The Online Encyclopedia of Integer Sequence (Printed Mirror)

2024 年 7 月 14 日

1 简介

这是一本什么书　本工具书为 OEIS (http://oeis.org) 的一部分离线镜像，包含了许多常见的整数数列。

本书包含的数列　本工具书筛选了 OEIS 上符合以下特征的数列：

- 2024 年 7 月 14 日及之前更新的
- 编号范围为 A000001 - A374609 的
- 有公式的
- 单调不下降的
- 非负的

数列的排序方式　本书数列的排序方式是：设原数列为 a 。将 a 前导 0 的项以及前导 1 的项删去后得到数列 b 。本书将新构造的数列 b 按字典序排序。数列 b 将会在原数列中用下划线标注。

项目链接　https://github.com/Dusker233/OEIS-PrintMirror

2 正文

▶ [A136640] 1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1, ⋆ A limited integer Devil's staircase from a winding number function. ● a(n) = floor(1 + 200 * Winding _ Number(Omega)): 0<=omega<=1;in steps of 1 / 200 ●

▶ [A103376] 1,1,1,1,1,1,1,1,1,2,2,2,2,2,2,2,2,3,4,4,4,4,4,4,4 ⋆ a(1) = a(2) = a(3) = a(4) = a(5) = a(6) = a(7) = a(8) = a(9) = 1 and for n>9: a(n) = a(n - 8) + a(n - 9). ● a(1)=1, a(2)=1, a(3)=1, a(4)=1, a(5)=1, a(6)=1, a(7)=1, a(8)=1, a(9)=1, a(n)=a(n - 8) + a(n - 9). - _ Harvey P. Dale _ , May 07 2015 ●

▶ [A174631] 0,1,1,1,1,1,1,1,1,1,1,1,2,2,2,2,2,2,3,3,3,4,4,4,4 ⋆ a(n) = Floor[(alpha ^ n - beta ^ n)(alpha - beta)], with alpha = (1 + Sqrt(a0)) / 2; beta = (1 - Sqrt(a0)) / 2; a0 = real minimal Pisot root of x ^ 3 - x - 1=0(1.324717957244746) ● a(n)=Floor[(alpha ^ n - beta ^ n) / (alpha - beta)] ●

▶ [A025781] 1,1,1,1,1,2,2,2,2,2,3,3,4,4,4,5,5,6,6,6,7,7,8,8,9 ⋆ Expansion of 1 / ((1 - x)(1 - x ^ 5)(1 - x ^ 12)). ● a(0)=1, a(1)=1, a(2)=1, a(3)=1, a(4)=1, a(5)=2, a(6)=2, a(7)=2, a(8)=2, a(9)=2, a(10)=3, a(11)=3, a(12)=4, a(13)=4, a(14)=4, a(15)=5, a(16)=5, a(17)=6, a(n)=a(n - 1) + a(n - 5) - a(n - 6) + a(n - 12) - a(n - 13) - a(n - 17) + a(n - 18). - _ Harvey P. Dale _ , May 11 2014 ●

▶ [A079954] 0,1,2,2,2,2,2,2,3,4,5,6,7,8,9,10,10,10,10,10,10,10,10,10,10,10 ⋆ Partial sums of A030301. ● a(n) = (n - 1 - (2 / 3) * (4 ^ e _ 4 - 1) - (- 1) ^ e _ 2 * (n - 1 - 2 * (4 ^ e _ 4 - 1))) / 2 where e _ 4 = floor(log _ 4(n)) and e _ 2 = floor(log _ 2(n)) = floor(log _ 4(n ^ 2)). - Antonio G. Astudillo (afg _ astudillo(AT)hotmail.com), Feb 22 2003 ●

▶ [A025775] 1,1,1,1,2,2,2,2,3,3,3,4,5,5,5,6,7,7,7,8,9,9,10,11,12 ⋆ Expansion of 1 / ((1 - x)(1 - x ^ 4)(1 - x ^ 11)). ● a(n) = floor((n ^ 2 + 16 * n + 90 + 22 * cos(n * Pi / 2)) / 88). - _ Tani Akinari _ , May 03 2014 ● a(n) = + a(n - 1) + a(n - 4) - a(n - 5) + a(n - 11) - a(n - 12) - a(n - 15) + a(n - 16). - _ R. J. Mathar _ , Aug 21 2014 ●

▶ [A229977] 1,1,1,1,2,2,2,2,3,3,4,4,5,5,6,7,7,8,10,11,12,14,16,18,20 ⋆ Gosper island perimeter (rounded to the nearest integer) after n iterations, let starting perimeter = 1. ● a(n) = round((3 / sqrt(7)) ^ n). ●

▶ [A255405] 1,1,1,1,1,2,2,2,2,3,3,4,4,5,6,6,7,8,9,11,12,14,16,18,20 ⋆ a(n) = floor((2 / sqrt(Pi)) ^ n). ● a(n) = floor((2 / sqrt(Pi)) ^ n). ●

▶ [A173777] 2,2,2,2,3,3,4,5,5,6,7,8,9,10,11,12,14,15,16,18,19,21,23,24,26 ⋆ Infinite sequence gradually builds a triangle plus another more widely spaced triangle on top of it, or overlapping, if you will. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) + a(n - 5) - a(n - 6) - a(n - 8) + a(n - 9) for n>10. ●

▶ [A029083] 1,1,1,1,2,2,2,2,3,3,4,5,6,6,7,8,9,9,10,11,13,14,16,17,19 ⋆ Expansion of 1 / ((1 - x)(1 - x ^ 4)(1 - x ^ 10)(1 - x ^ 11)). ● a(0)=1, a(1)=1, a(2)=1, a(3)=1, a(4)=2, a(5)=2, a(6)=2, a(7)=2, a(8)=3, a(9)=3, a(10)=4, a(11)=5, a(12)=6, a(13)=6, a(14)=7, a(15)=8, a(16)=9, a(17)=9, a(18)=10, a(19)=11, a(20)=13, a(21)=14, a(22)=16, a(23)=17, a(24)=19, a(25)=20, a(n)=a(n - 1) + a(n - 4) - a(n - 5) + a(n - 10) - a(n - 12) - a(n - 14) + a(n - 16) - a(n - 21) + a(n - 22) + a(n - 25) - a (n - 26). - _ Harvey P. Dale _ , Dec 22 2013 ●

▶ [A025774] 1,1,1,1,2,2,2,2,3,4,4,4,5,6,6,6,7,8,9,9,10,11,12,12,13 ⋆ Expansion of 1 / ((1 - x)(1 - x ^ 4)(1 - x ^ 9)). ● a(0)=1, a(1)=1, a(2)=1, a(3)=1, a(4)=2, a(5)=2, a(6)=2, a(7)=2, a(8)=3, a(9)=4, a(10)=4, a(11)=4, a(12)=5, a(13)=6, a(n)=a(n - 1) + a(n - 4) - a(n - 5) + a(n - 9) - a(n - 10) - a(n - 13) + a (n - 14). - _ Harvey P. Dale _ , Nov 11 2013 ● a(n) = floor(((n ^ 2 + 14 * n + 76) + 18 * cos((n - 1) * Pi / 2)) / 72). - _ Tani Akinari _ , May 02 2014 ●

▶ [A001156] 1,1,1,1,2,2,2,2,3,4,4,4,5,6,6,6,8,9,10,10,12,13,14,14,16 ⋆ Number of partitions of n into squares. ● a(n) = f(n,1,3) with f(x,y,z) = if x<y then 0 ^ x else f(x - y,y,z) + f(x,y + z,z + 2). - _ Reinhard Zumkeller _ , Nov 08 2009 ●

▶ [A363337] 1,1,1,1,1,2,2,2,2,3,4,4,4,5,6,7,7,8,10,11,12,14,16,18,19 ⋆ G.f. satisfies A(x) = exp(Sum _{ k>=1 } A(x ^ (4 * k)) * x ^ k / k). ● a(0) = 1; a(n) = (1 / n) * Sum _{ k=1..n } (Sum _{ d|k and d==1 mod 4 } d * a(floor(d / 4))) * a(n - k). ●

▶ [A029126] 1,1,1,1,1,1,1,2,2,2,2,3,4,4,5,5,5,5,6,7,7,8,9,10,11 ⋆ Expansion of 1 / ((1 - x)(1 - x ^ 7)(1 - x ^ 11)(1 - x ^ 12)). ● a(0)=1, a(1)=1, a(2)=1, a(3)=1, a(4)=1, a(5)=1, a(6)=1, a(7)=2, a(8)=2, a(9)=2, a(10)=2, a(11)=3, a(12)=4, a(13)=4, a(14)=5, a(15)=5, a(16)=5, a(17)=5, a(18)=6, a(19)=7, a(20)=7, a(21)=8, a(22)=9, a(23)=10, a(24)=11, a(25)=12, a(26)=13, a(27)=13, a(28)=14, a(29)=15, a(30)=16, a(n) = a(n - 1) + a(n - 7) - a(n - 8) + a(n - 11) - a(n - 13) - a(n - 18) + a(n - 20) - a(n - 23) + a(n - 24) + a(n - 30) - a(n - 31). - _ Harvey P. Dale _ , Mar 10 2015 ●

▶ [A241086] 0,1,1,1,1,2,2,2,2,3,4,4,5,5,6,7,8,9,11,12,14,15,17,19,21 ⋆ Number of partitions p of n into distinct parts such that max(p) <= 2 * (number of parts of p). ● a(15) counts these 7 partitions: 8421, 7521, 7431, 654, 6531, 6432, 54321. ●

▶ [A098527] 1,1,1,2,2,2,2,3,4,5,7,9,11,13,16,20,25,32,41,52,65,81,101,126,158 ⋆ Expansion (1 + x ^ 3) / (1 - x - x ^ 7). ● a(n)=a(n - 1) + a(n - 7); a(n)=sum { k=0..floor(n / 3), binomial(n - 3k, floor(k / 2)) } . ●

▶ [A355746] 1,1,1,1,1,2,2,2,2,4,4,6,6,12,20,20,20,26,26,36,58,116,116,140,140 ⋆ Number of different multisets that can be obtained by choosing a prime index (or a prime factor) of each integer from 2 to n. ● a(p) = a(p - 1) for p prime. - _ Michael S. Branicky _ , Aug 03 2022 ●

▶ [A363405] 1,1,1,1,1,2,2,2,2,4,5,5,5,10,12,13,13,26,34,36,37,74,97,105,107 ⋆ G.f. satisfies A(x) = exp(Sum _{ k>=1 } (A(x ^ k) + A(i * x ^ k) + A(- x ^ k) + A(i ^ 3 * x ^ k)) / 4 * x ^ k / k), where i = sqrt(- 1). ● a(0) = 1; a(n) = (1 / n) * Sum _{ k=1..n } (Sum _{ d|k and d==1 mod 4 } d * a(d - 1)) * a(n - k). ●

▶ [A216393] 0,0,1,1,2,2,2,2,4,5,6,8,13,17,32,47,63,98,189,279,437,782,1368,2062,3611 ⋆ Number of values of k for which sigma(k) - k is a permutation of decimal digits of k, for k < 2 ^ n. ● a(n) = # { k in A085844 | k < 2 ^ n } . - _ M. F. Hasler _ , Feb 24 2014 ●

▶ [A060824] 2,2,2,2,4,6,8,14,18,20,38,52,60,112,150,170,320,432,492,924,1244,1414,2658,3582,4074 ⋆ 4 - wave sequence beginning with 2s. ● a(n)=2 * a(n - 3) + 3 * a(n - 6) - a(n - 9) - a(n - 12) - Antonio G. Astudillo (afg _ astudillo(AT)hotmail.com), Jan 12 2003 ●

▶ [A171869] 1,2,2,2,2,2,4,8,16,32,64,128,256,512,1024,2048,4096,8192,16384,32768,65536,131072,262144,524288,1048576,2097152 ⋆ a(n) is the period of A175555(n) in the sequence { A175555 } . ● a(n) = 2 ^ (n - 4) if n > = 5. ●

▶ [A025771] 1,1,1,2,2,2,3,3,3,4,4,5,6,6,7,8,8,9,10,10,11,12,13,14,15 ⋆ Expansion of 1 / ((1 - x)(1 - x ^ 3)(1 - x ^ 11)). ● a(n)= + a(n - 1) + a(n - 3) - a(n - 4) + a(n - 11) - a(n - 12) - a(n - 14) + a(n - 15). - _ R. J. Mathar _ , Aug 21 2014 ●

▶ [A025770] 1,1,1,2,2,2,3,3,3,4,5,5,6,7,7,8,9,9,10,11,12,13,14,15,16 ⋆ Expansion of 1 / ((1 - x)(1 - x ^ 3)(1 - x ^ 10)). ● a(n) = floor((3 * n ^ 2 + 42 * n + 196 - 40 * cos(2 * (n + 1) * Pi / 3)) / 180). - _ Tani Akinari _ , May 03 2014 ● a(n)= + a(n - 1) + a(n - 3) - a(n - 4) + a(n - 10) - a(n - 11) - a(n - 13) + a(n - 14). - _ R. J. Mathar _ , Aug 21 2014 ●

▶ [A140471] 1,1,1,1,1,1,2,2,2,3,3,3,4,5,5,6,7,8,9,10,11,13,15,17,19 ⋆ Floored n - th power of Viswanath's constant. ● a(n) = floor(v ^ n), where v = 1.1319882487943 as given by A078416. ●

▶ [A029060] 1,1,1,2,2,2,3,3,3,4,5,6,7,8,9,10,11,12,13,14,16,18,20,22,24 ⋆ Expansion of 1 / ((1 - x) * (1 - x ^ 3) * (1 - x ^ 10) * (1 - x ^ 11)). ● a(0)=1, a(1)=1, a(2)=1, a(3)=2, a(4)=2, a(5)=2, a(6)=3, a(7)=3, a(8)=3, a(9)=4, a(10)=5, a(11)=6, a(12)=7, a(13)=8, a(14)=9, a(15)=10, a(16)=11, a(17)=12, a(18)=13, a(19)=14, a(20)=16, a(21)=18, a(22)=20, a(23)=22, a(24)=24, a(n)=a(n - 1) + a(n - 3) - a(n - 4) + a(n - 10) - a(n - 12) - a(n - 13) + a(n - 15) - a(n - 21) + a(n - 22) + a(n - 24) - a(n - 25). - _ Harvey P. Dale _ , Jan 11 2014 ●

▶ [A025778] 1,1,1,1,1,2,2,2,3,3,4,4,4,5,5,6,7,7,8,8,9,10,10,11,12 ⋆ Expansion of 1 / ((1 - x)(1 - x ^ 5)(1 - x ^ 8)). ● a(n)= + a(n - 1) + a(n - 5) - a(n - 6) + a(n - 8) - a(n - 9) - a(n - 13) + a(n - 14). - _ R. J. Mathar _ , Aug 21 2014 ● a(n) = floor(n * (n + 14) / 80 + 1). - _ Tani Akinari _ , Oct 12 2014 ●

▶ [A029099] 1,1,1,1,1,2,2,2,3,3,4,4,5,6,6,7,8,9,10,10,12,13,14,15,17 ⋆ Expansion of 1 / ((1 - x)(1 - x ^ 5)(1 - x ^ 8)(1 - x ^ 12)). ● a(0)=1, a(1)=1, a(2)=1, a(3)=1, a(4)=1, a(5)=2, a(6)=2, a(7)=2, a(8)=3, a(9)=3, a(10)=4, a(11)=4, a(12)=5, a(13)=6, a(14)=6, a(15)=7, a(16)=8, a(17)=9, a(18)=10, a(19)=10, a(20)=12, a(21)=13, a(22)=14, a(23)=15, a(24)=17, a(25)=19, a(n)=a(n - 1) + a(n - 5) - a(n - 6) + a(n - 8) - a(n - 9) + a(n - 12) - 2 * a(n - 13) + a(n - 14) - a(n - 17) + a(n - 18) - a(n - 20) + a(n - 21) + a(n - 25) - a(n - 26). - _ Harvey P. Dale _ , Oct 18 2012 ●

▶ [A086936] 1,2,2,2,3,3,4,4,5,6,7,7,8,8,9,10,11,11,12,12,13,14,15,15,16 ⋆ Number of primes between n and p(n) inclusive. ● a(n)=sum { k=0..n, (1 + mu(if(prime(k), k, 1))) / 2 } [offset 0] - _ Paul Barry _ , May 10 2005 ●

▶ [A224710] 0,0,0,0,0,0,1,1,1,2,2,2,3,3,4,5,5,5,6,7,7,8,8,8,9 ⋆ The number of unordered partitions { a,b } of 2n - 1 such that a and b are composite. ● a(n) = n - 2 - primepi(2n - 4) for n>1. - _ Anthony Browne _ , May 03 2016 ●

▶ [A210469] 0,0,0,0,1,1,1,2,2,2,3,3,4,5,5,5,6,7,7,8,8,8,9,10 ⋆ a(n) = n - primepi(2n). ● a(n) = n - primepi(2n). ●

▶ [A025769] 1,1,1,2,2,2,3,3,4,5,5,6,7,7,8,9,10,11,12,13,14,15,16,17,19 ⋆ Expansion of 1 / ((1 - x)(1 - x ^ 3)(1 - x ^ 8)). ● a(n) = floor((x ^ 2 + 12x + c) / 48) with 51 <= c <= 58. - _ M. F. Hasler _ , Sep 16 2012 ● a(0)=1, a(1)=1, a(2)=1, a(3)=2, a(4)=2, a(5)=2, a(6)=3, a(7)=3, a(8)=4, a(9)=5, a(10)=5, a(11)=6, a(n)=a(n - 1) + a(n - 3) - a(n - 4) + a(n - 8) - a(n - 9) - a(n - 11) + a(n - 12). - _ Harvey P. Dale _ , Nov 29 2012 ●

▶ [A090184] 0,1,1,1,2,2,2,3,3,4,5,5,6,7,9,10,11,13,14,17,19,22,25,28,33 ⋆ Number of partitions of the n - th 3 - smooth number into parts 2 and 3. ● a(2 ^ i * 3 ^ j) = floor(2 ^ (i - 1) * 3 ^ (j - 1) + 1), i * j>0. ●

▶ [A226503] 1,1,1,1,1,2,2,2,3,3,4,5,5,7,8,9,12,13,16,20,22,28,33,38,48 ⋆ Expansion of g.f. x * (1 + x + x ^ 2) / (1 - x ^ 3 - x ^ 5). ● a(n) = a(n - 3) + a(n - 5), a(1) = a(2) = a(3) = a(4) = a(5) = 1. ●

▶ [A029054] 1,1,1,2,2,2,3,3,4,6,6,7,9,9,10,12,13,15,18,19,21,24,25,27,31 ⋆ Expansion of 1 / ((1 - x) * (1 - x ^ 3) * (1 - x ^ 8) * (1 - x ^ 9)). ● a(0)=1, a(1)=1, a(2)=1, a(3)=2, a(4)=2, a(5)=2, a(6)=3, a(7)=3, a(8)=4, a(9)=6, a(10)=6, a(11)=7, a(12)=9, a(13)=9, a(14)=10, a(15)=12, a(16)=13, a(17)=15, a(18)=18, a(19)=19, a(20)=21, a(n)=a(n - 1) + a(n - 3) - a(n - 4) + a(n - 8) - a(n - 10) - a(n - 11) + a(n - 13) - a(n - 17) + a(n - 18) + a(n - 20) - a(n - 21). - _ Harvey P. Dale _ , May 09 2013 ●

▶ [A025773] 1,1,1,1,2,2,2,3,4,4,4,5,6,6,7,8,9,9,10,11,12,13,14,15,16 ⋆ Expansion of 1 / ((1 - x)(1 - x ^ 4)(1 - x ^ 7)). ● a(n) = floor((n ^ 2 + 12 * n + 50 + 14 * cos(n * Pi / 2)) / 56). - _ Tani Akinari _ , May 01 2014 ● a(n)= + a(n - 1) + a(n - 4) - a(n - 5) + a(n - 7) - a(n - 8) - a(n - 11) + a(n - 12). - _ R. J. Mathar _ , Aug 21 2014 ●

▶ [A289139] 0,0,1,2,2,2,3,4,4,5,6,6,6,7,8,8,9,10,10,10,11,12,12,13,14 ⋆ a(n) is the number of odd integers divisible by 7 in]4 * (n - 1) ^ 2, 4 * n ^ 2[. ● a(n + 7 * k) = a(n) + 4 * k. ● a(n) = 1 / 147 * Sum _{ k=0..n - 1 }{ 25 * (k mod 7) + 4 * [(k + 1) mod 7] - 17 * [(k + 2) mod 7] + 4 * [(k + 3) mod 7] + 25 * [(k + 4) mod 7] + 4 * [(k + 5) mod 7] - 17 * [(k + 6) mod 7] } . - _ Paolo P. Lava _ , Jun 26 2017 ●

▶ [A025768] 1,1,1,2,2,2,3,4,4,5,6,6,7,8,9,10,11,12,13,14,15,17,18,19,21 ⋆ Expansion of 1 / ((1 - x) * (1 - x ^ 3) * (1 - x ^ 7)). ● a(n) = round((n + 3) * (n + 8) / 42). ● a(n)= + a(n - 1) + a(n - 3) - a(n - 4) + a(n - 7) - a(n - 8) - a(n - 10) + a(n - 11). - _ R. J. Mathar _ , Aug 21 2014 ●

▶ [A000929] 1,1,1,2,2,2,3,4,4,5,6,6,7,8,9,11,12,13,15,16,17,20,22,23,26 ⋆ Dimension of n - th degree part of Steenrod algebra. ● a(n) = p(n,1) with p(n,k) = if k <= n then p(n - k,k) + p(n,2 * k + 1), otherwise 0 ^ n. - _ Reinhard Zumkeller _ , Mar 18 2009 ●

▶ [A363336] 1,1,1,1,2,2,2,3,4,4,5,6,7,9,11,12,15,18,20,23,29,33,38,45,52 ⋆ G.f. satisfies A(x) = exp(Sum _{ k>=1 } A(x ^ (3 * k)) * x ^ k / k). ● a(0) = 1; a(n) = (1 / n) * Sum _{ k=1..n } (Sum _{ d|k and d==1 mod 3 } d * a(floor(d / 3))) * a(n - k). ●

▶ [A029051] 1,1,1,2,2,2,3,4,4,5,7,7,8,10,11,12,14,16,17,19,22,24,26,29,32 ⋆ Expansion of 1 / ((1 - x)(1 - x ^ 3)(1 - x ^ 7)(1 - x ^ 10)). ● a(0)=1, a(1)=1, a(2)=1, a(3)=2, a(4)=2, a(5)=2, a(6)=3, a(7)=4, a(8)=4, a(9)=5, a(10)=7, a(11)=7, a(12)=8, a(13)=10, a(14)=11, a(15)=12, a(16)=14, a(17)=16, a(18)=17, a(19)=19, a(20)=22, a(n)=a(n - 1) + a(n - 3) - a(n - 4) + a(n - 7) - a(n - 8) - a(n - 13) + a(n - 14) - a(n - 17) + a(n - 18) + a(n - 20) - a (n - 21). - _ Harvey P. Dale _ , May 06 2013 ●

► [A079398] 0,1,1,1,1,2,2,2,3,4,4,5,7,8,9,12,15,17,21,27,32,38,48,59,70 ⋆ a(0)=0, a(1)=1, a(2)=1, a(3)=1, a(n) = a(n - 3) + a(n - 4) for n > 3. ● a(0)=0, a(1)=1, a(2)=1, a(3)=1, a(n) = a(n - 3) + a(n - 4) for n > 3. - _ Colin Barker _ , Sep 18 2013 ● a(n) = Sum _{ k=0..floor((n - 1) / 2) } binomial(floor((n - k - 1) / 3), k) } (offset 0). ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(floor((n - k - 1) / 3), k) }- 0 ^ n (offset 0). (End) ●

► [A130084] 1,2,2,2,3,4,4,6,7,8,10,13,16,20,26,32,40,51,64,80,100,126,159,200,252 ⋆ Smallest number whose tenth power has at least n digits. ● a(n) = ceiling(10 ^ ((n - 1) / 10)). ●

► [A274759] 0,1,1,1,1,2,2,2,3,4,4,6,7,8,12,14,15,23,27,29,44,52,56,85,100 ⋆ Modified quadranacci series. ● a(3n) = a(3n - 3) + a(3n - 6) + a(3n - 9) + a(3n - 12). ● a(3n + 2) = a(3n + 1) + a(3n - 2). ● a(3n + 3) = a(3n + 1) + a(3n - 1). ● a(3n + 4) = a(3n + 1) + a(3n). ●

► [A029074] 1,1,1,1,2,2,2,3,4,5,5,6,7,8,9,10,12,13,15,16,18,20,22,24,26 ⋆ Expansion of 1 / ((1 - x)(1 - x ^ 4)(1 - x ^ 7)(1 - x ^ 9)). ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) + a(n - 7) - a(n - 8) + a(n - 9) - a(n - 10) - a(n - 11) + a(n - 12) - a(n - 13) + a(n - 14) - a(n - 16) + a(n - 17) + a(n - 20) - a(n - 21), n > 20. ●

► [A323735] 1,2,2,2,3,4,5,6,6,6,7,8,9,10,10,10,11,12,13,14,14,14,15,16,17 ⋆ a(n) is the largest minimal distance of a binary LCD [n,2] code. ● a(n) = 4 * r + floor(s / 6) * (1 + (s mod 6)) + 2, where n = 6 * r + s, r is integer and 3 <= s <= 8. ● a(n) = 4 + a(n - 6) for n > 7. ● a(n) = (12 * n - 12 - 9 * cos(n * Pi / 3) + 3 * cos(2 * n * Pi / 3) + 3 * sqrt(3) * sin(n * Pi / 3) + sqrt(3) * sin(2 * n * Pi / 3)) / 18. - _ Wesley Ivan Hurt _ , Aug 31 2019 ● a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - 2 * a(n - 4) + 2 * a(n - 5) - a(n - 6) for n>7. ●

► [A309689] 0,0,0,0,0,1,2,2,2,3,4,5,6,7,8,9,10,12,14,15,16,18,20,22,24 ⋆ Number of even parts appearing among the second largest parts of the partitions of n into 3 parts. ● a(n) = Sum _{ j=1..floor(n / 3) } Sum _{ i=j..floor((n - j) / 2) } ((i - 1) mod 2). ● a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4) + a(n - 6) - 2 * a(n - 7) + 2 * a(n - 8) - 2 * a(n - 9) + a(n - 10) for n>9. ● a(n) = (6 * n ^ 2 + 48 * cos(n * Pi / 3) - 36 * cos(n * Pi / 2) + 16 * cos(2 * n * Pi / 3) - 3 * (- 1) ^ n - 25) / 144. - _ Ilya Gutkovskiy _ , Oct 29 2021 ●

► [A029049] 1,1,1,2,2,2,3,4,5,6,7,8,9,10,12,14,16,18,20,22,24,27,30,33,37 ⋆ Expansion of 1 / ((1 - x)(1 - x ^ 3)(1 - x ^ 7)(1 - x ^ 8)). ● a(0)=1, a(1)=1, a(2)=1, a(3)=2, a(4)=2, a(5)=2, a(6)=3, a(7)=4, a(8)=5, a(9)=6, a(10)=7, a(11)=8, a(12)=9, a(13)=10, a(14)=12, a(15)=14, a(16)=16, a(17)=18, a(18)=20, a(n)=a(n - 1) + a(n - 3) - a(n - 4) + a(n - 7) - a(n - 9) - a(n - 10) + a(n - 12) - a(n - 15) + a(n - 16) + a(n - 18) - a(n - 19) [_ Harvey P. Dale _ , Mar 10 2012] ● a(n) = floor((504 * ((floor((n + 2) / 2) - 2 * floor((n + 2) / 4)) * (- 1) ^ floor(n / 4)) + 2 * n ^ 3 + 57 * n ^ 2 + 480 * n + 2088) / 2016). - _ Tani Akinari _ , Jun 28 2013 ●

► [A096748] 1,2,2,2,3,4,5,6,8,10,13,16,21,26,34,42,55,68,89,110,144,178,233,288,377 ⋆ Expansion of (1 + x) ^ 2 / (1 - x ^ 2 - x ^ 4). ● a(n) = a(n - 2) + a(n - 4). ● a(n) = 2 * F((n + 1) / 2) * (1 - (- 1) ^ n) / 2 + F((n + 4) / 2) * (1 + (- 1) ^ n) / 2. ● a(n) = Sum _{ k=0..n } binomial(floor((n - k) / 2), floor(k / 2)). - _ Paul Barry _ , Jul 24 2004 ●

► [A098523] 1,1,2,2,2,3,4,6,8,10,13,17,23,31,41,54,71,94,125,166,220,291,385,510,676 ⋆ Expansion of (1 + x ^ 2) / (1 - x - x ^ 5) = (1 + x ^ 2) / ((1 - x + x ^ 2) * (1 - x ^ 2 - x ^ 3)). ● a(n)=a(n - 1) + a(n - 5); a(n)=sum { k=0..floor(n / 2), binomial(n - 2k, floor(k / 2)) } . ●

► [A029046] 1,1,1,2,2,2,4,4,5,7,7,8,11,11,13,16,17,19,23,24,27,31,33,36,42 ⋆ Expansion of 1 / ((1 - x)(1 - x ^ 3)(1 - x ^ 6)(1 - x ^ 8)). ● a(0)=1, a(1)=1, a(2)=1, a(3)=2, a(4)=2, a(5)=2, a(6)=4, a(7)=4, a(8)=5, a(9)=7, a(10)=7, a(11)=8, a(12)=11, a(13)=11, a(14)=13, a(15)=16, a(16)=17, a(17)=19, a(n)=a(n - 1) + a(n - 3) - a(n - 4) + a(n - 6) - a(n - 7) + a(n - 8) - 2 * a(n - 9) + a(n - 10) - a(n - 11) + a(n - 12) - a(n - 14) + a(n - 15) + a(n - 17) - a(n - 18). - _ Harvey P. Dale _ , Apr 05 2014 ●

► [A089819] 2,2,2,4,4,8,8,16,32,64,64,128,128,256,512,1024,1024,2048,2048,4096,8192,16384,16384,32768,65536 ⋆ Number of subsets of { 1,2,...,n } containing no primes. ● a(n) = 2 ^ (n - PrimePi(n)), with PrimePi = A000720. ●

► [A363404] 1,1,1,1,2,2,2,4,5,5,10,12,13,26,34,36,73,96,104,210,288,315,638,881,974 ⋆ G.f. satisfies A(x) = exp(Sum _{ k>=1 } (A(x ^ k) + A(w * x ^ k) + A(w ^ 2 * x ^ k)) / 3 * x ^ k / k), where w = exp(2 * Pi * i / 3). ● a(0) = 1; a(n) = (1 / n) * Sum _{ k=1..n } (Sum _{ d|k and d==1 mod 3 } d * a(d - 1)) * a(n - k). ●

► [A182539] 0,1,1,2,2,2,4,6,6,6,8,10,18,26,28,38,54,54,72,90,90,106,124,126,150 ⋆ a(n) = a(n - 1) + (a(n - 2) AND n). ● a(0)=0, a(1)=1, a(n) = a(n - 1) + (a(n - 2) AND n), where AND is the bitwise AND operator. ●

► [A262669] 0,0,0,2,2,2,4,6,8,8,12,14,18,18,20,26,28,32,32,40,42,46,48,58,58 ⋆ Consider the Farey sequence of order n, F _ n, and that the average distance between any two adjacent pairs in F _ n is 1 / A002088(n). Then a(n) is the number of adjacent pairs whose difference is less than the average. ● a(n) = (n / Pi) ^ 2 + O(n / 3 * (log(n)) ^ (2 / 3) * (log(log(n))) ^ (4 / 3)), (A. Walfisz 1963). ●

► [A345256] 0,0,0,2,2,2,4,6,8,10,12,14,18,20,22,26,30,32,36,42,42,48,54,56,62 ⋆ The number of squares, each vertex of which lies on the sinusoid y = n * sin(x), and whose centers coincide with the origin. ● a(n) = (K - 1) / 4, where K is the number of roots of n * sin(n * sin(x)) + x = 0. ●

► [A064355] 2,2,2,4,6,10,18,32,56,102,186,340,630,1170,2182,4096,7710,14560,27594,52428,99858,190650,364722,699040,1342176 ⋆ Number of subsets of { 1,2,..n } that sum to 1 mod n. ● a(n) = 1 / n * sum _{ d divides n and d is odd } 2 ^ (n / d) * mu(d); (mu(d) is the Moebius function, sequence A008683). ●

► [A077943] 1,2,2,2,4,8,12,16,24,40,64,96,144,224,352,544,832,1280,1984,3072,4736,7296,11264,17408,26880 ⋆ Expansion of 1 / (1 - 2 * x + 2 * x ^ 2 - 2 * x ^ 3). ● a(0)=1, a(1)=2, a(2)=2, a(n)=2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) [From Harvey P. Dale, Nov 30 2011] ●

► [A295680] 0,0,0,2,2,2,4,8,12,18,30,50,80,128,208,338,546,882,1428,2312,3740,6050,9790,15842,25632 ⋆ a(n) = a(n - 1) + a(n - 3) + a(n - 4), where a(0) = 0, a(1) = 0, a(2) = 0, a(3) = 2. ● a(n) = a(n - 1) + a(n - 3) + a(n - 4), where a(0) = 0, a(1) = 0, a(2) = 0, a(3) = 2. ●

► [A130707] 1,2,2,2,4,10,22,44,86,170,340,682,1366,2732,5462,10922,21844,43690,87382,174764,349526,699050,1398100,2796202,5592406 ⋆ a(n + 3) = 3 * (a(n + 2) - a(n + 1)) + 2 * a(n). ● a(n) = 2 ^ n / 3 + 4 * (- 1) ^ n * (1 / 3) * cos((2n + 1) * Pi / 3). - _ Emeric Deutsch _ , Jul 27 2007 ● a(n) = (1 / 3) * (1 / 2 - (1 / 2) * i * sqrt(3)) ^ n + (1 / 3) * (1 / 2 + (1 / 2) * i * sqrt(3)) ^ n + (1 / 3) * 2 ^ n + (1 / 3) * i * (1 / 2 - (1 / 2) * i * sqrt(3)) ^ n * sqrt(3) - (1 / 3) * i * (1 / 2 + (1 / 2) * i * sqrt(3)) ^ n * sqrt(3), with n >= 0. - _ Paolo P. Lava _ , May 10 2010 ●

► [A260786] 2,2,2,4,10,32,122,544,2770,15872,101042,707584,5405530,44736512,398721962,3807514624,38783024290,419730685952,4809759350882,58177770225664,740742376475050,9902996106248192,138697748786275802,2030847773013704704,31029068327114173810 ⋆ Twice the Euler or up / down numbers A000111. ● a(0)=a(1)=2; thereafter a(n) = (1 / 4) * Sum _{ k=1..n } binomial(n - 1, k - 1) * a(k - 1) * a(n - k). ●

► [A142974] 1,2,2,2,4,12,34,86,200,440,934,1938,3964,8036,16202,32558,65296,130800,261838,523946,1048196,2096732,4193842,8388102,16776664 ⋆ A007318 * [1, 1, - 1, 1, 1, 1, ...]. ● a(n) = 2 ^ n - n(n - 1) (if offset is 0). - _ Emeric Deutsch _ , Aug 09 2008 ●

► [A087421] 2,2,2,7,29,127,727,5051,40343,362897,3628811,39916801,479001629,6227020867,87178291219,1307674368043,20922789888023,355687428096031,6402373705728037,121645100408832089,2432902008176640029,51090942171709440031,1124000727777607680031 ⋆ Smallest prime >= n!. ● a(n) = min { p[i] | p[i] >=n! } , where p[i] is the set of prime numbers. ●

► [A122946] 0,0,2,2,2,10,18,26,66,138,242,506,1058,2026,4050,8282,16386,32586,65714,131258,261602,524458,1049490,2095898,4193730 ⋆ a(0)=a(1)=0, a(2)=a(3)=2, for n>=3 a(n)=a(n - 1) + 4 * a(n - 3). ● a(n)=(1 / 7) * 2 ^ (- 2 + n / 2) * (7 * 2 ^ (n / 2) - 7 * Cos[n * (Pi - ArcTan[Sqrt[7]])] + 5 * Sqrt[7] * Sin[n * (- Pi + ArcTan[Sqrt[7]])]) - _ Zak Seidov _ , Oct 26 2006 ●

► [A350599] 2,2,2,14,30,50,170,462,1014,2810,7906,19910,53278,148514,397530,1073918,2976390,8172426,22413266,62219830,172846382,479683762,1338281802,3743620974,10475828630 ⋆ Number of ways to partition the set of vertices of a convex n - gon into non - intersecting directed polygons. ● a(n) = Sum _{ k=1..floor(n / 3) } 2 ^ k * binomial(n + 1, k) * binomial(n - 2 * k - 1, k - 1) / (n + 1) . ●

► [A025777] 1,1,1,1,1,2,2,3,3,3,4,4,5,5,6,7,7,8,8,9,10,11,12,12,13 ⋆ Expansion of 1 / ((1 - x) * (1 - x ^ 5) * (1 - x ^ 7)). ● a(n) = round((n ^ 2 + 13 * n + 36) / 70). ● a(n) = a(n - 1) + a(n - 5) - a(n - 6) + a(n - 7) - a(n - 8) - a(n - 12) + a(n - 13). - _ R. J. Mathar _ , Aug 21 2014 ●

► [A115384] 0,1,2,2,3,3,3,4,5,5,5,6,6,7,8,8,9,9,9,10,10,11,12,12,12 ⋆ Partial sums of Thue - Morse numbers A010060. ● a(n) / n - > 1 / 2; a(n) = number of odious numbers <= n, see A000069. - _ Reinhard Zumkeller _ , Aug 26 2007, corrected by _ M. F. Hasler _ , May 22 2017. ● a(n) = Sum _{ i=1..n } (S2(n) mod 2), where S2 = binary weight; lim a(n) / n = 1 / 2. More generally, consider a(n) = Sum _{ i=1..n } (F(Sk(n)) mod m), where Sk(n) is sum of digits of n, n in base k; F(t) is an arithmetic function; m integer. How does lim a(n) / n depend on F(t)? - _ Ctibor O. Zizka _ , Feb 25 2008 ● a(2n + 1) = n + 1 (see Hassan Tarfaoui link, Concours Général 1990). - _ Bernard Schott _ , Jan 21 2022 ●

► [A029122] 1,1,1,1,1,1,1,2,2,3,3,4,4,4,5,5,6,6,8,8,9,10,11,12,12 ⋆ Expansion of 1 / ((1 - x)(1 - x ^ 7)(1 - x ^ 9)(1 - x ^ 11)). ● a(n) = floor((n ^ 3 + 42 * n ^ 2 + 525 * n + 3744) / 4158 + 1 / 6 * (1 + (- 1) ^ (n + 9 * floor(n / 9))) * (1 - floor((- 9 * floor(n / 9) + n) / 3))). - _ Tani Akinari _ , Jul 07 2013 ● a(0)=1, a(1)=1, a(2)=1, a(3)=1, a(4)=1, a(5)=1, a(6)=1, a(7)=2, a(8)=2, a(9)=3, a(10)=3, a(11)=4, a(12)=4, a(13)=4, a(14)=5, a(15)=5, a(16)=6, a(17)=6, a(18)=8, a(19)=8, a(20)=9, a(21)=10, a(22)=11, a(23)=12, a(24)=12, a(25)=14, a(26)=14, a(27)=16, a(n)=a(n - 1) + a(n - 7) - a(n - 8) + a(n - 9) - a(n - 10) + a(n - 11) - a(n - 12) - a(n - 16) + a(n - 17) - a(n - 18) + a(n - 19) - a(n - 20) + a(n - 21) + a(n - 27) - a(n - 28). - _ Harvey P. Dale _ , Feb 27 2015 ●

► [A110654] 0,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12 ⋆ a(n) = ceiling(n / 2), or: a(2 * k) = k, a(2 * k + 1) = k + 1. ● a(n) = floor(n / 2) + n mod 2. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n > 2, a(2) = a(1) = 1, a(0) = 0. - _ Reinhard Zumkeller _ , May 22 2006 ● a(- 1 - n) = - a(n). (End) ● a(n) = floor((n + 1) / 2) = |Sum _{ m=1..m } Sum _{ k=1..m } (- 1) ^ k|, where |x| is the absolute value of x. - _ William A. Tedeschi _ , Mar 21 2008 ● a(n) = 1 / 4 - (- 1) ^ n / 4 + n / 2. - _ Paolo P. Lava _ , Oct 03 2008 ● a(n) = ceiling(n / 2) = smallest integer >= n / 2. - _ M. F. Hasler _ , Nov 17 2008 ●

► [A317648] 1,1,2,2,3,3,4,4,5,5,6,7,7,7,8,8,9,9,10,11,12,12,12,12,13 ⋆ a(1) = a(2) = 1; for n >= 3, a(n) = a(t(n)) + a(n - t(n)) where t = A004001. ● a(n + 1) - a(n) = 0 or 1 for all n >= 1. ●

► [A025766] 1,1,2,2,3,3,4,4,5,5,6,7,8,9,10,11,12,13,14,15,16,17,19,20,22 ⋆ Expansion of 1 / ((1 - x)(1 - x ^ 2)(1 - x ^ 11)). ● a(n) = + a(n - 1) + a(n - 2) - a(n - 3) + a(n - 11) - a(n - 12) - a(n - 13) + a(n - 14). - _ R. J. Mathar _ , Jun 04 2013 ●

► [A029030] 1,1,2,2,3,3,4,4,5,5,7,8,10,11,13,14,16,17,19,20,23,25,29,31,35 ⋆ Expansion of 1 / ((1 - x)(1 - x ^ 2)(1 - x ^ 10)(1 - x ^ 11)). ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) + a(n - 10) - 2 * a(n - 12) + a(n - 14) - a(n - 21) + a(n - 22) + a(n - 23) - a(n - 24). - _ Matthew House _ , May 07 2017 ●

► [A225875] 1,2,2,3,3,4,4,5,6,6,7,7,8,8,9,10,10,11,11,12,12,13,14,14,15 ⋆ We write the 1 + 4 * k numbers once and twice the others. ● a(n + 1) = 1 + 4 * floor(n / 7) + [0,1,1,2,2,3,3]. ● a(n) = n - floor(3 * n / 7). - _ Wesley Ivan Hurt _ , Sep 29 2017 ●

► [A329547] 1,2,2,3,3,4,4,5,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,15 ⋆ Number of natural numbers k <= n such that k ^ k is a square. ● a(n) = floor(n / 2) + ceiling(floor(sqrt(n)) / 2). ●

► [A025765] 1,1,2,2,3,3,4,4,5,6,7,8,9,10,11,12,13,14,16,17,19,20,22,23,25 ⋆ Expansion of 1 / ((1 - x)(1 - x ^ 2)(1 - x ^ 9)). ● a(n)= + a(n - 1) + a(n - 2) - a(n - 3) + a(n - 9) - a(n - 10) - a(n - 11) + a(n - 12). - _ R. J. Mathar _ , Mar 22 2011 ●

► [A029026] 1,1,2,2,3,3,4,4,6,6,8,9,11,12,14,15,18,19,22,24,27,29,33,35,40 ⋆ Expansion of 1 / ((1 - x)(1 - x ^ 2)(1 - x ^ 8)(1 - x ^ 11)). ● a(0)=1, a(1)=1, a(2)=2, a(3)=2, a(4)=3, a(5)=3, a(6)=4, a(7)=4, a(8)=6, a(9)=6, a(10)=8, a(11)=9, a(12)=11, a(13)=12, a(14)=14, a(15)=15, a(16)=18, a(17)=19, a(18)=22, a(19)=24, a(20)=27, a(21)=29, a(n)= a(n - 1) + a(n - 2) - a(n - 3) + a(n - 8) - a(n - 9) -

a(n - 10) + 2 * a(n - 11) - a(n - 12) - a(n - 13) + a(n - 14) - a(n - 19) + a(n - 20) + a(n - 21) - a(n - 22). - _ Harvey P. Dale _ , Nov 02 2015 ●

▶ [A373114] 0,1,2,2,3,3,4,5,5,5,6,7,8,9,9,9,10,11,12,12,13,13,14,15,15 ⋆ Cardinality of the largest subset of { 1,...,n } such that no odd number of terms from this subset multiply to a square. ● a(n + 1) - a(n) is either 0 or 1 for any n. ●

▶ [A214656] 0,0,1,1,2,2,3,3,4,5,5,6,6,7,7,8,8,9,10,10,11,11,12,12,13 ⋆ Floor of the imaginary part of the zeros of the complex Fibonacci function on the left half - plane. ● a(n) = floor(a * n), n>=0, with a = - y _ 0(1) given in the comment section. ●

▶ [A098294] 0,1,2,2,3,3,4,5,5,6,6,7,8,8,9,9,10,10,11,12,12,13,13,14,15 ⋆ a(n) = ceiling(n * log _ 2(3 / 2)). ● a(n) = ceiling(tau * n) with tau := log(3) / log(2) - 1 = 0.584962501..., n >= 0. ● a(n) = floor(1 + n * log(3) / log(2)) - n, n >= 1. - _ Mike Winkler _ , Dec 31 2010 ●

▶ [A319433] 1,2,2,3,3,4,5,5,6,7,7,8,8,9,10,10,11,11,12,13,13,14,15,15,16 ⋆ Take Zeckendorf representation of n (A014417(n)), drop least significant bit, take inverse Zeckendorf representation. ● a(n) = floor((n - 1) / tau) + 2, where tau = golden ratio. - _ Clark Kimberling _ , Dec 29 2020 ●

▶ [A253671] 1,1,2,2,3,3,4,5,5,6,7,7,8,8,9,10,10,11,12,12,13,14,14,15,15 ⋆ a(n) = floor(A000111(n) / A000111(n - 1)). ● a(n + 2) = a(n + 1) + (0, 1, 0, followed by a sequence of period 11: repeat 1, 0, 1, 1, 0, 1, 1, 0, 1, 0, 1). ● a(n + 12) = a(n + 1) + (6, 7, 6, followed by 7's = A010727). ● a(n) = a(n - 1) + a(n - 11) - a(n - 12) for n>15. - _ Colin Barker _ , Jan 22 2015 ●

▶ [A209081] 1,1,2,2,3,3,4,5,5,6,7,7,8,9,9,10,10,11,12,12,13,14,14,15,15 ⋆ Floor(A152170(n) / n ^ n). Floor of the expected value of the cardinality of the image of a function from [n] to [n]. ● a(n) = floor(n - (n - 1) ^ n / n ^ (n - 1)). ●

▶ [A083479] 0,1,1,1,2,2,3,3,4,5,5,6,7,7,8,9,10,10,11,12,13,13,14,15,16 ⋆ The natural numbers with all terms of A033638 inserted. ● a(n) = ((n + 2) - ceiling(sqrt(4 * n))). - _ Gregory R. Bryant _ , Apr 01 2013 ●

▶ [A084630] 1,1,1,2,2,3,3,4,5,5,6,7,8,9,10,11,12,13,14,15,16,18,19,20,22 ⋆ a(n) = floor(C(n + 7,7) / C(n + 5,5)). ● a(n) = 1 + floor(n * (n + 13) / 42). ● a(n) = a(- 13 - n). ● a(n) = a(n - 21) + n + 4 for all n in Z. ● a(n) = floor(binomial(n + 7,2) / 21). - _ G. C. Greubel _ , Mar 23 2023 ●

▶ [A283371] 0,1,1,2,2,3,3,4,5,6,6,7,7,8,9,10,11,11,12,12,13,14,14,15,15 ⋆ Maximum number of pairs of primes (p, q) such that p < q = < prime (n) and q - p = constant. ● a(n) >> n / log n. In particular, lim inf a(n) * (log n) / n >= 1 / 2. - _ Charles R Greathouse IV _ , Mar 06 2017 ●

▶ [A156253] 1,2,2,3,3,4,5,6,6,7,8,8,9,9,10,11,11,12,12,13,14,15,15,16,17 ⋆ Least k such that A054353(k) >= n. ● a(n) = a(n - gcd(a(a(n - 1)), 2)) + 1. - _ Jon Maiga _ , May 16 2023 ●

▶ [A346693] 1,1,1,2,2,3,3,4,5,6,6,7,8,8,9,10,10,11,12,13,13,14,15,15,16 ⋆ Minimum integer length of a segment that touches the interior of n squares on a unit square grid. ● a(n) = 1 for n <= 3; a(n) = ceiling(sqrt((n - 3) ^ 2 / 2 + 1)) for n >= 4. ●

▶ [A060151] 1,2,2,3,3,4,5,6,6,7,8,9,9,10,11,12,12,13,14,15,15,16,17,18,19 ⋆ Number of base n digits required to write n!. ● a(n) = n - n / log n + O(1). - _ Charles R Greathouse IV _ , Oct 29 2016 ●

▶ [A097330] 1,1,1,2,2,3,3,4,5,6,6,7,8,9,9,10,11,12,14,15,15,16,18,19,20 ⋆ In the sequence of prime numbers replace each term p with floor(p / 2) and ceiling(p / 2). ● a(n) = 1 if n < 3, otherwise (prime((n + (n mod 2)) / 2) + 1) / 2 - n mod 2. ●

▶ [A062049] 2,2,3,3,4,5,6,7,8,9,10,11,13,14,15,16,17,19,20,21,23,24,25,27,28 ⋆ Integer part of geometric mean of first n primes. ● a(n) < (1 / 2) * prime(n) for n >3. ●

▶ [A025764] 1,1,2,2,3,3,4,5,6,7,8,9,10,11,13,14,16,17,19,20,22,24,26,28,30 ⋆ Expansion of 1 / ((1 - x)(1 - x ^ 2)(1 - x ^ 7)). ● a(n) = + a(n - 1) + a(n - 2) - a(n - 3) + a(n - 7) - a(n - 8) - a(n - 9) + a(n - 10). - _ R. J. Mathar _ , Jun 04 2013 ●

▶ [A011881] 0,0,0,0,0,0,1,1,2,2,3,3,4,5,6,7,8,9,10,12,13,15,16,18,19 ⋆ a(n) = floor(n * (n - 1) / 28). ● a(n)= + 2 * a(n - 1) - a(n - 2) + a(n - 7) - 2 * a(n - 8) + a(n - 9) - a(n - 14) + 2 * a(n - 15) - a(n - 16) + a(n - 21) - 2 * a(n - 22) + a(n - 23). - _ R. J. Mathar _ , Aug 11 2021 ●

▶ [A076678] 1,1,2,2,3,3,4,5,6,7,8,9,11,12,14,15,17,19,21,23,25,28,30,33,35 ⋆ a(0)= a(1)=1 a(n)=floor(sqrt(a(n - 1))) + a(n - 2). ● a(n) is asymptotic to n ^ 2 / 16 ●

▶ [A210024] 1,1,1,1,1,2,2,3,3,4,5,6,7,9,11,13,16,19,23,27,33,39,47,57,68 ⋆ Floor of the expected value of number of trials until all cells are occupied in a random distribution of 2n balls in n cells. ● a(n) = floor(n ^ (2n) / Sum _{ v=0..n - 1 } ((- 1) ^ v * binomial(n,v) * (n - v) ^ (2n))) ●

▶ [A005686] 0,1,1,1,1,1,2,2,3,3,4,5,6,8,9,12,14,18,22,27,34,41,52,63,79 ⋆ Number of Twopins positions. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(floor((n + 3k - 3) / 5), k). - _ Paul Barry _ , Jul 10 2004 ● a(n) = a(n - 2) + a(n - 5). - _ Michael Somos _ , Jul 15 2004 ●

▶ [A174619] 1,1,1,2,2,3,3,4,5,6,8,10,13,17,21,28,34,45,55,72,89,116,144,188,233 ⋆ a(n) = A174618(n) + A174618(n + 1). ● a(n)= 2 * a(n - 2) - a(n - 4) + a(n - 8). G.f. - x * (1 + x) * (x ^ 3 - x ^ 2 + 1) / ((x ^ 4 - x ^ 2 + 1) * (x ^ 4 + x ^ 2 - 1)). - _ R. J. Mathar _ , Jan 27 2011 ●

▶ [A130083] 1,2,2,3,3,4,5,6,8,10,13,17,22,28,36,47,60,78,100,130,167,216,279,360,465 ⋆ Smallest number whose ninth power has at least n digits. ● a(n) = ceiling(10 ^ ((n - 1) / 9)). ●

▶ [A147663] 1,1,2,2,3,3,4,5,7,9,12,16,21,28,37,50,66,88,116,154,203,269,356,472,625 ⋆ Expansion of 1 / (1 - x - x ^ 2 + x ^ 3 - x ^ 7 + x ^ 9 - x ^ 11). ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) + a(n - 7) - a(n - 9) + a(n - 10), n >= 10. - _ Franck Maminirina Ramaharo _ , Oct 31 2018 ●

▶ [A080087] 0,0,1,1,2,2,3,3,4,6,7,8,9,9,10,12,13,14,15,16,16,18,19,20,22 ⋆ Number of factors of 5 in the factorial of the n - th prime, counted with multiplicity. ● a(n) = sum _{ k=1..L } floor(prime(n) / 5 ^ k), where L = log(p _ n) / log(5). ●

▶ [A129526] 2,2,3,3,5,5,8,9,14,16,26,31,49,64,99,133,209,291,455,657,1022,1510,2359,3545,5536 ⋆ Number of n - bead two - color bracelets with 00 prohibited. ● a(n) = [Fib(floor(n / 2) + 2) + (1 / n) * sum _{ d divides n } phi(n / d) * (Fib(d - 1) + Fib(d + 1))] / 2. - _ Petros Hadjicostas _ , Jan 04 2017 (with help from Lingyun Zhang). ●

▶ [A000358] 1,2,2,3,3,5,5,8,10,15,19,31,41,64,94,143,211,329,493,766,1170,1811,2787,4341,6713 ⋆ Number of binary necklaces of length n with no subsequence 00, excluding the necklace "0". ● a(n) = (1 / n) * Sum _{ d divides n } totient(n / d) [Fib(d - 1) + Fib(d + 1)]. ●

▶ [A227426] 1,1,1,2,2,3,3,5,6,7,9,11,13,16,20,23,28,33,39,46,55,63,75,87,101 ⋆ Number of partitions into distinct parts without three consecutive parts. ● a(n) = c * exp(r * sqrt(n)) / n ^ (3 / 4), where r = 1.75931899568... and c = 0.2080626386... - _ Vaclav Kotesovec _ , May 24 2018 ●

▶ [A130841] 1,1,1,2,2,3,3,5,6,8,8,12,12,15,17,23,23,31,31,41,44,52,52,69,73 ⋆ Number of ways to write n as a sum of oterms, where an oterm is an ordered product of (1 + oterm), sorted by size and an empty product has value 1. ● a(n) = sum over sequences (n _ 1,n _ 2,...,n _ k) such that 2 <= n _ 1 <= n _ 2 <= ... <= n _ k and n1 * n2 * ... * nk=n of the product of j from 1 to k of a(n _ j - 1). The program, in J, implements this formula. (It works by factorizing n and then grouping the factors in all distinct ways. This J code handles the a(1) case without requiring any exception case.) ●

▶ [A309712] 0,0,0,0,1,1,2,2,3,3,5,6,9,10,13,14,18,20,25,28,34,37,44,48,56 ⋆ Number of odd parts appearing among the third largest parts of the partitions of n into 4 parts. ● a(n) = Sum _{ k=1..floor(n / 4) } Sum _{ j=k..floor((n - k) / 3) } Sum _{ i=j..floor((n - j - k) / 2) } (j mod 2). ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 6) - 2 * a(n - 7) + 2 * a(n - 8) - 2 * a(n - 9) + a(n - 10) - a(n - 14) + 2 * a(n - 15) - a(n - 16) for n>15. ●

▶ [A052473] 2,2,3,3,5,12,37,128,464,1718,6437,24312,92380,352718,1352080,5200302,20058302,77558762,300540197,1166803112,4537567652,17672631902,68923264412,269128937222,1052049481862 ⋆ a(n) = binomial(2 * n - 5,n - 2) + 2. ● a(n) = 2 + (2 ^ (2 * n - 5) * Gamma(n - 3 / 2)) / (sqrt(Pi) * Gamma(n - 1)). ●

▶ [A373446] 1,1,1,2,2,3,3,6,7,10,10,18,19,27,30,50,53,80,85,133,146,209,223,350,382 ⋆ Number of distinct ways of expressing n using only addition, multiplication, necessary parentheses, the number 1, and no "1 * " multiply. ● a(n) >= a(n - 1) since, if " + 1" is appended to each expression used to calculate a(n - 1), then each of the resulting expressions equate to n and are distinct from each other. There may or may not be other ways to express n that do not include an isolated " + 1", hence the greater - than possibility. ●

▶ [A309713] 0,0,0,0,1,1,2,2,3,3,7,10,17,20,27,30,42,50,67,80,102,115,144,164,200 ⋆ Sum of the odd parts appearing among the third largest parts of the partitions of n into 4 parts. ● a(n) = Sum _{ k=1..floor(n / 4) } Sum _{ j=k..floor((n - k) / 3) } Sum _{ i=j..floor((n - j - k) / 2) } j * (j mod 2). ●

▶ [A094117] 0,1,1,2,2,3,3,10,16,23,29,36,42,49,49,50,50,51,51,52,52,59,65,72,78 ⋆ Partial sums of A093349. ● a(7 ^ k)=(49 ^ k - 1) / 16 ●

▶ [A029111] 1,1,1,1,1,1,2,2,3,4,4,4,5,5,6,7,8,9,11,11,12,13,14,15,18 ⋆ Expansion of 1 / ((1 - x)(1 - x ^ 6)(1 - x ^ 8)(1 - x ^ 9)). ● a(0)=1, a(1)=1, a(2)=1, a(3)=1, a(4)=1, a(5)=1, a(6)=2, a(7)=2, a(8)=3, a(9)=4, a(10)=4, a(11)=4, a(12)=5, a(13)=5, a(14)=6, a(15)=7, a(16)=8, a(17)=9, a(18)=11, a(19)=11, a(20)=12, a(21)=13, a(22)=14, a(23)=15, a(n)=a(n - 1) + a(n - 6) - a(n - 7) + a(n - 8) - a(n - 10) - a(n - 14) + a(n - 16) - a(n - 17) + a(n - 18) + a(n - 23) - a (n - 24). - _ Harvey P. Dale _ , Jan 02 2016 ●

▶ [A046699] 1,1,2,2,3,4,4,4,5,6,6,7,8,8,8,8,9,10,10,11,12,12,12,13,14 ⋆ a(1) = a(2) = 1, a(n) = a(n - a(n - 1)) + a(n - 1 - a(n - 2)) if n > 2. ● a(n) <= a(n + 1) <= a(n) + 1. ● a(2 ^ n + 1) = 2 ^ (n - 1) + 1 for n > 0. ●

▶ [A302255] 0,1,2,2,3,4,4,4,5,6,6,7,8,8,8,9,10,10,11,12,12,12,13,14,14 ⋆ Total domination number of the n - antiprism graph. ● a(n) = a(n - 1) + a(n - 7) - a(n - 8). ● a(n) = a(n - 7) + 4. - _ Andrew Howroyd _ , Apr 18 2018 ● a(n) = a(n - 7 * k) + 4 * k. - _ Eric W. Weisstein _ , Apr 19 2018 ●

▶ [A076502] 1,1,2,2,3,4,4,4,5,6,7,7,8,8,8,9,9,10,11,12,12,13,14,14,15 ⋆ a(1)=1, a(n)=n - a(n - a(n - a(n - 1))). ● a(n) is asymptotic to c * n with c=0.5698..is the positive root of x ^ 3 - x ^ 2 + 2 * x - 1 ●

▶ [A316434] 1,1,2,2,3,4,4,4,5,6,7,7,8,8,9,10,10,11,11,11,12,12,13,14,15 ⋆ a(n) = a(pi(n)) + a(n - pi(n)) with a(1) = a(2) = 1. ● a(n + 1) - a(n) = 0 or 1 for all n >= 1. ●

▶ [A006165] 1,1,2,2,3,4,4,4,5,6,7,8,8,8,8,8,9,10,11,12,13,14,15,16,16 ⋆ a(1) = a(2) = 1; thereafter a(2n + 1) = a(n + 1) + a(n), a(2n) = 2a(n). ● a(n + 1) = min(msb(n), 1 + n - msb(n) / 2) for all n (msb = most significant bit, A053644). - Boyko Bantchev (bantchev(AT)math.bas.bg), May 17 2002 ● a(1)=1, a(n) = n - a(n - a(a(n - 1))). - _ Benoit Cloitre _ , Nov 08 2002 ●

▶ [A066997] 2,2,3,4,4,4,5,6,7,8,8,8,8,8,9,10,11,12,13,14,15,16,16,16,16 ⋆ Survivor number for 2nd - order Josephus problem. ● a(n) = 1 + k + 2 ^ (m - 1) for k < 2 ^ (m - 1) and 2 ^ m otherwise, where m = floor(log _ 2(n)) and k = n - 2 ^ m. Also: write n in binary; drop first bit; "OR" new first bit with each remaining bit; append 1 as new first bit; convert to integer; add 1. ●

▶ [A038128] 0,0,1,1,2,2,3,4,4,5,5,6,6,7,8,8,9,9,10,10,11,12,12,13,13 ⋆ Beatty sequence for Euler's constant (A001620). ● a(n) = floor(n * 0.5772156649...). - Typo fixed by _ Karl V. Keller, Jr. _ , Jul 27 2015 ●

▶ [A259549] 1,2,2,3,4,4,5,5,6,7,7,8,8,9,9,10,11,11,12,12,13,13,14,14,15 ⋆ Triangle T(n,k) with rows of length 2n - 1 filled with consecutive integers, each appearing twice except for the last term, T(n,2n - 1) = n(n + 1) / 2. ● a(n) = (1 / 4) * (2 * t(n) + 1 - (- 1) ^ t(n)), where t(n) = n + floor(sqrt(n)). - _ Ridouane Oudra _ , Jun 08 2019 ●

▶ [A074840] 0,1,1,2,2,3,4,4,5,5,6,7,7,8,8,9,9,10,11,11,12,12,13,14,14 ⋆ Numerators a(n) of fractions slowly converging to sqrt(2): let a(1) = 0, b(n) = n - a(n); if (a(n) + 1) / b(n) < sqrt(2), then a(n + 1) = a(n) + 1, else a(n + 1)= a(n). ● a(1) = 0. b(n) = n - a(n). If (a(n) + 1) / b(n) < sqrt(2), then a(n + 1) = a(n) + 1, else a(n + 1) = a(n). ● a(n) = floor(n * (2 - sqrt(2))). - _ Vladeta Jovovic _ , Oct 04 2003 ● a(n) = 2 * n - ceiling(n * sqrt(2)). - _ Clark Kimberling _ , Sep 09 2011 ●

▶ [A256502] 1,1,2,2,3,4,4,5,5,6,7,7,8,8,9,10,10,11,11,12,13,13,14,14,15 ⋆ Largest integer not exceeding the harmonic mean of the first n squares. ● a(n) = floor(n /{ sum { 1 / k ^ 2, k = 1..n }). ●

▶ [A019446] 1,2,2,3,4,4,5,5,6,7,7,8,9,9,10,10,11,12,12,13,13,14,15,15,16 ⋆ a(n) = ceiling(n / tau), where tau = (1 + sqrt(5)) / 2. ● a(1)=1; a(n) = n + 1 - a(a(n - 1)). - _ Benoit Cloitre _ , Nov 06 2002 ●

▶ [A371625] 0,1,2,2,3,4,4,5,5,6,7,7,8,9,9,10,10,11,12,12,13,14,14,15,15 ⋆ The x - coordinate of the point (x,y) where x + y = n, x is an integer, and x / y is as close as possible to phi (by absolute difference). ● a(n) = ceiling(n / phi) if floor(s(n)) + floor(n / phi) is even. ● a(n) = floor(n / phi) if floor(s(n)) + floor(n / phi) is odd. ● a(n) = ceiling(n / phi) - (floor(s(n)) + floor(n / phi) mod 2). ● a(n) = round(n / phi) + floor(s(n)) - floor(n / phi + 1 / 2) ●

▶ [A309430] 1,2,2,3,4,4,5,6,6,7,7,8,9,9,10,10,11,11,12,13,13,13,14,14,15 ⋆ a(n) = a(n - a(n - 1)) + a(n - a(n - 4)), with a(n) = ceiling(2 * n / 3) for n <= 7. ● a(n + 1) - a(n) = 0 or 1 for all n >= 1. ●

▶ [A029922] 0,1,1,2,2,3,4,4,5,6,6,7,7,8,9,9,10,11,11,12,12,13,14,14,15 ⋆ Convert n from kilometers (km) to miles. ● a(n) = floor(n / 1.609344 + 1 / 2). - _ Lee A. Newberg _ , Apr 10 2018 ●

▶ [A004523] 0,0,1,2,2,3,4,4,5,6,6,7,8,8,9,10,10,11,12,12,13,14,14,15,16 ⋆ Two even followed by one odd; or floor(2n / 3). ● a(n) = floor(2 * n / 3). ● a(0) = a(1) = 0; for n > 1, a(n) = n - 1 - floor(a(n - 1) / 2). - _ Benoit Cloitre _ , Nov 26 2002 ● a(n) = a(n - 1) + (1 / 2) * ((- 1) ^ floor((2 * n + 2) / 3) + 1), with a(0)=0. - Mario Catalani (mario.catalani(AT)unito.it), Oct 20 2003 ● a(n) = Sum _{ k=0..n - 1 } (Fibonacci(k) mod 2). - _ Paul Barry _ , May 31 2005 ● a(n) = 2 * (- 1 + Sum _{ k=0..n } ((1 / 9) * (- 2 * (k mod 3) + ((k + 1) mod 3) + 4 * ((k + 2) mod 3))) + (((n + 2) mod 3) mod 2). - _ Paolo P. Lava _ , Oct 02 2008 ● a(n) = ceiling(2 * (n - 1) / 3) = n - 1 - floor((n - 1) / 3). - _ Bruno Berselli _ , Jan 18 2017 ●

▶ [A322042] 0,1,2,2,3,4,4,5,6,6,7,8,8,9,10,10,11,12,12,13,14,14,15,16,16 ⋆ Maximum edge - distance of a point in the quotient graph E / nE from the origin (see A322041 for further information). ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n> 4. ●

▶ [A038372] 1,2,2,3,4,4,5,6,6,7,8,8,9,10,10,11,12,12,13,14,14,15,16,16,17 ⋆ Largest subset of integers [1...n] such that no member divides two others. ● a(n) >= ceiling(2n / 3). For large n, 0.6725n <= a(n) <= 0.6736n (see Guy). ●

▶ [A094331] 1,1,2,2,3,4,4,5,6,6,7,8,8,9,10,11,11,12,13,13,14,15,16,16,17 ⋆ Least k such that n! < (n + 1)(n + 2)(n + 3)...(n + k). ● a(n) = f(n) + 1, where f(n) is the function defined on p. 65 of Brilleslyper et al. - _ Michel Marcus _ , Apr 11 2022 ●

▶ [A265133] 0,1,2,2,3,4,4,5,6,6,7,8,9,9,10,11,11,12,13,13,14,15,15,16,17 ⋆ Beatty sequence for log(2). ● a(n) = floor(n * log(2)). ●

▶ [A064506] 0,1,2,2,3,4,4,5,6,6,7,8,9,9,10,11,11,12,13,14,14,15,16,16,17 ⋆ a(n) = Max { k | k * (k + 1) / 2 <= n * (n + 1) / 2 - k * (k + 1) / 2 } . ● a(n) = floor((sqrt(2 * n * (n + 1) + 1) - 1) / 2) ●

▶ [A368131] 0,0,1,2,2,3,4,4,5,6,7,7,8,9,9,10,11,12,12,13,14,14,15,16,17 ⋆ a(n) = floor(n * log(4 / 3) / log(3 / 2)) ● a(n) = floor(n * log(3) / log(3 / 2)) - 2 * n. ● a(n) = floor(n * arctanh(1 / 7) / arctanh(1 / 5)). ●

▶ [A272206] 1,2,2,3,4,4,5,6,7,7,8,9,10,10,11,12,12,13,14,14,15,16,16,17,18 ⋆ Rounded barycenter of first n primes defined as a(n) = round(sum _{ i=1..n } (i * prime(i)) / sum _{ i=1..n } prime(i)) ● a(n) = round(sum _{ i=1..n } (i * prime(i)) / sum _{ i=1..n } prime(i)). ●

▶ [A309945] 0,0,0,1,2,2,3,4,4,5,6,7,8,8,9,10,11,12,12,13,14,15,16,17,18 ⋆ a(n) = floor(n - sqrt(2 * n - 1)). ● a(n) = n - 1 - floor(sqrt(2 * n - 2)). - _ Wesley Ivan Hurt _ , Dec 03 2020 ●

▶ [A103354] 1,1,2,2,3,4,4,5,6,7,8,8,9,10,11,12,13,14,15,16,16,17,18,19,20 ⋆ a(n) = floor(x), where x is the solution to x = 2 ^ (n - x). ● a(n) is approximately n / (1 + log _ 2(n) / n). ● a(n) = floor(LambertW(log(2) * 2 ^ n) / log(2)) = floor (n - log _ 2(n) + log _ 2(n) / (n log(2)) + O((log(n) / n) ^ 2)) = floor(n - log _ 2(n) + 1.5 * log _ 2(n) / n) at least for all n < 10 ^ 7. - _ M. F. Hasler _ , Dec 14 2007 ●

▶ [A097950] 1,1,1,2,2,3,4,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21 ⋆ G.f.: (1 + x ^ 5 + x ^ 10) / ((1 - x) * (1 - x ^ 3)). ● a(n) = n - 3 for n > 7. [_ Charles R Greathouse IV _ , Oct 27 2011] ●

▶ [A211524] 0,0,0,0,0,0,0,0,1,1,1,2,2,3,4,4,5,6,7,8,9,10,11,13,14 ⋆ Number of ordered triples (w,x,y) with all terms in { 1,...,n } and w=3x + 5y. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) + a(n - 5) - a(n - 6) - a(n - 8) + a(n - 9). ●

▶ [A008672] 1,1,1,2,2,3,4,4,5,6,7,8,9,10,11,13,14,15,17,18,20,22,23,25,27 ⋆ Expansion of 1 / ((1 - x) * (1 - x ^ 3) * (1 - x ^ 5)). ● a(n) = round((n + 3) * (n + 6) / 30). ● a(n) = floor(n ^ 2 / 30 + 3 * n / 10 + 1). - _ Michael Somos _ , Nov 25 2002 ● a(n) = a(- 9 - n). - _ Michael Somos _ , Nov 16 2005 ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) + a(n - 5) - a(n - 6) - a(n - 8) + a(n - 9); a(0)=1, a(1)=1, a(2)=1, a(3)=2, a(4)=2, a(5)=3, a(6)=4, a(7)=4, a(8)=5. - _ Harvey P. Dale _ , Feb 07 2012 ●

▶ [A011880] 0,0,0,0,0,0,1,1,2,2,3,4,4,5,6,7,8,10,11,12,14,15,17,18,20 ⋆ a(n) = floor(n * (n - 1) / 27). ● a(n)= + 2 * a(n - 1) - a(n - 2) + a(n - 27) - 2 * a(n - 28) + a(n - 29). - _ R. J. Mathar _ , Aug 11 2021 ●

▶ [A029043] 1,1,1,2,2,3,4,4,5,6,7,9,10,11,13,15,17,19,21,23,26,29,32,35,38 ⋆ Expansion of 1 / ((1 - x)(1 - x ^ 3)(1 - x ^ 5)(1 - x ^ 11)). ● a(n) = floor((n ^ 3 + 30 * n ^ 2 + 371 * n + 1188 - 330 * floor((n + 2) / 3)) / 990). - _ Tani Akinari _ , Jun 28 2013 ●

▶ [A029041] 1,1,1,2,2,3,4,4,5,7,8,9,11,12,14,17,18,20,24,26,29,33,35,39,44 ⋆ Expansion of 1 / ((1 - x)(1 - x ^ 3)(1 - x ^ 5)(1 - x ^ 9)). ● a(n) = floor((n ^ 3 + 27 * n ^ 2 + 204 * n + 700 + 10 * [3 * n + 29,4,0][(n mod 3) + 1]) / 810). - _ Tani Akinari _ , Oct 01 2014 ●

▶ [A173633] 1,1,1,2,2,3,4,4,6,6,7,8,8,10,10,11,12,12,14,14,15,16,16,18,18 ⋆ a(n) = a(n - 2) + a(n - 3) - [a(n - 3) / 4] - [a(n - 4) / 2] - [a(n - 5) / 4]. ● a(n)=a(n - 2) + a(n - 3) - Floor[a(n - 3) / 4] - Floor[a(n - 4) / 2] - Floor[a(n - 5) / 4] ●

▶ [A029040] 1,1,1,2,2,3,4,4,6,7,8,10,11,13,15,17,20,22,25,28,31,35,38,42,47 ⋆ Expansion of 1 / ((1 - x)(1 - x ^ 3)(1 - x ^ 5)(1 - x ^ 8)). ● a(n) = floor((2 * n ^ 3 + 51 * n ^ 2 + 384 * n + 1368 + 180 * (1 + (- 1) ^ floor((n + 1) / 2)) * (- 1) ^ floor(n / 4)) / 1440). - _ Tani Akinari _ , Jun 28 2013 ●

▶ [A330715] 1,1,1,2,2,3,4,4,6,7,10,12,16,19,24,28,34,39,46,52,60,67,76,84,94 ⋆ a(1), a(2), a(3) = 1; a(n) = (a(n - 1) mod a(n - 3)) + a(n - 2) + 1. ● a(1), a(2), a(3) = 1; a(n) = (a(n - 1) mod a(n - 3)) + a(n - 2) + 1. ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4) for n>9. ● a(n) = (99 - 3 * (- 1) ^ n - 24 * n + 2 * n ^ 2) / 8 for n>5. ●

▶ [A262699] 1,2,2,3,4,4,8,8,16,16,32,32,64,64,128,128,256,256,512,512,1024,1024,2048,2048,4096 ⋆ List of currency denominations such that any value x > 0 is represented in exactly x ways as a sum of distinct denominations, where a repeated value represents a bill and a coin which count as distinct denominations. ● a(n) = 2 ^ ceiling(n / 2 - 1) for n>4. ●

▶ [A069928] 1,1,2,2,3,4,5,5,5,5,6,6,7,8,9,9,10,10,11,12,13,14,15,15,15 ⋆ Number of k, 1<=k<=n, such that tau(k) divides sigma(k) where tau(x) is the number of divisors of x and sigma(x) the sum of divisors of x. ● a(n)=Card(k: 1<=k<=n : sigma(k) == 0 (mod tau(k)) : lim n - > infinity a(n) / n=C=0, 8... ●

▶ [A242493] 0,1,2,2,3,4,5,5,5,6,7,7,8,9,10,10,11,11,12,13,14,15,16,16,16 ⋆ a(n) is the number of not - sqrt - smooth numbers (”jagged” numbers) not exceeding n. This is the counting function of A064052. ● a(n) = Sum _{ i=1..floor(sqrt(n)) } (pi(floor(n / i)) - pi(i)). ● a(n) = Sum _{ p<=sqrt(n) } (p - 1) + Sum _{ sqrt(n)<p<=n } floor(n / p), where p is prime. ●

▶ [A156351] 1,1,2,2,3,4,5,5,6,7,7,8,8,9,10,10,11,11,12,13,14,14,15,16,17 ⋆ a(n) = Sum _{ k=1..n } (- 1) ^ K(k + 1) * (K(k + 1) - K(k)) where K(k) = A000002(k). ● a(n) = gcd(a(a(n - 1)),2) + a(n - 2) (conjectured). - _ Jon Maiga _ , Dec 07 2021 ●

▶ [A274616] 0,1,1,2,2,3,4,5,5,6,7,7,8,9,9,10,11,11,12,13,13,14,15,15,16 ⋆ Maximal number of non - attacking queens on a right triangular board with n cells on each side. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>5. ● a(n) = 2 * (3 * n + sqrt(3) * sin((2 * Pi * n) / 3)) / 9. - _ Colin Barker _ , Mar 08 2017 ●

▶ [A257175] 0,1,2,2,3,4,5,5,6,7,7,8,9,10,10,11,12,12,13,14,14,15,16,17,17 ⋆ The smallest m such that the m - th triangular number is greater than or equal to half the n - th triangular number. ● a(n) = ceiling((sqrt(2n ^ 2 + 2n + 1) - 1) / 2). - _ Charles R Greathouse IV _ , Apr 17 2015 ●

▶ [A076538] 0,1,2,2,3,4,5,5,6,7,8,8,9,10,10,11,12,13,13,14,15,16,16,17,18 ⋆ Numerators a(n) of fractions slowly converging to e: let a(1) = 0, b(n) = n - a(n); if (a(n) + 1) / b(n) < e then a(n + 1) = a(n) + 1, else a(n + 1)= a(n). ● a(1) = 0. b(n) = n - a(n). If (a(n) + 1) / b(n) < e, then a(n + 1) = a(n) + 1, else a(n + 1) = a(n). ● a(n) = floor(n * exp(1) / (exp(1) + 1)). - _ Vladeta Jovovic _ , Oct 04 2003 ●

▶ [A039960] 1,1,1,1,2,2,3,4,5,5,6,7,8,8,9,10,11,11,12,13,14,14,15,16,17 ⋆ For n > = 2, a(n) = largest value of k such that n ^ k is <= n! (a(0) = a(1) = 1 by convention). ● a(n) = floor(log _ n(n!)) for n > 1. ●

▶ [A066530] 1,2,2,3,4,5,5,6,7,8,8,9,10,11,11,12,13,14,14,15,16,17,17,18,19 ⋆ Expansion of (1 + x + x ^ 3) / ((1 - x) * (1 - x ^ 4)). ● a(n) = floor((3 * n + 5) / 4). ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>4, with a(0)=1, a(1)=2, a(2)=2, a(3)=3, a(4)=4. - _ Harvey P. Dale _ , Apr 01 2013 ● a(n) = (6 * n + 7 + 2 * cos(n * Pi / 2) + cos((n + 1) * Pi) + 2 * sin(n * Pi / 2)) / 8. - _ Wesley Ivan Hurt _ , Oct 01 2017 ●

▶ [A105235] 1,2,2,3,4,5,5,6,7,8,8,9,10,11,11,12,13,14,15,16,17,18,18,19,20 ⋆ Partial sums of the central column of a Moebius - binomial triangle. ● a(n)=sum { k=0..n, binomial(abs(mu(2k)), abs(mu(k))) ●

▶ [A011884] 0,0,0,0,0,0,0,1,1,2,2,3,4,5,5,6,7,8,9,11,12,13,14,16,17 ⋆ Floor(n(n - 1) / 31). ● a(0)=0, a(1)=0, a(2)=0, a(3)=0, a(4)=0, a(5)=0, a(6)=0, a(7)=1, a(8)=1, a(9)=2, a(10)=2, a(11)=3, a(12)=4, a(13)=5, a(14)=5, a(15)=6, a(16)=7, a(17)=8, a(18)=9, a(19)=11, a(20)=12, a(21)=13, a(22)=14, a(23)=16, a(24)=17, a(25)=19, a(26)=20, a(27)=22, a(28)=24, a(29)=26, a(30)=28, a(31)=30, a(32)=32, a(n)=2 * a(n - 1) - a(n - 2) + a(n - 31) - 2 * a(n - 32) + a(n - 33). - _ Harvey P. Dale _ , Jan 23 2016 ●

▶ [A241730] 0,0,0,0,1,2,2,3,4,5,5,6,7,8,9,11,12,13,14,16,17,18,20,21,22 ⋆ Number of digits in the decimal expansion of n! minus the number of digits in the decimal expansion of n. ● a(n) = floor(log(n!) / log(10)) - floor(log(n) / log(10)) for n > 0. ●

▶ [A183003] 0,0,0,1,1,2,2,3,4,5,5,7,7,8,9,11,11,13,13,15,16,17,17,20,21 ⋆ a(n) = A183002(n) / 2. ● a(n) = Sum _{ k=1..floor((n - 1) / 3) } Sum _{ i=k..floor((n - k - 1) / 2) } sign(floor((n - i - k - 1) / (i * k))). - _ Wesley Ivan Hurt _ , Jan 03 2022 ● a(n) = (1 / 2) * Sum _{ k=1..n } (tau(k) - 2 + (tau(k) mod 2)), tau = A000005. - _ Alois P. Heinz _ , Jan 04 2022 ●

▶ [A165684] 0,0,0,0,1,1,1,2,2,3,4,5,5,7,8,9,11,13,13,17,18,20,23,26,27 ⋆ Dimension of the space of Siegel cusp forms of genus 2 and dimension 2n (associated with full modular group Gamma _ 2). ● a(n) = 1 / 1080 * n ^ 3 + 1 / 45 * n ^ 2 + O(n). (from g.f.) - _ Ralf Stephan _ , Jun 20 2014 ●

▶ [A340276] 0,0,1,1,1,2,2,3,4,5,5,7,8,10,11,12,13,16,17,20,22,24,25,29,30 ⋆ Number of partitions of n into 3 parts whose largest two parts are relatively prime. ● a(n) = Sum _{ k=1..floor(n / 3) } Sum _{ i=k..floor((n - k) / 2) } floor(1 / gcd(i,n - i - k)). ●

▶ [A340275] 0,0,1,1,2,2,3,4,5,5,7,8,10,11,12,13,16,17,20,22,24,25,29,30,33 ⋆ Number of partitions of n into 3 parts whose smallest two parts are relatively prime. ● a(n) = Sum _{ k=1..floor(n / 3) } Sum _{ i=k..floor((n - k) / 2) } floor(1 / gcd(i,k)). ●

▶ [A028391] 0,0,1,2,2,3,4,5,6,6,7,8,9,10,11,12,12,13,14,15,16,17,18,19,20 ⋆ a(n) = n - floor(sqrt(n)). ● a(n) = ceiling(n - sqrt(n)), as follows from ceiling(- x) = - floor(x). [Corrected by _ M. F. Hasler _ , Feb 21 2010] ●

▶ [A289188] 2,2,3,4,5,6,7,8,8,9,10,11,12,13,14,14,15,16,17,18,18,19,20,21,22 ⋆ Eternal domination number for P _ 3 X P _ n grid graph. ● a(n) = a(n - 5) + 4 for n > 26. ●

▶ [A011879] 0,0,0,0,0,0,1,1,2,2,3,4,5,6,7,8,9,10,11,13,14,16,17,19,21 ⋆ a(n) = floor(n(n - 1) / 26). ● a(n)= + 2 * a(n - 1) - a(n - 2) + a(n - 13) - 2 * a(n - 14) + a(n - 15). - _ R. J. Mathar _ , Aug 11 2021 ●

▶ [A011878] 0,0,0,0,0,0,1,1,2,2,3,4,5,6,7,8,9,10,12,13,15,16,18,20,22 ⋆ a(n) = floor(n(n - 1) / 25). ● a(n) = + 2 * a(n - 1) - a(n - 2) + a(n - 25) - 2 * a(n - 26) + a(n - 27). ●

▶ [A011874] 0,0,0,0,0,0,1,2,2,3,4,5,6,7,8,10,11,12,14,16,18,20,22,24,26 ⋆ a(n) = floor(n * (n - 1) / 21). ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 21) - 2 * a(n - 22) + a(n - 23). - _ R. J. Mathar _ , Aug 11 2021 ●

▶ [A000115] 1,1,2,2,3,4,5,6,7,8,10,11,13,14,16,18,20,22,24,26,29,31,34,36,39 ⋆ Denumerants: Expansion of 1 / ((1 - x) * (1 - x ^ 2) * (1 - x ^ 5)). ● a(n) = round

((n + 4) ^ 2 / 20). • a(n) = a(- 8 - n) for all n in Z. - _ Michael Somos _ , May 28 2014 •

▶ [A033552] 1,1,2,2,3,4,5,6,7,8,10,11,13,14,17,19,22,24,27,30,34,37,41,44,49 ⋆ Number of partitions into Catalan numbers. • a(n) = f(n,1,1) with f(m,k,c) = if c > m then 0 ^ m else f(m - c,k,c) + f(m,k + 1,2 * c * (2 * k + 1) / (k + 2)). [_ Reinhard Zumkeller _ , Apr 09 2010] •

▶ [A029015] 1,1,2,2,3,4,5,6,7,8,10,12,14,16,18,21,24,27,30,33,37,41,46,50,55 ⋆ Expansion of 1 / ((1 - x)(1 - x ^ 2)(1 - x ^ 5)(1 - x ^ 11)). • a(0)=1, a(1)=1, a(2)=2, a(3)=2, a(4)=3, a(5)=4, a(6)=5, a(7)=6, a(8)=7, a(9)=8, a(10)=10, a(11)=12, a(12)=14, a(13)=16, a(14)=18, a(15)=21, a(16)=24, a(17)=27, a(18)=30, a(n) = a(n - 1) + a(n - 2) - a(n - 3) + a(n - 5) - a(n - 6) - a(n - 7) + a(n - 8) + a(n - 11) - a(n - 12) - a(n - 13) + a(n - 14) - a(n - 16) + a(n - 17) + a(n - 18) - a(n - 19). - _ Harvey P. Dale _ , Dec 24 2011 • a(n) = floor((2 * n ^ 3 + 57 * n ^ 2 + 466 * n + 1622) / 1320 + (- 1) ^ n / 16). - _ Tani Akinari _ , May 19 2014 •

▶ [A000008] 1,1,2,2,3,4,5,6,7,8,11,12,15,16,19,22,25,28,31,34,40,43,49,52,58 ⋆ Number of ways of making change for n cents using coins of 1, 2, 5, 10 cents. • a(n) = a(n - 2) + a(n - 5) - a(n - 7) + a(n - 10) - a(n - 12) - a(n - 15) + a(n - 17) + 1. - _ Michael Somos _ , Apr 01 2003 • a(n) = - a(- 18 - n). - _ Michael Somos _ , Apr 01 2003 •

▶ [A011873] 0,0,0,0,0,1,1,2,2,3,4,5,6,7,9,10,12,13,15,17,19,21,23,25,27 ⋆ a(n) = floor(n(n - 1) / 20). • a(n) = + 2 * a(n - 1) - a(n - 2) + a(n - 5) - 2 * a(n - 6) + a(n - 7) - a(n - 10) + 2 * a(n - 11) - a(n - 12) + a(n - 15) - 2 * a(n - 16) + a(n - 17). •

▶ [A173151] 1,1,2,2,3,4,5,6,7,9,10,12,13,16,17,20,21,25,26,30,31,36,37,42,43 ⋆ a(n) = a(n - 1) - [a(n - 1) / 2] + a(n - 2) - [a(n - 5) / 2] where [k] = floor(k). • a(n) = a(n - 1) - floor[a(n - 1) / 2] + a(n - 2) - floor[a(n - 5) / 2]. • a(n) = a(n - 1) + a(n - 2) - a(n - 3) + a(n - 4) - a(n - 5) - a(n - 6) + a(n - 7) for n > 6. • a(n) = ((- 1) ^ n * (11 - 2 * n) + 2 * n * (n + 5) + 4 * sin(Pi * n / 2) - 4 * cos(Pi * n / 2) + 25) / 32. - _ Ilya Gutkovskiy _ , Jun 03 2016 •

▶ [A008673] 1,1,1,2,2,3,4,5,6,7,9,10,12,14,16,19,21,24,27,30,34,38,42,46,51 ⋆ Expansion of 1 / ((1 - x) * (1 - x ^ 3) * (1 - x ^ 5) * (1 - x ^ 7)). • a(n) = floor((n ^ 3 + 24 * n ^ 2 + 171 * n + 630) / 630). - _ Tani Akinari _ , Jul 08 2013 • a(n) = a(n - 1) + a(n - 3) - a(n - 4) + a(n - 5) - a(n - 6) + a(n - 7) - 2 * a(n - 8) + a(n - 9) - a(n - 10) + a(n - 11) - a(n - 12) + a(n - 13) + a(n - 15) - a(n - 16). - _ David Neil McGrath _ , Feb 14 2015 •

▶ [A342558] 1,1,1,1,1,2,2,3,4,5,6,7,9,10,12,15,16,18,19,20,21,22,23,24,25 ⋆ a(n) is the maximum number of distinct currents > 0 in a network of n one - ohm resistors with a total resistance of 1 ohm. • a(n) = n for n >= 18. •

▶ [A088567] 1,1,1,2,2,3,4,5,6,7,9,10,13,14,18,19,24,25,31,32,40,41,50,51,63 ⋆ Number of "non - squashing" partitions of n into distinct parts. • a(0)=1, a(1)=1; and for m >= 1, a(2m) = a(2m - 1) + a(m) - 1, a(2m + 1) = a(2m) + 1. •

▶ [A242634] 0,1,1,2,2,3,4,5,6,7,9,10,13,14,18,19,24,25,31,32,40,41,50,51,63 ⋆ G.f. A(x) satisfies A(x) = A(x ^ 2) / (1 - x) + x / (1 - x ^ 2). • a(n) = a(n - 2) + a(floor(n / 2)) unless n=1. •

▶ [A029014] 1,1,2,2,3,4,5,6,7,9,11,13,15,17,20,23,26,29,33,37,42,46,51,56,62 ⋆ Expansion of 1 / ((1 - x)(1 - x ^ 2)(1 - x ^ 5)(1 - x ^ 9)). • a(0)=1, a(1)=1, a(2)=2, a(3)=2, a(4)=3, a(5)=4, a(6)=5, a(7)=6, a(8)=7, a(9)=9, a(10)=11, a(11)=13, a(12)=15, a(13)=17, a(14)=20, a(15)=23, a(16)=26, a(n)=a(n - 1) + a(n - 2) - a(n - 3) + a(n - 5) - a(n - 6) - a(n - 7) + a(n - 8) + a(n - 9) - a(n - 10) - a(n - 11) + a(n - 12) - a(n - 14) + a(n - 15) + a(n - 16) - a(n - 17) [From Harvey P. Dale, Mar 03 2012] •

▶ [A011872] 0,0,0,0,0,1,1,2,2,3,4,5,6,8,9,11,12,14,16,18,20,22,24,26,29 ⋆ [n(n - 1) / 19]. • a(n) = + 2 * a(n - 1) - a(n - 2) + a(n - 19) - 2 * a(n - 20) + a(n - 21). [From _ R. J. Mathar _ , Apr 15 2010] •

▶ [A029013] 1,1,2,2,3,4,5,6,8,9,12,13,16,18,21,24,28,31,36,39,45,49,55,60,67 ⋆ Expansion of 1 / ((1 - x)(1 - x ^ 2)(1 - x ^ 5)(1 - x ^ 8)). • a(0)=1, a(1)=1, a(2)=2, a(3)=2, a(4)=3, a(5)=4, a(6)=5, a(7)=6, a(8)=8, a(9)=9, a(10)=12, a(11)=13, a(12)=16, a(13)=18, a(14)=21, a(15)=24, a(n)=a(n - 1) + a(n - 2) - a(n - 3) + a(n - 5) - a(n - 6) - a(n - 7) + 2 * a(n - 8) - a(n - 9) - a(n - 10) + a(n - 11) - a(n - 13) + a(n - 14) + a(n - 15) - a(n - 16). - _ Harvey P. Dale _ , Aug 26 2012 •

▶ [A000009] 1,1,1,2,2,3,4,5,6,8,10,12,15,18,22,27,32,38,46,54,64,76,89,104,122 ⋆ Expansion of Product _{ m >= 1 } (1 + x ^ m); number of partitions of n into distinct parts; number of partitions of n into odd parts. • a(n) = t(n, 0), t as defined in A079211. • a(0)=1; a(n) = 2 * (Sum _{ k=1..floor(sqrt(n)) } (- 1) ^ (k + 1) a(n - k ^ 2)) + sigma(n) where sigma(n) = (- 1) ^ j if (n=(j * (3 * j + 1)) / 2 OR n=(j * (3 * j - 1)) / 2) otherwise sigma(n)=0 (simpler: sigma = A010815). (End) • a(n) = P(n) - P(n - 2) - P(n - 4) + P(n - 10) + P(n - 14) + ... + (- 1) ^ m P(n - 2p _ m) + ..., where P(n) is the partition function (A000041) and p _ m = m(3m - 1) / 2 is the m - th generalized pentagonal number (A001318). - _ Jerome Malenfant _ , Feb 16 2011 •

▶ [A179241] 1,1,1,2,2,3,4,5,6,8,10,12,15,19,24,29,36,45,56,69,85,105,130,161,200 ⋆ Powers of sqrt(5) - 1 rounded down. • a(n) = floor((sqrt(5) - 1) ^ n). •

▶ [A130082] 1,2,2,3,4,5,6,8,10,14,18,24,32,43,57,75,100,134,178,238,317,422,563,750,1000 ⋆ Smallest number whose eighth power has at least n digits. • a(n) = ceiling(10 ^ ((n - 1) / 8)). •

▶ [A192660] 1,1,1,2,2,3,4,5,6,8,11,14,17,22,29,36,46,59,76,96,122,156,199,253,321 ⋆ Floor - Sqrt transform of Lucas numbers (A000032). • a(n) = floor(sqrt(Lucas(n))). •

▶ [A173692] 0,1,1,1,1,1,2,2,3,4,5,6,8,11,14,19,25,33,43,57,76,100,133,176,233 ⋆ a(n) = ceiling(A000931(n) / 2). • a(n) = a(n - 2) + a(n - 3) + a(n - 7) - a(n - 9) - a(n - 10). - _ R. J. Mathar _ , Mar 11 2012 •

▶ [A029012] 1,1,2,2,3,4,5,7,8,10,12,14,17,19,23,26,30,34,38,43,48,54,60,66,73 ⋆ Expansion of 1 / ((1 - x) * (1 - x ^ 2) * (1 - x ^ 5) * (1 - x ^ 7)). • a(n) = floor((2 * n ^ 3 + 45 * n ^ 2 + 298 * n + 956) / 840 + (- 1) ^ n / 16). - _ Tani Akinari _ , Oct 15 2014 •

▶ [A112192] 1,1,2,2,3,4,5,7,8,10,13,16,20,24,30,36,43,52,61,73,86,102,120,140,165 ⋆ Coefficients of replicable function number "48h". • a(n) = number of partitions of n into parts == +- 1, +- 2, +- 5 (mod 12). - _ Michael Somos _ , Sep 30 2015 •

▶ [A255575] 1,1,1,2,2,3,4,5,7,9,12,15,20,26,33,43,56,72,92,119,153,197,253,325,419 ⋆ a(n) = floor(((sqrt(sqrt(3)) ^ 3) / sqrt(Pi)) ^ n). • a(n) = floor(((sqrt(sqrt(3)) ^ 3) / sqrt(Pi)) ^ n). •

▶ [A134816] 1,1,1,2,2,3,4,5,7,9,12,16,21,28,37,49,65,86,114,151,200,265,351,465,616 ⋆ Padovan's spiral numbers. • a(1)=a(2)=a(3)=1, a(n) = a(n - 2) + a(n - 3) for n > 3. - _ Robert FERREOL _ , Oct 16 2017 •

▶ [A228361] 0,0,1,2,2,3,4,5,7,9,12,16,21,28,37,49,65,86,114,151,200,265,351,465,616 ⋆ The number of all possible covers of L - length line segment by 2 - length line segments with allowed gaps < 2. • a(n) = a(n - 2) + a(n - 3) for n >= 5. •

▶ [A072493] 1,1,1,1,2,2,3,4,5,7,9,12,16,22,29,39,52,69,92,123,164,218,291,388,517 ⋆ a(1) = 1 and a(n) = ceiling((Sum _{ k=1..n - 1 } a(k)) / 3) for n >= 2. • a(n) = ceiling(c * (4 / 3) ^ n - 1 / 2) where c = 0.389324199524937508840138455... •

▶ [A173674] 0,1,1,1,1,1,2,2,3,4,5,7,10,13,18,25,35,48,66,91,125,173,238,329,454 ⋆ a(n) = ceiling(A003269(n) / 2). • a(n)= a(n - 1) + a(n - 4) + a(n - 15) - a(n - 16) - a(n - 19). - _ R. J. Mathar _ , Sep 10 2016 •

▶ [A228693] 1,1,2,2,3,4,5,8,9,16,17,32,33,64,65,128,129,256,257,512,513,1024,1025,2048,2049 ⋆ Largest number of maximal independent sets of nodes in any tree on n nodes. • a(n) = 3 * a(n - 2) - 2 * a(n - 4) for n > 4. (End) •

▶ [A014535] 0,1,1,1,1,2,2,3,4,5,8,14,23,32,43,63,97,149,224,332,489,727,1116,1776,2897 ⋆ Number of B - trees of order 3 with n leaves. • a(0) = 0, a(1) = 1, a(n) = Sum _{ k=ceiling(n / 3)..floor(n / 2) } binomial(k, 3 * k - n) * a(k) - _ Jean - François Alcover _ , Jul 29 2014, after Steven Finch. •

▶ [A011868] 0,0,0,0,0,1,2,2,3,4,6,7,8,10,12,14,16,18,20,22,25,28,30,33,36 ⋆ a(n) = floor(n * (n - 1) / 15). • a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 15) - 2 * a(n - 16) + a(n - 17). •

▶ [A029011] 1,1,2,2,3,4,6,7,9,10,13,15,19,21,25,28,33,37,43,47,54,59,67,73,82 ⋆ Expansion of 1 / ((1 - x)(1 - x ^ 2)(1 - x ^ 5)(1 - x ^ 6)). • a(n) = - a(- 14 - n). • a(n) = a(n - 2) + a(n - 5) + a(n - 6) - a(n - 7) - a(n - 8) - a(n - 11) + a(n - 13) + 1. • a(n) = a(n - 1) + a(n - 2) - a(n - 3) + a(n - 5) - 2 * a(n - 7) + a(n - 9) - a(n - 11) + a(n - 12) + a(n - 13) - a(n - 14). - _ David Neil McGrath _ , Dec 06 2014 •

▶ [A274149] 1,1,1,1,1,2,2,3,4,6,7,9,12,17,22,29,38,51,68,90,119,158,209,277,368 ⋆ Number of integers in n - th generation of tree T(- 1 / 4) defined in Comments. • a(n - 1) = length of row n of the array in A274185. •

▶ [A339572] 0,0,1,2,2,3,4,6,7,10,12,17,20,28,33,46,54,75,88,122,143,198,232,321,376 ⋆ If n even, a(n) = A000071(n / 2 + 1); if n odd, a(n) = A001610((n - 1) / 2). • a(n) = Fibonacci(k + 2) + Fibonacci(k) * (n mod 2) - 1, where k = floor(n / 2). - _ Wesley Ivan Hurt _ , Dec 09 2020 •

▶ [A115593] 1,1,1,2,2,3,4,6,7,10,13,17,22,29,38,50,64,82,107,136,175,224,288,363,465 ⋆ Number of forests of rooted trees with total weight n, where a node at height k has weight 2 ^ k (with root considered to be at height 0). • a(0) = 1; a(n) = (1 / n) * Sum _{ k=1..n } (Sum _{ d|k and d is odd } d * a(floor(d / 2))) * a(n - k). - _ Seiichi Manyama _ , May 31 2023 •

▶ [A213816] 1,1,1,2,2,3,4,6,7,11,13,20,24,37,44,68,81,125,149,230,274,423,504,778,927 ⋆ Tribonacci sequences A000073 and A001590 interleaved. • a(1) = a(2) = a(3) = 1; for n>1: • a(2n) = a(2n - 1) + a(2n - 3), • a(2n + 1) = a(2n - 1) + a(2n - 2). •

▶ [A130081] 1,2,2,3,4,6,8,10,14,20,27,38,52,72,100,139,194,269,373,518,720,1000,1390,1931,2683 ⋆ Smallest number whose seventh power has at least n digits. • a(n) = ceiling(10 ^ ((n - 1) / 7)). •

▶ [A339235] 1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,2,2,3,4,6,8,12,16,23 ⋆ G.f.: Sum _{ k>=0 } x ^ (k ^ 4) / Product _{ j=1..k ^ 4 } (1 - x ^ j). • a(18) = 3 because we have [18], [3, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1] and [2, 2, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1] (see the first comment) or[16, 2], [16, 1, 1] and [1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1] (see the second comment). •

▶ [A107293] 0,0,0,0,1,1,2,2,3,4,6,9,13,19,27,39,56,81,117,169,244,352,508,733,1058 ⋆ The (1,1) - entry of the matrix M ^ n, where M is the 5 X 5 matrix [[0,1,0,0,0],[0,0,1,0,0], [0,0,0,1,0], [0,0,0,0,1], [1,0, - 1,1,1]]. • a(n) = a(n - 1) + a(n - 2) - a(n - 3) + a(n - 5) for n >= 5. •

▶ [A001611] 1,2,2,3,4,6,9,14,22,35,56,90,145,234,378,611,988,1598,2585,4182,6766,10947,17712,28658,46369 ⋆ a(n) = Fibonacci(n) + 1. • a(n) = 2 * a(n - 1) - a(n - 3). - _ Tanya Khovanova _ , Jul 13 2007 • a(0) = 1, a(1) = 2, a(n) = a(n - 2) + a(n - 1) - 1. • a(1) = 2; a(n + 1)=floor(a(n) * (sqrt(5) + 1) / 2). - Roland Schroeder (florola(AT)gmx.de), Aug 05 2010 • a(n) = Sum _{ k=0..n + 1 } Fibonacci(k - 3). - _ Ehren Metcalfe _ , Apr 15 2019 •

▶ [A214448] 1,2,2,3,4,6,9,15,25,44,80,148,281,544,1070,2139,4343,8946,18676,39495,84545,183102,400981,887517,1984548 ⋆ Least m>0 such that m ^ 4 >= n!. • a(n) = ceiling(n! ^ (1 / 4)). •

▶ [A065482] 2,2,3,4,6,11,18,32,57,102,186,341,630,1170,2185,4096,7710,14564,27594,52429,99864,190650,364722,699051,1342177 ⋆ a(n) = round(2 ^ n / n). • a(n) = floor((2 ^ n + floor(n / 2)) / n). •

▶ [A345867] 1,1,2,2,3,4,7,9,10,11,11,14,17,19,20,22,23,24,28,31,35,37,40,43,47 ⋆ Total number of 0's in the binary expansions of the first n primes. • a(n) = a(n - 1) for n in { A059305 } . •

▶ [A023105] 1,2,2,3,4,7,12,23,44,87,172,343,684,1367,2732,5463,10924,21847,43692,87383,174764,349527,699052,1398103,2796204 ⋆ Number of distinct quadratic residues mod 2 ^ n. • a(n) = floor((2 ^ n + 10) / 6). • a(n) = (2 ^ n + 9 - (- 1) ^ n) / 6 for n > 0. - _ David S. Dodson _ , Jan 06 2013 • a(0)=1, a(1)=2. a(n) = 2 * a(n - 1) - 2 if n is even, a(n) = 2 * a(n - 1) - 1 if n is odd. - _ Vincenzo Librandi _ , Apr 21 2012 • a(n) = 2 * a(n - 1) + a(n - 2) - 2 * a(n - 3) for n > 0. - _ Joerg Arndt _ , Apr 21 2012 •

▶ [A361117] 2,2,3,4,8,17,24,32,40,48,50,54,58,69,73,104,120,122,126,137,141,160,164,176,200 ⋆ a(n) is the least k such that A360519(k) is divisible by the n - th prime number. • a(n) <= a(n + 1). •

▶ [A289199] 0,0,2,2,3,5,5,6,7,7,9,10,10,12,12,14,14,15,17,17,18,19,19,21,22 ⋆ a(n) is the number of odd integers divisible by 13 in the open interval (12 * (n - 1) ^ 2, 12 * n ^ 2). • a(n + 13 * k) = a(n) + 12 * k. • a(n) = 12n / 13 + O(1). - _ Charles R Greathouse IV _ , Jun 29 2017 • a(n) = a(n - 1) + a(n - 13) - a(n - 14) for n>13. •

► [A011971] 1,1,2,2,3,5,5,7,10,15,15,20,27,37,52,52,67,87,114,151,203,203,255,322,409 ⋆ Aitken's array: triangle of numbers { a(n,k), n >= 0, 0 <= k <= n } read by rows, defined by a(0,0)=1, a(n,0) = a(n - 1,n - 1), a(n,k) = a(n,k - 1) + a(n - 1,k - 1). ● a(n,k) = Sum _{ i=0..k } binomial(k,i) * Bell(n - k + i). - _ Vladeta Jovovic _ , Oct 15 2006 ●

► [A098180] 1,2,2,3,5,6,6,7,9,10,10,11,13,14,14,15,17,18,18,19,21,22,22,23,25 ⋆ Odd numbers with twice the odd numbers repeated in order between them. ● a(n) = sqrt(2) * sin(Pi * n / 2 + Pi / 4) / 2 + n + 1 / 2. ● a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4), n>3. ● a(n) = (2n + 1 - (- 1) ^ ((n + 1) * (n + 2) / 2)) / 2. ●

► [A357411] 1,1,2,2,3,5,6,6,7,9,10,10,11,13,26,26,27,45,46,74,93,99,100,162,163 ⋆ Number of nonempty subsets of { 1..n } whose elements have an odd harmonic mean. ● a(p) = a(p - 1) + 1 for prime p > 2. - _ Michael S. Branicky _ , Sep 30 2022 ●

► [A290273] 2,2,3,5,7,8,13,18,25,34,49,69,95,134,188,264,368,517,725,1015,1422,1993,2794,3913,5484 ⋆ Number of minimal dominating sets in the n - pan graph. ● a(n) = a(n - 2) + a(n - 3) + a(n - 4) - a(n - 6). ●

► [A097333] 1,2,2,3,5,7,10,15,22,32,47,69,101,148,217,318,466,683,1001,1467,2150,3151,4618,6768,9919 ⋆ a(n) = Sum _{ k=0..n } C(n - k, floor(k / 2)). ● a(n) = a(n - 1) + a(n - 3); ● a(n) = a(n - 1) + a(n - 2) - a(n - 5). ●

► [A147997] 1,1,1,2,2,3,5,7,11,18,28,45,73,117,189,306,494,799,1293,2091,3383,5474,8856,14329,23185 ⋆ Number of nonnegative even integers <= Fibonacci(n). ● a(n) = a(n - 1) + a(n - 2) + a(n - 3) - a(n - 4) - a(n - 5) for n > 4. ●

► [A060699] 2,2,3,5,7,11,19,37,83,223,739,3181,18911,166679,2376391,60953117,3202432763,403823050201 ⋆ a(n) = floor(A ^ (C ^ n)), where A = 2.084551112207285611..., C = 1.221. ● a(n) = floor(A ^ (C ^ n)); A = 2.084551112... ; C = 1.221. - Luis Rodriguez - Torres (ludovicusmagister(AT)yahoo.com), Feb 10 2009 ●

► [A062724] 2,2,3,5,7,12,18,30,47,77,123,200,322,522,843,1365,2207,3572,5778,9350,15127,24477,39603,64080,103682 ⋆ a(n) = floor(tau ^ n) + 1, where tau = (1 + sqrt(5)) / 2. ● a(n) = 3 * Fibonacci(n - 1) + Fibonacci(n - 2) + (n mod 2), n > 0. - _ Gary Detlefs _ , Dec 29 2010 ●

► [A157176] 1,2,2,3,5,8,8,16,16,24,40,64,64,128,128,192,320,512,512,1024,1024,1536,2560,4096,4096 ⋆ a(n + 1) = a(n - n mod 2) + a(n - n mod 3), a(0) = 1. ● a(n + 6) = 8 * a(n). ●

► [A152948] 2,2,3,5,8,12,17,23,30,38,47,57,68,80,93,107,122,138,155,173,192,212,233,255,278 ⋆ a(n) = (n ^ 2 - 3 * n + 6) / 2. ● a(n) = a(n - 1) + n - 2 (with a(1)=2). - _ Vincenzo Librandi _ , Nov 26 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A293419] 0,2,2,3,5,8,12,19,30,49,78,126,204,330,534,863,1396,2259,3655,5913,9568,15480,25048,40528,65575 ⋆ a(n) is the least integer k such that k / Fibonacci(n) > sqrt(2). ● a(n) = ceiling(Fibonacci(n) * sqrt(2)). ●

► [A293643] 0,1,1,2,2,3,5,8,13,21,33,54,87,140,227,366,593,959,1551,2509,4059,6568,10627,17195,27821 ⋆ a(n) is the least integer k such that k / Fibonacci(n) > 3 / 5. ● a(n) = a(n - 1) + 2 a(n - 2) - a(n - 3) - 2 a(n - 4) + 2 a(n - 5) + a(n - 6) - 3 a(n - 7) - a(n - 8) + 3 a(n - 9) - 2 a(n - 11) + a(n - 12) + 2 a(n - 13) - a(n - 14) - a(n - 15) for n >= 16. ● a(n) = ceiling(3 * Fibonacci(n) / 5). ●

► [A226956] 1,1,2,2,3,5,9,15,24,38,61,99,161,261,422,682,1103,1785,2889,4675,7564,12238,19801,32039,51841 ⋆ a(0)=a(1)=1, a(n + 2) = a(n + 1) + a(n) - A128834(n). ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 4). ● a(n) = 3 * a(n - 3) + 5 * a(n - 6) + a(n - 9) (plus many similar by telescoping the fundamental recurrence). ●

► [A360299] 1,1,1,1,1,2,2,3,5,10,10,15,15,29,44,73,73,136,136,264,383,740,740,1418,2440 ⋆ a(n) is the number of terms in the n - th row of A360298. ● a(n) <= a(n + 1) <= 2 * a(n). ● a(p) = a(p - 1) for any prime number p. ●

► [A049873] 2,2,3,5,10,19,36,67,125,233,435,812,1516,2830,5283,9862,18410,34367,64155,119762,223567,417346,779085,1454365,2714951 ⋆ a(n)=Sum { a(k): k=0,1,2,...,n - 4,n - 2,n - 1 } ; a(n - 3) is not a summand; 3 initial terms required. ● a(n)=2 * a(n - 1) - a(n - 3) + a(n - 4); 4 initial terms required. ●

► [A078445] 2,2,3,5,11,23,29,31,53,67,79,89,97,107,149,163,223,229,241,271,277,283,307,313,347 ⋆ Primes in A060620, i.e., primes which are integer parts of averages of initial primes. ● a(n) = floor((Sum _{ x=1..k } prime(x)) / k) where k = 1, 2, ... prime(k) <= n. ●

► [A358088] 0,1,2,2,3,6,7,7,7,10,11,11,12,15,18,18,19,19,20,20,23,26,27,27,27 ⋆ Number of pairs (s,t) with s and t squarefree, 1 <= s < t <= n and s | t. ● a(n) = Sum _{ i=1..n } Sum _{ k=1..i - 1 } mu(i) ^ 2 * mu(k) ^ 2 * c(i / k), where c(n) = 1 - ceiling(n) + floor(n). ●

► [A159915] 0,0,0,1,2,2,3,6,8,8,10,15,18,18,21,28,32,32,36,45,50,50,55,66,72 ⋆ a(n) = floor((n + 1) / 4) * floor(n / 2). ● a(n) = 3 * a(n - 1) - 5 * a(n - 2) + 7 * a(n - 3) - 7 * a(n - 4) + 5 * a(n - 5) - 3 * a(n - 6) + a(n - 7) for n > 7. ●

► [A215450] 0,1,2,2,3,6,8,9,16,18,23,23,26,33,35,45,55,71,87,94,111,128,132,140,152 ⋆ a(0)=0, a(1)=1, a(n) = a(n - 1) + (Sum _{ i=0...n - 1)a(i)) mod n. ● a(0)=0, a(1)=1, a(n) = a(n - 1) + (a(0) + ... + a(n - 1)) mod n. ●

► [A019465] 2,2,3,6,8,24,27,108,112,560,565,3390,3396,23772,23779,190232,190240,1712160,1712169,17121690,17121700,188338700,188338711,2260064532,2260064544 ⋆ Multiply by 1, add 1, multiply by 2, add 2, etc., start with 2. ● a(2 * k) = 2 * k! + Sum _{ j=0..k - 1 } k! / j! = 2 * k! + k * e * Gamma(k,1). ● a(2 * k + 1) = 2 * (k + 1)! + Sum _{ j=0..k - 1 } (k + 1)! / j! = 2 * (k + 1)! + k * (k + 1) * e * Gamma(k,1). ●

► [A163493] 1,2,2,3,6,9,15,30,54,97,189,360,675,1304,2522,4835,9358,18193,35269,68568,133737,260802,509132,995801,1948931 ⋆ Number of binary strings of length n which have the same number of 00 and 01 substrings. ● a(n) = sum(binomial(2 * k - 1, k) * binomial(n - 2 * k,k) + binomial(2 * k, k) * binomial(n - 2 * k - 1, k), k=0..floor(n / 3)). - _ Joel B. Lewis _ , May 21 2011 ●

► [A070550] 1,2,2,3,6,10,15,24,40,65,104,168,273,442,714,1155,1870,3026,4895,7920,12816,20737,33552,54288,87841 ⋆ a(n) = a(n - 1) + a(n - 3) + a(n - 4), starting with a(0..3) = 1, 2, 2, 3. ● a(n) = (1 + 3 * i) / 10 * (- i) ^ n + (1 - 3 * i) / 10 * (i) ^ n + (2 + sqrt(5)) / 5 * ((1 + sqrt(5)) / 2) ^ n + (2 - sqrt(5)) / 5 * ((1 - sqrt(5)) / 2) ^ n, where i = sqrt(- 1). - _ Sergei N. Gladkovskii _ , Jul 16 2013 ● a(n + 1) * a(n + 3) = a(n) * a(n + 2) + a(n + 1) * a(n + 2) for all n in Z. - _ Michael Somos _ , Jan 19 2014 ●

► [A102762] 1,2,2,3,6,11,18,27,38,51,66,83,102,123,146,171,198,227,258,291,326,363,402,443,486 ⋆ Curvatures of (largest) kissing circles along the circumference, starting with curvature = - 1 and 2. ● a(n) = a(1) + a(2) + a(n - 1) + 2 * sqrt(a(1) * a(2) + a(1) * a(n - 1) + a(2) * a(n - 1)) = 1 + a(n - 1) + 2 * (sqrt(- 2 + a(n - 1))). (Descartes' curvature - theorem) ● a(n) = n ^ 2 - 4 * n + 6 for n > 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n > 4. ●

► [A049853] 1,2,2,3,6,11,19,33,58,102,179,314,551,967,1697,2978,5226,9171,16094,28243,49563,86977,152634,267854,470051 ⋆ a(n) = a(n - 1) + Sum _{ k=0..n - 3 } a(k) for n >= 2, a(0)=1, a(1)=2. ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3); 3 initial terms required. ● a(n) = a(n - 1) + a(n - 2) + a(n - 4) for n > 3. - _ Reinhard Zumkeller _ , Aug 06 2011 ●

► [A103687] 1,1,2,2,3,6,12,36,156,520,1920,5760,12600,39900,210140,844984,2871876,8784783,29392449,123405524,726794464,3669378736,20998365592,139906305272,770298602024 ⋆ Number of permutations p of (1,2,...,n) such that 1 + k + p(k) is prime for all k=1,2,...,n. ● a(n) = permanent(m), where the n X n matrix m is defined by m(i,j) = 1 or 0, depending on whether i + j + 1 is prime or composite respectively. - _ T. D. Noe _ , Oct 16 2007 ●

► [A032908] 2,2,3,6,14,35,90,234,611,1598,4182,10947,28658,75026,196419,514230,1346270,3524579,9227466,24157818,63245987,165580142,433494438,1134903171,2971215074 ⋆ One of four 3rd - order recurring sequences for which the first derived sequence and the Galois transformed sequence coincide. ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) + a(n - 3). ● a(n) = 3 * a(n - 1) - a(n - 2) - 1. - _ N. Sato _ , Jan 21 2010 ● a(n + 1) = (3 * a(n) + sqrt(5 * a(n) ^ 2 - 10 * a(n) + 1) - 1) / 2 for n >= 1. (End) ● a(n) = 1 + (2 ^ (- 1 - n) * ((3 - sqrt(5)) ^ n * (1 + sqrt(5)) + (- 1 + sqrt(5)) * (3 + sqrt(5)) ^ n)) / sqrt(5). - _ Colin Barker _ , Nov 02 2016 ●

► [A291102] 2,2,3,7,9,13,19,24,39,63,87,124,183,272,405,593,867,1261,1869,2760,4046,5936,8712,12817,18861 ⋆ Number of maximal irredundant sets in the n - pan graph. ● a(n) = a(n - 2) + a(n - 3) + a(n - 4) + a(n - 5) - a(n - 7) - 2 * a(n - 8) - a(n - 9) + 2 * a(n - 10) + a(n - 11) - a(n - 14) for n > 14. ●

► [A227300] 1,2,2,3,7,11,16,28,48,77,126,211,349,573,947,1568,2588,4271,7058,11661,19256,31804,52538,86779,143329 ⋆ Rising diagonal sums of triangle of Fibonacci polynomials (rows displayed as centered text). ● a(n) = sum(k=0..floor((n - 1) / 3), binomial(2 * n - 2 - 5 * k,k) + binomial(2 * n - 3 - 5 * k,k)) for n>=2; a(1)=1. - _ John Molokach _ , Jul 11 2013 ● a(n) = a(n - 1) + 2 * a(n - 3) - a(n - 6), starting with { 1, 2, 2, 3, 7, 11 } . - _ T. D. Noe _ , Jul 11 2013 ● a(n) = sum(k=0..floor((2n - 1) / 3) binomial(2n - k - 2 - 3 * floor(k / 2),floor(k / 2))). - _ John Molokach _ , Jul 29 2013 ●

► [A185387] 1,2,2,3,7,25,121,721,5041,40321,362881,3628801,39916801,479001601,6227020801,87178291201,1307674368001,20922789888001,355687428096001,6402373705728001 ⋆ E.g.f. exp(x) + log(1 / (1 - x)). ● a(n) = (n - 1)! + 1, n>0, a(0)=1. ●

► [A038507] 2,2,3,7,25,121,721,5041,40321,362881,3628801,39916801,479001601,6227020801,87178291201,1307674368001,20922789888001,355687428096001,6402373705728001,121645100408832001 ⋆ a(n) = n! + 1. ● a(n) = n * (a(n - 1) - 1) + 1. - _ Reinhard Zumkeller _ , Mar 20 2013 ●

► [A087522] 2,2,3,7,31,31,127,127,1279,3583,5119,6143,8191,8191,81919,131071,131071,131071,524287,524287,14680063,14680063,109051903,109051903,654311423 ⋆ a(0) = 2; for n>=1, a(n) = smallest prime p such that p + 1 is divisible by a n n - th power > 1. ● a(n) << 37 ^ n by Xylouris' improvement to Linnik's theorem. - _ Charles R Greathouse IV _ , Dec 10 2013 ●

► [A001131] 0,1,2,2,3,8,14,20,35,64,122,260,586,1296,2708,5400,10468,19888,37580,71960,140612,279264,560544,1133760,2310316 ⋆ Number of red - black rooted trees with n - 1 internal nodes. ● a(1) = 1, a(2) = 2 and for n>2: a(n) = Sum _ [n / 4 <= m <= n / 2] binomial(2m,n - 2m) * a(m), John Moon, as quoted in Ruskey. - _ Jonathan Vos Post _ , Jun 17 2005. ●

► [A060790] 1,2,2,3,15,38,110,323,927,2682,7754,22403,64751,187134,540822,1563011,4517183,13054898,37729362,109039875,315131087,910745750,2632104062,7606921923,21984412383 ⋆ Inscribe two circles of curvature 2 inside a circle of curvature - 1. Sequence gives curvatures of the smallest circles that can be sequentially inscribed in such a diagram. ● a(n) = 2a(n - 1) + 2a(n - 2) + 2a(n - 3) - a(n - 4). ●

► [A302405] 0,1,2,2,4,4,4,5,6,6,8,8,8,9,10,10,12,12,12,13,14,14,16,16,16 ⋆ Total domination number of the n - prism graph. ● a(n) = a(n - 1) + a(n - 6) - a(n - 7). ● a(n) = a(n - 6) + 4. - _ Andrew Howroyd _ , Apr 17 2018 ●

► [A090168] 0,1,2,2,4,4,5,6,7,7,9,9,10,11,12,12,14,14,15,16,17,17,19,19,20 ⋆ Floor(3n / 2) - floor(2n / 3). ● a(n) = a(n - 2) + a(n - 3) - a(n - 5). ●

► [A131055] 1,2,2,4,4,6,6,8,8,10,10,12,12,14,14,16,16,18,18,20,20,22,22,24,24 ⋆ 1 followed by repeats of 2 * k. ● a(n) = 1 + Sum { i=0..n } (1 - (- 1) ^ i - (i! ^ 2 mod (i + 1)) * ((i + 1)! ^ 2 mod (i + 2))), with n >= 0. - _ Paolo P. Lava _ , Jul 24 2007 ● a(n) = ((- 1) ^ n + 2 * n - 1) / 2 for n > 1. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n > 1. ●

► [A029010] 1,1,2,2,4,4,6,6,9,9,12,13,17,18,22,24,29,31,36,39,45,48,55,59,67 ⋆ Expansion of 1 / ((1 - x)(1 - x ^ 2)(1 - x ^ 4)(1 - x ^ 11)). ● a(n) = floor((420 + (n + 9) * (2 * n ^ 2 + 36 * n + 91 + 33 * (- 1) ^ n)) / 1056). - _ Tani Akinari _ , Jul 04 2013 ●

► [A029009] 1,1,2,2,4,4,6,6,9,10,13,14,18,20,24,26,31,34,40,43,50,54,62,66,75 ⋆ Expansion of 1 / ((1 - x)(1 - x ^ 2)(1 - x ^ 4)(1 - x ^ 9)). ● a(0)=1, a(1)=1, a(2)=2, a(3)=2, a(4)=4, a(5)=4, a(6)=6, a(7)=6, a(8)=9, a(9)=10, a(10)=13, a(11)=14, a(12)=18, a(13)=20, a(14)=24, a(15)=26, a(n)=a(n - 1) + a(n - 2) - a(n - 3) + a(n - 4) - a(n - 5) - a(n - 6) + a(n - 7) + a(n - 9) - a(n - 10) - a(n - 11) + a(n - 12) - a(n - 13) + a(n - 14) + a(n - 15) - a (n - 16). [_ Harvey P. Dale _ , May 05 2012] ●

► [A373943] 0,1,2,2,4,4,6,7,7,7,10,11,13,13,13,15,18,19,21,22,22,22,24,25,27 ⋆ a(n) is the cardinality of the set containing all rational numbers of the form 2 <= m / 2 ^ (bigomega(m) - 1) <= n. ● a(n) = card { x | x = m / 2 ^ (bigomega(m) - 1), x<=n } . ● a(n) = pi _ k(n * 2 ^ (k - 1)), with pi _ k(n) as the counting function for k - almost primes and k sufficiently large. ●

► [A029008] 1,1,2,2,4,4,6,7,10,11,14,16,20,22,27,30,36,39,46,50,58,63,72,78,88 ⋆ Expansion of 1 / ((1 - x)(1 - x ^ 2)(1 - x ^ 4)(1 - x ^ 7)). ● a(n) = a(n - 1) + a(n

- 2) - a(n - 3) + a(n - 4) - a(n - 5) - a(n - 6) + 2 * a(n - 7) - a(n - 8) - a(n - 9) + a(n - 10) - a(n - 11) + a(n - 12) + a(n - 13) - a(n - 14). - _ Wesley Ivan Hurt _ , May 27 2021 ●

▶ [A183002] 0,0,0,2,2,4,4,6,8,10,10,14,14,16,18,22,22,26,26,30,32,34,34,40,42 ⋆ a(n) is the total number of noncentral divisors in all positive integers <= n. ● a(n) = Sum _{ k=1..n } (tau(k) - 2 + (tau(k) mod 2)), tau = A000005. ●

▶ [A362307] 1,1,1,2,2,4,4,6,8,11,15,19,23,32,37,48,58,74,88,108,132,158,190,228,273 ⋆ Row sums of A362370. ● a(n) = Sum _{ k=0..n } floor(binomial(n - 1, k - 1) / k!). ●

▶ [A045674] 1,1,2,2,4,4,6,8,12,16,20,32,38,64,72,128,140,256,272,512,532,1024,1056,2048,2086 ⋆ Number of 2n - bead balanced binary necklaces which are equivalent to their reverse, complement and reversed complement. ● a(2n) = a(n) + 2 ^ (n - 1), a(2n + 1) = 2 ^ n. - _ Ralf Stephan _ , Nov 01 2003 ●

▶ [A264788] 2,2,4,4,6,10,10,12,16,16,18,22,22,24,28,28,30,34,34,36,40,40,42,46,46 ⋆ a(n) is the number of circles added at n - th iteration of the pattern starting with 2 circles. (See comment.) ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>5. ●

▶ [A253412] 1,1,2,2,4,4,7,9,13,18,25,36,49,70,97,137,191,268,376,526,738,1033,1449,2029,2844 ⋆ Number of n - bit legal binary words with maximal set of 1s. ● a(n) = a(n - 2) + a(n - 3) + a(n - 4) - a(n - 6), for n >= 6, with a(0) = a(1) = 1, a(2) = a(3) = 2, a(4) = a(5) = 4, a(6) = 7. - _ Andrew Woods _ , Jan 02 2015 ●

▶ [A032190] 0,1,1,2,2,4,4,7,9,14,18,30,40,63,93,142,210,328,492,765,1169,1810,2786,4340,6712 ⋆ Number of cyclic compositions of n into parts >= 2. ● a(n) = Sum _{ 1 <= i <= ceiling((n - 1) / 2) } [(1 / (n - i)) * Sum _{ d|gcd(i, n - i) } phi(d) * binomial((n - i) / d, i / d)]. (This is a slight variation of DeFord's formula for the number of distinct Lucas tilings of a 1 X n bracelet up to symmetry, where we exclude the case with i = 0 dominoes.) - _ Petros Hadjicostas _ , Jun 07 2019 ●

▶ [A131572] 0,1,2,2,4,4,8,8,16,16,32,32,64,64,128,128,256,256,512,512,1024,1024,2048,2048,4096 ⋆ a(0) = 0 and a(1) = 1, continued such that absolute values of 2nd differences equal the original sequence. ● a(n) = 2 * a(n - 2), n>2. ●

▶ [A000013] 1,1,2,2,4,4,8,10,20,30,56,94,180,316,596,1096,2068,3856,7316,13798,26272,49940,95420,182362,349716 ⋆ Definition (1): Number of n - bead binary necklaces with beads of 2 colors where the colors may be swapped but turning over is not allowed. ● a(n) = Sum _{ d divides n } (phi(2 * d) * 2 ^ (n / d)) / (2 * n) for n>0. - _ Michael Somos _ , Oct 20 1999 ● a(n) = (1 / (2 * n)) * Sum _{ k=1..n } phi(2 * gcd(n,k)) * 2 ^ (n / gcd(n,k)) / phi(n / gcd(n,k)), where phi = A000010. ● a(n) = (1 / (2 * n)) * Sum _{ k=1..n } phi(2 * n / gcd(n,k)) * 2 ^ gcd(n,k) / phi(n / gcd(n,k)). (End) ●

▶ [A063776] 2,2,4,4,8,12,20,32,60,104,188,344,632,1172,2192,4096,7712,14572,27596,52432,99880,190652,364724,699072,1342184 ⋆ Number of subsets of { 1,2,..., n } which sum to 0 modulo n. ● a(n) = 1 / n * Sum _{ d divides n and d is odd } 2 ^ (n / d) * phi(d). ●

▶ [A335129] 0,1,2,2,4,5,5,7,8,8,10,11,11,13,14,14,16,17,17,19,20,20,22,23,23 ⋆ a(n) is the number of distinct lines created inside an n - gon when connecting vertex k to vertex 2k mod n. ● a(3) = 0, a(n) = n - 4 + sign(n mod 3) for n>=4. - _ Wesley Ivan Hurt _ , Dec 29 2021 ●

▶ [A325260] 1,1,2,2,4,5,5,8,10,12,13,18,19,24,25,31,33,40,40,49,51,59,60,71,72 ⋆ Number of integer partitions of n whose omega - sequence covers an initial interval of positive integers. ● a(n) = a(n - 2) + a(n - 3) + a(n - 4) - a(n - 5) - a(n - 6) - a(n - 7) + a(n - 9) for n > 9. ●

▶ [A351782] 0,1,2,2,4,5,6,6,8,9,10,10,12,13,14,14,16,17,18,18,20,21,22,22,24 ⋆ a(n) = n - 2 if n is a multiple of 4, a(n) = n - 1 otherwise. ● a(n) = n - 2 + sign(n mod 4). ●

▶ [A059015] 1,1,2,2,4,5,6,6,9,11,13,14,16,17,18,18,22,25,28,30,33,35,37,38,41 ⋆ Total number of 0's in binary expansions of 0, ..., n. ● a(n) = b(n) + 1, with b(2n) = b(n) + b(n - 1) + n, b(2n + 1) = 2b(n) + n. - _ Ralf Stephan _ , Sep 13 2003 ● a(n) = 2 + (m + 1) * (n + 1) - 2 ^ (m + 1) + (1 / 2) * sum _{ j=1..m + 1 } (floor(n / 2 ^ j) * (2n + 2 - (1 + floor(n / 2 ^ j)) * 2 ^ j) - floor(n / 2 ^ j + 1 / 2) * (2n + 2 - floor(n / 2 ^ j + 1 / 2) * 2 ^ j. ● a(2 ^ m - 1) = 2 + (m - 2) * 2 ^ (m - 1) ● a(n) = 1 + (m + 1) * (n + 1) - (p ^ (m + 1) - 1) / (p - 1) + (1 / 2) * sum _{ j=1..m + 1 } (floor(n / p ^ j) * (2n + 2 - (1 + floor(n / p ^ j)) * p ^ j) - floor(n / p ^ j + (p - d - 1) / p) * (2n + 2 + ((p - 2 * d - 2) / p - floor(n / p ^ j + (p - d - 1) / p)) * p ^ j)). ● a(n) = H(n,p) - (n + 1) * F(n,p,d + 1) + (1 / 2) * sum _{ j=1..m + 1 } ((floor(n / p ^ j + (p - d - 1) / p) ^ 2 - floor(n / p ^ j) ^ 2) * p ^ j - (((p - 2 * d - 2) / p) * floor(n / p ^ j + (p - d - 1) / p) + floor(n / p ^ j)) * p ^ j), where H(n,p) = sum of number of digits in the base p representations of 0 to n and F(n,p,d) = number of digits >=d in the base p representation of n. ● a(p ^ m - 1) = 1 + (d + 1) * m * p ^ (m - 1) - (p ^ m - 1) / (p - 1). ●

▶ [A024683] 0,0,0,0,0,1,1,2,2,4,5,6,7,8,8,10,12,13,14,15,16,17,18,20,23 ⋆ a(n) is the number of ways prime(n) is a sum of two composite numbers r,s satisfying r < s. ● a(n) = Sum _{ i=4..floor((prime(n) - 1) / 2) } c(i) * c(prime(n) - i), where c is the characteristic function of composite numbers (A066247) and prime(n) is the n - th prime (A000040). - _ Wesley Ivan Hurt _ , Sep 08 2020 ●

▶ [A339022] 1,2,2,4,5,6,7,9,10,12,13,15,16,18,19,21,23,24,26,27,29,30,32,34,36 ⋆ a(n) is the floor of the average distance among first n primes. ● a(n) = floor((2 / (n * (n - 1)) * Sum _{ j=2..n } Sum _{ i=1..j - 1 } (prime(j) - prime(i))). ●

▶ [A089676] 1,2,2,4,5,6,8,9,10,16,17 ⋆ a(n) is the maximal size of a set S of points in { 0,1 }^ n in real n - dimensional Euclidean space such that every angle determined by three points in S is acute. ● a(n) >= 2 * floor((sqrt(6) / 9)(2 / sqrt(3)) ^ n), which is approximately 0.544 * 1.155 ^ n. ●

▶ [A340445] 0,0,0,0,1,2,2,4,5,6,8,10,11,14,16,18,21,24,26,30,33,36,40,44,47 ⋆ Number of partitions of n into 3 parts that are not all the same. ● a(n) = Sum _{ k=1..floor(n / 3) } Sum _ i=k..floor((n - k) / 2) } (1 - [k = i = n - i - k]), where [ ] is the (generalized) Iverson bracket. ● a(n) = Sum _{ k=1..floor(n / 3) } Sum _{ i=k..floor((n - k) / 2) } (1 - [k = i] * [2 * i = n - k] * [2 * k = n - i]), where [ ] is the Iverson bracket. ● a(n) = a(n - 1) + a(n - 2) - a(n - 4) - a(n - 5) + a(n - 6), n>6. (End) ●

▶ [A107849] 1,2,2,4,5,6,12,16,25,42,58,92,141,206,324,488,737,1138,1714,2612,3989,6038,9212,14016,21289 ⋆ Expansion of (1 + x) ^ 2 / ((1 - x ^ 2 - 2 * x ^ 3) * (1 + x ^ 4)). ● a(n) = a(n - 2) + 2 * a(n - 3) - a(n - 4) + a(n - 6) + 2 * a(n - 7) for n>6. - _ Colin Barker _ , Apr 30 2019 ●

▶ [A308840] 0,0,0,0,0,1,1,2,2,4,5,7,7,10,11,15,15,20,22,28,29,37,39,48,49 ⋆ Number of partitions of n into 5 squarefree parts. ● a(n) = Sum _{ l=1..floor(n / 5) } Sum _{ k=l..floor((n - l) / 4) } Sum _{ j=k..floor((n - k - l) / 3) } Sum _{ i=j..floor((n - j - k - l) / 2) } mu(l) ^ 2 * mu(k) ^ 2 * mu(j) ^ 2 * mu(i) ^ 2 * mu(n - i - j - k - l) ^ 2, where mu is the Möbius function (A008683). ●

▶ [A120326] 2,2,4,5,7,8,10,11,13,15,16,17,19,20,22,24,26,27,28,30,31,32,34,36,37 ⋆ Cumulative sum of the remainders when dividing primes by 3. ● a(n) = sum _{ k=1..n } (prime(k) mod 3). ●

▶ [A036406] 0,1,1,2,2,4,5,7,8,11,13,16,18,22,25,29,32,37,41,46,50,56,61,67,72 ⋆ a(n) = ceiling(n ^ 2 / 8). ● a(n) = (1 / 16) * (2n ^ 2 + 9 - 5(- 1) ^ n - 2(- 1) ^ floor(n / 2) + 2(- 1) ^ floor((n - 1) / 2)). - _ Ralf Stephan _ , Jun 10 2005 ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 4) - 2 * a(n - 5) + a(n - 6); a(0)=0, a(1)=1, a(2)=1, a(3)=2, a(4)=2, a(5)=4. - _ Harvey P. Dale _ , Jun 21 2011 ●

▶ [A029007] 1,1,2,2,4,5,7,8,11,13,17,19,24,27,33,37,44,49,57,63,73,80,91,99,112 ⋆ Expansion of 1 / ((1 - x)(1 - x ^ 2)(1 - x ^ 4)(1 - x ^ 5)). ● a(0)=1, a(1)=1, a(2)=2, a(3)=2, a(4)=4, a(5)=5, a(6)=7, a(7)=8, a(8)=11, a(9)=13, a(10)=17, a(11)=19, a(n)=a(n - 1) + a(n - 2) - a(n - 3) + a(n - 4) - 2 * a(n - 6) + a(n - 8) - a(n - 9) + a(n - 10) + a(n - 11) - a(n - 12). - _ Harvey P. Dale _ , Dec 06 2013 ● a(n) = floor((2 * n ^ 3 + 36 * n ^ 2 + 193 * n + 525) / 480 + (n + 1) * (- 1) ^ n / 32). - _ Tani Akinari _ , Sep 30 2014 ● a(n) = - a(- 12 - n) for all n in Z. - _ Michael Somos _ , Sep 30 2014 ●

▶ [A137200] 1,1,2,2,4,5,7,9,13,18,25,34,47,65,90,124,171,236,326,450,621,857,1183,1633,2254 ⋆ Number of ways to tile an n X 1 strip with 1 X 1 squares and 2 X 1 dominoes with the restriction that no three consecutive tiles are of the same type. ● a(n) = a(n - 1) + a(n - 4) for n>4; g.f.: (1 + x ^ 2 + x ^ 4) / (1 - x - x ^ 4). Also a(n) = a(n - 2) + a(n - 4) + a(n - 5). ●

▶ [A308902] 0,0,0,0,0,0,1,1,2,2,4,5,8,8,11,13,18,19,25,27,36,39,48,52,66 ⋆ Number of partitions of n into 6 squarefree parts. ● a(n) = Sum _{ m=1..floor(n / 6) } Sum _{ l=m..floor((n - m) / 5) } Sum _{ k=l..floor((n - l - m) / 4) } Sum _{ j=k..floor((n - k - l - m) / 3) } Sum _{ i=j..floor((n - j - k - l - m) / 2) } mu(m) ^ 2 * mu(l) ^ 2 * mu(k) ^ 2 * mu(j) ^ 2 * mu(i) ^ 2 * mu(n - i - k - j - l - m) ^ 2, where mu is the Möbius function (A008683). ●

▶ [A166515] 0,1,2,2,4,5,8,8,12,13,18,18,24,25,32,32,40,41,50,50,60,61,72,72,84 ⋆ Partial sum of A166514. ● a(n) = (2n ^ 2 + 6n + 5) / 16 + (2n - 1) * (- 1) ^ n / 16 - sqrt(2) * cos(Pi * n / 2 + Pi / 4) / 4. ●

▶ [A308952] 0,0,0,0,0,0,0,1,1,2,2,4,5,8,9,12,14,20,22,29,32,42,47,59,64 ⋆ Number of partitions of n into 7 squarefree parts. ● a(n) = Sum _{ o=1..floor(n / 7) } Sum _{ m=o..floor((n - o) / 6) } Sum _{ l=m..floor((n - m - o) / 5) } Sum _{ k=l..floor((n - l - m - o) / 4) } Sum _{ j=k..floor((n - k - l - m - o) / 3 } Sum _{ i=j..floor((n - j - k - l - m - o) / 2) } mu(o) ^ 2 * mu(m) ^ 2 * mu(l) ^ 2 * mu(k) ^ 2 * mu(j) ^ 2 * mu(i) ^ 2 * mu(n - i - j - k - l - m - o) ^ 2, where mu is the Möbius function (A008683). ●

▶ [A326443] 0,0,0,0,0,0,0,0,1,1,2,2,4,5,8,9,13,15,21,24,32,36,47,53,68 ⋆ Number of partitions of n into 8 squarefree parts. ● a(n) = Sum _{ p=1..floor(n / 8) } Sum _{ o=p..floor((n - p) / 7) } Sum _{ m=o..floor((n - o - p) / 6) } Sum _{ l=m..floor((n - m - o - p) / 5) } Sum _{ k=l..floor((n - l - m - o - p) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p) / 2) } mu(p) ^ 2 * mu(o) ^ 2 * mu(m) ^ 2 * mu(l) ^ 2 * mu(k) ^ 2 * mu(j) ^ 2 * mu(i) ^ 2 * mu(n - i - j - k - l - m - o - p) ^ 2, where mu is the Möbius function (A008683). ●

▶ [A326522] 0,0,0,0,0,0,0,0,0,1,1,2,2,4,5,8,9,13,16,22,25,34,39,51,58 ⋆ Number of partitions of n into 9 squarefree parts. ● a(n) = Sum _{ q=1..floor(n / 9) } Sum _{ p=q..floor((n - q) / 8) } Sum _{ o=p..floor((n - p - q) / 7) } Sum _{ m=o..floor((n - o - p - q) / 6) } Sum _{ l=m..floor((n - m - o - p - q) / 5) } Sum _{ k=l..floor((n - l - m - o - p - q) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p - q) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p - q) / 2) } mu(q) ^ 2 * mu(p) ^ 2 * mu(o) ^ 2 * mu(m) ^ 2 * mu(l) ^ 2 * mu(k) ^ 2 * mu(j) ^ 2 * mu(i) ^ 2 * mu(n - i - j - k - l - m - o - p - q) ^ 2, where mu is the Möbius function (A008683). ●

▶ [A326626] 0,0,0,0,0,0,0,0,0,0,1,1,2,2,4,5,8,9,13,16,23,26,35,41,54 ⋆ Number of partitions of n into 10 squarefree parts. ● a(n) = Sum _{ r=1..floor(n / 10) } Sum _{ q=r..floor((n - r) / 9) } Sum _{ p=q..floor((n - q - r) / 8) } Sum _{ o=p..floor((n - p - q - r) / 7) } Sum _{ m=o..floor((n - o - p - q - r) / 6) } Sum _{ l=m..floor((n - m - o - p - q - r) / 5) } Sum _{ k=l..floor((n - l - m - o - p - q - r) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p - q - r) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p - q - r) / 2) } mu(r) ^ 2 * mu(q) ^ 2 * mu(p) ^ 2 * mu(o) ^ 2 * mu(m) ^ 2 * mu(l) ^ 2 * mu(k) ^ 2 * mu(j) ^ 2 * mu(i) ^ 2 * mu(n - i - j - k - l - m - o - p - q - r) ^ 2, where mu is the Möbius function (A008683). ●

▶ [A326628] 0,0,0,0,0,0,0,0,0,0,1,1,2,2,4,5,8,9,13,16,24,27,36,43,57 ⋆ Sum of the smallest parts of the partitions of n into 10 squarefree parts. ● a(n) = Sum _{ r=1..floor(n / 10) } Sum _{ q=r..floor((n - r) / 9) } Sum _{ p=q..floor((n - q - r) / 8) } Sum _{ o=p..floor((n - p - q - r) / 7) } Sum _{ m=o..floor((n - o - p - q - r) / 6) } Sum _{ l=m..floor((n - m - o - p - q - r) / 5) } Sum _{ k=l..floor((n - l - m - o - p - q - r) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p - q - r) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p - q - r) / 2) } mu(r) ^ 2 * mu(q) ^ 2 * mu(p) ^ 2 * mu(o) ^ 2 * mu(m) ^ 2 * mu(l) ^ 2 * mu(k) ^ 2 * mu(j) ^ 2 * mu(i) ^ 2 * mu(n - i - j - k - l - m - o - p - q - r) ^ 2 * r, where mu is the Möbius function (A008683). ●

▶ [A326524] 0,0,0,0,0,0,0,0,0,1,1,2,2,4,5,8,9,13,17,23,26,36,42,55,63 ⋆ Sum of the smallest parts of the partitions of n into 9 squarefree parts. ● a(n) = Sum _{ q=1..floor(n / 9) } Sum _{ p=q..floor((n - q) / 8) } Sum _{ o=p..floor((n - p - q) / 7) } Sum _{ m=o..floor((n - o - p - q) / 6) } Sum _{ l=m..floor((n - m - o - p - q) / 5) } Sum _{ k=l..floor((n - l - m - o - p - q) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p - q) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p - q) / 2) } mu(q) ^ 2 * mu(p) ^ 2 * mu(o) ^ 2 * mu(m) ^ 2 * mu(l) ^ 2 * mu(k) ^ 2 *

mu(j) ^ 2 * mu(i) ^ 2 * mu(n - i - j - k - l - m - o - p - q) ^ 2 * q, where mu is t he Möbius function (A008683). ●

▶ [A326629] 0,0,0,0,0,0,0,0,0,0,1,1,2,2,4,5,8,9,13,17,25,28,38,46,61 ⋆ Sum of the n inth largest parts of the partitions of n into 10 squarefree parts. ● a(n) = Sum _{ r=1..floor(n / 10) } Sum _{ q=r..floor((n - r) / 9) } Sum _{ p=q..floor((n - q - r) / 8) } Sum _{ o=p..floor((n - p - q - r) / 7) } Sum _{ m=o..floor((n - o - p - q - r) / 6) } Sum _{ l=m..floor((n - m - o - p - q - r) / 5) } Sum _{ k=l..floor((n - l - m - o - p - q - r) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p - q - r) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p - q - r) / 2) } mu(r) ^ 2 * mu(q) ^ 2 * mu(p) ^ 2 * mu(o) ^ 2 * mu(m) ^ 2 * mu(l) ^ 2 * mu(k) ^ 2 * mu(j) ^ 2 * mu(i) ^ 2 * mu(n - i - j - k - l - m - o - p - q - r) ^ 2 * q, where mu is the Möbius function (A008683). ●

▶ [A326445] 0,0,0,0,0,0,0,0,0,1,1,2,2,4,5,8,9,14,16,22,26,35,40,52,59,78 ⋆ Sum of th e smallest parts of the partitions of n into 8 squarefree parts. ● a(n) = Sum _{ p=1..floor(n / 8) } Sum _{ o=p..floor((n - p) / 7) } Sum _{ m=o..floor((n - o - p) / 6) } Sum _{ l=m..floor((n - m - o - p) / 5) } Sum _{ k=l..floor((n - l - m - o - p) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p) / 2) } mu(p) ^ 2 * mu(o) ^ 2 * mu(m) ^ 2 * mu(l) ^ 2 * mu(k) ^ 2 * mu(j) ^ 2 * mu(i) ^ 2 * mu(n - i - j - k - l - m - o - p) ^ 2 * p, w here mu is the Möbius function (A008683). ●

▶ [A326525] 0,0,0,0,0,0,0,0,0,1,1,2,2,4,5,8,9,14,18,24,28,39,46,60,69 ⋆ Sum of the eighth largest parts in the partitions of n into 9 squarefree parts. ● a(n) = Sum _{ q=1..floor(n / 9) } Sum _{ p=q..floor((n - q) / 8) } Sum _{ o=p..floor((n - p - q) / 7) } Sum _{ m=o..floor((n - o - p - q) / 6) } Sum _{ l=m..floor((n - m - o - p - q) / 5) } Sum _{ k=l..floor((n - l - m - o - p - q) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p - q) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p - q) / 2) } mu(q) ^ 2 * mu(p) ^ 2 * mu(o) ^ 2 * mu(m) ^ 2 * mu(l) ^ 2 * mu(k) ^ 2 * mu(j) ^ 2 * mu(i) ^ 2 * mu(n - i - j - k - l - m - o - p - q) ^ 2 * p, where mu is the Möbius function (A008683). ●

▶ [A326630] 0,0,0,0,0,0,0,0,0,0,1,1,2,2,4,5,8,9,14,18,26,30,41,50,66 ⋆ Sum of the e ighth largest parts in the partitions of n into 10 squarefree parts. ● a(n) = Sum _{ r=1..floor(n / 10) } Sum _{ q=r..floor((n - r) / 9) } Sum _{ p=q..floor((n - q - r) / 8) } Sum _{ o=p..floor((n - p - q - r) / 7) } Sum _{ m=o..floor((n - o - p - q - r) / 6) } Sum _{ l=m..floor((n - m - o - p - q - r) / 5) } Sum _{ k=l..floor((n - l - m - o - p - q - r) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p - q - r) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p - q - r) / 2) } mu(r) ^ 2 * mu(q) ^ 2 * mu(p) ^ 2 * mu(o) ^ 2 * mu(m) ^ 2 * mu(l) ^ 2 * mu(k) ^ 2 * mu(j) ^ 2 * mu(i) ^ 2 * mu(n - i - j - k - l - m - o - p - q - r) ^ 2 * p, where mu is the Möbius function (A008683). ●

▶ [A308954] 0,0,0,0,0,0,0,0,1,1,2,2,4,5,8,10,13,15,22,25,33,37,49,55,71,77 ⋆ Sum of the smallest parts in the partitions of n into 7 squarefree parts. ● a(n) = Sum _{ o=1..floor(n / 7) } Sum _{ m=o..floor((n - o) / 6) } Sum _{ l=m..floor((n - m - o) / 5) } Sum _{ k=l..floor((n - l - m - o) / 4) } Sum _{ j=k..floor((n - k - l - m - o) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o) / 2) } mu(r) ^ 2 * mu(q) ^ 2 * mu(p) ^ 2 * mu(o) ^ 2 * mu(m) ^ 2 * mu(l) ^ 2 * mu(k) ^ 2 * mu(j) ^ 2 * mu(i) ^ 2 * mu(n - i - j - k - l - m - o - p - q - r) ^ 2 * o, where mu is the Möbius function (A008683). ●

▶ [A331443] 0,0,0,0,0,0,0,2,2,4,5,8,10,14,16,22,26,32,37,46,52,62,70,82,92 ⋆ Num ber of 1 - complete partitions of n with largest part 4. ● a(n) = a(n - 1) + a(n - 2) - 2 * a(n - 5) + a(n - 8) + a(n - 9) - a(n - 10). - _ Colin Barker _ , Jan 27 20 20 ●

▶ [A326446] 0,0,0,0,0,0,0,0,0,1,1,2,2,4,5,8,10,15,17,24,29,39,45,59,68,90 ⋆ Sum of t he seventh largest parts of the partitions of n into 8 squarefree parts. ● a(n) = Sum _{ p=1..floor(n / 8) } Sum _{ o=p..floor((n - p) / 7) } Sum _{ m=o..floor((n - o - p) / 6) } Sum _{ l=m..floor((n - m - o - p) / 5) } Sum _{ k=l..floor((n - l - m - o - p) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p) / 2) } mu(p) ^ 2 * mu(o) ^ 2 * mu(m) ^ 2 * mu(l) ^ 2 * mu(k) ^ 2 * mu(j) ^ 2 * mu(i) ^ 2 * mu(n - i - j - k - l - m - o - p) ^ 2 * o, where mu is the Möbius function (A008683). ●

▶ [A326526] 0,0,0,0,0,0,0,0,0,1,1,2,2,4,5,8,10,15,19,26,31,43,51,67,78 ⋆ Sum of th e seventh largest parts of the partitions of n into 9 squarefree parts. ● a(n) = S um _{ q=1..floor(n / 9) } Sum _{ p=q..floor((n - q) / 8) } Sum _{ o=p..floor((n - p - q) / 7) } Sum _{ m=o..floor((n - o - p - q) / 6) } Sum _{ l=m..floor((n - m - o - p - q) / 5) } Sum _{ k=l..floor((n - l - m - o - p - q) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p - q) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p - q) / 2) } mu(q) ^ 2 * mu(p) ^ 2 * mu(o) ^ 2 * mu(m) ^ 2 * mu(l) ^ 2 * mu(k) ^ 2 * mu(j) ^ 2 * mu(i) ^ 2 * mu(n - i - j - k - l - m - o - p - q) ^ 2 * o, where mu is the Möbius function (A008683). ●

▶ [A326631] 0,0,0,0,0,0,0,0,0,0,1,1,2,2,4,5,8,10,15,19,28,33,45,55,73 ⋆ Sum of the seventh largest parts of the partitions of n into 10 squarefree parts. ● a(n) = S um _{ r=1..floor(n / 10) } Sum _{ q=r..floor((n - r) / 9) } Sum _{ p=q..floor((n - q - r) / 8) } Sum _{ o=p..floor((n - p - q - r) / 7) } Sum _{ m=o..floor((n - o - p - q - r) / 6) } Sum _{ l=m..floor((n - m - o - p - q - r) / 5) } Sum _{ k=l..floor((n - l - m - o - p - q - r) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p - q - r) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p - q - r) / 2) } mu(r) ^ 2 * mu(q) ^ 2 * mu(p) ^ 2 * mu(o) ^ 2 * mu(m) ^ 2 * mu(l) ^ 2 * mu(k) ^ 2 * mu(j) ^ 2 * mu(i) ^ 2 * mu(n - i - j - k - l - m - o - p - q - r) ^ 2 * o, where mu is the Möbius function (A008683). ●

▶ [A193146] 1,1,2,2,4,5,8,10,15,20,29,39,55,75,105,144,200,275,381,525,726,1001,1 383,1908,2635 ⋆ Expansion of 1 / (1 - x - x ^ 2 + x ^ 3 - x ^ 4 + x ^ 6). ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) + a(n - 4) - a(n - 6) with a(n) = 0 for n = - 5, - 4, - 3, - 2, - 1 and a(0) = 1. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(floor (n - 3 * k / 2) + 1, n - 2 * k + 1). - _ Taras Goy _ , Dec 24 2019 ●

▶ [A157162] 1,1,1,1,2,2,4,5,8,10,18,24,40,52,88,125,210,286,492,702,1144,1638,27 86,3986,6704 ⋆ 1 / Product _{ n>=1 } (1 - a(n) * x ^ n) = 1 + Sum _{ k>=1 } F(k + 1) * x ^ k = 1 / (1 - x - x ^ 2), where F(n) = A000045(n) (Fibonacci n umbers). ● a(n) = (- sum(d * a(d) ^ (n / d), d|n with 1<=d<n) + L(n)) / n, n>=2, a(1)=1. ● a(n) = - sum((d / n) * (a(d)) ^ (n / d),d|n with 1<=d<n) + sum(((- 1) ^ (m - 1)) * (1 / m) * sum(M0(p) * F(2) ^ e(1) * ... * F(n + 1) ^ e(n),p=(1 ^ e(1),...,n ^ e(n)) from P(n,m)), m=1..n) for n>=2; a(1)=F(2)=1. See recurrence 1 for the set P(n,m). The M0 numbers are m! / product(e(j)!,j=1..n). ●

▶ [A006206] 1,1,1,1,2,2,4,5,8,11,18,25,40,58,90,135,210,316,492,750,1164,1791,27 86,4305,6710 ⋆ Number of aperiodic binary necklaces of length n with no subseq uence 00, excluding the necklace "0". ● a(n) = (1 / n) * Sum _{ d|n } mu(n / d) * (Fibonacci(d - 1) + Fibonacci(d + 1)) = (1 / n) * Sum _{ d|n } mu(n / d) * Lucas(d). Hence Lucas(n) = Sum _{ d|n } d * a(d). ● a(n) = round((1 / n) * Sum _{ d|n } mu(n) * phi ^ (n / d))). - _ David Broadhurst _ ●

▶ [A095719] 1,1,2,2,4,5,8,11,18,25,40,59,90,137,210,319,492,754,1164,1798,2786,4 317,6710,10438,16266 ⋆ Sum(floor(C(n - k,k) / (k + 1)),k=0..n / 2). ● a(n) = s um(floor(C(n - k, k) / (k + 1)), k=0..n / 2); ●

▶ [A172128] 1,1,1,1,2,2,4,5,8,12,18,26,40,60,90,137,210,320,492,756,1165,1800,27 86,4320,6710 ⋆ a(n) = floor(phi ^ n / n), where phi = golden ratio = (1 + sqrt(5)) / 2. ● a(n) = floor((1 / n) * (Fibonacci(n) * phi + Fibonacci(n - 1)), where phi = (1 + sqrt(5)) / 2. ●

▶ [A093333] 0,1,1,2,2,4,5,8,12,19,30,47,75,118,188,297,472,748,1188,1885,2992,47 49,7538,11966,18994 ⋆ a(0) = 0, a(1) = 1 and for n >= 0, a(n + 2) = floor(2 * sqrt(a(n) * a(n + 1))). ● a(n) = c * 2 ^ (2n / 3) + O(1) where c = 0.460059421 1686036392470119450103830526110335102224661416117198000442511705774434 976470174973885560.... - _ Benoit Cloitre _ , Dec 17 2006 ●

▶ [A216198] 1,2,2,4,5,8,13,19,29,45,68,105,159,243,370,567,862,1319,2007,3071,4 673,7148,10877,16640,25320 ⋆ Rounded area of squares and pentagons which ar range as successively circumscribing. ● a(n) = round(x(n)), x(1) = 1, x(2) = (5 / (4 * t3)) * (((1 / 2) + t1 / ((t1 / t2) + 1)) / s1) ^ 2, for n >= 3, x(n) = x(n - 2) * k, where k = (1 + 2 * t1 * t2 / (t1 + t2)) ^ 2, t1 = tan(Pi / 10), t2 = tan(3 * Pi / 10), t3 = tan(Pi / 5), s1 = sin(3 * Pi / 10). ●

▶ [A308906] 0,0,0,0,0,0,1,1,2,2,4,5,9,9,12,15,21,23,31,32,45,50,61,66,87 ⋆ Sum of the smallest parts in the partitions of n into 6 squarefree parts. ● a(n) = Sum _{ m=1..floor(n / 6) } Sum _{ l=m..floor((n - m) / 5) } Sum _{ k=l..floor((n - l - m) / 4) } Sum _{ j=k..floor((n - k - l - m) / 3) } Sum _{ i=j..floor((n - j - k - l - m) / 2) } mu(m) ^ 2 * mu(l) ^ 2 * mu(k) ^ 2 * mu(j) ^ 2 * mu(i) ^ 2 * mu(n - i - j - k - l - m) ^ 2 * m, where mu is the Möbius function (A008683). ●

▶ [A308955] 0,0,0,0,0,0,0,1,1,2,2,4,5,9,11,14,17,25,29,39,43,58,67,85,93 ⋆ Sum of the sixth largest parts in the partitions of n into 7 squarefree parts. ● a(n) = S um _{ o=1..floor(n / 7) } Sum _{ m=o..floor((n - o) / 6) } Sum _{ l=m..floor((n - m - o) / 5) } Sum _{ k=l..floor((n - l - m - o) / 4) } Sum _{ j=k..floor((n - k - l - m - o) / 3 } Sum _{ i=j..floor((n - j - k - l - m - o) / 2) } mu(o) ^ 2 * mu(m) ^ 2 * mu(l) ^ 2 * mu(k) ^ 2 * mu(j) ^ 2 * mu(i) ^ 2 * mu(n - i - j - k - l - m - o) ^ 2 * m, where mu is the Möbius function (A008683). ●

▶ [A326447] 0,0,0,0,0,0,0,0,0,1,1,2,2,4,5,9,11,16,19,27,33,45,51,69,80,105 ⋆ Sum of the sixth largest parts in the partitions of n into 8 squarefree parts. ● a(n) = S um _{ p=1..floor(n / 8) } Sum _{ o=p..floor((n - p) / 7) } Sum _{ m=o..floor((n - o - p) / 6) } Sum _{ l=m..floor((n - m - o - p) / 5) } Sum _{ k=l..floor((n - l - m - o - p) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p) / 2) } mu(p) ^ 2 * mu(o) ^ 2 * mu(m) ^ 2 * mu(l) ^ 2 * mu(k) ^ 2 * mu(j) ^ 2 * mu(i) ^ 2 * mu(n - i - j - k - l - m - o - p) ^ 2 * m, where mu is the Möbius function (A008683). ●

▶ [A326527] 0,0,0,0,0,0,0,0,0,0,1,1,2,2,4,5,9,11,16,21,29,35,49,57,77,91 ⋆ Sum of th e sixth largest parts of the partitions of n into 9 squarefree parts. ● a(n) = Sum _{ q=1..floor(n / 9) } Sum _{ p=q..floor((n - q) / 8) } Sum _{ o=p..floor((n - p - q) / 7) } Sum _{ m=o..floor((n - o - p - q) / 6) } Sum _{ l=m..floor((n - m - o - p - q) / 5) } Sum _{ k=l..floor((n - l - m - o - p - q) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p - q) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p - q) / 2) } mu(q) ^ 2 * mu(p) ^ 2 * mu(o) ^ 2 * mu(m) ^ 2 * mu(l) ^ 2 * mu(k) ^ 2 * mu(j) ^ 2 * mu(i) ^ 2 * mu(n - i - j - k - l - m - o - p - q) ^ 2 * m, where mu is the Möbius function (A008683). ●

▶ [A326632] 0,0,0,0,0,0,0,0,0,0,1,1,2,2,4,5,9,11,16,21,31,37,51,61,83 ⋆ Sum of the sixth largest parts of the partitions of n into 10 squarefree parts. ● a(n) = Sum _{ r=1..floor(n / 10) } Sum _{ q=r..floor((n - r) / 9) } Sum _{ p=q..floor((n - q - r) / 8) } Sum _{ o=p..floor((n - p - q - r) / 7) } Sum _{ m=o..floor((n - o - p - q - r) / 6) } Sum _{ l=m..floor((n - m - o - p - q - r) / 5) } Sum _{ k=l..floor((n - l - m - o - p - q - r) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p - q - r) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p - q - r) / 2) } mu(r) ^ 2 * mu(q) ^ 2 * mu(p) ^ 2 * mu(o) ^ 2 * mu(m) ^ 2 * mu(l) ^ 2 * mu(k) ^ 2 * mu(j) ^ 2 * mu(i) ^ 2 * mu(n - i - j - k - l - m - o - p - q - r) ^ 2 * m, where mu is the Möbius function (A008683). ●

▶ [A099574] 1,1,2,2,4,5,9,11,18,23,37,48,74,97,147,195,290,387,568,763,1108,149 5,2152,2915,4167 ⋆ Diagonal sums of triangle A099573. ● a(n) = Sum _{ k=0..f loor(n / 2) } Sum _{ j=0..floor(k / 2) } binomial(n - k - j, j). ●

▶ [A124280] 1,1,2,2,4,5,9,12,20,28,45,65,102,150,232,345,529,792,1208,1816,276 1,4161,6314,9530,14444 ⋆ Expansion of 1 / (1 - x - x ^ 2 + x ^ 3 - x ^ 4). ● a(n) = sum { k=0..floor(n / 2), sum { j=0..n - 2k, C(j,n - 2k - j)C(k,n - 2k - j) }} . ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) + a(n - 4), a(0)=1, a(1)=1, a(2)=2, a(3)= 2. - _ Carl Najafi _ , May 06 2014 ●

▶ [A088518] 1,1,1,2,2,4,5,9,12,21,29,50,71,121,175,296,434,730,1082,1812,2709,45 21,6807,11328,17157 ⋆ Symmetric secondary structures of RNA molecules with n nucleotides. ● a(n) is asymptotic to c * phi ^ n / sqrt(n) where phi=(1 + sqrt (5)) / 2 and c=0.86.... - _ Benoit Cloitre _ , Nov 19 2003 ●

▶ [A102526] 1,1,2,2,4,5,9,12,21,30,51,76,127,195,322,504,826,1309,2135,3410,554 5,8900,14445,23256,37701 ⋆ Antidiagonal sums of Losanitsch's triangle (A03485 1). ● a(n) = a(n - 1) + 2 * a(n - 2) - a(n - 3) - a(n - 5) - a(n - 6). - _ Wesley Iv an Hurt _ , Sep 17 2020 ●

▶ [A127968] 1,2,2,4,5,9,13,22,34,56,89,145,233,378,610,988,1597,2585,4181,6766,1 0946,17712,28657,46369,75025 ⋆ a(n) = F(n + 1) + (1 - (- 1) ^ n) / 2, where F( ) = Fibonacci numbers A000045. ● a(n) = (5 - 5 * (- 1) ^ n + 2 ^ (- n) * sqrt(5) * (- (1 - sqrt(5)) ^ (1 + n) + (1 + sqrt(5)) ^ (1 + n))) / 10. ● a(n) = a(n - 1) + 2 * a(n - 2) - a(n - 3) - a(n - 4) for n>3. ●

▶ [A147678] 1,2,2,4,5,10,12,24,27,54,58,116,121,242,248,496,503,1006,1014,2028,2 037,4074,4084,8168,8179 ⋆ Double, add 0, double, add 1, double, add 2, double, add 3, etc. ● a(n) = 4 * a(n - 2) - 5 * a(n - 4) + 2 * a(n - 6). ● a(n) = 2 * a(n -

1) - (n mod 2) * (a(n - 1) - (n - 3) / 2). - _ Reinhard Zumkeller _ , Apr 22 2009 ●

▶ [A195865] 1,1,1,2,2,4,5,10,12,25,33,68,91,190,264,555,780,1649,2365,5021,7274,15518,22727,48646,71784 ⋆ G.f. satisfies A(x) = exp(Sum _{ n>=1 } (A(x ^ n) + A(- x ^ n)) / 2 * x ^ n / n). ● a(0) = 1; a(n) = (1 / n) * Sum _{ k=1..n } (Sum _{ d|k and d is odd } d * a(d - 1)) * a(n - k). - _ Seiichi Manyama _ , May 31 2023 ●

▶ [A178113] 1,2,2,4,5,10,13,26,35,70,96,192,267,534,750,1500,2123,4246,6046,12092,17303,34606,49721,99442,143365 ⋆ Transform of C(n + 1,floor((n + 1) / 2)) by A178112. ● a(n)=sum { k=0..n, C(floor(n / 2),floor(k / 2)) * ((1 + (- 1) ^ (n - k)) / 2) * C(k + 1,floor((k + 1) / 2). ●

▶ [A114851] 0,0,1,1,2,2,4,5,10,14,27,41,78,126,237,399,745,1292,2404,4259,7915,14242,26477,48197,89721 ⋆ Number of lambda calculus terms of size n, where size(lambda x.M) = 2 + size(M), size(M N) = 2 + size(M) + size(N), and size(V) = 1 + i for a variable V bound by the i - th enclosing lambda (corresponding to a binary encoding). ● a(n + 2) = 1 + a(n) + Sum _{ i=0..n } a(i) * a(n - i), with a(0) = a(1) = 0. ●

▶ [A046639] 1,2,2,4,6,7,10,12,18,25,31,41,56,73,96,128,171,226,302,399,533,704,937,1236,1645 ⋆ Length of A001388(n). ● a(n) = 2 * a(n - 2) + a(n - 3) - 2 * a(n - 5) - 2 * a(n - 6) + 2 * a(n - 8) + 2 * a(n - 9) - a(n - 11) - a(n - 12) for n>18. ●

▶ [A309711] 0,0,0,0,0,0,0,0,2,2,4,6,8,10,14,16,24,28,36,44,54,62,76,86,106 ⋆ Sum of the even parts appearing among the smallest parts of the partitions of n into 4 parts. ● a(n) = Sum _{ k=1..floor(n / 4) } Sum _{ j=k..floor((n - k) / 3) } Sum _{ i=j..floor((n - j - k) / 2) } k * ((k - 1) mod 2). ● a(n) = a(n - 1) + a(n - 2) - a(n - 4) - a(n - 5) + a(n - 6) + 2 * a(n - 8) - 2 * a(n - 9) - 2 * a(n - 10) + 2 * a(n - 12) + 2 * a(n - 13) - 2 * a(n - 14) - a(n - 16) + a(n - 17) + a(n - 18) - a(n - 20) - a(n - 21) + a(n - 22) for n>21. ●

▶ [A179999] 1,2,2,4,6,8,10,14,18,24,30,40,50,66,82,108,134,176,218,286,354,464,574,752,930 ⋆ Length of the n - th term in the modified Look and Say sequence A110393. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) + a(n - 4) - a(n - 5) for n>6. ●

▶ [A291055] 1,2,2,4,6,8,13,17,27,40,57,86,122,184,269,395,582,849,1255,1843,2708,3982,5841,8597,12631 ⋆ Number of maximal irredundant sets in the n - path graph. ● a(n) = a(n - 2) + a(n - 3) + a(n - 4) + a(n - 5) - a(n - 7) - 2 * a(n - 8) - a(n - 9) + 2 * a(n - 10) + a(n - 11) - a(n - 14) for n > 14. ●

▶ [A293640] 0,1,1,1,2,2,4,6,9,14,22,36,58,94,151,244,395,639,1034,1673,2706,4379,7085,11463,18548 ⋆ a(n) is the least integer k such that k / Fibonacci(n) > 2 / 5. ● a(n) = a(n - 1) + 2 a(n - 2) - a(n - 3) - 2 a(n - 4) + 2 a(n - 5) + a(n - 6) - 3 a(n - 7) - a(n - 8) + 3 a(n - 9) - 2 a(n - 11) + a(n - 12) + 2 a(n - 13) - a(n - 14) - a(n - 15) for n >= 16. ● a(n) = ceiling(2 * Fibonacci(n) / 5). ●

▶ [A293552] 0,1,1,1,1,2,2,4,6,9,14,23,36,59,95,153,247,400,646,1046,1692,2737,4428,7165,11592 ⋆ a(n) is the least integer k such that k / Fibonacci(n) > 1 / 4. ● a(n) = a(n - 1) + a(n - 2) + a(n - 6) - a(n - 7) - a(n - 8) for n >= 9. ● a(n) = ceiling(Fibonacci(n) / 4). ●

▶ [A293546] 0,1,1,2,2,4,6,9,14,23,37,60,96,156,252,407,658,1065,1723,2788,4510,7298,11808,19105,30912 ⋆ a(n) is the least integer k such that k / Fibonacci(n) > 2 / 3. ● a(n) = a(n - 1) + a(n - 2) + a(n - 8) - a(n - 9) - a(n - 10) for n >= 11. ● a(n) = ceiling(2 * Fibonacci(n) / 3). ●

▶ [A173495] 1,1,2,2,4,6,9,15,24,38,62,100,161,261,422,682,1104,1786,2889,4675,7564,12238,19802,32040,51841 ⋆ a(n) = Lucas(n) - floor(Lucas(n) / 2). ● a(n) = ceiling(Lucas(n) / 2). ●

▶ [A308907] 0,0,0,0,0,0,1,1,2,2,4,6,10,10,14,18,26,28,37,41,57,62,77,87,113 ⋆ Sum of the fifth largest parts in the partitions of n into 6 squarefree parts. ● a(n) = Sum _{ m=1..floor(n / 6) } Sum _{ l=m..floor((n - m) / 5) } Sum _{ k=l..floor((n - l - m) / 4) } Sum _{ j=k..floor((n - k - l - m) / 3) } Sum _{ i=j..floor((n - j - k - l - m) / 2) } mu(m) ^ 2 * mu(l) ^ 2 * mu(k) ^ 2 * mu(j) ^ 2 * mu(i) ^ 2 * mu(n - i - k - j - l - m) ^ 2 * l, where mu is the Möbius function (A008683). ●

▶ [A308956] 0,0,0,0,0,0,0,1,1,2,2,4,6,10,12,16,20,30,34,46,52,71,80,103,115 ⋆ Sum of the fifth largest parts in the partitions of n into 7 squarefree parts. ● a(n) = Sum _{ o=1..floor(n / 7) } Sum _{ m=o..floor((n - o) / 6) } Sum _{ l=m..floor((n - m - o) / 5) } Sum _{ k=l..floor((n - l - m - o) / 4) } Sum _{ j=k..floor((n - k - l - m - o) / 3 } Sum _{ i=j..floor((n - j - k - l - m - o) / 2) } mu(o) ^ 2 * mu(m) ^ 2 * mu(l) ^ 2 * mu(k) ^ 2 * mu(j) ^ 2 * mu(i) ^ 2 * mu(n - i - j - k - l - m - o) ^ 2 * l, where mu is the Möbius function (A008683). ●

▶ [A309834] 0,0,0,0,0,0,0,0,0,0,2,2,4,6,10,12,18,22,30,36,50,58,76,90,114 ⋆ Sum of the even parts appearing among the smallest parts of the partitions of n into 5 parts. ● a(n) = Sum _{ l=1..floor(n / 5) } Sum _{ k=l..floor((n - l) / 4) } Sum _{ j=k..floor((n - k - l) / 3) } Sum _{ i=j..floor((n - j - k - l) / 2) } l * ((l - 1) mod 2). ● a(n) = a(n - 1) + a(n - 2) - 2 * a(n - 5) + a(n - 8) + a(n - 9) + a(n - 10) - 2 * a(n - 11) - 2 * a(n - 12) + 4 * a(n - 15) - 2 * a(n - 18) - 2 * a(n - 19) + a(n - 20) + a(n - 21) + a(n - 22) - 2 * a(n - 25) + a(n - 28) + a(n - 29) - a(n - 30) for n > 29. ●

▶ [A326448] 0,0,0,0,0,0,0,0,1,1,2,2,4,6,10,12,18,22,32,38,52,61,82,94,124 ⋆ Sum of the fifth largest parts of the partitions of n into 8 squarefree parts. ● a(n) = Sum _{ p=1..floor(n / 8) } Sum _{ o=p..floor((n - p) / 7) } Sum _{ m=o..floor((n - o - p) / 6) } Sum _{ l=m..floor((n - m - o - p) / 5) } Sum _{ k=l..floor((n - l - m - o - p) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p) / 2) } mu(p) ^ 2 * mu(o) ^ 2 * mu(m) ^ 2 * mu(l) ^ 2 * mu(k) ^ 2 * mu(j) ^ 2 * mu(i) ^ 2 * mu(n - i - j - k - l - m - o - p) ^ 2 * l, where mu is the Möbius function (A008683). ●

▶ [A326528] 0,0,0,0,0,0,0,0,0,1,1,2,2,4,6,10,12,18,24,34,40,56,67,91,105 ⋆ Sum of the fifth largest parts of the partitions of n into 9 squarefree parts. ● a(n) = Sum _{ q=1..floor(n / 9) } Sum _{ p=q..floor((n - q) / 8) } Sum _{ o=p..floor((n - p - q) / 7) } Sum _{ m=o..floor((n - o - p - q) / 6) } Sum _{ l=m..floor((n - m - o - p - q) / 5) } Sum _{ k=l..floor((n - l - m - o - p - q) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p - q) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p - q) / 2) } mu(q) ^ 2 * mu(p) ^ 2 * mu(o) ^ 2 * mu(m) ^ 2 * mu(l) ^ 2 * mu(k) ^ 2 * mu(j) ^ 2 * mu(i) ^ 2 * mu(n - i - j - k - l - m - o - p - q) ^ 2 * l, where mu is the Möbius function (A008683). ●

▶ [A326633] 0,0,0,0,0,0,0,0,0,0,1,1,2,2,4,6,10,12,18,24,36,42,58,71,97 ⋆ Sum of the fifth largest parts of the partitions of n into 10 squarefree parts. ● a(n) = Sum _{ r=1..floor(n / 10) } Sum _{ q=r..floor((n - r) / 9) } Sum _{ p=q..floor((n - q - r) / 8) } Sum _{ o=p..floor((n - p - q - r) / 7) } Sum _{ m=o..floor((n - o - p - q - r) / 6) } Sum _{ l=m..floor((n - m - o - p - q - r) / 5) } Sum _{ k=l..floor((n - l - m - o - p - q - r) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p - q - r) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p - q - r) / 2) } mu(r) ^ 2 * mu(q) ^ 2 * mu(p) ^ 2 * mu(o) ^ 2 * mu(m) ^ 2 * mu(l) ^ 2 * mu(k) ^ 2 * mu(j) ^ 2 * mu(i) ^ 2 * mu(n - i - j - k - l - m - o - p - q - r) ^ 2 * l, where mu is the Möbius function (A008683). ●

▶ [A262258] 1,2,2,4,6,10,16,24,40,56,96,128,224,288,512,640,1152,1408,2560,3072,5632,6656,12288,14336,26624 ⋆ a(n) = the number of hills (arch length of 1 with no covering arches) for semi - meander solutions with n arches and floor((n + 2) / 2) arch group returns to the x axis. ● a(1)=1, a(2)=2, a(n) = (2 ^ floor((n - 1) / 2) * (floor(n / 2) - (1 / 2) * (floor((n - 3) / 2)) for n>2. ● a(n) = 2 ^ (n / 2 - 3) * (n + 4) for n>2 and even. ● a(n) = 2 ^ ((n - 9) / 2) * (4 * n + 4) for n>2 and odd. ● a(n) = 4 * a(n - 2) - 4 * a(n - 4) for n>6. ●

▶ [A293633] 1,1,2,2,4,6,10,16,26,41,67,108,175,283,458,740,1198,1938,3136,5074,8210,13283,21493,34776,56269 ⋆ a(n) is the integer k that minimizes |k / Fibonacci(n) - 3 / 4|. ● a(n) = a(n - 1) + a(n - 2) + a(n - 6) - a(n - 7) - a(n - 8) for n >= 9. ● a(n) = floor(1 / 2 + 3 * Fibonacci(n) / 4). ●

▶ [A163733] 1,1,2,2,4,6,10,16,26,42,68,110,178,288,466,754,1220,1974,3194,5168,8362,13530,21892,35422,57314 ⋆ Number of n X 2 binary arrays with all 1's connected, all corners 1, and no 1 having more than two 1's adjacent. ● a(n) = round(phi ^ (k - 1)) - round(phi ^ (k - 1) / sqrt(5)), phi = (1 + sqrt(5)) / 2 (conjecture). - _ Federico Provvedi _ , Mar 26 2013 ●

▶ [A198834] 0,0,2,2,4,6,10,16,26,42,68,110,178,288,466,754,1220,1974,3194,5168,8362,13530,21892,35422,57314 ⋆ Number of sequences of n coin flips that win on the last flip, if the sequence of flips ends with (0,1,1) or (1,1,1). ● a(n) = a(n - 1) + a(n - 2) for n > 3. ●

▶ [A000016] 1,1,1,2,2,4,6,10,16,30,52,94,172,316,586,1096,2048,3856,7286,13798,26216,49940,95326,182362,349536 ⋆ a(n) is the number of distinct (infinite) output sequences from binary n - stage shift register which feeds back the complement of the last stage. ● a(n) = Sum _{ odd d divides n } (phi(d) * 2 ^ (n / d)) / (2 * n), n>0. ●

▶ [A060553] 2,2,4,6,10,16,32,52,104,192,376,720,1440,2800,5600,11072,22112,43968,87936,175296,350592,700160,1400192,2798336,5596672 ⋆ a(n) is the number of distinct (modulo geometric D3 - operations) patterns which can be formed by an equilateral triangular arrangement of closely packed black and white cells satisfying the local matching rule of Pascal's triangle modulo 2, where n is the number of cells in each edge of the arrangement. The matching rule is such that any elementary top - down triangle of three neighboring cells in the arrangement contains either one or three white cells. ● a(n) = (2 ^ (n - 1) + 2 ^ (floor(n / 3) + (n mod 3)mod 2)) / 3 + 2 ^ floor((n - 1) / 2). ●

▶ [A293673] 0,1,1,2,2,4,6,10,17,27,44,71,115,186,302,488,790,1278,2067,3345,5412,8757,14169,22926,37094 ⋆ a(n) is the integer k that minimizes |k / Fibonacci(n) - 4 / 5|. ● a(n) = a(n - 1) + 2 a(n - 2) - a(n - 3) - 2 a(n - 4) + a(n - 5) + 2 a(n - 6) - a(n - 7) - 2 a(n - 8) + a(n - 9) + a(n - 10) for n >= 11. ● a(n) = floor(1 / 2 + 4 * Fibonacci(n) / 5). ●

▶ [A293505] 0,0,0,1,2,2,4,6,10,17,28,44,72,116,188,305,494,798,1292,2090,3382,5473,8856,14328,23184 ⋆ a(n) is the integer k that minimizes |k / Fibonacci(n) - 1 / 2|. ● a(n) = a(n - 1) + a(n - 2) + a(n - 6) - a(n - 7) - a(n - 8) for n >= 9. ● a(n) = floor(1 / 2 + Fibonacci(n) / 2). ●

▶ [A063886] 1,2,2,4,6,12,20,40,70,140,252,504,924,1848,3432,6864,12870,25740,48620,97240,184756,369512,705432,1410864,2704156 ⋆ Number of n - step walks on a line starting from the origin but not returning to it. ● a(n) = Sum _{ k=0..n } (k + 1)binomial(n, (n - k) / 2) (1 - cos((k + 1) * Pi / 2) (1 + (- 1) ^ (n - k)) / (n + k + 2)). - _ Paul Barry _ , Oct 12 2004 ● a(n) = 2 ^ n * Product _{ k=0..n - 1 } (k / n + 1 / n) ^ ((- 1) ^ k). - _ Peter Luschny _ , Dec 02 2013 ●

▶ [A003000] 1,2,2,4,6,12,20,40,74,148,284,568,1116,2232,4424,8848,17622,35244,70340,140680,281076,562152,1123736,2247472,4493828 ⋆ Number of bifix - free (or primary, or unbordered) words of length n over a two - letter alphabet. ● a(2 * n + 1) = 2 * a(2 * n), a(2 * n) = 2 * a(2 * n - 1) - a(n). ● a(n) / 2 ^ n converges to A242430. ● a(0)=1; a(n)=2 * a(n - 1) - (1 / 2) * (1 + (- 1) ^ n) * a([n / 2]). - _ Farideh Firoozbakht _ , Jun 10 2004 ●

▶ [A238014] 1,1,2,2,4,6,12,20,48,84,216,408,1104,2280,6288,14128,40256,96240,287904,714016,2246592,5750112,18900672,49973568,169592576 ⋆ Number of chess tableaux with n cells. ● a(n) = Sum _{ lambda : partitions(n) } chess(lambda), where chess(lambda) is the number of chess tableaux of shape lambda. ●

▶ [A128209] 1,2,2,4,6,12,22,44,86,172,342,684,1366,2732,5462,10924,21846,43692,87382,174764,349526,699052,1398102,2796204,5592406 ⋆ Jacobsthal numbers(A001045) + 1. ● a(n) = 1 + 2 ^ n / 3 - (- 1) ^ n / 3. ●

▶ [A052953] 2,2,4,6,12,22,44,86,172,342,684,1366,2732,5462,10924,21846,43692,87382,174764,349526,699052,1398102,2796204,5592406,11184812 ⋆ Expansion of 2 * (1 - x - x ^ 2) / ((1 - x) * (1 + x) * (1 - 2 * x)). ● a(n) = a(n - 1) + 2 * a(n - 2) - 2. ● a(n) = 1 + Sum _{ alpha=RootOf(- 1 + z + 2 * z ^ 2) } (1 + 4 * alpha) * alpha ^ (- 1 - n) / 9. ● a(2n) = 2 * a(n - 1) - 2, a(2n + 1) = 2 * a(2n). - _ Lee Hae - hwang _ , Oct 11 2002 ● a(n) = (2 ^ (n + 1) - (- 1) ^ (n + 1)) / 3 + 1. (End) ●

▶ [A181926] 1,1,2,2,4,6,13,27,70,191,609,2130,8526,38156,194000,1109673,7176149,52238676,429004471,3970438003,41454181730,488046132076,6482590679282,97134793638750,1641654359781521 ⋆ Diagonal sums of Fibonomial triangle A010048. ● a(n) = sum(fibonomial(k,n - k),k=ceiling(n / 2)..n). ●

▶ [A069925] 1,1,1,2,2,4,6,16,18,40,62,160,210,448,660,2048,2570,5184,9198,24672,32508,76032,121574,344064,405000 ⋆ a(n) = phi(2 ^ n + 1) / (2 * n). ● a(n) = phi(2 ^ n + 1) / (2 * n). ●

▶ [A080611] 2,2,4,6,21,155,441,2925,10165,342056,2781505,10631544,163886800,498936010,5163068911,794010643700,17635639237580,353823355745574,16828233620277430,224220167903546529,1199047161971958678 5,11336776700319803248 0,4446177962278202834685,1183320817352031440636 19,1103720538399012083835935 ⋆ a(n) is the smallest number m >= 2 for which the set of prime factors of m, m - 1 and m + 1 contains at least the first n primes. ● a(n) is the smallest

number such that the product [a(n) - 1]a(n)[a(n) + 1] has prime factors which i nclude the first n ordinal primes excluding 1 (see A033946). ●
▶ [A338917] 1,2,2,4,7,7,25,34,151,331,1690,3265,26449,64528,574513,1671208,160 90657,54199564,559922497,2133503863,23506132363 ⋆ a(n) = sum _ of _ digits(a(n - 1) ^ a(n - 2)) where a(1)=1 and a(2)=2. ● a(n) == 7 (mod 9) for n >= 5. - _ Hugo Pfoertner _ , Nov 15 2020 ●
▶ [A067953] 0,1,1,2,2,4,7,13,23,39,69,122,211,339,564,1001,1764,2630,4565,7192,1 0151,17202,26152,43543,79126 ⋆ Number of ways to sum numbers from 1 to n t o the n - th prime. ● a(n) = b(0, n), where b(m, n) satisfies b(m, n) = 1 + sum { b(i, j): m<i<j<n & i + j=prime(n) } . ●
▶ [A049868] 1,2,2,4,7,14,26,49,91,170,317,592,1105,2063,3851,7189,13420,25052,4 6766,87301,162970,304226,567917,1060165,1979074 ⋆ a(n)=Sum { a(k): k=0,1,2 ,...,n - 4,n - 2,n - 1 } ; a(n - 3) is not a summand; 3 initial terms required. ● a(n)=2 * a(n - 1) - a(n - 3) + a(n - 4); 4 initial terms required. ●
▶ [A052949] 2,2,4,7,15,32,71,158,354,794,1783,4005,8998,20217,45426,102070,22 9348,515339,1157955,2601900,5846415,13136774,29518062,66326482,149034251 ⋆ Expansion of (2 - 4 * x + x ^ 3) / ((1 - x) * (1 - 2 * x - x ^ 2 + x ^ 3)). ● a(n) = 2 * a(n - 1) + a(n - 2) - a(n - 3) - 1. ● a(n) = 1 + Sum _{ alpha=RootOf(1 - 2 * z - z ^ 2 + z ^ 3) } (1 / 7) * (1 + 2 * alpha - alpha ^ 2) * alpha ^ (- 1 - n). ●
▶ [A032441] 1,2,2,4,7,16,37,92,232,596,1541,4006,10441,27262,71254,186356,4875 79,1276004,3339821,8742472,22885996,59912932,156848617,410626154,107501889 7 ⋆ a(n) = Sum _{ i=0..2 } binomial(Fibonacci(n),i). ● a(0)=1, a(1)=2, a(2)=2 , a(3)=4, a(4)=7, a(5)=16, a(n)=4 * a(n - 1) - 2 * a(n - 2) - 6 * a(n - 3) + 4 * a(n - 4) + 2 * a(n - 5) - a(n - 6). - _ Harvey P. Dale _ , Feb 02 2015 ●
▶ [A238184] 1,1,1,1,2,2,4,7,16,37,107,282,1020,2879,12507,39347,179231,687974,3 225246,14955561,75999551,392585613,2271201137,12183159188,81562521256 ⋆ S um of the squares of numbers of nonconsecutive chess tableaux over all partitio ns of n. ● a(n) = Sum _{ lambda : partitions(n) } ncc(lambda) ^ 2, where ncc(k) is the number of nonconsecutive chess tableaux of shape k. ●
▶ [A104221] 0,0,0,2,2,4,8,12,20,34,54,88,144,232,376,610,986,1596,2584,4180,676 4,10946,17710,28656,46368 ⋆ a(n) = Fibonacci(n) - (Fibonacci(n) mod 2). ● a(n) = a(n - 1) + a(n - 2) + a(n - 3) - a(n - 4) - a(n - 5). - _ Eric W. Weisstein _ , Sep 03 2017 ● a(n) = (1 / 3) * (- 2 + 3 * Fibonacci(n) + 2 * ChebyshevU(n, - 1 / 2) + ChebyshevU(n - 1, - 1 / 2)). - _ G. C. Greubel _ , Jul 08 2022 ●
▶ [A123024] 1,1,2,2,4,8,12,28,60,112,284,652,1404,3776,9228,22028,62092,16044 8,414540,1216012,3302604,9092272,27622844,78446956,227652828 ⋆ a(n) = n! * b(n) where b(n) = (b(n - 2) + b(n - 3)) / (n * (n - 1)), b(0) = b(1) = b(2) = 1. ● a(n) = n! * b(n) where b(n) = (b(n - 2) + b(n - 3)) / (n * (n - 1)), b(0) = b(1) = b(2) = 1. ●
▶ [A306604] 0,1,2,2,4,8,14,23,43,75,134,236,419,743,1316,2333,4135,7329,12992,2 3026,40813,72338,128218,227259,402806 ⋆ Number of perfect squares in the half - open interval [Pi ^ (n - 1), Pi ^ n). ● a(n) = ceiling(Pi ^ (n / 2)) - ceiling(Pi ^ ((n - 1) / 2)). ●
▶ [A354784] 0,0,2,2,4,8,14,26,48,88,162,298,548,1008,1854,3410,6272,11536,2121 8,39026,71780,132024,242830,446634,821488 ⋆ First differences of A000213, also twice A000073. ● a(n) = a(n - 1) + a(n - 2) + a(n - 3) for n > 2. ●
▶ [A171648] 1,2,2,4,8,16,24,48,80,160,256,512,832,1664,2688,5376,8704,17408,28 160,56320,91136,182272,294912,589824,954368 ⋆ a(1) = 1, a(n) = 2 * a(n - 1) if n is even; a(n) = a(n - 1) * Fibonacci((n + 1) / 2) / Fibonacci((n - 1) / 2) if n is odd. ● a(n) = 2 * a(n - 2) + 4 * a(n - 4) for n>4. ●
▶ [A090129] 1,2,2,4,8,16,32,64,128,256,512,1024,2048,4096,8192,16384,32768,655 36,131072,262144,524288,1048576,2097152,4194304,8388608 ⋆ Smallest exponent such that - 1 + 3 ^ a(n) is divisible by 2 ^ n. ● a(n) = 2 ^ (n - 2) if n >= 3, 1 f or n=1 and 2 for n=2 (see the order comment above). ●
▶ [A108774] 1,1,2,2,4,8,16,48,160,448,2048,6400,31232,125952,604160,3119104,15 638528,93478912,550141952,3367698432,24049516544,146207539200,12039345930 24,7615928598528,67190404415488 ⋆ Sum of the squares of numbers of chess ta bleaux over all partitions of n. ● a(n) = Sum _{ lambda : partitions(n) } chess (lambda) ^ 2, where chess(k) is the number of standard Young tableaux (SYT) with cell(i,j) + i + j == 1 mod 2. - _ Alois P. Heinz _ , Jun 30 2012 ●
▶ [A007971] 0,1,2,2,4,8,18,42,102,254,646,1670,4376,11596,31022,83670,227268,6 21144,1706934,4713558,13072764,36398568,101704038,285095118,801526446 ⋆ I NVERTi transform of central trinomial coefficients (A002426). ● a(0)=0, a(1)= 1, a(2)=2, then a(n)= (1 / 2) * (a(1) * a(n - 1) + a(2) * a(n - 2) + ... + a(n - 1) * a(1)). - _ Benoit Cloitre _ , Oct 24 2003 ● a(n) = 2 ^ (1 - n) * Sum _{ k= 1..n } (binomial(k,n - k) * a000108(k - 1) * 3 ^ (n - k)), n>0. - _ Vladimir Kru chinin _ , Feb 05 2011 ●
▶ [A100048] 0,1,2,2,4,9,16,29,56,106,198,373,704,1325,2494,4698,8848,16661,313 76,59089,111276,209554,394634,743177,1399552 ⋆ A Chebyshev transform of the Pell numbers. ● a(n) = 2 * a(n - 1) - a(n - 2) + 2 * a(n - 3) - a(n - 4). ● a(n) = |u(n)| ^ 2, where { u(n) } is the Lucas - type sequence defined by the recurrenc e u(0) = 0, u(1) = 1 and u(n) = P * u(n - 1) - u(n - 2) for n >= 2, where P = 1 / 2 * (sqrt(7) + i). ● a(n) = (T(n,alpha) - T(n,beta)) / (alpha - beta), where a lpha = (1 + sqrt(2)) / 2 and beta = (1 - sqrt(2)) / 2 and T(n,x) denotes the Ch ebyshev polynomial of the first kind. ● a(n) = bottom left entry of the 2 X 2 m atrix T(n, M), where M is the 2 X 2 matrix [0, 1 / 4; 1, 1]. ●
▶ [A052935] 2,2,4,9,16,32,65,128,256,513,1024,2048,4097,8192,16384,32769,6553 6,131072,262145,524288,1048576,2097153,4194304,8388608,16777217 ⋆ Expansio n of (2 - 2 * x - x ^ 3) / ((1 - 2 * x) * (1 - x ^ 3)). ● a(n) = a(n - 1) + a(n - 2) + 2 * a(n - 3) - 1. ● a(n) = 2 ^ n + Sum _{ alpha=RootOf(- 1 + z ^ 3) } alph a ^ (- n) / 3. ●
▶ [A052925] 2,2,4,9,22,56,145,378,988,2585,6766,17712,46369,121394,317812,832 041,2178310,5702888,14930353,39088170,102334156,267914297,701408734,183631 1904,4807526977 ⋆ Expansion of (2 - 6 * x + 4 * x ^ 2 - x ^ 3) / ((1 - x) * (1 - 3 * x + x ^ 2)). ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) + a(n - 3), with a(0)=2, a(1)= 2, a(2)=4, a(3)=9. ● a(n) = 1 + Sum _{ alpha=RootOf(1 - 3 * z + z ^ 2) } (1 / 5) * (2 - 3 * alpha) * alpha ^ (- 1 - n). ●
▶ [A152732] 0,0,2,2,4,10,18,36,74,146,292,586,1170,2340,4682,9362,18724,37450,7 4898,149796,299594,599186,1198372,2396746,4793490 ⋆ a(n) + a(n + 1) + a(n + 2) = 2 ^ n. ● a(n) = (1 / 21) * (3 * 2 ^ n + 18 * cos((2 * n * Pi) / 3) + 2 * sqr t(3) * sin((2 * n * Pi) / 3)). - _ Zak Seidov _ , Dec 12 2008 ●
▶ [A100088] 1,2,2,4,10,20,38,76,154,308,614,1228,2458,4916,9830,19660,39322,78 644,157286,314572,629146,1258292,2516582,5033164,10066330 ⋆ Expansion of (1 - x ^ 2) / ((1 - 2 * x) * (1 + x ^ 2)). ● a(n) = (3 * 2 ^ n + 2 * cos(Pi * n / 2) + 4 * sin(Pi * n / 2)) / 5. ● a(n) = 2 * a(n - 1) + period 4:repeat 0, - 2, 0, 2, with a(0) = 1. ● a(n) = 2 * a(n - 1) - a(n - 2) + 2 * a(n - 3). ● a(n) = (1 / 5) * (3 * 2 ^ n + i ^ n * (1 + (- 1) ^ n) - 2 * i ^ (n + 1) * (1 - (- 1) ^ n)). - _ G. C. Gr eubel _ , Jul 08 2022 ●
▶ [A132824] 1,2,2,4,10,24,54,116,242,496,1006,2028,4074,8168,16358,32740,6550 6,131040,262110,524252,1048538,2097112,4194262,8388564,16777170 ⋆ Row sum s of triangle A132823. ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 2 * a(n - 3) for n>3 . - _ Colin Barker _ , Jun 06 2014 ●
▶ [A284016] 1,2,2,4,10,28,84,264,858,2860,9724,33592,117572,416024,1485800,53 48880,19389690,70715340,259289580,955277400,3534526380,13128240840,489325 34040,182965127280,686119227300 ⋆ a(- 1)= - 1; a(n) = 2 * A000108(n) for n > = 0. ● a(n) = (2 * 4 ^ n * Gamma(n + 1 / 2)) / (sqrt(Pi) * Gamma(n + 2)) for n >= - 1. - _ Ralf Steiner _ , Apr 02 2017 ● a(n) = binomial(2 * n + 2, n + 1) / (2 * n + 1) = 4 * binomial(2 * n, n) - binomial(2 * n + 2, n + 1) for all n in Z . - _ Michael Somos _ , Jan 26 2018 ●
▶ [A112556] 1,2,2,4,10,32,112,408,1514,5680,21472,81644,311896,1196132,460223 6,17757184,68680170,266200112,1033703056,4020716124,15662273840,610921274 92,238582873476,932758045124,3650336341240 ⋆ Sums of squared terms in rows of triangle A112555. ● a(n) = (1 / 3) * (4 - (- 1 / 2) ^ n) - Sum _{ j=0..n - 1 } binomial(2 * j, j) * (- 1 / 2) ^ (n - j). - _ G. C. Greubel _ , Jan 13 2022 ●
▶ [A260878] 2,2,4,11,36,127,463,1717,6436,24311,92379,352717,1352079,520030 1,20058301,77558761,300540196,1166803111,4537567651,17672631901,689232644 11,269128937221,1052049481861,4116715363801,16123801841551 ⋆ Number of se t partitions of { 1, 2, ..., 2 * n } with sizes in { [n, n], [2n] } . ● a(n) = Binomia l(2 * n - 1, n) + 1. - _ Vladimir Kruchinin _ , Feb 26 2017 ● a(n) = ((4 * n - 2) * a(n - 1) - 3 * n + 2) / n for n >= 2. ● a(n) = (2 * n)! * [x ^ (2 * n)] exp(ex p(x) * (1 - (Gamma(n,x) / Gamma(n)))) for n >= 2. ●
▶ [A208529] 2,2,4,12,48,240,1440,10080,80640,725760,7257600,79833600,958003 200,12454041600,174356582400,2615348736000,41845579776000,71137485619200 0,1280474741456000,24329020081766400,486580401635380000,1021818843434 18880000 ⋆ Number of permutations of n > 1 having exactly 2 points on the bo undary of their bounding square. ● a(n) = 2(n - 2)!. ● a(n) = 2 * n! / (n * (n - 1)). - _ Vincenzo Librandi _ , Apr 15 2014 ●
▶ [A090753] 1,2,2,4,16,88,600,4800,43680,443296,4949920,60217408,792134528,1 1200176128,169375195136,2728019576832,46626359376384,842947307334144,160 7313155482675 2,322403473258650624,6786861273524305920 ⋆ Coefficients of po wer series A(x) such that n - th term of A(x) ^ n = n! * n * x ^ (n - 1), for n> 0. ● a(n) = Sum _{ j=2..(n - 2) } (j - 1) * a(j) * a(n - j) for n>=2, with a(0)= 1, a(1)=2. ●
▶ [A114695] 2,2,4,104,143,169,4895,6764,7921,229970,317810,372100,10803704,1 4930351,17480761,507544127,701408732,821223649,23843770274,32951280098,38 580030724,1120149658760,1548008755919,1812440220361 ⋆ Three consecutive el ements of the sequence built from a quadratic form over four consecutive Fibon acci numbers A000045. ● a(3 * n) = Fibonacci(4 * n + 2) * Fibonacci(4 * n + 3). ● a(3 * n + 1) = Lucas(4 * n + 1) * Fibonacci(4 * n + 3). ● a(3 * n + 2) = Fibonacci(4 * n + 3) * Fibonacci(4 * n + 3). ● a(n) = 48 * a(n - 3) - 48 * a(n - 6) + a(n - 9). (End) ● a(n) = F(4 * m + 3) * (4 * F(4 * m + 2) - ((n ^ 2 mod 3) * F(4 * m + 2) + ((n + 2) ^ 2 mod 3) * Lucas(4 * m + 1) + ((n + 1) ^ 2 mo d 3) * F(4 * m + 3))), where m = floor(n / 3) and F = Fibonacci. - _ G. C. G reubel _ , May 24 2021 ●
▶ [A213032] 0,0,0,1,2,2,5,5,7,11,14,14,20,20,24,31,36,36,45,45,51,61,68,68,80 ⋆ Fl oor(n / 2) * floor(n / 3) - floor(n / 6) ^ 2. ● a(n) = a(n - 1) + 2 * a(n - 6) - 2 * a(n - 7) - a(n - 12) + a(n - 13). ●
▶ [A307984] 1,1,1,2,2,5,5,7,11,25,25,38,38,84,150,178,178,235,235,341,578,1233,1 233,1521,1966 ⋆ a(n) is the number of Q - bases which can be build from the set { log(1),...,log(n) } . ● a(p) = a(p - 1) for any prime number p. - _ Rémy Sigri st _ , May 09 2019 ●
▶ [A340572] 0,0,0,0,0,1,2,2,5,5,8,10,13,16,21,24,31,35,41,49,57,64,75,84,95 ⋆ Num ber of partitions of n into 4 parts with at least one prime part. ● a(n) = Sum _{ k=1..floor(n / 4) } Sum _{ j=k..floor((n - k) / 3) } Sum _{ i=j..floor((n - j - k) / 2) } sign(c(k) + c(j) + c(i) + c(n - i - j - k)), where c is the prime chara cteristic (A010051). ●
▶ [A097896] 1,2,2,5,5,12,13,29,34,71,89,176,233,441,610,1115,1597,2840,4181,727 7,10946,18735,28657,48416,75025 ⋆ Number of compositions of n with either all parts odd or all parts even. ● a(2 * n - 1) = Fibonacci(2 * n - 1), a(2 * n) = 2 ^ (n - 1) + Fibonacci(2 * n). - _ Vladeta Jovovic _ , Sep 05 2004 ● a(n)= + a(n - 1) + 3 * a(n - 2) - 2 * a(n - 3) - 2 * a(n - 4). G.f.: - x * (- 1 - x + x ^ 3 + 3 * x ^ 2) / ((2 * x ^ 2 - 1) * (x ^ 2 + x - 1)). - _ R. J. Mathar _ , Feb 06 2010 ●
▶ [A122205] 1,1,1,2,2,5,5,12,17,31,31,96,96,197,324,629,629,1695,1695,4374,626 6,10671,10671,34402,38776 ⋆ Number of finite sequences b with b(0) = 1, b(i + 1) = b(i) + d where d|b(i), ending with n. ● a(1) = 1, for n>1, a(n) = sum _{ d|n, d<n } a(n - d). ●
▶ [A325983] 1,1,2,2,5,5,18,21,77,102,337,480,1449,2155,6107,9348,25355,39639,1 04188,165596,425156,684926,1726737,2813582,6990175 ⋆ Row sums of the triang le A325982. ● a(n) = Sum _{ k=0..floor((n - 1) / 2) } binomial(n - 1, k - 1) - b inomial(n - k - 1, k - 1) + 1. ●
▶ [A007988] 2,2,5,6,11,12,20,22,32,36,49,54,71,78,98,108,132,144,173,188,221,24 0,278,300,344 ⋆ Expansion of (x ^ 6 - x ^ 5 - x ^ 4 + 2x ^ 2) / ((1 - x ^ 3)(1 - x ^ 2) ^ 2(1 - x)). ● a(2)=2, a(3)=2, a(4)=5, a(5)=6, a(6)=11, a(7)=12, a(8)=20, a(9)=22; for n>9, a(n) = a(n - 1) + 2 * a(n - 2) - a(n - 3) - 2 * a(n - 4) - a(n - 5) + 2 * a(n - 6) + a(n - 7) - a(n - 8). - _ Harvey P. Dale _ , Apr 04 2013 ● a(n) = floor((n + 1) * (27 * (- 1) ^ n + 41 + 16 * n + 2 * n ^ 2) / 144). - _ Tani Akinari _ , Jun 26 2013 ●
▶ [A238517] 1,1,1,2,2,5,6,11,14,26,34,52,79,110,162,231,328,446,660,872,1236,166 0,2327,3060,4238 ⋆ Square row sums of the table A008289 (A060016). ● a(n) =

sum(q(n,k) ^ k,k=0..n), where q(n,k) is the number of partitions of n into k distinct parts (A008289, A060016). •

▶ [A181716] 0,1,2,2,5,6,12,17,30,46,77,122,200,321,522,842,1365,2206,3572,5777,9350,15126,24477,39602,64080 ⋆ a(n) = a(n - 1) + a(n - 2) + (- 1) ^ n, with a(0) =0 and a(1)=1. • a(n) = a(n - 1) + a(n - 2) + (- 1) ^ n = 2a(n - 2) + a(n - 3). •

▶ [A098600] 1,2,2,5,6,12,17,30,46,77,122,200,321,522,842,1365,2206,3572,5777,9350,15126,24477,39602,64080,103681 ⋆ a(n) = Fibonacci(n - 1) + Fibonacci(n + 1) - (- 1) ^ n. • a(n) = Sum _{ k = 0..n } binomial(k, n - k) + binomial(k - 1, n - k - 1). • a(n) = Lucas(n) - (- 1) ^ n. - _ Paul Barry _ , Dec 01 2004 • a(n) = [x ^ n] ((1 + x + sqrt(1 + 6 * x + 5 * x ^ 2)) / 2) ^ n. exp(Sum _{ n >= 1 } a(n) * x ^ n / n) = Sum _{ n >= 0 } Fibonacci(n + 2) * x ^ n. Cf. A182143. - _ Peter Bala _ , Jun 29 2015 • a(n) = (- (- 1) ^ n + ((1 / 2) * (1 - sqrt(5))) ^ n + ((1 / 2) * (1 + sqrt(5))) ^ n). • a(n) = 2 * a(n - 2) + a(n - 3) for n > 2. •

▶ [A329908] 2,2,5,6,15,24,51,90,187,352,715,1386,2795,5504,11051,21930,43947,87552,175275,349866,700075,1398784,2798251,5593770,11188907 ⋆ Number of oriented rational links with crossing number n. • a(n) = (2 ^ (n - 1) + 1) / 3 + 2 ^ (n / 2 - 1) if n is even; (2 ^ (n - 1) + 2 ^ ((n - 1) / 2) - 2) / 3 if n is odd and n == 1 mod 4; (2 ^ (n - 1) + 2 ^ ((n - 1) / 2)) / 3) if n is odd and n == 3 mod 4. •

▶ [A080880] 1,2,2,5,6,17,22,65,86,257,342,1025,1366,4097,5462,16385,21846,65537,87382,262145,349526,1048577,1398102,4194305,5592406 ⋆ a(n) * a(n + 3) - a(n + 1) * a(n + 2) = 2 ^ n, given a(0)=1, a(1)=2, a(2)=2. • a(2n)=(4 ^ n + 2) / 3, a(2n + 1)=4 ^ n + 1. • a(n) = 5 / 6 + 5 / 12 * 2 ^ n - 1 / 6 * (- 1) ^ n - 1 / 12 * (- 2) ^ n [From _ Richard Choulet _ , Dec 07 2008] • a(n + 4) = 5 * a(n + 2) - 4 * a(n) [From _ Richard Choulet _ , Dec 06 2008] •

▶ [A216392] 1,1,1,1,1,1,2,2,5,7,7,13,16,21,35,57,83,143,207,278,457,790,1064,1815,3468 ⋆ Number of values of k for which sigma(k) is a permutation of decimal digits of k, for k < 2 ^ n. • a(n) = # { k in A115920 | k < 2 ^ n } . - _ M. F. Hasler _ , Feb 24 2014 •

▶ [A188623] 1,2,2,5,7,8,12,15,17,22,26,29,35,40,44,51,57,62,70,77,83,92,100,107,117 ⋆ Number of reachable configurations in a chip - firing game on a triangle starting with n chips on one vertex. • a(3 * k) = (3 * k ^ 2 + 3 * k - 2) / 2, • a(3 * k + 1) = (3 * k ^ 2 + 5 * k + 2) / 2, • a(3 * k + 2) = (3 * k ^ 2 + 7 * k + 4) / 2. • a(n) = (n * (n + 3) - 4 * (- 1) ^ floor(2 * n / 3 + 1 / 3) - 2) / 6. [_ Bruno Berselli _ , Feb 03 2016] •

▶ [A308842] 0,0,0,0,0,1,1,2,2,5,7,9,10,16,18,25,25,35,40,51,54,74,83,105,112 ⋆ Sum of the fourth largest parts in the partitions of n into 5 squarefree parts. • a(n) = Sum _{ l=1..floor(n / 5) } Sum _{ k=l..floor((n - l) / 4) } Sum _{ j=k..floor((n - k - l) / 3) } Sum _{ i=j..floor((n - j - k - l) / 2) } mu(l) ^ 2 * mu(k) ^ 2 * mu(j) ^ 2 * mu(i) ^ 2 * mu(n - i - j - k - l) ^ 2 * k, where mu is the Möbius function (A008683). •

▶ [A308908] 0,0,0,0,0,0,1,1,2,2,5,7,11,12,18,22,32,34,47,52,71,78,102,116,154 ⋆ Sum of the fourth largest parts in the partitions of n into 6 squarefree parts. • a(n) = Sum _{ m=1..floor(n / 6) } Sum _{ l=m..floor((n - m) / 5) } Sum _{ k=l..floor((n - l - m) / 4) } Sum _{ j=k..floor((n - k - l - m) / 3) } Sum _{ i=j..floor((n - j - k - l - m) / 2) } mu(m) ^ 2 * mu(l) ^ 2 * mu(k) ^ 2 * mu(j) ^ 2 * mu(i) ^ 2 * mu(n - i - k - j - l - m) ^ 2 * k, where mu is the Möbius function (A008683). •

▶ [A308957] 0,0,0,0,0,0,0,1,1,2,2,5,7,11,14,20,24,36,41,56,64,86,98,129,147 ⋆ Sum of the fourth largest parts in the partitions of n into 7 squarefree parts. • a(n) = Sum _{ o=1..floor(n / 7) } Sum _{ m=o..floor((n - o) / 6) } Sum _{ l=m..floor((n - m - o) / 5) } Sum _{ k=l..floor((n - l - m - o) / 4) } Sum _{ j=k..floor((n - k - l - m - o) / 3 } Sum _{ i=j..floor((n - j - k - l - m - o) / 2) } mu(o) ^ 2 * mu(m) ^ 2 * mu(l) ^ 2 * mu(k) ^ 2 * mu(j) ^ 2 * mu(i) ^ 2 * mu(n - i - j - k - l - m - o) ^ 2 * k, where mu is the Möbius function (A008683). •

▶ [A326449] 0,0,0,0,0,0,0,0,1,1,2,2,5,7,11,14,22,26,38,45,63,73,98,113,152 ⋆ Sum of the fourth largest parts of the partitions of n into 8 squarefree parts. • a(n) = Sum _{ p=1..floor(n / 8) } Sum _{ o=p..floor((n - p) / 7) } Sum _{ m=o..floor((n - o - p) / 6) } Sum _{ l=m..floor((n - m - o - p) / 5) } Sum _{ k=l..floor((n - l - m - o - p) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p) / 2) } mu(p) ^ 2 * mu(o) ^ 2 * mu(m) ^ 2 * mu(l) ^ 2 * mu(k) ^ 2 * mu(j) ^ 2 * mu(i) ^ 2 * mu(n - i - j - k - l - m - o - p) ^ 2 * k, where mu is the Möbius function (A008683). •

▶ [A326529] 0,0,0,0,0,0,0,0,0,1,1,2,2,5,7,11,14,22,28,40,47,67,80,107,125 ⋆ Sum of the fourth largest parts of the partitions of n into 9 squarefree parts. • a(n) = Sum _{ q=1..floor(n / 9) } Sum _{ p=q..floor((n - q) / 8) } Sum _{ o=p..floor((n - p - q) / 7) } Sum _{ m=o..floor((n - o - p - q) / 6) } Sum _{ l=m..floor((n - m - o - p - q) / 5) } Sum _{ k=l..floor((n - l - m - o - p - q) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p - q) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p - q) / 2) } mu(q) ^ 2 * mu(p) ^ 2 * mu(o) ^ 2 * mu(m) ^ 2 * mu(l) ^ 2 * mu(k) ^ 2 * mu(j) ^ 2 * mu(i) ^ 2 * mu(n - i - j - k - l - m - o - p - q) ^ 2 * k, where mu is the Möbius function (A008683). •

▶ [A326634] 0,0,0,0,0,0,0,0,0,0,1,1,2,2,5,7,11,14,22,28,42,49,69,84,114 ⋆ Sum of the fourth largest parts of the partitions of n into 10 squarefree parts. • a(n) = Sum _{ r=1..floor(n / 10) } Sum _{ q=r..floor((n - r) / 9) } Sum _{ p=q..floor((n - q - r) / 8) } Sum _{ o=p..floor((n - p - q - r) / 7) } Sum _{ m=o..floor((n - o - p - q - r) / 6) } Sum _{ l=m..floor((n - m - o - p - q - r) / 5) } Sum _{ k=l..floor((n - l - m - o - p - q - r) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p - q - r) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p - q - r) / 2) } mu(r) ^ 2 * mu(q) ^ 2 * mu(p) ^ 2 * mu(o) ^ 2 * mu(m) ^ 2 * mu(l) ^ 2 * mu(k) ^ 2 * mu(j) ^ 2 * mu(i) ^ 2 * mu(n - i - j - k - l - m - o - p - q - r) ^ 2 * k, where mu is the Möbius function (A008683). •

▶ [A036378] 1,1,2,2,5,7,13,23,43,75,137,255,464,872,1612,3030,5709,10749,20390,38635,73586,140336,268216,513708,985818 ⋆ Number of primes p between powers of 2, 2 ^ n < p <= 2 ^ (n + 1). • a(n) = primepi(2 ^ (n + 1)) - primepi(2 ^ n). •

▶ [A079280] 1,2,2,5,7,17,26,62,99,233,382,890,1486,3434,5812,13340,22819,52073,89846,204002,354522,801422,1401292,3155300,5546382 ⋆ Number of log - concave paths of length n starting from the origin (0,0) with steps from { N=(0,1), E=(1,0) and S=(0, - 1) } that stay in the second octant and never touch the line y=x except possibly at the beginning or the end. • a(2n) = (1 / 2) * (4 ^ (n - 1) + 3 * binomial(2n - 2, n - 1)); • a(2n + 1) = (1 / 2) * (2 * 4 ^ (n - 1) + binomial(2n, n)). •

▶ [A293674] 0,2,2,5,8,13,21,35,57,92,149,241,391,633,1024,1658,2682,4341,7024,11365,18389,29754,48143,77897,126041 ⋆ a(n) is the greatest integer k such that k / Fibonacci(n) < e. • a(n) = floor(e * Fibonacci(n)). •

▶ [A340249] 0,0,0,1,2,2,5,8,14,18,30,35,56,63,95,109,156,166,235,255,346,369,491,517,676 ⋆ Sum of the largest parts t of the partitions of n into 4 parts q,r,s,t such that 1 <= q <= r <= s <= t and q + r + s > t. • a(n) = Sum _{ k=1..floor(n / 4) } Sum _{ j=k..floor((n - k) / 3) } Sum _{ i=j..floor((n - j - k) / 2) } sign(floor((i + k + j) / (n - i - j - k + 1))) * (n - i - j - k). •

▶ [A052531] 2,2,5,8,17,32,65,128,257,512,1025,2048,4097,8192,16385,32768,65537,131072,262145,524288,1048577,2097152,4194305,8388608,16777217 ⋆ If n is even then 2 ^ n + 1 otherwise 2 ^ n. • a(n) = a(n - 1) + 2 * a(n - 2) - 1, with a(0) = 2, a(1) = 2, a(2) = 5. • a(n) = 2 ^ n + Sum _{ alpha = RootOf(- 1 + x ^ 2) } alpha ^ (- n) / 2. • a(n) = 2 * a(n - 1) + a(n - 2) - 2 * a(n - 3), with a(0) = 2, a(1) = 2, a(2) = 5. - _ G. C. Greubel _ , May 09 2019 • a(n) = 2 ^ n + (1 + (- 1) ^ n) / 2. - _ G. C. Greubel _ , Oct 17 2019 •

▶ [A060405] 2,2,5,9,19,40,88,198,455,1061,2501,5940,14182,33982,81625,196389,473039,1140260,2749988,6634458,16009555,38638441,93261961,225122760,543443402 ⋆ Sum of Lucas (A000032) and Pell (A000129) numbers. • a(n) = 3 * a(n - 1) - 3 * a(n - 3) - a(n - 4). G.f.: (2 - 4 * x - x ^ 2) / ((1 - x - x ^ 2) * (1 - 2 * x - x ^ 2)). [_ Colin Barker _ , Jun 22 2012] •

▶ [A110182] 1,1,2,2,5,9,26,66,199,575,1790,5542,17945,58733,198880,685296,2429281,8778321,32491940,122503412,471379771,1844669495,7346727298,29712688698,122054603983 ⋆ Diagonal sums of number triangle A110180. • a(n)=sum { k=0..floor(n / 2), sum { j=0..floor((n - 2k) / 2), C(n - 2k, j)C(n - 2k - j, j)k ^ j }} •

▶ [A081374] 1,2,2,5,10,22,43,86,170,341,682,1366,2731,5462,10922,21845,43690,87382,174763,349526,699050,1398101,2796202,5592406,11184811 ⋆ Size of "uniform" Hamming covers of distance 1, that is, Hamming covers in which all vectors of equal weight are treated the same, included or excluded from the cover together. • a(n)=2 * a(n - 1) - a(n - 3) + 2 * a(n - 4). • a(n + 1) - 2 * a(n) has period length 6: repeat 0, - 2, 1, 0, 2, - 1 (see A080425). •

▶ [A227999] 1,1,1,1,2,2,5,11,25,97,220,1396,6053,30467,249431,1381913,19850884,160799404,1942868797,36133524445,458473480079,13521902050025,220176552243482,7006033824529130,276364333237297549 ⋆ a(n) = (a(n - 1) * a(n - 5) + a(n - 2) * a(n - 4) + a(n - 3) ^ 2) / a(n - 6), a(0) = a(1) = a(2) = a(3) = 1, a(4) = a(5) = 2. • a(n) = a(3 - n) for all n in Z. - _ Michael Somos _ , Apr 25 2017 •

▶ [A049680] 2,2,5,11,27,67,170,436,1127,2927,7625,19901,52002,135982,355745,930931,2436527,6377807,16695530,43706576,114420627,299549527,784218605,2053091161,5375030402 ⋆ a(n) = (L(n) + L(2 * n)) / 2, where L = A000032 (the Lucas sequence). • a(n) = 4 * a(n - 1) - 3 * a(n - 2) - 2 * a(n - 3) + a(n - 4) for n >3. (End) •

▶ [A033550] 2,2,5,15,43,118,316,836,2199,5769,15117,39592,103670,271430,710633,1860483,4870831,12752026,33385264,87403784,228826107,599074557,1568397585,4106118220,10749957098 ⋆ a(n) = A005248(n) - n. • a(n) = 3 * a(n - 1) - a(n - 2) + n - 1. • a(n) = [3 / 2 + (1 / 2) * sqrt(5)] ^ n - n + [3 / 2 - (1 / 2) * sqrt(5)] ^ n, with n>=0. - _ Paolo P. Lava _ , Jun 12 2008 • a(n) = Lucas(2 * n) - n. - _ G. C. Greubel _ , Oct 12 2019 •

▶ [A032130] 2,2,5,15,52,193,765,3143,13323,57670,254040,1134249,5122124,23349966,107310784,496633774,2312539465,10826481544,50929829953,240616214596,1141195080020,5431477088428,25933525825389,124185539096075,596268057962349 ⋆ Shifts left under the "BIK" (reversible, indistinct, unlabeled) transform with a(1) = 2. • a(2) = c, • a(3) = (1 / 2) * (c + 3) * c, • a(4) = (1 / 2) * (c + 3) * (c + 1) * c, • a(5) = (1 / 2) * (c ^ 3 + 5 * c ^ 2 + 10 * c + 4) * c, • a(6) = (1 / 4) * (2 * c ^ 4 + 15 * c ^ 3 + 38 * c ^ 2 + 37 * c + 8) * c, • a(7) = (1 / 8) * (4 * c ^ 4 + 38 * c ^ 3 + 103 * c ^ 2 + 109 * c + 22) * (c + 1) * c, •

▶ [A173323] 2,2,5,17,71,359,2159,15119,120959,1088639,10886399,119750399,1437004799,18681062399,261534873599,3923023103999,62768369663999,1067062284287999,19207121117183999,364935301226495999 ⋆ a(n) = 3 * n! - 1. • a(0)=2, a(n) = n * a(n - 1) + n - 1. - _ Vincenzo Librandi _ , Sep 30 2013 •

▶ [A010762] 0,0,1,2,2,6,6,8,12,15,15,24,24,28,35,40,40,54,54,60,70,77,77,96,96 ⋆ a(n) = floor(n / 2) * floor(n / 3). • a(n) = a(n - 2) + a(n - 3) - a(n - 5) + a(n - 6) - a(n - 8) - a(n - 9) + a(n - 11). - _ Clark Kimberling _ , May 18 2012 •

▶ [A039722] 1,2,2,6,6,10,10,22,22,34,34,54,54,74,74,118,118,162,162,230,230,298,298,406,406 ⋆ a(1) = 1, a(m + 1) = 2 * Sum _{ k=1..floor((m + 1) / 2) } a(k). • a(1)=1, a(2)=2, a(2m + 1)=a(2m), a(2m + 2)=a(2m + 1) + 2a(m + 1) { m is a positive integer. } •

▶ [A082542] 2,2,6,6,10,14,18,18,22,30,30,38,42,42,46,54,58,62,66,70,74,78,82,90,98 ⋆ a(n) = prime(n) + 2 - (prime(n) mod 4). • a(n + 1) = p + (- 1 / p) = p + (- 1) ^{ (p - 1) / 2) } , where p is the n - th odd prime and (a / b) denotes the value of Legendre symbol. - _ Lekraj Beedassy _ , Mar 17 2005 •

▶ [A032302] 1,2,2,6,6,10,18,22,30,42,66,78,110,138,186,254,318,402,522,654,822,1074,1306,1638,2022 ⋆ G.f.: Product _{ k>=1 } (1 + 2 * x ^ k). • a(n) = (1 / 3) [x ^ n] QPochhammer(- 2,x). - _ Vladimir Reshetnikov _ , Nov 20 2015 •

▶ [A290261] 1,2,2,6,6,10,18,54,54,114,186,334,630,1314,2106,5910,7710,15642,27594,57798,97902,207762,364722,712990,1340622 ⋆ Write 1 - x / (1 - x) as an inverse power product 1 / (1 + a(1) * x) * 1 / (1 + a(2) * x ^ 2) * 1 / (1 + a(3) * x ^ 3) * 1 / (1 + a(4) * x ^ 4) * ... • a(n) = Sum _ t (- 1) ^ v(t) where the sum is over all enriched p - trees of weight n (see A289501 for definition) and v(t) is the number of nodes (branchings and leaves) in t. • a(n) satisfies Sum _{ d|n } (1 / d) * (- a(n / d)) ^ d = - (2 ^ n - 1) / n. Thus, a(n) = Sum _{ d|n, d> 1 } (1 / d) * (- a(n / d)) ^ d + (2 ^ n - 1) / n. •

▶ [A007040] 2,2,6,6,10,20,28,46,78,122,198,324,520,842,1366,2206,3570,5780,9348,15126,24478,39602,64078,103684,167760 ⋆ Number of (marked) cyclic n - bit binary strings containing no runs of length > 2. • a(n) = a(n - 2) + 2 * a(n - 3) + a(n - 4), n >= 7. - _ David W. Wilson _ • a(n) = n * Sum _{ k=1..n } bin

omial(2 * k, n - 2 * k) / k for n > 1 with a(0) = 0 and a(1) = 2. - _ Vladimir K ruchinin _ , Oct 12 2011 ●

▶ [A060549] 0,1,2,2,6,6,12,14,28,28,60,60,120,124,248,248,504,504,1008,1016,203 2,2032,4080,4080,8160 ⋆ a(n) is the number of distinct patterns (modulo geomet ric D3 - operations) with strict median - reflective (palindrome) symmetry (i.e., having no other symmetry) which can be formed by an equilateral triangular ar rangement of closely packed black and white cells satisfying the local matching rule of Pascal's triangle modulo 2, where n is the number of cells in each edge o f the arrangement. The matching rule is such that any elementary top - down t riangle of three neighboring cells in the arrangement contains either one or thre e white cells. ● a(n) = 2 ^ ceiling(n / 2) - 2 ^ (floor((n + 3) / 6) + d(n)), with d(n)=1 if n mod 6=1 else d(n)=0. ●

▶ [A120690] 1,1,1,1,2,2,6,6,13,33,97,97,306,306,896,2804,7974,7974,24929,24929,8 2612,263913,782310,782310,2692708 ⋆ Number of ordered finite sequences a _ 1 <= a _ 2 <= ... <= a _ n of length n of positive integers less than or equal to n whose product is n!. ● a(p) = a(p - 1) for prime p. - _ Alois P. Heinz _ , Jul 05 2022 ●

▶ [A309800] 0,0,0,0,0,2,2,6,6,14,18,32,38,62,72,104,122,170,200,264,302,388,444,5 54,628 ⋆ Sum of the even parts appearing among the largest parts of the partiti ons of n into 4 parts. ● a(n) = Sum _{ k=1..floor(n / 4) } Sum _{ j=k..floor((n - k) / 3) } Sum _{ i=j..floor((n - j - k) / 2) } (n - i - j - k) * ((n - i - j - k - 1) mod 2). ●

▶ [A097869] 1,1,2,2,6,7,11,12,21,25,34,38,54,63,79,88,113,129,154,170,206,231,26 7,292,341 ⋆ Expansion of g.f.: (1 + x ^ 4 + x ^ 5 + x ^ 9) / ((1 - x) * (1 - x ^ 2) * (1 - x ^ 4) ^ 2). ● a(2 * n) = (1 / 48) * (30 + 18 * (- 1) ^ n + 64 * n + 12 * n ^ 2 + 8 * n ^ 3), ● a(2 * n + 1) = (1 / 48) * (36 + 12 * (- 1) ^ n + 16 * n + 8 * n ^ 2) * (1 + n). (End) ●

▶ [A099577] 1,1,2,2,6,7,13,15,38,47,85,104,245,313,558,706,1594,2080,3674,4753,1 0429,13817,24246,31875,68497 ⋆ Diagonal sums of triangle A099575. ● a(n) = S um _{ k=0..floor(n / 2) } Sum _{ j=0..floor(k / 2) } binomial(n - k + j, j). ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n - k + floor(k / 2) + 1, 1 + floor(k / 2)) * (1 + floor(k / 2)) / (n - k + 1). - _ G. C. Greubel _ , Jul 24 2022 ●

▶ [A136513] 0,0,2,2,2,6,8,12,16,26,30,38,44,56,60,74,82,96,108,128,138,154,166,18 8,196,220 ⋆ Number of unit square lattice cells inside half - plane (two adjacent quadrants) of origin centered circle of diameter n. ● a(n) = 2 * Sum _{ k=1..fl oor(n / 2) } floor(sqrt((n / 2) ^ 2 - k ^ 2)). ● a(n) = [x ^ (n ^ 2)] (theta _ 3(x ^ 4) - 1) ^ 2 / (2 * (1 - x)). - _ Ilya Gutkovskiy _ , Nov 24 2021 ●

▶ [A052957] 2,2,6,8,20,32,72,128,272,512,1056,2048,4160,8192,16512,32768,6579 2,131072,262656,524288,1049600,2097152,4196352,8388608,16781312 ⋆ Expansio n of 2 * (1 - x - x ^ 2) / ((1 - 2 * x) * (1 - 2 * x ^ 2)). ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 4 * a(n - 3). ● a(n) = 2 ^ n + Sum _{ alpha=RootOf(- 1 + 2 * x ^ 2) } alpha ^ (- n) / 2. ● a(n) = 2 ^ (n / 2) + 2 ^ n for n even. ● a(n) = 2 ^ n f or n odd. ●

▶ [A157253] 1,1,1,2,2,6,8,26,41,145,253,978,1858,7726,15796,69878,152219,71124 3,1638323,8039510,19467494,99862594,252998224,1351486758,3568259503 ⋆ Aris es in combinatorial approach to the power of 2 in the number of involutions. ● a(2 * n) = a(2 * n - 2) + (n - 1) * a(2 * n - 3) + 2 * binomial(n - 1, 2) * a(2 * n - 4) + 3 * binomial(n - 1, 3) * a(2 * n - 8); a(2 * n + 1) = a(2 * n) + n * a(2 * n - 1). See eqn. 5 and 6 for g _ n(1,1) in Kim and Kim reference. - _ Andrew Ho wroyd _ , May 07 2023 ●

▶ [A080460] 2,2,6,10,14,14,18,22,26,26,30,34,38,38,42,46,50,50,54,58,62,62,66,70,7 4 ⋆ a(1) = 2; for n > 1, a(n) = a(n - 1) if n is already in the sequence, a(n) = a (n - 1) + 4 otherwise. ● a(n) = 2 + 4 * (n - 2 - floor((n - 2) / 4)). ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n > 5. ● a(n) = (6 * n - (- 1) ^ n + 2 * sqrt(2) * si n(Pi * n / 2 + Pi / 4) - 5) / 2. (End) ●

▶ [A080456] 2,2,6,10,14,18,18,22,26,30,30,34,38,42,42,46,50,54,54,58,62,66,66,70,7 4 ⋆ a(1) = a(2) = 2; for n > 2, a(n) = a(n - 1) if n is already in the sequence, a(n) = a(n - 1) + 4 otherwise. ● a(n) = - 2 + 4 * ((n + 2) mod (n + 1)) + Sum _{ k=0..n } ((1 / 2) * ((k mod 4) + ((k + 1) mod 4) - ((k + 2) mod 4) + 3 * ((k + 3) mod 4))). - _ Paolo P. Lava _ , Aug 29 2007 ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n > 6. ●

▶ [A077017] 2,2,6,10,14,22,26,34,38,46,58,62,74,82,86,94,106,118,122,134,142,14 6,158,166,178 ⋆ a(1) = 2, a(n + 1) = smallest positive integer divisible by the n - th prime that also has a nontrivial common divisor with a(n). ● a(n)=2 * pri me(n - 1) for n>2. - _ Farideh Firoozbakht _ , Apr 22 2006 ●

▶ [A248800] 2,2,6,10,18,26,38,50,66,82,102,122,146,170,198,226,258,290,326,362,4 02,442,486,530,578 ⋆ a(n) = (2 * n ^ 2 + 3 + (- 1) ^ n) / 2. ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4). - _ Colin Barker _ , Oct 15 2014 ●

▶ [A019310] 0,2,2,6,10,22,38,82,154,318,614,1250,2462,4962,9842,19766,39378,78 910,157502,315322,630030,1260674,2520098,5041446,10080430 ⋆ Number of wor ds of length n (n >= 1) over a two - letter alphabet having a minimal period of size n - 1. ● a(n) = 2 * a(n - 1) + (- 1) ^ n * a(ceiling(n / 2)) for n >= 3. ● a(n) = a(n - 1) + 2 * a(n - 2) if n >= 4 even. a(n) = a(n - 1) + 2 * a(n - 2) + 2 * a((n - 1) / 2) if n>=7 == 3 (mod 4). - _ Michael Somos _ , Jan 23 2014 ●

▶ [A014113] 0,2,2,6,10,22,42,86,170,342,682,1366,2730,5462,10922,21846,43690,8 7382,174762,349526,699050,1398102,2796202,5592406,11184810 ⋆ a(n) = a(n - 1) + 2 * a(n - 2) with a(0)=0, a(1)=2. ● a(0) = 0 and if n>=1, a(n) = 2 ^ n - a(n - 1). ● a(n) = (2 ^ (n + 1) - 2 * (- 1) ^ n) / 3. - _ Ralf Stephan _ , Jul 18 201 3 ●

▶ [A208900] 2,2,6,10,26,50,114,226,482,962,1986,3970,8066,16130,32514,65026,13 0562,261122,523266,1046530,2095106,4190210,8384514,16769026,33546242 ⋆ Nu mber of bitstrings of length n which (if having two or more runs) the last two r uns have different lengths. ● a(n) = 2 ^ n + 2 - 2 ^ (floor(n / 2) + 1). ● a(n) = 3 * a(n - 1) - 6 * a(n - 3) + 4 * a(n - 4), a(0) = 2, a(1) = 2, a(2) = 6, a(3) = 10. ●

▶ [A229733] 1,1,2,2,6,10,26,54,134,306,754,1806,4478,11018,27578,69014,17435 8,441506,1124674,2873182,7370926,18962490,48939530,126625126,328475334 ⋆ E xpansion of (1 - x + 2 * x ^ 3 - sqrt(1 - 2 * x - 3 * x ^ 2 + 4 * x ^ 3 - 4 * x ^ 4)) / (2 * x ^ 2). ● a(n) = Sum _{ i=0..n + 1 } Sum _{ k=0..n - i } C(i,k) * C(k + i,i) * Sum _{ j=0..(- n + 3 * k + i + 2) / 2 } C(k + 1,j) * C(k - j + 1,n - 2 * k + j - i - 1) * (- 1) ^ (- n + k + i)) / (k + 1), a(1)=1. - _ Vladimir Kruch inin _ , May 07 2018 ●

▶ [A265987] 2,2,6,10,30,66,182,442,1166,2930,7590,19306,49662,126882,325526,8 33050,2135150,5467346,14007942,35877322,91909086,235418370,603054710,15447 28186,3956947022 ⋆ Number of n X 3 integer arrays with each element equal to the number of horizontal and antidiagonal neighbors not equal to itself. ● a(n) = 1 + (- ((1 - sqrt(17)) / 2) ^ n + ((1 + sqrt(17)) / 2) ^ n) / sqrt(17). ●

▶ [A364834] 0,2,2,6,11,17,17,25,25,35,35,47,47,61,76,92,92,110,110,130,130,152,1 52,176,201 ⋆ Sum of positive integers <= n which are multiples of 2 or 5. ● a(n) = sn(n,2) + sn(n,5) - sn(n,10) where sn(n,d) = (an(n,d) * (an(n,d) + d)) / (2 * d) and an(n,d) = d * floor(n / d). ● a(n) = Sum _{ k=2..n } { k if gcd(k,10) > 1 } . ●

▶ [A290518] 1,1,2,2,6,12,12,48,144,288,288,1440,5760,17280,34560,34560,20736 0,1036800,4147200,12441600,24883200,24883200,174182400,1045094400,52254720 00 ⋆ Minimum value of Product _{ i in lambda } i!, where lambda ranges over all partitions of n into distinct parts. ● a(n) = a(n - 1) iff n in { A000217 } \ { 0 } . ●

▶ [A324128] 0,2,6,12,26,50,98,182,338,612,1102,1958,3458,6058,10558,18300,3158 6,54298,93026,158878,270602,459732,779286,1318222,2225666 ⋆ a(n) = 2 * n * F ibonacci(n) + (- 1) ^ n + 1. ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 4 * a(n - 3) - 2 * a(n - 4) + 2 * a(n - 5) + a(n - 6) for n > 5. ●

▶ [A027375] 0,2,2,6,12,30,54,126,240,504,990,2046,4020,8190,16254,32730,6528 0,131070,261576,524286,1047540,2097018,4192254,8388606,16772880 ⋆ Number of aperiodic binary strings of length n; also number of binary sequences with pri mitive period n. ● a(n) = Sum _{ d|n } mu(d) * 2 ^ (n / d). ● a(p) = 2 ^ p - 2 for p prime. - _ R. J. Mathar _ , Aug 13 2006 ● a(n) = 2 ^ n - O(2 ^ (n / 2)). - _ Charles R Greathouse IV _ , Apr 28 2016 ●

▶ [A059727] 0,2,2,6,12,30,72,182,462,1190,3080,8010,20880,54522,142506,37271 0,975156,2552006,6679640,17484942,45771990,119825862,313697232,821252306,2 150037792 ⋆ a(n) = Fibonacci(n) * (Fibonacci(n) + 1). ● a(n) = Fibonacci(n) + (1 / 5) * (Lucas(2 * n) - 2 * (- 1) ^ n). ●

▶ [A319866] 2,2,6,14,20,44,52,100,110,190,202,322,336,504,520,744,762,1050,107 0,1430,1452,1892,1916,2444,2470 ⋆ a(n) = 2 * 1 + 4 * 3 + 6 * 5 + 8 * 7 + 10 * 9 + 12 * 11 + ... + (up to the n - th term). ● a(n) = (4 * n - 6 * n + 3 * n ^ 2 + 2 * n ^ 3) / 12 for n even. ● a(n) = (15 + 4 * n + 6 * n - 3 * n ^ 2 + 2 * n ^ 3) / 12 for n odd. ● a(n) = a(n - 1) + 3 * a(n - 2) - 3 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) + a(n - 6) - a(n - 7) for n>7. ●

▶ [A051890] 2,2,6,14,26,42,62,86,114,146,182,222,266,314,366,422,482,546,614,68 6,762,842,926,1014,1106 ⋆ a(n) = 2 * (n ^ 2 - n + 1). ● a(n) = 4 * binomial(n, 2) + 2. - Francois Jooste (phukraut(AT)hotmail.com), Mar 05 2003 ● a(n) = 4 * n + a(n - 1) - 4 for n > 0, a(0)=2. - _ Vincenzo Librandi _ , Aug 06 2010 ● a(n) = 2 * (n ^ 2 - n + 1) = 2 * (n - 1) ^ 2 + 2(n - 1) + 2 = 222 read in base n - 1 (for n > 3). - _ Jason Kimberley _ , Oct 20 2011 ●

▶ [A002203] 2,2,6,14,34,82,198,478,1154,2786,6726,16238,39202,94642,228486,55 1614,1331714,3215042,7761798,18738638,45239074,109216786,263672646,6365620 78,1536796802 ⋆ Companion Pell numbers: a(n) = 2 * a(n - 1) + a(n - 2), a(0) = a(1) = 2. ● a(n) = (1 + sqrt(2)) ^ n + (1 - sqrt(2)) ^ n. - Mario Catalani (m ario.catalani(AT)unito.it), Mar 17 2003 ● a(n) = [x ^ n] ((1 + 2 * x + sqrt(1 + 4 * x + 8 * x ^ 2)) / 2) ^ n for n >= 1. - _ Peter Bala _ , Jun 23 2015 ● a(n) ^ 2 - a(n + 1) * a(n - 1) = (- 1) ^ (n) * 8. ● a(n) = (- 1) ^ n * (a(n) ^ 3 - a(3 * n)) / 3. - _ Greg Dresden _ , Jun 16 2021 ● a(n) = (a(n + 2) + a(n - 2)) / 6 for n >= 2. - _ Greg Dresden _ , Jun 23 2021 ● a(3n + 2) / a(3n - 1) = [14, ... , 14, - 3] with (n + 1) 14's. ●

▶ [A142710] 2,2,6,14,38,112,276,814,1998,5702,14226,39404,99908,270922,69510 6,1859134,4807518,12748472,33128916,87394454,227792678,599050102,156424290 6,4106054164,10733283588 ⋆ a(n) = A142585(n) + A142586(n). ● a(n) = + 2 * a(n - 1) + 7 * a(n - 2) - 12 * a(n - 3) - 11 * a(n - 4) + 16 * a(n - 5) - 4 * a(n - 6) , n>6. - _ R. J. Mathar _ , Jun 14 2010 ● a(n) = (- 1) ^ n * LucasL(n) + Luc asL(2 * n) - (1 + (- 1) ^ n) * 2 ^ (n - 1) - [n=0]. - _ G. C. Greubel _ , Oct 26 2022 ●

▶ [A369608] 0,2,2,6,14,39,125,399,1310,4356,14970,51715,178832,635778,229001 9,8106059,29234378,105635076,384409483,1408730050,5193316109,19170300330,7 1421970661,263893092145,984568438169 ⋆ Number of solutions to +- 2 +- 3 +- 5 +- 7 +- ... +- prime(2 * n) = prime(2 * n). ● a(n) = [x ^ prime(2 * n)] Prod uct _{ k=1..2 * n } (x ^ prime(k) + 1 / x ^ prime(k)). ●

▶ [A134295] 2,2,6,16,65,312,1813,12288,95617,840960,8254081,89441280,1060369 921,13649610240,189550368001,2824077312000,44927447040001,76003445145600 0,136227009945600001,257872110354432000,5140559166898176001 ⋆ a(n) = Sum _{ k=1..n } ((n - k)! * (k - 1)! - (- 1) ^ k). ● a(n) = Sum _{ k=1..n } ((n - k) ! * (k - 1)! - (- 1) ^ k). ●

▶ [A365103] 1,2,2,6,18,70,274,1094,4370,17478,69906,279622,1118482,4473926,17 895698,71582790,286331154,1145324614,4581298450,18325193798,73300775186,2 93203100742,1172812402962,4691249611846,18764998447378 ⋆ Number of distin ct quartic residues x ^ 4 (mod 4 ^ n), x=0..4 ^ n - 1. ● a(n) = ceiling(4 ^ n / 15) + (n mod 2). ●

▶ [A320932] 1,1,1,2,2,6,20,51,141,381,1001,2796,7861,22306,64129,185692,54046 8,1585246,4674464,13846636,41216933,123176849,369410571,1111661833,3355466 306 ⋆ a(n) = [x ^ (n * (n + 1) / 2)] Product _{ k=1..n } Sum _{ m>=0 } x ^ (k * m ^ 2). ● a(n) = [x ^ (n * (n + 1) / 2)] Product _{ k=1..n } (theta _ 3(x ^ k) + 1) / 2, where theta _ 3() is the Jacobi theta function. ●

▶ [A271217] 1,2,2,6,22,50,274,598,4486,9570,90914,191398,2201078,4593554,6201 2978,128619510,1993602406,4115824322,72026925634,148169675590,28893086740 06 ⋆ Number of symmetric reduced rearrangement maps. ● a(n) = round(2 ^ n * e ^ (- 1 / 4) * (1 - (1 + (- 1) ^ n) / (4n)) * floor(n / 2)!) ● a(2k + 1) = 2 * a(2k) + a(2k - 1) and a(2k) = (2k - 1) * a(2k - 1) + (2k - 2) * a(2k - 3) ●

▶ [A076726] 2,2,6,26,150,1082,9366,94586,1091670,14174522,204495126,3245265 146,56183135190,1053716696762,21282685940886,460566381955706,10631309363 962710,260741534058271802,6771069326513690646 ⋆ a(n) = Sum _{ k>=0 } k ^ n / 2 ^ k. ● a(0) = 2, a(n) = Sum _{ k=0..n - 1 } binomial(n,k) * a(k) for n >= 1. ●

► [A357412] 0,1,1,2,2,7,7,8,8,9,9,16,16,17,27,28,28,55,55,106,110,111,111,216,216 ⋆ Number of nonempty subsets of { 1..n } whose elements have an even harmonic mean. ● a(p) = a(p - 1) for prime p > 2. - _ Michael S. Branicky _ , Sep 30 2022 ●

► [A267214] 0,2,2,7,9,13,16,26,30,37,45,57,64,76,86,101,113,127,140,160,174,191,209,231,248 ⋆ Total number of OFF (white) cells after n iterations of the "Rule 109" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = a(n - 1) + a(n - 3) - a(n - 5) - a(n - 7) + a(n - 8) for n>7. ●

► [A107386] 0,1,1,2,2,7,9,16,20,29,35,46,54,67,77,92,104,121,135,154,170,191,209,232,252 ⋆ a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4), n>6. ● a(n)= n ^ 2 / 2 - 3 * n / 2 + 1 - (- 1) ^ n, n>2. - _ N. J. A. Sloane _ , Sep 28 2009 ●

► [A094116] 0,1,1,2,2,7,11,16,20,25,25,26,26,27,27,32,36,41,45,50,50,51,51,52,52 ⋆ Partial sums of A093348. ● a(5 ^ k)=(25 ^ k - 1) / 12 ●

► [A024309] 2,2,7,12,27,43,85,138,253,409,718,1162,1984,3210,5383,8710,14433,23353,38391,62118,101577,164355,267804,433316,704382 ⋆ a(n) = s(1) * t(n) + s(2) * t(n - 1) + ... + s(k) * t(n + 1 - k), where k = floor((n + 1) / 2), s = (natural numbers >= 2), t = (Fibonacci numbers). ● a(n) = Sum _{ j=2..floor((n + 3) / 2) } j * Fibonacci(n - j + 2). ● a(n) = Lucas(n + 3) - (m + 1) * Fibonacci(n - m + 5) + m * Fibonacci(n - m + 4), where m = floor((n + 3) / 2). ● a(2 * n) = Lucas(2 * n + 3) - Lucas(n + 3) - n * Fibonacci(n + 2), n >= 1. ● a(2 * n + 1) = Lucas(2 * n + 4) - Lucas(n + 3) - (n + 1) * Fibonacci(n + 2), n >= 0. (End) ●

► [A162460] 0,2,2,7,14,37,90,232,594,1541,4004,10441,27260,71254,186354,487579,1276002,3339821,8742470,22885996,59912930,156848617,410626152,1075018897,2814412824 ⋆ First differences of A161762. ● a(n) = 3 * a(n - 1) + a(n - 2) - 5 * a(n - 3) - a(n - 4) + a(n - 5) for n>4. ●

► [A137249] 2,2,7,15,37,84,197,456,1062,2467,5737,13335,31002,72069,167542,389486,905447,2104907,4893317,11375580,26445017,61477204,142917162,332242091,772369157 ⋆ Expansion of g.f. z * (2 - 2 * z + z ^ 2 + z ^ 3) / ((1 + z) * (1 - 3 * z + 2 * z ^ 2 - z ^ 3)). ● a(n + 4) = 2 * a(n + 3) + a(n + 2) - a(n + 1) + a(n). ● a(n) = (1 / 7) * (4 * (- 1) ^ n + Sum _{ j=0..floor(n / 2) } (10 * binomial(n + j + 2, 3 * j + 2) - 12 * binomial(n + j + 1, 3 * j + 2) + 11 * binomial(n + j, 3 * j + 2))). (End) ●

► [A192921] 1,2,2,7,16,44,113,298,778,2039,5336,13972,36577,95762,250706,656359,1718368,4498748,11777873,30834874,80726746,211345367,553309352,1448582692,3792438721 ⋆ Constant term in the reduction by (x ^ 2 - >x + 1) of the polynomial p(n,x) defined below at Comments. ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - a(n - 3). ● a(n) = F(n - 4) * F(n) + F(n - 1) * F(n + 2), where F(- 4)= - 3, F(- 3)=2, F(- 2)= - 1, F(- 1)=1. - _ Bruno Berselli _ , Nov 03 2015 ● a(n) = (2 ^ (- n) * (- 3 * (- 2) ^ n - (- 4 + sqrt(5)) * (3 + sqrt(5)) ^ n + (3 - sqrt(5)) ^ n * (4 + sqrt(5)))) / 5. - _ Colin Barker _ , Oct 01 2016 ●

► [A203579] 2,2,7,17,57,177,577,1857,6017,19457,62977,203777,659457,2134017,6905857,22347777,72318977,234029057,757334017,2450784257,7930904577,25664946177,83053510657,268766806017,869747654657 ⋆ Exponential (or binomial) convolution of A000032 (Lucas) with itself, divided by 2. ● a(n) = 2 ^ (n - 1) * L(n) + 1. ●

► [A243022] 1,1,2,2,7,18,61,198,694,2446,8873,32556,121243,455986,1731459,6625258,25527571,98947914,385587017,1509702496,5936181673,23430706276,92805006308,368747893980,1469408091637 ⋆ Expansion of - (2 * x) / (1 - sqrt(1 - (2 * (1 - sqrt(1 - 4 * x ^ 2))) / x)). ● a(n) = sum(i=0..n / 2, binomial(n - 1,i) * binomial(2 * n - 4 * i - 2,n - 2 * i)) / (n - 1), n>1, a(0)= - 1, a(1)=1. ●

► [A067352] 2,2,7,30,158,985,7089,57890,529276,5358915,59543495,720476284,9431689530,132829627541,2002662076765,32185640519430,549301598198264,9921760117456135,189097075179752211,3792446896660586000,79840987298117599990,1760493769923493079769,40575189744903364314665 ⋆ Divide the natural numbers in sets of consecutive numbers starting with { 1,2 } as the first set. The number of elements of the n - th set is equal to the sum of the n - 1 final numbers in the (n - 1)st set. The number of elements of the n - th set gives a(n). ● a(n) = (1 + a(1) + a(2) + ... + a(n - 1) - n / 2) * (n - 1). ●

► [A058524] 1,1,1,2,2,8,8,13,21,77,77,128,128,354,641,1232,1232,2677,2677,7220,8951,25378,25378,63680,113335 ⋆ Each c(i) is "multiply" (*) or "divide" (/). a(n) is number of choices for c(1), ..., c(n - 1) so that 1 c(1) 2 c(2) 3,.., c(n - 1) n is an integer. ● a(p) = a(p - 1). - _ Sean A. Irvine _ , Aug 07 2022 ●

► [A354830] 1,1,1,1,2,2,8,8,30,72,408,408,4104,4104,29640,208704,1437312,1437312,22653504,22653504,318695040,2686493376,27628410816,27628410816,575372874240 ⋆ a(n) is the number of permutations p of [n] such that gcd(i, p(i)) > 1 for 2 <= i <= n. ● a(p) = a(p - 1) for primes p. ●

► [A275436] 0,0,2,2,8,10,30,40,100,140,320,460,988,1448,2982,4430,8840,13270,25850,39120,74760,113880,214272,328152,609528 ⋆ Sum of the asymmetry degrees of all 00 - avoiding binary words of length n. ● a(n) = a(n - 1) + 3 * a(n - 2) - 2 * a(n - 3) - 2 * a(n - 5) - 3 * a(n - 6) + a(n - 7) + a(n - 8). - _ Maxim Karimov _ , Aug 23 2020 ●

► [A202736] 2,2,8,10,32,44,128,186,512,772,2048,3172,8192,12952,32768,52666,131072,213524,524288,863820,2097152,3488872,8388608,14073060,33554432 ⋆ Number of n X 2 0..1 arrays with row sums equal and column sums unequal to adjacent columns. ● a(n) = 2 ^ n * (1 - (((- 1) ^ n + 1) * Gamma((n + 1) / 2)) / (2 * sqrt(Pi) * Gamma((n + 2) / 2))). - _ Peter Luschny _ , Sep 10 2014 ● a(n) = ((- 8 * n + 16) * a(n - 3) + (4 * n - 4) * a(n - 2) + (2 * n - 2) * a(n - 1)) / n. (End) ●

► [A014236] 0,2,2,8,12,32,56,128,240,512,992,2048,4032,8192,16256,32768,65280,131072,261632,524288,1047552,2097152,4192256,8388608,16773120 ⋆ Expansion of g.f.: 2 * x * (1 - x) / ((1 - 2 * x) * (1 - 2 * x ^ 2)). ● a(n) = 2 ^ ((n - 2) / 2) * (2 ^ ((n + 2) / 2) - 1 - (- 1) ^ n). ●

► [A087955] 1,2,2,8,12,34,62,152,304,698,1458,3248,6924,15210,32734,71440,154432,336018,727874,1581496,3429100,7445714,16151518,35059560,76068400 ⋆ a(n) is the square of the n - th partial sum minus the n - th partial sum of the squares, divided by a(n - 1), for all n>=1, starting with a(0)=1, a(1)=2. ● a(n) = a(n - 1) + 3a(n - 2) - a(n - 3) for n>3; G.f.: (1 + x - 3x ^ 2 + x ^ 3) / (1 - x - 3x ^ 2 + x ^ 3). ●

► [A094941] 1,2,2,8,12,64,120,768,1680,12288,30240,245760,665280,5898240,17297280,165150720,518918400,5284823040,17643225600,190253629440,670442572800,7610145177600,28158588057600,334846387814400,1295295050649600 ⋆ a(n) is n! times the coefficient of Pi ^ floor(n / 2) in the volume of an n - dimensional unit ball. ● a(n) = (2 * n - 2) * a(n - 2), if n>1. ● a(n) * a(n + 1) = n! * 2 ^ (n + 1). ● a(n) = Pi ^ floor((n + 1) / 2) * Integral _{ x>=0 } (x ^ n * exp(- Pi * x ^ 2 / 4)). - _ Paul Barry _ , Mar 01 2011 ●

► [A334600] 0,2,2,8,14,32,62,130,254,528,1038,2102,4194,8436,16826,33756,67438,135076,270022,540410,1080542,2161904,4323226,8647964,17294978 ⋆ Number of length - n binary strings having a unique border. ● a(n) = Sum _{ i = 1..floor(n / 2) } u(i) * B(n,i), where ●

► [A280399] 0,0,2,2,8,14,36,74,168,358,780,1666,3568,7582,16084,33978,71608,150486,315548,660210,1378688,2873870,5980772,12427562,25787208 ⋆ Number of 1 X n 0..2 arrays with no element unequal to a strict majority of its horizontal and antidiagonal neighbors, with the exception of exactly one element, and with new values introduced in order 0 sequentially upwards. ● a(n) = (8 * ((- 1) ^ (1 + n) + 2 ^ n) + 3 * (- 8 * (- 1) ^ n + 2 ^ n) * n) / 108 for n>1. ●

► [A228661] 2,2,8,14,38,80,194,434,1016,2318,5366,12320,28418,65378,150632,346766,798662,1838960,4234946,9751826,22456664,51712142,119082134,274218560,631464962 ⋆ Number of 2 X n binary arrays with top left value 1 and no two ones adjacent horizontally, diagonally or antidiagonally. ● a(n) = a(n - 1) + 3 * a(n - 2). ● a(n) = - 2 / 13 * sqrt(13) * (- 1 / 2 * sqrt(13) + 1 / 2) ^ n + 2 / 13 * sqrt(13) * (1 / 2 * sqrt(13) + 1 / 2) ^ n. - _ Tom Edgar _ , Aug 31 2013 ●

► [A228797] 2,2,8,16,42,98,240,576,1394,3362,8120,19600,47322,114242,275808,665856,1607522,3880898,9369320,22619536,54608394,131836322,318281040,768398400,1855077842 ⋆ Number of 2 X n binary arrays with top left element equal to 1 and no two ones adjacent horizontally or nw - se. ● a(n) = (- 2 * (- 1) ^ n + (1 - sqrt(2)) ^ n + (1 + sqrt(2)) ^ n) / 2. ●

► [A175395] 0,2,2,8,18,50,128,338,882,2312,6050,15842,41472,108578,284258,744200,1948338,5100818,13354112,34961522,91530450,239629832,627359042,1642447298,4299982848 ⋆ a(n) = 2 * Fibonacci(n) ^ 2. ● a(n) = F(n - 1) * F(n + 1) + F(n - 2) * F(n + 2), where F = A000045, - F(- 2) = F(- 1) = 1. - _ Bruno Berselli _ , Nov 03 2015 ● a(n) = 2 * (- 2 * (- 1) ^ n + (1 / 2 * (3 - sqrt(5))) ^ n + (1 / 2 * (3 + sqrt(5))) ^ n) / 5. - _ Colin Barker _ , Sep 28 2016 ●

► [A168506] 2,2,8,18,64,188,656,2154,7584,26276,93904,335156,1214944,4417848,16208672,59704858,221215552,822721108,3072787920,11514183900,43287544160,163193085960,616876440160,2337336770948,8875826681024 ⋆ Number of rooted plane trees of total weight n whose nodes are themselves planted plane trees whose roots are distinguished as either red or blue, the weight of each such node being equal to the size of the corresponding planted tree. ● a(n) = Sum _{ k =1..floor(n / 2) } 2 ^ k / (n - k) * binomial(2 * k - 2,k - 1) * binomial(2 * n - 3 * k - 1,n - k - 1). ●

► [A242658] 2,2,8,20,38,62,92,128,170,218,272,332,398,470,548,632,722,818,920,1028,1142,1262,1388,1520,1658 ⋆ a(n) = 3 * n ^ 2 - 3 * n + 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n > 2. ●

► [A080040] 2,2,8,20,56,152,416,1136,3104,8480,23168,63296,172928,472448,1290752,3526400,9634304,26321408,71911424,196465664,536754176,1466439680,4006387712,10945654784,29904084992 ⋆ a(n) = 2 * a(n - 1) + 2 * a(n - 2) for n > 1; a(0)=2, a(1)=2. ● a(n) = (1 + sqrt(3)) ^ n + (1 - sqrt(3)) ^ n. ● a(n) = [x ^ n] (1 + x + sqrt(1 + 2 * x + 3 * x ^ 2)) ^ n for n >= 1. - _ Peter Bala _ , Jun 29 2015 ●

► [A060823] 2,2,8,20,60,170,492,1414,4074,11728,33772,97240,279994,806208,2321386,6684162,19246280,55417452,159568196,459458306,1322957468,3809304206,10968454314,31582405472,90937912212 ⋆ 4 - wave sequence beginning with 2's with middles dropped. ● a(n) = 2 * a(n - 1) + 3 * a(n - 2) - a(n - 3) - a(n - 4). - Antonio G. Astudillo (afg _ astudillo(AT)lycos.com), Mar 22 2003 ●

► [A137774] 1,2,2,8,20,94,438,2766,19480,163058,1546726,16598282,197708058,2586423174,36769177348,563504645310,9248221393974,161670971937362,2996936692836754,58689061747521430,1210222434323163704,26204614054454840842,594313769819021397534,14086979362268860896282 ⋆ Number of ways to place n nonattacking empresses on an n X n board. ● a(n) / n! - > 1 / e ^ 2 for 0<r=s ● a(n) / n! - > 1 / e ^ 4 for 0<r<s ●

► [A098557] 0,1,2,2,8,24,144,720,5760,40320,403200,3628800,43545600,479001600,6706022400,87178291200,1394852659200,20922789888000,376610217984000,6402373705728000,128047474114560000,2432902008176640000,53523844179886080000,1124000727777607680000 ⋆ Expansion of e.g.f. (1 / 2) * (1 + x) * log((1 + x) / (1 - x)). ● a(n + 1) = n! + (n - 1)! * (1 - (- 1) ^ n) / 2. ●

► [A290604] 2,2,9,16,37,72,149,296,597,1192,2389,4776,9557,19112,38229,76456,152917,305832,611669,1223336,2446677,4893352,9786709,19573416,39146837 ⋆ a(0) = 2, a(1) = 2; for n > 1, a(n) = a(n - 1) + 2 * a(n - 2) + 3. ● a(n) = (2 ^ (n + 2) + 2 * (- 1) ^ n) / 3 + 2 ^ n - (3 - (- 1) ^ n) / 2. ● a(n) = 2 * a(n - 1) + a(n - 2) - 2 * a(n - 3), n > 2. - _ Iain Fox _ , Dec 18 2017 ●

► [A309751] 0,0,2,2,10,10,10,74,202,202,714,714,714,714,8906,25290,58058,123594,254666,516810,516810,1565386,1565386,5759690,14148298 ⋆ Approximation of the 2 - adic integer arctan(2) up to 2 ^ n. ● a(n) = (Sum _{ i=0..floor(n / 2) - 1 } (- 1) ^ i * 2 ^ (2 * i + 1) / (2 * i + 1)) mod 2 ^ n. ●

► [A066966] 0,2,2,10,12,30,40,82,110,190,260,422,570,860,1160,1690,2252,3170,4190,5760,7540,10142,13164,17450,22442 ⋆ Total sum of even parts in all partitions of n. ● a(n) = 2 * Sum _{ k=1..floor { n / 2) } sigma(k) * numbpart(n - 2 * k). ●

► [A334396] 0,0,2,2,10,16,52,104,286,634,1622,3768,9336,22152,54106,129610,314546,756728,1831196,4413952,10667462,25735346,62160046,150020016,362257392 ⋆ Number of fault - free tilings of a 3 X n rectangle with squares and dominoes. ● a(n) = a(n - 1) + 4 * a(n - 2) - a(n - 3) - a(n - 4) for n >= 5. ●

► [A102446] 2,2,10,18,58,130,362,882,2330,5858,15178,38610,99322,253762,651050,1666098,4270298,10934690,28015882,71754642,183818170,470836738,1206109418,3089456370,7913894042 ⋆ a(n) = a(n - 1) + 4 * a(n - 2) for n>1, a(0) = a(1) = 2. ● a(n) = (2 ^ (- n) * (- (1 - sqrt(17)) ^ (1 + n) + (1 + sqrt(17)) ^ (1 + n))) / sqrt(17). - _ Colin Barker _ , Dec 22 2016 ●

► [A372021] 1,2,2,10,18,90,210,1010,2754,12754,38626,173434,566034,2481578,8556722,36848994,132406274,562781730,2086628034,8786281322,33372861074,139609461370,540319600530,2250413871698,8838703576002 ⋆ G.f. A(x) satisfies A(x) = (1 + 4 * x / (1 - x * A(x)) ^ 2) ^ (1 / 2). ● a(n) = Sum _{ k=0..n } 4 ^ k * binomial(n / 2 - k / 2 + 1 / 2,k) * binomial(n + k - 1,n - k) / (n - k + 1). ●

► [A348957] 1,2,2,10,18,98,210,1194,2786,16258,39906,236938,601458,3615330,9399858,57024426,150947010,922283522,2475603138,15212318730,41290579410,254909413218,698230131858,4327273358250,11943274468770 ⋆ G.f. A(x) satisfies: A(x) = (1 + x * A(- x)) / (1 - x * A(x)). ● a(0) = 1; a(n) = - (- 1) ^ n * a(n - 1) + Sum _{ k=0..n - 1 } a(k) * a(n - k - 1). ●

► [A102345] 2,2,10,26,82,242,730,2186,6562,19682,59050,177146,531442,1594322,4782970,14348906,43046722,129140162,387420490,1162261466,3486784402,10460353202,31381059610,94143178826,282429536482 ⋆ a(n) = 3 ^ n + (- 1) ^ n. ● a(n) = 3a(n - 2) + 2a(n - 1). ●

► [A181334] 2,2,10,74,238,938,13130,23594,1298462,26637166,201403930,5005052234,135226271914,1315508114654,13747435592810,153590068548062,2029807642 90906,69141791857625242,276659582501710265 0,3889701454136324 6798,1724835471991750464238,8021972893631138355 7694 ⋆ Let f(n) = Sum _{ j>=1 } j ^ n / binomial(2 * j,j) = r _ n * Pi * sqrt(3) / 3 ^{ t _ n } + s _ n / 3; sequence gives r _ n. ● a(n) = numerator(2 * Sum _{ m=1..n + 1 } Sum _{ p=0..m - 1 } (- 1) ^ p * (m! / ((p + 1) * 3 ^ (m + 2))) * Stirling2(n + 1,m) * binomial(2 * p,p) * binomial(m - 1,p))). [It follows from Theorem 1 in Dyson et al. (2010 - 2011, 2013).] - _ Petros Hadjicostas _ , May 15 2020 ●

► [A014220] 2,2,11,29,67,127,223,347,521,733,1009,1361,1733,2203,2749,3389,4099,4919,5839,6863,8009,9277,10651,12197,13829 ⋆ Next prime after n ^ 3. ● a(n) < (n + 1) ^ 3 for n sufficiently large, by Ingham's theorem in A060199. - _ Jonathan Sondow _ , May 19 2013 ●

► [A175976] 2,2,11,56,245,1010,4079,16364,65513,262118,1048547,4194272,16777181,67108826,268435415,1073741780,4294967249,17179869134,68719476683,274877906888,1099511627717,4398046511042,17592186044351,70368744177596 ⋆ a(n) = 4 ^ n - 3 * n + 1. ● a(n) - 6 * a(n - 1) + 9 * a(n - 2) - 4 * a(n - 3) = 0 for n>2. ●

► [A217094] 2,2,11,182,2621,33572,402131,4619162,51572441,564151952,6077367551,64696307942,682266771461,7140400943132,74263608488171,768372476393522,7915352287541681,81238170587875112,831143535290875991,8480291817617883902,86322626358560955101 ⋆ Least index k such that A011540(k) >= 10 ^ n. ● a(n + 1) = 10 * a(n) - 9 * a(n - 1) + 9 * 10 ^ (n - 1), n>0. ● a(n) = 2 + 10 ^ n - 9 ^ n - (9 ^ n - 1) / 8. ●

► [A205957] 1,1,1,1,2,2,12,12,48,144,1440,1440,34560,34560,483840,7257600,58060800,58060800,3135283200,3135283200,125411328000,2633637888000,57940033536000,57940033536000,5562243219456000 ⋆ a(n) = exp(- Sum _{ k=1..n } Sum _{ d|k, d prime } moebius(d) * log(k / d)). ● a(n) = Product _{ p prime, p<=n } (floor(n / p)!). - _ Ridouane Oudra _ , Nov 22 2021 ●

► [A140431] 0,2,2,12,22,92,222,772,2102,6732,19342,59732,175782,534172,1588862,4793892,14327062,43090412,129052782,387595252,1161911942,3487483452,10458955102,31383855812,94137586422 ⋆ 2 * A094555(n). ● a(n) = (1 - (- 2) ^ n + 3 ^ n) / 3 for n>0. a(n) = 2 * a(n - 1) + 5 * a(n - 2) - 6 * a(n - 3) for n>3. G.f.: 2 * x * (1 - x - x ^ 2) / ((1 - x) * (1 + 2 * x) * (1 - 3 * x)). [_ Colin Barker _ , Sep 21 2012] ●

► [A122007] 0,2,2,12,24,90,234,756,2160,6642,19602,59292,176904,532170,1593594,4785156,14346720,43053282,129133602,387440172,1162241784,3486843450,10460294154,31381236756,94143001680 ⋆ Expansion of 2 * x ^ 2 * (1 - 2 * x) / ((3 * x - 1) * (3 * x ^ 2 - 1)). ● a(n) = 3 ^ (n / 2 - 1) + 3 ^ (n - 2) for n>1 and even. ● a(n) = 3 ^ (n - 2) - 3 ^ ((n - 3) / 2) for n>1 and odd. ●

► [A052612] 0,2,2,12,24,240,720,10080,40320,725760,3628800,79833600,479001600,12454041600,87178291200,2615348736000,20922789888000,711374856192000,6402373705728000,243290200817664000 ⋆ Expansion of e.g.f. x * (2 + x) / (1 - x ^ 2). ● a(n) = n! / gcd(n, T(n)) where T(n) is the n - th triangular number. - _ Andrew S. Plewe _ , Jan 09 2006 ●

► [A087131] 2,2,12,32,112,352,1152,3712,12032,38912,125952,407552,1318912,4268032,13811712,44695552,144637952,468058112,1514668032,4901568512,15861809152,51329892352,166107021312,537533612032,1739495309312 ⋆ a(n) = 2 ^ n * Lucas(n), where Lucas = A000032. ● a(n) = (1 + sqrt(5)) ^ n + (1 - sqrt(5)) ^ n. ● a(n) = [x ^ n] (1 + x + sqrt(1 + 2 * x + 5 * x ^ 2)) ^ n for n >= 1. - _ Peter Bala _ , Jun 23 2015 ● a(n) == 2 (mod 10). ●

► [A202730] 1,2,2,14,78,406,2062,10374,51998,260246,1301742,6509734,32550718,162757686,813796622,4068999494,20345030238,101725216726,508626214702,2543131335654,12715657202558,63578287061366,317891437403982 ⋆ Number of n X 3 nonnegative integer arrays each row and column an ascent sequence (interior element no greater than one plus up - steps preceding it) and the lower right element equal to min(n,3) - 1. ● a(n) = (4 * 5 ^ n - 25 * 2 ^ n) / 150 for n>2. ●

► [A127226] 2,2,16,44,184,632,2368,8528,31264,113696,414976,1512128,5514112,20100992,73286656,267179264,974078464,3551232512,12946935808,47201266688,172084148224,627375896576,2287256682496 ⋆ a(0)=2, a(1)=2, a(n) = 2 * a(n - 1) + 6 * a(n - 2). ● a(n) = (1 + sqrt(7)) ^ n + (1 - sqrt(7)) ^ n, with n >= 0. - _ Paolo P. Lava _ , Jul 31 2008 ●

► [A216387] 1,2,2,16,57,325,1666,9787 ⋆ Number of values of k for which phi(k) is a permutation of decimal digits of k, for 10 ^ (n - 1) < k < 10 ^ n. ● a(n) = # { k in A115921 | 10 ^ (n - 1) < k < 10 ^ n } . - _ M. F. Hasler _ , Feb 24 2014 ●

► [A173785] 2,2,18,98,338,882,1922,3698,6498,10658,16562,24642,35378,49298,66978,89042,116162,149058,188498,235298,290322,354482,428738,514098,611618 ⋆ Expansion of 2 * (1 - 4 * x + 14 * x ^ 2 + 4 * x ^ 3 + 9 * x ^ 4) / (1 - x) ^ 5. ● a(n) = 2 * (n ^ 2 - n + 1) ^ 2. ●

► [A081687] 1,2,2,20,542,8132,94502,964700,9138782,82619732,724180502,6213565580,52507598222,438786732932,3636161064902,29939329241660,245281233244862,2001531240407732,16280816416067702,132088684297864940 ⋆ A sum of decreasing powers. ● a(n)=8 ^ n - 7 ^ n - 6 ^ n - 5 ^ n + 3 * 4 ^ n. ●

► [A127261] 2,2,24,68,376,1432,6624,27568,121376,518432,2250624,9685568,41877376,180610432,779994624,3366093568,14532133376,62725202432,270771738624,1168795501568,5045308389376 ⋆ a(0)=2, a(1)=2, a(n) = 2 * a(n - 1) + 10 * a(n - 2). ● a(n) = (1 + sqrt(11)) ^ n + (1 - sqrt(11)) ^ n, with n >= 0. - _ Paolo P. Lava _ , Jul 31 2008 ●

► [A371932] 1,2,2,26,50,706,1650,24282,62370,940610,2554530,3915081 0,1103117 62,1709993346,4945525650,77314273562,228002115650,3587763069826,10741365151810,169903043416730,514833595840370,8177978884039490,25025386537586610 ⋆ G.f. A(x) satisfies A(x) = 1 + x / A(x) ^ 2 * (1 + A(x) ^ 5). ● a(n) = (- 1) ^ (n - 1) * (1 / n) * Sum _{ k=0..n } binomial(n,k) * binomial(3 * n - 5 * k - 2, n - 1) for n > 0. ● a(n) == 2 (mod 8) for n > 0. - _ Hugo Pfoertner _ , Apr 13 2024 ●

► [A094347] 2,2,26,362,5042,70226,978122,13623482,189750626,2642885282,36810643322,512706121226,7141075053842,99462344632562,1385331749802026,19295182152595802,268747218386539202,3743165875258953026 ⋆ a(n) = 14 * a(n - 1) - a(n - 2); a(0) = a(1) = 2. ● a(n) = ((2 + sqrt(3)) ^ (2 * n - 1) + (2 - sqrt(3)) ^ (2 * n - 1)) / 2. - _ Gerry Martens _ , Jun 03 2015 ● a(n) = (1 / 2) * sqrt(4 + (- 2 * sqrt(- 2 + (7 - 4 * sqrt(3)) ^ (2 * n) + (7 + 4 * sqrt(3)) ^ (2 * n)) + sqrt(3) * sqrt(2 + (7 - 4 * sqrt(3)) ^ (2 * n) + (7 + 4 * sqrt(3)) ^ (2 * n))) ^ 2). - _ Gerry Martens _ , Jun 03 2015 ●

► [A127262] 2,2,28,80,496,1952,9856,43136,204544,926720,4307968,19736576,91168768,419176448,1932378112,8894873600,40978284544,188695052288,869129519104,4002599665664,18434753560576,84900703109120 ⋆ a(0)=2, a(1)=2, a(n) = 2 * a(n - 1) + 12 * a(n - 2). ● a(n) = ((1 + sqrt(13)) ^ n - (1 - sqrt(13) ^ n)) / (2 * sqrt(13)). ●

► [A056612] 1,1,1,2,2,36,36,144,144,1440,1440,17280,17280,241920,3628800,29030400,29030400,1567641600,1567641600,156764160000,9876142080000,2172751257 60000,217275125760000,1738201006080000,1738201006080000 ⋆ a(n) = gcd(n!, n! * (1 + 1 / 2 + 1 / 3 + ... + 1 / n)). ● a(n) = gcd(Stirling1(n + 1, 2), n!). - _ Michel Marcus _ , May 20 2020 ●

► [A038623] 2,2,37,127,347,1087,3109,8419,24317,64553,175211,480881,1304707,3523901,9558533,25874843,70115473,189961529,514272533,1394193607,3779851091,10246935679,27788566133,75370121191,204475052401 ⋆ Smallest prime p such that p / pi(p)>=n. ● a(n) = exp(n + 1 + o(1)). - _ Charles R Greathouse IV _ , Oct 15 2016 ●

► [A025784] 1,1,1,1,1,1,1,2,3,3,3,3,3,3,4,5,6,6,6,6,6,7,8,9,10 ⋆ Expansion of 1 / ((1 - x)(1 - x ^ 7)(1 - x ^ 8)). ● a(0)=1, a(1)=1, a(2)=1, a(3)=1, a(4)=1, a(5)=1, a(6)=1, a(7)=2, a(8)=3, a(9)=3, a(10)=3, a(11)=3, a(12)=3, a(13)=3, a(14)=4, a(15)=5, a(n)= a(n - 1) + a(n - 7) - a(n - 9) - a(n - 15) + a(n - 16). - _ Harvey P. Dale _ , Jul 14 2015 ●

► [A029110] 1,1,1,1,1,1,2,3,3,3,3,3,5,6,7,7,7,7,9,11,12,13,13,13,16 ⋆ Expansion of 1 / ((1 - x)(1 - x ^ 6)(1 - x ^ 7)(1 - x ^ 12)). ● a(0)=1, a(1)=1, a(2)=1, a(3)=1, a(4)=1, a(5)=1, a(6)=2, a(7)=3, a(8)=3, a(9)=3, a(10)=3, a(11)=3, a(12)=5, a(13)=6, a(14)=7, a(15)=7, a(16)=7, a(17)=7, a(18)=9, a(19)=11, a(20)=12, a(21)=13, a(22)=13, a(23)=13, a(24)=16, a(25)=18, a(n)=a(n - 1) + a(n - 6) - a(n - 8) + a(n - 12) - 2 * a(n - 13) + a(n - 14) - a(n - 18) + a(n - 20) + a(n - 25) - a(n - 26). - _ Harvey P. Dale _ , May 25 2013 ●

► [A029120] 1,1,1,1,1,1,1,2,3,3,3,3,4,4,5,6,7,7,7,8,9,10,11,12,14 ⋆ Expansion of 1 / ((1 - x)(1 - x ^ 7)(1 - x ^ 8)(1 - x ^ 12)). ● a(0)=1, a(1)=1, a(2)=1, a(3)=1, a(4)=1, a(5)=1, a(6)=1, a(7)=2, a(8)=3, a(9)=3, a(10)=3, a(11)=3, a(12)=4, a(13)=4, a(14)=5, a(15)=6, a(16)=7, a(17)=7, a(18)=7, a(19)=8, a(20)=9, a(21)=10, a(22)=11, a(23)=12, a(24)=14, a(25)=14, a(26)=15, a(27)=16; for n>27, a(n) = a(n - 1) + a(n - 7) - a(n - 9) + a(n - 12) - a(n - 13) - a(n - 15) + a(n - 16) - a(n - 19) + a(n - 21) + a(n - 27) - a(n - 28). - _ Harvey P. Dale _ , Aug 13 2013 ●

► [A025776] 1,1,1,1,1,2,3,3,3,3,4,5,6,6,6,7,8,9,10,10,11,12,13,14,15 ⋆ Expansion of 1 / ((1 - x)(1 - x ^ 5)(1 - x ^ 6)). ● a(n)= + a(n - 1) + a(n - 5) - a(n - 7) - a(n - 11) + a(n - 12). - _ R. J. Mathar _ , Aug 21 2014 ●

► [A029119] 1,1,1,1,1,1,1,2,3,3,3,4,4,4,5,6,7,7,8,9,9,10,12,13,14 ⋆ Expansion of 1 / ((1 - x)(1 - x ^ 7)(1 - x ^ 8)(1 - x ^ 11)). ● a(n) = a(n - 1) + a(n - 7) - a(n - 9) + a(n - 11) - a(n - 12) - a(n - 15) + a(n - 16) - a(n - 18) + a(n - 20) + a(n - 26) - a(n - 27). (End) ●

► [A211535] 0,0,0,0,0,0,0,0,0,1,1,1,1,2,3,3,3,4,5,6,6,7,8,9,10 ⋆ Number of ordered triples (w,x,y) with all terms in { 1,...,n } and w=4x + 5y. ● a(n) = a(n - 1) + a(n - 4) - a(n - 6) - a(n - 9) + a(n - 10). ●

► [A279521] 0,1,1,2,3,3,3,4,5,6,7,7,7,7,7,8,9,10,11,12,13,14,15,15,15 ⋆ Maximum number of single - direction edges in leveled binary trees with n nodes. ● a(n) = (n + 2 ^ (h - 1) - 1) * He + (- 1) ^ He * (2 ^ h - 1), where h = floor(log _ 2(n)) and is the height of the binary tree, He = H(- n + 3 * 2 ^ (h - 1) - 1) and H is the Heaviside step function (i.e., H(x) = 1 if x >= 0 and H(x) = 0 if x < 0). ●

► [A076896] 1,1,2,3,3,3,4,5,6,7,7,7,8,8,8,9,10,11,12,12,13,14,15,15,16 ⋆ a(1) = 1, a(n) = n - a(floor(2n / 3)). ● a(n) is asymptotic to (6 / 10) * n. ●

► [A174522] 1,1,1,1,2,3,3,3,4,6,7,7,8,11,14,15,16,20,26,30,32,37,47,57,63 ⋆ Expansion of 1 / (1 - x - x ^ 4 + x ^ 6). ● a(n) = a(n - 1) + a(n - 4) + a(n - 6). - _ Franck Maminirina Ramaharo _ , Oct 31 2018 ●

► [A216391] 1,1,1,1,2,3,3,3,3,5,5,5,8,19,21,34,55,81,130,221,407,515,850,1787,2287,3968 ⋆ Number of values of k for which phi(k) is a permutation of decimal digits of k, for k < 2 ^ n. ● a(n) = # { k in A115921 | k < 2 ^ n } . - _ M. F. Hasler _ , Feb 24 2014 ●

► [A374022] 0,0,0,0,1,1,2,3,3,3,5,6,7,7,7,9,11,12,13,14,14,14,15,16,18 ⋆ a(n) is the cardinality of the set containing all noninteger rationals of the form m / 2 ^ (bigomega(m) - 1) <= n. ● a(n) = card { x | x = m / 2 ^ (bigomega(m) - 1), x noninteger, x<=n } . ● a(n) = pi _ k(n * 2 ^ (k - 1)) - pi(n) with pi _ k(n) as the counting function for k - almost primes and k sufficiently large. ●

► [A029065] 1,1,1,1,2,3,3,3,5,6,7,7,9,11,12,13,16,18,20,21,25,28,30,32,37 ⋆ Expansion of 1 / ((1 - x) * (1 - x ^ 4) * (1 - x ^ 5) * (1 - x ^ 8)). ● a(n) = a(n - 1) + a(n - 4) - a(n - 6) + a(n - 8) - 2 * a(n - 9) + a(n - 10) - a(n - 12) + a(n - 14) + a(n - 17) - a(n - 18). - _ Wesley Ivan Hurt _ , May 17 2021 ●

► [A361378] 0,1,2,3,3,3,8,8,12,16,25,33,45,66,91,128,177,252,351,491,689,966,1354,1894,2658 ⋆ Number of musical scales in n tone equal temperament respecting the property that alternate notes are 3 or 4 semitones apart. ● a(n) = a(n - 2) + a(n - 3) + a(n - 4) - a(n - 6). ●

► [A029133] 1,1,1,1,1,1,1,1,1,2,3,3,4,4,4,4,4,5,6,7,8,9,9,10 ⋆ Expansion of 1 / ((1 - x)(1 - x ^ 9)(1 - x ^ 10)(1 - x ^ 12)). ● a(0)=1, a(1)=1, a(2)=1, a(3)=1, a(4)=1, a(5)=1, a(6)=1, a(7)=1, a(8)=1, a(9)=2, a(10)=3, a(11)=3, a(12)=4, a(13)=4, a(14)=4, a(15)=4, a(16)=4, a(17)=4, a(18)=5, a(19)=6, a(20)=7, a(21)=8, a(22)=9, a(23)=9, a(24)=10, a(25)=10, a(26)=10, a(27)=11, a(28)=12, a(29)=13, a(30)=15, a(31)=16, a(n)=a(n - 1) + a(n - 9) - a(n - 11) + a(n - 12) - a(n - 13) - a(n - 19) + a(n - 20) - a(n - 21) + a(n - 23) + a(n - 31) - a(n - 32). - _ Harvey P. Dale _ , Mar 08 2014 ●

► [A357815] 0,1,2,3,3,4,4,4,4,5,6,6,7,8,9,10,11,12,12,13,14,14,15,16,16 ⋆ Smallest maximum degree over all maximal 2 - degenerate graphs with diameter 2 and n vertices. ● a(n) = ceiling(2 / 3 * (n - 1)) for n>15. ●

► [A189672] 0,1,1,1,2,3,3,4,4,4,5,5,5,6,7,7,8,9,9,10,10,10,11,12,12 ⋆ Partial sums of A080846. ● a(n) = floor((n + 1) / 3) + a(floor(n / 3)), where a(0)=0. ●

► [A266977] 1,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14 ⋆ Number of ON (black) cells in the n - th iteration of the "Rule 78" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = (2 * n + (- 1) ^ n + 7) / 4 for n>0. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n>3. ●

► [A214672] 0,0,1,1,2,3,3,4,4,5,5,6,7,7,8,8,9,9,10,10,11,12,12,13,13 ⋆ Floor of the imaginary parts of the zeros of the complex Lucas function on the left half - plane. ● a(n) = floor((2 * n + 1) * a / 2), n>=0, with a / 2 = - y _ 0(0) = 2 * Pi * log(phi) / (Pi ^ 2 + (2 * log(phi)) ^ 2), with phi:=(1 + sqrt(5)) / 2. a / 2 is approximately 0.2800649542. ●

► [A139338] 1,2,3,3,4,4,5,6,6,7,7,8,8,9,9,10,11,11,12,12,13,13,14,15,15 ⋆ Least k > 0 such that Sum _{ i=0..2 * n - 1 } (- k) ^ i / i! < 0. ● a(n) = r * n + o(n) where r is the solution to x + log(x) = 0 and 0 < x < 1: r = 0.56714329040978387299996... (see A030178). ●

► [A057355] 0,0,1,1,2,3,3,4,4,5,6,6,7,7,8,9,9,10,10,11,12,12,13,13,14 ⋆ a(n) = floor(3 * n / 5). ● a(n) = - 1 + Sum _{ k=0..n } (1 / 50) * (3 * (k mod 5) - 7 * ((k + 1) mod 5) + 13 * ((k + 2) mod 5) - 7 * ((k + 3) mod 5) + 13 * ((k + 4) mod 5)). - _ Paolo P. Lava _ , Nov 17 2008 ●

► [A171975] 0,1,1,2,3,3,4,4,5,6,6,7,7,8,9,9,10,11,11,12,12,13,14,14,15 ⋆ Integer part of the circumsphere radius of a regular tetrahedron with edge length n. ● a(n) = floor(n * sqrt(6) / 4). ●

► [A057363] 0,0,1,1,2,3,3,4,4,5,6,6,7,8,8,9,9,10,11,11,12,12,13,14,14 ⋆ a(n) = floor(8 * n / 13). ● a(n) = a(n - 1) + a(n - 13) - a(n - 14). ●

► [A005206] 0,1,1,2,3,3,4,4,5,6,6,7,8,8,9,9,10,11,11,12,12,13,14,14,15 ⋆ Hofstadter G - sequence: a(0) = 0; a(n) = n - a(a(n - 1)) for n > 0. ● a(0)=0, a(1)=1, a(n) = n - a(floor(n / tau)). - _ Benoit Cloitre _ , Nov 27 2002 ● a(n + a(n)) = n. - _ Pierre Letouzey _ , Sep 09 2015 ● a(n) + a(a(n + 1) - 1) = n. - _ Pierre Letouzey _ , Sep 09 2015 ● a(0) = 0, a(n + 1) = a(n) + d(n) and d(0) = 1, d(n + 1)=1 - d(n) * d(a(n)). - _ Pierre Letouzey _ , Sep 09 2015 ●

► [A057365] 0,0,1,1,2,3,3,4,4,5,6,6,7,8,8,9,9,10,11,11,12,13,13,14,14 ⋆ a(n) = floor(13 * n / 21). ● a(n) = a(n - 1) + a(n - 21) - a(n - 22). ●

► [A309077] 1,2,3,3,4,4,5,6,6,7,8,8,9,9,10,11,11,12,13,13,14,14,15,16,16 ⋆ Maximum sum of base lengths over all minimal factorizations of length - n binary strings. ● a(j + k) <= a(j) + a(k). - _ Bert Dobbelaere _ , Jul 21 2019 ●

► [A014245] 1,1,2,3,3,4,4,5,6,6,7,8,8,9,10,10,11,11,12,13,13,14,15,15,16 ⋆ a(n) = (n - th term of Beatty sequence for (3 + sqrt(3)) / 2) - (n - th term of Beatty sequence for sqrt(3)). ● a(n) = floor((3 + sqrt(3)) / 2 * n) - floor(sqrt(3) * n). ●

► [A096386] 0,0,1,2,3,3,4,4,5,6,7,7,8,8,9,10,11,11,12,12,13,14,15,15,16 ⋆ Number of numbers <= n which are divisible by 2 or 3. ● a(n) = [n / 2] + [(n + 3) / 6] = [n / 3] + [(n + 2) / 6] + [(n + 4) / 6]. ● a(- n) = - a(n - 1) - 1. ● a(n) = 4 + a(n - 6). ● a(n) = Sum _{ k=0..n } (1 / 90) * (- 11 * (k mod 6) + 19 * ((k + 1) mod 6) + 4 * ((k + 2) mod 6) + 4 * ((k + 3) mod 6) - 11 * ((k + 4) mod 6) + 19 * ((k + 5) mod 6))) - 1. - _ Paolo P. Lava _ , Jun 25 2007 ●

► [A076895] 1,1,2,3,3,4,4,5,6,7,7,8,9,10,10,11,11,12,12,13,14,15,15,16,16 ⋆ a(1) = 1, a(n) = n - a(ceiling(n / 2)). ● a(n) is asymptotic to (2 / 3) * n. ●

► [A274017] 1,2,3,3,4,4,6,6,9,11,16,20,32,42,65,95,144,212,330,494,767,1171,1812,2788,4342 ⋆ Number of n - bead binary necklaces (no turning over allowed) that avoid the subsequence 110. ● a(n) = 1 + (1 / n) * Sum _{ d|n } totient(n / d) * (Fibonacci(d - 1) + Fibonacci(d + 1)). ●

► [A110533] 0,0,0,0,0,2,3,3,4,4,10,10,12,12,14,21,24,24,27,27,40,40,44,44,48 ⋆ a(n) = floor(n / 2) * floor(n / 5). ● a(n) = + a(n - 2) + a(n - 5) - a(n - 7) + a(n - 10) - a(n - 12) - a(n - 15) + a(n - 17). ●

► [A088023] 1,2,3,3,4,5,5,5,6,7,8,8,8,9,9,9,10,11,12,12,13,14,14,14,14 ⋆ Set a(1) = 1. Then take the list of defined initial terms, reverse their order, add 1, 2, 3, ... to the reversed list in succession and append this new list to the right of the previously defined terms. Repeat this process indefinitely. ● a(n)=2a(n / 2) - 1 if a=2 ^ k else a(n)=a(2 ^ k - n + 1) + n - 2 ^ (k - 1) if 2 ^ (k - 1)<n<2 ^ k. (Ed.) ●

► [A123070] 0,1,1,2,3,3,4,5,5,6,6,7,8,8,9,10,10,11,11,12,13,13,14,14,15 ⋆ Hofstadter Flip - G - sequence. ● a(0) = 0; a(n + 1) = a(n) + d(n) where: ●

► [A057361] 0,0,1,1,2,3,3,4,5,5,6,6,7,8,8,9,10,10,11,11,12,13,13,14,15 ⋆ a(n) = floor(5 * n / 8). ● a(0)=0, a(1)=0, a(2)=1, a(3)=1, a(4)=2, a(5)=3, a(6)=3, a(7)=4, a(8)=5, a(n)=a(n - 1) + a(n - 8) - a(n - 9). - _ Harvey P. Dale _ , Jul 18 2013 ●

► [A074065] 0,1,1,2,3,3,4,5,5,6,6,7,8,8,9,10,10,11,12,12,13,13,14,15,15 ⋆ Numerators a(n) of fractions slowly converging to sqrt(3): let a(1) = 0, b(n) = n - a(n); if (a(n) + 1) / b(n) < sqrt(3), then a(n + 1) = a(n) + 1, else a(n + 1)= a(n). ● a(1) = 0. b(n) = n - a(n). If (a(n) + 1) / b(n) < sqrt(3), then a(n + 1) = a(n) + 1, else a(n + 1) = a(n). ● a(n) = floor(n * (3 - sqrt(3)) / 2). - _ Vladeta Jovovic _ , Oct 04 2003 ●

► [A194640] 0,1,1,2,3,3,4,5,5,6,7,7,8,8,9,10,10,11,12,12,13,13,14,15,15 ⋆ Smallest image size for which the number of endofunctions (functions f: { 1,2,...,n }- > { 1,2,...,n }) is a maximum. ● a(n) = arg max _{ k=0..n } Stirling2(n,k) * k! * C(n,k) for n!=2, a(2) = 1. ●

► [A317686] 1,1,2,3,3,4,5,5,6,7,7,8,8,9,10,11,12,12,12,13,14,15,15,16,16 ⋆ a(1) = a(2) = 1; for n >= 3, a(n) = a(t(n)) + a(n - t(n)) where t = A063882. ● a(n + 1) - a(n) = 0 or 1 for all n >= 1. ●

► [A131737] 0,1,1,1,2,3,3,4,5,5,6,7,7,8,9,9,10,11,11,12,13,13,14,15,15 ⋆ Essentially even numbers followed by duplicated odd numbers. ● a(n) = (1 / 9) * Sum { k=0..n }{ 5 * (k mod 3) + 2 * ((k + 1) mod 3) - ((k + 2) mod 3) }- 1 + (C(2 * n,n) mod 2) +{ C((n + 1) ^ 2,n + 3) mod 2 } , with n>=0. - _ Paolo P. Lava _ , Oct 07 2008 (corrected by _ Johannes W. Meijer _ , Jun 27 2011) ● a(n) = floor((2 * n - 1) / 3) for n > 1. - _ Werner Schulte _ , Feb 27 2019 ●

► [A004396] 0,1,1,2,3,3,4,5,5,6,7,7,8,9,9,10,11,11,12,13,13,14,15,15,16 ⋆ One even number followed by two odd numbers. ● a(n) = floor((2 * n + 1) / 3). ● a(n) = a(n - 1) + (1 / 2) * ((- 1) ^ floor((4 * n + 2) / 3) + 1), a(0) = 0. - Mario Catalani (mario.catalani(AT)unito.it), Oct 20 2003 ● a(n) = 2n / 3 - cos(2 * Pi * n / 3 + Pi / 3) / 3 + sqrt(3) * sin(2 * Pi * n / 3 + Pi / 3) / 9. - _ Paul Barry _ , Mar 18 2004 ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>3. ● a(n) = floor(n / 3) + ceiling(n / 3). - _ Jonathan Vos Post _ , Mar 19 2006 ● a(n) = floor((2 * n ^ 2 + 4 * n + 2) / (3 * n + 4)). - _ Gary Detlefs _ , Jul 13 2010 ●

► [A175406] 1,1,2,3,3,4,5,5,6,7,7,8,9,10,10,11,12,12,13,14,14,15,16,16,17 ⋆ The greatest integer k such that (1 + 1 / n) ^ k <= 2. ● a(n) = n log 2 + O(1). Conjecture: a(n) = floor((n + 1 / 2) log 2). - _ Charles R Greathouse IV _ , Apr 03 2012 ●

► [A258703] 0,0,1,2,3,3,4,5,5,6,7,7,8,9,10,10,11,12,12,13,14,15,15,16,17 ⋆ a(n) = floor(n / sqrt(2) - 1 / 2). ● a(n) = floor(1 / (exp(sqrt(2) / n) - 1)) for all positive integers n [O'Bryant]. ● a(n) = floor((n * sqrt(2) - 1) / 2). - _ Reinhard Zumkeller _ , Jun 09 2015 ●

► [A356988] 1,1,2,3,3,4,5,5,6,7,8,8,8,9,10,11,12,13,13,13,13,14,15,16,17 ⋆ a(n) = n - a ^ [2](n - a ^ [3](n - 1)) with a(1) = 1, where a ^ [2](n) = a(a(n)) and a ^ [3](n) = a(a(a(n))). ● a(n + 1) - a(n) = 0 or 1. ● a(2 * F(n)) = Lucas(n - 1) for n >= 2; ● a(3 * F(n)) = 2 * F(n) for n >= 1; ● a(4 * F(n)) = F(n + 2) for n >= 2; ● a(3 * L(n)) = F(n + 3) for n >= 3; ● a(L(m * n)) + a(F(m * n)) = L(m * n) and a(L(m * n)) - a(F(m * n)) = F(m * n). ●

► [A013928] 0,1,2,3,3,4,5,6,6,6,7,8,8,9,10,11,11,12,12,13,13,14,15,16,16 ⋆ Number of (positive) squarefree numbers < n. ● a(n) = Sum _{ k = 1..n - 1 } mu(k) ^ 2. - _ Vladeta Jovovic _ , May 18 2001 ● a(n) = Sum _{ d = 1..floor(sqrt(n - 1) } mu(d) * floor((n - 1) / d ^ 2) where mu(d) is the Moebius function (A008683). - _ Vladeta Jovovic _ , Apr 06 2001 ● a(n) = Sum _{ k = 0..n } if(k <= n - 1, mu(n - k) mod 2, else 0; a(n + 1) = Sum _{ k = 0..n } mu(n - k + 1) mod 2. - _ Paul Barry _ , May 10 2005 ● a(n + 1) = Sum _{ k = 0..n, abs(mu(n - k + 1)). - _ Paul Barry _ , Jul 20 2005 ● a(n) = Sum _{ k = 1..floor(sqrt(n)) } mu(k) * floor(n / k ^ 2). - _ Benoit Cloitre _ , Oct 25 2009 ●

► [A061288] 1,1,2,3,3,4,5,6,6,7,8,8,9,10,10,11,12,13,13,14,15,15,16,17,18 ⋆ Integer part of square root of n - th triangular number. ● a(n) = floor(sqrt(n * (n + 1) / 2)). - _ Zak Seidov _ , May 25 2015 ●

► [A083544] 1,2,3,3,4,5,6,6,7,8,9,9,10,11,12,12,12,13,14,14,15,16,17,17,18 ⋆ a(n) = maximal value of the sum of Mobius function values over a block of n consecutive natural numbers. ● a(n) = max sum m=i...(i + n - 1) Mobius(m) over i>=1. ●

► [A057353] 0,0,1,2,3,3,4,5,6,6,7,8,9,9,10,11,12,12,13,14,15,15,16,17,18 ⋆ a(n) = floor(3n / 4). ● a(n) = - 1 + Sum _{ k=0..n }{ (1 / 8) * ((k mod 4) + ((k + 1) mod 4) - ((k + 2) mod 4) + 3 * ((k + 3) mod 4) } - _ Paolo P. Lava _ , Nov 17 2008 ● a(n) = 1 / 8 * (6 * n + 2 * cos((Pi * n) / 2) + cos(Pi * n) - 2 * sin((Pi * n) / 2) - 3). - _ Ilya Gutkovskiy _ , Sep 18 2015 ● a(4n) = a(4n + 1). - _ Altug Alkan _ , Sep 26 2015 ●

► [A076539] 0,1,2,3,3,4,5,6,6,7,8,9,9,10,11,12,12,13,14,15,15,16,17,18,18 ⋆ Numerators a(n) of fractions slowly converging to Pi: let a(1) = 0, b(n) = n - a(n); if (a(n) + 1) / b(n) < Pi, then a(n + 1) = a(n) + 1, otherwise a(n + 1) = a(n). ● a(1) = 0, b(n) = n - a(n), if (a(n) + 1) / b(n) < Pi, then a(n + 1) = a(n) + 1, otherwise a(n + 1) = a(n). ● a(n) = floor(n * Pi / (Pi + 1)). - _ Vladeta Jovovic _ , Oct 04 2003 ●

► [A074184] 1,1,2,3,3,4,5,6,6,7,8,9,9,10,11,12,12,13,14,15,15,16,17,18,19 ⋆ Index of the smallest power of n >= n!. ● a(n) = ceiling(log _ n(n!)) for n>1. ●

► [A187329] 0,0,1,2,3,3,4,5,6,6,7,8,9,9,10,11,12,12,13,14,15,16,16,17,18 ⋆ Floor((3 - sqrt(5))n). ● a(n) = floor((3 - sqrt(5)) * n). ●

► [A083920] 0,0,1,1,2,3,3,4,5,6,6,7,8,9,10,10,11,12,13,14,15,15,16,17,18 ⋆ Number of nontriangular numbers <= n. ● a(n) = n - floor(sqrt(2 * n + 1) - 1 / 2). - _ Ridouane Oudra _ , Jun 19 2019 ●

► [A066508] 1,1,2,3,3,4,5,6,6,7,8,9,10,10,11,12,13,14,15,16,16,17,18,19,20 ⋆ a(n) = floor(Sum _{ i=1..n } (1 / i) ^ (1 / i)). ● a(n) = n - log(n) ^ 2 / 2 + O(1) as n - > infinity. - _ Robert Israel _ , Jan 05 2016 ●

► [A091960] 1,2,3,3,4,5,6,7,8,8,9,10,11,11,12,13,14,14,15,15,16,17,18,18,19 ⋆ a(1)=1, a(2n)=a(2n - 1) + (a(n)mod 2), a(2n + 1)=a(2n) + 1. ● a(n) is asymptotic to 3 / 4 * n. ●

► [A348776] 2,3,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25 ⋆ The numbers >= 2 with 3 repeated. ● a(n) = n for n >= 3. ● a(n) = 2 * a(n - 1) - a(n - 2) for n > 4. ●

► [A024698] 1,1,2,3,3,4,5,6,7,8,9,10,11,12,13,15,15,17,18,18,20,21,22,24,25 ⋆ a(n) = (prime(n + 1) - 1) / 4 if this is an integer or (prime(n + 1) + 1) / 4 otherwise. ● a(n) = ceiling((prime(n + 1) - 1) / 4). - _ Robert Israel _ , Jan 23 2018 ● a(n) = number of consecutive pairs of quadratic residues in 0,1,...,p - 1 where p =prime(n + 1). - _ Michael Somos _ , Feb 17 2020 ●

► [A011883] 0,0,0,0,0,0,1,1,1,2,3,3,4,5,6,7,8,9,10,11,12,14,15,16,18 ⋆ a(n) = floor(n * (n - 1) / 30). ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 15) - 2 * a(n - 16) + a(n - 17). ●

► [A034886] 1,1,1,1,2,3,3,4,5,6,7,8,9,10,11,13,14,15,16,18,19,20,22,23,24 ⋆ Number of digits in n!. ● a(n) = floor(log(n!) / log(10)) + 1. ● a(n) = ceiling(log _ 10(1) + log _ 10(2) + ... + log _ 10(n)). - _ Dmitry Kamenetsky _ , Nov 05 2010 ●

► [A025767] 1,1,1,2,3,3,4,5,6,7,8,9,11,12,13,15,17,18,20,22,24,26,28,30,33 ⋆ Expansion of 1 / ((1 - x) * (1 - x ^ 3) * (1 - x ^ 4)). ● a(n) = floor(n ^ 2 / 24 + n / 3 + 1). ● a(n) = Sum _{ k=0..floor(n / 4) } floor((n - 4 * k + 3) / 3) } . - _ Paul Barry _ , Jan 20 2006 ● a(n) = a(- 8 - n) for all n in Z. - _ Michael Somos _ , Nov 09 2007 ● a(n) = a(n - 1) + a(n - 3) - a(n - 5) - a(n - 7) + a(n - 8). - _ David Neil McGrath _ , Aug 30 2014 ● a(n) = Sum _{ k=1..floor((n + 4) / 4)

} Sum _{ j=k..floor((n + 4 - k) / 3) } Sum _{ i=j..floor((n + 4 - j - k) / 2) } [j = i], where [ ] is the Iverson bracket. - _ Wesley Ivan Hurt _ , Jan 17 2021 ●

▶ [A091848] 0,0,0,0,0,0,1,1,2,3,3,4,5,6,7,8,9,11,12,14,15,17,18,21,22 ⋆ Johnson bound J(n,4,2). ● a(n) = n ^ 2 / 24 - O(n). - _ Charles R Greathouse IV _ , Aug 25 2017 ●

▶ [A011877] 0,0,0,0,0,0,1,1,2,3,3,4,5,6,7,8,10,11,12,14,15,17,19,21,23 ⋆ a(n) = floor(n * (n - 1) / 24). ● a(n) = + 2 * a(n - 1) - a(n - 2) + a(n - 3) - 2 * a(n - 4) + a(n - 5) - a(n - 6) + 2 * a(n - 7) - a(n - 8) + a(n - 9) - 2 * a(n - 10) + a(n - 11) - a(n - 12) + 2 * a(n - 13) - a(n - 14) + a(n - 15) - 2 * a(n - 16) + a(n - 17) - a(n - 18) + 2 * a(n - 19) - a(n - 20) + a(n - 21) - 2 * a(n - 22) + a(n - 23). G.f.: x ^ 6 * (1 - x + x ^ 2 - x ^ 3 + x ^ 6 - x ^ 9 + x ^ 10 - x ^ 11 + x ^ 12) / ((1 - x) ^ 3 * (1 + x + x ^ 2) * (x ^ 2 + 1) * (x ^ 4 + 1) * (x ^ 4 - x ^ 2 + 1) * (x ^ 8 - x ^ 4 + 1)). [From _ R. J. Mathar _ , Apr 15 2010] ●

▶ [A029064] 1,1,1,1,2,3,3,4,5,6,7,8,10,11,13,15,17,19,21,24,27,30,33,36,40 ⋆ Expansion of 1 / ((1 - x) * (1 - x ^ 4) * (1 - x ^ 5) * (1 - x ^ 7)). ● a(n) = floor((2 * n ^ 3 + 51 * n ^ 2 + 388 * n + 1680) / 1680). - _ Tani Akinari _ , May 23 2014 ● a(- 17 - n) = - a(n). - _ Michael Somos _ , May 23 2014 ●

▶ [A011876] 0,0,0,0,0,0,1,1,2,3,3,4,5,6,7,9,10,11,13,14,16,18,20,22,24 ⋆ [n(n - 1) / 23]. ● a(n) = + 2 * a(n - 1) - a(n - 2) + a(n - 23) - 2 * a(n - 24) + a(n - 25). [From _ R. J. Mathar _ , Apr 15 2010] ●

▶ [A029034] 1,1,1,2,3,3,4,5,7,8,9,11,14,15,17,20,24,26,29,33,38,41,45,50,57 ⋆ Expansion of 1 / ((1 - x)(1 - x ^ 3)(1 - x ^ 4)(1 - x ^ 8)). ● a(0)=1, a(1)=1, a(2)=1, a(3)=2, a(4)=3, a(5)=3, a(6)=4, a(7)=5, a(8)=7, a(9)=8, a(10)=9, a(11)=11, a(12)=14, a(13)=15, a(14)=17, a(15)=20, a(n)=a(n - 1) + a(n - 3) - a(n - 5) - a(n - 7) + 2 * a(n - 8) - a(n - 9) - a(n - 11) + a(n - 13) + a(n - 15) - a(n - 16). - _ Harvey P. Dale _ , Jul 21 2013 ●

▶ [A115339] 1,1,2,3,3,4,5,7,8,11,13,18,21,29,34,47,55,76,89,123,144,199,233,322,377 ⋆ a(2n - 1)=F(n + 1), a(2n)=L(n), where F(n) and L(n) are the Fibonacci and the Lucas sequences. ● a(n + 2) = a(n) + a(n - 2). ●

▶ [A309795] 0,0,0,0,0,0,1,2,3,3,4,5,7,9,12,14,17,19,23,27,32,36,42,47,54 ⋆ Number of even parts appearing among the second largest parts of the partitions of n into 4 parts. ● a(n) = Sum _{ k=1..floor(n / 4) } Sum _{ j=k..floor((n - k) / 3) } Sum _{ i=j..floor((n - j - k) / 2) } ((i - 1) mod 2). ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 6) - 2 * a(n - 7) + 2 * a(n - 8) - 2 * a(n - 9) + a(n - 10) - a(n - 14) + 2 * a(n - 15) - a(n - 16) for n>15. ●

▶ [A157725] 2,3,3,4,5,7,10,15,23,36,57,91,146,235,379,612,989,1599,2586,4183,6767,10948,17713,28659,46370 ⋆ a(n) = Fibonacci(n) + 2. ● a(0) = 2, a(1) = 3, a(n) = a(n - 2) + a(n - 1) - 2. - _ Reinhard Zumkeller _ , Jul 30 2013 ●

▶ [A029033] 1,1,1,2,3,3,4,6,7,8,10,12,14,16,19,22,25,28,32,36,40,45,50,55,61 ⋆ Expansion of 1 / ((1 - x)(1 - x ^ 3)(1 - x ^ 4)(1 - x ^ 7)). ● a(0)=1, a(1)=1, a(2)=1, a(3)=2, a(4)=3, a(5)=3, a(6)=4, a(7)=6, a(8)=7, a(9)=8, a(10)=10, a(11)=12, a(12)=14, a(13)=16, a(14)=19, a(n) = a(n - 1) + a(n - 3) - a(n - 5) - a(n - 10) + a(n - 12) + a(n - 14) - a(n - 15). - _ Harvey P. Dale _ , Feb 26 2012 ●

▶ [A123552] 1,1,1,2,3,3,4,6,7,8,11,14,16,20,26,31,37,47,58,69,85,106,128,155,192 ⋆ Expansion of 1 / (1 - x - x ^ 3 + x ^ 5). ● a(n) = a(n - 1) + a(n - 3) - a(n - 5) for n >= 5, with a(0)=a(1)=a(2)=1, a(3)=2, a(4)=3. ● a(n) = a(n - 3) + a(n - 4) + 1 for n >= 4, with a(0)=a(1)=a(2)=1, a(3)=2. ●

▶ [A228362] 0,0,0,1,2,3,3,4,6,8,10,13,18,24,31,41,55,73,96,127,169,224,296,392,520 ⋆ The number of all possible covers of L - length line segment by 3 - length line segments with allowed gaps < 3. ● a(0)=a(1)=a(2)=0; a(3)=1; a(4)=2; a(5) = a(6)=3; a(7)=4; a(n)= a(n - 3) + a(n - 4) + a(n - 5). ●

▶ [A078467] 0,1,2,3,3,4,6,9,12,16,22,31,43,59,81,112,155,214,295,407,562,776,1071,1478,2040 ⋆ a(n) = a(n - 1) + a(n - 4); first four terms are 0,1,2,3. ● a(n) = a(n - 1) + a(n - 4); a(0)=0, a(1)=1, a(2)=2, a(3)=3 ● a(n + 1)=sum { k=0..n, binomial(n - k, floor(k / 3)) } - _ Paul Barry _ , Jul 06 2004 ●

▶ [A010761] 0,1,2,3,3,5,5,6,7,8,8,10,10,11,12,13,13,15,15,16,17,18,18,20,20 ⋆ a(n) = floor(n / 2) + floor(n / 3). ● a(- n) = - 2 - a(n - 1). (End) ● a(n) = a(n - 2) + a(n - 3) - a(n - 5). - _ Wesley Ivan Hurt _ , Jan 27 2022 ●

▶ [A051032] 2,3,3,5,5,9,9,17,17,33,33,65,65,129,129,257,257,513,513,1025,1025,2049,2049,4097,4097 ⋆ Summatory Rudin - Shapiro sequence for 2 ^ (n - 1). ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3). - _ Wesley Ivan Hurt _ , Aug 19 2022 ●

▶ [A338375] 1,1,2,3,3,5,6,7,8,9,11,12,13,15,16,18,19,21,22,24,26,27,29,31,32 ⋆ Number of digits in (2n)! / (2 ^ n * n!). ● a(n) = floor(log((2n)! / ((2 ^ n) * n!)) / log(10)) + 1. ●

▶ [A036410] 1,1,1,2,3,3,5,6,7,9,11,12,15,17,19,22,25,27,31,34,37,41,45,48,53 ⋆ G.f.: (1 + x ^ 6) / ((1 - x) * (1 - x ^ 3) * (1 - x ^ 4)). ● a(n) = ceiling((n + 1) ^ 2 / 12). ● a(n) = a(n - 1) + a(n - 2) - a(n - 4) - a(n - 5) + a(n - 6). ● a(n) = a(- 2 - n) for all n in Z. - _ Michael Somos _ , Dec 16 2021 ●

▶ [A008670] 1,1,1,2,3,3,5,6,7,9,11,12,16,18,20,24,28,30,36,40,44,50,56,60,69 ⋆ Molien series for Weyl group F _ 4. ● a(n) = a(n - 1) + a(n - 3) - a(n - 5) + a(n - 6) - 2 * a(n - 7) + a(n - 8) - a(n - 9) + a(n - 11) + a(n - 13) - a(n - 14), with a(0)=1, a(1)=1, a(2)=1, a(3)=2, a(4)=3, a(5)=3, a(6)=5, a(7)=6, a(8)=7, a(9)=9, a(10)=11, a(11)=12, a(12)=16, a(13)=18. - _ Harvey P. Dale _ , Feb 07 2012 ● a(n) = (120 * floor(n / 6) ^ 3 + 60 * (m + 7) * floor(n / 6) ^ 2 + 2 * (m ^ 5 - 15 * m ^ 4 + 75 * m ^ 3 - 135 * m ^ 2 + 134 * m + 240) * floor(n / 6) + 3 * (m ^ 5 - 15 * m ^ 4 + 75 * m ^ 3 - 135 * m ^ 2 + 84 * m + 70) + (m ^ 5 - 15 * m ^ 4 + 75 * m ^ 3 - 135 * m ^ 2 + 44 * m + 30) * (- 1) ^ floor(n / 6)) / 240 where m = (n mod 6). - _ Luce ETIENNE _ , Aug 14 2018 ●

▶ [A179492] 1,1,2,3,3,5,6,9,12,15,20,27,36,47,63,83,109,144,190,251,331,436,575,759,1001 ⋆ a(n) = floor((1 + 1 / Pi) ^ n). ● a(n) = floor((1 + 1 / Pi) ^ n). - _ R. J. Mathar _ , Jul 20 2010 ●

▶ [A258967] 1,2,3,3,5,7,11,20,40,94,275,1017,5128,37871,444415,9290130,395420005,40404949540,12183091294648,13951642918891149,8287216978700123967 9,3751487765641929828636648,20831230346748035897677277778237,2545421486363227882269489482808834529 11 ⋆ a(1)=1, a(2)=2, a(3)=3, a(n) = ceiling(sqrt(a(n - 1) * a(n - 2) * a(n - 3))), n>3. ● a(n) is approximately k ^ (c ^ n), where c is the real root of x ^ 3 - (x ^ 2 + x + 1) / 2 = 0 equal to (1 + (64 - 3 * sqrt(417)) ^ (1 / 3) + (64 + 3 * sqrt(417)) ^ (1 / 3)) / 6, and k is approximately 1.7450496... ●

▶ [A153643] 2,3,3,5,7,13,23,45,87,173,343,685,1367,2733,5463,10925,21847,43693,87383,174765,349527,699053,1398103,2796205,5592407 ⋆ Jacobsthal numbers A001045 incremented by 2. ● a(n) = 2 * a(n - 1) + a(n - 2) - 2 * a(n - 3) for n >= 3. - _ Andrew Howroyd _ , Feb 26 2018 ●

▶ [A049855] 2,3,3,5,10,18,31,54,95,167,293,514,902,1583,2778,4875,8555,15013,26346,46234,81135,142382,249863,438479,769477 ⋆ a(n) = Sum { a(k): k=0,1,2,...,n - 3,n - 1 } ; a(n - 2) is not a summand; 2 initial terms required. ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3); 3 initial terms required. ●

▶ [A020878] 2,3,3,6,7,13,18,31,47,78,123,201,322,523,843,1366,2207,3573,5778,9351,15127,24478,39603,64081,103682 ⋆ Number of maximum matchings in the n - Moebius ladder M _ n. ● a(n) = ((1 - sqrt(5)) / 2) ^ n + ((1 + sqrt(5)) / 2) ^ n for n even. ● a(n) = ((1 - sqrt(5)) / 2) ^ n + ((1 + sqrt(5)) / 2) ^ n + 2 for n odd. ● a(n) = a(n - 1) + 2 * a(n - 2) - a(n - 3) - a(n - 4) for n>3. ●

▶ [A049875] 2,3,3,6,11,22,41,77,143,267,498,930,1736,3241,6050,11294,21083,39357,73470,137151,256028,477943,892205,1665533,3109151 ⋆ a(n) = Sum { a(k): k=0,1,2,...,n - 4,n - 2,n - 1 } ; a(n - 3) is not a summand; 3 initial terms required. ● a(n) = 2 * a(n - 1) - a(n - 3) + a(n - 4); 4 initial terms required. ●

▶ [A127582] 2,3,3,7,31,31,127,127,1279,3583,5119,6143,8191,8191,81919,131071,131071,131071,524287,524287,14680063,14680063,109051903,109051903,654311423 ⋆ a(n) = the smallest prime number of the form k * 2 ^ n - 1, for k >= 1. ● a(n) << 37 ^ n by Xylouris's improvement to Linnik's theorem. - _ Charles R Greathouse IV _ , Dec 10 2013 ●

▶ [A210964] 1,1,1,1,1,1,1,1,1,1,2,3,4,4,4,4,4,4,4,4,5,7,10 ⋆ Column 10 of square array A195825. Also column 1 of triangle A210954. Also 1 together with the row sums of triangle A210954 ● a(n) = a(n - 1) + a(n - 11) - a(n - 14) - a(n - 34) + + - - (with the convention a(n) = 0 for negative n), where 1, 11, 14, 34, ... is the sequence of generalized 14 - gonal numbers A195818. - _ Peter Bala _ , Dec 10 2020 ●

▶ [A102678] 0,0,0,0,0,0,1,2,3,4,4,4,4,4,4,4,5,6,7,8,8,8,8,8,8 ⋆ Number of digits > = 6 in the decimal representations of all integers from 0 to n. ● a(n) = (1 / 2) * Sum _{ j=1..m + 1 } (floor(n / 10 ^ j + 2 / 5) * (2n + 2 - (1 / 5 + floor(n / 10 ^ j + 2 / 5)) * 10 ^ j) - floor(n / 10 ^ j) * (2n + 2 - (1 + floor(n / 10 ^ j)) * 10 ^ j)), where m = floor(log _ 10(n)). ● a(10 ^ m - 1) = 4 * m * 10 ^ (m - 1). ●

▶ [A029132] 1,1,1,1,1,1,1,1,1,2,3,4,4,4,4,4,4,4,5,6,8,9,10,10,10 ⋆ Expansion of 1 / ((1 - x)(1 - x ^ 9)(1 - x ^ 10)(1 - x ^ 11)). ● a(0)=1, a(1)=1, a(2)=1, a(3)=1, a(4)=1, a(5)=1, a(6)=1, a(7)=1, a(8)=1, a(9)=2, a(10)=3, a(11)=4, a(12)=4, a(13)=4, a(14)=4, a(15)=4, a(16)=4, a(17)=4, a(18)=5, a(19)=6, a(20)=8, a(21)=9, a(22)=10, a(23)=10, a(24)=10, a(25)=10, a(26)=10, a(27)=11, a(28)=12, a(29)=14, a(30)=16, a(n)=a(n - 1) + a(n - 9) - a(n - 12) - a(n - 19) + a(n - 22) + a(n - 30) - a(n - 31). - _ Harvey P. Dale _ , Dec 05 2015 ●

▶ [A195852] 1,1,1,1,1,1,1,1,1,2,3,4,4,4,4,4,4,4,5,7,10,12,13,13,13 ⋆ Column 8 of array A195825. Also column 1 of triangle A195842. Also 1 together with the row sums of triangle A195842. ● a(n) = a(n - 1) + a(n - 9) - a(n - 12) - a(n - 28) + + - - (with the convention a(n) = 0 for negative n), where 1, 9, 12, 28, ... is the sequence of generalized 12 - gonal numbers A195162. - _ Peter Bala _ , Dec 10 2020 ●

▶ [A029117] 1,1,1,1,1,1,1,2,3,4,4,4,4,4,5,6,8,9,10,10,10,11,12,14,16 ⋆ Expansion of 1 / ((1 - x)(1 - x ^ 7)(1 - x ^ 8)(1 - x ^ 9)). ● a(n) = a(n - 1) + a(n - 7) - a(n - 10) - a(n - 15) + a(n - 18) + a(n - 24) - a(n - 25). - _ Wesley Ivan Hurt _ , Mar 07 2022 ●

▶ [A195850] 1,1,1,1,1,1,1,2,3,4,4,4,4,4,5,7,10,12,13,13,13,14,16,21,27 ⋆ Column 6 of array A195825. Also column 1 of triangle A195840. Also 1 together with the row sums of triangle A195840. ● a(n) = a(n - 1) + a(n - 7) - a(n - 10) - a(n - 22) + + - - (with the convention a(n) = 0 for negative n), where 1, 7, 10, 22, ... is the sequence of generalized 10 - gonal numbers A074377. - _ Peter Bala _ , Dec 10 2020 ●

▶ [A072229] 0,0,0,0,1,2,3,4,4,4,4,5,6,7,8,8,8,8,9,10,11,12,12,12,12 ⋆ Witt index of the standard bilinear form <1,1,1,...,1> over the 2 - adic rationals. ● a(n) = 4 floor(n / 7) + [0,0,0,0,1,2,3][n % 7 + 1]. [Formula corrected by _ Franklin T. Adams - Watters _ , Apr 13 2009] ● a(n) = a(n - 1) + a(n - 7) - a(n - 8). ●

▶ [A135414] 1,1,2,3,4,4,4,5,6,6,7,8,9,9,9,10,11,12,12,12,13,14,14,15,16 ⋆ a(1)=a(2)=1 and for n>=3, a(n)=n - a(a(n - 2)). ● a(n)=2 + floor(n * phi) + floor((n + 1) * phi) - floor((n + 3) * phi) where phi=(sqrt(5) - 1) / 2 ●

▶ [A099479] 0,1,2,3,4,4,4,5,6,7,8,8,8,9,10,11,12,12,12,13,14,15,16,16,16 ⋆ Count, repeating 4n three times for n > 0. ● a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - 2 * a(n - 4) + 2 * a(n - 5) - a(n - 6). ● a(n) = - cos(Pi * 2n / 3 + Pi / 3) / 6 - sqrt(3) * sin(Pi * 2n / 3 + Pi / 3) / 18 - sqrt(3) * cos(Pi * n / 3 + Pi / 6) / 6 - sin(Pi * n / 3 + Pi / 6) / 2 + 2(n + 1) / 3. ● a(n) = Sum _{ k=0..floor(n / 2) } C(n - k, k) * (- 1) ^ k * (4 * 2 ^ (n - 1 - 2k) / 3 - (- 1) ^ n / 6 - 1 / 2). ●

▶ [A195848] 1,1,1,1,1,2,3,4,4,4,5,7,10,12,13,14,16,21,27,32,35,38,44,54,67 ⋆ Expansion of 1 / f(- x ^ 1, - x ^ 5) in powers of x where f() is Ramanujan's two - variable theta function. ● a(n) = a(n - 1) + a(n - 5) - a(n - 8) - a(n - 16) + + - - ... (with the convention a(n) = 0 for negative n), where 1, 5, 8, 16, ... is the sequence of generalized octagonal numbers A001082. (End) ●

▶ [A267530] 0,2,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14 ⋆ Number of OFF (white) cells in the n - th iteration of the "Rule 141" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n>4. ●

▶ [A050292] 0,1,1,2,3,4,4,5,5,6,6,7,8,9,9,10,11,12,12,13,14,15,15,16,16 ⋆ a(2n) = 2n - a(n), a(2n + 1) = 2n + 1 - a(n) (for n >= 0). ● a(1)=1, a(n) = n - a(floor(n / 2)); ● a(n) = Sum _{ k=>0 } (- 1) ^ k * floor(n / 2 ^ k), - _ Benoit Cloitre _ , Jun 03 2003 ● a(2 ^ n) = (2 ^ (n + 1) + (- 1) ^ n) / 3. - _ Vladimir Shevelev _ , Apr 15 2010 ●

▶ [A096336] 0,0,0,1,1,1,2,3,4,4,5,5,6,7,8,9,10,10,11,12,13,14,15,15,16 ⋆ Spin(2n + 1) and Spin(2n + 2) have torsion index 2 ^ a(n). ● a(n) is usually n - floor(log _ 2((n + 1)n / 2 + 1)), but is this number plus 1 if n = 2 ^ e + b for nonnegative integers e, b such that 2b - a(b) <= e - 3. ●

▶ [A110532] 0,0,1,1,2,3,4,4,5,5,7,7,8,8,9,10,11,11,12,12,14,14,15,15,16 ⋆ a(n) = floor(n / 2) + floor(n / 5). ● a(n) = 7n / 10 + O(1). - _ Charles R Greathouse IV _ , Jun 11 2015 ●

▶ [A316627] 2,3,4,4,5,6,6,7,8,8,8,9,10,10,11,12,12,12,13,14,14,15,16,16,16 ⋆ a(1)=2, a(2)=3; a(n) = a(n + 1 - a(n - 1)) + a(n - a(n - 2)) for n > 2. ● a(n + 1) - a(

n)=1 or 0. • a(n) / n - > C=1 / 2. •
▶ [A094500] 1,2,3,4,4,5,6,6,7,8,8,9,10,11,11,12,13,13,14,15,15,16,17,17,18 ⋆ Least number k such that (n + 1) ^ k / n ^ k >= 2. • a(n) = n * log(2) + O(1). - _ Charles R Greathouse IV _ , Sep 02 2015 •
▶ [A080820] 1,2,3,4,4,5,6,6,7,8,9,9,10,11,11,12,13,14,14,15,16,16,17,18,19 ⋆ Least m such that m ^ 2 >= n * (n + 1) / 2. • a(n) = ceiling(sqrt(n * (n + 1) / 2)) - C. Ronaldo (aga _ new _ ac(AT)hotmail.com), Dec 19 2004 •
▶ [A234604] 2,3,4,4,5,6,6,7,17,35,62,103,164,256,391,589,880,1303,1919,2814,4112,5993,8716,12655,18353 ⋆ Floor of the solutions to c = exp(1 + n / c) for n >= 0, using recursion. • a(n) = floor(c) for the solutions to c = exp(1 + n / c) at n = 0 to 7, and the floor of the stable upper values of c for n >= 8. •
▶ [A107079] 1,2,3,4,4,5,6,7,7,7,8,9,9,10,11,12,12,13,13,14,14,15,16,17,17 ⋆ Minimal number of squared primes in a squarefree gap of length n. • a(n) = sum { k =0..n - 1, moebius _ mu(n - k - 1) mod 2 } . •
▶ [A037915] 1,1,2,3,4,4,5,6,7,7,8,9,10,10,11,12,13,13,14,15,16,16,17,18,19 ⋆ a(n) = floor((3 * n + 4) / 4). • a(n) = 1 + floor(3 * n / 4). • a(n) = (1 / 8) * (6 * n + 5 + (- 1) ^ n - 2 * (- 1) ^ floor((n - 1) / 2)). - _ Ralf Stephan _ , Jun 10 2005 •
▶ [A367193] 0,1,2,3,4,4,5,6,7,7,8,9,10,11,11,12,13,14,14,15,16,17,17,18,19 ⋆ a(n) is the numerator of the fraction whose numerator + denominator = n that is closest to Pi. The fraction does not need to be in simplest form; the numerator and denominator must be integers. • a(n) = round((2 * n * Pi + n - sqrt(Pi ^ 2 + 2 * Pi + n ^ 2 + 1)) / (2 * Pi + 2)). - _ Jon E. Schoenfield _ , Nov 17 2023 •
▶ [A090223] 0,0,1,2,3,4,4,5,6,7,8,8,9,10,11,12,12,13,14,15,16,16,17,18,19 ⋆ Nonnegative integers with doubled multiples of 4. • a(n) = floor(4 * n / 5). •
▶ [A171974] 0,1,2,3,4,4,5,6,7,8,8,9,10,11,12,13,13,14,15,16,17,17,18,19,20 ⋆ Integer part of the height of a regular tetrahedron with edge length n. • a(n) = floor(n * sqrt(6) / 3). •
▶ [A280471] 2,3,4,4,5,6,7,8,9,9,10,11,12,13,13,14,15,16,17,17,18,19,20,21,21 ⋆ Solutions to the Gamow - Stern Elevator Problem, a(n) = ceiling((log _ 10 5) / (log _ 10 (1 + 2(n - 2)))) for integer n >= 3. • a(n) = ceiling((log _ 10 5) / (log _ 10 (1 + 2 / (n - 2)))) for integer n >= 3. •
▶ [A056847] 0,0,1,1,2,3,4,4,5,6,7,8,9,9,10,11,12,13,14,15,16,16,17,18,19 ⋆ Nearest integer to n - sqrt(n). • a(n) = n - k for k ^ 2 - k + 1 <= n <= k ^ 2 + k, k >= 1. •
▶ [A105598] 1,2,3,4,4,5,6,7,8,9,10,11,11,12,13,14,15,16,17,18,18,19,20,21,22 ⋆ Partial sums of central numbers for a Moebius - binomial triangle. • a(n)=sum { k=0..n, binomial(abs(mu(k)), abs(mu(floor(k / 2)))) } •
▶ [A309687] 0,0,0,1,1,1,1,2,3,4,4,5,6,7,8,10,11,12,13,15,17,19,20,22,24 ⋆ Number of odd parts appearing among the second largest parts of the partitions of n into 3 parts. • a(n) = Sum _{ j=1..floor(n / 3) } Sum _{ i=j..floor((n - j) / 2) } (i mod 2). • a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4) + a(n - 6) - 2 * a(n - 7) + 2 * a(n - 8) - 2 * a(n - 9) + a(n - 10) for n>9. •
▶ [A103750] 1,1,1,2,3,4,4,5,7,11,14,17,20,28,39,53,65,82,107,148,196,253,319,419,558 ⋆ Expansion of (1 + 2 * x ^ 3) / (1 - x + x ^ 3 - 2 * x ^ 4). • a(n) = a(n - 1) - a(n - 3) + 2 * a(n - 4). •
▶ [A193768] 2,3,4,4,6,7,7,8,10,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25 ⋆ The domination number of the 4 X n board. • a(n) = n, except for n = 1, 2, 3, 5, 6 or 9. For the exceptions a(n) = n + 1. • a(n) = 2 * a(n - 1) - a(n - 2) for n>11. - _ Colin Barker _ , Oct 05 2014 •
▶ [A248517] 0,0,0,1,1,2,3,4,4,6,7,8,9,10,11,14,14,15,17,18,19,22,23,24,25 ⋆ Number of odd divisors > 1 in the numbers 1 through n, counted with multiplicity. • a(n) = Sum _{ i=1..n - 1 } floor(floor(i / 2) / (n - i)). - _ Wesley Ivan Hurt _ , Jan 30 2016 •
▶ [A102676] 0,0,0,0,0,1,2,3,4,5,5,5,5,5,6,7,8,9,10,10,10,10,10,10 ⋆ Number of digits >= 5 in the decimal representations of all integers from 0 to n. • a(n) = (1 / 2) * Sum _{ j=1..m + 1 } (floor(n / 10 ^ j + 1 / 2) * (2n + 2 - floor(n / 10 ^ j + 1 / 2) * 10 ^ j - floor(n / 10 ^ j) * (2n + 2 - (1 + floor(n / 10 ^ j)) * 10 ^ j)), where m = floor(log _ 10(n)). • a(10 ^ m - 1) = 5 * m * 10 ^ (m - 1). •
▶ [A330881] 0,1,2,3,4,5,5,5,6,7,8,9,10,11,11,11,12,13,14,15,16,17,17,17,18 ⋆ Length of longest LB factorization over all binary strings of length n. • a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - 2 * a(n - 4) + 2 * a(n - 5) - 2 * a(n - 6) + 2 * a(n - 7) - a(n - 8) for n>7. •
▶ [A079411] 1,1,2,3,4,5,5,6,6,7,7,8,9,10,10,11,12,13,14,15,16,17,17,18,19 ⋆ a(1)=1, a(n) = n - a(a(ceiling(n / 2))). • a(n) is asymptotic to n * (sqrt(3) - 1); conjecture: (a(n) - n * (sqrt(3) - 1)) / log(n) is bounded. •
▶ [A072932] 1,2,3,4,5,5,6,7,8,9,10,11,12,13,14,15,15,16,17,18,19,20,21,22,23 ⋆ a(n) is the least k such that floor((1 + 1 / k) ^ n) = floor((1 + 1 / n) ^ k). • a(n) is asymptotic to C * n with C a rational constant = 91 / 100; also a(100k)=91k. •
▶ [A343127] 0,0,1,1,1,2,3,4,5,5,7,9,10,12,16,17,18,21,23,27,30,33,36,41,43 ⋆ Number of solutions to n = x + y + z in positive integers x,y,z such that (x + y) does not divide any of x * y, y * z, or x * z. • a(n) = Sum _{ j=1..floor(n / 3) } Sum _{ i=j..floor((n - j) / 2) } (ceiling(i * j / (i + j)) - floor(i * j / (i + j))) * (ceiling((i * (n - i - j)) / (n - j)) - floor(i * (n - i - j) / (n - j))) * (ceiling((j * (n - i - j)) / (n - i)) - floor(j * (n - i - j) / (n - i))). •
▶ [A175782] 1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,2,3,4,5,6 ⋆ Expansion of 1 / (1 - x - x ^ 20 - x ^ 39 + x ^ 40). • a(n) = a(n - 1) + a(n - 20) + a(n - 39) - a(n - 40). - _ Franck Maminirina Ramaharo _ , Oct 31 2018 •
▶ [A102674] 0,0,0,0,1,2,3,4,5,6,6,6,6,6,7,8,9,10,11,12,12,12,12,12,13 ⋆ Number of digits >= 4 in the decimal representations of all integers from 0 to n. • a(n) = (1 / 2) * Sum _{ j=1..m + 1 } (floor(n / 10 ^ j + 3 / 5) * (2n + 2 + (1 / 5 - floor(n / 10 ^ j + 3 / 5)) * 10 ^ j) - floor(n / 10 ^ j) * (2n + 2 - (1 + floor(n / 10 ^ j)) * 10 ^ j)), where m = floor(log _ 10(n)). • a(10 ^ m - 1) = 6 * m * 10 ^ (m - 1). •
▶ [A317442] 1,1,2,3,4,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,14,14,15,16 ⋆ a(1) = a(2) = 1; for n >= 3, a(n) = a(t(n)) + a(n - t(n)) where t = A000195. • a(n + 1) - a(n) = 0 or 1 for all n >= 1. •
▶ [A082287] 1,2,3,4,5,6,6,7,8,9,10,10,11,12,12,13,14,14,15,15,16,17,18,18,19 ⋆ a(1) = 1; for n > 1, n appears omega(n) times, where omega(n)=A001221(n) is the number of distinct prime factors of n, a(1)=1. • a(n) is the least k such that Sum _{ p<=k } floor(k / p) >= n where p runs through the primes. - _ Benoit Cloitre _ , Nov 08 2009 •
▶ [A145569] 0,1,2,3,4,5,6,6,7,8,9,10,11,12,12,13,14,15,16,17,18,18,19,20,21 ⋆ Multiples of 6 appear in pairs. • a(n) = number of positive numbers <= n relatively prime to 7, n >= 1. a(0)=1. • a(n) = (1 / 49) * Sum _{ k=0..n } (9 * (k mod 7) + 2 * ((k + 1) mod 7) + 2 * ((k + 2) mod 7) + 2 * ((k + 3) mod 7) + 2 * ((k + 4) mod 7) + 2 * ((k + 5) mod 7) - 5 * ((k + 6) mod 7)), with n >= 0. - _ Paolo P. Lava _ , Feb 11 2009 • a(n) = ceiling(6 * n / 7) = n - floor(n / 7). - _ Wesley Ivan Hurt _ , Sep 29 2017 •
▶ [A171970] 0,1,2,3,4,5,6,6,7,8,9,10,11,12,12,13,14,15,16,17,18,19,19,20,21 ⋆ Integer part of the height of an equilateral triangle with side length n. • a(n) = floor(n * sqrt(3) / 2). •
▶ [A343779] 0,1,2,3,4,5,6,6,8,8,9,11,12,12,14,14,15,16,18,18,19,20,21,22,23 ⋆ Nearest integer to log(Gamma(Im(zetazero(n)) / 2 / Pi)). • a(n) = floor(1 / 2 + log(Gamma(Im(zetazero(n)) / (2 * Pi)))). •
▶ [A102672] 0,0,0,1,2,3,4,5,6,7,7,7,7,8,9,10,11,12,13,14,14,14,14,15,16 ⋆ Number of digits >= 3 in the decimal representations of all integers from 0 to n. • a(n) = (1 / 2) * Sum _{ j=1..m + 1 } (floor(n / 10 ^ j + 7 / 10) * (2n + 2 + (2 / 5 - floor(n / 10 ^ j + 7 / 10)) * 10 ^ j) - floor(n / 10 ^ j) * (2n + 2 - (1 + floor(n / 10 ^ j)) * 10 ^ j)), where m = floor(log _ 10(n)). • a(10 ^ m - 1) = 7 * m * 10 ^ (m - 1). •
▶ [A095703] 1,2,3,4,5,6,7,7,8,9,10,10,11,12,12,13,13,14,15,15,16,17,17,18,18 ⋆ Integer part of the (positive) solution to x ^ x = 10 ^ n. • a(n) = n * log(10) / LambertW(n * log(10)) for n > 0, a(0) = 1. - _ Alois P. Heinz _ , Nov 07 2019 •
▶ [A209900] 1,1,2,3,4,5,6,7,7,8,9,10,11,12,13,13,14,15,16,17,18,19,20,20,21 ⋆ Floor of the expected number of occupied cells in a random placement of 2n balls into n cells. • a(n) = floor(n * (1 - (1 - 1 / n) ^ (2 * n))). •
▶ [A097043] 1,1,2,3,4,5,6,7,7,8,9,10,11,12,13,13,14,15,16,17,18,19,20,21,21 ⋆ a(n) = n - a(floor(sqrt(n))) for n > 1; a(1) = 1. • a(1)=1; a(n) = n - a(floor(sqrt(n))) for n > 1. • a(n)=n - sqrt(n) + O(n ^ (1 / 4)) - _ Benoit Cloitre _ , Jul 23 2009 •
▶ [A060431] 1,2,3,4,5,6,7,7,8,9,10,11,12,13,14,14,15,16,17,18,19,20,21,21,22 ⋆ Number of cubefree numbers <= n. • a(n)=Sum _{ d>=1 } mu(d) * floor(n / d ^ 3), mu(d) = Moebius function A008683. • a(n) is asymptotic to (1 / zeta(3)) * n, see A088453. - _ Benoit Cloitre _ , Jun 13 2007 •
▶ [A124808] 1,2,3,4,5,6,7,7,8,9,10,11,12,13,14,15,16,17,17,18,19,20,21,22,23 ⋆ Number of numbers k <= n such that k ^ 2 + 1 is squarefree. • a(n) = Sum _{ k =0..n } mu(k ^ 2 + 1) ^ 2, where mu(n) is the Mobius function (A008683). - _ Wesley Ivan Hurt _ , Jul 15 2015 •
▶ [A238401] 0,0,1,1,2,3,4,5,6,7,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21 ⋆ Floor(sum(i / (i + 1)),i=1..n). • a(n) = n - log n + O(1). - _ Charles R Greathouse IV _ , Feb 26 2014 •
▶ [A337978] 1,1,2,3,4,5,6,7,7,8,10,10,11,12,13,14,15,16,18,19,19,20,21,22,23 ⋆ a(n) = n + pi(n) - pi(n + pi(n)), where pi(n) is the prime count of n (n>=1). • a(n) = n + pi(n) - pi(n + pi(n)). •
▶ [A102670] 0,0,1,2,3,4,5,6,7,8,8,8,9,10,11,12,13,14,15,16,17,18,20,22,24 ⋆ Number of digits >= 2 in the decimal representations of all integers from 0 to n. • a(n) = (1 / 2) * Sum _{ j=1..m + 1 } (floor(n / 10 ^ j + 0.8) * (2n + 2 + ((3 / 5) - floor(n / 10 ^ j + 4 / 5)) * 10 ^ j) - floor(n / 10 ^ j) * (2n + 2 - (1 + floor(n / 10 ^ j)) * 10 ^ j)), where m = floor(log _ 10(n)). • a(10 ^ m - 1) = 8 * m * 10 ^ (m - 1). • a(n) = (1 / 2) * Sum _{ j=1..m + 1 } (floor(n / 10 ^ j + (10 - d) / 10) * (2n + 2 + ((5 - d) / 5 - floor(n / 10 ^ j + (10 - d) / 10)) * 10 ^ j) - floor(n / 10 ^ j) * (2n + 2 - (1 + floor(n / 10 ^ j)) * 10 ^ j)), where m = floor(log _ 10(n)). • a(n) = (n + 1) * F(n,d) + (1 / 2) * Sum _{ j=1..m + 1 } ((((5 - d) / 5) * floor(n / 10 ^ j + (10 - d) / 10) + floor(n / 10 ^ j)) * 10 ^ j - (floor(n / 10 ^ j + (10 - d) / 10) ^ 2 - floor(n / 10 ^ j) ^ 2) * 10 ^ j), where m = floor(log _ 10(n)) and F(n,d) = number of digits >= d in the decimal representation of n. • a(10 ^ m - 1) = (10 - d) * m * 10 ^ (m - 1). •
▶ [A081600] 0,1,2,3,4,5,6,7,8,9,9,10,11,12,13,14,15,16,17,18,18,19,20,21,22 ⋆ Let n = 10x + y where 0 <= y <= 9, x >= 0. Then a(n) = 9x + y. • a(n) = n - floor(n / 10). - _ Bruno Berselli _ , Jun 24 2014 •
▶ [A071604] 1,2,3,4,5,6,7,8,9,10,10,11,11,12,13,14,14,15,15,16,17,17,17,18,19 ⋆ a(n) is the number of 7 - smooth numbers <= n. • a(n) = Card { k | A002473 (k) <= n } . •
▶ [A337769] 1,2,3,4,5,6,7,8,9,10,10,11,12,12,13,14,15,15,16,17,18,18,19,20,20 ⋆ Smallest integer m such that the sum of the first m prime numbers is greater than n ^ 2. • a(n) = Min { m } , Sum _{ i=1..m } prime(i) > n ^ 2. •
▶ [A061069] 1,2,3,4,5,6,7,8,9,10,10,11,12,13,13,14,14,15,16,17,18,19,19,20,20 ⋆ Number of distinct values in the list of divisor - sums { sigma(j) : j=1...n } . • a(n)=Length[Union[Table[DivisorSigma[1, w], { w, 1, n }]]] •
▶ [A355221] 0,1,2,3,4,5,6,7,8,9,10,11,11,11,11,11,11,11,11,11,11,20,21,22,22,22 ⋆ The k - th leftmost digit of a(n) is the least of the k leftmost digits of n. • a(n) <= n with equality iff n belongs to A009996. • a(a(n)) = a(n). •
▶ [A269445] 0,0,0,0,0,0,0,0,0,0,0,0,1,2,3,4,5,6,7,8,9,10,11,12 ⋆ a(n) = Sum _{ k =0..n } floor(k / 13). • a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 13) - 2 * a(n - 14) + a(n - 15). •
▶ [A139179] 0,0,1,2,3,4,5,6,7,8,9,10,11,12,13,14,14,15,16,17,18,19,20,21,22 ⋆ Number of non - fourth - powers <= n. • a(n) = n - floor[n ^ (1 / 4)]. •
▶ [A159062] 2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,16,17,18,19,20,21,22,22,23,24 ⋆ Nearest integer to the variance of the number of tosses of a fair coin required to obtain at least n heads and n tails. • a(n) is the nearest integer to 2 * n * (1 + binomial(2 * n,n) / (2 ^ (2 * n))) - ((n * binomial(2 * n,n)) / (2 ^ (2 * n - 1))) ^ 2. •
▶ [A001477] 0,1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24 ⋆ The nonnegative integers. • a(n) = n. • a(0) = 0, a(n) = a(n - 1) + 1. • a(0)=0, a(1)=1, a(n) = 2 * a(n - 1) - a(n - 2). - _ Jaume Oliver Lafont _ , May 07 2008 • a(n + 1) = det(C(i + 1,j), 1 <= i, j <= n), where C(n,k) are binomial coefficients. - _ Mircea Merca _ , Apr 06 2013 • a(n - 1) = floor(n / e ^ (1 / n)) for

n > 0. - _ Richard R. Forberg _ , Jun 22 2013 ● a(n) = floor(cot(1 / (n + 1))) . - _ Clark Kimberling _ , Oct 08 2014 ●

▶ [A199969] 0,0,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24 ⋆ a(n) = the greatest non - divisor h of n (1 < h < n), or 0 if no such h exists. ● a(n) = n - 1 for n >= 3. ●

▶ [A277112] 0,1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24 ⋆ a(n) = floor(n * (1 + sqrt(5)) / Pi). ● a(n) = floor(n * (1 + sqrt(5)) / Pi). ●

▶ [A000027] 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25 ⋆ T he positive integers. Also called the natural numbers, the whole numbers or the counting numbers, but these terms are ambiguous. ● a(n) = 2 * a(n - 1) - a(n - 2); a(1)=1, a(2)=2. a(n) = 1 + a(n - 1). - _ Philippe Deléham _ , Nov 03 2008 ● a(n) = det(binomial(i + 1,j), 1 <= i,j <= n). - _ Mircea Merca _ , Apr 06 2 013 ● a(n) = Product _{ k=1..n - 1 } 2 * sin(Pi * k / n), n > 1. ● a(n) = Prod uct _{ k=1..n - 1 } (2 * sin(Pi * k / (2 * n))) ^ 2, n > 1. ● a(n) = Sum _{ j=0 ..k } (- 1) ^ (j - 1) * j * binomial(n,j) * binomial(n - 1 + k - j,k - j), k>=0. - _ Mircea Merca _ , Jan 25 2014 ● a(n) = Sum _{ k=1..n ^ 2 + 2 * n } 1 / (sqrt(k) + sqrt(k + 1)). - _ Pierre CAMI _ , Apr 25 2014 ●

▶ [A087156] 0,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25 ⋆ N onnegative numbers excluding 1. ● a(n) = n - 1 + [(n + 1) mod n], with n>=1. - _ Paolo P. Lava _ , Nov 06 2009 ● a(n) = n mod sigma _ k(n), where sigma _ k is the k divisor sigma function. -_ Enrique Pérez Herrero _ , Nov 11 2009 ● a(n + 1) = floor((n + sqrt(n ^ 2 + 8n)) / 2). - _ Philippe Deléham _ , Oct 0 3 2011 ● a(n) = n mod n ^ 2. - _ Andrew Secunda _ , Aug 21 2015 ●

▶ [A160546] 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25 ⋆ N ot divisible by 29. ● a(n) = a(n - 1) + a(n - 28) - a(n - 29) for n > 29. ●

▶ [A020725] 2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26 ⋆ I ntegers >= 2. a(n) = n + 1. ● a(n) = n + 1 for n>0. (End) ●

▶ [A246091] 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,26 ⋆ P aradigm shift sequence for (2,5) production scheme with replacement. ● a(n) = (qd + r) * d ^ (C - R) * (d + 1) ^ R, where r = (n - Cp) mod q, Q = floor((R - Cp) / q), R = Q mod (C + 1), and d = floor (Q / (C + 1)). ●

▶ [A246098] 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,27 ⋆ P aradigm shift sequence for (4,4) production scheme with replacement. ● a(n) = (qd + r) * d ^ (C - R) * (d + 1) ^ R, where r = (n - Cp) mod q, Q = floor((R - Cp) / q), R = Q mod (C + 1), and d = floor (Q / (C + 1)). ●

▶ [A132264] 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,48,50 ⋆ P roduct { 0<=k<=floor(log _ 12(n)), floor(n / 12 ^ k) } , n>=1. ● a(k * p ^ m)=k ^ (m + 1) * p ^ (m(m + 1) / 2), for 0<k<p. ● a(n)>c * b(n), where c=pr oduct { k>0, 1 - 1 / (2 * p ^ k) } =0.47735217025489380... (for p=12 see const ant A132265). ●

▶ [A081330] 2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,24,25,26,27 ⋆ N umbers that can be written as sum of two 3 - smooth numbers. ● a(n) >> exp(n ^ (1 / 4)). - _ Charles R Greathouse IV _ , Aug 22 2011 ●

▶ [A246087] 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,24,26,28 ⋆ P aradigm shift sequence for (1,5) production scheme with replacement. ● a(n) = (qd + r) * d ^ (C - R) * (d + 1) ^ R, where r = (n - Cp) mod q, Q = floor((R - Cp) / q), R = Q mod (C + 1), and d = floor (Q / (C + 1)). ● a(n) = 3 * a(n - 16) for all n >= 39. ●

▶ [A246094] 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,24,27,30 ⋆ P aradigm shift sequence for (3,4) production scheme with replacement. ● a(n) = (qd + r) * d ^ (C - R) * (d + 1) ^ R, where r = (n - Cp) mod q, Q = floor((R - Cp) / q), R = Q mod (C + 1), and d = floor (Q / (C + 1)). ●

▶ [A274399] 0,1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,23,24,25 ⋆ a(n) = floor(n * Pi / 3). ● a(n) = floor(n * Pi / floor(Pi)) = floor(n * Pi / 3). ●

▶ [A246101] 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,24,27,30,33 ⋆ P aradigm shift sequence for (5,3) production scheme with replacement. ● a(n) = (qd + r) * d ^ (C - R) * (d + 1) ^ R, where r = (n - Cp) mod q, Q = floor((R - Cp) / q), R = Q mod (C + 1), and d = floor (Q / (C + 1)). ●

▶ [A132263] 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,44,46,48,50 ⋆ P roduct { 0<=k<=floor(log _ 11(n)), floor(n / 11 ^ k) } , n>=1. ● a(k * 11 ^ m)=k ^ (m + 1) * 11 ^ (m(m + 1) / 2), for 0<k<11. ● a(n)>c * b(n), where c =0.47510412750760310539756444 72... (see constant A132265). ●

▶ [A246083] 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,22,24,26,28,30 ⋆ P aradigm shift sequence for (0,5) production scheme with replacement. ● a(n) = (qd + r) * d ^ (C - R) * (d + 1) ^ R, where r = (n - Cp) mod q, Q = floor((R - Cp) / q), R = Q mod (C + 1), and d = floor (Q / (C + 1)). ● a(n) = 3 * a(n - 15) for all n >= 25. ●

▶ [A246090] 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,22,24,27,30,33 ⋆ P aradigm shift sequence for (2,4) production scheme with replacement. ● a(n) = (qd + r) * d ^ (C - R) * (d + 1) ^ R, where r = (n - Cp) mod q, Q = floor((R - Cp) / q), R = Q mod (C + 1), and d = floor (Q / (C + 1)). ●

▶ [A110303] 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,21,22,23,24,25,26 ⋆ Al ternators. ● a(n + 19) = a(n) + 20. - _ David A. Corneth _ , Apr 13 2021 ●

▶ [A246097] 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,21,24,27,30,33,36 ⋆ P aradigm shift sequence for (4,3) production scheme with replacement. ● a(n) = (qd + r) * d ^ (C - R) * (d + 1) ^ R, where r = (n - Cp) mod q, Q = floor((R - Cp) / q), R = Q mod (C + 1), and d = floor (Q / (C + 1)). ●

▶ [A067080] 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,40,42,44,46,48,50 ⋆ If n = ab...def in decimal notation then the left digitorial function Ld(n) = ab...de f * ab...de * ab...d * ... * ab * a. ● a(n) = Product _{ k=1..length(n) } floor(n / 10 ^ (k - 1)). - _ Vladeta Jovovic _ , Jan 08 2002 ● a(n) = product { 0<=k <=floor(log _ 10(n)), floor(n / 10 ^ k) } , n>=1. ● a(n) = n * a(floor(n / 10)) ; ● a(n * 10 ^ m) = n ^ m * 10 ^ (m(m + 1) / 2) * a(n). ● a(k * 10 ^ m) = k ^ (m + 1) * 10 ^ (m(m + 1) / 2), for 0<k<10. ● a(n) > c * b(n), where c=0.472 362443816572... (see constant A132026). ●

▶ [A246079] 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,20,22,24,26,28,30,33 ⋆ P aradigm shift sequence for (- 1,5) production scheme with replacement. ● a(n) = (qd + r) * d ^ (C - R) * (d + 1) ^ R, where r = (n - Cp) mod q, Q = floor((R - Cp) / q), R = Q mod (C + 1), and d = floor (Q / (C + 1)). ● a(n) = 3 * a(n - 14) for all n >= 33. ●

▶ [A246086] 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,20,22,24,27,30,33,36 ⋆ P aradigm shift sequence for (1,4) production scheme with replacement. ● a(n) = (qd + r) * d ^ (C - R) * (d + 1) ^ R, where r = (n - Cp) mod q, Q = floor((R - Cp) / q), R = Q mod (C + 1), and d = floor (Q / (C + 1)). ● a(n) = 3 * a(n - 13) for all n >= 32. ●

▶ [A246093] 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,21,24,27,30,33,36,40 ⋆ P aradigm shift sequence for (3,3) production scheme with replacement. ● a(n) = (qd + r) * d ^ (C - R) * (d + 1) ^ R, where r = (n - Cp) mod q, Q = floor((R - Cp) / q), R = Q mod (C + 1), and d = floor (Q / (C + 1)). ●

▶ [A132033] 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,36,38,40,42,44,46,48,50 ⋆ P roduct { 0<=k<=floor(log _ 9(n)), floor(n / 9 ^ k) } , n>=1. ● a(k * 9 ^ m) =k ^ (m + 1) * 9 ^ (m(m + 1) / 2), for 0<k<9. ● a(n)>c * b(n), where c=0.4 689451783670236932832800... (see constant A132024). ●

▶ [A160543] 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,18,19,20,21,22,23,24,25,26 ⋆ N ot divisible by 17 ● a(n) = a(n - 1) + a(n - 16) - a(n - 17). G.f. x * (1 + x + x ^ 2 + x ^ 3 + x ^ 4 + x ^ 5 + x ^ 6 + x ^ 7 + x ^ 8 + x ^ 9 + x ^ 10 + x ^ 11 + x ^ 12 + x ^ 13 + x ^ 14 + x ^ 15 + x ^ 16) / ((1 + x) * (1 + x ^ 2) * (1 + x ^ 4) * (1 + x ^ 8) * (x - 1) ^ 2). - _ R. J. Mathar _ , Sep 30 2013 ●

▶ [A246076] 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,18,20,22,24,26,28,30,33,36 ⋆ P aradigm shift sequence for the (- 2,5) production scheme with replacement. ● a (n) = (qd + r) * d ^ (C - R) * (d + 1) ^ R, where r = (n - Cp) mod q, Q = floo r((R - Cp) / q), R = Q mod (C + 1), and d = floor (Q / (C + 1)). ● a(n) = 2 * a(n - 8) for all n >= 25. ●

▶ [A246082] 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,18,20,22,24,27,30,33,36,39 ⋆ P aradigm shift sequence for (0,4) production scheme with replacement. ● a(n) = (qd + r) * d ^ (C - R) * (d + 1) ^ R, where r = (n - Cp) mod q, Q = floor((R - Cp) / q), R = Q mod (C + 1), and d = floor (Q / (C + 1)). ● a(n) = 3 * a(n - 12) for all n >= 20. ●

▶ [A246089] 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,18,21,24,27,30,33,36,40,44 ⋆ P aradigm shift sequence for (2,3) production scheme with replacement. ● a(n) = (qd + r) * d ^ (C - R) * (d + 1) ^ R, where r = (n - Cp) mod q, Q = floor((R - Cp) / q), R = Q mod (C + 1), and d = floor (Q / (C + 1)). ●

▶ [A246100] 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,18,21,24,28,32,36,40,45,50 ⋆ P aradigm shift sequence for (5,2) production scheme with replacement. ● a(n) = (qd + r) * d ^ (C - R) * (d + 1) ^ R, where r = (n - Cp) mod q, Q = floor((R - Cp) / q), R = Q mod (C + 1), and d = floor (Q / (C + 1)). ●

▶ [A048340] 0,1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,17,34,51,68,85,102,119,136,153 ⋆ a(n) in base 16 is a repdigit. ● a(n) = 17 * a(n - 15) - 16 * a(n - 30) for n > 29. ● a(n) = (n - 15 * floor((n - 1) / 15)) * (16 ^ floor((n + 14) / 15) - 1) / 15. - _ Ilya Gutkovskiy _ , May 30 2016 ●

▶ [A246096] 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,18,21,24,28,32,36,40,45,50,55 ⋆ P aradigm shift sequence for (4,2) production scheme with replacement. ● a(n) = (qd + r) * d ^ (C - R) * (d + 1) ^ R, where r = (n - Cp) mod q, Q = floor((R - Cp) / q), R = Q mod (C + 1), and d = floor (Q / (C + 1)). ●

▶ [A132032] 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,32,34,36,38,40,42,44,46,72,75 ⋆ P roduct { 0<=k<=floor(log _ 8(n)), floor(n / 8 ^ k) } , n>=1. ● a(k * 8 ^ m) =k ^ (m + 1) * 8 ^ (m(m + 1) / 2), for 0<k<8. ● a(n)>c * b(n), where c = 0. 46456888368647639098... (see constant A132024). ●

▶ [A247160] 1,2,3,4,5,6,7,8,9,10,11,12,13,14,16,17,18,19,20,21,22,23,24,25,26 ⋆ D ynamic Betting Game D(n,4,3). ● a(n) = floor(n * 16 / 15). ● a(n) = a(n - 1) + a(n - 15) - a(n - 16). - _ Colin Barker _ , Sep 11 2014 ●

▶ [A321291] 1,2,3,4,5,6,7,8,9,10,11,12,13,14,16,17,18,19,20,21,22,23,24,26,27 ⋆ S mallest positive number for which the 4th power cannot be written as sum of 4t h powers of any subset of previous terms. ● a(n) = 2 * a(n - 12) for n > 25 (co njectured). ●

▶ [A246075] 1,2,3,4,5,6,7,8,9,10,11,12,13,14,16,18,20,22,24,26,28,32,36,40,44 ⋆ P aradigm shift sequence for a (- 3,5) production scheme with replacement. ● a(n) = (qd + r) * d ^ (C - R) * (d + 1) ^ R, where r = (n - Cp) mod q, Q = floor((R - Cp) / q), R = Q mod (C + 1), and d = floor (Q / (C + 1)). ● a(n) = 2 * a(n - 7) for all n >= 14. ●

▶ [A246078] 1,2,3,4,5,6,7,8,9,10,11,12,13,14,16,18,20,22,24,27,30,33,36,40,44 ⋆ P aradigm shift sequence for (- 1,4) production scheme with replacement. ● a(n) = (qd + r) * d ^ (C - R) * (d + 1) ^ R, where r = (n - Cp) mod q, Q = floor((R - Cp) / q), R = Q mod (C + 1), and d = floor (Q / (C + 1)). ● a(n) = 3 * a(n - 11) for all n >= 26. ●

▶ [A246085] 1,2,3,4,5,6,7,8,9,10,11,12,13,14,16,18,21,24,27,30,33,36,40,44,48 ⋆ P aradigm shift sequence for (1,3) production scheme with replacement. ● a(n) = (qd + r) * d ^ (C - R) * (d + 1) ^ R, where r = (n - Cp) mod q, Q = floor((R - Cp) / q), R = Q mod (C + 1), and d = floor (Q / (C + 1)). ● a(n) = 3 * a(n - 10) for all n >= 25. ●

▶ [A048339] 0,1,2,3,4,5,6,7,8,9,10,11,12,13,14,16,32,48,64,80,96,112,128,144,160 ⋆ a(n) in base 15 is a repdigit. ● a(n) = 16 * a(n - 14) - 15 * a(n - 28) for n > 27. ● a(n) = (n - 14 * floor((n - 1) / 14)) * (15 ^ floor((n + 13) / 14) - 1) / 14. - _ Ilya Gutkovskiy _ , May 30 2016 ●

▶ [A348960] 0,0,0,1,1,2,3,4,5,6,7,8,9,10,11,12,13,15,16,17,18,20,21,22,24 ⋆ a(n) = floor(log _ 10(Pi * n!)). ● a(n) = floor(log _ 10(Pi * n!). ● a(n) = floor(A0535 11 + log _ 10(n!)). ●

▶ [A246092] 1,2,3,4,5,6,7,8,9,10,11,12,13,15,18,21,24,28,32,36,40,45,50,55,63 ⋆ P aradigm shift sequence for (3,2) production scheme with replacement. ● a(n) = (qd + r) * d ^ (C - R) * (d + 1) ^ R, where r = (n - Cp) mod q, Q = floor((R - Cp) / q), R = Q mod (C + 1), and d = floor (Q / (C + 1)). ● a(n) = 4 * a(n - 11) for all n >= 36. ●

▶ [A048338] 0,1,2,3,4,5,6,7,8,9,10,11,12,13,15,30,45,60,75,90,105,120,135,150,165 ⋆ a(n) in base 14 is a repdigit. ● a(n) = 15 * a(n - 13) - 14 * a(n - 26) for n > 2 5. ● a(n) = (n - 13 * floor((n - 1) / 13)) * (14 ^ floor((n + 12) / 13) - 1) / 13. - _ Ilya Gutkovskiy _ , May 30 2016 ●

▶ [A132031] 1,2,3,4,5,6,7,8,9,10,11,12,13,28,30,32,34,36,38,40,63,66,69,72,75 ⋆ P roduct { 0<=k<=floor(log _ 7(n)), floor(n / 7 ^ k) } , n>=1. ● a(k * 7 ^ m) =k ^ (m + 1) * 7 ^ (m(m + 1) / 2), for 0<k<7. ● a(n)>c * b(n), where c=0.4 587667266997689850200... (see constant A132023). ●

► [A221912] 0,0,0,0,0,0,0,0,0,0,0,0,1,2,3,4,5,6,7,8,9,10,11,12,14 ⋆ Partial sums of floor(n / 12). ● a(0)=0, a(1)=0, a(2)=0, a(3)=0, a(4)=0, a(5)=0, a(6)=0, a(7)=0, a(8)=0, a(9)=0, a(10)=0, a(11)=0, a(12)=1, a(13)=2, a(n)=2 * a(n - 1) - a(n - 2) + a(n - 12) - 2 * a(n - 13) + a(n - 14). - _ Harvey P. Dale _ , Mar 23 2015 ●

► [A011760] 1,2,3,4,5,6,7,8,9,10,11,12,14,15,16,17,18,19,20,21,22,23,24,25,26 ⋆ Elevator buttons in U.S.A.: Positive integers except 13. ● a(n) = n + sign(floor(n / 13)). - _ Wesley Ivan Hurt _ , Jan 12 2013 ●

► [A113763] 1,2,3,4,5,6,7,8,9,10,11,12,14,15,16,17,18,19,20,21,22,23,24,25,27 ⋆ Non - multiples of 13, or numbers not divisible by 13. ● a(n) = n + floor((2n - 1) / 24) = n + quotient(2n - 1, 24) ●

► [A008730] 1,2,3,4,5,6,7,8,9,10,11,12,14,16,18,20,22,24,26,28,30,32,34,36,39 ⋆ Molien series 1 / ((1 - x) ^ 2 * (1 - x ^ 12)) for 3 - dimensional group [2,n] = * 22n. ● a(n) = Sum _{ j=0..n + 12 } floor(j / 12). ● a(n - 12) = (1 / 2) * floor(n / 12) * (2 * n - 10 - 12 * floor(n / 12)). (End) ●

► [A246074] 1,2,3,4,5,6,7,8,9,10,11,12,14,16,18,20,22,24,28,32,36,40,44,48,56 ⋆ Paradigm Shift Sequence for a (- 4,5) production scheme with replacement. ● a(n) = (qd + r) * d ^ (C - R) * (d + 1) ^ R, where r = (n - Cp) mod q, Q = floor((R - Cp) / q), R = Q mod (C + 1), and d = floor (Q / (C + 1)). ● a(n) = 2 * a(n - 6) for all n >= 12. ●

► [A246081] 1,2,3,4,5,6,7,8,9,10,11,12,14,16,18,21,24,27,30,33,36,42,48,54,63 ⋆ Paradigm shift sequence for (0,3) production scheme with replacement. ● a(n) = (qd + r) * d ^ (C - R) * (d + 1) ^ R, where r = (n - Cp) mod q, Q = floor((R - Cp) / q), R = Q mod (C + 1), and d = floor (Q / (C + 1)). ● a(n) = 3 * a(n - 9) for all n >= 15. ●

► [A048337] 0,1,2,3,4,5,6,7,8,9,10,11,12,14,28,42,56,70,84,98,112,126,140,154,168 ⋆ a(n) in base 13 is a repdigit. ● a(n) = 14 * a(n - 12) - 13 * a(n - 24) for n > 23. ● a(n) = (n - 12 * floor((n - 1) / 12)) * (13 ^ floor((n + 11) / 12) - 1) / 12. - _ Ilya Gutkovskiy _ , May 30 2016 ●

► [A246088] 1,2,3,4,5,6,7,8,9,10,11,12,15,18,21,24,28,32,36,40,45,54,63,72,84 ⋆ Paradigm shift sequence for (2,2) production scheme with replacement. ● a(n) = (qd + r) * d ^ (C - R) * (d + 1) ^ R, where r = (n - Cp) mod q, Q = floor((R - Cp) / q), R = Q mod (C + 1), and d = floor (Q / (C + 1)). ● a(n) = 4 * a(n - 10) for all n >= 32. ●

► [A193457] 1,2,3,4,5,6,7,8,9,10,11,12,16,20,25,30,36,42,49,56,64,72,81,100,125 ⋆ Paradigm shift sequence with procedure length p=5. ● a(n) = ●

► [A183224] 2,3,4,5,6,7,8,9,10,11,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27 ⋆ Complement of the 12 - gonal numbers. ● a(n)=n + Floor[1 / 2 + (n / 5 + 1 / 5) ^ (1 / 2)]. ●

► [A168186] 1,2,3,4,5,6,7,8,9,10,11,13,14,15,16,17,18,19,20,21,22,23,25,26,27 ⋆ Positive numbers that are not multiples of 12. ● a(n) = a(n - 1) + a(n - 11) - a(n - 12) for n > 12. ●

► [A059389] 2,3,4,5,6,7,8,9,10,11,13,14,15,16,18,21,22,23,24,26,29,34,35,36,37 ⋆ Sums of two nonzero Fibonacci numbers. ● a(1) = 2 and for n >= 2 a(n) = F _ (trinv(n - 2) + 2) + F _ (n - ((trinv(n - 2) * (trinv(n - 2) - 1)) / 2)) where F _ n is the n - th Fibonacci number, F _ 1 = 1 F _ 2 = 1 F _ 3 = 2 ... and the definition of trinv(n) is in A002262. - Noam Katz (noamkj(AT)hotmail.com), Feb 04 2001 ●

► [A008729] 1,2,3,4,5,6,7,8,9,10,11,13,15,17,19,21,23,25,27,29,31,33,36,39,42 ⋆ Molien series for 3 - dimensional group [2, n] = * 22n. ● a(n) = Sum _{ j=0..n + 11 } floor(j / 11). ● a(n - 11) = (1 / 2) * floor(n / 11) * (2 * n - 9 - 11 * floor(n / 11)). (End) ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 11) - 2 * a(n - 12) + a(n - 13) for n > 12. ●

► [A143290] 0,0,0,0,0,0,0,0,0,0,0,0,1,2,3,4,5,6,7,8,9,10,11,13,17 ⋆ Number of binary words of length n containing at least one subword 10 ^{ 10 } 1 and no subwords 10 ^{ i } 1 with i<10. ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 11) - a(n - 13) - a(n - 23). - _ Vincenzo Librandi _ , Jun 05 2013 ●

► [A048336] 0,1,2,3,4,5,6,7,8,9,10,11,13,26,39,52,65,78,91,104,117,130,143,157,314 ⋆ a(n) in base 12 is a repdigit. ● a(n) = 13 * a(n - 11) - 12 * a(n - 22) for n > 21. ● a(n) = (n - 11 * floor((n - 1) / 11)) * (12 ^ floor((n + 10) / 11) - 1) / 11. - _ Ilya Gutkovskiy _ , May 30 2016 ●

► [A114801] 1,2,3,4,5,6,7,8,9,10,11,20,22,30,33,40,44,50,55,60,66,70,77,80,88 ⋆ 2 - concatenation - free sequence starting (1,2). ● a(0) = 1, a(1) = 2, for n>2: a(n) = least k > a(n - 1) such that k is not an element of { Concatenate(a(i), a(j)) } for any distinct a(i) <= a(n - 1) and a(j) <= a(n - 1). ●

► [A064222] 0,1,2,3,4,5,6,7,8,9,10,11,21,22,32,33,43,44,54,55,65,66,76,77,87 ⋆ a(0) = 0; a(n) = DecimalDigitsSortedDecreasing(a(n - 1) + 1) for n > 0. ● a(n + 1) = (d + 0 ^ d) * 10 ^ floor(log _ 10(a(n) + 1)) + (1 - 0 ^ d) * floor(a(n) / 10), where d = (a(n) + 1) mod 10. - _ Reinhard Zumkeller _ , Oct 31 2007 ●

► [A132030] 1,2,3,4,5,6,7,8,9,10,11,24,26,28,30,32,34,54,57,60,63,66,69,96,100 ⋆ a(n) = Product _{ k=0..floor(log _ 6(n)) } floor(n / 6 ^ k), n>=1. ● a(k * 6 ^ m) = k ^ (m + 1) * 6 ^ (m(m + 1) / 2), for 0<k<6. ● a(n) > c * b(n), where c = 0.45071262522603913... (see constant A132022). ●

► [A288327] 1,1,2,3,4,5,6,7,8,9,10,11,24,39,56,75,96,119,144,171,200,231,528,897,1344 ⋆ Decuple factorial, 10 - factorial, n!10, n!!!!!!!!!!. ● a(n)=1 for n < 1, otherwise a(n) = n * a(n - 10). ●

► [A183223] 2,3,4,5,6,7,8,9,10,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27 ⋆ Complement of the 11 - gonal numbers. ● a(n)=n + Floor[1 / 2 + (2n / 9 + 2 / 9) ^ (1 / 2)]. ●

► [A160542] 1,2,3,4,5,6,7,8,9,10,12,13,14,15,16,17,18,19,20,21,23,24,25,26,27 ⋆ Not divisible by 11 ● a(n) = a(n - 10) + 11, n>10. - _ R. J. Mathar _ , May 20 2009 ●

► [A004775] 0,1,2,3,4,5,6,7,8,9,10,12,13,14,15,16,17,18,20,21,22,23,24,25,26 ⋆ Numbers k such that the binary expansion of k does not end in 011. ● a(n) = a(n - 1) + a(n - 7) - a(n - 8) for n>12; a(n) = a(n - 7) + 8 for n>11. ● a(n) = (56 * n - 105 + (n mod 7) + ((n + 1) mod 7) - 6 * ((n + 2) mod 7) + ((n + 3) mod 7) + ((n + 4) mod 7) + ((n + 5) mod 7) + ((n + 6) mod 7)) / 49 for n>4. (End) ● a(1) = 0, a(2) = 1, a(3) = 2, a(4) = 3, a(7 * n + k + 4) = 8 * n + k + 3, n >= 0, 1 <= k < 8. - _ Yosu Yurramendi _ , Aug 09 2016 ●

► [A154314] 0,1,2,3,4,5,6,7,8,9,10,12,13,14,16,17,18,20,22,23,24,25,26,27,28 ⋆ Numbers with not more than two distinct digits in ternary representation. ● a(n) >> n ^ 1.58..., where the exponent is log(3) / log(2). - _ Charles R Greathouse IV _ , Mar 17 2014 ●

► [A011875] 0,0,0,0,0,0,1,1,2,3,4,5,6,7,8,9,10,12,13,15,17,19,21,23,25 ⋆ Floor(n * (n - 1) / 22). ● a(n) = + 2 * a(n - 1) - a(n - 2) + a(n - 11) - 2 * a(n - 12) + a(n - 13). G.f.: x ^ 6 * (x ^ 2 - x + 1) / ((1 - x) ^ 3 * (1 + x ^ 10 + x ^ 9 + x ^ 8 + x ^ 7 + x ^ 6 + x ^ 5 + x ^ 4 + x ^ 3 + x ^ 2 + x)). [_ R. J. Mathar _ , Apr 15 2010] ●

► [A057890] 0,1,2,3,4,5,6,7,8,9,10,12,14,15,16,17,18,20,21,24,27,28,30,31,32 ⋆ In base 2, either a palindrome or becomes a palindrome if trailing 0's are omitted. ● a(7 * 2 ^ n - 4 * n - 4) = 4 ^ n + 1, a(10 * 2 ^ n - 4 * n - 6) = 2 * 4 ^ n + 1. - _ Gheorghe Coserea _ , Apr 05 2017 ●

► [A080672] 2,3,4,5,6,7,8,9,10,12,14,15,16,18,20,21,22,24,25,26,27,28,30,32,33 ⋆ Numbers having divisors 2 or 3 or 5 or 7. ● a(n) = 35n / 27 + O(1). ●

► [A131242] 0,0,0,0,0,0,0,0,0,0,1,2,3,4,5,6,7,8,9,10,12,14,16,18,20 ⋆ Partial sums of A059995: a(n) = sum _{ k=0..n } floor(k / 10). ● a(n) = (1 / 2) * floor(n / 10) * (2n - 8 - 10 * floor(n / 10)). ●

► [A102685] 0,1,2,3,4,5,6,7,8,9,10,12,14,16,18,20,22,24,26,28,29,31,33,35,37 ⋆ Partial sums of A055640. ● a(n) = (1 / 2) * Sum _{ j=1..m + 1 } (floor((n / 10 ^ j) + 0.9) * (2n + 2 + (0.8 - floor((n / 10 ^ j) + 0.9)) * 10 ^ j) - floor(n / 10 ^ j) * (2n + 2 - (floor(n / 10 ^ j) + 1) * 10 ^ j)), where m = floor(log _ 10(n)). ● a(10 ^ m - 1) = 9 * m * 10 ^ (m - 1). (This is the total number of nonzero digits occurring in all the numbers with <= m digits.) ●

► [A088235] 0,1,2,3,4,5,6,7,8,9,10,12,14,16,18,20,22,24,26,28,30,32,34,36,38 ⋆ Total number of digits (in base 10) in all preceding terms in the sequence. ● a(n + 1) = a(n) + floor(Log(10, a(n))) + 1, with a(0) = 0, a(1) = 1. ●

► [A064223] 1,2,3,4,5,6,7,8,9,10,12,14,16,18,20,22,24,26,28,30,32,34,36,38,40 ⋆ a(1) = 1; a(n + 1) = a(n) + number of decimal digits of a(n) for n > 0. ● a(1) = 1; a(n + 1) = a(n) + ceiling(log _ 10(a(n) + 1)) for n > 0. [corrected by _ Harry J. Smith _ , Sep 10 2009] ●

► [A008728] 1,2,3,4,5,6,7,8,9,10,12,14,16,18,20,22,24,26,28,30,33,36,39,42,45 ⋆ Molien series for 3 - dimensional group [2,n] = * 22n. ● a(n) = Sum _{ j=0..n + 10 } floor(j / 10). ● a(n - 10) = (1 / 2) * floor(n / 10) * (2 * n - 8 - 10 * floor(n / 10)). (End) ●

► [A083292] 0,1,2,3,4,5,6,7,8,9,10,12,14,16,18,20,22,24,26,28,40,43,46,49,52 ⋆ a(n) = n * floor(n / 10) + (n mod 10). ● a(n)= + a(n - 1) + 2 * a(n - 10) - 2 * a(n - 11) - a(n - 20) + a(n - 21). - _ R. J. Mathar _ , Feb 20 2011 ●

► [A060472] 1,2,3,4,5,6,7,8,9,10,12,14,16,18,20,23,25,27,29,31,36,38,40,42,44 ⋆ Smallest positive a(n) such that the number of solutions to a(n)=a(j) + a(k), j< k<n is four or less. ● a(n) = a(n - 1) + a(n - 18) - a(n - 19) for n > 40. ●

► [A246077] 1,2,3,4,5,6,7,8,9,10,12,14,16,18,21,24,28,32,36,42,48,56,64,72,84 ⋆ Paradigm shift sequence for (- 1, - 3) production scheme with replacement. ● a(n) = (qd + r) * d ^ (C - R) * (d + 1) ^ R, where r = (n - Cp) mod q, Q = floor((R - Cp) / q), R = Q mod (C + 1), and d = floor (Q / (C + 1)). ● a(n) = 2 * a(n - 5) for all n >= 16. ●

► [A175740] 1,1,1,1,1,1,1,1,1,1,2,3,4,5,6,7,8,9,10,12,14,17,21,26,32 ⋆ Expansion of 1 / (1 - x - x ^ 10 - x ^ 19 + x ^ 20). ● a(n) = a(n - 1) + a(n - 10) + a(n - 19) + a(n - 20). - _ Franck Maminirina Ramaharo _ , Oct 31 2018 ●

► [A246084] 1,2,3,4,5,6,7,8,9,10,12,15,18,21,24,28,32,36,45,54,63,72,84,96,112 ⋆ Paradigm shift sequence for (1,2) production scheme with replacement. ● a(n) = (qd + r) * d ^ (C - R) * (d + 1) ^ R, where r = (n - Cp) mod q, Q = floor((R - Cp) / q), R = Q mod (C + 1), and d = floor (Q / (C + 1)). ● a(n) = 3 * a(n - 7) for all n >= 26. ●

► [A193456] 1,2,3,4,5,6,7,8,9,10,12,16,20,25,30,36,42,49,56,64,80,100,125,150,180 ⋆ Paradigm shift sequence with procedure length p=4. ● a(n) = ●

► [A143289] 0,0,0,0,0,0,0,0,0,0,0,1,2,3,4,5,6,7,8,9,10,12,16,22,30 ⋆ Number of binary words of length n containing at least one subword 10 ^{ 9 } 1 and no subwords 10 ^{ i } 1 with i<9. ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 10) - a(n - 12) - a(n - 21). - _ Vincenzo Librandi _ , Jun 05 2013 ●

► [A064807] 1,2,3,4,5,6,7,8,9,10,12,18,19,20,21,24,27,28,30,36,37,38,39,40,42 ⋆ Numbers which are divisible by their digital root (A010888). ● a(n) = a(n - 1321) + 2520. - _ Charles R Greathouse IV _ , Dec 26 2013 ● a(n) = a(n - 1) + a(n - 1321) - a(n - 1322). - _ Charles R Greathouse IV _ , Apr 20 2023 ●

► [A033075] 1,2,3,4,5,6,7,8,9,10,12,21,23,32,34,43,45,54,56,65,67,76,78,87,89 ⋆ Positive numbers all of whose pairs of consecutive decimal digits differ by 1. ● a(n) >> n ^ 3.53267..., where the exponent is log 10 / log k and k is the largest root of x ^ 5 - x ^ 4 - 4x ^ 3 + 3x ^ 2 + 3x - 1. - _ Charles R Greathouse IV _ , Mar 11 2014 ●

► [A048335] 0,1,2,3,4,5,6,7,8,9,10,12,24,36,48,60,72,84,96,108,120,133,266,399,532 ⋆ a(n) in base 11 is a repdigit. ● a(n) = 12 * a(n - 10) - 11 * a(n - 20) for n > 19. ● a(n) = (n - 10 * floor((n - 1) / 10)) * (11 ^ floor((n + 9) / 10) - 1) / 10. - _ Ilya Gutkovskiy _ , May 30 2016 ●

► [A008817] 1,2,3,4,5,6,7,8,9,10,13,16,19,22,25,28,31,34,37,40,45,50,55,60,65 ⋆ Expansion of (1 + x ^ 10) / ((1 - x) ^ 2 * (1 - x ^ 10)). ● a(0)=1, a(1)=2, a(2)=3, a(3)=4, a(4)=5, a(5)=6, a(6)=7, a(7)=8, a(8)=9, a(9)=10, a(10)=13, a(11)=16, a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 10) - 2 * a(n - 11) + a(n - 12). - _ Harvey P. Dale _ , Jul 31 2014 ●

► [A081385] 1,2,3,4,5,6,7,8,9,10,16,17,18,19,20,26,27,28,29,30,36,37,38,39,40 ⋆ Incorrect version of A006254 (or A111333). ● a(n) = [p(n) / 2 + 1 / 2]. ●

► [A037124] 1,2,3,4,5,6,7,8,9,10,20,30,40,50,60,70,80,90,100,200,300,400,500,600,700 ⋆ Numbers that contain only one nonzero digit. ● a(n) = ((n mod 9) + 1) * 10 ^ floor(n / 9). E.g., a(39) = ((39 mod 9) + 1) * 10 ^ floor(39 / 9) = (3 + 1) * 10 ^ 4 = 40000. - _ Carl R. White _ , Jan 08 2004 ● a(n + 1) = a(n) + a(n - n mod 9). ● a(n) = (10 ^ floor((n - 1) / 9)) * (n - 9 * floor((n - 1) / 9)). - _ José de Jesús Camacho Medina _ , Nov 10 2014 ● a(n) = 10 * a(n - 9). ● a(n) 1.2589... ^ n, where the constant is A011279. (f g when f << g and g << f, that is, there are absolute constants c,C > 0 such that for all large n, |f(n)| <= c|g(n)| and |g(n)| <= C|f(n)|.) - _ Charles R Greathouse IV _ , Mar 11 2021 ●

► [A134817] 1,2,3,4,5,6,7,8,9,10,21,43,87,175,526,1579,6317,25269,126346,758077,4548463,31839242,254713937,2292425434,22924254341 ⋆ a(1)=1; a(n)=a(n - 1) * (number of decimal digits of a(n - 1)) + 1. ● a(n) = a(n - 1) * floor(log(a(n - 1)) + 1) + 1. ●

► [A132271] 1,2,3,4,5,6,7,8,9,10,22,24,26,28,30,32,34,36,38,40,63,66,69,72,75 ⋆ Product { k>=0, 1 + floor(n / 10 ^ k) } . ● a(k * p ^ m - j)=(k * p ^ m - j + 1) * k ^ m * p ^ (m(m - 1) / 2), for 0<k<p, 0<j<p, m>=1, a(p ^ m)=p ^ (m(m + 1) / 2) * product { 0<=k<=m, 1 + 1 / p ^ k } , m>=1. ●

► [A114806] 1,1,2,3,4,5,6,7,8,9,10,22,36,52,70,90,112,136,162,190,440,756,1144,1610,2160 ⋆ Nonuple factorial, 9 - factorial, n!9, n!!!!!!!!!. ● a(9 * m) = 9 ^ m * m!. ● a(9 * m + k) = 9 ^ m * (9 * m + k) * Gamma(m + k / 9) / Gamma(k / 9) for 1 <= k <= 8. (End) ●

► [A355222] 0,1,2,3,4,5,6,7,8,9,11,11,12,13,14,15,16,17,18,19,22,22,22,23,24 ⋆ The k - th leftmost digit of a(n) is the greatest of the k leftmost digits of n. ● a(n) >= n with equality iff n belongs to A009994. ● a(a(n)) = a(n). ●

► [A057717] 0,2,3,4,5,6,7,8,9,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26 ⋆ The non - powers of 10. ● a(n) = ceiling(log _ 10(a(n) + 1)) + n. ●

► [A183222] 2,3,4,5,6,7,8,9,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,28 ⋆ Complement of the 10 - gonal numbers. ● a(n) = n - 1 + ceiling(1 / 2 + ((n + 1) / 4) ^ (1 / 2)). ●

► [A065039] 0,1,2,3,4,5,6,7,8,9,11,12,13,14,15,16,17,18,19,20,22,23,24,25,26 ⋆ If n in base 10 is d _ 1 d _ 2 ... d _ k then a(n) = d _ 1 + d _ 1d _ 2 + d _ 1d _ 2d _ 3 + ... + d _ 1...d _ k. ● a(10 * n)=10 * n + a(n); a(n * 10 ^ m)=10 * n * (10 ^ m - 1) / 9 + a(n). ● a(k * 10 ^ m)=k * (10 ^ (m + 1) - 1) / 2, 0<=k<10, m>=0. ● a(n)=10 / 9 * n + O(log(n)), a(n + 1) - a(n)=O(log(n)); this follows from the inequalities below. ● a(n)<=(10 * n - 1) / 9; equality holds for powers of 10. ● a(n)>=(10 * n - 9) / 9 - floor(log _ 10(n)); equality holds for n=10 ^ m - 1, m>0. ● a(n) = sum(d _ (k) * RU(k + 1),k=0..nod(n) - 1), with the notation nod(n)and d _ k given in a comment above, and RU(k)is the repunit (10 ^ k - 1) / 9 (k times 1). - _ Wolfdieter Lang _ , May 04 2010 ●

► [A052382] 1,2,3,4,5,6,7,8,9,11,12,13,14,15,16,17,18,19,21,22,23,24,25,26,27 ⋆ Numbers without 0 as a digit, a.k.a. zeroless numbers. ● a(n + 1) = f(a(n)) with f(x) = 1 + if x mod 10 < 9 then x else 10 * f([x / 10]). - _ Reinhard Zumkeller _ , Nov 15 2009 ● a(n) = Sum _{ j=0..m - 1 } (1 + b(j) mod 9) * 10 ^ j, where m = floor(log _ 9(8 * n + 1)), b(j) = floor((8 * n + 1 - 9 ^ m) / (8 * 9 ^ j)). ● a(9 * n + k) = 10 * a(n) + k, k=1..9. ● a(k * (9 ^ n - 1) / 8) = k * (10 ^ n - 1) / 9, k=1..9. ● a((17 * 9 ^ n - 9) / 8) = 2 * 10 ^ n - 1. ● a((9 ^ n - 1) / 8 - 1) = 10 ^ (n - 1) - 1, n > 1. ●

► [A009994] 0,1,2,3,4,5,6,7,8,9,11,12,13,14,15,16,17,18,19,22,23,24,25,26,27 ⋆ Numbers with digits in nondecreasing order. ● a(n) >> exp(n ^ (1 / 10)). - _ Charles R Greathouse IV _ , Mar 15 2014 ●

► [A167619] 1,2,3,4,5,6,7,8,9,11,12,13,14,15,16,17,18,19,111,112,113,114,115,116,117 ⋆ Numbers n which have nonzero digital product equal to the last digits of n. ● a(n) < 10 ^ n, since 11...1 is always a member of this sequence; for n > 18, a(n) > n ^ 1.0479 because 0's are not allowed in the decimal expansion. ●

► [A074779] 1,2,3,4,5,6,7,8,9,11,12,13,15,16,17,18,19,20,21,22,23,24,25,26,27 ⋆ Numbers k such that 2 ^ k + 1 and F(k) are relatively prime, where F(k) denotes the k - th Fibonacci number. ● a(n) seems to be asymptotic to c * n with c = 1.207... ●

► [A058183] 1,2,3,4,5,6,7,8,9,11,13,15,17,19,21,23,25,27,29,31,33,35,37,39,41 ⋆ Number of digits in concatenation of first n positive integers. ● a(n) = (n + 1) * floor(log _ 10(10 * n)) - (10 ^ floor(log _ 10(10 * n)) - 1) / (10 - 1). ● a(n) = a(n - 1) + floor(log _ 10(10 * n)). ●

► [A008727] 1,2,3,4,5,6,7,8,9,11,13,15,17,19,21,23,25,27,30,33,36,39,42,45,48 ⋆ Molien series for 3 - dimensional group [2,n] = * 22n. ● a(n) = Sum _{ j=0..n + 9 } floor(j / 9). ● a(n - 9) = (1 / 2) * floor(n / 9) * (2 * n - 7 - 9 * floor(n / 9)). (End) ●

► [A357745] 1,2,3,4,5,6,7,8,9,11,13,15,17,19,21,23,25,28,31,34,37,40,43,46,49 ⋆ Numbers on the 8 main spokes of a square spiral with 1 in the center. ● a(n) = floor((n + 3) ^ 2 / 16) + (1 if n != 1 mod 8). - _ Kevin Ryde _ , Dec 30 2022 ●

► [A279080] 0,1,2,3,4,5,6,7,8,9,11,13,15,17,19,22,25,28,32,36,41,46,52,58,65 ⋆ Maximum starting value of X such that repeated replacement of X with X - ceiling (X / 10) requires n steps to reach 0. ● a(n) = floor(a(n - 1) * 10 / 9) + 1. ●

► [A175772] 1,1,1,1,1,1,1,1,1,2,3,4,5,6,7,8,9,11,13,16,20,25,31,38,46 ⋆ Expansion of 1 / (1 - x - x ^ 9 - x ^ 17 + x ^ 18). ● a(n) = a(n - 1) + a(n - 9) + a(n - 17) - a(n - 18). - _ Harvey P. Dale _ , Jul 13 2014 ●

► [A219955] 1,2,3,4,5,6,7,8,9,11,14,17,18,22,24,26,30,33,34,36,38,42,46,48,50 ⋆ Numbers that cannot be represented as 2 * p + 3 * q, where p and q are prime. ● a(n) < 1.5n + O(n / log n). - _ Charles R Greathouse IV _ , Dec 04 2012 ●

► [A367800] 1,1,1,1,1,1,1,1,2,3,4,5,6,7,8,9,11,14,18,23,29,36,44,53 ⋆ G.f. A(x) satisfies A(x) = 1 / (1 - x * A(x ^ 8)). ● a(0) = 1; a(n) = Sum _{ k=0..floor((n - 1) / 8) } a(k) * a(n - 1 - 8 * k). ●

► [A061379] 1,2,3,4,5,6,7,8,9,11,14,22,25,30,33,36,41,44,47,52,55,58,63,66,69 ⋆ Difference between n and its reversal is a perfect cube. ● a(n) = k if mod (k ~ R(k)) = r ^ 3.where R(k) is the digit reversal of k (A004086). ●

► [A143288] 0,0,0,0,0,0,0,0,0,0,1,2,3,4,5,6,7,8,9,11,15,21,29,39,51 ⋆ Number of binary words of length n containing at least one subword 10 ^{ 8 } 1 and no subwords 10 ^{ i } 1 with i<8. ● a(n) = 2a(n - 1) - a(n - 2) + a(n - 9) - a(n - 11) - a(n - 19). - _ Charles R Greathouse IV _ , Jun 04 2013 ●

► [A076643] 1,2,3,4,5,6,7,8,9,11,21,31,41,51,61,71,81,91,92,93,94,95,96,97,98 ⋆ Positive integers read backwards, but omit a number if it is <= an earlier number. ● a((9 * m ^ 2 + 7 * m + 2) / 2) = 10 ^ m - 1, m > 0. - _ David A. Cornetch _ , Nov 25 2018 ●

► [A227858] 1,2,3,4,5,6,7,8,9,11,22,33,44,55,66,77,88,99,101,111,121,131,141,151,161 ⋆ Numbers which start and end with the same digit in decimal. ● a(n) = 10 n + O(1). - _ Charles R Greathouse IV _ , Nov 01 2013 ●

► [A010785] 0,1,2,3,4,5,6,7,8,9,11,22,33,44,55,66,77,88,99,111,222,333,444,555,666 ⋆ Repdigit numbers, or numbers with repeated digits. ● a(0)=0, a(1)=1, a(2)=2, a(3)=3, a(4)=4, a(5)=5, a(6)=6, a(7)=7, a(8)=8, a(9)=9, a(10)=11, a(11)=22, a(12)=33, a(13)=44, a(14)=55, a(15)=66, a(16)=77, a(17)=88, a(n) = 11 * a(n - 9) - 10 * a(n - 18). - _ Harvey P. Dale _ , Dec 28 2011 ● a(n) = (n - 9 * floor((n - 1) / 9)) * (10 ^ floor((n + 8) / 9) - 1) / 9. - _ José de Jesús Camacho Medina _ , Nov 06 2014 ●

► [A083115] 1,2,3,4,5,6,7,8,9,11,22,33,111,121,131,141,151,161,171,191,212,222,313,1111,1221 ⋆ Palindromes in A083114. ● a(n) >> 3 ^ n. - _ Charles R Greathouse IV _ , May 15 2013 ●

► [A193455] 1,2,3,4,5,6,7,8,9,12,16,20,25,30,36,42,49,64,80,100,125,150,180,216,256 ⋆ Paradigm shift sequence with procedure length p=3. ● a(n) = ● a(25) = 256 [C = 4 below] ● a(1:24) = m ^ (C - R) * (m + 1) ^ R ●

► [A190876] 1,2,3,4,5,6,7,8,9,19,29,39,49,59,69,79,89,99,109,119,129,139,149,159,169 ⋆ Numbers 1 through 8 together with numbers congruent to 9 mod 10. ● a(n) = 2 * a(n - 1) - a(n - 2). - _ Vincenzo Librandi _ , Jul 12 2012 ●

► [A051885] 0,1,2,3,4,5,6,7,8,9,19,29,39,49,59,69,79,89,99,199,299,399,499,599,699 ⋆ Smallest number whose sum of digits is n. ● a(n) = ((n mod 9) + 1) * 10 ^ floor(n / 9) - 1 = a(n - 1) + 10 ^ floor((n - 1) / 9). - _ Henry Bottomley _ , Apr 24 2001 ●

► [A102491] 0,1,2,3,4,5,6,7,8,9,20,21,22,23,24,25,26,27,28,29,40,41,42,43,44 ⋆ Numbers whose base - 20 representation can be written with decimal digits. ● a(n + 1) = n + 1 / 2 * Sum _{ k >= 1 } 20 ^ k * floor(n / 10 ^ k). Cf. A037454, A037462 and A007091. ● a(1) = 0; a(n + 1) = 20 * a(n / 10 + 1) if n == 0 (mod 10) else a(n + 1) = a(n) + 1. (End) ●

► [A052383] 0,2,3,4,5,6,7,8,9,20,22,23,24,25,26,27,28,29,30,32,33,34,35,36,37 ⋆ Numbers without 1 as a digit. ● a(1) = 1, a(n + 1) = f(a(n) + 1, a(n) + 1) where f(x, y) = if x < 10 and x <> 1 then y else if x mod 10 = 1 then f(y + 1, y + 1) else f(floor(x / 10), y). - _ Reinhard Zumkeller _ , Mar 02 2008 ● a(n) is the replacement of all nonzero digits d by d + 1 in the base - 9 representation of n - 1. - _ Reinhard Zumkeller _ , Oct 07 2014 ●

► [A132029] 1,2,3,4,5,6,7,8,9,20,22,24,26,28,45,48,51,54,57,80,84,88,92,96,125 ⋆ Product { 0<=k<=floor(log _ 5(n)), floor(n / 5 ^ k) } , n>=1. ● a(k * 5 ^ m)=k ^ (m + 1) * 5 ^ (m(m + 1) / 2), for 0<k<5. ● a(n)>c * b(n), where c=0.387968372036385 31... (see constant A132021). ●

► [A276822] 1,2,3,4,5,6,7,8,9,20,30,31,40,41,42,50,51,52,53,60,61,62,63,64,70 ⋆ Complement of A063662. ● a(n + 74) = 11 a(n + 37) - 10 a(n) for n >= 10. - _ Robert Israel _ , Mar 30 2017 ●

► [A114800] 1,1,2,3,4,5,6,7,8,9,20,33,48,65,84,105,128,153,360,627,960,1365,1848,2415,3072 ⋆ Octuple factorial, 8 - factorial, n!8, n!!!!!!!!. ● a(n) = 1 for n<1, else a(n) = n * a(n - 8). ●

► [A174141] 0,1,2,3,4,5,6,7,8,9,25,26,27,28,29,30,31,32,33,34,50,51,52,53,54 ⋆ Numbers congruent to k mod 25, where 0 <= k <= 9. ● a(n + 10) = a(n) + 25 for n >= 1. ● a(n)= + a(n - 1) + a(n - 10) - a(n - 11). G.f. x ^ 2 * (1 + x + x ^ 2 + x ^ 3 + x ^ 4 + x ^ 5 + x ^ 6 + x ^ 7 + x ^ 8 + 16 * x ^ 9) / ((1 + x) * (1 + x + x ^ 2 + x ^ 3 + x ^ 4) * (x ^ 4 - x ^ 3 + x ^ 2 - x + 1) * (x - 1) ^ 2). - R. J. Mathar, Oct 08 2011 ●

► [A069510] 1,2,3,4,5,6,7,8,9,55,111,1111,11111,111111,1111111,11111111,111111111,1111111111,11111111111,111111111111,1111111111111,11111111111111,111111111111111,1111111111111111 ⋆ a(1) = 1; a(n) = smallest palindrome of the form k * a(n - 1) + 1. ● a(n) = { 10 ^ (n - 8) - 1 }/ 9 for n >10. ● a(n) = 11 * a(n - 1) - 10 * a(n - 2) for n > 12. ●

► [A038178] 0,1,2,3,4,5,6,7,8,9,81,512,2401 ⋆ n = (sum of digits of n) ^ (number of digits of n). ● a(n) = (1 / 10) * (n - (n mod 10)) * (729 * n ^ 2 - 14879 * n + 75971) + (n mod 10). - _ Rolf Pleisch _ , Feb 06 2008 ●

► [A135480] 0,1,2,3,4,5,6,7,8,9,81,512,2401,5748,10553,16816,24537,33716,44353,56448,139982,170003,202940,238793,277562 ⋆ Generator for the finite sequence A038178. ● a(n) = 1 / 10 * (n - (n mod 10)) * (729 * n ^ 2 - 14879 * n + 75971) + (n mod 10). ●

► [A280658] 0,1,2,3,4,5,6,7,8,9,91,92,93,94,95,96,97,98,99,181,182,183,184,185,186 ⋆ Numbers ending with their digital root in decimal representation. ● a(n) = 10 * n - 19 - 9 * ((n - 2) mod 9) for n > 1. ●

► [A051022] 0,1,2,3,4,5,6,7,8,9,100,101,102,103,104,105,106,107,108,109,200,201,202,203,204 ⋆ Interpolate 0's between each pair of digits of n. ● a(n) = n if n < 10, otherwise a(floor(n / 10)) * 100 + n mod 10. - _ Reinhard Zumkeller _ , Apr 20 2011 [Corrected by _ Kevin Ryde _ , Nov 07 2020] ●

► [A240237] 0,1,2,3,4,5,6,7,8,9,101,110,121,132,143,154,165,176,187,198,202,211,220,231,242 ⋆ Concatenated digits of pyramidalized numbers: Write the decimal digits of n (a nonnegative integer) and take successive absolute differences ("pyramidalization"), then concatenate, from left to right, all the digits in each level of the pyramid, and finally concatenate those results for all levels, from the base up. The result is a(n). ● a(n) = n for 0 <= n <= 9; ● a(n) = 10 * n + |floor(n / 10) - (n mod 10)| for 10 <= n <= 99. ●

► [A367342] 2,3,4,5,6,7,8,9,102,103,104,105,106,107,108,109,1102,1103,1104,1105,1106,1107,1108,1109,11102 ⋆ a(n) = n + 1 for n = 1 to 8; a(n) = 100 + a(n - 8) for n = 9 to 16; thereafter a(8 * i + j) = 10 ^ (i + 1) + a(8 * (i - 1) + j) for i >= 2, 1 <= j <= 8. ● a(n) = ((10 ^ i - 1) / 9) * 100 + j, where i = floor((n - 1) / 8) and j = (n - 1) mod 8 + 2. ●

► [A328279] 1,2,3,4,5,6,7,8,9,182,273,364,455,1728,2637,3546,4455,17182,26273,35364,44455,171728,262637,353546,444455 ⋆ Smallest elements of the cycles of (iterations of) A329623: n - > |concat(sum of adjacent digits of n) - n|. ● a(n) = a(n - 1) + 9 * a(n - 4) - 9 * a(n - 5) + 10 * a(n - 8) - 10 * a(n - 9) for n>17. ●

► [A183221] 2,3,4,5,6,7,8,10,11,12,13,14,15,16,17,18,19,20,21,22,23,25,26,27,28 ⋆ Complement of the 9 - gonal numbers. ● a(n)=n + Floor[1 / 2 + (2n / 7) ^ (1 / 2)]. ●

► [A007095] 0,1,2,3,4,5,6,7,8,10,11,12,13,14,15,16,17,18,20,21,22,23,24,25,26 ⋆ Numbers in base 9. ● a(0) = 0, a(n) = 10 * a(n / 9) if n==0 (mod 9), a(n) = a(n - 1) + 1 otherwise. - _ Benoit Cloitre _ , Dec 22 2002 ●

► [A168183] 1,2,3,4,5,6,7,8,10,11,12,13,14,15,16,17,19,20,21,22,23,24,25,26,28 ⋆ Numbers that are not multiples of 9. ● a(n) = a(n - 1) + a(n - 8) - a(n - 9), n>9. ● a(n) = n + floor((n - 1) / 8). (End) ●

► [A004774] 0,1,2,3,4,5,6,7,8,10,11,12,13,14,15,16,18,19,20,21,22,23,24,26,27 ⋆ Numbers n whose binary expansion does not end in 001. ● a(n) = a(n - 1) + a(n

- 7) - a(n - 8) for n>8. • a(1) = 0, a(2) = 1, a(7 * n + k + 2) = 8 * n + k + 1, n >= 0, 1 <= k < 8. - _ Yosu Yurramendi _ , Aug 09 2016 •

▶ [A047594] 0,2,3,4,5,6,7,8,10,11,12,13,14,15,16,18,19,20,21,22,23,24,26,27,28 ⋆ Numbers that are congruent to { 0, 2, 3, 4, 5, 6, 7 } mod 8. • a(n) = a(n - 7) + 8 for n>7. (End) • a(n) = n + floor((n - 2) / 7). - _ Wesley Ivan Hurt _ , Sep 11 2015 • a(n) = a(n - 1) + a(n - 7) - a(n - 8) for n>8. • a(n) = (56 * n - 35 + (n mod 7) + ((n + 1) mod 7) + ((n + 2) mod 7) + ((n + 3) mod 7) + ((n + 4) mod 7) - 6 * ((n + 5) mod 7) + ((n + 6) mod 7)) / 49. • a(7k) = 8k - 1, a(7k - 1) = 8k - 2, a(7k - 2) = 8k - 3, a(7k - 3) = 8k - 4, a(7k - 4) = 8k - 5, a(7k - 5) = 8k - 6, a(7k - 6) = 8k - 8. (End) •

▶ [A106092] 2,3,4,5,6,7,8,10,11,12,13,14,16,17,18,19,20,22,23,24,26,28,29,30,31 ⋆ Even numbers and primes. • a((prime(k) - 3) / 2 + k] = prime(k) for k >= 2. (End) •

▶ [A121208] 1,2,3,4,5,6,7,8,10,11,12,13,14,16,17,18,20,21,22,24,26,28,30,31,32 ⋆ Cyclotomic polynomials evaluated at prime number abscissae. • a(n) = Phi _ j(p), p in A000040, j=1,2,3,4... •

▶ [A011871] 0,0,0,0,0,1,1,2,3,4,5,6,7,8,10,11,13,15,17,19,21,23,25,28,30 ⋆ [n(n - 1) / 18]. • a(n) = + 2 * a(n - 1) - a(n - 2) + a(n - 9) - 2 * a(n - 10) + a(n - 11). G.f.: x ^ 5 * (x ^ 2 - x + 1) / ((1 - x) ^ 3 * (1 + x + x ^ 2) * (x ^ 6 + x ^ 3 + 1)). - _ R. J. Mathar _ , Apr 15 2010 • a(n) = floor((1 / 3) * sum _{ i=1..n } floor(i / 3)). - _ Wesley Ivan Hurt _ , Jun 06 2014 •

▶ [A115845] 0,1,2,3,4,5,6,7,8,10,12,14,16,17,20,21,24,28,32,33,34,35,40,42,48 ⋆ Numbers n such that there is no bit position where the binary expansions of n and 8n are both 1. • a(n) / n ^ k is bounded (but does not tend to a limit), where k = 1.44... = A104287. - _ Charles R Greathouse IV _ , Sep 23 2012 •

▶ [A118729] 0,0,0,0,0,0,0,0,1,2,3,4,5,6,7,8,10,12,14,16,18,20,22,24,27 ⋆ Infinite square array which contains the 8 numbers 4 * r ^ 2 - 3 * r, 4 * r ^ 2 - 2 * r, ..., 4 * r ^ 2 + 4 * r in row r. • a(n) = floor(n / 8) * (n - 3 - 4 * floor(n / 8)). - _ Ridouane Oudra _ , Jun 04 2019 •

▶ [A008726] 1,2,3,4,5,6,7,8,10,12,14,16,18,20,22,24,27,30,33,36,39,42,45,48,52 ⋆ Molien series 1 / ((1 - x) ^ 2 * (1 - x ^ 8)) for 3 - dimensional group [2,n] = * 22n. • a(n) = Sum _{ j=0..n + 8 } floor(j / 8). • a(n - 8) = (1 / 2) * floor(n / 8) * (2 * n - 6 - 8 * floor(n / 8)). (End) • a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 8) - 2 * a(n - 9) + a(n - 10). - _ R. J. Mathar _ , Apr 20 2010 •

▶ [A060471] 1,2,3,4,5,6,7,8,10,12,14,16,19,21,23,25,30,32,34,36,41,43,45,47,52 ⋆ Smallest positive a(n) such that number of solutions to a(n)=a(j) + a(k) j<k<n is three or less. • a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n > 17. •

▶ [A279079] 0,1,2,3,4,5,6,7,8,10,12,14,16,19,22,25,29,33,38,43,49,56,64,73,83 ⋆ Maximum starting value of X such that repeated replacement of X with X - ceiling(X / 9) requires n steps to reach 0. • a(n) = floor(a(n - 1) * 9 / 8) + 1. •

▶ [A029750] 1,2,3,4,5,6,7,8,10,12,14,16,20,24,28,32,40,48,56,64,80,96,112,128,160 ⋆ List of numbers of the form 2 ^ k times 1, 3, 5 or 7. • a(n) = 2a(n - 4) for n > 7. - _ Charles R Greathouse IV _ , Feb 18 2013 •

▶ [A246080] 1,2,3,4,5,6,7,8,10,12,15,18,21,24,30,36,45,54,63,72,90,108,135,162,189 ⋆ Paradigm shift sequence for (0,2) production scheme with replacement. • a(n) = (qd + r) * d ^ (C - R) * (d + 1) ^ R, where r = (n - Cp) mod q, Q = floor((R - Cp) / q), R = Q mod (C + 1), and d = floor (Q / (C + 1)). • a(n) = 3 * a(n - 6) for all n >= 10. •

▶ [A173925] 1,1,1,1,1,1,1,1,2,3,4,5,6,7,8,10,12,15,19,24,30,37,45,56,69 ⋆ Expansion of 1 / (1 - x - x ^ 8 - x ^ 15 + x ^ 16). • a(n) = a(n - 1) + a(n - 8) + a(n - 15) - a(n - 16). - _ Harvey P. Dale _ , Apr 02 2012 •

▶ [A143287] 0,0,0,0,0,0,0,0,0,1,2,3,4,5,6,7,8,10,14,20,28,38,50,64,80 ⋆ Number of binary words of length n containing at least one subword 10 ^{ 7 } 1 and no subwords 10 ^{ i } 1 with i<7. • a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 8) - a(n - 10) - a(n - 17). - _ Vincenzo Librandi _ , Jun 05 2013 •

▶ [A048334] 0,1,2,3,4,5,6,7,8,10,20,30,40,50,60,70,80,91,182,273,364,455,546,637,728 ⋆ Numbers that are repdigits in base 9. • a(n) = 10 * a(n - 8) - 9 * a(n - 16) . - _ R. J. Mathar _ , Mar 14 2015 •

▶ [A093515] 2,3,4,5,6,7,8,11,12,13,14,17,18,19,20,23,24,29,30,31,32,37,38,41,42 ⋆ Numbers k such that either k or k - 1 is a prime. • a(1) = 2, a(n) = a(n - 1) + 1 if a(n - 1) is prime, a(n) is the next prime after a(n - 1) otherwise. - _ Luca Armstrong _ , Aug 10 2021 •

▶ [A008815] 1,2,3,4,5,6,7,8,11,14,17,20,23,26,29,32,37,42,47,52,57,62,67,72,79 ⋆ Expansion of (1 + x ^ 8) / ((1 - x) ^ 2 * (1 - x ^ 8)). • a(n) = floor((n * (n + 2) + 14 + 4 * ((n mod 4) - 1) * (- 1) ^ floor(n / 4)) / 8). - _ Tani Akinari _ , Jul 25 2013 • a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 8) - 2 * a(n - 9) + a(n - 10). - _ Vincenzo Librandi _ , May 14 2019 •

▶ [A114799] 1,1,2,3,4,5,6,7,8,18,30,44,60,78,98,120,288,510,792,1140,1560,2058,2640,6624,12240 ⋆ Septuple factorial, 7 - factorial, n!7, n!!!!!!!, a(n) = n * a(n - 7) if n > 1, else 1. • a(n) = 1 for n <= 1, else a(n) = n * a(n - 7). •

▶ [A183220] 2,3,4,5,6,7,9,10,11,12,13,14,15,16,17,18,19,20,22,23,24,25,26,27,28 ⋆ Complement of the octagonal numbers. • a(n)=n + Floor[1 / 2 + (n / 3) ^ (1 / 2)] •

▶ [A052421] 0,1,2,3,4,5,6,7,9,10,11,12,13,14,15,16,17,19,20,21,22,23,24,25,26 ⋆ Numbers without 8 as a digit. • a(n) = replace digits d > 7 by d + 1 in base - 9 representation of n - 1. - _ Reinhard Zumkeller _ , Oct 07 2014 •

▶ [A248375] 0,1,2,3,4,5,6,7,9,10,11,12,13,14,15,16,18,19,20,21,22,23,24,25,27 ⋆ a(n) = floor(9 * n / 8). • a(n) = n + floor(n / 8) = a(n - 1) + a(n - 8) - a(n - 9). [_ Bruno Berselli _ , Oct 06 2014] •

▶ [A182768] 1,2,3,4,5,6,7,9,10,11,12,13,14,15,17,18,19,20,21,22,23,24,26,27,28 ⋆ Beatty sequence for 1 + e ^ (- 2). • a(n)=floor(n * (1 + e ^ (- 2))). •

▶ [A187320] 0,1,2,3,4,5,6,7,9,10,11,12,13,14,15,17,18,19,20,21,22,23,25,26,27 ⋆ a(n) = floor((Pi - 2) * n); complement of A186544. • a(n) = floor((Pi - 2) * n). •

▶ [A047592] 1,2,3,4,5,6,7,9,10,11,12,13,14,15,17,18,19,20,21,22,23,25,26,27,28 ⋆ Numbers that are congruent to { 1, 2, 3, 4, 5, 6, 7 } mod 8. • a(n) = n - 1 + floor((n + 6) / 7). - _ Benoit Cloitre _ , Jul 11 2009 • a(n) = a(n - 1) + a(n - 7) - a(n - 8) for n>8. • a(n) = (56 * n - 28 + (n mod 7) + ((n + 1) mod 7) + ((n + 2) mod 7) + ((n + 3) mod 7) + ((n + 4) mod 7) + ((n + 5) mod 7) - 6 * ((n + 6) mod 7)) / 49. • a(7k) = 8k - 1, a(7k - 1) = 8k - 2, a(7k - 2) = 8k - 3, a(7k - 3) = 8k - 4, a(7k - 4) = 8k - 5, a(7k - 5) = 8k - 6, a(7k - 6) = 8k - 7. (End) •

▶ [A047306] 0,2,3,4,5,6,7,9,10,11,12,13,14,16,17,18,19,20,21,23,24,25,26,27,28 ⋆ Numbers that are congruent to { 0, 2, 3, 4, 5, 6 } mod 7. • a(n) = a(n - 1) + a(n - 6) - a(n - 7) for n>7. • a(n) = n + floor((n - 2) / 6). (End) • a(n) = (42 * n - 27 + 3 * cos(n * Pi) - 12 * cos(n * Pi / 3) - 4 * sqrt(3) * sin(2 * n * Pi / 3)) / 3 6. • a(6k) = 7k - 1, a(6k - 1) = 7k - 2, a(6k - 2) = 7k - 3, a(6k - 3) = 7k - 4, a(6 k - 4) = 7k - 5, a(6k - 5) = 7k - 7. (End) •

▶ [A271108] 0,2,3,4,5,6,7,9,10,11,14,16,18,20,22,25,28,31,34,37,41,44,47,51,54 ⋆ a(n) is the number of syllables pronounced in reading the sequence up to a(n - 1) in American English. • a(0) = 0, a(n) = a(n - 1) + S(n), where S(n) is the number of syllables in n. •

▶ [A063949] 0,1,2,3,4,5,6,7,9,10,12,13,14,15,17,18,20,21,22,25,26,28,30,33,34 ⋆ Every number is the sum of 4 squares; these are the numbers n for which the first square can be taken to be any positive square < n. • a(n) = 4 * (n - 110) + 2 for all n > 1054. - _ M. F. Hasler _ , Jan 26 2018 •

▶ [A073518] 0,1,1,2,3,4,5,6,7,9,10,12,13,14,15,17,19,19,21,23,23,25,26,28,31 ⋆ Cotangent of Pi / prime(n), rounded to nearest integer. • a(n) = round(cotan(Pi / prime(n)) or a(n) = round(1 / tan(Pi / prime(n)). •

▶ [A361202] 1,1,2,3,4,5,6,7,9,10,12,14,16,18,20,22,25,27,30,33,36,39,42,45,49 ⋆ Maximum product of the vertex arboricities of a graph of order n and its complement. • a(n) = floor(((n + 3) / 2) ^ 2 / 4). •

▶ [A211543] 0,0,0,0,1,1,1,2,3,4,5,6,7,9,11,12,14,16,18,21,23,25,28,31,34 ⋆ Number of ordered triples (w,x,y) with all terms in { 1,...,n } and 2w=3x + 5y. • a(n) = a(n - 1) + a(n - 3) - a(n - 4) + a(n - 5) - a(n - 6) - a(n - 8) + a(n - 9). •

▶ [A031876] 0,1,2,3,4,5,6,7,9,11,13,15,17,19,21,23,25,27,29,31,33,35,37,39,41 ⋆ a(n) = Sum _{ k=0..n } floor(k ^ (1 / 3)). • a(0) = 0, a(1) = 1, a(n) = 2 * a(n - 1) - a(n - 2) if n not a perfect cube, else a(n) = 2 * a(n - 1) - a(n - 2) + 1 if n is a perfect cube. • a(n) = - 1 / 4 * floor(n ^ (1 / 3)) * (floor(n ^ (1 / 3)) ^ 3 + 2 * floor(n ^ (1 / 3)) ^ 2 + floor(n ^ (1 / 3)) - 4 * (n + 1)). - _ John M. Campbell _ , Mar 22 2016 • a(n) = (3 / 4) * n ^ (4 / 3) + O(n). - _ Charles R Greathouse IV _ , Aug 23 2017 •

▶ [A174738] 0,0,0,0,0,0,0,1,2,3,4,5,6,7,9,11,13,15,17,19,21,24,27,30,33 ⋆ Partial sums of floor(n / 7). • a(n) = round(n * (n - 5) / 14). • a(n) = floor((n - 2) * (n - 3) / 14). • a(n) = ceiling((n + 1) * (n - 6) / 14). • a(n) = a(n - 7) + n - 6, n > 6. • a(n) = + 2 * a(n - 1) - a(n - 2) + a(n - 7) - 2 * a(n - 8) + a(n - 9). - _ R. J. Mathar _ , Nov 30 2010 •

▶ [A011867] 0,0,0,0,0,1,2,3,4,5,6,7,9,11,13,15,17,19,21,24,27,30,33,36,39 ⋆ a(n) = floor(n * (n - 1) / 14). • a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 7) - 2 * a(n - 8) + a(n - 9). •

▶ [A008725] 1,2,3,4,5,6,7,9,11,13,15,17,19,21,24,27,30,33,36,39,42,46,50,54,58 ⋆ Molien series for 3 - dimensional group [2,n] = * 22n. • a(n) = Sum _{ j=0..n + 7 } floor(j / 7). • a(n - 7) = (1 / 2) * floor(n / 7) * (2 * n - 5 - 7 * floor(n / 7)). (End) • a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 7) - 2 * a(n - 8) + a(n - 9). - _ R. J. Mathar _ , Apr 20 2010 •

▶ [A275673] 1,2,3,4,5,6,7,9,11,13,15,17,19,22,25,28,31,34,37,41,45,49,53,57,61 ⋆ List of numbers that are in a spoke of a hexagonal spiral. • a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 6) - 2 * a(n - 7) + a(n - 8) for n>8. •

▶ [A279078] 0,1,2,3,4,5,6,7,9,11,13,15,18,21,25,29,34,39,45,52,60,69,79,91,105 ⋆ Maximum starting value of X such that repeated replacement of X with X - ceiling(X / 8) requires n steps to reach 0. • a(n) = floor(a(n - 1) * 8 / 7) + 1. •

▶ [A193286] 1,2,3,4,5,6,7,9,12,16,20,25,30,36,48,64,80,100,125,150,192,256,320,400,500 ⋆ a(n) is the maximal number of a's that can be produced in a blank document with n "keystrokes". • a(n) = 4 * a(n - 6) for n >= 34. [corrected by _ Georg Fischer _ , Jun 09 2022] • a(n) = a(8;9;15;21;27) = 9; 12; 48; 192; 768 - corresponding to [C=2;2;3;4;5 below]. • a(n=1:27) = Q ^ (C - R) * (Q + 1) ^ R where C = floor((n + 2) / 6 [minimum value 1], R = n + 2 mod C, and Q = floor((n + 2) / c) - 2. • a(n>=28) = 4 ^ (C - R) * 5 ^ R, where C = floor(n + 2 / 6), R = (n + 2) mod 6. •

▶ [A367637] 1,1,1,1,1,1,1,2,3,4,5,6,7,9,12,16,21,27,34,43,55,71,92,119,153 ⋆ G.f. A(x) satisfies A(x) = 1 / (1 - x * A(x ^ 6)). • a(0) = 1; a(n) = Sum _{ k=0..floor((n - 1) / 6) } a(k) * a(n - 1 - 6 * k). •

▶ [A005708] 1,1,1,1,1,1,2,3,4,5,6,7,9,12,16,21,27,34,43,55,71,92,119,153,196 ⋆ a(n) = a(n - 1) + a(n - 6), with a(i) = 1 for i = 0..5. • a(n) = term (1,1) in the 6 X 6 matrix [1,1,0,0,0,0; 0,0,1,0,0,0; 0,0,0,1,0,0; 0,0,0,0,1,0; 0,0,0,0,0,1]; 1,0,0,0,0,0] ^ n. - _ Alois P. Heinz _ , Jul 27 2008 •

▶ [A143286] 0,0,0,0,0,0,0,0,1,2,3,4,5,6,7,9,13,19,27,37,49,63,80,102,132 ⋆ Number of binary words of length n containing at least one subword 10 ^{ 6 } 1 and no subwords 10 ^{ i } 1 with i<6. • a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 7) - a(n - 9) - a(n - 15). - _ Vincenzo Librandi _ , Jun 05 2013 •

▶ [A048333] 0,1,2,3,4,5,6,7,9,18,27,36,45,54,63,73,146,219,292,365,438,511,585,1170,1755 ⋆ Numbers that are repdigits in base 8. • a(n) = 9 * a(n - 7) - 8 * a(n - 14) for n > 13. •

▶ [A007094] 0,1,2,3,4,5,6,7,10,11,12,13,14,15,16,17,20,21,22,23,24,25,26,27,30 ⋆ Numbers in base 8. • a(0) = 0; a(n) = 10 * a(n / 8) if n == 0 (mod 8); a(n) = a(n - 1) + 1 otherwise. - _ Benoit Cloitre _ , Dec 22 2002 •

▶ [A078779] 1,2,3,4,5,6,7,10,11,12,13,14,15,17,19,20,21,22,23,26,28,29,30,31,33 ⋆ Union of S, 2S and 4S, where S = odd squarefree numbers (A056911). • a(n) = (Pi ^ 2 / 7) * n + O(sqrt(n)). - _ Vladimir Shevelev _ , Jun 08 2016 •

▶ [A047593] 2,3,4,5,6,7,10,11,12,13,14,15,18,19,20,21,22,23,26,27,28,29,30,31,34 ⋆ Numbers that are congruent to { 2, 3, 4, 5, 6, 7 } mod 8. • a(n) = a(n - 1) + a(n - 6) - a(n - 7) for n>7. • a(n) = (24 * n - 3 - 3 * cos(n * Pi) - 4 * sqrt(3) * cos((1 + 4 * n) * Pi / 6) - 12 * sin((1 - 2 * n) * Pi / 6)) / 18. • a(6k) = 8k - 1, a(6k - 1) = 8k - 2, a(6k - 2) = 8k - 3, a(6k - 3) = 8k - 4, a(6k - 4) = 8k - 5, a(6k - 5) = 8k - 6. (End) •

▶ [A074946] 2,3,4,5,6,7,10,11,12,13,14,16,17,18,19,22,23,24,26,27,29,30,31,34,36 ⋆ Positive integers n for which the sum of the prime - factorization exponents of n (bigomega(n) = A001222(n)) divides n. • a(n) seems to be asymptotic to c * n * log(log(n)) with 1.128 < c < 1.13. •

▶ [A008814] 1,2,3,4,5,6,7,10,13,16,19,22,25,28,33,38,43,48,53,58,63,70,77,84,91 ⋆ Expansion of (1 + x ^ 7) / ((1 - x) ^ 2 * (1 - x ^ 7)). • a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 7) - 2 * a(n - 8) + a(n - 9). - _ R. H. Hardin _ , Nov 16 2011 •

► [A275910] 2,3,4,5,6,7,11,12,13,14,15,16,20,21,22,23,24,25,29,30,31,32,33,34,38 ⋆ Numbers not congruent to 0, 1 or 8 mod 9. • a(n) = a(n - 1) + a(n - 6) - a(n - 7) for n>7. •
► [A132028] 1,2,3,4,5,6,7,16,18,20,22,36,39,42,45,64,68,72,76,100,105,110,115,144,150 ⋆ Product { 0<=k<=floor(log _ 4(n)), floor(n / 4 ^ k) } , n>=1. • a(k * 4 ^ m)=k ^ (m + 1) * 4 ^ (m(m + 1) / 2), for 0<k<4. • a(n)>c * b(n), where c=0.419422441795107597... (see constant A132020). •
► [A085158] 1,1,2,3,4,5,6,7,16,27,40,55,72,91,224,405,640,935,1296,1729,4480,8505,14080,21505,31104 ⋆ Sextuple factorials, 6 - factorials, n!!!!!!, n!6. • a(n)=1 for n < 1, otherwise a(n) = n * a(n - 6). •
► [A297182] 1,2,3,4,5,6,7,20,33,46,59,72,85,254,423,592,761,930,1099,3296,5493,7690,9887,12084,14281 ⋆ a(n) is the smallest positive integer of length (distance from origin) n in the Cayley graph of the integers generated by all powers of 13. • a(n) = a(n - 1) + 13 * a(n - 6) - 13 * a(n - 7) for n>7. •
► [A342728] 0,1,2,3,4,5,6,7,23,39,55,71,87,103,359,615,871,1127,1383,1639,5735,9831,13927,18023,22119 ⋆ a(n) is the least number k such that A066323(k) = n. • a(n) = n for n <= 7, and a(n) = a(n - 1) + 16 * a(n - 6) - 16 * a(n - 7) for n > 7. • a(3 * n + 1) = (24 + (4 ^ n) * (25 - 9 * (- 1) ^ n)) / 40. • a(3 * n + 2) = (24 + (4 ^ n) * (50 + 6 * (- 1) ^ n)) / 40. • a(3 * n + 3) = (24 + (4 ^ n) * (75 + 21 * (- 1) ^ n)) / 40. (End) •
► [A052419] 0,1,2,3,4,5,6,8,9,10,11,12,13,14,15,16,18,19,20,21,22,23,24,25,26 ⋆ Numbers without 7 as a digit. • a(n) = replace digits d > 6 by d + 1 in base - 9 representation of n - 1. - _ Reinhard Zumkeller _ , Oct 07 2014 •
► [A000378] 0,1,2,3,4,5,6,8,9,10,11,12,13,14,16,17,18,19,20,21,22,24,25,26,27 ⋆ Sums of three squares: numbers of the form x ^ 2 + y ^ 2 + z ^ 2. • a(n) = 6n / 5 + O(log n). - _ Charles R Greathouse IV _ , Mar 14 2014 •
► [A059561] 1,2,3,4,5,6,8,9,10,11,12,13,14,16,17,18,19,20,21,22,24,25,26,27,28 ⋆ Beatty sequence for log(Pi). • a(n) = floor(n * log(Pi)). - _ Michel Marcus _ , Jan 04 2015 •
► [A047304] 1,2,3,4,5,6,8,9,10,11,12,13,15,16,17,18,19,20,22,23,24,25,26,27,29 ⋆ Numbers not divisible by 7. • a(n) = n - 1 + floor((n + 5) / 6). - _ Benoit Cloitre _ , Jul 11 2009 •
► [A004765] 0,1,2,3,4,5,6,8,9,10,11,12,13,16,17,18,19,20,21,22,23,24,25,26,27 ⋆ Numbers whose binary expansion does not begin 111. • a(1) = 0, a(2) = 1, a(3) = 2, a(4) = 3, a(2 ^ (m + 1) + 2 ^ m + k + 2) = 2 ^ (m + 2) + k, m >= 0, 0 <= k < (2 ^ (m + 1) + 2 ^ m). - _ Yosu Yurramendi _ , Aug 08 2016 •
► [A247063] 1,2,3,4,5,6,8,9,10,11,12,13,16,17,18,19,20,21,22,24,25,26,27,28,29 ⋆ Dynamic Betting Game D(n,5,3). • a(n) = a(n - 1) + a(n - 13) - a(n - 14). - _ Colin Barker _ , Sep 11 2014 •
► [A032798] 1,2,3,4,5,6,8,9,10,11,12,14,15,16,17,18,19,21,22,23,24,25,27,28,29 ⋆ Numbers such that n(n + 1)(n + 2)...(n + 12) / (n + (n + 1) + (n + 2) + ... + (n + 12)) is a multiple of n. • a(n) = a(n - 1) + a(n - 11) - a(n - 12) for n > 12. •
► [A068398] 1,1,1,2,3,4,5,6,8,9,10,11,13,14,16,17,19,20,22,23,25,27,28,30,32 ⋆ Number of digits in (2 ^ n) * (n!). • a(n) = floor(log(n! * 2 ^ n) / log(10)) + 1. •
► [A080671] 2,3,4,5,6,8,9,10,12,14,15,16,18,20,21,22,24,25,26,27,28,30,32,33,34 ⋆ Numbers having divisors 2 or 3 or 5. • a(n + 22) = a(n) + 30. - _ Gary Detlefs _ , Oct 06 2013 •
► [A184115] 2,3,4,5,6,8,9,11,13,14,16,18,20,22,24,27,29,31,34,36,39,42,45,48,50 ⋆ n + ceiling(n ^ 2 / 25); complement of A184114. • a(n) = n + ceiling(n ^ 2 / 25). •
► [A134030] 1,2,3,4,5,6,8,9,11,13,15,18,20,23,26,28,32,35,38,42,46,49,54,58,62 ⋆ Areas of regular n - sided polygons with length of each side equal to 1 (rounded). • a(n) = round(n / (4 * tan(Pi / n)). •
► [A047424] 0,2,3,4,5,6,8,10,11,12,13,14,16,18,19,20,21,22,24,26,27,28,29,30,32 ⋆ Numbers that are congruent to { 0, 2, 3, 4, 5, 6 } mod 8. • a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - 2 * a(n - 4) + 2 * a(n - 5) - a(n - 6) for n>6. • a(n) = (12 * n - 12 - sqrt(3) * cos((1 - 4 * n) * Pi / 6) - 3 * sqrt(3) * cos((1 + 2 * n) * Pi / 6)) / 9. • a(6k) = 8k - 2, a(6k - 1) = 8k - 3, a(6k - 2) = 8k - 4, a(6k - 3) = 8k - 5, a(6k - 4) = 8k - 6, a(6k - 5) = 8k - 8. (End) •
► [A000933] 0,0,0,0,1,1,1,2,3,4,5,6,8,10,11,13,16,18,20,23,26,29,32,35,39 ⋆ Genus of complete graph on n nodes. • a(n) = ceiling ((n - 3) * (n - 4) / 12) if n>=3. • a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 3 * a(n - 3) - 3 * a(n - 4) + 2 * a(n - 5) - 2 * a(n - 6) + a(n - 7) for n >= 10. - _ Harvey P. Dale _ , Dec 18 2011 • a(n) = (49 + 3 * (n - 7) * n - 9 * cos(n * Pi / 2) - 4 * cos(2 * n * Pi / 3) + 9 * sin(n * Pi / 2) - 4 * sqrt(3) * sin(2 * n * Pi / 3)) / 36 for n > 2. - _ Stefano Spezia _ , Dec 14 2021 •
► [A253012] 1,1,1,2,3,4,5,6,8,10,11,13,16,18,20,23,26,29,32,35,39,43,46,50,55 ⋆ a(n) = ceiling((n + 1) * (n + 2) / 12). • a(n) = a(- 3 - n) for all n in Z. • a(n) - 2 * a(n + 1) + a(n + 2) is a period 12 integer sequence. • a(n) - 2 * a(n + 1) + 2 * a(n + 2) - 2 * a(n + 3) + a(n + 4) = 1 if n == 1 (mod 3) else 0. •
► [A036409] 0,1,1,1,2,3,4,5,6,8,10,11,14,16,18,21,24,27,30,33,37,41,44,49,53 ⋆ a(n) = ceiling(n ^ 2 / 11). • a(n) = + 2 a(n - 1) - a(n - 2) + a(n - 11) - 2 a(n - 12) + a(n - 13). - _ R. J. Mathar _ , Mar 11 2012 • a(m + 11 k) = a(m) + 11 k ^ 2 + 2 m k. - _ Robert Israel _ , Apr 06 2016 •
► [A274039] 0,0,0,0,1,2,3,4,5,6,8,10,12,14,16,18,20,22,24,26,28,30,32,34,36 ⋆ Expansion of (x ^ 4 + x ^ 10) / (1 - 2 * x + x ^ 2). • a(n) = 2 * (n - 6), n>=9. - _ R. J. Mathar _ , Jun 09 2016 •
► [A011866] 0,0,0,0,0,1,2,3,4,5,6,8,10,12,14,16,18,20,23,26,29,32,35,38,42 ⋆ a(n) = floor(n * (n - 1) / 13). • a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 13) - 2 * a(n - 14) + a(n - 15). •
► [A174709] 0,0,0,0,0,0,1,2,3,4,5,6,8,10,12,14,16,18,21,24,27,30,33,36,40 ⋆ Partial sums of floor(n / 6). • a(n) = round(n * (n - 4) / 12) = round((2 * n ^ 2 - 8 * n - 1) / 24). • a(n) = floor((n - 2) ^ 2 / 12). • a(n) = ceiling((n + 1) * (n - 5) / 12). • a(n) = a(n - 6) + n - 5, n > 5. • a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 6) - 2 * a(n - 7) + a(n - 8). •
► [A008724] 0,0,0,0,1,2,3,4,5,6,8,10,12,14,16,18,21,24,27,30,33,36,40,44,48 ⋆ a(n) = floor(n ^ 2 / 12). • a(n) = a(n - 6) + n - 3. - _ Paul Barry _ , Jul 14 2004 • a(n) = Sum _{ j=0..n + 2 } floor(j / 6), a(n - 2) = (1 / 2) * floor(n / 6) * (2 * n - 4 - 6 * floor(n / 6)). - _ Mitch Harris _ , Sep 08 2008 •
► [A029032] 1,1,1,2,3,4,5,6,8,10,12,14,17,20,23,27,31,35,40,45,51,57,63,70,78 ⋆ Expansion of 1 / ((1 - x)(1 - x ^ 3)(1 - x ^ 4)(1 - x ^ 5)). • a(0)=1, a(1)=1, a(2)=1, a(3)=2, a(4)=3, a(5)=4, a(6)=5, a(7)=6, a(8)=8, a(9)=10, a(10)=12, a(11)=14, a(12)=17, a(n)=a(n - 1) + a(n - 3) - a(n - 6) - a(n - 7) + a(n - 10) + a(n - 12) - a (n - 13). - _ Harvey P. Dale _ , Jan 04 2012 •
► [A060470] 1,2,3,4,5,6,8,10,12,15,17,19,24,26,28,33,35,37,42,44,46,51,53,55,60 ⋆ Smallest positive a(n) such that number of solutions to a(n)=a(j) + a(k) j<k< n is two or less. • a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n > 13. • a(n) = 2 * n + 3 * floor(n / 3 + 2 / 3) - 17 for n>9. - _ Bruno Berselli _ , Feb 22 2018 •
► [A279077] 0,1,2,3,4,5,6,8,10,12,15,18,22,26,31,37,44,52,61,72,85,100,117,137,160 ⋆ Maximum starting value of X such that repeated replacement of X with X - ceiling(X / 7) requires n steps to reach 0. • a(n) = floor(a(n - 1) * 7 / 6) + 1. •
► [A029747] 1,2,3,4,5,6,8,10,12,16,20,24,32,40,48,64,80,96,128,160,192,256,320,384,512 ⋆ Numbers of the form 2 ^ k times 1, 3 or 5. • a(n) = if n < 6 then n else 2 * a(n - 3). - _ Reinhard Zumkeller _ , Aug 23 2006 •
► [A309715] 0,0,0,0,0,0,0,1,2,3,4,5,6,8,10,13,16,19,22,26,30,35,40,46,52 ⋆ Number of even parts appearing among the third largest parts of the partitions of n into 4 parts. • a(n) = Sum _{ k=1..floor(n / 4) } Sum _{ j=k..floor((n - k) / 3) } Sum _{ i=j..floor((n - j - k) / 2) } ((j - 1) mod 2). • a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 6) - 2 * a(n - 7) + 2 * a(n - 8) - 2 * a(n - 9) + a(n - 10) - a(n - 14) + 2 * a(n - 15) - a(n - 16) for n>15. •
► [A175773] 1,1,1,1,1,1,2,3,4,5,6,8,10,13,17,22,28,37,48,62,80,103,133,172,223 ⋆ Expansion of 1 / (1 - x - x ^ 6 - x ^ 11 + x ^ 12). • a(n) = a(n - 1) + a(n - 6) + a(n - 11) - a(n - 12), n >= 12. - _ Franck Maminirina Ramaharo _ , Oct 31 2018 •
► [A179053] 0,1,2,3,4,5,6,8,10,14,19,28,42,64,99,155,245,391,626,1007,1622,2618,4229,6835,11051 ⋆ Partial sums of ceiling(Fibonacci(n) / 11). • a(n) = round(Fibonacci(n + 2) / 11 + 3 * n / 5 + 43 / 110). • a(n) = floor(Fibonacci(n + 2) / 11 + 3 * n / 5 + 48 / 55). • a(n) = ceiling(Fibonacci(n + 2) / 11 + 3 * n / 5 - 1 / 11). • a(n) = a(n - 10) + Fibonacci(n - 3) + 6, n > 9. • a(n) = 2 * a(n - 1) - a(n - 3) + a(n - 10) - 2 * a(n - 11) + a(n - 13), n > 12. •
► [A003520] 1,1,1,1,1,2,3,4,5,6,8,11,15,20,26,34,45,60,80,106,140,185,245,325,431 ⋆ a(n) = a(n - 1) + a(n - 5); a(0) = ... = a(4) = 1. • a(n) = Sum _{ j=0..(n - 1) / 4 } binomial(n - 1 + (- 4) * j,j). • a(n) = term (1,1) in the 5 X 5 matrix [1, 1,0,0,0; 0,0,1,0,0; 0,0,0,1,0; 0,0,0,0,1; 1,0,0,0,0] ^ n. - _ Alois P. Heinz _ , Jul 27 2008 •
► [A143285] 0,0,0,0,0,0,0,0,1,2,3,4,5,6,8,12,18,26,36,48,63,83,111,150,203,273 ⋆ Number of binary words of length n containing at least one subword 1000001 and no subwords 10 ^{ i } 1 with i<5. • a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 6) - a(n - 8) - a(n - 13). - _ Vincenzo Librandi _ , Jun 05 2013 •
► [A048332] 0,1,2,3,4,5,6,8,16,24,32,40,48,57,114,171,228,285,342,400,800,1200,1600,2000,2400 ⋆ Numbers that are repdigits in base 7. • a(n) = 8 * a(n - 6) - 7 * a(n - 12) for n > 11. • a(n) = (n - 6 * floor((n - 1) / 6)) * (7 ^ floor((n + 5) / 6) - 1) / 6. - _ Ilya Gutkovskiy _ , May 30 2016 •
► [A119336] 1,2,3,4,5,6,8,16,45,130,341,804,1730,3460,6555,12016,21845,40410,77540,155080,320001,669526,1398101,2884776,5858126 ⋆ Expansion of (1 - x) ^ 4 / ((1 - x) ^ 6 - x ^ 6). • a(n) = Sum _{ k=0..n } Sum _{ j=0..n - k } C(k,3j) * C(n - k,3j). • a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5), with a(0)=1, a(1)=2, a(2)=3, a(3)=4, a(4)=5. - _ Harvey P. Dale _ , Dec 25 2015 • a(n) = Sum _{ k=0..floor(n / 6) } binomial(n + 1,6 * k + 1). - _ Seiichi Manyama _ , Mar 22 2019 •
► [A373933] 1,2,3,4,5,6,8,17,54,175,506,1299,3017,6465,13021,25142,47651,91104,180254,374077,810381,1800140,4019204,8888489,19322901 ⋆ Number of compositions of 7 * n - 1 into parts 6 and 7. • a(n) = Sum _{ k=0..floor(n / 6) } binomial(n + k,n - 1 - 6 * k). • a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 6 * a(n - 6) + a(n - 7). •
► [A272574] 0,1,2,3,4,5,6,9,10,11,12,13,14,15,18,19,20,21,22,23,24,27,28,29,30 ⋆ a(n) = f(9, f(8, n)), where f(k,m) = floor(m * k / (k - 1)). • a(n) = a(n - 1) + a(n - 7) - a(n - 8). • a(n) = (63 * n - 12 - 12 * (n mod 7) + 2 * ((- n - 1) mod 7)) / 49. - _ Wesley Ivan Hurt _ , Dec 25 2016 •
► [A354047] 0,1,2,3,4,5,6,9,10,11,12,13,14,15,18,27,28,29,30,31,32,33,36,37,38 ⋆ A169683 read as ternary numbers. • a(0) = 0; for n >= 1, a(2 ^ n - 1 + i) = a(i) + 3 ^ (n - 1) for 0 <= i <= 2 ^ n - 1. •
► [A047422] 1,2,3,4,5,6,9,10,11,12,13,14,17,18,19,20,21,22,25,26,27,28,29,30,33 ⋆ Numbers that are congruent to { 1, 2, 3, 4, 5, 6 } mod 8. • a(n) = a(n - 1) + a(n - 6) - a(n - 7) for n>7. • a(n) = (24 * n - 21 - 3 * cos(n * Pi) - 4 * sqrt(3) * cos((1 + 4 * n) * Pi / 6) - 12 * sin((1 - 2 * n) * Pi / 6)) / 18. • a(6k) = 8k - 2, a(6k - 1) = 8k - 3, a(6k - 2) = 8k - 4, a(6k - 3) = 8k - 5, a(6k - 4) = 8k - 6, a(6k - 5) = 8k - 7. (End) •
► [A008813] 1,2,3,4,5,6,9,12,15,18,21,24,29,34,39,44,49,54,61,68,75,82,89,96,105 ⋆ Expansion of (1 + x ^ 6) / ((1 - x) ^ 2 * (1 - x ^ 6)). • a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 6) - 2 * a(n - 7) + a(n - 8). - _ R. H. Hardin _ , Nov 16 2011 •
► [A178715] 1,2,3,4,5,6,9,12,16,20,27,36,48,64,81,108,144,192,256,324,432,576,768,1024,1296 ⋆ a(n) = solution to the "Select All, Copy, Paste" problem: Given the ability to type a single letter, or to type individual "Select All", "Copy" or "Paste" command keystrokes, what is the maximal number of letters of text that can be obtained with n keystrokes? • a(n) = 4 * a(n - 5) for n>=16. • a(n) = •
► [A351724] 1,1,1,1,1,2,3,4,5,6,9,13,18,24,31,42,58,80,109,146,197,268,366,499,676 ⋆ Number of compositions of n into parts of size 1, 5, 10 or 25. • a(n) = + a(n - 1) + a(n - 5) + a(n - 10) + a(n - 25). •
► [A113444] 1,1,1,1,1,2,3,4,5,6,9,13,18,24,31,43,60,83,113,151,206,283,389,532,721 ⋆ a(n) = a(n - 1) + Sum _{ 0<k<=n / 5 } a(n - 5k) with a(0)=1. • a(n) = a(n - 1) + 2 * a(n - 5) - a(n - 6). • a(n) = 11 * a(n - 5) - 45 * a(n - 10) + 90 * a(n - 15) - 90 * a(n - 20) + 37 * a(n - 25) - a(n - 30). •
► [A346074] 1,1,1,1,1,2,3,4,5,6,9,14,21,30,41,59,89,136,205,301,443,664,1011,1545,2341 ⋆ a(n) = 1 + Sum _{ k=0..n - 5 } a(k) * a(n - k - 5). • a(n) = Sum _{ k=0..floor(n / 5) } binomial(n - 4 * k,k) * Catalan(k). - _ Seiichi Manyama _ , Jan 22 2023 •

▶ [A007093] 0,1,2,3,4,5,6,10,11,12,13,14,15,16,20,21,22,23,24,25,26,30,31,32,33 ⋆ Numbers in base 7. • a(0) = 0, a(n) = 10 * a(n / 7) if n==0 (mod 7), a(n) = a(n - 1) + 1 otherwise. - _ Benoit Cloitre _ , Dec 22 2002 •
▶ [A047423] 2,3,4,5,6,10,11,12,13,14,18,19,20,21,22,26,27,28,29,30,34,35,36,37,38 ⋆ Numbers that are congruent to { 2, 3, 4, 5, 6 } mod 8. • a(n + 1) = 3 * floor (n / 5) + n + 2. - _ Gary Detlefs _ , Mar 12 2010 • a(n) = a(n - 1) + a(n - 5) - a(n - 6) for n > 6, a(n) = a(n - 5) + 8 for n > 5. • a(n) = (8 * n + 2 - 3 * ((n + 4) mod 5)) / 5. • a(5k) = 8k - 2, a(5k - 1) = 8k - 3, a(5k - 2) = 8k - 4, a(5k - 3) = 8k - 5, a(5k - 4) = 8k - 6. (End) •
▶ [A212774] 0,1,2,3,4,5,6,10,11,15,16,20,22,25,26,30,31,35,36,40,41,50,51,55,56 ⋆ Amounts (in cents) of coins in denominations 1, 5, 10, 25, and 50 (cents) which, when using the minimal number of coins, have equal numbers of all denominations used. • a(n) = (n - 41) * 50 for n >= 46. •
▶ [A057436] 1,2,3,4,5,6,11,12,13,14,15,16,21,22,23,24,25,26,31,32,33,34,35,36,41 ⋆ Contains digits 1 through 6 only. • a(n + 1) = 1 + (if a(n) mod 10 < 6 then a(n) else a(a(n) \ 10) * 10), a(0)=1. - _ Reinhard Zumkeller _ , Jul 13 2007 •
▶ [A276529] 1,1,1,1,1,1,2,3,4,5,6,13,20,27,34,41,89,137,185,233,281,610,939,1268,1597 ⋆ a(n) = (a(n - 1) * a(n - 5) + 1) / a(n - 6), a(0) = a(1) = ... = a(5) = 1. • a(n) + a(n + 10) = 7 * a(n + 5). • a(5 - n) = a(n). • a(5 * n + 2) = L(4 * n + 2) / 3 - F(4 * n), • a(5 * n + 3) = L(4 * n - 2) / 3 + F(4 * n), •
▶ [A085157] 1,1,2,3,4,5,6,14,24,36,50,66,168,312,504,750,1056,2856,5616,9576,15000,22176,62832,129168,229824 ⋆ Quintuple factorials, 5 - factorials, n!!!!!, n!5. • a(n) = 1 for n < 1, otherwise a(n) = n * a(n - 5). •
▶ [A297181] 1,2,3,4,5,6,17,28,39,50,61,182,303,424,545,666,1997,3328,4659,5990,7321,21962,36603,51244,65885 ⋆ a(n) is the smallest positive integer of length (distance from origin) n in the Cayley graph of the integers generated by all powers of 11. • a(n) = a(n - 1) + 11 * a(n - 5) - 11 * a(n - 6) for n>5. •
▶ [A237343] 0,1,2,3,4,5,6,36,336,3336,33336,333336,3333336,33333336,333333336,3333333336,33333333336,333333333336,3333333333336,33333333333336,333333333333336,3333333333333336,333333333333333336,33333333333333333336,3333333333333333333336,333333333333333333333336,33333333333333333333333336 ⋆ For k in { 2,3,...,9 } define a sequence as follows: a(0)=0; for n >=0, a(n + 1)=a(n) + 1, unless a(n) ends in k, in which case a(n + 1) is obtained by replacing the last digit of a(n) with the digit(s) of k ^ 2. This is k(6). • a(n) = (8 + 10 ^ (n - 5)) / 3 for n>5. [_ Bruno Berselli _ , Feb 08 2014] •
▶ [A069882] 1,2,3,4,5,6,66,666,6666,66666,666666,6666666,66666666,666666666,6666666666,66666666666,666666666666,6666666666666,66666666666666,666666666666666,6666666666666666,66666666666666666,666666666666666666,6666666666666666666,66666666666666666666 ⋆ Numbers n such that n and 2n - 1 are both palindromes. • a(n) = 2 * (10 ^ (n - 5) - 1) / 3 for n > 5. • a(n) = 11 * a(n - 1) - 10 * a(n - 2) for n > 7. •
▶ [A052414] 0,1,2,3,4,5,7,8,9,10,11,12,13,14,15,17,18,19,20,21,22,23,24,25,27 ⋆ Numbers without 6 as a digit. • a(n) = replace digits d > 5 by d + 1 in base - 9 representation of n - 1. - _ Reinhard Zumkeller _ , Oct 07 2014 •
▶ [A183218] 2,3,4,5,7,8,9,10,11,12,13,14,16,17,18,19,20,21,22,23,24,25,26,27,29 ⋆ Complement of the hexagonal numbers. • a(n)=n + Floor[1 / 2 + (n / 2) ^ (1 / 2)]. •
▶ [A047595] 0,1,2,3,4,5,7,8,9,10,11,12,13,15,16,17,18,19,20,21,23,24,25,26,27 ⋆ Numbers that are congruent to { 0, 1, 2, 3, 4, 5, 7 } mod 8. • a(n) = a(n - 1) + a(n - 7) - a(n - 8) for n>8. • a(n) = n - 1 + floor(n / 7). (End) • a(n) = a(n - 7) + 8 for n>7. • a(n) = (56 * n - 70 - 6 * (n mod 7) + ((n + 1) mod 7) + ((n + 2) mod 7) + ((n + 3) mod 7) + ((n + 4) mod 7) + ((n + 5) mod 7) + ((n + 6) mod 7)) / 49. • a(7 * k) = 8 * k - 1, a(7 * k - 1) = 8 * k - 3, a(7 * k - 2) = 8 * k - 4, a(7 * k - 3) = 8 * k - 5, a(7 * k - 4) = 8 * k - 6, a(7 * k - 5) = 8 * k - 7, a(7 * k - 6) = 8 * k - 8. (End) •
▶ [A047368] 0,1,2,3,4,5,7,8,9,10,11,12,14,15,16,17,18,19,21,22,23,24,25,26,28 ⋆ Numbers that are congruent to { 0, 1, 2, 3, 4, 5 } mod 7; a(n)=floor(7(n - 1) / 6). • a(n) = a(n - 1) + a(n - 6) - a(n - 7) for n>7. • a(n) = (42 * n - 57 - 3 * cos(Pi * n) - 4 * sqrt(3) * cos((4 * n + 1) * Pi / 6) - 12 * sin((1 - 2 * n) * Pi / 6)) / 36. • a(6k) = 7k - 2, a(6k - 1) = 7k - 3, a(6k - 2) = 7k - 4, a(6k - 3) = 7k - 5, a(6k - 4) = 7k - 6, a(6k - 5) = 7k - 7. (End) •
▶ [A187394] 1,2,3,4,5,7,8,9,10,11,12,14,15,16,17,18,19,21,22,23,24,25,26,28,29 ⋆ a(n) = floor(s * n), where s = 4 - sqrt(8); complement of A187393. • a(n) = floor(s * n), where s = 4 - sqrt(8). •
▶ [A187392] 1,2,3,4,5,7,8,9,10,11,13,14,15,16,17,18,20,21,22,23,24,26,27,28,29 ⋆ Floor(s * n), where s=1 + sqrt(8) - sqrt(7); complement of A189391. • a(n)=floor(s * n), where s=1 + sqrt(8) - sqrt(7). •
▶ [A108120] 1,2,3,4,5,7,8,9,10,11,13,14,15,16,17,19,20,21,22,23,24,26,27,28,29 ⋆ Floor[n * 1 / Sin[1]], or Beatty sequence for 1 / sin(1). • a(n) = floor(n * 1 / sin(1)) •
▶ [A047253] 1,2,3,4,5,7,8,9,10,11,13,14,15,16,17,19,20,21,22,23,25,26,27,28,29 ⋆ Numbers that are congruent to { 1, 2, 3, 4, 5 } mod 6. • a(n) = 5 + a(n - 5). • a(n) = n - 1 + floor((n + 4) / 5). - _ Benoit Cloitre _ , Jul 11 2009 •
▶ [A204878] 1,2,3,4,5,7,8,9,10,11,13,14,15,16,17,19,20,21,22,23,25,26,27,29,31 ⋆ Numbers that cannot be written as sum of perfect numbers. • a(38 + k) = 49 + 2k for all k>0 (up to occurrence of an odd perfect number, known to be > 10 ^ 300, if it exists). - _ M. F. Hasler _ , Feb 09 2012 •
▶ [A218444] 0,1,2,3,4,5,7,8,9,10,11,13,15,16,17,18,20,21,23,24,25,27,29,30,32 ⋆ a(n) = Sum _{ k>=0 } floor(n / (5 * k + 1)). • a(n) = Sum _{ k>=0 } floor(n / (5 * k + 1)). •
▶ [A004764] 0,1,2,3,4,5,7,8,9,10,11,14,15,16,17,18,19,20,21,22,23,28,29,30,31 ⋆ Numbers whose binary expansion does not begin 110. • a(n) = n - 1, 1 <= n <= 6, a(2 ^ (m + 2) + 2 ^ m + k + 2) = 2 ^ (m + 2) + 2 ^ (m + 1) + 2 ^ m + k, m >= 0, 0 <= k < (2 ^ (m + 2) + 2 ^ m). - _ Yosu Yurramendi _ , Aug 08 2016 •
▶ [A032797] 1,2,3,4,5,7,8,9,10,12,13,14,15,16,18,19,20,21,23,24,25,26,27,29,30 ⋆ Numbers n such that n(n + 1)(n + 2)...(n + 10) / (n + (n + 1) + (n + 2) + ... + (n + 10)) is a multiple of n. • a(n) = a(n - 1) + a(n - 9) - a(n - 10) for n > 10. •
▶ [A001967] 0,2,3,4,5,7,8,9,10,12,13,14,15,16,18,19,20,21,23,24,25,26,28,29,30 ⋆ u - pile positions for the 4 - Wythoff game with i=3. • a(n) = floor((n + 3 / 4) * (sqrt(5) - 1)). - _ R. J. Mathar _ , Feb 14 2011 •
▶ [A047203] 0,2,3,4,5,7,8,9,10,12,13,14,15,17,18,19,20,22,23,24,25,27,28,29,30 ⋆ Numbers that are congruent to { 0, 2, 3, 4 } mod 5. • a(n) = floor((5n - 2) / 4). - _ Gary Detlefs _ , Mar 06 2010 • a(n) = floor((15n - 5) / 12). - _ Gary Detlefs _ , Mar 07 2010 • a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. • a(n) = (10 * n - 7 + (- 1) ^ n + 2 * (- 1) ^ ((2 * n + 3 + (- 1) ^ n) / 4)) / 8. •
▶ [A107750] 0,1,2,3,4,5,7,8,9,11,12,13,15,16,17,19,20,21,23,24,25,27,28,29,31 ⋆ If n=0 then 0, else smallest number greater than its predecessor and having either more or fewer zeros in its binary representation. • a(n) = n - sign(floor(n / 3)) + floor((1 / 2) * sum _{ i=1..n } (ceiling((i + 2) / 3) - floor((i + 2) / 3))). - _ Wesley Ivan Hurt _ , Jun 16 2014 • a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>3. •
▶ [A079734] 2,3,4,5,7,8,9,11,12,13,20,21,33,34,54,55,88,89,143,144,232,233,376,377,609 ⋆ n for which there is a chain (or permutation) of the numbers from 1 to n for which each adjacent pair sums to a Fibonacci number. • a(n) = 2 * a(n - 2) - a(n - 6) for n>14. - _ Colin Barker _ , Dec 02 2014 •
▶ [A366142] 1,2,3,4,5,7,8,9,11,12,16,17,18,19,20,23,25,27,28,31,32,36,37,44,45 ⋆ Matula - Goebel numbers of rooted trees which are symmetrical about a straight line passing through the root. • a(1) = 1; k > 1 is a term iff (k / p ^ 2 is a term for some p) OR (k = prime(j) where j is a term). •
▶ [A078174] 2,3,4,5,7,8,9,11,13,15,16,17,19,21,23,25,27,29,31,32,33,35,37,39,41 ⋆ Numbers with an integer arithmetic mean of distinct prime factors. • a(n) << n log n / (log log n) ^ k for any k. - _ Charles R Greathouse IV _ , May 30 2013 •
▶ [A014567] 1,2,3,4,5,7,8,9,11,13,16,17,19,21,23,25,27,29,31,32,35,36,37,39,41 ⋆ Numbers k such that k and sigma(k) are relatively prime, where sigma(k) = sum of divisors of k (A000203). • a(n) << n log n. Can this be improved? - _ Charles R Greathouse IV _ , Feb 13 2013 • a(n) >> n log log log n, see Luca. - _ Charles R Greathouse IV _ , Feb 17 2014 •
▶ [A289995] 1,2,3,4,5,7,8,9,11,16,17,23,25,27,29,31,41,47,59,71,79,81,101,107,125 ⋆ Numbers n with omega(n) <= 1 such that omega(n + 1) = 1 or omega(n + 2) = 1. • a(n) >> n log ^ 2 n. - _ Charles R Greathouse IV _ , Sep 21 2017 •
▶ [A107684] 0,1,2,3,4,5,7,8,9,15,16,17,31,32,33,63,64,65,127,128,129,255,256,257,511 ⋆ Union of sequences 2 ^ k - 1, 2 ^ k and 2 ^ k + 1. • a(n) = if n<=2 then n else 2 ^ (floor(n / 3) + 1) + n mod 3 - 1. - _ Reinhard Zumkeller _ , Jun 05 2005 •
▶ [A245231] 0,2,3,4,5,7,8,10,10,12,13,14,15,17,18,20,20,22,23,24,25,27,28,30,30 ⋆ Maximum frustration of complete bipartite graph K(n,4). • a(n) = floor(5 * n / 4) - 1 if n == 1, 4 or 5 mod 8, • a(n) = floor(5 * n / 4) otherwise. • a(n + 8) = a(n) + 10. •
▶ [A047503] 0,2,3,4,5,7,8,10,11,12,13,15,16,18,19,20,21,23,24,26,27,28,29,31,32 ⋆ Numbers that are congruent to { 0, 2, 3, 4, 5, 7 } mod 8. • a(n) = a(n - 1) + a(n - 6) - a(n - 7) for n>7. • a(n) = (24 * n - 21 + 3 * cos(n * Pi) + 2 * sqrt(3) * cos((1 + 4 * n) * Pi / 6) - 6 * sin((1 - 2 * n) * Pi / 6)) / 18. • a(6k) = 8k - 1, a(6k - 1) = 8k - 3, a(6k - 2) = 8k - 4, a(6k - 3) = 8k - 5, a(6k - 4) = 8k - 6, a(6k - 5) = 8k - 8. (End) •
▶ [A211540] 0,0,0,0,0,1,1,2,3,4,5,7,8,10,12,14,16,19,21,24,27,30,33,37,40 ⋆ Number of ordered triples (w,x,y) with all terms in { 1..n } and 2w = 3x + 4y. • a(n) = a(n - 1) + a(n - 2) - a(n - 4) - a(n - 5) + a(n - 6). • a(n) = 3 * k ^ 2 - 6 * k + 3 (for n = 6 * k - 3), 3 * k ^ 2 - 5 * k + 2 (for n = 6 * k - 2), 3 * k ^ 2 - 4 * k + 1 (for n = 6 * k - 1), 3 * k ^ 2 - 3 * k + 1 (for n = 6 * k), 3 * k ^ 2 - 2 * k (for n = 6 * k + 1), 3 * k ^ 2 - k (for n = 6 * k + 2). - _ Ece Uslu _ , Esin Becenen, Dec 31 2015 • a(n) = Sum _{ k=1..floor(n / 3) } floor((n - k) / 2) - k. - _ Wesley Ivan Hurt _ , Apr 27 2019 •
▶ [A069905] 0,0,0,1,1,2,3,4,5,7,8,10,12,14,16,19,21,24,27,30,33,37,40,44,48 ⋆ Number of partitions of n into 3 positive parts. • a(n) = round(n ^ 2 / 12). • a(n) = floor((n ^ 2 + 6) / 12). - _ Washington Bomfim _ , Jul 03 2012 • a(- n) = a(n). - _ Michael Somos _ , Sep 04 2013 • a(n) = a(n - 1) + a(n - 2) - a(n - 4) - a(n - 5) + a(n - 6), n>5. - _ Wesley Ivan Hurt _ , Oct 16 2015 • a(n) = floor((n ^ 2 + k) / 12) for all integers k such that 3 <= k <= 7. - _ Giacomo Gugliери _ , Apr 03 2019 • a(n) = Sum _{ k=1..floor(n / 3) } Sum _{ i=k..floor((n - k) / 2) } 1. •
▶ [A001399] 1,1,2,3,4,5,7,8,10,12,14,16,19,21,24,27,30,33,37,40,44,48,52,56,61 ⋆ a(n) is the number of partitions of n into at most 3 parts; also partitions of n + 3 in which the greatest part is 3; also number of unlabeled multigraphs with 3 nodes and n edges. • a(n) = round((n + 3) ^ 2 / 12). Note that this cannot be of the form (2 * i + 1) / 2, so ties never arise. • a(n) = 1 + a(n - 2) + a(n - 3) - a(n - 5) for all n in Z. - _ Michael Somos _ , Sep 04 2006 • a(n) = a(- 6 - n) for all n in Z. - _ Michael Somos _ , Sep 04 2006 • a(n) = 6 * t(floor(n / 6)) + (n % 6) * (floor(n / 6) + 1) + (n mod 6 == 0?1:0), where t(n) = n * (n + 1) / 2. • a(n) = ceiling(1 / 12 * n ^ 2 + 1 / 2 * n) + (n mod 6 == 0?1:0). • a(n) = Sum _{ i=0..floor(n / 3) } 1 + floor((n - 3 * i) / 2). - _ Jon Perry _ , Jun 27 2003 •
▶ [A008758] 1,1,2,3,4,5,7,8,10,12,14,16,19,21,24,28,31,35,40,44,49,55,60,66,73 ⋆ Expansion of (1 + x ^ 15) / ((1 - x) * (1 - x ^ 2) * (1 - x ^ 3)). • a(n) = (6 * n ^ 2 - 54 * n + 452 + 8 * (- 1) ^ n * cos(n * Pi / 3) + 8 * cos(2 * n * Pi / 3)) / 36 for n>9. - _ G. C. Greubel _ , Aug 09 2019 •
▶ [A008757] 1,1,2,3,4,5,7,8,10,12,14,16,19,21,25,28,32,36,41,45,51,56,62,68,75 ⋆ Expansion of (1 + x ^ 14) / ((1 - x) * (1 - x ^ 2) * (1 - x ^ 3)). • a(n) = (6 * (n - 4) ^ 2 + 287 + 9 * (- 1) ^ n + 8 * (- 1) ^ n * cos((n - 2) * Pi / 3) + 8 * cos(2 * n * Pi / 3)) / 36 for n >= 9. - _ G. C. Greubel _ , Aug 04 2019 •
▶ [A008755] 1,1,2,3,4,5,7,8,10,12,14,16,20,22,26,30,34,38,44,48,54,60,66,72,80 ⋆ Expansion of (1 + x ^ 12) / ((1 - x) * (1 - x ^ 2) * (1 - x ^ 3)). • a(n) = (6 * n ^ 2 - 36 * n + 263 + 9 * (- 1) ^ n + 16 * (- 1) ^ n * cos(n * Pi / 3)) / 36 for n >=7. - _ G. C. Greubel _ , Aug 04 2019 •
▶ [A029006] 1,1,2,3,4,5,7,8,10,12,14,16,20,22,26,30,34,38,44,48,54,60,66,72,81 ⋆ Expansion of 1 / ((1 - x)(1 - x ^ 2)(1 - x ^ 3)(1 - x ^ 12)). • a(0)=1, a(1)=1, a(2)=2, a(3)=3, a(4)=4, a(5)=5, a(6)=7, a(7)=8, a(8)=10, a(9)=12, a(10)=14, a(11)=16, a(12)=20, a(13)=22, a(14)=26, a(15)=30, a(16)=34, a(17)=38, a(n)=a(n - 1) + a(n - 2) - a(n - 4) - a(n - 5) + a(n - 6) + a(n - 12) - a(n - 13) - a(n - 14) + a(n - 16) + a(n - 17) - a(n - 18). - _ Harvey P. Dale _ , Nov 01 2015 •

► [A008754] 1,1,2,3,4,5,7,8,10,12,14,17,20,23,27,31,35,40,45,50,56,62,68,75,82 ⋆ Expansion of (1 + x ^ 11) / ((1 - x) * (1 - x ^ 2) * (1 - x ^ 3)). ● a(n) = (3 * (n - 1) * (n - 4) + 94 - 2 * cos(2 * n * Pi / 3) - 2 * sqrt(3) * sin(2 * n * Pi / 3) + 4 * (- 1) ^ n * cos(n * Pi / 3)) / 18 for n >=6. - _ G. C. Greubel _ , Aug 04 2019 ●

► [A008753] 1,1,2,3,4,5,7,8,10,12,15,17,21,24,28,32,37,41,47,52,58,64,71,77,85 ⋆ Expansion of (1 + x ^ 10) / ((1 - x) * (1 - x ^ 2) * (1 - x ^ 3)). ● a(n) = (6 * (n - 2) ^ 2 + 143 + 4 * cos(2 * n * Pi / 3) + 4 * sqrt(3) * sin(2 * n * Pi / 3) + 9 * (- 1) ^ n) / 36 for n >= 5. - _ G. C. Greubel _ , Aug 04 2019 ●

► [A029004] 1,1,2,3,4,5,7,8,10,12,15,17,21,24,28,32,37,41,47,52,59,65,73,80,89 ⋆ Expansion of 1 / ((1 - x)(1 - x ^ 2)(1 - x ^ 3)(1 - x ^ 10)). ● a(0)=1, a(1)=1, a(2)=2, a(3)=3, a(4)=4, a(5)=5, a(6)=7, a(7)=8, a(8)=10, a(9)=12, a(10)=15, a(11)=17, a(12)=21, a(13)=24, a(14)=28, a(15)=32, a(n)=a(n - 1) + a(n - 2) - a(n - 4) - a(n - 5) + a(n - 6) + a(n - 10) - a(n - 11) - a(n - 12) + a(n - 14) + a(n - 15) - a(n - 16). - _ Harvey P. Dale _ , Jun 01 2013 ● a(n) = floor((2 * n ^ 3 + 48 * n ^ 2 + 327 * n + 927 + 9 * (n + 1) * (- 1) ^ n) / 720). - _ Tani Akinari _ , Jul 07 2013 ●

► [A029003] 1,1,2,3,4,5,7,8,10,13,15,18,22,25,29,34,38,43,50,55,62,70,77,85,95 ⋆ Expansion of 1 / ((1 - x)(1 - x ^ 2)(1 - x ^ 3)(1 - x ^ 9)). ● a(n) = floor(2 / 27 * (floor(n / 3) + 1) * cos(2 * Pi * n / 3) + (2 * n ^ 3 + 45 * n ^ 2 + 290 * n + 744) / 648). - _ Tani Akinari _ , Jul 07 2013 ●

► [A062890] 0,0,0,0,1,1,1,2,3,4,5,7,8,11,12,16,18,23,24,31,33,41,43,53,55 ⋆ Number of quadrilaterals that can be formed with perimeter n. In other words, number of partitions of n into four parts such that the sum of any three is more than the fourth. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) + a(n - 4) - a(n - 5) - a(n - 8) + a(n - 9) - a(n - 10) + a(n - 11) + a(n - 12) - a(n - 13). ● a(n) = Sum _{ k=1..floor(n / 4) } Sum _{ j=k..floor((n - k) / 3) } Sum _{ i=j..floor((n - j - k) / 2) } sign(floor((i + j + k) / (n - i - j - k + 1))). (End) ●

► [A008751] 1,1,2,3,4,5,7,8,11,13,16,19,23,26,31,35,40,45,51,56,63,69,76,83,91 ⋆ Expansion of (1 + x ^ 8) / ((1 - x) * (1 - x ^ 2) * (1 - x ^ 3)). ● a(n) = floor((n ^ 2 - 2 * n + 18) / 6) for n>2. ● a(n) = a(n - 2) + a(n - 3) - a(n - 5) + 2. ●

► [A116470] 0,1,2,3,4,5,7,8,11,13,18,21,29,34,47,55,76,89,123,144,199,233,322,377,521 ⋆ All distinct Fibonacci and Lucas numbers. ● a(0) = 0, a(1) = 1, a(2) = 2, a(3) = 3, a(4) = 4, a(5) = 5, a(6) = 7, a(n) = a(n - 2) + a(n - 4) for n>6. ● a(2 * n) = Lucas(n + 1) = Fibonacci(n) + Fibonacci(n + 2) for n>1. ● a(2 * n + 1) = Fibonacci(n + 3) for n>2. ● a(n) = FL((n + 2 + 3 * (n mod 2)) / 2, n mod 2, 1 / 2)) for n >= 3. Here FL(n, a, b) = hypergeom([a - n / 2, b - n / 2], [1 - n], - 4). - _ Peter Luschny _ , Sep 03 2019 ●

► [A309879] 0,0,0,0,0,1,1,2,3,4,5,7,8,11,14,18,22,28,33,40,47,56,65,77,89 ⋆ Number of odd parts appearing among the fourth largest parts of the partitions of n into 5 parts. ● a(n) = Sum _{ l=1..floor(n / 5) } Sum _{ k=l..floor((n - l) / 4) } Sum _{ j=k..floor((n - k - l) / 3) } Sum _{ i=j..floor((n - j - k - l) / 2) } (k mod 2). ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) - 2 * a(n - 4) + a(n - 5) + a(n - 8) - 2 * a(n - 9) + 2 * a(n - 10) - 3 * a(n - 11) + 3 * a(n - 12) - 2 * a(n - 13) + 2 * a(n - 14) - a(n - 15) - a(n - 18) + 2 * a(n - 19) - a(n - 20) + a(n - 21) - 2 * a(n - 22) + a(n - 23) for n>22. ●

► [A258085] 0,1,2,3,4,5,7,8,12,13,20,21,33,34,54,55,88,89,143,144,232,233,376,377,609 ⋆ Strictly increasing list of F and F - 1, where F = A000045, the Fibonacci numbers. ● a(n) = 2 * a(n - 2) - a(n - 6) for n>8. ●

► [A309708] 0,0,0,0,1,1,2,3,4,5,7,8,13,15,20,25,31,36,45,51,65,74,89,103,121 ⋆ Sum of the odd parts appearing among the smallest parts of the partitions of n into 4 parts. ● a(n) = Sum _{ k=1..floor(n / 4) } Sum _{ j=k..floor((n - k) / 3) } Sum _{ i=j..floor((n - j - k) / 2) } k * (k mod 2). ● a(n) = a(n - 1) + a(n - 2) - a(n - 4) - a(n - 5) + a(n - 6) + 2 * a(n - 8) - 2 * a(n - 9) - 2 * a(n - 10) + 2 * a(n - 12) + 2 * a(n - 13) - 2 * a(n - 14) - a(n - 16) + a(n - 17) + a(n - 18) - a(n - 20) - a(n - 21) + a(n - 22) for n > 21. ●

► [A309880] 0,0,0,0,0,1,1,2,3,4,5,7,8,13,18,26,34,46,57,72,87,110,133,165,201 ⋆ Sum of the odd parts appearing among the fourth largest parts in the partitions of n into 5 parts. ● a(n) = Sum _{ l=1..floor(n / 5) } Sum _{ k=l..floor((n - l) / 4) } Sum _{ j=k..floor((n - k - l) / 3) } Sum _{ i=j..floor((n - j - k - l) / 2) } k * (k mod 2). ● a(n) = 3 * a(n - 1) - 4 * a(n - 2) + 4 * a(n - 3) - 4 * a(n - 4) + 4 * a(n - 5) - 4 * a(n - 6) + 4 * a(n - 7) - 2 * a(n - 8) - 2 * a(n - 9) + 6 * a(n - 10) - 10 * a(n - 11) + 12 * a(n - 12) - 12 * a(n - 13) + 12 * a(n - 14) - 12 * a(n - 15) + 11 * a(n - 16) - 9 * a(n - 17) + 4 * a(n - 18) + 4 * a(n - 19) - 9 * a(n - 20) + 11 * a(n - 21) - 12 * a(n - 22) + 12 * a(n - 23) - 12 * a(n - 24) + 12 * a(n - 25) - 10 * a(n - 26) + 6 * a(n - 27) - 2 * a(n - 28) - 2 * a(n - 29) + 4 * a(n - 30) - 4 * a(n - 31) + 4 * a(n - 32) - 4 * a(n - 33) + 4 * a(n - 34) - 4 * a(n - 35) + 3 * a(n - 36) - a(n - 37) for n > 36. ●

► [A047504] 1,2,3,4,5,7,9,10,11,12,13,15,17,18,19,20,21,23,25,26,27,28,29,31,33 ⋆ Numbers that are congruent to { 1, 2, 3, 4, 5, 7 } mod 8. ● a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - 2 * a(n - 4) + 2 * a(n - 5) - a(n - 6) for n>6. ● a(n) = (12 * n - 9 + sqrt(3) * (3 * sin(n * Pi / 3) + sin(2 * n * Pi / 3))) / 9. ● a(6k) = 8k - 1, a(6k - 1) = 8k - 3, a(6k - 2) = 8k - 4, a(6k - 3) = 8k - 5, a(6k - 4) = 8k - 6, a(6k - 5) = 8k - 7. (End) ●

► [A047363] 0,2,3,4,5,7,9,10,11,12,14,16,17,18,19,21,23,24,25,26,28,30,31,32,33 ⋆ Numbers that are congruent to { 0, 2, 3, 4, 5 } mod 7. ● a(n) = a(n - 1) + a(n - 5) - a(n - 6). - _ Wesley Ivan Hurt _ , Sep 03 2022 ●

► [A360792] 0,0,1,2,3,4,5,7,9,10,12,15,17,19,22,25,28,31,34,37,41,45,49,53,57 ⋆ Integer portion of area of inscribed circle in a regular polygon having n sides of unit length. ● a(n) = floor((Pi / 4) * (cot(Pi / n) ^ 2)). ●

► [A036408] 0,1,1,1,2,3,4,5,7,9,10,13,15,17,20,23,26,29,33,37,40,45,49,53,58 ⋆ a(n) = ceiling(n ^ 2 / 10). ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 10) - 2 * a(n - 11) + a(n - 12). ●

► [A274583] 1,2,3,4,5,7,9,10,13,16,17,21,25,26,31,36,37,43,49,50,57,64,65,73,81 ⋆ Expansion of (1 + x + x ^ 2 - x ^ 3 - x ^ 4 + x ^ 6) / ((1 - x) ^ 3 * (1 + x + x ^ 2) ^ 2). ● a(n) = a(n - 1) + 2 * a(n - 3) - 2 * a(n - 4) - a(n - 6) + a(n - 7). ● a(n) = 1 + 10 * n / 9 - n ^ 2 / 9 + (n / 3 - 8 / 9) * floor(n / 3) + (n / 3 - 4 / 9) * floor((n + 1) / 3). - _ Vaclav Kotesovec _ , Jun 29 2016 ●

► [A188551] 1,2,3,4,5,7,9,11,12,14,17,20,23,24,27,31,35,39,40,44,49,54,59,60,65 ⋆ Numbers located at angle turns in a pentagonal spiral. ● a(n) = a(n - 1) + 2 * a(n - 5) - 2 * a(n - 6) - a(n - 10) + a(n - 11). ●

► [A184112] 2,3,4,5,7,9,11,12,15,17,19,21,24,27,30,32,36,39,42,45,49,53,57,60,65 ⋆ n + ceiling(n ^ 2 / 16); complement of A184111. ● a(n) = + 2 a(n - 1) - a(n - 2) + a(n - 8) - 2 a(n - 9) + a(n - 10). - R. J. Mathar, Mar 11 2012 ●

► [A032515] 0,1,2,3,4,5,7,9,11,13,15,17,19,21,23,25,28,31,34,37,40,43,46,49,52 ⋆ Sum of the integer part of 5 / 2 - th roots of integers less than or equal to n. ● a(0) = 0, a(n) = a(n - 1) + floor(n ^ (2 / 5)). - _ Alonso del Arte _ , Jun 18 2017 ● a(n) = (5 / 7) * n ^ (7 / 5) + O(n). - _ Charles R Greathouse IV _ , Jun 25 2017 ●

► [A130520] 0,0,0,0,0,1,2,3,4,5,7,9,11,13,15,18,21,24,27,30,34,38,42,46,50 ⋆ a(n) = Sum _{ k=0..n } floor(k / 5). (Partial sums of A002266.) ● a(n) = floor(n / 5) * (2 * n - 3 - 5 * floor(n / 5)) / 2. ● a(n) = floor((n - 1) * (n - 2) / 10). - _ Mitch Harris _ , Sep 08 2008 ● a(n) = round(n * (n - 3) / 10) = ceiling((n + 1) * (n - 4) / 10) = round((n ^ 2 - 3 * n - 1) / 10). - _ Mircea Merca _ , Nov 28 2010 ● a(n) = a(n - 5) + n - 4, n > 4. - _ Mircea Merca _ , Nov 28 2010 ●

► [A005706] 1,2,3,4,5,7,9,11,13,15,18,21,24,27,30,34,38,42,46,50,55,60,65,70,75 ⋆ Number of partitions of 5n into powers of 5. ● a(n) = a(n - 1) + a([n / 5]). ● a(n) = [x ^ (5 * n)] Product _{ k>=0 } 1 / (1 - x ^ (5 ^ k)). - _ Ilya Gutkovskiy _ , Jun 05 2017 ●

► [A008740] 1,2,3,4,5,7,9,11,13,16,19,22,25,28,32,36,40,44,49,54,59,64,69,75,81 ⋆ Molien series for 3 - dimensional group [2 + ,n] = 2 * (n / 2). ● a(n) = a(n - 4) + n. - _ Paul Barry _ , Jul 14 2004 ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 9) - 2 * a(n - 10) + a(n - 11). ● a(n) = floor((n ^ 2 + 6 * n + 12) / 9). - _ Tani Akinari _ , Aug 19 2013 ●

► [A089651] 1,2,3,4,5,7,9,11,13,16,19,22,25,29,33,37,41,46,51,56,61,68,75,82,89 ⋆ Partial sums of the sequence : a(1)=1, a(1), a(1), a(1), a(1), a(2), a(2), a(2), a(2), a(3), a(3), a(3), a(3), a(4), ... each term (not a(1)) repeated 4 times. ● a(n) = a(n - 1) + a(floor((n + 2) / 4)) with a(1)=1. - _ Alois P. Heinz _ , Feb 24 2023 ●

► [A337334] 1,1,2,3,4,5,7,9,11,14,16,21,24,30,35,42,48,58,67,78,91,103,121,138,158 ⋆ a(n) = pi(b(n)), where pi is the prime counting function (A000720) and b(n) = a(n - 1) + b(n - 1) with a(0) = b(0) = 1. ● a(n) = pi(b(n)), where b(n) = a(n - 1) + b(n - 1) with a(0) = b(0) = 1. ●

► [A076677] 1,1,2,3,4,5,7,9,11,14,17,20,24,28,32,37,42,48,54,60,67,74,82,90,99 ⋆ a(0)=a(1)=1 a(n)=a(n - 1) + floor(sqrt(a(n - 2))). ● a(n) is asymptotic to n ^ 2 / 4 ●

► [A029001] 1,1,2,3,4,5,7,9,11,14,17,20,24,28,33,38,44,50,57,64,72,81,90,100,111 ⋆ Expansion of 1 / ((1 - x)(1 - x ^ 2)(1 - x ^ 3)(1 - x ^ 7)). ● a(n) = floor((n + 12) * (2 * n ^ 2 + 15 * n + 42) / 504). - _ Tani Akinari _ , Jul 06 2013 ● a(0)=1, a(1)=1, a(2)=2, a(3)=3, a(4)=4, a(5)=5, a(6)=7, a(7)=9, a(8)=11, a(9)=14, a(10)=17, a(11)=20, a(12)=24, a(n)=a(n - 1) + a(n - 2) - a(n - 4) - a(n - 5) + a(n - 6) + a(n - 7) - a(n - 8) - a(n - 9) + a(n - 11) + a(n - 12) - a(n - 13). - _ Harvey P. Dale _ , Nov 13 2013 ●

► [A279076] 0,1,2,3,4,5,7,9,11,14,17,21,26,32,39,47,57,69,83,100,121,146,176,212,255 ⋆ Maximum starting value of X such that repeated replacement of X with X - ceiling(X / 6) requires n steps to reach 0. ● a(n) = floor(a(n - 1) * 6 / 5) + 1. ●

► [A122129] 1,1,1,2,3,4,5,7,9,12,15,19,24,30,37,46,57,69,84,102,123,148,177,211,252 ⋆ Expansion of 1 + Sum _{ k>0 } x ^ k ^ 2 / ((1 - x)(1 - x ^ 2)...(1 - x ^ (2 k))). ● a(n) is the number of partitions of n into parts that are either odd or = = +- 4 (mod 20). - _ Michael Somos _ , Jun 28 2015 ●

► [A233522] 1,1,1,1,2,3,4,5,7,9,12,16,22,29,38,50,67,89,118,156,207,274,363,481,638 ⋆ Expansion of 1 / (1 - x - x ^ 4 + x ^ 9) in powers of x. ● a(n) = a(n - 1) + a(n - 4) - a(n - 9) for all n in Z. ●

► [A333265] 1,2,3,4,5,7,9,13,17,19,29,37,49,72,73,103,155,193,277,441,527,769,1109,1597,2309 ⋆ Least number k that reaches 1 after n iterations of A071324. ● a(5) = 7 since 7 is the least number that reaches 1 after 5 iterations of A071324: 7 - > 6 - > 4 - > 3 - > 2 - > 1. ●

► [A055167] 1,1,1,1,2,3,4,5,7,9,13,17,23,30,39,50,65,83,107,136,174,219,278,348,437 ⋆ Number of optimal binary prefix - free codes with n words all ending in 1. ● a(n)=sum _{ 0 <= a < n / 3 } sum _{ 0 <= b < n / 3 } g(n, a, b) with for 1 <= n <= 4, g(n, a, b)=1 if a=b=1 and g(n, a, b)=0 otherwise; for n >= 5: g(n, b, 1)=sum _{ a = 0..b, b - a even } g(n - 1, a, b), (b >= 1); g(n, a, b)=g(n - 1, a, b - 1), (2 <= b <= a); g(n, a, b)=g(n - 1, a, b - 1), (b - a >= 2 text { even } , a >= 0); g(n, a, b)=g(n - 1, a + 1, b), (b - a >= 1 text { odd } , a >= 0); g(n, a, b)=0 (otherwise). ●

► [A047502] 2,3,4,5,7,10,11,12,13,15,18,19,20,21,23,26,27,28,29,31,34,35,36,37,39 ⋆ Numbers that are congruent to { 2, 3, 4, 5, 7 } mod 8. ● a(n) = a(n - 1) + a(n - 5) - a(n - 6) for n > 6, a(n) = a(n - 5) + 8 for n > 5. ● a(n) = (40 * n - 15 - 2 * (n mod 5) + 3 * ((n + 1) mod 5) + 3 * ((n + 2) mod 5) + 3 * ((n + 3) mod 5) - 7 * ((n + 4) mod 5)) / 25. ● a(5k) = 8k - 1, a(5k - 1) = 8k - 3, a(5k - 2) = 8k - 4, a(5k - 3) = 8k - 5, a(5k - 4) = 8k - 6. (End) ●

► [A144430] 2,3,4,5,7,10,11,13,16,17,19,22,23,25,28,29,31,34,35,37,40,41,43,46,47 ⋆ a(n) = 1 + A144429(n). ● a(n) = a(n - 3) + 6, n > 5. ●

► [A089597] 1,1,1,2,3,4,5,7,10,12,14,18,23,27,31,38,46,52,59,69,80,90,100,114,130 ⋆ G.f.: (1 + x) * (1 + x ^ 3) * (1 + x ^ 5) * (1 + x ^ 7) / ((1 - x ^ 2) * (1 - x ^ 4) * (1 - x ^ 6) * (1 - x ^ 8)). ● a(n)= + 3 * a(n - 1) - 5 * a(n - 2) + 8 * a(n - 3) - 11 * a(n - 4) + 13 * a(n - 5) - 15 * a(n - 6) + 16 * a(n - 7) - 15 * a(n - 8) + 13 * a(n - 9) - 11 * a(n - 10) + 8 * a(n - 11) - 5 * a(n - 12) + 3 * a(n - 13) - a(n - 14). - _ R. J. Mathar _ , Dec 18 2014 ●

► [A052335] 1,1,1,2,3,4,5,7,10,13,17,22,28,36,46,58,73,91,114,141,173,213,261,318,387 ⋆ Number of partitions of n into at most 1 copy of 1, 2 copies of 2, 3 copies of 3, ... ● a(n) = p(n,1,1) with p(n,t,k) = if t<0 then 0 else if k<=n then p(n - k,t - 1,k) + p(n,k + 1,k + 1) else 0 ^ n. - _ Reinhard Zumkeller _ , Jan 20 2010 ●

► [A193771] 1,1,1,2,3,4,5,7,10,13,17,23,31,41,54,72,96,127,168,223,296,392,519,688,912 ⋆ Expansion of 1 / (1 - x - x ^ 3 + x ^ 6) in powers of x. ● a(n) = a(n - 1) + a(n - 3) - a(n - 6) for all n in Z. ●

► [A160333] 1,1,1,1,2,3,4,5,7,10,13,17,23,32,44,59,79,107,146,198,267,361,490,665,900 ⋆ Number of pairs of rabbits in month n in the dying rabbits problem, if they become mature after 4 months and give birth to exactly 7 pairs, one per m

onth. • a(n) = a(n - 1) - a(n - 2) + a(n - 3) + a(n - 5) + a(n - 7) + a(n - 9). - _ Joerg Arndt _ , Oct 04 2017 • a(n)=1 for 0 <= n <= 3, a(n) = a(n - 1) + a(n - 4) for 4 <= n <= 9, and a(n) = a(n - 4) + a(n - 5) + ... + a(n - 10) for n >= 10. - _ Robert FERREOL _ , Oct 04 2017 •

▶ [A271489] 1,2,3,4,5,7,10,13,18,25,34,46,64,85,117,163,217,298,415,553,759,1057,1408,1933,2692 ⋆ Maximal term of TRIP - Stern sequence of level n corresponding to permutation triple (e,132,e). • a(n) = 2 * a(n - 3) + a(n - 6) + a(n - 9) for n>8. •

▶ [A255216] 1,1,1,2,3,4,5,7,10,14,18,25,34,45,61,82,110,147,198,266,357,479,642,862,1156 ⋆ a(n) = floor((3 / sqrt(5)) ^ n). • a(n) = floor((3 / sqrt(5)) ^ n). •

▶ [A099559] 0,1,2,3,4,5,7,10,14,19,25,33,44,59,79,105,139,184,244,324,430,570,755,1000,1325 ⋆ a(n) = Sum _{ k=0..floor(n / 5) } C(n - 4k,k + 1). • a(n) = 2a(n - 1) - a(n - 2) + a(n - 5) - a(n - 6). •

▶ [A247084] 0,1,1,1,1,2,3,4,5,7,10,14,19,26,27,32,42,50,59,64,70,75,89,99,106 ⋆ a(n)=0 when n<=0: Starting with n=1, a(n) = 1 + the sum of the digital sums of a(0) through a(n - 4). • a(n) = 1 + Sum _{ k=0..n - 4 } digsum(a(k)). • a(n) = a(n - 1) + digsum(a(n - 4)). •

▶ [A003269] 0,1,1,1,1,2,3,4,5,7,10,14,19,26,36,50,69,95,131,181,250,345,476,657,907 ⋆ a(n) = a(n - 1) + a(n - 4) with a(0) = 0, a(1) = a(2) = a(3) = 1. • a(n) = a(n - 3) + a(n - 4) + a(n - 5) + a(n - 6) for n>4. • a(n) = floor(d * c ^ n + 1 / 2) where c is the positive real root of - x ^ 4 + x ^ 3 + 1 and d is the positive real root of 283 * x ^ 4 - 18 * x ^ 2 - 8 * x - 1 (c=1.38027756909761411... and d= 0.3966506381592033124...). - _ Benoit Cloitre _ , Nov 30 2002 • a(n) = term (1,2) in the 4 X 4 matrix [1,1,0,0; 0,0,1,0; 0,0,0,1; 1,0,0,0] ^ n. - _ Alois P. Heinz _ , Jul 27 2008 • a(n + 1) = Sum _{ k=0..n } C((n + 3 * k) / 4,k) * ((1 + (-1) ^ (n - k)) / 2 + cos(Pi * n / 2)) / 2; • a(n + 1) = Sum _{ k=0..n } C(k,floor((n - k) / 3))(2 * cos(2 * Pi * (n - k) / 3) + 1) / 3. (End) • a(n) = Sum _{ j=0..(n - 1) / 3 } binomial(n - 1 - 3 * j,j) (cf. A180184). - _ Vladimir Kruchinin _ , May 23 2011 •

▶ [A367794] 1,1,1,1,1,2,3,4,5,7,10,14,19,26,36,50,69,95,131,181,250,346,478,660,911 ⋆ G.f. A(x) satisfies A(x) = 1 / (1 - x * A(x ^ 4)). • a(0) = 1; a(n) = Sum _{ k=0..floor((n - 1) / 4) } a(k) * a(n - 1 - 4 * k). •

▶ [A206739] 1,1,1,1,1,2,3,4,5,7,10,14,19,26,37,52,72,99,138,193,269,373,518,722,1006 ⋆ G.f.: 1 / (1 - x / (1 - x ^ 4 / (1 - x ^ 9 / (1 - x ^ 16 / (1 - x ^ 25 / (1 - x ^ 36 / (1 - ... - x ^ (n ^ 2) / (1 - ...))))))), a continued fraction. • a(n) = sum(k=0..n, T(n,k)), where T(n, m)=sum(i=1..(n - m) / 3, binomial(m, i) * T((n - m) / 3,i)), T(n,n)=1. - _ Vladimir Kruchinin _ , Mar 21 2015 •

▶ [A275174] 1,1,1,1,1,1,1,1,2,3,4,5,7,10,14,33,53,74,96,141,209,300,714,1151,1611 ⋆ a(n) = (a(n - 4) + a(n - 1) * a(n - 7)) / a(n - 8), a(0) = a(1) = ... = a(7) = 1. • a(n) = 23 * a(n - 7) - 23 * a(n - 14) + a(n - 21). •

▶ [A130080] 1,2,3,4,5,7,10,15,22,32,47,69,100,147,216,317,465,682,1000,1468,2155,3163,4642,6813,10000 ⋆ Smallest number whose sixth power has n digits. • a(n) = ceiling(10 ^ ((n - 1) / 6)). •

▶ [A006456] 1,1,1,1,2,3,4,5,7,11,16,22,30,43,62,88,124,175,249,354,502,710,1006,1427,2024 ⋆ Number of compositions (ordered partitions) of n into squares. • a(n) = 1, if n = 0; a(n)=Sum(1 <= k ^ 2 <= n, a(n - k ^ 2)), if n > 0. - _ David W. Wilson _ •

▶ [A143284] 0,0,0,0,0,0,1,2,3,4,5,7,11,17,25,35,48,66,92,129,180,249,342,468,640 ⋆ Number of binary words of length n containing at least one subword 100001 and no subwords 10 ^{ i } 1 with i<4. • a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 5) - a(n - 7) - a(n - 11). - _ Vincenzo Librandi _ , Jun 05 2013 •

▶ [A268199] 1,1,1,1,1,1,1,1,2,3,4,5,7,13,25,45,125,233,419,805,2252,8343,23554,55889 ⋆ Somos's sequence { b(3,n) } defined in comment in A078495: a(0)=a(1)=...=a(8)=1; for n>=9, a(n)=(a(n - 1) * a(n - 8) + a(n - 4) * a(n - 5)) / a(n - 9). • a(n) = a(8 - n) for all n in Z. - _ Michael Somos _ , Nov 16 2016 •

▶ [A133476] 0,1,2,3,4,5,7,14,36,93,220,474,948,1807,3381,6385,12393,24786,50559,103702,211585,427351,854702,1698458,3368259 ⋆ a(n) = Sum _{ k>=0 } binomial(n,5 * k + 1). • a(n) = 5a(n - 1) - 10a(n - 2) + 10a(n - 3) - 5a(n - 4) + 2a(n - 5). • a(n) = round((2 / 5) * (2 ^ (n - 1) + phi ^ n * cos(Pi * (n - 2) / 5))), where phi is the golden ratio, round(x) is the nearest to x integer. - _ Vladimir Shevelev _ , Jun 18 2017 • a(n + m) = a(n) * H _ 1(m) + H _ 1(n) * H _ 2(m) + H _ 5(n) * H _ 3(m) + H _ 4(n) * H _ 4(m) + H _ 3(n) * H _ 5(m), where H _ 1=A139398, H _ 3=A139714, H _ 4=A139748, H _ 5=A139761. - _ Vladimir Shevelev _ , Jun 18 2017 •

▶ [A131023] 1,2,3,4,5,7,14,37,101,256,593,1267,2534,4825,8921,16384,30581,58975,117950,242461,504605,1048576,2156201,4371451,8742902 ⋆ First subdiagonal of triangular array T: T(j,1) = 1 for ((j - 1) mod 6) < 3, else 0; T(j,k) = T(j - 1,k - 1) + T(j - 1,k) for 2 <= k <= j. • a(1) = 1, a(2) = 2, a(3) = 3, a(4) = 4; for n > 4, a(n) = 5 * a(n - 1) - 9 * a(n - 2) + 6 * a(n - 3). •

▶ [A373961] 1,2,3,4,5,7,15,44,129,340,804,1742,3550,7009,13835,28033,58993,128136,282569,622575,1357136,2918449,6204578,13104675,27646776 ⋆ Number of compositions of 6 * n - 1 into parts 5 and 6. • a(n) = Sum _{ k=0..floor(n / 5) } binomial(n + k,n - 1 - 5 * k). • a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 7 * a(n - 5) - a(n - 6). •

▶ [A171979] 1,1,2,3,4,5,8,8,12,14,19,21,30,31,42,50,62,69,91,99,126,144,175,198,246 ⋆ Number of partitions of n such that smaller parts do not occur more frequently than greater parts. • a(n) = p(n,0,1,1) with p(n,i,j,k) = if k<=n then p(n - k,i,j + 1,k) + p(n,max(i,j),1,k + 1) else (if j<i or n>0 then 0 else 1). •

▶ [A047602] 0,1,2,3,4,5,8,9,10,11,12,13,16,17,18,19,20,21,24,25,26,27,28,29,32 ⋆ Numbers that are congruent to { 0, 1, 2, 3, 4, 5 } mod 8. • a(n) = floor((8 / 7) * floor(7 * (n - 1) / 6)). - _ Bruno Berselli _ , May 03 2016 • a(n) = a(n - 1) + a(n - 6) - a(n - 7) for n>7. • a(n) = (24 * n - 39 - 3 * cos(n * Pi) - 4 * sqrt(3) * cos((4 * n + 1) * Pi / 6) - 12 * sin((1 - 2 * n) * Pi / 6)) / 18. • a(6k) = 8k - 3, a(6k - 1) = 8k - 4, a(6k - 2) = 8k - 5, a(6k - 3) = 8k - 6, a(6k - 4) = 8k - 7, a(6k - 5) = 8k - 8. (End) •

▶ [A047369] 1,2,3,4,5,8,9,10,11,12,15,16,17,18,19,22,23,24,25,26,29,30,31,32,33 ⋆ Numbers that are congruent to { 1, 2, 3, 4, 5 } mod 7. • a(n) = a(n - 1) + a(n - 5) - a(n - 6) for n > 6, a(n) = a(n - 5) + 7 for n > 5. • a(n) = n + 2 * floor((n - 1) / 5), a(n) = 7 * n / 5 - 2 * (1 + ((n + 4) mod 5)) / 5. • a(5 * k) = 7 * k - 2, a(5 * k - 1) = 7 * k - 3, a(5 * k - 2) = 7 * k - 4, a(5 * k - 3) = 7 * k - 5, a(5 * k - 4) = 7 * k - 6. (End) •

▶ [A047247] 2,3,4,5,8,9,10,11,14,15,16,17,20,21,22,23,26,27,28,29,32,33,34,35,38 ⋆ Numbers that are congruent to { 2, 3, 4, 5 } (mod 6). • a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. • a(n) = (6 * n - 1 - i ^ (2 * n) - (1 - i) * i ^ (- n) - (1 + i) * i ^ n) / 4 where i = sqrt(- 1). • a(n) = (6 * n - 1 - (- 1) ^ n - 2 * (- 1) ^ (n * (n + 1) / 2)) / 4. • a(n) = a(n - 4) + 6, a(1)=2, a(2)=3, a(3)=4, a(4)=5, for n > 4. •

▶ [A087278] 0,1,2,3,4,5,8,9,10,15,16,17,24,25,26,35,36,37,48,49,50,63,64,65,80 ⋆ Nonnegative integers whose distance to the nearest square is not greater than 1. • a(n) = floor(n / 3) * (floor(n / 3) + 2) + n mod 3. •

▶ [A029000] 1,1,2,3,4,5,8,9,12,15,18,21,27,30,36,42,48,54,64,70,80,90,100,110,125 ⋆ Expansion of 1 / ((1 - x)(1 - x ^ 2)(1 - x ^ 3)(1 - x ^ 6)). • a(n) = floor(1 / 18 * (- 3 * floor((n + 2) / 3) + 3 * floor(n / 3) + 2) * (floor(n / 3) + 1) + 1 / 432 * (n + 6) * (2 * n ^ 2 + 24 * n + 47 + 9 * (- 1) ^ n) + 7 / 36). - _ Tani Akinari _ , Jul 04 2013 •

▶ [A094103] 1,1,2,3,4,5,8,9,13,16,22,26,37,43,60,71,98,115,160,187,259,304,420,492,681 ⋆ a(n) = sum along n - th diagonal of A094102 (sloping downward to left). • a(1)=1, a(2)=1, a(3)=2, a(4)=3, a(5)=4, a(6)=5, a(7)=8, a(n)=a(n - 2) + a(n - 3) + a(n - 4) - a(n - 5) - a(n - 7) [From Harvey P. Dale, Oct 09 2011] •

▶ [A047597] 0,2,3,4,5,8,10,11,12,13,16,18,19,20,21,24,26,27,28,29,32,34,35,36,37 ⋆ Numbers that are congruent to { 0, 2, 3, 4, 5 } mod 8. • a(n) = a(n - 1) + a(n - 5) - a(n - 6) for n > 6. • a(n) = a(n - 5) + 8 for n > 5. • a(n) = (40 * n - 50 + 3 * (n mod 5) + 3 * ((n + 1) mod 5) + 3 * ((n + 2) mod 5) - 2 * ((n + 3) mod 5) - 7 * ((n + 4) mod 5)) / 25. • a(5k) = 8k - 3, a(5k - 1) = 8k - 4, a(5k - 2) = 8k - 5, a(5k - 3) = 8k - 6, a(5k - 4) = 8k - 8. (End) •

▶ [A369152] 1,2,3,4,5,8,10,12,14,18,25,28,31,38,44,50,57,64,69,76,88,96,102,114,125 ⋆ Total number of digits in row n of Pascal's triangle. • a(n) = 1 + n + Sum _{ k=0..n } floor(log _ 10(C(n,k))). •

▶ [A211544] 0,0,0,1,2,3,4,5,8,10,12,15,17,21,25,28,32,36,41,46,51,56,61,68,74 ⋆ Number of ordered triples (w,x,y) with all terms in { 1,...,n } and 2w=3x - 5y. • a(n) = a(n - 1) + a(n - 3) - a(n - 4) + a(n - 5) - a(n - 6) - a(n - 8) + a(n - 9). •

▶ [A110539] 1,1,2,3,4,5,8,10,15,23,35,58,101,193,381,817,1820,4298,10550,27037,71715,197062,558923,1635948,4932931 ⋆ Diagonal sums of A110537 viewed as a number triangle. • a(n) = Sum _{ k=1..floor((n + 1) / 2) } Sum _{ j=1..min(n - 2k + 2, k) } ceiling(j ^ (n - 2k + 2) / (n - 2k + 2) ^ j) * ceiling(j ^ k / k ^ j). •

▶ [A186041] 2,3,4,5,8,11,13,14,17,18,20,23,25,26,28,29,32,33,35,38,39,41,43,44,46 ⋆ Numbers of the form 3 * k + 2, 5 * k + 3, or 7 * k + 4. • a(n) = a(n - 57) + 105. • a(n) = a(n - 1) + a(n - 57) - a(n - 58). •

▶ [A008812] 1,2,3,4,5,8,11,14,17,20,25,30,35,40,45,52,59,66,73,80,89,98,107,116,125 ⋆ Expansion of (1 + x ^ 5) / ((1 - x) ^ 2 * (1 - x ^ 5)). • a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 5) - 2 * a(n - 6) + a(n - 7). - _ R. H. Hardin _ , Nov 16 2011 •

▶ [A008825] 1,2,3,4,5,8,11,14,17,22,27,32,37,42,49,56,63,70,79,88,97,106,115,126,137 ⋆ Expansion of (1 + 2 * x ^ 5 + x ^ 9) / ((1 - x) ^ 2 * (1 - x ^ 9)). • a(n) = floor((2 * n ^ 2 + 3 * n + 9) / 9) + ((n - 3) mod 9) - ((n - 1) mod 9) + 2) / 9. - _ G. C. Greubel _ , Sep 13 2019 • a(n) = 1 + floor(n * (2 * n + 3) / 9) + [mod(n - 1,9)<2], where [] is the Iverson bracket. - _ Michel Marcus _ , Sep 14 2019 •

▶ [A135318] 1,1,1,2,3,4,5,8,11,16,21,32,43,64,85,128,171,256,341,512,683,1024,1365,2048,2731 ⋆ The Kentucky - 2 sequence: a(n) = a(n - 2) + 2 * a(n - 4), with a[0..3] = [1, 1, 1, 2]. • a(n) = ((((- i) ^ (n + 1) - i ^ (n + 1)) * 2 * i * sqrt(2) + 3 * (1 + (- 1) ^ (n + 1)) * 2 ^ ((n + 2) / 2) + (1 - (- 1) ^ (n + 1)) * 2 ^ ((n + 5) / 2)) / (12 * sqrt(2)), where i=sqrt(- 1). (End) • a(2n) = 2 * a(2n - 1) - a(2n - 2); a(2n + 1) = a(2n) + a(2n - 2). - _ Richard R. Forberg _ , Aug 19 2013 •

▶ [A189761] 1,2,3,4,5,8,11,21,29,55,76,144,199,377,521,987,1364,2584,3571,6765,9349,17711,24476,46368,64079 ⋆ Numbers n for which the set of residues { Fibonacci(k) mod n, k=0,1,2,.... } is minimal. • a(n) = 3 * a(n - 2) - a(n - 4) for n > 9. •

▶ [A094087] 1,2,3,4,5,8,12,16,18,20,27,32,38,42,45,56,64,71,76,80,95,104,114,120,125 ⋆ Domination number of the Cartesian product of two n - cycles. • a(5n) = 5n ^ 2. - _ Richard Bean _ , Jun 08 2006 •

▶ [A113439] 1,1,1,1,2,3,4,5,8,12,17,23,34,50,72,101,146,212,306,436,627,905,1305,1871,2689 ⋆ a(n) = a(n - 1) + Sum _{ k=1..floor(n / 4) } a(n - 4k), with a(0)=1. • a(n) = a(n - 1) + 2 * a(n - 4) - a(n - 5). • a(n) = 9 * a(n - 4) - 28 * a(n - 8) + 38 * a(n - 12) - 20 * a(n - 16) + a(n - 20). •

▶ [A292325] 2,3,4,5,8,13,20,29,40,56,80,115,164,230,320,445,620,864,1200,1660,2290,3155,4344,5975,8206 ⋆ p - INVERT of (1,0,0,0,1,0,0,0,0,0,...), where p(S) = (1 - S) ^ 2. • a(n) = 2 * a(n - 1) - a(n - 2) + 2 * a(n - 5) - 2 * a(n - 6) - a(n - 10) for n >= 11. •

▶ [A367692] 1,2,3,4,5,8,13,20,29,43,66,102,155,233,352,536,817,1240,1878,2848,4327,6576,9984,15150,22995 ⋆ G.f. A(x) satisfies A(x) = 1 / ((1 - x) * (1 - x * A(x ^ 4))). • a(n) = 1 + Sum _{ k=0..floor((n - 1) / 4) } a(k) * a(n - 1 - 4 * k). •

▶ [A346073] 1,1,1,1,2,3,4,5,8,13,20,29,45,73,118,185,293,475,778,1263,2047,3345,5512,9085,14957 ⋆ a(n) = 1 + Sum _{ k=0..n - 4 } a(k) * a(n - k - 4). • a(n) = Sum _{ k=0..floor(n / 4) } binomial(n - 3 * k,k) * Catalan(k). - _ Seiichi Manyama _ , Jan 22 2023 •

▶ [A357533] 1,1,1,1,2,3,4,5,8,13,20,29,46,77,128,205,338,581,1012,1733,2990,5293,9536,17117,30778 ⋆ a(n) = Sum _{ k=0..floor(n / 4) } (n - 3 * k)! / (n - 4 * k)!. • a(n) = (3 * a(n - 1) + n * a(n - 4) + 1) / 4 for n > 3. •

▶ [A108014] 0,2,3,4,5,8,14,24,39,62,99,160,260,422,683,1104,1785,2888,4674,7564,12239,19802,32039,51840,83880 ⋆ Expansion of (x ^ 2 - 2 * x) / (x ^ 4 - x ^ 2 + 2 * x - 1). • a(n) = (1 / 2) * [Lucas(n + 1) + 2 * cos((n + 4) * Pi / 3)]. • a(0)=0, a(1)=2, a(2)=3, a(3)=4, a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 4). [_ Harvey P. Dale _ , Aug 19 2011] •

▶ [A047603] 1,2,3,4,5,9,10,11,12,13,17,18,19,20,21,25,26,27,28,29,33,34,35,36,37 ⋆ Numbers that are congruent to { 1, 2, 3, 4, 5 } mod 8. • a(n) = a(n - 1) + a(n - 5) - a(n - 6) for n > 6. • a(n) = a(n - 5) + 8 for n>5. • a(n) = (40 * n - 45 + 3 * (n mod 5) + 3 * ((n + 1) mod 5) + 3 * ((n + 2) mod 5) + 3 * ((n + 3) mod 5) - 12 * ((n + 4) mod 5)) / 25. • a(5k) = 8k - 3, a(5k - 1) = 8k - 4, a(5k - 2) =

8k - 5, a(5k - 3) = 8k - 6, a(5k - 4) = 8k - 7. (End) ● a(n) = n + 3 * floor((n - 1) / 5). - _ Wesley Ivan Hurt _ , Aug 08 2016 ●

▶ [A047362] 2,3,4,5,9,10,11,12,16,17,18,19,23,24,25,26,30,31,32,33,37,38,39,40,44 ⋆ Numbers that are congruent to { 2, 3, 4, 5 } mod 7. ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. ● a(n) = (14 * n - 7 - 3 * (i ^ (2 * n) + (1 - i) * i ^ (- n) + (1 + i) * i ^ n)) / 8 where i=sqrt(- 1). ●

▶ [A081869] 2,3,4,5,9,10,11,21,22,23,45,46,91,92,183,365,729,1457,2913,5825,11649,11650,23299,46597,93193 ⋆ a(1)=2; for n>1, a(n)=2 * a(n - 1) - 1 if that number is composite, a(n)=a(n - 1) + 1 otherwise. ● a(n)=s(n) * 2 ^ c(n) where c(n) is an integer sequence and s(n) converges to 1.422004961641565758470595.... ●

▶ [A038201] 1,1,1,1,1,2,3,4,5,9,12,14,15,29,41,50,55,105,146,175,190,365,511,616,671 ⋆ 5 - wave sequence. ● a(n) = a(n - 1) + a(n - 2) if n=4 * m + 1, a(n) = a(n - 1) + a(n - 4) if n=4 * m + 2, a(n) = a(n - 1) + a(n - 6) if n=4 * m + 3 and a(n) = a(n - 1) + a(n - 8) if n=4 * m. ● a(n) = 3 * a(n - 4) + 3 * a(n - 8) - 4 * a(n - 12) - a(n - 16) + a(n - 20). ● a(n - 1) = sequence(sequence(T(n,k), k=2..5), n>=2) with a(0)=1; T(n,k) = sum(T(n - 1,k1), k1 = 6 - k..5) with T(1,1) = T(1,2) = T(1,3) = T(1,4) = 0 and T(1,5) = 1; n>=1 and 1 <= k <= 5. [Steinbach] ●

▶ [A140298] 1,2,3,4,5,9,13,14,27,40,41,81,121,122,243,364,365,729,1093,1094,2187,3280,3281,6561,9841 ⋆ a(0)=1; a(3n + 1) = a(3n) + 1, a(3n + 2) = a(3n + 1) + a(3n) (=3 * A000244), a(3n + 3) = a(3n + 2) + a(3n) (=A003462(n + 2)). ● a(n) = - a(n - 1) - a(n - 2) + 3 * a(n - 3) + 3 * a(n - 4) + 3 * a(n - 5). ●

▶ [A191321] 1,1,1,1,2,3,4,5,9,14,20,27,47,74,109,153,262,415,622,894,1516,2410,3653,5335,8988 ⋆ Number of dispersed Dyck paths of length n (i.e., Motzkin paths of length n with no (1,0) steps at positive heights) having only ascents of even length (an ascent is a maximal sequence of consecutive (1,1) - steps). ● a(n) = Sum _{ m=0..n } ((m + 1) * Sum _{ i=0..floor((n + 1) / 4) - m - 1) } ((binomial(2 * m + 3 * i + 1,i) * (binomial(n - 3 * (m + 1) - 4 * i,m + 1))) / (m + i + 1))) + 1. - _ Vladimir Kruchinin _ , Mar 12 2016 ●

▶ [A065885] 2,3,4,5,9,25,26,64,169,441,1156,3025,7921,20736,54289,142129,372100,974169,2550409,6677056,17480761,45765225,119814916,313679521,821223649 ⋆ a(n) - 1, a(n) and a(n) + 1 form three consecutive integers that can be factored into Fibonacci numbers. ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - a(n - 3) for n>10. ● a(n) = 3 * a(n - 1) - a(n - 2) - 2 * (- 1) ^ n for n >= 10. - _ Greg Dresden _ , May 18 2020 ●

▶ [A007092] 0,1,2,3,4,5,10,11,12,13,14,15,20,21,22,23,24,25,30,31,32,33,34,35,40 ⋆ Numbers in base 6. ● a(0)=0, a(n) = 10 * a(n / 6) if n==0 (mod 6), and a(n) = a(n - 1) + 1 otherwise. - _ Benoit Cloitre _ , Dec 22 2002 ● a(n) = Sum { d(i) * 10 ^ i: i=0,1,...,m } , where Sum { d(i) * 6 ^ i: i=1,2,...,m } = n, and d(i) in { 0,1,...,5 } . - _ Karol Bacik _ , Sep 25 2012 ●

▶ [A047596] 2,3,4,5,10,11,12,13,18,19,20,21,26,27,28,29,34,35,36,37,42,43,44,45,50 ⋆ Numbers that are congruent to { 2, 3, 4, 5 } mod 8. ● a(n) = 2 * n - 1 - i ^ (n * (n + 1)) - (1 + (- 1) ^ n) / 2, where i=sqrt(- 1). [_ Bruno Berselli _ , Jul 17 2012] ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. ●

▶ [A199502] 1,2,3,4,5,10,11,12,13,18,19,20,21,30,31,36,37,38,39,48,49,54,55,56,57 ⋆ From Janet helicoidal classification of the periodic table. ● a(n + 2) - a(n) = r(n + 1) = 2, 2, 2, 6, 6, 2, 2, n=1,2,3,... ● a(2 * n + 1) - a(2 * n) = 1 = A000012. ●

▶ [A296160] 0,0,0,2,3,4,5,10,12,14,16,24,27,30,33,44,48,52,56,70,75,80,85,102,108 ⋆ Sum of the larger parts of the partitions of n into two parts such that the smaller part is even. ● a(n) = Sum _{ i=1..floor(n / 2) } (n - i) * ((i + 1) mod 2). ● a(n) = a(n - 1) + 2 * a(n - 4) - 2 * a(n - 5) - a(n - 8) + a(n - 9) for n > 9. ● a(n) = (1 / 64) * (12 * n ^ 2 - 28 * n + 10 + (4 * n - 2) * (- 1) ^ n + 4 * (- 1) ^ ((2 * n - 3) / 4 - (- 1) ^ n / 4) - 4 * (2 * n - 1) * (- 1) ^ ((2 * n + 3) / 4 + (- 1) ^ n / 4)). - _ Wesley Ivan Hurt _ , Dec 07 2017 ●

▶ [A140730] 1,2,3,4,5,10,15,20,25,50,75,100,125,250,375,500,625,1250,1875,2500,3125,6250,9375,12500,15625 ⋆ a(4 * n)=5 ^ n, a(4 * n + 1)=2 * 5 ^ n, a(4 * n + 2)=3 * 5 ^ n, a(4 * n + 3)=4 * 5 ^ n. ● a(n + 1) = a(n) + a(n - n mod 4). ● a(n) = (n + 1 - 4 * floor(n / 4)) * 5 ^ floor(n / 4). - _ Luce ETIENNE _ , Aug 05 2015 ● a(n) = 5 * a(n - 4) for n>3; a(n) = n + 1 for n<5. - _ Bruno Berselli _ , Aug 05 2015 ●

▶ [A282032] 1,2,3,4,5,10,15,20,25,50,100,200,300,400,500,600,700,800,900,1000,1100,1200,1300,1400,1500 ⋆ Additive number system based on U.S. coins. ● a(n) = 2 * a(n - 1) - a(n - 2) for n>11. ●

▶ [A369592] 1,1,1,1,2,3,4,5,10,16,23,31,62,102,152,213,426,712,1084,1556,3112,5255,8116,11843,23686 ⋆ Expansion of (1 / x) * Series _ Reversion(x / (1 + x + x ^ 4 / (1 + x) ^ 3)). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 4) } (n - 4 * k + 1) * binomial(n + 1,k). ●

▶ [A033077] 1,2,3,4,5,10,17,18,25,32,61,104,111,154,197,370,629,666,925,1184,2221,3776,3999,5554,7109 ⋆ Numbers in which all pairs of consecutive base - 6 digits differ by 3. ● a(n) = 6 * a(n - 5) + a(n - 10) - 6 * a(n - 15) for n>15. - _ Colin Barker _ , Jun 01 2015 ●

▶ [A190912] 1,2,3,4,5,10,19,36,69,134,263,516,1013,1990,3911,7688,15113,29710,58407,114824,225737,443786,872459,1715208,3372009 ⋆ Partial sums of pentanacci numbers (A000322). ● a(1)=1, a(2)=2, a(3)=3, a(4)=4, a(5)=5, a(6)=10, a(n) =2 * a(n - 1) - a(n - 6) [From Harvey P. Dale, May 23 2011] ●

▶ [A282033] 1,2,3,4,5,10,20,25,50,75,100,200,300,400,500,600,700,800,900,1000,1100,1200,1300,1400,1500 ⋆ An example of a collection of five sets (based on U.S. coinage) which is not an additive number system. ● a(n) = 2 * a(n - 1) - a(n - 2) for n>12. ●

▶ [A111665] 1,2,3,4,5,10,23,56,141,366,955,2496,6529,17090,44739,117124,306629,802762,2101655,5502200,14404941,37712622,98732923,258486144,676725505 ⋆ Expansion of (- 1 + x + 2 * x ^ 2 + 5 * x ^ 4 + 3 * x ^ 3) / ((x - 1) * (x + 1) * (x ^ 2 - 3 * x + 1) * (1 + x ^ 2)). ● a(n) = 3 * a(n - 1) - a(n - 2) + a(n - 4) - 3 * a(n - 5) + a(n - 6) for n>5. - _ Colin Barker _ , May 13 2019 ●

▶ [A111666] 2,3,4,5,10,27,68,173,450,1179,3084,8069,21122,55299,144772,379013,992266,2597787,6801092,17805485,46615362,122040603,319506444,836478725,2189929730 ⋆ Expansion of (- 2 + 3 * x + 3 * x ^ 2 + 4 * x ^ 3 + 3 * x ^ 4 - 5 * x ^ 5) / ((x - 1) * (x + 1) * (1 + x ^ 2) * (x ^ 2 - 3 * x + 1)). ● a(0)=2, a(1)=3, a(2)=4, a(3)=5, a(4)=10, a(5)=27, a(n)=3 * a(n - 1) - a(n - 2) + a(n - 4) - 3 * a(n - 5) + a(n - 6). - _ Harvey P. Dale _ , Jan 24 2015 ●

▶ [A084545] 1,2,3,4,5,11,12,13,14,15,21,22,23,24,25,31,32,33,34,35,41,42,43,44,45 ⋆ Alternate number system in base 5. ● a(n) = Sum _{ j=0..m - 1 } (1 + b(j) mod 5) * 10 ^ j, where m = floor(log _ 5(4 * n + 1)), b(j) = floor((4 * n + 1 - 5 ^ m) / (4 * 5 ^ j)). ● a(k * (5 ^ n - 1) / 4) = k * (10 ^ n - 1) / 9, for k = 1,2,3,4,5. ● a((9 * 5 ^ n - 5) / 4) = (14 * 10 ^ n - 5) / 9 = 10 ^ n + 5 * (10 ^ n - 1) / 9. ● a((5 ^ n - 1) / 4 - 1) = 5 * (10 ^ (n - 1) - 1) / 9, n>1. ● a(n) <= (10 ^ log _ 5(4 * n + 1) - 1) / 9, equality holds for n=(5 ^ k - 1) / 4, k>0. ● a(n) > (5 / 10) * (10 ^ log _ 5(4 * n + 1) - 1) / 9, n>0. ●

▶ [A190783] 1,1,1,1,1,1,1,1,1,2,3,4,5,11,35,143,719,7919,138599,6606599,1187536349,1880820071128,23698161912595167,4473264365531123929334,3714800022905337312526282814729 ⋆ a(n) = (a(n - 1) * a(n - 4) + a(n - 5) * a(n - 8)) / a(n - 9), a(0) = ... = a(8) = 1. ● a(8 - n) = a(n). ●

▶ [A339453] 1,2,3,4,5,12,13,14,15,18,19,26,27,30,53,54,55,100,101,180,203,210,211,378,379 ⋆ Number of subsets of { 1..n } whose harmonic mean is an integer. ● a(n) >= a(n - 1) + 1. For prime p, a(p ^ k) = a(p ^ k - 1) + 1. - _ Chai Wah Wu _ , Dec 14 2020 ●

▶ [A132027] 1,2,3,4,5,12,14,16,27,30,33,48,52,56,75,80,85,216,228,240,294,308,322,384,400 ⋆ a(n) = Product _{ k=0..floor(log _ 3(n)) } floor(n / 3 ^ k), n>=1. ● a(k * 3 ^ m)=k ^ (m + 1) * 3 ^ (m(m + 1) / 2), for k=1 or 2. ● a(n)<=b(n), where b(n)=n ^ (1 + floor(log _ 3(n))) / 3 ^ (1 / 2 * (1 + floor(log _ 3(n))) * floor(log _ 3(n))); equality holds if n is a power of 3 or two times a power of 3. ● a(n)>c * b(n), where c=0.382663196679033023288955 0... (see constant A132019). ● a(n)=O(n ^ ((1 + log _ 3(n)) / 2)). ●

▶ [A175303] 1,2,3,4,5,13,14,43,79,457,458,5145,5146,38237,259920,1702869,1702870,28603827,28603828,402599903,3319634320,34246343007,34246343008 ⋆ a(n) = number of finite sequences using numbers drawn from (1,2,3,...,n), using each number at most once, where each number in a finite sequence is not coprime to the previous number, and each finite sequence must continued if possible. (See example.) ● a(p)=a(p - 1) + 1 for all primes p. ●

▶ [A337559] 1,2,3,4,5,18,19,20,21,22,23,36,37,38,51,52,53,66,67,80,81,82,83,96,97 ⋆ Number of length three 1..n vectors that contain their harmonic mean. ● a(n) - a(n - 1) = 1 (mod 6). ●

▶ [A295317] 0,0,2,3,4,5,18,22,26,30,64,73,82,91,156,172,188,204,310,335,360,385,542,578,614 ⋆ Sum of the products of the smaller and larger parts of the partitions of n into two distinct parts with the smaller part odd. ● a(n) = Sum _{ i=1..floor((n - 1) / 2) } i * (n - i) * (i mod 2). ● a(n) = a(n - 1) + 3 * a(n - 4) - 3 * a(n - 5) - 3 * a(n - 8) + 3 * a(n - 9) + a(n - 12) - a(n - 13) for n>13. ● a(n) = (1 / 384) * (- 1) ^ ((- (- 1) ^ n) / 4) * (((- 2 + 2 * (- 1) ^ n) * ((- 1) ^ ((4 * n + 2 - (- 1) ^ n) / 4) - 6 * (- 1) ^ (1 / 4) * I ^ n + (- 1) ^ ((2 - (- 1) ^ n) / 4)) + 4 * n * (6 * n * (- 1) ^ (1 / 4) * I ^ n + (- 1) ^ ((- 1) ^ n / 4) * (8 - 3 * n * (1 + (- 1) ^ n) + 4 * n ^ 2))) where I=sqrt(- 1). - _ Wesley Ivan Hurt _ , Dec 02 2017 ●

▶ [A237342] 0,1,2,3,4,5,25,225,2225,22225,222225,2222225,22222225,222222225,2222222225,22222222225,222222222225,2222222222225,22222222222225,222222222222225,2222222222222225,22222222222222225,222222222222222225,2222222222222222225,22222222222222222225,222222222222222222225 ⋆ For k in { 2,3,...,9 } define a sequence as follows: a(0)=0; for n>=0, a(n + 1)=a(n) + 1, unless a(n) ends in k, in which case a(n + 1) is obtained by replacing the last digit of a(n) with the digit(s) of k ^ 2. This is k(5). ● a(n) = (25 + 2 * 10 ^ (n - 4)) / 9 for n>4. [_ Bruno Berselli _ , Feb 08 2014] ●

▶ [A298671] 1,1,2,3,4,5,146,4207,26329,257721,3556495,42685181,631230381,9409600499,142557084957,2781352245050,52598395446786,950288577530017,2076836802676859 4,4487590125465438 04,9652848877533217174,23517950769342488643,57562725928378127261 64,140920987987840184113287 ⋆ Number of ordered ways of writing n ^ 3 as a sum of n nonnegative cubes. ● a(n) = [x ^ (n ^ 3)] (Sum _{ k>=0 } x ^ (k ^ 3)) ^ n. ●

▶ [A001096] 0,1,2,3,4,5,726,5047,20168,60489,151210,332651,665292,1235533,2162174,3603615,5765776,8910737,13366098,19535059,27907220,39070101,53721382,72681863,96909144 ⋆ a(n) = n + n * (n - 1) * (n - 2) * (n - 3) * (n - 4) * (n - 5). ● a(n) = n + 6! * binomial(n,6). ●

▶ [A106006] 0,0,1,2,3,4,6,6,7,8,10,10,12,12,13,15,16,16,18,18,20,21,22,22,24 ⋆ [n / 2] + [n / 3] + [n / 5]. ● a(n) = kn + O(1), where k = 31 / 30. - _ Charles R Greathouse IV _ , Dec 04 2013 ●

▶ [A239492] 0,0,2,3,4,6,6,8,9,10,12,12,14,15,16,18,18,20,21,22,24,24,26,27,28 ⋆ The fifth bicycle lock sequence: a(n) is the maximum value of min { x * y, (5 - x) * (n - y) } over 0 <= x <= 5, 0 <= y <= n for integers x, y. ● a(n) = max(min { x * y, (5 - x) * (n - y)) | 0 <= x <= 5, 0 <= y <= n). ● a(n) = n + floor(n / 5) - [n == 1 mod 5]. - _ Ralf Stephan _ , Mar 29 2014 ● a(n) = 6 * floor(n / 5) + [0,0,2,3,4][n % 5]. - _ Ralf Stephan _ , Mar 29 2014 ● a(n) = n - 1 + floor(n / 5) + ceiling((n - 1) / 5) - floor((n - 1) / 5). - _ Wesley Ivan Hurt _ , Mar 29 2014 ●

▶ [A009490] 1,1,2,3,4,6,6,9,11,14,16,20,23,27,31,35,43,47,55,61,70,78,88,98,111 ⋆ Number of distinct orders of permutations of n objects; number of nonisomorphic cyclic subgroups of symmetric group S _ n. ● a(n) = Sum _{ k=0..n } b(k), where b(k) is the number of partitions of k into distinct prime power parts (1 excluded) (A051613). - _ Vladeta Jovovic _ ●

▶ [A052413] 0,1,2,3,4,6,7,8,9,10,11,12,13,14,16,17,18,19,20,21,22,23,24,26,27 ⋆ Numbers without 5 as a digit. ● a(n) = replace digits d > 4 by d + 1 in base - 9 representation of n - 1. - _ Reinhard Zumkeller _ , Oct 07 2014 ●

▶ [A004776] 0,1,2,3,4,6,7,8,9,10,11,12,14,15,16,17,18,19,20,22,23,24,25,26,27 ⋆ Numbers not congruent to 5 (mod 8). ● a(n) = n + floor((n - 6) / 7). - _ M. F. Hasler _ , Nov 02 2013 ● a(n) = a(n - 1) + a(n - 7) - a(n - 8) for n>8; a(n) = a(n - 7) + 8 for n>7. ● a(n) = (56 * n - 63 + (n mod 7) - 6 * ((n + 1) mod 7) + ((n + 2) mod 7) + ((n + 3) mod 7) + ((n + 4) mod 7) + ((n + 5) mod 7) + ((n + 6) mod 7)) / 49. ● a(7k) = 8k - 1, a(7k - 1) = 8k - 2, a(7k - 2) = 8k - 4, a(7k - 3) = 8k - 5, a(7k - 4) = 8k - 6, a(7k - 5) = 8k - 7, a(7k - 6) = 8k - 8. (End) ●

▶ [A183217] 2,3,4,6,7,8,9,10,11,13,14,15,16,17,18,19,20,21,23,24,25,26,27,28,29 ⋆ Complement of the pentagonal numbers. ● a(n)= n + Floor[1 / 2 + (2n / 3) ^ (1 / 2)]. ●

▶ [A047303] 0,1,2,3,4,6,7,8,9,10,11,13,14,15,16,17,18,20,21,22,23,24,25,27,28 ⋆ Numbers that are congruent to { 0, 1, 2, 3, 4, 6 } mod 7. ● a(n) = a(n - 1) + a(n

- 6) - a(n - 7) for n>7. ● a(n) = n + 1 + floor((n - 2) / 6) - ceiling((n - 1) / 6) + floor((n - 1) / 6) - ceiling(n / 6) + floor(n / 6). (End) ● a(n) = (42 * n - 51 + 3 * cos(n * Pi) + 4 * sqrt(3) * cos((1 - 4 * n) * Pi / 6) + 12 * sin((1 + 2 * n) * Pi / 6)) / 36. ● a(6k) = 7k - 1, a(6k - 1) = 7k - 3, a(6k - 2) = 7k - 4, a(6k - 3) = 7k - 5, a(6k - 4) = 7k - 6, a(6k - 5) = 7k - 7. (End) ●

▶ [A047226] 0,1,2,3,4,6,7,8,9,10,12,13,14,15,16,18,19,20,21,22,24,25,26,27,28 ⋆ Numbers that are congruent to { 0, 1, 2, 3, 4 } mod 6; a(n)=floor(6(n - 1) / 5). ● a(n) = floor(6 * (n - 1) / 5). ● a(n) = a(n - 1) + a(n - 5) - a(n - 6) for n>6. ● a(n) = n - 1 + floor((n - 1) / 5). (End) ●

▶ [A059537] 1,2,3,4,6,7,8,9,10,12,13,14,15,16,18,19,20,21,22,24,25,26,27,28,30 ⋆ Beatty sequence for zeta(3). ● a(n) = floor(n * zeta(3)). - _ Michel Marcus _ , Jan 04 2015 ●

▶ [A187388] 1,2,3,4,6,7,8,9,10,12,13,14,15,16,18,19,20,21,23,24,25,26,27,29,30 ⋆ Floor(s * n), where s=1 + sqrt(6) - sqrt(5); complement of A187387. ● a(n)=floor(s * n), where s=1 + sqrt(6) - sqrt(5). ●

▶ [A260816] 0,0,0,1,2,3,4,6,7,8,9,10,12,13,14,16,17,18,19,21,22,23,25,26,27 ⋆ a(n) = floor(log(Catalan(n)). ● a(n) = floor(log(C(n)). ●

▶ [A277644] 1,2,3,4,6,7,8,9,11,12,13,14,15,17,18,19,20,22,23,24,25,26,28,29,30 ⋆ Beatty sequence for sqrt(6) / 2. ● a(n) = floor(n * sqrt(6) / 2). ●

▶ [A115180] 1,2,3,4,6,7,8,9,11,12,13,14,16,17,18,19,20,22,23,24,25,27,28,29,30 ⋆ Beatty sequence for (Champernowne constant) * 10 = 1.234567891011121314.... ● a(n) = floor(n * 1.234567891011121314...). ●

▶ [A045774] 0,1,2,3,4,6,7,8,9,11,12,13,14,16,17,18,19,21,22,23,24,25,26,27,29 ⋆ Extension of Beatty sequence; complement of A045775. ● a(n)=mex { a(i), b(i):0 <= i<n } , where b=A045775, mex S=least integer >= 0 not in the sequence S. ●

▶ [A045681] 0,1,2,3,4,6,7,8,9,11,12,13,14,16,17,18,19,21,22,23,24,25,26,28,29 ⋆ Extension of Beatty sequence; complement of A045682. ● a(n)=mex { a(i), b(i):0 <=i<n } , where b=A045682, mex S=least integer >= 0 not in the sequence S . ●

▶ [A047201] 1,2,3,4,6,7,8,9,11,12,13,14,16,17,18,19,21,22,23,24,26,27,28,29,31 ⋆ Numbers not divisible by 5. ● a(n) = 5 + a(n - 4). ● a(n) = n - 1 + floor((n + 3) / 4). - _ Benoit Cloitre _ , Jul 11 2009 ● a(n) = floor((15 * n - 1) / 12). - _ Gary Detlefs _ , Mar 07 2010 ● a(n) = a(n - 1) + a(n - 4) - a(n - 5), n>5. ● a(n) = (10 * n - 5 - (- 1) ^ n + 2 * (- 1) ^ ((2 * n + 5 - (- 1) ^ n) / 4)) / 8. (End) ● a(n) = floor((5 * n - 1) / 4). - _ Wolfdieter Lang _ , Sep 30 2020 ●

▶ [A120518] 1,2,3,4,6,7,8,9,11,12,13,14,16,17,18,19,22,23,24,25,27,28,29,30,32 ⋆ a(n) = min { j : A120507(j) = n } . ● a(1) = 1; a(n) = n - 1 + a(floor((n - 1) / 4) + 1). - _ Gleb Ivanov _ , Jan 12 2022 ●

▶ [A001959] 0,2,3,4,6,7,8,9,11,12,13,15,16,17,19,20,21,23,24,25,26,28,29,30,32 ⋆ u - pile numbers for the 3 - Wythoff game with i=2. ● a(n) = floor((n + 2 / 3) * (sqrt(13) - 1) / 2). - _ R. J. Mathar _ , Feb 14 2011 ●

▶ [A013939] 0,1,2,3,4,6,7,8,9,11,12,14,15,17,19,20,21,23,24,26,28,30,31,33,34 ⋆ Partial sums of sequence A001221 (number of distinct primes dividing n). ● a(n) = Sum _{ k <= n } omega(k). ● a(n) = Sum _{ k = 1..n } floor(n / prime(k)). ● a(n) = Sum _{ k=1..n } pi(floor(n / k)). - _ Vladeta Jovovic _ , Jun 18 2006 ● a(n) = n log log n + O(n). - _ Charles R Greathouse IV _ , Jan 11 2012 ● a(n) = n * (log log n + B) + o(n), where B = 0.261497... is the Mertens constant A077761. - _ Arkadiusz Wesolowski _ , Oct 18 2013 ● a(n) = Sum _{ k =1..floor(sqrt(n)) } k * (pi(floor(n / k)) - pi(floor(n / (k + 1)))) + Sum _{ p prime <= floor(n / (1 + floor(sqrt(n)))) } floor(n / p). - _ Daniel Suteu _ , Nov 24 2018 ●

▶ [A004763] 0,1,2,3,4,6,7,8,9,12,13,14,15,16,17,18,19,24,25,26,27,28,29,30,31 ⋆ Numbers whose binary expansion does not begin 101. ● a(1) = 0, a(2) = 1, a(3) = 2, a(2 ^ m + k + 2) = 2 ^ m + 2 ^ (m - 1) + k, m >= 1, 0 <= k < 2 ^ m. - _ Yosu Yurramendi _ , Aug 08 2016 ●

▶ [A004772] 0,2,3,4,6,7,8,10,11,12,14,15,16,18,19,20,22,23,24,26,27,28,30,31,32 ⋆ Numbers that are not congruent to 1 (mod 4). ● a(n) = floor((4 * n - 2) / 3). - _ Gary Detlefs _ , Jan 02 2012 ● a(n) = n + ceiling((n - 1) / 3) - 1. - _ Arkadiusz Wesolowski _ , Sep 18 2012 ● a(n) = 4 + a(n - 3). ● a(n) = (12 * n - 9 - 3 * cos(2 * (n - 1) * Pi / 3) + sqrt(3) * sin(2 * (n - 1) * Pi / 3)) / 9. (End) ● a(n) = ceiling(4 * (n - 1) / 3). - _ Jean - François Alcover _ , Mar 07 2014 ●

▶ [A319371] 1,2,3,4,6,7,8,10,11,12,14,15,16,18,19,20,22,23,24,26,27,28,30,31,32 ⋆ Numbers k such that the characteristic polynomial of a wheel graph of k nodes has exactly one monomial with vanishing coefficient. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>5. ●

▶ [A257282] 0,1,2,3,4,6,7,8,10,12,14,16,17,18,20,22,24,26,28,30,32,34,36,38,40 ⋆ Numbers whose square is not the sum of two consecutive nonsquares. ● a(n) = sqrt(A256944). ●

▶ [A023758] 0,1,2,3,4,6,7,8,12,14,15,16,24,28,30,31,32,48,56,60,62,63,64,96,112 ⋆ Numbers of the form 2 ^ i - 2 ^ j with i >= j. ● a(n) = 2 ^ s(n) - 2 ^ ((s(n) ^ 2 + s(n) - 2n) / 2) where s(n) = ceiling((- 1 + sqrt(1 + 8n)) / 2). - _ Sam Alexander _ , Jan 08 2005 ● a(n + 1) = (2 ^ (n - r(r - 1) / 2) - 1) 2 ^ (r(r + 1) / 2 - n), where r=round(sqrt(2n)). - _ M. F. Hasler _ , May 06 2009 ●

▶ [A029748] 1,2,3,4,6,7,8,12,14,16,24,28,32,48,56,64,96,112,128,192,224,256,384,448,512 ⋆ Numbers of the form 2 ^ k times 1, 3 or 7. ● a(n) = 2 * a(n - 3) for n >5. ●

▶ [A065904] 2,3,4,6,7,9,10,11,12,13,14,19,20,21,22,23,24,26,29,31,32,37,38,39,40 ⋆ Integers i > 1 for which there is one prime p such that i is a solution mod p of x ^ 4 = 2. ● a(n) = n - th integer i such that i ^ 4 - 2 has one prime factor > i. ●

▶ [A047519] 1,2,3,4,6,7,9,10,11,12,14,15,17,18,19,20,22,23,25,26,27,28,30,31,33 ⋆ Numbers that are congruent to { 1, 2, 3, 4, 6, 7 } mod 8. ● a(n) = a(n - 1) + a(n - 6) - a(n - 7), for n > 7. ● a(n) = (24 * n - 15 - 3 * cos(n * Pi) - 2 * sqrt(3) * cos((1 - 4 * n) * Pi / 6) + 6 * sin((1 + 2 * n) * Pi / 6)) / 18. ● a(6k) = 8k - 1, a(6k - 1) = 8k - 2, a(6k - 2) = 8k - 4, a(6k - 3) = 8k - 5, a(6k - 4) = 8k - 6, a(6k - 5) = 8k - 7. (End) ●

▶ [A214857] 1,2,3,4,6,7,9,10,11,13,14,16,17,18,20,21,23,24,25,27,28,30,31,33,34 ⋆ Number of triangular numbers in interval [0, n ^ 2]. ● a(n) = floor((1 + sqrt(1 + 8 * n ^ 2)) / 2). - _ Ralf Stephan _ , Jan 30 2014 ●

▶ [A001953] 0,2,3,4,6,7,9,10,12,13,14,16,17,19,20,21,23,24,26,27,28,30,31,33,34 ⋆ a(n) = floor((n + 1 / 2) * sqrt(2)). ● a(n + 1) - a(n) is in { 1,2 } . ● a(n + 3) - a(n) is in { 4,5 } . (End) ●

▶ [A078607] 1,2,3,4,6,7,9,10,12,13,14,16,17,19,20,22,23,25,26,27,29,30,32,33,35 ⋆ Least positive integer x such that 2 * x ^ n > (x + 1) ^ n. ● a(n) = ceiling(1 / (2 ^ (1 / n) - 1)) for n > 1. (For n = 1 resp. 0 this gives the integer 1 resp. infinity as argument of ceiling.) [Edited by _ M. F. Hasler _ , May 08 2020] ● a(n) = floor(1 / (1 - 1 / 2 ^ (1 / n))). ● a(n) = n / log(2) + O(1). - _ Charles R Greathouse IV _ , Oct 31 2013 ● a(n) = floor(1 / (1 - x)) with x ^ n = 1 / 2: f(n) = 1 / (2 ^ (1 / n) - 1) is never an integer for n > 1, whence floor(f(n) + 1) = ceiling(f(n)) = a(n). - _ M. F. Hasler _ , Nov 02 2013, and _ Gabriel Conant _ , May 01 2016 ●

▶ [A079057] 0,1,2,3,4,6,7,9,10,12,13,15,16,18,20,21,22,24,25,27,29,31,32,35,36 ⋆ a(n) = Sum _{ k=1..n } bigomega(tau(k)). ● a(n) = n * log(log(n)) + O(n). ●

▶ [A111333] 1,2,3,4,6,7,9,10,12,15,16,19,21,22,24,27,30,31,34,36,37,40,42,45,49 ⋆ Number of odd numbers <= n - th prime. ● a(n) = ceiling((prime _ n) / 2). - _ Robert G. Wilson v _ , Nov 07 2005 ●

▶ [A006254] 2,3,4,6,7,9,10,12,15,16,19,21,22,24,27,30,31,34,36,37,40,42,45,49,51 ⋆ Numbers k such that 2k - 1 is prime. ● a(n) = sqrt((A065091 ^ 2 + 2 * A065091 + 1) / 4). - _ Eric Desbiaux _ , Jun 29 2009 ●

▶ [A064313] 0,0,1,1,2,3,4,6,7,9,11,13,15,17,20,22,25,28,31,34,38,41,45,49,53 ⋆ Integer part of area of a regular polygon with n sides each of length 1. ● a(n) = floor(n / (4 * tan(Pi / n))). ●

▶ [A011865] 0,0,0,0,1,1,2,3,4,6,7,9,11,13,15,17,20,22,25,28,31,35,38,42,46 ⋆ a(n) = floor(n * (n - 1) / 12). ● a(n) = + 2 * a(n - 1) - a(n - 2) + a(n - 3) - 2 * a(n - 4) + a(n - 5) - a(n - 6) + 2 * a(n - 7) - a(n - 8) + a(n - 9) - 2 * a(n - 10) + a(n - 11). ●

▶ [A160138] 0,0,1,2,3,4,6,7,9,11,13,15,18,20,23,26,29,32,36,39,43,47,51,55,60 ⋆ a(n) = number of solutions to the system: x + y + z + w = n, - 2x - y + z + 2w = 5 with nonnegative x, y, z, w. ● a(n) = a(n - 1) + a(n - 2) - a(n - 4) - a(n - 5) + a(n - 6) for n > 6. ●

▶ [A321195] 0,0,0,0,1,1,2,3,4,6,7,9,11,13,15,18,20,23,26,29,33,36,40,44,48 ⋆ Minimum number of monochromatic Schur triples over all 2 - colorings of [n]. ● a(n) = floor((n ^ 2 - 4 * n + 6) / 11). ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 11) - 2 * a(n - 12) + a(n - 13) for n > 13. - _ Colin Barker _ , Dec 18 2018 ●

▶ [A249020] 1,1,2,3,4,6,7,9,11,13,16,18,21,24,27,31,34,38,42,46,51,55,60,65,70 ⋆ a(n) = floor(n * (n + 5) / 10) + 1. ● a(n) = a(- 5 - n) for all n in Z. ● a(n) = a(n - 5) + n for all n in Z. ● a(n) + a(n + 4) = min(a(n + 1) + a(n + 3), a(n + 2) + a(n + 2)) + 1 for all n in Z. ●

▶ [A047872] 0,0,0,1,2,3,4,6,7,9,11,13,16,19,22,25,28,31,35,39,43,47,52,57,62 ⋆ a(n) = floor(abs(B(2 * n + 2) / B(2 * n))) where B(n) is the n - th Bernoulli number. ● a(n) = floor((n + 1) * (2 * n + 1) / (2 * Pi ^ 2)) (conjectured). - _ Bill McEachen _ , Dec 08 2021 ●

▶ [A173254] 1,1,2,3,4,6,7,9,11,13,16,19,22,26,29,33,37,41,46,51,56,62,67,73,79 ⋆ a(n) = a(n - 1) + a(n - 2) - [a(n - 2) / 2] - [a(n - 4) / 2]. ● a(n)=a(n - 1) + a(n - 2) - Floor[a(n - 2) / 2] - Floor[a(n - 4) / 2] ●

▶ [A097987] 1,2,3,4,6,7,9,11,14,18,19,22,23,27,31,38,43,46,47,49,54,59,62,67,71 ⋆ Numbers k such that 4 does not divide phi(k), where phi is Euler's totient function (A000010). ● a(n)=1, 2, 4, p ^ k, 2 * p ^ k, with prime p == 3 (mod 4). ●

▶ [A061489] 0,1,2,3,4,6,7,9,12,14,20,22,33,35,54,56,88,90,143,145,232,234,376,378,609 ⋆ Numbers that are Fibonacci numbers plus or minus 1. ● a(n) = - a(n - 1) + a(n - 2) + a(n - 3) + a(n - 4) + a(n + 5), for n >= 10. - _ Amiram Eldar _ , Jun 24 2023 ●

▶ [A047518] 2,3,4,6,7,10,11,12,14,15,18,19,20,22,23,26,27,28,30,31,34,35,36,38,39 ⋆ Numbers that are congruent to { 2, 3, 4, 6, 7 } mod 8. ● a(n) = a(n - 1) + a(n - 5) - a(n - 6) for n > 6. ●

▶ [A055802] 1,1,1,2,3,4,6,7,10,11,15,16,21,22,28,29,36,37,45,46,55,56,66,67,78 ⋆ a(n) = T(n,n - 2), array T as in A055801. ● a(n) = (2 * n ^ 2 + 2 * (- 1) ^ n * n - 6 * n - 11 * (- 1) ^ n + 11) / 16 for n>2. ● a(n) = (n ^ 2 - 2 * n) / 8 for n>2 and even. ● a(n) = (n ^ 2 - 4 * n + 11) / 8 for n odd. (End) ●

▶ [A134519] 1,2,3,4,6,7,10,11,15,16,21,22,28,29,36,37,45,46,55,56,66,67,78,79,91 ⋆ Numbers remaining when the natural numbers (A000027) are arranged into a triangle and only the beginning and end terms of each row are retained. ● a(n) = (16 + 4 * n + 2 * n ^ 2) / 16 for n even, a(n) = (3 + 4 * n + n ^ 2) / 8 for n odd. ●

▶ [A354970] 1,2,3,4,6,7,10,11,20,22,28,29,53,56,66,67,202,211,252,254,401,407,435,436,1408 ⋆ Smallest value of the Colijn - Plazzotta rank among n - leaved unlabeled binary rooted trees. ● a(n) = a(n / 2) * (a(n / 2) - 1) / 2 + 1 + a(n / 2) for even n; a(n) = a((n + 1) / 2) * (a((n + 1) / 2) - 1) / 2 + 1 + a((n - 1) / 2) for odd n>1; a(1)=1. ●

▶ [A036405] 0,1,1,2,3,4,6,7,10,12,15,18,21,25,28,33,37,42,47,52,58,63,70,76,83 ⋆ a(n) = ceiling(n ^ 2 / 7). ● a(n) = + 2 * a(n - 1) - a(n - 2) + a(n - 7) - 2 * a(n - 8) + a(n - 9). G.f.: x * (1 + x) * (x ^ 2 - x + 1) * (x ^ 4 - x ^ 3 + x ^ 2 - x + 1) / ((x ^ 6 + x ^ 5 + x ^ 4 + x ^ 3 + x ^ 2 + x + 1) * (1 - x) ^ 3). [_ R. J. Mathar _ , Jul 06 2010] ●

▶ [A226538] 1,1,2,3,4,6,7,11,12,19,20,32,33,53,54,87,88,142,143,231,232,375,376,608,609 ⋆ a(2t) = a(2t - 1) + 1, a(2t + 1) = a(2t) + a(2t - 2) for t >= 1, with a(0) = a(1) = 1. ● a(n) = a(n - 1) + a(n - 3) * (1 - (- 1) ^ n) / 2 + (1 + (- 1) ^ n) / 2. - _ Paolo P. Lava _ , Jun 27 2013 ●

▶ [A308189] 0,1,2,3,4,6,7,11,13,20,24,37,44,68,81,125,149,230,274,423,504,778,927,1431,1705 ⋆ Numbers of the form t _ n or t _ n + t _{ n + 1 } where { t _ n } are the tribonacci numbers A000073. ● a(n) = a(n - 2) + a(n - 4) + a(n - 6) for n>8. ●

▶ [A047420] 0,1,2,3,4,6,8,9,10,11,12,14,16,17,18,19,20,22,24,25,26,27,28,30,32 ⋆ Numbers that are congruent to { 0, 1, 2, 3, 4, 6 } mod 8. ● a(n + 1) = 6 * floor(n / 3) + (n mod 3). - _ Gary Detlefs _ , Mar 09 2010 ● a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - 2 * a(n - 4) + 2 * a(n - 5) - a(n - 6) for n>6. ● a(n) = (12 * n - 18 + sqrt(3) * (3 * sin(n * Pi / 3) + sin(2 * n * Pi / 3))) / 9. ● a(6k) = 8k - 2, a(6k - 1) = 8k - 4, a(6k - 2) = 8k - 5, a(6k - 3) = 8k - 6, a(6k - 4) = 8k - 7, a(6k - 5) = 8k - 8. (End) ●

► [A047229] 0,2,3,4,6,8,9,10,12,14,15,16,18,20,21,22,24,26,27,28,30,32,33,34,36 ⋆ Numbers that are congruent to { 0, 2, 3, 4 } mod 6. ● a(n) = (6 * (n - 1) - (1 + (- 1) ^ n) * (- 1) ^ (n * (1 + (- 1) ^ n) / 4)) / 4; also a(n) = (6 * (n - 1) - (- i) ^ n - i ^ n) / 4, where i is the imaginary unit. - _ Bruno Berselli _ , Nov 0 8 2010 ● a(n) = floor((6 * n - 5) / 4) + floor((1 / 2) * cos((n + 2) * Pi / 2) + 1 / 2). - _ Gary Detlefs _ , Oct 28 2011 and corrected by _ Aleksey A. Solomein _ , Feb 08 2016 ● a(n) = a(n - 1) + a(n - 4) - a(n - 5), n>4. - _ Gionata Neri _ , Apr 15 2015 ● a(n) = - a(2 - n) for all n in Z. - _ Michael Somos _ , Oct 05 2015 ● a(n) = n + 2 * floor((n - 2) / 4) + floor(f(n + 2) / 3), where f(n) = n m od 4. - _ Aleksey A. Solomein _ , Feb 08 2016 ● a(n) = (3 * n - 3 - cos(n * Pi / 2)) / 2. - _ Wesley Ivan Hurt _ , Oct 02 2017 ●

► [A196149] 1,2,3,4,6,8,9,10,12,15,16,18,20,21,24,27,28,30,32,36,40,42,44,45,48 ⋆ Numbers whose divisors increase by a factor of 3 or less. ● a(n) = C * n * log(n * log(n)) + O(n), where C = 0.486513··· (See comments). - _ Andreas Weingar tner _ , Jun 25 2021 ●

► [A055562] 2,3,4,6,8,9,11,12,13,15,16,18,19,21,22,24,26,27,29,30,32,33,35,36,38 ⋆ a(n) = least number greater than a(n - 1) not the sum of an earlier pair of cons ecutive terms, a(0) = 2. ● a(2n) = 3n + 1 + (floor(log _ 2 n) mod 2), n >= 1; a(2n + 1) = 3n + 3, n >= 0 - _ Jeffrey Shallit _ , Jun 08, 2000. ●

► [A278580] 1,2,3,4,6,8,9,12,13,16,18,24,25,26,27,29,31,32,35,36,39,41,47,48,49 ⋆ Numbers n such that Jacobi(n,23) = 1. ● a(n + 11) = a(n) + 23. ● a(n) = a(n - 1) + a(n - 11) - a(n - 12) for n>12. ●

► [A036407] 0,1,1,1,2,3,4,6,8,9,12,14,16,19,22,25,29,33,36,41,45,49,54,59,64 ⋆ a(n) = ceiling(n ^ 2 / 9). ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 9) - 2 * a(n - 10) + a(n - 11). ●

► [A374243] 0,0,0,0,1,1,2,3,4,6,8,9,12,14,16,20,23,25,30,33,36,42,46,49,56 ⋆ a(n) = ceiling(1 / 2 (n - 3 - ceiling((n - 3) / 3)) * ceiling((n - 3) / 3)). ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) + a(n - 6) - a(n - 7) - a(n - 9 } + a(n - 10). ●

► [A006446] 1,2,3,4,6,8,9,12,15,16,20,24,25,30,35,36,42,48,49,56,63,64,72,80,81 ⋆ Numbers k such that floor(sqrt(k)) divides k. ● a(n) = floor((n + 1) / 3) * (floo r(n / 3) + 1) + floor((n + 2) / 3). - _ Ridouane Oudra _ , Nov 21 2020 ● a(n) = a(n - 1) + 2 * a(n - 3) - 2 * a(n - 4) - a(n - 6) + a(n - 7) for n > 7. - _ Chai Wah Wu _ , Apr 05 2021 ●

► [A083854] 0,1,2,3,4,6,8,9,12,16,18,24,25,27,32,36,48,49,50,54,64,72,75,81,96 ⋆ N umbers that are squares, twice squares, three times squares, or six times square s, i.e., numbers whose squarefree part divides 6. ● a(n) is bounded below by 0.1 37918... * n ^ 2 where 0.137918... = 3 * (3 - 2 * sqrt(2)) * (2 - sqrt(3)); the err or appears to be O(n). ●

► [A121539] 0,2,3,4,6,8,10,11,12,14,15,16,18,19,20,22,24,26,27,28,30,32,34,35,36 ⋆ Numbers whose binary expansion ends in an even number of 1's. ● a(n) = (3 / 2) * n + O(log n). - _ Charles R Greathouse IV _ , Sep 23 2012 ●

► [A047418] 0,2,3,4,6,8,10,11,12,14,16,18,19,20,22,24,26,27,28,30,32,34,35,36,38 ⋆ Numbers that are congruent to { 0, 2, 3, 4, 6 } mod 8. ● a(n) = a(n - 1) + a(n - 5) - a(n - 6) for n > 6, a(n) = a(n - 5) + 8 for n > 5. ● a(n) = (40 * n - 45 - 2 * (n mod 5) + 3 * ((n + 1) mod 5) + 3 * ((n + 2) mod 5) - 2 * ((n + 3) mod 5) - 2 * ((n + 4) mod 5)) / 25. ● a(5 * k) = 8 * k - 2, a(5 * k - 1) = 8 * k - 4, a(5 * k - 2) = 8 * k - 5, a(5 * k - 3) = 8 * k - 6, a(5 * k - 4) = 8 * k - 8. (End) ● a(n) = (40 * n - 45 + 2 * cos(2 * Pi * (n - 1) / 5) - 2 * cos(2 * Pi * n / 5) - 2 * cos(4 * Pi * n / 5) - 6 * cos(2 * Pi * (n + 1) / 5) - 6 * cos(Pi * (2 * n + 1) / 5) + 6 * cos(2 * Pi * (2 * n + 1) / 5) - 2 * cos(Pi * (4 * n + 1) / 5) + 6 * sin(Pi * (8 * n + 3) / 10)) / 25. - _ Wesley Ivan Hurt _ , Oct 10 2018 ●

► [A184103] 1,2,3,4,6,8,10,11,14,16,18,20,23,26,29,31,35,38,41,44,48,52,56,59,64 ⋆ a(n) = n - 1 + ceiling(n ^ 2 / 16); complement of A184102. ● a(n) = n - 1 + cei ling(n ^ 2 / 16). ● a(n) = + 2 * a(n - 1) - a(n - 2) + a(n - 8) - 2 * a(n - 9) + a(n - 10). - _ R. J. Mathar _ , Mar 11 2012 ●

► [A004271] 0,1,2,3,4,6,8,10,12,14,16,18,20,22,24,26,28,30,32,34,36,38,40,42,44 ⋆ 1, 3 and the nonnegative even numbers. ● a(n) = 2 * n - 4 + floor(3 / n) + delt a _{ n,2 } , n > 0. - _ Wesley Ivan Hurt _ , May 23 2013 ● a(n) = max(2n - 4, n) = n + max(n - 4,0). - _ M. F. Hasler _ , Oct 30 2019 ● a(n) = 2 * a(n - 1) - a(n - 2) for n > 5. G.f.: (x ^ 5 + x) / (x - 1) ^ 2. - _ Chai Wah Wu _ , Feb 03 2021 ●

► [A004278] 1,2,3,4,6,8,10,12,14,16,18,20,22,24,26,28,30,32,34,36,38,40,42,44,46 ⋆ 1, 3 and the positive even numbers. ● a(n) = 2 * a(n - 1) - a(n - 2), n > 2 and n is not 5. ● a(n) = 2 * n - 2 + floor((4 / Pi) * arctan(2 - n)). ● a(n) = (abs(4 - n) + 3 * n - 4) / 2. - _ Iain Fox _ , Dec 23 2017 ●

► [A113769] 1,2,3,4,6,8,10,12,14,16,19,22,25,28,31,34,37,40,43,47,51,55,59,63,67 ⋆ a(1) = 1, a(n + 1) = a(n) + round((a(n) ^ (1 / 3)). ● a(1) = 1, a(n + 1) = a(n) + round(a(n) ^ (1 / 3)). ●

► [A097602] 1,2,3,4,6,8,10,12,14,16,19,22,25,29,33,37,41,45,49,54,59,64,70,76,82 ⋆ a(n + 1) = a(n) + number of squares so far; a(1) = 1. ● a(9 * n + 1) = (3 * n + 1) ^ 2; a(9 * n + 4) = (3 * n + 2) ^ 2. - _ Vladeta Jovovic _ , Aug 30 2004 ●

► [A011862] 0,0,0,0,1,2,3,4,6,8,10,12,14,17,20,23,26,30,34,38,42,46,51,56,61 ⋆ a(n) = floor(n * (n - 1) / 9). ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 9) - 2 * a(n - 1 0) + a(n - 11). (End) ●

► [A007183] 0,0,0,1,2,3,4,6,8,10,12,15,16,19,22,25,27,30,32,35,37,40,42,45,48 ⋆ M aximal splittance of a planar graph with n nodes. ● a(n) = 3 * n - 27 for n >= 23 [from Hammer and Simeone]. - _ Sean A. Irvine _ , Nov 12 2017 ● a(n) = 2 * a(n - 1) - a(n - 2) for n >= 23. (End) ●

► [A130519] 0,0,0,0,1,2,3,4,6,8,10,12,15,18,21,24,28,32,36,40,45,50,55,60,66 ⋆ a(n) = Sum _{ k=0..n } floor(k / 4). (Partial sums of A002265.) ● a(n) = + 2 * a (n - 1) - 1 * a(n - 2) + 1 * a(n - 4) - 2 * a(n - 5) + 1 * a(n - 6). ● a(n) = floor((n - 1) ^ 2 / 8). - _ Mitch Harris _ , Sep 08 2008 ● a(n) = round(n * (n - 2) / 8) = round((n ^ 2 - 2 * n - 1) / 8) = ceiling((n + 1) * (n - 3) / 8). - _ Mircea M erca _ , Nov 28 2010 ● a(n) = a(n - 4) + n - 3, n>3. - _ Mircea Merca _ , No v 28 2010 ● a(n) = a(2 - n) for all n in Z. - _ Michael Somos _ , Oct 14 2011 ● a(n) = Sum _{ i=1..ceiling(n / 2) - 1 } (i mod 2) * (n - 2 * i - 1). - _ Wesley I van Hurt _ , Jan 23 2014 ●

► [A001972] 1,2,3,4,6,8,10,12,15,18,21,24,28,32,36,40,45,50,55,60,66,72,78,84,91 ⋆ Expansion of 1 / ((1 - x) ^ 2 * (1 - x ^ 4)) = 1 / ((1 + x) * (1 + x ^ 2) * (1 - x) ^ 3). ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) + 1. ● a(n) = floor((n + 3) ^ 2 / 8). (End) ● a(n) = Sum _{ k=0..n } floor((k + 4) / 4) = n + 1 + Sum _{ k=0 ..n } floor(k / 4). - _ Paul Barry _ , Aug 19 2003 ● a(n) = a(n - 4) + n + 1. - _ Paul Barry _ , Jul 14 2004 ● a(n) = Sum _{ j=0..n + 4 } floor(j / 4); ● a(n - 4) = (1 / 2) * floor(n / 4) * (2 * n - 2 - 4 * floor(n / 4)). (End) ●

► [A005705] 1,2,3,4,6,8,10,12,15,18,21,24,28,32,36,40,46,52,58,64,72,80,88,96,106 ⋆ Number of partitions of 4 * n into powers of 4. ● a(n) = a(n - 1) + a(floor(n / 4)). ●

► [A184109] 2,3,4,6,8,10,13,16,18,22,25,28,32,36,40,45,50,54,60,65,70,76,82,88,95 ⋆ n + ceiling(n ^ 2 / 9); complement of A184108. ● a(n) = + 2 a(n - 1) - a(n - 2) + a(n - 9) - 2 a(n - 10) + a(n - 11). - R. J. Mathar, Mar 11 2012 ●

► [A214780] 2,3,4,6,8,10,13,16,19,22,25,28,32,36,40,44,48,52,56,60,64,68,72,76,80 ⋆ a(1) = 2; a(n + 1) = round(a(n) ^ (1 + 1 / a(n))). ● a(n + 1) = a(n) + log a (n) + O(1). a(n) ~ n log n. - _ Charles R Greathouse IV _ , Jul 30 2012 ● a(n) = n log n + n log log n + O(n) so a(n) = prime(n) + O(n). - _ Thomas Ordow ski _ , May 07 2013 ●

► [A024174] 0,0,1,2,3,4,6,8,10,13,16,19,22,25,29,33,37,42,47,52,57,62,68,74,80 ⋆ a (n) is floor((4th elementary symmetric function of 1,2,..,n) / (3rd elementary sy mmetric function of 1,2,...,n)). ● a(n) = floor((n - 3) * (15n ^ 3 + 15n ^ 2 - 10n - 8) / (120 * n * (n + 1))). - _ Ivan Neretin _ , Nov 25 2016 ●

► [A008748] 1,1,2,3,4,6,8,10,13,16,19,23,27,31,36,41,46,52,58,64,71,78,85,93,101 ⋆ Expansion of (1 + x ^ 5) / ((1 - x) * (1 - x ^ 2) * (1 - x ^ 3)) in powers of x. ● a(n) = 1 + floor(n(n + 1) / 6). - _ Michael Somos _ , Jun 16 1999 ● a(n) = 1 + a(n - 1) + a(n - 3) - a(n - 4) if n>4; a(n) = n if n=1..4. - _ Michael Somos _ , Jun 16 1999 ● a(- 1 - n) = a(n). - _ Michael Somos _ , Sep 06 2013 ●

► [A022796] 1,2,3,4,6,8,10,13,16,19,23,27,31,36,41,46,52,58,64,71,78,85,93,101,10 9 ⋆ Place where n - th 1 occurs in A023134. ● a(n) = n + Sum _ ({ k=1..n } f loor((n - k) / Pi. ● a(n) <= floor(binomial(n, 2) / Pi) + n. - _ David A. Corne th _ , Mar 26 2017 ●

► [A109965] 1,1,2,3,4,6,8,10,13,16,20,24,28,33,38,44,50,57,64,72,80,88,97,106,116 ⋆ Sum _ i { i<n } floor(sqrt(a(i))) with a(0) = 1. ● a(2 ^ (j + 1) + j + 2 * k) =2 ^ (2 * j) + 2 ^ j * (2 * k + 1) + k * (k - 1); ● a(2 ^ (j + 1) + j + 2 * k + 1) =2 ^ (2 * j) + 2 ^ j * (2 * k + 2) + k ^ 2; ● a(2 ^ (j + 1) + j - 1)=2 ^ (2 * j); j =0..infinity; k=0..(2 ^ j - 1). (End) ●

► [A008669] 1,1,2,3,4,6,8,10,13,16,20,24,29,34,40,47,54,62,71,80,91,102,114,127,1 41 ⋆ Molien series for 4 - dimensional complex reflection group of order 7680 (i n powers of x ^ 4). ● a(n) = round((n + 3) * (2 * n + 9) * (n + 9) / 360). ● a(n) = - a(- 11 - n). ● a(n) = a(n - 1) + a(n - 2) - a(n - 4) - a(n - 7) + a(n - 9) + a(n - 10) - a(n - 11). - _ David Neil McGrath _ , Sep 15 2014 ●

► [A123015] 1,2,3,4,6,8,10,13,17,21,26,33,41,50,62,77,94,115,142,174,212,260,31 9,389,475 ⋆ Grow a binary tree using the following rules. Initially there is a sin gle node labeled 1. At each step we add 1 to all labels less than 3. If a node has label 3 and zero or one descendants we add a new descendant labeled 1. Sequen ce gives sum of all labels at step n. ● a(n) = a(n - 3) + a(n - 4) + 3. - _ Ralf St ephan _ , Nov 12 2006 ●

► [A239100] 0,1,1,2,3,4,6,8,10,13,17,22,28,37,47,59,75,96,120,153,194,242,309,39 1,487 ⋆ Solution to the problem of finding the number of comparisons needed fo r optimal merging of 3 elements with n elements. ● a(3r + 1) = floor(107 * 2 ^ (r - 3) / 7) - 2, ● a(3r + 2) = floor((17 * 2 ^ r - 6) / 7) - 1; initial terms are sho wn in sequence. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) + a(n - 6) - a(n - 7) + 2 * a(n - 9) - 2 * a(n - 10) for n > 18. ●

► [A003107] 1,1,2,3,4,6,8,10,14,17,22,27,33,41,49,59,71,83,99,115,134,157,180,20 8,239 ⋆ Number of partitions of n into Fibonacci parts (with a single type of 1). ● a(n) = f(n,1,1) with f(x,y,z) = if x<y then 0 ^ x else f(x - y,y,z) + f(x,y + z,y). - _ Reinhard Zumkeller _ , Nov 11 2009 ●

► [A217123] 2,3,4,6,8,10,14,18,22,26,32,38,44,50,58,66,74,82,92,102,112,122,134,1 46,158 ⋆ Number of possible ordered pairs (x, y) where x is the number of bead s adjacent to at least one black bead and y the number of beads adjacent to at l east one white bead in a binary necklace of length n. ● a(n) = (13 - (- 1) ^ n + 2 * (- i) ^ n + 2 * i ^ n + 2 * n ^ 2) / 8, where i=sqrt(- 1). G.f.: x * (x ^ 7 - 2 * x ^ 6 - x ^ 5 + 2 * x ^ 4 - x ^ 3 + x - 2) / ((x - 1) ^ 3 * (x + 1) * (x ^ 2 + 1)) . [_ Colin Barker _ , Oct 04 2012] ●

► [A060469] 1,2,3,4,6,8,11,13,16,18,23,25,28,30,35,37,40,42,47,49,52,54,59,61,64 ⋆ Smallest positive a(n) such that number of solutions to a(n) = a(j) + a(k) j<k <n is one or less. ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>9. - _ Colin Bar ker _ , Feb 27 2015 ●

► [A211522] 0,0,0,1,2,3,4,6,8,11,13,16,19,23,27,31,35,40,45,51,56,62,68,75,82 ⋆ N umber of ordered triples (w,x,y) with all terms in { 1,...,n } and w + 5y = 2x. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) + a(n - 5) - a(n - 6) - a(n - 7) + a(n - 8). ●

► [A211536] 0,0,0,2,3,4,6,8,11,14,17,21,24,29,34,39,44,49,56,63,69,76,83,92,100 ⋆ Number of ordered triples (w,x,y) with all terms in { 1,...,n } and w=4x - 5y. ● a(n) = a(n - 1) + a(n - 4) - a(n - 6) - a(n - 9) + a(n - 10). ●

► [A290743] 2,3,4,6,8,11,14,18,22,27,32,38,44,51,58,66,74,83,92,102,112,123,134,1 46,158 ⋆ Maximum number of distinct Lyndon factors that can appear in words of length n over an alphabet of size 2. ● a(n) = binomial(n + 1,2) - (s - p) * bin omial(m + 1,2) - p * binomial(m + 2,2) + s where s=2, m=floor(n / s), p=n - m * s. - _ Andrew Howroyd _ , Aug 14 2017 ● a(n) = (2 * n ^ 2 + 16) / 8 for n even. ● a(n) = (2 * n ^ 2 + 14) / 8 for n odd. ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4) for n > 4. (End) ●

► [A177339] 0,0,0,0,0,1,2,3,4,6,8,11,14,18,22,27,33,40,47,55,64,74,85,97,110 ⋆ Pa rtial sums of round(n ^ 2 / 44). ● a(n) = round((2 * n + 1) * (2 * n ^ 2 + 2 * n - 15) / 528). ● a(n) = floor((n + 5) * (2 * n ^ 2 - 7 * n + 21) / 264). ● a(n) = c eiling((n - 4) * (2 * n ^ 2 + 11 * n + 30) / 264). ● a(n) = round(n * (n - 2) * (2 * n + 7) / 264). ● a(n) = a(n - 44) + (n + 1) * (n - 44) + 665, n > 43. ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4) + a(n - 11) - 2 * a(n - 12) + 2 * a(n - 14) - a(n - 15) with g.f. x ^ 5 * (1 - x ^ 2 + x ^ 4) / ((1 + x) * (x ^ 10 + x ^ 9 + x ^ 8 + x ^ 7 + x ^ 6 + x ^ 5 + x ^ 4 + x ^ 3 + x ^ 2 + x + 1) * (x - 1) ^ 4). - _ R. J. Mathar _ , Dec 13 2010 ●

► [A075535] 1,1,2,3,4,6,8,11,14,18,22,28,34,42,50,61,72,86,100,118,136,158,180,20 8,236 ⋆ a(1)=1, a(n) = Sum _{ k=1..n - 1 } min(a(k), a(n - k)). ● a(1)=a(2)=1

; a(2n) = a(2n - 1) + a(n); a(2n + 1) = a(2n) + a(n); for n >= 3, a(n) = a(n - 1) + a(floor(n / 2)). ●

▶ [A238383] 1,2,3,4,6,8,11,14,18,22,28,34,43,52,65,78,97,116,144,172,213,254,314,374,462 ★ Row sums of triangle in A139040. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) + a(n - 6) - a(n - 7), a(0) = 1, a(1) = 2, a(2) = 3, a(3) = 4, a(4) = 6, a(5) = 8, a(6) = 11. ●

▶ [A175870] 0,1,2,3,4,6,8,11,14,18,23,29,35,43,52,62,73,86,100,116,133,152,173,196,220 ★ Partial sums of ceiling(n ^ 2 / 24). ● a(n) = round((2 * n + 1) * (2 * n ^ 2 + 2 * n + 95) / 288). ● a(n) = floor((n + 1) * (2 * n ^ 2 + n + 95) / 144). ● a(n) = ceiling((2 * n ^ 3 + 3 * n ^ 2 + 96 * n) / 144). ● a(n) = a(n - 24) + (n + 1) * (n - 24) + 220. ●

▶ [A114829] 1,2,3,4,6,8,11,14,18,23,29,36,44,53,63,74,87,101,117,135,155,177,201,227,256 ★ Each term is previous term plus floor of geometric mean of all previous terms. ● a(1) = 1, a(n + 1) = a(n) + floor(GeometricMean[a(1),a(2),...,a(n)]). a(n + 1) = a(n) + [((a(1) * a(2) * ,..., * a(n)) ^ (1 / n)]. ●

▶ [A175869] 0,1,2,3,4,6,8,11,14,18,23,29,36,44,53,63,75,88,103,119,137,157,179,202,228 ★ Partial sums of ceiling(n ^ 2 / 23). ● a(n) = round((2 * n + 1) * (n ^ 2 + n + 42) / 138). ● a(n) = floor((2 * n ^ 3 + 3 * n ^ 2 + 85 * n + 90) / 138). ● a(n) = ceiling((2 * n ^ 3 + 3 * n ^ 2 + 85 * n - 6) / 138). ● a(n) = a(n - 23) + (n + 1) * (n - 23) + 202. ●

▶ [A279075] 0,1,2,3,4,6,8,11,14,18,23,29,37,47,59,74,93,117,147,184,231,289,362,453,567 ★ Maximum starting value of X such that repeated replacement of X with X - ceiling(X / 5) requires n steps to reach 0. ● a(n) = floor(a(n - 1) * 5 / 4) + 1. ●

▶ [A094707] 0,0,1,2,3,4,6,8,11,14,19,24,32,40,53,66,87,108,142,176,231,286,375,464,608 ★ Partial sums of repeated Fibonacci sequence. ● a(n) = a(n - 1) + a(n + 2) - a(n - 3) + a(n - 4) - a(n - 5). ● a(n) = Sum _{ k=0..n } Fibonacci(floor(k / 2)). ● a(n) = - 2 - (sqrt(5) / 2 - 1 / 2) ^ (n / 2) * ((2 * sqrt(5) / 5 - 1) * cos(Pi * n / 2) + sqrt(4 * sqrt(5) / 5 - 8 / 5) * sin(Pi * n / 2)) - (sqrt(5) / 2 + 1 / 2) ^ (n / 2) * ((sqrt(sqrt(5) / 5 + 2 / 5) - sqrt(5) / 5 - 1 / 2) * (- 1) ^ n - sqrt(sqrt(5) / 5 + 2 / 5) - sqrt(5) / 5 - 1 / 2). ● a(n) = Fibonacci(n / 2 + 3) - 2 if n even, otherwise a(n) = 2 * Fibonacci((n - 1) / 2 + 2) - 2. - _ G. C. Greubel _ , Feb 12 2023 ●

▶ [A175868] 0,1,2,3,4,6,8,11,15,20,25,32,40,49,59,71,84,99,116,135,155,178,203,230,259 ★ Partial sums of ceiling(n ^ 2 / 20). ● a(n) = round((2 * n + 1) * (2 * n ^ 2 + 2 * n + 69) / 240). ● a(n) = floor((2 * n ^ 3 + 3 * n ^ 2 + 70 * n + 72) / 120). ● a(n) = ceiling((2 * n ^ 3 + 3 * n ^ 2 + 70 * n - 3) / 120). ● a(n) = a(n - 20) + (n + 1) * (n - 20) + 155. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 10) - 3 * a(n - 11) + 3 * a(n - 12) - a(n - 13); a(0)=0, a(1)=1, a(2)=2, a(3)=3, a(4)=4, a(5)=6, a(6)=8, a(7)=11, a(8)=15, a(9)=20, a(10)=25, a(11)=32, a(12)=40. - _ Harvey P. Dale _ , Jun 10 2011 ●

▶ [A175864] 0,1,2,3,4,6,8,11,15,20,26,33,41,50,61,73,87,103,121,140,162,186,212,240,271 ★ Partial sums of ceiling(n ^ 2 / 19). ● a(n) = round((2 * n + 1) * (n ^ 2 + n + 30) / 114). ● a(n) = floor((2 * n ^ 3 + 3 * n ^ 2 + 61 * n + 78) / 114). ● a(n) = ceiling((2 * n ^ 3 + 3 * n ^ 2 + 61 * n - 18) / 114). ● a(n) = round((2 * n ^ 3 + 3 * n ^ 2 + 61 * n) / 114). ● a(n) = a(n - 19) + (n + 1) * (n - 19) + 140, n > 18. ●

▶ [A100673] 1,2,3,4,6,8,11,15,20,26,34,44,56,71,90,114,144,182,230,291,367,463,584,737,929 ★ A Graham - Pollak - like sequence with cube root instead of square root. ● a(0) = 1, a(n) = Floor((2 * a(n - 1) * (a(n - 1) + 1) * (a(n - 1) + 2)) ^ (1 / 3)) ●

▶ [A027336] 1,1,1,2,3,4,6,8,11,15,20,26,35,45,58,75,96,121,154,193,242,302,375,463,573 ★ Number of partitions of n that do not contain 2 as a part. ● a(n) = p(n) - p(n - 2) for n >= 2, where p(n) are the partition numbers (A000041); follows at once from the g.f. - _ Emeric Deutsch _ , Feb 18 2006 ●

▶ [A023434] 0,1,1,2,3,4,6,8,11,15,20,27,36,48,64,85,113,150,199,264,350,464,615,815,1080 ★ Dying rabbits: a(n) = a(n - 1) + a(n - 2) - a(n - 4). ● a(0)=0, a(1)=1, a(2)=1 then for n>2 a(n)=ceiling(r * a(n - 1)) where r is the positive root of x ^ 3 - x - 1=0. - _ Benoit Cloitre _ , Jun 19 2004 ● a(n) = Sum _{ k=1..floor((n + 2) / 3) } binomial(floor((n + 2 - k) / 2),k). This formula counts even run - types by length. - _ David Callan _ , Jul 14 2006 ● a(n) = a(n - 2) + a(n - 3) + 1. - _ Mark Dols _ , Feb 01 2010 ●

▶ [A188917] 1,2,3,4,6,8,11,15,20,27,37,51,70,97,135,189,264,371,521,734,1034,1459,2059,2908,4108 ★ Where powers of 2 occur in the union of squares and powers of 2. ● a(n) = floor((n + 1) / 2) + floor(2 ^ (n / 2)). - _ Robert Israel _ , Jun 13 2019 ●

▶ [A341218] 1,1,1,2,3,4,6,8,11,15,21,29,40,54,74,102,139,189,259,355,486,664,908,1242,1697 ★ a(n) is the number of numbers k such that A340873(k) = n. ● a(n) <= a(n + 1) <= 2 * a(n). ●

▶ [A003411] 1,2,3,4,6,8,11,15,21,29,40,55,76,105,145,200,276,381,526,726,1002,1383,1909,2635,3637 ★ Losing initial positions in game: two players alternate in removing >= 1 stones; last player wins; first player may not remove all stones; each move <= 3 times previous move. ● a(n) = a(n - 1) + a(n - 4), n >= 5. ●

▶ [A317669] 1,1,1,1,1,2,3,4,6,8,11,16,22,31,44,61,86,121,169,238,334,468,658,923,1295 ★ Number of equivalence classes of binary words of length n for the subword 10110. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) + a(n - 5) for n >= 5, a(n) = 1 for n < 5. ●

▶ [A057048] 1,2,3,4,6,8,11,16,23,32,45,64,91,128,181,256,362,512,724,1024,1448,2048,2896,4096,5793 ★ a(n) = A017911(n + 1) = round(sqrt(2) ^ (n + 1)). ● a(2n - 1) = 2 ^ n, n > 0. - _ M. F. Hasler _ , Feb 20 2012 ●

▶ [A271487] 1,2,3,4,6,8,11,17,23,32,48,65,90,136,184,255,385,521,722,1090,1475,2044,3086,4176,5787 ★ Maximal term of TRIP - Stern sequence of level n corresponding to permutation triple (e,13,132). ● a(n) = 2 * a(n - 3) + 2 * a(n - 6) + a(n - 9) for n>9. ●

▶ [A321266] 1,2,3,4,6,8,12,16,17,24,32,34,48,64,68,96,128,136,192,256,272,384,512,544,768 ★ Smallest positive number for which the square cannot be written as sum of distinct squares of any subset of previous terms. ● a(n) = 2 * a(n - 3) for n > 9 (conjectured). ●

▶ [A321729] 1,1,1,2,3,4,6,8,12,16,22,28,40,51 ★ Number of integer partitions of n whose Young diagram can be partitioned into vertical sections of the same sizes as the parts of the original partition. ● a(n) is the number of integer partitions y of n such that the coefficient of m(y) in e(y) is nonzero, where m is monomial symmetric functions and e is elementary symmetric functions. ●

▶ [A029744] 1,2,3,4,6,8,12,16,24,32,48,64,96,128,192,256,384,512,768,1024,1536,2048,3072,4096,6144 ★ Numbers of the form 2 ^ n or 3 * 2 ^ n. ● a(0)=1, a(1)=1 and a(n) = a(n - 2) * (floor(a(n - 1) / a(n - 2)) + 1). - _ Benoit Cloitre _ , Aug 13 2002 ● a(n) = sqrt((17 - (- 1) ^ n) * 2 ^ (n - 4)) for n >= 2. - _ Anton Zakharov _ , Jul 24 2016 ● a(n) = 2 ^ (n / 2) if n is even. a(n) = 3 * 2 ^ ((n - 3) / 2) if n is odd and for n>1. - _ Karl - Heinz Hofmann _ , Sep 08 2022 ●

▶ [A164090] 2,3,4,6,8,12,16,24,32,48,64,96,128,192,256,384,512,768,1024,1536,2048,3072,4096,6144,8192 ★ a(n) = 2 * a(n - 2) for n > 2; a(1) = 2, a(2) = 3. ● a(n) = (7 - (- 1) ^ n) * 2 ^ ((1 / 4) * (2 * n - 1 + (- 1) ^ n)) / 4. ●

▶ [A179042] 0,1,2,3,4,6,8,12,18,27,41,64,100,159,254,407,654,1054,1700,2746,4438,7175,11603,18768,30360 ★ Partial sums of ceiling(Fibonacci(n) / 4). ● a(n) = round(Fibonacci(n + 2) / 4 + n / 2). ● a(n) = floor(Fibonacci(n + 2) / 4 + n / 2 + 1 / 4). ● a(n) = ceiling(Fibonacci(n + 2) / 4 + n / 2 - 1 / 4). ● a(n) = round(Fibonacci(n + 2) / 4 + n / 2 - 1 / 4). ● a(n) = a(n - 6) + Fibonacci(n - 1) + 3, n > 5. ● a(n) = 2 * a(n - 1) - a(n - 3) + a(n - 6) - 2 * a(n - 7) + a(n - 9), n > 8. ●

▶ [A000029] 1,2,3,4,6,8,13,18,30,46,78,126,224,380,687,1224,2250,4112,7685,14310,27012,50964,96909,184410,352698 ★ Number of necklaces with n beads of 2 colors, allowing turning over (these are also called bracelets). ● a(n) = Sum _{ d divides n } phi(d) * 2 ^ (n / d) / (2 * n) + either 2 ^ ((n - 1) / 2) if n odd or 2 ^ (n / 2 - 1) + 2 ^ (n / 2 - 2) if n even. ● a(0) = 1; a(n) = Sum _{ k=1..n } 2 ^ gcd(n,k) / (2 * n) + either 2 ^ ((n - 1) / 2) if n odd or 2 ^ (n / 2 - 1) + 2 ^ (n / 2 - 2) if n even. ●

▶ [A155051] 1,2,3,4,6,8,13,18,32,46,88,130,262,394,823,1252,2682,4112,8974,13836,30632,47428,106214,165000,373012 ★ Expansion of c(x ^ 2) * (1 + x) / (1 - x), c(x) the g.f. of A000108. ● a(n) = 2 * Sum _{ k=0..n, } (C(k / 2) * (1 + (- 1) ^ k) / 2) - C(n / 2) * (1 + (- 1) ^ n) / 2, C(n) = A000108; ● a(n) = (C(n / 2) + 2 * Sum _{ k=0..(n / 2 - 1), C(k) }) * (1 + (- 1) ^ n) / 2 + Sum _{ k=0..n / 2, C(k) }* (1 - (- 1) ^ n), C(n) = A000108. ●

▶ [A084239] 1,2,3,4,6,8,13,20,32,52,90,152,268,472,845,1520,2766,5044,9277,17112,31724,59008,110162,206260,387282 ★ Rank of K - groups of Furstenberg transformation group C *- algebras of n - torus. ● a(n) = constant term of prod(i=1, n, 1 + t ^ (i - .5(n + 1))) for odd n and a(n) = constant term of (1 + t ^ (.5)) * prod(i=1, n, 1 + t ^ (i - .5(n + 1))) for even n. ●

▶ [A000031] 1,2,3,4,6,8,14,20,36,60,108,188,352,632,1182,2192,4116,7712,14602,27596,52488,99880,190746,364724,699252 ★ Number of n - bead necklaces with 2 colors when turning over is not allowed; also number of output sequences from a simple n - stage cycling shift register; also number of binary irreducible polynomials whose degree divides n. ● a(n) = (1 / n) * Sum _{ d divides n } phi(d) * 2 ^ (n / d), where phi is A000010. ● a(0) = 1; a(n) = (1 / n) * Sum _{ k=1..n } 2 ^ gcd(n,k). - _ Ilya Gutkovskiy _ , Apr 16 2021 ● a(0) = 1; a(n) = (1 / n) * Sum _{ k=1..n } 2 ^ (n / gcd(n,k)) * phi(gcd(n,k)) / phi(n / gcd(n,k)). - _ Richard L. Ollerton _ , May 06 2021 ●

▶ [A047419] 1,2,3,4,6,9,10,11,12,14,17,18,19,20,22,25,26,27,28,30,33,34,35,36,38 ★ Numbers that are congruent to { 1, 2, 3, 4, 6 } mod 8. ● a(n) = a(n - 1) + a(n - 5) - a(n - 6) for n > 6. ● a(n) = a(n - 5) + 8 for n > 5. ● a(n) = (40 * n - 40 - 2 * (n mod 5) + 3 * ((n + 1) mod 5) + 3 * ((n + 2) mod 5) + 3 * ((n + 3) mod 5) - 7 * ((n + 4) mod 5)) / 25. ● a(5 * k) = 8 * k - 2, a(5 * k - 1) = 8 * k - 4, a(5 * k - 2) = 8 * k - 5, a(5 * k - 3) = 8 * k - 6, a(5 * k - 4) = 8 * k - 7. (End) ● a(n) = (2 / 25) * (20 * n - 20 + 5 * cos(2 * Pi * (n - 1) / 5) - 2 * cos(2 * Pi * n / 5) - 2 * cos(4 * Pi * n / 5) - 4 * cos(2 * Pi * (n + 1) / 5) - 2 * cos(Pi * (2 * n + 1) / 5) + 2 * cos(2 * Pi * (2 * n + 1) / 5) - 5 * cos(Pi * (4 * n + 1) / 5) + sin(Pi * (4 * n + 3) / 10) + 4 * sin(Pi * (8 * n + 3) / 10) - sin(Pi * (8 * n + 1) / 10)). - _ Wesley Ivan Hurt _ , Oct 10 2018 ●

▶ [A047300] 2,3,4,6,9,10,11,13,16,17,18,20,23,24,25,27,30,31,32,34,37,38,39,41,44 ★ Numbers that are congruent to { 2, 3, 4, 6 } mod 7. ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. ● a(n) = (14 * n - 5 - i ^ (2 * n) - (1 - 3 * i) * i ^ (- n) - (1 + 3 * i) * i ^ n) / 8 where i=sqrt(- 1). ●

▶ [A189887] 1,1,2,3,4,6,9,11,12,14,17,19,20,22,25,27,28,30,33,35,36,38,41,43,44 ★ Dimension of homogeneous component of degree n in x in the Malcev - Poisson superalgebra S ^ tilde(M). ● a(n) = (1 / 4 + i / 4) * ((- 11 + 11 * i) - i * (- i) ^ n + i ^ n) + 2 * n for n>3, where i=sqrt(- 1). a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4) for n>7. G.f.: x * (x ^ 6 + x ^ 5 + x ^ 4 - x ^ 3 + 2 * x ^ 2 - x + 1) / ((x - 1) ^ 2 * (x ^ 2 + 1)). - _ Colin Barker _ , Jul 24 2013 ●

▶ [A179970] 0,1,2,3,4,6,9,11,12,14,17,19,25,27,36,38,44,46,49,51,57,59,68,70,76 ★ Numbers such that in base - 4 representation all sums of two adjacent digits are odd. ● a(n) = 4 * m - m mod 2 + 1 + 2 * (1 - n mod 2). ●

▶ [A331444] 0,0,0,0,0,0,1,2,3,4,6,9,11,14,18,23,27,33,39,47,54,63,72,84,94 ★ Number of 2 - complete partitions of n with largest part 4. ● a(n) = a(n - 1) + a(n - 2) - 2 * a(n - 5) + a(n - 8) + a(n - 9) - a(n - 10) for n>11. - _ Colin Barker _ , Jan 27 2020. ●

▶ [A000792] 1,1,2,3,4,6,9,12,18,27,36,54,81,108,162,243,324,486,729,972,1458,2187,2916,4374,6561 ★ a(n) = max { (n - i) * a(i) : i < n } ; a(0) = 1. ● a(3n) = 3 ^ n; a(3 * n + 1) = 4 * 3 ^ (n - 1) for n > 0; a(3 * n + 2) = 2 * 3 ^ n. ● a(n) = 3 * a(n - 3) if n > 4. - _ Henry Bottomley _ , Nov 29 2001 ● a(n) = n if n <= 2, otherwise a(n - 1) + Max { gcd(a(i), a(j)) | 0 < i < j < n } . - _ Reinhard Zumkeller _ , Feb 08 2002 ● a(n) = 3 ^ (n - 2 - 2 * floor((n - 1) / 3)) * 2 ^ (2 - (n - 1) mod 3) for n > 1. - _ Hieronymus Fischer _ , Nov 11 2007 ● a(n) = 3 ^ floor(n / 3) / (1 - (n mod 3) / 4), n > 1. ● a(n) = 3 ^ (floor((n - 2) / 3)) * (2 + ((n - 2) mod 3)), n > 1. (End) ●

▶ [A175848] 0,1,2,3,4,6,9,13,17,23,30,38,47,58,71,86,102,121,142,165,190,218,249,283,319 ★ Partial sums of ceiling(n ^ 2 / 16). ● a(n) = round((2 * n + 1) * (2 * n ^ 2 + 2 * n + 51) / 192); ● a(n) = floor((2 * n ^ 3 + 3 * n ^ 2 + 52 * n + 60) / 96); ● a(n) = ceiling((2 * n ^ 3 + 3 * n ^ 2 + 52 * n - 9) / 96); ● a(n) = a(n - 16) + (n + 1) * (n - 16) + 102. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 8) - 3 * a(n - 9) + 3 * a(n - 10) - a(n - 11). - _ R. J. Mathar _ , Mar 11 2012 ●

► [A016028] 1,2,3,4,6,9,13,18,24,31,39,48,58,69,81,94,108,123,139,156,174,193,213,234,256 ⋆ Expansion of (1 - x + x ^ 4) / (1 - x) ^ 3. ● a(n) = binomial(n,2) - 3 * n + 9, n>=3. a(n - 3) = n ^ 2 / 2 - 7 * n / 2 + 9, n>=4. - _ Milan Janjic _ , Dec 28 2007 ●
► [A219282] 1,1,1,2,3,4,6,9,13,18,25,35,49,68,93,126,170,229,308,413,551,731,965,1269,1664 ⋆ Number of superdiagonal bargraphs with area n. ● a(n) = sum _{ k=0..floor((sqrt(8 * n + 1) - 3) / 2) } C(n - 1 - C(k + 1,2),k), for n>=1. ●
► [A098578] 0,1,2,3,4,6,9,13,18,25,35,49,68,94,130,180,249,344,475,656,906,1251,1727,2384,3291 ⋆ a(n) = Sum _{ k=0..floor(n / 4) } C(n - 3 * k,k + 1). ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 4) - a(n - 5). ● a(n) = a(n - 1) + a(n - 4) + 1. ●
► [A050811] 2,3,4,6,9,13,18,26,35,48,65,87,115,152,199,258,333,427,545,692,875,1102,1381,1725,2145 ⋆ Partition numbers rounded to nearest integer given by the Hardy - Ramanujan approximate formula. ● a(n) = round(exp(Pi * sqrt(2 * n / 3)) / (4 * n * sqrt(3))). - _ Alonso del Arte _ , May 21 2011 ●
► [A001521] 1,2,3,4,6,9,13,19,27,38,54,77,109,154,218,309,437,618,874,1236,1748,2472,3496,4944,6992 ⋆ a(1) = 1; thereafter a(n + 1) = floor(sqrt(2 * a(n) * (a(n) + 1))). ● a(n) = floor(sqrt(2) ^ (n - 1)) + floor(sqrt(2) ^ (n - 2)), n>1. - _ Ralf Stephan _ , Sep 18 2004 ●
► [A003143] 1,1,2,3,4,6,9,13,19,27,38,54,77,109,155,219,310,438,621,877,1243,1755,2486,3510,4973 ⋆ a(2 * n) = floor(17 * 2 ^ n / 14), a(2 * n + 1) = floor(12 * 2 ^ n / 7). ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) + a(n - 4) - a(n - 5) + 2 * a(n - 6) - 2 * a(n - 7) for n > 7. - _ Chai Wah Wu _ , May 25 2016 ●
► [A247083] 0,1,1,1,2,3,4,6,9,13,19,28,32,42,52,57,63,70,82,91,98,108,118,135,144 ⋆ a(n) = 0 for n <= 0: Starting with n=1, a(n) = 1 + the sum of the digital sums of a(0) through a(n - 3). ● a(n) = 1 + Sum _{ k=0..n - 3 } digsum(a(k)). ●
► [A000930] 1,1,1,2,3,4,6,9,13,19,28,41,60,88,129,189,277,406,595,872,1278,1873,2745,4023,5896 ⋆ Narayana's cows sequence: a(0) = a(1) = a(2) = 1; thereafter a(n) = a(n - 1) + a(n - 3). ● a(n) = Sum _{ i=0..floor(n / 3) } binomial(n - 2 * i, i). ● a(n) = a(n - 2) + a(n - 3) + a(n - 4) for n>3. ● a(n) = floor(d * c ^ n + 1 / 2) where c is the real root of x ^ 3 - x ^ 2 - 1 and d is the real root of 31 * x ^ 3 - 31 * x ^ 2 + 9 * x - 1 (c = 1.465571... = A092526 and d = 0.611491991950812...). - _ Benoit Cloitre _ , Nov 30 2002 ● a(n) = Sum _{ k=0..n } binomial(floor((n + 2k - 2) / 3), k). - _ Paul Barry _ , Jul 06 2004 ● a(n) = Sum _{ k=0..n } binomial(k, floor((n - k) / 2))(1 + (- 1) ^ (n - k)) / 2. - _ Paul Barry _ , Jan 12 2006 ● a(n) = Sum _{ k=0..n } binomial((n + 2k) / 3,(n - k) / 3) * (2 * cos(2 * Pi * (n - k) / 3) + 1) / 3. - _ Paul Barry _ , Dec 15 2006 ●
► [A068921] 1,1,2,3,4,6,9,13,19,28,41,60,88,129,189,277,406,595,872,1278,1873,2745,4023,5896,8641 ⋆ Number of ways to tile a 2 X n room with 1x2 Tatami mats. At most 3 Tatami mats may meet at a point. ● a(n) = sum(binomial(n - 2j + 1,j), j=0..floor(n / 2)). (End) ●
► [A172161] 0,1,2,3,4,6,9,13,20,30,45,67,101,151,227,340,510,765,1148,1722,2583,3874,5811,8717,13075 ⋆ Greedy Coppersmith - Winograd sequence. ● a(n) = floor((Sum _{ i<n } a(i)) / 2) + 1 for n > 4. - _ Charles R Greathouse IV _ , Dec 02 2022 ●
► [A117791] 1,1,2,3,4,6,9,13,20,30,45,68,102,153,230,345,518,778,1168,1754,2634,3955,5939,8918,13391 ⋆ Expansion of 1 / (1 - x - x ^ 2 + x ^ 4 - x ^ 6). ● a(n) = a(n - 1) + a(n - 2) - a(n - 4) + a(n - 6). - _ Ilya Gutkovskiy _ , Nov 16 2016 ●
► [A078620] 1,1,1,1,2,3,4,6,9,14,21,31,46,70,106,161,245,375,576,885,1364,2107,3261,5058,7856 ⋆ Floor(average of first n Fibonacci numbers). ● a(n) = Floor((1 / n)(Sum _{ i=1, ..., n } Fibonacci(n)) ●
► [A073941] 1,1,1,2,3,4,6,9,14,21,31,47,70,105,158,237,355,533,799,1199,1798,2697,4046,6069,9103 ⋆ a(n) = ceiling((Sum _{ k=1..n - 1 } a(k)) / 2) for n >= 2 starting with a(1) = 1. ● a(n) = ceiling(c * (3 / 2) ^ n - 1 / 2) where c = 0.360504556196614959101544662866 5... - _ Benoit Cloitre _ , Nov 22 2002 ●
► [A005428] 1,1,2,3,4,6,9,14,21,31,47,70,105,158,237,355,533,799,1199,1798,2697,4046,6069,9103,13655 ⋆ a(n) = ceiling((1 + sum of preceding terms) / 2) starting with a(0) = 1. ● a(0) = 1; a(n) = ceiling((1 + Sum _{ k=0..n - 1 } a(k)) / 2). - _ Don Reble _ , Apr 23 2003 ● a(1) = 1, s(1) = 2, and for n > 1, a(n) = floor((3 * a(n - 1) + s(n - 1) - 1) / 2), s(n) = (s(n - 1) + a(n)) mod 3. - _ Max Alekseyev _ , Mar 28 2009 ● a(n) = floor(1 + (sum of preceding terms) / 2). - _ M. F. Hasler _ , Oct 14 2012 ●
► [A179041] 0,1,2,3,4,6,9,14,21,33,52,82,130,208,334,538,867,1400,2262,3656,5911,9560,15464,25017,40473 ⋆ Partial sums of ceiling(Fibonacci(n) / 3). ● a(n) = round(Fibonacci(n + 2) / 3 + 3 * n / 8 - 1 / 24). ● a(n) = floor(Fibonacci(n + 2) / 3 + 3 * n / 8 + 1 / 4). ● a(n) = ceiling(Fibonacci(n + 2) / 3 + 3 * n / 8 - 1 / 3). ● a(n) = a(n - 8) + Fibonacci(n - 1) + Fibonacci(n - 3) + 3, n > 7. ● a(n) = 2 * a(n - 1) - a(n - 3) + a(n - 8) - 2 * a(n - 9) + a(n - 11), n > 10. ●
► [A018140] 1,2,3,4,6,9,14,22,34,53,81,126,196,303,470,729,1132,1756,2725,4228,6561,10182,15801,24520,38051 ⋆ Powers of the fifth root of 9 rounded up. ● a(n) = ceiling(9 ^ (n / 5)). - _ Wesley Ivan Hurt _ , Sep 03 2022 ●
► [A103481] 1,1,2,3,4,6,9,16,31,69,168,447,1274,3862,12351,41472,145661,533745,2036158,8071795,33192800,141351726,622384741,2829417288,13263528363 ⋆ Diagonal sums of A103462. ● a(n)=sum { k=0..floor(n / 2), k ^ (n - 2k) + 1 - 0 ^ (n - 2k) } ; a(n)=sum { k=0..floor(n / 2), k ^ (n - 2k) }+ floor((n + 1) / 2). ●
► [A275173] 1,1,1,1,1,1,2,3,4,6,9,22,36,51,82,129,321,529,753,1217,1921,4786,7891,11236,18166 ⋆ a(n) = (a(n - 3) + a(n - 1) * a(n - 5)) / a(n - 6), a(0) = a(1) = ... = a(5) = 1. ● a(n) = 16 * a(n - 5) - 16 * a(n - 10) + a(n - 15). - _ G. C. Greubel _ , Jul 20 2016 ●
► [A047417] 2,3,4,6,10,11,12,14,18,19,20,22,26,27,28,30,34,35,36,38,42,43,44,46,50 ⋆ Numbers that are congruent to { 2, 3, 4, 6 } mod 8. ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. ● a(n) = (8 * n - 5 - i ^ (2 * n) - (1 - 2 * i) * i ^ (- n) - (1 + 2 * i) * i ^ n) / 4 with i=sqrt(- 1). ●
► [A364587] 1,2,3,4,6,10,15,24,39,62,100,162,261,422,683,1104,1786,2890,4675,7564,12239,19802,32040,51842,83881 ⋆ Clique covering number, independence number, and Shannon capacity of the n - Lucas cube graph. ● a(n) = (4 + 3 * LucasL[n] + 2 * cos(2 * n * Pi / 3)) / 6. ● a(n) = a(n - 1) + a(n - 2) + a(n - 3) - a(n - 4) - a(n - 5). ●
► [A104767] 0,1,2,3,4,6,10,16,24,36,56,88,136,208,320,496,768,1184,1824,2816,4352,6720,10368,16000,24704 ⋆ a(n)=n for n <= 3, a(n) = 2a(n - 1) - 2a(n - 2) + 2a(n - 3) for n >= 4. ● a(n) = n for n <= 4; for n >= 5, a(n) = 2a(n - 4) + a(n - 1). ●
► [A072944] 2,3,4,6,10,16,24,40,64,96,160,256,384,640,1024,1536,2560,4096,6144,10240,16384,24576,40960,65536,98304 ⋆ a(1)=2, a(n + 1) = 2 * a(n) - phi(a(n)) where phi is the Euler totient function A000010. ● a(1)=2, a(2)=3, a(3)=4, a(4)=6, a(5)=10 and for n> 5 a(n) = 4 * a(n - 3). ●
► [A018142] 1,2,3,4,6,10,16,25,40,63,100,158,251,398,631,1000,1585,2512,3981,6310,10000,15849,25119,39811,63096 ⋆ Powers of fifth root of 10 rounded to nearest integer. ● a(n) = round(10 ^ (n / 5)). - _ Wesley Ivan Hurt _ , Jun 23 2015 ●
► [A293632] 1,1,2,3,4,6,10,16,26,42,67,108,175,283,458,741,1198,1938,3136,5074,8210,13284,21493,34776,56269 ⋆ Least integer k such that k / Fibonacci(n) >= 3 / 4. ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) - a(n - 4) + a(n - 5) - a(n - 7) for n >= 8. ● a(n) = ceiling(3 * Fibonacci(n) / 4). ●
► [A060163] 0,2,3,4,6,10,17,28,44,66,95,132,178,234,301,380,472,578,699,836,990,1162,1353,1564,1796 ⋆ a(n) = (n ^ 3 + 5 * n + 18) / 6. ● a(n) = n + 2 + binomial(n,3) (with different offset). - _ Zerinvary Lajos _ , Jul 23 2006 ●
► [A024490] 1,2,3,4,6,10,17,28,45,72,116,188,305,494,799,1292,2090,3382,5473,8856,14329,23184,37512,60696,98209 ⋆ a(n) = C(n - 1,1) + C(n - 3,3) + ... + C(n - 2 * m - 1,2 * m + 1), where m = floor((n - 2) / 4). ● a(n) = Sum _{ k=0..n } Fibonacci(k + 1) * 2 * sin(Pi * (n - k) / 3 + Pi / 3) / sqrt(3). - _ Paul Barry _ , May 18 2004 ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n - k + 1,k + 1) * (1 + (- 1) ^ k) / 2. - _ Paul Barry _ , Jul 05 2007 ●
► [A056469] 2,3,4,6,10,18,34,66,130,258,514,1026,2050,4098,8194,16386,32770,65538,131074,262146,524290,1048578,2097154,4194306,8388610 ⋆ Number of elements in the continued fraction for Sum _{ k=0..n } 1 / 2 ^ 2 ^ k. ● a(n) = floor(2 ^ (n - 1) + 2). - _ Vincenzo Librandi _ , Sep 21 2011 ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n > 2. ●
► [A003099] 1,2,3,4,6,11,22,43,79,137,231,397,728,1444,3018,6386,13278,26725,51852,97243,177671,320286,579371,1071226,2053626 ⋆ a(n) = Sum _{ k=0..n } binomial(n,k ^ 2). ● a(n) * sqrt(n) / 2 ^ n is bounded: lim sup a(n) * sqrt(n) / 2 ^ n = 0.82... and lim inf a(n) * sqrt(n) / 2 ^ n = 0.58... - _ Benoit Cloitre _ , Nov 14 2003 [These constants are sqrt(2 / Pi) * JacobiTheta3(0,exp(- 4)) = 0.827112712713641457 42... and sqrt(2 / Pi) * JacobiTheta2(0,exp(- 4)) = 0.587247586271786487... - _ Vaclav Kotesovec _ , Jan 15 2023] ●
► [A245481] 1,2,3,4,6,12,13,26,39,52,78,156,169,338,507,676,1014,2028,2197,4394,6591,8788,13182,26364,28561 ⋆ Numbers n such that the n - th cyclotomic polynomial has a root mod 13. ● a(n) = 13 * a(n - 6). G.f.: - x * (12 * x ^ 5 + 6 * x ^ 4 + 4 * x ^ 3 + 3 * x ^ 2 + 2 * x + 1) / (13 * x ^ 6 - 1). - _ Colin Barker _ , Jul 30 2014 ●
► [A078495] 1,1,1,1,1,1,1,2,3,4,6,12,24,72,144,288,864,3456,10368,41472,124416,497664,2985984,17915904,71663616 ⋆ a(n) = (a(n - 1) * a(n - 6) + a(n - 3) * a(n - 4)) / a(n - 7) (a variant of Somos - 7). ● a(n) = 144 * a(n - 6) * a(n - 10) / a(n - 16), a(n) = a(6 - n) for all n in Z. ●
► [A161701] 1,2,3,4,6,12,28,64,135,262,473,804,1300,2016,3018,4384,6205,8586,11647,15524,20370,26356,33672,42528,53155 ⋆ a(n) = (n ^ 5 - 5 * n ^ 4 + 5 * n ^ 3 + 5 * n ^ 2 + 114 * n + 120) / 120. ● a(n) = C(n,0) + C(n,1) + C(n,4) + C(n,5). ●
► [A038504] 0,1,2,3,4,6,12,28,64,136,272,528,1024,2016,4032,8128,16384,32896,65792,131328,262144,523776,1047552,2096128,4194304 ⋆ Sum of every 4th entry of row n in Pascal's triangle, starting at "n choose 1". ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3), n > 3. - _ Paul Curtz _ , Mar 01 2008 ● a(n) = Sum _{ k=0..floor(n / 4) } binomial(n, 4 * k + 1). ● a(n) = Sum _{ k=0..n } binomial(n, k) * (sin(Pi * k / 2) / 2 + (1 - (- 1) ^ k) / 4). ● a(n) = 2 ^ (n - 2) + 2 ^ ((n - 2) / 2) * sin(Pi * n / 4) - 0 ^ n / 4. (End) ● a(n; t, s) = a(n - 1; t, s) + a(n - 1; t + 1, s + t + 1) where t is the trace and s is the subtrace. ● a(n + m) = a(n) * H _ 1(m) + H _ 1(n) * a(m) + H _ 4(n) * H _ 3(m) + H _ 3(n) * H _ 4(m), where H _ 1 = A038503, H _ 3 = A038505, H _ 4 = A000749. ●
► [A369849] 1,2,3,4,6,13,35,92,220,484,1013,2092,4382,9404,20552,45185,99009,215481,466361,1006897,2174834,4705895,10200142,22128873,48009456 ⋆ Number of compositions of 5 * n - 1 into parts 4 and 5. ● a(n) = Sum _{ k=0..floor(n / 4) } binomial(n + k,n - 1 - 4 * k). ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 4 * a(n - 4) + a(n - 5). ●
► [A047549] 0,1,2,3,4,7,8,9,10,11,12,15,16,17,18,19,20,23,24,25,26,27,28,31,32 ⋆ Numbers that are congruent to { 0, 1, 2, 3, 4, 7 } mod 8. ● a(n) = a(n - 1) + a(n - 6) - a(n - 7) for n>7. ● a(n) = (24 * n - 33 + 3 * cos(n * Pi) + 4 * sqrt(3) * cos((1 - 4 * n) * Pi / 6) + 12 * sin((1 + ● a(6k) = 8k - 1, a(6k - 1) = 8k - 4, a(6k - 2) = 8k - 5, a(6k - 3) = 8k - 6, a(6k - 4) = 8k - 7, a(6k - 5) = 8k - 8. (End) ●
► [A047337] 0,1,2,3,4,7,8,9,10,11,14,15,16,17,18,21,22,23,24,25,28,29,30,31,32 ⋆ Numbers that are congruent to { 0, 1, 2, 3, 4 } mod 7. ● a(n) = 7 * floor((n - 1) / 5) + ((n - 1) mod 5). - _ Gary Detlefs _ , Mar 09 2010 ● a(n) = floor((7 / 6) * floor(6 * (n - 1) / 5)). - _ Bruno Berselli _ , May 03 2016 ●
► [A047227] 1,2,3,4,7,8,9,10,13,14,15,16,19,20,21,22,25,26,27,28,31,32,33,34,37 ⋆ Numbers that are congruent to { 1, 2, 3, 4 } mod 6. ● a(n) = floor((n + 2) / 4) + floor((n + 1) / 4) + floor(n / 4) + 2 * floor((n - 1) / 4) + floor((n + 3) / 4). ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. ● a(n) = (6n - 5 - i ^ (2n) + (1 + i) * i ^ (1 - n) + (1 - i) * i ^ (n - 1)) / 4 where i=sqrt(- 1). ●
► [A287664] 2,3,4,7,8,9,11,12,13,16,17,18,21,22,23,25,26,27,30,31,32,34,35,36,39 ⋆ Positions of 0's in A287663; complement of A287665. ● a(3 * n + j - 3) = b ^ (j)(n) for j=1,2,3, with b ^ (1)(n) = floor(n * phi) + 3 * n - 2, b ^ (2)(n) = floor(n * phi) + 3 * n - 1, b ^ (3)(n) = floor(n * phi) + 3 * n. - _ Michel Dekking _ , Aug 22 2019 ●
► [A074215] 1,2,3,4,7,8,9,11,13,14,16,17,19,21,22,23,26,27,28,29,31,32,33,34,37 ⋆ Numbers m such that m and F(m) are relatively prime, where F(m) denotes the m - th Fibonacci number. ● a(n) is probably asymptotic to c * n with c=1.558..... ●
► [A047202] 2,3,4,7,8,9,12,13,14,17,18,19,22,23,24,27,28,29,32,33,34,37,38,39,42 ⋆ Numbers that are congruent to { 2, 3, 4 } mod 5. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>3. ● a(n) = (15 * n - 3 - 6 * cos(2 * n * Pi / 3) + 2 * sqrt(3) * sin(2 * n * Pi / 3)) / 9. ● a(3k) = 5k - 1, a(3k - 1) = 5k - 2, a(3k - 2) = 5k - 3. (

End) ● a(n) = 2 * n - floor((n - 1) / 3) - ((n - 1) mod 3). - _ Wesley Ivan Hurt _ , Sep 26 2017 ●

▶ [A050271] 1,2,3,4,7,8,9,14,15,16,23,24,25,34,35,36,47,48,49,62,63,64,79,80,81 ⋆ Numbers k such that k = floor(sqrt(k) * ceiling(sqrt(k))). ● a(n) = floor((n + 4) / 3) ^ 2 + ((n + 1) mod 3) - 2. - _ Ivan Neretin _ , Feb 08 2017 ● a(n) = a(n - 1) + 2 * a(n - 3) - 2 * a(n - 4) - a(n - 6) + a(n - 7) for n > 7. ●

▶ [A047547] 0,2,3,4,7,8,10,11,12,15,16,18,19,20,23,24,26,27,28,31,32,34,35,36,39 ⋆ Numbers that are congruent to { 0, 2, 3, 4, 7 } mod 8. ● a(n) = a(n - 1) + a(n - 5) - a(n - 6) for n > 6. ● a(n) = a(n - 5) + 8 for n>5. ● a(n) = (40 * n - 40 - 7 * (n mod 5) + 3 * ((n + 1) mod 5) + 3 * ((n + 2) mod 5) - 2 * ((n + 3) mod 5) + 3 * ((n + 4) mod 5)) / 25. ● a(5k) = 8k - 1, a(5k - 1) = 8k - 4, a(5k - 2) = 8k - 5, a(5k - 3) = 8k - 6, a(5k - 4) = 8k - 8. (End) ●

▶ [A097110] 1,2,3,4,7,8,15,16,31,32,63,64,127,128,255,256,511,512,1023,1024,2047,2048,4095,4096,8191 ⋆ Expansion of (1 + 2x - 2x ^ 3) / (1 - 3x ^ 2 + 2x ^ 4). ● a(n) = 3 * a(n - 2) - 2 * a(n - 4); ● a(n) = (1 + sqrt(2) / 2) * (sqrt(2)) ^ n + (1 / 2 - sqrt(2) / 2) * (- sqrt(2)) ^ n - (1 + (- 1) ^ n) / 2; ● a(n) = Sum _{ k =0..n } binomial(floor(n / 2), floor(k / 2)). ● a(n) = 2 ^ floor((n + 2) / 2) - 1 + (n mod 2). - _ Reinhard Zumkeller _ , Jan 18 2005 ●

▶ [A120611] 1,2,3,4,7,8,15,19,20,27,31,32,47,48,66,72,90,111,115,116,123,127,128,175,183 ⋆ Sum of previous term and preceding divisors. ● a(1) = 1, a(2) = 2, for n>=2, a(n + 1) = a(n) + sum _{ 1<=k<n, a(k) divides a(n) } a(k). ●

▶ [A370858] 1,2,3,4,7,8,15,24,43,56,111,132,263,420,723,1040,2079,2472,4943,7448,13091,19236,38471,45884,86119 ⋆ Let L _ 1 = (1) and L _ 2 = (1, 2); for any n > 2, L _ n is obtained by inserting one n between each pair of consecutive terms of L _{ n - 1 } coprime to n; a(n) gives the number of terms in L _ n. ● a(p) = 2 * a(p - 1) - 1 for any odd prime number p. ●

▶ [A047548] 1,2,3,4,7,9,10,11,12,15,17,18,19,20,23,25,26,27,28,31,33,34,35,36,39 ⋆ Numbers that are congruent to { 1, 2, 3, 4, 7 } mod 8. ● a(n) = a(n - 1) + a(n - 5) - a(n - 6) for n>6. ●

▶ [A047340] 0,2,3,4,7,9,10,11,14,16,17,18,21,23,24,25,28,30,31,32,35,37,38,39,42 ⋆ Numbers that are congruent to { 0, 2, 3, 4 } mod 7. ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. ● a(n) = (14n - 17 - i ^ (2n) - (3 - i) * i ^ (- n) - (3 + i) * i ^ n) / 8 where i=sqrt(- 1). ●

▶ [A050029] 1,1,2,3,4,7,9,10,11,21,30,37,41,44,46,47,48,95,141,185,226,263,293,314,325 ⋆ a(n) = a(n - 1) + a(m) for n >= 4, where m = 2 ^ (p + 1) + 2 - n and p is the unique integer such that 2 ^ p < n - 1 <= 2 ^ (p + 1), starting with a(1) = a(2) = 1 and a(3) = 2. ● a(n) = a(2 ^ ceiling(log _ 2(n - 1)) + 2 - n) + a(n - 1) for n >= 4. ●

▶ [A038197] 1,1,1,1,2,3,4,7,9,10,19,26,30,56,75,85,160,216,246,462,622,707,1329,1791,2037 ⋆ 4 - wave sequence. ● a(n) = a(n - 1) + a(n - 2) if n=3 * m + 1, a(n) = a(n - 1) + a(n - 4) if n=3 * m + 2, a(n) = a(n - 1) + a(n - 6) if n=3 * m. Also: a(n) = 2 * a(n - 3) + 3 * a(n - 6) - a(n - 9) - a(n - 12). ● a(n - 1) = sequence(sequence(T(n,k), k=2..4), n>=2) with a(0)=1; T(n,k) = sum(T(n - 1,k1), k1 = 5 - k..4) with T(1,1) = T(1,2) = T(1,3) = 0 and T(1,4) = 1; n>=1 and 1 <= k <= 4. [Steinbach] ●

▶ [A236337] 2,3,4,7,9,11,15,18,21,26,30,34,40,45,50,57,63,69,77,84,91,100,108,116,126 ⋆ Expansion of (2 - x) / ((1 - x) ^ 2 * (1 - x ^ 3)) in powers of x. ● a(n) = 2 * a(n - 3) - a(n - 6) + 3 = 2 * a(n - 1) - a(n - 2) + a(n - 3) - 2 * a(n - 4) + a(n - 5). ● a(3 * n) = (1 / 2) * (n + 1) * (3 * n + 4); a(3 * n + 1) = (1 / 2) * (n + 1) * (3 * n + 6); a(3 * n + 2) = (1 / 2) * (n + 1) * (3 * n + 8). - _ Peter Bala _ , Feb 11 2019 ●

▶ [A117450] 1,1,2,3,4,7,9,12,15,18,23,27,32,37,42,49,55,62,69,76,85,93,102,111,120 ⋆ Expansion of (1 - x + x ^ 2 + x ^ 5) / ((1 - x) ^ 2 * (1 - x ^ 5)). ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 5) - 2 * a(n - 6) + a(n - 7). ● a(n) = Sum _{ k=0.. n } binomial(n - k, L(k / 5)) } , where L(j / p) is the Legendre symbol of j and p. ● a(n) = ((5 - sqrt(5)) / 50) * cos(2 * Pi * (2 * n + 1) / 5) + sqrt(((5 + sqrt (5)) / 50) * sin(2 * Pi * (2 * n + 1) / 5) - ((5 + sqrt(5)) / 50) * cos(Pi * (2 * n + 1) / 5) + sqrt(((5 - sqrt(5)) / 50) * sin(Pi * (2 * n + 1) / 5) + (n ^ 2 + n + 3) / 5. ●

▶ [A241131] 0,1,1,2,3,4,7,9,13,18,26,32,47,60,79,104,137,173,227,285,365,461,583,724,912 ⋆ Number of partitions p of n such that (maximal multiplicity over the parts of p) = number of 1s in p. ● a(6) counts these 7 partitions: 51, 411, 321 , 3111, 2211, 21111, 111111. ●

▶ [A295619] 1,2,3,4,7,9,16,21,37,50,87,121,208,297,505,738,1243,1853,3096,4693,7789,11970,19759,30705,50464 ⋆ a(n) = a(n - 1) + 3 * a(n - 2) - 2 * a(n - 3) - 2 * a(n - 4), where a(0) = 1, a(1) = 2, a(2) = 3, a(3) = 4. ● a(n) = a(n - 1) + 3 * a(n - 2) - 2 * a(n - 3) - 2 * a(n - 4), where a(0) = 1, a(1) = 2, a(2) = 3, a(3) = 4. ●

▶ [A080724] 2,3,4,7,10,11,12,13,14,15,16,19,22,25,28,31,34,35,36,37,38,39,40,41,42 ⋆ a(0) = 2; for n>0, a(n) is taken to be the smallest positive integer greater than a(n - 1) which is consistent with the condition "n is a member of the sequence if and only if a(n) == 1 mod 3". ● a(a(n)) = 3 * n + 4, n >= 0. ●

▶ [A047546] 2,3,4,7,10,11,12,15,18,19,20,23,26,27,28,31,34,35,36,39,42,43,44,47,50 ⋆ Numbers that are congruent to { 2, 3, 4, 7 } mod 8. ● a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4) for n>4. ● a(n) = (4 * n - 2 + I ^ (1 - n) + I ^ (n - 1)) / 2 where I=sqrt(- 1). ●

▶ [A266510] 0,0,1,2,3,4,7,10,11,12,15,18,23,28,35,42,43,44,47,50,55,60,67,74,79 ⋆ Partial sums of A266509. ● a(n) = (a(n - 1) + a(n + 1)) / 2, if n is an odd number greater than 1. ●

▶ [A266540] 0,0,1,2,3,4,7,10,11,12,15,18,23,28,35,42,43,44,47,50,55,60,67,74,83 ⋆ Partial sums of A266539. ● a(n) = (a(n - 1) + a(n + 1)) / 2, if n is an odd number greater than 1. ●

▶ [A139759] 1,1,2,3,4,7,10,11,20,31,42,73,110,183,292,473,762,1235,1992,3209,5198,8407,13604,22011,35614 ⋆ A Fibonacci - based recurrence. ● a(n) = a(n - 1) + a(n - 2) + gcd(n,a(n - 1)) - gcd(n,a(n - 2)). ●

▶ [A321684] 0,1,2,3,4,7,10,12,16,21,24,30,35,40,47,53,60,68,76,84,92,101,111,121,131 ⋆ Independent domination number of the n X n grid graph. ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 5) - 2 * a(n - 6) + a(n - 7) for n > 20. ●

▶ [A008811] 0,1,2,3,4,7,10,13,16,21,26,31,36,43,50,57,64,73,82,91,100,111,122,133,144 ⋆ Expansion of x * (1 + x ^ 4) / ((1 - x) ^ 2 * (1 - x ^ 4)). ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 4) - 2 * a(n - 5) + a(n - 6). - _ R. H. Hardin _ , Nov 15 2011 ● a(n) = (- 2 * (1 + (- 1) ^ n) * (- 1) ^ floor(n / 2) + 2 * n ^ 2 + 5 - (- 1) ^ n) / 8. - _ Tani Akinari _ , Jul 24 2013 ●

▶ [A144678] 1,2,3,4,7,10,13,16,22,28,34,40,50,60,70,80,95,110,125,140,161,182,203,224,252 ⋆ Related to enumeration of quantum states (see reference for precise definition). ● a(n) = Sum _{ i=1..n + 8 } floor(i / 4) * floor((n + 8 - i) / 4). - _ Wesley Ivan Hurt _ , Jul 21 2014 ● a(n) = Sum _{ j=0..floor(n / 4) } (j + 1) * (n - 4 * j + 1). (End) ●

▶ [A008824] 1,2,3,4,7,10,13,18,23,28,33,40,47,54,63,72,81,90,101,112,123,136,149,162,175 ⋆ Expansion of (1 + 2 * x ^ 4 + x ^ 7) / ((1 - x) ^ 2 * (1 - x ^ 7)). ● a(0)=1, a(1)=2, a(2)=3, a(3)=4, a(4)=7, a(5)=10, a(6)=13, a(7)=18, a(8)=23, a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 7) - 2 * a(n - 8) + a(n - 9). - _ Harvey P. Dale _ , Apr 26 2014 ●

▶ [A329774] 1,2,3,4,7,10,13,22,31,40,67,94,121,202,283,364,607,850,1093,1822,2551,3280,5467,7654,9841 ⋆ a(n) = n + 1 for n <= 2; otherwise a(n) = 3 * a(n - 3) + 1. ● a(n) = a(n - 1) + 3 * a(n - 3) - 3 * a(n - 4) for n>3. ●

▶ [A267459] 1,2,3,4,7,10,15,20,27,34,43,52,63,74,87,100,115,130,147,164,183,202,223,244,267 ⋆ Total number of ON (black) cells after n iterations of the "Rule 133" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = (2 * n ^ 2 - 4 * n + (- 1) ^ n + 11) / 4 for n > 0. ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4) for n > 4. ●

▶ [A159288] 1,1,2,3,4,7,10,15,24,35,54,83,124,191,290,439,672,1019,1550,2363,3588,5463,8314,12639,19240 ⋆ Expansion of (1 + x + x ^ 2) / (1 - x ^ 2 - 2 * x ^ 3). ● a(n) = a(n - 2) + 2 * a(n - 3) for n>2. - _ Colin Barker _ , Apr 29 2019 ●

▶ [A363958] 1,1,1,2,3,4,7,10,16,23,37,53,86,123,199,285,461,660,1068,1529,2474,3542,5731,8205,13276 ⋆ Expansion of (1 + x + x ^ 3) / (1 - x ^ 2 - 2 * x ^ 4 - 2 * x ^ 6 + x ^ 8). ● a(n) = a(n - 2) + 2 * a(n - 4) + 2 * a(n - 6) + a(n - 8). ● a(2 * n) = a(2 * n - 1) + a(2 * n - 3) + a(2 * n - 5). ● a(2 * n + 1) = a(2 * n) + a(2 * n - 2). ●

▶ [A082766] 1,1,2,3,4,7,10,17,24,41,58,99,140,239,338,577,816,1393,1970,3363,4756,8119,11482,19601,27720 ⋆ Series ratios converge alternately to sqrt(2) and 1 + sqrt(1 / 2). ● a(2n) = a(2n - 1) + a(2n - 2); a(2n + 1) = a(2n) + a(2n - 2) ●

▶ [A218495] 1,1,1,2,3,4,7,10,17,26,39,58,89,133,195,289,420,610,875,1253,1778,2514,3527,4937,6879 ⋆ Number of partitions of n ^ 2 into positive cubes. ● a(n) = [x ^ (n ^ 2)] Product _{ k>=1 } 1 / (1 - x ^ (k ^ 3)). - _ Ilya Gutkovskiy _ , Jun 05 2017 ●

▶ [A166012] 1,2,3,4,7,10,17,26,43,68,111,178,289,466,755,1220,1975,3194,5169,8362,13531,21892,35423,57314,92737 ⋆ a(n) = 2 * (A000045(n) - (n mod 2)) + 1 + (n mod 2). ● a(n) = 2 * Fibonacci(n) + (1 + (- 1) ^ n) / 2. ● a(n) = 2 * Fibonacci(n) + [(n + 1)mod 2]. - _ Gary Detlefs _ , Dec 29 2010 ● a(n) = a(n - 1) + 2 * a(n - 2) - a(n - 3) - a(n - 4) for n>3. ● a(n) = (1 / 2 + (- 1) ^ n / 2 - (2 * (1 / 2 * (1 - sqrt(5))) ^ n - (1 / 2 * (1 + sqrt(5))) ^ n)) / sqrt(5)). ●

▶ [A140827] 1,1,2,3,4,7,11,15,26,41,56,97,153,209,362,571,780,1351,2131,2911,5042,7953,10864,18817,29681 ⋆ Interleave denominators and numerators of convergents to sqrt(3). ● a(n) = 4 * a(n - 3) - a(n - 6). ● a(n) = a(n - 1) + a(n - 3) if 3 |(n - 1), else a(n)=a(n - 1) + a(n - 2), with n>1. ● a(n) ^ 2 = 1 + 3 * a(n - 1) ^ 2 if n==2 (mod 3). ●

▶ [A141001] 1,1,1,2,3,4,7,11,16,21,26,32,38,44,51,59,67,75,84,94,104,114,125,137,149 ⋆ a(n) = number of different landings of a grasshopper after n hops. ● a(n) = floor(n * (n + 1) / 4 - 1) for n >= 9. The induction proof for A141000 shows that for n >= 21, you hit all numbers of the right parity except n(n + 1) / 2 - 2 and n(n + 1) / 2 - 4. The floor expression handles the various parity cases. - _ David Applegate _ . ● a(n) = (1 / 8 + i / 8) * ((- 5 + 5 * i) + (- i) ^ (1 + n) + i ^ n + (1 - i) * n + (1 - i) * n ^ 2) for n>8 where i=sqrt(- 1). ● a(n) = 3 * a(n - 1) - 4 * a(n - 2) + 4 * a(n - 3) - 3 * a(n - 4) + a(n - 5) for n>9. ●

▶ [A333260] 1,1,1,1,1,2,3,4,7,11,16,23,33,46,64,84,109,143,184,228,283,351,429,515,615 ⋆ Number of terms in polynomial sequence s(n) = (x * s(n - 1) * s(n - 4) + y * s(n - 2) * s(n - 3)) / s(n - 5), with s(k) = 1 for k = 0..4. ● a(n) = a(4 - n) for all n in Z. ●

▶ [A196382] 0,0,2,3,4,7,11,16,24,36,53,78,115,169,248,364,534,783,1148,1683,2467,3616,5300,7768,11385 ⋆ Number of sequences of n coin flips, that win on the last flip, if the sequence of flips ends with (1,1,0) or (1,0,1). ● a(n) = + 2 * a(n - 1) - a(n - 2) + a(n - 3) - a(n - 4), n>=5. ● a(n) = a(n - 1) + a(n - 3) + 1, n>3. - _ Greg Dresden _ , Feb 09 2020 ●

▶ [A120415] 1,1,1,2,3,4,7,11,16,25,39,59,91,141,216,332,512,787,1210,1863,2866,4408,6783,10436,16054 ⋆ Expansion of 1 / (1 - x - x ^ 3 - x ^ 6). ● a(n) = a(n - 1) + a(n - 3) + a(n - 6). ●

▶ [A023361] 1,1,1,2,3,4,7,11,16,25,40,61,94,147,227,351,546,846,1309,2030,3147,4876,7558,11715,18154 ⋆ Number of compositions of n into positive triangular numbers. ● a(n) = a(n - 1) + a(n - 3) + a(n - 6) + a(n - 10) + ... _ Gregory L. Simay _ , Jun 09 2016 ●

▶ [A210518] 0,0,2,3,4,7,11,16,25,40,65,102,168,275,446,739,1229,2039,3401,5703,9592,16144,27293,46243,78498 ⋆ Number of primes up to 10 ^ (n / 4). ● a(n) = primepi(10 ^ (n / 4)). ●

▶ [A113435] 1,1,1,2,3,4,7,11,16,26,41,62,98,154,237,371,581,901,1406,2197,3418,5329,8317,12956,20196 ⋆ a(n) = a(n - 1) + Sum _{ k=0..n / 3 } a(n - 3k) with a(0)=1. ● a(n) = a(n - 1) + 2 * a(n - 3) - a(n - 4) = 7 * a(n - 3) - 5 * a(n - 6) + 11 * a(n - 9) - a(n - 12). ●

▶ [A367667] 1,1,1,2,3,4,7,11,16,26,41,62,99,156,240,379,596,925,1453,2281,3556,5575,8742,13658,21394 ⋆ G.f. A(x) satisfies A(x) = 1 / (1 - x - x ^ 3 * A(x ^ 3)). ● a(0) = 1; a(n) = a(n - 1) + Sum _{ k=0..floor((n - 3) / 3) } a(k) * a(n - 3 - 3 * k). ●

▶ [A165407] 1,1,1,2,3,4,7,11,16,27,43,65,108,173,267,440,707,1105,1812,2917,4597,7514,12111,19196,31307 ⋆ Expansion of 1 / (1 - x - x ^ 3 * c(x ^ 3)), c(x) the g.f. of A000108. ● a(n) = Sum _{ k=0..n } if(n<=3k, C((n + k) / 2,k) * ((3 * k - n) / 2 + 1) * (1 + (- 1) ^ (n - k)) / (2 * (k + 1)). ●

▶ [A293672] 0,1,1,2,3,4,7,11,17,28,44,72,116,187,302,488,790,1278,2068,3345,5412,8757,14169,22926,37095 ⋆ a(n) is the least integer k such that k / Fibonacci(n) > 4 / 5. ● a(n) = a(n - 1) + 2 a(n - 2) - a(n - 3) - 2 a(n - 4) + 2 a(n - 5) + a(n - 6) - 3 a(n - 7) - a(n - 8) + 3 a(n - 9) - 2 a(n - 11) + a(n - 12) + 2 a(n - 13) - a(n - 14) - a(n - 15) for n >= 16. ● a(n) = ceiling(4 * Fibonacci(n) / 5). ●

▶ [A173173] 0,1,1,1,2,3,4,7,11,17,28,45,72,117,189,305,494,799,1292,2091,3383,5473,8856,14329,23184 ⋆ a(n) = ceiling(Fibonacci(n) / 2). ● a(n) = ceiling(Fibonacci(n) / 2). - _ Mircea Merca _ , Jan 04 2010 ● a(n) = a(n - 1) + a(n - 2) + a(n - 3) - a(n - 4) - a(n - 5) - _ Joerg Arndt _ , Apr 24 2011 ●

▶ [A192669] 1,1,1,2,3,4,7,11,17,28,46,76,124,204,337,557,923,1535,2556,4266,7131,11939,20019,33611,56504 ⋆ Floor - Sqrt transform of Motzkin numbers (A001006). ● a(n) = floor(sqrt(Motzkin(n))). ●

▶ [A293638] 0,0,0,0,1,1,2,3,4,7,11,18,29,47,75,122,197,319,517,836,1353,2189,3542,5731,9274 ⋆ a(n) is the integer k that minimizes |k / Fibonacci(n) - 1 / 5|. ● a(n) = a(n - 1) + 2 a(n - 2) - a(n - 3) - 2 a(n - 4) + a(n - 5) + 2 a(n - 6) - a(n - 7) - 2 a(n - 8) + a(n - 9) + a(n - 10) for n >= 11. ● a(n) = floor(1 / 2 + F(n) / 5). ●

▶ [A254729] 1,1,2,3,4,7,11,18,29,47,76,123,199,322,521,843,1364,2207,3571,5778,9349,15127,24476,39603,64079 ⋆ Number of numbers j + k * sqrt(2) of length n, where the length is the least number of steps to reach 0, the allowable steps being x - > x + 1 and x - > x * sqrt(2). ● a(n) = a(n - 1) + a(n - 2) for n >= 6. ●

▶ [A169985] 1,2,3,4,7,11,18,29,47,76,123,199,322,521,843,1364,2207,3571,5778,9349,15127,24476,39603,64079,103682 ⋆ Round phi ^ n to the nearest integer. ● a(n) = round(sqrt(F(2n) + 2 * F(2n - 1))), for n >= 0, allowing F(- 1) = 1. Also phi ^ n - > sqrt(F(2n) + 2 * F(2n - 1)), within < 0.02 % by n = 4, therefore converging rapidly. - _ Richard R. Forberg _ , Jun 23 2014 ●

▶ [A293544] 0,0,0,1,1,2,3,4,7,11,18,30,48,78,126,203,329,532,861,1394,2255,3649,5904,9552,15456 ⋆ a(n) is the integer k that minimizes | k / Fibonacci(n) - 1 / 3 | . ● a(n) = a(n - 1) + a(n - 2) - a(n - 4) + a(n - 5) + a(n - 6) for n >= 7. ● a(n) = floor(Fibonacci(n) / 3). ●

▶ [A292324] 2,3,4,7,12,19,28,42,64,97,144,212,312,459,672,979,1422,2062,2984,4308,6206,8925,12816,18376,26310 ⋆ p - INVERT of (1,0,0,1,0,0,0,0,0,...), where p(S) = (1 - S) ^ 2. ● a(n) = 2 * a(n - 1) - a(n - 2) + 2 * a(n - 4) - 2 * a(n - 5) - a(n - 8) for n >= 9. ●

▶ [A289919] 2,3,4,7,12,19,30,48,76,119,186,290,450,696,1074,1653,2538,3889,5948,9081,13842,21068,32022,48609,73700 ⋆ p - INVERT of (1,0,0,1,0,0,1,0,0,...), where p(S) = (1 - S) ^ 2. ● a(n) = 2 * a(n - 1) - a(n - 2) + 2 * a(n - 3) - 2 * a(n - 4) - a(n - 6) for n >= 7. ●

▶ [A293411] 1,2,3,4,7,12,19,30,49,80,129,208,337,546,883,1428,2311,3740,6051,9790,15841,25632,41473,67104,108577 ⋆ a(n) = a(n - 1) + a(n - 3) + a(n - 4), where a(0) = 1, a(1) = 2, a(2) = 3, a(3) = 4. ● a(n) = a(n - 1) + a(n - 3) + a(n - 4), where a(0) = 1, a(1) = 2, a(2) = 3, a(3) = 4. ● a(2 * n) = a(2 * n - 1) + a(2 * n - 2), ●

▶ [A227047] 0,0,1,1,2,3,4,7,12,19,31,50,80,130,211,341,552,893,1444,2337,3782,6119,9901,16020,25920 ⋆ Expansion of x ^ 2 * (1 + x ^ 2) / ((x ^ 2 - x + 1) * (- x ^ 2 - x + 1) * (1 + x + x ^ 2)). ● a(n + 1) / a(n) tends to A001622 (the golden ratio) as n - >infinity. ● a(n) = a(n - 1) + a(n - 3) + a(n - 5) + a(n - 6). - _ Joerg Arndt _ , Jun 30 2013 ●

▶ [A367691] 1,2,3,4,7,12,19,31,52,86,141,233,386,639,1057,1749,2896,4795,7937,13138,21751,36010,59613,98688,163380 ⋆ G.f. A(x) satisfies A(x) = 1 / ((1 - x) * (1 - x * A(x ^ 3))). ● a(n) = 1 + Sum _{ k=0..floor((n - 1) / 3) } a(k) * a(n - 1 - 3 * k). ●

▶ [A216604] 1,1,1,2,3,4,7,12,19,33,59,102,181,329,593,1076,1979,3643,6723,12494,23289,43498,81557,153356,288925 ⋆ G.f. satisfies: A(x) = (1 + x * (1 - x) * A(x)) * (1 + x ^ 2 * A(x)). ● a(n) = Sum _{ q=0..n } 1 / (q + 1) * Sum _{ r=0..q + 1 } C(n - 2 * q - 2,n - r - q) * C(q + 1,r - 1) * C(q + 1,r). - _ Vladimir Kruchinin _ , Jan 22 2019 ● a(n) = 1 + Sum _{ k=0..n - 3 } a(k) * a(n - k - 3) . - _ Ilya Gutkovskiy _ , Jan 28 2021 ● a(n) = Sum _{ m=0..n / 3 } C(2 * m,m) * C(n - 2 * m + 1,n - 3 * m) / (n - 2 * m + 1). - _ Vladimir Kruchinin _ , Jan 27 2022 ●

▶ [A357532] 1,1,1,2,3,4,7,12,19,34,63,112,211,414,799,1588,3267,6706,13999,30024,64723,141142,314271,705724,1599619 ⋆ a(n) = Sum _{ k=0..floor(n / 3) } (n - 2 * k)! / (n - 3 * k)!. ● a(n) = (2 * a(n - 1) + n * a(n - 3) + 1) / 3 for n > 2. ●

▶ [A107031] 1,2,3,4,7,12,25,56,145,422,1389,5072,20283,87996,412663,2087868,11361831,66155642,409567833,2680486870,18465061963,133504614880,1011121118741,8008145020804,66201411633209 ⋆ Diagonal sums of number triangle A107030 . ● a(n)=sum { k=0..floor(n / 2), (k - 1) * C(k(n - 2k), n - 2k) - (k - 2) * sum { j=0..n - k, C(k(n - 2k), j) }} ●

▶ [A023162] 1,2,3,4,7,13,14,17,23,26,34,37,43,46,47,53,67,73,74,83,86,94,97,103,106 ⋆ Numbers k such that F(k) == - 1 (mod k), where F(n) = A000045(n) is the n - th Fibonacci number. ● a(n) seems to be asymptotic to c * n * log(n) where c = 1.5... - _ Benoit Cloitre _ , Jan 10 2003 ●

▶ [A031149] 0,1,2,3,4,7,13,16,19,38,57,136,253,487,604,721,1442,2163,5164,9607,18493,22936,27379,54758,82137 ⋆ Numbers whose square with its last digit deleted is also a square. ● a(n) = 38 * a(n - 7) - a(n - 14) for n>15 (conjectured). - _ Colin Barker _ , Dec 31 2017 ● a(8 + 7k) = (8 + 5 sqrt(10) / 2) e1 ^ k + (8 - 5 sqrt(10) / 2) e2 ^ k. - _ Robert Israel _ , Feb 16 2016 ●

▶ [A266498] 2,3,4,7,13,22,38,66,115,198,344,595,1031,1786,3093,5357,9279,16071,27836,48213,83508,144640,250524,433920,751571 ⋆ Index of the smallest triangular number greater than 3 ^ n. ● a(n) = round(sqrt(2 * 3 ^ n + 1 / 4)). ●

▶ [A099779] 1,2,3,4,7,13,23,44,83,159,306,590,1144,2220,4317,8408,16399,32023,62601,122498,239924,470304,922612,1811217,3558035 ⋆ a(n) = ceiling(1 / 2 + (Sum _{ i=0..n - 1 } C(n,i) * C(n,i + 1)) / 2 ^ (n + 1)). ● a(n) = ceiling(1 / 2 + n * binomial(2 * n,n) / ((n + 1) * 2 ^ (n + 1))). - _ Vaclav Kotesovec _ , Sep 04 2019 ●

▶ [A270440] 2,3,4,7,13,23,44,84,161,313,609,1189,2327,4562,8958,17614,34673,68318,134724,265878,525066,1037554,2051390,4057939,8030892 ⋆ Least k such that binomial(k, 2) >= binomial(2 * n, n). ● a(n) = ceiling((8 * binomial(2 * n,n) + 1) ^ (1 / 2) + 1) / 2). The above conjecture is true asymptotically. Using Stirling's formula for the approximation of n!, we get binomial(2 * n,n) ~ 2 ^ (2n) / (Pi * n) ^ (1 / 2) and inserting this in the formula for a(n) results in the above approximation for a(n). - _ Chai Wah Wu _ , Mar 23 2016 ●

▶ [A000690] 1,2,3,4,7,13,24,44,83,157,297,567,1085,2086,4019,7766,15039,29181,56717,110408,215225,420076,820836,1605587,3143562 ⋆ Landau's approximation to population of x ^ 2 + y ^ 2 <= 2 ^ n. ● a(n) = round(b * 2 ^ n / sqrt(log(2 ^ n))) where b=0.764223654... is the Landau - Ramanujan constant (A064533). ●

▶ [A049876] 2,3,4,7,13,25,47,88,164,306,571,1066,1990,3715,6935,12946,24167,45114,84217,157213,293479,547855,1022714,1909162,3563948 ⋆ a(n)=Sum { a(k): k=0,1,2,...,n - 4,n - 2,n - 1 } ; a(n - 3) is not a summand; 3 initial terms required. ● a(n)=2 * a(n - 1) - a(n - 3) + a(n - 4); 4 initial terms required. ●

▶ [A290992] 0,0,0,1,2,3,4,7,14,27,48,82,140,242,420,726,1250,2153,3720,6446,11184,19408,33676,58431,101378 ⋆ p - INVERT of (0,0,0,1,2,3,4,5,...), the nonnegative integers A000027 preceded by two zeros, where p(S) = 1 - S - S ^ 2. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - 2 * a(n - 5) + a(n - 6) + a(n - 8). ●

▶ [A027362] 1,1,1,2,3,4,7,16,21,48,93,128,315,448,675,2048,3825,5376,13797,24576,27783,95232,182183,262144,629145 ⋆ Number of Hamiltonian cycles in the directed graph with 2n nodes { 0..2n - 1 } and edges from each i to 2i (mod 2n) and to 2i + 1 (mod 2n). ● a(2 ^ k) = 2 ^ (2 ^ k - k - 1) from L. Levine 2011, Theorem 1.3. ●

▶ [A119330] 1,2,3,4,7,18,49,120,265,554,1155,2476,5455,12138,26881,58992,128689,280466,612579,1341268,2940151,6443778,14111857,30886632,67590649 ⋆ Expansion of (1 - x) ^ 2 / ((1 - x) ^ 4 - 2x ^ 4). ● a(n)=4a(n - 1) - 6a(n - 2) + 4a(n - 3) + a(n - 4); a(n)=sum { k=0..n, sum { j=0..n - k, C(k,2j)C(n - k,2j) * 2 ^ j }} . ●

▶ [A047453] 0,1,2,3,4,8,9,10,11,12,16,17,18,19,20,24,25,26,27,28,32,33,34,35,36 ⋆ Numbers that are congruent to { 0, 1, 2, 3, 4 } mod 8. ● a(n) = a(n - 1) + a(n - 5) - a(n - 6) for n > 6, a(n) = a(n - 5) + 8 for n > 5. ● a(n) = (40 * n - 70 + 3 * (n mod 5) + 3 * ((n + 1) mod 5) + 3 * ((n + 2) mod 5) + 3 * ((n + 3) mod 5) - 12 * ((n + 4) mod 5)) / 25. ● a(5k) = 8k - 4, a(5k - 1) = 8k - 5, a(5k - 2) = 8k - 6, a(5k - 3) = 8k - 7, a(5k - 4) = 8k - 8. (End) ●

▶ [A047338] 1,2,3,4,8,9,10,11,15,16,17,18,22,23,24,25,29,30,31,32,36,37,38,39,43 ⋆ Numbers that are congruent to { 1, 2, 3, 4 } mod 7. ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. ● a(n) = (14n - 15 - 3 * i ^ (2n) - (3 - 3 * i) * i ^ (- n) - (3 + 3 * i) * i ^ n) / 8 where i=sqrt(- 1). ●

▶ [A069811] 0,1,2,3,4,8,9,10,11,15,16,20,21,25,29,30,31,35,36,40,44,48,49,53,54 ⋆ a(n) = Sum _{ k=1..n } omega(k) ^ 2. ● a(n) = n * Log(Log(n)) ^ 2 + O(n * Log(log(n))). ●

▶ [A329268] 1,2,3,4,8,9,10,11,22,23,24,25,29,58,59,60,61,65,66,67,68,88,142,143,144 ⋆ Positions of 1 in A309797. ● a(n + 1) <= 2 * a(n). ●

▶ [A047228] 2,3,4,8,9,10,14,15,16,20,21,22,26,27,28,32,33,34,38,39,40,44,45,46,50 ⋆ Numbers that are congruent to { 2, 3, 4 } mod 6. ● a(n) = 2 * n - 1 - cos(2 * n * Pi / 3) + sin(2 * n * Pi / 3) / sqrt(3). (End) [adapted for offset 1 by _ Wesley Ivan Hurt _ , Jun 13 2016] ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. ● a(3k) = 6k - 2, a(3k - 1) = 6k - 3, a(3k - 2) = 6k - 4. (End) ●

▶ [A079279] 1,2,3,4,8,9,10,14,15,16,21,22,26,27,28,32,33,34,38,39,40,44,45,46,51 ⋆ a(n)=n for n<=3; for n>3, a(n) is next integer sharing common factors with 1 or 2 of previous 3 terms. ● a(n) = a(n - 1) + a(n - 14) - a(n - 15) for n>16. ●

▶ [A244151] 2,3,4,8,9,14,15,20,21,26,27,32,33,38,39,44,45,50,51,56,57,62,63,68,69 ⋆ 0 - additive sequence: start with a(1) = 2; thereafter, a(n) = smallest number not already in sequence which is not the sum of any previous two terms. ● a(2n) = 6(n - 1) + 2 & a(2n + 1) = 6(n - 1) + 3 for n>1. - _ Robert G. Wilson v _ , Jun 23 2014 ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n > 6. ●

▶ [A047456] 0,2,3,4,8,10,11,12,16,18,19,20,24,26,27,28,32,34,35,36,40,42,43,44,48 ⋆ Numbers that are congruent to { 0, 2, 3, 4 } mod 8. ● a(n) = (- 11 - (- 1) ^ n - (2 - i) * (- i) ^ n - (2 + i) * i ^ n + 8 * n) / 4 where i=sqrt(- 1). - _ Colin Barker _ , May 14 2012 ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. - _ Vincenzo Librandi _ , May 16 2012 ●

▶ [A296161] 0,1,2,3,4,8,10,12,14,21,24,27,30,40,44,48,52,65,70,75,80,96,102,108,114 ⋆ Sum of the larger parts of the partitions of n into two parts such that the smaller part is odd. ● a(n) = Sum _{ i=1..floor(n / 2) } (n - i) * (i mod 2). ● a(n) = a(n - 1) + 2 * a(n - 4) - 2 * a(n - 5) - a(n - 8) + a(n - 9) for n>9. ● a(n) = (1 / 64) * (12 * n ^ 2 + 4 * n - 6 - 4 * (- 1) ^ ((2 * n - 3 - (- 1) ^ n) / 4) + (4 * n - 2) * (- 1) ^ n + (8 * n - 4) * (- 1) ^ ((2 * n + 3 + (- 1) ^ n) / 4)). - _ Wesley Ivan Hurt _ , Dec 06 2017 ●

▶ [A302406] 0,1,2,3,4,8,10,14,16,23,26,33,36,46,50,60,64,77,82,95,100,116,122,138,144 ⋆ Total domination number of the n X n torus grid graph. ● a(n) = (3 - (- 1) ^ n * (n - 1) + n + 2 * n ^ 2 - 4 * cos(n * Pi / 2) + 2 * sin(n * Pi / 2)) / 8. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) + a(n - 4) - a(n - 5) - a(n - 6) + a(n - 7). ●

▶ [A207644] 1,1,2,3,4,8,10,17,30,42,55,116,172,220,391,683,1024,1616,2050,3675,6520,9504,12505,22421,35572 ⋆ a(n) = 1 + (n - 1) + (n - 2) * [(n - 3) / 2] + (n - 3) * [(n - 4) / 2] * [(n - 5) / 3] + (n - 4) * [(n - 5) / 2] * [(n - 6) / 3] * [(n - 7) / 4] + ... where [x] = floor(x), with summation extending over the initial [n / 2 + 1] products only. ● a(n) = 1 + Sum _{ k=1..[n / 2] } Product _{ j=1..k } floor((n - k - j + 1) / j). ●

▶ [A115271] 1,2,3,4,8,12,16,20,29,38,47,56,72,88,104,120,145,170,195,220,256,292,328,364,413 ⋆ Partial sums of floor((n + 4) / 4) ^ 2. ● a(n) = sum { k=0..n, floor((k + 4) / 2) ^ 2 } . ● a(n) = 2 * a(n - 1) - a(n - 2) + 2 * a(n - 4) - 4 * a(n - 5) + 2 * a(n - 6) - a(n - 8) + 2 * a(n - 9) - a(n - 10) with a(0)=1, a(1)=2, a(2)=3, a(3)=4, a(4)=8, a(5)=12, a(6)=16, a(7)=20, a(8)=29, a(9)=38. - _ Harvey P. Dale _ , Jun 07 2011 ● a(n) = (2 * n ^ 3 + 18 * n ^ 2 + 61 * n + 75 + 3 * (n + 3) * (- 1) ^ n + 6 * (n + 4 - (n + 2) * (- 1) ^ n) * (- 1) ^ ((2 * n - 1 + (- 1) ^ n) / 4)) / 96. - _ Luce ETIENNE _ , Mar 17 2015 ●

▶ [A189375] 1,2,3,4,8,12,16,20,30,40,50,60,80,100,120,140,175,210,245,280,336,392,448,504,588 ⋆ Expansion of 1 / ((1 - x) ^ 5 * (x ^ 3 + x ^ 2 + x + 1) ^ 3). ● a(n) = (2 * n ^ 4 + 56 * n ^ 3 + 538 * n ^ 2 + 2044 * n + 2469 + 3 * ((2 * n ^ 2 + 28 * n + 89) * (- 1) ^ n + (4 * (- 1) ^ ((2 * n - 1 + (- 1) ^ n) / 4) * (n ^ 2 + 16 * n + 57 - (n ^ 2 + 12 * n + 29) * (- 1) ^ n)))) / 3072. - _ Luce ETIENNE _ , Jun 25 2015 ●

▶ [A133464] 1,2,3,4,8,12,16,32,48,64,128,192,256,512,768,1024,2048,3072,4096,8192,12288,16384,32768,49152,65536 ⋆ a(3n)=4 ^ n, a(3n + 1)=2 * 4 ^ n, a(3n + 2)=3 * 4 ^ n. ● a(n + 1) = a(n) + a(n - n mod 3). ●

▶ [A219968] 1,1,1,2,3,4,8,13,19,35,58,89,154,256,405,681,1131,1822,3025,5012,8156,13465,22257,36415,59976 ⋆ Number of tilings of a 3 X n rectangle using straight (3 X 1) trominoes and 2 X 2 tiles. ● a(n) = 1 + Sum _{ i=0..n - 3 } a(i) *

(1 + B * (B - 1)) where B=floor((n - i) / 3). E.g. a(7) = 1 + a(0) * 3 + a(1) * 3 + a(2) * 1 + a(3) * 1 + a(4) * 1 = 13. - _ Greg Dresden _ and Andrew Cha ng, Aug 23 2022 ●

▶ [A126042] 1,1,1,2,3,4,8,13,19,38,64,98,196,337,531,1062,1851,2974,5948,10468,17060,34120,60488,99658,199316 ★ Expansion of f(x ^ 3) / (1 - x * f(x ^ 3)), wher e f(x) is the g.f. of A001764, whose n - th term is binomial(3n,n) / (2n + 1). ● a (n) = Sum _{ k=0..n } binomial(3 * floor((n + 2k) / 3) - 2k, floor((n + 2k) / 3) - k) * (k + 1) / (2 * floor((n + 2k) / 3) - k + 1)(2 * cos(2 * Pi * (n - k) / 3) + 1) / 3. ● a(0) = 1, a(1) = 1, a(2) = 1 and for k>0 ● a(3 * k) = 2 * a(3 * k - 1), ● a(3 * k + 1) = 2 * a(3 * k) - binomial(3 * k,k) / (2 * k + 1), ● a(3 * k + 2) = 2 * a(3 * k + 1) - binomial(3 * k + 1,k) / (k + 1), ●

▶ [A076227] 1,1,1,2,3,4,8,13,19,38,64,128,226,367,734,1295,2114,4228,7495,14990,27328,46611,93222,168807,286581 ★ Number of surviving Collatz residues mod 2 ^ n. ● a(0) = 1, a(1) = 1, and for k > 0, ●

▶ [A364595] 1,1,1,2,3,4,8,15,25,50,102,193,390,815,1645,3385,7141,14893,31196,66309,140752,299043,640367,1373929,2950006 ★ G.f. satisfies A(x) = 1 / (1 - x) + x ^ 3 * (1 - x) * A(x) ^ 3. ● a(n) = Sum _{ k=0..floor(n / 3) } binomial(n - 2 * k,k) * binomial(3 * k,k) / (2 * k + 1). ●

▶ [A189740] 1,2,3,4,8,15,28,53,102,196,377,726,1399,2696,5196,10015,19304,37209,71722,138248,266481,513658,990107,1908492,3678736 ★ Partial sums of tetran acci numbers (A000288). ● a(1)=1, a(2)=2, a(3)=3, a(4)=4, a(5)=8, a(n)=2 * a (n - 1) - a(n - 5). - _ Harvey P. Dale _ , May 23 2011 ●

▶ [A129284] 2,3,4,8,20,44,92,188,380,856,2148,5024,17616,58768,176320,755904,3305920,13885184,69634816,348174336,2385273856,14652403712,102566830080,849285738496,6035962949632 ★ a(n) = A129150(n) / 4, where A129150(n) = n - t h arithmetic derivative of 2 ^ 3. ● a(n + 1) = a(n) + a'(n), with a(0) = 2. - _ Paolo P. Lava _ , Feb 08 2010 ●

▶ [A047454] 1,2,3,4,9,10,11,12,17,18,19,20,25,26,27,28,33,34,35,36,41,42,43,44,49 ★ Numbers that are congruent to { 1, 2, 3, 4 } mod 8. ● a(n) = (- 5 - (- 1) ^ n - (1 - i) * (- i) ^ n - (1 + i) * i ^ n + 4 * n) / 2 where i=sqrt(- 1). ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. - _ Vincenzo Librandi _ , May 15 2012 ●

▶ [A081870] 1,2,3,4,9,10,11,12,25,26,27,28,29,30,31,63,64,65,66,67,135,136,137,275,276 ★ a(1)=1, a(n)=2 * a(n - 1) + 1 if that number is not squarefree, a(n)=a(n - 1) + 1 otherwise. ● a(n)=r(n) * 2 ^ b(n) where b(n) is an integer sequence and r(n) converges to 1.1249227522411504411045135 29.... ●

▶ [A047339] 2,3,4,9,10,11,16,17,18,23,24,25,30,31,32,37,38,39,44,45,46,51,52,53,58 ★ Numbers that are congruent to { 2, 3, 4 } mod 7. ● a(n + 1) = 7 * floor(n / 3) + (n mod 3) + 2. - _ Gary Detlefs _ , Mar 09 2010 ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. ● a(n) = (21 * n - 15 - 12 * cos(2 * n * Pi / 3) + 4 * s qrt(3) * sin(2 * n * Pi / 3)) / 9. ● a(3k) = 7k - 3, a(3k - 1) = 7k - 4, a(3k - 2) = 7k - 5. (End) ●

▶ [A081871] 1,2,3,4,9,10,21,22,45,91,183,184,369,370,741,742,1485,1486,2973,5947,11895,23791,47583,95167,190335 ★ a(1)=1, a(n)=2 * a(n - 1) + 1 if that numb er is composite, a(n)=a(n - 1) + 1 otherwise. ● a(n)=r(n) * 2 ^ b(n) where b(n) is an integer sequence and r(n) converges to 1.452148914690155834251.... ●

▶ [A212989] 1,2,3,4,9,11,13,15,24,27,30,33,46,50,54,58,75,80,85,90,111,117,123,129,154 ★ Number of (w,x,y) with all terms in { 0,...,n } and 4 * w = 4 * x + y. ● a(n) = a(n - 1) + 2 * a(n - 3) - 2 * a(n - 4) - a(n - 7) + a(n - 8). ●

▶ [A211546] 0,0,0,2,3,4,9,11,13,21,24,27,38,42,46,60,65,70,87,93,99,119,126,133,156 ★ Number of ordered triples (w,x,y) with all terms in { 1,...,n } and w=3x - 3y. ● a(n) = a(n - 1) + 2 * a(n - 3) - 2 * a(n - 4) - a(n - 6) + a(n - 7). ●

▶ [A181287] 0,1,2,3,4,9,14,19,24,49,74,99,124,249,374,499,624,1249,1874,2499,3124,6249,9374,12499,15624 ★ Numbers of the form i * 5 ^ j - 1 (i=1..4, j >= 0). ● a(n) = a(n - 1) + 5 * a(n - 4) - 5 * a(n - 5). G.f.: x ^ 2 * (x + 1) * (x ^ 2 + 1) / ((x - 1) * (5 * x ^ 4 - 1)). [_ Colin Barker _ , Feb 01 2013] ●

▶ [A217787] 1,1,1,1,2,3,4,9,14,19,43,67,91,206,321,436,987,1538,2089,4729,7369,10009,22658,35307,47956 ★ a(n) = (a(n - 1) * a(n - 3) + 1) / a(n - 4) with a(0) = a(1) = a(2) = a(3) = 1. ● a(n) = a(3 - n) for all n in Z. ● a(n + 3) + a(n - 3) = 5 * a(n) for all n in Z. ● a(n + 1) + a(n - 1) = a(n) * (2 + [n mod 3 == 0]) for all n in Z. ●

▶ [A133993] 1,2,3,4,9,14,31,56,117,226,459,908,1825,3638,7287,14560,29133,58250,116515,233012,466041,932062,1864143,3728264,7456549 ★ a(n) = a(n - 1) + 3 * a(n - 2) - a(n - 3) - 2 * a(n - 4), n > 3. ● a(n) = 1 + 4 * 2 ^ n / 9 + (- 1) ^ n * (n / 3 - 4 / 9). ● a(n) = 3 * a(n - 2) + 2 * a(n - 3) - 4, for n>2. - _ Greg Dre sden _ , Feb 21 2020 ●

▶ [A033076] 1,2,3,4,9,15,21,46,78,109,234,390,546,1171,1953,2734,5859,9765,13671,29296,48828,68359,146484,244140,341796 ★ Numbers in which all pairs of con secutive base - 5 digits differ by 3. ● a(n) = 5 * a(n - 3) + a(n - 6) - 5 * a(n - 9) for n>11. - _ Colin Barker _ , Jun 01 2015 ●

▶ [A124753] 1,1,1,1,2,3,4,9,15,22,52,91,140,340,612,969,2394,4389,7084,17710,32890,53820,135720,254475,420732 ★ a(3n + k) = (k + 1) * binomial(4n + k, n) / (3n + k + 1), where k is n reduced mod 3. ● a(n) = ((mod(n,3) + 1) * C(4 * fl oor(n / 3) + mod(n,3), floor(n / 3)) / (3 * floor(n / 3) + 1 + mod(n, 3))). - _ Paul Barry _ , Dec 14 2006 ●

▶ [A049909] 1,2,3,4,9,15,31,63,127,192,416,848,1702,3409,6819,13639,27279,40920,88660,180730,363167,727188,1454808,2909840,5819745 ★ a(n) = a(1) + a(2) + ... + a(n - 1) - a(m) for n >= 4, where m = 2 ^ (p + 1) + 2 - n and p is the sm allest integer such that 2 ^ p < n - 1 <= 2 ^ (p + 1), starting with a(1) = 1, a (2) = 2, and a(3) = 3. ● a(n) = - a(2 ^ ceiling(log _ 2(n - 1)) + 2 - n) + Sum _{ i = 1..n - 1 } a(i) for n >= 4. ●

▶ [A322783] 2,3,4,9,18,39,80,165,334,675,1356,2721,5450,10911,21832,43677,87366,174747,349508,699033,1398082,2796183,5592384,11184789,22369598 ★ a(n) = 1 - n + (2 ^ (n + 2) - (- 1) ^ n) / 3. ● a(n + 1) - 2 * (n) = - 1, - 2, 1, 0, 3, 2, 5, 4 , ..., n >= 0. ● a(n) = 3 * a(n - 1) - a(n - 2) - 3 * a(n - 3) + 2 * a(n - 4) for n > 3. ●

▶ [A258274] 1,2,3,4,9,19,44,94,194,294,394,494,594,694,794,894,994,1094,1194,1294,1394,1494,1594,1694,1794 ★ The smallest number of cents which cannot be m ade with fewer than n American coins. ● a(n) = 100 * n - 706 for n >= 8. ●

▶ [A174139] 0,1,2,3,4,10,11,12,13,14,20,21,22,23,24,25,26,27,28,29,35,36,37,38,39 ★ Numbers congruent to { 0,1,2,3,4,10,11,12,13,14,20,21,22,23,24 } mod 25. ● a (15 + n) = a(n) + 25 for n >= 1. ● a(n) = + a(n - 1) + a(n - 15) - a(n - 16). ●

▶ [A007091] 0,1,2,3,4,10,11,12,13,14,20,21,22,23,24,30,31,32,33,34,40,41,42,43,44 ★ Numbers in base 5. ● a(0)=0 a(n)=10 * a(n / 5) if n==0 (mod 5) a(n)=a(n - 1) + 1 otherwise. - _ Benoit Cloitre _ , Dec 22 2002 ● a(n) = n + 1 / 2 * Sum _{ k >= 1 } 10 ^ k * floor(n / 5 ^ k). Cf. A037454, A037462 and A102491. - _ Peter Bala _ , Dec 01 2016 ●

▶ [A047455] 2,3,4,10,11,12,18,19,20,26,27,28,34,35,36,42,43,44,50,51,52,58,59,60,66 ★ Numbers that are congruent to { 2, 3, 4 } mod 8. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. ● a(n) = (24 * n - 21 - 15 * cos(2 * n * Pi / 3) + 5 * sqrt(3) * sin(2 * n * Pi / 3)) / 9. ● a(3k) = 8k - 4, a(3k - 1) = 8k - 5, a(3k - 2) = 8k - 6. (End) ●

▶ [A259561] 0,1,2,3,4,10,11,29,40,76,199,521,1364,3571,9349,24476,64079,167761,439204,1149851,3010349,7881196,20633239,54018521,141422324 ★ Numbers k s uch that k ^ 2 + 2 is the product of a Fibonacci number and a Lucas number. ● a(n) = 3 * a(n - 1) - a(n - 2) for n>11. - _ Colin Barker _ , Jun 30 2015 ●

▶ [A229593] 0,2,3,4,10,12,14,24,27,30,44,48,52,70,75,80,102,108,114,140,147,154,184,192,200 ★ Number of boomerang patterns appearing in n X n coins, rotation not allowed. ● a(n) = (n - 1) * floor(n / 3). - _ Laurance L. Y. Lau _ , Jun 22 2015 ●

▶ [A049548] 0,1,2,3,4,10,12,21,32,53,128,213,512,853,2048,3413,8192,13653,32768,54613,131072,218453,524288,873813,2097152 ★ a(n + 1) = smallest number no t containing any digits of a(n), working in base 4. ● a(n) = 5 * a(n - 2) - 4 * a(n - 4) for n>5; g.f.: x * (32 * x ^ 10 + 16 * x ^ 9 - 12 * x ^ 8 - 12 * x ^ 7 - 17 * x ^ 6 - x ^ 4 - 6 * x ^ 3 - 2 * x ^ 2 + 2 * x + 1) / ((x - 1) * (x + 1) * (2 * x - 1) * (2 * x + 1)). - _ Colin Barker _ , Sep 13 2014 ●

▶ [A193775] 1,2,3,4,10,12,52,58,394,418 ★ Number of signed permutations invar iant under the reverse complement and avoiding (- 2, - 1), (- 1, 2), and (1, - 2) . ● a(n) = (\ lfloor n / 2 \ rfloor)! 2 ^{\ lfloor n / 2 \ rfloor } + \ sum _{ k =0 }^{\ lfloor n / 2 \ lceil } k! ●

▶ [A365352] 1,1,1,2,3,4,10,16,23,29,70,113,166,211,505,813,1191,1515,3631,5846,8566,10894,26105,42032,61590 ★ Number of ways to tile a hexagonal strip made u p of n equilateral triangles, using singles and triples. ● a(n) = 7 * a(n - 4) + a(n - 8) + 3 * a(n - 12) - 3 * a(n - 16) + 3 * a(n - 20) - a(n - 24). ●

▶ [A007661] 1,1,2,3,4,10,18,28,80,162,280,880,1944,3640,12320,29160,58240,209440,524880,1106560,4188800,11022480,24344320,96342400,264539520 ★ Triple fac torial numbers a(n) = n!!!, defined by a(n) = n * a(n - 3), a(0) = a(1) = 1, a(2) = 2. Sometimes written n!3. ● a(n) = Product _{ i=0..floor((n - 1) / 3) } (n - 3 * i). - _ M. F. Hasler _ , Feb 16 2008 ●

▶ [A084544] 1,2,3,4,11,12,13,14,21,22,23,24,31,32,33,34,41,42,43,44,111,112,113,114,121 ★ Alternate number system in base 4. ● a(n) = Sum _{ j=0..m - 1 } (1 + b(j) mod 4) * 10 ^ j, ● a(k * (4 ^ n - 1) / 3) = k * (10 ^ n - 1) / 9, k = 1,2,3, 4. ● a((7 * 4 ^ n - 4) / 3) = (13 * 10 ^ n - 4) / 9 = 10 ^ n + 4 * (10 ^ n - 1) / 9 . ● a((4 ^ n - 1) / 3 - 1) = 4 * (10 ^ (n - 1) - 1) / 9, n > 1. ● a(n) <= (10 ^ log _ 4(3 * n + 1) - 1) / 9, equality holds for n=(4 ^ k - 1) / 3, k>0. ● a(n) > (4 / 10) * (10 ^ log _ 4(3 * n + 1) - 1) / 9, n > 0. ●

▶ [A295721] 1,2,3,4,11,13,32,41,89,122,243,349,656,973,1757,2666,4679,7217,12408,19369,32801,51658,86507,137141,227744 ★ a(n) = a(n - 1) + 3 * a(n - 2) - 2 * a(n - 3) - 2 * a(n - 4), where a(0) = - 1, a(1) = 2, a(2) = 3, a(3) = 4. ● a(n) = a (n - 1) + a(n - 3) + a(n - 4), where a(0) = - 1, a(1) = 2, a(2) = 3, a(3) = 4. ●

▶ [A297180] 1,2,3,4,11,18,25,74,123,172,515,858,1201,3602,6003,8404,25211,42018,58825,176474,294123,411772,1235315,2058858,2882401 ★ a(n) is the smallest p ositive integer of length (distance from origin) n in the Cayley graph of the inte gers generated by all powers of 7. ● a(n) = a(n - 1) + 7 * a(n - 3) - 7 * a(n - 4) for n>4. ●

▶ [A139763] 1,2,3,4,11,22,43,84,171,342,683,1364,2731,5462,10923,21844,43691,87382,174763,349524,699051,1398102,2796203,5592404,11184811 ★ a(n)=a(n - 1) + a(n - 2) + a(n - 3) + 2a(n - 4) with a(n)=n + 1 for n<=3. ● a(n + 1) - 2a(n) =period 4:repeat 0, - 1, - 2, 3. ● a(n)=2 * a(n - 1) + (1 / 4) *{- 5 * (n mod 4) + [(n + 1) mod 4] + [(n + 2) mod 4] + 3 * [(n + 3) mod 4] } , a(0)=1 and n> =1 - _ Paolo P. Lava _ , Jun 03 2008 ● a(n)= - (1 / 2 * I) * I ^ n + (1 / 3) * (- 1) ^ n + (2 / 3) * 2 ^ n + (1 / 2 * I) * (- I) ^ n, with n>=0 and I=(- 1) ^ (1 / 2) - _ Paolo P. Lava _ , Jun 03 2008 ●

▶ [A301877] 1,2,3,4,11,24,46,99,216,455,969,2086,4469,9570,20548,44118,94689,203318,436653,937720,2013884,4325391,9290080,19953405,42857019 ★ Group the natural numbers into groups (1),(2),(3),(4),(5,6),(7,8,9),... so that the n - th gro up contains N(n) terms, where N(n) is the Narayana's cows sequence (A000930). Sequence contains the sum of the terms in the n - th group. ● a(1) = 1 and f or n > 1, a(n) = (2N(n) + N(n - 2) + 1) * N(n - 2) / 2, where N(n) is the Nara yana's cows sequence (A000930). ● a(n) = 7 * a(n - 1) - 18 * a(n - 2) + 20 * a(n - 3) - 6 * a(n - 4) - 6 * a(n - 5) + 5 * a(n - 6) - a(n - 7) for n>10. ●

▶ [A221172] 2,3,4,11,26,63,152,367,886,2139,5164,12467,30098,72663,175424,423511,1022446,2468403,5959252,14386907,34733066,83853039,202439144,488731327,1179901798 ★ a(0)= - 2, a(1)=3; thereafter a(n) = 2 * a(n - 1) + a(n - 2). ● a(n)=(1 / 4) * (5 * sqrt(2) * ((1 + sqrt(2)) ^ n - (1 - sqrt(2)) ^ n) - 4 * ((1 + sqrt (2)) ^ n + (1 - sqrt(2)) ^ n)). [_ Paolo P. Lava _ , Jan 04 2013] ● a(n) = 7 * Pell(n) - 2 * Pell(n + 1), where Pell = A000129. - _ Vladimir Reshetnikov _ , Sep 27 2016 ●

▶ [A176621] 2,3,4,11,40,157,656,2721,11346,47337,197398,823451,3434718,14326815,59760224,249271079,1039759044,4337038713,18090636780,75459593981,314756746798,1312912064069,5476413466674,22843193551799,95283436047290 ★ a(n) = 2 + Sum _{ k=0..n - 1 } A176513(4 * k + 1). ● a(n + 5) = 2 * a(n + 4) + 7 * a(n + 3) + 9 * a(n + 2) - 2 * a(n + 1) + a(n) - 32. ● a(n + 6) = 3 * a(n + 5) + 5 * a(n + 4) + 2 * a(n + 3) - 11 * a(n + 2) + 3 * a(n + 1) - a(n). (End) ●

▶ [A295286] 0,1,2,3,4,14,18,22,26,55,64,73,82,140,156,172,188,285,310,335,360,506,542,578,614 ★ Sum of the products of the smaller and larger parts of the parti tions of n into two parts with the smaller part odd. ● a(n) = Sum _{ i=1..floor (n / 2) } i * (n - i) * (i mod 2). ● a(n) = a(n - 1) + 3 * a(n - 4) - 3 * a(n - 5) - 3 * a(n - 8) + 3 * a(n - 9) + a(n - 12) - a(n - 13) for n>13. ● a(n) = (1 / 384) * (

(2 - 2 * (- 1) ^ n) * (1 + (- 1) ^ n + 6 * (- 1) ^ ((2 * n + 3) / 4 + (- 1) ^ n / 4)) + 32 * n + 12 * n ^ 2 * (1 + (- 1) ^ n + 2 * (- 1) ^ ((2 * n + 3) / 4 + (- 1) ^ n / 4)) + 16 * n ^ 3). - _ Wesley Ivan Hurt _ , Dec 02 2017 ●

▶ [A081350] 1,2,3,4,15,16,35,36,63,64,99,100,143,144,195,196,255,256,323,324,399,400,483,484,575 ⋆ First column in maze array of natural numbers A081349. ● a(0)=1, a(1)=2, a(n)=(n - 1) * (n + (- 1) ^ n), n>1. ●

▶ [A107241] 1,2,3,4,20,69,238,863,3264,12100,44861,166662,619591,2301800,8551800,31774561,118060082,438649107,1629796276,6055504952,22499207241,83595676570,310599326171,1154030334396,4287794153932 ⋆ Sum of squares of first n tetranacci numbers (A000288). ● a(n) = 3 * a(n - 1) + 2 * a(n - 2) + 2 * a(n - 3) + 6 * a(n - 4) - 16 * a(n - 5) - 2 * a(n - 6) + 6 * a(n - 7) - 2 * a(n - 8) + 2 * a(n - 9) + a(n - 10) - a(n - 11). ●

▶ [A109787] 1,2,3,4,21,58,151,392,1037,2718,7115,18624,48769,127682,334275,875140,2291157,5998330,15703831,41113160,107635661,281793822,737745803,1931443584,5056584961 ⋆ Expansion of - (1 - x - 2 * x ^ 2 + 11 * x ^ 4 - 3 * x ^ 3) / ((x - 1) * (x + 1) * (x ^ 2 - 3 * x + 1) * (1 + x ^ 2)). ● a(n) = 3 * a(n - 1) - a(n - 2) + a(n - 4) - 3 * a(n - 5) + a(n - 6) for n>5. - _ Colin Barker _ , May 16 2019 ●

▶ [A000033] 0,2,3,4,40,210,1477,11672,104256,1036050,11338855,135494844,1755206648,24498813794,366526605705,5851140525680,99271367764480,1783734385752162,33837677493828171,675799125332580020,14173726082929399560,311462297063636041906 ⋆ Coefficients of ménage hit polynomials. ● a(n) = coefficient of t ^ 2 in polynomial p(t) = Sum _{ k=0..n } 2 * n * C(2n - k,k) * (n - k)! * (t - 1) ^ k / (2n - k). ● a(n) = Sum _{ k=2..n } (- 1) ^ k * n * (2n - k - 1)! * (n - k)! / ((2n - 2k)! * (k - 2)!). - _ David W. Wilson _ , Jun 22 2006 ● a(n) = round(2 * (exp(- 2) * n * (4 * BesselK(n,2) - (2 * n - 5) * BesselK(n - 1,2)) - (- 1) ^ n)) for n > 9. ●

▶ [A001095] 0,1,2,3,4,125,726,2527,6728,15129,30250,55451,95052,154453,240254,360375,524176,742577,1028178,1395379,1860500,2441901,3160102,4037903,5100504 ⋆ a(n) = n + n * (n - 1) * (n - 2) * (n - 3) * (n - 4). ● a(n) = n + 5! * binomial(n,5). ●

▶ [A187322] 0,0,2,3,5,5,7,8,10,10,12,13,15,15,17,18,20,20,22,23,25,25,27,28,30 ⋆ a(n) = floor(n / 2) + floor(3 * n / 4). ● a(n) = (10 * n - 5 + 3 * cos(n * Pi) + 2 * (cos(n * Pi / 2) - sin(n * Pi / 2))) / 8. - _ Luce ETIENNE _ , Aug 14 2017 ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>4. ●

▶ [A108962] 1,1,2,3,5,5,9,11,16,20,28,34,47,57,75,92,119,143,183,220,277,332,412,491,605 ⋆ Number of partitions that are "3 - close" to being self - conjugate. ● a(n, m) ~ exp(Pi * sqrt((2 * m + 1) * n / (3 * (m + 2)))) * (2 * m + 1) ^ (1 / 4) / (2 * 3 ^ (1 / 4) * (m + 2) ^ (3 / 4) * n ^ (3 / 4)). ●

▶ [A128054] 0,0,1,2,3,5,6,6,7,8,9,11,12,12,13,14,15,17,18,18,19,20,21,23,24 ⋆ List the nonnegative integers where multiples of 6 occur twice and numbers of the form 6k + 4 are omitted. ● a(n) = a(n - 6) + 6, for n >= 6. ● a(n) = cos(2 * Pi * n / 3) / 6 - sqrt(3) * sin(2 * Pi * n / 3) / 6 + cos(Pi * n / 3) / 2 - sqrt(3) * sin(Pi * n / 3) / 6 + (3n - 2) / 3. ●

▶ [A052406] 0,1,2,3,5,6,7,8,9,10,11,12,13,15,16,17,18,19,20,21,22,23,25,26,27 ⋆ Numbers without 4 as a digit. ● a(n) = replace digits d > 3 by d + 1 in base - 9 representation of n - 1. - _ Reinhard Zumkeller _ , Oct 07 2014 ●

▶ [A047588] 0,1,2,3,5,6,7,8,9,10,11,13,14,15,16,17,18,19,21,22,23,24,25,26,27 ⋆ Numbers that are congruent to { 0, 1, 2, 3, 5, 6, 7 } mod 8. ● a(n) = a(n - 7) + 8 = - a(- n) for n > 7. ● a(n) = a(n - 1) + a(n - 7) - a(n - 8) for n > 8. ● a(n) = (56 * n - 56 + (n mod 7) + ((n + 1) mod 7) - 6 * ((n + 2) mod 7) + ((n + 3) mod 7) + ((n + 4) mod 7) + ((n + 5) mod 7) + ((n + 6) mod 7)) / 49. ● a(7 * k) = 8 * k - 1, a(7 * k - 1) = 8 * k - 2, a(7 * k - 2) = 8 * k - 3, a(7 * k - 3) = 8 * k - 5, a(7 * k - 4) = 8 * k - 6, a(7 * k - 5) = 8 * k - 7, a(7 * k - 6) = 8 * k - 8. (End) ●

▶ [A032775] 0,1,2,3,5,6,7,8,9,10,12,13,14,15,16,17,19,20,21,22,23,24,26,27,28 ⋆ Numbers that are congruent to { 0, 1, 2, 3, 5, 6 } mod 7. ● a(n) = - 1 + Sum _{ k=1..n } ((1 / 90) * (22 * (k mod 6) - 8 * ((k + 1) mod 6) + 7 * ((k + 2) mod 6) + 7 * ((k + 3) mod 6) + 7 * ((k + 4) mod 6) + 7 * ((k + 5) mod 6)), with n >= 1. - _ Paolo P. Lava _ , Sep 03 2010 ● a(n) = a(n - 1) + a(n - 6) - a(n - 7) for n > 7. ● a(n) = (42 * n - 45 - 3 * cos(n * Pi) + 12 * cos(n * Pi / 3) - 4 * sqrt(3) * sin(2 * n * Pi / 3)) / 36. ● a(6k) = 7k - 1, a(6k - 1) = 7k - 2, a(6k - 2) = 7k - 4, a(6k - 3) = 7k - 5, a(6k - 4) = 7k - 6, a(6k - 5) = 7k - 7. (End) ●

▶ [A181092] 1,2,3,5,6,7,8,9,11,12,13,14,15,16,17,20,21,22,23,24,25,26,27,28,30 ⋆ a(n) is the sum of n addends nested as follows: floor(sqrt(floor(sqrt(...(n)...)))). ● a(n) = n + sqrt(n) + O(n ^ (1 / 4)). - _ Charles R Greathouse IV _ , Nov 15 2012 ●

▶ [A000037] 2,3,5,6,7,8,10,11,12,13,14,15,17,18,19,20,21,22,23,24,26,27,28,29,30 ⋆ Numbers that are not squares (or, the nonsquares). ● a(n) = n + floor(1 / 2 + sqrt(n)). ● a(n) = n + floor(sqrt(n + floor(sqrt n))). ●

▶ [A001068] 0,1,2,3,5,6,7,8,10,11,12,13,15,16,17,18,20,21,22,23,25,26,27,28,30 ⋆ a(n) = floor(5 * n / 4), numbers that are congruent to { 0, 1, 2, 3 } mod 5. ● a(n) = (10 * n + 2 * (- 1) ^ ((n - 1)n / 2) + (- 1) ^ n - 3) / 8. ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>4. ● a(n) = n + floor(n / 4). (End) ●

▶ [A062071] 1,2,3,5,6,7,8,10,11,12,13,15,16,17,18,20,21,22,23,25,26,27,28,30,31 ⋆ a(n) = [n / 1] + [n / (2 ^ 2)] + [n / (3 ^ 3)] + [n / (4 ^ 4)] + ... + [n / (k ^ k)] + ..., up to infinity, where [ ] is the floor function. ● a(n) = Sum _{ i=1..n } floor(n / i ^ i). - _ Wesley Ivan Hurt _ , Sep 15 2017 ●

▶ [A182777] 1,2,3,5,6,7,8,10,11,12,13,15,16,17,19,20,21,22,24,25,26,27,29,30,31 ⋆ Beatty sequence for 3 - sqrt(3). ● a(n) = floor(n * (3 - sqrt(3))). ●

▶ [A287770] 1,2,3,5,6,7,8,10,11,12,14,15,16,17,19,20,21,22,24,25,26,28,29,30,31 ⋆ Positions of 1 in A287769; complement of A276855. ● a(n) = floor(n * r), where r = (15 - sqrt(5)) / 10. - _ Michel Dekking _ , Oct 11 2017 ●

▶ [A047587] 0,2,3,5,6,7,8,10,11,13,14,15,16,18,19,21,22,23,24,26,27,29,30,31,32 ⋆ Numbers that are congruent to { 0, 2, 3, 5, 6, 7 } mod 8. ● a(n) = a(n - 1) + a(n - 6) - a(n - 7) for n>7. ● a(n) = (24 * n - 15 + 3 * cos(n * Pi) - 2 * sqrt(3) * cos((1 - 4 * n) * Pi / 6) - 6 * sin((1 + 2 * n) * Pi / 6)) / 18. ● a(6k) = 8k - 1, a(6k - 1) = 8k - 2, a(6k - 2) = 8k - 3, a(6k - 3) = 8k - 5, a(6k - 4) = 8k - 6, a(6k - 5) = 8k - 8. (End) ●

▶ [A036537] 1,2,3,5,6,7,8,10,11,13,14,15,17,19,21,22,23,24,26,27,29,30,31,33,34 ⋆ Numbers whose number of divisors is a power of 2. ● a(n) << n. - _ Charles R Greathouse IV _ , Feb 25 2017 ●

▶ [A120486] 1,2,3,5,6,7,8,10,13,14,15,17,18,19,20,24,25,28,29,31,32,33,34,36,41 ⋆ Partial sums of A000188. ● a(n) = 3n log(n) / Pi ^ 2 + O(n). - _ Griffin N. Macris _ , Jan 28 2017 ● a(n) = Sum _{ k=1..n } phi(k) * floor(n / k ^ 2), where phi is the Euler totient function A000010. - _ Ridouane Oudra _ , Aug 18 2019 ●

▶ [A063752] 1,2,3,5,6,7,8,11,13,17,19,21,23,24,27,28,29,31,32,37,41,43,47,53,54 ⋆ Numbers k such that cototient(k) is a square. ● a(n) seems to be asymptotic to c * n * log(n) with c = 1.7... (all primes are in the sequence since cototient(p) = 1). - _ Benoit Cloitre _ , Sep 08 2002 ●

▶ [A187328] 0,1,2,3,5,6,7,9,10,11,12,14,15,16,18,19,20,21,23,24,25,27,28,29,31 ⋆ a(n) = floor((2 - 1 / sqrt(2)) * n); complement of A187338. ● a(n) = floor((2 - 1 / sqrt(2)) * n). ●

▶ [A045749] 0,1,2,3,5,6,7,9,10,11,13,14,15,16,17,18,20,21,22,24,25,26,28,29,30 ⋆ Extension of Beatty sequence; complement of A045750. ● a(n) = mex { a(i), b(i) :0 <= i<n } , where b=A045750, mex S=least integer >= 0 not in sequence S. ●

▶ [A045671] 0,1,2,3,5,6,7,9,10,11,13,14,15,16,17,19,20,21,23,24,25,27,28,29,30 ⋆ Extension of Beatty sequence; complement of A045672. ● a(n) = mex { a(i), b(i) :0 <= i<n } , where b=A045672, mex S=least integer >= 0 not in sequence S. ● a(n) = (1 + sqrt(17)) / 4 * n + O(1). - _ Benoit Cloitre _ , Apr 23 2008 ●

▶ [A184480] 1,2,3,5,6,7,9,10,11,13,14,15,16,18,19,20,22,23,24,26,27,28,29,31,32 ⋆ Lower s - Wythoff sequence, where s(n)=3n. Complement of A001956. ● a(n)= floor[n * (- 1 + sqrt(13)) / 2]. ●

▶ [A329990] 1,2,3,5,6,7,9,10,11,13,14,15,17,18,19,20,22,23,24,26,27,28,30,31,32 ⋆ Beatty sequence for the number x satisfying 1 / x + 1 / 3 ^ x = 1. ● a(n) = floor(n x), where x = 1.31056994... is the constant in A329989. ●

▶ [A164087] 1,2,3,5,6,7,9,10,11,13,14,15,17,18,19,21,22,23,24,26,27,28,30,31,32 ⋆ Beatty sequence for 4 * Pi / (4 * Pi - 3) = 1.3135986... . ● a(n) = floor(4 * n * Pi / (4 * Pi - 3)). ●

▶ [A187386] 1,2,3,5,6,7,9,10,11,13,14,15,17,18,19,21,22,23,25,26,27,28,30,31,32 ⋆ a(n) = floor(s * n), where s=1 + sqrt(3) - sqrt(2); complement of A187385. ● a(n) = floor(s * n), where s=1 + sqrt(3) - sqrt(2). ●

▶ [A042968] 1,2,3,5,6,7,9,10,11,13,14,15,17,18,19,21,22,23,25,26,27,29,30,31,33 ⋆ Numbers not divisible by 4. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4). ● a(n) = a(n - 3) + 4, with a(1) = 1. ● a(n) = n + 1 + floor(n / 3). - _ Benoit Cloitre _ , Jul 11 2009 ● a(n) = floor((4 * n + 3) / 3). - _ Gary Detlefs _ , May 14 2011 ● a(n) = 2 * n - ceiling(2 * n / 3) + 1. - _ Arkadiusz Wesolowski _ , Sep 21 2012 ● a(n) = (12 * n + 6 + 3 * cos(2 * n * Pi / 3) + sqrt(3) * sin(2 * n * Pi / 3)) / 9. - _ Wesley Ivan Hurt _ , Sep 30 2017 ●

▶ [A120514] 1,2,3,5,6,7,9,10,11,14,15,16,18,19,20,22,23,24,27,28,29,31,32,33,35 ⋆ a(n) = min { j : A120503(j) = n } . ● a(1) = 1; a(n) = n - 1 + a(floor((n - 1) / 3) + 1). - _ Gleb Ivanov _ , Jan 10 2022 ●

▶ [A195121] 0,2,3,5,6,7,9,10,12,13,14,16,17,18,20,21,23,24,25,27,28,30,31,32,34 ⋆ a(n) = 2 * n - floor(n / r), where r = (1 + sqrt(5)) / 2 (the golden ratio). ● a(n) = 3 * n - floor(n * r), where r = (1 + sqrt(5)) / 2. ●

▶ [A047332] 0,2,3,5,6,7,9,10,12,13,14,16,17,19,20,21,23,24,26,27,28,30,31,33,34 ⋆ Numbers that are congruent to { 0, 2, 3, 5, 6 } mod 7. ● a(n) = a(n - 5) + 7. O.g.f.: x ^ 2 * (2 + x + 2 * x ^ 2 + x ^ 3 + x ^ 4) / ((- 1 + x) ^ 2 * (x ^ 4 + x ^ 3 + x ^ 2 + x + 1)). - _ R. J. Mathar _ , Apr 19 2008 ●

▶ [A080637] 2,3,5,6,7,9,11,12,13,14,15,17,19,21,23,24,25,26,27,28,29,30,31,33,35 ⋆ a(n) is the smallest positive integer which is consistent with the sequence being monotonically increasing and satisfying a(1)=2, a(a(n)) = 2n + 1 for n > 1. ● a(3 * 2 ^ k - 1 + j) = 4 * 2 ^ k - 1 + 3 * j / 2 + |j| / 2 for k >= 0, - 2 ^ k <= j < 2 ^ k. ● a(2n + 1) = 2 * a(n) + 1, a(2n) = a(n) + a(n - 1) + 1. ●

▶ [A074780] 1,2,3,5,6,7,9,13,14,15,17,19,21,23,25,26,27,29,31,34,35,37,38,39,41 ⋆ Numbers k such that 2 ^ k - 1 and F(k) are relatively prime, where F(k) denotes the k - th Fibonacci number. ● a(n) seems to be asymptotic to c * n with c=1.7... ●

▶ [A259444] 2,3,5,6,7,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,26,28,29,30,31 ⋆ a(1)=2. For n>1, a(n) = smallest number > a(n - 1) which is different from all the numbers a(i) ^ a(j) for 1 <= i < n, 1 <= j < n. ● a(n) = n + sqrt(n) + O(n ^ (1 / 3)). - _ Charles R Greathouse IV _ , Aug 18 2015 ●

▶ [A052485] 2,3,5,6,7,10,11,12,13,14,15,17,18,19,20,21,22,23,24,26,28,29,30,31,33 ⋆ Weak numbers (i.e., not powerful (1)): there is a prime p where p|n is true but p ^ 2|n is not true. ● a(n) = n + O(sqrt(n)). - _ Charles R Greathouse IV _ , Jul 08 2022 ●

▶ [A004762] 0,1,2,3,5,6,7,10,11,12,13,14,15,20,21,22,23,24,25,26,27,28,29,30,31 ⋆ Numbers whose binary expansion does not begin 100. ● a(1) = 0, a(2) = 1, a(3) = 2, a(4) = 3, a(2 ^ (m + 1) + 2 ^ m + k + 2) = 2 ^ (m + 2) + 2 ^ m + k, m >= 0, 0 <= k < (2 ^ (m + 1) + 2 ^ m). - _ Yosu Yurramendi _ , Aug 08 2016 ●

▶ [A047586] 2,3,5,6,7,10,11,13,14,15,18,19,21,22,23,26,27,29,30,31,34,35,37,38,39 ⋆ Numbers that are congruent to { 2, 3, 5, 6, 7 } mod 8. ● a(n) = a(n - 1) + a(n - 5) - a(n - 6) for n > 6, a(n) = a(n - 5) + 8 for n > 5. ● a(n) = (40 * n - 5 + 3 * (n mod 5) + 3 * ((n + 1) mod 5) - 2 * ((n + 2) mod 5) + 3 * ((n + 3) mod 5) - 7 * ((n + 4) mod 5)) / 25. ● a(5k) = 8k - 1, a(5k - 1) = 8k - 2, a(5k - 2) = 8k - 3, a(5k - 3) = 8k - 5, a(5k - 4) = 8k - 6. (End) ●

▶ [A336533] 1,2,3,5,6,7,10,11,13,14,15,23,26,27,29,30,31,47,55,58,59,61,62,63,93 ⋆ Lexicographically earliest sequence of positive terms such that for any n > 0, n = Sum _{ k >= 0 } b(k) * a(k + 1) where Sum _{ k >= 0 } b(k) * 2 ^ k is the binary expansion of a(n). ● a(Sum _{ k = 1..n } a(k)) = 2 ^ n - 1 for any n > 0. ●

▶ [A339267] 2,3,5,6,7,11,12,13,19,20,21,29,30,31,41,42,43,55,56,57,71,72,73,89,90 ⋆ Level of the Calkin - Wilf tree in which the n - th convergent of the continued fraction for e appears. ● a(n) = a(n - 1) + 2 * a(n - 3) - 2 * a(n - 4) - a(n - 6) + a(n - 7) for n > 7. ● a(n) = floor(n / 3) ^ 2 + n + 1. - _ Kevin Ryde _ , Dec 26 2020 ●

▶ [A089633] 0,1,2,3,5,6,7,11,13,14,15,23,27,29,30,31,47,55,59,61,62,63,95,111,119 ⋆ Numbers having no more than one 0 in their binary representation. ● a(0)=0 , n>0: a(n + 1) = Min { m>n: BinOnes(a(n))<=BinOnes(m) } with BinOnes =A000120. ●

▶ [A331394] 1,1,1,2,3,5,6,7,11,16,19,25,38,51,63,88,127,165,214,303,419,544,731,1 025,1382 ⋆ Number of ways of 4 - coloring the Fibonacci square spiral tiling of n squares with colors introduced in order. ● a(n) = a(n - 1) - a(n - 2) + 2 * a(n - 3) for n >= 7. ● a(n) / a(n - 1) approaches the only real solution of x ^ 3 - x ^ 2 + x - 2 = 0, x = (1 - 2 * (2 / (47 + 3 * sqrt(249))) ^ (1 / 3) + ((47 + 3 * sqrt (249)) / 2) ^ (1 / 3)) / 3 = 1.35320996419932... . ●

▶ [A049386] 1,2,3,5,6,8,9,10,11,12,13,15,16,17,18,19,20,21,22,23,24,26,27,28,29 ⋆ Binary order of 2 ^ n - th prime. ● a(n) = ceiling(log _ 2(prime(2 ^ n))). ●

▶ [A047450] 0,1,2,3,5,6,8,9,10,11,13,14,16,17,18,19,21,22,24,25,26,27,29,30,32 ⋆ N umbers that are congruent to { 0, 1, 2, 3, 5, 6 } mod 8. ● a(n) = a(n - 1) + a(n - 6) - a(n - 7) for n>7. ● a(n) = (24 * n - 33 - 3 * cos(n * Pi) - 2 * sqrt(3) * cos ((1 - 4 * n) * Pi / 6) + 6 * sin((1 + 2 * n) * Pi / 6)) / 18. ● a(6k) = 8k - 2, a(6 k - 1) = 8k - 3, a(6k - 2) = 8k - 5, a(6k - 3) = 8k - 6, a(6k - 4) = 8k - 7, a(6k - 5) = 8k - 8. (End) ●

▶ [A032796] 1,2,3,5,6,8,9,10,12,13,15,16,17,19,20,22,23,24,26,27,29,30,31,33,34 ⋆ Numbers that are congruent to { 1, 2, 3, 5, 6 } mod 7. ● a(n) = (m ^ 3 - 6 * m ^ 2 + 17 * m + 6 * (7 * floor(n / 5) - 1)) / 6, where m = n mod 5. - _ Luce ET IENNE _ ,Oct 17 2018 ●

▶ [A087057] 2,3,5,6,8,9,10,12,13,15,16,17,19,20,22,23,25,26,27,29,30,32,33,34,36 ⋆ Smallest number whose square is larger than 2 * n ^ 2. ● a(n) = ceiling(n * sqr t(2)). - _ Vincenzo Librandi _ , Oct 22 2011 ●

▶ [A184580] 1,2,3,5,6,8,9,10,12,13,15,16,18,19,20,22,23,25,26,27,29,30,32,33,35 ⋆ a(n) = floor((n - 1 / 4) * sqrt(2)), complement of A184581. ● a(n) = floor[(n - 1 / 4) * sqrt(2)]. ●

▶ [A167389] 2,3,5,6,8,9,10,12,13,15,16,18,19,21,22,23,25,26,28,29,31,32,34,35,36 ⋆ (arg(exp(- w)) + Im(w)) / (2 * Pi), with w = W(n, - log(2) / 2) / log(2), wher e W is the Lambert W function. ● a(n) = floor(Im(W(n, - log(2) / 2)) / (Pi * l og(4)) + 1 / 2). - _ Travis Scott _ , Oct 09 2022 ●

▶ [A161188] 2,3,5,6,8,9,11,12,13,15,16,18,19,20,21,23,24,25,27,28,29,30,32,33,34 ⋆ Let S = A089237 \{ 0 } = union of primes and nonzero squares; sequence gives indices of primes. ● a(n) = floor(sqrt(prime(n))) + n. - _ Ilya Gutkovskiy _ , Feb 16 2017 ●

▶ [A093001] 2,3,5,6,8,9,11,12,13,15,16,18,19,20,22,23,25,26,28,29,30,32,33,35,36 ⋆ Least k such that Sum _{ r=n + 1..k } r is greater than or equal to the sum of the first n positive integers (i.e., the n - th triangular number, A000217(n)). Or , least k such that (sum of first n positive integers) <= (sum of numbers from n + 1 up to k). ● a(n) = ceiling((- 1 + sqrt(8n ^ 2 + 8n + 1)) / 2). - _ Joshua Zucker _ , May 08 2006 ●

▶ [A226721] 2,3,5,6,8,9,11,12,13,15,16,18,19,21,22,23,25,26,28,29,31,32,33,35,36 ⋆ Position of 2 ^ n in the joint ranking of all the numbers 2 ^ j for j>=0 and 5 ^ k for k>=1; complement of A123384. ● a(n) = floor(n * (1 + log _ c(b)). ●

▶ [A224996] 2,3,5,6,8,9,11,12,13,15,16,18,19,21,22,24,25,26,28,29,31,32,34,35,37 ⋆ Floor(1 / f(x ^ (1 / n))) for x = 2, where f computes the fractional part. ● a(n) = floor(n / log(2) - 1 / 2). - _ Andrey Zabolotskiy _ , Dec 01 2017 ●

▶ [A332101] 2,3,5,6,8,9,11,12,14,15,16,18,19,21,22,24,25,27,28,29,31,32,34,35,37 ⋆ Least m such that m ^ n <= Sum _{ k<m } k ^ n. ● a(n) = round(n / log(2)) + 2. (Conjectured; verified up to 10 ^ 4, in particular for 3525 / log(2) = 5085. 500019... and 7844 / log(2) ~ 11316.49990...) ●

▶ [A248758] 0,2,3,5,6,8,9,11,12,14,15,17,18,20,21,22,24,25,27,28,30,31,33,34,36 ⋆ Ceiling(n * Pi ^ (1 / 3)). ● a(n) = ceiling(n * Pi ^ (1 / 3)). ●

▶ [A267528] 1,1,2,3,5,6,8,9,11,12,14,15,17,18,20,21,23,24,26,27,29,30,32,33,35 ⋆ N umber of ON (black) cells in the n - th iteration of the "Rule 141" elementary c ellular automaton starting with a single ON (black) cell. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n > 4. ●

▶ [A007494] 0,2,3,5,6,8,9,11,12,14,15,17,18,20,21,23,24,26,27,29,30,32,33,35,36 ⋆ Numbers that are congruent to 0 or 2 mod 3. ● a(n) = 3 * n / 2 if n even, othe rwise (3 * n + 1) / 2. ● a(n) = (6 * n + 1) / 4 - (- 1) ^ n / 4; a(n) = Sum _{ k=0..n - 1 } (1 + (- 1) ^ (k / 2) * cos(k * Pi / 2)). - _ Paul Barry _ , Aug 18 2007 ● a(n) = 3 * n - a(n - 1) - 1 (with a(0)=0). - _ Vincenzo Librandi _ , Nov 18 2010 ● a(n) = n + ceiling(n / 2). - _ Arkadiusz Wesolowski _ , Sep 18 2012 ● a(n) = 2n - floor(n / 2) = floor((3n + 1) / 2) = n + (n + (n mod 2)) / 2. - _ Wesley Ivan Hurt _ , Oct 19 2013 ● a(n) = n + floor(n / 2) + (n mod 2). - _ Bruno Berselli _ , Apr 04 2016 ●

▶ [A294732] 1,2,3,5,6,8,9,11,12,14,15,17,18,20,21,23,24,26,27,29,30,32,33,35,36 ⋆ Maximal diameter of the connected cubic graphs on 2 * n vertices. ● a(n) = (6 * n - 11 - (- 1) ^ n) / 4 for n > 2. ● a(n) = a(n - 2) + 3 for n > 4. (End) ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n > 5. (End) ●

▶ [A309793] 0,0,0,0,1,1,1,1,2,3,5,6,8,9,11,13,17,20,24,27,32,36,42,47,54 ⋆ Numbe r of odd parts appearing among the second largest parts of the partitions of n in to 4 parts. ● a(n) = Sum _{ k=1..floor(n / 4) } Sum _{ j=k..floor((n - k) / 3) } Sum _{ i=j..floor((n - j - k) / 2) } (i mod 2). ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 6) - 2 * a(n - 7) + 2 * a(n - 8) - 2 * a(n - 9) + a(n - 10) - a(n - 14) + 2 * a(n - 15) - a(n - 16) for n>15. ●

▶ [A102781] 0,1,2,3,5,6,8,9,11,14,15,18,20,21,23,26,29,30,33,35,36,39,41,44,48 ⋆ N umber of positive even numbers less than the n - th prime. ● a(n) = prime _ n - floor((prime _ n) / 2) - 1. - _ Giovanni Teofilatto _ , Nov 05 2005 ● a(n) = [(prime(n) - 1) / 2] where the integer part [.] needs be taken only for n=1. - _ M. F. Hasler _ , Dec 13 2019 ●

▶ [A173666] 1,2,3,5,6,8,9,14,16,18,19,23,24,26,27,41,42,47,48,53,55,57,58,70,72 ⋆ Partial sums of number of supersolvable groups of order n (A066083). ● a(n) = Sum _{ i=1..n } A066083 = Sum _{ i=1..n } number of finite groups of order i for which the index of any maximal subgroup is prime. ●

▶ [A184590] 2,3,5,6,8,10,11,13,14,16,17,19,21,22,24,25,27,29,30,32,33,35,36,38,40 ⋆ floor[(n * e + 1) / (e - 1)]; complement of A184589. ● a(n)=floor[(n * e + 1) / (e - 1)]. ●

▶ [A047448] 0,2,3,5,6,8,10,11,13,14,16,18,19,21,22,24,26,27,29,30,32,34,35,37,38 ⋆ Numbers that are congruent to { 0, 2, 3, 5, 6 } mod 8. ● a(n) = a(n - 1) + a(n - 5) - a(n - 6) for n > 6, a(n) = a(n - 5) + 8 for n > 5. ● a(n) = (40 * n - 40 + 3 * (n mod 5) - 2 * ((n + 1) mod 5) + 3 * ((n + 2) mod 5) - 2 * ((n + 3) mod 5) - 2 * ((n + 4) mod 5)) / 25. ● a(5k) = 8k - 2, a(5k - 1) = 8k - 3, a(5k - 2) = 8 k - 5, a(5k - 3) = 8k - 6, a(5k - 4) = 8k - 8. (End) ●

▶ [A099267] 2,3,5,6,8,10,11,13,14,16,18,19,21,23,24,26,27,29,31,32,34,35,37,39,40 ⋆ Numbers generated by the golden sieve. ● a(n) = floor(n * phi + 2 - phi) wh ere phi = (1 + sqrt(5)) / 2. ● a(n) = a(a(n)) - n. - _ Marc Morgenegg _ , Sep 23 2019 ●

▶ [A080276] 1,2,3,5,6,8,10,12,14,15,17,19,21,23,25,27,29,31,33,35,37,39,41,42,44 ⋆ Variation on Connell sequence (A001614). In this one, a(1)=1, terms a(n) onwa rds are generated in "blocks" as the next a(n - 1) odd numbers > a(n - 1) if the previous block ends with a(n - 1) even and the next a(n - 1) even numbers > a(n - 1) if the previous block ends with a(n - 1) odd. ● a(n) = round(LambertW(3 ^ ((4 * n - 3) / 2) * log(3) / 2) / log(3)) = round(LambertW(x * exp((4 * n - 3) * x)) / (2 * x)), where x=log(sqrt(3)). - Antonio G. Astudillo (afg _ astudill o(AT)hotmail.com), Feb 13 2003 ●

▶ [A011864] 0,0,0,0,1,1,2,3,5,6,8,10,12,14,16,19,21,24,27,31,34,38,42,46,50 ⋆ a(n) = floor(n * (n - 1) / 11). ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 11) - 2 * a(n - 1 2) + a(n - 13). ●

▶ [A249013] 0,0,1,2,3,5,6,8,10,12,15,17,20,23,26,30,33,37,41,45,50,54,59,64,69 ⋆ a (n) = floor((n - 1) * (n + 4) / 10). ● a(n) = a(- 3 - n) for all n in Z. ● a(n) = a(n - 5) + n - 1 for all n in Z. ● a(n) + a(n + 4) = min(a(n + 1) + a(n + 3), a(n + 2) + a(n + 2)) + 1 for all n in Z. ●

▶ [A001971] 0,0,1,1,2,3,5,6,8,10,13,15,18,21,25,28,32,36,41,45,50,55,61,66,72 ⋆ N earest integer to n ^ 2 / 8. ● a(n) = floor((n ^ 2 + 4) / 8). - _ Paul Weisenhor n _ , Jun 05 2009 ● a(n) = a(- n) for all n in Z. (End) ●

▶ [A188064] 1,2,3,5,6,8,10,16,17,19,21,27,29,35,41,65,66,68,70,76,78,84,90,114,11 6 ⋆ Partial sums of wt(n)! where wt(n) is the Hamming weight of n (A000120). ● a(n)=sum(k=0,n,wt(k)!) where wt(k) is the Hamming weight of k. ●

▶ [A268226] 2,3,5,6,8,11,12,14,15,17,20,21,23,24,26,29,30,32,33,35,38,39,41,42,44 ⋆ Complement of A056991. ● a(n) = a(n - 1) + a(n - 5) - a(n - 6) for n>6. ●

▶ [A247588] 1,2,3,5,6,8,11,13,15,17,21,25,27,31,34,39,43,48,52,56,63,67,73,80,84 ⋆ Number of integer - sided acute triangles with largest side n. ● a(n) = Sum _{ j=0..floor(n * (1 - sqrt(2) / 2)) } (n - j - floor(sqrt(2 * j * n - j ^ 2))). - _ Anto n Nikonov _ , Oct 06 2014 ●

▶ [A275341] 1,2,3,5,6,8,11,13,15,18,20,23,25,28,30,33,37,39,42,46,49,52,55,58,61 ⋆ Positions of ones in A275737. ● a(n) is the positions of ones in round(im(zetazer o(n + 1)) / (2 * Pi)) - round(im(zetazero(n)) / (2 * Pi)), where n starts at 1. ●

▶ [A216293] 2,3,5,6,8,15,16,17,23,25,26,27,28,33,34,35,37,38,40,44,49,50,52,54,56 ⋆ Values of k such that there are exactly two primes between 10k and 10k + 9. ● a(n) >> n log ^ 2 n. - _ Charles R Greathouse IV _ , Sep 07 2012 ●

▶ [A047449] 1,2,3,5,6,9,10,11,13,14,17,18,19,21,22,25,26,27,29,30,33,34,35,37,38 ⋆ Numbers that are primitively represented by x ^ 2 + y ^ 2 + z ^ 2. ● a(n) = a (n - 1) + a(n - 5) - a(n - 6); a(1)=1, a(2)=2, a(3)=3, a(4)=5, a(5)=6, a(6)=9. - _ Harvey P. Dale _ , Mar 05 2015 ●

▶ [A047331] 2,3,5,6,9,10,12,13,16,17,19,20,23,24,26,27,30,31,33,34,37,38,40,41,44 ⋆ Numbers that are congruent to { 2, 3, 5, 6 } mod 7. ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. ● a(n) = (14 * n - 3 - 3 * i ^ (2 * n) - (1 - i) * i ^ (- n) - (1 + i) * i ^ n) / 8 where i=sqrt(- 1). ●

▶ [A290564] 1,2,3,5,6,9,10,13,15,21,23,27,29,33,39,43,45,52,56,61,67,71,78,85,90 ⋆ Number of primes between n ^ 2 and 2 * n ^ 2. ● a(n) = pi(2n ^ 2) - pi(n ^ 2). ●

▶ [A117142] 1,2,3,5,6,9,10,14,15,20,21,27,28,35,36,44,45,54,55,65,66,77,78,90,91 ⋆ Number of partitions of n in which any two parts differ by at most 2. ● a(n) = (2 * n ^ 2 + 10 * n + 3 + (- 1) ^ n * (2 * n - 3)) / 16. - _ Birkas Gyorgy _ , F eb 20 2011 ●

▶ [A025523] 1,2,3,5,6,9,10,14,16,19,20,28,29,32,35,43,44,52,53,61,64,67,68,88,90 ⋆ a(n) = 1 + Sum _{ k < n and k | n } a(k). ● a(n) = 1 + Sum _{ k = 2 to n } a([n / k]). [Mitchell Lee (worthawholephan(AT)gmail.com), Jul 26 2010] ●

▶ [A137809] 1,1,2,3,5,6,9,10,19,28,34,35,63,64,74,108,182,183,291,292,400,474,50 9,510,984 ⋆ a(0) = a(1) = 1. a(n) = a(n - 1) + a(n - b(n)), where b(n) is largest prime dividing n. ● a(p) = a(p - 1) + 1, for p prime. - _ Michel Marcus _ , Au g 11 2018 ●

▶ [A349523] 1,2,3,5,6,9,11,13,14,18,20,23,24,29,31,35,38,41,42,48,50,55,58,62,63 ⋆ a(n) = Sum _{ k=1..n } A339399(k). ● a(n) = Sum _{ i=1..n } ((1 + (- 1) ^ i) * (1 + floor(sqrt(2 * i - 1 - (- 1) ^ i))) / 2 - ((2 * i + 1 - (- 1) ^ i) / 2 - 2 * S um _{ k=1..floor(sqrt(2 * i - 2 - (- 1) ^ i) - 1) } floor((k + 1) / 2)) * (- 1) ^ i / 2). ●

▶ [A046657] 1,2,3,5,6,9,11,14,16,21,23,29,32,36,40,48,51,60,64,70,75,86,90,100,10 6 ⋆ a(n) = A002088(n) / 2. ● a(n) = 1 / 2 + Sum _{ i<j<=n, gcd(i, j) = 1 } i / j. - _ Joseph Wheat _ , Feb 22 2018 ●

▶ [A008747] 1,1,2,3,5,6,9,11,14,17,21,24,29,33,38,43,49,54,61,67,74,81,89,96,105 ⋆ Expansion of (1 + x ^ 4) / ((1 - x) * (1 - x ^ 2) * (1 - x ^ 3)). ● a(n) = ceiling((n + 1) ^ 2 / 6). ● a(0)=1, a(1)=1, a(2)=2, a(3)=3, a(4)=5, a(5)=6, a(n) = a(n - 1) + a(n - 2) - a(n - 4) - a(n - 5) + a(n - 6) for n > 5. - _ Harvey P. Dale _ , Sep 05 2012 ● a(n) = a(- 2 - n) for all n in Z. ●

▶ [A054639] 1,2,3,5,6,9,11,14,18,23,26,29,30,33,35,39,41,50,51,53,65,69,74,81,83 ⋆ Queneau numbers: numbers n such that the Queneau - Daniel permutation { 1, 2, 3, ..., n } - > { n, 1, n - 1, 2, n - 2, 3, ... } is of order n. ● a(n) >> n log n, and on the Bateman - Horn - Stemmler conjecture a(n) << n log ^ 2 n. I imag ine a(n) n log n, and numerics suggest that perhaps a(n) ~ kn log n for some c onstant k (which seems to be around 1.122). - _ Charles R Greathouse IV _ , Aug 02 2023 ●

▶ [A028309] 1,1,2,3,5,6,9,11,15,18,23,27,33,38,45,51,59,66,75,83,93,102,113,123,1 35 ⋆ Molien series for ring of symmetrized weight enumerators of self - dual cod es (with respect to Euclidean inner product) of length n over GF(4). ● a(n) = (1 / 8) * (2 * n ^ 2 + 3 * (- 1) ^ n - 4 * n + 21) for n >= 3. - _ Ralf Stephan _ , Apr 29 2014 [Corrected by _ Pontus von Brömssen _ , May 30 2023] ●

▶ [A026810] 0,0,0,0,1,1,2,3,5,6,9,11,15,18,23,27,34,39,47,54,64,72,84,94,108 ⋆ Number of partitions of n in which the greatest part is 4. ● a(n) = round((n ^ 3 + 3 * n ^ 2 - 9 * n * (n mod 2)) / 144). - _ Washington Bomfim _ , Jan 06 2021 and Jul 03 2012 ● a(n) = (n ^ 3 + 3 * n ^ 2 - 9 * n) / 144 + a(m) - (m ^ 3 + 3 * m ^ 2 - 9 * m) / 144 if n = 12k + m and m is odd. For example, a(23) = a(12 * 1 + 11) = (23 ^ 3 + 3 * 23 ^ 2 - 9 * 23) / 144 + a(11) - (11 ^ 3 + 3 * 11 ^ 2 - 9 * 11) / 144 = 94. ● a(n) = (n ^ 3 + 3 * n ^ 2) / 144 + a(m) - (m ^ 3 + 3 * m ^ 2) / 144 if n = 12k + m and m is even. For example, a(22) = a(12 * 1 + 10) = (22 ^ 3 + 3 * 22 ^ 2) / 144 + a(10) - (10 ^ 3 + 3 * 10 ^ 2) / 144 = 84. (End) ● a(2n + 1) = a(2n) + a(n + 1) - a(n - 3) and ● a(2n) = a(2n - 1) + a(n + 2) - a(n - 2). (End) ●

▶ [A001400] 1,1,2,3,5,6,9,11,15,18,23,27,34,39,47,54,64,72,84,94,108,120,136,150,169 ⋆ Number of partitions of n into at most 4 parts. ● a(n) = 1 + (a(n - 2) + a(n - 3) + a(n - 4)) - (a(n - 5) + a(n - 6) + a(n - 7)) + a(n - 9). - Norman J. Meluch (norm(AT)iss.gm.com), Mar 09 2000 ● a(n) = round(((n + 4) ^ 3 + 3 * (n + 4) ^ 2 - 9 * (n + 4) * ((n + 4) mod 2)) / 144). - _ Washington Bomfim _ , Jul 03 2012 ● a(n) = a(n - 1) + a(n - 2) - 2 * a(n - 5) + a(n - 8) + a(n - 9) - a(n - 10). - _ David Neil McGrath _ , Sep 12 2014 ● a(n) = - a(- 10 - n) for all n in Z. - _ Michael Somos _ , Dec 29 2014 ● a(n) - a(n + 1) - a(n + 3) + a(n + 4) = 0 if n is odd, else floor(n / 4) + 2 for all n in Z. - _ Michael Somos _ , Dec 29 2014 ● a(n) = n ^ 3 / 144 + n ^ 2 / 24 - 7 * n / 144 + 1 + floor(n / 4) / 4 + floor(n / 3) / 3 + (n + 5) * floor(n / 2) / 8 + floor((n + 1) / 4) / 4. - _ Vaclav Kotesovec _ , Aug 18 2015 ●

▶ [A309831] 0,0,0,0,0,0,0,0,0,0,1,1,2,3,5,6,9,11,15,18,24,28,36,42,52 ⋆ Number of even parts appearing among the smallest parts of the partitions of n into 5 parts. ● a(n) = Sum _{ l=1..floor(n / 5) } Sum _{ k=l..floor((n - l) / 4) } Sum _{ j=k..floor((n - k - l) / 3) } Sum _{ i=j..floor((n - j - k - l) / 2) } ((l - 1) mod 2). ● a(n) = a(n - 1) + a(n - 2) - 2 * a(n - 5) + a(n - 8) + a(n - 9) - a(n - 11) - a(n - 12) + 2 * a(n - 15) - a(n - 18) - a(n - 19) + a(n - 20) for n>19. ●

▶ [A309830] 0,0,0,0,0,1,1,2,3,5,6,9,11,15,18,26,30,40,48,62,72,91,105,129,148 ⋆ Sum of the odd parts appearing among the smallest parts of the partitions of n into 5 parts. ● a(n) = Sum _{ l=1..floor(n / 5) } Sum _{ k=l..floor((n - l) / 4) } Sum _{ j=k..floor((n - k - l) / 3) } Sum _{ i=j..floor((n - j - k - l) / 2) } l * (l mod 2). ● a(n) = a(n - 1) + 2 * a(n - 2) - a(n - 3) - 2 * a(n - 4) - a(n - 5) + 2 * a(n - 6) + a(n - 7) - a(n - 8) + 2 * a(n - 10) - 2 * a(n - 11) - 4 * a(n - 12) + 2 * a(n - 13) + 4 * a(n - 14) + 2 * a(n - 15) - 4 * a(n - 16) - 2 * a(n - 17) + 2 * a(n - 18) - a(n - 20) + a(n - 21) + 2 * a(n - 22) - a(n - 23) - 2 * a(n - 24) - a(n - 25) + 2 * a(n - 26) + a(n - 27) - a(n - 28) for n > 27. ●

▶ [A008770] 1,1,2,3,5,6,9,11,15,19,24,29,37,44,53,63,75,87,102,117,135,154,175,197,223 ⋆ Expansion of (1 + x ^ 9) / ((1 - x) * (1 - x ^ 2) * (1 - x ^ 3) * (1 - x ^ 4)). ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) - a(n - 4) - a(n - 5) + a(n - 6) - a(n - 7) + 2 * a(n - 8) - a(n - 9); a(0)=1, a(1)=1, a(2)=2, a(3)=3, a(4)=5, a(5)=6, a(6)=9, a(7)=11, a(8)=15. - _ Harvey P. Dale _ , Oct 02 2012 ●

▶ [A008769] 1,1,2,3,5,6,9,11,16,19,25,30,39,45,56,65,79,90,107,121,142,159,183,204,233 ⋆ Expansion of (1 + x ^ 8) / ((1 - x) * (1 - x ^ 2) * (1 - x ^ 3) * (1 - x ^ 4)). ● a(n) = 1 + 5 * n / 72 - n ^ 2 / 12 + n ^ 3 / 72 + 1 / 2 * floor(n / 4) + 1 / 3 * floor(n / 3) + (1 / 4 + n / 4) * floor(n / 2) + 1 / 2 * floor((1 + n) / 4) + 1 / 3 * floor((1 + n) / 3). - _ Vaclav Kotesovec _ , Apr 29 2014 ● a(n) = round((n + 1) * (2 * n ^ 2 + 4 * n + 83 + 9 * (- 1) ^ n) / 144). - _ Tani Akinari _ , May 13 2014 ●

▶ [A339277] 1,1,2,3,5,6,9,11,16,19,25,30,39,45,56,65,81,92,111,127,152,171,201,226,265 ⋆ Number of partitions of 2 * n into powers of 2 where every part appears at least 2 times. ● a(n) = [x ^ (2 * n)] Product _{ k>=0 } (1 + x ^ (2 ^ (k + 1)) / (1 - x ^ (2 ^ k))). ●

▶ [A366143] 1,1,1,1,1,2,3,5,6,9,11,18,22,35,43,69,84,134,164,263,321,513,627,1004,1226 ⋆ a(n) = a(n - 2) + 2 * a(n - 4) - a(n - 10), with a[0..9] = [1, 1, 1, 1, 1, 2, 3, 5, 6, 9]. ● a(n) = a(n - 2) + 2 * a(n - 4) - a(n - 10). ● a(2 * n) = a(2 * n - 1) + a(2 * n - 4) - a(2 * n - 5) + a(2 * n - 6). ● a(2 * n + 1) = a(2 * n) + 2 * a(2 * n - 3) - a(2 * n - 4) + a(2 * n - 6) - a(2 * n - 7). ●

▶ [A283768] 2,3,5,6,9,12,15,16,18,19,22,25,28,29,31,32,34,35,38,41,42,44,45,47,48 ⋆ Numbers k such that U(k) is odd, where U = A001950 = upper Wythoff sequence. ● a(n + 1) - a(n) is in { 1,2,3 } for every n. ●

▶ [A008768] 1,1,2,3,5,6,9,12,16,20,26,32,40,48,58,69,82,95,111,128,147,167,190,214,241 ⋆ Expansion of (1 + x ^ 7) / ((1 - x) * (1 - x ^ 2) * (1 - x ^ 3) * (1 - x ^ 4)). ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) - a(n - 4) - a(n - 5) + a(n - 6) - a(n - 7) + 2 * a(n - 8) - a(n - 9); a(0)=1, a(1)=1, a(2)=2, a(3)=3, a(4)=5, a(5)=6, a(6)=9, a(7)=12, a(8)=16. - _ Harvey P. Dale _ , Jul 06 2011 ● a(n) = floor((2 * n ^ 3 + 9 * n ^ 2 + 72 * n + 160) / 144). - _ Tani Akinari _ , May 13 2014 ●

▶ [A212584] 1,1,2,3,5,6,9,12,18,24,34,46,65,89,124,170,236,325,450,620,857,1182,1633,2253,3111 ⋆ Nonnegative walks of length n on the x - axis starting at the origin using steps { 1, - 1 } and visiting no point more than twice. ● a(n) = a(n - 2) + a(n - 4) + a(n - 5) + 1, a(0..4) = { 1,1,2,3,5 } . ● a(n) = g(n) + sum(j=0..n - 4, g(j) * sum(k=1..(n - j) / 4, binomial(n - j - 3 * k - 1, k - 1))), g(j) = if(j< 3,1,2) + floor(j / 2). ●

▶ [A131761] 0,1,2,3,5,6,9,19,30,51,101,150,249,499,750,1251,2501,3750,6249,12499,18750,31251,62501,93750,156249 ⋆ a(3n) = 3a(3n - 1) - 3a(3n - 2) + 2a(3n - 3), a(3n + 1) = 3a(3n) - 3a(3n - 1) + 2a(3n - 2), a(3n + 2) = 3a(3n + 1) - 3a(3n), a(0) = 0, a(1) = 1, a(2) = 2. ● a(n) = a(n - 1) - a(n - 2) + 5 * a(n - 3) - 5 * a(n - 4) + 5 * a(n - 5) for n>7. - _ Colin Barker _ , Nov 04 2014 ●

▶ [A047447] 2,3,5,6,10,11,13,14,18,19,21,22,26,27,29,30,34,35,37,38,42,43,45,46,50 ⋆ Numbers that are congruent to { 2, 3, 5, 6 } mod 8. ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. ● a(n) = (1 + i) * (4 * n - 4 * n * i + 2 * i - 2 - (1 - i) * i ^ (2 * n) + i ^ (1 - n) - i ^ n) / 4 where i=sqrt(- 1). ●

▶ [A003238] 1,1,2,3,5,6,10,11,16,19,26,27,40,41,53,61,77,78,104,105,134,147,175,176,227 ⋆ Number of rooted trees with n vertices in which vertices at the same level have the same degree. ● a(n) = 1 + sum of a(i) such that n == 1 (mod i). - _ Jon Perry _ , Nov 20 2012 ●

▶ [A053436] 2,3,5,6,10,11,18,19,30,31,47,48,70,71,100,101,138,139,185,186,242,243,310,311,390 ⋆ a(n) = n + 1 + ceiling(n / 2) * (ceiling(n / 2) - 1) * (ceiling(n / 2) + 1) / 6. ● a(n) = a(n - 1) + 3 a(n - 2) - 3 a(n - 3) - 3 a(n - 4) + 3 a(n - 5) + a(n - 6) - a(n - 7). - _ R. J. Mathar _ , Mar 11 2012 ● a(n) = (2 * n ^ 3 + 3 * n ^ 2 + 91 * n + 93 - 3 * (n ^ 2 + n - 1) * (- 1) ^ n) / 96. - _ Luce ETIENNE _ , Oct 22 2014 ●

▶ [A138587] 0,1,2,3,5,6,10,11,21,22,42,43,85,86,170,171,341,342,682,683,1365,1366,2730,2731,5461 ⋆ The union of all entries of A024495, A131708 and A024493 sorted into natural order. ● a(n + 8) == a(n) (mod 10), n > 1. ● a(2 * n + 1) - a(2 * n) = 1. ● a(n) = - a(n - 1) + a(n - 2) + a(n - 3) + 2 * a(n - 4) + 2 * a(n - 5), n>6. ●

▶ [A161715] 1,2,3,5,6,10,15,30,171,886,3359,10143,26072,59502,123931,240048,438261,761754,1270123,2043641,3188202,4840994,7176951,10416034,14831391 ⋆ a(n) = (50 * n ^ 7 - 1197 * n ^ 6 + 11333 * n ^ 5 - 53655 * n ^ 4 + 132125 * n ^ 3 - 156828 * n ^ 2 + 73212 * n + 5040) / 5040. ● a(n) = C(n,0) + C(n,1) + C(n,3) - 3 * C(n,4) + 9 * C(n,5) - 21 * C(n,6) + 50 * C(n,7). ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8). - _ Wesley Ivan Hurt _ , Apr 26 2021 ●

▶ [A127524] 1,1,2,3,5,6,11,12,20,25,42,43,81,82,150,192,287,288,563,564,982,1277,2182,2183,3658 ⋆ Number of unordered rooted trees where each subtree from given node has the same number of nodes. ● a(1) = 1; a(n + 1) = Sum _{ d|n } C(a(n / d) + d - 1, d). ●

▶ [A132581] 1,2,3,5,6,11,14,19,20,39,53,78,84,134,148,167,168,335,483,765,849,1466,1681,1988,2008 ⋆ Number of antichains in the first n elements of the infinite Boolean lattice. ● a(2 ^ n) = a(2 ^ n - 2 ^ m) + a(2 ^ n - 2 ^ (n - m)) for n >= m >= 0. ● a(2 ^ n + 2) = a(2 ^ n) + a(2 ^ n - 1) + a(2 ^ n - 2) = 3 * a(2 ^ n - 2) + a(2 ^ (n - 1) + 1) for n >= 1. ● a(2 ^ n + 1) = 2 * a(2 ^ n - 2) + a(2 ^ (n - 1) + 1) = 2 * a(2 ^ n - 1) + 1 for n >= 1. ● a(2 ^ n - 1) = a(2 ^ n - 2) + a(2 ^ (n - 1) - 1) for n >= 1. ● a(2 ^ n - 2) = a(2 ^ n - 3) + a(2 ^ (n - 1) - 2) for n >= 2. ●

▶ [A038196] 1,1,1,2,3,5,6,11,14,25,31,56,70,126,157,283,353,636,793,1429,1782,3211,4004,7215,8997 ⋆ 3 - wave sequence starting with 1, 1, 1. ● a(n) = a(n - 1) + a(n - 2) if n is odd, ● a(n) = a(n - 1) + a(n - 4) if n is even. ●

▶ [A078913] 1,1,2,3,5,6,11,17,19,36,55,58,113,171,176,347,523,529,1052,1581,1592,3173,4765,4782,9547 ⋆ a(1)=a(2)=1, a(n)=a(n - 1) + a(n - 2) if n is not congruent to 3, a(n)=a(n - 1) + a(n / 3) if n is congruent to 3. ● a(3n) is asymptotic to c * 3 ^ n, a(3n + 1) to 2 * c * 3 ^ n, a(3n + 2) to 3 * c * 3 ^ n where c=0.729407718249558020561155714549683618764251558505616.... ●

▶ [A127525] 1,1,2,3,5,6,12,13,24,33,60,61,142,143,289,447,699,700,1558,1559,3518,5375,8977,8978,17179 ⋆ Number of ordered rooted trees where each subtree from given node has the same number of nodes. ● a(1) = 1; a(n + 1) = Sum _{ d|n } a(n / d) ^ d. ●

▶ [A047490] 0,1,2,3,5,7,8,9,10,11,13,15,16,17,18,19,21,23,24,25,26,27,29,31,32 ⋆ Numbers that are congruent to { 0, 1, 2, 3, 5, 7 } mod 8. ● a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - 2 * a(n - 4) + 2 * a(n - 5) - a(n - 6) for n>6. ● a(n) = (24 * n - 30 + 6 * sqrt(3) * cos((1 - 2n) * Pi / 6) + 2 * sqrt(3) * cos((1 + 4n) * Pi / 6)) / 18. ● a(6k) = 8k - 1, a(6k - 1) = 8k - 3, a(6k - 2) = 8k - 5, a(6k - 3) = 8k - 6, a(6k - 4) = 8k - 7, a(6k - 5) = 8k - 8. (End) ●

▶ [A047373] 0,1,2,3,5,7,8,9,10,12,14,15,16,17,19,21,22,23,24,26,28,29,30,31,33 ⋆ Numbers that are congruent to { 0, 1, 2, 3, 5 } mod 7. ● a(n) = a(n - 1) + a(n - 5) - a(n - 6) for n > 6. ● a(n) = a(n - 5) + 7 for n > 5. ● a(n) = (35 * n - 50 - 3 * (n mod 5) + 2 * ((n + 1) mod 5) + 2 * ((n + 2) mod 5) + 2 * ((n + 3) mod 5) - 3 * ((n + 4) mod 5)) / 25. ● a(5 * k) = 7 * k - 2, a(5 * k - 1) = 7 * k - 4, a(5 * k - 2) = 7 * k - 5, a(5 * k - 3) = 7 * k - 6, a(5 * k - 4) = 7 * k - 7. (End) ●

▶ [A329780] 1,2,3,5,7,8,9,11,12,13,14,15,17,18,19,20,21,23,24,25,27,29,30,31,33 ⋆ Numbers that are either odd or are congruent to {+- 2, +- 8, +- 12, +- 14 } (mod 32). ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) - a(n - 6) + a(n - 7) + a(n - 9) - a(n - 10) - a(n - 12) + a(n - 13) + a(n - 15) - a(n - 16) - a(n - 18) + a(n - 19) + a(n - 21) - a(n - 22) for n>22. ●

▶ [A186042] 1,2,3,5,7,8,9,11,13,14,15,17,18,19,20,21,23,25,26,27,28,29,31,32,33 ⋆ Numbers of the form 2 * k + 1, 3 * k + 2, or 5 * k + 3. ● a(n) = a(n - 22) + 30. ● a(n) = a(n - 1) + a(n - 22) - a(n - 23). ●

▶ [A047255] 1,2,3,5,7,8,9,11,13,14,15,17,19,20,21,23,25,26,27,29,31,32,33,35,37 ⋆ Numbers that are congruent to { 1, 2, 3, 5 } mod 6. ● a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4), for n>4. ● a(n) = (6 * n - 4 + i ^ (1 - n) + i ^ (n - 1)) / 4, where i = sqrt(- 1). ● a(n) = (6 * n - 4 + (1 - (- 1) ^ n) * (- 1) ^ (n * (n - 1) / 2)) / 4. ● a(n) = a(n - 4) + 6, a(1)=1, a(2)=2, a(3)=3, a(4)=5, for n > 4. ● a(n) = 2 * n - 1 - floor(n / 2) + floor(n / 4) - floor((n + 1) / 4). - _ Ridouane Oudra _ , Feb 21 2023 ●

▶ [A187332] 2,3,5,7,8,9,12,13,15,17,18,19,22,23,25,27,28,29,32,33,35,37,38,39,42 ⋆ Complement of A187331. ● a(n) = a(n - 1) + a(n - 6) - a(n - 7) for n > 7. ●

▶ [A076798] 1,2,3,5,7,8,10,11,12,14,20,21,22,25,28,33,35,37,38,39,44,45,47,49,50 ⋆ Greedy powers of (Pi / 6): Sum _{ n>=1 } (Pi / 6) ^ a(n) = 1. ● a(n) = Sum _{ k=1..n } floor(g _ k) where g _ 1=1, g _{ n + 1 } =log _ x(x ^ frac(g _ n) - x) (n>0) at x=(pi / 6) and frac(y) = y - floor(y). ●

▶ [A184588] 2,3,5,7,8,10,11,13,15,16,18,19,21,22,24,26,27,29,30,32,34,35,37,38,40 ⋆ floor[(n + 1 / 2) * e / (e - 1)]. ● a(n)=floor[(n + 1 / 2) * e / (e - 1)]. ●

▶ [A047488] 0,2,3,5,7,8,10,11,13,15,16,18,19,21,23,24,26,27,29,31,32,34,35,37,39 ⋆ Numbers that are congruent to { 0, 2, 3, 5, 7 } mod 8. ● a(n) = a(n - 1) + a(n - 5) - a(n - 6) for n > 6, a(n) = a(n - 5) + 8 for n > 5. ● a(n) = (40 * n - 35 - 2 * (n mod 5) - 2 * ((n + 1) mod 5) + 3 * ((n + 2) mod 5) - 2 * ((n + 3) mod 5) + 3 * ((n + 4) mod 5)) / 25. ● a(5k) = 8k - 1, a(5k - 1) = 8k - 3, a(5k - 2) = 8k - 5, a(5k - 3) = 8k - 6, a(5k - 4) = 8k - 8. (End) ●

▶ [A295282] 2,3,5,7,8,10,11,13,15,16,18,19,21,23,24,26,28,29,31,32,34,36,37,39,40 ⋆ a(n) > n is chosen to minimize the difference between ratios a(n):n and n:(a(n) - n), so that they are matching approximations to the golden ratio. ● a(n) = (m + n) > n so as to minimize (max((m + n) / n, n / m) / min((m + n) / n, n / m)). ● a(n + 1) = a(n) + 2 - floor((a(n) + 2) * (a(n) + 1 - n) * (a(n) + 1) * (a(n) - n) / (n + 1) ^ 4), with a(0) = 0 for the purpose of this calculation. ●

▶ [A047222] 0,2,3,5,7,8,10,12,13,15,17,18,20,22,23,25,27,28,30,32,33,35,37,38,40 ⋆ Numbers that are congruent to { 0, 2, 3 } mod 5. ● a(n) = floor((5 * n - 4) / 3). - _ Gary Detlefs _ , Oct 28 2011 ● a(n) = 2 * n - 2 - floor(n / 3). - _ Wesley Ivan Hurt _ , Nov 07 2013 ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. ●

a(n) = (15 * n - 15 - 3 * cos(2 * n * Pi / 3) - sqrt(3) * sin(2 * n * Pi / 3)) / 9. • a(3k) = 5k - 2, a(3k - 1) = 5k - 3, a(3k - 2) = 5k - 5. (End) • a(n) = n - 1 + floor((2n - 1) / 3). - _ Wesley Ivan Hurt _ , Dec 27 2016 •

▶ [A186221] 2,3,5,7,8,10,12,14,15,17,19,20,22,24,25,27,29,31,32,34,36,37,39,41,43 ⋆ Adjusted joint rank sequence of (f(i)) and (g(j)) with f(i) after g(j) when f(i)= g(j), where f and g are the triangular numbers and squares. Complement of A186222. • a(n) = n + floor(sqrt((n ^ 2 + n) / 2 + 1 / 4), A186221. •

▶ [A060107] 0,2,3,5,7,8,10,12,14,15,17,19,20,22,24,26,27,29,31,32,34,36,38,39,41 ⋆ Numbers that are congruent to { 0, 2, 3, 5, 7, 8, 10 } mod 12. The ivory keys on a piano, start with A0 = the 0th key. • a(n) = a(n - 7) + 12 for n > 7. • a(n) = a(n - 1) + a(n - 7) - a(n - 8) for n > 8. • a(n) = (84 * n - 91 - 2 * (n mod 7) + 5 * ((n + 1) mod 7) - 2 * ((n + 2) mod 7) - 2 * ((n + 3) mod 7) + 5 * ((n + 4) mod 7) - 2 * ((n + 5) mod 7) - 2 * ((n + 6) mod 7)) / 49. • a(7k) = 12k - 2, a(7k - 1) = 12k - 4, a(7k - 2) = 12k - 5, a(7k - 3) = 12k - 7, a(7k - 4) = 12k - 9, a(7k - 5) = 12k - 10, a(7k - 6) = 12k - 12. (End) •

▶ [A083028] 0,2,3,5,7,8,11,12,14,15,17,19,20,23,24,26,27,29,31,32,35,36,38,39,41 ⋆ Numbers that are congruent to { 0, 2, 3, 5, 7, 8, 11 } mod 12. • a(n) = a(n - 1) + a(n - 7) - a(n - 8) for n > 8. • a(n) = (84 * n - 84 - 9 * (n mod 7) + 5 * ((n + 1) mod 7) - 2 * ((n + 2) mod 7) - 2 * ((n + 3) mod 7) + 5 * ((n + 4) mod 7) - 2 * ((n + 5) mod 7) + 5 * ((n + 6) mod 7)) / 49. • a(7k) = 12k - 1, a(7k - 1) = 12k - 4, a(7k - 2) = 12k - 5, a(7k - 3) = 12k - 7, a(7k - 4) = 12k - 9, a(7k - 5) = 12k - 10, a(7k - 6) = 12k - 12. (End) • a(n) = a(n - 7) + 12 for n > 7. - _ Jianing Song _ , Sep 22 2018 •

▶ [A287893] 0,0,0,1,2,3,5,7,8,11,13,15,18,21,24,28,32,35,40,44,48,53,58,63,69 ⋆ a(n) = floor(n * (n + 2) / 9). • a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 9) - 2 * a(n - 10) + a(n - 11) for n>10. • a(n) = floor(n * (n + 2) / 9). - _ Alois P. Heinz _ , Jun 02 2017 •

▶ [A245227] 0,2,3,5,7,9,10,12,13,15,17,18,19,21,22,25,26,27,29,30,32,34,35,37,38 ⋆ Maximum frustration of complete bipartite graph K(n,5). • a(n) = floor(25 / 16 * n) - 1 if n == 2,4,9,13, or 15 mod 16 or if n = 1 or 3; a(n) = floor(25 / 16 * n) otherwise. • a(n + 16) = a(n) + 25 for n > 3. •

▶ [A083033] 0,2,3,5,7,9,10,12,14,15,17,19,21,22,24,26,27,29,31,33,34,36,38,39,41 ⋆ Numbers that are congruent to { 0, 2, 3, 5, 7, 9, 10 } mod 12. • a(n) = a(n - 1) + a(n - 7) - a(n - 8) for n > 8. • a(n) = (84 * n - 84 + 5 * (n mod 7) - 2 * ((n + 1) mod 7) - 2 * ((n + 2) mod 7) - 2 * ((n + 3) mod 7) + 5 * ((n + 4) mod 7) - 2 * ((n + 5) mod 7) - 2 * ((n + 6) mod 7)) / 49. • a(7k) = 12k - 2, a(7k - 1) = 12k - 3, a(7k - 2) = 12k - 5, a(7k - 3) = 12k - 7, a(7k - 4) = 12k - 9, a(7k - 5) = 12k - 10, a(7k - 6) = 12k - 12. (End) • a(n) = a(n - 7) + 12 for n > 7. - _ Jianing Song _ , Sep 22 2018 •

▶ [A022847] 0,2,3,5,7,9,10,12,14,16,17,19,21,23,24,26,28,29,31,33,35,36,38,40,42 ⋆ Integer nearest n * sqrt(3). • a(n + 1) - a(n) = 1 or 2. _ Philippe Deléham _ , Mar 09 2013 •

▶ [A047371] 0,2,3,5,7,9,10,12,14,16,17,19,21,23,24,26,28,30,31,33,35,37,38,40,42 ⋆ Numbers that are congruent to { 0, 2, 3, 5 } mod 7. • a(n) = floor((7n - 6) / 4). [_ Gary Detlefs _ , Mar 06 2010] • a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n >5. • a(n) = i ^ (- n) * ((14 * n - 15) * i ^ n + i - 1 - (1 + i) * i ^ (2 * n) + i ^ (- n)) / 8 where i=sqrt(- 1). •

▶ [A190785] 0,2,3,5,7,9,11,12,14,15,17,19,21,23,24,26,27,29,31,33,35,36,38,39,41 ⋆ Numbers that are congruent to { 0, 2, 3, 5, 7, 9, 11 } mod 12. • a(n) = a(n - 1) + a(n - 7) - a(n - 8) for n>8; G.f.: (2 + x + 2 * x ^ 2 + 2 * x ^ 3 + 2 * x ^ 4 + 2 * x ^ 5 + x ^ 6) / ((x ^ 6 + x ^ 5 + x ^ 4 + x ^ 3 + x ^ 2 + x + 1) * (x - 1) ^ 2). - _ R. J. Mathar _ , May 26 2011 • a(n) = 2 * n - floor(2 * n / 7) - floor(((n - 4) mod 7) / 5). - _ Rolf Pleisch _ , Jun 11 2011 • a(n) = a(n - 7) + 12 for n>7. • a(n) = (84 * n - 77 - 2 * (n mod 7) - 2 * ((n + 1) mod 7) - 2 * ((n + 2) mod 7) - 2 * ((n + 3) mod 7) + 5 * ((n + 4) mod 7) - 2 * ((n + 5) mod 7) + 5 * ((n + 6) mod 7)) / 49. • a(7 * k) = 12 * k - 1, a(7 * k - 1) = 12 * k - 3, a(7 * k - 2) = 12 * k - 5, a(7 * k - 3) = 12 * k - 7, a(7 * k - 4) = 12 * k - 9, a(7 * k - 5) = 12 * k - 10, a(7 * k - 6) = 12 * k - 12. (End) •

▶ [A004274] 0,1,2,3,5,7,9,11,13,15,17,19,21,23,25,27,29,31,33,35,37,39,41,43,45 ⋆ 0, 2 and the odd numbers. • a(n) = 2 * n - 3 + floor(2 / n), n > 0. - _ Wesley Ivan Hurt _ , May 23 2013 • a(n) = 2 * a(n - 1) - a(n - 2) for n > 4. •

▶ [A004280] 1,2,3,5,7,9,11,13,15,17,19,21,23,25,27,29,31,33,35,37,39,41,43,45,47 ⋆ 2 together with the odd numbers (essentially the result of the first stage of the sieve of Eratosthenes). • a(n) = 2 * n - 3 + C(1, n - 1) + C(0, n - 1). (End) • a(n) = 2 * n - 3 + floor(2 / n). - _ Wesley Ivan Hurt _ , May 23 2013 •

▶ [A095737] 2,3,5,7,9,11,13,15,17,19,23,25,29,31,37,41,43,47,53,59,61,67,71,73,79 ⋆ Mersenne - like sequence factors of complex real square type 2 * Prime[m] ^ 2 - n ^ 2 - 1. • a(n) =if (2 ^ n - 1) / (Prime[m] ^ 2 - n ^ 2 - 1)=Integer then n •

▶ [A046654] 0,0,1,2,3,5,7,9,11,13,15,18,20,23,25,28,31,34,36,39,42,45,48,52,55 ⋆ Nearest integer to Sum _{ k=1..n } log(k) = log(n!). • a(n) = n * log(n) - n + O(log(n)). - _ Arkadiusz Wesolowski _ , Oct 18 2013 • a(n) = round(LogGamma(n + 1)). - _ Mats Granvik _ , Roger L. Bagula, Aug 06 2016 •

▶ [A280724] 1,2,3,5,7,9,11,13,15,18,21,24,27,30,33,36,39,42,45,48,51,54,57,60,63 ⋆ Expansion of 1 / (1 - x) + (1 / (1 - x) ^ 2) * Sum _{ k>=0 } x ^ (3 ^ k). • a(n) = 1 + Sum _{ k=1..n } floor(log _ 3(k)) + 1. •

▶ [A023543] 1,2,3,5,7,9,11,13,15,18,21,24,27,30,33,36,39,42,45,49,53,57,61,65,69 ⋆ Convolution of natural numbers with A023533. • a(n) = (m + 2) * (n + 1) - binomial(n + 4, 4), for binomial(n + 3, 3) - 2 <= m <= binomial(n + 4, 3) - 3, and n >= 1, with a(1) = 1, a(2) = 2. (End) •

▶ [A129895] 1,2,3,5,7,9,11,13,15,18,21,25,29,33,37,41,45,50,55,61,67,73,79,85,91 ⋆ a(1)=1. a(n) = a(n - 1) + number of triangular numbers among the first (n - 1) terms of the sequence. • a(n) = 2 * a(n - 1) - 2 * a(n - 3) + 2 * a(n - 5) - 2 * a(n - 7) + a(n - 8); a(1)=1, a(2)=2, a(3)=3, a(4)=5, a(5)=7, a(6)=9, a(7)=11, a(8)=13. - _ Harvey P. Dale _ , May 16 2014 •

▶ [A022554] 0,1,2,3,5,7,9,11,13,16,19,22,25,28,31,34,38,42,46,50,54,58,62,66,70 ⋆ a(n) = Sum _{ k=0..n } floor(sqrt(k)). • a(0)=0, a(1)=1; a(n) = 2 * a(n - 1) - a(n - 2) if n is not a perfect square; a(n) = 2 * a(n - 1) - a(n - 2) + 1 if n is a perfect square. • a(n) = floor(sqrt(n)) * (n - 1 / 6 * (2 * floor(sqrt(n)) + 5) * (floor(sqrt(n)) - 1)). - Yong Kong (ykong(AT)curagen.com), Mar 10 2001 • a(n) = (2 / 3) * n ^ (3 / 2) - (1 / 2) * n + O(sqrt(n)). - _ Charles R Greathouse IV _ , Jan 12 2012 • a(n) = m * (n - m ^ 2 / 3 - m / 2 + 5 / 6) where m = floor(sqrt(n)). - _ M. F. Hasler _ , Apr 23 2022 •

▶ [A097046] 1,2,3,5,7,9,11,13,16,19,22,25,28,31,34,39,44,49,54,59,64,69,74,79,86 ⋆ a(n) = a(n - 1) + a(floor(sqrt(n))) for n > 1; a(1) = 1. • a(1)=1; a(n) = a(n - 1) + a(floor(sqrt(n))) for n > 1. •

▶ [A011861] 0,0,0,0,1,2,3,5,7,9,11,13,16,19,22,26,30,34,38,42,47,52,57,63,69 ⋆ a(n) = floor(n(n - 1) / 8). • a(n) = + 3 * a(n - 1) - 4 * a(n - 2) + 4 * a(n - 3) - 4 * a(n - 4) + 4 * a(n - 5) - 4 * a(n - 6) + 4 * a(n - 7) - 3 * a(n - 8) + a(n - 9). •

▶ [A241907] 1,2,3,5,7,9,11,14,17,20,23,26,29,33,36,40,44,48,52,56,60,65,69,74,78 ⋆ a(n) = floor(Catalan(2 * n) / Catalan(n) ^ 2). • a(n) = floor(Catalan(2 * n) / Catalan(n) ^ 2). •

▶ [A056834] 0,0,0,1,2,3,5,7,9,11,14,17,20,24,28,32,36,41,46,51,57,63,69,75,82 ⋆ a(n) = floor(n ^ 2 / 7). • a(n) = + 2 * a(n - 1) - a(n - 2) + a(n - 7) - 2 * a(n - 8) + a(n - 9). •

▶ [A183140] 0,0,0,1,2,3,5,7,9,11,14,17,20,24,28,32,36,41,46,51,57,63,69,76,83 ⋆ a(n) = [1 / s] + [2 / s] + ... + [n / s], where s=2 + sqrt(2) and []=floor. • a(n) = [1 / s] + [2 / s] + ... + [n / s], where s=2 + sqrt(2) and []=floor. •

▶ [A071423] 1,2,3,5,7,9,12,15,18,22,26,30,34,39,44,49,55,61,67,74,81,88,95,103,111 ⋆ a(n) = a(n - 1) + number of decimal digits of 2 ^ n. Number of decimal digits of concatenation of first n powers of 2. • a(n) = 0.5 log 2 / log 10 * n ^ 2 + O(n) •

▶ [A062781] 0,0,0,1,2,3,5,7,9,12,15,18,22,26,30,35,40,45,51,57,63,70,77,84,92 ⋆ Number of arithmetic progressions of four terms and any mean which can be extracted from the set of the first n positive integers. • a(n) = P(n,4), where P(n,k) = n * floor(n / (k - 1)) - (1 / 2)(k - 1)(floor(n / (k - 1)) * (floor(n / (k - 1)) + 1)); recursion: a(n) = a(n - 3) + n - 3; a(1) = a(2) = a(3) = 0. • a(n) = (1 / 2) * floor((n - 1) / 3) * (2 * n - 3 - 3 * floor((n - 1) / 3)). • a(n) = floor((n - 1) / 3) + a(n - 1). - _ Jon Maiga _ , Nov 25 2018 •

▶ [A001840] 0,1,2,3,5,7,9,12,15,18,22,26,30,35,40,45,51,57,63,70,77,84,92,100,108 ⋆ Expansion of g.f. x / ((1 - x) ^ 2 * (1 - x ^ 3)). • a(3 * k - 1) = k * (3 * k + 1) / 2; • a(3 * k) = 3 * k * (k + 1) / 2; • a(3 * k + 1) = (k + 1) * (3 * k + 2) / 2. • a(n) = 1 + a(n - 1) + a(n - 3) - a(n - 4). • a(- 3 - n) = a(n). (End) • a(n) = a(n - 3) + n for n > 2; a(0)=0, a(1)=1, a(2)=2. - _ Paul Barry _ , Jul 14 2004 •

▶ [A005704] 1,2,3,5,7,9,12,15,18,23,28,33,40,47,54,63,72,81,93,105,117,132,147,162,180 ⋆ Number of partitions of 3n into powers of 3. • a(n) = a(n - 1) + a(floor(n / 3)). • a(n) mod 3 = binomial(2n, n) mod 3. - _ Benoit Cloitre _ , Jan 04 2004 •

▶ [A283968] 1,2,3,5,7,9,12,15,19,23,27,32,37,42,48,54,61,68,75,83,91,100,109,118,128 ⋆ a(n) = a(n - 1) + 1 + floor(n * (3 + sqrt(5)) / 2), a(0) = 1. • a(n) = a(n - 1) + 1 + floor(n * (3 + sqrt(5)) / 2), a(0) = 1. •

▶ [A309881] 0,0,0,0,0,0,0,0,0,0,1,2,3,5,7,9,12,15,19,24,30,37,45,54,64,75 ⋆ Number of even parts appearing among the fourth largest parts of the partitions of n into 5 parts. • a(n) = Sum _{ l=1..floor(n / 5) } Sum _{ k=l..floor((n - l) / 4) } Sum _{ j=k..floor((n - k - l) / 3) } Sum _{ i=j..floor((n - j - k - l) / 2) } ((k - 1) mod 2). • a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) - 2 * a(n - 4) + a(n - 5) + a(n - 8) - 2 * a(n - 9) + 2 * a(n - 10) - 3 * a(n - 11) + 3 * a(n - 12) - 2 * a(n - 13) + 2 * a(n - 14) - a(n - 15) - a(n - 18) + 2 * a(n - 19) - a(n - 20) + a(n - 21) - 2 * a(n - 22) + a(n - 23) for n>22. •

▶ [A039825] 2,3,5,7,9,12,16,20,24,29,35,41,47,54,62,70,78,87,97,107,117,128,140,152,164 ⋆ a(n) = floor((n ^ 2 + n + 8) / 4). • a(n) = Sum _{ k=0..n } ((1 / 12) * ((k mod 4) + 4 * ((k + 1) mod 4) + ((k + 2) mod 4) - 2 * ((k + 3) mod 4))) + a(n - 1), with a(0)=2. - _ Paolo P. Lava _ , Aug 24 2007 • a(n) = 3 * a(n - 1) - 4 * a(n - 2) + 4 * a(n - 3) - 3 * a(n - 4) + a(n - 5). - _ Wesley Ivan Hurt _ , May 08 2022 •

▶ [A351874] 1,2,3,5,7,9,12,16,23,33,47,66,91,126,175,245,344,482,674,940,1311,1830,2557,3575,4997 ⋆ Number of subsets of { 1,2,...,n } such that any pair of elements do not differ by 1, 3, or 4. • a(n) = a(n - 1) + a(n - 5) + a(n - 7) + delta(n,0) + delta(n,1) + delta(n,2) + 2 * delta(n,3) + 2 * delta(n,4) + delta(n,5) + delta(n,6), a(n<0) = 0. •

▶ [A080000] 1,1,1,1,1,2,3,5,7,9,12,16,24,35,50,70,96,135,190,270,383,539,759,1065,1500 ⋆ Number of permutations satisfying - k<=p(i) - i<=r and p(i) - i not in I, i=1..n, with k=2, r=3, I= {- 1,1,2 } . • a(n) = a(n - 1) + 2 * a(n - 5) - a(n - 6) + a(n - 7) - a(n - 10). •

▶ [A200672] 1,2,3,5,7,9,13,17,21,29,37,45,61,77,93,125,157,189,253,317,381,509,637,765,1021 ⋆ Partial sums of A173862. • a(n) = 2 * a(n - 3) + 3 for n > 3. - _ Yuchun Ji _ , Nov 16 2018 •

▶ [A280429] 1,2,3,5,7,9,17,21,25,51,59,67,141,157,173,367,399,431,913,977,1041,2195,2323,2451,5141 ⋆ Longest word T from a string S using no breakpoint - reuse. • a(n) = (2 ^ k) * (n - 5) + 2 * k + 5 with k = floor((n - 1) / 3). • a(n) = a(n - 1) + 5 * a(n - 3) - 5 * a(n - 4) - 8 * a(n - 6) + 8 * a(n - 7) + 4 * a(n - 9) - 4 * a(n - 10) for n > 10. •

▶ [A202267] 0,1,2,3,5,7,10,11,12,13,15,17,20,21,22,23,25,27,30,31,32,33,35,37,50 ⋆ Numbers in which all digits are noncomposites (1, 2, 3, 5, 7) or 0. • a(n) = (b _ m(n) + 1) mod 10 + floor((b _ m(n) + 2) / 5) + floor((b _ m(n) + 1) / 5) - 2 * floor(b _ m(n) / 5)) * 10 ^ m + sum _{ j=0..m - 1 } (b _ j(n) mod 6 + floor((b _ j(n) + 1) / 6) + floor((b _ j(n) + 2) / 6) - 2 * floor(b _ j(n) / 6))) * 10 ^ j, where n>1, b _ j(n)) = floor((n - 1 - 6 ^ m) / 6 ^ j), m = floor(log _ 6(n - 1)). • a(1 * 6 ^ n + 1) = 1 * 10 ^ n. • a(2 * 6 ^ n + 1) = 2 * 10 ^ n. • a(3 * 6 ^ n + 1) = 3 * 10 ^ n. • a(4 * 6 ^ n + 1) = 5 * 10 ^ n. • a(5 * 6 ^ n + 1) = 7 * 10 ^ n. •

▶ [A047487] 2,3,5,7,10,11,13,15,18,19,21,23,26,27,29,31,34,35,37,39,42,43,45,47,50 ⋆ Numbers that are congruent to { 2, 3, 5, 7 } mod 8. • a(n) = (- 3 - (- 1) ^ n + i * (- i) ^ n - i * i ^ n + 8 * n) / 4 where i=sqrt(- 1). • a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. - _ Vincenzo Librandi _ , May 17 2012 •

▶ [A010062] 1,2,3,5,7,10,12,14,17,19,22,25,28,31,36,38,41,44,47,52,55,60,64,65,67 ⋆ a(0)=1; thereafter a(n + 1) = a(n) + number of 1's in binary representation of a(n). • a(n) = (n / 2) * log n + O(n * sqrt(log n * loglog n)), where log means log _ 2. In particular, a(n) ~ (n / 2) * log n. [Stolarsky] •

▶ [A350102] 1,2,3,5,7,10,12,16,18,22,25,29,31,37,39,43,47,52,54,60,62,68,72,76,78 ⋆ Number of self - measuring subsets of the initial segment of the natural numb ers strictly below n. Number of subsets S of [n] with S = distset(S). ● a(n) = a(n - 1) + tau(n - 1) for n >= 2, tau = A000005. ● a(n) = 2 + Sum _{ k=1..n - 1 } floor((n - 1) / k) for n >= 1. ● a(n) >= n + floor(n / 2) + floor(n / 3). ●

▶ [A211520] 0,0,0,1,2,3,5,7,10,12,16,19,24,27,33,37,44,48,56,61,70,75,85,91,102 ⋆ Number of ordered triples (w,x,y) with all terms in { 1,...,n } and w + 4y = 2x. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) + a(n - 4) - a(n - 5) - a(n - 6) + a(n - 7). ● a(n) = (6 * n ^ 2 - 10 * n + 3 + (2 * n - 7) * (- 1) ^ n - 4 * (- 1) ^ ((2 * n - 3 - (- 1) ^ n) / 4)) / 32. - _ Luce ETIENNE _ , Dec 31 2015 ● a(n) = Sum _{ k=1..floor(n / 2) } floor((n - k) / 2). - _ Wesley Ivan Hurt _ , Apr 01 2017 ●

▶ [A072831] 1,1,2,3,5,7,10,13,16,19,22,26,29,33,37,41,45,49,53,57,62,66,70,75,80 ⋆ Number of bits in n!. ● a(n) = floor(log(n!) / log(2)) + 1. ●

▶ [A302334] 2,3,5,7,10,13,16,20,24,28,32,36,40,44,48,53,57,61,66,70,75,79,84,89,9 4 ⋆ A weighted smoothing applied to the primes as a data set: a(n) = floor(A00 7443(2n - 1) / 2 ^ (2n - 2)), where A007443 is binomial transform of primes. ● a(n) = floor(Sum _{ k=0..2n - 2 } (binomial(2n - 2,k) * prime(k + 1)) / 2 ^ (2 n - 2)). ●

▶ [A024180] 0,2,3,5,7,10,13,16,20,24,28,32,37,42,48,54,60,67,74,81,88,96,104,113,1 22 ⋆ a(n) = floor(3rd elementary symmetric function of 2,3,...,n + 3) / 2nd ele mentary symmetric function of (2,3,...,n + 3)). ● a(n) = floor((1 / 2) * n * (5 + n) * (n ^ 2 + 9 * n + 22) / (3 * n ^ 2 + 29 * n + 72)). - _ Ivan Neretin _ , May 21 2018 ●

▶ [A194238] 0,1,2,3,5,7,10,13,16,20,24,29,35,41,48,55,62,70,78,86,95,104,114,124,1 34 ⋆ Partial sums of A194237. ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 16) - 2 * a (n - 17) + a(n - 18) for n > 18. ●

▶ [A022335] 1,2,3,5,7,10,13,17,21,25,30,35,41,47,54,61,68,76,84,93,102,112,122,13 2,143 ⋆ Index of 2 ^ n within sequence of numbers of form 2 ^ i * 5 ^ j. ● a(n) = Sum _{ i=0..n } (1 + floor(log _ 5(2 ^ i))). - _ Michel Marcus _ , Oct 02 2 013 ●

▶ [A022780] 1,2,3,5,7,10,13,17,21,26,31,36,42,48,55,62,70,78,87,96,105,115,125,13 6,147 ⋆ Place where n - th 1 occurs in A023118. ● a(n) = n + 1 + Sum { floor[(n - k) / sqrt(5)], k = 0..n } . ●

▶ [A033638] 1,1,2,3,5,7,10,13,17,21,26,31,37,43,50,57,65,73,82,91,101,111,122,13 3,145 ⋆ Quarter - squares plus 1 (that is, a(n) = A002620(n) + 1). ● a(n) = ceil ing((n ^ 2 + 3) / 4) = ((7 + (- 1) ^ n) / 2 + n ^ 2) / 4. ● a(n) = a(n - 2) + n - 1. - _ Paul Barry _ , Jul 14 2004 ● a(0) = 1; a(1) = 1; for n > 1 a(n) = a(n - 1) + round(sqrt(a(n - 1))). - _ Jonathan Vos Post _ , Jan 19 2006 ● a(n) = flo or((n ^ 2) / 4) + 1. ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4) for n > 3. - _ Philippe Deléham _ , Nov 03 2008 ● a(0) = a(1) = 1, a(n) = a(n - 1) + ceiling(sqrt(a(n - 2))) for n > 1. - _ Jonathan Vos Post _ , Oct 08 2011 ●

▶ [A177337] 0,0,0,0,0,1,2,3,5,7,10,13,17,22,27,33,40,48,57,67,78,90,103,118,134 ⋆ Partial sums of round(n ^ 2 / 36). ● a(n) = round((2 * n + 1) * (2 * n ^ 2 + 2 * n - 19) / 432). ● a(n) = floor((n + 5) * (2 * n ^ 2 - 7 * n + 17) / 216). ● a(n) = ceiling((n - 4) * (2 * n ^ 2 + 11 * n + 26) / 216). ● a(n) = round((2 * n ^ 3 + 3 * n ^ 2 - 18 * n) / 216). ● a(n) = a(n - 36) + (n + 1) * (n - 36) + 447, n > 35 . ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 18) - 3 * a(n - 19) + 3 * a(n - 20) - a(n - 21) with g.f. x ^ 5 * (1 - x + x ^ 3 - x ^ 4 + x ^ 5 - x ^ 6 + x ^ 7 - x ^ 9 + x ^ 10) / ((1 + x) * (1 + x + x ^ 2) * (x ^ 2 - x + 1) * (x ^ 6 + x ^ 3 + 1) * (x ^ 6 - x ^ 3 + 1) * (x - 1) ^ 4). - _ R. J. Mathar _ , Dec 13 2010 ●

▶ [A117143] 1,2,3,5,7,10,13,17,22,27,33,41,48,57,68,78,90,105,118,134,153,170,19 0,214,235 ⋆ Number of partitions of n in which any two parts differ by at most 3. ● a(n)=(2 * floor((n + 2) / 3) * (14 * floor((n + 2) / 3) ^ 2 - (10 * n + 21) * floor((n + 2) / 3) + 2 * (n ^ 2 + 5 * n + 7)) - (1 - (- 1) ^ floor((n + 2) / 3)) * (- 1) ^ (n + 2 - floor((n + 2) / 3))) / 16. - _ Luce ETIENNE _ , May 12 2015 ●

▶ [A177332] 0,0,0,0,1,2,3,5,7,10,13,17,22,28,35,43,52,62,73,85,99,114,131,149,169 ⋆ Partial sums of round(n ^ 2 / 29). ● a(n) = round(n * (n + 1) * (2 * n + 1) / 174). ● a(n) = floor((n + 4) * (2 * n ^ 2 - 5 * n + 21) / 174). ● a(n) = ceiling((n - 3) * (2 * n ^ 2 + 9 * n + 28) / 174). ● a(n) = a(n - 29) + (n + 1) * (n - 29) + 266, n > 28. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 29) - 3 * a(n - 30) + 3 * a(n - 31) - a(n - 32). - _ R. J. Mathar _ , Dec 13 2010 ●

▶ [A309408] 0,1,1,2,3,5,7,10,13,18,23,29,36,44,53,63,74,85,98,111,125,140,157,17 4,192 ⋆ Start with X = F(n) = A000045(n). Repeatedly replace X with X - ceili ng(X / n); a(n) is the number of steps to reach 0. ● a(n) = n ^ 2 * log(phi) - n * log(n) + O(n), phi = (1 + sqrt(5)) / 2. ●

▶ [A008766] 1,1,2,3,5,7,10,13,18,23,29,36,45,54,65,77,91,106,123,141,162,184,20 8,234,263 ⋆ Expansion of (1 + x ^ 5) / ((1 - x) * (1 - x ^ 2) * (1 - x ^ 3) * (1 - x ^ 4)). ● a(n)=round((2 * N ^ 3 - 15 * N ^ 2 + 60 * N - 110 * [N mod 2=0] - 65 * [N mod 2]) / 144), where N=n + 5. _ Washington Bomfim _ , Jan 14 2021 ●

▶ [A103232] 1,2,3,5,7,10,13,18,23,29,37,46,55,66,80,95,111,128,147,170,196,223,2 52,282,314 ⋆ After the first two terms, each subsequent term is the smallest int eger that is an outlier of the set of the previous terms, based on the criterion of 1.5 interquartile ranges above the third quartile. ● a(n) = int(q3(n - 1) + 1.5 * iqr(n - 1) + 1), where q3(n - 1) is the third quartile of the first n - 1 terms and iqr(n - 1) is the interquartile range of the first n - 1 terms. ●

▶ [A026811] 0,0,0,0,0,1,1,2,3,5,7,10,13,18,23,30,37,47,57,70,84,101,119,141,164 ⋆ Number of partitions of n in which the greatest part is 5. ● a(n) = round(((n ^ 4 + 10 * (n ^ 3 + n ^ 2) - 75 * n - 45 * n * (- 1) ^ n)) / 2880). - _ Washingto n Bomfim _ , Jul 03 2012 ● a(2n) = a(2n - 1) + a(n + 1) + a(n) - a(n - 3) - a(n - 4); ● a(2n + 1) = a(2n) + a(n + 3) - a(n - 5). (End) ● a(n) = + a(n - 1) + a(n - 2) - a(n - 5) - a(n - 6) - a(n - 7) + a(n - 8) + a(n - 9) + a(n - 10) - a(n - 13) - a(n - 14) + a(n - 15). (End) ●

▶ [A001401] 1,1,2,3,5,7,10,13,18,23,30,37,47,57,70,84,101,119,141,164,192,221,25 5,291,333 ⋆ Number of partitions of n into at most 5 parts. ● a(n) = 1 + (a(n - 2) + a(n - 3) + a(n - 4)) - (a(n - 6) + (2 * a(n - 7)) + a(n - 8)) + (a(n - 10) + a (n - 11) + a(n - 12)) - a(n - 14). - Norman J. Meluch (norm(AT)iss.gm.com), M ar 09 2000 ● a(n) = round(((n + 5) ^ 4 + 10 * ((n + 5) ^ 3 + (n + 5) ^ 2) - 75 * (n + 5) - 45 * (n + 5) * (- 1) ^ (n + 5)) / 2880). - _ Washington Bomfim _ , Jul 03 2012 ● a(n) = a(n - 1) + a(n - 2) - a(n - 5) - a(n - 6) - a(n - 7) + a(n - 8) + a(n - 9) + a(n - 10) - a(n - 13) - a(n - 14) + a(n + 15). - _ David Neil McGr ath _ , Sep 13 2014 ● a(n) = Sum _{ k=0..floor(n / 5) } Sum _{ j=0..floor(n / 4) } Sum _{ i=0..floor(n / 3) } ceiling((max(0, n + 1 - 3 * i - 4 * j - 5 * k)) / 2). ● a(n) = Sum _{ j=0..floor(n / 5) } Sum _{ i=0..floor(n / 4) } floor(((max (0, n + 3 - 4 * i - 5 * j)) ^ 2 + 4) / 12). (End) ●

▶ [A173538] 1,1,2,3,5,7,10,14,18,23,28,34,40,47,53,61,68,77,85,94,103,113,123,13 4,146 ⋆ a(n) = a(n - 1) + a(n - 2) - [a(n - 2) / 4] - [a(n - 3) / 2] - [a(n - 4) / 4]. ● a(n)=a(n - 1) + a(n - 2) - Floor[a(n - 2) / 4] - Floor[a(n - 3) / 2] - Floor[a(n - 4) / 4] ●

▶ [A177277] 0,0,0,0,1,2,3,5,7,10,14,18,23,29,36,44,53,63,75,88,102,118,135,154,17 5 ⋆ Partial sums of round(n ^ 2 / 28). ● a(n) = round((2 * n + 1) * (2 * n ^ 2 + 2 * n - 3) / 336). ● a(n) = floor((n + 4) * (2 * n ^ 2 - 5 * n + 18) / 168). ● a (n) = ceiling((n - 3) * (2 * n ^ 2 + 9 * n + 25) / 168). ● a(n) = round(n * (n + 2) * (2 * n - 1) / 168). ● a(n) = a(n - 28) + (n + 1) * (n - 28) + 275, n > 27. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 14) - 3 * a(n - 15) + 3 * a(n - 16) - a(n - 17) with g.f. x ^ 4 * (1 - x + x ^ 3 - x ^ 4 + x ^ 5 - x ^ 7 + x ^ 8) / ((1 + x) * (x ^ 6 + x ^ 5 + x ^ 4 + x ^ 3 + x ^ 2 + x + 1) * (x ^ 6 - x ^ 5 + x ^ 4 - x ^ 3 + x ^ 2 - x + 1) * (x - 1) ^ 4). - _ R. J. Mathar _ , Dec 12 2010 ●

▶ [A306473] 1,2,3,5,7,10,14,18,25,32,43,54,72,90,119,148,195,242,318,394 ⋆ a(n) i s the maximum number of distinct palindromic not necessarily contiguous subw ords over all binary words of length n. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) + a(n - 4) - a(n - 5) for n>9. ●

▶ [A175846] 0,1,2,3,5,7,10,14,19,25,32,41,51,63,77,92,110,130,152,177,204,234,26 7,303,342 ⋆ Partial sums of ceiling(n ^ 2 / 15). ● a(n) = round((2 * n + 1) * (n ^ 2 + n + 28) / 90). ● a(n) = floor((n + 1) * (2 * n ^ 2 + n + 56) / 90). ● a(n) = ceiling((2 * n ^ 3 + 3 * n ^ 2 + 57 * n) / 90). ● a(n) = a(n - 15) + (n + 1) * (n - 15) + 92. ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) - 2 * a(n - 4) + 2 * a(n - 5) - 2 * a(n - 6) + a(n - 7) - a(n - 8) + 2 * a(n - 9) - a(n - 10). - _ R. J. Matha r _ , Mar 11 2012 ●

▶ [A175842] 0,1,2,3,5,7,10,14,19,25,33,42,53,66,80,97,116,137,161,187,216,248,28 3,321,363 ⋆ Partial sums of ceiling(n ^ 2 / 14). ● a(n) = round((2 * n + 1) * (2 * n ^ 2 + 2 * n + 45) / 168). ● a(n) = floor((2 * n ^ 3 + 3 * n ^ 2 + 46 * n + 6 0) / 84). ● a(n) = ceiling((2 * n ^ 3 + 3 * n ^ 2 + 46 * n - 15) / 84). ● a(n) = a(n - 14) + (n + 1) * (n - 14) + 80, n > 13. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 14) - 3 * a(n - 15) + 3 * a(n - 16) - a(n - 17). - _ R. J. Math ar _ , Mar 11 2012 ●

▶ [A065094] 1,2,3,5,7,10,14,20,27,36,48,63,82,106,136,173,218,273,341,423,522,64 1,784,955,1158 ⋆ a(1) = 1, a(n + 1) is the sum of a(n) and floor(arithmetic mea n of a(1) ... a(n)). ● a(1) = 1, a(n + 1) = a(n) + floor((a(1) + a(2) + ... + a(n)) / n). ●

▶ [A123975] 0,0,1,1,2,3,5,7,10,14,20,27,37,49,66,86,113,147,190,243,311,394,499,6 27,786 ⋆ Number of Garden of Eden partitions of n in Bulgarian Solitaire. ● a(n) = Sum _{ j>=1 } (- 1) ^ (j + 1) * p(n - b(j)) where b(j) = 3 * j * (j + 1) / 2 (A045943) and p(n) is the number of partitions of n (see A000041). See Hopki ns & Sellers. - _ Michel Marcus _ , Sep 26 2018 ●

▶ [A321728] 0,0,1,1,2,3,5,7,10,14,20,28,37,50 ⋆ Number of integer partitions of n whose Young diagram cannot be partitioned into vertical sections of the same si zes as the parts of the original partition. ● a(n) is the number of integer partiti ons y of n such that the coefficient of m(y) in e(y) is zero, where m is monomial and e is elementary symmetric functions. ●

▶ [A002062] 0,2,3,5,7,10,14,20,29,43,65,100,156,246,391,625,1003,1614,2602,420 0,6785,10967,17733,28680,46392 ⋆ a(n) = Fibonacci(n) + n. ● a(n) = 2 * a(n - 1) - a(n - 3) - 1. - _ Kieren MacMillan _ , Nov 08 2008 ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - a(n - 3) + a(n - 4). - _ Emmanuel Vantieghem _ , May 19 2016 ●

▶ [A120446] 1,1,1,1,2,3,5,7,10,14,21,31,46,67,98,143,210,308,452,662,970,1421,20 83,3053,4475 ⋆ Expansion of 1 / (1 - x - x ^ 4 - x ^ 6). ● a(n) = a(n - 1) + a(n - 4) + a(n - 6). ●

▶ [A082531] 1,1,1,2,3,5,7,10,14,21,32,48,70,101,148,219,325,479,704,1033,1519,22 38,3300,4860,7149 ⋆ (- 1) ^ n * coefficient of x ^ n in 1 / x - 1 / (1 - eta(x)) po wer series. ● a(n) appears to be asymptotic to A * B ^ n where A=0.666953457 161016631166386... B=1.47202915703312788636092648... ●

▶ [A003410] 1,2,3,5,7,10,15,22,32,47,69,101,148,217,318,466,683,1001,1467,2150,3 151,4618,6768,9919,14537 ⋆ Expansion of (1 + x)(1 + x ^ 2) / (1 - x - x ^ 3). ● a(n) = a(n - 1) + a(n - 3) for n>3, see also A000930. - _ Reinhard Zumkeller _ , Oct 26 2005 ●

▶ [A278706] 1,1,1,2,3,5,7,10,16,24,36,54,81,123,185,278,419,631,951,1432,2156,32 48,4892,7368,11097 ⋆ a(n) = a(n - 1) + a(n - 3) + a(n - 5) - a(n - 6), a(0) = a(1) = a(2) = 1, a(3) = 2, a(4) = 3, a(5) = 5. ● a(n) = - a(- 6 - n) for all n in Z. ●

▶ [A360464] 1,1,1,2,3,5,7,10,17,21,29,34,43,49,59,66,77,85,97,106,119,129,143,15 4,169 ⋆ a(n) = a(n - 1) + a(n - 2) - a(n - 3) + gcd(a(n - 1), a(n - 3)), with a(1) = a(2) = a(3) = 1. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) + gcd(a(n - 1), a(n - 3)). ●

▶ [A001742] 1,2,3,5,7,11,12,13,15,17,21,22,23,25,27,31,32,33,35,37,51,52,53,55,57 ⋆ Numbers whose digits contain no loops (version 2). ● a(n) = Sum _{ j=0..m - 1 } ((2 * b _ j(n) + 1) mod 10 + 2 * floor(b _ j(n) / 5) - floor((b _ j(n) + 3) / 5) - floor((b _ j(n) + 4) / 5)) * 10 ^ j, where b _ j(n)) = floor((4 * n + 1 - 5 ^ m) / (4 * 5 ^ j)), m = floor(log _ 5(4 * n + 1)). ● a(1 * (5 ^ n - 1) / 4) = 1 * (10 ^ n - 1) / 9. ● a(2 * (5 ^ n - 1) / 4) = 2 * (10 ^ n - 1) / 9. ● a(3 * (5 ^ n - 1) / 4) = 1 * (10 ^ n - 1) / 3. ● a(4 * (5 ^ n - 1) / 4) = 5 * (10 ^ n - 1) / 9. ● a(5 * (5 ^ n - 1) / 4) = 7 * (10 ^ n - 1) / 9. ●

▶ [A038179] 2,3,5,7,11,13,17,19,23,25,29,31,35,37,41,43,47,49,53,55,59,61,65,67,7 1 ⋆ Result of second stage of sieve of Eratosthenes (after eliminating multiples of 2 and 3). ● a(n) = (1 / 9) * (4 * n ^ 3 + 3 * n ^ 2 + 1 - Kronecker(- 3,n + 1)). - _ Ralf Stephan _ , Jun 01 2014 ● a(n) = floor((41 / 21 - (3 mod n)) ^ (- 3 * n + 5)) + 3 * n - 4 (n > 0). ● a(n + 1) = 3 * n - ((n mod 2) + 1) mod n (n > 0). (End) ● a(n + 2) = 2 * floor((3 * n + 1) / 2) + 1 for n>=1; see (17) in Diab link. - _ Michel Marcus _ , Dec 14 2020 ●

▶ [A030059] 2,3,5,7,11,13,17,19,23,29,30,31,37,41,42,43,47,53,59,61,66,67,70,71,7 3 ⋆ Numbers that are the product of an odd number of distinct primes. ● a(n) < n * Pi ^ 2 / 3 infinitely often; a(n) > n * Pi ^ 2 / 3 infinitely often. - _ Char les R Greathouse IV _ , Sep 07 2017 ●

► [A054403] 2,3,5,7,11,13,17,19,23,29,31,37,41,43,47,49,53,59,61,67,71,73,77,79,83 ⋆ Result of third stage of sieve of Eratosthenes (after eliminating multiples of 2, 3 and 5). • a(n + 3) = 2 * floor((3 * floor((10 * floor((9 * n + 1) / 8) + 8) / 9) + 1) / 2) + 1 for n>=1; see (19) in Diab link. - _ Michel Marcus _ , Dec 14 2020 •

► [A000040] 2,3,5,7,11,13,17,19,23,29,31,37,41,43,47,53,59,61,67,71,73,79,83,89,97 ⋆ The prime numbers. • a(n) = n log n + n log log n + (n / log n) * (log log n - log n - 2) + O(n (log log n) ^ 2 / (log n) ^ 2). [Cipolla, see also Cesàro or the "Prime number theorem" Wikipedia article for more terms in the expansion] • a(n) = 2 + Sum _{ k = 2..floor(2n * log(n) + 2) } (1 - floor(pi(k) / n)), for n > 1, where the formula for pi(k) is given in A000720 (Ruiz and Sondow 2002) . - _ Jonathan Sondow _ , Mar 06 2004 • a(n) = { n| n! mod n ^ 2 = n(n - 1) } , n <> 4. • a(n) = { n| n! * h(n) mod n = n - 1 } , n <> 4, where h(n) = Sum _{ k=1..n } 1 / k. (End) •

► [A124590] 2,3,5,7,11,13,17,19,23,29,31,37,41,43,47,53,59,61,67,71,73,79,83,97,101 ⋆ Primes p such that q - p <= 6, where q is the next prime after p. • a(n) >> n log ^ 2 n. - _ Charles R Greathouse IV _ , Jan 31 2017 •

► [A033875] 2,3,5,7,11,13,17,19,23,31,47,79,83,211,227,229,233,241,257,769,773 ⋆ Skipping from prime to prime by least powers of 2. • a(1) = 2, a(n + 1) = a(n) + 2 ^ k; a(n + 1) prime, k minimal. •

► [A124589] 2,3,5,7,11,13,17,19,29,37,41,43,59,67,71,79,97,101,103,107,109,127,137,149,163 ⋆ Primes p such that q - p <= 4, where q is the next prime after p. • a(n) >> n log ^ 2 n. Infinite under standard conjectures. - _ Charles R Greathouse IV _ , Jun 01 2016 •

► [A190222] 1,2,3,5,7,11,13,17,23,31,37,53,71,73,113,127,131,137,151,157,173,211,223,227,233 ⋆ Noncomposite numbers all of whose decimal digits are noncomposite numbers (1,2,3,5,7). • a(n) >> n ^ k where k = log(10) / log(5) = 1.43067.... - _ Charles R Greathouse IV _ , Dec 28 2017 •

► [A061166] 2,3,5,7,11,13,17,72,332,1139,3129,7361,15469,29837,53797,91850,149910,235571,358397,530235,765551,1081789,1499753,2044012,2743328 ⋆ Polynomial extrapolation of 2, 3, 5, 7, 11, 13, 17. • a(n) = (23n ^ 6 - 537n ^ 5 + 4925n ^ 4 - 22515n ^ 3 + 53732n ^ 2 - 61548n + 27360) / 720. •

► [A005728] 1,2,3,5,7,11,13,19,23,29,33,43,47,59,65,73,81,97,103,121,129,141,151,173,181 ⋆ Number of fractions in Farey series of order n. • a(n) = 1 + Sum _{ i=1..n } phi(i). • a(n) = n * (n + 3) / 2 - Sum _{ k=2..n } a(floor(n / k)). - _ David W. Wilson _ , May 25 2002 • a(n) = a(n - 1) + phi(n) with a(0) = 1 . - _ Arkadiusz Wesolowski _ , Oct 13 2012 •

► [A049643] 0,2,3,5,7,11,13,19,23,29,33,43,47,59,65,73,81,97,103,121,129,141,151,173,181 ⋆ Number of fractions in Farey series of order n. • a(n) = 1 + Sum _{ k=1..n } phi(k), with a(0)=0. • a(n) = a(n - 1) + phi(n) for n > 1. - _ Robert G. Wilson v _ , Dec 13 2017 •

► [A114111] 1,2,3,5,7,11,13,19,29,31,33,35,37,39,41,67,69,71,73,75,77,9687,9689,9691,9693 ⋆ Where records occur in A111390. • a(n) = 2 * a(n - 1) - a(n - 2) for n > 23. •

► [A136185] 1,2,3,5,7,11,14,20,25,33,40,51,60,74,86,103,118,139,157,182,204,233,259,293,323 ⋆ Number of metacyclic groups of order p ^ n, prime p >= 3. • a(n) = (n ^ 3 + 12 * n ^ 2 + c * n + d) / 72, where c = 12 or 3 for n even / odd, and d = 72, 56 or 64 for n = 0, 1 or 2 (mod 3), according to the Liedahl paper. - _ M. F. Hasler _ , Jan 13 2015 •

► [A026812] 0,0,0,0,0,0,1,1,2,3,5,7,11,14,20,26,35,44,58,71,90,110,136,163,199 ⋆ Number of partitions of n in which the greatest part is 6. • a(n) = Sum _{ m=1..floor(n / 6) } Sum _{ l=m..floor((n - m) / 5) } Sum _{ k=l..floor((n - l - m) / 4) } Sum _{ j=k..floor((n - k - l - m) / 3) } Sum _{ i=j..floor((n - j - k - l - m) / 2) } 1. - _ Wesley Ivan Hurt _ , Jun 29 2019 • a(n) = round((1 / 86400) * n ^ 5 + (1 / 3840) * n ^ 4 + (19 / 12960) * n ^ 3 - (n mod 2) * (1 / 384) * n ^ 2 + (1 / 17280) * b(n mod 6) * n), where b(0)=96, b(1)=b(5)= - 629, b(2)=b(4) = - 224, and b(3)= - 309. - _ Washington Bomfim _ and _ Jon E. Schoenfield _ , Jan 16 2021 •

► [A001402] 1,1,2,3,5,7,11,14,20,26,35,44,58,71,90,110,136,163,199,235,282,331,391,454,532 ⋆ Number of partitions of n into at most 6 parts. • a(n) = 1 + (a(n - 2) + a(n - 3) + a(n - 4)) - (2 * a(n - 7) + 2 * a(n - 8) + a(n - 9)) + (a(n - 11) + 2 * a(n - 12) + 2 * a(n - 13)) - (a(n - 16) + a(n - 17) + a(n - 18)) + (a(n - 20)). - Norman J. Meluch (norm(AT)iss.gm.com), Mar 09 2000 • a(n) = (167 + (2 325 + (15400 + (47250 + 54000 * m + 4500 * r) * m + 3150 * r + 150 * r ^ 2) * m + X(r)) * m + Y(r)) * m / 6 + Z(r) where m = floor(n / 60), r = n mod 60 and X, Y, Z are functions of r (see Maple program below). - _ Alois P. Heinz _ , Aug 23 2011 • a(n) = floor((2 + 3 * (floor(n / 3) + floor(- n / 3))) * (floor(n / 3) + 1) / 54 + (6 * n ^ 5 + 315 * n ^ 4 + 6160 * n ^ 3 + 55125 * n ^ 2 + 219905 * n + 485700) / 518400 + (n + 1) * (n + 20) * (- 1) ^ n / 768). - _ Tani Akinari _ , Aug 05 2013 • a(n) = a(n - 1) + a(n - 2) - a(n - 5) - 2 * a(n - 7) + a(n - 9) + a(n - 10) + a(n - 11) + a(n - 12) - 2 * a(n - 14) - a(n - 16) + a(n - 19) + a(n - 20) - a(n - 21). - _ David Neil McGrath _ , Apr 11 2015 • a(n) = round((n + 11) * ((6 * n ^ 4 + 249 * n ^ 3 + 2071 * n ^ 2 - 4931 * n + 40621) / 518400 + floor(n / 2) * (n + 10) / 192 + (floor((n + 1) / 3) + 2 * floor(n / 3)) / 54)). - _ Washington Bomfim _ , Jan 15 2021 •

► [A055803] 1,1,1,2,3,5,7,11,14,21,25,36,41,57,63,85,92,121,129,166,175,221,231,287,298 ⋆ a(n) = T(n,n - 3), array T as in A055801. • a(n) = (- 39 + 55 * n - 15 * n ^ 2 + 2 * n ^ 3 + (- 1) ^ n * (135 - 39 * n + 3 * n ^ 2)) / 96 for n>3. •

► [A026813] 0,0,0,0,0,0,0,1,1,2,3,5,7,11,15,21,28,38,49,65,82,105,131,164,201 ⋆ Number of partitions of n in which the greatest part is 7. • a(n) = Sum _{ o=1..floor(n / 7) } Sum _{ m=o..floor((n - o) / 6) } Sum _{ l=m..floor((n - m - o) / 5) } Sum _{ k=l..floor((n - l - m - o) / 4) } Sum _{ j=k..floor((n - k - l - m - o) / 3 } Sum _{ i=j..floor((n - j - k - l - m - o) / 2) } 1. - _ Wesley Ivan Hurt _ , Jun 30 2019 •

► [A008636] 1,1,2,3,5,7,11,15,21,28,38,49,65,82,105,131,164,201,248,300,364,436,522,618,733 ⋆ Number of partitions of n into at most 7 parts. • a(n) = a(n - 1) + a(n - 2) - a(n - 5) - a(n - 7) - a(n - 8) + a(n - 10) + a(n - 11) + 2 * a(n - 12) - 2 * a(n - 16) - a(n - 17) - a(n - 18) + a(n - 20) + a(n - 21) + a(n - 23) - a(n - 26) - a(n - 27) + a(n - 28). - _ David Neil McGrath _ , Apr 11 2015 • a(n) = Sum _{ p=0..floor(n / 7) } Sum _{ m=0..floor(n / 6) } Sum _{ k=0..floor(n / 5) } Sum _{ j=0..floor(n / 4) } Sum _{ i=0..floor(n / 3) } ceiling((max(0, n + 1 - 3 * i - 4 * j - 5 * k - 6 * m - 7 * p)) / 2). • a(n) = Sum _{ m=0..floor(n / 7) } Sum _{ k=0..floor(n / 6) } Sum _{ j=0..floor(n / 5) } Sum _{ i=0..floor(n / 4) } floor(((max(0, n + 3 - 4 * i - 5 * j - 6 * k - 7 * m)) ^ 2 + 4) / 12). (End) •

► [A330640] 1,1,2,3,5,7,11,15,22,29,40,51,67,83,105,127,156,185,222,259,305,351,407,463,530 ⋆ a(n) is the number of partitions of n with Durfee square of size <= 2. • a(0) = 1, a(1) = 1, a(2) = 2. • a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + a(n - 4) + 2 * a(n - 5) - a(n - 6) for n>6. • a(n) = (3 - 3 * (- 1) ^ n + (49 + 3 * (- 1) ^ n) * n - 6 * n ^ 2 + 2 * n ^ 3) / 48. •

► [A026814] 0,0,0,0,0,0,0,0,1,1,2,3,5,7,11,15,22,29,40,52,70,89,116,146,186 ⋆ Number of partitions of n in which the greatest part is 8. • a(n) = Sum _{ p=1..floor(n / 8) } Sum _{ o=p..floor((n - p) / 7) } Sum _{ m=o..floor((n - o - p) / 6) } Sum _{ l=m..floor((n - m - o - p) / 5) } Sum _{ k=l..floor((n - l - m - o - p) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p) / 2) } 1. - _ Wesley Ivan Hurt _ , Jul 04 2019 •

► [A008637] 1,1,2,3,5,7,11,15,22,29,40,52,70,89,116,146,186,230,288,352,434,525,638,764,919 ⋆ Number of partitions of n into at most 8 parts. • a(n) = floor((- 1) ^ n * ((n + 1) * (- 1) ^ (floor((n + 2) / 3)) + (2 * n + 3) * (- 1) ^ (floor((n + 1) / 3)) + (n + 2) * (- 1) ^ (floor(n / 3))) / 972 + (n + 2) * ((- 1) ^ n + 1) * (- 1) ^ (n / 2) / 512 + (n + 18) * (6 * n ^ 6 + 648 * n ^ 5 + 27018 * n ^ 4 + 545616 * n ^ 3 + 5481213 * n ^ 2 + 25163028 * n + 39226571) / 1219276800 + (n + 1) * (n ^ 2 + 53 * n + 826) * (- 1) ^ n / 36864 + 1 / 2). (See link.) - _ Tani Akinari _ , Oct 26 2012 • a(n) = a(n - 1) + a(n - 2) - a(n - 5) - a(n - 7) - a(n - 9) + a(n - 11) + 2 * a(n - 12) + a(n - 13) + a(n - 15) - a(n - 16) - a(n - 17) - 2 * a(n - 18) - a(n - 19) - a(n - 20) + a(n - 21) + a(n - 23) + 2 * a(n - 24) + a(n - 25) - a(n - 27) - a(n - 29) - a(n - 31) + a(n - 34) + a(n - 35) - a(n - 36). - _ David Neil McGrath _ , Apr 14 2015 • a(n) = Sum _{ i _ 1=0..floor(n / 3) } Sum _{ i _ 2=0..floor(n / 4) } Sum _{ i _ 3=0..floor(n / 5) } Sum _{ i _ 4=0..floor(n / 6) } Sum _{ i _ 5=0..floor(n / 7) } Sum _{ i _ 6=0..floor(n / 8) } ceiling((max(0, n + 1 - 3 * i _ 1 - 4 * i _ 2 - 5 * i _ 3 - 6 * i _ 4 - 7 * i _ 5 - 8 * i _ 6)) / 2). • a(n) = Sum _{ i _ 1=0..floor(n / 4) } Sum _{ i _ 2=0..floor(n / 5) } Sum _{ i _ 3=0..floor(n / 6) } Sum _{ i _ 4=0..floor(n / 7) } Sum _{ i _ 5=0..floor(n / 8) } floor(((max(0, n + 3 - 4 * i _ 1 - 5 * i _ 2 - 6 * i _ 3 - 7 * i _ 4 - 8 * i _ 5)) ^ 2 + 4) / 12). (End) •

► [A008638] 1,1,2,3,5,7,11,15,22,30,41,54,73,94,123,157,201,252,318,393,488,598,732,887,1076 ⋆ Number of partitions of n into at most 9 parts. • a(n) = floor((30 * n ^ 8 + 5400 * n ^ 7 + 405300 * n ^ 6 + 16443000 * n ^ 5 + 390533640 * n ^ 4 + 5486840100 * n ^ 3 + 43691213950 * n ^ 2 + 175052776500 * n + 256697834389) / 438939648000 + (n + 1) * (2 * n ^ 2 + 133 * n + 2597) * (- 1) ^ n / 147456 + (- 1) ^ n * ((n + 1) * (n + 47) * (- 1) ^ floor(n / 3 + 2 / 3) + (2 * n ^ 2 + 90 * n + 127) * (- 1) ^ floor(n / 3 + 1 / 3) + (n + 2) * (n + 40) * (- 1) ^ floor(n / 3)) / 17496 + 1 / 256 * ((- 1) ^ ((2 * n + (- 1) ^ n - 1) / 4) * floor((n + 2) / 2)) + 1 / 2). - _ Tani Akinari _ , Oct 20 2012 • a(n) = Sum _{ i _ 1=0..floor(n / 3) } Sum _{ i _ 2=0..floor(n / 4) } Sum _{ i _ 3=0..floor(n / 5) } Sum _{ i _ 4=0..floor(n / 6) } Sum _{ i _ 5=0..floor(n / 7) } Sum _{ i _ 6=0..floor(n / 8) } Sum _{ i _ 7=0..floor(n / 9) } ceiling((max(0, n + 1 - 3 * i _ 1 - 4 * i _ 2 - 5 * i _ 3 - 6 * i _ 4 - 7 * i _ 5 - 8 * i _ 6 - 9 * i _ 7)) / 2). • a(n) = Sum _{ i _ 1=0..floor(n / 4) } Sum _{ i _ 2=0..floor(n / 5) } Sum _{ i _ 3=0..floor(n / 6) } Sum _{ i _ 4=0..floor(n / 7) } Sum _{ i _ 5=0..floor(n / 8) } Sum _{ i _ 6=0..floor(n / 9) } floor(((max(0, n + 3 - 4 * i _ 1 - 5 * i _ 2 - 6 * i _ 3 - 7 * i _ 4 - 8 * i _ 5 - 9 * i _ 6)) ^ 2 + 4) / 12). (End) •

► [A026816] 0,0,0,0,0,0,0,0,0,0,1,1,2,3,5,7,11,15,22,30,42,55,75,97,128 ⋆ Number of partitions of n in which the greatest part is 10. • a(n) = Sum _{ r=1..floor(n / 10) } Sum _{ q=r..floor((n - r) / 9) } Sum _{ p=q..floor((n - q - r) / 8) } Sum _{ o=p..floor((n - p - q - r) / 7) } Sum _{ m=o..floor((n - o - p - q - r) / 6) } Sum _{ l=m..floor((n - m - o - p - q - r) / 5) } Sum _{ k=l..floor((n - l - m - o - p - q - r) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p - q - r) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p - q - r) / 2) } 1. - _ Wesley Ivan Hurt _ , Jul 13 2019 •

► [A008640] 1,1,2,3,5,7,11,15,22,30,42,56,76,99,131,169,219,278,355,445,560,695,863,1060,1303 ⋆ Number of partitions of n into at most 11 parts. • a(n) = a(n - 1) + a(n - 2) - a(n - 5) - a(n - 7) + a(n - 14) + 2 * a(n - 15) + a(n - 16) - a(n - 19) - a(n - 20) - a(n - 21) - 2 * a(n - 22) - a(n - 23) - a(n - 24) - a(n - 26) + 2 * a(n - 27) + 2 * a(n - 28) + 2 * a(n - 29) + 2 * a(n - 30) + a(n - 31) + a(n - 32) - a(n - 34) - a(n - 35) - 2 * a(n - 36) - 2 * a(n - 37) - 2 * a(n - 38) - 2 * a(n - 39) + a(n - 40) + a(n - 42) + a(n - 43) + 2 * a(n - 44) + a(n - 45) + a(n - 46) + a(n - 47) - a(n - 50) - 2 * a(n - 51) - a(n - 52) + a(n - 59) + a(n - 61) - a(n - 64) - a(n - 65) + a(n - 66). - _ David Neil McGrath _ , Jul 27 2015 •

► [A008641] 1,1,2,3,5,7,11,15,22,30,42,56,77,100,133,172,224,285,366,460,582,725,905,1116,1380 ⋆ Number of partitions of n into at most 12 parts. • a(n) = a(n - 1) + a(n - 2) - a(n - 5) - a(n - 7) + a(n - 12) - a(n - 13) + 2 * a(n - 15) + a(n - 16) + a(n - 17) - a(n - 20) - a(n - 21) - 2 * a(n - 22) - a(n - 23) - a(n - 24) - 2 * a(n - 26) + a(n - 28) + 2 * a(n - 29) + 2 * a(n - 30) + 2 * a(n - 31) + 2 * a(n - 32) + a(n - 33) + a(n - 34) - a(n - 36) - 2 * a(n - 37) - a(n - 38) - 4 * a(n - 39) - a(n - 40) - 2 * a(n - 41) - a(n - 42) + a(n - 44) + a(n - 45) + 2 * a(n - 46) + 2a(n - 47) + 2 * a(n - 48) + 2 * a(n - 49) + a(n - 50) - 2 * a(n - 52) - a(n - 54) - a(n - 55) - 2 * a(n - 56) - a(n - 57) - a(n - 58) + a(n - 61) + a(n - 62) + 2 * a(n - 63) - a(n - 65) + a(n - 66) - a(n - 71) - a(n - 73) + a(n - 76) + a(n - 77) - a(n - 78). - _ David Neil McGrath _ , Jul 28 2015 •

► [A330641] 1,1,2,3,5,7,11,15,22,30,42,56,77,101,135,176,230,295,380,480,607,758,943,1161,1426 ⋆ a(n) is the number of partitions of n with Durfee square of size <= 3. • a(n) = 2 * a(n - 1) + a(n - 2) - 2 * a(n - 3) - 3 * a(n - 4) + 6 * a(n - 6) - 3 * a(n - 8) - 2 * a(n - 9) + a(n - 10) + 2 * a(n - 11) - a(n - 12) for n>12. •

► [A000041] 1,1,2,3,5,7,11,15,22,30,42,56,77,101,135,176,231,297,385,490,627,792,1002,1255,1575 ⋆ a(n) is the number of partitions of n (the partition numbers). • a(n) - a(n - 1) - a(n - 2) + a(n - 5) + a(n - 7) - a(n - 12) - a(n - 15) + ... = 0, where the sum is over n - k and k is a generalized pentagonal number (A001318) <= n and the sign of the k - th term is (- 1) ^ ([(k + 1) / 2]). See A001318 for a good way to remember this! • a(n) = (1 / n) * Sum _{ k=0..n - 1 } sigma(n - k) * a(k), where sigma(k) is the sum of divisors of k (A000203). • a(n) =

a(0) * b(n) + a(1) * b(n - 2) + a(2) * b(n - 4) + ... where b = A000009. ● a(n) < exp((2 / 3) ^ (1 / 2) Pi sqrt(n)) (Ayoub, p. 197). ● a(n) = Sum _{ i=0..n - 1 } P(i, n - i), where P(x, y) is the number of partitions of x into at most y par ts and P(0, y)=1. - _ Jon Perry _ , Jun 16 2003 ● a(n) = determinant of the n X n Toeplitz matrix: ●

► [A326589] 0,0,0,0,0,0,0,0,0,0,1,1,2,3,5,7,11,15,22,30,43,56,77,100,133 ⋆ Sum of the smallest parts of the partitions of n into 10 parts. ● a(n) = Sum _{ r=1..flo or(n / 10) } Sum _{ q=r..floor((n - r) / 9) } Sum _{ p=q..floor((n - q - r) / 8) } Sum _{ o=p..floor((n - p - q - r) / 7) } Sum _{ m=o..floor((n - o - p - q - r) / 6) } Sum _{ l=m..floor((n - m - o - p - q - r) / 5) } Sum _{ k=l..floor((n - l - m - o - p - q - r) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p - q - r) / 3) } Su m _{ i=j..floor((n - j - k - l - m - o - p - q - r) / 2) } r. ●

► [A326465] 0,0,0,0,0,0,0,0,0,1,1,2,3,5,7,11,15,22,31,42,56,76,99,130,168 ⋆ Sum o f the smallest parts of the partitions of n into 9 parts. ● a(n) = Sum _{ q=1..fl oor(n / 9) } Sum _{ p=q..floor((n - q) / 8) } Sum _{ o=p..floor((n - p - q) / 7) } Sum _{ m=o..floor((n - o - p - q) / 6) } Sum _{ l=m..floor((n - m - o - p - q) / 5) } Sum _{ k=l..floor((n - l - m - o - p - q) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p - q) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p - q) / 2) } q. ●

► [A326590] 0,0,0,0,0,0,0,0,0,0,1,1,2,3,5,7,11,15,22,31,44,58,80,105,140 ⋆ Sum of the ninth largest parts of the partitions of n into 10 parts. ● a(n) = Sum _{ r= 1..floor(n / 10) } Sum _{ q=r..floor((n - r) / 9) } Sum _{ p=q..floor((n - q - r) / 8) } Sum _{ o=p..floor((n - p - q - r) / 7) } Sum _{ m=o..floor((n - o - p - q - r) / 6) } Sum _{ l=m..floor((n - m - o - p - q - r) / 5) } Sum _{ k=l..floor((n - l - m - o - p - q - r) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p - q - r) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p - q - r) / 2) } q. ●

► [A308990] 0,0,0,0,0,0,0,0,1,1,2,3,5,7,11,15,23,30,42,55,75,96,127,161,209 ⋆ Sum of the smallest parts in the partitions of n into 8 parts. ● a(n) = Sum _{ p=1..f loor(n / 8) } Sum _{ o=p..floor((n - p) / 7) } Sum _{ m=o..floor((n - o - p) / 6) } Sum _{ l=m..floor((n - m - o - p) / 5) } Sum _{ k=l..floor((n - l - m - o - p) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p) / 2) } p. ●

► [A052955] 1,2,3,5,7,11,15,23,31,47,63,95,127,191,255,383,511,767,1023,1535,20 47,3071,4095,6143,8191 ⋆ a(2n) = 2 * 2 ^ n - 1, a(2n + 1) = 3 * 2 ^ n - 1. ● a(0)=1, a(1)=2; thereafter a(n) = 2 * a(n - 2) + 1, n >= 2. ● a(n) = - 1 + Sum _{ alpha = RootOf(- 1 + 2 * Z ^ 2) } (1 / 4) * (3 + 4 * alpha) * alpha ^ (- 1 - n). (That is, the sum is indexed by the roots of the polynomial - 1 + 2 * Z ^ 2 .) ● a(n) = 2 ^ (n / 2) * (3 * sqrt(2) / 4 + 1 - (3 * sqrt(2) / 4 - 1) * (- 1) ^ n) - 1. - _ Paul Barry _ , May 23 2004 ● a(n) = (5 - (- 1) ^ n) / 2 * 2 ^ floor(n / 2) - 1. - _ Hieronymus Fischer _ , Feb 03 2012 ● a(2n + 1) = (a(2 * n) + a(2 * n + 2)) / 2. Combined with a(n) = 2 * a(n - 2) + 1, n >= 2 and a(0) = 1, this specifies the sequence. - _ Richard R. Forberg _ , Nov 30 2013 ● a(n) = ((5 - (- 1) ^ n) / 2) * 2 ^ ((2 * n - 1 + (- 1) ^ n) / 4) - 1. - _ Luce ETIENNE _ , Sep 20 2014 ●

► [A326466] 0,0,0,0,0,0,0,0,0,1,1,2,3,5,7,11,15,23,32,44,59,81,106,141,183 ⋆ Sum of the eighth largest parts in the partitions of n into 9 parts. ● a(n) = Sum _{ q=1..floor(n / 9) } Sum _{ p=q..floor((n - q) / 8) } Sum _{ o=p..floor((n - p - q) / 7) } Sum _{ m=o..floor((n - o - p - q) / 6) } Sum _{ l=m..floor((n - m - o - p - q) / 5) } Sum _{ k=l..floor((n - l - m - o - p - q) / 4) } Sum _{ j=k..floor ((n - k - l - m - o - p - q) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p - q) / 2) } p. ●

► [A326591] 0,0,0,0,0,0,0,0,0,0,1,1,2,3,5,7,11,15,23,32,46,61,85,112,151 ⋆ Sum of the eighth largest parts of the partitions of n into 10 parts. ● a(n) = Sum _{ r =1..floor(n / 10) } Sum _{ q=r..floor((n - r) / 9) } Sum _{ p=q..floor((n - q - r) / 8) } Sum _{ o=p..floor((n - p - q - r) / 7) } Sum _{ m=o..floor((n - o - p - q - r) / 6) } Sum _{ l=m..floor((n - m - o - p - q - r) / 5) } Sum _{ k=l..floor((n - l - m - o - p - q - r) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p - q - r) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p - q - r) / 2) } p. ●

► [A239054] 1,2,3,5,7,11,15,25,35,55,77,125,175,275,385,625,875,1375,1925,3125,4 375,6875,9625,15625,21875 ⋆ Maximum of the partition function on the set of al l partitions of n. ● a(n) = 5 ^ (n / 4), if n is congruent to 0 { mod 4 } and n > = 8. ● a(n) = 7 * 5 ^ ((n - 5) / 4), if n is congruent to 1 { mod 4 } and n >= 8. ● a(n) = 11 * 5 ^ ((n - 6) / 4), if n is congruent to 2 { mod 4 } and n >= 8. ● a (n) = 11 * 7 * 5 ^ ((n - 11) / 4), if n is congruent to 3 { mod 4 } and n >= 8. ●

► [A308927] 0,0,0,0,0,0,0,1,1,2,3,5,7,11,16,22,30,41,54,72,93,121,153,194,242 ⋆ Su m of the smallest parts in the partitions of n into 7 parts. ● a(n) = Sum _{ o= 1..floor(n / 7) } Sum _{ m=o..floor((n - o) / 6) } Sum _{ l=m..floor((n - m - o) / 5) } Sum _{ k=l..floor((n - l - m - o) / 4) } Sum _{ j=k..floor((n - k - l - m - o) / 3 } Sum _{ i=j..floor((n - j - k - l - m - o) / 2) } o. ●

► [A178240] 1,2,3,5,7,11,16,23,32,46,64,88,119,156,203 ⋆ Row sums of triangle A 178239 ● a(n) = sum of r - th row terms of triangle A178239 ●

► [A253062] 0,1,2,3,5,7,11,16,23,34,49,70,103,148,211,310,445,634,931,1336,190 3,2794,4009,5710,8383 ⋆ Largest order of a rooted tree that does not contain a r ooted caterpillar subtree of order n. ● a(n) = a(n - 1) + 3 * a(n - 3) - 3 * a(n - 4) for n>10. ●

► [A308991] 0,0,0,0,0,0,0,0,1,1,2,3,5,7,11,16,24,32,45,60,82,107,143,184,240 ⋆ Su m of the seventh largest parts in the partitions of n into 8 parts. ● a(n) = Sum _{ p=1..floor(n / 8) } Sum _{ o=p..floor((n - p) / 7) } Sum _{ m=o..floor((n - o - p) / 6) } Sum _{ l=m..floor((n - m - o - p) / 5) } Sum _{ k=l..floor((n - l - m - o - p) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p) / 3) } Sum _{ i=j..fl oor((n - j - k - l - m - o - p) / 2) } o. ●

► [A326467] 0,0,0,0,0,0,0,0,0,1,1,2,3,5,7,11,16,24,34,47,64,88,117,157,206 ⋆ Sum of the seventh largest parts in the partitions of n into 9 parts. ● a(n) = Sum _{ q=1..floor(n / 9) } Sum _{ p=q..floor((n - q) / 8) } Sum _{ o=p..floor((n - p - q) / 7) } Sum _{ m=o..floor((n - o - p - q) / 6) } Sum _{ l=m..floor((n - m - o - p - q) / 5) } Sum _{ k=l..floor((n - l - m - o - p - q) / 4) } Sum _{ j=k..floor ((n - k - l - m - o - p - q) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p - q) / 2) } o. ●

► [A326592] 0,0,0,0,0,0,0,0,0,0,1,1,2,3,5,7,11,16,24,34,49,66,92,123,167 ⋆ Sum of the seventh largest parts in the partitions of n into 10 parts. ● a(n) = Sum _{ r=1..floor(n / 10) } Sum _{ q=r..floor((n - r) / 9) } Sum _{ p=q..floor((n - q - r) / 8) } Sum _{ o=p..floor((n - p - q - r) / 7) } Sum _{ m=o..floor((n - o - p - q - r) / 6) } Sum _{ l=m..floor((n - m - o - p - q - r) / 5) } Sum _{ k=l..floor ((n - l - m - o - p - q - r) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p - q - r) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p - q - r) / 2) } o. ●

► [A333589] 2,3,5,7,11,16,24,36,54,81,121,181,271,406,609,913,1369,2053,3079,46 18,6927,10390,15585,23377,35065 ⋆ a(n) = floor(a(n - 1) * 3 / 2) bitwise - OR L SB(a(n - 1) * n), with a(1)=2 (LSB = Least Significant Bit). ● a(n) = floor(a(n - 1) * 3 / 2) bitwise - OR LSB(a(n - 1) * n), with a(1)=2 (LSB = Least Significa nt Bit). ●

► [A112088] 2,3,5,7,11,16,24,36,54,81,122,183,274,411,617,925,1388,2082,3123,46 84,7026,10539,15809,23713,35570 ⋆ Number of leaf nodes in a binary tree. ● a(1)=2; a(n)=floor((5 + sum(a(1) to a(n - 1))) / 2). - _ Graeme McRae _ , Jun 0 9 2006 ●

► [A271485] 1,2,3,5,7,11,16,25,36,56,81,126,182,283,409,636,919,1429,2065,3211,4 640,7215,10426,16212,23427 ⋆ Maximal term of TRIP - Stern sequence of level n corresponding to permutation triple (e,13,e). ● a(n) = 2 * a(n - 2) + a(n - 4) - a(n - 6) for n>5. ●

► [A130137] 1,2,3,5,7,11,16,25,37,57,85,130,195,297,447,679,1024,1553,2345,355 3,5369,8130,12291,18605,28135 ⋆ Number of Fibonacci binary words of length n having no 0110 subword. A Fibonacci binary word is a binary word having no 0 0 subword. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) + a(n - 4); a(0)=1, a(1)=2, a(2)=3, a(3)=5. ●

► [A091980] 1,2,3,5,7,11,16,26,36,56,81,131,183,287,417,677,937,1457,2107,3407,4 759,7463,10843,17603,24373 ⋆ Recursive sequence; one more than maximum of products of pairs of previous terms with indices summing to current index. ● a(n) = 1 + max _{ i=1..n - 1 } a(i) * a(n - i) for n > 1, a(1) = 1. ●

► [A076805] 2,3,5,7,11,17,19,23,29,31,37,41,43,47,53,59,61,67,71,73,79,83,89,97,1 01 ⋆ Triskaidekaphobic or 13 - free primes: primes that do not contain the num ber 13. ● a(n) >> n ^ 1.0044, where the exponent is log(r) / log(10) with r the larger root of x ^ 2 - 10x + 1. [_ Charles R Greathouse IV _ , Nov 09 2011] ●

► [A055500] 1,1,2,3,5,7,11,17,23,37,59,89,139,227,359,577,929,1499,2423,3919,63 37,10253,16573,26821,43391 ⋆ a(0)=1, a(1)=1, a(n) = largest prime <= a(n - 1) + a(n - 2). ● a(n) is asymptotic to C * phi ^ n where phi = (1 + sqrt(5)) / 2 an d C = 0.258616379018607009651019225764954566 77... - _ Benoit Cloitre _ , A pr 21 2003 ● a(n) >= prime(n - 1) for n > 1, by Ishikawa's theorem. - _ Jonat han Sondow _ , Sep 21 2013 ●

► [A002379] 1,1,2,3,5,7,11,17,25,38,57,86,129,194,291,437,656,985,1477,2216,332 5,4987,7481,11222,16834 ⋆ a(n) = floor(3 ^ n / 2 ^ n). ● a(n) = b(n) - (- 2 / 3) ^ n where b(n) is defined by the recursion b(0):=2, b(1):=5 / 6, b(n + 1):=(5 / 6) * b(n) + b(n - 1). - _ Hieronymus Fischer _ , Dec 31 2008 ● a(n) = (1 / 2) * (b(n) + sqrt(b(n) ^ 2 - (- 4) ^ n)) (with b(n) as defined above). - _ Hierony mus Fischer _ , Dec 31 2008 ● a(n) = - (1 / 2) + (3 / 2) ^ n + arctan(cot((3 / 2) ^ n Pi)) / Pi. - _ Fred Daniel Kline _ , Apr 14 2018 ● a(n + 1) = round(- (1 / 2) + (3 ^ n - 1) / (2 ^ n - 1)). - _ Fred Daniel Kline _ , Apr 14 2018 ●

► [A072465] 1,1,1,2,3,5,7,11,17,26,40,61,94,144,221,339,520,798,1224,1878,2881,4 420,6781,10403,15960 ⋆ A Fibonacci - like model in which each pair of rabbits d ies after the birth of their 4th litter: a(n) = a(n - 2) + a(n - 3) + a(n - 4) + a(n - 5). ● a(n) = a(n - 1) + a(n - 2) - a(n - 6); ●

► [A204631] 1,1,2,3,5,7,11,17,26,40,62,96,148,229,354,547,845,1306,2018,3118,48 18,7445,11504,17776,27468 ⋆ Expansion of 1 / (1 - x - x ^ 2 + x ^ 5 - x ^ 7). ● a (n) = a(n - 1) + a(n - 2) - a(n - 5) + a(n - 7). - _ Franck Maminirina Ramahar o _ , Nov 02 2018 ●

► [A293637] 0,1,1,1,1,1,2,3,5,7,11,18,29,47,76,122,198,320,517,837,1353,2190,354 3,5732,9274 ⋆ a(n) is the least integer k such that k / Fibonacci(n) > 1 / 5. ● a (n) = a(n - 1) + 2 a(n - 2) - a(n - 3) - 2 a(n - 4) + 2 a(n - 5) + a(n - 6) - 3 a(n - 7) - a(n - 8) + 3 a(n - 9) - 2 a(n - 11) + a(n - 12) + 2 a(n - 13) - a(n - 14) - a(n - 15) for n >= 16. ● a(n) = ceiling(Fibonacci(n) / 5). ●

► [A291660] 2,3,5,7,11,18,30,49,79,127,205,332,538,871,1409,2279,3687,5966,965 4,15621,25275,40895,66169,107064,173234 ⋆ a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 4) for n>3, a(0)=2, a(1)=3, a(2)=5, a(3)=7, a sequence related to Lucas num bers. ● a(3n) + a(3n + 1) = a(3n + 2). ● a(n) = (1 / 15) * 2 ^ (- n - 1) * ((30 - 9 * sqrt(5)) * (1 - sqrt(5)) ^ n + (1 + sqrt(5)) ^ n * (30 + 9 * sqrt(5)) + 5 * 2 ^ (n + 1) * sqrt(3) * sin(n * Pi / 3)). ●

► [A061165] 2,3,5,7,11,22,48,100,192,341,567,893,1345,1952,2746,3762,5038,661 5,8537,10851,13607,16858,20660,25072,30156 ⋆ Polynomial extrapolation of 2, 3, 5, 7, 11. ● a(n) = (3n ^ 4 - 34n ^ 3 + 141n ^ 2 - 206n + 144) / 24. ● a(1)=2, a(2)=3, a(3)=5, a(4)=7, a(5)=11, a(n)=5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Harvey P. Dale _ , Oct 05 2012 ●

► [A114421] 1,2,3,5,7,11,26,51,95,161,319,806,1887,3895,6923,14993,42718,11133 3,237595,463841,1064503,3118414,8795307,19720385,41281849 ⋆ Quintuple prim orial n ##### = n # 5. ● a(n) = n ##### = prime(n) * ((n - 5) #####) = Prod[i == n mod 5, to n] prime(i). Notationally, prime(0) = 1; (- n) ##### = 0 #### = 1. ●

► [A254225] 2,3,5,7,11,35 ⋆ a(n) = 2[0]2[1]2...2[n - 1]2[n]2 where [n] is the n - th hyperoperator. ● a(- 1) = 2, a(n) = 2[0]2[1]2...2[n - 1]2[n]2. ●

► [A118950] 2,3,5,7,12,13,15,17,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,3 6 ⋆ Numbers containing at least one prime digit. ● a(n) = n + O(n ^ k) with k = log 6 / log 10 = 0.77815.... - _ Charles R Greathouse IV _ , Sep 15 2015 ●

► [A260181] 2,3,5,7,12,13,15,17,22,23,25,27,32,33,35,37,42,43,45,47,52,53,55,57,6 2 ⋆ Numbers whose last digit is prime. ● a(n) = a(n - 1) + a(n - 4) - a(n - 5), n >5. ● a(n) = (5 * n - 4 - (- 1) ^ n + ((3 - (- 1) ^ n) / 2) * (- 1) ^ ((2 * n + 5 - (- 1) ^ n) / 4)) / 2. ●

► [A179781] 1,1,1,2,3,5,7,12,14,27,31,54,63,119,123,240,255,490,511,990,1015,201 5,2047,4020,4092 ⋆ a(n) = AP(n) is the total number of aperiodic k - palindrom es of n, 1 <= k <= n. ● a(n) = Sum _{ d | n } moebius(n / d) * 2 ^ (floor(d / 2)) (see Baek et al. page 9). - _ Michel Marcus _ , Dec 09 2014 ●

► [A308868] 0,0,0,0,0,0,1,1,2,3,5,7,12,15,22,29,40,51,70,86,112,139,176,214,269 ⋆ Sum of the smallest parts in the partitions of n into 6 parts. ● a(n) = n * Sum _{ m=1..floor(n / 6) } Sum _{ l=m..floor((n - m) / 5) } Sum _{ k=l..floor((n

- l - m) / 4) } Sum _{ j=k..floor((n - k - l - m) / 3) } Sum _{ i=j..floor((n - j - k - l - m) / 2) } m. ●

▶ [A078912] 1,1,2,3,5,7,12,15,27,32,59,66,125,137,262,277,539,566,1105,1137,2242,2301,4543,4609,9152 ⋆ a(1)=a(2)=1, a(n)=a(n - 1) + a(n - 2) if n is odd, a(n)=a(n - 1) + a(n / 2) if n is even. ● a(2n) is asymptotic to c * 2 ^ n and a(2n + 1) to c * 2 ^ (n + 1) where c=1.1414701156262631873057848722810239242285638421321261246366 4.... ●

▶ [A275592] 1,1,2,3,5,7,12,16,26,35,56,74,117,154,241,317,492,645,998,1306,2014,2634,4053,5296,8139 ⋆ Number of compositions of n if only the order of the even numbers matter. ● a(2k) = Sum _{ j=0..k } c(j) * q(2k - 2j). ● a(n) = 2 * a(n - 2) + q(n) - q(n - 2). ●

▶ [A308928] 0,0,0,0,0,0,0,1,1,2,3,5,7,12,17,24,33,46,61,84,109,144,184,237,298 ⋆ Sum of the sixth largest parts in the partitions of n into 7 parts. ● a(n) = Sum _{ o=1..floor(n / 7) } Sum _{ m=o..floor((n - o) / 6) } Sum _{ l=m..floor((n - m - o) / 5) } Sum _{ k=l..floor((n - l - m - o) / 4) } Sum _{ j=k..floor((n - k - l - m - o) / 3 } Sum _{ i=j..floor((n - j - k - l - m - o) / 2) } m. ●

▶ [A308992] 0,0,0,0,0,0,0,0,1,1,2,3,5,7,12,17,26,35,50,67,94,123,167,216,285 ⋆ Sum of the sixth largest parts in the partitions of n into 8 parts. ● a(n) = Sum _{ p=1..floor(n / 8) } Sum _{ o=p..floor((n - p) / 7) } Sum _{ m=o..floor((n - o - p) / 6) } Sum _{ l=m..floor((n - m - o - p) / 5) } Sum _{ k=l..floor((n - l - m - o - p) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p) / 2) } m. ●

▶ [A326468] 0,0,0,0,0,0,0,0,0,0,1,1,2,3,5,7,12,17,26,37,52,71,100,133,181,239 ⋆ Sum of the sixth largest parts of the partitions of n into 9 parts. ● a(n) = Sum _{ q=1..floor(n / 9) } Sum _{ p=q..floor((n - q) / 8) } Sum _{ o=p..floor((n - p - q) / 7) } Sum _{ m=o..floor((n - o - p - q) / 6) } Sum _{ l=m..floor((n - m - o - p - q) / 5) } Sum _{ k=l..floor((n - l - m - o - p - q) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p - q) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p - q) / 2) } m. ●

▶ [A326593] 0,0,0,0,0,0,0,0,0,0,0,1,1,2,3,5,7,12,17,26,37,54,73,104,139,191 ⋆ Sum of the sixth largest parts of the partitions of n into 10 parts. ● a(n) = Sum _{ r=1..floor(n / 10) } Sum _{ q=r..floor((n - r) / 9) } Sum _{ p=q..floor((n - q - r) / 8) } Sum _{ o=p..floor((n - p - q - r) / 7) } Sum _{ m=o..floor((n - o - p - q - r) / 6) } Sum _{ l=m..floor((n - m - o - p - q - r) / 5) } Sum _{ k=l..floor((n - l - m - o - p - q - r) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p - q - r) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p - q - r) / 2) } m. ●

▶ [A002965] 0,1,1,1,2,3,5,7,12,17,29,41,70,99,169,239,408,577,985,1393,2378,3363,5741,8119,13860 ⋆ Interleave denominators (A000129) and numerators (A001333) of convergents to sqrt(2). ● a(n) = 2 * a(n - 2) + a(n - 4) if n>3; a(0)=0, a(1)=a(2)=a(3)=1. ● a(2 * n) = a(2 * n - 1) + a(2 * n - 2) and a(2 * n + 1) = 2 * a(2 * n) - a(2 * n - 1). ● a(0)=0, a(1)=1, a(n) = a(n - 1) + a(2 * [(n - 2) / 2]). - _ Franklin T. Adams - Watters _ , Jan 31 2006 ● a(n) = (((sqrt(2) - 2) * (- 1) ^ n + 2 + sqrt(2)) * (1 + sqrt(2)) ^ (floor(n / 2)) - ((2 + sqrt(2)) * (- 1) ^ n - 2 + sqrt(2)) * (1 - sqrt(2)) ^ (floor(n / 2))) / 8. - _ Ilya Gutkovskiy _ , Jul 18 2016 ● a(n) = a(n - 1) + a(n - 2 - (n mod 2)); a(0)=0, a(1)=1. - _ Ctibor O. Zizka _ , Oct 28 2018 ●

▶ [A257863] 1,1,2,3,5,7,12,18,29,45,72,112,178,279,441,693,1094,1721,2714,4273,6735,10607,16715,26329,41485 ⋆ Expansion of 1 / (1 - x - x ^ 2 + x ^ 5 - x ^ 6). ● a(n) = a(n - 1) + a(n - 2) - a(n - 5) + a(n - 6). ●

▶ [A169986] 1,2,3,5,7,12,18,30,47,77,123,200,322,522,843,1365,2207,3572,5778,9350,15127,24477,39603,64080,103682 ⋆ Ceiling(phi ^ n) where phi = (1 + sqrt(5)) / 2. ● a(n) = 3 * Fibonacci(n - 1) + Fibonacci(n - 2) + (n mod 2), n>0. - _ Gary Detlefs _ , Dec 29 2010 ●

▶ [A191385] 1,1,1,1,2,3,5,7,12,18,31,47,81,125,216,337,583,918,1590,2522,4372,6977,12104,19415,33703 ⋆ Number of dispersed Dyck paths of length n having no ascents of length 1. ● a(n - 1) = Sum _{ m=floor((n + 1) / 2)..n } ((2 * m - n) * sum(j=2 * m - n..m, binomial(n - 2 * m + 2 * j - 1,j - 1) * (- 1) ^ (j - m) * binomial(m,j))) / m. - _ Vladimir Kruchinin _ , Mar 09 2013 ●

▶ [A345669] 1,2,3,5,7,12,18,31,51,89,153,273,483,870,1571,2860,5225,9603,17711,32805,60967,113685,212610,398723,749615 ⋆ Antidiagonal sums of array containing i - bonacci sequences nac(i,n), where nac(i,n) is the n - th i - bonacci number with nac(i,1..i) = 1 (see comments). ● a(n) = Sum _{ i=1..n } of nac(i,n - i + 1) = Sum _{ i=1..n } of nac(n - i + 1,i). ●

▶ [A143642] 1,2,3,5,7,12,19,26,45,71,97,168,265,362,627,989,1351,2340,3691,5042,8733,13775,18817,32592,51409 ⋆ Numerators of principal and intermediate convergents to 3 ^ (1 / 2). ● a(n) = 4 * a(n - 3) - a(n - 6) for n>6. ●

▶ [A293543] 0,1,1,1,1,2,3,5,7,12,19,30,48,78,126,204,329,533,862,1394,2255,3649,5904,9553,15456 ⋆ a(n) is the least integer k such that k / Fibonacci(n) > 1 / 3. ● a(n) = a(n - 1) + a(n - 2) + a(n - 8) - a(n - 9) - a(n - 10) for n >= 11. ● a(n) = floor(Fibonacci(n) / 3). ●

▶ [A168484] 2,3,5,7,13,14,16,18,24,25,27,29,35,36,38,40,46,47,49,51,57,58,60,62,68 ⋆ Numbers that are congruent to { 2, 3, 5, 7 } mod 11. ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. (End) ● a(n) = (22 * n - 21 - 5 * i ^ (2 * n) - (3 - 5 * i) * i ^ (- n) - (3 + 5 * i) * i ^ n) / 8 where i = sqrt(- 1). - _ Wesley Ivan Hurt _ , Jun 07 2016 ●

▶ [A092621] 2,3,5,7,13,17,29,31,43,47,59,67,71,79,83,97,103,107,113,131,139,151,163,167,179 ⋆ Primes with exactly one prime digit. ● a(n) >> n ^ 1.28 because of the digit restriction ●

▶ [A365274] 1,1,1,2,3,5,7,13,18,31,43,78,108,190,263,471,652,1156,1600,2853,3949,7019,9715,17299,23944 ⋆ a(n) = a(n - 2) + 4 * a(n - 4) - 2 * a(n - 8) - a(n - 10), with a[0..9] = [1, 1, 1, 2, 3, 5, 7, 13, 18, 31]. ● a(n) = a(n - 2) + 4 * a(n - 4) - 2 * a(n - 8) - a(n - 10). ● a(2 * n) = a(2 * n - 1) + a(2 * n - 2) - a(2 * n - 3) + a(2 * n - 4). ● a(2 * n + 1) = a(2 * n) + a(2 * n - 2) + 2 * a(2 * n - 3) - a(2 * n - 4) - a(2 * n - 7). ●

▶ [A236340] 1,2,3,5,7,13,19,33,51,85,135,221,355,577,931,1509,2439,3949,6387,10337,16723,27061,43783,70845,114627 ⋆ Number of length n binary words such that maximal runs of 1's are restricted to length one or two and maximal runs of 0's are of odd length. ● a(0)=1, a(1)=2, a(2)=3, a(3)=5, a(4)=7 for n>=5, a(n) = 2 * a(n - 2) + a(n - 3). ●

▶ [A008965] 1,2,3,5,7,13,19,35,59,107,187,351,631,1181,2191,4115,7711,14601,27595,52487,99879,190745,364723,699251,1342183 ⋆ Number of necklaces of sets of beads containing a total of n beads. ● a(n) = Sum _{ d|(2 ^ n - 1) } phi(d) / ord(2,d), where phi = A000010 and ord(2,d) is the multiplicative order of 2 modulo d. ●

▶ [A330383] 1,1,1,1,1,1,1,1,2,3,5,7,13,19,49,139,349,814,1999,6239,17319,88463,352207,1433335,4638463 ⋆ a(n) = (a(n - 1) * a(n - 7) + a(n - 2) * a(n - 6) - a(n - 3) * a(n - 5) + a(n - 4) ^ 2) / a(n - 8), a(0) = ... = a(7) = 1. ● a(n) = a(7 - n) for all n in Z. ● a(n) * a(n + 8) = a(n + 1) * a(n + 7) + a(n + 2) * a(n + 6) - a(n + 3) * a(n + 5) + a(n + 4) ^ 2 for all n in Z. ● a(n) * a(n + 9) = - a(n + 1) * a(n + 8) + 3 * a(n + 2) * a(n + 7) + a(n + 3) * a(n + 6) + a(n + 4) * a(n + 5) for all n in Z. ●

▶ [A064336] 2,3,5,7,13,23,31,47,61,83,109,139,173,211,251,293,337,389,449,509,577,647,719,797,883 ⋆ Maximal prime numbers with increasing prime differences. ● a(1) = 2, a(n + 1) = MAX { prime p | p <= a(n) + p(n) } (where p(n) is the n - th prime number). ●

▶ [A046808] 1,2,3,5,7,14,19,46,48,62,67,74,81,89,589,2090,2299,7742,1925975,1989191 ⋆ Recursive sequence of indices of Proth primes a * 2 ^ b + 1. ● a(n) = least integer b greater than a(n - 1) such that a(n - 1) * 2 ^ b + 1 is prime ●

▶ [A335203] 2,3,5,7,15,25,49,95 ⋆ a(n) is the packing chromatic number of n - hypercube graph. ● a(n) >= 2 * a(n - 1) - (n - 1) (Corollary 1 from Torres and Valencia - Pabon). ● a(n) <= 3 + 2 ^ n * (1 / 2 - 1 / (2 ^ ceiling(log _ 2(n)))) - 2 * floor((n - 4) / 2) (Thm. 1 from Torres and Valencia - Pabon). ●

▶ [A100532] 2,3,5,7,17,32,61,117,227,437,842,1623,3129,6031,11625,22408,43193,83257,160483,309341,596274,1149355,2215453,4270423,8231505 ⋆ The first four numbers of this sequence are the primes 2,3,5,7. The other terms are calculated by adding the previous four terms. ● a(n) = a(n - 1) + a(n - 2) + a(n - 3) + a(n - 4) where n >= 5 and a(1) = 2, a(2) = 3, a(3) = 5 and a(4) = 7. ●

▶ [A046034] 2,3,5,7,22,23,25,27,32,33,35,37,52,53,55,57,72,73,75,77,222,223,225,227,232 ⋆ Numbers whose digits are primes. ● a(n) = Sum _{ j=0..m - 1 } ((2 * b(j) + 1) mod 8 + floor(b(j) / 4) - floor((b(j) - 1) / 4)) * 10 ^ j, where m = floor(log _ 4(3 * n + 1)), b(j) = floor((3 * n + 1 - 4 ^ m) / (3 * 4 ^ j)). ● a(1 * (4 ^ n - 1) / 3) = 2 * (10 ^ n - 1) / 9. ● a(2 * (4 ^ n - 1) / 3) = 1 * (10 ^ n - 1) / 3. ● a(3 * (4 ^ n - 1) / 3) = 5 * (10 ^ n - 1) / 9. ● a(4 * (4 ^ n - 1) / 3) = 7 * (10 ^ n - 1) / 9. ● a(n) <= 2 * (10 ^ log _ 4(3 * n + 1) - 1) / 9, equality holds for n = (4 ^ k - 1) / 3, k>0. ●

▶ [A114420] 1,2,3,5,7,22,39,85,133,506,1131,2635,4921,20746,48633,123845,260813,1224014,2966613,8297615,18517723,89353022,234362427,688702045,1648077347 ⋆ Quadruple primorial n #### = n # 4. ● a(n) = n #### = prime(n) * ((n - 4) ####) = Prod[i == n mod 4, to n] prime(i). Notationally, prime(0) = 1; (- n) #### = 0 #### = 1. ●

▶ [A106116] 2,3,5,7,23,29,37,43,47,53,59,67,73,79,83,89,97,223,227,229,233,239,257,263,269 ⋆ Primes with smallest digit > 1. ● a(n) >> n ^ k with k = log 10 / log 8 = 1.107.... - _ Charles R Greathouse IV _ , Jan 02 2013 ●

▶ [A211681] 2,3,5,7,23,37,53,73,237,373,537,737,2373,3737,5373,7373,23737,37373,53737,73737,237373,373737,537373,737373,2373737 ⋆ Numbers such that all the substrings of length <= 2 are primes. ● a(1 + 8 * k) = 2 * 10 ^ (2k) + 37 * (10 ^ (2k) - 1) / 99, ● a(2 + 8 * k) = 3 * 10 ^ (2k) + 73 * (10 ^ (2k) - 1) / 99, ● a(3 + 8 * k) = 5 * 10 ^ (2k) + 37 * (10 ^ (2k) - 1) / 99, ● a(4 + 8 * k) = 7 * 10 ^ (2k) + 37 * (10 ^ (2k) - 1) / 99, ● a(5 + 8 * k) = 23 * 10 ^ (2k) + 73 * (10 ^ (2k) - 1) / 99, ● a(6 + 8 * k) = 37 * 10 ^ (2k) + 37 * (10 ^ (2k) - 1) / 99, ●

▶ [A117058] 2,3,5,7,121,131,151,171,11211,11311,11511,11711,1112111,1113111,1115111,1117111,1111211111,1111311111,1111511111,1111711111,1111112111111 ⋆ Palindromes for which the product of the digits is prime. ● a(n) = a(n - 1) + 110 * a(n - 4) - 110 * a(n - 5) - 1000 * a(n - 8) + 1000 * a(n - 9) for n > 9. ●

▶ [A047372] 1,2,3,5,8,9,10,12,15,16,17,19,22,23,24,26,29,30,31,33,36,37,38,40,43 ⋆ Numbers that are congruent to { 1, 2, 3, 5 } mod 7. ● a(n) = (14 * n + (3 * i - 1) * (- i) ^ n - (3 * i + 1) * i ^ n - (- 1) ^ n - 13) / 8, i=sqrt(- 1). (End) ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. ●

▶ [A047254] 2,3,5,8,9,11,14,15,17,20,21,23,26,27,29,32,33,35,38,39,41,44,45,47,50 ⋆ Numbers that are congruent to { 2, 3, 5 } mod 6. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. ● a(n) = (6 * n - 2 - cos(2 * n * Pi / 3) + sqrt(3) * sin(2 * n * Pi / 3)) / 3. ● a(3k) = 6k - 1, a(3k - 1) = 6k - 3, a(3k - 2) = 6k - 4. (End) ●

▶ [A181155] 2,3,5,8,9,12,14,15,17,20,22,23,26,27,29,32,33,36,38,39,42,43,45,48,50 ⋆ Odious numbers (A000069) plus one; complement of A026147. ● a(a(n) - 1) = 2 * a(n) - 1. - _ Benoit Cloitre _ , Oct 07 2010 ●

▶ [A122933] 2,3,5,8,9,12,14,18,23,28,42,58,61,70,91,95,101,103,132,142,150,161,167,170,248 ⋆ a(n) - th prime is equal to the sum _{ i=1..k } pi(i) for some k (cf. A000720). ● a(n) = PrimePi[A122516[n]]. ●

▶ [A232868] 1,2,3,5,8,9,12,16,19,27,30,42,45,61,64,84,87,111,114,142,145,177,180,216,219 ⋆ Positions of the integers in the sequence (or tree) of complex numbers generated by these rules: 0 is in S, and if x is in S, then x + 1 and i * x are in S, where duplicates are deleted as they occur. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n > 10 (conjectured). ●

▶ [A028841] 1,2,3,5,8,10,11,12,14,17,19,20,21,23,26,28,29,30,32,35,37,38,39,41,44 ⋆ Iterated sum of digits of n is a Fibonacci number. ● a(n) = a(n - 1) + a(n - 5) - a(n - 6) for n>6. ●

▶ [A047605] 0,2,3,5,8,10,11,13,16,18,19,21,24,26,27,29,32,34,35,37,40,42,43,45,48 ⋆ Numbers that are congruent to { 0, 2, 3, 5 } mod 8. ● a(n) = 2 * (n - 1) - (i ^ (n * (n + 1)) + 1) / 2, where i=sqrt(- 1). (End) ● a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4) for n>4. ●

▶ [A277625] 2,3,5,8,10,12,13,17,21,26,29,33,34,37,50,55,65,70,72,82,89,101,109,122,135 ⋆ Nontrivial values of Fibonacci polynomials. ● a(n) = n ^ 2 - 2 * n ^ (5 / 3) - O(n ^ (3 / 2)). - _ Charles R Greathouse IV _ , Nov 03 2016 ●

▶ [A223577] 1,2,3,5,8,10,12,15,17,19,22,24,26,29,31,33,35,38,40,42,45,47,49,52,54 ⋆ Positive integers n for which there is exactly one negative integer m such that - n = floor(cot(Pi / (2 * m))). ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n > 6. ●

► [A183871] 2,3,5,8,10,14,17,21,26,30,36,41,47,54,60,68,75,83,92,100,110,119,129,140,150 ⋆ a(n) = n + ceiling((1 / 5) * n ^ 2). Complement of A183870. • a(n) = floor((n + 1) * (n + 4) / 5). [_ Bruno Berselli _ , Mar 05 2014] •
► [A211542] 0,0,1,2,3,5,8,10,14,17,22,26,32,36,44,49,57,63,73,79,90,97,109,117,130 ⋆ Number of ordered triples (w,x,y) with all terms in { 1,...,n } and 2w=4y - 3x. • a(n) = a(n - 2) + a(n - 3) + a(n - 4) - a(n - 5) - a(n - 6) - a(n - 7) + a(n - 9). •
► [A087279] 0,2,3,5,8,10,15,17,24,26,35,37,48,50,63,65,80,82,99,101,120,122,143,145,168 ⋆ Nonnegative numbers whose distance to the nearest positive square equals exactly 1. • a(1) = 0; a(2 * k + 1) = a(2 * k) + 2 * k - 1; a(2 * k) = a(2 * k - 1) + 2. • a(n - 1) = floor((n + 1) / 2) ^ 2 + (- 1) ^ (n mod 2). • a(n) = (2 * n * (n + 1) - (2 * n - 7) * (- 1) ^ n + 1) / 8. (End) •
► [A078444] 2,3,5,8,11,14,17,20,25,29,33,38,41,44,49,55,59,63,68,71,75,80,85,92,98 ⋆ Floor of geometric mean of two consecutive primes. • a(n) = floor(sqrt(prime(n) * prime(n + 1))). •
► [A332071] 1,2,3,5,8,11,14,17,21,25,29,33,37,41,45,49,53,57,61,65,70,75,81,87,93 ⋆ Lexicographically earliest sequence with a(n) odd terms among the first a(n + 1) terms, for any n; a(1) = 1, a(2) = 2. • a(n + 1) >= 2 * a(n) - a(n - 1) for all n > 1, with equality for n not in { 3, 4, 8, 20, 22, 69, 71, 80, 82, ... } . •
► [A194221] 0,0,1,2,3,5,8,11,14,17,21,25,29,34,40,46,52,58,65,72,79,87,96,105,114 ⋆ Partial sums of A194220. • a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 8) - 2 * a(n - 9) + a(n - 10) for n > 10. •
► [A054925] 0,0,1,2,3,5,8,11,14,18,23,28,33,39,46,53,60,68,77,86,95,105,116,127,138 ⋆ a(n) = ceiling(n * (n - 1) / 4). • a(n + 4) = a(n) + 2 * n + 3. - _ Michael Somos _ , Mar 01 2014 •
► [A096777] 1,2,3,5,8,11,15,20,25,31,38,45,53,62,71,81,92,103,115,128,141,155,170,185,201 ⋆ a(n) = a(n - 1) + Sum _{ k=1..n - 1 } (a(k) mod 2), a(1) = 1. • a(n) = floor(n / 3) * (3 * floor(n / 3) + 2 * (n mod 3) - 1) + n mod 3 + 0 ^ (n mod 3). - _ Reinhard Zumkeller _ , Dec 29 2007 • a(n) = floor((n - 2) ^ 2 / 3) + n. - _ Christopher Hunt Gribble _ , Mar 06 2014 •
► [A125811] 1,1,1,2,3,5,8,11,15,20,26,32,39,47,56,66,76,87,99,112,126,141,156,172,189 ⋆ Number of coefficients in the n - th q - Bell number as a polynomial in q. • a(n) = n * (n + 1) / 2 - 4 - Sum _{ k=2..n - 2 } floor(1 / 2 + sqrt(2 * k + 4)) for n>2. [Due to a formula by Jan Hagberg in A023536] •
► [A008762] 1,2,3,5,8,11,15,20,26,33,41,50,61,73,86,101,118,136,156,178,202,228,256,286,319 ⋆ Expansion of (1 + x) / ((1 - x) * (1 - x ^ 2) * (1 - x ^ 3) * (1 - x ^ 4)). • a(0)=1, a(1)=2, a(2)=3, a(3)=5, a(4)=8, a(5)=11, a(6)=15, a(7)=20, a(8)=26, a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) - a(n - 4) - a(n - 5) + a(n - 6) - a(n - 7) + 2 * a(n - 8) - a(n - 9). - _ Harvey P. Dale _ , Mar 19 2013 •
► [A308823] 0,0,0,0,0,1,1,2,3,5,8,11,15,21,28,38,48,62,78,98,122,149,181,219,262 ⋆ Sum of the smallest parts of the partitions of n into 5 parts. • a(n) = Sum _{ l=1..floor(n / 5) } Sum _{ k=l..floor((n - l) / 4) } Sum _{ j=k..floor((n - k - l) / 3) } Sum _{ i=j..floor((n - j - k - l) / 2) } l. • a(n) = a(n - 1) + a(n - 2) - 2 * a(n - 6) - 2 * a(n - 7) + a(n - 8) + a(n - 9) + 2 * a(n - 10) + a(n - 11) + a(n - 12) - 2 * a(n - 13) - 2 * a(n - 14) + a(n - 18) + a(n - 19) - a(n - 20) for n>19. •
► [A175831] 0,1,2,3,5,8,11,16,22,29,38,49,61,76,93,112,134,159,186,217,251,288,329,374,422 ⋆ Partial sums of ceiling(n ^ 2 / 12). • a(n) = round((2 * n + 1) * (2 * n ^ 2 + 2 * n + 41) / 144). • a(n) = floor((n + 1) * (2 * n ^ 2 + n + 41) / 72). • a(n) = ceiling((2 * n ^ 3 + 3 * n ^ 2 + 42 * n) / 72). • a(n) = a(n - 12) + (n + 1) * (n - 12) + 61. •
► [A070228] 1,1,2,3,5,8,11,16,23,31,42,58,82,114,156,217,299,417,583,814,1136,1589,2224,3116,4369 ⋆ Number of perfect powers (A001597) not exceeding 2 ^ n. • a(n) = 1 - Sum _{ k=2..n } Moebius(k) * floor(2 ^ (n / k) - 1). - _ Robert G. Wilson v _ , Jan 20 2015 •
► [A173599] 1,1,2,3,5,8,11,16,23,31,43,57,77,101,133,174,226,293,378,486,624,800,1023,1307,1669 ⋆ a(n) = a(n - 1) + a(n - 2) - [a(n - 2) / 4] - [a(n - 4) / 2] - [a(n - 6) / 4]. • a(n)=a(n - 1) + a(n - 2) - Floor[a(n - 2) / 4] - Floor[a(n - 4) / 2] - Floor[a(n - 6) / 4] •
► [A091498] 1,2,3,5,8,11,17,23,31,41,54,68,88,109,135,165,202,241,291,344,407,477,559,646,751 ⋆ The sixth column of triangle A091492, excluding leading zeros. • a(0)=1, a(1)=2, a(2)=3, a(3)=5, a(4)=8, a(5)=11, a(6)=17, a(7)=23, a(8)=31, a(9)=41, a(10)=54, a(11)=68, a(12)=88, a(13)=109, a(14)=135, a(15)=165, a(16)=202, a(17)=241, a(18)=291, a(19)=344, a(20)=407, a(n)=a(n - 1) + a(n - 2) - a(n - 5) - 2 * a(n - 7) + a(n - 9) + a(n - 10) + a(n - 11) + a(n - 12) - 2 * a(n - 14) - a(n - 16) + a(n - 19) + a(n - 20) - a (n - 21). - _ Harvey P. Dale _ , Dec 09 2012 •
► [A332070] 1,2,3,5,8,11,21,31,41,51,62,80,201,331,511,711,911,1111,1311,1511,1711,1911,2111,3111,4111 ⋆ Lexicographically earliest sequence with a(n) odd digits among the first a(n + 1) decimal digits, for any n; a(1) = 1, a(2) = 2. • a(n + 1) >= 2 * a(n) - a(n - 1) for n > 1. •
► [A084624] 1,2,3,5,8,12,16,22,28,36,45,56,68,81,96,114,133,154,177,202,230,260,292,327,365 ⋆ a(n) = floor(C(n + 5,5) / C(n + 2,2)). • a(n) = 1 + floor(n * (n ^ 2 + 12 * n + 47) / 60). • a(n) = floor(binomial(n + 5,3) / 10). •
► [A028955] 0,2,3,5,8,12,17,18,20,23,27,30,32,38,45,47,48,50,53,57,62,68,72,75,80 ⋆ Numbers represented by quadratic form with Gram matrix [4, 1; 1, 4] (divided by 2). • a(x, y) = (4x ^ 2 + 2xy + 4y ^ 2) / 2; x, y any integer. •
► [A089071] 1,2,3,5,8,12,17,23,30,38,47,57,68,80,93,107,122,138,155,173,192,212,233,255,278 ⋆ Number of liberties a big eye of size n gives in the game of Go. • a(n) = a(n - 1) + n - 2 for n>=3. • a(n) = n + 1 - 0 ^ n + C(n - 1,2). (End) •
► [A177205] 0,0,0,1,2,3,5,8,12,17,23,30,38,48,60,73,88,105,124,145,169,195,223,254,288 ⋆ Partial sums of round(n ^ 2 / 17). • a(n) = round(n * (n + 1) * (2 * n + 1) / 102). • a(n) = floor((2 * n ^ 3 + 3 * n ^ 2 + n + 36) / 102). • a(n) = ceiling((2 * n ^ 3 + 3 * n ^ 2 + n - 36) / 102). • a(n) = a(n - 17) + (n + 1) * (n - 17) + 105, n > 16. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 17) - 3 * a(n - 18) + 3 * a(n - 19) - a(n - 20) with g.f. x ^ 3 * (1 + x) * (x ^ 12 - 2 * x ^ 11 + 2 * x ^ 10 - x ^ 9 + x ^ 8 - x ^ 7 + x ^ 6 - x ^ 5 + x ^ 4 - x ^ 3 + 2 * x ^ 2 - 2 * x + 1) / ((x ^ 16 + x ^ 15 + x ^ 14 + x ^ 13 + x ^ 12 + x ^ 11 + x ^ 10 + x ^ 9 + x ^ 8 + x ^ 7 + x ^ 6 + x ^ 5 + x ^ 4 + x ^ 3 + x ^ 2 + x + 1) * (x - 1) ^ 4). - _ R. J. Mathar _ , Dec 13 2010 •
► [A275580] 1,2,3,5,8,12,17,23,31,41,52,65,81,99,119,142,168,197,229,264,303,346,392,442,497 ⋆ Add square root of sum of terms. • a(n) = n + 1 + Sum _{ i=0..n } floor((floor(i ^ 2 / 3) + i) / 4); derived from corresponding LODA program (see link). - _ Hugo van der Sanden _ , Feb 24 2021 •
► [A175829] 0,1,2,3,5,8,12,17,23,31,41,52,66,82,100,121,145,172,202,235,272,313,357,406,459 ⋆ Partial sums of ceiling(n ^ 2 / 11). • a(n) = round((2 * n + 1) * (n ^ 2 + n + 18) / 66). • a(n) = floor((n + 1) * (2 * n ^ 2 + n + 36) / 66). • a(n) = ceiling((2 * n ^ 3 + 3 * n ^ 2 + 37 * n) / 66). • a(n) = a(n - 11) + (n + 1) * (n - 11) + 52, n > 10. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 11) - 3 * a(n - 12) + 3 * a(n - 13) - a(n - 14). - _ R. J. Mathar _ , Dec 06 2010 •
► [A175827] 0,1,2,3,5,8,12,17,24,33,43,56,71,88,108,131,157,186,219,256,296,341,390,443,501 ⋆ Partial sums of ceiling(n ^ 2 / 10). • a(n) = round((2 * n + 1) * (2 * n ^ 2 + 2 * n + 27) / 120). • a(n) = floor((2 * n ^ 3 + 3 * n ^ 2 + 28 * n + 36) / 60). • a(n) = ceiling((2 * n ^ 3 + 3 * n ^ 2 + 28 * n - 9) / 60). • a(n) = a(n - 10) + (n + 1) * (n - 10) + 43. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 10) - 3 * a(n - 11) + 3 * a(n - 12) - a(n - 13). (End) •
► [A129504] 1,2,3,5,8,12,17,24,34,48,67,92,124,164,213,273,347,439,554,698,878,1102,1379,1719,2133 ⋆ Row sums of triangle A129503. • a(n) = Sum _{ k >= 0, 2 ^ k <= n } binomial(n - 2 ^ k + k, k). - _ Andrew Howroyd _ , Aug 09 2018 •
► [A175539] 1,2,3,5,8,12,17,25,36,51,73,104,148,210,297,421,596,843,1193,1688,2388,3378,4778,6758,9558 ⋆ a(1)=1, then a(n) = smallest number whose square is larger than 2 * (a(n - 1)) ^ 2. • a(n) = ceiling(sqrt(2) * a(n - 1)) with a(1)=1. - _ Benoit Cloitre _ , Oct 16 2012 •
► [A173564] 1,1,2,3,5,8,12,18,26,36,50,68,92,124,165,220,291,385,508,670,882,1161,1526,2005,2633 ⋆ a(n) = a(n - 1) + a(n - 2) - [a(n - 3) / 4] - [a(n - 4) / 2] - [a(n - 5) / 4]. • a(n)=a(n - 1) + a(n - 2) - Floor[a(n - 3) / 4] - Floor[a(n - 4) / 2] - Floor[a(n - 5) / 4] •
► [A200310] 0,1,2,3,5,8,12,18,26,37,53,76,108,154,218,309,437,620,876,1242,1754,2485,3509,4972,7020 ⋆ a(n) = n - 1 for n <= 4, otherwise if n is even then a(n) = a(n - 5) + 2 ^ (n / 2), and if n is odd then a(n) = a(n - 1) + 2 ^ ((n - 3) / 2). • a(n) = a(n - 1) + a(n - 2) - a(n - 3) + a(n - 4) - a(n - 5) + 2 * a(n - 6) - 2 * a(n - 7). • a(n) = floor((29 + 5(- 1) ^ n) * 2 ^ ((2n - 7 - (- 1) ^ n) / 4) / 7) - 1. (End) •
► [A136275] 1,2,3,5,8,12,18,26,38,55,79,114,164,235,337,483,692,991,1418,2029,2903,4154,5944,8504,12167 ⋆ Similar to A137284, but considering Sum { k = 1,2,3,... } 5 ^ (- nk). • a(n) = ceiling(a(n - 1) * log _ 5(10)). - _ Max Alekseyev _ , May 14 2009 •
► [A078408] 1,2,3,5,8,12,18,27,38,54,76,104,142,192,256,340,448,585,760,982,1260,1610,2048,2590,3264 ⋆ Number of ways to partition 2n + 1 into distinct positive integers. • a(n) = t(2 * n + 1, 0), t as defined in A079211. •
► [A077868] 1,2,3,5,8,12,18,27,40,59,87,128,188,276,405,594,871,1277,1872,2744,4022,5895,8640,12663,18559 ⋆ Expansion of 1 / (1 - x) * (1 - x - x ^ 3)). • a(n - 3) = Sum(binomial(n - r, r)), r=1, 2, ... which is the case t=3 and k=2 in the general case of t - strings and k blocks: a(n - 3, k, t) = Sum(binomial(n - r * (t - 1), r) * S2(n - r * (t - 1) - 1, k - 1)), r=1, 2, ... - _ Augustine O. Munagi _ , Apr 11 2005 • a(n) = a(n - 1) + a(n - 2) - a(n - 5) for n > 4. • a(n) = a(n - 2) + a(n - 3) + a(n - 4) + 2 for n > 3. • a(n) = 1 + a(n - 1) + a(n - 3), a(1)=1, a(2)=2, a(3)=3. - _ Gerry Martens _ , Jun 10 2018 •
► [A061419] 1,2,3,5,8,12,18,27,41,62,93,140,210,315,473,710,1065,1598,2397,3596,5394,8091,12137,18206,27309 ⋆ a(n) = ceiling(a(n - 1) * 3 / 2) with a(1) = 1. • a(n) = ceiling((a(n - 1) + a(n - 2)) * 9 / 10) - _ Franklin T. Adams - Watters _ , May 01 2006 •
► [A055804] 1,1,1,2,3,5,8,12,19,26,40,51,76,92,133,155,218,247,339,376,505,551,726,782,1013 ⋆ a(n) = T(n,n - 4), array T as in A055801. • a(n) = (2 * n ^ 4 - 28 * n ^ 3 + 178 * n ^ 2 - 416 * n + 441 + (- 1) ^ n * (4 * n ^ 3 - 90 * n ^ 2 + 704 * n - 1977)) / 768 for n>4, with a(4) = 1. •
► [A124062] 1,1,2,3,5,8,12,19,29,44,67,101,152,228,341,509,758,1127,1673,2480,3672,5431,8025,11848,17479 ⋆ Number of ways to write n as an ordered sum of 1's, 2's and 3's such that no 2 precedes any 1. • a(n) = a(n - 1) + a(n - 2) + a(n - 3) - a(n - 4) - a(n - 5) - a(n - 6). - _ Joel B. Lewis _ , Nov 06 2006 •
► [A060961] 1,1,1,2,3,5,8,12,19,30,47,74,116,182,286,449,705,1107,1738,2729,4285,6728,10564,16587,26044 ⋆ Number of compositions (ordered partitions) of n into 1's, 3's and 5's. • a(n) = a(n - 1) + a(n - 3) + a(n - 5). • a(n) = Sum _{ m =floor((n + 1) / 2)..n } (Sum _{ j=0..2 * m - n } binomial(j,3 * n - 5 * m + 2 * j) * binomial(2 * m - n,j))), n>0, a(0)=1. - _ Vladimir Kruchinin _ , Mar 11 2013 •
► [A225393] 1,1,2,3,5,8,12,19,30,47,74,116,183,288,453,713,1122,1766,2779,4373,6882,10830,17043,26820,42206 ⋆ Expansion of 1 / (1 - x - x ^ 2 + x ^ 6 - x ^ 8). • a(n) = a(n - 1) + a(n - 2) - a(n - 6) + a(n - 8). - _ Ilya Gutkovskiy _ , Nov 16 2016 •
► [A179018] 0,1,2,3,5,8,12,19,30,47,75,120,192,309,498,803,1297,2096,3388,5479,8862,14335,23191,37520,60704 ⋆ Partial sums of ceiling(Fibonacci(n) / 2). • a(n) = round(Fibonacci(n + 2) / 2 + (n - 1) / 3). • a(n) = round(Fibonacci(n + 2) / 2 + n / 3 - 1 / 2). • a(n) = floor(Fibonacci(n + 2) / 2 + n / 3 - 1 / 6). • a(n) = ceiling(Fibonacci(n + 2) / 2 + n / 3 - 1 / 2). • a(n) = a(n - 3) + Fibonacci(n) + 1, n > 2. • a(n) = 2 * a(n - 1) - 2 * a(n - 4) + a(n - 6), n > 5. •
► [A117761] 0,1,1,2,3,5,8,12,20,32,51,82,131,210,336,538,862,1380,2210,3539,5667,9075,14532,23271,37265 ⋆ Expansion of x * (1 + x ^ 2 + x ^ 4) / (1 - x - x ^ 3 - x ^ 5 - x ^ 7). • a(n) = a(n - 1) + a(n - 3) + a(n - 5) + a(n - 7). •
► [A308869] 0,0,0,0,0,0,1,1,2,3,5,8,13,17,25,34,48,63,86,109,143,182,232,288,363 ⋆ Sum of the fifth largest parts in the partitions of n into 6 parts. • a(n) = Sum _{ m=1..floor(n / 6) } Sum _{ l=m..floor((n - m) / 5) } Sum _{ k=l..floor((n - l - m) / 4) } Sum _{ j=k..floor((n - k - l - m) / 3) } Sum _{ i=j..floor((n - j - k - l - m) / 2) } l. •
► [A308929] 0,0,0,0,0,0,0,1,1,2,3,5,8,13,19,27,38,54,73,101,133,177,230,298,380 ⋆ Sum of the fifth largest parts in the partitions of n into 7 parts. • a(n) = Sum _{ o=1..floor(n / 7) } Sum _{ m=o..floor((n - o) / 6) } Sum _{ l=m..floor((n - m - o) / 5) } Sum _{ k=l..floor((n - l - m - o) / 4) } Sum _{ j=k..floor((n - k - l - m - o) / 3 } Sum _{ i=j..floor((n - j - k - l - m - o) / 2) } l. •

► [A308994] 0,0,0,0,0,0,0,0,1,1,2,3,5,8,13,19,29,40,58,79,111,148,201,264,349 ⋆ Sum of the fifth largest parts in the partitions of n into 8 parts. ● a(n) = Sum _{ p=1..floor(n / 8) } Sum _{ o=p..floor((n - p) / 7) } Sum _{ m=o..floor((n - o - p) / 6) } Sum _{ l=m..floor((n - m - o - p) / 5) } Sum _{ k=l..floor((n - l - m - o - p) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p) / 2) } l. ●

► [A326469] 0,0,0,0,0,0,0,0,0,1,1,2,3,5,8,13,19,29,42,60,83,117,158,216,288 ⋆ Sum of the fifth largest parts of the partitions of n into 9 parts. ● a(n) = Sum _{ q =1..floor(n / 9) } Sum _{ p=q..floor((n - q) / 8) } Sum _{ o=p..floor((n - p - q) / 7) } Sum _{ m=o..floor((n - o - p - q) / 6) } Sum _{ l=m..floor((n - m - o - p - q) / 5) } Sum _{ k=l..floor((n - l - m - o - p - q) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p - q) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p - q) / 2) } l. ●

► [A326594] 0,0,0,0,0,0,0,0,0,0,1,1,2,3,5,8,13,19,29,42,62,85,121,164,226 ⋆ Sum of the fifth largest parts of the partitions of n into 10 parts. ● a(n) = Sum _{ r =1..floor(n / 10) } Sum _{ q=r..floor((n - r) / 9) } Sum _{ p=q..floor((n - q - r) / 8) } Sum _{ o=p..floor((n - p - q - r) / 7) } Sum _{ m=o..floor((n - o - p - q - r) / 6) } Sum _{ l=m..floor((n - m - o - p - q - r) / 5) } Sum _{ k=l..floor((n - l - m - o - p - q - r) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p - q - r) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p - q - r) / 2) } l. ●

► [A088795] 1,2,3,5,8,13,20,30,43,60,81,107,138,175,218,268,325,390,463,545,636,737,848,970,1103 ⋆ a(n) = - 1 / 16 - 3 * n ^ 2 / 8 + 17 * n / 12 + n ^ 3 / 12 + (- 1) ^ n / 16. ● a(n) = - 1 / 16 - 3 * n ^ 2 / 8 + 17 * n / 12 + n ^ 3 / 12 + (- 1) ^ n / 16. - _ R. J. Mathar _ , Jul 22 2009 ●

► [A059923] 1,2,3,5,8,13,20,31,48,74,114,176,271,417,642,988,1521,2341,3603,5545,8533,13131,20207,31096,47853 ⋆ a(n + 1) is smallest number with a(n + 1) ^ n > a(n) ^ (n + 1). ● a(n + 1) = floor(a(n) ^ (1 + 1 / n)) + 1; compare A080870. - _ Paul D. Hanna _ , Feb 21 2003 ● a(n) = floor(x ^ n), where x=1.53885131519173... - _ Paul D. Hanna _ , Feb 21 2003 ●

► [A055805] 1,1,1,2,3,5,8,13,20,32,46,72,97,148,189,281,344,499,591,838,967,1343,1518,2069,2300 ⋆ a(n) = T(n,n - 5), array T as in A055801. ● a(n) = ((2 * n ^ 5 - 45 * n ^ 4 + 450 * n ^ 3 - 2070 * n ^ 2 + 4873 * n - 3585) + 5 * (- 1) ^ n * (n ^ 4 - 34 * n ^ 3 + 446 * n ^ 2 - 2741 * n + 6861)) / 7680 for n>5. ●

► [A225394] 1,1,2,3,5,8,13,20,32,51,81,129,205,326,519,826,1314,2091,3327,5294,8424,13404,21328,33937,54000 ⋆ Expansion of 1 / (1 - x - x ^ 2 + x ^ 7 - x ^ 9). ● a(n) = a(n - 1) + a(n - 2) - a(n - 7) + a(n - 9). - _ Ilya Gutkovskiy _ , Nov 16 2016 ●

► [A293644] 0,1,1,1,2,3,5,8,13,20,33,53,86,140,226,366,592,958,1550,2509,4059,6568,10627,17194,27821 ⋆ a(n) is the integer k that minimizes |k / Fibonacci(n) - 3 / 5|. ● a(n) = a(n - 1) + 2 a(n - 2) - a(n - 3) - 2 a(n - 4) + a(n - 5) + 2 a(n - 6) - a(n - 7) - 2 a(n - 8) + a(n - 9) + a(n - 10) for n >= 11. ● a(n) = floor(1 / 2 + 3 * Fibonacci(n) / 5). ●

► [A055806] 1,1,1,2,3,5,8,13,21,33,53,79,125,176,273,365,554,709,1053,1300,1891,2267,3234,3785,5303 ⋆ a(n) = T(n,n - 6), array T as in A055801. ● a(n) = (48915 - 58884 * n + 29723 * n ^ 2 - 7200 * n ^ 3 + 965 * n ^ 4 - 66 * n ^ 5 + 2 * n ^ 6 + 3 * (- 1) ^ n * (- 231345 + 98988 * n - 18505 * n ^ 2 + 1840 * n ^ 3 - 95 * n ^ 4 + 2 * n ^ 5)) / 92160, n > 6. ●

► [A117760] 1,1,1,2,3,5,8,13,21,33,53,85,136,218,349,559,895,1433,2295,3675,5885,9424,15091,24166,38698 ⋆ Expansion of 1 / (1 - x - x ^ 3 - x ^ 5 - x ^ 7). ● a(n) = a(n - 1) + a(n - 3) + a(n - 5) + a(n - 7). ●

► [A181600] 1,1,2,3,5,8,13,21,33,53,85,136,218,349,559,895,1434,2297,3679,5893,9439,15119,24217,38790,62132 ⋆ Expansion of 1 / (1 - x - x ^ 2 + x ^ 8 - x ^ 10). ● a(n) = a(n - 1) + a(n - 2) - a(n - 8) + a(n - 10). - _ Franck Maminirina Ramaharo _ , Oct 31 2018 ●

► [A225396] 1,1,2,3,5,8,13,21,34,55,88,142,229,369,595,959,1546,2492,4017,6475,10438,16826,27123,43722,70479 ⋆ Expansion of 1 / (1 - x - x ^ 2 + x ^ 10 - x ^ 12). ● a(0)=1, a(1)=1, a(2)=2, a(3)=3, a(4)=5, a(5)=8, a(6)=13, a(7)=21, a(8)=34, a(9)=55, a(10)=88, a(11)=142, a(n)=a(n - 1) + a(n - 2) - a(n - 10) + a(n - 12). - _ Harvey P. Dale _ , Apr 12 2014 ●

► [A132916] 0,1,1,1,1,1,1,1,2,3,5,8,13,21,34,55,89,144,233,377,610,987,1597,2584,4181 ⋆ a(0)=0; a(1)=1; a(n) = Sum _{ k=1..floor(n ^ (1 / 3)) } a(n - k) for n > = 2. ● a(n) = Sum _{ k=1..floor(n ^ (1 / 3)) } a(n - k) for n >= 2; a(0)=0; a(1)=1. ●

► [A000045] 0,1,1,2,3,5,8,13,21,34,55,89,144,233,377,610,987,1597,2584,4181,6765,10946,17711,28657,46368 ⋆ Fibonacci numbers: F(n) = F(n - 1) + F(n - 2) with F(0) = 0 and F(1) = 1. ● a(n)=F(n) has the property: F(n) * F(m) + F(n + 1) * F(m + 1) = F(n + m + 1). - _ Miklos Kristof _ , Nov 13 2003 ● a(n - 1) = Sum _{ k=0..n } (- 1) ^ k * binomial(n - ceiling(k / 2), floor(k / 2)). - _ Benoit Cloitre _ , May 05 2005 ● a(n) = (b(n + 1) + b(n - 1)) / n where { b(n) } is the sequence A001629. - _ Sergio Falcon _ , Nov 22 2006 ● a(n) = denominator of continued fraction [1,1,1,...] (with n ones); e.g., 2 / 3 = continued fraction [1,1,1]; where barover[1] = [1,1,1,...] = 0.6180339.... - _ Gary W. Adamson _ , Nov 29 2007 ● a(2 ^ n) = Product _{ i=0..n - 2 } B(i) where B(i) is A001566. Example 3 * 7 * 47 = F(16). - _ Kenneth J Ramsey _ , Apr 23 2008 ● a(n) = Sum _{ l _ 1=0..n + 1 } Sum _{ l _ 2=0..n } ...Sum _{ l _ i=0..n - i } ... Sum _{ l _ n=0..1 } delta(l _ 1,l _ 2,...,l _ i,...,l _ n), where delta(l _ 1,l _ 2,...,l _ i,...,l _ n) = 0 if any l _ i + l _ (i + 1) >= 2 for i=1..n - 1 and delta(l _ 1,l _ 2,...,l _ i,...,l _ n) = 1 otherwise. - _ Thomas Wieder _ , Feb 25 2009 ●

► [A020695] 2,3,5,8,13,21,34,55,89,144,233,377,610,987,1597,2584,4181,6765,10946,17711,28657,46368,75025,121393,196418 ⋆ Pisot sequence E(2,3). ● a(n) = Fibonacci(n + 3); a(n) = a(n - 1) + a(n - 2). ● a(n) = (2 ^ (- n) * ((1 - sqrt(5)) ^ n * (- 2 + sqrt(5)) + (1 + sqrt(5)) ^ n * (2 + sqrt(5)))) / sqrt(5). - _ Colin Barker _ , Jun 05 2016 ●

► [A109609] 1,1,2,3,5,8,13,21,34,55,89,144,234,378,612,990,1602,2592,4194,6786,10980,17766,28746,46512,75259 ⋆ Expansion of 1 / ((x - 1) * (x + 1) * (x ^ 2 + x + 1) * (x ^ 2 + x - 1) * (x ^ 2 - x + 1) * (x ^ 2 + 1) * (x ^ 4 - x ^ 2 + 1)). ● a(0)=1, a(1)=1, a(2)=2, a(3)=3, a(4)=5, a(5)=8, a(6)=13, a(7)=21, a(8)=34, a(9)=55, a(10)=89, a(11)=144, a(12)=234, a(13)=378, a(n)=a(n - 1) + a(n - 2) + a(n - 12) - a(n - 13) - a(n - 14). - _ Harvey P. Dale _ , Sep 20 2013 ●

► [A349843] 1,1,1,2,3,5,8,13,21,34,56,90,145,235,380,615,995,1610,2605,4215,6821,11036,17856,28892,46748 ⋆ Expansion of (1 - x ^ 2) / ((1 - x ^ 10)(1 - x - x ^ 2)). ● a(n) = a(n - 1) + a(n - 3) + a(n - 5) + a(n - 7) + a(n - 9) + a(n - 10) + delta(n,0), a(n<0)=0. ● a(n) = a(n - 1) + a(n - 2) + a(n - 10) - a(n - 11) - a(n - 12) + delta(n,0) - delta(n,2), a(n<0)=0. ●

► [A207976] 2,3,5,8,13,21,34,56,92,152,251,414,684,1130,1867,3084,5095,8418,13908,22979,37966,62727,103638,171232,282911 ⋆ a(1) = 2; for n>1, a(n) = largest integer such that the sequence b(n) = a(n) ^ (1 / n) is decreasing. ● a(1) = 2, a(2) = 3; a(n + 1) = floor(a(n) ^ (1 + 1 / n)) for n > 1. ● a(n) = 1 + floor(q ^ n), where q = lim a(n + 1) / a(n) = 1.652213... ● a(2) = 3; a(n) = floor(exp((n / (n - 1)) * log a(n - 1))) for n > 2. ●

► [A229194] 1,1,1,2,3,5,8,13,21,35,58,97,163,275,466,793,1353,2315,3969,6817,11726,20195,34816,60073,103724 ⋆ Integers nearest to (2 ^ ((n - 3) / 2) + 3 ^ ((n - 3) / 2)). ● a(n) = round(2 ^ ((n - 3) / 2) + 3 ^ ((n - 3) / 2)). ●

► [A306486] 0,1,1,2,3,5,8,13,21,36,58,96,159,262,431,712,1172,1934,3189,5256,8667,14289,23559,38841,64039 ⋆ Number of squares in the interval [e ^ (n - 1), e ^ n). ● a(n) = ceiling(sqrt(exp(n))) - ceiling(sqrt(exp(n - 1))). ● a(n) = (1 - 1 / sqrt(e)) * e ^ (n / 2) + O(1) ~ 0.39346934... * e ^ (n / 2) ~ A290506 * e ^ (n / 2). - _ Alexei Kourbatov _ , Feb 20 2019 ●

► [A236212] 0,0,0,0,0,0,1,1,2,3,5,8,13,21,36,63,113,206,386,736,1433,2849,5773,11919,25059 ⋆ Floor of the value of Riemann's xi function at n. ● a(n) = [xi(n)] for n > 0. ●

► [A041247] 1,1,2,3,5,8,13,21,475,496,971,1467,2438,3905,6343,10248,231799,242047,473846,715893,1189739,1905632,3095371,5001003,113117437 ⋆ Denominators of continued fraction convergents to sqrt(135). ● a(n) = 488 * a(n - 8) - a(n - 16). - _ Vincenzo Librandi _ , Dec 13 2013 ●

► [A349840] 1,1,1,2,3,5,8,13,22,35,56,91,147,238,385,623,1009,1632,2640,4272,6912,11184,18096,29280,47377 ⋆ The number of compositions of n using elements from the set { 1,3,5,7,8 } . ● a(n) = a(n - 1) + a(n - 3) + a(n - 5) + a(n - 7) + a(n - 8) + delta(n,0), a(n<0)=0 (where delta(i,j) is the Kronecker delta). ● a(n) = a(n - 1) + a(n - 2) + a(n - 8) - a(n - 9) - a(n - 10) + delta(n,0) - delta(n,2), a(n<0)=0. ●

► [A293639] 0,0,0,0,1,2,3,5,8,13,22,35,57,93,150,244,394,638,1033,1672,2706,4378,7084,11462,18547 ⋆ a(n) is the greatest integer k such that k / Fibonacci(n) < 2 / 5. ● a(n) = a(n - 1) + 2 a(n - 2) - a(n - 3) - 2 a(n - 4) + 2 a(n - 5) + a(n - 6) - 3 a(n - 7) - a(n - 8) + 3 a(n - 9) - 2 a(n - 11) + a(n - 12) + 2 a(n - 13) - a(n - 14) - a(n - 15) for n >= 16. ● a(n) = floor(2 * Fibonacci(n) / 5). ●

► [A004697] 0,0,0,0,0,1,2,3,5,8,13,22,36,58,94,152,246,399,646,1045,1691,2736,4427,7164,11592 ⋆ a(n) = floor(Fibonacci(n) / 4). ● a(n) = floor(Fibonacci(n) / 4). ● a(n) = ceiling(Fibonacci(n) / 4 - 3 / 4). ● a(n) = round(Fibonacci(n) / 4 - 3 / 8). ● a(n) = Sum _{ k=1..n - 2 } round(Fibonacci(n) / 4). ● a(n) = a(n - 6) + Fibonacci(n - 3), n > 5. (End) ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) - a(n - 4) + a(n - 5) - a(n - 7). - _ R. J. Mathar _ , Jan 08 2011 ●

► [A124429] 1,1,1,2,3,5,8,13,22,36,61,102,172,292,493,841,1429,2439,4169,7124,12216,20930,35940,61749,106155 ⋆ Antidiagonal sums of triangle A124428. ● a(n) = Sum _{ k=0..[n / 3] } C([(n - k) / 2],k) * C([(n - k + 1) / 2],k)). ●

► [A005683] 1,2,3,5,8,13,22,37,63,108,186,322,559,973,1697,2964,5183,9071,15886,27835,48790,85545,150021,263136,461596 ⋆ Numbers of Twopins positions. ● a(3)=1, a(4)=2, a(5)=3, a(6)=5, a(7)=8, a(8)=13, a(n)=2 * a(n - 1) - a(n - 4) - a(n - 6). - _ Harvey P. Dale _ , Jun 20 2011 ●

► [A288382] 1,2,3,5,8,13,22,39,72,137,266,523,1036,2061,4110,8207,16400,32785,65554,131091,262164,524309,1048598,2097175,4194328 ⋆ Positions of 0 in A288381; complement of A288383. ● a(n) = - 1 + 2 ^ (n - 3) + n for n>2. ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 2 * a(n - 3) for n>5. ●

► [A257418] 2,3,5,8,13,23,41,77,145,281,545,1073,2113,4193,8321,16577,33025,65921,131585,262913,525313,1050113,2099201,4197377,8392705 ⋆ Number of pieces after a sheet of paper is folded n times and cut diagonally. ● a(n) = (2 ^ n + 2 ^ (n / 2) * (1 + (- 1) ^ n + 3 * sqrt(2) * (1 - (- 1) ^ n) / 4) + 2) / 2 for n>1. (_ Johan Nilsson _) ● a(0) = 2, a(1) = 3, a(n + 1) = 2 * a(n) - 2 ^ (floor((n - 1) / 2)) - 1. ● a(n) = 3 * a(n - 1) - 6 * a(n - 3) + 4 * a(n - 4) for n>5. - _ Colin Barker _ , Feb 05 2020 ●

► [A132915] 0,1,1,1,2,3,5,8,13,26,47,86,159,292,537,988,1976,3793,7294,14051,27114,52252,100711,194128,374205 ⋆ a(0)=0; a(1)=1; a(n) = Sum _{ k=1..[sqrt(n)] } a(n - k) for n>=2. ● a(n) = sum a(n - k), k= 1 ... [sqrt(n)] for n>=2; a(0)=0; a(1)=1. ●

► [A158083] 2,3,5,8,13,30,39,48,57,66,75,84,93,102,111,120,129,138,147,156,165,174,183,192,201 ⋆ a(n) = Fibonacci(n + 3) for n < 5 and 9 * n - 15 otherwise. ● a(n) = a(n - 1) + 9 for n > 5, a(n - 1) + a(n - 2) + 9 for n = 5, and Fibonacci(n + 3) for n < 5. ● a(n) = 9 * n - 15, n>4. (End) ●

► [A041957] 1,2,3,5,8,13,47,389,436,1261,13046,14307,84581,183469,2653147,5489763,30101962,35591725,386019212,807630149,1193649361,10356825037,32264124472,42620949509,74885073981 ⋆ Denominators of continued fraction convergents to sqrt(501). ● a(n) = 22485463805950 * a(n - 28) - a(n - 56) for n>55. - _ Vincenzo Librandi _ , Dec 27 2013 ●

► [A041101] 1,1,2,3,5,8,13,190,203,393,596,989,1585,2574,37621,40195,77816,118011,195827,313838,509665,7449148,7958813,15407961,23366774 ⋆ Denominators of continued fraction convergents to sqrt(58). ● a(n) = 198 * a(n - 7) + a(n - 14). - _ Vincenzo Librandi _ , Dec 11 2013 ●

► [A041809] 1,1,2,3,5,8,13,528,541,1069,1610,2679,4289,6968,283009,289977,572986,862963,1435949,2298912,3734861,151693352,155428213,307121565,462549778 ⋆ Denominators of continued fraction convergents to sqrt(425). ● a(n) = 536 * a(n - 7) + a(n - 14) for n>13. - _ Vincenzo Librandi _ , Dec 24 2013 ●

► [A000046] 1,1,1,1,2,3,5,8,14,21,39,62,112,189,352,607,1144,2055,3885,7154,13602,25472,48670,92204,176770 ⋆ Number of primitive n - bead necklaces (turning over is allowed) where complements are equivalent. ● a(n) = ((1 / (2n))Sum _{ odd d|n } mu(d) * 2 ^ (n / d) + Sum _{ d|n } mu(n / d) * 2 ^ floor(d / 2)) / 2. ●

► [A293641] 0,0,0,1,1,2,3,5,8,14,22,36,58,93,151,244,395,639,1034,1672,2706,4378,7084,11463,18547 ⋆ a(n) is the integer k that minimizes |k / Fibonacci(n) - 2 / 5|. ● a(n) = a(n - 1) + 2 a(n - 2) - a(n - 3) - 2 a(n - 4) + a(n - 5) + 2 a(n - 6) -

a(n - 7) - 2 a(n - 8) + a(n - 9) + a(n - 10) for n >= 11. ● a(n) = floor(1 / 2 + 2 * Fibonacci(n) / 5). ●

▶ [A293553] 0,0,0,0,1,1,2,3,5,8,14,22,36,58,94,152,247,399,646,1045,1691,2736,4428,7164,11592 ⋆ a(n) is the integer k that minimizes |k / Fibonacci(n) - 1 / 4|. ● a(n) = a(n - 1) + a(n - 2) + a(n - 6) - a(n - 7) - a(n - 8) for n >= 9. ● a(n) = floor(1 / 2 + Fibonacci(n) / 4). ●

▶ [A131132] 1,1,2,3,5,8,14,22,36,58,94,152,247,399,646,1045,1691,2736,4428,7164,11592,18756,30348,49104,79453 ⋆ a(n) = a(n - 1) + a(n - 2) + 1 if n is a multiple of 6, otherwise a(n) = a(n - 1) + a(n - 2). ● a(n) = (number of compositions of n consisting of only 1 or 2 or 6) - (number of compositions with only 7 or ((1 or 2) and 7)) - (number of compositions with only 8 or ((1 or 2) and 8)). The "or" is inclusive. - _ Gregory L. Simay _ , May 25 2017 ●

▶ [A293545] 0,0,0,1,2,3,5,8,14,22,36,59,96,155,251,406,658,1064,1722,2787,4510,7297,11807,19104,30912 ⋆ a(n) is the greatest integer k such that k / Fibonacci(n) < 2 / 3. ● a(n) = a(n - 1) + a(n - 2) + a(n - 8) - a(n - 9) - a(n - 10) for n >= 11. ● a(n) = floor(2 * Fibonacci(n) / 3). ●

▶ [A225391] 1,1,2,3,5,8,14,23,38,63,104,172,285,472,781,1293,2140,3542,5863,9705,16064,26590,44013,72852,120588 ⋆ Expansion of 1 / (1 - x - x ^ 2 - x ^ 6 + x ^ 8). ● a(n) = a(n - 1) + a(n - 2) + a(n - 6) - a(n - 8). - _ Franck Maminirina Ramaharo _ , Nov 02 2018 ●

▶ [A078843] 1,2,3,5,8,14,23,39,64,103,169,269,427,676,1065,1669,2628,4104,6414,10023,15608,24281,37733,58503,90616 ⋆ Where 3 ^ n occurs in n - almost primes, starting at a(0)=1. ● a(n) = a(n - 1) + appi3(n - k, floor(3 ^ n / 2 ^ k)), where k = ceiling(n * c) with c = log(5 / 3) / log(5 / 2) = 0.557492950650240067298570731908359234 43... and appi3(k,n) is the number of k - almost primes not divisible by 3 and not exceeding n. - _ Max Alekseyev _ , Jan 06 2008 ●

▶ [A018068] 1,2,3,5,8,14,23,39,64,108,182,305,512,862,1449,2436,4096,6889,11586,19484,32768,55109,92682,155872,262144 ⋆ Powers of fourth root of 8 rounded up. ● a(n) = ceiling(8 ^ (n / 4)). - _ Michel Marcus _ , Dec 28 2020 ●

▶ [A120400] 1,1,2,3,5,8,14,23,39,65,109,182,305,510,854,1429,2392,4003,6700,11213,18767,31409,52568,87980,147248 ⋆ Expansion of 1 / (1 - x - x ^ 2 - x ^ 6). ● a(n) = a(n - 1) + a(n - 2) + a(n - 6). ●

▶ [A000621] 1,1,1,2,3,5,8,14,23,39,65,110,184,310,520,876,1471,2475,4159,6996,11759,19775,33244,55902,93984 ⋆ Number of monosubstituted alkanes C(n - 1)H(2n - 1) - X with n - 1 carbon atoms that are not stereoisomers. ● a(n) = T(2 * n - 1,1), where T(n,m) = Sum _{ i=1..n - m } binomial(i + m - 1,i) * ((1 + (- 1) ^ (n - m)) / 2) * T((n - m) / 2,i), n > m, T(n,n)=1. - _ Vladimir Kruchinin _ , Mar 18 2015 ●

▶ [A246360] 1,2,3,5,8,14,23,41,68,122,203,365,608,1094,1823,3281,5468,9842,16403,29525,49208,88574,147623,265721,442868 ⋆ a(1) = 1, then A007051 ((3 ^ n) + 1) / 2 interleaved with A057198 (5 * 3 ^ (n - 1) + 1) / 2. ● a(1) = 1, a(2n) = (3 ^ n + 1) / 2, a(2n + 1) = (5 * 3 ^ (n - 1) + 1) / 2. ●

▶ [A191388] 1,1,2,3,5,8,14,23,41,69,125,214,393,682,1267,2223,4171,7385,13976,24935,47544,85377,163863,295900,571216 ⋆ Number of dispersed Dyck paths of length n (i.e., Motzkin paths of length n with no (1,0) steps at positive heights) with no valleys at level 0. ● a(n) = 1 + Sum _{ i=0..(n - 1) / 2 } (Sum _{ k=0..i } ((k + 1) * binomial(2 * i - k,i - k) * binomial(n - 2 * i - 1,k + 1)) / (i + 1)). - _ Vladimir Kruchinin _ , Mar 27 2016 ●

▶ [A062692] 2,3,5,8,14,23,41,71,127,226,412,747,1377,2538,4720,8800,16510,31042,58636,111013,210871,401428,766150,1465020,2807196 ⋆ Number of irreducible polynomials over F _ 2 of degree at most n. ● a(n) = Sum _{ m=1..n } (1 / m) * Sum _{ d | m } mu(d) * 2 ^{ m / d } . ●

▶ [A340215] 1,2,3,5,8,14,24,41,70,119,203,346,590,1006,1715,2924,4985,8499,14490,24704,42118,71807,122424,208721,355849 ⋆ Consider constructing binary words that begin with 0 such that the subword 00, whenever it appears, is followed by 111. Then a(n) counts such words at length n (including those where the string 111 is yet being completed - see Example). ● a(n) = a(n - 1) + a(n - 2) + a(n - 5) with a(1) = 1, a(2) = 2, a(3) = 3, a(4) = 5, a(5) = 8. ●

▶ [A114831] 1,2,3,5,8,14,24,41,71,122,211,365,632,1094,1895,3282,5684,9845,17052,29534,51154,88601,153461,265802,460382 ⋆ Each term is previous term plus floor of harmonic mean of two previous terms. ● a(1) = 1, a(2) = 2, for n>2: a(n + 1) = a(n) + floor(HarmonicMean[a(n),a(n - 1)]). a(n + 1) = a(n) + floor[(2 * a(n) * a(n - 1)) / (a(n) + a(n - 1))]. ●

▶ [A343161] 1,1,1,2,3,5,8,14,24,42,72,127,221,390,684,1207,2125,3753,6620,11698,20659,36518,64533,114099,201707 ⋆ Number of planar distributive lattices with n nodes. ● a(n) = Sum _{ k=2..n } V(k) * a(n - k + 1), where V(k) is the number of planar vertically indecomposable distributive lattices of size k. - _ Bianca Newell _ , Jun 22 2021 ●

▶ [A274110] 1,2,3,5,8,14,24,42,73,128,224,393,689,1209,2121,3722,6531,11461,20112,35294,61936,108690,190737,334720,587392 ⋆ Number of equivalence classes of ballot paths of length n for the string uu. ● a(n) = 2 * a(n - 1) - a(n - 3) + a(n - 4) - a(n - 5). - _ Wesley Ivan Hurt _ , Mar 15 2023 ●

▶ [A290075] 1,1,2,3,5,8,14,24,44,80,152,288,560,1088,2144,4224,8384,16640,33152,66048,131840,263168,525824,1050624,2100224 ⋆ Number of monomials in c(n) where c(1) = x, c(2) = y, c(n + 2) = c(n + 1) + c(n) ^ 2. ● a(n) = 2 ^ (n / 2 - 1) + 2 ^ (n - 4) for n>2 and even. ● a(n) = 3 * 2 ^ ((n - 5) / 2) + 2 ^ (n - 4) for n>2 and odd. ●

▶ [A104882] 1,1,2,3,5,8,14,24,45,85,170,351,749,1656,3758,8776,21013,51473,129018,329939,860901,2288528,6192526,17047248,47693661 ⋆ Diagonal sums of number triangle A104881. ● a(n) = Sum _{ k=0..floor(n / 2) } (Sum _{ j=0..k } (n - 2 * k) ^ (k - j)). ●

▶ [A345235] 1,1,1,1,2,3,5,8,14,25,44,78,142,261,479,886,1655,3105,5843,11043,20965,39938,76285,146123,280691 ⋆ G.f. A(x) satisfies: A(x) = x + x ^ 2 * exp(A(x) + A(- x ^ 2) / 2 + A(x ^ 3) / 3 + A(- x ^ 4) / 4 + ...). ● a(n + 2) = (1 / n) * Sum _{ k=1..n } (- 1) ^ k * (Sum _{ d|k } (- 1) ^ d * d * a(d)) * a(n - k + 2). ●

▶ [A192633] 1,2,3,5,8,14,25,45,82,151,280,522,978,1839,3474,6587,12533,23919,45773,87811,168830,325246,627706,1213418,2349157 ⋆ Partial sums of the Floor - Sqrt transform of Catalan numbers. ● a(n) = sum(floor(sqrt(binomial(2 * k,k) / (k + 1))),k=0..n). ●

▶ [A178833] 1,2,3,5,8,14,25,49,96,199,413,894,1924,4261,9392,21205,47534,108492,246313,568003,1302431,3024429,6990985,16343338,38026783 ⋆ Partial sums of "Half - Catalan numbers" A000992. ● a(n) = SUM[i=1..n] SUM[k=1..floor(i / 2)] a(k) * a(i - k), with a(1) = 1. ●

▶ [A104880] 1,1,2,3,5,8,14,26,53,117,280,721,1989,5844,18188,59652,205305,739041,2775190,10846975,44039765,185391480,807776210,3637193486,16900721837 ⋆ Diagonal sums of a sum - of - powers triangle. ● a(0)=1, a(1)=1, a(n)=n + sum { k=2..floor(n / 2), (k ^ (n - 2k + 1) - 1) / (k - 1) } , n>1. ●

▶ [A307909] 1,1,2,3,5,8,15,27,52,99,195,382,757,1499,2986,5945,11865,23678,47309,94519,188942,377689,755191,1510000,3019625 ⋆ Number of binary strings of length n whose only palindromic prefixes are "1" and "11". ● a(2) = 1, a(3) = 1, a(2 * k) = 2 * a(2 * k - 1) - a(k + 1) + a(k), a(2 * k + 1) = 2 * a(2 * k) - a(k + 1) ●

▶ [A110536] 1,2,3,5,8,15,27,57,142,381,1110,3484,11678,41566,156319,618829,2570651,11174315,50704149,239641306,1177394450,6002778135,31706648191,173250478087,977993291266 ⋆ a(n) = Sum _{ k=1..n } ceiling(k ^ n / n ^ k). ● a(n) = Sum _{ k=1..n } ceiling(k ^ n / n ^ k). ●

▶ [A049861] 0,2,3,5,8,15,28,53,99,185,345,644,1202,2244,4189,7820,14598,27251,50871,94964,177275,330930,617767,1153223,2152791 ⋆ a(n)=Sum { a(k): k=0,1,2,...,n - 4,n - 2,n - 1 } ; a(n - 3) is not a summand; 3 initial terms required. ● a(n)=2 * a(n - 1) - a(n - 3) + a(n - 4); 4 initial terms required. ●

▶ [A215525] 1,1,2,3,5,8,16,17,18,36,54,57,73,81,84,100,105,205,305,405,413,429,634,734,788 ⋆ a(0)=a(1)=1, a(n) = a(n - 1) + a(a(n - 2) mod n). ● a(0)=a(1)=1, for n>=2, a(n) = a(n - 1) + a(a(n - 2) mod n). ●

▶ [A308852] 1,2,3,5,8,16,31,62,129,279,621,1421,3343,8057,19870,50071,128747,337414,900358,2443947,6742667,18893218,53729800,154983562,453174686 ⋆ Minimum number k such that the k - th tetrahedral number is not smaller than n!. ● a(n) = ceiling((sqrt(3) * sqrt(243 * (n!) ^ 2 - 1) + 27 * n!) ^ (1 / 3) / 3 ^ (2 / 3) + 1 / (3 ^ (1 / 3) * (sqrt(3) * sqrt(243 * (n!) ^ 2 - 1) + 27 * n!) ^ (1 / 3)) - 1). - _ Daniel Suteu _ , Jun 30 2019 ● a(n) = floor((6 * n!) ^ (1 / 3)). - _ Giovanni Resta _ , Jul 30 2019 ●

▶ [A093000] 2,3,5,8,16,38,101,284,852,2694,8935,30952,111598,417560,1617204,6468816,26671611,113158064,493244565,2205856753,10108505545,47413093714,227385209453,1113955476429,5569777382146 ⋆ Least k such that Sum _{ r=n + 1..k } r >= n!. ● a(n) = ceiling((- 1 + sqrt(1 + 8n! + 4n ^ 2 + 4n)) / 2) and ignoring the - 1 outside the sqrt and the 1 inside gives the approximate formula in the comment. - _ Joshua Zucker _ , May 08 2006 ●

▶ [A205303] 1,1,1,1,1,1,1,1,1,1,2,3,5,8,18,21,44,60,174,372,1344,2556,12984,24048,82224 ⋆ a(n) where a(n) * a(n - 5) * a(n - 10) = a(n - 1) * a(n - 6) * a(n - 8) + a(n - 2) * a(n - 4) * a(n - 9), with a(1) = ... = a(10) = 1. ● a(n) = a(11 - n) for all n in Z. ● a(n + 7) * a(n - 6) = - a(n + 6) * a(n - 5) + 13 * a(n + 3) * a(n - 2) for all n in Z. [see Grammaticos et al., Equation (3.2) for the general form of this equation.] ● a(n + 7) * a(n - 7) = a(n + 5) * a(n - 5) + 13 * a(n + 1) * a(n - 1) for all n in Z. ● a(n) = (3 * a(n - 1) * a(n - 4) - 2 * a(n - 2) * a(n - 3)) / a(n - 5) unless n == 0, 2, 4, 5, 8, 11 (mod 12). - _ Michael Somos _ , Oct 21 2018 ● a(n) = (4 * a(n - 1) * a(n - 4) - 2 * a(n - 2) * a(n - 3)) / a(n - 5) for n == 2, 5, 11 (mod 12). - _ Michael Somos _ , Oct 22 2018 ●

▶ [A135568] 1,2,3,5,8,19,41,101,240,614,1782,5024,15492,48859,150069,470216,1557591,5405758,18319515,64600395,229331402,797199637,2862671427,10330509932,38308974332 ⋆ a(n) = floor(Product _{ i=1..n } prime(i) / i). ● a(n) = floor(product of the first n primes / n!). ●

▶ [A041457] 1,1,2,3,5,8,21,29,166,195,361,3444,3805,26274,30079,296985,327064,624049,3447309,4071358,11590025,15661383,27251408,42912791,70164199 ⋆ Denominators of continued fraction convergents to sqrt(244). ● a(n) = 353263809 * a(n - 26) - a(n - 52) for n>51. - _ Vincenzo Librandi _ , Dec 18 2013 ●

▶ [A041157] 1,2,3,5,8,21,386,793,1179,1972,3151,8274,152083,312440,464523,776963,1241486,3259935,59920316,123100567,183020883,306121450,489142333,1284406116,23608452421 ⋆ Denominators of continued fraction convergents to sqrt(88). ● a(n) = 394 * a(n - 6) - a(n - 12). G.f.: - (x ^ 10 - 2 * x ^ 9 + 3 * x ^ 8 - 5 * x ^ 7 + 8 * x ^ 6 - 21 * x ^ 5 - 8 * x ^ 4 - 5 * x ^ 3 - 3 * x ^ 2 - 2 * x - 1) / (x ^ 12 - 394 * x ^ 6 + 1). - _ Colin Barker _ , Jul 18 2012 ●

▶ [A042785] 1,2,3,5,8,21,1268,2557,3825,6382,10207,26796,1617967,3262730,4880697,8143427,13024124,34191675,2064524624,4163240923,6227765547,10391006470,16618772017,43628550504,2634331802257 ⋆ Denominators of continued fraction convergents to sqrt(923). ● a(n) = 1276 * a(n - 6) - a(n - 12) for n>11. - _ Vincenzo Librandi _ , Dec 23 2013 ●

▶ [A041731] 1,1,2,3,5,8,29,37,103,140,523,663,1186,1849,3035,4884,188627,193511,382138,575649,957787,1533436,5558095,7091531,19741157 ⋆ Denominators of continued fraction convergents to sqrt(385). ● a(n) = 191662 * a(n - 16) - a(n - 32) for n>31. - _ Vincenzo Librandi _ , Dec 23 2013 ●

▶ [A041569] 1,2,3,5,8,37,82,119,1986,2105,6196,26889,33085,59974,93059,246092,8460187,17166466,25626653,42793119,68419772,316472207,701364186,1017836393,16986746474 ⋆ Denominators of continued fraction convergents to sqrt(302). ● a(n) = 8553246 * a(n - 16) - a(n - 32) for n>31. [_ Bruno Berselli _ , Dec 20 2013] ●

▶ [A042471] 1,1,2,3,5,8,45,53,98,1719,1817,12621,14438,258067,272505,530572,2925365,3455937,6381302,9837239,16218541,26055780,1423230661,1449286441,2872517102 ⋆ Denominators of continued fraction convergents to sqrt(763). ● a(n) = 1439449202 * a(n - 22) - a(n - 44) for n>43. - _ Vincenzo Librandi _ , Jan 23 2014 ●

▶ [A041871] 1,2,3,5,8,45,98,1319,1417,5570,6987,33518,40505,74023,336597,410620,1568457,1979077,27296458,56571993,310156423,366728416,676884839,1043613255,2764111349 ⋆ Denominators of continued fraction convergents to sqrt(457). ● a(n) = 118179903168 * a(n - 25) + a(n - 50) for n>49. - _ Vincenzo Librandi _ , Dec 26 2013 ●

▶ [A042667] 1,2,3,5,8,61,69,268,873,4633,135230,680783,2177579,7213520,9391099,72951213,82342312,155293525,237635837,630565199,36810417379,74251399957,111061817336,185313217293,296375034629 ⋆ Denominators of continued fraction convergents to sqrt(863). ● a(n) = 37048053216 * a(n - 20) - a(n - 40) for n>39. - _ Vincenzo Librandi _ , Jan 26 2014 ●

▶ [A047606] 1,2,3,5,9,10,11,13,17,18,19,21,25,26,27,29,33,34,35,37,41,42,43,45,49 ⋆ Numbers that are congruent to { 1, 2, 3, 5 } mod 8. ● a(n) = 2 * n - 3 + (3 - (- 1) ^ n) * (1 - i ^ (n * (n + 1))) / 4, where i=sqrt(- 1). (End) ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. ●

▶ [A047370] 2,3,5,9,10,12,16,17,19,23,24,26,30,31,33,37,38,40,44,45,47,51,52,54,58 ⋆ Numbers that are congruent to { 2, 3, 5 } mod 7. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4, with a(1)=2, a(2)=3, a(3)=5, a(4)=9. - _ Harvey P. Dale _ , Apr 29 2013 ● a(n) = 7 * floor((n - 1) / 3) + 2 ^ ((n - 1) mod 3) + 1. - _ Gary Detlefs _ , May 25 2014 ● a(n) = (1 / 9) * (21 * n + 4 * sqrt(3) * sin((2 * Pi * n) / 3) - 6 * cos((2 * Pi * n) / 3) - 12). - _ Alexander R. Povolotsky _ , May 25 2014 ● a(3k) = 7k - 2, a(3k - 1) = 7k - 4, a(3k - 2) = 7k - 5. - _ Wesley Ivan Hurt _ , Jun 10 2016 ●

▶ [A064386] 1,2,3,5,9,13,17,33,57,65,129,241,257,513,993,1025,2049,4033,4097,8193,16257,16385,32769,65281,65537 ⋆ Numbers of the form 2 ^ k + 1 or 4 ^ k - 2 ^ k + 1. ● a(n) = a(n - 1) + 6 * a(n - 3) - 6 * a(n - 4) - 8 * a(n - 6) + 8 * a(n - 7) for n>7. ●

▶ [A060482] 1,2,3,5,9,13,21,29,45,61,93,125,189,253,381,509,765,1021,1533,2045,3069,4093,6141,8189,12285 ⋆ New record highs reached in A060030. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) for n > 5. ●

▶ [A336631] 1,2,3,5,9,13,21,37,55,91,163,244,406,730,1054,1702,2998,4456,7372,13204,19765,32887,59131,85411,137971 ⋆ a(n) = 1 + Max _{ 0<=i<=j<=k; i + j + k=n - 1 } a(i) * a(j) * a(k) for n>0, with a(0) = 1. ● a(n) = 1 + Max _{ 0<=i<=j<=k; i + j + k=n - 1 } a(i) * a(j) * a(k) for n>0, a(0) = 1. ●

▶ [A079962] 1,1,1,2,3,5,9,14,22,36,58,94,153,247,399,646,1045,1691,2737,4428,7164,11592,18756,30348,49105 ⋆ Number of permutations satisfying - k <= p(i) - i <= r and p(i) - i not in I, i=1..n, with k=1, r=5, I= { 1,3 } . ● a(n) = a(n - 1) + a(n - 3) + a(n - 5) + a(n - 6). ● a(n + 1) / a(n) - > golden ratio A001622. - _ Roger L. Bagula _ , Mar 13 2006 ● a(n) + a(n + 2) + a(n + 4) = Fibonacci (n + 5). - _ Mark Dols _ , Aug 20 2010 ● a(n) = round(Fibonacci(n + 3) / 4). - _ Mircea Merca _ , Jan 04 2011 ●

▶ [A293547] 0,1,1,1,2,3,5,9,14,23,37,59,96,155,251,407,658,1065,1723,2787,4510,7297,11807,19105,30912 ⋆ a(n) is the integer k that minimizes |k / Fibonacci(n) - 2 / 3|. ● a(n) = a(n - 1) + a(n - 2) - a(n - 4) + a(n - 5) + a(n - 6) for n >= 7. ● a(n) = floor(1 / 2 + 2 * Fibonacci(n) / 3). ●

▶ [A124502] 1,1,2,3,5,9,14,23,37,60,98,158,256,414,670,1085,1755,2840,4595,7435,12031,19466,31497,50963,82460 ⋆ a(1)=a(2)=1; thereafter, a(n + 1) = a(n) + a(n - 1) + 1 if n is a multiple of 5, otherwise a(n + 1) = a(n) + a(n - 1). ● a(n + 5) = a(n) + Fibonacci(n + 5), n>5. ● a(n) = 12 * a(n - 5) - 10 * a(n - 10) - a(n - 15). - _ Gary Detlefs _ , Dec 10 2010 ●

▶ [A173714] 0,1,2,3,5,9,14,23,38,61,99,161,260,421,682,1103,1785,2889,4674,7563,12238,19801,32039,51841,83880 ⋆ Floor(Lucas(n + 1) / 2), Lucas(n) = A000032(n). ● a(0)= 0, a(1)=1, a(n)=a(n - 1) + a(n - 2) + 1 if n mod 3 =2, else a(n)= a(n - 1) + a(n - 2). ● a(n) = a(n - 1) + a(n - 2) + (1 + (- 1) ^ Fib(n + 1)) / 2. ● a(n) = Fibonacci(n) + floor(Fibonacci(n + 1) / 2). - _ Gary Detlefs _ , Dec 10 2010 ●

▶ [A026008] 1,1,2,3,5,9,14,28,42,90,132,297,429,1001,1430,3432,4862,11934,16796,41990,58786,149226,208012,534888,742900 ⋆ a(n) = T(n, floor(n / 2)), where T = Catalan triangle (A008315). ● a(2n) = C(2n + 2, n + 1) / (n + 2), a(2n + 1) = 3C(2n + 2, n) / (n + 3). - _ Ralf Stephan _ , Apr 30 2004 ●

▶ [A101461] 1,1,1,2,3,5,9,14,28,48,90,165,297,572,1001,2002,3640,7072,13260,25194,48450,90440,177650,326876,653752 ⋆ Row maximum of Catalan triangle with zeros (A053121), i.e., maximum value of (m + 1) * binomial(n + 1,(n - m) / 2) / (n + 1) for given n with m same parity as n. ● a(n) = (m + 1) * binomial(n + 1, (n - m) / 2) / (n + 1) where m = floor(sqrt(n + 2) - (1 + (- 1) ^ floor(n + sqrt(n + 2) - 1)) / 2). a(n) seems to be slightly less than 2 ^ n / n. ●

▶ [A147877] 1,1,2,3,5,9,15,25,43,70,113,181,283,436,666,999,1483,2179,3166,4556,6504,9200,12918,18011,24938 ⋆ The number of degree sequences with degree sum 2n representable by a non - separable graph (with multiple edges allowed). ● a(n) = p(2n) - p(2n - 1) - Sum _{ j=0..n - 2 } p(j). ●

▶ [A005517] 1,2,3,5,9,15,25,45,75,125,225,375,625,1125,1875,3125,5625,9375,15625,28125,46875,78125,140625,234375,390625 ⋆ Smallest label f(T) given to a rooted tree T with n nodes in Matula - Goebel labeling. ● a(1)=1; a(2)=2; a(n) = 3 * 5 ^ ((n - 3) / 3) if n=0 (mod 3); a(n)=5 ^ ((n - 1) / 3) if n>=4 and n=1 (mod 3); a(n)=9 * 5 ^ ((n - 5) / 3) if n>=5 and n = 2 (mod 3) (see the Gutman and Ivic 1994 paper). - _ Emeric Deutsch _ , Apr 15 2012 ● a(n + 3) = 5 * a(n) for n >= 3 under plausible assumptions about growth of prime numbers. - _ David W. Wilson _ , Jul 05 2001 ●

▶ [A079971] 1,1,2,3,5,9,15,26,44,75,128,218,372,634,1081,1843,3142,5357,9133,15571,26547,45260,77164,131557,224292 ⋆ Number of compositions (ordered partitions) of n into parts 1, 2, and 5. ● a(n) = Sum _{ k=0..n } Sum _{ j=floor((5 * k - n) / 4)..k } C(j,n - 5 * k + 4 * j) * C(k,j). - _ Vladimir Kruchinin _ , Dec 15 2011 ●

▶ [A073031] 1,1,2,3,5,9,15,26,44,75,129,220,377,644,1101,1883,3219,5505,9412,16093,27517,47049,80448,137553,235195 ⋆ Number of ways of making change for n cents using coins of sizes 1, 2, 5, 10 cents, when order matters. ● a(n) = a(n - 1) + a(n - 2) + a(n - 5) + a(n - 10), a(0)=1. ●

▶ [A286887] 2,3,5,9,15,26,44,76,130,223,382,655,1123,1925,3300,5657,9698,16625,28500,48857,83755,143580,246137,421949,723341 ⋆ Number of irredundant sets in the path graph P _ n. ● a(n) = a(n - 1) + a(n - 2) + a(n - 4) - a(n - 6) for n > 6. ●

▶ [A239909] 1,1,2,3,5,9,15,26,45,77,133,229,394,679,1169,2013,3467,5970,10281,17705,30489,52505,90418,155707,268141 ⋆ Arises from a construction of equiangular lines in complex space of dimension 2. ● a(n) = a(n - 1) + a(n - 2) + a(n - 3) - a(n - 4) for n>4. ●

▶ [A005169] 1,1,1,2,3,5,9,15,26,45,78,135,234,406,704,1222,2120,3679,6385,11081,19232,33379,57933,100550,174519 ⋆ Number of fountains of n coins. ● a(n) = c * x ^ (- n) + O((5 / 3) ^ n), where c = 0.312363324596741... and x = 0.347901 = 0.576148769142756... is the lowest root of the equation Q(x) = 0, Q(x) see above (Odlyzko & Wilf 1988). - _ Vaclav Kotesovec _ , Jul 18 2013, updated Sep 24 2020 ●

▶ [A338192] 0,1,2,3,5,9,15,26,45,78,136,238,418,737,1304,2315,4123,7365,13193,23694,42655,76958,139126,251974,457112 ⋆ Sum of Fibonacci and tribonacci numbers: a(n) = A000073(n) + A000045(n). ● a(n) = 2 * a(n - 1) + a(n - 2) - a(n - 3) - 2 * a(n - 4) - a(n - 5) for n > 4 with a(0)=0, a(1)=1, a(2)=2, a(3)=3, a(4)=5. ●

▶ [A367666] 1,1,2,3,5,9,15,26,46,79,138,241,418,729,1270,2209,3849,6703,11669,20325,35393,61629,107329,186900,325464 ⋆ G.f. A(x) satisfies A(x) = 1 / (1 - x - x ^ 2 * A(x ^ 3)). ● a(0) = 1; a(n) = a(n - 1) + Sum _{ k=0..floor((n - 2) / 3) } a(k) * a(n - 2 - 3 * k). ●

▶ [A328078] 1,2,3,5,9,15,27,48,91,169,325,618,1201,2319,4527,8804,17227,33649,65929,129046,252997,495779,972339,1906520,3739775 ⋆ Number of regions after n generations of Jim Conant's iterative dissection of a square. ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 6 * a(n - 3) + 7 * a(n - 4) - 4 * a(n - 5) - 12 * a(n - 6) + 20 * a(n - 7) - 12 * a(n - 8) + 12 * a(n - 10) - 16 * a(n - 11) + 8 * a(n - 12) for n>12. ●

▶ [A124642] 1,1,2,3,5,9,15,29,50,99,176,351,638,1275,2354,4707,8789,17577,33099,66197,125477,250953,478193,956385,1830271 ⋆ Antidiagonal sums of A096465. ● a(n) = (1 + (- 1) ^ n) / 2 + Sum _{ j=0..floor((n - 1) / 2) } Sum _{ k=0..j } (n - 2 * j) * binomial(n - 2 * k, n - k - j) / (n - 2 * k). ● a(n) = Sum _{ j=0..floor(n / 2) } Sum _{ k=0..j } ((n - 2 * j) / (n - k - j)) * binomial(n - 2 * k, n - k - j). (End) ●

▶ [A232866] 1,2,3,5,9,16,27,42,61,84,111,142,177,216,259,306,357,412,471,534,601,672,747,826,909 ⋆ Positions of the nonnegative integers in the sequence (or tree) of complex numbers generated by these rules: 0 is in S, and if x is in S, then x + 1 and i * x are in S, where duplicates are deleted as they occur. ● a(n + 4) = 2 * n ^ 2 + n + 6 for n >= 1 (conjectured). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n >= 8 (conjectured). ●

▶ [A011826] 2,3,5,9,16,27,43,65,94,131,177,233,300,379,471,577,698,835,989,1161,1352,1563,1795,2049,2326 ⋆ f - vectors for simplicial complexes of dimension at most 1 (graphs) on at most n - 1 vertices. ● a(n) = (n ^ 3 - 3n ^ 2 + 8n + 6) / 6 fits all listed terms. - _ John W. Layman _ , Mar 13 1999 ●

▶ [A137402] 1,1,2,3,5,9,16,28,48,81,136,229,388,661,1129,1928,3287,5594,9510,16164,27484,46757,79577,135454,230552 ⋆ a(n) = Sum _{ k=0..n } binomial(floor(n - 2k / 3), k). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 5); a(0)=1, a(1)=1, a(2)=2, a(3)=3, a(4)=5. - _ Harvey P. Dale _ , Aug 22 2011 ●

▶ [A079960] 1,1,2,3,5,9,16,28,49,85,148,258,450,785,1369,2387,4162,7257,12654,22065,38475,67089,116983,203983,355685 ⋆ Number of permutations satisfying - k <= p(i) - i <= r and p(i) - i not in I, i=1..n, with k=1, r=5, I= { 2,3 } . ● a(n) = a(n - 1) + a(n - 2) + a(n - 5) + a(n - 6). ●

▶ [A005314] 0,1,2,3,5,9,16,28,49,86,151,265,465,816,1432,2513,4410,7739,13581,23833,41824,73396,128801,226030,396655 ⋆ For n = 0, 1, 2, a(n) = n; thereafter, a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3). ● a(n) = Sum _{ k=0..n } binomial(n - k, 2k + 1). ● a(n) = Sum _{ k=0..floor((n - 1) / 3) } binomial(n - k, 2k + 1). - _ Richard L. Ollerton _ , May 12 2004 ● a(n) = Sum _{ k=0..n } binomial(n - floor((k + 1) / 2), n - floor((3k - 1) / 2)). - _ John Molokach _ , Jul 21 2013 ● a(n) = Sum _{ k=1..floor((2n + 2) / 3) } (binomial(n - floor((4n + 15 - 6k + (- 1) ^ k) / 12), n - floor((4n + 15 - 6k + (- 1) ^ k) / 12) - floor((2n - 1) / 3) + k - 1). - _ John Molokach _ , Jul 24 2013 ● a(n + 2) = n + 2 + Sum _{ k=0..n } (n - k) * a(k). - _ Greg Dresden _ and _ Yichen P. Wang _ , Sep 16 2021 ●

▶ [A114834] 1,2,3,5,9,16,28,50,90,162,293,529,956,1728,3124,5648,10211,18462,33380,60352,109119,197293,356716,644961,1166123 ⋆ Each term is previous term plus floor of root mean square of two previous terms. ● a(1) = 1, a(2) = 2, for n>2: a(n + 1) = a(n) + floor(RMS[a(n),a(n - 1)]). a(n + 1) = a(n) + floor[Sqrt[[a(n) ^ 2] + [a(n - 1) ^ 2] / 2]]. ●

▶ [A000048] 1,1,1,1,2,3,5,9,16,28,51,93,170,315,585,1091,2048,3855,7280,13797,26214,49929,95325,182361,349520 ⋆ Number of n - bead necklaces with beads of 2 colors and primitive period n, when turning over is not allowed but the two colors can be interchanged. ● a(n) = (1 / (2 * n)) * Sum _{ odd d divides n } mu (d) * 2 ^ (n / d), where mu is the Mobius function A008683. ●

▶ [A054650] 1,1,1,2,3,5,9,16,28,51,93,171,315,585,1092,2048,3855,7282,13797,26214,49932,95325,182361,349525,671089 ⋆ Nearest integer to 2 ^ (n - 1) / n. ● a(n) = round(hypergeometric([- n / 2 + 1 / 2, - n / 2 + 1], [3 / 2], 1)). - _ Peter Luschny _ , Sep 18 2014 ●

▶ [A192804] 1,1,1,2,3,5,9,16,29,53,97,178,327,601,1105,2032,3737,6873,12641,23250,42763,78653,144665,266080,489397 ⋆ Constant term in the reduction of the polynomial 1 + x + x ^ 2 + ... + x ^ n by x ^ 3 - >x ^ 2 + x + 1. See Comments. ● a(n) = 2 * a(n - 1) - a(n - 4). ● a(n) = a(n - 1) + a(n - 2) + a(n - 3) - 1. - _ Alzhekeyev Ascar M _ , Feb 05 2012 ●

▶ [A050253] 1,1,1,2,3,5,9,16,29,54,101,191,365,702,1359,2647,5181,10187,20113,39856,79243,158036,316053,633689,1273559 ⋆ G.f.: (1 - x ^ 2 - sqrt(1 - 2 * x ^ 2 - 4 * x ^ 3 - 3 * x ^ 4)) / (2 * x ^ 3). ● a(n) = Sum _{ k=1..n } ((Sum _{ j =0..k } C(j,n - k - j) * C(k,j))) * C(n - k,k - 1)) / k). - _ Vladimir Kruchinin _ , Nov 21 2014 ● a(0) = a(1) = 1; a(n) = a(n - 2) + Sum _{ k=0..n - 3 } a(k) * a(n - k - 3). - _ Ilya Gutkovskiy _ , Apr 11 2021 ●

▶ [A182558] 0,1,2,3,5,9,16,29,54,103,199,388,762,1505,2983,5928,11802,23528,46948,93743,187270,374234,748036,1495461,2990058 ⋆ a(n) = a(n - 1) * 2 - floor(sqrt(a(n - 2))). ● a(0)=0, a(1)=1, a(n) = a(n - 1) * 2 - floor(sqrt(a(n - 2))). ●

▶ [A107250] 1,1,2,3,5,9,16,30,54,104,191,372,692,1357,2550,5021,9508,18773,35766,70755,135461,268365,515849,1023092,1973159 ⋆ Diagonal sums of number array A107249. ● a(n)=sum { k=0..floor(n / 2), C(floor((2n - 3k - 2) / 2), floor((n - 2k) / 2)) } ●

▶ [A072176] 1,1,2,3,5,9,16,30,56,106,201,382,727,1384,2636,5021,9565,18222,34715,66137,126001,240052,457338,871304,1659978 ⋆ Unimodal analog of Fibonacci numbers: a(n + 1) = Sum _{ k=0..floor(n / 2) } A071922(n - k,k). ● a(1)=1, a(2)=1, a(3)=2, a(4)=3, a(5)=5, a(n) = 2 * a(n - 1) + a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). - _ Harvey P. Dale _ , Jun 23 2011 ●

▶ [A345234] 1,1,1,2,3,5,9,17,31,58,112,218,427,844,1683,3381,6824,13842,28226,57796,118762,244874,506515,1050688,2185095 ⋆ G.f. A(x) satisfies: A(x) = x + x ^ 2 * exp(A(x) - A(- x ^ 2) / 2 + A(x ^ 3) / 3 - A(- x ^ 4) / 4 + ...). ● a(n + 2) = (1 / n) * Sum _{ k=1..n } (- 1) ^ (k + 1) * (Sum _{ d|k } (- 1) ^ (k / d + d) * d * a(d)) * a(n - k + 2). ●

► [A049858] 1,0,1,2,3,5,9,17,32,60,112,209,390,728,1359,2537,4736,8841,16504,30809,57513,107363,200421,374138,698426,1303794 ⋆ a(n) = Sum { a(k): k=0,1,2,...,n - 4,n - 2,n - 1 } ; a(n - 3) is not a summand; 3 initial terms required. ● a(n) = 2 * a(n - 1) - a(n - 3) + a(n - 4); 4 initial terms required. ●

► [A092483] 1,1,1,2,3,5,9,17,32,60,114,218,418,803,1549,2995,5802,11263,21900,42648,83163,162366,317352,620906,1215941 ⋆ a(n) is the floor of the average of the last moment of all previous entries. ● a(n)=floor(sum(j=1, n - 1, j * a(j)) / (n - 1)) ●

► [A094373] 1,2,3,5,9,17,33,65,129,257,513,1025,2049,4097,8193,16385,32769,65537,131073,262145,524289,1048577,2097153,4194305,8388609 ⋆ Expansion of (1 - x - x ^ 2) / ((1 - x) * (1 - 2 * x)). ● a(n) = (2 ^ n - 0 ^ n) / 2 + 1. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2). ● a(2 * n) = 2 * a(2 * n - 1) - 1, n>0. ● a(n) = 2 * a(n - 1) - 1 for n>1, a(0)=1, a(1)=2. - _ Philippe Deléham _ , Sep 25 2009 ●

► [A000051] 2,3,5,9,17,33,65,129,257,513,1025,2049,4097,8193,16385,32769,65537,131073,262145,524289,1048577,2097153,4194305,8388609,16777217 ⋆ a(n) = 2 ^ n + 1. ● a(n) = 2 * a(n - 1) - 1 = 3 * a(n - 1) - 2 * a(n - 2). ● a(0) = 1, then a(n) = (Sum _{ i=0..n - 1 } a(i)) - (n - 2). - _ Gerald McGarvey _ , Jul 10 2004 ● a(n) = Sum _{ k=0..n } C(n,k) * B _{ n - k }* 2 ^ (k + 1) / (k + 1). (See also A052584.) (End) ● a(n) is the a(n - 1) - th odd number for n >= 1. - _ Jaroslav Krizek _ , Apr 25 2009 ●

► [A110113] 0,1,2,3,5,9,17,34,71,154,346,802,1914,4693,11800,30379,79963,214925,589223,1645994,4681037,13541446,39817560,118925810,360577616 ⋆ Diagonal sums of A083856. ● a(n) = Sum _{ k = 0..n } ((1 + sqrt(4 * (n - k) + 1)) / 2) ^ k / sqrt(4 * (n - k) + 1) - ((1 - sqrt(4 * (n - k) + 1)) / 2) ^ k / sqrt(4 * (n - k) + 1). [Corrected by _ Petros Hadjicostas _ , Dec 26 2019] ●

► [A262450] 2,3,5,9,18,35,69,137,274,547,1093,2185,4370,8739,17477,34953,69906,139811,279621,559241,1118482,2236963,4473925,8947849,17895698 ⋆ Number of (n + 3) X (1 + 3) 0..1 arrays with each row and column divisible by 15, read as a binary number with top and left being the most significant bits. ● a(n) = floor((2 ^ (n + 3) + 14) / 15). This satisfies the empirical recursion and g.f. - _ Robert Israel _ , Dec 31 2018 ●

► [A097332] 1,2,3,5,9,18,39,90,217,540,1375,3563,9361,24872,66707,180341,490913,1344380,3701159,10237541,28436825,79288844,221836403,622599626,1752360041 ⋆ Expansion of (1 / (1 - x))(1 + 2x / (1 - x + sqrt(1 - 2x - 3x ^ 2))). ● a(n) = Sum _{ k=0..n } (- 1) ^ (n + k) * binomial(n, k) * Sum _{ i=0..k } Catalan(k - i) * 2 ^ i. ●

► [A099236] 1,2,3,5,9,18,39,91,226,594,1643,4763,14419,45444,148714,504150,1766930,6390720,23815168,91306968,359694457,1454213026,6027213531,25583995337,111118605583 ⋆ Sums of antidiagonals of A099233. ● a(n)=sum { j=0..n, sum { k=0..n - j, binomial(j(n - j - k), k) }} ●

► [A077643] 1,2,3,5,9,19,39,79,157,310,621,1246,2491,4980,9958,19924,39844,79672,159365,318736,637457,1274916,2549816,5099651,10199363 ⋆ Number of squarefree integers in closed interval [2 ^ n, - 1 + 2 * 2 ^ n], i.e., among 2 ^ n consecutive numbers beginning with 2 ^ n. ● a(n) = Sum _{ j=0.. - 1 + 2 ^ n } abs(mu(2 ^ n + j)). ● a(n) / 2 ^ n approaches 1 / Zeta(2), so limiting sequence is floor(2 ^ n / Zeta(2)), n >= 0. - _ Wouter Meeussen _ , May 25 2003 ●

► [A123389] 2,3,5,9,19,42,101,241,615,1783,5024,15492,48860,150069,470216,1557591,5405759,18319515,64600395,229331403,797199638,2862671427,10330509932,38308974332,148638820408 ⋆ Ratio of each term of the primorial function to the corresponding term of the factorial function (rounded to nearest integer). ● a(n) = round((Product _{ k=1..n } prime(k)) / factorial(n)). ●

► [A110542] 1,2,3,5,9,19,48,140,458,1635,6272,25580,110130,497832,2352807,11584809,59251847,313995514,1720289573,9725340014,56636885799,339259270680,2087446695738,13177129073994,85244657070582 ⋆ Row sums of number triangle A110541. ● a(n)=sum { k=0..n, sum { j=0..n - k, C((k - 1) * (n - k) - (k - 2) * j, j) * C(j, n - k - j) }} ●

► [A047604] 2,3,5,10,11,13,18,19,21,26,27,29,34,35,37,42,43,45,50,51,53,58,59,61,66 ⋆ Numbers that are congruent to { 2, 3, 5 } mod 8. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. ● a(n) = 8 * n / 3 - 2 - cos(2 * n * Pi / 3) + 5 * sin(2 * n * Pi / 3) / (3 * sqrt(3)). ● a(3k) = 8k - 3, a(3k - 1) = 8k - 5, a(3k - 2) = 8k - 6. (End) ●

► [A079251] 2,3,5,10,12,14,22,24,26,28,30,32,46,48,50,52,54,56,58,60,62,64,66,68,94 ⋆ Complement of A079000. ● a(n)=b(n - 1) + 2, with b(0)=0, b(2n)=2b(n) + 1 + 3[n>1], b(2n + 1)=2b(n) + 1 + 5[n>0]. - _ Ralf Stephan _ , Oct 07 2003 ●

► [A120610] 2,3,5,10,13,33,63,126,187,442,869,1753,3506,5257,12269,24538,36805,85876,171755,343507,687019,1374038,2061055,4809126,9618252 ⋆ Sum of previous term and preceding non - divisors. ● a(1) = 2, a(2) = 3, for n>=2, a(n + 1) = a(n) + sum _{ 1<=k<n, a(k) does not divide a(n) } a(k). ●

► [A133335] 1,2,3,5,10,15,25,50,75,125,250,375,625,1250,1875,3125,6250,9375,15625,31250,46875,78125,156250,234375,390625 ⋆ a(3 * n) = 3 * a(3 * n - 1) - 3 * a(3 * n - 2) + 2 * a(3 * n - 3), a(3 * n + 1) = 3 * a(3 * n) - 3 * a(3 * n - 1) + 2 * a(3 * n - 2), a(3 * n + 2) = 3 * a(3 * n + 1) - 3 * a(3 * n) with a(0)=1, a(1)=2, a(2)=3. ● a(n) = 5 * a(n - 3). G.f.: - (3 * x ^ 2 + 2 * x + 1) / (5 * x ^ 3 - 1). [_ Colin Barker _ , Oct 11 2012] ●

► [A364641] 1,1,1,2,3,5,10,16,31,59,101,206,376,692,1408,2528,4943,9767,17755,35950,68659,129029,262758,490832,958948 ⋆ G.f. satisfies A(x) = 1 / (1 - 2 * x) - x * A(x) ^ 3. ● a(n) = Sum _{ k=0..n } (- 1) ^ k * 2 ^ (n - k) * binomial(n + k,2 * k) * binomial(3 * k,k) / (2 * k + 1). ●

► [A199594] 0,0,0,2,3,5,10,18,31,56,100,177,315,561,997,1773,3154,5609,9975,17741,31552,56114,99798,177489,315660 ⋆ Number of sequences of n coin flips that win on the last flip, if the sequence of flips ends with (0,0,1,1) or (1,1,1,1). ● a(n)=a(n - 1) + a(n - 2) + a(n - 3) - a(n - 5) for n>7. ● a(n)=2 * a(n - 1) - a(n - 4) - a(n - 5) + a(n - 6) for n>8. ●

► [A002661] 1,2,3,5,10,18,35,63,126,231,462,858,1716,3218,6435,12155,24310,46189,92378,176358,352716,676039,1352078,2600150,5200300 ⋆ Least integer having Radon random number n. ● a(n) = ceiling(binomial(n + 1, floor((n + 1) / 2)) / 2). - _ Sean A. Irvine _ , May 21 2014; corrected by _ Matthew House _ , Jul 29 2015 ●

► [A237250] 2,3,5,10,18,37,67,138,250,515,933,1922,3482,7173,12995,26770,48498,99907,180997,372858,675490,1391525,2520963,5193242,9408362 ⋆ Values of x in the solutions to x ^ 2 - 4xy + y ^ 2 + 11 = 0, where 0 < x < y. ● a(n) = 4 * a(n - 2) - a(n - 4). ●

► [A046630] 1,2,3,5,10,19,37,74,147,293,586,1171,2341,4682,9363,18725,37450,74899,149797,299594,599187,1198373,2396746,4793491,9586981 ⋆ Number of cubic residues mod 2 ^ n. ● a(n) = ceiling(2 ^ (n + 2) / 7) [Finch - Sebah, page 12]. - _ N. J. A. Sloane _ , Sep 30 2018 ●

► [A293353] 1,2,3,5,10,19,37,74,148,296,592,1183,2365,4729,9458,18915,37829,75657,151314,302628,605255,1210509,2421018,4842036,9684072 ⋆ Least integer k such that k / 2 ^ n > Euler's constant (0.577216...). ● a(n) = ceiling(r * 2 ^ n), where r = Euler's constant (0.577216...). ●

► [A293328] 1,2,3,5,10,19,37,74,148,296,592,1183,2365,4730,9460,18919,37838,75675,151349,302698,605396,1210792,2421583,4843166,9686331 ⋆ Least integer k such that k / 2 ^ n > sqrt(1 / 3). ● a(n) = ceiling(r * 2 ^ n), where r = sqrt(1 / 3). ●

► [A057755] 1,1,2,3,5,10,20,39,78,155,309,617,1234,2467,4933,9865,19729,39457,78914,157827,315653,631306,1262612,2525223,5050446 ⋆ Number of digits in n - th Fermat number (A000215). ● a(n) = floor(log _ 10(F _ n) + 1) (F _ n is the n - th Fermat number). - _ Ivan Panchenko _ , Sep 06 2009 ●

► [A262482] 2,3,5,10,20,40,79,158,316,631,1261,2521,5042,10083,20165,40330,80660,161320,322639,645278,1290556,2581111,5162221,10324441,20648882 ⋆ Number of (n + 3)X(1 + 3) 0..1 arrays with each row and column divisible by 13, read as a binary number with top and left being the most significant bits. ● a(n) = 1 + floor((2 ^ (n + 3) / 13). ●

► [A293323] 1,2,3,5,10,20,40,80,159,317,633,1266,2532,5063,10126,20252,40504,81007,162014,324028,648056,1296112,2592223,5184445,10368890 ⋆ Least integer k such that k / 2 ^ n > 1 / tau, where tau = (1 + sqrt(5)) / 2 = golden ratio. ● a(n) = ceiling(r * 2 ^ n), where r = (- 1 + sqrt(5)) / 2. ●

► [A014626] 0,1,2,3,5,10,21,42,78,135,220,341,507,728,1015,1380,1836,2397,3078,3895,4865,6006,7337,8878,10650 ⋆ Number of intersection points of diagonals of an n - gon in general position, plus number of vertices. ● a(n) = (n ^ 4 - 6 * n ^ 3 + 11 * n ^ 2 + 18 * n) / 24. ● a(n) = C(n,1) + C(n,4). (End) ●

► [A131708] 0,1,2,3,5,10,21,43,86,171,341,682,1365,2731,5462,10923,21845,43690,87381,174763,349526,699051,1398101,2796202,5592405 ⋆ A024494 prefixed by a 0. ● a(n) = k * a(n - 1) + (6 - 3 * k) * a(n - 2) + (3 * k - 7) * a(n - 3) + (6 - 2 * k) * a(n - 4). ● a(n) = (1 / 3) * 2 ^ n - (1 / 3) * cos((1 / 3) * Pi * n) + (1 / sqrt(3)) * sin((1 / 3) * Pi * n). [Cournot] ● a(n) = C(n,1) + C(n,4) + ... + C(n, 3 * floor(n / 3) + 1). - _ Jianing Song _ , Oct 04 2021 ●

► [A024494] 1,2,3,5,10,21,43,86,171,341,682,1365,2731,5462,10923,21845,43690,87381,174763,349526,699051,1398101,2796202,5592405,11184811 ⋆ a(n) = C(n,1) + C(n,4) + ... + C(n, 3 * floor(n / 3) + 1). ● a(n) = Sum _{ k=0..n } 2 ^ k * 2 * sin(- Pi * (n - k) / 3 + Pi / 3) / sqrt(3) (offset 0). - _ Paul Barry _ , May 18 2004 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + 2 * a(n - 3). - _ Paul Curtz _ , Nov 20 2007 ●

► [A346970] 2,3,5,10,21,55,182,357,1105,2958,16588,51243,106981,608685,3003455,7497910,52350909,168539462,1822961393,3079378759 ⋆ Smallest c which can be split into positive integers a,b with a + b=c, such that a * b * c is divisible by each of the first n primes. ● a(2k) <= Product _{ i=1..k } p _ 2i, a(2k + 1) <= Product _{ i=0..k } p _{ 2i + 1 } where p _ i is the i - th prime. - _ Chai Wah Wu _ , Oct 14 2021 ●

► [A329244] 1,2,3,5,10,22,50,115,266,617,1433,3330,7740,17992,41825,97230,226031,525457,1221538,2839730,6601570,15346787,35676950,82938845,192809421 ⋆ Sum of every third term of the Padovan sequence A000931. ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 3 * a(n - 3) - a(n - 4) for n>3. ●

► [A101163] 1,2,3,5,10,24,64,182,542,1685,5473,18594,66063,245078,947057,3802469,15826392,68158314,303273906,1392503108,6590530876,32117814629,160998508095,829301391150,4385370872477 ⋆ Diagonal sums of a Chebyshev number triangle. ● a(n)=sum { k=0..floor(n / 2), if(k=n - k, 1, 2T(n - 2k, (k + 2) / 2)) where T(n, k)=(n / 2)sum { j=0..floor(n / 2), C(n - j, j)(- 1) ^ j * (2k) ^ (n - 2j) } . ●

► [A155587] 1,2,3,5,10,24,66,198,627,2057,6919,23715,82501,290513,1033413,3707853,13402698,48760368,178405158,656043858,2423307048,8987427468,33453694488,124936258128,467995871778 ⋆ Expansion of (1 + x * c(x)) / (1 - x), where c(x) is the g.f. of A000108. ● a(n) = ((3 - i * sqrt(3))) / 2 - CatalanNumber(n) * hypergeom([1, n + 1 / 2], [n + 2], 4). - _ Peter Luschny _ , Aug 04 2020 ●

► [A011827] 2,3,5,10,25,70,190,471,1060,2189,4203,7592,13027,21400,33868,51901,77334,112423,159905,223062,305789,412666,549034,721075,935896 ⋆ f - vectors for simplicial complexes of dimension at most 2 on at most n - 1 vertices. ● a(n + 1)= (2 * n ^ 6 - 6 * n ^ 5 + 5 * n ^ 4 + 60 * n ^ 3 - 7 * n ^ 2 + 306 * n + 720) / 360 fits terms up to 5426026. [_ Frank Ellermann _] ●

► [A260304] 2,3,5,10,25,75,250,875,3125,11250,40625,146875,531250,1921875,6953125,25156250,91015625,329296875,1191406250,4310546875,15595703125,56425781250,204150390625,738623046875,2672363281250 ⋆ a(n) = 5 * a(n - 1) - 5 * a(n - 2) for n>1, a(0)=2, a(1)=3. ● a(n) = ((5 + 2 * sqrt(5)) * ((5 - sqrt(5)) / 2) ^ n + (5 - 2 * sqrt(5)) * ((5 + sqrt(5)) / 2) ^ n) / 5. ●

► [A135961] 1,1,2,3,5,10,25,79,318,1637,10753,89872,955537,12930173,222618066,4874855543,135781292309,4811103270054,216847500834513,1243214386275679,906625645142897790,84102571511631809865 ⋆ G.f.: A(x) = Sum _{ n>=0 } x ^ n / (1 - Fibonacci(n) * x). ● a(n) = Sum _{ k=0..n } Fibonacci(k) ^ (n - k). ●

► [A011828] 2,3,5,10,26,95,457,2246,9705,35926,115688,331201,859587,2054860,4582126,9627831,19217260,36679253,67308375,119286676,204940824,342425909,557944719,888630900,1386246251 ⋆ Number of f - vectors for simplicial complexes of dimension at most 3 on at most n - 1 vertices. ● a(n + 1) = (12 * n ^ 10 - 112 * n ^ 9 + 351 * n ^ 8 - 132 * n ^ 7 + 378 * n ^ 6 - 2856 * n ^ 5 + 4839 * n ^ 4 + 56812 * n ^ 3 - 5580 * n ^ 2 + 309168 * n + 725760) / 362880 fits terms up to 3191757298. [_ Frank Ellermann _] ●

► [A204518] 0,1,2,3,5,10,27,49,98,267,485,970,2643,4801,9602,26163,47525,95050,258987,470449,940898,2563707,4656965,9313930,25378083 ⋆ Numbers such that floor(a(n) ^ 2 / 6) is a square. ● a(n) = 10 * a(n - 3) - a(n - 6) for n > 7. ●

► [A223545] 2,3,5,10,27,95,447,2795,22616,230244,2878355,43253538,767188892,15813815440,373816159742,10018819334375,301465449259275,10097316273301640,373656009129456297,15176615488012528682,672638507261177844871,32362098917994667460975,1682366567474947423409203 ⋆ a(n + 1) = Sum _{ i=1..a(n) } floor(a(n) / i); a(1) = 2. ● a(n + 1) = Sum _{ i>=1 } floor(a(n) / i). ●

► [A088938] 2,3,5,10,27,104,541,3498,26615,231172,2250129,24227486,285705643,3660694200,50624828357,751426146514,11913622408671,200919532718828,3591112295892985,67803855263483142,1348467602319393299 ⋆ Occurrences of 2's in A088936. ● a(n)=2 + (1 / 2) * sum(k=1, n, sum(i=0, k, i!)), [_ Benoit Cloitre _ and Claude Lenormand] ●

► [A100475] 1,2,3,5,11,13,14,34,931,7037,95017,3549221,75296795,3518502151,34778126848,747746329129,13428156340222,728260738568834,17205012007789762 ⋆ Prime - th recurrence with reversal at each step. ● a(n) = reversal(a(n - 1)th prime). ●

► [A055498] 0,1,2,3,5,11,17,29,47,79,127,211,347,563,911,1481,2393,3877,6271,10151,16427,26591,43019,69623,112643 ⋆ a(0)=0, a(1)=1, a(n) = smallest prime >= a(n - 1) + a(n - 2). ● a(n + 1) = nextprime(a(n) + a(n - 1)) where nextprime(n) is smallest prime >= n. ● a(n) is asymptotic to c * phi ^ n where phi = (1 + sqrt(5)) / 2 and c = 1.08654127504498856237 5... - _ Benoit Cloitre _ , May 02 2004 ●

► [A082605] 2,3,5,11,17,41,65,161,257,641,1025,2561,4097,10241,16385,40961,65537,163841,262145,655361,1048577,2621441,4194305,10485761,16777217 ⋆ Using Euler's 6 - term sequence A014556, we define the partial recurrence relation a(0)=2, a(1)=3, a(2)=5; a(k) = 2 * a(k - 1) - 1 + (- 1) ^ (k - 1) * 2 ^ (k - 2), 3 <= k <= 5. ● a(2 * n) = 2 ^ n + 1. - _ Georg Fischer _ , May 15 2019 ●

► [A007755] 1,2,3,5,11,17,41,83,137,257,641,1097,2329,4369,10537,17477,35209,65537,140417,281929,557057,1114129,2384897,4227137,8978569 ⋆ Smallest number m such that the trajectory of m under iteration of Euler's totient function phi(n) [A000010] contains exactly n distinct numbers, including m and the fixed point. ● a(n + 2) ~ 2 ^ n. ●

► [A070865] 2,3,5,11,19,29,41,59,79,101,127,157,191,227,269,313,359,409,461,521,587,659,733,809,887 ⋆ Smallest prime such that the difference of successive terms is strictly increasing. ● a(n) >> n ^ 2. - _ Charles R Greathouse IV _ , Apr 30 2015 ●

► [A337347] 2,3,5,11,19,37,73,193,337,1741,5851,39157,50857,987713,1292701,11168887,21510131,177872951,220893209,932384951,15511295531,43482833879,974160518137,2539542521143,12281147701703 ⋆ a(n) = a(n - 2) + a(n - 1) if that sum is prime. Otherwise, a(n) = a(n - 2) + a(n - 1) + prime(m - 1) + prime(m - 2) + ... + prime(s), where a(- 1) = a(0) = prime(0) = 1, m = pi(a(n - 2)), and s = max(0, 1, 2, ..., m - 1) such that the sum is prime. ● a(n) = a(n - 1) + a(n - 2) + Sum { i=1..m - s } prime(m - i), where a(- 1) = a(0) = prime(0) = 1, m = pi(a(n - 2)), and s = max(0, 1, 2, ..., m) such that a(n) is prime. ●

► [A131101] 1,2,3,5,11,23,27,29,30,32,36,41,53,60,66,75,78,83,89,113,114,117,130,131,132 ⋆ Numbers that when added it to their prime factors + 1 the result is a prime number, member of A131102. ● a(n) + prime factors of a(n) + 1 = p ; p is a prime number, member of A131102. ●

► [A005384] 2,3,5,11,23,29,41,53,83,89,113,131,173,179,191,233,239,251,281,293,359,419,431,443,491 ⋆ Sophie Germain primes p: 2p + 1 is also prime. ● a(n) mod 10 <> 7. - _ Reinhard Zumkeller _ , Feb 12 2009 ●

► [A060696] 1,1,2,3,5,11,23,63,153,489,1329,4785,14235,56475,181215,780255,2672145,12348945,44781345,220253985,840523635,4370620275,17465201775,95498916975,397983749625 ⋆ Number of permutations in S _ n avoiding the strings 123, 321 and 231. ● a(0)=1, a(1)=1, a(2)=2, a(3)=3, a(n) = (n - 2)a(n - 2) + (n - 3)!! for n >= 4 ● a(n) = (n - 1)!! + (n - 2)!! (cf. A006882). ●

► [A076051] 2,3,5,11,23,63,153,489,1329,4785,14235,56475,181215,780255,2672145,12348945,44781345,220253985,840523635,4370620275,17465201775,95498916975,397983749625,2278224696825,9867844134225 ⋆ Sum of product of odd numbers <= n and the product of even numbers <= n. ● a(n) = o(n) + e(n) where; o(n)=the product of odd numbers from 1 to n e(n)=the product of even numbers from 2 to n. ● a(1)=2, a(2)=3, a(3)=5, a(n) = (n - 1) * a(n - 2) + (n - 2)!! for n >= 4. ●

► [A098179] 1,2,3,5,11,27,63,135,271,527,1023,2015,4031,8127,16383,32895,65791,131327,262143,523775,1047551,2096127,4194303,8390655,16781311 ⋆ Expansion of (1 - 3 * x + 3 * x ^ 2) / (1 - 5 * x + 10 * x ^ 2 - 10 * x ^ 3 + 4 * x ^ 4). ● a(n) = 2 ^ n + 2 ^ (n / 2)cos(pi * n / 4) - 1; a(n) = 5a(n - 1) - 10a(n - 2) + 10a(n - 3) - 4a(n - 4). ●

► [A079557] 2,3,5,11,31,97,469,3767,49729 ⋆ Numerator for global rational approximations. ● a(n) is the smallest integer such that if 0< m1 / a(m) < r1 / a(r) < 1, m<n and r<n, then there is an integer n1 which satisfies m1 / a(m) < n1 / a(n) < r1 / a(r), but there is no integer n2 with n2 / a(n)=m1 / a(m) or n2 / a(n)=r1 / a(r) ●

► [A007097] 1,2,3,5,11,31,127,709,5381,52711,648391,9737333,174440041,3657500101,88362852307,2428095424619,75063692618249,2586559730396077,98552043847093519,4123221751654370051,188272405179937051081,9332039515881088707361,499720579610303128776791,28785866289100396890228041 ⋆ Primeth recurrence: a(n + 1) = a(n) - th prime. ● a(n) / a(n - 1) ~ log(a(n)) ~ prime(n). - _ Thomas Ordowski _ , Mar 26 2015 ●

► [A132745] 1,2,3,5,11,32,114,467,2130,10642,57629,335381,2082582,13716502,95352529,696790819,5334094259,42649956716,355261078352,3075741331481,27620835538407,256810928552476,2468108094076860,24481671811988907,250296546308500181 ⋆ Row sums of (A008550 formatted as a triangular array). ● a(n) = Sum _{ k=0..n } Hypergeometric2F1([1 - n + k, k - n], [2], k). ● a(n) = Sum _{ k=0..n } Hypergeometric2F1([1 - k, - k], [2], n - k). ● a(n) = 1 + Sum _{ k=1..n } Sum _{ j=0..k - 1 } binomial(k,j) ^ 2 * ((k - j) * (n - k) ^ j / (k * (j + 1))). ●

► [A305971] 1,2,3,5,11,34,141,736,4653,34842,303848,3041514,34520903,439820187,6238591638,97832195694,1685800545944,31746373299029,650170193047230,14418116545259245,344857160229381442,8865220175506008295,244158955254595904415,7183277314615065192163 ⋆ Antidiagonal sums of A305962. ● a(n) = Sum _{ j=0..n } (j - 1)! * [x ^ (j - 1)] exp(x + Sum _{ i=1..n - j } (exp(i * x) - 1) / i) for n > 0, a(0) = 1. ●

► [A006721] 1,1,1,1,1,2,3,5,11,37,83,274,1217,6161,22833,165713,1249441,9434290,68570323,1013908933,11548470571,142844426789,2279343327171,57760865728994,979023970244321 ⋆ Somos - 5 sequence: a(n) = (a(n - 1) * a(n - 4) + a(n - 2) * a(n - 3)) / a(n - 5), with a(0) = a(1) = a(2) = a(3) = a(4) = 1. ● a(4 - n) = a(n). a(n + 2) * a(n - 2) = 2 * a(n + 1) * a(n - 1) - a(n) ^ 2 if n is even. a(n + 2) * a(n - 2) = 3 * a(n + 1) * a(n - 1) - a(n) ^ 2 if n is odd. ●

► [A056163] 2,3,5,11,120,191297 ⋆ Number of ordered antichains on an unlabeled n - set; labeled T _ 1 - hypergraphs with n hyperedges. ● a(n)=Sum _{ k=0..C(n, floor(n / 2)) } b(k, n) where b(k, n) is the number of k - element ordered antichains on an unlabeled n - set. ●

► [A331101] 1,2,3,5,12,17,29,70,99,169,408,577,985,2378,3363,5741,13860,19601,33461,80782,114243,195025,470832,665857,1136689 ⋆ Denominators of the best approximations for sqrt(2). ● a(3n - 2) = w / 4 * D(2n - 1), a(3n - 1) = w / 4 * D(2n), a(3n) = 1 / 2 * S(2n), for n>0 with w = sqrt(2) and S(n) = (1 + w) ^ n + (1 - w) ^ n and D(n) = (1 + w) ^ n - (1 - w) ^ n. ● a(n) = 6 * a(n - 3) - a(n - 6) for n > 6. ●

► [A193776] 1,2,3,5,12,17,65,80,473,527 ⋆ Number of signed permutations of length n invariant under the reverse complement and avoiding (- 2, - 1), (- 2, 1), (2, - 1). ● a(2k) = 2 ^ k k! + \ sum _{ j=0 }^{ k - 1 } (k - j - 1)! a(2j) ● a(2k + 1) = (2 ^ k + 1)k! + \ sum _{ j=0 }^{ k - 1 } (k - j - 1)! a(2j + 1) ●

► [A064688] 1,2,3,5,12,18,38,54,104,256,340,760,1260,1610,2590,5120,9792,12076,22250,32992,40026,70488,101698,173682,345856 ⋆ a(n) = number of partitions of primes into distinct (also odd) parts. ● a(n) = t(prime(n), 0), t as defined in A079211. ●

► [A233231] 2,3,5,12,29,51,122,291,509,1212,2885,5043,12002,28563,49925,118812,282749,494211,1176122,2798931,4892189,11642412,27706565,48427683,115248002 ⋆ a(n) = 10 * a(n - 3) - a(n - 6) + 4 for n>5, a(0)=2, a(1)=3, a(2)=5, a(3)=12, a(4)=29, a(5)=51. ● a(n) = a(n - 1) + 10 * a(n - 3) - 10 * a(n - 4) - a(n - 6) + a(n - 7) for n>6. [_ Bruno Berselli _ , Dec 09 2013] ●

► [A369847] 1,2,3,5,12,34,92,230,549,1299,3109,7536,18364,44713,108575,263178,637699,1545839,3749001,9093989,22058847,53501860,129755543,314685488,763192224 ⋆ Number of compositions of 5 * n - 2 into parts 3 and 5. ● a(n) = Sum _{ k=0..floor(n / 3) } binomial(n + 2 * k,n - 1 - 3 * k). ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 11 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ●

► [A179238] 1,2,3,5,13,18,31,80,111,191,493,684,1177,3038,4215,7253,18721,25974,44695,115364,160059,275423,710905,986328,1697233 ⋆ Numerators in convergents to infinitely repeating period 3 palindromic continued fraction [1,2,1,...]. ● a(1) = 1; a(n + 1) = a(n) + a(n - 1) if n == (0,1) mod 3. ● a(n + 1) = 2 * a(n) + a(n - 1) if n == 2 mod 3. ● a(n) = + 6 * a(n - 3) + a(n - 6). G.f.: x * (1 + 2 * x + 3 * x ^ 2 - x ^ 3 + x ^ 4) / (1 - 6 * x ^ 3 - x ^ 6). - _ R. J. Mathar _ , Jul 06 2010 ●

► [A041385] 1,2,3,5,13,18,31,80,2271,4622,6893,11515,29923,41438,71361,184160,5227841,10639842,15867683,26507525,68882733,95390258,164272991,423936240,12034487711 ⋆ Denominators of continued fraction convergents to sqrt(207). ● a(n) = 2302 * a(n - 8) - a(n - 16) for n>15. - _ Vincenzo Librandi _ , Dec 16 2013 ●

► [A142881] 0,1,2,3,5,13,21,34,89,144,233,610,987,1597,4181,6765,10946,28657,46368,75025,196418,317811,514229,1346269,2178309 ⋆ a(0) = 0, a(1) = 1, after which, if n=3k: a(n) = 2 * a(n - 1) - a(n - 2), if n=3k + 1: a(n) = a(n - 1) + a(n - 2), if n=3k + 2: a(n) = 2 * a(n - 1) + a(n - 2). ● a(n) = If[Mod[n, 3] == 2, 2 * a(n - 1) + a(n - 2), If[Mod[n, 3] == 1, a(n - 1) + a(n - 2), 2 * a(n - 1) - a(n - 2)]]. ● a(n) = 7 * a(n - 3) - a(n - 6). G.f.: - x ^ 2 * (x ^ 4 + 2 * x ^ 3 - 3 * x ^ 2 - 2 * x - 1) / (x ^ 6 - 7 * x ^ 3 + 1). [_ Colin Barker _ , Jan 08 2013] ● a(0) = 0, a(1) = 1, after which, if n is a multiple of 3, a(n) = 2 * a(n - 1) - a(n - 2), else, if n is of the form 3k + 1, a(n) = a(n - 1) + a(n - 2), and otherwise [when n is of the form 3k + 2], a(n) = 2 * a(n - 1) + a(n - 2). - _ Antti Karttunen _ , Jan 29 2016, after the original name of the sequence. ●

► [A048736] 1,1,1,1,2,3,5,13,22,41,111,191,361,982,1693,3205,8723,15042,28481,77521,133681,253121,688962,1188083,2249605 ⋆ Dana Scott's sequence: a(n) = (a(n - 2) + a(n - 1) * a(n - 3)) / a(n - 4), a(0) = a(1) = a(2) = a(3) = 1. ● a(n) = 9 * a(n - 3) - a(n - 6) - 3 - (ceiling(n / 3) - floor(n / 3)), with a(0) = a(1) = a(2) = a(3) = 1, a(4) = 2, a(5) = 3. - _ Michael Somos _ ● a(n) = 10 * a(n - 3) - 10 * a(n - 6) + a(n - 9). ● a(n) = a(3 - n) for all n in Z. - _ Michael Somos _ , Feb 05 2012 ●

► [A041519] 1,1,2,3,5,13,31,75,106,181,287,468,15263,15731,30994,46725,77719,202163,482045,1166253,1648298,2814551,4462849,7277400,237339649 ⋆ Denominators of continued fraction convergents to sqrt(276). ● a(n) = 15550 * a(n - 12) - a(n - 24) for n>23. - _ Vincenzo Librandi _ , Dec 19 2013 ●

► [A353582] 0,0,2,3,5,13,33,78,186,450,1088,2625,6335,15295,36927,89148,215220,519588,1254398,3028383,7311161,17650705,42612573,102875850,248364270 ⋆ a(n) = 2 * a(n - 1) + 2 * a(n - 3) + a(n - 4) - 1, with a(0) = 0 = a(1), a(2) = 2, and a(3) = 3. ● a(n) = (1 / 16)((4 - s) * (1 + s) ^ n + (4 + s) * (1 - s) ^ n - 8 * sin(n * Pi / 2) - 12 * cos(n * Pi / 2) + 4) where s = sqrt(2). ●

► [A042695] 1,1,2,3,5,13,57,70,127,578,1283,1861,3144,5005,8149,477647,485796,963443,1449239,2412682,6274603,27511094,33785697,61296791,278972861 ⋆ Denominators of continued fraction convergents to sqrt(877). ● a(n) = 482652 * a(n - 15) + a(n - 30) for n>29. - _ Vincenzo Librandi _ , Jan 26 2014 ●

► [A041047] 1,2,3,5,13,135,283,418,701,1820,18901,39622,58523,98145,254813,2646275,5547363,8193638,13741001,35675640,370497401,776670442,1147167843,19238838285,4994844413 ⋆ Denominators of continued fraction convergents to sqrt(29). ● a(n) = 140 * a(n - 5) + a(n - 10). - _ Vincenzo Librandi _ , Dec 10 2013 ●

► [A041639] 1,2,3,5,13,473,959,1432,2391,6214,226095,458404,684499,1142903,2970305,108073883,219118071,327191954,546310025,1419812004,51659542169,104738896342,156398438511,261137334853,678673108217 ⋆ Denominators of continued fraction convergents to sqrt(338). ● a(n) = 478 * a(n - 5) + a(n - 10) for n>9. - _ Vincenzo Librandi _ , Dec 22 2013 ●

► [A042907] 1,2,3,5,13,811,1635,2446,4081,10608,661777,1334162,1995939,3330101,8656141,540010843,1088677827,1628688670,2717366497,7063421664,440649509665,888362440994,1329011950659,2217374391653,5763760733965 ⋆ Denominato

rs of continued fraction convergents to sqrt(985). • a(n) = 816 * a(n - 5) + a(n - 10) for n>9. - _ Vincenzo Librandi _ , Feb 01 2014 •
► [A232162] 0,0,2,3,5,14,30,62,139,305,660,1444,3158,6887,15037,32842,71698,156538,341799,746273,1629384,3557592,7767594,16959611,37029365 ⋆ Number of Weyl group elements, not containing an s _ r factor, which contribute nonzero terms to Kostant's weight multiplicity formula when computing the multiplicity of the zero - weight in the adjoint representation for the Lie algebra of type B and rank n. • a(n) = a(n - 1) + a(n - 2) + 3 * a(n - 3) + a(n - 4). •
► [A114411] 1,2,3,5,14,33,65,238,627,1495,6902,19437,55315,282982,835791,2599805,14998046,49311669,158588105,1004869082,3501128499,11576931665,79384657478,290593665417,1030346918185 ⋆ Triple primorial n ### = n # 3. • a(n) = n ### = prime(n) * ((n - 3) ###) = Prod[i == n mod 3, to n] prime(i). Notationally, prime(0) = 1; (- n) ### = 0 ### = 1. •
► [A259596] 1,2,3,5,17,31,48,79,271,494,765,1259,4319,7873,12192,20065,68833,125474,194307,319781,1097009,1999711,3096720,5096431,17483311 ⋆ Denominators of the other - side convergents to sqrt(7). • a(n) = 16 * a(n - 4) - a(n - 8) for n>7. - _ Colin Barker _ , Jul 21 2015 •
► [A004249] 2,3,5,17,65537 ⋆ a(n) = (2 ^ 2 ^ ... ^ 2) (with n 2's) + 1. • a(0) = 2, a(n) = 2 ^ a(n - 1) / 2 + 1 for n >= 1. •
► [A041293] 1,1,2,3,5,18,23,41,64,105,2584,2689,5273,7962,13235,47667,60902,108569,169471,278040,6842431,7120471,13962902,21083373,35046275 ⋆ Denominators of continued fraction convergents to sqrt(159). • a(n) = 2648 * a(n - 10) - a(n - 20). - _ Vincenzo Librandi _ , Dec 15 2013 •
► [A041713] 1,2,3,5,18,23,64,151,668,1487,3642,5129,19029,24158,43187,110532,4243403,8597338,12840741,21438079,77154978,98593057,274341092,647275241,2863442056 ⋆ Denominators of continued fraction convergents to sqrt(376). • a(n) = 4286590 * a(n - 16) - a(n - 32) for n>31. - _ Vincenzo Librandi _ , Dec 23 2013 •
► [A042555] 1,2,3,5,18,41,223,933,4888,10709,37015,47724,84739,217202,12248051,24713304,36961355,61674659,221985332,505645323,2750211947,11506493111,60282677502,132071848115,456498221847 ⋆ Denominators of continued fraction convergents to sqrt(806). • a(n) = 12332790 * a(n - 14) - a(n - 28) for n > 27. - _ Vincenzo Librandi _ , Jan 25 2014 •
► [A041891] 1,1,2,3,5,18,59,1257,3830,12747,16577,29324,45901,75225,3205351,3280576,6485927,9766503,16252430,58523793,191823809,4086823782,12452295155,41443709247,53896004402 ⋆ Denominators of continued fraction convergents to sqrt(467). • a(n) = 3251252 * a(n - 14) - a(n - 28) for n>27. - _ Vincenzo Librandi _ , Dec 26 2013 •
► [A041195] 1,2,3,5,23,28,51,130,2651,5432,8083,13515,62143,75658,137801,351260,7163001,14677262,21840263,36517525,167910363,204427888,372338251,949104390,19354426051 ⋆ Denominators of continued fraction convergents to sqrt(108). • a(n) = 2702 * a(n - 8) - a(n - 16). - _ Vincenzo Librandi _ , Dec 12 2013 •
► [A117696] 2,3,5,23,8388581 ⋆ Primes in sequence a(1)=2, a(n + 1)=2 ^ a(n) - 3 ^ (n - 1). • a(1)=2, a(n + 1)=2 ^ a(n) - 3 ^ (n - 1) •
► [A042669] 1,2,3,5,28,33,457,490,2907,3397,6304,16005,934594,1885193,2819787,4704980,26344687,31049667,429990358,461040025,2735190483,3196230508,5931420991,15059072490,879357625411 ⋆ Denominators of continued fraction convergents to sqrt(864). • a(n) = 940898 * a(n - 12) - a(n - 24) for n>23. - _ Vincenzo Librandi _ , Dec 20 2013 •
► [A041585] 1,1,2,3,5,28,89,117,323,440,1643,8655,10298,18953,29251,48204,1668187,1716391,3384578,5100969,8485547,47528704,151071659,198600363,548272385 ⋆ Denominators of continued fraction convergents to sqrt(310). • a(n) = 1697438 * a(n - 16) - a(n - 32) for n>31. [_ Bruno Berselli _ , Dec 20 2013] •
► [A060301] 2,3,5,30,180,300,450,1080,1800,2700,3000,4500,6480,6750,10800,16200,18000,27000,30000,38880,40500,45000,64800,67500,97200 ⋆ For n>3: a(n) is a multiple of three distinct earlier terms. • a(n) is of the form 2 ^ b * 3 ^ c * 5 ^ d where either b + c + d=1, or where each of b, c and d are positive and the largest of the three is an odd number less than the sum of the other two. For n >3: a(n) is 30 times a power of 6 times a power of 10 times a power of 15. •
► [A041977] 1,1,2,3,5,33,38,565,2298,2863,62421,65284,323557,4595082,4918639,34106916,39025555,73132471,112158026,185290497,8264939894,8450230391,16715170285,25165400676,41880570961 ⋆ Denominators of continued fraction convergents to sqrt(511). • a(n) = 8377097920 * a(n - 20) - a(n - 40) for n>39. [_ Bruno Berselli _ , Jan 11 2014] •
► [A271387] 1,2,3,5,35,77,1001,2431,46189,1062347,30808063,86822723,3212440751,10131543907,435656388001,20475850236047,1085220062510491,3766351981654057,229747470880897477,810162134158954261,5752151152528575253 1,41990703413458599347 63,331726556966322934846277 ⋆ Numerator of prime(n) #/ n!, where prime(n) # is the prime factorial function. • a(n) = prime(n) #/ GCD(prime(n) # , n!), where GCD(a, b) is the greatest common divisor. • a(n) = prime(n) #/ prime(pi(n)) # , where pi(n) is the number of primes <= n. •
► [A041443] 1,2,3,5,38,385,2733,3118,5851,14820,450451,915722,1366173,2281895,17339438,175676275,1247073363,1422749638,2669823001,6762395640,205541692201,417845780042,623387472243,1041233252285,7912020238238 ⋆ Denominators of continued fraction convergents to sqrt(237). • a(n) = 456302 * a(n - 10) - a(n - 20) for n>19. - _ Vincenzo Librandi _ , Dec 18 2013 •
► [A042469] 1,1,2,3,5,43,48,91,139,230,12559,12789,25348,38137,63485,546017,609502,1155519,1765021,2920540,159474181,162394721,321868902,484263623,806132525 ⋆ Denominators of continued fraction convergents to sqrt(762). • a(n) = 12698 * a(n - 10) - a(n - 20) for n > 19. - _ Vincenzo Librandi _ , Jan 23 2014 •
► [A041791] 1,2,3,5,48,53,101,255,10301,20857,31158,52015,499293,551308,1050601,2652510,107151001,216954512,324105513,541060025,5193645738,5734705763,10928351501,27591408765,1114584702101 ⋆ Denominators of continued fraction convergents to sqrt(416). • a(n) = 10402 * a(n - 8) - a(n - 16) for n>15. - _ Vincenzo Librandi _ , Dec 24 2013 •
► [A041131] 1,1,2,3,5,83,88,171,259,430,7139,7569,14708,22277,36985,614037,651022,1265059,1916081,3181140,52814321,55995461,108809782,164805243,273615025 ⋆ Denominators of continued fraction convergents to sqrt(74). • a(n) = 86 * a(n - 5) + a(n - 10). - _ Vincenzo Librandi _ , Dec 11 2013 •
► [A041343] 1,1,2,3,5,133,138,271,409,680,18089,18769,36858,55627,92485,2460237,2552722,5012959,7565681,12578640,334610321,347188961,681799282,1028988243,1710787525 ⋆ Denominators of continued fraction convergents to sqrt(185). • a(n) = 136 * a(n - 5) + a(n - 10). - _ Vincenzo Librandi _ , Dec 16 2013 •
► [A041655] 1,1,2,3,5,183,188,371,559,930,34039,34969,69008,103977,172985,6331437,6504422,12835859,19340281,32176140,1177681321,1209857461,2387538782,3597396243,5984935025 ⋆ Denominators of continued fraction convergents to sqrt(346). • a(n) = 186 * a(n - 5) + a(n - 10) for n>9. - _ Vincenzo Librandi _ , Dec 22 2013 •
► [A187327] 0,0,1,2,3,6,6,7,8,9,12,12,13,14,15,18,18,19,20,21,24,24,25,26,27 ⋆ a(n) = floor(n / 5) + floor(2n / 5) + floor(3n / 5). • a(n) = floor(n / 5) + floor(2n / 5) + floor(3n / 5). • a(n)= + a(n - 1) + a(n - 5) - a(n - 6). G.f. (x ^ 4 * (1 + x + x ^ 2 + 3 * x ^ 3)) / ((x ^ 4 + x ^ 3 + x ^ 2 + x + 1) * (x - 1) ^ 2). - _ R. J. Mathar _ , Mar 18 2011 •
► [A187326] 0,0,2,3,6,6,8,9,12,12,14,15,18,18,20,21,24,24,26,27,30,30,32,33,36 ⋆ Floor(n / 4) + floor(n / 2) + floor(3n / 4). • a(n) = + 1 * a(n - 1) + 1 * a(n - 4) - 1 * a(n - 5). - _ Joerg Arndt _ , Apr 01 2011 • a(n) = (6 * (n - 1) + (1 + (- 1) ^ n) * (2 + i ^ n)) / 4, where i=sqrt(- 1). - _ Bruno Berselli _ , Mar 08 2011 • a(n) = (3 * n - 4 + gcd(4,n)) / 2. - _ Jose Eduardo Blazek _ , Mar 22 2014 • a(n + 1)=a(n) + (3 + gcd(4,n + 1) - gcd(4,n)) / 2 and a(0)=0. - _ Jose Eduardo Blazek _ , Mar 23 2014 • a(n + 4) = a(n) + 6. - _ Michael Somos _ , Feb 23 2014 •
► [A060464] 0,1,2,3,6,7,8,9,10,11,12,15,16,17,18,19,20,21,24,25,26,27,28,29,30 ⋆ Numbers that are not congruent to 4 or 5 mod 9. • a(n) = a(n - 1) + a(n - 7) - a(n - 8) for n>8; a(n) = a(n - 7) + 9 for n>7. • a(n) = (63 * n - 63 + 2 * (n mod 7) + 2 * ((n + 1) mod 7) - 12 * ((n + 2) mod 7) + 2 * ((n + 3) mod 7) + 2 * ((n + 4) mod 7) + 2 * ((n + 5) mod 7) + 2 * ((n + 6) mod 7)) / 49. • a(7k) = 9k - 1, a(7k - 1) = 9k - 2, a(7k - 2) = 9k - 3, a(7k - 3) = 9k - 6, a(7k - 4) = 9k - 7, a(7k - 5) = 9k - 8, a(7k - 6) = 9k - 9. (End) •
► [A047505] 0,1,2,3,6,7,8,9,10,11,14,15,16,17,18,19,22,23,24,25,26,27,30,31,32 ⋆ Numbers that are congruent to { 0, 1, 2, 3, 6, 7 } mod 8. • a(n) = a(n - 1) + a(n - 6) - a(n - 7) for n>7. • a(n) = (24 * n - 27 - 3 * cos(n * Pi) + 12 * cos(n * Pi / 3) - 4 * sqrt(3) * sin(2 * n * Pi / 3)) / 18. • a(6k) = 8k - 1, a(6k - 1) = 8k - 2, a(6k - 2) = 8k - 5, a(6k - 3) = 8k - 6, a(6k - 4) = 8k - 7, a(6k - 5) = 8k - 8. (End) •
► [A047287] 0,1,2,3,6,7,8,9,10,13,14,15,16,17,20,21,22,23,24,27,28,29,30,31,34 ⋆ Numbers that are congruent to { 0, 1, 2, 3, 6 } mod 7. • a(n) = a(n - 1) + a(n - 5) - a(n - 6) for n > 6. _ Vincenzo Librandi _ , May 15 2012 • a(n) = (7n - 5 - 2 * (n mod 5) / 5. - _ Wesley Ivan Hurt _ , Dec 28 2016 •
► [A047246] 0,1,2,3,6,7,8,9,12,13,14,15,18,19,20,21,24,25,26,27,30,31,32,33,36 ⋆ Numbers that are congruent to { 0, 1, 2, 3 } mod 6. • a(n) = floor((6 / 5) * floor(5 * (n - 1) / 4)). - _ Bruno Berselli _ , May 03 2016 • a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. • a(n) = (6 * n - 9 - i ^ (2 * n) - (1 - i) * i ^ (- n) - (1 + i) * i ^ n) / 4 where i=sqrt(- 1). • a(n) = (6 * n - 9 - (- 1) ^ n - 2 * (- 1) ^ (n * (n + 1) / 2)) / 4. • a(n) = a(n - 4) + 6, a(1)=0, a(2)=1, a(3)=2, a(4)=3, for n > 4. (End) •
► [A003605] 0,2,3,6,7,8,9,12,15,18,19,20,21,22,23,24,25,26,27,30,33,36,39,42,45 ⋆ Unique monotonic sequence of nonnegative integers satisfying a(a(n)) = 3n. • a(3 * n) = 3 * a(n), a(3 * n + 1) = 2 * a(n) + a(n + 1), a(3 * n + 2) = a(n) + 2 a(n + 1), n > 0. • a(n + 1) - 2 * a(n) + a(n - 1) = { 2 if n=3 ^ k, - 2 if n=2 * 3 ^ k, otherwise 0 } , n > 1. (End) • a(n) = abs(2 * 3 ^ floor(log _ 3(n)) - n) + 2n - 3 ^ floor(log _ 3(n)) for n>=1. - _ Theodore Lamort de Gail _ , Sep 12 2017 •
► [A132188] 1,2,3,6,7,8,9,12,17,18,19,22,23,24,25,32,33,38,39,42,43,44,45,48,57 ⋆ Number of 3 - term geometric progressions with no term exceeding n. • a(n) = Sum [sqrt(n / k)] ^ 2, where the sum is over all squarefree k not exceeding n. •
► [A306556] 0,1,2,3,6,7,8,9,18,19,20,21,24,25,26,27,54,55,56,57,60,61,62,63,72 ⋆ Integers that appear as (unreduced) numerators of segment endpoints when a ternary Cantor set is created. • a(1)=0, a(2)=1; • a(2 ^ n) = 3 ^ (n - 1) for n > = 1; • a(2 ^ n + k) = 2 * 3 ^ (n - 1) + a(k) for 1 <= k <= 2 ^ n. •
► [A059590] 0,1,2,3,6,7,8,9,24,25,26,27,30,31,32,33,120,121,122,123,126,127,128,129,144 ⋆ Numbers obtained by reinterpreting base - 2 representation of n in the factorial base: a(n) = Sum _{ k>=0 } A030308(n,k) * A000142(k + 1). • a(n) = a(n - mbs(n)) + (1 + floor(log(n) / log(2)))!. - _ David A. Corneth _ , Aug 21 2016 •
► [A047560] 0,2,3,6,7,8,10,11,14,15,16,18,19,22,23,24,26,27,30,31,32,34,35,38,39 ⋆ Numbers that are congruent to { 0, 2, 3, 6, 7 } mod 8. • a(n) = a(n - 1) + a(n - 5) - a(n - 6) for n>6. •
► [A047223] 1,2,3,6,7,8,11,12,13,16,17,18,21,22,23,26,27,28,31,32,33,36,37,38,41 ⋆ Numbers that are congruent to { 1, 2, 3 } mod 5. • a(n) = 2 * floor((n - 1) / 3) + n. - _ Gary Detlefs _ , Dec 22 2011 • a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. • a(n) = (15 * n - 12 - 6 * cos(2 * n * Pi / 3) + 2 * sqrt(3) * sin(2 * n * Pi / 3)) / 9. • a(3k) = 5k - 2, a(3k - 1) = 5k - 3, a(3k - 2) = 5k - 4. (End) •
► [A047561] 1,2,3,6,7,9,10,11,14,15,17,18,19,22,23,25,26,27,30,31,33,34,35,38,39 ⋆ Numbers that are congruent to { 1, 2, 3, 6, 7 } mod 8. • a(n) = a(n - 1) + a(n - 5) - a(n - 6) for n>6. •
► [A047285] 0,2,3,6,7,9,10,13,14,16,17,20,21,23,24,27,28,30,31,34,35,37,38,41,42 ⋆ Numbers that are congruent to { 0, 2, 3, 6 } mod 7. • a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. • a(n) = (14 * n - 13 + 3 * i ^ (2 * n) + (1 + i) * i ^ (- n) + (1 - i) * i ^ n) / 8 where i=sqrt(- 1). •
► [A283208] 0,2,3,6,7,9,10,14,15,17,18,21,22,24,25,30,31,33,34,37,38,40,41,45,46 ⋆ Minimal exponent integer sequence associated with Vietoris sequence. • a(n + 4) = a(n) + 6 + b(n), where b(n) = min(k, floor((n + 5) / 4 mod 2 ^ k) = 1), for n >= 0. •
► [A053438] 1,2,3,6,7,10,11,14,15,18,19,22,23,26,27,30,31,34,35,38,39,42,43,46,47 ⋆ Expansion of (1 + x + 2 * x ^ 3) / ((1 - x) * (1 - x ^ 2)). • a(n) = 2 * n - (1 + (- 1) ^ n) / 2 if n>=1. - _ Frank Ellermann _ , Feb 12 2002 •
► [A042964] 2,3,6,7,10,11,14,15,18,19,22,23,26,27,30,31,34,35,38,39,42,43,46,47,50 ⋆ Numbers that are congruent to { 2, 3 } mod 4. • a(n) = a(n - 1) + 2 + (- 1) ^ n. (End) • a(n) = 2n if n is odd, otherwise n = 2n - 1. - _ Amarnath Murt

hy _ , Oct 16 2003 ● a(n) = (2 + (- 1) ^ n + (- 1) ^ (n + 1)) * n - (1 + (- 1) ^ n) / 2, n >= 1. - _ Paolo P. Lava _ , Feb 15 2008 ● a(n) = (3 + (- 1) ^ (n - 1)) / 2 + 2 * (n - 1) = 2n + 2 - (n mod 2). - _ Hieronymus Fischer _ , Oct 20 2007 ● a(n) = 4 * n - a(n - 1) - 3 (with a(1) = 2). - _ Vincenzo Librandi _ , Nov 17 2010 ● a(n) = 2 * n + ((- 1) ^ (n - 1) - 1) / 2. - _ Gary Detlefs _ , Oct 29 2013 ●

▶ [A359503] 1,2,3,6,7,10,11,14,18,21,22,28,29,32,36,43,44,50,51,58,62,65,66,76,82 ★ Partial sums of A066839. ● a(n) = m * (6 * n + 5 - m * (2 * m + 3)) / 6 + Sum _{ k=1..n, i=1..floor(sqrt(k)) } [(k - 1) mod i] - [k mod i] where m = floor(sqrt(n)). ●

▶ [A073170] 0,0,1,2,3,6,7,10,11,14,19,20,25,28,29,32,37,42,43,48,51,52,57,60,65 ★ a(1) = a(2) = 0; for n>2, a(n) = prime(n - 1) - n + 1. ● a(n)=Min { x; composite[x] - x=n } ●

▶ [A349257] 0,1,2,3,6,7,10,11,15,18,21,22,27,28,32,36,40,41,46,47 ★ Largest integer that can be expressed as Sum _{ k=1..n } k / p(k), where p is a permutation of [n]. ● a(n) = 1 + a(n - 1) if n is prime. - _ Alois P. Heinz _ , Nov 12 2021 ●

▶ [A069813] 1,2,3,6,7,10,13,16,19,24,27,32,37,42,47,54,59,66,73,80,87,96,103,112,121 ★ Maximum number of triangles in polyiamond with perimeter n. ● a(n) = round((- 25 + 9 * (- 1) ^ n + 8 * exp(- 2 / 3 * i * n * Pi) + 8 * exp((2 * i * n * Pi) / 3) + 6 * n ^ 2) / 36), where i=sqrt(- 1). ●

▶ [A107852] 0,1,2,3,6,7,10,17,22,37,58,83,134,199,298,465,694,1061,1626,2451,3750,5703,8650,13201,20054 ★ Expansion of - x * (x ^ 2 + 1) * (x + 1) ^ 2 / ((2 * x ^ 3 + x ^ 2 - 1) * (x ^ 4 + 1)). ● a(n) = a(n - 2) + 2 * a(n - 3) - a(n - 4) + a(n - 6) + 2 * a(n - 7) for n>6. - _ Colin Barker _ , Apr 30 2019 ●

▶ [A113545] 1,2,3,6,7,11,13,14,17,19,21,23,26,29,31,33,34,37,38,39,41,42,43,46,47 ★ Numbers both pentagon - free and squarefree. ● a(n) has no factor >1 of for m b ^ 2 nor c * (3 * c - 1) / 2. A005117 INTERSECTION A113508. ●

▶ [A308733] 0,0,0,0,1,1,2,3,6,7,11,14,21,25,34,41,55,64,81,95,119,136,165,189,227 ★ Sum of the smallest parts of the partitions of n into 4 parts. ● a(n) = Sum _{ k=1..floor(n / 4) } Sum _{ j=k..floor((n - k) / 3) } Sum _{ i=j..floor((n - j - k) / 2) } k. ● a(n) = a(n - 1) + a(n - 2) + a(n - 4) - 3 * a(n - 5) - a(n - 6) + a(n - 8) + 3 * a(n - 9) - a(n - 10) - a(n - 12) - a(n - 13) + a(n - 14) for n>13. ●

▶ [A130404] 1,2,3,6,7,12,13,20,21,30,31,42,43,56,57,72,73,90,91,110,111,132,133,156,157 ★ Partial sums of A093178. ● a(1) = 1; for n > 1, a(n) = a(n - 1) + 1 if n is odd, a(n) = a(n - 1) + (n - 1) if n is even. ● a(1) = 1; a(n) = a(n - 1) + n ^ (n mod 2) = (1 / 4) * (n ^ 2 + 2n + 4 + (n mod 2) * (2n - 1)). - _ Rolf Pleisch _ , Feb 04 2008 ● a(n) = (2 * (n - 1) * (n + 2) + (2 * n - 3) * (- 1) ^ n + 7) / 8. - _ Bruno Berselli _ , Mar 31 2011 ●

▶ [A075427] 1,2,3,6,7,14,15,30,31,62,63,126,127,254,255,510,511,1022,1023,2046,2047,4094,4095,8190,8191 ★ a(0) = 1; a(n) = a(n - 1) + 1 if n is even, otherwise a(n) = 2 * a(n - 1). ● a(0) = 1; for n >= 1, a(2 * n) = 2 ^ (n + 1) - 1, a(2 * n - 1) = 2 ^ (n + 1) - 2; a(n) = 2 ^ floor((n + 3) / 2) - 3 / 2 + (- 1) ^ n / 2. - _ Benoit Cloitre _ , Sep 17 2002 [corrected by _ Robert FERREOL _ , Jan 26 2011] ● a(n) = (- 1) ^ n / 2 - 3 / 2 + 2 ^ (n / 2) * (1 + sqrt(2) + (1 - sqrt(2)) * (- 1) ^ n). - _ Paul Barry _ , Apr 22 2004 ● a(n) = 3 * a(n - 2) - 2 * a(n - 4); ● a(n) = Sum _{ k=0..n } binomial(floor((n + 1) / 2), floor((k + 1) / 2)). (End) ●

▶ [A000837] 1,1,1,2,3,6,7,14,17,27,34,55,63,100,119,167,209,296,347,489,582,775,945,1254,1481 ★ Number of partitions of n into relatively prime parts. Also aperiodic partitions. ● a(n) <= p(n) <= a(n + 1), where p(n) is the number of partitions of n (A000041). - _ Franklin T. Adams - Watters _ , Jul 24 2020 ●

▶ [A245479] 1,2,3,6,7,14,21,42,49,98,147,294,343,686,1029,2058,2401,4802,7203,14406,16807,33614,50421,100842,117649 ★ Numbers n such that the n - th cyclotomic polynomial has a root mod 7. ● a(n) = 7 * a(n - 4). G.f.: - x * (2 * x + 1) * (3 * x ^ 2 + 1) / (7 * x ^ 4 - 1). - _ Colin Barker _ , Jul 30 2014 ● a(n) appears to satisfy x * Prod _{ n>=0 } (1 + a(2 ^ n + 1)x ^ (2 ^ n)) = Sum _{ n>=1 } a(n)x ^ n. ●

▶ [A109976] 1,2,3,6,7,16,19,46,66,159,274,667,1320,3263,7156,18084,42794,111018,278752,743889,1959482,5383395,14761634,41740307,118517301 ★ Diagonal sums of number triangle A109974. ● a(n) = Sum _{ k=0..floor(n / 2) } sigma _ k(n - 2k + 1). - Corrected by _ Robert Israel _ , May 25 2018 ●

▶ [A119746] 1,2,3,6,7,19,38,49,118,197,440,716,992,1268,1544,1820,2040,2313,9524,12113,33210,45596,60298,74944,89646 ★ Sum of previous term and preceding relatively prime terms. ● a(1)=1, a(2)=2, for n>=2, a(n + 1) = a(n) + sum _{ 1<=k<n, gcd(a(n),a(k))=1 } a(k). ●

▶ [A047286] 1,2,3,6,8,9,10,13,15,16,17,20,22,23,24,27,29,30,31,34,36,37,38,41,43 ★ Numbers that are congruent to { 1, 2, 3, 6 } mod 7. ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. ● a(n) = (14n - 11 + i ^ (2n) + (1 + 3i) * i ^ (- n) + (1 - 3i) * i ^ n) / 8 where i=sqrt(- 1). ●

▶ [A047244] 0,2,3,6,8,9,12,14,15,18,20,21,24,26,27,30,32,33,36,38,39,42,44,45,48 ★ Numbers that are congruent to { 0, 2, 3 } mod 6. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. ● a(n) = (6 * n - 7 - 2 * cos(2 * n * Pi / 3)) / 3. ● a(3k) = 6k - 3, a(3k - 1) = 6k - 4, a(3k - 2) = 6k - 6. (End) ●

▶ [A047403] 0,2,3,6,8,10,11,14,16,18,19,22,24,26,27,30,32,34,35,38,40,42,43,46,48 ★ Numbers that are congruent to { 0, 2, 3, 6 } mod 8. ● a(n) = 2 * n - ((n mod 4) == 2). ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. ● a(n) = (8 * n - 9 + i ^ (2 * n) + i ^ (1 - n) - i ^ (1 + n)) / 4, where i=sqrt(- 1). ●

▶ [A316571] 1,2,3,6,8,10,12,14,16,18,20,22,24,26,28,30,32,34,36,38,40,42,44,46,48 ★ a(1) = 1; for n > 1: a(n) = smallest number such that (Sum _{ k=1..n } a(k)) is divisible by n - 1 ● a(1)=1, a(2)=2, a(3)=3, a(n)=2(n - 1) for n >= 4. ●

▶ [A082667] 0,1,2,3,6,8,10,15,18,21,28,32,36,45,50,55,66,72,78,91,98,105,120,128,136 ★ a(n) = floor(2n / 3) * ceiling(2n / 3) / 2. ● a(n) = a(n - 1) + 2a(n - 3) - 2a(n - 4) - a(n - 6) + a(n - 7), (with 0,0,0 prefixed as in the Comments section). - _ Clark Kimberling _ , Apr 15 2012 ● a(n) = floor((n + 1) / 3) * (n - floor((n + 1) / 3)). - _ Wesley Ivan Hurt _ , Jun 06 2014 ●

▶ [A097383] 0,2,3,6,8,11,13,17,20,24,27,31,34,38,41,46,50,55,59,64,68,73,77,82,86 ★ Minimum total number of comparisons to find each of the values 1 through n using a binary search with 3 - way comparisons (less than, equal and greater than). ● a(n) = min _{ 1<=k<=n - 1 } n + a(k) + a(n - 1 - k). ●

▶ [A211519] 0,1,2,3,6,8,11,15,19,23,29,34,40,47,54,61,70,78,87,97,107,117,129,140,152 ★ Number of ordered triples (w,x,y) with all terms in { 1,...,n } and w=2x - 3y. ● a(n) = a(n - 1) + a(n - 2) - a(n - 4) - a(n - 5) + a(n - 6). ● a(n) = floor((n - 1) ^ 2) / 4) + floor((n - 2) / 3) + 1. - _ Ridouane Oudra _ , Jun 12 2020 ●

▶ [A308843] 0,0,0,0,0,1,1,2,3,6,8,12,13,21,23,32,33,49,56,77,86,117,130,162,174 ★ Sum of the third largest parts in the partitions of n into 5 squarefree parts. ● a(n) = Sum _{ l=1..floor(n / 5) } Sum _{ k=l..floor((n - l) / 4) } Sum _{ j=k..floor((n - k - l) / 3) } Sum _{ i=j..floor((n - j - k - l) / 2) } mu(l) ^ 2 * mu(k) ^ 2 * mu(j) ^ 2 * mu(i) ^ 2 * mu(n - i - j - k - l) ^ 2 * j, where mu is the Möbius function (A008683). ●

▶ [A198442] 0,0,2,3,6,8,12,15,20,24,30,35,42,48,56,63,72,80,90,99,110,120,132,143,156 ★ Number of sequences of n coin flips that win on the last flip, if the sequence of flips ends with (1,1,0) or (1,0,0). ● a(n) = (2 * n ^ 2 - 5 - 3 * (- 1) ^ n) / 8. ● a(2 * n) = n ^ 2 - 1; a(2 * n + 1) = n * (n + 1). ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4) with n>=4. ● a(n) = a(- n) for all n in Z. a(0) = - 1. - _ Michael Somos _ , Jan 09 2015 ● a(n) = floor((n ^ 2 - 1) / 4). - _ Bruno Berselli _ , Mar 15 2021 ●

▶ [A035106] 1,2,3,6,8,12,15,20,24,30,35,42,48,56,63,72,80,90,99,110,120,132,143,156,168 ★ 1, together with numbers of the form k * (k + 1) or k * (k + 2), k > 0. ● a(n + 2) = (2 * n ^ 2 + 12 * n + 3 * (- 1) ^ n + 13) / 8, with a(1)=1, i.e., a(n + 2) = (n + 2) * (n + 4) / 4 if n is even and (n + 1) * (n + 5) / 4 if n is odd. - _ Vladeta Jovovic _ , Oct 23 2001 ● a(n) = a(n - 2) + (n - 1), where a(1) = 0, a(2) = 0. ● a(n) = (2 * (n + 1) ^ 2 + 3 * (- 1) ^ n - 5) / 8, n>=2, with a(1)=1. (End) ● a(1)=1, a(2)=2, a(3)=3, a(4)=6, a(5)=8; for n > 5, a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4). - _ Harvey P. Dale _ , May 03 2012 ● a(n) = floor(n / 2) * (1 + ceiling(n / 2)), a(1) = 1. - _ Arkadiusz Wesolowski _ , Sep 25 2012 ● a(n) = ceiling((n - 1) * (n + 3) / 4), n > 1. - _ Wesley Ivan Hurt _ , Jun 14 2013 ●

▶ [A343820] 1,1,2,3,6,8,12,15,26,32,42,50,68,80,98,113,166,192,230,262,318,360,418,468,572 ★ Number of partitions of 2n into powers of 2: p1 <= p2 <= ... <= p _ k such that p _ i <= 1 + Sum _{ j=1..i - 1 } p _ j. ● a(n) is odd <=> n in { A000225 } . ●

▶ [A049194] 1,2,3,6,8,12,18,27,39,58,85,125,183,269,394,578,847,1242,1820,2668,3910,5731,8399,12310,18041 ★ Number of digits in n - th term of A001387. ● a(n) = (8 / 9 + (1 / 18) * (748 - 36 * sqrt(93)) ^ (1 / 3) + (1 / 18) * (748 + 36 * sqrt(93)) ^ (1 / 3)) * (1 / 3 + (1 / 6) * (116 - 12 * sqrt(93)) ^ (1 / 3) + (1 / 6) * (116 + 12 * sqrt(93)) ^ (1 / 3)) ^ n. ● a(n) = a(n - 1) + a(n - 2) - a(n - 5) for n >= 7. [Derived from the T. Sillke link above.] ● a(n) = a(n - 1) + a(n - 3) if n is odd, a(n - 1) + a(n - 3) + 1 if n is even, n >= 5 (this does not hold for n = 4). ●

▶ [A319390] 1,2,3,6,8,13,16,23,27,36,41,52,58,71,78,93,101,118,127,146,156,177,188,211,223 ★ a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5), a(0)=1, a(1)=2, a(2)=3, a(3)=6, a(4)=8. ● a(2n) = (3 * n ^ 2 + n + 2) / 2. a(2n + 1) = (3 * n ^ 2 + 5 * n + 4) / 2. ● a(- n) = a(n). ●

▶ [A003405] 1,1,2,3,6,8,13,19,30,41,59,80,113,149,202,264,350,447,578,730,928,1155,1444,1777,2193 ★ G.f.: (1 + x ^ 4 + x ^ 7 + 2 * x ^ 8 + x ^ 9 + x ^ 12 + x ^ 16) / Product _{ i=1..8 } (1 - x ^ i). ● a(n) = p(n,8) + p(n - 4,8) + p(n - 7,8) + 2 * p(n - 8,8) + p(n - 9,8) + p(n - 12,8) + p(n - 16,8) where p(n,k) is the number of partitions of n into at most k parts. - _ Sean A. Irvine _ , Apr 22 2015 ●

▶ [A308909] 0,0,0,0,0,0,1,1,2,3,6,8,14,15,23,28,39,43,62,70,98,115,152,175,227 ★ Sum of the third largest parts in the partitions of n into 6 squarefree parts. ● a(n) = Sum _{ m=1..floor(n / 6) } Sum _{ l=m..floor((n - m) / 5) } Sum _{ k=l..floor((n - l - m) / 4) } Sum _{ j=k..floor((n - k - l - m) / 3) } Sum _{ i=j..floor((n - j - k - l - m) / 2) } mu(m) ^ 2 * mu(l) ^ 2 * mu(k) ^ 2 * mu(j) ^ 2 * mu(i) ^ 2 * mu(n - i - k - j - l - m) ^ 2 * j, where mu is the Möbius function (A008683). ●

▶ [A308958] 0,0,0,0,0,0,0,1,1,2,3,6,8,14,17,25,30,44,50,72,83,115,136,184,213 ★ Sum of the third largest parts in the partitions of n into 7 squarefree parts. ● a(n) = Sum _{ o=1..floor(n / 7) } Sum _{ m=o..floor((n - o) / 6) } Sum _{ l=m..floor((n - m - o) / 5) } Sum _{ k=l..floor((n - l - m - o) / 4) } Sum _{ j=k..floor((n - k - l - m - o) / 3 } Sum _{ i=j..floor((n - j - k - l - m - o) / 2) } mu(o) ^ 2 * mu(m) ^ 2 * mu(l) ^ 2 * mu(k) ^ 2 * mu(j) ^ 2 * mu(i) ^ 2 * mu(n - i - j - k - l - m - o) ^ 2 * j, where mu is the Möbius function (A008683). ●

▶ [A326450] 0,0,0,0,0,0,0,0,1,1,2,3,6,8,14,17,27,32,46,55,79,93,128,153,208 ★ Sum of the third largest parts of the partitions of n into 8 squarefree parts. ● a(n) = Sum _{ p=1..floor(n / 8) } Sum _{ o=p..floor((n - p) / 7) } Sum _{ m=o..floor((n - o - p) / 6) } Sum _{ l=m..floor((n - m - o - p) / 5) } Sum _{ k=l..floor((n - l - m - o - p) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p) / 2) } mu(p) ^ 2 * mu(o) ^ 2 * mu(m) ^ 2 * mu(l) ^ 2 * mu(k) ^ 2 * mu(j) ^ 2 * mu(i) ^ 2 * mu(n - i - j - k - l - m - o - p) ^ 2 * j, where mu is the Möbius function (A008683). ●

▶ [A326530] 0,0,0,0,0,0,0,0,0,1,1,2,3,6,8,14,17,27,34,48,57,84,100,138,166 ★ Sum of the third largest parts of the partitions of n into 9 squarefree parts. ● a(n) = Sum _{ q=1..floor(n / 9) } Sum _{ p=q..floor((n - q) / 8) } Sum _{ o=p..floor((n - p - q) / 7) } Sum _{ m=o..floor((n - o - p - q) / 6) } Sum _{ l=m..floor((n - m - o - p - q) / 5) } Sum _{ k=l..floor((n - l - m - o - p - q) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p - q) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p - q) / 2) } mu(q) ^ 2 * mu(p) ^ 2 * mu(o) ^ 2 * mu(m) ^ 2 * mu(l) ^ 2 * mu(k) ^ 2 * mu(j) ^ 2 * mu(i) ^ 2 * mu(n - i - j - k - l - m - o - p - q) ^ 2 * j, where mu is the Möbius function (A008683). ●

▶ [A326635] 0,0,0,0,0,0,0,0,0,0,1,1,2,3,6,8,14,17,27,34,50,59,86,105,145 ★ Sum of the third largest parts of the partitions of n into 10 squarefree parts. ● a(n) = Sum _{ r=1..floor(n / 10) } Sum _{ q=r..floor((n - r) / 9) } Sum _{ p=q..floor((n - q - r) / 8) } Sum _{ o=p..floor((n - p - q - r) / 7) } Sum _{ m=o..floor((n - o - p - q - r) / 6) } Sum _{ l=m..floor((n - m - o - p - q - r) / 5) } Sum _{ k=l..floor((n - l - m - o - p - q - r) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p - q - r) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p - q - r) / 2) } mu(r) ^ 2 * mu(q) ^ 2 * mu(p) ^ 2 * mu(o) ^ 2 * mu(m) ^ 2 * mu(l) ^ 2 * mu(k) ^ 2 * mu(j) ^ 2 * mu(i) ^ 2 * mu(n - i - j - k - l - m - o - p - q - r) ^ 2 * j, where mu is the Möbius function (A008683). ●

▶ [A133586] 1,2,3,6,8,16,21,42,55,110,144,288,377,754,987,1974,2584,5168,6765,13530,17711,35422,46368,92736,121393 ★ Expansion of x * (1 + 2 * x) / ((x ^ 2 -

x - 1) * (x ^ 2 + x - 1)). ● a(n) = (2 ^ (- 2 - n) * ((1 - sqrt(5)) ^ n * (- 5 + sqrt(5)) - (- 1 - sqrt(5)) ^ n * (- 3 + sqrt(5)) - (- 1 + sqrt(5)) ^ n * (3 + sqrt(5)) + (1 + sqrt(5)) ^ n * (5 + sqrt(5)))) / sqrt(5). - _ Colin Barker _ , Mar 28 2016 ●

▶ [A308546] 1,2,3,6,8,16,24,48,60,120,180,360,480,960,1440,2880,3456,6912,10368,20736,27648,55296,82944,165888,207360 ⋆ Number of double - closed subsets of { 1..n } . ● a(n) = Product _{ k < n / 2 } (2 + floor(log _ 2(n / (2k + 1)))). ●

▶ [A047404] 1,2,3,6,9,10,11,14,17,18,19,22,25,26,27,30,33,34,35,38,41,42,43,46,49 ⋆ Numbers that are congruent to { 1, 2, 3, 6 } mod 8. ● a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4) for n>4. ● a(n) = (4 * n - 4 + i ^ (1 - n) - i ^ (1 + n)) / 2 where i = sqrt(- 1). ●

▶ [A047284] 2,3,6,9,10,13,16,17,20,23,24,27,30,31,34,37,38,41,44,45,48,51,52,55,58 ⋆ Numbers that are congruent to { 2, 3, 6 } mod 7. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. ● a(n) = (21 * n - 9 + 4 * sqrt(3) * sin(2 * n * Pi / 3)) / 9. ● a(3k) = 7k - 1, a(3k - 1) = 7k - 4, a(3k - 2) = 7k - 5. (End) ●

▶ [A007780] 1,2,3,6,9,11,18,20,27,30,54,81,162,168,243,486,729,1458,2187,4374,6561,13122,19683,39366,59049 ⋆ Losing initial configurations in 2 - hole Tchuka Ruma. ● a(n) = 3 * a(n - 2) for n>2. ●

▶ [A302488] 1,2,3,6,9,12,15,20,25,30,35,42,49,56,63,72,81,90,99,110,121,132,143,156,169 ⋆ Total domination number of the n X n grid graph. ● a(n) = ((- 1) ^ n + 2 * n * (n + 2) + 4 * sin(n * Pi / 2) - 1) / 8. ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 4) - 2 * a(n - 5) + a(n - 6). ●

▶ [A008810] 0,1,2,3,6,9,12,17,22,27,34,41,48,57,66,75,86,97,108,121,134,147,162,177,192 ⋆ a(n) = ceiling(n ^ 2 / 3). ● a(- n) = a(n) = ceiling(n ^ 2 / 3). ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) - 2 * a(n - 4) + a(n - 5) for n > 4. - _ Harvey P. Dale _ , Jun 20 2011 ●

▶ [A280984] 0,2,3,6,9,12,17,22,27,34,41,48,57,66,75,86,97,108,122,134,147,163,178,192,210 ⋆ Minimum number of dominoes on an n X n chessboard needed to prevent placement of another domino. ● a(n) > n ^ 2 / 3 + n / 111 for large n not congruent to 0 (mod 3) [from Gyárfás, Lehel, Tuza]. - _ Peter Kagey _ , May 22 2019 ●

▶ [A144677] 1,2,3,6,9,12,18,24,30,40,50,60,75,90,105,126,147,168,196,224,252,288,324,360,405 ⋆ Related to enumeration of quantum states (see reference for precise definition). ● a(n) = 2 * a(n - 1) - a(n - 2) + 2 * a(n - 3) - 4 * a(n - 4) + 2 * a(n - 5) - a(n - 6) + 2 * a(n - 7) - a(n - 8). ● a(n) = ((2 + floor(n / 3)) ^ 3 - floor((n + 4) / 3) + floor((n + 4) / 3) ^ 3 - floor((n + 5) / 3) + floor((n + 5) / 3) ^ 3 - floor((n + 6) / 3)) / 6. (End) ● a(n) = Sum _{ j=0..n } floor((j + 3) / 3) * floor((n - j + 3) / 3). - _ G. C. Greubel _ , Oct 18 2021 ●

▶ [A308824] 0,0,0,0,0,1,1,2,3,6,9,13,18,27,36,50,64,86,109,140,175,220,269,331,399 ⋆ Sum of the fourth largest parts in the partitions of n into 5 parts. ● a(n) = Sum _{ l=1..floor(n / 5) } Sum _{ k=l..floor((n - l) / 4) } Sum _{ j=k..floor((n - k - l) / 3) } Sum _{ i=j..floor((n - j - k - l) / 2) } k. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) + 2 * a(n - 4) - 4 * a(n - 6) + a(n - 8) - 3 * a(n - 9) + 4 * a(n - 10) + 4 * a(n - 11) - 3 * a(n - 12) + a(n - 13) - 4 * a(n - 15) + 2 * a(n - 17) - a(n - 18) + a(n - 19) + a(n - 20) - a(n - 21) for n>20. ●

▶ [A075123] 1,2,3,6,9,14,17,22,25,30,33,38,41,46,49,54,57,62,65,70,73,78,81,86,89 ⋆ a(n) is the least positive integer > a(n - 1) and a(n) is not 2 * a(i) + a(j) for 1<=i<j<n. ● a(n) = 4n - 10 - (n mod 2), for n>3. - _ Ralf Stephan _ , Nov 16 2004 ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n > 3. - _ Harvey P. Dale _ , Oct 28 2012 ●

▶ [A008823] 1,2,3,6,9,14,19,24,31,38,47,56,65,76,87,100,113,126,141,156,173,190,207,226,245 ⋆ Expansion of (1 + 2 * x ^ 3 + x ^ 5) / ((1 - x) ^ 2 * (1 - x ^ 5)). ● a(n) = floor(n * (2 * n + 3) / 5) + 1. - _ Tani Akinari _ , Jun 15 2014 ● a(0)=1, a(1)=2, a(2)=3, a(3)=6, a(4)=9, a(5)=14, a(6)=19, a(n)= 2 * a(n - 1) - a(n - 2) + a(n - 5) - 2 * a(n - 6) + a(n - 7). - _ Harvey P. Dale _ , Jan 02 2016 ●

▶ [A261243] 1,1,2,3,6,9,14,19,26,33,42,51,62,73,86,99,114,129,146,163,182,201,222,243,266 ⋆ Row lengths of the irregular triangles A258643 and A261242: maximal number of 0 - islands (holes) of certain bisymmetric n X n matrices with 0 or 1 entries only. ● a(n) = ceiling(((n - 2) ^ 2) / 2) + 1, n >= 2, a(1) = 1. ● a(n) = (1 / 2) * (n - 2) ^ 2 + 1 if n is even, a(n) = (ceiling((n - 2) / 2)) ^ 2 + (floor((n - 2) / 2)) ^ 2 + 1 if n is odd >= 3, and a(1) = 1. ●

▶ [A061925] 1,2,3,6,9,14,19,26,33,42,51,62,73,86,99,114,129,146,163,182,201,222,243,266,289 ⋆ a(n) = ceiling(n ^ 2 / 2) + 1. ● a(n) = floor((n ^ 2 + 3) / 2). - _ Gary Detlefs _ , Feb 13 2010 ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4). ● a(n) = (2 * n ^ 2 - (- 1) ^ n + 5) / 4. - _ Bruno Berselli _ , Sep 29 2011 ●

▶ [A073736] 1,2,3,6,9,14,19,26,33,42,55,64,79,96,107,126,149,166,187,216,237,260,295,320,349 ⋆ Sum of primes whose index is congruent to n (mod 3); equals the partial sums of A073737 (in which sums of three successive terms form the primes). ● a(n) = Sum _{ m<=n, m=n (mod 3) } p _ m, where p _ m is the m - th prime; that is, a(3n + k) = p _ (3n) + p _ (3(n - 1)) + p _ (3(n - 2)) + ... + p _ k, for 0<=k<3, where a(0)=1 and the 0th prime is taken to be 1. ●

▶ [A101593] 1,2,3,6,9,14,19,34,62,109,202,336,587,1100,2003,3630,6784,12607,23647,44206,83510,157851,299810,571264,1090986 ⋆ a(n) is the number of m <= 2 ^ n which are in A075190, i.e., such that m ^ 2 is exactly at the center between two consecutive primes, or in other words A056929(m) = 0. ● a(1) counts the squares m ^ 2 with m <= 2 ^ n = 2 which are interprimes. The squares 0 ^ 2 = 0 and 1 ^ 2 = 1 obviously aren't interprimes, so the only such square in that range is m ^ 2 = 2 ^ 2 = 4 = (nextprime + precprime) / 2 = (3 + 5) / 2, so a(1) = 1. ●

▶ [A084628] 1,2,3,6,9,14,20,28,39,52,68,87,110,138,171,209,253,303,361,427,501,585,678,783,899 ⋆ a(n) = floor(binomial(n + 7,7) / binomial(n + 3,3)). ● a(n) = 1 + floor(n * (n + 11) * (n ^ 2 + 11 * n + 58) / 840). ● a(n) = floor(binomial(n + 7, 4) / 35). - _ G. C. Greubel _ , Mar 24 2023 ●

▶ [A228364] 0,0,1,2,3,6,9,14,22,32,48,70,101,146,208,296,419,590,829,1160,1619,2254,3130,4338,6000 ⋆ G.f.: x ^ 2 * (x + 1) ^ 2 / (x ^ 3 + x ^ 2 - 1) ^ 2. ● a(0)=a(1)=0, a(2)=1, a(3)=2, a(4)=3, a(5)=6; for n>5, a(n) = 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4) - 2 * a(n - 5) - a(n - 6). ●

▶ [A018060] 1,1,2,3,6,9,14,23,36,56,88,138,216,338,529,828,1296,2028,3174,4968,7776,12170,19047,29810,46656 ⋆ Powers of fourth root of 6 rounded down. ● a(n) = floor(6 ^ (n / 4)). - _ Wesley Ivan Hurt _ , Aug 28 2015 ●

▶ [A308870] 0,0,0,0,0,0,1,1,2,3,6,9,15,20,31,42,61,80,112,143,191,243,316,393,501 ⋆ Sum of the fourth largest parts in the partitions of n into 6 parts. ● a(n) = Sum _{ m=1..floor(n / 6) } Sum _{ l=m..floor((n - m) / 5) } Sum _{ k=l..floor((n - l - m) / 4) } Sum _{ j=k..floor((n - k - l - m) / 3) } Sum _{ i=j..floor((n - j - k - l - m) / 2) } k. ●

▶ [A308930] 0,0,0,0,0,0,0,1,1,2,3,6,9,15,22,33,46,67,91,128,169,228,297,390,498 ⋆ Sum of the fourth largest parts in the partitions of n into 7 parts. ● a(n) = Sum _{ o=1..floor(n / 7) } Sum _{ m=o..floor((n - o) / 6) } Sum _{ l=m..floor((n - m - o) / 5) } Sum _{ k=l..floor((n - l - m - o) / 4) } Sum _{ j=k..floor((n - k - l - m - o) / 3 } Sum _{ i=j..floor((n - j - k - l - m - o) / 2) } k. ●

▶ [A308995] 0,0,0,0,0,0,0,0,1,1,2,3,6,9,15,22,35,48,71,97,139,185,254,334,447 ⋆ Sum of the fourth largest parts in the partitions of n into 8 parts. ● a(n) = Sum _{ p=1..floor(n / 8) } Sum _{ o=p..floor((n - p) / 7) } Sum _{ m=o..floor((n - o - p) / 6) } Sum _{ l=m..floor((n - m - o - p) / 5) } Sum _{ k=l..floor((n - l - m - o - p) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p) / 2) } k. ●

▶ [A326470] 0,0,0,0,0,0,0,0,0,1,1,2,3,6,9,15,22,35,50,73,101,145,196,270,360 ⋆ Sum of the fourth largest parts of the partitions of n into 9 parts. ● a(n) = Sum _{ q=1..floor(n / 9) } Sum _{ p=q..floor((n - q) / 8) } Sum _{ o=p..floor((n - p - q) / 7) } Sum _{ m=o..floor((n - o - p - q) / 6) } Sum _{ l=m..floor((n - m - o - p - q) / 5) } Sum _{ k=l..floor((n - l - m - o - p - q) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p - q) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p - q) / 2) } k. ●

▶ [A326595] 0,0,0,0,0,0,0,0,0,0,1,1,2,3,6,9,15,22,35,50,75,103,149,202,281 ⋆ Sum of the fourth largest parts of the partitions of n into 10 parts. ● a(n) = Sum _{ r=1..floor(n / 10) } Sum _{ q=r..floor((n - r) / 9) } Sum _{ p=q..floor((n - q - r) / 8) } Sum _{ o=p..floor((n - p - q - r) / 7) } Sum _{ m=o..floor((n - o - p - q - r) / 6) } Sum _{ l=m..floor((n - m - o - p - q - r) / 5) } Sum _{ k=l..floor((n - l - m - o - p - q - r) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p - q - r) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p - q - r) / 2) } k. ●

▶ [A080239] 1,1,2,3,6,9,15,24,40,64,104,168,273,441,714,1155,1870,3025,4895,7920,12816,20736,33552,54288,87841 ⋆ Antidiagonal sums of triangle A035317. ● a(n) = a(n - 1) + a(n - 2) + a(n - 4) - a(n - 5) - a(n - 6). ● a(n) = Sum _{ j=0..floor(n / 2) } Sum _{ k=0..floor((n - j) / 2) } binomial(n - j - 2k, j - 2k) for n>=0. ● a(n) = 8 * a(n - 4) - 8 * a(n - 8) + a(n - 12), n>12. - _ Gary Detlefs _ , Dec 10 2010 ● a(n) = Sum _{ k=0..floor((n - 1) / 4) } Fibonacci(n - 4 * k). - _ Johannes W. Meijer _ , Apr 19 2012 ●

▶ [A114323] 1,2,3,6,9,15,25,39,63,99,158,251,398,630,999,1584,2511,3981,6309,9999,15848,25118,39810,63095,99999 ⋆ Largest number whose 5th power has n digits. ● a(n) = ceiling((10 ^ n) ^ (1 / 5)) - 1. ●

▶ [A355324] 1,2,3,6,9,15,25,40,65,106,171,277,449,726,1175,1902,3077,4979,8057,13036,21093,34130,55223,89353,144577 ⋆ Lower midsequence of the Fibonacci numbers (1,2,3,5,8,...) and Lucas numbers (1,3,4,7,11,...); see Comments. ● a(n) = a(n - 1) + a(n - 2) + a(n - 3) - a(n - 4) - a(n - 5) for n >= 5. ● a(n) = (3 * ((5 - 4 * sqrt(5)) * (1 - sqrt(5)) ^ n + (1 + sqrt(5)) ^ n * (5 + 4 * sqrt(5))) / 2 ^ n + 10 * (cos(2 * n * Pi / 3) - 1)) / 30. - _ Stefano Spezia _ , Jul 17 2022 ●

▶ [A293631] 0,0,1,2,3,6,9,15,25,41,66,108,174,282,457,740,1197,1938,3135,5073,8209,13283,21492,34776,56268 ⋆ Greatest integer k such that k / Fibonacci(n) <= 3 / 4. ● a(n) = a(n - 1) + a(n - 2) + a(n - 6) - a(n - 7) - a(n - 8) for n >= 9. ● a(n) = floor(3 * Fibonacci(n) / 4). ●

▶ [A018158] 1,2,3,6,9,15,26,45,77,131,225,387,665,1143,1964,3375,5801,9971,17137,29455,50625,87013,149556,257052,441813 ⋆ Powers of fifth root of 15 rounded up. ● a(n) = ceiling(15 ^ (n / 5)). - _ Wesley Ivan Hurt _ , Dec 28 2013 ●

▶ [A062114] 0,1,2,3,6,9,16,25,42,67,110,177,288,465,754,1219,1974,3193,5168,8361,13530,21891,35422,57313,92736 ⋆ a(n) = 2 * Fibonacci(n) - (1 - (- 1) ^ n) / 2. ● a(n + 1) = Sum _{ k=0..n } binomial(n - floor(k / 2), floor(k / 2)). - _ Benoit Cloitre _ , May 05 2005 ● a(n) = (1 / 2) * ((- 1) ^ n - 1) + (2 / 5) * sqrt(5) * ((1 / 2 + (1 / 2) * sqrt(5)) ^ n - (1 / 2 - (1 / 2) * sqrt(5)) ^ n), with n >= 0. - _ Paolo P. Lava _ , Jan 13 2009 ● a(n) = a(n - 1) + 2 * a(n - 2) - a(n - 3) - a(n - 4), n > 3. - _ Harvey P. Dale _ , Nov 02 2011 ● a(n) = - (- 1) ^ n * a(- n) for all n in Z. - _ Michael Somos _ , Oct 17 2018 ●

▶ [A275548] 1,1,2,3,6,9,16,25,43,68,113,181,298,479,781,1260,2048,3308,5364,8672,14048,22720,36782,59502,96305 ⋆ Number of compositions of n if only the order of the odd numbers matter. ● a(2k) = p(k) + Sum _{ j=0..(k - 1) } p(j) * F(2k - 2j). ● a(2k + 1) = a(2k) + a(2k - 1). ● a(2k) = a(2k - 1) + a(2k - 2) + p(k) - p(k - 1). ●

▶ [A260710] 1,1,2,3,6,9,16,25,43,69,116,188,313,511,846,1386,2288,3756,6191,10174,16756,27552,45357,74604,122787 ⋆ Expansion of 1 / (1 - x - x ^ 2 - x ^ 4 + x ^ 5 + x ^ 7). ● a(n) = a(n - 1) + a(n - 2) + a(n - 4) - a(n - 5) - a(n - 7). ●

▶ [A056768] 1,1,2,3,6,9,17,23,40,87,111,219,336,413,614,1083,1850,2198,3630,5007,5861,9282,12488,19232,33439 ⋆ Number of partitions of the n - th prime into parts that are all primes. ● a(n) = [x ^ prime(n)] Product _{ k>=1 } 1 / (1 - x ^ prime(k)). - _ Ilya Gutkovskiy _ , Jun 05 2017 ●

▶ [A320271] 1,1,2,3,6,9,17,26,46,72,124,196,329,525,871,1396,2293,3689,6028,9717,15817,25534,41475,67009,108680 ⋆ Number of unlabeled semi - binary rooted trees with n nodes in which the non - leaf branches directly under any given node are all equal. ● a(1) = 1, ●

▶ [A079289] 1,1,2,3,6,9,17,26,47,73,128,201,345,546,923,1469,2456,3925,6509,10434,17199,27633,45344,72977,119345 ⋆ For even n, a(n) = a(n - 2) + a(n - 1) + 2 ^ (n / 2 - 2), n>2. For odd n, a(n) = a(n - 2) + a(n - 1). ● a(n) = a(n - 2) + a(n - 1) + floor(2 ^ (n / 2 - 2)) * (1 - (- 1) ^ (n + 1)) / 2 for n>1. ●

▶ [A182522] 1,1,2,3,6,9,18,27,54,81,162,243,486,729,1458,2187,4374,6561,13122,19683,39366,59049,118098,177147,354294 ⋆ a(0) = 1; thereafter a(2 * n + 1) = 3 ^ n, a(2 * n + 2) = 2 * 3 ^ n. ● a(n) = (3 - (1 + (- 1) ^ n) * (3 - 2 * sqrt(3)) / 2) * sqrt(3) ^ (n - 3) for n>0, a(0)=1. - _ Bruno Berselli _ , Mar 19 2013 ● a(0) = 1, a(1) = 1, a(n) = a(n - 1) + a(n - 2) if n is odd, and a(n) = a(n - 1) + a(n - 2) + a(n - 3) if n is even. - _ Jon Perry _ , Mar 19 2013 ● a(2m) = S2(m + 3,3) - 4 * S2(m + 2,3) + 5 * S2(m + 1,3) - 2 * S2(m,3). ● a(2m - 1) = S2(m +

2,3) - 3 * S2(m + 1,3) + 2 * S2(m,3), where S2(n,k) is the Stirling subset number A008277. ●

▶ [A038754] 1,2,3,6,9,18,27,54,81,162,243,486,729,1458,2187,4374,6561,13122,19683,39366,59049,118098,177147,354294,531441 ⋆ a(2n) = 3 ^ n, a(2n + 1) = 2 * 3 ^ n. ● a(n) = a(n - 1) * a(n - 2) / a(n - 3) with a(0)=1, a(1)=2, a(2)=3. ● a(2 * n) = (3 / 2) * a(2 * n - 1) = 3 ^ n, a(2 * n + 1) = 2 * a(2 * n) = 2 * 3 ^ n. ● a(1)=1, a(n)= 2 * a(n - 1) if a(n - 1) is odd, or a(n)= (3 / 2) * a(n - 1) if a(n - 1) is even. ● a(n) = (1 / 6) * (5 - (- 1) ^ n) * 3 ^ floor(n / 2). ● a(2 * n) = a(2 * n - 1) + a(2 * n - 2) + a(2 * n - 3). ● a(2 * n + 1) = a(2 * n) + a(2 * n - 1). (End) ●

▶ [A095718] 1,2,3,6,9,18,30,56,101,186,339,630,1167,2182,4092,7710,14561,27594,52425,99862,190647,364722,699045,1342176,2581107 ⋆ a(n) = Sum _{ k=0..n } floor(binomial(n,k) / (k + 1)). ● a(n) = Sum _{ k=0..n } floor(binomial(n,k) / (k + 1)). ●

▶ [A161704] 1,2,3,6,9,18,59,190,513,1186,2435,4566,7977,13170,20763,31502,46273,66114,92227,125990,168969,222930,289851,371934,471617 ⋆ a(n) = (3 * n ^ 5 - 35 * n ^ 4 + 145 * n ^ 3 - 235 * n ^ 2 + 152 * n + 30) / 30. ● a(n) = C(n,0) + C(n,1) + 2 * C(n,3) - 4 * C(n,4) + 12 * C(n,5). ●

▶ [A193196] 1,1,2,3,6,9,19,29,57,94,172,280,519,833,1472,2433,4185,6800,11666,18816,31686,51340,84929,136561,225476 ⋆ G.f.: A(x) = Sum _{ n>=0 } x ^ n / Product _{ k=1..n } (1 - k * x ^ k). ● a(n) = sum(prod(j=2..m, min(C[j - 1], C[j]))) where the sum is over all partitions C[1..m] (m parts) of n, see example. - _ Joerg Arndt _ , Sep 03 2014 ●

▶ [A286954] 0,2,3,6,10,11,14,14,30,62,66,99,143,212,343,478,697,992,1501,2246,3251,4776,6969,10283,15210 ⋆ Number of maximal irredundant sets in the n - cycle graph. ● a(n) = a(n - 2) + a(n - 3) + a(n - 4) + a(n - 5) - a(n - 7) - 2 * a(n - 8) - a(n - 9) + 2 * a(n - 10) + a(n - 11) - a(n - 14) for n > 14. ●

▶ [A047402] 2,3,6,10,11,14,18,19,22,26,27,30,34,35,38,42,43,46,50,51,54,58,59,62,66 ⋆ Numbers that are congruent to { 2, 3, 6 } mod 8. ● a(n) = a(n - 3) + 8. - Herman Jamke (hermanjamke(AT)fastmail.fm), Sep 14 2006 ● a(n) = 1 + 2 * (- 1 / 2 - (1 / 2) * i * sqrt(3)) ^ (- 2) * (- 1 / 2 - (1 / 2) * i * sqrt(3)) ^ (n - 1) + 2 * (- 1 / 2 + (1 / 2) * i * sqrt(3)) ^ (- 2) * (- 1 / 2 + (1 / 2) * i * sqrt(3)) ^ (n - 1) + (8 / 3) * (n - 1) - (4 / 9) * i * sqrt(3) * (- 1 / 2 + (1 / 2) * i * sqrt(3)) ^ (n - 1) + 2 * (- 1 / 2 - (1 / 2) * i * sqrt(3)) ^ (n - 1) + 2 * (- 1 / 2 + (1 / 2) * i * sqrt(3)) ^ (n - 1) + (4 / 9) * i * sqrt(3) * (- 1 / 2 - (1 / 2) * i * sqrt(3)) ^ (n - 1) + (- 1 / 2 - (1 / 2) * i * sqrt(3)) ^ (- 1) * (- 1 / 2 - (1 / 2) * i * sqrt(3)) ^ (n - 1) + (- 1 / 2 + (1 / 2) * i * sqrt(3)) ^ (- 1) * (- 1 / 2 + (1 / 2) * i * sqrt(3)) ^ (n - 1), for n>=1 where i=sqrt(- 1). - _ Paolo P. Lava _ , Oct 01 2008 ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. ● a(n) = (24 * n - 15 - 3 * cos(2 * n * Pi / 3) + 5 * sqrt(3) * sin(2 * n * Pi / 3)) / 9. ● a(3k) = 8k - 2, a(3k - 1) = 8k - 5, a(3k - 2) = 8k - 6. (End) ●

▶ [A001635] 0,2,3,6,10,11,21,30,48,72,110,171,260,401,613,942,1445,2216,3401,5216,8004,12278,18837,28899,44335 ⋆ A Fielder sequence: a(n) = a(n - 1) + a(n - 2) - a(n - 6), n >= 7. ● a(n) = a(n - 2) + a(n - 3) + a(n - 4) + a(n - 5), n >= 6. ● a(n) = Sum _{ k=0..n } C(2 * n + 1, 2 * k + 1) * 2 ^ k. - Pat Costello (pat.costello(AT)eku.edu), May 20 2003 ●

▶ [A140785] 2,3,6,10,12,15,18,20,28,30,35,40,42,45,49,56,60,63,70,72,77,80,84,90,100 ⋆ a(n) = the single integer k, where p(n) <= k <= p(n + 1), that is divisible by (p(n + 1) - p(n) + 1), where p(n) is the n - th prime. ● a(n) = (p(n + 1) - p(n) + 1) * floor(p(n + 1) / (p(n + 1) - p(n) + 1)), where p(n) is the n - th prime. ●

▶ [A102366] 1,1,2,3,6,10,15,21,28,84,120,165,220,286,364,455,1820,2380,3060,3876,4845,5985,7315,8855,10626 ⋆ Number of subsets of { 1,2,...,n } in which exactly half of the elements are less than or equal to sqrt(n). ● a(n) = binomial(n, floor(sqrt(n))). - _ Paul D. Hanna _ , Jun 25 2011 ●

▶ [A269403] 0,2,3,6,10,16,21,28,36,46,55,66,78,92,105,120,136,154,171,190,210,232,253,276,300 ⋆ Expansion of x * (2 - x + 2 * x ^ 2 + x ^ 3) / ((1 - x) ^ 3 * (1 + x + x ^ 2 + x ^ 3)). ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 4) - 2 * a(n - 5) + a(n - 6). ● a(n) = (2 * n ^ 2 + 2 * n + 2 * sin((Pi * n) / 2) - (- 1) ^ n + 1) / 4. ●

▶ [A001636] 0,2,3,6,10,17,21,38,57,92,143,225,351,555,868,1366,2142,3365,5282,8296,13023,20451,32108,50417,79160 ⋆ A Fielder sequence: a(n) = a(n - 1) + a(n - 2) - a(n - 7), n >= 8. ● a(n) = a(n - 2) + a(n - 3) + a(n - 4) + a(n - 5) + a(n - 6), n >= 7. ●

▶ [A099517] 1,1,2,3,6,10,17,27,44,71,116,188,305,493,798,1291,2090,3382,5473,8855,14328,23183,37512,60696,98209 ⋆ A transform of (1 - x) / (1 - 2x). ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + 2 * a(n - 4) - a(n - 6). ● a(n) = sum { k=0..floor(n / 3), binomial(n - 2 * k, k) * (- 1) ^ k * (2 ^ (n - 3 * k) + 0 ^ (n - 3 * k)) / 2 } . ●

▶ [A001610] 0,2,3,6,10,17,28,46,75,122,198,321,520,842,1363,2206,3570,5777,9348,15126,24475,39602,64078,103681,167760 ⋆ a(n) = a(n - 1) + a(n - 2) + 1, with a(0) = 0 and a(1) = 2. ● a(n) = F(n) + F(n + 2) - 1 where F(n) is the n - th Fibonacci number. - _ Zerinvary Lajos _ , Jan 31 2008 ● a(n) = - 1 + (1 / 2) * (1 / 2 + (1 / 2) * sqrt(5)) ^ n + (1 / 2) * (1 / 2 + (1 / 2) * sqrt(5)) ^ n * sqrt(5) - (1 / 2) * sqrt(5) * (1 / 2 - (1 / 2) * sqrt(5)) ^ n + (1 / 2) * (1 / 2 - (1 / 2) * sqrt(5)) ^ n, with n >= 0. - _ Paolo P. Lava _ , Sep 29 2008 ● a(n) = Sum _{ i=1..floor((n + 1) / 2) } ((n + 1) / i) * C(n - i,i - 1). In more general case of polynomials Q _ n(x)=a(n,x) (see our comment) we have Q _ n(x) = Sum _{ i=1..floor((n + 1) / 2) } ((n + 1) / i) * C(n - i,i - 1) * x ^ (i - 1). - _ Vladimir Shevelev _ , Apr 23 2010 ● a(0)=0, a(1)=2, a(2)=3; for n>=3, a(n) = 2 * a(n - 1) - a(n - 3). - _ George F. Johnson _ , Jan 28 2013 ●

▶ [A245437] 0,0,0,0,0,1,1,2,3,6,10,17,29,50,86,147,252,432,741,1270,2177,3732,6398,10968,18802 ⋆ Expansion of x ^ 5 / (x ^ 6 - x ^ 4 - x ^ 2 - x + 1). ● a(n) = a(n - 1) + a(n - 2) + a(n - 4) - a(n - 6) for n>5. ●

▶ [A123908] 1,1,2,3,6,10,17,30,52,90,156,271,470,815,1414,2453,4255,7381,12804,22211,38529,66836,115940,201120,348881 ⋆ Number of sequences with terms 1, 2 or 3 summing to n with no three consecutive 1's. ● a(n) = a(n - 2) + 2 * a(n - 3) + 2 * a(n - 4) + a(n - 5). ●

▶ [A121364] 0,0,1,2,3,6,10,18,29,50,81,136,220,364,589,966,1563,2550,4126,6710,10857,17622,28513,46224,74792 ⋆ Convolution of A066983 with the double Fibonacci sequence A103609. ● a(n) = F(n) - D(n + 1), where F is the Fibonacci sequence (A000045) and D is "A double Fibonacci sequence" (A103609). ●

▶ [A215006] 0,1,2,3,6,10,18,30,51,84,139,227,371,603,980,1589,2576,4172,6756,10936,17701,28646,46357,75013,121381 ⋆ a(0)=0, a(n + 1) is the least k>a(n) such that k + a(n) + n + 1 is a Fibonacci number. ● a(n) = a(n - 1) + a(n - 2) + floor(n / 2) - 1 with n>1, a(0)=0, a(1)=1. ●

▶ [A364463] 1,2,3,6,10,18,30,54,92,167,290,525,935,1704,3082,5664,10386,19249,35701,66702,124855,234969,443174,839254,1592925 ⋆ Number of subsets of { 1..n } with elements disjoint from first differences of elements. ● a(n) < a(n + 1) <= 2 * a(n). - _ David A. Corneth _ , Aug 02 2023 ●

▶ [A172516] 2,3,6,10,18,30,60,108,180,360,720,1260,2520,5040,9240,17640,35280,65520,131040,257040,498960,982800,1884960,3603600,7207200 ⋆ Least number k such that sigma(k) >= 2 ^ n. ● a(n) <= 2 * a(n - 1) ●

▶ [A102702] 2,3,6,10,18,31,54,93,160,274,468,797,1354,2295,3882,6554,11046,18587,31230,52401,87812,146978,245736,410425,684818 ⋆ Expansion of (2 - x - 2 * x ^ 2 - x ^ 3) / (1 - x - x ^ 2) ^ 2. ● a(0)=2, a(1)=3, a(2)=6, a(3)=10, a(n)=2 * a(n - 1) + a(n - 2) - 2 * a(n - 3) - a(n - 4). - _ Harvey P. Dale _ , Apr 21 2014 ● a(n) = ((2 * n + 10) * F(n + 1) - (n - 4) * F(n)) / 5. - _ Andrew Yezhou Wang _ , Jul 14 2019 ●

▶ [A181532] 0,1,1,2,3,6,10,18,31,55,96,169,296,520,912,1601,2809,4930,8651,15182,26642,46754,82047,143983,252672 ⋆ a(0) = 0, a(1) = 1, a(2) = 1; a(n) = a(n - 1) + a(n - 2) + a(n - 4) ● a(0) = 0, a(1) = 1, a(2) = 1; a(n) = a(n - 1) + a(n - 2) + a(n - 4). ●

▶ [A060945] 1,1,2,3,6,10,18,31,55,96,169,296,520,912,1601,2809,4930,8651,15182,26642,46754,82047,143983,252672,443409 ⋆ Number of compositions (ordered partitions) of n into 1's, 2's and 4's. ● a(n) = a(n - 1) + a(n - 2) + a(n - 4). ● a(n) = Sum _{ k=0..floor(n / 2) } Sum _{ i=0..n - k } C(i, n - k - i) * C(2 * i - n + k, 3 * k - 2 * n + 2 * i). - _ Paul Barry _ , Oct 24 2005 ●

▶ [A023359] 1,1,2,3,6,10,18,31,56,98,174,306,542,956,1690,2983,5272,9310,16448,29050,51318,90644,160118,282826,499590 ⋆ Number of compositions (ordered partitions) of n into powers of 2. ● a(n) = [n=0] + Sum _{ k>=0 } a(n - 2 ^ k). - _ Len Smiley _ , May 07 2001 ● a(n) seems to be asymptotic to A * B ^ n where A=0.332198..., B=1.766398... - _ Benoit Cloitre _ , Dec 17 2002. More accurately: B=1.76639811455017359722848839244009973023206928795707277527828507440838434..., A=0.58679374529351144845013208294162259198824401250194713608555348278359775... - _ Vaclav Kotesovec _ , Apr 30 2014 ●

▶ [A089985] 2,3,6,10,18,34,66,130,258,514,1026,2050,4098,8194,16386,32770,65538,131074,262146,524290,1048578,2097154,4194306,8388610,16777218 ⋆ a(n) = A089709(n + 1) / A089709(n). ● a(n) = 2 ^ (n - 1) + 2, n>2. ●

▶ [A079959] 1,1,2,3,6,10,19,33,60,106,191,340,610,1089,1950,3485,6236,11150,19946,35670,63802,114107,204091,365018,652857 ⋆ Number of permutations satisfying - k<=p(i) - i<=r and p(i) - i not in I, i=1..n, with k=1, r=5, I= { 2,4 } . ● a(n) = a(n - 1) + a(n - 2) + a(n - 4) + a(n - 6) G.f.: - 1 / (x ^ 6 + x ^ 4 + x ^ 2 + x - 1) ●

▶ [A028495] 1,1,2,3,6,10,19,33,61,108,197,352,638,1145,2069,3721,6714,12087,21794,39254,70755,127469,229725,413908,745889 ⋆ Expansion of (1 - x ^ 2) / (1 - x - 2 * x ^ 2 + x ^ 3). ● a(n) = Sum _ (1 / 7 * (1 + 2 *_ alpha) *_ alpha ^ (- 1 - n), _ alpha=RootOf(_ Z ^ 3 - 2 *_ Z ^ 2 -_ Z + 1)). ● a(n) = a(n - 1) + Sum _{ k=1..floor(n / 2) } a(n - 2 * k). - _ Floor van Lamoen _ , Oct 29 2005 ● a(n) = 5 * a(n - 2) - 6 * a(n - 4) + a(n - 6). - _ Floor van Lamoen _ , Nov 02 2005 ● a(n) = (2 ^ n / 7) * Sum _{ r=1..6 } (1 - (- 1) ^ r) * cos(Pi * r / 7) ^ n * (1 + cos(Pi * r / 7)). - _ Herbert Kociemba _ , Sep 15 2020 ●

▶ [A191519] 1,1,2,3,6,10,19,33,62,110,205,368,683,1235,2286,4153,7674,13986,25813,47150,86949,159077,293176,537014,989267 ⋆ Number of dispersed Dyck paths of semilength n (i.e., Motzkin paths of length n with no (1,0) - steps at positive heights) having no UUU's (U=(1,1)). ● a(n - 1)=sum(m=floor((n + 1) / 2)..n, ((2 * m - n) * sum(j=0..m, binomial(j,n + 2 * j - 3 * m) * binomial(m,j))) / m). [_ Vladimir Kruchinin _ , Mar 09 2013] ●

▶ [A050291] 1,2,3,6,10,20,30,60,96,192,288,576,960,1920,2880,5760,9360,18720,28080,56160,93600,187200,280800,561600,898560 ⋆ Number of double - free subsets of { 1, 2, ..., n } . ● a(n) = a(n - 1) * Fibonacci(b(2n) + 2) / Fibonacci(b(2n) + 1), Fibonacci = A000045, b = A007814. ●

▶ [A214002] 1,1,2,3,6,10,20,31,65,101,216,336,728,1128,2472,3823,8451,13051,29050,44803,100298,154518,347568,534964,1208220 ⋆ Number of compositions of n into ceiling(n / 2) parts with 1 <= each part <=4. ● a(n) = sum((- 1) ^ h * binomial(n - 4 * h - 1, ceiling(n / 2) - 1) * binomial(ceiling(n / 2), h), h=0..floor((n - 1) / 4)). ●

▶ [A030436] 1,1,2,3,6,10,20,34,68,116,232,396,792,1352,2704,4616,9232,15760,31520,53808,107616,183712,367424,627232,1254464 ⋆ Expansion of g.f. (1 + x - 2 * x ^ 2 - x ^ 3) / (1 - 4 * x ^ 2 + 2 * x ^ 4). ● a(0)=a(1)=1, a(2)=2, a(3)=3, a(n)=4 * a(n - 2) - 2 * a(n - 4). - _ Harvey P. Dale _ , May 11 2011 ● a(n) = (2 + sqrt(2 + sqrt(2))) / 8 * (sqrt(2 + sqrt(2))) ^ n + (2 - sqrt(2 + sqrt(2))) / 8 * (- sqrt(2 + sqrt(2))) ^ n + (2 + sqrt(2 - sqrt(2))) / 8 * (sqrt(2 - sqrt(2))) ^ n + (2 - sqrt(2 - sqrt(2))) / 8 * (- sqrt(2 - sqrt(2))) ^ n. - _ Sergei N. Gladkovskii _ , Aug 23 2012 ● a(n) = (2 ^ n / 8) * Sum _{ r=1..7 } (1 - (- 1) ^ r)cos(Pi * r / 8) ^ n * (1 + cos(Pi * r / 8)). - _ Herbert Kociemba _ , Sep 17 2020 ●

▶ [A061551] 1,1,2,3,6,10,20,35,69,124,241,440,846,1560,2977,5525,10490,19551,36994,69142,130532,244419,460737,863788,1626629 ⋆ Number of paths along a corridor width 8, starting from one side. ● a(n) = sum(b(n,i)) where b(n,0) = b(n,9) = 0, b(0,1)=1, b(0, n)=0 if n!=1 and b(n,i) = b(n - 1,i) + b(n + 1,i) if 0 < n < 9. ● a(n) = 7 * a(n - 2) - 15 * a(n - 4) + 10 * a(n - 6) - a(n - 8). (End) ● a(n) = a(n - 1) + 3 * a(n - 2) - 2 * a(n - 3) - a(n - 4), for n > 3, with { a(k) } = { 1,1,2,3 } , k=0,1,2,3. - _ L. Edson Jeffery _ , Mar 18 2011 ● a(n) = 2 ^ n / 9 * Sum _{ r=1..8 } (1 - (- 1) ^ r)cos(Pi * r / 9) ^ n * (1 + cos(Pi * r / 9)). - _ Herbert Kociemba _ , Sep 17 2020 ●

▶ [A178381] 1,1,2,3,6,10,20,35,70,125,250,450,900,1625,3250,5875,11750,21250,42500,76875,153750,278125,556250,1006250,2012500 ⋆ Number of paths of length n starting at initial node of the path graph P _ 9. ● a(n) = 5 * a(n - 2) - 5 * a(n - 4) for n>=5 with a(0)=1, a(1)=1, a(2)=2, a(3)=3 and a(4)=6. ●

▶ [A037031] 1,1,2,3,6,10,20,35,70,126,210,462,792,1716,3003,5005,8008,19448,31824,75582,125970,203490,319770,817190,1307504 ⋆ Number of combinations of n objects taken pi(n) at a time. ● a(n) = C(n,pi(n)). ●

► [A336675] 1,1,2,3,6,10,20,35,70,126,251,460,911,1690,3327,6225,12190,22950,44744,84626,164407,312019,604487,1150208,2223504 ⋆ Number of paths of length n starting at initial node of the path graph P _ 10. ● a(n) = a(n - 1) + 4 * a(n - 2) - 3 * a(n - 3) - 3 * a(n - 4) + a(n - 5) for n > 4. (End) ● a(n) = (2 ^ n / 11) * Sum _{ r=1..10 } (1 - (- 1) ^ r) * cos(Pi * r / 11) ^ n * (1 + cos(Pi * r / 11)). - _ Herbert Kociemba _ , Sep 14 2020 ●

► [A336678] 1,1,2,3,6,10,20,35,70,126,252,461,922,1702,3404,6315,12630,23494,46988,87533,175066,326382,652764,1217483,2434966 ⋆ Number of paths of length n starting at initial node of the path graph P _ 11. ● a(n) = (2 ^ n / 12) * Sum _{ r=1..11 } (1 - (- 1) ^ r) * cos(Pi * r / 12) ^ n * (1 + cos(Pi * r / 12)). - _ Herbert Kociemba _ , Sep 14 2020 ●

► [A210736] 1,1,1,2,3,6,10,20,35,70,126,252,462,924,1716,3432,6435,12870,24310,48620,92378,184756,352716,705432,1352078 ⋆ Expansion of (1 + sqrt((1 + 2 * x) / (1 - 2 * x))) / 2 in powers of x. ● a(n) = (- 1) ^ floor(n / 2) * hypergeom2F1([1 - n, - n],[1], - 1). - _ Peter Luschny _ , Sep 01 2012 ●

► [A001405] 1,1,2,3,6,10,20,35,70,126,252,462,924,1716,3432,6435,12870,24310,48620,92378,184756,352716,705432,1352078,2704156 ⋆ a(n) = binomial(n, floor(n / 2)). ● a(n) = max _{ k=0..n } binomial(n, k). ● a(0) = 1; a(2 * m + 2) = 2 * a(2 * m + 1); a(2 * m + 1) = Sum _{ k = 0..2 * m } (- 1) ^ k * a(k) * a(2 * m - k). - _ Len Smiley _ , Dec 09 2001 ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n, k) * binomial(1, n - 2 * k). - _ Paul Barry _ , May 13 2005 ● a(n) = Sum _{ k=0..floor((n + 1) / 2) } (binomial(n + 1, k) * (cos((n - 2 * k + 1) * Pi / 2) + sin((n - 2 * k + 1) * Pi / 2))). ● a(n) = Sum _{ k=0..n + 1 } , (binomial(n + 1, (n - k + 1) / 2) * (1 - (- 1) ^ (n - k)) * (cos(k * Pi / 2) + sin(k * Pi)) / 2). (End) ● a(n) = Sum _{ k=floor(n / 2)..n } (binomial(n,n - k) - binomial(n,n - k - 1)). - _ Paul Barry _ , Sep 06 2007 ●

► [A036557] 1,1,2,3,6,10,20,35,70,126,252,463,926,1730,3460,6555,13110,25126,50252,97223,194446,379050,758100,1486675,2973350 ⋆ Number of multiples of 3 in 0..2 ^ n - 1 with an even sum of base - 2 digits. ● a(n) = (1 / 12) * (3 ^ ((n + 1) / 2) + 3 ^ ((n + 2) / 2) + 2 ^ (n + 1) + (- 1) ^ n + 3), n > 0. ● a(n) = 2 * a(n - 1) + 4 * a(n - 2) - 8 * a(n - 3) - 3 * a(n - 4) + 6 * a(n - 5). - _ Wesley Ivan Hurt _ , Apr 13 2021 ●

► [A173125] 1,1,2,3,6,10,20,35,70,127,254,474,948,1807,3614,6995,13990,27370,54740,107883,215766,427351,854702,1698458,3396916 ⋆ Sum _{ k=floor[n / 2] mod 5 } C(n,k). ● a(n) = 2 * a(n - 1) + 3 * a(n - 2) - 6 * a(n - 3) - a(n - 4) + 2 * a(n - 5). - _ Colin Barker _ , Sep 14 2014 ●

► [A005418] 1,2,3,6,10,20,36,72,136,272,528,1056,2080,4160,8256,16512,32896,65792,131328,262656,524800,1049600,2098176,4196352,8390656 ⋆ Number of (n - 1) - bead black - white reversible strings; also binary grids; also row sums of Losanitsch's triangle A034851; also number of caterpillar graphs on n + 2 vertices. ● a(n) = 2 ^ (n - 2) + 2 ^ (floor(n / 2) - 1). ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 4 * a(n - 3). - _ Jaume Oliver Lafont _ , Dec 05 2008 ● a(2 * n) = 2 * a(2 * n - 1) and a(2 * n + 1) = a(2 * n) + 4 ^ (n - 1) with a(1) = 1. - _ Johannes W. Meijer _ , Aug 26 2013 ● a(n) = Sum _{ j=0..k } (S2(n,j) + Ach(n,j)) / 2, where k=2 is the maximum number of colors, S2(n,k) is the Stirling subset number A008277, and Ach(n,k) = [n>=0 & n<2 & n==k] + [n>1] * (k * Ach(n - 2,k) + Ach(n - 2,k - 1) + Ach(n - 2,k - 2)). ● a(n + 1) = (k ^ n + k ^ ceiling(n / 2)) / 2, where k=2 is number of colors we can use. (End) ●

► [A345973] 1,1,1,2,3,6,10,20,36,73,138,281,549,1136,2263,4705,9553,20015,41096,86643,179638,380701,795892,1693003,3562217 ⋆ G.f.: x + x ^ 2 / Product _{ n>=1 } (1 - a(n) * x ^ n). ● a(n + 2) = (1 / n) * Sum _{ k=1..n } (Sum _{ d|k } d * a(d) ^ (k / d)) * a(n - k + 2). ●

► [A045690] 1,1,2,3,6,10,20,37,74,142,284,558,1116,2212,4424,8811,17622,35170,70340,140538,281076,561868,1123736,2246914,4493828 ⋆ Number of binary words of length n (beginning with 0) whose autocorrelation function is the indicator of a singleton. ● a(2n) = 2 * a(2n - 1) - a(n) for n >= 1; a(2n + 1) = 2 * a(2n) for n >= 1. ●

► [A007148] 1,2,3,6,10,20,37,74,143,284,559,1114,2206,4394,8740,17418,34696,69194,137971,275280,549258,1096286,2188333,4369162,8724154 ⋆ Number of self - complementary 2 - colored bracelets (turnover necklaces) with 2n beads. ● a(n) = 2 ^ (n - 2) + (1 / (4n)) * Sum _{ d|n } phi(2d) * 2 ^ (n / d). - _ N. J. A. Sloane _ , Sep 25 2012 ●

► [A215067] 1,1,1,2,3,6,10,21,37,80,146,322,602,1347,2563,5798,11181,25512,49720,114236,224540,518848,1027038,2384538,4748042 ⋆ Number of Motzkin n - paths avoiding odd - numbered steps that are up steps. ● a(2 * n) = Sum _{ k=0..n } binomial(n + k - 1,n - k) * binomial(n,k) / (n - k + 1); ● a(2 * n + 1) = Sum _{ k=0..n } binomial(n + k + 1,n - k) * binomial(n,k) / (n - k + 1). ● a(n) = 3 _ F _ 2([- r,1 - r - 2 * m,1 + r + m],[(3 - m) / 2,(4 - m) / 2],1 / 4) * r ^ (1 - m) for n>0 where m = n mod 2 and r = floor(n / 2). - _ Peter Luschny _ , Aug 03 2012 ●

► [A242563] 0,0,2,3,6,10,21,42,86,171,342,682,1365,2730,5462,10923,21846,43690,87381,174762,349526,699051,1398102,2796202,5592405 ⋆ a(n) = 2 * a(n - 1) - a(n - 3) + 2 * a(n - 4), a(0)=a(1)=0, a(2)=2, a(3)=3. ● a(n + 3) = 3 * 2 ^ n - a(n), a(0)=a(1)=0, a(2)=2. ● a(n + 1) = 2 * a(n) + period 6: repeat 0, 2, - 1, 0, - 2, 1. a(0)=0. ● a(n + 6) = a(n) + 21 * 2 ^ n, a(0)=a(1)=0, a(2)=2, a(3)=3, a(4)=6, a(5)=10. ● a(n) = 1 / 3 * ((- 1) ^ n - 2 * cos((n * Pi) / 3) + 2 ^ n). - _ Alexander R. Povolotsky _ , Jun 02 2014 ●

► [A137208] 2,3,6,10,22,38,86,150,342,598,1366,2390,5462,9558,21846,38230,87382,152918,349526,611670,1398102,2446678,5592406,9786710,22369622 ⋆ a(n) = a(n - 1) + 4 * a(n - 2) - 4 * a(n - 3) for n > 2; a(0)=2, a(1)=3, a(2)=6. ● a(n) = (2 / 3) + (5 / 4) * 2 ^ n + (1 / 12) * (- 2) ^ n, with n>=0. - _ Paolo P. Lava _ , Jun 09 2008 ●

► [A300442] 1,1,1,2,3,6,10,23,46,108,231,561,1285,3139,7348,18265,43907,109887,267582,675866,1669909,4238462,10555192,26955062,67706032 ⋆ Number of binary strict trees of weight n. ● a(n) = 1 + Sum _{ x + y = n, 0 < x < y < n } a(x) * a(y). ●

► [A054357] 1,1,2,3,6,10,28,63,190,546,1708,5346,17428,57148,191280,646363,2210670,7626166,26538292,93013854,328215300,1165060668,4158330416,1491563537 8,53746119972 ⋆ Number of unlabeled 2 - ary cacti having n polygons. Also number of bi - colored plane trees with n edges. ● a(n) = (1 / n) * (Sum _{ d|n } phi(n / d) * binomial(2 * d, d)) - binomial(2 * n, n) / (n + 1) for n > 0. - _ Andrew Howroyd _ , May 02 2018 ●

► [A218155] 2,3,6,11,14,15,18,23,26,27,30,35,38,39,42,47,50,51,54,59,62,63,66,71,74 ⋆ Numbers congruent to 2, 3, 6, 11 mod 12. ● a(n) = 2a(n - 1) - 2a(n - 2) + 2a(n - 3) - a(n - 4). - _ Charles R Greathouse IV _ , Nov 09 2012 ●

► [A076307] 1,2,3,6,11,15,21,28,36,46,56,66,79,92,105,120,137,153,171,190,210,232,254,276,301 ⋆ a(n) = n + min(2 * floor(a(n - 1) / 2), 3 * floor(a(n - 1) / 3)) for n > 1, a(1)=1. ● a(n) = n * (n - 1) / 2 + b(n) where b repeats the period (1, 1, 0, 0, 1, 0, 0, 0, 0, 1, 1, 0) of length 12. ● a(n) = + 2 * a(n - 1) - a(n - 2) + a(n - 12) - 2 * a(n - 13) + a(n - 14). ●

► [A059100] 2,3,6,11,18,27,38,51,66,83,102,123,146,171,198,227,258,291,326,363,402,443,486,531,578 ⋆ a(n) = n ^ 2 + 2. ● a(n) = ((n - 2) ^ 2 + 2 * (n + 1) ^ 2) / 3. - _ Reinhard Zumkeller _ , Feb 13 2009 ● a(n) = 2 * n + a(n - 1) - 1 with a(0) = 2. - _ Vincenzo Librandi _ , Aug 07 2010 ● a(3 * n) mod 9 = 2. ●

► [A291725] 2,3,6,11,18,30,50,81,130,208,330,520,816,1275,1984,3077,4758,7337,11286,17322,26532,40563,61908,94336,143540 ⋆ p - INVERT of (1,0,1,0,0,0,0,...), where p(S) = (1 - S) ^ 2. ● a(n) = 2 * a(n - 1) - a(n - 2) + 2 * a(n - 3) - 2 * a(n - 4) - a(n - 6) for n >= 7. ●

► [A039827] 1,2,3,6,11,19,26,34,44,54,65,77,90,104,119,135,152,170,189,209,230,252,275,299,324 ⋆ Number of different coefficient values in expansion of Product (1 + q ^ i + q ^ (2i)), i=1 to n. ● a(n) = n * (n + 1) / 2 - 1 for n >= 9. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n > 11. ●

► [A327665] 0,1,1,2,3,6,11,20,34,56,121,244,481,938,1832,3540,6757,12708,23410,42328,73764,122889,275122,408967,832560 ⋆ Fibonacci with binary selection. ● a(n) = a(n - 1) + Sum _{ i=0..e(a(n - 1)) } b(a(n - 1), e(a(n - 1)) - i) * a(n - i - 2) where b(k, i) is the i - th bit in the binary expansion of k, with b(k, 0) being the low order bit of k, and e(k) = floor(log _ 2(k)). The initial terms are a(0) = 0, a(1) = 1. [edited by _ Michel Marcus _ , Sep 28 2019 and _ Michael S. Branicky _ , Jan 19 2021] ●

► [A131269] 1,2,3,6,11,20,35,60,101,168,277,454,741,1206,1959,3178,5151,8344,13511,21872,35401,57292,92713,150026,242761 ⋆ a(n) = 3 * a(n - 1) - 2 * a(n - 2) - a(n - 3) + a(n - 4) with n>3, a(0)=1, a(1)=2, a(2)=3, a(3)=6. ● a(n) = a(n - 2) + a(n - 1) + n - 2 with n>1, a(0)=1, a(1)=2. - _ Alex Ratushnyak _ , May 02 2012 ●

► [A358027] 1,2,3,6,11,20,35,62,107,188,323,566,971,1700,2915,5102,8747,15308,26243,45926,78731,137780,236195,413342,708587 ⋆ Expansion of g.f.: (1 + x - 2 * x ^ 2 + 2 * x ^ 4) / ((1 - x) * (1 - 3 * x ^ 2)). ● a(n) = a(n - 1) - 3 * a(n - 2) + 3 * a(n - 3), for n >= 5. ●

► [A079976] 1,1,2,3,6,11,20,36,65,118,214,388,703,1274,2309,4185,7585,13747,24915,45156,81841,148329,268832,487232,883061 ⋆ G.f.: 1 / (1 - x - x ^ 2 - x ^ 4 - x ^ 5). ● a(n) = a(n - 1) + a(n - 2) + a(n - 4) + a(n - 5). ●

► [A186546] 1,1,1,2,3,6,11,20,37,69,129,242,456,861,1635,3113,5946,11386,21854,42038,81019,156416,302460,585712,1135739 ⋆ Floor - Sqrt transform of Catalan numbers (A000108). ● a(n) = floor(sqrt(binomial(2 * n,n) / (n + 1))) ●

► [A079969] 1,1,2,3,6,11,21,38,70,128,236,434,799,1469,2702,4969,9140,16811,30921,56872,104604,192396,353872,650872,1197141 ⋆ Number of permutations satisfying - k<=p(i) - i<=r and p(i) - i not in I, i=1..n, with k=1, r=5, I= { 2 } . ● a(n) = a(n - 1) + a(n - 2) + a(n - 4) + a(n - 5) + a(n - 6) G.f.: - 1 / (x ^ 6 + x ^ 5 + x ^ 4 + x ^ 2 + x - 1) ●

► [A049856] 0,0,1,1,2,3,6,11,21,39,73,136,254,474,885,1652,3084,5757,10747,20062,37451,69912,130509,243629,454797 ⋆ a(n) = Sum { a(k): k=0,1,2,...,n - 4,n - 2,n - 1 } ; a(n - 3) is not a summand; 3 initial terms required. ● a(n) = 2 * a(n - 1) - a(n - 3) + a(n - 4); 4 initial terms required. ● a(n + 2) = Sum _{ i=0..n } F(i + 1) * C(n - i,i)) where F=A000045. - _ Benoit Cloitre _ , Sep 21 2004 ●

► [A113409] 1,1,2,3,6,11,21,39,74,141,271,521,1004,1939,3756,7291,14176,27599,53805,105031,205268,401573,786328,1541037,3022528 ⋆ A transform of the central binomial coefficients A001405. ● a(n) = Sum _{ k=0..floor(n / 2) } C(n - k, k) * C(k, floor(k / 2)). ● a(n) = Sum _{ k=0..n } C((n + k) / 2, k) * C(floor((n - k) / 2), floor((n - k) / 4)). ●

► [A092684] 1,1,2,3,6,11,21,39,74,141,272,527,1026,2002,3914,7659,14996,29369,57531,112727,220963,433342,850386,1670011,3282259 ⋆ First column and main diagonal of triangle A092683, in which the convolution of each row with { 1,1 } produces a triangle that, when flattened, equals the flattened form of A092683. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n - k,k) * a(k). - _ Vladeta Jovovic _ , May 07 2006 ●

► [A109222] 1,2,3,6,11,21,40,76,145,276,526,1002,1909,3637,6929,13201,25150,47915,91286,173915,331337,631252,1202640,2291229,4365172 ⋆ Row sums of a triangle related to the Fibonacci polynomials. ● a(n) = a(n - 1) + 2a(n - 2) - a(n - 4); ● a(n) = Sum _{ k=0..n } binomial(floor((2n - k) / 2) + n - k, 2n - 2k). ●

► [A052956] 2,3,6,11,21,40,77,149,290,567,1113,2192,4329,8569,16994,33755,67133,133656,266325,531053,1059522,2114863,4222961,8434976,16852241 ⋆ a(n) = 2 ^ n + Fibonacci(n + 1). ● a(n) = 3 * a(n - 1) - a(n - 2) - 2 * a(n - 3). ● a(n) = 2 ^ n + Sum _{ alpha=RootOf(- 1 + z + z ^ 2) } (1 + 2 * alpha) * alpha ^ (- 1 - n) / 5. ●

► [A123341] 1,1,2,3,6,11,22,42,81,156,312,613,1226,2430,4818,9555,19110,38064,76128,151944,303275,605324,1210648,2418866,4832914 ⋆ a(1) = 1, a(n) = Sum _{ k=1 }^{ Pi(n) } a(n - k) for n > 1, where Pi(n) is the number of primes less than or equal to n. ● a(1) = a(2) = 1, for p an odd prime, a(p) = 2a(p - 1), otherwise a(n) = 2a(n - 1) - a(n - pi(n) - 1). ●

► [A002083] 1,1,1,2,3,6,11,22,42,84,165,330,654,1308,2605,5210,10398,20796,41550,83100,166116,332232,664299,1328598,2656866 ⋆ Narayana - Zidek - Capell numbers: a(n) = 1 for n <= 2. Otherwise a(2n) = 2a(2n - 1), a(2n + 1) = 2a(2n) - a(n). ● a(1)=1, else a(n) is sum of floor(n / 2) previous terms. ● a(n) is the permanent of the (n - 1) X (n - 1) matrix with (i, j) entry = 1 if i - 1 <= j <= 2 * i - 1 and = 0 otherwise. - _ David Callan _ , Nov 02 2005 ● a(n) = Sum _{ k=1..n } K(n - k + 1, k) * a(n - k), where K(n,k) = 1 if 0 <= k AND k <= n and K(n,k)=0 else. (Several arguments to the K - coefficient K(n,k) can lead to the same sequence. For example, we get A002083 also from a(n) = Sum _{ k=1..n } K((n - k)!,k!) * a(n - k), where K(n,k) = 1 if 0 <= k <= n and 0 else. S

ee also the comment to a similar formula for A002487.) - _ Thomas Wieder _ , Jan 13 2008 ●

▶ [A005578] 1,1,2,3,6,11,22,43,86,171,342,683,1366,2731,5462,10923,21846,43691,87382,174763,349526,699051,1398102,2796203,5592406 ★ a(2 * n) = 2 * a(2 * n - 1), a(2 * n + 1) = 2 * a(2 * n) - 1. ● a(n) = ceiling(2 ^ n / 3). ● a(n) = 1 + floor((2 ^ n) / 3) (proof by mathematical induction). ● a(n) = 2 * a(n - 1) + a(n - 2) - 2 * a(n - 3). ● a(n) = (2 ^ (n + 1) + 3 + (- 1) ^ n) / 6. - _ Vladeta Jovovic _ , Jul 02 2002 ● a(n) = Sum _{ k=0..n } (- 1) ^ k * Sum _{ j=0..n - k } (if((j - k) mod 2)=0, binomial(n - k, j), 0). - _ Paul Barry _ , Jan 25 2005 ● a(n) = 1 + 2 ^ (n - 1) - a(n - 1) = a(n - 1) + 2 * a(n - 2) - 1 = a(n - 2) + 2 ^ (n - 2). - _ Paul Curtz _ , Jan 31 2009 ●

▶ [A063895] 1,1,1,1,2,3,6,11,22,43,88,179,372,774,1631,3448,7347,15713,33791,72923,158021,343495,749102,1638103,3591724 ★ Start with x, xy; then concatenate each word in turn with all preceding words, getting x xy xxy xxxy xyxxy xxxxy xyxxxy xxyxxxy ...; sequence gives number of words of length n. Also binary trees by degree: x (x,y) (x,(x,y)) (x,(x,(x,y))) ((x,y),(x,(x,y)))... ● a(n) = (sum a(i) * a(j), i + j=n, i<j) + (if n=2k, (a(k) - 1) * a(k) / 2), n>2. a(1)=a(2)=1. ●

▶ [A192652] 1,2,3,6,11,22,44,86,169,332,652,1280,2513,4932,9688,19040,37439,73658,144985,285530,562589,1108994,2187050,4314894,8516372 ★ Convolution of the Floor - Sqrt transform of Catalan numbers. ● a(n) = sum(floor(sqrt(binomial(2 * k,k) / (k + 1))) * floor(sqrt(binomial(2 * n - 2 * k,n - k) / (n - k + 1))),k=0..n). ●

▶ [A007477] 1,1,1,2,3,6,11,22,44,90,187,392,832,1778,3831,8304,18104,39666,87296,192896,427778,951808,2124135,4753476,10664458 ★ Shifts 2 places left when convolved with itself. ● a(n) = sum(a(k) * a(n - 2 - k)), n>1. ● a(n) = Sum _{ k=0..n - 2 } binomial(2 * k + 2,n - k - 2) * binomial(n - k - 2,k) / (k + 1), n>1, a(0)=1, a(1)=1. - _ Vladimir Kruchinin _ , Nov 22 2014 ●

▶ [A001190] 0,1,1,1,2,3,6,11,23,46,98,207,451,983,2179,4850,10905,24631,56011,127912,293547,676157,1563372,3626149,8436379 ★ Wedderburn - Etherington numbers: unlabeled binary rooted trees (every node has outdegree 0 or 2) with n endpoints (and 2n - 1 nodes in all). ● a(2n - 1) = a(1)a(2n - 2) + a(2)a(2n - 3) + ... + a(n - 1)a(n), a(2n) = a(1)a(2n - 1) + a(2)a(2n - 2) + ... + a(n - 1)a(n + 1) + a(n)(a(n) + 1) / 2. ●

▶ [A090344] 1,1,2,3,6,11,23,47,102,221,493,1105,2516,5763,13328,30995,72556,170655,403351,957135,2279948,5449013,13063596,31406517,75701508 ★ Number of Motzkin paths of length n with no level steps at odd level. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n - k, k) * binomial(2 * k, k) / (k + 1)). - _ Paul Barry _ , Nov 13 2004 ● a(n) = 1 + Sum _{ k=1..n - 1 } a(k - 1) * a(n - k - 1). - _ Henry Bottomley _ , Feb 22 2005 ●

▶ [A217312] 1,1,2,3,6,11,23,48,107,244,578,1402,3485,8826,22729,59340,156766,418319,1125956,3053400,8334578,22881070,63135802,175000959,487042069 ★ Number of Motzkin paths of length n with no level steps at height 1. ● a(n) = 1 + Sum _{ k=0..(n - 1) / 2 } ((k + 1) * Sum _{ i=0..n - 2 * k - 1 } (((Sum _{ j=0..i } ((- 1) ^ (j - i) * binomial(k + i + 1,i - j) * binomial(k + 2 * j,j))) * binomial(n - k - i - 1,k + 1)) / (k + i + 1))). - _ Vladimir Kruchinin _ , Mar 12 2016 ●

▶ [A047750] 1,2,3,6,11,24,48,110,231,546,1183,2856,6324,15504,34884,86526,197087,493350,1134705,2861430,6633315,16829280,39268320,100134216,234930276 ★ If n mod 2 = 0 then m := n / 2 and a(n) = (3 * m)! * (5 * m + 1) / ((m + 1)! * (2 * m + 1)!); otherwise m := (n - 1) / 2, a(n) = 6 * (3 * m + 2)! / (m! * (2 * m + 3)!). ● a(n) = sum of top row terms in M ^ n, M = the infinite square production matrix: ●

▶ [A122852] 1,1,2,3,6,11,24,51,122,291,756,1979,5526,15627,46496,140451,442194,1414931,4687212,15785451,54764846,193129659,698978136,2570480147,9672977706 ★ Row sums of number triangle A122851. ● a(n) = Sum { k=0..n } C(k,n - k) * (n - k)!. ● a(n) = Sum _{ k=0..floor(n / 2) } C(n - k,k) * k!. (End) ● a(n) = (a(n - 1) + n * a(n - 2) + 1) / 2 for n > 1. - _ Seiichi Manyama _ , Nov 19 2022 ●

▶ [A107113] 1,1,2,3,6,11,24,52,125,307,809,2190,6249,18348,56016,176272,571113,1906091,6517283,22879944,82144248,301617448,1131401427,4327790902,16886037207 ★ Diagonal sums of A107111, viewed as a number triangle. ● a(n)=sum { k=0..floor(n / 2), sum { j=0..k, binomial((n - 2k)(k + 1), k - j) * binomial(k + j, j) }/ (k + 1) } ●

▶ [A115114] 2,3,6,11,26,63,158,411,1098,2955,8054,22151,61322,170823,478318,1345211,3798242,10761723,30585830,87169619,249056138,713205903,2046590846,5883948951,16945772210 ★ Asymmetric rhythm cycles (patterns): binary necklaces of length 2n subject to the restriction that for any k if the k - th bead is of color 1 then the (k + n) - th bead (modulo 2n) is of color 0. ● a(n) = (Sum _{ d|n } phi(2d) + Sum _{ d|n, d odd } phi(d)3 ^ (n / d)) / (2n), where phi(n) is the Euler function A000010. ●

▶ [A185265] 1,2,3,6,12,22,39,70,127,231,419,759,1375,2492,4517,8187,14838,26892,48739,88335,160099,290164,525894,953132,1727460 ★ a(0)=1, a(1)=2; thereafter a(n) = f(n - 1) + f(n - 2) where f() = A164387(). ● a(n) = a(n - 1) + a(n - 2) + a(n - 4) + a(n - 5) for n>5. ●

▶ [A289920] 1,2,3,6,12,22,42,80,151,287,544,1031,1956,3708,7031,13333,25280,47936,90895,172350,326806,619677,1175008,2228011,4224672 ★ p - INVERT of (1, 0,0,1,0,0,1,0,0,...), where p(S) = 1 - S - S ^ 2. ● a(n) = a(n - 1) + a(n - 2) + 2 * a(n - 3) - a(n - 4) - a(n - 6) for n >= 7. ●

▶ [A154324] 1,1,2,3,6,12,23,43,74,124,195,300,441,637,890,1226,1647,2187,2848,3673,4664,5874,7305,9021,11024 ★ Diagonal sums of number triangle A113582. ● a(n) = Sum _{ k=0..floor(n / 2) } (1 + C(k + 1,2) * C(n - 2k + 1,2)). ● a(n) = (2895 + 945 * (- 1) ^ n + (1786 - 90 * (- 1) ^ n) * n - 30 * (3 + (- 1) ^ n) * n ^ 2 + 40 * n ^ 3 + 30 * n ^ 4 + 4 * n ^ 5) / 3840. ● a(n) = (2 * n ^ 5 + 15 * n ^ 4 + 20 * n ^ 3 - 60 * n ^ 2 + 848 * n + 1920) / 1920 for n even. ● a(n) = (2 * n ^ 5 + 15 * n ^ 4 + 20 * n ^ 3 - 30 * n ^ 2 + 938 * n + 975) / 1920 for n odd. (End) ●

▶ [A338218] 1,1,1,1,2,3,6,12,23,43,80,140,233,387,612,930,1411,2067,2936,4170,5768,7796,10537,13960,18163 ★ Number of terms in polynomial sequence s(n) = x * y * z * (s(n - 1) * s(n - 3) + s(n - 2) ^ 2) / s(n - 4), with s(1) = x, s(2) = s(3) = 1, s(4) = y. ● a(n) = a(5 - n) for all n in Z. ●

▶ [A001630] 0,0,1,2,3,6,12,23,44,85,164,316,609,1174,2263,4362,8408,16207,31240,60217,116072,223736,431265,831290,1602363 ★ Tetranacci numbers: a(n) = a(n - 1) + a(n - 2) + a(n - 3) + a(n - 4), with a(0)=a(1)=0, a(2)=1, a(3)=2. ● a(n) = 2 * a(n - 1) - a(n - 5) with n>4, a(0)=a(1)=0, a(2)=1, a(3)=2, a(4)=3. [_ Vincenzo Librandi _ , Dec 21 2010] ●

▶ [A293363] 1,2,3,6,12,23,45,89,178,355,710,1420,2840,5679,11357,22714,45427,90853,181705,363409,726818,1453635,2907270,5814540,11629080 ★ Least integer k such that k / 2 ^ n > log 2. ● a(n) = ceiling(r * 2 ^ n), where r = log 2. ●

▶ [A306809] 2,3,6,12,23,46,98,213,458,972,2051,4322,9098,19113,40054,83748,174767,364086,757298,1572861,3262242,6757500,13981019,28894090,59652314 ★ Binomial transform of the continued fraction expansion of e. ● a(n) = Sum _{ k=0..n } binomial(n,k) * b(k), where b(k) is the k - th term of the continued fraction expansion of e. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 37 * a(n - 3) - 43 * a(n - 4) + 33 * a(n - 5) - 16 * a(n - 6) + 4 * a(n - 7) for n>6. ●

▶ [A321048] 0,2,3,6,12,24,44,84,159,300,564,1064,2004,3774,7107,13386,25208,47472,89400,168360,317055,597080,1124424,2117520,3987720 ★ Number of permutations of [n] with no fixed points where the maximal displacement of an element equals two. ● a(n) = 2 * a(n - 1) - 2 * a(n - 5) + a(n - 6). - _ Wesley Ivan Hurt _ , May 17 2023 ●

▶ [A293340] 1,1,2,3,6,12,24,48,95,189,377,754,1507,3014,6028,12055,24110,48219,96438,192875,385750,771500,1542999,3085997,6171993 ★ Least integer k such that k / 2 ^ n > 1 / e. ● a(n) = ceiling(r * 2 ^ n), where r = 1 / e. ●

▶ [A098011] 1,1,2,3,6,12,24,48,96,192,384,768,1536,3072,6144,12288,24576,49152,98304,196608,393216,786432,1572864,3145728,6291456 ★ 10 ^ a(n) + 1 = A088773(n). ● a(n) = 3 * 2 ^ (n - 4) for n>3; a(1)=a(2)=1, a(3)=2. - _ Emeric Deutsch _ , May 19 2006 ● a(n) = 2 ^ (n - 4) + 2 ^ (n - 3) for n > 3. - _ Jaroslav Krizek _ , Aug 17 2009 ● a(1) = 1, a(2) = 1, a(3) = 2, for n > 3: a(n) = Sum _{ i = 2..n - 1 } a(i). - _ Jaroslav Krizek _ , Nov 16 2009 [Corrected by _ Petros Hadjicostas _ , Nov 16 2019] ● a(n) = ceiling(2 ^{ n - 2 }) - floor(2 ^{ n - 4 }). - _ Martin Grymel _ , Oct 17 2012 ●

▶ [A042950] 2,3,6,12,24,48,96,192,384,768,1536,3072,6144,12288,24576,49152,98304,196608,393216,786432,1572864,3145728,6291456,12582912,25165824 ★ Row sums of the Lucas triangle A029635. ● a(n) = 2 * a(n - 1), n > 1; a(0)=2, a(1)=3. ● a(n) = (3 * 2 ^ n + 0 ^ n) / 2. (End) ● a(0) = 2, a(n) = 3 * 2 ^ (n - 1) = 2 ^ n + 2 ^ (n - 1) for n >= 1. - _ Jaroslav Krizek _ , Aug 17 2009 ● a(n) = 2 ^ (n + 1) - 2 ^ (n - 1), for n > 0. - _ Ilya Gutkovskiy _ , Aug 08 2015 ●

▶ [A187741] 1,1,1,2,3,6,12,24,60,120,360,720,2520,5040,20160,40320,181440,362880,1814400,3628800,19958400,39916800,239500800,479001600,3113510400 ★ G.f.: Sum _{ n>=0 } (1 + n * x) ^ n * x ^ n / (1 + x + n * x ^ 2) ^ n. ● a(2 * n) = (n + 1)! / 2, a(2 * n - 1) = n!, for n>0 with a(0)=1. ●

▶ [A192805] 1,1,1,2,3,6,12,25,53,113,242,519,1114,2392,5137,11033,23697,50898,109323,234814,504356,1083305,2326829,4997793,10734754 ★ Constant term in the reduction of the polynomial 1 + x + x ^ 2 + ... + x ^ n by x ^ 3 - >x ^ 2 + 2x + 1. See Comments. ● a(n)=2 * a(n - 1) + a(n - 2) - a(n - 3) - a(n - 4). ●

▶ [A001677] 1,2,3,6,12,26,59,146,368,976,2667,7482,21440,62622,185637,557680,1694256,5198142,16086486,50165218,157510504,497607008,1580800091,5047337994,16190223624 ★ Number of series - parallel networks with n edges. ● a(n) = s(n) - (1 / 2) * Sum _{ i=1..n - 1 } s(i) * s(n - i) - (1 / 2) * s(n / 2), where s() = A000084 and the last term is omitted if n is odd. ●

▶ [A373182] 1,2,3,6,12,26,60,144,366,960,2640,7464,21960,66240,206760,660240,2172240,7298640,25179840,88583040,319097520,1170650880,4387582080,16728808320,65040796800 ★ Number of ways that people can sit in n linearly arranged seats such that there are one or two empty seats between any two persons, zero or one empty seats at the start and end, and at least one person gets seated. ● a(n) = ((n - 1) * a(n - 4) + 2 * n * a(n - 3) + (n + 1) * a(n - 2) - 3 * a(n - 1)) / 2, n>4. ●

▶ [A019525] 2,3,6,12,27,60,138,315,726,1668,3843,8844,20370,46899,108006,248700,572715,1318812,3036954,6993387,16104246,37084404,85397139,196650348,452841762 ★ Poincaré series [or Poincare series] for depths of roots in a certain root system. ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 3 * a(n - 3). ● a(n) = (78 + (13 - 5 * sqrt(13)) * ((1 - sqrt(13)) / 2) ^ n + ((1 + sqrt(13)) / 2) ^ n * (13 + 5 * sqrt(13))) / 78. - _ Colin Barker _ , Aug 03 2017 ●

▶ [A082395] 1,1,2,3,6,12,27,63,154,386,989,2574,6787,18085,48622,131719,359194,985186,2715973,7521568,20915257,58373587,163462816,459136810,1293223231 ★ Number of shifted Young tableaux with height <= 3. ● a(n) = Sum _{ k=1..n } (- 1) ^ (k + 1) * binomial(n, k) * binomial(k - 1, floor(k / 2)). - _ Vladeta Jovovic _ , Sep 18 2003 ●

▶ [A061343] 1,1,2,3,6,12,27,63,154,398,1055,2970,8503,25651,78483,250487,811802,2723130,9295483,32653552,116866283,428464743,1600474365,6102119282,23690388631 ★ Number of standard shifted tableaux with n entries. ● a(n) is the sum over all partitions into distinct parts of Thrall's formula (4) on page 83, see the PARI script arndt - A061343.gp. - _ Joerg Arndt _ , May 09 2013 ●

▶ [A057649] 1,1,1,2,3,6,12,27,63,155,402,1087,3068,8996,27340,85905,278485,929713,3191201,11245603,40631628,150342633,569071745,2201355134,8694775795 ★ Nearest integer to ratio of volume of n - dimensional cube of side 2 to volume of n - dimensional ball of radius 1. ● a(n) = 2 ^ n * GAMMA(n / 2 + 1) / Pi ^ (n / 2). ●

▶ [A300323] 1,1,2,3,6,12,28,69,186,522,1536,4638,14408,45568,146884,479871,1589516,5320854,18000198,61412376,211282386,731973720,2553168136,8957554412,31604599044 ★ Number of Dyck paths of semilength n such that the area under the right half of the path equals the area under the left half of the path. ● a(n) is odd <=> n in { A000225 } . ●

▶ [A155996] 1,2,3,6,13,25,50,101,201,402,804,1608,3217,6434,12868,25736,51472,102944,205887,411775,823550,1647099,3294199,6588397,13176795 ★ Nearest integer to 2 ^ n * Pi / 4. ● a(n) = - floor(2 ^ (- 2 + n) * Pi) + floor(2 ^ (- 1 + n) * Pi), n>=0. - _ Mariusz Iwaniuk _ , Apr 30 2017 ●

▶ [A086514] 1,2,3,6,13,26,47,78,121,178,251,342,453,586,743,926,1137,1378,1651,1958,2301,2682,3103,3566,4073 ★ Difference between the arithmetic mean of the neighbors of the terms and the term itself follows the pattern 0,1,2,3,4,5,... ● a(n) + n - 2 = { a(n - 1) + a(n + 1) }/ 2 ● a(n) = (n ^ 3 - 6 * n ^ 2 + 14 * n -

6) / 3. ● a(n) - 4 * a(n - 1) + 6 * a(n - 2) - 4 * a(n - 3) + a(n - 4) = 0 with n>4 . For n=9, 121 - 4 * 78 + 6 * 47 - 4 * 26 + 13 = 0. ●
▶ [A079662] 1,2,3,6,13,26,50,96,184,350,661,1242,2324,4332,8047,14902,27521,50700,93191,170942,312974,572030,1043852,1902044,3461067 ⋆ a(n) = the number of occurrences of 1 in all compositions of n without 2's = # of occurrences of the integer k in compositions of n + k - 1 without 2's (k > 2). ● a(n) = c(0)c(n - 1) + c(1)c(n - 2) + c(2)c(n - 3) + ... + c(n - 1)c(0), where c(i) is given by sequence A005251; generating function = (x(1 - x) ^ 2) / (1 - 2x + x ^ 2 - x ^ 3) ^ 2 ● a(n) = Sum _{ k=1..floor((n + 2) / 3) } k * binomial(n - k + 1, 2 * k - 1). - _ Vladeta Jovovic _ , Apr 10 2004 ●
▶ [A290991] 0,0,1,2,3,6,13,26,50,96,184,351,669,1278,2447,4692,9004,17285,33182,63687,122208,234461,449774,862776,1655010 ⋆ p - INVERT of (0,0,1,2,3,4,5,...), the nonnegative integers A000027 preceded by one zero, where p(S) = 1 - S - S ^ 2. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 5 * a(n - 3) - 3 * a(n - 4) + a(n - 5) + a(n - 6). ●
▶ [A007910] 1,2,3,6,13,26,51,102,205,410,819,1638,3277,6554,13107,26214,52429,104858,209715,419430,838861,1677722,3355443,6710886,13421773 ⋆ Expansion of 1 / ((1 - 2 * x) * (1 + x ^ 2)). ● a(0) = 1, a(2n + 1) = 2 * a(2n) and a(2n) = 2 * a(2n - 1) + (- 1) ^ n. [Corrected by _ M. F. Hasler _ , Feb 22 2018] ● a(n) = (4 * 2 ^ n + cos(Pi * n / 2) + 2 * sin(Pi * n / 2)) / 5. - _ Paul Barry _ , Dec 17 2003 ● a(n) = 2a(n - 1) - a(n - 2) + 2a(n - 3). Sequence equals half its second differences with first term dropped. a(n) + a(n + 2) = 2 ^ (n + 2). - _ Paul Curtz _ , Dec 17 2007 ● a(n) = round(2 ^ (n + 2) / 5). - _ Mircea Merca _ , Dec 27 2010 ● a(n) = Sum _{ k=0..floor(n / 2) } (- 1) ^ k * 2 ^ (n - 2 * k). - _ Gerry Martens _ , Oct 15 2022 ●
▶ [A293315] 2,3,6,13,26,52,104,207,414,828,1657,3314,6627,13255,26510,53020,106039,212079,424158,848316,1696632,3393263,6786526,13573053,27146106 ⋆ The integer k that minimizes |k / 2 ^ n - r|, where r = golden ratio. ● a(n) = floor(1 / 2 + r * 2 ^ n), where r = (1 + sqrt(5)) / 2. ●
▶ [A132045] 1,2,3,6,13,28,59,122,249,504,1015,2038,4085,8180,16371,32754,65521,131056,262127,524270,1048557,2097132,4194283,8388586,16777193 ⋆ Row sums of triangle A132044. ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 2 * a(n - 3) for n>3 . ●
▶ [A089735] 1,2,3,6,13,28,62,140,320,740,1728,4068,9645,23010,55195,133042,322078,782758,1909091,4671098,11462607,28204212,69569278,171993316,426111203 ⋆ Self - convolution of A004148 (the RNA secondary structure numbers) with itself. ● a(n) = 2 * Sum _{ k=ceiling((n + 1) / 2)..n } binomial(k, n - k) * binomial(k + 1, n - k + 2) / k for n >= 1. ●
▶ [A287128] 2,3,6,13,29,65,145,323,719,1599,3555,7903,17567,39047,86791,192911,428783,953055,2118351,4708447,10465439,23261471,51703135,114920255,255432575 ⋆ a(n) = 3 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - 4 * a(n - 4) + 2 * a(n - 5), where a(0) = 2, a(1) =3, a(2) = 6, a(3)=13, a(4) = 29. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - 4 * a(n - 4) + 2 * a(n - 5), where a(0) = 2, a(1) =3, a(2) = 6, a(3)=13, a(4) = 29.. ●
▶ [A286062] 2,3,6,13,29,65,146,328,737,1656,3721,8361,18787,42214,94854,213135,478910,1076101,2417977,5433145,12208166,27431500,61638021,138499376,311205273 ⋆ a(n) = 2 * a(n - 1) + a(n - 2) - a(n - 3), where a(0) = 2, a(1) = 3, a(2) = 6. ● a(n) = 2 * a(n - 1) + a(n - 2) - a(n - 3), where a(0) = 2, a(1) = 3, a(2) = 6. ●
▶ [A174191] 1,2,3,6,13,30,71,170,409,986,2379,5742,13861,33462,80783,195026,470833,1136690,2744211,6625110,15994429,38613966,93222359,225058682,543339721 ⋆ Expansion of (1 + x) * (2 * x - 1) / ((1 - x) * (x ^ 2 + 2 * x - 1)). ● a(n) = 2 * a(n - 1) + a(n - 2) - 2, with a(0)=1, a(1)=2. ● a(n) = 3 * a(n - 1) - a(n - 2) - a(n - 3). (End) ● a(n) = 1 + (1 / 4) * sqrt(2) * ((1 + sqrt(2)) ^ n - (1 - sqrt(2)) ^ n) for n >= 0. - _ Paolo P. Lava _ , Mar 17 2010 ●
▶ [A052937] 2,3,6,13,30,71,170,409,986,2379,5742,13861,33462,80783,195026,470833,1136690,2744211,6625110,15994429,38613966,93222359,225058682,543339721,1311738122 ⋆ Expansion of (2 - 3 * x - x ^ 2) / ((1 - x) * (1 - 2 * x - x ^ 2)). ● a(n) = 2 * a(n - 1) + a(n - 2) - 2, with a(0)=2, a(1)=3, a(2)=6. ● a(n) = 1 + Sum _{ alpha=RootOf(- 1 + 2 * z + z ^ 2) } (1 + alpha) * alpha ^ (- 1 - n) / 4. ● a(n) = (1 + (- (1 - sqrt(2)) ^ (1 + n) + (1 + sqrt(2)) ^ (1 + n)) / (2 * sqrt(2))). - _ Colin Barker _ , Mar 16 2016 ●
▶ [A005554] 1,2,3,6,13,30,72,178,450,1158,3023,7986,21309,57346,155469,424206,1164039,3210246,8893161,24735666,69051303,193399578,543310782,1530523638,4322488212 ⋆ Sums of successive Motzkin numbers. ● a(n) = (- 1) ^ n * 2 * hypergeometric([2 - n,5 / 2],[4],4), for n>1. - _ Peter Luschny _ , Aug 15 2012 ● a(n) = (2 * Sum _{ j=0..(n + 2) / 2 } (binomial(n,j) * binomial(n - j + 1,n - 2 * j + 2))) / n. - _ Vladimir Kruchinin _ , Oct 04 2015 ●
▶ [A363071] 1,1,1,2,3,6,13,31,80,222,659,2082,6966,24574,91067,353443,1432909,6054025,26599192,121295345,573065538,2800640187,14137645933,73619324824,394979697320 ⋆ Number of partitions of [n] into m blocks that are ordered with increasing least elements and where block j contains n + 1 - j (m in { 0..ceiling(n / 2) } , j in { 1..m }). ● a(n) = Sum _{ j=0..ceiling(n / 2) } (Stirling2(n - j,j) + Stirling2(n - j,j - 1)). ●
▶ [A220699] 0,0,1,2,3,6,13,32,85,246,757,2480,8537,30858,116229,455668,1850417,7774102,33679941,150291472,689170529,3244125554,15649195077,77287580604,390271482145 ⋆ a(0)=0, a(1)=0; for n>1, a(n) = a(n - 1) + (n - 4) * a(n - 2) + 1 ● a(0)=a(1)=0, a(2)=1, a(n) = 2 * a(n - 1) + (n - 5) * a(n - 2) - (n - 5) * a(n - 3). ●
▶ [A117403] 1,1,2,3,6,13,34,105,386,1681,8706,53793,395266,3442753,35659778,440672385,6476038146,112812130561,2336999211010,57759810847233,1697654543745026,59146046307566593,2450521284684021762 ⋆ a(n) = Sum _{ k=0..floor(n / 2) } 2 ^ ((n - 2 * k) * k) for n>=0. ● a(2 * n) = Sum _{ k=0..n } 4 ^ ((n - k) * k). ● a(2 * n + 1) = Sum _{ k=0..n } 2 ^ k * 4 ^ ((n - k) * k). ●
▶ [A135967] 1,2,3,6,13,38,141,672,4081,31544,310171,3879588,61725481,1249215110,32159093791,1053086855394,43865027507209,2324162212695626,156642025511922149,13429008862711938180,1464446313265909756141 ⋆ Row sums of triangle A135966. ● a(n) = Sum _{ k=0..n } fibonacci(k(n - k) + 1). ●
▶ [A291401] 1,2,3,6,14,32,67,134,266,538,1110,2304,4760,9770,19991,40931,83976,172519,354452,727830,1493768,3065341,6291208,12914136,26511196 ⋆ p - INVERT of (1,1,0,0,0,0,...), where p(S) = 1 - S - S ^ 4. ● a(n) = a(n - 1) + a(n - 2) + a(n - 4) + 4 * a(n - 5) + 6 * a(n - 6) + 4 * a(n - 7) + a(n - 8) for n >= 9. ●
▶ [A093467] 1,2,3,6,14,35,90,234,611,1598,4182,10947,28658,75026,196419,514230,1346270,3524579,9227466,24157818,63245987,165580142,433494438,1134903171,2971215074 ⋆ a(1) = 1, a(2) = 2; for n >= 2, a(n + 1) = a(n) + Sum _{ i = 1..n } (a(i) - a(1)). ● a(n) = 3 * a(n - 1) - a(n - 2) - 1, n > 3. - _ Robert G. Wilson v _ , Apr 08 2004 ●
▶ [A246640] 2,3,6,14,35,90,234,611,1598,4182,10947,28658,75026,196419,514230,1346270,3524579,9227466,24157818,63245987,165580142,433494438,1134903171,2971215074,7778742050 ⋆ Sequence a(n) = 1 + A001519(n + 1) appearing in a certain touching problem for three circles and a chord, together with A246638. ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) + a(n - 3), n >= 1, with a(- 2) = 3, a(- 1) = 2 and a(0) = 2. ● a(n) = 1 + (2 ^ (- 1 - n) * ((3 - sqrt(5)) ^ n * (- 1 + sqrt(5)) + (1 + sqrt(5)) * (3 + sqrt(5)) ^ n)) / sqrt(5). - _ Colin Barker _ , Nov 02 2016 ●
▶ [A080408] 2,3,6,14,35,116,448,1980,10098,57840,368201,2578384,19697486,163017000,1452918806,13874348700,141322966623,1529472867448,17526468199148,211996227034964,2699219798770446,36085910558435148,505406091697374877 ⋆ Boustrophedon transform of the continued fraction of e (A003417). ● a(n) appears to be asymptotic to C * n! * (2 / Pi) ^ n where C = 9.27921365277635263761227970562207183019110298580498662908878310... - _ Benoit Cloitre _ and Mark Hudson (mrmarkhudson(AT)hotmail.com) ●
▶ [A007611] 2,3,6,14,40,152,784,5168,40576,363392,3629824,39918848,479005696,6227028992,87178307584,1307674400768,20922789953536,355687428227072,6402373705990144,121645100409356288,2432902008177688576 ⋆ a(n) = n! + 2 ^ n. ● a(n) = (n + 4) * a(n - 1) - 4 * n * a(n - 2) + (4 * n - 8) * a(n - 3) with a(0) = 2, a(1) = 3, a(2) = 6. - Dennis S. Kluk (mathemagician(AT)ameritech.net), Feb 12 2006 ●
▶ [A255353] 2,3,6,15,24,40,104,168,273,714,1155,1870,4895,7920,12816,33552,54288,87841,229970,372099,602070,1576239,2550408,4126648,10803704 ⋆ Denominators in an expansion of 3 - sqrt(5) as a sum of fractions +- 1 / d. ● a(n) = 8 * a(n - 3) - 8 * a(n - 6) + a(n - 9) for n>9. ●
▶ [A371570] 0,0,2,3,6,15,29,56,118,237,467,946,1905,3796,7618,15303,30614,61319,122951,246202,492971,987542,1977560,3959289,7927969 ⋆ Number of binary necklaces of length n which have more 01 than 00 substrings. ● a(n) = - (((n - 3) * (n - 2) - 8 * (n - 5) ^ 2 * (n - 2) * a(n - 5) + 4 * (n * ((3n - 34) * n + 117) - 114) * a(n - 4) + 2 * (((32 - 3n) * n - 95) * n + 62) * a(n - 3) + (((5n - 52) * n + 157) * n - 114) * a(n - 2) + (((39 - 4n) * n - 103) * n + 58) * a(n - 1)) / ((n - 6) * (n - 3) * n)) for n>=7. ●
▶ [A100249] 1,1,2,3,6,15,29,63,160,333,749,1914,4135,9490,24335,53791,125104,321521,721887,1694914,4362855,9907851,23429158,60379623,138320021 ⋆ Antidiagonal sums of the slanted Catalan convolution table A100247. ● a(n) = Sum _{ k=0..[2n / 3] } C(n + k - [k / 2], k) * (n - k - [k / 2]) / (n + k - [k / 2]), with a(0)=1. G.f. A(x) satisfies: A(x ^ 2) = ((1 + x) / (2 * x - (1 - sqrt(1 - 4 * x ^ 3))) - (1 - x) / (2 * x + (1 - sqrt(1 + 4 * x ^ 3)))). ●
▶ [A052102] 0,1,2,3,6,15,36,81,180,405,918,2079,4698,10611,23976,54189,122472,276777,625482,1413531,3194478,7219287,16315020,36870633,83324700 ⋆ The second of the three sequences associated with the polynomial x ^ 3 - 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + 3 * a(n - 3), n > 2. ● a(n) = Sum _{ 0..floor(n / 3) } , 2 ^ k * binomial(n, 3 * k + 1). - _ Ralf Stephan _ , Aug 30 2004 ●
▶ [A369628] 0,1,2,3,6,15,36,85,213,549,1423,3723,9882,26508,71579,194533,532120,1463561,4044075,11221727,31260192,87386579,245058185,689209348,1943530845 ⋆ Number of solutions to k _ 1 + 2 * k _ 2 + ... + n * k _ n = 1, where k _ i are from {- 1,0,1 } , i=1..n. ● a(n) = [x ^ 1] Product _{ k=1..n } (x ^ k + 1 + 1 / x ^ k). ● a(n) = [x ^ (n * (n + 1) / 2 + 1)] Product _{ k=1..n } (1 + x ^ k + x ^ (2 * k)). ●
▶ [A115098] 2,3,6,15,42,123,366,1095,3282,9843,29526,88575,265722,797163,2391486,7174455,21523362,64570083,193710246,581130735,1743392202,5230176603,15690529806,47071589415,141214768242 ⋆ a(0)=2, a(n)=3 * a(n - 1) - 3. ● a(n) = (3 ^ n + 3) / 2. ●
▶ [A110181] 1,2,3,6,15,42,131,432,1497,5420,20373,79422,319927,1328764,5677653,24904584,111961129,515029020,2421047613,11616330342,56829235095,283211069352,1436529522233,7410596379456,38852645340297 ⋆ Row sums of number triangle A110180. ● a(n)=sum { k=0..n, sum { j=0..floor((n - k) / 2), C(n - k, j) C(n - k - j, j)k ^ j } } . ●
▶ [A159340] 2,3,6,16,38,88,204,474,1102,2562,5956,13846,32188,74828,173954,404394,940102,2185472,5080606,11810976,27457188,63830218,148387254,344958514,801931252 ⋆ Transform of the finite sequence (1, 0, - 1) by the T _{ 0,1 } transformation (see link). ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) + a(n - 3) for n >= 5 , with a(0)=2, a(1)=3, a(2)=6, a(3)=16, a(4)=38. ●
▶ [A159343] 2,3,6,16,39,89,205,478,1113,2586,6010,13973,32485,75517,175554,408115,948754,2205584,5127359,11919665,27709861,64417610,149752773,348132962,809310950 ⋆ Transform of A056594 by the T _{ 0,1 } transformation (see link). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + 4 * a(n - 3) - 2 * a(n - 4) + a(n - 5) for n>=5, with a(0)=2, a(1)=3, a(2)=6, a(3)=16, a(4)=39. ●
▶ [A159341] 2,3,6,16,39,89,206,479,1114,2590,6021,13997,32539,75644,175851,408804,950354,2209305,5136011,11939777,27756614,64526299,150005446,348720354,810676469 ⋆ Transform of the finite sequence (1, 0, - 1, 0, 1) by the T _{ 0,1 } transformation (see link). ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) + a(n - 3) for n >= 7, with a(0)=2, a(1)=3, a(2)=6, a(3)=16, a(4)=39, a(5)=89, a(6)=206. ●
▶ [A159342] 2,3,6,16,39,89,207,480,1116,2595,6033,14025,32604,75795,176202,409620,952251,2213715,5146263,11963610,27812019,64655100,150304872,349416435,812294661 ⋆ Transform of the finite sequence (1, 0, - 1, 0, 1, 0, - 1) by the T _{ 0,1 } transform (see link). ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) + a(n - 3) for n >= 9, with a(0)=2, a(1)=3, a(2)=6, a(3)=16, a(4)=39, a(5)=89, a(6)=207, a(7)=480, a(8)=1116. ●
▶ [A078344] 1,2,3,6,17,43,109,278,708,1803,4592,11695,29785,75857,193194,492030,1253111,3191446,8128033,20700623,52720725,134270106,341961560,870913951,2218059568 ⋆ a(1)=1; a(2)=2; a(3)=3; a(n) = sum(k=3,n - 1,a(k) + a(k - 1) + a(k - 2)). ● a(n) is asymptotic to a * b ^ n where a = 0.1570450524507584150 4

37292... and b is the real root of: x ^ 3 - 2 * x ^ 2 - x - 1; b = 2.54681827688408 2079135997.. ● a(n) = 2 * a(n - 1) + a(n - 2) + a(n - 3) for n>4. G.f.: x * (3 * x ^ 3 + 2 * x ^ 2 - 1) / (x ^ 3 + x ^ 2 + 2 * x - 1). - _ Colin Barker _ , Jun 24 2013 ●

▶ [A361380] 1,2,3,6,17,56,215,922,4305,21894,119539,696632,4314925,28237146,194602079,1407456694,10649642837,84100177424,691474151187,5907288773554,52340230286509,480153099982726,4553711640946919,44584683333637168,450075389517849 ⋆ Sum over the j - th term of the (n - j) - th inverse binomial transform of the Bell numbers (A000110) for all j in [n]. ● a(n) = Sum _{ i=0..n } i! * [x ^ i] exp(exp(x) - (n - i) * x - 1). ● a(n) = Sum _{ 0<=j<=i<=n } binomial(i,j) * (i - n) ^ (i - j) * Bell(j). ●

▶ [A083563] 0,2,3,6,18,54,183,636,2316,8610,32763,126582,495981,1964718,7857939,31682202,128644290,525573252,2158930398,8911295286,36942107373,153742174722,642088530453,2690224616904,11304554951127 ⋆ Number of binary rooted trees (every node has out - degree 0 or 2) with n labeled leaves (2n - 1 nodes in all) and at most 2 distinct labels. Also the number of expressions in at most two variables constructible with n - 1 instances of a single commutative and nonassociative binary operator. ● a(0)=0, a(1)=2, a(2 * n - 1) = a(1) * a(2 * n - 2) + a(2) * a(2 * n - 3) + ... + a(n - 1) * a(n), a(2 * n) = a(1) * a(2 * n - 1) + a(2) * a(2 * n - 2) + ... + a(n - 1) * a(n + 1) + a(n) * (a(n) + 1) / 2. ●

▶ [A093468] 1,2,3,6,18,78,438,2958,23118,204558,2018958,21977358,261478158,3374988558,46964134158,700801318158,11162196262158,189005910310158,3390192763174158,64212742967590158,1280663747055910158 ⋆ a(1) = 1, a(2) = 2; for n >= 2, a(n + 1) = a(n) + Sum { a(n) - a(i), i = 1 to n } . ● a(n)=n * a(n - 1) - (n - 1) * a(n - 2), n>3. - _ Gary Detlefs _ , Dec 30 2010 ●

▶ [A364645] 1,2,3,6,19,51,114,312,981,2616,6564,19647,59922,159056,430302,1329996,3926217,10498968,30052851,93244764,267690168,729649143,2173840338,6663260223,18768583674 ⋆ G.f. satisfies A(x) = 1 / (1 - 3 * x) - x * A(x) ^ 3. ● a(n) = Sum _{ k=0..n } (- 1) ^ k * 3 ^ (n - k) * binomial(n + k,2 * k) * binomial(3 * k,k) / (2 * k + 1). ●

▶ [A182250] 2,3,6,19,76,381,2286,16007,128056,1152505,11525050,126775551,1521306620,19776986061,276877804862,4153167072943,66450673167088,1129661443840497,20333905989128946,386344213793449975,7726884275868999516 ⋆ a(0)=2, a(n) = (a(n - 1) * n) OR n. ● a(0)=2, a(n)=(a(n - 1) * n) OR n, where OR is the bitwise logical inclusive - OR operator. ●

▶ [A303224] 0,1,2,3,6,21,108,693,5220,44901,433350,4632147,54285714,691817841,9522592632,140763435957,2223647197416,37379712048201,666163875275370,12544974494087427,248900998255922430,5189286039892108749,113417589882858625188,2593036709186072053077,61892628250817153398284 ⋆ a(0)=0, a(1)=1; for n>1, a(n) = n * a(n - 1) - 3 * a(n - 2). ● a(n) = Sum _{ k = 0..floor((n - 1) / 2)) } (- 3) ^ k * binomial(n - k,k + 1) * binomial(n - k - 1,k) * (n - 2 * k - 1)!. ● a(n) / n! ~ BesselJ(1, 2 * sqrt(3)) / sqrt(3). (End) ● a(n) = - 2 * i ^ n * 3 ^ (n / 2) * (BesselI(1 + n, - 2 * i * sqrt(3)) * BesselK(1, - 2 * i * sqrt(3)) + (- 1) ^ n * BesselI(1, 2 * i * sqrt(3)) * BesselK(1 + n, - 2 * i * sqrt(3))), where i is the imaginary unit. - _ Vaclav Kotesovec _ , Apr 20 2018 ●

▶ [A000341] 1,2,3,6,26,96,210,1106,3759,12577,74072,423884,2333828,16736611,99838851,630091746,4525325020,38848875650,342245714017,3335164762941,31315463942337,241353231085002,2350106537365732,17903852593938447,158065352670318614 ⋆ Number of ways to pair up { 1..2n } so sum of each pair is prime. ● a(n) = permanent(m), where the n X n matrix m is defined by m(i,j) = 1 or 0, depending on whether 2i + 2j - 1 is prime or composite, respectively. - _ T. D. Noe _ , Feb 10 2007 ●

▶ [A309666] 2,3,7,7,13,58,58,135,819,819,2081,13834,13834,35955,244647,244647,639389,4374866,4374866,11448871,78439683,78439683,205337953,1407271538,1407271538 ⋆ a(n) is the least k such that the denominators of continued fraction convergents for sqrt(k) match the first n Fibonacci numbers. ● a(n) = a(n - 1) + 21 * a(n - 3) - 21 * a(n - 4) - 50 * a(n - 6) + 50 * a(n - 7) - 86 * a(n - 9) + 86 * a(n - 10) - 13 * a(n - 12) + 13 * a(n - 13) + a(n - 15) - a(n - 16) for n>16. ●

▶ [A047534] 0,1,2,3,7,8,9,10,11,15,16,17,18,19,23,24,25,26,27,31,32,33,34,35,39 ⋆ Numbers that are congruent to { 0, 1, 2, 3, 7 } mod 8. ● a(n) = a(n - 1) + a(n - 5) - a(n - 6), for n > 6. ●

▶ [A344624] 1,2,3,7,8,9,10,11,20,21,22,23,24,25,26,42,43,44,45,46,47,48,49,50,75 ⋆ a(n) = Sum _{ k=1..n } k ^ c(k), where c(n) is the characteristic function of squares. ● a(n) = n + m * (m - 1) * (2 * m + 5) / 6 where m = floor(sqrt(n)). - _ Chai Wah Wu _ , May 24 2021 ●

▶ [A047361] 0,1,2,3,7,8,9,10,14,15,16,17,21,22,23,24,28,29,30,31,35,36,37,38,42 ⋆ Numbers that are congruent to { 0, 1, 2, 3 } mod 7. ● a(n) = 7 * floor(n / 4) + (n mod 4), with offset 0 and a(0) = 0. - _ Gary Detlefs _ , Mar 09 2010 ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. ● a(n) = (14 * n - 23 - 3 * i ^ (2 * n) - (3 - 3 * i) * i ^ (- n) - (3 + 3 * i) * i ^ n) / 8, where i=sqrt(- 1). ●

▶ [A370902] 1,2,3,7,8,9,10,18,27,28,29,33,34,35,36,52,53,62,63,67,68,69,70,78,103 ⋆ Partial sums of the powerful part function (A057521). ● a(n) = c _ 1 * n ^ (3 / 2) / 3 + c _ 2 * n ^ (4 / 3) / 4 + O(n ^ (6 / 5)), where c _ 1 = A328013 and c _ 2 are positive constants (Tóth, 2017). ●

▶ [A047245] 1,2,3,7,8,9,13,14,15,19,20,21,25,26,27,31,32,33,37,38,39,43,44,45,49 ⋆ Numbers that are congruent to { 1, 2, 3 } mod 6. ● a(n) = ceiling(n / 3) + ceiling((n - 1) / 3) + ceiling((n - 2) / 3) + 3 * ceiling((n - 3) / 3). ● a(n) = 3 * floor((n - 1) / 3) + n. - _ Gary Detlefs _ , Dec 22 2011 ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. ● a(n) = 2 * n - 3 + ((2 * n - 3) mod 3). (End) ● a(n) = 2 * n - 2 - cos(2 * n * Pi / 3) + sin(2 * n * Pi / 3) / sqrt(3). ● a(3k) = 6k - 3, a(3k - 1) = 6k - 4, a(3k - 2) = 6k - 5. (End) ●

▶ [A088340] 0,2,3,7,8,10,11,13,16,17,18,20,21,23,25,27,29,31,34,35,36,39,40,41,44 ⋆ Numbers k such that frac(x ^ k) = frac(x * frac(x ^ (k - 1))) where x=5 / 2 and frac(x) denotes the fractional part of x. ● a(n) appears to be asymptotic to 2 * n and a(n)=2n for infinitely many values of n such as n=82, 89, 130, 138, 600, 604, 645, ... - Corrected by _ Robert Israel _ , Jan 20 2022 ●

▶ [A047532] 0,2,3,7,8,10,11,15,16,18,19,23,24,26,27,31,32,34,35,39,40,42,43,47,48 ⋆ Numbers that are congruent to { 0, 2, 3, 7 } mod 8. ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. ● a(n) = 2 * n + (1 + i) * (4 * i - 4 + (1 - i) * i ^ (2n) + i ^ (- n) - i ^ (1 + n)) / 4 where i=sqrt(- 1). ●

▶ [A329783] 2,3,7,8,11,12,13,17,18,22,23,27,28,32,33,37,38,42,43,44,47,48,52,53,57 ⋆ Numbers that are either +- 2 (mod 5) or +- 11 (mod 55). ● a(n) = a(n - 1) + a(n - 24) - a(n - 25) for n>25. ●

▶ [A287675] 2,3,7,8,11,12,16,17,21,22,25,26,30,31,34,35,39,40,44,45,48,49,53,54,58 ⋆ Positions of 0 in A287674; complement of A287676. ● a(2n - 1) = floor(n * phi) + 3n - 2 , a(2n) = floor(n * phi) + 3n - 1 . - _ Michel Dekking _ , Feb 12 2021 ●

▶ [A233998] 2,3,7,8,12,13,17,18,22,23,27,28,32,33,37,38,42,43,47,48,50,52,53,57,58 ⋆ Values of n such that numbers of the form x ^ 2 + n * y ^ 2 for some integers x, y cannot have prime factor of 5 raised to an odd power. ● a(n) = 2.4 n + O(log n). - _ Charles R Greathouse IV _ , Dec 19 2013 ●

▶ [A047221] 2,3,7,8,12,13,17,18,22,23,27,28,32,33,37,38,42,43,47,48,52,53,57,58,62 ⋆ Numbers that are congruent to { 2, 3 } mod 5. ● a(n) = - 3 + (1 / 2) * Sum _{ k=0..n } (5 - 3 * (- 1) ^ k). - _ Paolo P. Lava _ , Feb 29 2008 ● a(n) = 5 * (n - 1) - a(n - 1) (with a(1)=2). - _ Vincenzo Librandi _ , Aug 05 2010 ● a(n) = (10 * n - 3 * (- 1) ^ n - 5) / 4. ● a(n) = 5 * (floor(n - 1) / 2) + 3 - n mod 2. - _ Reinhard Zumkeller _ , Nov 27 2012 ●

▶ [A033082] 1,2,3,7,8,13,29,34,55,119,136,221,477,546,887,1911,2184,3549,7645,8738,14199,30583,34952,56797,122333 ⋆ Numbers in which all pairs of consecutive base - 4 digits differ by 2. ● a(n) = 4 * a(n - 3) + a(n - 6) - 4 * a(n - 9) for n > 9. - _ Colin Barker _ , Jun 01 2015 ●

▶ [A047533] 1,2,3,7,9,10,11,15,17,18,19,23,25,26,27,31,33,34,35,39,41,42,43,47,49 ⋆ Numbers that are congruent to { 1, 2, 3, 7 } mod 8. ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. ● a(n) = (8 * n - 7 + i ^ (2 * n) + (1 + 2 * i) * i ^ (- n) + (1 - 2 * i) * i ^ n) / 4 where i=sqrt(- 1). ●

▶ [A047359] 0,2,3,7,9,10,14,16,17,21,23,24,28,30,31,35,37,38,42,44,45,49,51,52,56 ⋆ Numbers that are congruent to { 0, 2, 3 } mod 7. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. ● a(n) = (21 * n - 27 - 9 * cos(2 * n * Pi / 3) + sqrt(3) * sin(2 * n * Pi / 3)) / 9. ● a(3k) = 7k - 4, a(3k - 1) = 7k - 5, a(3k - 2) = 7k - 7. (End) ●

▶ [A294109] 0,0,0,2,3,7,9,11,13,20,23,26,29,39,43,47,51,55,59,63,67,82,87,92,97 ⋆ Sum of the larger parts of the partitions of n into two parts with smaller part prime. ● a(n) = Sum _{ i=1..floor(n / 2) } (n - i) * c(i), where c is the prime characteristic (A010051). ●

▶ [A294263] 0,0,0,2,3,7,9,11,13,20,23,32,36,47,52,57,62,67,72,87,93,110,117,124,131 ⋆ Sum of the larger parts of the partitions of n into two parts with smaller part squarefree > 1. ● a(n) = Sum _{ i=2..floor(n / 2) } (n - i) * mu(i) ^ 2, where mu is the Möbius function (A008683). ●

▶ [A212985] 1,2,3,7,9,11,18,21,24,34,38,42,55,60,65,81,87,93,112,119,126,148,156,164,189 ⋆ Number of (w,x,y) with all terms in { 0,...,n } and 3w = 3x + y. ● a(n) = a(n - 1) + 2 * a(n - 3) - 2 * a(n - 4) - a(n - 6) + a(n - 7). ●

▶ [A262775] 0,2,3,7,9,13,15,19,21,27,33,37,39,49,51,55,57,63,67,69,81,85,99,105,109 ⋆ For a(n + 1), sift out all numbers congruent to a(n - 1) mod a(n) except for a(n - 1); a(0)=0, a(1)=2. ● a(0)=0, a(1)=2; for n>1, a(n) is the smallest integer k>a(n - 1) such that k a(j) mod a(j - 1) for all j<n. ●

▶ [A294283] 0,0,2,3,7,9,15,18,21,24,33,37,48,53,66,72,78,84,90,96,113,120,139,147,155 ⋆ Sum of the larger parts of the partitions of n into two distinct parts with smaller part squarefree. ● a(n) = Sum _{ i=1..floor((n - 1) / 2) } (n - i) * mu(i) ^ 2, where mu is the Möbius function (A008683). ●

▶ [A211539] 0,0,2,3,7,9,15,18,26,30,40,45,57,63,77,84,100,108,126,135,155,165,187,198,222 ⋆ Number of ordered triples (w,x,y) with all terms in { 1,...,n } and 2w = 2n - 2x + y. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). ● a(n) = Sum _{ k=floor((n + 1) / 2) + 1..n } k. ● a(n) = a(n - 1) + n for even n; a(n) = a(n - 1) + (n - 1) / 2 for odd n. (End) ● a(n) = (1 / 16) * (6n ^ 2 + 2n - 3 + (2n + 3) * (- 1) ^ n). ● a(3n) = 3 * (0, 1, 5, 10, 19, 28, 42, ...). ●

▶ [A291740] 1,2,3,7,9,18,25,47,65,118,165,290,408,702,992,1677,2379,3966,5643,9300,13266,21654,30954,50116,71770 ⋆ p - INVERT of (1,0,1,0,0,0,0,...), where p(S) = (1 - S)(1 - S ^ 2). ● a(n) = a(n - 1) + a(n - 2) + 2 * a(n - 4) - 3 * a(n - 5) + a(n - 6) - 3 * a(n - 7) - a(n - 9) for n >= 10. ●

▶ [A225202] 1,1,2,3,7,9,20,29,52,80,143,217,376,588,977,1563,2583,4116,6764,10854,17688,28512,46367,74763,121385 ⋆ Number of aperiodic tilings of an n X 1 rectangle by tiles of dimension 1 X 1 and 2 X 1. ● a(n) is the Möbius transform of Fibonacci(n + 1). ●

▶ [A207643] 1,1,2,3,7,9,26,31,71,129,262,291,1222,1333,2198,5139,11881,12673,39594,41923,117326,251841,354292,371163,1870453 ⋆ a(n) = 1 + (n - 1) + (n - 1) * [n / 2 - 1] + (n - 1) * [n / 2 - 1] * [n / 3 - 1] + (n - 1) * [n / 2 - 1] * [n / 3 - 1] * [n / 4 - 1] + ... for n>0 with a(0)=1, where [x] = floor(x). ● a(n) = 1 + Sum _{ k=1..[n / 2] } Product _{ j=1..k } floor((n - j) / j). ●

▶ [A047531] 2,3,7,10,11,15,18,19,23,26,27,31,34,35,39,42,43,47,50,51,55,58,59,63,66 ⋆ Numbers that are congruent to { 2, 3, 7 } mod 8. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n > 4. ● a(n) = (24 * n + 5 * sqrt(3) * sin(2 * Pi * n / 3) + 3 * cos(2 * Pi * n / 3) - 12) / 9. - _ Ilya Gutkovskiy _ , May 30 2016 ● a(3k) = 8k - 1, a(3k - 1) = 8k - 5, a(3k - 2) = 8k - 6. - _ Wesley Ivan Hurt _ , Jun 10 2016 ●

▶ [A266813] 0,0,2,3,7,10,14,19,26,31,39,47,56,65,76,86,99,111,124,138,154,168,185,202,220 ⋆ Total number of OFF (white) cells after n iterations of the "Rule 62" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = a(n - 1) + a(n - 3) - a(n - 5) - a(n - 7) + a(n - 8) for n>7. ●

▶ [A088163] 0,1,2,3,7,10,15,31,42,63,127,170,255,511,682,1023,2047,2730,4095,8191,10922,16383,32767,43690,65535 ⋆ Numbers for which rotating one binary place to the right less rotating one binary place to the left is equal to zero. ● a(n) = 5 * a(n - 3) - 4 * a(n - 6) for n>5. ●

▶ [A271713] 2,3,7,10,18,23,35,42,58,67,87,98,122,135,163,178,210,227,263,282,322,343,387,410,458 ⋆ Numbers n such that 3 * n - 5 is a square. ● a(n) = (3 / 2) * n ^ 2 + O(n). - _ Charles R Greathouse IV _ , Apr 12 2016 ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n>5. - _ Wesley Ivan Hurt _ , Apr 13 2016 ●

▶ [A351704] 1,1,2,3,7,10,20,26,45,55,86,101,147,168,232,260,345,381,490,535,671,726,892,958,1157 ⋆ Sums of the ascending diagonals of the triangle A162609. ●

a(n) = (n ^ 3 + 2 * n + 12) / 12, for even n. ● a(n) = (2 * n ^ 3 - 3 * n ^ 2 + 10 * n + 15) / 24, for odd n. ●

► [A295723] 0,1,2,3,7,10,21,31,60,91,167,258,457,715,1236,1951,3315,5266,8837,14103,23452,37555,62031,99586,163665 ★ a(n) = a(n - 1) + 3 * a(n - 2) - 2 * a(n - 3) - 2 * a(n - 4), where a(0) = 0, a(1) = 1, a(2) = 2, a(3) = 3. ● a(n) = a(n - 1) + a(n - 3) + a(n - 4), where a(0) = 0, a(1) = 1, a(2) = 2, a(3) = 3. ●

► [A291241] 1,2,3,7,10,22,32,67,99,200,299,588,887,1708,2595,4913,7508,14018,21526,39725,61251,111922,173173,313752,486925 ★ p - INVERT of (0,1,0,1,0,1,...), where p(S) = 1 - S - S ^ 2 + S ^ 3. ● a(n) = a(n - 1) + 4 * a(n - 2) - 3 * a(n - 3) - 4 * a(n - 4) + a(n - 5) + a(n - 6) for n >= 7. ●

► [A318406] 0,1,1,2,3,7,10,22,32,70,102,222,324,704,1028,2232,3260,7076,10336,22432,32768,71112,103880,225432,329312 ★ For n > 4, a(n) = a(n - 1) + a(n - 2) if n is even and a(n) = 3 * a(n - 2) + a(n - 4) - a(n - 5) if n is odd; a(0) = 0, a(1) = 1, a(2) = 1, a(3) = 2, and a(4) = 3. ● a(n) = 4 * a(n - 2) - 2 * a(n - 4) - 2 * a(n - 6) for n>5. ●

► [A365967] 1,1,2,3,7,10,22,32,71,103,228,331,733,1064,2356,3420,7573,10993,24342,35335,78243,113578,251498,365076,808395 ★ a(2 * n) = A030186(n), a(2 * n + 1) = A033505(n). ● a(n) = 3 * a(n - 2) + a(n - 4) - a(n - 6). ● a(2 * n) = a(2 * n - 1) + a(2 * n - 2) + a(2 * n - 3) + a(2 * n - 4). ● a(2 * n + 1) = a(2 * n) + a(2 * n - 1). ●

► [A062113] 1,2,3,7,10,24,34,82,116,280,396,956,1352,3264,4616,11144,15760,38048,53808,129904,183712,443520,627232,1514272,2141504 ★ a(0)=1; a(1)=2; a(n) = a(n - 1) + a(n - 2) * (3 - (- 1) ^ n) / 2. ● a(n) = 4 * a(n - 2) - 2 * a(n - 4). ●

► [A089174] 2,3,7,11,13,17,19,23,37,41,59,73,101,137,157,239,257,271,547,2153,2251,4649,7309,9091,19697 ★ Unique prime factors in A007907 extended to modulo 10 (past 20 elements). ● a(n) = If [PrimeQ[IntegerFractors[A007907[m]]]== True, IntegerFractors[A007907[m]]] ●

► [A106483] 2,3,7,11,13,17,41,43,59,73,109,113,127,137,157,179,181,197,199,211,251,263,277,293,311 ★ Primes p such that 2 * p ^ 2 - 1 is also prime. ● a(n) is in this sequence iff a(n) is prime and 2 * a(n) ^ 2 - 1 is also prime. ●

► [A174060] 0,1,2,3,7,11,15,19,23,32,41,50,59,68,77,86,102,118,134,150,166,182,198,214,230 ★ a(n) = Sum _{ k=0..n } floor(sqrt(k)) ^ 2. ● a(n) = (1 / 6) * m * (6 * m * n - (m + 1) * (3 * m ^ 2 + m - 1)) with m = floor(sqrt(n)). - _ Yalcin Aktar _ , Jan 30 2012 ●

► [A092353] 1,2,3,7,11,15,24,33,42,58,74,90,115,140,165,201,237,273,322,371,420,484,548,612,693 ★ Expansion of (1 + x ^ 3) / ((1 - x) ^ 2 * (1 - x ^ 3) ^ 2). ● a(n) = Sum(i=1..n + 3, floor(i / 3) ^ 2). - _ Enrique Pérez Herrero _ , Mar 20 2012 ● a(n) = (1 / 2) * (- 4 * t ^ 3 + (2n - 7) * t ^ 2 + (4n - 1) * t + 2n + 2), where t = floor(n / 3). - _ Ridouane Oudra _ , Oct 19 2019 ●

► [A189374] 1,2,3,7,11,15,25,35,45,65,85,105,140,175,210,266,322,378,462,546,630,750,870,990,1155 ★ Expansion of 1 / ((1 - x) ^ 5 * (x ^ 2 + x + 1) ^ 3). ● a(n) = (2 * a(n - 1) + 2 * a(n - 2) + (8 + n) * a(n - 3)) / n with a(0)=1, a(1)=2, a(2)=3 and a(3)=7. ● a(n) = (floor(n / 3) + 1) * (floor(n / 3) + 2) * (floor(n / 3) + 3) * (3 * floor(n / 3) + 4 * (4 - (3 * floor((n + 3) / 3) - n))) / 24. - _ Luce ETIENNE _ , Jun 29 2015 ●

► [A180516] 0,1,2,3,7,11,15,31,47,63,127,191,255,511,767,1023,2047,3071,4095,8191,12287,16383,32767,49151,65535 ★ Numbers of the form i * 4 ^ j - 1 (i=1..3, j >= 0). ● a(n) = a(n - 1) + 4 * a(n - 3) - 4 * a(n - 4). G.f.: x ^ 2 * (x ^ 2 + x + 1) / ((x - 1) * (4 * x ^ 3 - 1)). [_ Colin Barker _ , Feb 01 2013] ●

► [A127944] 0,0,0,2,3,7,11,17,21,29,37,47,56,68,80,94,105,121,137,155,172,192,212,234,254 ★ Partial sums of A093049. ● a(n) = log _ 2(2 ^ C(n + 1,2) / denominator(C(2n,n) / 4 ^ n)). ●

► [A274161] 2,3,7,11,17,23,27,31,37,41,45,57,61,65,75,79,91,95,99,109,113,125,129,133,143 ★ Numbers n such that in the edge - delete game on the path P _{ n } the first player does not have a winning strategy. ● a(n) = a(n - 1) + a(n - 5) - a(n - 6) for n > 15. - _ Andrew Howroyd _ , Nov 11 2018 ●

► [A245738] 2,3,7,11,20,32,54,87,143,231,376,608,986,1595,2583,4179,6764,10944,17710,28655,46367,75023,121392,196416,317810 ★ Number of compositions of n into parts 1 and 2 with both parts present. ● a(n) = (- 20 + sqrt(5) * (- (1 - sqrt(5)) ^ (1 + n) + (1 + sqrt(5)) ^ (1 + n)) / 2 ^ n) / 10 for n even. ● a(n) = (- 10 + sqrt(5) * (- (1 - sqrt(5)) ^ (1 + n) + (1 + sqrt(5)) ^ (1 + n)) / 2 ^ n) / 10 for n odd. ● a(n) = a(n - 1) + 2 * a(n - 2) - a(n - 3) - a(n - 4) for n>6. (End) ● a(n) = Sum _{ i=1..floor((n - 1) / 2) } C(n - i,i). - _ Wesley Ivan Hurt _ , Sep 19 2017 ●

► [A133044] 1,2,3,7,11,20,36,61,110,191,335,591,1032,1816,3185,5586,9811,17207,30203,53004,93004,163229,286430,502655,882111 ★ Area of the spiral of equilateral triangles with side lengths which follow the Padovan sequence, divided by the area of the initial triangle. ● a(n) = 2 * p(n + 4) * p(n + 5) - p(n + 2) ^ 2 where p is the Padovan sequence (A000931). This establishes Colin Barker's conjecture, because ● a(n) = a(n - 1) + p(n + 4) ^ 2 ●

► [A037078] 0,1,2,3,7,11,21,34,65,102,196,308,588,925,1766,2775,5299,8327,15897,24982,47693,74946,143080,224840,429240 ★ In ternary expansion of n, reading from right to left, digits occur in order ...,0,1,2,0,1,2,... ● a(0)=0, a(1)=1, a(2)=2, a(3)=3, a(4)=7, a(n)=3 * a(n - 2) + a(n - 3) - 3 * a(n - 5). - _ Harvey P. Dale _ , Aug 23 2013 ●

► [A226937] 1,2,3,7,11,23,34,52,68,87,105,134,153,182,213,237 ★ Number of different numbers of square parts in the set of partitions of an n X n square lattice into squares, considering only the list of parts. ● a(n) <= n ^ 2. ●

► [A007481] 1,2,3,7,11,25,39,89,139,317,495,1129,1763,4021,6279,14321,22363,51005,79647,181657,283667,646981,1010295,2304257,3598219 ★ Number of subsequences of [1,...,n] in which each even number has an odd neighbor. ● a(n) = 3 * a(n - 2) + 2 * a(n - 4). ●

► [A238312] 1,1,2,3,7,11,25,41,82,142,260,436,785,1287,2199,3592,5959,9511,15453,24268,38565,59838,93232,142589,219089 ★ Square row sums of the table A072233 (A008284). ● a(n) = Sum _{ k=0..n } p(n,k) ^ 2, where p(n,k) is the number of partitions of n into k positive parts (A072233, A008284). ●

► [A005246] 1,1,1,2,3,7,11,26,41,97,153,362,571,1351,2131,5042,7953,18817,29681,70226,110771,262087,413403,978122,1542841 ★ a(n) = (1 + a(n - 1) * a(n - 2)) / a(n - 3), a(0) = a(1) = a(2) = 1. ● a(n) = a(2 - n) for all n in Z. - _ Michael Somos _ , Nov 15 2006 ● a(2 * m) = Sum _{ p=0..floor(m / 2) } (- 1) ^ p * binomial(m - p,p) * 4 ^ (m - 2 * p) - 3 * Sum _{ p=0..floor((m - 1) / 2) } (- 1) ^ p * binomial(m - 1 - p,p) * 4 ^ (m - 1 - 2 * p). ● a(2 * m + 1) = Sum _{ p=0..floor(m / 2) } (- 1) ^ p * binomial(m - p,p) * 4 ^ (m - 2 * p) - 2 * Sum _{ p=0..floor((m - 1) / 2) } (- 1) ^ p * binomial(m - 1 - p,p) * 4 ^ (m - 1 - 2 * p). (End) ● a(2 * n + 2) = Sum _{ k = 0..n } 2 ^ k * binomial(n + k,2 * k); a(2 * n + 1) = Sum _{ k = 0..n } n / (n + k) * 2 ^ k * binomial(n + k,2 * k) for n >= 1 . Row sums of A211956. - _ Peter Bala _ , May 01 2012 ● a(n) = ((sqrt(2) + sqrt(3) + (- 1) ^ n * (sqrt(2) - sqrt(3))) * sqrt(2 + (2 - sqrt(3)) ^ n * (2 + sqrt(3)) - (- 2 + sqrt(3)) * (2 + sqrt(3)) ^ n)) / (4 * sqrt(3)). - _ Gerry Martens _ , Jun 06 2015 ●

► [A116406] 1,1,2,3,7,11,26,42,99,163,382,638,1486,2510,5812,9908,22819,39203,89846,155382,354522,616666,1401292,2449868,5546382 ★ Expansion of ((1 + x - 2 x ^ 2) + (1 + x) * sqrt(1 - 4x ^ 2)) / (2(1 - 4x ^ 2)). ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n - 1,k). - _ Paul Barry _ , Oct 06 2007 ●

► [A305750] 1,1,2,3,7,11,27,43,107,171,427,683,1707,2731,6827,10923,27307,43691,109227,174763,436907,699051,1747627,2796203,6990507 ★ Number of achiral color patterns (set partitions) in a row or cycle of length n with 4 or fewer colors (subsets). ● a(n) = Sum _{ j=0..4 } Ach(n,j), where Ach(n,k) = [n>1] * (k * T(n - 2,k) + T(n - 2,k - 1) + T(n - 2,k - 2)) + [0<=n<2 & n==k]. ● a(2m) = S2(m + 4,4) - 8 * S2(m + 3,4) + 22 * S2(m + 2,4) - 23 * S2(m + 1,4) + 6 * S2(m,4); ● a(2m - 1) = S2(m + 3,4) - 7 * S2(m + 2,4) + 16 * S2(m + 1,4) - 12 * S2(m,4), where S2(n,k) is the Stirling subset number A008277. ● a(2m - 1) = (2 + 4 ^ m) / 6. ● a(n) = a(n - 1) + 4 * a(n - 2) - 4 * a(n - 3). - _ Muniru A Asiru _ , Oct 28 2018 ●

► [A107857] 1,1,2,3,7,11,28,45,117,189,494,799,2091,3383,8856,14329,37513,60697,158906,257115,673135,1089155,2851444,4613733,12078909 ★ a(n) = floor[(phi + n mod 2) * a(n - 1)], a(1)=1. ● a(2n + 2) = (1 / 2) * (Fib(3n + 2) + 1), a(2n + 1) = (1 / 2) * (Fib(3n + 1) + 1). ●

► [A138000] 2,3,7,11,29,53,107,211,431,853,1709,3433,6857,13709,27427,54851,109717,219409,438827,877651,1755319,3510623,7021249,14042491,28084997 ★ a(n) is the least prime such that the subsets of { a(1), ..., a(n) } sum up to 2 ^ n different values. ● a(n) > a(n - 1) and a(n) <= nextprime((Sum _{ i=1..n - 1 } a(i)) - (- 1) ^ n); but in fact a(n) ~ Sum _{ i=1..n - 1 } a(i) and thus a(n) ~ constant * 2 ^ n. ●

► [A056292] 1,2,3,7,11,39,103,367,1235,4439,15935,58509,215251,799697,2983217,11187567,42109451,159082753,602809327,2290684251,8726308317,33318661277,127479700199,488672302909,1876500180291 ★ Number of n - bead necklace structures using a maximum of four different colored beads. ● a(n) = (1 / n) * Sum _{ d|n } phi(d) * ([d==0 mod 12] * (4 * S2(n / d + 3, 4) - 24 * S2(n / d + 2, 4) + 44 * S2(n / d + 1, 4) - 24 * S2(n / d, 4)) + [d==6 mod 12] * (3 * S2(n / d + 3, 4) - 18 * S2(n / d + 2, 4) + 33 * S2(n / d + 1, 4) - 18 * S2(n / d, 4)) + [d==4 mod 12 | d==8 mod 12] * (3 * S2(n / d + 3, 4) - 19 * S2(n / d + 2, 4) + 38 * S2(n / d + 1, 4) - 24 * S2(n / d, 4)) + [d==3 mod 12 | d=9 mod 12] * (2 * S2(n / d + 3, 4) - 13 * S2(n / d + 2, 4) + 26 * S2(n / d + 1, 4) - 15 * S2(n / d, 4)) + [d==2 mod 12 | d=10 mod 12] * (2 * S2(n / d + 3, 4) - 13 * S2(n / d + 2, 4) + 27 * S2[n / d + 1,4) - 18 * S2(n / d, 4)) + [d mod 12 in { 1,5,7,11 }] * (S2(n / d + 3, 4) - 8 * S2(n / d + 2, 4) + 20 * S2(n / d + 1, 4) - 15 * S2(n / d, 4))), where S2(n, k) is the Stirling subset number, A008277. ●

► [A302506] 2,3,7,12,17,27,46,75,119,192,313,507,818,1323,2143,3468,5609,9075,14686,23763,38447,62208,100657,162867,263522 ★ Number of total dominating sets in the n - pan graph. ● a(n) = a(n - 1) + a(n - 2) + a(n - 3) for n > 3. ●

► [A350437] 0,0,1,2,3,7,12,18,31,52,92,158,269,460,786,1350,2317,3969,6798,11643,19952,34197,58601,100410,172042 ★ a(n) is the number of integers that can be represented in a 7 - segment display by using only n segments (version A006942). ● a(n) = a(n - 2) + a(n - 3) + a(n - 4) + 3 * a(n - 5) + 3 * a(n - 6) + a(n - 7) for n > 13. ●

► [A289977] 0,0,0,1,1,2,3,7,12,23,41,77,140,258,470,861,1570,2867,5225,9526,17352,31607,57547,104766,190684 ★ p - INVERT of (0,0,0,1,2,3,5,8,...), the Fibonacci numbers preceded by three zeros, where p(S) = 1 - S - S ^ 2. ● a(n) = 2 * a(n - 1) + a(n - 2) - 2 * a(n - 3) - a(n - 5) - a(n - 6) + a(n - 8). ●

► [A036538] 2,3,7,12,23,45,89,178,356,707,1409,2822,5639,11273,22546,45088,90165,180315,360637,721258,1442491,2884973,5769941,11539858,23079721 ★ Number of integers m <= 2 ^ n such that d(m) = 2 ^ k for some k = 0, 1, 2, 3, ... ● a(n) = number of 1s in f(tau(k)) mapped across k = 1..2 ^ n, with f(x):= 1 - sign(log _ 2 x - floor(log _ 2 x)). - _ Michael De Vlieger _ , Mar 01 2017 ●

► [A108742] 1,2,3,7,12,24,45,86,164,312,595,1133,2159,4113,7836,14929,28442,54187,103235,196680,374708,713881,1360062,2591144,4936560 ★ Row sums of a triangle related to the Jacobsthal polynomials. ● a(n) = a(n - 1) + 2 * a(n - 2) - a(n - 4) for n >= 4. ● a(n) = Sum _{ 0 <= k <= n } binomial(floor((n + k + 1) / 2) + k, floor((n + k) / 2) - k). ●

► [A018240] 1,1,2,3,7,12,24,45,91,176,352,693,1387,2752,5504,10965,21931,43776,87552,174933,349867,699392,1398784,2796885,5593771 ★ Number of rational knots (or two - bridge knots) with n crossings (up to mirroring). ● a(n) = - a(n - 1) + 5 * (a(n - 2) + a(n - 3)) - 2 * (a(n - 4) + a(n - 5)) - 8 * (a(n - 6) + a(n - 7)). [Originally contributed as a separate sequence entry by _ Thomas A. Gittings _ , Dec 11 2003; see Stoimenow, Corollary 5.1 for proof] ● a(n) = { 2 ^{ n - 3 }+ 2 ^{ [n / 2] - 2 ^{ n (mod 2) }+ { [n / 2] (mod 2) } (- 1) ^{ n - 1 }}/ 3. - Slavik Jablan, Dec 20 2003 ●

► [A259593] 2,3,7,12,26,45,97,168,362,627,1351,2340,5042,8733,18817,32592,70226,121635,262087,453948,978122,1694157,3650401,6322680,13623482 ★ Numerators of the other - side convergents to sqrt(3). ● a(n) = 4 * a(n - 2) - a(n - 4) for n>3. - _ Colin Barker _ , Jul 21 2015 ● a(n) = 3 ^ (n / 2 - t + 1) * ((2 + sqrt(3)) ^ t + (- 1) ^ n * (2 - sqrt(3)) ^ t) / 2, where t = floor(n / 2) + 1. - _ Ridouane Oudra _ , Aug 03 2021 ●

► [A099163] 1,1,2,3,7,12,27,49,106,199,419,804,1663,3237,6618,13003,26383,52156,105299,209001,420586,836991,1680747,3350548,6718807 ★ Expansion of (1 - 2 * x ^ 2) / ((1 - 2 * x) * (1 + x - x ^ 2)). ● a(n)=a(n - 1) + 3a(n - 2) - 2a(n - 3); a(n)=((sqrt(5) - 1) / 2) ^ n(3 / 10 + sqrt(5) / 10) + ((- sqrt(5) - 1) / 2) ^ n(3 / 10 - sqrt(5) / 10) + 2 ^ (n + 1) / 5; a(n)=sum { k=0..n, (- 1) ^ (n - k)Fib(n - k + 1)(2 ^ (k - 1) + 0 ^ k / 2 - sum { j=0..k, C(k, j)j(- 1) ^ j }) } . ● a(n) =

Sum _{ k= - [n / 5]..[n / 5] } C(n, [(n - 5 * k) / 2]). ● a(n) = 2 * Sum _{ k= - [n / 10]..[n / 10] } C(n, [n / 2] - 5 * k) - fibonacci(n + 1). (End) ●

▶ [A182692] 2,3,7,12,28,48,113,195,461,798,1888,3270,7736,13399,31702,54909,129916,225021,532405,922152,2181835,3779049,8941325,15486829,36642230 ⋆ Composite Beatty sequence of sqrt(3). ● a(n)=floor(s * a(n - 1)) if n odd, a(n)=floor(r * a(n - 1)) if n even, where r=sqrt(3), s=(r + 3) / 2, a(1)=floor(s). ●

▶ [A305751] 1,1,2,3,7,12,30,55,141,266,688,1313,3407,6532,16970,32595,84721,162846,423348,813973,2116227,4069352,10580110,20345735,52898501 ⋆ Number of achiral color patterns (set partitions) in a row or cycle of length n with 5 or fewer colors (subsets). ● a(n) = Sum _{ j=0..5 } Ach(n,j), where Ach(n,k) = [n>1] * (k * T(n - 2,k) + T(n - 2,k - 1) + T(n - 2,k - 2)) + [0<=n<2 & n==k]. ● a(2m) = S2(m + 5,5) - 13 * S2(m + 4,5) + 62 * S2(m + 3,5) - 130 * S2(m + 2,5) + 110 * S2(m + 1,5) - 24 * S2(m,5); ● a(2m - 1) = S2(m + 4,5) - 12 * S2(m + 3,5) + 52 * S2(m + 2,5) - 95 * S2(m + 1,5) + 60 * S2(m,5), where S2(n,k) is the Stirling subset number A008277. ● a(2m - 1) = (3 + 2 * 2 ^ m + 5 ^ m) / 12. ● a(n) = a(n - 1) + 7 * a(n - 2) - 7 * a(n - 3) - 10 * a(n - 4) + 10 * a(n - 5). - _ Muniru A Asiru _ , Oct 30 2018 ●

▶ [A047749] 1,1,1,2,3,7,12,30,55,143,273,728,1428,3876,7752,21318,43263,120175,246675,690690,1430715,4032015,8414640,23841480,50067108 ⋆ If n = 2 * m then a(n) = binomial(3 * m, m) / (2 * m + 1), if n=2 * m + 1 then a(n) = binomial(3 * m + 1, m + 1) / (2 * m + 1). ● a(n) is the upper left term in M ^ n, M = the infinite square production matrix: ● a(0) = 1; a(n) = Sum _{ i=0..n - 1 } Sum _{ j=0..n - i - 1 } (- 1) ^ i * a(i) * a(j) * a(n - i - j - 1). - _ Ilya Gutkovskiy _ , Jul 28 2021 ●

▶ [A100982] 1,1,2,3,7,12,30,85,173,476,961,2652,8045,17637,51033,108950,312455,663535,1900470,5936673,13472296,39993895,87986917,257978502,820236724 ⋆ Number of admissible sequences of order j; related to 3x + 1 problem and Wagon's constant. ● a(n) = (m + n - 2)! / (m! * (n - 2)!) - Sum _{ i=2..n - 1 } binomial(floor((3 * (n - i) + b) / 2), n - i) * a(i), where m = floor((n - 1) * log _ 2(3)) - (n - 1) and b assumes different integer values within the sum at intervals of 5 or 6 terms. (Conjecture) ●

▶ [A305752] 1,1,2,3,7,12,31,58,159,312,883,1774,5103,10368,30067,61414,178815,366168,1068259,2190190,6395919,13120944,38335123,78665590,229890591 ⋆ Number of achiral color patterns (set partitions) in a row or cycle of length n with 6 or fewer colors (subsets). ● a(n) = Sum _{ j=0..6 } Ach(n,j), where Ach(n,k) = [n>1] * (k * T(n - 2,k) + T(n - 2,k - 1) + T(n - 2,k - 2)) + [0<=n<2 & n==k]. ● a(2m) = S2(m + 6,6) - 19 * S2(m + 5,6) + 140 * S2(m + 4,6) - 501 * S2(m + 3,6) + 887 * S2(m + 2,6) - 692 * S2(m + 1,6) + 160 * S2(m,6); ● a(2m - 1) = S2(m + 5,6) - 18 * S2(m + 4,6) + 124 * S2(m + 3,6) - 404 * S2(m + 2,6) + 613 * S2(m + 1,6) - 340 * S2(m,6)), where S2(n,k) is the Stirling subset number A008277. ● a(2m - 1) = (72 + 45 * 2 ^ m + 40 * 3 ^ m + 13 * 6 ^ m) / 360. ● a(n) = a(n - 1) + 11 * a(n - 2) - 11 * a(n - 3) - 36 * a(n - 4) + 36 * a(n - 5) + 36 * a(n - 6) - 36 * a(n - 7). - _ Muniru A Asiru _ , Oct 30 2018 ●

▶ [A080107] 1,1,2,3,7,12,31,59,164,339,999,2210,6841,16033,51790,127643,428131,1103372,3827967,10269643,36738144,102225363,376118747,1082190554,4086419601 ⋆ Number of fixed points of permutation of SetPartitions under { 1,2,...,n }- > { n,n - 1,...,1 } . Number of symmetric arrangements of non - attacking rooks on upper half of n X n chessboard. ● a(n) = Sum _{ k=0..n } Ach(n,k) where ●

▶ [A056293] 1,2,3,7,12,42,123,503,2008,8720,38365,173609,792828,3662924,17034381,79703081,374624254,1767883444,8370666417,39751072847,189262621864,903220058756,4319518316899,20697040198889,99343899144822 ⋆ Number of n - bead necklace structures using a maximum of five different colored beads. ● a(n) = (1 / n) * Sum _{ d|n } phi(d) * ([d==0 mod 60] * (5 * S2(n / d + 4, 5) - 50 * S2(n / d + 3, 5) + 175 * S2(n / d + 2, 5) - 250 * S2(n / d + 1, 5) + 120 * S2(n / d, 5)) + [d==30 mod 60] * (4 * S2(n / d + 4,5) - 41 * S2(n / d + 3,5) + 149 * S2(n / d + 2,5) - 226 * S2(n / d + 1, 5) + 120 * S2(n / d, 5)) + [d==20 mod 60 | d==40 mod 60] * (4 * S2(n / d + 4, 5) - 42 * S2(n / d + 3, 5) + 156 * S2(n / d + 2, 5) - 238 * S2(n / d + 1, 5) + 120 * S2(n / d, 5)) + [d==15 mod 60 | d==45 mod 60] * (3 * S2(n / d + 4, 5) - 33 * S2(n / d + 3, 5) + 129 * S2(n / d + 2, 5) - 210 * S2(n / d + 1, 5) + 120 * S2(n / d, 5)) + [d mod 60 in { 12,24,36,48 }] * (4 * S2(n / d + 4, 5) - 40 * S2(n / d + 3, 5) + 140 * S2(n / d + 2, 5) - 200 * S2(n / d + 1, 5) + 96 * S2(n / d, 5)) + [d=10 mod 60 | d==50 mod 60] * (3 * S2(n / d + 4, 5) - 33 * S2(n / d + 3, 5) + 130 * S2(n / d + 2, 5) - 214 * S2(n / d + 1, 5) + 120 * S2(n / d, 5)) + [d mod 60 in { 6,18,42,54 }] * (3 * S2(n / d + 4, 5) - 31 * S2(n / d + 3, 5) + 114 * S2(n / d + 2, 5) - 176 * S2(n / d + 1, 5) + 96 * S2(n / d, 5)) + [d mod 60 in { 5,25,35,55 }] * (2 * S2(n / d + 4, 5) - 23 * S2(n / d + 3, 5) + 95 * S2(n / d + 2, 5) - 165 * S2(n / d + 1, 5) + 100 * S2(n / d, 5)) + [d mod 60 in { 4,8,16,28,32,44,52,56 }] * (3 * S2(n / d + 4, 5) - 32 * S2(n / d + 3, 5) + 121 * S2(n / d + 2, 5) - 188 * S2(n / d + 1, 5) + 96 * S2(n / d, 5)) + [d mod 60 in { 3,9,21,27,33,39,51,57 }] * (2 * S2(n / d + 4, 5) - 23 * S2(n / d + 3, 5) + 94 * S2(n / d + 2, 5) - 160 * S2(n / d + 1, 5) + 96 * S2(n / d, 5)) + [d mod 60 in { 2,14,22,26,34,38,46,58 }] * (2 * S2(n / d + 4, 5) - 23 * S2(n / d + 3, 5) + 95 * S2(n / d + 2, 5) - 164 * S2(n / d + 1, 5) + 96 * S2(n / d, 5)) + [d mod 60 in { 1,7,11,13,17,19,23,29,31,37,41,43,47,49,53,59 }] * (S2[n / d + 4, 5) - 13 * S2(n / d + 3, 5) + 60 * S2(n / d + 2, 5) - 115 * S2(n / d + 1, 5) + 76 * S2(n / d, 5))), where S2(n,k) is the Stirling subset number, A008277. ●

▶ [A056294] 1,2,3,7,12,43,126,539,2304,11023,54682,284071,1509852,8195029,45080666,250641895,1404374248,7917211349,44848645458,255055231763,1455247360128,8326191290585,47752990403134 ⋆ Number of n - bead necklace structures using a maximum of six different colored beads. ● a(n) = (1 / n) * Sum _{ d|n } phi(d) * ([d==0 mod 60] * (6 * S2(n / d + 5, 6) - 90 * S2(n / d + 4, 6) + 510 * S2(n / d + 3, 6) - 1350 * S2(n / d + 2, 6) + 1644 * S2(n / d + 1, 6) - 720 * S2(n / d, 6)) + [d==30 mod 60] * (5 * S2(n / d + 5, 6) - 77 * S2(n / d + 4, 6) + 451 * S2(n / d + 3, 6) - 1243 * S2(n / d + 2, 6) + 1584 * S2(n / d + 1, 6) - 720 * S2(n / d, 6)) + [d==20 mod 60 | d==40 mod 60] * (4 * S2(n / d + 5, 6) - 62 * S2(n / d + 4, 6) + 364 * S2(n / d + 3, 6) - 998 * S2(n / d + 2, 6) + 1252 * S2(n / d + 1, 6) - 560 * S2(n / d, 6)) + [d==15 mod 60 | d==45 mod 60] * (3 * S2(n / d + 5, 6) - 48 * S2(n / d + 4, 6) + 291 * S2(n / d + 3, 6) - 825 * S2(n / d + 2, 6) + 1074 * S2(n / d + 1, 6) - 495 * S2(n / d, 6)) + [d mod 60 in { 12,24,36,48 }] * (5 * S2(n / d + 5, 6) - 76 * S2(n / d + 4, 6) + 439 * S2(n / d + 3, 6) - 1196 * S2(n / d + 2, 6) + 1524 * S2(n / d + 1, 6) - 720 * S2(n / d, 6)) + [d=10 mod 60 | d==50 mod 60] * (3 * S2(n / d + 5 , 6) - 49 * S2(n / d + 4, 6) + 305 * S2(n / d + 3, 6) - 891 * S2(n / d + 2, 6) + 1192 * S2(n / d + 1, 6) - 560 * S2(n / d, 6)) + [d mod 60 in { 6,18,42,54 }] * (4 * S2(n / d + 5, 6) - 63 * S2(n / d + 4, 6) + 380 * S2(n / d + 3, 6) - 1089 * S2(n / d + 2, 6) + 1464 * S2(n / d + 1, 6) - 720 * S2(n / d, 6)) + [d mod 60 in { 5,25,35,55 }] * (2 * S2(n / d + 5, 6) - 33 * S2(n / d + 4, 6) + 209 * S2(n / d + 3, 6) - 629 * S2(n / d + 2, 6) + 886 * S2(n / d + 1, 6) - 455 * S2(n / d, 6)) + [d mod 60 in { 4,8,16,28,32,44,52,56 }] * (3 * S2(n / d + 5, 6) - 48 * S2(n / d + 4, 6) + 293 * S2(n / d + 3, 6) - 844 * S2(n / d + 2, 6) + 1132 * S2(n / d + 1, 6) - 560 * S2(n / d, 6)) + [d mod 60 in { 3,9,21,27,33,39,51,57 }] * (2 * S2(n / d + 5, 6) - 34 * S2(n / d + 4, 6) + 220 * S2(n / d + 3, 6) - 671 * S2(n / d + 2, 6) + 954 * S2(n / d + 1, 6) - 495 * S2(n / d, 6)) + [d mod 60 in { 2,14,22,26,34,38,46,58 }] * (2 * S2(n / d + 5, 6) - 35 * S2(n / d + 4, 6) + 234 * S2(n / d + 3, 6) - 737 * S2(n / d + 2, 6) + 1072 * S2(n / d + 1, 6) - 560 * S2(n / d, 6)) + [d mod 60 in { 1,7,11,13,17,19,23,29,31,37,41,43,47,49,53,59 }] * ●

▶ [A084423] 1,1,2,3,7,12,43,127,544,2361,11703,61690,351773,2126497,13639372,92197523,655035769,4874404108,37893370473,306986431847,2586209749712,22612848403571,204850732480285,1919652428481930,18581619724363401 ⋆ Set partitions up to rotations. ● a(p) = (Bell(p) + 2 * (p - 1)) / p for prime p; cf. A079609. - _ Vladeta Jovovic _ , Jul 04 2003 ●

▶ [A026472] 1,2,3,7,13,14,25,26,37,38,49,50,61,62,73,74,85,86,97,98,109,110,121,122,133 ⋆ { 3, 7 } together with the numbers congruent to { 1, 2 } mod 12. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n>6. ● a(n) = - (39 / 2) - (5 * (- 1) ^ n) / 2 + 6 * n for n>4. ●

▶ [A100764] 1,2,3,7,13,19,25,31,37,43,49,55,61,67,73,79,85,91,97,103,109,115,121,127,133 ⋆ a(1) = 1, a(2) = 2, a(3) = 3, a(n) = least number not the sum of three or fewer previous terms. ● a(n + 4) = a(4) + 6n for n > 4; a(n) = 6n - 17, n >3. ● a(n) = 2 * a(n - 1) - a(n - 2) for n > 5. ●

▶ [A271827] 1,2,3,7,13,23,41,73,129,227,399,701,1231,2161,3793,6657,11683,20503,35981,63143,110809,194457,341249,598851,1050911 ⋆ Expansion of (x ^ 5 - 2 * x ^ 4 + 2 * x ^ 3 - x + 1) / (x ^ 4 - 2 * x ^ 3 + 3 * x ^ 2 - 3 * x + 1). ● a(n) = 1 + 2 * Sum _{ k=1..n } Sum _{ j=0..(n - k) / 2 } binomial(k + 1,j) * binomial(n - k - j - 1,n - k - 2 * j), a(1)=2. ●

▶ [A075058] 1,2,3,7,13,23,47,97,193,383,769,1531,3067,6133,12269,24533,49069,98129,196247,392503,785017,1570007,3140041,6280067,12560147 ⋆ Lexicographically earliest infinite sequence of distinct positive numbers with the property that every positive integer is a sum of distinct terms (see algorithm below). ● a(n) = (greatest prime) <= 1 + Sum _{ i=0..n - 1 } a(i). ●

▶ [A256494] 0,1,1,2,3,7,13,26,51,103,205,410,819,1639,3277,6554,13107,26215,52429,104858,209715,419431,838861,1677722,3355443 ⋆ Expansion of - x ^ 2 * (x ^ 3 + x - 1) / ((x - 1) * (x + 1) * (2 * x - 1) * (x ^ 2 + 1)). ● a(n) = 2 * a(n - 1) + r((n - 1) % 4); r = array(1, - 1, 0, - 1). ● a(n) = 2 * a(n - 1) + a(n - 4) - 2 * a(n - 5) for n>5. ● a(n) = (5 + 5 * (- 1) ^ n - (1 + 2 * i) * (- i) ^ n - (1 - i * 2) * i ^ n + 2 ^ (1 + n)) / 20 for n>0 where i=sqrt(- 1). ●

▶ [A344432] 0,1,1,1,2,3,7,13,26,52,105,209,418,835,1671,3343,6686,13371,26742,53483,106966,213933,427867,855733,1711466 ⋆ a(n) = Sum _{ k=1..n } mu(k) * 2 ^ (n - k). ● a(n) = 2 * a(n - 1) + mu(n) for n > 0. ●

▶ [A088172] 1,2,3,7,13,26,53,106,211,422,845,1689,3379,6758,13515,27031,54061,108122,216245,432489,864979,1729958,3459915,6919830,13839661 ⋆ First differences of A019300. ● a(n + 1) = 2 * a(n) + 0 or +- 1. - _ Robert G. Wilson v _ , Sep 27 2003 ●

▶ [A048573] 2,3,7,13,27,53,107,213,427,853,1707,3413,6827,13653,27307,54613,109227,218453,436907,873813,1747627,3495253,6990507,13981013,27962027 ⋆ a(n) = a(n - 1) + 2 * a(n - 2), a(0)=2, a(1)=3. ● a(n) = (5 * 2 ^ n + (- 1) ^ n) / 3. ● a(n + 1) = Sum _{ i=0..n } a(i) + 1 + (1 - (- 1) ^ n) / 2, a(0)=2. - _ Yuchun Ji _ , Apr 10 2019 ● a(n) = 2 ^ n + J(n + 1) = J(n + 2) + J(n + 1) - J(n), where J is A001045. - _ Yuchun Ji _ , Apr 10 2019 ● a(n + 1) + a(n) = a(n + 2) - a(n) = 5 * 2 ^ n. - _ Michael Somos _ , Feb 22 2023 ●

▶ [A113823] 0,2,3,7,13,29,53,97,181,337,617,1151,2111,3881,7151,13147,24181,44483,81817,150497,276817,509137,936469,1722431,3168097 ⋆ Tribonacci analog of A055502. ● a(0) = 0, a(1) = 2, for n>2: a(n) = smallest prime > a(n - 1) + a(n - 2) + a(n - 3). ●

▶ [A113843] 0,2,3,7,13,29,53,103,199,389,751,1447,2789,5381,10369,19991,38543,74287,143197,276019,532061,1025579,1976857,3810517,7345031 ⋆ Tetranacci analog of A055502. ● a(- n) = a(0) = 0, a(1) = 2, for n>1: a(n) = smallest prime > a(n - 1) + a(n - 2) + a(n - 3) + a(n - 4). ●

▶ [A113884] 0,2,3,7,13,29,59,113,223,439,877,1721,3389,6653,13093,25741,50599,99487,195581,384509,755959 ⋆ Pentanacci analog of A055502. ● a(- n) = a(0) = 0, a(1) = 2, for n>1: a(n) = smallest prime > a(n - 1) + a(n - 2) + a(n - 3) + a(n - 4) + a(n - 5). ●

▶ [A124430] 1,1,2,3,7,13,31,61,144,296,714,1534,3761,8303,20495,46115,114461,261445,651114,1503207,3749017,8726147,21788311,51072555,127698665 ⋆ Eigenvector of triangle A124428. ● a(n) = Sum _{ k=0..[n / 2] } a(k) * C([n / 2],k) * C([(n + 1) / 2],k) for n>0, with a(0)=1 and [] means floor(). ●

▶ [A171416] 1,1,2,3,7,13,31,65,156,351,849,1993,4866,11733,28921,70997,176560,438979,1100302,2761797,6969909,17625015,44742636,113822415,290416803 ⋆ A sequence with Somos - 4 Hankel transform. ● a(n) = a(n - 2) + Sum _{ k=1..n - 1 } a(k - 1) * a(n - k - 1) with a(0)=a(1)=1. ●

▶ [A193530] 1,1,2,3,7,13,31,66,159,363,876,2065,4985,11915,28765,69156,166957,402373,971414,2343519,5657755,13654969,32966011,79577190,192116331 ⋆ Expansion of (1 - 2 * x - 2 * x ^ 2 + 3 * x ^ 3 + x ^ 5) / ((1 - x) * (1 - 2 * x - x ^ 2) * (1 - 2 * x ^ 2 - x ^ 4)). ● a(n) = (2 + Q(n) + 2 * (1 + (- 1) ^ n) * Pell((n + 2) / 2) + 2 * (1 - (- 1) ^ n) * Pell((n + 1) / 2)) / 8. ● a(2 * n) = (2 + Q(2 * n) + 4 * Pell(n + 1)) / 8. ●

▶ [A032131] 1,1,1,2,3,7,13,31,66,160,369,907,2191,5461,13558,34209,86426,220359,563475,1449282,3739365,9688104,25173917,65621067,171498288 ⋆ Shifts left 2 places under the "BIK" (reversible, indistinct, unlabeled) transform with a(1) = a(2) = 1. ● a(3) = a(1), ● a(4) = (1 / 2) * (a(1) ^ 2 + a(1) + 2 * a(2)), ● a(5

) = (1 / 2) * (a(1) ^ 2 + a(1) + 2 * a(2) + 2) * a(1), • a(6) = (1 / 2) * (a(1) ^ 4 + 4 * a(1) ^ 2 + (3 * a(1) ^ 2 + a(1) + 3) * a(2) + a(2) ^ 2 + a(1)), • a(7) = (1 / 2) * (a(1) ^ 4 + 4 * a(1) ^ 2 * a(2) + 6 * a(1) ^ 2 + 3 * a(2) ^ 2 + 3 * a(1) + 7 * a(2) + 2) * a(1), •

► [A237255] 2,3,7,13,33,62,158,297,757,1423,3627,6818,17378,32667,83263,156517,398937,749918,1911422,3593073,9158173,17215447,43879443,82484162,210239042 ⋆ Values of x in the solutions to x ^ 2 - 5xy + y ^ 2 + 17 = 0, where 0 < x < y. • a(n) = 5 * a(n - 2) - a(n - 4). •

► [A056953] 1,1,2,3,7,13,34,73,209,501,1546,4051,13327,37633,130922,394353,1441729,4596553,17572114,58941091,234662231,824073141,3405357682,12470162233,53334454417 ⋆ Denominators of continued fraction for alternating factorial. • a(0)=1; a(1)=1; a(n) = a(n - 1) + n * a(n - 2) / 2. • a(n) = Sum _{ k=0..[n / 2] } k! * C([n / 2],k) * C([(n + 1) / 2],k). - _ Paul D. Hanna _ , Oct 31 2006 •

► [A225879] 1,1,2,3,7,14,23,51,102,167,371,742,1215,2699,5398,8839,19635,39270,64303,142843,285686,467799,1039171,2078342,3403199 ⋆ Number of n - length words w over ternary alphabet { 1,2,3 } such that for every prefix z of w we have 0<= # (z,1) -# (z,2)<=2 and 0<= # (z,2) -# (z,3)<=2 and # (z,x) gives the number of occurrences of letter x in z. • a(n) = 7 * a(n - 3) + 2 * a(n - 6) for n>5. (End) •

► [A294627] 0,1,2,3,7,14,27,55,110,219,439,878,1755,3511,7022,14043,28087,56174,112347,224695,449390,898779,1797559,3595118,7190235 ⋆ Expansion of x * (1 + x) / ((1 - 2 * x) * (1 + x + x ^ 2)). • a(n) = a(n - 1) + a(n - 2) + 2 * a(n - 3) for n > 2. • a(n + 1) / a(n) tends to 2, the unique real root of x ^ 3 - x ^ 2 - x - 2 = 0. •

► [A293326] 2,3,7,14,28,55,111,222,443,887,1774,3547,7094,14189,28378,56756,113512,227023,454047,908093,1816187,3632374,7264748,14529495,29058991 ⋆ The integer k that minimizes |k / 2 ^ n - sqrt(3)|. • a(n) = floor(1 / 2 + r * 2 ^ n), where r = sqrt(3). •

► [A308092] 1,2,3,7,14,28,56,112,224,448,896,1791,3583,7166,14332,28663,57326,114653,229306,458612,917223,1834446,3668892,7337785,14675570 ⋆ The sum of the first n terms of the sequence is the concatenation of the first n bits of the sequence read as binary, with a(1) = 1. • a(n) = c(n) - c(n - 1) for n > 2, where c(n) is the concatenation of the first n bits of the sequence. •

► [A131666] 0,0,1,1,2,3,7,14,29,57,114,227,455,910,1821,3641,7282,14563,29127,58254,116509,233017,466034,932067,1864135 ⋆ First differences of (A113405 prefixed with a 0). • a(n + 1) - 2 * a(n) = 0, 1, - 1, 0, - 1, 1, ... is the hexaperiodic A092220 (corrected Sep 24 2007). • a(n) = (1 / 18) * (2 ^ (n + 1) + 4 * (- 1) ^ n - 3 * ((- 1) ^ floor((n + 1) / 3) + (- 1) ^ floor((n + 2) / 3))). - _ G. C. Greubel _ , Nov 21 2019 •

► [A113822] 1,1,2,3,7,14,35,85,226,600,1658,4622,13141,37699,109419,320017,943329,2797788,8346030,25019401,75340824,227777899,691146578,2104028507,6424449318 ⋆ Number of binary trees of weight n where leaves have positive integer weights, where the order of subtrees is insignificant. Commutative non - associative version of partitions of n. • a(2n) = 1 + C(a(n) + 1, 2) + sum _{ k=1 }^{ n / 2 - 1 } a(k) * a(2n - k). a(2n + 1) = 1 + sum _{ k=1 }^{ (n - 1) / 2 } a(k) * a(2n + 1 - k), with a(0)=0. •

► [A364593] 1,1,2,3,7,14,36,85,228,587,1612,4354,12166,33832,95876,271803,779287,2239584,6483386,18823945,54932299,160771540,472322632,1391323310,4110685812 ⋆ G.f. satisfies A(x) = 1 / (1 - x) + x ^ 2 * (1 - x) * A(x) ^ 3. • a(n) = Sum _{ k=0..floor(n / 2) } binomial(n - k,k) * binomial(3 * k,k) / (2 * k + 1). •

► [A165433] 1,1,2,3,7,14,39,97,308,897,3139,10304,38997,140893,570002,2230599,9567979,40091222,181203603,805962157,3819522284,17912075229,88646095447,435959031488,2245454002137 ⋆ A transform of the double factorial numbers A001147. • a(n) = Sum _{ k=0..floor(n / 2) } C(n - k,k) * (2k)! / (k! * 2 ^ k). •

► [A276600] 0,2,3,7,15,20,42,88,117,245,513,682,1428,2990,3975,8323,17427,23168,48510,101572,135033,282737,592005,787030,1647912 ⋆ Values of m such that m ^ 2 + 6 is a triangular number (A000217). • a(n) = 6 * a(n - 3) - a(n - 6) for n >6. •

► [A001276] 2,3,7,15,27,41,62,85,115,150,186,229,274,323,380,443,509,577,653,733,818,912,1010,1114,1222 ⋆ Smallest k such that the product of q / (q - 1) over the primes from prime(n) to prime(n + k - 1) is greater than 2. • a(n) = li(prime(n) ^ 2) + O(n ^ 2 / exp((log n) ^ (4 / 7 - e))) for any e > 0. •

► [A020873] 2,3,7,15,29,53,95,171,313,585,1115,2159,4229,8349,16567,32979,65777,131345,262451,524631,1048957,2097573,4194767,8389115,16777769 ⋆ a(n) is number of cycles in Moebius ladder M _ n. • a(n) = 2 ^ n + n ^ 2 - n + 1. • a(n) = 5 * a(n - 1) - 9 * a(n - 2) + 7 * a(n - 3) - 2 * a(n - 4). •

► [A153010] 0,1,2,3,7,15,31,63,127,255,511,1023,2047,4095,8191,16383,32767,65535,131071,262143,524287,1048575,2097151,4194303,8388607 ⋆ Indices of A153007 where the entry equals zero. • a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>4. • a(n) = 2 ^ (n - 1) - 1 for n>2. •

► [A052321] 1,1,2,3,7,15,35,81,195,473,1171,2924,7396,18848,48446,125311,326145,853188,2242616,5919197,15683008,41694334,111195166,297393668,797475499 ⋆ Number of rooted trees with a forbidden limb of length 3. • a(n) satisfies a = SHIFT _ RIGHT(EULER(a - b)) where b(3)=1, b(k)=0 if k != 3. •

► [A114584] 1,1,2,3,7,15,36,85,209,517,1303,3312,8510,22029,57447,150709,397569,1053822,2805518,7498035,20110254,54110386,146021880,395114304,1071772322 ⋆ Number of Motzkin paths of length n having no UHD's (U=(1,1), H=(1,0), D=(1, - 1)). • a(n) = Sum _{ i=0..n / 2 } Sum _{ j=0..n / 2 - i } (- 1) ^ j * C(n - 2 * j,i) * C(n - 2 * j - 2 * i,j) * C(n - 2 * j - i,i) / (i + 1). - _ Vladimir Kruchinin _ , May 05 2018 • a(n) = a(n - 1) - a(n - 3) + Sum _{ i=0..n - 2 } a(i) * a(n - 2 - i), a(0)=1. - _ Vladimir Kruchinin _ , May 05 2018 • a(n) = Sum _{ i=0..n / 2 } binomial(n,i) * binomial(n - i,i) * hypergeom([(2 * i - n) / 3, (2 * i - n + 1) / 3, (2 * i - n + 2) / 3], [(1 - n) / 2, - n / 2], 27 / 4) / (i + 1). - _ Peter Luschny _ , May 05 2018 •

► [A045629] 1,1,2,3,7,15,44,128,415,1367,4654,16080,56450,200170,716728,2585850,9393119,34319667,126047906,465076160,1723097066,6407856892,23910271224,89493903438,335912741682 ⋆ Number of 2n - bead black - white complementable necklaces with n black beads. • a(n) = (1 / 2n) * Sum _{ d|n } (phi(n / d) * C(2d - 1, d - 1) + phi(2n / d) * 2 ^ (d - 1)). - _ Christian G. Bower _ •

► [A034731] 1,2,3,7,15,46,133,436,1433,4878,16797,58837,208013,743034,2674457,9695281,35357671,129646266,477638701,1767268073,6564120555,24466283818,91482563641,343059672916,1289904147339 ⋆ Dirichlet convolution of b _ n=1 with Catalan numbers. • a(n) = Sum _{ d divides n } C(d - 1) where C() are the Catalan numbers (A000108). •

► [A289844] 1,2,3,7,16,31,64,134,274,567,1168,2405,4967,10232,21094,43505,89672,184892,381203,785886,1620327,3340606,6887304,14199737,29275538 ⋆ p - INVERT of A175676 (starting at n=3), where p(S) = 1 - S - S ^ 2. • a(n) = a(n - 1) + a(n - 2) + 4 * a(n - 3) - 2 * a(n - 4) - 6 * a(n - 7) + a(n - 8) + 4 * a(n - 10) - a(n - 13). •

► [A081207] 1,2,3,7,16,37,89,216,529,1307,3248,8111,20339,51176,129143,326717,828374,2104361,5354979,13647682,34830191,89000157,227674188,583017657,1494365341 ⋆ Main diagonal of number square A081206. • a(n) = Sum _{ k=0..n } (binomial(floor((n + k) / 2), k)) ^ 2. •

► [A353580] 0,2,3,7,16,38,91,219,528,1274,3075,7423,17920,43262,104443,252147,608736,1469618,3547971,8565559,20679088,49923734,120526555,290976843,702480240 ⋆ a(n) = 2 * a(n - 1) + a(n - 2) - 1, with a(0) = 0 and a(1) = 2. • a(n) = (1 / 4)((2 * s - 1) * (1 + s) ^ n - (2 * s + 1) * (1 - s) ^ n + 2) where s = sqrt(2). •

► [A114582] 1,1,2,3,7,16,40,100,256,663,1741,4620,12376,33416,90853,248515,683429,1888449,5240509,14598709,40810390,114447429,321885675,907723460,2566079622 ⋆ Number of Motzkin paths of length n having no UDH's starting at level 0 (U=(1,1), H=(1,0), D=(1, - 1)). • a(n) = Sum(k=1..n / 3 + 1, (k * Sum(j=0..n - 2 * k + 3, binomial(j,k + 2 * j - n - 3) * binomial(n - 2 * k + 3,j))) / (n - 2 * k + 3) * (- 1) ^ (k - 1)). - _ Vladimir Kruchinin _ , Oct 22 2011 •

► [A089125] 1,1,2,3,7,16,51,179,842,4601,33229,286284,3243665,44468561,800242506,17564890003,505712818663,17842259251624,825465630656435,46929863536852851,3498201665311407586,320978728492120944601 ⋆ a(n + 2) = a(n + 1) + F(n + 1) * a(n), where F = Fibonacci number (A000045) and a(0) = a(1) = 1. • a(n) * a(n + 1) * a(n + 3) - a(n) * a(n + 2) * a(n + 3) - a(n + 1) * a(n + 2) ^ 2 = 0. [_ Emanuele Munarini _ , Feb 18 2016] •

► [A268539] 0,2,3,7,17,25,28,38,58,72,77,93,123,143,150,172,212,238,247,275,325,357,368,402,462 ⋆ Numbers k such that 48 * k + 25 is a perfect square. • a(n) = a(- n + 1) = 3 * a(n - 1) - 5 * a(n - 2) + 7 * a(n - 3) - 7 * a(n - 4) + 5 * a(n - 5) - 3 * a(n - 6) + a(n - 7) for n>6. • a(n) = (3 * (n - 1) * n + (2 * n - 1) * (- 1) ^ ((n - 2) * (n - 1) / 2) - 1) / 4. Therefore: • a(4 * k) = k * (12 * k - 5), • a(4 * k + 1) = k * (12 * k + 5), • a(4 * k + 2) = k * (12 * k + 11) + 2 = (3 * k + 2) * (4 * k + 1), • a(4 * k + 3) = k * (12 * k + 13) + 3 = (3 * k + 1) * (4 * k + 3). •

► [A158498] 1,2,3,7,17,36,67,113,177,262,371,507,673,872,1107,1381,1697,2058,2467,2927,3441,4012,4643,5337,6097 ⋆ a(n) = (1 / 2) * (n ^ 3 - 6 * n ^ 2 + 13 * n - 6). • a(n) = (1 / 2) * (n ^ 3 - 6 * n ^ 2 + 13 * n - 6). • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ G. C. Greubel _ , Feb 19 2017 •

► [A135364] 1,2,3,7,17,40,93,216,502,1167,2713,6307,14662,34085,79238,184206,428227,995507,2314273,5380032,12507057,29075380,67592058,157132471,365288677 ⋆ First column of a triangle - see Comments lines. • a(n + 1) = a(n) + a(n - 1) + (n - 1) * a(1) + (n - 2) * a(2) + ... + 2 * a(n - 2) for n>=3. • a(n + 3) = 3 * a(n + 2) - 2 * a(n + 1) + a(n). (End) • a(0) = 1, a(n) = term (1,3) in the 1 X 3 matrix [7,3,2].[3,1,0; - 2,0,1; 1,0,0] ^ (n - 1) (n>0). - _ Alois P. Heinz _ , Jul 24 2008 •

► [A143013] 1,2,3,7,17,43,114,310,861,2433,6970,20198,59101,174373,518179,1549545,4659399,14079553,42732230,130208246,398174723,1221573603,3758835953,11597578995,35872937745 ⋆ Number of Motzkin n - paths with two kinds of level steps one of which is a final step. • a(n) = Sum _{ i=0..n + 2 } Sum _{ k=1..n - i + 2 } C(i - 1,k - 1) * C(k,n - k - i + 2) * C(k + i - 2,i - 1) / k. - _ Vladimir Kruchinin _ , May 06 2018 •

► [A005248] 2,3,7,18,47,123,322,843,2207,5778,15127,39603,103682,271443,710647,1860498,4870847,12752043,33385282,87403803,228826127,599074578,1568397607,4106118243,10749957122 ⋆ Bisection of Lucas numbers: a(n) = L(2 * n) = A000032(2 * n). • a(n) = Fibonacci(2 * n - 1) + Fibonacci(2 * n + 1). • a(n) = a(k) * a(n - k) - a(n - 2k) for all k, i.e., a(n) = 2 * a(n) - a(n) = 3 * a(n - 1) - a(n - 2) = 7 * a(n - 2) - a(n - 4) = 18 * a(n - 3) - a(n - 6) = 47 * a(n - 4) - a(n - 8) etc., a(2n) = a(n) ^ 2 - 2. - _ Henry Bottomley _ , May 08 2001 • a(0)=2, a(1)=3, a(n) = 3 * a(n - 1) - a(n - 2) = a(- n). - _ Michael Somos _ , Jun 28 2003 • a(n) = phi ^ (2 * n) + phi ^ (- 2 * n) where phi=(sqrt(5) + 1) / 2, the golden ratio. E.g., a(4)=47 because phi ^ (8) + phi ^ (- 8) = 47. - _ Dennis P. Walsh _ , Jul 24 2003 • a(n) = (floor((3 + sqrt(5)) ^ n) + 1) / 2 ^ n. - _ Lekraj Beedassy _ , Oct 22 2004 • a(n) = ((3 - sqrt(5)) ^ n + (3 + sqrt(5)) ^ n) / 2 ^ n (Note: substituting the number 1 for 3 in the last equation gives A000204, substituting 5 for 3 gives A020876). - _ Creighton Dement _ , Apr 19 2005 •

► [A052919] 2,3,7,19,55,163,487,1459,4375,13123,39367,118099,354295,1062883,3188647,9565939,28697815,86093443,258280327,774840979,2324522935,6973568803,20920706407,62762119219,188286357655 ⋆ a(n) = 1 + 2 * 3 ^ (n - 1) with a(0)=2. • a(n) = 1 + 2 * 3 ^ (n - 1) for n > 0 with a(0) = 2. • a(n) = 4 * a(n - 1) - 3 * a(n - 2), with a(0)=2, a(1)=3, a(2)=7. •

► [A005807] 2,3,7,19,56,174,561,1859,6292,21658,75582,266798,950912,3417340,12369285,45052515,165002460,607283490,2244901890,8331383610,31030387440,115948830660,434542177290,1632963760974,6151850548776 ⋆ Sum of adjacent Catalan numbers. • a(n) = C(n) + C(n + 1) = ((5 * n + 4) * (2 * n)!) / (n! * (n + 2)!). • a(n) = binomial(2 * n,n) / (n + 1) * hypergeom([- 1,n + 1 / 2],[n + 2], - 4). - _ Peter Luschny _ , Aug 15 2012 •

► [A222939] 1,2,3,7,20,66,238,902,3510,13846,54998,219222,875350,3498326,13987158,55936342,223720790,894834006,3579237718,14316754262,57266623830,229065708886,916261262678,3665041904982,14660161328470 ⋆ Number of n X 1 0..4 arrays with no element equal to another at a city block distance of exactly two, and new values 0..4 introduced in row major order. • a(n) = (256 + 9 * 2 ^ (3 + n) + 5 * 4 ^ n) / 384 for n>2. •

► [A323230] 1,2,3,7,21,71,253,925,3433,12871,48621,184757,705433,2704157,10400601,40116601,155117521,601080391,2333606221,9075135301,35345263801,137846528821,538257874441,2104098963721,8233430727601 ⋆ a(n) = binomial(2 * (n -

1), n - 1) + 1. ● a(n) = ((4 * n - 6) * a(n - 1) - 3 * n + 5) / (n - 1) for n >= 2. - _ Peter Luschny _ , Aug 02 2019 ●

▶ [A038159] 2,3,7,22,89,446,2677,18740,149921,1349290,13492901,148421912,1781062945,23153818286,324153456005,4862301840076,77796829441217,1322546100500690,23805829809012421,452310766371236000,9046215327424720001,189970521875919120022 ★ a(n) = n * a(n - 1) + 1, a(0) = 2. ● a(n) = floor(n! * (e + 1)), n>0. - _ Gary Detlefs _ , Jul 18 2010 ●

▶ [A127581] 2,3,7,23,31,127,127,383,1279,3583,5119,6143,8191,73727,81919,131071,131071,524287,524287,14680063,14680063,14680063,109051903,109051903,654311423 ★ Smallest prime of the form k * 2 ^ n - 1, for k >= 2. ● a(n) << 37 ^ n by Xylouris' improvement to Linnik's theorem. - _ Charles R Greathouse IV _ , Dec 10 2013 ●

▶ [A006720] 1,1,1,1,2,3,7,23,59,314,1529,8209,83313,620297,7869898,126742987,1687054711,47301104551,1123424582771,32606721084786,1662315215971057,61958046554226593,4257998884448335457,334806306946199122193,2338575673186968322514 ★ Somos - 4 sequence: a(0)=a(1)=a(2)=a(3)=1; for n >= 4, a(n) = (a(n - 1) * a(n - 3) + a(n - 2) ^ 2) / a(n - 4). ● a(n + 1) / a(n) seems to be asymptotic to C ^ n with C = 1.226.... - _ Benoit Cloitre _ , Aug 07 2002. Confirmed by Hone - see below. ● a(n) = (a(n - 1) * a(n - 3) + a(n - 2) ^ 2) / a(n - 4); a(0) = a(1) = a(2) = a(3) = 1; exact formula is a(n) = A * B ^ n * sigma (z _ 0 + nk) / (sigma (k)) ^ (n ^ 2), where sigma is the Weierstrass sigma function associated to the elliptic curve y ^ 2 = 4 * x ^ 3 - 4 * x + 1, A = 1 / sigma(z _ 0) = 0.112724016 - 0.824911687 * i, B = sigma(k) * sigma (z _ 0) / sigma (z _ 0 + k) = 0.215971963 + 0.616028193 * i, k = 1.859185431, z _ 0 = 0.204680500 + 1.225694691 * i, sigma(k) = 1.555836426, all to 9 decimal places. This is a special case of a general formula for 4th - order bilinear recurrences. The Somos - 4 sequence corresponds to the sequence of points (2n - 3)P on the curve, where P = (0, 1). - _ Andrew Hone _ , Oct 12 2005 ●

▶ [A163834] 2,3,7,23,87,343,1367,5463,21847,87383,349527,1398103,5592407,22369623,89478487,357913943,1431655767,5726623063,22906492247,91625968983,366503875927,1466015503703,5864062014807,23456248059223,93824992236887 ★ a(n) = (4 ^ n + 5) / 3. ● a(n) = 5 * a(n - 1) - 4 * a(n - 2). ●

▶ [A077213] 2,3,7,23,97,487,2927,20507,164057,1476523,14765237,162417611,1949011333,25337147347,354720062861,5320800943001,85132815088031,1447257856496689,26050641416940457,494962186921868723 ★ a(1) = 2, a(n + 1) is the smallest prime greater than n * a(n). ● a(n) = nextprime((n - 1) * a(n - 1)). ●

▶ [A074189] 1,1,2,3,7,25,118,683,4663,36621,324926,3212639,35014103,416956597,5385421658,74978946615,1119298777567,17833801494457,302055326628202,5419162077813179 ★ a(1) = 1, a(2) = 2; for n > 2, a(n) = { a(n - 1) + a(n + 1) }/n or a(n + 1) = n * a(n) - a(n - 1). ● a(n + 2) = (n + 1) * a(n + 1) - a(n); a(0) = - 1, a(1) = 1; a(2) = 2. G.f. A(x) = sum(a(n) * x ^ n) is a solution of the differential equation (x ^ 2) * A'(x) - (1 + x ^ 2) * A(x) = 1 - x - Bruce Corrigan (scentman(AT)myfamily.com), Oct 19 2002 ●

▶ [A089708] 1,2,3,7,26,136,887,6785,59116,576528,6215729,73368729,940718528,13016462714,193285275705,3065510539375,51713071208774,924496937994286,17458742846249615,347270877144570683,7256791451501057782 ★ a(1) = 1, a(2) = 2, a(n) = a(n - 1) + d where d is the sum of the absolute differences between all pairs of previous terms. ● a(n) = a(n - 1) + sum _{ 1<=i<j<n } (a(j) - a(i)) ● a(n) = (n + 1)(a(n - 1) - a(n - 2)) + a(n - 3) for n>=5. ●

▶ [A037843] 2,3,7,39,2551,22928343,6641112790058484007 ★ Number of matrices with n columns whose rows do not cover each other; ordered antichains of subsets of an n - set. ● a(n)=Sum _{ k=0..C(n, floor(n / 2)) } k! * M(n, k) where M(n, k) is the number of distinct monotone Boolean functions of n variables with k mincuts. ●

▶ [A283776] 1,2,3,8,9,10,11,15,16,17,18,23,24,25,26,30,31,32,33,38,39,40,41,45,46 ★ Numbers k such that floor(k * sqrt(3)) is odd. ● a(n + 1) - a(n) is in { 1,4,5 } for every n. ●

▶ [A047476] 0,1,2,3,8,9,10,11,16,17,18,19,24,25,26,27,32,33,34,35,40,41,42,43,48 ★ Numbers that are congruent to { 0, 1, 2, 3 } mod 8. ● a(n) = 8 * floor(n / 4) + (n mod 4), with offset 0.. a(0)=0. - _ Gary Detlefs _ , Mar 09 2010 ● a(n) = (- 7 - (- 1) ^ n - (1 - i) * (- i) ^ n - (1 + i) * i ^ n + 4 * n) / 2, where i=sqrt(- 1). ● a(n) = a(n - 1) + a(n - 4) - a(n - 5). - _ Vincenzo Librandi _ , May 16 2012 ●

▶ [A037462] 0,1,2,3,8,9,10,11,16,17,18,19,24,25,26,27,64,65,66,67,72,73,74,75,80 ★ a(n) = Sum _{ i = 0..m } d(i) * 8 ^ i, where Sum _{ i = 0..m } d(i) * 4 ^ i is the base 4 representation of n. ● a(n) = n + 1 / 2 * Sum _{ k >= 1 } 8 ^ k * floor(n / 4 ^ k). Cf. A037454, A007091 and A102491. ● a(0) = 0; a(n) = 8 * a(n / 4) if n == 0 (mod 4) else a(n) = a(n - 1) + 1. (End) ●

▶ [A047360] 1,2,3,8,9,10,15,16,17,22,23,24,29,30,31,36,37,38,43,44,45,50,51,52,57 ★ Numbers that are congruent to { 1, 2, 3 } mod 7. ● a(n) = 7 * floor(n / 3) + (n mod 3) + 1, with offset 0. - _ Gary Detlefs _ , Mar 09 2010 ● a(n) = 4 * floor((n - 1) / 3) + n. - _ Gary Detlefs _ , Dec 22 2011 ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. ● a(n) = (21 * n - 24 - 12 * cos(2 * n * Pi / 3) + 4 * sqrt(3) * sin(2 * n * Pi / 3)) / 9. ● a(3k) = 7k - 4, a(3k - 1) = 7k - 5, a(3k - 2) = 7k - 6. (End) ●

▶ [A047243] 2,3,8,9,14,15,20,21,26,27,32,33,38,39,44,45,50,51,56,57,62,63,68,69,74 ★ Numbers that are congruent to { 2, 3 } mod 6. ● a(n) = 6 * n - 7 - a(n - 1), with a(1)=2. - _ Vincenzo Librandi _ , Aug 05 2010 ● a(n) = a(n - 2) + 6 with a(1)=2, a(2)=3 for n > 2; ● a(n) = 3 * n - 2 - (- 1) ^ n. (End) ●

▶ [A247375] 0,1,2,3,8,9,18,19,32,33,50,51,72,73,98,99,128,129,162,163,200,201,242,243,288 ★ Numbers m such that floor(m / 2) is a square. ● a(n) = 1 + (2 * n * (n - 1) + (2 * n - 3) * (- 1) ^ n - 1) / 4. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n >= 5. - _ Wesley Ivan Hurt _ , Dec 18 2020 ●

▶ [A030439] 0,1,2,3,8,9,26,27,80,81,242,243,728,729,2186,2187,6560,6561,19682,19683,59048,59049,177146,177147,531440 ★ a(n + 1) = smallest number not containing any digits of a(n), working in base 3. ● a(n) = 4 * a(n - 2) - 3 * a(n - 4); g.f.: - x * (x ^ 2 - 2 * x - 1) / ((x - 1) * (x + 1) * (3 * x ^ 2 - 1)). - _ Colin Barker _ , Sep 13 2014 ● a(n) = 3 ^ floor(n / 2) - 1 + (n mod 2). - _ Alois P. Heinz _ , Sep 14 2014 ●

▶ [A047474] 0,2,3,8,10,11,16,18,19,24,26,27,32,34,35,40,42,43,48,50,51,56,58,59,64 ★ Numbers that are congruent to { 0, 2, 3 } mod 8. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. ● a(n) = (24 * n - 33 - 12 * cos(2 * n * Pi / 3) + 2 * sqrt(3) * sin(2 * n * Pi / 3)) / 9. ● a(3k) = 8k - 5, a(3k - 1) = 8k - 6, a(3k - 2) = 8k - 8. (End) ●

▶ [A057543] 1,1,2,3,8,10,12,14,16,18,20,22,24,26,28,30,32,34,36,38,40,42,44,46,48 ★ Maximum cycle length (orbit size) in the rotation permutation of 2n non - crossing handshakes. ● a(0)=1, a(1)=1, a(2)=2, a(3)=3, and a(n)=2 * n for n>=4. ●

▶ [A190650] 1,2,3,8,10,12,14,16,27,30,33,36,39,42,45,128,136,144,152,160,168,176,184,192,250 ★ Product of iterated integral part of square root. ● a(1) = 1; for n>1, a(n) = n * a(floor(sqrt(n)). ● a(n) <= n ^ 2 / 2 for n > 1. Equality holds for n = 2 ^ 2 ^ k. ●

▶ [A190668] 1,2,3,8,10,12,14,32,54,60,66,72,78,84,90,256,272,288,304,320,336,352,368,384,500 ★ a(n) = Product _{ k>=1 } floor(n ^ (1 / k)). ● a(n) < n ^ log (n) for n > 4. ●

▶ [A132327] 1,2,3,8,10,12,21,24,27,80,88,96,130,140,150,192,204,216,399,420,441,528,552,576,675 ★ Product { k>=0, 1 + floor(n / 3 ^ k) } . ● a(k * 3 ^ m - j) =(k * 3 ^ m - j + 1) * 3 ^ m * p ^ (m(m - 1) / 2), for 0<k<3, 0<j<3, m>=1, a(3 ^ m)=3 ^ (m(m + 1) / 2) * product { 0<=k<=m, 1 + 1 / 3 ^ k } , m>=1 . ●

▶ [A093353] 2,3,8,10,18,21,32,36,50,55,72,78,98,105,128,136,162,171,200,210,242,253,288,300,338 ★ a(n) = (n + n mod 2) * (n + 1) / 2. ● a(n) = (n + 1) * (2 * n + 1 - (- 1) ^ n) / 4. - _ Paul Barry _ , Mar 31 2008 ● a(n) = (n + 1) * floor((n + 1) / 2). - _ Wesley Ivan Hurt _ , Jan 26 2013 ● a(n) = Sum _{ i=1..floor((n + 1) / 2) } i + Sum _{ i=ceiling((n + 1) / 2)..n } i. - _ Wesley Ivan Hurt _ , Jun 08 2013 ●

▶ [A098844] 1,2,3,8,10,18,21,64,72,100,110,216,234,294,315,1024,1088,1296,1368,2000,2100,2420,2530,5184,5400 ★ a(1)=1, a(n) = n * a(floor(n / 2)). ● a(n) = product _{ k=0..floor(log _ 2(n)) } floor(n / 2 ^ k), n>=1. ● a(n * 2 ^ m) = n ^ m * 2 ^ (m(m + 1) / 2) * a(n). ● a(n) >= c(n) * (n + 1) ^ ((1 + log _ 2(n + 1)) / 2) for n != 2, ● a(n) > c * (n + 1) ^ ((1 + log _ 2(n + 1)) / 2) ● a(n) = O(n ^ ((1 + log _ 2(n)) / 2)). (End) ●

▶ [A320843] 1,1,2,3,8,10,36,41,132,250,700,750,4010,4237,10680,24679,87328,90478,435812,449586,1939684,3853278,8650900,8840110,60035322 ★ Number of permutations sigma of { 1,2,...,n } such that sigma(i) divides i or i divides sigma(i) for 1 <= i <= n. ● a(n) = Permanent((x _{ ij })) with x _{ ij } = 1 if i divides j or j divides i and x _{ ij } = 0 otherwise for i,j = 1,...,n. - _ M. Farrokhi D. G. _ , Dec 30 2018 ●

▶ [A041075] 1,1,2,3,8,11,19,30,379,409,788,1197,3182,4379,7561,11940,150841,162781,313622,476403,1266428,1742831,3009259,4752090,60034339 ★ Denominators of continued fraction convergents to sqrt(44). ● a(n) = 398 * a(n - 8) - a(n - 16). - _ Vincenzo Librandi _ , Dec 11 2013 ●

▶ [A041893] 1,1,2,3,8,11,19,30,1279,1309,2588,3897,10382,14279,24661,38940,1660141,1699081,3359222,5058303,13475828,18534131,32009959,50544090,2154861739 ★ Denominators of continued fraction convergents to sqrt(468). ● a(n) = 1298 * a(n - 8) - a(n - 16) for n>15. - _ Vincenzo Librandi _ , Dec 26 2013 ●

▶ [A295333] 1,2,3,8,11,19,49,68,117,302,419,721,1861,2582,4443,11468,15911,27379,70669,98048,168717,435482,604199,1039681,2683561 ★ Numerators of continued fraction convergents to sqrt(10) / 2 = sqrt(5 / 2) = A020797 + 1. ● a(n) = 6 * a(n - 3) + a(n - 6), for n >= 6, with inputs a(0)..a(5). ●

▶ [A042263] 1,1,2,3,8,11,19,106,125,606,731,4261,4992,9253,23498,32751,56249,89000,4506249,4595249,9101498,13696747,36494992,50191739,86686731 ★ Denominators of continued fraction convergents to sqrt(657). ● a(n) = 4562498 * a(n - 18) - a(n - 36) for n>35. - _ Vincenzo Librandi _ , Jan 19 2014 ●

▶ [A285113] 1,2,3,8,11,24,52,108,207,448,720,1376,2892,5544,12532,23448,47239,98112,186672,377896,743656,1519816,2983160,6354536,11975324 ★ Row sums of A285116: a(n) = 2 + Sum _{ k=1..(n - 1) } (C(n - 1,k - 1) bitwise - or C(n - 1,k)), a(0) = 1, a(1) = 2. ● a(0) = 1, a(1) = 2, for n > 1, a(n) = 2 + Sum _{ k =1..(n - 1) } C(n - 1,k - 1) OR C(n - 1,k), where C(n,k) is binomial coefficient and OR is bitwise - OR (A003986). ●

▶ [A048788] 0,1,2,3,8,11,30,41,112,153,418,571,1560,2131,5822,7953,21728,29681,81090,110771,302632,413403,1129438,1542841,4215120 ★ a(2n + 1) = a(2n) + a(2n - 1), a(2n) = 2 * a(2n - 1) + a(2n - 2); a(n) = n for n = 0, 1. ● a(n) = 4 * a(n - 2) - a(n - 4). - _ Vincenzo Librandi _ , Dec 10 2013 ● a(n) = ((r + (- 1) ^ n / r) * s ^ n / 2 ^ (n / 2) - (1 / r + (- 1) ^ n * r) * 2 ^ (n / 2) / s ^ n) * sqrt(6) / 12, where r = 1 + sqrt(2), s = 1 + sqrt(3). - _ Vladimir Reshetnikov _ , May 11 2016 ● a(n) = 2 * ChebyshevU(n - 1, 2) if n is even and ChebyshevU(n, 2) - ChebyshevU(n - 1, 2) if n in odd. - _ G. C. Greubel _ , Dec 23 2019 ● a(n) = - (- 1) ^ n * a(- n) for all n in Z. - _ Michael Somos _ , Sep 17 2020 ●

▶ [A041123] 1,2,3,8,11,30,491,1012,1503,4018,5521,15060,246481,508022,754503,2017028,2771531,7560090,123732971,255026032,378759003,1012544038,1391303041,3795150120,62113704961 ★ Denominators of continued fraction convergents to sqrt(70). ● a(n) = 502 * a(n - 6) - a(n - 12). G.f.: - (x ^ 2 - 2 * x - 1) * (x ^ 8 + 4 * x ^ 6 + 15 * x ^ 4 + 4 * x ^ 2 + 1) / (x ^ 12 - 502 * x ^ 6 + 1). [_ Colin Barker _ , Jul 18 2012] ●

▶ [A042045] 1,2,3,8,11,30,1391,2812,4203,11218,15421,42060,1950181,3942422,5892603,15727628,21620231,58968090,2734152371,5527272832,8261425203,22050123238,30311548441,82673220120,3833279673961 ★ Denominators of continued fraction convergents to sqrt(546). ● a(n) = 1402 * a(n - 6) - a(n - 12) for n>11. - _ Vincenzo Librandi _ , Jan 13 2014 ●

▶ [A056922] 1,1,2,3,8,11,41,52,249,301,1754,2055,14084,16139,127057,143196,1272625,1415821,14015014,15430835,168323364,183754199,2189619553,2373373752,30670104577 ★ Denominators of continued fraction for alternating factorial. ● a(0)=1; a(1)=1; a(2 * n) = n * a(2 * n - 1) + a(2 * n - 2); a(2 * n + 1) = a(2 * n) + a(2 * n - 1). ●

▶ [A041587] 1,1,2,3,8,11,74,233,4035,12338,78063,90401,258865,349266,608131,957397,33159629,34117026,67276655,101393681,270064017,371457698,2498810205,7867888313,136252911526 ★ Denominators of continued fraction convergents t

o sqrt(311). • a(n) = 33767760 * a(n - 16) - a(n - 32) for n>31. [_ Bruno Berselli _ , Dec 20 2013] •

▶ [A350440] 0,0,1,2,3,8,12,19,33,55,103,170,297,509,875,1531,2622,4546,7828,13514,23379,40313,69680,120232,207630 ⋆ a(n) is the number of integers that can be represented in a 7 - segment display by using only n segments (version A277116). • a(n) = a(n - 2) + a(n - 3) + a(n - 4) + 4 * a(n - 5) + 2 * a(n - 6) + a(n - 7) for n > 13. •

▶ [A134683] 1,2,3,8,12,32,48,128,192,512,768,2048,3072,8192,12288,32768,49152,131072,196608,524288,786432,2097152,3145728,8388608,12582912 ⋆ Expansion of 1 + x * (2 + 3 * x) / (1 - 4 * x ^ 2). • a(n) = 4 * a(n - 2), n>2. _ Gary W. Adamson _ , Jul 08 2012 • a(n) = 2 ^ (n - 3) * (7 - (- 1) ^ n), n>0. - _ R. J. Mathar _ , Jul 22 2012 •

▶ [A217330] 1,2,3,8,13,18,30,42,54,76,98,120,155,190,225,276,327,378,448,518,588,680,772,864,981 ⋆ The number of integer solutions to the equation x1 + x2 + x3 + x4 = n, with xi >= 0, and with x2 + x3 divisible by 3. • a(3 * k) = (k + 1) * (3 * k ^ 2 + 3 * k + 2) / 2. • a(3 * k + 1) = (k + 1) * (3 * k ^ 2 + 6 * k + 4) / 2. • a(3 * k + 2) = 3 * (k + 1) ^ 2 * (k + 2) / 2. •

▶ [A142880] 0,1,2,3,8,13,21,55,89,144,377,610,987,2584,4181,6765,17711,28657,46368,121393,196418,317811,832040,1346269,2178309 ⋆ a(n) = 7 * a(n - 3) - a(n - 6). • a(n) = 2 * a(n - 1) + a(n - 2) if n == 1 (mod 3). • a(n) = a(n - 1) + a(n - 2) if n == 0 (mod 3). • a(n) = 2 * a(n - 1) - a(n - 2) if n == 2 (mod 3). •

▶ [A004138] 1,2,3,8,13,24,37,66,107,186,303,516,849,1436,2377,3998,6639,11134,18531,31024,51701,86464,144205,241018,402163 ⋆ From a counter moving problem. • a(n) = a(n - 1) + a(n - 2) - a(n - 3) + 2 * a(n - 4) + 2 for n >= 5. [Rawlins] •

▶ [A213046] 2,3,8,13,25,41,71,116,193,314,514,834,1356,2197,3562,5767,9339,15115,24465,39590,64067,103668,167748,271428,439190 ⋆ Convolution of Lucas numbers and positive integers repeated (A000032 and A008619). • a(n) = 2 * a(n - 1) + a(n - 2) - 3 * a(n - 3) + a(n - 5). • a(n) = (- 9 / 4 + (3 * (- 1) ^ n) / 4 + (2 ^ (- n) * ((1 - t) ^ n * (- 5 + 2 * t) + (1 + t) ^ n * (5 + 2 * t))) / t + (- 1 - n) / 2) where t=sqrt(5). - _ Colin Barker _ , Feb 09 2017 •

▶ [A045692] 0,0,0,1,2,3,8,13,30,55,116,221,458,895,1816,3589,7238,14391,28892,57613,115458,230579,461600,922521,1845958 ⋆ Number of binary words of length n (beginning 0) with autocorrelation function 2 ^ (n - 1) + 2. • a(2 * n - 1) = 2 * a(2 * n - 2) + 2 * a(n) for n > 4; a(2 * n) = 2 * a(2 * n - 1) - a(n) - a(n + 1) for n > 4. •

▶ [A151889] 2,3,8,13,34,55,144,233,610,987,2584,4181,10946,17711,46368,75025,196418,317811,832040,1346269,3524578,5702887,14930352,24157817,63245986 ⋆ a(1)=2, a(2)=3; a(2k - 1)=2a(2k - 2) + a(2k - 3), a(2k)=3a(2k - 2) + 2a(2k - 3), k >= 2. • a(2k - 1) = Fib(3k - 1), a(2k) = Fib(3k). •

▶ [A294566] 1,2,3,8,13,38,63,188,313,938,1563,4688,7813,23438,39063,117188,195313,585938,976563,2929688,4882813,14648438,24414063,73242188,122070313 ⋆ a(n) is the smallest positive integer of length (distance from origin) n in the Cayley graph of the integers generated by all powers of 5. • a(n) = a(n - 1) + 5 * a(n - 2) - 5 * a(n - 3) for n > 3. • a(n) = (3 * 5 ^ (n / 2) + 5) / 10 for n even. • a(n) = (5 ^ ((n - 1) / 2) + 1) / 2 for n odd. •

▶ [A327868] 1,1,2,3,8,13,44,75,308,541,2612,4683,25988,47293,296564,545835,3816548,7087261,54667412,102247563,862440068,1622632573,14857100084,28091567595,277474957988 ⋆ Number of achiral loops (necklaces or bracelets) of length n with integer entries that cover an initial interval of positive integers. • a(n) = (1 / 2) * Sum _{ k=0..n } k! * (Stirling2(floor((n + 1) / 2), k) + Stirling2(ceiling((n + 1) / 2), k)) for n > 0. •

▶ [A171237] 2,3,8,14,25,42,70,115,188,306,497,806,1306,2115,3424,5542,8969,14514,23486,38003,61492,99498,160993,260494,421490 ⋆ a(0)=2, a(1)=3, a(n) = 3 + a(n - 1) + a(n - 2) for n >= 2. • a(0)=2, a(1)=3, a(n) = 3 + a(n - 1) + a(n - 2) n >= 2. •

▶ [A080877] 1,1,2,3,8,14,40,72,208,376,1088,1968,5696,10304,29824,53952,156160,282496,817664,1479168,4281344,7745024,22417408,40553472,117379072 ⋆ a(n) * a(n + 3) - a(n + 1) * a(n + 2) = 2 ^ n, given a(0)=1, a(1)=1, a(2)=2. • a(n + 4) = 6 * a(n + 2) - 4 * a(n) [From _ Richard Choulet _ , Dec 06 2008] • a(n) = (- 1 / 20 * 5 ^ (1 / 2) + 1 / 16 * 5 ^ (1 / 2) * 2 ^ (1 / 2) - 1 / 16 * 2 ^ (1 / 2) + 1 / 4) * (sqrt(3 + sqrt(5))) ^ n + (1 / 20 * 5 ^ (1 / 2) + 1 / 16 * 5 ^ (1 / 2) * 2 ^ (1 / 2) + 1 / 16 * 2 ^ (1 / 2) + 1 / 4) * (sqrt(3 - sqrt(5))) ^ n + (- 1 / 20 * 5 ^ (1 / 2) - 1 / 16 * 5 ^ (1 / 2) * 2 ^ (1 / 2) + 1 / 16 * 2 ^ (1 / 2) + 1 / 4) * (- (sqrt(3 + sqrt(5)))) ^ n + (1 / 20 * 5 ^ (1 / 2) - 1 / 16 * 5 ^ (1 / 2) * 2 ^ (1 / 2) - 1 / 16 * 2 ^ (1 / 2) + 1 / 4) * (- (sqrt(3 - sqrt(5)))) ^ n [From _ Richard Choulet _ , Dec 07 2008] •

▶ [A128035] 1,1,2,3,8,15,24,42,72,117,190,308,504,819,1330,2160,3504,5678,9198,14877,24080,38976,63074,102051,165144 ⋆ a(0)=a(1)=1. a(n) = the multiple of n which is >= a(n - 1) + a(n - 2) and is < a(n - 1) + a(n - 2) + n. • a(n) = n * ceiling[(a(n - 1) + a(n - 2)) / n]. •

▶ [A291400] 0,1,2,3,8,15,26,52,100,193,378,726,1396,2699,5210,10065,19444,37528,72448,139890,270104,521547,1007026,1944336,3754132 ⋆ p - INVERT of (1,1,0,0,0,0,...), where p(S) = 1 - S ^ 2 - S ^ 4. • a(n) = a(n - 2) + 2 * a(n - 3) + 2 * a(n - 4) + 4 * a(n - 5) + 6 * a(n - 6) + 4 * a(n - 7) + a(n - 8) for n >= 9. •

▶ [A179991] 2,3,8,15,28,49,84,141,234,385,630,1027,1670,2711,4396,7123,11536,18677,30232,48929,79182,128133,207338,335495,542858 ⋆ Nonhomogeneous three - term sequence a(n) = a(n - 1) + a(n - 2) + n. • a(n) = F(n) + sum(i; i=1 to n) + sum((F(k) * sum(j;j=1 to k - n - 1); k=0 to n - 4)) + 2F(n - 3). • a(n) = 2 ^ (- n) * (- 3 * 2 ^ n + (1 - sqrt(5)) ^ (1 + n) + (1 + sqrt(5)) ^ n + sqrt(5) * (1 + sqrt(5)) ^ n - 2 ^ n * n). • a(n) = 3 * a(n - 1) - 2 * a(n - 2) - a(n - 3) + a(n - 4) for n>4. •

▶ [A099920] 0,2,3,8,15,30,56,104,189,340,605,1068,1872,3262,5655,9760,16779,28746,49096,83620,142065,240812,407353,687768,1159200 ⋆ a(n) = (n + 1) * F(n), F(n) = Fibonacci numbers A000045. • a(n) = Sum _{ k=0..n } F(n - k) * (L(k - 1) + 0 ^ k). • a(n) = Sum _{ k=0..n + 1 } F(n - k) * binomial(n - k + 1, k) * binomial(1, (k + 1) / 2) * (1 - (- 1) ^ k) / 2. • a(n) = 2 * a(n - 1) + a(n - 2) - 2 * a(n - 3) - a(n - 4); a(0)=0, a(1)=2, a(2)=3, a(3)=8. - _ Harvey P. Dale _ , Jan 18 2012 •

▶ [A128022] 1,2,3,8,15,30,63,128,252,510,1012,2028,4056,8120,16230,32464,64923,129852,259711,519420,1038828,2077658,4155318,8310648,16621300 ⋆ a(1)=1, a(n) = the multiple of n which is >= (sum { k=1 to n - 1 } a(k)) and is < (n + sum { k=1 to n - 1 } a(k)). • a(1)=1, a(n) = n * ceiling(sum { k=1 to n - 1 } a(k) / n). •

▶ [A195095] 1,2,3,8,15,30,63,128,252,510,1023,2040,4095,8190,16365,32768,65535,131040,262143,524280,1048509,2097150,4194303,8388480,16777200 ⋆ G.f.: Sum _{ n>=1 } - moebius(2 * n) * x ^ n / (1 - 2 * x ^ n). • a(2 ^ n) = 2 ^ (2 ^ n - 1). • a(p) = 2 ^ (p - 1) for odd prime p. • a(n) = floor(2 ^ (n - 1) / n) * n unless n=3k, k>4. - _ M. F. Hasler _ , Sep 08 2011 •

▶ [A166920] 0,2,3,8,15,32,63,128,255,512,1023,2048,4095,8192,16383,32768,65535,131072,262143,524288,1048575,2097152,4194303,8388608,16777215 ⋆ a(n) = 2 ^ n - (1 + (- 1) ^ n) / 2. • a(n) = 2 ^ n - (1 + (- 1) ^ n) / 2. • a(n) = 2 * a(n - 1) + a(n - 2) - 2 * a(n - 3). • a(n) = Sum _{ k=1..n + 1 } Sum _{ i=0..n + 1 } C(n - k,i). - _ Wesley Ivan Hurt _ , Sep 22 2017 •

▶ [A242510] 1,2,3,8,15,32,67,138,289,600,1249,2600,5409,11258,23427,48752,101455,211128,439363,914322,1902721,3959600,8240001,17147600,35684481 ⋆ Number of n - length words on { 1,2,3 } such that the maximal blocks (runs) of 1's have odd length, the maximal blocks of 2's have even length and the maximal blocks of 3's have odd length. • a(n) = a(n - 1) + 2 * a(n - 2) + a(n - 3) - a(n - 4). - _ Fung Lam _ , May 18 2014 •

▶ [A132862] 1,1,2,3,8,15,36,63,192,405,1080,2079,6048,12285,31752,59535,193536,433755,1224720,2488563,7620480,16253055,44008272,86266215,274337280 ⋆ Number of permutations divided by the number of (binary) heaps on n elements. • a(n) = n * a(nl) * a(n - 1 - nl) with nl = min(b - 1,n - b / 2) and b = 2 ^ floor(log _ 2(n)) for n>1, a(n) = 1 for n<2. •

▶ [A300443] 1,1,2,3,8,15,41,96,288,724,2142,5838,17720,49871,151846,440915,1363821,4019460,12460721,37374098,116809752,353904962,1109745666,3396806188,10712261952 ⋆ Number of binary enriched p - trees of weight n. • a(n) = 1 + Sum _{ x + y = n, 0 < x <= y < n } a(x) * a(y). •

▶ [A006882] 1,1,2,3,8,15,48,105,384,945,3840,10395,46080,135135,645120,2027025,10321920,34459425,185794560,654729075,3715891200,13749310575,81749606400,316234143225,1961990553600 ⋆ Double factorials n!!: a(n) = n * a(n - 2) for n > 1, a(0) = a(1) = 1. • a(n) = Product _{ i=0..floor((n - 1) / 2) } (n - 2 * i). • a(n) = 2 ^ ((1 + 2 * n - cos(n * Pi)) / 4) * Pi ^ ((cos(n * Pi) - 1) / 4) * Gamma(1 + (1 / 2) * n). - _ Paolo P. Lava _ , Jul 24 2007 • a(n) = n! / a(n - 1). - _ Vaclav Kotesovec _ , Sep 17 2012 • a(n) * a(n + 3) = a(n + 1) * (a(n + 2) + a(n)). a(n) * a(n + 1) = (n + 1)!. - _ Michael Somos _ , Dec 29 2012 • a(2 * n) = 2 ^ n * a(n) * a(n - 1). a(2 ^ n) = 2 ^ (2 ^ n - 1) * 1!! * 3!! * 7!! * ... * (2 ^ (n - 1) - 1)!!. - _ Peter Bala _ , Nov 01 2016 • a(n) = 2 ^ h * (2 / Pi) ^ (sin(Pi * h) ^ 2 / 2) * Gamma(h + 1) where h = n / 2. This analytical extension supports the view that a(- 1) = 1 is a meaningful numerical extension. With this definition (- 1 / 2)!! = Gamma(3 / 4) / Pi ^ (1 / 4). - _ Peter Luschny _ , Oct 24 2019 •

▶ [A219751] 0,0,0,0,2,3,8,16,36,76,164,348,740,1564,3300,6940,14564,30492,63716,132892,276708,575260,1194212,2475804,5126372 ⋆ Expansion of x ^ 4 * (2 - 3 * x - x ^ 2) / ((1 + x) * (1 - 2 * x) ^ 2). • a(n) = (2 ^ (n - 5) * (3 * n + 16) + 4 * (- 1) ^ n) / 9 with n>3, a(0)=a(1)=a(2)=a(3)=0. [_ Bruno Berselli _ , Nov 29 2012] •

▶ [A121133] 1,1,2,3,8,16,38,80,180,384,840,1792,3856,8192,17440,36864,77888,163840,344192,720896,1507584,3145728,6554112,13631488,28312576 ⋆ Numbers of isomers of unbranched a - 4 - catapolypentagons - see Brunvoll reference for precise definition. • a(n) = 2 ^ (n - 5) * (n + 2) for n>3 and even. • a(n) = 2 ^ (n - 5) * (n + 2) + 2 ^ ((n - 5) / 2) for n>3 and odd. • a(n) = 4 * a(n - 1) - 2 * a(n - 2) - 8 * a(n - 3) + 8 * a(n - 4) for n>7. •

▶ [A005648] 1,1,2,3,8,16,50,133,440,1387,4752,16159,56822,200474,718146,2587018,9398520,34324174,126068558,465093571,1723176308,6407924300,23910576230,89494164973,335913918902 ⋆ Number of 2n - bead black - white reversible necklaces with n black beads. • a(n) = (Sum _{ d|n } phi(n / d) * C(2 * d, d)) / (4 * n) + C(2 * k, k) / 2, where k = floor(n / 2). - _ Michael Somos _ •

▶ [A113947] 1,2,3,8,16,64,264,1580,10648,84320,750380,7455312,81566928,974988768,12636692720,176505029160,2642791002368,42224138928712,716984262871596,12893605560786944 ⋆ Number of non - equivalent n - fold branched coverings of the projective plane with two cyclic branch points. • a(n) = (1 / n) * Sum _{ k|n } gcd(2, n / k) * phi(n / k) ^ 2 * (n / k) ^ (k - 1) * Sum _{ i=0..k - 1 } i! * (k - i - 1)! where phi(n) is the Euler function A000010. •

▶ [A292401] 2,3,8,17,34,71,144,289,578,1147,2264,4449,8706,16975,32992,63937,123586,238323,458600,880753,1688482,3231639,6175728,11785313,22460802 ⋆ p - INVERT of (1,0,2,0,2,0,2,0,2,0,...), where p(S) = (1 - S) ^ 2. • a(n) = 2 * a(n - 1) + a(n - 2) - 3 * a(n - 4) - 2 * a(n - 5) - s(n - 6) for n >= 7. •

▶ [A219788] 2,3,8,17,39,87,196,440,989,2222,4993,11219,25209,56644,127278,285991,642616,1443945,3244515,7290359,16381288,36808420,82707769,185842670,417584689 ⋆ Consider the succession rule (x, y, z) - > (z, y + z, x + y + z). Sequence gives z values starting at (0, 1, 2). • a(n) = 2a(n - 1) + a(n - 2) - a(n - 3). - _ Charles R Greathouse IV _ , Nov 28 2012 •

▶ [A345243] 1,1,2,3,8,17,42,107,272,719,1914,5163,14088,38733,107370,299511,840372,2370020,6714316,19100096,54534696,156230943,448942998,1293692305,3737568960 ⋆ G.f. A(x) satisfies: A(x) = x + x ^ 2 * exp(2 * Sum _{ k>=1 } (- 1) ^ (k + 1) * A(x ^ k) / k). • a(n + 2) = (2 / n) * Sum _{ k=1..n } (Sum _{ d|k } (- 1) ^ (k / d + 1) * d * a(d)) * a(n - k + 2). •

▶ [A232165] 0,1,2,3,8,18,37,82,181,392,856,1873,4086,8919,19480,42530,92853,202742,442665,966496,2110240,4607473,10059866,21964555,47957080 ⋆ Cardinality of the Weyl alternation set corresponding to the zero - weight in the adjoint representation of the Lie algebra sp(2n). • a(n) = a(n - 1) + a(n - 2) + 3 * a(n - 3) + a(n - 4). •

▶ [A129955] 2,3,8,18,40,88,192,416,896,1920,4096,8704,18432,38912,81920,172032,360448,753664,1572864,3276800,6815744,14155776,29360128,60817408,125829120 ⋆ Third differences of A129952. • a(0) = 2, a(1) = 3; for n > 1, a(n) = (n + 6) * 2 ^ (n - 2). •

► [A272642] 1,2,3,8,18,42,97,225,521,1207,2796,6477,15004,34757,80515,186514,432062,1000877,2318544,5370936,12441840,28821677,66765773,154663743,358280483 ⋆ Expansion of (x ^ 4 + x ^ 3 + x ^ 2 - x - 1) / (x ^ 4 + 2 * x ^ 3 + 2 * x ^ 2 + x - 1). ● a(n) = 2 * a(n - 1) + a(n - 2) - a(n - 4) - a(n - 5). - _ Vincenzo Librandi _ , May 08 2016 ●

► [A185171] 2,3,8,18,48,116,312,810,2184,5880,16104,44220,122640,341484,956576,2690010,7596480,21522228,61171656,174336264,498111952,1426403748,4093181688,11767874940,33891544368 ⋆ Dimensions of primitive Lie algebras connected with the Mantaci - Reutenauer algebra MR ^ (2). ● a(1) = 2 and a(n) = (1 / n) * Sum _{ d|n } mu(d) * 3 ^ (n / d) for n > 1 (from Eq. (95) in Novelli and Thibon (2008) or Eq. (100) in Novelli and Thibon (2010)). ●

► [A113183] 1,1,2,3,8,18,58,155,546,1592,5774,17798,65676,210362,785248,2588155,9743348,32832290,124416022,426685544,1625465732,5654938190,21636274202,76171463926,292498386900 ⋆ Number of unrooted two - face maps in the plane (considered up to orientation - preserving homeomorphism) with the faces of equal degree n: planar maps with a distinguished outside face. ● a(n) = (1 / n) Sum _{ k|n } phi(k) C((n / k) - 1,floor(n / (2k))) ^ 2 where phi(k) is the Euler function A000010. ●

► [A041205] 1,1,2,3,8,19,27,46,73,1506,1579,3085,4664,12413,29490,41903,71393,113296,2337313,2450609,4787922,7238531,19264984,45768499,65033483 ⋆ Denominators of continued fraction convergents to sqrt(113). ● a(n) = 1552 * a(n - 9) + a(n - 18). - _ Vincenzo Librandi _ , Dec 13 2013 ●

► [A041281] 1,2,3,8,19,46,65,176,4289,8754,13043,34840,82723,200286,283009,766304,18674305,38114914,56789219,151693352,360175923,872045198,1232221121,3336487440,81307919681 ⋆ Denominators of continued fraction convergents to sqrt(153). ● a(n) = 4354 * a(n - 8) - a(n - 16). - _ Vincenzo Librandi _ , Dec 14 2013 ●

► [A078343] 1,2,3,8,19,46,111,268,647,1562,3771,9104,21979,53062,128103,309268,746639,1802546,4351731,10506008,25363747,61233502,147830751,356895004,861620759 ⋆ a(0) = - 1, a(1) = 2; a(n) = 2 * a(n - 1) + a(n - 2). ● a(n) is asymptotic to (1 / 4) * (- 2 + 3 * sqrt(2)) * (1 + sqrt(2)) ^ n. ● a(n) = 4 * Pell(n) - Pell(n + 1), where Pell = A000129. - _ Vladimir Reshetnikov _ , Sep 27 2016 ●

► [A042697] 1,1,2,3,8,19,84,103,2968,3071,15252,33575,82402,115977,198379,314356,18431027,18745383,37176410,55921793,149019996,353961785,1564867136,191882821,55292076924 ⋆ Denominators of continued fraction convergents to sqrt (878). ● a(n) = 18629406 * a(n - 16) - a(n - 32) for n>31. - _ Vincenzo Librandi _ , Jan 26 2014 ●

► [A042905] 1,2,3,8,19,141,301,743,1044,2831,176566,355963,532529,1421021,3374571,25043018,53460607,131964232,185424839,502813910,31359887259,63222588428,94582475687,252387539802,599357555291 ⋆ Denominators of continued fraction convergents to sqrt(984). ● a(n) = 177610 * a(n - 10) - a(n - 20) for n>19. - _ Vincenzo Librandi _ , Feb 01 2014 ●

► [A337281] 0,0,2,3,8,20,42,91,192,396,810,1639,3288,6552,12978,25575,50176,98056,190962,370747,717800,1386252,2671130,5136291,9857856 ⋆ a(n) = n * T(n), where T(n) = A000073(n) = n - th tribonacci number. ● a(n) = 2 * a(n - 1) + a(n - 2) - 3 * a(n - 4) - 2 * a(n - 5) - a(n - 6) for n>5. ●

► [A029895] 1,1,2,3,8,20,58,169,526,1667,5448,18084,61108,208960,723354,2527074,8908546,31630390,113093022,406680465,1470597342,5342750699,19499227828,71442850111,262754984020 ⋆ Number of partitions of floor(n ^ 2 / 2) with at most n parts and maximal height n. ● a(n) equals the central coefficient of q in the central q - binomial coefficients for n>0: a(n) = [q ^ ([n ^ 2 / 2])] Product _{ i=1..n } (1 - q ^ (n + i)) / (1 - q ^ i), with a(0)=1. - _ Paul D. Hanna _ , Feb 15 2007 ●

► [A073268] 1,1,2,3,8,20,58,179,576,1902,6426,22092,77026,271702,967840,3476555,12578728,45800278,167693698,617037126,2280467586,8461771342,31510700712,117725789124,441141656810 ⋆ Number of plane binary trees whose right (or respectively: left) subtree is a unique "complete" tree of (2 ^ m) - 1 nodes with all the leaf - nodes at the same depth m and the left (or respectively: right) subtree is any plane binary tree of size n - 2 ^ m + 1. ● a(0)=1, a(n) = Sum _{ i=0..floor(log _ 2(n)) } Cat(n - (2 ^ i)) ●

► [A132730] 1,2,3,8,21,50,111,236,489,998,2019,4064,8157,16346,32727,65492,131025,262094,524235,1048520,2097093,4194242,8388543,16777148,33554361 ⋆ Row sums of triangle A132729. ● a(n) = 2 ^ (n + 1) - 3 * n + 1, for n > 0. - _ R. J. Mathar _ , Apr 04 2012 ●

► [A032096] 2,3,8,23,74,227,704,2135,6482,19523,58808,176663,530714,1592867,4780784,14344535,43040162,129127043,387400808,1162222103,3486725354,10460235107,31380882464,94142824535,282429005042 ⋆ "BHK" (reversible, identity, unlabeled) transform of 2,2,2,2,... ● a(n) = (1 / 6) * ((- 1) ^ n - 5) * 3 ^ floor(n / 2) + 3 ^ (n - 1) + 2. - _ Ralf Stephan _ , May 11 2004 ●

► [A304121] 1,2,3,8,24,73,230,751,2512,8549,29520,103192,364441,1298336,4660273,16837743,61187249,223489715,820040293,3021286338,11172619317,41454901924,154285693649,575826677260,2154643706124 ⋆ Expansion of A(x) = 1 + x + x * A(x) + x ^ 2 * A(x) ^ 2 + x ^ 3 * A(x) ^ 3. ● a(n) = Sum _{ i=0..n } Sum _{ k=0..n - i } Sum _{ j=0..k } C(i,j) * C(j,k - j) * C(k + 1,n - k - i) * C(k + i,i) / (k + 1). ●

► [A120260] 1,1,2,3,8,24,92,432,2740,23822,264185,3545166,59474514,1343942004,41179884383,1593533376361,74665098131246,4404743069577837,351138858279113987,37740395752334771775,5093113605218543006445 ⋆ Diagonal sums of number triangle A120258. ● a(n)=sum { k=0..floor(n / 2), Product { j=0..k - 1, C(2n - 4k + j, n - 2k) / C(n - 2k + j, j) }} ●

► [A002619] 1,1,2,3,8,24,108,640,4492,36336,329900,3326788,36846288,444790512,5811886656,81729688428,1230752346368,19760413251956,336967037143596,6082255029733168,115852476579940152,2322315553428424200,48869596859598598608 ⋆ Number of 2 - colored patterns on an n X n board. ● a(n) = (1 / n ^ 2) * Sum _{ d|n } phi(d) ^ 2 * (n / d)! * d ^ (n / d), where phi is Euler's totient function (A000010). - _ Emeric Deutsch _ , Aug 23 2005 ● a(n) = A(n,1). (End) ●

► [A127905] 0,1,2,3,8,25,66,168,456,1269,3490,9581,26544,73944,206220,576045,1613264,4527661,12725946,35818135,100950440,284869263,804726934,2275500998,6440230392 ⋆ Construct triangle in which n - th row is obtained by expanding (1 + x + x ^ 3) ^ n and take the next - to - central column. ● a(n) = n * Sum _{ k=0..floor((n - 1) / 3) } C(n - 1,3 * k) * C(3 * k,k) / (2 * k + 1). ● a(n) = Sum _{ k=0..floor((n - 1) / 3) } (3 * k + 1) * C(n,3 * k + 1) * C(3 * k,k) / (2k + 1). ● a(n) = Sum _{ k=0..n - 1 } Sum _{ j=0..floor(k / 3) } C(k,3 * j) * C(3 * j + 1,j). ●

► [A171199] 1,2,3,8,25,83,289,1041,3847,14504,55569,215727,846761,3354858,13398965,53888063,218053915,887107888,3626373205,14887942624,61358959587,253771944529,1052917272543,4381374717994,18280470530047 ⋆ G.f. satisfies: A(x) = exp(Sum _{ n>=1 } [A(x) ^ n + A(x) ^- n] * x ^ n / n). ● a(0) = 1, a(1) = 2; a(n) = a(n - 1) + a(n - 2) + Sum _{ k=2..n - 1 } a(k) * a(n - k - 1). - _ Ilya Gutkovskiy _ , Jul 20 2021 ●

► [A065619] 1,2,3,8,25,96,427,2176,12465,79360,555731,4245504,35135945,313155584,2990414715,30460116992,329655706465,3777576173568,45692713833379,581777702256640,7777794952988025,108932957168730112,1595024111042171723,2437017327616445648 4 ⋆ Expansion of e.g.f. x * (tan(x) + sec(x)). ● a(n) = n * 2 ^ (n - 1) * |E _{ n - 1 } (1 / 2) + E _{ n - 1 } (1)| for n > 1; E _{ n } (x) Euler polynomial. - _ Peter Luschny _ , Nov 25 2010 ● a(n) = (n + 1)! * Re([x ^ n](1 + i ^ ((n - 1) * n) * (2 - 2 * i) / (exp(x) + i))), assuming offset = 0. - _ Peter Luschny _ , Aug 09 2021 ● a(n) = 2 * n * i ^ n * PolyLog(1 - n, - i) for n > = 2. - _ Peter Luschny _ , Aug 17 2021 ●

► [A107704] 1,1,2,3,8,26,107,492,2481,13599,81288,531343,3790344,29279668,242278645,2125160800,19608039385,189437263949,1912477987102,20161911603747,221869317899264,2546362514225134,30430660439311103 ⋆ Diagonal sums of A103209, viewed as number triangle. ● a(n)=sum { k=0..floor(n / 2), sum { j=0..n - 2k, C(n - 2k + j, 2j) * k ^ j * C(k) }} , C(n) given by A000108. ●

► [A041399] 1,1,2,3,8,27,35,167,1538,1705,3243,17920,57003,815962,2504889,13340407,15845296,29185703,278516623,1143252195,1421768818,5408558649,12238886116,17647444765,29886330881 ⋆ Denominators of continued fraction convergents to sqrt(214). ● a(n) = 1390718379850 * a(n - 26) - a(n - 52) for n>51. - _ Vincenzo Librandi _ , Dec 17 2013 ●

► [A093858] 1,2,3,8,27,116,607,3758,26913,219062,1998471,20203772,224239963,2711083328,35468323227,499267608506,7524482450817,120890986821578,2062671258417643,37248973638339152,709793170386861531 ⋆ a(0) = 1, a(1)= 2, a(n) = (a(n + 1) - a(n - 1)) / n, or a(n + 1) = n * a(n) + a(n - 1). ● a(n) = - 2 * (BesselI[n, - 2] * (2 BesselK[0, 2] - BesselK[1, 2]) + (- 2 BesselI[0, 2] + BesselI[1, - 2]) * BesselK[n, 2]). - _ Ryan Propper _ , Sep 14 2005 ●

► [A001048] 2,3,8,30,144,840,5760,45360,403200,3991680,43545600,518918400,6706022400,93405312000,1394852659200,22230464256000,376610217984000,6758061133824000,128047474114560000,2554547108585472000,53523844179886080000,1175091669949317120000 ⋆ a(n) = n! + (n - 1)!. ● a(n) = (n + 1) * (n - 1)!. ● a(n) = (n + 1)! / n. - Claude Lenormand (claude.lenormand(AT)free.fr), Aug 24 2003 ● a(1) = 2, a(2) = 3, D - finite recurrence a(n) = (n ^ 2 - n - 2) * a(n - 2) for n >= 3. - _ Jaume Oliver Lafont _ , Dec 01 2009 ● a(n) = (n - 1) * a(n - 1) + (n - 1)!. - _ Bruno Berselli _ , Feb 22 2017 ● a(1)=2, a(2)=3, D - finite recurrence a(n) = (n - 1) * a(n - 1) + (n - 2) * a(n - 2). - _ Dale Gerdemann _ , Jul 26 2019 ●

► [A082569] 2,3,8,32,160,960,6720,53760,483840,4838400,53222400,638668800,8302694400,116237721600,1743565824000,27897053184000,474249904128000,8536498274304000,162193467211776000,3243869344235520000 ⋆ a(1)=2; a(n)=ceiling(n * (a(n - 1) - 1 / a(n - 1))). ● a(1)=2 a(2)=3 and for n>2, a(n)= 4 * n! / 3. ●

► [A041657] 1,1,2,3,8,35,43,766,809,4002,8813,12815,21628,34443,1261576,1296019,2557595,3853614,10264823,44912906,55177729,982934299,1038112028,5135382411,11308876850 ⋆ Denominators of continued fraction convergents to sqrt(347). ● a(n) = 1283204 * a(n - 14) - a(n - 28) for n>27. - _ Vincenzo Librandi _ , Dec 22 2013 ●

► [A041789] 1,2,3,8,35,218,253,471,1666,2137,3803,24955,103623,232201,335824,903849,36489784,73883417,110373201,294629819,1288892477,8027984681,9316877158,17344861839,61351462675 ⋆ Denominators of continued fraction convergents to sqrt(415). ● a(n) = 36825608 * a(n - 16) - a(n - 32) for n>31. - _ Vincenzo Librandi _ , Dec 24 2013 ●

► [A042553] 1,2,3,8,43,51,706,1463,2169,23153,25322,73797,984683,1058480,6277083,13612646,19889729,53392104,3009847553,6073087210,9082934763,24238956736,130277718443,154516675179,2138994495770 ⋆ Denominators of continued fraction convergents to sqrt(805). ● a(n) = 3029737282 * a(n - 18) - a(n - 36) for n >35. - _ Vincenzo Librandi _ , Jan 25 2014 ●

► [A042139] 1,2,3,8,43,1040,5243,11526,16769,45064,2179841,4404746,6584587,17573920,94454187,2284474408,11516826227,25318126862,36834953089,98988033040,478826053900 9,9675509111058,14463769650067,38603048411192,207479011706027 ⋆ Denominators of continued fraction convergents to sqrt(594). ● a(n) = 2196610 * a(n - 10) - a(n - 20) for n>19. - _ Vincenzo Librandi _ , Jan 15 2014 ●

► [A042365] 1,1,2,3,8,59,244,791,2617,11259,81430,174119,255549,429668,685217,36060952,36746169,72807121,109553290,291913701,2152949197,8903710489,28864080664,95495952481,410847890588 ⋆ Denominators of continued fraction convergents to sqrt(709). ● a(n) = 36490620 * a(n - 15) + a(n - 30) for n>29. - _ Vincenzo Librandi _ , Jan 20 2014 ●

► [A042815] 1,1,2,3,8,67,142,209,351,560,33951,34511,68462,102973,274408,2298237,4870882,7169119,12040001,19209120,1164587201,1183796321,2348383522,3532179843,9412743208 ⋆ Denominators of continued fraction convergents to sqrt(938). ● a(n) = 34302 * a(n - 10) - a(n - 20) for n>19. - _ Vincenzo Librandi _ , Jan 30 2014 ●

► [A047475] 1,2,3,9,10,11,17,18,19,25,26,27,33,34,35,41,42,43,49,50,51,57,58,59,65 ⋆ Numbers that are congruent to { 1, 2, 3 } mod 8. ● a(n) = 1 + 8 * floor((n - 1) / 3) + ((n - 1) mod 3). - _ Alois P. Heinz _ , May 13 2012 ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. ● a(n) = (24 * n - 30 - 15 * cos(2 * n * Pi / 3) + 5 * sqrt(3) * sin(2 * n * Pi / 3)) / 9. ● a(3k) = 8k - 5, a(3k - 1) = 8k - 6, a(3k - 2) = 8k - 7. (End) ●

► [A047358] 2,3,9,10,16,17,23,24,30,31,37,38,44,45,51,52,58,59,65,66,72,73,79,80,86 ⋆ Numbers that are congruent to { 2, 3 } mod 7. ● a(n) = 7 * n - a(n - 1) - 9, n > 1. - _ Vincenzo Librandi _ , Aug 05 2010 ●

► [A057569] 0,2,3,9,11,21,24,38,42,60,65,87,93,119,126,156,164,198,207,245,255,297,308,354,366 ⋆ Numbers of the form k * (5 * k + 1) / 2 or k * (5 * k - 1) / 2.

● a(n) = a(1 - n) for all n in Z. - _ Michael Somos _ , Jan 13 2012 ● a(n) = n * (5 * n - 2) / 8 for n even. ● a(n) = (5 * n - 3) * (n - 1) / 8 for n odd. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n>5. ●

► [A350439] 0,0,1,2,3,9,12,20,35,58,116,180,329,560,970,1742,2933,5213,8954,15627,27340,47171,82661,143054,249474 ⋆ a(n) is the number of integers that can be represented in a 7 - segment display by using only n segments (version A063720). ● a(n) = a(n - 2) + a(n - 3) + a(n - 4) + 5 * a(n - 5) + a(n - 6) + a(n - 7) for n > 13. ●

► [A330298] 0,0,0,0,2,3,9,12,24,30,50,60,90,105,147,168,224,252,324,360,450,495,605,660,792 ⋆ a(n) is the number of subsets of { 1..n } that contain exactly 1 odd and 2 even numbers. ● a(n) = ceiling(n / 2) * binomial(floor(n / 2), 2). ● a(n) = a(n - 1) + 3 * a(n - 2) - 3 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) + a(n - 6) - a(n - 7) for n>6. ●

► [A047162] 0,0,0,2,3,9,12,30,40,100,135,335,455,1127,1540,3822,5250,13050,18000,44802,62007,154517,214467,534963,744315 ⋆ Number of nonempty subsets of { 1,2,...,n } in which exactly 2 / 3 of the elements are <= n / 2. ● a(n) = Sum _{ k>=1 } binomial(floor(n / 2), 2 * k) * binomial(ceiling(n / 2), k). - _ Andrew Howroyd _ , Apr 11 2021 ●

► [A338234] 0,0,2,3,9,14,20,25,32,44,54,63,77,90,104,113,135,149,170,187,209,230,252,273,294 ⋆ Sum of the numbers less than n whose square does not divide n. ● a(n) = n * (n - 1) / 2 - Sum _{ k=1..n - 1 } (1 - ceiling(n / k ^ 2) + floor(n / k ^ 2)) * k. ●

► [A295857] 0,0,2,3,9,14,31,49,96,153,281,450,795,1277,2200,3541,5997,9666,16175,26097,43296,69905,115249,186178,305523 ⋆ a(n) = a(n - 1) + 3 * a(n - 2) - 2 * a(n - 3) - 2 * a(n - 4), where a(0) = 0, a(1) = 0, a(2) = 2, a(3) = 3. ● a(n) = a(n - 1) + a(n - 3) + a(n - 4), where a(0) = 0, a(1) = 0, a(2) = 2, a(3) = 3. ●

► [A237254] 1,2,3,9,14,43,67,206,321,987,1538,4729,7369,22658,35307,108561,169166,520147,810523,2492174,3883449,11940723,18606722,57211441,89150161 ⋆ Values of x in the solutions to x ^ 2 - 5xy + y ^ 2 + 5 = 0, where 0 < x < y. ● a(n) = 5 * a(n - 2) - a(n - 4). ●

► [A220123] 1,1,2,3,9,16,35,65,143,281,590,1174,2440,4925,10142,20563,42178,85819,175632,357875,731536,1491966,3047879,6218844,12699982 ⋆ Number of tilings of a 4 X n rectangle using integer - sided rectangular tiles of area 4. ● a(n) = a(n - 1) + a(n - 2) + 5 * a(n - 4) - a(n - 5) + a(n - 6) - a(n - 8). - _ Caleb Wagner _ , Nov 06 2013 ●

► [A156066] 2,3,9,16,52,93,303,542,1766,3159,10293,18412,59992,107313,349659,625466,2037962,3645483,11878113,21247432,69230716,123839109,403506183,721787222,2351806382 ⋆ Numbers n with property that n ^ 2 is a square arising in A154138. ● a(1..4) = (2,3,9,16); a(n>4) = 6 * a(n - 2) - a(n - 4). ●

► [A079992] 1,1,2,3,9,19,49,100,233,503,1166,2580,5884,13092,29622,66281,149569,335524,755737,1697149,3819301,8582469,19306314,43397191,97600441 ⋆ Number of permutations satisfying - k<=p(i) - i<=r and p(i) - i not in I, i=1..n, with k=3, r=3, I= {- 2,2 } . ● a(n) = a(n - 1) + 3 * a(n - 2) - a(n - 3) + a(n - 4) + a(n - 5) + 3 * a(n - 6) - 5 * a(n - 7) - 9 * a(n - 8) + a(n - 9) + a(n - 10) + a(n - 11) - a(n - 12) + a(n - 13) + a(n - 14). ●

► [A106519] 1,1,1,2,3,9,19,58,160,499,1527,4940,16001,53187,178305,606330,2079863,7203864,25138879,88367780,312577245,1112119079,3977502767,14294207172,51596165898 ⋆ a(n) = (2 / n) * binomial(2 * n - 2, n - 1) - (1 / (2 * n)) * Sum _{ d|n } Moebius(d) * binomial(2 * n / d, n / d). ● a(n) = (2 / n) * binomial(2 * n - 2, n - 1) - (1 / (2 * n)) * Sum _{ d|n } Moebius(d) * binomial(2 * n / d, n / d). ●

► [A301809] 1,2,3,9,21,55,140,364,945,2465,6435,16821,43992,115102,301223,788425,2063817,5402651,14143524,37026936,96935685,253777537,664392743,1739393929,4553778096 ⋆ Group the natural numbers such that the first group is (1) then (2),(3),(4,5),(6,7,8),... with the n - th group containing F(n) sequential terms where F(n) is the n - th Fibonacci number (A000045(n)). Sequence gives the sum of terms in the n - th group. ● a(1) = 1 and for n > 1, a(n) = (F(n + 2) + 1) * F(n - 1) / 2, where F(n) is the n - th Fibonacci number (A000045). ● a(n) = 3 * a(n - 1) + a(n - 2) - 5 * a(n - 3) - a(n - 4) + a(n - 5) for n>6. ●

► [A227252] 2,3,9,23,53,113,225,421,745,1255,2025,3147,4733,6917,9857,13737,18769,25195,33289,43359,55749,70841,89057,110861,136761 ⋆ Number of n X 2 binary arrays indicating whether each 2 X 2 subblock of a larger binary array has lexicographically nondecreasing rows and columns, for some larger (n + 1) X 3 binary array with rows and columns of the latter in lexicographically nondecreasing order. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>7. ●

► [A277251] 2,3,9,29,107,430,1840,8230,38015,179873,867079,4242111,21006358,105072063,530058079,2693632580,13775807415,70847283680,366167521240,1900884870494,9907318315587,51822028122623,271949090063769,1431369293422604,7554372307564282 ⋆ Exponential convolution of Lucas (A000032) and Catalan (A000108) numbers. ● a(n) = phi ^ n * hypergeom([1 / 2, - n], [2], - 4 / phi) + (- phi) ^ (- n) * hypergeom([1 / 2, - n], [2], 4 * phi), where phi = (1 + sqrt(5)) / 2 = A001622. ●

► [A073950] 1,2,3,9,30,81,225,702,2187,6561,19602,59049,177633,532170,1594323,4782969,14351094,43046721,129127041,387400806,1162261467,3486784401,10460294154,31381059609,94143533121 ⋆ Number of strings over Z _ 3 of length n with trace 1 and subtrace 0. ● a(n; t, s) = a(n - 1; t, s) + a(n - 1; t + 2, s + 2t + 1) + a(n - 1; t + 1, s + t + 1) where t is the trace and s is the subtrace. ●

► [A281270] 0,0,1,2,3,9,30,81,242,838,2799,9365,33616,122937,449698,1696724,6558855,25559806,101294687,409363758,1673735259,6928460475,29115833976,123835124242,532449210893 ⋆ a(n) is the number of closed BCK (a.k.a. affine) lambda terms of size n. ● a(n) = 1 + a(n - 1) + 2 * Sum _{ k=2..n - 3 } k * a(k) + Sum _{ k=2..n - 3 } a(k) * a(n - 1 - k) for n>=2. ●

► [A219673] 2,3,9,42,197,913,4302,20611,99773,486438,2385319,11752931,58139858,288572079,1436398329,7167499522,35842352013,179576501169,901226053422,4529717794607,22797936691207,114881558737498,579544350869889,2926592507364717,14792448049794122 ⋆ a(n) = Sum _{ k=0..n } binomial(n,k) ^ 2 * Lucas(k) where Lucas(n) = A000032(n). ● a(n) = hypergeom([- n, - n], [1], phi) + hypergeom([- n, - n], [1], 1 - phi) = phi ^ n * P _ n(sqrt(5) - 2) + (1 - phi) ^ n * P _ n(- sqrt(5) - 2), where phi = (1 + sqrt(5)) / 2, P _ n(x) is the Legendre polynomial. - _ Vladimir Reshetnikov _ , Sep 28 2016 ●

► [A007090] 0,1,2,3,10,11,12,13,20,21,22,23,30,31,32,33,100,101,102,103,110,111,112,113,120 ⋆ Numbers in base 4. ● a(n) = Sum _{ d(i) * 10 ^ i: i=0, 1, ..., m } , where Sum _{ d(i) * 4 ^ i: i=0, 1, ..., m } is the base 4 representation of n. ● a(0) = 0, a(n) = 10 * a(n / 4) if n==0 (mod 4), a(n) = a(n - 1) + 1 otherwise. - _ Benoit Cloitre _ , Dec 22 2002 ●

► [A061909] 0,1,2,3,10,11,12,13,20,21,22,30,31,100,101,102,103,110,111,112,113,120,121,122,130 ⋆ Skinny numbers: numbers n such that there are no carries when n is squared by "long multiplication". ● a(n) >> n ^ 2.0959..., where the exponent is log 10 / log 3. - _ Charles R Greathouse IV _ , Sep 21 2012 ●

► [A278742] 1,2,3,10,11,12,20,30,100,110,200,300,1000,1100,2000,2100,3000,10000,20000,30000,100000,110000,120000,200000,300000 ⋆ Lexicographically least strictly increasing sequence such that, for any n>0, Sum _{ k=1..n } a(k) can be computed without carries in base 10. ● a(n + 17) = 10000 * a(n) for any n>0. ● a(17k + 1) = 10 ^ (4k), k >= 0. - _ N. J. A. Sloane _ , Jan 06 2017 ●

► [A032804] 2,3,10,11,14,15,42,43,46,47,58,59,62,63,170,171,174,175,186,187,190,191,234,235,238 ⋆ Numbers whose set of base - 4 digits is { 2,3 } . ● a(0) = 0, a(2 * n) = 4 * a(n - 1) + 3, a(2 * n + 1) = 4 * a(n) + 2. - _ Robert Israel _ , May 05 2014 ●

► [A047473] 2,3,10,11,18,19,26,27,34,35,42,43,50,51,58,59,66,67,74,75,82,83,90,91,98 ⋆ Numbers that are congruent to { 2, 3 } mod 8. ● a(n) = 8 * n - a(n - 1) - 11 for n>1, a(1)=2. - _ Vincenzo Librandi _ , Aug 06 2010 ● a(n) = 4 * n - 7 / 2 - 3 * (- 1) ^ n / 2. ● a(1)=2, a(2)=3, a(3)=10; for n>3, a(n) = a(n - 1) + a(n - 2) - a(n - 3). - _ Harvey P. Dale _ , Sep 28 2012 ●

► [A281366] 1,2,3,10,11,20,21,100,110,200,210,1000,1100,2000,2100,10000,11000,20000,21000,100000,110000,200000,210000,1000000,1100000 ⋆ Lexicographically least strictly increasing sequence such that, for any n>0, Sum _{ k=1..n } a(k) can be computed without carries in base 9 (the numbers are written in base 9). ● a(n) = 10 * a(n - 4) for n>7. (End) ●

► [A193652] 0,1,2,3,10,11,42,43,170,171,682,683,2730,2731,10922,10923,43690,43691,174762,174763,699050,699051,2796202,2796203,11184810 ⋆ A020988 and A007583 interleaved. ● a(n) = 2 * (4 ^ floor(n / 2) - 1) / 3 + n mod 2. ●

► [A023856] 2,3,10,13,28,34,60,70,110,125,182,203,280,308,408,444,570,615,770,825,1012,1078,1300,1378,1638 ⋆ a(n) = 1 * (n + 1 - 1) + 2 * (n + 1 - 2) + ... + k * (n + 1 - k), where k = floor((n + 1) / 2). ● a(n) = (n + 2) * (4 * n ^ 2 + 13 * n + 6 - 3(n + 2)(- 1) ^ n) / 48. ● a(n) = Sum _{ k=1..(2 * n + 1 + (- 1) ^ (n + 1)) / 4 } (n - k + 1) * (k - 1), with n >= 3. - _ Paolo P. Lava _ , Jan 31 2007 ● a(n) = Sum _{ i=1..ceiling(n / 2) } i * (n - i + 2) = - ceiling(n / 2) * (ceiling(n / 2) + 1) * (2 * ceiling(n / 2) - 3n - 5) / 6. - _ Wesley Ivan Hurt _ , Sep 20 2013 ● a(n) = a(n - 1) + 3 * a(n - 2) - 3 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) + a(n - 6) - a(n - 7). - _ Wesley Ivan Hurt _ , Dec 01 2017 ●

► [A187767] 0,2,3,10,15,35,63,138,255,527,1023,2083,4095,8255,16383,32906,65535,131327,262143,524815,1048575,2098175,4194303,8390691,16777215 ⋆ Number of bicolored cyclic patterns n X n. ● a(1) = 0; a(n) = 2 ^ (n - 1) - 1 if n is odd, 2 ^ (n - 1) + a(n / 2) if n is even (conjectured). ●

► [A226881] 0,0,2,3,10,15,41,63,162,255,637,1023,2509,4095,9907,16383,39202,65535,155381,262143,616665,1048575,2449867,4194303,9740685 ⋆ Number of n - length binary words w with # (w,0) >= # (w,1) >= 1, where # (w,x) gives the number of digits x in w. ● a(n) = Sum _{ i=1..floor(n / 2) } binomial(n,i). - _ Wesley Ivan Hurt _ , Mar 14 2015 ●

► [A027913] 1,1,2,3,10,15,50,77,266,414,1452,2277,8074,12727,45474,71955,258570,410346,1481108,2355962,8533660,13599915,49402850,78855339,287134346 ⋆ T(n,[n / 2]), T given by A027907. ● a(n) = GegenbauerC(floor(n / 2), - n, - 1 / 2). - _ Emanuele Munarini _ , Oct 18 2016 ●

► [A081204] 1,2,3,10,15,56,84,330,495,2002,3003,12376,18564,77520,116280,490314,735471,3124550,4686825,20030010,30045015,129024480,193536720,834451800,1251677700 ⋆ Staircase on Pascal's triangle. ● a(n) = binomial(ceiling((n) / 2) + n, n). ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n + k - 1, k). - _ Paul Barry _ , Jul 06 2004 ●

► [A213391] 0,1,2,3,10,17,24,43,62,81,118,155,192,253,314,375,466,557,648,775,902,1029,1198,1367,1536 ⋆ Number of (w,x,y) with all terms in { 0,...,n } and 2 * max(w,x,y) < 3 * min(w,x,y). ● a(n) = 2 * a(n - 1) - a(n - 2) + 2 * a(n - 3) - 4 * a(n - 4) - a(n - 5) + 2 * a(n - 6) - a(n - 7). ● a(n) = (n ^ 3 + 6 * n * (((n + 1) mod 3 + 1) mod 2) - 2 + 2 * ((n + 1) mod 3)) / 9. - _ Ayoub Saber Rguez _ , Feb 01 2022 ● a(n) = n ^ 3 / 9 if n == 0 (mod 3), ●

► [A143609] 2,3,10,17,58,99,338,577,1970,3363,11482,19601,66922,114243,390050,665857,2273378,3880899,13250218,22619537,77227930,131836323,450117362,768398401,2623476242 ⋆ Numerators of the upper principal and intermediate convergents to 2 ^ (1 / 2). ● a(n) = (2 + sqrt(2) + (- 1) ^ n * (- 2 + sqrt(2))) * ((- 1 + sqrt(2)) ^ n + (1 + sqrt(2)) ^ n) / (4 * sqrt(2)). - _ Colin Barker _ , Mar 27 2016 ●

► [A363430] 1,1,2,3,10,17,77,141,799,1540,10427,20878,163967,338233,3017562,6376149,63625324,137144475,1512354975,3315122947,40012800675,88981537570,1166271373797,2626214876310,37134022033885 ⋆ Number of set partitions of [n] such that each block has at most one odd element. ● a(n) = Sum _{ k=0..floor(n / 2) } ceiling(n / 2) ^ k * binomial(floor(n / 2),k) * Bell(floor(n / 2) - k). ●

► [A264038] 0,2,3,10,20,47,98,210,435,902,1848,3775,7670,15542,31403,63330,127500,256367,514938,1033450,2072675,4154702,8324528,16673535,33386670 ⋆ Convolution of Lucas and Jacobsthal numbers. ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 3 * a(n - 3) - 2 * a(n - 4) for n > 3. ●

► [A271740] 2,3,10,23,42,67,98,135,178,227,282,343,410,483,562,647,738,835,938,1047,1162,1283,1410,1543,1682 ⋆ a(n) = 3 * n ^ 2 - 2 * n + 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>2. - _ Wesley Ivan Hurt _ , Apr 13 2016 ●

► [A130002] 1,1,2,3,10,23,60,139,326,735,1648,3635,7962,17287,37316,80091,171118,364079,771864,1631107,3436994,7223511,15146092,31690283,66176790 ⋆ Alternating sum along antidiagonals of the array of A129952 and its iterated differences. ● a(n) = 4 * a(n - 1) - 2 * a(n - 2) - 8 * a(n - 3) + 7 * a(n - 4) + 4 * a(n - 5) - 4 * a(n - 6) for n > 6. ●

► [A059929] 0,2,3,10,24,65,168,442,1155,3026,7920,20737,54288,142130,372099,974170,2550408,6677057,17480760,45765226,119814915,313679522,821223648,2149991425,5628750624 ⋆ a(n) = Fibonacci(n) * Fibonacci(n + 2). ● a(n) = ((7 + 3 * sqrt(5)) / 10) * ((3 + sqrt(5)) / 2) ^ (n - 1) + ((7 - 3 * sqrt(5)) / 10) * ((3 - sqrt(5)) / 2) ^ (n - 1) + (3 / 5) * (- 1) ^ (n - 1). - _ Tim Monahan _ , Aug 09 2011 ● a(n) = (Lucas(n + 1) ^ 2 - Fibonacci(n + 1) ^ 2) / 4. - _ Vincenzo Librandi _ , Aug 02 2014 ● a(n) = F(n - 2) * F(n) + F(n - 1) * F(n) + F(n - 2) * F(n + 1) + F(n - 1) * F(n + 1), where F=A000045, F(- 2)= - 1, F(- 1)=1. - _ Bruno Berselli _ , Nov 03 2015 ● a(n) = a(- 2 - n) and a(n) + a(n + 3) = 2 * (a(n + 1) + a(n + 2)) for all n in Z. - _ Michael Somos _ , Mar 18 2022 ●

► [A123029] 1,1,2,3,10,24,130,504,4420,27720,393380,3991680,91657540,1504863360,55911099400,1485300136320,89290025741800,3838015552250880,3733215976 26465800,2596417521097720 3200,4086378207619294646800 ⋆ a(2 * n - 1) = Product _{ i=1..n } Fibonacci(2 * i - 1) and a(2 * n) = Product _{ i=1..n } Fibonacci(2 * i). ● a(n) = F(n) * a(n - 2). ● a(n) = 1 by convention since empty products equal 1. - _ Michael Somos _ , Oct 07 2014 ●

► [A005158] 1,2,3,10,25,140,588,5544,39204,622908,7422987,198846076 ⋆ Number of alternating sign n X n matrices invariant under a half - turn. ● a(n) = a(n - 1) * (1 + [n even] / 3) * C(n \ 2 * 3, n \ 2) / C(n \ 2 * 2, n \ 2) for all n > 1, where C(.,.) are the binomial coefficients, n \ 2 := floor(n / 2) and [n even] = 1 if n is even, 0 else (Iverson bracket). [From Robbins conjectured(!) formulas.] - _ M. F. Hasler _ , Jun 15 2019 ●

► [A182926] 1,2,3,10,25,161,721,5706,40881,385687,3628801,41268613,479001601,6324319717,87212177053,1317906346186,20922789888001,357099708702023,64023737057280 01,121882752536893635,2432928081076384321,51140835669924352717 ⋆ Row sums of absolute values of A182928. ● a(n) = Sum _{ d|n } n! / (d * ((n / d)!) ^ d). ●

► [A005225] 1,2,3,10,25,176,721,6406,42561,436402,3628801,48073796,479001601,7116730336,88966701825,1474541093026,20922789888001,400160588853026,64023737057280 01,133991603578884052,2457732174030848001,557355732919777905 76,1124000727777607680001 ⋆ Number of permutations of length n with equal cycles. ● a(n) = n! * sum(((n / k)! * k ^ (n / k)) ^ (- 1)) where sum is over all divisors k of n. Exponential generating function [for a(1) through a(n)]= sum(exp(t ^ k / k) - 1, k=1..n). ● a(n) = (n - 1)! + 1 iff n is a prime. ●

► [A052929] 2,3,10,27,82,243,730,2187,6562,19683,59050,177147,531442,1594323,4782970,14348907,43046722,129140163,387420490,1162261467,3486784402,10460353203,31381059610,94143178827,282429536482 ⋆ Expansion of (2 - 3 * x - x ^ 2) / ((1 - x ^ 2) * (1 - 3 * x)). ● a(n) = 3 * a(n - 1) + a(n - 2) - 3 * a(n - 3), a(0)=2, a(1)=3, a(2)=10. ● a(n) = 3 ^ n + Sum _{ alpha=RootOf(- 1 + z ^ 2) } alpha ^ (- n) / 2. ● a(n) = 3 ^ n + (1 + (- 1) ^ n) / 2. ● a(n) = Sum _{ k=0..n } (- 1) ^ k + 2 ^ k * binomial(n,k). (End) ●

► [A323680] 1,1,2,3,10,27,109,427,1958,9467,49459,274712,1614199,9996580,64940226,441179351,3125044744,23021059143,175976694409,1393077001768,11400165893604,96286628620151,838123560744653,7508677200329118,69152466448641019 ⋆ G.f.: Sum _{ n>=0 } x ^ n * ((1 + x) ^ n + 1) ^ n / (1 + x * (1 + x) ^ n) ^ (n + 1). ● a(n) = Sum _{ i=0..n } Sum _{ j=0..n - i } Sum _{ k=0..n - i - j } (- 1) ^ k * binomial(n - i,j) * binomial(n - i - j,k) * binomial((n - i - j) * (n - i - k),i). ● a(n) = Sum _{ i=0..n } Sum _{ j=0..n - i } Sum _{ k=0..n - i - j } binomial((n - i - j) * (n - i - k),i) * (- 1) ^ j * (n - i)! / ((n - i - j - k)! * j! * k!). ●

► [A084380] 2,3,10,29,66,127,218,345,514,731,1002,1333,1730,2199,2746,3377,4098,4915,5834,6861,8002,9263,10650,12169,13826 ⋆ a(n) = n ^ 3 + 2. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Vincenzo Librandi _ , Jun 24 2012 ●

► [A286814] 2,3,10,29,82,227,618,1661,4418,11651,30506,79389,205522,529635,1359434,3476989,8865026,22538755,57157578,144615709,365127634,920110051,2314564522,5812911741,14576950082 ⋆ Number of matchings in the n - helm graph. ● a(n) = ((1 - sqrt(2)) ^ n * (4 - sqrt(2) * n) + (1 + sqrt(2)) ^ n * (4 + sqrt(2) * n)) / 4; ● a(n) = 4 * a(n - 1) - 2 * a(n - 2) - 4 * a(n - 3) - a(n - 4). ●

► [A371607] 1,2,3,10,29,92,314,1078,3830,13844,50746,188554,707667,2679960,10227940,39294772,151859858,589943516,2302462140,9023681820,35498194465,140122652960,554827907272,2203135245820,8771143399104 ⋆ G.f. satisfies A(x) = (1 + x * (1 + x * A(x) ^ 2)) ^ 2. ● a(n) = Sum _{ k=0..n } binomial(4 * (n - k) + 2,k) * binomial(k,n - k) / (2 * (n - k) + 1). ●

► [A131764] 1,2,3,10,30,102,335,1170,4080,14560,52377,190650,698870,2581110,9586395,35791358,134215680,505290270,1908866960,7233629130,27487764474,104715392730,399822314775,1529755308210,5864061663920 ⋆ Inverse Euler transform of central binomial coefficients A000984. ● a(n) = (1 / n) * Sum _{ d|n } moebius(n / d) * 2 ^ (2 * d - 1) for n > 0, a(0) = 1. ●

► [A057146] 2,3,10,33,109,354,1148,3716,12026,38918,125943,407562,1318899,4268047,13811692,44695576,144637922,468058148,1514667986,4901568568,15861809082,51329892437,166107021206,537533612162,1739495309150 ⋆ The sequence 2, floor(a), floor(a ^ 2), floor(a ^ 3), ..., with a = 1 + sqrt(5). ● a(n) = floor((1 + sqrt(5)) ^ n) for n>0, a(0)=2. - _ Artur Jasinski _ , Nov 22 2006 ●

► [A144720] 2,3,10,37,138,515,1922,7173,26770,99907,372858,1391525,5193242,19381443,72332530,269948677,1007462178,3759900035,14032137962,52368651813,195442469290,729401225347,2722162432098,10159248503045 ⋆ a(0) = 2, a(1) = 3, a(n) = 4 * a(n - 1) - a(n - 2). ● a(n)=(1 / 6) * sqrt(3) * [2 - sqrt(3)] ^ n - (1 / 6) * sqrt(3) * [2 + sqrt(3)] ^ n + [2 - sqrt(3)] ^ n + [2 + sqrt(3)] ^ n, with n >=0 [From _ Paolo P. Lava _ , Oct 15 2008] ●

► [A164933] 1,2,3,10,37,151,674,3263,17007,94828,562594,3534961,23428397,163187870,1190538144,9066908419,71837342107,590009213152,5004416730974,43667740987637,390497323261737,3565602957116674,33130941174471484,312322981161532615,2979191694795132887 ⋆ Word structures of length n using a 10 - ary alphabet, including a special character, which may occur in the leftmost word position only if n=1. ● a(n) = Sum _{ m=0..n - 1 } C(n - 1,m) Sum _{ k=0..9 } S2 (n - m, k), if n>1; a(n) = n + 1 else. ● a(n) = 2119 / 11520 * 2 ^ n + 103 / 840 * 3 ^ n + 53 / 1152 * 4 ^ n + 11 / 900 * 5 ^ n + 6 ^ n / 384 + 7 ^ n / 2520 + 8 ^ n / 11520 + 10 ^ n / 403200, if n>1; a(n) = n + 1 else. ●

► [A003048] 1,2,3,10,39,196,1175,8226,65807,592264,5922639,65149030,781788359,10163248668,142285481351,2134282220266,34148515524255,580524763912336,10449445750422047,198539469258018894 ⋆ a(n + 1) = n * a(n) - (- 1) ^ n. ● a(n) = 2 * (n - 1)! - floor(((n - 1)! + 1) / e), n > 1. - _ Gary Detlefs _ , Apr 11 2010 ●

► [A007226] 2,3,10,42,198,1001,5304,29070,163438,937365,5462730,32256120,192565800,1160346492,7048030544,43108428198,265276342782,1641229898525,10202773534590,63698396932170,399223286267190,2510857763851185,15842014607109600 ⋆ a(n) = 2 * det(M(n; - 1)) / det(M(n; 0)), where M(n; m) is the n X n matrix with (i,j) - th element equal to 1 / binomial(n + i + j + m, n). ● a(n) = (2 / (n + 1)) * binomial(3 * n, n). ● a(n) = 2 * C(3 * n, n) - C(3 * n, n + 1) for n >= 0. - _ David Callan _ , Oct 25 2004 ● a(n) = C(3 * n, n) / (2 * n + 1) + C(3 * n + 1, n) / (n + 1) = C(3 * n, n) / (2 * n + 1) + 2 * C(3 * n + 1, n) / (2 * n + 2) for n >= 0. - _ Paul Barry _ , Nov 05 2006 ● a(n) = (1 / n) * Sum _{ k|gcd(n + 1,n) } phi(k) * binomial(3 * n / k, (n + 1) / k). ● a(n) = (1 / n) * binomial(3 * n, n + 1) for n >= 1. (End) ●

► [A243642] 1,2,3,10,43,210,1106,6120,35059,206050,1235130,7520860,46385822,289160620,1818956184,11531388580,73599630147,472547337650,3049962382850,19777692906300,128789274380746 ⋆ Expansion of - (4 * x) / ((1 - sqrt(1 - 4 * x)) / 2 - sqrt(- 3 * (1 - sqrt(1 - 4 * x)) + (1 - sqrt(1 - 4 * x)) ^ 2 / 4 + 1) + 1). ● a(n) = Sum _{ k=0..(n - 1) } binomial(3 * n - 3,n - 4 * k) * binomial(n + k - 2,k)) / (n - 1), n>1, a(0) = - 1, a(1)=2. ●

► [A052561] 2,3,10,54,408,3960,46800,650160,10362240,186157440,3719520000,81789523200,1962469555200,51017981414400,1428416301312000,42851181364992000,1371216880889856000,46621018262827008000 ⋆ a(n) = (1 + 2 ^ n) * n!. ● a(n) = 3 * n * a(n - 1) - 2 * n * (n - 1) * a(n - 2), with a(0)=2, a(1)=3. ●

► [A093856] 1,2,3,10,57,446,4403,52390,729057,11612522,208296339,4154314258,91186617337,2184324501830,56701250430243,1585450687544974,47506819375918977,1518632769341862290,51586007338247398883 ⋆ a(0)=1; a(1)=2; a(n + 1) = 2 * n * a(n) - a(n - 1) for n >= 1. ● a(- n) = (- 1) ^ n * a(n). - _ Michael Somos _ , Jan 25 2014 ● a(n + 1) ~ 1.0903447... * 2 ^ n * n! * f(1 / (4 * n)) where f(x) = 1 + x + x ^ 2 / 2! + 13 * x ^ 3 / 3! + 241 * x ^ 4 / 4! + 6201 * x ^ 5 / 5! + ...). - _ Michael Somos _ , Jan 26 2014 ●

► [A007932] 1,2,3,11,12,13,21,22,23,31,32,33,111,112,113,121,122,123,131,132,133,211,212,213,221 ⋆ Numbers that contain only 1's, 2's and 3's. ● a(n) = Sum _{ j=0..m - 1 } (1 + b(j) mod 3) * 10 ^ j, ● a(k * (3 ^ n - 1) / 2) = k * (10 ^ n - 1) / 9, k=1,2,3. ● a((5 * 3 ^ n - 3) / 2) = (4 * 10 ^ n - 1) / 3 = 10 ^ n + (10 ^ n - 1) / 3. ● a((3 ^ n - 1) / 2 - 1) = (10 ^ (n - 1) - 1) / 3, n>1. ● a(n) <= (10 ^ log _ 3(2 * n + 1) - 1) / 9, equality holds for n=(3 ^ k - 1) / 2, k>0. ● a(n) > (3 / 10) * (10 ^ log _ 3(2 * n + 1) - 1) / 9, n>0. ●

► [A042665] 1,2,3,11,14,25,239,981,2201,5383,12967,18350,104717,123067,596985,1317037,25620688,206282541,438185770,644468311,18483298478,19127766789,56738832056,473038423237,9044468873559 ⋆ Denominators of continued fraction convergents to sqrt(862). ● a(n) = 716045132294624251006 * a(n - 40) - a(n - 80) for n>79. - _ Vincenzo Librandi _ , Jan 26 2012 ●

► [A041029] 1,2,3,11,14,39,326,691,1017,3742,4759,13260,110839,234938,345777,1272269,1618046,4508361,37684934,79878229,117563163,432567718,550130881,1532829480,12812766721 ⋆ Denominators of continued fraction convergents to sqrt(19). ● a(n) = 340 * a(n - 6) - a(n - 12). G.f.: - (x ^ 10 - 2 * x ^ 9 + 3 * x ^ 8 - 11 * x ^ 7 + 14 * x ^ 6 - 39 * x ^ 5 - 14 * x ^ 4 - 11 * x ^ 3 - 3 * x ^ 2 - 2 * x - 1) / (x ^ 12 - 340 * x ^ 6 + 1). [_ Colin Barker _ , Jul 16 2012] ●

► [A041235] 1,2,3,11,14,95,109,422,531,1484,33179,67842,101021,370905,471926,3202461,3674387,14225622,17900009,50025640,1118464089,2286953818,3405417907,12503207539,15908625446 ⋆ Denominators of continued fraction convergents to sqrt(129). ● a(n) = 33710 * a(n - 10) - a(n - 20). - _ Vincenzo Librandi _ , Dec 13 2013 ●

► [A041637] 1,2,3,11,14,165,344,1541,1885,7196,23473,30669,146149,322967,3698786,4021753,15764045,19785798,55335641,2011868874,4079073389,6090942263,22351900178,28442842441,335223167029 ⋆ Denominators of continued fraction convergents to sqrt(337). ● a(n) = 2031654672 * a(n - 19) + a(n - 38) for n>37. [_ Bruno Berselli _ , Dec 22 2013] ●

► [A147655] 1,2,3,11,17,40,86,153,283,547,1069,1737,3238,5340,9574,17251,27897,45845,78601,126725,207153,353435,550422,881454,1393870 ⋆ a(n) is the coefficient of x ^ n in the polynomial given by Product _{ k>=1 } (1 + prime(k) * x ^ k). ● a(n) = [x ^ n] Product _{ k>=1 } 1 + prime(k) * x ^ k. - _ Alois P. Heinz _ , Sep 05 2014 ● a(n) = Sum _{ (b _ 1,...,b _ n) } f(1) ^ b _ 1 * f(2) ^ b _ 2 * ... * f(n) ^ b _ n, where f(m) = prime(m), and the sum is taken over all lists (b _ 1,...,b _ n) with b _ j in { 0,1 } and Sum _{ j=1..n } j * b _ j = n. - _ Petros Hadjicostas _ , Apr 10 2020 ●

► [A363497] 0,1,2,3,11,19,27,35,43,70,97,124,151,178,205,232,296,360,424,488,552,616,680,744,808 ⋆ a(n) = Sum _{ k=0..n } floor(sqrt(k)) ^ 3. ● a(n) = (n + 1) * m ^ 3 - (1 / 60) * m * (m + 1) * (3 * m - 1) * (12 * m ^ 2 + 7 * m - 4), where m = floor(sqrt(n)). ●

► [A097895] 0,0,2,3,11,20,51,99,222,441,935,1872,3863,7751,15774,31653,63939,128232,257963,517011,1037630,2078417,4165647,8340192,16702191 ⋆ Number of compositions of n with at least 1 odd and 1 even part. ● a(n) = 3 * a(n - 1) + a(n - 2) - 8 * a(n - 3) + 2 * a(n - 4) + 4 * a(n - 5) for n > 5. - _ Jinyuan Wang _ , Mar 10 2020 ●

► [A041955] 1,2,3,11,25,36,61,646,707,1353,3413,11592,15005,41602,1845493,3732588,5578081,20466831,46511743,66978574,113490317,1201881744,1315372061,2517253805,6349879671 ⋆ Denominators of continued fraction convergents to sqrt(500). ● a(n) = 1860498 * a(n - 14) - a(n - 28) for n>27. - _ Vincenzo Librandi _ , Dec 27 2013 ●

► [A157161] 1,2,3,11,25,79,245,869,2692,9544,32065,115381,400023,1462730,5165327,19165035,68635477,255546242,930138521,3491772737,12810761323,48334512920,178987624513,678727253284,2528210175630 ⋆ Formal infinite product representation for the Catalan numbers (A000108) o.g.f. series. ● a(n) = sum((d / n) * (- a(d) ^ (n / d)),d|n with 1<d<n) + sum(((- 1) ^ (m - 1)) * (1 / m) * sum(M0(p) * C(1) ^ e(1) * ... * C(n) ^ e(n), p=(1 ^ e(1),...,n ^ e(n)) from P(n,m), m=1..n - 1), n>=2; a(1)=C(1)=1. The exponents e(j)>=0 satisfy sum(j * e(j),j=1..n)=n and sum(e(j),j=1..m). If e _ j=0 then part j does not appear. The M0 numbers are m! / product(e(j)!,j=1..n). ●

► [A041811] 1,1,2,3,11,25,161,347,1202,1549,2751,4300,174751,179051,353802,532853,1952361,4437575,28577811,61593197,213357402,274950599,488308001,763258600,31018652001 ⋆ Denominators of continued fraction convergents to sqrt(426). ● a(n) = 177502 * a(n - 12) - a(n - 24) for n>23. - _ Vincenzo Librandi _ , Dec 24 2013 ●

► [A248161] 2,3,11,26,71,183,482,1259,3299,8634,22607,59183,154946,405651,1062011,2780378,7279127,19056999,49891874,130618619,341963987,895273338,2343856031,6136294751,16065028226 ⋆ Expansion of (2 - x + x ^ 2) / ((1 + x) * (1 - 3 * x + x ^ 2)). ● a(n) = - (F(n) ^ 2 + F(n + 1) ^ 2 + F(n + 2) ^ 2 - F(n + 3) ^ 2). ● a(n) = (4 * (- 1) ^ n + F(2 * n) + 6 * F(2 * n + 2)) / 5, with the Fibonacci numbers F = A000045. ●

► [A006497] 2,3,11,36,119,393,1298,4287,14159,46764,154451,510117,1684802,5564523,18378371,60699636,200477279,662131473,2186871698,7222746567,23855111399,78788080764,260219353691,859446141837,2838557779202 ⋆ a(n) = 3 * a(n - 1) + a(n - 2) with a(0) = 2, a(1) = 3. ● a(n) = ((3 + sqrt(13)) / 2) ^ n + ((3 - sqrt(13)) / 2) ^ n. ● a(n) = 2 ^ (1 - n) * Sum _{ k=0..floor(n / 2) } C(n, 2 * k) * (13) ^ k * 3 ^ (n - 2 * k). ● a(n) = 2 * T(n, 3i / 2) * (- i) ^ n with T(n, x) Chebyshev's polynomials of the first kind (see A053120) and i ^ 2= - 1. (End) ● a(n) = round(((3 + sqrt(13)) / 2) ^ n) for n > 0. (End) ● a(n) = [x ^ n] ((1 + 3 * x + sqrt(1 + 6 * x + 13 * x ^ 2)) / 2) ^ n for n >= 1. - _ Peter Bala _ , Jun 23 2015 ● a(n) = Lucas(n,3), Lucas polynomials, L(n,x), evaluated at x=3. - _ G. C. Greubel _ , Jun 06 2019 ●

► [A046224] 1,2,3,11,40,147,546,2046,7722,29315,111826,428298,1646008,6344366,24515700,94942620,368404110,1431985635,5574725970,21732560850,84828633120,331488081210,1296712152060,5077282282020,19897457591700 ⋆ Distinct numbers seen when writing first numerator and then denominator of central elements of 1 / 2 - Pascal triangle. ● a(n) = Sum _{ k=1..n - 2 } (2 * k + 1) * binomial(2 * n - k - 5,n - 3), n>2; a(1)=1, a(2)=2. - _ Vladimir Kruchinin _ , Sep 27 2011 ● a(n) = (5 * n - 9) / (8 * n - 12) * binomial(2 * n - 2,n - 1), n>2; a(1)=1, a(2)=2. - _ Eric Werley _ , Sep 16 2015 ●

► [A107327] 2,3,11,43,251,1931,19237,239347,3627181,65467067,1381237531,33547347529,926069157329,28743895441379,993969849468227,37991369810680411,1593993722216820553 ⋆ Prime Fibonacci sequence: each term is the prime with index equal to the sum of the previous two terms. ● a(n) = prime(a(n - 1) + a(n - 2)); a(1) = 2; a(2) = 3. ●

► [A041345] 1,1,2,3,11,47,152,199,351,550,14651,15201,29852,45053,165011,705097,2280302,2985399,5265701,8251100,219794301,228045401,447839702,675885103,2475495011 ⋆ Denominators of continued fraction convergents to sqrt(186). ● a(n) = 15002 * a(n - 10) - a(n - 20). - _ Vincenzo Librandi _ , Dec 16 2013 ●

► [A041441] 1,2,3,11,58,69,472,541,3177,10072,13249,36570,1110349,2257268,3367617,12360119,65168212,77528331,530338198,607866529,3569670843,11316879058,14886549901,41089978860,1247585915701 ⋆ Denominators of continued fraction convergents to sqrt(236). ● a(n) = 1123598 * a(n - 12) - a(n - 24) for n>23. [_ Bruno Berselli _ , Dec 18 2013] ●

► [A109809] 2,3,11,223,1009,22111,100003,2211127,10000019,221111257,1000000009,22111111123,100000000019,2211111111227,10000000000051,221111111111197,1000000000000223,22111111111111117,100000000000000003,2211111111111111211,10000000000000000087,221111111111111111249 ⋆ Primes at Levenshtein distance n from previous value when considered as a decimal string. ● a(0) = 2, a(n + 1) = least prime p such that LD(a(n), p) = n, where LD(A,B) = Levenshtein distance from A to B as decimal strings. ●

► [A081347] 1,2,3,12,13,30,31,56,57,90,91,132,133,182,183,240,241,306,307,380,381,462,463,552,553 ⋆ First column in maze arrangement of natural numbers. ● a(n) = ((1 + 2 * n ^ 2) + (1 - 2 * n) * (- 1) ^ n) / 2. ●

► [A309176] 0,0,2,3,12,13,33,40,66,81,135,135,212,249,319,354,489,511,681,725,876,981,1233,1235,1509 ⋆ a(n) = n ^ 2 * (n + 1) / 2 - Sum _{ k=1..n } sigma _ 2(k). ● a(n) = Sum _{ k=1..n } (n mod k) * k. ●

► [A289870] 1,2,3,12,15,30,35,56,63,90,99,132,143,182,195,240,255,306,323,380,399,462,483,552,575 ⋆ a(n) = n * (n + 1) for n odd, otherwise a(n) = (n - 1) * (n + 1). ● a(n) = (n + 1) * (n - 1 + (n mod 2)). ●

► [A290168] 0,0,2,3,12,15,36,42,80,90,150,165,252,273,392,420,576,612,810,855,1100,1155,1452,1518,1872 ⋆ If n is even then a(n) = n ^ 2 * (n + 2) / 8, otherwise a(n) = (n - 1) * n * (n + 1) / 8. ● a(n) = (1 / 16) * (- 1) ^ n * n * (1 + (- 1) ^ (n + 1) + 2 * (1 + (- 1) ^ n) * n + 2 * (- 1) ^ n * n ^ 2). ●

► [A123761] 1,2,3,12,15,60,60,240,360,1440,1800,7200,7200,28800,43200,172800,216000,864000,864000,3456000,5184000,20736000,25920000,103680000,103680000 ⋆ Let k(n) = mod(3,n) - 1. Then a(n) = 4 * a(n - 1) if n is odd, otherwise ((5 + k(n)) / 4) * a(n - 1), with a(0) = 1, a(1) = 2. ● a(n) = 120 * a(n - 6) for n>=7. ●

► [A333319] 0,0,0,0,0,2,3,12,16,40,50,100,120,210,245,392,448,672,756,1080,1200,1650,1815,2420,2640 ⋆ a(n) is the number of subsets of { 1..n } that contain exactly 3 odd and 1 even numbers. ● a(n) = binomial(ceiling(n / 2),3) * binomial(floor(n / 2), 1). ● a(n) = a(n - 1) + 4 * a(n - 2) - 4 * a(n - 3) - 6 * a(n - 4) + 6 * a(n - 5) + 4 * a(n - 6) - 4 * a(n - 7) - a(n - 8) + a(n - 9) for n>8. ●

► [A047163] 0,0,0,0,2,3,12,16,40,50,110,135,315,392,980,1232,3080,3864,9480,11850,29040,36300,89870,112519,280423 ⋆ Number of nonempty subsets of { 1,2,..., n } in which exactly 1 / 4 of the elements are <= n / 2. ● a(n) = Sum _{ k>=1 } binomial(floor(n / 2), k) * binomial(ceiling(n / 2), 3 * k). - _ Andrew Howroyd _ , Apr 11 2021 ●

► [A105045] 0,1,2,3,12,20,91,154,713,1209,5610,9515,44164,74908,347699,589746,2737425,4643057,21551698,36554707,169676156,287794596,1335857547,2265802058,10517184217 ⋆ a(0)=0, a(1)=1, a(2)=2, a(3)=3, a(4)=12; for n > 4, a(n) = 8 * a(n - 2) - a(n - 4) - 3. ● a(n) = 8 * a(n - 2) - a(n - 4) - 3, for n > 4. ● a(n) = ((15 + r) * (4 + r) ^ ((n - 1) / 2) + (15 - r) * (4 - r) ^ ((n - 1) / 2) + 30) / 60 when n is odd, and ● a(n) = ((45 + 11 * r) * (4 + r) ^ ((n - 2) / 2) + (45 - 11 * r) * (4 - r) ^ ((n - 2) / 2) + 30) / 60 when n is even. (End) ● a(n) = a(n - 1) + 8 * a(n - 2) - 8 * a(n - 3) - a(n - 4) + a(n - 5), a(0)=0, a(1)=1, a(2)=2, a(3)=3, a(4)=12, a(5)=20. - _ Harvey P. Dale _ , Nov 10 2011 ●

► [A295366] 1,2,3,12,23,44,77,132,221,367,604,987,1608,2613,4240,6873,11134,18029,29186,47240,76453,123720,200201,323950,524181 ⋆ Solution of the complementary equation a(n) = a(n - 1) + a(n - 2) + b(n - 1) + b(n - 2) - b(n - 3), where a(0) = 1, a(1) = 2, a[2] = 3, b(0) = 4, b(1) = 5, b(2) = 6, and (a(n)) and (b(n)) are increasing complementary sequences. ● a(n) / a(n - 1) - > (1 + sqrt(5)) / 2 = golden ratio (A001622). ●

► [A099429] 0,0,2,3,12,25,66,147,344,765,1710,3751,8196,17745,38234,81915,174768,371365,786438,1660239,3495260,7340025,15379122,32156323,67108872 ⋆ A Jacobsthal - Lucas convolution. ● a(n) = Sum _{ k=0..n } J(n - k) * (2 ^ (k - 1) - (- 1) ^ k + 0 ^ k / 2). ● a(n) = Sum _{ k=0..n + 1 } J(n - k) * binomial(n - k + 1, k) * binomial(1, (k + 1) / 2) * (1 - (- 1) ^ k) / 2. ●

► [A049601] 0,0,2,3,12,25,76,182,504,1275,3410,8811,23256,60580,159094,415715,1089648,2850645,7466468,19541994,51170460,133951675,350713222,918141623,2403786672 ⋆ a(n)=Sum { T(2i,n - 2i): i=0,1,...,[n / 2] } , array T as in A049600. ● a(n) = (Fibonacci(2 * n) + (- 1) ^ n * Fibonacci(n)) / 2. - _ Vladeta Jovovic _ , Aug 30 2004 ●

► [A349016] 1,2,3,12,26,125,317,1642,4492,24188,69174,381613,1123923,6304781,18962485,107682542,329007674,1885923378,5833166568,33685017384,105214504816,611241171298,1924588709710,11236434464097,35617302886643 ⋆ G.f. A(x) satisfies: A(x) = 1 + x * A(- x) / (1 - x) + x * A(x) ^ 2. ● a(0) = 1; a(n) = Sum _{ k=0..n - 1 } a(k) * ((- 1) ^ k + a(n - k - 1)). ●

► [A249490] 2,3,12,28,63,113,208,296,473,657,946,1236,1661,2071,2688,3228,4059,4811,5898,6858,8209,9433,11116,12572,14637 ⋆ a(n) = Sum _{ m=0..floor((n - 1) / 2) } prime((n - m)(n - m - 1) / 2 + m + 1). ● a(n) = Sum _{ m=0..floor((n - 1) / 2) } prime((n - m)(n - m - 1) / 2 + m + 1). ●

► [A215602] 2,3,12,28,77,198,522,1363,3572,9348,24477,64078,167762,439203,1149852,3010348,7881197,20633238,54018522,141422323,370248452,969323028,2537720637,6643838878,17393796002 ⋆ a(n) = L(n) * L(n + 1), where L = A000032 (Lucas numbers). ● a(n) = F(n - 1) * F(n) + F(n - 1) * F(n + 2) + F(n + 1) * F(n) + F(n + 1) * F(n + 2), where F=A000045, F(- 1)=1. - _ Bruno Berselli _ , Nov 03 2015 ● a(n) = ((- 1) ^ n + (2 ^ (- 1 - n) * ((3 - sqrt(5)) ^ n * (- 5 + sqrt(5)) + (3 + sqrt(5)) ^ n * (5 + sqrt(5)))) / sqrt(5)). - _ Colin Barker _ , Oct 01 2016 ●

► [A247651] 1,2,3,12,30,60,210,840,2520,7560,27720,83160,240240,840840,2702700,10810800,36756720,122522400,465585120,1551950400,4888643760,19554575040,74959204320,257002986240,936990054000 ⋆ Maximum number of binary strings of length 2n obtained from a partition of n. ● a(n) = Max[(n + 1)! / (Prod _ j(m _ j!)(n - m + 1)!)] over all partitions of n. ●

► [A169636] 1,2,3,12,30,180,1260,5040,15120,151200,1663200 ⋆ Number of permutations of A004001 sequence vectors:a(n)=Length[Permutations[Table[A004001[i], { i, 0, m }]]] ● a(n)=Length[Permutations[Table[f(i), { i, 0, m }]]] ●

► [A135522] 2,3,12,33,102,303,912,2733,8202,24603,73812,221433,664302,1992903,5978712,17936133,53808402,161425203,484275612,1452826833,4358480502,13075441503,39226324512,117678973533,353036920602 ⋆ a(n) = 2 * a(n - 1) + 3 * a(n - 2), with a(0) = 2 and a(1) = 3. ● a(n) = (5 * 3 ^ n + 3 * (- 1) ^ n) / 4. (End) ●

► [A107240] 1,2,3,12,37,118,407,1368,4617,15642,52891,178916,605325,2047726,6927407,23435376,79281105,268206130,907335091,3069492092,10384017717,35128880742,118840150983,402033352264,1360069089113 ⋆ Sum of squares of first n tribonacci numbers (A000213). ● a(n)= 3 * a(n - 1) + a(n - 2) + 3 * a(n - 3) - 7 * a(n - 4) + a(n - 5) - a(n - 6) + a(n - 7). G.f.: (x ^ 3 - x ^ 2 + 3 * x - 1) * (1 + x) ^ 2 / ((x - 1) * (x ^ 3 + x ^ 2 + 3 * x - 1) * (x ^ 3 - x ^ 2 - x - 1)). - _ R. J. Mathar _ , Aug 11 2009 ●

► [A256881] 1,2,3,12,40,240,1260,10080,72576,725760,6652800,79833600,889574400,12454041600,163459296000,2615348736000,39520825344000,711374856192000,12164510040883200,243290200817664000,4644631106519040000,102181884343418880000,2154334728240414720000 ⋆ a(n) = n! / ceiling(n / 2). ● a(n) = 2 / ([x ^ n](sinh(x) + x * exp(x))). - _ Pierre - Alain Sallard _ , Dec 15 2018 ●

► [A232864] 1,1,2,3,12,45,234,1323,8856,65529,543510,4937031,49030596,526930677,6101871426,75686176035,1001517264432,14079895613937,209594037600558,3293305758743679,54470994630103260,945988795762018029,17211193919411902938,327373136729339475362 7 ⋆ Number of permutations of n elements not cyclically containing the consecutive pattern 123. ● a(n) = n! * Sum _{ k= - oo..oo } (sqrt(3) / (2 * Pi * (k + 1 / 3))) ^ n for n >= 2. ●

► [A371612] 1,2,3,12,49,218,1037,5106,25909,134410,709691,3801498,20606654,112828202,623087675,3466539248,19411070496,109313442562,618713495451,3517737628368,20081523836403,115058714898196,661432784830204,3813891082337178,22052422636145522 ⋆ G.f. satisfies A(x) = (1 + x / (1 - x * A(x) ^ 2)) ^ 2. ● a(n) = Sum _{ k=0..n } binomial(4 * (n - k) + 2,k) * binomial(n - 1,n - k) / (2 * (n - k) + 1). ●

► [A027072] 1,2,3,12,53,222,899,3540,13657,51882,194727,723760,2668453,9771870,35577935,128887616,464885073,1670362418,5981289455,21352860808,76020123293,269977176422,956644165503,3382864303648,11940005836537 ⋆ a(n) = self - convolution of row n of array T given by A027052. ● a(n) = Sum _{ k=0..2 * n } T(n,k) * T(n,2 * n - k), where T = A027052. - _ G. C. Greubel _ , Nov 06 2019 ●

► [A083746] 1,2,3,12,54,288,1800,12960,105840,967680,9797760,108864000,1317254400,17244057600,242853811200,3661488230400,58845346560000,1004293914624000,18140058832896000,345728180109312000,6933770723303424000 ⋆ a(1) = 1, a(2) = 2; for n>2, a(n) = 3 * (n - 2) * (n - 2)!. ● a(n) = (n - 2) * sum _{ i=1..n - 1 } a(i). ●

► [A025231] 2,3,12,57,300,1686,9912,60213,374988,2381322,15361896,100389306,663180024,4421490924,29712558576,201046204173,1368578002188,9366084668802,64403308499592,444739795023054,3082969991029800 ⋆ a(n) = a(1) * a(n - 1) + a(2) * a(n - 2) + ... + a(n - 1) * a(1) for n >= 3. ● a(n) = Sum _{ k=0..n } C(k + 1,n - k) * 2 ^ (2 * k + 1 - n) * (- 1) ^ (n - k) * C(2 * k,k) / (k + 1). - _ Vladimir Kruchinin _ , Apr 21 2023 ●

► [A052183] 2,3,12,60,330,1911,11424,69768,432630,2713425,17168580,109390320,700939512,4512458580,29164264320,189120846288,1229917589262,8018580361365,52392620853300,342991368096300,2249282417749290 ⋆ A second - order recursive sequence. ● a(n) = (n + 2) * c(2; n), where c(2; n) = C(3n, n) / (2n + 1) (A001764). ●

► [A188588] 1,2,3,12,60,360,2520,20160,181440,1814400,19958400,239500800,3113510400,43589145600,653837184000,10461394944000,177843714048000,3201186852864000,60822550204416000,1216451004088320000,25545471085854720000 ⋆ Row sums of 1 - Euler triangle A188587. ● a(n) = (n + 1) * a(n - 1), n>2. ●
► [A155579] 2,3,12,63,378,2457,16848,120042,880308,6602310,50417640,390736710,3065780340,24307258410,194458067280,1567818167445,12726994535730,103937122041795,853378475711580,7040372424620535,58334514375427290 ⋆ Recursive sequence (n + 1) * a(n) = 3 * (3 * n - 2) * a(n - 1). ● a(n) = 3 ^ (2 * n - 1) * sum(binomial(k,n - k) * 2 ^ (2 * k - n) * (- 1) ^ (n - k) * (if k=1 then (1 / 3) else 1 / k * (1 / 3) ^ k * sum(binomial(i,k - 1 - i) * (- 1 / 3) ^ (k - 1 - i) * binomial(i + k - 1,k - 1),i,1,k - 1)),k,1,n),n>0. (End) ● a(n) = 2 * 3 ^ (2 * n) * Gamma(n + 1 / 3) / (Gamma(1 / 3) * Gamma(n + 2)). ●
► [A108261] 2,3,12,65,374,2175,12672,73853,430442,2508795,14622324,85225145,496728542,2895146103,16874148072,98349742325,573224305874,3340996092915,19472752251612,113495517416753,661500352248902,3855506596076655,22471539224211024 ⋆ 2nd order recursive series having the property that the product of any two adjacent terms is a triangular number, T(b) = b(b + 1) / 2 where b equals term a(n) of related series A108262. ● a(n) = 6 * a(n - 1) - a(n - 2) - 4. ● a(n) = 1 + (1 / 8) * sqrt(2) * [3 - 2 * sqrt(2)] ^ n + (1 / 2) * [3 + 2 * sqrt(2)] ^ n - (1 / 8) * [3 + 2 * sqrt(2)] ^ n * sqrt(2) + (1 / 2) * [3 - 2 * sqrt(2)] ^ n, with n>=0. - _ Paolo P. Lava _ , Jun 25 2008 ●
► [A074179] 1,2,3,12,90,108,1512,1728,3456,34560,456192,497664,12939264,13934592,139345920,167215104,5685313536,6019743744,228750262272,240789749760,481579499520,10594748989440,265831883735040,277389791723520 ⋆ a(1) = 1, a(n) = smallest multiple of n divisible by the sum of all previous terms. ● a(n) = lcm(n, Sum _{ k=1..n - 1 } a(k)), with a(1) = 1. - _ Michel Marcus _ , Nov 11 2020 ●
► [A193507] 2,3,13,19,31,43,53,61,71,73,101,103,109,131,151,157,173,181,191,229,233,239,241,251,269 ⋆ Ramanujan primes of the second kind: a(n) is the smallest prime such that if prime x >= a(n), then pi(x) - pi(x / 2) >= n, where pi(x) is the number of primes <= x. ● a(n)>p _ (2 * n - 1); a(n) ~ p _{ 2n } (Cf. properties of R _ n in A104272 and the above comment). - _ Vladimir Shevelev _ , Aug 28 2011 ●
► [A229117] 2,3,13,20,37,78,119,218,457,696,1273,2666,4059,7422,15541,23660,43261,90582,137903,252146,527953,803760,1469617,3077138,4684659 ⋆ Numbers k where d / k reaches a new record, with d the distance from the k - th triangular number to the nearest square. ● a(n) = a(n - 1) + 6 * a(n - 3) - 6 * a(n - 4) - a(n - 6) + a(n - 7) if n>9. - _ Michael Somos _ , Dec 25 2016 ●
► [A133201] 0,1,2,3,13,23,33,133,233,333,1333,2333,3333,13333,23333,33333,133333,233333,333333,1333333,2333333,3333333,13333333,23333333,33333333 ⋆ a(n) = A133195(n) / 3. ● a(n) = a(n - 1) + 10 * a(n - 3) - 10 * a(n - 4). G.f.: x * (x ^ 2 + x + 1) / ((x - 1) * (10 * x ^ 3 - 1)). - _ Colin Barker _ , Feb 01 2013 ●
► [A228278] 2,3,13,35,112,337,1034,3154,9637,29431,89895,274564,838609,2561372,7823242,23894643,72981777,222909351,680835436,2079486057,6351405998,19399196250,59251261117,180972030923,552745635451 ⋆ Number of n X 3 binary arrays with top left value 1 and no two ones adjacent horizontally, vertically or n w - se diagonally. ● a(n) = a(n - 1) + 5 * a(n - 2) + 4 * a(n - 3) - a(n - 5). ●
► [A206776] 2,3,13,45,161,573,2041,7269,25889,92205,328393,1169589,4165553,14835837,52838617,188187525,670239809,2387094477,8501763049,30279478101,107841960401,384084837405,1367938433017,4871984973861,17351831787617 ⋆ a(n) = 3 * a(n - 1) + 2 * a(n - 2) for n>1, a(0)=2, a(1)=3. ● a(n) = ((3 - sqrt(17)) ^ n + (3 + sqrt(17)) ^ n) / 2 ^ n. ● a(n) = [x ^ n] ((1 + 3 * x + sqrt(1 + 6 * x + 17 * x ^ 2)) / 2) ^ n for n >= 1. - _ Peter Bala _ , Jun 23 2015 ● a(n) = (- 2) ^ n * a(- n) for all n in Z. - _ Michael Somos _ , Oct 13 2016 ●
► [A164582] 2,3,13,62,297,1423,6818,32667,156517,749918,3593073,17215447,82484162,395205363,1893542653,9072507902,43468996857,208272476383,997893385058,4781194448907,22908078859477,109759199848478,525887920382913,2519680402066087 ⋆ a(n) = 5 * a(n - 1) - a(n - 2), with n>2, a(1)=2, a(2)=3. ● a(n) = (2 ^ (- 1 - n) * ((5 + sqrt(21)) ^ n * (- 31 + 7 * sqrt(21)) + (5 - sqrt(21)) ^ n * (31 + 7 * sqrt(21)))) / sqrt(21). - _ Colin Barker _ , Nov 08 2017 ● a(n) = (a(n - 1) ^ 2 + 17) / a(n - 2). - _ Klaus Purath _ , Aug 30 2020 ●
► [A098406] 2,3,13,113,1113,11113,111113,1111113,11111113,111111113,1111111113,11111111113,111111111113,1111111111113,11111111111113,111111111111113,1111111111111113,11111111111111113,111111111111111113,1111111111111111113,11111111111111111113,111111111111111111113 ⋆ a(n) = (10 ^ n + 17) / 9. ● a(1) = 3; a(n) = a(n - 1) + 10 ^ (n - 1). ● a(1) = 3; a(n) = 10 * a(n - 1) - 17. ●
► [A281500] 2,3,14,15,62,63,254,255,1022,1023,4094,4095,16382,16383,65534,65535,262142,262143,1048574,1048575,4194302,4194303,16777214,16777215,67108862 ⋆ Reduced denominators of f(n) = (n + 1) / (2 ^ (2 + n) - 2) with A026741(n + 1) as numerators. ● a(n) = 5 * a(n - 2) - 4 * a(n - 4) for n>3. (End) ● a(n) = (3 + (- 1) ^ n) * (2 ^ (n + 1) - 1) / 2. ● a(n) = 4 ^ ((n + 1 + ((n + 1) mod 2)) / 2) - 1 - ((n + 1) mod 2). (End) ● a(2 * k) = 4 ^ (k + 1) - 2, a(2 * k + 1) = a(2 * k) + 1 = 4 ^ (k + 1) - 1. ●
► [A041869] 1,2,3,14,17,48,2033,4114,6147,28702,34849,98400,4167649,8433698,12601347,58839086,71440433,201719952,8543678417,17289076786,25832755203,120620097598,146452852801,413525803200,17514536587201 ⋆ Denominators of continued fraction convergents to sqrt(456). ● a(n) = 2050 * a(n - 6) - a(n - 12) for n>11. - _ Vincenzo Librandi _ , Dec 26 2013 ●
► [A041010] 2,3,14,17,82,99,478,577,2786,3363,16238,19601,94642,114243,551614,665857,3215042,3880899,18738638,22619537,109216786,131836323,636562078,768398401,3710155682 ⋆ Numerators of continued fraction convergents to sqrt(8). ● a(n) = 6 * a(n - 2) - a(n - 4). ● a(2n) = a(2n - 1) + a(2n - 2), a(2n + 1) = 4 * a(2n) + a(2n - 1). ●
► [A188289] 0,2,3,14,45,167,609,2270,8517,32207,122463,467843,1794195,6903353,26635773,103020254,399300165,1550554583,6031074183,23493410759,91638191235,357874310213,1399137067683,5475504511859,21447950506395 ⋆ Binomial sum related to rooted trees. ● a(n) = binomial(2 * n,n) - (- 1) ^ n - Sum _{ k=0..n - 1 } binomial(2 * k, n - 1). ● a(n) = Sum _{ k=1..n } binomial(n + k,k) * (Sum _{ r=n - k..n } (- 1) ^ r binomial(n - k, r). ● a(n) = (- 1) ^ n * 2 ^ (- (1 + n)) * (1 - 2 ^ (1 + n) + (- 2) ^ n * binomial(2 + 2 * n, 1 + n) * hypergeometric2F1(1, 2 + 2 * n; 2 + n; - 1). ●
► [A070207] 1,2,3,14,50,181,657,2383,8644,31355,113736,412562,1496513,5428399,19690785,71425666,259086967,939803018,3409008654,12365718965,44854977221,162705378247,590191808148,2140841158159,7765612469020 ⋆ Expansion of (1 - x - 5 * x ^ 2) / (1 - 3 * x - 2 * x ^ 2 - x ^ 3). ● a(0)=1, a(1)=2, a(2)=3, a(n) = 3 * a(n - 1) + 2 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Feb 01 2013 ●
► [A371608] 1,2,3,14,55,226,1042,4840,23103,113118,561568,2826550,14392534,73967650,383271596,2000096144,10502029735,55446004880,294155761676,1567371462762,8384300275607,45009106969022,242400290365756,1309314066314354,7091306989205453 ⋆ G.f. satisfies A(x) = (1 + x * (1 + x * A(x) ^ 3)) ^ 2. ● a(n) = Sum _{ k=0..n } binomial(6 * (n - k) + 2,k) * binomial(k,n - k) / (3 * (n - k) + 1). ●
► [A041167] 1,1,2,3,14,87,362,449,811,1260,23491,24751,48242,72993,340214,2114277,8797322,10911599,19708921,30620520,570878281,601498801,1172377082,1773875883,8267880614 ⋆ Denominators of continued fraction convergents to sqrt(93). ● a(n) = 24302 * a(n - 10) - a(n - 20). - _ Vincenzo Librandi _ , Dec 12 2013 ●
► [A042071] 1,1,2,3,14,213,227,440,1987,2427,6841,9268,43913,53181,97094,1509591,6135458,7645049,13780507,21425556,999356083,1020781639,2020137722,3040919361,14183815166 ⋆ Denominators of continued fraction convergents to sqrt(559). ● a(n) = 1013136590 * a(n - 20) - a(n - 40) for n>39. - _ Vincenzo Librandi _ , Jan 13 2014 ●
► [A172012] 2,3,15,54,207,783,2970,11259,42687,161838,613575,2326239,8819442,33437043,126769455,480619494,1822166847,6908359023,26191577610,99299809899,376474162527,1427321917278,5411388239415,20516130470079,77782556128482 ⋆ Expansion of (2 - 3 * x) / (1 - 3 * x - 3 * x ^ 2) . ● a(0)=2, a(1)=3, a(n) = 3 * a(n - 1) + 3 * a(n - 2). [_ Harvey P. Dale _ , Aug 24 2011] ● a(n) = [x ^ n] ((1 + 3 * x + sqrt(1 + 6 * x + 21 * x ^ 2)) / 2) ^ n for n >= 1. - _ Peter Bala _ , Jun 23 2015 ●
► [A358119] 2,3,15,98,750,6359,57939,556896,5578764,57759397,614328561,6682078770,74071710414,834535805445,9535609593441,110306008352832,1289937458160684,15231176767392691,181406519662622559,2177471166182909994,26321521760571055830,320222147815305416123 ⋆ a(n) = Sum _{ j=0..n } (- 1) ^ j * binomial(2 * n - j, j) * c(n - j) * c(n - j + 2), where c(n) is the n - th Catalan number. ● a(n) = 2 * (- 1) ^ n * hypergeom([5 / 2, - n, n + 1], [2, 4], 4). ●
► [A337111] 1,2,3,16,17,18,19,56,105,106,107,144,145,146,147,208,209,306,307,320,321,322,323,432,529 ⋆ Number of length four 1..n vectors that contain their geometric mean. ● a(n) - a(n - 1) == 1 (mod 12). - _ Hywel Normington _ , Sep 28 2020 ●
► [A076801] 1,2,3,16,17,20,22,24,26,29,31,32,34,38,40,43,44,46,48,50,52,53,57,58,60 ⋆ Greedy powers of (e / 5): sum _{ n=1..inf } (e / 5) ^ a(n) = 1. ● a(n)=sum _{ k=1..n } floor(g _ k) where g _ 1=1, g _{ n + 1 } =log _ x(x ^ frac(g _ n) - x) (n>0) at x=(e / 5) and frac(y) = y - floor(y). ●
► [A122656] 0,0,2,3,16,20,54,63,128,144,250,275,432,468,686,735,1024,1088,1458,1539,2000,2100,2662,2783,3456 ⋆ n * floor(n / 2) ^ 2. ● a(n) = (n * (1 - (- 1) ^ n + 2 * (- 1 + (- 1) ^ n) * n + 2 * n ^ 2)) / 8. G.f.: x ^ 2 * (x ^ 4 + x ^ 3 + 7 * x ^ 2 + x + 2) / ((x - 1) ^ 4 * (x + 1) ^ 3). - _ Colin Barker _ , Sep 20 2013 ●
► [A092503] 1,1,2,3,16,25,216,343,4096,6561,100000,161051,2985984,4826809,105413504,170859375,4294967296,6975757441,198359290368,322687697779,10240000000000,16679880978201,584318301411328 ⋆ a(n) = n ^ floor(n / 2). ● a(n) = n ^ ((n - (1 - (- 1) ^ n) / 2) / 2). - _ Wesley Ivan Hurt _ , Mar 19 2015 ●
► [A074182] 1,2,3,16,25,216,2401,32768,59049,1000000,19487171,429981696,815730721,20661046784,576650390625,17592186044416,34271896307633,11568313814261676,420529834622570591,1638400000000000000 ⋆ Largest power of n <= n!. ● a(n) = n ^ floor(log _ n(n!)) for n>1. ●
► [A074759] 1,1,2,3,16,25,396,721,11264,46089,602200,3628801,133494912,479001601,7692266960,95904273375,1914926104576,20922789888001,628693317946656,6402373705728001,182635841123840000,2496321046987530021,55826951075231672512,1124000727777607680001 ⋆ Number of degree - n permutations of order dividing n. Number of solutions to x ^ n = 1 in S _ n. ● a(n) = n! * [x ^ n] exp(Sum _{ k divides n } x ^ k / k). ●
► [A034382] 1,2,3,16,30,360,840,15360,68040,907200,3991680,159667200,518918400,14529715200,163459296000,4250979532800,22230464256000,1200445069824000,6758061133824000,405483668029440000 ⋆ Number of labeled Abelian groups of order n. ● a(n) = Sum n! / |Aut(G)|, where the sum is taken over the different products G of cyclic groups with |G|=n. Formula for |Aut(G)| is given by Hillar and Rhea (2007). Another formula is given by Sugarknri (2019). ●
► [A072684] 2,3,16,31,103,235,674,1669,4526,11595,30769,79885,210226,548623,1439156,3763159,9859523,25800519,67566130,176858881,463073602,1212259843,3173871101,8309086201,21753819938 ⋆ Expansion of (2 + x + 3 * x ^ 2 + 2 * x ^ 3 + x ^ 4) / (1 - x - 5 * x ^ 2 + x ^ 3 + 3 * x ^ 4 - x ^ 5). ● a(n) = 2 * a(n - 1) + 3 * a(n - 2) - 4 * a(n - 3) + a(n - 4) + 3 * (- 1) ^ n for all n in Z. ● a(n) = (- 3 / 5) * (- 1) ^ n + (- 9 / 2) * F(- n) - F(- n - 1) + (13 / 10) * F(2 * n - 1) + (23 / 10) * F(2 * n + 1) for all n in Z. - _ Michael Somos _ , Apr 10 2022 ●
► [A052858] 0,0,2,3,16,65,456,3157,28624,276705,3136240,38531141,528468744,7837577761,126588882616,2194957583925,40854219413536,810192673705793,17082845929433952,381225135102420997 ⋆ E.g.f.: log(- 1 / (- 1 + x * exp(x) - x)). ● a(n) = n! * Sum _{ k=1..n / 2 } ((k - 1)! * stirling2(n - k,k) / (n - k)!). - _ Vladimir Kruchinin _ , Mar 22 2016 ●
► [A073997] 1,2,3,16,76,272,1008,4096,16576,65792,261888,1048576,4197376,16781312,67104768,268435456,1073790976,4295032832,17179803648,68719476736,274878693376,1099512676352,4398045462528,17592186044416,70368756760576 ⋆ Number of strings of length n over GF(4) with trace 1 and subtrace 0. ● a(n; t, s) = a(n - 1; t, s) + a(n - 1; t - 1, s - (t - 1)) + a(n - 1; t - 2, s - 2(t - 2)) + a(n - 1; t - 3, s - 3(t - 3)) where t is the trace and s is the subtrace. Note that all operations involving operands t or s are carried out over GF(4). ●
► [A371613] 1,2,3,16,83,460,2767,17210,110308,723624,4832363,32747106,224619408,1556484636,10879744696,76621739626,543159825499,3872610857558,2775217

5177823,199787917082084,1444171829169939,10477887409768628,7627556507501 6394 ⋆ G.f. satisfies A(x) = (1 + x / (1 - x * A(x) ^ 3)) ^ 2. ● a(n) = Sum _{ k=0..n } binomial(6 * (n - k) + 2,k) * binomial(n - 1,n - k) / (3 * (n - k) + 1). ●

▶ [A171990] 1,2,3,16,3814280 ⋆ Least integer a(n) for which the iterated functi on log, iterated n times, is defined. ● a(n) = ceiling(e ^ (e ^ ...))), n times. ●

▶ [A041295] 1,1,2,3,17,20,37,57,1405,1462,2867,4329,24512,28841,53353,82194,20 26009,2108203,4134212,6242415,35346287,41588702,76934989,118523691,2921503 573 ⋆ Denominators of continued fraction convergents to sqrt(160). ● a(n) = 14 42 * a(n - 8) - a(n - 16). - _ Vincenzo Librandi _ , Dec 15 2013 ●

▶ [A041981] 1,1,2,3,17,20,97,505,1107,6040,25267,31307,181802,213109,394911,6 08020,27147791,27755811,54903602,82659413,468200667,550860080,2671640987,1 3909065015,30489771017 ⋆ Denominators of continued fraction convergents to s qrt(513). ● a(n) = 27542702 * a(n - 16) - a(n - 32). - _ Wesley Ivan Hurt _ , A pr 18 2023 ●

▶ [A042699] 1,1,2,3,17,54,71,267,605,5712,12029,41799,53828,203283,1070243,12 73526,2343769,3617295,212146879,215764174,427911053,643675227,3646287188,1 1582536791,15228823979 ⋆ Denominators of continued fraction convergents to s qrt(879). ● a(n) = 214490648 * a(n - 18) - a(n - 36) for n>35. - _ Vincenzo Lib randi _ , Jan 27 2014 ●

▶ [A201455] 2,3,17,63,257,1023,4097,16383,65537,262143,1048577,4194303,16777 217,67108863,268435457,1073741823,4294967297,17179869183,68719476737,2748 77906943,1099511627777,4398046511103,17592186044417,70368744177663,28147 4976710657 ⋆ a(n) = 3 * a(n - 1) + 4 * a(n - 2) for n>1, a(0)=2, a(1)=3. ● a(n) = 4 ^ n + (- 1) ^ n. ● a(n) = [x ^ n] ((1 + 3 * x + sqrt(1 + 6 * x + 25 * x ^ 2)) / 2) ^ n for n >= 1. - _ Peter Bala _ , Jun 23 2015 ● a(n) = (2 / 4 ^ n) * S um _{ k = 0..n } binomial(4 * n + 1, 4 * k). - _ Peter Bala _ , Feb 06 2019 ●

▶ [A041383] 1,2,3,17,241,1222,1463,4148,117607,239362,356969,2024207,2869586 7,145503542,174199409,493902360,14003465489,28500833338,42504298827,24102 2327473,3416816883449,17325106744718,20741923628167,58808954001052,16673 92635657623 ⋆ Denominators of continued fraction convergents to sqrt(206). ● a(n) = 119070 * a(n - 8) - a(n - 16) for n>15. - _ Vincenzo Librandi _ , Dec 16 2013 ●

▶ [A042903] 1,2,3,17,530,2667,3197,9061,564979,1139019,1703998,9659009,30113 3277,1515325394,1816458671,5148242736,321007508303,647163259342,968170767 645,5488017097567,171096700792222,860971521058677,1032068221850899,29251 07964760475 ⋆ Denominators of continued fraction convergents to sqrt(983). ● a(n) = 568176 * a(n - 8) - a(n - 16) for n>15. - _ Vincenzo Librandi _ , Feb 01 2014 ●

▶ [A321212] 2,3,18,19,34,35,50,51,66,67,82,83,98,99,114,115,130,131,146,147,16 2,163,178,179,194 ⋆ Numbers that are congruent to { 2, 3 } mod 16. ● a(n) = a (n - 1) + a(n - 2) - a(n - 3) for n > 3. - _ Chai Wah Wu _ , Nov 29 2018 ● a(n) = (16 * n - 7 * (- 1) ^ n - 19) / 2. ● a(n) = a(n - 2) + 16. - _ David A. Corn eth _ , Nov 30 2018 ●

▶ [A003693] 0,2,3,18,54,222,779,2953,10771,40043,147462,545603,2013994,74429 27,27490263,101563680,375176968,1386004383,5120092320,18914660608,6987399 1466,258127586367,953569519203,3522660270539 ⋆ Number of 2 - factors in P _ 4 X P _ n. ● a(n) = 2a(n - 1) + 7a(n - 2) - 2a(n - 3) - 3a(n - 4) + a(n - 5), n > 5. ●

▶ [A288492] 1,2,3,18,95,440,1897,7882,32139,129804,521741,2092046,8378383,33 533968,134176785,536789010,2147319827,8589606932,34359083029,13743764277 4,549753192471,2199018012696,8796082536473,35184351117338,14073744641231 5 ⋆ Indices of terms of A288349 that are powers of 2. ● a(n) = 2 - 5 * 2 ^ (n - 2) + 2 ^ (2 * n - 3) + n for n>2. ● a(n) = 8 * a(n - 1) - 21 * a(n - 2) + 22 * a(n - 3) - 8 * a(n - 4) for n>6. ●

▶ [A073983] 1,2,3,18,180,1296,8100,50544,297432,1679616,9722592,58576608,358 108128,2179768320,13162730688,78976384128,472093588224,2821109907456,1689 1882995456,101356447675392,608764662139392,3656158440062976,219475381468 63104,131685972252346368 ⋆ Number of strings of length n over Z _ 6 with tra ce 2 and subtrace 0. ● a(n; t, s) = a(n - 1; t, s) + a(n - 1; t + 5, s + 5t + 1) + a (n - 1; t + 4, s + 4t + 4) + a(n - 1; t + 3, s + 3t + 3) + a(n - 1; t + 2, s + 2t + 2) + a(n - 1; t + 1, s + t + 1) where t is the trace and s is the subtrace. ●

▶ [A363498] 0,1,2,3,19,35,51,67,83,164,245,326,407,488,569,650,906,1162,1418,16 74,1930,2186,2442,2698,2954 ⋆ a(n) = Sum _{ k=0..n } floor(sqrt(k)) ^ 4. ● a(n) = (n + 1) * m ^ 4 - (1 / 30) * m * (m + 1) * (20 * m ^ 4 + 4 * m ^ 3 - 14 * m ^ 2 + 4 * m + 1), where m = floor(sqrt(n)). ●

▶ [A072263] 2,3,19,72,311,1293,5434,22767,95471,400248,1678099,7035537,29497 106,123669003,518492539,2173822632,9113930591,38210904933,160202367754,67 1661627927,2815996722551,11806298307288,49498878534619,207528127140297 ⋆ a(n) = 3 * a(n - 1) + 5 * a(n - 2), with a(0)=2, a(1)=3. ● a(n) = ((3 + sqrt(29)) / 2) ^ n + ((3 - sqrt(29)) / 2) ^ n. ● a(n) = [x ^ n] ((1 + 3 * x + sqrt(1 + 6 * x + 29 * x ^ 2)) / 2) ^ n for n >= 1. - _ Peter Bala _ , Jun 23 2015 ● a(n) = 5 ^ ((n - 1) / 2) * (2 * sqrt(5) * Fibonacci(n + 1, 3 / sqrt(5)) - 3 * Fibonacci (n, 3 / sqrt(5))). - _ G. C. Greubel _ , Jan 14 2020 ●

▶ [A042265] 1,1,2,3,20,23,43,66,3343,3409,6752,10161,67718,77879,145597,22347 6,11319397,11542873,22862270,34405143,229293128,263698271,492991399,756689 670,38327474899 ⋆ Denominators of continued fraction convergents to sqrt(658) . ● a(n) = 3386 * a(n - 8) - a(n - 16) for n>15. - _ Vincenzo Librandi _ , Jan 1 9 2014 ●

▶ [A041093] 1,2,3,20,23,66,947,1960,2907,19402,22309,64020,918589,1901198,281 9787,18819920,21639707,62099334,891030383,1844160100,2735190483,182553029 98,20990493481,60236289960,864298552921 ⋆ Denominators of continued fractio n convergents to sqrt(54). ● a(n) = 970 * a(n - 6) - a(n - 12). G.f.: - (x ^ 10 - 2 * x ^ 9 + 3 * x ^ 8 - 20 * x ^ 7 + 23 * x ^ 6 - 66 * x ^ 5 - 23 * x ^ 4 - 20 * x ^ 3 - 3 * x ^ 2 - 2 * x - 1) / ((x ^ 4 - 10 * x ^ 2 + 1) * (x ^ 8 + 10 * x ^ 6 + 99 * x ^ 4 + 10 * x ^ 2 + 1)). [_ Colin Barker _ , Jul 18 2012] ●

▶ [A042781] 1,2,3,20,23,273,842,1115,3072,7259,24849,32108,56957,89065,14602 2,235087,2026718,40769447,328182294,368951741,697134035,1066085776,1763219 811,2829305587,10251136572 ⋆ Denominators of continued fraction convergents to sqrt(921). ● a(n) = 5044115425671470 * a(n - 34) - a(n - 68) for n>67. - _ V incenzo Librandi _ , Jan 29 2014 ●

▶ [A295365] 1,2,3,20,41,82,147,256,433,722,1191,1952,3185,5182,8415,13648,2211 7,35823,58002,93891,151962,245925,397962,643965,1042008 ⋆ Solution of the co mplementary equation a(n) = a(n - 1) + a(n - 2) + b(n - 1) + b(n - 2) + b(n - 3), where a(0) = 1, a(1) = 2, a[2] = 3, b(0) = 4, b(1) = 5, b(2) = 6, and (a(n)) and (b(n)) are increasing complementary sequences. ● a(n) / a(n - 1) - > (1 + sqrt(5)) / 2 = golden ratio (A001622). ●

▶ [A318765] 2,3,20,55,114,203,328,495,710,979,1308,1703,2170,2715,3344,4063,48 78,5795,6820,7959,9218,10603,12120,13775,15574 ⋆ a(n) = (n + 2) * (n ^ 2 + n - 1). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n >= 5. - _ Wesley Ivan Hurt _ , Dec 18 2020 ●

▶ [A041567] 1,2,3,20,63,83,229,541,770,1311,11258,125149,261556,1171373,26043 02,29818695,241153862,270972557,512126419,1295225395,3102577209,439780260 4,16295985021,102173712730,118469697751 ⋆ Denominators of continued fractio n convergents to sqrt(301). ● a(n) = 11766785075390 * a(n - 26) - a(n - 52) for n>51. - _ Vincenzo Librandi _ , Dec 20 2013 ●

▶ [A348311] 0,1,2,3,20,85,534,3703,29672,266985,2669930,29369131,352429692,4 581585853,64142202110,962133031455,15394128503504,261700184559313,471060 3322067922,89501463119290195,1790029262385804260,3759061451010188906 1,82 699351922241559782 ⋆ a(n) = n! * Sum _{ k=1..n } (- 1) ^ k * (k - 2) / (k - 1)!. ● a(0) = 0; a(n) = n * (a(n - 1) + (- 1) ^ n * (n - 2)). ●

▶ [A066166] 2,3,20,90,594,4200,34544,316008,3207240,35699400,432690312,5672 581200,79991160144,1207367605080,19423062612480,331770360922560,59971051 60795584,1143735268413600 00,2295170834453089920 ⋆ Stanley's children's gam e. Class of n (named) children forms into rings with exactly one child inside eac h ring. We allow the case when outer ring has only one child. a(n) gives numbe r of possibilities, including clockwise order (or which hand is held), in each ring. ● a(n) = b(n), n>0, a(0)=0, where b(n) = (n - 1)! * Sum _{ i=1..n - 1 } (1 + 1 / i) * b(n - i - 1) / (n - i - 1)!, b(0)=1. - _ Vladimir Kruchinin _ , Feb 25 201 5 ● a(n) = n! * Sum _{ k=0..floor(n / 2) } |Stirling1(n - k,k)| / (n - k)!. - _ Se iichi Manyama _ , May 10 2022 ●

▶ [A267652] 2,3,20,92,448,2160,10432,50368,243200,1174272,5669888,27376640,1 32186112,638251008,3081748480,14879997952,71846985728,346907934720,167501 9681792,8087710466048,39050920591360,188554524229632,910421779283968,439 5905214054400,21225307973353472 ⋆ a(n) = 4 * a(n - 1) + 4 * a(n - 2) for n>1, a(0)=2, a(1)=3. ● a(n) = 2 ^ (n - 5 / 2) * ((1 + 4 * sqrt(2)) * (1 - sqrt(2)) ^ n - (1 - 4 * sqrt(2)) * (1 + sqrt(2)) ^ n). ●

▶ [A042441] 1,2,3,20,103,123,1579,1702,10089,62236,72325,206886,11244169,226 95224,33939393,226331582,1165597303,1391928885,17868743923,19260672808,11 4172107963,704293320586,818465428549,2341224177684,127244571023485 ⋆ Den ominators of continued fraction convergents to sqrt(748). ● a(n) = 11316494 * a(n - 12) - a(n - 24) for n>23. - _ Vincenzo Librandi _ , Jan 22 2014 ●

▶ [A032810] 2,3,22,23,32,33,222,223,232,233,322,323,332,333,2222,2223,2232,223 3,2322,2323,2332,2333,3222,3223,3232 ⋆ Numbers using only digits 2 and 3. ● a(n) is Theta(n ^ (log _ 2 10)); there are about n ^ (log _ 10 2) members of this sequence up to n. - _ Charles R Greathouse IV _ , Mar 18 2010 ●

▶ [A154254] 2,3,22,59,114,187,278,387,514,659,822,1003,1202,1419,1654,1907,217 8,2467,2774,3099,3442,3803,4182,4579,4994 ⋆ a(n) = 9n ^ 2 - 8n + 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). (End) ●

▶ [A041787] 1,2,3,23,49,366,415,1196,48255,97706,145961,1119433,2384827,1781 3222,20198049,58209320,2348570849,4755351018,7103921867,54482804087,11606 9530041,866969514374,983039044415,2833047603204,114304943172575 ⋆ Denomi nators of continued fraction convergents to sqrt(414). ● a(n) = 48670 * a(n - 8) - a(n - 16) for n>15. - _ Vincenzo Librandi _ , Dec 24 2013 ●

▶ [A195241] 1,2,3,23,59,111,179,263,363,479,611,759,923,1103,1299,1511,1739,19 83,2243,2519,2811,3119,3443,3783,4139 ⋆ Expansion of (1 - x + 19 * x ^ 3 - 3 * x ^ 4) / (1 - x) ^ 3. ● a(n) = 8 * n ^ 2 - 20 * n + 11 for n>1; a(0)=1, a(1)=2. ●

▶ [A041459] 1,1,2,3,23,141,1010,1151,2161,3312,101521,104833,206354,311187,23 84663,14619165,104718818,119337983,224056801,343394784,10525900321,108692 95105,21395195426,32264490531,247246629143 ⋆ Denominators of continued fra ction convergents to sqrt(245). ● a(n) = 103682 * a(n - 10) - a(n - 20) for n>19 . - _ Vincenzo Librandi _ , Dec 18 2013 ●

▶ [A238265] 2,3,23,6911,238878721,5944066965503999 ⋆ Primes p such that p + 1 or p - 1 is in A055462. ● a(n) are the prime values of 1! * (1! * 2!) * (1! * 2! * 3!) * (1! * 2! * 3! * n!) +/- 1. ●

▶ [A032811] 2,3,24,25,35,36,266,267,277,278,387,388,398,399,2928,2929,2939,294 0,3049,3050,3060,3061,4259,4260,4270 ⋆ Numbers whose set of base - 11 digits is { 2,3 } . ● a(1)=2, a(2)=3; a(n) = 11 * a(floor(n / 2)) + 2 for n odd, otherwise a(n) = 11 * a(floor((n - 1) / 2)) + 3. - _ Bruno Berselli _ , May 28 2012 ●

▶ [A354278] 0,1,2,3,24,50,720,4095,35840,267624,3628800,35724150,479001600,5 240149200,82614884352,1188272460375,20922789888000,320893244672000,6402 373705728000,113803149223980216,2379913632645120000,4639641756697584000 0,112400072777760768000 0 ⋆ Product _{ n>=1 } 1 / (1 - a(n) * x ^ n / n!) = exp(- x) / (1 - x). ● a(1) = 0; a(n) = (n - 1)! * (1 - Sum _{ d|n, 1 < d < n } d * (a(d) / d!) ^ (n / d)). ●

▶ [A354277] 0,1,2,3,24,70,720,4305,39200,337176,3628800,38417610,479001600,6 128488080,87104969952,1297383162075,20922789888000,354250929192160,6402 373705728000,121407227453840328,2432849766865689600,5104104739355905920 0,112400072777760768000 0 ⋆ Product _{ n>=1 } 1 / (1 - x ^ n / n!) ^ a(n) = exp(- x) / (1 - x). ● a(1) = 0; a(n) = (n - 1)! * (1 - Sum _{ d|n, 1 < d < n } d * d! ^ (- n / d) * a(d)). ●

▶ [A359951] 0,0,1,2,3,24,145,720,4725,22400,602721,3628800,67692625,47900160 0,12924021825,103953833984,2116670180625,20922789888000,959231402754625,6 402373705728000,2570712156529326 81,3242340687872000000,1425972302226164 30625,112400072777760768000 0 ⋆ Number of permutations of [n] such that the GCD of the cycle lengths is a prime. ● a(p) = (p - 1)! for prime p. ●

▶ [A041659] 1,1,2,3,26,29,55,84,3079,3163,6242,9405,81482,90887,172369,26325 6,9649585,9912841,19562426,29475267,255364562,284839829,540204391,82504422 0,30241796311 ⋆ Denominators of continued fraction convergents to sqrt(348). ● a(n) = 3134 * a(n - 8) - a(n - 16) for n>15. - _ Vincenzo Librandi _ , Dec 22 2013 ●

► [A042043] 1,2,3,26,29,84,3893,7870,11763,101974,113737,329448,15268345,30866138,46134483,399942002,446076485,1292094972,59882445197,121056985366,18093943056 3,1568572429870,1749511860433,5067596150736,234858934794289 ★ Denominators of continued fraction convergents to sqrt(545). ● a(n) = 3922 * a(n - 6) - a(n - 12) for n>11. - _ Vincenzo Librandi _ , Jan 13 2014 ●

► [A337560] 1,2,3,28,29,78,79,104,105,154,155,252,253,254,351,376,377,426,427,620,717,718,719,912,913 ★ Number of length four 1..n vectors that contain their harmonic mean. ● a(n) - a(n - 1) = 1 (mod 12). ●

► [A001094] 0,1,2,3,28,125,366,847,1688,3033,5050,7931,11892,17173,24038,32775,43696,57137,73458,93043,116300,143661,175582,212543,255048 ★ a(n) = n + n * (n - 1) * (n - 2) * (n - 3). ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5); a(0)=0, a(1)=1, a(2)=2, a(3)=3, a(4)=28. - _ Harvey P. Dale _ , Feb 02 2012 ● a(n) = n + 4! * binomial(n,4). ●

► [A003017] 1,1,2,3,28,605,9366,116767,1310408,15812505,2639246 50,6018875291,148630870092,3548481410773,82543469312318,2000101425252855,54347539111582096,1678367049470539697,56020955060945897298 ★ Expansion of 1 / (1 - x * exp(x) + x ^ 2 * exp(2 * x) - x ^ 3 * exp(3 * x)). ● a(n) = sum(sum(k ^ (n - k) / (n - k)! * sum(binomial(j,k - 3 * m + 2 * j) * (- 1) ^ (k - 3 * m + 2 * j) * binomial(m,j),j,0,m),k,m,n),m,1,n), n>0. - _ Vladimir Kruchinin _ , Aug 20 2010 ●

► [A096580] 2,3,28,8718,51426757439 ★ a(n) = smallest m >= 2 such that Sum _{ k=2..m } 1 / (k * log(k)) >= n. ● a(n) is roughly exp(exp(n - k)), where k = 0.7946786454... - _ Charles R Greathouse IV _ , Jul 23 2007 ●

► [A041193] 1,2,3,29,32,93,1892,3877,5769,55798,61567,178932,3640207,7459346,11099553,107355323,118454876,344265075,7003756376,14351777827,21355534203,206551585654,227907119857,662365825368 ★ Denominators of continued fraction convergents to sqrt(107). ● a(n) = 1924 * a(n - 6) - a(n - 12). G.f.: - (x ^ 10 - 2 * x ^ 9 + 3 * x ^ 8 - 29 * x ^ 7 + 32 * x ^ 6 - 93 * x ^ 5 - 32 * x ^ 4 - 29 * x ^ 3 - 3 * x ^ 2 - 2 * x - 1) / (x ^ 12 - 1924 * x ^ 6 + 1). - _ Colin Barker _ , Jul 19 2012 ●

► [A041053] 1,1,2,3,32,35,67,102,1087,1189,2276,3465,36926,40391,77317,117708,1254397,1372105,2626502,3998607,42612572,46611179,89223751,135834930,1447573051 ★ Denominators of continued fraction convergents to sqrt(32). ● a(0)=1, a(1)=1, a(2)=2, a(3)=3, a(4)=32, a(5)=35, a(6)=67, a(7)=102, a(n)=34 * a(n - 4) - a(n - 8). - _ Harvey P. Dale _ , Jun 15 2015 ●

► [A212763] 0,2,3,32,40,162,189,512,576,1250,1375,2592,2808,4802,5145,8192,8704,13122,13851,20000,21000,29282,30613,41472,43200 ★ Number of (w,x,y,z) with all terms in { 0,...,n } , and w, x and y odd. ● a(n) = a(n - 1) + 4 * a(n - 2) - 4 * a(n - 3) - 6 * a(n - 4) + 6 * a(n - 5) + 4 * a(n - 6) - 4 * a(n - 7) - a(n - 8) + a(n - 9). ● a(n) = (n + 1) * (2 * n ^ 3 + 3 * n ^ 2 + 3 * n + 1 - (3 * n ^ 2 + 3 * n + 1) * (- 1) ^ n) / 16. - _ Luce ETIENNE _ , Oct 01 2015 ●

► [A041895] 1,1,2,3,32,195,1982,2177,4159,6336,270271,276607,546878,823485,8781728,53513853,543920258,597434111,1141354369,1738788480,74170470529,75909259009,150079729538,225988988547,2409969615008 ★ Denominators of continued fraction convergents to sqrt(469). ● a(n) = 274430 * a(n - 10) - a(n - 20) for n>19. - _ Vincenzo Librandi _ , Dec 26 2013 ●

► [A363499] 0,1,2,3,35,67,99,131,163,406,649,892,1135,1378,1621,1864,2888,3912,4936,5960,6984,8008,9032,10056,11080 ★ a(n) = Sum _{ k=0..n } floor(sqrt(k)) ^ 5. ● a(n) = (n + 1) * m ^ 5 - (1 / 84) * m * (m + 1) * (2 * m + 1) * (3 * m - 1) * (10 * m ^ 3 - 7 * m + 4), where m = floor(sqrt(n)). ●

► [A042663] 1,2,3,35,493,528,1021,2570,6161,14892,21053,35945,524283,5803058,6327341,18457740,1076876261,2172210262,3249086523,37912162015,534019354733,571931516748,1105950871481,2783833259710,6673617390901 ★ Denominators of continued fraction convergents to sqrt(861). ● a(n) = 1083203602 * a(n - 16) - a(n - 32) for n>31. - _ Vincenzo Librandi _ , Jan 26 2014 ●

► [A041329] 1,2,3,38,41,120,3161,6442,9603,121678,131281,384240,10121521,20627282,30748803,389612918,420361721,1230336360,32409107081,66048550522,98457657603,1247540441758,1345998099361,3939536640480,103773950751841 ★ Denominators of continued fraction convergents to sqrt(178). ● a(n) = 3202 * a(n - 6) - a(n - 12). - _ Vincenzo Librandi _ , Dec 15 2013 ●

► [A356047] 2,3,44,45,626,627,8732,8733,121634,121635,1694156,1694157,23596562,23596563,328657724,328657725,4577611586,4577611587,63757904492,63757904493,888033051314,888033051315,12368704813916,12368704813917,172273834343522 ★ The number of links of a polyline that connects the midpoints of opposite sides of the n - th regular integer hexagon and has the following properties: the first link is 1; each subsequent one is 1 more than the previous one; the angle between adjacent links is equal to Pi / 3; links of the same parity are parallel. ● a(n) = 15 * a(n - 2) - 15 * a(n - 4) + a(n - 6) for n > 6. ●

► [A041501] 1,2,3,47,50,147,4754,9655,14409,225790,240199,706188,22838215,46382618,69220833,1084695113,1153915946,3392527005,109714780106,222822087217,332536867323,5210875097062,5543411964385,162976990258 32,527069780791009 ★ Denominators of continued fraction convergents to sqrt(267). ● a(n) = 4804 * a(n - 6) - a(n - 12) for n>11. - _ Vincenzo Librandi _ , Dec 19 2013 ●

► [A041133] 1,1,2,3,50,53,103,156,2599,2755,5354,8109,135098,143207,278305,421512,7022497,7444009,14466506,21910515,365034746,386945261,751980007,1138925268,18974784295 ★ Denominators of continued fraction convergents to sqrt(75). ● a(n) = 52 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Dec 11 2013 ●

► [A268251] 0,1,2,3,50,243,4802,23763,470450,2328483,46099202,228167523,4517251250,22358088723,442644523202,2190864527283,43374646022450,214682365584963,4250272665676802,21036680962799043,416483346590304050,2061380051988721203,40811117693184120002 ★ Expansion of x * (1 + 2 * x - 96 * x ^ 2 - 148 * x ^ 3 + 45 * x ^ 4 + 50 * x ^ 5 + 2 * x ^ 6) / (1 - 99 * x ^ 2 + 99 * x ^ 4 - x ^ 6). ● a(n) = 99 * a(n - 2) - 99 * a(n - 4) + a(n - 6) for n>7. ● a(n) = - a(n - 1) + 98 * a(n - 2) + 98 * a(n - 3) - a(n - 4) - a(n - 5) - 144 for n>6. ●

► [A041953] 1,2,3,65,68,201,8912,18025,26937,583702,610639,1804980,80029759,161864498,241894257,5241643895,5483538152,16208720199,718667226908,1453543174015,2172210400923,47069961593398,49242171994321,145554305582040,6453631617604081 ★ Denominators of continued fraction convergents to sqrt(499). ● a(n) = 8980 * a(n - 6) - a(n - 12) for n>11. - _ Vincenzo Librandi _ , Dec 27 2013 ●

► [A041249] 1,1,2,3,68,71,139,210,4759,4969,9728,14697,333062,347759,680821,1028580,23309581,24338161,47647742,71985903,1631337608,1703323511,3334661119,5037984630,114170322979 ★ Denominators of continued fraction convergents to sqrt(136). ● a(n) = 70 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Dec 13 2013 ●

► [A306195] 2,3,77,679,2809,18659,274511,1123471,10761677,222222219,1329025059,11257702583,298693399003,8722140365427,185351911272 29,600479950316063,210472283199251 13,4409569030377423 5,1686791892208310919 ★ Least integer N > 1 such that the number of base - n - zero containing numbers [<= N] >= the number of base - n - zerofree numbers [<= N]. ● a(n) = min(k > 1 | numOfZeroNum _ n(k) >= numOfZerofreeNum _ n(k)). ● a(n) = min(k > 1 | numOfZeroNum _ n(k) = (n + 1) / 2). ● a(n) = min(k > 1 | numOfZerofreeNum _ n(k) = (n + 1) / 2). ● a(n) > 2 ^ ((n - 1 / 2) * log(n). ● a(n) > 2 ^ ((n - 1 / 2) * log(n) * e ^ ((11 * log(n) + 12) / (12 * n). ● a(n) = O(n * 2 ^ ((n - 1 / 2) * log(n))). ●

► [A041401] 1,1,2,3,86,89,175,264,7567,7831,15398,23229,665810,689039,1354849,2043888,58583713,60627601,119211314,179838915,5154700934,5334539849,10489240783,15823780632,453555098479 ★ Denominators of continued fraction convergents to sqrt(215). ● a(n) = 88 * a(n - 4) - a(n - 8) for n>7. - _ Vincenzo Librandi _ , Dec 17 2013 ●

► [A042901] 1,2,3,92,95,282,17579,35440,53019,1626010,1679029,4984068,3106912 45,626366558,937057803,28738100648,29675158451,88088417550,5491157046551,11070402510652,16561559557203,507917189226742,524478748783945,1556874686794632,97050709330051129 ★ Denominators of continued fraction convergents to sqrt(982). ● a(n) = 17674 * a(n - 6) - a(n - 12) for n>11. - _ Vincenzo Librandi _ , Feb 01 2014 ●

► [A041589] 1,1,2,3,104,107,211,318,11023,11341,22364,33705,1168334,1202039,2370373,3572412,123832381,127404793,251237174,378641967,13125064052,13503706019,26628770071,40132476090,1391132957131 ★ Denominators of continued fraction convergents to sqrt(312). ● a(n) = 106 * a(n - 4) - a(n - 8) for n>7. - _ Vincenzo Librandi _ , Dec 20 2013 ●

► [A041813] 1,1,2,3,122,125,247,372,15127,15499,30626,46125,1875626,1921751,3797377,5719128,232562497,238281625,470844122,709125747,28835874002,29544999749,58380873751,87925873500,3575415813751 ★ Denominators of continued fraction convergents to sqrt(427). ● a(n) = 124 * a(n - 4) - a(n - 8) for n>7. - _ Vincenzo Librandi _ , Dec 24 2013 ●

► [A042701] 1,1,2,3,176,179,355,534,31327,31861,63188,95049,5576030,5671079,11247109,16918188,992502013,1009420201,2001922214,3011342415,176659782284,179671124699,356330906983,536002031682,31444448744539 ★ Denominators of continued fraction convergents to sqrt(880). ● a(n) = 178 * a(n - 4) - a(n - 8) for n>7. - _ Vincenzo Librandi _ , Dec 21 2013 ●

► [A324154] 2,3,344251,33182655683 ★ Least number N such that the number of primes (<= N) >= the number of the base - n - zerofree numbers (<= N). ● a(n) = min(k | pi(k) >= numOfZerofreeNum _ n(k)), where numOfZerofreeNum _ n(k) is the number of base - n - zerofree numbers <= k ((see A324161 for general formulas regarding numOfZerofreeNum _ n(k))). ● a(n) < e * (p * log(p * log((e / (e - 1)) * p * log(p)))) ^ (1 / (1 - d)), ● a(n) > e ^ 1.1 * (q * log(q * log(q * log(q)))) ^ (1 / (1 - d)), ● a(n) > e ^ 1.1 * (q * log(q)) ^ (1 / (1 - d)), ● a(n) > (n / (n - 1)) * ((n - 1) * log(n) * log(n * log(n))) ^ ((n - 1 / 2)) * log(n)). ● a(n) = O(n * ((e / (e - 1)) * n * log(n) * log(n * log(n))) ^ (n * log(n))). ●

► [A236680] 1,2,4,4,4,4,8,8,16,32,64,64,64,64,128,128,256,512,1024,1024,1024,1024,2048,2048,4096 ★ Dimension of the space of spinors in n - dimensional real space. ● a(n) = 16 * a(n - 8) = 2 * a(n - 1) - 2 * a(n - 2) + 4 * a(n - 4) - 8 * a(n - 5) + 8 * a(n - 6). ●

► [A309690] 0,0,0,0,0,2,4,4,4,8,12,16,20,26,32,38,44,58,72,80,88,106,124,142,160 ★ Sum of the even parts appearing among the second largest parts of the partitions of n into 3 parts. ● a(n) = Sum _{ j=1..floor(n / 3) } Sum _{ i=j..floor((n - j) / 2) } i * ((i - 1) mod 2). ● a(n) = 2 * a(n - 1) - 3 * a(n - 2) + 4 * a(n - 3) - 3 * a(n - 4) + 2 * a(n - 5) + a(n - 6) - 4 * a(n - 7) + 6 * a(n - 8) - 8 * a(n - 9) + 6 * a(n - 10) - 4 * a(n - 11) + a(n - 12) + 2 * a(n - 13) - 3 * a(n - 14) + 4 * a(n - 15) - 3 * a(n - 16) + 2 * a(n - 17) - a(n - 18) for n>17. ●

► [A140201] 0,1,2,4,4,5,6,8,8,9,10,12,12,13,14,16,16,17,18,20,20,21,22,24,24 ★ Partial sums of A140081. ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>4. ● a(n) = n when n + 1 is not a multiple of 4, and a(n) = n + 1 when n + 1 is a multiple of 4. - _ Dennis P. Walsh _ , Aug 06 2012 ● a(n) = (4 * n + 1 - i ^ (2 * n) + (- i) ^ (1 + n) + i ^ (1 + n)) / 4 where i=sqrt(- 1). - _ Wesley Ivan Hurt _ , Jun 04 2016 ● a(n) = n + 1 - (sign((n + 1) mod 4) mod 3). - _ Wesley Ivan Hurt _ , Sep 26 2017 ●

► [A147534] 1,1,2,4,4,5,7,7,8,10,10,11,13,13,14,16,16,17,19,19,20,22,22,23,25 ★ a(n) is congruent to (1,1,2) mod 3. ● a(1)=1, a(2)=1, a(3)=2, a(4)=4, a(n)=a(n - 1) + a(n - 3) - a(n - 4) for n>4. - _ Harvey P. Dale _ , Dec 09 2012 ● a(n) = (3 * n - 2 - cos(2 * n * Pi / 3) + sqrt(3) * sin(2 * n * Pi / 3)) / 3. - _ Wesley Ivan Hurt _ , Jul 24 2016 ● a(n) = 1 + floor((n - 1) / 3) + floor(2 * (n - 1) / 3). - _ Wesley Ivan Hurt _ , Jul 25 2016 ● a(n) = n - sign((n - 1) mod 3). - _ Wesley Ivan Hurt _ , Sep 25 2017 ●

► [A111138] 0,0,1,1,2,4,4,5,7,10,10,11,13,16,20,20,21,23,26,30,35,35,36,38,41 ★ Let b(n) denote the number of nontriangular numbers less than or equal to n. Then a(n) = b(n - 1) + a(b(n - 1)), with a(1) = a(2) = 0, a(3) = 1. ● a(N)=Comb(T,2) + Comb(R,3). - _ Gerald Hillier _ , Nov 18 2017 ●

► [A340761] 0,0,0,0,1,1,1,2,4,4,5,7,10,11,13,16,21,23,26,31,38,41,46,53,62 ★ Number of partitions of n into 4 parts whose 'middle' two parts have the same parity. ● a(n) = Sum _{ k=1..floor(n / 4) } Sum _{ j=k..floor((n - k) / 3) } Sum _{ i=j..floor((n - j - k) / 2) } [(j mod 2) = (i mod 2)], where [ ] is the Iverson bracket. ●

► [A014684] 1,1,2,4,4,6,6,8,9,10,10,12,12,14,15,16,16,18,18,20,21,22,22,24,25 ★ In the sequence of positive integers subtract 1 from each prime number. ● a(n) = phi(n!) / phi((n - 1)!). - _ Vladeta Jovovic _ , Nov 30 2002 ●

► [A187323] 0,0,1,2,4,4,6,6,8,9,10,10,13,13,14,15,17,17,19,19,21,22,23,23,26 ★ a(n) = floor(n / 2) + floor(n / 3) + floor(n / 4). ● a(n) = floor(n / 2) + floor(n / 3) + floor(n / 4). ● a(n + 12) = a(n) + 13. ●

► [A316945] 0,0,0,0,0,0,0,0,0,0,0,1,2,4,4,6,7,7,9,10,11,12,13,14,15 ⋆ A triple of positive integers (n,p,k) is admissible if there exist at least two different multisets of k positive integers, { x _ 1,x _ 2,...,x _ k } and { y _ 1,y _ 2,...,y _ k } , such that x _ 1 + x _ 2 + ... + x _ k=y _ 1 + y _ 2 + ... + y _ k = n and x _ 1x _ 2...x _ k = y _ 1y _ 2...y _ k = p. For each n, let A(n)= { k:(n,p,k) is admissible for some p } , and let a(n) = |A(n)|. • a(n) = 0 for 1 <= n <= 11, a(12) = 1, a(13) = 2, a(14) = 4, a(15) = 4, a(16) = 6, a(17) = 7, a(18) = 7, and a(n) = n - 10 for n >= 19. •

► [A014246] 1,2,4,4,6,7,8,9,10,12,12,14,15,16,17,18,20,20,21,23,24,25,26,28,28 ⋆ a(n) = (n - th term of Beatty sequence for e) - (n - th term of Beatty sequence for e / (e - 1)). • a(n) = floor(e * n) - floor(e / (e - 1) * n). - _ Franklin T. Adams - Watters _ , Nov 02 2006 •

► [A007843] 1,2,4,4,6,8,8,8,10,12,12,14,16,16,16,18,20,20,22,24,24,24,26,28 ⋆ Least positive integer k for which 2 ^ n divides k!. • a(2 ^ i + r) = 2 ^ i + a(r + 1) for 0 <= r <= 2 ^ i - 2, and a(2 ^ i + r) = 2 ^ (i + 1) for r = 2 ^ i - 1. - _ Kevin Ryde _ , Aug 06 2022 •

► [A063224] 0,2,4,4,6,8,8,10,12,12,14,16,16,18,20,20,22,24,24,26,28,28,30,32,32 ⋆ Dimension of the space of weight 2n cuspidal newforms for Gamma _ 0(60). • a(n) = (n - 1) + floor((n - 1) / 3) + ((n - 1) mod 3). - _ Bruno Berselli _ , Apr 04 2016 • a(n) = 2 * floor(2 * n / 3). - _ Eric W. Weisstein _ , Sep 10 2021 • a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n > 4. - _ Eric W. Weisstein _ , Sep 10 2021 • a(n) = 2 / 3 * (ChebyshevU(n, - 1 / 2) + 2 * n - 1). - _ Eric W. Weisstein _ , Sep 10 2021 • a(n) = 2 / 9 * (6 * (n + 1) - 9 + 2 * sqrt(3) * sin(2 * (n + 1) * pi / 3). - _ Eric W. Weisstein _ , Sep 10 2021 •

► [A081238] 0,2,4,4,6,12,16,16,16,24,30,30,36,48,60,60,70,70,80,80,96,112,126,126,126 ⋆ #{ (i,j): mu(i) * mu(j) = - 1, 1 <= i <= n, 1 <= j <= n } , where mu=A008683 (Moebius function). • a(n) = a(n - 1) iff mu(n) = 0. •

► [A233272] 1,2,4,4,7,7,8,8,12,12,13,13,15,15,16,16,21,21,22,22,24,24,25,25,28 ⋆ a(n) = n + 1 + number of nonleading zeros in binary representation of n (A080791). • a(0) = 1; for n > 1, a(n) = 1 + floor(n / 2) + a(floor(n / 2)). - (Found by LODA miner, see comments) - _ Antti Karttunen _ , Jan 30 2022 •

► [A070072] 1,2,4,4,7,9,14,14,14,17,24,24,32,37,43,43,54,54,66,66,74,83,98,98,98 ⋆ Number of distinct rectangles with integer sides <= n and squarefree area. • a(n) = Sum _{ i=1..n } Sum _{ j= 1..i } mu(i * j) ^ 2, where mu is the Moebius function (A008683). - _ Ridouane Oudra _ , Oct 17 2019 •

► [A076466] 1,2,4,4,8,10,13,16,23,30,38,40,41,42,54,60,69,72,87,100,116,122,129,144,163 ⋆ a(1)=1 a(n) = a(n - 1) + (((- 1) ^ a(n - 1) * a(n - 1)) mod n. • a(n) is asymptotic to 4n ^ 2 / 15; a(n)=4n ^ 2 / 15 if n is of the form 30 * (2k + 1) hence a(60k + 30) = 1800 * (2k + 1) ^ 2 •

► [A076342] 2,4,4,8,12,12,16,20,24,28,32,36,40,44,48,52,60,60,68,72,72,80,84,88,96 ⋆ a(n) = A076340(A000040(n)), real part of primes mapped as defined in A076340, A076341. • a(n) = p - (- 1 / p) = p + (- 1) ^{ (p + 1) / 2 } for an odd prime p. { (a / b) stands for the value of the Legendre symbol } . - _ Lekraj Beedassy _ , Oct 22 2004 •

► [A135268] 1,1,2,4,4,8,12,18,24,30,30,40,48,60,72,84,96,112,128,146,164,184,204,226,248 ⋆ a(0) = 1; a(n) = a(n - 1) + n - gcd(n,a(n - 1)). • a(n) = c * n * (n - 1), where c ~ 0.48.... •

► [A089887] 1,2,4,4,8,16,32,64,64,128,256,512,1024,2048,4096,4096,8192,16384,32768,65536,131072,262144,524288,1048576,1048576 ⋆ Number of subsets of { 1,.., n } containing no squares. • a(n) = 2 ^ (n - n ^ (1 / 2)). •

► [A114215] 0,1,2,4,4,9,12,25,30,64,80,169,208,441,546,1156,1428,3025,3740,7921,9790,20736,25632,54289,67104 ⋆ Number of derangements of [n] avoiding the patterns 123, 132 and 213. • a(n) = F(n) - F((n - 2) / 2) ^ 2 if n is even; a(n)= F(n) - F((n - 1) / 2) ^ 2 if n is odd; here F(n) is the Fibonacci sequence with F(0)=F(1)=1. • a(n) = 2 * a(n - 2) + 2 * a(n - 4) - a(n - 6). G.f.: - x ^ 2 * (x + 1) * (x ^ 3 - x ^ 2 - x - 1) / ((x ^ 2 - x - 1) * (x ^ 2 + 1) * (x ^ 2 + x - 1)). - _ Colin Barker _ , Mar 29 2014 •

► [A366045] 1,2,4,4,11,20,36,64,121,222,408,748,1379,2536,4664,8576,15777,29018,53372,98164,180555,332092,610812,1123456,2066361 ⋆ Number of circular binary sequences of length n with an odd number of 0's and no three consecutive 1's. • a(n) = a(n - 2) + 2 * a(n - 3) + 3 * a(n - 4) + 2 * a(n - 5) + a(n - 6), a(1)= 1, a(2)=2, a(3)=4, a(4)=4, a(5)=11, a(6)=20. •

► [A052405] 0,1,2,4,5,6,7,8,9,10,11,12,14,15,16,17,18,19,20,21,22,24,25,26,27 ⋆ Numbers without 3 as a digit. • a(n) >> n ^ k with k = log(10) / log(9) = 1.0479.... - _ Charles R Greathouse IV _ , Oct 16 2012 • a(n) = replace digits d > 2 by d + 1 in base - 9 representation of n - 1. - _ Reinhard Zumkeller _ , Oct 07 2014 •

► [A047573] 0,1,2,4,5,6,7,8,9,10,12,13,14,15,16,17,18,20,21,22,23,24,25,26,28 ⋆ Numbers that are congruent to { 0, 1, 2, 4, 5, 6, 7 } mod 8. • a(n) = a(n - 1) + a(n - 7) - a(n - 8) for n>8. • a(n) = n + floor((n - 4) / 7). (End) • a(n) = a(n - 7) + 8 for n>7. • a(n) = (56 * n - 49 + (n mod 7) + ((n + 1) mod 7) + ((n + 2) mod 7) - 6 * ((n + 3) mod 7) + ((n + 4) mod 7) + ((n + 5) mod 7) + ((n + 6) mod 7)) / 49. • a(7 * k) = 8 * k - 1, a(7 * k - 1) = 8 * k - 2, a(7 * k - 2) = 8 * k - 3, a(7 * k - 3) = 8 * k - 4, a(7 * k - 4) = 8 * k - 6, a(7 * k - 5) = 8 * k - 7, a(7 * k - 6) = 8 * k - 8. (End) •

► [A047318] 0,1,2,4,5,6,7,8,9,11,12,13,14,15,16,18,19,20,21,22,23,25,26,27,28 ⋆ Numbers that are congruent to { 0, 1, 2, 4, 5, 6 } mod 7. • a(n) = a(n - 1) + a(n - 6) - a(n - 7) for n>7. • a(n) = n + floor((n - 4) / 6). (End) • a(n) = (42 * n - 39 + 3 * cos(n * Pi) - 4 * sqrt(3) * cos((1 + 4 * n) * Pi / 6) + 12 * sin((1 - 2 * n) * Pi / 6)) / 36. • a(6k) = 7k - 1, a(6k - 1) = 7k - 2, a(6k - 2) = 7k - 3, a(6k - 3) = 7k - 5, a(6k - 4) = 7k - 6, a(6k - 5) = 7k - 7. (End) •

► [A047263] 0,1,2,4,5,6,7,8,10,11,12,13,14,16,17,18,19,20,22,23,24,25,26,28,29 ⋆ Numbers that are congruent to { 0, 1, 2, 4, 5 } mod 6. • a(n) = a(n - 5) + 6 for n > 5. - _ R. J. Mathar _ , Feb 25 2008 • a(n) = a(n - 1) + a(n - 5) - a(n - 6) for n > 6. - _ Harvey P. Dale _ , Oct 05 2014 • a(n) = n + floor((n - 4) / 5). • a(n) = (6 * n - 4 - ((n + 1) mod 5)) / 5. • a(5k) = 6k - 1, a(5k - 1) = 6k - 2, a(5k - 2) = 6k - 4, a(5k - 3) = 6k - 5, a(5k - 4) = 6k - 6. (End) •

► [A127428] 0,1,2,4,5,6,7,8,10,11,12,13,14,17,18,19,20,21,23,24,25,26,27,29,30 ⋆ v _ 5((10n)!) - v _ 5((5n)!), where v _ p(N) is the p - adic valuation defined in A112765. • a(n) - n = a([(n + 2) / 5]). •

► [A001963] 0,1,2,4,5,6,7,8,10,11,12,13,15,16,17,18,20,21,22,23,25,26,27,28,29 ⋆ Winning positions in the u - pile of the 4 - Wythoff game with i=1. • a(n) = floor((n + 1 / 4) * (sqrt(5) - 1)). - _ R. J. Mathar _ , Feb 14 2011 •

► [A047571] 0,2,4,5,6,7,8,10,12,13,14,15,16,18,20,21,22,23,24,26,28,29,30,31,32 ⋆ Numbers that are congruent to { 0, 2, 4, 5, 6, 7 } mod 8. • a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - 2 * a(n - 4) + 2 * a(n - 5) - a(n - 6) for n>6. • a(n) = (8 * n - 2 * sqrt(3) * sin(Pi * (n + 1) / 3) + 2 * sin(2 * Pi * (n + 1) / 3) / sqrt(3) - 4) / 6. - _ Ilya Gutkovskiy _ , May 30 2016 • a(6k) = 8k - 1, a(6k - 1) = 8k - 2, a(6k - 2) = 8k - 3, a(6k - 3) = 8k - 4, a(6k - 4) = 8k - 6, a(6k - 5) = 8k - 8. - _ Wesley Ivan Hurt _ , Jun 16 2016 •

► [A276706] 1,2,4,5,6,7,8,10,14,16,20,22,26,28,32,34,38,40,44,46,50,52,56,58,62 ⋆ Indices of records in A249860. • a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n>3. • a(n) = (6 * n - 27 - (- 1) ^ n) / 2 for n>6. •

► [A103838] 2,4,5,6,7,9,10,11,12,13,14,15,16,17,18,19,20,22,23,24,25,26,27,28,29 ⋆ Complement of A001671. • a(n) = n + [log(n + [log(n)])], apart from some initial exceptions. - _ David W. Wilson _ , Mar 29 2005 •

► [A265187] 0,1,2,4,5,6,7,9,10,11,12,13,15,16,17,18,20,21,22,23,24,26,27,28,29 ⋆ Nonnegative m for which 2 * floor(m ^ 2 / 11) = floor(2 * m ^ 2 / 11). • a(n) = a(n - 1) + a(n - 9) - a(n - 10) for n>10. •

► [A184738] 1,2,4,5,6,7,9,10,11,12,14,15,16,17,19,20,21,22,23,25,26,27,28,30,31 ⋆ floor(nr + h), where r= - 1 + sqrt(5), h=1 / 2; complement of A184735. • a(n) =floor(nr + h), where r= - 1 + sqrt(5), h=1 / 2. •

► [A032769] 0,1,2,4,5,6,7,9,10,11,12,14,15,16,17,19,20,21,22,24,25,26,27,29,30 ⋆ Numbers that are congruent to { 0, 1, 2, 4 } mod 5. • a(n) = (1 / 8) * (10 * n - 1 - (- 1) ^ n - 2 * (- 1) ^ (n / 2 - 1 / 2). - _ Ralf Stephan _ , Jun 09 2005 • a(n) = floor((5 * n - 4) / 4). - _ Gary Detlefs _ , Mar 06 2010 • a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. • a(n) = (10 * n - 11 + i ^ (2 * n) + (1 + i) * I ^ (- n) + (1 - i) * i ^ n) / 8 where i=sqrt(- 1). •

► [A047572] 1,2,4,5,6,7,9,10,12,13,14,15,17,18,20,21,22,23,25,26,28,29,30,31,33 ⋆ Numbers that are congruent to { 1, 2, 4, 5, 6, 7 } mod 8. • a(n) = a(n - 1) + a(n - 6) - a(n - 7) for n>7. • a(n) = (24 * n - 9 - 3 * cos(n * Pi) - 6 * cos(n * Pi / 3) + 2 * sqrt(3) * sin(2 * n * Pi / 3)) / 18. • a(6k) = 8k - 1, a(6k - 1) = 8k - 2, a(6k - 2) = 8k - 3, a(6k - 3) = 8k - 4, a(6k - 4) = 8k - 6, a(6k - 5) = 8k - 7. (End) •

► [A255165] 0,1,2,4,5,6,7,9,11,12,13,14,15,16,17,20,21,22,23,24,25,26,27,28,30 ⋆ a(n) = Sum _{ k=2..n } floor(log(n) / log(k)), n >= 1. • a(n) = Sum _{ k=2..n } floor(log(n) / log(k)), n >= 1. • a(n) = Sum _{ i=2..n } floor(n ^ (1 / i)). • a(n) = Sum _{ i=1..floor(log _ 2(n)) } floor(n ^ (1 / i) - 1). •

► [A007238] 0,1,2,4,5,6,7,10,11,12,13,15,16,17,18,22,23,24,25,27,28,29,30,33,34 ⋆ Length of longest chain of subgroups in S _ n. • a(n) = ceiling(3n / 2) - b(n) - 1, where b(n) = # 1's in binary expansion of n (A000120). •

► [A047570] 2,4,5,6,7,10,12,13,14,15,18,20,21,22,23,26,28,29,30,31,34,36,37,38,39 ⋆ Numbers that are congruent to { 2, 4, 5, 6, 7 } mod 8. • a(n) = a(n - 1) + a(n - 5) - a(n - 6). •

► [A059921] 1,2,4,5,6,8,9,10,11,12,13,14,15,16,17,19,20,21,22,23,24,25,26,27,28 ⋆ a(n) = floor(n ^ ((n + 1) / n)). • a(n) = floor(n ^ (1 + 1 / n)). - _ M. F. Hasler _ , Nov 03 2014 •

► [A062289] 2,4,5,6,8,9,10,11,12,13,14,16,17,18,19,20,21,22,23,24,25,26,27,28,29 ⋆ Numbers n such that n - th row in Pascal triangle contains an even number, i.e., A048967(n) > 0. • a(n) = 2 if n=1, otherwise max { min { 2 * i, a(n - i + 1) + i } : 1 < i <= n } . •

► [A276216] 1,2,4,5,6,8,9,10,11,12,14,15,16,17,18,20,21,22,23,24,25,27,28,29,30 ⋆ Position of n ^ r in the joint ranking of { h ^ r } and { k ^ s } , where r = sqrt(2), s = sqrt(6), h > 1, k > 1. • a(n) = n + floor(n ^ (r / s)); the complement is given by n + floor(n ^ (s / r)). •

► [A030124] 2,4,5,6,8,9,10,11,13,14,15,16,17,19,20,21,22,23,24,25,27,28,29,30,31 ⋆ Complement (and also first differences) of Hofstadter's sequence A005228. • a(n) = n + sqrt(2n) + o(n ^ (1 / 2)). - _ M. F. Hasler _ , Jun 04 2008 [proved in Jubin's paper]. •

► [A004773] 0,1,2,4,5,6,8,9,10,12,13,14,16,17,18,20,21,22,24,25,26,28,29,30,32 ⋆ Numbers congruent to { 0, 1, 2 } mod 4: a(n) = floor(4 * n / 3). • a(0) = 0, a(n + 1) = a(n) + a(n) mod 4 + 0 ^ (a(n) mod 4). - _ Reinhard Zumkeller _ , Mar 23 2003 • a(n) = floor(n / 3) + n. - _ Gary Detlefs _ , Mar 20 2010 • a(n) = (12 * n - 3 + 3 * cos(2 * n * Pi / 3) + sqrt(3) * sin(2 * n * Pi / 3)) / 9. - _ Wesley Ivan Hurt _ , Sep 30 2017 • a(n) = (12 * n - 3 + w ^ (2 * n) * (w + 2) - w ^ n * (w - 1)) / 9 where w = (- 1 + sqrt(- 3)) / 2. • a(n) = 2 * floor(n / 3) + floor((n + 1) / 3) + floor((n + 2) / 3). • a(n) = (4 * n - n mod 3) / 3. •

► [A329978] 1,2,4,5,6,8,9,10,12,13,14,16,17,18,20,21,22,24,25,26,28,29,31,32,33 ⋆ Beatty sequence for log x, where 1 / x + 1 / (log x) = 1. • a(n) = floor(n x), where x = 3.8573348... is the constant in A236229. •

► [A329839] 1,2,4,5,6,8,9,10,12,13,14,16,17,18,20,21,22,24,25,27,28,29,31,32,33 ⋆ Beatty sequence for (- 1 + sqrt(41)) / 4. • a(n) = floor(n * r), where r = (- 1 + sqrt(41)) / 5. •

► [A059553] 1,2,4,5,6,8,9,10,12,13,14,16,17,18,20,21,23,24,25,27,28,29,31,32,33 ⋆ Beatty sequence for Gamma(2 / 3). • a(n) = floor(n * Gamma(2 / 3)). - _ Michel Marcus _ , Jan 04 2015 •

► [A079709] 1,2,4,5,6,8,9,10,12,13,14,16,18,20,21,22,25,27,28,29,30,32,33,34,36 ⋆ Numbers m such that the squarefree kernel of m is less than the squarefree kernel of m + 1. • a(n) is asymptotic to c * n where c=1.51... •

► [A003511] 1,2,4,5,6,8,9,10,12,13,15,16,17,19,20,21,23,24,25,27,28,30,31,32,34 ⋆ A Beatty sequence: floor(n * (1 + sqrt(3)) / 2). • a(n) = floor(n * (1 + sqrt(3)) / 2). - _ Michel Marcus _ , Jan 05 2015 •

► [A260483] 1,2,4,5,6,8,9,10,12,13,15,16,17,19,20,21,23,24,26,27,28,30,31,32,34 ⋆ Beatty sequence for e ^ (1 / Pi) = A179706. • a(n) = floor(n * e ^ (1 / Pi)). •

► [A004128] 0,1,2,4,5,6,8,9,10,13,14,15,17,18,19,21,22,23,26,27,28,30,31,32,34 ⋆ a(n) = Sum _{ k=1..n } floor(3 * n / 3 ^ k). • a(n) = Sum _{ k>=0 } floor(n / 3 ^ k). a(n) = Sum _{ k=0..floor(log _ 3(n)) } floor(n / 3 ^ k), n >= 1. - _ Hieronymus Fischer _ , Aug 14 2007 • a(k * 3 ^ m) = k * (3 ^ (m + 1) - 1) / 2, 0 <= k < 3, m >= 0. - _ Hieronymus Fischer _ , Aug 14 2007 • a(n) <= (3 n - 1) / 2; equality holds for powers of 3. - _ Hieronymus Fischer _ , Aug 14 2

007 ● a(n) >= (3n - 2) / 2 - floor(log _ 3(n)); equality holds for n = 3 ^ m - 1, m > 0. - _ Hieronymus Fischer _ , Aug 14 2007 ●
▶ [A023717] 0,1,2,4,5,6,8,9,10,16,17,18,20,21,22,24,25,26,32,33,34,36,37,38,40 ⋆ Numbers with no 3's in base - 4 expansion. ● a(n) = Sum _{ i=0..m } d(i) * 4 ^ i, where Sum _{ i=0..m } d(i) * 3 ^ i is the base - 3 representation of n. - _ Clark Kimberling _ ● a(3n) = 4 * a(n); a(3n + 1) = 4 * a(n) + 1; a(3n + 2) = 4 * a(n) + 2; a(n) = 4 * a(floor(n / 3)) + n - 3 * floor(n / 3). - _ Benoit Cloitre _ , Apr 27 2003 ●
▶ [A087118] 0,2,4,5,6,8,9,11,12,13,14,16,17,19,23,24,25,27,28,29,30,32,33,35,39 ⋆ Numbers having exactly one maximal group of consecutive zeros in binary representation of n. ● a((n ^ 3 - n) / 6 + 2) = 2 ^ n for n >= 1. ● a((n ^ 3 - n) / 6 + 2 + n) = 2 ^ n + 2 ^ (n - 1) for n >= 2. ● a((n ^ 3 - n) / 6 + 2 + n + n - 1) = 2 ^ n + 2 ^ (n - 1) + 2 ^ (n - 2) for n >= 3. ● a(n) < 2 * 2 ^ ((6 * n) ^ (1 / 3)) and limsup a(n) / 2 ^ ((6 * n) ^ (1 / 3)) = 2. ● a(n) > 1 / 2 * 2 ^ ((6 * n) ^ (1 / 3)) for n>=3 and 1 / 2 <= liminf a(n) / (2 ^ ((6 * n) ^ (1 / 3))) <= 1. ●
▶ [A047317] 1,2,4,5,6,8,9,11,12,13,15,16,18,19,20,22,23,25,26,27,29,30,32,33,34 ⋆ Numbers that are congruent to { 1, 2, 4, 5, 6 } mod 7. ● a(n) = a(n - 1) + a(n - 5) - a(n - 6). ● a(n) = floor((7 * n - 1) / 5). - _ Gary Detlefs _ , May 14 2001 ●
▶ [A247161] 1,2,4,5,6,8,9,11,12,13,16,17,18,20,21,22,24,25,27,28,29,32,33,34,36 ⋆ Dynamic Betting Game D(n,4,2). ● a(n) = floor(12 * n / 11) + floor((4 * n + 1) / 11). ● a(n) = a(n - 1) + a(n - 11) - a(n - 12). - _ Colin Barker _ , Sep 11 2014 ●
▶ [A080086] 0,1,1,2,4,5,6,8,9,13,14,17,18,19,21,23,27,28,31,32,34,36,40,42,46 ⋆ Number of factors of 3 in the factorial of the n - th prime, counted with multiplicity. ● a(n) = sum _{ k=1..L } floor(prime(n) / 3 ^ k), where L = log(p _ n) / log(3). ●
▶ [A080653] 2,4,5,6,8,10,11,12,13,14,16,18,20,22,23,24,25,26,27,28,29,30,32,34,36 ⋆ a(1) = 2; for n>1, a(n) is taken to be the smallest integer greater than a(n - 1) such that the condition "a(a(n)) is always even" is satisfied. ● a(a(n)) = 2n + 2. - _ Yifan Xie _ , Jul 14 2022 ● a(n + 1) - a(n) is in { 1, 2 } . In particular, n < a(n) <= 2n. More is true: lim inf a(n) / n = 4 / 3 and lim sup a(n) / n = 3 / 2. - _ Charles R Greathouse IV _ , Dec 14 2022 ●
▶ [A047262] 0,2,4,5,6,8,10,11,12,14,16,17,18,20,22,23,24,26,28,29,30,32,34,35,36 ⋆ Numbers that are congruent to { 0, 2, 4, 5 } mod 6. ● a(n) = 3 * n / 2 - 1 - sin (Pi * n / 2) / 2. (End) ● a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4) for n > 4. ● a(n) = (6 * n - 4 - i ^ (1 - n) + i ^ (1 + n)) / 4, where i = sqrt(- 1). ● a(n) = (6 * n - 4 - (1 - (- 1) ^ n) * (- 1) ^ (n * (n - 1) / 2)) / 4. ● a(n) = a(n - 4) + 6, a(1)=0, a(2)=2, a(3)=4, a(4)=5, for n > 4. (End) ●
▶ [A047434] 0,2,4,5,6,8,10,12,13,14,16,18,20,21,22,24,26,28,29,30,32,34,36,37,38 ⋆ Numbers that are congruent to { 0, 2, 4, 5, 6 } mod 8. ● a(n) = a(n - 1) + a(n - 5) - a(n - 6) for n > 6, a(n) = a(n - 5) + 8 for n > 5. ● a(n) = (40 * n - 35 + 3 * (n mod 5) + 3 * ((n + 1) mod 5) - 2 * ((n + 2) mod 5) - 2 * ((n + 3) mod 5) - 2 * ((n + 4) mod 5)) / 25. ● a(5k) = 8k - 2, a(5k - 1) = 8k - 3, a(5k - 2) = 8k - 4, a(5k - 3) = 8k - 6, a(5k - 4) = 8k - 8. (End) ●
▶ [A065502] 2,4,5,6,8,10,12,14,15,16,18,20,22,24,25,26,28,30,32,34,35,36,38,40,42 ⋆ Positive numbers divisible by 2 or 5; 1 / n not purely periodic after decimal point. ● a(n) = 10 * floor(n / 6) + s(n mod 6) - floor(((n - 1)mod 6) / 5), where s(n) = n + 1 + floor((n + 1) / 3). - _ Gary Detlefs _ , Oct 05 2013 ●
▶ [A206926] 2,4,5,6,9,10,11,12,13,18,19,20,22,25,26,37,38,41,44,50,52,75,77,83,89 ⋆ Numbers such that the number of contiguous palindromic bit patterns in their binary representation is minimal (for a given number of places). ● a(6(k + 1) + 4) = 2a(6k + 4) + floor(37 * 2 ^ (k + 5) / 63) mod 2. ● a(6(k + 1) + 5) = 2a(6k + 5) + floor(41 * 2 ^ (k + 1) / 63) mod 2. ● a(6(k + 1) + 6) = 2a(6k + 6) + floor(41 * 2 ^ (k + 5) / 63) mod 2. ● a(6(k + 1) + 7) = 2a(6k + 7) + floor(37 * 2 ^ (k + 2) / 63) mod 2. ● a(6(k + 1) + 8) = 2a(6k + 8) + floor(37 * 2 ^ (k + 4) / 63) mod 2. ● a(6(k + 1) + 9) = 2a(6k + 9) + floor(41 * 2 ^ (k + 4) / 63) mod 2. ●
▶ [A361936] 1,2,4,5,6,9,10,11,13,14,16,19,20,21,24,26,28,29,31,33,35,36,39,40,41 ⋆ Indices of the squares in the sequence of powerful numbers (A001694). ● a(n) = (zeta(3 / 2) / zeta(3)) * n + O(n ^ (2 / 3)). ●
▶ [A069470] 0,1,2,4,5,6,9,10,11,13,15,16,19,20,21,24,25,26,29,30,32,35,36,37,40 ⋆ a(n) = Sum _{ k>=1 } floor(n / (k * (k + 1) / 2)). ● a(n) <= floor((2 * n * floor((1 + 2 * sqrt(2 * n)) / 2)) / (1 + floor((1 + 2 * sqrt(2 * n)) / 2))). (End) ●
▶ [A047435] 1,2,4,5,6,9,10,12,13,14,17,18,20,21,22,25,26,28,29,30,33,34,36,37,38 ⋆ Numbers that are congruent to { 1, 2, 4, 5, 6 } mod 8. ● a(n) = a(n - 1) + a(n - 5) - a(n - 6) for n > 6. a(n) = a(n - 5) + 8 for n > 5. ● a(n) = (40 * n - 30 + 3 * (n mod 5) + 3 * ((n + 1) mod 5) - 2 * ((n + 2) mod 5) + 3 * ((n + 3) mod 5) - 7 * ((n + 4) mod 5)) / 25. ● a(5k) = 8k - 2, a(5k - 1) = 8k - 3, a(5k - 2) = 8k - 4, a(5k - 3) = 8k - 6, a(5k - 4) = 8k - 7. (End) ●
▶ [A125297] 1,2,4,5,6,9,10,12,15,17,18,24,25,27,31,34,35,42,43,59,62,63,64,82,83 ⋆ Number of nonempty subsets S of { 1,2,3,...,n } such that each member of S divides the sum of all members of S. ● a(p) = a(p - 1) + 1 for prime p > 3 (see proof in Comments). - _ Michael S. Branicky _ , Jan 12 2022 ●
▶ [A047315] 2,4,5,6,9,11,12,13,16,18,19,20,23,25,26,27,30,32,33,34,37,39,40,41,44 ⋆ Numbers that are congruent to { 2, 4, 5, 6 } mod 7. ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. ● a(n) = (14 * n - 1 - i ^ (2 * n) - (3 - i) * i ^ (- n) - (3 + i) * i ^ n) / 8 where i=sqrt(- 1). ●
▶ [A288429] 2,4,5,6,9,13,18,26,38,55,80,117,171,250,366,536,785,1150,1685,2469,3618,5302,7770,11387,16688 ⋆ a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) - a(n - 4), where a(0) = 2, a(1) = 4, a(2) = 5, a(3) = 6. ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) - a(n - 4), where a(0) = 2, a(1) = 4, a(2) = 5. a(3) = 6. ● a(n) = a(n - 1) + a(n - 3) - 1, for n > 2. - _ Greg Dresden _ , Feb 09 2020 ●
▶ [A047433] 2,4,5,6,10,12,13,14,18,20,21,22,26,28,29,30,34,36,37,38,42,44,45,46,50 ⋆ Numbers that are congruent to { 2, 4, 5, 6 } mod 8. ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. ● a(n) = (8 * n - 3 - i ^ (2 * n) - (2 - i) * i ^ (- n) - (2 + i) * i ^ n) / 4 where i=sqrt(- 1). ●
▶ [A187325] 0,0,1,2,4,5,7,7,9,10,12,12,15,15,16,18,20,20,22,22,25,26,27,27,30 ⋆ a(n) = floor(n / 2) + floor(n / 3) + floor(n / 4) + floor(n / 5). ● a(n) = floor(n / 2) + floor(n / 3) + floor(n / 4) + floor(n / 5). ● a(n) = - a(n - 1) - a(n - 2) + a(n - 4) + 2 * a(n - 5) + 2 * a(n - 6) + a(n - 7) - a(n - 9) - a(n - 10) - a(n - 11). ●
▶ [A183573] 2,4,5,7,8,9,10,12,13,14,15,17,18,19,20,21,22,24,25,26,27,28,29,31,32 ⋆ a(n) = n + floor(sqrt(2n + 1)). ● a(n + 1)=a(n) + 2 if n is in A047838, otherwise a(n + 1) = a(n) + 1. ●
▶ [A079726] 1,2,4,5,7,8,9,10,12,13,14,16,17,19,20,21,23,24,26,27,28,29,31,32,33 ⋆ a(1)=1, a(n) is the smallest integer > a(n - 1) such that a(n) is even if k(n)=1, a(n) is odd if k(n)=2, where k(n) denotes the n - th term of the Kolakoski sequence (A000002). ● a(n) is conjectured to be asymptotic to 4 / 3 * n. ●
▶ [A047498] 0,1,2,4,5,7,8,9,10,12,13,15,16,17,18,20,21,23,24,25,26,28,29,31,32 ⋆ Numbers that are congruent to { 0, 1, 2, 4, 5, 7 } mod 8. ● a(n) = a(n - 1) + a(n - 6) - a(n - 7) for n>7. ● a(n) = (24 * n - 27 + 3 * cos(n * Pi) + 6 * cos(n * Pi / 3) + 2 * sqrt(3) * sin(2 * n * Pi / 3)) / 18. ● a(6k) = 8k - 1, a(6k - 1) = 8k - 3, a(6k - 2) = 8k - 4, a(6k - 3) = 8k - 6, a(6k - 4) = 8k - 7, a(6k - 5) = 8k - 8. (End) ●
▶ [A026367] 1,2,4,5,7,8,9,10,12,13,15,16,17,18,20,21,23,24,26,27,29,30,31,32,34 ⋆ a(n) = least k such that s(k) = n, where s = A026366. ● a(n) = a(n - 1) + 2 if n is in the set 2A + 1, a(n) = a(n - 1) + 1 if n is not in 2A + 1 where 2A + 1 = { 2a(1) + 1,2a(2) + 1,2a(3) + 1,... } = { 3,5,9,11,15,17,19,21,25,27,31,33,... } . a(n) = (1 + sqrt(3)) / 2 * n + O(1) For example, a(3) = a(2) + 2 = 2 + 2 = 4 since 3 is in 2A + 1. a(10) = a(9) + 1 = 12 + 1 = 13 since 10 is not in 2A + 1. - _ Benoit Cloitre _ , Apr 23 2008 ●
▶ [A014132] 2,4,5,7,8,9,11,12,13,14,16,17,18,19,20,22,23,24,25,26,27,29,30,31,32 ⋆ Complement of triangular numbers (A000217); also array T(n,k) = ((n + k) ^ 2 + n - k) / 2, n, k > 0, read by antidiagonals. ● a(n) = n + round(sqrt(2 * n)). ● a(a(n)) = n + 2 * floor(1 / 2 + sqrt(2n)) + 1. ● a(n) = ((t + 2) ^ 2 + i - j) / 2, where ●
▶ [A276220] 1,2,4,5,7,8,9,11,12,14,15,16,18,19,20,22,23,24,26,27,28,29,31,32,33 ⋆ Position of n ^ s in the joint ranking of { h } and { k ^ s } , where s = sqrt(2), h >= 1, k >= 2. ● a(n) = n + floor(n ^ s), n >= 1; the complement is given by n + floor(n ^ (1 / s)), n >= 2. ●
▶ [A047381] 0,1,2,4,5,7,8,9,11,12,14,15,16,18,19,21,22,23,25,26,28,29,30,32,33 ⋆ Numbers that are congruent to { 0, 1, 2, 4, 5 } mod 7. ● a(n) = floor((7 / 5)(n - 1)). [_ Gary Detlefs _ , Feb 20 2010] ● a(n) = a(n - 1) + a(n - 5) - a(n - 6). ●
▶ [A258833] 1,2,4,5,7,8,9,11,12,14,15,16,18,19,21,22,23,25,26,28,29,31,32,33,35 ⋆ Nonhomogeneous Beatty sequence: ceiling((n + 1 / 4) * sqrt(2)). ● a(n) = ceiling((n + 1 / 4) * sqrt(2)) = floor((n + 1 / 4) * sqrt(2) + 1). ●
▶ [A001951] 0,1,2,4,5,7,8,9,11,12,14,15,16,18,19,21,22,24,25,26,28,29,31,32,33 ⋆ A Beatty sequence: a(n) = floor(n * sqrt(2)). ● a(n) = floor(csc(1 / (sqrt(2) * n))) for n > 0, since sqrt(2) * n < csc(1 / (sqrt(2) * n)) < sqrt(2) * n + 1 / (3 * sqrt(2) * n) < floor(sqrt(2) * n) + 1 for n > 0. - _ Jianing Song _ , Sep 07 2021 ●
▶ [A184014] 2,4,5,7,8,10,11,12,13,15,16,17,18,20,21,22,23,24,26,27,28,29,30,32,33 ⋆ n + floor(sqrt(e * n)); complement of A184015. ● a(n) = n + floor(sqrt(e * n)) ●
▶ [A183856] 2,4,5,7,8,10,11,12,14,15,16,17,19,20,21,22,24,25,26,27,28,30,31,32,33 ⋆ n + floor(sqrt(3n - 2)); complement of A143975. ● a(n + 1) - a(n) = 2 if n is in A000212, 1 otherwise. - _ Robert Israel _ , Jun 04 2019 ●
▶ [A155902] 0,1,2,4,5,7,8,10,11,12,14,15,17,18,20,21,22,24,25,27,28,30,31,32,34 ⋆ Arises in Connell's game, a variation of Wythoff's Nim game. ● a(n) = floor(n * (sqrt(13) - 1) / 6) + n = floor(n * (sqrt(13) + 5) / 6). ●
▶ [A059549] 1,2,4,5,7,8,10,11,12,14,15,17,18,20,21,22,24,25,27,28,30,31,32,34,35 ⋆ Beatty sequence for 1 + 1 / log(10). ● a(n) = floor(n * (1 + 1 / log(10))). - _ Michel Marcus _ , Jan 04 2015 ●
▶ [A059539] 1,2,4,5,7,8,10,11,12,14,15,17,18,20,21,23,24,25,27,28,30,31,33,34,36 ⋆ Beatty sequence for 3 ^ (1 / 3). ● a(n) = floor(n * A002581). - _ R. J. Mathar _ , Apr 12 2019 ●
▶ [A037087] 0,1,2,4,5,7,8,10,11,13,14,15,17,18,20,21,23,24,26,27,28,30,31,33,34 ⋆ Beatty sequence for e ^ (1 / e). ● a(n) = floor(n * e ^ (1 / e)) = floor(n * A07322 9). ●
▶ [A320829] 1,2,4,5,7,8,10,11,13,14,15,17,18,20,21,23,24,26,27,28,30,31,33,34,36 ⋆ Continued fraction of the positive constant t in (1,2) such that the partial denominators form the Beatty sequence { floor((n + 1) * t), n >= 0 } . ● a(n) = floor((n + 1) * t), where t = [1; 2, 4, 5, 7, 8, ... ,floor((n + 1) * t), ...], for n >= 0. ●
▶ [A330116] 1,2,4,5,7,8,10,11,13,14,15,17,18,20,21,23,24,26,27,29,30,31,33,34,36 ⋆ Beatty sequence for sinh(x), where 1 / e ^ x + csch(x) = 1. ● a(n) = floor(n sinh(x)), where x = 1.1676157... is the constant in A330115. ●
▶ [A240977] 0,1,2,4,5,7,8,10,11,13,14,16,17,19,20,21,23,24,26,27,29,30,32,33,35 ⋆ Beatty sequence for cube root of Pi: a(n) = floor(n * Pi ^ (1 / 3)). ● a(n) = floor(n * (Pi ^ 1 / 3)). ●
▶ [A138251] 1,2,4,5,7,8,10,11,13,14,16,17,19,20,21,23,24,26,27,29,30,32,33,35,36 ⋆ Beatty sequence of the positive root of x ^ 3 - x ^ 2 - 1. ● a(n)=Floor(r * n), where r=1.46557123187676...; see A092526 for more decimal places. ●
▶ [A127450] 1,2,4,5,7,8,10,11,13,14,16,17,19,20,22,23,24,26,27,29,30,32,33,35,36 ⋆ Beatty sequence for 1 / (e ^ Pi - Pi ^ e), complement of A127451. ● a(n) = floor(n / (e ^ Pi - Pi ^ e)) ●
▶ [A059564] 1,2,4,5,7,8,10,11,13,14,16,17,19,20,22,23,25,26,28,29,31,32,34,35,36 ⋆ Beatty sequence for (e ^ 2 + 1) / (e ^ 2 - e + 1). ● a(n) = floor(n * (e ^ 2 + 1) / (e ^ 2 - e + 1)). - _ Michel Marcus _ , Jan 05 2015 ●
▶ [A001651] 1,2,4,5,7,8,10,11,13,14,16,17,19,20,22,23,25,26,28,29,31,32,34,35,37 ⋆ Numbers not divisible by 3. ● a(n) = 3 + a(n - 2) for n > 2. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n > 3. ● a(2 * n + 1) = 3 * n + 1, a(2 * n) = 3 * n - 1. ● a(n) = (4 - n) * a(n - 1) + 2 * a(n - 2) + (n - 3) * a(n - 3) (from the Carlitz et al. article). ● a(n) = floor((3 * n - 1) / 2). [Corrected by _ Gary Detlefs _] ● a(1) = 1, a(n) = 2 * a(n - 1) - 3 * floor(a(n - 1) / 3). - _ Benoit Cloitre _ , Aug 17 2002 ●
▶ [A229973] 1,2,4,5,7,8,10,11,14,16,17,19,20,22,23,25,28,29,31,32,34,35,37,38,40 ⋆ Numbers coprime to 39. ● a(n + 24) = a(n) + 39. ● a(n) = 39 * floor((n - 1) / 24) + f(n) + floor(11 * f(n) / 25) + 2 * floor(f(n) / 8) - 2 * floor(((n - 1)mod 8) / 7) + 40 * floor(f(n - 1) / 23), where f(n) = n mod 24. ●

▶ [A020914] 1,2,4,5,7,8,10,12,13,15,16,18,20,21,23,24,26,27,29,31,32,34,35,37,39 ⋆ Number of digits in the base - 2 representation of 3 ^ n. ● a(n) = floor(1 + n * log(3) / log(2)). - _ K. Spage _ , Oct 22 2009 ●

▶ [A204399] 0,2,4,5,7,8,10,12,13,15,16,18,20,21,23,24,26,27,29,31,32,34,35,37,39 ⋆ Numbers k such that floor(2 ^ k / 3 ^ n) = 1. ● a(n) = ceiling(n * log _ 2(3)) . - _ Charles R Greathouse IV _ , Jan 15 2012 ●

▶ [A047496] 0,2,4,5,7,8,10,12,13,15,16,18,20,21,23,24,26,28,29,31,32,34,36,37,39 ⋆ Numbers that are congruent to { 0, 2, 4, 5, 7 } mod 8. ● a(n) = a(n - 1) + a(n - 5) - a(n - 6) for n > 6, a(n) = a(n - 5) + 8 for n > 5. ● a(n) = (40 * n - 30 - 2 * (n mod 5) + 3 * ((n + 1) mod 5) - 2 * ((n + 2) mod 5) - 2 * ((n + 3) mod 5) + 3 * ((n + 4) mod 5)) / 25. ● a(5k) = 8k - 1, a(5k - 1) = 8k - 3, a(5k - 2) = 8k - 4, a(5k - 3) = 8k - 6, a(5k - 4) = 8k - 8. (End) ●

▶ [A223735] 1,2,4,5,7,8,10,12,13,15,16,20,23,24,25,28,31,32,36,37,39,40,44,47,48 ⋆ Positive numbers that are not representable as a primitive sum of three nonzero squares. ● a(n) has no representation as a ^ 2 + b ^ 2 + c ^ 2 with 0 < a <= b <= c and gcd(a,b,c) = 1. ●

▶ [A123663] 0,1,2,4,5,7,8,10,12,13,15,17,18,20,22,24,25,27,29,31,32,34,36,38,40 ⋆ Number of shared edges in a spiral of n unit squares. ● a(n) = 2n - ceiling(2 * sqrt(n)). - _ Julian F. Fleron _ , Nov 29 2016 ● a(n) = a(n - 1) + 2 - [n - 1 is a square or a pronic number], where [] stands for the Iverson bracket. - _ Luc Rousseau _ , Dec 28 2019 ●

▶ [A229968] 1,2,4,5,7,8,10,13,14,16,17,19,20,23,25,26,28,29,31,32,34,35,37,38,40 ⋆ Numbers not divisible by 3 or 11. ● a(n + 20) = a(n) + 33. ● a(n) = 33 * floor ((n - 1) / 20) + f(n) + floor(8 * f(n) / 19) + 2 * floor(f(n) / 7) - floor(f(n + 12) / 19) + 32 * floor(f(n - 1) / 19), where f(n) = n mod 20. ● a(n) = a(n - 1) + a(n - 20) - a(n - 21). G.f.: x * (x ^ 20 + x ^ 19 + 2 * x ^ 18 + x ^ 17 + 2 * x ^ 16 + x ^ 15 + 2 * x ^ 14 + 3 * x ^ 13 + x ^ 12 + 2 * x ^ 11 + x ^ 10 + 2 * x ^ 9 + x ^ 8 + 3 * x ^ 7 + 2 * x ^ 6 + x ^ 5 + 2 * x ^ 4 + x ^ 3 + 2 * x ^ 2 + x + 1) / ((x - 1) ^ 2 * (x + 1) * (x ^ 2 + 1) * (x ^ 4 - x ^ 3 + x ^ 2 - x + 1) * (x ^ 4 + x ^ 3 + x ^ 2 + x + 1) * (x ^ 8 - x ^ 6 + x ^ 4 - x ^ 2 + 1)). - _ Colin Barker _ , Oct 08 2013 ●

▶ [A029749] 1,2,4,5,7,8,10,14,16,20,28,32,40,56,64,80,112,128,160,224,256,320,448,512,640 ⋆ Numbers of the form 2 ^ k times 1, 5 or 7. ● a(n) = 2 * a(n - 3) for n>4. ●

▶ [A006693] 2,4,5,7,8,10,25,53,62,134,574,2431,13147,27167,229073,315416,435474,771789,1522716,3853889,7878986,7922488,8844776,9182596,9388467 ⋆ Modified Engel expansion of 3 / 7. ● a(n) = floor(1 / A(n)) where A(1) = 3 / 7, A(n + 1) = (1 / a(n) - A(n)) * (a(n) + 1). - _ Sean A. Irvine _ , Jun 17 2017 ●

▶ [A022559] 0,0,1,2,4,5,7,8,11,13,15,16,19,20,22,24,28,29,32,33,36,38,40,41,45 ⋆ Sum of exponents in prime - power factorization of n!. ● a(n) = n log log n + B _ 2 * n + o(n), with B _ 2 = A083342. - _ Charles R Greathouse IV _ , Jan 11 2012 ● a(n) = Sum _{ prime p<=n } Sum _{ k=1..floor(log _ p(n)) } floor(n / p ^ k). - _ Ridouane Oudra _ , Nov 04 2022 ●

▶ [A072920] 1,2,4,5,7,8,12,14,16,17,19,20,24,26,28,29,35,36,46,48,50,51,53,56,60 ⋆ a(n) = Sum _{ k=1..n } A034693(k). ● a(n) appears to be asymptotic to (zeta(2) - 1) * n * log(n) where zeta(2) - 1 = Pi ^ 2 / 6 - 1 = 0.6449... . Example: a(10 ^ 5) / 10 ^ 5 / log(10 ^ 5) = 0.6449(1)... . ●

▶ [A032924] 1,2,4,5,7,8,13,14,16,17,22,23,25,26,40,41,43,44,49,50,52,53,67,68,70 ⋆ Numbers whose ternary expansion contains no 0. ● a(1)=1, a(n + 1) = f(a(n) + 1,f(a(n) + 1) where f(x,y) = if x<3 and x<>0 then y, else if x mod 3 = 0 then f(y + 1,y + 1), else f(floor(x / 3),y). - _ Reinhard Zumkeller _ , Mar 02 2008 ● a(2 * n) = a(2 * n - 1) + 1, n>0. - _ Zak Seidov _ , Jul 27 2009 ● a(2 * n + 1) = 3 * a(n) + 1. - _ Robert Israel _ , Aug 05 2015 ●

▶ [A343915] 1,2,4,5,7,8,14,28,42,57,71,85,142,285,428,571,714,857,1428,2857,4285,5714,7142,8571,14285 ⋆ a(n) = floor(((n mod 6) + 1) * 10 ^ floor((n / 6) + 1) / 7). ● a(n) = floor(((n mod 6) + 1) * 10 ^ floor((n / 6) + 1) / 7). ●

▶ [A159615] 2,4,5,7,9,10,11,13,15,17,19,20,21,22,23,25,27,29,31,33,35,37,39,40,41 ⋆ The slowest increasing sequence beginning with a(1)=2 such that a(n) and n are both odious or both not odious. ● a(2n + 1)=2a(n) + 1. ● a(2n)=3n + 1 + j, if n=2 ^ k + j; a(2n)=(10n - 4j) / 3,if n=2 ^ k + 2 ^ (k - 1) + j, where 0<=j<=2 ^ (k - 1) - 1. ●

▶ [A047497] 1,2,4,5,7,9,10,12,13,15,17,18,20,21,23,25,26,28,29,31,33,34,36,37,39 ⋆ Numbers that are congruent to { 1, 2, 4, 5, 7 } mod 8. ● a(n) = floor((8n - 3) / 5). [_ Gary Detlefs _ , Mar 07 2010] ● a(n) = a(n - 1) + a(n - 5) - a(n - 6). ●

▶ [A184656] 1,2,4,5,7,9,10,12,14,15,17,18,20,22,23,25,27,28,30,31,33,35,36,38,39 ⋆ floor(nr + h), where r=(1 + sqrt(5)) / 2, h= - 1 / 2; complement of A184657. ● a(n)=floor(nr + h), where r=(1 + sqrt(5)) / 2, h= - 1 / 2. ●

▶ [A047212] 0,2,4,5,7,9,10,12,14,15,17,19,20,22,24,25,27,29,30,32,34,35,37,39,40 ⋆ Numbers that are congruent to { 0, 2, 4 } mod 5. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. ● a(n) = floor((5 * n - 3) / 3). - _ Gary Detlefs _ , May 14 2011 ● a(n) = n + ceiling(2 * (n - 1) / 3) - 1. - _ Arkadiusz Wesolowski _ , Sep 18 2012 ● a(n) = (15 * n - 12 + 3 * cos(2 * n * Pi / 3) - sqrt(3) * sin(2 * n * Pi / 3)) / 9. ● a(3 * k) = 5 * k - 1, a(3 * k - 1) = 5 * k - 3, a(3 * k - 2) = 5 * k - 5. (End) ●

▶ [A083120] 0,2,4,5,7,9,10,12,14,16,17,19,21,22,24,26,28,29,31,33,34,36,38,40,41 ⋆ Numbers that are congruent to { 0, 2, 4, 5, 7, 9, 10 } mod 12. ● a(n) = a(n - 1) + a(n - 7) - a(n - 8) for n > 8. ● a(n) = (84 * n - 77 + 5 * (n mod 7) - 2 * ((n + 1) mod 7) - 2 * ((n + 2) mod 7) + 5 * ((n + 3) mod 7) - 2 * ((n + 4) mod 7) - 2 * ((n + 5) mod 7) - 2 * ((n + 6) mod 7)) / 49. ● a(7k) = 12k - 2, a(7k - 1) = 12k - 3, a(7k - 2) = 12k - 5, a(7k - 3) = 12k - 7, a(7k - 4) = 12k - 8, a(7k - 5) = 12k - 10, a(7k - 6) = 12k - 12. (End) ● a(n) = a(n - 7) + 12 for n > 7. - _ Jianing Song _ , Sep 22 2018 ●

▶ [A001614] 1,2,4,5,7,9,10,12,14,16,17,19,21,23,25,26,28,30,32,34,36,37,39,41,43 ⋆ Connell sequence: 1 odd, 2 even, 3 odd, ... ● a(n) = 2 * n - floor((1 + sqrt(8 * n - 7)) / 2). ● a(1) = 1; then a(n) = a(n - 1) + 1 if a(n - 1) is a square, a(n) = a(n - 1) + 2 otherwise. For example, a(21)=36 is a square therefore a(22)=36 + 1=37 which is not a square so a(23)=37 + 2=39 ... - _ Benoit Cloitre _ , Feb 07 2007 ● a(n) ^ 2 = a(n * (n + 1) / 2). - _ Ivan N. Ianakiev _ , Aug 15 2013 ● a(n) = 2 * n - round(sqrt(2 * n)). - _ Gerald Hillier _ , Apr 15 2015 ●

▶ [A083026] 0,2,4,5,7,9,11,12,14,16,17,19,21,23,24,26,28,29,31,33,35,36,38,40,41 ⋆ Numbers that are congruent to { 0, 2, 4, 5, 7, 9, 11 } mod 12. ● a(n) = a(n - 1) + a(n - 7) - a(n - 8) for n > 8. ● a(n) = (84 * n - 70 - 2 * (n mod 7) - 2 * ((n + 1) mod 7) - 2 * ((n + 2) mod 7) + 5 * ((n + 3) mod 7) - 2 * ((n + 4) mod 7) - 2 * ((n + 5) mod 7) + 5 * ((n + 6) mod 7)) / 49. ● a(7k) = 12k - 1, a(7k - 1) = 12k - 3, a(7k - 2) = 12k - 5, a(7k - 3) = 12k - 7, a(7k - 4) = 12k - 8, a(7k - 5) = 12k - 10, a(7k - 6) = 12k - 12. (End) ● a(n) = a(n - 7) + 12 for n > 7. - _ Jianing Song _ , Sep 22 2018 ●

▶ [A047379] 0,2,4,5,7,9,11,12,14,16,18,19,21,23,25,26,28,30,32,33,35,37,39,40,42 ⋆ Numbers that are congruent to { 0, 2, 4, 5 } mod 7. ● a(n) = floor(floor((7n + 2) / 2) / 2). ● a(n) = floor((7n - 5) / 4). - _ Gary Detlefs _ , Mar 07 2010 ● a(n) = a(n - 1) + a(n - 4) - a(n - 5), n>5; ● a(n) = (14 * n - 13 - (- 1) ^ n + 2 * i ^ n * (- 1) ^ ((3 + (- 1) ^ n) / 4)) / 8, where i = sqrt(- 1); ●

▶ [A049039] 1,2,4,5,7,9,11,12,14,16,18,20,22,24,26,27,29,31,33,35,37,39,41,43,45 ⋆ Geometric Connell sequence: 1 odd, 2 even, 4 odd, 8 even, ... ● a(n) = 2n - 1 - floor(log _ 2(n)). ● a(0)=0, a(2n) = a(n) + 2n - 1, a(2n + 1) = a(n) + 2n + 1. - _ Ralf Stephan _ , Oct 11 2003 ●

▶ [A005152] 0,1,2,4,5,7,9,11,12,15,16,18,20,22,24,26,28,30,32,34,36,38,40,42,44 ⋆ Rotation distance between binary trees on n nodes. ● a(n) = 2n - 6 for n >= 11. ● a(n) = 2 * a(n - 1) - a(n - 2) for n > 12. ●

▶ [A060831] 0,1,2,4,5,7,9,11,12,15,17,19,21,23,25,29,30,32,35,37,39,43,45,47,49 ⋆ a(n) = Sum _{ k=1..n } (number of odd divisors of k) (cf. A001227). ● a(n) = n + floor(n / 3) + floor(n / 5) + floor(n / 7) + floor(n / 9) + ... ●

▶ [A357574] 0,1,2,4,5,7,9,11,13,15,17,19,21,24,26,29,31,34,36,39,41,44,46,49,51 ⋆ a(n) is the maximum number of pairs that sum to a power of 2 in a set of n consecutive odd numbers. ● a(n) >= n - 1. This would be the maximum value that could be attained for a set of only positive odd numbers and size n. ●

▶ [A185546] 1,2,4,5,7,9,11,13,15,18,20,23,26,29,32,35,38,41,44,48,51,55,58,62,66 ⋆ a(n) = floor((1 / 2) * (n + 1) ^ (3 / 2)); complement of A185547. ● a(n) = floor((1 / 2) * (n + 1) ^ (3 / 2)). ●

▶ [A058577] 2,4,5,7,9,11,14,16,20,23,27,31,36,42,48,54,61,69,78,87,97,108,121,134,148 ⋆ a(n) = floor(e ^ sqrt(n)). ● a(n) = floor(e ^ (x ^ 0.5)). ●

▶ [A071917] 0,1,2,4,5,7,9,11,14,18,21,25,28,31,35,40,44,48,52,56,61,67,72,78,84 ⋆ Number of pairs (x,y) where x is even, y is odd, 1<=x<=n, 1<=y<=n and x + y is prime. ● a(n) = sum over primes p from 3 to 2n - 1 of min(p - 1, 2n + 1 - p) / 2. ● a(n) = a(n - 1) + pi(2 * n - 1) - pi(n) for n>0, a(0) = 0. - _ Alois P. Heinz _ , Feb 03 2017 ●

▶ [A000788] 0,1,2,4,5,7,9,12,13,15,17,20,22,25,28,32,33,35,37,40,42,45,48,52,54 ⋆ Total number of 1's in binary expansions of 0, ..., n. ● a(0) = 0, a(2n) = a(n) + a(n - 1) + n, a(2n + 1) = 2a(n) + n + 1. - _ Ralf Stephan _ , Sep 13 2003 ● a(n)=n * log _ 2(n) / 2 + O(n); a(2 ^ n)=n * 2 ^ (n - 1) + 1. - _ Benoit Cloitre _ , Sep 25 2003 (The first result is due to Bellman and Shapiro, - _ N. J. A. Sloane _ , Mar 24 2014) ● a(n)=n * log _ 2(n) / 2 + n * F(log _ 2(n)) where F is a nowhere differentiable continuous function of period 1 (see Allouche & Shallit). - _ Benoit Cloitre _ , Jun 08 2004 ● a(4 ^ n - 2) = n(4 ^ n - 2). ● a(n) = (1 / 2) * Sum _{ j=1..m + 1 } (floor(n / 2 ^ j + 1 / 2) * (2n + 2 - floor(n / 2 ^ j + 1 / 2)) * 2 ^ j - floor(n / 2 ^ j) * (2n + 2 - (1 + floor(n / 2 ^ j)) * 2 ^ j)), where m=floor(log _ 2(n)). ● a(2 ^ m - 1) = m * 2 ^ (m - 1). ●

▶ [A288511] 2,4,5,7,9,12,17,23,33,48,70,103,152,228,343,515,779,1180,1787,2715,4124,6264,9526,14483,22025 ⋆ a(n) = 2 * a(n - 1) - a(n - 2) + 2 * a(n - 3) - 4 * a(n - 4) + 4 * a(n - 5) - 4 * a(n - 6) + 4 * a(n - 7) - 4 * a(n - 8) + 4 * a(n - 9) - 3 * a(n - 10) + 2 * a(n - 11) - 3 * a(n - 12) + 2 * a(n - 13) for n >= 16, with initial values as shown. ● a(n) = 2 * a(n - 1) - a(n - 2) + 2 * a(n - 3) - 4 * a(n - 4) + 4 * a(n - 5) - 4 * a(n - 6) + 4 * a(n - 7) - 4 * a(n - 8) + 4 * a(n - 9) - 3 * a(n - 10) + 2 * a(n - 11) - 3 * a(n - 12) + 2 * a(n - 13) for n >= 16, where a(0)=2, a(1)=4, a(2)=5, a(3)=7, a(4)=9, a(5)=12, a(6)=17, a(7)=23, a(8)=33, a(9)=48, a(10)=70, a(11)=103, a(12)=152, a(13)=228, a(14)=343, a(15)=515. ●

▶ [A193494] 0,1,2,4,5,7,9,13,14,16,18,22,24,28,32,40,41,43,45,49,51,55,59,67,69 ⋆ Worst case of an unbalanced recursive algorithm over all n - node binary trees. ● a(n) = O(n ^ (log _ 2(3))); ● a(n) = 2 ^ (nu(n) - 1) + a(n - 1) when n>0 and has nu(n) 1 - bits in binary (A000120); ●

▶ [A080725] 2,4,5,7,10,11,13,14,15,16,19,20,22,25,28,31,32,33,34,37,38,40,41,42,43 ⋆ a(1) = 2; for n>1, a(n) is taken to be the smallest positive integer greater than a(n - 1) which is consistent with the condition "n is a member of the sequence if and only if a(n) == 1 mod 3". ● a(a(n)) = 3 * n + 1, n >= 1. ●

▶ [A014370] 1,2,4,5,7,10,11,13,16,20,21,23,26,30,35,36,38,41,45,50,56,57,59,62,66 ⋆ If n = binomial(b,2) + binomial(c,1), b>c>=0 then a(n) = binomial(b + 1,3) + binomial(c + 1,2). ● a(n) = b(n) * (b(n) + 1) * (b(n) + 2) / 6 + c(n) * (c(n) + 1) / 2, where b(n) = [sqrt(2 * n) - 1 / 2] and c(n) = n - b(n) * (b(n) + 1) / 2 - Robert A. Stump (bee _ ess107(AT)msn.com), Sep 20 2002 ●

▶ [A047495] 2,4,5,7,10,12,13,15,18,20,21,23,26,28,29,31,34,36,37,39,42,44,45,47,50 ⋆ Numbers that are congruent to { 2, 4, 5, 7 } mod 8. ● a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4) for n>4. ● a(n) = (1 + i) * (4 * n - 4 * n * i + i - 1 + i ^ (1 - n) - i ^ n) / 4 where i=sqrt(- 1). ●

▶ [A335365] 2,4,5,7,10,12,15,17,20,22,25,30,35,40,45,50,55,60,65,70,75,80,85,90,95 ⋆ Numbers that are unreachable by the process of starting from 1 and adding 5 and / or multiplying by 3. ● a(n) = 2 * a(n - 1) - a(n - 2) for n>12. ● a(n) = 5 * (n - 6) for n>10. ●

▶ [A007997] 0,0,1,1,2,4,5,7,10,12,15,19,22,26,31,35,40,46,51,57,64,70,77,85,92 ⋆ a(n) = ceiling((n - 3)(n - 4) / 6). ● a(n) = a(n - 3) + n - 2, a(0)=0, a(1)=0, a(2)=1 [Offset 0]. - _ Paul Barry _ , Jul 14 2004 ● a(n + 5) = Sum _{ k=0..floor(n / 2) } C(n - k,L(k / 3)), where L(j / p) is the Legendre symbol of j and p. - _ Paul Barry _ , Mar 16 2006 ● a(3)=0, a(4)=0, a(5)=1, a(6)=1, a(7)=2, a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) - 2 * a(n - 4) + a(n - 5). - _ Harvey P. Dale _ , Jan 21 2014 ● a(n) = (n ^ 2 - 7 * n + 14 - 2 * (- 1) ^ (2 ^ (n + 1 - 3 * floor((n + 1) / 3)))) / 6. - _ Luce ETIENNE _ , Dec 27 2014 ● a(n) = (40 + 3 * (n - 7) * n - 4 * cos(2 * n * Pi / 3) - 4 * sqrt(3) * sin(2 * n * Pi / 3)) / 18. - _ Stefano Spezia _ , Dec 14 2021 ●

▶ [A211523] 0,0,1,2,4,5,7,10,13,17,20,24,29,34,40,45,51,58,65,73,80,88,97,106,116 ⋆ Number of ordered triples (w,x,y) with all terms in { 1,...,n } and w + 2x=5y

. • a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 5) - 2 * a(n - 6) + a(n - 7). •
▶ [A340246] 0,0,0,1,1,1,2,4,5,7,10,13,17,21,28,35,44,50,64,75,92,104,128,143,172 ⋆ Sum of the smallest parts q of the partitions of n into 4 parts q,r,s,t such that 1 <= q <= r <= s <= t and q + r + s > t. • a(n) = Sum _{ k=1..floor(n / 4) } Sum _{ j=k..floor((n - k) / 3) } Sum _{ i=j..floor((n - j - k) / 2) } sign(floor ((i + k + j) / (n - i - j - k + 1))) * k. •
▶ [A168639] 0,1,2,4,5,7,10,15,21,29,40,56,78,108,149,206,285,394,544,751,1037,1432,1977,2729,3767 ⋆ Expansion of x * (1 + x ^ 2 - x ^ 3)) / ((1 - x) * (1 - x - x ^ 4)). • a(n)= 2 * a(n - 1) - a(n - 2) + a(n - 4) - a(n - 5). - _ R. J. Mathar _ , Dec 02 2009 •
▶ [A288349] 1,2,4,5,7,11,12,14,18,26,27,29,33,41,57,58,60,64,72,88,120,121,123,127,135 ⋆ Partial sums of A059268. • a(n) = 2 ^ t + 2 ^ (n - t * (t - 1) / 2) - t - 2 , where t = floor(sqrt(2 * n) + 1 / 2), n>=1. •
▶ [A056527] 2,4,5,7,11,13,14,16,20,22,23,25,29,31,32,34,38,40,41,43,47,49,50,52,56 ⋆ Numbers where iterated sum of digits of square settles down to a cyclic pattern (in fact 13, 16, 13, 16, ...). • a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. - _ Harvey P. Dale _ , Apr 05 2015 • a(n) = (- 9 + (- 1) ^ (1 + n) - (3 - 3 * i) * (- i) ^ n - (3 + 3 * i) * i ^ n + 18 * n) / 8 where i=sqrt(- 1). •
▶ [A147991] 1,2,4,5,7,11,13,14,16,20,22,32,34,38,40,41,43,47,49,59,61,65,67,95,97 ⋆ Sequence S such that 1 is in S and if x is in S, then 3x - 1 and 3x + 1 are in S. • a(n) = 3 * a(n / 2) - 1 if n>=2 is even, 3 * a((n - 1) / 2) + 1 if n is odd, a(0) =0. - _ Robert Israel _ , May 05 2014 • a(n) = - a(- 1 - n) for all n in Z. - _ Michael Somos _ , Dec 22 2018 •
▶ [A307872] 0,0,1,1,2,4,5,7,11,13,17,23,27,33,42,48,57,69,78,90,106,118,134,154,170 ⋆ Sum of the smallest parts in the partitions of n into 3 parts. • a(n) = Sum _{ k=1..floor(n / 3) } Sum _{ i=k..floor((n - k) / 2) } k. • a(n) = a(n - 1) + a(n - 2) + a(n - 3) - 2 * a(n - 4) - 2 * a(n - 5) + a(n - 6) + a(n - 7) + a(n - 8) - a(n - 9) for n > 9. • a(n) = ((- 1) ^ n * (- 1 + (- 1) ^ r) + 2 * r * ((- 1) ^ (n + r) + (1 + r) * (1 + 2 * n - 4 * r))) / 16, where r = floor(n / 3). - _ Wesley Ivan Hurt _ , Oct 24 2021 •
▶ [A097581] 2,4,5,7,11,13,23,25,47,49,95,97,191,193,383,385,767,769,1535,1537,3071,3073,6143,6145,12287 ⋆ a(n) = 3 * 2 ^ floor((n - 1) / 2) + (- 1) ^ n. • a(n) = - a(n - 1) + 2 * a(n - 2) + 2 * a(n - 3). •
▶ [A164316] 1,2,4,5,7,11,16,23,34,50,73,107,157,230,337,494,724,1061,1555,2279,3340,4895,7174,10514,15409 ⋆ Number of binary strings of length n with no subs trings equal to 000, 001, or 010. • a(n) = 4 + Sum _{ i=0..n - 3 } a(i) for n>2. - _ Greg Dresden _ , Jul 02 2021 •
▶ [A356849] 1,2,4,5,7,14,22,29,49,86,124,185,319,506,742,1193,1969,3002,4612,7517,11911,18230,28870,46373,72193 ⋆ a(n) = a(n - 1) - a(n - 2) + 3 * a(n - 3) with a(0) = 1, a(1) = 2 and a(2) = 4. • a(n) = a(n - 1) - a(n - 2) + 3 * a(n - 3) with a(0) = 1, a(1) = 2 and a(2) = 4. • a(n) = A * (r1) ^ n + B * (r2) ^ n + C * (r3) ^ n, where r1 = (1 + x - y) / 3, r2 = (2 - (1 + i * sqrt(3)) * x + (1 - i * sqrt (3)) * y) / 6, r3 = (2 - (1 - i * sqrt(3)) * x + (1 - i * sqrt(3)) * y) / 6, x = (9 * sqrt(17) + 37) ^ (1 / 3), y = (9 * sqrt(17) - 37) ^ (1 / 3), A = (2 - r2) * (2 - r3) / ((r1 - r2) * (r1 - r3)), B = (2 - r1) * (2 - r3) / ((r2 - r1) * (r2 - r3)), C = (2 - r1) * (2 - r2) / ((r3 - r1) * (r3 - r2)). •
▶ [A085624] 2,4,5,8,8,10,11,14,14,16,17,20,20,22,23,26,26,28,29,32,32,34,35,38,38 ⋆ Sum of the entries in the character table of the dihedral group D _{ 2n } of order 2n. • a(n) = 1 + (6 * n + (1 + (- 1) ^ n) * i ^ n + 2 * (- 1) ^ n) / 4, where i=sqrt(- 1). - _ Bruno Berselli _ , Jul 09 2012 •
▶ [A130048] 1,2,4,5,8,9,10,11,13,14,15,16,18,19,21,22,23,24,25,26,27,28,30,31,33 ⋆ Complement of inductive sum sequence A130049. • a(1)=1, a(2)=2, b(1)=0, b(2)=3; for n>=3, let x=Floor(n / 2) and y=n - x + 1. Then a(n)=least positive integer not among a(1),a(2),...,a(n - 1), b(1),b(2),...b(n - 1) and b(n)=a(1) + a(2) + ... + a(x) if n is even, b(n)=a(y) + a(y + 1) + ... + a(n) if n is odd. •
▶ [A004761] 0,1,2,4,5,8,9,10,11,16,17,18,19,20,21,22,23,32,33,34,35,36,37,38,39 ⋆ Numbers n whose binary expansion does not begin with 11. • a(1)=0, a(2)=1 and for k>1: a(2 * k - 1) = a(2 * k - 2) + 1, a(2 * k) = 2 * a(k + 1). - _ Reinhard Zumkeller _ , Jan 09 2002, corrected by _ Robert Israel _ , Mar 31 2017 • a(1) = 0, a(2) = 1, a(2 ^ m + k + 2) = 2 ^ (m + 1) + k, m >= 0, 0 <= k < 2 ^ m. - _ Yosu Yurramendi _ , Jul 30 2016 •
▶ [A004754] 2,4,5,8,9,10,11,16,17,18,19,20,21,22,23,32,33,34,35,36,37,38,39,40,41 ⋆ Numbers n whose binary expansion starts 10. • a(2n) = 2a(n), a(2n + 1) = 2 a(n) + 1 + [n==0]. • a(2 ^ m + k) = 2 ^ (m + 1) + k, m >= 0, 0 <= k < 2 ^ m. - _ Yosu Yurramendi _ , Aug 08 2016 •
▶ [A045702] 0,1,2,4,5,8,9,10,13,18,25,26,29,34,50,64,65,68,73,89,128,169,170,173,178 ⋆ Sums of two squares of Fibonacci numbers. • a(4)=5 because 5 = 1 ^ 2 + 2 ^ 2; • a(8)=13 because 13 = 2 ^ 2 + 3 ^ 2. •
▶ [A003714] 0,1,2,4,5,8,9,10,16,17,18,20,21,32,33,34,36,37,40,41,42,64,65,66,68 ⋆ Fibbinary numbers: if n = F(i1) + F(i2) + ... + F(ik) is the Zeckendorf representation of n (i.e., write n in Fibonacci number system) then a(n) = 2 ^ (i1 - 2) + 2 ^ (i2 - 2) + ... + 2 ^ (ik - 2). Also numbers whose binary representation contains no two adjacent 1's. • a(n) / n ^ k is bounded (but does not tend to a limit), where k = 1.44... = A104287. - _ Charles R Greathouse IV _ , Sep 19 2012 •
▶ [A047380] 1,2,4,5,8,9,11,12,15,16,18,19,22,23,25,26,29,30,32,33,36,37,39,40,43 ⋆ Numbers that are congruent to { 1, 2, 4, 5 } mod 7. • a(n) = (1 / 4) * (6 * (n mod 4) + ((n + 1) mod 4) + ((n + 2) mod 4)) + 7 * A002265. - _ Paolo P. Lava _ , Nov 05 2007 • a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. • a(n) = (14 * n - 11 - 3 * i ^ (2 * n) - (1 + i) * i ^ (- n - 1) - (1 - i) * i ^ (n + 1)) / 8 where i=sqrt(- 1). •
▶ [A296058] 2,4,5,8,9,12,13,16,20,21,25,28,29,32,36,40,41,45,48,49,53,56,60,65,68 ⋆ Numbers k such that floor((3 * k - 1) / 2) is prime. • a(n) = floor((2 * prime (n + 1) + 2) / 3). •
▶ [A002541] 0,1,2,4,5,8,9,12,14,17,18,23,24,27,30,34,35,40,41,46,49,52,53,60,62 ⋆ a(n) = Sum _{ k=1..n - 1 } floor((n - k) / k). • a(n) = - n + Sum _{ k=1..n } tau(k). - _ Vladeta Jovovic _ , Oct 17 2002 • a(n) = Sum _{ i=2..n } floor(n / i). - _ Jon Perry _ , Feb 02 2004 • a(n) = Sum _{ i=2..n } ceiling((n + 1) / 2)) - n + 1. - _ Jon Perry _ , May 26 2004 • a(n) = - Sum _{ i=1..n } floor((n - 2i + 1) / (n - i + 1)). - _ Wesley Ivan Hurt _ , May 08 2016 • a(n) = Sum _{ i=1..floor(n / 2) } floor((n - i) / i). - _ Wesley Ivan Hurt _ , Nov 16 2017 •
▶ [A101881] 1,2,4,5,8,9,13,14,19,20,26,27,34,35,43,44,53,54,64,65,76,77,89,90,103 ⋆ Write two numbers, skip one, write two, skip two, write two, skip three ... and so on. • a(n) = (1 / 16) * (2 * n ^ 2 + 18 * n + 15 + (2 * n + 1) * (- 1) ^ n) . - _ Ralf Stephan _ , Mar 09 2014 •
▶ [A280050] 0,1,2,4,5,8,9,13,16,21,22,28,29,36,41,49,50,59,60,70,77,88,89,101,106 ⋆ a(n) = Sum _{ k=2..n } k / lpf(k), where lpf(k) is the least prime dividing k (A020639). • a(p ^ k) = a(p ^ k - 1) + p ^ (k - 1), for p is prime. •
▶ [A160545] 1,2,4,5,8,10,11,13,16,17,19,20,22,23,25,26,29,31,32,34,37,38,40,41,43 ⋆ Numbers coprime to 21. • a(n + 12) = a(n) + 21. • a(n) = 21 * floor((n - 1) / 12) + f(n) + floor(f(n) / 2) + 2 ^ floor(f(n) / 4) + floor(((n + 5) mod 12) / 11) + floor(((n + 3) mod 12) / 11), where f(n)= (n - 1) mod 12. - _ Gary Detlefs _ , Sep 22 2013 •
▶ [A131396] 1,2,4,5,8,10,11,13,16,17,19,21,24,25,27,30,31,34,35,37,39,41,43,46,48 ⋆ Positions of n - th positive integer in A131394, minus 1. • a(n) = position of n - th positive integers in A131393, minus 1. •
▶ [A131391] 1,2,4,5,8,10,11,13,16,17,19,21,24,25,28,29,32,33,35,37,39,41,44,46,47 ⋆ Positions of positive integers in A131389, minus 1. • a(n) = - 1 + position of the n - th positive integer in the sequence A131389=(0,1,2, - 1,3,4, - 2, - 3,6, - 4, 5,...) •
▶ [A047261] 2,4,5,8,10,11,14,16,17,20,22,23,26,28,29,32,34,35,38,40,41,44,46,47,50 ⋆ Numbers that are congruent to { 2, 4, 5 } mod 6. • a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. • a(n) = (6 * n - 1 - 2 * cos(2 * n * Pi / 3)) / 3. • a(3k) = 6k - 1, a(3k - 1) = 6k - 2, a(3k - 2) = 6k - 4. (End) •
▶ [A046809] 1,2,4,5,8,10,11,26,286,365,602,630,713,808,1327,3561,3566,5286,5477,10600,13485,15441,17339,76856,277718 ⋆ Recursive sequence of indices of Proth primes a * 2 ^ b - 1. • a(n) = least integer greater than a(n - 1) such that a(n - 1) * 2 ^ a(n) - 1 is prime •
▶ [A047612] 0,2,4,5,8,10,12,13,16,18,20,21,24,26,28,29,32,34,36,37,40,42,44,45,48 ⋆ Numbers that are congruent to { 0, 2, 4, 5 } mod 8. • a(n) = 2 * n - 2 - (1 + (- 1) ^ n) * (1 + i ^ n) / 4, where i=sqrt(- 1). (End) • a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. •
▶ [A174868] 0,1,2,4,5,8,10,13,14,18,21,26,28,33,36,40,41,46,50,57,60,68,73,80,82 ⋆ Partial sums of Stern's diatomic series A002487. • a(2k) = 2 * a(k) + a(k - 1); a(2k + 1) = 2 * a(k) + a(k + 1). - _ Michael J. Collins _ , Dec 25 2018 • a(n) = n ^ log _ 2(3) + Psi _ D(log _ 2(n)) + O(n ^ log _ 2(phi)), where phi is the golden ratio (A001622) and Psi _ D is a 1 - periodic continuous function which is Hölder continuous with any exponent smaller than log _ 2(3 / phi) (Heuberger et al., 2022). - _ Amiram Eldar _ , May 18 2023 •
▶ [A007729] 1,2,4,5,8,10,13,14,18,21,26,28,33,36,40,41,46,50,57,60,68,73,80,82,89 ⋆ 6th binary partition function. • a(2k) = 2 * a(k - 1) + a(k); a(2k + 1) = 2 * a(k) + a(k - 1). - _ Michael J. Collins _ , Dec 25 2018 •
▶ [A186349] 1,2,4,5,8,10,13,15,19,22,26,29,34,38,43,47,53,58,64,69,76,82,89,95,103 ⋆ Adjusted joint rank sequence of (f(i)) and (g(j)) with f(i) after g(j) when f(i) =g(j), where f(i)=8i and g(j)=j ^ 2. Complement of A186348. • a(n) = n + floor((n ^ 2 - 1) / 8). • a(n) = n + ceiling(n ^ 2 / 8) - 1. - _ Wesley Ivan Hurt _ , Jun 28 2013 • a(n) = (2 * n * (n + 8) - (1 + (- 1) ^ n) * (5 + 2 * i ^ (n * (n + 1))) - 2) / 16 where i=sqrt(- 1). - _ Bruno Berselli _ , Jul 05 2013 •
▶ [A337483] 0,0,0,1,2,4,5,8,10,13,16,20,23,28,32,37,42,48,53,60,66,73,80,88,95 ⋆ Number of ordered triples of positive integers summing to n that are either weakly increasing or weakly decreasing. • a(n) = a(n - 1) + a(n - 2) - a(n - 4) - a(n - 5) + a(n - 6) for n>6. (End) •
▶ [A126026] 0,1,2,4,5,8,10,13,17,20,24,28,33,38,43,49,55,61,68,75,82,90,97,106,114 ⋆ Conjectured upper bound on area of the convex hull of any edge - to - edge connected system of regular unit hexagons (n - polyhexes). • a(n) = floor((n ^ 2 + 14 * n / 3 + 1) / 6). •
▶ [A094958] 1,2,4,5,8,10,16,20,32,40,64,80,128,160,256,320,512,640,1024,1280,2048,2560,4096,5120,8192 ⋆ Numbers of the form 2 ^ k or 5 * 2 ^ k. • a(1)=1, a(2)=2, a(3)=4, for n>=0, a(2n + 3) = 4 * 2 ^ n, a(2n + 4) = 5 * 2 ^ n. •
▶ [A174803] 0,2,4,5,8,11,12,13,14,18,22,23,24,25,26,27,32,37,38,39,40,41,42,43,44 ⋆ a(n) = n + ceiling(sqrt(n)) * floor(sqrt(n)). • a(n ^ 2) = 2 * n ^ 2. - _ Bernard Schott _ , Jul 30 2022 •
▶ [A288523] 2,4,5,8,11,16,25,36,55,84,125,192,291,440,673,1020,1551,2364,3589,5464,8315,12640,19241,29268,44519 ⋆ a(n) = a(n - 1) + a(n - 2) + a(n - 3) - 2 * a(n - 4) for n >= 5, where a(0) = 2, a(1) = 4, a(2) = 5, a(3) = 8, a(4) = 11. • a(n) = a(n - 1) + a(n - 2) + a(n - 3) - 2 * a(n - 4) for n >= 5, where a(0) = 2, a(1) = 4, a(2) = 5, a(3) = 8, a(4) = 11. •
▶ [A080588] 0,2,4,5,8,12,13,14,16,17,18,19,20,24,28,29,32,36,40,44,48,49,50,51,52 ⋆ a(n) is smallest nonnegative integer which is consistent with sequence being monotonically increasing and satisfying a(a(n)) = 4n. • a(a(n)) = 4n. a(2 ^ k) = 2 ^ (k + 1). •
▶ [A288668] 2,4,5,8,13,18,29,44,65,102,153,232,357,538,821,1252,1897,2894,4401,6688,10189,15490,23565,35868,54545 ⋆ a(n) = a(n - 2) + 2 * a(n - 3) for n >= 3, where a(0) = 2, a(2) = 4, a(3) = 5. • a(n) = a(n - 2) + 2 * a(n - 3) for n >= 3, where a(0) = 2, a(2) = 4, a(3) = 5. •
▶ [A264800] 1,1,2,4,5,8,13,21,34,55,89,144,233,377,610,987,1597,2584,4181,6765,10946,17711,28657,46368,75025 ⋆ Nearly - Fibonacci sequence. • a(n) = F(n) for 1 <= n <= 3 and n >= 5, and a(4) = 4; where F = A000045, the Fibonacci numbers. • a(n) = a(n - 1) - a(n - 2) for n>6. •
▶ [A160967] 0,1,2,4,5,8,16,21,32,64,85,128,256,341,512,1024,1365,2048,4096,5461,8192,16384,21845,32768,65536 ⋆ Numbers of the form (4 ^ k - 1) / 3 or 2 ^ k. • a(n + 6) = 5 * a(n + 3) - 4 * a(n) for n >= 1. - _ Robert Israel _ , Jan 01 2015 •
▶ [A253426] 1,2,4,5,8,16,28,37,64 ⋆ Reusable Paper Tape Numbers: Maximum number of symbols that can be encoded on an n - hole paper tape, such that a used paper tape can always be reused at least once. • a(n) >= 2 ^ floor(n / 2). •
▶ [A152603] 1,2,4,5,8,41,60,70,410,412,416,418,452,454,458,470,472,476,478,812,814,818,830,832,836 ⋆ a(1) = 1; thereafter, a(n) is always the smallest integer > a(n - 1) not leading to a contradiction, such that any three consecutive digits in

the sequence sum up to a prime. • a(n) = b(n) * 10 ^ [3n / 52] = c(n) * 10 ^ (3 n / 52) with (except for smaller initial terms) 20 < b(n) < 611 and c(52k + 23) = 9.89... < c(n) < c(52k) = 91.1... for all integers k > 0. - _ M. F. Hasler _ , Oct 16 2009 •

► [A047613] 1,2,4,5,9,10,12,13,17,18,20,21,25,26,28,29,33,34,36,37,41,42,44,45,49 ⋆ Numbers that are congruent to { 1, 2, 4, 5 } mod 8. • a(n) = 2 * n - 2 - ((- 1) ^ n + i ^ (n * (n + 1))) / 2, where i=sqrt(- 1). (End) • a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. •

► [A063985] 0,1,2,4,5,9,10,14,17,23,24,32,33,41,48,56,57,69,70,82,91,103,104,120,1 25 ⋆ Partial sums of cototient sequence A051953. • a(n) = (1 / 2 - 3 / Pi ^ 2) * n ^ 2 + O(n * log(n)). - _ Amiram Eldar _ , Jul 26 2022 •

► [A282737] 1,2,4,5,9,10,15,16,22,23,30,31,39,40,49,50,60,61,72,73,85,86,99,100,1 14 ⋆ Expansion of (x ^ 6 - x ^ 4 + x ^ 3 - x - 1) / ((x - 1) ^ 3 * (x + 1) ^ 2). • a(n) = (n ^ 2 + 14 * n) / 8 for n>1 and even. • a(n) = (n ^ 2 + 12 * n - 5) / 8 for n>1 and odd. • a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n>4. (End) • a(n) = Sum _{ k=0..n } k * (k + 1) / 2 mod (k + 2) for n>=2. - _ Paolo P. Lava _ , Apr 11 2017 •

► [A363283] 1,2,4,5,9,10,16,17,25,26,36,37,49,50,64,65,81,82,100,101,121,122,14 4,145,169 ⋆ Squares (A000290) and (1 + squares) (A002522), in increasing orde r. • a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). •

► [A320225] 1,1,2,4,5,9,10,16,19,26,27,44,45,57,65,87,88,120,121,158,171,200,20 1,278,284 ⋆ a(1) = 1; a(n > 1) = Sum _{ k = 1..n } Sum _{ d|k, d < k } a(d) . • a(1) = 1; a(n > 1) = Sum _{ d = 1..n - 1 } a(d) * floor(n / d - 1). •

► [A047378] 2,4,5,9,11,12,16,18,19,23,25,26,30,32,33,37,39,40,44,46,47,51,53,54,5 8 ⋆ Numbers that are congruent to { 2, 4, 5 } mod 7. • a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. • a(n) = (21 * n - 9 - 9 * cos(2 * n * Pi / 3) + sqrt(3) * si n(2 * n * Pi / 3)) / 9. • a(3k) = 7k - 2, a(3k - 1) = 7k - 3, a(3k - 2) = 7k - 5. (End) •

► [A211521] 0,0,1,2,4,5,9,11,16,18,25,28,36,39,49,53,64,68,81,86,100,105,121,127,1 44 ⋆ Number of ordered triples (w,x,y) with all terms in { 1,...,n } and w + 2x = 4y. • a(n) = a(n - 1) + a(n - 2) - a(n - 3) + a(n - 4) - a(n - 5) - a(n - 6) + a(n - 7). • a(n) = (2 * n ^ 2 - n + 1 + (n - 1) * (- 1) ^ n + (- 1) ^ ((2 * n + 1 - (- 1) ^ n) / 4) - (- 1) ^ ((6 * n + 1 - (- 1) ^ n) / 4)) / 8. - _ Luce ETIENNE _ , Dec 31 2015 •

► [A077882] 0,1,1,2,4,5,9,14,20,33,49,74,116,173,265,406,612,937,1425,2162,330 0,5013,7625,11614,17652 ⋆ Expansion of x / ((1 - x) * (1 - x ^ 2 - 2 * x ^ 3)). • a(n) = a(n - 1) + a(n - 2) + a(n - 3) - 2 * a(n - 4) - _ Roger L. Bagula _ , Mar 25 2005 • a(n + 1)=sum { k=0..n, sum { j=0..floor(k / 2), C(j, k - 2j)2 ^ (k - 2 j) }} ; - _ Paul Barry _ , Jul 18 2005 •

► [A067298] 1,1,2,4,5,9,28,32,36,64,256,284,300,328,584,2704,2960,3072,3184,344 0,6144,31168,33872,34896,35680 ⋆ Generalized Catalan triangle, based on C(2,2; n) := A064340(n). • a(n, m)= sum(C(2, 2; j)C(2, 2; n - j), j=0..m) if n>=m> =0 else 0. •

► [A003278] 1,2,4,5,10,11,13,14,28,29,31,32,37,38,40,41,82,83,85,86,91,92,94,95,1 09 ⋆ Szekeres's sequence: a(n) - 1 in ternary = n - 1 in binary; also: a(1) = 1, a (2) = 2, and thereafter a(n) is smallest number k which avoids any 3 - term arit hmetic progression in a(1), a(2), ..., a(n - 1), k. • a(2 * k + 2) = a(2 * k + 1) + 1, a(2 ^ k + 1) = 2 * a(2 ^ k). • a(n) = b(n + 1) with b(0) = 1, b(2 * n) = 3 * b(n) - 2, b(2 * n + 1) = 3 * b(n) - 1. - _ Ralf Stephan _ , Aug 23 2003 •

► [A322068] 0,0,1,2,4,5,10,11,15,18,25,26,36,37,46,54,62,63,78,79,93,103,116,117,1 37 ⋆ a(n) = (1 / 2) * Sum _{ p prime <= n } floor(n / p) * floor(1 + n / p). • a(n) = (Sum _{ k=1..floor(sqrt(n)) } k * (k + 1) * (pi(floor(n / k)) - pi(floor (n / (k + 1)))) + Sum _{ p prime <= floor(n / (1 + floor(sqrt(n)))) } floor(n / p) * floor(1 + n / p)) / 2, where pi(x) is the prime - counting function (A0007 20). •

► [A109511] 0,1,2,4,5,10,11,19,23,40,41,79,80,145,164,292,293,577,578,1096,116 3,2188,2189,4357,4373 ⋆ Number of subsets of the first n numbers having a com mon divisor greater than 1. • a(n) - a(n - 1) = 1 iff n is prime; • a(p ^ e) = a(p ^ e - 1) + 2 ^ (p ^ (e - 1) - 1) for p prime, e>0; • a(p * q) = a(p * q - 1) + 2 ^ (p - 1) + 2 ^ (q - 1) - 1 for primes p<>q. •

► [A299322] 1,2,4,5,10,11,22,23,45,48,92,97,185,196,372,393,745,788,1492,1577,2 985,3156,5972,6313,11945 ⋆ Ranks of { 2,3 }- power towers without neither con secutive 2's nor consecutive 3's; see Comments. • a(n) = a(n - 1) + a(n - 2) - a(n - 3) + 2 * a(n - 4) - 2 * a(n - 5) for n>8. •

► [A091856] 1,2,4,5,10,11,22,23,46,47,94,95,100,101,202,203,210,211,422,423,42 6,427,434,435,438 ⋆ Beginning with 1, minimum value such that gcd(a(2n - 1),a(2n)) = 1, gcd(a(2n),a(2n + 1))>1 and a(n) > a(n - 1). • a(2n) = a(2n - 1) + 1, a(2n + 1) = a(2n) + LeastPrimeFactor(a(2n)). •

► [A083416] 1,2,4,5,10,11,22,23,46,47,94,95,190,191,382,383,766,767,1534,1535,3 070,3071,6142,6143,12286 ⋆ Add 1, double, add 1, double, etc. • a(2 * n) = 3 * 2 ^ (n - 1) - 1, a(2 * n + 1) = 3 * 2 ^ n - 2. • a(n) = 3 * 2 ^ ((2 * n - (- 1) ^ n - 3) / 4) + ((- 1) ^ n - 3) / 2. - _ Bruno Berselli _ , Feb 17 2011 •

► [A047611] 2,4,5,10,12,13,18,20,21,26,28,29,34,36,37,42,44,45,50,52,53,58,60,61,6 6 ⋆ Numbers that are congruent to { 2, 4, 5 } mod 8. • a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. • a(n) = (24 * n - 15 - 12 * cos(2 * n * Pi / 3) + 2 * sqrt(3) * sin(2 * n * Pi / 3)) / 9. • a(3k) = 8k - 3, a(3k - 1) = 8k - 4, a(3k - 2) = 8k - 6. (End) •

► [A097132] 1,2,4,5,10,12,25,30,64,77,166,200,433,522,1132,1365,2962,3572,775 3,9350,20296,24477,53134,64080,139105 ⋆ a(n) = Sum _{ k=0..n } Fibonacci(k) + (- 1) ^ k * Fibonacci(k - 1). • a(n) = a(n - 1) + 3 * a(n - 2) - 3 * a(n - 3) - a(n - 4) + a(n - 5); • a(n) = 1 + (1 / 2 - sqrt(5) / 2) ^ n * (1 / 2 - 3 * sqrt(5) / 1 0) - (sqrt(5) / 2 - 1 / 2) ^ n * (3 * sqrt(5) / 10 + 1 / 2) + (- sqrt(5) / 2 - 1 / 2) ^ n * (3 * sqrt(5) / 10 - 1 / 2) + (sqrt(5) / 2 + 1 / 2) ^ n * (3 * sqrt(5) / 10 + 1 / 2); • a(2n + 1) = 1 + Fibonacci(2n) + Fibonacci(2n + 2) = 1 + Lucas(2n). •

► [A253198] 0,1,2,4,5,10,16,25,42,68,109,178,288,465,754,1220,1973,3194,5168,83 61,13530,21892,35421,57314,92736 ⋆ a(n) = a(n - 1) + a(n - 2) - (- 1) ^ (a(n - 1) + a(n - 2))) with a(0)=0, a(1)=1. • a(n) = a(n - 1) + a(n - 2) - (- 1) ^ (a(n - 1) + a(n - 2))), a(0)=0, a(1)=1. • a(n) = a(n - 1) + a(n - 2) + a(n - 3) - a(n - 4) - a(n - 5) for n>4. - _ Colin Barker _ , Mar 28 2015 •

► [A333188] 1,1,1,2,4,5,10,16,28,52,94,170,316,586,1093,2048,3856,7284,13800,26 220,49942,95341,182390,349576,671178 ⋆ a(n) = [2 ^ n csc(1 / n)] - [2 ^ n cot(1 / n)], where [ ] = floor. • a(n) = [2 ^ n csc(1 / n)] - [2 ^ n cot(1 / n)], where [ ] = floor. •

► [A049332] 2,4,5,10,17,34,65,130,257,514,1025,2050,4097,8194,16385,32770,655 37,131074,262145,524290,1048577,2097154,4194305,8388610,16777217 ⋆ Number of conjugacy classes in Clifford group CL(n). • a(n) = (3 / 2 - (- 1) ^ n / 2 + 2 ^ n). • a(n) = 2 * a(n - 1) + a(n - 2) - 2 * a(n - 3). •

► [A245478] 1,2,4,5,10,20,25,50,100,125,250,500,625,1250,2500,3125,6250,12500,1 5625,31250,62500,78125,156250,312500,390625 ⋆ Numbers n such that the n - th cyclotomic polynomial has a root mod 5. • a(3j + i) = 2 ^ (i - 1) * 5 ^ j for i = 1,2,3 and j >= 0. • a(n) = 5 * a(n - 3). G.f.: - x * (4 * x ^ 2 + 2 * x + 1) / (5 * x ^ 3 - 1). - _ Colin Barker _ , Aug 01 2014 •

► [A292412] 1,1,2,4,5,11,13,29,34,76,89,199,233,521,610,1364,1597,3571,4181,934 9,10946,24476,28657,64079,75025 ⋆ Numbers of the form Fibonacci(2 * k - 1) or Lucas(2 * k - 1); i.e., union of sequences A001519 and A002878. • a(n) = 3 * a(n - 2) - a(n - 4) for n>4. (End) •

► [A000063] 1,1,2,4,5,14,14,39,42,132,132,424,429,1428,1430,4848,4862,16796,16 796,58739,58786,208012,208012,742768,742900 ⋆ Symmetrical dissections of an n - gon. • a(n) = Catalan(floor(n / 2) - 1) - Catalan(n / 4 - 1) - Catalan (n / 6 - 1), where Catalan(x) = 0 for noninteger x (from Guy's 1958 paper). - _ Joseph Myers _ , Jun 21 2012 •

► [A179133] 2,4,5,26,68,89,466,1220,1597,8362,21892,28657,150050,392836,51422 9,2692538,7049156,9227465,48315634,126491972,165580141,866988874,226980634 0,2971215073,15557484098 ⋆ Denominators of A178381(4 * n + 3) / A178381(4 * n + 2). • a(n) = 18 * a(n - 3) - a(n - 6). (End) • a(3 * n) = 2 * Fibonacci(6 * n + 1), • a(3 * n + 1) = 2 * Fibonacci(6 * n + 3), • a(3 * n + 2) = Fibonacci(6 * n + 5). (End) •

► [A267460] 0,2,4,6,6,8,8,10,10,12,12,14,14,16,16,18,18,20,20,22,22,24,24,26,26 ⋆ Number of OFF (white) cells in the n - th iteration of the "Rule 133" elementar y cellular automaton starting with a single ON (black) cell. • a(n) = (2 * n - (- 1) ^ n + 5) / 2 for n>1. • a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n>4. •

► [A309796] 0,0,0,0,0,0,2,4,6,6,10,14,22,30,44,54,70,82,108,134,168,196,242,282,3 40 ⋆ Sum of the even parts appearing among the second largest parts of the par titions of n into 4 parts. • a(n) = Sum _{ k=1..floor(n / 4) } Sum _{ j=k..floo r((n - k) / 3) } Sum _{ i=j..floor((n - j - k) / 2) } i * ((i - 1) mod 2). •

► [A030118] 1,1,2,4,6,7,7,7,8,10,12,13,13,13,14,16,18,19,19,19,20,22,24,25,25 ⋆ a(0) = 1, a(1) = 1, a(n) = a(n - 1) - a(n - 2) + n. • a(n) = (1 / 30) *{ 37 * (n mo d 6) + 2 * [(n + 1) mod 6] - 3 * [(n + 2) mod 6] - 3 * [(n + 3) mod 6] + 2 * [(n + 4) mod 6] + 7 * [(n + 5) mod 6] } + 6 * Sum _{ k=0..n }{ 1 / 3 * (cos(2 * Pi * k / 3) + 1 / 2) * (1 + (- 1) ^ k }- 6, with n>=0. - _ Paolo P. Lava _ , Ju n 01 2007 • a(n) = n iff n is either 1 or 2 mod 6. - _ Jon Perry _ , Nov 02 201 4 • a(n) = 3 * a(n - 1) - 4 * a(n - 2) + 3 * a(n - 3) - a(n - 4) for n > 3. - _ Chai Wah Wu _ , Jun 30 2020 •

► [A147613] 2,4,6,7,8,9,10,12,13,14,15,16,17,18,19,20,22,23,24,25,26,27,28,29,30 ⋆ Numbers that are not Jacobsthal numbers. • a(n) = floor(- LambertW(- 1, - (1 / 3) * log(2) * 2 ^ (3 / 2 - n)) / log(2) + 1 / 2). - Nicolas Normand (Nicolas. Normand(at)polytech.univ - nantes.fr), Nov 29 2017 •

► [A047513] 0,1,2,4,6,7,8,9,10,12,14,15,16,17,18,20,22,23,24,25,26,28,30,31,32 ⋆ N umbers that are congruent to { 0, 1, 2, 4, 6, 7 } mod 8. • a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - 2 * a(n - 4) + 2 * a(n - 5) - a(n - 6), n>6. • a(n) = (24 * n - 24 - 2 * sqrt(3) * (cos((1 - 4 * n) * Pi / 6) - 3 * cos((2 * n + 1) * Pi / 6))) / 18. • a(6k) = 8k - 1, a(6k - 1) = 8k - 2, a(6k - 2) = 8k - 4, a(6k - 3) = 8k - 6, a(6k - 4) = 8k - 7, a(6k - 5) = 8k - 8. (End) •

► [A229785] 1,2,4,6,7,8,9,10,12,14,16,18,19,20,22,24,25,26,28,30,31,32,33,34,36 ⋆ Partial sums of A157129. • a(n)=(3 / 2)n + O(1). More precisely, let b(n)=3 * n - 2 * a(n); then b(n) satisfies the following recurrence modulo 12: b(n)=1,2,1, 0,1,2,3,4,3,2,1 for n=1,2,3,4,5,6,7,8,9,10,11. Then for k>=1 we have b(12k)=b(4 k), b(12k + 1)=b(4k + 1), b(12k + 2)=b(4k + 2), b(12k + 2)=b(4k + 2), b(12k + 3)=b(4k + 2) - 1, b(12k + 4)=b(4k + 2) - 2, b(12k + 5)=b(4k + 2) - 1, b(12 k + 6)=b(4k + 2), b(12k + 7)=4 - b(4k + 3), b(12k + 8)=4 - b(4k + 4), b(12k + 9)=4 - b(4k + 3), b(12k + 10)=4 - b(4k + 2), b(12k + 11)=b(4k + 3). •

► [A080645] 1,2,4,6,7,8,10,12,13,14,15,16,18,20,22,24,25,26,27,28,29,30,31,32,34 ⋆ a(1) = 1; for n>1, a(n) is taken to be the smallest integer greater than a(n - 1) which is consistent with the condition "for n>1, if n is a member of the sequenc e then a(n) is even". • a(1)=1, a(2)=2, a(3)=4; then for k>=1, abs(j)<=2 ^ k: a(3 * 2 ^ k + j)=4 * 2 ^ k + 3 / 2 * j + abs(j) / 2. •

► [A047237] 0,1,2,4,6,7,8,10,12,13,14,16,18,19,20,22,24,25,26,28,30,31,32,34,36 ⋆ Numbers that are congruent to { 0, 1, 2, 4 } mod 6. • a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4) for n>4. • a(n) = (6 * n - 8 + i ^ (1 - n) - i ^ (1 + n)) / 4 where i=sqrt(- 1). • a(n) = (6 * n - 8 + (1 - (- 1) ^ n) * (- 1) ^ (n * (n - 1) / 2)) / 4. • a(n) = a(n - 4) + 6, a(1)=0, a(2)=1, a(3)=2, a(4)=4, for n > 4. •

► [A047511] 0,2,4,6,7,8,10,12,14,15,16,18,20,22,23,24,26,28,30,31,32,34,36,38,39 ⋆ Numbers that are congruent to { 0, 2, 4, 6, 7 } mod 8. • a(0)=0, a(1)=2, a(2)= 4, a(3)=6, a(4)=7, a(5)=8, a(n) = a(n - 1) + a(n - 5) - a(n - 6) for n > 6. - _ H arvey P. Dale _ , May 09 2014 • a(n) = a(n - 5) + 8 for n > 5. • a(n) = (40 * n - 25 + 3 * (n mod 5) - 2 * ((n + 1) mod 5) - 2 * ((n + 2) mod 5) - 2 * ((n + 3) mod 5) + 3 * ((n + 4) mod 5)) / 25. • a(5k) = 8k - 1, a(5k - 1) = 8k - 2, a(5k - 2) = 8k - 4, a(5k - 3) = 8k - 6, a(5k - 4) = 8k - 8. (End) •

► [A096750] 1,1,1,1,2,4,6,7,8,12,21,33,44,55,76,119,185,263,351,480,706,1066,155 1,2156,2982 ⋆ Expansion of (1 - x + x ^ 2) / (1 - 2x + 2x ^ 2 - x ^ 3 - x ^ 4). • a(n) = 2 * a(n - 1) - 2 * a(n - 2) + a(n - 3) + a(n - 4). •

► [A247000] 1,2,4,6,7,9,10,12,13,15,16,18,19,21,23,24,26,28,29,31,33,34,36,38,39 ⋆ Maximal number of palindromes in a circular binary word of length n. • a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. •

► [A047512] 1,2,4,6,7,9,10,12,14,15,17,18,20,22,23,25,26,28,30,31,33,34,36,38,39 ⋆ Numbers that are congruent to { 1, 2, 4, 6, 7 } mod 8. • a(n) = a(n - 1) + a(n - 5) - a(n - 6) for n > 6. (End) • a(n) = a(n - 5) + 8 for n > 5. • a(n) = (40 * n - 20 + 3 * (n mod 5) - 2 * ((n + 1) mod 5) - 2 * ((n + 2) mod 5) + 3 * ((n +

3) mod 5) - 2 * ((n + 4) mod 5)) / 25. • a(5k) = 8k - 1, a(5k - 1) = 8k - 2, a(5k - 2) = 8k - 4, a(5k - 3) = 8k - 6, a(5k - 4) = 8k - 7. (End) •

▶ [A026273] 1,2,4,6,7,9,10,12,14,15,17,19,20,22,23,25,27,28,30,31,33,35,36,38,40 ⋆ a(n) = least k such that s(k) = n, where s = A026272. • a(n) = floor[r * (n - 2 * r + 3)], where r=golden ratio. •

▶ [A184658] 1,2,4,6,7,9,10,12,14,15,17,19,20,22,23,25,27,28,30,32,33,35,36,38,40 ⋆ floor(nr + h), where r=(1 + sqrt(5)) / 2, h= - 1 / 3; complement of A184659. • a(n)=floor(nr + h), where r=(1 + sqrt(5)) / 2, h= - 1 / 3. •

▶ [A189518] 1,2,4,6,7,9,10,12,14,15,17,19,20,22,24,25,27,28,30,32,33,35,37,38,40 ⋆ n + [ns / r] + [nt / r]; r=1, s=1 / e, t=1 / (e + 1). • a(n)=n + [n / e] + [n / (e + 1)], •

▶ [A080711] 2,4,6,7,9,10,12,15,16,18,21,22,24,25,26,27,30,31,33,34,35,36,39,40,42 ⋆ a(0) = 2; for n>0, a(n) is taken to be the smallest positive integer greater tha n a(n - 1) which is consistent with the condition "n is a member of the sequence if and only if a(n) is a multiple of 3". • a(a(n)) = 3 * (n + 2). •

▶ [A184732] 1,2,4,6,7,9,11,12,14,15,17,19,20,22,24,25,27,28,30,32,33,35,36,38,40 ⋆ floor(nr + h), where r=(1 + sqrt(5)) / 2, h= - 1 / 4; complement of A184733. • a(n)=floor(nr + h), where r=(1 + sqrt(5)) / 2, h= - 1 / 4. •

▶ [A032793] 1,2,4,6,7,9,11,12,14,16,17,19,21,22,24,26,27,29,31,32,34,36,37,39,41 ⋆ Numbers that are congruent to { 1, 2, 4 } mod 5. • a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. • a(n) = - 1 + Sum _{ k=1..n } ((1 / 9) * (2 * (k mod 3) + 8 * ((k + 1) mod 3) + 5 * ((k + 2) mod 3)), with n >= 1. - _ Paolo P. Lava _ , Sep 03 2010 • a(n) = floor((5 * n - 2) / 3). - _ Gary Detlefs _ , May 14 2011 • a(n) = (15 * n - 9 + 2 * sqrt(3) * sin(2 * n * Pi / 3)) / 9. • a(3k) = 5k - 1, a(3k - 1) = 5k - 3, a(3k - 2) = 5k - 4. (End) • a(n) = a(n - 3) + 5 with a(1) = 1, a(2) = 2, a(3) = 4 for n > 3. •

▶ [A083088] 1,2,4,6,7,9,11,12,14,16,18,19,21,23,24,26,28,30,31,33,35,36,38,40,41 ⋆ First column of table A083087. • a(n) = floor(n * x / (x - 1)) + 1, n>=0, wher e x=1 + sqrt(2). • a(n) = floor(n / sqrt(2)) + n + 1. •

▶ [A083089] 0,2,4,6,7,9,11,12,14,16,18,19,21,23,24,26,28,30,31,33,35,36,38,40,42 ⋆ Numbers that are congruent to { 0, 2, 4, 6, 7, 9, 11 } mod 12. • a(n) = a(n - 1) + a(n - 7) - a(n - 8) for n > 8. • a(n) = (84 * n - 63 - 2 * (n mod 7) - 2 * ((n + 1) mod 7) + 5 * ((n + 2) mod 7) - 2 * ((n + 3) mod 7) - 2 * ((n + 4) mod 7) - 2 * ((n + 5) mod 7) + 5 * ((n + 6) mod 7)) / 49. • a(7k) = 12k - 1, a(7k - 1) = 12k - 3, a(7k - 2) = 12k - 5, a(7k - 3) = 12k - 6, a(7k - 4) = 12k - 8, a(7k - 5) = 12k - 10, a(7k - 6) = 12k - 12. (End) • a(n) = 2 * n - 2 - floor(2 * (n - 1) / 7). - _ Wesley Ivan Hurt _ , Sep 29 2017 • a(n) = a(n - 7) + 12 for n > 7. - _ Jian ing Song _ , Sep 22 2018 •

▶ [A047293] 0,2,4,6,7,9,11,13,14,16,18,20,21,23,25,27,28,30,32,34,35,37,39,41,42 ⋆ Numbers that are congruent to { 0, 2, 4, 6 } mod 7. • a(n) = floor(ceiling((7n + 2) / 2) / 2). • a(n) = 2n - 2 - floor((n - 1) / 4). - _ Gary Detlefs _ , Mar 27 2010 • a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. • a(n) = (14n - 11 + i ^ (2 n) + (1 - i) * i ^ (- n) + (1 + i) * i ^ n) / 8 where i=sqrt(- 1). •

▶ [A282896] 2,4,6,7,9,12,13,15,19,22,24,26,27,30,31,34,38,39,42,43,45,47,48,51,53 ⋆ Indices n such that sign(Im(zetazero(n)) - 2 * Pi * e * exp(LambertW((n - 11 / 8) / e))) = 1. • a(n) = positions where A288640 = 1. •

▶ [A047510] 2,4,6,7,10,12,14,15,18,20,22,23,26,28,30,31,34,36,38,39,42,44,46,47,5 0 ⋆ Numbers that are congruent to { 2, 4, 6, 7 } mod 8. • a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. • a(n) = (8 * n - 1 - i ^ (2 * n) - i ^ (- n) - i ^ n) / 4 where i=sqrt(- 1). •

▶ [A047412] 0,1,2,4,6,8,9,10,12,14,16,17,18,20,22,24,25,26,28,30,32,33,34,36,38 ⋆ Numbers that are congruent to { 0, 1, 2, 4, 6 } mod 8. • a(n) = a(n - 1) + a(n - 5) - a(n - 6) for n > 6. • a(n) = a(n - 5) + 8 for n > 5. • a(n) = (40 * n - 55 - 2 * (n mod 5) - 2 * ((n + 1) mod 5) + 3 * ((n + 2) mod 5) + 3 * ((n + 3) mod 5) - 2 * ((n + 4) mod 5)) / 25. • a(5 * k) = 8 * k - 2, a(5 * k - 1) = 8 * k - 4, a(5 * k - 2) = 8 * k - 6, a(5 * k - 3) = 8 * k - 7, a(5 * k - 4) = 8 * k - 8. (End) • a (n) = (40 * n - 55 + 6 * cos(2 * Pi * (n - 1) / 5) + 2 * cos(2 * Pi * n / 5) + 2 * cos(4 * Pi * n / 5) - 2 * cos(2 * Pi * (n + 1) / 5) - 6 * cos(Pi * (4 * n + 1) / 5) + 6 * sin(Pi * (4 * n + 3) / 10) + 2 * sin(Pi * (8 * n + 3) / 10) - 6 * sin(Pi * (8 * n + 1) / 10)) / 25. - _ Wesley Ivan Hurt _ , Oct 10 2018 •

▶ [A184012] 2,4,6,8,9,11,12,14,15,16,18,19,20,22,23,24,26,27,28,29,31,32,33,34,36 ⋆ n + floor(sqrt(5n - 4)); complement of A184013. • a(n) = n + floor(sqrt(5n - 4)) •

▶ [A184740] 1,2,4,6,8,9,11,13,14,16,18,20,21,23,25,26,28,30,32,33,35,37,39,40,42 ⋆ floor(n * (e - 1) - 1 / 2); complement of A184741. • a(n)=floor(n * e - 1 / 2); co mplement of A184741. •

▶ [A184638] 1,2,4,6,8,9,11,13,15,16,18,20,22,23,25,27,28,30,32,34,35,37,39,41,42 ⋆ floor(nr + h), where r=sqrt(3), h= - 1 / 2; complement of A184653. • a(n)=flo or(nr + h), where r=sqrt(3), h= - 1 / 2. •

▶ [A047294] 1,2,4,6,8,9,11,13,15,16,18,20,22,23,25,27,29,30,32,34,36,37,39,41,43 ⋆ Numbers that are congruent to { 1, 2, 4, 6 } mod 7. • a(n) = ceiling(floor((7 * n - 5) / 2) / 2). • a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. • a(n) = (- 9 - (- 1) ^ n + (1 + i) * (- i) ^ n + (1 - i) * i ^ n + 14 * n) / 8 where i=sqrt(- 1). - _ Colin Barker _ , May 14 2012 •

▶ [A228246] 1,2,4,6,8,9,11,13,15,16,18,20,22,24,26,28,29,31,33,35,37,39,41,43,44 ⋆ a(1)=1; for n >= 2, a(n) = round(x), where x is the average length (not counti ng draws) of a first - to - n match between two chess players of equal strength. • a(n) = round(2 * n * (1 - 4 ^ (- n) * binomial(2 * n,n))); • a(n) = 2 * n * (1 - 1 / sqrt(Pi * n)) + O(1 / sqrt(n)). •

▶ [A184587] 2,4,6,8,9,11,13,15,17,18,20,22,24,26,28,29,31,33,35,37,38,40,42,44,46 ⋆ a(n) = floor((n + 1 / 2) * s), where s=(5 + sqrt(5)) / 4; complement of A184 586. • a(n)=floor[(n + 1 / 2)s], where s=(5 + sqrt(5)) / 4. •

▶ [A225773] 2,4,6,8,9,11,13,15,18,20,22,24,25,27,29,31,34,36,38,40,41,43,45,47,50 ⋆ The squares on a chessboard that are black, counting from top left corner and down. • a(1) = 2 • a(n) = a(n - 1) + 2 + (mod(a(n - 1) + 1, 8) == 0) - (mod(a (n - 1), 8) == 0) •

▶ [A276138] 0,2,4,6,8,9,20,22,24,26,28,29,40,42,44,46,48,49,60,62,64,66,68,69,80 ⋆ Numbers without the decimal digits 1, 3, 5 and 7. • a(6n - 6 + k) = 10 a(n) + a(k) for k = 1..6. - _ Robert Israel _ , Aug 24 2016 •

▶ [A214671] 0,2,4,6,8,10,11,13,15,17,19,21,22,24,26,28,30,31,33,35,37,39,41,42,44 ⋆ Floor of the real parts of the zeros of the complex Lucas function on the right half - plane. • a(n) = floor((k + 1 / 2) * alpha), with alpha / 2 = x _ 0(0) defi ned in the comment section. •

▶ [A228295] 0,2,4,6,8,10,12,14,15,17,19,21,23,25,27,28,30,32,34,36,38,40,41,43,45 ⋆ The 'Honeycomb' or 'Beehive' sequence: a(n) = ceiling(12 ^ (1 / 4) * n). • a(n) = ceiling(12 ^ (1 / 4) * n). •

▶ [A184592] 2,4,6,8,10,12,14,15,17,19,21,23,25,27,29,30,32,34,36,38,40,42,44,45,4 7 ⋆ a(n) = floor((n * (Pi - 1) + 1) / (Pi - 2)); complement of A184591. • a(n) = floor((n * (Pi - 1) + 1) / (Pi - 2)). •

▶ [A214673] 0,2,4,6,8,10,12,14,16,18,20,21,23,25,27,29,31,33,35,37,39,41,43,44,46 ⋆ Floor of the moduli of the zeros of the complex Lucas function. • a(n) = floor ((2 * k + 1) * tau / 2), n>=0, with tau / 2 = rho(0) defined in the comment s ection. •

▶ [A004275] 0,1,2,4,6,8,10,12,14,16,18,20,22,24,26,28,30,32,34,36,38,40,42,44,46 ⋆ 1 together with nonnegative even numbers. • a(n) = floor((2 * n ^ 2) / (1 + n)). - _ Enrique Pérez Herrero _ , Apr 05 2010 • a(n) = 2n - 2 + floor(2 / (n + 1)) = max(n, 2n - 2) = 2n - 1 + sgn(1 - n). Also, a(0)=0, a(1)=1, a(n) = 2n - 2 for n > 1. - _ Wesley Ivan Hurt _ , Nov 05 2013 •

▶ [A004277] 1,2,4,6,8,10,12,14,16,18,20,22,24,26,28,30,32,34,36,38,40,42,44,46,48 ⋆ 1 together with positive even numbers. • a(n) = Sum _{ k=0..floor(n / 2) } binomial(n - k - 1) * (- 1) ^ k * 2 ^ (n - 2k). - _ Paul Barry _ , Jan 16 2005 •

▶ [A005843] 0,2,4,6,8,10,12,14,16,18,20,22,24,26,28,30,32,34,36,38,40,42,44,46,48 ⋆ The nonnegative even numbers: a(n) = 2n. • a(0) = 0, a(1) = 2, a(n) = 2a(n - 1) - a(n - 2). - _ Jaume Oliver Lafont _ , May 07 2008 • a(n) = Sum _{ k=1 ..n } floor(6n / 4 ^ k + 1 / 2). - _ Vladimir Shevelev _ , Jun 04 2009 • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Dec 23 2011 • a (n) = 2 * n = Product _{ k=1..2 * n - 1 } 2 * sin(Pi * k / (2 * n)), n >= 0 (un defined product := 1). See an Oct 09 2013 formula contribution in A000027 wit h a reference. - _ Wolfdieter Lang _ , Oct 10 2013 •

▶ [A299174] 2,4,6,8,10,12,14,16,18,20,22,24,26,28,30,32,34,36,38,40,42,44,46,48,5 0 ⋆ The even positive integers. • a(n) = 2 * n, n >= 1. •

▶ [A329836] 2,4,6,8,10,12,14,16,18,21,23,25,27,29,31,33,35,37,39,42,44,46,48,50,5 2 ⋆ Beatty sequence for (11 + sqrt(101)) / 10. • a(n) = floor(n * s), where s = (11 + sqrt(101)) / 10. •

▶ [A368244] 1,1,1,1,1,1,1,1,1,2,4,6,8,10,12,14,16,18,21,27,37,51,69,91,117 ⋆ Num ber of compositions of n into parts 1, 9, and 10. • a(n) = a(n - 1) + a(n - 9) + a (n - 10) for n > 9. •

▶ [A249124] 2,4,6,8,10,12,14,16,19,21,23,25,27,29,31,33,36,38,40,42,44,46,48,50,5 3 ⋆ Position of 2 * n ^ 6 in the ordered union of { h ^ 6, h >= 1 } and { 2 * k ^ 6, k >= 1 } . • a(n) = n + floor((2 * n ^ 6) ^ (1 / 6)). - _ David A. Cornet h _ , Aug 11 2019 •

▶ [A322405] 1,1,1,1,1,1,1,1,2,4,6,8,10,12,14,16,19,25,35,49,67,89,115,145,180 ⋆ N umber of compositions of n into parts 1, 8, 9. • a(n) = a(n - 1) + a(n - 8) + a(n - 9) for n > 8. •

▶ [A162764] 0,2,4,6,8,10,12,14,16,22,26,32,36,40,44 ⋆ Minimal total number of fl oors that an elevator must move to get n persons waiting, respectively, on floor s i = 1, 2, ..., n, to their destination floors n - i + 1 (= n, n - 1, ..., 1), if the elev ator can hold up to C = 4 persons at a time and starts at floor 1, and no passen ger may get off the elevator before reaching his destination. • a(n) = 2n - 2 for n < 2C + 2 = 10, a(n) <= 2n - 2 + C + a(n - 2C) for n > 2C + 1 (cf. comme nts for proof), with equality for all known values except n = 10 & 11 where a(n) = 4n - 18; conjectured to be exact for all n > 2C + 3 = 11. - _ M. F. Hasler _ , May 15 2019 •

▶ [A329832] 2,4,6,8,10,12,14,17,19,21,23,25,27,29,31,34,36,38,40,42,44,46,49,51,5 3 ⋆ Beatty sequence for (9 + sqrt(65)) / 8. • a(n) = floor(n * s), where s = (9 + sqrt(65)) / 8. •

▶ [A276106] 1,1,1,1,1,1,1,2,4,6,8,10,12,14,17,23,33,47,65,87,113,144,184,240,320 ⋆ Number of compositions of n into parts 1, 7, and 8. • a(n) = a(n - 1) + a(n - 7) + a(n - 8) for n > 7. •

▶ [A321501] 0,1,2,4,6,8,10,12,14,18,20,22,26,28,30,34,36,38,42,44,46,50,52,54,58 ⋆ Numbers not of the form (x - y)(x ^ 2 - y ^ 2) with x > y > 0; complement of A321499. • a(n) = round((n - 2) * 9 / 8) * 2 for all n > 6. •

▶ [A278453] 0,1,2,4,6,8,10,12,15,17,19,22,25,27,30,33,35,38,41,44,47,50,53,56,59 ⋆ a(n) = nearest integer to b(n) = c ^ (b(n - 1) / (n - 1)), where b(1)=0 and c is chosen such that the sequence neither explodes nor goes to 1. • a(n) = round(n * log _ c((n + 1) * log _ c((n + 2) * log _ c(...)))). - _ Andrey Zabolotskiy _ , Nov 30 2016 •

▶ [A011860] 0,0,0,0,1,2,4,6,8,10,12,15,18,22,26,30,34,38,43,48,54,60,66,72,78 ⋆ Fl oor(n(n - 1) / 7). • a(n) = + 2 * a(n - 1) - a(n - 2) + a(n - 7) - 2 * a(n - 8) + a(n - 9). G.f.: x ^ 4 * (x ^ 2 + 1) / ((1 - x) ^ 3 * (1 + x + x ^ 2 + x ^ 3 + x ^ 4 + x ^ 5 + x ^ 6)). [_ R. J. Mathar _ , Apr 15 2010] •

▶ [A259278] 1,1,1,1,1,1,2,4,6,8,10,12,15,21,31,45,63,85,112,148,200,276,384,532,7 29 ⋆ Number of compositions of n into parts 1, 6, and 7. • a(n) = a(n - 1) + a(n - 6) + a(n - 7). •

▶ [A049445] 1,2,4,6,8,10,12,16,18,20,21,24,32,34,36,40,42,48,55,60,64,66,68,69,72 ⋆ Numbers n with property that the number of 1's in binary expansion of n (se e A000120) divides n. • a(n) seems to be asymptotic to c * n * log(n) where 0.7 < c < 0.8. - _ Benoit Cloitre _ , Jan 22 2003 •

▶ [A090778] 1,2,4,6,8,10,12,16,18,20,24,32,36,40,42,48,50,54,60,64,72,80,84,96,10 0 ⋆ Numbers k such that phi(k) divides k * (k - phi(k)). • a(n) seems to be asy mptotic to c * n ^ 2 with c=0.11..... •

▶ [A112421] 2,4,6,8,10,12,16,20,24,28,32,36,42,48,54,60,66,72,80,88,96,104,112,12 0,130 ⋆ Number of 6 element subsets of { 1,2,3,...,n } for which the sum - set h as 12 elements. • a(n) = 2 * j * (n - 3 * j - 3), where j=floor(n / 6). - _ Jon E. Schoenfield _ , Dec 20 2013 •

▶ [A162763] 0,2,4,6,8,10,12,18,22,27,31,35,39,47,53,60 ⋆ Minimal total number o f floors an elevator must travel to get n people waiting, respectively, at floors i = 1, 2, ..., n, to their destinations at floors n + 1 - i (= n, ..., 1), if the elevator can hold at most C = 3 people and starts at floor 1, and no passenger may get o

ff the elevator before reaching his / her destination. ● a(n) = 2n - 2 for n < 2C + 2 = 8, a(n) <= 2n - 2 + C + a(n - 2C) else, see comment for proof. Conject ured to hold with equality for all n except n = 2C + { 2, 3 } = { 8, 9 } where a(n) = 4(n - C) - 2 = 4n - 14. - _ M. F. Hasler _ , May 15 2019 ●

▶ [A309716] 0,0,0,0,0,0,0,0,2,4,6,8,10,12,18,24,34,44,54,64,80,96,118,140,168,196 ⋆ Sum of the even parts appearing among the third largest parts of the partitions of n into 4 parts. ● a(n) = Sum _{ k=1..floor(n / 4) } Sum _{ j=k..floor((n - k) / 3) } Sum _{ i=j..floor((n - j - k) / 2) } j * ((j - 1) mod 2). ● a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - 2 * a(n - 4) + 2 * a(n - 5) - 2 * a(n - 7) + 4 * a(n - 8) - 6 * a(n - 9) + 6 * a(n - 10) - 6 * a(n - 11) + 5 * a(n - 12) - 4 * a(n - 13) + 4 * a(n - 15) - 5 * a(n - 16) + 6 * a(n - 17) - 6 * a(n - 18) + 6 * a(n - 19) - 4 * a(n - 20) + 2 * a(n - 21) - 2 * a(n - 23) + 2 * a(n - 24) - 2 * a(n - 25) + 2 * a(n - 26) - 2 * a(n - 27) + a(n - 28) for n > 27. - _ Wesley Ivan Hurt _ , Sep 0 4 2019 ●

▶ [A182766] 2,4,6,8,10,13,15,17,19,21,23,26,28,30,32,34,36,39,41,43,45,47,49,52,5 4 ⋆ Beatty sequence for 5 - 2 * sqrt(2). ● a(n) = floor(s * n), where s = 5 - 2 * sqrt(2). ●

▶ [A329828] 2,4,6,8,10,13,15,17,19,21,23,26,28,30,32,34,37,39,41,43,45,47,50,52,5 4 ⋆ Beatty sequence for (7 + sqrt(37)) / 6. ● a(n) = floor(n * s), where s = (7 + sqrt(37)) / 6. ●

▶ [A276383] 2,4,6,8,10,13,15,17,19,21,24,26,28,30,32,35,37,39,41,43,46,48,50,52,5 4 ⋆ Complement of A158919: complementary Beatty sequence to the Beatty se quence defined by the tribonacci constant tau = A058265. ● a(n) = floor(n * ta u _ prime), with tau _ prime = tau / (tau - 1), where tau is the tribonacci con stant A058265. ●

▶ [A332687] 1,2,4,6,8,10,13,15,17,19,22,24,27,29,32,35,37,39,42,44,47,50,53,55,58 ⋆ a(n) = Sum _{ k=1..n } ceiling(n / prime(k)). ● a(n) = n + Sum _{ k=1..n - 1 } omega(k), where omega = A001221. ● a(n) = n - omega(n) + Sum _{ k= 1..n } pi(floor(n / k)), where pi = A000720. ●

▶ [A061168] 0,1,2,4,6,8,10,13,16,19,22,25,28,31,34,38,42,46,50,54,58,62,66,70,74 ⋆ Partial sums of floor(log _ 2(k)) (= A000523(k)). ● a(n) = Sum _{ k=1..n } fl oor(log _ 2(k)) = (n + 1) * floor(log _ 2(n)) - 2 * (2 ^ floor(log _ 2(n)) - 1). - Diego Torres (torresvillarroel(AT)hotmail.com), Oct 29 2002 ●

▶ [A165453] 0,1,2,4,6,8,10,13,16,19,22,25,28,32,36,40,44,48,52,56,60,65,70,75,80 ⋆ Linear interpolation of the sequence that maps an entry of A002378 to the corr esponding entry of A006331. ● a(0)=0, a(n) = max(min(a(n - 1) + x, n + a(n - x))), where the maximum is taken over all values for x from 1 to n. ● a(n) = S um _{ k=1..n } floor(sqrt(k) + 1 / 2). - _ Wesley Ivan Hurt _ , Dec 01 2020 ● a(n) = (1 / 3) * t * (3 * n + 1 - t ^ 2), where t = floor(sqrt(n) + 1 / 2). - _ Ridouane Oudra _ , Feb 22 2021 ●

▶ [A056827] 0,0,0,1,2,4,6,8,10,13,16,20,24,28,32,37,42,48,54,60,66,73,80,88,96 ⋆ a (n) = floor(n ^ 2 / 6). ● a(n) = floor((1 / 2) * Sum _{ i=1..n + 1 } (ceiling(i / 3) + floor(i / 3) - 1)). - _ Wesley Ivan Hurt _ , Jun 06 2014 ●

▶ [A024172] 0,0,1,2,4,6,8,10,13,16,20,24,28,33,38,43,48,54,60,67,74,81,89,97,105 ⋆ Integer part of ((3rd elementary symmetric function of 1,2,..,n) / (2nd element ary symmetric function of 1,2,...,n)). ● a(n) = floor((1 / 2) * (n - 2) * n * (n + 1) / (3 * n + 2)). ●

▶ [A085577] 1,1,2,4,6,8,10,13,17,20,25,29,34,40,45,52,58,65,73,80,89,97,106,116,1 25 ⋆ Size of maximal subset of the n ^ 2 cells in an n X n grid such that there a re at least 3 edges between any pair of chosen cells. ● a(n) approaches n ^ 2 / 5 as n - > infinity. ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 5) - 2 * a(n - 6) + a(n - 7) for n > 8. ●

▶ [A121832] 1,1,1,1,1,2,4,6,8,10,13,19,29,43,61,84,116,164,236,340,485,685,965,13 65,1941 ⋆ Expansion of 1 / (1 - x - x ^ 5 - x ^ 6). ● a(n) = a(n - 1) + a(n - 5) + a(n - 6). ●

▶ [A334169] 1,2,4,6,8,10,14,16,18,26,30,32,34,50,58,62,64,66,98,114,122,126,128,1 30,194 ⋆ a(n) is the number of ON - cells in the n - th full level of ON - cells of a triangular wedge in the hexagonal grid of A151723 (after 2 ^ k >= n generati ons have been computed). ● a(0) = 1; a(1) = 2, a(n) = 2 + Sum _{ i=0..j } 2 ^ (k - i - 1), where k = floor((3 + sqrt(1 + 8 * (n - 2)) / 2) and j = n - 2 - (k - 2) * (k - 1) / 2 for n >= 2. ●

▶ [A288732] 2,4,6,8,10,14,18,22,26,34,42,50,58,74,90,106,122,154,186,218,250,31 4,378,442,506 ⋆ a(n) = a(n - 1) + 2 * a(n - 4) - 2 * a(n - 5) for n >= 5, where a (0) = 2, a(1) = 4, a(2) = 6, a(3) = 8, a(4) = 10. ● a(n) = a(n - 1) + 2 * a(n - 4) - 2 * a(n - 5) for n >= 5, where a(0) = 2, a(1) = 4, a(2) = 6, a(3) = 8, a(4) = 1 0. ●

▶ [A226722] 1,2,4,6,8,11,12,15,17,18,21,22,25,27,29,31,33,35,37,39,41,44,45,47,50 ⋆ Positions of the numbers 2 ^ n, for n >=0, in the joint ranking of all the num bers 2 ^ h, 3 ^ k, 5 ^ k, for h >= 0, k >= 1. ● a(n) = 1 + n + floor(n * log _ 3(2)) + floor(n * log _ 5(2)). ●

▶ [A054683] 0,2,4,6,8,11,13,15,17,19,20,22,24,26,28,31,33,35,37,39,40,42,44,46,48 ⋆ Numbers whose sum of digits is even. ● a(n) = 2 * n for the first 5 terms; a(n) = 2 * n + 1 for the next 5 terms (recurrence). ●

▶ [A329838] 2,4,6,8,11,13,15,17,19,22,24,26,28,31,33,35,37,39,42,44,46,48,51,53,5 5 ⋆ Beatty sequence for (6 + sqrt(26)) / 5. ● a(n) = floor(n * s), where s = (6 + sqrt(26)) / 5. ●

▶ [A184809] 2,4,6,8,11,13,15,17,20,22,24,26,28,31,33,35,37,40,42,44,46,48,51,53,5 5 ⋆ a(n) = n + floor(sqrt(3 / 2) * n). ● a(n) = n + floor(r * n), where r = sqrt(3 / 2). ●

▶ [A022839] 2,4,6,8,11,13,15,17,20,22,24,26,29,31,33,35,38,40,42,44,46,49,51,53,5 5 ⋆ Beatty sequence for sqrt(5). ● a(n) = floor(n * sqrt(5)). - _ G. C. Greubel _ , Sep 28 2018 ●

▶ [A186152] 1,2,4,6,8,11,13,15,18,21,23,26,29,32,35,38,41,44,48,51,55,58,61,65,69 ⋆ Rank of (1 / 8)n ^ 3 when { (1 / 8)i ^ 3: i>=1 } and { j ^ 2>: j>=1 } are j ointly ranked with (1 / 8)i ^ 3 before j ^ 2 when (1 / 8)i ^ 3=j ^ 2. Complemen t of A186153. ● a(n)=n + floor(((1 / 8)n ^ 3 - 1 / 16) ^ (1 / 2)), A186152. ●

▶ [A077473] 1,2,4,6,8,11,13,18,21,24,27,28,30,32,35,37,40,43,45,50,51,59,62,64,73 ⋆ Greedy powers of (5 / 9): sum _{ n=1..inf } (5 / 9) ^ a(n) = 1. ● a(n)=sum _{ k=1..n } floor(g _ k) where g _ 1=1, g _{ n + 1 } =log _ x(x ^ frac(g _ n) - x) (n>0) at x=(5 / 9) and frac(y) = y - floor(y). ● a(n) seems to be asympt otic to c * n with c around 2.8... - _ Benoit Cloitre _ ●

▶ [A060655] 2,4,6,8,11,14,18,21,24,28,32,37,41,46,51,55,60 ⋆ Pack n integer - sid ed rectangles into the smallest possible square so that no sides of the rectangle are the same. Sequence gives the side of the smallest square. ● a(n) >= sqrt(n * (n + 1) * (2n + 1) / 3). ●

▶ [A117490] 0,1,2,4,6,8,11,14,18,21,25,29,33,38,42,48,54,59,64,70,77,84,90,96,105 ⋆ Number of primes between n and n ^ 2 (with n and n ^ 2 excluded). ● a(n) = pi(n ^ 2) - pi(n), cf. A000720. ●

▶ [A359275] 0,0,0,2,4,6,8,11,14,18,21,25,29,33,38,43,48,53,58,63,69,75,81,87,93 ⋆ a(n) = greatest integer k such that (n + k) ^ 2 <= n ^ 3. ● a(n) = - n + [n ^ (3 / 2)], where [ ] = floor. ●

▶ [A011858] 0,0,0,1,2,4,6,8,11,14,18,22,26,31,36,42,48,54,61,68,76,84,92,101,110 ⋆ a(n) = floor(n * (n - 1) / 5). ● a(1 - n) = a(n). a(n) = a(n - 5) + 2 * n - 6 for all n in Z. - _ Michael Somos _ , Jul 04 2011 ● a(n) = a(n - 1) + a(n - 5) - a(n - 6) + 2 for all n in Z. - _ Michael Somos _ , Jul 06 2011 ● a(n) = (1 / 5) * (n ^ 2 - n + [0,0, - 2, - 1, - 2](mod 5)). - _ Ralf Stephan _ , Aug 11 2013 ● a(n) - 2 * a(n + 1) + a(n + 2) = (n == 1 (mod 5)) + (n == 3 (mod 5)) for all n in Z. - _ Michael Somos _ , Oct 19 2014 ●

▶ [A084627] 1,1,2,4,6,8,11,14,18,22,28,34,40,48,57,66,77,88,101,115,130,146,163,1 82,203 ⋆ a(n) = floor(C(n + 6,6) / C(n + 3,3)). ● a(n) = 1 + floor(n * (n ^ 2 + 15 * n + 74) / 120). ● a(n) = floor(binomial(n + 6,3) / 20). - _ G. C. Greubel _ , Mar 24 2023 ●

▶ [A194224] 0,0,1,2,4,6,8,11,14,18,23,28,33,38,44,50,57,64,71,79,87,96,106,116,12 6 ⋆ Partial sums of A194223. ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 12) - 2 * a(n - 13) + a(n - 14) for n > 14. ●

▶ [A039823] 1,2,4,6,8,11,15,19,23,28,34,40,46,53,61,69,77,86,96,106,116,127,139,1 51,163 ⋆ a(n) = ceiling((n ^ 2 + n + 2) / 4). ● a(n) = (n * (n + 1) + i ^ (n * (n + 1)) + 3) / 4, where i=sqrt(- 1). - _ Bruno Berselli _ , Jul 25 2012 ● a(n) = 3 * a(n - 1) - 4 * a(n - 2) + 4 * a(n - 3) - 3 * a(n - 4) + a(n - 5) for n>5. - _ Wesley Ivan Hurt _ , Sep 25 2015 ● a(n) = ceiling((n ^ 2 + n + 1) / 4). - _ Bob Selcoe _ , Sep 26 2015 ●

▶ [A079972] 1,1,1,1,2,4,6,8,11,17,27,41,60,88,132,200,301,449,669,1001,1502,225 2,3370,5040,7543 ⋆ Number of permutations satisfying - k <= p(i) - i <= r and p(i) - i not in I, i=1..n, with k=1, r=4, I= { 1,2 } . ● a(n) = a(n - 1) + a(n - 4) + a(n - 5). ● a(n) = Sum _{ k=0..n } Sum _{ j=floor((n - k) / 4)..floor((n - k) / 3) } binomial(k,j) * binomial(j,n - k - 3 * j). - _ Vladimir Kruchinin _ , Ma y 26 2011 ●

▶ [A373644] 1,1,1,1,2,4,6,8,11,18,29,44,64,96,148,228,345,519,786,1198,1824,276 6,4190,6358,9661 ⋆ a(n) = Sum _{ k=0..floor(n / 4) } binomial(2 * n - 7 * k,k). ● a(n) = a(n - 1) + 2 * a(n - 4) - a(n - 8) for n > 7. ●

▶ [A006998] 0,1,2,4,6,8,12,14,16,24,26,28,32,40,48,52,54,56,64,72,80,96,100,104,1 08 ⋆ Partitioning integers to avoid arithmetic progressions of length 3. ● a(n) = a([2n / 3]) + a([(2n + 1) / 3]). ●

▶ [A174973] 1,2,4,6,8,12,16,18,20,24,28,30,32,36,40,42,48,54,56,60,64,66,72,80,84 ⋆ Numbers whose divisors increase by a factor of 2 or less. ● a(n) = C * n * log (n * log(n)) + O(n), where C = 0.816439... (See comments). - _ Andreas Wein gartner _ , Jun 23 2021 ●

▶ [A007694] 1,2,4,6,8,12,16,18,24,32,36,48,54,64,72,96,108,128,144,162,192,216,2 56,288,324 ⋆ Numbers k such that phi(k) divides k. ● a(n) is approximately exp (sqrt(2 * log(2) * log(3) * n)) / sqrt(3 / 2). - _ Charles R Greathouse IV _ , N ov 10 2015 ●

▶ [A182568] 0,0,0,0,0,2,4,6,8,12,16,20,24,30,36,42,48,56,64,72,80,90,100,110,120 ⋆ a(n) = 2 * floor(n / 4) * (n - 2 * (1 + floor(n / 4))). ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 4) - 2 * a(n - 5) + a(n - 6). - _ Eric W. Weisstein _ , Sep 11 2018 ●

▶ [A097921] 1,1,2,4,6,8,12,16,20,26,32,38,46,54,62,72,82,92,104,116,128,142,156,1 70,186 ⋆ G.f.: (1 - x ^ 6) * (1 - x ^ 8) / ((1 - x) * (1 - x ^ 2) * (1 - x ^ 3) ^ 2 * (1 - x ^ 4)). ● a(n) = 2 + floor(n * (n - 1) / 3), for n>=2, with a(0)=1, a(1)=1. - _ G. C. Greubel _ , Dec 20 2017 ●

▶ [A061553] 1,2,4,6,8,12,16,20,28,36,44,54,72,92,104,138,176,212,268,332,416,50 8,628,776,968 ⋆ Sum of absolute values of coefficients of expansion of (1 - x)(1 - x ^ 2)(1 - x ^ 3)...(1 - x ^ n). ● a(n) := |c(n, 0)| + |c(n, 1)| + ... + |c(n, n(n + 1) / 2)| where c(n, j) are the coefficients of the polynomial P(n, x) := (1 - x)(1 - x ^ 2)(1 - x ^ 3)...(1 - x ^ n) ●

▶ [A288603] 2,4,6,8,12,18,28,44,70,112,180,290,468,756,1222,1976,3196,5170,836 4,13532,21894,35424,57316,92738,150052 ⋆ a(n) = 2 * a(n - 1) - a(n - 3) for n > = 3, where a(0) = 2, a(1) = 4, a(2) = 6, a(3) = 8. ● a(n) = 2 * a(n - 1) - a(n - 3) for n >= 3, where a(0) = 2, a(1) = 4, a(2) = 6, a(3) = 8. ● a(n) = Fibonacci(n) + Lucas(n) + 2 for n >= 1. - _ Greg Dresden _ , Oct 10 2020 ●

▶ [A131885] 1,2,4,6,8,12,24,56,128,272,544,1056,2048,4032,8064,16256,32768,657 92,131584,262656,524288,1047552,2095104,4192256,8388608 ⋆ a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) for n >= 4 starting with a(0) = 1, a(1) = 2, a(2) = 4, and a(3) = 6. ● a(n) = Sum _{ j=0..n } binomial(n, j) * (- 1) ^ binomial(j, 3); this is the case m=3 and z= - 1 of f(m,n)(z) = Sum _{ j=0..n } binomial(n, j) * z ^ binomial(j, m). See Dilcher and Ulas. - _ Michel Marcus _ , Sep 01 2020 ●

▶ [A283769] 2,4,6,8,13,15,17,19,21,26,28,30,32,39,41,43,45,52,54,56,58,65,67,69,7 1 ⋆ Numbers k such that L(k) = 0 mod 3, where L = A000201 = lower Wythoff sequence. ● a(n + 1) - a(n) is in { 2,5,7 } for every n. ●

▶ [A213506] 1,1,2,4,6,8,13,17,23,31,40,50,65,79,97,119,143,169,203,237,277,323,3 73,427,492 ⋆ Number of nonisomorphic 2 - generator p - groups of class at most 2 and order p ^ n. ● a(n) = sum _{ r + s + t=n, r >= s >= t >= 0 } ((t + 1) + (1 / 2) * min { t,r - s }* (2t + 1 - min { t,r - s }). ● a(n) = floor((n ^ 4 + 26 * n ^ 3 + 234 * n ^ 2 + (909 - 64 * (n mod 3)) * n + 1701) / 1728 + (n + 1) * (- 1) ^ n / 64). [_ Tani Akinari _ , Jun 28 2014 - see PARI code] ●

▶ [A162762] 0,2,4,6,8,14,18,22,26,34,40,46,52,62,70,78,86 ⋆ Minimal number of f loors an elevator must move to transport n passengers initially waiting at floors i = 1, ..., n to their destinations, floor n + 1 - i (= n, ..., 1), if the elevator can t ransport at most C = 2 persons at a time and starts at floor 1, and no one may get off the elevator before reaching their destination. ● a(n) = 2n - 2 for n < 2

C + 2, a(n) <= 2n - 2 + C + a(n - 2C) otherwise, with equality for all known t erms and the above g.f. - _ M. F. Hasler _ , May 15 2019 ●
▶ [A192333] 0,2,4,6,8,15,17,19,21,23,30,32,34,36,38,45,47,49,51,53,60,62,64,66,68 ⋆ Numbers that are "unsafe" when playing the game Dollar Nim, which is a Ni m game where users can remove 1, 5, 10, or 25 cents from an initial pile of mon ey. The most common version of the game is played with an initial amount of $ 1, hence the name. ● a(n) = 5 * floor((n - 1) / 5) + 2 * n - 2. ●
▶ [A068902] 2,4,6,8,15,18,21,24,27,30,33,48,52,56,60,64,68,72,76,80,84,88,92,96,1 00 ⋆ Least multiple of n not less than the n - th prime. ● a(n) = n * ceiling(pri me(n) / n). - _ Vladeta Jovovic _ , Apr 06 2003 ●
▶ [A014263] 0,2,4,6,8,20,22,24,26,28,40,42,44,46,48,60,62,64,66,68,80,82,84,86,88 ⋆ Numbers that contain even digits only. ● a(n) = ((2 * b _ m(n)) mod 8 + 2) * 10 ^ m + Sum _{ j=0..m - 1 } ((2 * b _ j(n)) mod 10) * 10 ^ j, where n>1, b _ j(n)) = floor((n - 1 - 5 ^ m) / 5 ^ j), m = floor(log _ 5(n - 1)). ● a(1 * 5 ^ n + 1) = 2 * 10 ^ n. ● a(2 * 5 ^ n + 1) = 4 * 10 ^ n. ● a(3 * 5 ^ n + 1) = 6 * 1 0 ^ n. ● a(4 * 5 ^ n + 1) = 8 * 10 ^ n. ● a(n) = 2 * 10 ^ log _ 5(n - 1) for n=5 ^ k + 1, ●
▶ [A210380] 1,2,4,6,9,10,11,15,18,20,21,24,26,28,32,34,36,38,40,42,50,52,54,56,58 ⋆ Consider all n - tuples of distinct positive integers for which no two different elements add up to a square. This sequence gives the smallest maximal integer in such tuples. ● a(n) <= (32 / 11) * n - 2. Erdős conjectured that a(n) >= (3 2 / 11) * n - k for some fixed k. ●
▶ [A047411] 1,2,4,6,9,10,12,14,17,18,20,22,25,26,28,30,33,34,36,38,41,42,44,46,49 ⋆ Numbers that are congruent to { 1, 2, 4, 6 } mod 8. ● a(n) = a(n - 4) + 8. ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n > 5. - _ R. J. Mathar _ , Feb 11 201 0 ● a(n) = (8n - 7 - i ^ (2n) + i ^ (1 - n) - i ^ (1 + n)) / 4 where i=sqrt(- 1). ● a(n) = (8 * n - 7 - cos(n * Pi) + 2 * sin(n * Pi / 2)) / 4. - _ Wesley Ivan Hurt _ , Oct 05 2017 ●
▶ [A252169] 2,4,6,9,11,13,15,18,20,22,24,27,29,31,33,36,38,40,42,45,47,49,51,54,5 6 ⋆ Beatty sequence for sqrt(Pi * phi) where phi is the golden ratio A001622. ● a(n) = floor(n * sqrt(Pi * phi)) = floor(n * sqrt(Pi * (1 + sqrt(5)) / 2)). ●
▶ [A330000] 2,4,6,9,11,13,15,18,20,22,25,27,29,31,34,36,38,40,43,45,47,50,52,54,5 6 ⋆ Beatty sequence for sqrt(x + 1), where 1 / sqrt(x - 1) + 1 / sqrt(x + 1) = 1. ● a(n) = floor(n sqrt(x + 1)), where x = 4.18112544... is the constant in A32 9998. ●
▶ [A059566] 2,4,6,9,11,13,15,18,20,22,25,27,29,31,34,36,38,41,43,45,47,50,52,54,5 7 ⋆ Beatty sequence for e ^ gamma / (e ^ gamma - 1). ● a(n) = floor(n * e ^ g amma / (e ^ gamma - 1)). - _ Michel Marcus _ , Jan 04 2015 ●
▶ [A059545] 2,4,6,9,11,13,16,18,20,23,25,27,29,32,34,36,39,41,43,46,48,50,52,55,5 7 ⋆ Beatty sequence for log(10). ● a(n) = floor(n * log(10)). - _ Stefan Steiner berger _ , May 09 2006 ●
▶ [A187339] 2,4,6,9,11,13,16,18,20,23,25,27,30,32,34,36,39,41,43,46,48,50,53,55,5 7 ⋆ a(n) = floor((7 + sqrt(5)) * n / 4); complement of A187330. ● a(n)=floor((7 + sqrt(5)) * n / 4). ●
▶ [A047292] 2,4,6,9,11,13,16,18,20,23,25,27,30,32,34,37,39,41,44,46,48,51,53,55,5 8 ⋆ Numbers that are congruent to { 2, 4, 6 } mod 7. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. ● a(n) = floor((7 * n - 1) / 3). [_ Gary Detlefs _ , May 14 2011] ● a(n) = 2 * n + ceiling(n / 3) - 1. - _ Arkadiusz Wesolowski _ , Sep 19 2012 ● a(n) = (21 * n - 6 - 3 * cos(2 * n * Pi / 3) + sqrt(3) * sin(2 * n * Pi / 3)) / 9. ● a(3k) = 7k - 1, a(3k - 1) = 7k - 3, a(3k - 2) = 7k - 5. (End) ●
▶ [A184627] 2,4,6,9,11,13,16,18,20,23,25,28,30,32,35,37,39,42,44,46,49,51,54,56,5 8 ⋆ floor((n - h) * s + h), where s=(3 + sqrt(3)) / 2 and h=1 / 4; complement of A184626. ● a(n)=floor((n - h) * s + h), where s=(3 + sqrt(3)) / 2 and h=1 / 4. ●
▶ [A224995] 2,4,6,9,11,14,16,19,21,24,26,29,31,34,36,38,41,43,46,48,51,53,56,58,6 1 ⋆ Floor(1 / f(x ^ (1 / n))) for x = 3 / 2, where f computes the fractional part. ● a(n) = floor(n / log(3 / 2) - 1 / 2) for n>1. - _ Andrey Zabolotskiy _ , Dec 01 2017 ●
▶ [A091626] 1,2,4,6,9,11,14,16,19,22,25,27,31,33,36,39,43,45,49,51,55,58,61,63,68 ⋆ Number of ordered integer pairs (b,c) with 0 <= b, c <= n such that both r oots of x ^ 2 + bx + c=0 are integers. ● a(n) = a(n - 1) + ceiling(tau(n) / 2) + 1, n>1. - _ Vladeta Jovovic _ , Jun 12 2004 ●
▶ [A276223] 2,4,6,9,11,14,17,19,22,24,27,30,33,35,38,41,44,47,49,52,55,58,61,64,6 7 ⋆ Position of n ^ Pi in the joint ranking of { h ^ e } and { k ^ Pi } , h > 1, k > 1. ● a(n) = n + floor(n ^ (Pi / e)); the complement is given by n + floor(n ^ (e / Pi)). ●
▶ [A054519] 1,2,4,6,9,11,15,17,21,24,28,30,36,38,42,46,51,53,59,61,67,71,75,77,85 ⋆ Number of increasing arithmetic progressions of nonnegative integers ending in n, including those of length 1 or 2. ● a(n) = Sum _{ i=1..n + 1 } ceiling((n + 1) / (i + 1)). - _ Wesley Ivan Hurt _ , Sep 15 2017 ●
▶ [A303331] 0,1,1,2,4,6,9,11,15,19 ⋆ a(n) is the minimum size of a square intege r grid allowing all triples of n points to form triangles of different areas. ● a(n + 1) >= a(n) (trivial). ● a(n) >= sqrt(n * (n - 1) * (n - 2) / 6) for n >= 2 (pr oven lower bound). ●
▶ [A256393] 2,4,6,9,12,15,18,21,24,27,30,35,40,45,48,51,54,57,60,65,70,77,84,91,9 8 ⋆ Start from a(1) = 2, then alternately add either the largest (if n is even), or the smallest (if n is odd) prime factor of the preceding term a(n - 1) to get a(n). ● a(1) = 2; a(2n) = a(2n - 1) + gpf(a(2n - 1)), a(2n + 1) = a(2n) + lpf(a(2n)), where gpf = greatest prime factor = A006530, lpf = least prime factor = A0206 39. ●
▶ [A014011] 1,2,4,6,9,12,15,18,21,24,28,32,36,40,45,50,55,60,65,70,75,80,85,90,96 ⋆ Defined by a chi - inequality greedy algorithm. ● a(n) = max { (k + 1) * (n - a(k)): 1<=k<n } , a(1) = 1. - _ Reinhard Zumkeller _ , Jul 10 2013 ●
▶ [A083652] 1,2,4,6,9,12,15,18,22,26,30,34,38,42,46,50,55,60,65,70,75,80,85,90,95 ⋆ Sum of lengths of binary expansions of 0 through n. ● a(n) = 2 + (n + 1) * c eiling(log _ 2(n + 1)) - 2 ^ ceiling(log _ 2(n + 1)). ●
▶ [A294060] 0,0,1,2,4,6,9,12,15,18,22,26,31,36,42,48,54,60,66,72,79,86,94,102,110 ⋆ Sum of the differences of the larger and smaller parts in the partitions of n in to two parts with the smaller part squarefree. ● a(n) = Sum _{ i=1..floor(n / 2) } (n - 2i) * mu(i) ^ 2, where mu is the Möbius function (A008683). ●
▶ [A036441] 2,4,6,9,12,15,20,25,30,35,42,49,56,63,70,77,88,99,110,121,132,143,15 6,169,182 ⋆ a(n + 1) = next number having largest prime dividing a(n) as a fac tor, with a(1) = 2. ● a(n) = p(m) * (n + 2 - p(m)), where p(k) is the k - th pri me and m is the smallest index such that n + 2 <= p(m) + p(m + 1). - _ Max Alekseyev _ , Oct 21 2008 ●
▶ [A257637] 0,1,2,4,6,9,12,16,17,20,22,24,26,28,30,32,34,36,38,40,42,44,46,48,50 ⋆ Maximal number of edges in an n - vertex triangle - free graph with maximal d egree at most 4. ● a(9) = 17. ● a(n) = 2 * a(n - 1) - a(n - 2) for n > 11. ●
▶ [A053096] 1,2,4,6,9,12,16,19,23,27,31,35,40,44,49,54,59,64,69,74,79,84,90,96,10 2 ⋆ When the Euler phi function is iterated with initial value A002110(n) = pri morial, a(n) = number of iterations required to reach the fixed number = 1. ● a(n) is the smallest number such that Nest[EulerPhi, A002110, a(n)]=1 ●
▶ [A033291] 1,2,4,6,9,12,16,20,24,28,30,35,40,45,50,54,60,66,72,78,84,91,98,105,1 12 ⋆ A Connell - like sequence: take the first multiple of 1, the next 2 multiples of 2, the next 3 multiples of 3, etc. ● a(n) = q(n) * n - q(n) * floor(q(n) * (q(n) + 1) / 6) with q(n) = ceiling((1 / 2) * (- 1 + sqrt(1 + 8 * (n)))). ●
▶ [A062048] 1,2,4,6,9,12,16,20,24,29,34,40,46,52,58,65,72,79,87,95,103,111,120,12 9,138 ⋆ a(n) = Sum _{ k=1..n } floor(sqrt(prime(k))). ● a(n) = a(n - 1) + floo r(sqrt(prime(n))) with a(1) = 1. - _ G. C. Greubel _ , May 06 2022 ●
▶ [A224813] 1,1,1,1,1,1,1,1,1,1,1,1,2,4,6,9,12,16,20,25,30,36,42,49 ⋆ Number of subsets of { 1,2,...,n - 12 } without differences equal to 2, 4, 6, 8, 10 or 12. ● a(n) = a(n - 1) + a(n - 7) - a(n - 8) + a(n - 9) - a(n - 10) + a(n - 11) - a(n - 12) + a(n - 13) + 3 * a(n - 14) - 2 * a(n - 15) + 2 * a(n - 16) - a(n - 17) + a(n - 18) - 3 * a(n - 21) + 2 * a(n - 22) - 4 * a(n - 23) + 2 * a(n - 24) - 3 * a(n - 25) - 3 * a(n - 28) + a(n - 29) - 2 * a(n - 30) + 3 * a(n - 35) - a(n - 36) + 3 * a(n - 37) + a(n - 42) - a(n - 49). ●
▶ [A002620] 0,0,1,2,4,6,9,12,16,20,25,30,36,42,49,56,64,72,81,90,100,110,121,132,1 44 ⋆ Quarter - squares: a(n) = floor(n / 2) * ceiling(n / 2). Equivalently, a(n) = floor(n ^ 2 / 4). ● a(n) = (2 * n ^ 2 - 1 + (- 1) ^ n) / 8. - _ Paul Barry _ , May 27 2003 ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4). - _ Jaume Oliver La font _ , Dec 05 2008 ● a(- n) = a(n) for all n in Z. ● a(n) = a(n - 1) + floor(n / 2), n > 0. Partial sums of A004526. - _ Adam Kertesz _ , Sep 20 2000 ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) + 1 [with a(- 1) = a(0) = a(1) = 0], a(2k) = k ^ 2, a(2k - 1) = k(k - 1). - _ Henry Bottomley _ , Mar 08 2000 ● a(n) = Sum _{ k=1..n } floor(k / 2). - Yong Kong (ykong(AT)curagen.com), Mar 10 2001 ●
▶ [A087811] 1,2,4,6,9,12,16,20,25,30,36,42,49,56,64,72,81,90,100,110,121,132,14 4,156,169 ⋆ Numbers k such that ceiling(sqrt(k)) divides k. ● a(n) = (n + n mo d 2) * (n + 2 - n mod 2) / 4. ● a(1) = 1, a(2) = 2, a(n) = n + a(n - 2). - _ Alo nso del Arte _ , Jun 18 2005 ● a(n) = (2 * n * (n + 2) - (- 1) ^ n + 1) / 8. (En d) ● a(n) = (C(n + 2,2) - floor((n + 2) / 2)) / 2. - _ Mircea Merca _ , Nov 23 2013 ● a(n) = ((- 1) ^ n * (- 1 + (- 1) ^ n * (1 + 2 * n * (2 + n)))) / 8. - _ F red Daniel Kline _ , Jan 06 2015 ● a(n) = Product _{ k=1...n - 1 } (1 + 2 / (k + k mod 2)), n >= 1. - _ Fred Daniel Kline _ , Oct 30 2016 ●
▶ [A224812] 1,1,1,1,1,1,1,1,1,1,1,2,4,6,9,12,16,20,25,30,36,42,49,63,81 ⋆ Number of subsets of { 1,2,...,n - 10 } without differences equal to 2, 4, 6, 8 or 10. ● a(n) = a(n - 1) + a(n - 7) - a(n - 8) + a(n - 9) - a(n - 10) + a(n - 11) + 3 * a(n - 12) - 2 * a(n - 13) + 2 * a(n - 14) - a(n - 15) + a(n - 16) - 2 * a(n - 19) + a(n - 20) - 2 * a(n - 21) - 3 * a(n - 24) + a(n - 25) - 2 * a(n - 26) + a(n - 31) + a(n - 36). ●
▶ [A224811] 1,1,1,1,1,1,1,1,1,2,4,6,9,12,16,20,25,30,36,48,64,88,121,165,225 ⋆ Nu mber of subsets of { 1,2,...,n - 8 } without differences equal to 2, 4, 6 or 8. ● a(n) = a(n - 1) + a(n - 5) - a(n - 6) + a(n - 7) - a(n - 8) + a(n - 9) + 2 * a(n - 10) - a(n - 11) + a(n - 12) - 2 * a(n - 15) + a(n - 16) - 2 * a(n - 17) - a(n - 20) + a(n - 25). ●
▶ [A224808] 1,1,1,1,1,1,1,2,4,6,9,12,16,20,25,35,49,70,100,140,196,266,361,494,67 6 ⋆ Number of permutations (p(1), p(2), ..., p(n)) satisfying - k <= p(i) - i <= r and p(i) - i not in the set I, i=1..n, with k=2, r=6, I= {- 1,1,2,3,4,5 } . ● a(n) = a(n - 1) + a(n - 5) - a(n - 6) + a(n - 7) + 2 * a(n - 8) - a(n - 9) + a(n - 10) - a (n - 13) + a(n - 16). ●
▶ [A022778] 1,2,4,6,9,12,16,21,26,32,38,45,52,60,69,78,88,98,109,120,132,145,15 8,172,186 ⋆ Place where n - th 1 occurs in A023116. ● a(n) = n + 1 + Sum { fl oor[(n - k) / sqrt(3)], k = 0..n } . ●
▶ [A224809] 1,1,1,1,1,2,4,6,9,12,16,24,36,54,81,117,169,247,361,532,784,1148,168 1,2460,3600 ⋆ Number of permutations (p(1), p(2), ..., p(n)) satisfying - k <= p (i) - i <= r and p(i) - i not in the set I, i=1..n, with k=2, r=4, I= {- 1,1,2,3 } . ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) + a(n - 5) + a(n - 6) - a(n - 9). ●
▶ [A338200] 0,0,1,2,4,6,9,12,17,21,27,33,41,48,58,67,79,90,104,117,134,149,168,18 6,208 ⋆ The number of similarity classes of pointed reflection spaces of residue t wo in an n - dimensional vector space over GF(2). ● a(n) = a(n - 1) + a(n - 2) - 2 * a(n - 5) + a(n - 8) + a(n - 9) - a(n - 10) for n > 10. ●
▶ [A229093] 0,0,1,2,4,6,9,12,17,22,27,34,41,48,57,66,75,86,97,108,121,134,147,16 2,177 ⋆ The clubs patterns appearing in n X n coins. ● a(n) = ceiling((n - 1) ^ 2 / 3), a(0) = 0, a(4) = 4. ●
▶ [A102379] 0,1,2,4,6,9,12,17,22,29,36,46,56,69,82,100,118,141,164,194,224,261,2 98,345,392 ⋆ a(n) is the minimal number of nodes in a binary tree of height n. ● a(n) = a(n - 1) + a(floor(n / 2)) + 1, a(1) = 0. ●
▶ [A238374] 1,2,4,6,9,12,17,22,30,38,51,64,85,106,140,174,229,284,373,462,606,75 0,983,1216,1593 ⋆ Row sums of triangle in A204026. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) + a(n - 4) - a(n - 5), a(0) = 1, a(1) = 2, a(2) = 4, a(3) = 6, a(4) = 9. ●
▶ [A267161] 0,2,4,6,9,12,18,20,31,35,48,50,69,73,94,96,123,127,156,158,193,197,2 34,236,279 ⋆ Total number of OFF (white) cells after n iterations of the "Rule 1 07" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) + a(n - 4) - a(n - 5) - a(n - 6) + a(n - 7) for n> 12. ●
▶ [A038709] 0,0,1,2,4,6,9,13,17,21,26,31,37,43,50,58,66,74,83,92,102,112,123,135,1 47 ⋆ a(n) = floor(n * (n + 1 / 2) / 4). ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 8) - 2 * a(n - 9) + a(n - 10) for n > 9. - _ Jinyuan Wang _ , Mar 16 2020 ●
▶ [A255977] 1,2,4,6,9,13,17,22,27,33,40,47,55,64,73,83,93,104,116,128,141,154,16 8,183,198 ⋆ The number of numbers j + k * r <= n, where r = golden ratio an d j and k are nonnegative integers. ● a(n) = n + 1 + Sum { floor[(n - k) / tau], k = 0..n } , where tau = (1 + sqrt(5)) / 2. ●

► [A087483] 1,2,4,6,9,13,17,22,28,34,41,49,57,66,76,86,97,109,121,134,148,162,177,193,209 ⋆ Row 0 of the order array of 3 / 2, i.e., row 0 of the transposable dispersion in A087465. ● a(n) = n + 1 - floor(n / 3) + Sum _{ i=1..n } floor(2i / 3). ●

► [A006697] 1,2,4,6,9,13,17,22,28,35,43,51,60,70,81,93,106,120,135,151,167,184,202,221,241 ⋆ Number of subwords of length n in infinite word generated by a -> aab, b -> b. ● a(n) = sum(k=0,n,min(2 ^ k,n - k + 1)) = 2 ^ (m + 1) - 1 + (n - m)(n - m + 1) / 2 with m = [n + 1 - LambertW(2 ^ (n + 1) * log(2)) / log(2)] = integer part of the solution to 2 ^ m = n + 1 - m. (conjectured). - _ M. F. Hasler _ , Dec 14 2007 ●

► [A247179] 0,0,2,4,6,9,13,18,23,29,35,42,50,58,67,76,87,98,109,121,134,147,161,176,191 ⋆ Floor of area enclosed in the interior of n unit circles arranged in a circle. ● a(n) = Floor((n / tan(Pi / n)) - Pi * ((n / 2) - 1)). ●

► [A175780] 0,0,0,0,0,1,2,4,6,9,13,18,24,31,39,48,58,70,83,98,114,132,152,174,198 ⋆ Partial sums of floor(n ^ 2 / 24). ● a(n) = round((2 * n + 1) * (2 * n ^ 2 + 2 * n - 37) / 288). ● a(n) = floor((2 * n + 11) * (n - 2) ^ 2 / 144). ● a(n) = ceiling((2 * n - 9) * (n + 3) ^ 2 / 144). ● a(n) = a(n - 24) + (n + 1) * (n - 24) + 198, n > 23. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 12) - 3 * a(n - 13) + 3 * a(n - 14) - a(n - 15). - _ R. J. Mathar _ , Dec 06 2010 ●

► [A114830] 1,2,4,6,9,13,18,24,31,39,48,59,71,85,101,119,139,162,187,215,246,280,318,359,404 ⋆ Each term is previous term plus ceiling of geometric mean of all previous terms. ● a(1) = 1, a(n + 1) = a(n) + ceiling(GeometricMean[a(1),a(2),...,a(n)]). a(n + 1) = a(n) + ceiling[((a(1) * a(2) * ,..., * a(n)) ^ (1 / n)]. ●

► [A177239] 0,0,0,0,1,2,4,6,9,13,18,24,31,39,49,60,73,87,103,121,141,163,187,213,242 ⋆ Partial sums of round(n ^ 2 / 20). ● a(n) = round((2 * n + 1) * (2 * n ^ 2 + 2 * n - 15) / 240). ● a(n) = floor((n + 4) * (2 * n ^ 2 - 5 * n + 6) / 120). ● a(n) = ceiling((n - 3) * (2 * n ^ 2 + 9 * n + 13)120). ● a(n) = round(n * (n - 2) * (2 * n + 7) / 120). ● a(n) = a(n - 20) + (n + 1) * (n - 20) + 141, n > 19. ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4) + a(n - 5) - 2 * a(n - 6) + 2 * a(n - 8) - a(n - 9) with g.f. x ^ 4 / ((1 + x) * (x ^ 4 + x ^ 3 + x ^ 2 + x + 1) * (x - 1) ^ 4). - _ R. J. Mathar _ , Dec 12 2010 ●

► [A001304] 1,2,4,6,9,13,18,24,31,39,49,60,73,87,103,121,141,163,187,213,242,273,307,343,382 ⋆ Expansion of 1 / ((1 - x) ^ 2 * (1 - x ^ 2) * (1 - x ^ 5)). ● a(n) = floor((n + 8) * (2 * n ^ 2 + 11 * n + 18) / 120). - _ Tani Akinari _ , May 14 2014 ●

► [A000064] 1,2,4,6,9,13,18,24,31,39,50,62,77,93,112,134,159,187,218,252,292,335,384,436,494 ⋆ Partial sums of (unordered) ways of making change for n cents using coins of 1, 2, 5, 10 cents. ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4) + a(n - 5) - 2 * a(n - 6) + 2 * a(n - 8) - a(n - 9) + a(n - 10) - 2 * a(n - 11) + 2 * a(n - 13) - a(n - 14) - a(n - 15) + 2 * a(n - 16) - 2 * a(n - 18) + a(n - 19). - _ Fung Lam _ , May 07 2014 ●

► [A088575] 1,1,2,4,6,9,13,18,24,31,40,50,63,77,95,114,138,163,194,226,266,307,357,408,471 ⋆ Bisection of A088567. ● a(n) = a(n - 1) + a(floor(n / 2)) + (1 - (- 1) ^ n) / 2, n > 1. - _ Vladeta Jovovic _ , Dec 02 2003 ●

► [A177189] 0,0,0,1,2,4,6,9,13,18,24,32,41,52,64,78,94,112,132,155,180,208,238,271,307 ⋆ Partial sums of round(n ^ 2 / 16). ● a(n) = round((2 * n + 1) * (2 * n ^ 2 + 2 * n + 3) / 192). ● a(n) = floor((n + 3) * (2 * n ^ 2 - 3 * n + 13) / 96). ● a(n) = ceiling((n - 2) * (2 * n ^ 2 + 7 * n + 18) / 96). ● a(n) = round((2 * n ^ 3 + 3 * n ^ 2 + 4 * n) / 96). ● a(n) = a(n - 16) + (n + 1) * (n - 16) + 94, n > 15. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 8) - 3 * a(n - 9) + 3 * a(n - 10) - a(n - 11) with g.f. x ^ 3 * (1 - x + x ^ 2 + x ^ 4 - x ^ 3) / ((1 + x) * (1 + x ^ 2) * (1 + x ^ 4) * (x - 1) ^ 4). - _ R. J. Mathar _ , Dec 13 2010 ●

► [A081659] 1,2,4,6,9,13,19,28,42,64,99,155,245,390,624,1002,1613,2601,4199,6784,10966,17732,28679,46391,75049 ⋆ a(n) = n + Fibonacci(n + 1). ● a(n) = (sqrt(5) * (1 + sqrt(5)) ^ (n + 1) - sqrt(5) * (1 - sqrt(5)) ^ (n + 1)) / (10 * 2 ^ n) + n. ● a(0) = 1, a(1) = 2, a(2) = 4, a(n) = a(n - 1) + a(n - 2) - (n - 3) n >= 3. (End) ●

► [A003402] 1,1,2,4,6,9,14,19,27,37,49,64,84,106,134,168,207,253,309,371,445,530,626,736,863 ⋆ G.f.: 1 / ((1 - x) * (1 - x ^ 2) * (1 - x ^ 3) ^ 2 * (1 - x ^ 4) * (1 - x ^ 5)). ● a(n) = a(n - 1) + b(n), b(n) = b(n - 2) + c(n) - e(n), c(n) = c(n - 3) + 2e(n), e(n) = e(n - 4) + f(n), f(n) = f(n - 5) + g(n), g(n) = g(n - 6), g(0) = 1, all functions are 0 for negative indexes. [From Miller paper.] - _ Sean A. Irvine _ , Apr 22 2015 ●

► [A034748] 1,2,4,6,9,14,19,30,44,68,99,168,245,402,636,1026,1613,2650,4199,6854,10996,17820,28679,46596,75065 ⋆ Dirichlet convolution of Fibonacci numbers with phi(n). ● a(n) = Sum _{ k=1..n } F(gcd(n,k)). ● a(n) = Sum _{ k=1..n } F(n / gcd(n,k)) * phi(gcd(n,k)) / phi(n / gcd(n,k)). (End) ●

► [A119737] 1,2,4,6,9,14,20,30,45,69,104,165,255,405,642,1029,1640,2645,4243,6852,11040,17840,28787,46567,75227 ⋆ a(n) = Sum { k=1..n } Fibonacci(floor(n / k)). ● a(n) also equals n + sum { k=1..n - 2 } Fibonacci(k) floor(n / (k + 2)), for n >= 2. ●

► [A038718] 1,1,2,4,6,9,14,21,31,46,68,100,147,216,317,465,682,1000,1466,2149,3150,4617,6767,9918,14536 ⋆ Number of permutations P of { 1,2,...,n } such that P(1)=1 and |P ^- 1(i + 1) - P ^- 1(i)| equals 1 or 2 for i=1,2,...,n - 1. ● a(n) = a(n - 1) + a(n - 3) + 1. (End) ●

► [A323227] 1,2,4,6,9,14,23,40,73,138,267,524,1037,2062,4111,8208,16401,32786,65555,131092,262165,524310,1048599,2097176,4194329 ⋆ a(n) = [x ^ n] (- x ^ 4 + 2 * x ^ 3 - x ^ 2 + 2 * x - 1) / ((x - 1) ^ 2 * (2 * x - 1)). ● a(n) = Sum _{ k=0..n } binomial(n - 2, k - 1) + 1 if n >= 2. ● a(n) = ((2 - 2 * n) * a(n - 2) - (5 - 3 * n) * a(n - 1)) / (n - 2) for n >= 4. ● a(n + 1) - a(n) = 2 ^ n + 1 for n >= 2. ●

► [A157679] 0,1,2,4,6,9,15,25,35,49,70,100,160,256,416,676,936,1296,1800,2500,3550,5041,7171,10201,16261 ⋆ Number of subtrees of a complete binary tree. ● a(0) = 0, a(1) = 1. ● a(n) = 1 + a(floor((n - 1) / 2)) + a(ceiling((n - 1) / 2)) + a(floor((n - 1) / 2)) * a(ceiling((n - 1) / 2)) = (1 + a(floor((n - 1) / 2))) * (1 + a(ceiling((n - 1) / 2))). ●

► [A171646] 1,1,1,2,4,6,9,15,25,35,49,77,121,165,225,330,484,660,900,1260,1764,2352,3136,4312,5929 ⋆ a(1) = 1, then partial products of Product _{ n>=1 } (p(n) / p(n - 1) * p(n) / p(n - 1)) = 1 * 1 * 1 * (2) * (2) * (3 / 2) * (3 / 2) * (5 / 3) * (5 / 3) * (7 / 5) * (7 / 5) * ... * ; p = partition numbers, A000041 starting (1, 2, 3, 5, ...). ● a(1) = 1, then partial products of Product _{ n>=1 } (p(n) / p(n - 1) * p(n) / p(n - 1)) = 1 * 1 * 1 * (2) * (2) * (3 / 2) * (3 / 2) * (5 / 3) * (5 / 3) * (7 / 5) * (7 / 5) * ...; p = partition numbers, A000041 starting (1, 2, 3, 5, ...). ●

► [A074677] 0,1,1,1,2,4,6,9,15,25,40,64,104,169,273,441,714,1156,1870,3025,4895,7921,12816,20736,33552 ⋆ a(n) = Sum _{ i = 0..floor(n / 2) } (- 1) ^ (i + floor(n / 2)) F(2 * i + e), where F = A000045 (Fibonacci numbers) and e = (1 - (- 1) ^ n) / 2. ● a(n) = a(n - 1) + a(n - 3) + a(n - 4) for n>3, a(0)=0, a(1)=1, a(2)=1, a(3)=1. ●

► [A006498] 1,1,1,2,4,6,9,15,25,40,64,104,169,273,441,714,1156,1870,3025,4895,7921,12816,20736,33552,54289 ⋆ a(n) = a(n - 1) + a(n - 3) + a(n - 4), a(0) = a(1) = a(2) = 1, a(3) = 2. ● a(n) = round((- (1 / 5) * sqrt(5) - 1 / 5) * (- 2 * 1 / (- sqrt(5) + 1)) ^ n / (- sqrt(5) + 1) + ((1 / 5) * sqrt(5) - 1 / 5) * (- 2 * 1 / (sqrt(5) + 1)) ^ n / (sqrt(5) + 1)). ● a(n) = (- i) ^ n * Sum { k=0..n } U(n - 2k, i / 2) where i ^ 2= - 1. - _ Paul Barry _ , Nov 15 2003 ● a(n) = Sum _{ k=0..floor(n / 2) } (- 1) ^ k * F(n - 2k + 1). - _ Paul Barry _ , Oct 12 2007 ● a(n + 1) * a(n + 3) = a(n) * a(n + 2) + a(n + 1) * a(n + 2) for all n in Z. - _ Michael Somos _ , Jan 19 2014 ● a(n) = round(1 / (1 / F(n + 2) + 2 / F(n + 3))), where F(n) = A000045, and 0.5 is rounded to 1. - _ Richard R. Forberg _ , Aug 04 2014 ● a(n) = Sum _{ j=0..floor(n / 3) } Sum _{ k=0..j } binomial(n - 3j,k) * binomial(j,k) * 2 ^ k. - _ Tony Foster III _ , Sep 18 2017 ●

► [A110538] 1,2,4,6,9,16,25,42,78,152,317,706,1685,4234,11173,30850,88804,265936,826931,2665434,8892534,30664346,109149206,400544458,1513655722 ⋆ Row sums of A110537 viewed as a number triangle. ● a(n) = Sum _{ k=1..n } Sum _{ j=1..min(n - k + 1,k) } ceiling(j ^ (n - k + 1) / (n - k + 1) ^ j) * ceiling(j ^ k / k ^ j). ●

► [A373639] 1,1,1,2,4,6,9,16,27,43,71,119,196,322,533,882,1455,2402,3970,6558,10829,17887,29548,48804,80608 ⋆ a(n) = Sum _{ k=0..floor(n / 3) } binomial(2 * n - 5 * k,k). ● a(n) = a(n - 1) + 2 * a(n - 3) - a(n - 6) for n > 5. ●

► [A244470] 1,1,2,4,6,9,17,25,40,72,106,169,305,449,716,1292,1902,3033,5473,8057,12848,23184,34130,54425,98209 ⋆ Maximal term in row n of sequence A240388 when regarded as a triangle. ● a(n) = 4 * a(n - 3) + a(n - 6). - _ Harvey P. Dale _ , Apr 08 2015 ● a(3 * n + 1) = 2 * Lucas(3 * n - 3) + Fibonacci(3 * n - 3) / 2 for n>1. - _ Greg Dresden _ , Oct 17 2021 ●

► [A079143] 2,4,6,9,20,25,42,49,110,121,156,169,272,289,342,361,506,529,812,841,930,961,1332,1369,1640 ⋆ Numbers divisible by prime ceilings of their square roots + 1. ● a(n) = prime(ceiling(n / 2)) * (prime(ceiling(n / 2)) - (n mod 2)) ●

► [A187333] 0,0,2,4,6,10,10,12,14,16,20,20,22,24,26,30,30,32,34,36,40,40,42,44,46 ⋆ Floor(n / 5) + floor(2n / 5) + floor(3n / 5) + floor(4n / 5). ● a(n)=floor(n / 5) + floor(2n / 5) + floor(3n / 5) + floor(4n / 5). ●

► [A120351] 2,4,6,10,12,14,16,18,20,22,24,26,28,34,36,38,44,46,48,52,58,62,68,72,74 ⋆ Even numbers k such that the number of odd divisors r and the number of even divisors s are both divisors of k. ● a(n) = n is even, r = number of odd divisors of n, s = number of even divisors of n, are all divisors of n. ●

► [A047410] 2,4,6,10,12,14,18,20,22,26,28,30,34,36,38,42,44,46,50,52,54,58,60,62,66 ⋆ Numbers that are congruent to { 2, 4, 6 } mod 8. ● a(n) = 2 * floor((n - 1) / 3) + 2 * n. - _ Gary Detlefs _ , Mar 18 2010 ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4, with a(1)=2, a(2)=4, a(3)=6, a(4)=10. - _ Harvey P. Dale _ , Oct 06 2014 ● a(n) = 2 * (12 * n - 6 - 3 * cos(2 * n * Pi / 3) + sqrt(3) * sin(2 * n * Pi / 3)) / 9. ● a(3k) = 8k - 2, a(3k - 1) = 8k - 4, a(3k - 2) = 8k - 6. (End) ●

► [A006093] 1,2,4,6,10,12,16,18,22,28,30,36,40,42,46,52,58,60,66,70,72,78,82,88,96 ⋆ a(n) = prime(n) - 1. ● a(n) = (p - 1)! mod p where p is the n - th prime, by Wilson's theorem. - _ Jonathan Sondow _ , Jul 13 2010 ●

► [A162578] 1,2,4,6,10,12,18,20,26,30,40,42,54,60,64,68,84,90,108,112,118,128,150,152,172 ⋆ Partial sums of A002322. ● a(n) = (n ^ 2 / log(n)) * exp(B * (log(log(n)) / log(log(log(n)))) * (1 + o(1))), where B = A218342 (Erdős et al., 1991). - _ Amiram Eldar _ , Dec 27 2022 ●

► [A152919] 1,2,4,6,10,12,18,20,28,30,40,42,54,56,70,72,88,90,108,110,130,132,154,156,180 ⋆ a(1)=1, for n>1, a(n) = n ^ 2 / 4 + n / 2 for even n, a(n) = n ^ 2 / 4 + n - 5 / 4 for odd n. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n > 6. ● a(2k + 2) = a(2k + 1) + 2 for k >= 1. (End) ●

► [A002088] 0,1,2,4,6,10,12,18,22,28,32,42,46,58,64,72,80,96,102,120,128,140,150,172,180 ⋆ Sum of totient function: a(n) = Sum _{ k=1..n } phi(k), cf. A000010. ● a(n) = (3 * n ^ 2) / (Pi ^ 2) + O(n log n). ● a(n) = (1 / 2) * Sum _{ k>=1 } mu(k) * floor(n / k) * floor(1 + n / k). - _ Benoit Cloitre _ , Apr 11 2003 ● a(n) = (Sum _{ k=1..floor(sqrt(n)) } k * (k + 1) * (M(floor(n / k)) - M(floor(n / (k + 1)))) + Sum _{ k=1..floor(n / (1 + floor(sqrt(n)))) } mu(k) * floor(n / k) * floor(1 + n / k)) / 2, where M(k) is the Mertens function (A002321) and mu(k) is the Moebius function (A008683). - _ Daniel Suteu _ , Nov 23 2018 ●

► [A002491] 1,2,4,6,10,12,18,22,30,34,42,48,58,60,78,82,102,108,118,132,150,154,174,192,210 ⋆ Smallest number of stones in Tchoukaillon (or Mancala, or Kalaharri) solitaire that make use of n - th hole. ● a(n + 1) = 1 + [..[[[[n * 3 / 2]5 / 4]7 / 6]9 / 8]...(2k + 1) / 2k]...]. - _ Birkas Gyorgy _ , Mar 07 2011 ●

► [A293821] 1,1,2,4,6,10,12,20,23,35,38,56,60,84,88,120,125,165,170,220,226,286,292,364,371 ⋆ Number of integer - sided quadrilaterals having perimeter n, modulo rotations but not reflections. ● a(n) = (1 / 96) * (- 3 * (- 1 + (- 1) ^ n + 4 * i * (- i) ^ n - 4 * i * i ^ n) + (7 - 15 * (- 1) ^ n) * n + 3 * (- 1 + (- 1) ^ n) * n ^ 2 + 2 * n ^ 3) where i=sqrt(- 1). ●

► [A133871] 2,4,6,10,12,20,24,34,44,64,78,116,148,208,286,410,556,808,1120,1620,2308,3352,4784,6980,10064 ⋆ a(n) = the definite integral Integral _{ 0..1 } Product _{ j=1..n } 4 * sin ^ 2(Pi * j * x) dx. ● a(n) = sum of squares of coefficients in Product _{ k=1..n } (1 - x ^ k). - _ Paul D. Hanna _ , Nov 30 2010 ●

► [A354673] 0,1,2,4,6,10,13,18,22,28,34,42,49,58,66,76,86,98,109,122,134,148,162,178,193 ⋆ Smallest number of unit cells that must be removed from an n X n square board in order to avoid any cycles. ● a(n) = ceiling(n ^ 2 / 3 - n / 6 + 4 / 3) - ceiling(n / 2) for n >= 3. ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 6) - 2 * a(n - 7) + a(n - 8) for n > 2. (End) ●

► [A309616] 1,2,4,6,10,13,18,22,30,36,45,52,64,72,84,93,110,122,140,154,177,192,214,230,258 ⋆ a(n) is the number of ways to represent 2 * n in the decibinary system. ● a(1) = 1. a(n) = a(n - 1) + a(ceiling(n / 2)) if 1 < n <= 5. ● a(n) = a(n - 1) + a(ceiling(n / 2)) - a(ceiling((n - 5) / 2)) if n > 5. (conjectured) ●

► [A267452] 1,2,4,6,10,13,19,24,30,37,46,53,63,73,84,95,108,120,135,149,164,180,198,214,233 ⋆ Total number of ON (black) cells after n iterations of the "Rule 131" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = a(n - 1) + a(n - 3) - a(n - 5) - a(n - 7) + a(n - 8) for n>7. ●

► [A140652] 1,2,4,6,10,13,19,24,31,38,48,55,67,78,90,102,118,131,149,164,182,201,223,240,263 ⋆ Partial sums of A062968. ● a(n) = Sum _{ i=1..n } i - floor(n / (i + 1)). - _ Wesley Ivan Hurt _ , Sep 13 2017 ●

► [A191113] 1,2,4,6,10,14,16,22,28,38,40,46,54,62,64,82,86,110,112,118,136,150,158,160,182 ⋆ Increasing sequence generated by these rules: a(1)=1, and if x is in a then 3x - 2 and 4x - 2 are in a. ● a(1)=1, and if x is in a then 3x - 2 and 4x - 2 are in a; the terms of a are listed in without repetitions, in increasing order. ●

► [A356959] 2,4,6,10,14,18,22,26,32,36,40,44,48,52,58,64,72,76,80,84,88,92,98,102,106 ⋆ Number of length - n binary strings that can be infinitely extended to the right to form an overlap - free string. ● a(n) = Theta(n ^ c), where c = 1.1550118636706647032 1... . ●

► [A128422] 0,0,0,2,4,6,10,14,18,24,30,36,44,52,60,70,80,90,102,114,126,140,154,168,184 ⋆ Projective plane crossing number of K _{ 4,n } . ● a(n) = floor(n / 3) * (2n - 3(floor(n / 3) + 1)). ● a(n) = ceiling(n ^ 2 / 3) - n. - _ Charles R Greathouse IV _ , Jun 06 2013 ● a(n) = floor((n - 1)(n - 2) / 3). - _ Christopher Hunt Gribble _ , Oct 13 2009 ●

► [A309882] 0,0,0,0,0,0,0,0,0,2,4,6,10,14,18,24,30,40,52,68,88,110,136,166,198 ⋆ Sum of the even parts appearing among the fourth largest parts of the partitions of n into 5 parts. ● a(n) = Sum _{ l=1..floor(n / 5) } Sum _{ k=l..floor((n - l) / 4) } Sum _{ j=k..floor((n - k - l) / 3) } Sum _{ i=j..floor((n - j - k - l) / 2) } k * ((k - 1) mod 2). ● a(n) = 3 * a(n - 1) - 4 * a(n - 2) + 4 * a(n - 3) - 4 * a(n - 4) + 4 * a(n - 5) - 4 * a(n - 6) + 4 * a(n - 7) - 2 * a(n - 8) - 2 * a(n - 9) + 6 * a(n - 10) - 10 * a(n - 11) + 12 * a(n - 12) - 12 * a(n - 13) + 12 * a(n - 14) - 12 * a(n - 15) + 11 * a(n - 16) - 9 * a(n - 17) + 4 * a(n - 18) + 4 * a(n - 19) - 9 * a(n - 20) + 11 * a(n - 21) - 12 * a(n - 22) + 12 * a(n - 23) - 12 * a(n - 24) + 12 * a(n - 25) - 10 * a(n - 26) + 6 * a(n - 27) - 2 * a(n - 28) - 2 * a(n - 29) + 4 * a(n - 30) - 4 * a(n - 31) + 4 * a(n - 32) - 4 * a(n - 33) + 4 * a(n - 34) - 4 * a(n - 35) + 3 * a(n - 36) - a(n - 37) for n > 36. ●

► [A024204] 0,2,4,6,10,14,19,24,30,37,44,53,61,71,81,92,103,115,128,141,156,170,186,202,219 ⋆ [(3rd elementary symmetric function of S(n)) / (2nd elementary symmetric function of S(n))], where S(n) = { first n + 2 odd positive integers } . ● a(n) = floor((n ^ 4 + 5 * n ^ 3 + 7 * n ^ 2 + 2 * n) / (3 * n ^ 2 + 11 * n + 9)). - Neven Juric (neven.juric(AT)apis - it.hr), neven.juric(AT)apis - it.hr, May 17 2007 ● a(n) = floor((n ^ 3 + 2 * n ^ 2) / (3 * n + 2)). - _ Gary Detlefs _ , Jul 13 2010 ●

► [A333574] 1,2,4,6,10,14,20,26,34,42,52,62,74,86,100,114,130,146,164,182,202,222,244,266,290 ⋆ Number of Hamiltonian paths in the n X 2 grid graph which start at any of the n vertices on left side of the graph and terminate at any of the n vertices on the right side. ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4) for n >5. ● a(n) = (9 + (- 1) ^ (1 + n) - 4 * n + 2 * n ^ 2) / 4 for n>1. (End) ●

► [A008804] 1,2,4,6,10,14,20,26,35,44,56,68,84,100,120,140,165,190,220,250,286,322,364,406,455 ⋆ Expansion of 1 / ((1 - x) ^ 2 * (1 - x ^ 2) * (1 - x ^ 4)). ● a(n) = - a(- 8 - n) for all n in Z. - _ Michael Somos _ , Feb 05 2011 ●

► [A088932] 1,2,4,6,10,14,20,26,36,46,60,74,94,114,140,166,201,236,280,324,380,436,504,572,656 ⋆ G.f.: 1 / ((1 - x) ^ 2 * (1 - x ^ 2) * (1 - x ^ 4) * (1 - x ^ 8)). ● a(n) = (8 * floor(n / 4) ^ 4 + 8 * (m + 8) * floor(n / 4) ^ 3 - 2 * (m ^ 3 - 6 * m ^ 2 - 19 * m - 86) * floor(n / 4) ^ 2 - 8 * (m ^ 3 - 6 * m ^ 2 - 6 * m - 22) * floor(n / 4) - 7 * m ^ 3 + 42 * m ^ 2 + 13 * m + 54 - (m ^ 3 - 6 * m ^ 2 + 5 * m + 6) * (- 1) ^ floor(n / 4)) / 48 where m = n mod 4. - _ Luce ETIENNE _ , Apr 07 2018 ●

► [A000123] 1,2,4,6,10,14,20,26,36,46,60,74,94,114,140,166,202,238,284,330,390,450,524,598,692 ⋆ Number of binary partitions: number of partitions of 2n into powers of 2. ● a(n) = a(n - 1) + a(floor(n / 2)). For proof see A018819. ● a(n) = Sum _{ i=0..n } a(floor(i / 2)) [O'Shea]. ●

► [A277277] 1,2,4,6,10,14,20,28,36,44,56,72,92,116,148,188,240,304,388,492,628,796,1016,1288,1644 ⋆ Number of overpal - free binary words of length n. ● a(n) = a(n - 2) + a(n - 4) for n>9. ●

► [A048670] 2,4,6,10,14,22,26,34,40,46,58,66,74,90,100,106,118,132,152,174,190,200,216,234,258 ⋆ Jacobsthal function A048669 applied to the product of the first n primes (A002110). ● a(n) << n ^ 2 * (log n) ^ 2, see Iwaniec. - _ Charles R Greathouse IV _ , Sep 08 2012 ● a(n) >= (2 * e ^ gamma + o(1)) n log ^ 2 n log log log n / (log log n) ^ 2, see Pintz. ● a(n) = largest (or last) term in row n of A331118. - _ Michael De Vlieger _ , Dec 11 2020 ●

► [A027383] 1,2,4,6,10,14,22,30,46,62,94,126,190,254,382,510,766,1022,1534,2046,3070,4094,6142,8190,12286 ⋆ a(2 * n) = 3 * 2 ^ n - 2; a(2 * n + 1) = 2 ^ (n + 2) - 2. ● a(0)=1, a(1)=2; thereafter a(n + 2) = 2 * a(n) + 2. ● a(n) = Sum _{ k=0..n } 2 ^ min(k, n - k). ● a(n) = 2 ^ floor((n + 2) / 2) + 2 ^ floor((n + 1) / 2) - 2. - Quim Castellsaguer (qcastell(AT)pie.xtec.es) ● a(n) = 2 ^ (n / 2) * (3 + 2 * sqrt(2) + (3 - 2 * sqrt(2)) * (- 1) ^ n) / 2 - 2. - _ Paul Barry _ , Apr 23 2004 ● a(n) = 2 * ((a(n - 2) + 1) mod (a(n - 1) + 1)), n > 1. - _ Pierre Charland _ , Dec 12 2010 ● a(n) = 2 ^ ((2 * n + 3 * (1 - (- 1) ^ n)) / 4) * 3 ^ ((1 + (- 1) ^ n) / 2) - 2. - _ Luce ETIENNE _ , Sep 01 2014 ●

► [A113118] 2,4,6,10,14,26,46,86,166,326,634,1262,2518,5006,10006,19946,39874,79738,159398,318778,637502,1274998,2549978,5099902,10199786 ⋆ a(1) = 2. a(n) is smallest integer > a(n - 1) which is a multiple of the largest prime <= a(n - 1). ● a(n) = 2 * (largest prime <= a(n - 1)), by Bertrand's postulate. ●

► [A175826] 0,1,2,4,6,10,15,22,30,41,54,70,88,110,135,164,196,233,274,320,370,426,487,554,626 ⋆ Partial sums of ceiling(n ^ 2 / 8). ● a(n) = round((2 * n + 1) * (2 * n ^ 2 + 2 * n + 27) / 96). ● a(n) = floor((n + 1) * (2 * n ^ 2 + n + 27) / 48). ● a(n) = ceiling((2 * n ^ 3 + 3 * n ^ 2 + 28 * n) / 48). ● a(n) = a(n - 8) + (n + 1) * (n - 8) + 30. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 4) - 3 * a(n - 5) + 3 * a(n - 6) - a(n - 7). (End) ●

► [A035294] 1,1,2,4,6,10,15,22,32,46,64,89,122,165,222,296,390,512,668,864,1113,1426,1816,2304,2910 ⋆ Number of ways to partition 2n into distinct positive integers. ● a(n) = T(2 * n, 0), T as defined in A026835. ●

► [A239288] 0,1,2,4,6,10,15,22,33,48,69,102,147,210,309,444,633,930,1335,1902,2793,4008,5709,8382,12027 ⋆ Maximal sum of x0 + x0 * x1 + ... + x0 * x1 * ... * xk over all compositions x0 + ... + xk = n. ● a(0) = 0, a(n) = max { k + k * a(n - k) | 1 <= k <= n } . ●

► [A167270] 1,2,4,6,10,15,24,37,59,93,149,238,383,616,994,1604,2592,4189,6774,10955,17721,28667,46379,75036,121405 ⋆ a(n) = Fibonacci(n + 2) + floor(n / 2). ● a(n) = 2 * a(n - 1) + a(n - 2) - 3 * a(n - 3) + a(n - 5). - _ Andrew Howroyd _ , Aug 10 2018 ●

► [A355108] 0,1,2,4,6,10,15,25,35,55,80,130,182,286,416,676,936,1456,2106,3406,4758,7462,10842,17602,24372 ⋆ Maximal number of root ancestral configurations among matching gene trees and species trees with n leaves. ● a(n) = max _{ i =1..floor(n / 2) } (a(i) + 1) * (a(n - i) + 1), with a(1)=0. ●

► [A192447] 0,2,4,6,10,16,22,28,36,46,56,66,78,92,106,120,136,154,172,190,210,232,254,276,300 ⋆ a(n) = n * (n - 1) / 2 if this is even, otherwise (n * (n - 1) / 2) + 1. ● a(n) = n * (n - 1) / 2 if this is even and a(n) = (n * (n - 1) / 2) + 1 otherwise. ● a(n) = (n ^ 2 - n + 1 - (- 1) ^ (n * (n - 1) / 2)) / 2. - _ Guenther Schrack _ , Jun 04 2019 ●

► [A305498] 2,4,6,10,16,24,36,54,82,124,186,280,420,630,946,1420,2130,3196,4794,7192,10788,16182,24274,36412,54618 ⋆ The smallest positive even integer that can be represented with n digits in base 3 / 2. ● a(n + 1) = 2 * ceiling(3 * a(n) / 4). ●

► [A017985] 1,1,2,4,6,10,16,25,40,64,101,161,256,406,645,1024,1625,2580,4096,6501,10321,16384,26007,41285,65536 ⋆ Powers of cube root of 4 rounded down. ● a(n) = floor(4 ^ (n / 3)). - _ Wesley Ivan Hurt _ , Sep 04 2022 ●

► [A327474] 1,2,4,6,10,16,26,38,56,78,106,138,180,226,284,348,420,500,596,698,818,946,1086,1236,1408 ⋆ Number of distinct means of subsets of { 1..n } , where {} has mean 0. ● a(n) = 2 * a(n - 1) - a(n - 2) + phi(n - 1) for n>3. - _ Chai Wah Wu _ , Feb 22 2023 ●

► [A227572] 0,1,1,1,2,4,6,10,16,26,41,67,108,175,283,458,741,1199,1941,3140,5081,8221,13302,21524,34826 ⋆ A sequence related to Le Corbusier's Modulor: round(phi ^ (- 13 + n) * 175). ● a(n) = round(phi ^ (- 13 + n) * 175) with the golden section phi:=(1 + sqrt(5)) / 2, with decimal expansion given in A001622. ●

► [A364580] 1,2,4,6,10,16,26,42,68,110,178,288,460,740,1192,1918,3064,4910,7872,12620,20114,32150,51396,82160,130730 ⋆ Number of n - step self - avoiding walks on the square Manhattan lattice that do not take two consecutive turns. ● a(n) = f(n) * mu ^ n where mu is a constant and f(n) is subexponential in n. This follows from the subadditivity of log a(n). See the Blanca, Chen, Galvin, Randall and Tetali reference for details. ●

► [A065795] 1,2,4,6,10,16,26,42,72,124,218,390,706,1292,2388,4436,8292,15578,29376,55592,105532,200858,383220,732756,1403848 ⋆ Number of subsets of { 1,2,...,n } that contain the average of their elements. ● a(n) = (1 / 2) * Sum _{ i= 1..n } (f(i) - 1) where f(i) = (1 / i) * Sum _{ d | i and d is odd } 2 ^ (i / d) * phi(d). ●

► [A293077] 2,4,6,10,16,26,44,74,126,214,364,620,1058,1806,3082,5260,8978,15326,26162,44660,76238,130146,222172,379270,647454 ⋆ Number of letters (0's and 1's) in the n - th iterate of the final - letter - removed mapping defined at A289035. ● a(n) = 2 a(n - 1) - a(n - 2) + 2 floor(a(n - 2) / 4) - _ Michel Dekking _ , Mar 20 2022 ●

► [A023557] 0,1,1,2,4,6,10,16,27,43,70,113,183,297,480,777,1257,2034,3291,5326,8617,13943,22560,36503,59063 ⋆ Convolution of A023531 and Fibonacci numbers. ● a(n) = a(n - 1) + a(n - 2) + 1 if n mod 4 = 0, else a(n) = a(n - 1) + a(n - 2), with offset 0. [_ Gary Detlefs _ , Dec 05 2010] ●

► [A293671] 0,0,0,1,2,4,6,10,16,27,44,71,115,186,301,488,789,1277,2067,3344,5412,8756,14168,22925,37094 ⋆ a(n) is the greatest integer k such that k / Fibonacci(n) < 4 / 5. ● a(n) = a(n - 1) + 2 a(n - 2) - a(n - 3) - 2 a(n - 4) + 2 a(n - 5) + a(n - 6) - 3 a(n - 7) - a(n - 8) + 3 a(n - 9) - 2 a(n - 11) + a(n - 12) + 2 a(n - 13) - a(n - 14) - a(n - 15) for n >= 16. ● a(n) = floor(4 * Fibonacci(n) / 5). ●

► [A173434] 0,0,0,1,2,4,6,10,16,27,44,72,116,188,304,493,798,1292,2090,3382,5472,8855,14328,23184,37512 ⋆ a(n) = (A000045(n) - A173432(n)) / 2. ● a(n)= 2 * a(n - 1) - 2 * a(n - 3) + 2 * a(n - 4) - a(n - 6). - _ R. J. Mathar _ , Mar 01 2010 ●

► [A160444] 0,1,1,1,2,4,6,10,16,28,44,76,120,208,328,568,896,1552,2448,4240,6688,11584,18272,31648,49920 ⋆ Expansion of g.f.: x ^ 2 * (1 + x - x ^ 2) / (1 - 2 * x ^ 2 - 2 * x ^ 4). ● a(n) = 2 * a(n - 2) + 2 * a(n - 4). ●

► [A228779] 0,1,1,1,2,4,6,10,17,27,43,70,113,183,296,479,775,1254,2030,3284,5313,8597,13910,22508,36418 ⋆ A sequence related to Le Corbusier's Modulor: round(phi ^ (- 13 + n) * 183). ● a(n) = round(phi ^ (- 13 + n) * 183) with the golden section phi:=(1 + sqrt(5)) / 2, with decimal expansion given in A001622. ●

► [A004695] 0,0,0,1,1,2,4,6,10,17,27,44,72,116,188,305,493,798,1292,2090,3382,5473,8855,14328,23184 ⋆ a(n) = floor(Fibonacci(n) / 2). ● a(n) = Fibonacci(n) / 2 - (1 - cos(2Pi * n / 3)) / 3. - _ Paul Barry _ , Oct 06 2003 ● a(n + 2) = Sum _{ k=0..floor(n / 3) } F(n - 3 * k). ● a(n + 2) = Sum _{ k=0..n } if(mod(n - k, 3)=0, F(k), 0). (End) ● a(n + 2) = Sum _{ k=0..n } F(k) * (cos(2 * Pi * (n - k) / 3 + Pi / 3) / 3 + sqrt(3) * sin(2 * Pi * (n - k) / 3 + Pi / 3) / 3 + 1 / 3). - _ Paul Barry _ , Apr 16 2005 ● a(n) = a(n - 1) + a(n - 2) + 1 if n mod 3 = 0, else a(n) = a(n - 1) + a(n - 2). - _ Gary Detlefs _ , Dec 05 2010 ● a(n) = Fibonacci(n - 2) + floor(Fibonacci(n - 3) / 2). - _ Gary Detlefs _ , Mar 28 2011 ●

► [A079961] 1,1,1,2,4,6,10,17,28,46,77,128,212,352,585,971,1612,2677,4445,7380,12254,20347,33784,56095,93141 ⋆ Number of permutations satisfying - k<=p(i) - i<=r and p(i) - i not in I, i=1..n, with k=1, r=5, I= { 1,4 } . ● a(n) = a(n - 1) + a(n - 3) + a(n - 4) + a(n - 6). ●

► [A142584] 2,4,6,10,18,28,46,76,122,198,322,520,842,1364,2206,3570,5778,9348,15126,24476,39602,64078,103682,167760,271442 ⋆ a(n) = A014217(n + 1) - A115360(n + 2). ● a(n) = Lucas(n + 1) - (1 / 2) * (1 + (- 1) ^ ((n + 2) mod 3)). - _ G. C. Greubel _ , Apr 14 2021 ●

► [A175941] 1,2,4,6,10,18,30,50,78,130,210,350,586,954,1606,2588,4234,6944,11342,18948,31450,52206,85662,141680,233040 ⋆ Number of n - step self - avoiding walks on a line, where step X skips X - 1 spaces. ● a(n) <= 2 * a(n - 1) for n > 0. - _ Andrew Howroyd _ , Nov 12 2018 ●

► [A288465] 2,4,6,10,18,32,58,106,194,356,654,1202,2210,4064,7474,13746,25282,46500,85526,157306,289330,532160,978794,1800282,3311234 ⋆ a(n) = 2 * a(n - 1) - a(n - 4), where a(0) = 2, a(1) = 4, a(2) = 6, a(3) = 10. ● a(n) = 2 * a(n - 1) - a(n - 4), where a(0) = 2, a(1) = 4, a(2) = 6. a(3) = 10. ●

► [A349592] 0,1,1,1,1,2,4,6,10,19,25,46,70,126,226,360,708,1237,2215,3902,7281,13243,24140,44006,81479 ⋆ Number of prime lucky numbers k between powers of 2, 2 ^ n < k < 2 ^ (n + 1). ● a(n) = # { x in A031157 | 2 ^ n < x < 2 ^ (n + 1) } . - _ M. F. Hasler _ , Nov 24 2021 ●

► [A350668] 2,4,6,11,13,15,20,22,24,29,31,33,38,40,42,47,49,51,56,58,60,65,67,69,74 ⋆ Numbers congruent to 2, 4, and 6 modulo 9: positions of 2 in A159955. ● a(n) = 1 + 3 * n + cos(2 * n * Pi / 3) + sin(2 * n * Pi / 3) / sqrt(3). - _ Stefano Spezia _ , Jan 30 2022 ●

► [A115269] 1,2,4,6,11,16,24,32,46,60,80,100,130,160,200,240,295,350,420,490,581,672,784,896,1036 ⋆ Row sums of correlation triangle for floor((n + 4) / 4). ● a(n) = Sum _{ k=0..n } Sum _{ j=0..n } [j<=k] * floor((k - j + 4) / 4) * [j<=n - k] * floor((n - k - j + 4) / 4). ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + 3 * a(n - 4) - 4 * a(n - 5) + 4 * a(n - 7) - 3 * a(n - 8) + 2 * a(n - 9) - 2 * a(n - 11) + a(n - 12). ● a(n) = (2 * (n ^ 4 + 24 * n ^ 3 + 197 * n ^ 2 + 636 * n) + 3 * (431 + (2 * n ^ 2 + 24 * n + 65) * (- 1) ^ n) + 24 * ((n + 7) * (- 1) ^ ((2 * n - 1 + (- 1) ^ n) / 4) - (n + 5) * (- 1) ^ ((6 * n - 1 + (- 1) ^ n) / 4))) / 1536. - _ Luce ETIENNE _ , Mar 03 2015 ●

► [A238375] 1,2,4,6,11,16,28,40,69,98,168,238,407,576,984,1392,2377,3362,5740,8118,13859,19600,33460,47320,80781 ⋆ Row sums of triangle in A152719. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) + a(n - 4) - a(n - 5). - _ Wesley Ivan Hurt _ , May 22 2021 ●

► [A056342] 0,1,2,4,6,11,16,28,44,76,124,222,378,685,1222,2248,4110,7683,14308,27010,50962,96907,184408,352696,675186 ⋆ Number of bracelets of length n using exactly two different colored beads. ● a(n) = (k! / 4) * (S2(floor((n + 1) / 2),k) + S2(ceiling((n + 1) / 2),k)) + (k! / 2n) * Sum _{ d|n } phi(d) * S2(n / d,k), where k=2 is the number of colors and S2 is the Stirling subset number A008277. ●

► [A014217] 1,1,2,4,6,11,17,29,46,76,122,199,321,521,842,1364,2206,3571,5777,9349,15126,24476,39602,64079,103681 ⋆ a(n) = floor(phi ^ n), where phi = (1 + sqrt(5)) / 2 is the golden ratio. ● a(n) = a(n - 1) + 2 * a(n - 2) - a(n - 3) - a(n - 4). ● a(2n - 1) = (Fibonacci(4n + 1) - 2) / Fibonacci(2n + 2). - _ Gary Detlefs _ , Feb 16 2011 ● a(n) = floor(Fibonacci(2n + 3) / Fibonacci(n + 3)). - _ Gary Detlefs _ , Feb 28 2011 ● a(2n) = Fibonacci(2 * n - 1) + Fibonacci(2 * n + 1) - 1. - _ Gary Detlefs _ , Mar 10 2011 ● a(n) = ((- 1) ^ (1 + n) - 1) / 2 + ((1 - sqrt(5)) / 2) ^ n + ((1 + sqrt(5)) / 2) ^ n. - _ Colin Barker _ , Nov 05 2017 ● a(n) = floor(2 * sinh(n * arccsch(2))). - _ Federico Provvedi _ , Feb 23 2022 ●

► [A131298] 1,1,2,4,6,11,18,30,50,82,135,221,361,589,959,1560,2535,4116,6679,10832,17560,28457,46103,74674,120928 ⋆ Diagonal sums of A104730. ● a(n) = Sum _{ k=0..floor(n / 2) } C(n - k + 1,k) - C(k,n - 2k + 1). ●

► [A140443] 0,0,1,2,4,6,11,19,31,52,86,140,228,372,604,980,1589,2575,4171,6754,10933,17696,28640,46349,75003 ⋆ Difference between n - th Fibonacci number and floored n - th power of Viswanath's constant. ● a(n) = F(n) - floor(v ^ n), where F(n) is given by A000045 with F(1) = F(2) = 1 and v = 1.1319882487943 as given by A078416. ●

► [A026385] 1,1,2,4,6,11,20,33,59,104,178,314,549,952,1669,2913,5074,8872,15482,27007,47172,82325,143675,250848,437822 ⋆ Sum { T(n - k,k) } , 0<=k<=[n / 2], where T is the array in A026374. ● a(n) = a(n - 2) + 3 * a(n - 3) + a(n - 4) for n>3. - _ Vincenzo Librandi _ , Jun 19 2014 ●

► [A199926] 0,0,0,1,1,1,2,4,6,11,20,35,62,111,197,350,623,1108,1970,3504,6232,11083,19711,35056,62346 ⋆ Number of sequences of n coin flips that win on the last flip, if the sequence of flips ends with (1,1,1,1). ● a(n)=a(n - 1) + a(n - 2) + a(n - 3) - a(n - 5) for n>7. ● a(n)=2 * a(n - 1) - a(n - 4) - a(n - 5) + a(n - 6) for n>8. ●

► [A049870] 1,2,4,6,11,20,38,71,133,248,463,864,1613,3011,5621,10493,19588,36566,68260,127425,237872,444050,828935,1547423,2888668 ⋆ a(n)=Sum { a(k): k=0,1,2,...,n - 4,n - 2,n - 1 } ; a(n - 3) is not a summand; 3 initial terms required. ● a(n)=2 * a(n - 1) - a(n - 3) + a(n - 4); 4 initial terms required. ●

► [A322051] 1,1,2,4,6,11,22,43,86,171,342,683,1366,2731,5462 ⋆ a(n) is the number of initial terms in the row of length 2 ^ n of A322050 that agree with the limiting sequence A322049. ● a(n) = (2 ^ n + 2) / 3 for n even and n>3. ● a(n) = (2 ^ n + 1) / 3 for n odd and n>3. ● a(n) = 2 * a(n - 1) + a(n - 2) - 2 * a(n - 3) for n>6. ●

► [A084979] 1,2,4,6,11,22,44,66,111,121,141,161,212,232,242,272,292,323,343,383,414,464,474,545,565 ⋆ Palindromes such that the product of the digits + 1 is prime. ● a(n) >> n ^ k, where k = log _ 3(10) = 2.0959.... - _ Charles R Greathouse IV _ , Aug 02 2010 ●

► [A309096] 1,2,4,6,12,16,18,30,36,48,60,64,90,144,150,162,180,192,210,240,300,324,420,450,576 ⋆ Increasing positive integers with prime factorization exponents all appearing earlier in the sequence. ● a(1) = 1; a(n) = least positive integer x > a(n - 1) where the exponents e in the prime factorization of x are in a(1..n - 1). ●

► [A098895] 2,4,6,12,16,24,48,60,120,240,288,384,576,1152,2304,2688,5376,8064,16128,20160,40320,46080,92160,184320,368640 ⋆ Number of divisors of the n - th superior highly composite number. ● a(n) = a(n - 1) * (1 + 1 / k(n)), where k(n) is the p(n) - adic valuation of the n - th superior highly composite number N(n), with p(n) = N(n) / N(n - 1) and N(0)=1. ●

► [A060735] 1,2,4,6,12,18,24,30,60,90,120,150,180,210,420,630,840,1050,1260,1470,1680,1890,2100,2310,4620 ⋆ a(1)=1, a(2)=2; thereafter, a(n) is the smallest number m not yet in the sequence such that every prime that divides a(n - 1) also divides m. ● a(1) = 1, a(n) = a(n - 1) + rad(a(n - 1)) with rad=A007947, squarefree kernel. - _ Reinhard Zumkeller _ , Apr 10 2006 ●

► [A225566] 2,4,6,12,18,24,36,48,60,80,100,120,150,180,210,252,294,336,392,448,504,576,648,720,810 ⋆ The set of magic numbers for an idealized harmonic oscillator atomic nucleus with a biaxially deformed prolate ellipsoid shape and an oscillator ratio of 3:1 ● a(n) = 2 * a(n - 1) - a(n - 2) + 2 * a(n - 3) - 4 * a(n - 4) + 2 * a(n - 5) - a(n - 6) + 2 * a(n - 7) - a(n - 8) for n>8. ●

► [A331933] 1,1,1,2,4,6,12,18,33,52,90,142,242,384,639,1028,1688,2716,4445,7161,11665,18839,30595,49434,80199 ⋆ Number of semi - lone - child - avoiding rooted trees with at most one distinct non - leaf branch directly under any vertex. ● a(n) = 1 + Sum _{ i=2..n - 2 } floor((n - 1) / i) * a(i). - _ Andrew Howroyd _ , Feb 09 2020 ●

► [A052823] 0,0,1,2,4,6,12,18,34,58,106,186,350,630,1180,2190,4114,7710,14600,27594,52486,99878,190744,364722,699250 ⋆ A simple grammar: cycles of pairs of sequences. ● a(n) = (k! / n) Sum _{ d|n } phi(d) S2(n / d,k), where k=2 is the number of colors and S2 is the Stirling subset number A008277. - _ Robert A. Russell _ , Sep 26 2018 ●

► [A068911] 1,2,4,6,12,18,36,54,108,162,324,486,972,1458,2916,4374,8748,13122,26244,39366,78732,118098,236196,354294,708588 ⋆ Number of n step walks (each step +- 1 starting from 0) which are never more than 2 or less than - 2. ● a(n) = 2 ^ ((3 + (- 1) ^ n) / 2) * 3 ^ ((2 * n - 3 - (- 1) ^ n) / 4) - ((1 - (- 1) ^ (2 ^ n))) / 6. - _ Luce ETIENNE _ , Aug 30 2014 ● a(n) = 2 * a(n - 1) if n is even, a(n - 1) + a(n - 2) if n is odd. - _ Vincenzo Librandi _ , Feb 26 2016 ●

► [A068018] 0,1,2,4,6,12,18,40,62,148,234,576,918,2284,3650,9112,14574,36420,58266,145648,233030,582556,932082,2330184,3728286 ⋆ Number of fixed points in all 132 - and 213 - avoiding permutations of { 1,2,...,n } (these are permutations with runs consisting of consecutive integers). ● a(n) = 2 ^ n / 4 - (- 2) ^ n / 36 + 2 * n / 3 - 2 / 9. ●

► [A358650] 1,2,4,6,12,18,42,78,156,234,546,1014,2886,4758,14118,30966,61932,92898,216762,402558,1145742,1888926,5604846,12293502,28210026 ⋆ Matula - Goebel tree number of the binomial tree of n vertices. ● a(2 ^ k + r) = a(2 ^ k) * prime(a(r)) for 1 <= r <= 2 ^ k. ●

► [A370582] 1,1,2,4,6,12,20,40,52,72,116,232,320,640,1020,1528,1792,3584,4552,9104,12240,17840,27896,55792,67584 ⋆ Number of subsets of { 1..n } such that it is possible to choose a different prime factor of each element. ● a(p) = 2 * a(p - 1) for prime p. - _ David A. Corneth _ , Feb 25 2024 ●

► [A279245] 1,2,4,6,12,20,40,64,128,208,416,672,1344,2176,4352,7040,14080,22784,45568,73728,147456,238592,477184,772096,1544192 ⋆ Number of subsets of { 1, 2, 3, ..., n } that include no consecutive odd integers. ● a(n) = 2a(n - 2) + 4a(n - 4). - _ Charles R Greathouse IV _ , Dec 13 2016 ●

► [A292320] 1,1,2,4,6,12,22,36,67,122,209,377,681,1193,2130,3823,6764,12043,21531,38252,68076,121456,216126,384691,685636 ⋆ p - INVERT of (1,0,0,1,0,0,1,0,0,...), where p(S) = 1 - S - S ^ 3. ● a(n) = a(n - 1) + 4 * a(n - 3) - 2 * a(n - 4) - 3 * a(n - 6) + a(n - 7) + a(n - 9) for n >= 10. ●

► [A341582] 0,1,2,4,6,12,22,42,76,142,262,488,902,1674,3100,5750,10654,19752,36606,67858,125772,233134,432118,800968,1484630 ⋆ Number of simple moves of the smallest disk in the solution to the Towers of Hanoi exchanging disks puzzle with 3 pegs and n disks. ● a(n) = a(n - 1) + a(n - 2) + 2 * a(n - 4). ●

► [A370648] 1,1,2,4,6,12,22,44,56,76,130,260,376,752,1248,1948,2224,4448,5808,11616,16016,24000,38416,76832,94656 ⋆ Number of ways to choose a subset s of [n] and then for each element in s choose a different prime factor. ● a(p) = 2 * a(p - 1) for prime p. ●

► [A002182] 1,2,4,6,12,24,36,48,60,120,180,240,360,720,840,1260,1680,2520,5040,7560,10080,15120,20160,25200,27720 ⋆ Highly composite numbers, definition (1): numbers n where d(n), the number of divisors of n (A000005), increases to a record. ● a(n + 1) < a(n) * (1 + log(a(n)) ^- c) for some positive c (see Erdős). - _ David A. Corneth _ , May 16 2016 ● a(n + 1) <= 2 * a(n). For cases where the equal sign holds, see A072938. - _ A.H.M. Smeets _ , Jul 10 2021 ●

► [A004394] 1,2,4,6,12,24,36,48,60,120,180,240,360,720,840,1260,1680,2520,5040,10080,15120,25200,27720,55440,110880 ⋆ Superabundant [or super - abundant] numbers: n such that sigma(n) / n > sigma(m) / m for all m < n, sigma(n) being A000203(n), the sum of the divisors of n. ● a(n + 1) <= 2 * a(n). - _ A.H.M. Smeets _ , Jul 10 2021 ●

► [A362144] 1,1,2,4,6,12,24,40,80,160,280,560,1120,2240,4480,10080,20160,40320,88704,177408,354816,768768,1537536,3075072,6589440 ⋆ Maximum number of ways in which a set of integer - sided squares can tile an n X 3 rectangle. ● a(n) = max _{ 3 * i + 2 * j<=n } C(i,j,n - 3 * i - 2 * j) * 2 ^ j, where C(i,j,k) is the trinomial coefficient (i + j + k)! / (i! * j! * k!). (i and j correspond to the number of squares of side lengths 3 and 2, respectively.) ●

► [A068010] 1,1,2,4,6,12,24,44,88,176,344,688,1376,2736,5472,10944,21856,43712,87424,174784,349568,699136,1398144,2796288,5592576 ⋆ Number of subsets of { 1,2,3,...,n } that sum to 0 mod 3. ● a(0)=1, a(1)=1, a(n) = 2 * a(n - 1) if 3 does not divide n - 1 and a(n) = 2 * a(n - 1) - (2 ^ ((n - 1) / 3)) if 3 divides n - 1. ● a(n) = (2 ^ n + 2 ^ ((n + 1 + (4 / sqrt(3)) * cos(((4 * n) + 1) * Pi / 6)) / 3)) / 3. - Fred Galvin ● a(0)=1, a(1)=1, a(2)=2, a(n) = 2 * a(n - 3) + 2 ^ (n - 2), n>=3. - _ Baris Arslan _ , Mar 27 2017 ●

► [A291738] 1,1,2,4,6,13,23,43,76,138,244,444,795,1444,2600,4705,8474,15307,27583,49797,89800,162088,292388,527663,951922 ⋆ p - INVERT of (1,0,1,0,0,0,0,...), where p(S) = 1 - S - S ^ 4. ● a(n) = a(n - 1) + a(n - 3) + a(n - 4) + 4 * a(n - 6) + 6 * a(n - 8) + 4 * a(n - 10) + a(n - 12) for n >= 13. ●

► [A095698] 1,2,4,6,14,18,46,54,146,162,454,486,1394,1458,4246,4374,12866,13122,38854,39366,117074,118098,352246,354294,1058786 ⋆ Number of permutations of { 1,2,3,...,n } where, for 1 < i <= n, the i - th number has maximized sum of the i - 1 absolute differences from all previous numbers of the permutation. ● a(1) = 1; Conjectured: For k >= 1, a(2k) = a(2k - 1) + 2 ^ (k - 1) and a(2k + 1) = 2 * a(2k - 1) + a(2k) (needs proof or a reference). ● a(2n) = 2 * 3 ^ (n - 1) for n >= 1. a(2n + 1) = 2 * 3 ^ n - 2 ^ n for n >= 0. - _ Joel B. Lewis _ , May 16 2009 ●

► [A062112] 0,1,1,2,4,6,14,20,48,68,164,232,560,792,1912,2704,6528,9232,22288,31520,76096,107616,259808,367424,887040 ⋆ a(0)=0; a(1)=1; a(n) = a(n - 1) + (3 + (- 1) ^ n) * a(n - 2) / 2. ● a(n) = 4 * a(n - 2) - 2 * a(n - 4), a(0)=0, a(1)=1, a(2)=1, a(3)=2. - _ Harvey P. Dale _ , May 24 2013 ●

► [A332754] 0,1,1,2,4,6,14,21,49,77,175,287,637,1079,2353,4082,8788,15522,33098,59280,125476,227240,478192,873886,1830270 ⋆ a(n) = Sum _{ k=1..n - 1 } ((- 1) ^ (k + n + 1) * binomial(k,floor(k / 2))). ● a(n) = Sum _{ k=1..n - 1 } ((- 1) ^ (k + n + 1) * binomial(k,floor(k / 2))). ●

► [A151794] 2,4,6,14,26,54,106,214,426,854,1706,3414,6826,13654,27306,54614,109226,218454,436906,873814,1747626,3495254,6990506,13981014,27962026 ⋆ a(1)=2, a(2)=4, a(3)=6; a(n + 3) = a(n + 2) + 2 * a(n), n>=1. ● a(n) = (4 * (- 1) ^ n + 5 * 2 ^ n) / 6 for n>1. - _ Colin Barker _ , Jun 12 2015 ●

► [A286850] 2,4,6,16,20,52,80,176,296,592,1104,2064,3936,7296,14048,25984,49600,92736,175872,330240,623232,1175296,2213632,4176128,7863808 ⋆ Number of minimal dominating sets in the 2 X n king graph. ● a(n) = 2 * a(n - 2) + 2 * a(n - 3) + 4 * a(n - 4) - 8 * a(n - 6) for n>6. ●

► [A279480] 1,2,4,6,16,28,46,82,88,106,180,198,210,228,238,276,312,352,430,442,466,498,540,556,568 ⋆ Numbers n such that n + 1 and n ^ 4 + 1 are primes. ● a(n) >> n log ^ 2 n. - _ Charles R Greathouse IV _ , Dec 13 2016 ●

► [A045665] 1,2,4,6,16,30,36,98,128,252,300,682,720,1638,1764,3690,4096,8670,9072,19418,20400,42630,45012,94162,97920 ⋆ Number of 2n - bead balanced binary strings of fundamental period 2n, rotationally equivalent to reverse, complement and reversed complement. ● a(n) = n * Sum _{ d|n, d odd } mu(d) * 2 ^ ceiling(n / (2 * d)) for n > 0. ●

► [A045663] 1,2,4,6,16,30,60,126,256,504,1020,2046,4080,8190,16380,32730,65536,131070,262080,524286,1048560,2097018,4194300,8388606,16776960 ⋆ Number of 2n - bead balanced binary strings of fundamental period 2n, rotationally equivalent to complement. ● a(n) = Sum { d|n, d odd } mu(d) * 2 ^ (n / d) for n > 0. - _ Andrew Howroyd _ , Sep 14 2019 ●

► [A019464] 1,1,2,4,6,18,21,84,88,440,445,2670,2676,18732,18739,149912,149920,1349280,1349289,13492890,13492900,148421900,148421911,1781062932,1781062944 ⋆ Multiply by 1, add 1, multiply by 2, add 2, etc., start with 1. ● a(n + 1) = (1 / 2) * a(n) * (n + 1 mod 2) * (n + 2) + (1 / 2) * (n mod 2) * (2 * a(n) + n + 1). - Francois Jooste (pin(AT)myway.com), Jun 25 2003 ●

► [A245766] 2,4,6,20,26,52,62,100,114,164,182,244,266,340,366,452,482,580,614,724,762,884,926,1060,1106 ⋆ a(n) = 2 * (n ^ 2 + 1) - n * (1 + (- 1) ^ n). ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5), n>4. ● a(n) = (2n + 2) * floor((n + 1) / 2) + (2n - 2) * floor((n - 1) / 2). ●

► [A319575] 0,2,4,6,24,90,252,574,1136,2034,3380,5302,7944,11466,16044,21870,29152,38114,48996,62054,77560,95802,117084,141726,170064 ⋆ a(n) = (2 / 3) * n * (n ^ 3 - 6 * n ^ 2 + 11 * n - 3). ● a(n) = [x ^ 4] JacobiTheta3(x) ^ n. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>4. (End) ●

► [A318609] 2,4,6,24,90,252,702,2160,6642,19764,58806,176904,532170,1595052,4780782,14346720,43053282,129146724,387400806,1162241784,3486843450,10460412252,31380882462,94143001680,282430067922 ⋆ a(1) = 2, a(2) = 4, a(3) = 6; for n > 3, a(n) = 3 * a(n - 1) - 3 * a(n - 2) + 9 * a(n - 3). ● a(n) = middle term in M ^ n * [1, 0, 0] ^ T, where M = the 3 X 3 matrix [1, 0, 2 / 2, 1, 0 / 0, 2, 1]] and T denotes transpose. [Edited by _ Petros Hadjicostas _ , Dec 19 2019] ● a(n) = 3 ^ (n / 2 - 1) * ((- i) ^ n * (- 1 + sqrt(3) * i) / 2 + i ^ n * (- 1 - sqrt(3) * i) / 2 + 3 ^ (n / 2)), where i is the imaginary unit. ● a(n) = 3 ^ (n / 2 - 1) * (2 * cos(n * Pi / 2 - 2 * Pi / 3) + 3 ^ (n / 2)). ● a(n) = 3 ^ (n - 1) + (- 3) ^ (n / 2 - 1) for even n and 3 ^ (n - 1) + (- 3) ^ ((n - 1) / 2) for odd n. ●

► [A045662] 1,2,4,6,32,50,204,266,1024,1224,4900,5522,21600,23998,95508,102750,409600,437546,1747152,1847522,7380000,7758870,31027876,32449826,129752064 ⋆ Number of 2n - bead balanced binary strings of fundamental period 2n, rotationally equivalent to reverse. ● a(n) = 2 * n * Sum _{ d|n } mu(n / d) * binomial(2 * floor(d / 2), floor(d / 2)) for n > 0. - _ Andrew Howroyd _ , Sep 14 2019 ●

► [A010759] 1,1,1,2,4,7,7,14,26,46,51,97,176,309,365,674,1204,2098,2587,4685,8273,14323,18228,32551,56967 ⋆ Sum along upward diagonal of Pascal triangle from halfway point. ● a(n) = Sum _{ k=floor((n + 2) / 4)..floor(n / 2) } binomial(n - k, k). - _ Seiichi Manyama _ , Feb 10 2022 ●

► [A047542] 0,1,2,4,7,8,9,10,12,15,16,17,18,20,23,24,25,26,28,31,32,33,34,36,39 ⋆ Numbers that are congruent to { 0, 1, 2, 4, 7 } mod 8. ● a(n) = a(n - 1) + a(n - 5) - a(n - 6) for n > 6. ● a(n) = a(n - 5) + 8 for n > 5. ● a(n) = (40 * n - 50 - 7 * (n mod 5) - 2 * ((n + 1) mod 5) + 3 * ((n + 2) mod 5) + 3 * ((n + 3) mod 5) + 3 * ((n + 4) mod 5)) / 25. ● a(5k) = 8k - 1, a(5k - 1) = 8k - 4, a(5k - 2) = 8k - 6, a(5k - 3) = 8k - 7, a(5k - 4) = 8k - 8. (End) ●

► [A047351] 0,1,2,4,7,8,9,11,14,15,16,18,21,22,23,25,28,29,30,32,35,36,37,39,42 ⋆ Numbers that are congruent to { 0, 1, 2, 4 } mod 7. ● a(n) = n - 3 + (6 * n + (2 - (- 1) ^ n)(1 - 2 * i ^ (n(n + 1))) + 1) / 8, where i=sqrt(- 1). - _ Bruno Berselli _ , Dec 03 2012 ● a(0)=0, a(1)=1, a(2)=2, a(3)=4, a(4)=7, a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. - _ Harvey P. Dale _ , Jun 04 2013 ●

► [A047540] 0,2,4,7,8,10,12,15,16,18,20,23,24,26,28,31,32,34,36,39,40,42,44,47,48 ⋆ Numbers that are congruent to { 0, 2, 4, 7 } mod 8. ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. ● a(n) = (8 * n - 7 + i ^ (2 * n) + i ^ (- n) + i ^ n) / 4 where i=sqrt(- 1). ●

► [A047236] 1,2,4,7,8,10,13,14,16,19,20,22,25,26,28,31,32,34,37,38,40,43,44,46,49 ⋆ Numbers that are congruent to { 1, 2, 4 } mod 6. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. ● a(n) = (6 * n - 5 - cos(2 * n * Pi / 3) + sqrt(3) * sin(2 * n * Pi / 3)) / 3. ● a(3k) = 6k - 2, a(3k - 1) = 6k - 4, a(3k - 2) = 6k - 5. (End) ●

► [A167051] 1,2,4,7,8,10,25,26,28,79,80,82,241,242,244,727,728,730,2185,2186,2188,6559,6560,6562,19681 ⋆ Start at 1, then add the first term (which is one here) plus 1 for the second term; then add the second term plus 2 for the third term; then add the third term to the sum of the first and second term; this gives the fourth term. Restart the sequence by adding 1 to the fourth term, etc. (From a sixth grade math extra credit assignment) ● a(n) = a(n - 1) + 1 for n mod 3 == 2; ● a(n) = a(n - 1) + 2 for n mod 3 == 0; ● a(n) = a(n - 1) + a(n - 2) + a(n - 3) for n mod 3 == 1 and n > 1. ●

► [A229829] 1,2,4,7,8,11,13,14,16,17,19,22,23,26,28,29,31,32,34,37,38,41,43,44,46 ⋆ Numbers coprime to 15. ● a(n + 8) = a(n) + 15. ● a(n) = 15 * floor((n - 1) / 8) + 2 * f(n) + floor(2 * phi * (f(n + 1) + 2)) - 2 * floor(phi * (f(n + 1) + 2)), where f(n) = (n - 1) mod 8 and phi=(1 + sqrt(5)) / 2. ● a(n) = 15 * floor((n - 1) / 8) + 2 * f(n) + floor((2 * f(n) + 5) / 5) - floor((f(n) + 2) / 3), where f(n) = (n - 1) mod 8. ● a(n) = a(n - 1) + a(n - 8) - a(n - 9) for n>9. (End) ●

► [A000069] 1,2,4,7,8,11,13,14,16,19,21,22,25,26,28,31,32,35,37,38,41,42,44,47,49 ⋆ Odious numbers: numbers with an odd number of 1's in their binary expansion n. ● a(1) = 1; for n > 1: a(2 * n) = 6 * n - 3 - a(n), a(2 * n + 1) = a(n + 1) + 2 * n. - Corrected by _ Vladimir Shevelev _ , Sep 25 2011 ●

► [A001839] 0,0,1,1,2,4,7,8,12,13,17,20,26,28,35,37,44,48,57,60,70,73,83,88,100 ⋆ The coding - theoretic function A(n,4,3). ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) + a(n - 6) - a(n - 7) - a(n - 8) + a(n - 9). - _ Eric W. Weisstein _ , Jul 13 2017 ●

► [A263660] 1,2,4,7,8,12,16,24,32,48,64,96,128,192,256,384,512,768,1024,1536,2048,3072,4096,6144,8192 ⋆ Number of length n arrays of permutations of 0..n - 1 with each element moved by - 2 to 2 places and with no two consecutive increases or two consecutive decreases. ● a(n) = 3 * 2 ^ (n / 2 - 1) for n>4 and even. ● a(n) = 2 ^ ((n - 5) / 2 + 3) for n>4 and odd. ●

► [A236217] 1,2,4,7,8,13,14,16,17,19,23,26,28,29,31,32,34,37,38,41,43,46,47,49,52 ⋆ Numbers not divisible by 3, 5 or 11. ● a(n) = a(n - 1) + a(n - 80) - a(n - 81) for n > 81. - _ Bruno Berselli _ , Mar 25 2014 ●

► [A338888] 0,0,1,2,4,7,8,16,25,26,28,31,32,64,97,98,100,103,104,112,121,122,124,127,128 ⋆ a(n) = (a(n - 2) bitwise - OR a(n - 1)) + 1; a(1)=0, a(2)=0. ● a(6 * 2 ^ n + k) = 8 * min(3,k) * 4 ^ n + a(k), where k is positive and as small as possible. - _ Charlie Neder _ , Jul 31 2023 ●

► [A047541] 1,2,4,7,9,10,12,15,17,18,20,23,25,26,28,31,33,34,36,39,41,42,44,47,49 ⋆ Numbers that are congruent to { 1, 2, 4, 7 } mod 8. ● a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4) for n>4. ● a(n) = (1 + i) * (n * (4 - 4 * i) + 3 * i - 3 + i ^ (- n) - i ^ (1 + n)) / 4 where i=sqrt(- 1). ●

► [A353737] 2,4,7,9,11,13,15 ⋆ Length of longest n - digit optimal prime ladder (base 10). ● a(n) is the number of vertices of a longest shortest path in the graph G = (V, E), where V = { n - digit base - 10 primes } and E = { (v, w) | H _ 10(v, w) = 1 } , where H _ b is the Hamming distance in base b. ●

► [A029924] 0,2,4,7,9,11,13,15,18,20,22,24,26,29,31,33,35,37,40,42,44,46,49,51,53 ⋆ Convert n from kilograms (kg) to pounds (lbs). ● a(n) = floor(n / 0.45359237 + 1 / 2). - _ Lee A. Newberg _ , Apr 10 2018 ●

► [A022848] 0,2,4,7,9,11,13,16,18,20,22,25,27,29,31,34,36,38,40,42,45,47,49,51,54 ⋆ Integer nearest nx, where x = sqrt(5). ● a(n + 1) - a(n) = 2 or 3. - _ Philippe Deléham _ , Mar 09 2013 ●

► [A043000] 2,4,7,9,11,13,16,19,21,23,25,27,29,31,35,37,39,41,43,45,47,49,51,54,56 ⋆ Number of digits in all base - b representations of n, for 2 <= b <= n. ● a(n) = Sum _{ i=2..n } floor(log _ i(i * n)); a(n) ~ 2 * n. - _ Vladimir Shevelev _ , Jun 03 2011 [corrected by _ Vaclav Kotesovec _ , Apr 05 2021] ● a(n) = Sum _{ i=1..n - 1 } floor(n ^ (1 / i)); ● a(n) = n - 1 + Sum _{ i=1..floor(log _ 2(n)) } floor(n ^ (1 / i) - 1); ●

► [A047349] 0,2,4,7,9,11,14,16,18,21,23,25,28,30,32,35,37,39,42,44,46,49,51,53,56 ⋆ Numbers that are congruent to { 0, 2, 4 } mod 7. ● a(n + 1) = floor(n / 3) + 2 * n. - _ Gary Detlefs _ , Mar 27 2010 ● a(n) = n + floor(4 * (n - 1) / 3) - 1. - _ Arkadiusz Wesolowski _ , Sep 18 2012 ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. ● a(n) = (21 * n - 24 - 3 * cos(2 * n * Pi / 3) + sqrt(3) * sin(2 * n * Pi / 3)) / 9. ● a(3k) = 7k - 3, a(3k - 1) = 7k - 5, a(3k - 2) = 7k - 7. (End) ●

► [A329842] 2,4,7,9,11,14,16,18,21,23,25,28,30,32,35,37,39,42,44,46,49,51,53,56,58 ⋆ Beatty sequence for (13 + sqrt(109)) / 10. ● a(n) = floor(n * s), where s = (13 + sqrt(109)) / 10. ●

► [A182761] 2,4,7,9,11,14,16,19,21,23,26,28,30,33,35,38,40,42,45,47,50,52,54,57,59 ⋆ Beatty sequence for (7 - sqrt(5)) / 2. ● a(n) = floor(n * (7 - sqrt(5)) / 2). ●

► [A329830] 2,4,7,9,11,14,16,19,21,23,26,28,31,33,35,38,40,42,45,47,50,52,54,57,59 ⋆ Beatty sequence for (4 + sqrt(10)) / 3. ● a(n) = floor(n * s), where s = (4 + sqrt(10)) / 3. ●

► [A081841] 0,2,4,7,9,11,14,16,19,21,24,26,28,31,33,36,38,40,43,45,48,50,52,55,57 ⋆ a(1)=0, a(n)=a(n - 1) + 3 if n is already in the sequence, a(n)=a(n - 1) + 2 otherwise. ● a(1)=0; for n>=1 a(n)=floor(r * n - (4 * r - 1) / (r + 1)) where r= 1 + sqrt(2) ●

► [A175884] 0,2,4,7,9,12,14,16,19,21,24,26,28,31,33,36,38,40,43,45,48,50,52,55,57 ⋆ Numbers that are congruent to { 0, 2, 4, 7, 9 } mod 12. ● a(n) = 2 * n - 1 + floor((n - 4) / 5) + floor((n - 1) / 5). - _ Federico Provvedi _ , Jan 13 2018 ● a(n) = floor(12 * (n - 1) / 5). - _ Federico Provvedi _ , Oct 19 2018 ●

► [A059542] 2,4,7,9,12,14,17,19,21,24,26,29,31,34,36,39,41,43,46,48,51,53,56,58,61 ⋆ Beatty sequence for 1 + 1 / log(2). ● a(n) = floor(n * (1 + 1 / log(2))). - _ Michel Marcus _ , Jan 04 2015 ●

► [A329994] 2,4,7,9,12,14,17,19,22,24,27,29,31,34,36,39,41,44,46,49,51,54,56,59,61 ⋆ Beatty sequence for 2 ^ x, where 1 / x ^ 2 + 1 / 2 ^ x = 1. ● a(n) = floor(n * 2 ^ x), where x = 1.298192... is the constant in A329992. ●

► [A329846] 2,4,7,9,12,14,17,19,22,24,27,29,32,34,37,39,42,44,47,49,52,54,56,59,61 ⋆ Beatty sequence for (7 + sqrt(29)) / 5. ● a(n) = floor(n * s), where s = (7 + sqrt(29)) / 5. ●

► [A047211] 2,4,7,9,12,14,17,19,22,24,27,29,32,34,37,39,42,44,47,49,52,54,57,59,62 ⋆ Numbers that are congruent to { 2, 4 } mod 5. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3). ● a(n) = (10 * n - 3 - (- 1) ^ n) / 4, (n>=1). [Corrected by _ Bruno Berselli _ , Sep 20 2010] ● a(n) = 5 * floor((n - 1) / 2) + 3 + (- 1) ^ n. - _ Gary Detlefs _ , Mar 02 2010 ● a(n) = 5 * n - a(n - 1) - 4 (with a(1)=2). - _ Vincenzo Librandi _ , Nov 18 2010 ● a(n) = floor((5 * n - 1) / 2). - _ Gary Detlefs _ , May 14 2011 ● a(n) = 2 * n + floor((n - 1) / 2). - _ Arkadiusz Wesolowski _ , Sep 19 2012 ●

► [A189677] 2,4,7,9,12,14,17,19,22,25,28,30,33,35,37,40,42,45,48,51,53,56,58,61,63 ⋆ n + [ns / r] + [nt / r]; r=1, s=arctan(1 / 2), t=arctan(2). ● a(n)=n + [n * arctan(1 / 2)] + [n * arctan(2)]. ●

► [A087733] 0,1,1,2,4,7,9,12,14,17,19,22,26,31,35,40,46,53,59,66,74,83,91,100,108 ⋆ Partial sums of A068639. ● a(0)=0, a(2n + 1) = - a(n) - a(n + 1) + n ^ 2 + n, a(2n + 1) = - 2a _ n + n ^ 2 + 2n + 1. - _ Ralf Stephan _ , Oct 16 2003 ●

► [A184583] 2,4,7,9,12,15,17,20,23,25,28,30,33,36,38,41,43,46,49,51,54,57,59,62,64 ⋆ floor[(n - 1 / 5)(1 + r)], where r=(1 + sqrt(5)) / 2; complement of A184582. ● a(n)=floor[(n - 1 / 5)(1 + r)], where r=(1 + sqrt(5)) / 2. ●

► [A031435] 1,2,4,7,9,12,15,18,21,25,28,32,35,39,42,46,50,54,58,62,66,70,74,78,83 ⋆ Reversal point for powers of consecutive natural numbers. ● a(n) = floor(1 / (1 - log(n) / log(n + 1))), empirical observation verified for n = 1 to 10000. - _ Fred Patrick Doty _ , Jul 13 2023 ●

► [A024193] 1,2,4,7,9,12,15,19,23,27,32,36,42,47,53,59,66,73,80,88,95,104,112,121,130 ⋆ Integer part of (3rd elementary symmetric function of S(n)) / (2nd elementary symmetric of S(n)), where S(n) = { 3,4, ..., n + 4 } . ● a(n) = floor(1 / 2 n (7 + n) (46 + 13 n + n ^ 2) / (144 + 41 n + 3 n ^ 2)). - _ Ivan Neretin _ , May 17 2018 ●

► [A212988] 1,1,2,4,7,9,12,16,21,25,30,36,43,49,56,64,73,81,90,100,111,121,132,144,157 ⋆ Number of (w,x,y) with all terms in { 0,...,n } and 4 * w = x + y. ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 4) - 2 * a(n - 5) + a(n - 6). ●

► [A360627] 1,2,4,7,9,13,14,18,23,25,26,28,36,41,43,46,50,52,59,61,63,67,73,81,82 ⋆ Odd bisection of A360613: a(n) = A360613(2 * n - 1). ● a(n) < a(n + 1). ●

► [A080057] 1,2,4,7,9,13,15,17,20,21,23,27,29,34,35,38,40,42,43,46,48,49,51,54,57 ⋆ Greedy powers of (e ^- Gamma): sum _{ n=1..inf } (e ^- Gamma) ^ a(n) = 1, where e ^- Gamma = e ^ (- .57721566490153286...) = .561459483566885169... ● a(n)=sum _{ k=1..n } floor(g _ k) where g _ 1=1, g _{ n + 1 } =log _ x (x ^ frac(g _ n) - x) (n>0) at x=(e ^- Gamma) and frac(y) = y - floor(y). See A077468 for mathematica program by _ Robert G. Wilson v _ . ●

► [A077597] 0,2,4,7,9,13,15,19,22,26,28,34,36,40,44,49,51,57,59,65,69,73,75,83,86 ⋆ Coefficient of x in the n - th Moebius polynomial (A074586), M(n,x), which satisfies M(n, - 1)=mu(n) the Moebius function of n. ● a(n) = Sum _{ k = 1..n } floor((n + 1) / k). - _ N. J. A. Sloane _ , Oct 28 2008 ●

► [A036386] 0,1,2,4,7,9,13,16,20,26,31,40,50,61,78,93,119,150,189,242,310,400,525,684,900 ⋆ Number of prime powers (p ^ 2, p ^ 3, ...) <= 2 ^ n. ● a(n) = Sum _{ j=2..n + 1 } pi(floor(2 ^ (n / j))). The summation starts with squares(j=2); for arbitrary range (=y), the y ^ (1 / j) argument has to be used. ●

► [A097433] 2,4,7,9,15,18,24,26,32,41,43,52,57,60,66,74,83,86,94,100,103,111,117,125,137 ⋆ Integer part of the hypotenuse of prime leg isosceles right triangles. ● a(n) = floor(sqrt(2 * p(n) ^ 2)), where p(n) = n - th prime. - _ N. J. A. Sloane _ , Feb 23 2015 ●

► [A308758] 0,0,0,0,1,1,2,4,7,9,15,20,29,38,51,64,86,104,131,160,198,233,284,332,396 ⋆ Sum of the third largest parts of the partitions of n into 4 parts. ● a(n) = Sum _{ k=1..floor(n / 4) } Sum _{ j=k..floor((n - k) / 3) } Sum _{ i=j..floor((n - j - k) / 2) } j. ● a(n) = a(n - 2) + 2 * a(n - 3) + 2 * a(n - 4) - 2 * a(n - 5) - 3 * a(n - 6) - 4 * a(n - 7) + 4 * a(n - 9) + 3 * a(n - 10) + 2 * a(n - 11) - 2 * a(n - 12) - 2 * a(n - 13) - a(n - 14) + a(n - 16) for n>15. ●

► [A047539] 2,4,7,10,12,15,18,20,23,26,28,31,34,36,39,42,44,47,50,52,55,58,60,63,66 ⋆ Numbers that are congruent to { 2, 4, 7 } mod 8. ● a(n) = floor((8 * n - 2) / 3). - _ Gary Detlefs _ , Mar 13 2010 ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. ● a(n) = (24 * n - 9 + 2 * sqrt(3) * sin(2 * n * Pi / 3)) / 9. ● a(3k) = 8 k - 1, a(3k - 1) = 8k - 4, a(3k - 2) = 8k - 6. (End) ●

► [A276209] 2,4,7,10,12,15,18,21,24,27,30,34,37,40,43,47,50,53,57,60,64,67,71,74,78 ⋆ Position of n ^ s in the joint ranking of { h ^ r } and { k ^ s } , where r = sqrt(2), s = sqrt(3), h > 1, k > 1. ● a(n) = n + floor(n ^ (s / r)), with complement given by n + floor(n ^ (r / s)). ●

► [A033627] 1,2,4,7,10,13,16,19,22,25,28,31,34,37,40,43,46,49,52,55,58,61,64,67,70 ⋆ 0 - additive sequence: not the sum of any previous pair. ● a(n) = 3 * n - 5, for n > 2. ● a(n) = 2 * a(n - 1) - a(n - 2), for n > 4; ●

► [A194236] 0,0,0,1,2,4,7,10,13,16,20,24,29,35,42,49,56,63,70,78,86,95,105,115,125 ⋆ Partial sums of A194235. ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 16) - 2 * a(n - 17) + a(n - 18) for n > 18. ●

► [A368784] 1,2,4,7,10,13,17,21,25,30,35,40,45,50,56,62,68,74,81,87,94,101,108,115,122 ⋆ a(0) = 1. For n > 0, a(n) is the smallest integer k > n such that (Sum _{ i = 1..n } i) / (Sum _{ i = n + 1..k } i) < 1 / n. ● a(n) = floor(- 1 / 2 + sqrt(4 * n ^ 3 + 8 * n ^ 2 + 4 * n + 1) / 2) + 1. ●

► [A328659] 0,2,4,7,10,14,18,23,28,33,38,43,49,55,61,67,73,79,85,92,99,106,113,120,127 ⋆ Partial sums of A035100: number of binary digits of the primes. ● a(n) = n + Sum _{ k=1..n } floor(log _ 2(prime(k))). ●

► [A088236] 0,1,2,4,7,10,14,18,23,28,33,39,45,51,57,63,69,76,83,90,97,104,111,118,125 ⋆ Total number of digits (in base 2) in all preceding terms in the sequence. ● a(n + 1) = a(n) + floor(Log(2, a(n))) + 1, with a(0) = 0, a(1) = 1. ●

► [A184674] 1,2,4,7,10,14,18,23,28,34,40,47,54,62,70,79,88,98,108,119,130,142,154,167,180 ⋆ a(n) = n + floor((n / 2 - 1 / (2 * n)) ^ 2); complement of A184675. ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4) for n>=6. ● a(n) = (2 * n ^ 2 + 8 * n - 9 + (- 1) ^ n) / 8 for n > 1. - _ Stefano Spezia _ , Apr 04 2023 ●

► [A014616] 2,4,7,10,14,18,23,28,34,40,47,54,62,70,79,88,98,108,119,130,142,154,167,180,194 ⋆ a(n) = solution to the postage stamp problem with 2 denominations and n stamps. ● a(n) = floor((n ^ 2 + 6 * n + 1) / 4). ●

► [A227353] 0,1,2,4,7,10,14,18,23,29,35,42,49,57,66,75,85,95,106,118,130,143,156,170,185 ⋆ Number of lattice points in the closed region bounded by the graphs of y = 3 * x / 5, x = n, and y = 0, excluding points on the x - axis. ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 5) - 2 * a(n - 6) + a(n - 7). ● a(n) = a(n - 1) + floor(3 * n / 5), n > 1. - _ Gennady Eremin _ , Mar 15 2022 ● a(n) = floor(n * (3 * n - 1) / 10). - _ Kevin Ryde _ , Mar 15 2022 ●

► [A183136] 0,1,2,4,7,10,14,18,23,29,35,42,50,58,67,76,86,97,108,120,132,145,159,173,188 ⋆ a(n) = [1 / r] + [2 / r] + ... + [n / r], where r = golden ratio = (1 + sqrt(5)) / 2 and []=floor. ● a(n) = [1 / r] + [2 / r] + ... + [n / r], where r = golden ratio = (1 + sqrt(5)) / 2 and []=floor. ●

► [A144873] 0,0,2,4,7,10,14,18,24,28,35,40,47,54,62,70,80,88,98,108,120,130,142,154,168 ⋆ If n mod 8 = 0 or n mod 10 = 0 then floor(n ^ 2 / 4) + n otherwise floor(n ^ 2 / 4) + n - 1. ● a(n)=2 * a(n - 1) - a(n - 2) + a(n - 40) - 2 * a(n - 41) + a(n - 42). [From _ R. J. Mathar _ , Feb 13 2009] ●

► [A047808] 1,2,4,7,10,14,19,24,30,37,44,52,59,69,78,87,98,109,121,133,146,158,173,186,200 ⋆ a(n) counts different values of i ^ 2 + j ^ 2 <= n ^ 2 or number of distances from the origin to all integer points inside a circle of radius n. ● a(n) = number of b(i) <= n ^ 2, b() = A001481. ●

► [A007980] 1,2,4,7,10,14,19,24,30,37,44,52,61,70,80,91,102,114,127,140,154,169,184,200,217 ⋆ Expansion of (1 + x ^ 2) / ((1 - x) ^ 2 * (1 - x ^ 3)). ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) + 2 = a(- 3 - n) for all n in Z. - _ Michael Somos _ , Jun 07 2003 ● a(n) = ceiling((n + 1) * (n + 2) / 3). - _ Paul Boddington _ , Jan 26 2004 ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) - 2 * a(n - 4) + a(n - 5) for n>4. ● a(n) = floor((n ^ 2 + 3 * n + 3) / 3). - _ Giacomo Guglieri _ , May 01 2019 ●

► [A022776] 1,2,4,7,10,14,19,24,30,37,45,53,62,72,82,93,105,118,131,145,160,175,191,208,225 ⋆ Place where n - th 1 occurs in A023115. ● a(n) = 1 + Sum _{ k=1..n - 1 } ceiling(r * k) where r=1 / sqrt(2). - _ Benoit Cloitre _ , Jan 24 2009 ●

► [A023536] 1,2,4,7,10,14,19,25,31,38,46,55,65,75,86,98,111,125,140,155,171,188,206,225,245 ⋆ Convolution of natural numbers with A023532. ● a(n) = (n(n + 5) - 4) / 2 - Sum _{ k=2..n } floor(1 / 2 + sqrt(2(k + 2))). - Jan Hagberg (jan.hagberg(AT)stat.su.se), Oct 16 2002 ● a(n) = (n + 1)(n + 2) / 2 - Sum _{ k=1..n + 1 } floor((sqrt(8k + 1) - 1) / 2); ● a(n) = Sum _{ k=1..n + 1 } k - floor((sqrt(8k + 1) - 1) / 2). (End) ●

► [A177237] 0,0,0,0,1,2,4,7,10,14,19,25,33,42,52,64,77,92,109,128,149,172,197,225,255 ⋆ Partial sums of round(n ^ 2 / 19). ● a(n) = round((n - 2) * (n + 3) * (2 * n + 1) / 114). ● a(n) = floor((2 * n ^ 3 + 3 * n ^ 2 - 11 * n + 42) / 114). ● a(n) = ceiling((2 * n ^ 3 + 3 * n ^ 2 - 11 * n - 54) / 114). ● a(n) = round((2 * n ^ 3 + 3 * n ^ 2 - 11 * n) / 114). ● a(n) = a(n - 19) + (n + 1) * (n - 19) + 128, n > 18. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 19) - 3 * a(n - 20) + 3 * a(n - 21) - a(n - 22) with g.f. x ^ 4 * (1 + x) * (x ^ 4 - x ^ 3 + x ^ 2 - x + 1) * (x ^ 8 - x ^ 7 + x ^ 6 - x ^ 4 + x ^ 2 - x + 1) / ((x ^ 18 + x ^ 17 + x ^ 16 + x ^ 15 + x ^ 14 + x ^ 13 + x ^ 12 + x ^ 11 + x ^ 10 + x ^ 9 + x ^ 8 + x ^ 7 + x ^ 6 + x ^ 5 + x ^ 4 + x ^ 3 + x ^ 2 + x + 1) * (x - 1) ^ 4). - _ R. J. Mathar _ , Dec 13 2010 ●

► [A079963] 1,1,1,1,2,4,7,10,14,21,34,55,86,131,200,310,485,757,1174,1815,2810,4362,6778,10524,16323 ⋆ Number of permutations satisfying - k<=p(i) - i<=r and p(i) - i not in I, i=1..n, with k=1, r=5, I= { 1,2 } . ● a(n) = a(n - 1) + a(n - 4) + a(n - 5) + a(n - 6) G.f.: - 1 / (x ^ 6 + x ^ 5 + x ^ 4 + x - 1) ●

► [A036702] 1,2,4,7,10,15,20,25,32,40,49,57,66,78,89,102,114,128,142,158,175,190,209,227,245 ⋆ a(n)=number of Gaussian integers z=a + bi satisfying |z|<=n, a>=0, 0<=b<=a. ● a(n) = sum(floor(sqrt(n ^ 2 - m ^ 2)) - (m - 1), m = 0.. floor(n / sqrt(2))), n >= 0. See A255250. - _ Wolfdieter Lang _ , Mar 15 2015 ●

► [A340248] 0,0,0,1,1,2,4,7,10,15,22,29,42,51,71,87,116,132,177,201,259,289,368,404,508 ⋆ Sum of the second largest parts s of the partitions of n into 4 parts q,r,s,t such that 1 <= q <= r <= s <= t and q + r + s > t. ● a(n) = Sum _{ k=1..floor(n / 4) } Sum _{ j=k..floor((n - k) / 3) } Sum _{ i=j..floor((n - j - k) / 2) } sign(floor((i + k + j) / (n - i - j - k + 1))) * i. ●

► [A160790] 0,1,2,4,7,10,16,20,30,35,50,56,77,84,112,120,156,165,210,220,275,286,352,364,442 ⋆ Vertex number of a rectangular spiral. The first differences (A160791) are the edge lengths of the spiral. The distances between two nearest edges, that are parallel to the initial edge, are the natural numbers. ● a(n) = + a(n - 1) + 3 * a(n - 2) - 3 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) + a(n - 6) - a(n - 7). ● a(n) = (2 * n + 3 + (- 1) ^ n) * (2 * n + 3 - 3 * (- 1) ^ n) * (2 * n + 15 + 5 * (- 1) ^ n) / 384. - _ Luce ETIENNE _ , Mar 31 2015 ●

► [A343328] 0,2,4,7,10,18,33,38,86,162,284,522,928,1688,3022,5470,9826,17744,31926,57588,103696,186946,336750,606946,1093500 ⋆ a(0) = 0. a(n) = the second smallest number greater than a(n - 1) that cannot be written as a sum of any previous distinct terms. ● a(n + 3) = a(n + 2) + 2a(n + 1) - a(n) for n=5, n>=8. ●

► [A034744] 1,2,4,7,10,20,26,48,72,120,178,316,466,780,1240,2025,3194,5268,8362,13670,21944,35600,57314,93156,150075 ⋆ Dirichlet convolution of Fibonacci numbers with themselves. ● a(n) = sum(Fibonacci(d) * Fibonacci(n / d), d|n). [_ Emanuele Munarini _ , Feb 14 2014] ●

► [A370905] 1,2,4,7,11,13,19,24,31,35,45,51,63,69,77,88,104,111,129,141,153,163,185,195,216 ⋆ Partial sums of the alternating sum of divisors function (A206369). ● a(n) = (Pi ^ 2 / 30) * n ^ 2 + O(n * log(n) ^ (2 / 3) * log(log(n)) ^ (4 / 3)) (Tóth, 2013). ●

► [A054850] 1,2,4,7,11,14,18,23,27,32,37,42,48,53,59,64,70,76,82,88,95,101,107,114,120 ⋆ Binary logarithm of n - th primorial, rounded down to an integer. ● a(n) = floor(log _ 2 n #) = m such that 2 ^ m <= p(n) # < 2 ^ (m + 1), where p(n) # is the primorial of the n - th prime (A002110). ●

► [A306070] 1,2,4,7,11,14,20,27,35,41,51,59,71,80,89,104,120,132,150,164,178,193,215,232,256 ⋆ Partial sums of A116550: Sum _{ k=1..n } bphi(k) where bphi(k) is the bi - unitary analog of Euler's totient function. ● a(n) = A * n ^ 2 / 2 + O(n * log(n) ^ 2), where A = A306071. ●

► [A062467] 0,0,2,4,7,11,15,19,23,28,32,37,41,46,50,55,60,64,69,74,78,83,88,93,97 ⋆ Integer part of log(n!) ^ (1 + log(n) / n). ● a(n) = floor(log(n!) ^ (1 + log(n) / n)). - _ Wesley Ivan Hurt _ , Mar 15 2023 ●

► [A078617] 1,2,4,7,11,15,20,25,31,38,46,54,63,72,82,93,105,117,130,143,157,172,188,204,221 ⋆ Floor(average of first n squares). ● a(n) = floor(n / (1 - e ^ (- 3 / n))). Also see related exponential formula in A171662 with symmetry as above. - _ Richard R. Forberg _ , Jun 22 2013 ●

► [A025703] 1,2,4,7,11,15,20,26,33,40,48,57,67,78,89,101,114,128,142,157,173,190,208,226,245 ⋆ Index of 4 ^ n within sequence of numbers of form 4 ^ i * 6 ^ j. ● a(n) = n + 1 + Sum(j= 1 .. n, floor(j * log[6](4))). - _ Robert Israel _ , May 10 2015 ●

► [A077169] 1,2,4,7,11,15,20,26,33,41,50,60,71,83,96,110,125,141,158,176,195,215,236,258,281 ⋆ Initial terms of rows of A077168. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3), n >= 7. ●

► [A293239] 1,2,4,7,11,15,21,28,35,43,53,64,76,88,102,117,133,149,167,186,206,226,248,271,295 ⋆ Number of terms in the fully expanded n - th derivative of x ^ x. ● a(n) = (5 + (- 1) ^ n + (1 - i) * (- i) ^ n + (1 + i) * i ^ n + 2 * n + 4 * n ^ 2) / 8 for n>7 where i=sqrt(- 1). ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 4) - 2 * a(n - 5) + a(n - 6) for n>6. ●

► [A067744] 2,4,7,11,16,20,26,31,37,43,50,56,64,71,79,86,95,103,112,120,129,139,148,158,168 ⋆ Number of terms yielding particularly small errors in a numerical integration of exp((cos(x) - 1) / (cos(x) + 1)) having non - monotonic sub - geometric convergence. ● a(n) = round(((2 * Pi / (3 ^ (3 / 2))) * ((6 * n - 5) / 6)) ^ (3 / 2)). ●

► [A024224] 0,2,4,7,11,16,22,28,35,43,51,60,70,81,93,105,118,132,146,161,177,194,212,230,249 ⋆ a(n) = floor((4th elementary symmetric function of S(n)) / (3rd elementary symmetric function of S(n))), where S(n) = { first n + 3 positive

integers congruent to 1 mod 3 } . • a(n) = floor((3 n ^ 2 + 5 n - 6) / 8). • a(8 * k + j) = 24 * k ^ 2 + (5 + 6 * j) k + b(j), where b(j) = - 1,0,2,4,7,11,16,22 fo r j = 0..7. (End) •

► [A254835] 2,4,7,11,16,22,29,37,46,56,67,79,92,106,121,133,136,144,153,161,17 0,180,187,197,206 ⋆ Total number of nonagons in a variant of a nonagon expans ion ("side - to - side", two consecutive sides) after n iterations. • a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4) for n>21. •

► [A152947] 1,1,2,4,7,11,16,22,29,37,46,56,67,79,92,106,121,137,154,172,191,211,2 32,254,277 ⋆ a(n) = 1 + (n - 2) * (n - 1) / 2. • a(n) = a(n - 1) + n - 2 for n>1, a(1) = 1. - _ Vincenzo Librandi _ , Nov 26 2010 • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>3. - _ Wesley Ivan Hurt _ , Jun 20 2016 •

► [A000124] 1,2,4,7,11,16,22,29,37,46,56,67,79,92,106,121,137,154,172,191,211,23 2,254,277,301 ⋆ Central polygonal numbers (the Lazy Caterer's sequence): n(n + 1) / 2 + 1; or, maximal number of pieces formed when slicing a pancake with n cuts. • a(n + 3) = 3 * a(n + 2) - 3 * a(n + 1) + a(n) and a(1) = 1, a(2) = 2 , a(3) = 4. - _ Artur Jasinski _ , Oct 21 2008 • a(n) = a(n - 1) + n. E.g.f.:(1 + x + x ^ 2 / 2) * exp(x). - _ Geoffrey Critzer _ , Mar 10 2009 • a(n) = Sum _{ k = 0..n + 1 } binomial(n + 1, 2(k - n)). - _ Paul Barry _ , Aug 29 2004 • a(n) = binomial(n + 2, 1) - 2 * binomial(n + 1, 1) + binomial(n + 2, 2). - _ Ze rinvary Lajos _ , May 12 2006 • a(n) = Sum _{ l _ 1 = 0..n + 1 } Sum _{ l _ 2 = 0..n } ...Sum _{ l _ i = 0..n - i } ...Sum _{ l _ n = 0..1 } delta(l _ 1, l _ 2, ..., l _ i, ..., l _ n) where delta(l _ 1, l _ 2, ..., l _ i, ..., l _ n) = 0 if any l _ i != l _ (i + 1) and l _ (i + 1) != 0 and delta(l _ 1, l _ 2, ..., l _ i, ..., l _ n) = 1 otherwise. (End) • a(n) = 2 * a(n - 1) - a(n - 2) + 1. - _ Eric Werley _ , J un 27 2011 •

► [A212369] 1,1,1,1,1,1,1,1,1,1,1,2,4,7,11,16,22,29,37,46,56,68,85,112,156 ⋆ Num ber of Dyck n - paths all of whose ascents and descents have lengths equal to 1 (mod 10). • a(n) = a(n - 1) + Sum _{ k=1..n - 10 } a(k) * a(n - 10 - k) if n>0; a(0) = 1. •

► [A212368] 1,1,1,1,1,1,1,1,1,1,2,4,7,11,16,22,29,37,46,57,73,99,142,211,317 ⋆ Nu mber of Dyck n - paths all of whose ascents and descents have lengths equal to 1 (mod 9). • a(n) = a(n - 1) + Sum _{ k=1..n - 9 } a(k) * a(n - 9 - k) if n>0; a(0) = 1. •

► [A212367] 1,1,1,1,1,1,1,1,1,2,4,7,11,16,22,29,37,47,62,87,129,197,302,457,677 ⋆ Number of Dyck n - paths all of whose ascents and descents have lengths equal to 1 (mod 8). • a(n) = a(n - 1) + Sum _{ k=1..n - 8 } a(k) * a(n - 8 - k) if n> 0; a(0) = 1. •

► [A175777] 0,0,0,0,1,2,4,7,11,16,22,29,38,48,60,74,90,108,128,150,175,202,232,26 5,301 ⋆ Partial sums of floor(n ^ 2 / 16). • a(n) = round((2 * n + 1) * (2 * n ^ 2 + 2 * n - 21) / 192). • a(n) = floor((n - 1) * (2 * n ^ 2 + 5 * n - 15) / 96). • a(n) = ceiling((n + 2) * (2 * n ^ 2 - n - 18) / 96). • a(n) = round(n * (n + 4) * (2 * n - 5) / 96). • a(n) = a(n - 16) + (n + 1) * (n - 16) + 90, n > 15. • a(n)= 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 8) - 3 * a(n - 9) + 3 * a(n - 10) - a(n - 11). - _ R. J. Mathar _ , Dec 06 2010 •

► [A212366] 1,1,1,1,1,1,1,1,2,4,7,11,16,22,29,38,52,76,117,184,288,442,662,972,14 14 ⋆ Number of Dyck n - paths all of whose ascents and descents have lengths e qual to 1 (mod 7). • a(n) = a(n - 1) + Sum _{ k=1..n - 7 } a(k) * a(n - 7 - k) i f n>0; a(0) = 1. •

► [A309838] 2,4,7,11,16,22,29,39,50,60,73,88,103,120,139,160,181,203,229,256,28 4,313,343,377,412 ⋆ a(n) = number of dimensions of semisimple matrix subalge bras. • a(n) <= n ^ 2 - Sqrt(2) * Sqrt(2n + 3) * n. •

► [A334251] 1,2,4,7,11,16,22,29,43,66,102,157,239,358,526,777,1159,1740,2619,39 42,5923,8870,13259,19822,29667 ⋆ a(n) is the number of binary (0,1) sequences of length n that have at most two zeros in a window of seven consecutive symbo ls. • a(n) = a(n - 1) + a(n - 4) + 3 * a(n - 6) - 2 * a(n - 10) - a(n - 12) - 3 * a(n - 13) - a(n - 15) + a(n - 18) + a(n - 21), n >= 21. (End) •

► [A175776] 0,0,0,0,1,2,4,7,11,16,22,30,39,50,63,78,95,114,135,159,185,214,246,28 1,319 ⋆ Partial sums of floor(n ^ 2 / 15). • a(n) = round((2 * n + 1) * (n ^ 2 + n - 14) / 90). • a(n) = floor((n - 2) * (2 * n ^ 2 + 7 * n - 13) / 90). • a(n) = ce iling((n + 3) * (2 * n ^ 2 - 3 * n - 18) / 90). • a(n) = a(n - 15) + (n + 1) * (n - 15) + 78, n > 14. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 15) - 3 * a(n - 16) + 3 * a(n - 17) - a(n - 18); a(0)=0, a(1)=0, a(2)=0, a(3)=0, a(4)=1, a (5)=2, a(6)=4, a(7)=7, a(8)=11, a(9)=16, a(10)=22, a(11)=30, a(12)=39, a(13) =50, a(14)=63, a(15)=78, a(16)=95, a(17)=114. - _ Harvey P. Dale _ , May 0 4 2012 •

► [A177176] 0,0,0,1,2,4,7,11,16,22,30,39,50,63,78,95,115,137,162,190,221,255,29 2,333,377 ⋆ Partial sums of round(n ^ 2 / 13). • a(n) = round(n * (n + 1) * (2 * n + 1) / 78). • a(n) = floor((n + 3) * (2 * n ^ 2 - 3 * n + 10) / 78). • a(n) = ceiling((n - 2) * (2 * n ^ 2 + 7 * n + 15) / 78). • a(n) = a(n - 13) + (n + 1) * (n - 13) + 63, n > 12. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 13) - 3 * a(n - 14) + 3 * a(n - 15) - a(n - 16) with g.f. x ^ 3 * (1 + x) * (x ^ 2 - x + 1) * (x ^ 6 - x ^ 5 + x ^ 4 - x ^ 3 + x ^ 2 - x + 1) / ((x ^ 12 + x ^ 11 + x ^ 10 + x ^ 9 + x ^ 8 + x ^ 7 + x ^ 6 + x ^ 5 + x ^ 4 + x ^ 3 + x ^ 2 + x + 1) * (x - 1) ^ 4). - _ R. J. Mathar _ , Dec 13 2010 •

► [A212365] 1,1,1,1,1,1,1,2,4,7,11,16,22,30,43,66,106,172,275,429,656,996,1522,23 60,3714 ⋆ Number of Dyck n - paths all of whose ascents and descents have len gths equal to 1 (mod 6). • a(n) = a(n - 1) + Sum _{ k=1..n - 6 } a(k) * a(n - 6 - k) if n>0; a(0) = 1. •

► [A131075] 1,2,4,7,11,16,22,30,46,92,232,628,1652,4096,9544,21000,43912,8782 4,169120,315952,578096,1048576,1913440,3567072,6874336 ⋆ First subdiagonal o f triangular array T: T(j,1) = 1 for ((j - 1) mod 8) < 4, else 0; T(j,k) = T(j - 1,k - 1) + T(j,k - 1) for 2 <= k <= j. • a(1) = 1, a(2) = 2, a(3) = 4, a(4) = 7, a(5) = 11; for n > 5, a(n) = 6 * a(n - 1) - 14 * a(n - 2) + 16 * a(n - 3) - 10 * a(n - 4) + 4 * a(n - 5). •

► [A114805] 1,2,4,7,11,16,22,36,60,96,146,212,380,692,1196,1946,3002,5858,1147 4,21050,36050,58226,121058,250226,480050 ⋆ Cumulative sum of quintuple facto rial numbers n!!!!! (A085157). • a(n) = Sum _{ j=0..n } j!5. • a(n) = Sum _{ j=0..n } j!!!!!. •

► [A181120] 0,0,0,1,2,4,7,11,16,23,31,41,53,67,83,102,123,147,174,204,237,274,31 4,358,406 ⋆ Partial sums of round(n ^ 2 / 12) (A069905). • a(n) = round((2 * n ^ 3 + 3 * n ^ 2 - 6 * n) / 72). • a(n) = round((4 * n ^ 3 + 6 * n ^ 2 - 12 * n - 7) / 144). • a(n) = floor((2 * n ^ 3 + 3 * n ^ 2 - 6 * n + 9) / 72). • a(n) = ceili ng((2 * n ^ 3 + 3 * n ^ 2 - 6 * n + 9 - 16) / 72). • a(n) = a(n - 6) + (n ^ 2 - 5 * n + 8) / 2, n > 5. •

► [A000601] 1,2,4,7,11,16,23,31,41,53,67,83,102,123,147,174,204,237,274,314,35 8,406,458,514,575 ⋆ Expansion of 1 / ((1 - x) ^ 2 * (1 - x ^ 2) * (1 - x ^ 3)). • a (0)=1, a(1)=2, a(2)=4, a(3)=7, a(4)=11, a(5)=16, a(6)=23, a(n) = 2 * a(n - 1) - a(n - 3) - a(n - 4) + 2 * a(n - 6) - a(n - 7). - _ Harvey P. Dale _ , Mar 17 201 3 • a(- 7 - n) = - a(n). - _ Michael Somos _ , May 28 2014 •

► [A065095] 1,2,4,7,11,16,23,33,46,62,83,110,144,186,238,303,383,481,600,744,91 8,1128,1380,1681,2039 ⋆ a(1) = 1, a(n + 1) is the sum of a(n) and ceiling(arith metic mean of a(1) ... a(n)). • a(1) = 1, a(n + 1) = a(n) + ceiling((a(1) + a(2) + ... + a(n)) / n). •

► [A005253] 1,1,1,1,2,4,7,11,16,23,34,52,81,126,194,296,450,685,1046,1601,2452,3 753,5739,8771,13404 ⋆ Number of binary words not containing ..01110... • a(n - 1) = Sum { k=0..floor(n / 5) } binomial(n - 3k, 2k). - _ Paul Barry _ , Sep 16 2004 •

► [A212364] 1,1,1,1,1,1,2,4,7,11,16,23,35,57,96,161,264,425,682,1106,1821,3030,5 055,8412,13956 ⋆ Number of Dyck n - paths all of whose ascents and descents h ave lengths equal to 1 (mod 5). • a(n) = a(n - 1) + Sum _{ k=1..n - 5 } a(k) * a(n - 5 - k) if n>0; a(0) = 1. • a(n) = Sum _{ k=0..(n - 1) / 4 } C(n - 4 * k,k) * C(n - 4 * k,k + 1) / (n - 4 * k) for n>0, a(0)=1. - _ Vladimir Kruchinin _ , Jan 21 2019 •

► [A129339] 1,2,4,7,11,16,23,37,74,175,431,1024,2291,4825,9650,18571,34955,655 36,124511,242461,484922,989527,2038103,4194304,8565755 ⋆ Main diagonal of tr iangular array T: T(j,1) = 1 for ((j - 1) mod 6) < 3, else 0; T(j,k) = T(j - 1,k - 1) + T(j,k - 1) for 2 <= k <= j. • a(1) = 1, a(2) = 2, a(3) = 4, a(4) = 7; for n > 4, a(n) = 5 * a(n - 1) - 9 * a(n - 2) + 6 * a(n - 3). •

► [A011912] 0,0,0,0,0,2,4,7,11,16,24,33,44,57,72,91,112,136,163,193,228,266,308,3 54,404 ⋆ a(n) = floor(n(n - 1)(n - 2) / 30). • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 5) - 3 * a(n - 6) + 3 * a(n - 7) - a(n - 8). •

► [A120118] 1,2,4,7,11,16,26,43,71,116,186,300,487,792,1287,2087,3382,5484,889 8,14438,23423,37993,61625,99965,162165 ⋆ a(n) is the number of binary strings of length n such that no subsequence of length 5 or less contains 3 or more ones . • a(n) = a(n - 1) + a(n - 3) + 2 * a(n - 5) - a(n - 8) - a(n - 10). •

► [A108895] 1,2,4,7,11,16,28,49,81,126,246,477,861,1446,3126,6591,12735,22680,5 2920,118755,241635,450480,1115760,2629965,5579085 ⋆ Partial sums of quadrup le factorial numbers n!!!! (A007662). • a(n) = Sum _{ i=0..n } i!!!!. •

► [A266448] 1,2,4,7,11,17,21,31,35,49,53,71,75,97,101,127,131,161,165,199,203,24 1,245,287,291 ⋆ Total number of ON (black) cells after n iterations of the "Rule 25" elementary cellular automaton starting with a single ON (black) cell. • a(n) = (2 * n ^ 2 + 2 * n + (- 1) ^ n * (7 - 2 * n) + 5) / 4 for n>2. • a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n>7. •

► [A038045] 1,1,2,4,7,11,17,23,33,43,58,68,97,109,138,168,211,227,298,316,401,45 9,537,559,723 ⋆ Shifts left under transform T where Ta is phi DCONV a. • a(1) = 1; a(n + 1) = Sum _{ d|n } phi(n / d) * a(d). - _ Ilya Gutkovskiy _ , Feb 2 3 2020 •

► [A084267] 1,2,4,7,11,17,24,33,44,57,72,89,109,131,156,184,215,250,288,330,37 6,426,480,538,601 ⋆ Partial sums of a binomial quotient. • a(n)=sum { k=0..n, floor(C(k + 4, 4) / C(k + 2, 2)) } •

► [A177116] 0,0,0,1,2,4,7,11,17,24,33,44,57,72,90,110,133,159,188,221,257,297,34 1,389,441 ⋆ Partial sums of round(n ^ 2 / 11). • a(n) = round((n - 2) * (n + 3) * (2 * n + 1) / 66). • a(n) = floor((2 * n ^ 3 + 3 * n ^ 2 - 11 * n + 18) / 66). • a(n) = ceiling((2 * n ^ 3 + 3 * n ^ 2 - 11 * n - 30) / 66). • a(n) = round(n * (2 * n ^ 2 + 3 * n - 11) / 66). • a(n) = a(n - 11) + (n + 1) * (n - 11) + 44, n > 1 0. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 11) - 3 * a(n - 12) + 3 * a(n - 13) - a(n - 14). [_ R. J. Mathar _ , Dec 10 2010] •

► [A175822] 0,1,2,4,7,11,17,24,34,46,61,79,100,125,153,186,223,265,312,364,422,4 85,555,631,714 ⋆ Partial sums of ceiling(n ^ 2 / 7). • a(n) = round((2 * n + 1) * (n ^ 2 + n + 12) / 42). • a(n) = floor((n + 1) * (2 * n ^ 2 + n + 24) / 42). • a(n) = ceiling((2 * n ^ 3 + 3 * n ^ 2 + 25 * n) / 42). • a(n) = a(n - 7) + (n + 1) * (n - 7) + 24, n > 6. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 7) - 3 * a(n - 8) + 3 * a(n - 9) - a(n - 10). (End) •

► [A308825] 0,0,0,0,0,1,1,2,4,7,11,17,24,36,50,69,91,123,158,204,259,326,403,499,6 06 ⋆ Sum of the third largest parts of the partitions of n into 5 parts. • a(n) = Sum _{ l=1..floor(n / 5) } Sum _{ k=l..floor((n - l) / 4) } Sum _{ j=k..floor((n - k - l) / 3) } Sum _{ i=j..floor((n - j - k - l) / 2) } j. •

► [A028291] 1,2,4,7,11,17,25,35,48,64,84,108,137,171,211,258,312,374,445,525,61 6,718,832,959,1100 ⋆ Expansion of 1 / ((1 - x) ^ 2(1 - x ^ 2)(1 - x ^ 3)(1 - x ^ 5)) in powers of x. • a(n) = round((n + 1) * (n ^ 3 + 23 * n ^ 2 + 173 * n + 451) / 720). - _ Tani Akinari _ , Jun 05 2014 • a(n) - 2 * a(n - 1) + a(n + 3) + a(n + 4) - 2 * a(n + 6) + a(n + 7) = 1 if n == 3 (mod 5) else 0. - _ Michael So mos _ , Jun 05 2014 • a(n) = a(- 12 - n) for all n in Z. - _ Michael Somos _ , May 14 2015 •

► [A289060] 2,4,7,11,17,25,36,51,70,93,120,151,186,225,268,315,366,421,480,543,6 10,681,756,835,918 ⋆ a(n) = 3 * a(n - 1) - 3 * a(n - 2) + * a(n - 3) for n >= 8, where a(0) = 2, a(1) = 4, a(2) = 7, a(3) = 11, a(4) = 17, a(5) = 25, a(6) = 36, a(7) = 51. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n >= 8, where a(0) = 2, a(1) = 4, a(2) = 7, a(3) = 11, a(4) = 17, a(5) = 25, a(6) = 36, a(7) = 51. • a(n) = 30 - 11 * n + 2 * n ^ 2 for n>4. - _ Colin Barker _ , Jul 02 2017 •

► [A006999] 0,1,2,4,7,11,17,26,40,61,92,139,209,314,472,709,1064,1597,2396,359 5,5393,8090,12136,18205,27308 ⋆ Partitioning integers to avoid arithmetic prog ressions of length 3. • a(n) = floor((3a(n - 1) + 2) / 2). • a(n) = - 1 + floor(c * (3 / 2) ^ n) where c=1.081513668589844877304633988599549408710737041542 024954790295591585622666484989650922411026555488940... - _ Benoit Cloitre _ , Jan 10 2002 • a(n + 1) = (3 * a(n)) / 2 + 1 if a(n) is even. a(n + 1) = (3 * a(n) + 1) / 2 if a(n) is odd. - _ Miquel Cerda _ , Jun 15 2019 •

► [A005252] 1,1,1,1,2,4,7,11,17,27,44,72,117,189,305,493,798,1292,2091,3383,547 3,8855,14328,23184,37513 ⋆ a(n) = Sum _{ k=0..floor(n / 4) } binomial(n - 2k, 2k). • a(n) = (((1 + sqrt(5)) / 2) ^ (n + 1) / sqrt(5) - ((1 - sqrt(5)) / 2) ^ (n +

1) / sqrt(5) + cos(Pi * n / 3) + sin(Pi * n / 3) / sqrt(3)) / 2. (End) ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 4); a(0) = a(1) = a(2) = a(3) = 1. - _ Philippe Delé ham _ , May 01 2006 ●

▶ [A023428] 1,1,1,1,1,1,2,4,7,11,17,27,45,77,132,224,378,640,1093,1881,3250,5622,9732,16874,29332 ★ Generalized Catalan Numbers. ● a(0)=1; a(n) = a(n - 1) + Sum _{ k=2..n - 4 } a(k) * a(n - 4 - k). ●

▶ [A023427] 1,1,1,1,1,2,4,7,11,17,28,49,87,152,262,453,794,1408,2507,4462,7943,14179,25415,45713,82398 ★ Number of Dyck n - paths with ascents and descents of length equal to 1 (mod 4). ● a(n) = Sum _{ k=0..(n - 1) / 3 } C(n - 3 * k,k) * C(n - 3 * k,k + 1) / (n - 3 * k), n>0, a(0)=1. - _ Vladimir Kruchinin _ , Jan 21 2019 ●

▶ [A129929] 1,2,4,7,11,17,29,58,129,292,639,1333,2666,5188,9999,19388,38166,76332,154261,312703,632171,1271107,2542214,5066717,10087066 ★ Binomial transf orm of the periodic sequence with periodic pattern 1,1,1,0,0. ● a(n)=5a(n - 1) - 10a(n - 2) + 10a(n - 3) - 5a(n - 4) + 2a(n - 5). - _ R. J. Mathar _ , Mar 06 200 8 ●

▶ [A360891] 1,1,1,1,1,2,4,7,11,17,32,66,132,247,463,937,2001,4248,8758,18166,39181,87096,193493,425468,942610 ★ G.f. satisfies A(x) = 1 + x / (1 - x ^ 4) * A(x / (1 - x ^ 4)). ● a(0) = 1; a(n) = Sum _{ k=0..floor((n - 1) / 4) } binomial(n - 1 - 3 * k,k) * a(n - 1 - 4 * k). ●

▶ [A073738] 1,2,4,7,11,18,24,35,43,58,72,89,109,130,152,177,205,236,266,303,337,376,416,459,505 ★ Sum of every other prime <= n - th prime down to 2 or 1; equals the partial sums of A036467 (in which sums of two consecutive terms for m the primes). ● a(n) = Sum _{ m<=n, m=n (mod 2) } p _ m, where p _ m is the m - th prime; that is, a(2n + k) = p _ (2n + k) + p _ (2(n - 1) + k) + p _ (2(n - 2) + k) + ... + p _ k, for 0<=k<2, where a(0)=1 and the 0th prime i s taken to be 1. ● a(n) = prime(n) + a(n - 2) for n >= 2. - _ Alois P. Heinz _ , Jun 04 2021 ●

▶ [A289131] 2,4,7,11,18,28,43,65,96,142,205,299,426,616,871,1253,1764,2530,3553,5087,7134,10204,14299,20441,28632 ★ a(n) = a(n - 1) + 3 * a(n - 2) - 3 * a(n - 3) - 2 * a(n - 4) + 2 * a(n - 5) for n >= 6, a(0) = 2, a(1) = 4, a(2) = 7, a(3) = 11, a(4) = 18, a(5) = 28. ● a(n) = a(n - 1) + 3 * a(n - 2) - 3 * a(n - 3) - 2 * a(n - 4) + 2 * a(n - 5) for n >= 6, a(0) = 2, a(1) = 4, a(2) = 7, a(3) = 11, a(4) = 18, a(5) = 28. ● a(n) = - (3 * n) / 2 + 7 * 2 ^ (n / 2) - 4 for n>0 and even. ● a(n) = (- 3 * n + 5 * 2 ^ ((n + 3) / 2) - 9) / 2 for n odd. ●

▶ [A091838] 1,2,4,7,11,18,29,47,76,121,199,310,521,841,1364,2207,3571,5776,9349,15125,24476,39601,64079,103682,167761 ★ a(n) is the number of images of the border correlation function for binary words of length n (cf. link). ● a(n) < 2 ^ (n - 1) ● a(n) <= F(n) + F(n - 2) - m where F(i) is the i - th Fibonacci number and m=2 if n is in the set { 2i | i >= 0 } - { 2 ^ j, 3x2 ^ j | j >= 0 } . - Dirk Nowotka (nowotka(AT)utu.fi), May 16 2004 ● a(n) seems to be asymptotic to p hi ^ n where phi=(1 + sqrt(5)) / 2. ●

▶ [A288219] 2,4,7,11,18,29,47,76,123,199,322,521,843,1364,2207,3571,5778,9349,15127,24476,39603,64079,103682,167761,271443 ★ a(n) = a(n - 1) + a(n - 2) for n >= 3, where a(0) = 2, a(1) = 4, a(2) = 7. ● a(n) = a(n - 1) + a(n - 2) for n > = 3, where a(0) = 2, a(1) = 4, a(2) = 7. ● a(n) = L(n + 2) for n >=1, where L = A000032 (Lucas numbers). ●

▶ [A293418] 0,1,1,2,4,7,11,18,29,48,77,125,203,329,533,862,1395,2258,3654,5912,9567,15479,25047,40527,65574 ★ a(n) is the greatest integer k such that k / Fibo nacci(n) < sqrt(2). ● a(n) = floor(Fibonacci(n) * sqrt(2)). ●

▶ [A289077] 2,4,7,11,18,30,47,74,114,176,269,411,625,950,1441,2185,3310,5013,7589,11487,17384,26306,39804,60225,91120 ★ a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + 2 * a(n - 4) + a(n - 5) - 2 * a(n - 6) + a(n - 7) for n >= 7, a(0) = 2, a(1) = 4, a(2) = 7, a(3) = 11, a(4) = 18, a(5) = 30, a(6) = 47. ● a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + 2 * a(n - 4) + a(n - 5) - 2 * a(n - 6) + a(n - 7) for n >= 7, a(0) = 2, a(1) = 4, a(2) = 7, a(3) = 11, a(4) = 18, a(5) = 30, a(6) = 47 . ●

▶ [A289004] 2,4,7,11,18,31,52,89,151,257,438,748,1277,2179,3719,6348,10837,18499,31579,53908,92027,157099,268182,457812,781531 ★ a(n) = 2 * a(n - 1) - a(n - 2) + 2 * a(n - 4) - a(n - 5) + a(n - 7) - a(n - 8) - a(n - 10) for n >= 10, where a(0) = 2, a(1) = 4, a(2) = 7, a(3) = 11, a(4) = 18, a(5) = 31, a(6) = 52, a(7) = 89 , a(9) = 151, a(9) = 257. ● a(n) = 2 * a(n - 1) - a(n - 2) + 2 * a(n - 4) - a(n - 5) + a(n - 7) - a(n - 8) - a(n - 10) for n >= 10, where a(0) = 2, a(1) = 4, a(2) = 7, a(3) = 11, a(4) = 18, a(5) = 31, a(6) = 52, a(7) = 89, a(9) = 151, a(9) = 257. ●

▶ [A000570] 1,1,2,4,7,11,18,31,53,89,149,251,424,715,1204,2028,3418,5761,9708,16358,27565,46452,78279,131910,222285 ★ Number of tournaments on n nodes de termined by their score vectors. ● a(n) = a(n - 5) + a(n - 4) + a(n - 3) + a(n - 1). - _ Jon E. Schoenfield _ , Aug 07 2006 ●

▶ [A308871] 0,0,0,0,0,0,1,1,2,4,7,11,19,26,40,57,81,109,153,198,264,342,442,556,710 ★ Sum of the third largest parts in the partitions of n into 6 parts. ● a(n) = Sum _{ m=1..floor(n / 6) } Sum _{ l=m..floor((n - m) / 5) } Sum _{ k=l..floor((n - l - m) / 4) } Sum _{ j=k..floor((n - k - l - m) / 3) } Sum _{ i=j..floor((n - j - k - l - m) / 2) } j. ●

▶ [A308931] 0,0,0,0,0,0,0,1,1,2,4,7,11,19,28,42,61,88,121,171,228,307,405,531,682 ★ Sum of the third largest parts in the partitions of n into 7 parts. ● a(n) = Sum _{ o=1..floor(n / 7) } Sum _{ m=o..floor((n - o) / 6) } Sum _{ l=m..floor((n - m - o) / 5) } Sum _{ k=l..floor((n - l - m - o) / 4) } Sum _{ j=k..floor((n - k - l - m - o) / 3 } Sum _{ i=j..floor((n - j - k - l - m - o) / 2) } j. ●

▶ [A308996] 0,0,0,0,0,0,0,0,1,1,2,4,7,11,19,28,44,63,92,128,183,246,337,448,597 ★ Sum of the third largest parts in the partitions of n into 8 parts. ● a(n) = Sum _{ p=1..floor(n / 8) } Sum _{ o=p..floor((n - p) / 7) } Sum _{ m=o..floor((n - o - p) / 6) } Sum _{ l=m..floor((n - m - o - p) / 5) } Sum _{ k=l..floor((n - l - m - o - p) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p) / 2) } j. ●

▶ [A326471] 0,0,0,0,0,0,0,0,0,1,1,2,4,7,11,19,28,44,65,94,132,190,258,355,478 ★ Sum of the third largest parts of the partitions of n into 9 parts. ● a(n) = Sum _{ q=1..floor(n / 9) } Sum _{ p=q..floor((n - q) / 8) } Sum _{ o=p..floor((n - p - q) / 7) } Sum _{ m=o..floor((n - o - p - q) / 6) } Sum _{ l=m..floor((n - m - o - p - q) / 5) } Sum _{ k=l..floor((n - l - m - o - p - q) / 4) } Sum _{ j=k..floor ((n - k - l - m - o - p - q) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p - q) / 2) } j. ●

▶ [A326596] 0,0,0,0,0,0,0,0,0,0,1,1,2,4,7,11,19,28,44,65,96,134,194,265,367 ★ Sum of the third largest parts of the partitions of n into 10 parts. ● a(n) = Sum _{ r=1..floor(n / 10) } Sum _{ q=r..floor((n - r) / 9) } Sum _{ p=q..floor((n - q - r) / 8) } Sum _{ o=p..floor((n - p - q - r) / 7) } Sum _{ m=o..floor((n - o - p - q - r) / 6) } Sum _{ l=m..floor((n - m - o - p - q - r) / 5) } Sum _{ k=l..floor ((n - l - m - o - p - q - r) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p - q - r) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p - q - r) / 2) } j. ●

▶ [A192670] 1,1,1,2,4,7,11,19,33,56,94,160,271,461,785,1337,2279,3890,6644,11357,19426,33246,56930,97535,167177 ★ Floor - Sqrt transform of central trinomial coefficients (A002426). ● a(n) = floor(sqrt(trinomial(2 * n,n))). ●

▶ [A118647] 2,4,7,11,19,33,57,97,166,285,489,838,1436,2462,4221,7236,12404,21264,36453,62491,107127,183646,314822,539695,925191 ★ a(n) is the number of bin ary strings of length n such that no subsequence of length 4 contains 3 or more ones. ● a(n) = a(n - 1) + a(n - 2) + a(n - 4) - a(n - 6). - suggested by _ Jon E. Schoenfield _ ●

▶ [A000802] 1,2,4,7,11,19,34,50,82,146,274,529,785,1297,2321,4369,8465,16657,33041,65809,131344,196880,327952,590096,1114384 ★ Maximal number of states i n the minimal deterministic finite automaton accepting a language over a binar y alphabet consisting of some words of length n. ● a(n) = Sum _{ k=0..n } mi n(2 ^ k,2 ^ (2 ^ (n - k)) - 1). - _ Sean A. Irvine _ , Jun 24 2011 ●

▶ [A236392] 0,1,1,2,4,7,11,19,34,59,100,172,299,517,889,1532,2647,4570,7880,13591,23455,40475,69826,120463,207848 ★ G.f.: (x + x ^ 3 + x ^ 4) / (1 - x - x ^ 3 - 2 * x ^ 4). ● a(n) = a(n - 1) + a(n - 3) + 2 * a(n - 4), a(0) = 0, a(1) = 1, a(2) = 1, a(3) = 2, a(4) = 4. - _ Philippe Deléham _ , Jan 25 2014 ●

▶ [A080005] 1,1,1,2,4,7,11,19,35,62,107,186,328,578,1012,1771,3107,5455,9568,16774,29417,51603,90513,158741,278404 ★ Number of permutations satisfying - k< =p(i) - i<=r and p(i) - i not in I, i=1..n, with k=2, r=3, I= {- 1,1 } . ● a(n) = a(n - 1) + a(n - 2) + a(n - 4) + a(n - 5) - 2 * a(n - 6) + a(n - 8) - a(n - 10), n>9 . ●

▶ [A364590] 1,1,1,1,2,4,7,11,19,37,74,142,268,518,1033,2077,4152,8290,16687,33899,69148,141160,288650,592354,1220086 ★ G.f. satisfies A(x) = 1 / (1 - x) + x ^ 4 * A(x) ^ 3. ● a(n) = Sum _{ k=0..floor(n / 4) } binomial(n - 2 * k,2 * k) * b inomial(3 * k,k) / (2 * k + 1). ●

▶ [A024501] 1,1,2,4,7,11,20,33,57,96,162,274,462,780,1317,2223,3751,6329,10680,18021,30409,51312,86584,146103,246538 ★ a(n) = floor(C(4n,2n) / C(4n,n)). ● a(n) = floor(C(4n,2n) / C(4n / n)) = floor(C(3n,n) / C(2n,n)). - _ Clark Kimb erling _ , Dec 23 2022 ●

▶ [A160393] 1,2,4,7,11,20,34,58,100,172,298,516,893,1547,2679,4640,8036,13918,24107,41754,72320,125262,216960,375786,650880 ★ Square root of A003462, roun ded up. ● a(n) = ceiling(sqrt((3 ^ n - 1) / 2)). ●

▶ [A288380] 2,4,7,11,20,38,70,130,245,461,866,1630,3070,5780,10883,20495,38596,72682,136874,257762,485417,914137,1721506,3241946,6105242 ★ a(n) = 3 * a(n - 1) - 3 * a(n - 2) + 3 * a(n - 3) - 3 * a(n - 4) + a(n - 5) for n >= 1, where a(0) = 2, a(1) = 4, a(2) = 7. a(3) = 11, a(4) = 20. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + 3 * a(n - 3) - 3 * a(n - 4) + a(n - 5) for n >= 1, where a(0) = 2, a(1) = 4, a (2) = 7, a(3) = 11, a(4) = 20. ●

▶ [A369581] 1,1,1,1,2,4,7,11,20,40,79,147,278,550,1110,2204,4352,8708,17689,35971,72933,148271,303582,624132,1283898 ★ Expansion of (1 / x) * Series _ Rever sion(x / (1 + x + x ^ 4 / (1 + x) ^ 2)). ● a(n) = (1 / (n + 1)) * Sum _{ k=0 ..floor(n / 4) } binomial(n + 1,k) * binomial(n - 3 * k + 1,n - 4 * k). ●

▶ [A114347] 1,2,4,7,11,21,39,67,147,309,589,1469,3413,7053,19373,48533,106773,316213,841093,1947653,6136453,17158933,41503253,137845653,402385173 ★ Cu mulative sum of triple factorial numbers a(n) = n!!! (A007661). ● a(n) = Sum _{ i=0..n } i!!!. ●

▶ [A360886] 1,1,1,1,1,2,4,7,11,22,49,104,212,471,1112,2584,6000,14574,36488,91148,230011,596893,1574433,4171388,11193376 ★ G.f. satisfies A(x) = 1 + x * A(x * (1 + x ^ 3)). ● a(0) = 1; a(n) = Sum _{ k=0..floor((n - 1) / 4) } binomial(n - 1 - 3 * k,k) * a(n - 1 - 3 * k). ●

▶ [A033054] 1,2,4,7,12,13,14,21,22,23,37,40,43,64,67,70,111,112,113,120,121,122,129,130,131 ★ Numbers whose base - 3 representation Sum _{ i=0..m } d(i) * 3 ^ i has d(i)=1 for m - i odd. ● a(3n + 3) = 9a(n) + 4. ●

▶ [A362652] 2,4,7,12,16,24,29,40,46,60,67,84,92,112,121,144,154,180,191,220,232,264,277,312,326 ★ Expansion of g.f. x * (- 2 - 2 * x + x ^ 2 - x ^ 3) / ((1 + x) ^ 2 * (- 1 + x) ^ 3). ● a(n) = n + (n mod 2) + (n * (n - (n mod 2))) / 2. ● a(2 * n) = 2 * n + 2 * n ^ 2; ● a(2 * n - 1) = 1 - n + 2 * n ^ 2. ●

▶ [A346114] 1,2,4,7,12,17,28,35,51,66,91,102,150,163,210,259,325,342,454,473,608,701,823,846,1099 ★ a(n + 1) = 1 + Sum _{ k=1..n } a(gcd(n,k)). ● a(1) = 1; a(n + 1) = 1 + Sum _{ d|n } phi(n / d) * a(d). ●

▶ [A084672] 1,2,4,7,12,18,25,34,44,55,68,82,97,114,132,151,172,194,217,242,268,295,324,354,385 ★ Expansion of g.f.: (1 + x ^ 2 + 2 * x ^ 4) / ((1 - x ^ 3) * (1 - x) ^ 2). ● a(n) = (1 / 3) * (2 * n ^ 2 - n + 3 + 2 * floor((n + 2) / 3) + floor((n + 1) / 3)). ●

▶ [A267529] 1,2,4,7,12,18,26,35,46,58,72,87,104,122,142,163,186,210,236,263,292,322,354,387,422 ★ Total number of ON (black) cells after n iterations of the " Rule 141" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4) for n>4. ●

▶ [A005521] 1,2,4,7,12,18,26,35,46,60,75,93,113,134,157,183,212,242,275,310,346,385,426,470,518 ★ 1 + (sum of first n odd primes - n) / 2. ● a(n + 1) = a(n) + (prime(n + 1) - 1) / 2 for odd primes prime(n + 1). ●

▶ [A173722] 0,0,1,2,4,7,12,18,26,36,49,64,82,103,128,156,188,224,265,310,360,415,476,542,614 ★ Partial sums of round(n ^ 2 / 8). ● a(n) = Sum _{ k=0..n } ro und(k ^ 2 / 8). ● a(n) = round((2 * n ^ 3 + 3 * n ^ 2 + 4 * n) / 48). ● a(n) = round((2 * n + 1) * (2 * n ^ 2 + 2 * n + 3) / 96). ● a(n) = floor((n + 2) * (2 * n ^ 2 - n + 6) / 48). ● a(n) = ceiling((2 * n ^ 3 + 3 * n ^ 2 + 4 * n - 9) / 48). ● a(n) = a(n - 4) + n * (n - 3) / 2 + 2, n>3. ●

▶ [A049703] 0,1,2,4,7,12,18,27,38,52,68,89,112,141,173,209,249,297,348,408,472,542,617,703,793 ★ a(0) = 0; for n>0, a(n) = A005598(n) / 2. ● a(n) = (1 / 2) * Sum _{ j=0..n } T(j, n - j), for array T in A049695. ●

► [A175812] 0,1,2,4,7,12,18,27,38,52,69,90,114,143,176,214,257,306,360,421,488,562,643,732,828 ⋆ Partial sums of ceiling(n ^ 2 / 6). ● a(n) = round((2 * n + 1) * (2 * n ^ 2 + 2 * n + 17) / 72). ● a(n) = floor((n + 1) * (2 * n ^ 2 + n + 17) / 36). ● a(n) = ceiling((2 * n ^ 3 + 3 * n ^ 2 + 18 * n) / 36). ● a(n) = round((2 * n ^ 3 + 3 * n ^ 2 + 18 * n) / 36). ● a(n) = a(n - 6) + (n + 1) * (n - 6) + 18, n > 5. ● a(n) = 2 * a(n - 1) - a(n - 3) - a(n - 4) + 2 * a(n - 6) - a(n - 7), n > 6. ●

► [A002621] 1,2,4,7,12,18,27,38,53,71,94,121,155,194,241,295,359,431,515,609,717,837,973,1123,1292 ⋆ Expansion of 1 / ((1 - x) ^ 2 * (1 - x ^ 2) * (1 - x ^ 3) * (1 - x ^ 4)). ● a(n) = + 2 * a(n - 1) - a(n - 3) - 2 * a(n - 5) + 2 * a(n - 6) + a(n - 8) - 2 * a(n - 10) + a(n - 11). ● a(n)=floor((n + 1) * (9 * (- 1) ^ n + n ^ 3 + 21 * n ^ 2 + 145 * n + 350) / 576 + 1 / 2). - _ Tani Akinari _ , Nov 10 2012 ●

► [A266464] 2,4,7,12,19,29,42,59,80,106,137,174,217,267,324,389,462,544,635,736,847,969,1102,1247,1404 ⋆ Number of n X 2 binary arrays with rows and columns lexicographically nondecreasing and column sums nonincreasing. ● a(n) = (2 * n ^ 3 + 3 * n ^ 2 + 22 * n + 24) / 24 for n even. ● a(n) = (2 * n ^ 3 + 3 * n ^ 2 + 22 * n + 21) / 24 for n odd. ●

► [A103231] 1,2,4,7,12,19,29,42,59,80,107,140,180,228,285,351,429,519,622,740,874,1025,1195,1385,1597 ⋆ After the first two terms, each subsequent term is the smallest integer that is an outlier of the previous dataset, based on the criterion of 3 sample standard deviations above the mean. ● a(n) = int(m(n - 1) + 3s(n - 1) + 1), where m(n - 1) is the arithmetic mean of the first n - 1 terms and s(n - 1) is the sample standard deviation of the first n - 1 terms ●

► [A002622] 1,2,4,7,12,19,29,42,60,83,113,150,197,254,324,408,509,628,769,933,1125,1346,1601,1892,2225 ⋆ Number of partitions of at most n into at most 5 parts. ● a(n)= 2 * a(n - 1) - a(n - 3) - a(n - 5) + 2 * a(n - 8) - a(n - 11) - a(n - 13) + 2 * a(n - 15) - a(n - 16). ● a(n) = round((n + 1) * (6 * n ^ 4 + 234 * n ^ 3 + 3326 * n ^ 2 + 20674 * n + 50651 + 675 * (- 1) ^ n) / 86400). - _ Tani Akinari _ , May 05 2014 ●

► [A000070] 1,2,4,7,12,19,30,45,67,97,139,195,272,373,508,684,915,1212,1597,2087,2714,3506,4508,5763,7338 ⋆ a(n) = Sum _{ k=0..n } p(k) where p(k) = number of partitions of k (A000041). ● a(n) = (1 / n) * Sum _{ k=1..n } (sigma(k) + 1) * a(n - k), n > 1, a(0) = 1. - _ Vladeta Jovovic _ , Aug 22 2002 ● a(n - 2) = Sum _{ parts k in all partitions in P(2,n) } phi(k), where phi(k) is the Euler totient function (see A000010). Using this result and Mertens's theorem on the average order of the phi function, leads to the asymptotic result ●

► [A008609] 1,2,4,7,12,19,30,45,68,99,146,215,309,451,659,942,1369,1994,2844,4126,6002,8553,12400,18029,25683 ⋆ a(n) = n + max _{ 0 <= i <n } ((n - i) * a(i)), a(0) = 1. ● a(n + 3) = 3 * a(n) + n + 3 for n >= 8. - _ Robert Israel _ , Mar 28 2018 ●

► [A343661] 1,2,4,7,12,19,30,46,70,105,155,223,316,443,619,865,1210,1690,2354,3263,4497,6157,8368,11280,15078 ⋆ Sum of numbers of y - multisets of divisors of x for each x >= 1, y >= 0, x + y = n. ● a(n) = Sum _{ k=1..n } binomial(sigma(k) + n - k - 1, n - k). ●

► [A287525] 2,4,7,12,19,31,49,80,129,210,339,549,887,1436,2323,3760,6083,9843,15925,25768,41693,67462,109155,176617,285771 ⋆ a(n) = a(n - 1) + a(n - 2) - a(n - 3) + a(n - 4) + a(n - 5) for n >= 6, where a(0) = 2, a(1) = 4, a(2) = 7, a(3) = 12, a(4) = 19, a(5) = 31. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) + a(n - 4) + a(n - 5) for n >= 6, where a(0) = 2, a(1) = 4, a(2) = 7, a(3) = 12, a(4) = 19, a(5) = 31. ●

► [A244472] 1,2,4,7,12,19,31,50,81,131,212,343,555,898,1453,2351,3804,6155,9959,16114,26073,42187,68260,110447,178707 ⋆ 2nd - largest term in n - th row of Stern's diatomic triangle A002487. ● a(n) = a(n - 1) + a(n - 2), n>5. - _ Colin Barker _ , Jul 10 2015 ●

► [A279890] 0,1,1,2,4,7,12,19,31,50,82,133,216,349,565,914,1480,2395,3876,6271,10147,16418,26566,42985,69552 ⋆ Expansion of x * (1 - x + 2 * x ^ 3 - x ^ 4) / ((1 - x) * (1 + x) * (1 - x + x ^ 2) * (1 - x - x ^ 2)). ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + 2 * a(n - 4) - a(n - 6). ● a(n) = (9 * sqrt(5) * (((1 + sqrt(5)) / 2) ^ n - ((1 - sqrt(5)) / 2) ^ n) + 5 * ((- 1) ^ n + 2 * cos(Pi * n / 3) - 3)) / 30. ● a(n) = floor(3 * F(n) * F(n + 1) * F(n + 2) / (2 * F(n + 1) * F(n + 2) - (- 1) ^ n)), where F(n) is the n - th Fibonacci number (A000045). ●

► [A289115] 2,4,7,12,20,32,50,77,116,174,260,386,571,843,1242,1827,2685,3943,5787,8490,12452,18259,26770,39244,57526 ⋆ a(n) = 3 * a(n - 1) - 3 * a(n - 2) + 2 * a(n - 3) - 2 * a(n - 4) + a(n - 5) for n >= 10, a(0) = 2, a(1) = 4, a(2) = 7, a(3) = 12, a(4) = 20, a(5) = 32, a(6) = 50, a(7) = 77, a(8) = 116, a(9) = 174. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + 2 * a(n - 3) - 2 * a(n - 4) + a(n - 5) for n >= 10, a(0) = 2, a(1) = 4, a(2) = 7, a(3) = 12, a(4) = 20, a(5) = 32, a(6) = 50, a(7) = 77, a(8) = 116, a(9) = 174. ●

► [A000071] 0,0,1,2,4,7,12,20,33,54,88,143,232,376,609,986,1596,2583,4180,6764,10945,17710,28656,46367,75024 ⋆ a(n) = Fibonacci(n) - 1. ● a(0) = - 1, a(1) = 0; thereafter a(n) = a(n - 1) + a(n - 2) + 1. ● a(n) = 2 * a(n - 1) - a(n - 3). - _ R. H. Hardin _ , Apr 02 2011 ● a(n) = - 1 + (A * B ^ n + C * D ^ n) / 10, with A, C = 5 +- 3 * sqrt(5), B, D = (1 +- sqrt(5)) / 2. - _ Ralf Stephan _ , Mar 02 2003 ● a(1) = 0, a(2) = 0, a(3) = 1, then a(n) = ceiling(phi * a(n - 1)) where phi is the golden ratio (1 + sqrt(5)) / 2. - _ Benoit Cloitre _ , May 06 2003 ● a(n) = Sum _{ k = 0..floor((n - 2) / 2) } binomial(n - k - 2, k + 1). - _ Paul Barry _ , Sep 23 2004 ● a(n + 3) = Sum _{ k = 0..floor(n / 3) } binomial(n - 2 * k, k) * (- 1) ^ k * 2 ^ (n - 3 * k). - _ Paul Barry _ , Oct 20 2004 ●

► [A179111] 0,0,0,0,0,0,1,2,4,7,12,20,33,54,88,143,233,378,613,993,1608,2603,4213,6818,11033 ⋆ Partial sums of round(Fibonacci(n) / 11). ● a(n) = round(Fibonacci(n + 2) / 11 - n / 10 - 83 / 220). ● a(n) = floor(Fibonacci(n + 2) / 11 - n / 10 - 4 / 55). ● a(n) = ceiling(Fibonacci(n + 2) / 11 - n / 10 - 15 / 22). ● a(n) = a(n - 10) + Fibonacci(n - 3) - 1, n > 10. ● a(n) = 2 * a(n - 1) - a(n - 3) + a(n - 10) - 2 * a(n - 11) + a(n - 13), n > 11. ●

► [A340217] 1,2,4,7,12,20,34,58,99,169,288,491,837,1427,2433,4148,7072,12057,20556,35046,59750,101868,173675,296099,504820 ⋆ Consider binary words that begin with 1 such that the subword 00, whenever it appears, is followed by 111. Then a(n) counts such words at length n (including those where the string 111 is yet being completed - see Example). ● a(n) = a(n - 1) + a(n - 2) + a(n - 5) with a(1) = 1, a(2) = 2, a(3) = 4, a(4) = 7, a(5) = 12. ●

► [A182746] 1,1,2,4,7,12,21,34,55,88,137,210,320,478,708,1039,1507,2167,3094,4378,6153,8591,11914,16424,22519 ⋆ Bisection (even part) of number of partitions that do not contain 1 as a part A002865. ● a(n) = p(2 * n) - p(2 * n - 1), where p is the partition function, A000041. - _ George Beck _ , Jun 05 2017 [Shifted by _ Georg Fischer _ , Jun 20 2022] ●

► [A227376] 1,1,2,4,7,12,21,36,62,106,181,309,527,898,1530,2606,4438,7557,12867,21907,37297,63497,108100,184032,313298 ⋆ G.f.: 1 / (1 - x - x ^ 2 - x ^ 3 + x ^ 5 + x ^ 6 + x ^ 7). ● a(n) = a(n - 1) + a(n - 2) + a(n - 3) - a(n - 5) - a(n - 6) - a(n - 7). - _ Wesley Ivan Hurt _ , May 22 2021 ●

► [A100671] 1,2,4,7,12,21,37,64,111,193,335,581,1007,1745,3023,5236,9069,15708,27207,47124,81622,141374,244867,424122,734601 ⋆ A Graham - Pollak - like sequence with multiplier 3 instead of 2. ● a(0) = 1, a(n) = Floor(Sqrt(3 * a(n - 1) * (a(n - 1) + 1))). ●

► [A005251] 0,1,1,1,2,4,7,12,21,37,65,114,200,351,616,1081,1897,3329,5842,10252,17991,31572,55405,97229,170625 ⋆ a(0) = 0, a(1) = a(2) = a(3) = 1; thereafter, a(n) = a(n - 1) + a(n - 2) + a(n - 4). ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3). ● a(n + 1) = Sum _{ k=0..n } binomial(n - k, 2k). - _ Richard L. Ollerton _ , May 12 2004 ● a(n) = (Sum _{ j<n } a(j)) - a(n - 2). ● a(n + 2) has g.f. (F _ 3(- x) + F _ 2(- x)) / (F _ 4(- x) + F _ 3(- x)) = 1 / (- x + 1 / (- x + 1 / (- x + 1))) where F _ n(x) is the n - th Fibonacci polynomial; see A011973. - Qiaochu Yuan (qchu(AT)mit.edu), Feb 19 2009 ● a(n) = hypergeom([(2 - n) / 3, 1 - n / 3, (1 - n) / 3], [1 / 2, - n + 1], 27 / 4) for n > 1. - _ Peter Luschny _ , Apr 08 2018 ●

► [A103197] 1,2,4,7,12,21,37,65,115,208,386,727,1367,2536,4630,8376,15217,28170,53620,104843,208547,416448,824990,1608138,3071813 ⋆ Number of compositions of n into Fibonacci number of parts. ● a(n) = Sum _{ k>1 } (x / (1 - x)) ^ Fibonacci(k). ●

► [A000709] 1,2,4,7,12,21,38,68,124,229,428,806,1530,2919,5591,10750,20730,40077,77653,150752,293161,570963,1113524,2174315,4250367 ⋆ Related to population of numbers of form x ^ 2 + y ^ 2. ● a(n) = int (1 / sqrt(log(u)), u=1..2 ^ (n - 1))))). - Based on _ Alois P. Heinz _ 's Maple program, _ Alonso del Arte _ , Oct 24 2014 ●

► [A288133] 1,2,4,7,12,21,38,71,136,265,522,1035,2060,4109,8206,16399,32784,65553,131090,262163,524308,1048597,2097174,4194327,8388632 ⋆ Positions of 0 in A288132; complement of A288134. ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 2 * a(n - 3) for n>4. ●

► [A289107] 2,4,7,12,22,37,62,102,167,272,442,717,1162,1882,3047,4932,7982,12917,20902,33822,54727,88552,143282,231837,375122 ⋆ a(n) = 2 * a(n - 1) - a(n - 3) for n >= 5, a(0) = 2, a(1) = 4, a(2) = 7, a(3) = 12, a(4) = 22. ● a(n) = 2 * a(n - 1) - a(n - 3) for n >= 5, a(0) = 2, a(1) = 4, a(2) = 7, a(3) = 12, a(4) = 22. ● a(n) = - 3 + 2 ^ (- 1 - n) * sqrt(5) * (- (1 - sqrt(5)) ^ (1 + n) + (1 + sqrt(5)) ^ (1 + n)) for n>1. - _ Colin Barker _ , Jun 28 2017 ●

► [A257932] 1,1,2,4,7,12,22,38,67,118,207,363,638,1119,1964,3447,6049,10615,18629,32691,57369,100676,176674,310041,544085 ⋆ Expansion of 1 / (1 - x - x ^ 2 - x ^ 3 + x ^ 5 + x ^ 7). ● a(n) = a(n - 1) + a(n - 2) + a(n - 3) - a(n - 5) - a(n - 7). ●

► [A287439] 2,4,7,12,22,38,68,120,212,376,664,1176,2080,3680,6512,11520,20384,36064,63808,112896,199744,353408,625280,1106304,1957376 ⋆ a(n) = 2 * a(n - 2) + 2 * a(n - 3) for n >= 3, where a(0) = 2, a(2) = 4, a(3) = 7. ● a(n) = 2 * a(n - 2) + 2 * a(n - 3) for n >= 3, where a(0) = 2, a(2) = 4, a(3) = 7. ●

► [A254685] 1,1,2,4,7,12,22,39,69,123,219,389,692,1231,2189,3893,6924,12314,21900,38949,69270,123195,219100,389665,693011 ⋆ Number of partially ordered partitions of n into parts less than or equal to 3, in which the order of adjacent 2's and 3's is unimportant. ● a(n) = a(n - 1) + a(n - 2) + a(n - 3) - a(n - 5). ●

► [A288317] 2,4,7,12,22,40,75,139,262,489,922,1726,3252,6097,11479,21540,40531,76096,143130,268816,505483,949575,1785262,3354205,6305358 ⋆ a(n) = a(n - 1) + 3 * a(n - 2) - 2 * a(n - 3) - a(n - 4) for n >= 4, where a(0) = 2, a(1) = 4, a(2) = 7, a(3) = 12. ● a(n) = a(n - 1) + 3 * a(n - 2) - 2 * a(n - 3) - a(n - 4) for n >= 4, where a(0) = 2, a(1) = 4, a(2) = 7, a(3) = 12. ●

► [A023432] 1,1,1,1,2,4,7,12,22,42,80,152,292,568,1112,2185,4313,8557,17050,34089,68370,137542,277475,561185,1137595 ⋆ Number of Dyck n - paths with ascents and descents of length equal to 1 (mod 3). ● a(n) = Sum _{ k=0..(n - 1) / 2 } (C(n - 2 * k,k) * C(n - 2 * k,k + 1) / (n - 2 * k), n>0, a(0)=1. - _ Vladimir Kruchinin _ , Jan 21 2019 ●

► [A280352] 1,1,2,4,7,12,22,43,85,164,308,573,1079,2081,4097,8129,16049,31315,60402,115806,222416,430791,843987,1670054,3322167 ⋆ Expansion of Sum _{ k>=1 } (x / (1 - x)) ^ (k * (k + 1) / 2). ● a(n) = Sum _{ k=1..floor((sqrt(8 * n + 1) - 1) / 2) } binomial(n - 1, k * (k + 1) / 2 - 1). - _ Jerzy R Borysowicz _ , Dec 26 2022 ●

► [A347017] 1,1,2,4,7,12,22,44,93,200,428,904,1883,3876,7906,16020,32313,64976,130392,261328,523319,1047436,2095822,4192764,8386837 ⋆ a(n) = floor(2 ^ (n - 1)) - binomial(n,3) + binomial(n,2) - n + 1. ● a(n) = 6 * a(n - 1) - 14 * a(n - 2) + 16 * a(n - 3) - 9 * a(n - 4) + 2 * a(n - 5) for n > 5. (End) ●

► [A099604] 1,1,2,4,7,12,23,40,72,131,233,420,756,1355,2438,4381,7868,14144,25413,45661,82058,147444,264943,476092,855483 ⋆ Antidiagonal sums of triangle A099602, in which row n equals the inverse binomial transform of column n of the triangle of trinomial coefficients (A027907). ● a(n) = 2 * a(n - 2) + 3 * a(n - 3) - 2 * a(n - 5) - a(n - 6) for n>=6. ●

► [A328129] 1,2,4,7,12,24,41,58,75,92,109,214,319,424,529,634,1176,1718,2260,2802,3344,3886,4428,4970,9411 ⋆ Finite cardinalities of equivalence classes of real intervals with respect to the symmetric transitive closure of R(x,y) = "x is an integer multiple of y". ● a(n) = |S _ n| where S _ n = S _ (n - 1) U { min({ 2 * x, 3 * x, 5 * x : x in S _ (n - 1) } \ S _ (n - 1)) / y : y in S _ (n - 1) } n >= 2, S _ 1 = { 1.0 } . ●

► [A360890] 1,1,1,1,2,4,7,12,25,55,115,245,564,1331,3103,7407,18388,46198,116503,299966,789426,2095941,5616114,15299205,42255533 ⋆ G.f. satisfies A(x) = 1 + x / (1 - x ^ 3) * A(x / (1 - x ^ 3)). ● a(0) = 1; a(n) = Sum _{ k=0..floor((n - 1) / 3) } binomial(n - 1 - 2 * k,k) * a(n - 1 - 3 * k). ●

► [A309729] 1,2,4,7,12,26,44,92,175,354,684,1396,2732,5506,10938,21937,43692,87578,174764,349884,699098,1398786,2796204,5593886,11184823 ⋆ Expansion of S

um _{ k>=1 } x ^ k / (1 - x ^ k - 2 * x ^ (2 * k)). • a(n) = (1 / 3) * Sum _{ d|n } (2 ^ d - (- 1) ^ d). •

▶ [A002466] 1,1,2,4,7,13,17,30,60,107,197,257,454,908,1619,2981,3889,6870,13740,24499,45109,58849,103958,207916,370723 ⋆ A jumping problem. • a(1) = a(2) = 1, a(3) = 2, a(5 * k + 2) = a(5 * k + 1) + a(5 * k - 1), a(5 * k + 3) = a(5 * k + 2) + a(5 * k + 1), a(5 * k + b) = a(5 * k + b - 1) + a(5 * k + b - 2) + a(5 * k + b - 3) for b= - 1,0,1 [From Domoryad]. - _ Sean A. Irvine _ , Apr 21 2016 • a(n) = 15 * a(n - 5) + 2 * a(n - 10) for n > 10. •

▶ [A165753] 0,0,0,0,1,1,2,4,7,13,20,34,56,93,150,244,396,643,1043,1689,2733,4425,7161,11587,18754 ⋆ Number of trailing zeros in sequence of factorials of Fibonacci numbers. • a(n) = k * phi ^ n + O(n), for k = 1 / sqrt(80). •

▶ [A026625] 1,1,2,4,7,13,21,36,58,96,155,253,409,664,1074,1740,2815,4557,7373,11932,19306,31240,50547,81789,132337 ⋆ a(n) = Sum _{ k=0..floor(n / 2) } A026615(n - k,k). • a(n) = 2 ^ (- 1 - n) * (- 5 * ((- 2) ^ n + 3 * 2 ^ n) - (- 15 + sqrt(5)) * (1 + sqrt(5)) ^ n + (1 - sqrt(5)) ^ n * (15 + sqrt(5))) / 5 for n>1. • a(n) = a(n - 1) + 2 * a(n - 2) - a(n - 3) - a(n - 4) for n>5. •

▶ [A061255] 1,1,2,4,7,13,21,37,60,98,157,251,392,612,943,1439,2187,3293,4930,7330,10839,15935,23315,33933,49170 ⋆ Euler transform of Euler totient function phi(n), cf. A000010. • a(n)=1 / n * Sum _{ k=1..n } a(n - k) * b(k), n>1, a(0)=1, b(k)=Sum _{ d|k } d * phi(d), cf. A057660. •

▶ [A281362] 1,2,4,7,13,22,38,63,105,172,282,459,747,1212,1966,3185,5159,8352,13520,21881,35411,57302,92724,150037,242773 ⋆ a(0) = 1, a(1) = 2; for n>1, a(n) = a(n - 1) + a(n - 2) + floor(n / 2). • a(n) = 2 * a(n - 1) + a(n - 2) - 3 * a(n - 3) + a(n - 5) for n>4. •

▶ [A372782] 2,4,7,13,22,40,67,121,202,364,607,1093,1822,3280,5467,9841,16402,29524,49207,88573,147622,265720,442867,797161,1328602 ⋆ Least number m for which there exists some positive k < m where the sum of the integers from k + 1 to m inclusive is an n - th power > 1. • a(n) = 3 * a(n - 2) + 1. •

▶ [A335471] 1,1,2,4,7,13,23,40,67,115,190,311,505,807,1285,2031,3164,4896,7550,11499,17480,26379,39558,58946,87469 ⋆ Number of compositions of n avoiding the pattern (1,2,1). • a(n) = F(n,n,1) where F(n,m,k) = F(n,m - 1,k) + k * (Sum _{ i=1..floor(n / m) } F(n - i * m, m - 1, k + i)) for m > 0 with F(0,m,k)=1 and F(n,0,k)=0 otherwise. - _ Andrew Howroyd _ , Dec 31 2020 •

▶ [A114832] 1,2,4,7,13,23,40,70,121,210,364,631,1093,1894,3281,5683,9844,17050,29532,51151,88597,153455,265792,460366,797377 ⋆ Each term is previous term plus ceiling of harmonic mean of two previous terms. • a(1) = 1, a(2) = 2, for n > 2: a(n + 1) = a(n) + ceiling(HarmonicMean(a(n), a(n - 1))). a(n + 1) = a(n) + ceiling((2 * a(n) * a(n - 1)) / (a(n) + a(n - 1))). •

▶ [A368299] 0,1,2,4,7,13,23,41,72,127,223,392,688,1208,2120,3721,6530,11460,20111,35293,61935,108689,190736,334719,587391 ⋆ a(n) is the the number of permutations pi of [n] that avoid { 231,321 } so that pi ^ 4 avoids 132. • a(n) = Sum _{ m=0..n - 1 } Sum _{ r=0..floor(m / 4) } Sum _{ j=0..floor((m - 4 * r) / 2) } binomial(m - 3 * r - j,r) * binomial(m - 4 * r - j,j). • a(n) = 1 + a(n - 1) + a(n - 2) + a(n - 4) where a(0)=0, a(1)=1, a(2)=2, a(3)=4. •

▶ [A260917] 1,1,2,4,7,13,23,41,74,132,236,422,754,1348,2409,4305,7694,13750,24573,43915,78481,140255,250652,447944,800528 ⋆ Expansion of 1 / (1 - x - x ^ 2 - x ^ 3 + x ^ 6 + x ^ 7). • a(n) = a(n - 1) + a(n - 2) + a(n - 3) - a(n - 6) - a(n - 7). •

▶ [A287381] 2,4,7,13,23,42,75,136,244,441,793,1431,2576,4645,8366,15080,27167,48961,88215,158970,286439,516164,930072,1675961,3019941 ⋆ a(n) = a(n - 1) + 2 * a(n - 2) - a(n - 3), where a(0) = 2, a(1) = 4, a(2) = 7. • a(n) = a(n - 1) + 2 * a(n - 2) - a(n - 3), where a(0) = 2, a(1) = 4, a(2) = 7. •

▶ [A048888] 0,1,2,4,7,13,23,42,76,139,255,471,873,1627,3044,5718,10779,20387,38673,73561,140267,268065,513349,984910,1892874 ⋆ a(n) = Sum { T(m,n + 1 - m): m=1,2,...,n } , array T as in A048887. • a(m) = Sum _{ n=2..m + 1 } Fn(m) where Fn is a Fibonacci n - step number (Fibonacci, tetranacci, etc.) indexed as in A000045, A000073, A000078. - _ Gerald McGarvey _ , Sep 25 2004 •

▶ [A000073] 0,0,1,1,2,4,7,13,24,44,81,149,274,504,927,1705,3136,5768,10609,19513,35890,66012,121415,223317,410744 ⋆ Tribonacci numbers: a(n) = a(n - 1) + a(n - 2) + a(n - 3) for n >= 3 with a(0) = a(1) = 0 and a(2) = 1. • a(n + 1) / a(n) - > A058265. a(n - 1) / a(n) - > A192918. • a(n) = central term in M ^ n * [1 0 0] where M = the 3 X 3 matrix [0 1 0 / 0 0 1 / 1 1 1]. (M ^ n * [1 0 0] = [a(n - 1) a(n) a(n + 1)].) a(n) / a(n - 1) tends to the tribonacci constant, 1.83928675... = A058265, an eigenvalue of M and a root of x ^ 3 - x ^ 2 - x - 1 = 0. - _ Gary W. Adamson _ , Dec 17 2004 • a(n + 2) = Sum _{ k=0..n } T(n - k, k), where T(n, k) = trinomial coefficients (A027907). - _ Paul Barry _ , Feb 15 2005 • a(n) = j * C ^ n + k * r1 ^ n + L * r2 ^ n where C is the tribonacci constant (C = 1.8392867552...), real root of x ^ 3 - x ^ 2 - x - 1=0, and r1 and r2 are the two other roots (which are complex), r1 = m + p * i and r2 = m - p * i, where i = sqrt(- 1), m = (1 - C) / 2 (m = - 0.4196433776...) and p = ((3 * C - 5) * (C + 1) / 4) ^ (1 / 2) = 0.6062907292..., and where j = 1 / ((C - m) ^ 2 + p ^ 2) = 0.1828035330..., k = a + b * i, and L = a - b * i, where a = - j / 2 = - 0.0914017665... and b = (C - m) / (2 * p * ((C - m) ^ 2 + p ^ 2) = 0.3405465308... . - Philippe LALLOUET (philip.lallouet(AT)wanadoo.fr), Jun 23 2007 • a(n + 1) = 3 * c * ((1 / 3) * (a + b + 1)) ^ n / (c ^ 2 - 2 * c + 4) where a=(19 + 3 * sqrt(33)) ^ (1 / 3), b=(19 - 3 * sqrt(33)) ^ (1 / 3), c=(586 + 102 * sqrt(33)) ^ (1 / 3). Round to the nearest integer. - Al Hakanson (hawkuu(AT)gmail.com), Feb 02 2009 • a(n) = round(3 * ((a + b + 1) / 3) ^ n / (a ^ 2 + b ^ 2 + 4)) where a=(19 + 3 * sqrt(33)) ^ (1 / 3), b=(19 - 3 * sqrt(33)) ^ (1 / 3).. - _ Anton Nikonov _ •

▶ [A265826] 1,1,2,4,7,13,24,45,84,157,293,547,1021,1906,3558,6642,12399,23146,43208,80659,150571,281080,524709,979506,1828503 ⋆ a(0) = 1, a(n) = Sum _{ k=1..n } a(n - k) * ceiling(sin(k)). • a(0) = 1 • a(n) = Sum _{ k=1..n } a(n - k) * ceiling(sin(k)). •

▶ [A059633] 1,2,4,7,13,24,45,84,157,293,547,1021,1906,3558,6642,12399,23146,43208,80659,150571,281080,524709,979506,1828503,3413377 ⋆ Expansion of g.f. x ^ 3 / (1 - 2 * x + x ^ 3 - x ^ 4). • a(n) = 2 * a(n - 1) - a(n - 3) + a(n - 4). • a(n) = Sum _{ k=0..n + 1 } C(k + 1, n - k + 1) * Fibonacci(n - k + 1) [offset 0]. - _ Paul Barry _ , Feb 23 2005 •

▶ [A086445] 1,2,4,7,13,24,46,89,175,346,688,1371,2737,5468,10930,21853,43699,87390,174772,349535,699061,1398112,2796214,5592417,11184823 ⋆ Partial sums of A005578. • a(n) = 2 * 2 ^ n / 3 + (- 1) ^ n / 12 + n / 2 + 1 / 4. • a(0) = 1, a(n) = floor(2 * a(n - 1) - n / 2 + 1) for n>0. - _ Gerald McGarvey _ , Aug 31 2004 •

▶ [A079958] 1,1,2,4,7,13,25,46,86,161,300,560,1046,1952,3644,6803,12699,23706,44254,82611,154215,287883,537408,1003212,1872757 ⋆ Number of permutations satisfying - k<=p(i) - i<=r and p(i) - i not in I, i=1..n, with k=1, r=5, I= { 3,4 } . • a(n) = a(n - 1) + a(n - 2) + a(n - 3) + a(n - 6). •

▶ [A367400] 1,2,4,7,13,25,47,88,166,313,589,1109,2089,3934,7408,13951,26273,49477,93175,175468,330442,622289,1171897,2206921,4156081 ⋆ Number of subsets of { 1..n } whose cardinality is not the sum of two distinct elements. • a(n) = 2 * a(n - 1) - a(n - 2) + 2 * a(n - 3) - a(n - 4) for n > 3. •

▶ [A108361] 1,1,2,4,7,13,25,47,90,172,329,629,1202,2294,4374,8330,15847,30115,57172,108434,205473,389019,735927,1391121,2627720 ⋆ Diagonal sums of number triangle A108359. • a(n) = sum { k=0..floor(n / 2) } (sum { j=0..n - 2k } C(k, j) * C(n - k - j, k) * floor((j + 2) / 2)). •

▶ [A103204] 2,4,7,13,25,49,97,193,385,769,1537,3073,6145,12289,24577,49153,98305,196609,393217,786433,1572865,3145729,6291457,12582913,25165825 ⋆ a(1) = 2, a(2) = 4; a(n) = 2 * a(n - 1) - 1. • a(n) = 3 * 2 ^ (n - 2) + 1 for n>1. - _ Ralf Stephan _ , May 18 2007 •

▶ [A342764] 1,1,2,4,7,13,26,51,97,191,366,713,1375,2673,5164,10031,19405,37663,72922,141461,274019,531405,1029640,1996395,3868793 ⋆ Fold a square sheet of paper alternately vertically to the left and horizontally downwards; after each fold, draw a line along each inward crease; after n folds, the largest region in the resulting graph occupies a(n) / 2 ^ n of the whole sheet. • a(n + 1) <= 2 * a(n). •

▶ [A262267] 2,4,7,13,26,52,103,205,410,820,1639,3277,6554,13108,26215,52429,104858,209716,419431,838861,1677722,3355444,6710887,13421773,26843546 ⋆ Number of (n + 2) X (1 + 2) 0..1 arrays with each row and column divisible by 5, read as a binary number with top and left being the most significant bits. • a(n) = 1 / 2 + 2 ^ (2 + n) / 5 - (1 / 20 - i / 20) * ((1 + 2 * i) * (- i) ^ n + (2 + i) * i ^ n) where i=sqrt(- 1). •

▶ [A293314] 2,4,7,13,26,52,104,208,415,829,1657,3314,6628,13255,26510,53020,106040,212079,424158,848316,1696632,3393264,6786527,13573053,27146106 ⋆ Least integer k such that k / 2 ^ n > (1 + sqrt(5)) / 2 (the golden ratio). • a(n) = ceiling(r * 2 ^ n), where r = (1 + sqrt(5)) / 2. •

▶ [A023431] 1,1,1,2,4,7,13,26,52,104,212,438,910,1903,4009,8494,18080,38656,82988,178802,386490,837928,1821664,3970282,8673258 ⋆ Generalized Catalan Numbers. • a(n + 1) = a(n) + a(0) * a(n - 2) + a(1) * a(n - 3) + ... + a(n - 2) * a(0). - _ Michael Somos _ , Jul 13 2003 • a(n) = hypergeom([(1 - n) / 3, (2 - n) / 3, - n / 3], [2, - n], 27). - _ Peter Luschny _ , Jun 15 2022 •

▶ [A112740] 1,2,4,7,13,26,58,147,423,1366,4880,19039,80281,362914,1747598,8918299,48024291,271891710,1613325844,10005690695,64702147429,435311589418,3041246276098,22024930755299,165082467634303 ⋆ Row sums of number triangle A112739. • a(n)=sum { k=0..n, sum { j=0..k, (2 - 0 ^ j) * (n - 1) ^ (k - j) }} . •

▶ [A136408] 1,2,4,7,13,27,55,107,211,427,859,1707,3403,6827,13675,27307,54571,109227,218539,436907,873643,1747627,3495595,6990507,13980331 ⋆ a(n) = 3 * a(n - 1) - 4 * a(n - 2) + 6 * a(n - 3) - 4 * a(n - 4). • a(n) = (5 * 2 ^ n + 2) / 6 - (1 / 12) * ((i * sqrt(2)) ^ n + (- i * sqrt(2)) ^ n), with n>=0 and i=sqrt(- 1) . - _ Paolo P. Lava _ , Jun 09 2008 •

▶ [A280430] 2,4,7,14,19,34,63,76,137,248,282,502,891,980,1718,3000,3233,5594,9646,10256,17565,30000,31597,53690,91033 ⋆ Longest word T from 2 equal length strings S using no breakpoint reuse. • a(n) = n + Sum _{ 0..k } (((n - 2) / (1 + Beta ^ 2)) + (2 / (Beta - alpha)))alpha ^ k + (((Beta ^ 2(n - 2)) / (1 + Beta ^ 2)) - (2 / (Beta - alpha)))Beta ^ k + 2 where alpha = (1 + sqrt(5)) / 2, beta = (1 - sqrt(5)) / 2, n = number of letters in each chromosome, and k = floor(2(n - 1) / 3). •

▶ [A045514] 0,1,2,4,7,14,20,38,53,85,118,186,236,363,464,651,839,1172,1433,1975,2408,3175,3892,5082,6034 ⋆ Number of conjugacy classes of elements of order n in E _ 8(C). • a(n) = Sum _{ d|n } mu(n / d) * [x ^ d] b(x), n > 0, where b(x) is the g.f. for A045513. - _ Sean A. Irvine _ , Mar 12 2021 •

▶ [A217730] 1,2,4,7,14,24,48,82,164,280,560,956,1912,3264,6528,11144,22288,38048,76096,129904,259808,443520,887040,1514272,3028544 ⋆ Expansion of (1 + 2 * x - x ^ 3) / (1 - 4 * x ^ 2 + 2 * x ^ 4). • a(n) = 4 * a(n - 2) - 2 * a(n - 4) for n >=4, a(0)=1, a(1)=2, a(2)=4, a(3)=7. • a(n) * a(n + 1) - a(n - 1) * a(n + 2) = (1 - (- 1) ^ n) * 2 ^ floor(n / 2 - 1) for n>0. - _ Bruno Berselli _ , Mar 22 2013 • a(n) = Sum _{ r=1..7 } (2 ^ n * (1 - (- 1) ^ r) * cos(Pi * r / 8) ^ n * cot(Pi * r / 16) * sin(3 * Pi * r / 8)) / 8. - _ Herbert Kociemba _ , Sep 17 2020 •

▶ [A287185] 2,4,7,14,25,47,88,166,311,586,1097,2068,3877,7301,13699,25778,48397,91033,170969,321496,603938,1135456,2133310,4010306,7535386 ⋆ a(n) = 3 * a(n - 2) + a(n - 3) + a(n - 5) - 3 * a(n - 6) - a(n - 7), where a(0) = 2, a(1) = 4, a(2) = 7, a(3) = 14, a(4) = 25, a(5) = 47, a(6) = 88, a(7) = 166. • a(n) = 3 * a(n - 2) + a(n - 3) + a(n - 5) - 3 * a(n - 6) - a(n - 7), where a(0) = 2, a(1) = 4, a(2) = 7, a(3) = 14, a(4) = 25, a(5) = 47, a(6) = 88, a(7) = 166. •

▶ [A026010] 1,2,4,7,14,25,50,91,182,336,672,1254,2508,4719,9438,17875,35750,68068,136136,260338,520676,999362,1998724,3848222,7696444 ⋆ a(n) = number of (s(0), s(1), ..., s(n)) such that s(i) is a nonnegative integer and |s(i) - s(i - 1)| = 1 for i = 1,2,...,n and s(0) = 2. Also a(n) = sum of numbers in row n + 1 of array T defined in A026009. • a(n) = Sum _{ k=0..n } binomial(floor((n + k) / 2), floor(k / 2)). - _ Paul Barry _ , Jul 15 2004 • a(n) = (1 / 2) ^ ((5 - (- 1) ^ n) / 2) * (6 * n + 7 - 3 * (- 1) ^ n) * Catalan((2 * n + 1 - (- 1) ^ n) / 4), where Catalan is the Catalan number = A000108. - _ G. C. Greubel _ , Nov 08 2018 •

▶ [A097596] 1,1,2,4,7,14,26,48,89,165,304,559,1029,1893,3482,6404,11779,21666,39850,73296,134813,247961,456072,838847,1542881 ⋆ Expansion of g.f. x * (1 - x + x ^ 5 + x ^ 6 - x ^ 7 + x ^ 9) / (1 - 2 * x + x ^ 4 + x ^ 6 - 2 * x ^ 7 + x ^ 10). • a(n) = ((r3) ^ n - (r2) ^ n - (r1) ^ n) / (r3 - r2 - r1), where r3 = (1 / 3) * (1 + (19 - 3 * sqrt(33)) ^ (1 / 3) + (19 + 3 * sqrt(33)) ^ (1 / 3)), r1 and r2 are

the other roots of x ^ 3 - x ^ 2 - x - 1 = 0. ● a(n) = 2 * a(n - 1) - a(n - 4) - a(n - 6) + 2 * a(n - 7) - a(n - 10). - _ G. C. Greubel _ , Dec 06 2022 ●

▶ [A257792] 1,1,2,4,7,14,26,49,92,174,328,618,1166,2197,4143,7811,14726,27764,52344,98687,186058,350784,661347,1246865,2350768 ⋆ Expansion of 1 / (1 - x - x ^ 2 - x ^ 3 - x ^ 5 + x ^ 8 - x ^ 9). ● a(n) = a(n - 1) + a(n - 2) + a(n - 3) + a(n - 5) - a(n - 8) + a(n - 9). ●

▶ [A253511] 1,2,4,7,14,26,49,93,176,333,630,1192,2255,4267,8073,15274,28900,54679,103455,195741,370348,700713,1325774,2508412,4746007 ⋆ Number of n - bit binary strings in which the length of any run of ones is a power of two. ● a(n) = a(n - 1) + Sum _{ k>=0 } a(n - (1 + 2 ^ k)), with a(- 1) = a(0) = 1 and a(n) = 0 for n < - 1. ●

▶ [A052535] 1,1,2,4,7,14,26,50,95,181,345,657,1252,2385,4544,8657,16493,31422,59864,114051,217286,413966,788674,1502555,2862617 ⋆ Expansion of (1 - x) * (1 + x) / (1 - x - 2 * x ^ 2 + x ^ 4). ● a(n) = a(n - 1) + 2 * a(n - 2) - a(n - 4), with h a(0)=1, a(1)=1, a(2)=2, a(3)=4. ● a(n) = Sum _{ alpha = RootOf(1 - x - 2 * x ^ 2 + x ^ 4) } (1 / 283) * (27 + 112 * alpha + 9 * alpha ^ 2 - 48 * alpha ^ 3) * alpha ^ (- n - 1). ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(2 * n - 3 * k, k). - _ Paul Barry _ , Jan 21 2005 ●

▶ [A079968] 1,1,2,4,7,14,27,51,98,187,357,683,1305,2494,4767,9110,17411,33276,63596,121544,232293,443954,848478,1621597,3099169 ⋆ Number of permutations satisfying - k<=p(i) - i<=r and p(i) - i not in I, i=1..n, with k=1, r=5, I= { 3 } . ● a(n) = a(n - 1) + a(n - 2) + a(n - 3) + a(n - 5) + a(n - 6) G.f.: - 1 / (x ^ 6 + x ^ 5 + x ^ 3 + x ^ 2 + x - 1) ●

▶ [A171231] 2,4,7,14,27,54,107,214,427,854,1707,3414,6827,13654,27307,54614,109227,218454,436907,873814,1747627,3495254,6990507,13981014,27962027 ⋆ a(n) = (10 * 2 ^ n + 3 - (- 1) ^ n) / 6. ● a(n) = 2 * a(n - 1) + a(n - 2) - 2 * a(n - 3), n >= 3. ● a(n) - a(n - 2) = 5 * 2 ^ n. ● a(n) = ceiling((5 / 3) * (2 ^ n)). - _ Wesley Ivan Hurt _ , Jun 28 2013 ●

▶ [A057744] 1,2,4,7,14,28,55,110,220,439,878,1756,3511,7022,14044,28087,56174,112348,224695,449390,898780,1797559,3595118,7190236,14380471 ⋆ Expansion of (1 - 2 * x ^ 3) / (1 - 2 * x - x ^ 3 + 2 * x ^ 4). ● a(0) = 1, a(1) = 2, a(2) = 4, a(3) = 7, a(n) = 2 * a(n - 1) + a(n - 3) - 2 * a(n - 4) for n > 3. - _ Jinyuan Wang _ , Apr 08 2020 ● a(n) = ceiling((6 / 7) * 2 ^ n) = (6 * 2 ^ n + 2 ^ (n mod 3)) / 7. - _ Kevin Ryde _ , Aug 25 2021 ●

▶ [A293325] 2,4,7,14,28,56,111,222,444,887,1774,3548,7095,14189,28378,56756,113512,227024,454047,908094,1816187,3632374,7264748,14529496,29058991 ⋆ Least integer k such that k / 2 ^ n > sqrt(3). ● a(n) = ceiling(r * 2 ^ n), where r = sqrt(3). ●

▶ [A365062] 1,1,2,4,7,14,28,56,112,224,448,896,1792,3584,7168,14336,28672,57344,114688,229376,458752,917504,1835008,3670016,7340032 ⋆ Enumeration of | Sort _ n(123,321) |. ● a(0) = 1, a(n) = 2 ^ (n - 1) for n = 1..3, a(n) = 7 * 2 ^ (n - 4) for n > 3. ●

▶ [A113405] 0,0,0,1,2,4,7,14,28,57,114,228,455,910,1820,3641,7282,14564,29127,58254,116508,233017,466034,932068,1864135 ⋆ Expansion of x ^ 3 / (1 - 2 * x + x ^ 3 - 2 * x ^ 4) = x ^ 3 / ((1 - 2 * x) * (1 + x) * (1 - x + x ^ 2)). ● a(n) = 2a(n - 1) - a(n - 3) + 2a(n - 4). ● a(n) + a(n + 3) = 2 ^ n. (End) ● a(n) = round(2 ^ n / 9). - _ Ross Drewe _ , Sep 03 2009 ●

▶ [A293336] 0,1,2,4,7,14,29,57,114,229,458,916,1832,3664,7327,14654,29309,58617,117234,234469,468937,937875,1875750,3751500,7502999 ⋆ The integer k that minimizes |k / 2 ^ n - sqrt(1 / 5))|. ● a(n) = floor(1 / 2 + r * 2 ^ n), where r = sqrt(1 / 5). ●

▶ [A367462] 1,1,1,2,4,7,14,30,62,131,287,629,1385,3096,6967,15735,35782,81823,187781,432689,1000919,2322584,5405094,12614260,29512587 ⋆ Expansion of (1 / x) * Series _ Reversion(x / (1 + x + x ^ 3 / (1 + x))). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 3) } binomial(n + 1,k) * binomial(n - 2 * k + 1,n - 3 * k). ●

▶ [A364589] 1,1,1,2,4,7,14,31,67,146,331,760,1749,4072,9583,22673,53929,129055,310328,749152,1815481,4415313,10771564,26352955,64644926 ⋆ G.f. satisfies A(x) = 1 / (1 - x) + x ^ 3 * A(x) ^ 3. ● a(n) = Sum _{ k=0..floor(n / 3) } binomial(n - k,2 * k) * binomial(3 * k,k) / (2 * k + 1). ●

▶ [A013326] 1,2,4,7,14,31,68,146,313,674,1453,3130,6740,14515,31262,67331,145012,312314,672637,1448674,3120041,6719698,14472356,31169423,67130254 ⋆ Expansion of - (2 * x ^ 3 - x ^ 2 + x - 1) / (x ^ 4 - 3 * x ^ 3 + 3 * x ^ 2 - 3 * x + 1). ● a(0)=1, a(1)=2, a(2)=4, a(3)=7, a(n)=3 * a(n - 1) - 3 * a(n - 2) + 3 * a(n - 3) - a(n - 4). - _ Harvey P. Dale _ , May 22 2013 ●

▶ [A333613] 1,2,4,7,15,21,51,78,158,230,568,661,1797,2595,5117,7789,19095,21702,59892,81801,171329,258028,630942,713093,1887828 ⋆ a(1) = 1; thereafter a(n) = Sum _{ k = 1..n } a(k / gcd(n,k)). ● a(1) = 1; a(n) = Sum _{ k = 1..n } a(lcm(n, k) / n). ● a(1) = 1; a(n) = Sum _{ d|n } Sum _{ k = 1..d, gcd(d, k) = 1 } a(k). ●

▶ [A259592] 1,2,4,7,15,26,56,97,209,362,780,1351,2911,5042,10864,18817,40545,70226,151316,262087,564719,978122,2107560,3650401,7865521 ⋆ Denominators of the other - side convergents to sqrt(3). ● a(n) = 4 * a(n - 2) - a(n - 4) for n>3. - _ Colin Barker _ , Jul 21 2015 ● a(n) = 3 ^ (n / 2 + 1 / 2 - t) * ((2 + sqrt(3)) ^ t - (- 1) ^ n * (2 - sqrt(3)) ^ t) / 2, where t = floor(n / 2) + 1. - _ Ridouane Oudra _ , Aug 03 2021 ●

▶ [A291220] 1,1,2,4,7,15,27,55,101,199,370,718,1347,2595,4898,9397,17803,34066,64682,123561,234917,448289,852979,1626689,3096695 ⋆ p - INVERT of (0,1,0,1,0,1,...), where p(S) = 1 - S - S ^ 4. ● a(n) = a(n - 1) + 4 * a(n - 2) - 3 * a(n - 3) - 5 * a(n - 4) + 3 * a(n - 5) + 4 * a(n - 6) - a(n - 7) - a(n - 8) for n >= 9. ●

▶ [A136336] 1,2,4,7,15,27,59,107,235,427,939,1707,3755,6827,15019,27307,60075,109227,240299,436907,961195,1747627,3844779,6990507,15379115 ⋆ a(n) = a(n - 1) + 4 * a(n - 2) - 4 * a(n - 3) for n>3. ● a(n) = (8 + (- 2) ^ n + 21 * 2 ^ n) / 24 for n>0. ●

▶ [A049885] 1,1,1,2,4,7,15,30,60,91,197,402,807,1616,3233,6466,12932,19399,42031,85679,172167,344739,689683,1379472,2758975 ⋆ a(n) = a(1) + a(2) + ... + a(n - 1) - a(m) for n >= 4, where m = 2 ^ (p + 1) + 2 - n and p is the unique integer such that 2 ^ p < n - 1 <= 2 ^ (p + 1), starting with a(1) = a(2) = a(3) = 1. ● a(n) = - a(2 ^ ceiling(log _ 2(n - 1)) + 2 - n) + Sum _{ i = 1..n - 1 } a(i) for n >= 4. ●

▶ [A129682] 1,1,2,4,7,15,30,60,123,249,506,1030,2093,4257,8658,17606,35807,72821,148096,301188,612531,1245717,2533444,5152318,10478383 ⋆ Number of ways tiling a 2 X n rectangle with 2 X 1 (domino) and 3 X 1 (tromino) tiles. ● a(n) = a(n - 1) + a(n - 2) + a(n - 3) + 2 * r(n - 3), where r(n) = r(n - 1) + r(n - 2) + a(n - 2); ● a(n)=2 * a(n - 1) + a(n - 3) - 2 * a(n - 4) + a(n - 5) - a(n - 6) - _ Robert Gerbicz _ , May 09 2008 ●

▶ [A072964] 1,1,2,4,7,15,32,66,141,295,619,1286,2654,5460,11066,22357,44962,89258,176459,347103,675846,1309903,2525893,4830943,9196093 ⋆ Number of partitions of n - th triangular number n(n + 1) / 2 (A000217(n)) into triangular parts. ● a(n) = A007294[n(n + 1) / 2] = coefficient of x ^ [n(n + 1) / 2] in the expansion of product _{ k=1..inf } 1 / (1 - x ^ (k(k + 1) / 2)). ●

▶ [A364596] 1,1,1,2,4,7,15,36,82,191,471,1166,2884,7267,18523,47349,121821,315781,822165,2148811,5641035,14864295,39287907,104154066,276899112 ⋆ G.f. satisfies A(x) = 1 / (1 - x) + x ^ 3 * (1 - x) * A(x) ^ 4. ● a(n) = Sum _{ k=0..floor(n / 3) } binomial(n - k,2 * k) * binomial(4 * k,k) / (3 * k + 1). ●

▶ [A320465] 2,4,7,16,31,62,127,256,508,1022,2047,4088,8191,16382,32764,65536,131071,262130,524287,1048568,2097148,4194302,8388607,16777208,33554416 ⋆ a(n) = 2 ^ n - (2 ^ (n - 1) mod n), where "mod" is the nonnegative remainder operator. ● a(n) = 2 ^ (n - 1) + n * floor(2 ^ (n - 1) / n). (Due to _ Thomas Ordowski _). ●

▶ [A259544] 1,2,4,7,16,32,75,169,396 ⋆ Minimum greatest integer in a set of n positive integers whose nonempty subsets all have distinct arithmetic means. ● a(n) < 4 ^ (n - 1) for n > 1, see comments. ●

▶ [A192464] 2,4,7,16,38,95,242,624,1619,4216,11002,28747,75170,196652,514607,1346880,3525566,9229063,24160402,63250168,165586907,433505384,1134920882,2971243731,7778788418 ⋆ Constant term of the reduction by x ^ 2 - >x + 1 of the polynomial p(n,x) = 1 + x ^ n + x ^ (2n). ● a(n) = 1 - Fibonacci(n) + Fibonacci(1 + n) - Fibonacci(2n) + Fibonacci(1 + 2n). - _ Friedjof Tellkamp _ , Nov 22 2021 ●

▶ [A360885] 1,1,1,1,2,4,7,16,39,93,246,671,1884,5578,16887,52854,170649,563703,1914366,6649798,23610987,85689987,317054427,1196183592,4595744763 ⋆ G.f. satisfies A(x) = 1 + x * A(x * (1 + x ^ 2)). ● a(0) = 1; a(n) = Sum _{ k=0..floor((n - 1) / 3) } binomial(n - 1 - 2 * k,k) * a(n - 1 - 2 * k). ●

▶ [A276027] 1,1,1,2,4,7,18,43,93,266,702,1687,5136,14405,36898,117016,341842,914064,2983027,8972121,24743851,82478973,253555061,715745648,2424954125 ⋆ Number of ways to transform a sequence of n ones to a single number by continually removing two numbers and replacing them with their sum modulo 3. ● a(n) = f(0, n, 0) where f(a, b, c) is the number of ways to reach one number beginning with a zeros, b ones, and c twos. ●

▶ [A291403] 0,2,4,7,20,42,92,214,472,1062,2396,5361,12052,27074,60764,136497,306520,688292,1545768,3471224,7795184,17505588,39311608,88280985,198250312 ⋆ p - INVERT of (1,1,0,0,0,0,...), where p(S) = 1 - 2 S ^ 2 - S ^ 4. ● a(n) = 2 * a(n - 2) + 4 * a(n - 3) + 3 * a(n - 4) + 4 * a(n - 5) + 6 * a(n - 6) + 4 * a(n - 7) + a(n - 8) for n >= 9. ●

▶ [A171978] 1,1,2,4,7,22,37,84,172,454,745,2904,4722,10464,38546,88769,147439,475153,785894,3140342,10412267,19169464,32132160,125087460,224341028 ⋆ Number of partitions of n into fractions k / (k + 1), 0<k<=n. ● a(n) = q(n,1) with q(x,k) = if x < k / (k + 1) then 0 ^ x else if k>n then 0 else q(x - k / (k + 1),k) + q(x,k + 1). ●

▶ [A233868] 1,2,4,7,31,127,511,2047,8191,32767,131071,524287,2097151,8388607,33554431,134217727,536870911,2147483647,8589934591,34359738367,137438953471,549755813887,2199023255551,8796093022207,35184372088831 ⋆ Numbers that are not the sum of two evil numbers. ● a(n) = 5 * a(n - 1) - 4 * a(n - 2) for n > 5. ●

▶ [A008496] 0,0,0,0,0,1,1,1,2,4,8,8,8,12,18,27,27,27,36,48,64,64,64,80,100 ⋆ a(n) = floor(n / 5) * floor((n + 1) / 5) * floor((n + 2) / 5). ● a(n) = a(n - 1) + 3 * a(n - 5) - 3 * a(n - 6) - 3 * a(n - 10) + 3 * a(n - 11) + a(n - 15) - a(n - 16). ●

▶ [A088244] 1,1,2,4,8,8,15,15,24,40,45,45,66,66,72,84,112,112,153,153,171,190,200,200,253 ⋆ Number of 3 - smooth divisors of n!. ● a(n) = a(n - 1) iff gcd(n,6) = 1. ●

▶ [A047466] 0,1,2,4,8,9,10,12,16,17,18,20,24,25,26,28,32,33,34,36,40,41,42,44,48 ⋆ Numbers that are congruent to { 0, 1, 2, 4 } mod 8. ● a(n) = 2 * n - 4 + (3 - (- 1) ^ n) * (1 - i ^ (n * (n + 1))) / 4, where i=sqrt(- 1). - _ Bruno Berselli _ , Jul 18 2012 ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. ●

▶ [A003485] 1,2,4,8,9,10,12,16,17,18,20,24,25,26,28,32,33,34,36,40,41,42,44,48,49 ⋆ Hurwitz - Radon function at powers of 2. ● a(n) = ceiling((n + 1) / 4) + ceiling((n) / 4) + 2 * ceiling((n - 1) / 4) + 4 * ceiling((n - 2) / 4). - _ Johannes W. Meijer _ , Jun 07 2011 ● a(n) = a(n - 1) + a(n - 4) - a(n - 5); a(0)=1, a(1)=2, a(2)=4, a(3)=8, a(4)=9. - _ Harvey P. Dale _ , Jun 13 2011 ●

▶ [A136803] 0,1,2,4,8,9,11,13,15,16,17,18,21,22,23,25,26,29,30,31,32,34,35,36,42 ⋆ Squares mod 257. ● a(n) + a(131 - n) = 257 for n>1. ●

▶ [A010410] 0,1,2,4,8,9,11,15,16,18,22,23,25,29,30,32,36,37,39,43,44,46 ⋆ Squares mod 49. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for 5 < n <= 22. - _ Chai Wah Wu _ , Jan 30 2018 ●

▶ [A233999] 1,2,4,8,9,11,15,16,18,22,23,25,29,30,32,36,37,39,43,44,46,49,50,51,53 ⋆ Values of n such that numbers of the form x ^ 2 + n * y ^ 2 for some integers x, y cannot have prime factor of 7 raised to an odd power. ● a(n) = 16n / 7 + O(log n). - _ Charles R Greathouse IV _ , Jan 12 2017 ●

▶ [A047350] 1,2,4,8,9,11,15,16,18,22,23,25,29,30,32,36,37,39,43,44,46,50,51,53,57 ⋆ Numbers that are congruent to { 1, 2, 4 } mod 7. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n > 4. ● a(n) = a(n - 3) + 7 for n > 3. (End) ● a(n) = (21 * n - 21 - 6 * cos(2 * n * Pi / 3) + 4 * sqrt(3) * sin(2 * n * Pi / 3)) / 9. ● a(3k) = 7k - 3, a(3k - 1) = 7k - 5, a(3k - 2) = 7k - 6. (End) ● a(n) = 4 * n - 3 - 2 * floor(n / 3) - 3 * floor((n + 1) / 3). - _ Ridouane Oudra _ , Nov 23 2022 ●

▶ [A190723] 1,2,4,8,9,11,15,19,20,22,26,27,29,33,37,38,40,44,48,49,51,55,56,58,62 ⋆ Numbers m for which A055778(m) > A055778(m - 1). ● a(n) = 1 + Sum _{ k=1..n - 1 } x(k), where x is the unique fixed point of the morphism 1 - >12, 2 - >4, 4 - >1244 on the alphabet { 1,2,4 } . - _ Michel Dekking _ , Apr 01 2020 ●

► [A136805] 0,1,2,4,8,9,13,15,16,17,18,19,21,25,26,30,32,33,34,35,36,37,38,42,49 ⋆ Squares mod 65537. ● a(n) + a(32771 - n) = 65537 for n > 1. ●
► [A048715] 0,1,2,4,8,9,16,17,18,32,33,34,36,64,65,66,68,72,73,128,129,130,132,136,137 ⋆ Binary expansion matches (100(0) *) * (0|1|10)?; or, Zeckendorf - like expansion of n using recurrence f(n) = f(n - 1) + f(n - 3). ● a(0) = 0, a(n) = (2 ^ (invfoo(n) - 1)) + a(n - foo(invfoo(n))), where foo(n) is foo(n - 1) + foo(n - 3) (A000930) and invfoo is its "integral" (floored down) inverse. ● a(n) XOR 6 * a(n) = 7 * a(n); 3 * a(n) XOR 4 * a(n) = 7 * a(n); 3 * a(n) XOR 5 * a(n) = 6 * a(n); (conjectures). - _ Paul D. Hanna _ , Jan 22 2006 ●
► [A028982] 1,2,4,8,9,16,18,25,32,36,49,50,64,72,81,98,100,121,128,144,162,169,196,200,225 ⋆ Squares and twice squares. ● a(n) is asymptotic to c * n ^ 2 with c = 2 / (1 + sqrt(2)) ^ 2 = 0.3431457.... - _ Benoit Cloitre _ , Sep 17 2002 ●
► [A079931] 1,2,4,8,9,16,20,22,23,32,33,36,39,42,43,46,47,50,51,55,59,60,63,69,74 ⋆ Greedy powers of (1 / sqrt(Pi)): Sum _{ n>=1 } (1 / sqrt(Pi)) ^ a(n) = 1. ● a(n) = Sum _{ k=1..n } floor(g _ k) where g _ 1=1, g _{ n + 1 } = log _ x(x ^ frac(g _ n) - x) (n > 0) at x = (1 / sqrt(Pi)) and frac(y) = y - floor(y). ●
► [A028836] 1,2,4,8,10,11,13,17,19,20,22,26,28,29,31,35,37,38,40,44,46,47,49,53,55 ⋆ Iterated sum of digits of n is a power of 2. ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. ●
► [A047464] 0,2,4,8,10,12,16,18,20,24,26,28,32,34,36,40,42,44,48,50,52,56,58,60,64 ⋆ Numbers that are congruent to { 0, 2, 4 } mod 8. ● a(n) = 2 * floor((n - 1) / 3) + 2 * n - 2. - _ Gary Detlefs _ , Mar 18 2010 ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. ● a(n) = 2 * (12 * n - 15 - 3 * cos(2 * n * Pi / 3) + sqrt(3) * sin(2 * n * Pi / 3)) / 9. ● a(3k) = 8k - 4, a(3k - 1) = 8k - 6, a(3k - 2) = 8k - 8. (End) ●
► [A346502] 0,2,4,8,10,12,16,18,20,26,28,30,34,36,38,42,44,46,52,54,56,60,62,64,68 ⋆ a(n) = 3n - (sum of digits of 3n in base 3). ● a(3 ^ n) - a(3 ^ n - 1) = 2 * (n + 1). ●
► [A047235] 2,4,8,10,14,16,20,22,26,28,32,34,38,40,44,46,50,52,56,58,62,64,68,70,74 ⋆ Numbers that are congruent to { 2, 4 } mod 6. ● a(n) = 3 * n + 5..n odd, 3 * n + 4..n even a(n) = 6 * floor((n + 1) / 2) + 3 + (- 1) ^ n. - _ Gary Detlefs _ , Mar 02 2010 ● a(n) = 6 * n - a(n - 1) - 6 (with a(1) = 2). - _ Vincenzo Librandi _ , Aug 05 2010 ● a(n + 1) = a(n) + (a(n) mod 6). - _ M. F. Hasler _ , Jan 14 2014 ● a(n) = (6 * n - (- 1) ^ n - 3) / 2. - _ Ammar Khatab _ , Aug 23 2020 ●
► [A341822] 1,2,4,8,10,14,17,21,27,30,35 ⋆ Length of the longest 2 - increasing sequence of positive integer triples with entries <= n. ● a(n) >= n ^{ 3 / 2 } when n is a perfect square. ●
► [A074330] 2,4,8,10,14,18,26,28,32,36,44,48,56,64,80,82,86,90,98,102,110,118,134,138,146 ⋆ a(n) = Sum _{ k=1..n } 2 ^ b(k) where b(k) denotes the number of 1's in the binary representation of k. ● a(0)=0, a(2n) = 2a(n - 1) + a(n) + 2, a(2n + 1) = 3a(n) + 2. ●
► [A022340] 0,2,4,8,10,16,18,20,32,34,36,40,42,64,66,68,72,74,80,82,84,128,130,132,136 ⋆ Even Fibbinary numbers (A003714); also 2 * Fibbinary(n). ● a(n) + a(n) / 2 = a(n) XOR a(n) / 2, see A106409. - _ Reinhard Zumkeller _ , May 02 2005 ●
► [A083655] 0,1,2,4,8,10,16,32,36,64,128,136,256,512,528,1024,2048,2080,4096,8192,8256,16384,32768,32896,65536 ⋆ Numbers which do not appear prematurely in the binary Champernowne word (A030190). ● a(0)=0, a(1)=1, a(2)=2; then for n>=1, a(3n)=2 ^ (2n), a(3n + 1)=2 ^ (2n + 1), a(3n + 2)=2 ^ (2n + 1) + 2 ^ n. - _ Graeme McRae _ , Aug 11 2007 ● a(n) = 6 * a(n - 3) - 8 * a(n - 6) for n>8. (End) ● a(n) = 2 ^ floor(2 * (n + 2) / 3 - 1) + (floor((n + 1) / 3) - floor(n / 3)) * 2 ^ (floor(n / 3)) - floor(5 / (n + 3)). - _ Alan Michael Gómez Calderón _ , Dec 15 2022 ●
► [A099942] 1,2,4,8,10,20,22,44,46,92,94,188,190,380,382,764,766,1532,1534,3068,3070,6140,6142,12284,12286 ⋆ Start with 1, then alternately double or add 2. ● a(0)=1; for n > 0, a(n) = a(n - 1) * (1 + n mod 2) + 2 * ((n + 1) mod 2). ●
► [A004655] 1,2,4,8,10,20,40,80,100,200,400,800,1000,2000,4000,8000,10000,20000,40000,80000,100000,200000,400000,800000,1000000 ⋆ Powers of 2 written in base 16. ● a(n) = 2 ^ (n mod 4) * 10 ^ floor(n / 4). - _ M. F. Hasler _ , Jun 22 2018 ● a(n) = 10 * a(n - 4) for n > 3. ●
► [A235700] 1,2,4,8,11,12,14,18,21,22,24,28,31,32,34,38,41,42,44,48,51,52,54,58,61 ⋆ a(n + 1) = a(n) + (a(n) mod 5), a(1)=1. ● a(n) = 2 ^ (n - 1 mod 4) + 10 * floor((n - 1) / 4). ● a(n) = (- 10 + (1 + 2 * i) * (- i) ^ n + (1 - 2 * i) * i ^ n + 10 * n) / 4 where i=sqrt(- 1). a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4). G.f.: x * (2 * x ^ 3 + 2 * x ^ 2 + 1) / ((x - 1) ^ 2 * (x ^ 2 + 1)). - _ Colin Barker _ , Jan 16 2014 ●
► [A236206] 1,2,4,8,11,13,16,17,19,22,23,26,29,31,32,34,37,38,41,43,44,46,47,52,53 ⋆ Numbers not divisible by 3, 5 or 7. ● a(n) = a(n - 1) + a(n - 48) - a(n - 49). - _ Amiram Eldar _ , Oct 23 2020 ●
► [A078649] 2,4,8,11,13,16,18,22,26,28,31,35,38,40,44,48,51,53,56,58,62,65,67,70,74 ⋆ Numbers n such that A000002(n)=A000002(n + 1) where A000002 is the Kolakoski sequence. ● a(n) is probably asymptotic to 3 * n. ●
► [A086790] 1,2,4,8,11,15,19,23,26,30,34,38,42,46,50,54,58,62,66,70,74,78,82,86,90 ⋆ a(n) = floor((1 + n + 2 * n ^ 2 + 4 * n ^ 3) / (1 + 2 * n + n ^ 2)) ● a(n) = floor(4 * n - 6 + 9 / (n + 1) - 2 / (n + 1) ^ 2). For n>=8 a(n)=4 * n - 6 - _ Benoit Cloitre _ , Aug 06 2003 ●
► [A336627] 1,2,4,8,11,16,20,24,28,32,36,40,44,48,52,56,60,64,68,72,76,80,84,88,92 ⋆ Coordination sequence for the Manhattan lattice. ● a(n) = 4 * (n - 1), n > = 5. ●
► [A242313] 1,2,4,8,11,16,21,22,31,32,41,42,44,51,61,62,64,71,81,82,84,88,91,101,102 ⋆ Numbers belonging to a geometric sequence whose ratio is 2 and whose first term ends in 1. ● a(n) = 5n + O(log n). - _ Charles R Greathouse IV _ , May 14 2014 ●
► [A295674] 1,2,4,8,11,17,29,48,76,122,199,323,521,842,1364,2208,3571,5777,9349,15128,24476,39602,64079,103683,167761 ⋆ a(n) = a(n - 1) + a(n - 3) + a(n - 4), where a(0) = 1, a(1) = 2, a(2) = 4, a(3) = 8. ● a(n) = a(n - 1) + a(n - 3) + a(n - 4), where a(0) = 1, a(1) = 2, a(2) = 4, a(3) = 8. ●
► [A053439] 1,2,4,8,11,18,22,32,37,50,56,72,79,98,106,128,137,162,172,200,211,242,254,288,301 ⋆ Expansion of (1 + x + 2 * x ^ 3) / ((1 - x) * (1 - x ^ 2) ^ 2). ● a(n) = Sum _{ k=0..n } binomial(n, k mod 2). - _ Paul Barry _ , Jul 24 2003 ●
► [A373080] 1,2,4,8,11,18,28,40,64,96,144,224,336,512,784,1184,1808,2752,4176,6368,9680,14720,22416,34080,51856 ⋆ a(n) is the number of binary strings of length n not containing the substrings 0000, 0001, 0011, 0111, 1111. ● a(n) = a(n - 2) + 2 * a(n - 3) for n >= 7. ●
► [A159693] 1,2,4,8,11,20,24,40,45,70,76,112,119,168,176,240,249,330,340,440,451,572,584,728,741 ⋆ Partial sums of A000463. ● a(n) = (n ^ 3 + 3 * n ^ 2 + 8 * n + r(n)) / 24, where r(n) = 3 * n + 9 if n is odd, 3 * n ^ 2 if n is even. ● a(n) = a(n - 1) + 3 * a(n - 2) - 3 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) + a(n - 6) - a(n - 7). - _ R. J. Mathar _ , Apr 20 2009 ● a(n) = (2 * n ^ 3 + 9 * n ^ 2 + 19 * n + 9 + 3 * (n ^ 2 - n - 3) * (- 1) ^ n) / 48. - _ Luce ETIENNE _ , Dec 29 2014 ●
► [A118286] 2,4,8,12,14,16,20,24,26,28,32,36,38,40,44,48,50,52,56,60,62,64,68,72,74 ⋆ Numbers n such that n == 0 (mod 4) or n == 2 (mod 12). ● a(n) = (- 2 + (- i) ^ n + i ^ n + 6 * n) / 2, where i = sqrt(- 1). - _ Colin Barker _ , Oct 19 2015 ● a(n) = (6 * n - 2 + (1 + (- 1) ^ n) * (- 1) ^ (n * (n - 1) / 2)) / 2. - _ Guenther Schrack _ , Feb 21 2019 ●
► [A351873] 1,2,4,8,12,16,21,29,45,73,117,178,260,376,552,832,1273,1945,2937,4385,6521,9730,14612,22040,33252 ⋆ Number of subsets of { 1,2,...,n } whose elements do not differ by 3 or 4. ● a(n) = a(n - 1) + a(n - 5) + a(n - 6) + 2 * a(n - 7) + delta(n,0) + delta(n,1) + 2 * delta(n,2) + 4 * delta(n,3) + 4 * delta(n,4) + 3 * delta(n,5) + 2 * delta(n,6). ●
► [A337120] 1,2,4,8,12,18,23,28,32,36,40,44,48,52,56,60,64,68,72,76,80,84,88,92,96 ⋆ Factor complexity (number of subwords of length n) of the regular paperfolding sequence (A014577), and all generalized paperfolding sequences. ● a(1..6) = 2,4,8,12,18,23, then a(n) = 4 * n for n>=7. [Allouche] ● a(n) = 2 * a(n - 1) - a(n - 2) for n>8. ●
► [A007590] 1,0,2,4,8,12,18,24,32,40,50,60,72,84,98,112,128,144,162,180,200,220,242,264,288 ⋆ a(n) = floor(n ^ 2 / 2). ● a(n + 1) = Sum _{ k=1..n } (k + (k mod 2)). Therefore a(n) = Sum _{ k=1..n } 2 * floor(k / 2). - _ William A. Tedeschi _ , Mar 19 2008 ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4). - _ R. H. Hardin _ , Mar 28 2011 ● a(n) = (2 * n ^ 2 + (- 1) ^ n - 1) / 4. - _ Bruno Berselli _ , Mar 28 2011 ● a(n) = ceiling((n ^ 2 - 1) / 2) = binomial(n + 1, 2) - ceiling(n / 2). - _ Wesley Ivan Hurt _ , Mar 08 2014, Jun 14 2013 ● a(n) = binomial(n,2) + floor(n / 2). - _ Bruno Berselli _ , Jun 08 2017 ●
► [A080476] 1,2,4,8,12,18,24,32,40,50,60,72,84,98,112,128,144,162,180,200,220,242,264,288,312 ⋆ Floor(geometric mean of next n numbers). ● a(n + 3) = 2 * a(n + 2) - a(n + 1) if n even, a(n + 3) = 2 * a(n + 2) - a(n + 1) + 2 if n odd, with a(1) = 1, a(2) = 2, a(3) = 4. - _ Yosu Yurramendi _ , Sep 12 2008 ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4) for n > 5. ●
► [A330130] 1,2,4,8,12,18,26,28,30,32,34,36,40,44,48,52,56,60,64,68,74,80,88,96,104 ⋆ Number of length - n binary words having no even palindromes of length > 2 and no odd palindromes of length > 5. ● a(n) = a(n - 8) + a(n - 10) for n >= 16. ●
► [A053799] 1,2,4,8,12,18,26,34,44,56,68,82,98,114,132,152,172,194,218,242,268,296,324,354,386 ⋆ Number of basis partitions of n + 9 with Durfee square size 3. ● a(n + 1) - 2 * a(n) + a(n - 1) = 1 + (- 1) ^ n if |n|>1. ● a(n) = a(- n) for all n in Z. (End) ●
► [A343949] 1,2,4,8,12,18,26,36,52,70,102,136,200,266,394,524,780,1038,1550,2064,3088,4114,6162,8212,12308 ⋆ Shortest distance from curve start to end along the segments of dragon curve expansion level n, and which is the diameter of the curve as a graph. ● a(0) = 1. ● a(n) = a(n - 1) + 3 * a(n - 2) - 3 * a(n - 3) - 2 * a(n - 4) + 2 * a(n - 5) for n >= 6. ●
► [A284122] 0,2,4,8,12,18,26,38,56,84,128,198,310,490,780,1248,2004,3226,5202,8398,13568,21932,35464,57358,92782 ⋆ Number of binary words w of length n for which s, the longest proper suffix of w that appears at least twice in w, is of length 1 (i.e., either s = 0 or s = 1). ● a(n) = 2 * (- 2 + (2 ^ (- 1 - n) * ((1 - sqrt(5)) ^ n * (1 + sqrt(5)) + (- 1 + sqrt(5)) * (1 + sqrt(5)) ^ n)) / sqrt(5) + n) for n>1. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - a(n - 3) + a(n - 4) for n>4. ●
► [A006501] 1,2,4,8,12,18,27,36,48,64,80,100,125,150,180,216,252,294,343,392,448,512,576,648,729 ⋆ Expansion of (1 + x ^ 2) / ((1 - x) ^ 2 * (1 - x ^ 3) ^ 2). ● a(n) = [(n + 3) / 3] * [(n + 4) / 3] * [(n + 5) / 3]. - _ Reinhard Zumkeller _ , May 18 2004 ● a(n - 3) = Sum _{ k=0..n } [k / 3] * [(k + 1) / 3]. - _ Mitch Harris _ , Dec 02 2004 ● a(3 * m) = (m + 1) ^ 3 (A000578). - _ Bernard Schott _ , Feb 22 2023 ●
► [A224814] 1,1,1,1,1,1,1,1,1,1,2,4,8,12,18,27,36,48,64,80,100,125,175,245,343 ⋆ Number of subsets of { 1,2,...,n - 9 } without differences equal to 3, 6 or 9. ● a(n) = a(n - 1) + a(n - 4) - a(n - 6) + a(n - 7) - 3 * a(n - 9) + 4 * a(n - 10) + 5 * a(n - 12) - 2 * a(n - 13) + 3 * a(n - 15) - 8 * a(n - 16) + a(n - 18) - 4 * a(n - 19) + 3 * a(n - 21) - 4 * a(n - 22) - 3 * a(n - 24) - 5 * a(n - 27) + 8 * a(n - 28) + 7 * a(n - 30) - 2 * a(n - 31) - 9 * a(n - 33) + 2 * a(n - 34) + 5 * a(n - 36) + 4 * a(n - 37) + a(n - 39) - 6 * a(n - 40) - 3 * a(n - 42) + 2 * a(n - 43) + 2 * a(n - 45) + a(n - 46) - a(n - 48) - a(n - 49) + a(n - 52). ●
► [A224810] 1,1,1,1,1,1,1,2,4,8,12,18,27,36,48,64,96,144,216,324,486,729,1053,1521,2197 ⋆ Subsets of { 1,2,...,n - 6 } without differences equal to 3 or 6. ● a(n) = a(n - 1) - a(n - 3) + 2 * a(n - 4) - 2 * a(n - 6) + 4 * a(n - 7) + 2 * a(n - 9) + 2 * a(n - 10) + 4 * a(n - 12) - 2 * a(n - 13) + 2 * a(n - 15) - 4 * a(n - 16) - 2 * a(n - 18) - 2 * a(n - 19) - a(n - 21) - a(n - 22) - a(n - 24) ●
► [A006500] 1,2,4,8,12,18,27,45,75,125,200,320,512,832,1352,2197,3549,5733,9261,14994,24276,39304,63580,102850,166375 ⋆ Restricted combinations. ● a(n) = F(floor(n / 3) + 3) ^ (n mod 3) * F(floor(n / 3) + 2) ^ (3 - (n mod 3)) where F(n) is the n - th Fibonacci number. - _ David Nacin _ , Feb 29 2012 ●
► [A011908] 0,0,0,0,0,2,4,8,12,19,27,38,50,66,84,105,129,156,188,223,263,306,355,408,467 ⋆ [n(n - 1)(n - 2) / 26]. ● a(n) = + 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 13) - 3 * a(n - 14) + 3 * a(n - 15) - a(n - 16). G.f.: x ^ 5 * (2 - 2 * x + 2 * x ^ 2 - 2 * x ^ 3 + 3 * x ^ 4 - 2 * x ^ 5 + 2 * x ^ 6 - 2 * x ^ 7 + 3 * x ^ 8 - 2 * x ^ 9 + x ^ 10) / ((- 1 + x) ^ 4 * (1 + x ^ 12 + x ^ 11 + x ^ 10 + x ^ 9

+ x ^ 8 + x ^ 7 + x ^ 6 + x ^ 5 + x ^ 4 + x ^ 3 + x ^ 2 + x)). [From _ R. J. Mathar _ , Apr 15 2010] ●

▶ [A037168] 1,2,4,8,12,20,24,32,36,44,56,60,72,80,84,92,104,116,120,132,140,144,156,164,176,192 ⋆ a(n) = 2 * prime(n) - 2. ● a(n) = 2 * prime(n) - 2 = 2 * phi(prime(n)). - _ Alonso del Arte _ , Jun 30 2013 ●

▶ [A206350] 1,2,4,8,12,20,24,36,44,56,64,84,92,116,128,144,160,192,204,240,256,280,300,344,360 ⋆ Position of 1 / n in the canonical bijection from the positive integers to the positive rational numbers. ● a(1) = 1, a(n + 1) = Sum _{ k=1..n } mu(k) * floor(n / k) * floor(1 + n / k), where mu(k) is the Moebius function A008683. - _ Daniel Suteu _ , May 28 2018 ●

▶ [A014557] 0,0,0,0,0,0,2,4,8,12,20,28,40,52,70,88,112,136,168,200,240,280,330,380,440 ⋆ Multiplicity of K _ 3 in K _ n. ● a(n) = binomial(n,3) - floor(n / 2 * floor(((n - 1) / 2) ^ 2)). - _ Alexander Adamchuk _ , Nov 29 2006 ●

▶ [A263615] 2,4,8,12,20,28,44,59,89,115,167,209,293,357,485,578,764,894,1154,1330,1682,1914,2378,2677,3275 ⋆ Partial sums of A263614 starting at n=2. ● a(n) = (2 * n * (3 * n ^ 3 - 14 * n ^ 2 + 147 * n + 272) + (4 * n ^ 3 - 30 * n ^ 2 + 128 * n - 27) * (- 1) ^ n - 741) / 768. ●

▶ [A347789] 0,2,4,8,12,20,28,44,60,92,124,188,252,380,508,764,1020,1532,2044,3068,4092,6140,8188,12284,16380 ⋆ a(n) is the number of times that only 2 pegs have disks on them during the optimal solution to a Towers of Hanoi problem with n disks. ● a(n) = (3 + (n mod 2)) * (2 ^ floor(n / 2)) - 4. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) for n > 3. (End) ●

▶ [A368430] 1,2,4,8,12,20,32,48,76,116,176,272,412,628,960,1456,2220,3380,5136,7824,11900,18100,27552,41904,63756 ⋆ Number of binary words of length n not containing the substrings 0000, 0001, 0011, 0111. ● a(n) = a(n - 1) + a(n - 2) + a(n - 3) - 2 * a(n - 4) with a(0)=1, a(1)=2, a(2)=4, and a(3)=8. ●

▶ [A131770] 1,2,4,8,12,20,32,52,72,104,156,228,332,436,592,820,1152,1588,2180,2772,3592,4744,6332,8512,11284 ⋆ First differences (A131771) equal this sequence with terms repeated at positions: { m * (m + 1) / 2, m>=0 } . ● a(n) = a(n - 1) + a(n - t(n)) where t(n) = [(sqrt(8n + 17) - 3) / 2] for n>0, with a(0)=1. ●

▶ [A081410] 1,1,2,4,8,12,21,35,56,92,150,242,393,637,1030,1668,2700,4368,7069,11439,18508,29948,48458,78406,126865 ⋆ a(n) = a(n - 1) + a(n - 2) + n (mod 3), with a(1)=a(2)=1. ● a(n) = floor(C * F(n)) + b(n) where C=(9 - sqrt(5)) / 4, F(n) is the n - th Fibonacci number and b(n) is the 6 - periodic sequence (0, 0, - 1, - 1, 0, - 1). ● a(1)=1, a(2)=1, a(3)=2, a(4)=4, a(5)=8, a(n) = a(n - 1) + a(n - 2) + a(n - 3) - a(n - 4) - a(n - 5). - _ Harvey P. Dale _ , Feb 01 2013 ●

▶ [A327480] 0,0,2,4,8,12,22,28,40,48,64,76,94,108,130,148,172,192,220,244,274,300,334,364,400 ⋆ a(n) is the maximum number of squares of unit area that can be removed from an n X n square while still obtaining a connected figure without holes and of the longest perimeter. ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 4) - 2 * a(n - 5) + a(n - 6) for n > 10. ●

▶ [A171647] 1,2,4,8,12,24,32,64,80,160,192,384,448,896,1024,2048,2304,4608,5120,10240,11264,22528,24576,49152,53248 ⋆ a(1) = 1; for n > 1, a(n) = 2 * a(n - 1) if n is even, a(n) = ((n + 1) / (n - 1)) * a(n - 1) if n is odd. ● a(n) = 4 * a(n - 2) - 4 * a(n - 4). ● a(n) = (2 * n - (- 1) ^ n + 1) * 2 ^ ((2 * n + (- 1) ^ n - 9) / 4). - _ Bruno Berselli _ , Dec 07 2010 ●

▶ [A089821] 0,2,4,8,12,24,32,64,128,256,320,640,768,1536,3072,6144,7168,14336,16384,32768,65536,131072,147456,294912,589824 ⋆ Number of subsets of { 1,.., n } containing exactly one prime. ● a(n) = pi(n) * 2 ^ (n - pi(n)), with pi = A000720. ●

▶ [A343419] 1,1,2,4,8,12,24,34,62,88,148,208,360,466,784,1082,1718,2278,3744,4902,7914,10486,16334,21728 ⋆ Number of distinct sets { p(i) - p(j) : 1 <= i <= j <= n } where p ranges over all permutations of [n]. ● a(n) < 2 + 74 * 3 ^ (n - 6). ● a(n) <= 2 * a(n - 1) (conjectured). ●

▶ [A279312] 1,2,4,8,12,24,40,80,128,256,416,832,1344,2688,4352,8704,14080,28160,45568,91136,147456,294912,477184,954368,1544192 ⋆ Number of subsets of { 1 , 2, 3, ..., n } that include no consecutive even integers. ● a(n) = 2a(n - 2) + 4a(n - 4). - _ Charles R Greathouse IV _ , Dec 13 2016 ●

▶ [A354541] 1,1,2,4,8,12,24,48,72,144,288,432,864,1728,2592,5184,10368,15552,31104,62208,93312,186624,373248,559872,1119744 ⋆ Number of ways to tile a double - hexagon strip of n hexagons, using single and double hexagons. ● a(3 * n) = a(3 * n - 1) + a(3 * n - 2) + a(3 * n - 3) = 4 * 6 ^ (n - 1). ● a(3 * n + 1) = a(3 * n) + 2 * a(3 * n - 1) = 8 * 6 ^ (n - 1). ● a(3 * n + 2) = a(3 * n + 1) + a(3 * n) = 12 * 6 ^ (n - 1). ● a(n) = 6 * a(n - 3) for n > 4. (End) ●

▶ [A030503] 2,4,8,13,19,27,36,46,58,71,85,101,118,136,156,177,199,223,248,274,302,331,361,393,426 ⋆ Graham - Sloane - type lower bound on the size of a ternary (n,3,3) constant - weight code. ● a(n) = ceiling(binomial(n, w) * 2 ^ w / (2 * n + 1)) with w=3. ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) - 2 * a(n - 4) + a(n - 5) for n>7. ● a(n) = (2 * n ^ 2 - 7 * n + 8) / 3 if n == 1 (mod 3), otherwise a(n) = (2 * n ^ 2 - 7 * n + 9) / 3. ●

▶ [A245094] 1,2,4,8,13,20,24,27,33,36,42,45,51,54,60,63,69,72,78,81,87,90,96,99,105 ⋆ Total squares count in n - th generation of Pythagoras tree variation which is rhombitrihexagonal tiling. ● a(n) = 3 * ((- 1) ^ n + 6 * n - 5) / 4 for n > 5. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n > 8. ●

▶ [A084684] 1,2,4,8,13,20,28,38,49,62,76,92,109,128,148,170,193,218,244,272,301,332,364,398,433 ⋆ Degrees of certain maps (see Comments and Formulas for more precise definitions). ● a(n) = (6 * n ^ 2 + 9 - (- 1) ^ n) / 8. - _ Charles R Greathouse IV _ , Sep 10 2014 ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4). - _ Colin Barker _ , Sep 11 2014 ● a(n) = a(- n) for all n in Z. - _ Michael Somos _ , Feb 08 2015 ● a(n) = 3 * (a(n - 1) + a(n - 4)) - 2 * (a(n - 2) + a(n - 3)) - a(n - 5) for all n in Z. - _ Michael Somos _ , Jan 04 2022 ●

▶ [A011907] 0,0,0,0,0,2,4,8,13,20,28,39,52,68,87,109,134,163,195,232,273,319,369,425,485 ⋆ [n(n - 1)(n - 2) / 25]. ● a(n) = + 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 25) - 3 * a(n - 26) + 3 * a(n - 27) - a(n - 28). G.f.: x ^ 5 * (2 - 2 * x + 2 * x ^ 2 - x ^ 3 + x ^ 4 - x ^ 5 + 2 * x ^ 6 - x ^ 7 + x ^ 8 + x ^ 12 - x ^ 13 + 2 * x ^ 14 - x ^ 15 + x ^ 16 - x ^ 17 + 2 * x ^ 18 - 2 * x ^ 19 + 3 * x ^ 20 - 2 * x ^ 21 + x ^ 22) / ((- 1 + x) ^ 4 * (1 + x ^ 4 + x ^ 3 + x ^ 2 + x) * (x ^ 20 + x ^ 15 + x ^ 10 + x ^ 5 + 1)). - _ R. J. Mathar _ , Apr 15 2010 ●

▶ [A172131] 0,0,0,1,2,4,8,13,20,29,40,53,69,87,108,133,161,193,229,269,313,362,415,473,537 ⋆ Partial sums of floor(n ^ 2 / 9) (A056838). ● a(n) = Sum _{ k=0..n } floor(k ^ 2 / 9). ● a(n) = round((2 * n ^ 3 + 3 * n ^ 2 - 15 * n - 9) / 54). ● a(n) = round((2 * n ^ 3 + 3 * n ^ 2 - 15 * n - 8) / 54). ● a(n) = floor((2 * n ^ 3 + 3 * n ^ 2 - 15 * n + 18) / 54). ● a(n) = ceiling((2 * n ^ 3 + 3 * n ^ 2 - 15 * n - 34) / 54). ● a(n) = a(n - 9) + (n - 4) ^ 2 + 4, n > 8. ●

▶ [A173721] 0,0,1,2,4,8,13,20,29,41,55,72,93,117,145,177,214,255,301,353,410,473,542,618,700 ⋆ Partial sums of A056833. ● a(n) = Sum _{ k=0..n } round(k ^ 2 / 7). ● a(n) = round((2 * n ^ 3 + 3 * n ^ 2 + n) / 42). ● a(n) = a(n - 7) + (n - 3) ^ 2 + 4, n > 6. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 7) - 3 * a(n - 8) + 3 * a(n - 9) - a(n - 10). ● a(n) = n * (n + 1) * (2 * n + 1) / 42 - b(n) / 7 where b(n) = 0, 1, - 2, 0, 2, - 1, 0, ... with period 7. (End) ●

▶ [A061866] 0,0,0,1,2,4,8,13,20,30,42,57,76,98,124,155,190,230,276,327,384,448,518,595,680 ⋆ a(n) is the number of solutions to x + y + z = 0 mod 3, where 1 <= x < y < z <= n. ● a(n) = (binomial(n,3) + 2 * floor(n / 3)) / 3. - _ Claude Morin _ , Mar 06 2012 ●

▶ [A130840] 1,1,2,4,8,13,20,30,45,69,110,184,323,591,1116,2154,4217,8329,16538,32940,65727,131283,262376,524542,1048853 ⋆ a(n) = floor((1 / 16) * (16 + 2 ^ n - 8 * n + 8 * n ^ 2)). ● a(n) = 5 * a(n - 1) - 9 * a(n - 2) + 7 * a(n - 3) - 2 * a(n - 4) for n>8. ● a(n) = 2 + 2 ^ (n - 5) - (3 * n) / 2 + n ^ 2 / 2 for n>4. ●

▶ [A115266] 1,2,4,8,13,20,31,44,61,84,111,144,186,234,291,360,438,528,634,752,886,1040,1210,1400,1615 ⋆ Row sums of correlation triangle for floor((n + 3) / 3) . ● a(n) = Sum _{ k=0..n } Sum _{ j=0..n } [j<=k] * floor((k - j + 3) / 3) * [j<=n - k] * floor((n - k - j + 3) / 3). ● a(n) = Sum _{ m=1..n + 3 } Sum _{ k=1..floor(m / 3) } Sum _{ i=k..floor((m - k) / 2) } k. ● a(n) = 2 * a(n - 1) - 3 * a(n - 4) + 3 * a(n - 6) - 2 * a(n - 9) + a(n - 10). (End) ●

▶ [A026039] 2,4,8,13,21,31,44,61,81,106,135,169,209,254,306,364,429,502,582,671,768,874,990,1115,1251 ⋆ a(n) = (d(n) - r(n)) / 5, where d = A026037 and r is the periodic sequence with fundamental period (1,2,0,2,0). ● a(n) = (n + 3) * (2 * n ^ 2 + 9 * n + 22) / 30 - 1 / 5 - (- 1 / 25 * ((5 - 5 ^ (1 / 2)) ^ (1 / 2) - (5 + 5 ^ (1 / 2)) ^ (1 / 2)) * 2 ^ (1 / 2)) * sin(2 * n * Pi / 5) - (1 / 25 * ((5 - 5 ^ (1 / 2)) ^ (1 / 2) + (5 + 5 ^ (1 / 2)) ^ (1 / 2)) * 2 ^ (1 / 2)) * sin(4 * n * Pi / 5). - _ Richard Choulet _ , Dec 14 2008 ● a(n) = round((2 * n - 1) * (n ^ 2 - n + 6) / 30) = floor((2 * n ^ 3 - 3 * n ^ 2 + 13 * n) / 30) = ceiling((n - 1) * (2 * n ^ 2 - n + 12) / 30) = round((n - 1) * (2 * n ^ 2 - n + 12) / 30). - _ Mircea Merca _ , Dec 03 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 5) - 3 * a(n - 6) + 3 * a(n - 7) - a(n - 8); ● a(n) = a(n - 5) + n ^ 2 - 6 * n + 13, n > 5 , a(1)=0, a(2)=1. - _ Mircea Merca _ , Dec 03 2010 ●

▶ [A164429] 1,2,4,8,13,21,33,50,75,112,166,245,361,531,780,1145,1680,2464,3613,5297,7765,11382,16683,24452,35838 ⋆ Number of binary strings of length n with no substrings equal to 0000, 0011, or 1011. ● a(n) = a(n - 1) + a(n - 3) + 4 for n>4. - _ Greg Dresden _ , Feb 09 2020 ●

▶ [A164480] 1,2,4,8,13,21,34,55,88,142,229,370,598,967,1564,2530,4093,6622,10714,17335,28048,45382,73429,118810,192238 ⋆ Number of binary strings of length n with no substrings equal to 0001, 0110 or 1100. ● a(n) = 2 * a(n - 1) - a(n - 3) for n>6. ● a(n) = 3 * Lucas(n - 1) + 1 for n >= 6. - _ Greg Dresden _ , Oct 10 2020 ●

▶ [A134035] 2,4,8,13,21,39,64,138,236,551,963,2315,4078,9892,17468,42481,75069,182691,322900,785970,1389248,3381731,5977491,14550695,25719658 ⋆ The 4 X 4 Fibonacci / anti - Fibonacci game switched modulo 2 with its dual: MA1= {{ 0,1 } , { 1,1 }} ;MB1= {{ 0,1 }{ 1,3 }} ; MA2= {{ 0,1 } ,1,3 }} ;MB2= {{ 1, 0 } , { 1,1 }} ; the game has two characteristic polynomials: (- 3 + 5 x - 3 x ^ 3 + x ^ 4, - 1 + x + 2 x ^ 2 - 3 x ^ 3 + x ^ 4 } . ● a(n) = + a(n - 1) + 6 * a(n - 2) - 6 * a(n - 3) - 8 * a(n - 4) + 8 * a(n - 5) + 3 * a(n - 6) - 3 * a(n - 7). G.f.: x * (2 + 2 * x - 8 * x ^ 2 - 7 * x ^ 3 + 4 * x ^ 5 + 3 * x ^ 6) / ((1 + x) * (3 * x ^ 4 - 5 * x ^ 2 + 1) * (x - 1) ^ 2). [From _ R. J. Mathar _ , May 24 2010] ●

▶ [A330153] 1,1,2,4,8,13,22,36,56,85,127,186,268,381,533,736,1004,1355,1811,2397,3146,4095,5289,6783,8641 ⋆ Nearest integer to the product of all integer roots of n from the second to the n - th. ● a(n) = round(n ^ (1 / n) * n ^ (1 / (n - 1)) * ... * n ^ (1 / 2)). ●

▶ [A164413] 1,2,4,8,13,22,36,58,94,152,246,398,644,1042,1686,2728,4414,7142,11556,18698,30254,48952,79206,128158,207364 ⋆ Number of binary strings of length n with no substrings equal to 0000, 0001 or 1001. ● a(n) = 2 * (((1 - sqrt(5)) / 2) ^ n + ((1 + sqrt(5)) / 2) ^ n) for n>4. ● a(n) = a(n - 1) + a(n - 2) for n>6. ●

▶ [A018066] 1,1,2,4,8,13,22,38,64,107,181,304,512,861,1448,2435,4096,6888,11585,19483,32768,55108,92681,155871,262144 ⋆ Powers of fourth root of 8 rounded down. ● a(n) ^ 4 <= 8 ^ n < (a(n) + 1) ^ 4. - _ Robert Israel _ , May 08 2018 ●

▶ [A348574] 1,2,4,8,13,24,40 ⋆ Length of the shortest string over the alphabet { 1,...,n } such that every subset of { 1,...,n } appears as a substring (in some order). ● a(n) >= binomial(n, ceiling(n / 2)) + ceiling(n / 2) - 1. [Lipski, formula (1)] ● a(n) >= n * ceiling(binomial(n, floor(n / 2)) / n). [Lipski, formula (3)] ●

▶ [A227910] 1,2,4,8,13,24,40,71,119,216,372,678,1215,2240,4102,7674,14299,27000,50952,96896,184397,352684,675174,1296843,2493711 ⋆ The number of necklaces with n beads of white and red colors, including at least three white ones. ● a(n) = (Sum _{ m=3..n } (1 / n * sum _{ d|gcd(m,n) } phi(d) * binomial(n / d, m / d)) + binomial(floor(m / 2) + floor((n - m) / 2), floor(m / 2))) / 2. ●

▶ [A048328] 0,1,2,4,8,13,26,40,80,121,242,364,728,1093,2186,3280,6560,9841,19682,29524,59048,88573,177146,265720,531440 ⋆ Numbers that are repdigits in base 3. ● a(n) = (3 ^ (n / 2) * (sqrt(3) + 2 - (- 1) ^ n * (sqrt(3) - 2)) - 3 - (- 1) ^ n) / 4. - _ Stefano Spezia _ , Feb 18 2022 ●

▶ [A288925] 2,4,8,13,26,47,89,159,300,548,1021,1868,3471,6383,11821,21766,40264,74237,137198,253091,467549,862823,1593492,2941192,5431149 ⋆ a(n) = a(n - 1) + a(n - 2) + 3 * a(n - 4) - 2 * a(n - 5) for n >= 5, where a(0) = 2, a(1) = 4, a(2) = 8, a(3) = 13, a(4) = 26. ● a(n) = a(n - 1) + a(n - 2) + 3 * a(n - 4) - 2 * a(n - 5) for n >= 5, where a(0) = 2, a(1) = 4, a(2) = 8, a(3) = 13, a(4) = 26. ●

▶ [A128309] 2,4,8,14,16,22,26,28,32,38,42,44,50,52,56,62,64,70,74,76,82,84,88,94,98 ⋆ a(n) = 2 * A000069(n). ● a(n) = 4n + O(1). - _ Charles R Greathouse IV _ , Mar 22 2013 ●

▶ [A140164] 1,2,4,8,14,20,26,32,38,44,50,56,62,68,74,80,86,92,98,104,110,116,122,128,134 ⋆ Binomial transform of [1, 1, 1, 1, - 1, - 1, 5, - 11, 19, - 29, 41, ...]. ●

a(n) = 2 * (3n - 5), n >= 3, if offset is 0 instead of 1. - _ Daniel Forgues _ , Jul 17 2016 ●

▶ [A316699] 2,4,8,14,20,38,70,134,240,442,814,1502,2756,5070,9326,17158,31552,58034,106742,196334,361108,664182,1221622,2246918,4132720 ★ Number of (marked) cyclic n - bit binary strings containing no runs of length > 3. ● a(n) = a(n - 2) + 2 * a(n - 3) + 3 * a(n - 4) + 2 * a(n - 5) + a(n - 6) for n>9. - _ Colin Barker _ , Jul 28 2019 ●

▶ [A014206] 2,4,8,14,22,32,44,58,74,92,112,134,158,184,212,242,274,308,344,382,422,464,508,554,602 ★ a(n) = n ^ 2 + n + 2. ● a(n) = a(n - 1) + 2 * n (with a(0) = 2). - _ Vincenzo Librandi _ , Nov 20 2010 ● a(0) = 2, a(1) = 4, a(2) = 8, a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n >= 3. - _ Harvey P. Dale _ , May 14 2011 ● a(n + 1) = n ^ 2 + 3 * n + 4. - _ Alonso del Arte _ , Apr 12 2015 ● a(n) = Sum _{ i=n - 2..n + 2 } i * (i + 1) / 5. - _ Bruno Berselli _ , Oct 20 2016 ●

▶ [A084626] 1,2,4,8,14,22,33,47,66,91,121,158,204,258,323,399,487,590,708,843,996,1170,1365,1583,1827 ★ a(n) = floor(C(n + 6,6) / C(n + 2,2)). ● a(n) = 1 + floor(n * (n + 9) * (n ^ 2 + 9 * n + 38) / 360). ● a(n) = floor(binomial(n + 6, 4) / 15). - _ G. C. Greubel _ , Mar 24 2023 ●

▶ [A025003] 2,4,8,14,22,33,48,66,90,120,156,202,256,322,400,494,604,734,888,1067,1272,1512,1790,2107,2472 ★ a(1) = 2; a(n + 1) = a(n) - th nonprime, where nonprimes begin at 1. ● a(n) = min(k: f ^ n(k) = 1), where f = A062298 and n - fold iteration of f is denoted by f ^ n. - _ Ya - Ping Lu _ , Sep 07 2020 ●

▶ [A305497] 2,4,8,14,22,34,52,80,122,184,278,418,628,944,1418,2128,3194,4792,7190,10786,16180,24272,36410,54616,81926 ★ The largest positive even integer that can be represented with n digits in base 3 / 2. ● a(n + 1) = 2 * floor(3 * a(n) / 4) + 2. ●

▶ [A201347] 2,4,8,14,23,36,54,78,109,148,196,254,323,404,498,606,729,868,1024,1198,1391,1604,1838,2094,2373 ★ Number of n X 2 0..1 arrays with rows and columns lexicographically nondecreasing and every element equal to at least one horizontal or vertical neighbor. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>5. ●

▶ [A091773] 1,2,4,8,14,23,36,54,78,110,151,202,266,344,438,551,684,840,1022,1232,1473,1748,2060,2412,2808 ★ G.f.: Product((1 + x ^ i) / (1 - x ^ i),i=1..n - 1) / (1 - x ^ n), with n = 5. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + 2 * a(n - 3) - 3 * a(n - 4) + 4 * a(n - 5) - 4 * a(n - 6) + 3 * a(n - 7) - 2 * a(n - 8) + 3 * a(n - 9) - 3 * a(n - 10) + a(n - 11). - _ Wesley Ivan Hurt _ , Apr 26 2021 ●

▶ [A341277] 1,2,4,8,14,24,32,42,54,68,82,98,118,140,162,186,216,248,280,314,356,400,444,490,546 ★ Number of length - n binary mesosome - avoiding strings. ● a(4k) = (4k ^ 3 + 15k ^ 2 + 41k - 12) / 3; ● a(4k + 1) = (4k ^ 3 + 18k ^ 2 + 50k) / 3; ● a(4k + 2) = (4k ^ 3 + 21k ^ 2 + 59k + 12) / 3; ● a(4k + 3) = (4k ^ 3 + 24k ^ 2 + 68k + 30) / 3. [from 'Mesosome Avoidance', Theorem 2, eqn. (1), _ Georg Fischer _ , Nov 25 2022] ●

▶ [A053800] 1,2,4,8,14,24,38,58,86,124,174,238,320,422,548,702,886,1106,1366,1670,2024,2432,2900,3434,4040 ★ Number of basis partitions of n + 25 with Durfee square size 5. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + 2 * a(n - 3) - 3 * a(n - 4) + 4 * a(n - 5) - 4 * a(n - 6) + 3 * a(n - 7) - 2 * a(n - 8) + 3 * a(n - 9) - 3 * a(n - 10) + a(n - 11) for n>11. - _ Colin Barker _ , Jan 01 2020 ●

▶ [A053801] 1,2,4,8,14,24,40,62,94,140,202,286,398,542,728,966,1262,1630,2084,2634,3300,4100,5048,6170,7490 ★ Number of basis partitions of n + 36 with Durfee square size 6. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + 3 * a(n - 3) - 6 * a(n - 4) + 7 * a(n - 5) - 6 * a(n - 6) + 6 * a(n - 7) - 6 * a(n - 8) + 7 * a(n - 9) - 6 * a(n - 10) + 3 * a(n - 11) - 3 * a(n - 12) + 3 * a(n - 13) - a(n - 14) for n>14. - _ Colin Barker _ , Jan 02 2020 ●

▶ [A053802] 1,2,4,8,14,24,40,64,98,148,218,314,446,622,854,1158,1550,2050,2684,3478,4464,5682,7172,8982,11170 ★ Number of basis partitions of n + 49 with Durfee square size 7. ● a(n) = a(n - 1) + a(n - 2) - a(n - 5) - a(n - 7) - a(n - 8) + a(n - 10) + a(n - 11) + 2 * a(n - 12) - 2 * a(n - 16) - a(n - 17) - a(n - 18) + a(n - 20) + a(n - 21) + a(n - 23) - a(n - 26) - a(n - 27) + a(n - 28) for n>28. - _ Colin Barker _ , Jan 02 2020 ●

▶ [A015128] 1,2,4,8,14,24,40,64,100,154,232,344,504,728,1040,1472,2062,2864,3948,5400,7336,9904,13288,17728,23528 ★ Number of overpartitions of n: an overpartition of n is an ordered sequence of nonincreasing integers that sum to n, where the first occurrence of each integer may be overlined. ● a(n) = (1 / n) * Sum _{ k=1..n } (sigma(2 * k) - sigma(k)) * a(n - k). - _ Vladeta Jovovic _ , Dec 05 2004 ● a(n) = Sum _{ i=1..p(n) } 2 ^ (d(n,i)), where d(n,i) is the number of distinct parts in the i - th partition of n. - _ Richard Joseph Boland _ , Sep 02 2021 ●

▶ [A123655] 1,2,4,8,14,24,40,64,101,156,236,352,518,752,1080,1536,2162,3018,4180,5744,7840,10632,14328,19200,25591 ★ Expansion of q * psi(q ^ 8) / phi(- q) in powers of q where psi(), phi() are Ramanujan theta functions. ● a(n) is odd if f n is an odd square. If n>2 is a power of 2 then the highest power of 2 dividing a(n) is (n / 2) ^ 3. - _ Michael Somos _ , Feb 18 2007 ●

▶ [A019274] 0,0,2,4,8,14,24,40,66,108,176,286,464,752,1218,1972,3192,5166,8360,13528,21890,35420,57312,92734,150048 ★ Number of recursive calls needed to compute the n - th Fibonacci number F(n), starting with F(1) = F(2) = 1. ● a(n) = Sum _{ k=0..n } (2 - 2 * 0 ^ (n - k)) * F(k) } . - _ Paul Barry _ , Oct 24 2007 ● a(n) = F(n) + F(n + 3) - 2, n>= - 1 (where F(n) is the n - th Fibonacci number). - _ Zerinvary Lajos _ , Jan 31 2008 ● a(1)=0, a(2)=0, a(3)=2, a(n) = 2 * a(n - 1) - a(n - 3). - _ Harvey P. Dale _ , Oct 16 2012 ●

▶ [A164402] 1,2,4,8,14,24,40,68,116,200,344,592,1016,1744,2992,5136,8816,15136,25984,44608,76576,131456,225664,387392,665024 ★ Number of binary strings of length n with no substrings equal to 0010 or 0110. ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + 2 * a(n - 4). - _ Andrew Howroyd _ , Feb 14 2018 ●

▶ [A182747] 0,1,2,4,8,14,24,41,66,105,165,253,383,574,847,1238,1794,2573,3660,5170,7245,10087,13959,19196,26252 ★ Bisection (odd part) of number of partitions that do not contain 1 as a part A002865. ● a(n) = p(2 * n + 1) - p(2 * n), where p is the partition function, A000041. - _ George Beck _ , Aug 14 2011 ●

▶ [A164406] 1,2,4,8,14,24,41,68,111,180,289,460,728,1146,1795,2800,4352,6742,10414,16044,24659,37818,57885,88440,134899 ★ Number of binary strings of length n with no substrings equal to 0011 or 0101. ● a(n) = Sum _{ i=0..floor((n + 1) / 2) } (n + 1 - 2i) * C(n + 1 - 2i,i). - _ Wesley Ivan Hurt _ , Nov 17 2017 ●

▶ [A178982] 0,0,0,1,2,4,8,14,24,41,68,112,184,300,488,793,1286,2084,3376,5466,8848,14321,23176,37504,60688 ★ Partial sums of floor(Fibonacci(n) / 2). ● a(n) = round(Fibonacci(n + 2) / 2 - (n + 2) / 3). ● a(n) = round(Fibonacci(n + 2) / 2 - n / 3 - 1 / 2). ● a(n) = floor(Fibonacci(n + 2) / 2 - n / 3 - 1 / 2). ● a(n) = ceiling(Fibonacci(n + 2) / 2 - (n + 1) / 3 - 1 / 2). ● a(n) = a(n - 3) + Fibonacci(n) - 1, n > 3. ● a(n) = 2 * a(n - 1) - 2 * a(n - 4) + a(n - 6), n > 5. ●

▶ [A164396] 1,2,4,8,14,24,41,70,120,205,350,597,1018,1736,2960,5047,8605,14671,25013,42645,72706,123957,211335,360306,614287 ★ Number of binary strings of length n with no substrings equal to 0001 or 0110. ● a(n) = 2 * a(n - 1) - a(n - 3) + a(n - 5) - a(n - 6). - _ Andrew Howroyd _ , Feb 14 2018 ●

▶ [A164405] 1,2,4,8,14,24,41,70,120,207,358,620,1074,1860,3220,5573,9644,16688,28877,49970,86472,149640,258954,448124,775485 ★ Number of binary strings of length n with no substrings equal to 0010 or 1100. ● a(n) = 2 * a(n - 1) - a(n - 3) + a(n - 6). - _ Andrew Howroyd _ , Feb 14 2018 ●

▶ [A164395] 1,2,4,8,14,24,42,72,122,208,354,600,1018,1728,2930,4968,8426,14288,24226,41080,69658,118112,200274,339592,575818 ★ Number of binary strings of length n with no substrings equal to 0001 or 0101. ● a(n) = 2 * a(n - 1) - a(n - 2) + 2 * a(n - 3) - 2 * a(n - 4). - _ Andrew Howroyd _ , Feb 14 2018 ●

▶ [A164394] 1,2,4,8,14,24,42,74,130,228,400,702,1232,2162,3794,6658,11684,20504,35982,63144,110810,194458,341250,598852,1050912 ★ Number of binary strings of length n with no substrings equal to 0001 or 0100. ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) for n > 3. - _ Andrew Howroyd _ , Feb 14 2018 ●

▶ [A066456] 1,1,2,4,8,14,25,40,65,97,146,206,292,394,533,694,905,1145,1450,1792,2216,2686,3257,3884,4633 ★ Upper bound on number of regular triangulations of cyclic polytope C(n, n - 4). ● a(n) = (n ^ 4 - 8 * n ^ 3 + 52 * n ^ 2 - 112 * n + 128) / 64 for n even. ● a(n) = (n ^ 4 - 8 * n ^ 3 + 54 * n ^ 2 - 120 * n + 137) / 64 for n odd. ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 6 * a(n - 3) + 6 * a(n - 5) - 2 * a(n - 6) - 2 * a(n - 7) + a(n - 8) for n>8. ●

▶ [A020956] 1,2,4,8,14,25,42,71,117,193,315,514,835,1356,2198,3562,5768,9339,15116,24465,39591,64067,103669,167748,271429 ★ Sum of [tau ^ (n - k)] for k from 1 to infinity. ● a(n) = 2 ^ (- 2 - n) * ((- 2) ^ n - 5 * 2 ^ n + 2 * (1 - t) ^ (1 + n) + 2 * (1 + t) ^ n + 2 * t * (1 + t) ^ n - 2 ^ (1 + n) * n) where t=sqrt(5). - _ Colin Barker _ , Feb 09 2017 ●

▶ [A164393] 1,2,4,8,14,25,44,76,132,228,393,678,1168,2012,3466,5969,10280,17704,30488,52504,90417,155706,268140,461760,795190 ★ Number of binary strings of length n with no substrings equal to 0001 or 0011. ● a(n) = 2 * a(n - 1) - 2 * a(n - 4) + a(n - 5). - _ Andrew Howroyd _ , Feb 14 2018 ●

▶ [A164391] 1,2,4,8,14,25,44,77,134,233,405,703,1220,2117,3673,6372,11054,19176,33265,57705,100101,173645,301221,522526,906422 ★ Number of binary strings of length n with no substrings equal to 0000 or 0111. ● a(n) = 1.6443631... * 1.7346913... ^ n + O(1), where 1.7346913... is the real root of x ^ 5 - x ^ 3 - 2x ^ 2 - 2x - 1. [_ Charles R Greathouse IV _ , Jan 18 2012] ●

▶ [A164392] 1,2,4,8,14,25,44,78,137,241,423,743,1304,2289,4017,7050,12372,21712,38102,66865,117340,205918,361361,634145,1112847 ★ Number of binary strings of length n with no substrings equal to 0001 or 0010. ● a(n) = 2 ^ n for n<4; otherwise, a(n) = a(n - 1) + a(n - 2) + a(n - 4) + 1. (End) ●

▶ [A199925] 0,0,0,1,2,4,8,14,25,45,80,142,253,450,800,1423,2531,4501,8005,14237,25320,45031,80087,142433,253314 ★ Number of sequences of n coin flips that win on the last flip, if the sequence of flips ends with (0,0,1,1). ● a(n) = a(n - 1) + a(n - 2) + a(n - 3) - a(n - 5) for n>7. ● a(n) = 2 * a(n - 1) - a(n - 4) - a(n - 5) + a(n - 6) for n>8. ●

▶ [A164388] 1,2,4,8,14,25,45,80,142,253,450,800,1423,2531,4501,8005,14237,25320,45031,80087,142433,253314,450514,801230,1424971 ★ Number of binary strings of length n with no substrings equal to 0000 or 0011. ● a(n) = 2 ^ n for n<4, a(4)=14, a(5)=25, a(6)=45, a(7)=80, a(8)=142, a(n)=a(n - 1) + a(n - 2) + a(n - 3)) - a(n - 5). - _ Harvey P. Dale _ , Feb 15 2013 ●

▶ [A164401] 1,2,4,8,14,25,45,81,146,264,477,861,1554,2805,5063,9139,16497,29779,53754,97031,175150,316162,570702,1030171,1859556 ★ Number of binary strings of length n with no substrings equal to 0010 or 0101. ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) + a(n - 6). - _ Andrew Howroyd _ , Feb 14 2018 ●

▶ [A027557] 1,2,4,8,14,26,44,78,130,224,370,626,1028,1718,2810,4656,7594,12506,20356,33374,54242,88640,143906,234594,380548 ★ Number of 3 - balanced strings of length n: let d(S)= # (1)'s in S - # (0)'s, then S is k - balanced if every substring T has - k<=d(T)<=k; here k=3. ● a(n) = a(n - 1) + 3a(n - 2) - 2a(n - 3) - 2a(n - 4); g.f. (1 + x - x ^ 2) / (1 - x - x ^ 2)(1 - 2x ^ 2). ●

▶ [A317884] 1,1,1,2,4,8,14,26,47,87,160,295,540,997,1832,3369,6197,11406,20975,38594,70991,130610,240275,442043,813184 ★ Number of series - reduced achiral free pure multifunctions (with empty expressions allowed) with one atom and n positions. ● a(1) = 1; a(n > 1) = a(n - 1) + Sum _{ 0 < k < n - 1 } a(k) * Sum _{ d|(n - k - 1), d < n - k - 1 } a(d). ●

▶ [A135491] 1,2,4,8,14,26,48,88,162,298,548,1008,1854,3410,6272,11536,21218,39026,71780,132024,242830,446634,821488,1510952,2779074 ★ Number of ways to toss a coin n times and not get a run of four. ● a(n) = a(n - 1) + a(n - 2) + a(n - 3) for n > 3. ● a(n) = nearest integer to b * c ^ n, where b = 1.2368... and c = 1.839286755... is the real root of x ^ 3 - x ^ 2 - x - 1 = 0. See A058265. - _ N. J. A. Sloane _ , Jan 06 2010 ●

▶ [A257934] 1,1,2,4,8,14,26,48,89,163,300,552,1016,1868,3436,6320,11625,21381,39326,72332,133040,244698,450070,827808,1522577 ★ Expansion of 1 / (1 - x - x ^ 2 - x ^ 3 - x ^ 4 + x ^ 5 + x ^ 6 + x ^ 7). ● a(n)= a(n - 1) + a(n - 2) + a(n - 3) + a(n - 4) - a(n - 5) - a(n - 6) - a(n - 7). ●

▶ [A258000] 1,1,2,4,8,14,26,48,89,164,302,557,1028,1896,3496,6448,11893,21935,40455,74613,137613,253807,468108,863354,1592327 ★ Expansion of 1 / (1 - x - x ^ 2 - x ^ 3 - x ^ 4 + x ^ 5 + x ^ 6 + x ^ 7 - x ^ 9). ● a(n) = a(n - 1) + a(n - 2) + a(n - 3) + a(n - 4) - a(n - 5) - a(n - 6) - a(n - 7) + a(n - 9) ●

▶ [A068912] 1,2,4,8,14,28,48,96,164,328,560,1120,1912,3824,6528,13056,22288,44576,76096,152192,259808,519616,887040,1774080,3028544 ★ Number of n step walks (each step +/- 1 starting from 0) which are never more than 3 or less than - 3. ● a(n) = 4 * a(n - 2) - 2 * a(n - 4). ● a(n) = (2 ^ n / 4) * Sum _{ r=1..4 }

(- 1) ^ r * cos((Pi * (2 * r - 1)) / 8) ^ n * cot((Pi * (1 - 2 * r)) / 16). - _ Herbert Kociemba _ , Sep 19 2020 ● a(n) = a1(n) + a2(n) with ●

► [A187813] 0,1,2,4,8,14,30,32,38,42,44,54,60,62,74,84,90,98,102,104,108,110,114,128,138 ★ Numbers n whose base - b digit sum is not b for all bases b >= 2. ● a(n + 1) = 1 + min (p > a(n) | p is prime AND ((q := p + 1 - 2 ^ floor(log _ 2(p + 1)) = 0) OR (2 ^ floor(log _ 2(q)) <> q))) ● a(n) > Prime(n), for n > 5. ● a(n - m) < Prime(n), for n > 1, where m := i * (i - 1) / 2 + j - 1, i := floor(log _ 2(Prime(n))), j := floor(log _ 2(Prime(n) - 2 ^ i)). ● a(n - m) < Prime(n), for n > 32, where m := i * (i - 1) / 2 + j - 16 with i and j above. ●

► [A033623] 1,2,4,8,15,16,32,51,64,85,106,128,150,171,219,237,247,256,279,297,455,512,537,557,594 ★ Grundy function for turn - at - most - 4 - coins game. ● a(n)=smallest natural not the exclusive - or of at most three a(k) for k<n. ●

► [A026474] 1,2,4,8,15,22,29,36,43,50,57,64,71,78,85,92,99,106,113,120,127,134,141,148,155 ★ a(n) = least positive integer > a(n - 1) and not equal to a(i) + a(j) or a(i) + a(j) + a(k) for 1<=i<j<k<n (a 3 - Stohr sequence). ● a(n) = 7 * n - 20 for n>3. a(n) = 2 * a(n - 1) - a(n - 2) for n>5. G.f.: x * (1 + x ^ 2 + 2 * x ^ 3 + 3 * x ^ 4) / (1 - x) ^ 2. - _ Colin Barker _ , Sep 19 2012 ●

► [A082562] 1,2,4,8,15,24,35,48,63,80,99,120,143,168,195,224,255,288,323,360,399,440,483,528,575 ★ a(n) = number of values of m such that m can be expressed as the sum of distinct odd numbers with largest odd number in the sum = 2n + 1. ● a(n) = n ^ 2 - 1 for n>2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>5. ●

► [A204555] 1,2,4,8,15,26,41,63,89,126,166,222,279,358,435,541,641,778,904,1076,1231,1442,1629,1883,2105 ★ The number of subsets of the numbers { 1,2,3...,n } consisting of at most 3 elements and at most two of those are even. ● a(n) = { (14 * n ^ 3 + 15 * n ^ 2 + 49 * n + 111) - (3 * n ^ 2 - 15 * n + 15)(- 1) ^ n }/ 96. ● a(0)=1, a(1)=2, a(2)=4, a(3)=8, a(4)=15, a(5)=26, a(6)=41, a(n)=a(n - 1) + 3 * a(n - 2) - 3 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) + a(n - 6) - a(n - 7). - _ Harvey P. Dale _ , Apr 17 2012 ●

► [A000125] 1,2,4,8,15,26,42,64,93,130,176,232,299,378,470,576,697,834,988,1160,1351,1562,1794,2048,2325 ★ Cake numbers: maximal number of pieces resulting from n planar cuts through a cube (or cake): C(n + 1,3) + n + 1. ● a(n) = (n + 1) * (n ^ 2 - n + 6) / 6 = (n ^ 3 + 5 * n + 6) / 6. ● a(n) = binomial(n,3) + binomial(n,2) + binomial(n,1) + binomial(n,0). - Peter C. Heinig (algorithms (AT)gmx.de), Oct 19 2006 ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ●

► [A129961] 1,2,4,8,15,26,42,64,94,140,232,464,1092,2744,6840,16384,37384,81296,169120,338240,654192,1232288,2280864,4194304,7761376 ★ Main diagonal of triangular array T: T(j,1) = 1 for ((j - 1) mod 8) < 4, else 0; T(j,k) = T(j - 1,k - 1) + T(j,k - 1) for 2 <= k <= j. ● a(1) = 1, a(2) = 2, a(3) = 4, a(4) = 8, a(5) = 15; for n > 5, a(n) = 6 * a(n - 1) - 14 * a(n - 2) + 16 * a(n - 3) - 10 * a(n - 4) + 4 * a(n - 5). ●

► [A179001] 0,0,0,0,1,2,4,8,15,26,44,73,121,198,323,526,855,1387,2248,3641,5896,9544,15447,24999,40455 ★ Partial sums of floor(Fibonacci(n) / 3). ● a(n) = round(Fibonacci(n + 2) / 3 - 3 * n / 8 - 11 / 24). ● a(n) = round(Fibonacci(n + 2) / 3 - 3 * n / 8 - 1 / 3). ● a(n) = floor(Fibonacci(n + 2) / 3 - 3 * n / 8 - 1 / 6). ● a(n) = ceiling(Fibonacci(n + 2) / 3 - 3 * n / 8 - 3 / 4). ● a(n) = a(n - 8) + Fibonacci(n - 1) + Fibonacci(n - 3) - 3, n > 8. ● a(n) = 2 * a(n - 1) - a(n - 3) + a(n - 8) - 2 * a(n - 9) + a(n - 11), n > 10. ●

► [A125513] 2,4,8,15,26,48,89,165,305,561,1034,1908,3521,6496,11982,22101,40770,75210,138741,255934,472117,870911,1606567,2963628,5466988 ★ a(n) is the number of binary strings of length n such that no subsequence of length 5 or less contains 4 or more ones. ● a(n) = a(n - 1) + a(n - 2) + a(n - 4) + 2a(n - 5) - a(n - 7) - a(n - 10). ●

► [A001523] 1,1,2,4,8,15,27,47,79,130,209,330,512,784,1183,1765,2604,3804,5504,7898,11240,15880,22277,31048,43003 ★ Number of stacks, or planar partitions of n; also weakly unimodal compositions of n. ● a(n) = Sum _{ k=1..n } f(k, n - k), where f(n, k) (= A054250) = 1 if k = 0; Sum _{ j=1..min(n, k) } (n - j + 1) f(j, k - j)) if k > 0. - _ David W. Wilson _ , May 05 2000 ●

► [A000126] 1,2,4,8,15,27,47,80,134,222,365,597,973,1582,2568,4164,6747,10927,17691,28636,46346,75002,121369,196393,317785 ★ A nonlinear binomial sum. ● a(n) = Fibonacci(n + 3) - (n + 1) = a(n - 1) + a(n - 2) + n - 2 ● a(n) = 2 * a(n - 1) - a(n - 3) + 1. - _ Franklin T. Adams - Watters _ , Jan 13 2006 ● a(n + 1) = 1 + Sum _{ k=0..n } (Fibonacci(k + 2) - 1) = Sum _{ k=0..n } Fibonacci(k + 2) - n. - _ Paul Barry _ , Mar 06 2008 ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - a(n - 3) + a(n - 4). - _ Harvey P. Dale _ , May 05 2011 ●

► [A289692] 0,1,2,4,8,15,27,48,85,150,264,464,815,1431,2512,4409,7738,13580,23832,41823,73395,128800,226029,396654,696080 ★ The number of partitions of [n] with exactly 2 blocks without peaks. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + 2 * a(n - 3) - a(n - 4) for n>4. (End) ●

► [A029907] 0,1,2,4,8,15,28,51,92,164,290,509,888,1541,2662,4580,7852,13419,22868,38871,65920,111556,188422,317689,534768 ★ a(n + 1) = a(n) + a(n - 1) + Fibonacci(n), with a(0) = 0 and a(1) = 1. ● a(n) = ((n + 4) * Fibonacci(n) + 2 * n * Fibonacci(n - 1)) / 5. ● a(n + 1) = Sum _{ k=0..n } Sum _{ j=0..floor(k / 2) } binomial(n - j, j). - _ Paul Barry _ , Oct 23 2004 ● a(n) = F(n) + Sum _{ k=1..n - 1 } F(k) * F(n - k), where F=Fibonacci. - _ Reinhard Zumkeller _ , Nov 01 2013 ●

► [A005682] 1,2,4,8,15,28,51,92,165,294,522,924,1632,2878,5069,8920,15686,27570,48439,85080,149405,262320,460515,808380,1418916 ★ Number of Twopins positions. ● a(n) = 2a(n - 1) - a(n - 4) - a(n - 6). - _ John W. Layman _ ●

► [A114833] 0,1,2,4,8,15,28,51,93,168,304,550,995,1799,3253,5882,10635,19229,34767,62861,113656,205497,371550,671782,1214618 ★ Each term is previous term plus ceiling of root mean square of two previous terms. ● a(1) = 1, a(2) = 2, for n>2: a(n + 1) = a(n) + ceiling(RMS[a(n),a(n - 1)]). a(n + 1) = a(n) + ceiling[Sqrt[[a(n) ^ 2] + [a(n - 1) ^ 2] / 2]]. ●

► [A008937] 0,1,2,4,8,15,28,52,96,177,326,600,1104,2031,3736,6872,12640,23249,42762,78652,144664,266079,489396,900140,1655616 ★ a(n) = Sum _{ k=0..n } T(k) where T(n) are the tribonacci numbers A000073. ● a(n) = 2 * a(n - 1) - a(n - 4), a(0) = 0, a(1) = 1, a(2) = 2, a(3) = 4. (End) ● a(n) = 1 + a(n - 1) + a(n - 2) + a(n - 3). E.g., a(11) = 1 + 600 + 326 + 177 = 1104. - Philippe LALLOUET (philip.lallouet(AT)orange.fr), Oct 29 2007 ● a(n) = term (4,1) in the 4 X 4 matrix [1,1,0,0; 1,0,1,0; 1,0,0,0; 1,0,0,1] ^ n. - _ Alois P. Heinz _ , Jul 24 2008 ● a(n) = Sum _{ j=0..floor(n / 2) } Sum _{ k=0..j } binomial(n - 2j,k + 1) * binomial(j,k) * 2 ^ k. - _ Tony Foster III _ , Sep 08 2017 ● a(n) = Sum _{ k=0..floor(n / 2) } (n - 2 * k) * hypergeom([- k, - n + 2 * k + 1], [2], 2). - _ Peter Luschny _ , Nov 09 2017 ● a(n) = 2 ^ (n - 1) * hypergeom([1 - n / 4, 1 / 4 - n / 4, 3 / 4 - n / 4, 1 / 2 - n / 4], [1 - n / 3, 1 / 3 - n / 3, 2 / 3 - n / 3], 16 / 27)) for n > 0. - _ Peter Luschny _ , Aug 20 2020 ●

► [A049864] 1,1,1,2,4,8,15,28,52,97,181,338,631,1178,2199,4105,7663,14305,26704,49850,93058,173717,324288,605368,1130077 ★ a(n) = Sum _{ k=0,1,2,...,n - 4, n - 2,n - 1 } a(k); a(n - 3) is not a summand; 3 initial terms required. ● a(n) = 2 * a(n - 1) - a(n - 3) + a(n - 4); 4 initial terms required. ●

► [A118870] 1,2,4,8,15,28,53,100,188,354,667,1256,2365,4454,8388,15796,29747,56020,105497,198672,374140,704582,1326871,2498768,4705689 ★ Number of binary sequences of length n with no subsequence 0101. ● a(n) = 2 * a(n - 1) - a(n - 2) + 2 * a(n - 3) - a(n - 4) for n>=4. ●

► [A001383] 1,1,1,2,4,8,15,29,53,98,177,319,565,1001,1749,3047,5264,9054,15467,26320,44532,75054,125904,210413,350215 ★ Number of n - node rooted trees of height at most 3. ● a(n + 1) is the Euler transform of p(n - 1), where p() = A000041 is the partition function. - _ Franklin T. Adams - Watters _ , Mar 01 2006 ●

► [A217733] 1,2,4,8,15,29,54,103,192,364,680,1285,2405,4536,8501,16014,30040,56544,106135,199673,374950,705155,1324524,2490416,4678728 ★ Expansion of (1 + x - x ^ 2) / ((1 - x) * (1 - 3 * x ^ 2 - x ^ 3)). ● a(n) = a(n - 1) + 3 * a(n - 2) - 2 * a(n - 3) - a(n - 4) for n>=4, a(0)=1, a(1)=2, a(2)=4, a(3)=8. ●

► [A335473] 1,1,2,4,8,15,29,55,103,190,347,630,1134,2028,3585,6291,10950,18944,32574,55692,94618,159758,268147,447502,743097 ★ Number of compositions of n avoiding the pattern (2,1,2). ● a(n) = F(n,1,1) where F(n,m,k) = F(n,m + 1, k) + k * (Sum _{ i=1..floor(n / m) } F(n - i * m, m + 1, k + i)) for m <= n with F(0,m,k)=1 and F(n,m,k)=0 otherwise. - _ Andrew Howroyd _ , Dec 31 2020 ●

► [A000078] 0,0,0,1,1,2,4,8,15,29,56,108,208,401,773,1490,2872,5536,10671,20569,39648,76424,147312,283953,547337 ★ Tetranacci numbers: a(n) = a(n - 1) + a(n - 2) + a(n - 3) + a(n - 4) for n >= 4 with a(0) = a(1) = a(2) = 0 and a(3) = 1. ● a(n) = term (1,4) in the 4 X 4 matrix [1,1,0,0; 1,0,1,0; 1,0,0,1; 1,0,0,0] ^ n. - _ Alois P. Heinz _ , Jun 12 2008 ● a(n + 3) = Sum _{ k=1..n } Sum _{ i=k..n } [(5 * k - i mod 4) = 0] * binomial(k, (5 * k - i) / 4) * (- 1) ^ ((i - k) / 4) * binomial(n - i + k - 1,k - 1), n > 0. - _ Vladimir Kruchinin _ , Aug 18 2010 [Edited by _ Petros Hadjicostas _ , Jul 26 2020, so that the formula agrees with the offset of the sequence] ● a(n) = 2 * a(n - 1) - a(n - 5), n >= 5. - _ Bob Selcoe _ , Jul 06 2014 ● a(2 * n + 5) = a(n + 4) ^ 2 + a(n + 3) ^ 2 + a(n + 2) ^ 2 + 2 * a(n + 3) * (a(n + 2) + a(n + 1)). ● a(n) - 1 = a(n - 2) + 2 * a(n - 3) + 3 * (a(n - 4) + a(n - 5) + ... + a(2) + a(1)), n >= 4. (End) ●

► [A293335] 1,1,2,4,8,15,29,58,115,229,458,916,1832,3664,7328,14655,29309,58618,117235,234469,468938,937875,1875750,3751500,7503000 ★ Least integer k such that k / 2 ^ n > sqrt(1 / 5). ● a(n) = ceiling(r * 2 ^ n), where r = sqrt(1 / 5). ●

► [A217777] 1,2,4,8,15,30,55,110,200,400,725,1450,2625,5250,9500,19000,34375,68750,124375,248750,450000,900000,1628125,3256250,5890625 ★ Expansion of (1 + x) * (1 + 2 * x) * (1 - x) / (1 - 5 * x ^ 2 + 5 * x ^ 4). ● a(n) = 5 * a(n - 2) - 5 * a(n - 4) for n>=4, a(0) = 1, a(1) = 2, a(2) = 4, a(3) = 8. ●

► [A026023] 1,2,4,8,15,30,56,112,210,420,792,1584,3003,6006,11440,22880,43758,87516,167960,335920,646646,1293292,2496144,4992288,9657700 ★ a(n) = number of (s(0), s(1), ..., s(n)) such that s(i) is a nonnegative integer and |s(i) - s(i - 1)| = 1 for i = 1,2,...,n and s(0) = 3. Also a(n) = Sum { T(n,k), k = 0,1,...,[(n + 3) / 2] } , where T is defined in A026022. ● a(2n) = C(2n + 2, n), a(2n + 1) = 2 * a(2n). ●

► [A079967] 1,1,2,4,8,15,30,58,113,220,429,835,1627,3169,6173,12024,23422,45623,88869,173107,337194,656817,1279409,2492150,4854439 ★ Number of permutations satisfying - k<=p(i) - i<=r and p(i) - i not in I, i=1..n, with k=1, r=5, I= { 4 } . ● a(n) = a(n - 1) + a(n - 2) + a(n - 3) + a(n - 4) + a(n - 6). ●

► [A192655] 1,1,2,4,8,15,30,58,113,220,429,839,1644,3224,6333,12454,24516,48307,95263,188003,371276,733660,1450551,2869395,5678697 ★ Floor - Sqrt transform of central binomial coefficients (A000984). ● a(n) = floor(sqrt(binomial(2 * n,n)). ●

► [A191497] 0,0,0,0,1,2,4,8,15,30,60,120,241,482,964,1928,3855,7710,15420,30840,61681,123362,246724,493448,986895 ★ a(n + 1) = 2 * a(n) + A014017(n + 5), a(0) = 0. ● a(n + 4) = 2 ^ n - a(n). ● a(n) = 2 * a(n - 1) - a(n - 4) + 2 * a(n - 5). ● a(4 * n + 4) = 16 * a(4 * n) + (- 1) ^ n. ●

► [A052325] 1,1,1,1,1,2,4,8,15,30,60,122,249,513,1061,2210,4620,9708,20472,43337,92023,196018,418653,896485,1924154 ★ Number of asymmetric rooted trees with a forbidden limb of length 3. ● a(n) satisfies a = SHIFT _ RIGHT(WEIGH(a - b)) where b(3)=1, b(k)=0 if k != 3. ●

► [A371351] 1,1,1,2,4,8,15,37,73,182,364,952,1944,5169,10659,28842,60115,164450,345345,953814,2016144,5609760,11920740,33378072,71250060 ★ Number of achiral polyominoes composed of n tetrahedral cells of the hyperbolic regular tiling with Schläfli symbol { 3,3,oo } . ● a(n) = ([0==n mod 2] * 2 * C(3n / 2,n) + [1==n mod 2] * 3 * C((3n - 1) / 2,n) + [1==n mod4] * 3 * C((3n - 3) / 4,(n - 1) / 2) + [2==n mod6] * 3 * C(n / 2 - 1,(n - 2) / 3)) / (3n + 3). ● a(n) = 2 * H(3,n) - h(3,n) in Table 8 of Hering link. ●

► [A048718] 0,1,2,4,8,16,17,32,33,34,64,65,66,68,128,129,130,132,136,256,257,258,260,264,272 ★ Binary expansion matches ((0) * 0001) * (0 *); or, Zeckendorf - like expansion of n using recurrence f(n) = f(n - 1) + f(n - 4). ● a(0) = 0, a(n) = (2 ^ (invfyy(n) - 1)) + a(n - fyy(invfyy(n))) where fyy(n) is fyy(n - 1) + fyy(n - 4) (A003269) and invfyy is its "integral" (floored down) inverse. ● a(n) XOR 14 * a(n) = 15 * a(n); 3 * a(n) XOR 9 * a(n) = 10 * a(n); 3 * a(n) XOR 13 * a(n) = 14 * a(n); 5 * a(n) XOR 9 * a(n) = 12 * a(n); 5 * a(n) XOR 11 * a(n) = 14 * a(n); 6 * a(n) XOR 11 * a(n) = 13 * a(n); 7 * a(n) XOR 9 * a(n) = 14 * a(n); 7 * a(n) XOR 10 * a(n) = 13 * a(n); 7 * a(n) XOR 11 * a(n) = 12 * a(n); 12

* a(n) XOR 21 * a(n) = 25 * a(n); 12 * a(n) XOR 37 * a(n) = 41 * a(n); etc. (conjectures). - _ Paul D. Hanna _ , Jan 22 2006 ●

▶ [A076057] 2,4,8,16,18,32,38,46,48,62,66,80,90,102,120,138,158,160,180,212,242,278,324,364,436 ⋆ Numbers k such that Sum _{ j=1..k } A006513(j) = 3 * k / 2. ● a(n) seems to be asymptotic to c * n ^ 2 with 1 / 2 < c < 1. ●

▶ [A001856] 1,2,4,8,16,21,42,51,102,112,224,235,470,486,972,990,1980,2002,4004,4027,8054,8078,16156,16181,32362 ⋆ A self - generating sequence: every positive integer occurs as a(i) - a(j) for a unique pair i,j. ● a(1)=1, a(2)=2, a(2n + 1) = 2a(2n), a(2n + 2) = a(2n + 1) + r(n), where r(n) = smallest positive number not of form a(j) - a(i) with 1 <= i < j <= 2n + 1. ●

▶ [A102039] 1,2,4,8,16,22,24,28,36,42,44,48,56,62,64,68,76,82,84,88,96,102,104,108,116 ⋆ a(n) = a(n - 1) + last digit of a(n - 1), starting at 1. ● a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4) for n>5. G.f.: x * (5 * x ^ 4 + 2 * x ^ 3 + 2 * x ^ 2 + 1) / ((x - 1) ^ 2 * (x ^ 2 + 1)). - _ Colin Barker _ , Sep 20 2014 ● a(n) = (- 10 - (1 - i / 2) * (- i) ^ n - (1 + i / 2) * i ^ n + 5 * n) for n>1, where i = sqrt(- 1). - _ Colin Barker _ , Oct 18 2015 ●

▶ [A002081] 2,4,8,16,22,24,28,36,42,44,48,56,62,64,68,76,82,84,88,96,102,104,108,116,122 ⋆ Numbers congruent to { 2, 4, 8, 16 } (mod 20). ● a(n) = Sum _{ k =0..n } ((1 / 6) * (8 * (k mod 4) - ((k + 1) mod 4) + 2 * ((k + 2) mod 4) + 11 * ((k + 3) mod 4))) - 4. - _ Paolo P. Lava _ , Aug 01 2007 ● a(n + 4) = a(n) + 20 for n > 3. - _ Reinhard Zumkeller _ , Sep 15 2011 ● a(n) = 5 * n + (1 / 2) * (3 + (- 1) ^ n) * (- 1) ^ (n(n + 1) / 2). - _ Bruno Berselli _ , Sep 15 2011 ●

▶ [A045844] 1,2,4,8,16,22,24,28,36,42,46,52,57,64,70,77,84,92,101,102,104,108,116,122,124 ⋆ a(n + 1) = a(n) + largest digit of a(n); a(0) = 1. ● a(0) = 1; a(n) = a(n - 1) + MaxDigit(a(n - 1)) for n > 0 where MaxDigit(x) is the largest digit in decimal notation for an integer x. ●

▶ [A007612] 1,2,4,8,16,23,28,29,31,35,43,50,55,56,58,62,70,77,82,83,85,89,97,104,109 ⋆ a(n + 1) = a(n) + digital root (A010888) of a(n). ● a(1) = 1, a(n + 1) = a(n) + a(n) mod 9. - _ Reinhard Zumkeller _ , Mar 23 2003 ● a(6n + 1)=27n + 1, a(6n + 2)=27n + 2, a(6n + 3)=27n + 4, a(6n + 4)=27n + 8, a(6n + 5)=27n + 16, a(6n + 6)=27n + 23. - _ Franklin T. Adams - Watters _ , Mar 13 2006 ●

▶ [A219675] 0,1,2,4,8,16,23,28,38,49,62,70,77,91,101,103,107,115,122,127,137,148,161,169,185 ⋆ Starting with a(0)=0, a(n) = 1 + the sum of the digital sums of a(0) through a(n - 1). ● a(n) = Sum _{ k=0..n - 1 } digsum(a(k)) + 1. ● a(n) = a(n - 1) + digsum(a(n - 1)). ●

▶ [A294364] 1,2,4,8,16,23,37,56,94,152,250,401,649,1046,1696,2744,4444,7187,11629,18812,30442,49256,79702,128957,208657 ⋆ Linear recurrence with signature (1,1, - 1,1,1), where the first terms are powers of 2 (1,2,4,8,16). ● a(n) = (9 / 2) * fibonacci(n) + (- 1) ^ n - sqrt(3) * sin(n * Pi / 3). ●

▶ [A333994] 1,2,4,8,16,24,32,44,52,64,76,86,96,106,116,124,132,140,148,156,164,172,180,188,196 ⋆ Arithmetical complexity of the regular paperfolding sequence (A014577). ● a(1..13) = 2,4,8,16,24, 32,44,52,64,76, 86,96,106, and a(n) = 8 * n + 4 for n>=14. [Avgustinovich, Fon - Der - Flaas, and Frid] ● a(n) = 2 * a(n - 1) - a(n - 2) for n>=16. ●

▶ [A005943] 1,2,4,8,16,24,36,46,56,64,72,80,88,96,104,112,120,128,136,144,152,160,168,176,184 ⋆ Factor complexity (number of subwords of length n) of the Golay - Rudin - Shapiro binary word A020987. ● a(1..7) = 2,4,8,16,24,36,46, then a(n) = 8 * n - 8 for n>=8. [Allouche] ●

▶ [A330131] 1,2,4,8,16,24,36,52,66,84,104,128,160,200,248,308,384,476,592,740,922,1144,1426,1776,2208 ⋆ Number of length - n binary words with no even palindrome of length > 6 and no odd palindrome of length > 3. ● a(n) = a(n - 6) + 2 * a(n - 8) + 3 * a(n - 10) + a(n - 14) for n >= 21. Further - more, and a(n) ~ C1 * alpha ^ n + C2 * (- alpha) ^ n, where C1 ~ 11.58110542, C2 ~ 0.00264754 , and ~ 1.244528319539183 is the largest real zero of X ^ 14 - X ^ 8 - 2X ^ 6 - 3X ^ 4 - 1. ●

▶ [A008233] 0,0,0,0,1,2,4,8,16,24,36,54,81,108,144,192,256,320,400,500,625,750,900,1080,1296 ⋆ a(n) = floor(n / 4) * floor((n + 1) / 4) * floor((n + 2) / 4) * floor((n + 3) / 4). ● a(n) = 2 * a(n - 1) - a(n - 2) + 3 * a(n - 4) - 6 * a(n - 5) + 3 * a(n - 6) - 3 * a(n - 8) + 6 * a(n - 9) - 3 * a(n - 10) + a(n - 12) - 2 * a(n - 13) + a(n - 14). ● a(4 * n) = n ^ 4. - _ Bernard Schott _ , Jan 24 2023 ●

▶ [A224815] 1,1,1,1,1,1,1,1,1,2,4,8,16,24,36,54,81,108,144,192,256,384,576,864,1296 ⋆ Number of subsets of { 1,2,...,n - 8 } without differences equal to 4 or 8. ● a(n) = a(n - 1) + a(n - 3) - 2 * a(n - 4) + 2 * a(n - 5) + 2 * a(n - 7) - 6 * a(n - 8) + 6 * a(n - 9) + 6 * a(n - 11) + a(n - 12) - a(n - 13) - a(n - 15) + 13 * a(n - 16) - 13 * a(n - 17) - 13 * a(n - 19) + 15 * a(n - 20) - 15 * a(n - 21) - 15 * a(n - 23) - 6 * a(n - 24) + 6 * a(n - 25) + 6 * a(n - 27) + 3 * a(n - 28) - 3 * a(n - 29) - 3 * a(n - 31) - 2 * a(n - 32) + 2 * a(n - 33) + 2 * a(n - 35) + 8 * a(n - 36) - 8 * a(n - 37) - 8 * a(n - 39) + 3 * a(n - 40) - 3 * a(n - 41) - 3 * a(n - 43) - a(n - 44) + a(n - 45) + a(n - 47) - a(n - 48) + a(n - 49) + a(n - 51). ●

▶ [A031923] 1,2,4,8,16,24,36,54,81,135,225,375,625,1000,1600,2560,4096,6656,10816,17576,28561,46137,74529,120393,194481 ⋆ Let r and s be consecutive Fibonacci numbers. Sequence is r ^ 4, r ^ 3 s, r ^ 2 s ^ 2, and r s ^ 3. ● a(n) = F(floor((n - 1) / 4) + 3) ^ (n - 1 mod 4) * F(floor((n - 1) / 4) + 2) ^ (4 - (n - 1 mod 4)) where F(n) is the n - th Fibonacci number. - _ David Nacin _ , Mar 07 2012 ● a(n) = a(n - 1) + a(n - 2) - 2 * a(n - 4) + 2 * a(n - 5) + 2 * a(n - 6) + 2 * a(n - 8) - 2 * a(n - 9) - 2 * a(n - 10) + a(n - 12) - a(n - 13) - a(n - 14). - _ David Nacin _ , Mar 07 2012 ● a(4 * k - 3) = F(k + 1) ^ 4, a(4 * k - 2) = F(k + 1) ^ 3 * F(k + 2), a(4 * k - 1) = F(k + 1) ^ 2 * F(k + 2) ^ 2, a(4 * k) = F(k + 1) * F(k + 2) ^ 3, k >= 1, where F = A000045. - _ Jianing Song _ , Feb 06 2019 ●

▶ [A138278] 1,2,4,8,16,24,40,80,120,200,400,600,1000,2000,3000,5000,10000,15000,25000,50000,75000,125000,250000,375000,625000 ⋆ Sequence identical to its third differences in absolute values: a(2n)=3a(2n - 1) - 3a(2n - 2) + 2a(2n - 3)), a(2n + 1)=3a(2n) - 3a(2n - 1) n > 1. ● a(n) = 5 * a(n - 3), n>5. G.f.: (3 * x ^ 3 + 6 * x ^ 4 + 4 * x ^ 5 + 1 + 2 * x + 4 * x ^ 2) / (1 - 5 * x ^ 3). [From _ R. J . Mathar _ , Mar 23 2010] ●

▶ [A089827] 2,4,8,16,24,48,80,160,320,640,1280,2560,3840,7680,15360,30720,61440,122880,184320,368640,737280,1474560,2949120,5898240,11796480 ⋆ Number of subsets of { 1,.., n } containing no twin prime pairs. ● a(n) = if n and n - 2 are primes then (if n=7 then a(n - 1) * 5 / 3 else a(n - 1) * 3 / 2) else a(n - 2) * 2. ●

▶ [A302588] 1,2,4,8,16,25,36,51,67,85,107,130,155,184,214,246,282,319,358,401,445,491,541,592,645 ⋆ a(n) = a(n - 3) + 7 * (n - 2), a(0)=1, a(1)=2, a(2)=4. ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) - 2 * a(n - 4) + a(n - 5). ●

▶ [A236292] 1,2,4,8,16,27,48,75,118,178,265,377,544,760,1048,1437,1949,2611,3480,4594,6024,7867,10184,13122,16823 ⋆ Number of distinct cyclic permutations of the partitions of n; see comments. ● a(n) = (d(n), f(2), f(3),..., f(n - 1)) * (1,2,3,...,n - 1), where d(n) = (number of divisors of n) = (number of constant partitions of n), and f(k) = number of nonconstant partitions of n, for k = 2,3,...,n - 1. ●

▶ [A104899] 2,4,8,16,28,32,64,128,256,512,1024,2048,3100,4096,8192,16384,32768,65536,118458,131072,262144,524288,1048576,2097152,4194304 ⋆ Numbers n such that sum of the proper divisors of n is equal to sigma(phi(n)). ● a(5)=28; a(13)=3100; a(19)=118458 & If n<5 then a(n)=2 ^ n, if 5<n<13 then a(n)=2 ^ (n - 1), if 13<n<19 then a(n)=2 ^ (n - 2) and if 19<n<30 then a(n)=2 ^ (n - 3) . ●

▶ [A260881] 1,2,4,8,16,28,46,70,102,140,190,250,318,398,496,602,724,862,1018,1192,1382,1584,1816,2070,2340 ⋆ Number of trapezoidal words of length n. ● a(n) = 1 + Sum _{ i=1..n } (n - i + 1) * phi(i) + Sum _{ i=0..floor((n - 4) / 2) } 2 * (n - 2 * i - 3) * phi(i + 2), where phi is the Euler phi function. ●

▶ [A276677] 1,2,4,8,16,28,48,76,120,180,272,396,584,836,1216,1724,2488,3508,5040,7084,10152,14244,20384,28572,40856 ⋆ Number of squares added at the n - th generation of a symmetric (with 45 - degree angles), non - overlapping Pythagoras tree. ● a(0) = 1, a(n) = 2 * a(n - 1) - 4 * C(n - 1), where: ● a(0) = 1; for n >= 1, a(n) = 6 * 2 ^ floor(n / 2) + 8 * 2 ^ floor((n - 1) / 2) - (4 * n + 8). ● a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + 2 * a(n - 4) for n>4. ● a(n) = - 4 + 2 ^ ((n - 1) / 2) * (7 - 7 * (- 1) ^ n + 5 * sqrt(2) + 5 * (- 1) ^ n * sqrt(2)) - 4 * (1 + n) for n>0. Therefore: ● a(n) = 5 * 2 ^ (n / 2 + 1) - 8 - 4 * n for n>0 and even; ● a(n) = 7 * 2 ^ ((n + 1) / 2) - 8 - 4 * n for n>0 and odd. (End) ●

▶ [A209410] 1,2,4,8,16,28,49,91,169,312,576,1056,1936,3564,6561,12069,22201,40826,75076,138096,254016,467208,859329,1580535,2907025 ⋆ Number of subsets of { 1,...,n } not containing { a,a + 2,a + 4 } for any a. ● a(n) = t[floor(n / 2) + 2] * t[floor((n + 1) / 2) + 2] where t(n) is the n - th tribonacci number. ● a(n) = a(n - 1) + 2 * a(n - 3) + 2 * a(n - 5) + 2 * a(n - 6) - a(n - 8) - a(n - 9). ●

▶ [A208531] 2,4,8,16,28,52,89,147,224,324,445,589,758,954,1179,1435,1724,2048,2409,2809,3250,3734,4263,4839,5464 ⋆ Number of distinct sums of subsets of the first n squares { 1,4,9,...,n ^ 2 } . ● a(n) = (2 * n ^ 3 + 3 * n ^ 2 + n - 366) / 6 for n>8. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>12. ●

▶ [A255937] 1,1,2,4,8,16,28,56,108,204,332,664,1114,2228,4078,7018,11402,22804,40638,81276,140490,230328,391544,783088,1287034 ⋆ Number of distinct products of distinct factorials up to n!. ● a(p) = 2 * a(p - 1) for prime p. - _ Jon E. Schoenfield _ , Apr 01 2015 ●

▶ [A348413] 1,2,4,8,16,28,57,114,221,451,893,1792,3549,7104,14212,28445,56894,113792,227554,455124,910208,1820449,3640907,7281813,14563613 ⋆ a(0) = A002858(1) = 1, followed by the greatest Ulam numbers A002858 to form a complete sequence (see algorithm below). ● a(n) = (greatest Ulam number) <= 1 + Sum _{ i=0..n - 1 } a(i), with a(0) = 1. ●

▶ [A085583] 1,2,4,8,16,29,51,83,131,196,286,402,554,743,981,1269,1621,2038,2536,3116,3796,4577,5479,6503,7671 ⋆ Number of (3412,1234) - avoiding involutions in S _ n. ● a(n) = (2 * n ^ 4 - 4 * n ^ 3 + 28 * n ^ 2 - 2 * n + 81 - 6 * n * (- 1) ^ n + 15 * (- 1) ^ n) / 96. ●

▶ [A046127] 0,2,4,8,16,30,52,84,128,186,260,352,464,598,756,940,1152,1394,1668,1976,2320,2702,3124,3588,4096 ⋆ Maximal number of regions into which space can be divided by n spheres. ● a(n) = n * (n ^ 2 - 3 * n + 8) / 3 (n >= 0). ● a(n) = Sum _{ i=1..n } (i * (i - 3) + 4). ● a(n) = a(n - 1) + n * (n - 3) + 4, a(0) = 0. (End) ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ●

▶ [A271480] 1,2,4,8,16,30,53,88,139,210,306,432,594,798,1051,1360 ⋆ Dimension of n - qubit subspace H ^{ MPS }_{ 2,n } for bond dimension 2. ● a(n) = (93 + 3 * (- 1) ^ n + 88 * n + 4 * n ^ 2 + 8 * n ^ 3 + 2 * n ^ 4) / 96. ● a(n) = (n ^ 4 + 4 * n ^ 3 + 2 * n ^ 2 + 44 * n + 48) / 48 for n even. ● a(n) = (n ^ 4 + 4 * n ^ 3 + 2 * n ^ 2 + 44 * n + 45) / 48 for n odd. ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 5 * a(n - 4) - 4 * a(n - 5) + a(n - 6) for n>5. ●

▶ [A054668] 1,2,4,8,16,30,56,104,192,354,652,1200,2208,4062,7472,13744,25280,46498,85524,157304,289328,532158,978792,1800280,3311232 ⋆ Number of distinct non - extendable sequences X= { x(1),x(2),...,x(k) } where x(1)=1, the x(i)'s are distinct elements of { 1,...,n } with |x(i) - x(i + 1)|=1 or 2, for i=1,2,...,k. ● a(1) = 1, a(n) = term (4,2) in the 4 X 4 matrix [1,1,0,0; 1,0,1,0; 1,0,0,0; 2,0,0,1] ^ n (n > 1). - _ Alois P. Heinz _ , Jul 24 2008 ●

▶ [A027559] 1,2,4,8,16,30,58,106,200,360,668,1190,2182,3858,7012,12328,22256,38958,69962,122042,218248,379656,676636,1174390,2087222 ⋆ Number of 4 - balanced strings of length n: let d(S)= # (1)'s in S - # (0)'s, then S is k - balanced if every substring T has - k<=d(T)<=k; here k=4. ● a(n) = a(n - 1) + 4 * a(n - 2) - 3 * a(n - 3) - 3 * a(n - 4). ● a(0) = 1; for n>0 odd, a(n) = 7 * 3 ^ floor(n / 2) - F(n + 4); for n>0 even, a(n) = 4 * 3 ^ floor(n / 2) - F(n + 4) where F(n) is the n - th Fibonacci number. - Barry Guiduli (guiduli(AT)gmail.com), Jun 23 2005 ●

▶ [A135492] 2,4,8,16,30,58,112,216,416,802,1546,2980,5744,11072,21342,41138,79296,152848,294624,567906,1094674,2110052,4067256,7839888,15111870 ⋆ Number of ways to toss a coin n times and not get a run of five. ● a(n) = a(n - 1) + a(n - 2) + a(n - 3) + a(n - 4). ●

▶ [A164203] 1,2,4,8,16,30,58,114,226,452,904,1808,3616,7232,14464,28928,57856,115712,231424,462848,925696,1851392,3702784,7405568,14811136 ⋆ Number of binary strings of length n with equal numbers of 00001 and 10000 substrings. ● a(n) = 113 * 2 ^ (n - 7) for n >= 8. - _ Brad Clardy _ , Feb 11 2012 ●

▶ [A027423] 1,1,2,4,8,16,30,60,96,160,270,540,792,1584,2592,4032,5376,10752,14688,29376,41040,60800,96000,192000,242880 ⋆ Number of divisors of n!. ● a(n) <= a(n + 1) <= 2 * a(n) - _ Benoit Cloitre _ , Sep 07 2002 ●

▶ [A216212] 1,2,4,8,16,30,60,110,220,400,800,1450,2900,5250,10500,19000,38000,68750,137500,248750,497500,900000,1800000,3256250,6512500 ⋆ Number of n step walks (each step +- 1 starting from 0) which are never more than 4 or less than - 4. ● a(n) = 5 * a(n - 2) - 5 * a(n - 4), a(0) = 1, a(1) = 2, a(2) = 4, a(3)

= 8, a(4) = 16. ● a(n) = (2 ^ n / 5) * Sum _{ r=1..5 } (- 1) ^ r * cos(Pi * (2 * r - 1) / 10) ^ n * cot(Pi * (1 - 2 * r) / 20), n>0. - _ Herbert Kociemba _ , Sep 22 2020 ●

▶ [A051039] 1,2,4,8,16,31,46,61,76,91,106,121,136,151,166,181,196,211,226,241,256,271,286,301,316 ⋆ 4 - Stohr sequence. ● a(n) = 15 * n - 59 for n>4. a(n) = 2 * a(n - 1) - a(n - 2) for n>6. G.f.: x * (7 * x ^ 5 + 4 * x ^ 4 + 2 * x ^ 3 + x ^ 2 + 1) / (x - 1) ^ 2. [_ Colin Barker _ , Sep 19 2012] ●

▶ [A000127] 1,2,4,8,16,31,57,99,163,256,386,562,794,1093,1471,1941,2517,3214,4048,5036,6196,7547,9109,10903,12951 ⋆ Maximal number of regions obtained by joining n points around a circle by straight lines. Also number of regions in 4 - space formed by n - 1 hyperplanes. ● a(n) = Sum _{ k=0..2 } C(n, 2k). - Joel Sanderi (sanderi(AT)itstud.chalmers.se), Sep 08 2004 ● a(n) = (n ^ 4 - 6 * n ^ 3 + 23 * n ^ 2 - 18 * n + 24) / 24. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5), n > 4. - _ Harvey P. Dale _ , Aug 24 2011 ●

▶ [A133552] 1,2,4,8,16,31,57,109,209,401,769,1473,2817,5391,10321,19761,37834,72432,138663,265455,508195,972909,1862575,3565778,6826437 ⋆ Number of length n binary sequences with at most 4 of every adjacent 6 bits set. ● a(n) = a(n - 1) + a(n - 2) + a(n - 3) + a(n - 5) + 2 * a(n - 6) - 2 * a(n - 8) - 2 * a(n - 9) - a(n - 12) + a(n - 15) for n>14. ●

▶ [A007800] 1,2,4,8,16,31,59,111,207,384,710,1310,2414,4445,8181,15053,27693,50942,93704,172356,317020,583099,1072495,1972635,3628251 ⋆ From a problem in AI planning: a(n) = 4 + a(n - 1) + a(n - 2) + a(n - 3) + a(n - 4) - a(n - 5) - a(n - 6) - a(n - 7), n>7. ● a(1)=1, a(2)=2, a(3)=4, a(4)=8, a(5)=16, a(n)=3 * a(n - 1) - 2 * a(n - 2) + 0 * a(n - 3) - a(n - 4) + a(n - 5). - _ Harvey P. Dale _ , Apr 24 2013 ●

▶ [A345372] 1,2,4,8,16,31,60,114,217,411,780,1481,2820,5379,10288,19720,37884,72924,140640,271695,525698,1018611,1976276,3838889,7465191 ⋆ a(n) = Sum _{ i=1..n } nac(i,n) where nac(i,n) is the n - th i - bonacci number. The n - th i - bonacci number here is equal to 1 for the first i terms, with subsequent terms equaling the sum of the previous n terms. ● a(n) = Sum _{ i=1..n } nac(i,n) where nac(i,n) = 1 if 1 <= n <= i, Sum _{ k=1..i } nac(i,n - k) if n > i. ●

▶ [A107066] 1,2,4,8,16,31,60,116,224,432,833,1606,3096,5968,11504,22175,42744,82392,158816,306128,590081,1137418,2192444,4226072,8146016 ⋆ Expansion of 1 / (1 - 2 * x + x ^ 5). ● a(n) = 2 * a(n - 1) - a(n - 5). ● a(n) = Sum _{ k=0..floor(n / 5) } C(n - 4 * k, k) * 2 ^ (n - 2 * k) * (- 1) ^ k. ●

▶ [A210003] 1,2,4,8,16,31,60,116,224,433,837,1618,3128,6047,11690,22599,43688,84457,163271,315633,610177,1179585,2280356,4408350,8522156 ⋆ Number of binary words of length n containing no subword 10001. ● a(n) = 2 ^ n if n<5, and a(n) = 2 * a(n - 1) - a(n - 4) + a(n - 5) otherwise. ●

▶ [A209888] 1,2,4,8,16,31,60,116,225,436,845,1637,3172,6146,11909,23075,44711,86633,167863,325256,630226,1221144,2366125,4584673,8883398 ⋆ Number of binary words of length n containing no subword 01101. ● a(n) = 2 ^ n if n<5, and a(n) = 2 * (a(n - 1) + a(n - 4)) - a(n - 3) - a(n - 5) otherwise. ●

▶ [A210021] 1,2,4,8,16,31,60,116,225,437,849,1649,3202,6217,12071,23438,45510,88368,171586,333171,646922,1256136,2439055,4735945,9195847 ⋆ Number of binary words of length n containing no subword 11011. ● a(n) = 2 ^ n if n<5, and a(n) = 2 * a(n - 1) - a(n - 3) + a(n - 4) + a(n - 5) otherwise. ●

▶ [A152718] 1,1,1,1,2,4,8,16,31,60,117,228,444,865,1685,3282,6393,12453,24257,47250,92038,179280,349218,680239,1325032 ⋆ a(n) = 2 * a(n - 1) - a(n - 2) + 2 * a(n - 3) - a(n - 4) + a(n - 5), n > 5. ● a(n)=1, n < 4. a(4)=2, a(5)=4. a(n) = 2 * a(n - 1) - a(n - 2) + 2a(n - 3) - a(n - 4) + a(n - 5), n > 5. ●

▶ [A223940] 1,2,4,8,16,31,61,117,228,436,845,1615,3120,5965,11501,22001,42365,81091,156010,298777,574450,1100620,2115150,4053959,7788126 ⋆ Sums of anti diagonals of A223968. ● a(n) = a(n - 1) + 4 * a(n - 2) - 3 * a(n - 3) - 3 * a(n - 4) + a(n - 5) with a(0) = 1, a(1) = 2, a(2) = 4, a(3) = 8, a(4) = 16, a(5) = 31. ●

▶ [A192656] 1,2,4,8,16,31,61,119,232,452,881,1720,3364,6588,12921,25375,49891,98198,193461,381464,752740,1486400,2936951,5806346,11485043 ⋆ Partial sums of the Floor - Sqrt transform of central binomial coefficients. ● a(n) = Sum _{ k=0..n } floor(sqrt(binomial(2 * k,k))). ●

▶ [A001591] 0,0,0,0,1,1,2,4,8,16,31,61,120,236,464,912,1793,3525,6930,13624,26784,52656,103519,203513,400096 ⋆ Pentanacci numbers: a(n) = a(n - 1) + a(n - 2) + a(n - 3) + a(n - 4) + a(n - 5), a(0)=a(1)=a(2)=a(3)=0, a(4)=1. ● a(n) = Sum _{ k=1..n } (Sum _{ r=0..k } (binomial(k,r) * Sum _{ m=0..r } (binomial(r,m) * Sum _{ j=0..m } (binomial(m,j) * binomial(j,n - m - k - j - r))))), n > 0. - _ Vladimir Kruchinin _ , Aug 30 2010 ● a(n) = 2 * a(n - 1) - a(n - 6). - _ Vincenzo Librandi _ , Dec 19 2010 ●

▶ [A008382] 0,0,0,0,0,1,2,4,8,16,32,48,72,108,162,243,324,432,576,768,1024,1280,1600,2000,2500 ⋆ a(n) = floor(n / 5) * floor((n + 1) / 5) * floor((n + 2) / 5) * floor((n + 3) / 5) * floor((n + 4) / 5). ● a(n) = + 2 * a(n - 1) - a(n - 2) + 4 * a(n - 5) - 8 * a(n - 6) + 4 * a(n - 7) - 6 * a(n - 10) + 12 * a(n - 11) - 6 * a(n - 12) + 4 * a(n - 15) - 8 * a(n - 16) + 4 * a(n - 17) - a(n - 20) + 2 * a(n - 21) - a(n - 22). ● a(5* m) = m ^ 5 (A000584). - _ Bernard Schott _ , Sep 21 2022 ●

▶ [A208742] 2,4,8,16,32,48,72,108,162,243,405,675,1125,1875,3125,5000,8000,12800,20480,32768,53248,86528,140608,228488,371293 ⋆ Number of subsets of the set { 1,2,...,n } which do not contain two elements whose difference is 5. ● a(n) = F(floor(n / 5) + 3) ^ (n mod 5) * F(floor(n / 5) + 2) ^ (5 - (n mod 5)) where F(n) is the n - th Fibonacci number. ● a(n) = a(n - 1) + a(n - 2) - 3 * a(n - 5) + 3 * a(n - 6) + 3 * a(n - 7) + 6 * a(n - 10) - 6 * a(n - 11) - 6 * a(n - 12) + 3 * a(n - 15) - 3 * a(n - 16) - 3 * a(n - 17) - a(n - 20) + a(n - 21) + a(n - 22). ●

▶ [A217833] 0,1,2,4,8,16,32,49,64,81,98,121,128,162,196,225,242,256,324,361,392,441,450,484,512 ⋆ The largest number not exceeding n ^ 2, such that there are no terms of the sequence in the interval (a(n - 1) / 2, a(n) / 2), with a(0)=0, a(1)=1. ● a(n) = min(2 * a(k + 1), n ^ 2) for n>=2 and a(k) <= a(n - 1) / 2 < a(k + 1). ●

▶ [A072207] 1,2,4,8,16,32,52,104,208,416,832,1664,1856,3712,7424,9664,19328,38656,59264,118528,126976,224128,448256,896512,936832 ⋆ a(0) = 1; for n>0, a(n) = number of distinct sums of subsets of { 1, 1 / 2, 1 / 3, 1 / 4, ..., 1 / n } (allowing the empty subset). ● a(p) = 2 * a(p - 1) for p prime. a(2 * p) = 2 * a(2 * p - 1) for p>3 prime. - _ Giovanni Resta _ , Jul 18 2019 ●

▶ [A330012] 1,2,4,8,16,32,56,84,120,164,226,312,428,584,786,1052,1404,1856,2440,3164,4112,5316,6850,8812,11342 ⋆ Number of length - n binary strings w with the property that if x is a subword of w and |x| >= 6, then x reversed is not a subword of w. ● a(n) satisfies a degree - 195 recurrence, for n >= 213. ●

▶ [A329824] 2,4,8,16,32,56,84,120,164,226,312,428,584,802,1096,1500,2056,2816,3852,5280,7228,9892,13548,18554,25396 ⋆ Number of length - n binary words having no palindromes of length > 5 as contiguous subwords. ● a(n) = 3a(n - 6) + 2a(n - 7) + 2a(n - 8) + 2a(n - 9) + a(n - 10) for n >= 20. ●

▶ [A230216] 1,2,4,8,16,32,56,104,192,352,648,1192,2192,4032,7416,13640,25088,46144,84872,156104,287120,528096,971320,1786536,3285952 ⋆ Number of binary strings of length n avoiding "squares" (that is, repeated blocks of the form xx) with |x| = 3. ● a(n) = a(n - 1) + a(n - 2) + a(n - 3) for n>5. ●

▶ [A135493] 2,4,8,16,32,62,122,240,472,928,1824,3586,7050,13860,27248,53568,105312,207038,407026,800192,1573136,3092704,6080096,11953154,23499282 ⋆ Number of ways to toss a coin n times and not get a run of six. ● a(n) = a(n - 1) + a(n - 2) + a(n - 3) + a(n - 4) + a(n - 5). ●

▶ [A216241] 1,2,4,8,16,32,62,124,236,472,890,1780,3340,6680,12502,25004,46732,93464,174554,349108,651740,1303480,2432918,4865836,9080956 ⋆ Number of n - step walks (each step +- 1 starting from 0) which are never more than 5 or less than - 5. ● a(n) = 6 * a(n - 2) - 9 * a(n - 4) + 2 * a(n - 6). ● a(n) = 2 ^ n for n < 6. ● a(2 * n + 1) = 2 * a(2 * n). ●

▶ [A111663] 1,2,4,8,16,32,62,124,248,494,988,1976,3952,7904,15808,31616,63232,126464,252926,505852,1011704,2023406,4046812,8093624,16187248 ⋆ Expansion of (- 1 + x ^ 3 + x ^ 6 + x ^ 9) / ((1 - x) * (2 * x - 1) * (x ^ 2 + 1) * (x ^ 2 + x + 1) * (x ^ 4 - x ^ 2 + 1)). ● a(0)=1, a(1)=2, a(2)=4, a(3)=8, a(4)=16, a(5)=32, a(6)=62, a(7)=124, a(8)=248, a(9)=494, a(n) = 2 * a(n - 1) + a(n - 3) - 2 * a(n - 4) - a(n - 6) + 2 * a(n - 7) + a(n - 9) - 2 * a(n - 10). [_ Harvey P. Dale _ , May 04 2012] ●

▶ [A051040] 1,2,4,8,16,32,63,94,125,156,187,218,249,280,311,342,373,404,435,466,497,528,559,590,621 ⋆ 5 - Stohr sequence. ● a(n) = 31 * n - 154 for n>5. a(n) = 2 * a(n - 1) - a(n - 2) for n>7. G.f.: x * (15 * x ^ 6 + 8 * x ^ 5 + 4 * x ^ 4 + 2 * x ^ 3 + x ^ 2 + 1) / (x - 1) ^ 2. [_ Colin Barker _ , Sep 19 2012] ●

▶ [A006261] 1,2,4,8,16,32,63,120,219,382,638,1024,1586,2380,3473,4944,6885,9402,12616,16664,21700,27896,35443,44552,55455 ⋆ a(n) = Sum _{ k=0..5 } binomial(n,k). ● a(n) = binomial(n + 1, 5) + binomial(n + 1, 3) + binomial(n + 1, 1). - _ Len Smiley _ , Oct 20 2001 ● a(n) = (n ^ 5 - 5 * n ^ 4 + 25 * n ^ 3 + 5 * n ^ 2 + 94 * n + 120) / 120. - _ Reinhard Zumkeller _ , Jun 17 2009 ●

▶ [A001949] 0,0,0,0,0,1,2,4,8,16,32,63,124,244,480,944,1856,3649,7174,14104,27728,54512,107168,210687,414200 ⋆ Solutions of a fifth - order probability difference equation. ● a(n) = Sum _{ k=1..n - 4 } Sum _{ j=0..floor((n - k - 4) / 5) } (- 1) ^ j * binomial(n - 5 * j - 5, k - 1) * binomial(n - k - 5 * j - 4, j). - _ Vladimir Kruchinin _ , Oct 19 2011 ● a(n) = 1 + a(n - 1) + a(n - 2) + a(n - 3) + a(n - 4) + a(n - 5) for n >= 5. (See Eq. (4) and the Theorem with r = 5 on p. 356 of Dunkel (1925).) ● a(n) = T(n - 5, 5) for n >= 5, where T(n, k) = Sum _{ j = 0..floor(n / (k + 1)) } (- 1) ^ j * binomial(n - k * j, n - (k + 1) * j) * 2 ^ (n - (k + 1) * j) for 0 <= k <= n. This is _ Richard Choulet _ 's formula in A172119. ●

▶ [A210031] 1,2,4,8,16,32,63,124,244,480,944,1857,3653,7186,14136,27808,54703,107610,211687,416424,819176,1611457,3170007,6235937,12267137 ⋆ Number of binary words of length n containing no subword 100001. ● a(n) = 2 ^ n if n<6, and a(n) = 2 * a(n - 1) - a(n - 5) + a(n - 6) otherwise. ●

▶ [A001592] 0,0,0,0,0,1,1,2,4,8,16,32,63,125,248,492,976,1936,3840,7617,15109,29970,59448,117920,233904 ⋆ Hexanacci numbers: a(n + 1) = a(n) + ... + a(n - 5) with a(0)=...=a(4)=0, a(5)=1. ● a(n) = 2 * a(n - 1) - a(n - 7). - _ Vincenzo Librandi _ , Dec 19 2010 ●

▶ [A217832] 0,1,1,2,4,8,16,32,63,126,252,502,1004,2008,4012,8024,16048,32089,64178,128356,256696,513392,1026784,2053538,4107076 ⋆ Number of sequences of n 2's and 3's with curling number 2 and which have the form XY ^ 2 with Y = 2. ● a(n + 4) - 2 * a(n + 3) = 0,0,0, 0,0, - 1, 0,0, - 2, 0,0, - 4, 0,0, - 7, 0,0, - 16, 0,0, - 30, 0,0, - 63, 0,0, - 122,... . See - A217929. This is the formula given above. ●

▶ [A208743] 2,4,8,16,32,64,96,144,216,324,486,729,1215,2025,3375,5625,9375,15625,25000,40000,64000,102400,163840,262144,425984 ⋆ Number of subsets of the set { 1,2,...,n } which do not contain two elements whose difference is 6. ● a(n) = F(floor(n / 6) + 3) ^ (n mod 6) * F(floor(n / 6) + 2) ^ (6 - (n mod 6)) where F(n) is the n - th Fibonacci number. ● a(n) = a(n - 1) + a(n - 2) - 5 * a(n - 6) + 5 * a(n - 7) + 5 * a(n - 8) + 15 * a(n - 12) - 15 * a(n - 13) - 15 * a(n - 14) + 15 * a(n - 18) - 15 * a(n - 19) - 15 * a(n - 20) - 5 * a(n - 24) + 5 * a(n - 25) + 5 * a(n - 26) - a(n - 30) + a(n - 31) + a(n - 32). ●

▶ [A059174] 1,2,4,8,16,32,64,126,240,438,764,1276,2048,3172,4760,6946,9888,13770,18804,25232,33328,43400,55792,70886,89104 ⋆ Maximal number of regions into which 5 - space can be divided by n hyper - spheres. ● a(n) = binomial(n - 1, 5) + Sum _{ i=0..5 } binomial(n, i). ●

▶ [A008859] 1,2,4,8,16,32,64,127,247,466,848,1486,2510,4096,6476,9949,14893,21778,31180,43796,60460,82160,110056,145499,190051 ⋆ a(n) = Sum _{ k=0..6 } binomial(n,k). ● a(n) = Sum _{ k=0..3 } binomial(n + 1, 2 * k). - _ Len Smiley _ , Oct 20 2001 ● a(n) = (n ^ 6 - 9 * n ^ 5 + 55 * n ^ 4 - 75 * n ^ 3 + 304 * n ^ 2 + 444 * n + 720) / 720. - _ Gerry Martens _ , May 04 2016 ●

▶ [A335247] 1,2,4,8,16,32,64,127,247,487,961,1897,3745,7393,14593,28801,56833,112156,221341,436825,862094,1701380,3357739,6626611,13077820 ⋆ a(n) is the number of binary (0,1) sequences of length n that have at least two ones in each window of eight consecutive symbols. ● a(n) = a(n - 1) + a(n - 2) + a(n - 3) + a(n - 4) + a(n - 6) + 2 * a(n - 7) + 3 * a(n - 8) - 3 * a(n - 10) - 4 * a(n - 11) - 3 * a(n - 12) - 2 * a(n - 15) - 3 * a(n - 16) + 3 * a(n - 19) + 3 * a(n - 20) + a(n - 24) - a(n - 28), n>28. ●

▶ [A208127] 1,2,4,8,16,32,64,127,252,495,969,1886,3655,7054,13562,25978,49602,94440,179380,340001,643276,1215178,2292431,4319603,8131123 ⋆ Cardinality of the set f ^ n({ s }), where f is a variant of the Collatz function that replaces any element x in the argument set with both x / 2 and 3 * x + 1, and s is an ar

bitrary irrational number. ● a(n) = |f ^ n({ s })| where f(M) = { x / 2 : x in M } union { 3x + 1 : x in M } and s is an arbitrary irrational number. ●
▶ [A172316] 1,2,4,8,16,32,64,127,252,500,992,1968,3904,7744,15361,30470,60440,119888,237808,471712,935680,1855999,3681528,7302616,14485344 ★ 7th column of the array A172119. ● a(n) = Sum _{ j=0..floor(n / (k + 1)) } ((- 1) ^ j * binomial(n - k * j,n - (k + 1) * j) * 2 ^ (n - (k + 1) * j)) with k=6. ●
▶ [A062258] 1,2,4,8,16,32,64,127,252,500,993,1972,3916,7776,15441,30662,60887,120906,240088,476753,946709,1879921,3733040,7412858,14720031 ★ Number of (0,1) - strings of length n not containing the substring 0100100. ● a(n) = 2 * a(n - 1) - a(n - 3) + 2 * a(n - 4) - a(n - 6) + a(n - 7). ●
▶ [A122189] 0,0,0,0,0,0,1,1,2,4,8,16,32,64,127,253,504,1004,2000,3984,7936,15808,31489,62725,124946 ★ Heptanacci numbers: each term is the sum of the preceding 7 terms, with a(0),...,a(6) = 0,0,0,0,0,0,1. ● a(n) = 2 * a(n - 1) - a(n - 8). - _ Joerg Arndt _ , Sep 24 2020 ●
▶ [A066178] 1,1,2,4,8,16,32,64,127,253,504,1004,2000,3984,7936,15808,31489,62725,124946,248888,495776,987568,1967200,3918592,7805695 ★ Number of binary bit strings of length n with no block of 8 or more 0's. Nonzero heptanacci numbers, A122189. ● a(n) = Sum _{ i=n - 7..n - 1 } a(i). ● a(n) = round((r - 1) / ((t + 1) * r - 2 * t) * r ^ (n - 1)), where r is the heptanacci constant, the real root of the equation x ^ (t + 1) - 2 * x ^ t + 1 = 0 which is greater than 1. The formula could also be used for a k - step Fibonacci sequence if r is replaced by the k - bonacci constant, as in A000045, A000073, A000078, A001591, A001592. - _ Zhao Hui Du _ , Aug 24 2008 ● a(n) = 2 * a(n - 1) - a(n - 8). - _ Vincenzo Librandi _ , Dec 20 2010 ●
▶ [A009641] 0,0,0,0,0,0,0,1,2,4,8,16,32,64,128,192,288,432,648,972,1458,2187,2916,3888,5184 ★ a(n) = Product _{ i=0..6 } floor((n + i) / 7). ● a(n) = 2 * a(n - 1) - a(n - 2) + 6 * a(n - 7) - 12 * a(n - 8) + 6 * a(n - 9) - 15 * a(n - 14) + 30 * a(n - 15) - 15 * a(n - 16) + 20 * a(n - 21) - 40 * a(n - 22) + 20 * a(n - 23) - 15 * a(n - 28) + 30 * a(n - 29) - 15 * a(n - 30) + 6 * a(n - 35) - 12 * a(n - 36) + 6 * a(n - 37) - a(n - 42) + 2 * a(n - 43) - a(n - 44). - _ Wesley Ivan Hurt _ , Jun 29 2022 ● a(7 * n) = n ^ 7 (A001015). - _ Bernard Schott _ , Nov 04 2022 ●
▶ [A089889] 1,2,4,8,16,32,64,128,192,384,768,1536,3072,6144,12288,16384,32768,65536,131072,262144,524288,1048576,2097152,4194304,5242880 ★ Number of subsets of { 1,.., n } containing exactly one square. ● a(n) = n ^ (1 / 2) * 2 ^ (n - n ^ (1 / 2)). ●
▶ [A008860] 1,2,4,8,16,32,64,128,255,502,968,1816,3302,5812,9908,16384,26333,41226,63004,94184,137980,198440,280600,390656,536155 ★ a(n) = Sum _{ k=0..7 } binomial(n,k). ● a(n) = Sum _{ k=1..4 } binomial(n + 1, 2k - 1) = (n ^ 6 - 14 * n ^ 5 + 112 * n ^ 4 - 350 * n ^ 3 + 1099 * n ^ 2 + 364 * n + 3828) * n / 5040 + 1. [Len Smiley's formula for A006261, copied by _ Frank Ellermann _] ●
▶ [A079262] 0,0,0,0,0,0,0,1,1,2,4,8,16,32,64,128,255,509,1016,2028,4048,8080,16128,32192,64256 ★ Octanacci numbers: a(0)=a(1)=...=a(6)=0, a(7)=1; for n >= 8, a(n) = Sum _{ i=1..8 } a(n - i). ● a(1)..a(9) = 1, 1, 2, 4, 8, 16, 32, 64, 128. a(10) and following are given by 63 * 2 ^ (n - 8) + (1 / 2 + sqrt(5 / 4)) ^ (n - 6) / sqrt(5) - (1 / 2 - sqrt(5 / 4)) ^ (n - 6) / sqrt(5). Offset 10. a(10)=255. - Al Hakanson (hawkuu(AT)gmail.com), Feb 14 2009 ● a(n) = 2 * a(n - 1) - a(n - 9). - _ Vincenzo Librandi _ , Dec 20 2010 ●
▶ [A009694] 0,0,0,0,0,0,0,0,1,2,4,8,16,32,64,128,256,384,576,864,1296,1944,2916,4374,6561 ★ a(n) = Product _{ i=0..7 } floor((n + i) / 8). ● a(8 * n) = n ^ 8 (A001016). - _ Bernard Schott _ , Nov 06 2022 ● a(n) = n ^ 8 / 8 ^ 8 + O(n ^ 6) . - _ Charles R Greathouse IV _ , Nov 06 2022 ●
▶ [A008861] 1,2,4,8,16,32,64,128,256,511,1013,1981,3797,7099,12911,22819,39203,65536,106762,169766,263950,401930,600370,880970,1271626 ★ a(n) = Sum _{ k=0..8 } binomial(n,k). ● a(n) = Sum _{ k=0..4 } binomial(n + 1, 2 * k), compare A008859. ● a(n) = (n ^ 8 - 20 * n ^ 7 + 210 * n ^ 6 - 1064 * n ^ 5 + 3969 * n ^ 4 - 4340 * n ^ 3 + 15980 * n ^ 2 + 25584 * n + 40320) / 8!. (End) ●
▶ [A172318] 1,2,4,8,16,32,64,128,256,511,1020,2036,4064,8112,16192,32320,64512,128768,257025,513030,1024024,2043984,4079856,8143520,16254720 ★ 9th column of the array A172119. ● a(n) = sum((- 1) ^ j * binomial(n - k * j,n - (k + 1) * j) * 2 ^ (n - (k + 1) * j),j=0..floor(n / (k + 1))) with k=8. ●
▶ [A104144] 0,0,0,0,0,0,0,0,1,1,2,4,8,16,32,64,128,256,511,1021,2040,4076,8144,16272,32512 ★ a(n) = Sum _{ k=1..9 } a(n - k); a(8) = 1, a(n) = 0 for n < 8. ● a(n) = Sum _{ k=1..9 } a(n - k) for n > 8, a(8) = 1, a(n) = 0 for n=0..7. ●
▶ [A009714] 0,0,0,0,0,0,0,0,0,1,2,4,8,16,32,64,128,256,512,768,1152,1728,2592,3888,5832 ★ a(n) = Product _{ i=0..8 } floor((n + i) / 9). ● a(9 * n) = n ^ 9. - _ Bernard Schott _ , Nov 20 2022 ● a(9 * n + j) = n ^ (9 - j) * (n + 1) ^ j for 0 <= j <= 8. - _ Robert Israel _ , Nov 21 2022 ●
▶ [A008862] 1,2,4,8,16,32,64,128,256,512,1023,2036,4017,7814,14913,27824,50643,89846,155382,262144,431910,695860,1097790,1698160,2579130 ★ a(n) = Sum _{ k=0..9 } binomial(n,k). ● a(n) = Sum _{ k=1..5 } binomial(n + 1, 2 * k - 1), compare A008860. ● a(n) = (n ^ 9 - 27 * n ^ 8 + 366 * n ^ 7 - 2646 * n ^ 6 + 12873 * n ^ 5 - 31563 * n ^ 4 + 79064 * n ^ 3 + 34236 * n ^ 2 + 270576 * n + 362880) / 9!. (End) ● a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10); a(0)=1, a(1)=2, a(2)=4, a(3)=8, a(4)=16, a(5)=32, a(6)=64, a(7)=128, a(8)=256, a(9)=512. - _ Harvey P. Dale _ , Mar 18 2012 ●
▶ [A172319] 1,2,4,8,16,32,64,128,256,512,1023,2044,4084,8160,16304,32576,65088,130048,259840,519168,1037313,2072582,4141080,8274000,16531696 ★ 10th column of A172119. ● a(n)=sum((- 1) ^ j * binomial(n - k * j,n - (k + 1) * j) * 2 ^ (n - (k + 1) * j),j=0..floor(n / (k + 1))). a(n + 10)=2 * a(n + 9) - a(n). ●
▶ [A122265] 0,0,0,0,0,0,0,0,0,1,1,2,4,8,16,32,64,128,256,512,1023,2045,4088,8172,16336 ★ 10th - order Fibonacci numbers: a(n + 1) = a(n) + ... + a(n - 9) with a(0) = ... = a(8) = 0, a(9) = 1. ● a(n) = Sum _{ j=1..10 } a(n - j) for n>=10; a(n) = 0 for 0<=n<=8, a(9) = 1 (follows from the minimal polynomial of M; a Maple program based on this recurrence relation is much slower than the given Maple program, based on the definition). ●
▶ [A354600] 0,0,0,0,0,0,0,0,0,0,1,2,4,8,16,32,64,128,256,512,1024,1536,2304,3456,5184 ★ a(n) = Product _{ k=0..9 } floor((n + k) / 10). ● a(n) = 2 * a(n - 1) - a(n - 2) + 9 * a(n - 10) - 18 * a(n - 11) + 9 * a(n - 12) - 36 * a(n - 20) + 72 * a(n - 21) - 36 * a(n - 22) + 84 * a(n - 30) - 168 * a(n - 31) + 84 * a(n - 32) - 126 * a(n - 40) + 252 * a(n - 41) - 126 * a(n - 42) + 126 * a(n - 50) - 252 * a(n - 51) + 126 * a(n - 52) - 84 * a(n - 60) + 168 * a(n - 61) - 84 * a(n - 62) + 36 * a(n - 70) - 72 * a(n - 71) + 36 * a(n - 72) - 9 * a(n - 80) + 18 * a(n - 81) - 9 * a(n - 82) + a(n - 90) - 2 * a(n - 91) + a(n - 92). ● a(10 * n) = n ^ 10 (A008454). - _ Bernard Schott _ , Feb 02 2023 ●
▶ [A008863] 1,2,4,8,16,32,64,128,256,512,1024,2047,4083,8100,15914,30827,58651,109294,199140,354522,616666,1048576,1744436,2842226,4540386 ★ a(n) = Sum _{ k=0..10 } binomial(n,k). ● a(n) = Sum _{ k=0..5 } binomial(n + 1, 2k), compare A008859. ● a(n) = (n ^ 10 - 35 * n ^ 9 + 600 * n ^ 8 - 5790 * n ^ 7 + 36813 * n ^ 6 - 140595 * n ^ 5 + 408050 * n ^ 4 - 382060 * n ^ 3 + 1368936 * n ^ 2 + 2342880 * n + 3628800) / 10!. (End) ● a(n) = 11 * a(n - 1) - 55 * a(n - 2) + 165 * a(n - 3) - 330 * a(n - 4) + 462 * a(n - 5) - 462 * a(n - 6) + 330 * a(n - 7) - 165 * a(n - 8) + 55 * a(n - 9) - 11 * a(n - 10) + a(n - 11); a(0)=1, a(1)=2, a(2)=4, a(3)=8, a(4)=16, a(5)=32, a(6)=64, a(7)=128, a(8)=256, a(9)=512, a(10)=1024. - _ Harvey P. Dale _ , Apr 25 2012 ●
▶ [A172320] 1,2,4,8,16,32,64,128,256,512,1024,2047,4092,8180,16352,32688,65344,130624,261120,521984,1043456,2085888,4169729,8335366,16662552 ★ 11th column of A172119. ● a(n)=sum((- 1) ^ j * binomial(n - k * j,n - (k + 1) * j) * 2 ^ (n - (k + 1) * j),j=0..floor(n / (k + 1))) with k=10. ● a(n + 11)=2 * a(n + 10) - a(n). ●
▶ [A168082] 0,0,0,0,0,0,0,0,0,0,1,1,2,4,8,16,32,64,128,256,512,1024,2047,4093,8184 ★ Fibonacci 11 - step numbers. ● a(n) = Sum _{ k=1..11 } a(n - k). ● a(n) = 2 * a(n - 1) - a(n - 12). (End) ●
▶ [A219531] 1,2,4,8,16,32,64,128,256,512,1024,2048,4095,8178,16278,32192,63019,121670,230964,430104,784626,1401292,2449868,4194304,7036530 ★ a(n) = Sum _{ k=0..11 } C(n, k). ● a(n) = 1 + (n ^ 11 - 44 * n ^ 10 + 935 * n ^ 9 - 11550 * n ^ 8 + 94083 * n ^ 7 - 497112 * n ^ 6 + 1870385 * n ^ 5 - 3920950 * n ^ 4 + 8550916 * n ^ 3 + 4429656 * n ^ 2 + 29400480 * n) / 11!. a(n) = 2 * a(n - 1), for 1 <= n <= 11 with a(0) = 1, a(n) = 2 * a(n - 1) - C(n - 1, 11), for n > 11. - Mohamed ●
▶ [A219615] 1,2,4,8,16,32,64,128,256,512,1024,2048,4096,8191,16369,32647,64839,127858,249528,480492,910596,1695222,3096514,5546382,9740686 ★ a(n) = Sum _{ k=0..12 } binomial(n,k). ● a(n) = (n ^ 12 - 54n ^ 11 + 1397n ^ 10 - 21450n ^ 9 + 218823n ^ 8 - 1508562n ^ 7 + 7374191n ^ 6 - 23551110n ^ 5 + 58206676n ^ 4 - 48306984n ^ 3 + 173699712n ^ 2 + 312888960n) / 479001600. - _ Charles R Greathouse IV _ , Nov 27 2012 ● a(0)=1, a(1)=2, a(2)=4, a(3)=8, a(4)=16, a(5)=32, a(6)=64, a(7)=128, a(8)=256, a(9)=512, a(10)=1024, a(11)=2048, a(12)=4096, a(n)= 13 * a(n - 1) - 78 * a(n - 2) + 286 * a(n - 3) - 715 * a(n - 4) + 1287 * a(n - 5) - 1716 * a(n - 6) + 1716 * a(n - 7) - 1287 * a(n - 8) + 715 * a(n - 9) - 286 * a(n - 10) + 78 * a(n - 11) - 13 * a(n - 12) + a(n - 13). - _ Harvey P. Dale _ , Nov 29 2012 ●
▶ [A219676] 1,2,4,8,16,32,64,128,256,512,1024,2048,4096,8192,16383,32752,65399,130238,258096,507624,988116,1898712,3593934,6690448,12236830 ★ a(n) = Sum _{ k=0..13 } binomial(n, k). ● a(n) = 1 + (n ^ 13 - 65 * n ^ 12 + 2015 * n ^ 11 - 37609 * n ^ 10 + 470613 * n ^ 9 - 4081935 * n ^ 8 + 25378925 * n ^ 7 - 110205667 * n ^ 6 + 351042406 * n ^ 5 - 657328100 * n ^ 4 + 1303568760 * n ^ 3 + 771653376 * n ^ 2 + 4546558080 * n) / 13!. - corrected by Mokhtar Mohamed, Dec 01 2012 ● a(n) = 2 * a(n - 1), for 1 <= n <= 13, with a(0) = 1, a(n) = 2 * a(n - 1) - C(n - 1, 13), for n > 13. ●
▶ [A220051] 1,2,4,8,16,32,64,128,256,512,1024,2048,4096,8192,16384,32767,65519,130918,261156,519252,1026876,2014992,3913704,7507638,14198086 ★ Sum _{ k=0..14 } binomial(n,k). ● a(n) = 1 + (n ^ 14 - 77 * n ^ 13 + 2821 * n ^ 12 - 6288 * n ^ 11 + 947947 * n ^ 10 - 10081071 * n ^ 9 + 77889383 * n ^ 8 - 435638203 * n ^ 7 + 1793239448 * n ^ 6 - 5043110072 * n ^ 5 + 1111159696 * n ^ 4 - 8346754416 * n ^ 3 + 30605906304 * n ^ 2 + 57424792320 * n) / 14!. ● a(n) = 2 * a(n - 1), for 1 <= n <= 14, with a(0) = 1, a(n) = 2 * a(n - 1) - C(n - 1,14), for n> 14. ●
▶ [A249169] 1,1,2,4,8,16,32,64,128,256,512,1024,2048,4096,8192,16384,32768,65535,131069,262136,524268,1048528,2097040,4194048,8388032 ★ Fibonacci 16 - step numbers, a(n) = a(n - 1) + a(n - 2) + ... + a(n - 16). ● a(n) = a(n - 1) + a(n - 2) + ... + a(n - 16). ●
▶ [A166444] 0,1,1,2,4,8,16,32,64,128,256,512,1024,2048,4096,8192,16384,32768,65536,131072,262144,524288,1048576,2097152,4194304 ★ a(0) = 0, a(1) = 1 and for n > 1, a(n) = sum of all previous terms. ● a(n) = (1 - n) * a(n - 1) + 2 * Sum _{ k=1..n - 1 } a(k) * a(n - k) if n>1. - _ Michael Somos _ , Jul 23 2011 ●
▶ [A011782] 1,1,2,4,8,16,32,64,128,256,512,1024,2048,4096,8192,16384,32768,65536,131072,262144,524288,1048576,2097152,4194304,8388608 ★ Coefficients of expansion of (1 - x) / (1 - 2 * x) in powers of x. ● a(0) = 1, a(n) = 2 ^ (n - 1). ● a(0) = 1 and for n>0, a(n) = sum of all previous terms. ● a(n) = Sum _{ k=0..n } binomial(n, 2 * k). - _ Paul Barry _ , Feb 25 2003 ● a(n) = Sum _{ k=0..n } binomial(n,k) * (1 + (- 1) ^ k) / 2. - _ Paul Barry _ , May 27 2003 ● a(n) = floor((1 + 2 ^ n) / 2). - Toby Bartels (toby + sloane(AT)math.ucr.edu), Aug 27 2003 ● a(n) = Sum _{ k=0..n } (- 1) ^ (n - k) * binomial(k + 1, n - k) * binomial(2 * k, k). - _ Paul Barry _ , Mar 18 2005 ●
▶ [A000079] 1,2,4,8,16,32,64,128,256,512,1024,2048,4096,8192,16384,32768,65536,131072,262144,524288,1048576,2097152,4194304,8388608,16777216 ★ Powers of 2: a(n) = 2 ^ n. ● a(n) = 2 ^ n. ● a(0) = 1; a(n) = 2 * a(n - 1). ● a(n)= Sum _{ k = 0..n } binomial(n, k). ● a(n + 1) = a(n) XOR 3 * a(n) where XOR is the binary exclusive OR operator. - _ Philippe Deléham _ , Jun 19 2005 ● a(n) = StirlingS2(n + 1, 2) + 1. - _ Ross La Haye _ , Jan 09 2008 ● a(n + 2) = 6a(n + 1) - 8a(n), n = 1, 2, 3, ... with a(1) = 1, a(2) = 2. - _ Yosu Yurramendi _ , Aug 06 2008 ●
▶ [A275065] 1,1,1,1,1,1,1,1,1,1,2,4,8,16,32,64,128,256,512,1024,3072,9216,27648,82944 ★ Number of permutations p of [n] such that p(i) - i is a multiple of ten for all i in [n]. ● a(n) = Product _{ i=0..9 } floor((n + i) / 10)!. ●
▶ [A367654] 1,1,2,4,8,16,32,64,128,256,512,1025,2051,4104,8212,16432,32882,65798,131664,263464,527200,1054948,2110989,4224165,8452706 ★ G.f. A(x) satisfies A(x) = 1 / (1 - x * (1 + x + x ^ 2 + x ^ 3 + x ^ 4) * A(x ^ 5)). ● a(0) = 1; a(n) = Sum _{ k=0..n - 1 } a(floor(k / 5)) * a(n - 1 - k). ●

► [A275064] 1,1,1,1,1,1,1,1,1,1,2,4,8,16,32,64,128,256,512,1536,4608,13824,41472,124416,373248 ⋆ Number of permutations p of [n] such that p(i) - i is a multiple of nine for all i in [n]. ● a(n) = Product _{ i=0..8 } floor((n + i) / 9)!. ●
► [A275063] 1,1,1,1,1,1,1,1,1,2,4,8,16,32,64,128,256,768,2304,6912,20736,62208,186624,559872,1679616 ⋆ Number of permutations p of [n] such that p(i) - i is a multiple of eight for all i in [n]. ● a(n) = Product _{ i=0..7 } floor((n + i) / 8)!. ●
► [A367653] 1,1,2,4,8,16,32,64,128,257,515,1032,2068,4146,8310,16656,33384,66916,134125,268837,538850,1080064,2164860,4339204,8697416 ⋆ G.f. A(x) satisfies A(x) = 1 / (1 - x * (1 + x + x ^ 2 + x ^ 3) * A(x ^ 4)). ● a(0) = 1; a(n) = Sum _{ k=0..n - 1 } a(floor(k / 4)) * a(n - 1 - k). ●
► [A210544] 1,1,1,1,1,1,1,2,4,8,16,32,64,128,257,524,1106,2470,5924,15262,41690,118595,345861,1023028,3050590 ⋆ Number of arrays of n nonnegative integers with value i>0 appearing only after i - 1 has appeared at least 7 times ● a(n) = 1 if n<=7 else sum { i=0..n - 7 } (binomial(n - 7,i) * a(i)) ●
► [A264791] 1,1,1,1,1,1,1,2,4,8,16,32,64,128,384,1152,3456,10368,31104,93312,279936,1119744,4478976,17915904,71663616 ⋆ Number of n X 1 arrays of permutations of 0..n * 1 - 1 with rows nondecreasing modulo 2 and columns nondecreasing modulo 7. ● a(n) = Product _{ i=0..6 } floor((n + i) / 7)!. - _ Alois P. Heinz _ , Jul 12 2016 ●
► [A117302] 1,2,4,8,16,32,64,129,258,516,1032,2064,4128,8256,16513,33026,66052,132104,264208,528416,1056832,2113665,4227330,8454660,16909320 ⋆ Number of cases in which the first player gets killed in a Russian roulette game when 7 players use a gun with n chambers and the number of the bullets can be from 1 to n. In the game they do not rotate the cylinder after the game starts. ● a(n) = (2 ^ (n + 6) - 2 ^ ((n - 1) mod 7)) / (2 ^ 7 - 1). ● a(n) = floor(2 ^ (n + 6) / 127). - _ Mircea Merca _ , Dec 22 2010 ● a(n) = 2 * a(n - 1) + a(n - 7) - 2 * a(n - 8). (End) ●
► [A084638] 1,1,2,4,8,16,32,64,129,265,558,1200,2610,5682,12288,26292,55587,116179,240366,493108,1004780,2036692,4112144,8278552,16631717 ⋆ Binomial transform of (1,0,1,0,1,0,1,0,2,0,2,0,2,...). ● a(n) = Sum _{ k=0..3, C(n, 2 * k) } + 2 * Sum _{ k=4..floor(n / 2), C(n, 2 * k) } . ● a(n) = (n ^ 6 - 15 * n ^ 5 + 115 * n ^ 4 - 405 * n ^ 3 + 964 * n ^ 2 - 660 * n + 720) / 720 + 2 * Sum _{ k=4..floor(n / 2), C(n, 2k) } . ●
► [A210543] 1,1,1,1,1,1,2,4,8,16,32,64,129,267,582,1364,3454,9338,26429,76929,227579,680113,2050000,6242818,19284165 ⋆ Number of arrays of n nonnegative integers with value i>0 appearing only after i - 1 has appeared at least 6 times. ● a(n) = 1 if n<=6 else Sum _{ i=0..n - 6 } (binomial(n - 6,i) * a(i)). ●
► [A264701] 1,1,1,1,1,1,2,4,8,16,32,64,192,576,1728,5184,15552,46656,186624,746496,2985984,11943936,47775744,191102976,955514880 ⋆ Number of n X 1 arrays of permutations of 0..n - 1 with rows nondecreasing modulo 2 and columns nondecreasing modulo 6. ● a(n) = Product _{ i=0..5 } floor((n + i) / 6)!. - _ Alois P. Heinz _ , Jul 12 2016 ●
► [A195904] 1,2,4,8,16,32,65,130,260,520,1040,2080,4161,8322,16644,33288,66576,133152,266305,532610,1065220,2130440,4260880,8521760,17043521 ⋆ Base - 2 digits are, in order, the first n terms of the periodic sequence with initial period 1,0,0,0,0,0. ● a(n) = floor(2 ^ (n + 5) / 63). ●
► [A367652] 1,1,2,4,8,16,32,65,131,264,534,1078,2176,4396,8877,17925,36202,73108,147636,298152,602108,1215933,2455552,4958915,10014374 ⋆ G.f. A(x) satisfies A(x) = 1 / (1 - x * (1 + x + x ^ 2) * A(x ^ 3)). ● a(0) = 1; a(n) = Sum _{ k=0..n - 1 } a(floor(k / 3)) * a(n - 1 - k). ●
► [A084637] 1,1,2,4,8,16,32,65,136,293,642,1410,3072,6606,14004,29295,60592,124187,252742,511672,1031912,2075452,4166408,8353165,16732664 ⋆ Binomial transform of (1,0,1,0,1,0,1,1,1,1,1,...). ● a(n) = Sum _{ k=0..2 } C(n, 2 * k) + Sum _{ k=6..n } C(n, k). ● a(n) = 2 ^ n - n * (n ^ 4 - 10 * n ^ 3 + 55 * n ^ 2 - 110 * n + 184) / 120. ●
► [A100137] 1,2,4,8,16,32,65,136,296,672,1584,3840,9473,23566,58736,146080,361760,891328,2184961,5331476,12958684,31400160,75910320,183220800,441787201 ⋆ a(n) = Sum _{ k=0..floor(n / 6) } C(n - 3k,3k) * 2 ^ (n - 6k). ● a(n) = 6 * a(n - 1) - 12 * a(n - 2) + 8 * a(n - 3) + a(n - 6). ●
► [A210542] 1,1,1,1,1,2,4,8,16,32,65,138,315,782,2090,5885,17112,50743,152705,466760,1455562,4658963,15392116,52663709,186632887 ⋆ Number of arrays of n nonnegative integers with value i>0 appearing only after i - 1 has appeared at least 5 times ● a(n) = 1 if n <= 5; otherwise, Sum _{ i=0..n - 5 } binomial(n - 5,i) * a(i). Proved by _ R. J. Mathar _ in the Sequence Fans Mailing List. ●
► [A367661] 1,2,4,8,16,32,66,136,280,576,1184,2436,5012,10312,21216,43648,89800,184752,380104,782016,1608896,3310096,6810096,14010896,28825616 ⋆ G.f. A(x) satisfies A(x) = 1 / (1 - x - x * A(x ^ 5)). ● a(0) = 1; a(n) = a(n - 1) + Sum _{ k=0..floor((n - 1) / 5) } a(k) * a(n - 1 - 5 * k). ● a(0) = 1, a(1) = 2, a(2) = 4, a(3) = 8, a(4) =16; a(n) = a(n - 5) + Sum _{ k=0..n - 1 } a(floor(k / 5)) * a(n - 1 - k). ●
► [A100138] 1,2,4,8,16,32,66,144,336,832,2144,5632,14852,38968,101312,260736,664704,1681152,4226056,10578080,26407648,65838848,164095360,409129472,1020795408 ⋆ a(n) = Sum _{ k=0..floor(n / 6) } C(n - 3k,3k) * 2 ^ (n - 5k). ● a(n) = 6 * a(n - 1) - 12 * a(n - 2) + 8 * a(n - 3) + 2 * a(n - 6). ●
► [A100139] 1,2,4,8,16,32,67,152,376,992,2704,7424,20233,54398,144112,376736,974368,2500544,6385435,16264220,41396788,105423776,268818064,686499008,1755723793 ⋆ a(n) = Sum _{ k=0..floor(n / 6) } C(n - 3k,3k) * 3 ^ k * 2 ^ (n - 6k). ● a(n) = 6 * a(n - 1) - 12 * a(n - 2) + 8 * a(n - 3) + 3 * a(n - 6). ●
► [A195458] 1,1,1,2,4,8,16,32,96,288,864,2592,7776,23328,69984,279936,1119744,4478976,17915904,71663616,286654464,1146617856,4586471424,18345885696,91729428480 ⋆ a(n) = floor(sqrt(n)) * a(n - 1), starting with 1. ● a(n) = Product _{ k=1..n } floor(sqrt(k)). - _ Ridouane Oudra _ , Feb 16 2023 ●
► [A264656] 1,1,1,1,1,2,4,8,16,32,96,288,864,2592,7776,31104,124416,497664,1990656,7962624,39813120,199065600,995328000,4976640000,24883200000 ⋆ Number of n X 1 arrays of permutations of 0..n * 1 - 1 with rows nondecreasing modulo 2 and columns nondecreasing modulo 5. ● a(n) = Product _{ i=0..4 } floor((n + i) / 5)!. - _ Alois P. Heinz _ , Jul 12 2016 ●
► [A119610] 1,2,4,8,16,33,66,132,264,528,1057,2114,4228,8456,16912,33825,67650,135300,270600,541200,1082401,2164802,4329604,8659208,17318416 ⋆ Number of cases in which the first player is killed in a Russian roulette game where 5 players use a gun with n chambers and the number of bullets can be from 1 to n. Players do not rotate the cylinder after the game starts. ● a(n) = floor(2 ^ (n + 4) / 31), which is obtained by letting p=5 in a _ p(n) = (2 ^ (n + p - 1) - 2 ^ ((n - 1) mod p)) / (2 ^ p - 1). ● a(n) = + 2 * a(n - 1) + a(n - 5) - 2 * a(n - 6). (End) ●
► [A121485] 1,1,2,4,8,16,33,66,136,274,562,1138,2327,4725,9645,19613,39997,81397,165906,337773,688260,1401565,2855432,5815477,11846941 ⋆ Number of nondecreasing Dyck paths of semilength n and having no peaks at even level (n>=0). A nondecreasing Dyck path is a Dyck path for which the sequence of the altitudes of the valleys is nondecreasing. ● a(n) = a(n - 1) + 4 * a(n - 2) - 2 * a(n - 3) - 4 * a(n - 4) + a(n - 6) for n>6. - _ Colin Barker _ , Sep 11 2015 ●
► [A308808] 1,2,4,8,16,33,67,136,276,561,1140,2316,4705,9559,19421,39457,80163,162864,330885,672247,1365779,2774802,5637462,11453422,23269491 ⋆ Limiting row sequence of Pascal - like triangle A141021 (with index of asymmetry s = 4). ● a(k) = a(k - 5) + 2 * a(k - 4) + a(k - 3) + a(k - 2) + a(k - 1) for k >= 5 with a(k) = 2 ^ k for k = 0..4. ●
► [A098588] 1,2,4,8,16,33,68,140,288,592,1217,2502,5144,10576,21744,44705,91912,188968,388512,798768,1642241,3376394,6941756,14272024,29342816 ⋆ a(n) = 2 ^ n for n = 0..4; for n > 4, a(n) = 2 * a(n - 1) + a(n - 5). ● a(n) = Sum _{ k=0..floor(n / 4) } Sum _{ i=0..n } binomial(n - 4k, i)binomial(i, k). ●
► [A367715] 1,2,4,8,16,33,68,140,288,594,1225,2526,5208,10740,22148,45673,94184,194224,400524,825950,1703249,3512395,7243168,14936668,30801992 ⋆ G.f. A(x) satisfies A(x) = 1 / ((1 - x) * (1 - x * (1 + x + x ^ 2 + x ^ 3) * A(x ^ 4))). ● a(n) = 1 + Sum _{ k=0..n - 1 } a(floor(k / 4)) * a(n - 1 - k). ●
► [A084636] 1,1,2,4,8,16,33,71,157,349,768,1662,3534,7398,15291,31297,63595,128555,258930,520240,1043540,2090956,4186757,8379499,16766313 ⋆ Binomial transform of (1,0,1,0,1,0,2,0,2,0,2,0,...). ● a(n) = Sum _{ k=0..2 } C(n, 2 * k) + 2 * Sum _{ k=3..floor(n / 2) } C(n, 2 * k). ● a(n) = (n ^ 4 - 6 * n ^ 3 + 23 * n ^ 2 - 18 * n + 24) / 24 + 2 * Sum _{ k=3..floor(n / 2) } C(n, 2 * k). ●
► [A210541] 1,1,1,1,2,4,8,16,33,73,177,467,1309,3813,11409,34999,110510,361194,1226930,4334048,15877297,60049447,233426007,929616461,3786970033 ⋆ Number of arrays of n nonnegative integers with value i>0 appearing only after i - 1 has appeared at least 4 times ● a(n) = 1 if n<=4 else sum { i=0..n - 4 } (binomial(n - 4,i) * a(i)). Proved by _ R. J. Mathar _ in the Sequence Fans Mailing List. ●
► [A273972] 1,2,4,8,16,34,68,128,256,544,1088,2056,4112,8738,17476,32768,65536,139264,278528,526336,1052672,2236928,4473856,8388736,16777472 ⋆ Decimal representation of the x - axis, from the left edge to the origin, of the n - th stage of growth of the two - dimensional cellular automaton defined by "Rule 20", based on the 5 - celled von Neumann neighborhood. ● a(2 * n + 2) = 2 * a(2 * n + 1). - _ Paul Curtz _ , Nov 16 2016 ●
► [A288170] 2,4,8,16,34,70,144,292,590,1186,2380,4768,9546,19102,38216,76444,152902,305818,611652,1223320,2446658,4893334,9786688,19573396,39146814 ⋆ a(n) = 3 * a(n - 1) - a(n - 2) - 4 * a(n - 3) + 2 * a(n - 4) for n >= 4, where a(0) = 2, a(1) = 4, a(2) = 8, a(3) = 16, a(4) = 34, a(5) = 70 . ● a(n) = 3 * a(n - 1) - a(n - 2) - 4 * a(n - 3) + 2 * a(n - 4) for n >= 4, where a(0) = 2, a(1) = 4, a(2) = 8, a(3) = 16, a(4) = 34, a(5) = 70 . ● a(n) = (3 + (- 1) ^ n + 7 * 2 ^ (1 + n) - 6 * n) / 6 for n>0. - _ Colin Barker _ , Sep 29 2017 ●
► [A367660] 1,2,4,8,16,34,72,152,320,676,1428,3016,6368,13448,28400,59976,126656,267472,564848,1192848,2519056,5319746,11234248,23724504,50101440 ⋆ G.f. A(x) satisfies A(x) = 1 / (1 - x - x * A(x ^ 4)). ● a(0) = 1; a(n) = a(n - 1) + Sum _{ k=0..floor((n - 1) / 4) } a(k) * a(n - 1 - 4 * k). ● a(0) = 1, a(1) = 2, a(2) = 4, a(3) = 8; a(n) = a(n - 4) + Sum _{ k=0..n - 1 } a(floor(k / 4)) * a(n - 1 - k). ●
► [A288260] 2,4,8,16,34,72,152,324,690,1468,3128,6664,14194,30240,64424,137244,292386,622900,1327016,2827072,6022786,12830904,27334904,58234164,124061778 ⋆ a(n) = 2 * a(n - 1) + 2 * a(n - 3) - 3 * a(n - 4), where a(0) = 2, a(1) = 4, a(2) = 8, a(3) = 16. ● a(n) = 2 * a(n - 1) + 2 * a(n - 3) - 3 * a(n - 4), where a(0) = 2, a(1) = 4, a(2) = 8, a(3) = 16. ●
► [A288176] 2,4,8,16,34,72,156,336,730,1580,3432,7440,16154,35040,76060,165024,358162,777172,1686632,3659984,7942706,17236024,37404156,81169520,176145962 ⋆ a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 4 * a(n - 3) + a(n - 4), where a(0) = 2, a(1) = 4, a(2) = 8, a(3) = 16. ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 4 * a(n - 3) + a(n - 4), where a(0) = 2, a(1) = 4, a(2) = 8, a(3) = 16. ●
► [A209971] 0,2,4,8,16,34,76,176,416,994,2388,5752,13872,33474,80796,195040,470848,1136706,2744228,6625128,15994448,38613986,93222380,225058704,543339744 ⋆ a(n) = A000129(n) + n. ● a(n) = (- (1 - sqrt(2)) ^ n + (1 + sqrt(2)) ^ n) / (2 * sqrt(2)) + n. ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) + a(n - 4) for n>3. ●
► [A166354] 1,1,2,4,8,16,34,78,200,568,1806,6282,24052,99100,443178,2107966,10775664,58092112,334087750,2012990930,12863046636,85662585604,602124105122,4391793687974,33676375206568 ⋆ Row sums of exponential Riordan array [1 + x * tan(x / 2),x], A166353. ● a(n)=sum { k=0..n, C(n,k) * G(k / 2)(1 + (- 1) ^ k) / 2 } where ●
► [A013025] 1,2,4,8,16,34,88,296,1152,4546,17696,72712,343424,1843170,10274688,56506024,315332608,1910439298,12815815168,90064672520,629185325056,4400756254114,32422278027264,258933905154856,2168521319694336 ⋆ Expansion of e.g.f. exp(sinh(x) + sin(x)). ● a(0) = 1; a(n) = 2 * Sum _{ k=0..floor((n - 1) / 4) } binomial(n - 1,4 * k) * a(n - 4 * k - 1). - _ Seiichi Manyama _ , Mar 17 2022 ●
► [A095236] 1,2,4,8,16,36,136,216,672,2592,10656,35904,167808,426240,1866240,15287040,35573760,147640320,1323970560,3104317440,64865525760,352235520000,1891946004480,11505792614400 ⋆ Given a row of n payphones (or phone booths), all initially unused, sequence gives number of ways for n people to choose the payphones assuming each always chooses one of the most distant payphones from those in use already. ● a(n) = Sum _{ i=1..n } Product _{ j=1..n - 1 } 2 ^ (d(i,j) + d(n + 1 - i,j)) * (d(i,j) + d(n + 1 - i,j))! * (b(i,j) + b(n + 1 - i,j) - d(i,j) - d(n + 1 - i,j))!. (End) ●
► [A162428] 1,2,4,8,16,37,87,210,523,1352,3579,9715,26956,76367,220408,648044,1940191,5907256,18279257,57449874,183261022,592970009,1945136089,6465415

945,21764630304 ⋆ Antidiagonal sums of table A162424. ● a(n) = Sum _{ k=0..n } Sum _{ m=k * (k + 1) / 2..k * (k + 1) / 2 + k } [x ^ m] S(x) ^ (n - k) for n>=1 where S(x) = Sum _{ n>=0 } x ^ ((n + 1)(n + 2) / 2 - 1). ●

▶ [A264635] 1,1,1,1,2,4,8,16,48,144,432,1296,5184,20736,82944,331776,1658880,8294400,41472000,207360000,1244160000,7464960000,44789760000,268738560000,1881169920000 ⋆ Number of n X 1 arrays of permutations of 0..n * 1 - 1 with rows nondecreasing modulo 2 and columns nondecreasing modulo 4. ● a(n) = Product _{ i=0..3 } floor((n + i) / 4)!. - _ Alois P. Heinz _ , Jul 12 2016 ●

▶ [A004000] 1,2,4,8,16,77,145,668,1345,6677,13444,55778,133345,666677,1333444,5567777,12333445,66666677,133333444,556667777,1233333444,5566667777,12333334444,55666667777,123333334444 ⋆ RATS: Reverse Add Then Sort the digits applied to previous term, starting with 1. ● a(2n - 1) = (37 * 10 ^ (n - 3) + 3332) / 3, n >= 11; a(2n) = (167 * 10 ^ (n - 3) + 3331) / 3, n >= 10. - _ Jianing Song _ , May 06 2021 ●

▶ [A307635] 1,2,4,8,16,112,224,448,4416,44112,88224,816448,8164416,81644112,811288224,8112816448,81128164416,811281644112,8112811288224,811281128164448,811281128164416,8112811281644112,81128112811288224,811281128116444 8,8112811281128164416 ⋆ a(0)=1; thereafter a(n) = largest number that can be obtained by applying "Choix de Bruxelles (version 2)" (see A323460) to a(n - 1). ● a(n + 4) = decimal concatenation of 8112 and a(n) for n >= 10. ●

▶ [A323453] 1,2,4,8,16,112,224,512,4416,44112,88224,816448,8164416,81644112,811288224,8112816448,81128164416,811281644112,8112811288224,811281128164448,811281128164416,8112811281644112,81128112811288224,811281128116444 8,8118112281128164416 ⋆ Largest number that can be obtained by starting with 1 and applying "Choix de Bruxelles (version 2)" (see A323460) n times. ● a(n + 4) = decimal concatenation of 8112 and a(n) for n >= 10. ●

▶ [A349842] 1,1,2,4,8,17,33,66,132,264,529,1057,2114,4228,8456,16913,33825,67650,135300,270600,541201,1082401,2164802,4329604,8659208 ⋆ Expansion of 1 / ((1 - 2 * x) * (1 + x + x ^ 2 + x ^ 3 + x ^ 4)). ● a(n) = a(n - 1) + a(n - 2) + a(n - 3) + a(n - 4) + 2 * a(n - 5) + delta(n,0), a(n<0)=0. ● a(n) = 2 * a(n - 1) + a(n - 5) - 2 * a(n - 6) + delta(n,0) - delta(n,1), a(n<0)=0. ●

▶ [A083593] 1,2,4,8,17,34,68,136,273,546,1092,2184,4369,8738,17476,34952,69905,139810,279620,559240,1118481,2236962,4473924,8947848,17895697 ⋆ Expansion of 1 / ((1 - 2 * x) * (1 - x ^ 4)). ● a(n) = 2 * a(n - 1) + a(n - 4) - 2 * a(n - 5). ● a(n) = - 1 / 4 + (1 / 20 - i / 10) * i ^ n + (1 / 12) * (- 1) ^ n + (16 / 15) * 2 ^ n + (1 / 20 + i / 10) * (- i) ^ n, for n >= 0, where i=sqrt(- 1). - _ Paolo P. Lava _ , Jun 10 2008 ● a(n) = floor((2 ^ (n + 5) + 1) / 30). - _ Tani Akinari _ , Jul 09 2013 ● a(n) = 2 * a(n - 1) + floor(((n - 1) mod 4) / 3), with a(0)=1. - _ Andres Cicuttin _ , Mar 29 2016 ● a(n) = 2 * a(n - 1) + 1 - ceiling((n mod 4) / 4), with a(0)=1. - _ Andres Cicuttin _ , Mar 29 2016 ●

▶ [A267045] 1,2,4,8,17,34,69,138,277,554,1109,2218,4437,8874,17749,35498,70997,141994,283989,567978,1135957,2271914,4543829,9087658,18175317 ⋆ Decimal representation of the middle column of the "Rule 91" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = (2 * (- 1) ^ n + 13 * 2 ^ n - 6) / 12 for n>1. ● a(n) = 2 * a(n - 1) + a(n - 2) - 2 * a(n - 3) for n>4. [Typo corrected by _ Karl V. Keller, Jr. _ , Mar 16 2022] ●

▶ [A266446] 1,2,4,8,17,34,69,138,277,555,1110,2220,4440,8881,17762,35525,71050,142101,284202,568405,1136810,2273621,4547242,9094485,18188970 ⋆ Decimal representation of the middle column of the "Rule 25" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = (- (- 1) ^ n + 6661 * 2 ^ (n - 10) - 3) / 6 for n>10. ●

▶ [A293331] 2,4,8,17,35,71,143,286,572,1144,2289,4579,9158,18317,36635,73271,146542,293085,586171,1172343,2344687,4689374,9378748,18757497,37514995 ⋆ Greatest integer k such that k / 2 ^ n < sqrt(5). ● a(n) = floor(r * 2 ^ n), where r = sqrt(5). ●

▶ [A309462] 1,2,4,8,17,35,72,149,308,636,1314,2715,5609,11588,23941,49462,102188,211120,436173,901131,1861732,3846329,7946496,16417420,33918306 ⋆ Limiting row sequence for Pascal - like triangle A140995 (Stepan's triangle with index of asymmetry s = 3). ● a(0) = 1, a(1) = 2, a(2) = 4, a(3) = 8, and a(k) = a(k - 1) + a(k - 2) + 2 * a(k - 3) + a(k - 4) for k >= 4. ●

▶ [A274115] 1,1,1,2,4,8,17,35,75,157,337,712,1529,3248,6976,14869,31937,68222,146536,313487,673351,1441999,3097326,6637879,14257734 ⋆ Number of equivalence classes of Dyck paths of semilength n for the string duu. ● a(n) = Sum _{ k=0..n } (k + 1) * Sum _{ i=0..(n - k) / 2 } C(k + 1,2 * k + 2 * i - n + 3) * C(k + 2 * i,i)) / (k + i + 1), n>1, a(0)=1,a(1)=1. - _ Vladimir Kruchinin _ , Feb 14 2019 ●

▶ [A292322] 1,2,4,8,17,36,73,152,317,653,1355,2812,5818,12061,25001,51786,107323,222409,460824,954942,1978840,4100398,8496827,17606974,36484494 ⋆ p - INVERT of (1,0,0,1,0,0,1,0,0,...), where p(S) = 1 - S - S ^ 2 - S ^ 3. ● a(n) = a(n - 1) + a(n - 2) + 4 * a(n - 3) - 2 * a(n - 4) - a(n - 5) - 3 * a(n - 6) + a(n - 7) + a(n - 9) for n >= 10. ●

▶ [A008999] 1,2,4,8,17,36,76,160,337,710,1496,3152,6641,13992,29480,62112,130865,275722,580924,1223960,2578785,5433292,11447508,24118976,50816737 ⋆ a(n) = 2 * a(n - 1) + a(n - 4). ● a(n) = Sum _{ m=0..n } Sum _{ j=0..(n - m) / 3 } binomial(n - m + (- 3) * j,j) * binomial(n - 3 * j,m). - _ Vladimir Kruchinin _ , May 23 2011 ●

▶ [A367714] 1,2,4,8,17,36,76,162,345,734,1564,3332,7097,15121,32216,68634,146228,311544,663748,1414136,3012859,6418971,13675802,29136686,62076510 ⋆ G.f. A(x) satisfies A(x) = 1 / ((1 - x) * (1 - x * (1 + x + x ^ 2) * A(x ^ 3))). ● a(n) = 1 + Sum _{ k=0..n - 1 } a(floor(k / 3)) * a(n - 1 - k). ●

▶ [A262735] 0,1,1,2,4,8,17,36,77,165,354,760,1632,3505,7528,16169,34729,74594,160220,344136,739169,1587660,3410133,7324621,15732546 ⋆ Expansion of x * (1 - x - x ^ 2) / ((1 - x) * (1 - x - 2 * x ^ 2 - x ^ 3)). ● a(n) = 2 * a(n - 1) + a(n - 2) - a(n - 3) - a(n - 4) for n>3. - _ Wesley Ivan Hurt _ , Oct 10 2015 ● a(n) = a(n - 1) + 2 * a(n - 2) + a(n - 3) - 1, n>=3. - _ R. J. Mathar _ , Nov 07 2015 ●

▶ [A002955] 1,1,1,2,4,8,17,36,79,175,395,899,2074,4818,11291,26626,63184,150691,361141,869057,2099386,5088769,12373721,30173307,73771453 ⋆ Number of (unordered, unlabeled) rooted trimmed trees with n nodes. ● a(n) satisfies a=SHIFT _ RIGHT(EULER(a - b)) where b(2)=1, b(k)=0 if k != 2. ●

▶ [A137255] 1,2,4,8,17,36,80,178,409,942,2212,5204,12377,29472,70592,169198,406801,978426,2357092,5679488,13696385,33032892,79703120,192321034,464168041 ⋆ a(n) = 2 * a(n - 1) + 4 * a(n - 2) - 6 * a(n - 3) - 3 * a(n - 4) for n > 3, with a(0)=1, a(1)=2, a(2)=4, a(3)=8. ● a(n) = (3 / 8) * 3 ^ (n / 2) * (1 + (- 1) ^ n) + (5 / 24) * 3 ^ ((n + 1) / 2) * (1 - (- 1) ^ n) + (1 / 8) * (1 + sqrt(2)) ^ (n + 1) + (1 / 8) * (1 - sqrt(2)) ^ (n + 1). - _ Emeric Deutsch _ , Mar 31 2008 ●

▶ [A136671] 0,1,2,4,8,17,37,81,177,388,850,1864,4088,8966,19664,43128,94591,207464,455026,997999,2188891 ⋆ Recursion based on Exp[Pi / 4]: a(n)=Floor[a(n - 1) * Exp[Pi / 4]] Angular domain { 0,Pi / 4 } is the smallest self - similar piece of a sine wave. ● a(0)=0;a(1)=1;a(2)=Floor[Exp[Pi / 4]]; a(n)=Floor[a(n - 1) * Exp[Pi / 4]] ●

▶ [A203019] 0,0,1,1,1,2,4,8,17,37,82,185,423,978,2283,5373,12735,30372,72832,175502,424748,1032004,2516347,6155441,15101701 ⋆ Number of elevated peakless Motzkin paths. ● a(n) = Sum _{ m=0..(n - 1) / 2 } ((binomial(2 * m + 1,m) * Sum _{ k=0..n - 2 * m - 2 } (binomial(k,n - 2 * m - k - 2) * binomial(2 * m + k,k) * (- 1) ^ (n - k))) / (2 * m + 1)). - _ Vladimir Kruchinin _ , Mar 12 2016 ●

▶ [A004148] 1,1,1,2,4,8,17,37,82,185,423,978,2283,5373,12735,30372,72832,175502,424748,1032004,2516347,6155441,15101701,37150472,91618049 ⋆ Generalized Catalan numbers: a(n + 1) = a(n) + Sum _{ k=1..n - 1 } a(k) * a(n - 1 - k). ● a(n + 1) = a(n) + a(1) * a(n - 2) + a(2) * a(n - 3) + ... + a(n - 1) * a(0). ● a(n) = Sum _{ k=ceiling((n + 1) / 2)..n } (binomial(k, n - k) * binomial(k, n - k + 1) / k) for n >= 1. - _ Emeric Deutsch _ , Nov 12 2003 This formula counts (i) disjoint - diagonal dissections by number of diagonals, (ii) peak - less Motzkin paths by number of up steps, (iii) UUU - and DDD - free Dyck paths by number of ascents. - _ David Callan _ , Mar 23 2004 ● a(n,m) = Sum _{ k=0..n } Sum _{ j=0..k } C(n - k + j + m,n - k) * m / (n - k + j + m) * C(n - k,k - j) * C(k - j,j). ● a(n) = hypergeom([- n / 2, (1 - n) / 2, (1 - n) / 2, 1 - n / 2], [2, - n, - n + 1], 16). - _ Peter Luschny _ , Jan 25 2020 ● a(n) = Sum _{ k=0..n - 1 } binomial(n - k,k + 1) * binomial(n - k,k) / (n - k) for n > 0. - _ Rigoberto Florez _ , Apr 17 2023 ●

▶ [A292460] 1,1,2,4,8,17,37,82,185,423,978,2283,5373,12735,30372,72832,175502,424748,1032004,2516347,6155441,15101701,37150472,91618049,226460893 ⋆ Expansion of (1 - x - x ^ 2 - sqrt((1 - x - x ^ 2) ^ 2 - 4 * x ^ 3)) / (2 * x ^ 3) in powers of x. ● a(0) = a(1) = 1; a(n) = a(n - 1) + a(n - 2) + Sum _{ k=0..n - 3 } a(k) * a(n - k - 3). - _ Ilya Gutkovskiy _ , Nov 09 2021 ●

▶ [A214999] 2,4,8,17,38,84,187,418,934,2088,4668,10437,23337,52183,116684,260913,583419,1304564,2917093,6522818,14585464,32614088,72927317,163070438,364636584 ⋆ Power floor sequence of sqrt(5). ● a(n) = [x * a(n - 1)], where x=sqrt(5), a(0) = [x]. ●

▶ [A084635] 1,1,2,4,8,17,38,86,192,419,894,1872,3864,7893,16006,32298,64960,130375,261310,523300,1047416,2095801,4192742,8386814,16775168 ⋆ Binomial transform of 1,0,1,0,1,1,1,... ● a(n) = 2 ^ n - n * (n ^ 2 - 3 * n + 8) / 6. ● a(n) = 1 + C(n, 2) + Sum _{ k=4..n } C(n, k). ●

▶ [A154222] 1,2,4,8,17,38,87,200,457,1034,2315,5132,11277,24590,53263,114704,245777,524306,1114131,2359316,4980757,10485782,22020119,46137368,96469017 ⋆ Row sums of number triangle A154221. ● a(n) = (1 / 4) * (4 * (n + 1) + (n - 1) * 2 ^ n + 0 ^ n). ● a(n) = 6 * a(n - 1) - 13 * a(n - 2) + 12 * a(n - 3) - 4 * a(n - 4) for n>4. ● a(n) = (4 - 2 ^ n + (4 + 2 ^ n) * n) / 4 for n>0. ●

▶ [A114199] 1,2,4,8,17,38,87,200,458,1044,2373,5388,12233,27782,63112,143392,325805,740266,1681935,3821412,8682310,19726316,44818473,101828344,231355953 ⋆ Row sums of a Pascal - Fibonacci triangle. ● a(n) = Sum _{ k=0..n } Sum _{ j=0..n - k } C(n - k, j) * C(k, j) * F(j); ● a(n) = Sum _{ k=0..n } C(n, k) * F(floor((k + 2) / 2)). ●

▶ [A006196] 0,1,1,1,2,4,8,17,38,87,203,482,1160,2822,6929,17149,42736,107144,270060,683940,1739511,4441255,11378814,29245927,75386341 ⋆ Number of leftist trees with n leaves. ● a(n)=T(n,1),a(0)=0, T(n,m)=sum(j=0..m - 1, binomial(m,j) * sum(k=0..floor((n + j) / 2) - m, T(n - k - m,k + m - j) * T(k + m - j,m - j))), n>m, T(n,n)=1. - _ Vladimir Kruchinin _ , May 04 2012 ●

▶ [A100131] 1,2,4,8,17,38,88,208,497,1194,2876,6936,16737,40398,97520,235424,568353,1372114,3312564,7997224,19306993,46611190,112529352,271669872,655869073 ⋆ a(n) = Sum _{ k=0..floor(n / 4) } binomial(n - 2k, 2k) * 2 ^ (n - 4k). ● a(n) = 4a(n - 1) - 4a(n - 2) + a(n - 4); ● a(n) = ((sqrt(2) + 1) ^ (n + 1) + (sqrt(2) - 1) ^ (n + 1)(- 1) ^ n) / (4 * sqrt(2)) + (n + 1) / 2; ● a(n) = Sum _{ k=0..n } Sum _{ j=0..n - k } binomial(k, j) * binomial(n - j, k) * ((j + 1) mod 2). - _ Paul Barry _ , May 31 2005 ●

▶ [A119685] 1,1,2,4,8,17,38,88,208,497,1194,2877,6948,16821,40846,99539,243536,598353,1476370,3657883,9098420,22713077,56887062,142897576,359879600 ⋆ G.f. satisfies: A(x) = x + A(x ^ 2 / (1 - x) ^ 2). ● a(1) = 1; a(n) = Sum _{ k=1..floor(n / 2) } binomial(n - 1,2 * k - 1) * a(k). - _ Ilya Gutkovskiy _ , Apr 07 2022 ●

▶ [A086615] 1,2,4,8,17,38,89,216,539,1374,3562,9360,24871,66706,180340,490912,1344379,3701158,10237540,28436824,79288843,221836402,622599625,1752360040,4945087837 ⋆ Antidiagonal sums of triangle A086614. ● a(n) = Sum _{ k=0..floor((n + 1) / 2) } binomial(n + 1, 2k + 1) * binomial(2k, k) / (k + 1). - _ Paul Barry _ , Nov 29 2004 ● a(n) = n + 1 + Sum _ k a(k - 1) * a(n - k - 1), starting from a(n)=0 for n negative. - _ Henry Bottomley _ , Feb 22 2005 ● a(n) = Sum _{ k=0..n } Sum _{ j=0..n - k } C(j) * C(n - k, 2j). - _ Paul Barry _ , Aug 19 2005 ● a(n) = Sum _{ k=0..floor(n / 2) } C(n + 1,n - 2k) * C(k). (End) ●

▶ [A081124] 1,2,4,8,17,38,90,224,585,1594,4520,13288,40409,126782,409646,1360512,4637681,16202034,57941164,211860488,791272129,3015807254,11719800674,46401584096,187039192185 ⋆ Binomial transform of floor(n / 2)!. ● a(n) = Sum _{ k=0..n } C(n, k) * floor(k / 2)!. ●

▶ [A118928] 1,1,1,2,4,8,17,38,92,238,643,1790,5076,14573,42241,123484,364052,1082602,3247759,9829820,30019326,92517644,287805801,903822922,2865339252 ⋆ a(n) = Sum _{ k=0..floor(n / 2) } C(n - k,k) * C(n - k,k + 1) / (n - k) * a(k), with a(0)=1. ● a(n) = Sum _{ k=0..floor(n / 2) } C(n - k,k) * C(n - k,k + 1) / (n - k) * a(k), with a(0)=1. ●

▶ [A137856] 1,2,4,8,17,39,97,261,756,2343,7722,26917,98789,380360,1531698,6434385,28130890,127729730,601196428,2928369917,14738842361,76547694741,4097

18539681,2257459567236,12789959138943 ⋆ Row sums of triangle A137855. ● a(n) = Sum _{ k=1..n } Sum _{ j=1..n - k + 1 } Stirling2(k, j). - _ Andrew Howroyd _ , Aug 09 2018 ●

▶ [A210540] 1,1,1,1,2,4,8,17,40,104,291,857,2634,8455,28424,100117,368465,1410903,5599073,22968514,97267342,424927846,1913764155,8877181958,42358589064 ⋆ Number of arrays of n nonnegative integers with value i>0 appearing only after i - 1 has appeared at least 3 times. ● a(n) = 1 if n<=3 else Sum _{ i=0..n - 3 } binomial(n - 3,i) * a(i). Proved by _ R. J. Mathar _ in the Sequence Fans Mailing List. ●

▶ [A104879] 1,2,4,8,17,40,106,316,1049,3830,15208,65072,297841,1449756,7468542,40555748,231335961,1381989882,8623700812,56078446616,379233142801,2662013133296,19362917622002,145719550012300,1133023004941273 ⋆ Row sums of a sum - of - powers triangle. ● a(n) = 1 + n + Sum _{ k=2..n + 1 } (k ^ (n - k + 1) - 1) / (k - 1). ●

▶ [A200542] 1,1,1,1,2,4,8,17,41,113,340,1070,3592,12979,50107,204325,875702,3947560,18724328,93137201,484066913,2623523381,14811843184,87000588266,530736806728 ⋆ E.g.f. A(x) satisfies differential equation A'''(x)=A(x) + 1 / 2 * A(x) ^ 2, A(0)=0, A'(0)=1, A''(0)=1, A'''(0)=1. ● a(n)=n! * b(n), b(n)=1 / (n * (n - 1) * (n - 2)) * (i=1..n - 4, b(n - 3) + 1 / 2 * sum(b(i) * b(n - 3 - i))), n>3, b(1)=1, b(2)=1 / 2, b(3)=1 / 6. ●

▶ [A291583] 1,2,4,8,18,36,72,144,292,586,1172,2344,4696,9396,18792,37584,75186,150380,300764,601528,1203092,2406200,4812408,9624816,19249704 ⋆ Expansion of Product _{ k>=1 } 1 / (1 - 2 * x ^ (k ^ 2)). ● a(n) = c * 2 ^ n, where c = Product _{ k>=2 } 1 / (1 - 2 ^ (1 - k ^ 2)) = 1.1473740190706250791012378892728990358979800885299281286906257674366893358222... ●

▶ [A288206] 2,4,8,18,38,80,164,334,674,1356,2720,5450,10910,21832,43676,87366,174746,349508,699032,1398082,2796182,5592384,11184788,22369598,44739218 ⋆ a(n) = 3 * a(n - 1) - a(n - 2) - 3 * a(n - 3) + 2 * a(n - 4), where a(0) = 2, a(1) = 4, a(2) = 8, a(3) = 18. ● a(n) = 3 * a(n - 1) - a(n - 2) - 3 * a(n - 3) + 2 * a(n - 4), where a(0) = 2, a(1) = 4, a(2) = 8, a(3) = 18. ● a(n) = (- 3 + (- 1) ^ (1 + n) + 2 ^ (4 + n) - 6 * n) / 6. - _ Colin Barker _ , Sep 29 2017 ●

▶ [A052910] 1,2,4,8,18,40,88,194,428,944,2082,4592,10128,22338,49268,108664,239666,528600,1165864,2571394,5671388,12508640,27588674,60848736,134206112 ⋆ Expansion of 1 + 2 / (1 - 2 * x - x ^ 3). ● a(n) = 2 * a(n - 1) + a(n - 3), with a(0)=1, a(1)=2, a(2)=4, a(3)=8. ● a(n) = Sum _{ alpha=RootOf(- 1 + 2 * z + z ^ 3) } (2 / 59) * (12 - 8 * alpha + 9 * alpha ^ 2) * alpha ^ (- 1 - n). ●

▶ [A367659] 1,2,4,8,18,40,88,196,436,968,2152,4784,10632,23634,52536,116776,259576,577000,1282576,2850968,6337264,14086744,31312644,69603152,154716976 ⋆ G.f. A(x) satisfies A(x) = 1 / (1 - x - x * A(x ^ 3)). ● a(0) = 1; a(n) = a(n - 1) + Sum _{ k=0..floor((n - 1) / 3) } a(k) * a(n - 1 - 3 * k). ● a(0) = 1, a(1) = 2, a(2) = 4; a(n) = a(n - 3) + Sum _{ k=0..n - 1 } a(floor(k / 3)) * a(n - 1 - k). ●

▶ [A288309] 2,4,8,18,40,92,210,484,1112,2562,5896,13580,31266,72004,165800,381810,879208,2024636,4662258,10736164,24722936,56931426,131100232,301894508,695195202 ⋆ a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 3 * a(n - 3), where a(0) = 2, a(1) = 4, a(2) = 8. ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 3 * a(n - 3), where a(0) = 2, a(1) = 4, a(2) = 8. ● a(n) = (2 ^ (1 - n) * (13 * 2 ^ n + (13 - 4 * sqrt(13)) * (1 - sqrt(13)) ^ n + (1 + sqrt(13)) ^ n * (13 + 4 * sqrt(13)))) / 39. - _ Colin Barker _ , Jun 09 2017 ●

▶ [A182780] 2,4,8,18,42,100,240,578,1394,3364,8120,19602,47322,114244,275808,665858,1607522,3880900,9369320,22619538,54608394,131836324,318281040,768398402,1855077842 ⋆ Twice A024537. ● a(n) = (2 + (1 - sqrt(2)) ^ (1 + n) + (1 + sqrt(2)) ^ (1 + n)) / 2. ● a(n) = 3 * a(n - 1) - a(n - 2) - a(n - 3) for n>2. ●

▶ [A078678] 1,2,4,8,18,42,100,242,592,1460,3624,9042,22656,56970,143688,363348,920886,2338566,5949148,15157874,38674978,98803052,252701484,646990518,1658066668 ⋆ Number of binary strings with n 1's and n 0's avoiding zigzags, that is avoiding the substrings 101 and 010. ● a(n) = sum(binomial(n - k + 2 * floor(k / 3), floor(k / 3)) ^ 2, k=0..n + floor(n / 2)). ● a(n) = sum(binomial(n - k,k) ^ 2 * (2 * n ^ 2 - 6 * n * k + 6 * k ^ 2) / (n - k) ^ 2), k=0..floor(n / 2)). ● a(n) = [x ^ n y ^ n](1 + x * y + x ^ 2 * y ^ 2) / (1 - x - y + x * y - x ^ 2 * y ^ 2). - _ Gheorghe Coserea _ , Jul 18 2016 ●

▶ [A052327] 1,1,2,4,8,18,43,102,251,625,1584,4055,10509,27451,72307,191697,511335,1370995,3693452,9991671,27133149,73934800,202096673,553999573,1522651908 ⋆ Number of rooted trees with a forbidden limb of length 4. ● a(n) satisfies a = SHIFT _ RIGHT(EULER(a - b)) where b(4)=1, b(k)=0 if k != 4. ●

▶ [A114203] 1,2,4,8,18,44,110,272,662,1596,3838,9240,22286,53812,129974,313888,757878,1829644,4416910,10662952,25742302,62147556,150038438,362226480,874493446 ⋆ Row sums of a Pascal - Jacobsthal triangle. ● a(n) = 4a(n - 1) - 5a(n - 2) + 2a(n - 3) + 2a(n - 4); ● a(n) = Sum _{ k=0..n } Sum _{ i=0..n - k } C(n - k, i) * C(k, i) * J(i); ●

▶ [A100132] 1,2,4,8,18,44,112,288,740,1896,4848,12384,31624,80752,206208,526592,1344784,3434272,8770368,22397568,57198368,146071744,373034240,952645120,2432840256 ⋆ a(n) = Sum _{ k=0..floor(n / 4) } C(n - 2k,2k) * 2 ^ (n - 3k). ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) + 2 * a(n - 3). ● a(n) = Sum _{ k=0..floor(n / 2) } C(n - k, k)2 ^ (n - 3k / 2)(1 + (- 1) ^ k) / 2. - _ Paul Barry _ , Jan 22 2005 ●

▶ [A099785] 1,2,4,8,18,48,144,448,1380,4152,12224,35456,102024,292768,840416,2416384,6959504,20069280,57913536,167158656,482462752,1392319488,4017460224,11590946816,33439639616 ⋆ a(n) = Sum _{ k=0..floor(n / 4) } C(n - k,3 * k) * 2 ^ (n - 3 * k). ● a(n) = 6 * a(n - 1) - 12 * a(n - 2) + 8 * a(n - 3) + 2 * a(n - 4). ●

▶ [A116723] 1,2,4,8,18,53,219,1201,8055,62860,556070,5488126,59740688,710771367,9174170117,127661752527,1904975488573,30341995265190,513771331467544,9215499383109764,174548332364311774,3481204991988351785,72920994844093191807,1600596371590399672061 ⋆ We have one bead labeled i for every i=1, 2, ...; a(n) = number of necklaces that can be made using any subset of the first n beads. ● a(n) = 1 + n + n(n - 1) / 2 + Sum _{ k=3..n } n! / (2k(n - k)!). ●

▶ [A323020] 1,2,4,8,18,56,126,630,1638,8190,31122,155610,964782,4823910,35696934,178484670,1534968162,7674840810,84423248910,468165289410,5149818183510,31367074390470,345037818295170,2289796430504310,25187760735547410 ⋆ a(n) is the smallest k such that A319447(k) = n. ● a(0) = 1, a(1) = 2, a(2) = 4, a(3) = 8, a(4) = 18. Let p(n) be the n - th prime congruent to 1 modulo 6, q(n) be the n - th prime congruent to 5 modulo 6. Then there exists { i(n) } and { j(n) } such that i(3) = j(3) = i(4) = j(4) = 0; for n >= 5, if a(n - 2) * p(i(n - 2) + 1) < a(n - 1) * q(j(n - 1) + 1), then a(n) = a(n - 2) * p(i(n - 2) + 1), i(n) = i(n - 2) + 1, j(n) = j(n - 2), or a(n) = a(n - 1) * q(j(n - 1) + 1), i(n) = i(n - 1), j(n) = j(n - 1) + 1. ●

▶ [A139784] 0,0,0,0,1,2,4,8,19,38,76,152,315,630,1260,2520,5083,10166,20332,40664,81499,162998,325996,651992,1304667 ⋆ a(4n + 1)=2a(4n), a(4n + 2)=2a(4n + 1), a(4n + 3)=2a(4n + 2), a(4n + 4)=2a(4n + 3) + A007583(n). ● a(4n + s) = 2 ^ s * (- 1 / 45 + 7 * 16 ^ n / 90 - 4 ^ n / 18), s=0,1,2,3. - _ R. J. Mathar _ , May 18 2008 ● a(0)=0, a(1)=0, a(2)=0, a(3)=0, a(4)=1, a(5)=2, a(6)=4, a(7)=8, a(8)=19, a(n)=2 * a(n - 1) + 5 * a(n - 4) - 10 * a(n - 5) - 4 * a(n - 8) + 8 * a(n - 9). - _ Harvey P. Dale _ , Jan 21 2013 ●

▶ [A099526] 1,2,4,8,19,44,100,224,505,1142,2584,5840,13195,29816,67384,152288,344161,777770,1757692,3972248,8976979,20287268,45847612,103611968,234154873 ⋆ Expansion of 1 / (1 - 2x - 3x ^ 4). ● a(n)=2a(n - 1) + 3a(n - 4); a(n)=sum { k=0..floor(n / 4), binomial(n - 3k, k)3 ^ (n - 3k)(2 / 3) ^ (n - 4k) } . ●

▶ [A100133] 1,2,4,8,19,50,136,368,985,2618,6940,18392,48763,129338,343120,910304,2415025,6406898,16996852,45090728,119620579,317340098,841868632,2233386320,5924932489 ⋆ a(n) = Sum _{ k=0..floor(n / 4) } C(n - 2k,2k) * 3 ^ k * 2 ^ (n - 4k). ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) + 3 * a(n - 4). [corrected by _ Kevin Ryde _ , Feb 02 2023] ●

▶ [A099598] 1,2,4,8,19,50,162,576,2469,11218,59984,331432,2120663,13784290,102616622,766648128,6507054537,54919451490,523342287196,4923469621256,52040350449307,539901936037202,6268123599148282 ⋆ Antidiagonal sums of array A099597. ● a(n)=sum { k=0..n, C(n,k) * (floor(k / 2)!) ^ 2 } ; a(n)=sum { k=0..n, sum { j=0..n - k, C(n - k,j)C(k,j)j! ^ 2 }} ; - _ Paul Barry _ , May 26 2007 ●

▶ [A128816] 1,1,2,4,8,19,53,160,512,1753,6431,25072,103022,444145,2004281,9447784,46407476,236950873,1254862955,6880495528,38999582018,228195894313,1376543144453,8550048509440,54619642413848 ⋆ Number of partitions of an n - element set avoiding the pattern 12|3. ● a(0)=1, a(1)=1, a(n) = 1 + a(n - 1) + Sum _{ k=1..n - 2 } binomial(n - 2, k) * a(n - k - 2). ●

▶ [A005518] 1,2,4,8,19,67,331,2221,19577,219613,3042161,50728129,997525853,22742734291,592821132889,17461204521323,575411103069067,2103468874265443,7846729487306354343 ⋆ Largest label f(T) given to a rooted tree T with n nodes in Matula - Goebel labeling. ● a(1)=1; a(2)=2; a(3)=4; a(4)=8; a(n) = the a(n - 1) - th prime (see the Gutman and Ivic 1994 paper). - _ Emeric Deutsch _ , Apr 15 2012 ●

▶ [A272122] 1,1,2,4,8,20,40,120,288,864,1728,4800,9600,28800,84480,304128,608256,2322432,9289728,40642560,116121600,348364800,696729600,3185049600,8918138880 ⋆ a(n) is the number of positive divisors of A003266(n). ● a(n + 1) = 2 * a(n) when n is in A069744. ●

▶ [A323019] 1,2,4,8,20,40,120,520,1560,8840,26520,185640,769080,5383560,28455960,199191720,1166694360,8166860520,61834801080,432843607560,3771922865880,26403460061160,275350369209240,1927452584464680,21201978429111480 ⋆ a(n) is the smallest k such that A316506(k) = n. ● a(0) = 1, a(1) = 2, a(2) = 4, a(3) = 8. Let p(n) be the n - th prime congruent to 1 modulo 4, q(n) be the n - th prime congruent to 3 modulo 4. Then there exists { i(n) } and { j(n) } such that i(2) = j(2) = i(3) = j(3) = 0; for n >= 4, if a(n - 2) * p(i(n - 2) + 1) < a(n - 1) * q(j(n - 1) + 1), then a(n) = a(n - 2) * p(i(n - 2) + 1), i(n) = i(n - 2) + 1, j(n) = j(n - 2), or a(n) = a(n - 1) * q(j(n - 1) + 1), i(n) = i(n - 1), j(n) = j(n - 1) + 1. ●

▶ [A288476] 2,4,8,20,44,108,244,588,1348,3212,7428,17580,40868,96332,224644,528236,1234148,2897804,6777924,15900844,37216932,87264460,204330500,478954476,1121747556 ⋆ a(n) = a(n - 1) + 4 * a(n - 2) - 2 * a(n - 3), where a(0) = 2, a(1) = 4, a(2) = 8. ● a(n) = a(n - 1) + 4 * a(n - 2) - 2 * a(n - 3), where a(0) = 2, a(1) = 4, a(2) = 8. ●

▶ [A056952] 0,1,1,2,4,8,20,44,124,300,920,2420,7940,22460,78040,235260,859580,2741660,10477880,35152820,139931620,491459820,2030707640,7436765660,31805257340 ⋆ Numerators of continued fraction for alternating factorial. ● a(0)=0; a(1)=1; a(n) = a(n - 1) + (n / 2) * a(n - 2). ●

▶ [A358056] 1,1,2,4,8,20,48,216,576,1392,7200,43200,184320,1065600,4314240,21611520,150958080,573834240,2293401600,32107622400,236017152000,2798762803200,22493915136000,189837914112000,1165284436377600 ⋆ Given a row of n payphones (or phone booths), all initially unused, how many ways are there for n people to choose the payphones, assuming each always chooses one of the most distant payphones from those in use already? We consider here only the distance to the closest neighbor (in contrast to A095236). ● a(n) = Sum _{ m = 1..n } StartCase(m, n), m is the selection of the first phone in usage. ● a(n) = floor(n / 2)! * Combinations if only floor((n + 1) / 2) phone users arrive. ● a(n) = Sum _{ i=1..n } (b(i,1) + b(n + 1 - i,1))! * Product _{ j=2..n - 1 } 2 ^ (d(i,j) + d(n + 1 - i,j)) * (b(i,j) + b(n + 1 - i,j))! (See A095236 for definition and calculation of b(p,k) and d(p,k)). - _ Simon Wundling _ , May 21 2023 ●

▶ [A115219] 0,0,2,4,8,20,52,132,332,836,2108,5316,13404,33796,85212,214852,541724,1365892,3443932,8683460,21894300,55203844,139189852,350950468,884879388 ⋆ Expansion of 2 * x ^ 2 * (1 - x) / (1 - 3 * x + 2 * x ^ 2 - 2 * x ^ 3). ● a(n + 3) = 3 * a(n + 2) - 2 * a(n + 1) + 2 * a(n). - _ G. C. Greubel _ , Feb 05 2016 ●

▶ [A123611] 1,2,4,8,20,52,160,492,1620,5408,18504,64132,225440,800048,2865720,10341208,37568340,137270956,504176992,1860277044,6892335720,25631327688,95640894056,357975249028,1343650267296 ⋆ Row sums of triangle A123610. ● a(n) = (1 / n) * Sum _{ d | n } phi(n / d) * binomial(2 * d, d) for n>0. - _ Andrew Howroyd _ , Apr 02 2017 ●

▶ [A113180] 1,2,4,8,20,56,160,448,1240,3440,9632,27200,77216,219840,627200,1793024,5136480,14743232,42390400,122064640,351951232,1015990528,2936079360,8493340672,24591589120 ⋆ Expansion of 1 / sqrt((1 - 2 * x) ^ 2 - 8 * x ^ 4). ● a(n) = Sum _{ k=0..floor(n / 2) } C(n - 2k,k) * C(n - 3k,k) * 2 ^ (n - 3k). ●

▶ [A241891] 1,2,4,8,20,72,244,968,3700,14792,58484,233928,932980,3731912,14916724,59666888,238623860,954495432,3817806964,15271227848,61084212340,244436849352,977344601204,3909378404808,15637502434420 ⋆ Total number of unit squares appearing in the Thue - Morse sequence of logical matrices (1, 0 version

) after n stages. ● a(n) = 4 * a(n - 1) + 5 * a(n - 2) - 20 * a(n - 3) - 4 * a(n - 4) + 16 * a(n - 5). - _ Colin Barker _ , Jan 17 2015 ●

▶ [A337762] 1,1,2,4,8,21,56,144,370,926,2275,5482,12966,30124,68838,154934,343756,752689,1627701,3479226,7355608,15390682,31889732,65465473,133212912 ⋆ Number of partitions of the n - th n - gonal number into n - gonal numbers. ● a(n) = [x ^ p(n,n)] Product _{ k=1..n } 1 / (1 - x ^ p(n,k)), where p(n,k) = k * (k * (n - 2) - n + 4) / 2 is the k - th n - gonal number. ●

▶ [A262345] 2,4,8,22,24,26,98,228,246,808,1556,1792,1978,3424,69738,108376,169584 ⋆ Numbers n such that 4 ^ n + 21 is prime. ● a(n) = half of even terms of A057201. ●

▶ [A217975] 2,4,8,22,46,128,268,746,1562,4348,9104,25342,53062,147704,309268,860882,1802546,5017588,10506008,29244646,61233502,170450288,356895004,993457082,2080136522 ⋆ 2 * n ^ 2 - 7 is a square. ● a(n) = 6 * a(n - 2) - a(n - 4) with a(1)=2, a(2)=4, a(3)=8, a(4)=22. - _ Sture Sjöstedt _ , Oct 16 2012 ● a(n) = a(- n + 1) = ((4 + sqrt(2)) * (1 - (- 1) ^ n * sqrt(2)) ^ (2 * floor(n / 2)) + (4 - sqrt(2)) * (1 + (- 1) ^ n * sqrt(2)) ^ (2 * floor(n / 2))) / 4. - _ Bruno Berselli _ , Oct 25 2012 ●

▶ [A078222] 2,4,8,24,48,240,480,2400,4800,24000,48000,240000,480000,2400000,4800000,24000000,48000000,240000000,480000000,2400000000,4800000000,24000000000,48000000000,240000000000,480000000000 ⋆ a(1) = 2, a(n + 1) > a(n) is the smallest multiple of a(n) using only even digits. ● a(n) = 10 * a(n - 2) for n > 5. ●

▶ [A291405] 0,2,4,8,24,52,120,290,672,1592,3760,8824,20800,48976,115296,271588,639488,1505816,3546032,8350064,19662944,46302800,109033952,256754760,604609280 ⋆ p - INVERT of (1,1,0,0,0,0,...), where p(S) = 1 - 2 S ^ 2 - 2 S ^ 4. ● a(n) = 2 * a(n - 2) + 4 * a(n - 3) + 4 * a(n - 4) + 5 * a(n - 5) + 12 * a(n - 6) + 8 * a(n - 7) + 2 * a(n - 8) for n >= 9. ●

▶ [A115115] 2,4,8,24,70,232,782,2744,9710,34990,127102,466152,1720742,6391714,23860936,89479864,336860182,1272587758,4822419422,18325211326,69810262088,266548336954,1019836872142,3909374909672,15011998757958 ⋆ Number of 3 - asymmetric rhythm cycles: binary necklaces of length 3n subject to the restriction that for any k if the k - th bead is of color 1 then the (k + n) - th and (k + 2n) - th beads (modulo 3n) are of color 0. ● a(n) = (Sum _{ d|n } phi(3d) + Sum _{ d|n, (3, d)=1 } phi(d) * 4 ^ (n / d)) / (3n), where phi(n) is the Euler function A000010. ●

▶ [A026097] 1,2,4,8,24,72,216,648,1944,5832,17496,52488,157464,472392,1417176,4251528,12754584,38263752,114791256,344373768,1033121304,3099363912,9298091736,27894275208,83682825624 ⋆ a(n) = number of (s(0), s(1), ..., s(n)) such that every s(i) is an integer, s(0) = 0, |s(i) - s(i - 1)| = 1 for i = 1,2,3; |s(i) - s(i - 1)| <= 1 for i >= 4. Also a(n) = sum of numbers in row n + 1 of the array T defined in A026082 and a(n) = 24 * 3 ^ (n - 4) for n >= 4. ● a(n) = 3 * a(n - 1) for n>3. G.f.: (4 * x ^ 3 + 2 * x ^ 2 + x - 1) / (3 * x - 1). - _ Colin Barker _ , Jun 15 2013 ● a(n) = floor((4 * n - 2) / (n + 1)) * a(n - 1). Without the floor function the recursion gives the Catalan numbers (A000108). - _ Hauke Woerpel _ , Oct 16 2020 ●

▶ [A264557] 1,1,1,2,4,8,24,72,216,864,3456,13824,69120,345600,1728000,10368000,62208000,373248000,2612736000,18289152000,128024064000,1024192512000,8193540096000,65548320768000,589934886912000 ⋆ Number of n X 1 arrays of permutations of 0..n * 1 - 1 with rows nondecreasing modulo 2 and columns nondecreasing modulo 3. ● a(n) = Product _{ i=0..2 } ceiling((n - i) / 3)!. - _ Alois P. Heinz _ , Jul 09 2016 ●

▶ [A152875] 1,1,2,4,8,24,72,288,1152,5760,28800,172800,1036800,7257600,50803200,406425600,3251404800,29262643200,263363788800,2633637888000,28997001676800,00,3186701844480000,38240422133760000,458885065605120000 ⋆ Number of permutations of { 1,2,...,n } with all odd entries preceding all even entries or all even entries preceding all odd entries. ● a(2n) = 2n! ^ 2; a(2n + 1) = 2n!(n + 1)! (for n>=2). ●

▶ [A179190] 1,2,4,8,24,80,288,1088,4256,17088,70016,291584,1230592,5251584,22623232,98248704,429677056,1890700288,8364824576,37186449408,166030266368,744180244480,3347321831424,15104525959168,68357598756864 ⋆ Coefficient [x ^ n] of the Maclaurin series for 2 - sqrt(1 - 4 * x - 4 * x ^ 2). ● a(n) = Sum _{ k=0..floor(n / 2) } (2 * n - 2 * k - 3)!! * 2 ^ (n - k) / (k! * (n - 2k)!), n > 0. - _ R. J. Mathar _ , Jul 11 2011 ●

▶ [A291482] 0,1,2,4,8,24,80,456,2368,20352,139648,1577984,13327360,185992832,1860708096,30882985472,356724338688,6860887896064,89815091306496,1963843714723840,28724760194564096,703639672161697792,11370790299166343168,308435832182144040960,5456591088206554333184 ⋆ Expansion of e.g.f. arcsin(x) * exp(x). ● a(n) = Sum _{ k=0..(n - 1) / 2 } binomial(n,2 * k + 1) * binomial(2 * k,k) * (2k)! / 4 ^ k. ● a(n + 4) - 2 * a(n + 3) - (n ^ 2 + 4 * n + 3) * a(n + 2) + (n + 2) * (2 * n + 3) * a(n + 1) - (n + 1) * (n + 2) * a(n) = 0. (End) ●

▶ [A066535] 1,2,4,8,24,112,544,2368,9328,34802,129064,491768,1938336,7801744,31553344,127083328,509145568,2035437440,8148505828,32728127192,131880275664,532597541344,2153312518240,8710505815360,35250721087168 ⋆ Number of ways of writing n as a sum of n squares. ● a(n) equals the coefficient of x ^ n in the n - th power of Jacobi theta _ 3(x) where theta _ 3(x) = 1 + 2 * Sum _{ n>=1 } x ^ (n ^ 2). - _ Paul D. Hanna _ , Oct 25 2009 ●

▶ [A298682] 1,2,4,8,28,92,352,1280,4828,17900,67024,249680,932716,3479132,12987904,48464288,180885628,675045452,2519361712,9402270320,35089981708,130957132220,488739595744,1823999153600,6807261212956 ⋆ Start with the triangle with 4 markings of the Shield tiling and recursively apply the substitution rule. a(n) is the number of triangles with 4 markings after n iterations. ● a(n) = (1 / 13) * (26 + (- 2) ^ n + (2 + sqrt(3)) ^ n * (- 7 + 5 * sqrt(3)) - (2 - sqrt(3)) ^ n * (7 + 5 * sqrt(3))). ● a(n) = 3 * a(n - 1) + 5 * a(n - 2) - 9 * a(n - 3) + 2 * a(n - 4) for n>3. ●

▶ [A271216] 1,2,4,8,32,64,384,768,6144,12288,122880,245760,2949120,5898240,82575360,165150720,2642411520,5284823040,95126814720,190253629440,3805072588800 ⋆ a(n) = 2 ^ n floor(n / 2)! ● a(n) = 2 ^ n floor(n / 2)! ●

▶ [A165904] 1,2,4,8,32,96,448,2944,15104,160768,1565696,16812032,341250048,5081473024,128940408832,4153114198016,110562817540096,6199850375708672,294499013825921024,17095312584100282368,1743063839902067064832 ⋆ Somos - 4 recurrence with a(i)=2 ^ i for 0<=i<=3. ● a(n) = (a(n - 1) * a(n - 3) + a(n - 2) ^ 2) / a(n - 4). - _ G. C. Greubel _ , Sep 18 2018 ●

▶ [A192008] 1,2,4,8,32,96,456,2016,11232,61632,419328,2695680,21358080,161049600,1433894400,12429158400,123511910400,1202903654400,13229501644800,143113833676800,1722282128179200,20516624400384000,268083853148160000,3485314242772992000,49167975665958912000 ⋆ Modified linear phone booth sequence : number of ways to occupy n phone booths in a row, one by one, each time picking a phone booth adjacent to the smallest number of previously occupied phone booths. ● a(n) = Sum (m + k + 1)! * binomial(m + k,m) * 2 ^ k * (k + v1 + v2)! * (m + k)!, where the sum is taken over v1,v2 each from 0 to 1, and over nonnegative m,k such that 2 * m + 3 * k = n - 1 - v1 - v2. - _ Max Alekseyev _ , Sep 11 2016 ●

▶ [A228920] 2,4,8,32,192,1024,4608,18432,69632,262144,1015808,4063232,16515072,67108864,270532608,1082130432,4311744512,17179869184,68585259008,274341036032,1098437885952,4398046511104,17600775979008,70403103916032,281543696187392 ⋆ Number of solutions to Sum _{ i=1..n } x _ i ^ 2 == 0 (mod 4) with x _ i in 0..3. ● a(n) = ((2 + 2i) ^ n + (2 - 2i) ^ n + 4 ^ n) / 4. - _ Charles R Greathouse IV _ , Sep 15 2013 ●

▶ [A036544] 2,4,8,32,256,2480,24704,246928,2469152,24691376,246913600,2469135824,24691358048,246913580272,2469135802496,24691358024720,246913580246944 ⋆ a(n) = (2 * (1 + n + (((10 ^ n - 1) / 9) - n) / 9)). ● a(n) = (2 / 81) * (72 * n + 10 ^ n + 80). ●

▶ [A068620] 1,2,4,8,56,272,1184,4736,17536,65792,254464,1015808,4130816,16781312,67641344,270565376,1077968896,4295032832,17146445824,68585259008,274609995776,1099512676352,4400196091904,17600784367616,70385932435456 ⋆ Number of strings over Z _ 4 of length n with trace 0 and subtrace 0. ● a(n; t, s) = a(n - 1; t, s) + a(n - 1; t + 3, s + 3t + 1) + a(n - 1; t + 2, s + 2t) + a(n - 1; t + 1, s + t + 1) where t is the trace and s is the subtrace. ●

▶ [A371966] 1,2,4,8,61,221,442,884,8671,24371,60721,244121,881371,2898371,8692591,48826601,97653202,484336211,968672422,6847550561,24334620331,68473110671,247696944631,884738088671,2892570042961 ⋆ Largest number reachable starting from 1 and taking n steps either doubling or doubling + reversing. ● a(n) <= 20 ^ n and a(n + 1) <= 20 * a(n). ●

▶ [A263451] 1,2,4,8,61,221,442,884,8761,75221,544210,8842100,87642100,875422100,8754421000,88754210000,877542100000,8755421000000,87542110000000,875422100000000,8754421000000000,88754210000000000,877542100000000000,8755421000000000000 ⋆ a(n) is the largest anagram of 2 * a(n - 1), a(1)=1. ● a(n) = 10 ^ 6 * a(n - 6) for n >= 20. (End) ●

▶ [A267457] 1,2,4,8,84,168,1364,2728,21844,43688,349524,699048,5592404,11184808,89478484,178956968,1431655764,2863311528,22906492244,45812984488,366503875924,733007751848,5864062014804,11728124029608,93824992236884 ⋆ Decimal representation of the n - th iteration of the "Rule 133" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = 17 * a(n - 2) - 16 * a(n - 4) for n>5. ●

▶ [A047465] 1,2,4,9,10,12,17,18,20,25,26,28,33,34,36,41,42,44,49,50,52,57,58,60,65 ⋆ Numbers that are congruent to { 1, 2, 4 } mod 8. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. - _ Vincenzo Librandi _ , May 16 2012 ● a(n) = 8 * n / 3 - 3 - cos(2 * n * Pi / 3) + 5 * sin(2 * n * Pi / 3) / (3 * sqrt(3)). ● a(3k) = 8k - 4, a(3k - 1) = 8k - 6, a(3k - 2) = 8k - 7. (End) ●

▶ [A047348] 2,4,9,11,16,18,23,25,30,32,37,39,44,46,51,53,58,60,65,67,72,74,79,81,86 ⋆ Numbers that are congruent to { 2, 4 } mod 7. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3). ● a(n) = 7 * floor((n - 1) / 2) + 3 + (- 1) ^ n. - _ Gary Detlefs _ , Mar 02 2010 ● a(n) = 7 * n - a(n - 1) - 8 with n > 1, a(1)=2. - _ Vincenzo Librandi _ , Aug 05 2010 ●

▶ [A266257] 1,2,4,9,11,20,22,35,37,54,56,77,79,104,106,135,137,170,172,209,211,252,254,299,301 ⋆ Total number of ON (black) cells after n iterations of the "Rule 11" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = ((n + 1) ^ 2 - (- 1) ^ n * (n - 1)) / 2. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n>4. ●

▶ [A341239] 2,4,9,12,16,19,21,26,28,33,36,38,43,45,50,53,57,60,62,67,70,74,77,79,84 ⋆ a(n) = floor(r * floor(s * n)), where r = 1 + sqrt(2) and s = sqrt(2). ● a(n) = floor(r * floor(s * n)), where r = 1 + sqrt(2) and s = sqrt(2). ●

▶ [A241200] 2,4,9,12,19,23,32,37,48,54,67,74,89,97,114,123,142,152,173,184,207,219,244,257,284 ⋆ For the n in A241199, the index of the first of 4 terms in binomial(n,k) that satisfy a quadratic relation. ● a(n) = (- 11 - 5 * (- 1) ^ n - 2 * (- 15 + (- 1) ^ n) * n + 6 * n ^ 2) / 16. G.f.: x * (x ^ 2 - 2) * (x ^ 2 + x + 1) / ((x - 1) ^ 3 * (x + 1) ^ 2). - _ Colin Barker _ , Apr 18 2014 and Apr 29 2015 ●

▶ [A092530] 0,2,4,9,12,20,24,35,40,54,60,77,84,104,112,135,144,170,180,209,220,252,264,299,312 ⋆ a(0) = 0; for n > 0, a(n) = T(n) + k where T(n) is the n - th triangular number (A000217) and k (see A026741) is the smallest positive number such that a(n) is divisible by n. ● a(0) = 0, a(2n) = a(2n - 1) + n, a(2n - 1) = a(2n - 2) + 3n - 1. - _ Amarnath Murthy _ , Jul 04 2004 ● a(n) = (n * (2 + n)) / 2 for n even. ● a(n) = (n * (3 + n)) / 2 for n odd. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n>4. ●

▶ [A162761] 0,2,4,9,13,20,26,35,43,54,64,77,89,104,118,135,151,170,188,209,229,252,274,299,323 ⋆ Minimal total number of floors an elevator must move to transport n people initially waiting at floors i = 1, ..., n to their destination floors n - i + 1 (= n, ..., 1), when the elevator can hold at most one person at a time and starts at floor 1, and no passenger may get off the elevator before reaching his / her destination. ● a(n) = (n ^ 2 + n + (- 1) ^ n - 3) / 2 for n > 1. a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4) for n > 4. G.f.: x ^ 2 * (2 + x ^ 2 - x ^ 3) / ((1 - x) ^ 3 * (1 + x)). - Conjectured by _ Colin Barker _ , Jun 10 2012, edited and proved by _ M. F. Hasler _ , Apr 29 2019 ●

▶ [A266596] 0,2,4,9,15,20,30,35,49,54,72,77,99,104,130,135,165,170,204,209,247,252,294,299,345 ⋆ Total number of OFF (white) cells after n iterations of the "Rule 37" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = (n ^ 2 + 4 * n + (- 1) ^ n * (n - 3) - 3) / 2 for n>0. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n>5. ●

▶ [A058296] 2,4,9,15,21,30,39,45,56,64,72,81,93,102,108,120,134,144,154,165,176,186,195,205,225 ⋆ Average of consecutive primes. ● a(1)=2, a(n) = (p(2n - 2)

+ p(2n - 1)) / 2 for n>1, where p(i) is the i - th prime. ●
▶ [A080004] 1,1,1,2,4,9,15,25,46,84,156,280,501,909,1647,2990,5408,9773,17695,32033,58000,104976,189968,343860,622409 ⋆ Number of permutations satisfying - k<=p(i) - i<=r and p(i) - i not in I, i=1..n, with k=2, r=3, I= {- 1,2 } . ● a(n) = a(n - 1) + a(n - 3) + a(n - 4) + 4 * a(n - 5) - a(n - 6) + a(n - 7) - a(n - 9) - a(n - 10). ●
▶ [A082894] 2,4,9,16,30,66,126,256,513,1020,2046,4092,8190,16380,32775,65536,131070,262152,524286,1048580,2097144,4194300,8388606,16777224,33554425 ⋆ a(n) is the closest number to 2 ^ n which is divisible by n. ● a(n) = n * floor((floor(n / 2) + 2 ^ n) / n). ●
▶ [A358904] 1,1,2,4,9,16,38,64,156,260,632,1024,2601,4096,10208,16944,40966,65536,168672,262144,656980,1090240,2620928,4194304,10862100 ⋆ Number of finite sets of compositions with all equal sums and total sum n. ● a(n>0) = Sum _{ d|n } binomial(2 ^ (d - 1),n / d). ●
▶ [A060401] 2,4,9,16,65,66,427,848,2529,2530,27731,27732,360373,360374,360375,720736,12252257,12252258,232792579,232792580,232792581,232792582,5354228903,5354228904,26771144425 ⋆ a(n) = minimal m such that m>n, n divides m, n - 1 divides m - 1, n - 2 divides m - 2 and so on down to 1 divides m - n + 1. ● a(n) = n + lcm(seq(i, i=1..n)). ●
▶ [A065026] 1,2,4,9,17,25,59,67,176,226,578,628,1340,1876,4472,5728,13952,17704,43112,54568,133088,168496,410720,519856,1267568 ⋆ a(1) = 1; for n>1, a(n) = smallest number that is not a sum or product of any subset of the numbers a(1) to a(n - 1). ● a(n) = 2 * a(n - 2) + 4 * a(n - 4) - 2 * a(n - 6) for n>17. ●
▶ [A007502] 1,2,4,9,17,33,61,112,202,361,639,1123,1961,3406,5888,10137,17389,29733,50693,86204,146246,247577,418299,705479,1187857 ⋆ Les Marvin sequence: a(n) = F(n) + (n - 1) * F(n - 1), F() = Fibonacci numbers. ● a(n) = 2 * a(n - 1) + a(n - 2) - 2 * a(n - 3) - a(n - 4) for n>3, a(0)=1, a(1)=2, a(2)=4, a(3)=9. - Harvey P. Dale, Jul 13 2011 ●
▶ [A266108] 1,1,2,4,9,17,33,67,133,256,488,935,1798,3437,6507,12239,22950,42959,80283,149717,278338,515579,952014,1753899,3225529 ⋆ Expansion of Product _{ k>=1 } (1 + (x + x ^ 2) ^ k). ● a(n) = Sum _{ k=0..n } binomial(k,n - k) * q(k), where q(n) is A000009. ●
▶ [A360303] 0,1,2,4,9,17,34,66,132,261,521,1033,2066,4114,8226,16420,32837,65605,131209,262281,524554,1048850,2097682,4194834,8389668 ⋆ a(n) = Sum _{ k=1..floor(sqrt(n)) } 2 ^ floor(n / k - k). ● a(n) = Sum _{ k=1..floor(sqrt(n)) } 2 ^ floor(n / k - k). ●
▶ [A115451] 1,1,2,4,9,17,34,68,137,273,546,1092,2185,4369,8738,17476,34953,69905,139810,279620,559241,1118481,2236962,4473924,8947849 ⋆ Expansion of 1 / ((1 + x) * (1 - 2 * x) * (1 + x ^ 2)). ● a(n) = a(n - 1) + a(n - 2) + a(n - 3) + 2 * a(n - 4); ● a(n) = Sum _{ k=0..n } (2 ^ (n - k + 1) - 1)(- 1) ^ k } - Sum _{ k=0..floor(n / 2) } (2 ^ (n - 2k) - 1)(- 1) ^ k } . ●
▶ [A291728] 1,2,4,9,17,35,70,142,285,576,1160,2340,4716,9510,19171,38653,77926,157110,316747,638599,1287479,2595698,5233196,10550681,21271280 ⋆ p - INVERT of (1,0,1,0,0,0,0,...), where p(S) = 1 - S - S ^ 2. ● a(n) = a(n - 1) + a(n - 2) + a(n - 3) + 2 * (a(n - 4) + a(n - 6) for n >= 7. ●
▶ [A059973] 0,1,1,2,4,9,17,38,72,161,305,682,1292,2889,5473,12238,23184,51841,98209,219602,416020,930249,1762289,3940598,7465176 ⋆ Expansion of x * (1 + x - 2 * x ^ 2) / (1 - 4 * x ^ 2 - x ^ 4). ● a(2n) = Sum _{ k=0..2n - 1 } a(k). ●
▶ [A103321] 1,2,4,9,18,35,68,130,246,463,867,1617,3007,5579,10332,19107,35295,65140,120137,221444,407999,751453,1383641,2547116,4688106 ⋆ Expansion of 1 / ((1 - x - x ^ 2 - x ^ 3) * (1 - x - x ^ 3)). ● a(0)=1, a(1)=2, a(2)=4, a(3)=9, a(4)=18, a(5)=35, a(n)=2 * a(n - 1) + a(n - 3) - 2 * a(n - 4) - a(n - 5) - a(n - 6). - _ Harvey P. Dale _ , Nov 06 2011 ●
▶ [A101351] 2,4,9,18,36,71,140,276,545,1078,2136,4239,8424,16760,33377,66522,132668,264727,528468,1055340,2108097,4212014,8417264,16823583,33629456 ⋆ a(n) = 2 ^ n - 1 + Fibonacci(n). ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) - a(n - 3) + 2 * a(n - 4). G.f.: x * (2 - 4 * x + x ^ 2) / ((x - 1) * (2 * x - 1) * (1 - x - x ^ 2)). - _ R. J. Mathar _ , Feb 06 2010 ● a(n) = ((1 + sqrt(5)) ^ n - (1 - sqrt(5)) ^ n) / (2 ^ n * sqrt(5)) + 2 ^ n - 1. - _ Colin Barker _ , Nov 02 2016 ●
▶ [A293333] 2,4,9,18,36,72,143,286,572,1145,2290,4579,9159,18318,36636,73271,146543,293086,586172,1172344,2344687,4689374,9378749,18757498,37514995 ⋆ The integer k that minimizes |k / 2 ^ n - sqrt(5))|. ● a(n) = floor(1 / 2 + r * 2 ^ n), where r = sqrt(5). ●
▶ [A111662] 0,0,1,2,4,9,18,36,72,144,288,576,1152,2304,4610,9220,18440,36882,73764,147528,295056,590112,1180224,2360450,4720900 ⋆ Expansion of x ^ 2 * (1 - x) * (x ^ 2 + x + 1) * (x ^ 6 + x ^ 3 + 1) / ((2 * x - 1) * (2 * x ^ 9 - x ^ 6 + x ^ 3 - 1)). ● a(n) = 2 * a(n - 1) + a(n - 3) - 2 * a(n - 4) - a(n - 6) + 2 * a(n - 7) + 2 * a(n - 9) - 4 * a(n - 10) for n>11. - _ Colin Barker _ , May 11 2019 ●
▶ [A155803] 0,0,0,1,2,4,9,18,36,73,146,292,585,1170,2340,4681,9362,18724,37449,74898,149796,299593,599186,1198372,2396745 ⋆ A023001 interleaved with 2 * A023001 and 4 * A023001. ● a(n)= 2 * a(n - 1) + a(n - 3) - 2 * a(n - 4). G.f.: x ^ 3 / ((x - 1) * (2 * x - 1) * (1 + x + x ^ 2)). [_ R. J. Mathar _ , Jul 23 2009] ● a(n)=floor(2 ^ n / 7) [_ Mircea Merca _ , Dec 22 2010] ●
▶ [A033138] 1,2,4,9,18,36,73,146,292,585,1170,2340,4681,9362,18724,37449,74898,149796,299593,599186,1198372,2396745,4793490,9586980,19173961 ⋆ a(n) = floor(2 ^ (n + 2) / 7). ● a(n) = 2 * a(n - 1) + a(n - 3) - 2 * a(n - 4). -_ John W. Layman _ ● a(n) = floor(2 ^ (n + 2) / 7). - _ Gary Detlefs _ , Sep 06 2010 ● a(n) = floor((4 * 2 ^ n - 1) / 7) = ceiling((4 * 2 ^ n - 4) / 7) = round((4 * 2 ^ n - 2) / 7) = round((8 * 2 ^ n - 5) / 14); a(n) = a(n - 3) + 2 ^ (n - 1), n>3. - _ Mircea Merca _ , Dec 28 2010 ● a(n) = 4 / 7 * 2 ^ n - 5 / 21 * cos(2 / 3 * Pi * n) + 1 / 21 * 3 ^ (1 / 2) * sin(2 / 3 * Pi * n) - 1 / 3. - _ Leonid Bedratyuk _ , May 13 2012 ●
▶ [A293352] 0,1,2,4,9,18,36,73,147,295,591,1182,2364,4728,9457,18914,37828,75656,151313,302627,605254,1210508,2421017,4842035,9684071 ⋆ Greatest integer k such that k / 2 ^ n < Euler's constant (0.577216...). ● a(n) = floor((r * 2 ^ n)), where r = Euler's constant (0.577216...). ●
▶ [A293327] 0,1,2,4,9,18,36,73,147,295,591,1182,2364,4729,9459,18918,37837,75674,151348,302697,605395,1210791,2421582,4843165,9686330 ⋆ Greatest integer k such that k / 2 ^ n < sqrt(1 / 3). ● a(n) = floor(r * 2 ^ n), where r = sqrt(1 / 3). ●
▶ [A081253] 2,4,9,18,37,74,149,298,597,1194,2389,4778,9557,19114,38229,76458,152917,305834,611669,1223338,2446677,4893354,9786709,19573418,39146837 ⋆ Numbers k such that A081252(m) / m ^ 2 has a local minimum for m = k. ● a(n) = floor(2 ^ (n - 1) * 7 / 3). ● a(n) = 2 * a(n - 1) for even n, otherwise a(n) = 2 * a(n - 1) + 1, with a(1)=2. - _ Bruno Berselli _ , Jun 19 2014 ●
▶ [A118255] 1,2,4,9,18,37,74,149,299,599,1198,2397,4794,9589,19179,38359,76718,153437,306874,613749,1227499,2454999,4909998,9819997,19639995 ⋆ a(1)=1, then a(n)=2 * a(n - 1) if n is prime, a(n)=2 * a(n - 1) + 1 if n not prime. ● a(n) = floor(k * 2 ^ n) where k = 0.585317... = 1 - A051006. [_ Charles R Greathouse IV _ , Dec 27 2011] ● a(n) = 2 ^ n - 1 - (1 / 2) * (pi(n) + Sum _{ i=1..n } 2 ^ (n - i) * pi(i)), where pi = A000720 ●
▶ [A206927] 2,4,9,18,37,75,150,300,601,1202,2405,4811,9622,19244,38489,76978,153957,307915,615830,1231660,2463321,4926642,9853285,19706571,39413142 ⋆ Minimal numbers of binary length n + 1 such that the number of contiguous palindromic bit patterns in the binary representation is minimal. ● a(n) = 37 * 2 ^ (1 + n mod 6) * (2 ^ (6 * floor(n / 6)) - 1) / 63 + floor(37 * 2 ^ (n mod 6) / 2 ^ 5). ● a(n) = floor((37 * 2 ^ (n + 1) / 63)) mod 2 ^ (n + 1). ● a(n + 1) = 2a(n) + floor(37 * 2 ^ (n + 2) / 63) mod 2. ●
▶ [A019299] 1,2,4,9,18,37,75,150,300,601,1203,2406,4813,9626,19252,38505,77010,154021,308043,616086,1232173,2464346,4928692,9857385,19714771 ⋆ First n elements of Thue - Morse sequence A010059 read as a binary number. ● a(n + 1) = 2 * a(n) + 1 if a(n) is evil; a(n + 1) = 2 * a(n) otherwise (see also A125050). ● a(n) = floor((1 - c) * 2 ^ (n + 1)), where c = A014571 is the Thue - Morse constant. (End) ●
▶ [A052932] 1,1,2,4,9,18,37,76,157,323,665,1369,2819,5804,11950,24604,50658,104301,214748,442150,910354,1874351,3859149,7945700,16359604 ⋆ Expansion of (1 - x) / (1 - 2 * x - x ^ 4 + x ^ 5). ● a(n) = 2 * a(n - 1) * a(n - 4) - a(n - 5), with a(0)=a(1)=1, a(2)=2, a(3)=4, a(4)=9. ● a(n) = Sum _{ alpha=RootOf(1 - 2 * z - z ^ 4 + z ^ 5) } (1 / 11243) * (1807 + 1630 * alpha -+ 319 * alpha ^ 2 + 428 * alpha ^ 3 - 1268 * alpha ^ 4) * alpha ^ (- 1 - n). ●
▶ [A320222] 1,1,2,4,9,18,39,78,161,324,658,1316,2657,5314,10668,21347,42777,85554,171290,342580,685498,1371037,2742733,5485466,10972351 ⋆ Number of unlabeled rooted trees with n nodes in which the non - leaf branches directly under any given node are all equal. ● a(n) = 1 + Sum _{ k = 2..n - 1 } floor((n - 1) / k) * a(k). ●
▶ [A219755] 0,0,0,0,1,2,4,9,18,39,80,169,350,731,1516,3149,6522,13503,27912,57649,118934,245155,504868,1038869,2135986 ⋆ Expansion of x ^ 4 * (1 - 3 * x ^ 2 - x ^ 3) / ((1 + x) * (1 - 2 * x) * (1 - x - 2 * x ^ 2)). ● a(n) = (2 ^ (n - 5) * (3 * n + 38) - (3 * n - 14) * (- 1) ^ n) / 27 with n>3, a(0)=a(1)=a(2)=a(3)=0. [_ Bruno Berselli _ , Nov 29 2012] ●
▶ [A289846] 1,2,4,9,18,39,80,170,353,744,1553,3262,6824,14313,29970,62823,131596,275782,577777,1210704,2536657,5315210,11136700,23334969,48893202 ⋆ p - INVERT of (1,0,1,0,1,0,1,0,1,...) (A059841), where p(S) = 1 - S - S ^ 2. ● a(n) = a(n - 1) + 3 * a(n - 2) - a(n - 3) - a(n - 4). ●
▶ [A038044] 1,1,2,4,9,18,40,80,168,340,698,1396,2844,5688,11456,22948,46072,92144,184696,369392,739536,1479232,2959860,5919720,11842696 ⋆ Shifts left under transform T where Ta is a DCONV a. ● a(n + 1) = Sum _{ d|n } a(d) * a(n / d), a(1) = 1. ● a(prime(k) + 1) = 2 * a(prime(k)); ● a(n) is asymptotic to c * 2 ^ n where c=0.353030198... (End) ● a(n + 1) = Sum _{ k=1..n } a(gcd(n,k)) * a(n / gcd(n,k)) / phi(n / gcd(n,k)) where phi = A000010. - _ Richard L. Ollerton _ , May 19 2021 ●
▶ [A189911] 1,2,4,9,18,40,80,175,350,756,1512,3234,6468,13728,27456,57915,115830,243100,486200,1016158,2032316,4232592,8465184,17577014,35154028 ⋆ Row sums of the extended Catalan triangle A189231. ● a(2 * n) = (n + 1) * C(2 * n, n) (A037965); ● a(2 * n + 1) = (n + 2) * C(2 * n + 1, n + 1) (A097070). (End) ●
▶ [A081490] 1,2,4,9,19,36,62,99,149,214,296,397,519,664,834,1031,1257,1514,1804,2129,2491,2892,3334,3819,4349 ⋆ Leading term of n - th row of A081491. ● a(n) = n * (2 * n ^ 2 - 9 * n + 19) / 6 - 1. (End) ● a(n) = (n - 2) ^ 2 + a(n - 1) + 1, n>1. - _ Gary Detlefs _ , Jun 29 2010 ● a(1)=1, a(2)=2, a(3)=4, a(4)=9, a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Harvey P. Dale _ , Apr 30 2011 ●
▶ [A292478] 1,2,4,9,19,36,66,127,256,513,998,1916,3717,7311,14396,28134,54719,106624,208577,408426,798340,1558049,3041323,5942916,11618026 ⋆ p - INVERT of A010892, where p(S) = 1 - S - S ^ 3. ● a(n) = 4 * a(n - 1) - 8 * a(n - 2) + 11 * a(n - 3) - 8 * a(n - 4) + 4 * a(n - 5) - a(n - 6) for n >= 7. ●
▶ [A262864] 1,2,4,9,19,38,76,153,307,614,1228,2457,4915,9830,19660,39321,78643,157286,314572,629145,1258291,2516582,5033164,10066329,20132659 ⋆ Decimal representation of the middle column of the "Rule 147" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + 3 * a(n - 3) - 2 * a(n - 4) for n > 3. ● a(n) = floor(6 * 2 ^ n / 5). - _ Karl V. Keller, Jr. _ , Apr 12 2021 ●
▶ [A329356] 0,1,2,4,9,19,38,77,154,308,617,1234,2468,4937,9875,19750,39501,79003,158006,316012,632025,1264050,2528101,5056203,10112406 ⋆ The binary expansion of a(n) is the first n terms of 2 - A000002. ● a(n) = floor((1 - c / 2) * 2 ^ n), where c = A118270 is the Kolakoski constant. - _ Lorenzo Sauras Altuzarra _ , Jan 01 2023 ●
▶ [A125050] 1,2,4,9,19,38,77,155,311,622,1245,2491,4983,9967,19934,39869,79738,159477,318955,637911,1275823,2551646,5103293,10206587,20413175 ⋆ a(1) = 1. If a(n) is composite, a(n + 1) = 2 * a(n) + 1; otherwise, a(n + 1) = 2 * a(n). ● a(n) = floor(c * 2 ^ n), where c = 0.6083600446... - _ Lorenzo Sauras Altuzarra _ , Jan 01 2023 ●
▶ [A293322] 0,1,2,4,9,19,39,79,158,316,632,1265,2531,5062,10125,20251,40503,81006,162013,324027,648055,1296111,2592222,5184444,10368889 ⋆ Greatest integer k such that k / 2 ^ n < 1 / tau, where tau = (1 + sqrt(5)) / 2 = golden ratio. ● a(n) = floor((r * 2 ^ n)), where r = (- 1 + sqrt(5)) / 2. ●
▶ [A267157] 1,2,4,9,19,39,79,159,319,639,1278,2557,5114,10229,20458,40917,81834,163669,327338,654677,1309354,2618709,5237418,10474837,20949674 ⋆ Decimal representation of the middle column of the "Rule 107" elementary cellular auto

maton starting with a single ON (black) cell. • a(n) = (- (- 1) ^ n + 959 * 2 ^ (n - 7) - 3) / 6 for n>7. • a(n) = 2 * a(n - 1) + a(n - 2) - 2 * a(n - 3) for n>4. •
► [A054135] 2,4,9,19,39,79,159,319,639,1279,2559,5119,10239,20479,40959,81919,163839,327679,655359,1310719,2621439,5242879,10485759,20971519,41943039 ⋆ a(n) = T(n,1), array T as in A054134. • a(1)=1, a(n) = n + Sum _{ i=1..n - 1 } a(i) for n > 1. - _ Gerald McGarvey _ , Sep 06 2004 • a(n) = 5 * 2 ^ (n - 2) - 1 for n > 1. - _ Karl V. Keller, Jr. _ , Jun 12 2022 •
► [A099568] 1,2,4,9,19,39,80,163,330,666,1341,2695,5409,10846,21733,43526,87140,174409,349007,698291,1396988,2794571,5590014,11181306,22364485 ⋆ Expansion of (1 - x) / ((1 - 2 * x) * (1 - x - x ^ 3)). • a(n) = 3 * a(n - 1) - 2 * a(n - 2) + a(n - 3) - 2 * a(n - 4). • a(n) = Sum _{ k=0..n } Sum _{ j=0..floor(n / 3) } binomial(n - 2 * j, k + j). •
► [A084172] 1,2,4,9,19,40,82,167,337,678,1360,2725,5455,10916,21838,43683,87373,174754,349516,699041,1398091,2796192,5592394,11184799,22369609 ⋆ a(n) = 3 * a(n - 1) - a(n - 2) - 3 * a(n - 3) + 2 * a(n - 4). • a(n) = 2 ^ (n + 2) / 3 - (- 1) ^ n / 12 - (2 * n + 1) / 4. • a(n + 2) = a(n + 1) + 2 * a(n) + n, a(0)=0, a(1)=2. • a(n + 1) = 2 * a(n) + floor(n / 2). _ Franklin T. Adams - Watters _ , Oct 17 2013 •
► [A052908] 1,1,2,4,9,19,40,85,180,381,807,1709,3619,7664,16230,34370,72785,154136,326412,691239,1463829,3099934,6564695,13901980,29440065 ⋆ Expansion of 1 + x / (1 - 2 * x - x ^ 3 + x ^ 4). • a(n) = 2 * a(n - 1) + a(n - 3) - a(n - 4), with a(0)=1, a(1)=1, a(2)=2, a(3)=4, a(4)=9. • a(n) = Sum _{ alpha=RootOf(1 - 2 * z - z ^ 3 + z ^ 4) } (1 / 643) * (168 - 74 * alpha + 53 * alpha ^ 2 - 93 * alpha ^ 3) * alpha ^ (- 1 - n). •
► [A136298] 1,2,4,9,19,41,87,185,391,825,1735,3641,7623,15929,33223,69177,143815,298553,618951,1281593,2650567,5475897,11301319,23301689,48001479 ⋆ a(n) = 3 * a(n - 1) - 4 * a(n - 3), with a(0)=1, a(1)=2, a(2)=4, a(3)=9. • a(n) = (2 ^ (n - 2) * (3 * n + 31) - (- 1) ^ n) / 9 + (1 / 4) * [n=0]. •
► [A122584] 1,1,1,1,2,4,9,19,41,87,186,396,845,1801,3841,8189,17462,37232,79389,169275,360937,769603,1640982,3498968,7460649 ⋆ Expansion of x * (1 + x) * (1 - 2 * x) / (1 - 2 * x - x ^ 2 + 2 * x ^ 3 - x ^ 4). • a(n) = 2 * a(n - 1) + a(n - 2) - 2 * a(n - 3) + a(n - 4). •
► [A141683] 1,1,2,4,9,19,41,88,189,406,872,1873,4023,8641,18560,39865,85626,183916,395033,848491,1822473,3914488,8407925,18059374,38789712 ⋆ a(n) = Sum _{ k=1..n } b(k) * a(n - k) for n >= 1, where b(n) = b(n - 2) + b(n - 3) for n >= 3 with b(0) = 0 and b(1) = b(2) = 1. • a(n) = a(n - 1) + 2 * a(n - 2) + a(n - 3), n > 4. •
► [A275862] 1,1,2,4,9,19,41,89,194,424,927,2026,4429,9682,21166,46272,101157,221143,483449,1056887,2310503,5051084,11042380,24140196,52773864 ⋆ floor(r * a(n - 1)) + floor(r * a(n - 2)), where r = 3 / 2, a(0) = 1, a(1) = 1. • a(n) = floor(3 * a(n - 1) / 2) + floor(3 * a(n - 2) / 2). •
► [A089941] 1,2,4,9,19,42,90,197,424,923,1989,4315,9300,20129,43374,93724,201888,435713,938218,2022972,4354569,9382489,20190181,43477688,93534469 ⋆ Row sums of triangle A089940. • a(n)=sum { k=0..n, Bin(n + k, floor((n - k) / 2)) } . •
► [A192923] 0,1,2,4,9,19,42,91,200,437,959,2101,4609,10106,22168,48620,106649,233928,513126,1125541,2468901,5415578,11879209,26057330,57157443 ⋆ Coefficient of x in the reduction by (x ^ 2 - >x + 1) of the polynomial p(n,x) defined below at Comments. • a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 3 * a(n - 3) - a(n - 4). •
► [A192673] 1,1,2,4,9,19,42,92,203,453,1018,2300,5224,11919,27301,62750,144662,334392,774802,1799089,4185524,9754468,22769099,53225213,124585182 ⋆ Floor - Sqrt transform of large Schroder numbers (A006318). • a(n) = floor(sqrt(largeSchroder(n))). •
► [A289845] 1,2,4,9,19,43,91,202,433,952,2055,4494,9737,21236,46099,100403,218164,474833,1032256,2245929,4883690,10623848,23103985,50255443,109298635 ⋆ p - INVERT of A079977, where p(S) = 1 - S - S ^ 2. • a(n) = a(n - 1) + 3 * a(n - 2) - a(n - 3) + a(n - 4) - a(n - 5) - 2 * a(n - 6) - a(n - 8). •
► [A036718] 1,1,1,2,4,9,19,45,106,260,643,1624,4138,10683,27790,72917,192548,511624,1366424,3666930,9881527,26730495,72556208,197562840,539479354 ⋆ Number of rooted trees where each node has at most 4 children. • a(n) / a(n + 1) ~ 0.3435201045704890466320746987387926546447518982576812874071 49... - _ Robert A. Russell _ , Feb 11 2023 •
► [A052328] 1,1,2,4,9,19,46,110,273,684,1747,4505,11763,30956,82153,219437,589747,1593170,4324445,11787195,32251520,88548011,243877256,673605521,1865445693 ⋆ Number of rooted trees with a forbidden limb of length 5. • a(n) satisfies a = SHIFT _ RIGHT(EULER(a - b)) where b(5)=1, b(k)=0 if k != 5. •
► [A101338] 1,2,4,9,20,41,77,134,219,340,506,727,1014,1379,1835,2396,3077,3894,4864,6005,7336,8877,10649,12674,14975 ⋆ Antidiagonal sums in A101321. • a(n) = n ^ 4 / 24 + n ^ 3 / 12 - n ^ 2 / 24 + 11 * n / 12 + 1. • a(0)=1, a(1)=2, a(2)=4, a(3)=9, a(4)=20, a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Harvey P. Dale _ , May 21 2013 •
► [A179744] 1,2,4,9,20,43,90,185,376,759,1526,3061,6132,12275,24562,49137,98288,196591,393198,786413,1572844,3145707,6291434,12582889,25165800 ⋆ a(0) = 1, a(n) = 3 * 2 ^ (n - 1) - n for n>0. • a(0) = 1, a(1) = 2; a(n) = 2 * a(n - 1) + (n - 2) for n>1. •
► [A109975] 1,2,4,9,20,44,96,208,448,960,2048,4352,9216,19456,40960,86016,180224,376832,786432,1638400,3407872,7077888,14680064,30408704,62914560 ⋆ Second differences of A045623, prefixed by an initial 1. • a(n) = 2 ^ (n - 3) * (n + 6) with n>1, a(0)=1, a(1)=2 (see the PARI code). - _ Bruno Berselli _ , Jun 27 2012 •
► [A129988] 1,2,4,9,20,44,96,209,456,999,2198,4854,10752,23877,53142,118517,264816,592744,1328880,2983565,6707396,15096727,34014866,76712042,173150400 ⋆ Fourth differences of A129983. • a(n) = + 6 * a(n - 1) - 13 * a(n - 2) + 12 * a(n - 3) - 3 * a(n - 4) - 2 * a(n - 5), n>5. - _ R. J. Mathar _ , Feb 11 2016 •
► [A008998] 1,2,4,9,20,44,97,214,472,1041,2296,5064,11169,24634,54332,119833,264300,582932,1285697,2835694,6254320,13794337,30424368,67103056,148000449 ⋆ a(n) = 2 * a(n - 1) + a(n - 3), with a(0)=1 and a(1)=2. • a(n) = Sum _{ k=0..floor(n / 3) } binomial(n - 2k, k) * 2 ^ (n - 3k). - _ Paul Barry _ , Oct 20 2004 •
► [A052534] 1,2,4,9,20,45,101,227,510,1146,2575,5786,13001,29213,65641,147494,331416,744685,1673292,3759853,8448313,18983187,42654834,95844542,215360731 ⋆ Expansion of (1 - x) * (1 + x) / (1 - 2 * x - x ^ 2 + x ^ 3). • a(n) = 2 * a(n - 1) + a(n - 2) - a(n - 3), with a(0)=1, a(1)=2, a(2)=4. • a(n) = Sum _{ alpha = RootOf(1 - 2 * x - x ^ 2 + x ^ 3) } (1 / 7) * (2 + alpha) * alpha ^ (- 1 - n) . • a(n) = central term in the (n + 1) - th power of the 3 X 3 matrix (shown in the example of A066170): [1 1 1 / 1 1 0 / 1 0 0]. E.g. a(6) = 101 since the central term in M ^ 7 = 101. - _ Gary W. Adamson _ , Feb 01 2004 •
► [A227978] 1,2,4,9,20,45,102,231,520,1161,2570,5643,12300,26637,57358,122895,262160,557073,1179666,2490387,5242900,11010069,23068694,48234519,100663320 ⋆ a(0)=1, a(1)=2; for n>1, a(n) = n * (2 ^ n + 4) / 4. • a(n) = 6 * a(n - 1) - 13 * a(n - 2) + 12 * a(n - 3) - 4 * a(n - 4) for n>5. •
► [A367713] 1,2,4,9,20,46,105,243,560,1296,2994,6928,16019,37060,85713,198282,458636,1060932,2454070,5676750,13131210,30374892,70262196,162528916,375957183 ⋆ G.f. A(x) satisfies A(x) = 1 / ((1 - x) * (1 - x * (1 + x) * A(x ^ 2))). • a(n) = 1 + Sum _{ k=0..n - 1 } a(floor(k / 2)) * a(n - 1 - k). •
► [A005908] 0,1,1,2,4,9,20,46,106,245,567,1313,3041,7044,16317,37798,87559,202831,469860,1088436,2521375,5840796,13530276,31343052,72606569 ⋆ a(n) = floor(phi * a(n - 1)) + floor(phi * a(n - 2)), where phi is the golden ratio. • a(n) = 2 * a(n - 1) + a(n - 2) - a(n - 4) - a(n - 5) for n > 4. •
► [A138164] 1,1,2,4,9,20,47,109,262,622,1516,3653,8988,21883,54213,133004,331233,817432,2044151,5068346,12716872,31651555,79636493,198843284,501466519 ⋆ Row sums of Riordan array (c(- x ^ 2),xc(- x ^ 2) ^ 2) ^ (- 1) where c(x) is the g.f. of A000108. • a(n) = top left term of M ^ n. a(n + 1) = sum of top row terms of M ^ n. Example: top row of M ^ 3 = (4, 3, 1, 1), where a(3) = 4 and a(4) = 9 = (4 + 3 + 1 + 1). (End) •
► [A349014] 1,1,2,4,9,20,47,111,270,663,1656,4174,10636,27308,70651,183902,481436,1266515,3346793,8879116,23642034,63156917,169222939,454660940,1224650739 ⋆ G.f. A(x) satisfies: A(x) = 1 + x + x ^ 2 * A(x) / (1 - x) + x ^ 2 * A(x) ^ 2. • a(0) = a(1) = 1; a(n) = Sum _{ k=0..n - 2 } a(k) * (1 + a(n - k - 2)). •
► [A036721] 1,1,1,2,4,9,20,47,112,277,693,1766,4547,11852,31146,82534,220149,590834,1593951,4320723,11761394,32138301,88121176,242383729,668607115 ⋆ G.f. satisfies A(x) = 1 + x * cycle _ index(Sym(5), A(x)). • a(n) / a(n + 1) ~ 0.3400174691510600868239301378165852627109768357114842672098 11... - _ Robert A. Russell _ , Feb 11 2023 •
► [A052329] 1,1,2,4,9,20,47,113,281,706,1807,4671,12224,32247,85782,229683,618767,1675618,4559263,12457483,34168574,94040433,259637564,718892281,1995739380 ⋆ Number of rooted trees with a forbidden limb of length 6. • a(n) satisfies a=SHIFT _ RIGHT(EULER(a - b)) where b(6)=1, b(k)=0 if k != 6. •
► [A036722] 1,1,1,2,4,9,20,48,114,283,710,1816,4690,12267,32338,85978,230080,619521,1676808,4560286,12454272,34143682,93928091,259208006,717375068 ⋆ G.f. satisfies A(x) = 1 + x * cycle _ index(Sym(6), A(x)). • a(n) / a(n + 1) ~ 0.3388871960528567143047490789609839366614855228647925732843 74... - _ Robert A. Russell _ , Feb 11 2023 •
► [A182378] 1,1,1,2,4,9,20,48,115,285,716,1833,4740,12410,32754,87176,233547,629540,1705809,4644231,12697500,34848694,95973026,265142431,734606478 ⋆ G.f. satisfies A(x) = 1 + x * cycle _ index(Sym(7), A(x)). • a(n) / a(n + 1) ~ 0.3385120112866039477196048697505390456164367182250979267296 20... - _ Robert A. Russell _ , Feb 11 2023 •
► [A292553] 1,1,1,2,4,9,20,48,115,286,718,1839,4757,12460,32897,87592,234746,633013,1715851,4673320,12781759,35093010,96681705,267199518,740580555 ⋆ Number of rooted unlabeled trees on n nodes where each node has at most 8 children. • a(n) / a(n + 1) ~ 0.3383860423648499570357449262271663707027757217950186006305 54... - _ Robert A. Russell _ , Feb 11 2023 •
► [A292554] 1,1,1,2,4,9,20,48,115,286,719,1841,4763,12477,32947,87735,235162,634212,1719325,4683368,12810871,35177357,96926335,267909285,742641309 ⋆ Number of rooted unlabeled trees on n nodes where each node has at most 9 children. • a(n) / a(n + 1) ~ 0.3383435527891087128664881478285280122666933263850523878848 53... - _ Robert A. Russell _ , Feb 11 2023 •
► [A292555] 1,1,1,2,4,9,20,48,115,286,719,1842,4765,12483,32964,87785,235305,634628,1720524,4686842,12820920,35206475,97010705,268154003,743351390 ⋆ Number of rooted unlabeled trees on n nodes where each node has at most 10 children. • a(n) / a(n + 1) ~ 0.3383291945661312116706676711608557411930819028680909866085 24... - _ Robert A. Russell _ , Feb 11 2023 •
► [A124497] 1,1,2,4,9,20,48,116,288,724,1849,4768,12423,32628,86342,229952,616042,1659012,4489101,12199521,33284546,91140797,250396629,690043032,1907022197 ⋆ Number of 1 - 2 - 3 trees with n edges and with thinning limbs. • a(n) = Sum _{ m=1..n + 2 } (binomial(3 * m,m) * Sum _{ k=0..n - m } ((binomial(2 * m + 2 * k,k) * binomial(n - m - k,2 * m + k)) / (2 * m + k + 1))) + Sum _{ k=0..n / 2 } ((binomial(2 * k,k) * binomial(n - k,k)) / (k + 1)). - _ Vladimir Kruchinin _ , Apr 24 2016 •
► [A286983] 1,2,4,9,20,48,117,294,748,1925,4984,12960,33785,88218,230580,603057,1577836,4129232,10807885,28291230,74060636,193882317,507572784,1328814144,3478834225 ⋆ a(n) is the smallest integer that can appear as the n - th term of two distinct nondecreasing sequences of positive integers that satisfy the Fibonacci recurrence relation. • a(n) = F(n) * (1 + F(n - 1)) where F = A000045 (the Fibonacci sequence). • a(n) = 3 * a(n - 1) + a(n - 2) - 5 * a(n - 3) - a(n - 4) + a(n - 5) for n>5. •
► [A018105] 1,2,4,9,21,44,96,206,441,944,2020,4326,9261,19824,42439,90849,194481,416324,891223,1907838,4084101,8742815,18715701,40064612,85766121 ⋆ Powers of fourth root of 21 rounded down. • a(n) = floor((21) ^ (n / 4)). - _ Wesley Ivan Hurt _ , Apr 24 2017 •
► [A061439] 2,4,9,21,46,99,215,464,999,2154,4641,9999,21544,46415,99999,215443,464158,999999,2154434,4641588,9999999,21544346,46415888,99999999,215443469 ⋆ Largest number whose cube has n digits. • a(n) = ceiling(10 ^ (n / 3)) - 1. - Antonio G. Astudillo (afg _ astudillo(AT)lycos.com), Mar 30 2003 •
► [A027711] 0,1,2,4,9,21,47,101,212,440,907,1859,3791,7699,15586,31476,63445,127689,256671,515433,1034248,2073968,4156791,8327911,16679007 ⋆ Number of binary sequences of length n with an even number of ones, at least two of the on

es being contiguous. ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 2 * a(n - 3) + a(n - 4) - 2 * a(n - 5). ●

▶ [A084634] 1,2,4,9,21,48,106,227,475,978,1992,4029,8113,16292,32662,65415,130935,261990,524116,1048385,2096941,4194072,8388354,16776939,33554131 ★ Binomial transform of 1, 1, 1, 2, 2, 2, 2, 2, ... ● a(n) = 2 ^ (n + 1) - (n ^ 2 + n + 2) / 2. ● a(n) = 1 + n + n * (n - 1) / 2 + 2 * Sum _{ k=3..n } C(n, k). ● a(n) = 5 * a(n - 1) - 9 * a(n - 2) + 7 * a(n - 3) - 2 * a(n - 4). - _ R. J. Mathar _ , Apr 07 2008 ● a(n) = Sum _{ i=0..n } (2 ^ i - i). - _ Ctibor O. Zizka _ , Oct 15 2010 ●

▶ [A137256] 1,2,4,9,21,48,108,243,549,1242,2808,6345,14337,32400,73224,165483,373977,845154,1909980,4316409,9754749,22044960,49819860,112588947,254442141 ★ Binomial transform of 2 ^ n, 2 ^ n, 2 ^ n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + 3 * a(n - 3). ●

▶ [A119967] 1,1,2,4,9,21,49,113,259,595,1376,3202,7479,17499,40986,96116,225755,531115,1251310,2951556,6968883,16468775,38951925,92204241,218426037 ★ A transform of the central binomial coefficients C(n,floor(n / 2)). ● a(n) = sum { k=0..floor(n / 2), C(n,2k) * C(k,floor(k / 2)) } . ●

▶ [A052921] 1,2,4,9,21,49,114,265,616,1432,3329,7739,17991,41824,97229,226030,525456,1221537,2839729,6601569,15346786,35676949,82938844,192809420,448227521 ★ Expansion of (1 - x) / (1 - 3 * x + 2 * x ^ 2 - x ^ 3). ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) + a(n - 3), with a(0)=1, a(1)=2, a(2)=4. ● a(n) = Sum _{ alpha=RootOf(- 1 + 3 * z - 2 * z ^ 2 + z ^ 3) } (1 / 23) * (8 - 5 * alpha + 7 * alpha ^ 2) * alpha ^ (- 1 - n). ● a(n) = Sum _{ k=0..n + 1 } C(n + k + 1, n - 2 * k). (End) ●

▶ [A322325] 1,1,2,4,9,21,49,115,269,630,1474,3450,8073,18893,44212,103465,242125,566617,1325982,3103035,7261648,16993545,39767898,93063924,217786044 ★ Number of nondecreasing Motzkin paths of length n. ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 3 * a(n - 3) + a(n - 5), a(0)=1, a(1)=1, a(2)=2, a(3)=4, a(4)=9. ●

▶ [A275864] 1,1,2,4,9,21,50,118,279,661,1566,3711,8795,20843,49396,117064,277432,657492,1558206,3692830,8751726,20740926,49154420,116492243,276077771 ★ Floor(r * a(n - 1)) + floor(r * a(n - 2)), where r = 5 / 3, a(0) = 1, a(1) = 1. ● a(n) = floor(r * a(n - 1)) + floor(r * a(n - 2)), where r = 5 / 3, a(0) = 1, a(1) = 1. ●

▶ [A171842] 1,1,2,4,9,21,50,120,289,697,1682,4060,9801,23661,57122,137904,332929,803761,1940450,4684660,11309769,27304197,65918162,159140520,384199201 ★ Binomial transform of 1,0,1,0,2,0,4,0,8,0,16,... ● a(n) = 3 * a(n - 1) - a(n - 2) - a(n - 3). G.f.: (1 - 2 * x) / ((1 - x) * (1 - 2 * x - x ^ 2)). - _ Colin Barker _ , Apr 01 2012 ● a(n) = (2 + (1 - sqrt(2)) ^ n + (1 + sqrt(2)) ^ n) / 4. - _ Colin Barker _ , Mar 16 2016 ●

▶ [A024537] 1,2,4,9,21,50,120,289,697,1682,4060,9801,23661,57122,137904,332929,803761,1940450,4684660,11309769,27304197,65918162,159140520,384199201,927538921 ★ a(n) = floor(a(n - 1) / (sqrt(2) - 1)), with a(0) = 1. ● a(n) = 2 * a(n - 1) + a(n - 2) - 1. - _ Christian G. Bower _ ● a(n) = 3 * a(n - 1) - a(n - 2) - a(n - 3). ● a(n) = (1 / 4) * (2 + (1 - sqrt(2)) ^ (n + 1) + (1 + sqrt(2)) ^ (n + 1)). - _ Herbert Kociemba _ , Jun 02 2004 ● a(n) = 1 + sum _{ k=1..floor((n + 1) / 2) } C(n + 1,2 * k) * 2 ^ (k - 1). - _ Andrew Woods _ , Jan 03 2015 ●

▶ [A091964] 1,2,4,9,21,50,121,296,730,1812,4521,11328,28485,71844,181674,460443,1169283,2974574,7578937,19337489,49401526,126350742,323495259,829033334,2126454271 ★ Number of left factors of peakless Motzkin paths of length n. ● a(n) = Sum _{ k=0..n } C(n - floor(k / 2), floor((k + 1) / 2)) * C(n - floor((k + 1) / 2), floor(k / 2)). - _ Paul D. Hanna _ , Mar 24 2005 ● a(n) = Sum _{ k=0..n } C(floor((n + k) / 2),k) * C(floor((n + k + 1) / 2),k). - _ Paul D. Hanna _ , Oct 31 2006 ●

▶ [A176334] 1,1,2,4,9,21,51,124,305,755,1879,4698,11792,29694,74984,189811,481498,1223713,3115200,7942134,20275362,51823246,132604193,339644739,870745187 ★ Diagonal sums of number triangle A176331. ● a(n) = Sum _{ k=0..floor(n / 2) } Sum _{ j=0..n - k } C(j,n - 2k) * C(j,k) * (- 1) ^ (n - k - j). ●

▶ [A005207] 1,2,4,9,21,51,127,322,826,2135,5545,14445,37701,98514,257608,673933,1763581,4615823,12082291,31628466,82798926,216761547,567474769,1485645049,3889431721 ★ a(n) = (F(2 * n - 1) + F(n + 1)) / 2 where F(n) is a Fibonacci number. ● a(n) = 4 * a(n - 1) - 3 * a(n - 2) - 2 * a(n - 3) + a(n - 4). ● a(n) = (w ^ (2 * n - 1) + w ^ (1 - 2 * n) + w ^ (n + 1) - (- w) ^ (- 1 - n)) / (4 * w - 2) where w = (1 + sqrt(5)) / 2. ● a(n) = (2 / 5) * Sum _{ k=1..4 } (sin(Pi * k / 5) ^ 2 * (1 + 2 * cos(Pi * k / 5)) ^ n). - _ Herbert Kociemba _ , May 31 2004 ●

▶ [A094286] 1,2,4,9,21,51,127,323,835,2187,5787,15435,41419,111659,302059,819243,2226219,6058155,16503211,44991659,122727595,334914219,914235051,2496201387,6816678571 ★ Number of (s(0), s(1), ..., s(n)) such that 0 < s(i) < 6 and |s(i) - s(i - 1)| <= 1 for i = 1,2,...,n, s(0) = 1, s(n) = 1. ● a(n) = (1 / 12) * (4 + 3 * 2 ^ n + (1 - sqrt(3)) ^ n + (1 + sqrt(3)) ^ n). ●

▶ [A094287] 1,2,4,9,21,51,127,323,835,2188,5798,15510,41822,113531,309937,850118,2340918,6466953,17913087,49726649,138287113,385126811,1073832695,2996974774,8370739326 ★ Number of (s(0), s(1), ..., s(n)) such that 0 < s(i) < 7 and |s(i) - s(i - 1)| <= 1 for i = 1,2,...,n, s(0) = 1, s(n) = 1. ● a(n) = (2 / 7) * Sum _{ k=1..6 } sin(Pi * k / 7) ^ 2(1 + 2 * cos(Pi * k / 7)) ^ n. ●

▶ [A094288] 1,2,4,9,21,51,127,323,835,2188,5798,15511,41835,113633,310557,853333,2355861,6531062,18171848,50722229,141973073,398351055,1120056347,3155043447,8901325751 ★ Number of (s(0), s(1), ..., s(n)) such that 0 < s(i) < 8 and |s(i) - s(i - 1)| <= 1 for i = 1,2,...,n, s(0) = 1, s(n) = 1. ● a(n) = (1 / 4) * Sum _{ k=1..7 } sin(Pi * k / 8) ^ 2 * (1 + 2 * cos(Pi * k / 8)) ^ n. ●

▶ [A086246] 0,1,1,1,2,4,9,21,51,127,323,835,2188,5798,15511,41835,113634,310572,853467,2356779,6536382,18199284,50852019,142547559,400763223 ★ Expansion of (1 + x - sqrt(1 - 2 * x - 3 * x ^ 2)) / 2 in powers of x. ● a(n) + a(n - 1) = a(0) * a(n) + a(1) * a(n - 1) + ... + a(n) * a(0), n > 2. ● a(n) = Sum _{ k=1..n } binomial(2 * k - 2, k - 1) * (- 1) ^ (n - k) * binomial(n - 2, n - k) / k. - _ Vladimir Kruchinin _ , May 27 2014 ●

▶ [A001006] 1,1,2,4,9,21,51,127,323,835,2188,5798,15511,41835,113634,310572,853467,2356779,6536382,18199284,50852019,142547559,400763223,1129760415,3192727797 ★ Motzkin numbers: number of ways of drawing any number of nonintersecting chords joining n (labeled) points on a circle. ● a(n) = (- 1 / 2) Sum _{ i + j = n + 2, i >= 0, j >= 0 } (- 3) ^ i * C(1 / 2, i) * C(1 / 2, j). ● a(n) = (3 / 2) ^ (n + 2) * Sum _{ k >= 1 } 3 ^ (- k) * Catalan(k - 1) * binomial(k, n + 2 - k). [Doslic et al.] ● a(n + 2) - a(n + 1) = a(0) * a(n) + a(1) * a(n - 1) + ... + a(n) * a(0). [Bernhart] ● a(n) = (1 / (n + 1)) * Sum _{ i } (n + 1)! / (i! * (i + 1)! * (n - 2 * i)!). [Bernhart] ● a(n) = (1 / (n + 1)) * Sum _{ k=0..ceiling((n + 1) / 2) } binomial(n + 1, k) * binomial(n + 1 - k, k - 1); ● a(n) = (1 / (n + 1)) * Sum _{ j=0..floor(n / 3) } (- 1) ^ j * binomial(n + 1, j) * binomial(2 * n - 3 * j, n). - _ Emeric Deutsch _ , Mar 13 2004 ●

▶ [A247100] 1,2,4,9,21,51,127,324,844,2243,6073,16737,46905,133556,386062,1132107,3365627,10137559,30920943,95457178,298128278,941574417,3006040523,9697677885,31602993021 ★ The number of ways to write an n - bit binary string and then define each run of ones as an element in an equivalence relation. ● a(n) = 1 + Sum _{ k=1..ceiling(n / 2) } binomial(n + 1, 2k) * Bell(k), where Bell(x) refers to Bell numbers (A000110). ●

▶ [A289666] 0,1,2,4,9,21,52,134,355,957,2608,7154,19701,54379,150302,415762,1150609,3185147,8818620,24418128,67615743,187239359,518506932,1435875288,3976322869 ★ a(n) = number of weakly threshold graphs on n nodes. ● a(n) = 4 * a(n - 1) - 3 * a(n - 2) - a(n - 3) - a(n - 5) for n>5. - _ Colin Barker _ , Jul 26 2017 ●

▶ [A084261] 1,1,2,4,9,21,52,134,361,1009,2926,8768,27121,86373,282864,950866,3277169,11564353,41739130,153919324,579411641,2224535125,8703993420,34681783422,140637608089 ★ A binomial transform of factorial numbers. ● a(n) = Sum _{ k=0..floor(n / 2) } C(n, 2k) * k!. ● a(n) = Sum _{ k=0..n } C(n, k) * (k / 2)! * ((1 + (- 1) ^ k) / 2) . ●

▶ [A055094] 0,1,2,4,9,22,52,72,146,313,738,1156,2829,6772,9520,18496,53643,75154,162438,312328,600116,1513186,4023888,4737152,9741609 ★ Binary encoding of quadratic residue set of n. L(1 / n) is the most significant bit, L(n - 1 / n) is the least significant bit, i.e., the rows of A055088 interpreted as binary numbers. ● a(n) = qrs2bincode(n) ●

▶ [A369472] 1,1,2,4,9,22,52,140,340,969,2394,7084,17710,53820,135720,420732,1068012,3362260,8579560,27343888,70068713,225568798,580034052,1882933364,4855986044 ★ Number of achiral polyominoes composed of n pentagonal cells of the hyperbolic regular tiling with Schläfli symbol { 5,oo } . ● a(n + 2) / a(n) ~ 256 / 27. a(2m + 1) / a(2m) ~ 32 / 9; a(2m) / a(2m - 1) ~ 8 / 3. ●

▶ [A290996] 1,2,4,9,22,55,136,330,789,1872,4433,10510,24968,59409,141470,336935,802340,1910166,4546845,10822176,25758097,61308650,145928764,347350473,826795942 ★ p - INVERT of (1,1,1,1,1,...), where p(S) = 1 - S - S ^ 4. ● a(n) = 5 * a(n - 1) - 9 * a(n - 2) + 7 * a(n - 3) - a(n - 4) for n >= 4. ●

▶ [A055588] 1,2,4,9,22,56,145,378,988,2585,6766,17712,46369,121394,317812,832041,2178310,5702888,14930353,39088170,102334156,267914297,701408734,1836311904,4807526977 ★ a(n) = 3 * a(n - 1) - a(n - 2) - 1 with a(0) = 1 and a(1) = 2. ● a(n) = (((3 + sqrt(5)) / 2) ^ n - ((3 - sqrt(5)) / 2) ^ n) / sqrt(5) + 1. ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) + a(n - 3); ● a(n) = Sum _{ k=0..floor(n / 3) } binomial(n - k, 2 * k)2 ^ (n - 3 * k). (End) ● a(n) = Fibonacci(2 * n) + 1. ● a(n) = Sum _{ k=0..n } Fibonacci(2 * k + 2) * (2 * 0 ^ (n - k) - 1). ● a(n) = Sum _{ k=0..2 * n + 1 } ((- 1) ^ (k + 1)) * Fibonacci(k). - _ Michel Lagneau _ , Feb 03 2014 ●

▶ [A091561] 1,2,4,9,22,56,146,388,1048,2869,7942,22192,62510,177308,506008,1451866,4185788,12119696,35227748,102753800,300672368,882373261,2596389190,7658677856,22642421206 ★ Expansion of (1 - 2x - sqrt(1 - 4x + 4x ^ 2 - 4x ^ 3)) / (2x ^ 2). ● a(n) = 2 * a(n - 1) + a(1) * a(n - 3) + a(2) * a(n - 4) + ... + a(n - 3) * a(1) for n>1. ●

▶ [A143017] 1,2,4,9,22,56,147,396,1088,3036,8582,24524,70727,205594,601756,1771937,5245544,15602496,46606356,139753120,420520000,1269361000,3842722454,11663928644,35490451807 ★ Number of { 2 - 1 - 3, 2' ^ e - 31 }- avoiding permutations of size n (see definition in the Elizalde paper). ● a(n) = (1 / n) * Sum _{ k=0..floor(n / 2) } 2 * binomial(n,2k) * binomial(n - k,k - 1) + n * binomial(n,2k + 1) * binomial(n - k,k) / (n - k). ●

▶ [A099754] 2,4,9,22,57,154,429,1222,3537,10354,30549,90622,269817,805354,2407869,7207222,21588897,64701154,193972389,581655022,1744440777,5232273754,15694724109,47079978022,141231545457 ★ a(n) = (3 ^ n + 1) / 2 + 2 ^ n. ● a(n) = (3 ^ n + 2 ^ (n + 1) + 1) / 2. ●

▶ [A105633] 1,2,4,9,22,57,154,429,1223,3550,10455,31160,93802,284789,871008,2681019,8298933,25817396,80674902,253106837,796968056,2517706037,7977573203,25347126630,80738862085 ★ Row sums of triangle A105632. ● a(n) = 2 * a(n - 1) + Sum _{ i=1..n - 2 } a(i) * (a(n - 1 - i) - a(n - 2 - i)). a(n) = Sum _{ i=0..floor(n / 2) } (- 1) ^ i * binomial(n + 1 - i,i) * binomial(2 * (n + 1) - 3 * i, n - 2 * i) / (n + 1 - i). - I. Tasoulas (jtas(AT)unipi.gr), Feb 15 2006 ● a(n) = Sum _{ k=0..floor(n / 2) } Sum _{ j=0..n - k } binomial(n - k,j)(0 ^ (j + k) + (1 / (j + 0 ^ j)) * binomial(j,k) * binomial(j,k + 1)). - _ Paul Barry _ , Jun 30 2009 ● a(n) = Sum _{ i=0..n + 1 } (- 1) ^ i * hypergeom([(i + 1) / 2, i / 2 + 1, i - n - 1], [1, 2], - 4). - _ Peter Luschny _ , May 03 2018 ●

▶ [A099241] 1,2,4,9,22,57,155,441,1311,4066,13130,44046,153144,550706,2044248,7819897,30779570,124487688,516723174,2198726181,9581247648,42717268934,194688593966,906331074605,4306472500778 ★ Sums of antidiagonals of A099239. ● a(n) = Sum _{ k=0..n } Sum _{ j=0..n - k } binomial(k * (n - k) - (k - 1) * (j - 1), j). ●

▶ [A249563] 1,1,2,4,9,22,57,156,447,1335,4140,13290,44055,150494,528860,1909010,7068879,26820161,104156616,413634176,1678323602,6952182325,2937890866 4,126568357635,555540596435 ★ Number of length n permutations avoiding (132, { 2 } , {}) and (123, {} , { 1 }). ● a(n,k,i,l) = aup(n,k,i,l) + adown(n,k,i,l) ● a(n) = sum(sum(sum(a(n,k,j,m) for m in [1..k]) for j in [1..k]) for k in [1..n]) ●

▶ [A059019] 1,1,2,4,9,22,58,163,483,1494,4783,15740,52956,181391,630533,2218761,7888266,28291588,102237141,371884771,1360527143,5002837936,18479695171,68539149518,255137783916 ★ Number of Dyck paths of semilength n with no peak at height 3. ● a(n) = Sum _{ k=1..n - 1 } (Sum _{ j=0..min(k,n - k) } binomial(k,j) * j * binomial(2 * n - 2 * k - j - 1, n - k - j) / (n - k)) + 1. - _ Vladimir Kruchinin _ , Oct 02 2013 ●

▶ [A024427] 1,1,2,4,9,22,58,164,495,1587,5379,19195,71872,281571,1151338,4902687,21696505,99598840,473466698,2327173489,11810472444,61808852380,333170

844940,1847741027555,10532499571707 ⋆ S(n,1) + S(n - 1,2) + S(n - 2,3) + ... + S(n + 1 - k,k), where k = floor((n + 1) / 2) and S(i,j) are Stirling numbers o f the second kind. ● a(n) = Sum _{ i=0..n } stirling2(n + 1 - i, i). - _ Zerinva ry Lajos _ , Jan 31 2008 ●

▶ [A092920] 1,1,2,4,9,22,58,164,496,1601,5502,20075,77531,315947,1354279,6087 421,28611385,140239297,715116827,3785445032,20760746393,117759236340,6897 45339984,4165874930885,25911148634728 ⋆ Number of strongly monotone parti tions of [n]. ● a(n) = leftmost column terms of M ^ n * V, where M = an infini te tridiagonal matrix with all 1's in the super and subdiagonals and (1,1,2,3,4,5, ...) as the main diagonal; and the rest zeros. V = vector [1,0,0,0,...]. - _ Gary W. Adamson _ , Jun 16 2011 ● a(n) = Sum _{ k=0..2 ^ (n - 1) - 1 } b(k) for n > 0 with a(0) = 1 where b(2 ^ m * (2n + 1)) = Sum _{ k=0..[m > 0] * (m - 1) } binomial(m - 1, k) * b(2 ^ k * n) for m >= 0, n >= 0 with b(0) = 1. - _ Mik hail Kurkov _ , Apr 24 2023 ●

▶ [A193361] 0,0,1,2,4,9,22,59,170,525,1716,5917,21362,80533,315516,1281913,538 3622,23330405,104084736,477371217,2246811730,10839493637,53528916508,2703 18789249,1394426035918 ⋆ a(0)=0, a(1)=0; for n>1, a(n) = a(n - 1) + (n - 3) * a(n - 2) + 1. ● a(0)=a(1)=0, a(2)=1, a(n) = 2 * a(n - 1) + (n - 4) * a(n - 2) - (n - 4) * a(n - 3). ●

▶ [A159329] 2,4,9,23,54,125,290,674,1567,3643,8469,19688,45769,106400,24735 0,575019,1336757,3107583,7224254,16794353,39042134,90761950,210995935,4905 06039,1140288197 ⋆ Transform of the finite sequence (1, 0, - 1) by the T _{ 1,1 } transformation (see link). ● a(0)=2, a(1)=4, a(2)=9, a(3)=23, a(4)=54 and fo r n>=2 a(n + 3)=3 * a(n + 2) - 2 * a(n + 1) + a(n). ●

▶ [A159330] 2,4,9,23,55,126,292,679,1579,3671,8534,19839,46120,107216,24924 7,579429,1347009,3131416,7279659,16923154,39341560,91458031,212614127,4942 67879,1149033414 ⋆ Transform of the finite sequence (1, 0, - 1, 0, 1) by the T _{ 1,1 } transformation (see link). ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) + a(n - 3) for n >= 7, with a(0)=2, a(1)=4, a(2)=9, a(3)=23, a(4)=55, a(5)=126, a(6)= 292. ●

▶ [A159331] 2,4,9,23,55,126,293,680,1581,3676,8546,19867,46185,107367,24959 8,580245,1348906,3135826,7289911,16946987,39396965,91586832,212913553,4949 63960,1150651606 ⋆ Transform of the finite sequence (1, 0, - 1, 0, 1, 0, - 1) by t he T _{ 1,1 } transform (see link). ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) + a(n - 3) for n >= 9, with a(0)=2, a(1)=4, a(2)=9, a(3)=23, a(4)=55, a(5)=126, a(6)= 293, a(7)=680, a(8)=1581. ●

▶ [A190277] 1,1,2,4,9,23,62,174,497,1433,4150,12044,34989,101695,295642,85956 6,2499277,7267081,21130538,61441732,178655937,519483767,1510520966,4392195 390,12771343961 ⋆ Number of trails between opposite vertices in a triangle stri p. ● a(n) = 3 * a(n - 1) + a(n - 2) - 3 * a(n - 3) - 2 * a(n - 4) for n > 4. ●

▶ [A369328] 1,2,4,9,23,63,176,491,1362,3762,10369,28559,78653,216638,596761,1 643966,4528932,12476737,34372059,94691059,260862508,718644363,1979777046,5 454042866,15025219777 ⋆ Antidiagonal sums of A369326. ● a(n) = 5 * a(n - 1) - 8 * a(n - 2) + 5 * a(n - 3) for n > 3. ●

▶ [A058585] 1,1,2,4,9,23,63,177,514,1526,4624,14230,44357,139779,444557,14251 51,4600338,14939849,48778197,160019884,527200711,1743607825,5786756469,192 66336882,64331275266 ⋆ An approximation to A000084(n). ● a(n) = floor(u(n)) where u(n) has g.f. (1 / 2) * (5 - 3 * x - 2 * x ^ 2 - sqrt(9 - 30 * x - 11 * x ^ 2 + 12 * x ^ 3 + 4 * x ^ 4)). ●

▶ [A164039] 1,2,4,9,23,64,186,551,1645,4926,14768,44293,132867,398588,119575 0,3587235,10761689,32285050,96855132,290565377,871696111,2615088312,784526 4914,23535794719,70607384133 ⋆ a(n + 1) = 3 * a(n) - n. ● a(0) = 1; a(n + 1) = 3 * a(n) - n. ● a(n) = (3 ^ n + 2 * n + 3) / 4. ● a(n) = 5 * a(n - 1) - 7 * a(n - 2) + 3 * a(n - 3). ●

▶ [A014137] 1,2,4,9,23,65,197,626,2056,6918,23714,82500,290512,1033412,37078 52,13402697,48760367,178405157,656043857,2423307047,8987427467,3345369448 7,124936258127,467995871777,1757900019101 ⋆ Partial sums of Catalan number s (A000108). ● a(n) = Sum _{ k=0..n } (2k)! / (k!) ^ 2 / (k + 1). - _ Alexan der Adamchuk _ , Jul 11 2006 ● a(n) = C(n) * hypergeom([1, - n - 1], [1 / 2 - n], 1 / 4) + 1 / 2. ●

▶ [A245158] 1,1,2,4,9,23,65,199,653,2275,8313,31439,121637,477307,1888721,750 9799,29940861,119550419,477742889,1909988479,7637856725,30546970411,12217 8444417,488693854679,1954733475629 ⋆ Number of length n 0..3 arrays with ne w values introduced in order from both ends. ● a(n) = (- 64 - 27 * 2 ^ (2 + n) + 4 ^ n + 12 * (32 + 3 * 2 ^ n) * n) / 576 for n>1. ●

▶ [A245159] 1,1,2,4,9,23,65,199,654,2296,8568,33794,140039,605869,2718531,125 64289,59419764,285878342,1392536354,6842206084,33819153429,167827213315,8 35048228437,4162123757579,20768689294634 ⋆ Number of length n 0..4 arrays with new values introduced in order from both ends. ● a(n) = (- 3375 - 525 * 2 ^ (4 + n) - 1300 * 3 ^ n + 3 * 5 ^ n + 100 * (297 + 9 * 2 ^ (2 + n) + 2 * 3 ^ n) * n) / 43200. ●

▶ [A026898] 1,2,4,9,23,66,210,733,2781,11378,49864,232769,1151915,6018786,330 87206,190780213,1150653921,7241710930,47454745804,323154696185,2282779990 495,16700904488706,126356632390298,987303454928973,7957133905608837 ⋆ a(n) = Sum _{ k=0..n } (n - k + 1) ^ k. ● a(n - 1) = Sum _{ k = 1..n } k ^ (n - k). - _ Gus Wiseman _ , Jan 08 2019 ●

▶ [A093156] 1,2,4,9,24,63,177,514,1527,4625,14230,44358,139779,444558,142515 1,4600339,14939849,48778197,160019885,527200711,1743607826,5786756470,1926 6336882,64331275266,215377539119 ⋆ Another approximation to A000084(n). ● a(n) is the nearest integer to u(n) (with round(0.5)=0), where u(n) has o.g.f.: U (x) = (5 - 3 * x - 2 * x ^ 2 - sqrt(9 - 30 * x - 11 * x ^ 2 + 12 * x ^ 3 + 4 * x ^ 4)) / 2. [Riordan & Shannon] ●

▶ [A200966] 1,2,4,9,24,68,204,642,2096,7026,24026,83454,293562,1043488,37419 54,13520253,49171485,179859763,661240417,2442023860,9055315765,3370144254 8,125845246605,471346884115,1770306347204 ⋆ Expansion (1 - sqrt(1 - 4 * x)) / (2 * (1 - x ^ 4 - x)). ● a(n) = Sum _{ i=0..(n - 1) } (Sum _{ j=0..(i / 3) } bin omial(i - 3 * j,j)) * binomial(2 * (n - i) - 2,n - i - 1)) / (n - i)), n>0. ●

▶ [A081913] 1,2,4,9,24,72,224,688,2048,5888,16384,44288,116736,301056,76185 6,1896448,4653056,11272192,27000832,64028672,150470656,350748672,81159782 4,1865416704,4261412864 ⋆ a(n) = 2 ^ n * (n ^ 3 - 3n ^ 2 + 2n + 48) / 48. ● a(n) = 2 ^ n * (n ^ 3 - 3n ^ 2 + 2n + 48) / 48. ●

▶ [A092236] 1,2,4,9,24,72,225,702,2160,6561,19764,59292,177633,532170,159505 2,4782969,14346720,43040160,129127041,387400806,1162241784,3486784401,1046 0412252,31381236756,94143533121 ⋆ a(n) = (3 ^ n + 2 * 3 ^ (n / 2) * cos(n * P i / 6)) / 3. ● a(n) = Sum _{ k=0..n } binomial(n, k) * Sum _{ j=0..floor(k / 3) } binomial(k, 3 * j). - _ Joseph M. Shunia _ , Jul 25 2022 ●

▶ [A009283] 1,2,4,9,24,73,246,913,3688,16057,74954,372749,1965156,10942285,64 103006,393902353,2532010800,16982676561,118600412626,860680689429,6478753 957948,50505684285301,407133297257542,3389160344023385,29098108436107592 ⋆ E.g.f.: exp(x + sinh(x)). ● a(0) = 1; a(n) = a(n - 1) + Sum _{ k=0..floor((n - 1) / 2) } binomial(n - 1,2 * k) * a(n - 2 * k - 1). - _ Ilya Gutkovskiy _ , Apr 10 2022 ●

▶ [A005001] 0,1,2,4,9,24,76,279,1156,5296,26443,142418,820988,5034585,326790 22,223578344,1606536889,12086679036,94951548840,777028354999,660977056005 6,58333928795428,533203744952179,5039919483399502,49191925338483848 ⋆ a(0) = 0; for n>0, a(n) = Sum _ k= { 0..n - 1 } Bell(k), where the Bell numbers Bell(k) are given in A000110. ● a(0) = 0; for n >= 0, a(n + 1) = 1 + Sum _{ j =1..n } (C(n, j) - C(n, j + 1)) * a(j). ●

▶ [A343032] 1,2,4,9,24,78,313,1557,9606,73482,696736,8187149,119214337,21509 35400,48085463503,1331903411529,45708405952786,1943464419169294,10237821 2255343442,6681679619583450775,540264005909352759970,541209924393295834 59008,671680202709793478892902 3 ⋆ Row sums of triangle A073165. ● a(n) = S um _{ k=0..n } Product _{ 1<=i<=j<=k } (n - k + i + j - 1) / (i + j - 1). ●

▶ [A210342] 1,2,4,9,24,78,317,1636,10752,89871,955536,12930172,222618065,487 4855542,135781292308,4811103270053,216847500834512,12432143862756778,906 625645142897789,8410257151163180986 4,99239796993120245694 40,14895464082 05976627946331 ⋆ Row sums of triangle A210341. ● a(n) = [x ^ n] Sum _{ k= 0..n } x ^ k / (1 - Fibonacci(k + 2) * x). ●

▶ [A192801] 1,2,4,9,25,84,312,1199,4637,17906,68976,265249,1019069,3913484,15 026092,57690143,221487945,850350482,3264725772,12534190569,48122302705,18 4755243892,709328262928,2723314511871,10455585321989 ⋆ Constant term in t he reduction of the polynomial (x + 2) ^ n by x ^ 3 - >x ^ 2 + x + 1. See Com ments. ● a(n) = 7 * a(n - 1) - 15 * a(n - 2) + 11 * a(n - 3). ●

▶ [A005095] 1,2,4,9,28,125,726,5047,40328,362889,3628810,39916811,47900161 2,6227020813,87178291214,1307674368015,20922789888016,355687428096017,640 2373705728018,121645100408832019 ⋆ a(n) = n! + n. ● a(n) + (- n - 3) * a(n - 1) + 3 * (n) * a(n - 2) + (- 3 * n + 5) * a(n - 3) + (n - 3) * a(n - 4)=0. - _ R. J. Mathar _ , Oct 30 2015 ●

▶ [A054119] 1,2,4,9,32,150,864,5880,46080,408240,4032000,43908480,52254720 0,6745939200,93884313600,1401079680000,22317642547200,377917892352000,677 8983923712000,128403161542656000,2560949482291200000,53645489280294912 00,1177524571957493760000,27027108408834293760000 ⋆ a(n) = n! + (n - 1)! + (n - 2)!. ● a(n) = (n + 1)! * (H(n - 1) + H(n + 1) - H(n - 2) - H(n)) / 2, n>1, where H(n) is the n - th harmonic number. [_ Gary Detlefs _ , Oct 04 2011] ●

▶ [A047463] 2,4,10,12,18,20,26,28,34,36,42,44,50,52,58,60,66,68,74,76,82,84,90,9 2,98 ⋆ Numbers that are congruent to { 2, 4 } mod 8. ● a(n) = 8 * n - a(n - 1) - 10, with a(1)=2. - _ Vincenzo Librandi _ , Aug 06 2010 ● a(n) = 4 * n - (- 1) ^ n - 3. ●

▶ [A081115] 2,4,10,14,24,30,44,70,80,114,140,154,184,234,290,310,374,420,444,52 0,574,660,784,850,884 ⋆ (p ^ 2 - 1) / 12 where p > 3 runs through the primes. ● a(n) = (prime(n) ^ 2 - 1) / 12 for n >= 3. - _ Jon E. Schoenfield _ , Dec 25 2019 ●

▶ [A053417] 0,2,4,10,14,24,30,48,60,76,92,110,130,154,178,208,230,264,288,330,3 64,406,442,482,522 ⋆ Circle numbers (version 5): a(n) = number of points (i + j / 2,j * sqrt(3) / 2), i,j integers (triangular grid) contained in a circle of diamete r n, centered at (1 / 2,0). ● a(n) / (n / 2) ^ 2 - > Pi * 2 / sqrt(3). ●

▶ [A137928] 2,4,10,16,26,36,50,64,82,100,122,144,170,196,226,256,290,324,362,40 0,442,484,530,576,626 ⋆ The even principal diagonal of a 2n X 2n square spiral. ● a(n) = 2 * ceiling(n ^ 2 / 2). - _ Wesley Ivan Hurt _ , Jun 15 2013 ● a(n) = n ^ 2 + (n mod 2). - _ Bruno Berselli _ , Oct 03 2017 ●

▶ [A280186] 0,0,0,0,2,4,10,16,28,40,60,80,110,140,182,224,280,336,408,480,570,66 0,770,880,1012 ⋆ Number of 3 - element subsets of S = { 1..n } whose sum is od d. ● a(n) = C((n + 1) / 2, 3) + C((n - 1) / 2, 2) * C((n + 1) / 2,1) when n is od d. ● a(n) = C(n / 2, 3) + C(n / 2, 2) * C(n / 2, 1) when n is even. ● a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + a(n - 4) + 2 * a(n - 5) - a(n - 6) for n>5. ● a (n) = n * (n - 1) * (n - 2) / 12 for n even. ● a(n) = (n - 1) * (n + 1) * (n - 3) / 12 for n odd. ● a(n) = ((- 1) ^ n) * (- 1 + n) * (3 - 3 * (- 1) ^ n - 4 * ((- 1) ^ n) * n + 2 * ((- 1) ^ n) * n ^ 2) / 24. - _ Ivan N. Ianakiev _ , Aug 19 2018 ●

▶ [A006584] 0,0,0,2,4,10,16,28,40,60,80,110,140,182,224,280,336,408,480,570,66 0,770,880,1012,1144 ⋆ If n mod 2 = 0 then n * (n ^ 2 - 4) / 12 else n * (n ^ 2 - 1) / 12. ● a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + a(n - 4) + 2 * a(n - 5) - a(n - 6). - _ Jaume Oliver Lafont _ , Dec 05 2008 ● a(n) = n * (2 * n ^ 2 - 5 - 3 * (- 1) ^ n) / 24. - _ Luce ETIENNE _ , Apr 03 2015 ● a(n) = Sum _{ i=1. .n } floor(i * (n - i) / 2). - _ Wesley Ivan Hurt _ , May 07 2016 ●

▶ [A032246] 2,4,10,16,28,42,64,90,126,168,224,288,370,462,576,704,858,1030,123 2,1456,1716,2002,2330,2688,3094 ⋆ "DHK[5]" (bracelet, identity, unlabeled, 5 parts) transform of 1,1,1,1,... ● a(n) = a(5 - n) for all n in Z. - _ Michael Somos _ , Nov 28 2016 ●

▶ [A077627] 2,4,10,16,30,52,92,160,280,484,840,1456,2524,4372,7574,13120,2272 6,39364,68182,118096,204550,354292,613654,1062880,1840964 ⋆ Largest term in periodic part of continued fraction expansion of square root of - 1 + 3 ^ n. ● a(2 * m) = 2 * (3 ^ m - 1); in general a(n) is close to 2 * (3 ^ (n / 2) - 1) and for any n, 0 <= a(n) - 2 * (3 ^ (n / 2) - 1) < 2. Conjecture: a(n)=ceiling(2 * (3 ^ (n / 2) - 1)) except for n=3, 9, 27 and all powers of 3, in this case a(n)=1 + ceil ing(2 * (3 ^ (n / 2) - 1)). - Benoit Cloitre, Nov 24 2002 ●

▶ [A117862] 0,2,4,10,16,34,52,106,160,322,484,970,1456,2914,4372,8746,13120,26 242,39364,78730,118096,236194,354292,708586,1062880 ⋆ Number of palindrome s (in base 3) below 3 ^ n. ● a(n) = 4 * 3 ^ ((n - 1) / 2) - 2 (n odd), 2 * 3 ^ (n / 2) - 2 (n even). ●

► [A182248] 1,2,4,10,18,28,36,46,54,72,84,106,122,140,156,174,206,240,260,298,338,364,404,430,470 ⋆ a(0)=0, a(n) = (a(n - 1) OR n) + n. ● a(0)=0, a(n)=(a(n - 1) OR n) + n, where OR is the bitwise logical inclusive - OR operator. ●
► [A093695] 0,0,2,4,10,18,34,56,94,146,228,340,506,730,1050,1476,2066,2844,3896,5268,7090,9442,12518,16454,21534 ⋆ Number of one - element transitions among partitions of the integer n for unlabeled parts. ● a(n) = Sum _ p=1 ^ P(n) Sum _ i=1 ^ D(p) Sum _ j=1 ^ D(p) 1 [subject to: i <> j and d(i,p) <= d(j,p) and d(i,p) <> d(i - 1,p) (if i > 1) and d(j,i) <> d(j - 1,i) (if j > 1 and if d(j - 1,p) has given a contribution to the sum)]; P(n) = number of partitions of n, D(p) = number of digits in partition p, d(i,p) and d(j,p) = digits number i and j in partition p of integer n. ● a(n) = Sum _ i=1 ^ P(n + 1) S(i, n + 1) ^ 2 - S(i, n + 1), where P(n + 1) is the number of integer partitions of n + 1 and S(i, n + 1) is the number of digits in the set of digits of the i - th partition of n + 1. (E.g. the partition [1111233] has the set of digits { 1, 2, 3 } and would contribute 3 ^ 2 - 3 = 6 to the sum.) ●
► [A218008] 0,0,2,4,10,18,38,68,138,250,502,922,1846,3430,6862,12868,25738,48618,97238,184754,369510,705430,1410862,2704154,5408310 ⋆ Sum of successive absolute differences of the binomial coefficients = 2 * A014495(n) ● a(n) = sum | C(n,k + 1) - C(n,k)|, k=0..n - 1 = 2 * sum C(n,k + 1) - C(n,k), k=0..floor((n - 1) / 2) = 2 * (C(n, floor((n + 1) / 2)) - 1) ●
► [A079162] 0,1,2,4,10,18,46,82,210,374,958,1706,4370,7782,19934,35498,90930,161926,414782,738634,1892050,3369318,8630686,15369322,39369330 ⋆ a(n) = 5a(n - 2) - 2a(n - 4). ● a(n)=(1 / 68) * (- 1) ^ n * [5 / 2 + (1 / 2) * sqrt(17)] ^ (- 1 / 4) * [5 / 2 + (1 / 2) * sqrt(17)] ^ [(1 / 4) * (- 1) ^ n] * [5 / 2 + (1 / 2) * sqrt(17)] ^ (1 / 2) * n * sqrt(17) - (1 / 68) * [5 / 2 - (1 / 2) * sqrt(17)] ^ (- 1 / 4) * (- 1) ^ n * sqrt(17) * [5 / 2 - (1 / 2) * sqrt(17)] ^ [(1 / 4) * (- 1) ^ n] * [5 / 2 - (1 / 2) * sqrt(17)] ^ (1 / 2) * n + (1 / 4) * [5 / 2 - (1 / 2) * sqrt(17)] ^ (- 1 / 4) * [5 / 2 - (1 / 2) * sqrt(17)] ^ [(1 / 4) * (- 1) ^ n] * [5 / 2 - (1 / 2) * sqrt(17)] ^ (1 / 2) * n + (1 / 4) * [5 / 2 + (1 / 2) * sqrt(17)] ^ (- 1 / 4) * [5 / 2 + (1 / 2) * sqrt(17)] ^ [(1 / 4) * (- 1) ^ n] * [5 / 2 + (1 / 2) * sqrt(17)] ^ (1 / 2) * n - (1 / 4) * (- 1) ^ n * [5 / 2 + (1 / 2) * sqrt(17)] ^ (- 1 / 4) * [5 / 2 + (1 / 2) * sqrt(17)] ^ [(1 / 4) * (- 1) ^ n] * [5 / 2 + (1 / 2) * sqrt(17)] ^ [(1 / 2) * n] - (1 / 4) * [5 / 2 - (1 / 2) * sqrt(17)] ^ (- 1 / 4) * (- 1) ^ n * [5 / 2 - (1 / 2) * sqrt(17)] ^ [(1 / 4) * (- 1) ^ n] * [5 / 2 - (1 / 2) * sqrt(17)] ^ (1 / 2) * n + (7 / 68) * [5 / 2 + (1 / 2) * sqrt(17)] ^ (- 1 / 4) * [5 / 2 + (1 / 2) * sqrt(17)] ^ [(1 / 4) * (- 1) ^ n] * [5 / 2 + (1 / 2) * sqrt(17)] ^ (1 / 2) * n * sqrt(17) - (7 / 68) * [5 / 2 - (1 / 2) * sqrt(17)] ^ (- 1 / 4) * sqrt(17) * [5 / 2 - (1 / 2) * sqrt(17)] ^ [(1 / 4) * (- 1) ^ n] * [5 / 2 - (1 / 2) * sqrt(17)] ^ [(1 / 2) * n], with n>=0 [From _ Paolo P. Lava _ , Oct 06 2008] ●
► [A228705] 1,2,4,10,19,28,40,60,85,110,140,182,231,280,336,408,489,570,660,770,891,1012,1144,1300,1469 ⋆ Expansion of (1 - 2 * x + 4 * x ^ 2 - 2 * x ^ 3 + x ^ 4) / ((1 - x) ^ 4 * (1 + x ^ 2) ^ 2). ● a(n) = (n + 2) * (2 * (n + 1) * (n + 3) + 3 * (1 + (- 1) ^ n) * i ^ (n * (n + 1))) / 24, where i=sqrt(- 1). [_ Bruno Berselli _ , Sep 07 2013] ● a(0)=1, a(1)=2, a(2)=4, a(3)=10, a(4)=19, a(5)=28, a(6)=40, a(7)=60, a(n)=4 * a(n - 1) - 8 * a(n - 2) + 12 * a(n - 3) - 14 * a(n - 4) + 12 * a(n - 5) - 8 * a(n - 6) + 4 * a(n - 7) - a(n - 8). - _ Harvey P. Dale _ , Apr 10 2014 ●
► [A219555] 1,2,4,10,19,38,73,134,242,430,749,1282,2171,3622,5979,9770,15802,25334,40288,63560,99554,154884,239397,367800,561846 ⋆ Number of bipartite partitions of (i,j) with i + j = n into distinct pairs. ● a(n) = Sum _{ i + j=n } [x ^ i * y ^ j] 1 / 2 * Product _{ k,m>=0 } (1 + x ^ k * y ^ m). ●
► [A271624] 2,4,10,20,34,52,74,100,130,164,202,244,290,340,394,452,514,580,650,724,802,884,970,1060,1154 ⋆ a(n) = 2n ^ 2 - 4n + 4. ● a(n) = 2 + 2 * (n - 1) ^ 2. - _ Tyler Skywalker _ , Jul 21 2016 ●
► [A004647] 1,2,4,10,20,40,100,200,400,1000,2000,4000,10000,20000,40000,100000,200000,400000,1000000,2000000,4000000,10000000,20000000,40000000,100000000 ⋆ Powers of 2 written in base 8. ● a(0)=1, a(1)=2, a(2)=4, a(n)=10 * a(n - 3). - _ Harvey P. Dale _ , Aug 16 2012 ●
► [A026644] 1,2,4,10,20,42,84,170,340,682,1364,2730,5460,10922,21844,43690,87380,174762,349524,699050,1398100,2796202,5592404,11184810,22369620 ⋆ a(n) = a(n - 1) + 2 * a(n - 2) + 2, for n>=3, where a(0)= 1, a(1)= 2, a(2)= 4. ● a(2 * k) = 2 * a(2 * k - 1), a(2 * k + 1) = 2 * a(2 * k) + 2. - _ Peter Shor _ , Apr 11 2002 ● a(2 * n) = 2 * n - 1 + Sum _{ k=0..2 * n - 1 } a(k), n>0; a(2 * n + 1) = 2 * n + 1 + Sum _{ k=0..n } a(k). - _ Lee Hae - hwang _ , Sep 17 2002; corrected by _ R. J. Mathar _ , Oct 21 2008 ● a(n) = 2 * n + 2 * Sum _{ k=1..n - 2 } a(k), n>0. - _ Lee Hae - hwang _ , Sep 19 2002; corrected by _ R. J. Mathar _ , Oct 21 2008 ● a(n) = - 1 + (1 / 3) * (- 1) ^ (n - 1) + (8 / 3) * 2 ^ (n - 1) + (C(2 * n,n) mod 2). - _ Paolo P. Lava _ , Oct 03 2008 ● a(n + 3) = 3 * 2 ^ (n + 2) - 2 - a(n), n>=1, a(1)=2, a(2)=4, a(3)=10 . - _ Yosu Yurramendi _ , Jul 05 2016 ●
► [A094536] 0,0,2,4,10,20,44,88,182,364,740,1480,2980,5960,11960,23920,47914,95828,191804,383608,767500,1535000,3070568,6141136,12283388 ⋆ Number of binary words of length n that are not "bifix - free". ● a(0) = 0; a(1) = 0; a(2 * n + 1) = 2 * a(2 * n); a(2 * n) = 2 * a(2 * n - 1) + 2 ^ n - a(n). - _ Peter Kagey _ , Jan 11 2015 ●
► [A307768] 0,0,2,4,10,20,44,88,186,372,772,1544,3172,6344,12952,25904,52666,105332,213524,427048,863820,1727640,3488872,6977744,14073060 ⋆ Number of n - step random walks on a line starting from the origin and returning to it at least once. ● a(2n) = 2 ^ (2n) - binomial(2n,n); a(2n + 1) = 2 * a(2n). ●
► [A026395] 1,2,4,10,20,50,100,250,500,1250,2500,6250,12500,31250,62500,156250,312500,781250,1562500,3906250,7812500,19531250,39062500,97656250,195312500 ⋆ a(n) = 5 * a(n - 2), starting 1,2,4. ● a(n) = a(n - 1) + 2 * 5 ^ (n / 2 - 1) if n is even, a(n) = a(n - 2) + 2 * phi(5 ^ [(n - 1) / 2]) if n is odd, where phi is the Euler phi function. - Shannon Ezzat (sez10(AT)math.canterbury.ac.nz), Jan 20 2009 ●
► [A355747] 1,1,2,4,10,20,58,116,320,772,2170,4340,14112,28224,78120,212004,612232,1224464,3873760,7747520,24224608,64595088,175452168,350904336 ⋆ Number of multisets that can be obtained by choosing a divisor of each positive integer from 1 to n. ● a(p) = 2 * a(p - 1) for p prime. - _ Michael S. Branicky _ , Aug 03 2022 ●
► [A371358] 0,0,1,2,4,10,21,42,89,184,371,758,1546,3122,6315,12782,25780,51962,104759,210934,424404,853806,1716759,3450158,6932169 ⋆ Number of binary strings of length n which have more 00 than 01 substrings. ● a(n) = ((4 * n ^ 2 - 15 * n + 7) * a(n - 1) - (5 * n ^ 2 - 22 * n + 14) * a(n - 2) + 2 * (3 * n ^ 2 - 14 * n + 10) * a(n - 3) - 4 * (3 * n ^ 2 - 16 * n + 18) * a(n - 4) + 8 * (n - 2) * (n - 4) * a(n - 5)) / (n * (n - 3)) for n>=5. - _ Alois P. Heinz _ , Mar 20 2024 ●
► [A018003] 1,2,4,10,21,46,100,215,464,1000,2154,4641,10000,21544,46415,100000,215443,464158,1000000,2154434,4641588,10000000,21544346,46415888,100000000 ⋆ Powers of cube root of 10 rounded down. ● a(n) = floor(10 ^ (n / 3)). ●
► [A165136] 1,2,4,10,21,50,99,250,454,1242,2223,6394,11389,35002,62034,202010,359483,1233518,2203507,7944100,14249715,53810836,96911168,382258438,691048071 ⋆ a(n) is the number of patterns for n - digit papaya numbers. ● a(n) = R(n) - Sum _{ d|n,d<n } phi(n / d) * a(d) where R(2 * k)=k * (b(k) + b(k + 1)), R(2 * k + 1)=(2 * k + 1) * b(k + 1), b(k)=Sum _{ j=1..10 } stirling2(k,j). - _ Andrew Howroyd _ , Mar 29 2016 ●
► [A036954] 2,4,10,22,34,46,58,67,79,94,103,139,145,157,166,169,172,181,190,193,199,205,211,214,229 ⋆ Primes with digits in { 0,1,2 } taken as base 3 and converted to base 10. ● a(n) == 1 (mod 3) for all n > 1. - _ M. F. Hasler _ , Jul 25 2015 ●
► [A337654] 0,1,1,2,4,10,22,45,93,197,420,890,1878,3964,8380,17724,37474,79209,167426,353927,748202,1581668,3343519,7067929,14941121 ⋆ G.f. = H(x) * (1 + x ^ 5) / (1 - x ^ 2 - x ^ 3 - x ^ 4) where H(x) = g.f. for A249665. ● a(n) = 2 * a(n - 1) - a(n - 2) + 2 * a(n - 3) + a(n - 4) + a(n - 5) - a(n - 7) - a(n - 8) for n >7. - _ Colin Barker _ , Oct 11 2020 ●
► [A369491] 1,2,4,10,22,46,94,190,382,766,1534,3070,6142,12286,24574,49150,98302,196606,393214,786430,1572862,3145726,6291454,12582910,25165822 ⋆ a(n) = n! * [x ^ n] (2 * x - 4 * exp(x) + 3 * exp(2 * x) + 3) / 2. ● a(n) = [x ^ n] ((x + 1) * (2 * x ^ 2 - 2 * x + 1)) / ((2 * x - 1) * (x - 1)). ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n >= 4. ●
► [A291397] 1,2,4,10,22,46,97,209,452,972,2084,4472,9608,20645,44345,95238,204552,439366,943734,2027046,4353861,9351633,20086392,43143592,92668072 ⋆ p - INVERT of (1,1,0,0,0,0,...), where p(S) = 1 - S - S ^ 3. ● a(n) = a(n - 1) + a(n - 2) + a(n - 3) + 3 * a(n - 4) + 3 * a(n - 5) + a(n - 6) for n >= 7. ●
► [A164990] 1,2,4,10,22,52,114,260,564,1256,2698,5908,12588,27224,57620,123432,259816,552400,1157466,2446004,5105532,10735352,22334524,46766200,97021272 ⋆ Number of square involutions of n. ● a(n) = (n + 2) * 2 ^ (n - 3) - (n - 2) * C(n - 3,(n - 3) / 2), n > 1. ●
► [A221839] 1,1,2,4,10,22,57,157,447 ⋆ Number of rectangles dissectable into a minimum of n squares. ● a(n) is the number of rectangles pXq for which GCD(p,q) = 1 and T(p,q) = n in A219158. ●
► [A189890] 2,4,10,23,46,82,134,205,298,416,562,739,950,1198,1486,1817,2194,2620,3098,3631,4222,4874,5590,6373,7226 ⋆ a(n) = (n ^ 3 - 2 * n ^ 2 + 3 * n + 2) / 2. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Wesley Ivan Hurt _ , Apr 23 2021 ●
► [A210460] 1,2,4,10,23,53,123,285,660,1529,3542,8205,19007,44030,101996,236275,547334,1267906,2937120,6803875,15761261,36511157,84578549,195927260,453867933 ⋆ Expansion of x * (1 + x) / (1 - x - 2 * x ^ 2 - 2 * x ^ 3 - x ^ 4). ● a(n) = sum(Fibonacci(k) * binomial(k,n - k), k=floor((n - 1) / 2) + 1..n). ●
► [A032171] 1,1,1,2,4,10,23,59,148,385,1006,2678,7170,19421,52933,145364,401421,1114713,3109710,8713076,24506121,69168705,195849114,556165311,1583601840 ⋆ Number of rooted compound windmills (mobiles) of n nodes with no symmetries. ● a(n + 1) = (1 / n) * Sum _{ d|n } mu(n / d) * c(d), where c(n) = n * a(n) + Sum _{ s=1..n - 1 } c(s) * a(n - s) with a(1) = c(1) = 1. ●
► [A136427] 0,1,2,4,10,24,48,92,188,388,772,1524,3060,6164,12308,24532,49108,98388,196692,393044,786260,1573204,3146068,6290772,12582228 ⋆ a(n) = 3 * a(n - 1) - 4 * a(n - 2) + 6 * a(n - 3) - 4 * a(n - 4). ● a(n) = - (2 / 3) + (2 / 3) * 2 ^ n - [(1 / 12) * I] * [I * sqrt(2)] ^ n * sqrt(2) + [(1 / 12) * I] * sqrt(2) * [- I * sqrt(2)] ^ n, with n>=0 and I=sqrt(- 1). - _ Paolo P. Lava _ , Jun 09 2008 ●
► [A018114] 1,2,4,10,24,53,117,260,576,1274,2821,6245,13824,30597,67723,149896,331776,734341,1625363,3597521,7962624,17624184,39008731,86340516,191102976 ⋆ Powers of fourth root of 24 rounded down. ● a(n) = floor(24 ^ (n / 4)). - _ Wesley Ivan Hurt _ , Mar 08 2023 ●
► [A356695] 1,1,2,4,10,24,53,132,310,711,1736,4053,9475,22800,53294,125667,299629,702555,1661861,3941889,9269716,21941640,51908768,122325141,289466629 ⋆ Expansion of x * (1 + x - 7 * x ^ 3 - 3 * x ^ 4 + x ^ 5) / (1 - 2 * x ^ 2 - 9 * x ^ 3 + 3 * x ^ 5). ● a(n) = 2 * a(n - 2) + 9 * a(n - 3) - 3 * a(n - 5). - _ Wesley Ivan Hurt _ , Apr 20 2023 ●
► [A159328] 2,4,10,24,56,130,302,702,1632,3794,8820,20504,47666,110810,257602,598852,1392162,3236384,7523680,17490434,40660326,94523790,219741152,510836202,1187550092 ⋆ Transform of 1 by the T _{ 1,1 } transformation (see link) ● a(0), a(1)=4, a(2)=10 and for n>=0 a(n + 3)=3 * a(n + 2) - 2 * a(n + 1) + a(n). ●
► [A052912] 1,2,4,10,24,56,132,312,736,1736,4096,9664,22800,53792,126912,299424,706432,1666688,3932224,9277312,21888000,51640448,121835520,287447040,678174976 ⋆ Expansion of 1 / (1 - 2 * x - 2 * x ^ 3). ● a(n) = 2 * a(n - 1) + 2 * a(n - 3). ● a(n) = Sum _{ alpha = RootOf(- 1 + 2 * z + 2 * z ^ 3) } (1 / 43) * (8 + 9 * alpha + 12 * alpha ^ 2) * alpha ^ (- 1 - n). ● a(n) = Sum _{ k=0..n } binomial(k, floor((n - k) / 2)) * 2 ^ k * (1 + (- 1) ^ (n - k)) / 2. - _ Paul Barry _ , Jan 12 2006 ●
► [A052542] 1,2,4,10,24,58,140,338,816,1970,4756,11482,27720,66922,161564,390050,941664,2273378,5488420,13250218,31988856,77227930,186444716,450117362,1086679440 ⋆ a(n) = 2 * a(n - 1) + a(n - 2), with a(0) = 1, a(1) = 2, a(2) = 4. ● a(n) = Sum _{ alpha = RootOf(- 1 + 2 * x + x ^ 2) } (1 / 2) * (1 - alpha) * alpha ^ (- n - 1). ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n - k - 1, k)2 ^ (n - 2k). - _ Paul Barry _ , Jan 16 2005 ● a(n) = round(sqrt(Pell(2n) + Pell(2n - 1))). - _ Richard R. Forberg _ , Jun 22 2014 ●
► [A163271] 0,2,4,10,24,58,140,338,816,1970,4756,11482,27720,66922,161564,390050,941664,2273378,5488420,13250218,31988856,77227930,186444716,450117362,1086679440 ⋆ Numerators of fractions in a 'zero - transform' approximation of

sqrt(2) by means of a(n) = (a(n - 1) + c) / (a(n - 1) + 1) with c=2 and a(1)=0. • a(n) = 2 * a(n - 1) + a(n - 2). - _ Jacob Antony _ , Jun 07 2013 •

► [A110236] 1,2,4,10,24,58,143,354,881,2204,5534,13940,35213,89162,226238,575114,1464382,3734150,9534594,24374230,62377881,159793932,409717004,1051405260,2700168229 ⋆ Number of (1,0) steps in all peakless Motzkin paths of length n (can be easily translated into RNA secondary structure terminology). • a(n) = Sum _{ k=1..n } k * T(n, k), where T(n, k) = floor(2 / (n + k)) * binomial((n + k) / 2, k) * binomial((n + k) / 2, k - 1) for n + k mod 2 = 0 and T(n, k)=0 otherwise. • a(n + 1) = Sum _{ k=0..n } Sum _{ j=0..n - k } C(k + j,n - k - j) * C(k,n - k - j). - _ Paul Barry _ , Oct 24 2006, index corrected Jul 13 2011 • a(n + 1) = Sum _{ k=0..floor(n / 2) } C(n - k + 1,k + 1) * C(n - k,k); a(n + 1) := Sum _{ k=0..n } C(k + 1,n - k + 1) * C(k,n - k). - _ Paul Barry _ , Aug 17 2009, indices corrected Jul 13 2011 • a(n) = - f _{ n } (- n) with f _ 1(n)= n and f _{ p } (n) = (n + p - 1) * (n + p + 1 - 1) ^ 2 * (n + p + 2 - 1) ^ 2 * ... * (n + p + (p - 1) - 1) ^ 2 / (p! * (p - 1)!) + f _{ p - 1 } (n) for p > 1. - _ Alzhekeyev Ascar M _ , Jun 27 2011 •

► [A349365] 1,2,4,10,24,60,148,370,920,2296,5720,14268,35568,88700,221156,551482,1375096,3428888,8549944,21319624,53160896,132558360,330537528,824204780,2055176304 ⋆ G.f. A(x) satisfies: A(x) = 1 / (1 - x - x * A(x ^ 2)). • a(0) = 1, a(1) = 2; a(n) = a(n - 2) + Sum _{ k=0..n - 1 } a(floor(k / 2)) * a(n - k - 1). •

► [A100087] 1,2,4,10,24,60,148,370,920,2300,5736,14340,35808,89520,223668,559170,1397496,3493740,8732920,21832300,54575888,136439720,341082504,852706260,2131706864 ⋆ Expansion of x / (sqrt(1 - 4 * x ^ 2) + x - 1). • a(n) = Sum _{ k=0..floor(n / 2) } C(n, k) * (3 * 2 ^ (n - 2 * k) + 2 * cos(Pi * (n - 2 * k) / 2) + 4 * sin(Pi * (n - 2 * k) / 2)) / 5. • a(n) = Sum _{ k=0..n } k * C(n - 1,(n - k) / 2) * (1 + (- 1) ^ (n - k)) * 2 ^ k / (n + k). - _ Paul Barry _ , Jan 17 2005 •

► [A006575] 1,2,4,10,24,60,156,410,1092,2952,8052,22140,61320,170820,478288,1345210,3798240,10761660,30585828,87169608,249055976,713205900,2046590844,5883948540,16945772184 ⋆ Number of primitive (aperiodic, or Lyndon) asymmetric rhythm cycles: ones having no nontrivial shift automorphism. • a(n) = (Sum _{ d|n, d odd } mu(d) * (3 ^ (n / d) - 1)) / (2 * n). • a(n) = (3 ^ n - 1) / (2 * n) for n=2 ^ k and a(n) = (Sum _{ d|n, d odd } mu(d) * 3 ^ (n / d)) / (2 * n) otherwise. (End) •

► [A084078] 1,2,4,10,24,66,172,498,1360,4066,11444,34970,100520,312066,911068,2862562,8457504,26824386,80006116,255680170,768464312,2471150402,7474561164,24161357010,73473471344 ⋆ Length of list created by n substitutions k - > Range[- abs(k + 1), abs(k - 1), 2] starting with { 0 } . • a(n) = (6 * (35 * n ^ 2 - 55 * n - 76) * a(n - 1) + (275 * n ^ 4 - 770 * n ^ 3 - 203 * n ^ 2 + 1736 * n - 912) * a(n - 2) - 6 * (5 * n ^ 2 + 5 * n - 28) * a(n - 3) + (n - 4) * (n - 2) * (25 * n ^ 2 + 5 * n - 48) * a(n - 4)) / (n * (n + 2) * (25 * n ^ 2 - 45 * n - 28)), for n >= 4. - _ G. C. Greubel _ , Nov 24 2022 •

► [A372123] 1,2,4,10,24,68,200,652,2203,7794,28182,103979 ⋆ Number of multisets of free polyominoes that can be constructed from n squares. • a(n) = Sum _{ p in P } Product _{ k in p' } (b(n) + m _ p(k) - 1)! / ((b(n) - 1)!m _ p(k)!) •

► [A089928] 1,2,4,10,25,60,144,348,841,2030,4900,11830,28561,68952,166464,401880,970225,2342330,5654884,13652098,32959081,79570260,192099600,463769460,1119638521 ⋆ a(n) = 2 * a(n - 1) + 2 * a(n - 3) + a(n - 4), with a(0)=1, a(1)=2, a(3)=4, a(4)=10. • a(n) = ((1 + sqrt(2)) ^ (n + 2) + (1 - sqrt(2)) ^ (n + 2) + 2 * (- 1) ^ floor(n / 2)) / 8. • a(n) = (- i) ^ n * Sum _{ k=0..floor(n / 2) } U(n - 2 * k, i) with i ^ 2 = - 1. •

► [A166516] 1,1,2,4,10,25,65,169,442,1156,3026,7921,20737,54289,142130,372100,974170,2550409,6677057,17480761,45765226,119814916,313679522,821223649,2149991425 ⋆ A product of consecutive doubled Fibonacci numbers. • a(n) = F(2 * floor(n / 2) + 1) * F(2 * floor((n - 1) / 2) + 1). • a(n) = F(n) ^ 2 * (1 - (- 1) ^ n) / 2 + F(n - 1) * F(n + 1)(1 + (- 1) ^ n) / 2. • a(n + 1) * a(n + 3) - a(n + 2) ^ 2 = F(n + 2) ^ 2 * (1 - (- 1) ^ n) / 2. • a(n) = 3 * a(n - 1) - 3 * a(n - 3) + a(n - 4). - _ G. C. Greubel _ , May 15 2016 •

► [A189912] 1,2,4,10,25,66,177,484,1339,3742,10538,29866,85087,243478,699324,2015082,5822619,16865718,48958404,142390542,414837699,1210439958,3536809521,10347314544,30306977757 ⋆ Extended Motzkin numbers, Sum _{ k>=0 } C(n,k)C(k), C(k) the extended Catalan number A057977(k). • a(n) = Sum _{ k=0..n } (n! / (((n - k)! * floor(k / 2)! ^ 2) * (floor(k / 2) + 1)). • a(n) = Sum _{ k=0...n } (n + 1 - 2 * k) * (n!) / ((k!) * (k + 1)! * (n - 2k)!). - _ Per W. Alexandersson _ , May 28 2020 •

► [A032128] 1,1,2,4,10,25,69,193,565,1680,5113,15757,49223,155228,493937,1583002,5106386,16563542,53995678,176797966,581196445,1917446630,6346554919,21068877925,70133571797 ⋆ Number of dyslexic planted planar trees with n nodes. • a(2) = c, • a(3) = (1 / 2) * (c + 3) * c, • a(4) = (1 / 2) * (c + 3) * (c + 1) * c, • a(5) = (1 / 2) * (c ^ 3 + 5 * c ^ 2 + 10 * c + 4) * c, • a(6) = (1 / 4) * (2 * c ^ 4 + 15 * c ^ 3 + 38 * c ^ 2 + 37 * c + 8) * c, • a(7) = (1 / 8) * (4 * c ^ 4 + 38 * c ^ 3 + 103 * c ^ 2 + 109 * c + 22) * (c + 1) * c, •

► [A001998] 1,2,4,10,25,70,196,574,1681,5002,14884,44530,133225,399310,1196836,3589414,10764961,32291602,96864964,290585050,871725625,2615147350,7845353476,23535971854,70607649841 ⋆ Bending a piece of wire of length n + 1; walks of length n + 1 on a tetrahedron; also non - branched catafusenes with n + 2 condensed hexagons. • a(n) = if n mod 2 = 0 then ((3 ^ ((n - 2) / 2) + 1) / 2) ^ 2 else 3 ^ ((n - 3) / 2) + (1 / 4) * (3 ^ (n - 2) + 1). • a(n) = 4 * a(n - 1) - 12 * a(n - 3) + 9 * a(n - 4), with a(0)=1, a(1)=2, a(2)=4, a(3)=10. - _ Harvey P. Dale _ , Apr 10 2013 • a(n) = (1 + 3 ^ n + 3 ^ (1 / 2 * (- 1 + n)) * (2 - 2 * (- 1) ^ n + sqrt(3) + (- 1) ^ n * sqrt(3))) / 4. - _ Colin Barker _ , May 15 2016 • a(n - 1) = Sum _{ j=1..k } (S2(n,j) + Ach(n,j)) / 2, where k=3 is the maximum number of colors, S2 is the Stirling subset number A008277, and Ach(n,k) = [n>=0 & n<2 & n==k] + [n>1] * (k * Ach(n - 2,k) + Ach(n - 2,k - 1) + Ach(n - 2,k - 2)). •

► [A124419] 1,1,1,2,4,10,25,75,225,780,2704,10556,41209,178031,769129,3630780,17139600,87548580,447195609,2452523325,13450200625,78697155750,460457244900,2859220516290,17754399678409 ⋆ Number of partitions of the set { 1,2,...n } having no blocks that contain both odd and even entries. • a(n) = Q[n](1,1,0), where the polynomials Q[n]=Q[n](t,s,x) are defined by Q[0]=1; Q[n]=t * dQ[n - 1] / dt + x * dQ[n - 1] / ds + x * dQ[n - 1] / dx + t * Q[n - 1] if n is odd and Q[n]=x * dQ[n - 1] / dt + s * dQ[n - 1] / ds + x * dQ[n - 1] / dx + s * Q[n - 1] if n is even. •

► [A154322] 1,2,4,10,26,62,133,260,471,802,1298,2014,3016,4382,6203,8584,11645,15522,20368,26354,33670,42526,53153,65804,80755 ⋆ a(n) = 1 + n + binomial(n + 3,5). • a(n) = n + 1 + Sum _{ k=0..n } binomial(k + 1,2) * binomial(n - k + 1,2). • a(n) = (n + 1) * (n ^ 4 + 4 * n ^ 3 + n ^ 2 - 6 * n + 120) / 120. • a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>5. - _ Wesley Ivan Hurt _ , Oct 08 2015 •

► [A217988] 1,2,4,10,26,66,160,372,840,1864,4096,8944,19424,41952,90112,192576,409728,868480,1835008,3866368,8125952,17038848,35651584,74449920,155191296 ⋆ Binomial transform of A215495(n). • a(n) = 6 * a(n - 1) - 14 * a(n - 2) + 16 * a(n - 3) - 8 * a(n - 4) with n > 5. • a(n) = 2 ^ (n - 3) * (3 * n + 2) + ((1 + i) ^ n + (1 - i) ^ n) / 4, where i=sqrt(- 1) and n>1, with a(0)=1, a(1)=2. •

► [A052995] 0,2,4,10,26,68,178,466,1220,3194,8362,21892,57314,150050,392836,1028458,2692538,7049156,18454930,48315634,126491972,331160282,866988874,2269806340,5942430146 ⋆ Expansion of 2 * x * (1 - x) / (1 - 3 * x + x ^ 2). • a(0) = 0, a(1) = 2, a(2) = 4; for n > 0, a(n) - 3 * a(n + 1) + a(n + 2) = 0. • a(n) = Sum(2 / 5 * (- 1 + 4 *_ alpha) *_ alpha ^ (- 1 - n), _ alpha = RootOf(_ Z ^ 2 - 3 *_ Z + 1)). • a(n + 2) = F(n) ^ 2 + F(n + 3) ^ 2 = 2 * F(n + 1) ^ 2 + 2 * F(n + 2) ^ 2, where F = A000045. - _ N. J. A. Sloane _ , Feb 20 2005 • a(n) = 1 / 2 * (F(2 * n + 8) mod F(2 * n + 2)) for n > 2. - _ Gary Detlefs _ , Nov 22 2010 • a(n) = F(n - 3) * F(n - 1) + F(n) * F(n + 2) for n > 0, F(- 2) = - 1, F(- 1) = 1. - _ Bruno Berselli _ , Nov 03 2015 • a(n) = (2 ^ (- n) * ((3 - sqrt(5)) ^ n * (1 + sqrt(5)) + (- 1 + sqrt(5)) * (3 + sqrt(5)) ^ n)) / sqrt(5) for n > 0. - _ Colin Barker _ , Mar 30 2016 •

► [A055819] 1,2,4,10,26,68,178,466,1220,3194,8362,21892,57314,150050,392836,1028458,2692538,7049156,18454930,48315634,126491972,331160282,866988874,2269806340,5942430146 ⋆ Row sums of array T in A055818; twice the odd - indexed Fibonacci numbers after initial term. • a(n) = 3 * a(n - 1) - a(n - 2) for n > 0. • a(n) = 2 * (ChebyshevU(n, 3 / 2) - 2 * ChebyshevU(n - 1, 3 / 2)), with a(0)=1. •

► [A081881] 1,2,4,10,26,69,186,504,1369,3720,10111,27483,74705,203068,551995,1500477,4078718,11087104,30137872,81923228,222690421,605335323,1645472007,4472856655,12158484965 ⋆ Pack bins of size 1 sequentially with items of size 1 / 1, 1 / 2, 1 / 3, 1 / 4, ... Sequence gives values of n for which 1 / n starts a new bin. • a(n) is asymptotic to C * exp(n) where C=0.1688... - _ Benoit Cloitre _ , Apr 14 2003 • a(n) = 1 + (A136616 ^ (n - 1))(0), where (f ^ 0)(x)=x, (f ^ (n + 1))(x) = f((f ^ n)(x)) for any function f. - _ Rainer Rosenthal _ , Feb 16 2008, Apr 05 2020 •

► [A025565] 1,2,4,10,26,70,192,534,1500,4246,12092,34606,99442,286730,829168,2403834,6984234,20331558,59287740,173149662,506376222,1482730098,4346486256,12754363650,37461564504 ⋆ a(n) = T(n,n - 1), where T is array defined in A025564. • a(1) = 1, a(n) = M(n - 1) + Sum _{ k=1..n - 1 } M(k - 1) * a(n - k) with M=A001006, the Motzkin Numbers. - _ Reinhard Zumkeller _ , Mar 30 2012 • a(n) = n * hypergeom([2 - n, 1 / 2 - n / 2, 1 - n / 2], [2, - n], 4). - _ Peter Luschny _ , Jul 12 2016 • a(n) = (- 1) ^ n * 2 * hypergeom([3 / 2, 2 - n], [2], 4) for n > 1. - _ Peter Luschny _ , Jan 30 2017 •

► [A257520] 1,1,2,4,10,26,71,197,554,1570,4477,12827,36895,106471,308114,893804,2598314,7567466,22076405,64498427,188689685,552675365,1620567764,4756614062,13974168191 ⋆ Number of factorizations of m ^ 2 into 2 factors, where m is a product of exactly n distinct primes and each factor is a product of n primes (counted with multiplicity). • a(n) = ((3 * n ^ 2 - 7 * n + 3) * a(n - 1) + (n - 1) * (n - 3) * a(n - 2) - 3 * (n - 1) * (n - 2) * a(n - 3)) / (n * (n - 2)) for n>2, a(0) = a(1) = 1, a(2) = 2. •

► [A102407] 1,1,2,4,10,26,72,206,606,1820,5558,17206,53872,170298,542778,1742308,5627698,18277698,59652952,195541494,643506310,2125255036,7041631854,23400092142,77971706848 ⋆ Number of Dyck paths of semilength n having no ascents of length 1 that start at an odd level. • a(n) = top left term in M ^ n, a(n + 1) = sum of top row terms in M ^ n. Example: top row of M ^ 5 = (26, 19, 16, 7, 3, 1, 0, 0, 0, ...) where 26 = a(5) and 72 = a(6) = (26 + 19 + 16 + 7 + 3 + 1). - _ Gary W. Adamson _ , Jul 11 2011 •

► [A049130] 1,1,2,4,10,26,73,211,630,1918,5944,18668,59311,190243,615269,2004025,6568174,21645438,71681152,238416580,796107464,2667768904,8968626418,30240087086,102238147891 ⋆ Revert transform of ((x - 1)(x + 1)) / (- 1 - x + x ^ 3). • a(n) = sum { k=0..floor(n / 2), C(n,2k) * C(3k,k) / (2k + 1) } ; a(n)=sum { k=0..n, C(3k / 2,k / 2)(1 + (- 1) ^ k) / (2(k + 1)) } . - _ Paul Barry _ , Nov 05 2006 •

► [A303930] 1,2,4,10,26,76,232,750,2493,8514,29524,103708,367225,1308542,4682276,16807286,60462082,217855460,785863048,2837177434,10249053629,37039804078,133902392980,484178868612,1751030978481 ⋆ Number of no - leaf subgraphs of the 2 X n grid up to horizontal and vertical reflection. • a(n) = 8 * a(n - 1) - 16 * a(n - 2) - 20 * a(n - 3) + 95 * a(n - 4) - 60 * a(n - 5) - 80 * a(n - 6) + 100 * a(n - 7) - 25 * a(n - 8) for n>8. •

► [A000085] 1,1,2,4,10,26,76,232,764,2620,9496,35696,140152,568504,2390480,10349536,46206736,211799312,997313824,4809701440,23758664096,119952692896,618884638912,3257843882624,17492190577600 ⋆ Number of self - inverse permutations on n letters, also known as involutions; number of standard Young tableaux with n cells. • a(n) = Sum _{ k=0..floor(n / 2) } n! / ((n - 2 * k)! * 2 ^ k * k!). • a(m + n) = Sum _{ k>=0 } k! * binomial(m, k) * binomial(n, k) * a(m - k) * a(n - k). - _ Philippe Deléham _ , Mar 05 2004 • a(n) = (n - 1) * a(n - 2) + a(n - 1); e.g., a(7) = 232 = 6 * 26 + 76. • a(n) = (1 / sqrt(2 * Pi)) * Integral _{ x= - oo..oo } exp(- x ^ 2 / 2) * (x + 1) ^ n. - _ Groux Roland _ , Mar 14 2011 • a(n) = Sum _{ k=0..n } s(n,k) * (- 1) ^ (n - k) * 2 ^ k * B(k,1 / 2), where the s(n,k) are (signless) Stirling numbers of the first kind, and the B(n,x) = Sum _{ k=0..n } S(n,k) * x ^ k are the Stirling polynomials, where the S(n, k) are the Stirling numbers of the second kind. - _ Emanuele Munarini _ , May 16 2014 • a(n) = hyper2F0([- n / 2,(1 - n) / 2],[],2). - _ Peter Luschny _ , Aug 21 2014 •

► [A179381] 1,2,4,10,26,78,236,770,2520,8606,29364,103302,362226,1298882,4645670,16897224,61296686,225457006,826950080,3067763394,11353597198,42414220022,158095481910,594108418428,2227714454332 ⋆ Row sums of A179318. ● a(n) = s(1,n), where s(m,n) = C(n - 1) + sum(k=m..n / 2, C(k - 1) * s(k,n - k), a(n, n) = C(n - 1), C(n) are the Catalan numbers (A000108). - _ Vladimir Kruchinin _ , Sep 06 2014 ●

► [A003239] 1,1,2,4,10,26,80,246,810,2704,9252,32066,112720,400024,1432860,5170604,18784170,68635478,252088496,930138522,3446167860,12815663844,47820447028,178987624514,671825133648 ⋆ Number of rooted planar trees with n non - root nodes: circularly cycling the subtrees at the root gives equivalent trees. ● a(n) = Sum _{ d|n } (phi(n / d) * binomial(2 * d, d)) / (2 * n) for n > 0. ● a(n) = (1 / n) * Sum _{ d|n } (phi(n / d) * binomial(2 * d - 1, d)) for n > 0. ●

► [A114507] 1,1,2,4,10,27,79,240,750,2387,7711,25214,83315,277799,933596,3159187,10755190,36811479,126594819,437220744,1515844359,5273760446,18406122609,64426136558,226108087891 ⋆ Number of Dyck paths of semilength n having no ascents of length 3. ● a(n) = 1 / n * sum(j=ceiling((n + 1) / 2)..n, C(n,j) * C(4 * j - 2 * n - 2,j - 1) * (- 1) ^ (n - j)) n>0. [From _ Vladimir Kruchinin _ , Mar 07 2011] ●

► [A121690] 1,1,2,4,10,27,81,262,910,3363,13150,54135,233671,1053911,4951997,24177536,122381035,640937746,3466900453,19337255086,111057640382,655892813805,3978591077096,24760700544301,157941950878839 ⋆ G.f.: A(x) = Sum _{ k>=0 } x ^ k * (1 + x) ^ (k * (k + 1) / 2). ● a(n) = Sum _{ k=0..n } C(k * (k + 1) / 2,n - k). ●

► [A138356] 1,1,2,4,10,27,82,268,940,3476,13448,53968,223412,949535,4128594,18310972,82645012,378851428,1760998280,8288679056,39457907128,189784872428,921472827272,4512940614960,22279014978544 ⋆ Moment sequence of t ^ 2 coefficient in det(tI - A) for random matrix A in USp(4). ● a(n) = (1 / 2)Integral _{ x=0..Pi,y=0..Pi } (4cos(x)cos(y) + 2) ^ n(2cos(x) - 2cos(y)) ^ 2(2 / Pi * sin ^ 2(x))(2 / Pi * sin ^ 2(y))dxdy. ●

► [A276051] 1,2,4,10,28,80,244,732,2320,7172,23212,73228,240184,768932,2545568,8240604,27468352,89699652,300579836,988463844 ⋆ a(n) is the number of top arches with length =1 for all semi meander solutions with n top arches. ● a(n + 1)= sum of x=1 to M(n)for [r(x) * h(x) - i(x)] + 2 * M(n) - 2 * M(n - 1) ● a(5) =(3 * 3 - 1) + (3 * 3 - 1) + (2 * 2 - 0) + (2 * 2 - 0) + 2 * 4 - 2 * 2= 28. ●

► [A034472] 2,4,10,28,82,244,730,2188,6562,19684,59050,177148,531442,1594324,4782970,14348908,43046722,129140164,387420490,1162261468,3486784402,10460353204,31381059610,94143178828,282429536482 ⋆ a(n) = 3 ^ n + 1. ● a(n) = 3 * a(n - 1) - 2 = 4 * a(n - 1) - 3 * a(n - 2). (Lucas sequence, with A003462, associated to the pair (4, 3).) ●

► [A187256] 1,2,4,10,28,82,248,770,2440,7858,25644,84618,281844,946338,3199728,10885122,37230352,127951714,441633812,1530242954,5320853260,18560408050,64932101224,227767796482,800928670232 ⋆ Number of peakless Motzkin paths of length n, assuming that the (1,0) - steps come in 2 colors. ● a(n) = Sum _{ i=0..n / 2 } ((- 1) ^ i * binomial(n - i,i) * binomial(2 * n - 4 * i + 2,n - 2 * i)) / (n - 2 * i + 1)). - _ Vladimir Kruchinin _ , Jun 01 2014 ● a(n) = 2 ^ n * hypergeom([- n / 2, (1 - n) / 2, (1 - n) / 2, 1 - n / 2], [2, - n, - n + 1], 4). - _ Peter Luschny _ , Jan 25 2020 ●

► [A192653] 1,2,4,10,28,82,264,866,2984,10476,37500,135916,496242,1821384,6712394,24818020,92016874,342043052,1274461144,4759439600,17812520318,66803249358,251038475982,945202437760,3565529448118 ⋆ Binomial convolution of the Floor - Sqrt transform of Catalan numbers. ● a(n) = sum(binomial(n,k) * floor(sqrt(binomial(2 * k,k) / (k + 1))) * floor(sqrt(binomial(2 * n - 2 * k,n - k) / (n - k + 1))),k=0..n). ●

► [A068875] 1,2,4,10,28,84,264,858,2860,9724,33592,117572,416024,1485800,5348880,19389690,70715340,259289580,955277400,3534526380,13128240840,48932534040,182965127280,686119227300,2579808294648 ⋆ Expansion of (1 + x * C) * C, where C = (1 - (1 - 4 * x) ^ (1 / 2)) / (2 * x) is the g.f. for Catalan numbers, A000108. ● a(n) = Sum _{ j=0..n } Sum _{ k=0..n } binomial(2 * n, n - k) * ((2 * k + 1) / (n + k + 1)) * binomial(k, j) * (- 1) ^ (j - k) * (2 - 0 ^ j). (End) ● a(n + 1) = a(n) + (1 / 2) * (Sum _{ k=0 }^ n a(k) * a(n - k)) if n>0. - _ Michael Somos _ , Apr 22 2022 ●

► [A135336] 1,1,2,4,10,28,85,271,893,3013,10351,36075,127219,453097,1627378,5887660,21436354,78484402,288779728,1067263660,3960081904,14746806292,55094725918,206450572930,775724723086 ⋆ Number of Dyck paths of semilength n with no UUDU's starting at level 0. ● a(n) = Sum _{ j=0..floor(n / 3) } (- 1) ^ j * (3 * j + 1) * binomial(2 * n - 3 * j,n) / (n + 1). ●

► [A253409] 1,2,4,10,28,86,282,984,3630,14138,57904,248854,1118554,5246980,25619018,129961850,683561488,3722029314,20946195078,121671375312,7285117024 62,4491224518274,28475638336144,185499720543262,1240358846060122 ⋆ The number of ways to write an n - bit binary string and then define each run of ones as an element in an equivalence relation, and each run of zeros as an element in a second equivalence relation. ● a(n) = 2 * Sum _{ k=1..ceiling(n / 2) } C(n - 1,2k - 1) * Bell(k) ^ 2 + C(n - 1,2k - 2) * Bell(k) * Bell(k - 1), where C(x,y) refers to binomial coefficients and Bell(x) refers to Bell numbers (A000110). ●

► [A229046] 1,1,2,4,10,28,88,304,1144,4648,20248,94024,463144,2409928,13198888,75848584,456066664,2862257608,18708144808,127096142344,895846801384,6540722530888,49392459602728,385251753351304,3099780861286504 ⋆ G.f.: Sum _{ n>=0 } n! * x ^ n * (1 + x) ^ n / Product _{ k=1..n } (1 + k * x). ● a(n) = Sum _{ k=0..floor(n / 2) } Sum _{ i=0..k } (- 1) ^ i * binomial(k,i) * (k - i + 1) ^ (n - k). (See Paul Barry's formula in A105795). - _ Paul D. Hanna _ , Jul 13 2014 ● a(n) = Sum _{ k=0..floor(n / 2) } k! * Stirling2(n - k + 1,k + 1) . ●

► [A191501] 1,2,4,10,28,96,354,1372,5512,22740,95768,410016,1779210,7807724,34589432,154488460,694883528,3144917888,14311109396,65439770904,300534169744,1385612474536,6410981989808,29757955549888,138534010818650 ⋆ Expansion of 2 - sqrt(1 - 4 * x - 4 * x ^ 2 - 4 * x ^ 3) ● a(n)=2 * sum(k=1..n, (binomial(2 * k - 2,k - 1) * sum(j=0..k, binomial(j,n - 3 * k + 2 * j) * binomial(k,j))) / k), n>0, a(0)=1. ●

► [A061417] 1,2,4,10,28,136,726,5100,40362,363288,3628810,39921044,479001612,6227066928,87178295296,1307675013928,20922789888016,355687438476444,6402373705728018,121645100594641896,2432902008177690360 ⋆ Number of permutations up to cyclic rotations; permutation siteswap necklaces. ● a(n) = (1 / n) * Sum _{ d|n } phi(n / d) * ((n / d) ^ d) * (d!). ●

► [A243814] 0,1,2,4,10,29,86,259,806,2573,8332,27301,90498,302933,1022074,3472148,11868242,40788053,140851104,488485195,1700694884,5941906864,20826229564,73208454375,258031793698 ⋆ Expansion of - (x * (1 - sqrt((2 * (1 - sqrt(4 * x ^ 2 + 1))) / x + 1))) / (1 - sqrt(4 * x ^ 2 + 1)) - 1. ● a(n) = Sum(i=0..floor((n - 1) / 2), (- 1) ^ i * binomial(n,i) * binomial(2 * n - 4 * i,n - 2 * i + 1)) / n, n >0, a(0)=0. ●

► [A262592] 1,2,4,10,29,88,268,812,2449,7366,22124,66406,199261,597836,1793572,5380792,16142465,48427498,145282612,435847970,1307544061,3922632352,11767897244,35303691940,105911076049 ⋆ a(n) = (3 ^ (n + 1) - 2n ^ 2 + 4n + 5) / 8.. ● a(n) = 6 * a(n - 1) - 12 * a(n - 2) + 10 * a(n - 3) - 3 * a(n - 4) for n>3. - _ Colin Barker _ , Oct 23 2015 ●

► [A135334] 1,1,2,4,10,29,90,290,960,3246,11164,38934,137358,489341,1757882,6360634,23160528,84802606,312041692,1153271984,4279311348,15935808866,59537435012,223099337404,838282693560 ⋆ Number of Dyck paths of semilength n having no UDDU's starting at level 1. ● a(n) = 2 * (Sum _{ j=0..floor((n - 1) / 2) } (- 1) ^ j * (j + 1) * binomial(2n - 2j - 1,n)) / (n + 1) (n >= 1). ●

► [A086631] 1,2,4,10,29,92,310,1088,3931,14518,54551,207856,801202,3118532,12239732,48385852,192483953,769974110,3095236066,12497442266,50660112478,206093561590,841151382755,3443278744832,14133534466258 ⋆ Antidiagonal sums of square table A086629. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n + 2 * k + 1,4 * k + 1) * binomial(3 * k,k) / (2 * k + 1). - _ Seiichi Manyama _ , Jul 30 2023 ●

► [A361758] 1,2,4,10,30,90,264,754,2106,5778,15628,41786,110678,290858,759312,1971042,5091442,13095586,33555988,85695978,218198158,554081146,1403588376,3547702610,8949110954 ⋆ a(n) = [x ^ n] (x ^ 5 + 5 * x ^ 4 + 4 * x ^ 3 - 3 * x + 1) / ((1 - x) * (x ^ 2 + 2 * x - 1) ^ 2). ● a(n) = ((3 * n ^ 2 - 7 * n + 2) * a(n - 1) - (n ^ 2 - n) * a(n - 3) - (n ^ 2 - 3 * n) * a(n - 2)) / ((n - 1) * (n - 2)) for n >= 4. ●

► [A026119] 1,2,4,10,30,94,316,1096,3856,13798,49940,182362,671092,2485534,9256396,34636834,130150588,490853416,1857283156,7048151672,26817356776,102280151422,390937468408,1497207322930,5744387279818 ⋆ Bisection of A000016 (also of A000013). ● a(n) = (Sum _{ d | 2n + 1 } phi(d) * 2 ^ ((2n + 1) / d)) / (4n + 2). ●

► [A087161] 1,2,4,10,30,98,330,1122,3826,13058,44578,152194,519618,1774082,6057090,20680194,70606594,241065986,823050754,2810071042,9594182658,32756588546,111837988866,381838778370,1303679135746 ⋆ Records in A087159, i.e., A087159(a(n)) = n, and satisfies the recurrence a(n + 3) = 5 * a(n + 2) - 6 * a(n + 1) + 2 * a(n) with a(1) = 1, a(2) = 2, and a(3) = 4. ● a(n) = ((2 - sqrt(2)) ^ (n) / (1 - sqrt(2)) + (2 + sqrt(2)) ^ (n) / (1 + sqrt(2))) / 2 + 2 (offset 0) - _ Paul Barry _ , Aug 26 2003 ● a(1) = 1, a(2) = 2, a(3) = 4, a(n) = 5 * a(n - 1) - 6 * a(n - 2) + 2 * a(n - 3) for n >= 4. - _ Harvey P. Dale _ , Oct 12 2015 ●

► [A372018] 1,2,4,10,30,98,336,1194,4360,16258,61644,236938,921102,3615330,14307312,57024426,228701646,922283522,3737497980,15212318730,62160993642,254909413218,1048717979424,4327273358250,17903826642780 ⋆ G.f. A(x) satisfies A(x) = (1 + 4 * x * A(x) / (1 - x * A(x))) ^ (1 / 2). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..n } 4 ^ k * binomial(n / 2 + 1 / 2,k) * binomial(n - 1,n - k). ●

► [A274232] 1,2,4,10,30,102,374,1430,5590,22102,87894,350550,1400150,5596502,22377814,89494870,357946710,1431721302,5726754134,22906754390,91626493270,366504924502,1466017600854,5864066209110,23456256447830 ⋆ Number of partitions of 2 ^ n into at most three parts. ● a(n) = (8 + 3 * 2 ^ (1 + n) + 4 ^ n) / 12 for n>0. ● a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3) for n>3. ●

► [A186021] 1,2,4,10,30,104,406,1754,8280,42294,231950,1357140,8427194,55288874,381798644,2765917090,20960284294,165729739608,1364153612318,11665484410114,103448316470744,949739632313502,9013431476894646,88304011710168692,891917738589610578 ⋆ a(n) = Bell(n) * (2 - 0 ^ n). ● a(n + 1) = 1 + Sum _{ k=0..n } C(n,k) * a(k). - _ Franklin T. Adams - Watters _ , Oct 02 2011. ●

► [A124384] 1,2,4,10,30,110,494,2734,18734,159278,1685550,22268974,367653934,7597868078,196929315886,6402998805550,261393582040110,13416320169124910,865576139256079406,70227589169019724846,7172766017169503134766,921829147482582383174702 ⋆ O.g.f.: A(x) = Sum _{ n>=0 } x ^ n * Product _{ k=0..n } (1 + 2 ^ k * x). ● a(n) = Sum _{ k=0..floor((n + 1) / 2) } q - binomial(n - k + 1,k) * 2 ^ binomial(k,2), where q - binomial is triangle A022166, that is, with q=2. - _ Vladimir Kruchinin _ , Jan 21 2020 ●

► [A071954] 2,4,10,32,114,420,1562,5824,21730,81092,302634,1129440,4215122,15731044,58709050,219105152,817711554,3051741060,11389252682,42505269664,158631825970,592022034212,2209456310874,8245803209280,30773756526242 ⋆ a(n) = 4 * a(n - 1) - a(n - 2) - 4, with a(0) = 2, a(1) = 4. ● a(n) = 5 * a(n - 1) - 5 * a(n - 2) + a(n - 3) for n > 2, with a(0) = 2, a(1) = 4, a(2) = 10. ● a(n) = (2 + (- (2 - sqrt(3)) ^ n + (2 + sqrt(3)) ^ n) / sqrt(3)). - _ Colin Barker _ , Nov 03 2016 ● a(n) = 2 * (1 - (- i) ^ (n + 1) * F(n, 4 * i)), where i=sqrt(- 1) and F(n,x) is the Fibonacci polynomial. (End) ●

► [A001250] 1,1,2,4,10,32,122,544,2770,15872,101042,707584,5405530,44736512,398721962,3807514624,38783024290,419730685952,4809759350882,58177770225664,740742376475050,9902996106248192,138697748786275802,2030847773013704704,31029068327114173810 ⋆ Number of alternating permutations of order n. ● a(n) = coefficient of x ^ (n - 1) / (n - 1)! in power series expansion of (tan(x) + sec(x)) ^ 2 = (tan(x) + 1 / cos(x)) ^ 2. ● a(n) = coefficient of x ^ n / n! in power series expansion of 2 * (tan(x) + sec(x)) - 2 - x. - _ Michael Somos _ , Feb 05 2011 ● a(n) = 4 * |Li _{- n } (i)| - [n=1] = Sum _{ m=0..n / 2 } (- 1) ^ m * 2 ^ (1 - k) * Sum _{ j=0..k } binomial(k,j) * (- 1) ^ j * (k - 2 * j) ^ (n + 1) / k - [n=1], where k = k(m) = n + 1 - 2 * m and [n=1] equals 1 if n=1 and zero else; Li denotes the polylogarithm (and i ^ 2 = - 1). - _ M. F. Hasler _ , May 20 2012 ●

► [A098830] 0,1,2,4,10,32,126,588,3170,19384,132550,1002212,8301930,74767056,727348814,7601002876,84920459890,1010058659048,12742908917718,169962226236180,2389587638934650,35321010036943360,547577222471444062 ⋆ 3 * Sum _{ k>=0 } k ^ n / binomial(2 * k, k) = Pi * sqrt(3) * q(n) + a(n) for some rat

ional sequence (q(n)). • a(n) = Sum _{ k=0..n } Sum _{ j=0..n - k } (j + 1) ^ k * Sum _{ i=0..j } (- 1) ^ (n - k + j - i) * C(j, i) * (j - i) ^ (n - k). - _ Paul D. Hanna _ , Nov 03 2004 • a(n) = Sum _{ k=0..n } Sum _{ m=0..k } (- 1) ^ (k + m) * (m + 1) ^ (n - k) * m! * Stirling2(k,m). - _ Vladimir Reshetnikov _ , Dec 17 2015 •

► [A166741] 1,2,4,10,32,130,640,3770,25600,199810,1740800,16983850,181043200,2122981250,26794393600,367275756250,5358878720000,84106148181250,1393308467200000,24643101417106250,457005177241600000 ⋆ E.g.f.: exp(2 * arcsin(x)) . • a(n) = (n ^ 2 - 4 * n + 8) * a(n - 2). • a(n) = 2 ^ (n - 1) * (exp(Pi) - (- 1) ^ n * exp(- Pi)) * GAMMA(n / 2 - I) * GAMMA(n / 2 + I) / Pi. •

► [A054091] 1,2,4,10,32,130,652,3914,27400,219202,1972820,19728202,217010224,2604122690,33853594972,473950329610,7109254944152,113748079106434,1933717344809380,34806912206568842,661331331924808000,13226626638496160002,277759159408419360044 ⋆ Row sums of A054090. • a(n + 1) = Sum(2 * n! / j!, j =0..n). - _ Zerinvary Lajos _ , Oct 20 2006 • a(n) = 2 * floor(e * (n - 1)!), n> 1. - _ Gary Detlefs _ , May 20 2010 • a(n) = n * a(n - 1) - (n - 2) * a(n - 2), a(0)=1, a(1)=2. - _ Vincenzo Librandi _ , Feb 23 2012 •

► [A323207] 1,2,4,10,33,141,752,4825,36027,305132,2879840,29909421,338479429,4139716658,54339861530,761150445734,11322139144239,178116143657889,2952831190016238,51423702126549166,938126972940647197,17883424301972473339 ⋆ a(n) = Sum _{ k=0..n } hypergeometric([- k, k + 1], [- k - 1], n - k). • a(n) = Sum _{ k=0..n } Sum _{ j=0..n - k } (binomial(2 * (n - k) - j, n - k) - binomial(2 * (n - k) - j, n - k + 1)) * k ^ (n - k - j). •

► [A003422] 0,1,2,4,4,10,34,154,874,5914,46234,409114,4037914,43954714,522956314,6749977114,93928268314,1401602636314,22324392524314,378011820620314,6780385526348314,128425485935180314,2561327494111820314,53652269665821260314,1177652997443428940314 ⋆ Left factorials: !n = Sum _{ k=0..n - 1 } k!. • a(n) = Sum _{ k=0..n - 1 } P(n, k) / C(n, k). - _ Ross La Haye _ , Sep 20 2004 • a(n) = Integral _{ x = 0..infinity } [(x ^ n - 1) / (x - 1)] * exp(- x) dx. - _ Gerald McGarvey _ , Oct 12 2007 • a(n) = a(n - 1) + (n - 1)! for n >= 2. - _ Jaroslav Krizek _ , Jun 16 2009 • a(n) = (- 1) ^ (n + 1) * C(n - 1, - 1) where C(n, x) are the Charlier polynomials (with parameter a=1) as given in A137338. (Evaluation at x = 1 gives A232845.) - _ Peter Luschny _ , Nov 28 2018 • a(n) = (a(n - 3) * (n - 2) ^ 2 * (n - 3)! + a(n - 1) ^ 2) / a(n - 2) (empirical). - _ Gary Detlefs _ , Feb 25 2022 • a(n) = signum(n) / b(1,n) with b(i,n) = i - [i <n] * i / b(i + 1,n). - _ Mohammed Bouras _ , Sep 07 2022 •

► [A210772] 1,2,4,10,35,165,969,6545,47905,366145,2862209,22632705,180007425,1435853825,11470030849,91693092865,733276217345,5865135816705,46916791205889,375317149057025,3002468471537665,24019472891510785,192154683614691329,1537233070859485185 ⋆ Number of partitions of 2 ^ n into powers of 2 less than or equal to 8. • a(n) = [x ^ 2 ^ (n - 1)] 1 / (1 - x) * 1 / Product _{ j=0..2 } (1 - x ^ (2 ^ j)) for n>0. • a(n) = 1 + (11 * 2 ^ (n - 3)) / 3 + 2 ^ (3 * n - 7) / 3 + 4 ^ (n - 2) for n>1. - _ Colin Barker _ , Jan 26 2018 •

► [A103854] 2,4,10,36,56,94,126,224,260,270,300,350,686,716,780,1036,1070,1080,1156,1174,1210,1394,1416,1434,1440 ⋆ Positive integers n such that n ^ 6 + 1 is semiprime. • a(n) ^ 6 + 1 is semiprime. (a(n) ^ 2 + 1) is prime and (a(n) ^ 4 - a(n) ^ 2 + 1) is prime. •

► [A210773] 1,2,4,10,36,201,1625,17361,222241,3160641,47594625,738433281,11633144321,184687354881,2943499290625,47004182220801,751333186150401,12015464030289921,192200500444954625,3074832660977745921,49194319991205396481,787085099922532597761 ⋆ Number of partitions of 2 ^ n into powers of 2 less than or equal to 16. • a(n) = [x ^ 2 ^ (n - 1)] 1 / (1 - x) * 1 / Product _{ j=0..3 } (1 - x ^ (2 ^ j)) for n>0. •

► [A113208] 1,1,2,4,10,44,1426,17592187106356 ⋆ Half - fixed - point of ascending descending base exponent transform. • a(1) = 1. For n > 1: a(n) = (1 / 2) * Sum _{ i=1..n } a(i) ^ a(n - i + 1). •

► [A120402] 2,4,10,70,430,4090,86530,513100,913570,7914340,65936213809366241600 ⋆ a(1)=2; a(n)=first even number greater than a(n - 1) such that 2 * a(n) - 1 is prime and a(i) + a(n) - 1 is prime for all 1<=i<=n - 1. • a(1)=2; a(n) = s where s is the first even number s>a(n - 1) such that 2 * s - 1 is prime and s + a(i) - 1 is prime, 1<=i<=n - 1. •

► [A214429] 0,1,2,4,11,15,18,23,37,44,49,57,78,88,95,106,134,147,156,170,205,221,232,249,291 ⋆ Integers of the form (n ^ 2 - 49) / 120. • a(n) = 2 * a(n - 4) - a (n - 8) + 15 = a(- 1 - n). •

► [A330856] 0,2,4,11,15,25,33,48,56,75,87,111,127,149,165,204,220,251,277,315,339,383,407,459,491 ⋆ Total sum of divisors of all the parts in the partitions of n into 2 parts. • a(n) = Sum _{ i=1..floor(n / 2) } sigma(i) + sigma(n - i), where sigma(n) is the sum of divisors of n (A000203). • a(n) = ((n + 1) mod 2) * sigma(floor(n / 2)) + Sum _{ i=1..n - 1 } sigma(i), where sigma(n) is the sum of divisors of n (A000203). •

► [A277867] 1,2,4,11,16,47,64,191,256,767,1024,3071,4096,12287,16384,49151,65536,196607,262144,786431,1048576,3145727,4194304,12582911,16777216 ⋆ Decimal representation of the x - axis, from the origin to the right edge, of the n - th stage of growth of the two - dimensional cellular automaton defined by "Rule 3", based on the 5 - celled von Neumann neighborhood. • a(n) = (- 2 - (- 2) ^ n + 2 * (- 1) ^ n + 5 * 2 ^ n) / 4. (End) •

► [A283216] 1,2,4,11,17,46,68,187,273,750,1092,3003,4369,12014,17476,48059,69905,192238,279620,768955,1118481,3075822,4473924,12303291,17895697 ⋆ Decimal representation of the x - axis, from the left edge to the origin, of the n - th stage of growth of the two - dimensional cellular automaton defined by "Rule 597", based on the 5 - celled von Neumann neighborhood. • a(n) = 4 * a(n - 2) + a(n - 4) - 4 * a(n - 6) for n>5. •

► [A283357] 1,2,4,11,17,46,70,190,286,766,1150,3070,4606,12286,18430,49150,73726,196606,294910,786430,1179646,3145726,4718590,12582910,18874366 ⋆ Decimal representation of the x - axis, from the left edge to the origin, of the n - th stage of growth of the two - dimensional cellular automaton defined by "Rule 621", based on the 5 - celled von Neumann neighborhood. • a(n) = (- 32 - 3 * (- 2) ^ n + 21 * 2 ^ n) / 16 for n>4. • a(n) = a(n - 1) + 4 * a(n - 2) - 4 * a(n - 3) for n>5. •

► [A182642] 2,4,11,17,46,76,199,321,842,1364,3571,5777,15126,24476,64079,103681,271442,439204,1149851,1860497,4870846,7881196,20633239,33385282,87403803 ⋆ Subsequence of A014217 (n=2,3,5,6,8,9,11,12,...). • a(n)=floor(r ^ m(n)), where r=(1 + sqrt(5)) / 2 and m(n) •

► [A039824] 1,2,4,11,20,31,46,61,78,97,118,141,166,193,222,253,286,321,358,397,438,481,526,573,622 ⋆ Number of different coefficient values in expansion of Product (1 + q ^ 1 + q ^ 3... + q ^ (2i - 1)), i=1 to n. • a(n) = 3 * a(n - 1) - 3 * a (n - 2) + a(n - 3) for n>9. •

► [A061152] 1,2,4,11,23,51,107,216,430,839,1614,3046,5684,10465,19046,34321,61225,108245,189779,330093,569916,977139,1664304,2817039,4740000 ⋆ Expansion of Product _{ n>=1 } (1 + x ^ n) ^ prime(n). • a(n) = 1 / n * Sum _{ k=1.. n } a(n - k) * b(k), k>0, a(0)=1, b(k)=Sum _{ d|k } (- 1) ^ (k / d + 1) * d * prime(d). •

► [A006452] 1,1,2,4,11,23,64,134,373,781,2174,4552,12671,26531,73852,154634,430441,901273,2508794,5253004,14622323,30616751,85225144,178447502,496728541 ⋆ a(n) = 6 * a(n - 2) - a(n - 4). • a(n + 2) = sqrt(17 * a(n) ^ 2 + 6 * (sqrt(8 * a(n) ^ 2 - 7)) * a(n) * sgn(2 * n - 1) - 7) with a(0) = 1, a(1) = 1. - _ Raphie Frank _ , Feb 08 2013 •

► [A342533] 1,2,4,11,24,81,193,772,1920,8735,23040 ⋆ a(n) is the number of n - gons in A000940 that display symmetry (reflection / rotation). • a(p) = (2 ^ ((p - 1) / 2) * ((p - 1) / 2)!) / 2 for prime p. •

► [A329707] 1,2,4,11,25,61,146,351,844,2028,4875,11717,28163,67692,162703,391070,939968,2259289,5430383,13052363,31372406,75406105,181244648,435636112,1047086489 ⋆ Number of placements of zero or more dominoes on a 2 X n grid where no two empty squares are horizontally adjacent. • a(n) = 2 * a(n - 1) + a(n - 2) - a(n - 6) for n > 6. •

► [A086424] 1,2,4,11,25,64,171,569,3406,27697,243374,1759619,28381401,222323189,3416307938 ⋆ Numbers needed to generate all other natural numbers, only allowing multiplication and addition. Each number can be used only once. • a(n) >= 2a(n - 1). - _ Charles R Greathouse IV _ , Jun 17 2013 •

► [A080009] 1,1,2,4,11,26,56,127,288,660,1500,3401,7729,17565,39930,90735,206176,468536,1064750,2419661,5498621,12495505,28395889,64529315,146642077 ⋆ Number of permutations satisfying - k<=p(i) - i<=r and p(i) - i not in I, i=1..n, with k=2, r=3, I= { 2 } . • a(n) = a(n - 1) + a(n - 2) + 2 * a(n - 3) + 3 * a(n - 4) + 5 * a(n - 5) + a(n - 7) - a(n - 8) - a(n - 9) - a(n - 10). •

► [A159336] 1,2,4,11,26,60,139,323,751,1746,4059,9436,21936,50995,118549,275593,640676,1489391,3462414,8049136,18711971,43500055,101125359,235087938,546513151 ⋆ Transform of the finite sequence (1, 0, - 1) by the T _{ 1,0 } transformation (see link). • a(n) = 3 * a(n - 1) - 2 * a(n - 2) + a(n - 3) for n >= 5, with a(0)=1, a(1)=2, a(2)=4, a(3)=11, a(4)=26. •

► [A159338] 1,2,4,11,27,61,140,327,761,1769,4112,9559,22222,51660,120095,279187,649031,1508814,3507567,8154104,18955992,44067335,102444125,238153697,553640176 ⋆ Transform of the finite sequence (1, 0, - 1, 0, 1, 0, - 1) by the T _{ 1,0 } transformation (see link). • a(n) = 3 * a(n - 1) - 2 * a(n - 2) + a(n - 3) for n >= 9, with a(0)=1, a(1)=2, a(2)=4, a(3)=11, a(4)=27, a(5)=61, a(6)=140, a(7)=327, a(8)=761. •

► [A159339] 1,2,4,11,27,61,140,327,762,1770,4113,9563,22233,51684,120149,279314,649328,1509503,3509167,8157825,18964644,44087447,102490878,238262386,553892849 ⋆ Transform of A056594 by the T _{ 1,0 } transformation (see link). • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + 4 * a(n - 3) - 2 * a(n - 4) + a(n - 5) for n > = 5, with a(0)=1, a(1)=2, a(2)=4, a(3)=11, a(4)=27, a(5)=61, a(6)=141. •

► [A159337] 1,2,4,11,27,61,141,328,763,1774,4124,9587,22287,51811,120446,280003,650928,1513224,3517819,8177937,19011397,44196136,102743551,238849778,555258368 ⋆ Transform of the finite sequence (1, 0, - 1, 0, 1) by the T _{ 1,0 } transformation (see link). • a(n) = 3 * a(n - 1) - 2 * a(n - 2) + a(n - 3) for n >= 7, with a(0)=1, a(1)=2,a(2)=4, a(3)=11, a(4)=27, a(5)=61, a(6)=141. •

► [A099525] 1,2,4,11,28,68,169,422,1048,2603,6472,16088,39985,99386,247036,614027,1526212,3793532,9429145,23436926,58254448,144796331,359903440,894570224,2223529441 ⋆ Expansion of 1 / (1 - 2x - 3x ^ 3). • a(n)=2a(n - 1) + 3a(n - 3) ; a(n)=sum { k=0..floor(n / 3), binomial(n - 2k, k)3 ^ (n - 2k)(2 / 3) ^ (n - 3k) } . •

► [A099016] 1,2,4,11,28,74,193,506,1324,3467,9076,23762,62209,162866,426388,1116299,2922508,7651226,20031169,52442282,137295676,359444747,941038564,2463670946,6449974273 ⋆ a(n) = 3 * L(2 * n) / 5 - (- 1) ^ n / 5, where L = A000032. • a(n) = 2 * a(n - 1) + 2 * a(n - 2) - a(n - 3). • a(n) = 2 * F(n) ^ 2 + F(n) * F(n - 1) + F(n - 1) ^ 2, where F = A000045. • a(n) = 3 * ((3 / 2 - sqrt(5) / 2) ^ n + (3 / 2 + sqrt(5) / 2) ^ n) / 5 - (- 1) ^ n / 5. • a(n) = 3 * F(n) ^ 2 + (- 1) ^ n. • a(n) = F(n + 1) ^ 2 + F(n) * F(n - 2). See also A192914, fourth formula. - _ Bruno Berselli _ , Feb 15 2017 •

► [A026122] 2,4,11,28,74,196,525,1416,3846,10508,28864,79664,220818,614460,1715874,4807008,13506534,38052972,107477319,304261404,863188662,2453737132,6988033949,19935797080,56966012730 ⋆ a(n) is the number of (s(0),s(1),...,s(n)) such that every s(i) is a nonnegative integer, s(0) = 1, s(n) = 1, |s(1) - s(0)| = 1, |s(i) - s(i - 1)| <= 1 for i >= 2. Also a(n) = T(n,n), where T is the array in A026120. • a(n) = 2 * Sum _{ m=1..n / 2 } C(2 * m + 1,m) * C(n - 1,2 * m - 1) / (m + 2). - _ Vladimir Kruchinin _ , Jan 24 2022 •

► [A061860] 1,2,4,11,28,152,726,5268,40438,365944,3628810,39974466,479001612,6228256404,87178339984,1307706805928,20922789888016,355688409760972,6402373705728018,121645133931170028,2432902008232456692 ⋆ Variant of A061417. • a(n) = (1 / n) * Sum _{ d|n } phi(n / d) * C(n, d) * (d!). •

► [A093960] 1,2,4,11,29,76,199,521,1364,3571,9349,24476,64079,167761,439204,1149851,3010349,7881196,20633239,54018521,141422324,370248451,969323029,2537720636,6643838879 ⋆ a(1) = 1, a(2) = 2, a(n + 1) = n * a(1) + (n - 1) * a(2) + ... + (n - r) * a(r + 1) + ... + a(n). • a(n) = F(2 * n - 2) + F(2 * n - 4), where F(k) is k - th Fibonacci number, n > 2. • a(n) = 3 * a(n - 1) - a(n - 2) for n >4. - _ Colin Barker _ , Mar 26 2015 • a(n) = 2 ^ (2 - n) * [n<3] + LucasL(2 * n - 3). - _ G. C. Greubel _ , Dec 30 2021 •

► [A267912] 1,2,4,11,29,77,201,525,1361,3525,9097,23453,60353,155189,398649,1023501,2626289,6736677,17274601,44286845,113516321,290925845,745515417,1910267373,4894426193 ⋆ Number of 1 X n 0..2 arrays with every repeated value i

n every row unequal to the previous repeated value, and in every column equal to the previous repeated value, and new values introduced in row - major sequential order. ● a(n) = (1 / 17) * 2 ^ (- 5 - n) * (- 17 * 4 ^ (1 + n) + (85 - 19 * sqrt(17)) * (1 - sqrt(17)) ^ n + (1 + sqrt(17)) ^ n * (85 + 19 * sqrt(17))) for n >2. ●

▶ [A039300] 1,2,4,11,31,92,274,821,2461,7382,22144,66431,199291,597872,1793614,5380841,16142521,48427562,145282684,435848051,1307544151,3922632452,11767897354,35303692061,105911076181 ⋆ Number of distinct quadratic residues mod 3 ^ n. ● a(n) = floor(3 * (3 ^ n + 3) / 8). ● a(n) = (3 ^ (n + 1) + 6 + (- 1) ^ (n + 1)) / 8. - _ Lekraj Beedassy _ , Jan 07 2005 ● a(n) = 2 * a(n - 1) + 3 * a(n - 2) - 3 with n > 1, a(0) = 1, a(1) = 1. - _ Zerinvary Lajos _ , Dec 14 2008 ● a(n) = 3 * a(n - 1) + a(n - 2) - 3 * a(n - 3). _ Vincenzo Librandi _ , Apr 21 2012 ●

▶ [A247333] 1,1,2,4,11,31,92,283,893,2875,9407,31189,104555,353794,1206821,4145350,14326184,49778473,173794610,609392578,2145057797,7577098816,26850456704,95425761829,340047930692 ⋆ Number of Dyck paths of semilength n avoiding the consecutive step pattern UDUDU, where U=(1,1) and D=(1, - 1). ● a(n) = Sum _{ k=1..n } binomial(k,n - k) * M(k + 1), a(0)=1, where M(k) are Motzkin numbers (A001006). (End) ●

▶ [A364594] 1,1,2,4,11,31,98,316,1065,3649,12775,45299,162713,590097,2159015,7957003,29517141,110116277,412879256,1555048142,5880591163,22319380999,84992915958,324634976440,1243396473153 ⋆ G.f. satisfies A(x) = 1 / (1 - x) + x ^ 2 * (1 - x) * A(x) ^ 4. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n,2 * k) * binomial(4 * k,k) / (3 * k + 1). ●

▶ [A110140] 1,1,2,4,11,31,103,351,1321,5113,21201,90465,406621,1879021,9051309,44754061,229059633,1201271409,6488957521,35853950609,203303964341,1177299817093,6976709899853,42161309544541,260154190137865 ⋆ Binomial transform of n ^ n (with interpolated zeros). ● a(n)=sum { k=0..n, C(n, k)(k / 2) ^ (k / 2) * (1 + (- 1) ^ k) / 2 } ●

▶ [A190452] 1,1,2,4,11,31,106,372,1499,6211,28606,135356,697357,3688049,20935006,121837276,753159801,4767863657,31807384354,217048147396,1551200297291,11327527814191,86206555248122,669666314150164,5399592811359331 ⋆ E.g.f. exp(x + x ^ 2 / 2 + x ^ 4 / 24). ● a(n) = n! * sum(k=1..n, sum(j=floor((4 * k - n) / 3)..floor((4 * k - n) / 2), binomial(j,n - 4 * k + 3 * j) * 12 ^ (j - k) * binomial(k,j) * 2 ^ (- n + 3 * k - 2 * j)) / k!), n>0, a(0)=1. ●

▶ [A056323] 1,1,2,4,11,31,107,379,1451,5611,22187,87979,350891,1400491,5597867,22379179,89500331,357952171,1431743147,5726775979,22906841771,91626580651,366505274027,1466017950379,5864067607211 ⋆ Number of reversible string structures with n beads using a maximum of four different colors. ● a(n) = Sum _{ j=0..k } (S2(n,j) + Ach(n,j)) / 2, where k=4 is the maximum number of colors, S2 is the Stirling subset number A008277, and Ach(n,k) = [n>=0 & n<2 & n==k] + [n>1] * (k * Ach(n - 2,k) + Ach(n - 2,k - 1) + Ach(n - 2,k - 2)). ●

▶ [A191586] 1,2,4,11,32,92,271,814,2464,7508,23024,70952,219503,681358,2121116,6619571,20703040,64873328,203625604,640109128,2014951552,6350490808,20037015200,63284778256,200063948527 ⋆ Binomial row sums of the Riordan matrix (1 / (1 - x),x / (1 - x ^ 2)) (A046854). ● a(n) = Sum _{ k=0..n } binomial(n,k) * binomial(floor((n + k) / 2),k). ●

▶ [A135339] 1,1,2,4,11,32,99,318,1051,3550,12200,42520,149930,533890,1917181,6934722,25243539,92405718,339940116,1256122632,4660081434,17350844808,64814186646,242838410652,912333763806 ⋆ Number of Dyck paths of semilength n having no DUDU's starting at level 1. ● a(n) = binomial(2 * n - 2, n - 1) / n + (Sum _{ j=0..n - 2 } (- 1) ^ j * (j + 3) * binomial(2 * n - j - 2, n)) / (n + 1) for n >= 1. - _ Emeric Deutsch _ , Dec 13 2007 ●

▶ [A056324] 1,1,2,4,11,32,116,455,1993,9134,43580,211659,1041441,5156642,25640456,127773475,637624313,3184387574,15910947980,79521737939,397510726681,1987259550002,9935420646296,49674470817195,248364482308833 ⋆ Number of reversible string structures with n beads using a maximum of five different colors. ● a(n) = Sum _{ j=0..k } (S2(n,j) + Ach(n,j)) / 2, where k=5 is the maximum number of colors, S2 is the Stirling subset number A008277, and Ach(n,k) = [n>=0 & n<2 & n==k] + [n>1] * (k * Ach(n - 2,k) + Ach(n - 2,k - 1) + Ach(n - 2,k - 2)). ● a(n) = 5 ^ n / 240 + 3 ^ n / 24 + 2 ^ n / 12 + 13 * 5 ^ (n / 2) / 120 + 2 ^ (n / 2) / 6 + 5 / 16 for n>0 even; ● a(n) = 5 ^ n / 240 + 3 ^ n / 24 + 2 ^ n / 12 + 5 ^ ((n + 1) / 2) / 24 + 2 ^ ((n + 1) / 2) / 12 + 5 / 16 for n >0 odd. (End) ●

▶ [A056325] 1,1,2,4,11,32,117,467,2135,10480,55091,301633,1704115,9819216,57365191,338134521,2005134639,11937364184,71254895955,426063226937,2550552314219,15280103807200,91588104196415,549159428968825 ⋆ Number of reversible string structures with n beads using a maximum of six different colors. ● a(n) = Sum _{ j=0..k } (S2(n,j) + Ach(n,j)) / 2, where k=6 is the maximum number of colors, S2 is the Stirling subset number A008277, and Ach(n,k) = [n>=0 & n<2 & n==k] + [n>1] * (k * Ach(n - 2,k) + Ach(n - 2,k - 1) + Ach(n - 2,k - 2)). ● a(n) = 16 * a(n - 1) - 84 * a(n - 2) + 84 * a(n - 3) + 685 * a(n - 4) - 2140 * a(n - 5) + 180 * a(n - 6) + 7200 * a(n - 7) - 8244 * a(n - 8) - 4176 * a(n - 9) + 11664 * a(n - 10) - 5184 * a(n - 11) for n>11. ● a(n) = (1 / 1440) * 6 ^ n + (1 / 96) * 4 ^ n + (1 / 36) * 3 ^ n + (3 / 32) * 2 ^ n + (19 / 360) * 6 ^ (n / 2) + (1 / 9) * 3 ^ (n / 2) + (1 / 8) * 2 ^ (n / 2) + 17 / 60 for n > 0 even; ● a(n) = (1 / 1440) * 6 ^ n + (1 / 96) * 4 ^ n + (1 / 36) * 3 ^ n + (3 / 32) * 2 ^ n + (13 / 720) * 6 ^ ((n + 1) / 2) + (1 / 18) * 3 ^ ((n + 1) / 2) + (1 / 16) * 2 ^ ((n + 1) / 2) + 17 / 60 for n > 0 odd. (End) ●

▶ [A345207] 1,1,2,4,11,32,117,468,2151,10722,58071,333774,2018321,12678506,82035085,542520052,3646124339,24791545874,169986552195,1172526610674,8122332718341,56435590886610,392969320828713,2740480494041976,19132214719583207 ⋆ Number of (unlabeled) 7 - paths with n vertices. ● a(n) = (7 ^ (n - 9) + 21 * 5 ^ (n - 9) + 70 * 4 ^ (n - 9) + 315 * 3 ^ (n - 9) + 924 * 2 ^ (n - 9) + 232 * 7 ^ ((n - 9) / 2) + 700 * 4 ^ ((n - 9) / 2) + 840 * 3 ^ ((n - 9) / 2) + 1008 * 2 ^ ((n - 9) / 2) + 2975) / 10080 for n>9 odd; ● a(n) = (7 ^ (n - 9) + 21 * 5 ^ (n - 9) + 70 * 4 ^ (n - 9) + 315 * 3 ^ (n - 9) + 924 * 2 ^ (n - 9) + 76 * 7 ^ ((n - 8) / 2) + 280 * 4 ^ ((n - 8) / 2) + 420 * 3 ^ ((n - 8) / 2) + 504 * 2 ^ ((n - 8) / 2) + 2975) / 10080 for n even. ● a(n) = 20 * a(n - 1) - 134 * a(n - 2) + 200 * a(n - 3) + 1502 * a(n - 4) - 6120 * a(n - 5) - 200 * a(n - 6) + 35440 * a(n - 7) - 41269 * a(n - 8) - 66380 * a(n - 9) + 141454 * a(n - 10) + 840 * a(n - 11) - 135912 * a(n - 12) + 70560 * a(n - 13) for n > 22. - _ Stefano Spezia _ , Aug 01 2021 ●

▶ [A103293] 1,1,1,2,4,11,32,117,468,2152,10743,58487,340390,2110219,13830235,95475556,691543094,5240285139,41432986588,341040317063,2916376237350,25862097486758,237434959191057,2253358057283035,22076003468637450 ⋆ Number of ways to color n regions arranged in a line such that consecutive regions do not have the same color. ● a(n) = Sum _{ k=0..n - 1 } (Stirling2(n - 1,k) + Ach(n - 1,k)) / 2 for n>0, where Ach(n,k) = [n>1] * (k * Ach(n - 2,k) + Ach(n - 2,k - 1) + Ach(n - 2,k - 2)) + [n<2 & n>=0 & n==k]. - _ Robert A. Russell _ , May 19 2018 ●

▶ [A220902] 2,4,11,33,104,339,1133,3861,13364,46852,166022,593674,2139552,7763305,28337265,103981965,383351580,1419269280,5274495930,19669409790,73580417040,276043317030,1038327097314,3915101867778,14795310818024 ⋆ a(n) = Catalan(n) - A000245(n - 2). ● a(n) = Catalan(n) - Catalan(n - 1) + Catalan(n - 2). - _ Andrei Asinowski _ , Dec 16 2015 ●

▶ [A249945] 2,4,11,33,105,363,1449,7227,46881,382563,3687849,40093947,479533041,6228615123,87183074169,1307688716907,20922832934721,355687557236163,6402374093148489,121645101571093467,2432902011663424401,51090942182169793203,1124000727808988739609 ⋆ a(n) = n! + 3 ^ n. ● a(n) = n! + 3 ^ n. ●

▶ [A127782] 1,1,1,2,4,11,33,114,438,1845,8458,41823,221539,1250269,7481758,47278652,314374316,2192798077,16000160519,121831654450,965946444587,7958739329386,68023023892680,602115897105136,5511499584735858 ⋆ G.f. satisfies A(x) = 1 + x * A(x + x ^ 2). ● a(n) = Sum _{ k=0..floor((n - 1) / 2) } binomial(n - 1 - k,k) * a(n - 1 - k) for n>0 with a(0)=1. [corrected by _ Seiichi Manyama _ , Feb 25 2023] ●

▶ [A188478] 1,1,1,2,4,11,33,116,456,1999,9623,50603,288287,1769352,11636669,81652911,608857325,4807873069,40080193414,351751992542,3241754135966,31301851579056,316012152140592,3329322705562603,36539984716325869 ⋆ Binomial variation of the Catalan numbers ● a(n) = sum(binomial(n - 1 - i, i) * a(i) * a(n - 1 - i), i=0..(n - 1)) with a(0)=1 ●

▶ [A369843] 1,2,4,11,34,102,296,851,2452,7085,20489,59241,171245,494973,1430710,4135527,11953991,34553692,99879234,288705927,834519021,2412219633,6972643768,20154781952,58258423000 ⋆ Number of compositions of 5 * n - 3 into parts 2 and 5. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n + 3 * k,n - 1 - 2 * k). ● a(n) = 5 * a(n - 1) - 9 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ●

▶ [A281481] 2,4,11,37,137,529,2081,8257,32897,131329,524801,2098177,8390657,33558529,134225921,536887297,2147516417,8590000129,34359869441,137439215617,549756338177,2199024304129,8796095119361,35184376283137,140737496743937 ⋆ a(n) = 2 ^ (n - 1) * (2 ^ n + 1) + 1. ● a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3) for n>2. ●

▶ [A107107] 1,1,2,4,11,37,168,926,6181,47651,418546,4106264,44537519,528408261,6807428748,94588717554,1409927483625,22437711255279,379674820846534,6806486383431340,128862216628864163,2569080120361323721,53797824318887051264,1180533584545138213222 ⋆ For each partition of n, calculate (dM2 / dM3) where dM2 = A036039(p) and dM3 = A036040(p); then sum over all partitions of n. ● a(n) = S(n,1), where S(n,m) = sum(k=m..n / 2, (k - 1)! * S(n - k,k)) + (n - 1)!, S(n,n)=(n - 1)!, S(0,m)=1, S(n,m)=0 for m>n. - _ Vladimir Kruchinin _ , Sep 07 2014 ●

▶ [A013170] 1,2,4,11,40,185,1030,6785,51160,438425,4176250,44098925,507867100,6375156125,86130937750,1253044612625,19429666282000,321457635604625,5626346310003250,104323833636303125,2034312191276462500 ⋆ Expansion of e.g.f.: exp(arctanh(x) + arcsin(x)). ● a(n) = (n ^ 2 - 3 * n + 5) * a(n - 2) + (n ^ 2 - 6 * n + 10) * a(n - 3). - _ Vaclav Kotesovec _ , Oct 07 2012 ●

▶ [A067353] 2,4,11,41,199,1184,8273,66163,595439,5954354,65497849,785974133,10217663663,143047291204,2145709367969,34331349887399,583632948085663,10505393065541798,199602468245294009,3992049364905880009,83833036663023479999 ⋆ Divide the natural numbers in sets of consecutive numbers starting with { 1,2 } as the first set. The number of elements of the n - th set is equal to the sum of the n - 1 final numbers in the (n - 1)st set. The final number of the n - th set gives a(n). ● a(n)=n * a(n - 1) - (n - 1)(n - 2) / 2 with a(1)=2. a(n)=b(1) + b(2) + ... + b(n) with b(n) as in A067352. ●

▶ [A107703] 1,2,4,11,43,218,1336,9557,78053,714578,7223548,79704015,951626175,12210506762,167413540912,2440529176297,37665520151241,613124748803618,10492684074110772,188241358671950227,3531254422923432083 ⋆ Sums of antidiagonals of number array A103209. ● a(n)=sum { k=0..n, sum { j=0..n - k, C(n - k + j, 2j) * k ^ j * C(k) }} , C(n) given by A000108. ●

▶ [A134019] 1,2,4,11,46,227,1114,5231,23566,102827,438274,1836551,7601686,31183427,127084234,515429471,2083077406,8396552027,33779262994,135696871991,544528258726,2183337968627,8749031918554,35043178292111,140313885993646 ⋆ Let P(A) be the power set of an n - element set A. Then a(n) = the number of pairs of elements { x,y } of P(A) for which either 0) x and y are intersecting but for which x is not a subset of y and y is not a subset of x, or 1) x = y. ● a(n) = (1 / 2)(4 ^ n - 3 ^ (n + 1) + 5 * 2 ^ n - 1) = 3 * StirlingS2(n + 1,4) + StirlingS2(n + 1,2) + 1. ●

▶ [A007903] 2,4,11,60,877,42944,7339704 ⋆ The number of distinct principal ideals in the semigroup of binary relations on an n - set. ● a(n) is asymptotic to 2 ^ (n ^ 2) / n! ^ 2 (from Kim reference). - _ Geoffrey Critzer _ , May 14 2023 ●

▶ [A297064] 2,4,12,14,40,56,112,178,306,482,792,1214,1924,2914,4470,6706,10064,14924,22078,32382,47376,68862,99820,144002,207150 ⋆ Number of maximal matchings in the n - dipyramidal graph. ● a(n) = 5 * a(n - 2) + 3 * a(n - 3) - 10 * a(n - 4) - 12 * a(n - 5) + 7 * a(n - 6) + 18 * a(n - 7) + 4 * a(n - 8) - 11 * a(n - 9) - 8 * a(n - 10) + a(n - 11) + 3 * a(n - 12) + a(n - 13). ●

▶ [A132314] 0,2,4,12,16,40,48,112,128,288,320,704,768,1664,1792,3840,4096,8704,9216,19456,20480,43008,45056,94208,98304 ⋆ a(n) = n * 2 ^ floor((n + 1) / 2). ● a(n) = 4 * a(n - 2) - 4 * a(n - 4) for n > 3. ●

▶ [A308076] 1,2,4,12,16,48,64,168,272,576,1024,2288,4096,8448,16512,33456,65536,132448,262144,526784,1049088,2101248,4194304,8399232,16777472 ⋆ G.f. A(x) satisfies: A(x) = x + 2 * A(x ^ 2) + 4 * A(x ^ 3) + 8 * A(x ^ 4) + ... + 2 ^ (k - 1) * A(x ^ k) + ... ● a(1) = 1; a(n) = Sum _{ d|n, d<n } 2 ^ (n / d - 1) * a(d). ●

► [A309519] 0,0,0,0,0,2,4,12,18,28,40,62,80,120,154,208,260,334,408,522,620,764,902,1090,1270 ⋆ Sum of the even parts in the partitions of n into 4 parts. ● a(n) = Sum _{ k=1..floor(n / 4) } Sum _{ j=k..floor((n - k) / 3) } Sum _{ i=j..floor((n - j - k) / 2) } (i * ((i - 1) mod 2) + j * ((j - 1) mod 2) + k * ((k - 1) mod 2) + (n - i - j - k) * ((n - i - j - k - 1) mod 2)). ●

► [A198392] 2,4,12,18,31,41,59,73,96,114,142,164,197,223,261,291,334,368,416,454,507,549,607,653,716 ⋆ a(n) = (6 * n * (3 * n + 7) + (2 * n + 13) * (- 1) ^ n + 3) / 16 + 1. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). ●

► [A309547] 0,0,0,0,0,0,2,4,12,18,38,48,80,102,164,206,302,374,522,632,856,1014,1326,1564,1988 ⋆ Sum of the even parts in the partitions of n into 5 parts. ● a(n) = Sum _{ l=1..floor(n / 5) } Sum _{ k=l..floor((n - 1) / 4) } Sum _{ j=k..floor((n - k - l) / 3) } Sum _{ i=j..floor((n - j - k - l) / 2) } (i * ((i - 1) mod 2) + j * ((j - 1) mod 2) + k * ((k - 1) mod 2) + l * ((l - 1) mod 2) + (n - i - j - k - l) * ((n - i - j - k - l - 1) mod 2)). ●

► [A309552] 0,0,0,0,0,0,0,2,4,12,18,38,60,90,124,192,260,368,488,666,864,1148,1442,1862,2328 ⋆ Sum of the even parts in the partitions of n into 6 parts. ● a(n) = Sum _{ m=1..floor(n / 6) } Sum _{ l=m..floor((n - m) / 5) } Sum _{ k=l..floor((n - l - m) / 4) } Sum _{ j=k..floor((n - k - l - m) / 3) } Sum _ (i=j..floor((n - j - k - l - m) / 2) } (i * ((i - 1) mod 2) + j * ((j - 1) mod 2) + k * ((k - 1) mod 2) + l * ((l - 1) mod 2) + m * ((m - 1) mod 2) + (n - i - j - k - l - m) * ((n - i - j - k - l - m - 1) mod 2)). ●

► [A309626] 0,0,0,0,0,0,0,0,2,4,12,18,38,60,104,136,218,294,432,568,802,1036,1424,1794,2382 ⋆ Sum of the even parts in the partitions of n into 7 parts. ● a(n) = Sum _{ o=1..floor(n / 7) } Sum _{ m=o..floor((n - o) / 6) } Sum _{ l=m..floor((n - m - o) / 5) } Sum _{ k=l..floor((n - l - m - o) / 4) } Sum _{ j=k..floor((n - k - l - m - o) / 3 } Sum _{ i=j..floor((n - j - k - l - m - o) / 2) } o * ((o - 1) mod 2) + m * ((m - 1) mod 2) + l * ((l - 1) mod 2) + k * ((k - 1) mod 2) + j * ((j - 1) mod 2) + i * ((i - 1) mod 2) + (n - i - j - k - l - m - o) * ((n - i - j - k - l - m - o - 1) mod 2). ●

► [A309632] 0,0,0,0,0,0,0,0,0,0,2,4,12,18,38,60,104,152,232,324,472,642,896,1194,1626,2112 ⋆ Sum of the even parts of the partitions of n into 8 parts. ● a(n) = Sum _{ p=1..floor(n / 8) } Sum _{ o=p..floor((n - p) / 7) } Sum _{ m=o..floor((n - o - p) / 6) } Sum _{ l=m..floor((n - m - o - p) / 5) } Sum _{ k=l..floor((n - l - m - o - p) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p) / 2) } i * ((i - 1) mod 2) + j * ((j - 1) mod 2) + k * ((k - 1) mod 2) + l * ((l - 1) mod 2) + m * ((m - 1) mod 2) + o * ((o - 1) mod 2) + p * ((p - 1) mod 2) + (n - i - j - k - l - m - o - p) * ((n - i - j - k - l - m - o - p - 1) mod 2). ●

► [A309659] 0,0,0,0,0,0,0,0,0,0,2,4,12,18,38,60,104,152,250,340,506,688,980,1302,1806 ⋆ Sum of the even parts in the partitions of n into 9 parts. ● a(n) = Sum _{ q=1..floor(n / 9) } Sum _{ p=q..floor((n - q) / 8) } Sum _{ o=p..floor((n - p - q) / 7) } Sum _{ m=o..floor((n - o - p - q) / 6) } Sum _{ l=m..floor((n - m - o - p - q) / 5) } Sum _{ k=l..floor((n - l - m - o - p - q) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p - q) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p - q) / 2) } q * ((q - 1) mod 2) + p * ((p - 1) mod 2) + o * ((o - 1) mod 2) + m * ((m - 1) mod 2) + l * ((l - 1) mod 2) + k * ((k - 1) mod 2) + j * ((j - 1) mod 2) + i * ((i - 1) mod 2) + (n - i - j - k - l - m - o - p - q - 1) * ((n - i - j - k - l - m - o - p - q - 1) mod 2). ●

► [A309664] 0,0,0,0,0,0,0,0,0,0,0,2,4,12,18,38,60,104,152,250,360,524,726,1032,1396 ⋆ Sum of the even parts in the partitions of n into 10 parts. ● a(n) = Sum _{ r=1..floor(n / 10) } Sum _{ q=r..floor((n - r) / 9) } Sum _{ p=q..floor((n - q - r) / 8) } Sum _{ o=p..floor((n - p - q - r) / 7) } Sum _{ m=o..floor((n - o - p - q - r) / 6) } Sum _{ l=m..floor((n - m - o - p - q - r) / 5) } Sum _{ k=l..floor((n - l - m - o - p - q - r) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p - q - r) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p - q - r) / 2) } r * ((r - 1) mod 2) + q * ((q - 1) mod 2) + p * ((p - 1) mod 2) + o * ((o - 1) mod 2) + m * ((m - 1) mod 2) + l * ((l - 1) mod 2) + k * ((k - 1) mod 2) + j * ((j - 1) mod 2) + i * ((i - 1) mod 2) + (n - i - j - k - l - m - o - p - q - r - 1) * ((n - i - j - k - l - m - o - p - q - r - 1) mod 2). ●

► [A168380] 2,4,12,20,38,56,88,120,170,220,292,364,462,560,688,816,978,1140,1340,1540,1782,2024,2312,2600,2938 ⋆ Row sums of A168281. ● a(n) = (n + 1) * (3 + 2 * n ^ 2 + 4 * n - 3 * (- 1) ^ n) / 12. ● a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + a(n - 4) + 2 * a(n - 5) - a(n - 6). ●

► [A121569] 1,2,4,12,20,54,88,232,986,1596,6764,17710,28656,75024,317810,1346268,2178308,9227464,24157816,39088168,165580140,433494436,1836311902,12586269024,32951280098 ⋆ a(n) = Fibonacci((prime(n) + 3) / 2) - 1. ● a(n) = Fibonacci[(Prime[n] + 3) / 2] - 1, n>1. a(n) = Sum[Fibonacci[k], { k,1,(p - 1) / 2 }], p = Prime[n], n>1. ●

► [A099603] 1,2,4,12,20,64,104,336,544,1760,2848,9216,14912,48256,78080,252672,408832,1323008,2140672,6927360,11208704,36272128,58689536,189923328,307302400 ⋆ Row sums of triangle A099602, in which row n equals the inverse binomial transform of column n of the triangle of trinomial coefficients (A027907). ● a(n) = fibonacci(n + 1) * 2 ^ [(n + 1) / 2]. a(n) = 6 * a(n - 2) - 4 * a(n - 4) for n>4. G.f.: (1 + 2 * x - 2 * x ^ 2) / (1 - 6 * x ^ 2 + 4 * x ^ 4). ●

► [A173650] 0,0,1,2,4,12,22,64,126,340,714,1824,3998,9868,22210,53688,122790,293124,676906,1603824,3725198,8786684,20479826,48176168,112522102 ⋆ Expansion of x ^ 2 * (1 + 2 * x - x ^ 2) / ((1 + x) * (1 - x - 4 * x ^ 2 + 2 * x ^ 3)). ● a(n) = 5 * a(n - 2) + 2 * a(n - 3) - 2 * a(n - 4) for n>4. - _ Colin Barker _ , Feb 17 2018 ●

► [A291404] 0,1,2,4,12,23,42,89,188,404,856,1763,3652,7641,16030,33612,70252,146623,306334,640637,1340024,2802056,5857264,12243403,25596040 ⋆ p - INVERT of (1,1,0,0,0,0,...), where p(S) = 1 - S ^ 2 - 2 S ^ 4. ● a(n) = a(n - 2) + 2 * a(n - 3) + 3 * a(n - 4) + 8 * a(n - 5) + 12 * a(n - 6) + 8 * a(n - 7) + 2 * a(n - 8) for n >= 9. ●

► [A330592] 0,0,2,4,12,24,48,96,160,320,480,960,1344,2688,3584,7168,9216,18432,23040,46080,56320,112640,135168,270336,319488 ⋆ a(n) is the number of subsets of { 1,2,...,n } that contain exactly two odd numbers. ● a(n) = binomial((n + 1) / 2,2) * 2 ^ ((n - 1) / 2), n odd; ● a(n) = binomial(n / 2,2) * 2 ^ (n / 2), n even. ● a(n) = 6 * a(n - 2) - 12 * a(n - 4) + 8 * a(n - 6) for n>6. - _ Colin Barker _ , Dec 20 2019 ●

► [A089822] 0,0,2,4,12,24,48,96,192,384,640,1280,1920,3840,7680,15360,21504,43008,57344,114688,229376,458752,589824,1179648,2359296 ⋆ Number of subsets of { 1,.., n } containing exactly two primes. ● a(n) = (pi(n) * (pi(n) - 1) * 2 ^ (n - pi(n))) / 2, with pi = A000720. ●

► [A079352] 1,2,4,12,24,48,96,192,384,768,1536,4608,9216,18432,36864,73728,147456,294912,589824,1179648,2359296,4718592,9437184,28311552,56623104 ⋆ a(1)=1, then a(n)=3 * a(n - 1) if n is already in the sequence, a(n)=2 * a(n - 1) otherwise. ● a(n + 1)=3 * a(n) for n=3 n of the form 3 * 2 ^ k - 1, k>=2 . a(n + 1)=2 * a(n) otherwise. Hence a(n)=3 * (3 / 2) ^ floor((log(n / 3)) / log(2)) * 2 ^ n. ●

► [A089888] 1,2,4,12,24,48,96,192,448,896,1792,3584,7168,14336,28672,61440,122880,245760,491520,983040,1966080,3932160,7864320,15728640,32505856 ⋆ Number of subsets of { 1,.., n } containing at least one square. ● a(n) = (2 ^ (n ^ (1 / 2)) - n ^ (1 / 2)) * 2 ^ (n - 1). ●

► [A233411] 0,0,2,4,12,24,56,112,240,480,992,1984,4032,8064,16256,32512,65280,130560,261632,523264,1047552,2095104,4192256,8384512,16773120 ⋆ The number of length n binary words with some prefix which contains two more 1's than 0's or two more 0's than 1's. ● a(n) = 2 ^ n - 2 ^ ceiling(n / 2). ●

► [A135139] 1,2,4,12,24,68,144,388,856,2228,5056,12852,29736,74372,174384,431332,1020664,2505428,5965984,14568468,34840776,84774308,203340816,493553092,1186252696 ⋆ a(n) = 5 * a(n - 2) + 2 * a(n - 3). ● a(n) = (4 / 7) * [1 + sqrt(2)] ^ n - (1 / 7) * sqrt(2) * [1 - sqrt(2)] ^ n - (1 / 7) * (- 2) ^ n + (4 / 7) * [1 - sqrt(2)] ^ n + (1 / 7) * [1 + sqrt(2)] ^ n * sqrt(2), with n>=0. - _ Paolo P. Lava _ , Jun 09 2008 ●

► [A332644] 1,2,4,12,24,72,360,720,2160,10800,75600,151200,453600,2268000,15876000,174636000,349272000,1047816000,5239080000,36673560000,40340916000 0,5244319080000,10488638160000,31465914480000,157329572400000 ⋆ Largest of the least integers of prime signatures over all partitions of n into distinct parts. ● a(n) in { A025487 } . ● a(n) in { A055932 } . ● a(n) in { A087980 } . ●

► [A096421] 1,1,2,4,12,24,88,224,720,1792,7200,16512,69952,185984,608896,1797120,7495424,17936896,79457792,211576832,742306816,2190231552,9482688512,23198867456,97967427584 ⋆ a(1)=1; for n > 1, a(n) = Sum _{ 1<=j<n, gcd(j,n)=1 } a(j) * a(n - j). ● a(1) = 1, a(n) = Sum _{ j=1..n - 1 } (1 / gcd(n, j)) * a(j) * a(n - j), {}). - _ Farideh Firoozbakht _ , Aug 09 2004 ●

► [A066843] 1,1,2,4,12,24,96,192,768,2304,9216,18432,110592,221184,884736,3538944,17694720,35389440,212336640,424673280,2548039680,10192158720,40768634880,81537269760,652298158080 ⋆ a(n) = Product _{ k=1..n } d(k); d(k) = A000005(k) is the number of positive divisors of k. ● a(n) = product { p=primes <=n } product { 1<=k<=log(n) / log(p) } (1 + 1 / k) ^ floor(n / p ^ k). - _ Leroy Quet _ , Mar 20 2007 ●

► [A291406] 0,1,2,4,12,26,60,145,336,796,1880,4412,10400,24488,57648,135794,319744,752908,1773016,4175032,9831472,23151400,54516976,128377380,302304640 ⋆ a(n) = (1 / 2)A291405(n). ● a(n) = 2 * a(n - 2) + 4 * a(n - 3) + 4 * a(n - 4) + 5 * a(n - 5) + 12 * a(n - 6) + 8 * a(n - 7) + 2 * a(n - 8) for n >= 9. ●

► [A242536] 1,2,4,12,26,66,160,386,946,2292,5582,13578,33016,80330,195370,475236,1155974,2811762,6839416,16636178,40466002,98429844,239421374,582370554,1416562360 ⋆ Number of n - length words on { 1,2,3,4 } such that the maximal runs of identical odd integers are of odd length and the maximal runs of identical even integers are of even length. ● a(n) = a(n - 1) + 3 * a(n - 2) + 2 * a(n - 3) - 2 * a(n - 4). - _ Fung Lam _ , May 18 2014 ●

► [A275434] 0,0,0,2,4,12,28,68,156,356,796,1764,3868,8420,18204,39140,83740,178404,378652,800996,1689372,3553508,7456540,15612132,32622364 ⋆ Sum of the degrees of asymmetry of all compositions of n. ● a(n) = - (4 / 9) * (- 1) ^ n + (3n - 2) * 2 ^ n / 36 for n>=2; a(1)=0 ●

► [A080876] 1,1,1,2,4,12,28,88,208,656,1552,4896,11584,36544,86464,272768,645376,2035968,4817152,15196672,35955712,113429504,268377088,846649344,2003193856 ⋆ a(n) * a(n + 3) - a(n + 1) * a(n + 2) = 2 ^ n, given a(0) = 1, a(1) = 1, and a(2) = 1. ● a(n + 4) = 8 * a(n + 2) - 4 * a(n). - _ Richard Choulet _ , Dec 06 2008 ● a(n) = (1 / 24 * 3 ^ (1 / 2)) * (1 + sqrt(3)) ^ n - (1 / 24 * 3 ^ (1 / 2)) * (1 - sqrt(3)) ^ n + (1 / 2 - 7 / 24 * 3 ^ (1 / 2)) * (- (1 + sqrt(3))) ^ n + (1 / 2 + 7 / 24 * 3 ^ (1 / 2)) * (- (1 - sqrt(3))) ^ n. - _ Richard Choulet _ , Dec 06 2008 ●

► [A059412] 2,4,12,30,78,180,432,978,2220,4926,10908,23790,51750,111564,239604,511758,1089306,2309118,4880946,10285146,21619770,45334776,94865904,198116082,413013684 ⋆ Number of distinct minimal unary DFA's with exactly n states. ● a(n) = psi(n) + Sum _{ j=1..n - 1 } psi(n - j) * 2 ^ (j - 1), where psi(n) is the number of primitive words of length n over a 2 - letter alphabet (expressible in terms of the Moebius function). ●

► [A079472] 0,2,4,12,30,80,208,546,1428,3740,9790,25632,67104,175682,459940,1204140,3152478,8253296,21607408,56568930,148099380,387729212,1015088254,2657535552,6957518400 ⋆ Number of perfect matchings on an n X n L - shaped graph. ● a(n) = 2 * F(n) * F(n - 1) where F(n) are the Fibonacci numbers (A000045). ● a(n + 1) = a(n) + 2 * F(n) ^ 2. ● a(n) = Im((F(n) + i * F(n + 1)) ^ 2) (cf. A121646). - Daniele Corradetti (d.corradetti(AT)gmail.com), May 02 2008 ● a(n) = F(n + 1) ^ 2 - F(n) ^ 2 - F(n - 1) ^ 2. ● a(1 - n) = - a(n). (End) ● a(n) = (2 * (- 1) ^ n - (1 + sqrt(5)) * ((3 - sqrt(5)) / 2) ^ n - (1 - sqrt(5)) * ((3 + sqrt(5)) / 2) ^ n) / 5. - _ Colin Barker _ , Sep 27 2016 ●

► [A242659] 0,2,4,12,32,70,132,224,352,522,740,1012,1344,1742,2212,2760,3392,4114,4932,5852,6880,8022,9284,10672,12192 ⋆ a(n) = n * (n ^ 2 - 3 * n + 4). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n > 3. ●

► [A109388] 2,4,12,32,80,240,672,1792,5376,15360,42240,126720,366080,1025024,3075072,8945664,25346048,76038144,222265344,635043840,1905131520,5588385792,16066609152,48199827456,141764198400 ⋆ Maximum number of pairwise incomparable subcubes of the discrete n - cube. Largest antichain in partial ordering { 0,1, * } ^ n where 0 and 1 are less than * . Maximum number of implicants in an irredundant disjunctive normal form for n Boolean variables. ● a(n) = binomial(n, floor(n / 3)) * 2 ^{ n - floor(n / 3) } . ●

► [A293007] 0,0,2,4,12,32,88,240,656,1792,4896,13376,36544,99840,272768,745216,2035968,5562368,15196672,41518080,113429504,309895168,846649344,2313089024,6319476736 ⋆ Expansion of 2 * x ^ 2 / (1 - 2 * x - 2 * x ^ 2). ● a(n) = ((1 - s

qrt(3)) ^ n * (1 + sqrt(3)) + (- 1 + sqrt(3)) * (1 + sqrt(3)) ^ n) / (2 * sqrt(3)) for n>0. • a(n) = 2 * a(n - 1) + 2 * a(n - 2) for n>2. •

► [A152035] 1,2,4,12,32,88,240,656,1792,4896,13376,36544,99840,272768,745216,2035968,5562368,15196672,41518080,113429504,309895168,846649344,2313089024,6319476736,17265131520 ⋆ G.f.: (1 - 2 * x ^ 2) / (1 - 2 * x - 2 * x ^ 2). • a(n) = 2 * (a(n - 1) + a(n - 2)) for n >= 3. - _ Peter Luschny _ , Jan 03 2019 •

► [A025178] 0,2,4,12,32,90,252,714,2032,5814,16700,48136,139152,403286,1171380,3409020,9938304,29017878,84844044,248382516,727971360,2135784798,6272092596,18435108258,54228499920 ⋆ First differences of the central trinomial coefficients A002426. • a(n) = T(n,n) for n>=1, where T is the array defined in A025177. • a(n) is asymptotic to c * 3 ^ n / sqrt(n) with c around 1.02... - _ Benoit Cloitre _ , Nov 02 2002 • a(n) = Sum _{ k = 0..floor(n / 2) } binomial(n - 1, 2 * k - 1) * binomial(2 * k,k). Cf. A097893. • a(n) = 2 * (n - 1) * hypergeom([1 - n / 2,3 / 2 - n / 2],[2],4). • a(n) = (n - 1)! * [x ^ (n - 1)](2 * exp(x) * BesselI(1,2 * x)). •

► [A087211] 1,2,4,12,32,92,264,772,2272,6732,20024,59732,178512,534172,1599784,4793892,14370752,43090412,129227544,387595252,1162610992,3487483452,10461751304,31383855812,94148771232 ⋆ a(n) = floor((1 + 2 ^ n + 3 ^ n) / 3). • a(n) = (3 ^ n + 2 ^ n + 2 * 0 ^ n - (- 1) ^ n) / 3. • a(n) = 4 * a(n - 1) - a(n - 2) - 6 * a(n - 3). - _ Wesley Ivan Hurt _ , Apr 25 2023 •

► [A039721] 1,2,4,12,32,96,280,840,2496,7488,22400,67200,201408,604224,1812112,5436336,16307328,48921984,146760960,440282880,1320833664,3962500992,11887458176,35662374528,106986989184 ⋆ a(1) = 1, a(m + 1) = 2 * Sum _{ k=1..floor((m + 1) / 2) } a(m + 1 - k). • a(1)=1, a(2)=2, a(2m + 1)=3 * a(2m) - 2 * a(m), a(2m + 2)=3 * a(2m + 1) (m is positive integer). •

► [A341344] 1,1,2,4,12,32,104,304,1008,3072,10272,32064,107712,341504,1150592,3688192,12451584,40239104,136053248,442442752,1497664512,4894728192,16583583744,54419632128,184511361024 ⋆ a(n) = A100631(n, floor(n / 2)). • a(n) = 2 ^ ceiling(n / 2) * hypergeom([- floor(n / 2) + 1, ceiling(n / 2)], [1], - 1); see the comments for A100631. - _ Petros Hadjicostas _ , Feb 10 2021 •

► [A069727] 1,1,2,4,12,34,154,675,3534,18985,108070,632109,3807254,23411290,146734695,934382820,6034524474,39457153432,260855420489,1741645762265,11732357675908,79673115468562,545036528857605,3753642607424647,26010818244754788 ⋆ Number of nonisomorphic unrooted Eulerian planar maps with n edges (Eulerian means that all vertices are of even valency; there is an Eulerian cycle). • a(n) = (1 / (2n)) * (3 * 2 ^ (n - 1) * binomial(2n, n) / ((n + 1)(n + 2)) + Sum _{ k=1..n - 1, k|n } phi(n / k) * d(n / k) * 2 ^ (k - 2) * binomial(2k, k)) + q(n) where phi is the Euler function A000010, q(n) = 2 ^ ((n - 4) / 2) * binomial(n, n / 2) / (n + 2) if n is even, q(n) = 2 ^ ((n - 1) / 2) * binomial(n - 1, (n - 1) / 2) / (n + 1) if n is odd, d(n)=4, if n is even and d(n)=3 if n is odd. - _ Valery A. Liskovets _ , Mar 17 2005 •

► [A025579] 1,2,4,12,36,108,324,972,2916,8748,26244,78732,236196,708588,2125764,6377292,19131876,57395628,172186884,516560652,1549681956,4649045868,13947137604,41841412812,125524238436 ⋆ a(1)=1, a(2)=2, a(n) = 4 * 3 ^ (n - 3) for n >= 3. • a(n) = 3 * a(n - 1) for n>3. (End) •

► [A010552] 1,1,2,4,12,36,108,432,1728,6912,27648,138240,691200,3456000,17280000,86400000,518400000,3110400000,18662400000,111974400000,671846400000,4031078400000,28217548800000,197522841600000,1382659891200000 ⋆ Multiply successively by 1 (once), 2 (twice), 3 (thrice), etc. • a(0)=1, a(n) = a(n - 1) * floor(sqrt(2 * n) + 1 / 2)) for n>0. - _ Alois P. Heinz _ , May 20 2013 •

► [A226022] 1,1,2,4,12,36,112,360,1184,3968,13504,46544,162144,570016,2019648,7204864,25856896,93288576,338167296,1231045376,4498577408,16496039936,60681046016,223860786432,828040881664 ⋆ A modified version of Catalan numbers. • a(n) = Sum _{ k=0..n - 1 } a(k)a(n - k) for n>3 just like the Catalan sequence formula. •

► [A054542] 1,1,2,4,12,36,116,382,1287,4420,15397,54264,193154,693374,2507288,9124560,33393355,122821380,453756765,1683107800,6265751310,23402516280,87670790155,329337229104,1240292449350 ⋆ A Catalan - like sequence. • a(n) = ceiling(1 / (n + k) * C(p * n,n)), where k=2, p=2 (in the standard Catalan sequence k=1 and p=2). •

► [A009623] 0,1,2,4,12,36,118,456,1816,7888,37354,184064,974372,5444544,31769182,195982208,1259350576,8441139456,59073098706,428299217920,3226127944764,25165446157312,202778723085382,1689266143553536 ⋆ Expansion of sinh(x).exp(sinh(x)). • a(n) = D ^ n(x * exp(x)) evaluated at x = 0, where D is the operator sqrt(1 + x ^ 2) * d / dx. Cf. A003724 and A009541. - Peter Bala, Dec 06 2011 •

► [A241530] 1,2,4,12,36,120,400,1400,4900,17640,63504,232848,853776,3171168,11778624,44169840,165636900,625739400,2363904400,8982836720,34134779536,130332794592,497634306624,1907598175392,7312459672336 ⋆ a(n) = binomial(n,floor(n / 2)) * binomial(n + 1,floor(n / 2 + 1 / 2)) * (1 + floor(n / 2)) / (1 + 2 * floor(n / 2)). • a(n) = ((8 * n - 4) * a(n - 1) + 16 * (n - 1) * (n - 2) * a(n - 2)) / (n * (n + 1)) for n>=2, a(n) = 2 ^ n for n<2. - _ Alois P. Heinz _ , Apr 25 2014 •

► [A369688] 1,1,2,4,12,36,126,442,1644,6172,23801,92731,366688,1462852,5891808,23898576,97600556,400844140,1654818768,6862550360,28576414261,119434041561,500849380048,2106740001442,8886482895068 ⋆ G.f. satisfies A(x) = 1 + x * A(x) + x ^ 2 * (1 - x) ^ 3 * A(x) ^ 5. • a(n) = Sum _{ k=0..floor(n / 2) } binomial(n,2 * k) * binomial(5 * k,k) / (4 * k + 1). •

► [A010551] 1,1,1,2,4,12,36,144,576,2880,14400,86400,518400,3628800,25401600,203212800,1625702400,14631321600,131681894400,1316818944000,13168189440000,144850083840000,1593350922240000,19120211066880000,229442532802560000 ⋆ Multiply successively by 1,1,2,2,3,3,4,4,..., n >= 1, a(0) = 1. • a(n) = floor(n / 2)! * floor((n + 1) / 2)! is the number of permutations p of { 1, 2, 3, ..., n } such that for every i, i and p(i) have the same parity, i.e., p(i) - i is even. - Avi Peretz (njk(AT)netvision.net.il), Feb 22 2001 • a(n) = n! / binomial(n, floor(n / 2)). - _ Paul Barry _ , Sep 12 2004 • a(n) = a(n - 1) * (a(n - 2) + a(n - 3)) / a(n - 3) for all n >= 3. - _ Michael Somos _ , Dec 29 2012 •

► [A255432] 1,1,2,4,12,36,160,680,4368,24976,219616,1599104,18145600,160805568,2245960704,23437238656,389201754368,4669754525952,89893314615808,1218303508421632,26673872401980416,402798557886395392,9883555312758398976 ⋆ E.g.f. sqrt(1 - t ^ 2) * exp(t * (1 + arctanh(t))). • a(n) = a(n - 1) + sum(k=1..n / 2, (n - 1)! / (n - 2 * k)! * (1 / (2 * k - 1)) * a(n - 2 * k)), a(0)=1. •

► [A275539] 1,2,4,12,36,160,810,5376,41160,366336,3638250,39959040,479126340,6227619840,87180183090,1307684044800,20922822320400,355687603568640,6402374325997650,121645103938928640,2432902021271221500,51090942249743155200,1124000728080092512650 ⋆ a(n) = n! + n * (n - 1)!!. • a(n) = n! + n * (n - 1)!! = n * ((n - 1)! + (n - 1)!!). •

► [A193049] 0,1,1,2,4,12,37,105,268,625,1355,2772,5414,10188,18605,33161,57954,99683,169265,284452,474066,784852,1292567,2119923,3465620 ⋆ Coefficient of x in the reduction by x ^ 2 - >x + 1 of the polynomial p(n,x) defined at Comments. • a(n)=7 * a(n - 1) - 20 * a(n - 2) + 29 * a(n - 3) - 20 * a(n - 4) +* a(n - 5) + 8 * a(n - 6) - 5 * a(n - 7) + a(n - 8). •

► [A000940] 1,2,4,12,39,202,1219,9468,83435,836017,9223092,111255228,1453132944,20433309147,307690667072,4940118795869,84241805734539,1520564059349452,28963120073957838,580578894859915650,12217399235411398127,269291841184184374868,6204484017822892034404 ⋆ Number of n - gons with n vertices. • a(p) = ((((p - 1)! + 1) / p) + p - 2 + (2 ^ ((p - 1) / 2) * ((p - 1) / 2)!)) / 4 for prime p. See A007619. - _ Ian Mooney _ , Oct 05 2022 •

► [A113179] 1,2,4,12,40,128,408,1328,4384,14560,48576,162816,547936,1850048,6263680,21257856,72298240,246345728,840775424,2873802240,9835840512,33704557568,115622041600,397032488960,1364610270720 ⋆ Expansion of 1 / sqrt((1 - 2x) ^ 2 - 8x ^ 3). • a(n)=sum { k=0..floor(n / 2), C(n - k, k)C(n - 2k, k)2 ^ (n - 2k) } . •

► [A056236] 2,4,12,40,136,464,1584,5408,18464,63040,215232,734848,2508928,8566016,29246208,99852800,340918784,1163969536,3974040576,13568223232,46324811776,158162800640,540001579008,1843680714752,6294719700992 ⋆ a(n) = (2 + sqrt(2)) ^ n + (2 - sqrt(2)) ^ n. • a(n) = 4 * a(n - 1) - 2 * a(n - 2). • a(n) = 2 ^ (2 * n) * (cos(Pi / 8) ^ (2 * n) + cos(3 * Pi / 8) ^ (2 * n)). • a(n) = 3 * a(n - 1) + Sum _{ k=1..(n - 2) } a(k), for n>1, with a(0)=2, a(1)=4. (End) • a(n) = [x ^ n] ((1 + 4 * x + sqrt(1 + 8 * x + 8 * x ^ 2)) / 2) ^ n for n >= 1. - _ Peter Bala _ , Jun 23 2015 •

► [A300652] 1,2,4,12,40,136,496,1952,7488,30368,123456,512384,2129664,9068672,38391552,165642752,713405952,3109135872,13528865792,59591322624,261549260800,1159547047936,5131968999424,22883893137408,101851069587456 ⋆ Number of enriched p - trees of weight 2n + 1 in which all outdegrees and all leaves are odd. • a(n) = (1 - (- 1) ^ n) / 2 + Sum _ y Product _{ i in y } a(i) where the sum is over all non - singleton integer partitions of n with an odd number of parts. •

► [A028329] 2,4,12,40,140,504,1848,6864,25740,97240,369512,1410864,5408312,20801200,80233200,310235040,1202160780,4667212440,18150270600,70690527600,275693057640,1076515748880,4208197927440,16466861455200 ⋆ Twice central binomial coefficients. • a(n) = 2 * binomial(2 * n, n). •

► [A025227] 0,1,2,4,12,40,144,544,2128,8544,35008,145792,615296,2625792,11311616,49124352,214838528,945350144,4182412288,18593224704,83015133184,372090122240,1673660915712,7552262979584,34178799378432 ⋆ a(n) = a(1) * a(n - 1) + a(2) * a(n - 2) + ... + a(n - 1) * a(1) for n >= 3. • a(n) = Sum _{ k=0..floor(n / 2) } C(n - k - 1) * binomial(n - k, k), where C(q)=binomial(2q, q) / (q + 1) are the Catalan numbers (A000108). - _ Emeric Deutsch _ , Nov 14 2001 [{ a(n + 1) }_{ n>=0 } = row sum of A068763. - _ Wolfdieter Lang _ , Jan 21 2023] • a(n) = Sum _{ k=0..n - 1 } C(k) * C(k + 1, n - k - 1). - _ Paul Barry _ , Feb 23 2005 • a(n + 1), n >= 0, is column sum for the n - th column of the table R(m,n)=binomial(m + 1, n - m)c(m) where c(m) is the m - th Catalan number A000108. •

► [A188479] 1,1,2,4,12,40,156,700,3520,19592,119992,801272,5792464,45071600,375615696,3338063600,31511918816,314913425280,3321357021600,36868596345056,429672869359360,5245439731918784,66941714022827072,891387254398818752,12363478873222765568 ⋆ Binomial variation of the Catalan Numbers • a(n) = sum(binomial(n - i, i) * a(i) * a(n - 1 - i), i=0..(n - 1)) with a(0)=1 •

► [A179973] 1,1,2,4,12,42,216,1200,8664,66384,612264,5910024,66723384,776642664,10311400344,141065450904,2153769250584,33743736435864,583781959921944,10308436641381144,198863818304824344,3914117125411211544,83301824014343774744,1805447764831655109144 ⋆ Number of permutations of [n] whose cycle lengths are nondecreasing when cycles are ordered by their minima and these minima are { 1..k } (for some k <= n). • a(n) = Sum _{ lambda in partitions(n) } (n - |lambda|)!. •

► [A039301] 1,2,4,12,44,172,684,2732,10924,43692,174764,699052,2796204,11184812,44739244,178956972,715827884,2863311532,11453246124,45812984492,183251937964,733007751852,2932031007404,11728124029612,46912496118444 ⋆ Number of distinct quadratic residues mod 4 ^ n. • a(n) = floor((4 ^ n + 10) / 6). • a(n) - 5 * a(n - 1) + 4 * a(n - 2) = 0 for n>1. - _ Bruno Berselli _ , Jul 27 2010 •

► [A346505] 1,2,4,12,44,172,700,2940,12652,55500,247260,1115740,5088908,23423020,108659324,507520316,2384733868,11264884876,53464215580,254822253852,1219182031820,5853309920748,28190437248700,136160853462524,659401832797676 ⋆ G.f. A(x) satisfies: A(x) = (1 + x * A(x) ^ 2) / (1 - x + 2 * x ^ 2). • a(0) = 1; a(n) = 2 * a(n - 1) + Sum _{ k=2..n - 1 } a(k) * a(n - k - 1). •

► [A364622] 1,2,4,12,45,182,779,3480,16005,75234,359893,1746268,8573477,42511646,212587561,1070897000,5429174465,27679933778,141829437174,729972918876,3772160853821,19563615260102,101797930474515,531293155760840,2780515192595481 ⋆ G.f. satisfies A(x) = 1 / (1 - x) ^ 2 + x ^ 2 * A(x) ^ 4. • a(n) = Sum _{ k=0..floor(n / 2) } binomial(n + 4 * k + 1,6 * k + 1) * binomial(4 * k,k) / (3 * k + 1). •

► [A002871] 1,2,4,12,48,200,1040,5600,33600,222432,1460928,11487168,84713728,731574272,6314147840,55456727040,548291597568,5226494727168,54361802626560,586042688924160,6149776714099200,72895623466265600,855187250563024896 ⋆ a(n) = max _{ k=0..n } 2 ^ k * A048993(n,k) • a(n) = max { 2 ^ k * stirling2(n,k), k=0..n } . - _ Sean A. Irvine _ , Mar 26 2013 •

► [A052849] 0,2,4,12,48,240,1440,10080,80640,725760,7257600,79833600,958003200,12454041600,174356582400,2615348736000,41845579776000,711374856192000,12804747411456000,243290200817664000,4865804016353280000,102181884343418

18880000,2248001455555215360000 ⋆ a(0) = 0; a(n + 1) = 2 * n! (n >= 0). ● a(n) = T(n, 2) for n>1, where T is defined as in A080046. ●

► [A098558] 1,2,4,12,48,240,1440,10080,80640,725760,7257600,79833600,958003200,12454041600,174356582400,2615348736000,41845579776000,711374856192000,12804747411456000,243290200817664000,4865804016353280000,102181884343418880000,2248001455555215360000 ⋆ Expansion of e.g.f. (1 + x) / (1 - x). ● a(n) = 2 * n! - 0 ^ n = 2 * n! - !n. ●

► [A227037] 1,2,4,12,54,312,2136,16800,149160,1475280,16081920,191530080,2473999920,34446303360,514240110720,8193624284160,138780284791680,2489891543596800,47169750454848000,940914453958617600,19712190644360121600 ⋆ Partial sums of A013999. ● a(n) = sum(sum(C(j - k + 1,k) * (- 1) ^ k * (j - k + 1)!, k=0..floor((j + 1) / 2)), j=0..n). ● a(n) = (n + 3) * a(n - 1) - 2 * (n + 1) * a(n - 2) + (n + 1) * a(n - 3) for n>2, a(n) = 2 ^ n for n<=2. - _ Alois P. Heinz _ , Jul 01 2013 ●

► [A356288] 2,4,13,20,40,55,90,116,170,210,287,344,448,525,660,760,930,1056,1265,1420,1672,1859,2158,2380,2730 ⋆ Sum of numbers in n - th upward diagonal of triangle the sum of { 1; 2,3; 4,5,6; 7,8,9,10; ... } and { 1; 2,3; 3,4,5; 4,5,6,7; ... } . ● a(n) = (n * ceiling(n / 2)) + ((15 + 25 * n + 15 * n ^ 2 + 14 * n ^ 3 - 3 * (((- 1) ^ n)) * (5 + n * (3 + n))) / 96). ●

► [A133453] 2,4,13,40,122,365,1094,3280,9841,29524,88574,265721,797162,2391484,7174453,21523360,64570082,193710245,581130734,1743392200,5230176601,15690529804,47071589414,141214768241,423644304722 ⋆ a(n) = 3 * a(n - 1) - a(n - 3) + 3 * a(n - 4). ● a(n) = (1 / 6) * (1 / 2 - (1 / 2) * i * sqrt(3)) ^ n + (3 / 2) * 3 ^ n + (1 / 6) * (- 1) ^ n + (1 / 6) * (1 / 2 + (1 / 2) * i * sqrt(3)) ^ n - (1 / 6) * i * (1 / 2 - (1 / 2) * i * sqrt(3)) ^ n * sqrt(3) + (1 / 6) * i * (1 / 2 + (1 / 2) * i * sqrt(3)) ^ n * sqrt(3), with n>=0 and i=sqrt(- 1). - _ Paolo P. Lava _ , Jun 09 2008 ●

► [A085422] 1,2,4,13,40,125,392,1231,3867,12148,38164,119895,376661,1183315,3717493,11678848,36690183,115265609,362117590,1137625960,3573957358,11227918180,35273545269,110815110683,348135937628 ⋆ A sequence analogous to the Lucas numbers (A000032), with ratios converging to Pi. ● a(0) = - 1, a(1) = 2, a(n + 2) = floor[k * a(n + 1) + a(n)], where k = Pi - 1 / Pi = 2.82328276.... ●

► [A355194] 1,1,2,4,13,41,176,722,3774,18958,116302,687182,4812226,32541874,255274826,1938568634,16798483589,141220228149,1337121257864,12305678519102,126208299343263,1260257489267963,13901541357573146,149520289244078172,1763398965493327476 ⋆ The number of evenly tagged partitions: partitions of n elements together with an involution defined on the set of classes which has a t most one fixed point, such that a class and its image have the same number of elements. ● a(0) = 1, a(n + 1) = a(n) + Sum _{ k>=0, m>=0, k + 2m + 1 = n } (n! / (k! * m! * (n - k - m)!) * a(k). ●

► [A087214] 1,1,2,4,13,41,196,862,5489,31033,247006,1706816,16302397,133131649,1483518128,13978823146,178022175361,1901119947857,27237392830234,325091511083548,5175104637744461,68269217327545081,1195449171318970492,1727211983868905494 ⋆ Expansion of e.g.f.: exp(x) / (1 - x ^ 2 / 2). ● a(n) = Sum _{ k=0..floor(n / 2) } n! / ((n - 2 * k)! * 2 ^ k). ● a(n) = hypergeom([1, - n / 2, - n / 2 + 1 / 2], [], 2). ● a(n) = ((- 1) ^ n * exp(- sqrt(2)) * Gamma(n + 2, - sqrt(2)) + exp(sqrt(2)) * Gamma(n + 2,sqrt(2))) / ((n + 1) * 2 ^ (n / 2 + 1)). ●

► [A259239] 1,1,2,4,13,41,211,967,7274,44578,449551,3456641,43883797,405589549,6212792678,67022223556,1202604514141,14825243365517,304950638503279,4227716923246963,98067246206824406,1509933505953992386,38990856819985996927,660048542856323263589,18778057160849966289433 ⋆ E.g.f.: exp(x - sqrt(1 - x ^ 2) + 1). ● a(n) = ((2 * n - 3) * a(n - 1) + (n - 1) * (n ^ 2 - 5 * n + 5) * a(n - 2) + 2 * (n - 1) * (n - 2) * (n - 3) * (a(n - 4) - a(n - 3))) / (n - 2) for n >= 4. - _ Alois P. Heinz _ , Jan 30 2020 ●

► [A002771] 1,2,4,13,41,226,1072,9374,60958,723916,5892536,86402812,837641884,145123339928,1629258513376,32521048820056,414772076047872,9370148103655841,338040660447708848,3374574786289889 6,5333575373478669136,148532521250931168352 ⋆ Number of terms in a skew determinant: a(n) = (A000085(n) + A081919(n)) / 2. ● a(n) = sum(binomial(n, 2 * k) * (2 * k - 1)!! * (1 + (2 * k - 1)!!) / 2, k=0..floor(n / 2)). - _ Sean A. Irvine _ , Aug 18 2014 ● a(n) = (hyper2F0([- n / 2,(1 - n) / 2],[],2) + hyper3F0([1 / 2, - n / 2,(1 - n) / 2],[],4)) / 2. - _ Peter Luschny _ , Aug 21 2014 ●

► [A050624] 1,2,4,13,42,138,458,1525,5081,16936,56451,188168,627226,2090752,6969172,23230574,77435244,258117480,860391598,2867971991,9559906636,31866355454,106221184845,354070616148,1180235387158 ⋆ Let b(n) = A050623(n) = smallest n - digit number divisible by 3 ^ n; sequence gives b(n) / 3 ^ n. ● a(n) = ceiling(10 ^ (n - 1) / 3 ^ n). - _ Vladeta Jovovic _ , Feb 14 2003 ●

► [A007858] 1,2,4,13,44,164,636,2559,10556,44440,190112,824135,3612244,15981632,71277736,320121747,1446537564,6571858168,30000766128,137544893940,633051803120,2923867281660,13547594977500,62955434735505,293336372858724 ⋆ G.f. is 1 - 1 / f(x), where f(x) = 1 + x + 3 * x ^ 2 + 9 * x ^ 3 + 32 * x ^ 4 + ... is 1 / x times g.f. for A063020. ● a(n + 1) = Sum _{ k = 1..n } (binomial(n + k,k) / (n + k) * Sum _{ j = 0..k } (binomial(j,n - k - j + 1) * binomial(k,j) * (- 1) ^ (n + k - j + 1))) + C(n), where C(n) is a Catalan number. - _ Vladimir Kruchinin _ , Nov 13 2014 ●

► [A337797] 1,1,2,4,13,45,198,858,3728,16115,69125,292940,1224628,5052396,20570806,82655098,327881398,1284663878,4973614490,19034194696,72037124003,269723590850,999517370314,3667158097572,13325691939021 ⋆ Number of partitions of the n - th n - gonal pyramidal number into n - gonal pyramidal numbers. ● a(n) = [x ^ p(n,n)] Product _{ k=1..n } 1 / (1 - x ^ p(n,k)), where p(n,k) = k * (k + 1) * (k * (n - 2) - n + 5) / 6 is the k - th n - gonal pyramidal number. ●

► [A300931] 1,1,2,4,13,45,230,1388,10558,92126,912908,9998008,119831996,1557050972,21795929320,326923928048,5230723155848,88921965504136,1600593971537552,30411277553507360,608225514852464848,12772735603832679248,281000182274281641056 ⋆ a(n) is the number of Klein four orbits of permutations generated by the operations of inverse permutation and conjugation by w _ 0 = [n, n - 1, ..., 1]. ● a(n) = (n! + (2 * floor(n / 2))!! + 2 + 2 * Sum _{ k=1..floor(n / 2) } (Product _{ j=0..k - 1 } binomial(n - 2j,2)) / k!) / 4. ●

► [A184177] 1,1,2,4,13,46,184,805,3840,19775,109180,642382,4007712,26399764,182939900,1329327991,10100670183,80053631844,660328296777,5657449573120,50255253534312,462096537041953,4391648990609487,43079839534282880 ⋆ Number of set partitions of { 1,2,...,n } having no blocks of the form { i,i + 1,i + 2 } . ● a(n) = Sum _{ j=0..floor(n / 3) } (- 1) ^ j * binomial(n - 2j,j) * Bell(n - 3j,j) . ●

► [A346550] 1,2,4,13,54,278,1704,12126,98280,893904,9017280,99918120,1206500400,15768729360,221792780160,3340515069360,53641756586880,914849722725120,16514863528665600,314599179867396480,6306817346711481600,132727279189258656000 ⋆ Expansion of Sum _{ k>=0 } k! * x ^ k * (1 + x) ^ (k + 1). ● a(n) = Sum _{ k=floor(n / 2)..n } k! * binomial(k + 1,n - k). ● a(n) = (n - 2) * a(n - 1) + 2 * (n - 1) * a(n - 2) + (n - 2) * a(n - 3) for n > 2. ●

► [A173184] 1,1,2,4,13,57,322,2176,17009,150505,1485466,16170036,192384877,2483177809,34554278858,515620794592,8212685046337,139062777326001,2494364438359954,47245095998005060,942259727190907181,19737566982241851721,433234326593362631602 ⋆ Partial sums of A000166. ● a(n + 2) - (n + 3) * a(n + 1) + (n + 2) * a(n) = (- 1) ^ n. (End) ●

► [A245764] 2,4,14,20,42,52,86,100,146,164,222,244,314,340,422,452,546,580,686,724,842,884,1014,1060,1202 ⋆ a(n) = 2 * (n ^ 2 + 1) + n * (1 + (- 1) ^ n). ● a(n) = 2 * (n ^ 2 + 1) + n * (1 + (- 1) ^ n). ● a(n) = (2n + 2) * ceiling((n + 1) / 2) + (2n - 2) * ceiling((n - 1) / 2). ●

► [A090889] 0,0,2,4,14,24,40,56,96,136,186,236,310,384,472,560,712,864,1034,1204,1414,1624,1856,2088,2392 ⋆ Double partial sums of (n * its dyadic valuation). ● a(0)=0, a(2n) = 2a(n) + 2a(n - 1) + n(n + 1)(2n + 1) / 3, a(2n + 1) = 4a(n) + (2 / 3) * (n + 1)(n + 2)(n + 3). ●

► [A350050] 0,0,0,2,4,14,24,52,80,140,200,310,420,602,784,1064,1344,1752,2160,2730,3300,4070,4840,5852,6864 ⋆ a(n) = (2 * n ^ 4 - 6 * (- 1) ^ n * n ^ 2 - 2 * n ^ 2 + 3 * (- 1) ^ n - 3) / 96. ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 6 * a(n - 3) + 6 * a(n - 5) - 2 * a(n - 6) - 2 * a(n - 7) + a(n - 8) for n > 7. ●

► [A115626] 1,1,2,4,14,26,107,190,1234,2182,9947,17414,126953,228398,1039404,1857419,19047146,35215110,168364007,307674658,2378963269,4429446046,20237375204,37371654467,410117798653 ⋆ Number of non - squashing partitions of { 1,...,n } . ● a(n) = Sum _{ i = 0..ceiling(n / 2) - 1 } (binomial(n, i) * a(i)) + [if n is even] binomial(n, n / 2) * (a(n / 2) - 1 / 2). ●

► [A283353] 1,2,4,14,28,62,124,254,508,1022,2044,4094,8188,16382,32764,65534,131068,262142,524284,1048574,2097148,4194302,8388604,16777214,33554428 ⋆ Decimal representation of the x - axis, from the origin to the right edge, of the n - th stage of growth of the two - dimensional cellular automaton defined by ”Rule 619”, based on the 5 - celled von Neumann neighborhood. ● a(n) = 2 ^ (n + 1) - 4 for n>0 and even. ● a(n) = 2 ^ (n + 1) - 2 for n odd. ● a(n) = 2 * a(n - 1) + a(n - 2) - 2 * a(n - 3) for n>3. ●

► [A333710] 1,1,2,4,14,28,212,424,3060,13488,131212,262424,6444376,12888752,145241952,2146993212,40313750564,80627501128,2265599072684,4531198145368,173216179971224,320252063188182 4,4201851309718706 8,840370261943741 36,705175358920367670 4 ⋆ Number of permutations sigma of [n] such that i! divides Product _{ k=1..i } sigma(k) for 1 <= i <= n. ● a(p) = 2 * a(p - 1) if p is prime . ●

► [A295909] 2,4,14,30,82,160,386,718,1646,3000,6742,12190,27194,49024,109082,196446,436726,786232,1747406,3145486,6990242,12582624,27961714,50331310,111847742 ⋆ Number of (not necessarily maximal) cliques in the n X n black bishop graph. ● a(n) = ((- 2) ^ (n + 1) + (- 1) ^ n + 19 * 2 ^ (n + 1) - 6 * n * (n + 4) - 25) / 12. ● a(n) = 2 * a(n - 1) + 4 * a(n - 2) - 10 * a(n - 3) + a(n - 4) + 8 * a(n - 5) - 4 * a(n - 6). ●

► [A095977] 2,4,14,32,82,188,438,984,2202,4852,10622,23056,49762,106796,228166,485448,1029162,2174820,4582670,9631360,20194802,42253724,88235734,183927992,382769082 ⋆ Expansion of 2 * x / ((1 + x) ^ 2 * (1 - 2 * x) ^ 2). ● a(n) = (1 / 27) * ((3 * n + 2) * 2 ^ (n + 2) - (6 * n + 8) * (- 1) ^ n). ● a(n) = Sum _{ k=0..floor((n + 1) / 2) } k * 2 ^ k * binomial(n + 1 - k,k). - _ Emeric Deutsch _ , Feb 18 2007 ●

► [A129744] 2,4,14,32,82,196,478,1152,2786,6724,16238,39200,94642,228484,551614,1331712,3215042,7761796,18738638,45239072,109216786,263672644,636562078,1536796800,3710155682 ⋆ a(n) = - (u ^ n - 1) * (v ^ n - 1) with u = 1 + sqrt(2), v = 1 - sqrt(2). ● a(n) = - det(I - M ^ n) where I is the 2X2 identity matrix and M = [2, 1; 1, 0]. Cf. A001350. ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) for n > 4. - _ Seiichi Manyama _ , Jun 07 2018 ●

► [A336108] 1,2,4,14,36,99,274,813,2278,6692,19206,56687,164416,486052,1422654,4214023,12408476,36825663,108926976,323856358,961177042,2862551860,8518115200,25407468667,75763113682 ⋆ Number of compositions of 2 * n with n maximal runs. ● a(n) = [x ^ (2 * n) * y ^ n] (1 - y) / (1 - y - y * Sum _{ d>=1 } (1 - y) ^ d * x ^ d / (1 - x ^ d)). - _ Andrew Howroyd _ , Feb 02 2021 ●

► [A035010] 1,2,4,14,38,132,420,1426,4834,16796,58688,208012,742636,2674384,9693976,35357670,129641774,477638700,1767253368,6564119892,24466233428,91482563640,343059494120,1289904147128,4861945985428 ⋆ Number of prime binary rooted trees with n external nodes. ● a(n) = C(n - 1) - Sum _{ d _ 1 * d _ 2=n and 1 < d _ 1 < n } a(d _ 1) * C(d _ 2 - 1) where C(n) is the n - th Catalan number (A000108). ●

► [A079995] 1,1,2,4,14,39,103,255,665,1741,4605,12046,31474,82206,215157,563083,1473635,3855111,10085589,26386595,69038554,180630858,472594580,1236463719,3235013481 ⋆ Number of permutations satisfying - k<=p(i) - i<=r and p(i) - i not in I, i=1..n, with k=3, r=3, I= { 2 } . ● a(n) = a(n - 1) + 2 * a(n - 2) + 3 * a(n - 3) + 4 * a(n - 4) + 6 * a(n - 5) + 13 * a(n - 6) - 9 * a(n - 7) - 11 * a(n - 8) - 7 * a(n - 9) + 5 * a(n - 10) - a(n - 11) - 11 * a(n - 12) + 3 * a(n - 13) + 9 * a(n - 14) + 4 * a(n - 15) - 4 * a(n - 16) - a(n - 17) + 2 * a(n - 18) - a(n - 19) - a(n - 20). ●

► [A152011] 1,2,4,14,40,122,364,1094,3280,9842,29524,88574,265720,797162,2391484,7174454,21523360,64570082,193710244,581130734,1743392200,5230176602,15690529804,47071589414,141214768240 ⋆ a(0) = 1 and a(n) = (3 ^ n - (- 1) ^ n) / 2 for n >= 1. ● a(n) = 2 ^ n * Product _{ k = 1..floor((n - 1) / 2) } (1 + 3 * cos(k * Pi / n) ^ 2). ● a(n) = (3 ^ n - (- 1) ^ n) / 2, n > 0. ● a(n) = 2 * a(n - 1) + 3 * a(n - 2) for n >= 2, a(1) = 2, and a(2) = 4. - _ David Neil McGrath _ , Sep 04 2014 ● a(n) = M ^ n[1,2] = M ^ n[2,1] for n>0, where M = [1,2;2,1]. - _ Rigoberto Florez _ , May 05 2020 ●

► [A228477] 2,4,14,41,127,386,1181,3605,11013,33635,102734,313780,958385,2927208,8940618,27307464,83405606,254747013,778077691,2376494562,7258563605,22169941573,67713990833,206819875427,631693101322 ⋆ Number of nX3 binary arrays with top left value 1 and no two ones adjacent horizontally, vertically or antidiagonally. ● a(n) = a(n - 1) + 5 * a(n - 2) + 4 * a(n - 3) - a(n - 5). ●
► [A266695] 1,1,2,4,14,46,230,1066,6902,41506,329462,2441314,22934774,202229266,2193664790,22447207906,276054834902,3216941445106,44222780245622,578333776748674,8787513806478134,127464417117501586,2121181056663291350,33800841048945424546 ⋆ Number of acyclic orientations of the Turán graph T(n,2). ● a(n) = Sum _{ i=0..floor(n / 2) } i! ^ 2 * Stirling2(ceiling(n / 2) + 1,i + 1) * Stirling2(floor(n / 2) + 1,i + 1). ●
► [A327034] 1,1,2,4,14,46,242,1114,7814,46246,405482,2933074,30860414,263817646,3238391522,31943268634,448122565814,5009616448246,79063212894362,998740438629794,17322647732052014,239217148602642046,4614370558369770002,69790939492563608554 ⋆ Expansion of e.g.f. exp(x) / (2 - cosh(x)). ● a(0) = 1; a(n) = Sum _{ k=1..n } (- 1) ^ k * binomial(n,k) * (2 ^ (k - 1) - 2) * a(n - k). ●
► [A152103] 1,2,4,14,48,158,532,1778,5952,19922,66676,223166,746928,2499950,8367268,28005026,93732096,313718882,1050008932,3514352558,11762446512,39368602238,131765686708,441016322834,1476070150464 ⋆ a(n) = 2 ^ n * Product _{ k=1..floor((n - 1) / 2) } (1 + 2 * cos(k * Pi / n) ^ 2 + 4 * cos(k * Pi / n) ^ 4). ● a(n) = 2 * a(n - 1) + 4 * a(n - 2) + 2 * a(n - 3) - a(n - 4) for n > 5. ●
► [A102879] 1,2,4,14,48,162,556,1934,6784,23954,85044,303294,1085712,3898962,14040156,50678814,183309312,664263714,2411050084,8764098158,31899231088,116244082178,424064770188,1548543412398,5659898710912 ⋆ A Chebyshev transform of the first kind of the central binomial numbers. ● a(n) = n * Sum _{ k=0..floor(n / 2) } C(n - k, k) * (- 1) ^ k * C(2(n - 2k), n - 2k) / (n - k). ●
► [A003500] 2,4,14,52,194,724,2702,10084,37634,140452,524174,1956244,7300802,27246964,101687054,379501252,1416317954,5285770564,19726764302,73621286644,274758382274,1025412242452,3826890587534,14282150107684,53301709843202 ⋆ a(n) = 4 * a(n - 1) - a(n - 2) with a(0) = 2, a(1) = 4. ● a(n) = (2 + sqrt(3)) ^ n + (2 - sqrt(3)) ^ n. ● a(n) = trace of n - th power of the 2 X 2 matrix [1 2 / 1 3]. - _ Gary W. Adamson _ , Jun 30 2003 [corrected by _ Joerg Arndt _ , Jun 18 2020] ● a(n) = [x ^ n] ((1 + 4 * x + sqrt(1 + 8 * x + 12 * x ^ 2)) / 2) ^ n for n >= 1. - _ Peter Bala _ , Jun 23 2015 ● a(n) = Sum _{ k=0..floor(n / 2) } (- 1) ^ k * n * (n - k - 1)! / (k! * (n - 2 * k)!) * 4 ^ (n - 2 * k) for n >= 1. - _ Peter Luschny _ , May 10 2016 ● a(n) = trace(M ^ n), where M is the 2 X 2 matrix [0, 1; - 1, 4]. ● a(n) = tan(Pi / 12) ^ n + tan(5 * Pi / 12) ^ n. - _ Greg Dresden _ , Oct 01 2020 ●
► [A306150] 0,2,4,14,56,282,1692,11846,94768,852914,8529140,93820542,1125846504,14636004554,204904063756,3073560956342,49176975301472,836008580125026,15048154442250468,285914934402758894,5718298688055177880,120084272449158735482,2641853993881492180604 ⋆ Row sums of A306015. ● a(n) = e * Gamma(n + 1, 1) - !(n). ● a(n) = Gamma(n + 1, 1) * e - Gamma(n + 1, - 1) / e. ● a(n) = n * a(n - 1) + a(n - 2) - (n - 2) * a(n - 3) for n >= 3. ● a(n) = n! [x ^ n] 2 * sinh(x) / (1 - x). ●
► [A122972] 1,2,4,14,58,302,1858,13262,107698,980942,9905458,109844942,1327159858,17353902542,244180971058,3678842132942,59089527531058,1007972756756942,18199148360427058,346736152866068942 ⋆ a(1) = 1, a(2) = 2; for n>2, a(n + 1) = a(n) * (n - 1) + a(n - 1) * n. ● a(n) = 2 * (- 1) ^ n - 3 * (- 1) ^ n * Sum _{ k=0..n - 1 } (- 1) ^ k * k!. - _ Vaclav Kotesovec _ , Oct 28 2012 ●
► [A019537] 1,2,4,14,61,414,3416,34274,394009,5113712,73758368,1170495180,20263806277,380048113202,7676106638884,166114210737254,3834434327929981,94042629562443206,2442147034770292496,66942194906543381336,1931543452346146410965,58519191359170883258606 ⋆ Number of special orbits for dihedral group of degree n. ● a(n) = Sum _{ k=1..n } ((k! / 4) * (S2(floor((n + 1) / 2),k) + S2(ceiling((n + 1) / 2),k)) + (k! / (2 n)) * Sum _{ d|n } phi(d) * S2(n / d,k)), where S2(n,k) is the Stirling subset number A008277. - _ Robert A. Russell _ , May 31 2018 ●
► [A352644] 1,2,4,14,64,282,1504,9382,59392,417842,3234304,25854270,222423040,2039652682,19398688768,195195414998,2058666508288,22509119309922,257507944431616,3058883865391726,37588692110934016,479523015556635002,6316374397705781248 ⋆ Expansion of e.g.f. exp(2 * x * cosh(x)). ● a(0) = 1; a(n) = 2 * Sum _{ k=0..floor((n - 1) / 2) } (2 * k + 1) * binomial(n - 1,2 * k) * a(n - 2 * k - 1). ●
► [A192815] 0,2,4,14,72,346,1612,7526,35216,164786,770964,3606974,16875480,78953226,369388508,1728211222,8085563168,37828901730,176985297700,828038725486,3874040046440,18124981139642,84799056637292,396738620092614 ⋆ Coefficient of x in the reduction of the polynomial (2 * x + 1) ^ n by x ^ 3 - > x ^ 2 + x + 1. ● a(n) = 5 * a(n - 1) - 3 * a(n - 2) + 7 * a(n - 3). ●
► [A181442] 1,2,4,15,35,144,342,1421,3381,14062,33464,139195,331255,1377884,3279082,13639641,32459561,135018522,321316524,1336545575,3180705675,13230437224,31485740222,130967826661,311676696541 ⋆ Expansion of (1 + x - 8 * x ^ 2 + x ^ 3 + x ^ 4) / ((1 - x) * (1 - 10 * x ^ 2 + x ^ 4)). ● a(2 * n) = (12 + (6 + r) * s ^ n + (6 - r) * t ^ n) / 24. ● a(2 * n + 1) = (12 + (18 + 7 * r) * s ^ n + (18 - 7 * r) * t ^ n) / 24. ● a(n) = 11 * a(n - 2) - 11 * a(n - 4) + a(n - 6). ● a(n) = + a(n - 1) + 10 * a(n - 2) - 10 * a(n - 3) - a(n - 4) + a(n - 5). ● a(n) = (b(n) + 3 * b(n - 1) - 3 * b(n - 2) - b(n - 3) + 1) / 2, where b(n) = ((1 + (- 1) ^ n) / 2) * ChebyshevU(n / 2, 5). - _ G. C. Greubel _ , Apr 26 2022 ●
► [A316726] 2,4,15,46,150,480,1545,4964,15958,51292,164871,529946,1703418,5475328,17599457,56570280,181834970,584475732,1878691887,6038716422,19410365422,62391120800,200545011401,644615789580,2072001259342 ⋆ The number of ways to tile (with squares and rectangles) a 2 X (n + 2) strip with the upper left and upper right squares removed. ● a(n) = 2 * a(n - 1) + 4 * a(n - 2) - a(n - 4) for n>=4. ●
► [A308345] 1,2,4,15,48,310,1440,11970,85120,821016,7257600,91707000,958003200,13440913200,178919989248,2809456650000,41845579776000,763629026160000,12804747411456000,257140635922025856,4918792391884800000,106876408948152480000 ⋆ Expansion of e.g.f. Sum _{ k>=1 } log(1 / (1 - x ^ k / k)). ● a(n) = n! * Sum _{ d|n } 1 / (d * (n / d) ^ d). ●
► [A193868] 2,4,16,22,46,56,92,106,154,172,232,254,326,352,436,466,562,596,704,742,862,904,1036,1082,1226 ⋆ Even central polygonal numbers. ● a(n) = (3 + (- 1) ^ n - 2 * (2 + (- 1) ^ n) * n + 4 * n ^ 2) / 2. ● a(n) = 2 * n ^ 2 - 3 * n + 2 for n even. ● a(n) = 2 * n ^ 2 - n + 1 for n odd. ●
► [A131475] 0,0,2,4,16,24,54,72,128,160,250,300,432,504,686,784,1024,1152,1458,1620,2000,2200,2662,2904,3456 ⋆ a(n) = floor(n / 2) * floor(n ^ 2 / 2). ● a(n) = a(n - 1) + 3 * a(n - 2) - 3 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) + a(n - 6) - a(n - 7). ●
► [A104258] 1,2,4,16,26,42,57,512,730,1010,1343,1872,2367,2954,3616,65536,83522,104994,130341,160400,194923,234762,280394,345600,406251 ⋆ Replace 2 ^ i with n ^ i in binary representation of n. ● a(n) = [x ^ n] (1 / (1 - x)) * Sum _{ k >=0 } n ^ k * x ^ (2 ^ k) / (1 + x ^ (2 ^ k)). - _ Ilya Gutkovskiy _ , Aug 17 2019 ●
► [A144797] 2,4,16,26,94,152,548,886,3194,5164,18616,30098,108502,175424,632396,1022446,3685874,5959252,21482848,34733066,125211214,202439144,729784436,1179901798,4253495402 ⋆ Numbers k such that 2 * k ^ 2 + 17 is a square. ● a(n) = 6 * a(n - 2) - a(n - 4). - _ Colin Barker _ , Oct 20 2014 ●
► [A274497] 0,0,2,4,16,32,96,192,512,1024,2560,5120,12288,24576,57344,114688,262144,524288,1179648,2359296,5242880,10485760,23068672,46137344,100663296 ⋆ Sum of the degrees of asymmetry of all binary words of length n. ● a(n) = (1 / 8) * (2n - 1 + (- 1) ^ n) * 2 ^ n. ● a(n) = 2 * a(n - 1) + 4 * a(n - 2) - 8 * a(n - 3) for n > 2. ●
► [A001088] 1,1,1,2,4,16,32,192,768,4608,18432,184320,737280,8847360,53084160,424673280,3397386240,54358179840,326149079040,5870683422720,46965467381760,563585608581120,5635856085811200,123988833887846400,9919106711027712 00 ⋆ Product of totient function: a(n) = Product _{ k=1..n } phi(k) (cf. A000010). ● a(n) = phi(1) * phi(2) * ... * phi(n). ●
► [A103435] 0,2,4,16,48,160,512,1664,5376,17408,56320,182272,589824,1908736,6176768,19988480,64684032,209321984,677380096,2192048128,7093616640,22955425792,74285318144,240392339456,777925951488 ⋆ a(n) = 2 ^ n * Fibonacci(n). ● a(n) = Sum _{ i=0..n - 1 } (2 ^ i * Lucas(i)). ● a(n) = 2 * a(n - 1) + 4 * a(n - 2). - _ Carmine Suriano _ , May 13 2010 ● a(n) = a(- n) * - (- 4) ^ n for all n in Z. - _ Michael Somos _ , Sep 20 2014 ● a(n) == 2 * n (mod 10). - _ Amiram Eldar _ , Jan 15 2022 ● a(n) = Sum _{ k=0..n } binomial(n,k) * Fibonacci(k) * Lucas(n - k) (Wall, 1987). - _ Amiram Eldar _ , Jan 27 2022 ●
► [A003433] 1,2,4,16,48,160,576,4096,14336,73728,327680,2985984,14929920,77635584,418037760,4294967296,21474836480,146028888064,894426939392,10240000000000,59392000000000,409600000000000 ⋆ Hadamard maximal determinant problem: largest determinant of (+ 1, - 1) - matrix of order n. ● a(n) <= n ^ (n / 2). ●
► [A363441] 1,2,4,16,52,208,840,3520,15008,65344,288408,1288416,5813744,26460800,121333200,559991712,2599385536,12127405952,56837861376,267473331200,1263354463056,5987210061184,28461008374480,135672151034304,648406644570048 ⋆ G.f. satisfies A(x) = exp(Sum _{ k>=1 } (- 1) ^ (k + 1) * A(x ^ k) * (2 * x) ^ k / k). ● a(0) = 1; a(n) = (- 1 / n) * Sum _{ k=1..n } (Sum _{ d|k } d * (- 2) ^ (k / d) * a(d - 1)) * a(n - k). ●
► [A322940] 1,2,4,16,56,200,712,2536,9032,32168,114568,408040,1453256,5175848,18434056,65653864,233829704,832796840,2966049928,10563743464,37623330248,133997477672,477239093512,1699712235880,6053614894664 ⋆ a(n) = [x ^ n] (4 * x ^ 2 + x - 1) / (2 * x ^ 2 + 3 * x - 1). ● a(n) = 3 * a(n - 1) + 2 * a(n - 2) for n >= 3. ●
► [A001472] 1,1,2,4,16,56,256,1072,6224,33616,218656,1326656,9893632,70186624,574017536,4454046976,40073925376,347165733632,3370414011904,31426411211776,328454079574016,3331595921852416,37125035407900672,400800185285464064 ⋆ Number of degree - n permutations of order dividing 4. ● a(n) = n! * Sum _{ k=1..n } (1 / k!) * (Sum _{ j=floor((4 * k - n) / 3)..k } binomial(k,j) * binomial(j,n - 4 * k + 3 * j) * (1 / 2) ^ (n - 4 * k + 3 * j) * (1 / 4) ^ (k - j), n>0. - _ Vladimir Kruchinin _ , Sep 07 2010 ●
► [A081919] 1,1,2,4,16,56,376,1912,17984,119296,1438336,11749376,172665472,1674715264,29022277376,325841353216,6504163557376,82954203410432,1874028623417344,26760916479840256,674914911967133696 ⋆ E.g.f.: exp(x) / sqrt(1 - x ^ 2). ● a(n) = hyper3F0([1 / 2, - n / 2,(1 - n) / 2],[],4). - _ Peter Luschny _ , Aug 21 2014 ● a(n) = sum _{ k=0..floor(n / 2) } ((2 * k - 1)!!) ^ 2 * binomial(n, 2 * k). - _ Andrew Howroyd _ , Feb 28 2016 ●
► [A152876] 1,1,2,4,16,60,288,1584,10368,74880,604800,5356800,51840000,544320000,6147187200,74579097600,962415820800,13241346048000,192255565824000,2957575348224000,47721518530560000,811595019755520000,14407079038894080000,268390402745794560000 ⋆ Number of permutations of { 1,2,...,n } having no consecutive triples of the form (odd, even, odd) or (even, odd, even). ● a(2n) = (n!) ^ 2 * Sum _{ j=0..floor(n / 2) } (binomial(n - j, j)) ^ 2 * (2 * n ^ 2 - 6 * j * n + 6 * j ^ 2) / (n - j) ^ 2; ● a(2n + 1) = n! * (n + 1)! * Sum _{ j=1..floor(n / 2) } binomial(n + 1 - j, j) * binomial(n - j, j) * (2 * n ^ 2 + 2 * n - 6 * j * n - 3 * j + 6 * j ^ 2) / ((n + 1 - j) * (n - j)). ●
► [A001901] 1,2,4,16,64,128,256,2048,16384,32768,65536,262144,1048576,2097152,4194304,67108864,1073741824,2147483648,4294967296,17179869184,68719476736,137438953472,274877906944,2199023255552 ⋆ Successive numerators of Wallis's approximation to Pi / 2 (reduced). ● a(n) = numerator(W(n)), for n >= 0, with W(n) = Product _{ k=0..n } N(k) / D(k) (reduced), with N(k) = 2 * floor((k + 1) / 2) for k >= 1 and N(0) = 1, and D(k) = 2 * floor(k / 2) + 1, for k >= 0. (End) ●
► [A106186] 1,2,4,16,64,224,800,3008,11392,43008,163328,624640,2397696,9227264,35608576,137764864,534102016,2074394624,8069922816,31440338944,122652655616,479052693504,1873097261056,7331070869504,28718945140736 ⋆ Expansion of 1 / sqrt(1 - 4x + 4x ^ 2 - 16x ^ 3). ● a(n)=sum { k=0..floor(n / 2), C(2k,k)C(2(n - 2k), n - 2k) * (- 1) ^ k } . ●
► [A001900] 1,2,4,16,64,384,2304,18432,147456,1474560,14745600,176947200,2123366400,29727129600,416179814400,6658877030400,106542032486400,1917756584755200,34519618525593600,690392370511872000,13807847410237440000,303772643025223680000 ⋆ Successive numerators of Wallis's approximation to Pi / 2 (

unreduced). • a(n) = denominator([x ^ n](J _ 0(x) + J _ 1(x)). • a(n) = deno minator([x ^ n](J _ 0(i * x) - i * J _ 1(i * x)). •

▶ [A113247] 1,1,2,4,4,16,64,384,2544,20352,181632,1816320,19960320,239523840,3 113533440,43589468160,653837506560,10461400104960,177843719208960,320118 6945761280,608225502973132 80,1216451005946265600 ⋆ Number of permutation s pi in S _ n such that maj pi and maj pi ^ (- 1) have the same parity where m aj is the major index. Equivalently, the number of pi such that maj pi and inv pi have the same parity where inv is the inversion number. • a(2n) = 2 n ^ 2 a (2n - 2) + 2 n (n - 1) b(2n - 2) and a(2n + 1) = 2 n (n + 1) a(2n - 1) + 2 n ^ 2 b(2n - 1) where b(n) is sequence A113248 •

▶ [A358032] 1,2,4,16,66,438,2694,25296,204576,2509728,24912816,381010320,444 0815472,82150191264,1089159690912,23879423005440,351430312958208,9005004 020293632,1441840207644725 76,4277182103330660352,7322722621374752179 2,24 9966659262388192128 0 ⋆ Expansion of e.g.f. (1 + log(1 + x)) / (1 - log(1 + x) * (1 + log(1 + x))). • a(n) = Sum _{ k=0..n } k! * Fibonacci(k + 2) * Stirling1(n,k). •

▶ [A155519] 1,2,4,16,72,432,2880,23040,201600,2016000,21772800,261273600,335 3011200,46942156800,697426329600,11158821273600,188305108992000,33894919 61856000,6402373705728 0000,1280474741145600000 ⋆ a(n) = Sum (J(p): p is a permutation of { 1,2,...,n }), where J(p) is the number of j <= ceiling(n / 2) s uch that p(j) + p(n + 1 - j) = n + 1. • a(2n - 1) = n(2n - 2)!; a(2n) = 2(2n - 2) ! * n ^ 2. •

▶ [A000831] 1,2,4,16,80,512,3904,34816,354560,4063232,51733504,724566016,110 70525440,183240753152,3266330312704,62382319599616,1270842139934720,2750 747023455027 2,63042477763880550 4,1525095339803646361 6,3883623390773510 1 4400,1038404404510530417492 ⋆ Expansion of e.g.f. (1 + tan(x)) / (1 - tan(x)) . • a(n) = Sum _{ k=1..n } (if even(n + k) ((- 1) ^ ((n + k) / 2) * Sum _{ j =k..n } (j! * stirling2(n,j) * 2 ^ (n - j + 1) * (- 1) ^ (j) * binomial(j - 1,k - 1)), n>0. - _ Vladimir Kruchinin _ , Aug 19 2010 • a(n) = 4 ^ n * (E _{ n } (1 / 2) + E _{ n } (1)) * (- 1) ^ ((n ^ 2 - n) / 2) for n > 0, where E _{ n } (x) is an Euler polynomial. - _ Peter Luschny _ , Nov 24 2010 • a(0) = 1; a(n) = 2 * Sum _{ k=0..n - 1 } binomial(n - 2,k) * a(k) * a(n - k - 1). - _ Ilya Gutkovskiy _ , Jun 11 2020 •

▶ [A000090] 1,1,2,4,16,80,520,3640,29120,259840,2598400,28582400,343235200,4 462057600,62468806400,936987251200,14991796019200,254860532326400,458750 1779660800,8716253381355520 0,1743250676271104000,3660825956653465600 0,80 5381710463762432000 ⋆ Expansion of e.g.f. exp((- x ^ 3) / 3) / (1 - x). • a(n) = n! * Sum _{ i=0..floor(n / 3) } (- 1) ^ i / (i! * 3 ^ i); a(n) / n! ~ Sum _{ i >= 0 } (- 1) ^ i / (i! * 3 ^ i) = e ^ (- 1 / 3); a(n) ~ e ^ (- 1 / 3) * n!; a(n) ~ e ^ (- 1 / 3) * (n / e) ^ n * sqrt(2 * Pi * n). - Avi Peretz (njk(AT)netvision.net.i l), Apr 22 2001 • a(n,k) = n! * floor(floor(n / k)! * k ^ floor(n / k) / exp(1 / k) + 1 / 2) / (floor(n / k)! * k ^ floor(n / k)), here k=3, n>=0. - _ Simon Plouf fe _ from old notes, 1993 •

▶ [A295922] 2,4,16,81,393,1777,7633,31745,129537,523009,2099969,8409089,3363 4305,134475777,537628673,2149580801,8595505153,34374090753,137475063809,5 49844942849,2199239786497,8796612067329,35185602068481,140740374036481,5 62956664307713 ⋆ Number of (not necessarily maximal) cliques in the n - halve d cube graph. • a(n) = (24 * (2 + 4 ^ n) + 2 ^ n * n * ((n - 9) * n - 16)) / 48. • a(n) = 13 * a(n - 1) - 68 * a(n - 2) + 184 * a(n - 3) - 272 * a(n - 4) + 208 * a(n - 5) - 64 * a(n - 6). •

▶ [A281964] 1,2,4,16,104,624,3648,29184,302976,3029760,29698560,356382720,51 11976960,71567677440,986336870400,15781389926400,289206418636800,5205715 535462400,92506221468057600,1850124429361152000,4128551502476083 2000,908 281330544738304000 ⋆ Real part of n! * Sum _{ k=1..n } i ^ (k - 1) / k, where i is sqrt(- 1). • a(1) = 1, a(n + 1) = a(n) * (n + 1) + n! * cos(Pi * n / 2). •

▶ [A110365] 2,4,16,112,448,3136,12544,87808,351232,2458624,9834496,6884147 2,275365888,1927561216,7710244864,53971714048,215886856192,151120799334 4,6044831973376,42313823813632,169255295254528,1184787066781696,47391482 67126784,33174037869887488 ⋆ a(1)=2, a(n + 1) = a(n) * A010888(a(n)). • a(1) = 2, a(2) = 4, a(3) = 16. a(2 * n) = 4 * a(2 * n - 1), a(2 * n + 1) = 7 * a(2 * n) for n > 1. • a(n) = 2 ^ (- 1 + n) * (7 ^ (1 / 2 * (- 3 + n)) * (2 - 2 * (- 1) ^ n + sqrt(7) + (- 1) ^ n * sqrt(7))) for n > 1. • a(n) = 2 ^ n * 7 ^ (n / 2 - 1) for n > 1 and even. • a(n) = 2 ^ (n + 1) * 7 ^ ((n - 3) / 2) for n > 1 and odd. • a(n) = 28 * a(n - 2) for n > 3. •

▶ [A352801] 1,1,2,4,16,170,360,840,82320,181440,1512000,19958400,79833600,25 9459200,14529715200 ⋆ Number of symmetric n X n 01 - matrices with maximu m number of 1s and no 2 X 2 all - 1 submatrix. • a(n) is the last element in the n - th row of triangle A350189. •

▶ [A014221] 0,1,2,4,16,65536 ⋆ a(n + 1) = 2 ^ a(n) with a(- 1) = 0. • a(n) = H _ 4(2,n) = 2 ^^ n; • a(n) = A _ 3(n) the Ackermann function defined in the Comments; • a(- 1) = 0, a(0) = 1, a(n) = 2 ^ 2 ^ ... ^ 2 (n times); •

▶ [A276557] 1,1,2,4,17,39,191,410,1771,13805,26459,170897,556698,988053,3019 206,15074481,70202708,115639004,498047289,1281427052,2039282754,798133494 6,19374343049,71015123687,380553620426 ⋆ Number of partitions of prime(n) ^ 2 into squares of primes. • a(n) = [x ^ (prime(n) ^ 2)] Product _{ k>=1 } 1 / (1 - x ^ (prime(k) ^ 2)). •

▶ [A064723] 1,1,2,4,18,40,210,492,2786,39650,97108,1459960,9030450,22542396,1 41358274,2249412290,36259245522,91815545800,1500020153484,9702063416738,2 4704432285040,409634464205812,2672366681180466,44720842390302450,1927655 270098608960 ⋆ (L(p) - 1) / p where L() are the Lucas numbers (A000032) and p runs through the primes. • a(n) = (round(phi ^ prime(n + 1)) - 1) / prime(n + 1), where phi is golden ratio (A001622). Indeed, L(p) = round(phi ^ p), and round(phi ^ p) == 1 (mod p) and, what is more, for p>=5, round(phi ^ p) == 1 (mod 2 * p) (see Shevelev link). In particular, all terms >=2 are even. - _ V ladimir Shevelev _ , Mar 24 2014 •

▶ [A045664] 1,2,4,18,48,150,324,882,1920,4536,9900,22506,48240,106470,22755 6,490950,1044480,2228190,4708368,9961434,20950800,44037378,92229588,192937 938,402549120 ⋆ Number of 2n - bead balanced binary strings of fundamental p eriod 2n, rotationally equivalent to reversed complement. • a(n) = 2 * n * Sum _{ d|n } mu(n / d) * 2 ^ (d - 1) for n > 0. - _ Andrew Howroyd _ , Sep 14 20 19 •

▶ [A318249] 1,2,4,18,48,480,1440,20160,120960,1451520,7257600,239500800,9580 03200,24908083200,348713164800,6538371840000,41845579776000,213412456857 6000,1280474741145600 0,7298706024529920 00,9731608032706560000,2043637686 86837760000,2248001455555215360000,2068161339110798131200000 ⋆ a(n) = (n - 1)! * d(n), where d(n) = number of divisors of n (A000005). • a(p ^ k) = (k + 1) * (p ^ k - 1)!, where p is a prime. •

▶ [A093045] 0,0,2,4,18,50,176,546,1806,5780,18810,60698,196704,636090,205917 4,6662420,21562002,69772930,225795088,730679922,2364543390,7651801300,2476 1784522,80130760714,259308681408 ⋆ 2 * Jacobsthal(n - 1) * Fibonacci(n). • a(n) = 2(2 ^ n / 6 + (- 1) ^ n / 3)(((1 + sqrt(5)) / 2) ^ n / sqrt(5) - ((1 - sqrt(5)) / 2) ^ n / sqrt(5)). •

▶ [A083694] 0,2,4,18,56,202,684,2378,8176,28242,97364,335938,1158696,399708 2,13787644,47560698,164059616,565922722,1952143524,6733900658,2322851893 6,80126541162,276395677004,953424059818,3288826504656 ⋆ a(n) = 2 * A00253 2(n). • a(n) = 2 * a(n - 1) + 5 * a(n - 2), a(0)=0, a(1)=2. • a(n) = 1 / sqrt(6) * ((1 + sqrt(6)) ^ n - (1 - sqrt(6)) ^ n). •

▶ [A241685] 0,2,4,18,60,242,924,3698,14620,58482,233244,932978,3729180,14916 722,59655964,238623858,954451740,3817806962,15271053084,61084212338,24433 6150300,977344601202,3909375608604 ⋆ The total number of squares and rectan gles appearing in the Thue - Morse sequence logical matrices after n stages. • a (n) = floor((2 ^ (n + 2) + 3 - (- 1) ^ n) ^ 2 / 72). - _ G. C. Greubel _ , Sep 2 9 2017 •

▶ [A009679] 1,2,4,18,60,252,1860,9552,59616,565920,4051872,33805440,46523980 8,4294865664,35413136640,768372168960,8757710173440,79772814777600,198690 6367584000,22082635812268800,280886415019776000,7683780010315046400 ⋆ N umber of partitions of { 1, ..., 2n } into coprime pairs. • a(n) = permanent(m), where the n X n matrix m is defined by m(i,j) = 1 or 0, depending on whether gcd(2i,2j - 1) is 1 or >1, respectively. - _ T. D. Noe _ , Feb 11 2007 •

▶ [A052689] 1,2,4,18,72,480,2880,25200,201600,2177280,21772800,279417600,335 3011200,49816166400,697426329600,11769069312000,188305108992000,35568742 80960000,6402373705728 0000,1338096104497152000,2676192208994304000 0,6130 913060651328 0000 ⋆ Expansion of e.g.f. (1 + x - x ^ 2) / ((1 - x) * (1 - x ^ 2)). • a(n) = n! * (2 * n + 5 - (- 1) ^ n) / 4. •

▶ [A014448] 2,4,18,76,322,1364,5778,24476,103682,439204,1860498,7881196,333 85282,141422324,599074578,2537720636,10749957122,45537549124,19290015361 8,817138163596,3461452808002,14662949395604,62113250390418 ⋆ Even Lucas n umbers: L(3n). • a(n) = 4 * a(n - 1) + a(n - 2) with n>1, a(0)=2, a(1)=4. • a(n) = (2 + sqrt(5)) ^ n + (2 - sqrt(5)) ^ n. • a(n) = Sum _{ k=0..n } C(n,k) * Lucas(n + k). - _ Paul D. Hanna _ , Oct 19 2010 • a(n) = Fibonacci(6 * n) / Fibonacci(3 * n), n>0. - _ Gary Detlefs _ , Dec 26 2010 • a(n) = (Fibonacci(3 * n + 2 * k) - F(3 * n - 2 * k)) / Fibonacci(2 * k) for nonzero integer k. • a(n) = (Fibonacci(3 * n + 2 * k + 1) + F(3 * n - 2 * k - 1)) / Fibonacci(2 * k + 1) for arbitrary integer k. (End) •

▶ [A120664] 0,2,4,18,92,442,2004,8738,37132,155082,640004,2619058,10653372,4 3144922,174174004,701478978,2820264812,11324105962,45425564004,1820896764 98,729520967452,2921570654202,11696742970004,46818352939618 ⋆ Expansion o f 2 * x * (1 - 6 * x + 12 * x ^ 2) / (1 - 8 * x + 19 * x ^ 2 - 12 * x ^ 3). • a(n) = 8 * a(n - 1) - 19 * a(n - 2) + 12 * a(n - 3) for n > 3. •

▶ [A095816] 1,1,2,4,18,92,570,4082,33292,304490,3086890,34357812,416526730,5 463479106,77094352076,1164544912938,18749754351338,320544941916628,5799 226664694602,110695180631374114,2223242026407894732,4686831116531897713 0,1034758905785710599402 ⋆ Number of permutations of 1..n with no three ele ments in correct or reverse order. • a(n) = (n - 3) * a(n - 1) + 3 * (n - 1) * a(n - 2) + (2 * n - 5) * a(n - 3) - (n - 3) * a(n - 4) - (2 * n - 13) * a(n - 5) - (n - 8) * a(n - 6) + (n - 6) * a(n - 7). •

▶ [A370524] 0,0,1,2,4,18,99,612,4376,35620,324965,3285270,36462924,44084035 8,5767387591,81184266632,1223531387056,19657686459528,335404201199049,605 6933308042410,115417137054004820,2314399674388138810,4871781029920491985 1,1074106226256896375532 ⋆ Number of permutations of [n] having exactly on e adjacent 2 - cycle. • a(n) = Sum _{ k=0..floor(n / 2) - 1 } (- 1) ^ k * (n - k - 1)! / k!. •

▶ [A099938] 2,4,18,100,578,3364,19602,114244,665858,3880900,22619538,131836 324,768398402,4478554084,26102926098,152139002500,886731088898,5168247530 884,30122754096402,175568277047524,1023286908188738,5964153172084900,347 6163124320658 ⋆ Consider the sequence of circles C0, C1, C2, C3 ..., where C0 is a half - circle of radius 1. C1 is the largest circle that fits into C0 and has rad ius 1 / 2. C(n + 1) is the largest circle that fits inside C0 but outside C(n), etc. Sequence gives the curvatures (reciprocals of the radii) of the circles. • a(n) = 7 * a(n - 1) - 7 * a(n - 2) + a(n - 3). G.f.: - 2 * x * (2 * x ^ 2 - 5 * x + 1) / ((x - 1) * (x ^ 2 - 6 * x + 1)). - _ Colin Barker _ , Jan 07 2013 • a(n) = 1 / 2 * (2 + (3 - 2 * sqrt(2)) ^ n * (3 + 2 * sqrt(2)) + (3 - 2 * sqrt(2)) * (3 + 2 * sqrt(2)) ^ n). - _ Colin Barker _ , Jun 05 2016 •

▶ [A154140] 2,4,19,29,114,172,667,1005,3890,5860,22675,34157,132162,199084,77 0299,1160349,4489634,6763012,26167507,39417725,152515410,229743340,8889249 55,1339042317,5181034322 ⋆ Indices k such that 6 plus the k - th triangular nu mber is a perfect square. • a(n) = + a(n - 1) + 6 * a(n - 2) - 6 * a(n - 3) - a(n - 4) + a(n - 5). • a(1..4) = (2,4,19,29); a(n) = 6 * a(n - 2) - a(n - 4) + 2, for n > 4. - _ Ctibor O. Zizka _ , Nov 10 2009 •

▶ [A363303] 1,2,4,19,89,653,5683,48529,667021,8480902 ⋆ Smallest positive inte ger that cannot be obtained from an expression consisting of digits 0,1,...,n - 1, each used exactly once, and any mix of the four arithmetic operations +-*/ plus balanced parentheses. Digits may be concatenated as in 210 + 34. Neither unar y minus signs nor exponents are allowed. • a(n + 1) > a(n) for all n. •

▶ [A192380] 0,2,4,20,60,230,776,2792,9720,34410,120780,425788,1497716,527419 0,18562320,65348560,230024944,809742418,2850375060,10033806180,3532035294 0,124333050422,437670231064,1540664252600,5423363437800 ⋆ Coefficient of x i n the reduction by x ^ 2 - >x + 1 of the polynomial p(n,x) defined below in Co mments. • a(n) = 2 * a(n - 1) + 6 * a(n - 2) - 2 * a(n - 3) - a(n - 4). G.f.: 2 * x

^ 2 / (x ^ 4 + 2 * x ^ 3 - 6 * x ^ 2 - 2 * x + 1). [_ Colin Barker _ , Dec 09 2012] ●

▶ [A274520] 0,2,4,20,64,248,880,3248,11776,43040,156736,571712,2083840,7597952,27698944,100985600,368164864,1342243328,4893475840,17840411648,65041678336,237125826560,864501723136,3151758405632,11490527150080 ⋆ a(n) = ((1 + sqrt(7)) ^ n - (1 - sqrt(7)) ^ n) / sqrt(7). ● a(n) = 2 * a(n - 1) + 6 * a(n - 2). ●

▶ [A192377] 0,2,4,20,68,262,968,3624,13512,50442,188236,702524,2621836,9784846,36517520,136285264,508623504,1898208786,7084211604,26438637668,98670339028,368242718486,1374300534872,5128959421048,19141537149272 ⋆ Coefficient of x in the reduction by x ^ 2 - >x + 2 of the polynomial p(n,x) defined below in Comments. ● a(n) = 2 * a(n - 1) + 6 * a(n - 2) + 2 * a(n - 3) - a(n - 4). - _ Colin Barker _ , Dec 09 2012 ●

▶ [A271944] 0,2,4,22,56,250,732,2926,9264,34866,115316,419846,1422824,5086122,17471692,61823966,213983072,752927074,2616950756,9179311350,31978941080,111975792474,390606950844,1366410142030,4769896907152 ⋆ Expansion of 2 * x * (1 + x) / (1 - x - 9 * x ^ 2 + x ^ 3). ● a(n) = a(n - 1) + 9 * a(n - 2) - a(n - 3). ●

▶ [A305492] 0,2,4,22,72,298,1100,4286,16272,62546,238996,915814,3504600,13419898,51371996,196683278,752970528,2882724002,11036241700,42251551414,161756794728,619274449354,2370846461804,9076614069086,34749153370800 ⋆ a(n) = ((1 + y) ^ n - (1 - y) ^ n) / y with y = sqrt(8). ● a(n) = 2 * a(n - 1) + 7 * a(n - 2) for n>1. ●

▶ [A080042] 2,4,22,100,466,2164,10054,46708,216994,1008100,4683382,21757828,101081458,469599316,2181641638,10135364500,47086382914,218751625156,1016265649366,4721317472932,21934066839826,101900219778100 ⋆ a(n) = 4 * a(n - 1) + 3 * a(n - 2) for n>1, a(0)=2, a(1)=4. ● a(n) = (2 + sqrt(7)) ^ n + (2 - sqrt(7)) ^ n. ● a(n) = [x ^ n] ((1 + 4 * x + sqrt(1 + 8 * x + 28 * x ^ 2)) / 2) ^ n for n >= 1. - _ Peter Bala _ , Jun 23 2015 ●

▶ [A081680] 1,2,4,23,274,2927,27094,228923,1827634,14069687,105715534,781107923,5702856394,41273440847,296753044774,2122921300523,15127554995554,107462125890407,761485887090814,5385095865086723,38019827430709114 ⋆ A sum of decreasing powers. ● a(n)=(7 ^ n - 6 ^ n - 5 ^ n - 4 ^ n + 4 * 3 ^ n) / 2. ●

▶ [A192384] 0,2,4,24,72,312,1088,4288,15744,60192,224832,851072,3197056,12062592,45398016,171104256,644354048,2427699712,9144222720,34448209920,129761986560,488821962752,1841370087424,6936475090944,26129575084032 ⋆ Coefficient of x in the reduction by x ^ 2 - > x + 1 of the polynomial p(n,x) defined below in Comments. ● a(n) = 2 * a(n - 1) + 8 * a(n - 2) - 4 * a(n - 3) - 4 * a(n - 4). ● a(n) = Sum _{ k=0..n - 1 } T(n, k) * Fibonacci(k). (End) ●

▶ [A192382] 0,2,4,24,80,352,1344,5504,21760,87552,349184,1398784,5591040,22372352,89473024,357924864,1431633920,5726666752,22906404864,91626143744,366503526400,1466016202752,5864060616704,23456250855424,93824986644480 ⋆ Coefficient of x in the reduction by x ^ 2 - > x + 2 of the polynomial p(n,x) defined below in Comments. ● a(n) = 2 * a(n - 1) + 8 * a(n - 2). ● a(n) = 4 ^ n * (1 - (- 1 / 2) ^ n) / 3. - _ Peter Luschny _ , Oct 02 2019 ●

▶ [A371892] 1,2,4,24,112,688,4032,25856,165888,1103616,7412480,50699776,350087168,2444208128,17198686208,121945948160,870026493952,6242802761728,45016506564608,326071359897600,2371312632397824,17307835567636480,126743329792327680 ⋆ G.f. A(x) satisfies A(x) = 1 + x / A(x) * (1 + A(x) ^ 4). ● a(n) = (- 1) ^ (n - 1) * (1 / n) * Sum _{ k=0..n } binomial(n,k) * binomial(2 * n - 4 * k - 2,n - 1) for n > 0. ●

▶ [A330504] 1,2,4,24,136,480,4768,40320,249856,4112640,39563008,319334400,6249389056,82473431040,1044235737088,20922789888000,355897293438976,4408265775513600,121616011523719168,2757288942600192000,31308290669925892096 ⋆ Expansion of e.g.f. Sum _{ k>=1 } tanh(x ^ k). ● a(n) = n! * Sum _{ d|n, d odd } 2 ^ (d + 1) * (2 ^ (d + 1) - 1) * Bernoulli(d + 1) / (d + 1)!. ●

▶ [A330511] 1,2,4,24,144,480,4320,40320,282240,4354560,36288000,319334400,6706022400,74724249600,1046139494400,20922789888000,376610217984000,4979623993344000,115242726703104000,2919482409811968000,29194824098119680000 ⋆ Expansion of e.g.f. Sum _{ k>=1 } arctan(x ^ k). ● a(n) = (n - 1)! * Sum _{ d|n, n / d odd } (- 1) ^ ((n / d - 1) / 2) * d. ●

▶ [A009672] 0,1,2,4,24,172,1192,10176,106176,1212048,15123872,210069440,3195595392,52434870464,926003117184,17548224583168,354716499392512,7614573123195136,173087393243492864,4153672167748662272 ⋆ Expansion of e.g.f. tan(sin(x) * exp(x)). ● a(n) = 2 * sum(k=0..(n - 1) / 2, ((sum(j=1..2 * k + 1, j! * 2 ^ (- j) * (- 1) ^ (j) * stirling2(2 * k + 1,j))) * sum(r=k..(n - 1) / 2, binomial(n,n - 1 - 2 * r) * ((2 * k + 1) ^ (n - 1 - 2 * r) * sum(i=0..(2 * k + 1) / 2, (2 * i - 2 * k - 1) ^ (2 * r + 1) * binomial(2 * k + 1,i) * (- 1) ^ (r - i))))) / (2 * k + 1)!). - _ Vladimir Kruchinin _ , Jun 13 2011 ●

▶ [A062531] 2,4,24,282,738,8688,273413,92276646,73268943890,62207460415158 ⋆ Index of smallest prime p such that there is a gap of 2 ^ n between p and next prime. ● a(n) =A000720[A000230[2 ^ (n - 1)]] = Pi[Min { p|p - prevprime(p)=2 ^ n }] ●

▶ [A341633] 1,2,4,24,621,492288,81203064840 ⋆ a(n) is the cardinality of the central rank of the free distributive lattice on n generators. ● a(n) = T(n,2 ^ (n - 1)) (A269699). ●

▶ [A155120] 2,4,26,76,166,308,514,796,1166,1636,2218,2924,3766,4756,5906,7228,8734,10436,12346,14476,16838,19444,22306,25436,28846 ⋆ a(n) = 2 * (n ^ 3 + n ^ 2 + n - 1). ● a(n) = 2 * (n ^ 3 + n ^ 2 + n - 1). ●

▶ [A087404] 2,4,26,124,626,3124,15626,78124,390626,1953124,9765626,48828124,244140626,1220703124,6103515626,30517578124,152587890626,762939453124,3814697265626,19073486328124,95367431640626,476837158203124 ⋆ a(n) = 4a(n - 1) + 5a(n - 2). ● a(n) = 5 ^ n + (- 1) ^ n. ●

▶ [A189896] 1,2,4,27 ⋆ Weak Ackermann numbers: H _ n(n,n) where H _ n is the n - th hyperoperator. ● a(n) = H _ n(n, n), where H _ n the hyperoperation indexed by n. ●

▶ [A274526] 0,2,4,28,96,472,1904,8528,36096,157472,675904,2926528,12612096,54489472,235099904,1015094528,4381188096,18913321472,81638523904,352410262528,1521205764096,6566514153472,28345085947904,122355313430528,528161486340096 ⋆ a(n) = ((1 + sqrt(11)) ^ n - (1 - sqrt(11)) ^ n) / sqrt(11). ● a(n) = 2 * a(n - 1) + 10 * a(n - 2). ●

▶ [A192387] 0,2,4,32,96,512,1856,8576,33792,147456,602112,2566144,10637312,44892160,187269120,787087360,3292069888,13812760576,57837355008,242497880064,1015868817408,4258009186304,17841063460864,74771320537088,313317428035584 ⋆ Coefficient of x in the reduction by x ^ 2 - > x + 1 of the polynomial p(n,x) defined below in Comments. ● a(n) = 2 * a(n - 1) + 12 * a(n - 2) - 8 * a(n - 3) - 16 * a(n - 4). ● a(n) = Sum _{ k=0..n - 1 } T(n, k) * Fibonacci(k). (End) ●

▶ [A320624] 1,2,4,32,98,1034,3484,41582,1868198,6751460,330246410,4522217312,16829506610,235344648416,12559206444236,683534482499900,2599887148071402,1444190155857682521,171718216002111198,8120930597438173620 ⋆ a(n) = (A006134((prime(n) - 1) / 2) - Legendre(prime(n), 3)) / prime(n). ● a(2) = (binomial(0, 0) + binomial(2, 1)) / 3 = 3 / 3 = 1. ● a(3) = (binomial(0, 0) + binomial(2, 1) + binomial(4, 2) + 1) / 5 = 10 / 5 = 2. ● a(4) = (binomial(0, 0) + binomial(2, 1) + binomial(4, 2) + binomial(6, 3) - 1) / 7 = 28 / 7 = 4. ●

▶ [A277091] 0,2,4,36,128,760,3312,17264,80896,403488,1939520,9527872,46209024,225808256,1098542848,5358401280,26096402432,127210422784,619770479616,3020486878208,14717760471040,71722337236992,349493321068544,1703099363454976,8299105221869568 ⋆ a(n) = ((1 + sqrt(15)) ^ n - (1 - sqrt(15)) ^ n) / sqrt(15). ● a(n) = 2 * a(n - 1) + 14 * a(n - 2). ●

▶ [A187468] 1,2,4,40,208,928,3904,16000,64768,260608,1045504,4188160,16764928,67084288,268386304,1073643520,4294770688,17179475968,68718690304,274876334080,1099508482048,4398040219648,17592173461504,70368719011840,281474926379008 ⋆ Sum of the squares modulo 2 ^ n of the odd numbers less than 2 ^ n. ● a(n) = 2 ^ (n - 2) * (2 ^ n - 6) for n>2. a(n) = 6 * a(n - 1) - 8 * a(n - 2) for n>4. G.f.: x * (32 * x ^ 3 - 4 * x + 1) / ((2 * x - 1) * (4 * x - 1)). - _ Colin Barker _ , Aug 19 2013 ●

▶ [A105282] 2,4,46,154,266,472,748,1434,1738,2058,2204,2222,2428,2478,2510,2866,3132,3288,3576,3688,3756,4142,4506,4940,5164 ⋆ Positive integers n such that n ^ 20 + 1 is semiprime (A001358). ● a(n) ^ 20 + 1 is semiprime (A001358). ●

▶ [A212429] 1,1,2,4,48,96,1152,2304,276480,552960,6635520,13271040,33443020800,66886041600,802632499200,1605264998400,385263599616000,770527199232000,194172854206464000,388345708412928000,51261633510506496000,1025232670210129920000 ⋆ a(n) is the LCM of denominators of polynomials of degree n which are integer - valued on primes together with their first divided differences. ● a(n) = Prod _{ p prime } p ^ w _ p(n - 1) where w _ p(n) = Sum _{ k>= 0 } floor(n / ((p - 1) * p ^ k)) - t _{ p,n } and p ^ (t _{ p,n }- 1) <= n / (p - 1) < p ^ t _{ p,n } . ●

▶ [A275203] 1,2,4,64 ⋆ Hyperoperations using consecutive integers. ● a(n) = H _ n(a(n - 1),n), where H _ n is the n - th hyperoperation. ●

▶ [A168199] 2,5,5,8,8,11,11,14,14,17,17,20,20,23,23,26,26,29,29,32,32,35,35,38,38 ⋆ a(n) = 3 * n - a(n - 1) + 1 with n > 1, a(1)=2. ● a(n) = (6 * n + 5 + 3 * (- 1) ^ n) / 4. - _ Jon E. Schoenfield _ , Jun 24 2010 ●

▶ [A330447] 0,1,2,5,5,8,11,22,22,32,32,42,48,48,68,71,77,89,108,115,115,140,140,149,216 ⋆ a(n) is the smallest index k such that { 0,1,2,...,n } is a subset of { A316774(j) : 0 <= j <= k } . ● a(n) <= a(n + 1). ●

▶ [A081240] 1,2,5,5,10,13,20,20,20,25,34,34,45,52,61,61,74,74,89,89,100,113,130,130,130 ⋆ #{ (i,j): mu(i) * mu(j) = 1, 1<=i,j<=n } , where mu=A008683 (Moebius function). ● a(n) = |sum(i=1..n, sqrt(mu(i))| ^ 2. - _ Enrique Pérez Herrero _ , Jul 30 2012 ●

▶ [A206625] 0,1,1,1,2,5,5,13,16,37,45,109,130,313,377,905,1088,2617,3145,7561,9090,21853,26269,63157,75920 ⋆ Expansion of x * (1 + x) * (1 - x ^ 2) * (1 + x ^ 3) / (1 - 2 * x ^ 2 - 2 * x ^ 4 - 2 * x ^ 6 + x ^ 8) in powers of x. ● a(n) = a(- n) = 2 * a(n - 2) + 2 * a(n - 4) + 2 * a(n - 6) - a(n - 8) for all n in Z. ●

▶ [A112835] 1,2,5,5,13,16,37,45,109,130,313,377,905,1088,2617,3145,7561,9090,21853,26269,63157,75920,182525,219413,527509 ⋆ Small - number statistic from the enumeration of domino tilings of a 3 - pillow of order n. ● a(- n) = a(- 6 + n). a(- 1) = a(- 2) = 1, a(- 3) = 0. a(n) = 2 * a(n - 2) + 2 * a(n - 4) + 2 * a(n - 6) - a(n - 8). - _ Michael Somos _ , Dec 15 2011 ●

▶ [A308770] 0,0,0,0,1,2,5,5,13,17,29,32,44,52,75,81,118,130,176,198,261,262,351,362,470 ⋆ Sum of the largest parts of the partitions of n into 4 squarefree parts. ● a(n) = Sum _{ k=1..floor(n / 4) } Sum _{ j=k..floor((n - k) / 3) } Sum _{ i=j..floor((n - j - k) / 2) } mu(k) ^ 2 * mu(j) ^ 2 * mu(i) ^ 2 * mu(n - i - j - k) ^ 2 * (n - i - j - k) , where mu is the Möbius function (A008683). ●

▶ [A308845] 0,0,0,0,0,1,2,5,5,13,19,32,35,52,66,96,104,147,177,240,263,356,392,514,543 ⋆ Sum of the largest parts in the partitions of n into 5 squarefree parts. ● a(n) = Sum _{ l=1..floor(n / 5) } Sum _{ k=l..floor((n - l) / 4) } Sum _{ j=k..floor((n - k - l) / 3) } Sum _{ i=j..floor((n - j - k - l) / 2) } mu(l) ^ 2 * mu(k) ^ 2 * mu(j) ^ 2 * mu(i) ^ 2 * mu(n - i - j - k - l) ^ 2 * (n - i - j - k - l), where mu is the Möbius function (A008683). ●

▶ [A308911] 0,0,0,0,0,0,1,2,5,5,13,19,34,38,55,74,110,125,173,206,292,333,433,493,662 ⋆ Sum of the largest parts in the partitions of n into 6 squarefree parts. ● a(n) = Sum _{ m=1..floor(n / 6) } Sum _{ l=m..floor((n - m) / 5) } Sum _{ k=l..floor((n - l - m) / 4) } Sum _{ j=k..floor((n - k - l - m) / 3) } Sum _{ i=j..floor((n - j - k - l - m) / 2) } mu(m) ^ 2 * mu(l) ^ 2 * mu(k) ^ 2 * mu(j) ^ 2 * mu(i) ^ 2 * mu(n - i - j - k - l - m) ^ 2 * (n - i - j - k - l - m), where mu is the Möbius function (A008683). ●

▶ [A308960] 0,0,0,0,0,0,0,0,1,2,5,5,13,19,34,40,58,77,118,139,194,232,324,385,508,576 ⋆ Sum of the largest parts in the partitions of n into 7 squarefree parts. ● a(n) = Sum _{ o=1..floor(n / 7) } Sum _{ m=o..floor((n - o) / 6) } Sum _{ l=m..floor((n - m - o) / 5) } Sum _{ k=l..floor((n - l - m - o) / 4) } Sum _{ j=k..floor((n - k - l - m - o) / 3 } Sum _{ i=j..floor((n - j - k - l - m - o) / 2) } mu(o) ^ 2 * mu(m) ^ 2 * mu(l) ^ 2 * mu(k) ^ 2 * mu(j) ^ 2 * mu(i) ^ 2 * mu(n - i - j - k - l - m - o) ^ 2 * (n - i - j - k - l - m - o), where mu is the Möbius function (A008683). ●

▶ [A326452] 0,0,0,0,0,0,0,0,0,1,2,5,5,13,19,34,40,60,80,121,147,208,253,350,417,563 ⋆ Sum of the largest parts of the partitions of n into 8 squarefree parts. ● a(n) = Sum _{ p=1..floor(n / 8) } Sum _{ o=p..floor((n - p) / 7) } Sum _{ m=o..floor((n - o - p) / 6) } Sum _{ l=m..floor((n - m - o - p) / 5) } Sum _{ k=l..floor((n - l - m - o - p) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p) / 2) } mu(p) ^ 2 * mu(o) ^ 2 * mu(m) ^ 2

* mu(l) ^ 2 * mu(k) ^ 2 * mu(j) ^ 2 * mu(i) ^ 2 * mu(n - i - j - k - l - m - o - p) ^ 2 * (n - i - j - k - l - m - o - p), where mu is the Möbius function (A008683). •
▶ [A326532] 0,0,0,0,0,0,0,0,0,1,2,5,5,13,19,34,40,60,82,124,150,216,267,371,443 ⋆ Sum of the largest parts of the partitions of n into 9 squarefree parts. • a(n) = Sum _{ q=1..floor(n / 9) } Sum _{ p=q..floor((n - q) / 8) } Sum _{ o=p..floor((n - p - q) / 7) } Sum _{ m=o..floor((n - o - p - q) / 6) } Sum _{ l=m..floor((n - m - o - p - q) / 5) } Sum _{ k=l..floor((n - l - m - o - p - q) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p - q) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p - q) / 2) } mu(q) ^ 2 * mu(p) ^ 2 * mu(o) ^ 2 * mu(m) ^ 2 * mu(l) ^ 2 * mu(k) ^ 2 * mu(j) ^ 2 * mu(i) ^ 2 * mu(n - i - j - k - l - m - o - p - q) ^ 2 * (n - i - j - k - l - m - o - p - q), where mu is the Möbius function (A008683). •
▶ [A326637] 0,0,0,0,0,0,0,0,0,0,1,2,5,5,13,19,34,40,60,82,126,153,219,275,385 ⋆ Sum of the largest parts of the partitions of n into 10 squarefree parts. • a(n) = Sum _{ r=1..floor(n / 10) } Sum _{ q=r..floor((n - r) / 9) } Sum _{ p=q..floor((n - q - r) / 8) } Sum _{ o=p..floor((n - p - q - r) / 7) } Sum _{ m=o..floor((n - o - p - q - r) / 6) } Sum _{ l=m..floor((n - m - o - p - q - r) / 5) } Sum _{ k=l..floor((n - l - m - o - p - q - r) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p - q - r) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p - q - r) / 2) } mu(r) ^ 2 * mu(q) ^ 2 * mu(p) ^ 2 * mu(o) ^ 2 * mu(m) ^ 2 * mu(l) ^ 2 * mu(k) ^ 2 * mu(j) ^ 2 * mu(i) ^ 2 * mu(n - i - j - k - l - m - o - p - q - r) ^ 2 * (n - i - j - k - l - m - o - p - q - r), where mu is the Möbius function (A008683). •
▶ [A271222] 0,2,5,5,59,221,221,1679,3866,16988,56354,174452,174452,705893,705893,10271831,24620738,110714180,239854343,627274832,2951797766,2951797766,2951797766,65713916984,159857095811 ⋆ One of the two successive approximations up to 3 ^ n for the 3 - adic integer sqrt(- 2). These are the numbers congruent to 2 mod 3 (except for the initial 0). • a(n) ^ 2 + 2 == 0 (mod 3 ^ n), and a(n) == 2 (mod 3). Representatives of the complete residue system { 0, 1, ..., 3 ^ n - 1 } are taken. •
▶ [A239868] 0,1,2,5,6,6,7,14,18,26,27,31,32,42,51,66,67,70,71,73,84,98,99,111,117 ⋆ Sum of sigma(i) mod i for i from 1 to n. • a(n) = a(n - 1) for multiply - perfect numbers n (A007691). • a(p) = a(p - 1) + 1 for prime p. •
▶ [A057544] 1,1,2,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26 ⋆ Maximum cycle length (orbit size) in the rotation permutation of n + 2 side polygon triangularizations. • a(0)=1, a(1)=1, a(2)=2, a(n)=n + 2. • a(n) = 2 * a(n - 1) - a(n - 2) for n > 4. •
▶ [A047581] 0,1,2,5,6,7,8,9,10,13,14,15,16,17,18,21,22,23,24,25,26,29,30,31,32 ⋆ Numbers that are congruent to { 0, 1, 2, 5, 6, 7 } mod 8. • a(n) = a(n - 1) + a(n - 6) - a(n - 7) for n>7. • a(n) = (8 * n + (- 1) ^ n - 2 * sqrt(3) * sin(Pi * n / 3) - 4 * sin(2 * Pi * (n + 1) / 3) / sqrt(3) + 2 * cos(Pi * n / 3) - 7) / 6. - _ Ilya Gutkovskiy _ , May 30 2016 • a(6k) = 8k - 1, a(6k - 1) = 8k - 2, a(6k - 2) = 8k - 3, a(6k - 3) = 8k - 6, a(6k - 4) = 8k - 7, a(6k - 5) = 8k - 8. - _ Wesley Ivan Hurt _ , Jun 16 2016 •
▶ [A047579] 0,2,5,6,7,8,10,13,14,15,16,18,21,22,23,24,26,29,30,31,32,34,37,38,39 ⋆ Numbers that are congruent to { 0, 2, 5, 6, 7 } mod 8. • a(n) = a(n - 1) + a(n - 5) - a(n - 6) for n > 6. • a(n) = a(n - 5) + 8 for n > 5. • a(n) = (40 * n - 20 + 3 * (n mod 5) + 3 * ((n + 1) mod 5) - 7 * ((n + 2) mod 5) - 2 * ((n + 3) mod 5) + 3 * ((n + 4) mod 5)) / 25. • a(5k) = 8k - 1, a(5k - 1) = 8k - 2, a(5k - 2) = 8k - 3, a(5k - 3) = 8k - 6, a(5k - 4) = 8k - 7, a(5k - 5) = 8k - 8. (End) •
▶ [A047269] 0,1,2,5,6,7,8,11,12,13,14,17,18,19,20,23,24,25,26,29,30,31,32,35,36 ⋆ Numbers that are congruent to { 0, 1, 2, 5 } mod 6. • a(n) = (- 7 + (- 1) ^ n + (1 + i) * (- i) ^ n + (1 - i) * i ^ n + 6 * n) / 4 where i=sqrt(- 1). • a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. - _ Vincenzo Librandi _ , May 15 2012 •
▶ [A074940] 2,5,6,7,8,11,14,15,16,17,18,19,20,21,22,23,24,25,26,29,32,33,34,35,38 ⋆ Numbers having at least one 2 in their ternary representation. • a(n) = n + O(n ^ 0.631). [_ Charles R Greathouse IV _ , Aug 21 2011] •
▶ [A080727] 1,2,5,6,7,8,11,14,17,18,19,20,21,22,23,24,25,26,29,32,35,38,41,44,47 ⋆ a(0) = 1; for n>0, a(n) is taken to be the smallest positive integer greater than a(n - 1) which is consistent with the condition "n is a member of the sequence if and only if a(n) == 2 mod 3". • a(a(n)) = 3 * n + 2, n >= 0. •
▶ [A134026] 2,5,6,7,8,14,15,16,17,18,19,20,21,22,23,24,25,26,41,42,43,44,45,46,47 ⋆ Numbers that are in balanced ternary representation longer than in ternary representation. • a(n) = g(n,0,0) with g(n,m,k) = if n=0 then k else if k=3 ^ m - 1 then g(n - 1,m,3 * (k + 1) / 2 + 1) else g(n - 1,m,k + 1). •
▶ [A047580] 1,2,5,6,7,9,10,13,14,15,17,18,21,22,23,25,26,29,30,31,33,34,37,38,39 ⋆ Numbers that are congruent to { 1, 2, 5, 6, 7 } mod 8. • a(n) = a(n - 1) + a(n - 5) - a(n - 6), for n > 6. •
▶ [A047324] 0,2,5,6,7,9,12,13,14,16,19,20,21,23,26,27,28,30,33,34,35,37,40,41,42 ⋆ Numbers that are congruent to { 0, 2, 5, 6 } mod 7. • a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n > 5. • a(n) = (14 * n - 9 - i ^ (2 * n) + (1 - 3 * i) * i ^ (- n) + (1 + 3 * i) * i ^ n) / 8 where i = sqrt(- 1). •
▶ [A047217] 0,1,2,5,6,7,10,11,12,15,16,17,20,21,22,25,26,27,30,31,32,35,36,37,40 ⋆ Numbers that are congruent to { 0, 1, 2 } mod 5. • a(n) = 5 + a(n - 3) for n> 3. - _ Robert Israel _ , Sep 02 2014 • a(n) = floor((5 / 4) * floor(4 * (n - 1) / 3)). - _ Bruno Berselli _ , May 03 2016 • a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. • a(n) = (15 * n - 21 - 6 * cos(2 * n * Pi / 3) + 2 * sqrt(3) * sin(2 * n * Pi / 3)) / 9. • a(3 * k) = 5 * k - 3, a(3 * k - 1) = 5 * k - 4, a(3 * k - 2) = 5 * k - 5. (End) • a(n) = n - 1 + 2 * floor((n - 1) / 3). - _ Bruno Berselli _ , Feb 06 2017 •
▶ [A037453] 1,2,5,6,7,10,11,12,25,26,27,30,31,32,35,36,37,50,51,52,55,56,57,60,61 ⋆ Positive numbers whose base - 5 representation contains no 3 or 4. • a(3n)=5a(n), a(3n + 1)=5a(n) + 1, a(3n + 2)=5a(n) + 2, where by definition a(0)=0. - _ Emeric Deutsch _ , Mar 23 2004 •
▶ [A286751] 1,2,5,6,7,10,11,14,15,16,19,20,21,24,25,28,29,30,33,34,37,38,39,42,43 ⋆ Positions of 1 in A286749; complement of A286750. • a(n) = 5 * n - 2 * floor(n * phi) - 2. - _ Michel Dekking _ , Aug 29 2020 •
▶ [A047578] 2,5,6,7,10,13,14,15,18,21,22,23,26,29,30,31,34,37,38,39,42,45,46,47,50 ⋆ Numbers that are congruent to { 2, 5, 6, 7 } mod 8. • a(n) = 2 * n - cos(Pi * n / 2). - _ Wesley Ivan Hurt _ , Oct 22 2013 • a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4) for n > 4. • a(n) = (4 * n - i ^ (- n) - i ^ n) / 2 where i=sqrt(- 1). •
▶ [A224778] 2,5,6,8,9,10,11,13,14,15,17,18,19,20,21,22,23,24,25,26,27,29,30,31,32 ⋆ One half of the even numbers that are the sum of four nonzero squares. • a(n) is one half of the n - th even number of the sequence A000414. •
▶ [A047442] 0,1,2,5,6,8,9,10,13,14,16,17,18,21,22,24,25,26,29,30,32,33,34,37,38 ⋆ Numbers that are congruent to { 0, 1, 2, 5, 6 } mod 8. • a(n) = a(n - 1) + a(n - 5) - a(n - 6) for n > 6, a(n) = a(n - 5) + 8 for n > 5. • a(n) = (40 * n - 50 + 3 * (n mod 5) - 7 * ((n + 1) mod 5) + 3 * ((n + 2) mod 5) + 3 * ((n + 3) mod 5) - 2 * ((n + 4) mod 5)) / 25. • a(5k) = 8k - 2, a(5k - 1) = 8k - 3, a(5k - 2) = 8k - 6, a(5k - 3) = 8k - 7, a(5k - 4) = 8k - 8. (End) •
▶ [A047325] 1,2,5,6,8,9,12,13,15,16,19,20,22,23,26,27,29,30,33,34,36,37,40,41,43 ⋆ Numbers that are congruent to { 1, 2, 5, 6 } mod 7. • a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. • a(n) = (14n - 7 - 3 * i ^ (2n) + (1 - i) * i ^ (- n) + (1 + i) * i ^ n) / 8 where i=sqrt(- 1). •
▶ [A087943] 2,5,6,8,10,11,14,15,17,18,20,22,23,24,26,29,30,32,33,34,35,38,40,41,42 ⋆ Numbers n such that 3 divides sigma(n). • a(n) << n ^ k for any k > 1, where << is the Vinogradov symbol. - _ Charles R Greathouse IV _ , Sep 04 2013 •
▶ [A047441] 0,2,5,6,8,10,13,14,16,18,21,22,24,26,29,30,32,34,37,38,40,42,45,46,48 ⋆ Numbers that are congruent to { 0, 2, 5, 6 } mod 8. • a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. • a(n) = (8 * n - 7 - i ^ (2 * n) - i ^ (1 - n) + i ^ (1 + n)) / 4 where i=sqrt(- 1). • a(n) = (8 * n - 7 - cos(n * Pi) - 2 * sin(n * Pi / 2)) / 4. - _ Wesley Ivan Hurt _ , Oct 05 2017 •
▶ [A047267] 0,2,5,6,8,11,12,14,17,18,20,23,24,26,29,30,32,35,36,38,41,42,44,47,48 ⋆ Numbers that are congruent to { 0, 2, 5 } mod 6. • a(n) = 3 * n - 3 * floor(n / 3) - (n ^ 2 mod 3), with offset 0. - _ Gary Detlefs _ , Mar 19 2010 • a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. • a(n) = (6 * n - 5 + 2 * cos(2 * n * Pi / 3)) / 3. • a(3k) = 6k - 1, a(3k - 1) = 6k - 4, a(3k - 2) = 6k - 6. (End) •
▶ [A247062] 1,2,5,6,8,11,12,16,17,18,21,22,24,27,28,32,33,34,37,38,40,43,44,48,49 ⋆ Dynamic Betting Game D(n,5,2). • a(n) = a(n - 1) + a(n - 8) - a(n - 9). - _ Colin Barker _ , Sep 11 2014 •
▶ [A224779] 2,5,6,9,10,11,13,14,15,17,18,19,21,22,23,25,26,27,29,30,31,33,34,35,37 ⋆ One half of the even numbers that are a primitive sum of four nonzero squares at least once. • a(n) is one half of the n - th even number of the sequence A222949. •
▶ [A264120] 0,1,2,5,6,9,10,13,14,17,18,21,22,25,26,29,30,33,34,37,38,41,42,45,46 ⋆ Values of k such that A001163(k) is positive. • a(1) = 0. •
▶ [A042963] 1,2,5,6,9,10,13,14,17,18,21,22,25,26,29,30,33,34,37,38,41,42,45,46,49 ⋆ Numbers congruent to 1 or 2 mod 4. • a(n) = a(n - 1) + 2 + (- 1) ^ n, a(0) = 1. (End) [This uses offset 0. - _ Jianing Song _ , Oct 06 2018] • a(n) = 4 * n - a(n - 1) - 5 for n > 1. [Corrected by _ Jerzy R Borysowicz _ , Jun 09 2023] • a(n) = a(n - 1) + a(n - 2) - a(n - 3). • a(n) = (4 * n - 3 - (- 1) ^ n) / 2. (End) • a(n) = (n mod 2) + 2 * n - 2. - _ Wesley Ivan Hurt _ , Oct 10 2013 •
▶ [A078632] 0,1,2,5,6,9,10,15,18,21,22,28,29,32,35,43,44,50,51,57,60,63,64,73,76 ⋆ Number of geometric subsequences of [1,...,n] with integral successive - term ratio and length > 1. • a(n) = sum { r > 1, j > 0 } floor(n / r ^ j) •
▶ [A032925] 1,2,5,6,9,10,21,22,25,26,37,38,41,42,85,86,89,90,101,102,105,106,149,150,153 ⋆ Numbers whose set of base - 4 digits is a subset of { 1,2 } . • a(2n) = 4a(n - 1) + 2, a(2n + 1) = 4a(n) + 1. - _ Ralf Stephan _ , Oct 07 2003, corrected by _ R. J. Mathar _ , Sep 07 2016 •
▶ [A244749] 2,5,6,9,10,28,29,85,86,256,257,769,770,2308,2309,6925,6926,20776,20777,62329,62330,186988,186989,560965,560966 ⋆ 0 - additive sequence: a(n) is the smallest number larger than a(n - 1) that is not the sum of any subset of earlier terms, starting with initial values { 2, 5 } . • a(2n) = 4a(2n - 2) - 3a(2n - 4) and a(2n + 1) = a(2n) + 1, for n>2. • a(n) = - a(n - 1) + 3 * a(n - 2) + 3 * a(n - 3) for n>6. - _ Colin Barker _ , Jul 11 2014 •
▶ [A276886] 1,2,5,6,9,12,13,16,17,20,23,24,27,30,31,34,35,38,41,42,45,46,49,52,53 ⋆ Sums - complement of the Beatty sequence for 2 + phi. • a(n) = 2 * floor((n - 1) * phi) - n + 2, where phi is the golden mean. •
▶ [A047323] 2,5,6,9,12,13,16,19,20,23,26,27,30,33,34,37,40,41,44,47,48,51,54,55,58 ⋆ Numbers that are congruent to { 2, 5, 6 } mod 7. • a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. • a(n) = (21 * n - 3 - 6 * cos(2 * n * Pi / 3) - 2 * sqrt(3) * sin(2 * n * Pi / 3)) / 9. • a(3k) = 7k - 1, a(3k - 1) = 7k - 2, a(3k - 2) = 7k - 5. (End) •
▶ [A050487] 1,2,5,6,9,12,15,16,19,22,25,28,31,34,37,38,41,44,47,50,53,56,59,62,65 ⋆ Geometric Connell sequence: start with 1; then next two numbers == 2 mod 3; next four == 3 mod 3; next eight == 1 mod 3; etc. • a(n) = 3n - 2 * (1 + floor(log _ 2(n)). •
▶ [A046962] 1,2,5,6,9,12,15,18,37,40,62,84,106,128,150,172,527,882,1237,1592,1947,2302,2657,3012,3367 ⋆ Bessel function |J _ 0(n)| is a monotonically decreasing positive sequence. • a(n) = 2 * a(n - 1) - a(n - 2) for n > 16. •
▶ [A349895] 0,1,2,5,6,9,12,17,20,27,30,39,42,51,56,67,72,85,90,105,110,125,132,149,156 ⋆ Length of the longest self avoiding walk through a grid such that either x or y is changed by + 1 or - 1 in each step, and with 0 <= y, 0 <= x <= y, x + y <= n starting at (0,0) and terminating at (x,y) = (n,0). • a(2 * n) = n * (n + 1); a(2 * n - 1) = n ^ 2 + n - 1 - 2 * floor((n + 1) / 4). • a(n) = a(n - 1) + a(n - 2) - a(n - 3) + a(n - 8) - a(n - 9) - a(n - 10) + a(n - 11) for n >= 11. (End) •
▶ [A326118] 0,1,2,5,6,9,14,21,24,29,36,45,50,57,66,77,84,93,104,117,126,137,150,165,176 ⋆ a(n) is the largest number of squares of unit area connected only at corners and without holes that can be inscribed in an n X n square. • a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 4) - 2 * a(n - 5) + a(n - 6) for n > 8. • a(n) = (1 / 8) * (- 29 + 12 * n + 2 * n ^ 2 - 3 * (- 1) ^ n - 12 * sin(n * Pi / 2)) for n > 2, a(0) = 0, a(1) = 1, a(2) = 2. •
▶ [A077471] 1,2,5,6,10,11,14,18,19,23,27,29,30,35,36,39,55,56,60,62,64,73,75,78,79 ⋆ Greedy powers of (4 / 7): sum _{ n=1..inf } (4 / 7) ^ a(n) = 1. • a(n) = Sum _{ k=1..n } floor(g _ k) where g _ 1=1, g _{ n + 1 } =log _ x(x ^ frac(g _ n) - x) (n>0) at x=(4 / 7) and frac(y) = y - floor(y). • a(n) seems to be asymptotic to c * n with c around 3.3... - _ Benoit Cloitre _ •
▶ [A007969] 2,5,6,10,12,13,14,17,18,20,21,22,26,28,29,30,33,34,37,38,39,41,42,44,45 ⋆ Rectangular numbers. • a(n) is in the sequence if a(n) = C * B with integers B >= 1 and C >= 2, such that C * S ^ 2 - B * R ^ 2 = 1 has an integer solu

tion (without loss of generality one may take S and R positive). See the Conway link. - _ Wolfdieter Lang _ , Sep 18 2015 ●
▶ [A047440] 2,5,6,10,13,14,18,21,22,26,29,30,34,37,38,42,45,46,50,53,54,58,61,62,66 ⋆ Numbers that are congruent to { 2, 5, 6 } mod 8. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. ● a(n) = (24 * n - 9 - 9 * cos(2 * n * Pi / 3) - sqrt(3) * sin(2 * n * Pi / 3)) / 9. ● a(3k) = 8k - 2, a(3k - 1) = 8k - 3, a(3k - 2) = 8k - 6. (End) ●
▶ [A140144] 1,2,5,6,11,12,19,20,29,30,41,42,55,56,71,72,89,90,109,110,131,132,155,156,181 ⋆ a(1)=1, a(n)=a(n - 1) + n ^ 1 if n odd, a(n)=a(n - 1) + n ^ 0 if n is even. ● a(n) = a(n - 1) +{ [1 - (- 1) ^ n] / 2 }* n +{ [1 + (- 1) ^ n] / 2 } , with a(1)=1. ● a(n) = - (1 / 8) - (1 / 4) * (- 1) ^ n * n + (1 / 8) * (- 1) ^ n + (1 / 4) * n ^ 2 + (3 / 4) * n. (End) ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). ● a(n) = Sum _{ k=1..n } k ^ (k mod 2). - _ Wesley Ivan Hurt _ , Nov 20 2021 ●
▶ [A030130] 0,2,5,6,11,13,14,23,27,29,30,47,55,59,61,62,95,111,119,123,125,126,191,223,239 ⋆ Binary expansion contains a single 0. ● a(n) = 2 ^ (g(n)) - 1 - 2 ^ (((2 * g(n) - 1) ^ 2 - 1 - 8 * n) / 8) with g(n)=int((sqrt(8 * n - 7) + 3) / 2) for all n>0 and g(0)=1. - Ulrich Schimke (ulrschimke(AT)aol.com) ●
▶ [A015613] 0,0,1,2,5,6,11,14,19,22,31,34,45,50,57,64,79,84,101,108,119,128,149,156,175 ⋆ a(n) = Sum _{ i=1..n } phi(i) * (ceiling(n / i) - floor(n / i)). ● a(n) = sum of phi(e) where e ranges over all nondivisors of n that are between 1 and n. - _ Joseph L. Pe _ , Oct 24 2002 ●
▶ [A135013] 1,2,5,6,11,14,21,22,31,36,47,50,63,70,85,86,103,112,131,136,157,168,191,194,219 ⋆ Partial sums of A000265. ● a(n) = Sum _{ k>=1 } (round(n / 2 ^ k)) ^ 2. - _ Alejandro Erickson _ , Apr 13 2012 ● a(n) = n ^ 2 / 3 + O(n) (see MacLeod link). - _ Michel Marcus _ , Dec 05 2013 ● a(j * 2 ^ k) = a(j) + (4 ^ k - 1) * j ^ 2 / 3 for any j >= 1, k >= 0. - _ Jinyuan Wang _ , Mar 23 2019 ●
▶ [A239447] 0,1,2,5,6,11,14,21,22,31,36,49,52,63,70,85,86,103,112,137,142,163,176,205,208 ⋆ Partial sums of A030101. ● a(4n) = 6 a(2n) - 5 a(n) - 3 a(n - 1) - 1. ● a(4n + 1) = 2 a(2n + 1) + 4 a(2n) - 6 a(n) - 2 a(n - 1) - 1. ● a(4n + 2) = 3 a(2n + 1) + 3 a(2n) - 6 a(n) - 2 a(n - 1) - 1. ● a(4n + 3) = 6 a(2n + 1) - 8 a(n) - 1. ●
▶ [A336902] 0,1,2,5,6,11,18,25,32,53,84,107,156,205,302,497,618,863,1206,1597,2228,3569,4440,6191,8256 ⋆ Sum of the smallest parts of all compositions of n into distinct parts. ● a(n) == n (mod 2). ●
▶ [A289206] 1,2,5,6,12,13,15,16,32,33,35,39,40,42,56,81,84,85,88,90,93,94,108,109,113 ⋆ Greedy strictly increasing sequence starting at a(1)=1 avoiding both arithmetic and geometric progressions of length 3. ● a(n) >= 3n / 2 for n > 2. ●
▶ [A153485] 0,1,2,5,6,12,13,20,24,32,33,49,50,60,69,84,85,106,107,129,140,154,155,191,197 ⋆ Sum of all aliquot divisors of all positive integers <= n. ● a(n) = Sum _{ k=1..n } k * floor((n - k) / k). - _ Wesley Ivan Hurt _ , Apr 02 2017 ●
▶ [A113240] 1,2,5,6,13,14,25,30,49,50,97,98,165,186,325,326,621,622,1161,1230,2257,2258,4481,4498,8597 ⋆ Expansion of (1 / (1 - x)) * sum(k>=2,x ^ k / (1 - 2x ^ k)). ● a(n)=sum { k=0..floor(n / 2), floor((n - k + 1) / (k + 1)) * 2 ^ k } . ●
▶ [A215147] 1,2,5,6,14,15,30,31,55,56,91,92,140,141,204,205,285,286,385,386,506,507,650,651,819 ⋆ For n odd, a(n)= 1 ^ 2 + 2 ^ 2 + 3 ^ 2 + ... + n ^ 2; for n even, a(n)=(1 ^ 2 + 2 ^ 2 + 3 ^ 2 + ... + n ^ 2) + 1. ● a(n) = (6 * (5 + 3 * (- 1) ^ n) + (13 - 9 * (- 1) ^ n) * n - 3 * (- 3 + (- 1) ^ n) * n ^ 2 + 2 * n ^ 3) / 48. G.f.: - x * (x ^ 6 - x ^ 5 - 2 * x ^ 4 + 2 * x ^ 3 - x - 1) / ((x - 1) ^ 4 * (x + 1) ^ 3). [_ Colin Barker _ , Nov 16 2012] ●
▶ [A109784] 2,5,6,14,31,59,118,238,475,951,1902,3802,7607,15215,30426,60854,121711,243419,486838,973678,1947355,3894711,7789422,15578842,31157687 ⋆ Expansion of (x ^ 2 - x - 1) * (x ^ 3 - x ^ 2 + x - 2) / ((x - 1) * (2 * x - 1) * (x ^ 2 + x + 1) * (x ^ 2 + 1)). ● a(n) = 2 * a(n - 1) - a(n - 2) + 3 * a(n - 3) - 2 * a(n - 4) + a(n - 5) - 2 * a(n - 6) for n>5. - _ Colin Barker _ , May 15 2019 ●
▶ [A166753] 1,2,5,6,17,18,61,62,233,234,917,918,3649,3650,14573,14574,58265,58266,233029,233030,932081,932082,3728285,3728286,14913097 ⋆ Partial sums of A166752. ● a(n) = a(n + 1) + 5 * a(n + 2) - 5 * a(n - 3) - 4 * a(n - 4) + 4 * a(n - 5). ●
▶ [A341756] 2,5,6,20,28,48,170,274,350,1670,2731,3350,16670,27274,33350,166670,272731,333350,1666670,2727274,3333350,16666670,27272731,33333350,166666670 ⋆ Records in A341755 (= length of chain of (k,k + 1) sharing a digit with k + (k + 1), starting at n). ● a(3n + 6) = 3...350 with n '3's, n >= 1; ● a(3n + 7) = 16...670 with n '6's, n >= 0. ●
▶ [A136324] 0,1,1,2,5,6,21,22,85,86,341,342,1365,1366,5461,5462,21845,21846,87381,87382,349525,349526,1398101,1398102,5592405 ⋆ Interleaving of A002450(n), A002450(n) + 1. ● a(n) = 5 * a(n - 2) - 4 * a(n - 4). ● a(n) = 1 / 6 - (1 / 2) * (- 1) ^ n + (1 / 4) * 2 ^ n + (1 / 12) * (- 2) ^ n; ●
▶ [A047483] 0,1,2,5,7,8,9,10,13,15,16,17,18,21,23,24,25,26,29,31,32,33,34,37,39 ⋆ Numbers that are congruent to { 0, 1, 2, 5, 7 } mod 8. ● a(n) = a(n - 1) + a(n - 5) - a(n - 6). - _ Vincenzo Librandi _ , May 17 2012 ●
▶ [A047388] 0,1,2,5,7,8,9,12,14,15,16,19,21,22,23,26,28,29,30,33,35,36,37,40,42 ⋆ Numbers that are congruent to { 0, 1, 2, 5 } mod 7. ● a(n) = (- 19 + (- 1) ^ n + (1 + 3 * i) * (- i) ^ n + (1 - 3 * i) * i ^ n + 14 * n) / 8 where i=sqrt(- 1). - _ Colin Barker _ , May 14 2012 ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. - _ Vincenzo Librandi _ , May 16 2012 ●
▶ [A283778] 2,5,7,8,10,11,13,16,19,21,22,24,25,27,30,33,35,36,38,41,44,46,47,49,50 ⋆ Numbers k such that floor(k * e) is odd. ● a(n + 1) - a(n) is in { 1,2,3 } for every n. ●
▶ [A047481] 0,2,5,7,8,10,13,15,16,18,21,23,24,26,29,31,32,34,37,39,40,42,45,47,48 ⋆ Numbers that are congruent to { 0, 2, 5, 7 } mod 8. ● a(n) = (1 / 4 + i / 4) * ((- 3 + 3 * i) - i * (- i) ^ n + i ^ n + (4 - 4 * i) * n) where i=sqrt(- 1). ● a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4) for n>4. - _ Vincenzo Librandi _ , May 16 2012 ● a(n) = (- 1 * ((- 1) ^ ((n - 1) / 2 - (- 1) ^ n / 4 - 1 / 4))) / 2 + 2 * (n - 1) + 1 / 2. ● a(n) = cos(n * Pi / 2) - 1 / 2 * cos((n - 1) * Pi / 2) - 1 / 2 * cos(n * Pi / 2) + 2 * (n - 1) + 1 / 2. - _ Cédric Christian Bernard Gagneux _ , Mar 05 2014 ●
▶ [A299232] 2,5,7,8,11,12,14,16,18,20,22,24,26,28,30,32,34,36,38,40,42,44,46,48,50 ⋆ Ranks of { 2,3 }- power towers that start with 3; see Comments. ● a(n) = 2n for all n except 2, 3, and 5. ●
▶ [A047268] 1,2,5,7,8,11,13,14,17,19,20,23,25,26,29,31,32,35,37,38,41,43,44,47,49 ⋆ Numbers that are congruent to { 1, 2, 5 } mod 6. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. (End) ● a(n) = 2 * n - 1 - floor((n mod 3) / 2). - _ Gary Detlefs _ , Jun 01 2012 ● a(n) = (6 * n - 4 + cos(2 * n * Pi / 3) + sqrt(3) * sin(2 * n * Pi / 3)) / 3. ● a(3k) = 6k - 1, a(3k - 1) = 6k - 4, a(3k - 2) = 6k - 5. (End) ●
▶ [A047482] 1,2,5,7,9,10,13,15,17,18,21,23,25,26,29,31,33,34,37,39,41,42,45,47,49 ⋆ Numbers that are congruent to { 1, 2, 5, 7 } mod 8. ● a(n) = (- 5 - (- 1) ^ n + (- i) ^ n + i ^ n + 8 * n) / 4 where i=sqrt(- 1). ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. - _ Vincenzo Librandi _ , May 17 2012 ●
▶ [A163985] 0,1,2,5,7,9,11,13,15,17,19,21,23,25,27,29,31,33,35,37,39,41,43,45,47 ⋆ Sum of all isolated parts of all partitions of n. ● a(n) = n for n<3, a(n) = 2 * n - 1 for n>=3. ●
▶ [A184737] 2,5,7,9,11,13,16,18,20,22,24,27,29,31,33,35,38,40,42,44,46,49,51,53,55 ⋆ floor(n * s + h - h * s), where s= - 1 + 2 ^ (3 / 2), h= - 1 / 2; complement of A184736. ● a(n)=floor(n * s + h - h * s), where s= - 1 + 2 ^ (3 / 2), h= - 1 / 2. ●
▶ [A184743] 2,5,7,9,12,14,16,19,21,23,25,28,30,32,35,37,39,41,44,46,48,51,53,55,58 ⋆ a(n) = floor(n * s + h - h * s), where s = sqrt(Pi) / (sqrt(Pi) - 1), h = - 1 / 2; complement of A184742. ● a(n) = floor(n * s + h - h * s), where s = sqrt(Pi) / (sqrt(Pi) - 1), h = - 1 / 2. ●
▶ [A047386] 0,2,5,7,9,12,14,16,19,21,23,26,28,30,33,35,37,40,42,44,47,49,51,54,56 ⋆ Numbers that are congruent to { 0, 2, 5 } mod 7. ● a(n + 1) = 3 * n - 2 * floor(n / 3) - (n ^ 2 mod 3). - _ Gary Detlefs _ , Mar 19 2010 ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. ● a(n) = (21 * n - 21 + 3 * cos(2 * n * Pi / 3) + sqrt(3) * sin(2 * n * Pi / 3)) / 9. ● a(3k) = 7k - 2, a(3k - 1) = 7k - 5, a(3k - 2) = 7k - 7. (End) ●
▶ [A184007] 2,5,7,9,12,14,17,19,21,24,26,28,31,33,35,38,40,43,45,47,50,52,54,57,59 ⋆ floor(n * s + h - h * s), where s=(3 + sqrt(3)) / 2, h= - 1 / 3. Complement of A184006. ● a(n)=floor(n * s + h - h * s), where s=(3 + sqrt(3)) / 2, h= - 1 / 3. ●
▶ [A080652] 2,5,7,9,12,14,17,19,22,24,26,29,31,34,36,38,41,43,46,48,50,53,55,58,60 ⋆ a(1)=2; for n>1, a(n)=a(n - 1) + 3 if n is already in the sequence, a(n)=a(n - 1) + 2 otherwise. ● a(n) = floor(n * r + 1 / (1 + r)) where r = 1 + sqrt(2). ●
▶ [A142879] 0,1,2,5,7,9,25,34,43,120,163,206,575,781,987,2755,3742,4729,13200,17929,22658,63245,85903,108561,303025 ⋆ a(n) = 5 * a(n - 3) - a(n - 6) with terms 1..6 as 0, 1, 2, 5, 7, 9. ● a(n) = 2 * a(n - 1) + a(n - 2) if 3 | n, a(n) = a(n - 1) + a(n - 2) if n = 1 mod 3, and a(n) = 2 * a(n - 1) - a(n - 2) if n = 2 mod 3. ●
▶ [A108118] 1,2,5,7,10,11,13,14,17,19,22,23,25,26,29,31,34,35,37,38,41,43,46,47,49 ⋆ Integers not divisible by 3 or 4. ● a(n) = 2 * a(n - 1) - a(n - 2) - a(n - 3) + 2 * a(n - 4) - a(n - 5) for n>5. ● a(n) = a(n - 6) + 12 for n>6. ● a(n) = (6 * n - 3 + cos(n * Pi / 3) - cos(n * Pi) - sqrt(3) * sin(n * Pi / 3)) / 3. ● a(6k) = 12k - 1, a(6k - 1) = 12k - 2, a(6k - 2) = 12k - 5, a(6k - 3) = 12k - 7, a(6k - 4) = 12k - 10, a(6k - 5) = 12k - 11. (End) ●
▶ [A081032] 2,5,7,10,12,14,17,19,22,24,26,29,31,34,36,38,41,43,46,48,50,53,55,58,60 ⋆ Positions of black keys on piano keyboard, starting with A0 = the 1st key. ● a(n) = floor((12n + 2) / 5). ● a(n) = a(n - 1) + a(n - 5) - a(n - 6) for n > 6. ●
▶ [A082845] 2,5,7,10,12,14,17,19,22,24,26,29,31,34,36,39,41,43,46,48,51,53,55,58,60 ⋆ Partial sums of A082844. ● a(n)=1 + floor((1 + sqrt(2)) * n - (2 - sqrt(2))) ●
▶ [A047215] 0,2,5,7,10,12,15,17,20,22,25,27,30,32,35,37,40,42,45,47,50,52,55,57,60 ⋆ Numbers that are congruent to { 0, 2 } mod 5. ● a(n) = floor(5 * n / 2). ● a(n) = 5 * n / 2 + ((- 1) ^ n - 1) / 4. ● a(n) = 5 * n - a(n - 1) - 8 with a(1)=0. - _ Vincenzo Librandi _ , Aug 05 2010 ● a(n) = 2 * n + floor(n / 2). - _ Arkadiusz Wesolowski _ , Sep 19 2012 ●
▶ [A330067] 2,5,7,10,12,15,17,20,22,25,27,30,32,35,37,40,42,45,47,50,53,55,58,60,63 ⋆ Beatty sequence for sinh(x), where 1 / x + 1 / sinh(x) = 1. ● a(n) = floor(n sinh(x)), where x = 1.656135560... is the constant in A330065. ●
▶ [A059536] 2,5,7,10,12,15,17,20,22,25,28,30,33,35,38,40,43,45,48,51,53,56,58,61,63 ⋆ Beatty sequence for zeta(2) / (zeta(2) - 1). ● a(n) = floor(n * zeta(2) / (zeta(2) - 1)). - _ Michel Marcus _ , Jan 05 2015 ●
▶ [A182771] 2,5,7,10,12,15,18,20,23,25,28,30,33,36,38,41,43,46,48,51,54,56,59,61,64 ⋆ Beatty sequence for (6 + sqrt(3)) / 3. ● a(n)=floor(n * (6 + sqrt(3)) / 3). ●
▶ [A182773] 2,5,7,10,12,15,18,20,23,25,28,31,33,36,38,41,43,46,49,51,54,56,59,62,64 ⋆ Beatty sequence for 1 + 2 ^ (2 / 3). ● a(n) = floor(n * (1 + 2 ^ (2 / 3))). ●
▶ [A001950] 2,5,7,10,13,15,18,20,23,26,28,31,34,36,39,41,44,47,49,52,54,57,60,62,65 ⋆ Upper Wythoff sequence (a Beatty sequence): a(n) = floor(n * phi ^ 2), where phi = (1 + sqrt(5)) / 2. ● a(n) = n + floor(n * phi). In general, floor(n * phi ^ m) = Fibonacci(m - 1) * n + floor(Fibonacci(m) * n * phi). - _ Benoit Cloitre _ , Mar 18 2003 ●
▶ [A330064] 2,5,7,10,13,15,18,20,23,26,28,31,34,36,39,41,44,47,49,52,55,57,60,62,65 ⋆ Beatty sequence for cosh(x), where 1 / x + sech(x) = 1. ● a(n) = floor(n x), where x = x = 1.61749989... is the constant in A330062. ●
▶ [A022841] 2,5,7,10,13,15,18,21,23,26,29,31,34,37,39,42,44,47,50,52,55,58,60,63,66 ⋆ Beatty sequence for sqrt(7). ● a(n) = floor(n * sqrt(7)). - _ G. C. Greubel _ , Sep 28 2018 ●
▶ [A047480] 2,5,7,10,13,15,18,21,23,26,29,31,34,37,39,42,45,47,50,53,55,58,61,63,66 ⋆ Numbers that are congruent to { 2, 5, 7 } mod 8. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. ● a(n) = (24 * n - 6 - 3 * cos(2 * n * Pi / 3) - sqrt(3) * sin(2 * n * Pi / 3)) / 9. ● a(3k) = 8k - 1, a(3k - 1) = 8k - 3, a(3k - 2) = 8k - 6. (End) ●
▶ [A057347] 2,5,7,10,13,16,18,21,24,26,29,32,35,37,40,43,46,48,51,54,56,59,62,65,67 ⋆ Leap years in the Islamic calendar starting year 1 AH (Anno Hegirae) = 622 CE (Common Era or AD). There are 11 leap years in a 30 year cycle. ● a(n) = floor((30 * n - 4) / 11). ●
▶ [A067008] 2,5,7,10,13,16,19,20,31,34,37,40,41,44,46,48,51,53,55,56,62,64,65,67,68 ⋆ Numbers k such that Sum _{ j=1..k } A008472(j) divides k!. ● a(n) seems to be asymptotic to c * n with c=2.3..... ●
▶ [A094065] 0,2,5,7,10,13,16,19,22,26,29,32,36,39,42,46,49,53,57,60,64,67,71,75,78 ⋆ Asymptotic form for prime. ● a(n) = floor(Re(n * (2 + log(n) / 2 - sqrt((2 * Pi + i * n) / (Pi * n))))). ●

► [A073593] 1,2,5,7,10,13,17,20,23,27,31,35,38,42,46,51,55,59,63,67,72,76,81,85,90 ⋆ Number of cards needed to be drawn (with replacement) from a deck of n cards to have a 50 % or greater chance of seeing each card at least once. ● a(n) seems to be asymptotic to n * (log(n) + c) with c=0.3(6)...and maybe c=1 / e. - _ Benoit Cloitre _ , Sep 07 2002 ●

► [A276213] 2,5,7,10,14,17,20,24,27,31,34,38,42,45,49,53,57,61,65,69,74,78,82,86,91 ⋆ Position of n ^ s in the joint ranking of { h ^ r } and { k ^ s } , where r = sqrt(3), s = sqrt(5), h > 1, k > 1. ● a(n) = n + floor(n ^ (s / r)); the complement is given by n + floor(n ^ (r / s)). ●

► [A024177] 1,2,5,7,10,14,18,23,28,34,40,47,54,61,70,78,87,97,107,118,129,141,153,166,179 ⋆ a(n) = floor ((2nd elementary symmetric function of 2,3,...,n + 2) / (2 + 3 + ... + n + 2)). ● a(n) = floor(1 / 12 n (3 n ^ 2 + 23 n + 46) / (n + 4)). - _ Ivan Neretin _ , May 21 2018 ●

► [A266594] 1,2,5,7,10,16,19,29,32,46,49,67,70,92,95,121,124,154,157,191,194,232,235,277,280 ⋆ Total number of ON (black) cells after n iterations of the "Rule 37" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = (n ^ 2 - (- 1) ^ n * (n - 3) + 5) / 2 for n>0. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n>5. ●

► [A362388] 1,2,5,7,10,17,29,46,73,119,194,313,505,818,1325,2143,3466,5609,9077,14686,23761,38447,62210,100657,162865 ⋆ a(n) = a(n - 1) + a(n - 3) + a(n - 4), where a(0) = 1, a(1) = 2, a(2) = 5, a(3) = 7. ● a(n) = a(n - 1) + a(n - 3) + a(n - 4), where a(0) = 1, a(1) = 2, a(2) = 5, a(3) = 7. ● a(2 * n) = F(n + 2) ^ 2 + F(n) ^ 2, a(2 * n + 1) = F(n + 2) ^ 2 + F(n + 1) * L(n + 1) for F(n) and L(n) the Fibonacci and Lucas numbers. ●

► [A076802] 1,2,5,7,10,18,20,22,23,26,30,33,37,41,44,46,48,49,53,56,58,59,68,69,75 ⋆ Greedy powers of the gamma constant (0.577215664...) Sum _{ n=1..infinity } (gamma) ^ a(n) = 1. ● a(n) = Sum _{ k=1..n } floor(g _ k) where g _ 1 = 1, g _{ n + 1 } = log _ x(x ^ frac(g _ n) - x) (n>0) at x = gamma and frac(y) = y - floor(y). ●

► [A079933] 1,2,5,7,11,12,19,22,27,33,37,39,42,44,53,54,60,62,68,69,75,77,78,83,86 ⋆ Greedy powers of (1 / sqrt(3)): sum _{ n=1..inf } (1 / sqrt(3)) ^ a(n) = 1. ● a(n)=sum _{ k=1..n } floor(g _ k) where g _ 1=1, g _{ n + 1 } =log _ x(x ^ frac(g _ n) - x) (n>0) at x=(1 / sqrt(3)) and frac(y) = y - floor(y). ●

► [A113543] 1,2,5,7,11,13,14,17,19,22,23,26,29,31,34,35,37,38,41,43,46,47,53,58,59 ⋆ Numbers both squarefree and triangle - free. ● a(n) has no factor >1 of form a * (a + 1) / 2 nor b ^ 2. A005117 INTERSECTION A112886. ●

► [A229470] 2,5,7,11,13,16,21,23,26,30,36,38,41,45,50,57,59,62,66,71,77,85,87,90,94 ⋆ Positions of 2 in decimal expansion of 0.1231232331232332333..., whose definition is given below. ● a((n ^ 2 + n + 2m - 2) / 2) = (n ^ 3 + 6n ^ 2 + 3m ^ 2 + 11n - 3m + 6) / 6; n + 2>=m>=2. ●

► [A184676] 1,2,5,7,11,14,19,23,29,34,41,47,55,62,71,79,89,98,109,119,131,142,155,167,181 ⋆ a(n) = n + floor((n / 2 - 1 / (4 * n)) ^ 2); complement of A183867. ● a(n) = n + floor((n / 2 - 1 / (4 * n)) ^ 2). ●

► [A216094] 2,5,7,11,15,19,23,27,31,37,43,47,51,55,59,61,67,73,77,81,87,91,95,99,105 ⋆ a(1) = 2; a(n + 1) = a(n) + |A036263(n)| + 2. ● a(1)=2; a(n + 1) = a(n) + |prime(n + 2) - 2 * prime(n + 1) + prime(n)| + 2. ●

► [A342939] 1,2,5,7,11,16,22,29,37,46,56,67,79,92,106,121,137,154,172,191,211,232,254,277,301 ⋆ a(n) is the Skolem number of the triangular grid graph T _ n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) - a(n - 3) for n > 6. ●

► [A089781] 1,2,5,7,11,16,23,29,37,46,57,67,79,92,107,121,137,154,173,191,211,232,255,277,301 ⋆ Successive coprime numbers with distinct successive differences: gcd(a(k + 1),a(k)) = gcd(a(m + 1),a(m)) = 1 and a(k + 1) - a(k) = a(m + 1) - a(m) <==> m=k. ● a(n + 1) = a(n) + (smallest number coprime with a(n) and not already added). - _ Reinhard Zumkeller _ , Aug 15 2015 ●

► [A163695] 2,5,7,11,18,29,47,76,123,199,322,521,843,1364,2207,3571,5778,9349,15127,24476,39603,64079,103682,167761,271443 ⋆ Number of n X 2 binary arrays with all 1s connected, a path of 1s from top row to lower right corner, and no 1 having more than two 1s adjacent. ● a(n) = a(n - 1) + a(n - 2) for n>=5. ● a(n) = (2 ^ (- 1 - n) * ((1 - sqrt(5)) ^ n * (- 5 + sqrt(5)) + (1 + sqrt(5)) ^ n * (5 + sqrt(5)))) / sqrt(5) for n>2. ●

► [A063217] 2,5,7,12,14,17,21,24,26,31,33,36,40,43,45,50,52,55,59,62,64,69,71,74,78 ⋆ Dimension of the space of weight 2n cuspidal newforms for Gamma _ 0(50). ● a(n) = a(n - 2) + a(n - 3) - a(n - 5). G.f.: x * (2 + 5 * x + 5 * x ^ 2 + 5 * x ^ 3 + 2 * x ^ 4) / ((1 - x) ^ 2 * (1 + x) * (1 + x + x ^ 2)). [_ Colin Barker _ , Sep 27 2012] ●

► [A294146] 0,1,2,5,7,12,15,18,21,29,33,43,48,60,66,72,78,84,90,106,113,131,139,147,155 ⋆ Sum of the larger parts of the partitions of n into two parts with smaller part squarefree. ● a(n) = Sum _{ i=1..floor(n / 2) } (n - i) * mu(i) ^ 2, where mu is the Möbius function (A008683). ●

► [A088822] 0,2,5,7,12,15,22,24,27,32,43,46,59,66,71,73,90,93,112,117,124,135,158,161,166 ⋆ a(n) is the sum of largest prime factors of numbers from 1 to n. ● a(n) = Pi ^ 2 / 12 * n ^ 2 / log n + O(n ^ 2 / log ^ 2 n). - _ Charles R Greathouse IV _ , Feb 19 2014 ●

► [A001318] 0,1,2,5,7,12,15,22,26,35,40,51,57,70,77,92,100,117,126,145,155,176,187,210,222 ⋆ Generalized pentagonal numbers: m * (3 * m - 1) / 2, m = 0, +- 1, +- 2, +- 3, ... ● a(n) = 3 + 2 * a(n - 2) - a(n - 4). - _ Ant King _ , Aug 23 2011 ● a(n) = n * (n + 1) / 6 when n runs through numbers == 0 or 2 mod 3. - _ Barry E. Williams _ ● a(n) = Sum _{ k=1..floor((n + 1) / 2) } (n - k + 1). - _ Paul Barry _ , Sep 07 2005 ● a(n) = (1 / 2) * ceiling(n / 2) * ceiling((3 * n + 1) / 2). - _ Mircea Merca _ , Jul 13 2012 ● a(n) = floor((n + 1) / 2) * ((n + 1) - (1 / 2) * floor((n + 1) / 2) - 1 / 2). - _ Wesley Ivan Hurt _ , Jan 26 2013 ● a(n) = Sum _{ i = ceiling((n + 1) / 2)..n } i. - _ Wesley Ivan Hurt _ , Jun 08 2013 ●

► [A320657] 0,0,0,0,0,0,0,0,0,0,1,2,5,7,12,16,24,30,41,50,65,77,96,112,136 ⋆ a(n) is the number of non - unimodal sequences with n nonzero terms that arise as a convolution of sequences of binomial coefficients preceded by a finite number of ones. ● a(n + 10) = 2 * (Sum _{ i=1..n / 2 } floor(i * (i + 4) / 4)) - floor(n ^ 2 / 16) for n even. ● a(n + 10) = 2 * (Sum _{ i=1..(n - 1) / 2 } floor(i(i + 4) / 4)) - floor((n - 1) ^ 2 / 16) + floor((n + 1) * (n + 9) / 16) for n odd. ●

► [A350497] 0,0,0,1,2,5,7,12,19,27,32,48,55,68,84,109,120,149,162,196,223,249,266,323,359 ⋆ Sum of the largest parts in all the partitions of n into 3 parts whose largest part is greater than or equal to the product of the other two. ● a(n) = Sum _{ k=1..floor(n / 3) } Sum _{ i=k..floor((n - k) / 2) } sign(floor((n - i - k) / (i * k))) * (n - i - k). ●

► [A001060] 2,5,7,12,19,31,50,81,131,212,343,555,898,1453,2351,3804,6155,9959,16114,26073,42187,68260,110447,178707,289154 ⋆ a(n) = a(n - 1) + a(n - 2) with a(0)=2, a(1)=5. Sometimes called the Evangelist Sequence. ● a(n) = 2 * Fibonacci(n) + Fibonacci(n + 3). - _ Zerinvary Lajos _ , Oct 05 2007 ● a(n) = Fibonacci(n + 4) - Fibonacci(n - 1) for n >= 1. - _ Ian Stewart _ , Jun 07 2012 ● a(n) = Fibonacci(n) + 2 * Fibonacci(n + 2) = 5 * Fibonacci(n) + 2 * Fibonacci(n - 1). The ratio r(n) := a(n + 2) / a(n) satisfies the recurrence r(n + 1) = (2 * r(n) - 1) / (r(n) - 1). If M denotes the 2 X 2 matrix [2, - 1; 1, - 1] then [a(n + 2), a(n)] = M ^ n[2, - 1]. - _ Peter Bala _ , Dec 06 2013 ● a(n) = 6 * F(n) + F(n - 3), for F(n)=A000045. - _ J. M. Bergot _ , Jul 14 2017 ●

► [A042691] 1,1,2,5,7,12,19,31,112,143,255,398,653,1704,2357,4061,237895,241956,479851,1201658,1681509,2883167,4564676,7447843,26908205 ⋆ Denominators of continued fraction convergents to sqrt(875). ● a(n) = 240252 * a(n - 16) - a(n - 32) for n>31. - _ Vincenzo Librandi _ , Jan 26 2014 ●

► [A331529] 0,0,1,1,2,5,7,12,19,33,59,99,170,290,496,854,1463,2506,4292,7351,12601,21596,37005,63405,108637 ⋆ a(n) is the number of nonnegative integers that can be represented in a 7 - segment display by using only n segments (version A006942). ● a(n) = b(n) - b(n - 6), where b(n) = [x ^ n] Sum _{ k=max(1,ceiling(n / 7))..floor(n / 2) } P(x) ^ k with P(x) = x ^ 2 + x ^ 3 + x ^ 4 + 3 * x ^ 5 + 3 * x ^ 6 + x ^ 7. ● a(n) = a(n - 2) + a(n - 3) + a(n - 4) + 3 * a(n - 5) + 3 * a(n - 6) + a(n - 7) for n>13. ●

► [A041793] 1,2,5,7,12,19,107,447,554,7095,7649,37691,196104,233795,429899,663694,1757287,4178268,168888007,341954282,852796571,1194750853,2047547424,3242298277,18259038809 ⋆ Denominators of continued fraction convergents to sqrt(417). ● a(n) = 170645294 * a(n - 18) - a(n - 36) for n>35. - _ Vincenzo Librandi _ , Dec 24 2013 ●

► [A213044] 1,1,2,5,7,12,22,34,56,94,150,244,399,643,1042,1691,2733,4424,7164,11588,18752,30348,49100,79448,128557 ⋆ Convolution of Fibonacci numbers and positive integers repeated three times (A000045 and A008620). ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - 2 * a(n - 4) - a(n - 5) + a(n - 6) + a(n - 7). ●

► [A295334] 1,1,2,5,7,12,31,43,74,191,265,456,1177,1633,2810,7253,10063,17316,44695,62011,106706,275423,382129,657552,1697233 ⋆ Denominators of continued fraction convergents to sqrt(10) / 2 = sqrt(5 / 2) = A020797 + 1. ● a(n) = 6 * a(n - 3) + a(n - 6), n >= 6, with inputs a(0)..a(5). ●

► [A041033] 1,1,2,5,7,12,103,115,218,551,769,1320,11329,12649,23978,60605,84583,145188,1246087,1391275,2637362,6665999,9303361,15969360,137058241 ⋆ Denominators of continued fraction convergents to sqrt(21). ● a(n) = 110 * a(n - 6) - a(n - 12). G.f.: - (x ^ 4 - x ^ 3 + 2 * x ^ 2 + x + 1) * (x ^ 6 - 6 * x ^ 3 - 1) / ((x ^ 4 - 5 * x ^ 2 + 1) * (x ^ 8 + 5 * x ^ 6 + 24 * x ^ 4 + 5 * x ^ 2 + 1)). [_ Colin Barker _ , Jul 16 2012] ●

► [A041203] 1,1,2,5,7,12,247,259,506,1271,1777,3048,62737,65785,128522,322829,451351,774180,15934951,16709131,32644082,81997295,114641377,196638672,4047414817 ⋆ Denominators of continued fraction convergents to sqrt(112). ● a(n) = 254 * a(n - 6) - a(n - 12). G.f.: - (x ^ 4 - x ^ 3 + 2 * x ^ 2 + x + 1) * (x ^ 6 - 6 * x ^ 3 - 1) / ((x ^ 6 - 16 * x ^ 3 + 1) * (x ^ 6 + 16 * x ^ 3 + 1)). [_ Colin Barker _ , Jul 19 2012] ●

► [A041517] 1,1,2,5,7,12,391,403,794,1991,2785,4776,155617,160393,316010,792413,1108423,1900836,61935175,63836011,125771186,315378383,441149569,756527952,24650044033 ⋆ Denominators of continued fraction convergents to sqrt(275). ● a(n) = 398 * a(n - 6) - a(n - 12) for n>11. - _ Vincenzo Librandi _ , Dec 19 2013 ●

► [A041975] 1,1,2,5,7,12,535,547,1082,2711,3793,6504,289969,296473,586442,1469357,2055799,3525156,157162663,160687819,317850482,796388783,1114239265,1910628048,85181873377 ⋆ Denominators of continued fraction convergents to sqrt(510). ● a(n) = 542 * a(n - 6) - a(n - 12) for n>11. - _ Vincenzo Librandi _ , Dec 28 2013 ●

► [A065897] 1,2,5,7,13,16,22,25,31,41,43,52,59,62,69,78,87,91,101,107,111,120,127,137,149 ⋆ The a(n) - th composite number is twice the n - th prime. ● a(n) = 2 * prime(n) - (pi(2 * prime(n))) - 1, where pi = A000720. ●

► [A160794] 0,1,2,5,7,13,17,28,35,53,65,94,114,156,189,248,302,380,468,569,712,842,1074,1235,1611 ⋆ Vertex number of a rectangular spiral related to Fibonacci numbers and prime numbers. The distances between nearest edges of the spiral that are parallel to the initial edge are the Fibonacci numbers, while the distances between nearest edges perpendicular to the initial edge are the prime numbers. ● a(2n) = a(2n - 1) + Sum _{ j=1..n } Fibonacci(j); a(2n + 1) = a(2n) + 1 + Sum _{ j=1..n } prime(j) for n >= 1. - _ Nathaniel Johnston _ , Jun 16 2011 ●

► [A262392] 2,5,7,13,19,31,43,61,79,103,131,163,199,241,283,331,383,443,503,571,641,715,793,877,965 ⋆ a(n) = A007504(n) + A010693(n). ● a(n) = Sum _{ k=1..n } prime(k) + n mod 2 + 2 for n>0, a(0)=2 (from Pari code). ●

► [A266259] 0,2,5,7,14,16,27,29,44,46,65,67,90,92,119,121,152,154,189,191,230,232,275,277,324 ⋆ Total number of OFF (white) cells after n iterations of the "Rule 11" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = ((n + 1) ^ 2 + (- 1) ^ n * (n - 1)) / 2. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n>4. ●

► [A133146] 2,5,7,14,18,29,35,50,58,77,87,110,122,149,163,194,210,245,263,302,322,365,387,434,458 ⋆ Antidiagonal sums of the triangle A133128. ● a(n) = 19 / 8 + 5 * n / 4 + 3 * n ^ 2 / 4 - (- 1) ^ n * (n / 4 + 3 / 8). - _ R. J. Mathar _ , Oct 15 2008 ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5); a(0)=2, a(1)=5, a(2)=7, a(3)=14, a(4)=18. (End) ●

► [A228208] 1,2,5,7,14,19,37,50,97,131,254,343,665,898,1741,2351,4558,6155,11933,16114,31241,42187,81790,110447,214129 ⋆ y - values in the solution to x ^ 2 - 20y ^ 2 = 176. ● a(n) = 3 * a(n - 2) - a(n - 4). ●

► [A338231] 0,2,5,7,14,20,27,33,41,54,65,75,90,104,119,129,152,167,189,207,230,252,275,297,319 ⋆ Sum of the numbers less than or equal to n whose square does

not divide n. ● a(n) = n * (n + 1) / 2 - Sum _{ k=1..n } (1 - ceiling(n / k ^ 2) + floor(n / k ^ 2)) * k. ●

▶ [A306956] 1,1,2,5,7,15,21,39,58,90,142,218,325,465,695,948,1411,1977,2883,3940,5415,7422,10126,14091,18947 ⋆ Sum over all partitions of n into distinct parts of the LCM of the parts. ● a(n) is even <=> n in { A001560 } . ● a(n) is odd <=> n in { A052002 } . ●

▶ [A027038] 1,1,2,5,7,18,43,103,264,687,1809,4836,13049,35493,97218,267857,741791,2063574,5763595,16155403,45429488,128121191,362287433,1026918632,2917313257 ⋆ Diagonal sum of right - justified array T given by A027023. ● a(n) = Sum _{ k=0..n } T(n - k, 2 * n - 3 * k), where T = A027023. - _ G. C. Greubel _ , Nov 05 2019 ●

▶ [A002531] 1,1,2,5,7,19,26,71,97,265,362,989,1351,3691,5042,13775,18817,51409,70226,191861,262087,716035,978122,2672279,3650401 ⋆ a(2 * n) = a(2 * n - 1) + a(2 * n - 2), a(2 * n + 1) = 2 * a(2 * n) + a(2 * n - 1); a(0) = a(1) = 1. ● a(2 * n) = a(2 * n - 1) + a(2 * n - 2), a(2 * n + 1) = 2 * a(2 * n) + a(2 * n - 1), n > 0. ● a(n) = ((1 + sqrt(3)) ^ n + (1 - sqrt(3)) ^ n) / (2 * 2 ^ floor(n / 2)). - _ Bruno Berselli _ , Nov 10 2011 ● a(2 * n) = (- 1) ^ n * T(2 * n,u) and a(2 * n + 1) = (- 1) ^ n * 1 / u * T(2 * n + 1,u), where u = sqrt(- 1 / 2) and T(n,x) denotes the Chebyshev polynomial of the first kind. - _ Peter Bala _ , May 01 2012 ● a(n) = ((1 - sqrt(2)) * (- 1) ^ n + 1 + sqrt(2)) * (((sqrt(2) - sqrt(6)) / 2) ^ n + ((sqrt(6) + sqrt(2)) / 2) ^ n) / 4. ● a(n) = (- 1) ^ n * a(- n) for all n in Z. - _ Michael Somos _ , Mar 22 2022 ●

▶ [A041387] 1,2,5,7,19,45,1279,2603,6485,9088,24661,58410,1660141,3378692,8417525,11796217,32009959,75816135,2154861739,4385539613,10925940965,15311480578,41548902121,98409284820,2797008877081 ⋆ Denominators of continued fraction convergents to sqrt(208). ● a(n) = 1298 * a(n - 6) - a(n - 12) for n>11. - _ Vincenzo Librandi _ , Dec 17 2013 ●

▶ [A041583] 1,1,2,5,7,19,83,102,185,287,2481,15173,17654,191713,209367,1447915,11792687,13240602,25033289,38273891,178128853,394531597,572660450,1539852497,2112512947 ⋆ Denominators of continued fraction convergents to sqrt(309). ● a(n) = 128405450990 * a(n - 26) - a(n - 52) for n>51. - _ Vincenzo Librandi _ , Dec 20 2013 ●

▶ [A042931] 1,1,2,5,7,33,40,73,332,405,1142,1547,2689,168265,170954,339219,849392,1188611,5603836,6792447,12396283,56377579,68773862,193925303,262699165 ⋆ Denominators of continued fraction convergents to sqrt(997). ● a(n) = 2883615346 * a(n - 26) - a(n - 52) for n>51. - _ Vincenzo Librandi _ , Feb 01 2014 ●

▶ [A041875] 1,2,5,7,33,700,2833,3533,9899,23331,989801,2002933,4995667,6998600,32990067,699790007,2832150095,3531940102,9896030299,23324000700,989504059699,2002332120098,4994168299895,6996500419993,32980169979867 ⋆ Denominators of continued fraction convergents to sqrt(459). ● a(n) = 999700 * a(n - 10) - a(n - 20) for n>19. - _ Vincenzo Librandi _ , Dec 26 2013 ●

▶ [A042559] 1,2,5,7,40,47,87,134,221,3007,3228,6235,9463,15698,87953,103651,295255,694161,39168271,79030703,197229677,276260380,1578531577,1854791957,3433323534 ⋆ Denominators of continued fraction convergents to sqrt(808). ● a(n) = 39463526 * a(n - 18) - a(n - 36) for n>35. - _ Vincenzo Librandi _ , Jan 25 2014 ●

▶ [A041653] 1,1,2,5,7,47,54,155,209,364,13313,13677,26990,67657,94647,635539,730186,2095911,2826097,4922008,180018385,184940393,364958778,914857949,1279816727 ⋆ Denominators of continued fraction convergents to sqrt(345). ● a(n) = 13522 * a(n - 10) - a(n - 20) for n>19. - _ Vincenzo Librandi _ , Dec 22 2013 ●

▶ [A041125] 1,2,5,7,54,61,176,413,6784,13981,34746,48727,375835,424562,1224959,2874480,47216639,97307758,241832155,339139913,2615811546,2954951459,8525714464,20006380387,328627800656 ⋆ Denominators of continued fraction convergents to sqrt(71). ● a(n) = 6960 * a(n - 8) - a(n - 16). - _ Vincenzo Librandi _ , Dec 11 2013 ●

▶ [A042257] 1,1,2,5,7,68,75,143,2363,2506,4869,46327,51196,148719,199915,348634,17631615,17980249,35611864,89203977,124815841,1212546546,1337362387,2549908933,42135905315 ⋆ Denominators of continued fraction convergents to sqrt(654). ● a(n) = 17831530 * a(n - 16) - a(n - 32) for n>31. - _ Vincenzo Librandi _ , Jan 19 2014 ●

▶ [A041445] 1,2,5,7,103,110,323,756,23003,46762,116527,163289,2402573,2565862,7534297,17634456,536567977,1090770410,2718108797,3808879207,56042417695,59851296902,175745011499,411341319900,12515984608499 ⋆ Denominators of continued fraction convergents to sqrt(238). ● a(n) = 23326 * a(n - 8) - a(n - 16) for n>15. - _ Vincenzo Librandi _ , Dec 18 2013 ●

▶ [A042673] 1,2,5,7,201,208,617,1442,84253,169948,424149,594097,17058865,17652962,52364789,122382540,7150552109,14423486758,35997525625,50421012383,1447785872349,1498206884732,4444199641813,10386606168358,606867357406577 ⋆ Denominators of continued fraction convergents to sqrt(866). ● a(n) = 84870 * a(n - 8) - a(n - 16) for n>15. - _ Vincenzo Librandi _ , Dec 20 2013 ●

▶ [A047620] 0,1,2,5,8,9,10,13,16,17,18,21,24,25,26,29,32,33,34,37,40,41,42,45,48 ⋆ Numbers that are congruent to { 0, 1, 2, 5 } mod 8. ● a(n) = 2 * n - 3 + sin(n * Pi / 2). (End) ● a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4) for n>4. ● a(n) = (4n - 6 + I ^ (1 - n) - I ^ (1 + n)) / 2 where i=sqrt(- 1). ●

▶ [A212591] 0,1,2,5,8,9,10,21,32,33,34,37,40,41,42,85,128,129,130,133,136,137,138,149,160 ⋆ a(n) is the smallest value of k for which A020986(k) = n. ● a(2 * n - 1) - a(2 * n - 2) = (2 ^ (2 * k + 1) + 1) / 3 and a(2 * n) - a(2 * n - 1) = (2 ^ (2 * k + 1) + 1) / 3 with a(0) = a(1) = 0, where n = (2 ^ k) * (2 * m - 1) for some integers k >= 0 and m > 0. ●

▶ [A174438] 0,2,5,8,9,11,14,17,18,20,23,26,27,29,32,35,36,38,41,44,45,47,50,53,54 ⋆ Numbers that are congruent to { 0, 2, 5, 8 } mod 9. ● a(n) = 3 * (n - floor(n / 4)) - (3 - i ^ n - (- i) ^ n - (- 1) ^ n) / 4 where i=sqrt(- 1), offset=0. ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n > 5. ● a(n) = (18 * n - 15 + i ^ (2 * n) + (3 - i) * i ^ (- n) + (3 + i) * i ^ n) / 8 where i=sqrt(- 1). (End) ●

▶ [A047387] 1,2,5,8,9,12,15,16,19,22,23,26,29,30,33,36,37,40,43,44,47,50,51,54,57 ⋆ Numbers that are congruent to { 1, 2, 5 } mod 7. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>1. ● a(n) = 7 * n / 3 - 2 + 4 * sin(2 * n * Pi / 3) / (3 * sqrt(3)). ● a(3k) = 7k - 2, a(3k - 1) = 7k - 5, a(3k - 2) = 7k - 6. (End) ●

▶ [A039770] 1,2,5,8,10,12,17,32,34,37,40,48,57,60,63,74,76,85,101,108,114,125,126,128,136 ⋆ Numbers k such that phi(k) is a perfect square. ● a(n) seems to be asymptotic to c * n ^ (3 / 2) with 1 < c < 1.3. - _ Benoit Cloitre _ , Sep 08 2002 ●

▶ [A047618] 0,2,5,8,10,13,16,18,21,24,26,29,32,34,37,40,42,45,48,50,53,56,58,61,64 ⋆ Numbers that are congruent to { 0, 2, 5 } mod 8. ● a(n) = 3 * (n - 1) - floor((n - 1) / 3) - ((n - 1) ^ 2 % 3). - _ Gary Detlefs _ , Mar 19 2010; corrected by _ L. Edson Jeffery _ , Sep 02 2014 ● a(n) = floor(8 * (n - 1) / 3). - _ Gary Detlefs _ , Jan 02 2012 ● a(n) = a(n - 1) + a(n - 3) - a(n - 4), n>4, with a(1)=0, a(2)=2, a(3)=5, a(4)=8. - _ L. Edson Jeffery _ , Sep 02 2014 ● a(n) = ((8 * n - 9) + 2 * sin((2 * n * Pi) / 3) / sqrt(3)) / 3. - _ L. Edson Jeffery _ , Sep 02 2014 ● a(3k) = 8k - 3, a(3k - 1) = 8k - 6, a(3k - 2) = 8k - 8. - _ Wesley Ivan Hurt _ , Jun 10 2016 ●

▶ [A059551] 2,5,8,10,13,16,18,21,24,26,29,32,34,37,40,42,45,48,50,53,56,58,61,64,66 ⋆ Beatty sequence for Gamma(1 / 3). ● a(n) = floor(n * Gamma(1 / 3)). - _ Michel Marcus _ , Jan 04 2015 ●

▶ [A330094] 2,5,8,10,13,16,18,21,24,26,29,32,34,37,40,42,45,48,50,53,56,59,61,64,67 ⋆ Beatty sequence for 2 ^ x, where 1 / 2 ^ x + 1 / 3 ^ (x - 1) = 1. ● a(n) = floor(n 2 ^ x), where x = 1.4243198392... is the constant in A330093. ●

▶ [A330214] 2,5,8,10,13,16,18,21,24,26,30,33,36,38,41,44,46,49,52,54,58,61,63,66,69 ⋆ a(n) = n + floor(nr / s) + floor(nt / s), where r = log(2), s = 1, t = log(3). ● a(n) = n + floor(nr / s) + floor(nt / s), where r = log(2), s = 1, t = log(3) ●

▶ [A182769] 2,5,8,10,13,16,18,21,24,27,29,32,35,37,40,43,46,48,51,54,56,59,62,64,67 ⋆ Beatty sequence for (4 + sqrt(2)) / 2. ● a(n) = floor(n * (4 + sqrt(2)) / 2). ●

▶ [A117630] 2,5,8,10,13,16,18,21,24,27,29,32,35,37,40,43,46,48,51,54,56,59,62,65,67 ⋆ Complement of A056576. ● a(n) = floor(n * log(3) / log(3 / 2)). ●

▶ [A022843] 0,2,5,8,10,13,16,19,21,24,27,29,32,35,38,40,43,46,48,51,54,57,59,62,65 ⋆ Beatty sequence for e: a(n) = floor(n * e). ● a(n) / n converges to e because |a(n) / n - e|=|a(n) - n * e| / n < 1 / n. - _ Hieronymus Fischer _ , Jan 22 2006 ●

▶ [A054088] 2,5,8,10,13,16,19,21,24,27,30,32,35,38,40,43,46,49,51,54,57,60,62,65,68 ⋆ a(n) = A054086(3n); also a bisection of A003511. ● a(n) = floor(n * (1 + sqrt(3))) = n + floor(n * sqrt(3)). - _ R. J. Mathar _ , Feb 26 2011 ●

▶ [A309518] 0,0,0,0,0,1,2,5,8,10,14,19,24,32,40,49,60,71,84,100,116,134,154,176,200 ⋆ Number of even parts in the partitions of n into 4 parts. ● a(n) = Sum _{ k=1..floor(n / 4) } Sum _{ j=k..floor((n - k) / 3) } Sum _{ i=j..floor((n - j - k) / 2) } (((i - 1) mod 2) + ((j - 1) mod 2) + ((k - 1) mod 2) + ((n - i - j - k - 1) mod 2)). ● a(n) = 3 * a(n - 1) - 4 * a(n - 2) + 4 * a(n - 3) - 4 * a(n - 4) + 4 * a(n - 5) - 3 * a(n - 6) + a(n - 7) + a(n - 8) - 3 * a(n - 9) + 4 * a(n - 10) - 4 * a(n - 11) + 4 * a(n - 12) - 4 * a(n - 13) + 3 * a(n - 14) - a(n - 15). ●

▶ [A007826] 2,5,8,11,13,15,30,34,40,46,52,56,60,63,69 ⋆ Numbered stops on the Market - Frankford rapid transit (SEPTA) railway line in Philadelphia, PA USA. ● a(n) = 2 + 3 n - binomial(n, 4) + 3 binomial(n, 5) + 7 binomial(n, 6) - 66 binomial(n, 7) + 248 binomial(n, 8) - 679 binomial(n, 9) + 1554 binomial(n, 10) - 3158 binomial(n, 11) + 5897 binomial(n, 12) - 10352 binomial(n, 13) + 17384 binomial(n, 14). ●

▶ [A292988] 2,5,8,11,13,16,19,22,24,27,30,33,35,38,41,44,46,49,52,55,57,60,63,66,68 ⋆ Beatty sequence of the real root of 2 * x ^ 5 - 9 * x ^ 4 + 13 * x ^ 3 - 11 * x ^ 2 + 5 * x - 1; complement of A292987. ● a(n) = floor(n * r), where r = 2.7539326742561821408 0... ●

▶ [A330144] 2,5,8,11,13,16,19,22,24,27,30,33,35,38,41,44,46,49,52,55,57,60,63,66,69 ⋆ Beatty sequence for (5 / 2) ^ x, where (3 / 2) ^ x + (5 / 2) ^ x = 1. ● a(n) = floor(n (5 / 2) ^ x)), where x = 1.108702608375893... is the constant in A330142. ●

▶ [A187341] 2,5,8,11,13,16,19,22,24,27,30,33,35,38,41,44,46,49,52,55,58,60,63,66,69 ⋆ Floor((5 - sqrt(5))n); complement of A187342. ● a(n)=floor((5 - sqrt(5))n). ●

▶ [A329924] 2,5,8,11,13,16,19,22,24,27,30,33,35,38,41,44,47,49,52,55,58,60,63,66,69 ⋆ Beatty sequence for (8 + sqrt(34)) / 5. ● a(n) = floor(n * s), where s = (8 + sqrt(34)) / 5. ●

▶ [A330112] 2,5,8,11,13,16,19,22,24,27,30,33,36,38,41,44,47,49,52,55,58,60,63,66,69 ⋆ Beatty sequence for e ^ x, where 1 / e ^ x + sech(x) = 1. ● a(n) = floor(n e ^ x), where x = 1.01859181977... is the constant in A330111. ●

▶ [A093609] 2,5,8,11,13,16,19,22,25,27,30,33,36,38,41,44,47,50,52,55,58,61,63,66,69 ⋆ Upper Beatty sequence for e ^ G, G = Euler's gamma constant. ● a(n) = floor (n * (k + 1)) where k = 1.781072417...= e ^ G, G = Euler's gamma constant, .577215664901... ●

▶ [A329848] 2,5,8,11,14,16,19,22,25,28,30,33,36,39,42,44,47,50,53,56,58,61,64,67,70 ⋆ Beatty sequence for (13 + sqrt(89)) / 8. ● a(n) = floor(n * s), where s = (13 + sqrt(89)) / 8. ●

▶ [A059560] 2,5,8,11,14,16,19,22,25,28,31,33,36,39,42,45,47,50,53,56,59,62,64,67,70 ⋆ Beatty sequence for 1 - 1 / log(gamma). ● a(n) = floor(n * (1 - 1 / log(gamma))). - _ Michel Marcus _ , Jan 05 2015 ●

▶ [A022842] 2,5,8,11,14,16,19,22,25,28,31,33,36,39,42,45,48,50,53,56,59,62,65,67,70 ⋆ Beatty sequence for sqrt(8). ● a(n) = floor(2 * n * sqrt(2)). - _ Michel Marcus _ , Oct 31 2017 ●

▶ [A045930] 1,2,5,8,11,14,17,18,21,24,27,30,33,36,39,42,45,48,49,52,55,58,61,64,67 ⋆ The generalized Connell sequence C _{ 3,5 } . ● a(n) = 3 * n - 2 * floor((13 + sqrt(40 * n - 31)) / 10). See general formula in A045928. - _ Michel Marcus _ , Apr 02 2013 ●

▶ [A329961] 2,5,8,11,14,17,20,23,25,28,31,34,37,40,43,46,49,51,54,57,60,63,66,69,72 ⋆ Beatty sequence for 2 + sin x, where x = least positive solution of 1 / (2 + sin x) + 1 / (2 + cos x) = 1. ● a(n) = floor(n * (2 + sin x)), where x = 2.058943... is the constant in A329960. ●

▶ [A016789] 2,5,8,11,14,17,20,23,26,29,32,35,38,41,44,47,50,53,56,59,62,65,68,71,74 ⋆ a(n) = 3 * n + 2. ● a(n) = 3 + a(n - 1). ● a(n) = 2 * a(n - 1) - a(n - 2); a(0)=2, a(1)=5. - _ Philippe Deléham _ , Nov 03 2008 ● a(n) = 6 * n - a(n - 1) + 1 with a(0)=2. - _ Vincenzo Librandi _ , Aug 25 2010 ●

▶ [A000093] 0,1,2,5,8,11,14,18,22,27,31,36,41,46,52,58,64,70,76,82,89,96,103,110,117 ⋆ a(n) = floor(n ^ (3 / 2)). ● a(n) = floor(n * sqrt(n)). [_ Arkadiusz Wesolowski _ , Jun 01 2011] ●

► [A070214] 1,2,5,8,11,14,19,23,28,32,38,43,49,55 ⋆ Maximal number of occupied cells in all monotonic matrices of order n. • a(r * s) >= a(r) * a(s); if a(n) = n ^ e(n) then L := lim _{ n - >infinity } e(n) exists and is in the range 1.513 <= L <= 2. •

► [A257984] 2,5,8,11,15,18,21,24,27,30,33,37,40,43,46,49,52,55,59,62,65,68,71,74,77 ⋆ Nonhomogeneous Beatty sequence: ceiling((n - 1 / 2) * Pi)) • a(n) = ceiling((n - 1 / 2) * Pi). •

► [A184747] 2,5,8,11,15,18,21,24,28,31,34,37,40,44,47,50,53,57,60,63,66,70,73,76,79 ⋆ floor(n * s + h - h * s), where s=1 + sqrt(5), h=1 / 2; complement of A184746. • a(n)=floor(n * s + h - h * s), where s=1 + sqrt(5), h=1 / 2. •

► [A361684] 2,5,8,11,15,18,22,25,28,32,35,39,42,45,49,52,56,59,62,66,69,73,76,80,83 ⋆ Ramsey core number rc(n,n). • a(n) = rc(n,n) = ceiling(2 * n - 3 / 2 + sqrt(2 * (n - 1) ^ 2 + 9 / 4)). •

► [A032765] 0,1,2,5,8,11,16,21,26,33,40,47,56,65,74,85,96,107,120,133,146,161,176,191,208 ⋆ a(n) = floor(n * (n + 1) * (n + 2) / (n + n + 1 + n + 2)), which equals floor(n * (n + 2) / 3). • a(n) = n ^ 2 - ceiling(n * (n - 1) / 3). • a(n) = floor(n * (n + 2) / 3). - Saburo Tamura, sent by _ Alexandre Wajnberg _ , Dec 19 2005 • a(3 * n - 1) = 3 * n ^ 2 - 1, a(3 * n) = 3 * n ^ 2 + 2 * n, a(3 * n + 1) = 3 * n ^ 2 + 4 * n + 1. - _ Michael Somos _ , Mar 14 2023 •

► [A193767] 2,5,8,12,14,17,21,24,26,30,33,36,39,42,45,48,51,54,57,60,63,66,69,72,75 ⋆ The number of dominoes in a largest saturated domino covering of the 4 by n board. • a(n) = 3n, except for n = 1, 2, 3, 5, 6 or 9. For the exceptions a(n) = 3n - 1. • a(n) = 2 * a(n - 1) - a(n - 2) for n>11. - _ Colin Barker _ , Oct 05 2014 •

► [A156745] 2,5,8,12,15,20,23,28,32,37,40,47,50,55,60,66,69,76,79,86,91,96,99,108,112 ⋆ a(n) = Sum _{ k=1..n } floor((n + k) / k) = n + Sum _{ k=1..n } sigma _ 0(k), where sigma _ 0(k) is A000005(k). Also a(n) = n + A006218(n). • a(n) = 2 * n + Sum _{ k=1..floor(n / 2) } floor((n - k) / k). - _ Wesley Ivan Hurt _ , Dec 25 2020 •

► [A003314] 0,2,5,8,12,16,20,24,29,34,39,44,49,54,59,64,70,76,82,88,94,100,106,112,118 ⋆ Binary entropy function: a(1)=0; for n > 1, a(n) = n + min { a(k) + a(n - k) : 1 <= k <= n - 1 } . • a(1) = 0; a(n) = n + a([n / 2]) + a(n - [n / 2]). (See the Morris reference.) •

► [A229154] 1,2,5,8,12,16,21,27,33,40,48,56,65,75,85,96,108,120,133,147,161,176,192,208,225 ⋆ The clubs patterns appearing in n X n coins, with rotation allowed. • a(n) = floor(n ^ 2 / 3), a(3) = 2. • a(n) = n ^ 2 / 3 + (2 / 9) * cos((2 * Pi * n) / 3) - 2 / 9. •

► [A174605] 0,0,1,2,5,8,12,16,23,30,38,46,56,66,77,88,103,118,134,150,168,186,205,224,246 ⋆ Partial sums of A011371. • a(n) = ((n + 1) ^ 2 - Sum _{ i=1..k } (e[i] + 2 * i - 1) * 2 ^ e[i]) / 2, where binary expansion n + 1 = 2 ^ e[1] + ... + 2 ^ e[k] with descending exponents e[1] > e[2] > ... > e[k] (A272011). •

► [A330188] 1,2,5,8,12,17,21,26,32,37,43,50,56,63,70,78,86,94,102,111,119,128,138,147,157 ⋆ a(n) = round(n ^ arctan(n!)). • a(n) = round(n ^ arctan(n!)). •

► [A183861] 1,2,5,8,12,17,22,28,35,42,50,59,68,78,89,100,112,125,138,152,167,182,198,215,232 ⋆ a(1) = 1; for n > 1, a(n) = n - 1 + ceiling((n ^ 2 - 1) / 3); complement of A183860. • a(n) = n - 1 + ceiling((n ^ 2 - 1) / 3). • a(n) = floor((2 * n ^ 2 + 6 * n - 5) / 6) for n > 1. - _ Sela Fried _ , Jul 12 2022 •

► [A373640] 1,1,1,2,5,8,12,24,45,76,134,246,440,775,1386,2490,4437,7902,14128,25248,45042,80396,143604,256410,457704 ⋆ a(n) = Sum _{ k=0..floor(n / 3) } binomial(3 * n - 8 * k,k). • a(n) = a(n - 1) + 3 * a(n - 3) - 3 * a(n - 6) + a(n - 9) for n > 8. •

► [A178752] 2,5,8,13,16,28,32,56,80,136,208,400,656,1232,2240,4192,7744,14728,27632,52664,99968,190984,364768,699760,1342256 ⋆ a(n) gives the number of conjugacy classes in the permutation group generated by transposition (1 2) and double n - cycle (1 3 5 7 ... 2n - 1)(2 4 6 8 ... 2n). This group is a semidirect product formed by a cyclic group acting on an elementary abelian 2 - group of rank n by cyclically permuting the factors. • a(n) = Sum _{ k=0..n - 1 } (1 / gcd(n,k) 2 ^ s phi(gcd(n,k) / s), s in divisors(gcd(n,k))). •

► [A342431] 1,2,5,8,13,18,21,24,29,31,34,38,42,46 ⋆ Solution to Von Neumann s tepping stone puzzle (see Comments). • a(n) >= 3n - 4 (found by _ Thomas Ladouceur _). •

► [A290268] 1,2,5,8,13,18,25,31,41,49,61,71,85,97,113,126,145,160,181,198,221,240,265,285,313 ⋆ Number of terms in the fully expanded n - th derivative of x ^ (x ^ 2). • a(n) = n ^ 2 / 2 + n + 1 - (n mod 2) * (1 / 2 + floor((n + 1) / 8)). •

► [A000982] 0,1,2,5,8,13,18,25,32,41,50,61,72,85,98,113,128,145,162,181,200,221,242,265,288 ⋆ a(n) = ceiling(n ^ 2 / 2). • a(2 * n) = 2 * n ^ 2, a(2 * n + 1) = 2 * n ^ 2 + 2 * n + 1. • a(n) = (2 * n ^ 2 + 1 - (- 1) ^ n) / 4. • a(0)=0, a(1)=1; for n>1, a(n + 1) = n + 1 + max(2 * floor(a(n) / 2), 3 * floor(a(n) / 3)). (End) • a(n) = a(n - 2) + 2n - 2. - _ Paul Barry _ , Jul 17 2004 • a(n) = Sum _{ k=0..n } (k ^ 2 - k + 1 - 0 ^ k) * (- 1) ^ (n - k); • a(n) = Sum _{ k=0..n } (1 + (- 1) ^ (n - k) - 0 ^ (n - k)) * k. (End) •

► [A083704] 0,0,1,2,5,8,13,19,25,33,41,51,61,73,86,99,114,129,146,163,182,202,222,244,266 ⋆ a(n)=sum(k=1,n,floor(r * floor(k / r))) where r=sqrt(3). • a(n) = n(n - 3) / 2 + ceiling(n / sqrt(3)) •

► [A027916] 2,5,8,13,19,25,33,42,51,62,74,86,100,115,130,147,165,183,203,224,245,268,292,316,342 ⋆ Least k such that 1 + 2 + ... + k >= E { 1,2,...,n } , where E = 2nd elementary symmetric function. • a(n) = ceiling((1 / 2) * (sqrt(3 * n ^ 4 + 2 * n ^ 3 - 3 * n ^ 2 - 2 * n + 3) / sqrt(3) - 1)) = (3 * n + 4) * (n - 1) / 6 + ((n + 2) mod 3) / 3. - _ Rick Mabry _ , Jul 01 2023 •

► [A266287] 0,2,5,8,14,18,27,32,44,50,65,72,90,98,119,128,152,162,189,200,230,242,275,288,324 ⋆ Total number of OFF (white) cells after n iterations of the "Rule 13" elementary cellular automaton starting with a single ON (black) cell. • a(n) = (2 * n ^ 2 + 5 * n + (- 1) ^ n * (n - 1) + 1) / 4. • a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n>4. •

► [A111711] 1,2,5,8,14,19,28,35,47,56,71,82,100,113,134,149,173,190,217,236,266,287,320,343,379 ⋆ Leading column of triangle mentioned in A111710. • a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n > 5. • a(n) = (10 * n * (n - 1) + (- 1) ^ n * (1 - 2 * n) + 15) / 16. - _ Eric Simon Jacob _ , Jun 11 2022 •

► [A006918] 0,1,2,5,8,14,20,30,40,55,70,91,112,140,168,204,240,285,330,385,440,506,572,650,728 ⋆ a(n) = binomial(n + 3, 3) / 4 for odd n, n * (n + 2) * (n + 4) / 24 for even n. • a(0)=0, a(1)=1, a(n) = (2 / (n - 1)) * a(n - 1) + ((n + 3) / (n - 1)) * a(n - 2). - _ Benoit Cloitre _ , Jun 28 2004 • a(n) = floor(binomial(n + 4, 4) / (n + 4)) - floor((n + 2) / 8)(1 + (- 1) ^ n) / 2. - _ Paul Barry _ , Jan 01 2005 • a(n + 1) = a(n) + binomial(floor(n / 2) + 2,2), i.e., first differences are A008805. Convolution of A008619 with itself, then shifted right (or A004526 with itself, shifted left by 3). - _ Franklin T. Adams - Watters _ , Jan 27 2006 • a(n) = - a(- 4 - n) for all n in Z. • a(n) = (n + 2) * (2 * n * (n + 4) - 3 * (- 1) ^ n + 3) / 48. - _ Bruno Berselli _ , May 21 2011 •

► [A011842] 0,0,0,0,1,2,5,8,14,21,30,41,55,71,91,113,140,170,204,242,285,332,385,442,506 ⋆ a(n) = floor(n(n - 1)(n - 2) / 24). • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 8) - 3 * a(n - 9) + 3 * a(n - 10) - a(n - 11). • a(n) = floor(binomial(n + 1,4) / (n + 1)). - _ Gary Detlefs _ , Nov 23 2011 •

► [A309546] 0,0,0,0,0,0,0,1,2,5,8,15,18,27,34,49,60,81,98,127,150,190,220,271,312,376 ⋆ Number of even parts in the partitions of n into 5 parts. • a(n) = Sum _{ l=1..floor(n / 5) } Sum _{ k=l..floor((n - 1) / 4) } Sum _{ j=k..floor((n - k - l) / 3) } Sum _{ i=j..floor((n - j - k - l) / 2) } (((i - 1) mod 2) + ((j - 1) mod 2) + ((k - 1) mod 2) + ((l - 1) mod 2) + ((n - i - j - k - l - 1) mod 2)). •

► [A077866] 1,2,5,8,15,22,37,52,83,114,177,240,367,494,749,1004,1515,2026,3049,4072,6119,8166,12261,16356,24547 ⋆ Expansion of (1 - x) ^ (- 1) / (1 - x - 2 * x ^ 2 + 2 * x ^ 3). • a(n) = 2 ^ (n / 2) * (3 + 2 * sqrt(2) + (3 - 2 * sqrt(2)) * (- 1) ^ n) - n - 5. - _ Paul Barry _ , Apr 23 2004 • a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + 2 * a(n - 4); a(0)=1, a(1)=2, a(2)=5, a(3)=8. - _ Harvey P. Dale _ , Feb 16 2013 •

► [A073335] 0,1,2,5,8,15,23,39,58,89,128,189,264,375,515,713,960,1301,1726,2298,3011,3948,5113,6625,8492 ⋆ Total number of prime power parts in all partitions of n. • a(n) = Sum _{ k=1..n } bigomega(k) * numbpart(n - k). •

► [A309551] 0,0,0,0,0,0,0,1,2,5,8,15,24,32,44,62,82,108,140,179,226,284,348,427,520 ⋆ Number of even parts in the partitions of n into 6 parts. • a(n) = Sum _{ m=1..floor(n / 6) } Sum _{ l=m..floor((n - m) / 5) } Sum _{ k=l..floor((n - l - m) / 4) } Sum _{ j=k..floor((n - k - l - m) / 3) } Sum _ (i=j..floor((n - j - k - l - m) / 2) } (((i - 1) mod 2) + ((j - 1) mod 2) + ((k - 1) mod 2) + ((l - 1) mod 2) + ((m - 1) mod 2) + ((n - i - j - k - l - m - 1) mod 2)). •

► [A309625] 0,0,0,0,0,0,0,0,0,1,2,5,8,15,24,39,50,74,98,135,174,232,292,381,470,595 ⋆ Number of even parts in the partitions of n into 7 parts. • a(n) = Sum _{ o=1..floor(n / 7) } Sum _{ m=o..floor((n - o) / 6) } Sum _{ l=m..floor((n - m - o) / 5) } Sum _{ k=l..floor((n - l - m - o) / 4) } Sum _{ j=k..floor((n - k - l - m - o) / 3 } Sum _{ i=j..floor((n - j - k - l - m - o) / 2) } ((o - 1) mod 2) + ((m - 1) mod 2) + ((l - 1) mod 2) + ((k - 1) mod 2) + ((j - 1) mod 2) + ((i - 1) mod 2) + ((n - i - j - k - l - m - o - 1) mod 2). •

► [A309630] 0,0,0,0,0,0,0,0,0,0,1,2,5,8,15,24,39,58,81,112,154,206,273,356,462,588 ⋆ Number of even parts in the partitions of n into 8 parts. • a(n) = Sum _{ p=1..floor(n / 8) } Sum _{ o=p..floor((n - p) / 7) } Sum _{ m=o..floor((n - o - p) / 6) } Sum _{ l=m..floor((n - m - o - p) / 5) } Sum _{ k=l..floor((n - l - m - o - p) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p) / 2) } ((i - 1) mod 2) + ((j - 1) mod 2) + ((k - 1) mod 2) + ((l - 1) mod 2) + ((m - 1) mod 2) + ((o - 1) mod 2) + ((p - 1) mod 2) + ((n - i - j - k - l - m - o - p - 1) mod 2). •

► [A309658] 0,0,0,0,0,0,0,0,0,0,0,1,2,5,8,15,24,39,58,90,120,170,228,310,404,537 ⋆ Number of even parts in the partitions of n into 9 parts. • a(n) = Sum _{ q=1..floor(n / 9) } Sum _{ p=q..floor((n - q) / 8) } Sum _{ o=p..floor((n - p - q) / 7) } Sum _{ m=o..floor((n - o - p - q) / 6) } Sum _{ l=m..floor((n - m - o - p - q) / 5) } Sum _{ k=l..floor((n - l - m - o - p - q) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p - q) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p - q) / 2) } ((q - 1) mod 2) + ((p - 1) mod 2) + ((o - 1) mod 2) + ((m - 1) mod 2) + ((l - 1) mod 2) + ((k - 1) mod 2) + ((j - 1) mod 2) + ((i - 1) mod 2) + ((n - i - j - k - l - m - o - p - q - 1) mod 2). •

► [A309662] 0,0,0,0,0,0,0,0,0,0,0,1,2,5,8,15,24,39,58,90,130,179,246,335,446 ⋆ Number of even parts in the partitions of n into 10 parts. • a(n) = Sum _{ r=1..floor(n / 10) } Sum _{ q=r..floor((n - r) / 9) } Sum _{ p=q..floor((n - q - r) / 8) } Sum _{ o=p..floor((n - p - q - r) / 7) } Sum _{ m=o..floor((n - o - p - q - r) / 6) } Sum _{ l=m..floor((n - m - o - p - q - r) / 5) } Sum _{ k=l..floor((n - l - m - o - p - q - r) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p - q - r) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p - q - r) / 2) } ((r - 1) mod 2) + ((q - 1) mod 2) + ((p - 1) mod 2) + ((o - 1) mod 2) + ((m - 1) mod 2) + ((l - 1) mod 2) + ((k - 1) mod 2) + ((j - 1) mod 2) + ((i - 1) mod 2) + ((n - i - j - k - l - m - o - p - q - r - 1) mod 2). •

► [A154327] 1,1,2,5,8,15,24,41,66,109,176,287,464,753,1218,1973,3192,5167,8360,13529,21890,35421,57312,92735,150048 ⋆ Diagonal sums of number triangle A132046. • a(n) = 0 ^ n - (3 + (- 1) ^ n) / 2 + 2 * Fibonacci(n + 1). •

► [A066629] 1,2,5,8,15,24,41,66,109,176,287,464,753,1218,1973,3192,5167,8360,13529,21890,35421,57312,92735,150048,242785 ⋆ a(n) = 2 * Fibonacci(n + 2) + ((- 1) ^ n - 3) / 2. • a(0)=1, a(1)=2, a(2)=5, a(3)=8, a(n)=a(n - 1) + 2 * a(n - 2) - a(n - 3) - a(n - 4). - _ Harvey P. Dale _ , Oct 09 2011 •

► [A081660] 1,2,5,8,15,26,49,92,179,350,693,1376,2743,5474,10937,21860,43707,87398,174781,349544,699071,1398122,2796225,5592428,11184835 ⋆ n + A001045(n + 1). • a(n) = 2 ^ (n + 1) / 3 + n + (- 1) ^ n / 3. •

► [A080084] 1,2,5,8,16,20,29,33,41,56,60,76,85,89,98,114,129,134,151,160,166,180,192,207,229 ⋆ Number of prime factors in the factorial of the n - th prime, counted with multiplicity. • a(n) = Sum _{ m=1..n } Sum _{ k=1..L } floor(p _ n / (p _ m) ^ k), where L = ceiling(log(p _ n) / log(p _ m)). •

► [A295998] 1,2,5,8,16,23,41,56,93,124,199,262,413,541,844,1101,1708,2223,3438,4470,6901,8966,13829,17960,27687 ⋆ Solution of the complementary equation a(n) = 2 * a(n - 2) + b(n - 2), where a(0) = 1, a(1) = 2, b(0) = 3, and (a(n)) and (b(n)) are increasing complementary sequences. • a(0) = 1, a(1) = 2, b(0) = 3, so that a(2) = 5, b(1) = 4. •

► [A096541] 0,0,1,2,5,8,16,24,41,61,95,136,204,284,407,560,779,1050,1432,1901,2543,3338,4393,5698,7411 ⋆ Number of parts unequal to 1 in all partitions of the integer n. Also the difference between the labeled and the unlabeled case of one

- element transitions from the partitions of n to the partitions of n + 1. • a(n) = Sum _{ k=1..n } (tau(k) - 1) * numbpart(n - k). - _ Vladeta Jovovic _ , Jun 26 2004 •

▶ [A169826] 1,2,5,8,16,27,45,69,109,171,268,404,597,860,1215 ⋆ Row sums of triangle A178568 • a(n) = sum of n - th row terms of triangle A178568 •

▶ [A280373] 1,2,5,8,16,40,84,130,257,640,1344,2080,4096,10240,21504,33280,65536,163840,344064,532480,1048576,2621440,5505024,8519680,16777216 ⋆ Decimal representation of the x - axis, from the left edge to the origin, of the n - th stage of growth of the two - dimensional cellular automaton defined by "Rule 260", based on the 5 - celled von Neumann neighborhood. • a(n) = 16 * a(n - 4) for n >3. •

▶ [A216307] 2,5,8,17,23,26,35,37,38,44,50,56,59,65,73,101,110,112,122,128,143,149,154,155,161 ⋆ Values of k such that 10 * k + 3 and 10 * k + 9 alone are prime between 10 * k and 10 * k + 9. • a(n) >> n log ^ 2 n. - _ Charles R Greathouse IV _ , Sep 07 2012 •

▶ [A062318] 0,1,2,5,8,17,26,53,80,161,242,485,728,1457,2186,4373,6560,13121,19682,39365,59048,118097,177146,354293,531440 ⋆ Numbers of the form 3 ^ m - 1 or 2 * 3 ^ m - 1; i.e., the union of sequences A048473 and A024023. • a(n) = 2 * 3 ^ (n / 2 - 1) - 1 if n is even; a(n) = 3 ^ (n / 2 - 1 / 2) - 1 if n is odd. - _ Emeric Deutsch _ , Feb 03 2005, offset updated. • a(n) = a(n - 1) + 3 * a(n - 2) - 3 * a(n - 3). • a(2n + 1) = 3 * a(2n - 1) + 2; a(2n) = (a(2n - 1) + a(2n + 1)) / 2. See A060647 for case where a(1)= 1. - _ Richard R. Forberg _ , Nov 30 2013 • a(n) = 2 ^ ((1 + (- 1) ^ n) / 2) * 3 ^ ((2 * n - 3 - (- 1) ^ n) / 4) - 1. - _ Luce ETIENNE _ , Aug 29 2014 • a(n) = (1 / 3) * ([n=0] - 3 + (1 + (- 1) ^ n) * 3 ^ (n / 2) + ((1 - (- 1) ^ n) / 2) * 3 ^ ((n + 1) / 2)). - _ G. C. Greubel _ , Apr 17 2023 •

▶ [A259580] 2,5,8,17,30,50,78,116,162,227,300,389,498,628,766,940,1128,1347,1584,1855,2146,2486,2838,3236,3660 ⋆ Sum of numbers in the n - th antidiagonal of the reciprocity array of 2. • a(n) = Sum _{ m=1..n } Sum _{ k=0..m - 1 } floor((n * k + x) / m), where x = 2. •

▶ [A103745] 1,2,5,8,17,34,65,128,257,514,1029,2048,4097,8194,16385,32768,65537,131074,262149,524296,1048577,2097154,4194305,8388608,16777217 ⋆ a(n) = (A102371(n) + n) / 2. • a(n) = Sum _{ k>= 1, k == n (mod 2 ^ k) } 2 ^ (k - 1) . - _ N. J. A. Sloane _ and _ David Applegate _ , Mar 22 2005 •

▶ [A152006] 1,1,2,5,8,18,34,63,102,203,336,589,999,1675,2799,4768,7561,12224,20513,31724,51621,81976,128560,199192,312536 ⋆ Expansion of Product _{ k > 0 } (1 + f(k) * x ^ k), where f(1) = 1 and f(m) = prime(m - 1) for m >= 2. • a(n) = [x ^ n] Product _{ k > 0 } (1 + f(k) * x ^ k), where f(1) = 1 and f(m) = prime(m - 1) for m >= 2. •

▶ [A243094] 1,2,5,8,19,44,92,201,444,965,2104,4602,10045,21924,47879,104540,228236,498337,1088072,2375657,5186976,11325186,24727205,53988976,117878715 ⋆ Cardinality of the Weyl alternation set corresponding to the zero - weight in the representation of the Lie algebra sp(2n) whose highest weight is the second fundamental weight. • a(n) = a(n - 1) + a(n - 2) + 3 * a(n - 3) + a(n - 4). •

▶ [A360771] 1,2,5,8,20,32,77,128,288,518,1104,2048,4313,8192,16832,32848,66568,131072,264688,524288,1053737,2097824,4205568,8388608,16803744 ⋆ Expansion of Sum _{ k>=0 } (x * (2 + x ^ k)) ^ k. • a(n) = Sum _{ d|n } 2 ^ (d - n / d + 1) * binomial(d,n / d - 1) for n > 0. •

▶ [A104721] 1,2,5,8,20,32,80,128,320,512,1280,2048,5120,8192,20480,32768,81920,131072,327680,524288,1310720,2097152,5242880,8388608,20971520 ⋆ Expansion of (1 + x) ^ 2 / (1 - 4 * x ^ 2). • a(n) = (9 * 2 ^ n + (- 2) ^ n - 2 * 0 ^ n) / 8. •

▶ [A245191] 1,2,5,8,20,34,85,128,320,544,1360,2056,5140,8738,21845,32768,81920,139264,348160,526336,1315840,2236928,5592320,8388736,20971840 ⋆ Successive states of one - sided one - dimensional cellular automaton using Rule 90, starting with a single ON cell, converted to decimal. • a(n) = Sum _{ i>=0, i==n mod 2 } (binomial(2n + 2,n + 2 + i) mod 2) * 2 ^ i. •

▶ [A121568] 1,1,2,5,8,21,34,89,377,610,2584,6765,10946,28657,121393,514229,832040,3524578,9227465,14930352,63245986,165580141,701408733,4807526976,12586269025 ⋆ Fibonacci[(p - 1) / 2], where p = Prime[n]. • a(n) = Fibonacci[(Prime[n] - 1) / 2], n>1. •

▶ [A007369] 2,5,9,10,11,16,17,19,21,22,23,25,26,27,29,33,34,35,37,41,43,45,46,47,49 ⋆ Numbers n such that sigma(x) = n has no solution. • a(n) < 2n + sqrt(8n). - _ Charles R Greathouse IV _ , Oct 23 2015 •

▶ [A100530] 0,2,5,9,10,12,15,19,20,22,25,29,30,32,35,39,40,42,45,49,50,52,55,59,60 ⋆ Numbers == 0,2,5,9 modulo 10. • a(n) = a(n - 1) + Mod[n,4] + 1; a(0)=0. • a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n > 4. •

▶ [A055394] 2,5,9,10,12,17,24,26,28,31,33,36,37,43,44,50,52,57,63,65,68,72,73,76,80 ⋆ Numbers that are the sum of a positive square and a positive cube. • a(n) >> n ^ (6 / 5). - _ Charles R Greathouse IV _ , May 15 2015 •

▶ [A047619] 1,2,5,9,10,13,17,18,21,25,26,29,33,34,37,41,42,45,49,50,53,57,58,61,65 ⋆ Numbers that are congruent to { 1, 2, 5 } mod 8. • a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. • a(n) = (24 * n - 24 - 3 * cos(2 * n * Pi / 3) + 5 * sqrt(3) * sin(2 * n * Pi / 3)) / 9. • a(3k) = 8k - 3, a(3k - 1) = 8k - 6, a(3k - 2) = 8k - 7. (End) •

▶ [A063957] 2,5,9,12,15,19,22,26,29,32,36,39,43,46,50,53,56,60,63,67,70,73,77,80,84 ⋆ Numbers not of the form round(m * sqrt(2)) for any integer m, i.e., complement of A022846. • a(n) = round((n - 1 / 2) * (2 + sqrt(2))) = round(n * 3.4142... - 1.7071...). •

▶ [A184579] 2,5,9,12,15,19,22,26,29,33,36,39,43,46,50,53,56,60,63,67,70,73,77,80,84 ⋆ a(n) = floor((n - 1 / 3) * (2 + sqrt(2))), complement of A184578. • a(n) = floor((n - 1 / 3) * (2 + sqrt(2))). •

▶ [A184922] 2,5,9,12,16,19,22,26,29,33,36,39,43,46,50,53,57,60,63,67,70,74,77,80,84 ⋆ a(n) = n + [rn / t] + [sn / t] + [un / t], where []=floor and r=2 ^ (1 / 2), s =r + 1, t=r + 2, u=r + 3. • a(n) = floor(n * (2 + sqrt(2))) - 1. - _ Michel Dekking _ , Feb 22 2018 •

▶ [A047385] 2,5,9,12,16,19,23,26,30,33,37,40,44,47,51,54,58,61,65,68,72,75,79,82,86 ⋆ Numbers that are congruent to { 2, 5 } mod 7. • a(n) = (14 * n - (- 1) ^ n - 7) / 4. - _ Bruno Berselli _ , Dec 05 2011 • a(n) = 4 * n - 2 - floor(n / 2). - _ Wesley Ivan Hurt _ , Oct 16 2013 •

▶ [A284624] 2,5,9,12,16,20,23,27,30,34,38,41,45,49,52,56,59,63,67,70,74,77,81,85,88 ⋆ Positions of 1 in A284749. • a(n) = floor((n - 1) * phi) + 2 * (n - 1) + 2 (Theorem 31 in Allouche and Dekking). - _ Michel Dekking _ , Oct 08 2018 •

▶ [A276217] 2,5,9,12,16,20,24,29,33,38,43,48,53,59,64,69,75,81,87,93,99,105,111,117,124 ⋆ Position of n ^ s in the joint ranking of { h ^ r } and { k ^ s } , where r = sqrt(3), s = sqrt(6), h > 1, k > 1. • a(n) = n + floor(n ^ (s / r)); the complement is given by n + floor(n ^ (r / s)). •

▶ [A239876] 0,0,2,5,9,12,18,23,28,35,45,47,59,70,76,85,101,107,125,133,143,162,184,184,203 ⋆ Partial sums of A229110, where A229110(n) = antisigma(n) mod n = A024816(n) mod n. • a(n) = a(n - 1) for numbers n from A159907 if there are no odd multiply perfect numbers (A007691). •

▶ [A373662] 2,5,9,12,20,23,35,38,54,57,77,80,104,107,135,138,170,173,209,212,252,255,299,302,350 ⋆ a(n) = (1 + (n + 1) ^ 2 - (n - 2) * (- 1) ^ n) / 2. • a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). •

▶ [A063203] 2,5,9,13,17,19,25,27,31,35,39,41,47,49,53,57,61,63,69,71,75,79,83,85,91 ⋆ Dimension of the space of weight 2n cuspidal newforms for Gamma _ 0(23). • a(n) = a(n - 2) + a(n - 3) - a(n - 5) for n>6. G.f.: x * (2 + 5 * x + 7 * x ^ 2 + 6 * x ^ 3 + 3 * x ^ 4 - x ^ 5) / ((1 - x) ^ 2 * (1 + x) * (1 + x + x ^ 2)). [_ Colin Barker _ , Sep 27 2012] •

▶ [A267531] 0,2,5,9,13,18,23,29,35,42,49,57,65,74,83,93,103,114,125,137,149,162,175,189,203 ⋆ Total number of OFF (white) cells after n iterations of the "Rule 141" elementary cellular automaton starting with a single ON (black) cell. • a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4) for n > 4. •

▶ [A120615] 0,1,2,5,9,13,19,25,33,42,51,62,74,86,100,114,130,147,164,183,202,223,245,267,291 ⋆ a(n) = Sum _{ k=0..n } floor(phi * floor(n / phi)) where phi = (1 + sqrt(5)) / 2. • a(n) = n * (n - 3) / 2 + ceiling(n / phi). •

▶ [A038707] 0,0,2,5,9,13,19,26,34,42,52,63,75,87,101,116,132,148,166,185,205,225,247,270,294 ⋆ a(n) = floor(n * (n + 1 / 2) / 2). • a(n) = (1 / 8) { 4n ^ 2 + 2 n - 3 + (- 1) ^ n - 2(- 1) ^ [(n - 1) / 2] } . - _ Ralf Stephan _ , Jun 10 2005 • a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 4) - 2 * a(n - 5) + a(n - 6) with a(0)=0, a(1)=0, a(2)=2, a(3)=5, a(4)=9, a(5)=13. - _ Harvey P. Dale _ , Dec 27 2015 • a(n) = floor(n(1 + 2 * n)) / 4). - _ Harvey P. Dale _ , Dec 27 2015 • a(n) = (- 3 + (- 1) ^ n + 2 * i ^ (n * (1 + n)) + 2 * n + 4 * n ^ 2) / 8, where i is the imaginary unit. •

▶ [A290140] 1,2,5,9,13,19,27,39,57,85,129,199,311,491,781,1249,2005,3227,5203,8399,13569,21933,35465,57359,92783 ⋆ The number of maximal subsemigroups of the Jones monoid on the set [1..n]. • a(n) = - 5 + (2 ^ (- n) * ((1 - sqrt(5)) ^ n * (1 + sqrt(5)) + (- 1 + sqrt(5)) * (1 + sqrt(5)) ^ n)) / sqrt(5) + 2 * (1 + n) for n>2. • a(n) = 3 * a(n - 1) - 2 * a(n - 2) - a(n - 3) + a(n - 4) for n>6. •

▶ [A126326] 1,2,5,9,13,31,35,92,118,280,516,752,1618,1968,5090,6594,15620,19556,48364,61552,149028,188140,460272,583376,1419928 ⋆ a(1) = 1; for n>1, a(n) = smallest number which is not a sum or product or power of any subset of the numbers a(1) to a(n - 1). • a(n) = 2 * a(n - 2) + 4 * a(n - 4) - 2 * a(n - 6) for n >16. •

▶ [A160663] 2,5,9,14,19,26,33,41,50,60,70,82,93,105,119,134,147,164,179,197,215,234,251,272,293 ⋆ Number of distinct sums that one can obtain by adding two squares among the n first ones. • a(n) = card(A + A) where A= { k ^ 2 } k=1..n and A + A = { a,b,a + b where (a,b) in A ^ 2 } . • a(n) << n ^ 2 / sqrt(log n) [see A000404]. - _ Charles R Greathouse IV _ , Oct 30 2015 •

▶ [A266450] 0,2,5,9,14,19,28,33,46,51,68,73,94,99,124,129,158,163,196,201,238,243,284,289,334 ⋆ Total number of OFF (white) cells after n iterations of the "Rule 25" elementary cellular automaton starting with a single ON (black) cell. • a(n) = (2 * n ^ 2 + 2 * ((- 1) ^ n + 3) * n - 7 * (- 1) ^ n - 1) / 4 for n>2. • a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n>7. •

▶ [A000096] 0,2,5,9,14,20,27,35,44,54,65,77,90,104,119,135,152,170,189,209,230,252,275,299,324 ⋆ a(n) = n * (n + 3) / 2. • a(n) = a(n - 1) + n + 1. - Bryan Jacobs (bryanjj(AT)gmail.com), Apr 01 2005 • a(n) = 2 * t(n) - t(n - 1) where t() are the triangular numbers, e.g., a(5) = 2 * t(5) - t(4) = 2 * 15 - 10 = 20. - _ Jon Perry _ , Jul 23 2003 • a(- 3 - n) = a(n). - _ Michael Somos _ , May 26 2004 • a(n) = C(3 + n, 2) - C(3 + n, 1). - _ Zerinvary Lajos _ , Dec 09 2005 • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Paul Curtz _ , Jan 02 2008 • a(n) = Sum _{ k=1..n } (k + 1)! / k!. - _ Gary Detlefs _ , Aug 03 2010 •

▶ [A109470] 2,5,9,14,20,27,36,46,57,69,82,96,111,127,144,162,181,201,222,244,267,291,316,342,370 ⋆ Sum of first n noncubes. • a(n) = Sum _{ i=1..n } (i + floor((i + floor(i ^ (1 / 3)) ^ (1 / 3))). •

▶ [A026053] 1,2,5,9,14,21,29,40,53,68,86,106,130,157,187,221,258,300,346,396,451,510,575,645,720 ⋆ (d(n) - r(n)) / 5, where d = A008778 and r is the periodic sequence with fundamental period (0,3,1,0,1). • a(n)=(n + 2) * (n ^ 2 + 10 * n + 15) / 30 - 1 / 5 * (1 + (- 1 / 2 + 3 / 10 * 5 ^ (1 / 2)) * cos(2 * n * Pi / 5) + (1 / 5 * 2 ^ (1 / 2) * (5 + 5 ^ (1 / 2)) ^ (1 / 2) + 1 / 10 * 2 ^ (1 / 2) * (5 - 5 ^ (1 / 2)) ^ (1 / 2)) * sin(2 * n * Pi / 5) + (- 1 / 2 - 3 / 10 * 5 ^ (1 / 2)) * cos(4 * n * Pi / 5) + (- 1 / 10 * 2 ^ (1 / 2) * (5 + 5 ^ (1 / 2)) ^ (1 / 2) + 1 / 5 * 2 ^ (1 / 2) * (5 - 5 ^ (1 / 2)) ^ (1 / 2)) * sin(4 * n * Pi / 5)) [From _ Richard Choulet _ , Dec 14 2008] • a(n)= 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 5) - 3 * a(n - 6) + 3 * a(n - 7) - a(n - 8). G.f.: - x ^ 2 * (- 1 + x - 2 * x ^ 2 + x ^ 3) / ((x ^ 4 + x ^ 3 + x ^ 2 + x + 1) * (x - 1) ^ 4). [From _ R. J. Mathar _ , Oct 05 2009] •

▶ [A199935] 0,0,2,5,9,14,22,36,60,99,161,260,420,680,1102,1785,2889,4674,7562,12236,19800,32039,51841,83880,135720 ⋆ Size (b ^ 3 _ n) of unit sphere in a certain graph (see Hazama article for precise definition). • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 4) - a(n - 5), with a(2)=0, a(3)=0, a(4)=2, a(5)=5, a(6)=9. - _ Harvey P. Dale _ , Jul 04 2013 •

▶ [A090937] 1,2,5,9,14,23,30,41,50,61,72,85,98,113,128,145,162,181,200,221,242,265,288,313,338 ⋆ a(1) = 1, a(2) = 2; for n > 2, a(n) = a(n - 1) + (smallest integer >= n which is coprime to a(n - 1)). • a(2 * n - 1) = 2 * n ^ 2, a(2 * n) = 2 * n ^ 2 + 2 * n + 1, for n > 4. •

▶ [A101201] 0,2,5,9,15,21,28,37,47,60,71,84 ⋆ Maximal number of kings in the toroidal king's graph on an n X n board such that each king is attacking no more than four other kings. • a(n) is approximately 3n ^ 2 / 5 (conjecture). •

► [A184535] 1,2,5,9,15,21,29,38,48,60,72,86,101,117,135,153,173,194,216,240,264,290,317,345,375 ⋆ a(n) = floor(3 / 5 * n ^ 2), with a(1)=1. ● a(n) = floor(1 /{(5 + n ^ 3) ^ (1 / 3) }), where {} =fractional part. ● a(n)= + 2 * a(n - 1) - a(n - 2) + a(n - 5) - 2 * a(n - 6) + a(n - 7), for n>8, with g.f. 1 - x ^ 2 * (1 + x) * (2 * x ^ 2 - x + 2) / ((x ^ 4 + x ^ 3 + x ^ 2 + x + 1) * (x - 1) ^ 3), so a(n) is (3n ^ 2 - 2) / 5 plus a fifth of A164116 for n>1. [_ Bruno Berselli _ , Jan 30 2011. See the following Bala's comment.] ● a(n) = floor(3 / 5 * n ^ 2) for n >= 2. ●

► [A195014] 0,2,5,9,15,21,30,38,50,60,75,87,105,119,140,156,180,198,225,245,275,297,330,354,390 ⋆ Vertex number of a square spiral whose edges have length A195013. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). ● a(n) = (10 * n ^ 2 + 18 * n + 3 + (2 * n - 3) * (- 1) ^ n) / 16. - _ Luce ETIENNE _ , Aug 11 2014 ●

► [A320259] 0,2,5,9,15,22,30,40,51,63,77,92,108,126,145,165,187,210,234,260,287,315,345,376,408 ⋆ Terms that are on the y - axis of the square spiral built with 2 * k, 2 * k + 1, 2 * k + 1 for k >= 0. ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) - 2 * a(n - 4) + a(n - 5), a(0)=0, a(1)=2, a(2)=5, a(3)=9, a(4)=15. ●

► [A308265] 0,0,1,2,5,9,15,22,34,45,62,81,104,129,163,195,237,282,333,387,454,518,596,678,768 ⋆ Sum of the largest parts in the partitions of n into 3 parts. ● a(n) = Sum _{ k=1..floor(n / 3) } Sum _{ i=k..floor((n - k) / 2) } (n - i - k). ● a(n) = 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4) - 4 * a(n - 5) - a(n - 6) + 2 * a(n - 7) + 2 * a(n - 8) - a(n - 10) for n>10. ●

► [A047809] 1,2,5,9,15,23,32,43,55,70,86,103,122,143,166,190,215,243,273,304,336,371,406,443,482 ⋆ a(n) counts different values of i ^ 2 + j ^ 2 + k ^ 2 <= n ^ 2 or number of distances from the origin to all integer points inside a sphere of radius n. ● a(n) = number of b(i) <= n ^ 2, b() = A000378. ●

► [A176691] 2,5,9,15,25,43,77,143,273,531,1045,2071,4121,8219,16413,32799,65569,131107,262181,524327,1048617,2097195,4194349,8388655,16777265 ⋆ a(n) = 2 ^ n + 2 * n + 1. ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 2 * a(n - 3). ●

► [A175287] 0,1,2,5,9,16,25,38,54,75,100,131,167,210,259,316,380,453,534,625,725,836,957,1090,1234 ⋆ Partial sums of ceiling(n ^ 2 / 4). ● a(n) = round((2 * n + 1) * (2 * n ^ 2 + 2 * n + 9) / 48). ● a(n) = floor((n + 1) * (2 * n ^ 2 + n + 9) / 24). ● a(n) = ceiling((2 * n ^ 3 + 3 * n ^ 2 + 10 * n) / 24). ● a(n) = round((2 * n ^ 3 + 3 * n ^ 2 + 10 * n) / 24). ● a(n) = a(n - 4) + n ^ 2 - 3 * n + 5 , n>3. ● a(n) = (2 * n * (2 * n ^ 2 + 3 * n + 10) - 9 * (- 1) ^ n + 9) / 48. - _ Bruno Berselli _ , Dec 03 2010 ●

► [A007979] 1,2,5,9,16,25,39,56,79,107,142,183,233,290,357,433,520,617,727,848,983,1131,1294,1471,1665 ⋆ Expansion of (1 + x ^ 2)(1 + x ^ 4) / ((1 - x) ^ 2 * (1 - x ^ 2) * (1 - x ^ 3)). ● a(n) = floor((2 * n ^ 3 + 3 * n ^ 2 + 24 * n + 18) / 18). - _ Tani Akinari _ , Jun 26 2013 ●

► [A097701] 1,2,5,9,16,25,39,56,80,109,147,192,249,315,396,489,600,726,874,1040,1232,1446,1690,1960,2265 ⋆ Expansion of 1 / ((1 - x) ^ 2 * (1 - x ^ 2) ^ 2 * (1 - x ^ 3)). ● a(n) = floor((n + 1) * (9 * (- 1) ^ n + n ^ 3 + 17 * n ^ 2 + 95 * n + 184) / 288 + 1 / 2). - _ Tani Akinari _ , Oct 07 2012 ● a(n) = 2 * a(n - 1) + a(n - 2) - 3 * a(n - 3) - a(n - 4) + a(n - 5) + 3 * a(n - 6) - a(n - 7) - 2 * a(n - 8) + a(n - 9) for n >= 9, with initial values as shown. - _ Harvey P. Dale _ , May 20 2013 ● a(n) = (6 * n * (9 * ((- 1) ^ n + 31) + n * (n * (n + 18) + 112)) + 243 * (- 1) ^ n + 128 * cos((2 * Pi * n) / 3) + 1357) / 1728. - _ Ilya Gutkovskiy _ , Apr 23 2016 ● a(n) = 1 + 175 * n / 288 + 47 * n ^ 2 / 144 + n ^ 3 / 16 + n ^ 4 / 288 + (9 / 16 + n / 8) * floor(n / 2) + 2 * floor(n / 3) / 9 + floor((n + 1) / 3) / 9. - _ Vaclav Kotesovec _ , Apr 24 2016 ●

► [A014739] 1,2,5,9,16,27,45,74,121,197,320,519,841,1362,2205,3569,5776,9347,15125,24474,39601,64077,103680,167759,271441 ⋆ Expansion of (1 + x ^ 2) / (1 - 2 * x + x ^ 3). ● a(n) = ((3 + sqrt(5))((1 + sqrt(5)) / 2) ^ n + (3 - sqrt(5))((1 - sqrt(5)) / 2) ^ n) / 2 - 2. (End) ● a(n) = 2 * a(n - 1) - a(n - 3). - _ Vincenzo Librandi _ , Dec 31 2010 ●

► [A130752] 2,5,9,16,31,63,128,257,513,1024,2047,4095,8192,16385,32769,65536,131071,262143,524288,1048577,2097153,4194304,8388607,16777215,33554432 ⋆ Binomial transform of periodic sequence (2, 3, 1). ● a(0) = 2; a(1) = 5; a(2) = 9; for n > 2, a(n) = 3 * a(n - 1) - 3 * a(n - 2) + 2 * a(n - 3). ● a(n) = 2 ^ (n + 1) + (2 * sin((Pi * n) / 3)) / sqrt(3). - _ Colin Barker _ , Jan 20 2017 ●

► [A271318] 1,1,2,5,9,16,33,67,126,239,477,946,1809,3471,6858,13515,26001,50100,98577,193705,373734,721691,1416933,2779780,5372001 ⋆ Expansion of 1 / (- x * sqrt(4 * x ^ 2 + 1) - x ^ 2 + 1). ● a(n) = Sum _{ k=0..n } Sum _{ j=floor(n / 2)..(n + k) / 2 } 4 ^ (j - k) * binomial(k,2 * j - n) * binomial((2 * j - n) / 2,j - k). ●

► [A308760] 0,0,0,0,1,2,5,9,17,25,41,57,84,112,154,197,262,325,414,506,629,751,915,1078,1289 ⋆ Sum of the largest parts of the partitions of n into 4 parts. ● a(n) = Sum _{ k=1..floor(n / 4) } Sum _{ j=k..floor((n - k) / 3) } Sum _{ i=j..floor((n - j - k) / 2) } (n - i - j - k). ● a(n) = a(n - 2) + 2 * a(n - 3) + 2 * a(n - 4) - 2 * a(n - 5) - 3 * a(n - 6) - 4 * a(n - 7) + 4 * a(n - 9) + 3 * a(n - 10) + 2 * a(n - 11) - 2 * a(n - 12) - 2 * a(n - 13) - a(n - 14) + a(n - 16) for n>15. ●

► [A308827] 0,0,0,0,0,1,2,5,9,17,27,44,64,96,134,188,251,339,439,571,724,917,1137,1411,1719 ⋆ Sum of the largest parts of the partitions of n into 5 parts. ● a(n) = Sum _{ l=1..floor(n / 5) } Sum _{ k=l..floor((n - l) / 4) } Sum _{ j=k..floor((n - k - l) / 3) } Sum _{ i=j..floor((n - j - k - l) / 2) } (n - i - j - k - l). ●

► [A308873] 0,0,0,0,0,0,1,2,5,9,17,27,46,67,103,146,210,285,396,520,694,896,1162,1466,1865 ⋆ Sum of the largest parts in the partitions of n into 6 parts. ● a(n) = Sum _{ m=1..floor(n / 6) } Sum _{ l=m..floor((n - m) / 5) } Sum _{ k=l..floor((n - l - m) / 4) } Sum _{ j=k..floor((n - k - l - m) / 3) } Sum _{ i=j..floor((n - j - k - l - m) / 2) } (n - i - j - k - l - m). ●

► [A308933] 0,0,0,0,0,0,0,1,2,5,9,17,27,46,69,106,153,222,307,430,577,778,1023,1343,1726 ⋆ Sum of the largest parts in the partitions of n into 7 parts. ● a(n) = Sum _{ o=1..floor(n / 7) } Sum _{ m=o..floor((n - o) / 6) } Sum _{ l=m..floor((n - m - o) / 5) } Sum _{ k=l..floor((n - l - m - o) / 4) } Sum _{ j=k..floor((n - k - l - m - o) / 3 } Sum _{ i=j..floor((n - j - k - l - m - o) / 2) } (n - i - j - k - l - m - o). ●

► [A308998] 0,0,0,0,0,0,0,0,1,2,5,9,17,27,46,69,108,156,229,319,452,611,835,1107,1473 ⋆ Sum of the largest parts in the partitions of n into 8 parts. ● a(n) = Sum _{ p=1..floor(n / 8) } Sum _{ o=p..floor((n - p) / 7) } Sum _{ m=o..floor((n - o - p) / 6) } Sum _{ l=m..floor((n - m - o - p) / 5) } Sum _{ k=l..floor((n - l - m - o - p) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p) / 2) } (n - i - j - k - l - m - o - p). ●

► [A326473] 0,0,0,0,0,0,0,0,0,0,1,2,5,9,17,27,46,69,108,158,232,326,464,633,869,1164 ⋆ Sum of the largest parts of the partitions of n into 9 parts. ● a(n) = Sum _{ q=1..floor(n / 9) } Sum _{ p=q..floor((n - q) / 8) } Sum _{ o=p..floor((n - p - q) / 7) } Sum _{ m=o..floor((n - o - p - q) / 6) } Sum _{ l=m..floor((n - m - o - p - q) / 5) } Sum _{ k=l..floor((n - l - m - o - p - q) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p - q) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p - q) / 2) } (n - i - j - k - l - m - o - p - q). ●

► [A326598] 0,0,0,0,0,0,0,0,0,0,1,2,5,9,17,27,46,69,108,158,234,329,471,645,891 ⋆ Sum of the largest parts of the partitions of n into 10 parts. ● a(n) = Sum _{ r=1..floor(n / 10) } Sum _{ q=r..floor((n - r) / 9) } Sum _{ p=q..floor((n - q - r) / 8) } Sum _{ o=p..floor((n - p - q - r) / 7) } Sum _{ m=o..floor((n - o - p - q - r) / 6) } Sum _{ l=m..floor((n - m - o - p - q - r) / 5) } Sum _{ k=l..floor((n - l - m - o - p - q - r) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p - q - r) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p - q - r) / 2) } (n - i - j - k - l - m - o - p - q - r). ●

► [A093694] 1,2,5,9,17,27,46,69,108,158,234,331,476,657,915,1244,1694,2262,3029,3988,5257,6844,8901,11461,14749 ⋆ Number of one - element transitions from the partitions of n to the partitions of n + 1 for labeled parts. ● a(n) = Sum _ k=1 ^ p(n) (nops(p(k, n)) + 1), where p(n) is the number of partitions of n and nops(p(k, n)) is the number of parts in the k - th partition p(n, k) of n. ● a(n) = Sum _ k=1 ^ p(n) nops(p(k, n)[subject to: at least one p(l, k, n) = 1]; p(n) = number of partitions of n, p(k, n) = k - th partition, p(l, k, n) = l - th part in the k - th partition p(k, n) of integer n. ●

► [A129696] 1,2,5,9,17,29,50,83,138,226,370,602,979,1588,2575,4171,6755,10935,17700,28645,46356,75012,121380,196404,317797 ⋆ Antidiagonal sums of triangular array T defined in A014430: T(j,k) = binomial(j + 1, k) - 1 for 1 <= k <= j. ● a(n) = Sum _{ k=0..floor(n / 2) } (Sum _{ j=0..n - 2 * k } Fibonacci(j + 1)). (End) ● a(n + 1) = a(n - 1) + a(n) + 1 + floor(n / 2) for n>1, a(0)=1, a(1)=2. - _ Alex Ratushnyak _ , Jul 30 2012 ● a(n) = Fibonacci(n + 3) - 2 - floor(n / 2). - _ Emeric Deutsch _ , Nov 22 2014 ● a(n) = (- 5 / 4 - (- 1) ^ n / 4 + (2 ^ (- n) * ((1 - t) ^ n * (- 2 + t) + (1 + t) ^ n * (2 + t))) / t + (- 1 - n) / 2), where t=sqrt(5). - _ Colin Barker _ , Feb 09 2017 ●

► [A115851] 0,0,1,1,1,2,5,9,17,34,69,137,273,546,1093,2185,4369,8738,17477,34953,69905,139810,279621,559241,1118481 ⋆ G.f. x ^ 2 * (- 1 + x + x ^ 2) / ((1 - x) * (2 * x - 1) * (x + 1) * (x ^ 2 + 1)). ● a(n) = (2 ^ n - 1) / 15 if n == 0 (mod 4), (2 ^ n - 2) / 15 if n == 1 (mod 4), (2 ^ n + 11) / 15 if n == 2 (mod 4), (2 ^ n + 7) / 15 if n == 3 (mod 4). - _ Robert Israel _ , Mar 14 2023 ●

► [A295724] 0,0,1,2,5,9,18,31,57,96,169,281,482,795,1341,2200,3669,5997,9922,16175,26609,43296,70929,115249,188226 ⋆ a(n) = a(n - 1) + 3 * a(n - 2) - 2 * a(n - 3) - 2 * a(n - 4), where a(0) = 0, a(1) = 0, a(2) = 1, a(3) = 2. ● a(n) = a(n - 1) + a(n - 3) + a(n - 4), where a(0) = 0, a(1) = 0, a(2) = 1, a(3) = 2. ●

► [A077865] 1,2,5,9,18,32,60,107,196,351,637,1144,2068,3720,6713,12086,21793,39253,70754,127468,229724,413907,745888,1343979,2421849 ⋆ Expansion of (1 - x) ^ (- 1) / (1 - x - 2 * x ^ 2 + x ^ 3). ● a(n)=a(n - 1) + 2a(n - 2) - a(n - 3) + 1 for n>=3. a(n)=2a(n - 1) + a(n - 2) - 3a(n - 3) + a(n - 4) for n>=4. - _ Clark Kimberling _ , Jun 26 2004 ●

► [A289976] 0,0,1,1,2,5,9,18,36,70,137,268,522,1017,1980,3852,7492,14568,28321,55051,106999,207952,404134,785366,1526186 ⋆ p - INVERT of (0,0,1,2,3,5,8,...), the Fibonacci numbers preceded by two zeros, where p(S) = 1 - S - S ^ 2. ● a(n) = 2 * a(n - 1) + a(n - 2) - a(n - 3) - 2 * a(n - 4) - a(n - 5) + a(n - 6). ●

► [A077947] 1,1,2,5,9,18,37,73,146,293,585,1170,2341,4681,9362,18725,37449,74898,149797,299593,599186,1198373,2396745,4793490,9586981 ⋆ Expansion of 1 / (1 - x - x ^ 2 - 2 * x ^ 3). ● a(n) = a(n - 1) + a(n - 2) + 2 * a(n - 3). - _ Paul Curtz _ , May 23 2008 ● a(n) = round(2 ^ (n + 2) / 7). - _ Mircea Merca _ , Dec 28 2010 ● a(n) = 4 * 2 ^ n / 7 + 3 * cos(2 * Pi * n / 3) / 7 + sqrt(3) * sin(2 * Pi * n / 3) / 21. - _ Paul Barry _ , Jan 23 2004 ● a(n) = sum(sum(binomial(k,j) * binomial(j,n - 3 * k + 2 * j) * 2 ^ (k - j),j,0,k),k,1,n), n>0. - _ Vladimir Kruchinin _ , Sep 07 2010 ● a(n) = 1 / 14 * (2 ^ (n + 3) + (- 1) ^ n * ((- 1) ^ floor(n / 3) + 4 * (- 1) ^ floor((n + 1) / 3) + 2 * (- 1) ^ floor((n + 2) / 3) + (- 1) ^ floor((n + 4) / 3))). - _ John M. Campbell _ , Dec 23 2016 ● a(n) = 1 / 63 * (9 * 2 ^ (2 + n) + (- 1) ^ n * (2 + 9 * floor(n / 6) - 32 * floor((n + 5) / 6) + 24 * floor((n + 7) / 6) + 20 * floor((n + 8) / 6) - 10 * floor((n + 9) / 6) - 27 * floor((n + 10) / 6) + 14 * floor((n + 11) / 6) + 3 * floor((n + 13) / 6) - 2 * floor((n + 14) / 6) + floor((n + 15) / 6))). - _ John M. Campbell _ , Dec 23 2016 ●

► [A293354] 1,1,2,5,9,18,37,74,148,296,591,1182,2364,4729,9457,18914,37828,75657,151314,302627,605254,1210509,2421018,4842036,9684072 ⋆ The integer k that minimizes |k / 2 ^ n - r|, where r = Euler's constant (0.577216...). ● a(n) = floor(1 / 2 + r * 2 ^ n), where r = Euler's constant (0.577216...). ●

► [A293329] 1,1,2,5,9,18,37,74,148,296,591,1182,2365,4730,9459,18919,37837,75674,151349,302698,605396,1210791,2421583,4843165,9686330 ⋆ The integer k that minimizes |k / 2 ^ n - sqrt(1 / 3))|. ● a(n) = floor(1 / 2 + r * 2 ^ n), where r = sqrt(1 / 3). ●

► [A014495] 0,0,1,2,5,9,19,34,69,125,251,461,923,1715,3431,6434,12869,24309,48619,92377,184755,352715,705431,1352077,2704155 ⋆ Central binomial coefficient - 1. ● a(n) = C(n - 1,floor((n - 1) / 2)) - 1. - _ Alois P. Heinz _ , Oct 03 2012 ●

► [A056326] 0,1,2,5,9,19,35,71,135,271,527,1055,2079,4159,8255,16511,32895,65791,131327,262655,524799,1049599,2098175,4196351,8390655 ⋆ Number of reversible string structures with n beads using exactly two different colors. ● a(n) = 3 * a(n - 1) - 6 * a(n - 3) + 4 * a(n - 4). ●

► [A062092] 2,5,9,19,37,75,149,299,597,1195,2389,4779,9557,19115,38229,76459,152917,305835,611669,1223339,2446677,4893355,9786709,19573419,39146837 ⋆ a(n) = 2 * a(n - 1) - (- 1) ^ n for n > 0, a(0)=2. ● a(n) = a(n - 1) + 2 * a(n - 2). ● a(n) = (7 * 2 ^ n - (- 1) ^ n) / 3. ●

► [A105309] 1,1,2,5,9,20,41,85,178,369,769,1600,3329,6929,14418,30005,62441,129940,270409,562725,1171042,2436961,5071361,10553600,21962241 ⋆ a(n) = |b(n)| ^ 2 = x ^ 2 + 3 * y ^ 2 where (x,y,y,y) is the quaternion b(n) of the sequence b of quaternions defined by b(0)=1,b(1)=1, b(n) = b(n - 1) + b(n - 2) * (0,c,c,c

) where c = 1 / sqrt(3). • a(n) = (T(n,alpha) - T(n,beta)) / (alpha - beta), where alpha = (1 + sqrt(17)) / 4 and beta = (1 - sqrt(17)) / 4 and T(n,x) denotes the Chebyshev polynomial of the first kind. • a(n) = bottom left entry of the 2 X 2 matrix T(n, M), where M is the 2 X 2 matrix [0, 1; 1, 1 / 2]. • a(n) = U(n - 1,(1 + i) / sqrt(8)) * U(n - 1,(1 - i) / sqrt(8)), where U(n,x) denotes the Chebyshev polynomial of the second kind. • a(n) = abs(((sqrt(4 * i - 1) + i) ^ (n + 1) - (i - sqrt(4 * i - 1)) ^ (n + 1)) / 2 ^ (n + 1) / sqrt(4 * i - 1)) ^ 2. - _ Daniel Suteu _ , Dec 20 2016 • a(n) = a(- 2 - n) for all n in Z. - _ Michael Somos _ , Dec 20 2016 •

▶ [A097163] 1,2,5,9,21,37,85,149,341,597,1365,2389,5461,9557,21845,38229,87381,152917,349525,611669,1398101,2446677,5592405,9786709,22369621 ⋆ Expansion of (1 + x - x ^ 2) / ((1 - x) * (1 - 4 * x ^ 2)). • a(n) = 5 * 2 ^ n / 4 + (- 2) ^ n / 12 - 1 / 3. • a(n) = a(n - 1) + 4 * a(n - 2) - 4 * a(n - 3). • a(n) = (15 * 2 ^ n - (- 2) ^ n - 8) / 24. - _ Harvey P. Dale _ , Jun 17 2011 •

▶ [A373638] 1,1,2,5,9,21,43,92,196,414,882,1869,3970,8427,17887,37975,80608,171121,363254,771119,1636944,3474913,7376591,15659094,33241289 ⋆ a(n) = Sum _{ k=0..floor(n / 2) } binomial(3 * n - 5 * k,k). • a(n) = a(n - 1) + 3 * a(n - 2) - 3 * a(n - 4) + a(n - 6) for n > 5. •

▶ [A305189] 1,2,5,9,25,31,38,87,96,106,206,218,231,400,415,431,687,705,724,1085,1106,1128,1612,1636,1661 ⋆ a(n) = 1 * 2 + 3 + 4 * 5 + 6 + 7 * 8 + 9 + 10 * 11 + 12 + ... + (up to n). • a(n) = 3 * floor(n / 3) * (floor(n / 3) + 1) / 2 + floor((n + 1) / 3) * (3 * floor((n + 1) / 3) ^ 2 - 1) + n * (floor((n - 1) / 3) - floor((n - 2) / 3)). • a(n) = a(n - 1) + 3 * a(n - 3) - 3 * a(n - 4) - 3 * a(n - 6) + 3 * a(n - 7) + a(n - 9) - a(n - 10) for n>10. •

▶ [A344394] 1,1,2,5,9,25,44,133,230,726,1242,4037,6853,22737,38376,129285,217242,740554,1239980,4266830,7123765,24701425,41141916,143567173,238637282 ⋆ a(n) = binomial(n, n / 2 - 1 / 4 + (- 1) ^ n / 4) * hypergeom([- n / 4 - 1 / 8 + (- 1) ^ n / 8, - n / 4 + 3 / 8 + (- 1) ^ n / 8], [n / 2 + 7 / 4 + (- 1) ^ n / 4], 4) . • a(n) = Sum _{ j = 0..n } C(n, j) * (C(n - j, j + n / 2 - 1 / 4 + (- 1) ^ n / 4) - C(n - j, j + n / 2 + 7 / 4 + (- 1) ^ n / 4). •

▶ [A185160] 1,1,1,1,2,5,9,61,193,1439,13892,121853,1908467,47166783,675904139,39429369055,1213855360958,67750536841003,6132230542496 11,493982993144750867,5855060749433528 6859,1420080026270105036 2129,170298766313399110 3090484 ⋆ Somos - 4 variation with periodic coefficients. • a(0) = a(1) = a(2) = a(3) = 1, a(n + 4) * a(n) = c(n) * a(n + 3) * a(n + 1) + a(n + 2) ^ 2, c(0) = 2, c(1) = 1, c(n + 2)=c(n). •

▶ [A194350] 1,1,2,5,10,10,20,50,100,100,200,500,1000,1000,2000,5000,10000,10000,20000,50000,100000,100000,200000,500000,1000000 ⋆ Numbers covering A000027: a(n)=(1, 1, 2, 5) * A011557(n)). • a(1)=1, a(2)=1, a(3)=2, a(4)=5, a(n)=10 * a(n - 4). G.f.: x * (1 + x + 2 * x ^ 2 + 5 * x ^ 3) / (1 - 10 * x ^ 4). [Colin Barker, Jan 25 2012] •

▶ [A245480] 1,2,5,10,11,22,55,110,121,242,605,1210,1331,2662,6655,13310,14641,29282,73205,146410,161051,322102,805255,1610510,1771561 ⋆ Numbers n such that the n - th cyclotomic polynomial has a root mod 11. • a(n) = 11 * a(n - 4). • a(n) appears to satisfy x * Prod _{ n>=0 } (1 + a(2 ^ n + 1)x ^ (2 ^ n)) = Sum _{ n>=1 } a(n) * x ^ n. •

▶ [A103215] 1,2,5,10,13,17,25,26,29,34,37,41,49,50,53,58,61,65,73,74,77,82,85,89,97 ⋆ Numbers congruent to { 1, 2, 5, 10, 13, 17 } mod 24. • a(1)=1, a(2)=2, a(3)=5, a(4)=10, a(5)=13, a(6)=17, a(7)=25, a(n) = a(n - 1) + a(n - 6) - a(n - 7) for n>7. - _ Harvey P. Dale _ , Feb 19 2015 • a(n) = a(n - 6) + 24 for n>6. • a(n) = (12 * n - 18 + cos(n * Pi / 3) - 3 * cos(2 * n * Pi / 3) - cos(n * Pi) + 2 * sqrt(3) * sin(n * Pi / 3) + 2 * sqrt(3) * sin(2 * n * Pi / 3)) / 3. • a(6k) = 24k - 7, a(6k - 1) = 24k - 11, a(6k - 2) = 24k - 14, a(6k - 3) = 24k - 19, a(6k - 4) = 24k - 22, a(6k - 5) = 24k - 23. (End) •

▶ [A047617] 2,5,10,13,18,21,26,29,34,37,42,45,50,53,58,61,66,69,74,77,82,85,90,93,98 ⋆ Numbers that are congruent to { 2, 5 } mod 8. • a(n) = 8 * n - a(n - 1) - 9 (with a(1)=2). - _ Vincenzo Librandi _ , Aug 06 2010 • a(n) = 4 * n - (5 + (- 1) ^ n) / 2. - _ Arkadiusz Wesolowski _ , Sep 18 2012 • a(1)=2, a(2)=5, a(3)=10, a(n) = a(n - 1) + a(n - 2) - a(n - 3). - _ Harvey P. Dale _ , Feb 23 2016 •

▶ [A185647] 1,2,5,10,13,26,29,58,61,122,125,250,253,506,509,1018,1021,2042,2045,4090,4093,8186,8189,16378,16381 ⋆ Expansion of (1 + 2x) * (1 + 2 * x ^ 2) / ((1 - x) * (1 + x) * (1 - 2 * x ^ 2)). • a(n) = a(n - 1) * 2 if n odd. • a(n) = a(n - 1) + 3 if n even. • a(n) = 3 * a(n - 2) - 2 * a(n - 4) with a(0)=1, a(1)=2, a(2)=5, a(3)=10. •

▶ [A140411] 1,2,5,10,13,37,58,85,130 ⋆ Conjectured complete list of squarefree numbers that can be written as a sum of at most two positive squares, but not as a sum of three positive squares. • a(n) in A005117 and a(n) in { i ^ 2 + j ^ 2 for i,j > 1 } and a(n) not in { i ^ 2 + j ^ 2 + k ^ 2 for i,j,k > 1 } . •

▶ [A135042] 1,2,5,10,15,20,25,30,35,40,45,50,55,60,65,70,75,80,85,90,95,100,105,110,115 ⋆ a(n) = 5 * (n - 1) for n >= 2; a(0) = 1, a(1) = 2. • a(n) = 2 * a(n - 1) - a(n - 2), n > 3. - _ R. J. Mathar _ , Apr 21 2010, corrected Sep 02 2010 • a(n) = 5 * (n - 1) for n >= 2. •

▶ [A215098] 0,1,2,5,10,15,20,27,36,45,54,65,78,91,104,119,136,153,170,189,210,231,252,275,300 ⋆ a(0)=0, a(1)=1, a(n) = n * (n - 1) - a(n - 2). • a(n) = (n ^ 2 + n - 1 + cos(pi * n / 2) + sin(pi * n / 2)) / 2. - _ Vaclav Kotesovec _ , Aug 11 2012 •

▶ [A179207] 1,2,5,10,15,22,29,38,47,58,69,82,95,110,125,142,159,178,197,218,239,262,285,310,335 ⋆ a(n) = n - 1 + ceiling((- 3 + n ^ 2) / 2) if n > 1 with a(1)=1, complement of A182835. • a(n) = n - 1 + ceiling((- 3 + n ^ 2) / 2) if n > 1. • a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4). - _ Joerg Arndt _ , Apr 02 2011 • a(n) = (2 * n ^ 2 + 4 * n - 9 + (- 1) ^ n) / 4 for n > 1. • a(n) = a(n - 2) + 2 * n for n > 3. • a(- n) = a(n - 2) for n > 1. •

▶ [A008822] 1,2,5,10,15,22,31,40,51,64,77,92,109,126,145,166,187,210,235,260,287,316,345,376,409 ⋆ Expansion of (1 + 2 * x ^ 2 + x ^ 3) / ((1 - x) ^ 2 * (1 - x ^ 3)). • a(n) = ceiling((n + 1) * (2 * n + 1) / 3). - _ Jörg Zurkirchen _ , Oct 15 2008 • a(n) = (n + 1) ^ 2 - floor((n + 1) * (n + 2) / 3). - _ Bruno Berselli _ , Mar 02 2017 •

▶ [A267454] 0,2,5,10,15,23,30,40,51,63,75,91,106,123,141,161,181,204,226,251,277,304,331,362,392 ⋆ Total number of OFF (white) cells after n iterations of the "Rule 131" elementary cellular automaton starting with a single ON (black) cell. • a(n) = a(n - 1) + a(n - 3) - a(n - 5) - a(n - 7) + a(n - 8) for n>7. •

▶ [A135061] 2,5,10,16,22,29,37,45,54,63,72,83,93,104,116,128,140,152,165,178,192,206,220,235,250 ⋆ a(n) = minimum (floor(n ^ 3 / m) + m) for any integer m >= 1. • a(n) = floor(2 * n ^ (3 / 2)), with the minimum occurring at m = ceiling(n ^ (3 / 2)). See link for proof. - _ Robert Israel _ , Mar 03 2017 •

▶ [A086849] 2,5,10,16,23,31,41,52,64,77,91,106,123,141,160,180,201,223,246,270,296,323,351,380,410 ⋆ Sum of first n nonsquares. • a(n) = Sum _{ i=1..n } (i + floor(1 / 2 + sqrt(i))). • a(n) = floor(1 / 2 + (n + sqrt(n)) * (n / 2 + sqrt(n) / 6 + 1 / 3) - (floor(1 / 2 + sqrt(n)) - sqrt(n)) ^ 2 * sqrt(n)). - _ Graeme McRae _ , Aug 28 2007 • a(n) = n ^ 2 / 2 + 2n * sqrt(n) / 3 + O(n). - _ Charles R Greathouse IV _ , Aug 28 2016 •

▶ [A026056] 2,5,10,16,23,33,45,60,77,96,119,145,175,208,244,285,330,380,434,492,556,625,700,780,865 ⋆ a(n) = (d(n) - r(n)) / 5, where d = A026054 and r is the periodic sequence with fundamental period (3,3,0,0,4). • a(n) = (n + 2) * (n + 3) * (n + 13) / 30 - 1 / 5 * (2 + (1 / 2 + 7 / 10 * 5 ^ (1 / 2)) * cos(2 * n * Pi / 5) + (- 1 / 10 * 2 ^ (1 / 2) * (5 + 5 ^ (1 / 2)) ^ (1 / 2)) * sin(2 * n * Pi / 5) + (1 / 2 - 7 / 10 * 5 ^ (1 / 2)) * cos(4 * n * Pi / 5) + (- 1 / 10 * 2 ^ (1 / 2) * (5 - 5 ^ (1 / 2)) ^ (1 / 2)) * sin(4 * n * Pi / 5)). - _ Richard Choulet _ , Dec 14 2008 • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 5) - 3 * a(n - 6) + 3 * a(n - 7) - a(n - 8). - _ Wesley Ivan Hurt _ , Jul 29 2022 •

▶ [A267159] 1,2,5,10,16,24,31,44,50,65,73,94,100,123,131,160,166,197,205,242,248,287,295,340,346 ⋆ Total number of ON (black) cells after n iterations of the "Rule 107" elementary cellular automaton starting with a single ON (black) cell. • a(n) = a(n - 1) + a(n - 2) - a(n - 3) + a(n - 4) - a(n - 5) - a(n - 6) + a(n - 7) for n>12. •

▶ [A084587] 2,5,10,16,24,33,44,55,68,83,99,116,135,155,177,199,224,249,276,305,335,366,398,432,468 ⋆ Integer floor of the reciprocal of Gauss - Kuzmin distribution of n: a(n) = floor(log(2) / log(1 + 1 / (n * (n + 2)))). • a(n) = (n ^ 2 + 2n) * log(2) + O(1). - _ Charles R Greathouse IV _ , Sep 04 2015 •

▶ [A001859] 0,2,5,10,16,24,33,44,56,70,85,102,120,140,161,184,208,234,261,290,320,352,385,420,456 ⋆ Triangular numbers plus quarter - squares: n * (n + 1) / 2 + floor((n + 1) ^ 2 / 4) (i.e., A000217(n) + A002620(n + 1)). • a(n) = n + floor((3n ^ 2 + 1) / 4). • a(n) = (6n ^ 2 + 8n + 1 - (- 1) ^ n) / 8; • a(n) = Sum _{ k=0..n } max(k, n - k). (End) • a(0)=0, a(1)=2, a(2)=5, a(3)=10, a(n) = 2 * a(n - 1) + 0 * a(n - 2) - 2 * a(n - 3) + a(n - 4). - _ Harvey P. Dale _ , Apr 01 2012 • a(n) = Sum _{ k=1..n } floor((n + k + 2) / 2). - _ Wesley Ivan Hurt _ , Mar 31 2017 •

▶ [A011903] 0,0,0,0,1,2,5,10,16,24,34,47,62,81,104,130,160,194,233,276,325,380,440,506,578 ⋆ a(n) = floor(n * (n - 1) * (n - 2) / 21). • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 7) - 3 * a(n - 8) + 3 * a(n - 9) - a(n - 10). •

▶ [A079984] 1,1,1,1,2,5,10,16,26,43,80,148,264,465,816,1444,2588,4619,8214,14591,25903,46071,82015,145904,259492 ⋆ Number of permutations satisfying - k<= p(i) - i<=r and p(i) - i not in I, i=1..n, with k=3, r=3, I= {- 1,1,2 } . • a(n) = a(n - 1) + a(n - 2) + a(n - 3) - a(n - 4) + a(n - 5) + 3 * a(n - 6) - 4 * a(n - 7) - 4 * a(n - 8) - 2 * a(n - 9) + 4 * a(n - 10) + 2 * a(n - 11) - 4 * a(n - 12) + 4 * a(n - 13) + 3 * a(n - 14) - a(n - 15) - a(n - 16) - a(n - 17) + a(n - 18) - a(n - 19) - a(n - 20) •

▶ [A002522] 1,2,5,10,17,26,37,50,65,82,101,122,145,170,197,226,257,290,325,362,401,442,485,530,577 ⋆ a(n) = n ^ 2 + 1. • a(n) * a(n - 2) = (n - 1) ^ 4 + 4. - _ Reinhard Zumkeller _ , Feb 12 2009 • a(n) = 2 * a(n - 1) - a(n - 2) + 2. • a(n) = a(n - 1) + 2 * n - 1. (End) • a(n) = (n - 1) ^ 2 + 2(n - 1) + 2 = 122 read in base n - 1 (for n > 3). - _ Jason Kimberley _ , Oct 20 2011 • a(n) * a(n + 1) = a(n * (n + 1) + 1) so a(1) * a(2) = a(3). More generally, a(n) * a(n + k) = a(n * (n + k) + 1) + k ^ 2 - 1. - _ Jon Perry _ , Aug 01 2012 • a(n) = (n!) ^ 2 * [x ^ n] BesselI(0, 2 * sqrt(x)) * (1 + x). - _ Peter Luschny _ , Aug 25 2012 •

▶ [A322008] 2,5,10,17,26,37,50,65,82,101,123,146,171,198,227,258,291,326,364,403,444,487,532,579,628 ⋆ 1 / (1 - Integral _{ x=0..1 } x ^ (x ^ n) dx), rounded to the nearest integer. • a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 8) - 2 * a(n - 9) + a(n - 10) for n>11. •

▶ [A248193] 1,1,1,1,1,1,2,5,10,17,26,37,51,74,118,201,347,586,955,1509,2351,3682,5871,9545,15700 ⋆ G.f.: Sum _{ n>=0 } x ^ n * Sum _{ k=0..n } C(n,k) ^ 2 * x ^ (5 * k). • a(n) = Sum _{ k=0..[n / 5] } C(n - 5 * k, k) ^ 2. •

▶ [A246884] 1,1,1,1,1,2,5,10,17,26,38,59,101,182,326,564,945,1566,2622,4476,7750,13455,23231,39837,68101 ⋆ G.f.: Sum _{ n>=0 } x ^ n * Sum _{ k=0..n } C(n,k) ^ 2 * x ^ (4 * k). • a(n) = Sum _{ k=0..[n / 4] } C(n - 4 * k, k) ^ 2. •

▶ [A246883] 1,1,1,1,2,5,10,17,27,46,86,165,308,558,1006,1841,3421,6383,11863,21966,40697,75662,141099,263429,491778 ⋆ G.f.: Sum _{ n>=0 } x ^ n * Sum _{ k=0..n } C(n,k) ^ 2 * x ^ (3 * k). • a(n) = Sum _{ k=0..[n / 3] } C(n - 3 * k, k) ^ 2. •

▶ [A007504] 0,2,5,10,17,28,41,58,77,100,129,160,197,238,281,328,381,440,501,568,639,712,791,874,963 ⋆ Sum of the first n primes. • a(n) = (n ^ 2 / 2) * (log n + log log n - 3 / 2 + (log log n - 3) / log n + (2 (log log n) ^ 2 - 14 log log n + 27) / (4 log ^ 2 n) + O((log log n / log n) ^ 3)) [Sinha]. - _ Charles R Greathouse IV _ , Jun 11 2015 •

▶ [A011894] 0,0,0,0,2,5,10,17,28,42,60,82,110,143,182,227,280,340,408,484,570,665,770,885,1012 ⋆ a(n) = floor(n(n - 1)(n - 2) / 12). • a(n) = + 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 4) - 3 * a(n - 5) + 3 * a(n - 6) - a(n - 7); • a(n) = (2 * n ^ 3 - 6 * n ^ 2 + 4 * n - 3 * (1 - (- 1) ^ n) * (1 - (- 1) ^ ((2 * n - 1 + (- 1) ^ n) / 4))) / 24. - _ Luce ETIENNE _ , Jun 26 2014 •

▶ [A109377] 2,5,10,17,29,51,90,158,277,486,853,1497,2627,4610,8090,14197,24914,43721,76725,134643,236282,414646,727653,1276942,2240877 ⋆ Expansion of (2 + x + 2 * x ^ 2) / (1 - 2 * x + x ^ 2 - x ^ 3). • a(n) = P(2 * n + 4) where P is the Perrin sequence (A001608). a(n) is asymptotic to r ^ (n + 2) where r is the real root of x ^ 3 - 2 * x ^ 2 + x - 1 (A109134). For n>2, a(n) = round(r ^ (n + 2)). - _ Gerald McGarvey _ , Jan 12 2008 •

▶ [A360749] 1,1,1,1,2,5,10,17,30,64,146,315,649,1386,3164,7381,16931,38649,90406,217474,527586,1277452,3112371,7705059,19336789 ⋆ Expansion of Sum _{ k >=0 } (x * (1 + k * x ^ 3)) ^ k. • a(n) = Sum _{ k=0..floor(n / 4) } (n - 3 * k) ^ k * binomial(n - 3 * k,k). •

► [A308600] 2,5,10,17,34,61,98,145,202,269,346,433,530,637,754,881,1018,1165,1322,1489,1666,1853,2050,2257,2474 ⋆ Number of (not necessarily maximal) cliques in the n X n antelope graph. ● a(n) = 5 * n ^ 2 - 28 * n + 49 for n >= 3. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>5. ●

► [A308604] 2,5,10,17,34,73,126,193,274,369,478,601,738,889,1054,1233,1426,1633,1854,2089,2338,2601,2878,3169,3474 ⋆ Number of (not necessarily maximal) cliques in the n X n fiveleaper graph. ● a(n) = 7 * n ^ 2 - 38 * n + 49 for n > 4. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>7. ●

► [A213299] 2,5,10,17,40,77,130,203,440,813,1350,2087,4460,8197,13570,20943,44680,82053,135790,209527,446900,820637,1358010,2095383,4469120 ⋆ Partial sums of A211681. ● a(n) = ((3982 + 2709 * k + 567 * k ^ 2 + 54 * k ^ 3) * 10 ^ m - 1980 * m - 2200 - 495 * k + 162 * ((n + 1) mod 2) * (- 1) ^ m * (- 1) ^ floor(n / 2)) / 891, where m=floor((n - 1) / 4), k=(n - 1) mod 4. ● a(n) = 2 * a(n - 1) - a(n - 2) + 9 * a(n - 4) - 18 * a(n - 5) + 9 * a(n - 6) + 10 * a(n - 8) - 20 * a(n - 9) + 10 * a(n - 10) for n > 10. ●

► [A348919] 0,0,0,1,2,5,10,18,29,47,69,100,140,191,253,333,426,540,675,834,1017,1234,1478,1760,2080 ⋆ Sum of the middle parts of the partitions of k into 3 parts for all 0 <= k <= n. ● a(n) = Sum _{ m=1..n } Sum _{ k=1..floor(m / 3) } Sum _{ i=k..floor((m - k) / 2) } i. ● a(n) = a(n - 1) + 2 * a(n - 2) - 3 * a(n - 4) - 3 * a(n - 5) + 3 * a(n - 6) + 3 * a(n - 7) - 2 * a(n - 9) - a(n - 10) + a(n - 1 _) . - _ Wesley Ivan Hurt _ , Nov 19 2021 ●

► [A177787] 2,5,10,18,30,47,70,100,138,185,242,310,390,483,590,712,850,1005,1178,1370,1582,1815,2070,2348,2650 ⋆ Number of paths from (0,0) to (n + 2,n) using only up and right steps and avoiding two or more consecutive moves up or three or more consecutive moves right. ● a(n) = 1 / 6 * n (11 + n ^ 2). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ●

► [A117485] 1,2,5,10,18,30,49,74,110,158,221,302,407,536,698,896,1136,1424,1770,2176,2656,3216,3866,4616,5481 ⋆ Expansion of x ^ 9 / ((1 - x) * (1 - x ^ 2) * (1 - x ^ 3)) ^ 2. ● a(n) = 2 * a(n - 1) + a(n - 2) - 2 * a(n - 3) - 3 * a(n - 4) + 6 * a(n - 6) - 3 * a(n - 8) - 2 * a(n - 9) + a(n - 10) + 2 * a(n - 11) - a(n - 12) for n> 20. - _ Colin Barker _ , Dec 12 2019 ●

► [A006327] 0,2,5,10,18,31,52,86,141,230,374,607,984,1594,2581,4178,6762,10943,17708,28654,46365,75022,121390,196415,317808 ⋆ a(n) = Fibonacci(n) - 3. Number of total preorders. ● a(n) = a(n - 1) + a(n - 2) + 3. ● a(n + 3) = Sum _{ k= - n + 1..n } F(abs(n) + 1). - _ Paul Barry _ , Oct 24 2007 ● a(n) = F(4 * n) mod F(n + 1) = F(n) - (F(n + 4) ^ 2 - F(n) ^ 2) / F(2 * n + 4). - _ Gary Detlefs _ , Apr 02 2012 ●

► [A185721] 0,0,0,0,0,1,2,5,10,18,32,51,79,118,172,243,335,454,604,792,1024,1306,1649,2059,2548 ⋆ Arises in the maximum number of C5's in a triangle - free graph. ● a(n) = floor((n / 5) ^ 5). ●

► [A246840] 1,1,1,2,5,10,18,35,73,151,306,623,1286,2668,5531,11477,23889,49852,104175,217936,456534,957609,2010839,4226417,8891022 ⋆ G.f.: Sum _{ n>=0 } x ^ n * Sum _{ k=0..n } C(n,k) ^ 2 * x ^ (2 * k). ● a(n) = Sum _{ k=0..floor(n / 2) } C(n - 2 * k, k) ^ 2. ●

► [A360811] 1,1,1,1,2,5,10,18,38,91,211,472,1108,2754,6881,17101,43443,113565,300142,797191,2147414,5883976,16293712,45471429,128285353 ⋆ Expansion of Sum _{ k>=0 } (x / (1 - k * x ^ 3)) ^ k. ● a(n) = Sum _{ k=0..floor(n / 3) } (n - 3 * k) ^ k * binomial(n - 2 * k - 1,k). ●

► [A011893] 0,0,0,0,2,5,10,19,30,45,65,90,120,156,198,248,305,370,445,528,621,725,840,966,1104 ⋆ [n(n - 1)(n - 2) / 11]. ● a(n) = + 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 11) - 3 * a(n - 12) + 3 * a(n - 13) - a(n - 14). [_ R. J. Mathar _ , Apr 15 2010] ●

► [A104161] 0,1,2,5,10,19,34,59,100,167,276,453,740,1205,1958,3177,5150,8343,13510,21871,35400,57291,92712,150025,242760 ⋆ G.f.: x * (1 - x + x ^ 2) / ((1 - x) ^ 2 * (1 - x - x ^ 2)). ● a(n) = 2 * (Fibonacci(n + 2) - 1) - n. ● a(n) = a(n - 1) + a(n - 2) + n - 1. ● a(n) = row sums of A117501, starting (1, 2, 5, 10, ...). (End) ● a(n) = (Sum _{ k=0..n } (n - k) * Fibonacci(k - 1) + Fibonacci(k)) - n. - _ Ross La Haye _ , May 31 2006 ● a(n) = - 2 - n + (- A094214) ^ n * (1 - A010499 / 5) + (1 + A010499 / 5) / A094214 ^ n. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - a(n - 3) + a(n - 4); a(0)=0, a(1)=1, a(2)=2, a(3)=5. - _ Harvey P. Dale _ , Sep 06 2012 ●

► [A061705] 2,5,10,19,36,66,120,215,382,673,1178,2050,3550,6121,10514,17999,30720,52290,88788,150427,254342,429245,723190,1216514,2043386 ⋆ Number of matchings in the wheel graph with n spokes. ● a(n) = (n + 1) * Fibonacci(n) + 2 * Fibonacci(n - 1). ● a(n) = sqrt(5) * ((n + 1) * (u ^ n - v ^ n) + 2 * (u ^ (n - 1) - v ^ (n - 1))) / 5, where u = (1 + sqrt(5)) / 2, v = (1 - sqrt(5)) / 2. ● a(0)= 2, a(1)=5, a(2)=10, a(3)=19; for n > 3, a(n) = 2 * a(n - 1) + a(n - 2) - 2 * a(n - 3) - a(n - 4). - _ Harvey P. Dale _ , Jun 05 2011 ● a(n) = n * Fibonacci(n) + Lucas(n) = (n + 1) * Fibonacci(n + 1) - (n - 1) * Fibonacci(n - 1). - _ Bruno Berselli _ , May 26 2015 ●

► [A052944] 0,2,5,10,19,36,69,134,263,520,1033,2058,4107,8204,16397,32782,65551,131088,262161,524306,1048595,2097172,4194325,8388630,16777239 ⋆ a(n) = 2 ^ n + n - 1. ● a(n + 1) = 2 * a(n) - n + 2 with a(0)=0. - Pieter Moree, Mar 06 2004 ● a(0)=0, a(1)=2, a(2)=5, a(n + 3) = 4 * a(n + 2) - 5 * a(n + 1) + 2 * a(n). - Hermann Kremer (Hermann.Kremer(AT)online.de), Mar 16 2004 ●

► [A132736] 1,2,5,10,19,36,69,134,263,520,1033,2058,4107,8204,16397,32782,65551,131088,262161,524306,1048595,2097172,4194325,8388630,16777239 ⋆ Row sums of triangle A132735. ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 2 * a(n - 3) for n>3. ● a(n) = 2 ^ n + n - 1 + [n=0]. ●

► [A016029] 1,1,2,5,10,19,38,77,154,307,614,1229,2458,4915,9830,19661,39322,78643,157286,314573,629146,1258291,2516582,5033165,10066330 ⋆ a(1) = a(2) = 1, a(2n + 1) = 2 * a(2n) and a(2n) = 2 * a(2n - 1) + (- 1) ^ n. ● a(n) = (1 / 10) * (3 * 2 ^ n + 3 * (- 1) ^ floor(n / 2) - (- 1) ^ floor((n + 1) / 2)). ● a(n) = 2 * a(n - 1) - a(n - 2) + 2 * a(n - 3). - _ Paul Curtz _ , Dec 18 2007 ● a(n) = (3 / 5) * 2 ^ (n - 1) + (1 / 5 + (1 / 10) * i) * i ^ (n - 1) + (1 / 5 - (1 / 10) * i) * (- i) ^ (n - 1), with n > 0 and i=sqrt(- 1). - _ Paolo P. Lava _ , Jun 10 2008 ● a(n) = round(3 * 2 ^ (n - 1) / 5). ●

► [A039690] 1,2,5,10,20,25,50,100,125,200,250,500,1000,1250,2000,2500,5000,10000,12500,20000,25000,50000,100000,125000,200000 ⋆ Ambitious numbers: numbers n with the property that if a number ends in n then it is divisible by n. ● a(n) = 10 * a(n - 5). - _ Wesley Ivan Hurt _ , May 03 2023 ●

► [A117486] 1,2,5,10,20,34,59,94,149,224,334,480,685,950,1307,1762,2357,3100,4050,5220,6685,8466,10659,13294,16494 ⋆ Expansion of 1 / ((1 - x) * (1 - x ^ 2) * (1 - x ^ 3) * (1 - x ^ 4)) ^ 2. ● a(n) = 2 * a(n - 1) + a(n - 2) - 2 * a(n - 3) - a(n - 4) - 4 * a(n - 5) + 4 * a(n - 6) + 4 * a(n - 7) + 2 * a(n - 8) - 10 * a(n - 10) + 2 * a(n - 12) + 4 * a(n - 13) + 4 * a(n - 14) - 4 * a(n - 15) - a(n - 16) - 2 * a(n - 17) + a(n - 18) + 2 * a(n - 19) - a(n - 20) for n>19. - _ Colin Barker _ , Apr 07 2019 ●

► [A000712] 1,2,5,10,20,36,65,110,185,300,481,752,1165,1770,2665,3956,5822,8470,12230,17490,24842,35002,49010,68150,94235 ⋆ Generating function = Product _{ m>=1 } 1 / (1 - x ^ m) ^ 2; a(n) = number of partitions of n into parts of 2 kinds. ● a(0) = 1, a(n) = 1 / n * Sum _{ k=0..n - 1 } 2 * a(k) * sigma _ 1(n - k)). - _ Joerg Arndt _ , Feb 05 2011 ● a(n) is odd iff n = 2 * m and p(m) is odd. ● a(n) = 2 / n * Sum _{ k = 0..n } k * p(k) * p(n - k) for n >= 1. ●

► [A341581] 0,1,2,5,10,20,37,70,130,243,450,836,1549,2874,5326,9875,18302,33928,62885,116566,216058,400483,742314,1375932,2550365 ⋆ Number of steps needed to move the largest disk out from a stack of n disks in the Towers of Hanoi exchanging disks puzzle with 3 pegs. ● a(n) = 2 * a(n - 1) - a(n - 3) + 2 * a(n - 4) - 2 * a(n - 5). ●

► [A001629] 0,0,1,2,5,10,20,38,71,130,235,420,744,1308,2285,3970,6865,11822,20284,34690,59155,100610,170711,289032,488400 ⋆ Self - convolution of Fibonacci numbers. ● a(n) = 2 * a(n - 1) + a(n - 2) - 2 * a(n - 3) - a(n - 4), n > 3. ● a(n) = Sum _{ k=0..floor(n / 2) - 1 } (k + 1) * binomial(n - k - 1, k + 1). - _ Emeric Deutsch _ , Nov 15 2001 ● a(n) = floor((1 / 5) * (n - 1 / sqrt(5)) * phi ^ n + 1 / 2) where phi=(1 + sqrt(5)) / 2 is the golden ratio. - _ Benoit Cloitre _ , Jan 05 2003 ● a(n) = Sum _{ k=0..floor((n - 2) / 2) } (n - k - 1) * binomial(n - k - 2, k). - _ Paul Barry _ , Jan 25 2005 ● a(n) = a(n - 1) + a(n - 2) + F(n - 1), where F=A000045, the Fibonacci sequence. - _ Graeme McRae _ , Jun 02 2006 ● a(n) = (1 / 5) * (n - 1 / sqrt(5)) * ((1 + sqrt(5)) / 2) ^ n + (1 / 5) * (n + 1 / sqrt(5)) * ((1 - sqrt(5)) / 2) ^ n. - _ Graeme McRae _ , Jun 02 2006 ●

► [A293324] 1,1,2,5,10,20,40,79,158,316,633,1266,2531,5063,10126,20252,40503,81007,162014,324028,648056,1296111,2592222,5184445,10368890 ⋆ The integer k that minimizes |k / 2 ^ n - 1 / tau|, where tau = (1 + sqrt(5)) / 2 = golden ratio. ● a(n) = floor(1 / 2 + r * 2 ^ n), where r = (- 1 + sqrt(5)) / 2. ●

► [A084215] 1,2,5,10,20,40,80,160,320,640,1280,2560,5120,10240,20480,40960,81920,163840,327680,655360,1310720,2621440,5242880,10485760,20971520 ⋆ Expansion of g.f.: (1 + x ^ 2) / (1 - 2 * x). ● a(n) = Sum _{ k=0..n } 2 ^ (n - k) * binomial(1, k / 2) * (1 + (- 1) ^ k) / 2. - _ Paul Barry _ , Oct 15 2004 ● a(n) is the sum of top row terms of M ^ n, M is an infinite square production matrix as follows: ● a(n) = floor(2 ^ (n - 2) * 5). - _ Taher Jamshidi _ , Sep 15 2012 ● a(n) = 2 * a(n - 1) for n >= 3, a(0) = 1, a(1) = 2, a(2) = 5. - _ Philippe Deléham _ , Mar 13 2013 ●

► [A024810] 1,2,5,10,20,40,81,162,325,651,1303,2607,5215,10430,20860,41721,83443,166886,333772,667544,1335088,2670176,5340353,10680707,21361414 ⋆ a(n) = floor(tan(m * Pi / 2)), where m = 1 - 2 ^ (- n). ● a(n) = floor(1 / tan(Pi / 2 ^ (n + 1))). - _ Michael Somos _ , Feb 24 2014 ● a(n) = floor(2 ^ (n + 1) / Pi). - _ Clark Kimberling _ , Oct 10 2017 [Corrected by _ Michel Marcus _ , Oct 25 2019] ●

► [A266613] 1,2,5,10,20,41,82,165,330,661,1322,2645,5290,10581,21162,42325,84650,169301,338602,677205,1354410,2708821,5417642,10835285,21670570 ⋆ Decimal representation of the middle column of the "Rule 41" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = (31 * 2 ^ n - 4 * ((- 1) ^ n + 3)) / 24 for n>2. ● a(n) = 2 * a(n - 1) + a(n - 2) - 2 * a(n - 3) for n>5. - [corrected by _ Karl V. Keller, Jr. _ , Oct 07 2021] ●

► [A293319] 2,5,10,20,41,83,167,335,670,1340,2680,5361,10723,21446,42893,85787,171575,343150,686301,1372603,2745207,5490415,10980830,21961660,43923321 ⋆ Greatest integer k such that k / 2 ^ n < tau ^ 2, where tau = (1 + sqrt(5)) / 2 = golden ratio. ● a(n) = floor((r * 2 ^ n)), where r = (3 + sqrt(5)) / 2. ●

► [A267589] 1,2,5,10,20,41,83,167,335,671,1343,2687,5375,10751,21503,43007,86015,172031,344063,688127,1376255,2752511,5505023,11010047,22020095 ⋆ Decimal representation of the middle column of the "Rule 169" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>3. ●

► [A129847] 1,1,2,5,10,20,42,87,179,370,765,1580,3264,6744,13933,28785,59470,122865,253838,524428,1083466,2238435,4624595,9554390,19739321 ⋆ b(n) = number of set partitions of { 1, 2, ..., n } whose blocks consist only of elements that differ by two or less (that is, have only the forms { i } , { i,i + 1 } , { i,i + 2 } , or { i,i + 1,i + 2 }). ● a(n) = Sum _{ k=0..floor(n / 2) } Sum _{ j=0..n - 2 k } C(n - j - k,k) * C(2k,j). - _ Paul Barry _ , Mar 24 2009 ● a(n) = a(n - 1) + a(n - 2) + 2 * (n - 3) + a(n - 4) with a(0) = a(1) = 1, a(2) = 2, a(3) = 5. - _ Taras Goy _ , Aug 04 2017 ●

► [A051109] 1,2,5,10,20,50,100,200,500,1000,2000,5000,10000,20000,50000,100000,200000,500000,1000000,2000000,5000000,10000000,20000000,50000000,100000000 ⋆ Expansion of g.f. (1 + 2 * x + 5 * x ^ 2) / (1 - 10 * x ^ 3). ● a(3 * n) = 10 ^ n, a(3 * n + 1) = 2 * 10 ^ n, a(3 * n + 2) = 5 * 10 ^ n. ● a(n) = (1 + (n mod 3) ^ 2) * 10 ^ floor(n / 3). - Justin L. Brown (jlbrown(AT)neo.tamu.edu), Jun 17 2004 ● a(n) = 10 * a(n - 3) with n>2, a(0)=1, a(1)=2, a(2)=5. - _ Philippe Deléham _ , Apr 08 2013 ●

► [A261681] 1,2,5,10,21,41,83,162,325,637,1275,2509,5019,9907,19815,39202,78405,155381,310763,616665,1233331,2449867,4899735,9740685,19481371 ⋆ a(n) = 2 ^ n + binomial(n, floor(n / 2)) - 1. ● a(n) = Sum _{ i=1..n + 1 } C(n,floor(i / 2)). - _ Wesley Ivan Hurt _ , Nov 22 2017 ●

► [A116385] 0,0,1,2,5,10,21,42,84,168,330,660,1287,2574,5005,10010,19448,38896,75582,151164,293930,587860,1144066,2288132,4457400 ⋆ Expansion of e.g.f. Bessel _ I(2,2x) + 2 * Bessel _ I(3,2x) + Bessel _ I(4,2x). ● a(n) = C(n + 1,floor((n - 2) / 2) * (1 + (- 1) ^ n) / 2 + C(n,floor((n - 3) / 2)) * (1 - (- 1) ^ n). ●

► [A267515] 1,2,5,10,21,42,84,169,338,677,1354,2709,5418,10836,21673,43346,86693,173386,346773,693546,1387092,2774185,5548370,11096741,22193482 ⋆ Decimal representation of the middle column of the "Rule 137" elementary cellular aut

omaton starting with a single ON (black) cell. • a(n) = 2 * a(n - 1) + a(n - 7) - 2 * a(n - 8) for n>7. [Wrong] •

▶ [A243988] 1,2,5,10,21,42,85,169,333,655,1286,2519,4935,9675,18982,37285,73346,144509,285158,563546,1115309,2210243,4385443,8710876,17319387 ⋆ G.f.: Sum _{ n>=0 } (1 + x ^ n) ^ n * x ^ n / (1 - x) ^ (n + 1). • a(n) - 2 ^ n ~ n / 5 * ((1 + sqrt(5)) / 2) ^ n. - _ Vaclav Kotesovec _ , Jul 02 2014 •

▶ [A000975] 0,1,2,5,10,21,42,85,170,341,682,1365,2730,5461,10922,21845,43690,87381,174762,349525,699050,1398101,2796202,5592405,11184810 ⋆ a(2n) = 2 * a(2n - 1), a(2n + 1) = 2 * a(2n) + 1 (also a(n) is the n - th number without consecutive equal binary digits). • a(n) = ceiling(2 * (2 ^ n - 1) / 3). • a(n) = a(n - 1) + 2 * a(n - 2) + 1. • a(n) = 2 * 2 ^ n / 3 - 1 / 2 - (- 1) ^ n / 6. • a(n) = n + 2 * Sum _{ k = 1..n - 2 } a(k). • a(n) = 2 * a(n - 1) + a(n - 2) - 2 * a(n - 3). - _ Paul Barry _ , Feb 11 2003 • a(n) = Sum _{ k = 0..floor((n - 1) / 2) } 2 ^ (n - 2 * k - 1) } ; a(n + 1) = Sum _{ k = 0..floor(n / 2) } 2 ^ (n - 2 * k). - _ Paul Barry _ , Nov 11 2003 •

▶ [A266248] 1,2,5,10,21,43,86,173,346,693,1386,2773,5546,11093,22186,44373,88746,177493,354986,709973,1419946,2839893,5679786,11359573,22719146 ⋆ Decimal representation of the middle column of the "Rule 9" elementary cellular automaton starting with a single ON (black) cell. • a(n) = (65 * 2 ^ n - 8 * ((- 1) ^ n + 3)) / 48 for n>3. • a(n) = 2 * a(n - 1) + a(n - 2) - 2 * a(n - 3) for n>6. • a(n) = floor(65 * 2 ^ n / 48). - _ Karl V. Keller, Jr. _ , Dec 15 2021 •

▶ [A267880] 1,2,5,10,21,43,87,175,351,703,1407,2815,5631,11263,22527,45055,90111,180223,360447,720895,1441791,2883583,5767167,11534335,23068671 ⋆ Decimal representation of the middle column of the "Rule 233" elementary cellular automaton starting with a single ON (black) cell. • a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>4. •

▶ [A101510] 1,2,5,10,21,43,87,175,352,707,1417,2836,5674,11353,22716,45443,90886,181748,363451,726870,1453773,2907648,5815315,11630195,23259059 ⋆ Diagonal sums of binomial - Möbius product. • a(n) = Sum _{ k=0..floor(n / 2) } Sum _{ i=0..n - k, (k + 1)|(i + 1) } binomial(n - k,i). •

▶ [A131403] 1,2,5,10,21,44,93,196,411,856,1771,3642,7451,15178,30809,62358,125921,253800,510777,1026704,2061751,4137012,8295895,16627190,33311671 ⋆ Row sums of triangle A131402. • a(n) = 5 * a(n - 1) - 8 * a(n - 2) + 3 * a(n - 3) + 3 * a(n - 4) - 2 * a(n - 5). •

▶ [A052540] 1,1,2,5,10,21,45,95,201,426,902,1910,4045,8566,18140,38415,81351,172276,364827,772590,1636105,3464761,7337285,15538085,32904826 ⋆ Expansion of (1 - x) / (1 - 2 * x - x ^ 3 + x ^ 4). • a(n) = 2 * a(n - 1) + a(n - 3) - a(n - 4), with a(0)=1, a(1)=1, a(2)=2, a(3)=5. • a(n) = Sum _{ alpha = RootOf(1 - 2 * x - x ^ 3 + x ^ 4) } (1 / 643) * (94 + 127 * alpha + 22 * alpha ^ 2 - 75 * alpha ^ 3) * alpha ^ (- n - 1). • a(n) = Sum _{ k=0..n } (Sum _{ j=ceiling((- n + 3 * k + 1) / 3)..k } binomial(k,j) * binomial(n - 3 * (k - j) - 1,j - 1)) + kron _ delta(3 * k,n)). - _ Vladimir Kruchinin _ , May 12 2013 •

▶ [A360748] 1,1,1,2,5,10,21,53,133,327,861,2361,6469,18168,52757,155221,463077,1412656,4379917,13747504,43834213,141866555,464650309,1541008295,5176660997 ⋆ Expansion of Sum _{ k>=0 } (x * (1 + k * x ^ 2)) ^ k. • a(n) = Sum _{ k=0..floor(n / 3) } (n - 2 * k) ^ k * binomial(n - 2 * k,k). •

▶ [A215422] 1,1,2,5,10,22,44,88,177,355,710,1421,2843,5687,11374,22748,45497,90995,181991,363982,727965,1455930,2911861,5823723,11647446 ⋆ Length of binary representation of Fibonacci(2 ^ n). • a(n) = 2 ^ n * log _ 2 phi + O(1). - _ Charles R Greathouse IV _ , Jun 05 2013 •

▶ [A026633] 1,2,5,10,22,44,90,180,362,724,1450,2900,5802,11604,23210,46420,92842,185684,371370,742740,1485482,2970964,5941930,11883860,23767722 ⋆ T(n,0) + T(n,1) + ... + T(n,n), T given by A026626. • a(n) = (- 1) ^ n / 3 - 1 + 17 * 2 ^ (n - 2) / 3, n>=2. - _ R. J. Mathar _ , May 22 2013 • a(n) = a(n - 1) + 2 * a(n - 2) + 2. - _ Greg Dresden _ , Feb 22 2020 •

▶ [A093370] 0,1,2,5,10,22,44,91,182,369,738,1486,2972,5962,11924,23884,47768,95607,191214,382568,765136,1530552,3061104,6122765,12245530 ⋆ Start with any initial string of n numbers s(1), ..., s(n), with s(1) = 2, other s(i)'s = 2 or 3 (so there are 2 ^ (n - 1) starting strings). The rule for extending the string is this as follows: To get s(n + 1), write the string s(1)s(2)...s(n) as xy ^ k for words x and y (where y has positive length) and k is maximized, i.e., k = the maximal number of repeating blocks at the end of the sequence. Then a(n) = number of starting strings for which k > 1. • a(n) / 2 ^ (n - 1) seems to converge to a number around 0.73. •

▶ [A135098] 1,2,5,10,22,44,92,184,376,752,1520,3040,6112,12224,24512,49024,98176,196352,392960,785920,1572352,3144704,6290432,12580864,25163776 ⋆ First differences of A135094. • a(n) = 2 ^ ((n - 5) / 2) * (3 * 2 ^ ((n + 1) / 2) - (1 - (- 1) ^ n) - (1 + (- 1) ^ n) * sqrt(2)). • a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 4 * a(n - 3). - _ Wesley Ivan Hurt _ , Apr 07 2021 •

▶ [A045621] 0,1,2,5,10,22,44,93,186,386,772,1586,3172,6476,12952,26333,52666,106762,213524,431910,863820,1744436,3488872,7036530,14073060 ⋆ a(n) = 2 ^ n - binomial(n, floor(n / 2)). • a(2 * k) = 2 * a(2 * k - 1), a(2 * k + 1) = 2 * a(2 * k) + Catalan(k). • a(n + 1) = b(0) * b(n) + b(1) * b(n - 1) + ... + b(n) * b(0), b(k)=C(k, [k / 2]). • a(n) = Sum _{ k=0..n - 1 } binomial(n, floor(k / 2)). - _ Paul Barry _ , Aug 05 2004 • a(n + 1) = 2 * a(n) + Catalan(n / 2) * (1 + (- 1) ^ n) / 2. - _ Paul Barry _ , Aug 05 2004 •

▶ [A100938] 1,2,5,10,22,46,97,200,412,844,1729,3536,7227,14754,30093,61312,124782,253664,515085,1044796,2117158,4286330,8671103,17529304,35416016 ⋆ Self - convolution of A092684. • a(n) = 1 + Sum _{ k=1..n } Sum _{ j=0..n - k } binomial(k, j) * a(j). •

▶ [A124329] 0,1,2,5,10,22,46,101,220,492,1104,2515,5762,13327,30994,72555,170654,403350,957134,2279947,5449012,13063595,31406516,75701507,182902336 ⋆ Number of ordered trees with n edges, with thinning limbs and with root of degree 2. An ordered tree with thinning limbs is such that if a node has k children, all its children have at most k children. • a(n) = 2 * Sum _{ k = 0..(n - 1) / 2 } binomial(2 * k + 1, k + 1) * binomial(n - k, k + 1) / (k + 2). - _ Vladimir Kruchinin _ , Apr 21 2016 •

▶ [A123491] 1,2,5,10,22,48,112,274,715,1982,5837,18180,59644,205296,739032,2775180,10846965,44039754,185391469,807776198,3637193474,16900721824,80939650552,399061251246,2023408865983 ⋆ Diagonal sums of number triangle A123490. • a(n) = Sum _{ k=0..floor(n / 2) } ((k + 2) ^ (n - 2k) + k) / (k + 1). •

▶ [A329185] 1,1,2,5,10,22,49,105,227,494,1071,2322,5038,10927,23699,51405,111498,241837,524546,1137742,2467761,5352577,11609747,25181550,54618807 ⋆ Number of ways to tile a 2 X n grid with dominoes and L - trominoes such that no four tiles meet at a corner. • a(n) = 2 * a(n - 1) - a(n - 2) + 3 * a(n - 3) - a(n - 4) + 2 * a(n - 5), with a(0) = a(1) = 1, a(2) = 2, a(3) = 5, and a(4) = 10. •

▶ [A232163] 0,1,2,5,10,22,49,106,231,506,1104,2409,5262,11489,25082,54766,119577,261078,570035,1244610,2717456,5933249,12954570,28284797,61756570 ⋆ Cardinality of the Weyl alternation set corresponding to the zero - weight in the adjoint representation of the Lie algebra so(2n + 1). • a(n) = a(n - 1) + a(n - 2) + 3 * a(n - 3) + a(n - 4). G.f.: - x * (2 * x ^ 2 + x + 1) / (x ^ 4 + 3 * x ^ 3 + x ^ 2 + x - 1). - _ Colin Barker _ , Jan 01 2014 •

▶ [A174542] 1,2,5,10,23,44,99,188,421,798,1785,3382,7563,14328,32039,60696,135721,257114,574925,1089154,2435423,4613732,10316619,19544084,43701901 ⋆ Partial sums of odd Fibonacci numbers (A014437). • a(2n) = (1 / 2) * (Fibonacci(3n + 2) - 1). • a(2n + 1) = (1 / 2) * (Fibonacci(3n + 1) + Fibonacci(3n + 3) - 1). • a(n) = a(n - 1) + 4 * a(n - 2) - 4 * a(n - 3) + a(n - 4) - a(n - 5) for n>4. - _ Colin Barker _ , Oct 26 2014 • a(n) = ((sin(Pi * n / 2) * sqrt(5 / phi) - cos(Pi * n / 2) / phi ^ 2) / phi ^ (3 * n / 2) + (sqrt(5 * phi) * sin(Pi * n / 2) ^ 2 + phi ^ 2 * cos(Pi * n / 2) ^ 2) * phi ^ (3 * n / 2)) / (2 * sqrt(5)) - 1 / 2, where phi=(1 + sqrt(5)) / 2. •

▶ [A323988] 1,2,5,10,23,46,102,204,443,886,1898,3796,8054,16108,33932,67864,142163,284326,592962,1185924,2464226,4928452,10209620,20419240,42190558 ⋆ a(n) = 2 ^ (n - 1) + binomial(n, floor(n / 2)) * (n + 1) / 2. • a(0) = 1, a(1) = 2, a(2) = 5; thereafter (8 * n + 16) * a(n) + (- 4 * n - 8) * a(n + 1) + (- 2 * n - 6) * a(n + 2) + (n + 3) * a(n + 3) = 0. •

▶ [A284181] 1,2,5,10,23,47,87,171,381,766,1407,2751,6111,12287,22527,44031,97791,196607,360447,704511,1564671,3145727,5767167,11272191,25034751 ⋆ Decimal representation of the x - axis, from the left edge to the origin, of the n - th stage of growth of the two - dimensional cellular automaton defined by "Rule 813", based on the 5 - celled von Neumann neighborhood. • a(n) = a(n - 1) + 16 * a(n - 4) - 16 * a(n - 5) for n>10. •

▶ [A291249] 1,2,5,10,23,47,102,214,452,955,2003,4223,8854,18610,39032,81896,171752,360103,754985,1582497,3316978,6951684,14568692,30530311,63977107 ⋆ p - INVERT of (0,1,0,1,0,1,...), where p(S) = 1 - S - S ^ 2 - S ^ 3 + S ^ 4 + S ^ 5. • a(n) = a(n - 1) + 6 * a(n - 2) - 3 * a(n - 3) - 14 * a(n - 4) + 3 * a(n - 5) + 14 * a(n - 6) - 3 * a(n - 7) - 6 * a(n - 8) + a(n - 9) + a(n - 10) for n >= 11. •

▶ [A087640] 1,1,2,5,10,23,48,107,228,501,1078,2353,5086,11067,23972,52087,112936,245225,531946,1154685,2505298,5437407,11798616,25605539,55563980 ⋆ To obtain a(n + 1), take the square of the n - th partial sum, minus the sum of the first n squared terms, then divide this difference by a(n); for all n>1, starting with a(0)=1, a(1)=1. • a(n) = a(n - 1) + 3a(n - 2) - a(n - 3) for n>3. •

▶ [A049937] 1,1,2,5,10,24,45,89,178,444,844,1667,3320,6635,13267,26533,53066,132664,252062,497492,991669,1981685,3962547,7924694,15849122 ⋆ a(n) = a(1) + a(2) + ... + a(n - 1) + a(m) for n >= 4, where m = 2 ^ (p + 1) + 2 - n and p is the unique integer such that 2 ^ p < n - 1 <= 2 ^ (p + 1), starting with a(1) = a(2) = 1 and a(3) = 2. • a(n) = a(2 ^ ceiling(log _ 2(n - 1)) + 2 - n) + Sum _{ i = 1..n - 1 } a(i) for n >= 4. •

▶ [A291247] 1,2,5,10,24,49,112,238,526,1142,2491,5442,11842,25873,56344,122975,268042,584633,1274820,2779895,6062306,13219186,28827703,62861754,137082358 ⋆ p - INVERT of (0,1,0,1,0,1,...), where p(S) = 1 - S - S ^ 2 - S ^ 3 + S ^ 4. • a(n) = a(n - 1) + 5 * a(n - 2) - 2 * a(n - 3) - 9 * a(n - 4) + 2 * a(n - 5) + 5 * a(n - 6) - a(n - 7) - a(n - 8) for n >= 9. •

▶ [A084081] 0,1,2,5,10,24,50,121,260,637,1400,3468,7752,19380,43890,110561,253000,641355,1480050,3771885,8765250,22439040,52451256,134796060,316663760 ⋆ Sum of lists created by n substitutions k - > Range[k + 1,0, - 2] starting with { 0 } , counting down from k + 1 to 0 step - 2. • a(2 * n + 1) = (3 * n - 1) * binomial[3 * n + 1, n] / ((n + 1) * (3 * n + 1)). • a(2 * n) = 10 * binomial(3 * n + 1, n - 1) / (2 * n + 3). (End) •

▶ [A026383] 1,2,5,10,25,50,125,250,625,1250,3125,6250,15625,31250,78125,156250,390625,781250,1953125,3906250,9765625,19531250,48828125,97656250,244140625 ⋆ a(n) = 5 * a(n - 2), starting 1,2. • a(2n) = 5 ^ n, a(2n + 1) = 2 * 5 ^ n. • a(n) = 5 ^ (n / 2) * ((1 / 2 + 1 / sqrt(5)) + (1 / 2 - 1 / sqrt(5)) * (- 1) ^ n). (End) • a(n) = a(n - 1) + 2 * a(n - 2) + 5 ^ floor((n - 2) / 2); • a(n) = Sum _{ k=0..floor(n / 2) } binomial(floor(n / 2), k) * 2 ^ (n - 2k). (End) • a(n + 3) = a(n + 2) * a(n + 1) / a(n). - _ Reinhard Zumkeller _ , Mar 04 2011 •

▶ [A162963] 2,5,10,25,50,125,250,625,1250,3125,6250,15625,31250,78125,156250,390625,781250,1953125,3906250,9765625,19531250,48828125,97656250,244140625,488281250 ⋆ a(n) = 5 * a(n - 2) for n > 2; a(1) = 2, a(2) = 5. • a(n) = (3 - (- 1) ^ n) * 5 ^ (1 / 4 * (2 * n - 1 + (- 1) ^ n)) / 2. •

▶ [A115725] 1,2,5,10,26,42,118,171,389,692,1442,1854,5534,6895,11910,21116,44278,52568,118734,138670,300326,492507,728514,829244,2167430 ⋆ Number of partitions with maximum rectangle <= n. • a(n) = subpart([<floor(n / k)>]). The subpart function is A115728 (or A115729), [<floor(n / k)>] is row n of A010766. •

▶ [A032099] 1,2,5,10,27,66,181,470,1263,3310,8767,22980,60449,158354,415353,1087690,2849675,7461318,19539429,51156950,133944931,350677822,918123935,2403693960,6293050657 ⋆ "BHK" (reversible, identity, unlabeled) transform of 1,2,3,4,... • a(n) = n + (1 / 2) * (Fibonacci(2 * n) + (- 1) ^ (n + 1) * Fibonacci(n - 2) - Fibonacci(n + 2)) for n >= 2. - _ Petros Hadjicostas _ , Aug 21 2018 •

▶ [A074801] 1,2,5,10,28,50,116,178,528,1282,2794,4778,10594,17166,33426,60242,183072,304202,759716,1288642,2965286,6352098,11776586,18326642,48714362 ⋆ a(n) is the sum of the n - th row of the triangle formed by replacing each m in Pascal's triangle with sigma(m). • a(n) >= 2 ^ n with equality for n <= 2. - _ Michel Marcus _ , Mar 19 2017 •

▶ [A075885] 1,2,5,10,29,46,169,239,745,1450,4111,5182,27157,33164,84001,186496,610065,713474,3061009,3526553,13783421,27380452,63264389,71240523,444872761 ⋆ a(n) = 1 + n + n * [n / 2] + n * [n / 2] * [n / 3] + n * [n / 2] * [n / 3] * [

n / 4] + ... where [x]=floor(x). • a(n) = 1 + Sum _{ m=1..n } Product _{ k=1..m } floor(n / k). •

► [A155580] 1,1,2,5,10,30,180,585,1430,3575,9100,31850,83300,220150,792540,11888100,32167800,87567900,1576222200,4334611050,11971782900,33194488950,92367273600,257858638800,722004188640 ⋆ a(n)=If[IntegerQ[((3 * n - 2) / (n + 1)) * a(n - 1)], ((3 * n - 2) / (n + 1)) * a(n - 1), If[IntegerQ[((4 * n - 2) / (n + 1)) * a(n - 1)], ((4 * n - 2) / (n + 1)) * a(n - 1), n * a(n - 1)]] • a(n)=If[IntegerQ[((3 * n - 2) / (n + 1)) * a(n - 1)], ((3 * n - 2) / (n + 1)) * a(n - 1), •

► [A089073] 1,1,2,5,10,32,64,231,462,1792,3584,14586,29172,122880,245760,1062347,2124694,9371648,18743296,84021990,168043980,763363328,1526726656,7012604550,14025209100 ⋆ Number of symmetric non - crossing connected graphs on n equidistant nodes on a circle. • a(2k) = 4 ^ k * binomial((3k - 1) / 2, k) / [2(k + 1)], a(2k + 1) = 2a(2k). •

► [A326006] 1,2,5,10,35,110,484,2090,10449,54526,306394,1817190,11357273,74488856,510662890,3649746072,27120964497,209070202378,1668632739832,13763654492458,117143535623438,1027274860573646,9269762507422848,85969437563219710,818533062206441679 ⋆ G.f.: Sum _{ n>=0 } (n + 1) * x ^ n * ((1 + x) ^ n + 1) ^ n / (1 + x * (1 + x) ^ n) ^ (n + 2). • a(n) = Sum _{ i=0..n } (n - i + 1) * Sum _{ j=0..n - i } Sum _{ k=0..n - i - j } (- 1) ^ k * binomial(n - i,j) * binomial(n - i - j,k) * binomial((n - i - j) * (n - i - k),i). • a(n) = Sum _{ i=0..n } (n - i + 1) * Sum _{ j=0..n - i } Sum _{ k=0..n - i - j } binomial((n - i - j) * (n - i - k),i) * (- 1) ^ j * (n - i)! / ((n - i - j - k)! * j! * k!). •

► [A363429] 1,1,2,5,10,37,77,372,799,4736,10427,73013,163967,1322035,3017562,27499083,63625324,646147067,1512354975,16926317722,40012800675,489109544320,1166271373797,15455199988077,37134022033885 ⋆ Number of set partitions of [n] such that each block has at most one even element. • a(n) = Sum _{ k =0..ceiling(n / 2) } floor(n / 2) ^ k * binomial(ceiling(n / 2),k) * Bell(ceiling(n / 2) - k). •

► [A276660] 2,5,11,13,19,23,37,43,47,61,67,73,79,103,151,157,163,191,193,211,223,271,277,283,313 ⋆ Primes of the form p * 2 ^ k - 1 where p is an odd prime and k >= 0. • a(n) >> n (log n) ^ 2. - _ Charles R Greathouse IV _ , Sep 11 2016 •

► [A347838] 2,5,11,14,17,23,26,29,35,38,41,47,50,53,59,62,65,71,74,77,83,86,89,95,98 ⋆ Positive numbers that are congruent to 2, 5, or 11 modulo 12. • a(n) = a(n - 1) + a(n - 3) - a(n - 4), for n >= 4, given a(n) for 0..3, with a(0) = - 1. • a(n) = - 1 + 3 * n + 3 * floor(n / 3) (from the partial fraction decomposition of G). •

► [A086319] 2,5,11,17,23,41,47,71,89,167,191,281,353,359,761,1409,1433,1439,3041,5639,12161,48647,194591,778361,3113447 ⋆ Primes produced by repeated application of the formula p - > (4p +- 3) starting at the prime 2. • a(n) = (4 * a(n - m)) - 3 or (4 * a(n - m)) + 3. •

► [A228344] 2,5,11,17,26,35,47,59,74,89,107,125,146,167,191,215,242,269,299,329,362,395,431,467,506 ⋆ a(n) = floor(3 * n ^ 2 / 4) - 1. • a(n) = (- 11 + 3 * (- 1) ^ n + 6 * n ^ 2) / 8. a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4). G.f.: x ^ 2 * (x - 2) * (x ^ 2 + x + 1) / ((x - 1) ^ 3 * (x + 1)). - _ Colin Barker _ , Aug 27 2013 •

► [A274830] 0,2,5,11,17,27,36,50,62,80,95,117,135,161,182,212,236,270,297,335,365,407,440,486,522 ⋆ Numbers n such that 7 * n + 1 is a triangular number (A000217). • a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n> 5. • a(n) = (14 * (n - 1) * n + (2 * n - 1) * (- 1) ^ n + 1) / 16. Therefore: • a(n) = n * (7 * n - 6) / 8 for n even, • a(n) = (n - 1) * (7 * n - 1) / 8 for n odd. •

► [A038390] 1,2,5,11,17,27,42,57,78,106,134,170,215,260,315,381,447,525,616,707,812,932,1052,1188,1341 ⋆ Bisection of A028289. • a(n) = (2 * n ^ 2 + 2 + floor(n / 3) * (10 * floor(n / 3) ^ 2 - (8 * n - 15) * floor(n / 3) + 2 * n ^ 2 - 8 * n + 7)) / 2. - _ Luce ETIENNE _ , Sep 14 2015 •

► [A064337] 2,5,11,17,29,41,59,79,101,127,157,191,229,271,317,367,421,487,557,631,709,787,877,967,1061 ⋆ Minimal prime numbers with increasing prime differences. • a(1) = 2, a(n + 1) = MIN { prime p | p >= a(n) + p(n) } (where p(n) is the n - th prime number). •

► [A228353] 2,5,11,17,29,47,53,83,89,107,137,173,179,197,233,263,317,389,443,449,467,569,587,593,677 ⋆ Primes of the form 3p - 4 where p is prime. • a(n) >> n * log ^ 2 n. - _ Charles R Greathouse IV, Jun 04 2015 •

► [A171769] 2,5,11,18,28,39,53,68,86,105,127,150,176,203,233,264,298,333,371,410,452,495,541,588,638 ⋆ Partial sums of A042964 (numbers congruent to 2 or 3 mod 4). • a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4). - _ R. H. Hardin _ , Nov 13 2011 • a(n) = ceiling((2 * n + 1) * n / 2). - _ Andrew Woods _ , Jun 06 2013 • a(n) = round(n / (1 - exp(- 1 / n))). - _ Richard R. Forberg _ , Jan 28 2015 •

► [A298375] 2,5,11,18,29,43,61,84,111,145,183,230,281,343,409,488,571,669,771,890,1013,1155,1301,1468,1639 ⋆ Partial sums of A230584. • a(n) = (g ^ 3 + 6 * g ^ 2 + 11 * g + 18) / 12 - If(n mod 2 = 1, 0, ((n + 2) / 2) ^ 2 + 2). • a(n) = (n ^ 3 + 6 * n ^ 2 + 14 * n) / 12 for n>1 and even. • a(n) = (n ^ 3 + 6 * n ^ 2 + 11 * n + 18) / 12 for n>1 and odd. • a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + a(n - 4) + 2 * a(n - 5) - a(n - 6) for n>6. •

► [A132455] 1,1,2,5,11,18,30,45,80,147,330,882,1935,3298,4676,7613,18409,53724,141094,293407,473604,639418,1138534,3086050,9159520 ⋆ a(n) = sum of the squares of the coefficients of x ^ n in x ^ (n - 2 * k) / A(x ^ 2) ^ (n - 2 * k + 1), a s k varies from 0 to floor(n / 2), with a(0)=1, where A(x) is the g.f. of this sequence. • a(n) = Sum _{ k=0..[n / 2] } ([x ^ n] (x / A(x ^ 2)) ^ (n - 2 * k + 1)) ^ 2 for n>0 with a(0)=1. •

► [A245207] 2,5,11,19,29,41,54,70,88,108,130,154,179,207,237,269,303,339,376,416,458,502,548,596,645 ⋆ a(n) = floor((n + sqrt(2)) ^ 2). • a(n) = floor((n + sqrt(2)) ^ 2). •

► [A160536] 0,2,5,11,19,30,44,62,85,115,155,210,288,402,573,835,1243,1886,2908,4542,7165,11387,18195,29186,46944 ⋆ a(n) = Fibonacci(n) + n ^ 2. • a(n) = a(n - 4) - a(n - 3) - 2 * a(n - 2) + 3 * a(n - 1) - 2 for n > 3; a(0)=0, a(1)=2, a(2)=5), a(3)=11. - _ Klaus Brockhaus _ , May 22 2009 •

► [A139482] 1,2,5,11,20,32,47,65,86,110,137,167,200,236,275,317,362,410,461,515,572,632,695,761,830 ⋆ Binomial transform of [1, 1, 2, 1, - 1, 1, - 1, 1, - 1, 1, - 1, 1, - 1, ...]. • a(n) = (10 - 9 * n + 3 * n ^ 2) / 2 for n >= 2. - _ Emeric Deutsch _ , May 03 2008 • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3); a(1)=1, a(2)=2, a(3)=5, a(4)=11. - _ Harvey P. Dale _ , May 02 2015 •

► [A256310] 0,0,0,1,2,5,11,20,35,58,90,136,199,282,391,532,709,931,1206,1540,1945,2432,3009,3692,4494 ⋆ Number of partitions of 2n into exactly 6 parts. • a(n) = 2 * a(n - 1) - 3 * a(n - 4) + a(n - 5) + a(n - 6) + a(n - 9) + a(n - 10) - 3 * a(n - 11) + 2 * a(n - 14) - a(n - 15). - _ Wesley Ivan Hurt _ , Jul 28 2022 •

► [A050407] 0,1,1,1,2,5,11,21,36,57,85,121,166,221,287,365,456,561,681,817,970,1141,1331,1541,1772 ⋆ a(n) = n * (n ^ 2 - 6 * n + 11) / 6. • a(n + 2) = 1 + n * (n + 1) * (n - 1) / 6 = Sum _{ k=0..n } (0 ^ k + (n - k) * k). (End) • a(n) = binomial(n - 1,3) + binomial(n - 1,0), n>=0. - _ Zerinvary Lajos _ , Jul 24 2006 • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Vincenzo Librandi _ , Jun 22 2012 • a(n + 2) = 1 + Sum { i=3..4 } binomial(n, i - 1) for n >= 1. - _ Jessica A. Tomasko _ , Nov 15 2022 •

► [A370722] 1,1,1,1,1,1,1,2,5,11,21,36,57,85,122,173,249,371,575,918,1485,2398,3830,6030,9369 ⋆ a(n) = Sum _{ k=0..floor(n / 7) } binomial(n - 4 * k,3 * k). • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 7). •

► [A100134] 1,1,1,1,1,1,2,5,11,21,36,57,86,128,194,305,497,827,1381,2287,3739,6042,9693,15519,24901 ⋆ a(n) = Sum _{ k=0..floor(n / 6) } binomial(n - 3k,3k). • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 6). •

► [A365732] 1,1,1,1,1,1,2,5,11,21,36,57,88,142,250,473,917,1751,3240,5829,10350,18472,33574,62293,117138 ⋆ G.f. satisfies A(x) = 1 + x * A(x) * (1 + x ^ 5 * A(x) ^ 2). • a(n) = Sum _{ k=0..floor(n / 6) } binomial(n - 5 * k,k) * binomial(n - 3 * k + 1,n - 5 * k) / (n - 3 * k + 1). •

► [A137356] 1,1,1,1,1,2,5,11,21,36,58,92,149,250,431,750,1299,2227,3784,6401,10828,18364,31236,53228,90741 ⋆ a(n) = Sum _{ k <= n / 2 } binomial(n - 2k, 3k). • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 5). - _ Vincenzo Librandi _ , Aug 09 2015 • a(n) = hypergeom([- (1 / 5) * n, - (1 / 5) * n + 1 / 5, 2 / 5 - (1 / 5) * n, 3 / 5 - (1 / 5) * n, - (1 / 5) * n + 4 / 5], [1 / 3, 2 / 3, - (1 / 2) * n, - (1 / 2) * n + 1 / 2], - 3125 / 108). - _ Robert Israel _ , May 26 2017 •

► [A365734] 1,1,1,1,1,1,2,5,11,21,36,58,94,163,306,599,1170,2229,4140,7596,14002,26228,49979,96212,185491 ⋆ G.f. satisfies A(x) = 1 + x * A(x) / (1 - x ^ 5 * A(x) ^ 2). • a(n) = Sum _{ k=0..floor(n / 5) } binomial(n - 4 * k - 1,k) * binomial(n - 3 * k + 1,n - 5 * k) / (n - 3 * k + 1). •

► [A103198] 1,1,1,1,2,5,11,21,36,58,94,166,331,716,1574,3368,6892,13447,25127,45391,80428,142615,259085,491855,982400 ⋆ Number of compositions of n into a square number of parts. • a(n) = Sum _{ k>=0 } (x / (1 - x)) ^ (k ^ 2). • a(n) = Sum _{ k >= 0 } binomial(n - 1,k ^ 2 - 1). - _ Gus Wiseman _ , Jan 17 2019 •

► [A365252] 1,1,1,1,1,2,5,11,21,36,60,106,205,418,851,1685,3257,6264,12210,24276,48920,98873,199118,399472,801361 ⋆ G.f. satisfies A(x) = 1 + x * A(x) * (1 + x ^ 4 * A(x) ^ 2). • a(n) = Sum _{ k=0..floor(n / 5) } binomial(n - 4 * k,k) * binomial(n - 2 * k + 1,n - 4 * k) / (n - 2 * k + 1). •

► [A023548] 2,5,11,21,38,66,112,187,309,507,828,1348,2190,3553,5759,9329,15106,24454,39580,64055,103657,167735,271416,439176,710618 ⋆ Convolution of natural numbers >= 2 and Fibonacci numbers. • a(n) = 4 * (F(n + 1) - 1) + 3 * F(n) - n, F(n)=A000045 (Fibonacci). • a(n) = Fib(n + 3) + F(n + 1) - (n + 3) for n > 1. - Alex Vinokur (alexvn(AT)barak - online.net), Oct 26 2004 • a(n) = (- 4 + (2 ^ (- n) * ((1 - sqrt(5)) ^ n * (- 5 + 2 * sqrt(5)) + (1 + sqrt(5)) ^ n * (5 + 2 * sqrt(5)))) / sqrt(5) - n). - _ Colin Barker _ , Mar 11 2017 • a(n) = Sum _{ i=1..n } C(n - i + 2,i + 1) + C(n - i + 1,i). - _ Wesley Ivan Hurt _ , Sep 13 2017 •

► [A364552] 1,1,1,1,2,5,11,21,39,78,169,373,808,1727,3719,8153,18100,40315,89770,200250,448755,1010685,2284295,5173961,11740697 ⋆ G.f. satisfies A(x) = 1 + x * A(x) + x ^ 4 * A(x) ^ 3. • a(n) = Sum _{ k=0..floor(n / 4) } binomial(n - k,3 * k) * binomial(3 * k,k) / (2 * k + 1). •

► [A369525] 1,1,1,1,2,5,11,21,40,84,190,429,944,2067,4613,10505,24092,55182,126444,291232,675144,1571934,3667774,8573365,20090498 ⋆ Expansion of (1 / x) * Series _ Reversion(x / (1 + x + x ^ 4 / (1 + x))). • a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 4) } binomial(n + 1,k) * binomial(n - 2 * k + 1,n - 4 * k). •

► [A364591] 1,1,1,1,2,5,11,21,40,85,197,457,1028,2289,5193,12069,28338,66445,155563,365701,865815,2061133,4919431,11758741,28165412 ⋆ G.f. satisfies A(x) = 1 / (1 - x) + x ^ 4 * A(x) ^ 4. • a(n) = Sum _{ k=0..floor(n / 4) } binomial(n - k,3 * k) * binomial(4 * k,k) / (3 * k + 1). •

► [A024493] 1,1,1,2,5,11,22,43,85,170,341,683,1366,2731,5461,10922,21845,43691,87382,174763,349525,699050,1398101,2796203,5592406 ⋆ a(n) = C(n,0) + C(n,3) + ... + C(n,3[n / 3]). • a(n) = (1 / 3) * (2 ^ n + 2 * cos(n * Pi / 3)). • a(n) = (1 / 3) * (2 ^ n + b(n)) where b(n) is the 6 - periodic sequence { 2, 1, - 1, - 2, - 1, 1 } . - _ Benoit Cloitre _ , May 23 2004 • a(n) = Sum _{ k=0..n } binomial(n, 3 * (n - k)). - _ Paul Barry _ , Aug 30 2004 •

► [A130781] 1,1,2,5,11,22,43,85,170,341,683,1366,2731,5461,10922,21845,43691,87382,174763,349525,699050,1398101,2796203,5592406,11184811 ⋆ Sequence is identical to its third differences: a(n + 3) = 3 * a(n + 2) - 3 * a(n + 1) + 2 * a(n), with a(0)=a(1)=1, a(2)=2. • a(n) = (1 / 6) * (1 / 2 - (1 / 2) * i * sqrt(3)) ^ n + (1 / 6) * (1 / 2 + (1 / 2) * i * sqrt(3)) ^ n + (2 / 3) * 2 ^ n - (1 / 6) * i *{ 1 / 2 - (1 / 2) * i * sqrt(3)) ^ n * sqrt(3) + (1 / 6) * i * (1 / 2 + (1 / 2) * i * sqrt(3)) ^ n * sqrt(3), with n>=0 and i=sqrt(- 1). - _ Paolo P. Lava _ , Jun 09 2008 •

► [A293362] 0,1,2,5,11,22,44,88,177,354,709,1419,2839,5678,11356,22713,45426,90852,181704,363408,726817,1453634,2907269,5814539,11629079 ⋆ Greatest integer k such that k / 2 ^ n < log 2. • a(n) = floor(r * 2 ^ n), where r = log 2. • a(n) = nearest integer to the integral dx / sin(x) from Pi / (2 ^ (2 ^ n)) to Pi / 2. • a(n) = nearest integer to - log(tan(Pi / (2 ^ (2 ^ n + 1)))) (follows from the integral formula). (End) •

► [A362583] 1,2,5,11,22,44,89,179,358,717,1434,2868,5737,11475,22950,45901,91802,183605,367211,734422,1468845,2937691,5875382,11750764,23501528 ⋆ Concatenation of ((p mod 4) - 1) / 2 for the primes from 3 through prime(n), converted from binary to decimal. • a(n + 1) = 2 * (a(n)) + floor(prime(n) / 2) mod 2. •

► [A084188] 1,2,5,11,22,45,90,181,362,724,1448,2896,5792,11585,23170,46340,92681,185363,370727,741455,1482910,2965820,5931641,11863283,23726566 ⋆ a(0)=1

, a(n + 1) = 2 * a(n) + b(n + 2), where b(n)=A004539(n) is the n - th bit in th e binary expansion of sqrt(2). • a(n) = floor(sqrt(2) * 2 ^ n). •

▶ [A266721] 1,2,5,11,22,45,90,181,362,725,1450,2901,5802,11605,23210,46421,928 42,185685,371370,742741,1485482,2970965,5941930,11883861,23767722 ⋆ Decima l representation of the middle column of the "Rule 59" elementary cellular auto maton starting with a single ON (black) cell. • a(n) = (- 2 * (- 1) ^ n + 17 * 2 ^ n - 6) / 12 for n>1. • a(n) = 2 * a(n - 1) + a(n - 2) - 2 * a(n - 3) for n>4. • a(n) = floor(17 * 2 ^ n / 12). - _ Karl V. Keller, Jr. _ , Oct 17 2021 •

▶ [A044432] 1,2,5,11,22,45,90,181,363,726,1453,2907,5814,11629,23258,46517,930 35,186070,372141,744282,1488565,2977131,5954262,11908525,23817051 ⋆ a(n) is the number whose base - 2 representation is d(0)d(1)...d(n), where d=A005614 (the infinite Fibonacci word). • a(n) = floor(2 ^ n * (1 - Sum _{ n >= 1 } (- 1) ^ (n + 1) * (1 + 2 ^ Fibonacci(3 * n + 1)) / ((2 ^ (Fibonacci(3 * n - 1)) - 1) * (2 ^ (Fibonacci(3 * n + 2)) - 1))). • a(n) = floor(2 ^ n * R), where R is the r abbit constant. • a(n) = floor(2 ^ n / [1, 2, 2, 4, 8, 32, ..., 2 ^ Fibonacci(3 * h)]) , with h=1 for n=0, h=floor(2 + log((n + 1) / 11) / arcsinh(2)) for n>0. •

▶ [A033120] 1,2,5,11,22,45,91,182,365,731,1462,2925,5851,11702,23405,46811,936 22,187245,374491,748982,1497965,2995931,5991862,11983725,23967451 ⋆ Base - 2 digits of a(n) are, in order, the first n terms of the periodic sequence with initi al period 1,0,1. • a(3n) = (5 * 8 ^ n - 5) / 7, a(3n + 1) = (10 * 8 ^ n - 3) / 7, a(3n + 2) = (20 * 8 ^ n - 6) / 7. • a(n) = a(n - 6) + 45 * 2 ^ (n - 6). - _ Lekraj B eedassy _ , Sep 12 2006 • a(n) = floor((5 / 7) * 2 ^ n). - _ Tani Akinari _ , J ul 15 2014 • a(n) = (5 / 8) * 2 ^ n + a(n - 3). • a(n) = (5 / 7) * 2 ^ n - 2 / 3 - (1 / 21) * cos((2 / 3) * Pi * n) + (1 / 7) * sqrt(3) * sin((2 / 3) * Pi * n). (End) •

▶ [A365243] 1,1,1,1,2,5,11,22,45,99,226,515,1168,2670,6186,14467,33985,80105,1 89636,451060,1077225,2580979,6201602,14942480,36098349 ⋆ G.f. satisfies A(x) = 1 + x * A(x) / (1 - x ^ 3 * A(x) ^ 2). • a(n) = Sum _{ k=0..floor(n / 3) } b inomial(n - 2 * k - 1,k) * binomial(n - k + 1,n - 3 * k) / (n - k + 1). •

▶ [A227637] 2,5,11,23,44,78,130,206,313,459,653,905,1226,1628,2124,2728,3455,4 321,5343,6539,7928,9530,11366,13458,15829 ⋆ Number of n X 2 0,1 arrays indica ting 2 X 2 subblocks of some larger (n + 1) X 3 binary array having determina nt equal to one, with rows and columns of the latter in nondecreasing lexicogra phic order. • a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a (n - 5) for n>5. •

▶ [A354044] 0,2,5,11,23,45,86,160,293,529,945,1673,2940,5134,8917,15415,2653 9,45525,77842,132716,225685,382877,648165,1095121,1846968 ⋆ a(n) = 2 * (- i) ^ n * (n * sin(c * (n + 1)) - i * sin(- c * n)) / sqrt(5) where c = arccos(i / 2). • a(n) = [x ^ n] ((2 - x) * x * (x + 1)) / (x ^ 2 + x - 1) ^ 2. • a(n) = ((((- 1 - sqr t(5)) ^ (- n) * (sqrt(5) * n - n - 2) + (- 1 + sqrt(5)) ^ (- n) * (sqrt(5) * n + n + 2))) / (2 ^ (1 - n) * sqrt(5)). • a(n) = (- 1) ^ (n - 1) * (Fibonacci(- n) - n * Fibonacci(- n - 1)). • a(n) = ((- 42 * n ^ 2 + 259 * n - 350) * a(n - 3) + (123 * n ^ 2 - 76 * n - 446) * a(n - 2) + (207 * n ^ 2 - 885 * n + 412) * a(n - 1)) / ((16 5 * n - 542) * (n - 1)) for n >= 4. • a(n) = Fibonacci(n) + n * Fibonacci(n + 1). - _ Jianing Song _ , May 16 2022 •

▶ [A147878] 1,2,5,11,23,46,86,156,273,463,766,1241,1969,3073,4723,7157,10711,1 5850,23206,33654,48373,68955,97544,137002,191125 ⋆ The number of degree seq uences with degree sum 2n representable by a connected graph (with multiple e dges allowed). • a(n) = p(2n) - p(n - 1) - 2 * Sum _{ j=0..n - 2 } p(j). •

▶ [A140992] 0,1,2,5,11,23,46,89,168,311,567,1021,1820,3217,5646,9849,17091,295 23,50794,87081,148820,253611,431087,731065,1237176 ⋆ a(0) = 0, a(1) = 1; for n > 1, a(n) = a(n - 2) + a(n - 1) + A000071(n + 1). • a(n) = 3 * a(n - 1) - a(n - 2) - 3 * a(n - 3) + a(n - 4) + a(n - 5). •

▶ [A248646] 2,5,11,23,46,92,184,368,736,1472,2944,5888,11776,23552,47104,9420 8,188416,376832,753664,1507328,3014656,6029312,12058624,24117248,48234496 ⋆ Expansion of x * (5 + x + x ^ 2) / (1 - 2 * x). • a(n) = 23 * 2 ^ (n - 3) for n > 2. • a(n) = 2 * a(n - 1) for n > 3. •

▶ [A000100] 0,0,0,1,2,5,11,23,47,94,185,360,694,1328,2526,4781,9012,16929,3170 9,59247,110469,205606,382087,709108,1314512 ⋆ a(n) is the number of compositi ons of n in which the maximal part is 3. • a(n) = 2 * a(n - 1) + a(n - 2) - a(n - 3) - 2 * a(n - 4) - a(n - 5). Convolution of Fibonacci and tribonacci numbers (A 000045 and A000073). - _ Franklin T. Adams - Watters _ , Jan 13 2006 •

▶ [A293339] 0,0,1,2,5,11,23,47,94,188,376,753,1506,3013,6027,12054,24109,4821 8,96437,192874,385749,771499,1542998,3085996,6171992 ⋆ Greatest integer k su ch that k / 2 ^ n < 1 / e. • a(n) = floor(r * 2 ^ n), where r = 1 / e. •

▶ [A266550] 1,1,2,5,11,23,47,95,191,383,767,1535,3071,6143,12287,24575,49151,9 8303,196607,393215,786431,1572863,3145727,6291455,12582911 ⋆ Independence number of the n - Mycielski graph. • a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>2. - _ Vincenzo Librandi _ , Jan 01 2016 •

▶ [A055010] 0,2,5,11,23,47,95,191,383,767,1535,3071,6143,12287,24575,49151,983 03,196607,393215,786431,1572863,3145727,6291455,12582911,25165823 ⋆ a(0) = 0; for n > 0, a(n) = 3 * 2 ^ (n - 1) - 1. • a(n) = (- 1 + 3 * 2 ^ (n - 1)) * (1 - (C(2 * n,n) mod 2)), with n>=0. - _ Paolo P. Lava _ , Nov 20 2008 •

▶ [A083329] 1,2,5,11,23,47,95,191,383,767,1535,3071,6143,12287,24575,49151,983 03,196607,393215,786431,1572863,3145727,6291455,12582911,25165823 ⋆ a(0) = 1; for n > 0, a(n) = 3 * 2 ^ (n - 1) - 1. • a(n) = (3 * 2 ^ n - 2 + 0 ^ n) / 2. • a (0) = 1, a(n) = sum of all previous terms + n. - _ Amarnath Murthy _ , Jun 2 0 2004 • a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n > 2, a(0)=1, a(1)=2, a(2)=5. - _ Philippe Deléham _ , Nov 29 2013 • a(n) = (...((((((1) + 1) * 2 + 1) * 2 + 1) * 2 + 1) * 2 + 1)...), with n + 1 1's, n >= 0. • a(n) = 2 * a(n - 1) + 1, n >= 2. • a(n) = 2 ^ n + 2 ^ (n - 1) - 1, n >= 2. (End) •

▶ [A153893] 2,5,11,23,47,95,191,383,767,1535,3071,6143,12287,24575,49151,9830 3,196607,393215,786431,1572863,3145727,6291455,12582911,25165823,50331647 ⋆ a(n) = 3 * 2 ^ n - 1. • a(n) = a(n - 1) * 2 + 1, a(0)=2. • a(n) = 3 * a(n - 1) - 2 * a(n - 2). •

▶ [A357292] 0,0,0,0,0,1,2,5,11,23,47,96,193,388,778,1558,3118,6239,12480,24963,4 9929,99861,199725,399454,798911 ⋆ a(n) = number of subsets S of { 1,2,...,n } h aving more than 2 elements such that (sum of least two elements of S) = differe nce between greatest two elements of S. • a(n) = 2 * a(n - 1) + a(n - 2) - a(n - 3) - 2 * a(n - 4) - a(n - 5) + 2 * a(n - 6). •

▶ [A059411] 2,5,11,23,47,283,1699,20389,244669,7340071,205521989,411043979,4 932527749,295951664941,4735226639057,227290878674737,12273707448435799,8 83706936287377529,24743794216046570813 ⋆ a(1) = 2, a(n) = k * a(n - 1) + 1, where a(n) is the smallest prime of the form k * a(n - 1) + 1 and k > 1. • a(n + 1) = a(n) * q(n) + 1, q(n) = Min { q|qa(n) + 1 is prime } . •

▶ [A192415] 1,1,1,2,5,11,23,51,120,286,681,1636,3985,9803,24257,60338,150931,3 79501,958360,2429294,6179380,15769380,40361087,103579221,266471500 ⋆ G.f. s atisfies: A(x) = (1 + x * A(x)) * (1 + x ^ 3 * A(x) ^ 2). • a(n) = Sum _{ k=0 ..n / 2 + 1 } C(n - k + 2,k - 1) * C(n - k + 2,2 * k - 1) / (n - k + 2). - _ Vladi mir Kruchinin _ , Feb 12 2019 •

▶ [A182557] 0,1,2,5,11,24,51,106,219,448,910,1841,3712,7466,14992,30070,6026 2,120697,241639,483625,967741,1936177,3873337,7748065,15498098 ⋆ a(n) = a(n - 1) * 2 + floor(sqrt(a(n - 2))). • a(0)=0, a(1)=1, a(n) = a(n - 1) * 2 + floor(sq rt(a(n - 2))). •

▶ [A027934] 0,1,2,5,11,24,51,107,222,457,935,1904,3863,7815,15774,31781,6393 9,128488,257963,517523,1037630,2079441,4165647,8342240,16702191 ⋆ a(0)=0, a (1)=1, a(2)=2; for n > 2, a(n) = 3 * a(n - 1) - a(n - 2) - 2 * a(n - 3). • a(n) = S um _{ j=0..floor(n / 2) } Sum _{ k=0..n - 2 * j } binomial(n - j, n - 2 * j - k). - _ Paul Barry _ , Feb 07 2003 • a(n) = 2 ^ n - Fibonacci(n + 1). (End) - corr ected Apr 06 2006 and Oct 05 2012 • a(n) = Sum _{ j=0..n } Sum _{ k=0..n } binomial(n - k, k + j). - _ Paul Barry _ , Aug 29 2004 • a(n) = (Sum of (n + 1) - th row of the triangle in A108617) / 2. - _ Reinhard Zumkeller _ , Jun 12 2005 • a(n) = term (1,1) - term (2,2) in the 3 X 3 matrix [2,0,0; 0,1,1; 0,1,0] ^ n. - _ Alois P. Heinz _ , Jul 28 2008 • a(n) = 2 ^ n - (1 / 2) * (1 / 2 + (1 / 2) * sqrt(5)) ^ n - (1 / 10) * (1 / 2 + (1 / 2) * sqrt(5)) ^ n * sqrt(5) + (1 / 10) * sqrt(5) * (1 / 2 - (1 / 2) * sqrt(5)) ^ n - (1 / 2) * (1 / 2 - (1 / 2) * sqrt(5)) ^ n, with n >= 0. - _ Paolo P. Lava _ , Oct 02 2008 •

▶ [A286945] 1,2,5,11,24,51,109,234,503,1081,2322,4987,10711,23006,49415,10613 9,227976,489669,1051759,2259072,4852259,10422163,22385754,48082339,1032760 09 ⋆ Number of maximal matchings in the ladder graph P _ 2 X P _ n. • a(n) = 2 * a(n - 1) + a(n - 4) + a(n - 5) for n>5. •

▶ [A111297] 1,2,5,11,24,52,112,240,512,1088,2304,4864,10240,21504,45056,9420 8,196608,409600,851968,1769472,3670016,7602176,15728640,32505856,67108864 ⋆ First differences of A109975. • a(n) = Sum _{ k=0..n } C(n,k) * Sum _{ j= 0..floor(k / 2) } C(j + 1,k - j). • a(n) = Sum _{ k=0..n - 2 } (k + 5) * binomia l(n - 2,k) for n >= 2. - _ Philippe Deléham _ , Apr 20 2009 • a(n) = 2 * a(n - 1) + 2 ^ (n - 3) for n > 2, a(0) = 1, a(1) = 2, a(2) = 5. - _ Philippe Deléham _ , Mar 02 2012 • a(n) = (n + 8) * 2 ^ (n - 3), for n >= 2. •

▶ [A077864] 1,2,5,11,24,52,112,241,518,1113,2391,5136,11032,23696,50897,10932 2,234813,504355,1083304,2326828,4997792,10734753,23057166,49524465,1063735 51 ⋆ Expansion of (1 - x) ^ (- 1) / (1 - x - 2 * x ^ 2 - x ^ 3). • a(0)=1, a(1)=2, a(2)=5, a(3)=11, a(n)=2 * a(n - 1) + a(n - 2) - a(n - 3) - a(n - 4) for n>3. - _ Philippe Deléham _ , Oct 25 2006 • a(n) = term (4,1) in the 4x4 matrix [1,1,0, 0; 2,0,1,0; 1,0,0,0; 1,0,0,1] ^ (n + 1). - _ Alois P. Heinz _ , Jul 24 2008 •

▶ [A052980] 1,1,2,5,11,24,53,117,258,569,1255,2768,6105,13465,29698,65501,1444 67,318632,702765,1549997,3418626,7540017,16630031,36678688,80897393 ⋆ Expa nsion of (1 - x) / (1 - 2 * x - x ^ 3). • a(n) = Sum(1 / 59 * (4 + 3 *_ alpha ^ 2 + 17 *_ alpha) *_ alpha ^ (- 1 - n), _ alpha = RootOf(- 1 + 2 *_ Z +_ Z ^ 3)). • a(2n) = a(n) ^ 2 - a(n - 1) ^ 2 + (1 / 2) * (a(n + 2) - a(n + 1) - a(n)) ^ 2 . - _ Greg Dresden _ and _ Michael Tulskikh _ , Aug 20 2019 • a(n) = 2 ^ (n - 1) + Sum _{ i=3..n } (2 ^ (n - i) * a(i - 3)). - _ Greg Dresden _ , Aug 27 20 19 • a(n + 1) = (Sum _{ i >= 0 } 2 ^ (n - 3i - 2) * (4 * binomial(n - 2i, i) + bi nomial(n - 2i - 2, i))). - _ Michael Tulskikh _ , Feb 14 2020 •

▶ [A018007] 1,2,5,11,24,54,121,269,598,1331,2960,6583,14641,32561,72416,16105 1,358174,796572,1771561,3939916,8762296,19487171,43339080,96385252,2143588 81 ⋆ Powers of cube root of 11 rounded to nearest integer. • a(n) = round(11 ^ (n / 3)). - _ Wesley Ivan Hurt _ , Dec 21 2013 •

▶ [A071879] 1,1,1,2,5,11,24,57,141,349,871,2212,5688,14730,38403,100829,26633 3,706997,1885165,5047522,13565203,36578497,98934826,268342933,729709432 ⋆ G.f. satisfies: A(x) = 1 + x * A(x) + x ^ 3 * A(x) ^ 3. • a(n) = (Sum _{ i=0.. floor(n / 3) } C(n + 1, 1 + 2i) * C(n - 2i, i)) / (n + 1). - _ Emeric Deutsch _ , Nov 03 2002 • a(n) = Sum _{ k=0..floor(n / 3) } C(n,3k) * C(3k,k) / (2k + 1) . - _ Paul Barry _ , Sep 07 2006 •

▶ [A084978] 1,2,5,11,25,51,110,221,456,918,1864,3729,7528,15057,30227,60485,12 1205,242411,485337,970675,1942307,3884730,7771327,15542655,31089330 ⋆ Num ber of ways to represent n as a + b * (c + d * (e + f * (...x + y * (z)...))) in po sitive integers. • a(n + 1) = Sum(k=1..n; Sum(d|k; a(d)). • a(n + 1) = 1 + Su m(k=1..n; Sum(d|k; a(d)) or a(n + 1) = a(n) + Sum(d|n; a(d)). - _ Vladeta Jo vovic _ , Aug 08 2004 •

▶ [A291737] 1,2,5,11,25,54,121,267,591,1310,2899,6422,14218,31486,69722,15438 9,341881,757050,1676405,3712200,8220236,18202762,40307892,89257156,1976495 88 ⋆ p - INVERT of (1,0,1,0,0,0,0,...), where p(S) = 1 - S - S ^ 2 - S ^ 3. • a(n) = a(n - 1) + a(n - 2) + 2 * a(n - 3) + 2 * a(n - 4) + 3 * a(n - 5) + a(n - 6) + 3 * a(n - 7) + a(n - 9) for n >= 10. •

▶ [A177795] 0,1,2,5,11,25,55,120,258,550,1163,2444,5108,10627,22021,45474,9362 1,192232,393779,804947,1642355,3345307,6803734,13818636,28031472 ⋆ Number of length n binary words that have at least one maximal run of 1's having lengt h two. • a(n) = 2 * a(n - 1) + 2 ^ n - 3 - a(n - 3) - 2 ^ n - 4 + a(n - 4). •

▶ [A215091] 2,5,11,25,55,123,275,615,1375,3075,6875,15373,34375,76865,17187 5,384325,859376,1921624,4296881,9608119,21484407,48040595,107422036,240202 975,537110180 ⋆ Power floor - ceiling sequence of sqrt(5). • a(n) = ceiling(x * a (n - 1)) if n is odd, a(n) = floor(x * a(n - 1) if n is even, where x = sqrt(5) and a(0) = floor(x). •

▶ [A228765] 1,2,5,11,25,56,126,283,633,1419,3178,7118,15943,35710,79985,17915 2,401270,898777,2013107,4509015,10099422,22620977,50667115,113485664,25418 8460 ⋆ The curvature of circles (rounded to nearest integer), successively inscri bed toward the 45 - degree angle of a 45 - 45 - 90 triangle, starting with a unit circle. • a(n + 1) = round(k ^ n), with k = 7 - 4 sqrt(2) + 2 sqrt(20 - 14 sqrt(2)) = 2.23982.... - _ Charles R Greathouse IV _ , Sep 05 2013 •

► [A006054] 0,0,1,2,5,11,25,56,126,283,636,1429,3211,7215,16212,36428,81853,183922,413269,928607,2086561,4688460,10534874,23671647,53189708 ⋆ a(n) = 2 * a(n - 1) + a(n - 2) - a(n - 3), with a(0) = a(1) = 0, a(2) = 1. ● a(n + 3) = Sum _{ k=1..n } Sum _{ j=0..k } binomial(j,n - 3 * k + 2 * j) * (- 1) ^ (j - k) * binomial(k,j) * 2 ^ (- n + 3 * k - j); a(0)=0, a(1)=0, a(2)=1. - _ Vladimir Kruchinin _ , May 05 2011 ●

► [A366095] 1,1,1,2,5,11,25,63,162,415,1085,2896,7795,21127,57785,159253,441351,1229506,3442150,9678358,27315923,77364683,219815829,626375327,1789627564 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 + x - x ^ 3) / (1 + x) ^ 2). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 3) } binomial(n + k,k) * binomial(n - k + 1,n - 3 * k). ●

► [A085945] 1,2,5,11,26,53,116,236,488,983,2006,4016,8111,16238,32603,65243,130778,261566,523709,1047479,2095988,4192115,8386418,16772858,33550058 ⋆ Number of subsets of { 1,2,...,n } with relatively prime elements. ● a(n) = Sum _{ k=1..n } mu(k) * (2 ^ floor(n / k) - 1). - _ Geoffrey Critzer _ , Jan 03 2012 ●

► [A291233] 1,2,5,11,26,58,134,303,693,1576,3593,8184,18645,42480,96773,220481,502290,1144350,2607062,5939501,13531493,30827806,70232669,160005808,364529269 ⋆ p - INVERT of (0,1,0,1,0,1,...), where p(S) = 1 - S - S ^ 2 - S ^ 3. ● a(n) = a(n - 1) + 4 * a(n - 2) - a(n - 3) - 4 * a(n - 4) + a(n - 5) + a(n - 6) for n > = 7. ●

► [A006138] 1,2,5,11,26,59,137,314,725,1667,3842,8843,20369,46898,108005,248699,572714,1318811,3036953,6993386,16104245,37084403,85397138,196650347,452841761 ⋆ a(n) = a(n - 1) + 3 * a(n - 2). ● a(n) = Sum _{ k=0..n } C(floor((2n - k) / 2),n - k) * 3 ^ floor(k / 2). - _ Paul Barry _ , Feb 02 2007 ● a(n) = (1 / 2) * (((1 / 2) - (1 / 2) * sqrt(13)) ^ n + ((1 / 2) + (1 / 2) * sqrt(13)) ^ n) + (3 / 26) * sqrt(13) * (((1 / 2) + (1 / 2) * sqrt(13)) ^ n - ((1 / 2) - (1 / 2) * sqrt(13)) ^ n). - _ Paolo P. Lava _ , Jul 17 2009 ● a(n) = (i * sqrt(3)) ^ (n - 1) * (i * sqrt(3) * ChebyshevU(n, 1 / (2 * i * sqrt(3))) + ChebyshevU(n - 1, 1 / (2 * i * sqrt(3)))), where i=sqrt(- 1). - _ G. C. Greubel _ , Nov 19 2019 ●

► [A182015] 1,2,5,11,26,60,145,353,884,2241,5786,15108,39941,106558,286809,777505,2121668,5822287,16059288,44494738,123782207,345615047,968211110,2720561790,7665640267 ⋆ Diagonal sums of triangle A182013. ● a(n) = sum(sum(M(i),i=k..n - k),k=0..n), where the M(n)'s are the Motzkin numbers. ● a(n) = sum((n - i + 1) * M(i),i=0..n) - sum((n - 2 * i) * M(i),i=0..floor(n / 2)). ●

► [A124217] 1,1,2,5,11,26,61,143,336,789,1853,4352,10221,24005,56378,132409,310975,730354,1715305,4028555,9461440,22221081,52188297,122569120,287865097 ⋆ Expansion of (1 - x - x ^ 2) / (1 - 2x - x ^ 2 + x ^ 4). ● a(n)=sum { k=0..floor(n / 2), sum { j=0..n - k, C(n - k,j)C(j,2(j - k))2 ^ (j - k) }} ; ●

► [A095981] 0,0,1,2,5,11,26,61,147,357,879,2183,5471,13811,35100,89724,230562,595237,1543191,4016038,10487553,27473602,72178312,190127740,502044221 ⋆ Number of plateau - free Motzkin paths of length n. ● a(n) = a(n - 1) + a(n - 2) + 1 + a(2)(1 + a(n - 4)) + a(3)(1 + a(n - 5)) + ... + a(n - 2)(1 + a(0)) for n >=3. This recurrence counts plateau - free Motzkin n - paths by location of first return to ground level. ●

► [A082397] 1,2,5,11,26,62,153,385,988,2573,6786,18084,48621,131718,359193,985185,2715972,7521567,20915256,58373586,163462815,459136809,1293223230,3651864606,10336625731 ⋆ Number of directed aggregates of height <= 2 with n cells. ● a(n) = Sum _{ k=1..n } (- 1) ^ (k + 1) * binomial(n + 1, k + 1) * binomial(k, floor((k - 1) / 2)). E.g.f.: - exp(x) * int(- BesselI(1, 2 * x) + BesselI(2, 2 * x), x) - exp(x) * (- BesselI(1, 2 * x) + BesselI(2, 2 * x)). - _ Vladeta Jovovic _ , Sep 18 2003 ●

► [A051286] 1,1,2,5,11,26,63,153,376,931,2317,5794,14545,36631,92512,234205,594169,1510192,3844787,9802895,25027296,63972861,163701327,419316330,1075049011 ⋆ Whitney number of level n of the lattice of the ideals of the fence of order 2n. ● a(n) = Sum _{ k=0..n } C(n - k, k) ^ 2. ● a(n) = Sum _{ k=0..n } (C(k,k / 2) * (1 + (- 1) ^ k) / 2) * Sum _{ j=0..n } (- 1) ^ ((n - j) / 2) * C((n + j) / 2,j) * ((1 + (- 1) ^ (n - j)) / 2) * C(j,k). -_ Paul Barry _ , Mar 31 2010 ●

► [A192475] 2,5,11,26,63,157,398,1021,2639,6854,17855,46601,121770,318421,833027,2179906,5705471,14934533,39094934,102345101,267932007,701437390,1836358271,4807602001,12586390418 ⋆ Coefficient of x in the reduction by x ^ 2 - >x + 1 of the polynomial p(n,x)=1 + x ^ (n + 1) + x ^ (2n). ● a(n) = F(2n) + F(n + 1), where F(n) is A000045. - _ Carl Najafi _ , May 06 2014 ●

► [A095892] 1,1,1,2,5,11,26,66,173,469,1307,3676,10506,30260,87922,256990,756381,2236409,6648893,19846902,59507503,179051839,540778436,1638019284,4977317066 ⋆ a(n) = sum of the squares of the coefficients of x ^ n in x ^ (n - 2k) * A(x ^ 2) ^ (n - 2k), as k varies from 0 to floor(n / 2), with a(0)=1. ● a(n) = Sum _{ k=0..[n / 2] } ([x ^ n] (x * A(x ^ 2)) ^ (n - 2k)) ^ 2, where [x ^ n] f(x) denotes the coefficient of x ^ n in f(x). ●

► [A364597] 1,1,1,2,5,11,26,71,197,540,1521,4401,12826,37597,111385,332861,1000181,3021071,9174308,27987989,85712801,263438881,812394661,2512807846,7793552386 ⋆ G.f. satisfies A(x) = 1 / (1 - x) + x ^ 3 * (1 - x) * A(x) ^ 5. ● a(n) = Sum _{ k=0..floor(n / 3) } binomial(n,3 * k) * binomial(5 * k,k) / (4 * k + 1). ●

► [A212567] 0,0,2,5,11,27,42,68,106,149,201,279,354,452,572,701,845,1031,1212,1428,1676,1937,2219,2559,2892 ⋆ Number of (w,x,y,z) with all terms in { 1,...,n } and 2w + 2x=3y + 3z. ● a(n) = 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4) - 4 * a(n - 5) - a(n - 6) + 2 * a(n - 7) + 2 * a(n - 8) - a(n - 10). ●

► [A325916] 1,1,2,5,11,27,76,177,428,966,2724,5986,14322,31241,68632,174364,374901,841417,1792950,3803764,7688426,18376432,37158444,80078021,163155272 ⋆ Number of partitions of n into colored blocks of equal parts with colors from a set of size n such that the block with largest parts has the first color. ● a(n) = 1 / n * [x ^ n] Product _{ j=1..n } (1 + (n - 1) * x ^ j) / (1 - x ^ j) for n>0, a(0) =1. ●

► [A000625] 1,1,1,2,5,11,28,74,199,551,1553,4436,12832,37496,110500,328092,980491,2946889,8901891,27012286,82300275,251670563,772160922,2376294040,7333282754 ⋆ Number of n - node steric rooted ternary trees; number of n carbon alkyl radicals C(n)H(2n + 1) taking stereoisomers into account. ● a(0) = a(1) = 1; a(n + 1) = 2 * a(n / 3) / 3 + (Sum _{ j=1..n } j * a(j) * (Sum _{ i=1..n - j } a(i) * a(n - j - i))) / n for n >= 1, where a(k) = 0 if k not an integer (essentially eq (4) in the Robinson et al. paper). - _ Emeric Deutsch _ , May 16 2004 ●

► [A334578] 1,1,1,2,5,11,29,76,233,685,2329,7534,27949,97943,391285,1469144,6260561,24975449,112690097,474533530,2253801941,9965204131,49583642701,229199695012,1190007424825 ⋆ Double subfactorials: a(n) = (- 1) ^ floor(n / 2) * n !! * Sum _{ i=0..floor(n / 2) } (- 1) ^ i / (n - 2 * i)!!. ● a(n) = n * a(n - 2) + (- 1) ^ floor(n / 2). ●

► [A360810] 1,1,1,2,5,11,29,81,229,696,2181,7045,23653,81433,288173,1046814,3887749,14768783,57275541,226462801,912443397,3741515804,15603500797,66134448329,284660214181 ⋆ Expansion of Sum _{ k>=0 } (x / (1 - k * x ^ 2)) ^ k. ● a(n) = Sum _{ k=0..floor(n / 2) } (n - 2 * k) ^ k * binomial(n - k - 1,k). ●

► [A190865] 1,1,1,2,5,11,31,106,337,1205,5021,20186,86461,417847,1992355,9860306,53734241,292816841,1633818457,9855157330,59926837141,370352343971,2439935383271,16283034762842,109982177787505 ⋆ E.g.f. exp(x + x ^ 3 / 6). ● a(n) = n! * sum(k=0..n / 3, 1 / ((k)! * (n - 3 * k)! * 6 ^ (k))), n>0, a(0)=1. ● a(n) = hypergeom([- n / 3, (1 - n) / 3, (2 - n) / 3], [], - 9 / 2). - _ Peter Luschny _ , Jun 04 2021 ●

► [A298122] 1,1,2,5,11,34,90,300,875,3038,9408,33516,108108,392040,1302444,4785066,16256955,60324550,208579800,780088452,2735682092,10296854984,36532677272,138231751840,495241833996 ⋆ a(n) is the number of n nonintersecting arches above the x - axis that start and / or end with an arch length equal to one and have floor((n + 2) / 2) arches starting in odd numbered positions. ● a(1) = a(2) = 1, a(3) = 2; for n > 3, a(n) = 2 * (C(n - 1, floor((n - 1) / 2)) * C(n - 2, floor((n - 2) / 2)) - (C(n - 1, floor((n - 2) / 2)) * C(n - 2, floor((n - 3) / 2)))) - (C(n - 3, floor((n - 1) / 2)) * C(n - 2, floor((n - 1) / 2)) / (floor((n - 1) / 2) + 1)). ●

► [A172297] 2,5,11,41,116,197,312,435,684,1046,1430,1892,2404,3155,3977,9289,17044,26575,38954,54776,73661,96632,119637,218363,361381 ⋆ Partial sums of A002234. ● a(n) = sum[i=1..n] { i such that the Woodall number i * 2 ^ i - 1 is prime } . ●

► [A267527] 1,2,5,11,87,175,1375,2751,21887,43775,349695,699391,5593087,11186175,89481215,178962431,1431666687,2863333375,22906535935,45813071871,366504050687,733008101375,5864062713855,11728125427711,93824995033087 ⋆ Decimal representation of the n - th iteration of the "Rule 141" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = 3 * a(n - 1) + 14 * a(n - 2) - 48 * a(n - 3) + 32 * a(n - 4) for n>5. ● a(n) = 2 ^ n * (4 ^ floor(n / 2) - 1) / 3 + 2 ^ (n - 1) - 1 for n > 1. - _ Karl V. Keller, Jr. _ , Sep 22 2021 ●

► [A069506] 2,5,11,111,1111,11111,111111,1111111,11111111,111111111,1111111111,11111111111,111111111111,1111111111111,11111111111111,111111111111111,1111111111111111,11111111111111111,1111111111111111111,11111111111111111111,111111111111111111111,1111111111111111111111,11111111111111111111111,111111111111111111111111 ⋆ a(1) = 2; a(n) = smallest palindromic number of the form k * a(n - 1) + 1 with k > 1. ● a(n) = (10 ^ (n - 1) - 1) / 9 for n > 2. ● a(n) = 11 * a(n - 1) - 10 * a(n - 2) for n > 3. ●

► [A085227] 2,5,12,13,31,32,34,35,36,87,88,90,91,92,96,97,99,100,101,103,104,105,106,261,262 ⋆ Column 0 of A085205. ● a(n) = A085205bi(0, n). ●

► [A102718] 0,1,2,5,12,15,21,24,30,33,39,51,57,69,84,96,111,113,117,125,132,137,147,158,171 ⋆ a(n) = a(n - 1) + (sum of the last two digits of the sequence so far); a(0)=0; a(1)=1. ● a(n + 20) = 200 + a(n) for n > 17. - _ David A. Corneth _ , May 11 2018 ●

► [A042467] 1,1,2,5,12,17,29,1583,1612,3195,8002,19199,27201,46400,2532801,2579201,5112002,12803205,30718412,43521617,74240029,4052483183,4126723212,8179206395,20485136002 ⋆ Denominators of continued fraction convergents to sqrt(761). ● a(n) = 1600 * a(n - 7) + a(n - 14). - _ Vincenzo Librandi _ , Dec 14 2013 ●

► [A041889] 1,1,2,5,12,17,46,247,293,1126,1419,29506,30925,122281,153206,888311,1929828,2818139,7566106,17950351,25516457,43466808,1851122393,1894589201,3745711594 ⋆ Denominators of continued fraction convergents to sqrt(466). ● a(n) = 1876638850 * a(n - 22) - a(n - 44) for n>43. - _ Vincenzo Librandi _ , Dec 26 2013 ●

► [A041641] 1,2,5,12,17,301,318,937,2192,5321,193748,392817,979382,2351581,3330963,58977952,62308915,183595782,429500479,1042596740,37962983119,76968562978,191900109075,460768781128,652668890203 ⋆ Denominators of continued fraction convergents to sqrt(339). ● a(n) = 195940 * a(n - 10) - a(n - 20) for n> 19. - _ Vincenzo Librandi _ , Dec 22 2013 ●

► [A131091] 1,2,5,12,19,20,29,38,45,48,51,60,61,62,65,72,79,80,89,98,105,108,111,120,121 ⋆ Partial sums of A131707. ● a(n) = 2 * a(n - 1) - a(n - 2) - a(n - 6) + 2 * a(n - 7) - a(n - 8) for n > 7. - _ Chai Wah Wu _ , Jan 09 2021 ●

► [A116728] 1,2,5,12,19,26,33,40,47,54,61,68,75,82,89,96,103,110,117,124,131,138,145,152,159 ⋆ Number of permutations of length n which avoid the patterns 321, 1243, 2134. ● a(n) = 2 * a(n - 1) - a(n - 2) for n=4. - _ Colin Barker _ , Oct 24 2017 ●

► [A276478] 1,2,5,12,19,34,45,56,77,98,127,148,169,206,239,280,311,350,393,440,495,534,593,644,697 ⋆ Number of points in square lattice in and on the boundary of the area encompassed by two arcs of radius n and centers at (0,0) and (n,0). ● a(n) = 1 - 3 * n - 2 * (n - 1) * m(n) + 4 * Sum _{ k=0..m(n) } floor(sqrt(n ^ 2 - k ^ 2)) where m(n) = floor(n * sqrt(3) / 2). - _ Franz Vrabec _ , Oct 02 2016 ● a(n) / n ^ 2 tends to A093731 as n tends to infinity. - _ Rémy Sigrist _ , Mar 07 2021 ●

► [A356649] 1,2,5,12,20,36,49 ⋆ Domination number of the Cartesian product of three n - cycles. ● a(7 * n) = 49 * n ^ 3. ●

► [A080838] 0,0,0,2,5,12,21,36,54,80,110,150,195,252,315,392,476,576,684,810,945,1100,1265,1452,1650 ⋆ Orchard crossing number of complete bipartite graph K _{ 1,n } . ● a(n) = (n / 16) * (2 * n ^ 2 - 8 * n + 7 + (- 1) ^ n). ●

► [A244396] 2,5,12,21,39,54,87,117,162,204,279,333,435,516,624,732,900,1017,1224,1380,1590,1785,2082,2286,2616 ⋆ a(n) = Sum _{ k=1, n } phi(k) * index(k, n), with phi(k) the Euler totient A000010(k) and index(k,n) the position of 1 / k in the n - th row of the Farey sequence of order k, A049805(n,k). ● a(n) = n ^ 3 / (6 * zeta(3)) + O(n ^ 2). (see (22) in Tomás link). ●

► [A106331] 0,1,2,5,12,21,50,119,208,495,1178,2059,4900,11661,20382,48505,115432,201761,480150,1142659,1997228,4752995,11311158,19770519,47049800 ⋆ Numbers j such that 24 * (j ^ 2) + 25 = k ^ 2. ● a(n) = + 10 * a(n - 3) - a(n - 6). G.f.: x ^ 2 * (1 + 2 * x + 5 * x ^ 2 + 2 * x ^ 3 + x ^ 4) / (1 - 10 * x ^ 3 + x ^ 6) . [_ R. J. Mathar _ , May 22 2010] ●

► [A116727] 1,2,5,12,22,32,42,52,62,72,82,92,102,112,122,132,142,152,162,172,182,192,202,212,222 ⋆ Number of permutations of length n which avoid the patterns 321, 2134, 3412. ● a(n) = 2 * a(n - 1) - a(n - 2) for n=5. - _ Colin Barker _ , Oct 24 2017 ●

► [A048840] 1,2,5,12,22,34,48,64,82,102,124,148,174,202,232,264,298,334,372,412,454,498,544,592,642 ⋆ Expansion of (1 - x + 2 * x ^ 2 + 2 * x ^ 3 - x ^ 4 - x ^ 5) / (1 - x) ^ 3. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n > 5. - _ Colin Barker _ , May 03 2019 ●

► [A116718] 1,1,2,5,12,22,37,60,96,153,244,390,625,1004,1616,2605,4204,6790,10973,17740,28688,46401,75060,121430,196457 ⋆ Number of permutations of length n which avoid the patterns 321, 1342, 3124. ● a(0)=1, a(1)=1, a(2)=2, a(3)=5, a(4)=12, a(5)=22, a(6)=37, a(n)=3 * a(n - 1) - 2 * a(n - 2) - a(n - 3) + a (n - 4). - _ Harvey P. Dale _ , Oct 21 2011 ●

► [A026035] 2,5,12,22,38,59,88,124,170,225,292,370,462,567,688,824,978,1149,1340,1550,1782,2035,2312,2612,2938 ⋆ Expansion of x ^ 2 * (2 - x + x ^ 2) / ((1 + x) * (1 - x) ^ 4). ● a(n) = (2 * n ^ 3 + 4 * n - 3 + 3 * (- 1) ^ n) / 12. - _ Ralf Stephan _ , Jan 30 2005. ● a(2)=2, a(3)=5, a(4)=12, a(5)=22, a(6)=38; for n>6, a(n) = 3 * a(n - 1) - 2 * a(n - 2) - 2 * a(n - 3) + 3 * a(n - 4) - a(n - 5). - _ Harvey P. Dale _ , May 31 2013 ● a(n) = binomial(n,3) + floor(n ^ 2 / 2). - _ Bruno Berselli _ , Jun 08 2017 ●

► [A116711] 1,2,5,12,23,36,51,68,87,108,131,156,183,212,243,276,311,348,387,428,471,516,563,612,663 ⋆ Number of permutations of length n which avoid the patterns 123, 3214, 4312. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>3. - _ Colin Barker _ , Oct 23 2017 ●

► [A115520] 1,2,5,12,23,36,61,88,123,170,227,288,373,462,565,688,827,972,1153,1340,1547,1782,2039,2304,2617 ⋆ Number of ordered triples (i,j,k) in range [0..n] satisfying i == j mod 2 and j == k mod 3. ● a(n) = binomial(n + 1,3) - linear (PORC) correction term which depends on n mod 6. ●

► [A096376] 2,5,12,23,38,57,80,107,138,173,212,255,302,353,408,467,530,597,668,743,822,905,992,1083,1178 ⋆ a(n) = n + (n - 1) ^ 2 + (n + 1) ^ 2. ● a(n) = 2 * n ^ 2 + n + 2. - _ N. J. A. Sloane _ , Nov 10 2009 ● a(n) = 4 * n + a(n - 1) - 1 (with a(0)=2). - _ Vincenzo Librandi _ , Nov 16 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A357288] 0,0,0,0,0,0,1,2,5,12,23,42,85,144,251,454,753,1244,2183,3506,5725,9736,15539,24926,41993 ⋆ a(n) = (1 / 4) * A357287(n). ● a(n) = 2 * a(n - 1) + a(n - 2) - 6 * a(n - 4) - 4 * a(n - 5) + 16 * a(n - 6) - 8 * a(n - 7). ●

► [A116721] 1,2,5,12,24,42,67,100,142,194,257,332,420,522,639,772,922,1090,1277,1484,1712,1962,2235,2532,2854 ⋆ Number of permutations of length n which avoid the patterns 123, 3142, 4312; or avoid the patterns 123, 3421, 4231. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>5. - _ Colin Barker _ , Oct 24 2017 ●

► [A116713] 1,2,5,12,24,45,83,154,290,555,1077,2112,4172,8281,16487,32886,65670,131223,262313,524476,1048784,2097381,4194555,8388882,16777514 ⋆ Number of permutations of length n which avoid the patterns 123, 2431, 4132. ● a(n) = (- 4 + 2 ^ n - n + n ^ 2) / 2 for n>2. ● a(n) = 5 * a(n - 1) - 9 * a(n - 2) + 7 * a(n - 3) - 2 * a(n - 4) for n>6. ●

► [A023615] 2,5,12,24,47,84,148,251,422,702,1155,1894,3090,5027,8164,13244,21467,34772,56306,91149,147528,238756,386367,625212,1011676 ⋆ Convolution of Fibonacci numbers and primes. ● a(n) = a(n - 1) + a(n - 2) + prime(n + 1). - _ Alois P. Heinz _ , Feb 19 2023 ●

► [A116731] 1,2,5,12,25,46,77,120,177,250,341,452,585,742,925,1136,1377,1650,1957,2300,2681,3102,3565,4072,4625 ⋆ Number of permutations of length n which avoid the patterns 321, 2143, 3124; or avoid the patterns 132, 2314, 4312, etc. ● a(n) = (n ^ 3 - 3 * n ^ 2 + 5 * n) / 3. - _ Franklin T. Adams - Watters _ , Sep 13 2006 ●

► [A116722] 1,2,5,12,25,47,82,135,212,320,467,662,915,1237,1640,2137,2742,3470,4337,5360,6557,7947,9550,11387,13480 ⋆ Number of permutations of length n which avoid the patterns 312, 1324, 3421; or avoid the patterns 312, 1324, 2341, etc. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>4. - _ Colin Barker _ , Oct 24 2017 ●

► [A368638] 1,2,5,12,25,48,83,136,211,314,449,626,849,1130,1475,1892,2389,2982,3677,4492,5435,6518,7751,9156,10741 ⋆ a(n) is the number of triangular partitions whose Young diagram fits inside a square of side n. ● a(n) = 1 + Sum _{ i =1..n } binomial(n - i + 2,2) * phi(i). ●

► [A116730] 1,2,5,12,25,48,87,152,259,434,719,1182,1933,3150,5121,8312,13477,21836,35363,57252,92671,149982,242715,392762,635545 ⋆ Number of permutations of length n which avoid the patterns 321, 1342, 1423. ● a(n) = 1 + (2 ^ (1 - n) * ((1 - sqrt(5)) ^ n * (- 2 + sqrt(5)) + (1 + sqrt(5)) ^ n * (2 + sqrt(5)))) / sqrt(5) - 3 * (1 + n). ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - a(n - 3) + a(n - 4) for n >4. ●

► [A166106] 0,1,1,2,5,12,25,50,96,180,331,600,1075,1908,3360,5878,10225,17700,30509,52390,89664,153000,260375,442032,748775 ⋆ a(n) = a(n - 1) + a(n - 2) + F (n), with a(0) = 0, a(1) = 1, a(2) = a(1) + a(0), a(3) = a(2) + a(1), a(4) = a(3) + a(2) + 2. ● a(n) = 2 * a(n - 1) + a(n - 2) - 2 * a(n - 3) - a(n - 4) for n > 6. ● a(n) = (1 / 25) * 2 ^ (- n - 1) * (5 * ((1 - sqrt(5)) ^ (n + 1) + (1 + sqrt(5)) ^ (n + 1)) * n - (25 + sqrt(5)) * (1 + sqrt(5)) ^ n + (sqrt(5) - 25) * (1 - sqrt(5)) ^ n), n > 2. - _ Ilya Gutkovskiy _ , Apr 26 2016 ●

► [A067331] 2,5,12,25,50,96,180,331,600,1075,1908,3360,5878,10225,17700,30509,52390,89664,153000,260375,442032,748775,1265832,2136000,3598250 ⋆ Convolution of Fibonacci F(n + 1), n >= 0, with F(n + 3), n >= 0. ● a(n) = Sum _{ i=0..floor((n + 3) / 2) } binomial(n + 3 - i, i) * (n + 2 - 2 * i). - _ John M. Campbell _ , Jan 04 2016 ●

► [A116734] 1,2,5,12,25,50,97,184,345,642,1189,2196,4049,7458,13729,25264,46481,85506,157285,289308,532137,978770,1800257,3311208,6090281 ⋆ Number of permutations of length n which avoid the patterns 231, 1432, 4123. ● a(0)=0, a(1)=1, a(2)=2, then a(n) = a(n - 1) + a(n - 2) + a(n - 3) + 2 * n - 4. [From _ Gerald McGarvey _ , Oct 06 2009] ●

► [A116715] 1,2,5,12,25,54,120,265,580,1272,2796,6143,13488,29619,65053,142873,313771,689095,1513390,3323699,7299465,16031000,35207128,7732154516981276 7 ⋆ Number of permutations of length n which avoid the patterns 312, 2341, 4321. ● a(n) = a(n - 1) + a(n - 2) + 2 * a(n - 3) + 3 * a(n - 4) + a(n - 5) for n>5. - _ Colin Barker _ , Oct 20 2017 ●

► [A221720] 1,1,2,5,12,26,49,83,129,187,257,339,433,539,657,787,929,1083,1249,1427,1617,1819,2033,2259,2497 ⋆ An avoidance sequence for a pair of tree patterns that is not the avoidance sequence for any set of permutations. ● a(n) = 6 * n ^ 2 - 56 * n + 147 for n>6. [_ Bruno Berselli _ , Feb 05 2013] ●

► [A027927] 1,2,5,12,26,51,92,155,247,376,551,782,1080,1457,1926,2501,3197,4030,5017,6176,7526,9087,10880,12927,15251 ⋆ Number of plane regions after drawing (in general position) a convex n - gon and all its diagonals. ● a(n) = T(n, 2 * n - 4), T given by A027926. ● a(n) = 1 + binomial(n, 4) + binomial(n - 1, 2) = (n ^ 4 - 6 * n ^ 3 + 23 * n ^ 2 - 42 * n + 48) / 24. ● a(n) = 1 + Sum { i=3..5 } binomial(n - 1, i - 1). - _ Jessica A. Tomasko _ , Nov 15 2022 ●

► [A221948] 0,1,1,2,5,12,26,52,98,176,303,502,803,1244,1872,2744,3928,5504,7565,10218,13585,17804,23030,29436,37214 ⋆ Expansion of (x - 5 * x ^ 2 + 11 * x ^ 3 - 12 * x ^ 4 + 7 * x ^ 5 - 2 * x ^ 6 + x ^ 7) / (1 - 6 * x + 15 * x ^ 2 - 20 * x ^ 3 + 15 * x ^ 4 - 6 * x ^ 5 + x ^ 6). ● a(n) = (n - 1) * (n ^ 4 - 14 * n ^ 3 + 111 * n ^ 2 - 354 * n + 480) / 120 for n>1. - _ Bruno Berselli _ , Feb 06 2013 ●

► [A116717] 1,2,5,12,26,52,98,177,310,531,895,1491,2463,4044,6611,10774,17520,28446,46136,74771,121116,196117,317485,513877,831661 ⋆ Number of permutations of length n which avoid the patterns 231, 1423, 3214. ● a(n) = - 3 + (2 ^ (- 1 - n) * ((1 - sqrt(5)) ^ n * (- 11 + 5 * sqrt(5)) + (1 + sqrt(5)) ^ n * (11 + 5 * sqrt(5)))) / sqrt(5) - n - (1 + n) * (2 + n) / 2. ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + a(n - 3) + 2 * a(n - 4) - a(n - 5) for n>5. ● a(n) = 1 + Sum _{ k=1..n } Sum _{ j=1..k } Sum _{ i=1..j - 1 } Fibonacci(i). - _ Ehren Metcalfe _ , Oct 22 2017 ●

► [A116725] 1,2,5,12,26,52,99,184,340,632,1189,2268,4382,8556,16839,33328,66216,131888,263113,525428,1049906,2098692,4196075,8390632,16779516 ⋆ Number of permutations of length n which avoid the patterns 132, 3421, 4231. ● a(n) = (3 * 2 ^ n + 2 * n - 3 * n ^ 2 + n ^ 3) / 6. ● a(n) = 6 * a(n - 1) - 14 * a(n - 2) + 16 * a(n - 3) - 9 * a(n - 4) + 2 * a(n - 5) for n>5. ●

► [A026622] 1,2,5,12,26,54,110,222,446,894,1790,3582,7166,14334,28670,57342,114686,229374,458750,917502,1835006,3670014,7340030,14680062,29360126 ⋆ a(n) = T(n,0) + T(n,1) + ... + T(n,n), T given by A026615. ● a(n) = 7 * 2 ^ (n - 2) - 2, a(0) = 1, a(1) = 2 (conjectured). Cf. A026624. - _ Ralf Stephan _ , Feb 05 2004 ● a(n) = 2 * a(n - 1) + 2, n>2. - _ Gary Detlefs _ , Jun 22 2010 ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>3. G.f.: (1 - x + x ^ 2 + x ^ 3) / ((1 - x) * (1 - 2 * x)). - _ Colin Barker _ , Feb 17 2016 ●

► [A228078] 0,0,2,5,12,26,55,114,234,477,968,1958,3951,7958,16006,32157,64548,129474,259559,520106,1041810,2086205,4176592,8359950,16730847 ⋆ a(n) = 2 ^ n - Fibonacci(n) - 1. ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) - a(n - 3) + 2 * a(n - 4) for n>3. - _ Colin Barker _ , Mar 20 2015 ● a(n) = (- 1 + 2 ^ n + (((1 - sqrt(5)) / 2) ^ n - ((1 + sqrt(5)) / 2) ^ n) / sqrt(5)). - _ Colin Barker _ , Nov 02 2016 ●

► [A125180] 2,5,12,26,56,114,232,466,936,1878,3758,7522,15048,30098,60200,120406,240818,481638,963282,1926568,3853138,7706282,15412568,30825142,61650292 ⋆ a(n) = 2 * a(n - 1) + prime(n) - prime(n - 1), a(1)=2, where prime(n) denotes the n - th prime. ● a(n) = prime(n) + Sum _{ j=1..n - 1 } 2 ^ (n - j - 1) * prime(j), where prime(k) denotes the k - th prime. ●

► [A073778] 0,0,0,0,1,2,5,12,26,56,118,244,499,1010,2027,4040,8004,15776,30956,60504,117845,228818,443057,855732,1649022 ⋆ a(n) = Sum _{ k=0..n } T(k) * T(n - k), where T is A000073; convolution of A000073 with itself. ● a(n) = Sum _{ k=0..n - 4 } (k + 1) * Sum _{ j=0..k } binomial(j,n - 3 * k + 2 * j - 4) * binomial(k,j). - _ Vladimir Kruchinin _ , Dec 14 2011 ●

► [A116716] 1,2,5,12,26,58,131,295,662,1487,3342,7510,16874,37915,85195,191432,430143,966522,2171756,4879892,10965017,24638169,55361464,124396081,279515456 ⋆ Number of permutations of length n which avoid the patterns 321, 2341, 4123. ● a(n) = 2 * a(n - 1) + a(n - 3) + a(n - 4) - a(n - 5) for n>5. - _ Colin Barker _ , Oct 20 2017 ●

► [A078410] 2,5,12,27,54,104,192,340,585,982,1610,2590,4097,6378,9792,14848,22250,32992,48446,70488,101698,145578,206848,291874,409174 ⋆ Number of ways to partition 4 * n + 3 into distinct positive integers. ● a(n) = t(4 * n + 3, 0), t as defined in A079211. ●

► [A362193] 1,1,2,5,12,27,57,113,211,373,628,1013,1574,2367,3459,4929,6869,9385,12598,16645,21680,27875,35421,44529,55431 ⋆ Number of Grassmannian permutations of size n that avoid a pattern, sigma, where sigma is a pattern of size 6 with exactly one descent. ● a(n) = 1 + Sum _{ i=2..5 } binomial(n,i). ●

► [A362194] 1,1,2,5,12,27,58,120,239,457,838,1475,2498,4083,6462,9934,14877,21761,31162,43777,60440,82139,110034,145476,190027 ⋆ Number of Grassmannian permutations of size n that avoid a pattern, sigma, where sigma is a pattern of size 7 with exactly one descent. ● a(n) = 1 + Sum _{ i=2..6 } binomial(n, i). ●

► [A111000] 2,5,12,27,58,120,245,498,1006,2024,4064,8149,16327,32692,65435,130938,261966,524051,1048260,2096731,4193743,8387860,16776219,33553102,67107091 ⋆ Integer part of zeta(zeta(n)). ● a(n) = 2 ^ n - (4 / 3) ^ n + O(1) and more precisely lim _{ n –>infinity } zeta(zeta(n)) - 2 ^ n + (4 / 3) ^ n + 1 = gamma where gamma is the Euler - Mascheroni constant. - _ Benoit Cloitre _ , Oct 04 2005 ● a(n) >= b(n) >= c(n). By The Squeeze Theorem, if a(n) = c(n) for some integer n, then a(n) = b(n). (Proved by _ Iain Fox _ , Sep 16 2020) ● a(n) - c(n) <= 1. (Proved by _ Iain Fox _ , Sep 16 2020) ●

► [A362195] 1,1,2,5,12,27,58,121,247,493,958,1805,3290,5799,9894,16369,26317,41209,62986,94165,137960,198419,280578,390633,536131 ⋆ Number of Grassmannian permutations of size n that avoid a pattern, sigma, where sigma is a pattern of size 8 with exactly one descent. ● a(n) = 1 + Sum _{ i=3..8 } binomial(n, i - 1). ●

► [A362196] 1,1,2,5,12,27,58,121,248,502,1003,1970,3785,7086,12897,22804,39187,65519,106744,169747,263930,401909,600348,880947,1271602 ⋆ Number of Grassmannian permutations of size n that avoid a pattern, sigma, where sigma is a pattern of size 9 with exactly one descent. ● a(n) = 1 + Sum _{ i=2..8 } binomial(n,i). ● a(n) = (n ^ 8 - 20 * n ^ 7 + 210 * n ^ 6 - 1064 * n ^ 5 + 3969 * n ^ 4 - 4340 * n ^ 3 + 15980 * n ^ 2 - 14736 * n + 40320) / 8!. - _ Alois P. Heinz _ , Apr 21 2023 ●

▶ [A362197] 1,1,2,5,12,27,58,121,248,503,1013,2025,4005,7801,14899,27809,50627,89829,155364,262125,431890,695839,1097768,1698137,2579106 ⋆ Number of Grassmannian permutations of size n that avoid a pattern, sigma, where sigma is a pattern of size 10 with exactly one descent. ● a(n) = 1 + Sum _{ i=2..9 } binomial(n,i). ●

▶ [A000325] 1,1,2,5,12,27,58,121,248,503,1014,2037,4084,8179,16370,32753,65520,131055,262126,524269,1048556,2097131,4194282,8388585,16777192 ⋆ a(n) = 2 ^ n - n. ● a(n + 1) = 2 * a(n) + n - 1, a(0) = 1. - _ Reinhard Zumkeller _ , Apr 12 2003 ● a(n + 1) = sum of n - th row of the triangle in A109128. - _ Reinhard Zumkeller _ , Jun 20 2005 ● a(n) = [x ^ n](B(x) ^ n - B(x) ^ (n - 1)), n> 0, a(0)=1, where B(x) = (1 + 2 * x + sqrt(1 + 4 * x ^ 2)) / 2. - _ Vladimir Kruchinin _ , Mar 07 2014 ● a(n) ^ 2 - 4 * a(n - 1) ^ 2 = (n - 2) * (a(n) + 2 * a(n - 1)). - _ Yuchun Ji _ , Jul 13 2018 ● a(2 ^ n) = (2 ^ a(n) - 1) * 2 ^ n. - _ Lorenzo Sauras Altuzarra _ , Feb 01 2022 ●

▶ [A076878] 0,2,5,12,27,58,121,248,503,1014,2037,4084,8179,16370,32753,65520,131055,262126,524269,1048556,2097131,4194282,8388585,16777192,33554407 ⋆ a(n) = ceiling(n ^ (1 / n)) ^ n - n. ● a(1)=0; a(n) = 2 ^ n - n for n > 1. - _ Benoit Cloitre _ , Nov 28 2002 ●

▶ [A083378] 1,2,5,12,27,58,125,271,584,1259,2714,5848,12599,27144,58480,125992,271441,584803,1259921,2714417,5848035,12599210,27144176,58480354,125992104 ⋆ a(n) is the largest integer whose cube has n digits and first digit 1, except that a(2)=2. ● a(n) = floor((10 ^ n / 5) ^ (1 / 3)). ●

▶ [A000102] 0,0,0,0,1,2,5,12,27,59,127,269,563,1167,2400,4903,9960,20135,40534,81300,162538,324020,644282,1278152,2530407 ⋆ a(n) = number of compositions of n in which the maximum part size is 4. ● a(n) = 2 * a(n - 1) + a(n - 2) - 2 * a(n - 4) - 3 * a(n - 5) - 2 * a(n - 6) - a(n - 7). Convolution of tribonacci and tetranacci numbers (A000073 and A000078). - _ Franklin T. Adams - Watters _ , Jan 13 2006 ●

▶ [A091596] 0,1,2,5,12,27,62,137,304,663,1442,3109,6676,14259,30342,64321,135928,286415,601962,1262173,2640860,5514731,11495502,23923065,49710272 ⋆ Expansion of x(1 - 2x ^ 2) / (1 - x - 2x ^ 2) ^ 2. ● a(n) := sum { k=0..floor((n - 1) / 2), binomial(n - k - 1, k)2 ^ k } ; a(n)=2a(n - 1) + 3a(n - 2) - 4a(n - 3) - 4a(n - 4). ● a(n)=(1 / 9) * (- 1) ^ n * n - (8 / 27) * (- 1) ^ n + (8 / 27) * 2 ^ n + (1 / 9) * 2 ^ n * n, with n>=0 - _ Paolo P. Lava _ , Jun 10 2008 ●

▶ [A077863] 1,2,5,12,27,62,141,320,727,1650,3745,8500,19291,43782,99365,225512,511807,1161562,2636201,5982940,13578467,30816750,69939565,158730000,360242631 ⋆ Expansion of (1 - x) ^ (- 1) / (1 - x - 2 * x ^ 2 - 2 * x ^ 3). ● a(n) = a(n - 1) + 2 * a(n - 2) + 2 * a(n - 3) + 1. - _ Christian Krause _ , Jan 02 2023 ●

▶ [A291248] 1,2,5,12,27,65,146,346,788,1845,4239,9865,22758,52818,122072,282954,654528,1516221,3508817,8125763,18808494,43550500,100815652,233418699,540371471 ⋆ p - INVERT of (0,1,0,1,0,1,...), where p(S) = 1 - S - S ^ 2 - S ^ 3 - S ^ 4 + S ^ 5. ● a(n) = a(n - 1) + 6 * a(n - 2) - 3 * a(n - 3) - 12 * a(n - 4) + 3 * a(n - 5) + 12 * a(n - 6) - 3 * a(n - 7) - 6 * a(n - 8) + a(n - 9) + a(n - 10) for n > = 11. ●

▶ [A316706] 1,1,1,2,5,12,27,69,178,457,1194,3178,8538,23062,62726,171804,473069,1308397,3634075,10133154,28352421,79575702,223981549,632101856,1788172541 ⋆ Number of solutions to k _ 1 + 2 * k _ 2 + ... + n * k _ n = n, where k _ i are from {- 1,0,1 } , i=1..n. ● a(n) = [x ^ n] Product _{ k=1..n } (1 / x ^ k + 1 + x ^ k). ● a(n) = [x ^ (n * (n - 1) / 2)] Product _{ k=1..n } (1 + x ^ k + x ^ (2 * k)). ● a(n) = [x ^ (n * (n + 3) / 2)] Product _{ k=1..n } (1 + x ^ k + x ^ (2 * k)). ●

▶ [A118898] 0,0,0,0,1,2,5,12,28,62,136,294,628,1328,2787,5810,12043,24840,51016,104380,212848,432732,877400,1774672,3581605 ⋆ Number of binary sequences of length n containing exactly one subsequence 0000. ● a(1)=0,a(2)=0,a(3)=0,a(4)=1,a(5)=2,a(6)=5,a(7)=12,a(8)=28 ● a(n)=2a(n - 1) + a(n - 2) - a(n - 4) - 4a(n - 5) - 3a(n - 6) - 2a(n - 7) - a(n - 8) (End) ●

▶ [A111586] 0,1,2,5,12,28,62,136,299,661,1456,3213,7085,15628,34467,76021,167668,369805,815629,1798928,3967659,8750949,19300824,42569309,93889565 ⋆ G.f.: - x * (1 + x + x ^ 2 + 2 * x ^ 3 + 3 * x ^ 4 + 3 * x ^ 5 + x ^ 6 - x ^ 7 - x ^ 9) / ((1 + x) * (- 1 + 2 * x + x ^ 3)). ● a(n) = 2 * a(n - 1) + a(n - 3) - 2 * (- 1) ^ n for n >= 10. - _ Greg Dresden _ , May 18 2020 ●

▶ [A192657] 1,2,5,12,28,62,138,300,646,1378,2919,6148,12890,26914,56010,116224,240567,496854,1024202,2107660,4330651,8886094,18210883,37278902,76234264 ⋆ Convolution of the Floor - Sqrt transform of central binomial coefficients. ● a(n) = Sum _{ k=0..n } floor(sqrt(binomial(2 * k,k))) * floor(sqrt(binomial(2 * n - 2 * k,n - k))). ●

▶ [A045623] 1,2,5,12,28,64,144,320,704,1536,3328,7168,15360,32768,69632,147456,311296,655360,1376256,2883584,6029312,12582912,26214400,54525952,113246208 ⋆ Number of 1's in all compositions of n + 1. ● a(0)=1, a(n) = (n + 3) * 2 ^ (n - 2), n >= 1. ● a(n + 1) = 2 * a(n) + 2 ^ (n - 1), n>0. ● a(n) = Sum _{ 0 <= j <= k <= n } binomial(n, j + k). - _ Benoit Cloitre _ , Oct 14 2004 ● a(n) = Sum _{ k=0..n } C(n, k) * floor((k + 2) / 2). - _ Paul Barry _ , Mar 06 2003 ● a(n) = Sum _{ k=0..n } (k + 1) * C(n - 1,n - k). - _ Peter Luschny _ , Apr 20 2015 ● a(n) = Sum _{ m=0..n } ((2 * m + 2) * n - 2 * m ^ 2 + 1) * C(2 * n + 2,2 * m + 1) / ((4 * n + 2) * 2 ^ n). - _ Vladimir Kruchinin _ , Nov 01 2020 ●

▶ [A290990] 0,1,2,5,12,28,64,145,328,743,1686,3830,8704,19781,44950,102133,232048,527208,1197808,2721421,6183108,14048151,31917714,72517738,164761792 ⋆ p - INVERT of the nonnegative integers (A000027), where p(S) = 1 - S - S ^ 2. ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 2 * a(n - 3) + a(n - 4). ●

▶ [A019485] 2,5,12,28,65,150,346,797,1836,4228,9737,22422,51634,118901,273804,630508,1451921,3343446,7699210,17729549,40827180,94015828,216497369,498544854,1148036962 ⋆ a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 3 * a(n - 3). ● a(n) = - 1 / 3 + (7 / 6) * (1 / 2 - (1 / 2) * sqrt(13)) ^ n + (7 / 6) * (1 / 2 + (1 / 2) * sqrt(13)) ^ n + (25 / 78) * sqrt(13) * (1 / 2 + (1 / 2) * sqrt(13)) ^ n - (25 / 78) * (1 / 2 - (1 / 2) * sqrt(13)) ^ n * sqrt(13) for n >= 0. - _ Paolo P. Lava _ , Jul 31 2008 ●

▶ [A018914] 2,5,12,28,65,150,346,798,1840,4242,9779,22543,51967,119796,276157,636604,1467515,3382951,7798460,17977197,41441465,95531857,220222323,507661769,1170274058 ⋆ Pisot sequence T(2,5), a(n) = floor(a(n - 1) ^ 2 / a(n - 2)). ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) + a(n - 3) - a(n - 6) (holds at least up to n = 1000 but is not known to hold in general). ●

▶ [A034943] 1,1,1,2,5,12,28,65,151,351,816,1897,4410,10252,23833,55405,128801,299426,696081,1618192,3761840,8745217,20330163,47261895,109870576 ⋆ Binomial transform of Padovan sequence A000931. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) + a(n - 3). ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n + k - 1, 3 * k). - _ Paul Barry _ , Jul 06 2004 ●

▶ [A181984] 1,2,5,12,28,65,151,351,816,1897,4410,10252,23833,55405,128801,299426,696081,1618192,3761840,8745217,20330163,47261895,109870576,255418101,593775046 ⋆ INVERT transform of A028310. ● a(n) = 3 * a(n - 1) + 2 * a(n - 2) - a(n - 3). ● a(n) satisfies 1 = f(a(n - 2), a(n - 1), a(n)) where f(u, v, w) = u ^ 3 - 5 * v ^ 3 + w ^ 3 + u * v * (7 * v - 4 * u) + u * w * (3 * u + 2 * w) + v * w * (11 * v - 6 * w) - 9 * u * v * w. ●

▶ [A255115] 1,2,5,12,28,66,156,368,868,2048,4832,11400,26896,63456,149712,353216,833344,1966112,4638656,10944000,25820224,60917760,143723520,339087488,800010496 ⋆ Number of n - length words on { 0,1,2 } in which 0 appears only in runs of length 2. ● a(n + 3) = 2 * a(n + 2) + 2 * a(n) with n>1, a(0) = 1, a(1) = 2, a(2)=5. ●

▶ [A166297] 0,0,0,1,2,5,12,28,66,156,370,882,2112,5079,12264,29725,72298,176414,431754,1059595,2607090,6429913,15893330,39365876,97692372 ⋆ Number of UUDUDD's starting at level 0 in all Dyck paths of semilength n with no UUU's and no DDD's (U=(1,1), D=(1, - 1)). ● a(n) = 2 * Sum _{ k=0..(n - 2) / 2 } C(n - k - 1,k) * C(n - k - 1,k + 2) / (n - k - 1). - _ Vladimir Kruchinin _ , Oct 13 2020 ●

▶ [A291234] 1,2,5,12,28,67,156,370,866,2044,4799,11304,26574,62547,147108,346149,814270,1915795,4506952,10603417,24945414,58687660,138068915,324824928,764187814 ⋆ p - INVERT of (0,1,0,1,0,1,...), where p(S) = 1 - S - S ^ 2 - S ^ 3 - S ^ 4. ● a(n) = a(n - 1) + 5 * a(n - 2) - 2 * a(n - 3) - 7 * a(n - 4) + 2 * a(n - 5) + 5 * a(n - 6) - a(n - 7) - a(n - 8) for n >= 9. ●

▶ [A290073] 1,2,5,12,29,60,125,252,509,1020,2045,4092,8189,16380,32765,65532,131069,262140,524285,1048572,2097149,4194300,8388605,16777212,33554429 ⋆ Decimal representation of the diagonal from the corner to the origin of the n - th stage of growth of the two - dimensional cellular automaton defined by "Rule 641", based on the 5 - celled von Neumann neighborhood. ● a(n) = 2 * a(n - 1) + a(n - 2) - 2 * a(n - 3) for n>4. ●

▶ [A131045] 1,2,5,12,29,68,155,348,775,1712,3745,8112,17431,37252,79355,168710,358037,758020,1599675,3362876,7041593,14692956,30577435,63531092,131901879 ⋆ Binomial transform of Euler's totient function phi(n + 1). ● a(n) = Sum _{ j=0..n } binomial(n,j) * phi(j + 1). - _ Emeric Deutsch _ , Jul 09 2007 ●

▶ [A291235] 1,2,5,12,29,69,166,394,944,2245,5365,12781,30506,72734,173520,413838,987130,2354465,5615889,13395047,31949764,76206828,181768094,433554067,1034112065 ⋆ p - INVERT of (0,1,0,1,0,1,...), where p(S) = 1 - S - S ^ 2 - S ^ 3 - S ^ 4 - S ^ 5. ● a(n) = a(n - 1) + 6 * a(n - 2) - 3 * a(n - 3) - 12 * a(n - 4) + 5 * a(n - 5) + 12 * a(n - 6) - 3 * a(n - 7) - 6 * a(n - 8) + a(n - 9) + a(n - 10) for n >= 11. ●

▶ [A000129] 0,1,2,5,12,29,70,169,408,985,2378,5741,13860,33461,80782,195025,470832,1136689,2744210,6625109,15994428,38613965,93222358,225058681,543339720 ⋆ Pell numbers: a(0) = 0, a(1) = 1; for n > 1, a(n) = 2 * a(n - 1) + a(n - 2). ● a(n) = 2 * a(n - 1) + a(n - 2), a(0)=0, a(1)=1. ● a(n) = ((1 + sqrt(2)) ^ n - (1 - sqrt(2)) ^ n) / (2 * sqrt(2)). ● a(n) = integer nearest a(n - 1) / (sqrt(2) - 1), where a(0) = 1. - _ Clark Kimberling _ ● a(n) = Sum _{ i, j, k >= 0: i + j + 2k = n } (i + j + k)! / (i! * j! * k!). ● a(n) ^ 2 + a(n + 1) ^ 2 = a(2n + 1) (1999 Putnam examination). ● a(n) = ((- i) ^ (n - 1)) * S(n - 1, 2 * i), with S(n, x) := U(n, x / 2) Chebyshev's polynomials of the second kind. See A049310. S(- 1, x)=0, S(- 2, x)= - 1. ●

▶ [A215928] 1,1,2,5,12,29,70,169,408,985,2378,5741,13860,33461,80782,195025,470832,1136689,2744210,6625109,15994428,38613965,93222358,225058681,543339720 ⋆ a(n) = 2 * a(n - 1) + a(n - 2) for n > 2, a(0) = a(1) = 1, a(2) = 2. ● a(n) = 2 * a(n - 1) + a(n - 2) for n > 2, a(0) = a(1) = 1, a(2) = 2. ● a(n) = 1 / 2 * ((1 + sqrt(2)) ^ (n - 1) + (1 - sqrt(2)) ^ (n - 1)) + 1 / 4 * sqrt(2) * ((1 + sqrt(2)) ^ (n - 1) - (1 - sqrt(2)) ^ (n - 1)), for n > 0. - _ Paolo P. Lava _ , Oct 26 2012 ●

▶ [A089372] 1,1,1,2,5,12,29,72,183,473,1239,3282,8777,23665,64261,175584,482395,1331795,3692891,10280190,28719659,80493514,226268539,637767720,1802113489 ⋆ Number of Motzkin paths of length n with no peaks at level 1. ● a(n) = sum(k=1..(n + 3) / 2, (k * sum(j=0..n - k + 3, binomial(j,n - j + 3) * binomial(n - k + 3,j))) / (n - k + 3) * (- 1) ^ (k - 1)). - _ Vladimir Kruchinin _ , Oct 22 2011 ●

▶ [A132807] 1,2,5,12,29,73,195,556,1685,5373 ⋆ A000108(n) + A000079(n) - 1. ● a(n) = C(n) + 2 ^ n - 1. ●

▶ [A042789] 1,2,5,12,29,1752,3533,8818,21169,51156,3090529,6232214,15554957,37342128,90239213,5451694908,10993629029,27438952966,65871534961,159182022888,9616792908241,19392767839370,48402328586981,116197425013332,280797178613645 ⋆ Denominators of continued fraction convergents to sqrt(925). ● a(n) = 1764 * a(n - 5) + a(n - 10) for n>9. - _ Vincenzo Librandi _ , Jan 29 2014 ●

▶ [A291253] 2,5,12,30,70,166,382,881,2002,4540,10210,22891,51050,113506,251430,555466,1223680,2689591,5898290,12909880,28204178,61515521,133961048,291308806,632628710 ⋆ p - INVERT of (0,1,0,1,0,1,...), where p(S) = (1 - S - S ^ 2) ^ 2. ● a(n) = 2 * a(n - 1) + 5 * a(n - 2) - 8 * a(n - 3) - 9 * a(n - 4) + 8 * a(n - 5) + 5 * a(n - 6) - 2 * a(n - 7) - a(n - 8) for n >= 9. ●

▶ [A054341] 1,2,5,12,30,74,185,460,1150,2868,7170,17904,44760,111834,279585,698748,1746870,4366460,10916150,27287944,68219860,170541252,426353130,1065853432,2664633580 ⋆ Row sums of triangle A054336 (central binomial convolutions). ● a(n) = Sum _{ k=0..n } binomial(n,(n - k) / 2) * (1 + (- 1) ^ (n + k)) * 2 ^ k * (k + 1) / (n + k + 2). (End) ● a(n) is the upper left term of M ^ n, M is an infinite square production matrix as follows: ●

▶ [A076883] 1,2,5,12,30,75,187,467,1167,2917,7292,18230,45575,113937,284842,712105,1780262,4450655,11126637,27816592,69541480,173853700,434634250,1086585625,2716464062 ⋆ Let u(0)=1, u(n) = 5 / 2 * floor(u(n - 1)); then a(n) = (2 /

5) * u(n). ● a(n)=ceiling(c * (5 / 2) ^ n) with c=0.7646166585498893366580827 5090184088890217299... ●

▶ [A092247] 1,2,5,12,30,75,190,484,1242,3206,8316,21657,56591,148303,389615,1 025810,2706014,7150411,18923033,50146688,133054093,353426693,939750924,250 1100209,6662258807 ⋆ a(0)=1, a(n + 1)=ceiling((1 + 1 / n) ^ n * a(n)). ● a(n) is asymptotic to c * exp(n) / sqrt(n) where c=1.261(6)... ●

▶ [A051163] 1,2,5,12,30,76,194,496,1269,3250,8337,21428,55184,142376,367916,9 52000,2466014,6393372,16586678,43054344,111801908,290412296,754543052,1960 808160,5096293794 ⋆ Sequence is defined by property that (a0,a1,a2,a3,...) = bi nomial transform of (a0,a0,a1,a1,a2,a2,a3,a3,...). ● a(n) = 1 + Sum _{ k=1..n } Sum _{ j=0..n - k } C(k, j) * C(n - k, j) * a(j). - _ Paul D. Hanna _ , Nov 22 2004 ● a(0) = 1; a(n) = Sum _{ k=0..floor(n / 2) } binomial(n + 1,2 * k + 1) * a(k). - _ Ilya Gutkovskiy _ , Apr 07 2022 ●

▶ [A051450] 1,2,5,12,30,76,195,504,1309,3410,8900,23256,60813,159094,416325,1 089648,2852242,7466468,19546175,51170460,133962621,350713222,918170280,240 3786672,6293172025 ⋆ Number of positive rational knots with 2n + 1 crossings. ● a(n) = (Fibonacci(2 * n) + Fibonacci(n)) / 2. - _ Vladeta Jovovic _ , Jul 17 2004 ● a(n) = 4 * a(n - 1) - 3 * a(n - 2) - 2 * a(n - 3) + a(n - 4). - _ Colin Bark er _ , Nov 01 2014 ●

▶ [A038508] 1,2,5,12,30,76,196,512,1352,3600,9648,25984,70240,190400,517184,1 406976,3831936,10445056,28488448,77735936,212186624,579320832,1581966336,4 320477184,11800692736 ⋆ Expansion of (1 - 2 * x - x ^ 2) / ((1 - 2 * x) * (1 - 2 * x + 2 * x ^ 2)). ● a(n) = (3 * 2 ^ (n + 1) - sqrt(3) * (1 - sqrt(3)) ^ (n + 1) + s qrt(3) * (1 + sqrt(3)) ^ (n + 1)) / 12. - _ Herbert Kociemba _ , Jun 17 2004 ● a(n) = 4 * a(n - 1) - 2 * a(n - 2) - 4 * a(n - 3). - _ Wesley Ivan Hurt _ , May 1 4 2021 ●

▶ [A002026] 0,1,2,5,12,30,76,196,512,1353,3610,9713,26324,71799,196938,54289 5,1503312,4179603,11662902,32652735,91695540,258215664,728997192,206296738 2,5850674704 ⋆ Generalized ballot numbers (first differences of Motzkin numbe rs). ● a(n) = Sum _{ b = 1..(n + 1) / 2) C(n, 2b - 1) * C(2b, b) / (b + 1). ● a (0) = 0, a(1) = 1; a(n) = 2 * a(n - 1) + a(n - 2) + Sum _{ k=0..n - 3 } a(k) * a (n - k - 3). - _ Ilya Gutkovskiy _ , Nov 09 2021 ●

▶ [A086622] 1,2,5,12,30,76,197,520,1398,3820,10594,29768,84620,243000,70404 5,2055760,6043750,17875020,53148310,158773320,476311940,1434313960,4333867 170,13135533552,39924668220 ⋆ G.f. A(x) satisfies: A(x) = 1 / (1 - 2 * x) + x ^ 2 * A(x) ^ 2. ● a(n) = Sum _{ k=0..floor(n / 2) } C(n - k,k) C(2k,k) 2 ^ (n - 2 k) / (k + 1). - _ Paul Barry _ , Nov 13 2004 ● a(n) = Sum _{ i=0..floor(n / 2) } 2 ^ (n - 2i) * C(i) * binomial(n - i,i), where C(n) is the n - th Catalan numb er A000108. - _ José Luis Ramírez Ramírez _ , Apr 20 2015 ●

▶ [A253831] 1,2,5,12,30,76,197,522,1418,3956,11354,33554,102104,319608,102723 7,3381714,11371366,38946892,135505958,477781296,1703671604,6132978608,2225 6615602,81327116484,298938112816 ⋆ Number of 2 - Motzkin paths with no lev el steps at height 1. ● a(n) = Sum _{ m=1..n / 2 } (Sum _{ j=0..n - 2 * m } (((Sum _{ k=0..j } ((k + 1) * binomial(k + m,k + 1) * binomial(2 * j - k + m - 1,j - k) * (- 1) ^ (k))) * 2 ^ (n - j - 2 * m) * binomial(n - m - j,m)) / (j + m))) + 2 ^ n. - _ Vladimir Kruchinin _ , Mar 11 2016 ●

▶ [A188378] 2,5,12,30,77,200,522,1365,3572,9350,24477,64080,167762,439205,114 9852,3010350,7881197,20633240,54018522,141422325,370248452,969323030,25377 20637,6643838880,17393796002 ⋆ Partial sums of A005248. ● a(n) = 2 ^ (- 1 - n) * (2 ^ (1 + n) - (3 - sqrt(5)) ^ n * (- 1 + sqrt(5)) + (1 + sqrt(5)) * (3 + sqr t(5)) ^ n). - _ Colin Barker _ , Nov 02 2016 ●

▶ [A136704] 0,1,2,5,12,30,78,205,546,1476,4026,11070,30660,85410,239144,67260 5,1899120,5380830,15292914,43584804,124527988,356602950,1023295422,2941974 270,8472886092 ⋆ Number of Lyndon words on { 1,2,3 } with an odd number of 1's and an odd number of 2's. ● a(1)=0; for n>1, if n=odd then a(n)= sum(mu (d) * 3 ^ (n / d)) / (4n); d|n. If n=even, then a(n)= sum(mu(d) * (3 ^ (n / d) - 1)) / (4n); d|n, d odd. ●

▶ [A101785] 1,1,1,2,5,12,30,79,213,584,1628,4600,13138,37871,110043,321978,947 813,2805104,8341608,24912004,74686460,224694128,678143656,2052640752,62296 16730 ⋆ G.f. satisfies: A(x) = 1 + x * A(x) / (1 - x ^ 2 * A(x) ^ 2). ● a(n) = S um _{ k=0..[(n - 1) / 2] } C(n - k - 1, k) * C(n, 2 * k) / (2 * k + 1) for n>0, w ith a(0)=1. ●

▶ [A291239] 2,5,12,31,74,184,442,1081,2604,6323,15250,36912,89074,215293,5196 60,1255223,3030106,7317032,17664170,42649553,102963276,248587051,60013737 8,1448890464,3497918306 ⋆ p - INVERT of (0,1,0,1,0,1,...), where p(S) = (1 - S ^ 2) (1 - 2 S). ● a(n) = 2 * a(n - 1) + 4 * a(n - 2) - 6 * a(n - 3) - 4 * a(n - 4) + 2 * a(n - 5) + a(n - 6) for n >= 7. ●

▶ [A317882] 1,1,2,5,12,31,79,211,564,1543,4259,11899,33526,95272,272544,78459 8,2270888,6604900,19293793,56581857,166523462,491674696,1455996925,4323328 548,12869353254 ⋆ Number of free pure achiral multifunctions (with empty exp ressions allowed) with one atom and n positions. ● a(1) = 1; a(n > 1) = a(n - 1) + Sum _{ 0 < k < n - 1 } a(k) * Sum _{ d|(n - k - 1) } a(d). ●

▶ [A290616] 2,5,12,31,80,205,526,1350,3464,8889,22810,58532,150198,385420,989 018,2537899,6512450,16711463,42882940,110041025,282373998,724594076,185936 5870,4771280299,12243483684 ⋆ p - INVERT of (1,0,0,1,0,0,1,0,0,...), where p(S) = 1 - 2 S - S ^ 2. ● a(n) = 2 * a(n - 1) + a(n - 2) + 2 * a(n - 3) - 2 * a(n - 4) - a(n - 6) for n >= 7. ●

▶ [A110035] 1,2,5,12,31,80,209,546,1429,3740,9791,25632,67105,175682,459941,1 204140,3152479,8253296,21607409,56568930,148099381,387729212,1015088255,26 57535552,6957518401 ⋆ Row sums of an unsigned characteristic triangle for the Fibonacci numbers. ● a(n) = 3 * a(n - 1) - 3 * a(n - 3) + a(n - 4); ● a(n) = F(2n) + 1 + Sum _{ k=0..n - 1 } F(k) * F(k + 1). ● a(n) = 1 / 2 + (1 / 5) * (3 / 2 + (1 / 2) * sqrt(5)) ^ n + (1 / 10) * (- 1) ^ n + (1 / 5) * (3 / 2 + (1 / 2) * sqrt (5)) ^ n * sqrt(5) - (1 / 5) * (3 / 2 - (1 / 2) * sqrt(5)) ^ n * sqrt(5) + (1 / 5) * (3 / 2 - (1 / 2) * sqrt(5)) ^ n, with n >= 0. - _ Paolo P. Lava _ , Jun 12 2008 ●

▶ [A097893] 1,2,5,12,31,82,223,616,1723,4862,13815,39468,113257,326198,94242 5,2730032,7926659,23061590,67214399,196211252,573590621,1678941350,4920076 877,14433305000,42381641381 ⋆ Partial sums of the central trinomial coefficient s (A002426). ● a(n) = Sum _{ 0<=j<=i<=n } C(i, i - j) * C(j, i - j). - _ Ben oit Cloitre _ , Oct 23 2004 ● a(n) = sum _{ k=0..n } Sum _{ j=0..n - k } C(k ,j)C(n - k,j)C(2j,j). - _ Paul Barry _ , Jan 03 2008 ● a(n) = Sum _{ k = 0..flo or(n / 2) } binomial(n + 1,2 * k + 1) * binomial(2 * k,k). Cf. A025178. - _ Pe ter Bala _ , Oct 28 2015 ● a(n) = (n + 1) * hypergeom([1 / 2,(1 - n) / 2, - n / 2],[1,3 / 2],4). - _ Peter Luschny _ , Oct 29 2015 ●

▶ [A093379] 0,1,2,5,12,31,82,225,632,1811,5262,15445,45652,135591,404042,1206 665,3609072,10805371,32372422,97029885,290914892,872395151,2616486402,7848 061105,23541387112 ⋆ Expansion of x(1 - 2x - 2x ^ 2) / ((1 + x)(1 - 2x)(1 - 3x)) . ● a(n)=3 ^ n / 12 - (- 1) ^ n / 12 + 2 ^ n / 3 - 0 ^ n / 3; ● a(n)=4a(n - 1) - a (n - 2) - 6a(n - 3). ●

▶ [A071359] 0,1,1,2,5,12,31,83,227,634,1799,5171,15027,44074,130299,387880,116 1665,3497734,10581819,32150411,98057835,300116888,921456715,2837379238,876 0199757 ⋆ Expansion of (1 - x - sqrt(1 - 2 * x - 3 * x ^ 2 - 4 * x ^ 3)) / (2 * x * (1 + x)). ● a(n + 1) = sum(k=0..n / 2, binomial(2 * k,k) / (k + 1) * sum(i=0.. k, binomial(k,i) * binomial(n - i,2 * k))). ● a(0)=0, a(1)=1, a(2)=1, a(3)=2, a(n) = ((n - 2) * a(n - 1) + (5 * n - 7) * a(n - 2) + (7 * n - 20) * a(n - 3) + (4 * n - 14) * a(n - 4)) / (n + 1). - _ Tani Akinari _ , Jul 03 2013 ●

▶ [A162434] 1,2,5,12,32,82,218,598,1702,4925,14496,43720,134854,423988,135788 4,4425384,14664610,49386081,168884638,586012116,2061993475,7353614415,2656 6226591,97177708497,359765742126 ⋆ Antidiagonal sums of table A162430. ● a(n) = Sum _{ k=0..n } Sum _{ m=k(k + 1) / 2..k(k + 1) / 2 + k } [x ^ m] S(x) ^ (n - k) for n>=1 where S(x) = Sum _{ n>=0 } x ^ (n(n + 1) / 2). ●

▶ [A345200] 1,1,2,5,12,32,84,234,652,1872,5416,15922,47188,141283,425910,1293 105,3948080,12118619,37367694,115708111,359623780,1121543440,3508533500,11 006973980,34620982004 ⋆ G.f. A(x) satisfies: A(x) = x + x ^ 2 * exp(2 * Sum _{ k>=1 } A(x ^ k) / k). ● a(n + 2) = (2 / n) * Sum _{ k=1..n } (Sum _{ d|k } d * a(d)) * a(n - k + 2). ●

▶ [A143657] 1,1,2,5,12,32,95,301,1001,3495,12708,47932,186581,747619,3073207 ⋆ Number of 4 - noncrossing stack - free partial matching without 1 - arcs. ● a(n) = C _ 4(n,h) = SUM[b=0.. { h - 1 }](- 1) ^{ h - b - 1 }{ h - 1 Choose b }{ T }_ 4(h - 2h + 2b + 2,b + 1); where the T function is defined in Jin and R eidys. ●

▶ [A115523] 1,2,5,12,33,60,111,176,287,440,637,864,1237,1652,2147,2752,3555,44 28,5517,6700,8177,9878,11785,13824,16441 ⋆ Number of ordered quadruples (i,j, k,l) in range [0..n] satisfying i == j mod 2, j == k mod 3 and k == l mod 4. ● a(n) = binomial(n + 1,4) - presumably quadratic (PORC) correction term whic h depends on n mod 24. ● a(n) = (19958400 * (n ^ 4 + 4 * n ^ 3 + 12 * n ^ 2 + 24 * n + 24) - (1235 * n ^ 2 + 2 * 1127 * n + 215) * m ^ 11 + (74987 * n ^ 2 + 2 * 69047 * n + 13541) * m ^ 10 - (1983300 * n ^ 2 + 2 * 1844700 * n + 3775 20) * m ^ 9 + (29983800 * n ^ 2 + 2 * 28201800 * n + 6115890) * m ^ 8 - (2857 31655 * n ^ 2 + 2 * 272034411 * n + 63415275) * m ^ 7 + (1784142591 * n ^ 2 + 2 * 1720539051 * n + 436295013) * m ^ 6 - (7344548530 * n ^ 2 + 2 * 717513 1810 * n + 1995595030) * m ^ 5 + (19515989350 * n ^ 2 + 2 * 19301456350 * n + 5911801060) * m ^ 4 - (31672473360 * n ^ 2 + 2 * 31658103312 * n + 106855 62360) * m ^ 3 + (27907182072 * n ^ 2 + 2 * 28127231352 * n + 10490664096) * m ^ 2 - (9932634720 * n ^ 2 + 2 * 10110299040 * n + 4359398400) * m) / 479 001600 where m=n - 12 * floor(n / 12). - _ Luce ETIENNE _ , Sep 27 2017 ●

▶ [A084075] 1,2,5,12,33,86,249,680,2033,5722,17485,50260,156033,455534,143128 1,4228752,13412193,40003058,127840085,384232156,1235575201,3737280582,1208 0678505,36736735672,119276490193 ⋆ Length of list created by n substitutions k - > Range(- abs(k + 1), abs(k - 1), 2) starting with { 1 } . ● a(n) = (6 * (35 * n ^ 2 + 15 * n - 96) * a(n - 1) + (275 * n ^ 4 + 330 * n ^ 3 - 863 * n ^ 2 + 120 * n + 126) * a(n - 2) - 6 * (5 * n ^ 2 + 15 * n - 18) * a(n - 3) + (n - 3) * (n - 1) * (25 * n ^ 2 + 55 * n - 18) * a(n - 4)) / ((n + 1) * (n + 3) * (25 * n ^ 2 + 5 * n - 48)), n >= 4. - _ G. C. Greubel _ , Nov 24 2022 ●

▶ [A032124] 2,5,12,33,90,261,756,2241,6642,19845,59292,177633,532170,159578 1,4785156,14353281,43053282,129153285,387440172,1162300833,3486843450,1046 0471301,31381236756,94143533121,282430067922 ⋆ "BIK" (reversible, indistinct , unlabeled) transform of 2,2,2,2... ● a(n) = (1 / 6) * ((5 - (- 1) ^ n) * 3 ^ floor (n / 2) + 2 * 3 ^ n). - _ Ralf Stephan _ , May 11 2004 ● a(n) = 3 * a(n - 1) + 3 * a(n - 2) - 9 * a(n - 3). G.f.: - x * (9 * x ^ 2 + x - 2) / ((3 * x - 1) * (3 * x ^ 2 - 1)). - _ Colin Barker _ , Dec 15 2012 ●

▶ [A221206] 2,5,12,33,93,269,788,2330,6947,20840,62834,190240,577990,176127 9,5380796,16475256,50543777,155330201,478096270,1473591670,4547602623,1405 0145290,43453847676,134519899690,416794664987 ⋆ a(n) = nearest integer to s qrt(10 ^ n / log(10 ^ n)). ● a(n) = round(sqrt(10 ^ n / log(10 ^ n))). ●

▶ [A281489] 1,1,1,2,5,12,33,93,276,833,2574,8057,25565,81889,264703,861889,282 4974,9311875,30851395,102676439,343112116,1150785092,3872588051,130715838 10,44245023261 ⋆ Number of partitions of n ^ 2 into distinct odd parts. ● a(n) = [x ^ (n ^ 2)] Product _{ j>=0 } (1 + x ^ (2 * j + 1)). ●

▶ [A186739] 0,0,1,2,5,12,33,94,293,952,3297,11866,44837,175364,713409,299314 2,12980869,57878000,265571905,1249497906,6029792197,29770252412,150366096 353,775541397006,4083595516773 ⋆ a(0)=0, a(1)=0; for n>1, a(n) = a(n - 1) + (n - 2) * a(n - 2) + 1. ● a(n) = 2 * a(n - 1) + (n - 3) * a(n - 2) - (n - 3) * a(n - 3) with a(0)=a(1)=0, a(2)=1. - _ Vincenzo Librandi _ , Dec 24 2012 ●

▶ [A196545] 1,1,2,5,12,34,92,277,806,2500,7578,24198,75370,243800,776494,2545 777,8223352,27221690,88984144,296856400,979829772,3287985078,10934749788,3 6912408342,123519937044 ⋆ Number of weakly ordered plane trees with n leave s. ● a(1) = 1; for n > 1, a(n) = Sum _{ y } Product _{ i } a(y _ i) where the sum is over all partitions of n with at least two parts. ●

▶ [A101292] 1,2,5,12,34,135,741,5068,40356,362925,3628855,39916866,47900167 8,6227020891,87178291305,1307674368120,20922789888136,355687428096153,640 2373705728171,121645100408832190,2432902008176640210,51090942171709440 2 31,1124000727777607680253 ⋆ a(n) = n! + Sum _{ i=1..n } i. ● a(n) = n! + n * (n + 1) / 2. ●

▶ [A323397] 0,2,5,12,35,122,465,1832,7295,29142,116525,466052,1864155,745656 2,29826185,119304672,477218615,1908874382,7635497445,30541989692,12216795 8675,488671834602,1954687338305,7818749353112,31274997412335 ⋆ a(n) = (4 ^ n + 15 * n - 1) / 9. ● a(n + 1) = 4 * a(n) - 5 * n + 2, with a(0)=0, a(1)=2. Thi s implies a(n + 2) = 5 * a(n + 1) - 4 * a(n) - 5, and also that a(n + 3) = 6 * a(n + 2) - 9 * a(n + 1) + 4 * a(n). - _ N. J. A. Sloane _ , Jan 13 2019 ●

► [A003724] 1,1,1,2,5,12,37,128,457,1872,8169,37600,188685,990784,5497741,32333824,197920145,1272660224,8541537105,59527313920,432381471509,3252626013184,25340238127989,204354574172160,1699894200469849 ⋆ Number of partitions of n - set into odd blocks. ● a(n) = sum(1 / 2 ^ k * sum((- 1) ^ i * C(k,i) * (k - 2 * i) ^ n, i=0..k) / k!, k=1..n). - _ Vladimir Kruchinin _ , Aug 22 2010 ● a(n) = D ^ n(exp(x)) evaluated at x = 0, where D is the operator sqrt(1 + x ^ 2) * d / dx. Cf. A002017 and A009623. - _ Peter Bala _ , Dec 06 2011 ● a(0) = 1 ; a(n) = Sum _{ k=0..floor((n - 1) / 2) } binomial(n - 1,2 * k) * a(n - 2 * k - 1) . - _ Ilya Gutkovskiy _ , Jul 11 2021 ●

► [A138314] 1,1,1,2,5,12,37,129,465,1912,8449,39481,200081,1069470,6043361,36120082,226063729,1484564600,10184907985,72814137773,542009067393,4188018707130,33562233856177,278441210021464,2387929437251657 ⋆ E.g.f. satisfies: A(x) = exp(Sum _{ n>=0 } a(n) * x ^ (2n + 1) / (2n + 1)!). ● a(0) = 1; a(n) = Sum _{ k=0..floor((n - 1) / 2) } binomial(n - 1,2 * k) * a(k) * a(n - 2 * k - 1) . - _ Ilya Gutkovskiy _ , Feb 25 2022 ●

► [A332791] 1,1,2,5,12,49,104,625,2512,15077,60358,603581,2414438,28973257,173840168,1390721397,11125773688,178012379009,1068074289230,19225337206141,153802697709496,1845632372514581,18456323725749392,40603912196648662 5,3248312975734309938 ⋆ a(1) = 1; a(n + 1) = Sum _{ d|n } phi(d) * a(d). ● a(1) = 1; a(n + 1) = Sum _{ k=1..n } a(n / gcd(n, k)). ● a(n) = Sum _{ k=1..n } a(gcd(n,k)) * phi(gcd(n,k)) / phi(n / gcd(n,k)). - _ Richard L. Ollerton _ , May 07 2021 ●

► [A291484] 0,1,2,5,12,49,190,1301,7224,69441,495898,6095429,53005700,792143793,8110146070,142633278997,1679413757168,33964965659649,451969255722162,10331348137881349,153288815339260796,3907452790559751857,63949589015139119598,1798373345567005989781,32179694275204166066728 ⋆ Expansion of e.g.f. arctanh(x) * exp(x). ● a(n) = Sum _{ k=0..n / 2 } binomial(n + 1,2 * k + 1) * ((n - 2 * k) / (n + 1)) * (2 * k)!. ● a(n + 3) - a(n + 2) - (n + 1) * (n + 2) * a(n + 1) + (n + 1) * (n + 2) * a(n) = 1. ● a(n + 4) - 2 * a(n + 3) - (n ^ 2 + 5 * n + 5) * a(n + 2) + 2 * (n + 2) ^ 2 * a(n + 1) - (n + 1) * (n + 2) * a(n) = 0. ●

► [A041095] 1,2,5,12,173,358,889,2136,30793,63722,158237,380196,5480981,11342158,28165297,67672752,975583825,2018840402,5013264629,12045369660,173648439869,359342249398,892332938665,2144008126728,30908446712857 ⋆ Denominators of continued fraction convergents to sqrt(55). ● a(n) = 178 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Dec 11 2013 ●

► [A041333] 1,2,5,12,317,646,1609,3864,102073,208010,518093,1244196,32867189,66978574,166824337,400627248,10583132785,21566892818,53716918421,129000729660,3407735889581,6944472508822,17296680907225,41537834323272,1097280373312297 ⋆ Denominators of continued fraction convergents to sqrt(180). ● a(n) = 322 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Dec 15 2013 ●

► [A041715] 1,2,5,12,461,934,2329,5592,214825,435242,1085309,2605860,100107989,202821838,505751665,1214325168,46650108049,94514541266,235679190581,565872922428,21738850242845,44043573408118,109825997059081,263695567526280,10130257563057721 ⋆ Denominators of continued fraction convergents to sqrt(377). ● a(n) = 466 * a(n - 4) - a(n - 8) for n>7. - _ Vincenzo Librandi _ , Dec 23 2013 ●

► [A042241] 1,2,5,12,605,1222,3049,7320,369049,745418,1859885,4465188,225119285,454703758,1134526801,2723757360,137322394801,277368546962,692059488725,1661487524412,837664357093 25,169194358943062,422155153595449,1013504666133960,51097388460293449 ⋆ Denominators of continued fraction convergents to sqrt(646). ● a(n) = 610 * a(n - 4) - a(n - 8) for n > 7. - _ Vincenzo Librandi _ , Jan 18 2014 ●

► [A042911] 1,2,5,12,749,1510,3769,9048,564745,1138538,2841821,6822180,425816981,858456142,2142729265,5143914672,321065438929,647274792530,1615615023989,3878504840508,242082915135485,488044335111478,1218171585358441,2924387505828360 ⋆ Denominators of continued fraction convergents to sqrt(987). ● a(n) = 754 * a(n - 4) - a(n - 8) for n>7. - _ Vincenzo Librandi _ , Feb 01 2014 ●

► [A220268] 2,5,13,14,23,25,33,43,46,58,60,61,71,77,80,88,103,104,116,123,127,144,145,148,150 ⋆ a(n) is the smallest number, such that for N >= a(n) there are at least n primes between 2 * N and 3 * N. ● a(1) = 2; for n >= 2, a(n) = ceiling(R _ (3 / 2)(n) / 3), where R _ v(n) (v>1) are generalized Ramanujan numbers (see Shevelev's link). In particular, for n >= 1, { R _ (3 / 2)(n) } = { 2, 13, 37, 41, 67, 73, 97, 127, 137, 173, 179, 181, 211, 229, 239, ... } . ●

► [A168486] 2,5,13,16,24,27,35,38,46,49,57,60,68,71,79,82,90,93,101,104,112,115,123,126,134 ⋆ Numbers that are congruent to { 2, 5 } mod 11. ● a(n) = 11 * n - a(n - 1) - 4 with n>1, a(1)=2. ● a(n) = (22 * n - 5 * (- 1) ^ n - 19) / 4. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3). ●

► [A235204] 2,5,13,18,32,41,50,72,85,113,128,145,181,200,242,265,313,338,365,421,450,512,545,578,648 ⋆ Number of integer lattice points inside the square ABCD with side length n>0 with A(0|0), B(n * sqrt(2) / 2| n * sqrt(2) / 2), C(0| n * sqrt(2)) and D(- n * sqrt(2) / 2| n * sqrt(2) / 2). ● a(n) = (2 * z ^ 2 + 1 - (- 1) ^ z) / 4, where z = ceiling(sqrt(2) * n). - _ Giovanni Resta _ , Jan 10 2014 ●

► [A273462] 0,2,5,13,19,31,41,56,81,103,136,171,201,235,280,335,384,444,505,560,626,693,772,869,966 ⋆ Rounded variance of the first n primes, for n > 1. ● a(n) = round(Sum _{ i=1..n } (prime(i) - Sum _{ j=1..n } prime(j) / n) ^ 2 / (n - 1)), n > 1. ●

► [A049779] 2,5,13,23,41,62,94,130,180,235,307,385,483,588,716,852,1014,1185,1385,1595,1837,2090,2378,2678,3016 ⋆ a(n) = Sum _{ k=1..floor(n / 2) } T(n, 2k), array T as in A049777. ● a(n) = Sum _{ k=1..n } k * floor(k / 2). - _ Vladeta Jovovic _ , Apr 29 2006 ● a(n) = (8 * n ^ 3 + 6 * n ^ 2 - 2 * n - 3 + 3 * (- 1) ^ n * (2 * n + 1)) / 48. - _ Robert Israel _ , Jun 08 2015 ● a(n) = (n * (n + 1) * (4 * n - 1) + 6 * (- 1) ^ n * floor((n + 1) / 2)) / 24. - _ Néstor Jofré _ , Apr 24 2017 ●

► [A072921] 1,2,5,13,25,44,71,106,148,203,263,334,415,506,608,724,853,998,1169,1357,1561,1778,2018,2269,2539 ⋆ a(1)=1; a(n) = a(n - 1) + [sum of all decimal digits present so far in the sequence]. ● a(1)=1, a(2)=2; a(n + 1)=2a(n) - a(n - 1) + sod(a(n)) (sod = "sum of digits"). - _ Farideh Firoozbakht _ , Oct 01 2009 ●

► [A369714] 0,1,1,1,1,1,1,1,1,2,5,13,25,56,110,218,494,1216,2702,6477,14752,35758,83730,208107,499459 ⋆ Number of solutions to 1 ^ 4 * k _ 1 + 2 ^ 4 * k _ 2 + ... + n ^ 4 * k _ n = 1, where k _ i are from {- 1,0,1 } , i=1..n. ● a(n) = [x ^ 1] Product _{ k=1..n } (x ^ (k ^ 4) + 1 + 1 / x ^ (k ^ 4)). ●

► [A322593] 2,5,13,27,49,83,137,227,385,675,1225,2291,4385,8531,16777,33219,66049,131651,262793,525011,1049377,2098035,4195273,8389667,16778369 ⋆ a(n) = 2 ^ n + 2 * n ^ 2 + 1. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4), n >= 4. ●

► [A126656] 1,2,5,13,27,62,125,266,538,1106,2213,4509,9019,18166,36365,73012,146025,292658,585317,1171783,2343697,4689610,9379221,18763300,37526628 ⋆ a(1)=1; for n>1, a(n) = Sum _{ k=1..n - 1 } a(k) * floor(n / k). ● a(n) is asymptotic to c * 2 ^ n where c=1.118656792139919360830375675285583554251806141777100646700242129904614 6... [_ Benoit Cloitre _ , Nov 10 2009] ●

► [A225690] 1,1,2,5,13,28,48,73,103,138,178,223,273,328,388,453,523,598,678,763,853,948,1048,1153,1263 ⋆ Number of Dyck paths of semilength n avoiding the pattern U ^ 3 D ^ 3 U D. ● a(n) = (5 * n ^ 2 - 15 * n + 6) / 2 for n >= 4. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>6. - _ Colin Barker _ , Jul 10 2015 ●

► [A122491] 0,0,0,2,5,13,28,58,114,218,407,747,1352,2420,4292,7554,13209,22969,39748,68494,117590,201210,343275,584087,991440 ⋆ a(n) = n * Fibonacci(n) - Sum _{ i=0..n } Fibonacci(i). ● a(n) = n * Fibonacci(n) - Fibonacci(n + 2) + 1. - _ Stefan Steinerberger _ , Feb 22 2008 ●

► [A320933] 0,0,2,5,13,28,60,123,251,506,1018,2041,4089,8184,16376,32759,65527,131062,262134,524277,1048565,2097140,4194292,8388595,16777203 ⋆ a(n) = 2 ^ n - floor((n + 3) / 2). ● a(n) = 3 * a(n - 1) - a(n - 2) - 3 * a(n - 3) + a(n - 4). ● a(n) = ((- 1) ^ n + 2 ^ (n + 2) - 2 * n - 5) / 4. - _ Colin Barker _ , Oct 28 2018 ●

► [A290194] 1,2,5,13,28,61,124,253,508,1021,2044,4093,8188,16381,32764,65533,131068,262141,524284,1048573,2097148,4194301,8388604,16777213,33554428 ⋆ Decimal representation of the diagonal from the corner to the origin of the n - th stage of growth of the two - dimensional cellular automaton defined by "Rule 705", based on the 5 - celled von Neumann neighborhood. ● a(n) = 2 * a(n - 1) + a(n - 2) - 2 * a(n - 3) for n > 5 (conjectured). ●

► [A011756] 2,5,13,29,47,73,107,151,197,257,317,397,467,571,659,769,883,1019,1151,1291,1453,1607,1783,1987,2153 ⋆ a(n) = prime(n(n + 1) / 2). ● a(n) is asymptotic to (n * (n + 1) / 2) * log(n * (n + 1) / 2) = (n * (n + 1) / 2) * (log(n) + log(n + 1) - log(2)) ~ (n ^ 2 + n) * (2 log n) / 2 ~ (n ^ 2 + n) * (log n). - _ Jonathan Vos Post _ , Mar 12 2006 ●

► [A218152] 1,2,5,13,29,56,97,155,233,334,461,617,805,1028,1289,1591,1937,2330,2773,3269,3821,4432,5105,5843,6649 ⋆ a(n) = 1 + n + ((n - 1) * n ^ 2) / 2. ● a(n) = a(n - 1) + (4 - 5 * n + 3 * n ^ 2) / 2 for n > 0 and a(0)=1. ● a(n) = (2 + 2 * n - n ^ 2 + n ^ 3) / 2. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>3. ●

► [A079991] 1,1,1,2,5,13,29,58,124,280,632,1406,3101,6851,15217,33846,75181,166823,370177,821760,1824620,4051056,8993220,19964240,44320545 ⋆ Number of permutations satisfying - k<=p(i) - i<=r and p(i) - i not in I, i=1..n, with k=3, r=3, I= {- 1,1 } . ● a(n) = 2 * a(n - 1) + 3 * a(n - 4) + a(n - 6) - 8 * a(n - 7) - a(n - 8) - 3 * a(n - 10) + 2 * a(n - 13) + a(n - 14). ●

► [A289843] 1,2,5,13,29,73,168,410,962,2317,5483,13131,31193,74509,177311,423025,1007505,2402354,5723761,13644587,32514730,77501115,184698088,440216833,1049148789 ⋆ p - INVERT of (1,0,2,0,3,0,4,0,5,...) (A027656), where p(S) = 1 - S - S ^ 2. ● a(n) = a(n - 1) + 5 * a(n - 2) - 2 * a(n - 3) - 6 * a(n - 4) + a(n - 5) + 4 * a(n - 6) - a(n - 8). ●

► [A116699] 1,2,5,13,30,61,112,190,303,460,671,947,1300,1743,2290,2956,3757,4710,5833,7145,8666,10417,12420,14698,17275 ⋆ Number of permutations of length n which avoid the patterns 123 and 4312. ● a(n) = (n ^ 4 + 2 * n ^ 3 - 13 * n ^ 2 + 34 * n) / 24. - _ Franklin T. Adams - Watters _ , Sep 16 2006 ●

► [A282153] 0,1,2,5,13,30,63,127,254,509,1021,2046,4095,8191,16382,32765,65533,131070,262143,524287,1048574,2097149,4194301,8388606,16777215 ⋆ Expansion of x * (1 - 2 * x + 3 * x ^ 2) / ((1 - x) * (1 - 2 * x) * (1 - x + x ^ 2)). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 5 * a(n - 3) - 2 * a(n - 4) for n>3. (End) ● a(n) = 2 ^ n + ((- 1) ^ floor(n / 3) + (- 1) ^ floor((n + 1) / 3)) / 2 - 2. Therefore: ● a(3 * k) = 8 ^ k + (- 1) ^ k - 2, ● a(3 * k + 1) = 2 * 8 ^ k + (- 1) ^ k - 2, ● a(3 * k + 2) = 4 * 8 ^ k - 2. (End) ● a(n + 6 * h) = a(n) + 2 ^ n * (64 ^ h - 1) with h>=0. For h=1, a(n + 6) = a(n) + 63 * 2 ^ n. ●

► [A184052] 1,2,5,13,30,66,137,279,556,1104,2179,4309,8518,16886,33509,66643,132672,264492,527639,1053441,2104042,4204242,8402617,16797343,33582724 ⋆ The number of order - decreasing partial isometries (of an n - chain) ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - 2 ^ floor(n / 2) + n + 1. ●

► [A098501] 1,2,5,13,31,49,70,93,121,151,186,223,265,309,358,409,465,523,586,651,721,793,870,949,1033 ⋆ Number of squares on infinite octant of chessboard at <=n knight moves from the corner. The octant includes the diagonal. ● a(n) = (1 / 8) * [14n ^ 2 + 8n + 5 + 3(- 1) ^ n], for n>4. ●

► [A116701] 1,1,2,5,13,31,66,127,225,373,586,881,1277,1795,2458,3291,4321,5577,7090,8893,11021,13511,16402,19735,23553 ⋆ Number of permutations of length n that avoid the patterns 132, 4321. ● a(n) = (n ^ 4 - 4n ^ 3 + 11n ^ 2 - 8n + 12) / 12. - _ Franklin T. Adams - Watters _ , Sep 16 2006 ● a(n) = binomial(n + 1,4) + binomial(n,4) + binomial(n,2) + 1. - _ Michael Coopman _ , Oct 24 2021 ●

► [A179257] 1,1,2,5,13,32,72,148,281,499,838,1343,2069,3082,4460,6294,8689,11765,15658,20521,26525,33860,42736,53384,66057 ⋆ Number of permutations of length n which avoid the patterns 321 and 1324. ● a(n) = 1 + binomial(n,2) + binomial(n + 2,5). ●

► [A116702] 1,2,5,13,32,74,163,347,722,1480,3005,6065,12196,24470,49031,98167,196454,393044,786241,1572653,3145496,6291202,12582635,25165523,50331322 ⋆ Number of permutations of length n which avoid the patterns 123, 3241. ● a(n) = 3 * 2 ^ (n - 1) + n - (n + 1) * (2 + n) / 2. ● a(n) = 5 * a(n - 1) - 9 * a(n - 2) + 7 * a(n - 3) - 2 * a(n - 4) for n > 4. ●

► [A098156] 1,2,5,13,32,76,176,400,896,1984,4352,9472,20480,44032,94208,200704,425984,901120,1900544,3997696,8388608,17563648,36700160,76546048,1593835

52 ⋆ Interleave n + 1 and 2n + 1 and take binomial transform. ● a(n) = (2 * 0 ^ n + Sum _{ k=0..n } (- 1) ^ (n - k) * k * binomial(n,k) + 2 ^ (n + 1) + 3 * n * 2 ^ (n - 1)) / 4. ● a(n) = Sum _{ j=0..n } Sum _{ k=0..n } binomial(n, 2 * (k - j)). ● a(n) = Sum _{ k=0..n } Sum _{ j=0..k } C(n, 2 * j). - _ Paul Barry _ , Jan 13 2005 ● a(n) = 2 ^ (n - 3) * (3 * n + 4) for n>=2. - _ Philip B. Zhang _ , May 25 2016 ●

▶ [A267862] 1,2,5,13,32,77,178,399,877,1882,3959,8179,16636,33333,65894,128633,248169,473585,894573,1673704,3103334,5705383,10405080,18831761,33836627 ⋆ Number of planar lattice convex polygonal lines joining the origin and the point (n,n). ● a(n) = [x ^ n * y ^ n] 1 / ((1 - x) * (1 - y) * Product _{ i>0,j>0,gcd(i,j)=1 } (1 - x ^ i * y ^ j)). ●

▶ [A098586] 2,5,13,32,78,189,457,1104,2666,6437,15541,37520,90582,218685,527953,1274592,3077138,7428869,17934877,43298624,104532126,252362877,609257881,470878640,3551015162 ⋆ a(n) = (1 / 2) * (5 * P(n + 1) + P(n) - 1), where P(k) are the Pell numbers A000129. ● a(n) = 3 * a(n - 1) - a(n - 2) - a(n - 3) with a(0)=2, a(1)=5, a(2)=13. - _ Hermann Stamm - Wilbrandt _ , Aug 26 2014 ● a(n) = 7 * a(n - 2) - 7 * a(n - 4) + a(n - 6), for n>5. - _ Hermann Stamm - Wilbrandt _ , Aug 27 2014 ● a(n) = (- 2 + (5 - 3 * sqrt(2)) * (1 - sqrt(2)) ^ n + (1 + sqrt(2)) ^ n * (5 + 3 * sqrt(2))) / 4. - _ Colin Barker _ , Mar 16 2016 ●

▶ [A255630] 1,2,5,13,32,79,197,490,1217,3025,7520,18691,46457,115474,287021,713413,1773248,4407559,10955357,27230458,67683593,168233257,418157888,1039366555,2583432881 ⋆ Number of n - length ternary words avoiding runs of zeros of length 1 (mod 3). ● a(n + 3) = 2 * a(n + 2) + 3 * a(n) with n > 0, a(0) = 1, a(2) = 2, a(3) = 5. ●

▶ [A337282] 0,0,2,5,13,33,75,166,358,754,1564,3203,6491,13043,26021,51596,101772,199828,390790,761537,1479337,2865589,5536719,10673010,20530866 ⋆ Partial sums of A337281. ● a(n) = 3 * a(n - 1) - a(n - 2) - a(n - 3) - 3 * a(n - 4) + a(n - 5) + a(n - 6) + a(n - 7) for n>6. ●

▶ [A027929] 1,2,5,13,33,79,176,365,709,1300,2267,3785,6085,9465,14302,21065,30329,42790,59281,80789,108473,143683,187980,243157,311261 ⋆ a(n) = T(n, 2 * n - 6), T given by A027926. ● a(n) = Sum _{ k=0..3 } binomial(n - k, 6 - 2 * k). - _ Len Smiley _ , Oct 20 2001 ● a(n) = (3600 - 3420 * n + 1684 * n ^ 2 - 525 * n ^ 3 + 115 * n ^ 4 - 15 * n ^ 5 + n ^ 6) / 720. ●

▶ [A088921] 1,2,5,13,33,80,185,411,885,1862,3853,7881,15993,32284,64945,130359,261293,523282,1047397,2095781,4192721,8386792,16775145,33552083,67106213 ⋆ The number of 321 - and 2143 - avoiding permutations of length n. ● a(n) = 2 ^ (n + 1) - binomial(n + 1, 3) - 2 * n - 1. ●

▶ [A005183] 1,2,5,13,33,81,193,449,1025,2305,5121,11265,24577,53249,114689,245761,524289,1114113,2359297,4980737,10485761,22020097,46137345,96468993,201326593 ⋆ a(n) = n * 2 ^ (n - 1) + 1. ● a(n) = 2 * a(n - 1) + 2 ^ (n - 1) - 1 (with a(0)=1). - _ Vincenzo Librandi _ , Dec 31 2010 ●

▶ [A005348] 1,2,5,13,33,81,193,449,1089,2673,6561,15633,37249,88209,216513,531441,1266273,3017169,7189057,17537553,43046721,102568113,244390689,582313617,1420541793 ⋆ Number of ways to add n ordinals. ● a(n) = 81 * a(n - 5) for n >= 21. ●

▶ [A292507] 1,1,2,5,13,33,82,201,488,1176,2817,6714,15931,37647,88628,207914,486158,1133304,2634339,6106953,14121157,32573842,74968044,172164086,394561089 ⋆ Number of partitions of n with up to n distinct kinds of 1. ● a(n) = [x ^ n] (1 + x) ^ n * Product _{ k>=2 } 1 / (1 - x ^ k). - _ Ilya Gutkovskiy _ , Apr 24 2021 ●

▶ [A007443] 2,5,13,33,83,205,495,1169,2707,6169,13889,30993,68701,151469,332349,725837,1577751,3413221,7349029,15751187,33616925,71475193,151466705,320072415,674721797 ⋆ Binomial transform of primes. ● a(n) = Sum _{ k=1..n } binomial(n - 1,k - 1) * prime(k). - _ M. F. Hasler _ , Jun 02 2017 ●

▶ [A120925] 1,2,5,13,33,83,209,527,1329,3351,8449,21303,53713,135431,341473,860983,2170865,5473575,13800961,34797463,87737617,221219847,557779233,1406373239,3546000945 ⋆ Number of ternary words on { 0,1,2 } having no isolated 0's. ● a(n) = 3a(n - 1) - 2a(n - 2) + 2a(n - 3); a(0)=1, a(1)=2,a(2)=5. ●

▶ [A077939] 1,2,5,13,33,84,214,545,1388,3535,9003,22929,58396,148724,378773,964666,2456829,6257097,15935689,40585304,103363394,263247781,670444260,1707499695,4348691431 ⋆ Expansion of 1 / (1 - 2 * x - x ^ 2 - x ^ 3). ● a(n) = Sum _{ m=1..n + 1 } Sum _ (k=0..n - m + 1 } (Sum _{ j=0..k } binomial(j,n - m - 3 * k + 2 * j + 1) * binomial(k,j)) * binomial(m + k - 1,m - 1). - _ Vladimir Kruchinin _ , Oct 11 2011 ● a(n) = 2 * a(n - 1) + a(n - 2) + a(n - 3), where a(0) = 0, a(1)=1, a(2)=2. - _ Rigoberto Florez _ , Jan 23 2020 ●

▶ [A104589] 1,2,5,13,34,55,76,97,215,333,451,569,1256,1943,2630,3317,4004,4691,10069,25516,40963,56410,71857,87304,102751 ⋆ a(1)=1. a(n) = a(n - 1) + (sum of terms, from among terms a(1) through a(n - 1), which are prime or 1). ● a(n) = 3 * a(n - 1) - a(n - 2) if a(n - 1) is prime, else a(n) = 2 * a(n - 1) - a(n - 2) for n>3. - _ John Tyler Rascoe _ , Jul 20 2022 ●

▶ [A252932] 2,5,13,34,83,176,329,558,879,1308,1861,2554,3403,4424,5633,7046,8679,10548,12669,15058,17731,20704,23993,27614,31583 ⋆ Number of n X 2 nonnegative integer arrays with upper left 0 and every value within 3 of its king move distance from the upper left and every value increasing by 0 or 1 with every step right, diagonally se or down. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>6. ●

▶ [A027931] 1,2,5,13,34,88,221,530,1204,2587,5270,10220,18955,33775,58060,96647,156299,246280,379051,571103,843944,1225258,1750255,2463232,3419366 ⋆ T(n, 2n - 8), T given by A027926. ● a(n) = Sum _{ k=0..4 } binomial(n - k, 8 - 2 * k). - _ Len Smiley _ , Oct 20 2001 ●

▶ [A267905] 1,2,5,13,34,88,225,569,1426,3548,8777,21613,53026,129712,316545,770993,1874914,4553588,11047625,26779909,64869586,157043368,380004897,919150313,2222499826 ⋆ Number of n X 1 0..2 arrays with every repeated value in every row unequal to the previous repeated value, and in every column equal to the previous repeated value, and new values introduced in row - major sequential order. ● a(n) = ((1 - sqrt(2)) ^ (1 + n) + (1 + sqrt(2)) ^ (1 + n) - 2 * (2 ^ n - 1)) / 4. ●

▶ [A103142] 1,2,5,13,34,88,228,591,1532,3971,10293,26680,69156,179256,464641,1204374,3121801,8091873,20974562,54367172,140922580,365278767,946821848,2454212215,6361447625 ⋆ a(n) = 2 * a(n - 1) + a(n - 2) + a(n - 3) + a(n - 4), with a(0)=1, a(1)=2, a(3)=5, a(4)=13. ● a(n) = 2 * a(n - 1) + a(n - 2) + a(n - 3) + a(n - 4). ●

▶ [A027933] 1,2,5,13,34,89,232,596,1490,3588,8273,18228,38403,77533,150438,281403,509015,892926,1523117,2532359,4112704,6536993,10186540,15586342,23449376 ⋆ a(n) = T(n, 2 * n - 10), T given by A027926. ● a(n) = Sum _{ k=0..5 } binomial(n - k, 10 - 2 * k). - _ Len Smiley _ , Oct 20 2001 ● a(n) = 34 - 9161 * n / 280 - 101897 * n ^ 3 / 20160 + 794293 * n ^ 2 / 50400 - 287 * n ^ 5 / 1280 + 438209 * n ^ 4 / 362880 + 593 * n ^ 6 / 172800 - 47 * n ^ 7 / 13440 - n ^ 9 / 80640 + n ^ 8 / 3780 + n ^ 10 / 3628800. - _ R. J. Mathar _ , Oct 05 2009 ●

▶ [A141448] 0,1,2,5,13,34,89,232,605,1578,4116,10736,28003,73041,190515,496926,1296147,3380779,8818187,23000741,59993521,156482896,408159020,1064613385,2776862948 ⋆ Generalized Pell numbers P(n,5,5). ● a(n) = 2 * a(n - 1) + a(n - 2) + a(n - 3) + a(n - 4) + a(n - 5). ● a(n + 1) = Sum _ (k=1..n, Sum _ (r=0..k, binomial(k,r) * 2 ^ (k - r) * Sum _ (m=0..r,(Sum _ (j=0..m, binomial(j, - r + n - m - k - j) * binomial(m,j))) * binomial(r,m)))), a(0)=0, a(1)=1. [_ Vladimir Kruchinin _ , May 05 2011] ●

▶ [A001519] 1,1,2,5,13,34,89,233,610,1597,4181,10946,28657,75025,196418,514229,1346269,3524578,9227465,24157817,63245986,165580141,433494437,1134903170,2971215073 ⋆ a(n) = 3 * a(n - 1) - a(n - 2) for n >= 2, with a(0) = a(1) = 1. ● a(n) = a(1 - n) for all n in Z. ● a(n + 2) = (a(n + 1) ^ 2 + 1) / a(n) with a(1)=1, a(2)=2. - _ Benoit Cloitre _ , Aug 29 2002 ● a(n) = (phi ^ (2 * n - 1) + phi ^ (1 - 2 * n)) / sqrt(5) where phi=(1 + sqrt(5)) / 2. - _ Michael Somos _ , Oct 28 2002 ● a(n) = Sum _{ k=0..n } binomial(n + k, 2 * k). - _ Len Smiley _ , Dec 09 2001 ● a(n) = Sum _{ k=0..n } C(n, k) * F(k + 1). - _ Benoit Cloitre _ , Sep 03 2002 ● a(n) = (1 / 2) * (3 * a(n - 1) + sqrt(5 * a(n - 1) ^ 2 - 4)). - _ Benoit Cloitre _ , Apr 12 2003 ●

▶ [A122367] 1,2,5,13,34,89,233,610,1597,4181,10946,28657,75025,196418,514229,1346269,3524578,9227465,24157817,63245986,165580141,433494437,1134903170,2971215073,7778742049 ⋆ Dimension of 3 - variable non - commutative harmonics (twisted derivative). The dimension of the space of non - commutative polynomials in 3 variables which are killed by all symmetric differential operators (where for a monomial w, d _{ xi } (xi w) = w and d _{ xi } (xj w) = 0 for i != j). ● a(n) = 3 * a(n - 1) - a(n - 2) with a(0) = 1, a(1) = 2. ● a(n) = (2 ^ (- 1 - n) * ((3 - sqrt(5)) ^ n * (- 1 + sqrt(5)) + (1 + sqrt(5)) * (3 + sqrt(5)) ^ n)) / sqrt(5). - _ Colin Barker _ , Oct 14 2015 ● a(n) = Sum _{ k=0..n } Sum _{ i=0..n } binomial(k + i - 1, k - i). - _ Wesley Ivan Hurt _ , Sep 21 2017 ● a(n) = Fibonacci(n) ^ 2 + Fibonacci(n + 1) ^ 2. - _ Michel Marcus _ , Mar 18 2019 ● a(n) = Product _{ k=1..n } (1 + 4 * cos(2 * k * Pi / (2 * n + 1)) ^ 2). - _ Seiichi Manyama _ , Apr 30 2021 ● a(n) = (L(n) ^ 2 + L(n) * L(n + 2)) / 5 - (- 1) ^ n. ●

▶ [A048575] 2,5,13,34,89,233,610,1597,4181,10946,28657,75025,196418,514229,1346269,3524578,9227465,24157817,63245986,165580141,433494437,1134903170,2971215073,7778742049,20365011074 ⋆ Pisot sequences L(2,5), E(2,5). ● a(n) = [(3 / 2) + (1 / 2) * sqrt(5)] ^ n + (2 / 5) * [(3 / 2) + (1 / 2) * sqrt(5)] ^ n * sqrt(5) - (2 / 5) * [(3 / 2) - (1 / 2) * sqrt(5)] ^ n * sqrt(5) + [(3 / 2) - (1 / 2) * sqrt(5)] ^ n, with n>=0. [_ Paolo P. Lava _ , Nov 20 2008] ●

▶ [A367658] 1,2,5,13,34,89,234,615,1616,4246,11156,29314,77026,202394,531811,1397387,3671781,9647988,25351094,66612640,175031647,459913889,1208471657,3175385173,8343655339 ⋆ G.f. A(x) satisfies A(x) = 1 / (1 - x - x * (1 + x + x ^ 2 + x ^ 3 + x ^ 4) * A(x ^ 5)). ● a(0) = 1; a(n) = a(n - 1) + Sum _{ k=0..n - 1 } a(floor(k / 5)) * a(n - 1 - k). ●

▶ [A367657] 1,2,5,13,34,90,238,629,1662,4394,11616,30707,81173,214584,567259,1499563,3964128,10479273,27702219,73231500,193589270,511758023,1352844978,3576279113,9453982143 ⋆ G.f. A(x) satisfies A(x) = 1 / (1 - x - x * (1 + x + x ^ 2 + x ^ 3) * A(x ^ 4)). ● a(0) = 1; a(n) = a(n - 1) + Sum _{ k=0..n - 1 } a(floor(k / 4)) * a(n - 1 - k). ●

▶ [A064780] 2,5,13,34,94,255,693,1884,5123,13923,37848,102880,279659,760191,2066413,5617093,15268842,41505017,112822331,306682895,833650539,2266097112,6159890600,16744318683,45515777208 ⋆ Number of times n occurs in A000195. ● a(n) = floor(exp(n + 1)) - floor(exp(n)), n>0. ●

▶ [A291242] 2,5,13,35,91,241,631,1662,4362,11470,30127,79179,208023,546633,1436257,3773939,9916134,26055432,68461966,179888381,472667065,1241962303,3263330095,8574599917,22530279167 ⋆ p - INVERT of (0,1,0,1,0,1,...), where p(S) = 1 - 2 S - S ^ 2 + S ^ 3. ● a(n) = 2 * a(n - 1) + 4 * a(n - 2) - 5 * a(n - 3) - 4 * a(n - 4) + 2 * a(n - 5) + a(n - 6) for n >= 7. ●

▶ [A367656] 1,2,5,13,35,94,252,678,1823,4900,13176,35427,95250,256105,688599,1851450,4978062,13384681,35987808,96761612,260166110,699517054,1880814358,5057006914,13596939262 ⋆ G.f. A(x) satisfies A(x) = 1 / (1 - x - x * (1 + x + x ^ 2) * A(x ^ 3)). ● a(0) = 1; a(n) = a(n - 1) + Sum _{ k=0..n - 1 } a(floor(k / 3)) * a(n - 1 - k). ●

▶ [A057960] 1,2,5,13,35,95,259,707,1931,5275,14411,39371,107563,293867,802859,2193451,5992619,16372139,44729515,122203307,333865643,912137899,2492007083,6808289963,18600594091 ⋆ Number of base 5 (n + 1) - digit numbers starting with a zero and with adjacent digits differing by one or less. ● a(n) = sum(b(n, i)) where b(n, 0) = b(n, 6) = 0, b(0, 1) = 1, b(0, n) = 0 if n <> 1 and b(n + 1, i) = b(n, i - 1) + b(n, i) + b(n, i + 1) if 1 <= i <= 5. ● a(n) = ceiling((1 + sqrt(3)) ^ (n + 2) / 12). - _ Mitch Harris _ , Apr 26 2006 ● a(n) = floor(a(n - 1) * (a(n - 1) + 1 / 2) / a(n - 2)). - _ Franklin T. Adams - Watters _ and _ Max Alekseyev _ , Apr 25 2006 ● a(n) = floor(a(n - 1) * (1 + sqrt(3))). - _ Philippe Deléham _ , Jul 25 2003 ● a(n) = 1 / 3 + (2 + sqrt(3)) * (1 + sqrt(3)) ^ n / 6 + (2 - sqrt(3)) * (1 - sqrt(3)) ^ n / 6. Binomial transform of A038754 (with extra leading 1). (End) ●

▶ [A339479] 1,2,5,13,35,95,259,708,1938,5308,14543,39852,109216,299326,820378,2248484,6162671,16890790,46294769,126886206,347774063,953191416,2612541157,7160547089,19625887013 ⋆ Number of partitions consisting of n parts, each of which is a power of 2, where one part is 1 and no part is more than twice the sum of all smaller parts. ● a(n) = F(n,0) where F(0,k) = 1, F(n,0) = F(n - 1,1) for n > 0 and F(n,k) = F(n - 1,k + 1) + F(n, floor(k / 2)) for n,k > 0. In this recursion, F(n,k) gives the number of partitions with n parts where the sum of all parts smaller than the current part size being considered is between k and k

+ 1 multiples of the part size. This function is independent of the current part size. In the case that k is zero, the only choice is to add a part of the current p art size, otherwise parts of double the size are also a possibility. - _ Andrew H owroyd _ , Apr 24 2021 ●

► [A007075] 1,2,5,13,35,95,260,714,1965,5415,14934,41206,113730,313958,866801,2393315,6608473,18248017,50389350,139144906,384237186,1061044865,2930013158,8091077148,22343115337 ⋆ Number of irreducible positions of size n in Mon treal solitaire. ● a(n) = d(n, 1) where d(n, k) is defined in A007046. - _ Sean A . Irvine _ , Oct 06 2017 ●

► [A085810] 1,2,5,13,35,96,266,741,2070,5791,16213,45409,127206,356384,998509,2797678,7838801,21963661,61540563,172432468,483144522,1353740121,3793094450,10628012915,29779028189 ⋆ Number of three - choice paths along a corrido r of height 5, starting from the lower side. ● a(n) = 4 * a(n - 1) - 3 * a(n - 2) - a(n - 3). ● a(n) = Sum _{ k=0..floor(n / 2) } (Sum _{ j=0..n - k } C(n - k, j) * C(j + k, 2k)); ● a(n) = Sum _{ k=0..floor(n / 2) } (Sum _{ j=0..n - k } C(n - k, k + j) * C(k, k - j) * 2 ^ (n - 2k - j)); ● a(n) = Sum _{ k=0..floor(n / 2) } (Sum _{ j=0..n - 2 * k } C(n - j, n - 2 * k - j) * C(k, j)(- 1) ^ j * 2 ^ (n - 2 * k - j)). (End) ● a(n - 1) = - B(n; - 1) = (1 / 7) * ((c(4) - c(1)) * (1 - c(1)) ^ n + (c(1) - c(2)) * (1 - c(2)) ^ n + (c(2) - c(4)) * (1 - c(4)) ^ n), where a(- 1):=0, c(j):=2 * cos(2 * Pi * j / 7). Moreover, B(n;d), n in N, d in C, denotes the respect ive quasi - Fibonacci number defined in comments to A121449 or in Witula - Sl ota - Warzynski's paper (see also A077998, A006054, A052975, A094789, A1214 42). - _ Roman Witula _ , Aug 09 2012 ●

► [A355040] 1,1,2,5,13,35,96,266,742,2079,5843,16457,46423,131099,370527,1047858,2964698,8390837,23754234,67260645,190478213,539484321,1528094423,4328632609,12262352881 ⋆ Expansion of the continued fraction 1 / (1 - q / (1 - q - q ^ 2 / (1 - q - q ^ 2 - q ^ 3 / (1 - q - q ^ 2 - q ^ 3 - q ^ 4 / (...))))). ● a(n) = [q ^ n] K _{ k>=0 } - q ^ k / ((q ^ (k + 1) - 2 * q + 1) / (q - 1)), where K is Gaus s's notation for continued fractions. - _ Peter Luschny _ , Jun 20 2022 ●

► [A005773] 1,1,2,5,13,35,96,267,750,2123,6046,17303,49721,143365,414584,1201917,3492117,10165779,29643870,86574831,253188111,741365049,2173243128,6377181825,18730782252 ⋆ Number of directed animals of size n (or directed n - omi noes in standard position). ● a(n) = Sum _{ q=0..n } binomial(q, floor(q / 2)) * binomial(n - 1, q) for n > 0. - _ Emeric Deutsch _ , Aug 15 2002 ● a(n + 1) = Sum _{ k=0..n } (- 1) ^ (n + k) * C(n, k) * C(2 * k + 1, k + 1). ● a(n) = 0 ^ n + Sum _{ k=0..n - 1 } (- 1) ^ (n + k - 1) * C(n - 1, k) * C(2 * k + 1, k + 1). (End) ● a(n) = Sum _{ l _ 1=0..n + 1 } Sum _{ l _ 2=0..n } ...Sum _{ l _ i=0..n - i } ...Sum _{ l _ n=0..1 } delta(l _ 1,l _ 2,...,l _ i,...,l _ n) where d elta(l _ 1,l _ 2,...,l _ i,...,l _ n) = 0 if any (l _ i - l _ (i + 1)) ^ 2 >= 2 for i=1 ..n - 1 and delta(l _ 1,l _ 2,..., l _ i,...,l _ n) = 1 otherwise. - _ Thomas Wiede r _ , Feb 25 2009 ● a(n) = Sum _{ k=1..n } (k / n * Sum _{ j=0..n } binomia l(n,j) * binomial(j,2 * j - n - k)). - _ Vladimir Kruchinin _ , Sep 06 2010 ● a(0) = 1; a(n + 1) = Sum _{ t=0..n } n! / ((n - t)! * ceiling(t / 2)! * floor(t / 2)!. - _ Andrew S. Hays _ , Feb 02 2011 ●

► [A085281] 1,2,5,13,35,97,275,793,2315,6817,20195,60073,179195,535537,1602515,4799353,14381675,43112257,129271235,387682633,1162785755,3487832977,10462450355,31385253913,94151567435 ⋆ Expansion of (1 - 3 * x + x ^ 2) / ((1 - 2 * x) * (1 - 3 * x)). ● a(n) = 3 ^ n / 3 + 2 ^ n / 2 + 0 ^ n / 6. ●

► [A007689] 2,5,13,35,97,275,793,2315,6817,20195,60073,179195,535537,1602515,4799353,14381675,43112257,129271235,387682633,1162785755,3487832977,10462450355,31385253913,94151567435,282446313697 ⋆ a(n) = 2 ^ n + 3 ^ n. ● a(n) = 5 * a(n - 1) - 6 * a(n - 2). ● a(n) = 2 * a(n - 1) + 3 ^ (n - 1), with a(0)=2. - _ Vincenzo Librandi _ , Nov 18 2010 ●

► [A082582] 1,1,1,2,5,13,35,97,275,794,2327,6905,20705,62642,190987,586219,1810011,5617914,17518463,54857506,172431935,543861219,1720737981,5459867166,17369553427 ⋆ Expansion of (1 + x ^ 2 - sqrt(1 - 4 * x + 2 * x ^ 2 + x ^ 4)) / (2 * x) in powers of x. ● a(n + 1) = a(n) + Sum(a(k) * a(n - k): k=2..n), a(0) = a(1) = 1. - _ Reinhard Zumkeller _ , Nov 13 2012 ● a(n) = Sum _{ k=0..n - 2 } Sum _{ j=0..n - k - 1 } C(n - k - 2,j) * C(k,j) * C(k + j + 2,j) / (j + 1), n>1 , a(0)=1, a(1)=1. - _ Vladimir Kruchinin _ , Oct 18 2020 ● a(n) = Sum _{ k= 0..n - 2 } HypergeometricPFQ[{- k, 3 + k, k - n + 2 } , { 1, 2 } , 1] for n >= 2. - _ Peter Luschny _ , Oct 18 2020 ●

► [A086581] 1,1,2,5,13,35,97,275,794,2327,6905,20705,62642,190987,586219,1810011,5617914,17518463,54857506,172431935,543861219,1720737981,5459867166,17369553427,55391735455 ⋆ Number of Dyck paths of semilength n with no DDU U. ● a(n + 2) - 2 * a(n + 1) + a(n) = a(0) * a(n) + a(1) * a(n - 1) + ... + a(n) * a(0). ● a(n) = 1 + sum(k=0..n, sum(i=0..k, C(n - 1,k) * C(2i + 2,i) * C(i + 2 ,k - 2i - 1) / (i + 1))). - _ Thomas Baruchel _ , Jan 19 2015 ● a(n) = sum(k=0 ..n, C(2k,k) C(n + k,3k) / (k + 1). - _ Thomas Baruchel _ , Jan 19 2015 ●

► [A059027] 1,1,2,5,13,35,97,276,805,2404,7343,22916,72980,236857,782275,2625265,8938718,30834165,107608097,379454447,1350434278,4845475311,17512579630,63703732426,233063976059 ⋆ Number of Dyck paths of semilength n with no p eak at height 4. ● a(n) = sum(k=1..n - 2, sum(j=max(2 * k - n + 1,0)..k - 1, (bi nomial(k,j) * ((k - j) * binomial(2 * n - 3 * k + j - 3,n - 1 - 2 * k + j))) / (n - k - 1) * 2 ^ j)) + 2 ^ (n - 1). - _ Vladimir Kruchinin _ , Oct 03 2013 ●

► [A234643] 1,2,5,13,35,99,297,951,3265,12047,47761,202975,921281,4447327,22737537,122639583,695404929,4132531679,25667031937,166211936735,1119791799425,7833568488415,56802921911681,426267651506655,3305731721387649 ⋆ E.g.f.: Sum _{ n>=0 } Integral ^ n (exp(x) + 1) ^ n dx ^ n, where integral ^ n F(x) dx ^ n is the n - th integration of F(x) with no constant of integration. ● a(n) = Sum _{ k=0..n } Sum _{ j=0..k } binomial(k,j) * j ^ (n - k). ●

► [A331030] 2,5,13,36,98,266,723,1965,5342,14521,39472,107296,291661,792817,2155100,5858169,15924154,43286339,117664468,319845186,869429357,2363354022,6424262292,17462955450,47469234471 ⋆ Divide the terms of the harmonic seri es into groups sequentially so that the sum of each group is minimally greater t han 1. a(n) is the number of terms in the n - th group. ● a(1)=2, a(n) = (min(p) : Sum _{ s=r..p } 1 / s > 1) - r + 1, r=Sum _{ k=1..n - 1 } a(k). ●

► [A036765] 1,1,2,5,13,36,104,309,939,2905,9118,28964,92940,300808,980864,3219205,10626023,35252867,117485454,393133485,1320357501,4449298136,15038769672,50973266380,173214422068 ⋆ Number of ordered rooted trees with n non - r oot nodes and all outdegrees <= three. ● a(n) = (1 / (n + 1)) * sum(j=0..floor (n / 2), binomial(n + 1, n - 2j) * binomial(n + 1, j)). G.f. A(z) satisfies A=1 + z * A + (z * A) ^ 2 + (z * A) ^ 3. - _ Emeric Deutsch _ , Nov 29 2003 ● a(n) = hypergeom([- n - 1, (1 - n) / 2, - n / 2], [1, 3 / 2], - 1). - _ Vladimir Reshetn ikov _ , Oct 15 2018 ●

► [A366023] 1,1,2,5,13,36,104,309,940,2915,9184,29328,94747,309180,1017824,3376693,11279274,37906330,128085630,434913555,1483226921,5078436800,17450556480,60159492600,208013078910 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 - x) * (1 + x ^ 4)). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 4) } (- 1) ^ k * binomial(n + k,n) * binomial(2 * n - 4 * k,n). ●

► [A125094] 1,1,2,5,13,36,104,313,977,3152,10486,35880,126039,453725,1671322,6291148,24170312,94680426,377788108,1534169595,6335718925,26589240583,113323479393,490203781505,2150975413846 ⋆ Eigensequence of A061554 regarded as a triangle: a(n) = Sum _{ k=0..n - 1 } A061554(n - 1,k) * a(k) with a(0)=1. ● a(n) = Sum _{ k=0..n - 1 } a(k) * C(n - 1, floor[n / 2 - (- 1) ^ (n - k - 1) * (k + 1) / 2]). ●

► [A135310] 1,1,2,5,13,36,105,319,1002,3235,10685,35970,123045,426667,1496782,5303623,18956417,68270576,247518777,902708185,3309559838,12190954231,45096739797,167462013888,624019924009 ⋆ Number of Dyck paths of semilength n having no UUUU's starting at level 0. ● a(n) = Sum _{ j=0..floor(n / 4) } (- 1) ^ (j) * (5j + 1) * binomial(2n - 3j,n + j) / (n + j + 1). ● a(n) = the upper le ft term in M ^ n, M = the following production matrix in which a column of (1, 1,1,0,0,0,...) is prepended to an infinite lower triangular matrix with all 1's and the rest zeros: ●

► [A135337] 1,1,2,5,13,36,105,320,1011,3289,10957,37216,128435,449142,1588228,5669505,20403322,73945553,269647630,988642372,3642310793,13476857235,50059454347,186598634398,697777187275 ⋆ Number of Dyck paths of semilength n with no DUUU's starting at level 1. ● a(n) = sum of top row terms of M ^ (n - 1), M = an infinite square production matrix as follows, in which a column of [1 ,1,0,0,0,...] is prepended to an infinite lower triangular matrix of all 1's and the rest zeros: ● a(n) = Sum _{ m=0..n } 1 / (m + 1) * Sum _{ k=0..n - m } k * C(2 * m - k + 1,m - k + 1) * C(n - m - 1,n - m - k). - _ Vladimir Kruchinin _ , Jan 16 2018 ●

► [A114509] 1,1,2,5,13,37,111,345,1104,3611,12016,40548,138414,477076,1657956,5802920,20436910,72369903,257518806,920333307,3302003826,11888979066,42944410207,155576009845,565127618392 ⋆ Number of Dyck paths of semilength n having no ascents of length 4. ● a(n) = 1 / n * sum(j=ceiling((3 * n + 2) / 5).. n, C(n,j) * C(5 * j - 3 * n - 2,j - 1) * (- 1) ^ (n - j)), n>0. [From _ Vladimir K ruchinin _ , Mar 07 2011] ●

► [A003080] 1,1,2,5,13,37,111,345,1105,3624,12099,41000,140647,487440,1704115,6002600,21282235,75890812,272000538,979310627,3540297130,12845634348,46764904745,170767429511,625314778963 ⋆ Number of rooted triangular cacti with 2n + 1 nodes (n triangles). ● a(n)=b(2n + 1). b shifts left under transform T w here Tb = EULER(E _ 2(b)). E _ 2(b) has g.f. (B(x ^ 2) + B(x) ^ 2) / 2. ●

► [A369729] 0,1,1,2,5,13,38,118,380,1262,4277,14745,51541,182182,650095,2338706,8472697,30884150,113189168,416839177,1541726967,5724470097,21330062502,79733319862,298922247363 ⋆ Number of solutions to +- 1 +- 3 +- 5 +- 7 +- .. . +- (4 * n - 3) = 1. ● a(n) = [x ^ 1] Product _{ k=1..2 * n - 1 } (x ^ (2 * k - 1) + 1 / x ^ (2 * k - 1)). ●

► [A000800] 1,1,1,2,5,13,38,125,449,1742,7269,32433,153850,772397,4088773,22746858,132601933,807880821,5132235182,33925263901,232905588441,1657807491222,12215424018837,93042845392105,731622663432978 ⋆ Sum of upward diagonal s of Eulerian triangle. ● a(n) = Sum _{ m=0..n } (- 1) ^ (n - m) * m! * Sum _{ k=0..(n - m) / 2 } C(n - m - k,k) * stirling2(n - k,m). - _ Vladimir Kruchin in _ , Jan 23 2018 ●

► [A127986] 1,2,5,13,39,151,783,5167,40575,363391,3629823,39918847,479005695,6227028991,87178307583,1307674400767,20922789953535,355687428227071,6402373705990143,121645100409356287,2432902008177688575,51090942171711537151,1124000727777611874303 ⋆ a(n) = n! + 2 ^ n - 1. ● a(n) = n! + 2 ^ n - 1. ●

► [A133448] 2,5,13,40,121,365,1094,3281,9841,29524,88573,265721,797162,2391485,7174453,21523360,64570081,193710245,581130734,1743392201,5230176601,15690529804,47071589413,141214768241,423644304722 ⋆ a(n) = 3 * a(n - 1) - a(n - 3) + 3 * a(n - 4). ● a(n) = (1 / 3) * (1 / 2 - (1 / 2) * i) * sqrt(3)) ^ n + (3 / 2) * 3 ^ n - (1 / 6) * (- 1) ^ n + (1 / 3) * (1 / 2 + (1 / 2) * i * sqrt(3)) ^ n, with n>=0 and i=sqrt(- 1). - _ Paolo P. Lava _ , Jun 09 2008 ●

► [A247981] 2,5,13,41,137,149,229,293,397,509,661,677,709,761,809,877,881,1217,1249,1277,1601,2053,2633,3637,3701 ⋆ Primes dividing nonzero terms in A003095: the iterates of x ^ 2 + 1 starting at 0. ● a(n) << exp(k ^ n) for some co nstant k > 0, see Jones theorem 6.1. In particular this sequence is infinite. - _ Charles R Greathouse IV _ , Sep 28 2014 ●

► [A343175] 2,5,13,41,145,545,2113,8321,33025,131585,525313,2099201,8392705,33562625,134234113,536903681,2147549185,8590065665,34360000513,137439477761,549756862465,2199025352705,8796097216513,35184380477441,140737505132545 ⋆ a(0)=2; for n > 0, a(n) = 2 ^ (2 * n - 1) + 2 ^ n + 1. ● a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3) for n > 3. ●

► [A192745] 0,1,2,5,13,42,175,937,6152,47409,416441,4092650,44425891,527520141,6798966832,94504778173,1408978113005,22426272779178,379522678988183,6804322657495361,128828945745315544,2568535276579450905,53788306394034206449 ⋆ Coefficient of x in the reduction by x ^ 2 - >x + 1 of the polynomial p(n, x) defined below in Comments. ● a(n) = Sum _{ k=0..n } k! * Fibonacci(n - k). - _ Greg Dresden _ , Dec 03 2021 ●

► [A269068] 1,1,2,5,13,48,191,1055,6594,56179,557323,7467340,118374617,2522858097,64196033554,2190965409325,89754355176981,4925215013557256,325438017350556407,2878333036568438157 5,3071303354576036230618,43847674179628367615643,756116976483993464569218 11,1744060610300662177958533154 0 ⋆ a(n + 2) = a(n + 1) + L(n + 1) * a(n), where L = Lucas number (A000032) and a(0) = a(1) = 1. ● a(n) * a(n + 1) * a(n + 3) - a(n) * a(n + 2) * a(n + 3) - a(n + 1) * a(n + 2) ^ 2 = 0. ●

► [A030426] 1,2,5,13,89,233,1597,4181,28657,514229,1346269,24157817,1655801 41,433494437,2971215073,53316291173,956722026041,2504730781961,449455702

12853,308061521170129,806515533049393,14472334024676221,9919485309475549 7,1779979416004714189 ★ a(n) = Fibonacci(prime(n)). ● a(n) == 1 (mod prime (n)) if prime(n) == 1, 4 (mod 5). ● a(n) == - 1 (mod prime(n)) if prime(n) = = 2, 3 (mod 5). (End) ● a(n) == Sum _{ k=0..floor((prime(n) - 1) / 2) } (- 1) ^ k * binomial(2 * k,k) (mod prime(n)) (Bataille, 2006). - _ Amiram Eldar _ , Jul 02 2023 ●

▶ [A228958] 1,2,5,14,19,44,51,100,109,190,201,322,335,504,519,744,761,1050,106 9,1430,1451,1892,1915,2444,2469 ★ a(n) = 1 * 2 + 3 * 4 + 5 * 6 + 7 * 8 + 9 * 1 0 + 11 * 12 + 13 * 14 + ... + (up to n). ● a(n) = (1 / 12) * (2 * n ^ 3 + 4 * n + 3 / 2 + (3 * n ^ 2 - 6 * n - 3 / 2) * (- 1) ^ n). [based on Alcover program] ●

▶ [A076664] 0,0,2,5,14,23,43,64,96,133,187,237,314,395,491,596,731,863,1033,120 1,1400,1617,1869,2109,2403 ★ a(n) = Sum _{ k=1..n } antisigma(k), where anti sigma(i) = sum of the nondivisors of i that are between 1 and i. ● a(n) = Sum _{ k=1..n } Sum _{ i=1..k - 1 } (n - k - i + 1) mod (n - i + 1). - _ Wesley Iv an Hurt _ , Sep 13 2017 ●

▶ [A290414] 1,2,5,14,25,63,112,255,480,1023,1984,4095,8064,16383,32512,65535,1 30560,262143,523264,1048575,2095104,4194303,8384512,16777215,33546240 ★ De cimal representation of the diagonal from the corner to the origin of the n - th s tage of growth of the two - dimensional cellular automaton defined by "Rule 78 5", based on the 5 - celled von Neumann neighborhood. ● a(n) = 2 ^ (n / 2 + 1) * (2 ^ (n / 2) - 1) for n>4 and even. ● a(n) = 2 ^ (n + 1) - 1 for n>4 and od d. ● a(n) = 2 * a(n - 1) + 3 * a(n - 2) - 6 * a(n - 3) - 2 * a(n - 4) + 4 * a(n - 5) for n>6. ●

▶ [A212346] 1,1,2,5,14,28,48,75,110,154,208,273,350,440,544,663,798,950,1120,13 09,1518,1748,2000,2275,2574 ★ Sequence of coefficients of x ^ 0 in marked mesh pattern generating function Q _{ n,132 }^ (0,4,0,0)(x). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>6. ●

▶ [A120328] 2,5,14,29,50,77,110,149,194,245,302,365,434,509,590,677,770,869,97 4,1085,1202,1325,1454,1589,1730 ★ Sum of three consecutive squares: a(n) = n ^ 2 + (n + 1) ^ 2 + (n + 2) ^ 2. ● a(n) = 3 * (2 * n + 1) + a(n - 1) (with a(- 1) = 2). - _ Vincenzo Librandi _ , Nov 13 2010 ● a(n) = 3 * n ^ 2 + 6 * n + 5. - _ T. D. Noe _ by way of _ Alonso del Arte _ , Oct 29 2012 ● a(n) = 3 * (n + 1) ^ 2 + 2 == 2 (mod 3), hence a(n) is never square. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for all n in Z. (End) ●

▶ [A212393] 1,1,2,5,14,30,72,195,485,1059,2065,3682,6120,9620,14454,20925,2936 7,40145,53655,70324,90610,115002,144020,178215,218169 ★ Expansion of (1 - 4 * x + 7 * x ^ 2 - 5 * x ^ 3 + 4 * x ^ 4 - 6 * x ^ 5 + 21 * x ^ 6 + 18 * x ^ 7 - 5 * x ^ 8) / (1 - x) ^ 5. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>8, a(0)=a(1)=1, a(2)=2, a(3)=5, a(4)=14, a(5)=30, a(6)=7 2, a(7)=195, a(8)=485. ● a(n) = (n - 3) * (31 * n ^ 3 - 369 * n ^ 2 + 1454 * n - 1560) / 24 for n>3, a(0)=a(1)=1, a(2)=2, a(3)=5. ●

▶ [A080039] 1,2,5,14,33,82,197,478,1153,2786,6725,16238,39201,94642,228485,55 1614,1331713,3215042,7761797,18738638,45239073,109216786,263672645,6365620 78,1536796801 ★ a(n) = floor((1 + sqrt(2)) ^ n). ● a(n) = (sqrt(2) + 1) ^ n - (1 / 2) + (- 1) ^ n * ((sqrt(2) - 1) ^ n - (1 / 2)) for n>0. (End) ●

▶ [A344236] 0,1,2,5,14,33,90,221,582,1465,3794,9653,24830,63441,162762,41652 5,1067574,2733673,7003970,17938661,45954542,117709185,301527354,77236409 3,1978473510 ★ Number of n - step walks from a universal vertex to the other o n the diamond graph. ● a(n) = a(n - 1) + 4 * a(n - 2) + (- 1) ^ n for n > 1. ● a(n) = ((sqrt(17) - 1) / (4 * sqrt(17))) * ((1 - sqrt(17)) / 2) ^ n + ((sqrt(17) + 1) / (4 * sqrt(17))) * ((1 + sqrt(17)) / 2) ^ n - (1 / 2) * (- 1) ^ n. ● a(n) = 5 * a(n - 2) + 4 * a(n - 3) for n > 2. - _ Stefano Spezia _ , May 13 2021 ●

▶ [A201371] 2,5,14,36,80,157,280,464,726,1085,1562,2180,2964,3941,5140,6592,83 30,10389,12806,15620,18872,22605,26864,31696,37150 ★ Number of n X 4 0..1 ar rays with rows and columns lexicographically nondecreasing read forwards, and nonincreasing read backwards. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

▶ [A182890] 0,1,2,5,14,36,94,247,646,1691,4428,11592,30348,79453,208010,54457 7,1425722,3732588,9772042,25583539,66978574,175352183,459077976,120188174 4,3146567256 ★ Number of (1,0) - steps of weight 1 at level 0 in all weighted lat tice paths in L _ n. ● a(n) = Sum _{ m=0..n } C(2 * n - 2 * m,2 * m + 1) / 2. - _ Vladimir Kruchinin _ , Jan 24 2022 ●

▶ [A102714] 2,5,14,36,95,248,650,1701,4454,11660,30527,79920,209234,547781,14 34110,3754548,9829535,25734056,67372634,176383845,461778902,1208952860,316 5079679,8286286176,21693778850 ★ Expansion of (x + 2) / ((x + 1) * (x ^ 2 - 3 * x + 1)). ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - a(n - 3), a(0) = 2, a(1) = 5, a(2) = 14. ● a(n) = (2 ^ (- 1 - n) * ((- 1) ^ n * 2 ^ (1 + n) + (9 - 5 * sqrt(5)) * (3 - sqrt(5)) ^ n + (3 + sqrt(5)) ^ n * (9 + 5 * sqrt(5)))) / 5. - _ Colin Barker _ , Oct 01 2016 ●

▶ [A099485] 1,2,5,14,37,96,251,658,1723,4510,11807,30912,80929,211874,55469 3,1452206,3801925,9953568,26058779,68222770,178609531,467605822,122420793 5,3205017984,8390846017 ★ A Fibonacci convolution. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) + 3 * a(n - 3). ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n - k, k) * (- 1) ^ n * (2 * 3 ^ (n - 2 * k) + 0 ^ (n - 2 * k)) / 3. ● a(n) = Sum _{ k=0.. n } (0 ^ k - sin(Pi * k / 2)) * Fibonacci(2 * (n - k) + 2). ● a(n) = (1 / 6) * (4 * Fibonacci(2 * n + 2) + I ^ n + (- I) ^ n). - _ Ralf Stephan _ , Dec 04 2004 ●

▶ [A038990] 1,2,5,14,37,98,257,674,1765,4622,12101,31682,82945,217154,56851 7,1488398,3896677,10201634,26708225,69923042,183060901,479259662,125471808 5,3284894594,8599965697 ★ Expansion of (1 - x - x ^ 2 + 2 * x ^ 3) / ((1 - x) * (1 + x) * (1 - 3 * x + x ^ 2)). ● a(0)=1, a(1)=2, a(2)=5, a(3)=14, a(n)=3 * a(n - 1) - 3 * a(n - 3) + a(n - 4). - _ Harvey P. Dale _ , Feb 17 2012 ● a(n) = (- 1) * (2 ^ (- 1 - n) * ((- 2) ^ n + 5 * 2 ^ n - 8 * (3 - sqrt(5)) ^ n - 8 * (3 + sqrt(5)) ^ n)) / 5. - _ Colin Barker _ , Jul 16 2017 ●

▶ [A077938] 1,2,5,14,37,98,261,694,1845,4906,13045,34686,92229,245234,65206 9,1733830,4610197,12258362,32594581,86667918,230447141,612751362,162928570 1,4332217046,11519222517 ★ Expansion of 1 / (1 - 2 * x - x ^ 2 - 2 * x ^ 3). ● a(n)=sum(k=1..n, sum(j=0..k, binomial(j,n - 3 * k + 2 * j) * binomial(k,j) * 2 ^ (- n + 4 * k - 2 * j))), n>0, a(0)=1. [_ Vladimir Kruchinin _ , May 05 2011] ● a(n) = 2 * a(n - 1) + a(n - 2) + 2 * a(n - 3). [_ Stefan Schuster _ , Apr 24 201 5] ●

▶ [A292327] 2,5,14,38,102,271,714,1868,4858,12569,32374,83058,212350,541219,1 375570,3487384,8821170,22266413,56098206,141087934,354268502,888238903,222 3968666,5561234916,13889778218 ★ p - INVERT of the Fibonacci sequence (A0 00045), where p(S) = (1 - S) ^ 2. ● a(n) = 4 * a(n - 1) - 2 * a(n - 2) - 4 * a(n - 3) - a(n - 4) for n >= 5. ●

▶ [A052945] 1,2,5,14,38,104,284,776,2120,5792,15824,43232,118112,322688,88160 0,2408576,6580352,17977856,49116416,134188544,366609920,1001596928,2736413 696,7476021248,20424869888 ★ Number of compositions of n when each odd par t can be of two kinds. ● a(n) = 2 * (a(n - 1) + a(n - 2)). ● a(n) = Sum _{ alph a=RootOf(- 1 + 2 * z + 2z ^ 2) } alpha ^ (- 1 - n) / 4. ● a(n) = ((2 + sqrt(3)) * (1 + sqrt(3)) ^ (n - 1) + (2 - sqrt(3)) * (1 - sqrt(3)) ^ (n - 1)) / 2 for n>0. ●

▶ [A141752] 1,2,5,14,39,106,283,748,1967,5160,13521,35412,92725,242774,63560 9,1664066,4356603,11405758,29860687,78176320,204668291,535828572,140281744 5,3672623784,9615053929 ★ a(n) = Sum _{ k=0..n } (Fibonacci(2 * k - 1) + (n - k) * Fibonacci(2 * k)). ● a(n) = 5 * a(n - 1) - 8 * a(n - 2) + 5 * a(n - 3) - a(n - 4). - _ Wesley Ivan Hurt _ , Oct 18 2021 ●

▶ [A291729] 2,5,14,39,106,290,794,2173,5946,16272,44530,121860,333480,91259 7,2497400,6834349,18702782,51181767,140063294,383295214,1048920220,2870460 125,7855260268,21496593296,58827270844 ★ p - INVERT of (1,0,1,0,0,0,0,...), w here p(S) = 1 - 2 S - S ^ 2. ● a(n) = 2 * a(n - 1) + a(n - 2) + 2 * a(n - 3) + 2 * a(n - 4) + a(n - 6) for n >= 7. ●

▶ [A142586] 1,2,5,14,39,107,290,779,2079,5522,14615,38579,101634,267347,70245 5,1844114,4838079,12686507,33254210,87141659,228301839,598026002,156630045 5,4101923939,10741568514 ★ Binomial transform of A014217. ● a(n) = 5 * a(n - 1) - 7 * a(n - 2) + 2 * a(n - 3); a(0)=1, a(1)=2, a(2)=5, a(3)=14. - _ Harvey P. Dale _ , Aug 08 2011 ● a(n) = (- 2 ^ (- 1 + n) + ((3 - sqrt(5)) / 2) ^ n + ((3 + sqrt(5)) / 2) ^ n) for n > 0. - _ Colin Barker _ , Jun 05 2017 ●

▶ [A026135] 1,2,5,14,39,110,312,890,2550,7334,21161,61226,177575,516114,15028 67,4383462,12804429,37452870,109682319,321563658,943701141,2772060618,8149 661730,23978203662,70600640796 ★ Number of (s(0),s(1),...,s(n)) such that ever y s(i) is a nonnegative integer, s(0) = 1, |s(1) - s(0)| = 1, |s(i) - s(i - 1)| <= 1 fo r i >= 2. Also sum of numbers in row n + 1 of the array T defined in A026120. ● a(n) = Sum _{ k=0..n } binomial(n - 1, k - 1) * binomial(k + 1, floor((k + 1) / 2)). - _ Vladeta Jovovic _ , Sep 18 2003 ●

▶ [A367655] 1,2,5,14,39,111,314,894,2539,7224,20536,58413,166102,472410,13434 48,3820748,10865805,30901790,87882171,249931270,710786078,2021427153,57487 94540,16349171957,46495891170 ★ G.f. A(x) satisfies A(x) = 1 / (1 - x - x * (1 + x) * A(x ^ 2)). ● a(0) = 1; a(n) = a(n - 1) + Sum _{ k=0..n - 1 } a(floor(k / 2)) * a(n - 1 - k). ●

▶ [A296516] 1,1,2,5,14,40,111,300,797,2098,5499,14389,37634,98435,257516,6738 27,1763460,4615686,12082137,31628294 ★ a(n) is the number of terms in expand ed form of bivariate polynomial Q _ n, where (P _ n, Q _ n) is defined by: P _ 0 = x, Q _ 0 = y, P _ (n + 1) = P _ n + Q _ n, Q _ (n + 1) = P _ n * Q _ n. ● a(n) = F(n + 1) ^ 2 - T(n - 1) - T(F(n - 1)) - 2 * V(n) - 2 * W(n) for n > 0, where ● a(n) = F(n + 1) ^ 2 - T(n - 1) - T(F(n - 1)) - [n>=4] * U(n) wher e [] is the Iverson bracket, ● a(n) = 7 * a(n - 1) - 18 * a(n - 2) + 20 * a(n - 3) - 6 * a(n - 4) - 6 * a(n - 5) + 5 * a(n - 6) - a(n - 7) for n>7. ● a(n) = - (1 / 2) * n ^ 2 + (1 / 2) * n - 1 + (2 + phi) / 10 * (phi ^ 2) ^ n + (4 - 3 * phi) / 10 * (- p hi ^ (- 1)) ^ n + (1 + 3 * phi) / 10 * (phi) ^ n + (3 - phi) / 10 * (phi ^ (- 2)) ^ n, ● a(n) = (F(2 * n + 1) + F(n + 2) - n ^ 2 + n - 2) / 2. ●

▶ [A081908] 1,2,5,14,40,112,304,800,2048,5120,12544,30208,71680,167936,38912 0,892928,2031616,4587520,10289152,22937600,50855936,112197632,246415360,53 8968064,1174405120 ★ a(n) = 2 ^ n * (n ^ 2 - n + 8) / 8. ● a(n) = Sum _{ k=0 ..n } C(n, k) * (1 + C(k, 2)). - _ Paul Barry _ , May 27 2003 ●

▶ [A059505] 2,5,14,40,114,323,910,2551,7120,19796,54852,151525,417434,114714 5,3145394,8606848,23507190,64093031,174474790,474261691,1287398452,3490267 820,9451319304,25565098825,69080289074 ★ Transform of A059502 applied to se quence 2,3,4,... ● a(n) = 6 * a(n - 1) - 11 * a(n - 2) + 6 * a(n - 3) - a(n - 4). ● a (n) = ((3 - n) * Fibonacci(2 * n) + (5 + 3 * n) * Fibonacci(2 * n - 1)) / 5. (End) ●

▶ [A117189] 1,2,5,14,40,114,324,920,2612,7416,21056,59784,169744,481952,13684 00,3885280,11031424,31321376,88930368,252498816,716916544,2035531648,57794 58048,16409538688,46591385856 ★ Binomial transform of the tribonacci sequenc e A000073 (shifted left twice). ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) + 2 * a(n - 3), n>2. - _ T. D. Noe _ , Nov 07 2006 ● a(n) = 2 * a(n - 1) + Sum _{ j=1..n - 1 } j * a(n - j - 1), n>=1; with a(0) = 1. - _ Bob Selcoe _ , Jun 28 2014 ●

▶ [A052963] 1,2,5,14,40,115,331,953,2744,7901,22750,65506,188617,543101,15637 97,4502774,12965221,37331866,107492824,309513251,891207887,2566130837,7388 879260,21275429893,61260158842 ★ a(0)=1, a(1)=2, a(2)=5, a(n) = 3 * a(n + 2) - a(n + 3). ● a(n) = Sum((1 / 9) * (1 + 2 *_ alpha +_ alpha ^ 2) *_ alpha ^ (- 1 - n), _ alpha=RootOf(1 - 3 *_ Z +_ Z ^ 3)). [in Maple notation] ● a(n) / a(n - 1) tends to 2.8793852... = 1 / (2 * cos(4 * Pi / 9)), a root of x ^ 3 - 3x ^ 2 + 1 (the characteristic polynomial of the 3 X 3 matrix). The latter polynomial i s a factor (with (x + 1)) of the 4th degree polynomial of A066170: x ^ 4 - 2x ^ 3 - 3x ^ 2 + x + 1. Given the 3 X 3 matrix [0 1 0 / 0 0 1 / - 1 0 3], (M ^ n) * [1 1 1] = [a(n - 2), a(n - 1), a(n)]. - _ Gary W. Adamson _ , Feb 29 2004 ●

▶ [A075496] 1,1,2,5,14,40,118,349,1042,3112,9322,27926,83738,251096,753170,22 59161,6777134,20330360,60990038,182967002,548897894,1646684360,494004375 8,14820103348,44460282118 ★ a(1)=1, a(n) = Sum _{ k=1..n - 1 } max(a(k), a(n - k)). ● a(n) is asymptotic to c * 3 ^ n where c=0.052473532403527236078834 469922176934048617034711904730589975028466575548 68.... ●

▶ [A225691] 1,1,2,5,14,41,110,245,450,739,1126,1625,2250,3015,3934,5021,6290,7 755,9430,11329,13466,15855,18510,21445,24674 ★ Number of Dyck paths of semi length n avoiding the pattern U ^ 4 D ^ 4 U D. ● a(n) = (14 * n ^ 3 - 84 * n ^ 2 + 124 * n - 84) / 6 for n >= 6. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>6. - _ Colin Barker _ , Jul 10 2015 ●

▶ [A116844] 1,1,2,5,14,41,116,302,715,1549,3106,5831,10352,17525,28484,44696,6 8021,100777,145810,206569,287186,392561,528452,701570,919679 ★ Number of p ermutations of length n which avoid the patterns 231, 12345. ● a(n) = (n ^ 6 -

9n ^ 5 + 43n ^ 4 - 99n ^ 3 + 172n ^ 2 - 108n + 144) / 144. - _ Franklin T. Adams - Watters _ , Sep 16 2006 ●

▶ [A116851] 1,2,5,14,41,116,307,760,1779,3986,8641,18282,38005,78024,158791,321236,647247,1300630,2609029,5227766,10467521,20949692,41917115,83855504,167736331 ⋆ Number of permutations of length n which avoid the patterns 321, 3 1245. ● a(n) = 5 * 2 ^ n - (n + 2) * (n ^ 3 + 11 * n + 24) / 12. - _ R. J. Mathar _ , Jan 12 2013 ●

▶ [A038989] 1,2,5,14,41,118,341,986,2849,8234,23797,68774,198761,574430,1660133,4797874,13866113,40073810,115815461,334712894,967338217,2795659334,8079605429,23350493066,67484177441 ⋆ Expansion of (1 - x ^ 2 - 2 * x ^ 3) / (1 - 2 * x - 2 * x ^ 2 - 2 * x ^ 3 + x ^ 4). ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4) for n>3. - _ Colin Barker _ , Jul 16 2017 ●

▶ [A116850] 1,2,5,14,41,119,334,902,2351,5945,14660,35408,84061,196715,454778,1040522,2359451,5308589,11862208,26345684,58196201,127926527,279970070,610271534,1325400391 ⋆ Number of permutations of length n which avoid the pa tterns 231, 12354. ● a(n) = (1 / 16) * (32 - 9 * 2 ^ (1 + n) + (8 + 2 ^ n) * n + (8 + 2 ^ n) * n ^ 2). ● a(n) = 9 * a(n - 1) - 33 * a(n - 2) + 63 * a(n - 3) - 66 * a(n - 4) + 36 * a(n - 5) - 8 * a(n - 6) for n>6. ●

▶ [A116847] 1,2,5,14,41,119,336,924,2492,6636,17536,46137,121095,317434,831571,2177734,5702191,14929519,39087182,102332996,267912946,701407172,1836310110,4807524929,12586266701 ⋆ Number of permutations of length n which avoid the patterns 123, 51432. ● a(n) = 1 - ((3 - sqrt(5)) / 2) ^ n / sqrt(5) + ((3 + sqrt(5)) / 2) ^ n / sqrt(5) - (4 * n) / 3 + n ^ 2 / 2 - n ^ 3 / 6. - _ Colin Barker _ , Oct 31 2017 ●

▶ [A116848] 1,2,5,14,41,119,336,927,2527,6870,18717,51155,140120,384147,1053147,2886182,7906953,21657679,59318944,162475127,445041287,1219069014,3339354501,9147387195,25057021032 ⋆ Number of permutations of length n which avoid the patterns 231, 51234. ● a(n) = 6 * a(n - 1) - 14 * a(n - 2) + 17 * a(n - 3) - 10 * a(n - 4) + 4 * a(n - 5) for n>5. - _ Colin Barker _ , Nov 01 2017 ●

▶ [A122055] 1,1,1,1,1,1,1,1,1,2,5,14,41,121,353,989,2393,9397,49121,342793,2842633,24619238,211654405,1731275594,11581792513 ⋆ A Somos 9 - type recurrence: a(n) = (3 * a(n - 1) * a(n - 8) - a(n - 4) * a(n - 5)) / a(n - 9), with a(0)=...=a(8)=1. ● a(n) = (3 * a(n - 1) * a(n - 8) - a(n - 4) * a(n - 5)) / a(n - 9). ●

▶ [A244885] 1,1,2,5,14,41,121,354,1021,2901,8130,22513,61713,167746,452789,1215197,3246050,8637641,22912633,60624546,160075117,421960101,1110785922,2920883425,7673884449 ⋆ Expansion of (1 - 6 * x + 12 * x ^ 2 - 8 * x ^ 3 + x ^ 4) / ((1 - 2 * x) ^ 2 * (1 - 3 * x + x ^ 2)). ● a(n) = Fibonacci(2 * n + 1) - (n + 1) * 2 ^ (n - 2) for n>0. [_ Bruno Berselli _ , Jul 10 2014] ● a(n) = ((2 ^ (- 1 - n) * ((3 - sqrt(5)) ^ n * (- 1 + sqrt(5)) + (1 + sqrt(5)) * (3 + sqrt(5)) ^ n)) / sqrt(5) - 2 ^ (- 2 + n) * (1 + n)) for n>0. ● a(n) = 7 * a(n - 1) - 17 * a(n - 2) + 16 * a(n - 3) - 4 * a(n - 4) for n>4. ●

▶ [A116845] 1,2,5,14,41,121,355,1032,2973,8496,24111,68017,190885,533294,1484021,4115186,11375765,31358377,86223943,236540916,647556621,1769374932,4826148315,13142564449,35736448201 ⋆ Number of permutations of length n which avoid the patterns 231, 12534. ● a(n) = 7 * a(n - 1) - 17 * a(n - 2) + 17 * a(n - 3) - 7 * a(n - 4) + a(n - 5) for n>5. - _ Colin Barker _ , Oct 19 2017 ● a(n) = 1 + Fibonacci(2 * n) / 5 + Lucas(2 * n - 3) * n / 5. - _ Vaclav Kotesovec _ , Aug 04 2018 ●

▶ [A116849] 1,2,5,14,41,121,356,1044,3057,8948,26192,76674,224465,657137,1923817,5632105,16488346,48270655,141315320,413709331,1211159679,3545745012,10380388294,30389230117,88966354626 ⋆ Number of permutations of length n which avoid the patterns 213, 51432. ● a(n) = 5 * a(n - 1) - 8 * a(n - 2) + 6 * a(n - 3) - a(n - 4) for n>3. - _ Vincenzo Librandi _ , Jun 29 2014 ● a(n) = 2 * a(n - 1) + sum _{ i=1..n - 3 } a(n - i - 2) * [(i * (i + 1) / 2) + 1]. ● a(n) = 2 * a(n - 1) + sum _{ i=2..4 } a(n - i) * 2 ^ (i - 2) + sum _ ({ i=5..n - 1 } , { j=0..i - 5 }) a(n - i) * (2 ^ (i - 2) - sum _ [(i - 2)! / (j! * (i - 2 - j)!)]). (End) ●

▶ [A124302] 1,1,2,5,14,41,122,365,1094,3281,9842,29525,88574,265721,797162,2391485,7174454,21523361,64570082,193710245,581130734,1743392201,5230176602,15690529805,47071589414 ⋆ Number of set partitions with at most 3 blocks; number of Dyck paths of height at most 4; dimension of space of symmetric polynomials in 3 noncommuting variables. ● a(0) = 1, a(n) = (3 ^ (n - 1) + 1) / 2 for n >= 1, see A007051. - _ Philippe Deléham _ , Oct 30 2006 ● a(n) = Sum _{ k=0..3 } Stirling2(n,k). - _ Robert A. Russell _ , Mar 29 2018 ●

▶ [A007051] 1,2,5,14,41,122,365,1094,3281,9842,29525,88574,265721,797162,2391485,7174454,21523361,64570082,193710245,581130734,1743392201,5230176602,15690529805,47071589414,141214768241 ⋆ a(n) = (3 ^ n + 1) / 2. ● a(n) = 3 * a(n - 1) - 1. ● a(n) = 4 * a(n - 1) - 3 * a(n - 2) for n > 1, a(0)=1, a(1)=2. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n, 2 * k) * 2 ^ (n - 2 * k). - _ Paul Barry _ , May 08 2003 ● a(n) = M ^ n * [1,1,1,0,0,0,...], leftmost column term; where M = an infinite bidiagonal matrix with all 1's in the superdiagonal and (1,2,3,...) in the main diagonal and the rest zeros. - _ Gary W. Adamson _ , Jun 23 2011 ● a(n) = M ^ n *{ 1,1,1,0,0,0,...}, top entry term; where M is an infinite bidiagonal matrix with all 1's in the superdiagonal, (1,2,3,...) as the main diagonal, and the rest zeros. - _ Gary W. Adamson _ , Jun 24 2011 ● a(2 * m + 1) = Product _{ k= - m..m } (2 + i * tan(Pi * k / (2 * m + 1))), ●

▶ [A113485] 1,2,5,14,41,122,367,1114,3423,10670,33841,109398,361045,1217346,4195267,14775986,53172411,195396310,732806677,2802898190,10926431393,43381582538,175311002903,720640632074,3011495745175 ⋆ Number of partitions of [n] avoiding the pattern 12 / 34. ● a(n) = Sum[Sum[(k + 1) ^ 2 binomial[n, 2k + p] k!, { k, 0, Floor[(n - p) / 2] }], { p, 3, n }] + Sum[binomial[n, 2k] k!, { k, 0, Floor[n / 2] }]. ●

▶ [A054391] 1,1,2,5,14,41,123,374,1147,3538,10958,34042,105997,330632,1032781,3229714,10109310,31667245,99260192,311294876,976709394,3065676758,9625674442,30231524869,94972205349 ⋆ Number of permutations with certain forbidden subsequences. ● a(n) = upper left term of M ^ n, a(n + 1) = sum of top row terms of M ^ n; M = an infinite square production matrix as follows with a main diagonal of (1, 1, 1, 0, 0, 0, ...): ● a(n) = Sum _{ k=1..n - 1 } (sum(l=1..k, (binomial(k,l) * l * sum(j=0..n + l - k - 1, binomial(j,1 - n - 2 * l + k + 2 * j) * binomial(n - 1 + l - k,j))) / (n + l - k - 1))) + 1. - _ Vladimir Kruchinin _ , Oct 31 2011 ●

▶ [A108626] 1,2,5,14,41,124,383,1200,3799,12122,38919,125578,406865,1322772,4313155,14099524,46192483,151628090,498578411,1641921014,5414619739,17878144968,59097039545,195548471268,647665451911 ⋆ Antidiagonal sums of square array A108625, in which row n equals the crystal ball sequence for A _ n lattice. ● a(n) = Sum _{ k=0..n } Sum _{ i=0..k } C(n, i) ^ 2 * C(n + k - i, k - i). ● a(n) = ((5 * n - 3) * a(n - 1) - (6 * n - 8) * a(n - 2) + (2 * n - 4) * a(n - 3) - (n - 2) * a(n - 4) + (n - 3) * a(n - 5)) / n. - _ Thomas Baruchel _ , Nov 08 2014 ● a(n) = Sum _{ k=0..n } binomial(n,k) * hypergeom([- k,k - n,k - n], [1, - n], 1). - _ Peter Luschny _ , Feb 13 2018 ●

▶ [A366046] 1,1,2,5,14,41,124,384,1210,3861,12434,40313,131332,429250,1405696,4606898,15093714,49386035,161204470,524361475,1697564726,5461804480,17433977340,55085418075,171777442668 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 - x + x ^ 5)). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 5) } (- 1) ^ k * binomial(n + k,k) * binomial(2 * n - 4 * k,n - 5 * k). ●

▶ [A159772] 1,1,2,5,14,41,124,384,1210,3865,12482,40677,133572,441468,1467296,4900760,16439370,55357305,187050302,633998079,2154950454,7343407521,25082709012,85858848820,294480653064 ⋆ Number of n - leaf binary trees that do not contain (()(((((())))))())) as a subtree. ● a(n) = sum(k=1..n - 1, k * sum(j=0..n - 1, binomial(n - 1,j) * sum(i=j..n - k + j - 1, binomial(j,i - j) * binomial(n - j - 1,3 * j - n - k - i + 1)))) / (n - 1), n>1. a(0)=0, a(1)=1. - _ Vladimir Kruchinin _ , Oct 23 2011 ●

▶ [A159771] 1,1,2,5,14,41,124,385,1220,3929,12822,42309,140922,473169,1599864,5442561,18615176,63975857,220816906,765121477,2660426630,9280204025,32466050612,113883898241,400464335116 ⋆ Number of n - leaf binary trees that do not contain (()((())(((())))())) as a subtree. ● a(n) = Sum _{ k=0..floor(n / 2) } 1 / (n - k + 0 ^ (n - k)) * C(n - k,k) * C(n - k,k + 1) * 2 ^ (n - 2k - 1). - _ Paul Barry _ , Nov 18 2009 ●

▶ [A036766] 1,1,2,5,14,41,125,393,1265,4147,13798,46476,158170,543050,1878670,6542330,22915999,80682987,285378270,1013564805,3613262795,12924536005,46373266470,166856922125,601928551824 ⋆ Number of ordered rooted trees with n non - root nodes and all outdegrees <= four. ● a(n - 4) - 625 * (733 * n - 400) * (n - 2) * (n - 3) * (n - 4) * a(n - 5)=0. - _ R. J. Mathar _ , Aug 04 2015 ●

▶ [A366024] 1,1,2,5,14,41,125,393,1265,4147,13799,46488,158261,543610,1881730,6557818,22990323,81026013,286915275,1020294605,3642192301,13047053600,46885795710,168979132425,610640337099 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 - x) * (1 + x ^ 5)). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 5) } (- 1) ^ k * binomial(n + k,n) * binomial(2 * n - 5 * k,n). ●

▶ [A316779] 1,1,2,5,14,42,128,390,1184,3582,10808,32550,97904,294222,883688,2653110,7963424,23898462,71711768,215168070,645569744,1936840302,5810783048,17432873430,52299668864 ⋆ Expansion of 1 + (1 / (1 - x) + 1 / (1 - 3 * x)) * x / 2 + (1 / (1 - x) - 8 / (1 - 2 * x) + 9 / (1 - 3 * x)) * x ^ 5 / 2. ● a(n) = 1 + 5 * 3 ^ (n - 3) - 2 ^ (n - 3), n>=3. ● a(n) = 6 * a(n - 1) - 11 * a(n - 2) + 6 * a(n - 3), n>=6. ●

▶ [A344571] 1,2,5,14,42,130,412,1326,4318,14188,46950,156258,522523,1754254,5909419,19964450,67618388,229526054,780633253,2659600616,9075301990,31010850632,106100239080,363428599306,1246172974048 ⋆ Number of subgraphs of the directed square lattice with n edges and all vertices reachable from the origin. ● a(n) >= 2 * a(n - 1) for n > 0. ●

▶ [A080937] 1,1,2,5,14,42,131,417,1341,4334,14041,45542,147798,479779,1557649,5057369,16420730,53317085,173118414,562110290,1825158051,5926246929,19242396629,62479659622,202870165265 ⋆ Number of Catalan paths (nonnegative, starting and ending at 0, step +/- 1) of 2 * n steps with all values <= 5. ● a(n) = 5 * a(n - 1) - 6 * a(n - 2) + a(n - 3). - _ Herbert Kociemba _ , Jun 11 2004 ● a(n) = (4 / 7 - 4 / 7 * cos(1 / 7 * Pi) ^ 2) * (4 * (cos(Pi / 7)) ^ 2) ^ n + (1 / 7 - 2 / 7 * cos(1 / 7 * Pi) + 4 / 7 * cos(1 / 7 * Pi) ^ 2) * (4 * (cos(2 * Pi / 7)) ^ 2) ^ n + (2 / 7 + 2 / 7 * cos(1 / 7 * Pi)) * (4 * (cos(3 * Pi / 7)) ^ 2) ^ n for n>=0. - _ Richard Choulet _ , Apr 19 2010 ●

▶ [A162746] 1,2,5,14,42,132,427,1402,4629,15290,50412,165816,544253,1783602,5839313,19106766,62504002,204457540,668825279,2188016442,7158417217,23421034442,76632061852,250740203864,820430583305 ⋆ Row sums of Fibonacci - Pascal triangle A162745. ● a(n) = Sum _{ k=0..floor(n / 2) } C(n,2k) * 2 ^ (n - 2k) * F(k + 1). ● a(n) = Sum _{ k=0..n } C(n,k) * 2 ^ (n - k) * F(k / 2 + 1) * (1 + (- 1) ^ k) / 2. ●

▶ [A024175] 1,1,2,5,14,42,132,428,1416,4744,16016,54320,184736,629280,2145600,7319744,24979584,85262464,291057920,993641216,3392317952,11581727232,39541748736,135002491904,460924372992 ⋆ Expansion of g.f. (x ^ 3 - 6 * x ^ 2 + 5 * x - 1) / ((2 * x - 1) * (2 * x ^ 2 - 4 * x + 1)). ● a(n) = (1 / 4) * Sum _{ r=1..7 } sin(r * Pi / 8) ^ 2 * (2 * cos(r * Pi / 8)) ^ (2n), n >= 1. ● a(n) = 6 * a(n - 1) - 10 * a(n - 2) + 4 * a(n - 3), n >= 4. (End) ● a(n) = (1 / 4) * ((2 + sqrt(2)) ^ (n - 1) + (2 - sqrt(2)) ^ (n - 1) + 2 ^ n) for n >= 1. [_ Richard Choulet _ , Apr 19 2010] ●

▶ [A058094] 1,1,2,5,14,42,132,429,1426,4806,16329,55740,190787,654044,2244153,7704047,26455216,90860572,312090478,1072034764,3682565575,12650266243,43456340025,149282561256,512821712570 ⋆ Number of 321 - hexagon - avoiding permutations in S _ n, i.e., permutations of 1..n with no submatrix equivalent to 321, 56781234, 46781235, 56718234 or 46718235. ● a(n + 1) = 6a(n) - 11a(n - 1) + 9a(n - 2) - 4a(n - 3) - 4a(n - 4) + a(n - 5) for n >= 5. ●

▶ [A080938] 1,1,2,5,14,42,132,429,1429,4846,16645,57686,201158,704420,2473785,8704089,30664890,108126325,381478030,1346396146,4753200932,16783118309,59266297613,209302921830,739203970773 ⋆ Number of Catalan paths (nonnegative, starting and ending at 0, step +- 1) of 2 * n steps with all values less than or equal to 7. ● a(n) = 7 * a(n - 1) - 15 * a(n - 2) + 10 * a(n - 3) - a(n - 4). - _ Herbert Kociemba _ , Jun 13 2004 ●

▶ [A033191] 1,1,2,5,14,42,132,429,1430,4861,16778,58598,206516,732825,2613834,9358677,33602822,120902914,435668420,1571649221,5674201118,20497829133,74079051906,267803779710,968355724724 ⋆ Binomial transform of [1, 0, 1, 1, 3, 6, 15, 36, 91, 231, 595, ...], which is essentially binomial(Fibonacci(k) + 1, 2). ● a(n) = (1 / 5) * Sum _{ r=1..9 } sin(r * Pi / 10) ^ 2 * (2 * cos(r * Pi / 10)) ^ (2n), n >= 1; ● a(n) = 8 * a(n - 1) - 21 * a(n - 2) + 20 * a(n - 3) - 5 * a(n - 4), n >= 5. (End) ●

► [A120588] 1,1,1,2,5,14,42,132,429,1430,4862,16796,58786,208012,742900,2674440,9694845,35357670,129644790,477638700,1767263190,6564120420,24466267020,91482563640,343059613650 ⋆ G.f. is 1 + x * c(x), where c(x) is the g.f. of the Catalan numbers (A000108). ● a(n) = Sum _{ k=1..n - 1 } a(k) * a(n - k) if n >1. - _ Michael Somos _ , Jul 23 2011 ●

► [A000108] 1,1,2,5,14,42,132,429,1430,4862,16796,58786,208012,742900,2674440,9694845,35357670,129644790,477638700,1767263190,6564120420,24466267020,91482563640,343059613650,1289904147324 ⋆ Catalan numbers: C(n) = binomial(2n,n) / (n + 1) = (2n)! / (n!(n + 1)!). ● a(n) = Product _{ k=2..n } (1 + n / k). ● a(n + 1) = Sum _{ i } binomial(n, 2 * i) * 2 ^ (n - 2 * i) * a(i). - Touchard ● a(n) = polygorial(n, 6) / polygorial(n, 3). - Daniel Dockery (peritus(AT)gmail.com), Jun 24 2003 ● a(n + 1) = (1 / (n + 1)) * Sum _{ k=0..n } a(n - k) * binomial(2k + 1, k + 1). - _ Philippe Deléham _ , Jan 24 2004 ● a(n) = Sum _{ k=0..n } (- 1) ^ k * 2 ^ (n - k) * binomial(n, k) * binomial(k, floor(k / 2)). - _ Paul Barry _ , Jan 27 2005 ● a(n) = a(n - 1) * (4 - 6 / (n + 1)). a(n) = 2a(n - 1) * (8a(n - 2) + a(n - 1)) / (10a(n - 2) - a(n - 1)). - _ Franklin T. Adams - Watters _ , Feb 08 2006 ●

► [A126567] 1,2,5,14,42,132,430,1444,4981,17594,63441,232806,866870,3266460,12426210,47629020,183638729,711285170,2764753405,10775740030,42086252770,164635420788,644811687734,2527808259668,9916569410301 ⋆ Sequence generated from the E6 Cartan matrix. ● a(n) = (3 ^ n + 1) / 4 + ((3 + sqrt(3)) * ((2 - sqrt(2 - sqrt(3))) ^ n + (2 + sqrt(2 - sqrt(3))) ^ n) + (3 - sqrt(3)) * ((2 - sqrt(2 + sqrt(3))) ^ n + (2 + sqrt(2 + sqrt(3))) ^ n)) / 24. - _ Vaclav Kotesovec _ , Jan 30 2023 ●

► [A126569] 1,2,5,14,42,132,430,1444,4981,17594,63442,232828,867146,3269060,12446684,47771496,184544427,716658870,2794956099,10938266562,42930256917,168890693650,665739119129,2628578437646,10393091551794 ⋆ Top - left "head" entry of the n - th power of the E8 Cartan matrix. ● a(n) = leftmost term in M ^ n * [1,0,0,0,0,0,0,0], where M = the 8x8 matrix [2, - 1,0,0,0,0,0,0; - 1,2, - 1,0,0, 0,0,0; 0, - 1,2, - 1,0,0,0, - 1; 0,0, - 1,2, - 1,0,0,0; 0,0,0, - 1,2, - 1,0,0; 0,0,0,0, - 1,2, - 1,0; 0,0,0,0,0, - 1,2,0; 0,0, - 1,0,0,0,0,2]. ● a(n) = 16 * a(n - 1) - 105 * a(n - 2) + 364 * a(n - 3) - 714 * a(n - 4) + 784 * a(n - 5) - 440 * a(n - 6) + 96 * a(n - 7) - a(n - 8). - _ R. J. Mathar _ , May 08 2009 [Corrected by _ Georg Fischer _ , Mar 12 2020] ●

► [A162748] 1,2,5,14,42,132,430,1444,4984,17648,64024,237712,902416,3499680,13853424,55931168,230142848,964460288,4113656704,17846729984,78708574976,352678567424,1604739694848,7411167960576,34723660917760 ⋆ Row sums of factorial - Pascal matrix A162747. ● a(n)=sum { k=0..floor(n / 2), C(n,2k) * 2 ^ (n - 2k) * F(k + 1) } =sum { k=0..n, C(n,k) * 2 ^ (n - k) * (k / 2)! * (1 + (- 1) ^ k) / 2 } . ●

► [A308329] 1,1,2,5,14,42,133,442,1534,5525,20502,77826,300357,1172770,4616054,18267797,72556958,288881562,1152001669,4598779210,18370959022,73420590101,293516780262,1173633626610,4693399603269 ⋆ Even moments of the trace of elements of the binary icosahedral group. ● a(n) = 0 ^ n / 4 + (phi ^{ 2n } + phi ^{- 2n }) / 5 + 1 / 3 + 4 ^ n / 60. ● a(n) = 8 * a(n - 1) - 20 * a(n - 2) + 17 * a(n - 3) - 4 * a(n - 4) for n>4. ● a(n) = (20 + 4 ^ n + 3 * 2 ^ (2 - n) * ((3 - sqrt(5)) ^ n + (3 + sqrt(5)) ^ n)) / 60 for n>0. ●

► [A366025] 1,1,2,5,14,43,139,465,1595,5577,19804,71228,258946,950030,3513050,13079920,48993149,184490361,698020080,2652192675,10115878915,38715267645,148655862210,572412768275,2209969761924 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 - x) / (1 + x ^ 5)). ● a(n) = Sum _{ k=0..floor(n / 5) } binomial(n - 4 * k,k) * binomial(2 * n - 5 * k + 1,n - 4 * k) / (2 * n - 5 * k + 1) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 5) } binomial(n + 1,k) * binomial(2 * n - 5 * k,n - 5 * k). ●

► [A366042] 1,1,2,5,14,43,139,465,1595,5577,19805,71240,259037,950590,3516110,13095440,49068051,184839543,699607625,2659276675,10147039881,38853068780,149240187330,574913637375,2220609902199 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 - x) * (1 - x ^ 5)). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 5) } binomial(n + k,n) * binomial(2 * n - 5 * k,n). ●

► [A276989] 1,1,2,5,14,43,140,474,1650,5863,21170,77441,286372,1068790,4020704,15230470,58044354,222401745,856235030,3310615055,12849946406,50051007940,195571906140,766413504375,3011469930300 ⋆ Reversion of x - x ^ 2 - x ^ 6. ● a(n) = (Sum _{ j=0..(n - 1) / 2 } C(n - 1 - 4 * j,j) * C(2 * n - 4 * j - 2,n - 1)) / n. ●

► [A123020] 1,1,2,5,14,43,142,493,1766,6443,23750,88045,327406,1219531,4546622,16958765,63272054,236096683,881049142,3287968813,12270563966,45793762763,170903438510,637817894125,2380363943686 ⋆ Expansion of (1 - 5 * x + 5 * x ^ 2) / ((1 - 2 * x) * (1 - 4 * x + x ^ 2)). ● a(n) = ((2 + sqrt(3)) / 6) * (2 - sqrt(3)) ^ n + ((2 - sqrt(3)) / 6) * (2 + sqrt(3)) ^ n + 2 ^ n / 3. (End) ● a(n) = (1 / 3) * (2 ^ n - ChebyshevT(n + 1, 2) + 4 * ChebyshevT(n, 2)). - _ G. C. Greubel _ , Jul 11 2021 ●

► [A005317] 1,2,5,14,43,142,494,1780,6563,24566,92890,353740,1354126,5204396,20066492,77575144,300572963,1166868646,4537698722,17672894044,68923788698,269129985796,1052051579012,4116719558104,16123810230158 ⋆ a(n) = (2 ^ n + C(2 * n,n)) / 2. ● a(n) = Sum _{ k=0..floor(n / 2) } (- 1) ^ k * C(2 * n, n - 2 * k), n > 0. - _ Mircea Merca _ , Jun 20 2011 ● a(n) = Sum _{ r=0..n } k * (k + 1) / 2 where k=C(n,r). - _ J. M. Bergot _ , Sep 04 2013 ●

► [A369158] 1,2,5,14,43,142,495,1794,6686,25436,98311,384826,1522283,6075838,24437937,98956270,403080170,1650502292,6790018182,28050896964,116322826479,484029536374,2020386475025,8457397801150,35495812337114 ⋆ Expansion of (1 / x) * Series _ Reversion(x / ((1 + x) ^ 2 + x ^ 4)). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 4) } binomial(n + 1,k) * binomial(2 * n - 2 * k + 2, n - 4 * k). ●

► [A110489] 1,2,5,14,43,142,497,1828,7037,28326,119361,527748,2454929,12041410,62354641,340840118,1963757863,11896370734,75549183725,501393978466,3467199478543,24916100775758,185646100106929,1431332539961350 ⋆ Row sums of a triangle based on the Catalan numbers. ● a(n) = Sum _{ k=0..n } Sum _{ j =0..(n - k) } 2 * (j + 1) * (k - 1) ^ j * C(2 * (n - k) + 1, n - k - j) / (n - k + j + 2). ●

► [A005425] 1,2,5,14,43,142,499,1850,7193,29186,123109,538078,2430355,11317646,54229907,266906858,1347262321,6965034370,36833528197,199037675054,1097912385851,6176578272782,35409316648435,206703355298074,1227820993510153 ⋆ a(n) = 2 * a(n - 1) + (n - 1) * a(n - 2). ● a(n) = (- i / sqrt(2)) ^ n * H(n, i * sqrt(2)), where H(n, x) is the n - th Hermite polynomial and i = sqrt(- 1). - _ Emeric Deutsch _ , Nov 24 2004 ● a(n) = Sum _{ k=0..floor(n / 2) } 2 ^{ n - 3 * k }* n! / ((n - 2 * k)! * k!). - Huajun Huang (hua _ jun(AT)hotmail.com), Oct 10 2005 ● a(n) = (1 / sqrt(2 * Pi)) * Integral _{ x= - infinity..infinity } exp(- x ^ 2 / 2) * (x + 2) ^ n. - _ Groux Roland _ , Mar 14 2011 ● a(n) = 2 ^ (n / 2) * exp(- i * n * Pi / 2) * KummerU(- n / 2, 1 / 2, - 2). - _ Peter Luschny _ , May 30 2021 ●

► [A366099] 1,2,5,14,43,143,507,1885,7247,28523,114190,463179,1898892,7855615,32754687,137520639,580920600,2467305352,10530055735,45135757683,194224957674,838729701308,3633559928326,15787558766909,68780335280091 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 + x - x ^ 4) / (1 + x) ^ 3). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 4) } binomial(n + k,k) * binomial(2 * n - k + 2,n - 4 * k). ●

► [A249562] 1,1,2,5,14,43,143,509,1921,7631,31725,137412,617822,2874819,13809305,68331089,347657464,1815839759,9722708061,53301771604,298854490602,1712023130016,10011533550216,59714205975048,363008132101658 ⋆ Number of length n permutations avoiding (123, { 2 } , {}) and (123, {} , { 1 }). ● a(n,k,i,l) = aup(n,k,i,l) + adown(n,k,i,l) + abar(n,k,i,l) ● a(n) = sum(sum(sum(a(n,k, j,m) for m in [0..k]) for j in [1..k]) for k in [1..n]) ●

► [A098569] 1,2,5,14,43,143,510,1936,7775,32869,145665,674338,3251208,16282580,84512702,453697993,2514668492,14367066833,84489482201,510760424832,3170267071640,20182121448815,131642848217536,878999194493046 ⋆ Row sums of the triangle of triangular binomial coefficients given by A098568. ● a(n) = Sum _{ k=0..n } C((k + 1) * (k + 2) / 2 + n - k - 1, n - k). ●

► [A047970] 1,2,5,14,43,144,523,2048,8597,38486,182905,919146,4866871,27068420,157693007,959873708,6091057009,40213034874,275699950381,1959625294310,14418124498211,109655727901592,860946822538675,6969830450679864,58114638923638573 ⋆ Antidiagonal sums of nexus numbers (A047969). ● a(n) = Sum _{ m = 1..n + 1 } Sum _{ i = 0..m - 1 } binomial(m,i) * (n - m + 1) ^ i. ● a(n) = 1 + Sum _{ i = 0..n } i * (i + 1) ^ (n - i). (End) ●

► [A360592] 1,1,2,5,14,44,149,543,2096,8539,36444,162380,752181,3612037,17933038,91843329,484280386,2624400428,14595111277,83178971707,485218783724,2893881790823,17628815344600,109585578277012,694575012732989 ⋆ G.f.: Sum _{ k>=0 } (1 + k * x) ^ k * x ^ k. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n - k,k) * (n - k) ^ k. ●

► [A257273] 2,5,14,44,152,560,2144,8384,33152,131840,525824,2100224,8394752,33566720,134242304,536920064,2147581952,8590131200,34360131584,137439739904,549757386752,2199026401280,8796099313664,35184384671744,140737513521152 ⋆ a(n) = 2 ^ (n - 1) * (2 ^ n + 3). ● a(n) = 6 * a(n - 1) - 8 * a(n - 2). - _ Colin Barker _ , Apr 27 2015 ●

► [A204064] 1,1,2,5,14,44,152,572,2324,10124,47012,231572,1204964,6599444,37924292,228033332,1431128804,9354072404,63548071172,447923400692,3270361265444,24696229801364,192625876675652,1549890430643252,12849460733123684 ⋆ G.f.: Sum _{ n>=0 } x ^ n * Product _{ k=1..n } (k + n * x) / (1 + k * x + n * x ^ 2). ● a(n) = (1 / 2) * Sum _{ k=0..floor((n + 1) / 2) } Sum _{ i=0..k } (- 1) ^ i * C(k,i) * (k - i + 1) ^ (n - k + 1) for n>1. (See Paul Barry's formula in A105795). - _ Paul D. Hanna _ , Jul 13 2014 ●

► [A368636] 1,1,2,5,14,44,155,607,2617,12306,62587,341790,1991916,12324031,80587935,554826429,4008364544,30299290911,239019427636,1963239741712,16755637216417,148317595764043,1359380603278377,12880841117125364,126007744452786277 ⋆ Number of modified ascent sequences of length n avoiding the pattern 221. ● a(n) = Sum _{ k=1..n } Sum _{ i=1..k } S2(k - 1,i - 1) * binomial(n - 1 - k + i,i - 1) for n >= 1, a(0)=1, where S2(n,i) are the Stirling numbers of the second kind. ●

► [A101226] 0,2,5,14,44,165,725,3607,19624,115127,716177,4675144,31743253 ⋆ Numbers formed by the fourth nesting of pi(10 ^ n). ● a(n) = pi(pi(pi(pi(10 ^ n)))) where pi(x) is the number of primes LE x. ●

► [A290615] 1,2,5,14,45,164,661,2906,13829,70736,386397,2242118,13759933,88975628,604202693,4296191090,31904681877,246886692680,1986631886029,16592212576862,143589971363981,1285605080403332,11891649654471285,113491862722958474,1116236691139398565 ⋆ Number of maximal independent vertex sets (and minimal vertex covers) in the n - triangular honeycomb bishop graph. ● a(n) = Sum _{ m=0..n } Sum _{ k=0..min(m,n - m) } k! * S(m,k) * S(n + 1 - m,k + 1), where S(,) are Stirling numbers of second kind. - _ Max Alekseyev _ , Oct 14 2021 ●

► [A285201] 1,2,5,14,45,174,825,4738,32137,251338,2224157,21952358,238962581,2843085270,36696680241,510647009850,7619901954001,121367981060434,2055085325869813,36861997532438654,698193329457246653,13924819967953406654,291683979376372766697,6402385486361598687666,146948520147021794869977 ⋆ Stage at which Ken Knowlton's elevator (version 1) reaches floor n for the first time. ● a(n) = 2 - n + 2 * Sum _{ k=0..n - 2 } Sum _{ j=0..k } k! / j!. ●

► [A232622] 1,2,5,14,46,156,561,2037,7525,27874,103741,386386,1440946,5374772,20054945,74835209,279273961,1042224066,3889577781,14515950582,541740583 90,202179773644,754544416081,2815995989821,10509437228941 ⋆ Number of incongruent domino tilings of the 3 X (2n) board. ● a(n) = 5a(n - 1) - a(n - 2) - 19a(n - 3) + 19a(n - 4) + a(n - 5) - 5a(n - 6) + a(n - 7) for n > 6. - Conjectured by _ Jean - François Alcover _ , Jan 21 2019 ●

► [A001680] 1,1,2,5,14,46,166,652,2780,12644,61136,312676,1680592,9467680,55704104,341185496,2170853456,14314313872,97620050080,687418278544,4989946902176,37286121988256,286432845428192,2259405263572480,18280749571449664 ⋆ The partition function G(n,3). ● a(n) = n! * sum(k=1..n, 1 / k! * sum(j=0..k, C(k,j) * C(j,n - 3 * k + 2 * j) * 2 ^ (- n + 2 * k - j) * 3 ^ (j - k))). [_ Vladimir Kruchinin _ , Jan 25 2011] ● a(n) = G(n,3) with G(0,i) = 1, G(n,i) = 0 for n>0 and i<1, otherwise G(n,i) = Sum _{ j=0..floor(n / i) } G(n - i * j,i - 1) * n! / (i! ^ j * (n - i * j)! * j!). - _ Alois P. Heinz _ , Apr 20 2012 ●

► [A107268] 1,1,2,5,14,46,173,733,3436,17572,96997,573268,3604687,23990345,168254444,1238889493,9546211068,76761000444,642524333589,5586361188966,50351455288661,469653513479395,4526242614854118,45005754238016688 ★ Sums of antidiagonals of A107267. ● a(n) = Sum _{ k=0..n } Sum _{ j=0..n - k } 1 / (j + 1) C(j + 1,n - k - j + 1) C(n - k,j) k ^ j. ● a(n) = Sum _{ k=0..n } Sum _{ j=0..k } 1 / (j + 1) C(j + 1,k - j + 1) C(k,j) (n - k) ^ j. ●

► [A343664] 1,1,2,5,14,47,173,702,3125,14910,76495,418035,2418397,14791597,9509361 2,641094695,4521228732,33250447919,254585084539,2024995604762,16702070759557,142642458681486,1259387604241013,11479967000116911,107910143688962037 ★ Number of partitions of an n - set without blocks of size 4. ● a(n) = n ! * Sum _{ k=0..floor(n / 4) } (- 1) ^ k * Bell(n - 4 * k) / ((n - 4 * k)! * k! * (4!) ^ k). ●

► [A096402] 1,1,1,2,5,14,47,182,786,3774,19974,115236,720038,4846512,34950929,268836776,2197143724,19013216102,173672030192,1669863067916,16858620684522,178306120148144,1971584973897417,22748265125187632 ★ n! times the volume of the polytope x _ i >= 0 for 1 <= i <= n and x _ i + x _{ i + 1 } + x _{ i + 2 } <= 1 for 1 <= i <= n - 2. ● a(n) = n! * g(0, 1, n + 1) where g(a, b, n) = f(a, b, n) / a. - _ Michael Somos _ , Feb 21 2012 ●

► [A143918] 1,2,5,14,47,194,977,5870,41099,328802,2959229,29592302,325515335,3906184034,50780392457,710925494414,10663882416227,170622118659650,2900576017214069,52210368309853262,991996997887211999,19839939957744240002,416638739112629040065 ★ G.f. A(x) satisfies: A(x) = 1 / (1 - x) ^ 2 + x ^ 2 * A'(x). ● a(n) = 3 * floor(e * (n - 1)!) - 1, n>1. - _ Gary Detlefs _ , Jun 10 2010 ●

► [A006390] 1,1,2,5,14,49,240,1259,7570,47996,319518,2199295,15571610,112773478,832809504,6253673323,47650870538,367784975116,2871331929096,22647192990256,180277915464664,1447060793168493,11703567787559680,95312765368320637,781151020141584190 ★ Number of unrooted loopless planar n - edge maps. ● a(n) = (1 / (2n)) * [2(4n + 1) * binomial(4n, n) / ((n + 1) * (3n + 1) * (3n + 2)) + Sum _{ 0<k<n, k|n } phi(n / k) * binomial(4k, k) + q(n)] where phi is the Euler function (A000010), q(n)=binomial(2n, (n - 2) / 2) if n is even and q(n)=2n * binomial(2n, (n - 1) / 2) / (n + 1) if n is odd. ●

► [A000679] 1,1,2,5,14,51,267,2328,56092,10494213,49487367289 ★ Number of groups of order 2 ^ n. ● a(n) = 2 ^ ((2 / 27)n ^ 3 + O(n ^ (8 / 3))). ●

► [A052649] 2,5,14,54,264,1560,10800,85680,766080,7620480,83462400,997920000,12933043200,180583603200,2702527027200,43153254144000,732297646080000,13160434839552000,249692574523392000 ★ E.g.f. (2 + x - x ^ 2) / (1 - x) ^ 2. ● a(n) = (3 + 2 * n) * n!. ● a(0) = 2; for n >= 1, a(n) = 2 * (n + 1)! + n! - _ Antti Karttunen _ , Sep 24 2016 ●

► [A174795] 1,2,5,14,56,202,715,3244,12945,49742,238048,996158,3991995,19676358,84649176,347993910,1747681160,7656026268,32018897274,162900330572,722787262419,3060338457400,15718332812096,70407433197686 ★ Number of admissible sequences of order j; related to 5x + 1 problem ● a(1)=1 and a(k + 1) = Sum _{ m=1..k } (- 1) ^ (m - 1) * binomial(floor((k - m + 1) * (log(5) / log(2))) + m - 1, m) * a(k - m + 1) for k >= 1. - _ Vladimir M. Zarubin _ , Sep 25 2015 ●

► [A110043] 1,2,5,14,57,284,1705,11934,95473,859256,8592561,94518170,1134218041,14744834532,206427683449,3096415251734,49542644027745,842224948471664,15160049072489953,288040932377309106,5760818647546182121,120977191598469824540,2661498215166336139881 ★ a(0) = 1, a(1) = 2; for n>1, a(n) = n * a(n - 1) + (- 1) ^ n. ● a(n) = (n - 1) * (a(n - 1) + a(n - 2)), n>2. - _ Gary Detlefs _ , Apr 11 2010 ● a(n) = 2 * n! + floor((n! + 1) / e) for n>0. - _ Gary Detlefs _ , Apr 11 2010 ●

► [A006847] 1,1,2,5,14,58,238,1516,9020,79892,635984,7127764,70757968,949723600,11260506056,175400319992,2416123951952,42776273847184,671238787739920,13302324582892048,234257439470319776,5135062189842955616,100292619307729965152 ★ Number of extreme points of the set of n X n symmetric doubly - stochastic matrices. ● a(n) = n! * sum((if r=0 then 1 else sum((1 / 2) ^ k * C(k,r - k) / k!, k=1..r)) * b(n - r), r=0..n), b(n)=if n=0 then 1 else 1 / 2 + sum(2 ^ m * C(n - 1,m - 1) * (- 1) ^ (m - 1) * ((1 / 4) ^ m * sum(sum(C(j,m - 1 - 3 * k + 2 * j) * C(k,j) * 3 ^ (3 * k - m + 1 - j) * 2 ^ (m - 1 - 5 * k + 3 * j) * (- 1) ^ (m - 1 - 3 * k), j=0..k) * C(k + m - 1,m - 1), k=1..m - 1)) / m, m=2..n). - _ Vladimir Kruchinin _ , Sep 09 2010 ●

► [A104585] 0,2,5,15,22,40,51,77,92,126,145,187,210,260,287,345,376,442,477,551,590,672,715,805,852 ★ a(n) = (1 / 2) * (3 * n ^ 2 - n * (- 1) ^ n). ● a(n) = (1 / 2) * (3 * n ^ 2 - n * (- 1) ^ n). - _ Ralf Stephan _ , Nov 13 2010 ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). - _ Vincenzo Librandi _ , Apr 04 2013 ●

► [A290527] 1,2,5,15,24,63,112,255,480,1023,1984,4095,8064,16383,32512,65535,130560,262143,523264,1048575,2095104,4194303,8384512,16777215,33546240 ★ Decimal representation of the diagonal from the corner to the origin of the n - th stage of growth of the two - dimensional cellular automaton defined by "Rule 833", based on the 5 - celled von Neumann neighborhood. ● a(n) = 2 ^ (n / 2 + 1) * (2 ^ (n / 2) - 1) for n>2 and even. ● a(n) = 2 ^ (n + 1) - 1 for n>2 and odd. ● a(n) = 2 * a(n - 1) + 3 * a(n - 2) - 6 * a(n - 3) - 2 * a(n - 4) + 4 * a(n - 5) for n>4. ●

► [A290828] 1,2,5,15,28,63,124,255,508,1023,2044,4095,8188,16383,32764,65535,131068,262143,524284,1048575,2097148,4194303,8388604,16777215,33554428 ★ Decimal representation of the diagonal from the corner to the origin of the n - th stage of growth of the two - dimensional cellular automaton defined by "Rule 961", based on the 5 - celled von Neumann neighborhood. ● a(n) = 2 * (2 ^ n - 2) for n>2 and even. ● a(n) = 2 ^ (n + 1) - 1 for n>2 and odd. ● a(n) = 2 * a(n - 1) + a(n - 2) - 2 * a(n - 3) for n>5. ●

► [A290836] 1,2,5,15,28,63,127,255,511,1023,2047,4095,8191,16383,32767,65535,131071,262143,524287,1048575,2097151,4194303,8388607,16777215,33554431 ★ Decimal representation of the diagonal from the corner to the origin of the n - th stage of growth of the two - dimensional cellular automaton defined by "Rule 969", based on the 5 - celled von Neumann neighborhood. ● a(n) = 2 ^ (1 + n) - 1 for n>4. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>6. ●

► [A006451] 0,2,5,15,32,90,189,527,1104,3074,6437,17919,37520,104442,218685,608735,1274592,3547970,7428869,20679087,43298624,120526554,252362877,702480239,1470878640 ★ Numbers k such that k * (k + 1) / 2 + 1 is a square. ● a(n) = 6 * a(n - 2) - a(n - 4) + 2 with a(0)=0, a(1)=2, a(2)=5, a(3)=15. - _ Zak Seidov _ , Apr 15 2008 ● a(n) = 3 * a(n - 2) + 4 * sqrt((a(n - 2) ^ 2 + a(n - 2)) / 2 + 1) + 1 with a(0) = 0, a(1) = 2. - _ Raphie Frank _ , Feb 02 2013 ● a(n) = a(n - 1) + 6 * a(n - 2) - 6 * a(n - 3) - a(n - 4) + a(n - 5); a(0)=0, a(1)=2, a(2)=5, a(3)=15, a(4)=32. - _ Harvey P. Dale _ , Jul 17 2013 ● a(n) = 7 * a(n - 2) - 7 * a(n - 4) + a(n - 6), for n>5. - _ Hermann Stamm - Wilbrandt _ , Aug 26 2014 ●

► [A245961] 0,0,0,0,2,5,15,35,80,171,355,715,1410,2730,5208,9810,18280,33745,61785,112309,202840,364245,650705,1157015,2048532 ★ Number of 4 - cycles in the Lucas cube Lambda(n). ● a(n) = 3 * a(n - 1) - 5 * a(n - 3) + 3 * a(n - 5) + a(n - 6). G.f.: x ^ 4 * (x - 2) / (x ^ 2 + x - 1) ^ 3. - _ Colin Barker _ , Aug 11 2014 ●

► [A258121] 2,5,15,39,102,267,699,1830,4791,12543,32838,85971,225075,589254,1542687,4038807,10573734,27682395,72473451,189737958,496740423,1300483311,3404709510,8913645219,23336226147 ★ Number of vertices of degree n in all Lucas cubes. ● a(n) = F(n - 1) ^ 2 + F(n) ^ 2 + F(n + 1) ^ 2 + F(n + 2) ^ 2 for n > 1, where F(n) is the n - th Fibonacci number (A000045). - _ Amiram Eldar _ , Jan 11 2022 ●

► [A059840] 0,0,2,5,15,39,104,272,714,1869,4895,12815,33552,87840,229970,602069,1576239,4126647,10803704,28284464,74049690,193864605,507544127,1328767775,3478759200 ★ a(n) = F(n) * F(n - 1) if n odd otherwise F(n) * F(n - 1) - 1, where F = Fibonacci numbers A000045. ● a(n) = Sum _{ k=1..n - 2 } F(k) * F(k + 2). - _ Alexander Adamchuk _ , May 17 2007 ● a(n + 2) = (3 * (- 1) ^ (n + 1) - 5 + 2 * Lucas(2 * n + 3)) / 10, n >= 0. - _ Ehren Metcalfe _ , Aug 21 2017 ● a(n) = floor(1 / (Sum _{ k>=n } 1 / Fibonacci(k) ^ 2)) [Ohtsuka and Nakamura]. - _ Michel Marcus _ , Aug 09 2018 ●

► [A190140] 1,2,5,15,41,112,310,855,2356,6497,17915,49395,136196,375532,1035445,2855010,7872061,21705467,59848025,165017700,454999826,1254561427,3459175780,9537912465,26298684991 ★ a(n) = 2 * a(n - 1) + a(n - 2) + 3 * a(n - 3), a(0)=1. ● a(n) = sum(k=1..n, sum(j=0..k, binomial(j,n - 3 * k + 2 * j) * 3 ^ (k - j) * binomial(k,j) * 2 ^ (- n + 3 * k - j))), n>0, a(0)=1. ●

► [A084086] 1,2,5,15,44,125,347,948,2561,6863,18284,48501,128243,338276,890681,2341959,6151580,16145549,42350603,111037332,291023537,762557567,1997697740,5232632805,13704394979 ★ a(n) = Fibonacci(2 * n + 1) + 2 * Fibonacci(2 * n - 1) - 2 ^ n - [n = 0], where [b] is the Iverson bracket of b. ● a(n) = 5 * a(n - 1) - 7 * a(n - 2) + 2 * a(n - 3), for n >= 4. ● a(n) = 3 * ChebyshevU(n, 3 / 2) - 5 * ChebyshevU(n - 1, 3 / 2) - 2 ^ n - [n=0]. ● a(n) = Fibonacci(2 * n + 1) + 2 * Fibonacci(2 * n - 1) - 2 ^ n - [n=0]. (End) ●

► [A292524] 0,1,2,5,15,44,133,398,1194,3582,10747,32240,96720,290159,870478,2611435,7834305,23502914,70508742,211526225,634578675,1903736026,5711208079,17133624236,51400872708 ★ Interpret the values of the Moebius function mu(k) for k = 1 to n as a balanced ternary number. ● a(n) = Sum _{ k = 1..n } mu(k) 3 ^ (n - k). ● a(n) = 3 * a(n - 1) + mu(n) for n > 0. - _ Alois P. Heinz _ , Oct 13 2017 ●

► [A336417] 1,1,2,5,15,44,169,652,3106,15286,89933,532476,3698650,25749335,204947216,1636097441,14693641859,132055603656,1319433514898,13186485900967,144978145009105,1594375302986404,19128405558986057,229508085926717076,2983342885319348522 ★ Number of perfect - power divisors of superprimorials A006939. ● a(n) = 1 + Sum _{ k=2..n } mu(k) * (1 - Product _{ i=1..n } 1 + floor(i / k)). - _ Andrew Howroyd _ , Aug 30 2020 ●

► [A364330] 1,1,2,5,15,45,142,464,1556,5327,18532,65326,232826,837589,3037472,11092143,40753626,150541422,558762382,2082871613,7794301294,29269317708,110263451242,416595676681,1578183767068 ★ G.f. satisfies A(x) = (1 + x ^ 4) * (1 + x * A(x) ^ 2). ● a(n) = Sum _{ k=0..floor(n / 4) } binomial(2 * n - 8 * k + 1,k) * binomial(2 * n - 8 * k + 1,n - 4 * k) / (2 * n - 8 * k + 1). ●

► [A139782] 1,2,5,15,46,139,417,1250,3749,11247,33742,101227,303681,911042,2733125,8199375,24598126,73794379,221383137,664149410,1992448229,5977344687,17932034062,53796102187,161388306561 ★ Binomial transform of A077947. ● a(n)=3a(n - 1) - a(n - 3) + 3a(n - 4). ●

► [A047086] 1,2,5,15,46,143,450,1429,4570,14698,47491,154042,501283,1635835,5351138,17541671,57610988,189521640,624389105,2059824523,6803433916,22495796651,74457478476,246667937610,817866796549 ★ a(n) = T(2 * n + 1, n), array T as in A047080. ● a(n + 4) = ((16 * n ^ 3 + 100 * n ^ 2 + 188 * n + 105) * a(n + 3) - (8 * n ^ 3 + 36 * n ^ 2 + 46 * n + 5) * a(n + 2) + (4 * n ^ 2 + 16 * n + 25) * a(n + 1) - (n - 1) * (2 * n + 5) ^ 2 * a(n)) / ((n + 4) * (2 * n + 3) ^ 2). - _ G. C. Greubel _ , Oct 30 2022 ●

► [A143094] 1,2,5,15,47,145,470 ★ Arises in counting relative Milnor rings in K - theory. ● a(n) = the number of nonisomorphic elementary types K _* (F) / S with |F ^ X / S| = 2 ^ n, if we view the K - structures just as graded rings. ●

► [A365267] 1,1,2,5,15,47,153,513,1763,6177,21981,79224,288611,1061019,3931320,14666135,55041855,207668702,787225265,2996851140,11452198368,43915195973,168930713580,651708006690,2520840672423 ★ G.f. satisfies A(x) = 1 + x * A(x) ^ 2 * (1 + x ^ 3 * A(x)). ● a(n) = Sum _{ k=0..floor(n / 4) } binomial(n - 3 * k,k) * binomial(2 * n - 5 * k + 1,n - 3 * k) / (2 * n - 5 * k + 1). ●

► [A364161] 1,1,2,5,15,47,153,514,1769,6205,22102,79733,290721,1069688,3966739,14810348,55627778,210046102,796864028,3035912900,11610468138,44556451207,171529074168,662238211929,2563524741603 ★ G.f. satisfies A(x) = 1 + x * A(x) ^ 2 / (1 - x ^ 3 * A(x)). ● a(n) = Sum _{ k=0..floor(n / 3) } binomial(n - 2 * k - 1,k) * binomial(2 * n - 5 * k + 1,n - 3 * k) / (2 * n - 5 * k + 1). ●

► [A353028] 0,1,2,5,15,47,156,527,1826,6407,22762,81587,294711,1070973,3912808,14358493,52893647,195498831,724704974,2693397035,10033263089,37452388361,140063288728 ★ Number of subgraphs of the directed square lattice with n vertices and all vertices reachable from the origin. ● a(n) >= 2 * a(n - 1) for n > 0. ●

► [A268407] 1,2,5,15,48,160,548,1914,6785,24335,88109,321521,1181039,4362855,16195747,60379623,225955264,848432824,3195394520,12067450014,45685766306,173350890788,659126407978,2510942564760,9582235262428 ★ Number of North - East lattice paths that do not bounce off the diagonal y = x to the right. ● a(n):= Sum _{ k=0..n } ((k + 1) * fib(k) * binomial(2 * n - k,n - k)) / (n + 1)

+ C(n), where fib(n) - Fibonacci numbers, C(n) - Catalan numbers. - _ Vladimir Kruchinin _ , Feb 27 2016 ●

▶ [A365268] 1,1,2,5,15,48,160,549,1929,6909,25134,92612,344924,1296376,4910656,18728645,71857133,277160183,1074085446,4180057725,16329796959,64014638564,251734985808,992788252700,3925688845948 ⋆ G.f. satisfies A(x) = 1 + x * A(x) ^ 2 * (1 + x ^ 3 * A(x) ^ 2). ● a(n) = Sum _{ k=0..floor(n / 4) } binomial(n - 3 * k,k) * binomial(2 * n - 4 * k + 1,n - 3 * k) / (2 * n - 4 * k + 1). ●

▶ [A366041] 1,1,2,5,15,48,160,549,1930,6919,25200,92976,346757,1305140,4951216,18912245,72675114,280761670,1089800270,4248149795,16623209911,65273370720,257115465600,1015719256200,4023178881540 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 - x) * (1 - x ^ 4)). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 4) } binomial(n + k,n) * binomial(2 * n - 4 * k,n). ●

▶ [A348666] 1,1,2,5,15,49,166,577,2050,7414,27201,100984,378651,1431901,5454718,20912754,80630085,312430832,1216045522,4752132953,18638125275,73340870891,289463959745,1145612705905,4545478673125 ⋆ a(n) is the number of quiddities of 3 - periodic dissections of (n + 2) - gons. ● a(n) = Sum _{ k=0..n / 3 } Sum _{ s=0..k } ((3 * (k - s) + 2) / (n - s + 1)) * binomial(n - 3 * k + s - 2,s) * binomial(2 * n - 3 * k - s - 1,n - 3 * k - 1). ●

▶ [A189176] 1,2,5,15,49,168,594,2145,7865,29172,109174,411502,1560090,5943200,22732740,87253605,335897865,1296447900,5015206350,19439895090,75487384830,293595204240,1143532045500 ⋆ Row sums of the Riordan matrix (1 + x / sqrt(1 - 4 * x),(1 - sqrt(1 - 4 * x)) / 2) (A189175). ● a(n) = Sum _{ k=0..n } binomial(2 * n - k,n - k) * (n ^ 2 + n * k - k ^ 2 - k) / ((2 * n - k) * (2 * n - k - 1)), for n>=2. ● a(n) = Sum _{ k=1..n } (3 - k) * binomial(2 * n - k - 1,n - 1), n>0, a(0)=1. - _ Vladimir Kruchinin _ , Oct 18 2011 ● a(n) is the sum of top row terms in M ^ n, M = an infinite square production matrix as follows, with the Fibonacci sequence as the left border: ●

▶ [A366054] 1,1,2,5,15,49,168,594,2149,7919,29627,112254,429884,1661308,6470678,25375070,100106145,397018815,1582005849,6330533220,25428891084,102497788194,414445390730,1680617637425,6833083703094 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 - x) ^ 2 / (1 - x + x ^ 4)). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 4) } binomial(n + 1,k) * binomial(2 * n - 3 * k,n - 4 * k). ●

▶ [A369631] 1,1,2,5,15,49,168,594,2149,7920,29640,112359,430564,1665197,6491280,25478886,100611695,399421439,1593221090,6382176160,25664184349,103560846454,419215870860,1701907025715,6927658961599 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 / (1 + x ^ 4) - x)). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 4) } binomial(2 * n - 4 * k + 1,k) * binomial(2 * n - 4 * k,n - 4 * k). ●

▶ [A063021] 0,1,1,2,5,15,49,168,594,2150,7931,29718,112814,432957,1677050,6547856,25742454,101819100,404885630,1617725010,6491294600,26147434885,105691660110,428578242900,1742925259725 ⋆ Reversion of y - y ^ 2 - y ^ 5. ● a(n) = sum(j=0..(n - 1) / 3, C(n - 1 - 3 * j,j) * C(2 * n - 3 * j - 2,n - 1)) / n, n>0, a(0)=0. - _ Vladimir Kruchinin _ , May 24 2011 ●

▶ [A364833] 1,1,2,5,15,49,168,595,2160,7997,30083,114660,441840,1718531,6737820,26600784,105659970,421949492,1693120779,6823018035,27602090087,112053680381,456343848121,1863893501065,7633232165286 ⋆ G.f. satisfies A(x) = 1 + x * A(x) ^ 2 / (1 - x ^ 3 * A(x) ^ 3). ● a(n) = Sum _{ k=0..floor(n / 3) } binomial(n - 2 * k - 1,k) * binomial(2 * n - 3 * k + 1,n - 3 * k) / (2 * n - 3 * k + 1). ●

▶ [A001892] 1,2,5,15,49,169,602,2191,8095,30239,113906,431886,1646177,6301715,24210652,93299841,360490592,1396030396,5417028610,21056764914,81978913225,319610939055,1247641114021,4875896455975 ⋆ Number of permutations of (1,...,n) having n - 2 inversions (n>=2). ● a(n) = 2 ^ (2 * n - 3) / sqrt(Pi * n) * Q * (1 + O(n ^{- 1 })), where Q is a digital search tree constant, Q = 0.288788095... (see A048651). - corrected by _ Vaclav Kotesovec _ , Mar 16 2014 ●

▶ [A364588] 1,1,2,5,15,49,170,613,2275,8629,33301,130333,516077,2063685,8321892,33803161,138181521,568031297,2346668400,9737766513,40569611691,1696328275345,711611670532,2994165070045,12632782541053 ⋆ G.f. satisfies A(x) = 1 / (1 - x) + x ^ 2 * A(x) ^ 4. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n + k,3 * k) * binomial(4 * k,k) / (3 * k + 1). ●

▶ [A093129] 1,2,5,15,50,175,625,2250,8125,29375,106250,384375,1390625,5031250,18203125,65859375,238281250,862109375,3119140625,11285156250,40830078125,147724609375,534472656250,1933740234375,6996337890625 ⋆ Binomial transform of Fibonacci(2n - 1) (A001519). ● a(n) = (5 - sqrt(5)) * ((5 + sqrt(5)) / 2) ^ n / 10 + (5 + sqrt(5)) * ((5 - sqrt(5)) / 2) ^ n / 10. ● a(2 * n) = 5 ^ n * Fibonacci(2 * n - 1), a(2 * n + 1) = 5 ^ n * Lucas(2 * n). - _ G. C. Greubel _ , Dec 27 2019 ●

▶ [A020876] 2,5,15,50,175,625,2250,8125,29375,106250,384375,1390625,5031250,18203125,65859375,238281250,862109375,3119140625,11285156250,40830078125,147724609375,534472656250,1933740234375,6996337890625,25312988281250 ⋆ a(n) = ((5 + sqrt(5)) / 2) ^ n + ((5 - sqrt(5)) / 2) ^ n. ● a(n)= 5 * a(n - 1) - 5 * a(n - 2). ● a((2 * m + 1) * k) / a(k) = Sum _{ i=0..m - 1 } (- 1) ^ (i * (k + 1)) * a(2 * (m - i) * k) + 5 ^ (m * k). ● a(m + r) * a(n + s) + a(m + s) * a(n + r) = 2 * a(m + n + r + s) + 5 ^ (n + s) * a(m - n) * a(r - s). ● a(n) ^ 2 - a(n + 1) * a(n - 1) = - 5 ^ n. ● a(m + n) + 5 ^ (n) * a(m - n) = a(m) * a(n). ●

▶ [A024718] 1,2,5,15,50,176,638,2354,8789,33099,125477,478193,1830271,7030571,27088871,104647631,405187826,1571990936,6109558586,23782190486,92705454896,361834392116,1413883873976,5530599237776,21654401079326 ⋆ a(n) = (1 / 2) * (1 + Sum _{ k=0..n } binomial(2 * k, k)). ● a(n) = ((1 - I / sqrt(3)) / 2 - binomial(2 * n + 1, n) * hypergeom([n + 3 / 2, 1], [n + 2], 4)). - _ Peter Luschny _ , May 18 2018 ●

▶ [A367317] 1,1,2,5,15,50,177,649,2436,9307,36080,141610,561732,2248709,9073415,36863549,150676275,619169360,2556446520,10600160707,44121921044,184291848864,772204252280,3244999395406,13672564904027 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 - x - x ^ 4 / (1 - x))). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 4) } binomial(n + k,k) * binomial(2 * n - 2 * k,n - 4 * k). ●

▶ [A196836] 2,5,15,50,177,650,2445,9350,36177,141170,554325,2186750,8656377,34355690,136617405,544061750,2169039777,8654570210,34553579685,138020346350,551499730377,2204254480730,8811785649165,35231447872550,140878711512177 ⋆ (1 ^ n + 2 ^ n + 3 ^ n + 4 ^ n) / 2. ● a(n) = (1 ^ n + 2 ^ n + 3 ^ n + 4 ^ n) / 2, n>=0. ●

▶ [A365247] 1,1,2,5,15,50,177,650,2449,9412,36761,145518,582556,2354557,9594898,39378259,162619316,675258452,2817643240,11808576745,49683880754,2097865590004,8886768601 91,3775654643360,16084818268474 ⋆ G.f. satisfies A(x) = 1 + x * A(x) ^ 2 / (1 - x ^ 3 * A(x) ^ 4). ● a(n) = Sum _{ k=0..floor(n / 3) } binomial(n - 2 * k - 1,k) * binomial(2 * n - 2 * k + 1,n - 3 * k) / (2 * n - 2 * k + 1). ●

▶ [A369212] 1,2,5,15,50,177,652,2473,9594,37892,151846,615859,2523217,10427471,43415259,181941198,766841846,3248517320,13823977350,59067577266,253315964424,1089998388418,4704475230340,20361365646315,88351705071583 ⋆ Expansion of (1 / x) * Series _ Reversion(x / ((1 + x) ^ 2 + x ^ 3)). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 3) } binomial(n + 1,k) * binomial(2 * n - 2 * k + 2,n - 3 * k). ●

▶ [A007853] 1,2,5,15,50,178,663,2553,10086,40669,166752,693331,2917088,12398545,53164201,229729439,999460624,4374546305,19250233408,85120272755,378021050306,1685406494673,7541226435054,33852474532769,152415463629568 ⋆ Number of maximal antichains in rooted plane trees on n nodes. ● a(n) = (1 / (n + 1)) * C(2 * n,n) + Sum _{ k=0..n - 1 } ((k + 2) / (n + 1)) * C(2 * n - k - 1, n - k - 1) * Sum _{ i=0..floor(k / 2) } C(2 * i,i) * C(k + i,3 * i) / (i + 1). - _ Vladimir Kruchinin _ , Apr 05 2019 ●

▶ [A245311] 1,1,2,5,15,50,182,707,2903,12479,55844,258860,1238588,6099054,30836886,159770751,846927495,4586883023,25351486346,142843162421,819783142271,4788268962584,28444114318056,171737405798836,1053285775758916 ⋆ G.f. satisfies: A(x) = 1 + x * A(x) + x ^ 2 * A(x) ^ 2 + x ^ 3 * A(x) * A'(x). ● a(n) = [x ^ n] G(x) ^ (n + 1) / (n + 1) for n>=0 where G(x) is the g.f. of A245310. ● a(n) = [x ^ (n + 2)] G(x) ^ (n + 1) / (n + 1) ^ 2 for n>=0 where G(x) is the g.f. of A245310. ●

▶ [A124303] 1,1,2,5,15,51,187,715,2795,11051,43947,175275,700075,2798251,11188907,44747435,178973355,715860651,2863377067,11453377195,45813246635,183252462251,733008800427,2932033104555,11728128223915 ⋆ Number of set partitions of length <= 4; sum of first 4 columns of triangle of Stirling numbers of 2nd kind; dimension of space of symmetric polynomials in 4 noncommuting variables. ● a(n) = (8 + 3 * 2 ^ (1 + n) + 4 ^ n) / 24 for n>0. - _ Colin Barker _ , Nov 03 2017 ● a(n) = Sum _{ k=0..4 } Stirling2(n,k). - _ Robert A. Russell _ , Mar 29 2018 ●

▶ [A007581] 1,2,5,15,51,187,715,2795,11051,43947,175275,700075,2798251,11188907,44747435,178973355,715860651,2863377067,11453377195,45813246635,183252462251,733008800427,2932033104555,11728128223915,46912504507051 ⋆ a(n) = (2 ^ n + 1) * (2 ^ n + 2) / 6. ● a(n) = (3 * 2 ^ (n - 1) + 2 ^ (2 * n - 1) + 1) / 3. ● a(n) = Sum _{ k=1..4 } Stirling2(n, k). - Winston Yang (winston(AT)cs.wisc.edu), Aug 23 2000 ● a(n) is the top entry of the vector M ^ n * [1,1,1,1,0,0,0,...], where M is an infinite bidiagonal matrix with M(r,r)=r, r >= 1, as the main diagonal, M(r,r + 1)=1, and the rest zeros. ([1,1,1,...] is a column vector and transposing gives the same in terms of a leftmost column term.) - _ Gary W. Adamson _ , Jun 24 2011 ● a(0)=1, a(1)=2, a(2)=5, a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3). - _ Harvey P. Dale _ , Jul 24 2011 ●

▶ [A367414] 1,1,2,5,15,51,187,715,2800,11138,44846,182476,749566,3105575,12966165,54505650,230508612,980045835,4186600220,17960356014,77343359518,334217730014,1448771849516,6298222363395,27452466169243 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 - x - x ^ 4 / (1 - x) ^ 2)). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 4) } binomial(n + k,k) * binomial(2 * n - k,n - 4 * k). ●

▶ [A369481] 1,2,5,15,51,187,718,2844,11530,47612,199576,847013,3632468,15717041,68527255,300780438,1327939406,5893299392,26275243626,117635107818,528631769323,2383660351991,10781500113896,48903885040638,222400899237943 ⋆ Expansion of (1 / x) * Series _ Reversion(x / ((1 + x) * (1 + x + x ^ 3))). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 3) } binomial(n + 1,k) * binomial(2 * n - k + 2,n - 3 * k). ●

▶ [A366096] 1,2,5,15,51,187,719,2858,11650,48438,204630,875867,3790172,16554305,72883035,323109570,1441152303,6462494515,29118219850,131761291852,598529262016,2728346941040,12476533435028,57220220120080,263125059775970 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 + x - x ^ 3) / (1 + x) ^ 3). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 3) } binomial(n + k,k) * binomial(2 * n - k + 2,n - 3 * k). ●

▶ [A181768] 1,1,2,5,15,51,188,731,2950,12235,51822,223191,974427,4302645,19181100,86211885,390248055,1777495635,8140539950,37463689775,173164232965,803539474345,3741930523740,17481709707825,81912506777200 ⋆ G.f.: (1 / 2) * (3 - sqrt((1 - 5 * x) / (1 - x))). ● a(n) = JacobiP(n - 1,1, - n - 1 / 2,9) / n for n>0. - _ Peter Luschny _ , Sep 23 2014 ● a(n) = 1 + Sum _{ k=1..n - 1 } a(k) * a(n - k). - _ Ilya Gutkovskiy _ , Jul 01 2020 ●

▶ [A007317] 1,2,5,15,51,188,731,2950,12235,51822,223191,974427,4302645,19181100,86211885,390248055,1777495635,8140539950,37463689775,173164232965,803539474345,3741930523740,17481709707825,81912506777200,384847173838501 ⋆ Binomial transform of Catalan numbers. ● a(n) = hypergeom([1 / 2, - n], [2], - 4), n=0, 1, 2...; Integral representation as n - th moment of a positive function on a finite interval of the positive half - axis: a(n)=int(x ^ n * sqrt((5 - x) / (x - 1)) / (2 * Pi), x=1..5), n=0, 1, 2... This representation is unique. - _ Karol A. Penson _ , Sep 24 2001 ● a(1)=1, a(n)=1 + sum(i=1, n - 1, a(i) * a(n - i)). - _ Benoit Cloitre _ , Mar 16 2004 ● a(n) = sum { k=0..n, (- 1) ^ k * 3 ^ (n - k) * binomial(n, k) * binomial(k, floor(k / 2)) } [offset 0]. - _ Paul Barry _ , Jan 27 2005 ● a(n) = upper left term in M ^ (n - 1), M = an infinite square production matrix as follows: ● a(n) = JacobiP(n - 1,1, - n - 1 / 2,9) / n. - _ Peter Luschny _ , Sep 23 2014 ● a(n + 1) = (2 / Pi) * Integral _{ x = - 1..1 } (m + 4 * x ^ 2) ^ n * sqrt(1 - x ^ 2) dx at m = 1. In general, the integral, qua sequence in n, gives the m - th binomial transform of the Catalan numbers. - _ Peter Balla _ , Jan 26 2020 ●

▶ [A193296] 1,1,1,1,2,5,15,51,191,773,3338,15243,73131,366815,1916260,10394665,58404853,339223859,2033188222,12556915219,79807729238,521399203037,3497978659977,24076009827669,169865542733652 ⋆ G.f. satisfies: A(x) = 1 + x + x ^ 2 * A((A(x) - 1 - x) / x). ● a(n) = [x ^ (n - 2)] A(x) ^ (n - 1) / (n - 1) for n >=2 with a(0)=a(1)=1. ●

► [A001681] 1,1,2,5,15,51,196,827,3795,18755,99146,556711,3305017,20655285,135399720,927973061,6631556521,49294051497,380306658250,3039453750685,25120541332271,214363100120051,1885987611214092,17085579637664715,159185637725413675 ★ The partition function G(n,4). ● a(n) = n! * sum(k=1..n, 1 / k! * sum(j=0..k, C(k,j) * sum(i=j..n - k + j, C(j,i - j) * C(k - j,n - 3 * k + 3 * j - i) * 2 ^ (5 * k - 4 * j + i - 2 * n) * 3 ^ (j - k)))). [_ Vladimir Kruchinin _ , Jan 25 2011] ● a(n) = G(n,4) with G(0,i) = 1, G(n,i) = 0 for n>0 and i<1, otherwise G(n,i) = Sum _{ j=0..floor(n / i) } G(n - i * j,i - 1) * n! / (i! ^ j * (n - i * j)! * j!). - _ Alois P. Heinz _ , Apr 20 2012 ●

► [A343665] 1,1,2,5,15,51,197,835,3860,19257,102997,586170,3535645,22496437,150454918,1054235150,7718958995,58905868192,467530598983,3851775136517,32881385742460,290387471713872,2649226725182823,24934118754400767,241809265181914545 ★ Number of partitions of an n - set without blocks of size 5. ● a(n) = n! * Sum _{ k=0..floor(n / 5) } (- 1) ^ k * Bell(n - 5 * k) / ((n - 5 * k)! * k! * (5!) ^ k). ●

► [A192553] 1,2,5,15,51,197,850,3897,19461,104264 ★ Sums of powers of permutations of length n. ● a(n) <= Bell(n) ●

► [A367415] 1,1,2,5,15,52,198,793,3255,13529,56696,239340,1017900,4361840,18828606,81833505,357865215,1573549667,6952392450,30848928525,137403484655,614104910096,2753200345000,12378494389660,55799811151140 ★ Expansion of (1 / x) * Series _ Reversion(x * (1 - x - x ^ 4 / (1 - x) ^ 3)). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 4) } binomial(n + k,k) * binomial(2 * n,n - 4 * k). ●

► [A369443] 1,2,5,15,52,198,796,3306,14042,60698,266235,1182315,5306085,24028162,109654887,503797703,2328343326,10816971516,50487762906,236635814984,1113297830297,5255647026534,24888156618738,118194065746758,562773777767295 ★ Expansion of (1 / x) * Series _ Reversion(x / ((1 + x) ^ 2 * (1 + x ^ 3))). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 3) } binomial(n + 1,k) * binomial(2 * n + 2,n - 3 * k). ●

► [A369398] 1,2,5,15,52,198,797,3322,14195,61848,273792,1228131,5570200,25501610,117694557,546983631,2557677780,12024345942,56801925455,269483935384,1283469626512,6134259516564,29412031039568,141434223863670,681939435678239 ★ Expansion of (1 / x) * Series _ Reversion(x / (1 + x) ^ 2 * (1 - x ^ 3)). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 3) } binomial(n + k,k) * binomial(2 * n + 2,n - 3 * k). ●

► [A370798] 1,2,5,15,52,200,824,3549,15745,71343,328537,1532838,7230341,34425026,165230211,798643501,3884110353,18993027790,93325418867,460562269745,2281769792691,11344607718373,56585135577335,283067227288767,1419859530338142 ★ Expansion of (1 / x) * Series _ Reversion(x / (x + 1 / (1 - x - x ^ 4))). ● a(n) = Sum _{ k=0..n } binomial(n,k) * b(k), where g.f. B(x) = Sum _{ k>=0 } b(k) * x ^ k satisfies B(x) = (1 / x) * Series _ Reversion(x * (1 - x - x ^ 4)). ●

► [A224071] 1,2,5,15,52,201,841,3726,17213,82047,400600,1993377,10071777,51532938,266462229,1390174911,7308741084,38682855225,205940368441,1102091393574,5925177392573,31987877317887,173337754977904 ★ Number of Schroeder paths of semilength n in which there are no (2,0) - steps at level 1. ● a(n) = Sum _{ k=0..n } ((k + 1) * ((- 1) ^ floor((k + 2) / 3) + (- 1) ^ floor((k + 1) / 3)) * Sum _{ i=0..n - k } (binomial(n + 1,n - k - i) * binomial(n + i,n))) / (2 * (n + 1)). - _ Vladimir Kruchinin _ , Mar 08 2016 ●

► [A056272] 1,1,2,5,15,52,202,855,3845,18002,86472,422005,2079475,10306752,51263942,255514355,1275163905,6368612302,31821472612,159042661905,795019337135,3974515030652,19870830712482,99348921288655 ★ Word structures of length n using a 5 - ary alphabet. ● a(n) = Sum _{ k=0..5 } Stirling2(n, k). ● a(n) = (5 ^ n + 10 * 3 ^ n + 20 * 2 ^ n + 45) / 5! for n >= 1. - _ Vladeta Jovovic _ , Aug 17 2003 ● a(n) = Sum _{ k=1..c } g(k, c) * k ^ n where g(1, 1) = 1, g(1, c) = g(1, c - 1) + (- 1) ^ (c - 1) / (c - 1)! if c > 1; g(k, c) = g(k - 1, c - 1) / k if c > 1, 2 <= k <= c and n >= 1. (End) ● a(n + 1) is the top entry of the vector M ^ n * [1,1,1,1,1,0,0,0,...], where M is an infinite bidiagonal matrix with M(r,r + 1)=1 in the superdiagonal and M(r,r)=r, r>=1 as the main diagonal, and the rest zeros. The n - th power of the matrix is multiplied from the right with a column vector starting with 5 1's. - _ Gary W. Adamson _ , Jun 24 2011 ●

► [A110038] 1,1,2,5,15,52,202,869,4075,20645,112124,648649,3976633,25719630,174839120,1245131903,9263053753,71806323461,578719497070,4839515883625,41916097982471,375401824277096,3471395994487422,33099042344383885,325005134436155395 ★ The partition function G(n,5). ● a(n) = n! * sum(k=1..n, 1 / k! * sum(r=0..k, C(k,r) * sum(m=0..r, 2 ^ (m - r) * C(r,m) * sum(j=0..m, C(m,j) * C(j,n - m - k - j - r) * 6 ^ (j - m) * 24 ^ (n - r - m - k - 2 * j) * 120 ^ (m + k + j + r - n))))). - _ Vladimir Kruchinin _ , Jan 25 2011 ● a(n) = G(n,5) with G(0,i) = 1, G(n,i) = 0 for n>0 and i<1, otherwise G(n,i) = Sum _{ j=0..floor(n / i) } G(n - i * j,i - 1) * n! / (i! ^ j * (n - i * j)! * j!). - _ Alois P. Heinz _ , Apr 20 2012 ●

► [A343666] 1,1,2,5,15,52,202,870,4084,20727,112825,654546,4026487,26145511,178550986,1278168860,9564026947,74615547996,605593775899,5103054929621,44564754448972,402677613100491,3759094788129312,36205919126040190,359340174509911325 ★ Number of partitions of an n - set without blocks of size 6. ● a(n) = n! * Sum _{ k=0..floor(n / 6) } (- 1) ^ k * Bell(n - 6 * k) / ((n - 6 * k)! * k! * (6!) ^ k). ●

► [A056273] 1,1,2,5,15,52,203,876,4111,20648,109299,601492,3403127,19628064,114700315,676207628,4010090463,23874362200,142508723651,852124263684,5101098232519,30560194493456,183176170057707 ★ Word structures of length n using a 6 - ary alphabet. ● a(n) = Sum _{ k=0..6 } Stirling2(n, k). ● a(n) = (c ^ n) / c! + Sum _{ k=0..c - 2 } ((k ^ n) / k! * (Sum _{ j=2..c - k } (((- 1) ^ j) / j!))). ● a(n) = Sum _{ k=1..c } (g(k, c) * k ^ n) where g(1, 1) = 1; g(1, c) = g(1, c - 1) + ((- 1) ^ (c - 1)) / (c - 1)! if c>1. For 2 <= k <= c: g(k, c) = g(k - 1, c - 1) / k if c>1. (End) ●

► [A148092] 1,1,2,5,15,52,203,876,4131,21065,115274,672673,4163743,27216840,187160429,1349511178,10173555345,79982663997,654277037674,5557624876513,48931106059451,445790174654588,4196351007814659,40757862664061104,407944375184911787 ★ The partition function G(n,6). ● a(n) = G(n,6) with G(0,i) = 1, G(n,i) = 0 for n>0 and i<1, otherwise G(n,i) = Sum _{ j=0..floor(n / i) } G(n - i * j,i - 1) * n! / (i! ^ j * (n - i * j)! * j!). - _ Alois P. Heinz _ , Apr 20 2012 ●

► [A343667] 1,1,2,5,15,52,203,876,4132,21075,115375,673620,4172413,27296089,187891174,1356343385,10238632307,80615222404,660560758879,5621465069117,49594663447612,452846969975391,4273130715906123,41612346388251187,417668648929556073 ★ Number of partitions of an n - set without blocks of size 7. ● a(n) = n! * Sum _{ k=0..floor(n / 7) } (- 1) ^ k * Bell(n - 7 * k) / ((n - 7 * k)! * k! * (7!) ^ k). ●

► [A099262] 1,2,5,15,52,203,877,4139,21110,115179,665479,4030523,25343488,164029595,1084948961,7291973067,49582466986,339971207051,2345048898523,16244652278171 ★ a(n) = (1 / 5040) * 7 ^ n + (1 / 240) * 5 ^ n + (1 / 72) * 4 ^ n + (1 / 16) * 3 ^ n + (11 / 60) * 2 ^ n + 53 / 144. Partial sum of Stirling numbers of second kind S(n,i), i=1..7 (i.e., a(n) = Sum _{ i=1..7 } S(n,i)). ● a(n) = Sum _{ k=0..7 } Stirling2(n,k). ●

► [A343668] 1,1,2,5,15,52,203,877,4139,21138,115885,677745,4206172,27577513,190289713,1377315050,10426866782,82350895629,677003941219,5781485704892,51193839084907,469251258854001,4445769329586348,43475305461354931,438270620701587657 ★ Number of partitions of an n - set without blocks of size 8. ● a(n) = n! * Sum _{ k=0..floor(n / 8) } (- 1) ^ k * Bell(n - 8 * k) / ((n - 8 * k)! * k! * (8!) ^ k). ●

► [A099263] 1,2,5,15,52,203,877,4140,21146,115929,677359,4189550,27243100,184941915,1301576801,9433737120,69998462014,529007272061,4054799902003,31415584940850,245382167055488,1928337630016767,15222915798289765 ★ a(n) = (1 / 40320) * 8 ^ n + (1 / 1440) * 6 ^ n + (1 / 360) * 5 ^ n + (1 / 64) * 4 ^ n + (11 / 180) * 3 ^ n + (53 / 288) * 2 ^ n + 103 / 280. Partial sum of Stirling numbers of second kind S(n,i), i=1..8 (i.e., a(n) = Sum _{ i=1..8 } S(n,i)). ● a(n) = Sum _{ k=0..8 } Stirling2(n,k). ●

► [A343669] 1,1,2,5,15,52,203,877,4140,21146,115965,678460,4212497,27633712,190795218,1381942530,10470109267,82764226404,681048663329,5822029128397,51610194855972,473631475252041,4492967510009533,43996047374513046,444151309687221889 ★ Number of partitions of an n - set without blocks of size 9. ● a(n) = n! * Sum _{ k=0..floor(n / 9) } (- 1) ^ k * Bell(n - 9 * k) / ((n - 9 * k)! * k! * (9!) ^ k). ●

► [A164863] 1,1,2,5,15,52,203,877,4140,21147,115974,678514,4211825,27602602,190077045,1368705291,10254521370,79527284317,635182667816,5199414528808,43426867585575,368654643520692,3170300933550687,27542984610086665,241205285284001240 ★ Number of ways of placing n labeled balls into 9 indistinguishable boxes; word structures of length n using a 9 - ary alphabet. ● a(n) = Sum _{ k=0..9 } stirling2 (n,k). ● a(n) = ceiling (103 / 560 * 2 ^ n + 53 / 864 * 3 ^ n + 11 / 720 * 4 ^ n + 5 ^ n / 320 + 6 ^ n / 2160 + 7 ^ n / 10080 + 9 ^ n / 362880). ●

► [A343671] 1,1,2,5,15,52,203,877,4140,21147,115974,678559,4213465,27643007,190884307,1382802389,10478516523,82847813908,681895648039,5830788687491,51702731250650,474630475600569,4503991075480297,44120379612630694,445584481578266277 ★ Number of partitions of an n - set without blocks of size 10. ● a(n) = n! * Sum _{ k=0..floor(n / 10) } (- 1) ^ k * Bell(n - 10 * k) / ((n - 10 * k)! * k! * (10!) ^ k). ●

► [A164864] 1,1,2,5,15,52,203,877,4140,21147,115975,678569,4213530,27641927,190829797,1381367941,10448276360,82285618467,672294831619,5676711562593,49344452550230,439841775811967,4005444732928641,37136385907400125,349459367068932740 ★ Number of ways of placing n labeled balls into 10 indistinguishable boxes; word structures of length n using a 10 - ary alphabet. ● a(n) = Sum _{ k=0..10 } stirling2 (n,k). ● a(n) = ceiling(2119 / 11520 * 2 ^ n + 103 / 1680 * 3 ^ n + 53 / 3456 * 4 ^ n + 11 / 3600 * 5 ^ n + 6 ^ n / 1920 + 7 ^ n / 15120 + 8 ^ n / 80640 + 10 ^ n / 3628800). ●

► [A203641] 1,2,5,15,52,203,877,4140,21147,115975,678570,4213596,27644358,190895863,1382847419,10477213268,82797679445,680685836527,5806124780384,51245294979716,466668627500968,4371727233798927,42000637216351225 ★ Number of arrays of n 0..10 integers with new values introduced in order 0..10 but otherwise unconstrained. ● a(n) = Sum _{ k=1..11 } stirling2(n,k). - _ Danny Rorabaugh _ , Mar 03 2015 ●

► [A000110] 1,1,2,5,15,52,203,877,4140,21147,115975,678570,4213597,27644437,190899322,1382958545,10480142147,82864869804,682076806159,5832742205057,51724158235372,474869816156751,4506715738447323,44152005855084346,445958869294805289 ★ Bell or exponential numbers: number of ways to partition a set of n labeled elements. ● a(n) = Sum _{ k=0..n } Stirling2(n, k). ● a(n) = exp(- 1) * Sum _{ k >= 0 } k ^ n / k! [Dobinski]. - _ Benoit Cloitre _ , May 19 2002 ● a(n) is asymptotic to n! * (2 Pi r ^ 2 exp(r)) ^ (- 1 / 2) exp(exp(r) - 1) / r ^ n, where r is the positive root of r exp(r) = n. See, e.g., the Odlyzko reference. ● a(n) is asymptotic to b ^ n * exp(b - n - 1 / 2) * sqrt(b / (b + n)) where b satisfies b * log(b) = n - 1 / 2 (see Graham, Knuth and Patashnik, Concrete Mathematics, 2nd ed., p. 493). - _ Benoit Cloitre _ , Oct 23 2002, corrected by _ Vaclav Kotesovec _ , Jan 06 2013 ● a(n + 1) = exp(- 1) * Sum _{ k>=0 } (k + 1) ^ (n) / k!. - _ Gerald McGarvey _ , Jun 03 2004 ● a(n) = Sum _{ k=1..n } (1 / k!) * (Sum _{ i=1..k } (- 1) ^ (k - i) * binomial(k, i) * i ^ n + 0 ^ n). - _ Paul Barry _ , Apr 18 2005 ●

► [A249892] 1,1,2,5,15,52,207,923,4532,24271,140581,874434,5806557,40955973,305544958,2402139329,19837601155,171598571288,1550865447043,14611295961047,143210242799872,1457573997373131,15379106145570681,167962044452359398,1896100883094424657 ★ G.f.: Sum _{ n>=0 } x ^ n / (1 - n * x - n ^ 2 * x ^ 2). ● a(n) = Sum _{ k=0..n } Fibonacci(n - k + 1) * k ^ (n - k). ●

► [A277175] 1,2,5,15,53,222,1120,6849,50111,427510,4142900,44693782,529276962,6813205468,94642629984,1410507388421,22445134308123,379776665469030,6808016435182620,128886547350655050,2569493300908367550,53805226930896987540,1180673761078007109840 ★ Convolution of Catalan numbers and factorial numbers. ● a(n) = Sum _{ i=0..n } C(i) * (n - i)!. ●

► [A369599] 1,2,5,15,54,223,993,4580,21521,102563,495318,2422302,11979965,59824535,301202673,1527118720,7789673832,39947163395,205835776301,1065155017623,5533253267649,28844759080896,150846487065730,791163319140664,4160593763997122 ★ Expansion of (1 / x) * Series _ Reversion(x * (1 / (1 + x) ^ 2 - x ^ 3)). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 3) } binomial(n + k,k) * binomial(2 * n + 2 * k + 2,n - 3 * k). ●

► [A107112] 1,2,5,15,54,228,1106,6069,37212,252287,1873928,15127191,131788320,1231650843,12283477562,130137706957,1458823402224,17242265101407,214202486482516,2789239633559763,37974772474452740,539356744121554370 ⋆ Row sums of A107111, viewed as a number triangle. ● a(n)=sum { k=0..n, sum { j=0..k, binomial((n - k)(k + 1), k - j) * binomial(k + j, j) }/ (k + 1) } ●

► [A051295] 1,1,2,5,15,54,235,1237,7790,57581,489231,4690254,49986715,5853728775,7463687750,102854072045,1522671988215,24093282856182,405692082526075,7242076686885157,136599856992122366,2714409550073698925 ⋆ a(0)=1; there after, a(m + 1) = Sum _{ k=0..m } k! * a(m - k). ● a(n) = upper left term in M ^ n, M = an infinite square production matrix in which a column of 1's is prepended to Pascal's triangle, as follows: ●

► [A334154] 1,2,5,15,54,236,1254,7986,59584,509304,4897272,52237448,611460432,7787383488,107155194928,1583776282704,25019083516416,420609003810944,7496930998018176,141203784944996736,2802115237399913728,58432523737192745472,1277372108617847278848 ⋆ a(n) is the number of length n decorated permutations avoiding the pattern 012. ● a(n) = n! + Sum _{ j=1..n } Sum _{ l=1..n - j + 1 } binomial(n - l,j - 1) * binomial(n - j,l - 1) * (l - 1)!. ●

► [A216388] 1,2,5,15,55,270,1494,8081,3395709,53903207 ⋆ Number of values of k for which sigma(k) - k is a permutation of decimal digits of k, for k < 10 ^ n. ● a(n) = # { k in A085844 | k < 10 ^ n } . - _ M. F. Hasler _ , Feb 24 2014 ●

► [A334155] 1,2,5,15,57,273,1593,10953,86553,771993,7666713,83871513,1001957913,12976997913,181106559513,2709277004313,43247182412313,733699248716313,13182759232076313,250070586344012313,4994229502288460313,104743211837530700313,2301653725221036620313 ⋆ a(n) is the number of length n decorated permutations avoiding the pattern 001. ● a(n) = n! + Sum _{ j=0..n - 1 } (j + 1) * j!. ●

► [A348365] 1,1,2,5,15,58,265 ⋆ Number of connected realizable graphs on n vertices. ● a(n) is strictly increasing, a(n + 1)>a(n) and a(n) grows at least exponentially with n as n - >infinity. ●

► [A274100] 1,2,5,15,64,351,2280,16335,123464,959631,7566280,60090255,4789682643824743311,30569959880,244447781775,1955134763464,15639288341391,125107148059080,1000828550570895,8006513870533064,64051652831273871,512411390124519880 ⋆ Number of partitions of 2 ^ n into at most four parts. ● a(n) = 14 * a(n - 1) - 55 * a(n - 2) + 50 * a(n - 3) + 56 * a(n - 4) - 64 * a(n - 5) for n>6. ●

► [A328000] 1,2,5,16,28,96,160,512,896,2560,4864,12288,25600,57344,131072,262144,655360,1179648,3211264,5242880,15466496,23068672,73400320,100663296,343932928 ⋆ a(n) = Sum _{ k=0..n } (k! * (n - k)!) / (floor(k / 2)! * floor((n - k) / 2)!) ^ 2. ● a(n) = [x ^ n] (4 * x ^ 2 - x - 1) ^ 2 / (1 - 4 * x ^ 2) ^ 3. ● a(n) = 2 ^ (n - 5) * (n * (n + 2) + 32) if n even else 2 ^ (n - 1) * (n + 1). ● a(2 ^ n - 1) = 2 ^ (2 ^ n - 2 + n) for n >= 1. ● a(n) = n! [x ^ n] (1 / 32) * exp(- 2 * x) * (8 + exp(4 * x) * (8 + x) * (3 + 2 * x) + x * (13 + 2 * x)). ● a(n) = 12 * a(n - 2) - 48 * a(n - 4) + 64 * a(n - 6) for n > 5. (End) ●

► [A361257] 1,2,5,16,29,66,127,512,737,1090,1541,3312,4369,7658,12209,65536,83537,105282,130987,167600,203701,254122,313259,649728,766201 ⋆ a(n) = Sum _{ j=0..n } n ^ wt(j), where wt = A000120. ● a(n) = Sum _{ j=0..n } n ^ wt(j), where wt = A000120. ●

► [A174988] 0,1,2,5,16,31,110,203,736,1345,4898,8933,32560,59359,216398,394475,1438144,2621569,9557570,17422277,63517264,115784095,422119982,769472267,2805304480 ⋆ Expansion of - x * (x - 1) * (3 * x + 1) / (9 * x ^ 4 - 8 * x ^ 2 + 1). ● a(n) = 8 * a(n - 2) - 9 * a(n - 4). G.f.: - x * (x - 1) * (3 * x + 1) / (9 * x ^ 4 - 8 * x ^ 2 + 1). [_ Colin Barker _ , Jan 05 2013] ●

► [A179992] 2,5,16,37,78,151,278,493,852,1445,2418,4007,6594,10797,17616,28669,46574,75567,122502,198469,321412,520365,842306,1363247,2206178 ⋆ Extended three term Fibonacci sequence a(n)=a(n - 1) + a(n - 2) + n ^ 2. a(1)=2; a(2)=5 ● a(n)=F(n) + sum(i ^ 2; i=1 to n) + sum(F(k) * sum(j ^ 2; j=0 to n - k - 1); k=0 to n - 3)). ● a(n) - 4 * a(n - 1) + 5 * a(n - 2) - a(n - 3) - 2 * a(n - 4) + a(n - 5) = 0 with n>5. [From _ Bruno Berselli _ , Aug 25 2010] ●

► [A124720] 2,5,16,38,96,220,512,1144,2560,5616,12288,26592,57344,122816,262144,556928,1179648,2490112,5242880,11009536,23068672,48233472,100663296,209713152,436207616 ⋆ Number of ternary Lyndon words of length n with exactly two 1's. ● a(n) = 2 ^ (n - 3) * (n - 1) - 2 ^ (n / 2 - 2) for n even. ● a(n) = 2 ^ (n - 3) * n - 2 ^ (n - 3) for n odd. ● a(n) = 4 * a(n - 1) - 2 * a(n - 2) - 8 * a(n - 3) + 8 * a(n - 4) for n>6. ●

► [A132734] 1,2,5,16,43,102,225,476,983,2002,4045,8136,16323,32702,65465,130996,262063,524202,1048485,2097056,4194203,8388502,16777105,33554316,67108743 ⋆ Row sums of triangle A132733. ● a(n) = 4 * 2 ^ n - 5 * n - 1 for n > 0. ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 2 * a(n - 3) for n > 3. ●

► [A138573] 0,1,2,5,16,45,130,377,1088,3145,9090,26269,75920,219413,634114,1832625,5296384,15306833,44237570,127848949,369490320,1067846845,3086134658,8919094697,25776662080 ⋆ a(n) = 2 * a(n - 1) + 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4); a(0)=0, a(1)=1, a(2)=2, a(3)=5. ● a(n) = (alpha(1) ^ n + beta(1) ^ n - alpha(2) ^ n - beta(2) ^ n) / (2 * sqrt(5)), where alpha(1), beta(1) are the roots of x ^ 2 - (1 + sqrt(5)) * x + 1 = 0, and alpha(2), beta(2) are the roots of x ^ 2 - (1 - sqrt(5)) * x + 1 = 0. ● a(n) = (1 / sqrt(5)) * (T(n,phi) - T(n, - 1 / phi)), where phi = 1 / 2 * (1 + sqrt(5)) is the golden ratio and T(n,x) denotes the Chebyshev polynomial of the first kind. Compare with the Fibonacci numbers, A000045, whose terms are given by the Binet formula 1 / sqrt(5) * (phi ^ n - (- 1 / phi) ^ n). ● a(n) = top right (or bottom left) entry of the 2 X 2 matrix T(n, M), where M is the 2 X 2 matrix [0, 1; 1, 1]; the off - diagonal elements of M ^ n give the sequence of Fibonacci numbers. Bottom right entry of the matrix T(n, M) gives A138574. See the remarks in A100047 for the general connection between Chebyshev polynomials and linear divisibility sequences of the fourth order. (End) ● a(n) = (((phi + sqrt(phi)) ^ n + (phi - sqrt(phi)) ^ n) / 2 - (- 1) ^ n * cos(n * arctan(sqrt(phi)))) / sqrt(5), where phi=(1 + sqrt(5)) / 2. - _ Vladimir Reshetnikov _ , May 11 2016 ●

► [A075887] 1,2,5,16,45,171,421,1968,4553,19225,57261,226854,496309,3136420,6764563,24850336,84877201,380461599,805949533,4411165990,9288196621,48275465722,154143694937,527401107276,1100708161081 ⋆ a(n) = 1 + n + n[n / 2] + n[n / 2][n / 3] + ... + n[n / 2][n / 3]...[n / n], where [x]=ceiling(x). ● a(n) = 1 + Sum _{ m=1..n } Product _{ k=1..m } ceiling(n / k) for n>0 and a(0)=1. ●

► [A306504] 1,2,5,16,46,128,366,1048,2983,8498,24235,69088,196924,561360,1600252,4561680,13003565,37068242,105667377,301217072,858654442,2447694896,6977439850,19890006440,56698785235 ⋆ Expansion of 1 / (x ^ 6 + 2 * x ^ 5 - x ^ 4 - 4 * x ^ 3 - x ^ 2 - 2 * x + 1). ● a(n) = 2 * a(n - 1) + a(n - 2) + 4 * a(n - 3) + a(n - 4) - 2 * a(n - 5) - a(n - 6). ●

► [A257970] 1,2,5,16,48,144,432,1296,3888,11664,34992,104976,314928,944784,2834352,8503056,25509168,76527504,229582512,688747536,2066242608,6198727824,18596183472,55788550416,167365651248 ⋆ a(1) = 1, a(2) = 2, a(3) = 5; therefter a(n) = 2 * Sum _{ k=1..n - 1 } a(k). ● a(n) = 3 * a(n - 1) for n>=5. ● a(n) = 16 * 3 ^ (n - 4) for n>=4. ●

► [A108529] 1,1,2,5,16,51,177,621,2246,8245,30783,116257,443945,1710255,6640939,25961690,102105115,403701135,1603721999,6397931901,25621989760,102965680728,415091909292,1678226164646,6803121058354 ⋆ Number of asymmetric mobiles (cycle rooted trees) with n generators. ● a(n) = (1 / 2) * (a(n - 1) + (1 / n) * Sum _{ d|n } mu(d) * c(n / d)) for n>=2, where c(n) = n * a(n) + Sum _{ s=1..n - 1 } c(s) * a(n - s) and a(1) = c(1) = 1. ●

► [A011819] 2,5,16,52,152,392,904,1899,3694,6743,11672,19318,30772,47426,71024,103717,148122,207385,285248,386120,515152,678316,882488,1135535,1446406 ⋆ M - sequences m _ 0,m _ 1,m _ 2,m _ 3 with m _ 1 < n. ● a(n)= (2 * n ^ 6 + 15 * n ^ 5 + 50 * n ^ 4 + 165 * n ^ 3 + 308 * n ^ 2 + 540 * n + 720) / 360. [_ Frank Ellermann _] ●

► [A101500] 1,2,5,16,53,178,609,2112,7393,26066,92437,329360,1178149,4228322,15218305,54907136,198527617,719170850,2609577701,9483269008,34508808789,125727351186,458573578977,1674270763584,6118472289889 ⋆ A Chebyshev transform of the central binomial numbers. ● a(n) = Sum _{ k=0..floor(n / 2) } C(n - k, k) * (- 1) ^ k * C(2(n - 2k), n - 2k). ● a(n) = Sum _{ k=0..n } C(n + k + 1,n - k) * C(k,k / 2) * (1 + (- 1) ^ k) / 2. (End) ● a(n) = Sum _{ k=ceiling(n / 2)..n } C(k,n - k) ^ 2 * 2 ^ (2 * k - n). - _ Vladimir Kruchinin _ , Apr 09 2014 ●

► [A006191] 1,2,5,16,54,180,595,1964,6485,21418,70740,233640,771661,2548622,8417525,27801196,91821114,303264540,1001614735,3308108744,10925940965,36085931638,119183735880,393637139280,1300095153721 ⋆ Number of paths on square lattice. ● a(n) = 4 * a(n - 1) - 3 * a(n - 2) + 2 * a(n - 3) + a(n - 4) for n>4. ●

► [A161941] 2,5,16,54,184,628,2144,7320,24992,85328,291328,994656,3395968,11594560,39586304,135156096,461451776,1575494912,5379076096,18365314560,62703106048,214081795072,730920968192,2495520282624,8520239194112 ⋆ a(n) = ((4 + sqrt(2)) * (2 + sqrt(2)) ^ n + (4 - sqrt(2)) * (2 - sqrt(2)) ^ n) / 4. ● a(n) = 4 * a(n - 1) - 2 * a(n - 2) for n>1; a(0) = 2; a(1) = 5. ●

► [A141754] 1,2,5,16,54,190,684,2505,9291,34793,131277,498312,1900862,7280732,27983141,107868939,416869874,1614609446,6265869591,24358231651,94837442844,369755864507,1443420649734,5641088964709,22068939198169 ⋆ Secondary diagonal of A139755, the table of q - derangement numbers of type A. ● a(n) = [q ^ n] { ([n + 2] _ q)! * Sum _{ m=0..n + 2 } (- 1) ^ m * q ^ (m(m - 1) / 2) / ([m] _ q)! } ; here, the q - factorial of n is denoted by ([n] _ q)! = Product _{ j=1..n } (1 - q ^ j) / (1 - q), with ([0] _ q)! = 1. ●

► [A051960] 2,5,16,55,196,714,2640,9867,37180,140998,537472,2057510,7904456,30458900,117675360,455657715,1767883500,6871173870,26747767200,104268528210,406975466040,1590307356300,6220814327520,24357232569150,95452906901976 ⋆ a(n) = C(n) * (3n + 2) where C(n) = Catalan numbers = A000108. ● a(n) = Sum _{ k=0..(n + 1) / 2 } (binomial(n - k + 1,k) * 2 ^ (n - 2 * k + 1) * binomial(n,k)). - _ Vladimir Kruchinin _ , Sep 30 2015. ● a(n) = 4 ^ n * (2 + 3 * n) * Gamma(n + 1 / 2) / (sqrt(Pi) * Gamma(n + 2)). - _ Peter Luschny _ , Dec 14 2015 ●

► [A137732] 1,1,2,5,16,55,224,935,4400,21262,111624,596805,3457354,20147882,125455512,792576243,5277532388,35519373064,252120178596,1800810613940,13492153025558,102095379031327,804122472505530,6395239610004277 ⋆ Repeated set splitting, unlabeled elements. Repeated integer partitioning into two parts. ● a(n) = Sum _{ k=1..n - 1 } p(n - 1,k) * a(k) * a(n - k), with a(1)=1 and where p(n,k) denotes the number of integer partitions of n into k parts. ●

► [A176332] 1,2,5,16,56,202,741,2752,10318,38972,148070,565280,2166646,8332378,32136205,124249856,481433286,1868972828,7267804550,28304698336,110383060776,431000853028,1684754608210,6592277745536,25818887839956 ⋆ Row sums of triangle A176331. ● a(n) = Sum _{ k=0..n } Sum _{ j=0..n } binomial(j, n - k) * binomial(j,k) * (- 1) ^ (n - j). ● a(n) = Sum _{ k=0..floor(n / 2) } (- 1) ^ k * binomial(2 * n - 2 * k,n). ●

► [A191241] 1,1,2,5,16,56,204,759,2880,11132,43732,174122,700952,2847840,11661592,48080811,199433880,831649380,3484523460,14662036550,61931353880,262503848400,1116179957160,4759795460550,20351410848288 ⋆ Reversion of x - x ^ 2 - 2 * x ^ 5. ● a(n) = Sum _{ j=0..floor((n - 1) / 3) } 2 ^ j * binomial(n - 3 * j - 1,j) * binomial(2 * n - 3 * j - 2,n - 1) / n, n > 0. ●

► [A352905] 0,1,2,5,16,56,218,937,4376,22027,118744,681570,4144988,26598313,179451366,1268930969,9378332608,72267300476,579336907254,4822070246225,41597773001612,371306237988959,3424303740576440,32583334570211654,319487530199710232 ⋆ Expansion of e.g.f. sin(x) * exp(exp(x) - 1). ● a(n) = Sum _{ k=0..floor((n - 1) / 2) } (- 1) ^ k * binomial(n,2 * k + 1) * Bell(n - 2 * k - 1). ●

► [A180678] 1,2,5,16,57,206,737,2612,9213,32442,114205,402072,1415713,4985126,17554489,61816252,217679141,766531986,2699251381,9505089568,33471028105,117864194430,415044573969,1461529529924,5146600421325 ⋆ The Ze2 sums of the Pell - Jacobsthal triangle A013609. ● a(n) = 6 * a(n - 1) - 11 * a(n - 2) + 8 * a(n - 3) with a(0)=1, a(1)=2 and a(2)= 5. ●

► [A072110] 1,2,5,16,57,210,781,2912,10865,40546,151317,564720,2107561,7865522,29354525,109552576,408855777,1525870530,5694626341,21252634832,79315912985,296011017106,1104728155437,4122901604640,15386878263121 ⋆ a(n) = 4 * a(n - 1) - a(n - 2) - 2, with a(0)=1, a(1)=2. ● a(n) = 5 * a(n - 1) - 5 * a(n - 2) + a(n - 3). ● a(n) = 1 - (- i) ^ (n + 1) * F(n, 4 * i), where i = sqrt(- 1) and F(n, x) is the Fibonacci polynomial. (End) ●

► [A121689] 1,1,2,5,16,57,231,1023,4926,25483,140601,822422,5074015,32881868,223027542,1578435549,11625317128,88894615929,704269188135,5770209550496,48810504348082,425650324975153,3821377057170313 ⋆ G.f.: Sum _{ n>=0 } x ^ n * (1 + x) ^ (n ^ 2). ● a(n) = Sum _{ k=0..n } C(k ^ 2,n - k). ●

► [A357580] 1,1,2,5,16,57,232,1017,4864,24641,133024,752765,4476928,27707513,178613376,1191756593,8231124992,58598528065,429868937728,3239768599221,25073052286976,198825601967609,1614604933769216,13405327061690025,113725655719346176 ⋆ a(n) = ((1 + sqrt(n)) ^ n - (1 - sqrt(n)) ^ n) / (2 * n * sqrt(n)). ● a(n) = [x ^ n] x / (n * (1 - 2 * x - (n - 1) * x ^ 2)). ● a(n) = Sum _{ j=0..floor(n / 2) } n ^ (j - 1) * binomial(n,2 * j + 1). ●

► [A286946] 1,1,2,5,16,57,286,1431,9064,51398,359787,3118155,25568872,223727631,2311852188,15990310968,105935810164,1038449718056,10903722039589,185715007642033,3528585145198628,46753753173881822,658243630211230916,9215410822957232825,197209791611284782456 ⋆ a(1) = 1; a(n + 1) = Sum _{ k=1..n } a(n) / gcd(a(k),a(n)). ● a(1) = 1; a(n + 1) = Sum _{ k=1..n } lcm(a(k),a(n)) / a(k). ●

► [A262441] 1,2,5,16,58,226,924,3910,16979,75232,338776,1545886,7132580,33219086,155963851,737383488,3507680650,16776206680,80622416976,389123999656,1885405316596,9167409871040,44717351734160,218762640192838,1073082055680180 ⋆ a(n) = Sum _{ k=0..n + 1 } (binomial(n - 1,k) / (k + 1) * binomial(n + k + 1,n - k)). ● a(n) = (n + 1) * hypergeom([1 - n, - n, n + 2], [3 / 2, 2], 1 / 4). - _ Peter Luschny _ , Mar 07 2022 ●

► [A328296] 1,2,5,16,58,228,945,4072,18078,82172,380666,1791138,8537912,41146988,200169891,981705400,4848820372,24098703860,120433164750,604831645542,3050979757728,15451575335362,78536766518038,400497435480332,2048473941706016 ⋆ Number of n - step walks on cubic lattice starting at (0,0,0), ending at (0,y,z), remaining in the first (nonnegative) octant and using steps (0,0,1), (0,1,0), (1,0,0), (- 1,1,1), (1, - 1,1), and (1,1, - 1). ● a(n) is odd <=> n in { A000918 } and n >= 0. ●

► [A280760] 1,2,5,16,58,440,17281,16049141,8010046523646 ⋆ Index of first occurrence of n in A280055. ● a(n) = a(n - 1) + { sum of members of A008578 <= a(n - 1) } . - _ Charlie Neder _ , Jun 14 2019 ●

► [A350717] 1,2,5,16,59,230,913,3644,14567,58258,233021,932072,3728275,14913086,59652329,238609300,954437183,3817748714,15270994837,61083979328,244335917291,977343669142,3909374676545,15637498706156,62549994824599 ⋆ a(n) = 4 * a(n - 1) - n - 1, for n > 0, a(0) = 1. ● a(n) = (2 ^ (2 * n + 1) + 3 * n + 7) / 9. ● a(n) = 6 * a(n - 1) - 9 * a(n - 2) + 4 * a(n - 3), n >= 3. ● a(n) = - 1 + 5 * a(n - 1) - 4 * a(n - 2), n >= 2. ●

► [A087949] 1,1,1,2,5,16,59,246,1131,5655,30428,174835,1066334,6870542,46581883,331237074,2463361903,19112314727,154364077009,1295325828045,11273167827343,101589943242179,946577526626181,9107029927925714,90359115887726302 ⋆ G.f. satisfies A(x) = 1 + x * A(x * A(x)). ● a(n,m) = Sum _{ k=0..n } m * C(n - k + m,k) / (n - k + m) * a(n - k,k) with a(0,m)=1. ●

► [A369483] 1,2,5,16,60,242,1014,4370,19278,86678,395751,1829742,8549100,40302810,191469165,915751966,4405727502,21307102900,103526683797,505118705078,2473833623696,12157124607612,59929746189165,296271556144028,1468494529164194 ⋆ Expansion of (1 / x) * Series _ Reversion(x / (1 + x + x ^ 3) ^ 2). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 3) } binomial(2 * n + 2,k) * binomial(2 * n - k + 2,n - 3 * k). ●

► [A307771] 2,5,16,60,253,1178,5976,32623,189702,1166720,7554877,51351254,365560784,2720255911,21121563036,170839106566,1437200307921,12556366592382,113755900474652,1067028469382353,10346222830388738,103538470949470066,1067747451140472577,11330777204488565252 ⋆ Expansion of e.g.f. Sum _{ k >=1 } prime(k) * (exp(x) - 1) ^ k / k!. ● a(n) = Sum _{ k=1..n } Stirling2(n,k) * prime(k). ●

► [A301306] 1,2,5,16,60,254,1188,6043,33080,193249,1197001,7819995,53648847,385090323,2883045424,22451716833,181437812058,1518374146260,13133970646948,117235109969112,1078235776311405,10204120439288725,99244762587719585,990878067150790140,10145281310155565842 ⋆ G.f.: Sum _{ n>=0 } (1 + (1 + x) ^ n) ^ n * x ^ n. ● a(n) = Sum _{ j=0..n } Sum _{ k=0..n - j } binomial(n - j, k) * binomial((n - j) * k, j). ●

► [A352617] 1,2,5,16,60,254,1199,6206,34827,210264,1355992,9288954,67279309,513149498,4107383185,34398823888,300629113292,2735356900806,25857446103571,253472859754918,2572266378189583,26981781750668760,292136508070103208,3260640536587635410,37472102225288489529 ⋆ Expansion of e.g.f. exp(exp(x) + sinh(x) - 1). ● a(0) = 1; a(n) = (1 / 2) * Sum _{ k=1..n } binomial(n - 1,k - 1) * (3 - (- 1) ^ k) * a(n - k). ●

► [A349458] 1,2,5,16,61,256,1132,5174,24229,115654,560741,2754082,13674212,68522208,346100952,1760213254,9006390373,46329244034,239455376071,1242923653316,6476376834789,33863408028888,177625109853808,934404580376016 ⋆ Number of smooth positroids in the Grassmannian variety Gr(k,n) for a fixed n and any 0 <= k <= n. ● a(n) = Sum _{ i=0..n } (2 ^ i) * binomial(n,i) * b(n), where b(n) is the sequence A349413. ●

► [A370797] 1,2,5,16,61,256,1133,5191,24403,117066,570835,2821026,14097839,71121660,361718339,1852640518,9547375955,49469352300,257564997407,1346840074300,7070283106575,37246786128714,196849114734855,1043398553112059,5545408681615257 ⋆ Expansion of (1 / x) * Series _ Reversion(x / (x + 1 / (1 - x - x ^ 3))). ● a(n) = Sum _{ k=0..n } binomial(n,k) * b(k), where g.f. B(x) = Sum _{ k>=0 } b(k) * x ^ k satisfies B(x) = (1 / x) * Series _ Reversion(x * (1 - x - x ^ 3)). ●

► [A275711] 1,1,1,2,5,16,61,272,1385,7936,50521,353791,2702767,22368251,199360995,1903757268,19391512295,209865342434,2404879677510,29088885104489,370371188272931,4951498052966308,69348874393874527,1015423886503257017,15514534163575397655 ⋆ Nearest integer to 2 * n! * (2 / Pi) ^ (n + 1). ● a(n) = round (2 * n! * (2 / Pi) ^ (n + 1)). ●

► [A000111] 1,1,1,2,5,16,61,272,1385,7936,50521,353792,2702765,22368256,199360981,1903757312,19391512145,209865342976,2404879675441,29088885112832,370371188237525,4951498053124096,69348874393137901,1015423886506852352,15514534163557086905 ⋆ Euler or up / down numbers: e.g.f. sec(x) + tan(x). Also for n >= 2, half the number of alternating permutations on n letters (A001250). ● a(n) = P _ n(0) + Q _ n(0) (see A155100 and A104035), defining Q _{- 1 } = 0. Cf. A156142. ● a(n) = (n - 1) * a(n - 1) - Sum _{ i=2..n - 2 } (i - 1) * E(n - 2, n - 1 - i), where E are the Entringer numbers A008281. - _ Jon Perry _ , Jun 09 2003 ● a(2 * k) = (- 1) ^ k euler(2k) and a(2k - 1) = (- 1) ^ (k - 1)2 ^ (2k)(2 ^ (2k) - 1) Bernoulli(2k) / (2k). - C. Ronaldo (aga _ new _ ac(AT)hotmail.com), Jan 17 2005 ● a(n) = 2 ^ n|E(n,1 / 2) + E(n,1)| where E(n,x) are the Euler polynomials. - _ Peter Luschny _ , Jan 25 2009 ● a(n) = 2 ^ (n + 2) * n! * S(n + 1) / (Pi) ^ (n + 1), where S(n) = Sum _{ k = - inf..inf } 1 / (4k + 1) ^ n (see the Elkies reference). - _ Emeric Deutsch _ , Aug 17 2009 ● a(n) = i ^ (n + 1) Sum _{ k=1..n + 1 } Sum _{ j=0..k } binomial(k,j)(- 1) ^ j (k - 2j) ^ (n + 1) (2i) ^ (- k) k ^{- 1 } . - Ross Tang (ph.tchaa(AT)gmail.com), Jul 28 2010 ●

► [A368318] 1,2,5,16,62,264,1170,5310,24599,116090,556569,2703098,13268900,65721840,328050639,1648535856,8333536002,42348587700,216211838178,1108514508608,5704874555112,29460504457692,152612723209700,792833380805160,4129639139612133 ⋆ Expansion of (1 / x) * Series _ Reversion(x / ((1 + x) ^ 2 * (1 + x ^ 3) ^ 2)). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 3) } binomial(2 * n + 2,k) * binomial(2 * n + 2,n - 3 * k). ●

► [A369400] 1,2,5,16,62,264,1172,5342,24905,118410,572167,2801354,13865237,69258500,348698784,1767724720,9015710574,46227736956,238159867070,1232206495528,6399778252336,33354634754364,174390047681360,914414985920664,4807481173042396 ⋆ Expansion of (1 / x) * Series _ Reversion(x / (1 + x) ^ 2 * (1 - x ^ 3) ^ 2). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 3) } binomial(2 * n + k + 1,k) * binomial(2 * n + 2,n - 3 * k). ●

► [A033543] 1,2,5,16,62,270,1257,6096,30398,154756,800834,4199720,22269976,119207942,643277553,3495713184,19113486390,105074982876,580435709622,3220217022144,17935186513044,100243540330188,562080274898250,3160904659483104,17823384503589996 ⋆ Expansion of (1 - sqrt((1 - 2 * x) * (1 - 6 * x))) / (2 * x * (2 - 3 * x)). ● a(n) = upper left term in M ^ n, M = an infinite square production matrix as follows (with the main diagonal (2,3,3,3,...)): ●

► [A173469] 1,2,5,16,62,280,1440,8296,52864,368848,2794864,22842048,200201408,1872466944,18608903968,195778297664,2173272774016,25380361760000,311011886153856,3989579297299712,53458990592638976,746817531317769728 ⋆ Number of permutations of length n that can be sorted in 2 ^ (n - 1) - 1 steps of Elizalde and Winkler's homing algorithm ● a(n) is the coefficient of t ^ n in the generating function F(t,t), where F(u,v) satisfies the partial differential equation F(u,v)=u * v + u * v * D _ u(f) + u * v * D _ v(f) - u ^ 2 * v ^ 2 * D _ u(D _ v(f)). ●

► [A112951] 1,2,5,16,63,271,1225,5726,27461,134461,669795,3384945,17316771,89518347,466932059,2454546192,12990743783,69164599115,370186756425,1990638982239,10749412063853,58265968105385,316903203993921 ⋆ a(n) = number of indecomposable Schur rings over the group Z _{ 2 ^ n } . ● a(n) = (- 1) ^ n Binomial(- 1,n - 2) + 2 * y(n), n>1, where y(n) is the recurrence function as defined in the Mathematica code below. - _ Benedict W. J. Irwin _ , May 29 2016 ●

► [A136127] 1,2,5,16,63,294,1585,9692,66275,501106,4150965,37383528,363674407,3800501438,42460229945,505029329524,6371454458859,84981113118090,1194793819467325,17660505018471680,273788611235722031,4442085091233531862,75276072393821203905 ⋆ Number of permutations of { 1,2,...,n } having excedance set { 1,2,...,k } for some k=0...n - 1 (for k=0 we have the empty set). The excedance set of a permutation p in S _ n is the set of indices i such that p(i)>i. ● a(n) = Sum(Sum (- 1) ^ (k + 1 - i) * i! * i ^ (n - 1 - k) * Stirling2(k + 1,i), i=1..k + 1), k=0..n - 1). ●

► [A344640] 1,2,5,16,63,297,1649,10641,78823,662315,6241889,65294039,751035233,9420926879,127958645921,1870319380463,29263787708393,487891616911031,8632986776222945,161555987833199807,3187606376603319017,66128414623822131863,1438861202348688524897,32763278185929878499887 ⋆ Antidiagonal sums of A344639. ● a(n) = Sum _{ k=0..n } Sum _{ m=0..n - k } abs(S1(n - k, m)) * (m + 1) ^ k, where S1 indicates the signed Stirling numbers of first kind. ●

► [A003149] 1,2,5,16,64,312,1812,12288,95616,840960,8254080,89441280,1060369920,13649610240,189550368000,2824077312000,44927447040000,760034451456000,13622700994560000,257872110354432000,5140559166898176000,107637093007589376000,2361827297364885504000 ⋆ a(n) = Sum _{ k=0..n } k!(n - k)!. ● a(n) = n! + ((n + 1) / 2) * a(n - 1), n >= 1. - _ Leroy Quet _ , Sep 06 2002 ● a(n) = ((3n + 1) * a(n - 1) - n ^ 2 * a(n - 2)) / 2, n >= 2. - _ David W. Wilson _ , Sep 06 2002; corrected by _ N. Sato _ , Jan 27 2010 ● a(n) = 2 * Integral _{ t =0..oo } Ei(t) * exp(- 2 * t) * t ^ (n + 1) where Ei is the exponential integral function. - _ Groux Roland _ , Dec 09 2010 ● a(n) = (n + 1)! / 2 ^ n * Sum _{ k=0..n } 2 ^ k / (k + 1). - _ Vaclav Kotesovec _ , Oct 27 2012 ● a(n) = - (n + 1)! * Re(Beta(2; n + 2, 0)) / 2 ^ (n + 1), where Beta(z; a, b) is the incomplete Beta function. ● a(n) = - 2 * (n + 1)! * Re(LerchPhi(2, 1, n + 2)), where LerchPhi(z, s, a) is the Lerch transcendent. (End) ●

► [A000522] 1,2,5,16,65,326,1957,13700,109601,986410,9864101,108505112,1302061345,16926797486,236975164805,3554627472076,56874039553217,966858672404690,17403456103284421,330665665962404000,6613313319248080001,138879579704209680022,3055350753492612960485,70273067330330098091156 ⋆ Total number of ordered k - tuples (k=0..n) of distinct elements from an n - element set: a(n) = Sum _{ k=0..n } n! / k!. ● a(n) = n * a(n - 1) + 1, a(0) = 1. ● a(n) = n! * Sum _{ k=0..n } 1 / k! = n! * (e - Sum _{ k>=n + 1 } 1 / k!). - _ Michael Somos _ , Mar 26 1999 ● a(0) = 1; for n > 0, a(n) = floor(e * n!). ● a(n) = e * Gamma(n + 1,1) where Gamma(z,t) = Integral _{ x>=t } e ^ (- x) * x ^ (z - 1) dx is incomplete gamma function. - _ Michael Somos _ , Jul 01 2004 ● a(n) = Sum _{ k=0..n } P(n, k). - _ Ross La Haye _ , Aug 28 2005 ● a(n) = 1 + n + n * (n - 1) + n * (n - 1) * (n - 2) + ... + n!. - _ Jonathan Sondow _ , Aug 18 2006 ●

► [A306026] 1,1,2,5,16,66,343,2180,16505,145773,1477880,16986349,219158316,3147962668,49982588535,871766923048,16609804758449,344016348602845,7711752589539436,186379711851775401,4839449174872615116,134575228738532130948,3996183953610068510929 ⋆ Antidiagonal sums of A306024. ● a(n) = Sum _{ j=0..n } j! * [x ^ j] exp(Sum _{ i=1..n - j } (exp(i * x) - 1) / i). ●

► [A334157] 1,2,5,16,89,686,5917,54860,588401,7370074,103522421,1573237832,25869057865,462768222086,8965777751309,186025937645956,4106375449878497,96241703493486770,2390797380938894821,62730027061416412544 ⋆ Row sums of

array A158777. ● a(n) = n! * Sum _{ k=0..n } Sum _{ s=0..floor(k / 3) } binomial(k - 3 * s, s) / (n - k)!. ●

▶ [A041283] 1,2,5,17,22,61,83,310,703,1716,41887,85490,212867,724091,936958,2598007,3534965,13202902,29940769,73084440,1783967329,3641019098,9066005525,30839035673,39905041198 ⋆ Denominators of continued fraction convergents to sqrt(154). ● a(n) = 42590 * af(n - 10) - a(n - 20). - _ Vincenzo Librandi _ , Dec 14 2013 ●

▶ [A042049] 1,2,5,17,22,127,149,1617,1766,10447,12213,47086,106385,259856,12059761,24379378,60818517,206834929,267653446,1545102159,1812755605,19672658209,21485413814,127099727279,148585141093 ⋆ Denominators of continued fraction convergents to sqrt(548). ● a(n) = 12166146 * a(n - 14) - a(n - 28) for n> 27. - _ Vincenzo Librandi _ , Jan 13 2014 ●

▶ [A023244] 2,5,17,23,53,83,137,197,227,257,293,317,347,383,467,593,647,677,683,797,857,953,1163,1193,1217 ⋆ Primes that remain prime through 2 iterations of the function f(x) = 2x + 7. ● a(n) == 5 (mod 6), for n > 1. - _ John Cerkan _ , Sep 12 2016 ●

▶ [A183906] 2,5,17,38,67,105,153,212,283,367,465,578,707,853,1017,1200,1403,1627,1873,2142,2435,2753,3097,3468,3867 ⋆ Number of nondecreasing arrangements of n + 2 numbers in 0..3 with each number being the sum mod 4 of two others. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>6. ●

▶ [A122566] 2,5,17,41,73,127,191,269,367,467,607,751,919,1093,1297,1523,1753,2027,2309,2621,2909,3299,3623,4007,4421 ⋆ Primes with index k ^ 2 + k + 1. ● a(n) = prime(n ^ 2 + n + 1). - _ Wesley Ivan Hurt _ , Nov 28 2021 ●

▶ [A215580] 2,5,17,45,122,320,842,2205,5777,15125,39602,103680,271442,710645,1860497,4870845,12752042,33385280,87403802,228826125,599074577,1568397605,4106118242,10749957120,28143753122 ⋆ Partial sums of A215602. ● a(2n) = L(4 * n) - 2, a(2 * n + 1) = L(4 * n + 2) - 1, where L() are the Lucas numbers A000032. ●

▶ [A219554] 1,2,5,17,46,123,323,809,1966,4660,10792,24447,54344,118681,254991,539852,1127279,2323849,4733680,9535079,19005282,37507802,73333494,142112402,273092320 ⋆ Number of bipartite partitions of (n,n) into distinct pairs. ● a(n) = [x ^ n * y ^ n] 1 / 2 * Product _{ i,j>=0 } (1 + x ^ i * y ^ j). ●

▶ [A074494] 2,5,17,47,119,287,671,1535,3455,7679,16895,36863,79871,172031,368639,786431,1671167,3538943,7471103,15728639,33030143,69206015,144703487,301989887,629145599 ⋆ Number of 2 - input gates used to synthesize parity function in disjunctive normal form (DNF) with n inputs. ● a(n) = 3 * n * 2 ^ (n - 2) - 1 for n>1. ●

▶ [A133510] 2,5,17,53,167,515,1577,4793,14507,43775,131837,396533,1191647,3579035,10745297,32252273,96789587,290434295,871433957,2614564013,7844216327,23533697555,70603189817,211813763753,635449679867 ⋆ Number of primitive H - invariant prime ideals in O _ q(M _{ 2,n }) generic quantum matrices. ● a(n) = ((3 ^ (n + 1)) - (2 ^ (n + 1)) + ((- 1) ^ (n + 1)) + 2) / 4. ●

▶ [A180148] 2,5,17,56,185,611,2018,6665,22013,72704,240125,793079,2619362,8651165,28572857,94369736,311682065,1029415931,3399929858,11229205505,37087546373,122491844624,404563080245,1336181085359,4413106336322 ⋆ a(n) = 3 * a(n - 1) + a(n - 2) with a(0)=2 and a(1)=5. ● a(n) = 3 * a(n - 1) + a(n - 2) with a(0)=2 and a(1)=5. ● a(n) = ((4 + 7 * A) * A ^ (- n - 1) + (4 + 7 * B) * B ^ (- n - 1)) / 13 with A = (- 3 + sqrt(13)) / 2 and B = (- 3 - sqrt(13)) / 2. ●

▶ [A259792] 1,1,2,5,17,62,258,1050,4365,18012,73945,301073,1214876,4852899,19187598,75070201,290659230,1113785613,4224773811,15866483556,59011553910,217410395916,793635925091,2871246090593,10297627606547 ⋆ Number of partitions of n ^ 3 into cubes. ● a(n) = [x ^ (n ^ 3)] Product _{ j>=1 } 1 / (1 - x ^ (j ^ 3)). - _ Alois P. Heinz _ , Jul 10 2015 ●

▶ [A052539] 2,5,17,65,257,1025,4097,16385,65537,262145,1048577,4194305,16777217,67108865,268435457,1073741825,4294967297,17179869185,68719476737,274877906945,1099511627777,4398046511105,17592186044417 ⋆ a(n) = 4 ^ n + 1. ● a(n) = 4 ^ n + 1. ● a(n) = 4 * a(n - 1) - 3 = 5 * a(n - 1) - 4 * a(n - 2). ● a(n) = 3 * 4 ^ (n - 1) + a(n - 1). ● a(n) = (a(n - 1) ^ 2 + 9 * 4 ^ (n - 2)) / a(n - 2). ●

▶ [A123166] 1,2,5,17,65,257,1025,4097,16385,65537,262145,1048577,4194305,16777217,67108865,268435457,1073741825,4294967297,17179869185,68719476737,274877906945,1099511627777,4398046511105,17592186044417,70368744177665 ⋆ Row sums of A123162. ● a(n) = 1 + Sum _{ k=0..n } binomial(2 * n - 1, 2 * k - 1), for n > 0. - _ Paul Barry _ , May 26 2008 ●

▶ [A346506] 1,2,5,17,66,274,1190,5341,24577,115326,549747,2654739,12959468,63848307,317064921,1585380283,7975134892,40332823042,204947059412,1045859173864,5357606584326,27540884494209,142023060613755,734506610474205,3808771672620618 ⋆ G.f. A(x) satisfies: A(x) = (1 + x * A(x) ^ 2) / (1 - x + x ^ 2). ● a(0) = 1, a(1) = 2; a(n) = 2 * a(n - 1) + a(n - 2) + Sum _{ k=2..n - 1 } a(k) * a(n - k - 1). ●

▶ [A051625] 1,2,5,17,67,362,2039,14170,109694,976412,8921002,101134244,1104940280,13914013024,191754490412,2824047042632,41304021782824,708492417746000,11629404776897384,222093818836736752,4351196253952132832,88481681599705382144,1781763397966126421200 ⋆ Number of "labeled" cyclic subgroups of symmetric group S _ n. ● a(n) = Sum _{ pi } n! / (k _ 1! * 1 ^ k _ 1 * k _ 2! * 2 ^ k _ 2 * ... * k _ n! * n ^ k _ n * phi(lcm { i:k _ i != 0 })), where pi runs through all partitions k _ 1 + 2 * k _ 2 + ... + n * k _ n=n and phi is Euler's function. ●

▶ [A239201] 2,5,17,68,293,1310,5984,27725,129773,612158,2905322,13857035,66361892,318901523,1536964313,7426185908,35960185373,174468439958,847920579938,4127211830363,20116566452918,98172213841553,479635277636543,2345731259059238,11482918774964588 ⋆ Expansion of - (x * sqrt(5 * x ^ 2 - 6 * x + 1) - 2 * x ^ 3 + 3 * x ^ 2 - x) / ((3 * x ^ 2 - 4 * x + 1) * sqrt(5 * x ^ 2 - 6 * x + 1) + 5 * x ^ 3 - 11 * x ^ 2 + 7 * x - 1). ● a(n) = [x ^ n] (F(x) ^ n - F(x) ^ (n - 1)), where F(x) = (x ^ 2 - x - 1) / (x - 1). ● a(n) = sum(k=1..n, binomial(n - 1,n - k) * sum(i=0..n - k, binomial(k,n - k - i) * binomial(k + i - 1,k - 1) * 2 ^ (- n + 2 * k + i) * (- 1) ^ (n - k - i))), n>0. ●

▶ [A372376] 1,2,5,17,69,297,1317,6008,28106,134094,649610,3186439,15795137,79002875,398220450,2020817214,10315652205,52934429595,272901102282,1412828261100,7341969856083,38284412715874,200255776288357,1050476288628006,5524897831049580 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 + x) / (1 + x + x ^ 3) ^ 3). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 3) } binomial(3 * n + 3,k) * binomial(2 * n - k + 2,n - 3 * k). ●

▶ [A049774] 1,1,2,5,17,70,349,2017,13358,99377,822041,7477162,74207209,797771521,9236662346,114579019469,1516103040833,21314681315998,317288088082405,4985505271920097,82459612672301846,1432064398910663705,26054771465540507273,495583804405888997218 ⋆ Number of permutations of n elements not containing the consecutive pattern 123. ● a(n) = leftmost column term of M ^ n * V, where M = an infinite tridiagonal matrix with (1,2,3,...) in the super, sub, and main diagonals and the rest zeros. V = the vector [1,0,0,0,...]. - _ Gary W. Adamson _ , Jun 16 2011 ●

▶ [A317132] 1,1,2,5,17,70,350,2029,13495,100813,837647,7652306,76282541,823684964,9578815164,119346454671,1586149739684,22397700381817,334879465463998,5285103821004717,87800206978975107,1531533620821692217,27987305231654121046,534688325008397289484 ⋆ Number of permutations of [n] whose lengths of increasing runs are factorials. ● a(3) = 5: 132, 213, 231, 312, 321. ● a(4) = 17: 1324, 1423, 1432, 2143, 2314, 2413, 2431, 3142, 3214, 3241, 3412, 3421, 4132, 4213, 4231, 4312, 4321. ●

▶ [A084869] 1,2,5,17,71,317,1415,6197,26591,112157,466775,1923077,7863311,31972397,129459335,522571157,2104535231,8460991037,33972711095,136277478437,546270602351,2188566048077,8764718254055,35090241492917 ⋆ Number of 2 - multiantichains of an n - set. ● a(n) = (1 / 2!) * (4 ^ n - 2 * 3 ^ n + 3 * 2 ^ n). ● a(n) = 3 * StirlingS2(n + 1,4) + StirlingS2(n + 1,3) + StirlingS2(n + 1,2) + 1. - _ Ross La Haye _ , Jan 11 2008 ● a(n) = 9 * a(n - 1) - 26 * a(n - 2) + 24 * a(n - 3). - _ Vaclav Kotesovec _ , Oct 30 2015 ●

▶ [A082282] 2,5,17,71,359,2161,15131,121061,1089551,10895513,119850691,1438208297,18696707863,261753910123,3926308651849,62820938429593,1067955953303143,19223207159456609,365240936029675579 ⋆ a(1) = 2, a(n) is the smallest prime > n * a(n - 1). ● a(n) = nextprime(n * a(n - 1)). ●

▶ [A369402] 1,2,5,17,72,330,1554,7490,36992,186582,956573,4967425,26070960,138081690,737120376,3962039625,21424392088,116467354320,636141911420,3489357591052,19213097243736,106158276425242,588409936029990,3270832234633026,18229957695363048 ⋆ Expansion of (1 / x) * Series _ Reversion(x / (1 + x) ^ 2 * (1 - x ^ 3) ^ 3). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 3) } binomial(3 * n + k + 2,k) * binomial(2 * n + 2,n - 3 * k). ●

▶ [A104859] 1,2,5,17,72,345,1773,9525,52788,299463,1730178,10144818,60211926,361042498,2183809018,13308564682,81637319641,503667864976,3123298907641,19456221197941,121696331095636,764008782313381 ⋆ Partial sums of A001764. ● a(n) = Sum _{ k=0..n } binomial(3k, k) / (2k + 1). ●

▶ [A108289] 1,2,5,17,72,357,2022,12900,91448,711180,6004981,54619489,531854438,5515551251,60642234815,704106298738,8603658260904,110306422692488,1479905106340895,20727595895871297,302423908621734606 ⋆ Antidiagonal sums of table A060543. ● a(n)=Sum _{ k=0..n } C(n + (n - k) * k, (n - k) * k + k)). ●

▶ [A102038] 1,2,5,17,73,382,2365,16937,137861,1257686,12714721,141119617,1706150125,22321071242,314201147513,4735338283937,76079613690505,1298088771022522,23441677492095901,446689961120844641 ⋆ a(n + 1) = n * a(n) + a(n - 1), a(1)=1, a(2)=2. ● a(n + 1) = Sum _{ k=0..n } k! * C(floor((n + k) / 2),k) * C(floor((n + k + 1) / 2),k)). ●

▶ [A002135] 1,1,2,5,17,73,388,2461,18155,152531,1436714,14986879,171453343,2134070335,28708008128,415017867707,6416208498137,105630583492969,1844908072865290,34071573484225549,663368639907213281,13580208904207073801 ⋆ Number of terms in a symmetrical determinant: a(n) = n * a(n - 1) - (n - 1) * (n - 2) * a(n - 3) / 2. ● a(n) = Sum _{ k=0..n } Sum _{ i=0..k } binomial(k,i) * binomial(i - 1 / 2,n - k) * (3 ^ (k - i) * n!) / (4 ^ k * k!) * (- 1) ^ (n - k - i). - _ Emanuele Munarini _ , Aug 25 2017 ●

▶ [A112831] 1,2,5,17,74,365,1889,9938,52565,278513,1476506,7828925,41513921,220137122,1167334565,6190107857,32824743914,174062236685,923012961569,4894530600818,25954597551605,137631407453873,729828474212666 ⋆ Number of non - intersecting cycle systems in a particular directed graph. ● a(0)=1, a(1)=2, a(n)=7 * a(n - 1) - 9 * a(n - 2). - _ Harvey P. Dale _ , Jun 08 2013 ●

▶ [A000774] 1,2,5,17,74,394,2484,18108,149904,1389456,14257440,160460640,1965444480,26029779840,370643938560,5646837369600,91657072281600,1579093018675200,28779361764249600,553210247226470400,11185850044938240000,237335752951879680000 ⋆ a(n) = n! * (1 + Sum _{ i=1..n } 1 / i). ● a(n + 1) = (n + 1) * a(n) + n!. - _ Jon Perry _ , Sep 26 2004 ● a(n) = Sum _{ k=0..n } (k + 1) * |s(n,k)|, where s(n,k) are Stirling numbers of the first kind (A008275). - _ Peter Luschny _ , Oct 16 2012 ●

▶ [A260948] 1,2,5,17,74,395,2526,19087,168603,1723065,20148031,266437102,3938754720,64391209604,1152961464743,22424127879610,470399253269776,10579865622308851,253840801521314095,6468953273455413674,174452533187403980841,4962228907578051232358 ⋆ Coefficients in asymptotic expansion of sequence A259870. ● a(k) ~ 2 * exp(- 1) * (k - 1)! / (log(2)) ^ k. ●

▶ [A129591] 2,5,17,75,407,2619,19487,164571,1555007,16252779,186167087,2319025851,31210884767,451319283339,6978220721807,114883713395931,2006375649873407,37048762422505899,721210940496319727,14761360406583900411,316901715602790903647,7120504270648900589259 ⋆ For each permutation p of { 1,2,..., n } define min(p) = min { p(i) + i : i = 1..n } ; a(n) is the sum of min(p) of all p. ● a(n) = Sum _{ k=0..n - 1 } (n - k + 1) * k! * ((k + 1) ^ (n - k) - k ^ (n - k)). ●

▶ [A014288] 0,1,2,5,17,77,437,2957,23117,204557,2018957,21977357,261478157,3374988557,46964134157,700801318157,11162196262157,189005910310157,3390192763174157,64212742967590157,1280663747055910157,26826134832910630157,588826498721714470157 ⋆ a(n) = floor(Sum _{ k=0..n } k! / 2), or floor(A003422(n + 1) / 2). ● a(0)=0, a(1)=1, a(2)=2, a(n) = (n + 1) * a(n - 1) - n * a(n - 2). - _ Benoit Cloitre _ , Sep 07 2002 ● a(0) = 0, a(n) = (1 / 2) * floor(1 + 1 * floor(1 + 2 * floor(1 + ... + (n - 1) * floor(1 + n * floor(1))). - Joseph E. Cooper III (easonrevant(AT)gmail.com), Aug 19 2008 ● a(n) = ((n + 1)! * ExpIntegral(n + 2, - 1) + Ei(1) + Pi * i) / (2 * e). - _ Ammar Khatab _ , Aug 14 2020 ●

▶ [A343848] 1,2,5,17,77,444,3123,25933,248163,2687200,32460889,432482545,6296217017,99388128516,1690073020687,30788225809509,597998944638879,12332575195452440,269072563350272149,6190949611140562505,149789737789559221 39

7,3801359947725801283196 ⋆ a(n) = Sum _{ k = 0..n } (n - k)! LaguerreL(n - k, - k). ● a(n) = Sum _{ k=0..n } (n - k)! * Sum _{ j=0..n - k } binomial(n - k, j) * k ^ j / j!. ●

▶ [A032262] 1,1,2,5,17,83,557,4715,47357,545963,7087517,102248075,1622633597,28091569643,526858352477,10641342978635,230283190994237,5315654682014123,130370767029201437,3385534663256976395 ⋆ Number of ways to partition n labeled elements into pie slices allowing the pie to be turned over. ● a(n) = 2 ^ (n - 1) + Sum _{ k >= 3 } Stirling _ 2(n,k) * (k - 1)! / 2 for n >= 1. - _ N. J. A. Sloane _ , Jan 17 2008 ●

▶ [A041455] 1,1,2,5,17,260,797,1854,2651,4505,137801,142306,280107,702520,2387667,36517525,111940242,260398009,372338251,632736260,19354426051,19987162311,39341588362,98670339035,335352605467 ⋆ Denominators of continued fraction convergents to sqrt(243). ● a(n) = 140452 * a(n - 10) - a(n - 20) for n>19. - _ Vincenzo Librandi _ , Dec 18 2013 ●

▶ [A117839] 2,5,17,9255121991,28870447577 ⋆ Primes of the form floor(Pi ^ k + e ^ k). ● a(n) = { floor(pi ^ k + e ^ k) = p is prime, k an integer } . a(n) = A000040 INTERSECTION A061675. ●

▶ [A226141] 0,2,5,18,30,64,91,156,204,310,385,542,650,868,1015,1304,1496,1866,2109,2570,2870,3432,3795,4468,4900 ⋆ Sum of the squared parts of the partitions of n into exactly two parts. ● a(n) = Sum _{ i=1..floor(n / 2) } (i ^ 2 + (n - i) ^ 2). ● a(n) = ((n / 2) ^ 2) * (1 - ceiling(n / 2) + floor(n / 2)) + Sum _{ i=1..n - 1 } i ^ 2. ● a(n) = n * (8 * n ^ 2 - 9 * n + 4) / 24 + (- 1) ^ n * n ^ 2 / 8. - _ Giovanni Resta _ , May 29 2013 ●

▶ [A295905] 2,5,18,41,74,117,170,233,306,389,482,585,698,821,954,1097,1250,1413,1586,1769,1962,2165,2378,2601,2834 ⋆ Number of (not necessarily maximal) cliques in the n X n knight graph. ● a(n) = 5 * n ^ 2 - 12 * n + 9. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A056296] 0,0,1,2,5,18,43,126,339,946,2591,7254,20125,56450,158355,446618,1262225,3580686,10181479,29032254,82968843,237645250,682014587,1960981598,5647919645 ⋆ Number of n - bead necklace structures using exactly three different colored beads. ● a(n) = (1 / n) * Sum _{ d|n } phi(d) * ([d==0 mod 6] * (S2(n / d + 2, 3) - S2(n / d + 1, 3)) + [d==3 mod 6] * (S2(n / d + 2, 3) - 3 * S2(n / d + 1, 3) + 3 * S2(n / d, 3)) + [d==2 mod 6 | d==4 mod 6] * (2 * S2(n / d + 1, 3) - 2 * S2(n / d, 3)) + [d==1 mod 6 | d=5 mod 6] * S2(n / d, 3)), where S2(n,k) is the Stirling subset number, A008277. ●

▶ [A024025] 1,2,5,18,65,218,693,2138,6497,19602,58949,177026,531297,1594154,4782773,14348682,43046465,129139874,387420165,1162261106,3486784001,10460352762,31381059125,94143178298,282429535905 ⋆ a(n) = 3 ^ n - n ^ 2. ● a(n) = 6 * a(n - 1) - 12 * a(n - 2) + 10 * a(n - 3) - 3 * a(n - 4) for n>3. - _ Vincenzo Librandi _ , Oct 05 2014 ●

▶ [A144721] 2,5,18,67,250,933,3482,12995,48498,180997,675490,2520963,9408362,35112485,131041578,489053827,1825173730,6811641093,25421390642,94873921475,354074295258,1321423259557,4931618742970,18405051712323,68688588106322 ⋆ a(0) = 2, a(1) = 5, a(n) = 4 * a(n - 1) - a(n - 2). ● a(n) = ((2 - sqrt(3)) ^ n * (- 1 + 2 * sqrt(3)) + (2 + sqrt(3)) ^ n * (1 + 2 * sqrt(3))) / (2 * sqrt(3)). - _ Colin Barker _ , Oct 12 2015 ●

▶ [A363061] 1,2,5,18,68,283,1161,4843,19985,83074,349670,1456458,6107257,25547835,106115655,440396113,1833079809,7642924612,31705433101,131716079566,546283729493,2257462298234,9339325821411,38593708318690,159600066415313 ⋆ Number of k <= P(n) such that rad(k) | P(n), where rad(n) = A007947(n) and P(n) = A002110(n). ● a(n) >= 2 ^ n. ●

▶ [A249062] 1,2,5,18,69,306,1497,7890,45033,273474,1760301,11961522,85265325,636026418,4947725889,40019230386,335868650577,2918173355010,26199114476373,242657102748114,2314964975130261,22717352863875762,229029972003647145,2369438933865972498 ⋆ A double binomial sum. ● a(n) = sum((n! / k!) * sum(bin(k,i) * bin(k - i + 1,n - k - 2 * i) / 3 ^ i,i=0..k),k=0..n). ● a(n + 4) + (n + 1) * a(n + 3) - 3 * (n + 3) * a(n + 2) - 3 * (n + 3) * (n + 2) * a(n + 1) - (n + 3) * (n + 2) * (n + 1) * a(n)=0. ●

▶ [A073157] 1,2,5,18,70,293,1283,5808,26960,127628,613814,2990681,14730713,73229291,366936231,1851352820,9397497758,47957377934,245903408244,1266266092112,6545667052320,33954266444498,176689391245146 ⋆ Number of Schroeder n - paths containing no FFs. ● a(n) = Sum _{ i=0..n } C(2 * i + 1,i) * C(2 * i + 1,n - i)) / (2 * i + 1). - _ Vladimir Kruchinin _ , Oct 11 2018 ●

▶ [A371494] 1,2,5,18,72,310,1399,6532,31287,152876,759034,3818410,19420713,99697784,515909606,2688267462,14093211259,74281217492,393389969722,2092312452404,11171325560120,59854910468196,321717833732186,1734250394445622,9373581927760595 ⋆ G.f. A(x) satisfies A(x) = 1 / (1 - x * A(x) / (1 + x)) ^ 2. ● a(n) = Sum _{ k=0..n } (- 1) ^ (n - k) * binomial(n - 1,n - k) * binomial(3 * k + 1,k) / (k + 1). ●

▶ [A039744] 1,1,2,5,18,73,338,1656,8512,45207,246448,1371535,7764392,44585180,259140928,1521967986,9020077206,53885028921,324176252022,1962530559999,11947926290396,73108804084505,449408984811980,2774152288318052,17190155366056138 ⋆ Number of ways n * (n - 1) can be partitioned into the sum of 2 * (n - 1) integers in the range 0..n. ● a(n) = T(n(n + 1),2n - 2,n), where T(k,p,m) is a recursive function that gives the number of partitions of k into p parts of 0..m. It is defined T(k,p,m) = sum _{ i=1..m } T(k - i,p - 1,i), with the boundary conditions T(0,p,m)=1 and T(k,0,m)=0 for all positive k, p and m. - _ T. D. Noe _ , Dec 19 2006 ● a(n) = coefficient of q ^ (n * (n - 1)) in q - binomial(3 * n - 2, n). - _ Max Alekseyev _ , Jun 16 2023 ●

▶ [A307773] 2,5,18,82,454,2960,22212,188568,1786896,18698116,214149822,2664667358,35796803068,516387315172,7961576156330,130655542040262,2273957872532176,41836619073742452,811316702293124504,16540499893106494782,353673865103189710572,7914396129656344633522 ⋆ Expansion of e.g.f. Sum _{ k>=1 } prime(k) * log(1 / (1 - x)) ^ k / k!. ● a(n) = Sum _{ k=1..n } |Stirling1(n,k)| * prime(k). ●

▶ [A058798] 0,1,2,5,18,85,492,3359,26380,234061,2314230,25222469,300355398,3879397705,54011212472,806288789375,12846609417528,217586071308601,3903702674137290,73952764737299909,1475151592071860890 ⋆ a(n) = n * a(n - 1) - a(n - 2) with a(0) = 0, a(1) = 1. ● a(n) = Sum _{ k = 0..floor((n - 1) / 2) } (- 1) ^ k * binomial(n - k - 1,k) * (n - k)! / (k + 1)!. - _ Peter Bala _ , Aug 01 2013 ● a(n) = Pi * (BesselY(1, 2) * BesselJ(n + 1, 2) - BesselJ(1,2) * BesselY(n + 1,2)). See the Abramowitz - Stegun reference given under A103921, p. 361 eq. 9.1.27 (first line with Y, J and z=2) and p. 360, eq. 9.1.16 (Wronskian). - _ Wolfdieter Lang _ , Mar 05 2013 ● a(n) = n! * hypergeometric([1 / 2 - n / 2, 1 - n / 2], [2, 1 - n, - n], - 4) for n >= 2. - _ Peter Luschny _ , Sep 10 2014 ●

▶ [A094294] 1,2,5,18,87,518,3621,28962,260651,2606502,28671513,344058146,4472755887,62618582406,939278736077,15028459777218,255483816212691,4598708691828422,87375465144740001,1747509302894800002,36697695360790800023,807349297937397600486,18569033852560144811157 ⋆ a(n) = n * a(n - 1) - n + 2 for n > 1; a(1)=1. ● a(n + 1) = (n + 1) * a(n) - n + 1, or a(n) = n * a(n - 1) - (n - 2). [Corrected by _ M. F. Hasler _ , Apr 09 2009] ● a(n) = 1 + Sum _{ k=2..n } n! / k! = ceiling(n! * (e - 2)). - _ Michel Marcus _ , Sep 19 2012 ●

▶ [A173227] 1,2,5,18,91,592,4643,42276,436629,5033182,63974273,888047414,13358209647,216334610860,3751352135263,69325155322184,1359759373992105,28206375825238458,616839844140642301,14181213537729200474,341879141423814854915,8623032181189674581256 ⋆ Partial sums of A000262. ● a(n) = 2 * n * a(n - 1) - (n ^ 2 - n + 1) * a(n - 2) + (n - 2) * (n - 1) * a(n - 3). ● a(n) = 1 + Sum _{ j=1..n } j! * (LaguerreL(j, - 1) - LaguerreL(j - 1, - 1)). - _ G. C. Greubel _ , Mar 09 2021 ●

▶ [A217389] 1,2,5,18,93,634,5317,52610,598445,7685706,109933269,1732565842,29824133437,556682418,11198025452261,241481216430114,5557135898411469,135927902927547370,3521462566184392693,96323049885512803826 ⋆ Partial sums of the ordered Bell numbers (number of preferential arrangements) A000670. ● a(n) = Sum _{ k=0..n } t(k), where t = A000670 (ordered Bell numbers). ●

▶ [A304782] 1,2,5,19,49,126,469,1177,2881,6481,23101,53725,127153,274288,581925,1860751,4155649,9279791,19409221,39839239,77052401,229393207,481747949,1035561408,2082441025 ⋆ a(n) = [x ^ n] (1 / (1 - x)) * Product _{ k>=1 } (1 + n * x ^ k). ● a(n) = [x ^ n] (1 / (1 - x)) * exp(Sum _{ k>=1 } (- 1) ^ (k + 1) * n ^ k * x ^ k / (k * (1 - x ^ k))). ●

▶ [A255541] 1,2,5,19,73,309,1229,4959,19821,79597,318453,1274563,5097973,20397515,81591147,326371001,1305482159,5222040189,20888133573,83552798667,334211074959,1336845501841,5347382348679,21389531880435,85558125961121 ⋆ a(n) = 1 + Sum _{ k=1..2 ^ n - 1 } A000010(k). ● a(n) = A005728 (2 ^ n - 1). - _ Michel Marcus _ , Feb 27 2015 ●

▶ [A138911] 1,2,5,19,81,401,2233,13721,91969,666145,5174001,42827225,375850225,3481908353,33923685097,346468507201,3698848172289,41173895716289,476826776487649,5733422156706473,71449460236945201,921311262658989217 ⋆ The n - th term of n - th inverse binomial transform of this sequence is 1 for n>=0. ● a(n) = 1 + Sum _{ k=0..n - 1 } C(n,k) * n * k ^ (n - k - 1) for n>0 with a(0)=1. ●

▶ [A107377] 0,1,1,2,5,19,84,393,1865,8886,42381,202187,964640,4602409,21958729,104768258,499864605,2384926971,11378834836,54290082897,259025915025,1235850473974,5896423120549,28132695944723,134225201438720 ⋆ Expansion of x * (1 - 4 * x - 3 * x ^ 2) / (1 - 5 * x + 5 * x ^ 3 + x ^ 4). ● a(0)=0, a(1)=1, a(2)=1, a(3)=2, a(n)=5 * a(n - 1) - 5 * a(n - 3) - a(n - 4). - _ Harvey P. Dale _ , Dec 24 2015 ●

▶ [A354621] 1,2,5,19,85,586,3583,28568,195449,1666786,18757980,161386953,1897428757,20910643255,186584844271,1896239913403,23753305611756,322385257985845,3291722491175736,43011227141438328,517673545204963277,5056620552149902641,65366993167319822971 ⋆ Number of n - tuples (p _ 1, p _ 2, ..., p _ n) of positive integers such that p _{ i - 1 } <= p _ i <= prime(i). ● a(n) = Sum _{ j=0..n - 1 } a(j) * (- 1) ^ (n + 1 - j) * binomial(prime(j + 1),n - j) with a(0) = 1. ●

▶ [A052169] 1,2,5,19,91,531,3641,28673,254871,2523223,27526069,328018989,4239014627,59043418019,881715042417,14052333488521,238063061452591,4271909380510383,80941440893880941,1614781745832924773,33833522293642233339,742799603083145395579 ⋆ Equivalent of the Kurepa hypothesis for left factorial. ● a(2) = 1, a(3) = 2, a(n) = (n - 2) * a(n - 1) + (n - 3) * a(n - 2). ● a(n) = 2 * floor((n + 1)! * (n + 3) / e + 1 / 2) - 3 * (floor(((n + 1)! + 1) / e) + floor(((n + 2)! + 1) / e)) + (n + 1)! + (n + 2)!, n>1, with offset 0..a(0)= 1. - _ Gary Detlefs _ , Apr 18 2010 ● a(n) = 1 / (n + 1) * ((n + 2)! - floor(((n + 2)! + 1) / e)), with offset 0 a(n) = 1 / (n - 1) * (n! - floor((n! + 1) / e)). - _ Gary Detlefs _ , Jul 11 2010 ● a(n) = (n - 2)! * y(n - 2). ● a(n) = (Gamma(n + 1,0) - exp(- 1) * Gamma(n + 1, - 1)) / (n - 1). - _ Martin Clever _ , Mar 25 2023 ●

▶ [A093502] 2,5,19,103,733,6691,76831,1081429,18242699,361919671,8309068723,217809953467,6445388418589,213232943658197,7821073506524401,315743571062703689 ⋆ a(1) = 2; for n > 0, a(n + 1) is the a(n) - th prime after a(n). ● a(n) = prime(pi(a(n - 1)) + a(n - 1)). - _ Vladeta Jovovic _ , Jun 19 2004 ● a(1)=2, a(n) = next a(n - 1)th prime after a(n - 1). - _ Zak Seidov _ , Mar 21 2009 ●

▶ [A359116] 1,2,5,19,208,480,3011,7185,20169,35438,111232,162062,422841,633226,1024370,1576122,3315790,4240974,8204951,10654475,15310713 ⋆ Mark the points of the Farey series F _ n on a strip of paper and wrap it around a circle of circumference 1 so the endpoints 0 and 1 coincide; draw a chord between every pair of the Farey points; a(n) is the number of vertices in the resulting graph. ● a(n) = A359118 - A359117 + 1 by Euler's formula. ●

▶ [A077138] 0,1,2,5,20,25,150,157,1256,1265,12650,12661,151932,151945,2127230,2127245,34035920,34035937,612646866,612646885,12252937700,12252937721,269564629862,269564629885,6469551117240 ⋆ a(0) = 0. If n is odd, a(n) = a(n - 1) + n, otherwise a(n) = a(n - 1) * n. ● a(0) = 0, a(2n) = 2n * a(2n - 1) and a(2n + 1) = a(2n) + (2n + 1). ●

▶ [A098510] 1,2,5,20,49,210,429,2860,7293,34034,113373,537472,1359507,6611810,24627135,37917616,177181213,973514514,1647439975,12026570280,17818756259,98555142278,502860886675,4577646742140,6402665244089 ⋆ Row sums of a matrix associated to the inverse of a Catalan scaled binomial matrix. ● a(n)=sum{ k=0..n, denominator((n + 1)binomial(n, k) / binomial(2n, n)) } ●

▶ [A189734] 2,5,20,65,230,785,2720,9365,32330,111485,384620,1326665,4576430,15786185,54454520,187839965,647952530,2235104885,7709972420,26595469265,91740800630,316458947585,1091621898320,3765538534565,12989186560730 ⋆ a(1)=2, a(2)=5, a(n)=2 * a(n - 1) + 5 * a(n - 2). ● a(n) = (1 - sqrt(6)) ^ (n - 1)

+ (1 + sqrt(6)) ^ (n - 1) + 1 / 4 * sqrt(6) * ((1 + sqrt(6)) ^ (n - 1) - (1 - sqrt(6)) ^ (n - 1)). - _ Paolo P. Lava _ , May 24 2011 ●

▶ [A009737] 0,1,2,5,20,81,438,2477,16680,120481,973034,8496245,80252732,817734321,8859646110,102873611549,1258403748432,16372688411713,2232022779063 86,3213260867586149,48295209177888356 ★ Expansion of e.g.f. tan(x) * exp(tan(x)). ● a(n) = Sum _{ k=1..n } (((1 + (- 1) ^ (n - k)) / (k - 1)!) * Sum _{ j=k..n } j! * Stirling2(n,j) * 2 ^ (n - j - 1) * (- 1) ^ ((n + k) / 2 + j) * binomial(j - 1,k - 1))). - _ Vladimir Kruchinin _ , Apr 19 2011 ●

▶ [A006228] 1,1,1,2,5,20,85,520,3145,26000,204425,2132000,20646925,26010400 0,2993804125,44217680000,589779412625,9993195680000,151573309044625,28980 26747200000,4926132543950312 5,1049085682486400000,19753791501240753125,4 636958715889888000 0 ★ Expansion of exp(arcsin(x)). ● a(0)=1, a(1)=1, a(n) = (1 + (n - 2) ^ 2) * a(n - 2) for n >= 2. _ Jaume Oliver Lafont _ , Oct 24 2009 ● a(n) = (n - 1)! * sum((if n=m then 1 else if oddp(n - m) then 0 else sum((- 1) ^ k * (sum(C(k,j) * 2 ^ (1 - j) * sum((- 1) ^ ((n - m) / 2 - i) * C(j,i) * (j - 2 * i) ^ (n - m + j) / (n - m + j)!, i=0..floor(j / 2)) * (- 1) ^ (k - j), j=1..k)) * C(k + n - 1,n - 1), k=1..n - m)) / (m - 1)!, m=1..n), n>0. - _ Vladimir Kruchinin _ , Sep 12 2010 ● a(n) = 2 ^ (n - 2) * (exp(Pi / 2) - (- 1) ^ n * exp(- Pi / 2)) * GAMMA((n - I) / 2) * GAMMA((n + I) / 2) / Pi. - _ Vaclav Kotesovec _ , Nov 06 2014 ●

▶ [A366452] 1,2,5,20,90,440,2266,12110,66525,373320,2130865,12332512,7220286 0,426861830,2544727475,15280236800,92333523153,561054410200,342607542974 0,21013974400920,129403499560500,799733464576880,4958649842375975,308373 25310579350 ★ G.f. A(x) satisfies A(x) = 1 + x + x * A(x) ^ (5 / 2). ● a(n) = Sum _{ k=0..n } binomial(3 * k / 2 + 1,n - k) * binomial(5 * k / 2,k) / (3 * k / 2 + 1). ●

▶ [A259834] 0,0,1,2,5,20,97,574,3973,31520,281825,2803418,30704101,36711425 2,4757800705,66432995030,994204132517,15875195019224,269397248811073,484 1453414347570,91856764780324165,1834779993945449348,3848562914129479120 1,8457888264772925043 02 ★ Number of permutations of [n] with no fixed points where the maximal displacement of an element equals n - 1. ● a(n) = ((2 * n ^ 2 - 11 * n + 13) * a(n - 1) + (2 * n - 5) * (n - 3) * a(n - 2)) / (2 * n - 7) for n > 2. ● a(n) = (n - 2)! * [x ^ (n - 2)] exp(- x) * (x + 1) / (x - 1) ^ 2 for n > 1. ● a(n) = y(n,n), n > 1, where y(m + 1,n) = (n - m) * y(m,n) + (n - m) * y(m - 1,n), with y(0,n)=0, y(1,n)=y(2,n)=1 for all n. - _ Benedict W. J. Irwin _ , Nov 03 2016 ● a(n) = (Gamma(n - 1, - 1) + 2 * Gamma(n, - 1)) / e for n >= 2. ●

▶ [A020001] 1,1,2,5,20,99,584,4038,31970,285070,2826941,30860774,367757553,4 750201727,66106974037,986095696055,15695356495548,265513114049684,475710 9960056837,899886634110751 65,1792274212937247027,3748840228727075031 5,82162081679601727740 ★ Nearest integer to Gamma(n + 11 / 12) / Gamma(11 / 12). ● a(n) = round(Product _{ k=0..n - 1 } (k + 11 / 12)). - _ Sean A. Irvin e _ , Apr 14 2019 ●

▶ [A348597] 1,1,2,5,20,100,601,4207,33656,302903,3029030,33319330,39983196 1,5197815493,72769416902,1091541253529,17464660056464,296899220959888,534 4185977277985,101539533568281715,2030790671365634300,426466040986783202 99,938225290170923046578 ★ a(n) = n! * Sum _{ k=0..floor(n / 3) } (- 1) ^ k / (3 * k)!. ● a(n) = round(c * n!), where c = 0.834719468... = A346441. ●

▶ [A370699] 1,1,2,5,20,100,610,4270,34160,307160,3071600,33787600,40546660 0,5271065800,73794921200,1106922416600,17710758665600,301082897315200,541 9492342264000,10297035450301 6000,205940709006032 0000,432475488550545440 00,951446074811199968000 ★ Expansion of e.g.f. exp(- x ^ 3 / 6) / (1 - x). ● a(n) = n! * Sum _{ k=0..floor(n / 3) } (- 1) ^ k / (6 ^ k * k!). ●

▶ [A009551] 0,1,2,5,20,101,606,4241,33928,305353,3053530,33588829,40306594 8,5239857325,73358002550,1100370038249,17605920611984,299300650403729,538 7411707267122,10236082243807 5317,2047216448761506340 ★ Expansion of sin(x) / (1 - x). ● a(n) = round(n! * sin(1)), n>=1. - _ Vladeta Jovovic _ , Aug 11 2002 ● a(n) = n! * Sum _{ k=0..floor(n / 2) } (- 1) ^ k / (2k - 1)!, n>0. - _ Ralf Stephan _ , Apr 16 2004 ● a(n) = n * a(n - 1) - a(n - 2) + (n - 2) * a(n - 3). - _ Vaclav Kotesovec _ , Oct 07 2012 ● a(n) = Im(i ^ n * hypergeom([1, - n], [], i)). ● a(n) = n! * sin(1) - cos(Pi * n / 2) * hypergeom([1], [n / 2 + 1,(n + 3) / 2], - 1 / 4) / (n + 1) + sin(Pi * n / 2) * hypergeom([1], [n / 2 + 2,(n + 3) / 2], - 1 / 4) / (n ^ 2 + 3 * n + 2). ● a(n) = Im(Gamma(n + 1, i) * exp(i)) = (Gamma(n + 1, i) * exp(i) - Gamma(n + 1, - i) * exp(- i)) / (2 * i), where Gamma(a, x) is the upper incomplete Gamma function, i=sqrt(- 1). ●

▶ [A370669] 1,1,2,5,20,103,630,4475,36232,329341,3320890,36787889,44412562 8,5803850515,81625106990,1229298774647,19738870726160,336627732586105,607 6590994501938,11575254125520 3869,2320456607696181220,488332274362589246 71,1076420625931284514342 ★ Expansion of Sum _{ k>=0 } k! * (x / (1 + x ^ 2)) ^ k. ● a(n) = Sum _{ k=0..floor(n / 2) } (- 1) ^ k * (n - 2 * k)! * binomial(n - k - 1,k). ● a(n) = n * a(n - 1) + (n - 4) * a(n - 3) + a(n - 4) for n > 4. ●

▶ [A019536] 1,2,5,20,109,784,6757,68240,787477,10224812,147512053,234096437 2,40527565261,760095929840,15352212731933,332228417657960,76688686487727 01,188085259070219000,4884294069438337429 ★ Number of length n necklaces with integer entries that cover an initial interval of positive integers. ● a(n) = Sum _{ k = 1..n } (k! / n) * Sum _{ d|n } phi(d) * S2(n / d, k), where S2(n, k) = Stirling numbers of 2nd kind (A008277). ●

▶ [A009599] 0,1,2,5,20,117,782,5441,39496,306921,2602682,24116413,24112156 4,2561633245,28613237382,334511450617,4089814554384,52302564139985,699179 303859698,9751200460426357,141494250613386916 ★ Expansion of e.g.f. sinh(sinh(x) * exp(x)). ● a(n) = Sum _{ k=0..n } Stirling2(n, k) * (1 - (- 1) ^ k) / 2 * 2 ^ (n - k). - _ Vladeta Jovovic _ , Sep 26 2003 ●

▶ [A076795] 0,1,2,5,20,125,1070,11465,146600,2173625,36633050,691362125,1444 0672700,330674815925,8236528396550,221694575073425,6411977928702800,1983 107618912134 25,653097063265404050 ★ Partial sums of (2n - 1)!!. ● a(n) = a(n - 1) * (2 * n - 2) - a(n - 2) * (2 * n - 3). ● a(n) = Sum _{ k=0..n - 1 } (2 * k - 1)!!. ● a(n) = sqrt(Pi / 2) * exp(- 1 / 2) * erfi(1 / sqrt(2)) + (2 * n - 1)!! * Im(Gamma(1 / 2 - n, - 1 / 2)) * exp(- 1 / 2) / ((- 2) ^ n * sqrt(2)), where Gamma(a, x) is the upper incomplete Gamma function. ●

▶ [A229662] 2,5,20,149,1852,34354,873386,28671789,1166062774,56973937168,32 66313635225,215667757729237 ★ The number of subsets of integers of cardinality n, produced as the steps in a computation starting with 1 and using the operations of multiplication, addition, or subtraction. ● a(n) >= a(n - 1) * 2 * (n - 1) and a(2)=5 Hence a(n) >= 5 * 2 ^ (n - 2) * (n - 1)! . ●

▶ [A000131] 2,5,21,61,214,669,2240,7330,24695,83257,284928,981079,3410990,11 937328,42075242,149171958,531866972,1905842605,6861162880,24805692978,900 35940227,327987890608,1198853954688,4395797189206,16165195705544 ★ Number of asymmetrical dissections of n - gon. ● a(n) = (Catalan(n - 2) - (n / 2) * Catalan(n / 2 - 1) - n * Catalan(floor(n / 2) - 1) - (n / 3) * Catalan(n / 3 - 1) + n * Catalan(n / 4 - 1) + n * Catalan(n / 6 - 1)) / (2 * n), where Catalan(x) = 0 for noninteger x (derived from Guy's 1958 paper). - _ Joseph Myers _ , Jun 21 2012 ●

▶ [A337283] 0,0,2,5,21,101,395,1578,6186,23610,89220,333431,1234343,4536551,1 6567157,60172532,217524468,783111476,2809027334,10043413545,35805255545,1 27314522569,451629771519,1598650868766,5647706073630 ★ a(n) = Sum _{ i=0..n } i * T(i) ^ 2, where T(i) = A000073(i) is the i - th tribonacci number. ● a(n) = 5 * a(n - 1) - 2 * a(n - 2) - 2 * a(n - 3) - 35 * a(n - 4) + 3 * a(n - 5) + 48 * a(n - 7) - 11 * a(n - 8) + 7 * a(n - 9) - 14 * a(n - 10) + 2 * a(n - 11) - a(n - 12) + a(n - 13) for n>12. ●

▶ [A328286] 1,2,5,21,114,780,6390,61110,667800,8210160,112152600,168523740 0,27624920400,490572482400,9381882510000,192238348302000,420163947403200 0,97572286427616000,2399151995223984000,6226874888837032000,17012138568 60117600000 ★ Expansion of e.g.f. - log(1 - x - x ^ 2 / 2). ● a(n) = (n - 1)! * ((1 - sqrt(3)) ^ n + (1 + sqrt(3)) ^ n) / 2 ^ n. ●

▶ [A042557] 1,2,5,22,27,103,439,4054,16655,54019,70674,336715,744104,182492 3,102939792,207704507,518348806,2281099731,2799448537,10679445342,4551722 9905,420334514487,1726855287853,5600900378046,7327755665899 ★ Denominators of continued fraction convergents to sqrt(807). ● a(n) = 103683896 * a(n - 14) - a(n - 28) for n>27. - _ Vincenzo Librandi _ , Jan 25 2014 ●

▶ [A181443] 1,2,5,22,34,161,494,2365,3685,17654,54281,260074,405262,1941725,5 970362,28605721,44575081,213572042,656685485,3146369182,4902853594,234909 82841,72229432934,346072004245,539269320205 ★ Solutions a(n) to (r(n) - 5) * (r(n) - 6) = 21 * a(n) * (a(n) - 1). ● a(4 * n)=(42 + (21 + r) * s ^ n + (21 - r) * t ^ n) / 84. ● a(4 * n + 1)=(42 + (63 + 13 * r) * s ^ n + (63 - 13 * r) * t ^ n) / 84. ● a(4 * n + 2)=(42 + (189 + 41 * r) * s ^ n + (189 - 41 * r) * t ^ n) / 84. ● a(4 * n + 3)=(42 + (903 + 197 * r) * s ^ n + (903 - 197 * r) * t ^ n) / 84. ● a(n) = 111 * a(n - 4) - 111 * a(n - 8) + a(n - 12). ● a(n) = + a(n - 1) + 110 * a(n - 4) - 110 * a(n - 5) - a(n - 8) + a(n - 9). - _ R. J. Mathar _ , Jan 05 2011 ●

▶ [A041165] 1,1,2,5,22,49,71,120,2231,2351,4582,11515,50642,112799,163441,276 240,5135761,5412001,10547762,26507525,116577862,259663249,376241111,635904 360,11822519591 ★ Denominators of continued fraction convergents to sqrt(92). ● a(n) = 2302 * a(n - 8) - a(n - 16). - _ Vincenzo Librandi _ , Dec 12 2013 ●

▶ [A371609] 1,2,5,22,94,452,2253,11640,61732,333924,1836052,10229434,5762807 8,327711260,1878658490,10845298128,62993496588,367874945560,215871774192 8,12722258713956,75269561054412,446891212180568,2661788871400197,1590064 4226590952,95240143776976144 ★ G.f. satisfies A(x) = (1 + x * (1 + x * A(x) ^ 2) ^ 2) ^ 2. ● a(n) = Sum _{ k=0..n } binomial(4 * (n - k) + 2,k) * binomial(2 * k,n - k) / (2 * (n - k) + 1). ●

▶ [A177251] 1,1,2,5,22,114,697,4923,39612,357899,3588836,39556420,47539284 1,6187284605,86701097310,1301467245329,20835850494474,354382860600678,638 1494425302865,121290065781743383,2426510081356069016 ★ Number of permutations of [n] having no adjacent 3 - cycles, i.e., no cycles of the form (i, i + 1, i + 2). ● a(n) = Sum _{ j=0..floor(n / 3) } (- 1) ^ j * (n - 2 * j)! / j!. ● a(n) - na(n - 1) = 2a(n - 3) + 3 * (- 1) ^{ n / 3 } if 3 | n; a(n) - na(n - 1) = 2a(n - 3) otherwise. ●

▶ [A041807] 1,1,2,5,22,115,137,252,389,3753,4142,7895,12037,68080,284357,6367 94,921151,1557945,63238951,64796896,128035847,320868590,1411510207,7378419 625,8789929832 ★ Denominators of continued fraction convergents to sqrt(424). ● a(n) = 64160102 * a(n - 18) - a(n - 36) for n>35. - _ Vincenzo Librandi _ , Dec 24 2013 ●

▶ [A042933] 1,1,2,5,22,181,203,790,993,30580,31573,125299,156872,1380275,5677 972,12736219,18414191,31150410,1949739611,1980890021,3930629632,984214928 5,43299226772,356235963461,399535190233 ★ Denominators of continued fraction convergents to sqrt(998). ● a(n) = 1968153802 * a(n - 18) - a(n - 36) for n > 35. - _ Vincenzo Librandi _ , Feb 01 2014 ●

▶ [A100299] 0,2,5,23,98,452,2139,10397,51524,259430,1323361,6824435,3551968 6,186346760,984400759,5231789177,27954506504,150079713482,809181079293,43 79654830223,23787413800490,129607968854732,708230837732435,3880366912218 773,21312485647242828 ★ Number of dissections of a convex n - gon by noninterlocking diagonals into an even number of regions. ● a(n) = Sum _{ k=1..floor((n - 2) / 2) } C(n - 3, 2 * k - 1) * C(n + 2 * k - 2, 2 * k - 1) / (2 * k). ●

▶ [A003501] 2,5,23,110,527,2525,12098,57965,277727,1330670,6375623,3054744 5,146361602,701260565,3359941223,16098445550,77132286527,369562987085,17 70682648898,8483850257405,40648568638127,194758992933230,93314639602802 3,4470972987206885 ★ a(n) = 5 * a(n - 1) - a(n - 2), with a(0) = 2, a(1) = 5. ● a(n) = ap ^ n + am ^ n, with ap=(5 + sqrt(21)) / 2 and am=(5 - sqrt(21)) / 2. ●

▶ [A358608] 1,1,2,5,23,118,715,5017,40202,362165,3623783,39876598,47863943 5,6223397017,87138414602,1307195728565,20916566490983,355600289681398,640 1066509999435,121624183842341017,2432546407886958602,510845411051994405 65,1123879103593765338983 ★ a(n) = Sum _{ k=0..floor(n / 3) } (- 1) ^ k * (n - 3 * k)!. ● a(n) = n * a(n - 1) - a(n - 3) + n * a(n - 4) for n > 3. ●

▶ [A330512] 1,2,5,24,129,600,4815,40320,313425,3900960,39023775,399168000,63 35076825,83286403200,1169542749375,20922789888000,359796258446625,552982 7983680000,120457648437501375,2615369658789888000,4072360967207595562 5 ★ Expansion of e.g.f. Sum _{ k>=1 } arcsinh(x ^ k). ● a(n) = n! * Sum _{ d|n, d odd } (- 1) ^ ((d - 1) / 2) * ((d - 2)!!) ^ 2 / d!. ●

▶ [A226170] 0,1,2,5,26,134,894,6474,55152,510768,5334480,60090480,74503584 0,9881421120,141972324480,2166467990400,35410730342400,611048958105600,11 198955424204800,215604729694771200,4379675205233664000,9306158283988070 4000,2075454840671815680000 ★ The number of cycles over all even permutations of { 1,2,...,n } . ● a(n) = Sum _{ k=1..n, 2|(n + k) } k * Stirling1(n,k). ●

► [A371614] 1,2,5,26,138,814,5051,32550,215792,1461934,10077345,70450980,498328320,3559894566,25646621725,186122575840,1359384244220,9984580141702,737033874482 45,546492958156148,4068417329371228,30397841636794944,227872480308702892 ★ G.f. satisfies A(x) = (1 + x / (1 - x * A(x) ^ 2) ^ 2) ^ 2. ● a(n) = Sum _{ k=0..n } binomial(4 * (n - k) + 2,k) * binomial(n + k - 1,n - k) / (2 * (n - k) + 1). ●

► [A041571] 1,2,5,27,59,145,4989,10123,25235,136298,297831,731960,25184471,51100902,127386275,688032277,1503450829,3694933935,12713120461 9,2579573431 73,643045890965,3473186797998,7589419486961,18652025771920,6417582957322 41 ★ Denominators of continued fraction convergents to sqrt(303). ● a(n) = 5048 * a(n - 6) - a(n - 12) for n>11. - _ Vincenzo Librandi _ , Dec 20 2013 ●

► [A042259] 1,1,2,5,27,86,199,1678,16979,137510,291999,1013507,5359534,11732575,17092109,28824684,1458326309,1487150993,2945477302,7378105597,39836005287,126886121458,293608248203,2475752107082,25051129319023 ★ Denominators of continued fraction convergents to sqrt(655). ● a(n) = 1475418418 * a(n - 16) - a(n - 32) for n>31. - _ Vincenzo Librandi _ , Jan 19 2014 ●

► [A087130] 2,5,27,140,727,3775,19602,101785,528527,2744420,14250627,73997555,384238402,1995189565,10360186227,53796120700,279340789727,1450500069335,7531841136402,39109705751345,203080369893127 ★ a(n) = 5 * a(n - 1) + a(n - 2) for n>1, a(0)=2, a(1)=5. ● a(n) = ((5 + sqrt(29)) / 2) ^ n + ((5 - sqrt(29)) / 2) ^ n. ● a(- n) = (- 1) ^ n * a(n). - _ Michael Somos _ , Nov 01 2008 ●

► [A286879] 2,5,28,66,140,272,489,828,1339,2088,3160,4662,6726,9512,13211,18048,24285,32224,42210,54634,69936,88608,111197,138308,170607 ★ Number of minimal dominating sets in the n - Andrasfai graph. ● a(n) = (3 * n - 1) * (n ^ 4 - 13 * n ^ 3 + 164 * n ^ 2 - 572 * n + 960) / 120 for n > 3. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n > 9. ●

► [A009635] 0,1,2,5,28,201,1566,14349,154456,1870225,25034650,368887573,59387767924,103580577881,1945112687350,39137964503837,840076566197552,19158967944112929,46264237842633899 4,117923921908237522 29 ★ Expansion of e.g.f. tan(x * exp(x)). ● a(n) = 2 * Sum _{ m=0..floor((n - 1) / 2) } binomial(n, 2 * m + 1) * (2 * m + 1) ^ (n - 2 * m - 1 * Sum _{ j=1..2 * m + 1 } j! * 2 ^ (2 * m - j) * (- 1) ^ (m + 1 + j) * Stirling2(2 * m + 1, j)). - _ Vladimir Kruchinin _ , Jun 10 2011 ●

► [A342288] 2,5,28,210,1848,18018,188760,2085798,24018280,285817532,3493769552,43672119400,556315613280,7202300350500,94561966954800,1256886144107550,16888191533829000,229116465142280100,3135277944052254000,43238333101156993800,600502564063273528800 ★ a(n) = C(n) * C(n + 2), where C(n) is the n - th Catalan number A000108(n). ● a(n) = a(n - 1) * 4 * (2 * n - 1) * (2 * n + 3) / ((n + 1) * (n + 3)). - _ Chai Wah Wu _ , Mar 26 2021 ●

► [A134449] 0,2,5,29,39,129,150,374,410,860,915,1707,1785,3059,3164,5084,5220,7974,8145,11945,12155,17237,17490,24114,24414 ★ Sum of even products minus sum of odd products of different pairs of numbers from 1 to n. ● a(n) = (n ^ 4 + 4 * n ^ 3 - 2 * n ^ 2 - 4 * n) / 16 for n even. ● a(n) = (n ^ 4 - 1) / 16 for n odd. ●

► [A327765] 2,5,29,155,833,4475,24041,129155,693857,3727595,20025689,107583635,577969553,3105015035,16681014281,89615101475,481437535937,2586417882635,13894964485049,74647658190515,401028219922673,2154436415994395,11574238519817321,62180065431075395 ★ a(n) is the trace of the n - th power of the 2 X 2 matrix [1 2; 3 4]. ● a(n) = trace(M ^ n) where M is [1, 2; 3, 4]. ● a(n) = 5 * a(n - 1) + 2 * a(n - 2) for n > 1. ● a(n) = ((5 - sqrt(33)) / 2) ^ n + ((5 + sqrt(33)) / 2) ^ n. ●

► [A371610] 1,2,5,30,162,996,6449,43086,296750,2086244,14920110,108202326,793793106,5880645408,43931188235,330570658228,2503247547204,19061888196960,145874708874538,1121290880430144,8653411948545596,67022656919955620,520808586384360885 ★ G.f. satisfies A(x) = (1 + x * (1 + x * A(x) ^ 3) ^ 2) ^ 2. ● a(n) = Sum _{ k=0..n } binomial(6 * (n - k) + 2,k) * binomial(2 * k,n - k) / (3 * (n - k) + 1). ●

► [A042811] 1,1,2,5,32,69,101,170,10301,10471,20772,52015,332862,717739,1050601,1768340,107151001,108919341,216070342,541060025,3462430492,7465921009,10928351501,18394272510,1114584702101 ★ Denominators of continued fraction convergents to sqrt(936). ● a(n) = 10402 * a(n - 8) - a(n - 16) for n>15. - _ Vincenzo Librandi _ , Jan 30 2014 ●

► [A371615] 1,2,5,34,222,1622,12559,100904,835322,7070574,60922335,532566850,4711614912,42106192680,379544358032,3446755447528,31504896429042,289619348156494,2675953520657839,24836797229730316,231461661673958896,2165002179076830442 ★ G.f. satisfies A(x) = (1 + x / (1 - x * A(x) ^ 3) ^ 2) ^ 2. ● a(n) = Sum _{ k=0..n } binomial(6 * (n - k) + 2,k) * binomial(n + k - 1,n - k) / (3 * (n - k) + 1). ●

► [A133473] 2,5,35,335,3335,33335,333335,3333335,33333335,333333335,3333333335,33333333335,333333333335,3333333333335,33333333333335,333333333333335,3333333333333335,33333333333333335,333333333333333335 ★ 2 followed by numbers with n - 1 3's before 5. ● a(n) = 10 * a(n - 1) - 15. (End) ● a(n) = (1 / 3) * (5 + 10 ^ n). - _ Paolo P. Lava _ , Jul 15 2008 ●

► [A202637] 2,5,37,82,590,1307,9403,20830,149858,331973,2388325,5290738,38063342,84319835,606625147,1343826622,9667939010,21416906117,154080399013,341326671250,2455618445198,5439809833883,39135814724155,86695630670878 ★ x - values in the solution to x ^ 2 - 7 * y ^ 2 = - 3. ● a(n) = - a(- n + 1) = ((- 2 * (- 1) ^ n + sqrt(7)) * (8 + 3 * sqrt(7)) ^ floor(n / 2) - (2 * (- 1) ^ n + sqrt(7)) * (8 - 3 * sqrt(7)) ^ floor(n / 2)) / 2. ●

► [A274074] 2,5,37,215,1297,7775,46657,279935,1679617,10077695,60466177,362797055,2176782337,13060694015,78364164097,470184984575,2821109907457,16926659444735,101559956668417,609359740010495,3656158440062977,21936950640377855,131621703842267137 ★ a(n) = 6 ^ n + (- 1) ^ n. ● a(n) = 5 * a(n - 1) + 6 * a(n - 2) for n>1. ●

► [A077398] 0,2,5,39,87,629,1394,10032,22224,159890,354197,2548215,5644935,40611557,89964770,647236704,1433791392,10315175714,22850697509,164395574727,364177368759,2620014019925,5803987202642,41755828744080,92499617873520 ★ First member of the Diophantine pair (m,k) that satisfies 7 * (m ^ 2 + m) = k ^ 2 + k; a(n)=m. ● a(n) = 16 * a(n - 2) - a(n - 4) + 7, n >= 3. [corrected by _ Vladimir Pletser _ , Feb 29 2020] ● a(0)=0, a(1)=2; a(n + 2) = (7 + 16 * a(n) + 3 * sqrt((1 + 28 * a(n) + 28 * a(n) ^ 2)) / 2. - _ Herbert Kociemba _ , May 12 2008 ● a(n) = a(n - 1) + 16 * a(n - 2) - 16 * a(n - 3) - a(n - 4) + a(n - 5). - _ Wesley Ivan Hurt _ , Jul 24 2020 ●

► [A127974] 1,2,5,40,110,308,2618,7480,21505,559130,1621477,4717024,41273960,120646960,353323240,3109244512,9133405754,26862958100,711868389650,2098138411600,6189508314220,54821359354520,161972198092900 ★ Numerators in expansion of (1 - x) ^ (- 2 / 3). ● a(n) = denominator(n! / (product _{ k=0..n - 1 } (2 + 3 * k))). ● a(n) = - 3 ^ (floor(n / 3) + floor(n / 9) + floor(n / 27)) * Product _{ k=0..n } (3 * k - 1) / n!. - _ Roger L. Bagula _ , Dec 20 2008 ●

► [A183910] 2,5,40,207,778,2199,5126,10501,19630,34274,56754,90071,138042,205453,298230,423629,590446,809248,1092626,1455471,1915274,2492451,3210694,4097349,5183822 ★ Number of nondecreasing arrangements of n + 2 numbers in 0..7 with each number being the sum mod 8 of two others. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>10. ●

► [A041729] 1,1,2,5,47,99,146,245,9456,9701,19157,48015,451292,950599,1401891,2352490,90796511,93149001,183945512,461040025,4333305737,9127651499,13460957236,22588608735,87182808916 6 ★ Denominators of continued fraction convergents to sqrt(384). ● a(n) = 9602 * a(n - 8) - a(n - 16) for n>15. - _ Vincenzo Librandi _ , Dec 23 2013 ●

► [A042161] 1,1,2,5,57,62,553,615,7318,15251,22569,37820,1837929,1875749,3713678,9303105,106047833,115350938,1028855337,1144206275,13615124362,28374454999,41989579361,70364034360,3419463228641 ★ Denominators of continued fraction convergents to sqrt(605). ● a(n) = 1860498 * a(n - 12) - a(n - 24) for n > 23. - _ Vincenzo Librandi _ , Jan 16 2014 ●

► [A041069] 1,2,5,62,129,320,3969,8258,20485,254078,528641,1311360,16264961,33841282,83947525,1041211582,2166370689,5373952960,66653806209,138681565378,344016936965,4266884808958,8877786554881,220224579187 20,273147281579521 ★ Denominators of continued fraction convergents to sqrt(41). ● a(n) = 64 * a(n - 3) + a(n - 6). - _ Vincenzo Librandi _ , Dec 10 2013 ●

► [A305292] 2,5,65,170,2210,5777,75077,196250,2550410,6666725,8663886 5,226472402,2943171002,7693394945,99981175205,261348955730,3396416785970,8878171099877,115378189547777,301596468440090,3919462027838450,10245401755863185,133146330756959525 ★ Numbers k such that k - 1 is a square and k + 1 is a triangular number. ● a(n) = a(- n - 1) = a(n - 1) + 34 * a(n - 2) - 34 * a(n - 3) - a(n - 4) + a(n - 5). ● a(n) = 35 * a(n - 2) - 35 * a(n - 4) + a(n - 6) = 34 * a(n - 2) - a(n - 4) + 2. ● a(n) = (- 2 + (13 * sqrt(2) + 7 * (- 1) ^ n) * (1 + sqrt(2)) ^ (2 * n + 1) - (13 * sqrt(2) - 7 * (- 1) ^ n) * (1 - sqrt(2)) ^ (2 * n + 1)) / 32. ●

► [A309366] 2,5,71,43103 ★ When the positive integers are written as products of primes in nondecreasing order, a(n) is the least prime to occur more frequently in n - th position than in any other position. ● a(1) = prime(1) = 2. ●

► [A042693] 1,1,2,5,72,149,221,370,21681,22051,43732,109515,1576942,3263399,4840341,8103740,474857261,482961001,957818262,2398597525,34538183612,71474964749,106013148361,177488113110,10400323708741 ★ Denominators of continued fraction convergents to sqrt(876). ● a(n) = 21902 * a(n - 8) - a(n - 16) for n >15. - _ Vincenzo Librandi _ , Dec 21 2013 ●

► [A041237] 1,2,5,112,229,570,12769,26108,64985,1455778,2976541,7408860,165971461,339351782,844675025,18922202332,38689079689,96300361710,2157297037309,4410894436328,10979085909965,245950784455558,502880654821081,1251712094097720 ★ Denominators of continued fraction convergents to sqrt(130). ● a(n) = 114 * a(n - 3) + a(n - 6). - _ Vincenzo Librandi _ , Dec 13 2013 ●

► [A214648] 2,5,125,51875,8114028125 ★ Sum of next a(n) > 1 triangular numbers is a triangular number. ● a(n) is the smallest integer k > 1 such that (4 * k ^ 3 + 12 * s * k ^ 2 + 4 * (3 * s ^ 2 - 1) * k) / 3 + 1 is a square, where s = a(1) + a(2) + ... + a(n - 1). - _ Max Alekseyev _ , Jan 30 2014 ●

► [A041505] 1,2,5,162,329,820,26569,53958,134485,4357478,8849441,22056360,714652961,1451362282,3617377525,117207443082,238032263689,593271970460,19222735318409,39038742607278,97300220532965,3152645799662158,64025918198572 81,15957829439376720 ★ Denominators of continued fraction convergents to sqrt(269). ● a(n) = 164 * a(n - 3) + a(n - 6) for n>5. - _ Vincenzo Librandi _ , Dec 19 2013 ●

► [A041873] 1,2,5,212,429,1070,45369,91808,228985,9709178,19647341,49003860,2077809461,4204622782,10487055025,444660933832,899808922689,22442787792 10,95159517649509,192563314078228,480286145805965,20364581437928758,41209449021663481 ★ Denominators of continued fraction convergents to sqrt(458). ● a(n) = 214 * a(n - 3) + a(n - 6) for n>5. - _ Vincenzo Librandi _ , Dec 26 2013 ●

► [A042909] 1,2,5,312,629,1570,97969,197508,492985,30762578,62018141,154798860,9659547461,19473893782,48607335025,3033128665332,6114864665689,15262857996710,95241206046170 9,1920086978920128,4792586018301965,29906042011364 1958,602913426245585881 ★ Denominators of continued fraction convergents to sqrt(986). ● a(n) = 314 * a(n - 3) + a(n - 6) for n>5. - _ Vincenzo Librandi _ , Feb 01 2014 ●

► [A063210] 1,2,6,6,10,10,14,14,18,18,22,22,26,26,30,30,34,34,38,38,42,42,46,46,50 ★ Dimension of the space of weight 2n cuspidal newforms for Gamma _ 0(42). ● a(n) = (n ^ 2 - n) / floor(n / 2) for n >=2. (Excludes leading 1.) - _ William A. Tedeschi _ , Mar 20 2008 ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n > 4. ●

► [A306925] 0,1,2,6,6,11,16,35,36,46,50,84,94,130,158,285,338,424,460,616,672,810,816,1162,1346 ★ Sum over all partitions of n into distinct parts of the bitwise XOR of the parts. ● a(n) is odd <=> n in { A067589 } . ●

► [A343315] 0,0,1,1,2,6,6,14,19,36,67,103,194,315,560,971,1651,2895,4933,8581,14798,25515,44165,76067,131563 ★ a(n) is the number of nonnegative integers that can be represented in a 7 - segment display by using only n segments (version A277116). ● a(n) = a(n - 2) + a(n - 3) + a(n - 4) + 4 * a(n - 5) + 2 * a(n - 6) + a(n - 7) for n > 13. ● a(n) = b(n) - b(n - 6), where b(n) = [x ^ n] Sum _{ k =max(1,ceiling(n / 7))..floor(n / 2) } P(x) ^ k with P(x) = x ^ 2 + x ^ 3 + x ^ 4 + 4 * x ^ 5 + 2 * x ^ 6 + x ^ 7. ●

► [A119551] 1,1,1,1,1,1,1,1,1,2,6,6,22,22,60,159,377,377,1007,1007,2867,8147,22403,22403,67808 ★ Number of ordered finite sequences a _ 1 <= a _ 2 <= ... <

= a _ n of length n of positive integers less than or equal to n whose product is n! and whose sum is n * (n + 1) / 2. • a(p) = a(p - 1) for prime p. - _ Alois P. Heinz _ , Jul 05 2022 •

▶ [A047555] 0,1,2,6,7,8,9,10,14,15,16,17,18,22,23,24,25,26,30,31,32,33,34,38,39 ⋆ Numbers that are congruent to { 0, 1, 2, 6, 7 } mod 8. • a(n) = a(n - 1) + a(n - 5) - a(n - 6). •

▶ [A047279] 0,1,2,6,7,8,9,13,14,15,16,20,21,22,23,27,28,29,30,34,35,36,37,41,42 ⋆ Numbers that are congruent to { 0, 1, 2, 6 } mod 7. • a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. • a(n) = (14n - 17 + 3 * (i ^ (2n) + (1 + i) * i ^ (- n) + (1 - i) * i ^ n)) / 8 where i = sqrt(- 1). •

▶ [A260139] 0,2,6,7,8,9,18,21,24,27,28,29,30,31,32,33,34,35,54,55,56,63,64,65,72 ⋆ For any term a(k), there are exactly a(k) terms strictly smaller than 3 * a(k); t his is the lexicographically first increasing sequence of nonnegative integers wit h this property. • a(n) <= 3n, with equality for indices of the form n = a(k) fo r some k. •

▶ [A267541] 2,6,7,8,10,13,17,18,19,21,24,28,29,30,32,35,39,40,41,43,46,50,51,52,5 4 ⋆ Expansion of (2 + 4 * x + x ^ 2 + x ^ 3 + 2 * x ^ 4 + x ^ 5) / (1 - x - x ^ 5 + x ^ 6). • a(n) = a(n - 1) + a(n - 5) - a(n - 6). •

▶ [A047553] 0,2,6,7,8,10,14,15,16,18,22,23,24,26,30,31,32,34,38,39,40,42,46,47,48 ⋆ Numbers that are congruent to { 0, 2, 6, 7 } mod 8. • a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. • a(n) = (8 * n - 5 - i ^ (2 * n) + (1 - 2 * i) * i ^ (- n) + (1 + 2 * i) * i ^ n) / 4 where i=sqrt(- 1). •

▶ [A047240] 0,1,2,6,7,8,12,13,14,18,19,20,24,25,26,30,31,32,36,37,38,42,43,44,48 ⋆ Numbers that are congruent to { 0, 1, 2 } mod 6. • a(n) = 2 * n - 3 - cos(2 * n * Pi / 3) + sin(2 * n * Pi / 3) / sqrt(3). (End) • a(n) = n - 1 + 3 * floor((n - 1) / 3). - _ Philippe Deléham _ , Apr 21 2009 • a(n) = 6 * floor(n / 3) + (n mod 3). - _ Gary Detlefs _ , Mar 09 2010 • a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. • a(3 * k) = 6 * k - 4, a(3 * k - 1) = 6 * k - 5, a(3 * k - 2) = 6 * k - 6. (E nd) •

▶ [A080333] 1,2,6,7,8,12,13,14,27,28,29,33,34,35,39,40,41,54,55,56,60,61,62,66,67 ⋆ Partial sums of A080278. • a(n) = Sum _{ k=0..log _ 3(n) } 3 ^ k * floor(n / 3 ^ k). • a(3 ^ k) = (k + 1) * 3 ^ k. • a(n) is conjectured to be asymptotic to n * log(n) / log(3). - _ Klaus Brockhaus _ , Mar 23 2003 [This follows from the asymptotics of A333979. - _ Pontus von Brömssen _ , Sep 06 2020] • a(n) = n + 3 * a(floor(n / 3)), a(0)=0. - _ Vladeta Jovovic _ , Aug 06 2003 •

▶ [A037454] 0,1,2,6,7,8,12,13,14,36,37,38,42,43,44,48,49,50,72,73,74,78,79,80,84 ⋆ a(n) = Sum _{ i=0..m } d(i) * 6 ^ i, where Sum _{ i=0..m } d(i) * 3 ^ i is the base 3 representation of n. • a(n) = n + 1 / 2 * Sum _{ k >= 1 } 6 ^ k * floor (n / 3 ^ k). Cf. A037462, A007091 and A102491. • a(0) = 0; a(n) = 6 * a(n / 3) if n == 0 (mod 3) else a(n) = a(n - 1) + 1. (End) •

▶ [A088225] 2,6,7,8,13,17,18,19,24,28,29,30,35,39,40,41,46,50,51,52,57,61,62,63,6 8 ⋆ Solutions to x ^ n == 7 (mod 11). • a(n) = - 4 + Sum _ (k=0..n) ((1 / 24) * (11 * (k mod 4) + 29 * ((k + 1) mod 4) + 17 * ((k + 2) mod 4) - 13 * ((k + 3) mod 4))). - _ Paolo P. Lava _ , Feb 29 2008 • a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n > 5; a(1)=2, a(2)=6, a(3)=7, a(4)=8, a(5)=13. - _ Harvey P. Dale _ , Jan 30 2015 • a(n) = (- 9 - (- 1) ^ n - (7 - i) * (- i) ^ n - (7 + i) * i ^ n + 22 * n) / 8, where i=sqrt(- 1). •

▶ [A047554] 1,2,6,7,9,10,14,15,17,18,22,23,25,26,30,31,33,34,38,39,41,42,46,47,49 ⋆ Numbers that are congruent to { 1, 2, 6, 7 } mod 8. • a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. • a(n) = 2 * n + (1 + i) * (2 * i - 2 - (1 - i) * i ^ (2 * n) - i ^ (1 - n) + i ^ n) / 4 where i=sqrt(- 1). •

▶ [A047277] 0,2,6,7,9,13,14,16,20,21,23,27,28,30,34,35,37,41,42,44,48,49,51,55,56 ⋆ Numbers that are congruent to { 0, 2, 6 } mod 7. • a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. • a(n) = 7 * n / 3 - 2 + cos(2 * n * Pi / 3) + sin(2 * n * P i / 3) / (3 * sqrt(3)). • a(3k) = 7k - 1, a(3k - 1) = 7k - 5, a(3k - 2) = 7k - 7. (E nd) •

▶ [A346123] 1,2,6,7,10,12,13,14,15,16,23,24,25,27,28,30,33,36,37,38,42,43,46,53,5 4 ⋆ Numbers m such that no self - avoiding walk of length m + 1 on the honeyc omb net fits into the smallest circle that can enclose a walk of length m. • a(n + 1) >= a(n) + 1 for n > 1; a(1) = 1. •

▶ [A047552] 2,6,7,10,14,15,18,22,23,26,30,31,34,38,39,42,46,47,50,54,55,58,62,63,6 6 ⋆ Numbers that are congruent to { 2, 6, 7 } mod 8. • a(n) = a(n - 1) + a(n - 3) - a(n - 4). • a(n) = (24 * n - 3 - 6 * cos(2 * n * Pi / 3) - 4 * sqrt(3) * sin(2 * n * Pi / 3)) / 9. • a(3k) = 8k - 1, a(3k - 1) = 8k - 2, a(3k - 2) = 8k - 6. (End) •

▶ [A283766] 1,2,6,7,11,12,13,16,17,18,21,22,23,27,28,32,33,34,37,38,39,42,43,44,4 8 ⋆ Numbers k such that L(k) is odd, where L = A000201 = lower Wythoff seq uence. • a(n + 1) - a(n) is in { 1,3,4 } for every n. •

▶ [A047216] 1,2,6,7,11,12,16,17,21,22,26,27,31,32,36,37,41,42,46,47,51,52,56,57,6 1 ⋆ Numbers that are congruent to { 1, 2 } mod 5. • a(n) = 5 * n - a(n - 1) - 7 for n>1, with a(1)=1. - _ Vincenzo Librandi _ , Aug 05 2010 • a(n) = (10 * n - 3 * (- 1) ^ n - 9) / 4. • a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n > 3. • a(2 * k) = 5 * k - 3, a(2 * k - 1) = 5 * k - 4. (End) •

▶ [A242330] 2,6,7,11,12,17,18,27,29,35,37,42,43,48,51,53,54,55,60,65,66,69,72,73,7 5 ⋆ Numbers k such that k ^ 2 + 2 is a semiprime. • a(n) > 2n for n > 1. - _ Charles R Greathouse IV _ , Feb 24 2023 •

▶ [A088227] 2,6,7,11,15,19,20,24,28,32,33,37,41,45,46,50,54,58,59,63,67,71,72,76,8 0 ⋆ Solutions x to x ^ n == 7 mod 13. • a(n) = - 6 + Sum _{ k=0..n } ((1 / 2 4) * (- 5 * (k mod 4) + 31 * ((k + 1) mod 4) + 13 * ((k + 2) mod 4) + 13 * ((k + 3) mod 4))), with n>=1. - _ Paolo P. Lava _ , Feb 29 2008 •

▶ [A078471] 1,2,6,7,13,17,25,26,39,45,57,61,75,83,107,108,126,139,159,165,197,20 9,233,237,268 ⋆ Sum of all odd divisors of all positive integers <= n. • a(n) is a symptotic to c * n ^ 2 where c = Pi ^ 2 / 24. • a(n) = Sum _{ k=1..n } (sigm a(2k) - 2 * sigma(k)), where sigma = A000203. •

▶ [A128918] 1,1,2,6,7,15,16,28,29,45,46,66,67,91,92,120,121,153,154,190,191,231,2 32,276,277 ⋆ a(n) = n * (n + 1) / 2 if n is odd, otherwise (n - 1) * n / 2 + 1. • a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5), with a(0)=1, a(1)=1, a(2)=2, a(3)=6, a(4)=7. - _ Harvey P. Dale _ , Mar 31 2012 • a(n) = (1 / 2) * (- 1) ^ n * (n + (- 1) ^ n * ((n - 2) * n + 2) - 2). - _ Harvey P. Dale _ , Mar 31 2012 •

▶ [A290379] 2,6,7,18,39,75,155,310,638,1295,2624,5339,10853,22069,44836,9113 4,185259,376542,765331,1555567,3161843,6426646,13062506,26550391,53965428 ⋆ Number of minimal dominating sets in the n - ladder graph. • a(n) = a(n - 2) + 3 * a(n - 3) + 4 * a(n - 4) + 4 * a(n - 5) + a(n - 6) + 2 * a(n - 7) + 3 * a(n - 8) + 5 * a(n - 9) + 4 * a(n - 10) + 2 * a(n - 11) for n > 11. •

▶ [A220946] 1,2,6,7,21,22,66,67,201,202,606,607,1821,1822,5466,5467,16401,1640 2,49206,49207,147621,147622,442866,442867,1328601 ⋆ Expansion of (1 + 2 * x + 2 * x ^ 2 - x ^ 3) / ((1 - x) * (1 + x) * (1 - 3x ^ 2)). • a(n) = a(n - 1) + 1 if n odd, a(n) = a(n - 1) * 3 if n even. • a(n) = 4 * a(n - 2) - 3 * a(n - 4) with a(0)=1, a(1)=2, a(2)=6, a(3)=7. •

▶ [A060112] 0,1,2,6,7,24,25,26,120,121,122,126,127,720,721,722,726,727,744,745,7 46,5040,5041,5042,5046 ⋆ Sums of nonconsecutive factorial numbers. • a(n) = P ermRevLexRank(CampanoPerm(n)) •

▶ [A047397] 0,1,2,6,8,9,10,14,16,17,18,22,24,25,26,30,32,33,34,38,40,41,42,46,48 ⋆ Numbers that are congruent to { 0, 1, 2, 6 } mod 8. • a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. • a(n) = (8 * n - 11 + i ^ (2 * n) + (1 + 2 * i) * i ^ (- n) + (1 - 2 * i) * i ^ n) / 4, where i=sqrt(- 1). •

▶ [A047278] 1,2,6,8,9,13,15,16,20,22,23,27,29,30,34,36,37,41,43,44,48,50,51,55,57 ⋆ Numbers that are congruent to { 1, 2, 6 } mod 7. • a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. • a(n) = (21 * n - 15 + 6 * cos(2 * n * Pi / 3) + 4 * sqrt(3) * sin(2 * n * Pi / 3)) / 9. • a(3k) = 7k - 1, a(3k - 1) = 7k - 5, a(3k - 2) = 7k - 6. (End) •

▶ [A141105] 2,6,8,10,14,16,18,20,24,26,28,32,34,36,40,42,44,48,50,52,54,58,60,62,6 6 ⋆ Upper Even Swappage of Upper Wythoff Sequence. • a(n) = round(n * tau ^ 2), with tau = (1 + sqrt(5)) / 2 (the golden ratio A001622). •

▶ [A047395] 0,2,6,8,10,14,16,18,22,24,26,30,32,34,38,40,42,46,48,50,54,56,58,62,6 4 ⋆ Numbers that are congruent to { 0, 2, 6 } mod 8. • a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. • a(n) = 2 * (12 * n - 12 + 3 * cos(2 * n * Pi / 3) + sqrt(3) * sin(2 * n * Pi / 3)) / 9. • a(3k) = 8k - 2, a(3k - 1) = 8k - 6, a(3k - 2) = 8k - 8. (End) • a(n) = 2 * (n - 1 + floor(n / 3)). - _ Wolfdieter Lang _ , Sep 11 2 021 •

▶ [A038619] 1,2,6,8,10,18,20,28,68,88,108,188,200,208,288,688,888,1088,1888,200 8,2088,2888,6888,8888,10888 ⋆ Smallest positive number that needs more lines when shown on a 7 - segment display (digital clock) than any previous term. • a(n) = 10 * a(n - 7) + 8 for n > 13 (and with a(n - 6) for 7 < n < 13). • a(n) = a(n - 1) + 10 * a(n - 7) - 10 * a(n - 8), for n >= 15. - _ Wesley Ivan Hurt _ , Jun 29 2020 •

▶ [A247984] 2,6,8,10,32,84,128,186,512,1276,2048,3172,8192,19816,32768,52666,1 31072,310764,524288,863820,2097152,4899736,8388608,14073060,33554432 ⋆ Con stant terms of congruences derived from a permutation polynomial motivated b y generalized quadrangles. • a(n) = 2 ^ n when n is odd and a(n) = 2 ^ n - (- 1) ^ (n / 2) * binomial(n, n / 2) when n is even. •

▶ [A130205] 1,2,6,8,11,17,21,26,34,40,47,57,65,74,86,96,107,121,133,146,162,176,1 91,209,225 ⋆ a(n) = n ^ 2 - a(n - 1) - a(n - 2), with a(1) = 1 and a(2) = 2. • a(1)=1, a(2)=2; n>2: a(n)=n ^ 2 - a(n - 1) - a(n - 2). • a(n) = floor((n ^ 2 + 2 * n + 1) / 3) + 1 - (n mod 3). - _ Ivan Neretin _ , May 25 2015 •

▶ [A047238] 0,2,6,8,12,14,18,20,24,26,30,32,36,38,42,44,48,50,54,56,60,62,66,68,7 2 ⋆ Numbers that are congruent to { 0, 2 } mod 6. • a(n) = a(n - 1) + a(n - 2) - a(n - 3), a(0)=0, a(1)=2, a(2)=6. • a(n) = (6 * n - (- 1) ^ n - 7) / 2. • a(n) = 6 * n - a(n - 1) - 10 (with a(1)=0). - _ Vincenzo Librandi _ , Aug 05 2010 • a(n) = 2 * floor(3 * n / 2). - _ Enrique Pérez Herrero _ , Jul 04 2012 •

▶ [A064796] 1,2,6,8,12,15,20,24,30,35,42,48,56,63,72,80,90,99,110,120,132,143,15 6,168,182 ⋆ Largest integer m such that every permutation (p _ 1, ..., p _ n) of (1, ..., n) satisfies p _ i * p _{ i + 1 } >= m for some i, 1 <= i <= n, where p _{ n + 1 } = p _ 1. • a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4) for n>6. G.f .: - x * (x ^ 5 - x ^ 4 - 2 * x ^ 3 + 2 * x ^ 2 + 1) / ((x - 1) ^ 3 * (x + 1)). - _ Colin Barker _ , Aug 28 2013 •

▶ [A247066] 1,2,6,8,12,16,17,21,24,27,32,33,34,38,40,44,48,49,53,56,59,64,65,66,7 0 ⋆ Dynamic Betting Game D(n,6,2). • a(n) = a(n - 1) + a(n - 11) - a(n - 12). •

▶ [A283233] 2,6,8,12,16,18,22,24,28,32,34,38,42,44,48,50,54,58,60,64,66,70,74,76,8 0 ⋆ 2 * A000201. • a(n) = 2 * floor(n * r), where r = (1 + sqrt(5)) / 2. •

▶ [A087327] 1,2,6,8,13,18,25,32,41,50,61,72,85,98,113,128,145,162,181,200,221,24 2,265,288,313 ⋆ Independence numbers for KT _ 2 knight on triangular board. • a(n) = ceiling(n ^ 2 / 2) except for n=3. • a(n) = (2 * n ^ 2 - (- 1) ^ n + 1) / 4 for n>3. • a(n) = n ^ 2 / 2 for even n>3; a(n) = (n ^ 2 + 1) / 2 for odd n >3. • a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4) for n>3. •

▶ [A022112] 2,6,8,14,22,36,58,94,152,246,398,644,1042,1686,2728,4414,7142,1155 6,18698,30254,48952,79206,128158,207364,335522 ⋆ Fibonacci sequence beginnin g 2, 6. • a(n) = 4 * Fibonacci(n + 2) - 2 * Fibonacci(n + 1). - _ Gary Detlefs _ , Dec 21 2010 • a(n) = Fibonacci(n - 2) + Fibonacci(n + 4). - _ Gary Detlefs _ , Mar 31 2012 • a(n) = L(n - 1) + L(n) + L(n + 1), for n > 0, where L(n) is the n - th Lucas number (A000204). - _ Alonso del Arte _ , Sep 25 2013 • a(n) = L(n + 3) - L(n). - _ Bruno Berselli _ , Jun 15 2017 • a(n) = (2 ^ (- n) * ((1 - sqrt(5)) ^ n * (- 5 + sqrt(5)) + (1 + sqrt(5)) ^ n * (5 + sqrt(5)))) / sqrt(5). • a(n) = a(n - 1) + a(n - 2) for > 1. •

▶ [A093005] 1,2,6,8,15,18,28,32,45,50,66,72,91,98,120,128,153,162,190,200,231,24 2,276,288,325 ⋆ a(n) = n * ceiling(n / 2). • a(2 * n - 1) = n * (2 * n - 1), a(2 * n) = 2 * n ^ 2. • a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5); • a(n) = n * (2 * n + 1) / 4 - n * (- 1) ^ n / 4. (End) • a(n) = n * ceiling(n / 2). - _ Wesley Ivan Hurt _ , Nov 14 2013 •

▶ [A326300] 2,6,8,16,18,22,24,40,42,46,48,56,58,62,64,96,98,102,104,112,114,118,1 20,136,138 ⋆ Steinhaus sums. • a(n) = Sum _{ k>=1 } floor(n / 2 ^ k + 1 / 2) * 2 ^ k. •

▶ [A238549] 1,2,6,8,16,20,36,44,76,92,156,188,316,380,636,764,1276,1532,2556,30 68,5116,6140,10236,12284,20476 ⋆ a(n) is one fourth of the total number of free ends of 4 line segments expansion at n iterations (see Comments lines for defini tion). • a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3). •

▶ [A005823] 0,2,6,8,18,20,24,26,54,56,60,62,72,74,78,80,162,164,168,170,180,182,1 86,188,216 ⋆ Numbers whose ternary expansion contains no 1's. • a(2n) = 3 * a (n) + 2, a(2n + 1) = 3 * a(n + 1), a(1) = 0. •

▶ [A093968] 1,1,2,6,8,20,24,56,64,144,160,352,384,832,896,1920,2048,4352,4608,9728,10240,21504,22528,47104,49152 ⋆ Inverse binomial transform of n * Pell(n). • a(n) = 2 ^ ((n - 4) / 2)n((1 + sqrt(2)) + (1 - sqrt(2))(- 1) ^ n). • a(n) = n * 2 ^ floor((n - 1) / 2). - _ Anton Zakharov _ , Jul 25 2016 •

▶ [A162213] 1,2,6,8,20,36,70,128,261,520,1034,2052,4108,8204,16395,32768,65552,131076,262162,524300,1048593,2097172,4194326,8388624,16777225 ⋆ a(n) = the smallest positive multiple of n with exactly n digits when written in binary. • a(n) = n * ceiling(2 ^ (n - 1) / n). - _ Alois P. Heinz _ , Jul 11 2009 •

▶ [A134136] 0,1,1,2,6,8,20,40,72,160,304,608,1248,2432,4928,9856,19584,39424,78592,157184,314880,628736,1258496,2516992,5031936 ⋆ a(n) = 2 * a(n - 2) + 4 * a(n - 3), with initial terms 0, 1, 1. • a(n) = (6 * 2 ^ n - (3 + i) * (- 1 + i) ^ n - (3 - i) * (- 1 - i) ^ n) / 20. - _ Ivan Neretin _ , May 27 2015 •

▶ [A343256] 0,1,2,6,8,22,32,66,118,204,366,644,1120,1902,3300,5676,9690,16620,28152,47900,80856,136546,230754,387570,651932 ⋆ Difference between prime(Fibonacci(n + 1)) and prime(Fibonacci(n)). • a(n) = prime(Fibonacci(n + 1)) - prime(Fibonacci(n)). •

▶ [A045654] 1,2,6,8,22,32,72,128,278,512,1056,2048,4168,8192,16512,32768,65814,131072,262656,524288,1049632,2097152,4196352,8388608,16781384 ⋆ Number of 2n - bead balanced binary strings, rotationally equivalent to complement. • a(0)=1, a(2n) = a(n) + 2 ^ (2n), a(2n + 1) = 2 ^ (2n + 1). - _ Ralf Stephan _ , Jun 07 2003 •

▶ [A332348] 1,2,6,8,22,40,82,176,340,722,1450,2966,6096,12362,25384,51728,105698,216074,440962,901396,1840686,3760232,7681828,15689962,32053346 ⋆ Number of maximal independent sets in the 3 X n king graph. • a(n) = a(n - 1) + 2 * a(n - 2) + a(n - 3) - 2 * a(n - 4) + 2 * a(n - 5) - 2 * a(n - 6) for n >= 6. •

▶ [A122756] 1,2,6,8,24,32,96,128,384,512,1536,2048,6144,8192,24576,32768,98304,131072,393216,524288,1572864,2097152,6291456,8388608,25165824 ⋆ Odd - indexed terms, a(n) = 2 ^ n. Even - indexed terms, a(n) = floor(2 ^ n + 2 ^ (n - 1)). • a(0)=1, a(1)=2, a(2)=6, a(n)=4 * a(n - 2) for n>=3. G.f.: (1 + 2 * x + 2 * x ^ 2) / (1 - 4 * x ^ 2). - _ Philippe Deléham _ , Dec 14 2007 • a(n) = - sqrt(2) * (1 / 2) ^ ((- 1 / 2) * (- 1) ^ (n - 1)) * (- 2) ^ (n - 1) + 2 * 2 ^ (n - 1) * sqrt(2) * (1 / 2) ^ ((- 1 / 2) * (- 1) ^ (n - 1)) - (1 / 2) * (C(2 * n,n) mod 2). [_ Paolo P. Lava _ , Nov 19 2008] • a(n - 1) = (5 * 2 ^ n - (- 2) ^ n) / 8 for n>1. - _ Ralf Stephan _ , Jul 18 2013 •

▶ [A272614] 1,2,6,8,28,40,104,144,496,672,1632,2240,7872,11648,27520,33536,120576,175616,445952,629760,2014208,2701312,6453248,8712192,33353728 ⋆ Numbers whose binary digits, except for the first "1", are given by floor(((k - n) / n) mod 2) with 1<=k<=n. • a(n) = 2 ^ n + Sum _{ k=1..n } [floor(((n - k) / k) mod 2) * 2 ^ (n - k)]. •

▶ [A132269] 1,2,6,8,30,36,56,64,270,300,396,432,728,784,960,1024,4590,4860,5700,6000,8316,8712,9936,10368,18200 ⋆ a(n) = Product _{ k>=0 } (1 + floor(n / 2 ^ k)). • a(2 ^ m - 1) = 2 ^ (m * (m + 1) / 2), a(2 ^ m) = 2 ^ (m * (m + 1) / 2) * Product _{ k=0..m } (1 + 1 / 2 ^ k), m>=1. •

▶ [A152158] 0,1,1,2,6,8,38,110,186,846,1776,4314,13194,47706,166452,500394,1998462,3499644,7496568,17995500,77968044,149950044,617758308,917658396,4624208244 ⋆ A sequence set up on the first 1000 base ten Pi digits: a(n)=a(n - 1) + a(n - 2) * Floor[Mod[N[Pi * 10 ^ (n - 2), 1000], 10]]. • a(n) = a(n - 1) + a(n - 2) * floor(Pi * 10 ^ (n - 2) mod 10). •

▶ [A282079] 1,1,2,6,9,9,12,20,25,25,30,42,49,49,56,72,81,81,90,110,121,121,132,156,169 ⋆ Number of n - element subsets of [n + 2] having an even sum. • a(n) = (2 * (1 + n) * (2 + n) - i * (- i) ^ n * ((1 + 2 * i) + (1 + i) * n) + i ^ n * ((2 + i) + (1 + i) * n)) / 8 where i=sqrt(- 1). - _ Colin Barker _ , Feb 06 2017 •

▶ [A047396] 1,2,6,9,10,14,17,18,22,25,26,30,33,34,38,41,42,46,49,50,54,57,58,62,65 ⋆ Numbers that are congruent to { 1, 2, 6 } mod 8. • a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4, with a(1)=1, a(2)=2, a(3)=6, a(4)=9. - _ Harvey P. Dale _ , Sep 30 2012 • a(n) = (24 * n - 21 + 3 * cos(2 * n * Pi / 3) + 5 * sqrt(3) * sin(2 * n * Pi / 3)) / 9. • a(3k) = 8k - 2, a(3k - 1) = 8k - 6, a(3k - 2) = 8k - 7. (End) •

▶ [A000134] 2,6,9,12,15,18,21,24,27,31,34,37,40,43,46,49,53,56,59,62,65,68,71,75,78 ⋆ Positive zeros of Bessel function of order 0 rounded to nearest integer. • a(n) = Pi * n + O(1). Probably a(n + 1) - a(n) is 3 or 4 for all n. - _ Charles R Greathouse IV _ , Oct 04 2016 •

▶ [A120701] 2,6,9,12,15,18,21,25,28,31,34,37,40,43,47,50,53,56,59,62,65,69,72,75,78 ⋆ Number of unit circles which fit touching a circle of radius n - 1, i.e., with their centers on a circle of radius n. • a(n) = floor(Pi / arcsin(1 / n)). •

▶ [A184619] 2,6,9,12,16,19,23,26,29,33,36,40,43,46,50,53,57,60,64,67,70,74,77,81,84 ⋆ a(n) = floor((n - h) * s + h), where s=2 + sqrt(2) and h=1 / 3; complement of A184618. • a(n) = floor((n - h) * s + h), where s=2 + sqrt(2) and h=1 / 3. •

▶ [A184119] 2,6,9,12,16,19,23,26,30,33,36,40,43,47,50,53,57,60,64,67,70,74,77,81,84 ⋆ Upper s(n) - Wythoff sequence, where s(n) = 2n - 1; complement of A136119. • a(n) = floor((2 + sqrt(2)) * n - sqrt(2) / 2). - _ Michel Dekking _ , Jan 31 2017 •

▶ [A184821] 2,6,9,13,16,20,22,26,29,33,36,40,43,46,50,53,57,60,63,66,70,73,77,81,83 ⋆ a(n) = n + floor(n * t) + floor(n / t), where t is the tribonacci constant. • a(n) = n + floor(n * p / q) + floor(n * r / q), where p=t, q=t ^ 2, r=t ^ 3, and t is the tribonacci constant (see Clark Kimberling's formula in A184812). •

▶ [A047276] 2,6,9,13,16,20,23,27,30,34,37,41,44,48,51,55,58,62,65,69,72,76,79,83,86 ⋆ Numbers that are congruent to { 2, 6 } mod 7. • a(n) = 7 * n - a(n - 1) - 6 (with a(1)=2). - _ Vincenzo Librandi _ , Aug 05 2010 • a(n) = 3 * n + floor(n / 2) - 1. - _ Arkadiusz Wesolowski _ , Sep 19 2012 •

▶ [A054770] 2,6,9,13,17,20,24,27,31,35,38,42,46,49,53,56,60,64,67,71,74,78,82,85,89 ⋆ Numbers that are not the sum of distinct Lucas numbers 1,3,4,7,11, ... (A000204). • a(n) = floor(((5 + sqrt(5)) / 2) * n) - 1 (conjectured by _ David W. Wilson _ ; proved by Ian Agol (iagol(AT)math.ucdavis.edu), Jun 08 2000) •

▶ [A184745] 2,6,9,13,17,20,24,28,32,35,39,43,46,50,54,58,61,65,69,73,76,80,84,87,91 ⋆ floor(n * (e - 1 / 2) + 1 / 2); complement of A184744. • a(n)=floor(n * (e - 1 / 2) + 1 / 2). •

▶ [A048162] 1,1,2,6,9,13,20,31,49,78,125,201,324,523,845,1366,2209,3573,5780,9351,15129,24478,39605,64081,103684 ⋆ Expansion of (1 - x + 3 * x ^ 3 - 2 * x ^ 4 - 3 * x ^ 5) / (1 - 2 * x + x ^ 3). • a(n) = Fibonacci(n + 1) + Fibonacci(n - 1) + 2, for n>2. - Jessa Lee (jessal(AT)comcast.net), Nov 25 2003 •

▶ [A184824] 2,6,9,14,17,21,24,29,32,36,39,44,47,50,54,58,61,65,69,73,76,80,84,88,91 ⋆ a(n) = n + floor(n * t) + floor(n / t) + floor(n / t ^ 2), where t is the tetranacci constant. • a(n) = n + floor(n * p / r) + floor(n * q / r) + floor(n * s / r), where p=t, q=t ^ 2, r=t ^ 3, s=t ^ 4, and t is the tetranacci constant. •

▶ [A184836] 2,6,9,14,17,21,24,30,33,37,40,45,48,52,55,61,64,68,71,76,79,83,87,92,95 ⋆ a(n) = n + floor(n * t) + floor(n / t) + floor(n / t ^ 2) + floor(n / t ^ 3), where t is the pentanacci constant. • a(n) = n + floor(n * p / s) + floor(n * q / s) + floor(n * r / s) + floor(n * u / s), where p=t, q=t ^ 2, r=t ^ 3, s=t ^ 4, u=t ^ 5, and t is the pentanacci constant. •

▶ [A096378] 0,2,6,9,14,20,26,34,42,51,61,72,84,96,109,124,139,155,172,190,208,228,248,269,291 ⋆ Floor of area of triangle with consecutive integer sides. • a(n) = floor((n + 1) * sqrt(3 * (n + 3) * (n - 1)) / 4). •

▶ [A320666] 0,2,6,9,14,22,29,38,51,61,74,92,105,122,145,161,182,210,229,254,287,309,338,376 ⋆ a(n) is the maximum number of liberties a single group can have on an otherwise empty n X n Go board. • a(n) = a(n - 1) + 2 * a(n - 3) - 2 * a(n - 4) - a(n - 6) + a(n - 7) for n>9. •

▶ [A260699] 0,1,2,6,9,15,20,28,34,45,53,66,76,91,102,120,133,153,168,190,206,231,249,276,296 ⋆ a(2n + 6) = a(2n) + 12 * n + 20, a(2n + 1) = (n + 1) * (2 * n + 1), with a(0)=0, a(2)=2, a(4)=9. • a(n) = a(n - 1) + a(n - 2) - a(n - 3) + a(n - 6) - a(n - 7) - a(n - 8) + a(n - 9). • a(6 * k) = 2 * k * (9 * k + 1), • a(6 * k + 2) = 2 * (9 * k ^ 2 + 7 * k + 1), • a(6 * k + 4) = 18 * k ^ 2 + 26 * k + 9. • a(n) = n * (n + 1) / 2 - (1 + (- 1) ^ n) * floor(n / 6 + 2 / 3) / 2. [_ Bruno Berselli _ , Nov 18 2015] •

▶ [A084265] 1,2,6,9,15,20,28,35,45,54,66,77,91,104,120,135,153,170,190,209,231,252,276,299,325 ⋆ a(n) = (n ^ 2 + 3 * n + 1 + (- 1) ^ n) / 2. • a(n) = (n ^ 2 + 3 * n + 1) / 2 + (- 1) ^ n / 2. • a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4). • a(n) = Sum _{ i=0..n + 1 } i - (- 1) ^ i. (End) •

▶ [A103139] 1,2,6,9,15,22,28,39,49,59,73 ⋆ Woolbright sequence: the maximum number of kings on an n X n chessboard such that every single king is attacking a number of other kings that is smaller or equal to the number of empty spaces around it. • a(n) = n ^ 2 - gamma _{ 1 / 2 } (n) = approx floor(3 * (n ^ 2 + 1) / 5). (I assume this is a lower bound? - _ N. J. A. Sloane _) •

▶ [A043548] 1,1,2,6,9,16,20,30,42,49,64,81,90,110,132,156,169,196,225,256,272,306,342,380,420 ⋆ Least separator of first n Egyptian fractions; i.e., least k for which the integers floor(k / m) for m=1,2,...,n are distinct. • a(n) = n ^ 2 + floor(sqrt(n - 1)) * floor(sqrt(n) + 1 / 2) - n * floor(sqrt(n - 1)) - n * floor(sqrt(n) + 1 / 2), for n>1. - _ Ridouane Oudra _ , Jun 08 2020 • a(n) = n ^ 2 - n * t + floor((t ^ 2) / 4), where t = floor(sqrt(4 * n - 3)) for n>1. - _ Ridouane Oudra _ , Jan 24 2023 •

▶ [A257083] 1,2,6,9,17,22,34,41,57,66,86,97,121,134,162,177,209,226,262,281,321,342,386,409,457 ⋆ Partial sums of A257088. • a(n) = (6 * n * (n + 1) + (2 * n + 1) * (- 1) ^ n + 7) / 8. (End) • a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). - _ Wesley Ivan Hurt _ , Oct 30 2022 •

▶ [A054974] 1,2,6,9,17,23,36,46,65,80,106,127,161,189,232,268,321,366,430,485,561,627,716,794,897 ⋆ Number of nonnegative integer 2 X 2 matrices with no zero rows or columns and with sum of elements equal to n, up to row and column permutation. • a(n) = (6 - 6 * (- 1) ^ n + (9 * (- 1) ^ n - 17) * n + 12 * n ^ 2 + 2 * n ^ 3) / 48. • a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + a(n - 4) + 2 * a(n - 5) - a(n - 6) for n>7. •

▶ [A072481] 0,0,0,1,2,6,9,17,25,37,50,72,89,117,148,184,220,271,318,382,443,513,590,688,773 ⋆ a(n) = Sum _{ k=1..n } Sum _{ d=1..k } (k mod d). • a(n) = Sum _{ k=1..n } Sum _{ d=1..k } (k mod d). •

▶ [A028724] 0,0,0,0,1,2,6,9,18,24,40,50,75,90,126,147,196,224,288,324,405,450,550,605,726 ⋆ a(n) = (1 / 2) * floor(n / 2) * floor((n - 1) / 2) * floor((n - 2) / 2). • a(3 - n) = - a(n). - _ Michael Somos _ , Jan 27 2008 • a(n) = (- 3 + 11 * n - 9 * n ^ 2 + 2 * n ^ 3 + (- 1) ^ n * (3 - 3 * n + n ^ 2)) / 32. - _ Benedict W. J. Irwin _ , Sep 27 2016 • a(n) = Sum _{ i=1..floor((n - 1) / 2) } i * (floor((n - 1) / 2) mod (n - i - 1)). - _ Wesley Ivan Hurt _ , Nov 17 2017 •

▶ [A082290] 1,2,6,9,19,26,46,59,94,116,172,206,290,340,460,530,695,790,1010,1135,1421,1582,1946,2149,2604 ⋆ Expansion of (1 + x + x ^ 2) / ((1 + x ^ 2) * (1 + x) ^ 4 * (1 - x) ^ 5). • a(n) = 3 * a(n - 2) - 2 * a(n - 4) - 2 * a(n - 6) + 3 * a(n - 8) - a(n - 10) + 3. • a(n) = a(- 9 - n) for all n in Z. • a(n) = (6 * n ^ 4 + 108 * n ^ 3 + 666 * n ^ 2 + 1620 * n + 1251 + (4 * n ^ 3 + 54 * n ^ 2 + 236 * n + 333) * (- 1) ^ n - 48 * (- 1) ^ ((6 * n - 1 + (- 1) ^ n) / 4)) / 1536. - _ Luce ETIENNE _ , Oct 23 2014 •

▶ [A279897] 2,6,9,20,43,94,213,456,1003,2146,4625,9852,20983,44438,93917,197808,415683,871370,1822889,3805924,7932303,16505342,34292341,71147800,147422043 ⋆ Number of n X 3 0..2 arrays with no element unequal to a strict majority of its king - move neighbors, with the exception of exactly one element, and with new values introduced in order 0 sequentially upwards. • a(n) = (1280 * (- 1) ^ n + 31 * 2 ^ (2 + n) - 264 * (- 1) ^ n * n + 33 * 2 ^ n * n) / 216 for n>3. •

▶ [A047161] 0,0,1,2,6,9,21,30,70,100,235,335,791,1127,2681,3822,9150,13050,31401,44802,108262,154517,374715,534963,1301235 ⋆ Number of nonempty subsets of { 1,2,...,n } in which exactly 1 / 3 of the elements are <= n / 2. • a(n) = Sum _{ k>=1 } binomial(floor(n / 2), k) * binomial(ceiling(n / 2), 2 * k). - _ Andrew Howroyd _ , Apr 11 2021 •

▶ [A127931] 1,2,6,9,23,29,70,72,103,112,128,147,157,158,162,165,179,185,226,228,259,268,284,303,313 ⋆ Numbers k such that 13 divides 11 * k + 2 ^ k. • a(n) = a(n - 1) + a(n - 12) - a(n - 13). - _ Wesley Ivan Hurt _ , Feb 22 2022 •

▶ [A077237] 1,2,6,9,23,34,86,127,321,474,1198,1769,4471,6602,16686,24639,62273,91954,232406,343177,867351,1280754,3236998,4779839,12080641 ⋆ Combined Diophantine Chebyshev sequences A054491 and A077234. • a(n) = 4 * a(n - 2) - a(n - 4). - _ Matthew House _ , Feb 11 2017 •

▶ [A180123] 2,6,10,13,17,21,25,28,32,36,40,43,47,51,54,58,62,66,69,73,77,81,84,88,92 ⋆ Second of three "least, sum, least" self - generating sequences. • a(n) = least positive integer not yet used; •

▶ [A111284] 1,2,6,10,14,18,22,26,30,34,38,42,46,50,54,58,62,66,70,74,78,82,86,90,94 ⋆ Number of permutations of [n] avoiding the patterns { 2143, 2341, 2413, 24

31, 3142, 3241, 3412, 3421, 4123, 4213, 4231, 4321, 4132, 4312 } ; number of strong sorting classes based on 2143. ● a(n) = 4 * n - 6, n>=2. ● a(n ^ 2 - 2n + 3) / 2 = Sum _{ i=1..n } a(i). - _ Ivan N. Ianakiev _ , Apr 24 2013 ● a(n) = 2 * a(n - 1) - a(n - 2), n>3. - _ Rick L. Shepherd _ , Jul 06 2017 ●

▶ [A130824] 0,2,6,10,14,18,22,26,30,34,38,42,46,50,54,58,62,66,70,74,78,82,86,90,94 ⋆ a(n) = 2 * A004273(n). ● a(n) = 4 * n - 2 * ((n + 2) mod (n + 1)) for n >= 0. - _ Paolo P. Lava _ , Aug 29 2007 ● a(n) = 2 * a(n - 1) - a(n - 2) for n > 0. ● a(n) = 4 * n - 1 - (- 1) ^ (2 ^ n). (End) ●

▶ [A016825] 2,6,10,14,18,22,26,30,34,38,42,46,50,54,58,62,66,70,74,78,82,86,90,94,98 ⋆ Positive integers congruent to 2 (mod 4): a(n) = 4 * n + 2, for n >= 0. ● a(n) = 4 * n + 2, for n >= 0. ● a(n) = a(n - 1) + 4. ● a(- 1 - n) = - a(n). (End) ● a(n) = 8 * n - a(n - 1) for n > 0, a(0)=2. - _ Vincenzo Librandi _ , Nov 20 2010 ●

▶ [A132417] 2,6,10,14,18,22,26,30,34,38,42,46,50,54,58,126,130,134,138,142,146,150,154,158,162 ⋆ a(16j + i) := 8(16j + i) + e _ i, for j >= 0, 0 <= i <= 15, where e _ 0, ..., e _ 15 are 2, - 2, - 6, - 10, - 14, - 18, - 22, - 26, - 30, - 34, - 38, - 42, - 46, - 50, - 54, 6. ● a(n) = a(n - 1) + a(n - 16) - a(n - 17). - _ R. J. Mathar _ , Jul 21 2013 ●

▶ [A185548] 1,2,6,10,14,19,25,31,38,46,54,62,71,81,91,101,112,123,135,147,159,172,185,199,213 ⋆ a(n) = floor(floor(n ^ (5 / 2)) ^ (2 / 3)). ● a(n) = floor(floor(n ^ (5 / 2)) ^ (2 / 3)). ●

▶ [A276211] 2,6,10,15,20,26,32,39,46,53,60,68,76,85,94,103,112,122,132,142,152,163,174,185,196 ⋆ Position of n ^ s in the joint ranking of { h ^ r } and { k ^ s } , where r = sqrt(2), s = sqrt(5), h > 1, k > 1. ● a(n) = n + floor(n ^ (s / r)); the complement is given by n + floor(n ^ (r / s)). ●

▶ [A190091] 2,6,10,15,20,26,32,39,46,54,62,71,80,90,100,111,122,134,146,159,172,186,200,215,230 ⋆ Number of rhombuses on a (n + 1) X 3 grid. ● a(n) = (n ^ 2 + 12 * n - 4) / 4 for n even. ● a(n) = (n ^ 2 + 12 * n - 5) / 4 for n odd. ●

▶ [A186783] 0,1,2,6,10,15,21,28,36,45,55,66,78 ⋆ Diameter of the symmetric group S _ n when generated by the transposition (1,2) and both left and right rotations by (1,2,...,n). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A133931] 2,6,10,15,21,29,40,56,80,117,175,267,414,650,1030,1643,2633,4233,6820,11004,17772,28721,46435,75095,121466 ⋆ Expansion of x * (2 - 4 * x ^ 2 - x ^ 3) / ((1 - x) ^ 2 * (1 - x - x ^ 2)). ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - a(n - 3) + a(n - 4). G.f.: x * (2 - 4 * x ^ 2 - x ^ 3) / ((1 - x) ^ 2 * (1 - x - x ^ 2)). [_ Colin Barker _ , Jun 10 2012] ●

▶ [A293408] 0,1,2,6,10,15,22,30,40,50,62,75,89,104,121,139,158,179,200,223,247,273,299,327,356 ⋆ The integer k that minimizes |k / n ^ 2 - 1 / tau|, where tau = (1 + sqrt(5)) / 2 (golden ratio). ● a(n) = floor(1 / 2 + (n ^ 2) / tau). ●

▶ [A183575] 0,2,6,10,16,22,30,38,48,58,70,82,96,110,126,142,160,178,198,218,240,262,286,310,336 ⋆ a(n) = n - 1 + ceiling((n ^ 2 - 2) / 2); complement of A183574. ● a(n) = n - 1 + ceiling(n ^ 2 / 2 - 1). ● a(n) = (n ^ 2 + 2 * n - 4) / 2 for n even. ● a(n) = (n ^ 2 + 2 * n - 3) / 2 for n odd. ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4) for n > 4. ●

▶ [A030511] 2,6,10,16,24,32,42,54,66,80,96,112,130,150,170,192,216,240,266,294,322,352,384,416,450 ⋆ Graham - Sloane - type lower bound on the size of a ternary (n,3,3) constant - weight code. ● a(n) = 2 * (n - 1) ^ 2 / 3 if n==1 (mod 3), a(n) = 2 * n * (n - 2) / 3 otherwise. ● a(n) = floor((2 / 3) * (n - 1) ^ 2). - _ Wesley Ivan Hurt _ , Jun 19 2013 ● a(n) = (2 * (n - 2) * n - (- 1) ^ floor(2 * (n - 2) / 3) + 1) / 3. - _ Bruno Berselli _ , Aug 08 2013 ● a(n) = a(n - 1) + 2 * floor((n - 1) * 2 / 3). - _ Gionata Neri _ , Apr 26 2015 ● a(n) = floor((n - 2) * (n - 1) / 3) + floor((n - 1) * n / 3) = floor((n - 1) * (n + 1) / 3) + floor((n - 1) * (n - 3) / 3). - _ Bruno Berselli _ , Mar 02 2017 ●

▶ [A351635] 2,6,10,16,38,54,142,196,530,726,1978,2704,7382,10086,27550,37636,102818,140454,383722,524176,1432070,1956246,5344558,7300804,19946162 ⋆ a(n) is the number of perfect matchings of an edge - labeled 2 X n Klein bottle grid graph, or equivalently the number of domino tilings of a 2 X n Klein bottle grid . (The twist is on the length - n side.) ● a(n) = a(n - 1) + a(n - 2) + (n mod 2) * a(n - 1) - 4 * (n mod 2). ● a(n) = 5 * a(n - 2) - 5 * a(n - 4) + a(n - 6) for n > 6. (End) ●

▶ [A238377] 1,2,6,10,17,24,34,44,57,70,86,102,121,140,162,184,209,234,262,290,321,352,386,420,457 ⋆ Row sums of triangle in A204028. ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4), a(0) = 1, a(1) = 2, a(2) = 6, a(3) = 10. ●

▶ [A290220] 0,2,6,10,18,26,34,42,58,70,78,94,106,114,130,142,150,166,178,186,202,214,222,238,250 ⋆ Narrow cross sequence (see Comments lines for definition). ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>6. ●

▶ [A084481] 2,6,10,18,38,84,186,410,904,1994,4398,9700,21394,47186,104072,229538,506262,1116596,2462730,5431722,11980040,26422810,58277342,128534724,283492258 ⋆ Number of fault - free tilings of a 4 X 2n rectangle with L tetrominoes. ● a(n) = 2 * a(n - 1) + a(n - 3) for n>6. - _ Colin Barker _ , Mar 28 2017 ●

▶ [A005993] 1,2,6,10,19,28,44,60,85,110,146,182,231,280,344,408,489,570,670,770,891,1012,1156,1300,1469 ⋆ Expansion of (1 + x ^ 2) / ((1 - x) ^ 2 * (1 - x ^ 2) ^ 2). ● a(2n) = (n + 1)(2n ^ 2 + 4n + 3) / 3, a(2n + 1) = (n + 1)(n + 2)(2n + 3) / 3. a(- 4 - n) = - a(n). ● a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + a(n - 4) + 2 * a(n - 5) - a(n - 6). - _ Jaume Oliver Lafont _ , Dec 05 2008 ● a(n) = (n ^ 3 + 6 * n ^ 2 + 11 * n + 6) / 12 + ((n + 2) / 4)[n even] (the bracket means that the second term is added if and only if n is even). - _ Benoit Jubin _ , Mar 31 2012 ● a(n) = (1 / 12) * n * (n + 1) * (n + 2) + (1 / 4) * (n + 1) * (1 / 2) * (1 - (- 1) ^ n), with offset 1. - _ Yosu Yurramendi _ , Jun 20 2013 ● a(n) = Sum _{ i=0..n + 1 } ceiling(i / 2) * round(i / 2) = Sum _{ i=0..n + 2 } floor(i / 2) ^ 2. - _ Bruno Berselli _ , Aug 30 2013 ● a(n) = (n + 2) * (3 * (- 1) ^ n + 2 * n ^ 2 + 8 * n + 9) / 24. - _ Ilya Gutkovskiy _ , May 04 2016 ●

▶ [A096338] 0,1,2,6,10,20,30,50,70,105,140,196,252,336,420,540,660,825,990,1210,1430,1716,2002,2366,2730 ⋆ a(n) = (2 / (n - 1)) * a(n - 1) + ((n + 5) / (n - 1)) * a(n - 2) with a(0)=0 and a(1)=1. ● a(n) = Sum _{ k=1..floor(n / 2) + 1 } (Sum _{ i=1..k } i * (n - 2 * k + 2)) = - (floor(n / 2) + 1) * (floor(n / 2) + 2) * (floor(n / 2) + 3) * (3 * floor(n / 2) - 2 * n) / 12. - _ Wesley Ivan Hurt _ , Sep 26 2013 ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 6 * a(n - 3) + 6 * a(n - 5) - 2 * a(n - 6) - 2 * a(n - 7) + a(n - 8). - _ Wesley Ivan Hurt _ , Nov 26 2020 ●

▶ [A055895] 1,2,6,10,22,34,78,130,278,522,1062,2050,4190,8194,16518,32810,65814,131074,262734,524290,1049654,2097290,4196358,8388610,16781662 ⋆ Inverse Moebius transform of powers of 2. ● a(n) = Sum _{ d divides n } 2 ^ d. - _ Olivier Gérard _ , Jan 01 2012 ●

▶ [A258143] 1,2,6,10,25,41,98,162,381,637,1485,2509,5811,9907,22818,39202,89845,155381,354521,616665,1401291,2449867,5546381,9740685,21977515 ⋆ Row sums of A257241, Stifel's version of the arithmetical triangle. ● a(n) = Sum _{ m = 1 .. ceiling(n / 2) } binomial(n, m), n >= 1. ● a(n) = 2 ^ n - 2 - Sum _{ i=1..floor(n / 2) - 1 } binomial(n, i), n >= 2; a(1)=1. - _ Enrique Navarrete _ , Dec 16 2019 ●

▶ [A320429] 1,2,6,10,26,90,154,410,1434,2458,6554,22938,39322,104858,367002,629146,1677722,5872026,10066330,26843546,93952410,161061274,429496730,1503238554,2576980378 ⋆ The length of the shortest prefix of the Thue - Morse word decomposable to not less than n palindromes. ● a(n + 3) = 16 * a(n) - 6. ● a(n) = a(n - 1) + 16 * a(n - 3) - 16 * a(n - 4) for n > 4. (End) ●

▶ [A319014] 1,2,6,10,26,126,133,182,630,640,740,1950,1963,2132,4680,4696,4952,9576,9595,9956,17556,17578,18062,29700,29725 ⋆ a(n) = 1 * 2 * 3 + 4 * 5 * 6 + 7 * 8 * 9 + 10 * 11 * 12 + 13 * 14 * 15 + 16 * 17 * 18 + ... + (up to n). ● a(n) = Sum _{ i=1..floor(n / 3) } (3 * i)! / (3 * i - 3)! + Sum _{ j=1..2 } (1 - sign((n - j) mod 3)) * (Product _{ i=1..j } n - i + 1). ● a(n) = a(n - 1) + 4 * a(n - 3) - 4 * a(n - 4) - 6 * a(n - 6) + 6 * a(n - 7) + 4 * a(n - 9) - 4 * a(n - 10) - a(n - 12) + a(n - 13) for n>13. ● a(3 * k) = 3 * k * (k + 1) * (3 * k - 2) * (3 * k + 1) / 4, a(3 * k + 1) = a(3 * k) + 3 * k + 1, a(3 * k + 2) = a(3 * k) + (3 * k + 2) * (3 * k + 1). - _ Giovanni Resta _ , Sep 08 2018 ●

▶ [A364879] 2,6,10,28,126,520,1394,4440,11765,35702,98202,271718,736814,2012631,5478367,14867499,40448112,109944053,298170203,810416222,2200884471,5980529528 ⋆ a(n) is the smallest number k such that (sum of composites <= k) / (sum of primes <= k) >= n. ● a(n) = min { k : (Sum _{ c<=k, c composite } c) / (Sum _{ p<=k, p prime } p) >= n } . ●

▶ [A115113] 2,6,10,54,202,822,3274,13110,52426,209718,838858,3355446,13421770,53687094,214748362,858993462,3435973834,13743895350,54975581386,219900225558,879609302218,3518437208886,14073748835530,56294995342134,225179981368522 ⋆ a(n) = 3 * a(n - 1) + 4 * a(n - 2), with a(0) = 2, a(1) = 6, a(2) = 10. ● a(n) = (- 2 * (7 * (- 1) ^ n - 2 ^ (1 + 2 * n))) / 5 for n > 0. ● a(n) = 3 * a(n - 1) + 4 * a(n - 2) for n > 2. ●

▶ [A193910] 2,6,11,15,20,24,29,33,38,42,47,51,56,60,65,69,74,78,83,87,92,96,101,105,110 ⋆ Leap centuries in the revised Julian calendar. ● a(n) = a(n - 2) + 9. - _ Charles R Greathouse IV _ , Aug 09 2011 ● a(n) = 2 or 6 (mod 9). ●

▶ [A046691] 1,2,6,11,17,24,32,41,51,62,74,87,101,116,132,149,167,186,206,227,249,272,296,321,347 ⋆ a(n) = (n ^ 2 + 5 * n - 2) / 2. ● a(n) = a(n - 1) + n + 2 with a(0) = - 1. - _ Vincenzo Librandi _ , Nov 18 2010 ●

▶ [A231559] 0,0,2,6,11,17,25,35,46,58,72,88,105,123,143,165,188,212,238,266,295,325,357,391,426 ⋆ a(n) = floor(A000326(n) / 2). ● a(n) = (n * (3 * n - 1) + i ^ (n * (n + 1)) - 1) / 4, where i=sqrt(- 1). ●

▶ [A248469] 0,2,6,11,18,26,36,47,59,73,89,105,124,144,165,188,212,238,265,294,324,356,389,423,459 ⋆ Floor((2 * n ^ 2) / e). ● a(n) = floor((2 * n ^ 2) / e). ●

▶ [A201993] 1,2,6,11,18,26,37,49,63,79,97,116,138,161,186,213,241,272,304,338,374,412,451,492,535 ⋆ Conjectured lower bound for the number of circles of radius 1 that can be packed into a circle of radius n. ● a(n) = Smallest k, such that 1 + (sqrt((4 * Rho - 1) ^ 2 + 16 * Rho * (k - 1)) - 1) / (4 * Rho) >=n with Rho = Pi / (2 * sqrt(3)). ●

▶ [A194455] 2,6,11,18,29,48,83,150,281,540,1055,2082,4133,8232,16427,32814,65585,131124,262199,524346,1048637,2097216,4194371,8388678,16777289 ⋆ a(n) = 2 ^ n + 3n + 1. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - 3 for n > 1. ● a(n) ^ 2 = 2 ^ (n + 1) * (a(n - 1) + 3) + (3 * n + 1) ^ 2 for n > 2. ●

▶ [A317186] 1,2,6,11,19,28,40,53,69,86,106,127,151,176,204,233,265,298,334,371,411,452,496,541,589 ⋆ One of many square spiral sequences: a(n) = n ^ 2 + n - floor((n - 1) / 2). ● a(n) = (1 / 4) * (4 * n ^ 2 + 2 * n + (- 1) ^ n + 3), n >= 0 . ● a(0) = 1; a(n) = - a(n - 1) + 2 * n ^ 2 - n + 2, n >= 1. ● a(0) = 1; a(1) = 2 ; a(2) = 6; a(3) = 11; a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4), n >= 4. ●

▶ [A171516] 1,2,6,11,20,34,57,94,154,251,408,662,1073,1738,2814,4555,7372,11930,19305,31238,50546,81787,132336,214126,346465 ⋆ a(n) = a(n - 1) + a(n - 2) + k, n>1; with a(0) = 1, a(1) = 2, k = 3. ● a(n) = a(n - 1) + a(n - 2) + 3, n>1; with a(0) = 1, a(1) = 2. ● a(n) = Fibonacci(n + 3) + 2 * Fibonacci(n + 1) - 3. - _ G. C. Greubel _ , Jul 12 2019 ●

▶ [A083322] 1,2,6,11,22,42,85,170,342,683,1366,2730,5461,10922,21846,43691,87382,174762,349525,699050,1398102,2796203,5592406,11184810,22369621 ⋆ a(n) = 2 ^ n - A081374(n). ● a(n) = 2 * a(n - 1) - a(n - 3) + 2 * a(n - 4). ●

▶ [A033304] 2,6,11,26,57,129,289,650,1460,3281,7372,16565,37221,83635,187926,422266,948823,2131986,4790529,10764221,24186985,54347662,122118088,274396853,616564132 ⋆ Expansion of (2 + 2 * x - 3 * x ^ 2) / (1 - 2 * x - x ^ 2 + x ^ 3). ● a(n) = (1 - 2 * cos(1 / 7 * Pi)) ^ (n + 1) + (1 + 2 * cos(2 / 7 * Pi)) ^ (n + 1) + (1 - 2 * cos(3 / 7 * Pi)) ^ (n + 1). - _ Vladeta Jovovic _ , Jun 27 2001 ●

▶ [A184884] 1,1,2,6,11,27,60,132,301,669,1502,3370,7543,16919,37912,84968,190457,426841,956698,2144238,4805827,10771315,24141588,54108332,121272549 ⋆ Diagonal sums of number triangle A184883. ● a(n) = Sum _{ k=0..floor(n / 2) } Sum _{ j=0..k } C(2 * n - 4 * k,j) * C(k,j) * 2 ^ j. ● a(n) = Sum _{ k=0..floor(n / 2) } Hypergeometric2F1([- k, 2 * (k - n)], [1], 2). - _ G. C. Greubel _ , Nov 19 2021 ●

▶ [A130237] 0,2,6,12,16,25,30,35,48,54,60,66,72,91,98,105,112,119,126,133,140,168,176,184,192 ⋆ The 'lower' Fibonacci Inverse A130233(n) multiplied by n. ● a(n) = n * floor(arcsinh(sqrt(5) * n / 2) / log(phi)). ●

▶ [A267461] 0,2,6,12,18,26,34,44,54,66,78,92,106,122,138,156,174,194,214,236,258,282,306,332,358 ⋆ Total number of OFF (white) cells after n iterations of the "Rule 133" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = (2 * n ^ 2 + 12 * n - (- 1) ^ n - 7) / 4 for n>0. ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4) for n>4. ●

▶ [A294062] 0,2,6,12,18,26,36,48,60,72,86,102,118,136,156,178,200,224,248,274,300,328,358,390,422 ⋆ Sum of the differences of the larger and smaller parts in the partitions of 2n into two parts with the smaller part squarefree. ● a(n) = 2 *

Sum _{ i=1..n } (n - i) * mu(i) ^ 2, where mu is the Möbius function (A008683). ●

▶ [A104969] 1,2,6,12,18,36,92,184,298,596,1444,2888,4852,9704,22840,45680,78490,156980,362580,725160,1265564,2531128,5767688,11535376,20366596 ⋆ Sum of squares of terms in rows of triangle A104967. ● a(2 * n + 1) = 2 * a(2 * n). ●

▶ [A061078] 2,6,12,20,20,22,26,32,40,40,44,52,64,80,80,86,98,116,140,140,148,164,188,220,220 ⋆ Sum of the products of the digits of the first n positive even numbers. ● a(5 * 10 ^ n - 1) = a(5 * 10 ^ n) = (5 / 11) * (45 ^ (n + 1) - 1). ● a(n) <= (5 / 11) * (45 ^ (log((n + 1) / 5) + 1) - 1) for all n. ● a(5 ^ a * 2 ^ b * p - 1) = a(5 ^ a * 2 ^ b * p) = ... = a(5 ^ a * 2 ^ b * p + 55...5) where the number of fives is equal to b if a > b, and is equal to a - 1 if 1 <= a <= b. (End) ●

▶ [A045619] 0,2,6,12,20,24,30,42,56,60,72,90,110,120,132,156,182,210,240,272,306,336,342,360,380 ⋆ Numbers that are the products of 2 or more consecutive integers. ● a(n) = n ^ 2 - 2 * n ^ (5 / 3) + O(n ^ (4 / 3)). - _ Charles R Greathouse IV _ , Aug 27 2013 ●

▶ [A103505] 1,1,2,6,12,20,30,42,56,72,90,110,132,156,182,210,240,272,306,342,380,420,462,506,552 ⋆ Denominator in expansion of (1 - x) * log(1 - x). ● a(n) = 0 ^ n + C(1, n) - C(0, n) + 2 * C(n, 2). ●

▶ [A279019] 0,0,2,6,12,20,30,42,56,72,90,110,132,156,182,210,240,272,306,342,380,420,462,506,552 ⋆ Least possible number of diagonals of simple convex polyhedron with n faces. ● a(n) = n ^ 2 - 9 * n + 20 = (n - 4) * (n - 5). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>6. - _ Colin Barker _ , Dec 05 2016 ●

▶ [A002378] 0,2,6,12,20,30,42,56,72,90,110,132,156,182,210,240,272,306,342,380,420,462,506,552,600 ⋆ Oblong (or promic, pronic, or heteromecic) numbers: a(n) = n * (n + 1). ● a(n) = a(n - 1) + 2 * n, a(0) = 0. ● a(n) * a(n + 1) = a(n * (n + 2)); e.g., a(3) * a(4) = 12 * 20 = 240 = a(3 * 5). - _ Charlie Marion _ , Dec 29 2003 ● a(0) = 0, a(n) = a(n - 1) + 1 + floor(x), where x is the minimal positive solution to fract(sqrt(a(n - 1) + 1 + x)) = 1 / 2. - _ Hieronymus Fischer _ , Dec 31 2008 ● a(n - 1) = floor(n ^ 5 / (n ^ 3 + n ^ 2 + 1)). - _ Gary Detlefs _ , Feb 11 2010 ● a(n) ^ 2 + a(n + 1) ^ 2 = 2 * a((n + 1) ^ 2), for n > 0. - _ Ivan N. Ianakiev _ , Apr 08 2013 ● a(n) = floor(n ^ 2 * e ^ (1 / n)) and a(n - 1) = floor(n ^ 2 / e ^ (1 / n)). - _ Richard R. Forberg _ , Jun 22 2013 ●

▶ [A349704] 0,0,1,2,6,12,20,30,42,56,72,92,115,140,170,204,240,282,329,378,434,496,560,632,711 ⋆ Maximum terminal Wiener index for a tree of n vertices. ● a(0) = a(1) = a(2) = 1, a(n) = (n - 1) * (n - 2) for 3 <= n <= 9, and otherwise: [Gutman, Furtula, Petrović, theorem 5] ● a(3s) = s ^ 3 + 3 * s ^ 2 + s - 1, ● a(3s + 1) = s ^ 3 + 4 * s ^ 2 + 3 * s, ● a(3s + 2) = s ^ 3 + 5 * s ^ 2 + 6 * s + 2. ● a(n) = 2 * a(n - 1) - a(n - 2) + 2 * a(n - 3) - 4 * a(n - 4) + 2 * a(n - 5) - a(n - 6) + 2 * a(n - 7) - a(n - 8) for n>=15. ●

▶ [A214916] 1,1,2,6,12,20,60,252,672,1440,5400,27720,88704,224640,982800,5821200,21288960,61102080,300736800,1990850400,8089804800,25662873600,138940401600,1007370302400,4465572249600 ⋆ a(0) = a(1) = 1, a(n) = n! / a(n - 2). ● a(0) = a(1) = 1, for n>=2, a(n) = n! / a(n - 2). ●

▶ [A184637] 2,6,12,21,33,48,65,85,108,133,161,192,225,261,300,341,385,432,481,533,588,645,705,768,833 ⋆ a(n) = floor(1 /{ (n ^ 4 + 3 * n) ^ (1 / 4) }), where {} =fractional part. ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) - 2 * a(n - 4) + a(n - 5) for n>=8. ● a(n) = n ^ 2 + floor(n ^ 2 / 3) with n>2, a(1)=2, a(2)=6. This confirms the g.f. and the recurrence. - _ Bruno Berselli _ , Aug 08 2013 ●

▶ [A011892] 0,0,0,0,2,6,12,21,33,50,72,99,132,171,218,273,336,408,489,581,684,798,924,1062,1214 ⋆ [n(n - 1)(n - 2) / 10]. ● a(n) = + 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 5) - 3 * a(n - 6) + 3 * a(n - 7) - a(n - 8). G.f.: x ^ 4 * (x ^ 3 + 2) / ((- 1 + x) ^ 4 * (x ^ 4 + x ^ 3 + x ^ 2 + x + 1)). [From _ R. J. Mathar _ , Apr 15 2010] ●

▶ [A046960] 1,2,6,12,21,37,40,84,128,172,882,1592,2302,3012,3722,4432,5142,5852,6562,7272,7982,8692,9402,10112,10822 ⋆ Bessel function J _ 0(n) is a monotonically decreasing positive sequence. ● a(n) = 2 * a(n - 1) - a(n - 2) for n > 10. ●

▶ [A147623] 0,2,6,12,22,34,48,66,86,108,134,162,192,226,262,300,342,386,432,482,534,588,646,706,768 ⋆ The 3rd Witt transform of A040000. ● a(n) = 4 * (2 - 2 * n + n ^ 2) - a(n - 1) - a(n - 2). ●

▶ [A005819] 1,2,6,12,22,34,52,74,102,134,176,222,280,344,416,496,592,694,814,942,1082,1232,1404,1584,1784 ⋆ Number of words of length n in a certain language. ● a(n) = - 1 + Sum _{ i=1..n } (n - i + 1) * phi(i) for n>=2, where phi is Euler's totient function (this is conjectured in the Duluck & Gouyou - Beauchamps paper, p. 399). ●

▶ [A322072] 2,6,12,22,37,62,98,155,240,370,563,856,1287,1936,2901,4335,6462,9617,14281,21181,31371,46405,68568,101221,149279 ⋆ Row sums of the triangle A322071. ● a(n) = Sum _{ k=1..n } floor(2 * n ^ k / k ^ k). ●

▶ [A168193] 0,2,6,12,22,38,64,106,174,284,462,750,1216,1970,3190,5164,8358,13526,21888,35418,57310,92732,150046,242782,392832 ⋆ a(n) = a(n - 1) + a(n - 2) + 4, with a(0)=0, a(1)=2. ● a(n) = a(n - 1) + 2 * Fibonacci(n + 1), with a(0)=0. - _ Taras Goy _ , Mar 24 2019 ●

▶ [A131520] 2,6,12,22,40,74,140,270,528,1042,2068,4118,8216,16410,32796,65566,131104,262178,524324,1048614,2097192,4194346,8388652,16777262,33554480 ⋆ Number of partitions of the graph G _ n (defined below) into "strokes". ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 2 * a(n - 3). - _ Wesley Ivan Hurt _ , May 20 2021 ●

▶ [A084570] 1,2,6,12,23,38,60,88,125,170,226,292,371,462,568,688,825,978,1150,1340,1551,1782,2036,2312,2613 ⋆ Partial sums of A084263. ● a(n) = (- 1) ^ n / 4 + (2n ^ 3 + 6n ^ 2 + 10n + 9) / 12. ● a(n) = Sum _{ j=0..n } (Sum _{ i=0..j } (i + (- 1) ^ i)). ● a(n) = ceiling((n ^ 3 + 3n ^ 2 + 5n + 3) / 6). ●

▶ [A192969] 1,2,6,12,23,41,71,120,200,330,541,883,1437,2334,3786,6136,9939,16093,26051,42164,68236,110422,178681,289127,467833 ⋆ Constant term of the reduction by x ^ 2 - > x + 1 of the polynomial p(n,x) defined at Comments. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - a(n - 3) + a(n - 4). ● a(0) = 1; a(1) = 2; a(n) = 1 + n + a(n - 1) + a(n - 2). - _ Daniel Suteu _ , Jan 12 2016 ● a(n) = 2 * Fibonacci(n + 2) + 3 * Fibonacci(n + 1) - n - 4. - _ G. C. Greubel _ , Jul 11 2019 ●

▶ [A291014] 0,0,2,6,12,23,48,105,228,486,1026,2161,4548,9555,20026,41874,87384,182043,378648,786429,1631120,3378750,6990510,14447045,29826156 ⋆ p - INVERT of (1,1,1,1,1,...), where p(S) = (1 - S ^ 3) ^ 2. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 22 * a(n - 3) - 21 * a(n - 4) + 12 * a(n - 5) - 4 * a(n - 6) for n >= 7. ●

▶ [A187272] 0,2,6,12,24,40,72,112,192,288,480,704,1152,1664,2688,3840,6144,8704,13824,19456,30720,43008,67584,94208,147456 ⋆ a(n) = (n / 4) * 2 ^ (n / 2) * ((1 + sqrt(2)) ^ 2 + (- 1) ^ n * (1 - sqrt(2)) ^ 2). ● a(n) / a(n - 2) = 2 * n / (n - 2). (End) ● a(2 * n) = 3 * n * 2 ^ n, a(2 * n + 1) = (2 * n + 1) * 2 ^ (n + 1). - _ Andrew Howroyd _ , Mar 28 2016 ●

▶ [A029929] 0,2,6,12,24,40,72,126,240,468,960,2002,4248,9048,19320,41190,87648,185980,393552,830490,1748040,3670464,7690056,16078702,33555024 ⋆ a(n) = n * (n + ceiling(2 ^ n / 12)). ● a(n) = n * (6 + 2 * (- 1) ^ n + 2 ^ n + 12 * n) / 12. G.f.: 2 * x * (x ^ 7 - 2 * x ^ 6 - 2 * x ^ 5 + x ^ 4 - 6 * x ^ 3 + 3 * x ^ 2 + 2 * x - 1) / ((x - 1) ^ 3 * (x + 1) ^ 2 * (2 * x - 1) ^ 2). - _ Colin Barker _ , Aug 04 2013 ●

▶ [A053635] 0,2,6,12,24,40,84,140,288,540,1080,2068,4224,8216,16548,32880,65856,131104,262836,524324,1049760,2097480,4196412,8388652,16782048 ⋆ a(n) = Sum _{ d|n } phi(d) * 2 ^ (n / d). ● a(n) = Sum _{ k=1..n } 2 ^ gcd(n,k). - _ Ilya Gutkovskiy _ , Apr 16 2021 ● a(n) = Sum _{ k=1..n } 2 ^ (n / gcd(n,k)) * phi(gcd(n,k)) / phi(n / gcd(n,k)). - _ Richard L. Ollerton _ , May 06 2021 ●

▶ [A307211] 2,6,12,24,42,75,90,150,180,216,312,339,447,519,615,660,783 ⋆ a(n) = the "maximum first open number" for prime(n). ● a(n) = max for all { r(1), ... , r(n) } min d = d({ r }) where d >= 1, d !== r(i) (mod prime(i)), d !== - r(i) (mod prime(i)), i = 1, ..., n. ● a(n) = max for all c >= 1, min d = d(c) where d >= 1, d !== c (mod p) and d !== - c (mod p) for all p, p prime, p <= prime(n). ●

▶ [A111286] 1,2,6,12,24,48,96,192,384,768,1536,3072,6144,12288,24576,49152,98304,196608,393216,786432,1572864,3145728,6291456,12582912,25165824 ⋆ Number of permutations avoiding the patterns { 1342, 1432, 2341, 2431, 3142, 3241, 3412, 3421, 4132, 4231, 4312, 4321 } ; number of strong sorting class based on 1342. ● a(n)=3 * 2 ^ (n - 2), n>=3. ● a(n)=2 * a(n - 1) for n=3. G.f.: x * (1 + 2 * x ^ 2) / (1 - 2 * x). [_ Colin Barker _ , Nov 29 2012] ●

▶ [A350293] 1,2,6,12,24,52,112 ⋆ a(n) is the 1st saturated vertex Turán number for the cube graph Q _ n. ● a(n) = n * 2 ^ n / (n + 1) iff n is a Mersenne number (see Theorem 1 in Harborth and Nienborg). ●

▶ [A175943] 1,2,6,12,24,120,240,720,5040,10080,20160,40320,120960,362880,725760,3628800,39916800,79833600,159667200,479001600,6227020800,12454041600,87178291200,261534873600,1307674368000 ⋆ Partial products of A027746. ● a(n) is approximately (n / (e log log n)) ^ (n / log log n). - _ Charles R Greathouse IV _ , Sep 12 2012 ●

▶ [A045925] 0,1,2,6,12,25,48,91,168,306,550,979,1728,3029,5278,9150,15792,27149,46512,79439,135300,229866,389642,659111,1112832 ⋆ a(n) = n * Fibonacci(n). ● a(n) = a(n - 1) + a(n - 2) + L(n - 1). - _ Gary Detlefs _ , Dec 29 2012 ● a(n) = F(n + 1) + Sum _{ k=1..n - 2 } F(k) * L(n - k), F = A000045 and L = A000032. - _ Gary Detlefs _ , Dec 29 2012 ● a(n) = F(2 * n) / Sum _{ k=0..floor(n / 2) } binomial(n - k,k) / (n - k). - _ Gary Detlefs _ , Jan 19 2013 ● a(n) = 2 * n * (F(n - 2) + floor(F(n - 3) / 2)) + (n ^ 3 mod 3 * n), F = A000045. - _ Gary Detlefs _ , Jun 06 2014 ● a(n) = L'(n, 1), the first derivative of the n - th Lucas polynomial evaluated at 1. - _ Andrés Ventas _ , Nov 12 2021 ●

▶ [A128020] 1,2,6,12,25,48,98,200,396,790,1584,3168,6331,12670,25335,50672,101354,202698,405403,810800,1621599,3243196,6486391,12972792,25945575 ⋆ a(n) = the multiple of n which is > (sum { k=1 to n - 1 } a(k)) and is <= (n + sum { k=1 to n - 1 } a(k)). ● a(n) = n * (1 + floor(sum { k=1 to n - 1 } a(k) / n)). ●

▶ [A140659] 0,0,1,2,6,12,25,50,102,204,409,818,1638,3276,6553,13106,26214,52428,104857,209714,419430,838860,1677721,3355442,6710886 ⋆ a(n) = floor(A140657(n + 2) / 10). ● a(2n + 1) = 2 * a(2n). ●

▶ [A232164] 0,1,1,2,6,12,25,57,124,268,588,1285,2801,6118,13362,29168,63685,139057,303608,662888,1447352,3160121,6899745,15064810,32892270 ⋆ Number of Weyl group elements, not containing an s _ r factor, which contribute nonzero terms to Kostant's weight multiplicity formula when computing the multiplicity of the zero - weight in the adjoint representation for the Lie algebra of type C and rank n. ● a(n) = a(n - 1) + a(n - 2) + 3 * a(n - 3) + a(n - 4). ●

▶ [A136515] 0,2,6,12,26,38,56,74,96,128,154,188,220,262,304,344,398,452,506,562,616,686,754,824,894 ⋆ Number of unit square lattice cells inside half - plane (two adjacent quadrants) of origin centered circle of diameter 2n + 1. ● a(n) = 2 * Sum _{ k=1..n } floor(sqrt((n + 1 / 2) ^ 2 - k ^ 2)). ●

▶ [A054454] 1,2,6,12,26,50,97,180,332,600,1076,1908,3361,5878,10226,17700,30510,52390,89665,153000,260376,442032,748776,1265832,2136001 ⋆ Third column of triangle A054453. ● a(2 * k) = 1 + (8 * n * Fibonacci(2 * n + 1) + 3 * (2 * n + 1) * Fibonacci(2 * n)) / 5. ● a(2 * k + 1) = 2 * (2 * (2 * n + 1) * Fibonacci(2 * (n + 1)) + 3 * (n + 1) * Fibonacci(2 * n + 1)) / 5. ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 4 * a(n - 3) - 2 * a(n - 4) + 2 * a(n - 5) + a(n - 6) where a(0)=1, a(1)=2, a(2)=6, a(3)=12, a(4)=26, a(5)=50. - _ Harvey P. Dale _ , May 06 2012 ●

▶ [A084170] 1,2,6,12,26,52,106,212,426,852,1706,3412,6826,13652,27306,54612,109226,218452,436906,873812,1747626,3495252,6990506,13981012,27962026 ⋆ a(n) = (5 * 2 ^ n + (- 1) ^ n - 3) / 3. ● a(n) = 2 * a(n - 1) + a(n - 2) - 2 * a(n - 3), n>2. ● a(n) = a(n - 1) + 2 * a(n - 2) + 2, a(0)=1, a(1)=2. ● a(n + 3) = 15 * 2 ^ n - 2 - a(n), n >= 0, a(0)=1, a(1)=2, a(2)=6. ●

▶ [A091919] 1,2,6,12,27,54,112,224,453,906,1818,3636,7279,14558,29124,58248,116505,233010,466030,932060,1864131,3728262,7456536,14913072,29826157 ⋆ Expansion of 1 / ((1 - 2 * x) * (1 - x ^ 2) ^ 2). ● a(n) = 2 ^ (n + 4) / 9 + (3 * n + 8) * (- 1) ^ n / 36 - (n + 4) / 4. ●

▶ [A356465] 0,2,6,12,27,59,113,179,257,359,497,747,963,1227,1577,1799,2081,2611,3223,3663,4167,4817,5231,5847,6657 ⋆ The number of unit squares enclosed by the rectangular spiral of which the n - th side has length prime(n). ● a(n) = a(n - 1) + (prime(n) - prime(n - 2) + prime(n - 4)) * (prime(n - 1) - prime(n - 3)) for n > 4. ●

▶ [A166963] 1,2,6,12,27,61,138,309,694,1560,3506,7877,17699,39770,89363,200796,451184,1013802,2277993,5118603,11501396,25843403,58069600,130481206,293188608 ⋆ Number of permutations in S _{ 2n } avoiding 123 and 1432 whose matrices are 180 - degree symmetric. ● a(n) = 2a(n - 1) + a(n - 3) + a(n - 4) - a(n - 5). ●

► [A188476] 1,1,2,6,12,27,65,150,353,843,2014,4843,11713,28433,69292,169470,415754,1022868,2523120,6238645,15459561,38387191,95497612,237989801,594062697 ★ Diagonal sums of number triangle A188474. ● a(n)=sum { k=0..floor(n / 2) , sum { j=0..n - 2k + 1, (j / (n - k + 2 - j)) * C(n - k + 2 - j,n - k + 1) * C(n - k + 2 - j,k + 1) * 2 ^ (j - 1) }} . ●

► [A089820] 0,2,6,12,28,56,120,240,480,960,1984,3968,8064,16128,32256,64512,130048,260096,522240,1044480,2088960,4177920,8372224,16744448,33488896 ★ Number of subsets of { 1,..,n } containing at least one prime. ● a(n) = 2 ^ n - 2 ^ (n - pi(n)) = the total number of subsets minus the number of subsets of the nonprime elements of { 1,..,n } , where pi = A000720. - _ Greg Martin _ , May 13 2004 ●

► [A122746] 1,2,6,12,28,56,120,240,496,992,2016,4032,8128,16256,32640,65280,130816,261632,523776,1047552,2096128,4192256,8386560,16773120,33550336 ★ G.f. : 1 / ((1 - 2 * x) * (1 - 2 * x ^ 2)). ● a(n) = 2 ^ (n + 1) - 2 ^ (floor((n + 1) / 2)). - _ Geoffrey Critzer _ , Mar 03 2009 ● a(n) = 2 * (a(n - 1) bitwiseOR a(n - 2)), a(0)=1, a(1)=2. - _ Pierre Charland _ , Dec 12 2010 ● a(0)=1, a(1)=2, a(2)=6, a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 4 * a(n - 3). - _ Harvey P. Dale _ , Jun 25 2013 ● a(n) = - a(- 3 - n) * 2 ^ (n + 2 + floor((n + 1) / 2)) for all n in Z . - _ Michael Somos _ , Jul 01 2018 ●

► [A093387] 0,0,1,2,6,12,29,58,130,260,562,1124,2380,4760,9949,19898,41226,82452,169766,339532,695860,1391720,2842226,5684452,11576916 ★ a(n) = 2 ^ (n - 1) - binomial(n, floor(n / 2)). ● a(n + 1) = Sum _{ k=2..n } binomial(n, floor((n - k) / 2)). - _ Paul Barry _ , Jan 11 2007 ● a(2n) = 2 * a(2n - 1). - _ Emeric Deutsch _ , May 30 2011 ●

► [A038199] 1,2,6,12,30,54,126,240,504,990,2046,4020,8190,16254,32730,65280,131070,261576,524286,1047540,2097018,4192254,8388606,16772880,33554400 ★ Row sums of triangle T(m,n) = number of solutions to 1 <= a(1) < a(2) < ... < a(m) <= n, where gcd(a(1), a(2), ..., a(m), n) = 1, in A020921. ● a(n) = Sum _{ d | n } mu(n / d) * (2 ^ d - 1). - _ Paul Barry _ , Mar 20 2005 ●

► [A162214] 1,2,6,12,30,60,126,248,504,1020,2046,4092,8190,16380,32760,65520,131070,262134,524286,1048560,2097144,4194300,8388606,16777200,33554425 ★ a(n) = the largest positive multiple of n with exactly n digits when written in binary. ● a(n) = n * floor((2 ^ n - 1) / n). - _ Alois P. Heinz _ , Jul 11 2009 ●

► [A100071] 0,1,2,6,12,30,60,140,280,630,1260,2772,5544,12012,24024,51480,102960,218790,437580,923780,1847560,3879876,7759752,16224936,32449872 ★ a(n) = n * binomial(n - 1, floor((n - 1) / 2)) = n * max _{ i=0..n } binomial(n - 1, i). ● a(n) = Sum _{ k = 0..floor(n / 2) } binomial(n,k) * (n - 2 * k). ● a(n) = n * binomial(n - 1, floor((n - 1) / 2)); ● a(n) = Sum _{ k = 0..n } binomial(n,k) * 2 ^ (n - k) * binomial(2 * k - 2, k - 1) * (- 1) ^ (k - 1). (End) ● a(n) = a(n - 1) * n / floor(n / 2) for n > 0. - _ Reinhard Zumkeller _ , Jan 20 2008 ● a(n) = (floor(n / 2) + ceiling(n / 2) + 1)! / (floor(n / 2)! * ceiling(n / 2)!). - _ Stefan Steinerberger _ , Nov 04 2008 ● a(n) = n for n < 3, a(n) = 4 * a(n - 2) + 2 * a(n - 1) / (n - 1) for n >= 3. - _ Alexander R. Povolotsky _ , Aug 17 2012 ●

► [A335711] 2,6,12,30,65,158,362,875,2064,4984,11914,28764,69155,166956,402372,971413,2343518,5657754,13654968,32966010,79577189,192116330,463786190,1119678911,2703086892 ★ The number of free polyominoes of width 2 and height n . ● a(n) = 3 * a(n - 1) + a(n - 2) - 7 * a(n - 3) + 3 * a(n - 4) - a(n - 5) + a(n - 6) + a(n - 7) for n>8. ●

► [A073949] 0,2,6,12,30,90,252,702,2106,6480,19602,58806,176904,532170,1596510,4785156,14351094,43053282,129146724,387400806,1162202418,3486725352,10460294154,31380882462,94143001680 ★ Number of strings over Z _ 3 of length n with trace 0 and subtrace 2. ● a(n; t, s) = a(n - 1; t, s) + a(n - 1; t + 2, s + 2t + 1) + a(n - 1; t + 1, s + t + 1) where t is the trace and s is the subtrace. ●

► [A217447] 2,6,12,32,120,580,3392,23244,182776,1622468,16045200,174894172,2082824744,26902998516,374570250688,5591767768460,89095070783832,1509041577895204,27073887615758576,512898265609845948,10230945527263709320,214337863242231108692 ★ Number of n x n permutation matrices that disconnect their zeros. ● a(n) = 4 Sum _{ i=1..n - 2 } i! - 2(n - 2) Sum _{ i=0..n - 4 } i! + 2 Sum _{ i=1..n - 3 } i! + 2. ●

► [A099576] 1,2,6,12,35,72,210,440,1287,2730,8008,17136,50388,108528,319770,692208,2042975,4440150,13123110,28614300,84672315,185122080,548354040,1201610592,3562467300 ★ Row sums of triangle A099575. ● a(n) = Sum _{ k=0..n } Sum _{ j=0..floor(k / 2) } binomial(n + j, j). ● a(2 * n) = (1 + n / (n + 1)) * binomial(3 * n + 1,n). ● a(2 * n + 1) = 2 * binomial(3 * n + 3,n). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..n } binomial(n + floor(k / 2) + 1, floor(k / 2) + 1) * (1 + floor(k / 2)). - _ G. C. Greubel _ , Jul 24 2022 ●

► [A026549] 1,2,6,12,36,72,216,432,1296,2592,7776,15552,46656,93312,279936,559872,1679616,3359232,10077696,20155392,60466176,120932352,362797056,725594112,2176782336 ★ Ratios of successive terms are 2, 3, 2, 3, 2, 3, 2, 3, ... ● a(n + 3) = a(n + 2) * a(n + 1) / a(n). - _ Reinhard Zumkeller _ , Mar 04 2011 ● a(n) = (1 / 2) * (3 - (- 1) ^ n) * 6 ^ floor(n / 2), or a(n) = 6 * a(n - 2). - _ Vincenzo Librandi _ , Jun 08 2011 ● a(n) = 1 / a(- n) if n is even and (2 / 3) / a(- n) if n is odd for all n in Z. - _ Michael Somos _ , Apr 09 2022 ●

► [A202337] 1,2,6,12,36,108,324,972,2916,8748,26244,78732,236196,708588,2125764,6377292,19131876,57395628,172186884,516560652,1549681956,4649045868,13947137604,41841412812,125524238436 ★ Range of A062723. ● a(n) = 4 * 3 ^ (n - 3) for n>3. ● a(n) = 3 * a(n - 1) for n>4. ●

► [A332868] 1,2,6,12,44,88,264,528,2064,4128,12384,24768,90816,181632,544896,1089792,4292864,8585728,25757184,51514368,188886016,377772032,1133316096,2266632192,8860471296 ★ Number of involutions (plus identity) in a fixed Sylow 2 - subgroup of the symmetric group of degree 2n. ● a(n) = big - Theta(C ^ n) for C = 2.59745646488..., i.e., A * C ^ n < a(n) < B * C ^ n for constants A , B (but it's not the case that a(n) ~ C ^ n as lim inf a(n) / C ^ n and lim sup a(n) / C ^ n differ). ●

► [A169858] 1,2,6,12,45,60,245,245,504,504,5049,5049,10296,11760,11760,11760,56160,56160,198016,198016,1008159,1323008,2340849,6240366,13442580 ★ Smallest integer k such that k or one of its left substrings (or prefixes, regarded as an integer) is divisible by any integer from { 1,2,...,n } . ● a(n) = min m: forall d in { 1..n } : exists k in { 0..log _ 10(m) } : d | floor(m / 10 ^ k). ●

► [A152873] 2,6,12,48,144,720,2880,17280,86400,604800,3628800,29030400,203212800,1828915200,14631321600,146313216000,1316818944000,14485008384000,144850083840000,1738201006080000,19120211066880000,248562743869440000,2982752926433280000,41758540970065920000 ★ Number of permutations of { 1,2,...,n } (n>=2) having a single run of even entries. For example, the permutation 513284679 has a single run of even entries: 2846. ● a(2n) = (n + 1)(n!) ^ 2; ● a(2n + 1) = n!(n + 2)! ●

► [A003418] 1,1,2,6,12,60,60,420,840,2520,2520,27720,27720,360360,360360,360360,720720,12252240,12252240,232792560,232792560,232792560,232792560,5354228880,5354228880 ★ Least common multiple (or LCM) of { 1, 2, ..., n } for n >= 1, a(0) = 1. ● a(n) = exp(Sum _{ k=1..n } Sum _{ d|k } moebius(d) * log(k / d)). - _ Peter Luschny _ , Sep 01 2012 ● a(n) = lcm(m * binomial(n,m): 1 <= m <= n) and ● a(n) = gcd(a(m) * binomial(n,m): n / 2 <= m <= n). (End) ●

► [A191836] 1,2,6,12,60,120,840,1680,5040,10080,110880,221760,2882880,5765760,11531520,23063040,392071680,784143360,14898723840,29797447680,595948953601,19189790720,2741365186560,5482730373120,27413651865600 ★ The slowest growing sequence that satisfies: a(1) = 1, a(n) is a multiple of n and a(n - 1), and a(n) > a(n - 1). ● a(1) = 1; for n > 1, a(n) = a(n - 1) * (if n is a prime power p ^ k then p else 2). - Franklin T. Adams - Watters, Jan 13 2012 ●

► [A081125] 1,1,2,6,12,60,120,840,1680,15120,30240,332640,665280,8648640,17297280,259459200,518918400,8821612800,17643225600,335221286400,670442572800,14079294028800,28158588057600,647647525324800,1295295050649600 ★ a(n) = n! / floor(n / 2)!. ● a(n) = sqrt(n! * n $) where n $ denotes the swinging factorial (A056040). ● a(n) = 2 ^ n Gamma((n + 1 + (n mod 2)) / 2) / sqrt(Pi). (End) ● a(n) = n! / (n - floor((n + 1) / 2))!. ● a(n) = Product _{ i = ceiling(n / 2)..(n - 1) } i. [Note: empty product = 1] ● a(n) = P(n, floor((n + 1) / 2)), where P(n,k) are the number of k - permutations of n objects. (End) ● a(n) = n $* floor(n / 2)! where n $ denotes the swinging factorial (A056040). - _ Peter Luschny _ , Oct 28 2013 ●

► [A048803] 1,1,2,6,12,60,360,2520,5040,15120,151200,1663200,9979200,129729600,1816214400,27243216000,54486432000,926269344000,5557616064000,105594705216000,1055947052160000,22174888095360000,487847538097920000 ★ a(0) = 1, a(1) = 1; for n > 1, a(n) = lcm(1, 2, ..., n, a(1) * a(n - 1), a(2) * a(n - 2), ..., a(n - 1) * a(1)). ● a(n) = Product _{ p prime } p ^ floor(n / p). See Farhi link p. 16. - _ Michel Marcus _ , Oct 18 2018 ●

► [A258213] 1,1,2,6,12,72,144,1440,2880,43200,86400,1814400,3628800,101606400,203212800,7315660800,14631321600,658409472000,1316818944000,72425041920000,144850083840000,9560105533440000,19120211066880000,1491376463216640000,2982752926433280000 ★ Number of permutations of { 1,2,3,...,n } such that no even numbers are adjacent. ● a(n) = factorial(ceiling(n / 2)) * fallfac(ceiling(n / 2) + 1, floor(n / 2)), with fallfac = A008279. ●

► [A062349] 2,6,12,120,360,5040,13440,181440,1814400,39916800,159667200,6227020800,43589145600,653837184000,5230697472000,355687428096000,2134124568576000,121645100408832000,810967336058880000 ★ a(n) = n! / (number of prime divisors of n, counted with multiplicity). ● a(n) = n! / bigomega(n). ●

► [A105122] 2,6,12,232,262,280,330,430,508,772,786,852,1012,1522,1566,1626,1810,2346,2556,2676,3658,3888,3910,4018,4048 ★ Positive integers n such that n ^ 11 + 1 is semiprime. ● a(n) ^ 11 + 1 is semiprime A001538. a(n) + 1 is prime and a(n) ^ 10 - a(n) ^ 9 + a(n) ^ 8 - a(n) ^ 7 + a(n) ^ 6 - a(n) ^ 5 + a(n) ^ 4 - a(n) ^ 3 + a(n) ^ 2 - a(n) + 1 is prime. ●

► [A277690] 2,6,13,19,26,32,38,44,51,57,63,70,76,82,88,95,101,107,114,120,126,132,139,145,151 ★ Smallest possible number of sides of a regular polygon with unit sides and circumradius n. ● a(n) = ceiling(Pi / arcsin(1 / 2n)). ●

► [A267874] 1,2,6,13,22,33,46,61,78,97,118,141,166,193,222,253,286,321,358,397,438,481,526,573,622 ★ Total number of ON (black) cells after n iterations of the "Rule 235" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>2. ●

► [A226292] 2,6,13,22,34,48,65,84,106,130,157,186,218,252,289,328,370,414,461,510,562,616,673,732,794 ★ (10 * n ^ 2 + 4 * n + (1 - (- 1) ^ n)) / 8. ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4) for n>4, a(1)=2, a(2)=6, a(3)=13, a(4)=22. ● a(n) = 2 * a(n - 2) - a(n - 4) + 10 for n>4, a(1)=2, a(2)=6, a(3)=13, a(4)=22 . ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) + 5 for n>3, a(1)=2, a(2)=6, a(3)=13. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + (- 1) ^ n for n>3, a(1)=2, a(2)=6, a(3)=13. ● a(n) = 2 * a(n - 1) - a(n - 2) + 2 + (1 - (- 1) ^ n) / 2 for n>2, a(1)=2, a(2)=6. ●

► [A026052] 2,6,13,22,35,52,74,100,132,170,215,266,325,392,468,552,646,750,865,990,1127,1276,1438,1612,1800 ★ (d(n) - r(n)) / 2, where d = A008778 and r is the periodic sequence with fundamental period (1,1,0,1). ● a(n)=(n + 2) * (n ^ 2 + 10 * n + 15) / 12 - 0.375 + 0.125 * (- 1) ^ n - 0.25 * cos(n * Pi / 2) [From _ Richard Choulet _ , Dec 13 2008] ●

► [A293503] 0,2,6,13,23,36,51,70,91,115,142,172,204,240,278,319,363,409,459,511,566,624,685,749,815 ★ Least integer k such that k / n ^ 2 > sqrt(2). ● a(n) = ceiling(r * n ^ 2), where r = sqrt(2). ●

► [A143689] 1,2,6,13,23,36,52,71,93,118,146,177,211,248,288,331,377,426,478,533,591,652,716,783,853 ★ a(n) = (3 * n ^ 2 - n + 2) / 2. ● a(n) = a(n - 1) + 3 * n - 2 (with a(0)=1). - _ Vincenzo Librandi _ , Nov 25 2010 ● a(n) = 2 * a(n - 1) - a(n - 2) + 3. ●

► [A184533] 2,6,13,24,37,54,73,96,121,150,181,216,253,294,337,384,433,486,541,600,661,726,793,864,937 ★ a(n) = floor(1 /{ (2 + n ^ 3) ^ (1 / 3) }), where {} = fractional part. ● a(n) = floor[1 /{ (2 + n ^ 3) ^ (1 / 3) }], where {} =fractional part. ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4). ● a(n) = (6 * n ^ 2 - (1 - (- 1) ^ n)) / 4 for n>1. ● a(n + 1) + a(n) = 3 * n ^ 2 + 3 * n + 1. ● a(n) = floor(1 / ((n ^ 3 + 2) ^ (1 / 3) - n)). - _ Charles R Greathouse IV _ , Aug 23 2011 ●

► [A003600] 1,2,6,13,24,40,62,91,128,174,230,297,376,468,574,695,832,986,1158,1349,1560,1792,2046,2323,2624 ★ Maximal number of pieces obtained by slicing a torus (or a bagel) with n cuts: (n ^ 3 + 3 * n ^ 2 + 8 * n) / 6 (n > 0). ● a(n) = binomial(n + 2, n - 1) + binomial(n, n - 1). ● a(n) = coefficient of z ^ 3 in the series expansion of G ^ n (n>0), where G=[1 - z + z ^ 2 - sqrt(1 - 2z - z ^ 2 - 2z ^ 3 + z ^ 4)] / (2z ^ 2) is the g.f. of A004148 (secondary structures of RNA

molecules). - _ Emeric Deutsch _ , Jan 11 2004 ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Vincenzo Librandi _ , Jun 29 2012 ●

▶ [A362438] 2,6,13,24,41,68,113,192,337,612,1145,2192,4265,8388,16609,33024,65825,131396,262505,524688,1049017,2097636,4194833,8389184,16777841 ⋆ a(n) = n ^ 2 + 2 ^ (n - 1). ● a(n) = 5 * a(n - 1) - 9 * a(n - 2) + 7 * a(n - 3) - 2 * a(n - 4) for n > 4. ●

▶ [A335439] 0,2,6,13,25,46,84,155,291,556,1078,2113,4173,8282,16488,32887,65671,131224,262314,524477,1048785,2097382,4194556,8388883,16777515 ⋆ a(n) = n * (n - 1) / 2 + 2 ^ (n - 1) - 1. ● a(n) = 5 * a(n - 1) - 9 * a(n - 2) + 7 * a(n - 3) - 2 * a(n - 4) for n>4. ●

▶ [A259577] 1,2,6,13,26,44,72,108,156,215,290,381,486,610,758,924,1112,1329,1566,1839,2134,2456,2816,3220,3640 ⋆ Sum of numbers in the n - th antidiagonal of the reciprocity array of 1. ● a(n) = sum { sum { floor((n * k + x) / m), k=0..m - 1, m=1..n } , where x = 1. ● a(n) = n ^ 3 / 4 + O(n ^ 2). - _ Charles R Greathouse IV _ , Mar 22 2017 ●

▶ [A192953] 0,1,2,6,13,26,48,85,146,246,409,674,1104,1801,2930,4758,7717,12506,20256,32797,53090,85926,139057,225026,364128 ⋆ Coefficient of x in the reduction by x ^ 2 - > x + 1 of the polynomial p(n,x) defined at Comments. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - a(n - 3) + a(n - 4). ● a(n) = 3 * Fibonacci(n + 2) - (2 * n + 3). - _ G. C. Greubel _ , Jul 12 2019 ●

▶ [A353232] 0,2,6,13,26,51,98,182,324,552,902,1419,2158,3185,4578,6428,8840,11934,15846,20729,26754,34111,43010,53682,66380 ⋆ a(n) is the number of ways to split [n] = { 1,2,...,n } into two (possibly empty) complementary intervals { 1,2,...,i } and { i + 1,i + 2,...,n } and then, if both intervals are nonempty, select 2 nonempty blocks / cells (i.e., subintervals) from each of them, or if one of the intervals is empty, select 2 nonempty blocks / cells from the nonempty interval. ● a(n) = 2 * C(n,2) + C(n + 1,5). ● a(n) = n * (n - 1) * (n ^ 3 - 4 * n ^ 2 + n + 126) / 120. - _ R. J. Mathar _ , Jul 05 2022 ●

▶ [A275970] 2,6,13,26,51,100,197,390,775,1544,3081,6154,12299,24588,49165,98318,196623,393232,786449,1572882,3145747,6291476,12582933,25165846,50331671 ⋆ a(n) = 3 * 2 ^ n + n - 1. ● a(n) = 2 * a(n - 1) - n + 2. ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 2 * a(n - 2). (End) ●

▶ [A374148] 0,1,2,6,13,26,54,110,220,442,886,1772,3546,7093,14188,28377,56755,113510,227022,454045,908092,1816186,3632373,7264746,14529494 ⋆ Integer part of (2 ^ (n - 1) - 1) * sqrt(3) + 1. ● a(n) = floor(sqrt(3) * (2 ^ (n - 1) - 1) + 1). ●

▶ [A182614] 2,6,13,28,56,108,204,376,685,1230,2190,3864,6774,11802,20461,35312,60708,104004,177632,302540,513997,871266,1473818,2488368,4194026 ⋆ Least k such that floor(k / r ^ n)=n, where r = golden ratio = (1 + sqrt(5)) / 2. ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 4 * a(n - 3) - 2 * a(n - 4) + 2 * a(n - 5) + a(n - 6) for n > 6. ●

▶ [A289764] 1,2,6,13,29,58,122,245,501,1002,2026,4053,8149,16298,32682,65365,130901,261802,523946,1047893,2096469,4192938,8387242,16774485,33551701 ⋆ Decimal representation of the diagonal from the corner to the origin of the n - th stage of growth of the two - dimensional cellular automaton defined by "Rule 597", based on the 5 - celled von Neumann neighborhood. ● a(n) = 3 * a(n - 1) - a(n - 2) - 3 * a(n - 3) + 4 * a(n - 4) - 6 * a(n - 5) + 4 * a(n - 6) for n>5. ●

▶ [A055243] 1,2,6,13,29,60,122,241,468,894,1686,3144,5807,10636,19338,34931,62731,112068,199264,352787,622152,1093260,1914780,3343440,5821645 ⋆ First differences of A001628 (Fibonacci convolution). ● a(n - 3) = Sum _{ k = 2..floor((n + 1) / 2) } C(k,2) * C(n - k,k - 1) = (1 / 2) * G''(n,1), where the polynomial G(n,x) := Sum _{ k = 1..floor((n + 1) / 2) } C(n - k,k - 1) * x ^ k = x ^ ((n + 1) / 2) * F(n, 1 / sqrt(x)) and where F(n,x) denotes the n - th Fibonacci polynomial. Since G(n,1) yields the Fibonacci numbers A000045 and G'(n,1) yields the second - order Fibonacci numbers A010049, a(n) may be considered as the sequence of third - order Fibonacci numbers. ●

▶ [A173009] 0,1,2,6,13,29,60,124,251,507,1018,2042,4089,8185,16376,32760,65527,131063,262134,524278,1048565,2097141,4194292,8388596,16777203 ⋆ Expansion of o.g.f. x * (1 - x + x ^ 2) / (1 - 3 * x + x ^ 2 + 3 * x ^ 3 - 2 * x ^ 4). ● a(1)=0, a(2)=1, a(3)=2, a(4)=6, a(n) = 3 * a(n - 1) - a(n - 2) - 3 * a(n - 3) + 2 * a(n - 4). - _ Harvey P. Dale _ , Nov 16 2011 ●

▶ [A180965] 1,2,6,13,29,68,156,357,821,1886,4330,9945,22841,52456,120472,276681,635433,1459354,3351598,7697381,17678037,40599916,93242996,214144685,491811165 ⋆ Number of tatami tilings of a 2 X n grid (with monomers allowed). ● a(n) = 2 * a(n - 1) + 2 * a(n - 3) - a(n - 4). - _ Muniru A Asiru _ , Sep 11 2018 ●

▶ [A115217] 1,2,6,13,30,62,133,270,558,1125,2286,4590,9253,18542,37230,74533,149358,298862,598309,1196910,2394990,4790565,9583470,19168110,38340901 ⋆ Diagonal sums of "correlation triangle" for 2 ^ n. ● a(n)=sum { k=0..floor(n / 2), sum { j=0..n - k, [j<=k] * 2 ^ (k - j)[j<=n - 2k]2 ^ (n - 2k - j) }} . ●

▶ [A094687] 0,0,1,2,6,13,30,64,137,286,594,1221,2498,5084,10313,20858,42094,84797,170582,342760,688105,1380390,2767546,5546037,11109786 ⋆ Convolution of Fibonacci and Jacobsthal numbers. ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 3 * a(n - 3) - 2 * a(n - 4). ● a(n) = J(n + 1) - F(n + 1) = Sum _{ k=0..n } F(k) * J(n - k), where J=A001045, F=A000045. - _ Yuchun Ji _ , Mar 05 2019 ●

▶ [A369584] 0,0,0,0,0,1,2,6,13,30,65,140,296,622,1294,2679,5518,11323,23160,47250,96184,195438,396490,803292,1625591 ⋆ a(n) = 2 ^ (n - 3) - A368279(n) for n >= 5, otherwise 0. Number of compositions of n whose first and last part is not equal to 1 and whose first part is not the largest part. ● a(n) = [x ^ n] (1 + (x - 1) * (1 + x ^ 2 / (2 * x - 1) + sum(x ^ n / (1 - x * (1 - x ^ n) / (1 - x))). ●

▶ [A219753] 0,0,0,0,1,2,6,13,31,68,151,327,706,1509,3211,6796,14331,30115,63106,131905,275111,572676,1190031,2469039,5115426 ⋆ Expansion of x ^ 4 * (1 - 2 * x + x ^ 4) / ((1 + x) * (1 - 2 * x) ^ 2 * (1 - x - x ^ 2)). ● a(n) = (2 ^ (n - 5) * (3 * n + 16) + 4 * (- 1) ^ n) / 9 + ((1 - sqrt(5)) ^ (n - 3) - (1 + sqrt(5)) ^ (n - 3)) / (2 ^ (n - 3) * sqrt(5)) with n>3, a(0)=a(1)=a(2)=a(3)=0. [_ Bruno Berselli _ , Nov 29 2012] ●

▶ [A239305] 1,1,2,6,13,31,69,153,332,712,1509,3169,6603,13669,28142,57674,117741,239587,486193,984353,1989056,4012636,8083717,16266181,32698903 ⋆ Expansion of (4 * x ^ 4 - 5 * x ^ 3 - x ^ 2 + 3 * x - 1) / (2 * x ^ 5 + 3 * x ^ 4 - 4 * x ^ 3 - 3 * x ^ 2 + 4 * x - 1). ● a(n) = sum(k=0..n, ((k * n - 1) * sum(i=0..n - k, 2 ^ i * binomial(k + 1,n - k - i) * binomial(k + i,k) * (- 1) ^ (n - i + 1))) / (k + 1)). ●

▶ [A099232] 0,1,2,6,13,32,72,169,386,894,2053,4736,10896,25105,57794,133110,306493,705824,1625304,3742777,8618690,19847022,45703093,105244160,242353440 ⋆ a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 3 * a(n - 3). ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n - k, k + 1) * 3 ^ k. ● a(n) = (1 / 2 + sqrt(13) / 2) ^ n * (1 / 6 + 7 * sqrt(13) / 78) + (1 / 6 - 7 * sqrt(13) / 78) * (1 / 2 - sqrt(13) / 2) ^ n - 1 / 3. ● a(n + 1) = Sum _{ k=0..n } C(k + 1,n - k + 1) * 3 ^ (n - k). - _ Paul Barry _ , May 21 2006 ● a(n) = a(n - 1) + 3 * a(n - 2) + 1, n > 1. - _ Gary Detlefs _ , Jun 21 2010 ●

▶ [A098407] 1,1,2,6,13,33,78,186,436,1028,2394,5566,12877,29689,68198,156194,356599,811959,1843956,4177436,9442166,21295934,47932572,107677140,241443980 ⋆ Number of different hierarchical orderings that can be formed from n unlabeled elements with no repetition of subhierarchies. ● a(n) = Sum _{ partitions n = s _ 1 + ... + s _ n } Product _{ Set { s _ i } } C(2 ^ (s _ i - 1), m(s _ i)), where the sum runs over all partitions of n, the product runs over the set of parts of a given partition, s _ i is the i - th part in the set of parts, C(k, l) denotes the binomial coefficient and m(s _ i) is the multiplicity of part s _ i in the given partition. ●

▶ [A124124] 1,2,6,13,37,78,218,457,1273,2666,7422,15541,43261,90582,252146,527953,1469617,3077138,8565558,17934877,49923733,104532126,290976842,609257881,1695937321 ⋆ Nonnegative integers n such that 2n ^ 2 + 2n - 3 is square. ● a(n) = a(n - 1) + 6 * a(n - 2) - 6 * a(n - 3) - a(n - 4) + a(n - 5). G.f.: - x * (1 + x - 2 * x ^ 2 + x ^ 3 + x ^ 4) / ((x - 1) * (x ^ 2 - 2 * x - 1) * (x ^ 2 + 2 * x - 1)). [_ R. J. Mathar _ , Jul 17 2009] ● a(n) = 7 * a(n - 2) - 7 * a(n - 4) + a(n - 6), for n>6. (End) ●

▶ [A238410] 0,2,6,14,24,38,54,74,96,122,150,182,216,254,294,338,384,434,486,542,600,662,726,794,864 ⋆ a(n) = floor((3(n - 1) ^ 2 + 1) / 2). ● a(n) = (3 * n) ^ 2 / 6 for n even and a(n) = ((3 * n) ^ 2 + 3) / 6 for n odd. - _ Miquel Cerda _ , Jun 17 2016 ● a(n) = (6 * n ^ 2 - 12 * n + 7 + (- 1) ^ n) / 4. ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4). - _ Matthew House _ , Feb 15 2017 ●

▶ [A212964] 0,0,0,2,6,14,26,44,68,100,140,190,250,322,406,504,616,744,888,1050,1230,1430,1650,1892,2156 ⋆ Number of (w,x,y) with all terms in { 0,...,n } and | w - x| < |x - y| < |y - w|. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - 2 * a(n - 3) + 3 * a(n - 4) - a(n - 5). ● a(n) = Sum _{ k=0..n } floor((k - 1) ^ 2 / 2). - _ Enrique Pérez Herrero _ , Dec 28 2013 ● a(n) = Sum _{ i=1..n } floor(i ^ 2 / 2) - 2 * floor(i / 2). - _ Wesley Ivan Hurt _ , Jul 23 2014 ● a(n) = (2 * n - 1) * (2 * n ^ 2 - 2 * n - 3) / 24 - (- 1) ^ n / 8. - _ Robert Israel _ , Jul 23 2014 ●

▶ [A121968] 1,2,6,14,27,46,72,106,149,202,266,342,431,534,652,786,937,1106,1294,1502,1731,1982,2256,2554,2877 ⋆ a(n) = 2 * a(n - 1) - a(n - 2) + n + 1. ● a(n) = (6 + n(- 1 + n(6 + n))) / 6 = C(n + 1, 3) + n ^ 2 + 1 = C(n + 2, 3) + C(n, 2) + 1. ●

▶ [A033547] 0,2,6,14,28,50,82,126,184,258,350,462,596,754,938,1150,1392,1666,1974,2318,2700,3122,3586,4094,4648 ⋆ Otto Haxel's guess for magic numbers of nuclear shells. ● a(n) = n * (n ^ 2 + 5) / 3. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Wesley Ivan Hurt _ , Apr 05 2015 ●

▶ [A050531] 1,2,6,14,28,52,93,152,242,370,546,784,1103,1512,2040,2706,3534,4554,5803,7304,9108,11252,13780,16744,20205 ⋆ Number of multigraphs with loops on 3 nodes with n edges. ● a(n) = (A + B + C) / 6 where A = binomial(n + 5, 5); B = (n + 2) * (n + 3) * (n + 4) / 8 if n even, B = (n + 1) * (n + 3) * (n + 5) / 8 if n odd; C = 2 * ((n / 3) + 1) if n divisible by 3, C = 0 if n not divisible by 3. - _ David Pasino _ , Jul 06 2019 ● a(n) = 2 * a(n - 1) + a(n - 2) - 2 * a(n - 3) - 3 * a(n - 4) + 6 * a(n - 6) - 3 * a(n - 8) - 2 * a(n - 9) + a(n - 10) + 2 * a(n - 11) - a(n - 12) for n>11. - _ Colin Barker _ , Jul 07 2019 ●

▶ [A290699] 0,2,6,14,28,52,94,170,312,584,1114,2158,4228,8348,16566,32978,65776,131344,262450,524630,1048956,2097572,4194766,8389114,16777768 ⋆ a(n) = 2 ^ n - n + n ^ 2. ● a(n) = 5 * a(n - 1) - 9 * a(n - 2) + 7 * a(n - 3) - 2 * a(n - 4). ●

▶ [A249665] 1,1,1,2,6,14,28,56,118,254,541,1140,2401,5074,10738,22711,48001,101447,214446,453355,958395,2025963,4282685,9053286,19138115 ⋆ The number of permutations p of { 1,...,n } such that p(1)=1, p(n)=n, and |p(i) - p(i + 1)| is in { 1,2,3 } for all i from 1 to n - 1. ● a(n) = a(n - 1) + g(n - 1) + h(n - 1), ● a(n) = a(n - 1) * b(1) + a(n - 2) * b(2) + a(n - 3) * b(3) + ... + a(1) * b(n - 1). ● a(n) = 2 * a(n - 1) - a(n - 2) + 2 * a(n - 3) + a(n - 4) + a(n - 5) - a(n - 7) - a(n - 8). ●

▶ [A366542] 2,6,14,30,56,100,178,322,596,1128,2174,4246,8368,16588,33002,65802,131372,262480,524662,1048990,2097608,4194804,8389154,16777810,33555076 ⋆ Number of discrete uninorms defined on the finite chain L _ n= { 0,1,...n } , U:L _ n ^ 2 - >L _ n, whose underlying operators are smooth and idempotent, or smooth and idempotent - free. ● a(1)=2, a(2)=6 and a(n) = 2 ^ n + n * (n + 1) - 6 for n>=3. ●

▶ [A192966] 0,1,2,6,14,30,59,110,197,343,585,983,1634,2695,4420,7220,11760,19116,31029,50316,81535,132061,213827,346141,560244 ⋆ Coefficient of x in the reduction by x ^ 2 - > x + 1 of the polynomial p(n,x) defined at Comments. ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + a(n - 3) + 2 * a(n - 4) - a(n - 5). ● a(n) = Fibonacci(n + 4) + 2 * Fibonacci(n + 2) - (n ^ 2 + 5 * n + 10) / 2. - _ G. C. Greubel _ , Jul 11 2019 ●

▶ [A296965] 0,1,2,6,14,30,62,126,254,510,1022,2046,4094,8190,16382,32766,65534,131070,262142,524286,1048574,2097150,4194302,8388606,16777214 ⋆ Expansion of x * (1 - x + 2 * x ^ 2) / ((1 - x) * (1 - 2 * x)). ● a(n) = 2 ^ n - 2 for n>1. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>3. (End) ●

▶ [A095121] 1,2,6,14,30,62,126,254,510,1022,2046,4094,8190,16382,32766,65534,131070,262142,524286,1048574,2097150,4194302,8388606,16777214,33554430 ⋆ Expansion of (1 - x + 2x ^ 2) / ((1 - x) * (1 - 2x)). ● a(n) = 2 * 2 ^ n - 2 + 0 ^ n; a(n) = 3 * a(n - 1) - 2 * a(n - 2). ● a(0)=1, a(1)=2, a(n) = 2 * a(n - 1) + 2 for n>1. - _ Philippe Deléham _ , Sep 28 2006 ● a(n) = - 2 + 4 * 2 ^ (n - 1) + (binomial(2 * n,n) mod 2). - _ Paolo P. Lava _ , Nov 19 2008 ● a(n) = 5 * a(n - 2) - 4 * a(n - 4) for n>4 [Because x(n)=f * x(n - 1) + g * x(n - 2) => x(n)=(f ^ 2 + 2 * g) * x(n - 2) - g ^ 2 * x(n - 4), here with f=3 and g= - 2]. - _ Hermann Stamm - Wilbrandt _ , Aug 13 2015 ●

► [A291409] 2,6,14,31,66,136,272,534,1030,1958,3678,6837,12594,23016,41768,75325,135084,241032,428112,757236,1334292,2342892,4100676,7155937,12453170 ⋆ p - INVERT of (1,1,0,0,0,0,...), where p(S) = (1 - S ^ 2)(1 - S) ^ 2. ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - 5 * a(n - 4) - 2 * a(n - 5) + 4 * a(n - 6) + 4 * a(n - 7) + a(n - 8) for n >= 9. ●

► [A074878] 1,2,6,14,32,70,150,316,658,1358,2784,5678,11534,23356,47178,95110,191440,384854,772902,1550972,3110306,6234142,12490176,25015774,50088862 ⋆ Row sums of triangle in A074829. ● a(1)=1, a(2)=2, a(3)=6, a(n) = 3 * a(n - 1) - a(n - 2) - 2 * a(n - 3) for n>3. ●

► [A131352] 1,2,6,14,32,72,160,352,768,1664,3584,7680,16384,34816,73728,155648,327680,688128,1441792,3014656,6291456,13107200,27262976,56623104,117440512 ⋆ Row sums of triangle A133935. ● a(n) = 2 ^ (n - 2) * (n + 4) for n>1. - ___ Colin Barker _ , Jun 05 2012 ●

► [A232230] 1,1,2,6,14,32,72,160,354,782,1726,3808,8400,18528,40866,90134,198798,438464,967064,2132928,4704322,10375710,22884350,50473024,111321760 ⋆ Expansion of (1 - 2 * x + x ^ 2 + x ^ 3 + x ^ 5) / ((1 - x) * (1 - 2 * x - x ^ 3)). ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) + a(n - 3) - a(n - 4) for n>3. - _ Colin Barker _ , Dec 05 2018 ● a(n) = 2 * a(n - 1) + a(n - 3) + 2 for n>4. - _ Greg Dresden _ , Feb 09 2020 ●

► [A077999] 1,1,2,6,14,32,76,180,424,1000,2360,5568,13136,30992,73120,172512,407008,960256,2265536,5345088,12610688,29752448,70195072,165611520,390727936 ⋆ Expansion of (1 - x) / (1 - 2 * x - 2 * x ^ 3). ● a(n) = 2 * (a(n - 1) + a(n - 3)) counts the above permutations by first entry. a(n) = a(n - 1) + a(n - 2) + 3 * Sum _{ k=0..n - 3 } a(k) counts by last entry. a(n) = 2 ^ (n - 1) + Sum _{ k=0..n - 3 } 2 ^ (n - 2 - k) * a(k) counts by location of first 3xx pattern. a(n) = Sum _{ k=0..floor(n / 3) } ((n - k) / (n - 2k)) * binomial(n - 2 * k,k) * 2 ^ (n - 2 * k - 1) counts by number of 3xx patterns. - _ David Callan _ , Oct 26 2006 ●

► [A257557] 1,1,2,6,14,33,79,188,448,1068,2545,6065,14454,34446,82090,195633,466223,1111080,2647872,6310280,15038353,35838673,85408986,203542550,485072726 ⋆ Expansion (x - 1) / (x ^ 5 + 2 * x ^ 3 + 2 * x - 1). ● a(n) = Sum _{ k=0..n } Sum _{ i=0..(n - k) / 2 } C(2 * k,i) * C(n - 2 * i - 1,n - 2 * i - k). ●

► [A070933] 1,2,6,14,34,74,166,350,746,1546,3206,6550,13386,27114,54894,110630,222794,447538,898574,1801590,3610930,7231858,14480654,28983246,58003250 ⋆ Expansion of Product _{ k>=1 } 1 / (1 - 2 * t ^ k). ● a(n) is asymptotic to c * 2 ^ n where c=3.46253527447396564949732... - _ Benoit Cloitre _ , Oct 26 2003. Right value of this constant is c = 1 / A048651 = 3.4627466194550636115379573429244311645407579029044383913293530317589154397404 2... . - _ Vaclav Kotesovec _ , Sep 09 2014 ● a(n) = S(n,1), where S(n,m) = 2 + Sum _{ k=m..floor(n / 2) } 2 * S(n - k,k)), S(n,n)=2, S(0,m)=1, S(n,m)=0 for n < m. - _ Vladimir Kruchinin _ , Sep 07 2014 ● a(n) = Sum _{ lambda,mu,nu } (c ^{ lambda }_{ mu,nu }) ^ 2, where lambda ranges over all partitions of n, mu and nu range over all partitions satisfying |mu| + |nu| = n, and c ^{ lambda }_{ mu,nu } denotes a Littlewood - Richardson coefficient. - _ Richard Stanley _ , Nov 16 2014 ●

► [A059570] 1,2,6,14,34,78,178,398,882,1934,4210,9102,19570,41870,89202,189326,400498,844686,1776754,3728270,7806066,16311182,34020466,70837134,147266674 ⋆ Number of fixed points in all 231 - avoiding involutions in S _ n. ● a(n) = (3 * n + 4) * 2 ^ n / 18 - 2 * (- 1) ^ n / 9. ● a(n) = Sum _{ j=0..n } Sum _{ k=0..n } binomial(n - k, k + j) * 2 ^ k. - _ Paul Barry _ , Aug 29 2004 ● a(n) = 3 * a(n - 1) - 4 * a(n - 3); a(1)=1,a(2)=2,a(3)=6. - _ Philippe Deléham _ , Aug 30 2006 ●

► [A208902] 2,6,14,34,78,182,414,942,2110,4702,10366,22718,49406,106878,229886,492286,1049598,2229758,4720638,9964542,20975614,44046334,92282878,192950270,402669566 ⋆ The sum over all bitstrings b of length n of the number of runs in b not immediately followed by a longer run. ● a(n) = 2 ^ n * (2 + (n - 1) / 2 - (1 / 2) ^ (n - 1) - 2 (1 - (1 / 2) ^ floor(n / 2)) + (1 / 2) ^ (floor(n / 2) + 1) (1 + (- 1) ^ n)). ● a(n) = 5 * a(n - 1) - 6 * a(n - 2) - 6 * a(n - 3) + 16 * a(n - 4) - 8 * a(n - 5), a(1) = 2, a(2) = 6, a(3) = 14, a(4) = 34, a(5) = 78. ●

► [A099425] 1,2,6,14,34,82,198,478,1154,2786,6726,16238,39202,94642,228486,551614,1331714,3215042,7761798,18738638,45239074,109216786,263672646,636562078,1536796802 ⋆ Expansion of (1 + x ^ 2) / (1 - 2 * x - x ^ 2). ● a(n) = (1 + sqrt(2)) ^ n + (1 - sqrt(2)) ^ n - 0 ^ n. ● a(n) = round((1 + sqrt(2)) ^ n). - _ Bruno Berselli _ , Feb 04 2013 ●

► [A177790] 1,2,6,14,34,84,208,518,1296,3254,8196,20700,52404,132942,337878,860142,2192902,5598144,14308378,36610970,93770358,240390602,616787116,1583765724,4069672444 ⋆ Number of paths from (0,0) to (n,n) avoiding 3 or more consecutive east steps and 3 or more consecutive north steps. ● a(n) = Sum _{ i=0..floor(n / 2) } 2 * C(n - i,i) ^ 2 + C(n - i,i) * C(n - i - 1,i + 1) + C(n - i,i) * C(n - i + 1,i - 1). ● a(n) = [x ^ n y ^ n] (- (1 + x + x ^ 2) * (1 + y + y ^ 2) / (- 1 + x * y + x * y ^ 2 + x ^ 2 * y + x ^ 2 * y ^ 2)). ●

► [A105635] 0,1,2,6,14,35,84,204,492,1189,2870,6930,16730,40391,97512,235416,568344,1372105,3312554,7997214,19306982,46611179,112529340,271669860,655869060 ⋆ a(n) = (2 * Pell(n + 1) - (1 + (- 1) ^ n)) / 4. ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4). ● a(n) = Sum _{ k=0..floor((n - 1) / 2) } Pell(n - 2k). ● a(n) = Sum _{ k=0..n } Pell(k) * (1 - (- 1) ^ (n + k - 1)) / 2. ● a(n) = term (4,1) in the 4 X 4 matrix [1,1,0,0; 3,0,1,0; 1,0,0,0; 1,0,0,1] ^ n. - _ Alois P. Heinz _ , Jul 24 2008 ● a(n) = floor(Pell(n) / 2). - _ Eric W. Weisstein _ , Aug 01 2023 ●

► [A175654] 1,2,6,14,36,86,210,500,1194,2822,6660,15638,36642,85604,199626,464630,1079892,2506550,5811762,13462484,31159914,72071654,166599972,384912086,888906306 ⋆ Eight bishops and one elephant on a 3 X 3 chessboard. G.f.: (1 - x - x ^ 2) / (1 - 3 * x - x ^ 2 + 6 * x ^ 3). ● a(n) = 3 * a(n - 1) + a(n - 2) - 6 * a(n - 3) with a(0)=1, a(1)=2 and a(2)=6. ● a(n) = ((6 + 10 * A) * A ^ (- n - 1) + (6 + 10 * B) * B ^ (- n - 1)) / 13 - 2 ^ n with A = (- 1 + sqrt(13)) / 6 and B = (- 1 - sqrt(13)) / 6. ● a(n) = b(n) - b(n - 1) - b(n - 2), where b(n) = Sum _{ k=1..n } (Sum _{ j=0..k } (binomial(j,n - 3 * k + 2 * j) * (- 6) ^ (k - j) * binomial(k,j) * 3 ^ (3 * k - n - j), n>0, b(0)=1, with a(0) = b(0), a(1) = b(1) - b(0). - _ Vladimir Kruchinin _ , Aug 20 2010 ●

► [A077937] 1,2,6,14,36,88,220,544,1352,3352,8320,20640,51216,127072,315296,782304,1941056,4816128,11949760,29649664,73566592,182532992,452899840,1123732480,2788198656 ⋆ Expansion of 1 / (1 - 2 * x - 2 * x ^ 2 + 2 * x ^ 3). ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) with a(0) = 1, a(1) = 2, and a(3) = 8. - _ G. C. Greubel _ , May 02 2022 ●

► [A006864] 0,1,2,6,14,37,92,236,596,1517,3846,9770,24794,62953,159800,405688,1029864,2614457,6637066,16849006,42773094,108584525,275654292,699780452,1776473532 ⋆ Number of Hamiltonian cycles in P _ 4 X P _ n. ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) + a(n - 4). ● a(n)=sum (sum (binomial(k,j) * sum (binomial(j, i - j) * 2 ^ j * binomial(k - j,n - i - 3 * (k - j)) * (- 2) ^ (4 * (k - j) - (n - i)), i,j,n - k + j) , j,0,k) , k,1,n), n>0. - _ Vladimir Kruchinin _ , Aug 04 2010 ●

► [A100067] 1,2,6,14,38,92,240,590,1510,3740,9476,23564,59372,147968,371636,927374,2324870,5805740,14538660,36322340,90898228,227153192,568235696,1420236524,3551943388 ⋆ a(n) = Sum _{ k=0..floor(n / 2) } binomial(n,k) * 2 ^ (n - 2 * k). ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n, k) * 2 ^ (n - 2 * k). ● a(n) = Sum _{ k=0..n } binomial(n, (n - k) / 2) * (1 + (- 1) ^ (n - k) * 2 ^ k / 2. ●

► [A026597] 1,2,6,14,38,94,246,622,1606,4094,10518,26894,68966,176542,452406,1158574,2968198,7602494,19475286,49885262,127786406,327327454,838473078,2147782894,5501675206 ⋆ Expansion of (1 + x) / (1 - x - 4 * x ^ 2). ● a(n) = T(n,0) + T(n,1) + ... + T(n,2 * n), T given by A026584. ● a(n) = Sum _{ k=0..n } binomial(floor((2 * n - k - 1) / 2), n - k) * 2 ^ k. - _ Paul Barry _ , Feb 1 1 2005 ● a(n) = Sum _{ k=0..n } binomial(floor((2 * n - k) / 2),n - k) * 4 ^ floor(k / 2). - _ Paul Barry _ , Feb 02 2007 ● a(n) = (1 / 2 + 3 * sqrt(17) / 34) * (1 / 2 + sqrt(17) / 2) ^ n + (1 / 2 - 3 * sqrt(17) / 34) * (1 / 2 - sqrt(17) / 2) ^ n. - _ Antonio Alberto Olivares _ , Jun 07 2011 ● a(n) = (2 * i) ^ n * (chebyshevU(n, - i / 4) - (i / 2) * chebyshevU(n - 1, - i / 4)). - _ G. C. Greubel _ , Dec 08 2021 ●

► [A190788] 1,1,2,6,14,38,94,248,628,1638,4190,10872,27940,72316,186260,481488,1241512,3207302,8274646,21369496,55148068,142396436,367537484,948920560,2449445432 ⋆ Expansion of ((x - 1) * sqrt(1 - 4 * x ^ 2)) / ((x - 1) * sqrt(1 - 4 * x ^ 2) + x). ● a(n)=sum(k=1..n, sum(i=0..(n - k) / 2, binomial((2 * i + k - 2) / 2,i) * 4 ^ i * binomial(n - 2 * i - 1,k - 1))), n>0, a(0)=1. ●

► [A127546] 2,6,14,38,98,258,674,1766,4622,12102,31682,82946,217154,568518,1488398,3896678,10201634,26708226,69923042,183060902,479259662,1254718086,3284894594,8599965698,22515002498 ⋆ a(n) = F(n) ^ 2 + F(n + 1) ^ 2 + F(n + 2) ^ 2, where F(n) denotes the n - th Fibonacci number. ● a(n) = 2 * (F(n) ^ 2 + F(n + 1) ^ 2 + F(n) * F(n + 1)). - _ Emeric Deutsch _ , Apr 04 2007 ●

► [A271895] 1,2,6,14,40,100,276,712,1928,5048,13536,35696,95248,252064,670944,1778656,4728704,12546368,33335616,88484480,235033216,623990656,1657207296,4400177920,11685241088 ⋆ Expansion of (1 - 2 * x ^ 2) / (1 - 2 * x - 4 * x ^ 2 + 6 * x ^ 3). ● a(n) >= 2 ^ n. ●

► [A133155] 2,6,14,46,110,366,878,2926,19310,52078,314222,1362798,3459950,11848558,78957422,615828334,1689570158,10279504750,44639243118,113358719854,663114533742,2862137789294,20454323833710,301929300544366,1427829207386990 ⋆ Numbers formed by setting bits representing odd primes, where bit _ no = (prime - 1) / 2. Setting bit number b is the same as OR - ing with 2 ^ b (i. e., bit numbers start at zero). ● a(n) = setbit(a(n - 1),(p - 1) / 2) where p is the n - th odd prime. ●

► [A284701] 2,6,14,46,137,354,905,2366,6278,16681,44156,116650,308180,814645,2153984,5695102,15056494,39804582,105231559,278204561,735502187,1944477640,5140687360,13590620330,35930023287 ⋆ Number of maximal matchings in the n - antiprism graph. ● a(n) = 2 * a(n - 1) + a(n - 2) + 3 * a(n - 4) + 5 * a(n - 5) + a(n - 6) - 2 * a(n - 7) - a(n - 8) for n>8. ●

► [A293402] 0,2,6,15,26,40,58,79,104,131,162,196,233,273,317,364,414,468,524,584,647,714,783,856,932 ⋆ The integer k that minimizes |k / n ^ 2 - tau|, where tau = (1 + sqrt(5)) / 2 (golden ratio). ● a(n) = floor(1 / 2 + tau * n ^ 2). ●

► [A256313] 0,0,2,6,15,27,47,72,108,150,206,270,351,441,551,672,816,972,1154,1350,1575,1815,2087,2376,2700 ⋆ Number of partitions of 3n into exactly 4 parts. ● a(n) = (6 * n ^ 3 + 6 * n ^ 2 - 3 * n - 5 + (3 * n + 1) * (- 1) ^ n + 2 * ((- 1) ^ ((2 * n - 1 + (- 1) ^ n) / 4) + (- 1) ^ ((2 * n + 1 - (- 1) ^ n) / 4))) / 32. - _ Luce ETIENNE _ , Feb 17 2017 ●

► [A087427] 2,6,15,30,48,72,99,154,210,270,360,420,483,598,754,870,990,1155,1260,1404,1599,1804,2112,2400,2550 ⋆ Number of lattice points on or inside the rectangle formed by [1 <= x <= (q - 1) / 2] and [1 <= y <= (p - 1) / 2], where p = n - th prime, q = (n - 1) - st prime. ● a(n) = (prime(n - 1) - 1) * (prime(n) - 1) / 4. ● a(n) = Sum _{ k=1..(p - 1) / 2 } floor(k * q / p) + Sum _{ k=1..(q - 1) / 2 } floor(k * p / q). ●

► [A355057] 1,1,2,6,15,30,70,210,462,6006,51051,102102,277134,6374082,10623470,223092870,588153930,18232771830,51893273670,2127624220470,5381637734130,252936973504110,6702829797858915,1340565959517830,41628100849860630 ⋆ a(n) = product of prohibited prime factors of A090252(n). ● a(n) = a(n - 1) * K(s(n - 1)) / K(s((n - 1) / 2)), where the last operation is only carried out iff (n - 1) / 2 is an integer. ●

► [A056520] 1,2,6,15,31,56,92,141,205,286,386,507,651,820,1016,1241,1497,1786,2110,2471,2871,3312,3796,4325,4901 ⋆ a(n) = (n + 2) * (2 * n ^ 2 - n + 3) / 6. ● a(n) = a(n - 1) + n ^ 2. ●

► [A192980] 0,1,2,6,15,34,70,135,248,440,761,1292,2164,3589,5910,9682,15803,25726,41802,67835,109980,178196,288597,467256,756360 ⋆ Coefficient of x in the reduction by x ^ 2 - > x + 1 of the polynomial p(n,x) defined at Comments. ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + a(n - 3) + 2 * a(n - 4) - a(n - 5). ● a(n) = Fibonacci(n + 4) + Lucas(n + 3) - (n ^ 2 + 3 * n + 7). - _ G. C. Greubel _ , Jul 24 2019 ●

► [A221719] 0,2,6,15,34,74,157,328,678,1391,2838,5766,11677,23588,47554,95719,192426,386450,775485,1555152,3117070,6245087,12507886,25044430,50135229 ⋆ a(n) = 3 * 2 ^ n - Fibonacci(n + 3) - 1. ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) - a(n - 3) + 2 * a(n - 4) for n>3. ● a(n) = (- 1 + 3 * 2 ^ n - (2 ^ (- n) * ((1 - sqrt(5)) ^ n * (- 2 + sqrt(5)) + (1 + sqrt(5)) ^ n * (2 + sqrt(5)))) / sqrt(5)). - _ Colin Barker _ , Nov 03 2016 ●

► [A095380] 1,1,2,6,15,34,75,162,337,706,1466,2995,6119,12450,25248,51158,103450,209010,421681,850322,1712673,3447970,6937759,13952296,28049834 ⋆ Numbe

r of integers not exceeding 2 ^ n that are impossible as sum - of - divisors of oth er numbers. ● a(n) is the number of terms in A007369 not exceeding 2 ^ n. ●

▶ [A136302] 2,6,15,35,81,188,437,1016,2362,5491,12765,29675,68986,160373,372822,866706,2014847,4683951,10888865,25313540,58846841,136802308,318026782,739322571,1718716457 ★ Transform of A000027 by the T _{ 1,1 } transformatio n (see link). ● a(n + 3) = 3 * a(n + 2) - 2 * a(n + 1) + a(n) (n>=0). - _ Richard Choulet _ , Apr 07 2009 ●

▶ [A116404] 1,1,2,6,15,35,84,204,493,1189,2870,6930,16731,40391,97512,235416,568345,1372105,3312554,7997214,19306983,46611179,112529340,271669860,655869061 ★ Expansion of (1 - x) / ((1 - x) ^ 2 - x ^ 2 * (1 + x) ^ 2). ● a(n) = 2 * a(n - 1) + 2 * a(n - 3) + a(n - 4). ● a(n) = Sum _{ k=0..floor(n / 2) } Sum _{ j= 0..n - k } C(2 * k,n - 2 * k - j) * C(n - 2 * k,j) * 2 ^ (n - 2 * k - j). ● a(n) = Su m _{ k=0..floor(n / 2) } hypergeometric2F1([- 2 * k, - n + 2 * k], [1], 2). - _ G. C. Greubel _ , Nov 20 2021 ●

▶ [A084860] 1,2,6,15,36,84,192,432,960,2112,4608,9984,21504,46080,98304,208896,442368,933888,1966080,4128768,8650752,18087936,37748736,78643200,163577856 ★ Expansion of (1 - 2x + 2x ^ 2 - x ^ 3) / (1 - 2x) ^ 2. ● a(0)=1, a(n + 1) = 3 * 2 ^ (n - 2) * (n + 3) - 0 ^ n / 4. ●

▶ [A084798] 1,2,6,15,36,84,195,451,1041,2402,5539,12772,29447,67893,156531,360889,832045,1918313,4422746,10196812,23509143,54201233,124963024,288107051,664241868 ★ Least integer such that x ^ (n + 1) / (ceiling(x ^ n) + a(n)) mon otonically decreases to 1, where x=2.30553839092543... ● a(0)=1, a(n + 1) = ce iling(x * a(n) + x * ceiling(x ^ n) - ceiling(x ^ (n + 1))), where x=2.30553839 092543... ●

▶ [A335903] 2,6,15,37,88,204,464,1040,2304,5056,11008,23808,51200,109568,233472,495616,1048576,2211840,4653056,9764864,20447232,42729472,89128960,185597952,385875968 ★ Column 1 in the matrix of A279212 (whose indexing starts at 0). ● a(1) = 2, a(2) = 6, a(3) = 15, a(n) = 2 * a(n - 1) + 7 * 2 ^ (n - 4), for n >= 4 (recursion for column 1 in the matrix of A279212). ● a(1) = 2, a(2) = 6, a(n) = (7 * n + 9) * 2 ^ (n - 4), for n >= 3. ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) for n > 4. ●

▶ [A291414] 2,6,15,37,89,212,500,1173,2741,6388,14860,34524,80138,185904,431075,999280,2315960,5366755,12435075,28810731,66748062,154635086,358234115,829886167,1922494024 ★ p - INVERT of (1,1,0,0,0,0,...), where p(S) = 1 - 2 S + S ^ 3. ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - a(n - 3) - 3 * a(n - 4) - 3 * a(n - 5) - a(n - 6) for n >= 7. ●

▶ [A098790] 1,2,6,15,37,90,218,527,1273,3074,7422,17919,43261,104442,252146,608735,1469617,3547970,8565558,20679087,49923733,120526554,290976842,702480239,1695937321 ★ a(n) = 2 * a(n - 1) + a(n - 2) + 1, a(0) = 1, a(1) = 2. ● a(n) = 2 * a(n - 1) + a(n - 2) + 1, a(0) = 1, a(1) = 2. ● a(n) = (sqrt(2) + 1) ^ n * (3 / 4 + sqrt(2) / 4) + (sqrt(2) - 1) ^ n * (3 / 4 - sqrt(2) / 4) * (- 1) ^ n - 1 / 2; - _ Paul Barry _ , Mar 11 2007 ● a(0)=1, a(1)=2, a(2)=6, a(n)=3 * a(n - 1) - a(n - 2) - a(n - 3). [_ Harvey P. Dale _ , Oct 15 2011] ● a(n) = 7 * a(n - 2) - 7 * a(n - 4) + a(n - 6), for n>5. - _ Hermann Stamm - Wilbrandt _ , Aug 26 2014 ●

▶ [A331347] 1,2,6,15,37,93,238,616,1604,4189,10955,28667,75036,196430,514242,1346283,3524593,9227481,24157834,63246004,165580160,433494457,1134903191,2971215095,7778742072 ★ Number of permutations w in S _ n that form Bool ean intervals [s, w] in the Bruhat order for every simple reflection s in the supp ort of w. ● a(n) = 5 * a(n - 1) - 8 * a(n - 2) + 5 * a(n - 3) - a(n - 4) for n>5. ●

▶ [A290762] 2,6,15,38,90,200,434,934,1995,4237,8976,19010,40300,85591,182231,389094,833306,1790141,3857190,8334719,18057605,39217422,85357692,186142694,406619110 ★ Number of minimal edge covers in the n - gear graph. ● a(n) = 6 * a(n - 1) - 14 * a(n - 2) + 19 * a(n - 3) - 21 * a(n - 4) + 18 * a(n - 5) - 11 * a(n - 6) + 7 * a(n - 7) - 2 * a(n - 8) + a(n - 9) for n > 9. ●

▶ [A106515] 1,2,6,15,38,94,231,564,1372,3329,8064,19512,47177,114010,275430,665247,1606534,3879302,9366735,22615356,54601628,131825377,318263328,768369744,1855031473 ★ A Fibonacci - Pell convolution. ● a(n) = Sum _{ k=0..n } Fi bonacci(n - k - 1) * Pell(k + 1). ● a(n) = Sum _{ k=0..floor(n / 2) } Sum _{ j =0..floor((n - k + 1) / 2) } binomial(n - k + 1, 2 * j + k + 1) * 2 ^ j. ● a(n) = Pell(n) + Pell(n + 1) - Fibonacci(n). - _ Ralf Stephan _ , Jun 02 2007 ● a(n) = 3 * a(n - 1) - 3 * a(n - 3) - a(n - 4). - _ Wesley Ivan Hurt _ , May 27 2021 ●

▶ [A120846] 2,6,15,38,101,280,799,2322,6825,20204,60083,179206,535549,1602528,4799367,14381690,43112273,129271252,387682651,1162785774,3487832997,10462450376,31385253935,94151567458,282446313721 ★ a(n) = 3 ^ n + 2 ^ n + n. ● a(0)=2, a(1)=6, a(2)=15, a(3)=38, a(n) = 7 * a(n - 1) - 17 * a(n - 2) + 17 * a(n - 3) - 6 * a(n - 4). [_ Harvey P. Dale _ , Oct 24 2011] ●

▶ [A246563] 1,1,2,6,15,39,116,340,1001,3041,9322,28718,89363,279987,881376,2788464,8860677,28256709,90407666,290124182,933482527,3010689527,9731366060,31516942060,102259648701 ★ G.f.: Sum _{ n>=0 } x ^ n / (1 - x ^ 2) ^ (2 * n + 1) * [Sum _{ k=0..n } C(n,k) ^ 2 * x ^ (2 * k)] ^ 2. ● a(n) = Sum _{ k=0 ..[n / 2] } Sum _{ j=0..k } C(n - k - j,k) ^ 2 * C(k,j) ^ 2. ●

▶ [A001654] 0,1,2,6,15,40,104,273,714,1870,4895,12816,33552,87841,229970,602070,1576239,4126648,10803704,28284465,74049690,193864606,507544127,1328767776,3478759200 ★ Golden rectangle numbers: F(n) * F(n + 1), where F(n) = A0 00045(n) (Fibonacci numbers). ● a(n) = 3 * a(n - 1) - a(n - 2) - (- 1) ^ n = - a(- 1 - n). ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - a(n - 3), a(1)=1, a(2)=2, a(3)=6. - _ Sture Sjöstedt _ , Feb 06 2010 ● a(n) = 1 / |F(n + 1) / F(n) - F(n) / F(n - 1)| where F(n) = Fibonacci numbers A000045. b(n) = F(n + 1) / F(n) - F(n) / F(n - 1): 1 / 1, - 1 / 2, 1 / 6, - 1 / 15, 1 / 40, - 1 / 104, ...; c(n) = 1 / b(n) = a(n) * (- 1) ^ (n + 1): 1, - 2, 6, - 15, 40, - 104, ... (n=1,2,...). - _ Thomas Ordow ski _ , Nov 04 2010 ● a(n) = (Fibonacci(n + 2) ^ 2 - Fibonacci(n - 1) ^ 2) / 4. - _ Gary Detlefs _ , Dec 03 2010 ● a(n + 1) = ((2 + sqrt(5)) * ((3 + sqrt(5)) / 2) ^ n + (2 - sqrt(5)) * ((3 - sqrt(5)) / 2) ^ n + (- 1) ^ n) / 5. ● a(n) = ((1 + s qrt(5)) * ((3 + sqrt(5)) / 2) ^ n + (1 - sqrt(5)) * ((3 - sqrt(5)) / 2) ^ n - 2 * (- 1) ^ n) / 10. (End) ●

▶ [A362566] 0,1,2,6,15,42,77,180,345,806,1457,3276,5985,13462,24257,54060,97665,217686,391937,871596,1570305,3492182,6286337,13972140,25155585 ★ a(n) is t he area of the smallest rectangle that the Harter - Heighway Dragon Curve will fit in after n doublings, starting with a segment of length 1. ● a(n) = ●

▶ [A178936] 1,2,6,15,42,116,330,951,2778,8180,24234,72087,215034,642644,1923018,5759223,17258010,51734708,155125482,465219159,1395342906,4185399572,12554940426,37662304695,112981880922 ★ a(n) = floor((2 * 3 ^ n + 3 * 2 ^ n) / 5). ● a(n) = (8 * 3 ^ n + 12 * 2 ^ n - (1 - (- 1) ^ n) * (5 + i ^ (n + 1))) / 20, wher e i=sqrt(- 1). - _ Bruno Berselli _ , Sep 05 2011 ●

▶ [A001444] 1,2,6,15,45,126,378,1107,3321,9882,29646,88695,266085,797526,2392578,7175547,21526641,64573362,193720086,581140575,1743421725,5230206126,15690618378,47071677987,141215033961 ★ Bending a piece of wire of length n + 1 (configurations that can only be brought into coincidence by turning the figure over are counted as different). ● a(n) = (3 ^ n + 3 ^ [n / 2]) / 2. ● a(n) = 3 * a(n - 1) + 3 * a(n - 2) - 9 * a(n - 3). ●

▶ [A045628] 1,1,1,2,6,15,46,132,432,1384,4735,16158,56766,200473,718012,2587000,9398080,34324173,126067124,465093570,1723171550,6407924165,23910560070,89494164972,335913861648 ★ Number of 2n - bead black - white reversible ne cklaces with n black beads and fundamental period 2n. ● a(n) = 1 / (4 * n) * S um _{ d|n } mu(n / d) * (2 * n * binomial(2 * floor(d / 2), floor(d / 2)) + bino mial(2 * d, d)) for n > 0. - _ Andrew Howroyd _ , Sep 28 2017 ●

▶ [A186738] 0,0,1,2,6,15,46,137,460,1557,5698,21269,83948,339177,1430502,6178981,27636512,126500209,596320914,2873324677,14203422044,71669915585,369941778510,1946679921381 ★ a(0)=0, a(1)=0; for n>1, a(n) = a(n - 1) + (n - 1) * a (n - 2) + 1. ● a(n) = 2 * a(n - 1) + (n - 2) * a(n - 2) - (n - 2) * a(n - 3) with a(0)=a(1)=0, a(2)=1. - _ Vincenzo Librandi _ , Dec 24 2012 ●

▶ [A237262] 1,2,6,15,47,118,370,929,2913,7314,22934,57583,180559,453350,1421538,3569217,11191745,28100386,88112422,221233871,693707631,1741770582,5461548626,13712930785,42998681377 ★ Values of x in the solutions to x ^ 2 - 8 * x * y + y ^ 2 + 11 = 0, where 0 < x < y. ● a(n) = 8 * a(n - 2) - a(n - 4) for n > 4 . ● a(n) = (11 * a(n - 1) - 4 * a(n - 2)) / 3 if n is odd; a(n) = (11 * a(n - 1) - 3 * a(n - 2)) / 4 if n is even. - _ R. J. Mathar _ , Jun 18 2014 ●

▶ [A038111] 2,6,15,105,385,1001,17017,323323,7436429,19605131,86822723,3212440751,131710070791,5663533044013,266186053068611,613385252723321,2783825377744303,5855632691117327,39232739030486090 9,27855244711645124539,203343286395009409134 7,1606411962520574332164 13 ★ Denominator of density of in tegers with smallest prime factor prime(n). ● a(n) = denominator of phi(e ^ (p si(p _ n - 1))) / e ^ (psi(p _ n)), where psi(.) is the second Chebyshev function and phi(.) is Euler's totient function. - _ Fred Daniel Kline _ , Jul 17 2014 ● a (n) = a(n - 1) * prime(n) / q(n), where q(n) = 1 except for q({ 3, 5, 6, 10, 11, 16, 17, 18, ... }) = (2, 3, 5, 11, 7, 23, 13, 29, ...), cf. A112037. - _ M. F. Hasler _ , Dec 03 2018 ●

▶ [A356803] 1,1,2,6,15,105,385,2310,6006,102102,277134,6374082,16804398,520936338,3038795305,66853496710,190275336790,7420738134810,17897074325130,769574195980590,1903683537425670,100895227483560510,258818192240437830,1578709726666707630,3647551557540239349 0 ★ a(n) = product of prohibited prim e factors of A354790(n). ● a(n) = a(n - 1) * s(n - 1) / s((n - 1) / 2), where the l ast operation is only carried out iff (n - 1) / 2 is an integer. ●

▶ [A085226] 2,6,16,19,44,47,53,56,60,128,131,137,140,144,156,159,165,168,172,179,182,186,191,392,395 ★ Row 0 of A085205. ● a(n) = A085205bi(n, 0). ●

▶ [A005996] 2,6,16,30,54,84,128,180,250,330,432,546,686,840,1024,1224,1458,1710,2000,2310,2662,3036,3456,3900,4394 ★ G.f.: 2 * (1 - x ^ 3) / ((1 - x) ^ 5 * (1 + x) ^ 2). ● a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + a(n - 4) + 2 * a(n - 5) - a(n - 6), with a(1)=2, a(2)=6, a(3)=16, a(4)=30, a(5)=54, a(6)=84. - _ Harvey P. Dale _ , Apr 08 2013 ● a(n) = (n ^ 3 + 3 * n ^ 2 + 2 * n + 1 + n * (n mod 2) - ((n + 1) mod 2)) / 4. (End) ●

▶ [A330503] 2,6,16,30,60,84,144,198,280,352,504,598,812,960,1152,1360,1728,1938,2400,2688,3080,3450,4128,4500,5200 ★ Number of Sós permutations of { 0,1,... ,n } . ● a(n) = (n + 1) * Sum _{ k=1..n } phi(k), where phi(k) is Euler's totie nt function. ●

▶ [A171218] 0,2,6,16,32,58,94,144,208,290,390,512,656,826,1022,1248,1504,1794,2118,2480,2880,3322,3806,4336,4912 ★ a(n) = Sum _{ k=0..n } A109613(k) * A0 05843(n - k). ● a(n) = - a(- n - 1) = 3 * a(n - 1) - 2 * a(n - 2) - 2 * a(n - 3) + 3 * a(n - 4) - a(n - 5). (End) ●

▶ [A032091] 2,6,16,32,60,100,160,240,350,490,672,896,1176,1512,1920,2400,2970,3630,4400,5280,6292,7436,8736,10192,11830 ★ Number of reversible strings wi th n - 1 beads of 2 colors. 4 beads are black. String is not palindromic. ● a(n) = [(n - 5)(n - 3)(n - 1) ^ 2 + (6n - 15) X[2Z](n)] / 48, where X[2Z] is the charac teristic function of 2Z. ● a(n) = (n ^ 4 - 10 * n ^ 3 + 32 * n ^ 2 - 32 * n) / 48 if n is even. ● a(n) = (n ^ 4 - 10 * n ^ 3 + 32 * n ^ 2 - 38 * n + 15) / 48 if n is od d. ● a(n) = (2 * n ^ 4 - 20 * n ^ 3 + 64 * n ^ 2 + 6 * (- 1) ^ n * n - 70 * n - 15 * (- 1) ^ n + 15) / 96. - _ Ilya Gutkovskiy _ , Jul 08 2016 ● a(n) = (1 / 2) * (binomial(n - 1, n - 5) - binomial(floor((n - 1) / 2) - floor((n - 5) / 2))). ●

▶ [A060354] 0,1,2,6,16,35,66,112,176,261,370,506,672,871,1106,1380,1696,2057,2466,2926,3440,4011,4642,5336,6096 ★ The n - th n - gonal number: a(n) = n * (n ^ 2 - 3 * n + 4) / 2. ● a(n) = (n * (n - 2) ^ 2 + n ^ 2) / 2. ● a(n) = Sum _{ j=0..n - 1 } (binomial(0,0 * j) + binomial(n - 1,2)). - _ Zerinvary Lajos _ , Sep 04 2006 [corrected by _ Jon E. Schoenfield _ , Aug 11 2018] ● a(n) = Sum _{ i =0..n - 1 } (i * (n - 2) + 1). - _ Ivan N. Ianakiev _ , Sep 25 2020 ●

▶ [A159938] 2,6,16,36,70,122,196,296,426,590,792,1036,1326,1666,2060,2512,3026,3606,4256,4980,5782,6666,7636,8696,9850 ★ The number of homogeneous trisu bstituted linear alkanes. ● a(n) = (1 / 3) * (2 * n ^ 3 - 9 * n ^ 2 + 19 * n - 12), where n is the number of carbons. ●

▶ [A145126] 1,2,6,16,36,71,127,211,331,496,716,1002,1366,1821,2381,3061,3877,4846,5986,7316,8856,10627,12651,14951,17551 ★ a(n) = 1 + (6 + (11 + (6 + n) * n) * n) * n / 24. ● a(n) = C(n + 3,4) + 1. - _ Zerinvary Lajos _ , Mar 24 2009 ●

▶ [A348289] 1,1,1,1,1,1,1,1,2,6,16,36,71,127,211,331,497,725,1047,1531,2316,3668,6064,10312,17717 ★ a(n) = Sum _{ k=0..floor(n / 8) } binomial(n - 4 * k,4 * k). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) + a(n - 8). ●

▶ [A365733] 1,1,1,1,1,1,2,6,16,36,71,127,215,367,676,1376,2982,6514,13855,28407,56543,111127,219918,444450,919744 ★ G.f. satisfies A(x) = 1 + x * A(x) * (1 + x ^ 5 * A(x) ^ 3). ● a(n) = Sum _{ k=0..floor(n / 6) } binomial(n - 5 * k,k) * binomial(n - 2 * k + 1,n - 5 * k) / (n - 2 * k + 1). ●

► [A005676] 1,1,1,1,1,2,6,16,36,71,128,220,376,661,1211,2290,4382,8347,15706,29191,53824,99009,182497,337745,627401 ⋆ Sum C(n - k,4 * k), k = 0..n. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n - k, 4k); ● a(n) = 4a(n - 1) - 6a(n - 2) + 4a(n - 3) - a(n - 4) + a(n - 5). (End) ●

► [A365735] 1,1,1,1,1,1,2,6,16,36,71,128,223,403,796,1706,3775,8252,17485,35986,72988,148594,307833,650947,1395846 ⋆ G.f. satisfies A(x) = 1 + x * A(x) / (1 - x ^ 5 * A(x) ^ 3). ● a(n) = Sum _{ k=0..floor(n / 5) } binomial(n - 4 * k - 1, k) * binomial(n - 2 * k + 1,n - 5 * k) / (n - 2 * k + 1). ●

► [A365079] 1,1,1,1,1,2,6,16,36,71,131,247,511,1156,2696,6172,13664,29563,63871,140341,315185,717962,1639822,3728276,8432696 ⋆ G.f. satisfies A(x) = 1 + x * A(x) * (1 + x ^ 4 * A(x) ^ 3). ● a(n) = Sum _{ k=0..floor(n / 5) } binomial(n - 4 * k,k) * binomial(n - k + 1,n - 4 * k) / (n - k + 1). ●

► [A038503] 1,1,1,1,2,6,16,36,72,136,256,496,992,2016,4096,8256,16512,32896,65536,130816,261632,523776,1048576,2098176,4196352 ⋆ Sum of every 4th entry of row n in Pascal's triangle, starting at "n choose 0". ● a(n) = Sum _{ k=0..floor(n / 4) } binomial(n, 4k); a(n) = 2 ^ (n - 1) + 2 ^ ((n - 2) / 2)(cos(Pi * n / 4) - sin(Pi * n / 4)). (End) ● a(n) = Sum _{ k=0..n } binomial(n, 4(n - k)). - _ Paul Barry _ , Aug 30 2004 ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n, 2k)(1 + (- 1) ^ k) / 2. - _ Paul Barry _ , Nov 29 2004 ● a(n; t, s) = a(n - 1; t, s) + a(n - 1; t + 1, s + t + 1) where t is the trace and s is the subtrace. ● a(n + m) = a(n) * a(m) + H _ 4(n) * H _ 2(m) + H _ 3(n) * H _ 3(m) + H _ 2(n) * H _ 4(m), where H _ 2 = A038504, H _ 3 = A038505, H _ 4 = A000749. ● a(n) = hypergeom([1 / 4 - n / 4, 1 / 2 - n / 4, 3 / 4 - n / 4, - n / 4], [1 / 4, 1 / 2, 3 / 4], 1). - _ Peter Luschny _ , Mar 18 2023 ●

► [A365245] 1,1,1,1,1,2,6,16,36,72,139,283,631,1487,3510,8086,18240,41004,93364,216370,507353,1193113,2799681,6556243,15368798 ⋆ G.f. satisfies A(x) = 1 + x * A(x) / (1 - x ^ 4 * A(x) ^ 3). ● a(n) = Sum _{ k=0..floor(n / 4) } binomial(n - 3 * k - 1,k) * binomial(n - k + 1,n - 4 * k) / (n - k + 1). ●

► [A079990] 1,1,1,2,6,16,36,73,157,353,797,1776,3916,8636,19145,42504,94286,208948,462907,1025863,2274069,5040891,11173063,24763854,54886846 ⋆ Number of permutations satisfying - k<=p(i) - i<=r and p(i) - i not in I, i=1..n, with k= 3, r=3, I= {- 1,2 } . ● a(n) = a(n - 1) + a(n - 2) + 2 * a(n - 3) + a(n - 4) + 4 * a(n - 5) + 7 * a(n - 6) - 4 * a(n - 7) - a(n - 8) + a(n - 9) + 7 * a(n - 10) + 3 * a(n - 11) - 7 * a(n - 12) + 2 * a(n - 13) + 3 * a(n - 14) - 3 * a(n - 16) - 2 * a(n - 17) + a(n - 18) - a(n - 19) - a(n - 20). ●

► [A127902] 1,1,1,1,2,6,16,36,75,163,391,991,2498,6150,15016,37116,93481,238137,607921,1550401,3959335,10155615,26182267,67753907,175713561 ⋆ Series reversion of x / (1 + x + x ^ 4). ● a(n) = Sum _{ k=0..floor(n / 4) } C(n,4k) * C(4k,k) / (3k + 1). ●

► [A270810] 0,1,2,6,16,36,76,156,316,636,1276,2556,5116,10236,20476,40956,81916,163836,327676,655356,1310716,2621436,5242876,10485756,20971516 ⋆ Expansion of (x - x ^ 2 + 2 * x ^ 3 + 2 * x ^ 4) / (1 - 3 * x + 2 * x ^ 2). ● a(n) = 5 * 2 ^ (n - 2) - 4 for n>2. - _ Bruno Berselli _ , Apr 08 2016 ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>4. - _ Colin Barker _ , Apr 12 2016 ● a(n + 1) = b(n + 4) - b(n) where b(n) = 0, 1, 1, 1 followed by A026646. ● a(n) = 2 * a(n - 1) + 4 for n>4. (End) ●

► [A366098] 1,1,1,1,2,6,16,36,76,171,427,1111,2841,7096,17722,45124,117078,305906,798526,2083465,5456182,14373672,38051106,101006111,268552030 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 + x - x ^ 4) / (1 + x) ^ 2). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 4) } binomial(n + k,k) * binomial(n - k + 1,n - 4 * k). ●

► [A257198] 0,0,2,6,16,36,78,162,332,672,1354,2718,5448,10908,21830,43674,87364,174744,349506,699030,1398080,2796180,5592382,11184786,22369596 ⋆ Number of permutations of length n having exactly one descent such that the first element of the permutation is an odd number. ● a(n) = 2 * floor((2 * 2 ^ n - 3 * n - 1) / 6). ● a(n) = (- 3 - (- 1) ^ n + 2 ^ (2 + n) - 6 * n) / 6. ● a(n) = 3 * a(n - 1) - a(n - 2) - 3 * a(n - 3) + 2 * a(n - 4). ●

► [A265106] 0,1,2,6,16,36,80,178,394,870,1920,4236,9344,20610,45458,100262,221136,487732,1075728,2372594,5232922,11541574,25455744,56144412,123830400 ⋆ Expansion of (x ^ 5 - x ^ 4 - 2 * x ^ 3 + x ^ 2 - x) / (- x ^ 4 + x ^ 3 - 2 * x ^ 2 + 3 * x - 1). ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) + a(n - 3) - a(n - 4) for n>5. - _ Colin Barker _ , Apr 12 2016 ● a(n) = 2 * a(n - 1) + a(n - 3) + 2 for n>4. - _ Greg Dresden _ , Feb 09 2020 ●

► [A351932] 1,1,1,1,2,6,16,36,106,442,1786,6106,23596,120836,631632,2854216,13590396,81258556,510768316,2839808572,16008902296,108643656136,787965516416,5161270717296,33513036683512 ⋆ Number of set partitions of [n] such that block sizes are either 1 or 4. ● a(n) = n! * Sum _{ k=0..floor(n / 4) } (1 / 24) ^ k * binomial(n - 3 * k,k) / (n - 3 * k)!. ● a(n) = a(n - 1) + binomial(n - 1,3) * a(n - 4) for n > 3. ● a(n) = hypergeom([- n / 4,(1 - n) / 4,(2 - n) / 4,(3 - n) / 4],[],32 / 3), _ Karol A. Penson _ , Jul 28 2023. ●

► [A099099] 1,1,1,2,6,16,37,80,172,377,839,1874,4175,9274,20577,45665,101393,225193,500162,1110790,2466760,5477917,12164896,27015092,59993817 ⋆ Quadrisection of a generalized Padovan sequence. ● a(n) = sum _{ k=0..2n } binomial(k, 4n - 3k). ● a(n) = 4a(n - 1) - 6a(n - 2) + 5a(n - 3) - a(n - 4). ● a(n) = sum _{ k=0..floor((n + 1) / 2) } binomial(n + k, 4k). - _ Paul Barry _ , May 09 2005 ●

► [A074082] 0,0,0,0,2,6,16,37,81,169,342,675,1307,2491,4686,8718,16066,29364,53282,96065,172215,307151,545286,963993,1697701 ⋆ Coefficient of q ^ 2 in nu(n), where nu(0)=1, nu(1)=b and, for n>=2, nu(n)=b * nu(n - 1) + lambda * (1 + q + q ^ 2 + ... + q ^ (n - 2)) * nu(n - 2) with (b,lambda)=(1,1). ● a(n) = 3 * a(n - 1) - 5 * a(n - 3) + 3 * a(n - 5) + a(n - 6) for n>=8. ●

► [A212383] 1,1,1,1,2,6,16,37,83,199,512,1343,3488,9011,23488,62094,165738,444160,1193146,3216436,8709766,23683846,64611879,176730460,484593740 ⋆ Number of Dyck n - paths all of whose ascents have lengths equal to 1 (mod 3). ● a(n) = Sum _{ k=0..n } binomial(2 * k - n - 1,n - k) * binomial(n + 1,3 * k - 2 * n) / (n + 1). - _ Vladimir Kruchinin _ , Mar 05 2016 ●

► [A097813] 1,2,6,16,38,84,178,368,750,1516,3050,6120,12262,24548,49122,98272,196574,393180,786394,1572824,3145686,6291412,12582866,25165776,50331598 ⋆ a(n) = 3 * 2 ^ n - 2 * n - 2. ● a(n) = 2 * a(n - 1) + 2 * n - 2, for n>0, with a(0)=1. ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 2 * a(n - 3). ●

► [A167821] 0,0,2,6,16,38,86,188,402,846,1760,3630,7438,15164,30794,62342,125904,253782,510758,1026684,2061730,4136990,8295872,16627166,33311646 ⋆ a(n) is the number of n - tosses having a run of 3 or more heads or a run of 3 or more tails for a fair coin (i.e., probability is a(n) / 2 ^ n). ● a(n) = 2 ^ n - 2 * Fibonacci(n + 1). ● a(n) = 3 * a(n - 1) - a(n - 2) - 2 * a(n - 3). - _ G. C. Greubel _ , Jun 27 2016 ●

► [A265107] 0,1,2,6,16,38,92,222,536,1294,3124,7542,18208,43958,106124,256206,618536,1493278,3605092,8703462,21012016,50727494,122467004,295661502,713790008 ⋆ Expansion of (2 * x ^ 4 + x ^ 3 + x) / (- x ^ 2 - 2 * x + 1). ● a(n) = ((1 + sqrt(2)) ^ n * (- 5 + 4 * sqrt(2)) + (1 - sqrt(2)) ^ n * (5 + 4 * sqrt(2))) / sqrt(2) for n>2. ● a(n) = 2 * a(n - 1) + a(n - 2) for n>4. ●

► [A046209] 1,1,2,6,16,38,104,270,726,1960,5368,14736,40880,113828,318848,896670,2532160,7174050,20390552,58112088,166037248,475467916,1364393896,3922624800,11297181456 ⋆ Number of ternary Lyndon words whose digits sum to 0 mod 3; also number of trace 0 irreducible polynomials over GF(3). ● a(n) = 1 / (3 * n) * sum(d divides n, gcd(d, 3) * mu(d) * 3 ^ (n / d)). ●

► [A273348] 2,6,16,39,92,211,476,1059,2332,5091,11036,23779,50972,108771,231196,489699,1034012,2177251,4572956,9582819,20039452,41826531,87148316,181287139,376555292 ⋆ The sum of the semiperimeters of the bargraphs of area n (n >=1). ● a(n) = (15 * n2 ^ n + 29 * 2 ^ n - 2(- 1) ^ n - 18) / 36. ●

► [A198951] 1,1,1,2,6,16,39,99,271,763,2146,6062,17359,50337,147057,431874,1275273,3786649,11298031,33846202,101762937,306997821,929038518,2819426688,8578433304 ⋆ G.f. satisfies: A(x) = (1 + x * A(x)) * (1 + x ^ 3 * A(x) ^ 3). ● a(n) = 1 / (n + 1) * Sum _{ k = 0..floor(n / 3) } binomial(n + 1,k) * binomial(n + 1,n - 3 * k). Applying Maple's sumrecursion command to this formula gives the above recurrence of Kotesovec. ●

► [A057711] 0,1,2,6,16,40,96,224,512,1152,2560,5632,12288,26624,57344,122880,262144,557056,1179648,2490368,5242880,11010048,23068672,48234496,100663296 ⋆ a(0)=0, a(1)=1, a(n) = n * 2 ^ (n - 2) for n >= 2. ● a(n) = ceiling(n * 2 ^ (n - 2)). ● a(0)=0, a(n) = n * (0 ^ (n - 1) + 2 ^ (n - 1)) / 2, n > 0. ● a(n) = Sum _{ k=0..n } binomial(n, 2k + 1) * (2k + 1). ● a(n) = n * 2 ^ (n - 2) - Sum _{ k=0..n } binomial(n, k) * k * (- 1) ^ k. ● a(n + 1) = ceiling(binomial(n + 1,1) * 2 ^ (n - 1)). - _ Zerinvary Lajos _ , Nov 01 2006 ● a(0)=0, a(1)=1, a(2)=2, a(3)=6, a(n + 1) = 4 * a(n) - 4 * a(n - 1) for n >= 3. - _ Philippe Deléham _ , Feb 20 2013 ●

► [A129952] 1,1,2,6,16,40,96,224,512,1152,2560,5632,12288,26624,57344,122880,262144,557056,1179648,2490368,5242880,11010048,23068672,48234496,100663296 ⋆ Binomial transform of A124625. ● a(0) = 1, a(1) = 1; for n > 1, a(n) = n * 2 ^ (n - 2). ●

► [A265278] 0,1,2,6,16,40,98,238,576,1392,3362,8118,19600,47320,114242,275806,665856,1607520,3880898,9369318,22619536,54608392,131836322,318281038,768398400 ⋆ Expansion of (x ^ 4 + x ^ 3 - x ^ 2 + x) / (x ^ 3 + x ^ 2 - 3 * x + 1). ● a(n) = (- 2 + (1 - sqrt(2)) ^ n + (1 + sqrt(2)) ^ n) / 2 for n>1. ● a(n) = 3 * a(n - 1) - a(n - 2) - a(n - 3) for n>4. ●

► [A293004] 0,0,2,6,16,40,98,238,576,1392,3362,8118,19600,47320,114242,275806,665856,1607520,3880898,9369318,22619536,54608392,131836322,318281038,768398400 ⋆ Expansion of 2 * x ^ 2 / (x ^ 3 + x ^ 2 - 3x + 1). ● a(n) = 3 * a(n - 1) - a(n - 2) - a(n - 3) for n > 2. ● a(n) = (- 2 + (1 - sqrt(2)) ^ n + (1 + sqrt(2)) ^ n) / 2. (End) ●

► [A111281] 1,1,2,6,16,40,100,252,636,1604,4044,10196,25708,64820,163436,412084,1039020,2619764,6605420,16654772,41993004,105880308,266964460,673118772,1697188012 ⋆ Number of permutations avoiding the patterns { 2413,2431,4213,3412,3421,4231,4321,4312 } ; number of strong sorting class based on 2413. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3). ●

► [A215340] 1,1,1,2,6,16,40,107,307,893,2597,7646,22878,69162,210402,644098,1984598,6149428,19143220,59840692,187781992,591343894,1868106990,5918537492,18800935948 ⋆ Expansion of series _ reversion(x / (1 + sum(k>=1, x ^ A032766(k)))) / x. ● a(n) = 1 / (n + 1) * Sum _{ k = 0..floor(n / 3) } binomial(n + 1, n - 3 * k) * binomial(n + k, n). - _ Peter Bala _ , Aug 02 2016 ●

► [A158920] 1,2,6,16,41,102,248,592,1392,3232,7424,16896,38144,85504,190464,421888,929792,2039808,4456448,9699328,21037056,45481984,98041856,210763776,451936256 ⋆ Binomial transform of A008805 (triangular numbers with repeats). ● a(n) = 6 * a(n - 1) - 12 * a(n - 2) + 8 * a(n - 3), n > 5. (End) ●

► [A102699] 1,1,2,6,16,42,104,252,592,1370,3112,6996,15536,34244,74832,162616,351136,754938,1615208,3443940,7314928,15493676,32714992,68918856,144815456 ⋆ Number of strings of length n, using as symbols numbers from the set { 1, 2, ..., n } , in which consecutive symbols differ by exactly 1. ● a(n) = (n + 1)2 ^ (n - 1) - 4(n - 1)binomial(n - 2,(n - 2) / 2) for n even, a(n) = (n + 1)2 ^ (n - 1) - (2n - 1)binomial(n - 1,(n - 1) / 2) for n odd. - _ Joseph Myers _ , Dec 23 2008 ●

► [A156664] 1,2,6,16,42,108,274,688,1714,4244,10458,25672,62826,153372,373666,908896,2207842,5357348,12988074,31464568,76179354,184347564,445923058,1078290832,2606699026 ⋆ Binomial transform of A052551. ● a(n) = - 2 ^ n + (1 - 1 / sqrt(2)) * (1 - sqrt(2)) ^ n + (1 + 1 / sqrt(2)) * (1 + sqrt(2)) ^ n. - _ Alexander R. Povolotsky _ , Aug 16 2012 ● a(n + 3) = - 2 * a(n) - 3 * a(n + 1) + 4 * a(n + 2). - _ Alexander R. Povolotsky _ , Aug 16 2012 ●

► [A111282] 1,2,6,16,42,110,288,754,1974,5168,13530,35422,92736,242786,635622,1664080,4356618,11405774,29860704,78176338,204668310,535828592,1402817466,3672623806,9615053952 ⋆ Number of permutations avoiding the patterns { 1432,2431,3412,3421,4132,4231,4312,4321 } ; number of strong sorting class based on 1432. ● a(n) = 3a(n - 1) - a(n - 2), n > 3. ● a(n) = F(2n + 1) + F(2n - 2) + 0 ^ n. (End) ●

► [A025169] 2,6,16,42,110,288,754,1974,5168,13530,35422,92736,242786,635622,1664080,4356618,11405774,29860704,78176338,204668310,535828592,1402817466,3672623806,9615053952,25172538050 ⋆ a(n) = 2 * Fibonacci(2 * n + 2). ● a(n) = 3 * a(n - 1) - a(n - 2). ● a(n) = Fibonacci(2 * n + 1) + Lucas(2 * n + 1). - _ Bruno Berselli _ , Oct 13 2017 ●

► [A115730] 0,0,1,2,6,16,42,110,289,756,1980,5184,13572,35532,93025,243542,637602,1669264,4370190,11441306,29953729,78419880,205305912,537497856,1407187656 ⋆ a(n) = a(n - 3) + A001654(n - 1) with a(0)=0, a(1)=0 and a(2)=1. ● a(n)

= - floor(g(Fibonacci(n + 1)) where g(x) = (1 - x ^ 2) ^ 2 / (- 4 * x ^ 2). • a(n) = (1 / 60) * ((- 1) ^ n * (6 - 5 * ChebyshevU(n, 1 / 2) + 10 * ChebyshevU(n - 1, 1 / 2)) - (10 - 9 * ChebyshevU(n, 3 / 2) + 6 * ChebyshevU(n - 1, 3 / 2))). - _ G. C. Greubel _ , Jan 20 2022 •

► [A217661] 1,1,2,6,16,42,114,314,870,2426,6804,19168,54198,153730,437232,1246480,3560838,10190810,29212432,83860176,241051796,693709896,1998535892,5763312876,16635018146 ⋆ G.f.: Sum _{ n>=0 } x ^ n * Sum _{ k=0..n } binomial(n,k) ^ 2 * x ^ k / (1 - x) ^ k. • a(n) = Sum _{ m=0..n } Sum _{ k=0,n - m } C(m,k) ^ 2 * C(n - m - 1,n - m - k). - _ Vladimir Kruchinin _ , Jan 16 2018 •

► [A291142] 0,1,2,6,16,43,114,300,784,2037,5266,13554,34752,88799,226210,574680,1456352,3682409,9292002,23403102,58842416,147713043,370262930,926852868,2317191024 ⋆ a(n) = (1 / 4) * A291024(n). • a(n) = 4 * a(n - 1) - 2 a(n - 2) - 4 * a(n - 3) - a(n - 4) for n >= 5. • a(n) = ((1 + sqrt(2)) ^ n * (3 * sqrt(2) + 2 * (- 1 + sqrt(2)) * n) - (1 - sqrt(2)) ^ n * (3 * sqrt(2) + 2 * (1 + sqrt(2)) * n)) / 16. - _ Colin Barker _ , Aug 24 2017 •

► [A027994] 1,2,6,16,43,114,301,792,2080,5456,14301,37468,98137,256998,672946,1761984,4613239,12078110,31621701,82787980,216743836,567446112,1485598681,3889356696,10182482353 ⋆ a(n) = (F(2n + 3) - F(n)) / 2 where F() = Fibonacci numbers A000045. • a(n) = Sum _{ k=0..n } T(n, k) * T(n, n + k), T given by A027926. • a(n) = (2 / 5) * Sum _{ k=1..4 } sin(2 * Pi * k / 5) * sin(3 * Pi * k / 5) * (1 + 2 * cos(Pi * k / 5)) ^ (n + 1)). - _ Herbert Kociemba _ , Jun 02 2004 •

► [A295572] 1,2,6,16,43,117,318,865,2351,6391,17372,47222,128363,348927,948482,2578241,7008386,19050768,51785356,140767193,382644902,1040136684,2827384648,7685628310,20891703776 ⋆ First differences of A081881. • a(1) = 1, a(n) = (max(m) : Sum _{ s=r..m } 1 / s <= 1) - r + 1, r = Sum _{ k=1..n - 1 } a(k). - _ Pablo Hueso Merino _ , Feb 16 2020 •

► [A105073] 0,2,6,16,44,116,304,798,2090,5472,14328,37512,98208,257114,673134,1762288,4613732,12078908,31622992,82790070,216747218,567451584,1485607536,3889371024,10182505536 ⋆ Define a(1)=0, a(2)=2 then a(n) = 3 * a(n - 1) - a(n - 2), a(n + 1) = 3 * a(n) - a(n - 1) and a(n + 2) = 3 * a(n + 1) - a(n) + 2. • a(n) = (1 / 6) * (Fibonacci(2n + 4) - 2 * Fibonacci(2n) - 2 * cos((n + 2)(2 * Pi / 3)) - 4). - _ Ralf Stephan _ , May 20 2007 • a(n) = 3 * a(n - 1) - a(n - 2) + a(n - 3) - 3 * a(n - 4) + a(n - 5). •

► [A002605] 0,1,2,6,16,44,120,328,896,2448,6688,18272,49920,136384,372608,1017984,2781184,7598336,20759040,56714752,154947584,423324672,1156544512,3159738368,8632565760 ⋆ a(n) = 2 * (a(n - 1) + a(n - 2)), a(0) = 0, a(1) = 1. • a(n) = (- I * sqrt(2)) ^ (n - 1) * U(n - 1, I / sqrt(2)) where U(n, x) is the Chebyshev U - polynomial. - _ Wolfdieter Lang _ • a(n) = (1 + sqrt(3)) ^ (n - 1) * (1 / 2 + sqrt(3) / 6) + (1 - sqrt(3)) ^ (n - 1) * (1 / 2 - sqrt(3) / 6), for n>0. • a(n) = Sum _{ k=0..floor(n / 2) } binomial(n - k, k) * 2 ^ (n - k). - _ Paul Barry _ , Jul 13 2004 • a(n) = ((1 + sqrt(3)) ^ n - (1 - sqrt(3)) ^ n) / (2 * sqrt(3)). • a(n) = Sum _{ k=0..n } binomial(n, 2 * k + 1) * 3 ^ k. • a(n) = (1 / 3) * Sum _{ k=1..5 } sin(Pi * k / 2) * sin(2 * Pi * k / 3) * (1 + 2 * cos(Pi * k / 6)) ^ n, n >= 1. - _ Herbert Kociemba _ , Jun 02 2004 •

► [A105696] 1,1,2,6,16,44,122,342,966,2746,7846,22514,64836,187288,542438,1574666,4580400,13347324,38956182,113861922,333226560,976353876,2863756158,8407877394,24707200854 ⋆ Expansion of (1 - x) / sqrt((1 - 3 * x) / (1 + x)). • a(n) = Sum _{ k=0..floor(n / 2) } (2 * C(n - 2, k) * C(n - k, k)) - C(1, n). •

► [A209629] 2,6,16,44,134,468,1880,8534,42804,232972,1359186,8431288,55297064,381815026,2765949856,20960349828,165729870678,1364153874460,11665484934400,103448317519318,949739634410652,9013431481088948,88304011718557298,891917738606387792 ⋆ The number of partitions of the set [n] where each element can be colored 1 or 2 avoiding the patterns 1 ^ 12 ^ 2 and 1 ^ 22 ^ 1 in the pattern sense. • a(n) = 2 ^ n + 2 * (B(n) - 1), where B(n) is the n - th Bell number. •

► [A026163] 1,2,6,16,45,126,356,1008,2862,8140,23188,66144,188916,540216,1546560,4432512,12717513,36526626,105016686,302228080,870613689,2510249302,7244285436,20924179920,60487084775 ⋆ Sum { T(k,k - 1) } , k = 1,2,...,n, where T is the array in A026148. • a(n) = - 4 * (- 3) ^ (1 / 2) * (- 1) ^ n * ((n ^ 3 + 11 * n ^ 2 + 48 * n + 45) * hypergeom([1 / 2, n + 2],[1],4 / 3) + (3 * n ^ 2 + 11 * n + 15) * hypergeom([1 / 2, n + 3],[1],4 / 3)) / ((n + 3) * (n + 5) * (n + 6) * (7 + n)) •

► [A005717] 1,2,6,16,45,126,357,1016,2907,8350,24068,69576,201643,585690,1704510,4969152,14508939,42422022,124191258,363985680,1067892399,3136046298,9217554129,27114249960,79818194925 ⋆ Construct triangle in which n - th row is obtained by expanding (1 + x + x ^ 2) ^ n and take the next - to - central column. • a(n) = Sum _{ k=1..n } T(k, k - 1), where T is the array defined in A025177. • a(n) = Sum _{ k=0..floor((n - 1) / 3) } (- 1) ^ k * binomial(n,k) * binomial(2n - 2 - 3k, n - 1). - _ David Callan _ , Jul 03 2006 • a(n) = Sum _{ k=0..floor((n - 1) / 2) } (2k + 1) * C(n,2k + 1) * C(k). • a(n) = Sum _{ k=0..n - 1 } (Sum _{ j=0..floor(k / 2) } C(k,2j) * C(2j + 1,j)). (End) • a(n) = Sum _{ i=0..floor(n / 2) } C(n + 1,n - i) * C(n - i,i). - _ Shanzhen Gao _ , Apr 20 2010 • a(n) = GegenbauerC(n, - n - 1, - 1 / 2). - _ Peter Luschny _ , May 07 2016 •

► [A290953] 1,2,6,16,45,136,434,1436,4869,16804,58795,208022,742911,2674452,9694858,35357684,129644805,477638716,1767263207,6564120438,24466267039,91482563660,343059613671,1289904147346,4861946401475 ⋆ The number of permutations in S _ n for which the number of reduced words is maximized with respect to the numbers of braid and commutation classes: |R(w)| = |B(w)| * |C(w)|. • a(1) = 1 and a(n) = C(n) + n - 2 for n > 1, where C(n) is the n - th Catalan number. •

► [A098617] 1,2,6,16,46,128,364,1024,2902,8192,23188,65536,185420,524288,1483096,4194304,11863910,33554432,94908420,268435456,759257636,2147483648,6074027496,17179869184,48592102396 ⋆ G.f. A(x) satisfies: A(x * G(x)) = G(x), where G(x) is the g.f. for A098616(n) = Pell(n + 1) * Catalan(n). • a(2 * n + 1) = 2 * 8 ^ n. • a(n) = 2 ^ n * sum(j=0..n / 2, binomial((n - 1) / 2,j)). - _ Vladimir Kruchinin _ , May 18 2011 •

► [A291036] 2,6,16,46,132,376,1074,3066,8752,24986,71328,203624,581298,1659462,4737360,13524006,38607732,110215648,314638754,898216794,2564189568,7320134930,20897197344,59656394448,170304435554 ⋆ p - INVERT of (1,0,0,1,0,0,1,0,0,...), where p(S) = 1 - 2 S - 2 S ^ 2. • a(n) = 2 * a(n - 1) + 2 * a(n - 2) + 2 * a(n - 3) - 2 * a(n - 4) - a(n - 6) for n >= 7. •

► [A094039] 0,1,2,6,16,46,132,386,1136,3366,10012,29866,89256,267086,799892,2396946,7185376,21545206,64613772,193797626,581305496,1743741726,5230875652,15691927906,47074385616 ⋆ Binomial transform of (Jacobsthal(n) + 2 ^ n * Jacobsthal(- n)) / 2. • a(n) = 3 ^ n / 6 - (- 1) ^ n / 6 + 2 ^ n / 6 - 0 ^ n / 6. •

► [A165431] 1,2,6,16,46,132,388,1152,3462,10492,32036,98400,303756,941576,2928936,9138176,28584006,89609196,281466916,885620576,2790812196,8806560056,27823745016,88005102336,278637450396 ⋆ A transform of the central binomial coefficients. • a(n) = Sum _{ k=0..n } C(n - k,k) * 2 ^ (n - 2k) * C(2k,k). • a(n) = 2 ^ n * hypergeom([1 / 2, 1 / 2 - n / 2, - n / 2],[1, - n], - 4) for n>=1. - _ Peter Luschny _ , Jul 28 2016 •

► [A190729] 1,1,1,2,6,16,46,176,722,2906,13106,66716,345676,1849992,10802156,66543296,418075036,2750329276,19145683612,137410493656,1012831509736,7785886770656,62105849642376,507682088621632,4271236045340056 ⋆ E.g.f. exp(x + 1 / 6 * x ^ 3 + 1 / 24 * x ^ 4) • a(n)=n! * sum(k=0..n, sum(j=floor((n - k) / 3)..floor((n - k) / 2), binomial(j,n - k - 2 * j) * binomial(k,j) * 2 ^ (- 2 * n + 2 * k + 3 * j) * 3 ^ (- j)) / k!). •

► [A151281] 1,2,6,16,48,136,408,1184,3552,10432,31296,92544,277632,824448,2473344,7365120,22095360,65920000,197760000,590790656,1772371968,5299916800,15899750400,47578857472,142736572416 ⋆ Number of walks within N ^ 2 (the first quadrant of Z ^ 2) starting at (0,0) and consisting of n steps taken from { (- 1, 0), (1, 0), (1, 1) } . • a(n) = Sum _{ k=0..n } ((k + 1) / (n + k + 1)) * C(n, (n - k) / 2) * (1 + (- 1) ^ (n - k)) * 2 ^ ((n - k) / 2) * 2 ^ k. •

► [A045694] 1,2,6,16,48,138,414,1226,3678,10986,32958,98736,296208,888210,2664630,7992664,23977992,71930298,215790894,647361696,1942085088,5826222306,17478666918,52435902018,157300706054 ⋆ Number of ternary words of length n (beginning with 0) with autocorrelation function 2 ^ (n - 1). • a(2n) = 3 * a(2n - 1) - a(n) for n >= 1; a(2n + 1) = 3 * a(2n) for n >= 1. •

► [A360856] 1,1,2,6,16,48,140,424,1280,3920,12032,37184,115248,358624,1118784,3499584,10969344,34450944,108377984,341465344,1077300224,3403006464,10761447424,34065967104,107937899264 ⋆ a(n) = [x ^ n](1 / 2) * (1 + (2 * x + 1) / sqrt(1 - 8 * x ^ 2 * (x + 1))). • a(n) = (4 * (2 * n ^ 2 - 11 * n + 15) * a(n - 3) + 4 * (2 * n ^ 2 - 9 * n + 9) * a(n - 2) + 2 * (n - 3) * a(n - 1)) / (n ^ 2 - 3 * n) for n >= 4. •

► [A367042] 1,1,2,6,16,48,152,500,1688,5816,20368,72288,259424,939808,3432192,12622416,46706144,173762016,649569216,2438748864,9191656192,34765298944,131912452864,501987944832,1915417307392 ⋆ G.f. satisfies A(x) = 1 + x ^ 3 + x * A(x) ^ 2. • a(n) = Sum _{ k=0..floor(n / 3) } binomial(n - 3 * k + 1,k) * binomial(2 * (n - 3 * k),n - 3 * k) / (n - 3 * k + 1). •

► [A013989] 1,2,6,16,50,156,532,1856,6876,26200,104456,428352,1821976,7959056,35857200,165592576,785514512,3812387616,18948962656,96194028800,498931946016,2638959243712,14234346694976 ⋆ a(n) = (n + 1) * (a(n - 1) / n + a(n - 2)), with a(0)=1, a(1)=2. • a(n) = (n + 1) * (- i / sqrt(2)) ^ n * H _ n(i / sqrt(2)), where H _ n(x) is the Hermite polynomial. - _ Vladimir Reshetnikov _ , Nov 12 2016 •

► [A360232] 1,1,2,6,16,51,172,626,2409,9791,41671,185224,855865,4100761,20314349,103827684,546388333,2955518901,16407286272,93350267922,543674327227,3237568471183,19693508812475,122249256779882,773797772369256 ⋆ G.f. Sum _{ n>=0 } a(n) * x ^ n = Sum _{ n>=0 } (1 + n * x + x ^ 2) ^ n * x ^ n. • a(n) = Sum _{ k=1..n } (Sum _{ j=0..k } binomial(k,j) * binomial(j,n - k - j) * k ^ (2 * j - n + k)). - _ Vaclav Kotesovec _ , Feb 14 2023 •

► [A214833] 1,1,2,6,16,52,160,536,1796,6216,21752,77504,278720,1013184,3712128,13701204,50880808,190003808,712975648,2687114976,10167088608,38605365712,147060726688,561853414896,2152382687488 ⋆ Number of formula representations of n using addition, multiplication and the constant 1. • a(n) = Sum _{ i=1..n - 1 } a(i) * a(n - i) + Sum _{ d|n, 1<d<n } a(d) * a(n / d) for n>1, a(1)=1. •

► [A300668] 1,1,2,6,16,52,172,586,2048,7286,26216,95326,349536,1290556,4793492,17895736,67108864,252645136,954437292,3616814566,13743895360,52357696956,199911205052,764877654106,2932031008768 ⋆ a(n) = A000016(2 * n). • a(n) = (1 / (4 * n)) * Sum _{ odd d divides n } phi(d) * 4 ^ (n / d) for n > 0. •

► [A045696] 0,0,0,2,6,16,54,154,480,1418,4302,12836,38670,115802,347868,1042970,3130350,9389152,28171710,84509410,253541136,760606270,2281857318,6845520448,20536677354 ⋆ Number of ternary words of length n (beginning 0) with autocorrelation function 2 ^ (n - 1) + 2. • a(2 * n) = 3 * a(2 * n - 1) - a(n) - a(n + 1) for n>=3; a(2 * n - 1) = 3 * a(2 * n - 2) + 3 * a(n) for n>=3. •

► [A068787] 0,2,6,16,56,192,896,4096,17280,69632,270336,1048576,4130816,16515072,66584576,268435456,1077903360,4311744512,17213423616,68719476736,274609995776,1098437885952,4395899027456,17592186044416,70385915658240 ⋆ Number of strings over Z _ 4 of length n with trace 1 and subtrace 2. • a(n; t, s) = a(n - 1; t, s) + a(n - 1; t + 3, s + 3t + 1) + a(n - 1; t + 2, s + 2t) + a(n - 1; t + 1, s + t + 1) where t is the trace and s is the subtrace. •

► [A131385] 1,2,6,16,60,144,672,1536,6480,19200,76032,165888,1048320,2257920,8294400,28311552,126904320,268738560,1470873600,3096576000,16094453760,51385466880,175814737920,366917713920,2717245440000 ⋆ Product ceiling(n / 1) * ceiling(n / 2) * ceiling(n / 3) * ... * ceiling(n / n) (the 'ceiling factorial'). • a(n) = Product _{ k=1..n } ceiling(n / k). • a(n) = Product _{ k=1..n - 1 } floor((n + k - 1) / k) for n>1. • a(n) = Product _{ k=1..n - 1 } ((k + 1) / k) ^ floor((n - 1) / k) for n>1. •

► [A024310] 2,6,17,26,59,97,191,308,565,915,1606,2598,4436,7178,12037,19476,32273,52219,85845,138900,227133,367509,598828,968924,1575046 ⋆ a(n) = s(1) * t(n) + s(2) * t(n - 1) + ... + s(k) * t(n + 1 - k), where k = floor((n + 1) / 2), s = (natural numbers >= 2), t = (Lucas numbers). • a(n) = Sum _{ j=2..floor((n + 3) / 2) } j * Lucas(n - j + 2). • a(n) = 5 * Fibonacci(n + 3) - (m + 1) * Lucas(n - m + 5) + m * Lucas(n - m + 4), where m = floor((n + 3) / 2). • a(2 * n) = 5 * Fibonacci(2 * n + 3) - (n + 5) * Fibonacci(n + 3) - n * Fibonacci(n + 1). • a(2 * n + 1) = 5 * Fibonacci(2 * n + 2) - (n + 5) * Fibonacci(n + 2) - n * Fibonacci(n). (End) •

► [A204450] 0,2,6,17,30,177,417,1857,4302,19457,47731,203777,509769,2134017,5462701,22347777,58104062,234029057,616919457,2450784257,6533317815,25664946177,69085604341,268766806017,729558799305 ⋆ 2 * A203579 - A204449. Difference between the exponential convolution of A000032 (Lucas) with itself and the corresponding exponential half - convolution. ● a(n) = sum(binomial(n,k) * L(k) * L(n - k),k=floor(n / 2) + 1..n), n>=0, ●

► [A252814] 2,6,17,40,81,147,246,387,580,836,1167,1586,2107,2745,3516,4437,5526,6802,8285,9996,11957,14191,16722,19575,22776 ⋆ Number of n X 2 nonnegative integer arrays with upper left 0 and every value within 2 of its city block distance from the upper left and every value increasing by 0 or 1 with every step right or down. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

► [A014833] 1,1,1,2,6,17,43,100,220,467,969,1982,4018,8101,16279,32648,65400,130919,261973,524098,1048366,2096921,4194051,8388332,16776916 ⋆ a(n) = 2 ^ n - n(n + 1) / 2. ● a(n) = 5 * a(n - 1) - 9 * a(n - 2) + 7 * a(n - 3) - 2 * a(n - 4); a(0)=1, a(1)=1, a(2)=1, a(3)=2. ●

► [A130104] 0,1,2,6,17,43,100,220,467,969,1982,4018,8101,16279,32648,65400,130919,261973,524098,1048366,2096921,4194051,8388332,16776916,33554107 ⋆ Expansion of x(1 - 3x + 5x ^ 2 - 2x ^ 3) / ((1 - x) ^ 3 * (1 - 2x)). ● a(n)=2 ^ (n + 1) - C(n + 2,2) - 0 ^ n. ●

► [A020963] 2,6,17,45,112,276,671,1627,3934,9506,22957,55433,133836,323120,780091,1883319,4546746,10976830,26500425,63977701,154455848,372889420,900234711,2173358867,5246952470 ⋆ Sum of Floor[2 * (1 + sqrt(2)) ^ (n - k)] for k from 1 to infinity. ● a(n) = 3 * a(n - 1) - 4 * a(n - 3) + a(n - 4) + a(n - 5) for n > 5 (conjectured). ●

► [A065068] 1,2,6,17,45,114,264,545,1061,2070,3990,7275,12556,20824,33584,52753,80560,119274,170168,232700,306472,396580,517300,688736,926816 ⋆ Number of fixed polyominoes with n cells of which no four are equally spaced on a straight line. ● a(n) = 0 for n >= 143. - _ Jan Kristian Haugland _ , Apr 28 2020 ●

► [A109961] 1,1,2,6,17,45,117,305,798,2090,5473,14329,37513,98209,257114,673134,1762289,4613733,12078909,31622993,82790070,216747218,567451585,1485607537,3889371025 ⋆ Expansion of (1 - x) ^ 3 / (1 - 4x + 5x ^ 2 - 4x ^ 3 + x ^ 4). ● a(n)=sum { k=0..floor(n / 2), binomial(n + 2k, 4k) } . ● a(0)=1, a(1)=1, a(2)=2, a(3)=6, a(n)=4 * a(n - 1) - 5 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Harvey P. Dale _ , Dec 11 2013 ●

► [A288029] 1,2,6,17,45,120,324,873,2349,6322,17018,45809,123305,331904,893400,2404801,6473097,17423890,46900574,126244129,339816309,914696984,2462126012,6627401865,17839239445 ⋆ Number of minimal edge covers in the ladder graph P _ 2 X P _ n. ● a(n) = 2 * a(n - 1) + a(n - 2) + 2 * a(n - 3) + a(n - 4) - a(n - 6) for n>6. ●

► [A190050] 1,2,6,17,46,120,304,752,1824,4352,10240,23808,54784,124928,282624,634880,1417216,3145728,6946816,15269888,33423360,72876032,158334976,342884352,740294656 ⋆ Expansion of ((1 - x) * (3 * x ^ 2 - 3 * x + 1)) / (1 - 2 * x) ^ 3 ● a(n) = (n ^ 2 + 5 * n + 10) * 2 ^ (n - 4) for n >=1 with a(0)=1. ●

► [A005592] 1,2,6,17,46,122,321,842,2206,5777,15126,39602,103681,271442,710646,1860497,4870846,12752042,33385281,87403802,228826126,599074577,1568397606,4106118242,10749957121 ⋆ a(n) = F(2n + 1) + F(2n - 1) - 1. ● a(n) = floor(r ^ (2 * n)), where r = golden ratio = (1 + sqrt(5)) / 2. ● a(n) = floor(Fibonacci(5 * n) / Fibonacci(3 * n)). - _ Gary Detlefs _ , Mar 11 2011 ● a(n) = + 4 * a(n - 1) - 4 * a(n - 2) + 1 * a(n - 3). - _ Joerg Arndt _ , Mar 11 2011 ● a(n) = 2 * cosh(2 * n * arcsinh(1 / 2)) - 1. - _ Ilya Gutkovskiy _ , Oct 31 2016 ● a(n) = floor(sqrt(5) * Fibonacci(2 * n)), for n > 0 (Seamons, 1966). - _ Amiram Eldar _ , Feb 05 2022 ●

► [A102403] 1,1,1,2,6,17,46,128,372,1109,3349,10221,31527,98178,308179,973911,3096044,9894393,31770247,102444145,331594081,1077022622,3509197080,11466710630,37567784437 ⋆ Number of Dyck paths of semilength n having no ascents of length 2. ● a(n) = (1 / n) * Sum _{ j=ceiling((n + 2) / 3)..n } binomial(n,j) * binomial(3 * j - n - 2,j - 1) * (- 1) ^ (n - j), n > 0. - _ Vladimir Kruchinin _ , Mar 07 2011 ● a(n) is the upper left term in M ^ n, M = an infinite square production matrix as follows: ●

► [A136776] 1,2,6,17,48,135,379,1063,2980,8352,23405,65584,183769,514919,1442785,4042614,11327182,31738101,88928244,249171491,698163131,1956209807,5481178344,15357920824,43031938457 ⋆ Number of primitive multiplex juggling sequences of length n, base state <1,1> and hand capacity 2. ● a(1)=1, a(2)=2, a(3)=6, a(n) = 4 * a(n - 1) - 3 * a(n - 2) - a(n - 3). - _ Harvey P. Dale _ , Sep 17 2013 ●

► [A077936] 1,2,6,17,48,136,385,1090,3086,8737,24736,70032,198273,561346,1589270,4499505,12738896,36066072,102109441,289089922,818464798,2317218881,6560457280,18573817120,52585767681 ⋆ Expansion of 1 / (1 - 2 * x - 2 * x ^ 2 - x ^ 3). ● a(n) = Sum _{ k=0..n } Sum _{ j=0..n - k } C(n - j,k) * C(2k,j). - _ Paul Barry _ , Mar 24 2009 ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) + a(n - 3) with a(0) = 1, a(1) = 2, a(2) = 6. - _ Taras Goy _ , Aug 04 2017 ●

► [A365244] 1,1,1,2,6,17,48,144,449,1422,4568,14893,49139,163665,549570,1858754,6326343,21651064,74462327,257219221,892047965,3104749126,10841192392,37967942203,133333407639 ⋆ G.f. satisfies A(x) = 1 + x * A(x) / (1 - x ^ 2 * A(x) ^ 3). ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n - k - 1,k) * binomial(n + k + 1,n - 2 * k) / (n + k + 1). ●

► [A052536] 1,2,6,17,49,141,406,1169,3366,9692,27907,80355,231373,666212,1918281,5523470,15904198,45794313,131859469,379674209,1093228314,3147825473,9063802210,26098178316,75146709475 ⋆ Number of compositions of n when parts 1 and 2 are of two kinds. ● a(n) = Sum(- (1 / 9) * (- 2 + r ^ 2 - r) * r ^ (- 1 - n)), r = RootOf(1 - 3 * x + x ^ 3). ● a(0)=1, a(1)=2, a(2)=6, a(n) = 3 * a(n - 1) - a(n - 3) for n >= 3. - _ Emeric Deutsch _ , Apr 10 2005 ●

► [A026165] 1,2,6,17,49,141,407,1177,3411,9904,28808,83931,244895,715534,2093262,6130767,17974779,52751358,154950378,455524203,1340182539,3945723033,11624603235,34268836707,101081770181 ⋆ Number of (s(0), s(1), ..., s(n)) such that every s(i) is a nonnegative integer, s(0) = 2, |s(1) - s(0)| = 1, |s(i) - s(i - 1)| <= 1 for i >= 2. Also sum of numbers in row n + 1 of the array T in A026148. ● a(n) = Sum _{ k=0..n } binomial(n, k) * binomial(k + 1, floor(k / 2)). - _ Vladeta Jovovic _ , Sep 18 2003 ●

► [A270863] 0,1,2,6,17,50,147,434,1282,3789,11200,33109,97878,289354,855413,2528850,7476023,22101326,65338038,193158521,571033600,1688143881,4990651642,14753839486,43616704857 ⋆ Self - composition of the Fibonacci sequence. ● a(n) = 3 * a(n - 1) + a(n - 2) - 3 * a(n - 3) - a(n - 4) for n > 3, a(0)=0, a(1)=1, a(2)=2, a(3)=6. ● a(n) = (phi * ((phi ^ 2 + 5 ^ (1 / 4) * sqrt(3 * phi)) ^ n - (phi ^ 2 - 5 ^ (1 / 4) * sqrt(3 * phi)) ^ n) + (psi ^ 2 + 5 ^ (1 / 4) * sqrt(3 * psi)) ^ n - (psi ^ 2 - 5 ^ (1 / 4) * sqrt(3 * psi)) ^ n) / (2 ^ n * 5 ^ (3 / 4) * sqrt(3 * phi)), where phi = (sqrt(5) + 1) / 2 is the golden ratio, and psi = 1 / phi = (sqrt(5) - 1) / 2. - _ Vladimir Reshetnikov _ , Aug 01 2019 ●

► [A027914] 1,2,6,17,50,147,435,1290,3834,11411,34001,101400,302615,903632,2699598,8068257,24121674,72137547,215786649,645629160,1932081885,5782851966,17311097568,51828203475,155188936431 ⋆ T(n,0) + T(n,1) + ... + T(n,n), T given by A027907. ● a(n) = (1 / 2) * (Sum { k = 0..n } binomial(n,k) * binomial(n - k,k) + 3 ^ n); ● a(n) = Sum _{ k = 0..n } Sum _{ i = 0..k } binomial(n,i) * binomial(n - i,k); ● a(n) = 3 ^ n / 2 * (1 + c / sqrt(n) + O(n ^- 1 / 2)) where c=0.5... (End) ● a(n) = n! * Sum(i + j + k=n, 1 / (i! * j! * k!)) 0<=i<=n, 0<=k<=j<=n. - _ Benoit Cloitre _ , Mar 23 2004 ● a(n) = [x ^ n](3 * x - 1 / (1 - x)) ^ n. ● a(n) = (3 ^ n + GegenbauerC(n, - n, - 1 / 2)) / 2. - _ Peter Luschny _ , May 12 2016 ●

► [A098703] 0,1,2,6,17,50,148,441,1318,3946,11825,35454,106328,318929,956698,2869950,8609617,25828474,77484812,232453449,697358750,2092073666,6276216817,18828643686,56485920112 ⋆ a(n) = (3 ^ n + phi ^ (n - 1) + (- phi) ^ (1 - n)) / 5, where phi denotes the golden ratio A001622. ● a(n) = (((1 + sqrt(5)) ^ n - (1 - sqrt(5)) ^ n) / (2 ^ n * sqrt(5))) + ((3 ^ n - (((1 + sqrt(5)) / 2) ^ (n + 1) + ((1 - sqrt(5)) / 2) ^ (n + 1))) / 5); a(n) = (3 ^ n + (((1 + sqrt(5)) / 2) ^ (n - 1) + ((1 - sqrt(5)) / 2) ^ (n - 1))) / 5. ● a(n) = 4 * a(n - 1) - 2 * a(n - 2) - 3 * a(n - 3). ● a(0) = 0, a(1) = 1, a(n) = a(n - 1) + a(n - 2) + 3 ^ (n - 2) for n > 1. - _ Ross La Haye _ , Aug 20 2005 ●

► [A153773] 1,2,6,17,51,152,456,1367,4101,12302,36906,110717,332151,996452,2989356,8968067,26904201,80712602,242137806,726413417,2179240251,6537720752,19613162256,58839486767,176518460301 ⋆ a(2 * n) = 3 * a(2 * n - 1) - 1, a(2 * n + 1) = 3 * a(2 * n), with a(1)=1. ● a(n) = 3 * a(n - 1) + a(n - 2) - 3 * a(n - 3). ● a(n) = (5 * 3 ^ n + 6 - 3 * (- 1) ^ n) / 24. (End) ●

► [A059398] 1,2,6,17,51,154,473,1464,4568,14332,45187,143024,454217,1446604,4618576,14777451,47371177,152110326,489165277,1575211177,5078690936,16392526502,52963765321,171282782902,554393341371 ⋆ Row sums of triangle in A059397. ● a(n) = (1 / 2) * sum(binomial(2 * k,k) * (- 1) ^ (n - k + 1) * sum(binomial(i + k - 1,i) * binomial(i,n - k - i + 1),i=0..n - k + 1),k=0..n + 1). - _ Emanuele Munarini _ , May 05 2011 ●

► [A186239] 1,1,2,6,17,51,163,533,1779,6055,20908,73052,257863,918139,3293538,11891778,43183835,157616827,577902846,2127539802,7861397403,29145629141,108385383175,404184619545,1511132059333 ⋆ G.f. A(x) satisfies A(x) = 1 + x * A(x) + x ^ 2 * A(x) ^ 2 + 2 * x ^ 3 * A(x) ^ 3. ● a(n) = 1 / n * sum(j=0..n, C(n,j) * sum(i=j..n + j - 1, C(j,i - j) * C(n - j,3 * j - n - i - 1) * 2 ^ (3 * j - n - i - 1))), n>0. ● a(n) is the top left term of M ^ n, M = an infinite matrix with (1,1,1,...) as diagonals starting at positions (1,2), (1,1), and (2,1); with a diagonal of (2,2,2,...) starting at (3,1). - _ Gary W. Adamson _ , Nov 25 2011 ●

► [A364329] 1,1,2,6,17,52,167,558,1912,6683,23736,85426,310861,1141837,4227938,15764474,59140089,223062670,845388258,3217750229,12295043520,47144444476,181349473833,699629022954,2706327445312 ⋆ G.f. satisfies A(x) = (1 + x ^ 3) * (1 + x * A(x) ^ 2). ● a(n) = Sum _{ k=0..floor(n / 3) } binomial(2 * n - 6 * k + 1,k) * binomial(2 * n - 6 * k + 1,n - 3 * k) / (2 * n - 6 * k + 1). ●

► [A367056] 1,1,2,6,17,52,168,561,1922,6719,23871,85938,312823,1149421,4257460,15880036,59594517,224856450,852491806,3245959002,12407332166,47592364107,183139542306,706794663136,2735053815771 ⋆ G.f. satisfies A(x) = 1 + x * A(x) ^ 2 + x ^ 3 * A(x). ● a(n) = Sum _{ k=0..floor(n / 3) } binomial(n - 2 * k + 1,k) * binomial(2 * n - 5 * k,n - 3 * k) / (n - 2 * k + 1). ●

► [A097514] 1,1,1,2,6,17,53,205,871,3876,18820,99585,558847,3313117,20825145,138046940,959298572,6974868139,52972352923,419104459913,3446343893607,29405917751526,259930518212766,2376498296500063,22441988298860757 ⋆ Number of partitions of an n - set without blocks of size 2. ● a(n) = Sum _{ k=0..floor(n / 2) } (- 1) ^ k * binomial(n, 2 * k) * (2 * k - 1)!! * Bell(n - 2 * k). ●

► [A363042] 1,1,2,6,17,57,233,989,4602,23794,129285,751973,4680041,30523105,210159654,1521122754,11481486845,90604333205,744420806913,6348340033789,56202980961206,514994183598470,4877587872447801,47711923353493817,481072714151555073 ⋆ Row sums of A363041. ● a(n) = Sum _{ k = 0..floor((n - 1) / 2) } Stirling2(n + 1,n - 2 * k) / binomial(n - 2 * k + 1,2). ●

► [A347825] 1,2,6,17,61,220,883,3597,15232,65130,282294,1229729,5384065,23630332,103922707,457561989,2016346540,8890227762,39212714934,173001054449,763388725141,3368934926716,14868728620387,65626328874621,289666423135048 ⋆ Number of ways to cut a 2 X n rectangle into rectangles with integer sides up to symmetries of the rectangle. ● a(n) = (c(n) + |V(n)| + |H(n)| + |R(n)|) / 4 for n > 0, where: ● a(n) = 9 * a(n - 1) - 19 * a(n - 2) - 33 * a(n - 3) + 143 * a(n - 4) - 63 * a(n - 5) - 175 * a(n - 6) + 147 * a(n - 7) for n > 7. ●

► [A064842] 0,2,6,18,36,66,106,162,232,322,430,562,716,898,1106,1346,1616,1922,2262,2642,3060,3522,4026,4578,5176 ⋆ Maximal value of Sum _{ i=1..n } (p(i) - p(i + 1)) ^ 2, where p(n + 1) = p(1), as p ranges over all permutations of { 1, 2, ..., n } . ● a(n) = (2 * n ^ 3 - 8 * n + 3 * (- 1) ^ n + 9) / 6. - _ Luce ETIENNE _ , Jul 08 2014 ●

► [A302647] 0,0,2,6,18,36,72,120,200,300,450,630,882,1176,1568,2016,2592,3240,4050,4950,6050,7260,8712,10296,12168 ⋆ a(n) = (2 * n ^ 2 * (n ^ 2 - 3) - (2 * n ^ 2 + 1) * (- 1) ^ n + 1) / 64. ● a(n) = Sum _{ k=1..floor(n / 2) } k * (n - k) * (n - 2 * k). ● a(n) = (1 / 2) * floor(n / 2) * (1 + floor(n / 2)) * (floor(n / 2) - n) * (1 - n + floor(n / 2)). ● a(n) = n ^ 2 * (n - 2) * (n + 2) / 32 for n even. ● a(n) = (n ^ 2 - 1) ^ 2 / 32 for n odd. ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 6 * a(n - 3) + 6 * a(n - 5) - 2 * a(n - 6) - 2 * a(n - 7) + a(n - 8) for n>8. ● a(n) = 2 * binomial(floor((n + 1) / 2),2) * binomial(floor((n + 2) / 2),2). - _ Bruno Berselli _ , Apr 12 2018 ●

► [A230137] 0,2,6,18,44,110,252,588,1304,2934,6380,14036,30120,65260,138712,297240,627248,1332902,2796876,5904516,12333320,25899972,53897096,11269392

8,233776464 ⋆ a(n) / 2 ^ n is the expected value of the maximum of the numbe r of heads and the number of tails when n fair coins are tossed. ● a(2n) = 2 * S um _{ k=n + 1..2n } binomial(2n,k) * k + binomial(2n,n) * n. ● a(2n + 1) = 2 * Sum _{ k=n + 1..2n + 1 } binomial(2n + 1,k) * k. ● a(n) = 2 * n / (n - 1) * a(n - 1) + 4 * (n - 3) / (n - 2) * a(n - 2) - 8 * a(n - 3) for n>2, else a(n) = n * (1 + n). - _ Alois P. Heinz _ , Oct 10 2013 ● a(2 * n) = (4 ^ n + binomial(2 * n,n)) * n. ● a(2 * n + 1) = (4 ^ n + binomial(2 * n,n)) * (2 * n + 1). (End) ●

▶ [A120414] 0,1,2,6,18,45,102,213,426,821,1538,2820,5075,8996,15743,27247,46709,79405,133996,224640,374400 ⋆ Conjectured Ramsey number R(n,n). ● a(n) = ceiling((3 / 2) ^ (n - 3) * n * (n - 1)), for n > 1. ●

▶ [A308305] 1,2,6,18,46,101,197,351,583,916,1376,1992,2796,3823,5111,6701,8637,10966,13738,17006,20826,25257,30361,36203,42851 ⋆ a(n) = s(n,n) + s(n,n - 1) + s(n,n - 2), where s(n,k) are the unsigned Stirling numbers of the first kind (se e A132393). ● a(n) = s(n,n) + s(n,n - 1) + s(n,n - 2), where s(n,k) are the unsi gned Stirling numbers of the first kind. ● a(n) = (1 / 24) * (24 - 14 * n + 21 * n ^ 2 - 10 * n ^ 3 + 3 * n ^ 4). ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

▶ [A140960] 0,0,2,6,18,46,114,270,626,1422,3186,7054,15474,33678,72818,156558,334962,713614,1514610,3203982,6757490,14214030,29826162,62448526,130489458 ⋆ a(n) = (2 * (- 1) ^ n - 2 ^ (n + 1) + 3 * n * 2 ^ n) / 9. ● a(n) = 3 * a(n - 1) - 4 * a(n - 3), n > 2. ●

▶ [A062026] 0,2,6,18,50,120,252,476,828,1350,2090,3102,4446,6188,8400,11160,14552,18666,23598,29450,36330,44352,53636,64308,76500 ⋆ a(n) = n * (n + 1) * (n ^ 2 - 3 * n + 6) / 4. ● a(0)=0, a(1)=2, a(2)=6, a(3)=18, a(4)=50, a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Harvey P. Dal e _ , Apr 22 2015 ● a(n) = 6 * binomial(n + 3, 4) - 12 * binomial(n + 2, 3) + 8 * binomial(n + 1, 2). ●

▶ [A048495] 1,2,6,18,50,130,322,770,1794,4098,9218,20482,45058,98306,212994,458754,983042,2097154,4456450,9437186,19922946,41943042,88080386,184549378,385875970 ⋆ a(n) = (n - 1) * 2 ^ n + 2. ● a(n) - 1 = Sum _{ i=0..n - 1 } (n - i) * 2 ^ (n - i - 1) = n * 2 ^ (n - 1) + (n - 1) * 2 ^ (n - 2) + (n - 2) * 2 ^ (n - 3) + ... + 1 * (2 ^ 0). - Matthew Erbst (matt(AT)erbst.org), Apr 19 2006 ● a(n) = a(n - 1) + (2 ^ n - 2 ^ (n - 1)) * n = a(n - 1) + n * 2 ^ (n - 1). - _ Olivier Gé rard _ , Feb 25 2014 ●

▶ [A362067] 0,2,6,18,50,136,364,966,2550,6710,17622,46224,121160,317434,831430,2177322,5701290,14927768,39083988,102327390,267903350,701391022,1836283246,4807480608,12586194000 ⋆ Sum of successive Fibonacci numbers F(n) : a(n) = Sum _{ k = 0..n } F(n + k). ● a(n) = 4 * a(n - 1) - 3 * a(n - 2) - 2 * a(n - 3) + a(n - 4), a(0)=0, a(1)=2, a(2)=6, a(3)=18. ●

▶ [A196593] 1,2,6,18,51,134,328,758,1677,3594,7530,15530,31687,64190,129420,260142,521889,1045730,2093806,4190402,8384091,16772022,33548496,67102118,134210101 ⋆ Number of fixed tree - like convex polyominoes. ● a(n) = 6 * a(n - 1) - 14 * a(n - 2) + 16 * a(n - 3) - 9 * a(n - 4) + 2 * a(n - 5). ● a(n) = 2 ^ (n + 2) - (n ^ 3 - n ^ 2 + 10 * n + 4) / 2. ●

▶ [A078484] 0,1,2,6,18,52,148,420,1192,3384,9608,27280,77456,219920,624416,1772896,5033760,14292288,40579904,115217984,327136896,928835456,2637230208,7487852800,21260161280 ⋆ G.f.: - x * (1 - 2 * x + 2 * x ^ 2) / (2 * x ^ 3 - 4 * x ^ 2 + 4 * x - 1). ● a(0)=0, a(1)=1, a(2)=2, a(3)=6, a(n) = 4 * a(n - 1) - 4 * a(n - 2) + 2 * a(n - 3). - _ Harvey P. Dale _ , Jul 21 2012 ●

▶ [A077835] 1,2,6,18,52,152,444,1296,3784,11048,32256,94176,274960,802784,2343840,6843168,19979584,58333184,170311872,497249280,1451788672,4238699648,12375475200,36131927040,105492203776 ⋆ Expansion of 1 / (1 - 2 * x - 2 * x ^ 2 - 2 * x ^ 3). ● a(n) = sum { k=0..n, T(n - k, k)2 ^ (n - k) } , T(n, k) = trinomi al coefficients (A027907). - _ Paul Barry _ , Feb 15 2005 ● a(n) = sum { k=0.. n, sum { i=0..floor((n - k) / 2), C(n - k - i, i)C(k, n - k - i) }* 2 ^ k } - _ Paul Barry _ , Apr 26 2005 ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) + 2 * a(n - 3). [_ G eoffrey Critzer _ , Feb 07 2009] ●

▶ [A252822] 2,6,18,53,142,339,729,1437,2638,4568,7536,11937,18266,27133,39279,55593,77130,105130,141038,186525,243510,314183,401029,506853,634806 ⋆ Nu mber of n X 2 nonnegative integer arrays with upper left 0 and every value wit hin 3 of its city block distance from the upper left and every value increasing b y 0 or 1 with every step right or down. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 3 5 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

▶ [A094864] 1,2,6,18,53,154,443,1264,3582,10092,28291,78962,219541,608318,1680438,4629414,12722033,34882954,95451407,260698732,710802606,1934955072,5259642751,14277467618,38707663273 ⋆ a(0)=1, a(1)=2, a(2)=6, a(3)=18; for n > = 4, a(n) = 6 * a(n - 1) - 11 * a(n - 2) + 6 * a(n - 3) - a(n - 4). ● a(n) = (2 * F(2n + 1) + (n - 2) * L(2n - 3)) / 5, where F(n) is the n - th Fibonacci number an d L(n) is the n - th Lucas number. - _ Rigoberto Florez _ , Jul 29 2019 ●

▶ [A132790] 1,2,6,18,53,158,486,1550,5109,17298,59799,210048,746983,2682618,9711214,35390422,129710309,477769754,1767525315,6564644688,24467315575,91484660770,343063807931,1289912535908,4861963178643 ⋆ Row sums of triangle A 132789. ● a(n) = Sum _{ k=1..n } binomial(n - 1,k - 1) * (1 + binomial(n,k - 1) / k) - 1. - _ Andrew Howroyd _ , Sep 01 2018 ●

▶ [A160175] 1,2,6,18,54,160,476,1416,4212,12528,37264,110840,329688,980640,2916864,8676064,25806512,76760160,228319200,679123872,2020019488,6008445440,17871816000,53158809600,158118181056 ⋆ Expansion of 1 / (1 - 2 * x - 2 * x ^ 2 - 2 * x ^ 3 - 2 * x ^ 4). ● a(n) = 2 * (a(n - 1) + a(n - 2) + a(n - 3) + a(n - 4)) . ●

▶ [A025192] 1,2,6,18,54,162,486,1458,4374,13122,39366,118098,354294,1062882,3188646,9565938,28697814,86093442,258280326,774840978,2324522934,6973568802,20920706406,62762119218,188286357654 ⋆ a(0)=1; a(n) = 2 * 3 ^ (n - 1) for n >= 1. ● a(0) = 1, a(n) = Sum _{ k=0..n - 1 } (a(k) + a(n - k - 1)). - _ Benoit Cloitre _ , Jun 24 2003 ● a(1) = 2, a(n) = 3 * a(n - 1). - _ Vincenzo Librandi _ , Jan 01 2011 ● a(n) = lcm(a(n - 1), Sum _{ k=1..n - 1 } a(k)) for n >= 3. - _ David W. Wilson _ , Sep 27 2011 ● a(n) = ((2 * n - 1) * a(n - 1) + (3 * n - 6) * a(n - 2)) / (n - 1); a(0)=1, a(1)=2. - _ Sergei N. Gladkovskii _ , Jul 16 2012 ●

▶ [A008776] 2,6,18,54,162,486,1458,4374,13122,39366,118098,354294,1062882,3188646,9565938,28697814,86093442,258280326,774840978,2324522934,6973568802,20920706406,62762119218,188286357654,564859072962 ⋆ Pisot sequences E(2, 6), L(2,6), P(2,6), T(2,6). ● a(n) = 2 * 3 ^ n. ● a(n) = 3 * a(n - 1). ● a(n - 1) = phi(3 ^ n). - _ Artur Jasinski _ , Nov 19 2008 ●

▶ [A004529] 1,1,1,1,2,6,18,54,216,1080,5400,27000,162000,1134000,7938000,55566000,444528000,4000752000,36006768000,324060912000,3240609120000,35646700320000,392113703520000,4313250738720000 ⋆ Ratios of successive terms are 1,1 ,1,2,3,3,3,4,5,5,5,6,... ● a(4 * k + j) = 16 ^ k * k! * Gamma(k + 1 / 2) ^ 3 * (2 * k + 1) ^ j / Gamma(1 / 2) ^ 3 for 0 <= j <= 3. - _ Robert Israel _ , Jun 1 9 2018 ●

▶ [A238236] 1,2,6,18,55,169,520,1601,4930,15182,46754,143983,443409,1365520,4205249,12950466,39882198,122821042,378239143,1164823609,3587185688,11047081345,34020543362,104769516446,322647744322 ⋆ Expansion of (1 - x - x ^ 2) / ((x - 1) * (x ^ 3 + 3 * x ^ 2 + 2 * x - 1)). ● a(n) = 3 * a(n - 1) + a(n - 2) - 2 * a(n - 3) - a(n - 4), a(0) = 1, a(1) = 2, a(2) = 6, a(3) = 18. ●

▶ [A291730] 2,6,18,56,168,510,1544,4680,14176,42952,130128,394252,1194456,3618840,10963960,33217424,100638528,304903688,923764032,2798719872,8479257216,25689531840,77831351040,235804967056,714416256800 ⋆ p - INVERT of (1,0 ,1,0,0,0,0,...), where p(S) = 1 - 2 S - 2 S ^ 2. ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) + 2 * a(n - 3) + 4 * a(n - 4) + 2 * a(n - 6) for n >= 7. ●

▶ [A291228] 2,6,18,56,170,522,1594,4880,14922,45654,139642,427176,1306690,3997146,12227058,37402144,114411538,349980390,1070575586,3274847512,10017625050,30643508586,93737246762,286738430256,877121205338 ⋆ p - INVERT of (0 ,1,0,1,0,1,...), where p(S) = 1 - 2 S - 2 S ^ 2. ● a(n) = 2 * a(n - 1) + 4 * a(n - 2) - 2 * a(n - 3) - a(n - 4) for n >= 5. ●

▶ [A275857] 1,2,6,18,56,175,548,1717,5381,16865,52859,165674,519267,1627524,5101104,15988252,50111546,157063265,492279150,1542937247,4835986551,15157302067,47507122597,148900291588,466694163381 ⋆ a(n) = floor(c * s * a(n - 1)) + floor(d * r * a(n - 2)), where r = (1 + sqrt(5)) / 2, s = r / (r - 1), c = 1, d = 1, a(0) = 1, a(1) = 2. ● a(n) = floor(s * a(n - 1)) + floor(r * a(n - 2)), where r = (1 + sqrt(5)) / 2, s = r / (r - 1). ●

▶ [A111961] 1,2,6,18,56,176,558,1778,5686,18230,58558,188366,606588,1955044,6305418,20347342,65689088,212146400,685342218,2214556478,7157409064,23136645472,74801223162,241863933094,782131232390 ⋆ Expansion of 1 / (sqrt(1 - 2x - 3x ^ 2) - x). ● a(n) = Sum _{ k=0..n } Sum _{ j=0..n } C(n, j) * C((j - 1) / 2 , (j - k) / 2) * 2 ^ (j - k) * (1 + (- 1) ^ (j - k)) / 2. ● a(n) = Sum _{ k=0..n } F(k + 1) * Sum _{ i=0..floor((n - k) / 2) } C(n, i) * C(n - i, i + k) / (i + k + 1). - _ Paul Barry _ , Sep 23 2005 ●

▶ [A071721] 1,2,6,18,56,180,594,2002,6864,23868,83980,298452,1069776,3863080,14040810,51325650,188574240,695987820,2579248980,9593714460,35804293200,134032593240,503154100020,1893689067348,7144084508256 ⋆ Expansion of (1 + x ^ 2 * C ^ 2) * C ^ 2, where C = (1 - (1 - 4 * x) ^ (1 / 2)) / (2 * x) is g.f. fo r Catalan numbers, A000108. ● a(n) = 6n * (2n)! / [(n + 2)n!(n + 1)!], n>0. In terms of Catalan numbers (A000108), a(n) = 6n * Cat(n) / (n + 2), n>0. - _ Ralf Stephan _ , Mar 11 2004 ● a(n) = n * (n + 1) * hypergeom([1 - n, 2 - n] , [4], 1) for n>=1. - _ Peter Luschny _ , Nov 19 2014 ● a(n) = b(n + 1) - b(n) for all n in Z if b(0) = 2, b(- 1) = - 1, a(0) = 0, a(- 1) = 3, a(- 2) = - 1 where b = A068875. ●

▶ [A125306] 1,1,2,6,18,56,182,607,2064,7132,24970,88383,315748,1137014,4122762,15039631,55157790,203255438,752190764,2794352648,10417047964,38956725596,146108755556,549442692378,2071236137154 ⋆ Number of 123 - segmented per mutations of length n. ● a(n) = Sum _{ k = 0..floor(n / 3) } Sum _{ i = 0..k } ((2 * k + i + 1) / (n - k + i + 1)) * binomial(k - 1, k - i) * binomial(2 * n - 4 * k + i, n - 3 * k). ●

▶ [A104629] 1,2,6,18,57,186,622,2120,7338,25724,91144,325878,1174281,4260282,15548694,57048048,210295326,778483932,2892818244,10786724388,40347919626,151355847012,569274150156,2146336125648,8110508473252 ⋆ Expansion of (1 - 2 * x - sqrt(1 - 4 * x)) / (x ^ 2 * (1 + 2 * x + sqrt(1 - 4 * x))). ● a(n) = (1 + S um _{ k=0..n + 2 } C(k) * (- 2) ^ k) / (8 * (- 2) ^ n), where C(n) = Catalan numbers. ●

▶ [A125305] 1,1,2,6,18,57,190,654,2306,8290,30272,111973,418666,1579803,6008464,23009240,88645034,343334976,1336105472,5221667740,20485272152,80645855014,318489386884,1261428593649,5009356014722 ⋆ Number of 132 - segmented permutations of length n. ● a(n) = sum(binomial(n - 2 * k,k) * catalan(n - 2 * k),k=0..floor(n / 3)); generating function = C(x + x ^ 3), where C(x) is the gene rating function for the Catalan numbers. ●

▶ [A369621] 1,1,2,6,18,57,191,660,2334,8417,30831,114380,428915,1623143,6190876,23774613,91849846,356735941,1392091107,5455425618,21460947111,84717452192,335479515201,1332327233554,5305235886691 ⋆ Expansion of (1 / x) * Series _ Reversion(x / (1 / (1 - x) + x ^ 3)). ● a(n) = (1 / (n + 1)) * Sum _{ k=0.. floor(n / 3) } binomial(n + 1,k) * binomial(2 * n - 4 * k,n - 3 * k). ●

▶ [A304200] 1,1,1,2,6,18,58,186,570,1680,4878,14058,40200,114450,325290,923846,2624730,7465410,21261828,60647370,173288724,496014934,1422223506,4084793082,11751102060 ⋆ a(n) is the number of cyclic permutations with at most 2 asc ents. ● a(n) = L(3,n) - n * L(2,n) when n !== 2 (mod 4) and n>2; ● a(n) = L(3,n) + L(3,n / 2) - n * (L(2,n) + L(2,n / 2)) when n == 2 (mod 4) and n>2; ●

▶ [A081057] 1,2,6,18,58,186,602,1946,6298,20378,65946,213402,690586,2234778,7231898,23402906,75733402,245078426,793090458,2566494618,8305351066,26876680602,86974765466,281456253338,910811568538 ⋆ E.g.f.: Sum _{ n>=0 } a(n) * x ^ n / n! = { Sum _{ n>=0 } F(n + 1) * x ^ n / n! }^ 2, where F(n) is the n - th Fibonacci number. ● a(n) = 2 / 5 + (3 / 10 - 1 / 10 * 5 ^ (1 / 2)) * (1 - 5 ^ (1 / 2)) ^ n + (3 / 10 + 1 / 10 * 5 ^ (1 / 2)) * (1 + 5 ^ (1 / 2)) ^ n. ● a(n) = Sum _{ k=0..n } (F(k + 1) * F(n - k + 1) * C(n,k)), where F(k) = Fibonacci(k). - _ David Scambler _ , Oct 17 2010 ● a(n) = (2 ^ n * Lucas(n + 2) + 2) / 5. - _ Ira M. Gessel _ , Mar 06 2022 ●

▶ [A193777] 1,2,6,18,58,190,642,2206,7746,27662,100738,373550,1413506,5457710,21546466,87025806,360264258,1529624366,6669850466,29877013902,137560725890,650780790894,3162711095074,15774862353614,80687636530882 ⋆ Number of signed permutations of size 2n invariant under D and D'bar and avoiding (- 2, 1) and (2, - 1). ● a(n) = 2 * a(n - 1) + n * a(n - 2) - Sum _{ j=1..k - 3 } j * a(j) * |S _{ k - j - 3 }^ D|, where S _ n ^ D is the set of unsigned permutations o f length n invariant under D. ●

► [A293067] 0,0,2,6,18,58,194,658,2242,7650,26114,89154,304386,1039234,3548162,12114178,41360386,141213186,482131970,1646101506,5620142082,19188365314,65513177090,223675977730,763677556738 ★ Sum of values of vertices of type A at level n of the hyperbolic Pascal pyramid PP _ (4,5). ● a(n) = 5 * a(n - 1) - 6 * a(n - 2) + 2 * a(n - 3), n >= 3. ● a(n) = (4 + (2 + sqrt(2)) ^ n * (- 4 + 3 * sqrt(2)) - (2 - sqrt(2)) ^ n * (4 + 3 * sqrt(2))) / 2 for n>0. ●

► [A085139] 1,1,2,6,18,58,194,670,2370,8546,31298,116102,435346,1647418,6283394,24130174,93226242,362098050,1413098370,5538138182,21788069266,86016385274,340655956802,1353023683486,5388230857538 ★ a(n) = Sum _{ i=0..n - 1 } (1 + (- 1) ^ (n - 1 - i)) / 2 * Sum _{ j=0..i } a(j) * a(i - j) for n > 0, with a(0) = 1. ● a(n) = Sum _{ k=0..floor(n / 2) } C(n - k,k) * C(n - 2k) - Sum _{ k=0..floor((n - 2) / 2) } C(n - k - 2,k) * C(n - 2k - 2). - _ Paul Barry _ , Nov 30 2008 ●

► [A036675] 1,1,2,6,18,59,198,690,2450,8878,32632,121518,457262,1736526,6646340,25613086,99298674,387021728,1515594560,5960406102,23530528512,93216984177,370450977206,1476458287082,5900150928510 ★ G.f. satisfies A(x) = 1 + x * A(x) ^ 2 * A(x ^ 2). ● a(n) = T(2 * n + 1,1), where T(n,m) = sum(i=1..n - m, (m * binomial(m + 2 * i - 1,i)) / (m + i) * ((1 + (- 1) ^ (n - m)) / 2) * T((n - m) / 2,i)), n>m, T(n,n)=1. - _ Vladimir Kruchinin _ , Mar 18 2015 ●

► [A005566] 1,2,6,18,60,200,700,2450,8820,31752,116424,426888,1585584,5889312,22084920,82818450,312869700,1181952200,4491418360,17067389768,65166397296,248817153312,953799087696,3656229836168,14062422446800 ★ Number of walks of length n on square lattice, starting at origin, staying in first quadrant. ● a(n) = binomial(n, floor(n / 2)) * binomial(n + 1, floor((n + 1) / 2)). ●

► [A303117] 1,1,1,2,6,18,62,186,570,1680,4890,14058,40200,114450,325230,924846,2624730,7465410,21260652,60647370,173288724,496014934,1422211494,4084793082,11751102060 ★ a(n) is the number of cyclic permutations with at most two descents. ● a(n) = L(3,n) - n * L(2,n) where L(k,n) is the number of primitive k - ary necklaces (or equivalently, Lyndon words) of length n. ●

► [A052863] 0,0,2,6,18,65,295,1652,11032,85353,749203,7347384,79564496,942541041,12121319327,168145213732,2502276609008,39761200642225,671855234838915,12028625060491336,227451564319791336,4529507975800063337,94751047516476943359,2077192015403191663844 ★ Expansion of e.g.f. log(- 1 / (- 1 + x)) * exp(x) - log(- 1 / (- 1 + x)). ● a(n) = Sum _{ k=0..n - 2 } k! * binomial(n,k + 1). - _ Seiichi Manyama _ , May 13 2022 ●

► [A057693] 1,1,2,6,18,66,276,1212,5916,31068,171576,1014696,6319512,41143896,281590128,2007755856,14871825936,114577550352,913508184096,7526682826848,64068860545056,561735627038496,5068388485760832,47026385852423616,447837548306401728 ★ Number of permutations on n letters that have only cycles of length 3 or less. ● a(n) = sum(binomial((n, 3 * j) * (3 * j)! * (1 / 3) ^ j / j! * sum(binomial(n - 3 * j, 2 * k) * (2 * k)! * (1 / 2) ^ k / k!, k=0..floor((n - 3 * j) / 2)), j=0..floor(n / 3))) ● a(n) = a(n - 1) + (n - 1) * a(n - 2) + (n - 1)(n - 2) * a(n - 3). Generally, for n - permutations that have only cycles of length k or less the recurrence is: a(n)=Sum _ i=0...k - 1;P(n - 1,i) * a(n - i - 1) where P(x,i) is the falling factorial. - _ Geoffrey Critzer _ , May 23 2009 ●

► [A000138] 1,1,2,6,18,90,540,3780,31500,283500,2835000,31185000,372972600,4848643800,67881013200,1018215198000,16294848570000,277012425690000,4986223662420000,94738249585980000,1894745192712372000 ★ Expansion of e.g.f. exp(- x ^ 4 / 4) / (1 - x). ● a(n) = n! * Sum _{ i=0..floor(n / 4) } (- 1) ^ i / (i! * 4 ^ i); a(n) / n! ~ Sum _{ i >= 0 } (- 1) ^ i / (i! * 4 ^ i) = e ^ (- 1 / 4); a(n) ~ e ^ (- 1 / 4) * n!; a(n) ~ e ^ (- 1 / 4) * (n / e) ^ n * sqrt(2 * Pi * n). - Avi Peretz (njk(AT)netvision.net.il), Apr 22 2001 ● a(n,k) = n! * floor(floor(n / k)! * k ^ floor(n / k) / exp(1 / k) + 1 / 2) / (floor(n / k)! * k ^ floor(n / k)), here k=4, n>=0. _ Simon Plouffe _ , from old notes, 1993 ●

► [A052687] 1,2,6,18,96,480,3600,25200,241920,2177280,25401600,279417600,3832012800,49816166400,784604620800,11769069312000,209227898880000,3556874280960000,70426110763008000,1338096104497152000 ★ Expansion of e.g.f. (1 + x - x ^ 3) / ((1 - x) * (1 - x ^ 2)). ● a(n) = n! * (2 * n + 7 + (- 1) ^ n) / 4. ●

► [A213400] 0,0,0,2,6,19,29,52,81,116,159,223,282,366,462,568,688,841,987,1170,1371,1586,1821,2101,2372 ★ Number of (w,x,y) with all terms in { 0,...,n } and w < R < 2 * w, where R = range { w,x,y } = max(w,x,y) - min(w,x,y). ● a(n) = 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4) - 4 * a(n - 5) - a(n - 6) + 2 * a(n - 7) + 2 * a(n - 8) - a(n - 10). ●

► [A282080] 1,2,6,19,38,60,100,170,255,350,490,693,924,1176,1512,1956,2445,2970,3630,4455,5346,6292,7436,8814,10283 ★ Number of n - element subsets of [n + 4] having an even sum. ● a(n) = (2 * (1 + n) * (2 + n) * (3 + n) * (4 + n) + 3 * (- i * (- i) ^ n * ((3 + 8 * i) + (4 + 6 * i) * n + (1 + i) * n ^ 2) + i ^ n * ((8 + 3 * i) + (6 + 4 * i) * n + (1 + i) * n ^ 2))) / 96 where i=sqrt(- 1). - _ Colin Barker _ , Feb 06 2017 ●

► [A273180] 1,2,6,19,38,102,307,614,1638,4915,9830,26214,78643,157286,410430,1258291,2516582,6710886,20132659,40265318,107374182,322122547,644245094,1717986918,5153960755 ★ Numbers n such that ror(n) + rol(n) is a power of 2, where ror(n)=A038572(n) is n rotated one binary place to the right, rol(n)=A006257(n) is n rotated one binary place to the left. ● a(n) = 17 * a(n - 3) - 16 * a(n - 6) for n>6. ●

► [A214948] 1,2,6,19,51,148,395,1095,2945,8020,21597,58518,157746,426250,1149832,3104236,8375167,22603530,60988687,164579663,444082316,1198312390,3233419264,8724918311,23542640336 ★ a(n) is the sum over all proper integer partitions of n of the previous terms. ● a(n) = sum(sum(a(i), i in p) , p in P * (n)) where P * (n) is the set of all integer partitions of n excluding { n } , p is a partition of P * (n), i is a part of p. ●

► [A077834] 1,2,6,19,56,168,505,1514,4542,13627,40880,122640,367921,1103762,3311286,9933859,29801576,89404728,268214185,804642554,2413927662,7241782987,21725348960,65176046880,195528140641 ★ Expansion of 1 / (1 - 2 * x - 2 * x ^ 2 - 3 * x ^ 3). ● a(n) = sum _{ k=0..n } (3 ^ k * 2 * sqrt(3) * cos(2 * Pi * (n - k) / 3 + Pi / 6) / 3). ● a(n) = 3 ^ (n + 2) / 13 + 2 * sqrt(3) * cos(2 * Pi * n / 3 + Pi / 6) / 39 + 2 * sqrt(3) * sin(2 * Pi * n / 3 + Pi / 3) / 13. ● a(0)=1, a(1)=2, a(2)=6, a(n) = 2 * a(n - 1) + 2 * a(n - 2) + 3 * a(n - 3). - _ Harvey P. Dale _ , Jan 31 2012 ● a(n) = 1 / 52 * (4 * 3 ^ (n + 2) + (- 1) ^ n * (2 * (- 1) ^ floor(n / 3) + 9 * (- 1) ^ floor((1 + n) / 3) + 6 * (- 1) ^ floor((n + 2) / 3) + (- 1) ^ floor((n + 4) / 3))). - _ John M. Campbell _ , Dec 23 2016 ●

► [A111277] 1,1,2,6,19,59,180,544,1637,4917,14758,44282,132855,398575,1195736,3587220,10761673,32285033,96855114,290565358,871696091,2615088291,7845264892,23535794696,70607384109 ★ Number of permutations avoiding the patterns { 2413,4213,2431,4231,4321 } ; also number of permutations avoiding the patterns { 3142,3412,3421,4312,4321 } ; number of weak sorting class based on 2413 or 3142. ● a(n) = (3 ^ n - 2 * n + 3) / 4. ● a(n) = + 5 * a(n - 1) - 7 * a(n - 2) + 3 * a(n - 3). - _ R. J. Mathar _ , Jun 25 2011 ● a(n + 1) = sum of row 1 terms of M ^ n, an infinite bidiagonal matrix with all 1's in the superdiagonal and (1,3,0,0,0,...) in the main diagonal, and the rest zeros. Example: a(5) = 59 = (sum of row 1 terms of M ^ 4) = (1 + 40 + 13 + 4 + 1). - _ Gary W. Adamson _ , Jun 23 2011 ●

► [A208481] 1,2,6,19,60,188,589,1846,5786,18135,56840,178152,558377,1750106,5485310,17192459,53885860,168892996,529356757,1659148590,5200224626,16298923631,51085276240,160115201936,501844754065 ★ Diagonal sums of triangle A185384. ● a(n) = sum(binomial(n - k,k) * F(2n - 3k + 1), k=0..floor(n / 2)), where F(n) are the Fibonacci numbers (A000045). ●

► [A204200] 1,1,2,6,19,60,189,595,1873,5896,18560,58425,183916,578949,1822473,5736961,18059374,56849086,178955183,563332848,1773314929,5582216355,17572253481,55315679788,174128175064 ★ INVERT transform of [1, 0, 1, 3, 9, 27, 81, ...]. ● a(n) = 4 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A052544] 1,2,6,19,60,189,595,1873,5896,18560,58425,183916,578949,1822473,5736961,18059374,56849086,178955183,563332848,1773314929,5582216355,17572253481,55315679788,174128175064,548137914373 ★ Expansion of (1 - x) ^ 2 / (1 - 4 * x + 3 * x ^ 2 - x ^ 3). ● a(n) = 4 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ● a(n) = Sum(- 1 / 31 * (- 4 - 7 *_ alpha + 2 *_ alpha ^ 2) *_ alpha ^ (- 1 - n), _ alpha=RootOf(- 1 + 4 *_ Z - 3 *_ Z ^ 2 +_ Z ^ 3)). ● a(n) = Sum _{ k=0..n } binomial(n + 2 * k, 3 * k). - _ Richard L. Ollerton _ , May 12 2004 ● a(n) = hypergeom([(n + 1) / 2, n / 2 + 1, - n], [1 / 3, 2 / 3], - 4 / 27). - _ Peter Luschny _ , Nov 03 2017 ●

► [A001169] 1,2,6,19,61,196,629,2017,6466,20727,66441,212980,682721,2188509,7015418,22488411,72088165,231083620,740754589,2374540265,7611753682,24400004911,78215909841,250726529556,803721298537 ★ Number of board - pile polyominoes with n cells. ● a(n) = 5 * a(n - 1) - 7 * a(n - 2) + 4 * a(n - 3) for n >= 5. ● a(n) = sum(k=0..n - 1, sum(i=0..k, binomial(k,i) * binomial(n + 2 * i - 1,4 * k - i))). - _ Emanuele Munarini _ , May 19 2011 ●

► [A018906] 2,6,19,61,196,630,2026,6516,20957,67403,216786,697242,2242518,7212542,23197479,74609345,239963764,771788146,2482278709,7983677414,25677658524,82586271099,265619708576,854304579262,2747673800490 ★ Define the Shallit sequence S(a _ 0,a _ 1) by a _{ n + 2 } is the least integer > a _{ n + 1 }^ 2 / a _ n for n >= 0. This is S(2,6). ● a(n) = [a(n - 1) ^ 2 / a(n - 2) + 1]. ●

► [A014010] 2,6,19,61,196,630,2026,6516,20957,67403,216786,697242,2242518,7212542,23197479,74609345,239963764,771788146,2482278710,7983677420,25677658553,82586271223,265619709074,854304581182,2747673807690 ★ Linear recursion relative of Shallit sequence S(2,6). ● a(n) = 3 * a(n - 1) + a(n - 2) - a(n - 3) + a(n - 4) - 3 * a(n - 5). ●

► [A138747] 1,1,1,2,6,19,61,197,637,2060,6662,21545,69677,225337,728745,2356778,7621874,24649315,79716449,257804821,833746693,2696355892,8720076682,28200927617,91202445513 ★ a(n) = 4 * a(n - 1) - 3 * a(n - 2) + 2 * a(n - 3) - 1 * a(n - 4). ● a(n) = 4 * a(n - 1) - 3 * a(n - 2) + 2 * a(n - 3) - 1 * a(n - 4); a>4. Let X = the 4 X 4 matrix [0,1,0,0; 0,0,1,0; 0,0,0,1; - 1,2, - 3,4]. X ^ n * [1,1,1,1] = [a(n), a(n + 1), a(n + 2), a(n + 3)]. ●

► [A052975] 1,2,6,19,61,197,638,2069,6714,21794,70755,229725,745889,2421850,7863641,25532994,82904974,269190547,874055885,2838041117,9215060822,29921113293,97153242650,315454594314,1024274628963 ★ Expansion of (1 - 2 * x) * (1 - x) / (1 - 5 * x + 6 * x ^ 2 - x ^ 3). ● a(n) = Sum (1 / 7 * (2 - 3 *_ alpha +_ alpha ^ 2) *_ alpha ^ (- 1 - n), _ alpha=RootOf(- 1 + 5 *_ Z - 6 *_ Z ^ 2 +_ Z ^ 3)) ● a(n) = (2 / 7) * Sum _{ r=1..6 } sin(r * 3 * Pi / 7) ^ 2 * (2 * cos(r * Pi / 7)) ^ (2 * n). ● a(n) = 5 * a(n - 1) - 6 * a(n - 2) + a(n - 3). (End) ● a(n) = 2 ^ n * A(n;1 / 2) = (1 / 7) * (s(2) ^ 2 * c(4) ^ (2n) + s(4) ^ 2 * c(1) ^ (2n) + s(1) ^ 2 * c(2) ^ (2n)), where c(j):=2 * cos(2Pi * j / 7) and s(j):=2 * sin(2 * Pi * j / 7). Here A(n;d), n in N, d in C denotes the respective quasi - Fibonacci number - see A121449 and Witula - Slota - Warzynski paper for details (see also A094789, A085810, A077998, A006054, A121442). I note that my and the respective Herbert Kociemba's formulas are "compatible". - _ Roman Witula _ , Aug 09 2012 ●

► [A035929] 0,1,1,1,2,6,19,61,200,670,2286,7918,27770,98424,351983,1268541,4602752,16799894,61642078,227239086,841230292,3126039364,11656497518,43601626146,163561902392 ★ Number of Dyck n - paths starting U ^ mD ^ m (an m - pyramid), followed by a pyramid - free Dyck path. ● a(n), n>0; is the upper left term in M ^ (n - 1), where M is the infinite square production matrix: ●

► [A071646] 1,2,6,19,61,201,672,2269,7723,26452,91058,314766,1091884,3798900,13251136,46325285,162268775,569385098,2001012474,7042014879,24813529581,87533417037,309107111536,1092585807044,3865270781236 ★ Number of base 4 n - digit numbers with digit sum n. ● a(n)=[x ^ n] (1 + x + x ^ 2 + x ^ 3) ^ n - (1 + x + x ^ 2 + x ^ 3) ^ (n - 1). - _ Michael Somos _ , Jul 19 2002 ● a(n) * 790 * (2 * n ^ 2 - n) = a(n - 1) * (- 16328 * n ^ 4 + 137200 * n ^ 3 - 400977 * n ^ 2 + 489925 * n - 207450) + a(n - 2) * (44902 * n ^ 4 - 399751 * n ^ 3 + 1267117 * n ^ 2 - 1672482 * n + 769980) + a(n - 3) * 4 * (n - 3) * (8164 * n ^ 3 - 52272 * n ^ 2 + 115397 * n - 81223) + a(n - 4) * 16 * (n - 4) * (n - 3) * (4082 * n ^ 2 - 11849 * n + 8529), n>2. - _ Michael Somos _ , Jul 19 2002 ● a(n) = sum(k=1..n, (sum(j=0..k, binomial(j,n - 3 * k + 2 * j) * binomial(k,j))) * binomial(n - 1,n - k)). [_ Vladimir Kruchinin _ , Nov 07 2013] ●

► [A094817] 2,6,19,62,206,692,2340,7944,27032,92112,314128,1071776,3657824,12485696,42623040,145512576,496787840,1696093440,5790732544,19770612224,67500721664,230461137920,786842059776,2686443866112 ★ Number of (s(0), s(1), ..., s(2n)) such that 0 < s(i) < 8 and |s(i) - s(i - 1)| = 1 for i = 1,2,...,2n, s(0) = 3, s(2n) = 3. ● a(n) = (1 / 4) * Sum _{ r=1..7 } sin(3 * r * Pi / 8) ^ 2 * (2 * c

os(r * Pi / 8)) ^ (2 * n). ● a(n) = 6 * a(n - 1) - 10 * a(n - 2) + 4 * a(n - 3), n >= 4. ●

▶ [A094831] 1,2,6,19,62,207,703,2417,8382,29242,102431,359790,1266103,4460939,15730497,55500634,195890270,691566411,2441886670,8623112591,30453261927,107553444913,379864424726,1341658806066,4738726458775 ★ Number of (s(0), s(1), ..., s(2n)) such that 0 < s(i) < 9 and |s(i) - s(i - 1)| = 1 for i = 1,2,...,2n, s(0) = 3, s(2n) = 3. ● a(n) = (2 / 9) * Sum _{ r=1..8 } sin(r * Pi / 3) ^ 2 * (2 * cos(r * Pi / 9)) ^ (2 * n). ● a(n) = 6 * a(n - 1) - 9 * a(n - 2) + a(n - 3). ●

▶ [A033193] 1,2,6,19,62,207,704,2430,8486,29903,106098,378391,1354700,4863834,17499302,63055947,227465414,821215295,2966571096,10721076118,38757594758,140143505031,506827217210,1833150646599 ★ Binomial transform of A033192. ● a(n) = (1 / 5) * Sum _{ r=1..9 } sin(3 * r * Pi / 10) ^ 2 * (2 * cos(r * Pi / 10)) ^ (2 * n), n >= 1. - _ Herbert Kociemba _ , Jun 16 2004 ●

▶ [A026012] 1,2,6,19,62,207,704,2431,8502,30056,107236,385662,1396652,5088865,18642420,68624295,253706790,941630580,3507232740,13105289370,49114150020,184560753390,695267483664,2625197720454,9933364416572 ★ Second differences of Catalan numbers A000108. ● a(n) = 3 * (3 * n ^ 2 + 3 * n + 2) * binomial(2 * n, n) / ((n + 1) * (n + 2) * (n + 3)). - _ Emeric Deutsch _ , Oct 26 2003 ● a(n) = binomial(2 * n,n) / (n + 1) * hypergeom([- 2,n + 1 / 2],[n + 2],4). - _ Peter Luschny _ , Aug 15 2012 ● a(n) = binomial(2 * n,n) - binomial(2n,n - 3). - _ Mark Spindler _ , Nov 11 2012 ●

▶ [A191993] 2,6,19,62,207,705,2445,8622,30871,112061,411765,1529225,5731741,21652623,82341729,314889102,1209849831,4666707813,18060052389,70085525877,272615721621,1062509835063,4148096423409,16217945020377,63487732755357 ★ a(n) = 3 ^ (n - 1) + C(2 * n, n) / 2. ● a(n) = Sum _{ k=0..floor(n / 3) } (- 1) ^ k * C(2 * n, n - 3 * k). ●

▶ [A109262] 0,1,2,6,19,63,215,749,2650,9490,34318,125104,459152,1694914,6287896,23429158,87635243,328917615,1238303243,4674847097,17692789741,67114622451,255120892105,971649360211,3707176155659 ★ A Catalan transform of the Fibonacci numbers. ● a(n) = Sum _{ k=0..n } (k / (2 * n - k)) * binomial(2 * n - k, n - k) * Fibonacci(k). ● a(n) = (1 / (2 * sqrt(5))) * Catalan(n - 1) * Sum _{ j=0..1 } ((- 1) ^ j + sqrt(5)) * Hypergeometric2F1([2,1 - n], [2 * (1 - n)], (1 + (- 1) ^ j * sqrt(5)) / 2). - _ G. C. Greubel _ , May 30 2022 ●

▶ [A346157] 0,1,2,6,19,63,216,758,2705,9777,35698,131425,487201,1816651,6807742,25621878,96796225,366902949,1394851446,5316835073,20314772302,77786795230,298435201100,1147019162326,4415737088310 ★ Total number of left - to - right maxima in Dyck paths of semilength n. ● a(n) = Sum _{ r=1..n } (d(r + 1) - d(r)) * (binomial(2 * n - 1, n - r) - binomial(2 * n - 1,n - r - 1)) where d is A000005 and binomial is A007318. ●

▶ [A371818] 1,2,6,19,64,224,805,2947,10934,40975,154738,587910,2244681,8605061,33099767,127687258,493796454,1913755319,7431027611,28902878561,112585961052,439148770623,1715009647444,6705019714554,26240361155821 ★ a(n) = Sum _{ k=0..floor(n / 3) } (- 1) ^ k * binomial(2 * n - 2 * k,n - 3 * k). ● a(n) = [x ^ n] 1 / ((1 - x + x ^ 3) * (1 - x) ^ n). ● a(n) = binomial(2 * n, n) * hypergeom([1, (1 - n) / 3, (2 - n) / 3, - n / 3], [1 / 2 - n, - n, 1 + n], 27 / 4). - _ Stefano Spezia _ , Apr 07 2024 ●

▶ [A181734] 1,1,2,6,19,64,227,832,3126,11980,46646,184003,733783,2953434,11982265,48949631,201182110,831292029,3451336467,14390479996,60232976244,252992172572,1066000599632,4504710385216,19086728370308 ★ G.f. A(x) satisfies: A(x) = (1 + x * A(x)) * (1 + x ^ 2 * A(x) ^ 3). ● a(n) = Sum _{ k=0..[n / 2] } C(n + k, k) * C(n + k + 1, n - 2k) / (n + 1). ●

▶ [A216447] 1,1,2,6,19,64,228,841,3181,12277,48156,191400,769168,3120044,12758080,52533265,217637308,906511243,3793989118,15947205096,67290484581,284934164506,1210374907352,5156562941596,22027291990432 ★ G.f. satisfies: A(x) = (1 + x * (1 - x) * A(x) ^ 2) * (1 + x ^ 2 * A(x) ^ 2). ● a(n) = [x ^ n] ((1 - x ^ 4) / (1 - x - x ^ 3)) ^ (n + 1) / (n + 1). ●

▶ [A307354] 1,2,6,19,65,231,841,3110,11628,43834,166298,634140,2428336,9331688,35967462,138987715,538287881,2088842463,8119916647,31613327405,123251518641,481125828853,1880262896537,7355767408395,28803717914791 ★ a(n) = Sum _{ 0<=i<=j<=n } (- 1) ^ (i + j) * (i + j)! / (i! * j!). ● a(n) = Sum _{ k=0..floor(n / 3) } (- 1) ^ k * binomial(2 * n - 3 * k,n). ●

▶ [A005654] 1,2,6,19,66,236,868,3235,12190,46252,176484,676270,2600612,10030008,38781096,150273315,583407990,2268795980,8836340260,34461678394,134564560988,526024917288,2058358034616,8061901596814,31602652961516 ★ Number of bracelets (turn over necklaces) with n red, 1 pink and n - 1 blue beads; also reversible strings with n red and n - 1 blue beads; also next - to - central column in Losanitsch's triangle A034851. ● a(n) = (1 / 2) * (binomial(2 * n - 1, n) + binomial(n - 1, floor(n / 2))). - _ Michael Somos _ ●

▶ [A361489] 1,1,2,6,19,72,313,1472,7612,42679,255515,1632710,11065057,79065807,594174922,4679473130,38500353667,330172915164,2944613004359,27253908250340,261328607398332,2591724561444621,26545170005412613,280411070646125638 ★ Expansion of e.g.f. exp(exp(x) - 1 + x ^ 3 / 6). ● a(0) = a(1) = 1, a(2) = 2; a(n) = binomial(n - 1,2) * a(n - 3) + Sum _{ k=1..n } binomial(n - 1,k - 1) * a(n - k). ●

▶ [A341639] 1,1,2,6,19,95,291,2037,10203,71429,357240,3929640,19648533,255430929,1788018540,16092167088,144829514049,2462101738833,17234712244012,327459532636228,2947135794083881,38312765323095109,421440418557975839,9693129626833444297,87238166641520673597 ★ a(1) = 1; a(n + 1) = Sum _{ d|n } phi(d) * a(d) * a(n / d). ● a(1) = 1; a(n + 1) = Sum _{ k=1..n } a(gcd(n,k)) * a(n / gcd(n,k)). ●

▶ [A323724] 0,0,2,6,20,40,78,126,200,288,410,550,732,936,1190,1470,1808,2176,2610,3078,3620,4200,4862,5566,6360 ★ a(n) = n * (2 * (n - 2) * n + (- 1) ^ n + 3) / 4. ● a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + a(n - 4) + 2 * a(n - 5) - a(n - 6) for n > 5. ● a(n) = (1 / 2) * (- 1 + n) ^ 2 * n - (- 1 + n) * floor(n / 2) + 2 * floor(n / 2) ^ 2. ● a(n) = (n / 2) * ((n - 1) ^ 2 + 1) for even n; a(n) = (n / 2) * (n - 1) ^ 2 otherwise. - _ Bruno Berselli _ , Feb 06 2019 ●

▶ [A036689] 2,6,20,42,110,156,272,342,506,812,930,1332,1640,1806,2162,2756,3422,3660,4422,4970,5256,6162,6806,7832,9312 ★ Product of a prime and the previous number. ● a(n) = prime(n) * (prime(n) - 1). ● a(n) = prime(n) * phi(prime(n)). - _ Artur Jasinski _ , Jan 23 2008 ● a(n) = prime(n)! mod (prime(n) ^ 2). - _ J. M. Bergot _ , Apr 10 2014 ●

▶ [A060344] 2,6,20,52,96,192,384,768,1536,3072,6144,12288,24576,49152,98304,196608,393216,786432,1572864,3145728,6291456,12582912,25165824,50331648,100663296 ★ For n >= 2, let N _ n denote the set of all unipotent upper - triangular real n X n matrices A such that for every k=1,2,...,n - 1 the minor of A with rows 1,2,...,k and columns n - k + 1,...,n is nonzero. a(n) is the number of connected components of N _ n. ● a(2)=2, a(3)=6, a(4)=20, a(5)=52; for n > 5, a(n) = 3 * 2 ^ (n - 1). ●

▶ [A363600] 1,2,6,20,52,140,356,880,2123,5016,11610,26400,59130,130476,284216,611592,1301344,2740194,5713930,11806144,24184908,49142504,99091244,198360536,394342884 ★ Number of partitions of n into distinct parts where there are k ^ 2 + 1 kinds of part k. ● a(0) = 1; a(n) = (- 1 / n) * Sum _{ k=1..n } (Sum _{ d|k } (- 1) ^ (k / d) * d * (d ^ 2 + 1)) * a(n - k). ●

▶ [A321192] 1,1,2,6,20,55,239,700,3212,10104,48622,161579,806843,2799199,14379647,52018828,273472712,1023655306,5491615463,21234676241,115910309103,460998296937,2556361045845,10440651927427,58714921974979 ★ a(n) = [x ^ n] Product _{ k>=1 } (1 + x ^ k) ^ tau _ n(k), where tau _ n(k) = number of ordered n - factorizations of k. ● a(n) = [x ^ n] Product _{ k _ 1>=1, k _ 2>=1, ..., k _ n>=1 } (1 + x ^ (k _ 1 * k _ 2 * ... * k _ n)). ●

▶ [A082045] 1,2,6,20,59,150,336,680,1269,2218,3674,5820,8879,13118,18852,26448,36329,48978,64942,84836,109347,139238,175352,218616,270045 ★ Diagonal sums of number array A082043. ● a(n) = (n ^ 5 + 10 * n ^ 3 + 19 * n + 30) / 30. ●

▶ [A361732] 1,1,2,6,20,60,174,490,1352,3672,9850,26158,68892,180180,468454,1211730,3120400,8004144,20460402,52139990,132502180,335882988,849507230,2144114234,5401408344 ★ a(n) = [x ^ n] (x ^ 5 + 5 * x ^ 4 + 4 * x ^ 3 - 3 * x + 1) / (x ^ 2 + 2 * x - 1) ^ 2. ● a(n) = (n * (n - 1) * a(n - 2) + 2 * n * (n - 2) * a(n - 1)) / ((n - 2) * (n - 1)) for n >= 4. ● a(n) = Sum _{ k=0..n - 1 } F(n - 1, 2) for n >= 2, where F(n, x) is the n - th Fibonacci polynomial. ●

▶ [A081251] 2,6,20,60,182,546,1640,4920,14762,44286,132860,398580,1195742,3587226,10761680,32285040,96855122,290565366,871696100,2615088300,7845264902,23535794706,70607384120,211822152360,635466457082 ★ Numbers n such that A081249(m) / m ^ 2 has a local maximum for m = n. ● a(n) = a(n - 2) + 2 * 3 ^ (n) for n > 1. ● a(n) = floor(3 ^ (n + 1) / 4). - _ Mircea Merca _ , Dec 26 2010 ● a(n) = (9 * 3 ^ (n - 1) - (- 1) ^ n - 2) / 4. ●

▶ [A134293] 1,1,2,6,20,60,190,764,2337,9812,49538,330058,2133438,11192143,73469550,462692414,3692965270,32635321384,290171883863,2572828730372,22299380503953,195129375058656,1544534855847233,13144353749969945,128883813733449772 ★ Number of ways to pair up { 2..2n + 1 } so the sum of each pair is prime. ● a(n) = permanent(m), where the n X n matrix m is defined by m(i,j) = 1 or 0, depending on whether 2i + 2j + 1 is prime or composite, respectively. ●

▶ [A132353] 1,2,6,20,61,183,547,1640,4920,14762,44287,132861,398581,1195742,3587226,10761680,32285041,96855123,290565367,871696100,2615088300,7845264902,23535794707,70607384121,211822152361 ★ a(n) = 3 * a(n - 1) - a(n - 3) + 3 * a(n - 4), starting with 1, 2, 6, 20. ● a(n) = (1 / 6) * (1 / 2 - (1 / 2) * i * sqrt(3)) ^ n + (3 / 4) * 3 ^ n - (1 / 12) * (- 1) ^ n + (1 / 6) * (1 / 2 + (1 / 2) * i * sqrt(3)) ^ n - (1 / 6) * i * (1 / 2 - (1 / 2) * i * sqrt(3)) ^ n * sqrt(3) + (1 / 6) * i * (1 / 2 + (1 / 2) * i * sqrt(3)) ^ n * sqrt(3), with n>=0 and i=sqrt(- 1) - _ Paolo P. Lava _ , Jun 09 2008 ●

▶ [A260696] 1,1,2,6,20,62,172,471,1337,3846,11030,31442,89470,254934,727203,2074435,5915652,16866988,48093810,137141828,391072846,1115164897,3179915535,9067592160,25856510664 ★ The number of length - n permutations avoiding the patterns 1234, 1324, 1432 and 3214. ● a(n) = 2 * a(n - 1) + a(n - 2) + 2 * a(n - 3) + 4 * a(n - 4) + 8 * a(n - 5) - 15 * a(n - 7) - 14 * a(n - 8) - 7 * a(n - 9) for n>8. - _ Wesley Ivan Hurt _ , Dec 29 2015 ●

▶ [A052958] 1,2,6,20,62,194,610,1914,6006,18850,59158,185658,582662,1828602,5738806,18010426,56523158,177389882,556712886,1747164122,5483225814,17208323450,54005872822,169489741850,531919420822 ★ Expansion of g.f.: (1 - x) / (1 - 3 * x - 2 * x ^ 3 + 2 * x ^ 4). ● a(n) = 3 * a(n - 1) + 2 * a(n - 3) - 2 * a(n - 4), with a(0)=1, a(1)=2, a(2)=6, a(3)=20. ● a(n) = Sum _{ alpha=RootOf(1 - 3 * z - 2 * z ^ 3 + 2 * z ^ 4) } (1 / 3259) * (491 + 503 * alpha + 272 * alpha ^ 2 - 498 * alpha ^ 3) * alpha ^ (- 1 - n). ●

▶ [A247076] 1,2,6,20,62,194,612,1922,6038,18980,59646,187442,589076,1851266,5817894,18283700,57459518,180575906,567489348,1783428098,5604714422,17613731780,55354032894,173959101458,546694927604 ★ Number of tilings of a 5 X 2n rectangle using 2n pentominoes of shape P. ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) + 5 * a(n - 3) for n>3, a(0)=1; a(1)=2, a(2)=6, a(3)=20. ●

▶ [A177792] 1,2,6,20,62,194,616,1972,6344,20498,66486,216352,705982,2309246,7569420,24857864,81768144,269369282,888569354,2934666604,9702925752,32113058042,106379839060,352698604852,1170271492014 ★ Number of paths from (0,0) to (n,n) avoiding 4 or more consecutive east steps and 4 or more consecutive north steps. ● a(n) = 2 * Sum _{ i=0..floor(n / 3) } Sum _{ j=0..floor((n - 3 * i) / 2) } C(n - 2 * i - j,i) * C(n - 3 * i - j,j) * (Sum _{ s=0..min(floor(n / 3), floor((2 * i + j) / 2)) } C(n - 2 * i - j,s) * C(n - 2 * i - j - s, 2 * i + j - 2 * s) + Sum _{ s=0..min(floor(n / 3), floor((2 * i + j + 1) / 2)) } C(n - 2 * i - j - 1,s) * C(n - 2 * i - j - s - 1, 2 * i + j + 1 - 2 * s)) if n>0; a(0) = 1. ● a(n) = [x ^ n y ^ n] (1 + x + x ^ 2 + x ^ 3) * (1 + y + y ^ 2 + y ^ 3) / (1 - x * y - x * y ^ 2 - x * y ^ 3 - x ^ 2 * y - x ^ 2 * y ^ 2 - x ^ 2 * y ^ 3 - x ^ 3 * y - x ^ 3 * y ^ 2 - x ^ 3 * y ^ 3). ●

▶ [A053730] 1,2,6,20,64,192,544,1472,3840,9728,24064,58368,139264,327680,761856,1753088,3997696,9043968,20316160,45350912,100663296,222298112,488636416,1069547520,2332033024 ★ a(n) = 2 ^ (n - 2) * (n ^ 2 - n + 4). ● a(n) = 6 * a(n - 1) - 12 * a(n - 2) + 8 * a(n - 3). - _ Vincenzo Librandi _ , Apr 28 2012 ●

▶ [A220874] 1,2,6,20,64,194,562,1570,4258,11266,29186,74242,185858,458754,1118210,2695170,6430722,15204354,35651586,82968578,191758338,440401922,1005584386,2283798530,5161091074 ★ Number of permutations of [n + 1] avoiding 2413, 3142, 1324, 4231. ● a(n) = 2 + (n - 1) * (n ^ 2 + n + 42) * 2 ^ (n - 4) / 3 for n>0. - _ R. J. Mathar _ , Jan 30 2013 (see Maple section). ●

▶ [A302612] 1,2,6,20,65,186,462,1016,2025,3730,6446,10572,16601,25130,36870,52656,73457,100386,134710,177860,231441,297242,377246,473640,588825 ★ a(n) =

(n + 1) * (n ^ 4 - 4 * n ^ 3 + 11 * n ^ 2 - 8 * n + 12) / 12. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>5. ●

▶ [A005726] 1,2,6,20,65,216,728,2472,8451,29050,100298,347568,1208220,4211312,14712960,51507280,180642391,634551606,2232223626,7862669700,27727507521,97884558992,345891702456,1223358393120,4330360551700 ⋆ Quadrinomial coefficients. ● a(n) = Sum _{ k=0..floor(n / 2) } , C(n,k) C(n,2k + 1). - _ Paul Barry _ , May 15 2003 ● a(n) = Sum[(- 1) ^ k binomial[n,k] binomial[2n - 2 - 4k, n - 1], { k,0,Floor[(n - 1) / 4] }]. - _ David Callan _ , Jul 03 2006 ●

▶ [A083323] 1,2,6,20,66,212,666,2060,6306,19172,58026,175100,527346,1586132,4766586,14316140,42981186,129009092,387158346,1161737180,3485735826,10458256052,31376865306,94134790220,282412759266 ⋆ a(n) = 3 ^ n - 2 ^ n + 1. ● a(n) = 2 * StirlingS2(n + 1,3) + StirlingS2(n + 1,2) + 1. - _ Ross La Haye _ , Jan 10 2008 ●

▶ [A111285] 1,2,6,20,66,216,706,2308,7546,24672,80666,263740,862306,2819336,9217906,30138228,98537866,322172592,1053353226,3443970860,11260168946,36815469656,120369313506,393551182948,1286727730586 ⋆ Number of permutations avoiding the patterns { 2431, 3421, 4231, 4321, 24513, 42513, 34512, 43512 } ; number of strong sorting class based on 2431. ● a(n) = 4 * a(n - 1) - 3 * a(n - 2) + 2 * a(n - 3), n>=4. ●

▶ [A285197] 1,1,2,6,20,67,221,717,2294,7258,22760,70863,219353,675769,2073674,6342414,19345052,58867195,178779893,542042565,1641058046,4962262306,14989121072,45235277511,136407241265 ⋆ Expansion of (1 - 6 * x + 11 * x ^ 2 - 5 * x ^ 3) / ((1 - x) * (1 - 3 * x) * (1 - 3 * x + x ^ 2)). ● a(n) = 7 * a(n - 1) - 16 * a(n - 2) + 13 * a(n - 3) - 3 * a(n - 4) for n>3. ● a(n) = (1 / 2 + 3 ^ n / 2 + (2 ^ (- n) * ((3 - sqrt(5)) ^ n - (3 + sqrt(5)) ^ n)) / sqrt(5)). ●

▶ [A372872] 1,2,6,20,67,222,728,2368,7653,24602,78730,250956,797159,2524342,7971612,25110584,78918985,247518642,774840974,2421378052,7554699531,23535794702,73222472416,227512682160,706073841197 ⋆ a(n) is the total number of runs of weak ascents over all flattened Catalan words of length n. ● a(n) = (27 - 9 * n + (5 + n) * 3 ^ n) / 36. (End) ●

▶ [A291005] 2,6,20,68,230,774,2600,8732,29330,98526,330980,1111868,3735110,12547374,42150440,141596132,475664450,1597901526,5367837140,18032197268,60575633990,203491974774,683591422280,2296391457932,7714277207570 ⋆ p - INVERT of (1,1,1,1,1,...), where p(S) = 1 - 2 S - 2 S ^ 3. ● a(n) = 5 * a(n - 1) - 7 * a(n - 2) + 5 * a(n - 3) for n >= 4. ●

▶ [A295873] 1,1,2,6,20,68,231,781,2629,8821,29530,98706,329592,1099792,3668127,12230505,40771337,135895689,452914658,1509385902,5029980252,16761785436,55855539047,186125915029,620217261197 ⋆ Number of permutations of length n which avoid the patterns 1342, 2413, 3124 and 3142. ● a(n) = 7 * a(n - 1) - 16 * a(n - 2) + 14 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>4. ●

▶ [A006012] 1,2,6,20,68,232,792,2704,9232,31520,107616,367424,1254464,4283008,14623104,49926400,170459392,581984768,1987020288,6784111616,23162408888,79081400320,270000789504,921840357376,3147359850496 ⋆ a(0) = 1, a(1) = 2, a(n) = 4 * a(n - 1) - 2 * a(n - 2), n >= 2. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n, 2k) * 2 ^ (n - k) = Sum _{ k=0..n } binomial(n, k) * 2 ^ (n - k / 2) (1 + (- 1) ^ k) / 2. - _ Paul Barry _ , Nov 22 2003 (typo corrected by _ Manfred Scheucher _ , Jan 17 2023) ● a(n) = ((2 + sqrt(2)) ^ n + (2 - sqrt(2)) ^ n) / 2. ● a(- n) = a(n) / 2 ^ n for all n in Z. - _ Michael Somos _ , Aug 24 2014 ●

▶ [A279557] 1,1,2,6,20,68,233,805,2807,9879,35073,125513,452389,1641029,5986994,21954974,80884424,299233544,1111219334,4140813374,15478839554,58028869154,218123355524,821908275548,3104046382352 ⋆ Number of length n inversion sequences avoiding the patterns 110, 120, and 021. ● a(n) = 1 + Sum _{ t=1..n - 1 } Sum _{ k=t + 2..n + 1 } (k - t - 1) * (k - t) / (n - t + 1) * binomial(2n - k - t + 1,n - k + 1). ●

▶ [A094854] 1,2,6,20,69,241,846,2977,10490,36994,130532,460737,1626629,5743674,20283121,71632290,252989326,893528468,3155899165,11146628105,39370204614,139057473905,491159630010,1734810719530,6127485120996 ⋆ Number of (s(0), s(1), ..., s(2n)) such that 0 < s(i) < 9 and |s(i) - s(i - 1)| = 1 for i = 1,2,...,2n, s(0) = 4, s(2n) = 4. ● a(n) = (2 / 9) * Sum _{ r=1..8 } sin(4 * r * Pi / 9) ^ 2 * (2 * cos(r * Pi / 9)) ^ (2n). ● a(n) = 7 * a(n - 1) - 15 * a(n - 2) + 10 * a(n - 3) - a(n - 4). ●

▶ [A217782] 1,2,6,20,69,242,857,3054,10930,39236,141153,508598,1834641,6623450,23926334,86468052,312587197,1130277914,4087621545,14784539846,53478888618,193456813508,699850536281,2531866279710,9159810802849 ⋆ Expansion of (1 - x) * (1 - 2x) * (1 - 3x) / ((1 - 5x + 5 * x ^ 2) * (1 - 3x + x ^ 2)). ● a(n) = 8 * a(n - 1) - 21 * a(n - 2) + 20 * a(n - 3) - 5 * a(n - 4) for n>=4, a(0) = 1, a(1) = 2, a(2) = 6, a(3) = 20. ●

▶ [A026029] 1,2,6,20,69,242,858,3068,11050,40052,145996,534888,1968685,7276050,26993490,100490220,375287550,1405622460,5278838100,19873977240,74994427170,283595947284,1074568266756,4079184055640,15511924233204 ⋆ Number of (s(0), s(1), ..., s(2n)) such that s(i) is a nonnegative integer and |s(i) - s(i - 1)| = 1 for i = 1,2,....,n, s(0) = 3, s(2n) = 3. Also T(2n,n), where T is defined in A026022. ● a(n) = C(2n,n) - C(2n,n - 4). - _ Paul Barry _ , May 11 2009 ●

▶ [A078483] 1,1,2,6,20,69,243,869,3145,11491,42312,156807,584288,2187298,8221257,31009841,117331070,445174418,1693270531,6454992143,24657428519,94363587324,361741068087,1388892123038,5340282880156 ⋆ G.f.: - 2 * x / (1 - 5 * x - sqrt(1 - 4 * x) + x * sqrt(1 - 4 * x) + 2 * x ^ 2). ● a(n) is the upper left term in M ^ n, where M is the following infinite square production matrix: ● a(n) = 1 + Sum _{ m=1..n } m * Sum _{ k=1..n - m } (1 / (m + k)) * ((Sum _{ j=0..m + k } binomial(j, - 2 * m - k + 2 * j) * binomial(m + k,j)) * binomial(n - m - 1,k - 1)). - _ Vladimir Kruchinin _ , Oct 11 2011 ●

▶ [A275046] 1,2,6,20,70,245,874,3164,11577,42694,158431,590873,2212797,8315535,31341163,118423810,448455754,1701534151,6467049185,24617030774,93834205107,358116770601,1368283768753,5233261657558,20034371696497 ⋆ Number of binary strings with n zeros and n ones avoiding the substrings 10101101 and 11 10101. ● a(n) = [x ^ n y ^ n] (1 + x ^ 2 * y ^ 3 + x ^ 2 * y ^ 4 + x ^ 3 * y ^ 4 - x ^ 3 * y ^ 6) / (1 - x - y + x ^ 2 * y ^ 3 - x ^ 3 * y ^ 3 - x ^ 4 * y ^ 4 - x ^ 3 * y ^ 6 + x ^ 4 * y ^ 6). ●

▶ [A229472] 0,1,2,6,20,70,246,854,2920,9846,32810,108262,354300,1151462,3720094,11957430,38263760,121965718,387420498,1226831558,3874204900,12203745414,38354628422,120294061846,376572715320 ⋆ Number of defective 4 - colorings of an n X 1 0..3 array connected horizontally, antidiagonally and vertically with exactly one mistake, and colors introduced in row - major 0..3 order. ● a(n) = (27 + 3 ^ n) * (n - 1) / 54 for n>2. ●

▶ [A135413] 1,2,6,20,70,246,875,3144,11385,41470,151778,557712,2056210,7602700,28180050,104677280,389571983,1452293766,5422187130,20271296100,75878518695,284339792110,1066585128810,4004566131000,15048213795600 ⋆ Number of at most 4 - way branching ordered (i.e., plane) trees. ● a(n) = [x ^ (n - 1)] (1 + x + x ^ 2 + x ^ 3 + x ^ 4) ^ n. ● a(n) = Sum _{ i=0..floor((n - 1) / 5) } (- 1) ^ i * C(n,i) * C(2 * n - 5 * i - 2,n - 5 * i - 1). - _ Vladimir Kruchinin _ , Mar 28 2019 ●

▶ [A193653] 1,2,6,20,70,248,882,3140,11182,39824,141834,505148,1799110,6407624,22821090,81278516,289477726,1030990208,3671926074,13077758636,46577128054,165886901432,590814960402,2104218684068,7494285973006 ⋆ Q - residue of the Delannoy triangle A008288, where Q is the triangular array (t(i,j)) given by t(i,j)=1. ● a(n) = 4 * a(n - 1) - a(n - 2) - 2 * a(n - 3). ● a(n - 1) = (1,1) and (2, 2) elements of A ^ (n - 1) where A=(2,1,1; 1,2,1; 1,1,0) and n>1. (End) ● a(n) = (34 + (17 - 3 * sqrt(17)) * ((3 - sqrt(17)) / 2) ^ n + ((3 + sqrt(17)) / 2) ^ n * (17 + 3 * sqrt(17))) / 68. - _ Colin Barker _ , Sep 02 2016 ● a(n) = (1 / 2) * (1 + (i * sqrt(2)) ^ n * ChebyshevU(n, - 3 * i / (2 * sqrt(2)))). ● a(n) = (1 / 2) * (1 + Sum _{ j=0..floor(n / 2) } binomial(n - k,k) * 2 ^ k * 3 ^ (n - 2 * k)). (End) ●

▶ [A147748] 1,2,6,20,70,250,900,3250,11750,42500,153750,556250,2012500,7281250,26343750,95312500,344843750,1247656250,4514062500,16332031250,59089843750,213789062500,773496093750,2798535156250,10125195312500 ⋆ Row sums of Riordan array ((1 - 3x + x ^ 2) / (1 - 4x + 3x ^ 2), x(1 - 2x) / (1 - 4x + 3x ^ 2)) . ● a(n) = 5 * a(n - 1) - 5 * a(n - 2) for n>2, a(0)=1, a(1)=2, a(2)=6. - _ Philippe Deléham _ , Nov 13 2008 ● a(n) = (1 / 5) * Sum _{ k=1..5 } (x _ k) ^ (2 * n), x _ k=2 * cos((2 * k - 1) * Pi / 10). - _ L. Edson Jeffery _ , Apr 19 2011 ●

▶ [A224514] 1,2,6,20,70,251,911,3327,12190,44744,164407,604487,2223504,8181175,30108147,110820165,407946421,1501844193,5529362694,20358557249,74961030414,276017648570,1016360893036,3742540945813,13781324308298 ⋆ Expansion of (1 - x) * (1 - 3 * x) * (1 - 3 * x + x ^ 2) / (1 - 9 * x + 28 * x ^ 2 - 35 * x ^ 3 + 15 * x ^ 4 - x ^ 5). ● a(n) = 9 * a(n - 1) - 28 * a(n - 2) + 35 * a(n - 3) - 15 * a(n - 4) + a(n - 5) with a(0) = 1, a(1) = 2, a(2) = 6, a(3) = 20, a(4) = 70. ●

▶ [A302644] 1,2,6,20,70,252,896,2976,8955,24310,60038,136500,289016,575680,1087920,1964384,3408789,5712426,9282070,14674100,22635690,34153988,50514256,73368000,104812175 ⋆ a(n) = (n + 2) * (n + 1) * (n ^ 6 - 12 * n ^ 5 + 70 * n ^ 4 - 210 * n ^ 3 + 409 * n ^ 2 - 378 * n + 360) / 720. ● a(n) = (n + 2) * (n + 1) * (n ^ 6 - 12 * n ^ 5 + 70 * n ^ 4 - 210 * n ^ 3 + 409 * n ^ 2 - 378 * n + 360) / 720. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>8. ●

▶ [A087944] 1,2,6,20,70,252,922,3404,12630,46988,175066,652764,2434966,9085052,33901146,126511340,472127830,1761967212,6575675482,24540603644,91586476950,341804779868,1275631593946,4760719498764,17767242206806 ⋆ Expansion of (1 - 4 * x + 3 * x ^ 2) / ((1 - 2 * x) * (1 - 4 * x + x ^ 2)). ● a(0)=1, a(2)=2, a(2)=6, a(n) = 6 * a(n - 1) - 9 * a(n - 2) + 2 * a(n - 3), n>2. ● a(n) = (2 ^ n + (2 + sqrt(3)) ^ n + (2 - sqrt(3)) ^ n) / 3. ●

▶ [A302645] 0,1,2,6,20,70,252,924,3432,12705,45430,152438,472836,1352078,3578680,8827080,20439984,44745513,93185994,185640070,355452020,656846190,1175604980,2044130980,3462303000 ⋆ Values of unimodal polynomial analogous to A302612 and A302644 arising from a partition size <= 4 restriction. ● a(n) = n * (n + 2) * (n + 1) * (n ^ 8 - 32 * n ^ 7 + 462 * n ^ 6 - 3836 * n ^ 5 + 20013 * n ^ 4 - 66836 * n ^ 3 + 140804 * n ^ 2 - 171216 * n + 100800) / 120960. ● a(n) = 12 * a(n - 1) - 66 * a(n - 2) + 220 * a(n - 3) - 495 * a(n - 4) + 792 * a(n - 5) - 924 * a(n - 6) + 792 * a(n - 7) - 495 * a(n - 8) + 220 * a(n - 9) - 66 * a(n - 10) + 12 * a(n - 11) - a(n - 12) for n>11. ●

▶ [A302646] 0,1,2,6,20,70,252,924,3432,12870,48620,183755,683046,2443168,8263360,26184420,77558760,215182923,561542454,1385168400,3245959640,7260395142,15567955260,32124894880,64016082000 ⋆ Values of unimodal polynomial analogous to A302612 and A302644 arising from a partition size <= 5 restriction. ● a(n) = n * (n + 3) * (n + 2) * (n + 1) * (n ^ 10 - 50 * n ^ 9 + 1140 * n ^ 8 - 15420 * n ^ 7 + 136533 * n ^ 6 - 824370 * n ^ 5 + 3436190 * n ^ 4 - 9762880 * n ^ 3 + 18198936 * n ^ 2 - 20242080 * n + 10886400) / 43545600. ● a(n) = 15 * a(n - 1) - 105 * a(n - 2) + 455 * a(n - 3) - 1365 * a(n - 4) + 3003 * a(n - 5) - 5005 * a(n - 6) + 6435 * a(n - 7) - 6435 * a(n - 8) + 5005 * a(n - 9) - 3003 * a(n - 10) + 1365 * a(n - 11) - 455 * a(n - 12) + 105 * a(n - 13) - 15 * a(n - 14) + a(n - 15) for n>14. ●

▶ [A000984] 1,2,6,20,70,252,924,3432,12870,48620,184756,705432,2704156,10400600,40116600,155117520,601080390,2333606220,9075135300,35345263800,137846528820,538257874440,2104098963720,8233430727600,32247603683100 ⋆ Central binomial coefficients: binomial(2 * n,n) = (2 * n)! / (n!) ^ 2. ● a(n) = 2 ^ n / n! * Product _{ k=0..n - 1 } (2 * k + 1). ● a(n) = Max _{ (i + j)! / (i!j!) | 0 <=i,j<=n } . - _ Benoit Cloitre _ , May 30 2002 ● a(n) = Sum _{ k=0..n } binomial(n, k) ^ 2. - _ Benoit Cloitre _ , Jan 31 2003 ● a(n) = 2 * Sum _{ k=0..(n - 1) } a(k) * a(n - k + 1) / (k + 1). - _ Philippe Deléham _ , Jan 01 2004 ● a(n + 1) = Sum _{ j=n..n * 2 + 1 } binomial(j, n). E.g., a(4) = C(7,3) + C(6,3) + C(5,3) + C(4,3) + C(3,3) = 35 + 20 + 10 + 4 + 1 = 70. - _ Jon Perry _ , Jan 20 2004 ● a(n) = (- 1) ^ (n) * Sum _{ j=0..(2 * n) } (- 1) ^ j * binomial(2 * n, j) ^ 2. - Helena Verrill (verrill(AT)math.lsu.edu), Jul 12 2004 ●

▶ [A087433] 1,2,6,20,70,252,926,3460,13110,50252,194446,758100,2973350,11716252,46333566,183739940,730176790,2906358252,11582386286,46200404980,184414199430,736494536252,2942491360606,11759505089220,47006639297270 ⋆ Expansion of g.f.: (1 - 2 * x) * (1 - 4 * x + x ^ 2) / ((1 - x) * (1 - 3 * x) * (1 - 4 * x)). ● a(n) = 0 ^ n / 6 + 1 / 3 + 3 ^ n / 3 + 4 ^ n / 6. ● a(n) = 8 * a(n - 1) - 19 * a(n - 2) + 12 * a(n - 3). - _ Wesley Ivan Hurt _ , Jul 11 2023 ●

▶ [A095929] 1,2,6,20,70,254,948,3614,13990,54740,215766,854702,3396916,13530350,53971350,215492564,860941798,3441074654,13757249460,55010542910,219993856006,879848932052,3519064567926,14075391282830,56299295324980 ⋆ Number of closed walks of length 2n at a vertex of the cyclic graph on 10 nodes C _ 1

0. • a(n) = 4 ^ n / 10 * Sum _{ r=0..9 } cos(Pi * r / 5) ^ (2 * n). • a(n) = 7 * a(n - 1) - 13 * a(n - 2) + 4 * a(n - 3). • a(n / 2) = (2 ^ n + 2 * phi ^ n + 2 * (phi - 1) ^ n) * (1 + (- 1) ^ n) / 10, with the golden section phi = A001622. - _ Wolfdieter Lang _ , Nov 08 2011 • a(n) = (2 ^ (- n) * (8 ^ n + 2 * (3 - sqrt(5)) ^ n + 2 * (3 + sqrt(5)) ^ n)) / 5. - _ Colin Barker _ , Apr 27 2016 • a(n) = (4 ^ n + 2 * Lucas(2 * n)) / 5. - _ Ehren Metcalfe _ , Apr 04 2019 • a(n) = Sum _{ k= - n..n } binomial(2 * n, n + 5 * k). - _ Greg Dresden _ , Jan 05 2023 •

► [A078482] 0,1,2,6,20,70,254,948,3618,14058,55432,221262,892346,3630680,14885042,61432382,255025212,1064190214,4461325382,18780710508,79357572866,336466650450,1431007889744,6103431668830,26099839562738 ⋆ G.f.: (1 - 3 * x + x ^ 2 - sqrt(1 - 6 * x + 7 * x ^ 2 - 2 * x ^ 3 + x ^ 4)) / (2 * x). • a(n) = Sum _{ m=1..n + 1 } (C(m,n - m + 1) * (sum(i=0..m - 1, C(m,i) * C(2 * m - i - 2,m - 1))) * (- 1) ^ (n - m + 1)) / m), n>0, a(0)=0. - _ Vladimir Kruchinin _ , May 21 2011 •

► [A049128] 1,1,2,6,20,70,255,959,3696,14520,57930,234080,955999,3939949,16364985,68437033,287910048,1217627176,5173854018,22077273858,94564541166,406451008386,1752472631360,7577758539846,32852955892191 ⋆ Revert transform of x * (x - 1) ^ 2 / (1 - x + x ^ 3). • a(n) = 1 / n * (Sum _{ l=1..n } C(n,l) * Sum _{ i=1..n - 1 } C(i - 1,i - 2 * l) * C(n - l,n - i - 1)) + 1. - _ Vladimir Kruchinin _ , Jun 26 2015 •

► [A192540] 1,1,2,6,20,70,255,960,3707,14597,58382,236522,968597,4003061,16674858,69936760,295092057,1251747436,5334958079,22834290248,98108081192,422986894605,1829443421394,7935301625600,34510975557383 ⋆ G.f.: A(x) = Series _ Reversion(x * G(x)) where G(x) = Sum _{ n>=0 } (- x) ^ (n * (n + 1) / 2). • a(n) = [x ^ n] (1 / n) * x / [Product _{ k>=1 } (1 - x ^ k) * (1 + x ^ (2 * k))] ^ n for n >= 1. •

► [A369630] 1,1,2,6,20,70,255,960,3707,14598,58395,236626,969275,4007041,16696822,70053159,295691622,1254772103,5349978803,22907982780,98466168572,424713570017,1837717336614,7974744620620,34698200181696 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 / (1 + x ^ 3) - x)). • a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 3) } binomial(2 * n - 3 * k + 1,k) * binomial(2 * n - 3 * k, n - 3 * k). •

► [A049140] 1,1,2,6,20,70,256,969,3762,14894,59904,244088,1005452,4180096,17516936,73913705,313774854,1339162028,5742691704,24731501410,106919054880,463844340060,2018673093000,8810852089650,38558866555248 ⋆ Revert transform of 1 - x - x ^ 3. • a(n) = sum(j=0..(n - 1) / 2, binomial(n - 2 * j - 1,j) * binomial(2 * n - 2 * j - 2,n - 1)) / n. - _ Vladimir Kruchinin _ , May 24 2011 •

► [A145138] 0,1,2,6,20,71,259,960,3597,13586,51635,197223,756380,2910707,11233311,43460144,168502849,654547456,2546819347,9924285801,38723794820,151278566731,591628491483,2316065644414,9074988880769 ⋆ Main diagonal of square array A145153. • a(n) = [x ^ n] x / ((1 - x - x ^ 4) * (1 - x) ^ (n - 1)). •

► [A000707] 1,1,2,6,20,71,259,961,3606,13640,51909,198497,762007,2934764,11333950,43874857,170193528,661386105,2574320659,10034398370,39163212165,153027659730,598577118991,2343628878849,9184197395425 ⋆ Number of permutations of [1,2,...,n] with n - 1 inversions. • a(n) = 2 ^ (2 * n - 2) / sqrt(Pi * n) * Q * (1 + O(n ^ (- 1))), where Q is a digital search tree constant, Q = Product _{ n>=1 } (1 - 1 / (2 ^ n)) = QPochhammer[1 / 2, 1 / 2] = 0.288788095... (see A048651), corrected and extended by _ Vaclav Kotesovec _ , Mar 16 2014 •

► [A049124] 1,1,2,6,20,71,264,1015,4002,16094,65758,272208,1139182,4811807,20487096,87832558,378846620,1642851797,7158220968,31323340342,137595355130,606533278416,2682157911032,11895267124841,52895679368820 ⋆ Revert transform of (- 1 + x + x ^ 2) / ((x - 1) * (x + 1)). • a(n) = Sum _{ k=0..floor((n - 1) / 2) } C(n - k - 1, k) * C(2 * n - 2 * k, n) / (n + 1) for n > 0, with a(0)=1. - _ Paul D. Hanna _ , Dec 15 2004 •

► [A192658] 1,2,6,20,72,270,1040,4036,15714,61226,238778,930716,3628520,14143922,55134174,214941488,838158510,3269630046,12761106790,49834920864,194743761948,761543265544,2980128724806,11670402459630,45734346816026 ⋆ Binomial convolution of the Floor - Sqrt transform of central binomial coefficients. • a(n) = sum(binomial(n,k) * floor(sqrt(binomial(2 * k,k))) * floor(sqrt(binomial(2 * n - 2 * k,n - k))),k=0..n). •

► [A063376] 1,2,6,20,72,272,1056,4160,16512,65792,262656,1049600,4196352,16781312,67117056,268451840,1073774592,4295032832,17180000256,68719738880,274878431232,1099512676352,4398048608256,17592190238720,70368752566272 ⋆ a(n) = 2 ^ n + 4 ^ n = 2 ^ n * (1 + 2 ^ n). • a(n) = Sum _{ k=0..n } if((n - k) mod 4 = 0, binomial(n, 2 * k), 0) } . - _ Paul Barry _ , Sep 19 2005 • a(n) = ceiling(2 ^ n * (2 ^ n + 1)), n >= - 1. - _ Zerinvary Lajos _ , Jan 07 2008 •

► [A161168] 2,6,20,72,272,1056,4160,16512,65792,262656,1049600,4196352,16781312,67117056,268451840,1073774592,4295032832,17180000256,68719738880,274878431232,1099512676352,4398048608256,17592190238720,70368752566272 ⋆ a(n) = 2 ^ n + 4 ^ n. • a(n) = 6 * a(n - 1) - 8 * a(n - 2); a(0)=2, a(1)=6. - _ Vincenzo Librandi _ , Dec 27 2010 •

► [A071356] 1,2,6,20,72,272,1064,4272,17504,72896,307648,1312896,5655808,24562176,107419264,472675072,2091206144,9296612352,41507566592,186045061120,836830457856,3776131489792,17089399689216,77548125675520,352766964908032 ⋆ Expansion of (1 - 2 * x - sqrt(1 - 4 * x - 4 * x ^ 2)) / (4 * x ^ 2). • a(n) = Sum _{ k=0..floor(n / 2) } C(n, 2k)C(k)2 ^ (n - 2k) * 2 ^ k. - _ Paul Barry _ , May 18 2005 • a(n) = sum of top row terms of M ^ n, M = an infinite square production matrix as follows: • a(n) = 2 ^ n * hypergeom((1 - n) / 2, - n / 2, 2, 2). - _ Peter Luschny _ , May 30 2021 •

► [A186996] 1,1,2,6,20,72,273,1073,4333,17869,74937,318601,1370113,5949201,26046727,114857599,509669295,2274146599,10197234215,45925646367,207656685443,942302814363,4289903653615,19588180438263,89685571667763 ⋆ G.f. satisfies: A(x) = 1 + x * A(x) + x ^ 2 * A(x) ^ 4. • a(n) = sum(k=0..n, binomial(3n - 2 k + 1, k) * binomial(k,n - k) * 1 / (3n - 2k + 1)). - _ Michael D. Weiner _ , Apr 23 2015 •

► [A104632] 1,2,6,20,73,281,1125,4635,19525,83710,364070,1602327,7123041,31937010,144255802,655804649,2998354717,13777825186,63596593430,294743653360,1371017707245,6398580086645,29952930770185,140604572777250,661708404611603 ⋆ 1 / n times A104631(n), the coefficient of x ^ (2n + 1) in the expansion of (1 + x + x ^ 2 + x ^ 3 + x ^ 4) ^ n. • a(n) = Sum _{ i=0..(2 * n + 1) / 5 } ((- 1) ^ i * binomial(n,i) * binomial(3 * n - 5 * i,n - 1)) / n. - _ Vladimir Kruchinin _ , Apr 06 2017 •

► [A243255] 0,1,2,6,20,73,283,1149,4833,20901,92406,415878,1899153,8778193,40988834,193056506,916091727,4375298013,21015823762,101454449878,491976470648,2395332765741,11704830457167 ⋆ Expansion of 1 / 2 - (1 / 2) * (sqrt((2 * sqrt(- 3 * x ^ 2 - 2 * x + 1) + 3 * x - 2) / x)). • a(n) = Sum _{ k=0..n - 1 } (binomial(2 * k,k) * Sum _{ j=0..n } (binomial(j, - n - k + 2 * j - 1) * binomial(n,j)) / n, n>0, a(0)=0. •

► [A374599] 1,2,6,20,74,276,1044,3992,15414,59948,234484,921432,3634916,14386248,57097704,227166384,905714150,3617851980,14475452484,58004111160,232737175404,934969613528,3760157234584,15137340947280,60994657996476 ⋆ Expansion of 1 / sqrt(1 - 4 * x - 8 * x ^ 4). • a(n) = Sum _{ k=0..floor(n / 4) } 2 ^ k * binomial(n - 3 * k,k) * binomial(2 * (n - 3 * k),n - 3 * k). •

► [A107284] 1,2,6,20,74,284,1116,4424,17622,70340,281076,1123736,4493828,17973080,71887896,287542736,1150153322,4600578044,18402241836,73608826664,294435025580,1177739540168,4710957036936,18843825900272,75375299107260 ⋆ a(n) / 4 ^ n is the measure of the subset of [0,1] remaining when all intervals of the form [b / 2 ^ m - 1 / 2 ^ (2m), b / 2 ^ m + 1 / 2 ^ (2m)] have been removed, with b and m positive integers, b < 2 ^ m and m <= n. • a(2 * n + 1) = 6 * a(2 * n) - 8 * a(2 * n - 1). • a(4 * n) = 6 * a(4 * n - 1) - 8 * a(4 * n - 2) - a(n). • a(4 * n + 2) = 6 * a(4 * n + 1) - 8 * a(4 * n) - 2 * a(n). •

► [A188144] 1,2,6,20,74,292,1218,5308,24034,112484,542346,2686268,13639226,70863652,376208706,2038335580,11259474754,63353211332,362819139978,2113410084188,12513610048154,75274067489284,459782361574146,2850369932150908,17926893505949986 ⋆ Binomial transform A140456(n + 1) (indecomposable involutions). • a(n) is the moment of order n for the probability density function: sqrt(2 / Pi ^ 3) * exp((x - 2) ^ 2 / 2) / (1 + (erfi((x - 2) / sqrt(2))) ^ 2) over the interval - infinity..infinity, with erfi the imaginary error function. •

► [A052889] 0,1,2,6,20,75,312,1421,7016,37260,211470,1275725,8142840,54776761,387022118,2863489830,22127336720,178162416499,1491567656472,12959459317021,116654844101140,1086207322942812,10447135955448522,103654461984288429,1059648140522024304 ⋆ Number of rooted set partitions. • a(n) = n * Bell(n - 1). - _ Vladeta Jovovic _ , Sep 14 2003 •

► [A000898] 1,2,6,20,76,312,1384,6512,32400,168992,921184,5222208,30710464,186753920,1171979904,7573069568,50305536256,342949298688,2396286830080,17138748412928,125336396368896,936222729254912,7136574106003456,55466948299223040,439216305474605056 ⋆ a(n) = 2 * (a(n - 1) + (n - 1) * a(n - 2)) for n >= 2 with a(0) = 1. • a(n) = Sum _{ k=0..n } binomial(n,2k) * binomial(2k,k) * k! * 2 ^ (n - 2k). - N. Calkin, Apr 22 2010 • a(n) = Sum _{ k=0..n } Stirling1(n, k) * 2 ^ k * Bell(k). - _ Vladeta Jovovic _ , Oct 01 2003 • a(n) = Sum _{ k=0..floor(n / 2) } 2 ^ (n - 2 * k) * C(n,2 * k) * (2 * k)! / k!. - _ Paul Barry _ , Feb 11 2008 • a(n) = (2 * n / e) ^ (n / 2) * exp(sqrt(2 * n)) / sqrt(2 * e) * (1 + sqrt(2 / n) / 3 + O(n ^ (- 1)). - _ Yen - chi R. Lin _ , Sep 30 2013 • a(n) = Sum _{ k=0..floor(n / 2) } 2 ^ (n - k) * B(n, k), where B are the Bessel numbers A100861. - _ Peter Luschny _ , Jun 04 2021 •

► [A195254] 1,2,6,20,76,336,1744,10592,74400,595712,5362432,53626368,589894144,7078737920,92023609344,1288330563584,19324958519296,309199336439808,5256388719738880,94614996955824128,1797684942161707008,35953698843236237312,755027675707965177856 ⋆ O.g.f.: Sum _{ n>=0 } 2 * (n + 2) ^ (n - 1) * x ^ n / (1 + n * x) ^ n. • a(n) = (n - 1)! * Sum _{ k=1..n } 2 ^ k / (k - 1)! for n>0, with a(0)=1. •

► [A098469] 1,2,6,20,78,332,1516,7240,35734,180620,929940,4858328,25687052,137177016,738819672,4008435984,21886788582,120178329740,663179894788,3675923244856,20456707469540,114254175491304,640223315385576 ⋆ A sequence related to the even - indexed Catalan numbers. • a(n) = Sum _{ k=0..floor(n / 2) } C(n,2k) * C(k) * 2 ^ (n - 2k). • a(n) = Sum _{ k=0..n } C(n,k) * 2 ^ (n - k) * C(k) * (1 - (- 1) ^ k) / 2. •

► [A357502] 1,2,6,20,80,342,1624,8136,43776,246410,1463264,9033180,58200064,387905182,2679200640,19068105488,139929124864,1054773505170,8167509816832,64795371984420,526534098026496,4374163243287398,37135913476691968,321727849480560600 ⋆ a(n) = ((1 + sqrt(n)) ^ n - (1 - sqrt(n)) ^ n) / (2 * sqrt(n)). • a(n) = [x ^ n] x / (1 - 2 * x - (n - 1) * x ^ 2). • a(n) = Sum _{ j=0..floor(n / 2) } n ^ j * binomial(n,2 * j + 1). •

► [A300011] 1,1,2,6,20,80,362,1820,10084,60522,391864,2714514,20001700,156107224,1284705246,11112088358,100698613720,953478331288,9410963022318,96614921664444,1029705968813656,11373102766644372,129972789566984682,1534638410054873892,18696544357738885720 ⋆ Expansion of e.g.f. exp(Sum _{ k>=1 } phi(k) * x ^ k / k!), where phi() is the Euler totient function (A000010). • a(0) = 1; a(n) = Sum _{ k=1..n } phi(k) * binomial(n - 1,k - 1) * a(n - k). - _ Seiichi Manyama _ , Feb 27 2022 •

► [A186365] 0,1,2,6,20,80,366,1904,11080,71424,505210,3891712,32433180,290787328,2791053734,28556359680,310264194320,3567710830592,43287834157938,552688817143808,7407423764750500,103981459115606016,1525675236649033822,23354749389657604096 ⋆ Number of fixed points in all cycle - up - down permutations of { 1,2,...,n } . • a(n) = n * sum(j=0..(n - 2) / 2, (sum(i=0..(n - 2 * j - 1) / 2, (2 * i + 2 * j - n + 1) ^ (n - 1) * C(n - 2 * j - 1,i) * (- 1) ^ ((n + n - 2 * j - 2) / 2 - i))) / 2 ^ (n - 2 * j - 2)), n>1, a(1)=1, a(0)=0. - _ Vladimir Kruchinin _ , May 28 2011 •

► [A245373] 1,2,6,20,80,368,1904,10880,67904,459008,3336704,25925120,214175744,1873092608,17276401664,167504076800,1702214549504,18084149854208,200388963958784,2311212530401280,27693720143396864,344157474490155008,4428851361694613504,58933575269230837760 ⋆ G.f.: Sum _{ n>=0 } x ^ n / ((1 + x) ^ (n + 1) * (1 - 2 * (n + 1) * x)). • a(n) = Sum _{ k=0..floor(n / 2) } Sum _{ i=0..k } (- 1) ^ i * binomial(k,i) * 2 ^ (n - k) * (k - i + 1) ^ (n - k). •

► [A118476] 1,2,6,20,81,408,2480,17376,139040,1251450,12514816,137663064,1651956992,21475443200,300656206080,4509843098112,72157489576704,1226677322842112,22080191811166208,419523644412176256,8390472888243683328,176199930653117513728 ⋆ a(0) = 1; a(n) is least k with n prime factors and k > n * a(n - 1). • a(0) = 1; a(n) least n - almost prime > n * a(n - 1). •

► [A372987] 1,2,6,20,84,360,1848,9360,55440,318240,2106720,13366080,96909120,668304000,5233092480,38761632000,324451733760,2558267712000,22711621363200,189311810688000,1771506466329600,15523568476416000,152349556104345600,1397121162877440000 ⋆ a(n) = (2 * n)! / (n! * a(n - 1)), with a(0)=1. ● a(n) = Product _{ k=0..floor((n - 1) / 2) } 2 * (2 * n - 4 * k - 1). - _ Andrew Howroyd _ , Jul 10 2024 ●
► [A073964] 0,2,6,20,100,600,3150,15750,78000,390000,1952500,9768750,48831250,244125000,1220625000,6103437500,30517656250,152588281250,762939062500,3814695312500,19073484375000,95367441406250,476837167968750,2384185742187500,11920928710937500 ⋆ Number of strings of length n over Z _ 5 with trace 0 and subtrace 1. ● a(n; t, s) = a(n - 1; t, s) + a(n - 1; t + 4, s + 4t + 1) + a(n - 1; t + 3, s + 3t + 4) + a(n - 1; t + 2, s + 2t + 4) + a(n - 1; t + 1, s + t + 1). ●
► [A073966] 1,2,6,20,125,625,3150,15500,78000,390625,1955625,9768750,48831250,244125000,1220703125,6103515625,30517656250,152587500000,762939062500,3814697265625,19073494140625,95367441406250,476837167968750,2384185742187500,11920928955078125 ⋆ Number of strings of length n over Z _ 5 with trace 1 and subtrace 0. ● a(n; t, s) = a(n - 1; t, s) + a(n - 1; t + 4, s + 4t + 1) + a(n - 1; t + 3, s + 3t + 4) + a(n - 1; t + 2, s + 2t + 4) + a(n - 1; t + 1, s + t + 1). ●
► [A104861] 1,2,6,20,210,792,8008,31824,319770,6906900,30045015,600805296,5586853480,25518731280,239877544005,4481381406320,79960182801345,387221678682300,6848956078664700,63484158299081520,312049055023946856,5469191608792974920,50825908693881519120 ⋆ Number of compositions (ordered partitions) of the n - th prime into n positive integers. ● a(n) = binomial(prime(n) - 1, n - 1). - _ Vladeta Jovovic _ , Apr 25 2005 ●
► [A228398] 1,2,6,21,52,105,186,301,456,657,910,1221,1596,2041,2562,3165,3856,4641,5526,6517,7620,8841,10186,11661,13272 ⋆ The number of permutations of length n sortable by 3 prefix reversals (in the pancake sorting sense). ● a(n) = (n - 1) * (n ^ 2 - 3 * n + 3) for n>2, a(1)=1, a(2)=2. [_ Bruno Berselli _ , Aug 22 2013] ●
► [A228394] 1,2,6,21,61,146,302,561,961,1546,2366,3477,4941,6826,9206,12161,15777,20146,25366,31541,38781,47202,56926,68081,80801 ⋆ The number of permutations of length n sortable by 2 prefix block transpositions. ● a(n) = 1 + (n - 1) * n * (3 * n ^ 2 - 11 * n + 16) / 12. [_ Bruno Berselli _ , Aug 22 2013] ●
► [A294708] 1,1,2,6,21,69,190,446,927,1745,3036,4960,7701,11467,16490,23026,31355,41781,54632,70260,89041,111375,137686,168422,204055 ⋆ Number of permutations of [n] avoiding { 4231, 2143, 1234 } . ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>10. ● a(n) = (1 / 6) * (786 - 787 * n + 333 * n ^ 2 - 68 * n ^ 3 + 6 * n ^ 4) for n>5. ●
► [A294709] 1,1,2,6,21,69,194,470,1009,1969,3562,6062,9813,15237,22842,33230,47105,65281,88690,118390,155573,201573,257874,326118,408113 ⋆ Number of permutations of [n] avoiding { 2143, 3412, 1234 } . ● a(n) = (1 / 60) * (60 + 16 * n - 65 * n ^ 2 + 70 * n ^ 3 - 25 * n ^ 4 + 4 * n ^ 5). ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>5. ●
► [A116774] 1,2,6,21,69,198,498,1121,2305,4402,7910,13509,22101,34854,53250,79137,114785,162946,226918,310613,418629,556326,729906,946497,1214241 ⋆ Number of permutations of length n which avoid the patterns 2143, 2341, 4312; or avoid the patterns 1234, 1432, 3412. ● a(n) = (n ^ 6 - 3n ^ 5 + 10n ^ 4 - 15n ^ 3 + 79n ^ 2 - 72n + 180) / 180. - Franklin T. Adams - Watters, Sep 16 2006 ●
► [A116832] 1,2,6,21,70,203,517,1187,2504,4921,9107,16009,26922,43567,68177,103591,153356,221837,314335,437213,598030,805683,1070557,1404683,1821904 ⋆ Number of permutations of length n which avoid the patterns 1324, 3421, 4123. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>10. - _ Colin Barker _ , Oct 23 2017 ●
► [A294718] 1,1,2,6,21,70,205,536,1264,2722,5424,10122,17871,30102,48703,76108,115394,170386,245770,347214,481497,656646,882081,1168768,1529380 ⋆ Number of permutations of [n] avoiding { 4231, 2134, 1243 } . ● a(n) = (1 / 360) * (16560 - 13902 * n + 4501 * n ^ 2 - 825 * n ^ 3 + 175 * n ^ 4 - 33 * n ^ 5 + 4 * n ^ 6) for n>2. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>9. ●
► [A294719] 1,1,2,6,21,70,212,597,1610,4248,11107,28966,75552,197251,515476,1348060,3527067,9230832,24162270,63251763,165587512,433503706,1134914677,2971229196,7778759206 ⋆ Number of permutations of [n] avoiding { 2341, 2143, 4123 } . ● a(n) = (1 / 60) * (3 * 2 ^ (1 - n) * (5 * 2 ^ (n + 1) - (3 - sqrt(5)) ^ n * (- 5 + sqrt(5)) + (3 + sqrt(5)) ^ n * (5 + sqrt(5))) - 190 * n + 115 * n ^ 2 - 50 * n ^ 3 + 5 * n ^ 4) for n > 0. ● a(n) = 8 * a(n - 1) - 26 * a(n - 2) + 45 * a(n - 3) - 45 * a(n - 4) + 26 * a(n - 5) - 8 * a(n - 6) + a(n - 7) for n > 7. ●
► [A116825] 1,2,6,21,71,204,479,951,1687,2764,4269,6299,8961,12372,16659,21959,28419,36196,45457,56379,69149,83964,101031,120567,142799 ⋆ Number of permutations of length n which avoid the patterns 1243, 2341, 4321. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Wesley Ivan Hurt _ , Sep 04 2022 ●
► [A116767] 1,2,6,21,71,208,526,1174,2370,4416,7714,12783,20277,31004,45946,66280,93400,128940,174798,233161,306531,397752,510038,647002,812686 ⋆ Number of permutations of length n which avoid the patterns 1234, 3142, 3421. ● a(1)=1, a(2)=2, a(3)=6, a(4)=21, a(5)=71, a(6)=208, a(7)=526, a(8)=1174, a(9)=2370, a(n)=7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a (n - 7) [From Harvey P. Dale, Aug 31 2011] ●
► [A294725] 1,1,2,6,21,71,212,554,1289,2725,5326,9758,16941,28107,44864,69266,103889,151913,217210,304438,419141,567855,758220,999098,1300697 ⋆ Number of permutations of [n] avoiding { 4231, 3412, 1234 } . ● a(n) = (1 / 120) * (120 - 40 * n + 44 * n ^ 2 - 15 * n ^ 3 + 15 * n ^ 4 - 5 * n ^ 5 + n ^ 6). ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>6. ●
► [A116755] 1,2,6,21,71,213,561,1317,2809,5536,10220,17865,29823,47867,74271,111897,164289,235774,331570,457901,622119,832833,1100045,1435293,1851801 ⋆ Number of permutations of length n which avoid the patterns 1234, 2431, 3412. ● a(n) = (7n ^ 6 - 45n ^ 5 + 175n ^ 4 - 315n ^ 3 + 538n ^ 2 - 360n + 720) / 720. - Franklin T. Adams - Watters, Sep 16 2006 ●
► [A116833] 1,2,6,21,71,213,564,1340,2909,5860,11090,19911,34179,56447,90144,139782,211193,311798,450910,640073,893439,1228185,1664972,2228448,2947797 ⋆ Number of permutations of length n which avoid the patterns 2134, 3421, 4132. ● a(n) = (n ^ 7 + 7 * n ^ 6 - 56 * n ^ 5 + 490 * n ^ 4 - 2051 * n ^ 3 + 5803 * n ^ 2 - 6714 * n + 5040) / 2520. - _ Franklin T. Adams - Watters _ , Sep 16 2006 ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n > 8. - _ Wesley Ivan Hurt _ , Oct 09 2017 ●
► [A294726] 1,1,2,6,21,71,217,599,1514,3550,7801,16193,31956,60282,109214,190816,322679,529823,847060,1321888,2017991,3019425,4435575,6406973,9112072 ⋆ Number of permutations of [n] avoiding { 4231, 3142, 1234 } . ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>8. ● a(n) = (40320 - 14640 * n + 15724 * n ^ 2 - 3780 * n ^ 3 + 3885 * n ^ 4 - 1680 * n ^ 5 + 546 * n ^ 6 - 60 * n ^ 7 + 5 * n ^ 8) / 40320. ●
► [A294700] 1,1,2,6,21,71,218,610,1585,3895,9186,21022,47061,103663,225618,486626,1042305,2220303,4708714,9949294,20956661,44022231,92253162,192912386,402622961 ⋆ Number of permutations of [n] avoiding { 1324, 2143, 3421 } . ● a(n) = (1 / 12) * (12 + 4 * (3 * 2 ^ n - 4) * n - 5 * n ^ 2 - 2 * n ^ 3 - n ^ 4). ● a(n) = 9 * a(n - 1) - 34 * a(n - 2) + 70 * a(n - 3) - 85 * a(n - 4) + 61 * a(n - 5) - 24 * a(n - 6) + 4 * a(n - 7) for n>6. ●
► [A294701] 1,1,2,6,21,71,218,614,1619,4065,9840,23168,53393,120995,270518,598218,1310943,2851061,6160652,13238564,28311869,60293463,127926642,270533006,570425771 ⋆ Number of permutations of [n] avoiding { 4231, 2143, 1342 } . ● a(n) = (28 - 32 * 2 ^ n + 22 * n + 7 * 2 ^ n * n + 2 * n ^ 2) / 4 for n>1. - _ Bruno Berselli _ , Nov 07 2017 ● a(n) = 7 * a(n - 1) - 19 * a(n - 2) + 25 * a(n - 3) - 16 * a(n - 4) + 4 * a(n - 5) for n>4. - _ Colin Barker _ , Nov 10 2017 ●
► [A116761] 1,2,6,21,71,220,630,1697,4365,10842,26216,62071,144519,331928,753834,1695933,3784913,8388838,18481404,40501523,88342827,191889732,415236446,895484281,1925185941 ⋆ Number of permutations of length n which avoid the patterns 2143, 3124, 3421. ● a(n) = (1 / 16) * (80 - 41 * 2 ^ (1 + n) + (56 + 15 * 2 ^ n) * n + (8 + 2 ^ n) * n ^ 2) for n>1. ● a(n) = 9 * a(n - 1) - 33 * a(n - 2) + 63 * a(n - 3) - 66 * a(n - 4) + 36 * a(n - 5) - 8 * a(n - 6) for n>7. ●
► [A116791] 1,2,6,21,72,220,590,1409,3055,6118,11474,20373,34542,56304,88714,135713,202301,294730,420718,589685,813012,1104324,1479798,1958497,2562731 ⋆ Number of permutations of length n which avoid the patterns 1234, 1342, 4312. ● a(n) = (n ^ 7 + 35n ^ 6 - 203n ^ 5 + 665n ^ 4 - 686n ^ 3 + 1820n ^ 2 - 1632n + 5040) / 5040. - Franklin T. Adams - Watters, Sep 16 2006 ●
► [A116775] 1,2,6,21,72,221,605,1517,3574,8065,17671,37953,80424,168885,352481,732581,1518074,3139033,6480187,13360153,27514476,56610861,116377941,239059421,490715582 ⋆ Number of permutations of length n which avoid the patterns 1234, 2341, 4132. ● a(n) = (6 * (- 44 + 21 * 2 ^ n) + (- 56 + 9 * 2 ^ n) * n + 12 * n ^ 2 - 28 * n ^ 3) / 24 for n>2. ● a(n) = 8 * a(n - 1) - 26 * a(n - 2) + 44 * a(n - 3) - 41 * a(n - 4) + 20 * a(n - 5) - 4 * a(n - 6) for n>8. ●
► [A116830] 1,2,6,21,72,229,686,1972,5514,15131,40986,110013,293376,778678,2059646,5434009,14309508,37628165,98841306,259426800,680498610,1784183887,4676276006,12253079101,32099813532 ⋆ Number of permutations of length n which avoid the patterns 1324, 2431, 4123. ● a(n) = 7 * a(n - 1) - 17 * a(n - 2) + 15 * a(n - 3) + a(n - 4) - 7 * a(n - 5) + 2 * a(n - 6). - _ Wesley Ivan Hurt _ , Apr 18 2023 ●
► [A116747] 1,2,6,21,72,230,689,1970,5460,14833,39790,105890,280367,739878,1948186,5121973,13451620,35299782,92580429,242705586,636062896,1666534337,4365640346,11434584546,29946505947 ⋆ Number of permutations of length n which avoid the patterns 1234, 2413, 3241. ● a(0)=1, a(1)=2, a(2)=6, a(3)=21, a(4)=72, a(5)=230, a(6)=689, a(n)= 9 * a(n - 1) - 33 * a(n - 2) + 64 * a(n - 3) - 71 * a(n - 4) + 45 * a(n - 5) - 15 * a(n - 6) + 2 * a(n - 7) [From Harvey P. Dale, May 19 2011] ●
► [A116800] 1,2,6,21,72,232,712,2116,6155,17629,49893,139851,388899,1074280,2950885,8066698,21960083,59566264,161060160,434269077,1168017399,3134554480,8395344424,22445226508,59911148129 ⋆ Number of permutations of length n which avoid the patterns 1432, 2314, 3241. ● a(n) = 6 * a(n - 1) - 11 * a(n - 2) + 4 * a(n - 3) + 8 * a(n - 4) - 11 * a(n - 5) + 3 * a(n - 6) for n>6. - _ Colin Barker _ , Oct 23 2017 ●
► [A116796] 1,2,6,21,72,236,745,2286,6866,20285,59156,170712,488401,1387226,3916062,10996581,30737760,85573316,237387961,656451270,1810142186,4978643597,13661617196,37409025456,102238082977 ⋆ Number of permutations of length n which avoid the patterns 2314, 3241, 4132. ● a(n) = (1 / 25) * (2 ^ (- n) * (25 * 2 ^ n + sqrt(5) * (3 - sqrt(5)) ^ n - sqrt(5) * (3 + sqrt(5)) ^ n + 10 * ((3 - sqrt(5)) ^ n + (3 + sqrt(5)) ^ n) * n)). ● a(n) = 7 * a(n - 1) - 17 * a(n - 2) + 17 * a(n - 3) - 7 * a(n - 4) + a(n - 5) for n>5. ● a(n) = 1 + (2 * (n - 1) * Lucas(2 * (n - 1)) - Fibonacci(2 * (n - 1))) / 5. - _ Ehren Metcalfe _ , Oct 22 2017 ●
► [A116829] 1,2,6,21,73,229,629,1521,3304,6578,12201,21353,35607,57007,88153,132293,193422,276388,387005,532173,720005,959961,1262989,1641673,2110388 ⋆ Number of permutations of length n which avoid the patterns 1234, 1324, 3421. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). - _ Wesley Ivan Hurt _ , Jun 26 2022 ●
► [A116824] 1,2,6,21,73,229,634,1562,3481,7132,13622,24531,42033,69031,109306,167680,250193,364294,519046,725345,996153,1346745,1794970,2361526,3070249 ⋆ Number of permutations of length n which avoid the patterns 1234, 3412, 3421. ● a(n) = (7n ^ 6 - 78n ^ 5 + 460n ^ 4 - 1500n ^ 3 + 2953n ^ 2 - 2922n + 1440) / 360. - Franklin T. Adams - Watters, Sep 16 2006 ●
► [A116783] 1,2,6,21,73,232,654,1639,3705,7678,14798,26841,46257,76324,121318,186699,279313,407610,581878,814493,1120185,1516320,2023198,2664367,3466953 ⋆ Number of permutations of length n which avoid the patterns 1234, 2431, 4231. ● a(n) = (4n ^ 6 - 45n ^ 5 + 250n ^ 4 - 735n ^ 3 + 1276n ^ 2 - 1110n + 540) / 180. - Franklin T. Adams - Watters, Sep 16 2006 ●
► [A116770] 1,2,6,21,73,234,691,1910,5019,12690,31147,74694,175843,407810,934179,2117958,4759915,10617234,23527867,51839462,113639955,247988802,538968691,1167065766,2518680283 ⋆ Number of permutations of length n which avoid the patterns 1243, 1342, 4312. ● a(n)=2 ^ n * (- 99 / 16 + 29n / 32 + 3n ^ 2 / 32) + n ^ 2 + 4n + 6, n>1. [From _ R. J. Mathar _ , Aug 05 2008] ●

► [A294796] 1,1,2,6,21,73,236,700,1919,4927,12006,28090,63705,141109,307088,659576,1402947,2962699,6223018,13018294,27148925,56478465,117258996,243044020,503038535 ⋆ Number of permutations of [n] avoiding { 1234, 1324, 3412 } . ● a(n) = - 5 + 3 * 2 ^ (1 + n) + (- 169 / 30 + 2 ^ n) * n - (3 * n ^ 2) / 2 - (5 * n ^ 3) / 6 - n ^ 5 / 30. ● a(n) = 10 * a(n - 1) - 43 * a(n - 2) + 104 * a(n - 3) - 155 * a(n - 4) + 146 * a(n - 5) - 85 * a(n - 6) + 28 * a(n - 7) - 4 * a(n - 8) for n>7. ●
► [A294762] 1,1,2,6,21,73,237,702,1881,4577,10216,21158,41097,75561,132523,223134,362589,571137,875246,1308934,1915277,2748105,3873897,5373886,7346385 ⋆ Number of permutations of [n] avoiding { 4231, 1243, 1234 } . ● a(n) = (25200 - 52056 * n + 48650 * n ^ 2 - 20881 * n ^ 3 + 4340 * n ^ 4 - 154 * n ^ 5 - 70 * n ^ 6 + 11 * n ^ 7) / 5040 for n>0. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. ●
► [A294797] 1,1,2,6,21,73,237,711,1988,5253,13301,32673,78669,187230,443398,1050209,2497187,5976456,14419577,35101838,86229874,213707024,534022585,1344450284,3407215499 ⋆ Number of permutations of [n] avoiding { 1243, 1324, 3412 } . ● a(n) = (1 / 120) * (3 * 2 ^ (2 - n) * (5 * 2 ^ (2 + n) * (- 1 + 2 ^ n) - (- 5 + sqrt(5)) * (3 + sqrt(5)) ^ n + (3 - sqrt(5)) ^ n * (5 + sqrt(5))) + 4 * (- 73 + 15 * 2 ^ (1 + n)) * n - 120 * n ^ 2 - 65 * n ^ 3 - 3 * n ^ 5). ● a(n) = 13 * a(n - 1) - 74 * a(n - 2) + 243 * a(n - 3) - 510 * a(n - 4) + 715 * a(n - 5) - 678 * a(n - 6) + 429 * a(n - 7) - 173 * a(n - 8) + 40 * a(n - 9) - 4 * a(n - 10) for n>9. ●
► [A294763] 1,1,2,6,21,73,238,714,1962,4957,11604,25390,52361,102533,191868,344970,598682,1006793,1646094,2624054,4088421,6239089,9342610,13749770,19916690 ⋆ Number of permutations of [n] avoiding { 4231, 1324, 1234 } . ● a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10) for n > 10 . - _ Chai Wah Wu _ , Oct 22 2018 ●
► [A294799] 1,1,2,6,21,73,238,721,2046,5501,14158,35172,84895,200133,462714,1052727,2363200,5245849,11535354,25163458,54518249,117424881,251631318,536828413,1140787234 ⋆ Number of permutations of [n] avoiding { 3412, 1324, 2341 } . ● a(n) = (1 / 720) * (- 20160 * (2 ^ n - 1) + 36 * (349 + 5 * 2 ^ (4 + n)) * n + 1556 * n ^ 2 + 1095 * n ^ 3 - 115 * n ^ 4 + 21 * n ^ 5 - n ^ 6) for n>0. ● a(n) = 11 * a(n - 1) - 53 * a(n - 2) + 147 * a(n - 3) - 259 * a(n - 4) + 301 * a(n - 5) - 231 * a(n - 6) + 113 * a(n - 7) - 32 * a(n - 8) + 4 * a(n - 9) for n > 9. ●
► [A294693] 1,1,2,6,21,73,238,722,2054,5541,14323,35788,87043,207201,484772,1118334,2550164,5759101,12899521,28689880,63419177,139435017,305102778,664755562,1442788402 ⋆ Number of permutations of [n] avoiding { 1243, 2314, 3412 } . ● a(n) = - n ^ 5 / 120 + n ^ 4 / 24 - n ^ 3 / 24 + (3 * 2 ^ n + 35) * n ^ 2 / 24 + (35 * 2 ^ n + 142) * n / 40 - (7 * 2 ^ n - 8). - _ Bruno Berselli _ , Nov 07 2017 ●
► [A116757] 1,2,6,21,73,238,724,2075,5667,14892,37942,94273,229453,548954,1294440,3014775,6946951,15859864,35913898,80740541,180355281,400556262,884998396,1946157331,4261413163 ⋆ Number of permutations of length n which avoid the patterns 1324, 2314, 4312. ● a(n) = (1 / 4) * (- 4 + 2 ^ (3 + n) - (2 + 5 * 2 ^ n) * n + (2 + 2 ^ n) * n ^ 2). ● a(n) = 9 * a(n - 1) - 33 * a(n - 2) + 63 * a(n - 3) - 66 * a(n - 4) + 36 * a(n - 5) - 8 * a(n - 6) for n>6. ●
► [A294800] 1,1,2,6,21,73,238,726,2101,5857,15926,42626,112997,297861,782666,2052958,5379953,14091781,36901646,96621062,252971401,662305301,1733959342,4539590666,11884834161 ⋆ Number of permutations of [n] avoiding { 1324, 2341, 3421 } . ● a(n) = (1 / 60) * (- 3 * 2 ^ (2 - n) * (15 * 2 ^ n + 2 * (- 5 + sqrt(5)) * (3 + sqrt(5)) ^ n - 2 * (3 - sqrt(5)) ^ n * (5 + sqrt(5))) + 80 * n - 85 * n ^ 2 + 10 * n ^ 3 - 5 * n ^ 4). ● a(n) = 8 * a(n - 1) - 26 * a(n - 2) + 45 * a(n - 3) - 45 * a(n - 4) + 26 * a(n - 5) - 8 * a(n - 6) + a(n - 7) for n>6. ●
► [A116754] 1,2,6,21,73,239,734,2134,5934,15918,41470,105470,262910,644350,1556478,3713022,8761342,20475902,47448062,109117438,249233406,565772286,1277165566,2868379646,6412042238 ⋆ Number of permutations of length n which avoid the patterns 2134, 2143, 4312. ● a(n) = (1 / 128) * (4 * (- 64 + 65 * 2 ^ n) - 107 * 2 ^ n * n + 9 * 2 ^ (1 + n) * n ^ 2 + 2 ^ n * n ^ 3) for n > 2. - _ Colin Barker _ , Nov 02 2017 ●
► [A294801] 1,1,2,6,21,73,239,736,2158,6102,16813,45493,121567,322108,848654,2227722,5834253,15258361,39874967,104169568,272109046,710846406,1857283957,4853664901,12686932951 ⋆ Number of permutations of [n] avoiding { 4231, 1324, 2341 } . ● a(n) = 10 * a(n - 1) - 41 * a(n - 2) + 89 * a(n - 3) - 110 * a(n - 4) + 77 * a(n - 5) - 28 * a(n - 6) + 4 * a(n - 7) for n>6. ●
► [A116768] 1,2,6,21,73,239,738,2178,6220,17351,47595,128985,346492,924788,2456502,6502017,17164189,45219875,118954134,312559974,820560736,2152792187,5645155791,14797355181,38776269808 ⋆ Number of permutations of length n which avoid the patterns 1342, 3214, 4213. ● a(n) = 2 ^ (- 1 - n) * (- 7 * 4 ^ n + 5 * (3 + sqrt(5)) ^ n - sqrt(5) * (3 + sqrt(5)) ^ n + (3 - sqrt(5)) ^ n * (5 + sqrt(5)) + 3 * 2 ^ (1 + n) * n). - _ Colin Barker _ , Nov 02 2017 ● a(n) = 3 * n + 5 * Fibonacci(2 * n - 1) - 7 * 2 ^ (n - 1). - _ Ehren Metcalfe _ , Nov 08 2017 ●
► [A294694] 1,1,2,6,21,73,239,740,2194,6298,17653,48621,132199,356040,952154,2533014,6712221,17734489,46753127,123048884,323441770,849373210,2228871757,5845630221,15324795631 ⋆ Number of permutations of [n] avoiding { 3412, 4132, 1324 } . ● a(n) = 8 * a(n - 1) - 25 * a(n - 2) + 39 * a(n - 3) - 32 * a(n - 4) + 13 * a(n - 5) - 2 * a(n - 6) for n>7. - _ Colin Barker _ , Nov 07 2017 ●
► [A294802] 1,1,2,6,21,73,240,744,2192,6192,16896,44800,115968,294144,733184,1800192,4362240,10448896,24772608,58195968,135593984,313589760,720371712,1644691456,3733979136 ⋆ Number of permutations of [n] avoiding { 3412, 3421, 1324 } . ● a(n) = 2 ^ (n - 6) * (36 - 8 * n + n ^ 2 + n ^ 3) for n>1. ● a(n) = 8 * a(n - 1) - 24 * a(n - 2) + 32 * a(n - 3) - 16 * a(n - 4) for n>5. ●
► [A294695] 1,1,2,6,21,73,240,748,2240,6525,18653,52640,147210,408957,1130398,3112172,8540753,23375439,63830072,173949534,473211976,1285299971,3486071977,9442928926,25548319586 ⋆ Number of permutations of [n] avoiding { 1243, 2431, 3412 } . ● a(n) = 12 * a(n - 1) - 61 * a(n - 2) + 172 * a(n - 3) - 296 * a(n - 4) + 322 * a(n - 5) - 221 * a(n - 6) + 92 * a(n - 7) - 21 * a(n - 8) + 2 * a(n - 9) for n>8. - _ Colin Barker _ , Nov 07 2017 ●
► [A294803] 1,1,2,6,21,73,241,754,2252,6471,18003,48736,128878,333949,850061,2130078,5263536,12845251,30998743,74055916,175309058,411566361,958923057,2218787146,5101322596 ⋆ Number of permutations of [n] avoiding { 1324, 2413, 3421 } . ● a(n) = (1 / 32) * (256 - 115 * 2 ^ (1 + n) + (80 + 79 * 2 ^ n) * n - 2 * (5 * 2 ^ n - 8) * n ^ 2 + 2 ^ n * n ^ 3) for n>0. ● a(n) = 11 * a(n - 1) - 51 * a(n - 2) + 129 * a(n - 3) - 192 * a(n - 4) + 168 * a(n - 5) - 80 * a(n - 6) + 16 * a(n - 7) for n>7. ●
► [A294804] 1,1,2,6,21,73,242,762,2290,6610,18434,49922,131842,340738,864258,2156546,5304322,12881922,30932994,73531394,173211650,404684802,938475522,2161639426,4948230146 ⋆ Number of permutations of [n] avoiding { 1324, 3142, 4231 } . ● a(n) = (1 / 192) * (384 - 51 * 2 ^ (2 + n) + 17 * 2 ^ (3 + n) * n - 27 * 2 ^ n * n ^ 2 + 5 * 2 ^ n * n ^ 3) for n>1. ● a(n) = 9 * a(n - 1) - 32 * a(n - 2) + 56 * a(n - 3) - 48 * a(n - 4) + 16 * a(n - 5) for n>6. ●
► [A294697] 1,1,2,6,21,73,244,790,2505,7839,24320,74998,230243,704359,2148620,6538740,19859175,60213343,182304334,551269876,1665215691,5025508101,15154701002,45668771716,137542144181 ⋆ Number of permutations of [n] avoiding { 1342, 2143, 3412 } . ● a(n) = 9 * a(n - 1) - 31 * a(n - 2) + 52 * a(n - 3) - 45 * a(n - 4) + 19 * a(n - 5) - 3 * a(n - 6) for n>5. - _ Colin Barker _ , Nov 07 2017 ●
► [A294765] 1,1,2,6,21,74,245,744,2068,5296,12608,28150,59412,119341,229477,424478,758491,1313931,2213350,3635214,5834559,9169668,14136101,21409620,31899782 ⋆ Number of permutations of [n] avoiding { 4231, 1423, 1234 } . ● a(n) = (3628800 - 1447200 * n + 1660536 * n ^ 2 - 377700 * n ^ 3 + 154790 * n ^ 4 + 9135 * n ^ 5 - 987 * n ^ 6 + 1350 * n ^ 7 + 60 * n ^ 8 + 15 * n ^ 9 + n ^ 10) / 3628800. ● a(n) = 11 * a(n - 1) - 55 * a(n - 2) + 165 * a(n - 3) - 330 * a(n - 4) + 462 * a(n - 5) - 462 * a(n - 6) + 330 * a(n - 7) - 165 * a(n - 8) + 55 * a(n - 9) - 11 * a(n - 10) + a(n - 11) for n>10. ●
► [A294698] 1,1,2,6,21,74,248,780,2309,6483,17407,45028,112921,275964,660030,1550320,3586449,8190493,18500893,41399992,91896773,202564062,443789172,967093220,2097536909 ⋆ Number of permutations of [n] avoiding { 1423, 1234, 3412 } . ● a(n) = (1 / 720) * (720 * (41 - 5 * 2 ^ (3 + n)) + 6 * (2812 + 465 * 2 ^ n) * n + 2 * (2627 + 45 * 2 ^ n) * n ^ 2 + 765 * n ^ 3 + 145 * n ^ 4 + 3 * n ^ 5 + n ^ 6). ● a(n) = 13 * a(n - 1) - 75 * a(n - 2) + 253 * a(n - 3) - 553 * a(n - 4) + 819 * a(n - 5) - 833 * a(n - 6) + 575 * a(n - 7) - 258 * a(n - 8) + 68 * a(n - 9) - 8 * a(n - 10) for n > 9. (End) ●
► [A294766] 1,1,2,6,21,74,248,784,2355,6785,18897,51177,135358,350788,893038,2237998,5530485,13496371,32566359,77785039,184083080,432004206,1006097772,2326777196,5346673751 ⋆ Number of permutations of [n] avoiding { 4312, 1432, 1234 } . ● a(n) = (1 / 96) * (- 6 * (- 16 + 2 ^ n) + (- 136 + 123 * 2 ^ n) * n - 4 * (11 + 3 * 2 ^ (1 + n)) * n ^ 2 + (- 8 + 3 * 2 ^ n) * n ^ 3 - 4 * n ^ 4). ● a(n) = 13 * a(n - 1) - 74 * a(n - 2) + 242 * a(n - 3) - 501 * a(n - 4) + 681 * a(n - 5) - 608 * a(n - 6) + 344 * a(n - 7) - 112 * a(n - 8) + 16 * a(n - 9) for n>9. ●
► [A116818] 1,2,6,21,75,248,735,1952,4697,10378,21320,41163,75363,131808,221561,359742,566561,868514,1299754,1903649,2734539,3859704,5361555,7340060,9915417 ⋆ Number of permutations of length n which avoid the patterns 1234, 2341, 3421. ● a(n) = (12n ^ 7 - 119n ^ 6 + 651n ^ 5 - 1505n ^ 4 + 693n ^ 3 + 6664n ^ 2 - 11436n + 10080) / 5040. - Franklin T. Adams - Watters, Sep 16 2006 ●
► [A294770] 1,1,2,6,21,75,253,774,2130,5314,12169,25895,51756,98034,177282,307933,516327,839223,1326868,2046700,3087767,4565949,6630075,9469032,13319968 ⋆ Number of permutations of [n] avoiding { 4231, 4123, 1234 } . ● a(n) = (40320 - 22704 * n + 33868 * n ^ 2 - 16996 * n ^ 3 + 6405 * n ^ 4 - 616 * n ^ 5 + 42 * n ^ 6 - 4 * n ^ 7 + 5 * n ^ 8) / 40320. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>8. ●
► [A294806] 1,1,2,6,21,75,259,852,2669,7997,23043,64190,173677,458255,1183139,2997544,7470237,18349057,44497747,106691218,253229501,595589331,1389361107,3217028796,7398749581 ⋆ Number of permutations of [n] avoiding { 1324, 3421, 3241 } . ● a(n) = (1 / 24) * (24 * (2 ^ (2 + n) - 3) + 5 * (2 ^ n - 16) * n - 6 * (2 ^ n + 2) * n ^ 2 + (2 ^ n - 4) * n ^ 3). ● a(n) = 12 * a(n - 1) - 62 * a(n - 2) + 180 * a(n - 3) - 321 * a(n - 4) + 360 * a(n - 5) - 248 * a(n - 6) + 96 * a(n - 7) - 16 * a(n - 8) for n>7. ●
► [A294807] 1,1,2,6,21,75,259,853,2684,8120,23782,67845,189493,520359,1409742,3778514,10042552,26517095,69668495,182357337,476027280,1240285036,3227591882,8393207561,21819385961 ⋆ Number of permutations of [n] avoiding { 1324, 1342, 3421 } . ● a(n) = 13 * a(n - 1) - 72 * a(n - 2) + 221 * a(n - 3) - 409 * a(n - 4) + 464 * a(n - 5) - 312 * a(n - 6) + 112 * a(n - 7) - 16 * a(n - 8). - _ Wesley Ivan Hurt _ , Oct 18 2021 ●
► [A294771] 1,1,2,6,21,75,259,862,2808,9090,29489,96076,314011,1027749,3364559,11012071,36033146,117891838,385711145,1261999184,4129291969,13511534900,44211907218,144668866862,473380823897 ⋆ Number of permutations of [n] avoiding { 4231, 2341, 4123 } . ● a(n) = 10 * a(n - 1) - 42 * a(n - 2) + 99 * a(n - 3) - 144 * a(n - 4) + 134 * a(n - 5) - 83 * a(n - 6) + 31 * a(n - 7) - 5 * a(n - 8) for n>8. ●
► [A116820] 1,2,6,21,75,264,914,3127,10621,35932,121324,409301,1380417,4655382,15700590,52954137,178609067,602449564,2032105066,6854506171,23121097405,77990499392,263072412420,887378656761,2993247393297 ⋆ Number of permutations of length n which avoid the patterns 2341, 3241, 4213. ● a(n) = 8 * a(n - 1) - 23 * a(n - 2) + 29 * a(n - 3) - 14 * a(n - 4) + a(n - 5) for n>5. - _ Colin Barker _ , Oct 18 2017 ●
► [A247416] 2,6,21,75,273,1008,3762,14158,53635,204270,781378,2999906,11553234,44612760,172671925,669679793,2601913466,10125418060,39459828905,153977743500,601545298200,2352559491900,9209476821105,36084150102001,141499349638556 ⋆ Number of friezes of type B _ n. ● a(n) = sum _{ m=1..floor(sqrt(n + 1)) } binomial(2n - m ^ 2 + 1,n). ●
► [A304781] 1,2,6,21,75,274,1016,3807,14377,54627,208584,799669,3076167,11867511,45897145,177888715,690770763,2686879415,10466761637,40828165464,159453481037,623427464093,2439907421914,9557831470082,37472409664888 ⋆ a(n) = [x ^ n] (1 / (1 - x) ^ n) * Product _{ k>=1 } (1 + x ^ k). ● a(n) = [x ^ n] (1 / (1 - x) ^ n) * Product _{ k>=1 } 1 / (1 - x ^ (2 * k - 1)). ● a(n) = [x ^ n] (1 / (1 - x) ^ n) * exp(Sum _{ k>=1 } (- 1) ^ (k + 1) * x ^ k / (k * (1 - x ^ k))). ●
► [A294817] 1,1,2,6,21,76,270,927,3074,9886,30985,95064,286558,851203,2497550,7252494,20874861,59630404,169225518,477513639,1340705306,3747697726,10435070737,28954040496,80087091646 ⋆ Number of permutations of [n] avoiding { 1324, 2431, 3241 } . ● a(n) = (1 / 25) * (2 ^ (- 1 - n) * (- 25 * 2 ^ (1 + n) + 7

5 * 2 ^ (1 + 2 * n) - 25 * (3 + sqrt(5)) ^ n - 37 * sqrt(5) * (3 + sqrt(5)) ^ n + (3 - sqrt(5)) ^ n * (- 25 + 37 * sqrt(5)) + 20 * ((3 - sqrt(5)) ^ n + (3 + sqrt(5)) ^ n) * n)). ● a(n) = 9 * a(n - 1) - 31 * a(n - 2) + 51 * a(n - 3) - 41 * a(n - 4) + 15 * a(n - 5) - 2 * a(n - 6) for n>5. ●

▶ [A294772] 1,1,2,6,21,76,270,930,3114,10196,32820,104283,328048,1023854,3175395,9797833,30104416,92174093,281393563,856933273,2604185761,7899961881,23928712717,72385213846,218724040451 ⋆ Number of permutations of [n] avoiding { 4132, 4123, 1243 } . ● a(n) = (35 / 16 + (13 * 3 ^ n) / 16 - ((3 - sqrt(5)) / 2) ^ n - ((3 + sqrt(5)) / 2) ^ n - (7 * n) / 6 + (5 * n ^ 2) / 8 - n ^ 3 / 12). ● a(n) = 10 * a(n - 1) - 40 * a(n - 2) + 83 * a(n - 3) - 97 * a(n - 4) + 64 * a(n - 5) - 22 * a(n - 6) + 3 * a(n - 7) for n>6. ●

▶ [A112091] 1,2,6,21,76,276,1001,3626,13126,47501,171876,621876,2250001,8140626,29453126,106562501,385546876,1394921876,5046875001,18259765626,66064453126,239023437501,864794921876,3128857421876,11320312500001 ⋆ Number of idempotent order - preserving partial transformations (of an n - element chain). ● a(n) = ((sqrt(5)) ^ (n - 1)) * (((sqrt(5) + 1) / 2) ^ n - ((sqrt(5) - 1) / 2) ^ n)); a(n) = 1 + 5 * (a(n - 1) - a(n - 2)), a(0) = 1, a(1) = 2. ● a(n) = 6 * a(n - 1) - 10 * a(n - 2) + 5 * a(n - 3); a(0) = 1, a(1) = 2, a(2) = 6. - _ Harvey P. Dale _ , Aug 20 2011 ●

▶ [A116798] 1,2,6,21,76,277,1012,3702,13553,49642,181885,666542,2442922,8954133,32821408,120310377,441018216,1616644946,5926191305,21723934190,79634709513,291922123258,1070118922286,3922810609205,14380129657444 ⋆ Number of permutations of length n which avoid the patterns 1234, 1342, 1432. ● a(n) = 7 * a(n - 1) - 15 * a(n - 2) + 11 * a(n - 3) - 3 * a(n - 4) for n>4. - _ Colin Barker _ , Oct 23 2017 ●

▶ [A279560] 1,1,2,6,21,76,277,1016,3756,13998,52554,198568,754316,2878552,11027384,42384412,163372325,631290168,2444700421,9485463044,36866810877,143508889270,559399074443,2183269032876,8530724152279 ⋆ Number of length n inversion sequences avoiding the patterns 100, 210, 201, and 102. ● a(n) = binomial(2n - 2,n - 1) + Sum _{ k=2..n - 2 } Sum _{ i=1..k - 1 } Sum _{ u=1..i } Sum _{ d=0..u - 1 } ((i - d + 1) / (i + 1) * binomial(i + d,d)) for n>0, a(0)=1. ●

▶ [A131792] 1,1,2,6,21,76,280,1045,3936,14925,56892,217791,836706,3224157,12456225,48232162,187131664,727309265,2831193004,11036424667,43076087806,168322335246,658416150496,2577945422410,10102468839284 ⋆ Main diagonal of triangle A131791: a(n) = A131791(n,n) for n>=0. ● a(n) = [x ^ n] Product _{ j =0..n - 1 } [(1 - x ^ (2 ^ j + 1)) / (1 - x)] for n>0, with a(0)=1. - _ Max Alekseyev _ , Aug 30 2007. ●

▶ [A144904] 0,1,2,6,21,76,280,1045,3937,14938,56993,218414,840090,3241153,12537263,48604755,188799962,734631798,2862843281,11171582151,43647688211,170720728344,668414462009,2619400928928,10273572796046 ⋆ Coefficient of x ^ n in expansion of x / ((1 - x - x ^ 3) * (1 - x) ^ (n - 1)), also diagonal of A144903. ● a(n) = [x ^ n] x / ((1 - x - x ^ 3) * (1 - x) ^ (n - 1)). ● a(n) = Sum _{ j=0..floor((n - 1) / 3) } binomial(2 * n - 2 * j - 2, n + j - 1). ●

▶ [A101879] 1,1,2,6,21,77,286,1066,3977,14841,55386,206702,771421,2878981,10744502,40099026,149651601,558507377,2084377906,7779004246,29031639077,108347552061,404358569166,1509086724602,5631988329241 ⋆ a(0) = 1, a(1) = 1, a(2) = 2; for n > 2, a(n) = 5 * a(n - 1) - 5 * a(n - 2) + a(n - 3). ● a(0) = a(1) = 1, for n>1 a(n) = (a(n - 1) + a(n - 1) ^ 2) / a(n - 2). - _ Seiichi Manyama _ , Aug 11 2016 ● a(n) = (6 + (3 - sqrt(3)) * (2 + sqrt(3)) ^ n + (2 - sqrt(3)) ^ n * (3 + sqrt(3))) / 12. (End) ● a(n) = 4 * a(n - 1) - a(n - 2) - 1. - _ Seiichi Manyama _ , Aug 26 2016 ● a(n) = (a(n - 1) + 1) * (a(n - 2) + 1) / a(n - 3). ●

▶ [A101265] 1,2,6,21,77,286,1066,3977,14841,55386,206702,771421,2878981,10744502,40099026,149651601,558507377,2084377906,7779004246,29031639077,108347552061,404358569166,1509086724602,5631988329241,21018866592361 ⋆ a(1) = 1, a(2) = 2, a(3) = 6; a(n) = 5 * a(n - 1) - 5 * a(n - 2) + a(n - 3) for n > 3. ● a(n) = 4 * a(n - 1) - a(n - 2) - 1. - _ N. Sato _ , Jan 21 2010 ● a(n) = (6 + (3 + r) * (2 + r) ^ (n - 1) + (3 - r) * (2 - r) ^ (n - 1)) / 12; r=sqrt(3). - _ Paul Weisenhorn _ , Jul 01 2010 ● a(n + 1) = a(n) * (a(n) + 1) / a(n - 1) for n>1 with a(0)=1, a(1)=1. - _ Paul D. Hanna _ , Apr 08 2012 ● a(n + 1) = 1 + Sum { k = 1..n } 2 ^ (k - 1) * binomial(n + k,2 * k). ● a(n) = T(n,u) * T(n + 1,u) / u with u = sqrt(3) and T(n,x) denotes the Chebyshev polynomial of the first kind . ● a(n + 1) = 2 * a(n) + (sqrt(12 * a(n) ^ 2 - 12 * a(n) + 1) - 1) / 2. (End) ●

▶ [A279561] 1,1,2,6,21,77,287,1079,4082,15522,59280,227240,873886,3370030,13027730,50469890,195892565,761615285,2965576715,11563073315,45141073925,176423482325,690215089745,2702831489825,10593202603775 ⋆ Number of length n inversion sequences avoiding the patterns 101, 102, 201, and 210. ● a(n) = 1 + Sum _{ i=1..n - 1 } binomial(2i, i - 1). ●

▶ [A063023] 0,1,1,2,6,21,77,292,1143,4592,18821,78364,330512,1409149,6063526,26298592,114849110,504595293,2228824203,9891723114,44087704836,197255893945,885630834120,3988872011820,18017892014655 ⋆ Reversion of y - y ^ 2 - y ^ 4 - y ^ 5. ● a(n) = sum(k=0..n - 1, (sum(j=floor((n - k - 1) / 3)..floor((n - k - 1) / 2), binomial(j,n - k - 2 * j - 1) * binomial(k,j))) * binomial(n + k - 1,n - 1)) / n, n>0, a(0)=0. - _ Vladimir Kruchinin _ , May 26 2011 ●

▶ [A124292] 1,1,2,6,21,78,297,1143,4419,17118,66366,257391,998406,3873015,15024609,58285737,226111986,877174110,3402893997,13201132950,51212274057,198672129783,770725711035,2989941920334,11599136512038 ⋆ Number of free generators of degree n of symmetric polynomials in 4 noncommuting variables. ● a(n) = 6 * a(n - 1) - 9 * a(n - 2) + 3 * a(n - 3). - _ David Nacin _ , Feb 11 2012 ● a(n) = (1 / 3) * (x ^ (n - 2) + y ^ (n - 2) + z ^ (n - 2)) for x = (2 * cos(Pi / 18)) ^ 2, y = (2 * cos(5 * Pi / 18)) ^ 2, and z = (2 * cos(7 * Pi / 18)) ^ 2. - _ Greg Dresden _ , Jan 28 2023 ●

▶ [A129775] 1,1,2,6,21,78,298,1157,4539,17936,71251,284188,1137076,4561093,18333337,73816489,297635750,1201551286,4855672249,19640147061,79501958895,322037615290,1305256267511,5293166568270,21475362822956 ⋆ Number of maximally clustered permutations in S _ n; the maximally clustered permutations are those that avoid 3421, 4312 and 4321. ● a(n) = sum(m=1..n - 1, sum(k=1..n - m, k * binomial(m + k - 1,m - 1) * binomial(2 * (n - m),n - m - k)) / (n - m)) + 1, a(0)=1. - _ Vladimir Kruchinin _ , Oct 11 2011 ● a(n) is the upper left term in M ^ n, M = an infinite square production matrix with (1, 1, 2, 4, 8, 16, ... powers of 2) as the left border, as follows: ●

▶ [A054515] 1,1,2,6,21,78,301,1198,4888,20340,85986,368239,1594183,6965380,30675399,136026759,606848034,2721783023,12265670909,55511013680,252193872912,1149742659556,5258257323304,24117924005616,110915268468358 ⋆ Number of ways to place non - intersecting diagonals in convex (n + 2) - gon so as to create no quadrilaterals. ● a(n - 1) = (1 / n) * [binomial(2n - 2,n - 1) + Sum _{ i=1..(n - 3) } Sum _{ k=1..Min(i,(n - i - 1) / 2) } binomial(n + i - 1,i) * binomial(i,k) * binomial(n - i - k - 2,k - 1)] if n>1. Proved in M. Bouvel, L. Cioni, B. Izart (Theorem 21) with offset 1. - _ Mathilde Bouvel _ , Oct 21 2021 ●

▶ [A357538] 1,1,2,6,21,78,308,1264,5332,22994,100896,449004,2021712,9193509,42161222,194768936,905522052,4233712140,19893553120,93894821200,444952447944,2116220266360,10098086643002,48330679370584,231954451580616 ⋆ a(n) = coefficient of x ^ n in A(x) such that A(x) = 1 + x * (2 * A(x) ^ 3 + A(x ^ 3)) / 3. ● a(0) = a(1) = 1; a(n + 1) = a(n / 3) / 3 + 2 * (Sum _{ j=0..n } a(n - j) * (Sum _{ i=0..j } a(i) * a(j - i))) / 3 for n >= 1, where a(k) = 0 if k not an integer (see formula and comment by _ Emeric Deutsch _ in A000625). (corrected by _ R. J. Mathar _ , Dec 19 2022) ●

▶ [A111279] 1,1,2,6,21,79,309,1237,5026,20626,85242,354080,1476368,6173634,25873744,108628550,456710589,1922354351,8098984433,34147706833,144068881455,608151037123,2568318694867,10850577045131,45856273670841 ⋆ Number of permutations avoiding the patterns { 3241,3421,4321 } ; number of weak sorting class based on 3241. ● a(n) is the sum of top row terms of M ^ (n - 1), M is an infinite square production matrix with powers of 2 as the left border as follows: ●

▶ [A033321] 1,1,2,6,21,79,311,1265,5275,22431,96900,424068,1876143,8377299,37704042,170870106,779058843,3571051579,16447100702,76073821946,353224531663,1645807790529,7692793487307,36061795278341,169498231169821 ⋆ Binomial transform of Fine's sequence A000957: 1, 0, 1, 2, 6, 18, 57, 186, ... ● a(n) = Sum _{ m=1..n - 1 } (Sum _ (k=1..n - m } (binomial(n - m - 1, k - 1) * (m / (k + m)) * binomial(2 * k + m - 1, k + m - 1))) + 1. - _ Vladimir Kruchinin _ , May 12 2011 ● a(n) = upper left term in M ^ n, M = the production matrix: ●

▶ [A112806] 1,1,2,6,21,79,312,1277,5369,23049,100612,445214,1992606,9004260,41025315,188259072,869305315,4036286518,18832973733,88259024068,415252542641,1960718710035,9288106921038,44129146527731 ⋆ Expansion of solution of functional equation. ● a(n) = Sum _{ i=0..n / 2 } ((binomial(n + 2 * i + 1,i) * Sum _{ k=0..n - 2 * i } (binomial(k,n - k - 2 * i) * (- 1) ^ (n - k) * binomial(n + k + 2 * i,k))) / (n + 2 * i + 1)). - _ Vladimir Kruchinin _ , Mar 07 2016 ●

▶ [A106228] 1,1,2,6,21,80,322,1347,5798,25512,114236,518848,2384538,11068567,51817118,244370806,1159883685,5536508864,26560581688,127993221140,619280193640,3007251366000,14651743202152,71601107803904,350873710447210 ⋆ G.f. satisfies: A(x) = 1 + x * A(x) / (1 - x * A(x) ^ 2). ● a(n + 1) = Sum[binomial(2n - 2k,n - k) * binomial(n + k,n) / (n + 1), { k,0,n }]. - _ David Callan _ , Aug 16 2006 ● a(n) = 1 / (n + 1) * sum(binomial(n + 1,k) * binomial(n + k + 1,n - k),k,0,n); - _ Vladimir Kruchinin _ , Feb 28 2010 ● a(n) = upper left term in M ^ n, M = the production matrix: ● a(n) is the sum of top row terms of Q ^ (n - 1), where Q = the following infinite square production matrix: ● a(n) = 3 _ F _ 2([- n, 1 - n, n + 1], [1, 3 / 2], 1 / 4). - _ Peter Luschny _ , Aug 02 2012 ●

▶ [A129442] 1,2,6,21,80,322,1348,5814,25674,115566,528528,2449746,11485068,54377288,259663576,1249249981,6049846848,29469261934,144293491564,709806846980,3506278661820,17385618278700,86500622296800 ⋆ Expansion of c(x) * c(x * c(x)) where c(x) is the g.f. of A000108. ● a(n - 1) = (1 / n) * Sum _{ k=1..n } binomial(2 * n - k - 1, n - 1) * binomial(2 * k - 2, k - 1). ●

▶ [A279565] 1,1,2,6,21,81,332,1420,6266,28318,130412,609808,2887582,13818590,66726628,324713196,1590853485,7840315329,38843186366,193342353214,966409013021,4848846341569,24412146213116,123290812268404,624448756434476 ⋆ Number of length n inversion sequences avoiding the patterns 100, 110, 120, 201, and 210. ● a(n) = (1 / n) * Sum _{ m=1..n } m * Sum _{ k=0..n - m } C(k,n - m - k) * C(n + k - 1,k), n>0, a(0)=1. - _ Vladimir Kruchinin _ , Mar 26 2019 ●

▶ [A178325] 1,1,2,6,21,83,363,1730,8889,48829,284858,1755325,11374092,77208275,547261631,4039201624,30967330941,246084049137,2023030659970,17175765057532,150367445873108,1355528352031358,12566899017130088 ⋆ G.f.: A(x) = Sum _{ n>=0 } x ^ n / (1 - x) ^ (n ^ 2). ● a(n) = Sum _{ k=0..n } C((n - k) ^ 2 + k - 1, k). ●

▶ [A090805] 1,2,6,21,85,430,2586,18109,144880,1303929,13039300,143432311,1721187744,22375440685,313256169604,4698842544075,75181480705216,1278085171988689,23005533095796420,437105128820131999,8742102576402640000,183584154104455440021,4038851390298019680484 ⋆ A simple recurrence with one error. ● a(0) = 1; a(n) = n * (a(n - 1) + 1) but make an error if n = 4. ●

▶ [A033540] 1,2,6,21,88,445,2676,18739,149920,1349289,13492900,148421911,1781062944,23153818285,324153456004,4862301840075,77796829441216,1322546100500689,23805829809012420,452310766371235999,9046215327424720000,189970521875919120021 ⋆ a(n + 1) = n * (a(n) + 1) for n >= 1, a(1) = 1. ● a(n) = n! * (1 + 1 / 0! + 1 / 1! + ... + 1 / (n - 1)!). - Jon Bentley (jlb(AT)research.bell - labs.com) ● a(n) = (n + 1) * a(n - 1) - (2 * n - 3) * a(n - 2) + (n - 3) * a(n - 3) for n>=4. - _ Jaume Oliver Lafont _ , Sep 11 2009 ● a(n) = n! + floor(e * n!) - 1, n>0. - _ Gary Detlefs _ , Jun 06 2010 ●

▶ [A305923] 1,2,6,21,105,580,4332,33173,333057,3249334,41175698,485901669,7470988137,102962077608,1870375878472,29342124588357,617978798588225,10818920340476010,260570216908845406,5009431835664474101,136578252867673635369,2844357524328057280332,87134882338620095240484 ⋆ Expansion of e.g.f. exp(x) / (1 - log(1 + x) - log(1 + x) ^ 2). ● a(n) = Sum _{ k=0..n } Sum _{ j=0..k } binomial(n,k) * Stirling1(k,j) * j! * Fibonacci(j + 1). ●

▶ [A306967] 2,6,22,54,132,292,626,1290,2594,5102,9864,18792,35362,65838,121454,222246,403788,728972,1308562,2336946,4154170,7353310,12965904,22781520,39897410 ⋆ a(n) is the first Zagreb index of the Fibonacci cube Gamma(n). ● a(n) = Sum _{ k=1..n } T(n,k) * k ^ 2, where T(n,k) = Sum _{ i=0..k } binomial(n - 2 * i, k - i) * binomial(i + 1, n - k - i + 1). ● a(n) = 3 * a(n - 1) - 5 * a(n - 3) + 3 * a(n - 5) + a(n - 6) for n>6. ●

▶ [A228396] 1,2,6,22,63,145,288,516,857,1343,2010,2898,4051,5517,7348,9600,12333,15611,19502,24078,29415,35593,42696,50812,60033 ⋆ The number of permutations of length n sortable by 2 reversals. ● a(n) = 8 + n * (n ^ 3 - 2 * n ^ 2 + 2 * n - 19) / 6 for n>2, a(1)=1, a(2)=2. [_ Bruno Berselli _ , Aug 22 2013] ●

▶ [A002839] 0,0,0,0,0,0,0,0,2,6,22,67,213,744,2609,9016,31426,110381,390223,1383905,4931308,17633773,63301427,228130926 ⋆ Number of simple perfect squared rectangles of order n up to symmetry. ● a(n) = ((n ^ (- 5 / 2)) * (4 ^ n)) / (2 ^ 5 * sqrt(Pi)). ●

▶ [A109194] 2,6,22,70,224,700,2174,6702,20572,62920,191932,584220,1775258,5386846,16326734,49435150,149557436,452133880,1366012832,4124825872,12449394278,37558361290,113266431860,341467468420,1029119688014 ⋆ Number of returns to the x - axis (i.e., d or u steps hitting the x - axis) in all Grand Motzkin paths of length n. (A Grand Motzkin path of length n is a path in the half - plane x>=0, starting at (0,0), ending at (n,0) and consisting of steps u=(1,1), d=(1, - 1) and h=(1,0).). ● a(n) = 2 * Sum _ (k=1..n } (Sum _{ j=0..n } binomial(j , - n - 2 * k + 2 * j) * binomial(n,j))), n>1. - _ Vladimir Kruchinin _ , Oct 12 2011 ●

▶ [A014334] 0,0,2,6,22,70,230,742,2406,7782,25190,81510,263782,853606,2762342,8939110,28927590,93611622,302933606,980313702,3172361830,10265978470,33221404262,107506722406,347899061862 ⋆ Exponential convolution of Fibonacci numbers with themselves. ● a(n) = 3 * a(n - 1) + 2 * a(n - 2) - 4 * a(n - 3), a(0)=0, a(1)=0, a(2)=2. ● a(n) = Sum _{ k=0..n - 1 } 2 ^ k * Fibonacci(k) for n > 0. ● a(n) = (- 2 + ((1 + sqrt(5)) ^ n + (1 - sqrt(5)) ^ n)) / 5. (End) ● a(n) = Sum _{ k=0..n } Fibonacci(k) * Fibonacci(n - k) * binomial(n, k)). - _ Benoit Cloitre _ , May 11 2005 ● a(n) = (Sum _{ k=0..n } Lucas(k) * Lucas(n - k) * binomial(n, k)) - 4) / 5 (Wall, 1986). - _ Amiram Eldar _ , Jan 27 2022 ●

▶ [A107239] 0,0,1,2,6,22,71,240,816,2752,9313,31514,106590,360606,1219935,4126960,13961456,47231280,159782161,540539330,1828631430,6186215574,20927817799,70798300288,239508933824 ⋆ Sum of squares of tribonacci numbers (A000073). ● a(n) = 1 / 4 - (1 / 11) * Sum _{_ R = RootOf(_ Z ^ 3 -_ Z ^ 2 -_ Z - 1) } ((3 + 7 *_ R + 5 *_ R ^ 2) / (3 *_ R ^ 2 - 2 *_ R - 1) *_ R ^ (- n) - (1 / 44) * Sum _{_ R = RootOf(_ Z ^ 3 +_ Z ^ 2 + 3 *_ Z - 1) } ((- 1 - 2 *_ R - 9 *_ R ^ 2) / (3 *_ R ^ 2 + 2 *_ R + 3) *_ R ^ (- n). - _ Robert Israel _ , Mar 26 2010 ●

▶ [A217528] 1,2,6,22,78,254,766,2174,5886,15358,38910,96254,233470,557054,1310718,3047422,7012350,15990782,36175870,81264638,181403646,402653182,889192446,1954545662,4278190078 ⋆ a(n) = (n - 2) * (n - 3) * 2 ^ (n - 2) + 2 ^ n - 2. ● a(n) = 7 * a(n - 1) - 18 * a(n - 2) + 20 * a(n - 3) - 8 * a(n - 4). G.f.: - x * (4 * x ^ 3 - 10 * x ^ 2 + 5 * x - 1) / ((x - 1) * (2 * x - 1) ^ 3). [_ Colin Barker _ , Oct 17 2012] ●

▶ [A106434] 0,2,6,22,78,278,990,3526,12558,44726,159294,567334,2020590,7196438,25630494,91284358,325114062,1157910902,4123960830,14687704294,52311034542,186308512214,663547605726,2363259841606,8416874736270 ⋆ The (1,1) - entry of the matrix A ^ n, where A = [0,1;2,3]. ● a(n) = - (2 / 17) * sqrt(17) * [3 / 2 - (1 / 2) * sqrt(17)] ^ n + (2 / 17) * [3 / 2 + (1 / 2) * sqrt(17)] ^ n * sqrt(17), with n>=0. - _ Paolo P. Lava _ , Jun 12 2008 ●

▶ [A201372] 2,6,22,80,268,786,2016,4608,9582,18446,33330,57136,93704,147994,226284,336384,487866,692310,963566,1318032,1774948,2356706,3089176,4002048,5129190 ⋆ Number of n X 5 0..1 arrays with rows and columns lexicographically nondecreasing read forwards, and nonincreasing read backwards. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

▶ [A164870] 1,2,6,22,84,320,1212,4576,17256,65048,245184,924160,3483408,13129952,49490592,186544480,703140672,2650342784,9989916864,37654917376,141932392320,534984681344,2016513669120,7600829555200,28649748728064 ⋆ The number of permutations of length n that can be sorted by 2 pop stacks in parallel. ● a(n) = 6 * a(n - 1) - 10 * a(n - 2) + 6 * a(n - 3) for n>3. - _ Colin Barker _ , Oct 31 2017 ●

▶ [A121686] 2,6,22,84,324,1254,4862,18876,73372,285532,1112412,4338536,16938120,66192390,258909390,1013586540,3971224620,15571021620,61096813140,239888764440,942483155640,3705043827420,14573172387852,57351122857944 ⋆ Number of branches in all binary trees with n edges. A binary tree is a rooted tree in which each vertex has at most two children and each child of a vertex is designated as its left or right child. ● a(n) = 2 * (n ^ 2 + 2) * binomial(2 * n, n) / ((n + 1) * (n + 2)). - _ Vaclav Kotesovec _ , Dec 10 2013 ●

▶ [A105871] 1,2,6,22,85,336,1350,5492,22554,93300,388201,1622868,6811056,28680356,121111440,512684484,2174928031,9243973062,39354962345,167799259130,716414975613,3062437147352,13105366936465,56139506687280 ⋆ a(n) = sum { k=0..floor(n / 2), C(2 * n - 3 * k, n) * C(n - k, k) } ● a(n) = sum { k=0..floor(n / 2), C(2 * n - 3 * k, n) * C(n - k, k) } ●

▶ [A116705] 1,2,6,22,86,321,1085,3266,8797,21478,48206,100728,198046,369617,659505,1131656,1876481,3018946,4728382,7230242,10820046,15879769,22896941,32486742,45417389 ⋆ Number of permutations of length n which avoid the patterns 1234, 4312. ● a(n) = (21 * n ^ 8 - 48 * n ^ 7 - 966 * n ^ 6 + 7728 * n ^ 5 - 8211 * n ^ 4 - 72912 * n ^ 3 + 311556 * n ^ 2 - 418608 * n + 241920) / 60480. - Franklin T. Adams - Watters, Sep 16 2006 ●

▶ [A116706] 1,2,6,22,86,330,1206,4174,13726,43134,130302,380414,1078270,2978814,8046590,21311486,55468030,142147582,359268350,896794622,2213543934,5408292862,13091995646,31424774142,74845257726 ⋆ Number of permutations of length n which avoid the patterns 2134, 3421. ● a(n) = (24 * (- 32 + 39 * 2 ^ n) - 263 * 2 ^ (1 + n) * n + 165 * 2 ^ n * n ^ 2 - 13 * 2 ^ (1 + n) * n ^ 3 + 3 * 2 ^ n * n ^ 4) / 384 for n>1. ● a(n) = 11 * a(n - 1) - 50 * a(n - 2) + 120 * a(n - 3) - 160 * a(n - 4) + 112 * a(n - 5) - 32 * a(n - 6) for n>7. ●

▶ [A165524] 1,2,6,22,86,332,1217,4140,12934,37088,98115,241269,555881,1208988,2498732,4936275,9367783,17151454,30408684,52373368,87869112,143950884,230755459,362614022,559490596 ⋆ Number of permutations of length n which avoid the patterns 4321 and 1324. ● a(n) = 12 * a(n - 1) - 66 * a(n - 2) + 220 * a(n - 3) - 495 * a(n - 4) + 792 * a(n - 5) - 924 * a(n - 6) + 792 * a(n - 7) - 495 * a(n - 8) + 220 * a(n - 9) - 66 * a(n - 10) + 12 * a(n - 11) - a(n - 12) for n>12. - _ Colin Barker _ , Oct 31 2017 ●

▶ [A116709] 1,2,6,22,86,336,1290,4870,18164,67234,247786,911120,3346618,12286942,45104548,165573482,607817410,2231360192,8191763970,30074097062,110410946820,405353571346,1488185247962,5463619641904,20058759689642 ⋆ Number of permutations of length n which avoid the patterns 2341, 4213. ● a(n) = 8 * a(n - 1) - 22 * a(n - 2) + 25 * a(n - 3) - 10 * a(n - 4) + 2 * a(n - 5) for n>5. - _ Colin Barker _ , Oct 20 2017 ●

▶ [A165530] 1,1,2,6,22,86,338,1314,5046,19190,72482,272530,1021734,3823622,14293234,53394370,199382550,744348822,2778471490,10370520178,38705706374,144456761766,539130777874,2012086272674,7509256255862 ⋆ Number of permutations of length n which avoid the patterns 4321 and 3142. ● a(n) = (1 / 18) * (2 * (3 * 2 ^ n - (- 3 + sqrt(3)) * (2 + sqrt(3)) ^ n + (2 - sqrt(3)) ^ n * (3 + sqrt(3))) - 3 * 2 ^ n * n). ● a(n) = 8 * a(n - 1) - 21 * a(n - 2) + 20 * a(n - 3) - 4 * a(n - 4) for n>3. ●

▶ [A116707] 1,2,6,22,86,338,1318,5106,19718,76066,293398,1131794,4366374,16846018,64995254,250765298,967503814,3732821922,14401956182,55565542354,214382633062,827129764994,3191227078902,12312373271986,47503525349126 ⋆ Number of permutations of length n which avoid the patterns 1342, 4213. ● a(n) = 7 * a(n - 1) - 16 * a(n - 2) + 16 * a(n - 3) - 4 * a(n - 4) for n>3. - _ Colin Barker _ , Oct 20 2017 ●

▶ [A116704] 1,1,2,6,22,86,338,1318,5110,19770,76466,295810,1144530,4428622,17136186,66306722,256565926,992749334,3841316550,14863484902,57512368162,222536820262,861078033110,3331832349354,12892103081874 ⋆ Number of permutations of length n which avoid the patterns 2341, 4312. ● a(n) = 7 * a(n - 1) - 17 * a(n - 2) + 22 * a(n - 3) - 13 * a(n - 4) + 4 * a(n - 5) for n>6. - _ Colin Barker _ , Oct 25 2017 ●

▶ [A029759] 1,1,2,6,22,86,340,1340,5254,20518,79932,311028,1209916,4707964,18330728,71429176,278586182,1087537414,4249391468,16618640836,65048019092,254814326164,998953992728,3919041821896,15385395144092 ⋆ Number of permutations which are the union of an increasing and a decreasing subsequence. ● a(n) = (binomial(2 * n, n) * (hypergeom([1, n + 1 / 2], [n + 1], 2) + 2) + i * 2 ^ n) / 2, where i is the imaginary unit. - _ Peter Luschny _ , Oct 25 2018 ●

▶ [A107243] 0,0,0,0,1,2,6,22,86,342,1303,5024,19424,75120,290416,1122160,4337009,16762634,64787534,250400910,967783566,3740437902,14456621263,55874162432,215950971648 ⋆ Sum of squares of pentanacci numbers (A001591). ● a(n)= 3 * a(n - 1) + 2 * a(n - 2) + 3 * a(n - 3) + 7 * a(n - 4) + 14 * a(n - 5) - 32 * a(n - 6) - 2 * a(n - 7) + 6 * a(n - 8) - 4 * a(n - 9) - 6 * a(n - 10) + 10 * a(n - 11) + a(n - 12) - a(n - 13) + a(n - 15) - a(n - 16). [_ R. J. Mathar _ , Aug 11 2009] ●

▶ [A107244] 0,0,0,0,0,1,2,6,22,86,342,1366,5335,20960,82464,324528,1277104,5025200,19770800,77789489,306071370,1204272270,4738336974,18643463374,73354544590 ⋆ Sum of squares of hexanacci numbers (A001592, Fibonacci 6 - step numbers). ● a(n)= 3 * a(n - 1) + 2 * a(n - 2) + 4 * a(n - 3) + 6 * a(n - 4) + 14 * a(n - 5) + 28 * a(n - 6) - 67 * a(n - 7) - 9 * a(n - 8) - 8 * a(n - 9) + 28 * a(n - 10) - 8 * a(n - 11) - 12 * a(n - 12) + 20 * a(n - 13) + 5 * a(n - 14) + 5 * a(n - 15) - 10 * a(n - 16) + 2 * a(n - 18) - 2 * a(n - 19) - a(n - 21) + a(n - 22). [From _ R. J. Mathar _ , Aug 11 2009] ●

▶ [A047849] 1,2,6,22,86,342,1366,5462,21846,87382,349526,1398102,5592406,22369622,89478486,357913942,1431655766,5726623062,22906492246,91625968982,366503875926,1466015503702,5864062014806,23456248059222,93824992236886 ⋆ a(n) = (4 ^ n + 2) / 3. ● a(n) = (4 ^ n + 2) / 3 = 4 * a(n - 1) - 2. ● a(n) = 5 * a(n - 1) - 4 * a(n - 2). ● a(n) = T(1,n), array T given by A047848. ● a(n) = Sum _{ k=0..n } binomial(2 * n, mod(n,3) + 3 * k). - _ Oboifeng Dira _ , May 29 2020 ●

▶ [A367413] 1,1,2,6,22,87,356,1493,6398,27936,123906,556734,2528668,11590555,53545932,249065874,1165482126,5482782933,25914899804,123009541412,586121731150,2802470267460,13441993044464,64660400422341,311861855749484 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 - x - x ^ 3 / (1 - x) ^ 2)). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 3) } binomial(n + k,k) * binomial(2 * n,n - 3 * k). ●

▶ [A032351] 1,1,2,6,22,88,366,1552,6652,28696,124310,540040,2350820,10248248,44725516,195354368,853829272,3733693872,16333556838,71476391800,312865382004,1369760107576,5998008630244,26268304208032,115055864102504 ⋆ Number of permutations of length n which avoid the patterns 2143, 1324 (smooth permutations); or avoid the patterns 1342, 2431; etc. ● a(n) = upper left term in n - th power of the following infinite square production matrix: ● a(n) = (Sum _{ m=0..n - 2 } (m + 3) * (Sum _{ k=0..m / 2 } Sum _{ j=0..m - 2 * k - 1 } 2 ^ j * binomial(j + k, k) * binomial(m - j, 2 * k + 1)) * binomial(2 * n - m - 2, n) + binomial(2 * n,n)) / (n + 1). - _ Vladimir Kruchinin _ , Sep 19 2014 ●

▶ [A365246] 1,1,2,6,22,88,370,1613,7230,33117,154330,729369,3487470,16840346,82007012,402269702,1985867630,9858739759,49187798158,246506563980,1240337033398,6263601365616,31734939452116,161270637750264,821802841072422 ⋆ G.f. satisfies A(x) = 1 + x * A(x) ^ 2 / (1 - x ^ 2 * A(x) ^ 4). ● a(n) = (1 / (2 * n + 1)) * Sum _{ k=0..floor(n / 2) } binomial(n - k - 1,k) * binomial(2 * n + 1,n - 2 * k). ●

▶ [A214358] 1,1,2,6,22,88,374,1668,7744,37182,183666,929480,4803018,25274088,135132886,732779504,4023875702,22346542912,125368768090,709852110576,4053103780006,23320440656376,135126739754922,788061492048436,4623591001082002 ⋆ Number of (2 - 14 - 3, 3 - 41 - 2) - avoiding permutations of size n. ● a(0) = 1, a(1) = 1, a(2) = 2, a(3) = 6, a(4) = 22, a(5) = 88 and ●

▶ [A271388] 0,1,2,6,22,89,372,1570,6644,28137,119182,504854,2138586,9059185,38375312,162560418,688616968,2917028273,12356730042,52343948422,221732523710,939274043241,3978828696652,16854588829826,71397184015932 ⋆ a(n) = 4 * a(n - 1) + a(n - 2) - n for n > 1, with a(0) = 0, a(1) = 1. ● a(n) = 6 * a(n - 1) - 8 * a(n - 2) + 2 * a(n - 3) + a(n - 4). ● a(n) = (1 / 80) * (20 * n - 3 * (5 + 3 * sqrt(5)) * (2 - sqrt(5)) ^ n + 3 * (3 * sqrt(5) - 5) * (2 + sqrt(5)) ^ n + 30). ●

▶ [A165543] 1,1,2,6,22,89,380,1678,7584,34875,162560,766124,3644066,17469863,84324840,409471090,1998933556,9804748548,48298256084,238840150970,1185256302910,5900843531665,29464355189120,147522603762870,740471407808372 ⋆ Number of permutations of length n which avoid the patterns 3241 and 4321. ● a(n) = sum(m=1..n - 1, (m * sum(k=1..n - m, (k * binomial(m + 2 * k - 1,m + k - 1) * binomial(2 * (n - m) - k - 1,n - m - 1)) / (m + k))) / (n - m)) + 1. (End

) • a(n) is the top left term in M ^ n, M = an infinite square production matrix with A000108 as the left column, as follows: •
► [A200753] 1,1,2,6,22,89,381,1694,7744,36168,171831,827814,4034589,19857262,98555324,492710856,2478897620,12541604830,63768192378,325674039636,16699222290311,8593644472017,44369362778645,229767801472366,1193126351099007 ⋆ G.f. satisfies: A(x) = 1 + (x - x ^ 2) * A(x) ^ 3. • a(n) = Sum _{ k=0..[n / 2] } (- 1) ^ k * C(n - k, k) * C(3 * (n - k), n - k) / (2 * (n - k) + 1). •
► [A369439] 1,2,6,22,89,382,1708,7870,37108,178184,868318,4283402,21347902,107330004,543707480,2772469998,14219396908,73303128344,379621891640,1974078923416,10303600000553,53960438323438,283461807342876,1493252678987602,7886649917261724 ⋆ Expansion of (1 / x) * Series _ Reversion(x / ((1 + x) ^ 2 * (1 + x ^ 2))). • a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 2) } binomial(n + 1,k) * binomial(2 * n + 2,n - 2 * k). •
► [A155069] 1,1,2,6,22,90,394,1806,8558,41586,206098,1037718,5293446,27297738,142078746,745387038,3937603038,20927156706,111818026018,600318853926,3236724317174,17518619320890,95149655201962,518431875418926 ⋆ Expansion of (3 - x - sqrt(1 - 6 * x + x ^ 2)) / 2. • a(n) = top left term of M ^ n, where M = the production matrix: • a(n) = (1 / n) * Sum _{ i = 0..n / 2 } binomial(n + i - 1,i) * binomial(2 * n, n - 2 * i - 1)), n>0, a(0)=1. - _ Vladimir Kruchinin _ , Nov 13 2014 • a(n) = Catalan(n) * hypergeometric([1 / 2 - n / 2, 1 - n / 2, n], [n / 2 + 1, n / 2 + 3 / 2], 1). - _ Peter Luschny _ , Nov 14 2014 • a(0) = 1 ; a(n) = a(n - 1) + Sum _{ k=1..n - 1 } a(k) * a(n - k). - _ Ilya Gutkovskiy _ , Apr 11 2021 •
► [A006318] 1,2,6,22,90,394,1806,8558,41586,206098,1037718,5293446,27297738,142078746,745387038,3937603038,20927156706,111818026018,600318853926,3236724317174,17518619320890,95149655201962,518431875418926,28329233509297 42,15521467648875090 ⋆ Large Schröder numbers (or large Schroeder numbers, or big Schroeder numbers). • a(n) = 2 * hypergeom([- n + 1, n + 2], [2], - 1). - _ Vladeta Jovovic _ , Apr 24 2003 • a(n) = Sum _{ k = 0..n } C(n + k, n) * C(n, k) / (k + 1). (End) • a(n) = (CentralDelannoy(n + 1) - 3 * CentralDelannoy(n)) / (2 * n) = (- CentralDelannoy(n + 1) + 6 * CentralDelannoy(n) - CentralDelannoy(n - 1)) / 2 for n >= 1, where CentralDelannoy is A001850. - _ David Callan _ , Aug 16 2006 • a(n) = the upper left term in M ^ (n + 1), M = the production matrix: • a(n) is the sum of top row terms in Q ^ n, Q = an infinite square production matrix as follows: • a(n - 1) = number of ordered complete binary trees with n leaves having k internal vertices colored black, the remaining n - 1 - k internal vertices colored white, and such that each vertex and its rightmost child have different colors ([Drake, Example 1.6.7]). For a refinement of this sequence see A175124. - _ Peter Bala _ , Sep 29 2011 •
► [A308564] 1,2,6,22,90,404,1974,10366,57864,341690,2134022,14104624,98498972,723664482,5561589508,44473028634,368602225688,3159852790392,27997141025686,256410638073082,2428063270357748,23774001479212114,240580239864321604,2513553050765310236 ⋆ Expansion of e.g.f. Sum _{ k>=1 } phi(k) * (exp(x) - 1) ^ k / k!, where phi = Euler totient function (A000010). • a(n) = Sum _{ k=1..n } Stirling2(n,k) * phi(k). •
► [A226435] 1,2,6,22,90,422,2226,13102,85170,606542,4697946,39330982,353985450,3408792662,34975509666,380947661662,4390028664930,53368010874782,682564606249386,9162253729773142,128794752680027610,1892150024227428902 ⋆ Number of permutations of 1..n with fewer than 2 interior elements having values lying between the values of their neighbors. • a(n) = Sum _{ i=0..(n - 2) / 2 } ((n - 2 * i - 1) * Sum _{ j=0..2 * i } ((- 1) ^ (j + i) * 2 ^ (- n - j + 2 * i + 2) * Stirling2(n,n + j - 2 * i) * binomial(n + j - 2 * i - 1,n - 2 * i - 1) * (n + j - 2 * i)!)), n > 1, a(1)=1. - _ Vladimir Kruchinin _ , Apr 08 2016 •
► [A264868] 1,1,2,6,22,92,420,2042,10404,54954,298648,1660714,9410772,54174212,316038060,1864781388,11111804604,66782160002,404392312896,2465100947836,15116060536540,93184874448186,577198134479356,3590697904513792,22425154536754776 ⋆ Number of rooted tandem duplication trees on n gene segments. • a(n) = Sum _{ k = 1..floor((n + 1) / 3) } (- 1) ^ (k + 1) * binomial(n + 1 - 2 * k,k) * a(n - k) with a(1) = a(2) = 1 (Yang and Zhang). •
► [A001181] 1,1,2,6,22,92,422,2074,10754,58202,326240,1882960,11140560,67329992,414499438,2593341586,16458756586,105791986682,687782586844,4517543071924,29949238543316,200234184620736,1349097425104912,9154276618636016,62522506583844272 ⋆ Number of Baxter permutations of length n (also called Baxter numbers). • a(n) = Sum _{ k=1..n } C(n + 1,k - 1) * C(n + 1,k) * C(n + 1,k + 1) / (C(n + 1,1) * C(n + 1,2)). • a(n) = hypergeom([- 1 - n, - n, 1 - n], [2, 3], - 1). (End) •
► [A014330] 1,2,6,22,92,424,2108,11134,61748,356296,2123720,13002840,81417520,519550880,3369559864,22161337742,147544048324,992923683912,6746101933304,46226667046360,319199694771696,2219445498261152,15529758665102416,109291258550712 ⋆ Exponential convolution of Catalan numbers with themselves. • a(n) = Sum _{ k=0..n } binomial(n, k) * binomial(2 * k, k) / (k + 1) * binomial(2 * n - 2 * k, n - k) / (n - k + 1). • a(n) = 4 ^ n * Sum _{ k=0..n } (- 4) ^ (- k) * binomial(n, k) * binomial(k, floor(k / 2)) * binomial(k + 1, floor((k + 1) / 2)). • a(n) = binomial(2 * n, n) / (n + 1) * hypergeometric3F2([- n - 1, - n, 1 / 2], [2, 1 / 2 - n], - 1). (End) •
► [A074664] 1,1,2,6,22,92,426,2146,11624,67146,411142,2656052,18035178,128318314,954086192,7396278762,59659032142,499778527628,4341025729290,39035256389026,362878164902216,3482882959111530,34472032118214598 ⋆ Number of algebraically independent elements of degree n in the algebra of symmetric polynomials in noncommuting variables. • a(n) = upper left term in M ^ (n - 1), where M is the following infinite square production matrix: • a(n) = sum of top row terms in M ^ (n - 2). Example: top row of M ^ 4 = (22, 31, 28, 10, 1, 0, 0, 0, ...), where 22 = a(5) and (22 + 31 + 28 + 10 + 1) = 92 = a(6). - _ Gary W. Adamson _ , Jul 11 2011 •
► [A001861] 1,2,6,22,94,454,2430,14214,89918,610182,4412798,33827974,273646526,2326980998,20732504062,192982729350,1871953992254,18880288847750,197601208474238,2142184050841734,24016181943732414,278028611833689478,3319156078802044158,40811417293301014150 ⋆ Expansion of e.g.f. exp(2 * (exp(x) - 1)). • a(n) = Sum _{ k=0..n } 2 ^ k * Stirling2(n, k). - _ Emeric Deutsch _ , Oct 20 2001 • a(n) = exp(- 2) * Sum _{ k>=1 } 2 ^ k * k ^ n / k!. - _ Benoit Cloitre _ , Sep 25 2003 • a(0) = 1 and a(n) = 2 * Sum _{ k=0..n - 1 } binomial(n - 1,k) * a(k) for n > 0. - _ Seiichi Manyama _ , Sep 25 2017 [corrected by _ Ilya Gutkovskiy _ , Jul 12 2020] •
► [A187251] 1,1,2,6,22,94,460,2532,15420,102620,739512,5729192,47429896,417429800,3888426512,38192416048,394239339792,4264424937488,48212317486112,568395755184224,6973300915138656,88860103591344864,1174131206436335296,16067561669122448 00 ⋆ Number of permutations of [n] having no cycle with 3 or more alternating runs (it is assumed that the smallest element of a cycle is in the first position). • a(n) = Sum _{ j=1..n } a(n - j) * binomial(n - 1,j - 1) * ceiling(2 ^ (j - 2)) for n > 0, a(0) = 1. - _ Alois P. Heinz _ , May 30 2021 •
► [A193763] 1,2,6,22,94,462,2606,16862,124782,1048990,9921550,104447550,1211190638,15329157278,210093682254,3097760346238,48869022535726,821007386273118,14630266558195214,275575669958063678,5469996402416702958,114107289124208861470 ⋆ Number of signed permutations of length n avoiding (- 2, 1) and (2, - 1). • a(0) = 1, and for n > 0, a(n) = n! + Sum _{ j=0..n - 1 } (n - j)! * a(j). • a(n) is the sum of top row terms of M ^ n, M = an infinite square production matrix as follows: •
► [A180389] 1,1,2,6,22,96,492,2952,20588,164990,1497740,15187692,169974040,2078905752,27567259896,393759207372,6025346314756,98317949671110,1703879074519500,31251488731748108,604748393942784976,12312387380060084768,263079571367773145632 ⋆ Number of permutations of 1..n with number of rises (p(i + 1)>p(i)) the same as number of rises in the inverse permutation. • a(n) = Sum _{ m=0..n + 1 } Sum _{ i=0..m } Sum _{ j=0..m } (- 1) ^{ i + j } binomial(n + 1,i) binomial(n + 1,j) binomial((m - i) * (m - j) + n - 1,n). - _ Kevin Dilks _ , Jun 09 2015 •
► [A130907] 1,2,6,22,98,516,3172,22436,180252,1624888,16258376,178877832,2146674136,27907332272,390705042288,5860585983856,93769421948432,1594080384922656,28693447925921632 ⋆ E.g.f.: exp(x + x ^ 2 / 2) / (1 - x). • a(n)=n! + (sum(m=0..n, sum(k=1..m, (binomial(k,m - k) * 2 ^ (k - m)) / k!))) * n!. [From Vladimir Kruchinin, Jul 02 2011] •
► [A052517] 0,0,2,6,22,100,548,3528,26136,219168,2053152,21257280,241087680,2972885760,39605518080,566931294720,8678326003200,141468564787200,2446811181158400,44753976117043200,863130293635276800 ⋆ Number of ordered pairs of cycles over all n - permutations having two cycles. • a(n) = Sum _{ k=1..n - 1 } 2 * k * |S1(n - 1,k)| = 2 * |S1(n,2)|. - _ Olivier Gérard _ , Oct 23 2012 •
► [A000140] 1,1,2,6,22,101,573,3836,29228,250749,2409581,25598186,296643390,3727542188,50626553988,738680521142,11501573822788,190418421447330,3344822488498265,62119523114983224,1214967840930909302,24965661442811799655,538134522243713149122 ⋆ Kendall - Mann numbers: the most common number of inversions in a permutation on n letters is floor(n * (n - 1) / 4); a(n) is the number of permutations with this many inversions. • a(n + 1) / a(n) = n - 1 / 2 + O(1 / n ^{ 1 - epsilon }) as n – > infinity (compare with A008302, A181609, A001147). - _ Mikhail Gaichenkov _ , Apr 11 2014 •
► [A309579] 2,6,22,102,582,3942,30822,272742,2691942,29303142,348637542,4499984742,62618845542,934401757542,14882928349542,252007880413542,4520257017565542,85616990623453542,1707551662741213542,35768179777214173542,785101998295619293542,18019779824218937053542 ⋆ Maximum principal ratio of a strongly connected digraph on n nodes. • a(n) = (2 / 3) * (n - 1)! * (n / (n - 1) + (1 / (n - 1)!) * Sum _{ i=1..n - 3 } i!). •
► [A218531] 1,1,2,6,22,105,675,4872,40614,403704,4342080,50457000,631548456,8484089328,121882518576,1865935562400,30341974222944,522466493255424,9499883854364928,181927524046316544,3713847873452280000,80378118226450517760,1816649795206970760960,42807228653571471429120 ⋆ The maximal number of solutions for a given row of a skyscraper puzzle of size n X n. • a(n + 1) is the maximum over all u, v of Sum _{ k=1..n } binomial(n,k) * c(k,u - 1) * c(n - k,v - 1), where c(l,m) is an unsigned Stirling number of the first kind (see A132393). •
► [A129535] 2,6,22,106,630,4394,35078,315258,3149494,34620010,415222566,5395737242,75516784982,1132471183626,18115911832390,307919970965434,5541804787940598,105282261866132138,2105441434230129254,44210612765653749210,972564180363044943766 ⋆ Number of permutations of 1,...,n with at least one pair of adjacent consecutive entries (i.e., of the form k(k + 1) or (k + 1)k), n >= 2. • a(n) = n! - Sum _{ k=1..n } ((- 1) ^ (n - k) * k! * Sum _{ i=0..n - k } binomial(i + k - 1, k - 1) * binomial(k, n - i - k)), n > 0. - _ Vladimir Kruchinin _ , Sep 08 2010 •
► [A111280] 1,2,6,22,113,431,1584,5920,22214,83239,311777,1167902,4375090,16389450,61395989,229993639,861572476,3227511492,12090486122,45291815419,169666341761,635582108218,2380935499534,8919152662622,33411776268873 ⋆ Number of permutations avoiding the patterns { 4231, 4321, 35142, 45312, 42513, 45132, 35412, 45213, 43512, 456123, 351624, 451623, 356124 } ; number of strong sorting class based on 4231. • a(n) = 4 * a(n - 1) - 2 * a(n - 2) + 4 * a(n - 3) - a(n - 5). •
► [A370525] 0,0,0,1,2,6,22,114,696,4923,39612,357900,3588836,39556420,475392840,6187284605,86701097310,1301467245330,20835850494474,354382860600678,6381494425302864,121290065781743383,2426510081356069016,50969474697328055064,1121571023472780698152 ⋆ Number of permutations of [n] having exactly one adjacent 3 - cycle. • a(n) = Sum _{ k=0..floor(n / 3) - 1 } (- 1) ^ k * (n - 2 * k - 2)! / k!. •
► [A290954] 1,2,6,23,65,177,506,1551,5041,17049,59131,208469,743491,2675189,9695778,35358815,129646177,477640361,1767265159,6564122733,24466269715,91482566757,343059617231,1289904151413,4861946406095 ⋆ The number of permutations in S _ n for which the number of reduced words is minimized with respect to the numbers of braid and commutation classes: |R(w)| = |B(w)| + |C(w)| - 1. • a(1) = 1, a(2) = 2, and a(n) = C(n) + (n ^ 3 - 3n ^ 2 + 8n - 21) / 3 for n > 2, where C(n) is the n - th Catalan number. •
► [A217200] 2,6,23,78,207,458,891,1578,2603,4062,6063,8726,12183,16578,22067,28818,37011,46838,58503,72222,88223,106746,128043,152378,180027 ⋆ Number of permutations in S _{ n + 2 } containing an increasing subsequence of length n. • a(0) = 2, a(n) = 3 + n + n ^ 2 / 2 + n ^ 3 + n ^ 4 / 2 for n>0. •

► [A303071] 1,2,6,23,90,362,1491,6225,26242,111479,476466,2046464,8825559,38191467,165751529,721177328,3144703234,13739010855,60127642329,263545670385,1156732481150,5083320593976,22364017244278,98491038664903,434160710647831 ⋆ a(n) = [x ^ n] (1 / (1 - x)) * Product _{ k>=1 } (1 + x ^ k) ^ n. ● a(n) = [x ^ n] (1 / (1 - x)) * exp(n * Sum _{ k>=1 } (- 1) ^ (k + 1) * x ^ k / (k * (1 - x ^ k))). ●

► [A326355] 1,1,2,6,23,93,360,1312,4541,15111,48854,154674,482355,1487905,4553684,13857492,41998265,126912075,382702050,1152300166,3465813071,10416313221,31288785152,93950241096,282026883573 ⋆ Number of permutations of length n with at most two descents. ● a(n) = 3 ^ n - n * 2 ^ n + n ^ 2 / 2 - n / 2. - _ R. J. Mathar _ , Sep 25 2019 ●

► [A370285] 1,2,6,23,94,392,1659,7107,30734,133880,586576,2582142,11411371,50597900,224986467,1002867878,4479814606,20049099908,89878609344,403521966942,1814102538624,8165526187128,36794746597494,165968135843522,749314496125451 ⋆ Coefficient of x ^ n in the expansion of ((1 + x) ^ 2 + x ^ 3) ^ n. ● a(n) = Sum _{ k=0..floor(n / 3) } binomial(n,k) * binomial(2 * n - 2 * k,n - 3 * k). ●

► [A371827] 1,2,6,23,94,392,1680,7387,33110,150905,698996,3287550,15685420,75877427,371994692,1847450970,9290557158,47291312897,243574276884,1268915237141,6683909556420,35585631836229,191433293140656,1040197718292138,5707318227692796 ⋆ a(n) = Sum _{ k=0..floor(n / 3) } n ^ k * binomial(2 * n - 2 * k,n - 3 * k). ● a(n) = [x ^ n] 1 / ((1 - x - n * x ^ 3) * (1 - x) ^ n). ●

► [A134064] 1,2,6,23,96,407,1716,7163,29616,121487,495276,2009603,8124936,32761367,131834436,529712843,2125993056,8525430047,34166159196,136858084883,548012945976,2193794127527,8780404589556,35137304693723,140596281975696 ⋆ Let P(A) be the power set of an n - element set A. Then a(n) = the number of pairs of elements { x,y } of P(A) for which either 0) x and y are intersecting but for which x is not a subset of y and y is not a subset of x, or 1) x and y are intersecting and for which either x is a proper subset of y or y is a proper subset of x, or 2) x = y. ● a(n) = (1 / 2)(4 ^ n - 3 ^ n + 2 ^ n + 1) = 3 * StirlingS2(n + 1,4) + 2 * StirlingS2(n + 1,3) + StirlingS2(n + 1,2) + 1. ● a(n) = C(2 ^ n + 1,2) - (1 / 2)(3 ^ n - 1) = StirlingS2(2 ^ n + 1,2 ^ n) - StirlingS2(n + 1,3) - StirlingS2(n + 1,2). - _ Ross La Haye _ , Jan 21 2008 ●

► [A111283] 1,2,6,23,96,409,1751,7505,32176,137956,591501,2536132,10873981,46623553,199904321,857114814,3674987126,15756967635,67559972476,289671844661,1242004318751,5325249092137,22832672531956,97897943538708 ⋆ Number of permutations avoiding the patterns { 4321, 45132, 45231, 35412, 53412, 45213, 43512, 45312, 456123, 451623, 356124 } ; number of strong sorting class based on 4321. ● a(n)=4a(n - 1) + a(n - 2) + a(n - 3) - 4; n>=4. ●

► [A374165] 1,1,2,6,23,97,418,1800,7717,32969,140558,598590,2547851,10842145,46133086,196287336,835152025,3553338593,15118441034,64324630854,273682864751,1164442223761,4954368527338,21079421416440,89686912218205 ⋆ Expansion of g.f. (1 - x) * (1 - 2 * x)(1 - 4 * x) / (1 - 8 * x + 20 * x ^ 2 - 18 * x ^ 3 + 3 * x ^ 4). ● a(n) = 8 * a(n - 1) - 20 * (n - 2) + 18 * a(n - 3) - 3 * a(n - 4) for n > 3. ●

► [A370183] 1,2,6,23,98,432,1929,8689,39442,180248,828376,3824757,17727989,82438852,384429751,1797017598,8417950626,39506701508,185718513144,874346516454,4121841403488,19454625634936,91924347974883,434783188981384,2058320844378109 ⋆ Coefficient of x ^ n in the expansion of ((1 + x) * (1 + x + x ^ 3)) ^ n. ● a(n) = Sum _{ k=0..floor(n / 3) } binomial(n,k) * binomial(2 * n - k,n - 3 * k). ●

► [A242586] 1,2,6,23,98,437,1995,9242,43258,204053,968441,4619012,22120631,106300508,512321438,2475395303,11986728458,58156146653,282640193313,1375737276788,6705522150973,32724071280518,159878425878848 ⋆ Expansion of 1 / (2 * sqrt(1 - x)) * (1 / sqrt(1 - x) + 1 / (sqrt(1 - 5 * x))). ● a(n) = Sum _{ j = 0..n } binomial(2 * j - 1,j) * binomial(n,j). ● a(n) = T(2 * n,n) for n>0, where T(n,k) is triangle of A105477. ● a(n) = hypergeom([1 / 2, - n],[1], - 4) / 2 + 1 / 2. - _ Peter Luschny _ , May 18 2014 ● a(n) = [x ^ n] (x + 1 / (1 - x)) ^ n. ● a(0) = 1, a(1) = 2 and n * a(n) = 3 * (2 * n - 1) * a(n - 1) - 5 * (n - 1) * a(n - 2) - 1 for n >= 2. ●

► [A233106] 1,2,6,23,99,452,2136,10313,50469,249062,1235466,6147803,30650439,152986472,764135196,3818284493,19084248009,95399716682,476934013326,2384476356383,11921800651179,59607259863692,298031069141856 ⋆ Number of n X 1 0..5 arrays with no element x(i,j) adjacent to value 5 - x(i,j) horizontally or vertically, top left element zero, and 1 appearing before 2 3 and 4, and 2 appearing before 3 in row major order. ● a(n) = (75 + 10 * 3 ^ n + 3 * 5 ^ n) / 120. ●

► [A133656] 1,2,6,23,99,456,2199,10962,56033,292094,1546885,8299058,45010492,246377362,1359339710,7551689783,42206697209,237156951618,1338917298708,7591380528489,43207023511013,246773061257046,1413889039642479,8124356140582768,46807462792903984 ⋆ Number of below - diagonal paths from (0,0) to (n,n) using steps (1,0), (0,1) and (2k - 1,1), k a positive integer. ● a(n) = sum(k=0..n, binomial(n + k,n) * sum(j=0..k + n + 1, binomial(j, - n - 3 * k + 2 * j - 2) * (- 1) ^ (n + k - j + 1) * binomial(n + k + 1,j))) / (n + 1). - _ Vladimir Kruchinin _ , Oct 11 2011 ●

► [A263576] 0,1,2,6,23,101,490,2597,14926,92335,610503,4288517,31848677,249044068,2043448968,17540957166,157108128963,1464813176354,14187155168782,142469605397465,1480903718595721,15908940627242898,176382950500197589,2015650339677868116 ⋆ Stirling transform of Fibonacci numbers (A000045). ● a(n) = (B _ n(phi) - B _ n(1 - phi)) / sqrt(5), where B _ n(x) is n - th Bell polynomial. ●

► [A370196] 1,2,6,23,102,477,2259,10733,51174,245156,1180381,5709387,27723315,135055845,659744973,3230479173,15850993126,77918426928,383646423564,1891715752242,9340099603677,46170434726054,228479085858447,1131770152854441,5611302030239667 ⋆ Coefficient of x ^ n in the expansion of ((1 + x) ^ 2 * (1 + x ^ 3)) ^ n. ● a(n) = Sum _{ k=0..floor(n / 3) } binomial(n,k) * binomial(2 * n,n - 3 * k). ●

► [A370213] 1,2,6,23,102,477,2265,10831,52134,252581,1230831,6027012,29630793,146162525,723042585,3585576123,17819138214,88723077165,442503268107,2210287317913,11055220684527,55362552116104,277553123875572,1392884816721228,6996589905913737 ⋆ Coefficient of x ^ n in the expansion of ((1 + x) ^ 2 / (1 - x ^ 3)) ^ n. ● a(n) = Sum _{ k=0..floor(n / 3) } binomial(n + k - 1,k) * binomial(2 * n,n - 3 * k). ●

► [A098746] 1,1,2,6,23,102,495,2549,13682,75714,428882,2474573,14492346,85926361,514763279,3111119358,18946375767,116147683902,716179441293,4438862153246,27638747494178,172805469880497,1084462349973559,6828717036765622,43132158190994223 ⋆ Number of permutations of [1..n] which avoid 4231 and 42513. ● a(n) is the upper left term in M ^ n, with sum of top row terms = a(n + 1). Example: top row of M ^ 3 = (6, 11, 5, 1), where a(3) = 6 and a(4) = 23 = (6 + 11 + 5 + 1). (End) ●

► [A301897] 1,2,6,23,103,511,2719,15205,88197,526018,3206206,19885911,125107063,796453594,5121305414,33213428285,216998830397,1426936199824,9436710005524,62723077297135,418784925848463,2807458708620337,18889686239933521,127520180043751313,863473397167656913 ⋆ Number of permutations b of length n that satisfy the Diaconis - Graham inequality I _ n(b) + EX _ n(b) <= D _ n(b) with equality. ● a(n) <= 1 + Sum _{ m=2..n } ((m - 1)! * Sum _{ k=1..m - 1 } (2 / k) - Sum _{ k=1..m - 1 } (k - 1)! * (m - k - 1)!). ● a(n) / n! = O(log(n) / n). ● a(n) = binomial(2 * n,n) / (n + 1) + Sum _{ k=1..n - 2 } Sum _{ j=1..n - 1 - k } binomial(n,k - 1) * binomial(n - 1,k + j) * binomial(n - k + j - 1,j - 1) * (1 / j). - _ Michael D. Weiner _ , Jun 30 2020 ● a(n) = 2 * a(n - 1) + Sum _{ k=0..n - 3 } (a(k + 2) * a(n - k - 1) + ((Sum _{ j=0..k } a(j) * a(k - j + 1)) - 3 * a(k + 2) + 4 * a(k + 1)) * a(n - k - 2)), with a(0) = 0, a(1) = 1. ● a(n) = 1 + Sum _{ k=1..n - 1 } ((- 2) ^ (n - k - 1) / (n - k)) * binomial(n, k - 1) * JacobiP(n - k - 1, 2 * k - 2 * n + 1, k; 0), where JacobiP(n, a, b; x) is the Jacobi polynomial. (End) ● a(n) = R(n - 1, 0) for n > 0 where R(n, q) = Sum _{ j=0..q + (q mod 3) + 1 } R(n - 1, j) for n > 0, q >= 0 with R(0, q) = 1 for q >= 0 (proved by Terence Tao, see Links section). - _ Mikhail Kurkov _ , Aug 01 2023 ●

► [A022558] 1,1,2,6,23,103,512,2740,15485,91245,555662,3475090,22214707,144640291,956560748,6411521056,43478151737,297864793993,2059159989914,14350039389022,100726680316559,711630547589023,5057282786190872,36132861123763276,259423620328055093 ⋆ Number of permutations of length n avoiding the pattern 1342. ● a(n) = (7 * n ^ 2 - 3 * n - 2) / 2 * (- 1) ^ (n - 1) + 3 * Sum _{ i=2..n } 2 ^ (i + 1) * (2 * i - 4)! / (i! * (i - 2)!) * binomial(n - i + 2, 2) * (- 1) ^ (n - i). ●

► [A005802] 1,1,2,6,23,103,513,2761,15767,94359,586590,3763290,24792705,167078577,1148208090,8026793118,56963722223,409687815151,2981863943718,21937062144834,162958355218089,1221225517285209,9225729232653663,70209849031116183,537935616492552297 ⋆ Number of permutations in S _ n with longest increasing subsequence of length <= 3 (i.e., 1234 - avoiding permutations); vexillary permutations (i.e., 2143 - avoiding). ● a(n) = 2 * Sum _{ k=0..n } binomial(2 * k, k) * (binomial(n, k)) ^ 2 * (3 * k ^ 2 + 2 * k + 1 - n - 2 * k * n) / ((k + 1) ^ 2 * (k + 2) * (n - k + 1)). ● a(0) = 1, a(1) = 1, (n ^ 2 + 8 * n + 16) * a(n + 2) = (10 * n ^ 2 + 42 * n + 41) a(n + 1) - (9 * n ^ 2 + 18 * n + 9) a(n). - Alec Mihailovs (alec(AT)mihailovs.com), Aug 14 2005 ● a(n) = Sum _{ k=0..n } binomial(2k,k) * binomial(n + 1,k + 1) * binomial(n + 2,k + 1) / ((n + 1) ^ 2 * (n + 2)). [Conway and Guttmann, Adv. Appl. Math. 64 (2015) 50] ● a(n) = hypergeom([1 / 2, - 1 - n, - n], [2, 2], 4) / (n + 1). - _ Vaclav Kotesovec _ , Jun 07 2021 ●

► [A053488] 0,1,2,6,23,103,535,3153,20676,149148,1172343,9960085,90864801,885278605,9167936406,100508961982,1162366436355,14136151459043,180287711599455,2405321659729837,33495442060505752,485880832780748932 ⋆ E.g.f.: exp(exp(sinh(x)) - 1) - 1. ● a(n) = Sum _{ m=1..n } (Sum _{ k } 1 / (2 ^ k * k!) * Sum _{ i=0..k } (- 1) ^ i * binomial(k,i) * (k - 2 * i) ^ n) * stirling2(k,m),k,m,n)), n>0. - _ Vladimir Kruchinin _ , Sep 10 2010 ●

► [A117106] 1,1,2,6,23,104,530,2958,17734,112657,750726,5207910,37387881,276467208,2097763554,16282567502,128951419810,1039752642231,8520041699078,70840843420234,596860116487097,5089815866230374,43886435477701502,382269003235832006,3361054683237796748 ⋆ Number of permutations in S _ n avoiding 21 { bar 3 } 54 (i.e., every occurrence of 2154 is contained in an occurrence of a 21354). ● a(n) = a(n - 1) * (11 * n ^ 2 + 11 * n - 6) / ((n + 4)(n + 3)) + a(n - 2) * (n - 3) * (n - 2) / ((n + 4) * (n + 3)). ● a(n) = 24 / (((n - 1) * n ^ 2 * (n + 1) * (n + 2))) * Sum _{ j=0..n } binomial(n,j + 2) * binomial(n + 2,j) * binomial(n + j + 2,j + 1) ●

► [A030266] 0,1,1,2,6,23,104,531,2982,18109,117545,808764,5862253,44553224,353713232,2924697019,25124481690,223768976093,2062614190733,19646231085928,193102738376890,1956191484175505,20401540100814142,218825717967033373,2411606083999341827 ⋆ Shifts left under COMPOSE transform with itself. ● a(n) = [x ^ (n - 1)] [1 + A(x)] ^ n / n for n>=1 with a(0)=0; i.e., a(n) equals the coefficient of x ^ (n - 1) in [1 + A(x)] ^ n / n for n >= 1. - _ Paul D. Hanna _ , Nov 18 2008 ● a(n,m) = Sum _{ k=0..n } m * C(n + m,k) / (n + m) * a(n - k,k). ●

► [A113227] 1,1,2,6,23,105,549,3207,20577,143239,1071704,8555388,72442465,647479819,6083742438,59885558106,615718710929,6595077685263,73424063891526,847916751131054,10138485386085013,125310003360265231 ⋆ Number of permutations avoiding the pattern 1 - 23 - 4. ● a(n) = the upper left term in M ^ n, M = the production matrix: ●

► [A125273] 1,1,2,6,23,106,567,3434,23137,171174,1376525,11934581,110817423,1095896195,11487974708,127137087319,1480232557526,18075052037054,230855220112093,3076513227516437,42686898298650967,615457369662333260 ⋆ Eigenseque of triangle A085478: a(n) = Sum _{ k=0..n - 1 } A085478(n - 1,k) * a(k) for n > 0 with a(0) = 1. ● a(n) = Sum _{ k=0..n - 1 } binomial(n + k - 1, n - k - 1) * a(k) for n > 0 with a(0) = 1. ●

► [A277176] 1,2,6,23,106,572,3564,25377,204446,1844876,18465556,203179902,2438366836,31699511768,443795839192,6656947282725,106511191881270,1810690391626380,32592427526913540,619256124778620450,12385122502136529420,260087572569333384840 ⋆ Exponential convolution of Catalan numbers and factorial numbers. ● a(n) = Sum _{ i=0..n } binomial(n,i) * C(i) * (n - i)!. ●

► [A000772] 1,1,2,6,23,107,583,3633,25444,197620,1684295,15618141,156453857,1683050189,19344093070,236497985706,3063827565763,41916787157011,603799270943519,9132945141812301,144708157060239704,2396568154933265024,414036

36316192616995 ⋆ E.g.f. exp(tan(x) + sec(x) - 1). • a(n) = D ^ n(exp(x)) evaluated at x = 0, where D is the operator (1 + x + x ^ 2 / 2!) * d / dx. Cf. A000110 and A094198. See also A185422. - _ Peter Bala _ , Nov 25 2011 •

▶ [A007555] 1,1,2,6,23,107,586,3690,26245,207997,1817090,17345358,179595995,2004596903,23992185226,306497734962,4162467826729,59882101858777,909688617178178,14551535460258966,244477068964113407 ⋆ Number of standard paths of length n in composition poset. • a(n) is asymptotic to n!(c1(n + 1 + c2) + c2) / ((sqrt(2)c2) ^ n * c1 ^ c1 * c2 ^ 2) where c1=1 + sqrt(2), c2=log(c1). •

▶ [A101053] 1,2,6,23,107,587,3725,26952,219756,1998951,20105485,221838905,2666280457,34689290378,485840964614,7288997427755,116634438986227,1982868327635663,35692311974248093,678159760252918824,13563246929216611852,284828660383650564 3 ⋆ a(n) = n! * Sum _{ k=0..n } Bell(k) / k! (cf. A000110). • a(0) = 1; a(n) = Sum _{ k=1..n } ((k - 1)! + 1) * binomial(n - 1,k - 1) * a(n - k). - _ Seiichi Manyama _ , Jul 14 2022 •

▶ [A155857] 1,2,6,23,107,590,3786,27821,230869,2137978,21873854,245151555,2987967551,39358156310,557259550034,8440866957273,136211005966889,2333068710452146,42276699542130166,808068680469402095 ⋆ Row sums of triangle A155856. • a(n) = Sum _{ k=0..n } binomial(2 * n - k, k) * (n - k)!. • a(n) = Sum _{ k=0..n } binomial(n + k, 2 * k) * k!. - _ Paul Barry _ , May 28 2009 • a(n) = (n + 1) * a(n - 1) - (n - 3) * a(n - 2) - a(n - 3). - _ R. J. Mathar _ , Nov 15 2012 •

▶ [A117226] 1,1,2,6,23,110,630,4204,32054,274914,2619692,27459344,313990182,3889585408,51888955808,741668212080,11307669002720,183174676857608,3141820432768752,56882461258572976,1084056190235653304,21692744773505849952,454758269790599361968 ⋆ Number of permutations of [n] avoiding the consecutive pattern 1243. • a(n) = Sum _{ m = 0..floor((n - 1) / 3) } (- 3) ^ m * (1 / 3) _ m * binomial(n, 3 * m + 1) * a(n - 3 * m - 1) for n >= 1 with a(0) = 1. (End) •

▶ [A349087] 1,1,2,6,23,115,690,4830,38641,347769,3477690,38254590,459055079,5967716027,83548024378,1253220365670,20051525850721,340875939462257,6135766910320626,116579571296091894,2331591425921837879,48963419944358595459,1077195238775889100098 ⋆ a(n) = n! * Sum _{ k=0..floor(n / 4) } (- 1) ^ k / (4 * k)!. • a(n) = round(c * n!), where c = 0.9583581... = A346440. •

▶ [A370508] 1,1,2,6,23,116,702,4944,39722,358578,3593664,39595440,475746474,6190838544,86740334160,1301939398080,20842001737224,354469125185880,6382790173842480,121310821042966800,2426863248540057480,50975836645480342560,1121691979824460425360 ⋆ Expansion of Sum _{ k>=0 } k! * (x * (1 - x ^ 3)) ^ k. • a(n) = Sum _{ k=0..floor(n / 4) } (- 1) ^ k * (n - 3 * k)! * binomial(n - 3 * k,k). •

▶ [A370670] 1,1,2,6,23,116,702,4945,39726,358596,3593759,39596032,475750740,6190873441,86740653730,1301942638170,20842037779079,354469561697988,6382795892548194,121310901632237857,2426864464216669694,50975856191753357928,1121692313538562441535 ⋆ Expansion of Sum _{ k>=0 } k! * (x / (1 + x ^ 3)) ^ k. • a(n) = Sum _{ k=0..floor(n / 3) } (- 1) ^ k * (n - 3 * k)! * binomial(n - 2 * k - 1,k). • a(n) = n * a(n - 1) + a(n - 3) + (n - 6) * a(n - 4) + 2 * a(n - 6) for n > 6. •

▶ [A177253] 1,1,2,6,23,118,714,5016,40201,362163,3623772,39876540,478639079,6223394516,87138394540,1307195547720,20916564680761,355600269756485,6401066270800350,121643180731849810,2432546364331038479,51084540451761077514,1123879093137556106358 ⋆ Number of permutations of [n] having no adjacent 4 - cycles, i.e., no cycles of the form (i, i + 1, i + 2, i + 3). • a(n) = Sum _{ j =0..floor(n / 4) } (- 1) ^ j * (n - 3 * j)! / j!. • a(n) - n * a(n - 1) = 3a(n - 4) + 4 * (- 1) ^{ n / 4 } if 4|n; a(n) - n * a(n - 1) = 3a(n - 4) otherwise. •

▶ [A358609] 1,1,2,6,23,119,718,5034,40297,362761,3628082,39911766,478961303,6226658039,87174663118,1307634456234,20922310926697,355681201437961,6402286531064882,121643792774375766,2432881085865713303,51090586490508002039,1123994325491076615118 ⋆ a(n) = Sum _{ k=0..floor(n / 4) } (- 1) ^ k * (n - 4 * k)!. • a(n) = n * a(n - 1) - a(n - 4) + n * a(n - 5) for n > 4. •

▶ [A099732] 1,2,6,24,24,72,144,1152,1296,2304,6912,82944,82944,165888,497664,7962624,15925248,47775744,191102976,191102976,573308928,1146617856,13759414272,13759414272,27518828544 ⋆ Largest order of a solvable subgroup of the symmetric group S _ n. • a(n) <= 24 ^ ((n - 1) / 3). Equality holds iff n is a power of 4. •

▶ [A232981] 1,1,2,6,24,24,144,1008,8064,72576,72576,798336,9580032,124540416,1743565824,1743565824,27897053184,474249904128,8536498274304,162193467211776,162193467211776,3406062811447296,74933381851840512,1723467782592331776,41363226782215962624 ⋆ The Gauss factorial n _ 5!. • a(n) = a(n - 1) if 5 | n; otherwise n * a(n - 1). • a(n) = n! / (5 ^ floor(n / 5) * floor(n / 5)!). (End) •

▶ [A319205] 1,2,6,24,29,54,234,1704,1713,1794,2694,13584,13597,13766,16314,57264,57281,57570,63078,173544,173565,174006,184170,428568,428593 ⋆ a(n) = 1 * 2 * 3 * 4 + 5 * 6 * 7 * 8 + 9 * 10 * 11 * 12 + 13 * 14 * 15 * 16 + 17 * 18 * 19 * 20 + ... + (up to n). • a(n) = Sum _{ i=1..floor(n / 4) } (4 * i)! / (4 * i - 4)! + Sum _{ j=1..3 } (1 - sign((n - j) mod 4)) * (Product _{ i=1..j } n - i + 1). • a(n) = a(n - 1) + 5 * a(n - 4) - 5 * a(n - 5) - 10 * a(n - 8) + 10 * a(n - 9) + 10 * a(n - 12) - 10 * a(n - 13) - 5 * a(n - 16) + 5 * a(n - 17) + a(n - 20) - a(n - 21) for n>21. •

▶ [A066332] 1,1,2,6,24,30,180,210,1680,1890,2100,2310,27720,30030,420420,450450,480480,510510,9189180,9699690,193993800,203693490,213393180,223092870,5354228880 ⋆ a(1)=1; for n > 0, a(n + 1) = rad(a(n)) * n where rad=A007947. • a(1)=1; for n > 1, a(n) = (n - 1) * Product _{ p prime < (n - 1) } p. - _ Pedro Caceres _ , Mar 12 2018 •

▶ [A257546] 1,1,2,6,24,40,80,140,280,504,1008,1848,3696,6864,13728,25740,51480,97240,194480,369512,739024,1410864,2821728,5408312,10816624 ⋆ Number of permutations of length n such that numbers at odd positions are monotone and numbers at even positions are also monotone. • a(n) = 4 * binomial(n,floor(n / 2))) for n > 4; a(n) = n! for n=0,1,2,3,4. • a(n + 2) = (4 * (1 + n) * a(n) + 2 * a(n + 1)) / (n + 3) for n >= 4. (End) •

▶ [A004306] 1,1,2,6,24,44,80,144,264,484,888,1632,3000,5516,10144,18656,34312,63108,116072,213488,392664,722220,1328368,2443248,4493832 ⋆ Rook polynomials. • a(n) = 2 * a(n - 1) - a(n - 4); a(0)=1, a(1)=1, a(2)=2, a(3)=6, a(4)=24, a(5)=44, a(6)=80, a(7)=144. - _ Harvey P. Dale _ , Dec 13 2011 •

▶ [A113904] 1,2,6,24,48,108,162,225,297,459,639,837,1053,1170,1296,1566,1854,2160,2322,2493,2853,3231,3429,3843,4275 ⋆ Starting with 1, each number is the previous number plus the product of the index number and the sum of the digits of the previous number. • a(n) = a(n - 1) + (n - 1) * s(n - 1), where s(n) stands for the sum of the digits of n. •

▶ [A104114] 1,2,6,24,48,432,1296 ⋆ The order of the smallest solvable group with derived length n. • a(n) >= 2 * a(n - 1). - _ Charles R Greathouse IV _ , May 26 2014 •

▶ [A289161] 0,0,2,6,24,50,114,196,352,540,850,1210,1752,2366,3234,4200,5504,6936,8802,10830,13400,16170,19602,23276,27744 ⋆ Number of 3 - cycles in the n X n black bishop graph. • a(n) = (n - 1) ^ 2 * (2 * n ^ 2 - 4 * n + 3 - 3 * (- 1) ^ n) / 24. • a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 6 * a(n - 3) + 6 * a(n - 5) - 2 * a(n - 6) - 2 * a(n - 7) + a(n - 8). •

▶ [A087645] 2,6,24,72,172,352,646,1094,1742,2642,3852,5436,7464,10012,13162,17002,21626,27134,33632,41232,50052,60216,71854,85102,100102 ⋆ Third column of A071223. • a(n) = (3 * n ^ 4 - 10 * n ^ 3 + 9 * n ^ 2 - 2 * n + 24) / 12. - _ Vladeta Jovovic _ , Oct 26 2003 •

▶ [A002526] 1,1,2,6,24,78,230,675,2069,6404,19708,60216,183988,563172,1725349,5284109,16177694,49526506,151635752,464286962,1421566698,4352505527,13326304313,40802053896,124926806216 ⋆ Number of permutations of length n within distance 3 of a fixed permutation. • a(0)=1, a(1)=1, a(2)=2, a(3)=6, a(4)=24, a(5)=78, a(6)=230, a(7)=675, a(8)=2069, a(9)=6404, a(10)=19708, a(11)=60216, a(12)=183988, a(13)=563172, a(n) = 2 * a(n - 1) + 2 * a(n - 2) + 10 * a(n - 4) + 8 * a(n - 5) - 2 * a(n - 6) - 16 * a(n - 7) - 10 * a(n - 8) - 2 * a(n - 9) + 4 * a(n - 10) + 2 * a(n - 11) + 2 * a(n - 13) + a(n - 14). - _ Harvey P. Dale _ , Jun 22 2011 •

▶ [A117665] 0,2,6,24,80,210,462,896,1584,2610,4070,6072,8736,12194,16590,22080,28832,37026,46854,58520,72240,88242,106766,128064,152400 ⋆ n times the n - th n - gonal number. • a(n) = n (n + 1) (n ^ 2 - 3 n + 4) / 2. - corrected by _ Eric Rowland _ , Aug 15 2017 • a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n > 4. •

▶ [A275206] 0,0,0,2,6,24,80,286,994,3536,12576,45220,163372,594320,2172768,7983990,29464010,109174560,405990464,1514797020,5669004692,21275014800,80047213792,301892460012,1141068949396 ⋆ Expansion of (A(x) ^ 2 - A(x ^ 2)) / 2 where A(x) = A000108(x) - 1. • a(n) = (- 2 * c(n) + c(n + 1) - [(n mod 2) == 0] * c(n / 2)) / 2 for n >= 1, where c = A000108. • a(n) = (1 / n) * (binomial(2 * n, n - 2) - [(n mod 2) == 0] * binomial(n, (n / 2) - 1)) for n >= 2. (End) •

▶ [A003759] 0,2,6,24,86,320,1176,4340,15994,58970,217388,801426,2954496,10891960,40153904,148030026,545722366,2011841328,7416784934,27342464080,100799786752,371605023956,1369946288898,5050396829138 ⋆ Number of Hamiltonian cycles in D _ 4 X P _ n. • a(n) = 3 * a(n - 1) + 3 * a(n - 2) - 2 * a(n - 3) + a(n - 4), n>4. •

▶ [A217527] 2,6,24,88,288,864,2432,6528,16896,42496,104448,251904,598016,1400832,3244032,7438336,16908288,38141952,85458944,190316544,421527552,929038336,2038431744,4454350848,9697230848 ⋆ a(n) = 2 ^ (n - 2) * (n - 2) ^ 2 + 2 ^ (n - 1). • a(n) = 6 * a(n - 1) - 12 * a(n - 2) + 8 * a(n - 3). G.f.: - 2 * x ^ 2 * (6 * x ^ 2 - 3 * x + 1) / (2 * x - 1) ^ 3. [_ Colin Barker _ , Oct 17 2012] •

▶ [A226037] 1,2,6,24,88,528,1392,11136,41856,192192,516032,6192384,13270272,185783808,511526400,1163742720,4403449344,79262088192,199280729088,3985614581760,8463108648960,19276630732800,54618972549120,1310855341178880,2751134770298880 ⋆ a(n) = Sum _{ c in P(n) } lcm(c) where P(n) is the set of all subsets of { 1,2,...,n } . • a(n) = Sum _{ k=0..n } Sum _{ c in binomial(n,k) } lcm(c) where C(n,k) are the combinations of n with size k. •

▶ [A192466] 2,6,24,90,352,1386,5504,21930,87552,349866,1398784,5593770,22372352,89483946,357924864,1431677610,5726666752,22906579626,91626143744,366504225450,1466016202752,5864063412906,23456250855424,93824997829290 ⋆ Coefficient of x in the reduction by x ^ 2 - >x + 2 of the polynomial p(n,x)=1 + x ^ n + x ^ (2n). • a(n) = (- 1 - (- 1) ^ n + 2 ^ n + 4 ^ n) / 3. • a(n) = 6 * a(n - 1) - 7 * a(n - 2) - 6 * a(n - 3) + 8 * a(n - 4) for n>4. •

▶ [A374598] 1,2,6,24,94,372,1508,6192,25638,106908,448356,1889040,7989676,33902504,144259944,615330784,2630199942,11263613484,48315367076,207556060816,892819376964,3845161246424,16578320962104,71548426931616,309070048163676 ⋆ Expansion of 1 / sqrt(1 - 4 * x - 8 * x ^ 3). • a(n) = Sum _{ k=0..floor(n / 3) } 2 ^ k * binomial(n - 2 * k,k) * binomial(2 * (n - 2 * k),n - 2 * k). •

▶ [A115220] 0,0,0,0,1,2,6,24,95,380,1520,6072,24253,96870,386910,1545368,6172403,24653392,98468904,393297808,1570883385,6274315690,25060445446,100094728568,399791564311 ⋆ Expansion of x ^ 4 * (1 - 2 * x - 2 * x ^ 2) / (1 - 4 * x + x ^ 4 - 2 * x ^ 5 - 2 * x ^ 6). • a(0)=a(1)=a(2)=a(3)=0,a(4)=1,a(5)=2,a(6)=6; for n>6 a(n) = 4 * a(n - 1) - a(n - 4) + 2 * a(n - 5) + 2 * a(n - 6). - _ Zak Seidov _ , Mar 06 2006 •

▶ [A323260] 0,2,6,24,96,390,1582,6422,26062,105768,429228,1741898,7068978,28687370,116419254,472453328,1917312976,7780851238,31576298030,128143125598,520031215214,2110393854816,8564413235420,34756154117738,141047636989250 ⋆ Number of horizontally convex polyoctagons containing n regular polygons (squares or octagons). • a(n) = 5 * a(n - 1) - 3 * a(n - 2) - 5 * a(n - 3) + 7 * a(n - 4) - a(n - 5) for n>5. - _ Colin Barker _ , Jan 10 2019 •

▶ [A060725] 1,1,2,6,24,96,576,4032,32256,290304,2975616,32731776,392781312,5106157056,71486198784,1070549415936,17128790654976,291189441134592,5241409940422656,99586788868030464,1991897970827821056,41829857387384242176,920256862522453327872 ⋆ E.g.f.: exp(- (x ^ 5 / 5)) / (1 - x). • a(n,k) = n! * floor(floor(n / k)! * k ^ floor(n / k) / exp(1 / k) + 1 / 2) / (floor(n / k)! * k ^ floor(n / k)), k=5, n>=0. - _ Simon Plouffe _ , Feb 18 2011 •

▶ [A094012] 0,1,2,6,24,100,408,1624,6336,24336,92320,346720,1291392,4776512,17562496,64245120,233969664,848748800,3068269056,11057710592,39740405760,142466343936,509572929536,1818872207360,6480018948096 ⋆ Expansion of x * (1 - 6 * x + 10 * x ^ 2) / (1 - 4 * x + 2 * x ^ 2) ^ 2. • a(n) = (n / 4) * ((3 + 2 * sqrt(2)) * (2 - sqrt(2)) ^ n + (3 - 2 * sqrt(2)) * (2 + sqrt(2)) ^ n). •

▶ [A141253] 1,2,6,24,100,408,1631,6440,25263,98790,385803,1506156,5881057,22974406,89804910,351279584,1375035208,5386203792,21113167346,82816267480,325055630634,1276635121388,5016837177052,19725798613152,77601159558800 ⋆ Number of permutations that lie in the cyclic closure of Av(132) – i.e., at least one cyclic rotation of the permutation avoids the pattern 132. ● a(n) = n(C(n) - C(n - 1) - ... - C(1)), where C(n) denotes the n - th Catalan number. ●
▶ [A306672] 2,6,24,100,422,1786,7564,32040,135722,574926,2435424,10316620,43701902,185124226,784198804,3321919440,14071876562,59609425686,252509579304,1069647742900,4531100550902,19194049946506,81307300336924,344423251294200,1459000305513722 ⋆ Partial sums of the even Lucas numbers (A014448). ● a(n) = L(0) + L(3) + L(6) + L(9) + ... + L(3n), L(n) = Lucas numbers A000032. ● a(n) = Sum _{ i=0..n } L(3i). ● a(n) = (L(3 * n + 2) - 1) / 2 + 1. ●
▶ [A128652] 1,2,6,24,104,464,2088,9392,42064,187296,828776,3644912,15937776,69317984,300009744,1292654304,5547021728,23715100480,101046014952,429209373296,1817975905456,7680278380512,32368750662320 ⋆ Number of square permutations of length n. ● a(n) = 2 * (n + 2) * 4 ^ (n - 3) - 4 * (2 * n - 5) * C(2 * n - 6,n - 3) for n>=2, a(1)=1. ●
▶ [A094433] 1,1,2,6,24,108,504,2376,11232,53136,251424,1189728,5629824,26640576,126064512,596543616,2822874624,13357986048,63210668544,299116094976,1415432558592,6697898781696,31694797338624,149981391341568,709719564017664 ⋆ a(n) is the left term in M ^ n * [1 0 0], M = the 3 X 3 matrix [1 - 1 0 / - 1 3 - 2 / 0 - 2 2]. ● a(n) = (3 + sqrt(3)) ^ (n - 2) + (3 - sqrt(3)) ^ (n - 2). - Tamas Kalmar - Nagy (integers(AT)kalmarnagy.com), Mar 23 2008 [Corrected by _ R. J. Mathar _ , Mar 28 2010, Jun 02 2010] ●
▶ [A141254] 1,1,2,6,24,110,510,2268,9632,39492,158190,624745,2447808,9552244,37214086,144932760,564676096,2201735552,8592780798,33568042425,131261440720,513747571680,2012524130518,7890178181831,30957296889264 ⋆ Number of permutations that lie in the cyclic closure of Av(123) - i.e., at least one cyclic rotation of the permutation avoids the pattern 123. ● a(n) = n * (C(n) - 2 ^ n + binomial(n,2) + 2) for n >= 4. ●
▶ [A216879] 1,2,6,24,110,540,2772,14704,79974,443594,2499640,14269320,82346004,479604748,2815557264,16643093712,98974828886,591742372068,3554708076858,21444913596408,129870710693976,789237890852160,4811481299622276,29417496447990096,180337119342194820 ⋆ G.f. satisfies: A(x) = sqrt(theta _ 3(x * A(x)) / theta _ 4(x * A(x))). ● a(n) = [x ^ n] (theta _ 3(x) / theta _ 4(x)) ^ ((n + 1) / 2) / (n + 1). ●
▶ [A046646] 1,2,6,24,110,546,2856,15504,86526,493350,2861430,16829280,100134216,601661144,3645533040,22249511328,136657509918,844061090670,5239262085330,32665844580600,204480219795390,1284624902435490 ⋆ Number of certain rooted planar maps. ● a(1)=1; a(n) = 2 * binomial(3 * n - 3, n - 1) / (2 * n - 1) for n >= 2. ●
▶ [A118376] 1,2,6,24,112,568,3032,16768,95200,551616,3248704,19389824,117021824,712934784,4378663296,27081760768,168530142720,1054464293888,6629484729344,41860283723776,265346078982144,1687918305128448,10771600724946944,68941213290561536 ⋆ Number of all trees of weight n, where nodes have positive integer weights and the sum of the weights of the children of a node is equal to the weight of the node. ● a(n) = Sum _{ j=0..(n - 1) / 2 } (- 1) ^ j * 2 ^ (n - j - 1) * C(n,j) * C(2 * n - 2 * j - 2,n - 2 * j - 1) / n. - _ Vladimir Kruchinin _ , Sep 29 2020 ●
▶ [A192088] 2,6,24,114,528,2334,9528,36834,135918,484206,1678152,5694786,19007808,62625054,204215340,660445914,2121665016,6778399914,21557206332,68294432778,215651021484,679023425238,2132750062560,6684084844362,20907052386534 ⋆ Number of permutations of [n] realized by the shift on 3 letters. ● a(n) =3 ^ (n - 2) + sum(psi _ 3(t) * 3 ^ (n - t - 1),t=1..n - 1) - (n - 1) * sum(psi _ 2(t) * 2 ^ (n - t - 1),t=0..n - 1), where psi _ N(t) is the number of primitive words of length t over an N - letter alphabet, expressible in terms of the Möbius function. ●
▶ [A209625] 1,2,6,24,114,600,3372,19824,120422,749848,4760228,30688560,200338740,1321408656,8791205496,58912586784,397228820742,2692522813848,18333530047428,125325068538672,859639878194844 ⋆ G.f. A(x) satisfies A(A(x) - 2 * A(x) ^ 2)=x / (1 - 2 * x) ● a(n)=T(n,1), T(n,m)=1 / 2 * (binomial(n - 1,m - 1) * 2 ^ (n - m) - (sum(k=m + 1..n - 1, T(k,m) * sum(i=k..n, T(n,i) * binomial(k,i - k) * (- 2) ^ (i - k))) + sum(i=m + 1,n, T(n,i) * binomial(m,i - m) * (- 2) ^ (i - m)))), T(n,n)=1. ●
▶ [A054872] 1,1,2,6,24,114,600,3372,19824,120426,749976,4762644,30723792,200778612,1326360048,8842981848,59425117152,402092408346,2737156004376,18732169337604,128806616999184,889479590046108,6165939982059600,42891532191557736,299307319060137504 ⋆ Number of (12345, 13245, 21345, 23145, 31245, 32145) - avoiding permutations. ● a(n) = 2 ^ (n - 1) * (LegendreP _{ n - 1 } (2) - LegendreP _{ n - 3 } (2)) / (2 * n - 3). ●
▶ [A324133] 1,1,2,6,24,114,608,3554,22480,152546,1103200,8456994,68411632,581745250,5183126016,48245682338,467988498064,4720072211938,49400302118560,535546012710434,6000405485933104,69507152958422370,829789019700511040,1020285432332525353 8,1290617530863354787 36 ⋆ Number of permutations of [n] that avoid the shuffle pattern s - k - t, where s = 12 and t = 12. ● a(n) = - 2 ^ (n - 1) + 2 * Sum _{ i = 0..n - 1 } binomial(n - 1,i) * a(i) with a(0) = 1. [It follows from Kitaev's recurrence for C _ n on p. 220 of his paper.] - _ Petros Hadjicostas _ , Oct 30 2019 ● a(n) = Sum _{ j=0..n } Stirling2(n,j) * ceiling(2 ^ (j - 2)). (End) ●
▶ [A128088] 1,2,6,24,115,618,3591,22088,141903,943590,6452490,45159480,322305165,2339100078,17223121350,128428689888,968383277791,7374380672718,56655414930642,438741242896680,3422125459579869,26866961380274598,212191772351034249,1685036376746788392 ⋆ a(n) = Sum _{ k=0..n } A000108(k) * A001263(n + 1,k + 1), where A000108 is the Catalan numbers and A001263 is the Narayana triangle. ● a(n) = Sum _{ k=0..n } C(2k,k) * C(n,k) * C(n + 1,k) / (k + 1) ^ 2. ●
▶ [A228395] 1,2,6,24,116,521,1877,5531,13939,31156,63416,119802,213006,360179,583871,913061,1384277,2042806,2943994,4154636,5754456,7837677,10514681,13913759,18182951 ⋆ The number of permutations of length n sortable by 3 prefix block transpositions. ● a(n) = 1 + (1 / 24) * (3n ^ 6 - 37n ^ 5 + 184n ^ 4 - 441n ^ 3 + 509n ^ 2 - 218n). [_ Ralf Stephan _ , Aug 22 2013] ●
▶ [A007405] 1,2,6,24,116,648,4088,28640,219920,1832224,16430176,157554048,1606879040,17350255744,197553645440,2363935624704,29638547505408,388328781668864,5304452565517824,75381218537805824,1112348880749130752,17014743624340539392,269360902955086379008 ⋆ Dowling numbers: e.g.f.: exp(x + (exp(b * x) - 1) / b) with b=2. ● a(n) = sum of top row terms of M ^ n, M = an infinite square production matrix in which a diagonal of 1's is appended to the right of Pascal's triangle squared; as follows: ● a(n) = exp(- 1 / 2) * Sum _{ k>=0 } (2 * k + 1) ^ n / (2 ^ k * k!). - _ Ilya Gutkovskiy _ , Apr 16 2020 ●
▶ [A228397] 1,2,6,24,118,534,1851,5158,12264,25943,50214,90656,154758,252304,395793,600894,886936,1277433,1800644,2490168,3385574,4533066,5986183,7806534,10064568 ⋆ The number of permutations of length n sortable by 3 reversals. ● a(n) = n! for 0 < n < 4; for n > 3, a(n) = 318 + n * (7 * n ^ 5 - 21 * n ^ 4 - 125 * n ^ 3 - 819 * n ^ 2 + 12862 * n - 42720) / 144. [_ Bruno Berselli _ , Aug 22 2013] ●
▶ [A164871] 1,1,2,6,24,118,644,3622,20366,113686,630464,3481084,19171838,105444400,579547826,3184321642,17493771830,96100287256,527905628552,2899911094078,15929870658308,87506389326742,480692570563526,2640554790693958,14505177373598504 ⋆ The number of permutations of length n that can be sorted by 3 pop stacks in parallel. ● a(n) = 14 * a(n - 1) - 75 * a(n - 2) + 201 * a(n - 3) - 288 * a(n - 4) + 216 * a(n - 5) - 72 * a(n - 6) for n>6. - _ Colin Barker _ , Jul 02 2019 ●
▶ [A263777] 1,1,2,6,24,118,674,4306,29990,223668,1763468,14558588,124938648,1108243002,10115202962,94652608690,905339525594,8829466579404,87618933380020,883153699606024,9028070631668540,93478132393544988,979246950529815364,10368459385853924212 ⋆ Number of inversion sequences avoiding pattern 201 (or 210). ● a(n) = Sum _{ k=0..n - 1 } Sum _{ p= - 1,k - 1 } T(n,k,p), where T(n,k,p) = Sum _{ i= - 1..p } T(n - 1,k,i) + Sum _{ j=p + 1..k } T(n - 1,j,p) with initial conditions T(n,k,p) = 0 if k >= n and T(n,k, - 1) = (n - k) / n * binomial(n - 1 + k,k). (eqn. (4) and (5) in Corteel link) - _ Gheorghe Coserea _ , Sep 21 2017 ●
▶ [A369098] 0,0,0,0,1,2,6,24,118,714,5016,40200,362163,3623772,39876540,478639080,6223394516,87138394540,1307195547720,20916564680760,355600269756485,6401066270800350,121624180731849810,2432546364331038480,51084540451761077514 ⋆ Number of permutations of [n] having exactly one adjacent 4 - cycle. ● a(n) = Sum _{ k=0..floor(n / 4) - 1 } (- 1) ^ k * (n - 3 * k - 3)! / k!. ●
▶ [A047889] 1,1,2,6,24,119,694,4582,33324,261808,2190688,19318688,178108704,1705985883,16891621166,172188608886,1801013405436,19274897768196,210573149141896,2343553478425816,26525044132374656,304856947930144656 ⋆ Number of permutations in S _ n with longest increasing subsequence of length <= 4. ● a(0)=1, a(1)=1, (n ^ 3 + 16 * n ^ 2 + 85 * n + 150) * a(n + 2) = (20 * n ^ 3 + 182 * n ^ 2 + 510 * n + 428) * a(n + 1) - (64 * n ^ 3 + 256 * n ^ 2 + 320 * n + 128) * a(n). - Alec Mihailovs (alec(AT)mihailovs.com), Aug 14 2005 ●
▶ [A094198] 1,2,6,24,119,702,4795,37183,322486,3091630,32453172,370104159,4555518746,60182704891,849245520581,12746759647944,202753756944382,3406596290534764,60282041591986049,1120554350714688128 ⋆ Number of ways that n boxes with distinct sizes can contain each other under the condition that each box may contain at most three (themselves possibly nested) boxes. Each box is assumed to be large enough to contain any three smaller boxes. ● a(n) = D ^ n(exp(x)) evaluated at x = 0, where D is the operator (1 + x + x ^ 2 / 2! + x ^ 3 / 3!) * d / dx. Cf. A000110 and A000772. - Peter Bala, Nov 25 2011 ●
▶ [A202213] 1,1,2,6,24,119,708,4914,38976,347765,3447712,37598286,447294144,5764747515,80011430240,1189835682714,18873422539776,318085061976105,5676223254661760,106919460527212950,2119973556022047744,44136046410218669055,962630898723772565760 ⋆ Number of permutations of [n] avoiding the consecutive pattern 45321. ● a(n) = Sum _{ m = 0..floor((n - 1) / 4) } (- 4) ^ m * (1 / 4) _ m * binomial(n, 4 * m + 1) * a(n - 4 * m - 1) for n >= 1 with a(0) = 1. (End) ●
▶ [A177523] 1,1,2,6,24,119,709,4928,39144,349776,3472811,37928331,451891992,58324672456,81074690424,1207441809209,19181203110129,323753459184738,5785975294622694,109149016813544376,2167402030585724571,45190632809497874161,987099099863360190632 ⋆ Number of permutations of 1..n avoiding adjacent step pattern up, up, up, up. ● a(n) / n! ~ c * (1 / r) ^ n, where r = 1.007187547786015395418998654... is the root of the equation Sum _{ n>=0 } (r ^ (5 * n) / (5 * n)! - r ^ (5 * n + 1) / (5 * n + 1)!) = 0, c = 1.02806793756750152.... - _ Vaclav Kotesovec _ , Dec 11 2013 ●
▶ [A005395] 0,1,2,6,24,119,711,4981,39903,359537,3598696,39615626,475687487,6187239476,86661001741,1300430722200,20814114415224,353948328666101,6372804626194310,121112786592293964,2422786846761133394,50888617325509644404,1119751494628234263303 ⋆ Leading term of Stirling's approximation to n!, sqrt(2 * Pi) * n ^ (n + (1 / 2)) / e ^ n, rounded up. ● a(n) = ceiling(sqrt(2 * Pi) * n ^ (n + (1 / 2)) / e ^ n). - _ Wesley Ivan Hurt _ , Jun 11 2016 ●
▶ [A358611] 1,1,2,6,24,119,719,5038,40314,362856,3628681,39916081,478996562,6226980486,87177928344,1307670739319,20922749971919,355686949099438,6402367478747514,121645013230903656,2432900700505900681,51090921248959468081,1124000372090658580562 ⋆ a(n) = Sum _{ k=0..floor(n / 5) } (- 1) ^ k * (n - 5 * k)!. ● a(n) = n * a(n - 1) - a(n - 5) + n * a(n - 6) for n > 5. ●
▶ [A319206] 1,2,6,24,120,126,162,456,3144,30360,30371,30492,32076,54384,390720,390736,390992,395616,483744,2251200,2251221,2251662,2261826,2506224,8626800 ⋆ a(n) = 1 * 2 * 3 * 4 * 5 + 6 * 7 * 8 * 9 * 10 + 11 * 12 * 13 * 14 * 15 + ... + (up to n). ● a(n) = Sum _{ i=1..floor(n / 5) } (5 * i)! / (5 * i - 5)! + Sum _{ j=1..4 } (1 - sign((n - j) mod 5)) * (Product _{ i=1..j } n - i + 1). ● a(n) = a(n - 1) + 6 * a(n - 5) - 6 * a(n - 6) - 15 * a(n - 10) + 15 * a(n - 11) + 20 * a(n - 15) - 20 * a(n - 16) - 15 * a(n - 20) + 15 * a(n - 21) + 6 * a(n - 25) - 6 * a(n - 26) - a(n - 30) + a(n - 31) for n>31. ●
▶ [A048631] 1,1,2,6,24,120,272,1904,15232,124800,848640,7507200,39738368,433441792,2589116416,30419859456,486717751296,8128101580800,132557598294016,1971862458400768,30421253686034432,512675443057623040,7176891455747129344,130521457800367308800 ⋆ Xfactorials - like factorials but use carryless GF(

2)[X] polynomial multiplication. ● a(0) = 1, a(n) = n X a(n - 1) (see the Maple function Xfactorial given below). ●

► [A062348] 1,2,6,24,120,360,5040,40320,362880,1814400,39916800,239500800,6227020800,43589145600,653837184000,20922789888000,355687428096000,3201186852864000,121645100408832000,1216451004088320000 ⋆ a(n) = n! / (number of distinct prime divisors of n). ● a(n) = n! / omega(n). ●

► [A258216] 1,1,2,6,24,120,480,3600,30240,151200,1693440,20321280,121927680,1828915200,28740096000,201180672000,3793692672000,73977007104000,5918160568320000,13463815292928000,314155690168320000 ⋆ Number of permutations of { 1,2,3,...,n } such that no multiples of 3 are adjacent. ● a(n) = factorial(n - floor(n / 3)) * fallfac(n + 1 - floor(n / 3),floor(n / 3)), where fallfac is falling factorial, A008279. ●

► [A228401] 1,2,6,24,120,540,1996,6196,16732,40459,89519,184185,356721,656475,1156443,1961563,3219019,5130856,7969228,12094622,17977422,26223198,37602126,53082966,73872046 ⋆ The number of permutations of length n sortable by 2 block interchanges. ● a(n) = 1 + n * (n - 1) * (n + 1) * (n + 2) * (3 * n ^ 4 - 10 * n ^ 3 - 11 * n ^ 2 + 50 * n + 216) / 5760. [_ Bruno Berselli _ , Aug 22 2013] ●

► [A228399] 1,2,6,24,120,577,2208,6768,17469,39603,81272,154225,274802,464985,753556,1177362,1782687,2626731,3779196,5323979,7360972,10007969,13402680,17704852,23098497 ⋆ The number of permutations of length n sortable by 2 cut - and - paste moves. ● a(n) = n! for 0 < n < 5; for n > 4, a(n) = - 18 + n * (107 * n ^ 5 - 1077 * n ^ 4 + 2225 * n ^ 3 + 12345 * n ^ 2 - 61732 * n + 80532) / 720. [_ Bruno Berselli _ , Aug 22 2013] ●

► [A070946] 1,1,2,6,24,120,600,3480,22800,164880,1285920,10516320,92931840,877374720,8762014080,91819440000,1005716908800,11584953158400,139521689740800,1748830512960000,22750446292531200,306931140411955200,4296645083802470400,62213458150660147200 ⋆ Number of permutations on n letters that have only cycles of length 5 or less. ● a(n) = n! * sum(k=1..n, 1 / k! * sum(r=0..k, binomial(k,r) * sum(m=0..r, 2 ^ (m - r) * binomial(r,m) * sum(j=0..m, binomial(m,j) * binomial(j,n - m - k - j - r) * 3 ^ (j - m) * 4 ^ (n - r - m - k - 2 * j) * 5 ^ (m + k + j + r - n)))). - _ Vladimir Kruchinin _ , Jan 26 2011 ●

► [A060726] 1,1,2,6,24,120,600,4200,33600,302400,3024000,33264000,405820800,5275670400,73859385600,1107890784000,17726252544000,301346293248000,5419293175296000,102966570330624000,2059331406612480000 ⋆ For n >= 1, a(n) is the number of permutations in the symmetric group S _ n such that their cycle decomposition contains no 6 - cycle. ● a(n,k) = n! * floor(floor(n / k)! * k ^ floor(n / k) / exp(1 / k) + 1 / 2) / (floor(n / k)! * k ^ floor(n / k)), k=6, n >= 0. - _ Simon Plouffe _ , Feb 18 2011 ●

► [A177533] 1,1,2,6,24,120,719,5027,40168,361080,3606480,39623760,474915803,6166512899,86227808578,1291868401830,20645144452320,350547210173280,6302294420371031,119600213982762899,2389140113204434900,50111866901959213980,1101140993932295832120 ⋆ Number of permutations of 1..n avoiding adjacent step pattern up, up, up, up, up. ● a(n) / n! ~ 1.005827831279392186... * (1 / r) ^ n, where r = 1.001198827324062303188 7... is the root of the equation Sum _{ n>=0 } (r ^ (6 * n) / (6 * n)! - r ^ (6 * n + 1) / (6 * n + 1)!) = 0. - _ Vaclav Kotesovec _ , Dec 11 2013 ●

► [A319207] 1,2,6,24,120,720,727,776,1224,5760,56160,666000,666013,666182,668730,709680,1408560,14032080,14032099,14032460,14040060,14207640,18069960,110941200,110941225 ⋆ a(n) = 1 * 2 * 3 * 4 * 5 * 6 + 7 * 8 * 9 * 10 * 11 * 12 + 13 * 14 * 15 * 16 * 17 * 18 + ... + (up to n). ● a(n) = Sum _{ i=1..floor(n / 6) } (6 * i)! / (6 * i - 6)! + Sum _{ j=1..5 } (1 - sign((n - j) mod 6)) * (Product _{ i=1..j } n - i + 1). ●

► [A000805] 1,1,2,6,24,120,720,1854,4738,12072,30818,79118,204448,528950,1370674,3557408,9244418,24043990,62573616,162925614,424377730,1105703640,2881483458,7510389278,19577689120 ⋆ Permanent of a certain cyclic n X n (0,1) matrix. ● a(n) = 96 + sum(b(i) * a(n - i),i=1..15) where b(i)=[2, 2, 1, 0, - 4, - 18, - 16, - 12, - 10, - 4, 4, 3, 2, 2, 1] for n>=21. - _ Sean A. Irvine _ , Jun 29 2011 ●

► [A060727] 1,1,2,6,24,120,720,4320,34560,311040,3110400,34214400,410572800,5337446400,75613824000,1134207360000,18147317760000,308504401920000,5553079234560000,105508505456640000,2110170109132800000,44288746761093120000,974352428744048640000 ⋆ For n >= 1 a(n) is the number of permutations in the symmetric group S _ n such that their cycle decomposition contains no 7 - cycle. ● a(n,k) = n! * floor(floor(n / k)! * k ^ floor(n / k) / exp(1 / k) + 1 / 2) / (floor(n / k)! * k ^ floor(n / k)), k=7, n>=0. - _ Simon Plouffe _ , Feb 18 2011 ●

► [A177553] 1,1,2,6,24,120,720,5039,40305,362682,3626190,39881160,478490760,6219298800,87055051511,1305598835941,20885951018102,354999461960226,6388879812001704,121367620532150280,2426930566055020080,50956684690331669759,1120852238721212726609 ⋆ Number of permutations of 1..n avoiding adjacent step pattern up, up, up, up, up, up. ● a(n) / n! ~ c * (1 / r) ^ n, where r = 1.000173818153150450451826096271468777578582359301888 6... is the root of the equation Sum _{ n>=0 } (r ^ (7 * n) / (7 * n)! - r ^ (7 * n + 1) / (7 * n + 1)!) = 0, c = 1.001019110425945028245077059407672242477255532278.... - _ Vaclav Kotesovec _ , Aug 29 2014 ●

► [A319208] 1,2,6,24,120,720,5040,5048,5112,5760,12960,100080,1240560,17302320,17302335,17302560,17306400,17375760,18697680,45209520,603353520,6033535 42,603354026,603365664,603657120 ⋆ a(n) = 1 * 2 * 3 * 4 * 5 * 6 * 7 + 8 * 9 * 10 * 11 * 12 * 13 * 14 + 15 * 16 * 17 * 18 * 19 * 20 * 21 + ... + (up to n). ● a(n) = Sum _{ i=1..floor(n / 7) } (7 * i)! / (7 * i - 7)! + Sum _{ j=1..6 } (1 - sign((n - j) mod 7)) * (Product _{ i=1..j } n - i + 1). ●

► [A230051] 1,1,2,6,24,120,720,5040,40319,362863,3628550,39913170,478947480,6226179960,87164597520,1307440134000,20918580896069,355608034188517,6408034797011178,121612584595293870,2432198062707745560,51075033128533094520,1123625953230764250960 ⋆ Number of permutations of [n] avoiding adjacent step pattern { up }^ 7. ● a(n) / n! ~ c / r ^ n, where r = 1.00002204968378369953328414756797389512373088177598218453 22... is the root of the equation exp(- r) + cos(r) - sin(r) + 2 * cos(r / sqrt(2)) * cosh(r / sqrt(2)) - sqrt(2) * cos(r / sqrt(2)) * sinh(r / sqrt(2)) - sqrt(2) * cosh(r / sqrt(2)) * sin(r / sqrt(2)) = 0, c = 2 * sqrt(2) / (r * sqrt(2 + cosh(sqrt(2) * r) - cos(2 * r) + 2 * cosh(r / sqrt(2)) * (2 * sqrt(2) * sin(r) * sin(r / sqrt(2)) - cos(sqrt(2) * r) * cosh(r / sqrt(2))))) = 1.000151614491474683940060792265709477298542079161253 7... . - _ Vaclav Kotesovec _ , Aug 23 2014, updated Feb 01 2015 ●

► [A319209] 1,2,6,24,120,720,5040,40320,40329,40410,41310,52200,194760,2202480,32472720,518958720,518958737,518959026,518964534,519075000,521400600,572680080,1754550000,30173149440,30173149465 ⋆ a(n) = 1 * 2 * 3 * 4 * 5 * 6 * 7 * 8 + 9 * 10 * 11 * 12 * 13 * 14 * 15 * 16 + 17 * 18 * 19 * 20 * 21 * 22 * 23 * 24 + ... + (up to n). ● a(n) = Sum _{ i=1..floor(n / 8) } (8 * i)! / (8 * i - 8)! + Sum _{ j=1..7 } (1 - sign((n - j) mod 8)) * (Product _{ i=1..j } n - i + 1). ●

► [A324075] 1,1,1,2,6,24,120,720,5040,40320,359520,3590400,39362400,472919040,6133670400,85948262400,1284106824000,20434058444800,345796766515200,6188467544064000,117398964114432000,2341018467532800000,49035684501872640000,1074839883779211264000 ⋆ Number of defective (binary) heaps on n elements having one half of their ancestor - successor pairs (rounded down) distorted. ● a(n) <= (n - 1)! for n >= 1 with equality only for n <= 9. ●

► [A230231] 1,1,2,6,24,120,720,5040,40320,362879,3628781,39916492,478996716,6226941864,87176969880,1307651304960,20922368987520,355679390626560,6402213152423659,121641748198554547,2432828930036156696,51089280818439941448,1123961390341566969192 ⋆ Number of permutations of [n] avoiding adjacent step pattern { up }^ 8. ● a(n) / n! ~ 1.000019566510089164960643485918995388141791988532066043233168093971 9... * (1 / r) ^ n, where r = 1.00000248021340926682220444758511219721652916783783891837300776809575 71... is the root of the equation Sum _{ n>=0 } (r ^ (9 * n) / (9 * n)! - r ^ (9 * n + 1) / (9 * n + 1)!) = 0. - _ Vaclav Kotesovec _ , Jan 17 2015 ●

► [A109834] 1,2,6,24,120,720,5040,40320,362880,362880,362880,362880,362880,362880,362880,362880,362880,725760,1451520,2903040,5806080,11612160,23224320 ⋆ Startorial numbers: product of initial digits of integers 1 through n. ● a(n + 1) = a(n) * InitialDigitOf(n). ● a(n) = Product _{ i = 1..n } floor(i / 10 ^ (floor(log _ 10(i)))) where log _ 10(i) is the logarithm of i in base 10. ●

► [A131451] 1,2,6,24,120,720,5040,40320,362880,362880,362880,725760,2177280,8709120,43545600,261273600,1828915200,14631321600,131681894400,2633637888000,526727577600,2106910310400,12641461862400,101131694899200 ⋆ Product of the nonzero digital products of all the numbers 1 to n (a 'total digital - product factorial' in base 10). ● a(n)=product { 1<=k<=n, dp _ p(k) } where dp _ p(k) = product of the nonzero digits of k in base p. ● a(n)=(n mod p)! * product { 0<j<=log _ p(n) } (p - 1)! ^ (floor(n / p ^ j) * p ^ (j - 1)) * product { 0<j<=log _ p(n),(floor(n / p ^ j)mod p)>0 } (floor(n / p ^ j)mod p) ^ (1 + (n mod p ^ j)) * ((floor(n / p ^ j)mod p) - 1)! ^ (p ^ j). ● a(n)=n!, for 0<=n<p. ● a(k * p ^ m)=k * (p - 1)! ^ (k * m * p ^ (m - 1)) * (k - 1)! ^ (p ^ m) for 0<=k<p. ● a(n)=(p - 1)! ^ ((m * p ^ (m + 1) - (m + 1) * p ^ m + 1) / (p - 1) ^ 2)=(p - 1)! ^ (1 + 2 * p + 3 * p ^ 2 + ... + m * p ^ (m - 1)) for n=1 + p + p ^ 2 + ... + p ^ m. ● a(n)=(p - 1)! ^ (k * (m * p ^ (m + 1) - (m + 1) * p ^ m + 1) / (p - 1) ^ 2) * (k - 1)! ^ (p * (p ^ m - 1) / (p - 1)) * k ^ (k * (p ^ (m + 1) - (m + 1) * p + m) / (p - 1) ^ 2) * k! * k ^ m, for n=k * (1 + p + p ^ 2 + ... + p ^ m). ●

► [A319211] 1,2,6,24,120,720,5040,40320,362880,362890,362990,364200,380040,603120,3966480,58020480,980542080,17643588480,17643588499,17643588860,17643596460,17643764040,17647626360,17740497600,20066316480 ⋆ a(n) = 1 * 2 * 3 * 4 * 5 * 6 * 7 * 8 * 9 + 10 * 11 * 12 * 13 * 14 * 15 * 16 * 17 * 18 + 19 * 20 * 21 * 22 * 23 * 24 * 25 * 26 * 27 + ... + (up to n). ● a(n) = Sum _{ i=1..floor(n / 9) } (9 * i)! / (9 * i - 9)! + Sum _{ j=1..8 } (1 - sign((n - j) mod 9)) * (Product _{ i=1..j } n - i + 1). ●

► [A230232] 1,1,2,6,24,120,720,5040,40320,362880,3628799,39916779,479001228,6227014404,87178179816,1307672369640,20922752672640,355686706327680,6402359109968640,121644792614741760,2432895242801771955,51090787299486057355,1123997039003038423610 ⋆ Number of permutations of [n] avoiding adjacent step pattern { up }^ 9. ● a(n) / n! ~ c * (1 / r) ^ n, where r = 1.000000250521705189094679308103963969300825716918907902833963293816... is the root of the equation Sum _{ n>=0 } (r ^ (10 * n) / (10 * n)! - r ^ (10 * n + 1) / (10 * n + 1)!) = 0, c = 1.000002229648140602899529055054469878816530201510267349345270187155... . - _ Vaclav Kotesovec _ , Jan 17 2015 ●

► [A319212] 1,2,6,24,120,720,5040,40320,362880,3628800,3628811,3628932,3630516,3652824,3989160,9394560,101646720,1767951360,33525757440,670446201600,670446201621,670446202062,670446212226,670446456624,670452577200 ⋆ a(n) = 1 * 2 * 3 * 4 * 5 * 6 * 7 * 8 * 9 * 10 + 11 * 12 * 13 * 14 * 15 * 16 * 17 * 18 * 19 * 20 + 21 * 22 * 23 * 24 * 25 * 26 * 27 * 28 * 29 * 30 + ... + (up to n). ● a(n) = Sum _{ i=1..floor(n / 10) } (10 * i)! / (10 * i - 10)! + Sum _{ j=1..9 } (1 - sign((n - j) mod 10)) * (Product _{ i=1..j } n - i + 1). ●

► [A230233] 1,1,2,6,24,120,720,5040,40320,362880,3628800,39916799,479001577,6227020358,87178283010,1307674215120,20922786961440,355687370176320,6402372516146880,121645075013280000,2432901444395385600,51090929159028595200,1124000415686590747031 ⋆ Number of permutations of [n] avoiding adjacent step pattern { up }^ 10. ● a(n) / n! ~ 1.000000227556759905306252970186381144189779110025896440589711080508... * (1 / r) ^ n, where r = 1.000000022964438439732421879840792836238519233492197325926442472620564... is the root of the equation Sum _{ n>=0 } (r ^ (11 * n) / (11 * n)! - r ^ (11 * n + 1) / (11 * n + 1)!) = 0. - _ Vaclav Kotesovec _ , Jan 17 2015 ●

► [A254523] 1,1,2,6,24,120,720,5040,40320,362880,3628800,39916800,479001599,6227020775,87178290682,1307674357710,20922789683040,355687423926240,6402373618334400,121645098513933120,2432901965590252800,51090941178938707200,1124000703770606323200 ⋆ Number of permutations of [n] avoiding adjacent step pattern { up }^ 11. ● a(n) / n! ~ c * (1 / r) ^ n, where r = 1.000000001927085304673016524975367397895499212824773604127 6... is the root of the equation Sum _{ n>=0 } (r ^ (12 * n) / (12 * n)! - r ^ (12 * n + 1) / (12 * n + 1)!) = 0, equivalently root of the equation exp(- r) + cos(r) + 2 * cos(r / 2) * cosh(sqrt(3) * r / 2) - cosh(sqrt(3) * r / 2) * sin(r / 2) - sin(r) + cosh(r / 2) * (2 * cos(sqrt(3) * r / 2) - sqrt(3) * sin(sqrt(3) * r / 2)) - cos(sqrt(3) * r / 2) * sinh(r / 2) - sqrt(3) * cos(r / 2) * sinh(sqrt(3) * r / 2) = 0, c = 3 / (r * sqrt((cosh(sqrt(3) * r / 2) * sin(r / 2) + sin(r)) ^ 2 + 2 * sqrt(3) * cosh(r / 2) * (cosh(sqrt(3) *

r / 2) * sin(r / 2) + sin(r)) * sin(sqrt(3) * r / 2) + 3 * cosh(r / 2) ^ 2 * sin((sqrt(3) * r) / 2) ^ 2)) = 1.00000002103734835158187128021564967567884045340796891457736119905298189 19... . ●

▶ [A159333] 1,1,1,1,2,6,24,120,720,5040,40320,362880,3628800,39916800,479001600,6227020800,87178291200,1307674368000,20922789888000,355687428096000,6402373705728000,121645100408832000,2432902008176640000 ⋆ Roman factorial of n. ● a(n) = n! for a nonnegative integer and ((- 1) ^ (n + 1)) / (- n - 1)! for negative integer n. There is a Gamma function formula for nonintegral n. ● a(n) equals, for n >= - 1, the diagonals of triangle A165680. - _ Johannes W. Meijer _ , Oct 16 2009 ●

▶ [A000142] 1,1,2,6,24,120,720,5040,40320,362880,3628800,39916800,479001600,6227020800,87178291200,1307674368000,20922789888000,355687428096000,6402373705728000,121645100408832000,2432902008176640000,51090942171709440000,1124000727777607680000 ⋆ Factorial numbers: n! = 1 * 2 * 3 * 4 * ... * n (order of symmetric group S _ n, number of permutations of n letters). ● a(0) = 1, a(n) = subs(x = 1, (d ^ n / dx ^ n)(1 / (2 - x))), n = 1, 2, ... - _ Karol A. Penson _ , Nov 12 2001 ● a(n) = Sum _{ i=1..n } ((- 1) ^ (i - 1) * sum of 1..n taken n - i at a time) - e.g., 4! = (1 * 2 * 3 + 1 * 2 * 4 + 1 * 3 * 4 + 2 * 3 * 4) - (1 * 2 + 1 * 3 + 1 * 4 + 2 * 3 + 2 * 4 + 3 * 4) + (1 + 2 + 3 + 4) - 1 = (6 + 8 + 12 + 24) - (2 + 3 + 4 + 6 + 8 + 12) + 10 - 1 = 50 - 35 + 10 - 1 = 24. - _ Jon Perry _ , Nov 14 2005 ● a(n) = (n - 1) * (a(n - 1) + a(n - 2)), n >= 2. - Matthew J. White, Feb 21 2006 ● a(n) = Product _{ p prime } p ^ (Sum _{ k > 0 } floor(n / p ^ k)) by Legendre's formula for the highest power of a prime dividing n!. - _ Jonathan Sondow _ , Jul 24 2009 ● a(n) = a(n - 1) ^ 2 / a(n - 2) + a(n - 1), n >= 2. - _ Jaume Oliver Lafont _ , Sep 21 2009 ● a(n) = Gamma(n + 1). - _ Enrique Pérez Herrero _ , Sep 21 2009 ●

▶ [A292749] 1,1,2,6,24,120,721,5075,41146,379764,3955413,46147101,598757159,8574963397,134469746411,2290379988897,42043096791696,825840722368662,17251010028434182,381214917773329640,8873155199416851343,216770612918353773279,5542237907509303118118 ⋆ Number of 6 - good trees with n nodes. ● a(n) = (- 1) ^ (n - 1) * n! * [x ^ n]g(x) where g(x) is the series reversion of 1 + x + x ^ 2 / 2! + x ^ 3 / 3! + x ^ 4 / 4 + x ^ 5 / 5! + x ^ 6 / 6! [see p. 21 of Engbers, Galvin, and Smyth]. - _ Sean A. Irvine _ , Aug 23 2019 ●

▶ [A365977] 1,1,2,6,24,120,840,6720,60480,604800,6652800,83462400,1138236600,16746912000,264176640000,4444771968000,80719172352000,1556132497920000,31722198842880000,681437830993920000,15378172899747840000,366025806545817600000 ⋆ Expansion of e.g.f. 1 / (1 - Sum _{ k>=0 } x ^ (5 * k + 1) / (5 * k + 1)). ● a(0) = 1; a(n) = Sum _{ k=0..floor((n - 1) / 5) } (5 * k)! * binomial(n,5 * k + 1) * a(n - 5 * k - 1). ●

▶ [A358500] 1,1,2,6,24,121,721,5042,40326,362904,3628921,39917521,479006642,6227061126,87178654104,1307677996921,20922829805521,355687907102642,6402379932789126,121645187587486104,2432903315854636921,51090963094539245521,1124001083465514782642 ⋆ a(n) = Sum _{ k=0..floor(n / 5) } (n - 5 * k)!. ● a(n) = n * a(n - 1) + a(n - 5) - n * a(n - 6) for n > 5. ●

▶ [A358494] 1,1,2,6,24,121,722,5046,40344,363000,3629521,39921843,479041932,6227383740,87181920360,1307714287321,20923268909764,355693655298260,6402460885833720,121646408103159240,2432922931206035521,51091297862251106885,1124007130194903158430 ⋆ a(n) = Sum _{ k=0..floor(n / 5) } (n - 4 * k)! / k!. ● a(n) = (n - 1) * a(n - 1) + (n - 2) * a(n - 2) + (n - 3) * a(n - 3) + (n - 4) * a(n - 4) + (n - 8) * a(n - 5) - 4 * a(n - 6) - 4 * a(n - 7) - 4 * a(n - 8) - 4 * a(n - 9) + 5 for n > 8. ●

▶ [A349089] 0,1,2,6,24,121,726,5082,40656,365905,3659050,40249550,482994600,6278929801,87905017214,1318575258210,21097204131360,358652470233121,6455744464196178,122659144819727382,2453182896394547640,51516840824285500441,1133370498134281009702 ⋆ a(n) = n! * Sum _{ k=0..floor((n - 1) / 4) } 1 / (4 * k + 1)!. ● a(n) = floor(c * n!) for n > 0, where c = 1.008336089... = A334363. ●

▶ [A216779] 0,0,1,2,6,24,135,930,7420,66752,667485,7342290,88107426,1145396472,16035550531,240533257874,3848532125880,65425046139840,1177650830516985,22375365779822562,447507315964510 70,9397653627525472280,206748379805560389951,4755212735527888968642 ⋆ Number of derangements on n elements with an odd number of cycles. ● a(n + 1) = n * (a(n) + a(n - 1) - n + 2), a(0)=0, a(1)=0. ●

▶ [A366459] 0,0,2,6,24,140,990,8442,84056,955656,12227130,173812430,2717859012,46362339036,856770362630,17050946225250,363576478312560,8269357341437072,199837364514425586,5113346326011170838,138106722548779770620,3926456810081828991780 ⋆ Expansion of e.g.f. - log(1 - x ^ 2 * exp(x)). ● a(n) = n! * Sum _{ k=1..floor(n / 2) } k ^ (n - 2 * k - 1) / (n - 2 * k)!. ●

▶ [A365976] 1,1,2,6,24,144,1008,8064,72576,766080,8934912,113895936,1573254144,23864924160,389247344640,6786673496064,125855767166976,2492616008171520,52243870155079680,1154797100239749120,26835102086208159744,656159502089355264000 ⋆ Expansion of e.g.f. 1 / (1 - Sum _{ k>=0 } x ^ (4 * k + 1) / (4 * k + 1)). ● a(0) = 1; a(n) = Sum _{ k=0..floor((n - 1) / 4) } (4 * k)! * binomial(n,4 * k + 1) * a(n - 4 * k - 1). ●

▶ [A073973] 0,2,6,24,180,1440,9072,50544,286416,1658880,9722592,58335552,356638464,2179768320,13180786560,79012495872,472093588224,2821539889152,16894457846784,101356447675392,608733733690368,3656096522698752,21947538146863104,131685228881178624 ⋆ Number of strings of length n over Z _ 6 with trace 0 and subtrace 2. ● a(n; t, s) = a(n - 1; t, s) + a(n - 1; t + 5, s + 5t + 1) + a(n - 1; t + 4, s + 4t + 4) + a(n - 1; t + 3, s + 3t + 3) + a(n - 1; t + 2, s + 2t + 2) + a(n - 1; t + 1, s + t + 1) where t is the trace and s is the subtrace. ●

▶ [A052699] 1,1,2,6,24,240,720,5040,40320,362880,3628800,39916800,479001600,6227020800,87178291200,1307674368000,20922789888000,355687428096000,6402373705728000,121645100408832000,2432902008176640000 ⋆ Expansion of e.g.f. (1 + x ^ 5 - x ^ 6) / (1 - x). ● a(n + 1) = (n + 1) * a(n), for n > 5. ● a(n) = n! + 5! * [n=5]. ●

▶ [A074351] 1,1,2,6,24,240,720,5040,40320,514080,3628800,80166240,479001600,6797831040,93774320640,1307674368000,20922789888000,523845011289600,6402373705728000,153101632051630080,2471368711740364800,51182316789956352000,1124000727777607680000 ⋆ Number of elements of S _ n having order n. ● a(n) = n! * coefficient of x ^ n in expansion of Sum _{ i divides n } mu(n / i) * exp(Sum _{ j divides i } x ^ j / j). - _ Vladeta Jovovic _ , Sep 29 2002 ●

▶ [A346121] 1,1,2,6,24,240,720,5040,40320,816480,3628800,108108000,479001600,14789174400,254431457280,1307674368000,20922789888000,872545722048000,6402373705728000,411616608508385280,7817896752906240000,1281265034149900080000,1124000727777607680000 ⋆ Number of permutations of [n] whose order is a multiple of n. ● a(n) = (n - 1)! <=> n in { A000961 } . ●

▶ [A052692] 1,1,2,6,24,240,2160,20160,201600,2540160,36288000,558835200,9101030400,161902540800,3138418483200,65383718400000,1443672502272000,33790305669120000,838710955450368000 ⋆ Expansion of e.g.f. (1 - x ^ 4) / (1 - x - x ^ 4). ● a(n) = (n! / 283) * Sum _{ alpha=RootOf(- 1 + z + Z ^ 4) } (36 - 9 * alpha + 64 * alpha ^ 2 + 48 * alpha ^ 3) * alpha ^ (- 1 - n). ●

▶ [A123150] 1,1,2,6,24,2399,6299,28222,169338,1244136,213748501,914608501,6392593442,57693964614,618160168824,1508207285570 99,895583729570699,8513087005239262,102642351647368962,1446049101566437896,45734862645581845050 1,3475580442134239108501 ⋆ a(n) = (n ^ 5 - n ^ 4 - n ^ 3 + n ^ 2 - 1) * a(n - 5) for n > 4, otherwise n!. ● a(n) = n! for n < 5, otherwise a(n) = (n ^ 5 - n ^ 4 - n ^ 3 + n ^ 2 - 1) * a(n - 5). ●

▶ [A366236] 1,2,6,25,110,520,2566,13073,68244,363129,1962304,10739914,59411546,331652408,1865903040,10569319231,60227702736,345015430415,1985747398748,11477353063881,66590427901454,387685469752989,2264180109124196,13261401158297918 ⋆ G.f. A(x) satisfies A(x) = 1 + x + x * (1 + x) ^ 2 * A(x) ^ 2. ● a(n) = Sum _{ k=0..n } binomial(3 * k + 1,n - k) * binomial(2 * k,k) / (k + 1). ●

▶ [A229042] 1,2,6,25,114,560,2880,15321,83600,465322,2631668,15079922,87362184,510837760,3010987912,17870854206,106713713826,640659094566,3864643224900,23412690485800,142386465217920,868967571732540,5320093500153120,326660649065 50,201109232686971492 ⋆ Series reversion of (sqrt(1 + 4 * x) - 1) / 2 - x ^ 2. ● a(n) = binomial(2 * (n - 1),(n - 1)) / n - sum(k=1..n - 1, k * (- 1) ^ (k - n) * binomial(n + k - 1,n - 1) * ((sum(l=0..k - 1, (binomial(k - 1,l) * binomial(2 * (n + l - k),n - k - 1)) / (n + l - k))))) / n. - _ Vladimir Kruchinin _ , Feb 08 2015 ●

▶ [A321720] 1,1,2,6,25,120,726,5040,40410,362881,3630840,39916800,479069574,6227020800,87181402140,1307674370040,20922977418841,355687428096000,6402388104196400,121645100408832000,2432903379962038320,51090942171778388800,1124000886592995642000,25852016738884976640000 ⋆ Number of non - normal (0,1) semi - magic squares with sum of entries equal to n. ● a(p) = p! for p prime as the squares are all permutation matrices of order p and a(n) >= n! for n > 1 (see comments in A321717 and A321719). - _ Chai Wah Wu _ , Jan 13 2019 ●

▶ [A358499] 1,1,2,6,25,121,722,5046,40345,363001,3629522,39921846,479041945,6227383801,87181920722,1307714289846,20923268929945,355693655479801,6402460887648722,121646408123121846,2432922931445569945,51091297865364919801,1124007130238495328722 ⋆ a(n) = Sum _{ k=0..floor(n / 4) } (n - 4 * k)!. ● a(n) = n * a(n - 1) + a(n - 4) - n * a(n - 5) for n > 4. ●

▶ [A357949] 1,1,2,6,25,122,726,5064,40441,363603,3633852,39957180,479364841,6230652124,87218228180,1308153551160,20929018724041,355774626352325,6403681619657310,121666026312835410,2433257739200536081,51097345199332007026,1124122383340449444042 ⋆ a(n) = Sum _{ k=0..floor(n / 4) } (n - 3 * k)! / k!. ● a(n) = (n - 1) * a(n - 1) + (n - 2) * a(n - 2) + (n - 3) * a(n - 3) + (n - 6) * a(n - 4) - 3 * a(n - 5) - 3 * a(n - 6) - 3 * a(n - 7) + 4 for n > 6. ●

▶ [A370510] 1,1,2,6,25,124,738,5136,40922,367218,3664224,40240560,482278326,6263414736,87618506160,1313435465280,21003904630824,356910121855320,6422020465846320,121980351190294800,2438956634267865720,51206322309647263200,1126314497201852150640 ⋆ Expansion of Sum _{ k>=0 } k! * (x * (1 + x ^ 3)) ^ k. ● a(n) = Sum _{ k=0..floor(n / 4) } (n - 3 * k)! * binomial(n - 3 * k,k). ●

▶ [A370511] 1,1,2,6,25,124,738,5137,40926,367236,3664321,40241168,482282700,6263450401,87618831730,1313438757210,21003941166601,356910563528412,6422026243338846,121980432505328545,2438957859604373534,51206419938730936 08,1126314833020691642497 ⋆ Expansion of Sum _{ k>=0 } k! * (x / (1 - x ^ 3)) ^ k. ● a(n) = Sum _{ k=0..floor(n / 3) } (n - 3 * k)! * binomial(n - 2 * k - 1,k). ●

▶ [A352660] 1,1,2,6,25,125,750,5250,42001,378009,3780090,41580990,498971886,6486634453,90812882342,1362193235130,21795091762081,370516559955377,6669298079196786,126716663504738934,2534333270094778681,53220998671990352301,1170861970783787750622 ⋆ a(n) = n! * Sum _{ k=0..floor(n / 4) } 1 / (4 * k)!. ● a(n) = floor(c * n!), where c = 1.04169147... = A332890. ●

▶ [A349088] 0,1,2,6,25,125,750,5251,42008,378072,3780721,41587931,499055176,6487717237,90828041318,1362420619770,21798729916321,370578408577457,6670411354394226,126737815733490295,2534756314669805900,53229882608065923900,1171057417377450325801 ⋆ a(n) = n! * Sum _{ k=0..floor((n - 1) / 3) } 1 / (3 * k + 1)!. ● a(n) = floor(c * n!) for n > 0, where c = 1.041865355... = A143820. ●

▶ [A188687] 1,2,6,25,126,704,4183,25897,165166,1077520,7156352,48222354,328859011,2265428728,15740837575,110187356134,776336572878,5501042194580,39177463572112,280277949384146,2013277273220064,14514764553512488,104993261648226446 ⋆ Partial binomial sums of binomial(3n,n) / (2n + 1) = A001764(n). ● a(n) = Sum _{ k=0..n } binomial(n,k) * binomial(3k,k) / (2k + 1). ●

▶ [A130619] 0,1,2,6,25,127,768,5401,43335,390783,3913231,43088876,517457295,6730858066,94275101800,1414643984295,22641034606786,384991863417162,6931268185493211,131716736558977795,2634719723042973062 ⋆ Let M(n) = {{ n, 0, 1 } , { 1, 0, 0 } , { 0, 1, 0 }} , then a(n) is the upper - right term of M(n) * M(n - 1) * ... * M(1). ● a(n) = n * a(n - 1) + a(n - 3) for n >= 3. - _ David A. Corneth _ , Sep 24 2018 ●

▶ [A299044] 1,1,2,6,25,129,784,5472,42993,374190,3564176,36808647,409067204,4861490200,61457674398,822732344816,11618029697489,172476856415121,2683881876383377,43660291710726058,740764460615030663,13080604188895285878,239939914279952537597,4564083798329838120034,89886989241387131773525 ⋆ G.f. Sum _{ n>=0 } Series _ Reversion(x / (1 + x) ^ n) ^ n. ● a(n) = Sum

_{ k=0..n } binomial(n * (n - k), k) * (n - k) / n. ● a(n) ^ (1 / n) ~ n ^ (n / w) * (n + 1 - w) ^ (1 - (n + 1) / w) * (w - 1) ^ (1 / w - 1), where w = Lambert W(exp(1) * n). - _ Vaclav Kotesovec _ , Feb 19 2018 ●

▶ [A353180] 1,1,2,6,25,130,810,5880,48790,455491,4725020,53915730,671141130,9050528630,131437406100,2045160117000,33944105995801,598591246152934,11176863039391538,220287874849834596,4570225746232479690,9955750654762236 9750,227202839909485280610 0 ⋆ Expansion of e.g.f. 1 / (1 - Sum _{ k>=1 } x ^ (k ^ 2) / (k ^ 2)!). ● a(0) = 1; a(n) = Sum _{ k=1..floor(sqrt(n)) } binomial (n,k ^ 2) * a(n - k ^ 2). ●

▶ [A247499] 1,2,6,25,135,896,7042,63841,654901,7491574,94470926,1301130777,19423173211,312256205652,5376809244458,98700795776641,1923638785344457,39661911384761866,862362968121278038,19717031047061570777,472849461034147171791,11866892471399392308232 ⋆ a(n) = hypergeom([1, - n, - n - 1], [2], 1). ● a(n) = n! * hypergeom([- n - 1], [2], - 1) - 1 / ((n + 1) * (n + 2)). (original na me) ● a(n) = Sum _{ k=0..n } (n! / k!) * binomial(n + 2, k + 1) / (n + 2). ●

▶ [A092438] 0,2,6,26,90,302,966,3026,9330,28502,86526,261626,788970,2375102,7141686,21457826,64439010,193448102,580606446,1742343626,5228079450,15686335502,47063200806,141197991026,423610750290 ⋆ Sequence arising from enume ration of domino tilings of Aztec Pillow - like regions. ● a(n)=(3 ^ (n + 1) + (- 1) ^ (n + 1)) / 2 - 2 ^ (n + 1) + 1 ●

▶ [A092880] 1,2,6,26,126,602,2766,12266,52926,223802,932526,3844106,15722526,63936602,258902286,1045109546,4209004926,16921851002,67945160046,272554432586,1092540156126,4377129999002,17529432313806,70180474597226 ⋆ Numb er of ordered 2 - multiantichains on an n - set. ● a(n) = 4 ^ n - 2 * 3 ^ n + 2 * 2 ^ n. ●

▶ [A370185] 1,2,6,26,126,612,2970,14534,71838,357884,1793296,9026976,45612450,231224060,1175422590,5989693176,30586693182,156483812892,801908994852,4115509738188,21149522157816,108817959549416,560500440662872,2889915938877078,14913928051929426 ⋆ Coefficient of x ^ n in the expansion of (1 + x + x ^ 3) ^ (2 * n). ● a(n) = Sum _{ k=0..floor(n / 3) } binomial(2 * n,k) * binomial(2 * n - k,n - 3 * k). ●

▶ [A192808] 1,2,6,26,126,618,3022,14746,71902,350538,1708910,8331130,40615294,198004778,965298958,4705957722,22942154782,111845982474,545263681710,2658231220538,12959222223038,63177890368490,308000415667278,1501542003033370 ⋆ Constant term in the reduction of the polynomial (x ^ 2 + 2) ^ n by x ^ 3 - > x ^ 2 + 2. See Comments. ● a(n) = 7 * a(n - 1) - 12 * a(n - 2) + 8 * a(n - 3). ●

▶ [A034474] 2,6,26,126,626,3126,15626,78126,390626,1953126,9765626,48828126,244140626,1220703126,6103515626,30517578126,152587890626,762939453126,3814697265626,19073486328126,95367431640626,476837158203126 ⋆ a(n) = 5 ^ n + 1. ● a(n) = 5 * a(n - 1) - 4 = 6 * a(n - 1) - 5 * a(n - 2). ●

▶ [A230071] 0,0,2,6,26,130,782,5474,43794,394146,3941462,43356082,520272986,6763548818,94689683454,1420345251810,22725524028962,386333908492354,6954010352862374,132126196704385106,2642523934087702122,55493002615841744562,1220846057548518380366 ⋆ Sum over all permutations without double ascent s on n elements and each permutation contributes 2 raised to the power of the number of double descents. ● a(n) = closest integer to (e - 2 + 1 / e) * n! for n > 3. ● a(n) = (2 - n) * a(n - 3) + a(n - 2) + n * a(n - 1) for n > 2. ●

▶ [A370215] 1,2,6,26,134,702,3642,18916,99078,523448,2783406,14870418,79743002,428987236,2314194840,12514276476,67815709958,368183248722,2002240199040,10904629019548,59468066955534,324698112501166,1774806572174862,9710825272099992,53181284133726618 ⋆ Coefficient of x ^ n in the expansion of ((1 + x) ^ 2 / (1 - x ^ 3) ^ 2) ^ n. ● a(n) = Sum _{ k=0..floor(n / 3) } binomial(2 * n + k - 1,k) * binomial(2 * n,n - 3 * k). ●

▶ [A134094] 1,2,6,26,140,887,6405,51564,455712,4370567,45081476,496556194,5806502663,71734434956,932447207866,12707973761320,181033752071568,2688530124711819,41525910256013832,665674913113633582 ⋆ Binomial convolution of t he Stirling numbers of the second kind. ● a(n) = sum(C(n + 1,k) * |S2(n,k)|, k =0..n). ● a(n) = Sum _{ k=0..n } C(n + 1,k) * S2(n,k). From _ Olivier Gérar d _ , Oct 23 2012 ●

▶ [A107404] 1,2,6,26,144,962,7536,67706,685824,7730882,95970816,1300815386,19113775104,302616787202,5135568746496,92996021795066,1789758460329984,3647983102049922,78502011409308057 6,1778527358839596674 6 ⋆ E.g.f. = 1 / (1 - sinh(x)) ^ 2 ● a(n) = D ^ n(1 / (1 - x) ^ 2) evaluated at x = 0, where D is the operator sqrt(1 + x ^ 2) * d / dx. Cf. A006154. - Peter Bala, Dec 06 2011 ●

▶ [A132609] 1,2,6,26,147,1026,8532,82394,906485,11194402,153347766,2307805402,37851581159,672037936898,12841521329896,262772642843802,5733086299727913,132853067341477538,3258726189638877610 ⋆ Antidiagonal sum of table A072590(n,k) = n ^ (k - 1) * k ^ (n - 1) for n>=1. ● a(n) = Sum _{ k=1..n } (n - k + 1) ^ (k - 1) * k ^ (n - k) for n>=1. ●

▶ [A052844] 1,2,6,26,148,1032,8464,79592,842832,9914336,128162464,1804852128,27489582784,450089665664,7880963503872,146913179393408,2904309329449216,60677563647195648,1335634021282590208,30891084696208976384,748854186528315687936 ⋆ E.g.f.: exp(x * (2 - x) / (1 - x)). ● a(n) = n! * sum(m=1,n, ((sum (j=0,m, binomial(m,j) * binomial(n - j - 1,m - j - 1)))) / m!) + 1; [_ Vladimir Kruchinin _ , May 02 2012] ● a(0) = 1; a(n) = a(n - 1) + Sum _{ k=1..n } bin omial(n - 1,k - 1) * k! * a(n - k). - _ Ilya Gutkovskiy _ , Aug 13 2021 ●

▶ [A103937] 2,6,26,150,1032,8074,67086,586752,5317226,49592424,473357994,4606116310,45554761836,456848968518,4637014782748,47563495004742,492422043299964,5140194991046122,54053208147441474,572191817441284272 ⋆ Number o f unrooted n - edge maps in the plane (planar with a distinguished outside face) . ● a(n)=(1 / (2n))[3 ^ n * binomial(2n, n) / (n + 1) + sum _{ 0<k<n, k|n } phi(n / k)3 ^ k * binomial(2k, k)] + q(n) where phi is the Euler function A000010, q(n)=0 if n is even and q(n)=3 ^ ((n - 1) / 2)binomial(n - 1, (n - 1) / 2) / (n + 1) if n is odd. ●

▶ [A032187] 1,1,1,1,2,6,26,151,1093,9489,96084,1111722,14469388,209234595,3328056991,57746229265,1085448899206,21972175778646,476535125344462,11024061833485335,270965694793159153,7051933526740491393,193723061625591928384,5601822117610355927946 ⋆ Shifts left 3 places under "CIJ" (necklace, indistin ct, labeled) transform. ● a(n) = sum(k=0..n - 5, binomial(n - 4,k) * a(k + 4) * a(n - k - 4)) + a(n - 3), n>4, a(1)=a(2)=a(3)=a(4)=1. - _ Vladimir Kruchinin _ , May 10 2011 ●

▶ [A141761] 1,1,1,2,6,26,154,1188,11474,134432,1863168,29936846,548625820,11315025894,259733293774,6574304470320,182050022755386,5477819548007438,178054691097463354,6220193033111607018 ⋆ Column 0 of triangle A141760. ● a(n) = 1 - Sum _{ j=0..n - 1 } a(j) * (- 1) ^ (n - j) * C(j(j - 1) / 2 + n - j - 1, n - j) for n>0, with a(0)=1. ●

▶ [A112934] 1,1,2,6,26,158,1282,13158,163354,2374078,39456386,737125446,15279024026,347786765150,8621313613954,231139787526822,6663177374810266,205503866668090750,6751565905975718 42 ⋆ a(0) = 1; a(n + 1) = Sum _{ k=0..n } a(k) * A001147(n - k), where A001147 = double factorial numbers. ● a(n) is th e upper left term in M ^ n, M = the production matrix: ● a(n) = (2 * n - 1) * a(n - 1) - Sum _{ k=1..n - 1 } a(k) * a(n - k) if n>1. - _ Michael Somos _ , Ju l 23 2011 ●

▶ [A032186] 1,1,1,2,6,27,160,1183,10477,108149,1275024,16903440,248915119,4031045212,71202358081,1362297883463,28066342411395,619474462826562,14583353438928682,364748466791800669,9658964416375216576,269978766441123241685,7943074999430019396711 ⋆ Shifts left 2 places under "CIJ" (necklace, indistin ct, labeled) transform. ● a(n) = n! * b(n), b(n) = b(n - 2) * (n - 2) + sum(i=0.. n - 4, b(i + 3) * (i + 1) * (i + 2) * (i + 3) * b(n - 3 - i))) / (n * (n - 1) * (n - 2)) n > 0, b(1)=1, b(2)=1 / 2. - _ Vladimir Kruchinin _ , Nov 18 2011 ●

▶ [A360035] 0,0,2,6,28,100,366,1274,4376,14760,49210,162382,531444,1727180,5580134,17936130,57395632,182948560,581130738,1840247318,5811307340,18305618100,57531942622,180441092746,564859072968 ⋆ Expansion of e.g.f. x * exp(x) * cosh(x) * sinh(x). ● a(n) = n * (3 ^ (n - 1) - (- 1) ^ (n - 1)) / 4. ●

▶ [A189238] 1,2,6,28,120,726,4424,31928,249984,2131690,20027392,199240020,2162269824,24676708798,302660939520,3897794538864,53264941301760,763279034957010,11499327153704960,181271619624350860 ⋆ E.g.f. x / cos(x) * exp(x / co s(x)) ● a(n)=sum(k=1..n - 1, binomial(n,k) * k * (1 + (- 1) ^ (n - k)) * sum(j= 1..m, sum(i=0..floor((j - 1) / 2), binomial(m,j) / 2 ^ (j) * sum((- 1) ^ ((n - k) / 2 - j) * binomial(j,i) * (j - 2 * i) ^ (n - k))) * binomial(k + m - 1,k - 1),m,1,n - k)) + n. ●

▶ [A228842] 2,6,28,144,752,3936,20608,107904,564992,2958336,15490048,81106944,424681472,2223661056,11643240448,60964798464,319215828992,1671435780096,8751751364608,45824765067264,239941584945152,1256350449401856,6578336356630528,34444616342175744 ⋆ Binomial transform of A014448. ● a(n) = (3 - s qrt(5)) ^ n + (3 + sqrt(5)) ^ n. ● a(n) = 6 * a(n - 1) - 4 * a(n - 2) for n>1. ●

▶ [A152393] 1,2,6,28,150,930,6286,46120,359946,2973650,25766950,233274228,2195351158,21414166970,215809803270,2242074012816,23959435578514,262910074728546,2957549692243558,34061536200099020,401102135361004182 ⋆ Column 1 of triangle A152391. ● a(n) is divisible by (n + 1) for n>=0. ●

▶ [A358265] 1,1,2,6,28,160,1080,8470,76160,771120,8671600,107245600,1446984000,21150929800,332950217600,5615507898000,101024594070400,1931055071545600,39082823446867200,834945681049480000,18776164188349568000,443348081412556320000 ⋆ Expansion of e.g.f. 1 / (1 - x * exp(x ^ 3 / 6)). ● a(n) = n! * Su m _{ k=0..floor(n / 3) } (n - 3 * k) ^ k / (6 ^ k * k!). ●

▶ [A088501] 1,2,6,28,172,1328,12272,132480,1633344,22663104,349324608,5923548288,109570736256,2195765044224,47386235513856,1095689316882432,27023900076988416,708173307424456704,19649589144733089792 ⋆ Expansion of e.g.f. 1 / (1 - 2 * log(1 + x)). ● a(n) = Sum _{ k=0..n } Stirling1(n, k) * k! * 2 ^ k. ● a(0) = 1; a(n) = 2 * Sum _{ k=1..n } (- 1) ^ (k - 1) * (k - 1)! * binomial(n,k) * a(n - k). - _ Seiichi Manyama _ , May 22 2022 ●

▶ [A140092] 1,2,6,28,174,1308,11300,108808,1145078,12996332,157580252,2026874424,27507762028,392226116696,5855551243464,91263899531280,1481385005886374,24989341719984972,437270678940944556,7923785627972483672 ⋆ G.f. satis fies: A(x) = Series _ Reversion[x / sqrt(1 + 4 * A(x))] with A(0)=0. ● a(n)= T(n,1), T(n, m)=m / n * sum(k=1..n - m, sum(i=k..n - m, T(n - m,i) * sum(j= 0..i - k, binomial(- k - j + 2 * i - 1,i - 1) * (k + j) * 2 ^ (k + j) * binomial(k + j - 1,k - 1)) / i * (- 1) ^ (i + k)) * binomial(n + k - 1, n - 1)), n>m, T(n,n)=1. [_ Vladimir Kruchinin _ , May 08 2012] ●

▶ [A136631] 1,1,2,6,28,177,1449,14869,185230,2738962,47287352,939759621,21241309681,540698975061,15370957337418,484433735633218,16817886069720724,639545680226171989,26507567678760284105 ⋆ Antidiagonal sums of triangle A136630, omitting antidiagonals of all zeros. ● a(n) = Sum _{ k=0..n } [x ^ (2n - 2k)] Product _{ j=0..[k / 2] } 1 / (1 - (2j + k - 2[k / 2]) ^ 2 * x ^ 2). ●

▶ [A084870] 1,2,6,28,190,1692,16766,166028,1586430,14580412,129654526,1123451628,9544185470,79881877532,661135445886,5425962250828,44250287565310,359161631645052,2904756409742846,23429320590259628,188594431902253950 ⋆ N umber of 3 - multiantichains of an n - set. ● a(n) = (1 / 3!) * (8 ^ n - 6 * 6 ^ n + 6 * 5 ^ n + 9 * 4 ^ n - 18 * 3 ^ n + 14 * 2 ^ n). ●

▶ [A372372] 1,2,6,29,154,792,4047,20967,110058,582257,3096516,16539690,88684291,477080671,2573652045,13917256254,75417513498,409447753305,2226602481387,12126317466294,66129124080804,361059693982863,1973513103986606,10797777359289435 ⋆ Coefficient of x ^ n in the expansion of ((1 + x + x ^ 3) ^ 3 / (1 + x)) ^ n. ● a(n) = Sum _{ k=0..floor(n / 3) } binomial(3 * n,k) * binomial (2 * n - k,n - 3 * k). ●

▶ [A370217] 1,2,6,29,166,927,5055,27687,153702,861950,4862481,27543111,156571951,892919445,5106591405,29275176204,168181755750,967967551701,5580293663274,32217589171489,186253647533841,1078046039503182,6246592211179337,36231065957573793 ⋆ Coefficient of x ^ n in the expansion of ((1 + x) ^ 2 / (1 - x ^ 3) ^ 3) ^ n. ● a(n) = Sum _{ k=0..floor(n / 3) } binomial(3 * n + k - 1,k) * binomial(2 * n,n - 3 * k). ●

▶ [A137825] 2,6,30,60,420,4620,13860,180180,360360,6126120,116396280,2677114440,77636318760,155272637520,776363187600,24067258815600,890488576177200,2671465728531600,109530094869795600,4709794079401210800,22136032173185 6907600,1173209705178841610 2800 ⋆ Least number having the highest abundan cy among numbers with exactly n prime factors (counted with multiplicity). ● a (n) = product of the first n terms of A137826. - _ T. D. Noe _ , Jan 24 2010 ●

▶ [A304579] 2,6,30,110,306,702,1406,2550,4290,6806,10302,15006,21170,29070,39006,51302,66306,84390,105950,131406,161202,195806,235710,281430,333506 ⋆ a(

n) = (n ^ 2 + 1) * (n ^ 2 + 2). ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ●

► [A065563] 2,6,30,120,520,2184,9282,39270,166430,704880,2986128,12649104,535830100,2269803900,9615057900,40730015760,172535152880,730870575600,3096017538900,13114940595900,55555780141420,235338060807360 ★ Product of three consecutive Fibonacci numbers. ● a(n) = Fibonacci(n + 1) ^ 3 - (- 1) ^ n * Fibonacci(n + 1). - _ Gary Detlefs _ , Feb 02 2011 ● a(n) = 3 * a(n - 1) + 6 * a(n - 2) - 3 * a(n - 3) - a(n - 4). ●

► [A073969] 0,2,6,30,125,650,3150,15750,78000,390625,1952500,9768750,48831250,244156250,1220703125,6103593750,30517656250,152588281250,762939062500,3814697265625,19073484375000,95367441406250,476837167968750,2384185839843750,11920928955078125 ★ Number of strings of length n over Z _ 5 with trace 1 and subtrace 3. ● a(n; t, s) = a(n - 1; t, s) + a(n - 1; t + 4, s + 4t + 1) + a(n - 1; t + 3, s + 3t + 4) + a(n - 1; t + 2, s + 2t + 4) + a(n - 1; t + 1, s + t + 1). ●

► [A366266] 1,2,6,30,170,1050,6846,46374,323154,2301618,16680246,122607342,911868282,6849381194,51885977838,395941193718,3040818657954,23485437201762,182297207394150,1421357996034750,11126867651367498,87421958424703098,689130671539597854 ★ G.f. A(x) satisfies A(x) = 1 + x + x * A(x) ^ 3. ● a(n) = Sum _{ k=0..n } binomial(2 * k + 1,n - k) * binomial(3 * k,k) / (2 * k + 1). ●

► [A353184] 1,1,2,6,30,180,1260,10080,93240,1015560,12146400,158004000,2226193200,34162128000,565750785600,10034584560000,190820565936000,3845407181616000,81995523626016000,1844123531009760000,43689721287532320000,1086745683839175360000 ★ Expansion of e.g.f. 1 / (1 - Sum _{ k>=1 } x ^ (k ^ 2) / (k ^ 2)). ● a(0) = 1; a(n) = Sum _{ k=1..floor(sqrt(n)) } (k ^ 2 - 1)! * binomial (n,k ^ 2) * a(n - k ^ 2). ●

► [A365975] 1,1,2,6,30,180,1260,10800,104760,1130760,13776480,184044960,2670220080,42222280320,718144004160,13061603808000,254036916144000,5247117638294400,114652672773408000,2647321293055507200,64330669872690566400,1640738743703289331200 ★ Expansion of e.g.f. 1 / (1 - Sum _{ k>=0 } x ^ (3 * k + 1) / (3 * k + 1)). ● a(0) = 1; a(n) = Sum _{ k=0..floor((n - 1) / 3) } (3 * k)! * binomial(n,3 * k + 1) * a(n - 3 * k - 1). ●

► [A287592] 0,2,6,31,167,806,3588,15233,62973,256504,1036274,4167659,16719843,66985946,268173264,1073184709,4293787577,17177378732,68714233758,274866896783,1099488558975,4397998276462,17592085380956,70368534462281,281474540502837 ★ Number of connected induced subgraphs on the n - crown graph. ● a(n) = (- 1 + 2 ^ n) ^ 2 - (n * (- 7 + 2 ^ (1 + n) + n)) / 2. ● a(n) = 11 * a(n - 1) - 47 * a(n - 2) + 101 * a(n - 3) - 116 * a(n - 4) + 68 * a(n - 5) - 16 * a(n - 6). ●

► [A094639] 1,2,6,31,227,1991,19415,203456,2248356,25887400,307993016,3763786812,47032778956,598933188956,7751562502556,101741582076581,1351906409905481,18159677984049581,246298405721739581 ★ Partial sums of squares of Catalan numbers (A000108). ● a(n) = Sum _{ k=0..n } ((2k)! / (k!) ^ 2 / (k + 1)) ^ 2. - _ Alexander Adamchuk _ , Feb 16 2008 ●

► [A212762] 0,2,6,32,60,162,252,512,720,1250,1650,2592,3276,4802,5880,8192,9792,13122,15390,20000,23100,29282,33396,41472,46800 ★ Number of (w,x,y,z) with all terms in { 0,...,n } , w and x odd, y even. ● a(n) = a(n - 1) + 4 * a(n - 2) - 4 * a(n - 3) - 6 * a(n - 4) + 6 * a(n - 5) + 4 * a(n - 6) - 4 * a(n - 7) - a(n - 8) + a(n - 9). ● a(n) = (n + 1) * (2 * n ^ 3 + 5 * n ^ 2 + 3 * n + 1 - (n ^ 2 + 3 * n + 1) * (- 1) ^ n) / 16. - _ Luce ETIENNE _ , Sep 19 2015 ●

► [A011820] 2,6,32,203,1144,5345,20926,70506,209746,562727,1384758,3167606,6807620,13863904,26941700,50245591,90358146,157312324,266040452,438299013,705186944,1110395771,1714352818,2599444040,3876530866 ★ Number of M - sequences m _ 0,...,m _ 4 with m _ 1 < n. ● a(n)= (4 * n ^ 10 + 61 * n ^ 9 + 408 * n ^ 8 + 1722 * n ^ 7 + 6132 * n ^ 6 + 18333 * n ^ 5 + 41072 * n ^ 4 + 88748 * n ^ 3 + 133824 * n ^ 2 + 193536 * n + 241920) / 120960. - _ Frank Ellermann _ ●

► [A206300] 1,2,6,32,210,1536,12012,98304,831402,7208960,63740820,572522496,5209363380,47915728896,444799488600,4161823309824,39209074920090,371626340253696,3541117629057540 ★ Expand the real root of y ^ 3 - y + x in powers of x, then multiply coefficient of x ^ n by - 4 ^ n to get integers. ● a(n) = 2 ^ (2 * n - 1) Gamma((3 * n - 1) / 2) / (Gamma((n + 1) / 2) * n!). ● a(n) = (2 ^ (2 * n - 1) * ((n + 1) / 2) _ (n - 1)) / n!, where (x) _ k is the Pochhammer symbol. (End) ●

► [A357664] 0,1,2,6,32,220,1592,11944,96000,847120,8209952,86020704,958326272,11243157952,138464594816,1789358629504,24250275913728,344002396594432,5092763802452480,78443316497892864,1253887341918199808,20761127890765634560 ★ Expansion of e.g.f. sinh((exp(2 * x) - 1) / sqrt(2)) / sqrt(2). ● a(n) = Sum _{ k=0..floor((n - 1) / 2) } 2 ^ (n - 1 - k) * Stirling2(n,2 * k + 1). ●

► [A162429] 1,2,6,33,171,1073,7749,58846,489993,4345078,40693236,403876159,4192624215,45577188311,516108618746,6073914844170,74083651509143,934440647979907,12164742571864976,163157161537315276 ★ Main diagonal of table A162424. ● a(n) = Sum _{ m=n(n + 1) / 2..n(n + 1) / 2 + n } [x ^ m] S(x) ^ (n + 1) for n>=0 where S(x) = Sum _{ n>=0 } x ^ ((n + 1)(n + 2) / 2 - 1). ●

► [A105142] 2,6,34,46,142,174,204,238,312,466,550,616,690,730,1136,1280,1302,1330,1486,1586,1610,1638,1644,1652,1688 ★ Positive integers n such that n ^ 12 + 1 is semiprime. ● a(n) ^ 12 + 1 is semiprime A001538. a(n) ^ 4 + 1 is prime and d a(n) ^ 8 - a(n) ^ 4 + 1 is prime. ●

► [A003499] 2,6,34,198,1154,6726,39202,228486,1331714,7761798,45239074,263672646,1536796802,8957108166,52205852194,304278004998,1773462177794,10336495061766,60245508192802,351136554095046,2046573816377474,11928306344169798,69523264248641314 ★ a(n) = 6 * a(n - 1) - a(n - 2), with a(0) = 2, a(1) = 6. ● a(n + 1) is the trace of n - th power of matrix {{ 6, - 1 } , { 1, 0 }} . - _ Artur Jasinski _ , Apr 22 2008 ● a(n) = Product _{ r=1..n } (4 * sin ^ 2((4 * r - 1) * Pi / (4 * n)) + 4). [Lu / Wu] - _ Sarah - Marie Belcastro _ , Jul 04 2009 ● a(n) = (1 + sqrt(2)) ^ (2 * n) + (1 + sqrt(2)) ^ (- 2 * n). - _ Gerson Washiski Barbosa _ , Sep 19 2010 ● a(2 * n) + 2 = a(n) ^ 2. - _ Greg Dresden _ and Shraya Pal, Jun 29 2021 ●

► [A108424] 2,6,34,238,1858,15510,135490,1223134,11320066,106830502,1024144482,9945711566,97634828354,967298498358,9659274283650,97119829841854,982391779220482,9990160542904134,102074758837531810,1047391288012377774,10785328748880319298 ★ Number of paths from (0,0) to (3n,0) that stay in the first quadrant, consist of steps u=(2,1), U=(1,2), or d=(1, - 1) and do not touch the x - axis, except at the endpoints. ● a(n) = (n * 2 ^ n * C(2 * n, n) / ((2n - 1)(n + 1))) * Sum _{ j=0..n - 1 } (C(n - 1, j)) ^ 2 / (2 ^ j * C(n + j + 1,j)). ● a(n) = Sum _{ i=0..n } (2 * n + i - 2)! / ((n - i)! * (n + i - 1)! * i!), n>0. [_ Vladimir Kruchinin _ , Feb 16 2013] ● a(n) = 2 * Sum _{ i>=0 } (1 / n) * binomial(2 * n - 2,i) * binomial(3 * n - 2 - i,2 * n - 1). ● a(n) = 2 * binomial(3 * n - 2, 2 * n - 1) * hypergeom([2 - 2 * n, 1 - n], [2 - 3 * n], - 1) / n. - _ Peter Luschny _ , Jun 14 2021 ● a(n) = (- 1) ^ (n + 1) * 1 / ((d - 1) * n + 1)) * Sum _{ i = 0..n } binomial((d - 1) * n + 1, n - i) * binomial((d - 1) * n + i, i), with d = - 1. ●

► [A325296] 1,2,6,34,274,2566,26406,290530,3361042,40463894,503505542,6445263858,84593906962,1135730543782,15571171913958,217755224972034,3103675765823634,45064501714445366,666402338952126790,10035910959863435794,153933449475479903634,2405188381726250188486,38293058095081812664742,621408387360835449163042,10281437987942851628839442 ★ G.f. A(x) satisfies: 1 + 2 * Sum _{ n>=1 } x ^ n * A(x) ^ (n ^ 2) = Sum _{ n>=0 } x ^ n * (1 + A(x) ^ n) ^ n. ● a(n) = 2 (mod 4) for n > 0. ●

► [A081003] 2,6,35,234,1598,10947,75026,514230,3524579,24157818,165580142,1134903171,7778742050,53316291174,365435296163,2504730781962,17167680177566,117669030460995,806515533049394,5527939700884758,37889062373143907,259695496911122586 ★ a(n) = Fibonacci(4n + 1) + 1, or Fibonacci(2n + 1) * Lucas(2n). ● a(n) = 8 * a(n - 1) - 8 * a(n - 2) + a(n - 3). ● a(n) = 1 + (1 / 2) *{ [(7 / 2) - (3 / 2) * sqrt(5)] ^ n + [(7 / 2) + (3 / 2) * sqrt(5)] ^ n }+ (1 / 10) * sqrt (5) *{ [(7 / 2) + (3 / 2) * sqrt(5)] ^ n - [(7 / 2) - (3 / 2) * sqrt(5)] ^ n } , with n>=0. - _ Paolo P. Lava _ , Dec 01 2008 ●

► [A101609] 0,2,6,36,180,1320,9240,84000,756000,8285760,91143360,1173553920,15256200960,226040855040,3390612825600,56865153945600,966707617075200,18112111963545600,344130127307366400,7125892746964992000 ★ a(n) = n! * Sum _{ k=1..floor(n / 2) } 1 / k. ● a(1) = 0, a(n) = a(n - 1) * n + (1 + (- 1) ^ n) * (n - 1)!. - _ Daniel Suteu _ , Feb 06 2017 ●

► [A152668] 2,6,36,192,1440,10800,100800,967680,10886400,127008000,1676505600,22992076800,348713164800,5492232345600,94152554496000,1673823191040000,32011868528640000,633834996867072000,13380961044971520000 ★ Number of runs of even entries in all permutations of { 1,2,...,n } (the permutation 274831659 has 3 runs of even entries: 2, 48 and 6). ● a(2n) = (n + 1)(2n)! / 2; ● a(2n + 1) = n(n + 2)(2n)! ●

► [A086325] 0,2,6,36,220,1590,12978,118664,1201464,13349610,161530270,2114578092,29780308116,448995414686,7215997736010,123153028027920,2224451568754288,42395429898611154,850263899633257014,17900292623858042420,394701452356069835340,9096928711444657157382,218739785834282892557026 ★ Let u(1) =0, u(2)=1, u(k)=u(k - 1) + u(k - 2) / (k - 2); then a(n)=n! * u(n). ● a(n) = ceiling(n * n! / e) - (1 - (- 1) ^ n) / 2. ● a(n) = n * floor((n! + 1) / e). [_ Gary Detlefs _ , Jul 13 2010] ●

► [A162697] 1,1,2,6,36,260,2190,23562,294056,4145976,66518010,1187366510,23307288972,500683995396,11669239646246,293211947901810,7905976017270480,227653751742812912,6972326784534024306 ★ E.g.f. satisfies: A(x) = 1 + x + x ^ 2 * exp(x * A(x)). ● a(n) = n! * Sum _{ k=0..n } Sum _{ j=0..k } C(j + 1,n - k) / (j + 1) * C(n - k,k - j) * (k - j) ^ j / j!. ● a(n,m) = n! * Sum _{ k=0..n } Sum _{ j=0..k } m * C(j + m,n - k) / (j + m) * C(n - k,k - j) * (k - j) ^ j / j!. ●

► [A372309] 2,6,38,174,2866,11670,135570,1335534,15618090,155077890,5148702870 ★ The smallest number whose prime factor concatenation, when written in base n, contains all digits 0,1,...,(n - 1). ● a(n) >= n!. - _ Michael S. Branicky _ , Apr 28 2024 ●

► [A077259] 0,2,6,44,116,798,2090,14328,37512,257114,673134,4613732,12078908,82790070,216747218,1485607536,3889371024,26658145586,69791931222,478361013020,1252365390980,8583840088782,22472785106426,154030760585064,403257766524696 ★ First member of the Diophantine pair (m,k) that satisfies 5 * (m ^ 2 + m) = k ^ 2 + k; a(n) = m. ● a(0)=0, a(1)=2, a(n + 2) = 4 + 9 * a(n) + 2 * sqrt(1 + 20 * a(n) + 20 * a(n) ^ 2). - _ Herbert Kociemba _ , May 12 2008 ● a(0)=0, a(1)=2, a(2)=6, a(3)=44, a(n) = 18 * a(n - 2) - a(n - 4) + 8. - Robert Phillips, Sep 01 2008 ● a(n) = a(- 1 - n) for all n in Z. - _ Michael Somos _ , Jul 15 2018 ● a(n) = a(n - 1) + 18 * a(n - 2) - 18 * a(n - 3) - a(n - 4) + a(n - 5). - _ Wesley Ivan Hurt _ , Jul 24 2020 ● a(n) = ((5 + sqrt(5)) * (2 + sqrt(5)) ^ n + (5 - sqrt(5)) * (2 - sqrt(5)) ^ n) / 20 - 1 / 2 for even n; ● a(n) = ((5 + 3 * sqrt(5)) * (2 + sqrt(5)) ^ n + (5 - 3 * sqrt(5)) * (2 - sqrt(5)) ^ n) / 20 - 1 / 2 for odd n. (End) ●

► [A371341] 1,2,6,46,330,2778,24094,219318,2048274,19583410,190497142,1880184446,18778814938,189456108554,1927852050830,19763367194630,203919590002210,2116079501498722,22069907395614182,231222485352688590,2432325883912444010 ★ G.f. A(x) satisfies A(x) = 1 + x / A(x) * (1 + A(x) ^ 5). ● a(n) = (- 1) ^ (n - 1) * (1 / n) * Sum _{ k=0..n } binomial(n,k) * binomial(2 * n - 5 * k - 2,n - 1) for n > 0. ●

► [A052688] 0,1,2,6,48,240,1440,15120,120960,1088640,14515200,159667200,1916006400,31135104000,435891456000,6538371840000,125536739328000,2134124568576000,38414242234368000,851515702861824000 ★ Expansion of e.g.f. x / ((1 - x) * (1 - x ^ 3)). ● a(n) = (n! / 3) * (n + 1 - (1 / 3) * Sum _{ alpha=RootOf(Z ^ 2 + Z + 1) } (1 + 2 * alpha) *_ alpha ^ (- 1 - n)). ●

► [A052657] 0,0,2,6,48,240,2160,15120,161280,1451520,18144000,199584000,2874009600,37362124800,610248038400,9153720576000,167382319104000,2845499424768000,57621363351552000,1094805903679488000,24329020081766400000,510909421717094400000,12364008005553684480000 ★ Expansion of e.g.f. x ^ 2 / ((1 - x) ^ 2 * (1 + x)). ● a(0)=0, a(1)=0, a(2)=2, n * a(n + 2) = (n + 2) * a(n + 1) + (n ^ 3 + 4 * n ^ 2 + 5 * n + 2) * a(n). ●

► [A358065] 1,1,2,6,48,360,2880,27720,322560,4173120,58665600,911433600,15567552000,287740252800,5710178073600,121450256928000,2758495490150400,66563938106265600,1699990278213427200,45828946821385728000,1300703752243703808000 ★ Expansion of e.g.f. 1 / (1 - x * exp(x ^ 3)). ● a(n) = n! * Sum _{ k=0..floor(n / 3) } (n - 3 * k) ^ k / k!. ●

► [A181509] 2,6,56,152,296,488,728,1016,1352,1736,2168,2648,3176,3752,4376,5048,5768,6536,7352,8216,9128,10088,11096,12152,13256 ★ a(1) = 2, a(n) = (n - th

- even n ^ 3) - (sum of previous terms) ● a(n) = 56 - 72 * n + 24 * n ^ 2, n>2. a(n) = (2 * n - 2) ^ 3 - sum _{ i=1..n - 1 } a(i). [From R. J. Mathar, Nov 01 2010] ●

► [A102290] 0,0,2,6,60,380,3990,37002,450296,5373720,76018410,1096730030,17814654132,299645294676,5511836578430,105550556136690,2171244984679920,46545825736022192,1059273836225051346,25100215228045842390,626204775725372971820,16239127347086448236460 ★ Total number of even lists in all sets of lists , cf. A000262. ● a(n) = n! * Sum _{ j=0..n - 2 } (- 1) ^ (n + j) * LaguerreL(j, - 1) for n>1 with a(0)=a(1)=0. - _ G. C. Greubel _ , Mar 09 2021 ●

► [A025540] 1,2,6,60,420,1260,13860,360360,360360,6126120,116396280,116396280,2677114440,13385572200,40156716600,2329089562800,72201776446800,72201776446800,72201776446800,2671465728531600,2671465728531600 ★ Least common multiple of { C(0,0), C(2,1), ..., C(2n,n) } . ● a(n) = 2 ^ floor(log(n + 1) / log(2)) * Prod(p ^ floor(log(2n) / log(p))), where the product is taken over all odd primes p below 2n. - _ Max Alekseyev _ , Apr 13 2016 ●

► [A368511] 1,1,2,6,66,450,3690,35280,385560,6717480,96117000,1512819000,25975395600,483169486800,9678799930800,207733600074000,5243385642495000,128458209887007000,3332234177825553000,91241046790816923000,2629791992312269785000,79586945507310941700000 ★ Number of ordered partitions of an n - set into blocks of size <= sqrt(n). ● a(n) = n! * [x ^ n] 1 / (1 - Sum _{ 1 <= j <= sqrt(n) } x ^ j / j!). ●

► [A152885] 0,0,2,6,72,360,4320,30240,403200,3628800,54432000,598752000,10059033600,130767436800,2440992153600,36614882304000,753220435968000,12804747411456000,288106816757760000,5474029518397440000,133809610449715200000,2810001819444019200000 ★ Number of descents beginning and ending with an odd number in all permutations of { 1,2,...,n } . ● a(2n) = (2n - 1)! * binomial(n,2); a(2n + 1) = (2n)! * binomial(n + 1,2). ●

► [A056164] 1,2,6,109,191177 ★ Number of ordered antichain covers of an unlabeled n - set; labeled T _ 1 - hypergraphs (without empty hyperedges) with n hyperedges. ● a(n)=Sum _{ k=1..C(n, floor(n / 2)) } b(k, n) where b(k, n) is the number of k - element ordered antichains covers of an unlabeled n - set. ●

► [A178773] 1,2,6,1001,5005,323323 ★ Least palindrome which is the product of n consecutive primes. ● a(3) = 1001 = 7 * 11 * 13, ● a(4) = 5005 = 5 * 7 * 11 * 13, ● a(5) = 323323 = 7 * 11 * 13 * 17 * 19. ●

► [A267499] 2,7,7,12,19,29,44,68,109,183 ★ Number of fixed points of autobiographical numbers (A267491 ... A267498) in base n. ● a(n)=2 ^ (n - 4) + 1 / 2 * n ^ 2 - 1 / 2 * n for 5<=n<=11, unknown for n>11. ●

► [A253251] 1,2,7,8,9,10,11,20,25,29,32,35,37,39,41,43,45,47,49,51,52,53,54,55,56 ★ a(1) = 1, and for n > 0, a(n + 1) = a(n) + floor(10 ^ k / a(n)), where k is the least integer such that 10 ^ k >= a(n). ● a(n) + 1 <= a(n + 1) <= a(n) + 9 , hence n <= a(n) <= 9n. - _ Charles R Greathouse IV _ , Jun 18 2015 ●

► [A047527] 0,1,2,7,8,9,10,15,16,17,18,23,24,25,26,31,32,33,34,39,40,41,42,47,48 ★ Numbers that are congruent to { 0, 1, 2, 7 } mod 8. ● a(n) = 3 * n - 4 * floor((n - 2) / 4) - 6 + (- 1) ^ n. - _ Gary Detlefs _ , Mar 27 2010 ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. - _ Harvey P. Dale _ , Sep 05 2014 ● a(n) = (4n - 5 + i ^ (2n) + (1 + i) * i ^ (- n) + (1 - i) * i ^ n) / 2 where i = sqrt(- 1). ●

► [A287515] 2,7,8,9,11,12,15,20,21,27,29,30,32,34,38,44,50,52,53,54,55,56,58,59,60 ★ a(n) = position of n - th 0 when sequence is written in base 2. ● a(n) = zeropos([sequence],n). ●

► [A047354] 0,1,2,7,8,9,14,15,16,21,22,23,28,29,30,35,36,37,42,43,44,49,50,51,56 ★ Numbers that are congruent to { 0, 1, 2 } mod 7. ● a(n) = 7 * floor(n / 3) + (n mod 3), with offset 0 and a(0)=0. - _ Gary Detlefs _ , Mar 09 2010 ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. (End) ● a(n) = (21 * n - 33 - 12 * cos(2 * n * Pi / 3) + 4 * sqrt(3) * sin(2 * n * Pi / 3)) / 9. ● a(3k) = 7k - 5, a(3k - 1) = 7k - 6, a(3k - 2) = 7k - 7. (End) ● a(n) = n + 4 * floor((n - 1) / 3) - 1. - _ Bruno Berselli _ , Feb 06 2017 ●

► [A047525] 0,2,7,8,10,15,16,18,23,24,26,31,32,34,39,40,42,47,48,50,55,56,58,63,64 ★ Numbers that are congruent to { 0, 2, 7 } mod 8. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. ● a(n) = (24 * n + 2 * sqrt(3) * sin(2 * Pi * n / 3) + 12 * cos(2 * Pi * n / 3) - 21) / 9. - _ Ilya Gutkovskiy _ , May 29 2016 ● a(3k) = 8k - 1, a(3k - 1) = 8k - 6, a(3k - 2) = 8k - 8. - _ Wesley Ivan Hurt _ , Jun 10 2016 ●

► [A047239] 1,2,7,8,13,14,19,20,25,26,31,32,37,38,43,44,49,50,55,56,61,62,67,68,73 ★ Numbers that are congruent to { 1, 2 } (mod 6). ● a(n) = 3 * (n - 1) - (- 1) ^ n. - _ Rolf Pleisch _ , Aug 04 2009 ● a(n) = 6 * n - a(n - 1) - 9 (with a(1)=1). - _ Vincenzo Librandi _ , Aug 05 2010 ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) with a(1)=1, a(2)=2, a(3)=7. - _ Harvey P. Dale _ , Nov 23 2011 ●

► [A334227] 0,2,7,8,15,16,29,30,31,32,57,58,59,60,61,62,63,64,113,114,115,116,117,118,119 ★ Length of the shortest prefix of the Thue - Morse sequence (A010060) containing, as subwords, all length - n blocks appearing in A010060. ● a(0) = 0, a(1) = 2, a(2) = 2, and a(2 ^ i + j) = 7 * 2 ^ i + j - 1 for i >= 0 and 2 <= j <= 2 ^ i + 1. ●

► [A080572] 0,0,1,2,7,8,15,24,37,38,49,62,81,98,121,146,175,176,195,216,247,272,307,344,387 ★ Number of ordered pairs (i,j), 0 <= i,j < n, for which (i & j) is nonzero, where & is the bitwise AND operator. ● a(0)=a(1)=0, a(2n) = 3a(n) + n ^ 2, a(2n + 1) = a(n) + 2a(n + 1) + n ^ 2 - 1. This was proved by Jeremy Dover. - _ Ralf Stephan _ , Dec 08 2004 ●

► [A213037] 0,1,2,7,8,17,18,31,32,49,50,71,72,97,98,127,128,161,162,199,200,241,242,287,288 ★ a(n) = n ^ 2 - 2 * floor(n / 2) ^ 2. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). ●

► [A055247] 1,2,7,8,19,20,25,26,55,56,61,62,73,74,79,80,163,164,169,170,181,182,187,188,217 ★ Related to A055246 and A005836. Used for boundaries of open intervals which have to be erased in the Cantor middle third set construction. ● a(1) = 1, a(n) = 3 ^ ceiling(log _ 2(n)) - a(2 ^ ceiling(log _ 2(n)) + 1 - n). - Juan Jose Alba Gonzalez (jjalba(AT)gmail.com), May 16 2006 ●

► [A306903] 0,1,2,7,8,19,26,61,70,126,146,270,308,519,604,1054,1222,1929,2208,3454,3930,5862,6576,9833,11102 ★ Sum over all partitions of n of the bitwise XOR of the parts. ● a(n) is odd <=> n in { A067567 } . ●

► [A279847] 0,1,2,7,8,22,23,44,54,84,85,151,152,206,241,326,327,458,459,605,664,790,791,1065,1091 ★ a(n) = Sum _{ k=1..n } k ^ 2 * (floor(n / k) - 1). ● a(p ^ k) = a(p ^ k - 1) + (p ^ (2 * k) - 1) / (p ^ 2 - 1), for p is prime. ● a(n) = Sum _{ k=1..floor(n / 2) } k ^ 2 * floor((n - k) / k). - _ Wesley Ivan Hurt _ , Dec 21 2020 ●

► [A236291] 1,1,2,7,8,26,32,85,128,292,512,1079,2048,4174,8192,16489,32768,65672,131072,262315,524288,1048786,2097152,4194557,8388608 ★ Number of length n binary words that contain an even number of 0's or exactly two 1's. ● a(n) = (2 ^ (1 + n)) / 4 for n even; a(n) = (2 ^ (1 + n) - 2 * n + 2 * n ^ 2) / 4 for n odd. - _ Colin Barker _ , Jan 23 2014 ●

► [A047526] 1,2,7,9,10,15,17,18,23,25,26,31,33,34,39,41,42,47,49,50,55,57,58,63,65 ★ Numbers that are congruent to { 1, 2, 7 } mod 8. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4), for n > 4. ● a(n) = 8 * n / 3 - 2 + cos(2 * n * Pi / 3) + 5 * sin(2 * n * Pi / 3) / (3 * sqrt(3)). ● a(3 * k) = 8 * k - 1, a(3 * k - 1) = 8 * k - 6, a(3 * k - 2) = 8 * k - 7. (End) ●

► [A077470] 1,2,7,9,13,15,18,20,22,27,31,37,39,40,49,55,57,66,68,70,71,77,79,81,82 ★ Greedy powers of (3 / 5): sum _{ n=1..inf } (3 / 5) ^ a(n) = 1. ● a(n)=sum _{ k=1..n } floor(g _ k) where g _ 1=1, g _{ n + 1 } =log _ x(x ^ frac(g _ n) - x) (n>0) at x=(3 / 5) and frac(y) = y - floor(y). ● a(n) seems to be asymptotic to c * n with c around 3.7... - _ Benoit Cloitre _ ●

► [A047352] 0,2,7,9,14,16,21,23,28,30,35,37,42,44,49,51,56,58,63,65,70,72,77,79,84 ★ Numbers that are congruent to { 0, 2 } mod 7. ● a(n) = 7 * n - a(n - 1) - 12 with a(1)=0. Also: a(n) = a(n - 1) + a(n - 2) - a(n - 3). - _ Vincenzo Librandi _ , Aug 05 2010 ● a(n) = floor((7 / 3) * floor(3 * n / 2)). - _ Clark Kimberling _ , Jul 04 2012 ●

► [A267212] 1,2,7,9,16,23,33,38,51,63,76,87,105,120,139,155,176,197,221,240,267,293,320,345,377 ★ Total number of ON (black) cells after n iterations of the "Rule 109" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = a(n - 1) + a(n - 3) - a(n - 5) - a(n - 7) + a(n - 8) for n>7. ●

► [A022113] 2,7,9,16,25,41,66,107,173,280,453,733,1186,1919,3105,5024,8129,13153,21282,34435,55717,90152,145869,236021,381890 ★ Fibonacci sequence beginning 2, 7. ● a(n) = a(n - 1) + a(n - 2). (End) ● a(n) = ((5 + 6 * sqrt(5)) / 5) * ((1 + sqrt(5)) / 2) ^ n + ((5 - 6 * sqrt(5)) / 5) * ((1 - sqrt(5)) / 2) ^ n starting at n=0. - _ Bogart B. Strauss _ , Oct 27 2013 ● a(n) = h * Fibonacci(n + k) + Fibonacci(n + k - h) with h=5, k=1. - _ Bruno Berselli _ , Feb 20 2017 ● a(n) = 8 * F(n) + F(n - 3) for F = A000045. - _ J. M. Bergot _ , Jul 14 2017 ● a(n) = Fibonacci(n + 4) + Lucas(n - 1). - _ Greg Dresden _ and Henry Sauer, Mar 04 2022 ●

► [A041643] 1,2,7,9,16,25,41,353,394,747,1141,1888,6805,15498,564733,1144964,3999625,5144589,9144214,14288803,23433017,201752939,225185956,426938895,652124851 ★ Denominators of continued fraction convergents to sqrt(340). ● a(n) = 571538 * a(n - 14) - a(n - 28) for n>27. - _ Vincenzo Librandi _ , Dec 22 2013 ●

► [A042345] 1,2,7,9,16,41,57,1466,1523,4512,6035,10547,37676,85899,4504424,9094747,31788665,40883412,72672077,186227566,258899643,6658718641,6917618284,20493955209,27411573493 ★ Denominators of continued fraction convergents to sqrt(699). ● a(n) = 4542100 * a(n - 14) - a(n - 28) for n>27. - _ Vincenzo Librandi _ , Jan 20 2014 ●

► [A042807] 1,1,2,7,9,16,57,1726,5235,6961,12196,43549,55745,99294,6013385,6112679,12126064,42490871,54616935,97107806,345940353,10475318396,31771895541,42247213937,74019109478 ★ Denominators of continued fraction convergents to sqrt(934). ● a(n) = 6069130 * a(n - 14) - a(n - 28) for n>27. - _ Vincenzo Librandi _ , Jan 30 2014 ●

► [A079326] 1,2,7,9,17,20,31,35,49,54,71,77,97,104,127,135,161,170,199,209,241,252,287,299,337 ★ a(n) = the largest number m such that if m monominoes are removed from an n X n square then an L - tromino must remain. ● a(n) = (n ^ 2) / 2 - 1 (n even), (n ^ 2 - n) / 2 - 1 (n odd). ● a(n) = n * (2 * n + (- 1) ^ n - 1) / 4 - 1. ●

► [A174247] 1,1,2,7,9,21,76,104,255,936,1321,3327,12250,17682,45200,166420,244431,630586,2318863,3453662,8964527,32909250,49579091,129250365,473604092 ★ Number of words of length n composed of the letters a, b, and c with at least as many a's as b's, and at least as many b's as c's, and no a's adjacent. ● a(n) = Sum _{ i=floor((n + 2) / 3)..floor((n + 1) / 2) } Sum _{ j=floor((n - i + 1) / 2)..min(n - i, i) } binomial(n - i + 1, i) * binomial(n - i, j). - _ Andrew Howroyd _ , Jan 07 2020, after Maple ●

► [A042929] 1,1,2,7,9,25,59,84,143,227,1051,1278,2329,3607,9543,22693,32236,119401,151637,271038,16955993,17227031,34183024,119776103,153959127 ★ Denominators of continued fraction convergents to sqrt(996). ● a(n) = 17107630 * a(n - 20) - a(n - 40) for n > 39. - _ Vincenzo Librandi _ , Feb 01 2014 ●

► [A041717] 1,2,7,9,43,52,199,450,17299,35048,122443,157491,752407,909898,3482101,7874100,302697901,613269902,2142507607,2755777509,13165617643,15921395152,60929803099,137781001350,5296607854399 ★ Denominators of continued fraction convergents to sqrt(378). ● a(n) = 17498 * a(n - 8) - a(n - 16) for n>15. - _ Vincenzo Librandi _ , Dec 23 2013 ●

► [A041073] 1,1,2,7,9,52,61,235,296,531,6668,7199,13867,48800,62667,362135,424802,1636541,2061343,3697884,46435951,50133835,96569786,339843193,436412979 ★ Denominators of continued fraction convergents to sqrt(43). ● a(n) = 6964 * a(n - 10) - a(n - 20). - _ Vincenzo Librandi _ , Dec 10 2013 ●

► [A041453] 1,1,2,7,9,133,142,559,701,1260,38501,39761,78262,274547,352809,5213873,5566682,21913919,27480601,49394520,1509316201,1558710721,3068026922,10762791487,13830818409 ★ Denominators of continued fraction convergents to sqrt(242). ● a(n) = 39202 * a(n - 10) - a(n - 20) for n>19. - _ Vincenzo Librandi _ , Dec 18 2013 ●

► [A042157] 1,1,2,7,9,214,223,883,1106,1989,96578,98567,195145,684002,879147,20904383,21783530,86254973,108038503,194293476,9434125351,9628418827,19062544178,66816051361,85878595539 ★ Denominators of continued fraction convergents to sqrt(603). ● a(n) = 97684 * a(n - 10) - a(n - 20) for n>19. - _ Vincenzo Librandi _ , Jan 16 2014 ●

► [A047524] 2,7,10,15,18,23,26,31,34,39,42,47,50,55,58,63,66,71,74,79,82,87,90,95,98 ★ Numbers that are congruent to { 2, 7 } mod 8. ● a(n) = 8 * n - a(n - 1) - 7, n > 1. - _ Vincenzo Librandi _ , Aug 06 2010 ● a(n) = 4 * n - 3 / 2 + (- 1

) ^ n / 2. ● a(n) = 4 * n - (n mod 2) - 1. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3). - _ Muniru A Asiru _ , Aug 06 2018 ●

▶ [A105770] 1,2,7,10,17,28,37,50,67,82,101,124,145,170,199,226,257,292,325,362,403,442,485,532,577 ⋆ Expansion of (x ^ 2 - x + 1)(4x ^ 2 + x + 1) / ((1 + x + x ^ 2)(1 - x) ^ 3). ● a(n) = n ^ 2 + 1 + [0,0,2] (3 - periodic). - _ Ralf Stephan _ , Nov 15 2010. ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) - 2 * a(n - 4) + a(n - 5) for n>4. - _ Colin Barker _ , May 19 2019 ●

▶ [A309805] 1,2,7,10,19,24,37,44,61,70,91,102,127,140,169,184,217,234,271,290,331,352,397,420,469 ⋆ Maximum number of nonattacking kings placeable on a hexagonal board with edge - length n in Glinski's hexagonal chess. ● a(n) = n ^ 2 - floor(n / 2) - floor(n / 2) ^ 2. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n > 5. ● a(n) = (1 / 16) * (3 + (- 1) ^ (1 + 2 * n) - 4 * n + 12 * n ^ 2 - 2 * (- 1) ^ n * (1 + 2 * n)). ●

▶ [A336903] 0,1,2,7,10,19,42,61,98,151,304,403,654,925,1400,2431,3328,4903,7056,10117,13952,23419,30406,44683,61308 ⋆ Sum of the largest parts of all compositions of n into distinct parts. ● a(n) == n (mod 2). ●

▶ [A023855] 1,2,7,10,22,28,50,60,95,110,161,182,252,280,372,408,525,570,715,770,946,1012,1222,1300,1547 ⋆ a(n) = 1 * (n) + 2 * (n - 1) + 3 * (n - 2) + ... + (n + 1 - k) * k, where k = floor((n + 1) / 2). ● a(n) = (n + 1) * (n + 3) * (2 * n + 1) / 24 if n is odd, or n * (n + 1) * (n + 2) / 12 if n is even. ● a(n) = Sum _{ i=1..ceiling(n / 2) } i * (n - i + 1) = - ceiling(n / 2) * (ceiling(n / 2) + 1) * (2 * ceiling(n / 2) - 3n - 2) / 6. - _ Wesley Ivan Hurt _ , Sep 19 2013 ● a(n) = (4 * n ^ 3 + 15 * n ^ 2 + 14 * n + 3 - 3 * (n + 1) ^ 2 * (- 1) ^ n) / 48. - _ Luc e ETIENNE _ , Oct 22 2014 ●

▶ [A084184] 0,1,2,7,10,31,42,127,170,511,682,2047,2730,8191,10922,32767,43690,131071,174762,524287,699050,2097151,2796202,8388607,11184810 ⋆ Partial sums of a Jacobsthal related sequence. ● a(n) = (5 - (- 1) ^ n) * (2 ^ n - 1) / 6. ● a(n) = 5 * a(n - 2) - 4 * a(n - 4) for n>3. ●

▶ [A113544] 1,2,7,11,13,14,17,19,23,26,29,31,34,37,38,41,43,46,47,53,58,59,61,62,67 ⋆ Numbers simultaneously pentagon - free, squarefree and triangle - free. ● a(n) has no factor >1 of form a * (a + 1) / 2 nor b ^ 2 nor c * (3 * c - 1) / 2. A005117 INTERSECTION A112886 INTERSECTION A113508. ●

▶ [A001960] 2,7,11,15,20,24,28,32,37,41,45,50,54,58,63,67,71,76,80,84,88,93,97,101,106 ⋆ a(n) = floor((n + 2 / 3) * (5 + sqrt(13)) / 2); v - pile positions in the 3 - Wythoff game. ● a(n) = floor((n + 2 / 3) * (5 + sqrt(13)) / 2). - _ R. J. Mathar _ , Feb 14 2011 ●

▶ [A063289] 1,2,7,11,16,20,25,29,34,38,43,47,52,56,61,65,70,74,79,83,88,92,97,101,106 ⋆ Dimension of the space of weight n cuspidal newforms for Gamma _ 1(16). ● a(n) = 9 * n / 4 + (- 1) ^ n / 4 - 45 / 4 for n >= 3, with first differences in A010710. - _ R. J. Mathar _ , Dec 06 2010 ● a(n + 2) = a(n) + 9 (n>2), a(2n + 1) = a(2n) + 4 (n>1), a(2n) = a(2n - 1) + 5 (n>1). (End) ●

▶ [A287726] 2,7,11,16,21,25,30,34,39,44,48,53,58,62,67,71,76,81,85,90,94,99,104,108,113 ⋆ Positions of 0 in A287725; complement of A287727. ● a(n) = floor(n * phi) + 3n - 2. - _ Michel Dekking _ , Feb 12 2021 ●

▶ [A063097] 2,7,11,17,21,27,31,37,41,47,51,57,61,67,71,77,81,87,91,97,101,107,111,117,121 ⋆ Dimension of the space of weight 2n cusp forms for Gamma _ 0(29). ● a(n) = 10 * n - a(n - 1) - 12 for n>2, with a(1)=2, a(2)=7. [_ Vincenzo Librandi _ , Aug 07 2010] ● a(n) = (- 7 + (- 1) ^ n + 10 * n) / 2. a(n)=a(n - 1) + a(n - 2) - a(n - 3) for n>4. G.f.: x * (x ^ 3 + 2 * x ^ 2 + 5 * x + 2) / ((x - 1) ^ 2 * (x + 1)). - _ Colin Barker _ , Sep 08 2013 ●

▶ [A294114] 0,2,7,11,20,26,39,47,55,63,82,92,115,127,139,151,180,194,227,243,259,275,314,332,350 ⋆ Sum of the larger parts of the partitions of 2n into two parts with smaller part prime. ● a(n) = Sum _{ i=1..n } (2 * n - i) * c(i), where c is the prime characteristic (A010051). ●

▶ [A144707] 1,1,2,7,11,22,35,61,98,163,263,430,695,1129,1826,2959,4787,7750,12539,20293,32834,53131,85967,139102,225071 ⋆ Diagonal sums of the triangle A132047. ● a(n) = 3 * Fibonacci(n + 1) - 3 - (- 1) ^ n + 2 * 0 ^ n. ● a(n) = a(n - 1) + 2 * a(n - 2) - a(n - 3) - a(n - 4) for n>4. - _ Philippe Deléham _ , Dec 16 2008 ● a(n) = (3 * 2 ^ (- n - 1) * ((1 + sqrt(5)) ^ (n + 1) - (1 - sqrt(5)) ^ (n + 1))) / sqrt(5) - 4 for n>0 and even. ● a(n) = (3 * 2 ^ (- n - 1) * ((1 + sqrt(5)) ^ (n + 1) - (1 - sqrt(5)) ^ (n + 1))) / sqrt(5) - 2 for n odd. ●

▶ [A235355] 0,1,2,7,11,24,33,58,74,115,140,201,237,322,371,484,548,693,774,955,1055,1276,1397,1662,1806 ⋆ 0 followed by the sum of (1),(2), (3,4),(5,6), (7,8,9),(10,11,12) from the natural numbers. ● a(n) = 4 * a(n - 2) - 6 * a(n - 4) + 4 * a(n - 6) - a(n - 8), n>7. ● a(n) = (- 1) * ((- 1 + (- 1) ^ n - 2 * n) * (2 + n + n ^ 2)) / 16. a(n) = a(n - 1) + 3 * a(n - 2) - 3 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) + a(n - 6) - a(n - 7). G.f.: x * (x ^ 2 + 1) * (x ^ 2 + x + 1) / ((x - 1) ^ 4 * (x + 1) ^ 3). - _ Colin Barker _ , Jan 20 2014 ●

▶ [A201630] 2,7,11,25,47,97,191,385,767,1537,3071,6145,12287,24577,49151,98305,196607,393217,786431,1572865,3145727,6291457,12582911,25165825,50331647 ⋆ a(n) = a(n - 1) + 2 * a(n - 2) with n>1, a(0)=2, a(1)=7. ● a(n) = 3 * 2 ^ n - (- 1) ^ n. ● a(n) = 2 * sum(a(i), i=0..n - 2) + 7 for n>1. ●

▶ [A309465] 0,0,0,0,0,2,7,11,28,31,56,68,101,117,165,187,267,307,385,445,563,621,780,878,1044 ⋆ Sum of the prime parts in the partitions of n into 4 parts. ● a(n) = Sum _{ k=1..floor(n / 4) } Sum _{ j=k..floor((n - k) / 3) } Sum _{ i=j..floor((n - j - k) / 2) } (i * c(i) + j * c(j) + k * c(k) + (n - i - j - k) * c(n - i - j - k)), where c is the prime characteristic (A010051). ●

▶ [A309466] 0,0,0,0,0,0,2,7,11,28,41,67,88,136,169,248,295,413,496,652,772,1001,1161,1469,1697 ⋆ Sum of the prime parts in the partitions of n into 5 parts. ● a(n) = Sum _{ l=1..floor(n / 5) } Sum _{ k=l..floor((n - 1) / 4) } Sum _{ j=k..floor((n - k - l) / 3) } Sum _{ i=j..floor((n - j - k - l) / 2) } (i * c(i) + j * c(j) + k * c(k) + l * c(l) + (n - i - j - k - l) * c(n - i - j - k - l)), where c is the prime characteristic (A010051). ●

▶ [A309467] 0,0,0,0,0,0,0,2,7,11,28,41,79,101,160,210,310,392,559,683,909,1126,1464,1766,2250 ⋆ Sum of the prime parts in the partitions of n into 6 parts. ● a(n) = Sum _{ m=1..floor(n / 6) } Sum _{ l=m..floor((n - m) / 5) } Sum _{ k=l..floor((n - l - m) / 4) } Sum _{ j=k..floor((n - k - l - m) / 3) } Sum _ (i=j..floor((n - j - k - l - m) / 2) } (i * c(i) + j * c(j) + k * c(k) + l * c(l) + m * c(m) + (n - i - j - k - l - m) * c(n - i - j - k - l - m)), where c is the prime characteristic (A010051). ●

▶ [A309468] 0,0,0,0,0,0,0,0,2,7,11,28,41,79,115,175,238,357,464,670,851,1145,1441,1908,2349 ⋆ Sum of the prime parts in the partitions of n into 7 parts. ● a(n) = Sum _{ o=1..floor(n / 7) } Sum _{ m=o..floor((n - o) / 6) } Sum _{ l=m..floor((n - m - o) / 5) } Sum _{ k=l..floor((n - l - m - o) / 4) } Sum _{ j=k..floor((n - k - l - m - o) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o) / 2) } (i * c(i) + j * c(j) + k * c(k) + l * c(l) + m * c(m) + o * c(o) + (n - i - j - k - l - m - o) * c(n - i - j - k - l - m - o)), where c = A010051. ●

▶ [A309469] 0,0,0,0,0,0,0,0,0,2,7,11,28,41,79,115,191,255,389,517,752,976,1335,1707,2289 ⋆ Sum of the prime parts in the partitions of n into 8 parts. ● a(n) = Sum _{ p=1..floor(n / 8) } Sum _{ o=p..floor((n - p) / 7) } Sum _{ m=o..floor((n - o - p) / 6) } Sum _{ l=m..floor((n - m - o - p) / 5) } Sum _{ k=l..floor((n - l - m - o - p) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p) / 2) } (i * c(i) + j * c(j) + k * c(k) + l * c(l) + m * c(m) + o * c(o) + p * c(p) + (n - i - j - k - l - m - o - p) * c(n - i - j - k - l - m - o - p)), where c is the prime characteristic (A010051). ●

▶ [A309470] 0,0,0,0,0,0,0,0,0,0,2,7,11,28,41,79,115,191,273,408,553,811,1068,1474,1919 ⋆ Sum of the prime parts in the partitions of n into 9 parts. ● a(n) = Sum _{ q=1..floor(n / 9) } Sum _{ p=q..floor((n - q) / 8) } Sum _{ o=p..floor((n - p - q) / 7) } Sum _{ m=o..floor((n - o - p - q) / 6) } Sum _{ l=m..floor((n - m - o - p - q) / 5) } Sum _{ k=l..floor((n - l - m - o - p - q) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p - q) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p - q) / 2) } (q * c(q) + p * c(p) + o * c(o) + m * c(m) + l * c(l) + k * c(k) + j * c(j) + i * c(i) + (n - i - j - k - l - m - o - p - q) * c(n - i - j - k - l - m - o - p - q)), where c is the prime characteristic (A010051). ●

▶ [A309471] 0,0,0,0,0,0,0,0,0,0,0,2,7,11,28,41,79,115,191,273,428,574,851,1133,1576 ⋆ Sum of the prime parts in the partitions of n into 10 parts. ● a(n) = Sum _{ r=1..floor(n / 10) } Sum _{ q=r..floor((n - r) / 9) } Sum _{ p=q..floor((n - q - r) / 8) } Sum _{ o=p..floor((n - p - q - r) / 7) } Sum _{ m=o..floor((n - o - p - q - r) / 6) } Sum _{ l=m..floor((n - m - o - p - q - r) / 5) } Sum _{ k=l..floor((n - l - m - o - p - q - r) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p - q - r) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p - q - r) / 2) } (r * c(r) + q * c(q) + p * c(p) + o * c(o) + m * c(m) + l * c(l) + k * c(k) + j * c(j) + i * c(i) + (n - i - j - k - l - m - o - p - q - r) * c(n - i - j - k - l - m - o - p - q - r)), where c is the prime characteristic (A010051). ●

▶ [A284354] 1,2,7,11,31,47,127,191,511,767,2047,3071,8191,12287,32767,49151,131071,196607,524287,786431,2097151,3145727,8388607,12582911,33554431 ⋆ Decimal representation of the x - axis, from the origin to the right edge, of the n - th stage of growth of the two - dimensional cellular automaton defined by "Rule 899", based on the 5 - celled von Neumann neighborhood. ● a(n) = (2 ^ (n + 3) - 4) / 4 for n even. ● a(n) = (3 * 2 ^ (n + 1) - 4) / 4 for n odd. ● a(n) = a(n - 1) + 4 * a(n - 2) - 4 * a(n - 3) for n>2. ●

▶ [A160455] 0,2,7,12,16,27,48,70,91,127,184,243,300,385,507,631,752,919,1141,1365,1587,1875,2241,2611,2977 ⋆ Number of triangles that can be built from rods with lengths 1,2,...,n by using and concatenating all rods. ● a(n) = 4 * a(n - 1) - 9 * a(n - 2) + 17 * a(n - 3) - 27 * a(n - 4) + 37 * a(n - 5) - 47 * a(n - 6) + 55 * a(n - 7) - 59 * a(n - 8) + 59 * a(n - 9) - 55 * a(n - 10) + 47 * a(n - 11) - 37 * a(n - 12) + 27 * a(n - 13) - 17 * a(n - 14) + 9 * a(n - 15) - 4 * a(n - 16) + a(n - 17) for n>20. ●

▶ [A045929] 1,2,7,12,17,18,23,28,33,38,43,48,49,54,59,64,69,74,79,84,89,94,95,100,105 ⋆ Generalized Connell sequence C _{ 5,3 } . ● a(n) = 5 * n - 4 * floor((7 + sqrt(24 * n - 23)) / 6). See general formula in A045928. - _ Michel Marcus _ , Apr 02 2013 ●

▶ [A016873] 2,7,12,17,22,27,32,37,42,47,52,57,62,67,72,77,82,87,92,97,102,107,112,117,122 ⋆ a(n) = 5 * n + 2. ● a(n) = 10 * n - a(n - 1) - 1 (with a(0)=2). - _ Vincenzo Librandi _ , Nov 20 2010 ●

▶ [A213041] 1,2,7,12,21,30,43,56,73,90,111,132,157,182,211,240,273,306,343,380,421,462,507,552,601 ⋆ Number of (w,x,y) with all terms in { 0..n } and 2|w - x| = max(w,x,y) - min(w,x,y). ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4) for n >3. ● a(n) = n * (n + 1) + (1 + (- 1) ^ n) / 2. - _ Wesley Ivan Hurt _ , May 06 2016 ●

▶ [A135541] 0,2,7,12,21,44,91,180,357,716,1435,2868,5733,11468,22939,45876,91749,183500,367003,734004,1468005,2936012,5872027,11744052,23488101 ⋆ a(n) = 2 * a(n - 1) - a(n - 2) + 2 * a(n - 3), with a(0) = 2, a(1) = 2. ● a(n) = (1 / 10) * (7 * 2 ^ (n + 1) - (7 - 4 * i) * i ^ n - (7 + 4 * i) * (- i) ^ n), with n>=0 and i =sqrt(- 1). - _ Paolo P. Lava _ , Jun 09 2008 ●

▶ [A122264] 2,7,12,25,30,43,48,61,82,87,108,121,126,139,160,181,186,207,220,225,246,259,280,309,322 ⋆ a(n) = n + 1 + 2 * Sum _{ j=0..n - 2 } (j * prime(n - j + 2) - (2 * j - 1) * prime(n - j + 1) + (j - 1) * prime(n - j)). ● a(n) = n + 1 + 2 * Sum _{ j=0..n - 2 } (j * prime(n - j + 2) - (2 * j - 1) * prime(n - j + 1) + (j - 1) * prime(n - j)) with a(1) = 2. ●

▶ [A079824] 1,2,7,12,25,37,62,84,125,160,221,272,357,427,540,632,777,894,1075,1220,1441,1617,1882,2092,2405 ⋆ Sum of numbers in n - th upward diagonal of triangle in A079823. ● a(2 * n) = (n / 6) * (7 * n ^ 2 + 3 * n + 2); a(2 * n - 1) = (n / 6) * (7 * n ^ 2 - 6 * n + 5). - _ Philippe Deléham _ , Feb 16 2004 ● a(n) = (15 + 25 * n + 15 * n ^ 2 + 14 * n ^ 3 - 3 * (((- 1) ^ n)) * (5 + n * (3 + n))) / 96. - _ Torlach Rush _ , Aug 14 2022 ●

▶ [A059329] 1,2,7,12,25,38,63,88,129,170,231,292,377,462,575,688,833,978,1159,1340,1561,1782,2047,2312,2625 ⋆ Number of 3 X 3 matrices, with elements from { 0,...,n } , having the property that the middle element of each of the eight 3 - element horizontal, vertical and diagonal lines equals the average of the two end elements. ● a(n) = ((1 + n) * (9 + 3 * (- 1) ^ n + 4 * n + 2 * n ^ 2)) / 12. ●

▶ [A350093] 0,2,7,12,26,34,45,56,100,114,131,148,174,194,217,240,392,418,447,476,514,546,581,616,684 ⋆ a(n) = Sum _{ k=0..n } n OR k where OR is the bitwise logical OR operator (A003986). ● a(2 * n) = 4 * a(n) - n. ● a(2 * n + 1) = 4 * a(n) + 2 * n + 2. ●

▶ [A177747] 1,2,7,12,27,42,77,112,182,252,378,504,714,924,1254,1584,2079,2574,3289,4004,5005,6006,7371,8736,10556 ⋆ Convolution of A008805 (triangular numbers repeated) with itself. ● a(n) = (n + 5) * (2 * n * (n + 10) * (n ^ 2 + 10 * n + 35) + 5 * (2 * n * (n + 10) + 39) * (- 1) ^ n + 573) / 3840. [_ Bruno Berselli _ , Mar 23 2012] ●

► [A175879] 0,1,2,7,12,29,58,123,240,501,998,2023,4040,8137,16266,32671,65300,130837,261682,523827,1047592,2096237,4192366,8386671,16773312 ⋆ Numbers arising from certain regular binary expansions. • a(0) = 0; • a(n) = \ sum _{ k=1 }^ n 2 ^{ k - 1 }\ odd(n \ div k) •
► [A102371] 1,2,7,12,29,62,123,248,505,1018,2047,4084,8181,16374,32755,65520,131057,262130,524279,1048572,2097133,4194286,8388587,16777192,33554409 ⋆ Numbers missing from A102370. • a(n) = - n + Sum _{ k >= 1, k == n mod 2 ^ k } 2 ^ k. - _ N. J. A. Sloane _ and _ David Applegate _ , Mar 22 2005. E.g. a(5) = - 5 + 2 ^ 1 + 2 ^ 5 = 29. • a(2 ^ k + k) - a(k) = 2 ^ (2 ^ k + k) - 2 ^ k, with k>= 1. • a(1)=1, for n>1, a(n) = a(n - 1) XOR (a(n - 1) + n), where XOR is the bitwise exclusive - or operator. - _ Alex Ratushnyak _ , Apr 21 2012 •
► [A290234] 1,2,7,12,31,56,127,240,511,992,2047,4032,8191,16256,32767,65280,131071,261632,524287,1047552,2097151,4192256,8388607,16773120,33554431 ⋆ Decimal representation of the diagonal from the corner to the origin of the n - th stage of growth of the two - dimensional cellular automaton defined by "Rule 773", based on the 5 - celled von Neumann neighborhood. • a(n) = 2 ^ (n + 1) - 1 for n even. • a(n) = 2 ^ (n + 1) - 2 ^ ((n + 1) / 2) for n odd. • a(n) = 2 * a(n - 1) + 3 * a(n - 2) - 6 * a(n - 3) - 2 * a(n - 4) + 4 * a(n - 5) for n>4. •
► [A308706] 0,0,0,0,0,0,0,1,2,7,12,31,58,126,233,484,904,1800,3395,6643,12612,24457,46655,90157,172750 ⋆ Number of chiral pairs of set partitions of a primitive cycle of n elements having exactly two different elements. • a(n) = ((1 / (2n)) * Sum _{ odd d|n } mu(d) * 2 ^ (n / d) - Sum _{ d|n } mu(n / d) * 2 ^ floor(d / 2)) / 2, where mu is the Möbius function at A008683. •
► [A059053] 0,0,0,0,0,0,0,1,2,7,12,31,58,126,234,484,906,1800,3402,6643,12624,24458,46686,90157,172810 ⋆ Number of chiral pairs of necklaces with n beads and two colors (color complements being equivalent); i.e., turning the necklace over neither leaves it unchanged nor simply swaps the colors. • a(n) = - S2(1 + floor(n / 2),2) + (1 / 2n) * Sum _{ d|n } phi(d) * S2(n / d + [2|d],2), where S2 is a Stirling subset number A008277. •
► [A088662] 1,2,7,12,34,60,155,280,686,1260,2982,5544,12804,24024,54483,102960,230230,437580,967538,1847560,4047836,7759752,16871582,32449872,70100044 ⋆ Number of peaks at even level in all symmetric Dyck paths of semilength n + 2. • a(2n) = (2n)!(2n ^ 2 + 4n + 1) / [n!(n + 1)!], a(2n + 1) = 2(2n + 1)! / (n!) ^ 2. • a(n) = (n! / 4) * ((1 + (- 1) ^ n) * (n ^ 2 + 4 * n + 2) / ((n / 2)! * (n / 2 + 1)!) + 4 * (1 - (- 1) ^ n) / (n / 2 - 1 / 2)! ^ 2). - _ Wesley Ivan Hurt _ , Jun 23 2015 •
► [A238366] 1,2,7,12,37,62,187,312,937,1562,4687,7812,23437,39062,117187,195312,585937,976562,2929687,4882812,14648437,24414062,73242187,122070312,366210937 ⋆ a(n) = 5 * a(n - 2) + 2, a(0) = 1, a(1) = 2. • a(n) = a(n - 1) + 5 * a(n - 2) - 5 * a(n - 3), a(0) = 1, a(1) = 2, a(2) = 7. •
► [A084068] 1,2,7,12,41,70,239,408,1393,2378,8119,13860,47321,80782,275807,470832,1607521,2744210,9369319,15994428,54608393,93222358,318281039,543339720,1855077841 ⋆ a(1) = 1, a(2) = 2; a(2 * k) = 2 * a(2 * k - 1) - a(2 * k - 2), a(2 * k + 1) = 4 * a(2 * k) - a(2 * k - 1). • a(n) * a(n + 3) = - 2 + a(n + 1) * a(n + 2). • a(n) = ((sqrt(2) + 1) ^ n - (sqrt(2) - 1) ^ n)((sqrt(2) / 8 - 1 / 4) * (- 1) ^ n + sqrt(2) / 8 + 1 / 4); • a(n + 1) = Sum _{ k=0..floor((n + 1) / 2) } 2 ^ k * (C(n + 1,2k) - C(n,2k + 1) * (1 - (- 1) ^ n) / 2. (End) • a(2 * n + 2) = a(2 * n + 1) + sqrt((1 + a(2 * n + 1) ^ 2) / 2). • a(2 * n + 1) = 2 * a(2 * n) + sqrt((1 + 2 * a(2 * n) ^ 2)). • a(2 * n + 2 * m + 1) = sqrt(2) * a(2 * n) o a(2 * m + 1), where o is the binary operation defined above, that is, •
► [A063206] 2,7,13,17,23,27,33,37,43,47,53,57,63,67,73,77,83,87,93,97,103,107,113,117,123 ⋆ Dimension of the space of weight 2n cuspidal newforms for Gamma _ 0(31). • a(n) = - 5 / 2 - (- 1) ^ n / 2 + 5 * n for n>1. • a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n>4. •
► [A063099] 2,7,13,17,23,29,33,39,45,49,55,61,65,71,77,81,87,93,97,103,109,113,119,125,129 ⋆ Dimension of the space of weight 2n cusp forms for Gamma _ 0(31). • a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>5. •
► [A001966] 2,7,13,18,23,28,34,39,44,49,54,60,65,70,75,81,86,91,96,102,107,112,117,123,128 ⋆ v - pile counts for the 4 - Wythoff game with i=2. • a(n) = floor((n + 1 / 2) * (3 + sqrt 5)). •
► [A168465] 2,7,13,18,24,29,35,40,46,51,57,62,68,73,79,84,90,95,101,106,112,117,123,128,134 ⋆ Numbers that are congruent to 2 or 7 mod 11. • a(n) = (22 * n - (- 1) ^ n - 3) / 4 - 3. [_ Bruno Berselli _ , Jan 05 2013, modified Jul 08 2015] •
► [A271114] 2,7,13,19,25,31,37,43,49,55,61,67,73,79,85,91,97,103,109,115,121,127,133,139,145 ⋆ Expansion of (1 + x) * (2 + x) / (1 - x) ^ 2. • a(n) = 2 * a(n - 1) - a(n - 2) for n>2. •
► [A155212] 2,7,13,20,28,37,47,58,70,83,97,112,128,145,163,182,202,223,245,268,292,317,343,370,398 ⋆ a(n) = (n ^ 2 + 9 * n + 4) / 2. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Feb 26 2012 •
► [A346870] 0,2,7,13,20,35,44,58,78,99,112,147,162,189,230,260,279,333,354,403,456,495,520,595,637 ⋆ Sum of all divisors, except the smallest and the largest of every number, of the first n positive even numbers. • a(n) = (5 * Pi ^ 2 / 24 - 1) * n ^ 2 + O(n * log(n)). - _ Amiram Eldar _ , May 15 2023 •
► [A262523] 0,2,7,13,21,32,44,58,75,93,113,136,160,186,215,245,277,312,348,386,427,469,513,560,608 ⋆ a(n + 3) = a(n) + 6 * n + 13, a(0)=0, a(1)=2, a(2)=7. • a(n + 2) - 2 * a(n + 1) + a(n) = period 3: repeat (3, 1, 2). • a(n + 3) = a(n - 3) + 4 * (2 + 3 * n). [Thus, a(n + 3m) = a(n - 3m) + 4m * (2 + 3n), and a(6m + k) = 4m * (9m + 3k + 2) + a(k): explicit formula for a(n) in terms of a(k), 0 <= k <= 5. - _ M. F. Hasler _ , Jun 06 2017] • a(n) = n * (n + 1) + floor((n + 1) / 3). - _ Bruno Berselli _ , Jun 06 2017 •
► [A182415] 1,2,7,13,24,41,69,114,187,305,496,805,1305,2114,3423,5541,8968,14513,23485,38002,61491,99497,160992,260493,421489 ⋆ a(0) = 1, a(1) = 2; for n>1, a(n) = a(n - 1) + a(n - 2) + 4. • a(n) = 2 * a(n - 1) - a(n - 3). • a(n) = Fibonacci(n + 3) + 3 * Fibonacci(n + 1) - 4. - _ G. C. Greubel _ , Jul 22 2019 •
► [A226140] 0,1,2,7,13,48,95,424,898,4837,10780,68399,158111,1156224,2745145,22744380,55098660,510307001,1255610350,12859037607,32030878113,359498491968,904385401323,11040700820704,28000658588542 ⋆ a(n) = Sum _{ i=1..floor(n / 2) } (n - i) ^ i. • a(n) = Sum _{ i=1..floor(n / 2) } (n - i) ^ i. •
► [A180003] 1,2,7,13,56,247,475,2108,9361,18019,80030,355453,684229,3039014,13497835,25982665,115402484,512562259,986657023,4382255360,19463867989,37466984191,166410301178,739114421305,1422758742217 ⋆ a(n) blue and b(n)(A180002) red balls in an urn, draw 5 balls without replacement, Probability(5 red balls) = Probability(3 red and 2 blue balls). • a(n + 9) = 39 * a(n + 6) - 39 * a(n + 3) + a(n). • a(3 * n + 1) = (20 + (10 + r) * (19 + 6 * r) ^ n + (10 - r) * (19 - 6 * r) ^ n) / 40. • a(3 * n + 2) = (20 + (30 + 9 * r) * (19 + 6 * r) ^ n + (30 - 9 * r) * (19 - 6 * r) ^ n) / 40. • a(3 * n + 3) = (20 + (130 + 41 * r) * (19 + 6 * r) ^ n + (130 - 41 * r) * (19 - 6 * r) ^ n) / 40. • a(n) = a(n - 1) + 38 * a(n - 3) - 38 * a(n - 4) - a(n - 6) + a(n - 7). - _ G. C. Greubel _ , Mar 21 2019 •
► [A008865] 1,2,7,14,23,34,47,62,79,98,119,142,167,194,223,254,287,322,359,398,439,482,527,574,623 ⋆ a(n) = n ^ 2 - 2. • a(n) = a(n - 1) + 2 * n - 1 for n > 1, a(1) = - 1. - _ Vincenzo Librandi _ , Nov 18 2010 •
► [A227582] 2,7,14,23,35,50,67,86,107,131,158,187,218,251,287,326,367,410,455,503,554,607,662,719,779 ⋆ Expansion of (2 + 3 * x + 2 * x ^ 2 + 2 * x ^ 3 + 3 * x ^ 4 + x ^ 5 - x ^ 6) / (1 - 2 * x + x ^ 2 - x ^ 5 + 2 * x ^ 6 - x ^ 7). • a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 5) - 2 * a(n - 6) + a(n - 7). •
► [A249852] 0,2,7,14,23,35,50,67,86,108,133,160,189,221,256,293,332,374,419,466,515,567,622,679,738 ⋆ a(n) is the total number of pentagons on the left or the right of the vertical symmetry axis of a pentagon expansion (vertex to vertex) after n iterations. • a(n) = 3 * a(n - 1) - 4 * a(n - 2) + 4 * a(n - 3) - 3 * a(n - 4) + a(n - 5). •
► [A249547] 0,2,7,14,24,36,51,68,88,110,135,162,192,224,259,296,336,378,423,470,520,572,627,684,744 ⋆ a(n) = (10 * n ^ 2 + 8 * n - 1 + (- 1) ^ n) / 8. • a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4) for n>3. •
► [A088207] 0,2,7,14,24,37,52,70,90,113,139,167,198,232,268,307,348,392,439,488,540,594,651,711,773 ⋆ a(n) = Sum _{ k=0..n } floor(k * phi ^ 2)) where phi= (1 + sqrt(5)) / 2. • a(n) = Sum _{ k=1..n } floor(k * phi ^ 2). • a(n) = floor((n * (n + 1) / 2) * phi ^ 2 - n / 2) + (0 or 1). - _ Benoit Cloitre _ , Sep 27 2003 •
► [A014112] 1,2,7,14,27,44,69,100,141,190,251,322,407,504,617,744,889,1050,1231,1430,1651,1892,2157,2444,2757 ⋆ a(n) = n * (n - 1) + (n - 2) * (n - 3) + ... + 1 * 0 + 1 for n odd; otherwise, a(n) = n * (n - 1) + (n - 2) * (n - 3) + ... + 2 * 1. • a(n) = a(n - 2) + n * (n - 1) for n > 2, a(1)=1, a(2)=2. • a(n) = n * (n + 2) * (2 * n - 1) / 12 + 3 * (1 - (- 1) ^ n) / 8. - _ Bruno Berselli _ , Mar 12 2018 •
► [A227016] 1,2,7,14,27,45,69,101,141,191,252,323,408,506,618,746,890,1052,1233,1432,1653,1895,2159,2447,2759 ⋆ Floor(M(g(n - 1) + 1,..,g(n))), where M = harmonic mean and g(n) = n(n + 1)(n + 2) / 6. • a(n) + 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 8) - 3 * a(n - 9) + 3 * a(n - 10) - a(n - 11) for n > 1 (conjectured). •
► [A210728] 1,2,7,14,27,48,83,140,233,384,629,1026,1669,2710,4395,7122,11535,18676,30231,48928,79181,128132,207337,335494,542857 ⋆ a(n) = a(n - 1) + a(n - 2) + n + 2 with n>1, a(0)=1, a(1)=2. • a(n) = ((5 + sqrt(5)) * (1 + sqrt(5)) ^ (n + 1) - (5 - sqrt(5)) * (1 - sqrt(5)) ^ (n + 1)) / (2 ^ (n + 1) * sqrt(5)) - n - 5. - _ Bruno Berselli _ , Jun 27 2012 •
► [A122751] 1,2,7,14,29,49,83,127,192,273,384,519,694,902,1162,1466,1835,2260,2765,3340,4011,4767,5637,6609,7714 ⋆ Number of essentially different semi - magic squares of order 3 with semimagic sum n. • a(n) = 1 / 64 * n ^ 4 - 1 / 32 * n ^ 3 + 1 / 32 * n ^ 2 + d * n + e with: d:= - 1 / 8 if n=0 or n=2 (mod 4) d:=3 / 32 if n=1 or n=3 (mod 4) e:=0 if n=0 (mod 4) e:= - 7 / 64 if n=1 (mod 4) e:=1 / 8 if n=2 (mod 4) e:=1 / 64 if n=3 (mod 4). • a(n) = (2 * n * (n - 1) * (n ^ 2 - n + 1) - 7 * (2 * n - 1) * (- 1) ^ n - 8 * (- 1) ^ ((2 * n - 1 + (- 1) ^ n) / 4) + 1) / 128. - _ Luce ETIENNE _ , Oct 29 2017 •
► [A258321] 0,2,7,14,31,60,116,216,397,718,1285,2278,4008,7006,12179,21070,36299,62304,106588,181812,309305,524942,888977,1502474,2534736 ⋆ a(n) = Fibonacci(n) + n * Lucas(n). • a(n) = - a(- n) = 2 * a(n - 1) + a(n - 2) - 2 * a(n - 3) - a(n - 4). • a(n) = (n + 1) * Fibonacci(n + 1) + (n - 1) * Fibonacci(n - 1). •
► [A140253] 1,1,2,7,14,31,62,127,254,511,1022,2047,4094,8191,16382,32767,65534,131071,262142,524287,1048574,2097151,4194302,8388607,16777214 ⋆ a(2 * n) = 2 * (2 * 4 ^ (n - 1) - 1) and a(2 * n - 1) = 2 * 4 ^ (n - 1) - 1. • a(n)= a(n - 1) + 2 * a(n - 2) + 3. - _ Gary Detlefs _ , Jun 22 2010 • a(n) = 2 * a(n - 1) + a(n - 2) - 2 * a(n - 3) for n>2, a(0) = - 1, a(1) = 1, a(2) = 2. - _ Philippe Deléham _ , Feb 25 2012 •
► [A290682] 1,2,7,14,31,63,127,255,511,1023,2047,4095,8191,16383,32767,65535,131071,262143,524287,1048575,2097151,4194303,8388607,16777215,33554431 ⋆ Decimal representation of the diagonal from the corner to the origin of the n - th stage of growth of the two - dimensional cellular automaton defined by "Rule 929", based on the 5 - celled von Neumann neighborhood. • a(n) = 2 ^ (1 + n) - 1 for n>3. • a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>5. •
► [A060552] 0,0,0,1,2,7,14,35,70,154,310,650,1300,2666,5332,10788,21588,43428,86856,174244,348488,697992,1396040,2794120,5588240 ⋆ a(n) is the number of distinct (modulo geometric D3 - operations) nonsymmetric (no reflective nor rotational symmetry) patterns which can be formed by an equilateral triangular arrangement of closely packed black and white cells satisfying the local matching rule of Pascal's triangle modulo 2, where n is the number of cells in each edge of the arrangement. The matching rule is such that any elementary top - down triangle of three neighboring cells in the arrangement contains either one or three white cells. • a(n) = (2 ^ (n - 1) - 2 ^ (floor(n / 3) + (n mod 3)mod 2 - 1)) / 3 + 2 ^ (floor((n + 3) / 6) + d(n) - 1) - 2 ^ floor((n - 1) / 2), with d(n)=1 if n mod 6=1 else d(n)=0. • a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - 4 * a(n - 4) - 4 * a(n - 5) + 10 * a(n - 6) - 4 * a(n - 7) - 4 * a(n - 8) + 4 * a(n - 9) + 8 * a(n - 10) + 8 * a(n - 11) - 16 * a(n - 12). •
► [A274868] 1,2,7,14,35,70,155,310,651,1302,2667,5334,10795,21590,43435,86870,174251,348502,698027,1396054,2794155,5588310,11180715,22361430,44731051 ⋆ Number of set partitions of [n] into exactly four blocks such that all odd elements are in blocks with an odd index and all even elements are in blocks with an even index. • a(n) = x / 6 + ((- 1) ^ n - 1) * y, where x = 2 ^ n - 3 * sqrt(2) ^ n + 2 and y = (1 / 2) * sqrt(2) ^ (n - 1) - (1 / 4) * sqrt(2) ^ n - 1 / 6. • a(n) = ((3 - (- 1) ^ n) / 12) * (4 ^ floor(n / 2) - 3 * 2 ^ floor(n / 2) + 2). • a(2n) = (4 ^ n) / 6 - 2 ^ (n - 1) + 1 / 3. • a(2n + 1) = 2 * a(2n). (End) •
► [A173126] 0,0,0,0,1,2,7,14,36,72,165,330,715,1430,3004,6008,12393,24786,50559,101118,204820,409640,826045,1652090,3321891 ⋆ sum _{ k=floor[(n + 5) / 2]

mod 5 } C(n,k) • a(n)= 2 * a(n - 1) + 3 * a(n - 2) - 6 * a(n - 3) - a(n - 4) + 2 * a(n - 5). G.f.: x ^ 4 / ((1 - 2 * x) * (x ^ 2 + x - 1) * (x ^ 2 - x - 1)). [From _ R . J. Mathar _ , Feb 19 2010] •

▶ [A256272] 2,7,14,36,72,188,410,1021,2392,5818,13862,33678,80784,195440,470916,1137710,2744212,6627675,15994430,38619812,93222780,225072548,543339722,1311772784,3166816034 ⋆ G.f.: Sum _{ n>=1 } Pell(n + 1) * x ^ n / (1 - x ^ n), where Pell(n) = A000129(n). • a(2 * n ^ 2) == 1 (mod 2), with a(n) == 0 (mod 2) elsewhere. •

▶ [A167762] 0,0,1,2,7,14,37,74,175,350,781,1562,3367,6734,14197,28394,58975,117950,242461,484922,989527,1979054,4017157,8034314,16245775 ⋆ a(n) = 2 * a(n - 1) + 3 * a(n - 2) - 6 * a(n - 3) starting a(0)=a(1)=0, a(2)=1. • a(n) = - 3 * (- sqrt(3)) ^ n * (- 18 - 12 * sqrt(3)) ^ (- 1) - 12 * 2 ^ n * sqrt(3) * (- 18 - 12 * sqrt(3)) ^ (- 1) + 12 * sqrt(3) * 3 ^ (1 / 2 * n) * (- 18 - 12 * sqrt(3)) ^ (- 1) - 18 * 2 ^ n * (- 18 - 12 * sqrt(3)) ^ (- 1) + 21 * 3 ^ (1 / 2 * n) * (- 18 - 12 * sqrt(3)) ^ (- 1), with n>=0. - _ Paolo P. Lava _ , Nov 16 2009 • a(n) = [- 18 - 12 * sqrt(3)] ^ (- 1) *{ 12 * sqrt(3) * [3 ^ ((1 / 2) * n) - 2 ^ n] + 21 * 3 ^ ((1 / 2) * n) - 3 * (- sqrt(3)) ^ n - 18 * 2 ^ n } , with n>=0. - _ Paolo P. Lava _ , Nov 16 2009 •

▶ [A178748] 1,2,7,14,37,80,187,410,913,1988,4327,9326,20029,42776,91027,192962,407785,859244,1805887,3786518,7922581,16544192,34486507,71769194,149130817 ⋆ Total number of '1' bits in the terms of 'rows' of A178746. • a(n) = (2 ^ n * (3 * n + 8) + (3 * n + 1) * (- 1) ^ n) / 9. • a(n) = 2 * a(n - 1) + 3 * a(n - 2) - 4 * a(n - 3) - 4 * a(n - 4) for n>3. •

▶ [A176662] 2,7,14,40,104,256,608,1408,3200,7168,15872,34816,75776,163840,352256,753664,1605632,3407872,7208960,15204352,31981568,67108864,140509184,293601280,612368384 ⋆ a(0)=2, a(1)=7, and a(n) = (3 * n + 1) * 2 ^ (n - 1) if n > 1. • a(2n) + a(2n + 1) = 9, 54, 360, 2016, ... • a(n) = 4 * a(n - 1) - 4 * a(n - 2), n > 3. •

▶ [A329115] 0,0,1,2,7,14,43,86,259,518,1555,3110,9331,18662,55987,111974,335923,671846,2015539,4031078,12093235,24186470,72559411,145118822,435356467 ⋆ a(n) = floor(A026549(n) / 5). • a(n + 1) = 2 * a(n) if n is odd, a(n + 1) = 3 * a(n) + 1 if n is even. • a(n) = f(2 ^ f(n / 2) * 3 ^ f((n - 1) / 2) / 5), where f = floor. • a(n) = 7 * a(n - 2) - 6 * a(n - 4). •

▶ [A123752] 1,2,7,14,49,98,343,686,2401,4802,16807,33614,117649,235298,823543,1647086,5764801,11529602,40353607,80707214,282475249,564950498,1977326743,3954653486,13841287201 ⋆ a(n) = 7 * a(n - 2), a(0) = 1, a(1) = 2. • a(n) = 7 ^ (n / 2) * (7 * (1 + (- 1) ^ n) + 2 * sqrt(7) * (1 - (- 1) ^ n)) / 14. • a(n + 3) = a(n + 2) * a(n + 1) / a(n). - _ Reinhard Zumkeller _ , Mar 04 2011 •

▶ [A350043] 0,2,7,15,24,36,58,75,104,138,175,217,277,328,399,477,560,650,766,869,1000,1140,1287,1443,1633 ⋆ Sum of all the parts > 1 in the partitions of n into 3 positive integer parts. • a(n) = 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4) - 4 * a(n - 5) - a(n - 6) + 2 * a(n - 7) + 2 * a(n - 8) - a(n - 10). - _ Wesley Ivan Hurt _ , Dec 17 2021 •

▶ [A332495] 0,2,7,15,25,37,52,70,90,112,137,165,195,227,262,300,340,382,427,475,525,577,632,690,750 ⋆ a(n - 2) = a(n - 6) + 5 * (1 + 2 * n) with a(0)=0, a(1)=2, a(2)=7, a(3)=15 for n>=4. • a(- 1 - n) = a(n). • a(n) = 3 * a(n - 1) - 4 * a(n - 2) + 4 * a(n - 3) - 3 * a(n - 4) + a(n - 5) for n>4. •

▶ [A005449] 0,2,7,15,26,40,57,77,100,126,155,187,222,260,301,345,392,442,495,551,610,672,737,805,876 ⋆ Second pentagonal numbers: a(n) = n * (3 * n + 1) / 2. • a(n) = Sum _{ j=1..n } n + j. - _ Zerinvary Lajos _ , Sep 12 2006 • a(n) = 2 * C(3 * n,4) / C(3 * n,2), n>=1. - _ Zerinvary Lajos _ , Jan 02 2007 • a(n) = a(n - 1) + 3 * n - 1 for n>0, a(0)=0. - _ Vincenzo Librandi _ , Nov 18 2010 • a(n) = (12 / (n + 2)!) * Sum _{ j=0..n } (- 1) ^ (n - j) * binomial(n,j) * j ^ (n + 2). - _ Vladimir Kruchinin _ , Jun 04 2013 • a(n) = floor(n / (1 - exp(- 2 / (3 * n)))) for n>0. - _ Richard R. Forberg _ , Jun 22 2013 • a(n) = Sum _{ i=1..n } 2 * i - 1 + (i mod 2). - _ Wesley Ivan Hurt _ , Oct 11 2013 •

▶ [A293401] 0,2,7,15,26,41,59,80,104,132,162,196,233,274,318,365,415,468,525,585,648,714,784,856,932 ⋆ Least integer k such that k / n ^ 2 > (1 + sqrt(5)) / 2 (the golden ratio). • a(n) = ceiling(r * n ^ 2), where r = (1 + sqrt(5)) / 2. •

▶ [A333637] 0,0,0,2,7,15,27,41,57,75,95,117,141,167,195,225,257,291,327,365,405,447,491,537,585 ⋆ The number of cells which contain multiple squares of a Genealodron formed from 2 ^ n - 1 equal - sized squares (when viewed from above). • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>8. •

▶ [A113422] 0,2,7,15,27,42,60,82,107,135,167,202,240,282,327,375,427,482,540,602,667,735,807,882,960 ⋆ a(n) = floor((5 * n ^ 2 + 1) / 3). • a(- n) = a(n). • a(3n) = 15n ^ 2, a(3n + 1) = 15n ^ 2 + 10n + 2. • a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) - 2 * a(n - 4) + a(n - 5), a(0)=0, a(1)=2, a(2)=7, a(3)=15, a(4)=27. - _ Harvey P. Dale _ , Nov 28 2013 • a(n) = Sum _{ j=1..n } Sum _{ i=1..n } ceiling((i + j - n + 3) / 3). - _ Wesley Ivan Hurt _ , Mar 12 2015 •

▶ [A061802] 2,7,15,27,45,69,99,135,177,229,289,357,435,519,609,709,821,941,1069,1207,1351,1503,1665,1837,2023 ⋆ Sum of n - th row of triangle of primes: 2; 2 3 2; 2 3 5 3 2; 2 3 5 7 5 3 2; ...; where n - th row contains 2n + 1 terms. • a(n) = a(n - 1) + p(n) + p(n - 1) where p(n) = n - th prime. •

▶ [A192962] 1,2,7,15,30,55,97,166,279,463,762,1247,2033,3306,5367,8703,14102,22839,36977,59854,96871,156767,253682,410495,664225 ⋆ Constant term of the reduction by x ^ 2 - > x + 1 of the polynomial p(n,x) defined at Comments. • a(n) = 3 * a(n - 1) - 2 * a(n - 2) - a(n - 3) + a(n - 4). • a(n) = 3 * Fibonacci(n + 1) + 4 * Fibonacci(n) - 2 * (n + 2). - _ G. C. Greubel _ , Jul 12 2019 •

▶ [A131412] 1,2,7,15,32,62,117,214,385,683,1200,2092,3625,6250,10731,18359,31312,53258,90365,152990,258501,435987,734112,1234200,2072017 ⋆ a(n) = n * (Fibonacci(n) - 1) + Fibonacci(n + 2) - 1. • a(n) = n * (Fibonacci(n) - 1) + Sum _{ k=1..n } Fibonacci(k). • a(n) = 4 * a(n - 1) - 4 * a(n - 2) - 2 * a(n - 3) + 4 * a(n - 4) - a(n - 6). •

▶ [A345448] 1,1,2,7,15,32,79,185,422,987,2307,5352,12451,29005,67478,156991,365391,850304,1978615,4604465,10715078,24934611,58024779,135028632,314222011 ⋆ Number of tilings of a 2 X n rectangle with dominoes and long L - shaped 4 - minoes. • a(n) = a(n - 1) + a(n - 2) + 4 * a(n - 3) + 2 * a(n - 4). •

▶ [A295145] 1,2,7,15,34,70,146,295,597,1198,2404,4813,9635,19277,38564,77136,154283,308575,617162,1234334,2468681,4937373,9874760,19749532,39499079 ⋆ Solution of the complementary equation a(n) = a(n - 1) + 2 * a(n - 2) + b(n - 2), where a(0) = 1, a(1) = 2, b(0) = 3, b(1) = 4, and (a(n)) and (b(n)) are increasing complementary sequences. • a(n + 1) / a(n) - > 2. •

▶ [A093652] 1,2,7,15,45,86,239,433,1157,2034,5307,9151,23497,39974,101467,170913,430089,718946,1796975,2985775,7422437,12272502,30373191,50016721,123327373 ⋆ Let a(1) = 1, a(2) = 2, a(3) = 7, a(4) = 15 and for n >= 5 set a(n) = (n * b(n) - b(n - 2)) / 2, where b(n) = 4 * b(n - 2) - b(n - 4) for n >= 5 and b(1) = 1, b(2) = 2, b(3) = 5, b(4) = 8. • a(n) = 8 * a(n - 2) - 18 * a(n - 4) + 8 * a(n - 6) - a(n - 8) for n>8. •

▶ [A200862] 1,2,7,15,47,106,312,731,2068,4983,13727,33757,91302,227846,608389,1534290,4059911,10315771,27122487,69284630,181339756,465000279,1213137668,3119218927,8119123683 ⋆ G.f.: (1 - 2 * x ^ 2) / (1 - 2 * x - 5 * x ^ 2 + 9 * x ^ 3). • a(n) = 2 * a(n - 1) + 5 * a(n - 2) - 9 * a(n - 3) for n>2. - _ Vincenzo Librandi _ , Jun 30 2014 •

▶ [A120110] 1,2,7,15,67,92,461,1065,3016,3956,29478,42231,379107,547556,603421,991923,12709228,18540622,241033695,352271227,389226278,407797820,5532937710,8097345425,30368363481 ⋆ Diagonal sums of number triangle A120108. • a(n) = Sum _{ k=0..floor(n / 2) } lcm(1,..,n - k + 1) / lcm(1,..,k + 1). •

▶ [A041573] 1,2,7,16,23,39,62,101,163,427,1444,3315,114154,231623,809023,1849669,2658692,4508361,7167053,11675414,18842467,49360348,166923511,383207370,13195974091 ⋆ Denominators of continued fraction convergents to sqrt(304). • a(n) = 115598 * a(n - 12) - a(n - 24) for n>23. - _ Vincenzo Librandi _ , Dec 20 2013 •

▶ [A041341] 1,1,2,7,16,23,62,85,232,781,1013,1794,47657,49451,97108,340775,778658,1119433,3017524,4136957,11291438,38011271,49302709,87313980,2319466189 ⋆ Denominators of continued fraction convergents to sqrt(184). • a(n) = 48670 * a(n - 12) - a(n - 24). - _ Vincenzo Librandi _ , Dec 16 2013 •

▶ [A070169] 0,2,7,16,28,43,62,85,111,140,173,210,249,293,339,390,443,501,561,625,693,764,838,916,998 ⋆ Rounded total surface area of a regular tetrahedron with edge length n. • a(n) = round(n ^ 2 * sqrt(3)). •

▶ [A293410] 0,2,7,16,28,44,63,85,111,141,174,210,250,293,340,390,444,501,562,626,693,764,839,917,998 ⋆ Least integer k such that k / n ^ 2 > sqrt(3). • a(n) = ceiling(r * n ^ 2), where r = sqrt(3). •

▶ [A130883] 1,2,7,16,29,46,67,92,121,154,191,232,277,326,379,436,497,562,631,704,781,862,947,1036,1129 ⋆ a(n) = 2 * n ^ 2 - n + 1. • a(n) = a(n - 1) + 4 * n - 3 for n > 0, a(0)=1. - _ Vincenzo Librandi _ , Nov 23 2010 • a(n) = 2 * a(n - 1) - a(n - 2) + 4. - _ Eric Werley _ , Jun 27 2011 • a(0)=1, a(1)=2, a(2)=7; for n > 2, a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Jul 20 2011 •

▶ [A005581] 0,0,2,7,16,30,50,77,112,156,210,275,352,442,546,665,800,952,1122,1311,1520,1750,2002,2277,2576 ⋆ a(n) = (n - 1) * n * (n + 4) / 6. • a(n) = binomial(n + 1, n - 2) + binomial(n, n - 2). • a(n + 2) = 2 * te(n) - te(n - 1), e.g., a(5) = 2 * te(3) - te(2) = 2 * 20 - 10 = 30, where te(n) are the tetrahedral numbers A000292. - _ Jon Perry _ , Jul 23 2003 • a(n) is the coefficient of x ^ 3 in the expansion of (1 + x + x ^ 2) ^ n. For example, a(1)=0 since (1 + x + x ^ 2) ^ 1=1 + x + x ^ 2. - Peter C. Heinig (algorithms(AT)gmx.de), Apr 09 2007 • a(n) = C(4 + n,3) - (n + 4) * (n + 1), since C(4 + n,3) = number of all triangles in (n + 4) - gon, and (n + 4) * (n + 1)=number of triangles with at least one of the edges included. Example: n=0,in a square, all 4 possible triangles include some of the square's edges and C(4 + n,3) - (n + 4) * (n + 1)=4 - 4 * 1=0 = number of other triangles = a(0). - _ Toby Gottfried _ , Nov 12 2011 • a(n) = 2 * binomial(n,2) + binomial(n,3). - _ Vladimir Shevelev _ and _ Peter J. C. Moses _ , Jun 22 2012 • a(0)=0, a(1)=0, a(2)=2, a(3)=7, a(n)=4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Harvey P. Dale _ , Sep 22 2012 •

▶ [A241526] 2,7,16,31,53,83,123,174,237,314,406,514,640,785,950,1137,1347,1581,1841,2128,2443,2788,3164,3572,4014 ⋆ Number of different positions in which a square with side length k, 1 <= k <= n - floor(n / 3), can be placed within a bi - symmetric triangle of 1 X 1 squares of height n. • a(n) = sum _{ j=0..n - 1 - floor(n / 3) } ((4 * n - 6 * j + 1 - (- 1) ^ j) / 4) * ((4 * n - 6 * j + 3 + (- 1) ^ j) / 4). • a(n) = (4 * n ^ 3 + 15 * n ^ 2 + 17 * n - 6 * floor(n / 3)) / 18. •

▶ [A216499] 0,0,0,2,7,16,32,55,87,130,184,252,335,433,550,686,842,1022,1224,1451,1706,1987,2299,2642,3015 ⋆ The maximum possible number of rooted triples consistent with any galled - tree (level - 1 phylogenetic network) containing exactly n leaves. • a(0) = 0, • a(n) = max _{ 1<=i<=n } [C(i,3) + 2 * C(i,2) * (n - i) + i * C(n - i,2) + a(n - i)] for n>0. •

▶ [A228189] 0,2,7,16,32,56,89,134,190,261,348,452,575,718,883,1072,1286,1526,1795,2094,2424,2787,3185,3619,4090 ⋆ Volume of right circular cone (rounded down) with the diameter of base and height equal to n. • a(n) = floor((Pi * n ^ 3) / 12). •

▶ [A023550] 2,7,16,32,59,104,178,299,496,816,1335,2176,3538,5743,9312,15088,24435,39560,64034,103635,167712,271392,439151,710592,1149794 ⋆ Convolution of natural numbers >= 2 and (F(2), F(3), F(4), ...). • a(n) = (2 ^ (- 1 - n) * ((1 - sqrt(5)) ^ n * (- 15 + 7 * sqrt(5)) + (1 + sqrt(5)) ^ n * (15 + 7 * sqrt(5)))) / sqrt(5) - 2 * n - 7. • a(n) = 3 * a(n - 1) - 2 * a(n - 2) - a(n - 3) + a(n - 4) for n>4. • a(n) = Lucas(n + 4) - 2 * n - 7. - _ G. C. Greubel _ , Jun 01 2019 •

▶ [A212576] 0,1,2,7,16,33,52,87,126,181,246,331,422,545,674,831,1006,1213,1428,1691,1964,2277,2614,2995,3388 ⋆ Number of (w,x,y,z) with all terms in { 1,..., n } and |w - x|=2|x - y| + 2|y - z|. • a(n) = a(n - 2) + 2 * a(n - 3) + a(n - 4) - 2 * a(n - 5) - 2 * a(n - 6) - 2 * a(n - 7) + a(n - 8) + 2 * a(n - 9) + a(n - 10) - a(n - 12). •

▶ [A208995] 2,7,16,33,58,95,144,209,290,391,512,657,826,1023,1248,1505,1794,2119,2480,2881,3322,3807,4336,4913,5538 ⋆ Number of 4 - bead necklaces labeled with numbers - n..n not allowing reversal, with sum zero and first differences in - n..n. • a(n) = (12 + 8 * n + 6 * n ^ 2 + 4 * n ^ 3) / 12 for n even. • a(n) = (6 + 8 * n + 6 * n ^ 2 + 4 * n ^ 3) / 12 for n odd. •

▶ [A192952] 0,1,2,7,16,33,62,111,192,325,542,895,1468,2397,3902,6339,10284,16669,27002,43723,70780,114561,185402,300027,485496 ⋆ Coefficient of x in the reduction by x ^ 2 - > x + 1 of the polynomial p(n,x) defined at Comments. • a(n) = 3 * a(n - 1) - 2 * a(n - 2) - a(n - 3) + a(n - 4). • a(n) = 4 * Fibonacci(n + 2) - (3 * n + 4). - _ G. C. Greubel _ , Jul 12 2019 •

► [A132738] 1,2,7,16,33,66,131,260,517,1030,2055,4104,8201,16394,32779,65548,131085,262158,524303,1048592,2097169,4194322,8388627,16777236,33554453 ⋆ Row sums of triangle A132737. ● a(n) = 2 ^ (n + 1) + n - 3 for n > 0. - _ Frankl in T. Adams - Watters _ , Jul 06 2009 ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 2 * a(n - 3) for n>3. ●

► [A131405] 1,2,7,16,37,82,179,384,813,1702,3531,7272,14889,30342,61603,124700,251825,507582,1021535,2053388,4123481,8274002,16591767,33254356,66623317 ⋆ Row sums of triangle A131404. ● a(n) = 5 * a(n - 1) - 8 * a(n - 2) + 3 * a(n - 3) + 3 * a(n - 4) - 2 * a(n - 5). ●

► [A269963] 1,2,7,16,37,82,187,428,985,2262,5191,11904,27301,62618,143635,329476,755761,1733566,3976447,9121160,20922109,47991138,110082091,252506316,579198985 ⋆ Start with a square; at each stage add a square at each expandable vertex so that the ratio of the side of the squares at stage n + 1 and at stage n is the golden ratio phi=0.618...; a(n) is the number of squares in a portion of the n - th stage (see below). ● a(n) = 2 * a(n - 1) + a(n - 2) - 2 * a(n - 3) + 2 * a(n - 4) + 2 * a(n - 5). ●

► [A176805] 2,7,16,37,94,259,748,2209,6586,19711,59080,177181,531478,1594363,4783012,14348953,43046770,129140215,387420544,1162261525,3486784462,10460353267,31381059676,94143178897,282429536554 ⋆ a(n) = 3 ^ n + 3 * n + 1. ● a(n)= 5 * a(n - 1) - 7 * a(n - 2) + 3 * a(n - 3). ●

► [A224227] 0,0,0,1,2,7,16,38,82,173,352,701,1368,2628,4980,9329,17302,31811,58040,105178,189446,339373,604964,1073593,1897488 ⋆ a(n) = (1 / 50) * ((15 * n ^ 2 - 20 * n + 4) * Fibonacci(n) - (5 * n ^ 2 - 6 * n) * A000032(n)). ● a(n) = Sum _{ k=0..n - 1 } k ^ 2 * binomial(n - k - 1,k). ●

► [A042243] 1,2,7,16,39,55,94,431,10869,43907,54776,98683,252142,602967,2061043,4725053,238313693,481352439,1682371010,3846094459,9374559928,13220654387,22595214315,103601511647,2612633005490 ⋆ Denominators of continued fraction convergents to sqrt(647). ● a(n) = 240374736 * a(n - 16) - a(n - 32) for n>31. - _ Vincenzo Librandi _ , Jan 18 2014 ●

► [A041887] 1,1,2,7,16,39,94,321,415,736,31327,32063,63390,222233,507856,1237945,2983746,10189183,13172929,23362112,994381633,1017743745,2012125378,7054119879,16120365136 ⋆ Denominators of continued fraction convergents to sqrt(465). ● a(n) = 31742 * a(n - 10) - a(n - 20) for n>19. - _ Vincenzo Librandi _ , Dec 26 2013 ●

► [A129441] 1,1,2,7,16,39,100,248,618,1546,3858,9631,24049,60041,149903,374266,934427,2332981,5824753,14542648,36308602,90651625,226329747,565077072,1410826915 ⋆ G.f. x * (1 - x ^ 2 - x ^ 3) / ((1 + x + x ^ 2) * (x ^ 4 - x ^ 3 - x ^ 2 - 2 * x + 1)). ● a(n) = a(n - 1) + 2 * a(n - 2) + 4 * a(n - 3) + a(n - 4) - a(n - 6). ●

► [A073371] 1,2,7,16,41,94,219,492,1101,2426,5311,11528,24881,53398,114083,242724,514581,1087410,2291335,4815680,10097401,21126862,44117867,91963996,1913845 41 ⋆ Convolution of A001045(n + 1) (generalized (1,2) - Fibonacci), n >= 0, with itself. ● a(n) = Sum _{ k=0..floor(n / 2) } (n - k + 1) * binomial(n - k, k) * 2 ^ k. ● a(n) = ((5 + 3 * n) * 2 ^ (n + 2) + (7 + 3 * n) * (- 1) ^ n) / 27. ● a(n) = ((6 * n + 4) * 2 ^ (n) + (- 1) ^ (n - 1) * (3 * n + 4)) / 27. - _ Artur Jasinski _ , Feb 09 2007 ●

► [A113224] 1,2,7,16,41,98,239,576,1393,3362,8119,19600,47321,114242,275807,665856,1607521,3880898,9369319,22619536,54608393,131836322,318281039,768398400,1855077841 ⋆ a(2n) = A002315(n), a(2n + 1) = A082639(n + 1). ● a(n) = - (u ^ (n + 1) - 1) * (v ^ (n + 1) - 1) / 2 with u = 1 + sqrt(2), v = 1 - sqrt(2). - _ Vladeta Jovovic _ , May 30 2007 ● a(n) = n * Sum _{ k=1..n } Sum _{ i=ceiling((n - k) / 2)..n - k } binomial(i,n - k - i) * binomial(k + i - 1,k - 1) * (1 - (- 1) ^ k) / (2 * k). - _ Vladimir Kruchinin _ , Apr 11 2011 ● a(n) = floor((1 + sqrt(2)) ^ (n + 1) / 2). - _ Bruno Berselli _ , Feb 06 2013 ●

► [A178945] 1,2,7,16,42,96,228,512,1160,2560,5648,12288,26656,57344,122944,262144,557184,1179648,2490624,5242880,11010560,23068672,48235520,100663296,209717248 ⋆ Expansion of x * (1 - x) ^ 2 / ((1 - 2 * x ^ 2) * (1 - 2 * x) ^ 2). ● a(n) = 2 ^ (n - 2) * n + 2 ^ (n / 2 - 5 / 2) * (1 - (- 1) ^ n). ● a(n) = + 4 * a(n - 1) - 2 * a(n - 2) - 8 * a(n - 3) + 8 * a(n - 4). ●

► [A164267] 0,1,2,7,16,46,114,309,792,2101,5456,14356,37468,98281,256998,673323,1761984,4614226,12078110,31624285,82787980,216750601,567446112,1485616392,3889356696 ⋆ A Fibonacci convolution. ● a(n) = Sum _{ k=0..n } (- 1) ^ k * F(k + 1) * F(2(n - k)). ● a(n) = Sum _{ k=0..n } C(n,k) * F(k + 1) * (1 - (- 1) ^ (n - k)) / 2. ● a(n) = 2 * a(n - 1) + 3 * a(n - 2) - 4 * a(n - 3) + a(n - 4). ●

► [A286848] 2,7,16,53,154,436,1268,3660,10610,30744,89079,258251,748420,2169219,6287336,18222901,52817261,153084840,443698814,1286012537,3727362387,10803344089,31312289784,90755170545,263043739916 ⋆ Number of minimal dominating sets in the grid graph P _ 3 X P _ n. ● a(n) = Sum _{ k=1..48 } c(k) * a(n - k), where c = (2, 2, 4, - 8, 2, 2, 23, - 14, - 31, - 31, 45, - 50, - 83, - 122, 141, 54, 105, - 36, 85, 275, 222, - 63, - 90, 140, - 253, - 399, - 234, - 190, 87, - 59, 219, 222, 189, 270, - 152, - 56, - 123, - 158, 41, - 75, 62, 12, - 21, 30, - 7, - 4, 3, - 1) (conjectured). - _ Eric W. Weisstein _ , Aug 02 2017 ●

► [A239425] 1,2,7,16,53,156,522,1702,5833,19990,70079,247160,882587,3172196,11492847,41874864,153452521,564975570,2089346157,7756501690,28898156364,108010059036,404890987653,1521877280868,5734545323859 ⋆ Expansion of - 16 / (sqrt(12 * x + 2 * sqrt(1 - 4 * x) + 2) - sqrt(1 - 4 * x) - 1) ^ 2 + 1 / x ^ 2 - 1. ● a(n) = Sum _{ j=0..(n + 2) } C(n + 2 * j - 1,j) * (- 1) ^ (j + n) * C(2 * n + 2,j + n)) / (n + 1) - delta(n,0). ●

► [A042689] 1,1,2,7,16,55,71,126,7379,7505,14884,52157,119198,409751,528949,938700,54973549,55912249,110885798,388569643,888025084,3052644895,3940669979,6993314874,409552932671 ⋆ Denominators of continued fraction convergents to sqrt(874). ● a(n) = 7450 * a(n - 8) - a(n - 16) for n>15. - _ Vincenzo Librandi _ , Dec 21 2013 ●

► [A073998] 0,2,7,16,60,272,1072,4096,16320,65792,262912,1048576,4193280,16781312,67121152,268435456,1073725440,4295032832,17180065792,68719476736,274877644800,1099512676352,4398049656832,17592186044416,70368739983360 ⋆ Number of strings of length n over GF(4) with trace 1 and subtrace 1. ● a(n; t, s) = a(n - 1; t, s) + a(n - 1; t - 1, s - (t - 1)) + a(n - 1; t - 2, s - 2(t - 2)) + a(n - 1; t - 3, s - 3(t - 3)) where t is the trace and s is the subtrace. Note that all operations involving operands t or s are carried out over GF(4). ●

► [A129444] 0,1,2,7,16,65,154,639,1520,6321,15042,62567,148896,619345,1473914,6130879,14590240,60689441,144428482,600763527,1429694576,5946945825,14152517274,58868694719,140095478160 ⋆ Numbers k such that the centered triangular number A005448(k) = 3 * k * (k - 1) / 2 + 1 is a perfect square. ● a(n) = 11 * (a(n - 2) - a(n - 4)) + a(n - 6); a(1)=0; a(2)=1; a(3)=2; a(4)=7; a(5)=16; a(6)=65. - _ Zak Seidov _ , Apr 17 2007 ● a(n) = 1 - a(- n + 3) for all n in Z. - _ Michael Somos _ , Apr 05 2008 ● a(n) = a(n - 1) + 10 * a(n - 2) - 10 * a(n - 3) - a(n - 4) + a(n - 5); a(1)=0, a(2)=1, a(3)=2, a(4)=7, a(5)=16. - _ Harvey P. Dale _ , Dec 06 2012 ●

► [A227144] 1,2,7,17,23,25,26,31,41,47,49,50,55,65,71,73,74,79,89,95,97,98,103,113,119 ⋆ Numbers that are congruent to { 1, 2, 7, 17, 23 } modulo 24. ● a(n) = a(n - 1) + a(n - 5) - a(n - 6) for n > 6. ● a(n) = (120 * n - 110 - 6 * (n mod 5) - 26 * ((n + 1) mod 5) - ((n + 2) mod 5) + 19 * ((n + 3) mod 5) + 14 * ((n + 4) mod 5)) / 25. ● a(5k) = 24k - 1, a(5k - 1) = 24k - 7, a(5k - 2) = 24k - 17, a(5k - 3) = 24k - 22, a(5k - 4) = 24k - 23. (End) ●

► [A220273] 2,7,17,24,25,38,41,58,59,64,65,73,95,97,103,106,107,108,138,143,143,157,169,169,174 ⋆ a(n) is the smallest number, such that for all N >= a(n) there are at least n primes between 5 * N and 6 * N. ● a(n) <= ceiling(R _ (6 / 5)(n) / 6), where R _ v(n) (v>1) are generalized Ramanujan numbers (see Shelevev's link). In particular, for n >= 1, { R _ (6 / 5)(n) } = { 29, 59, 137, 139, 149, 223, 241, 347, 353, 383, 389, 563, 569, 593, ... } . Moreover, if R _ (6 / 5)(n) == 1 (mod 6), then a(n) = ceiling(R _ (6 / 5)(n) / 6). ●

► [A166381] 0,2,7,17,31,52,76,108,146,191,242,301,364,437,518,605,700,804,914,1034,1160,1295,1438,1594,1751 ⋆ a(n) = Sum _{ j>n } floor(n ^ 2 / j). ● a(n) = Sum _{ i=1..n } floor(n * (n - i) / i). - _ Wesley Ivan Hurt _ , Jan 30 2016 ●

► [A045947] 0,0,2,7,17,33,57,90,134,190,260,345,447,567,707,868,1052,1260,1494,1755,2045,2365,2717,3102,3522 ⋆ Triangles in open triangular matchstick arrangement (triangle minus one side) of side n. ● a(n) = (1 / 16) * (2 * n * (2 * n ^ 2 + n - 2) + (- 1) ^ n - 1). - _ Bruno Berselli _ , Aug 29 2011 ●

► [A321123] 2,7,17,33,57,93,149,241,401,693,1245,2313,4409,8557,16805,33249,66081,131685,262829,525049,1049417,2098077,4195317,8389713,16778417 ⋆ a(n) = 2 ^ n + 2 * n ^ 2 + 2 * n + 1. ● a(n) = 5 * a(n - 1) - 9 * a(n - 2) + 7 * a(n - 3) - 2 * a(n - 4), n >= 4. ●

► [A145066] 2,7,17,34,60,97,147,212,294,395,517,662,832,1029,1255,1512,1802,2127,2489,2890,3332,3817,4347,4924,5550 ⋆ Partial sums of A002522, starting at n =1. ● a(1) = 2; a(n) = a(n - 1) + n ^ 2 + 1 for n > 1. ● a(n) = Sum _{ k=1..n } (k ^ 2 + 1). ● a(n) = n * (n + 1) * (2 * n + 1) / 6 + n. (End) ●

► [A070070] 0,2,7,17,35,64,111,182,286,436,647,938,1336,1871,2583,3520,4741,6320,8347,10930,14199,18312,23460,29869,37808 ⋆ Rounded value of n * L _ n(- 1) where L is the Laguerre polynomial. ● a(n) = round(n * [x ^ n] exp(x / (1 - x)) / (1 - x)). - _ Ilya Gutkovskiy _ , Jun 05 2018 ●

► [A318054] 0,2,7,17,35,65,112,182,282,420,605,847,1157,1547,2030,2620,3332,4182,5187,6365,7735,9317,11132,13202,15550 ⋆ a(n) = n * (n + 1) * (n ^ 2 + n + 22) / 24. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ● a(n) = (1 / 6) * Sum _{ i=1..n } (n - i) * ((n - i) ^ 2 + 11), for n >= 1. ●

► [A033937] 2,7,17,35,66,118,204,345,575,949,1556,2540,4134,6715,10893,17655,28598,46306,74960,121325,196347,317737,514152,831960,1346186 ⋆ Convolution of natural numbers n >= 1 with Fibonacci numbers F(k), k >= 3. ● a(n) = Fibonacci(n + 7) - (11 + 3 * n). ●

► [A086321] 2,7,17,37,47,97,107,227,277,577,587,647,1367,1657,1667,3457,3467,3517,3527,3877,10007,20747,20807,21107,21157 ⋆ Primes produced by repeated application of the formula p - > (6p +- 5) starting at the prime 2. ● a(n) = (6 * a(n - m)) - 5 or (6 * a(n - m)) + 5. ●

► [A154117] 1,2,7,17,37,77,157,317,637,1277,2557,5117,10237,20477,40957,81917,163837,327677,655357,1310717,2621437,5242877,10485757,20971517,41943037 ⋆ Expansion of (1 - x + 3 * x ^ 2) / ((1 - x) * (1 - 2 * x)). ● a(n) = 3 * a(n - 1) - 2 * a(n - 2), n > 2. ● a(n) = 2 * a(n - 1) + 3, n > 1. ● a(n) = 5 * 2 ^ (n - 1) - 3, n >= 1. (End) ●

► [A067038] 1,2,7,17,39,80,155,284,500,849,1395,2233,3487,5329,7989,11770,17068,24395,34410,47947,66063,90080,121643,162787,216013 ⋆ a(n) = floor(n ^ m) where m = Sum _{ k=1..n } (1 / k). ● a(n) = floor(n ^ H(n)), H = A001008 / A002805. - _ Alois P. Heinz _ , Dec 03 2019 ●

► [A209398] 0,0,0,2,7,17,39,88,192,408,855,1775,3655,7478,15228,30898,62511,126177,254223,511472,1027840,2063600,4140015,8300767,16635087 ⋆ Number of subsets of { 1,...,n } containing two elements whose difference is 2. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) + a(n - 3) - a(n - 4) - 2 * a(n - 5), a(0)=0, a(1)=0, a(2)=0, a(3)=2, a(4)=7. ● a(n) = 2 ^ n - F(2 + floor(n / 2)) * F(floor(2 + (n + 1) / 2)), where F(n) are the Fibonacci numbers. ●

► [A175660] 1,2,7,17,40,89,193,410,859,1781,3664,7493,15253,30938,62575,126281,254392,511745,1028281,2064314,4141171,8302637,16638112,33329357,66744685 ⋆ Eight bishops and one elephant on a 3 X 3 chessboard. a(n) = 2 ^ (n + 2) - 3 * F(n + 2). ● a(n) = 3 * a(n - 1) - a(n - 2) - 2 * a(n - 3) with a(0)=1, a(1)=2 and a(2)=7. ●

► [A014742] 1,2,7,17,46,119,313,818,2143,5609,14686,38447,100657,263522,689911,1806209,4728718,12379943,32411113,84853394,222149071,581593817,1522632382,3986303327,10436277601 ⋆ Expansion of (1 + x ^ 2) / (1 - 2 * x - 2 * x ^ 2 + x ^ 3). ● a(n) = (2 * (- 1) ^ n + 3 * (F(2 * n) + F(2 * (n + 1)))) / 5, ● a(n) = 3 * F(n) * F(n + 1) + (- 1) ^ n. - _ Bruno Berselli _ , Oct 30 2015 ● a(n) = (2 ^ (- 1 - n) * ((- 1) ^ n * 2 ^ (2 + n) - 3 * (3 - sqrt(5)) ^ n * (- 1 + sqrt(5)) + 3 * (1 + sqrt(5)) * (3 + sqrt(5)) ^ n)) / 5. - _ Colin Barker _ , Sep 29 2016 ●

► [A180665] 0,1,2,7,17,47,121,320,835,2190,5730,15006,39282,102847,269252,704917,1845491,4831565,12649195,33116030,86698885,226980636,594243012,1555748412,4073002212 ⋆ Golden Triangle sums: a(n)=a(n - 2) + A001654(n) with a(0)=0 and a(1)=1. ● a(n) = ((- 1) ^ (- n - 1) * (15 + 10 * n) - 25 + (16 - 4 * A) * A ^ (- n - 1) + (16 - 4 * B) * B ^ (- n - 1)) / 100 with A=(3 + sqrt(5)) / 2 and B=(3 - sqrt(5)) / 2. ●

► [A133407] 1,2,7,17,52,137,397,1082,3067,8477,23812,66197,185257,516242,1442527,4023737,11236372,31355057,87536917,244312202,681996787,1903557797,5313541732,14831330717,41399039377 ⋆ a(n) = a(n - 1) + 5 * a(n - 2) for n >= 2, a

(0)=1, a(1)=2. ● a(n) = (1 / 2) * (1 / 2 + (1 / 2) * sqrt(21)) ^ n - (1 / 14) * sq rt(21) * (1 / 2 - (1 / 2) * sqrt(21)) ^ n + (1 / 14) * (1 / 2 + (1 / 2) * sqrt(21)) ^ n * sqrt(21) + (1 / 2) * (1 / 2 - (1 / 2) * sqrt(21)) ^ n, with n >= 0. - _ Pao lo P. Lava _ , Nov 18 2008 ● a(n) = ((21 - 3 * sqrt(21)) / 42) * (1 / 2 - (1 / 2) * sqrt(21)) ^ n + ((21 + 3 * sqrt(21)) / 42) * (1 / 2 + (1 / 2) * sqrt(21)) ^ n. - _ Richard Choulet _ , Nov 20 2008 ●

▶ [A216389] 1,2,7,17,64,264,1106,5804 ⋆ Number of values of k for which sigma (k) is a permutation of decimal digits of k, for k < 10 ^ n. ● a(n) = # { k in A 115920 | k < 10 ^ n } . - _ M. F. Hasler _ , Feb 24 2014 ●

▶ [A122382] 2,7,17,103,467,6577,17189,61627,109919,130531,198109,239579,399 557,559313,1291909,1807609,2851951,3644479,5189339,5659651,6794993,690535 7,7359091,9795109,19405363 ⋆ Primes of the form Sum[Sum[Prime[k], { k,1,m }], { m,1,n }] = A014148[n]. ● a(n) = A014148[A122381[n]]. ●

▶ [A283957] 2,7,17,467,1033,2287,2333,3413,7523,10357,14723,15073,17467,1807 7,19423,19583,20177,24337,26113,26357,26987,27437,28627,29327,32077 ⋆ Prime s p such that 6p - 1 and 6p + 1 are twin primes and ((6p - 1) ^ 2 + (6p + 1) ^ 2) / 10 is prime. ● a(n) == +- 2 (mod 5). ●

▶ [A195605] 2,7,18,31,50,71,98,127,162,199,242,287,338,391,450,511,578,647,72 2,799,882,967,1058,1151,1250 ⋆ a(n) = (4 * n * (n + 2) + (- 1) ^ n + 1) / 2 + 1. ● a(n) = a(- n - 2) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4). ●

▶ [A307684] 0,0,1,2,7,18,34,62,121,182,292,460,651,924,1339,1764,2376,3196,407 4,5214,6740,8294,10318,12850,15496 ⋆ Total volume of all rectangular prisms wi th dimensions r X s X t where r, s and t are the smallest, middle and largest pa rts in each partition of n into 3 parts. ● a(n) = Sum _{ k=1..floor(n / 3) } Su m _{ i=k..floor((n - k) / 2) } i * k * (n - i - k). ● a(n) = - a(n - 1) + 2 * a(n - 2) + 6 * a(n - 3) + 3 * a(n - 4) - 9 * a(n - 5) - 14 * a(n - 6) - 2 * a(n - 7) + 16 * a (n - 8) + 16 * a(n - 9) - 2 * a(n - 10) - 14 * a(n - 11) - 9 * a(n - 12) + 3 * a(n - 1 3) + 6 * a(n - 14) + 2 * a(n - 15) - a(n - 16) - a(n - 17) for n>17. ●

▶ [A141631] 2,7,18,35,58,87,122,163,210,263,322,387,458,535,618,707,802,903,10 10,1123,1242,1367,1498,1635,1778 ⋆ a(n) = 3 * n ^ 2 - 4 * n + 3. ● a(n) = 6 * n + a(n - 1) - 7 for n>1, a(1)=2. - _ Vincenzo Librandi _ , Nov 25 2010 ●

▶ [A342397] 0,2,7,18,35,62,98,148,210,290,385,502,637,798,980,1192,1428,1698,1 995,2330,2695,3102,3542,4028,4550 ⋆ Expansion of the o.g.f. (2 * x ^ 2 + 3 * x + 2) * x / ((x + 1) ^ 2 * (x - 1) ^ 4). ● a(n) = (n + 1) * (1 - (- 1) ^ n) / 16 + (7 / 4) * (binomial(n + 3, 3) - binomial(n + 2, 2)). ● a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + a(n - 4) + 2 * a(n - 5) - a(n - 6) for n > 5. - _ Chai Wah Wu _ , Mar 11 2021 ●

▶ [A212685] 0,0,2,7,18,36,64,103,156,224,310,415,542,692,868,1071,1304,1568,18 66,2199,2570,2980,3432,3927,4468 ⋆ Number of (w,x,y,z) with all terms in { 1,... ,n } and |w - x|=w + |y - z|. ● a(n)=3 * a(n - 1) - 2 * a(n - 2) - 2 * a(n - 3) + 3 * a(n - 4) - a(n - 5). ● a(n)=(- 3 + 3 * (- 1) ^ n + 4 * n - 6 * n ^ 2 + 8 * n ^ 3) / 24. [_ Colin Barker _ , Jun 10 2012] ●

▶ [A229183] 0,2,7,18,38,70,117,182,268,378,515,682,882,1118,1393,1710,2072,248 2,2943,3458,4030,4662,5357,6118,6948 ⋆ a(n) = n * (n ^ 2 + 3) / 2. ● a(n) ^ 2 + 1 = (n ^ 2 + 1) ^ 2 * ((n / 2) ^ 2 + 1). - _ Joerg Arndt _ , Jan 22 2015 ●

▶ [A051743] 2,7,18,39,75,132,217,338,504,725,1012,1377,1833,2394,3075,3892,486 2,6003,7334,8875,10647,12672,14973,17574,20500 ⋆ a(n) = (1 / 24) * n * (n + 5) * (n ^ 2 + n + 6). ● a(n) = binomial(n + 3, n - 1) + binomial(n, n - 1) = binom ial(n + 3, 4) + binomial(n, 1), n > 0. ● a(1)=2, a(2)=7, a(3)=18, a(4)=39, a(5) =75, a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ●

▶ [A054111] 1,2,7,18,39,82,167,338,679,1362,2727,5458,10919,21842,43687,8737 8,174759,349522,699047,1398098,2796199,5592402,11184807,22369618,44739239 ⋆ Row sums of array T as in A054110. ● a(n + 1) = 2 ^ (n + 4) / 3 - 7 / 2 + (- 1) ^ n / 6, n>0. - _ R. J. Mathar _ , May 20 2013 ●

▶ [A192955] 0,1,2,7,18,41,84,161,294,519,894,1513,2528,4185,6882,11263,18370,2 9889,48548,78761,127670,206831,334942,542257,877728 ⋆ Coefficient of x in the reduction by x ^ 2 - > x + 1 of the polynomial p(n,x) defined at Comments. ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + a(n - 3) + 2 * a(n - 4) - a(n - 5). ● a(n) = 2 * Lucas(n + 3) - (n ^ 2 + 4 * n + 8). - _ G. C. Greubel _ , Jul 12 2019 ●

▶ [A055503] 1,1,2,7,18,41,85,162,287,478,756,1145,1672,2367,3263,4396,5805,753 2,9622,12123,15086,18565,22617,27302,32683 ⋆ Take n points in general position in the plane; draw all the (infinite) straight lines joining them; sequence gives n umber of connected regions formed. ● a(n) = (1 / 8) * (n - 1) * (n ^ 3 - 5 * n ^ 2 + 18 * n - 8) for n>1. ●

▶ [A077802] 1,2,7,18,41,88,183,374,757,1524,3059,6130,12273,24560,49135,9828 6,196589,393196,786411,1572842,3145705,6291432,12582887,25165798,50331621 ⋆ Sum of products of parts increased by 1 in hook partitions of n, where hook p artitions are of the form h * 1 ^ (n - h). ● a(n) = 3 * 2 ^ n - n - 3, n > 0. ●

▶ [A095151] 0,2,7,18,41,88,183,374,757,1524,3059,6130,12273,24560,49135,9828 6,196589,393196,786411,1572842,3145705,6291432,12582887,25165798,50331621 ⋆ a(n + 3) = 3 * a(n + 2) - 2 * a(n + 1) + 1 with a(0)=0, a(1)=2. ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 2 * a(n - 3). ● a(n)=Sum _{ j=0..d - 1 } b _ j / b _{ j + 1 } (proved). - R. P. Stanley, Aug 27 2019 ●

▶ [A243717] 2,7,18,43,83,156,257,418,624,925,1292,1797,2393,3178,4083,5236,654 2,8163,9974,12175,14607,17512,20693,24438,28508 ⋆ Number of inequivalent (m od D _ 4) ways to place 2 nonattacking knights on an n X n board. ● a(n) = (n ^ 4 - 2 * n ^ 2 + 20 * n - 16 + IF(MOD(n, 2) = 1) * (2 * n ^ 2 - 4 * n - 1)) / 16 . ● a(n) = (- 33 + (- 1) ^ n + 4 * (9 + (- 1) ^ n) * n - 2 * (1 + (- 1) ^ n) * n ^ 2 + 2 * n ^ 4) / 32. - _ Colin Barker _ , Jun 10 2014 ●

▶ [A174192] 1,2,7,18,45,110,267,646,1561,3770,9103,21978,53061,128102,30926 7,746638,1802545,4351730,10506007,25363746,61233501,147830750,356895003,86 1620758,2080136521 ⋆ Expansion of (1 - x + 2x ^ 2) / ((1 - x) * (1 - 2x - x ^ 2)) . ● a(n)=2 * a(n - 1) + a(n - 2) + 2, with a(0)=1, a(1)=2. ● a(n)= - 1 + [1 + s qrt(2)] ^ n + [1 - sqrt(2)] ^ n + (1 / 4) * sqrt(2) *{ [1 + sqrt(2)] ^ n - [1 - sqrt(2)] ^ n } , with n>=0 [From _ Paolo P. Lava _ , Mar 17 2010] ●

▶ [A362126] 1,2,7,18,47,118,290,702,1677,3966,9300,21654,50116,115388,26447 5,603792,1373621,3115222,7045205,15892794,35769390,80337144,180091131,4030 02108,900370600 ⋆ Expansion of 1 / (1 - x * (1 + x) ^ 2) ^ 2. ● a(n) = 2 * a(n - 1) + 3 * a(n - 2) - 2 * a(n - 3) - 6 * a(n - 4) - 4 * a(n - 5) - a(n - 6) for n > 5. ● a(n) = Sum _{ k=0..n } (- 1) ^ k * binomial(- 2,k) * binomial(2 * k,n - k) = Sum _{ k=0..n } (k + 1) * binomial(2 * k,n - k). ●

▶ [A182197] 0,1,2,7,18,48,131,355,966,2626,7137,19401,52737,143354,389676,105 9250,2879341,7826860,21275612,57833109,157206689,427332086,1161609045,3157 580760,8583194401 ⋆ a(n) = round(e ^ (n + 1) / (e ^ 2 + 1)). ● a(n) = round(e ^ (n + 1) / (e ^ 2 + 1)). ●

▶ [A192873] 0,1,2,7,18,49,128,337,882,2311,6050,15841,41472,108577,284258,744 199,1948338,5100817,13354112,34961521,91530450,239629831,627359042,1642447 297,4299982848 ⋆ Coefficient of x in the reduction by (x ^ 2 - >x + 1) of the po lynomial p(n,x) given in Comments. ● a(n) = 3 * a(n - 1) - 3 * a(n - 3) + a(n - 4). ● a(n) = (1 / 10) * (4L(2 * n) - 3 * (- 1) ^ n - 5), with L(n) the Lucas num bers (A000032). - _ Ralf Stephan _ , Apr 06 2014 ● a(- n) = a(n) for all n in Z. - _ Michael Somos _ , Apr 08 2014 ●

▶ [A030236] 1,2,7,18,49,136,377,1044,2891,8006,22171,61398,170029,470860,1303 949,3611016,9999959,27692810,76689487,212375610,588130153,1628704336,45103 58465,12490501212,34589849507 ⋆ Cycle - path coverings of a family of digraphs . ● a(n + 4) = 3 * a(n + 3) - a(n + 2) + a(n + 1), n >= 0. ● a(n + 3) = 2 * a(n + 2) + a(n + 1) + 2 * Sum _{ k=0..n } a(k), n >= 0. ● a(n) = Sum _{ k= 0..n } binomial(n + k + 1,3 * k + 1) * 2 ^ k + 2 * Sum _{ j=0..n - 1 } binomia l(n + j - 1,3 * j + 1) * 2 ^ j. - _ Emanuele Munarini _ , Dec 03 2012 ●

▶ [A074141] 1,2,7,18,50,118,301,684,1621,3620,8193,17846,39359,84198,181313,3 83208,811546,1695062,3546634,7341288,15207022,31261006,64255264,13131701 2,268336125 ⋆ Sum of products of parts increased by 1 in all partitions of n. ● a (n) = 1 / n * Sum _{ k=1..n } b(k) * a(n - k), where b(k) = Sum _{ d divides k } d * (d + 1) ^ (k / d). ● a(n) = S(n,1), where S(n,m) = sum(k=m..n / 2, (k + 1) * S(n - k,k)) + (n + 1), S(n,n)=n + 1, S(0,m)=1, S(n,m)=0 for n<m. - _ Vladimir Kruchinin _ , Sep 07 2014 ●

▶ [A122931] 1,2,7,18,50,132,351,924,2431,6380,16732,43848,114869,300846,78781 5,2062830,5401054,14140940,37022755,96928920,253766591,664375032,173936527 2,4553731728,11921847625 ⋆ Row sums of triangular array A122930. ● a(n) = (F(n + 2) ^ 2 - F(n + 1) ^ 2 - F(n + 2) + F(n + 1)) / 2 where F(n)=Fibonacci(n). - _ Gary Detlefs _ , Mar 10 2011 ● a(n) = F(n) * (F(n + 3) - 1) / 2. - _ J. M. Bergot _ , Mar 16 2013 ● a(n) = (F(n + 1) - 1) * (F(n + 2) + 1) / 2 + (n mod 2). - _ Greg Dresden _ , Sep 25 2021 ●

▶ [A046672] 1,2,7,18,53,146,415,1162,3277,9210,25927,72930,205221,577378,1624 559,4570810,12860541,36184394,101808791,286449682,805956949,2267645362,638 0262207,17951546602,50508589101 ⋆ Expansion of 1 / (1 - 2 * x - 3 * x ^ 2 + 2 * x ^ 3). ● a(n) = 2 * a(n - 1) + 3 * a(n - 2) - 2 * a(n - 3), n > 2. - _ Iain Fox _ , Dec 02 2017 ●

▶ [A291255] 2,7,18,55,144,404,1060,2853,7442,19573,50670,131368,337622,86681 9,2213650,5642899,14332988,36335548,91872760,231875713,584030738,146863115 3,3686943130,9242753104,23138167146 ⋆ p - INVERT of (0,1,0,1,0,1,...), where p(S) = (1 - S - 2 S ^ 2) ^ 2. ● a(n) = 2 * a(n - 1) + 7 * a(n - 2) - 10 * a(n - 3) - 16 * a(n - 4) + 10 * a(n - 5) + 7 * a(n - 6) - 2 * a(n - 7) - a(n - 8) for n >= 9. ●

▶ [A185308] 0,0,1,2,7,18,61,188,677,2370,9141,35212,144905,602662,2631333,116 71264,53772593,252184082,1220090757,6011588316,30413403457,156656758094,8 25751634149,4428857070312,24246896289889 ⋆ a(0)=0, a(1)=0; for n>1, a(n) = a(n - 1) + n * a(n - 2) + 1. ● a(0)=a(1)=0, a(2)=1, a(n) = 2 * a(n - 1) + (n - 1) * a(n - 2) - (n - 1) * a(n - 3). - _ Vincenzo Librandi _ , Dec 24 2012 ●

▶ [A340738] 1,2,7,18,71,252,1001,4540,18089,99990,398959,2602278,10391023,78 132152,312129649,2658297528,10622799089,101072656170,403978495031,4247085 597370,16977719590391,195445764537012,781379079653017,9775727355457908,3 9085931702241241 ⋆ Denominator of a sequence of fractions converging to e. ● a(1) = 1, a(2) = 2; for n > 2, a(n) = (n + 2) * a(n - 1) / 2 - a(n - 2) - (n - 2) * a(n - 3) / 2 if n is even, 2 * a(n - 1) + n * a(n - 2) otherwise. ●

▶ [A100119] 1,2,7,19,41,76,127,197,289,406,551,727,937,1184,1471,1801,2177,260 2,3079,3611,4201,4852,5567,6349,7201 ⋆ a(n) = n - th centered n - gonal numbe r. ● a(n) = 1 + n * (n + n ^ 2) / 2 = 1 + (1 / 2) * n ^ 2 + (1 / 2) * n ^ 3 = 1 + mean(n ^ 2, n ^ 3). - _ Joshua Zucker _ , May 03 2006 ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Vincenzo Librandi _ , Jun 25 2012 ●

▶ [A209400] 0,0,0,0,2,7,19,46,107,242,535,1162,2490,5281,11108,23206,48206,996 63,205218,421115,861585,1758249,3580075,7275377,14759592 ⋆ Number of subse ts of { 1,...,n } containing a subset of the form { k,k + 1,k + 3 } for some k. ● a(n) = 3 * a(n - 1) - a(n - 2) - 2 * a(n - 3) + a(n - 4) - a(n - 5) - 2 * a(n - 6), a(4)=2, a(5)=7, a(i)=0 for i<4. ●

▶ [A006589] 0,2,7,19,47,111,255,575,1279,2815,6143,13311,28671,61439,131071,2 78527,589823,1245183,2621439,5505023,11534335,24117247,50331647,10485759 9,218103807 ⋆ a(n) = (n + 3) * 2 ^ n - 1. ● a(n) = 5 * a(n - 1) - 8 * a(n - 2) + 4 * a(n - 3). (End) ● a(n) = Sum _{ k=0..n } Sum _{ i=0..n } (binomial(n,i) + binomial(k,i)). - _ Wesley Ivan Hurt _ , Sep 21 2017 ●

▶ [A328990] 2,7,19,48,118,287,695,1680,4058,9799,23659,57120,137902,332927,80 3759,1940448,4684658,11309767,27304195,65918160,159140518,384199199,927538 919,2239277040,5406093002 ⋆ a(n) = (3 * b(n) + b(n - 1) + 1) / 2, where b = A 005409. ● a(n) = 3 * a(n - 1) - a(n - 2) - a(n - 3) for n>3. ● a(n) = (- 6 + (3 - 2 * sqrt(2)) * (1 - sqrt(2)) ^ n + (1 + sqrt(2)) ^ n * (3 + 2 * sqrt(2))) / 4. ●

▶ [A099484] 1,1,2,7,19,48,125,329,862,2255,5903,15456,40465,105937,277346,726 103,1900963,4976784,13029389,34111385,89304766,233802911,612103967,1602508 992,4195423009 ⋆ A Fibonacci convolution. ● a(n)=3a(n - 1) - 2a(n - 2) + 3a(n - 3); ● a(n)=sum { k=0..floor(n / 2), binomial(n - k, k)(- 1) ^ n * (3 ^ (n - 2k) + 2 * 0 ^ (n - 2k)) / 3 } ; ● a(n)=sum { k=0..n, (0 ^ k - 2sin(pi * k / 2))F(2(n - k) + 2) } . ●

▶ [A080873] 1,1,2,7,19,69,188,683,1861,6761,18422,66927,182359,662509,180516 8,6558163,17869321,64919121,176888042,642633047,1751011099,6361411349,1733 3222948,62971480443,171581218381 ⋆ a(n) * a(n + 3) - a(n + 1) * a(n + 2) = 5, given a(0)=a(1)=1, a(2)=2. ● a(n + 4) = 10 * a(n + 2) - a(n). [_ Richard Cho ulet _ , Dec 04 2008] ● a(n) = (1 / 24 * (3 + 3 * 3 ^ (1 / 2) * 2 ^ (1 / 2) + 6 * 2 ^ (1 / 2) + 2 * 3 ^ (1 / 2)) / (3 ^ (1 / 2) * 2 ^ (1 / 2) + 2)) * (sqrt(3) + sqrt(2)) ^ n + (1 / 16 * 3 ^ (1 / 2) * 2 ^ (1 / 2) + 1 / 8 * 2 ^ (1 / 2) + 1 / 4 + 1 / 6 * 3 ^ (1 / 2)) * (sqrt(3) - sqrt(2)) ^ n + (1 / 24 * (3 * 3 ^ (1 / 2) * 2 ^ (1 / 2) - 6 * 2 ^ (1 / 2) + 3 - 2 * 3 ^ (1 / 2)) / (3 ^ (1 / 2) * 2 ^ (1 / 2) + 2)) * (- sqrt(

3) - sqrt(2)) ^ n + (1 / 16 * 3 ^ (1 / 2) * 2 ^ (1 / 2) - 1 / 8 * 2 ^ (1 / 2) + 1 / 4 - 1 / 6 * 3 ^ (1 / 2)) * (- sqrt(3) + sqrt(2)) ^ n. [_ Richard Choulet _ , Dec 0 4 2008] ●

► [A054423] 1,1,1,2,7,19,86,372,1825,9143,47801,254990,1391302,7713642,43401974,247216934,1423531255,8275108733,48511773461,286542497274,1704002332513,10195435737315,61341136938138,370933387552634,2253475545208390 ⋆ Number of unlabeled 3 - gonal cacti having n triangles. ● a(n) = ((Sum _{ d|n } phi(n / d) * binomial(3 * d, d)) + (Sum _{ d|gcd(n - 1, 3) } phi(d) * binomial(3 * n / d, (n - 1) / d))) / (3 * n) - binomial(3 * n, n) / (2 * n + 1) for n > 0. - _ A ndrew Howroyd _ , May 04 2018 ●

► [A368881] 1,2,7,20,46,91,162,267,415,616,881,1222,1652,2185,2836,3621,4557,5662,6955,8456,10186,12167,14422,16975,19851 ⋆ a(n) = binomial(n + 3, 4) + binomial(n + 1, 3) + 1. ● a(n) = (1 / 24) * (n ^ 4 + 10 * n ^ 3 + 11 * n ^ 2 + 2 * n + 24). ●

► [A270109] 2,7,20,47,94,167,272,415,602,839,1132,1487,1910,2407,2984,3647,4402,5255,6212,7279,8462,9767,11200,12767,14474 ⋆ a(n) = n ^ 3 + (n + 1) * (n + 2). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4), n>3. ● a(n + h) - a(n) + a(n - h) = n ^ 3 + n ^ 2 + (6 * h ^ 2 + 3) * n + (2 * h ^ 2 + 2) for an y h. This identity becomes a(n) = n ^ 3 + n ^ 2 + 3 * n + 2 if h=0. ● a(h * a(n) + n) = (h * a(n)) ^ 3 + (3 * n + 1) * (h * a(n)) ^ 2 + (3 * n ^ 2 + 2 * n + 3) * (h * a(n)) + a(n) for any h, therefore a(h * a(n) + n) is always a multiple of a(n). ●

► [A123203] 1,2,7,20,49,110,235,488,997,2018,4063,8156,16345,32726,65491,131024,262093,524234,1048519,2097092,4194241,8388542,16777147,33554360,67108789 ⋆ A007318 * [1, 1, 4, 4, 4, ...]. ● a(n) = 2 ^ (1 + n) - 3 * n. ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 2 * a(n - 3). - _ Colin Barker _ , Jul 29 2012 ●

► [A335927] 1,2,7,20,50,115,251,530,1096,2237,4529,9124,18326,36743,73591,147302,294740,589633,1179437,2359064,4718338,9436907,18874067,37748410,75497120 ⋆ a(n + 1) = Sum _{ k=1..n } (a(k) + k * (n - k)), with a(1)=1. ● a(1) = 1 , a(n + 1) = Sum _{ k=1..n } (a(k) + k * (n - k)); for n>1. ● a(n) = 1 / 4 * (9 * 2 ^ n - 2 * n ^ 2 - 6 * n - 8); for n > 1. ● a(n) = 5 * a(n - 1) - 9 * a(n - 2) + 7 * a(n - 3) - 2 * a(n - 4) for n > 5. (End) ●

► [A066373] 2,7,20,52,128,304,704,1600,3584,7936,17408,37888,81920,176128,376832,802816,1703936,3604480,7602176,15990784,33554432,70254592,146800640,306184192,637534208 ⋆ a(n) = (3 * n - 2) * 2 ^ (n - 3). ● a(n) = 2 * a(n - 1) + 3 * 2 ^ (n - 3). - _ Vincenzo Librandi _ , Mar 20 2011 ●

► [A096005] 0,1,2,7,20,52,144,389,1058,2876,7817,21250,57763,157017,426817,1160207,3153770,8572836,23303385,63345169,172190019,468061001,1272321714,3458528995,9401256521 ⋆ For k >= 1, let b(k) = ceiling(Sum _{ i=1..k } 1 / i); a(n) = number of b(k) that are equal to n. ● a(n + 1) / a(n) approaches e = ex p(1) = 2.71828... ●

► [A035508] 0,2,7,20,54,143,376,986,2583,6764,17710,46367,121392,317810,832039,2178308,5702886,14930351,39088168,102334154,267914295,701408732,1836311902,4807526975,12586269024 ⋆ a(n) = Fibonacci(2 * n + 2) - 1. ● a(n) = Fibona cci(4 * n + 2) mod Fibonacci(2 * n + 2). - _ Gary Detlefs _ , Nov 22 2010 ● a(n + 1) = Sum _{ k=0..n } Fibonacci(2 * k + 3). - _ Gary Detlefs _ , Dec 24 2 010 ● a(n) = floor(Fibonacci(2 * n + 2) - Fibonacci(n + 1) ^ 2 / Fibonacci(2 * n + 2)). - _ Gary Detlefs _ , Dec 21 2012 ● a(n) = Fibonacci(2 * n + 4) * (Fib onacci(2 * n + 1) - 1) / (Fibonacci(2 * n + 3) - 1). ● a(n)= - 2 + Sum _{ k = 1..2 * n + 3 } (- 1) ^ (k + 1) * Fibonacci(k). (End) ●

► [A000149] 1,2,7,20,54,148,403,1096,2980,8103,22026,59874,162754,442413,1202604,3269017,8886110,24154952,65659969,178482300,485165195,1318815734,3584912846,9744803446,26489122129 ⋆ a(n) = floor(e ^ n). ● a(n) ^ (1 / n) converges to e because |1 - a(n) / e ^ n|=|e ^ n - a(n)| / e ^ n < e ^ (- n) and so a(n) ^ (1 / n)=(e ^ n * (1 + o(1)) ^ (1 / n)=e * (1 + o(1). - _ Hieronymus Fischer _ , Jan 22 2006 ●

► [A049681] 0,1,2,7,20,56,152,407,1080,2851,7502,19702,51680,135461,354902,929567,2434320,6374236,16689752,43697227,114405500,299525051,784179002,2053027082,5374926720 ⋆ a(n) = (Lucas(2 * n) - Lucas(n)) / 2. ● a(n) = Lucas(n) * (Lucas(n) - 1) / 2 - (- 1) ^ n = binomial(Lucas(n), 2) - (- 1) ^ n. - _ Vladimir Reshetnikov _ , Sep 27 2016 ●

► [A292400] 2,7,20,57,158,431,1160,3089,8154,21367,55644,144137,371638,954335,2441872,6228129,15839794,40181095,101690404,256812121,647303502,1628647055,4091042328,10260849073,25699419914 ⋆ p - INVERT of (1,2,2,2,2,2,...) (A0 40000), where p(S) = (1 - S) ^ 2. ● a(n) = 4 * a(n - 1) - 2 * a(n - 2) - 4 * a(n - 3) - a(n - 4) for n >= 5. ●

► [A201967] 1,2,7,20,60,178,529,1572,4671,13880,41244,122556,364173,1082134,3215543,9554932,28392320,84367302,250696021,744939016,2213573775,6577597296,19545219896,58078292664,172578671241 ⋆ Expansion of 1 / (1 - 2 * x - 3 * x ^ 2 + x ^ 4) in powers of x. ● a(n)= 2 * a(n - 1) + 3 * a(n - 2) - a(n - 4), a(0)=1, a(n)=0 if n<0. ●

► [A116408] 0,0,1,2,7,20,61,182,546,1632,4875,14542,43340,129064,384111,1142610,3397656,10100448,30020283,89213094,265096455,787695636,2340488535,6954401762,20664628438 ⋆ E.g.f. exp(x) * (Bessel _ I(2,2 * x) - Bessel _ I(3,2 * x) + Bessel _ I(4,2 * x)). ● a(n) = Sum { k=0..n } C(n,k) * (- 1) ^ k * (C(k + 1,k / 2 - 1) * (1 + (- 1) ^ k) / 2 + C(k,(k - 1) / 2 - 1) * (1 - (- 1) ^ k) / 2). ●

► [A015518] 0,1,2,7,20,61,182,547,1640,4921,14762,44287,132860,398581,1195742,3587227,10761680,32285041,96855122,290565367,871696100,2615088301,7845264902,23535794707,70607384120 ⋆ a(n) = 2 * a(n - 1) + 3 * a(n - 2), with a(0)=0 , a(1)=1. ● a(n) = (3 ^ n - (- 1) ^ n) / 4 = floor(3 ^ n / 4 + 1 / 2). ● a(n) = 3 ^ (n - 1) - a(n - 1). - _ Emeric Deutsch _ , Apr 01 2004 ● a(n) = Sum _{ k=0. .floor(n / 2) } C(n, 2k + 1) * 2 ^ (2k). - _ Paul Barry _ , May 14 2003 ● a(n) = Sum _{ k=1..n } binomial(n, k) * (- 1) ^ (n + k) * 4 ^ (k - 1). - _ Paul Bar ry _ , Apr 02 2003 ● a(n + 1) = Sum _{ k=0..floor(n / 2) } binomial(n - k, k) * 2 ^ (n - 2 * k) * 3 ^ k. - _ Paul Barry _ , Jul 13 2004 ● a(n) = U(n - 1, i / sq rt(3))(- i * sqrt(3)) ^ (n - 1), i ^ 2= - 1. - _ Paul Barry _ , Nov 17 2003 ●

► [A122877] 0,1,2,7,20,65,206,679,2248,7569,25690,88055,303964,1056497,3693158,12977655,45813008,162400609,577843890,2063053991,7388487460,26535797729,95552015614,344897769991,1247685613272 ⋆ Expansion of (1 - 2 * x - 3 * x ^ 2 - (1 - x) * sqrt(1 - 2 * x - 7 * x ^ 2)) / (8 * x ^ 3). ● a(n) = (1 / Pi) * Integra l _{ x=1 - 2 * sqrt(2)..1 + 2 * sqrt(2) } x ^ n * sqrt(- x ^ 2 + 2x + 7) * (x - 1) / 8. ● a(n) = (Sum _{ j=0..n + 1 } binomial(j,n - j + 3) * 2 ^ (n - j + 2) * bi nomial(n + 1,j)) / (n + 1). - _ Vladimir Kruchinin _ , May 19 2014 ●

► [A000150] 0,0,1,2,7,20,66,212,715,2424,8398,29372,104006,371384,1337220,4847208,17678835,64821680,238819350,883629164,3282060210,12233125112,45741281820,171529777432,644952073662 ⋆ Number of dissections of an n - gon, rooted at an exterior edge, asymmetric with respect to that edge. ● a(n) = (2 ^ (n - 3) / sqrt(Pi)) * (4 * 2 ^ n * GAMMA(n + 1 / 2) / GAMMA(n + 2) + ((- 1) ^ n - 1) * GAMMA(n / 2) / GAMMA(n / 2 + 3 / 2)) for n>0. - _ Mark van H oeij _ , Nov 11 2009 ●

► [A115117] 1,2,7,20,68,224,780,2720,9709,34918,127100,465920,1720740,6390930,23860928,89477120,336860180,1272578048,4822419420,18325176316,69810262080,266548209850,1019836872140,3909374443520,15011998757888 ⋆ Number of p rimitive (aperiodic, or Lyndon) 3 - asymmetric rhythm cycles: ones having no n ontrivial shift automorphism. 3 - asymmetric rhythm cycles (A115115): binary necklaces of length 3n subject to the restriction that for any k if the k - th bead is of color 1 then the (k + n) - th and (k + 2n) - th beads (modulo 3n) are of co lor 0. ● a(n) = (Sum _{ d|n } mu(3d) + Sum _{ d|n, (3,d)=1 } mu(d) 4 ^ (n / d)) / (3n), where mu(n) is the Moebius function A008683. ●

► [A265500] 1,2,7,21,52,167,501,1503,4509,13527,40581 ⋆ Balance scale sequenc e. ● a(i + 1)= 1 + 2 * sum(a[1], a[i]) (proved). ●

► [A005666] 0,2,7,21,59,163,447,1223,3343,9135,24959,68191,186303,508991,1390591,3799167,10379519,28357375,77473791,211662335,578272255,1579869183,4316282879,11792304127,32217174015 ⋆ Tower of Hanoi with 3 pegs and cyclic move s only (counterclockwise). ● a(n) = (1 / (4 * s3)) * ((1 + s3) ^ (n + 2) - (1 - s3) ^ (n + 2)) - 1 where s3 = sqrt(3). ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) + 3 (sam e recurrence as A005665). ● a(n) = 2 * a(n - 1) + c(n - 1) + 2 where c(n) = 2 * a(n - 1) + 1 stands for A005665. ●

► [A353094] 2,7,21,62,184,549,1643,4924,14766,44291,132865,398586,1195748,3587233,10761687,32285048,96855130,290565375,871696109,2615088310,7845264912,23535794717,70607384131,211822152372,635466457094 ⋆ a(1) = 2; for n > 1, a (n) = 3 * a(n - 1) + 3 - n. ● a(n) = 5 * a(n - 1) - 7 * a(n - 2) + 3 * a(n - 3). ● a (n) = (3 ^ (n + 1) + 2 * n - 3) / 4. ● a(n) = Sum _{ k=0..n - 1 } (3 - n + k) * 3 ^ k. ●

► [A291411] 2,7,21,63,189,567,1699,5092,15260,45731,137046,410697,1230768,3688339,11053134,33123790,99264648,297474121,891463923,2671519536,8005951162,23992058879,71898875923,215464974683,645700711159 ⋆ p - INVERT of (1,1,0 ,0,0,0,...), where p(S) = 1 - 2 S - S ^ 2 + S ^ 3. ● a(n) = 2 * a(n - 1) + 3 * a(n - 2) + a(n - 3) - 2 * a(n - 4) - 3 * a(n - 5) - a(n - 6) for n >= 7. ●

► [A218836] 1,2,7,21,65,200,616,1897,5842,17991,55405,170625,525456,1618192,4983377,15346786,47261895,145547525,448227521,1380359512,4250949112,13091204281,40315615410,124155792775,382349636061 ⋆ Unmatched value maps: num ber of n X 2 binary arrays indicating the locations of corresponding elements no t equal to any horizontal or antidiagonal neighbor in a random 0..1 n X 2 array. ● a(n) = 2 * a(n - 1) + 3 * a(n - 2) + a(n - 3). ●

► [A052911] 1,2,7,21,66,205,639,1990,6199,19309,60146,187349,583575,1817782,5662223,17637301,54938562,171128541,533049583,1660400166,5171992999,16110279997,50182032658,156312391973,486898648583 ⋆ Expansion of (1 - x) / (1 - 3 * x - x ^ 2 + 2 * x ^ 3). ● a(n) = 3 * a(n - 1) + a(n - 2) - 2 * a(n - 3). ● a(n) = S um _{ alpha=RootOf(1 - 3 * z - z ^ 2 + 2 * z ^ 3) } (1 / 229) * (43 + 41 * alp ha - 46 * alpha ^ 2) * alpha ^ (- 1 - n). ● a(n) = center term in M ^ n * [1 1 1] where M = Hosoya's triangle considered as an upper triangular 3 X 3 matrix: [2 1 2 / 1 1 0 / 1 0 0]. E.g., a(4) = 66 since M ^ 4 * [1 1 1] = [139 66 45]. The an alogous procedure using M ^ n * [1 0 0] generates A100058. - _ Gary W. Adam son _ , Oct 31 2004 ●

► [A344500] 1,1,2,7,21,66,216,715,2395,8101,27598,94568,325612,1125632,3904512,13583195,47373255,165585883,579907758,2034443127,7148313381,25151582046,88607951512,312518438532,1103393962996 ⋆ a(n) = Sum _{ k=0..n } binomial(n, k) * CT(n, k) = Sum _{ k=0..n } (- 1) ^ (n - k) * binomial(n, k) * CT(n, k), where CT(n, k) is the Catalan triangle A053121. ● a(n) = Sum _{ j=0..n } even(n + j) * binomial(n, j) * binomial(n + 1, (n - j) / 2) * (j + 1) / (n + 1), w here even(k) = 1 if k is even and otherwise 0. ●

► [A186240] 1,1,2,7,21,66,228,799,2843,10357,38278,143012,539980,2056848,7892496,30483351,118416903,462348219,1813410078,7141608015,28229040165,111956307486,445374729396,1776704142348,7105896093588 ⋆ G.f. A(x) defined by A(x) = 1 + x * A(x) + x ^ 2 * A(x) ^ 2 + 3 * x ^ 3 * A(x) ^ 3. ● a(n) = 1 / n * su m(j=0..n, binomial(n,j) * sum(i=j..n + j - 1, binomial(j,i - j) * binomial(n - j,3 * j - n - i - 1) * 3 ^ (3 * j - n - i - 1))), n>0 ●

► [A274203] 0,1,2,7,21,67,212,673,2136,6781,21527,68341,216960,688777,2186642,6941875,22038189,69964063,222113084,705136609,2238578784,7106757625,22561637903,71625842857,227388693456 ⋆ Expansion of x * (1 - x - x ^ 3) / ((1 - x) * (1 - 2 * x - 3 * x ^ 2 - 2 * x ^ 3 - x ^ 4)). ● a(n) = 3 * a(n - 1) + a(n - 2) - a(n - 3) - a(n - 4) - a(n - 5). ● a(n) = floor((1 + sqrt(2)) * a(n - 1) + (1 + sqrt(2)) * a(n - 2)), a(0)=0, a(1)=1 (empirically). ●

► [A323228] 1,2,7,22,57,127,253,463,793,1288,2003,3004,4369,6189,8569,11629,15505,20350,26335,33650,42505,53131,65781,80731,98281 ⋆ a(n) = binomial(n + 4, n - 1) + 1. ● a(n) = 1 + Pochhammer(n, 5) / 5!. ● a(n) = [x ^ n] (x - (x - 1) ^ 5) / (x - 1) ^ 6. ●

► [A348290] 1,1,1,1,1,1,1,1,1,1,2,7,22,57,127,253,463,793,1288,2003,3005,4380,6255,8855,12630 ⋆ a(n) = Sum _{ k=0..floor(n / 10) } binomial(n - 5 * k,5 * k). ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) + a(n - 10). ●

► [A099132] 1,1,1,1,1,1,2,7,22,57,127,253,464,804,1354,2289,4005,7372,14198,28033,55523,108699,208982,394555,734561 ⋆ Quintisection of 1 / (1 - x ^ 5 - x ^ 6). ● a(n) = Sum _{ k=0..n } binomial(k, 5(n - k)); ● a(n) = 5a(n - 1) - 10a(n - 2) + 10a(n - 3) - 5a(n - 4) + a(n - 5) + a(n - 6); ● a(n) = Sum _{ k=0..floor(n / 5) } binomial(n - k, 5k). - _ Paul Barry _ , May 09 2005 ●

► [A365798] 1,1,1,1,1,1,2,7,22,57,127,253,468,848,1618,3433,8009,19384,46264,106369,235179,505955,1079790,2332555,5166405 ⋆ G.f. satisfies A(x) = 1 + x * A(x) * (1 + x ^ 5 * A(x) ^ 4). ● a(n) = Sum _{ k=0..floor(n / 6) } binomial(n -

5 * k,k) * binomial(n - k + 1,n - 5 * k) / (n - k + 1) = Sum _{ k=0..floor(n / 6) } binomial(n - k,5 * k) * binomial(5 * k,k) / (4 * k + 1). •
► [A139398] 1,1,1,1,1,2,7,22,57,127,254,474,859,1574,3004,6008,12393,25773,53143,107883,215766,427351,843756,1669801,3321891 ⋆ a(n) = Sum _{ k >= 0 } binomial(n,5 * k). • a(n) = round((2 / 5) * (2 ^ (n - 1) + phi ^ n * cos(Pi * n / 5))), where phi is the golden ratio and round(x) is the integer nearest to x. • a(n + m) = a(n) * a(m) + H _ 2(n) * H _ 5(m) + H _ 3(n) * H _ 4(m) + H _ 4(n) * H _ 3(m) + H _ 5(n) * H _ 2(m), where H _ 2=A133476, H _ 3=A139714, H _ 4=A139748, H _ 5=A139761. - _ Vladimir Shevelev _ , Jun 17 2017 •
► [A365736] 1,1,1,1,1,1,2,7,22,57,127,254,478,903,1838,4148,10012,24417,58019,132919,295699,649742,1437719,3247500,7504925 ⋆ G.f. satisfies A(x) = 1 + x * A(x) / (1 - x ^ 5 * A(x) ^ 4). • a(n) = Sum _{ k=0..floor(n / 5) } binomial(n - 4 * k - 1,k) * binomial(n - k + 1,n - 5 * k) / (n - k + 1). •
► [A364522] 1,1,1,1,1,2,7,22,57,127,258,518,1123,2718,7008,18054,44969,108189,255919,609179,1482210,3689155,9294440,23419705,58639835 ⋆ G.f. satisfies A(x) = 1 + x * A(x) + x ^ 5 * A(x) ^ 5. • a(n) = Sum _{ k=0..floor(n / 5) } binomial(n,5 * k) * binomial(5 * k,k) / (4 * k + 1). •
► [A275423] 1,1,1,1,1,2,7,22,57,127,379,1849,9109,37324,128129,507508,3031393,19609773,108440893,500515633,2467616641,17154715726,134519207131,927764339426,5359830269641 ⋆ Number of set partitions of [n] such that five is a multiple of each block size. • a(n) = n! * Sum _{ k=0..floor(n / 5) } (1 / 5!) ^ k * binomial(n - 4 * k,k) / (n - 4 * k)!. • a(n) = a(n - 1) + binomial(n - 1,4) * a(n - 5) for n > 4. (End) •
► [A099131] 1,1,1,1,2,7,22,57,128,264,529,1079,2290,5022,11148,24633,53824,116472,250880,540536,1167937,2531061,5494247,11928731,25880583 ⋆ Quintisection and binomial transform of 1 / (1 - x ^ 4 - x ^ 5). • a(n)=sum { k=0..floor((n + 1) / 2), binomial(n + k, 5k) } ; - _ Paul Barry _ , May 09 2005 •
► [A212384] 1,1,1,1,1,2,7,22,57,128,268,573,1343,3434,9038,23374,58649,144400,355992,892336,2280020,5892301,15253305,39347067,101177783 ⋆ Number of Dyck n - paths all of whose ascents have lengths equal to 1 (mod 4). • a(n) = Sum _{ k=0..n } (binomial(3 * k - 2 * n - 1,n - k) * binomial(n + 1,4 * k - 3 * n)) / (n + 1). - _ Vladimir Kruchinin _ , Mar 05 2016 •
► [A306347] 1,1,1,1,1,2,7,22,57,128,389,1904,9329,38040,132147,542648,3283633,20997824,114657097,536178880,2784500161,19876061312,153326461311,1034551839872,6051063485481 ⋆ Expansion of e.g.f. exp((sin(x) + sinh(x)) / 2). • a(0) = 1; a(n) = Sum _{ k=0..floor((n - 1) / 4) } binomial(n - 1,4 * k) * a(n - 4 * k - 1). - _ Seiichi Manyama _ , Mar 17 2022 •
► [A369444] 1,1,1,1,2,7,22,57,131,298,738,2003,5600,15380,41224,109769,296009,813315,2261647,6305930,17554044,48851034,136350556,382408995,1077164245 ⋆ Expansion of (1 / x) * Series _ Reversion(x / ((1 + x) * (1 + x ^ 4))). • a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 4) } binomial(n + 1,k) * binomial(n + 1,n - 4 * k). •
► [A369845] 1,1,1,2,7,22,58,138,319,750,1810,4427,10828,26349,63862,154603,374521,908140,2203162,5344988,12964858,31443013,76253683,184929945,448506736 ⋆ Number of compositions of 5 * n into parts 3 and 5. • a(n) = Sum _{ k=0..floor(n / 3) } binomial(n + 2 * k,n - 3 * k). • a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 11 * a(n - 3) - 5 * a(n - 4) + a(n - 5). •
► [A365756] 1,1,1,1,2,7,22,58,142,363,1014,2966,8645,24824,71189,206742,609159,1809493,5388804,16073002,48092377,144532884,436168716,1320372837,4006489208 ⋆ G.f. satisfies A(x) = 1 + x * A(x) / (1 - x ^ 3 * A(x) ^ 4). • a(n) = Sum _{ k=0..floor(n / 3) } binomial(n - 2 * k - 1,k) * binomial(n + k + 1,n - 3 * k) / (n + k + 1). •
► [A183156] 1,2,7,22,59,142,319,686,1435,2950,5999,12118,24379,48926,98047,196318,392891,786070,1572463,3145286,6290971,12582382,25165247,50331022,100662619 ⋆ The number T(n) of isometries of all subspaces of the finite metric space { 1,2,...,n } (as a subspace of the reals with the Euclidean metric). • a(n) = 5 * a(n - 1) - 9 * a(n - 2) + 7 * a(n - 3) - 2 * a(n - 4). - _ Eric W. Weisstein _ , Nov 29 2017 • a(n) = 2 * a(n - 1) + n ^ 2 - 1. - _ Kritsada Moomuang _ , Oct 25 2019 •
► [A198888] 1,1,1,2,7,22,61,172,528,1695,5447,17486,56778,187064,622149,2080325,6990670,23621143,80230388,273687898,937072049,3219316096,11095261035,38351414036,132915860364 ⋆ G.f. satisfies: A(x) = (1 + x * A(x)) * (1 + x ^ 3 * A(x) ^ 4). • a(n) = Sum _{ k=0..[n / 3] } C(n + k, k) * C(n + k + 1, n - 3 * k) / (n + 1). •
► [A364539] 1,1,1,2,7,22,62,182,583,1928,6358,21063,70888,241889,831634,2874584,9995579,34966279,122938956,434062141,1538378816,5471697241,19525345791,69880082323,250767909528 ⋆ G.f. satisfies A(x) = 1 + x * A(x) + x ^ 3 * A(x) ^ 5. • a(n) = Sum _{ k=0..floor(n / 3) } binomial(n + 2 * k,5 * k) * binomial(5 * k,k) / (4 * k + 1). •
► [A084264] 1,2,7,22,64,176,464,1184,2944,7168,17152,40448,94208,217088,495616,1122304,2523136,5636096,12517376,27656192,60817408,133169152,290455552,631242752,1367343104 ⋆ Binomial transform of A084263. • a(0)=1, a(1)=2, a(2)=7, a(3)=22, a(n)=6 * a(n - 1) - 12 * a(n - 2) + 8 * a(n - 3). - Harvey P. Dale, Mar 25 2012 • a(n) = 2 ^ (n - 3) * (n ^ 2 + 3 * n + 4) for n > 0. - _ Eric W. Weisstein _ , Sep 30 2017 •
► [A071684] 1,1,2,7,22,66,212,715,2438,8398,29372,104006,371516,1337220,4847208,17678835,64823110,238819350,883629164,3282060210,12233141908,45741281820,171529777432,644952073662,2430973304732 ⋆ Number of plane trees with n edges and having an odd number of leaves. • a(2 * n) = (1 / (4 * n + 2)) * binomial(4 * n, 2 * n); • a(2 * n - 1) = (1 / (4 * n)) * binomial(4 * n - 2, 2 * n - 1) - (- 1) ^ n * (1 / (2 * n)) * binomial(2 * n - 2, n - 1), with n>0. • a(0)=0; a(n) = Sum _{ k = 0..floor(n / 2) } (1 / n) * C(n,2 * k + 1) * C(n,2 * k) for n>0. - _ Paul Barry _ , Jan 25 2007 • a(n) = Sum _{ k=1..n } (1 / n) * C(n,k) * C(n,k - 1) * (1 - (- 1) ^ k) / 2. - _ Paul Barry _ , Dec 16 2008 •
► [A290917] 2,7,22,67,200,588,1708,4913,14018,39725,111922,313752,875702,2434747,6746350,18636343,51340988,141089508,386857888,1058572325,2891193242,7882921697,21458980582,58330331952,158339542250 ⋆ p - INVERT of the positive integers, where p(S) = (1 - S) ^ 2. • a(n) = 6 * a(n - 1) - 11 * a(n - 2) + 6 * a(n - 3) - a(n - 4). • a(n) = (((3 - sqrt(5)) / 2) ^ n * (- 3 + sqrt(5)) * (- 5 + 7 * sqrt(5) - 5 * n) + 2 ^ (- n) * (3 + sqrt(5)) ^ (n + 1) * (5 + 7 * sqrt(5) + 5 * n)) / 50. - _ Colin Barker _ , Aug 24 2017 •
► [A060816] 1,2,7,22,67,202,607,1822,5467,16402,49207,147622,442867,1328602,3985807,11957422,35872267,107616802,322850407,968551222,2905653667,8716961002,26150883007,78452649022,235357947067 ⋆ a(0) = 1; a(n) = (5 * 3 ^ (n - 1) - 1) / 2 for n > 0. • a(n) = 3 * a(n - 1) + 1; with a(0)=1, a(1)=2. - _ Jason Earls _ , Apr 29 2001 • a(n) = 4 * a(n - 1) - 3 * a(n - 2) for n > 2. • a(n + 1) * a(n + 2) = a(n) * a(n + 3) + 20 * 3 ^ n, n > 1. •
► [A291012] 2,7,22,68,208,632,1912,5768,17368,52232,156952,471368,1415128,4247432,12746392,38247368,114758488,344308232,1032990232,3099101768,9297567448,27893226632,83680728472,251044282568,753137042008 ⋆ p - INVERT of (1,1,1,1,1,...), where p(S) = (1 - S ^ 2) * (1 - 2 * S). • a(n) = 5 * a(n - 1) - 6 * a(n - 2) for n >= 4. • a(n) = (16 * 3 ^ n - 3 * 2 ^ n) / 6 for n > 0. - _ Colin Barker _ , Aug 23 2017 •
► [A369314] 1,2,7,22,68,214,691,2240,7396,24702,83469,284928,981814,3410990,11939752,42075308,149180356,531866972,1905872189,6861162880,24805796984,90035940942,327988261992,1198853954688,4395798528850 ⋆ Number of chiral pairs of polyominoes composed of n triangular cells of the hyperbolic regular tiling with Schläfli symbol { 3,oo } . • a(n) = C(2n,2) / (2(n + 1)(n + 2)) - [2 \ (n + 1)] * C(n,(n + 1) / 2) / (2n) - [2 \ n] * C(n,n / 2) / (2n + 4) + [3 \ (n - 1)] * C((2n + 1) / 3,(n - 1) / 3) / (2n + 1). •
► [A292399] 2,7,22,69,212,644,1936,5772,17088,50288,147232,429136,1245888,3604544,10396160,29900992,85784064,245548800,701402624,1999734016,5691409408,16172221440,45885403136,130011401216,367902195712 ⋆ p - INVERT of (1,2,3,5,8,...) (distinct Fibonacci numbers), where p(S) = (1 - S) ^ 2. • a(n) = 4 * a(n - 1) - 8 * a(n - 3) - 4 * a(n - 4) for n >= 5. •
► [A094618] 2,7,22,69,216,671,2066,6313,19180,58035,175110,527357,1586144,4766599,14316154,42981201,129009108,387158363,1161737198,3485735845,10458256072,31376865327,94134790242,282412759289,847255055036 ⋆ a(n) = 3 ^ (n + 1) - 2 ^ (n + 1) + n + 1. • a(n) = 2 * a(n - 1) + 1 - n + 3 ^ n, a(0) = 2. •
► [A291382] 2,7,22,70,222,705,2238,7105,22556,71608,227332,721705,2291178,7273743,23091762,73308814,232731578,738846865,2345597854,7446508273,23640235416,75050038224,238259397096,756395887969,2401310279090 ⋆ p - INVERT of (1,1,0,0,0,0,...), where p(S) = 1 - 2 S - S ^ 2. • a(n) = 2 * a(n - 1) + 3 * a(n - 2) + 2 * a(n - 3) + a(n - 4) for n >= 5. •
► [A030186] 1,2,7,22,71,228,733,2356,7573,24342,78243,251498,808395,2598440,8352217,26846696,86293865,277376074,891575391,2865808382,9211624463,29609106380,95173135221,305916887580,983314691581 ⋆ a(n) = 3 * a(n - 1) + a(n - 2) - a(n - 3) for n >= 3, a(0)=1, a(1)=2, a(2)=7. • a(n) = ((Sum _{ k=0..n - 1 } a(k)) ^ 2 + (Sum _{ k=0..n - 1 } a(k) ^ 2)) / a(n - 1) for n>1 with a(0)=1, a(1)=2 (similar to A088016). - _ Paul D. Hanna _ , Nov 20 2012 •
► [A162770] 2,7,22,72,232,752,2432,7872,25472,82432,266752,863232,2793472,9039872,29253632,94666752,306348032,991363072,3208118272,10381688832,33595850752,108718456832,351820316672,1138514460672,3684310188032 ⋆ a(n) = ((2 + sqrt(5)) * (1 + sqrt(5)) ^ n + (2 - sqrt(5)) * (1 - sqrt(5)) ^ n) / 2. • a(n) = 2 * a(n - 1) + 4 * a(n - 2) for n > 1; a(0) = 2, a(1) = 7. •
► [A116387] 1,2,7,22,72,234,763,2486,8099,26372,85833,279226,907946,2951066,9587981,31140034,101104048,328162170,1064856217,3454513274,11204337056,36332719182,117795920249,381848062066,1237615088203 ⋆ Expansion of 1 / (sqrt(1 - 2 * x - 3 * x ^ 2) * (2 - M(x))), where M(x) is the g.f. of the Motzkin numbers A001006. • a(n) = Sum _{ k=0..n } Sum _{ j=0..n } C(n,j - k) * C(j,n - j). •
► [A322573] 0,1,2,7,22,73,240,793,2618,8647,28558,94321,311520,1028881,3398162,11223367,37068262,122428153,404352720,1335486313,4410811658,14567921287,48114575518,158911647841,524849519040 ⋆ G.f. = g(f(x)), where f(x) = g.f. of Fibonacci sequence A000045 and g(x) = g.f. of Jacobsthal sequence A001045. • a(n) = 3a(n - 1) + 2a(n - 2) - 3a(n - 3) - a(n - 4), a(0)=0, a(1)=1, a(2)=2, a(3)=7. •
► [A114495] 0,1,2,7,22,73,246,844,2936,10334,36736,131709,475714,1729345,6322534,23232616,85757008,317839438,1182341740,4412949358,16521076012,62024023306,233451103612,880764587512,3330234867792 ⋆ Number of returns to the x - axis in all hill - free Dyck paths of semilength n (a Dyck path is said to be hill - free if it has no peaks at level 1). • a(n) = Sum _{ k=1..floor(n / 2) } k ^ 2 * binomial(2 * n - 2 * k, n - 2 * k) / (n - k). •
► [A137398] 0,1,2,7,22,74,252,875,3078,10950,39316,142278,518364,1899668,6997688,25894579,96211398,358779118,1342323364,5037146738,18953759988,71497359884,270321915848,1024217489278,3888253473180 ⋆ Let S be a strictly monotonic sequence of length 2n and let p and q be subsequences of S each of length n such that the least element belongs to p and every element of S belongs to either p or q. The number of ways to select p such that for any index i the exchange of p(i) and q(i) makes at least one of p and q non - monotonic, is given by a(n). • a(1)=0, a(2)=1, a(3)=2, a(n) = 2 * a(n - 1) + 2 * a(n - 2) + Sum _{ k=1..n - 3 } C(k) * a(n - k - 1), where C(k) is the k - th Catalan number. •
► [A007141] 1,2,7,22,75,250,886,3150,11525,42698,160636,610694,2345584,9081850,35422281,139022744,548671671,2176051206,8668363781,34667284600,139140831224,560271494924,2262709876353,9163000968906,37198940600718 ⋆ E - trees with at most 2 colors. • a(n) = E(2, n) where E(c, 1) = 1, E(c, n) = (1 / (n - 1)) * Sum _{ i=1..n - 1 } ((c + 1) * i - n + 1) * S(c, i) * E(c, n - i) and S(c, 0) = 1 and S(c, n) = Sum _{ d | n } E(c, d) [From Gati, Harary, Robinson]. - _ Sean A. Irvine _ , Oct 29 2017 •
► [A119975] 1,2,7,22,77,266,947,3382,12217,44338,161855,593110,2181445,8046650,29759147,110303798,409655281,1524056546,5678827511,21189499030,79164147389,296094973418,1108623865123,4154794910518,15584520425641 ⋆ E.g.f. exp(x) * (Bessel _ I(0,2 * sqrt(2)x) + Bessel _ I(1,2 * sqrt(2)x) / sqrt(2)). • a(n) = Sum _{ k=0..n } C(n,k) * C(k,floor(k / 2))2 ^ floor(k / 2); • a(n) = Sum _{ k =0..n } Sum _{ j=0..n } C(n,j - k) * C(k,j - k) * 2 ^ (j - k). • a(n) = (1 / pi) * int(x ^ n * (x + 3) / (4 * sqrt(- x ^ 2 + 2x + 7)), x, 1 - 2 * sqrt(2), 1 + 2 * sqrt(2)). • a(n) = (1 / pi) * int((x + 1) ^ n * (x + 4) / (4 * sqrt(8 - x ^ 2)),x, - 2 * sqrt(2),2 * sqrt(2)). •
► [A106188] 1,2,7,22,77,274,1001,3706,13871,52326,198627,757758,2902783,11158358,43019383,166275878,644099773,2499882098,9719235073,37845145898,14756

5763893,576103020338,2251664727613,8809533747938,34499268410713 ⋆ Expansion of 1 / ((1 - x ^ 2) * sqrt(1 - 4 * x)). ● a(n)=sum { k=0..floor(n / 2), binomial(2(n - 2k), n - 2k) } . ●

► [A110137] 1,2,7,22,79,286,1071,4070,15721,61506,243703,977366,3968169,16313842,67942539,286769518,1227194947,5326324598,23451408843,104753097326,474663076539,2181355670806,10163422480887,47988508807190 ⋆ Diagonal sums of A110135 when read as a number triangle. ● a(n)=sum { j=0..floor((n - 2k) / 2), C(n - 2k, j)C(2(n - 2k - j), n - 2k)k ^ j } ●

► [A360861] 1,2,7,22,81,281,1058,3830,14605,54127,208110,782761,3027038,1150 1478,44668692,170974710,666220005,2564271875,10018268150,38728479647,1516 31858378,588229029258,2307174835212,8975958379817,35258881445606 ⋆ a(n) = Sum _{ k=0..n } binomial(n, ceiling(k / 2)) * binomial(n, floor(k / 2)). ● a(n) = (1 / 2) * (binomial(2 * n + 1,n) + (binomial(n,floor(n / 2))) ^ 2). - _ Tani Akinari _ , Jul 12 2023 ●

► [A011757] 2,7,23,53,97,151,227,311,419,541,661,827,1009,1193,1427,1619,1879,2143,2437,2741,3083,3461,3803,4211,4637 ⋆ a(n) = prime(n ^ 2). ● a(n) = n ^ 2 log ^ 2 n + O(n ^ 2 log n log log n). - _ Charles R Greathouse IV _ , Mar 11 2014 ●

► [A041159] 1,2,7,23,53,977,2007,6998,23001,53000,977001,2007002,6998007,23001023,53000053,977001977,2007004007,6998013998,23001046001,53000106000,97 7002954001,2007006014002,6998020996007,23001069002023,53000159000053 ⋆ Denominators of continued fraction convergents to sqrt(89). ● a(n) = 1000 * a(n - 5) + a(n - 10). - _ Vincenzo Librandi _ , Dec 12 2013 ●

► [A281584] 2,7,23,58,182,457,1433,3598,11282,28327,88823,223018,699302,1755 817,5505593,13823518,43345442,108832327,341257943,856835098,2686718102,674 5848457,21152486873,53109952558,166533176882 ⋆ Solutions x to the negative Pell equation x ^ 2 - 15 * y ^ 2 = - 11 with x, y > 0. ● a(n) = 8 * a(n - 2) - a(n - 4) for n>4. ● a(n) = (11 * a(n - 1) - 4 * a(n - 2)) / 3 if n is odd, a(n) = (11 * a(n - 1) - 3 * a(n - 2)) / 4 if n is even (see also _ R. J. Mathar _ in A237262). ● a(n) * a(n - 3) - a(n - 1) * a(n - 2) = - 15 * (7 - (- 1) ^ n) / 2, with n>3. Example: for n=8, a(8) * a(5) - a(7) * a(6) = 3598 * 182 - 1433 * 457 = - 15 * 3. (End) ●

► [A048496] 1,2,7,23,67,179,451,1091,2563,5891,13315,29699,65539,143363,31129 9,671747,1441795,3080195,6553603,13893635,29360131,61865987,130023427,2726 29763,570425347 ⋆ a(n) = 2 ^ (n - 1) * (3 * n - 4) + 3. ● a(n) = 5 * a(n - 1) - 8 * a(n - 2) + 4 * a(n - 3). ●

► [A369840] 1,1,2,7,23,68,194,555,1601,4633,13404,38752,112004,323728,93573 7,2704817,7818464,22599701,65325542,188826693,545813094,1577700612,4560424 135,13182138184,38103641048 ⋆ Number of compositions of 5 * n into parts 2 and 5. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n + 3 * k,n - 2 * k). ● a(n) = 5 * a(n - 1) - 9 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ●

► [A037488] 2,7,23,70,212,637,1913,5740,17222,51667,155003,465010,1395032,41 85097,12555293,37665880,112997642,338992927,1016978783,3050936350,9152809 052,27458427157,82375281473,247125844420,741377533262 ⋆ Base 3 digits are, in order, the first n terms of the periodic sequence with initial period 2,1. ● a(n) = 3 * a(n - 1) + a(n - 2) - 3 * a(n - 3). ● a(n) = (7 * 3 ^ n - (- 1) ^ n - 6) / 8. - _ Bruno Berselli _ , Jan 20 2011 ●

► [A192906] 1,1,2,7,23,72,225,705,2210,6927,21711,68048,213281,668481,209520 2,6566935,20582567,64511384,202196289,633738369,1986309058,6225634847,1951 2839199,61158565024 ⋆ Constant term in the reduction by (x ^ 2 - > x + 1) of the polynomial p(n,x) defined below at Comments. ● a(n) = 3 * a(n - 1) + a(n - 3) + a(n - 4). ●

► [A365692] 1,1,1,2,7,23,72,238,831,2959,10645,38824,143492,535700,2016020,76 41574,29152015,111841263,431209723,1669945778,6493144143,25338440143,9920 4579648,389570145288,1534026813892 ⋆ G.f. satisfies A(x) = 1 + x * A(x) / (1 - x ^ 2 * A(x) ^ 4). ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n - k - 1,k) * binomial(n + 2 * k + 1,n - 2 * k) / (n + 2 * k + 1). ●

► [A064686] 0,2,7,23,73,227,697,2123,6433,19427,58537,176123,529393,1590227,4 774777,14332523,43013953,129074627,387289417,1161999323,3486260113,104593 04627,31378962457,94138984523,282421147873 ⋆ a(n) = number of n - digit base - 3 biquams. ● a(1) = 0, a(n) = 3 ^ (n - 1) - 2 ^ (n - 2) for n>=2. - _ Alex Ratushnyak _ , Jul 02 2012 ● a(n) = 5 * a(n - 1) - 6 * a(n - 2) for n>3. G.f.: - x ^ 2 * (3 * x - 2) / ((2 * x - 1) * (3 * x - 1)). - _ Colin Barker _ , May 27 2013 ●

► [A083313] 1,2,7,23,73,227,697,2123,6433,19427,58537,176123,529393,1590227,4 774777,14332523,43013953,129074627,387289417,1161999323,3486260113,104593 04627,31378962457,94138984523,282421147873 ⋆ a(0)=1; a(n) = 3 ^ n - 2 ^ (n - 1) for n >= 1. ● a(n) = (2 * 3 ^ n - (2 ^ n - 0 ^ n)) / 2. ● a(0) = 1, a(n) = 3 ^ n - 2 ^ (n - 1) for n >= 1. ● a(n) mod 100 = 23 for n = 4 * k - 1, k >= 1. ● a(n) mod 100 = 27 for n = 4 * k + 1, k >= 1. ●

► [A291015] 2,7,23,75,244,793,2576,8366,27167,88215,286439,930072,3019941,98 05712,31838986,103380599,335674791,1089929347,3538978588,11490991649,3731 1016064,121148109014,393365440335,1277249563655,4147203285279 ⋆ p - INVERT of (1,1,1,1,1,...), where p(S) = (1 - S ^ 3) ^ 2. ● a(n) = 5 * a(n - 1) - 6 * a(n - 2) + a(n - 3) n >= 4. ●

► [A042575] 1,1,2,7,23,76,99,175,9899,10074,19973,69993,229952,759849,98980 1,1749650,98970201,100719851,199690052,699790007,2299060073,7596970226,989 6030299,17493000525,989504059699 ⋆ Denominators of continued fraction convergents to sqrt(816). ● a(n) = 9998 * a(n - 8) - a(n - 16) for n>15. - _ Vincenzo Librandi _ , Jan 25 2014 ●

► [A052924] 1,2,7,23,76,251,829,2738,9043,29867,98644,325799,1076041,355392 2,11737807,38767343,128039836,422886851,1396700389,4612988018,1523566444 3,50319981347,166195608484,548906806799,1812916028881 ⋆ Expansion of g.f.: (1 - x) / (1 - 3 * x - x ^ 2). ● a(n) = 3 * a(n - 1) + a(n - 2). ● a(n) = Sum _{ alpha=RootOf(- 1 + 3 * x + x ^ 2) } (1 / 13) * (1 + 5 * alpha) * alpha ^ (- 1 - n). ●

► [A091702] 1,2,7,23,78,264,895,3034,10286,34872,118225,400813,1358859,46068 81,15618510,52950761,179516682,608607667,2063336333,6995240208,2371566127 4,80402183905,272584057514,924129977596,3133038018732 ⋆ Column 0 of triangle A091700. ● a(n) = 3 * a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4), for n>3. ● a(n) = M ^ n [1, 1] where M = [2, 1, 1, 1 ; 1, 1, 1, 0 ; 1, 1, 0, 0 ; 1, 0, 0, 0] . (End) ●

► [A130567] 2,7,23,79,287,1087,4223,16639,66047,263167,1050623,4198399,16785 407,67125247,268468223,1073807359,4295098367,17180131327,68720001023,2748 78955519,1099513724927,4398050705407,17592194433023,70368760954879 ⋆ Expansion of x * (2 - 7 * x + 2 * x ^ 2) / ((1 - x) * (1 - 4 * x) * (1 - 2 * x)). ● a(n) = 2 ^ (2 * n - 1) + 2 * a(n - 1) + 1. ● a(n) = - 1 + 2 * 2 ^ n + 4 ^ n, with n>=0. - _ Paolo P. Lava _ , Jul 30 2008 ●

► [A176287] 1,2,7,23,81,291,1066,3955,14818,55937,212428,810664,3106167,1194 2261,46047897,178000950,689580319,2676598447,10406929687,40525045518,1580 22343991,616950024334,2411395005316,9434753907065,36948692202031 ⋆ Diagonal sums of number triangle A092392. ● a(n) = Sum _{ k=0..floor(n / 2) } C(2n - 3k,n - k). ●

► [A358655] 1,2,7,24,61,111,183,281,409,571,771,1013,1301,1639,2031,2481,299 3,3571,4219,4941,5741,6623,7591,8649,9801 ⋆ a(n) is the number of distinct scalar products which can be formed by pairs of signed permutations (V, W) of [n]. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n > 7. (End) ●

► [A082047] 1,2,7,24,69,170,371,736,1353,2338,3839,6040,9165,13482,19307,2700 8,37009,49794,65911,85976,110677,140778,177123,220640,272345 ⋆ Diagonal sums of number array A082046. ● a(n) = (n ^ 5 + 15 * n ^ 3 + 14 * n + 30) / 30 = (n + 1) * (n ^ 4 - n ^ 3 + 16 * n ^ 2 - 16 * n + 30) / 30. ●

► [A024024] 1,2,7,24,77,238,723,2180,6553,19674,59039,177136,531429,1594310,4 782955,14348892,43046705,129140146,387420471,1162261448,3486784381,104603 53182,31381059587,94143178804,282429536457 ⋆ a(n) = 3 ^ n - n. ● a(n) = 5 * a(n - 1) - 7 * a(n - 2) + 3 * a(n - 3). - _ Vincenzo Librandi _ , Mar 06 2013 ●

► [A038765] 1,2,7,24,81,270,891,2916,9477,30618,98415,314928,1003833,318864 6,10097379,31886460,100442349,315675954,990074583,3099363912,9685512225,30 218798142,94143178827,292889889684,910050728661 ⋆ Next - to - last diagonal of A024462. ● a(n) = 6 * a(n - 1) - 9 * a(n - 2) for n>2. a(n) = 3 ^ (n - 2) * (n + 5) for n>0. [_ Colin Barker _ , Jun 25 2012] ●

► [A099463] 0,1,2,7,24,81,274,927,3136,10609,35890,121415,410744,1389537,4700 770,15902591,53798080,181997601,615693474,2082876103,7046319384,238375277 29,80641778674,272809183135,922906855808 ⋆ Bisection of tribonacci numbers. ● a(n) = Sum _{ k=0..n } binomial(n, k) * Sum _{ j=0..floor((k - 1) / 2) } binomial(j, k - 2 * j - 1) * 4 ^ j. ● a(n) = 3 * a(n - 1) + a(n - 2) + a(n - 3). ● a(n) = Sum _{ k=0..n } Sum _{ j=0..n } C(2 * k, n - k - j) * C(n - k, j) * 2 ^ (n - k - j). (End) ● a(n) / a(n - 1) tends to 3.38297576..., the square of the tribonacci constant A058265. - _ Gary W. Adamson _ , Feb 28 2006 ●

► [A003480] 1,2,7,24,82,280,956,3264,11144,38048,129904,443520,1514272,51700 48,17651648,60266496,205762688,702517760,2398545664,8189147136,2795949721 6,95459694592,325919783936,1112759746560,3799199418368 ⋆ a(n) = 4 * a(n - 1) - 2 * a(n - 2) (n >= 3). ● a(n) = (n + 1) * a(0) + n * a(1) + ... + 3 * a(n - 2) + 2 * a(n - 1). - _ Amarnath Murthy _ , Aug 17 2002 ● a(n + 1) * a(n + 1) - a(n + 2) * a(n) = 2 ^ n, n > 0. - D. G. Rogers, Jul 12 2004 ● a(n) = Sum((1 + p _ 1)(1 + p _ 2)...)(1 + p _ m)), summation being over all compositions (p _ 1, p _ 2, ..., p _ m) of n. Example: a(3)=24; indeed, the compositions of 3 are (1,1,1), (1,2),(2,1), (3) and we have 2 * 2 * 2 + 2 * 3 + 3 * 2 + 4 = 24. - _ Emeric Deutsch _ , Oct 17 2010 ● a(n) = Sum _{ k>=0 } binomial(n + 2 * k - 1, n) / 2 ^ (k + 1). - _ Vaclav Kotesovec _ , Dec 31 2013 ●

► [A370477] 1,2,7,24,83,290,1023,3640,13052,47124,171190,625328,2295561,8464 690,31339455,116458200,434217000,1623971580,6090823890,22903571280,863324 53350,326145976884,1234662753126,4682968975664,17794062340008 ⋆ G.f. satisfies A(x) = (1 + x * (A(x) ^ (1 / 2) / (1 - x)) ^ (3 / 2)) ^ 2. ● a(n) = 2 * Sum _{ k=0..n } binomial(3 * k / 2 + 2,k) * binomial(n + k / 2 - 1,n - k) / (3 * k / 2 + 2). ●

► [A088854] 2,7,24,83,292,1046,3808,14051,52412,197202,747120,2846318,108929 36,41844172,161247104,623034403,2412871916,9363311482,36399254864,1417217 74138,552572485496,2157194452852,8431104269504,32986010380558 ⋆ a(n) = (2 ^ (n - 1)) * (Integral _{ x=0..1 } (1 + x ^ 2) ^ n dx) / (Integral _{ x=0..1 } (1 - x ^ 2) ^ n dx). ● a(n) = 2 ^ (n - 1) + Sum _{ k=1..n } 2 ^ (n - k) * C(2 * k - 1,k). - _ Vaclav Kotesovec _ , Oct 28 2012 ●

► [A000777] 1,2,7,24,83,293,1055,3860,14299,53481,201551,764217,2912167,1114 3499,42791039,164812364,636438059,2463251009,9552773999,37112526989,14441 0649239,562724141459,2195581527359,8576490341249,33537507830423 ⋆ a(n) = (n + 2) * Catalan(n) - 1. ● a(n) = (binomial(2 * n,n) / (n + 1)) * (n + 2) - 1. - _ Zerinvary Lajos _ , Jun 25 2006 ●

► [A369266] 1,1,2,7,24,84,313,1209,4769,19166,78253,323570,1352122,5701467,2 4229122,103663575,446163435,1930390329,8391341664,36630504952,16050948461 6,705750073063,3112865367660,13769327908980,61066953746400 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 - x) / (1 + x ^ 3) ^ 2). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 3) } binomial(2 * n + 2,k) * binomial(2 * n - 3 * k, n - 3 * k). ●

► [A369296] 1,1,2,7,24,84,315,1225,4859,19646,80739,336050,1413587,6000777,2 5674462,110598855,479286932,2088036939,9139604421,40174594432,17726794291 8,784889441217,3486198469890,15529021825140,69355660644738 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 - x) * (1 - x ^ 3) ^ 2). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 3) } binomial(2 * n + k + 1,k) * binomial(2 * n - 3 * k,n - 3 * k). ●

► [A052986] 1,2,7,24,85,302,1075,3828,13633,48554,172927,615888,2193517,7812 326,27824011,99096684,352938073,1257007586,4476898903,15944711880,5678793 3445,202253224094,720335539171,2565513065700,9137210275441 ⋆ Expansion of (1 - 2 * x) / ((x - 1) * (2 * x ^ 2 + 3 * x - 1)). ● a(n) = Sum(- 1 / 136 * (- 13 - 27 * r + 6 * r ^ 2) * r ^ (- 1 - n) where r=RootOf(1 - 4 *_ Z +_ Z ^ 2 + 2 *_ Z ^ 3)). ● a(n) = (1 / 4 + (2 ^ (- 3 - n) * ((3 - sqrt(17)) ^ n * (- 5 + 3 * sqrt(17)) + (3 + sqrt(17)) ^ n * (5 + 3 * sqrt(17)))) / sqrt(17)). - _ Colin Barker _ , Sep 02 2016 ●

► [A141753] 1,1,2,7,24,86,313,1157,4325,16303,61856,235917,903620,3473381,133 91280,51761781,200523644,778342906,3026400508,11785538461,45959004812,179 444813270,701422450293,2744562302533,10749124666643 ⋆ Main diagonal of A139755, the table of q - derangement numbers of type A. ● a(n) = [q ^ n] { ([n + 1] _ q)! * Sum _{ m=0..n + 1 } (- 1) ^ m * q ^ (m(m - 1) / 2) / ([m] _ q)! }

; here, the q - factorial of n is denoted by ([n] _ q)! = Product _{ j=1..n } (1 - q ^ j) / (1 - q). ●

► [A014300] 1,2,7,24,86,314,1163,4352,16414,62292,237590,909960,3497248,13480826,52097267,201780224,783051638,3044061116,11851853042,46208337584,180383564228,704961896036,2757926215742,10799653176704,42326626862636 ★ Number of nodes of odd outdegree in all ordered rooted (planar) trees with n edges. ● a(n) = Sum _{ k=0..n } (- 1) ^ (n - k) * binomial(n + k - 1, k - 1). - _ Vladeta Jovovic _ , Aug 28 2002 ● a(n) = Sum _{ j=0..floor((n - 1) / 2) } binomial(2 * n - 2 * j - 2, n - 1). ● a(n) = (- 1) ^ n * Sum _{ i=0..n } Sum _{ j=n..2 * n } (- 1) ^ (i + j) * binomial(j, i). - _ Benoit Cloitre _ , Jun 18 2005 ● a(n) = Sum _{ k=0..n } C(2 * k,n) [offset 0]. - _ Paul Barry _ , May 13 2006 ● a(n) = Sum _{ k=0..n } (- 1) ^ (n - k) * C(n + k - 1,k - 1). - _ Paul Barry _ , Jul 18 2006 ● a(n) = Sum _{ k=0..n } C(2 * n - k,n - k) * (1 + (- 1) ^ k) / 2. ●

► [A131824] 1,1,2,7,24,86,316,1177,4424,16744,63724,243618,934870,3598960,13892776,53756263,208434024,809658440,3150218032,12274694280,47890456576,187068828772,731511810152,2863308366462,11217762520246 ★ Main diagonal of triangle A131823: a(n) = A131823(n,n) for n>=0. ● a(n) = [x ^ n] Product _{ i =0..n - 1 } (1 + x ^ (2 ^ i)) ^ (n - i) for n>=0. ●

► [A183876] 1,1,2,7,24,86,328,1289,5180,21232,88384,372582,1587442,6825092,29573380,129014039,566183860,2497841196,11071594936,49281430216,220193658876,987234942328,4440142628200,20027079949202,90569211556534 ★ G.f. satisfies: A(x) = Sum _{ n>=0 } x ^ n * [Sum _{ k=0..n } C(n,k) ^ 2 * x ^ k * A(x) ^ (2k)]. ● a(n) = Sum _{ k=0..[n / 2] } C(n + k, 2k) * C(n + 1, n - 2k) / (n + 1). ●

► [A052705] 0,0,1,2,7,24,89,342,1355,5492,22669,94962,402703,1725424,7458065,32482798,142414867,628037612,2783922197,12397342698,55436525591,248819728360,1120584933401,5062273384422,22933667676187 ★ Expansion of 2 * x ^ 2 / (1 - 2 * x - 2 * x ^ 2 + sqrt(1 - 4 * x - 4 * x ^ 2)). ● a(n) = Sum _{ j=1..floor(n / 2) } C(2 * n - 2 * j,n) * C(n,j - 1) / (n - j). - _ Vladimir Kruchinin _ , Jan 16 2015 ● a(n) = C(2 * n - 2,n) * 3F2((2 - n) / 2,(3 - n) / 2, - n;3 / 2 - n,2 - n; - 1) / (n - 1), n>1. - _ Benedict W. J. Irwin _ , Sep 13 2016 ●

► [A137952] 1,1,2,7,24,95,386,1641,7150,31844,144216,662228,3076044,14427582,68235078,325049475,1558212804,7511319253,36387218312,177050945886,864912345340,4240388439744,20857232340528,102896737106415 ★ G.f. satisfies A(x) = 1 + x * (1 + x * A(x) ^ 3) ^ 2. ● a(n) = Sum _{ k=0..n - 1 } C(2 * (n - k),k) / (n - k) * C(3 * k,n - k - 1) for n>0 with a(0)=1. - _ Paul D. Hanna _ , Jun 16 2009 ●

► [A005754] 1,1,2,7,24,95,388,1650,7183,31965,144502,662241,3068942,14358678,67729973,321759461,1538076291,7392775328,35707198905,173221206284,843634142771,4123376617009,20218897206392,99436453714990,490355165178472 ★ Number of planted identity matched trees with n nodes. ● a(n + 1) is Weigh transform of A005753. - _ Christian G. Bower _ , Dec 15 1999 ●

► [A102286] 1,2,7,24,96,418,1989,10216,56275,330424,2057672,13532060,93633021,679473694,5156626991,40824399712,336406367196,2879570703510,25557841113625,234822774979908,2230107923204443,21861817965483016,220940261740238140,2299258336094622008 ★ Total number of odd blocks in all partitions of n - set. ● a(n) = Sum _{ k=0..floor((n - 1) / 2) } binomial(n,2 * k + 1) * Bell(n - 2 * k - 1). - _ Ilya Gutkovskiy _ , Apr 10 2022 ●

► [A330254] 1,2,7,24,121,840,5041,40320,423361,3659040,39916801,558835200,6227020801,87195588480,1536517382401,20922789888000,355687428096001,7469453633241600,121645100408832001,2453176191578112000,59616236292028416001 ★ Expansion of e.g.f. Sum _{ k>=1 } sinh(x ^ k). ● a(n) = n! * Sum _{ d|n, d odd } 1 / d!. ●

► [A330506] 1,2,7,24,129,840,5265,40320,434385,3900960,40809825,558835200,6635076825,91070179200,1641957141825,20922789888000,359796258446625,7663952552256000,122832552380162625,2615369658789888000,62315614994643635625 ★ Expansion of e.g.f. Sum _{ k>=1 } arcsin(x ^ k). ● a(n) = n! * Sum _{ d|n, d odd } ((d - 2)!!) ^ 2 / d!. ●

► [A330051] 0,0,2,7,25,72,208,564,1530,4059,10769,28336,74560,195576,513010,1344063,3521385,9221688,24149456,63230860,165558250,433454835,1134845857,2971111392,7778592000 ★ a(n) = 1 + F(2 * n + 1) - (F(n + 4) - (- 1) ^ n * F(n - 2)) / 2 where F=A000045. ● a(n) = 1 + F(2 * n + 1) - F(n + 2) - (F(- n + 2) + F(n + 1)) / 2. ●

► [A145130] 2,7,25,81,236,622,1498,3334,6931,13586,25312,45124,77403,128351,206551,323647,495160,741457,1088891,1571131,2230702,3120756,4307096,5870476,7909201 ★ 2 + (89040 + (71868 + (29932 + (8449 + (1960 + (322 + (28 + n) * n) * n) * n) * n) * n) * n) * n / 40320. ● a(0)=2, a(1)=7, a(2)=25, a(3)=81, a(4)=236, a(5)=622, a(6)=1498, a(7)=3334, a(8)=6931, a(n)=9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9). - _ Harvey P. Dale _ , Dec 25 2011 ●

► [A048506] 1,2,7,25,81,241,673,1793,4609,11521,28161,67585,159745,372737,860161,1966081,4456449,10027009,22413313,49807361,110100481,242221057,530579457,1157627905,2516582401 ★ a(n) = T(0,n), array T given by A048505. ● a(n) = 7 * a(n - 1) - 18 * a(n - 2) + 20 * a(n - 3) - 8 * a(n - 4). - _ Colin Barker _ , Nov 26 2014 ●

► [A169651] 1,1,2,7,25,85,277,877,2725,8365,25477,77197,233125,702445,2113477,6352717,19082725,57297325,171990277,516167437,1548895525,4647473005,13943991877,41835121357,125511655525 ★ a(0)=a(1)=1, a(2)=2; thereafter a(n) = 3 * a(n - 1) + 3 * 2 ^ (n - 3) - 2. ● a(n) = 4 * 3 ^ (n - 2) - 3 * 2 ^ (n - 2) + 1, n>1. - _ R. J. Mathar _ , Apr 20 2010 ● a(n) = 6 * a(n - 1) - 11 * a(n - 2) + 6 * a(n - 3); a(0)=1, a(1)=1, a(2)=2, a(3)=7, a(4)=25. - _ Harvey P. Dale _ , Nov 23 2011 ●

► [A131430] 1,2,7,25,88,311,1114,4050,14917,55528,208459,787920,2994655,11433998,43824437,168520201,649840740,2512011359,9731179138,37768570827,146833956266,571711568905,2229035221824,8701426599353,34005503702176 ★ Row sums of triangle A131429. ● a(n) = binomial(2 * n, n) - (n + 1) + Sum _{ k=0..n } binomial(2 * k, k) / (k + 1). - _ Andrew Howroyd _ , Aug 28 2018 ●

► [A007484] 2,7,25,89,317,1129,4021,14321,51005,181657,646981,2304257,8206733,29228713,104099605,370756241,1320467933,4702916281,16749684709,59654886689,212464029485,756701861833,2695033644469,9598504657073,34185581260157 ★ a(n) = 3 * a(n - 1) + 2 * a(n - 2), with a(0)=2, a(1)=7. ● a(n) = (3 / 2 + sqrt(17) / 2) ^ n - (4 / 17) * sqrt(17) * (3 / 2 - sqrt(17) / 2) ^ n + (4 / 17) * (3 / 2 + sqrt(17) / 2) ^ n * sqrt(17) + (3 / 2 - sqrt(17) / 2) ^ n, with n >= 0. - _ Paolo P. Lava _ , Jun 11 2008 ● a(n) = nearest integer to (and converges rapidly to) (1 + 4 / sqrt(17)) * ((3 + sqrt(17)) / 2) ^ n. - _ N. J. A. Sloane _ , Jul 30 2016 ● a(n) = (i * sqrt(2)) ^ (n - 1) * (i * 2 * sqrt(2) * ChebyshevU(n, - 3 * i / (2 * sqrt(2))) + ChebyshevU(n - 1, - 3 * i / (2 * sqrt(2)))). ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n - k, k) * ((7 * n - 8 * k) / (n - k)) * 2 ^ k * 3 ^ (n - 2 * k - 1) with a(0) = 2. (End) ●

► [A052936] 1,2,7,25,90,325,1175,4250,15375,55625,201250,728125,2634375,9531250,34484375,124765625,451406250,1633203125,5908984375,21378906250,77349609375,279853515625,1012519531250,3663330078125,13254052734375 ★ Expansion of (1 - x) * (1 - 2 * x) / (1 - 5 * x + 5 * x ^ 2). ● a(0)=1, a(1)=2, a(2)=7, a(n) = 5 * a(n - 1) - 5 * a(n - 2). - _ Harvey P. Dale _ , Apr 20 2012 ● a(n) = Sum _{ alpha=RootOf(1 - 5 * z + 5 * z ^ 2) } (1 / 5) * (1 - alpha) * alpha ^ (- 1 - n). ● a(n) = Sum _{ k=0..n } C(n - 1, k) * Fib(2 * n - 2 * k + 1). - _ Paul Barry _ , Jun 07 2005 ● a(2 * n) = 5 ^ (n - 1) * Lucas(2 * n + 2) for n>=1 with a(2 * 0)=1 and a(2 * n + 1) = 5 ^ n * Fibonacci(2 * n + 3). - _ G. C. Greubel _ , Oct 18 2019 ●

► [A097613] 1,2,7,25,91,336,1254,4719,17875,68068,260338,999362,3848222,14858000,57500460,222981435,866262915,3370764540,13135064250,51250632510,200205672810,782920544640,3064665881940,12007086477750,47081501377326 ★ a(n) = binomial(2n - 3,n - 1) + binomial(2n - 2,n - 2). ● a(n) = ((2 - 3 * n) / (4 - 8 * n)) * binomial(2 * n,n) for n >= 2. - _ Peter Luschny _ , Sep 06 2014 ●

► [A074605] 2,7,25,91,337,1267,4825,18571,72097,281827,1107625,4371451,17308657,68703187,273218425,1088090731,4338014017,17309009347,69106897225,276040168411,1102998412177,4408506864307,17623567104025 ★ a(n) = 3 ^ n + 4 ^ n. ● a(n) = 3 * a(n - 1) + 4 ^ (n - 1). - _ Bruno Berselli _ , Jul 20 2010 ● a(n) = 7 * a(n - 1) - 12 * a(n - 2) with a(0)=2, a(1)=7. - _ Vincenzo Librandi _ , Jul 19 2010 ●

► [A108081] 1,2,7,25,92,344,1300,4950,18955,72905,281403,1089343,4227273,16438345,64037453,249855417,976205516,3818779616,14954876080,58623077586,230007291334,903164858092,3549071519462,13955918890440,54912972103772 ★ a(n) = Sum _{ i=0..n } binomial(2 * n - i, n + i). ● a(n) = Sum _{ k=0..n } C(n + k - 1,k) * F(n - k + 1). - _ Paul Barry _ , Sep 28 2007 ●

► [A199247] 1,1,2,7,25,92,359,1453,6018,25411,109032,473942,2082550,9235675,41284297,185819487,841433773,3830604764,17521832924,80490034307,371169646860,1717567062240,7973153760616,37119622029816,173272771061677 ★ G.f. satisfies: A(x) = (1 + x * A(x)) * (1 + x ^ 2 * A(x) ^ 3 + x ^ 3 * A(x) ^ 4). ● a(n) = Sum _{ k=0..[n / 2] } C(n + k, k) * C(n + 2 * k + 1, n - 2 * k) / (n + 1). ●

► [A242728] 1,2,7,25,93,346,1291,4817,17977,67090,250383,934441,3487381,13015082,48572947,181276705,676533873,2524858786,9422901271,35166746297,131244083917,489809589370,1827994273563,6822167504881,25460675745961 ★ Sequence a(n) with all (x,y)=(a(2m),a(2m +- 1)) satisfying y|x ^ 2 + 1 and x|y ^ 2 + y + 1. ● a(n + 1) = 4 * a(n) - a(n - 1) - p _ n (n>0), where p _ n=0 if n is odd and p _ n = 1 if n is even. ● a(n) = 4 * a(n - 1) - 4 * a(n - 3) + a(n - 4). - _ Colin Barker _ , May 21 2014 ●

► [A116396] 1,2,7,25,93,353,1358,5273,20614,81003,319584,1264924,5019743,19963699,79541181,317406302,1268283199,5073605801,20316709251,81427911966,326612013623,1310968893954,5265285993860,21158914176719,85071253608611 ★ Expansion of 2 / ((2 + x) * sqrt(1 - 4 * x) - x). ● a(n)=sum { k=0..floor(n / 2), (4 ^ (n - k) / 2 ^ k) * sum { j=0..k, C(k,j)C(n - k + (j - 1) / 2,n - k)(- 1) ^ (k - j) }} . ●

► [A358498] 1,1,2,7,25,122,727,5065,40442,363607,3633865,39957242,479365207,6230654665,87218248442,1308153733207,20929020542665,355774646344442,6403681859461207,121666029429374665,2433257782822984442,51097345853568901207,1124122393807037054665 ★ a(n) = Sum _{ k=0..floor(n / 3) } (n - 3 * k)!. ● a(n) = n * a(n - 1) + a(n - 3) - n * a(n - 4) for n > 3. ●

► [A300451] 1,2,7,26,88,272,784,2144,5632,14336,35584,86528,206848,487424,1134592,2613248,5963776,13500416,30343168,67764224,150470656,332398592,730857472,1600126976,3489660928 ★ a(n) = (3 * n ^ 2 - 3 * n + 8) * 2 ^ (n - 3). ● a(n) = ((3 / 4) * binomial(n, 2) + 1) * 2 ^ n. ● a(n) = 2 * a(n - 1) + 3 * (n - 1) * 2 ^ (n - 2), with a(0) = 1. ● a(n) = 6 * a(n - 1) - 12 * a(n - 2) + 8 * a(n - 3), for n >= 3, with a(0) = 1, a(1) = 2 and a(2) = 7. ●

► [A134063] 1,1,2,7,26,91,302,967,3026,9331,28502,86527,261626,788971,2375102,7141687,21457826,64439011,193448102,580606447,1742343626,5228079451,15686335502,47063200807,141197991026 ★ a(n) = (1 / 2) * (3 ^ n - 2 ^ (n + 1) + 3). ● a(n) = 3 * StirlingS2(n,3) + StirlingS2(n,2) + 1. ● a(n) = StirlingS2(n + 1,3) + 1. - _ Ross La Haye _ , Jan 21 2008 ● a(n) = 6 a(n - 1) - 11 a(n - 2) + 6 a(n - 3) (n >= 3). Also a(n) = 4 a(n - 1) - 3 a(n - 2) + 2 ^{ n - 2 } (n >= 3). - Tian - Xiao He (the(AT)iwu.edu), Jul 02 2009 ●

► [A055988] 1,2,7,26,95,345,1252,4544,16493,59864,217286,788674,2862617,10390321,37713313,136886433,496850954,1803399103,6545722210,23758733815,86236081273,313007493212,1136110191472,4123691589365,14967590689568 ★ Sequence is its own 4th difference. ● a(n) = Sum _{ k=0..n } binomial(n + 3k, 4k). (End) ●

► [A371798] 1,1,2,7,26,96,356,1331,5014,19006,72412,277058,1063856,4097510,15823432,61245987,237536326,922906150,3591500972,13996328322,54614894396,213360770840,834409399672,3266370155262,12797894251276 ★ a(n) = Sum _{ k=0..floor(n / 2) } (- 1) ^ k * binomial(2 * n - 2 * k - 1,n - 2 * k). ● a(n) = [x ^ n] 1 / ((1 + x ^ 2) * (1 - x) ^ n). ●

► [A001075] 1,2,7,26,97,362,1351,5042,18817,70226,262087,978122,3650401,13623482,50843527,189750626,708158977,2642885282,9863382151,36810643322,137379191137,512706121226,1913445293767,7141075053842,26650854921601 ★ a(0) = 1, a(1) = 2, a(n) = 4 * a(n - 1) - a(n - 2). ● a(n) = 4 * a(n - 1) - a(n - 2) = a(- n). ● a(n) = ((2 + sqrt(3)) ^ n + (2 - sqrt(3)) ^ n) / 2; a(n) = ceiling((1 / 2) * (2 + sqrt(3)) ^ (n)). ● a(n) = cosh(n * log(2 + sqrt(3))). ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n, 2 * k) * 2 ^ (n - 2 * k) * 3 ^ k. - _ Paul Barry _ , May 08 2003 ● a(n + 2) = 2 * a(n + 1) + 3 * Sum _{ k>=0 } a(n - k) * 2 ^ k.

- _ Philippe Deléham _ , Mar 03 2004 ● a(n) = (tan(Pi / 12) ^ n + tan(5 * Pi / 12) ^ n) / 2. - _ Greg Dresden _ , Oct 01 2020 ●

▶ [A113436] 1,2,7,26,98,371,1406,5329,20196,76532,289997,1098826,4163483,15775426,59772826,226477879,858118966,3251390237,12319431012,46677994276,176861668393,670124115506,2539082288671,9620514646154,36451871795186 ★ First row of A113435. ● a(n) = 7 * a(n - 1) - 15 * a(n - 2) + 11 * a(n - 3) - a(n - 4). ●

▶ [A126223] 0,1,2,7,26,98,372,1419,5434,20878,80444,310726,1202852,4665412,18126760,70538355,274877370,1072515990,4189573740,16383007410,64126407180,251226790620,985033185240,3865138313790,15176957307876 ★ Number of level steps in all 2 - Motzkin paths (i.e., Motzkin paths with blue and red level steps) of length n, without red level steps on the x - axis. ● a(n) = 2 * (2 * n - 3) * (n ^ 2 - n + 1) * a(n - 1) / ((n + 1) * (n ^ 2 - 3 * n + 3)) for n>1. - _ Alois P. Heinz _ , May 20 2014 ● a(n) = 2 * (1 - n + n ^ 2) * C(2 * n - 2, n - 1) / (n * (n + 1)). - _ Vaclav Kotesovec _ , Sep 08 2014 ●

▶ [A369231] 1,1,2,7,26,98,385,1569,6556,27908,120624,528030,2336202,10430155,46930285,212597901,968833424,4438398734,20428750419,94424634294,438104297376,2039690282940,9526029685218,44617396906698,209526541600978 ★ Expansion of (1 / x) * Series _ Reversion(x * (1 - x) ^ 3 / (1 - x + x ^ 3) ^ 2). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 3) } binomial(2 * n + 2,k) * binomial(2 * n - 2 * k,n - 3 * k). ●

▶ [A369489] 1,1,2,7,26,98,387,1589,6688,28676,124880,550926,2456831,11056693,50152457,229050621,1052393802,4861062466,22559964766,105144660498,491922058878,2309456782464,10876596029574,51372213424194,243283513468707 ★ Expansion of (1 / x) * Series _ Reversion(x / (1 - x) * (1 - x - x ^ 3) ^ 2). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 3) } binomial(2 * n + k + 1,k) * binomial(2 * n - 2 * k,n - 3 * k). ●

▶ [A114121] 1,2,7,26,99,382,1486,5812,22819,89846,354522,1401292,5546382,21977516,87167164,345994216,1374282019,5461770406,21717436834,86392108636,343801171354,1368640564996,5450095992964,21708901408216,86492546019214 ★ Expansion of (sqrt(1 - 4 * x) + (1 - 2 * x)) / (2 * (1 - 4 * x)). ● a(n) = Sum _{ k=0..n } C(n, k) * 2 ^ (n - k - 2) * (2 ^ k + C(k, k / 2)) * (1 + (- 1) ^ k). ● a(n) = Sum _{ k=0..n } (Sum _{ j=0..n } C(2 * n, n - k - j) * (- 1) ^ j). (End) ● a(n) = Sum _{ k=0..n } C(2 * n, n - k) * (1 + (- 1) ^ k) / 2. - _ Paul Barry _ , Aug 06 2009 ● a(n) = C(2 * n - 1, n - 1) + (4 ^ n + 3 * 0 ^ n) / 4. ● a(n) = Sum _{ k=0..floor(n / 2) } C(2 * n, 2 * k + (n mod 2)). - _ Mircea Merca _ , Jun 21 2011 ● a(n) = Sum _{ i=0..n } (sum _{ j=0..n } binomial(n, i + j) * binomial(n, j - i)). - _ Yalcin Aktar _ , Jan 07 2013. ●

▶ [A049775] 2,7,26,100,392,1552,6176,24640,98432,393472,1573376,6292480,25167872,100667392,402661376,1610629120,6442483712,25769869312,103079346176,412317122560,1649267965952,6597070815232,26388281163776 ★ a(n) is the sum of all integers from 2 ^ (n - 2) + 1 to 2 ^ (n - 1). ● a(n) = 2 ^ (n - 3) * (3 * 2 ^ (n - 2) + 1). - _ Carl R. White _ , Aug 19 2003 ● a(n + 1) = 4 * a(n) - 2 ^ (n - 2); see also A007582. ● a(n) = 6 * a(n - 1) - 8 * a(n - 2). ●

▶ [A101850] 1,2,7,26,100,392,1555,6218,25006,100988,409162,1661948,6764194,27575732,112570675,460058906,1881978694,7704907724,31566153058,129400608044,530734613920,2177792579072,8939838222718,36711025334948 ★ A Catalan transform of Pell(n + 1). ● a(n) = [x ^ n] (1 - 2 * x) / ((1 - 2 * x - x ^ 2)(1 - x) ^ (n + 1)). ● a(n) = Sum _{ k=0..n } binomial(2 * n + 1, n + 2 * k + 1) * 2 ^ (k + 1) * (2 * k + 1) / (n + 2 * k + 2). ● a(n) = the upper left term in M ^ n, M = an infinite square production matrix as follows: ●

▶ [A176280] 1,2,7,26,101,402,1625,6638,27319,113054,469811,1958706,8187063,34290934,143864999,604402050,2542083509,10702020746,45090876913,190110250998,801997354525,3384971428258,14292950533517,60373808435046,255102065046401 ★ Diagonal sums of number triangle A046521. ● a(n) = Sum _{ k=0..floor(n / 2) } C(n - k,k) * C(2 * (n - k),n - k) / C(2 * k,k). ●

▶ [A045868] 1,2,7,26,101,406,1676,7066,30302,131782,579867,2576982,11550237,52152330,237005385,1083211410,4975796735,22960105510,106377393365,494674698190,2308015808015,10801388134690,50691017885290,238503869991926,1124828963516896 ★ Expansion of g.f.: ((1 - x - sqrt(1 - 6 * x + 5 * x ^ 2)) / (2 * x)) ^ 2. ● a(n) = (2 / n) * Sum _{ j=1..n } binomial(n, j) * binomial(2j + 1, j - 1) for n >= 1. ●

▶ [A198957] 1,1,2,7,26,102,424,1827,8078,36466,167376,778718,3664164,17407068,83375616,402198915,1952296598,9528757098,46735576816,230227356906,1138609205372,5651170500612,28138939936704,140527262919342,703704207921932 ★ G.f. satisfies: A(x) = (1 + x * A(x)) * (1 + x ^ 2 * A(x) ^ 4). ● a(n) = sum(j=0..n / 2, binomial(2 * j + n,j) * binomial(2 * j + n + 1,4 * j + 1) / (n + j + 1)). - _ Vladimir Kruchinin _ , May 28 2014 ●

▶ [A052706] 0,0,1,2,7,26,105,444,1944,8734,40040,186550,880750,4204508,20260498,98419392,481442805,2369551218,11725590555,58303117680,291151523355 ★ A simple context - free grammar. ● a(n) = 2 * sum(binomial(k,n - k - 2) * binomial(n + k - 1,n - 1),k,0,n - 2)) / n, n>1, a(0)=a(1)=0. [_ Vladimir Kruchinin _ , May 19 2012] ●

▶ [A122871] 1,2,7,26,106,452,1999,9074,42046,198044,945430,4564100,22243060,109285256,540738943,2692103714,13475973238,67784600108,342439638418,1736727343436,8839203054604,45132514680248,231121351433158 ★ Expansion of (1 - 2 * x - sqrt(1 - 4 * x - 8 * x ^ 2)) / (6 * x ^ 2). ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n,2 * k) * binomial(k)3 ^ k * 2 ^ (n - 2k). ●

▶ [A102319] 1,2,7,26,107,462,2065,9438,43811,205622,972917,4631838,22157525,106406978,512629551,2476289106,11989326771,58163714118,282662269717,1375801775214,6705710840657,32724623955882,159880046446611 ★ A mean binomial transform of the central binomial numbers. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n,2 * k) * binomial(2 * (n - 2 * k), n - 2 * k) } . ● a(n) = Sum _{ k=0..n } binomial(n,k) * binomial(2 * k,k) * (1 + (- 1) ^ (n - k)) / 2. ●

▶ [A006603] 1,2,7,26,107,468,2141,10124,49101,242934,1221427,6222838,32056215,166690696,873798681,4612654808,24499322137,130830894666,702037771647,3783431872018,20469182526595,111133368084892,605312629105205,3306633429423460,18111655081108453 ★ Generalized Fibonacci numbers. ● a(n) = Sum _{ k=1..floor(n / 2) + 1 } k * (1 / (n - k + 2)) * Sum _{ i=0..n - 2 * k + 2 } C(n - k + 2,i) * C(2 * n - 3 * k - i + 3,n - k + 1). - _ Vladimir Kruchinin _ , Oct 23 2011 ●

▶ [A202830] 1,2,7,26,115,542,2809,15374,89737,548450,3519799,23493098,163139563,1172030654,8706504265,66638295998,525069283921,4248776775746,35276087031463,299986119953210,2610709200699811,23220585598592222,210915850841272537,1954390351189631726 ★ E.g.f.: exp(2 * x + 3 * x ^ 2 / 2). ● a(n) = Sum _{ k=0..floor(n / 2) } 2 ^ (n - 3 * k) * 3 ^ k * n! / ((n - 2 * k)! * k!). ● a(n) = 2 * a(n - 1) + 3 * (n - 1) * a(n - 2), a(0)=1, a(1)=2. - Sergei N. Gladkovskii, Jul 29 2012 ● a(n) = Sum _{ k=0..n } s(n,k) * (- 1) ^ (n - k) * (3 ^ n / 2 ^ (n - k)) * B(k,2 / 3), where the s(n,k) are the (signless) Stirling numbers of the first kind and the B(n,x) = Sum _{ k=0..n } S(n,k) * x ^ k are the Stirling polynomials (or exponential polynomials), where the S(n,k) are the Stirling numbers of the second kind. - _ Emanuele Munarini _ , May 15 2014 ● a(n) = i ^ (1 - n) * 2 ^ ((1 + n) / 2) * 3 ^ ((n - 1) / 2) * U((1 - n) / 2, 3 / 2, - 2 / 3), U Kummer's hypergeometric function of the second kind. - _ Peter Luschny _ , May 15 2014 ●

▶ [A358493] 1,1,2,7,26,126,745,5163,41052,367981,3669484,40282220,482650681,6267119885,87659113950,1313921407891,21010208286486,356998222642362,6423340164746737,122001442713615031,2439314857827015896,51212765334037840345,1126436834463405257528 ★ a(n) = Sum _{ k=0..floor(n / 3) } (n - 2 * k)! / k!. ● a(n) = (n - 1) * a(n - 1) + (n - 2) * a(n - 2) + (n - 4) * a(n - 3) - 2 * a(n - 4) - 2 * a(n - 5) + 3 for n > 4. ●

▶ [A341900] 0,1,2,7,26,127,746,5167,41066,368047,3669866,40284847,482671466,6267305647,87660962666,1313941673647,21010450850666,357001369769647,6423384156578666,122002101778601647,2439325392333218666,51212944273488041647,1126440053169940898666 ★ Partial sums of A005165. ● a(n) = Sum _{ i=0..(n - 1) / 2) } (n - 2 * i)!. ● a(n) = n! + a(n - 2) for n >= 2. - _ Alois P. Heinz _ , Jun 04 2021 ●

▶ [A136412] 2,7,27,107,427,1707,6827,27307,109227,436907,1747627,6990507,27962027,111848107,447392427,1789569707,7158278827,28633115307,114532461227,458129844907,1832519379627,7330077518507,29320310074027 ★ a(n) = (5 * 4 ^ n + 1) / 3. ● a(n) = 4 * a(n - 1) - 1. ● a(n) = 5 * a(n - 1) - 4 * a(n - 2). - _ Vincenzo Librandi _ , Nov 04 2011 ●

▶ [A182454] 1,1,2,7,27,112,492,2243,10513,50353,245353,1212398,6061225,30601910,155808915,799096655,4124491215,21408066097,111672838857,585128521777,3078178384457,16252057372887,86089680204939,457400940705274,2436895852070559 ★ G.f. satisfies A(x) = 1 + x * A(x) + x ^ 2 * A(x) ^ 5. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n + 3 * k,k) * binomial(n + 2 * k,n - 2 * k) / (4 * k + 1). - _ Seiichi Manyama _ , Jul 26 2023 ●

▶ [A127897] 0,1,2,7,27,114,507,2342,11125,54002,266684,1335610,6767477,34629709,178701317,928903447,4859345882,25563551782,135153617840,717740916202,3826894116962,20478451476328,109945087353190,592048943478464,3196930550222605 ★ Series reversion of x / (1 + 2 * x + 3 * x ^ 2 + x ^ 3). ● a(n) = Sum _{ k=0..n - 1 } Sum _{ j=0..k } (1 / (2k + j - 1)) * C(n - 1,3k - j) * C(3k - j,k) * C(k,j) * 2 ^ (n - 3k + j - 1) * 3 ^ j; ●

▶ [A180473] 1,2,7,27,114,509,2365,11318,55411,276231,1397430,7156089,37023225,193229466,1016141199,5378940051,28638955098,153267403397,824014568581,4448456379134,24104579252971,131055735586767,714741620026542,3908997981612017,21434123083817329 ★ Expansion of o.g.f. x * s(x) / (1 - x * s(x) - x ^ 2 * s(x) ^ 2), where s(x) is the o.g.f. of the little Schroeder numbers (A001003). ● a(n) = Sum _{ k=1..n } (k / (2 ^ k * n)) * (Sum _{ j=0..n - k } binomial(n,j) * 2 ^ (n - j) * (- 1) ^ j * binomial(2 * n - k - j - 1, n - 1)) * Fibonacci(k). ●

▶ [A175934] 1,2,7,27,116,532,2554,12675,64507,334836,1765833,9434779,50962640,277839361,1526834471,8448751385,47035469902,263260232668,1480527858436,8361881707770,47409359120684,269736194796537,1539547726712437,8812663513352489,50579825742416942 ★ Number of lattice paths from (0,0) to (n,n) using steps S= { (1,0),(0,1),(r,r)|0<r<=2 } that never go above the line y=x. ● a(0) = 1, a(1) = 2; a(n) = 2 * a(n - 1) + 3 * a(n - 2) + Sum _{ k=2..n - 1 } a(k) * a(n - k - 1). - _ Ilya Gutkovskiy _ , Jul 20 2021 ●

▶ [A368762] 1,2,7,27,118,605,3651,25585,204716,1842489,18424945,202674461,2432093610,31617217021,442641038399,6639615576105,106233849217816,1805975436703025,32507557860654621,617643599352437989,12352871987048759990,259410311728023960021 ★ a(n) = n! * (1 + Sum _{ k=0..n } binomial(k + 1,2) / k!). ● a(0) = 1; a(n) = n * a(n - 1) + binomial(n + 1,2). ●

▶ [A155581] 1,1,2,7,28,84,384,1824,6080,30400,304000,1064000,12768000,67488000,359936000,1934656000,30954496000,526226432000,2880397312000,15842185216000,316843704320000,1757042360320000,38654931927040000 ★ a(n)=If[IntegerQ[((6 * n - 4) / (n + 1)) * a(n - 1)], ((6 * n - 4) / (n + 1)) * a(n - 1), If[IntegerQ[((4 * n - 2) / (n + 1)) * a(n - 1)], ((4 * n - 2) / (n + 1)) * a(n - 1), n * a(n - 1)]] ● a(n)=If[IntegerQ[((6 * n - 4) / (n + 1)) * a(n - 1)], ((6 * n - 4) / (n + 1)) * a(n - 1), ●

▶ [A048504] 1,2,7,28,101,326,967,2696,7177,18442,46091,112652,270349,638990,1490959,3440656,7864337,17825810,40108051,89653268,199229461,440401942,968884247,2122317848,4630511641 ★ a(n) = T(n,n), array T given by A048494. ● a(n) = n * (n - 1) * 2 ^ (n - 1) + n + 1. - _ Ralf Stephan _ , Jan 15 2004 ●

▶ [A364145] 0,2,7,28,116,480,1968,8000,32320,130048,521984,2092032,8377344,33529856,134164480,536756224,2147237888,8589410304,34358624256,137436594176,549750833152,2199012769792,8796071002112,35184325951488,140737391886336 ★ a(n) is the sum of the first 2 * n nonzero n - bonacci numbers. ● a(n) = (2 * 4 ^ n - (n - 1) * 2 ^ n) / 4 for n>=1. ●

▶ [A232970] 1,2,7,28,117,494,2091,8856,37513,158906,673135,2851444,12078909,51167078,216747219,918155952,3889371025,16475640050,69791931223,295643364940,1252365390981,5305104928862,22472785106427,95196245354568,403257766524697 ★ Expansion of (1 - 3 * x) / (1 - 5 * x + 3 * x ^ 2 + x ^ 3). ● a(n) = 5 * a(n - 1) - 3 * a(n - 2) - a(n - 3). - _ N. J. A. Sloane _ , Jun 23 2017 ● a(n) = (Fibonacci(3 * n + 1) + 1) / 2 = Sum _{ k=0..n } Fibonacci(3 * k - 1). - _ Eheren Metcalfe _ , Apr 15 2019 ●

▶ [A116078] 1,2,7,28,117,496,2110,8968,38017,160648,676626,2840872,11892562,49650368,206773372,859186768,3562780057,14746127608,60929182282,251358948328,1035479267542,4260071237728,17505144024292 ★ Column 0 of triangle A116077. ● a(n) = (n + 3) * C(2 * n - 1,n) - 2 ^ (2 * n - 1), a(n) ~ 2 ^ (2 * n - 1) * sqrt(n) / sqrt(Pi). - _ Vaclav Kotesovec _ , Oct 28 2012 ●

► [A090317] 1,2,7,28,118,510,2235,9876,43870,195556,873814,3911168,17527904,78622982,352911939,1584927828,7120769526,32002212252,143859840114,646819996008,2908670252676,13081556909292,58839348572574,264674150692488,1190649451348908 ⋆ Row sums of triangle in A090285. ● a(n) = 4 * C(2 * n - 1,n) / (n + 1) + 3 * Sum _{ k=1..n - 1 } (k + 1) * 2 ^ k * C(2 * n - 1,n - k - 1) / (n + k + 1), n>0, a(0)=1. - _ Vladimir Kruchinin _ , Feb 21 2019 ●
► [A161944] 2,7,28,119,518,2275,10024,44219,195146,861343,3802036,16782815,74082638,327016123,1443518272,6371996771,28127352722,124160138935,548069364556,2419295214791,10679285736854,47140647917587 ⋆ a(n) = ((4 + sqrt(2)) * (3 + sqrt(2)) ^ n + (4 - sqrt(2)) * (3 - sqrt(2)) ^ n) / 4. ● a(n) = 6 * a(n - 1) - 7 * a(n - 2) for n > 1; a(0) = 2; a(1) = 7. ●
► [A005436] 1,2,7,28,120,528,2344,10416,46160,203680,894312,3907056,16986352,73512288,316786960,1359763168,5815457184,24788842304,105340982248,446389242480,1886695382192,7955156287456,33468262290096,140516110684832,588832418973280 ⋆ Number of convex polygons of perimeter 2n on square lattice. ● a(n) = (2 * n + 3) * 4 ^ (n - 4) - 4 * (n - 3) * C(2 * n - 7, n - 4) for n >= 4. ● a(n) = (2 * n + 11) * 4 ^ n - 4 * (2 * n + 1) * binomial(2 * n,n) produces the terms (except the first two) with a different offset. - _ N. J. A. Sloane _ , Oct 14 2017 ● a(n) = (2 * (8 * n ^ 2 - 106 * n + 303) * a(n - 1) - 8 * (2 * n - 9) * (2 * n - 17) * a(n - 2)) / ((n - 4) * (2 * n - 19)), with a(2) = 1, a(3) = 2, a(4) = 7, a(4) = 28. - _ G. C. Greubel _ , Nov 20 2022 ●
► [A010683] 1,2,7,28,121,550,2591,12536,61921,310954,1582791,8147796,42344121,221866446,1170747519,6216189936,33186295681,178034219986,959260792775,5188835909516,28167068630713,153395382655222 ⋆ Let S(x,y) = number of lattice paths from (0,0) to (x,y) that use the step set { (0,1), (1,0), (2,0), (3,0), ... } and never pass below y = x. Sequence gives S(n - 1,n) = number of 'Schröder' trees with n + 1 leaves and root of degree 2. ● a(n) = (2 / n) * Sum _{ k=1..n } binomial(n, k) * binomial(n + k + 1, k - 1). ● a(n) = 2 * hypergeometric2F1([1 - n, n + 3], [2], - 1), n>=1. a(0)=1. (End) ● a(n) = ((2 * n + 1) * Legendre P(n + 1,3) - (2 * n + 3) * LegendreP(n,3)) / (4 * n * (n + 2)) for n>0. - _ Mark van Hoeij _ , Jul 02 2010 ● a(n) is the upper entry in the vector (M(T)) ^ n * [1,0,0,0,...]; where T is the transpose operation. (End) ● a(n) = (n + 1) * hypergeometric2F1([1 - n, - n], [3], 2). - _ Peter Luschny _ , Nov 19 2014 ●
► [A352861] 1,2,7,28,121,570,2911,15968,93433,580162,3806275,26284368,190415809,1442982350,11409436363,93913277608,803094241309,7121757279798,65383520552131,620517308328812,6079168380979213,61402851498255790,638674759049919079,6833589979500278700 ⋆ a(n) = 1 + Sum _{ k=0..n - 1 } binomial(n + 2, k + 3) * a(k). ● a(0) = 1; a(n) = a(n - 1) + Sum _{ k=0..n - 1 } binomial(n + 1,k + 2) * a(k). ●
► [A215973] 1,2,7,28,122,565,2735,13682,70188,367248,1952394,10516141,57265929,314751625,1743829163,9728561418,54604800126,308137127382,1747158309208,9949001656704,56872435967840,326243091718978,1877419829207578,10835354636496321 ⋆ a(0) = 1, for n > 0: a(n) = Sum _{ k=0..n - 1 } a(k) * (1 + a(n - 1 - k)). ● a(n) = Sum _{ j=0..n } Sum _{ i=0..j } C(j + 1,i) * C(2 * j - i,j - i) * C(n - j + i - 1,n - j) / (j + 1). - _ Vladimir Kruchinin _ , May 04 2018 ●
► [A143927] 1,2,7,28,123,572,2769,13806,70414,365636,1926505,10273870,55349155,300783420,1646828655,9075674700,50304255210,280248358964,1568399676946,8813424968192,49709017472751,281306750922072,1596802663432503 ⋆ G.f. satisfies: A(x) = (1 + x * A(x) + x ^ 2 * A(x) ^ 2) ^ 2. ● a(n) = (1 / (n + 1)) * Sum _{ j=0..2 * n + 2 } (binomial(j,2 * j - 3 * n - 4) * binomial(2 * n + 2 ,j)). - _ Vladimir Kruchinin _ , Dec 24 2010 ● a(n) = GegenbauerPoly(n, - 2n - 2, - 1 / 2) / (n + 1). - _ Emanuele Munarini _ , Oct 20 2016 ●
► [A227845] 1,2,7,28,125,590,2891,14536,74497,387450,2038743,10830148,57986773,312542678,1694166275,9228580464,50486521785,277239830210,1527533993871,8441627856300,46776754474709,259830443968046,1446468759734131,8068688342238328,45091854560015025 ⋆ G.f.: Sum _{ n>=0 } x ^ n / (1 - x) ^ (2 * n + 1) * [Sum _{ k=0..n } C(n,k) ^ 2 * x ^ k] ^ 2. ● a(n) = Sum _{ k=0..[n / 2] } Sum _{ j=k..n - k } binomial(n - k,j) ^ 2 * binomial(j,k) ^ 2. ●
► [A362555] 2,7,28,129,630,3131,15632,78133,390634,1953135,9765636,48828137,244140638,1220703139,6103515640,30517578141,152587890642,762939453143,3814697265644,19073486328145,95367431640646,476837158203147,2384185791015648,11920928955078149,59604644775390650 ⋆ Number of distinct n - digit suffixes generated by iteratively multiplying an integer by 6, where the initial integer is 1. ● a(n) = 5 ^ (n - 1) + n. ●
► [A370509] 1,1,2,7,28,138,818,5658,44784,399366,3962256,43289760,516432984,6679346280,93091875120,1390851720840,22175338353120,375794883339120,6745177713093840,127830886641354960,2550687440585679360,53451172032327664560,1173650135526055272960 ⋆ Expansion of Sum _{ k>=0 } k! * (x * (1 + x ^ 2)) ^ k. ● a(n) = Sum _{ k=0..floor(n / 3) } (n - 2 * k)! * binomial(n - 2 * k,k). ●
► [A276080] 0,1,2,7,28,139,822,5677,44888,400021,3966970,43328131,516782292,6682867087,93130824878,1391321096089,22181459914672,375880800693097,6746469047955378,127851581333528191,2551039715319388940,53457519928692619411,1173770856436282074982,26948387795024752862917,645694707721735535710728 ⋆ a(n) = A276075(A206296(n)). ● a(n) = Sum _{ k = 0..floor((n - 1) / 2) } (n - 2 * k)! * binomial(n - k - 1,k). ●
► [A352659] 1,1,2,7,28,140,841,5887,47096,423865,4238650,46625150,559501801,7273523413,101829327782,1527439916731,24439038667696,415463657350832,7478345832314977,142088570813984563,2841771416279691260,59677199741873516461,1312898394321217362142 ⋆ a(n) = n! * Sum _{ k=0..floor(n / 3) } 1 / (3 * k)!. ● a(n) = floor(c * n!), where c = 1.16805831... = A143819. ●
► [A186763] 0,1,2,7,28,141,846,5923,47384,426457,4264570,46910271,562923252,7318002277,102452031878,1536780478171,24588487650736,418004290062513,7524077221125234,142957467201379447,2859149344027588940,60042136224579367741 ⋆ Number of increasing odd cycles in all permutations of { 1,2,...,n } . ● a(n) = n! * Sum _{ k=0..floor((n - 1) / 2) } 1 / (2 * k + 1)!. - _ Ilya Gutkovskiy _ , Jul 16 2021 ●
► [A182249] 0,1,2,7,28,141,846,5927,47416,426745,4267450,46941951,563303420,7322944461,102521222462,1537818336943,24605093391088,418286587648497,7529158577672946,143054012975785975,2861080259515719516 ⋆ a(0)=0, a(n) = (a(n - 1) * n) OR n. ● a(0)=0, a(n)=(a(n - 1) * n) OR n, where OR is the bitwise logical inclusive - OR operator. ●
► [A362084] 1,2,7,28,145,896,6328,50212,441489,4248370,44306306,496991848,5959111223,75977511442,1025441134747,14594189335496,218290221112929,3421314388169988,56043004143343843,957209642080023286,17011439135301438016,313980693855333453740 ⋆ a(n) = Sum _{ k=0..n } (- 1) ^ k * binomial(- 2,k) * binomial(n * k,n - k). ● a(n) = Sum _{ k=0..n } (k + 1) * binomial(n * k,n - k). ● a(n) = [x ^ n] 1 / (1 - x * (1 + x) ^ n) ^ 2. ●
► [A274682] 2,7,29,44,88,113,179,214,302,347,457,512,644,709,863,938,1114,1199,1397,1492,1712,1817,2059,2174,2438 ⋆ Numbers n such that 8 * n - 1 is a triangular number. ● a(n) = (5 + 3 * (- 1) ^ n - 2 * (8 + 3 * (- 1) ^ n) * n + 16 * n ^ 2) / 4. ● a(n) = (8 * n ^ 2 - 11 * n + 4) / 2 for n even. ● a(n) = (8 * n ^ 2 - 5 * n + 1) / 2 for n odd. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n>5. ●
► [A278815] 1,2,7,29,109,416,1596,6105,23362,89415,342193,1309593,5011920,19180976,73406985,280933906,1075154535,4114694797,15747237101,60265824784,230641706484,882682631025,3378090801226,12928199853783,49477163668857 ⋆ Number of tilings of a 2 X n grid with monomers, dimers, and trimers. ● a(n) = 3 * a(n - 1) + 2 * a(n - 2) + 5 * a(n - 3) - 2 * a(n - 4) - a(n - 6). ●
► [A120757] 0,2,7,29,117,474,1919,7770,31460,127379,515747,2088217,8455018,34233669,138609296,561217582,2272323599,9200450421,37251863241,150829715006,610697048403,2472661868474,10011603514040,40536155064419 ⋆ Expansion of x ^ 2 * (2 + x) / (1 - 3 * x - 4 * x ^ 2 - x ^ 3). ● a(n) = 3 * a(n - 1) + 4 * a(n - 2) + a(n - 3) (follows from the minimal polynomial of the matrix M). See also the o.g.f. given in the name. ●
► [A134169] 1,2,7,29,121,497,2017,8129,32641,130817,523777,2096129,8386561,33550337,134209537,536854529,2147450881,8589869057,34359607297,137438691329,549755289601,2199022206977,8796090925057,35184367894529 ⋆ a(n) = 2 ^ (n - 1) * (2 ^ n - 1) + 1. ● a(n) = 2 ^ (n - 1) * (2 ^ n - 1) + 1. ● a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3). ●
► [A052961] 1,2,7,29,124,533,2293,9866,42451,182657,785932,3381689,14550649,62608178,269388943,1159120181,4987434076,21459809837,92336746957,397304305274,1709511285499,7355643511673,31649683701868,136181487974321,585958388766001 ⋆ Expansion of (1 - 3 * x) / (1 - 5 * x + 3 * x ^ 2). ● a(n) = 5 * a(n - 1) - 3 * a(n - 2), with a(0) = 1, a(1) = 2. ● a(n) = Sum _{ alpha=RootOf(1 - 5 * z + 3 * z ^ 2) } (- 1 + 9 * alpha) * alpha ^ (- 1 - n) / 13. ●
► [A371431] 1,2,7,29,131,623,3064,15423,78936,408958,2137993,11252163,59508232,315786764,1679410076,8941421014,47613443433,253359512287,1346009853489,7133000408765,37669665812955,198034693198875,1035095172883710,5371011415598595,27615259784888724 ⋆ Expansion of (1 / x) * Series _ Reversion(x * ((1 - x) ^ 2 + x ^ 3)). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 3) } (- 1) ^ k * binomial(n + k,k) * binomial(3 * n - k + 1,n - 3 * k). ●
► [A007852] 1,2,7,29,131,625,3099,15818,82595,439259,2371632,12967707,71669167,399751019,2247488837,12723799989,72474333715,415046380767,2388355096446,13803034008095,80082677184820,466263828731640,2723428895205210,15954063529603565,93711351580424391 ⋆ Antichains in rooted plane trees on n nodes. ● a(1) = 1 and for n > 1 a(n) = sum((a(j) + b(j)) * a(n - j), j=1..n - 1), where b(n) = C(2n - 2, n - 1) / n (Catalan number). ● a(n) = sum(i=0..n, binomial(2 * i + 1,i) * binomial(2 * n - 1,n - i - 1)) / ((2 * n - 1)). - _ Vladimir Kruchinin _ , Jun 09 2014 ●
► [A300048] 1,1,2,7,29,131,627,3124,16032,84162,449828,2439550,13391105,74256824,415357737,2340775363,13278009018,75753246286,434392031856,2502289328542,14473290097526,84023214062635,489424396591995,2859551104564120,16754209625090980 ⋆ G.f. A(x) satisfies A(x) ^ 3 = 1 + x * A(x) + x * A(x) ^ 2 + x * A(x) ^ 6. ● a(n) = (1 / n) * Sum _{ k=0..n - 1 } binomial(n,k) * binomial(n + 2 * k,n - 1 - k) for n > 0. - _ Seiichi Manyama _ , Aug 05 2023 ●
► [A366084] 1,2,7,29,132,637,3199,16536,87366,469556,2558610,14100033,78437805,439838596,2483300228,14103794518,80517436710,461768157262,2658979794811,15366500638407,89093023210674,518064484263918,3020484579372765,17653011431832906 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 - x) ^ 3 / (1 - x - x ^ 3)). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 3) } (- 1) ^ k * binomial(n + 1,k) * binomial(3 * n - 2 * k + 1,n - 3 * k). ●
► [A368935] 1,2,7,29,132,637,3200,16554,87576,471570,2575885,14238003,79487023,447540164,2538352756,14489355578,83174465721,479842193453,2780625587822,16178040713569,94467163314370,553430174678595,3251969073086610,19161172609833540,113186247571818096 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 - x) * (1 - x + x ^ 3)). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 3) } (- 1) ^ k * binomial(n + k,k) * binomial(3 * n - 2 * k + 1,n - 3 * k). ●
► [A110576] 1,1,2,7,29,132,648,3407,19109,113946,719896,4802318,33712717,248285282,1912928549,15379305080,128729241725,1119519156562,10097102345993,94285391374568,910145431036423,9069616636456648,93179779321299479 ⋆ Sequence is { a(0,n) } , where a(m,0)=1, a(m,n) = a(m,n - 1) + a(m - 1,n), a(0,n + 1) = a(n,n). ● a(0, n + 1) = Sum _{ k=0..n } binomial(2 * n - k - 1, n - 1) * a(0, k), with a(0,0) = 1. ●
► [A074600] 2,7,29,133,641,3157,15689,78253,390881,1953637,9766649,48830173,244144721,1220711317,6103532009,30517610893,152587956161,762939584197,3814697527769,19073486852413,95367432689201,476837160300277 ⋆ a(n) = 2 ^ n + 5 ^ n. ● a(n) = 5 * a(n - 1) - 3 * 2 ^ (n - 1) = 7 * a(n - 1) - 10 * a(n - 2). [Corrected by _ Zak Seidov _ , Oct 24 2009] ●
► [A064641] 1,2,7,29,133,650,3319,17498,94525,520508,2910895,16487795,94393105,545337200,3175320607,18615098837,109783526821,650884962908,3877184797783,23193307022861,139271612505361,839192166392276 ⋆ Unidirectional 'Delannoy' variation of the Boustrophedon transform applied to all 1's sequence: construct an array in which the first element of each row is 1 and subsequent entries are given by T(n,k) = T(n,k - 1) + T(n - 1,k - 1) + T(n - 1,k) + T(n - 2,k - 1). The last number in row n gives a(n). ● a(n) = sum(i=0..n, binomial(n + i,n) * sum(j=0..n + 1, binomial(j, - n + 2 * j - i - 2) * binomial(n + 1,j))) / (n + 1). - _ Vladimir Kruchinin _ , May 12 2011 ●
► [A183608] 1,1,2,7,29,133,658,3471,19400,114417,709815,4619048,31446579,223419752,1652599036,12698380493,101151995810,833740791381,7098646227614,623

35051895044,563749889969108,5244173616702347,50117689766439784 ⋆ G.f.: A(x) = Sum _{ n>=0 } x ^ n * C(x) ^ (n ^ 2), where C(x) = 1 + x * C(x) ^ 2 is the g.f. of the Catalan numbers (A000108). ● a(n) = Sum _{ k=0..n - 1 } binomial((n - k) ^ 2 + 2k, k) * (n - k) ^ 2 / ((n - k) ^ 2 + 2k) for n>0 with a(0)=1. ●

▶ [A190736] 1,2,7,29,139,731,4096,24005,145420,903503,5726290,36878978,240663403,1587928511,10575884599,71005972250,480071241463,3265685620913,2233528450552 9,1534965436902 26,1059443187603955,7340794592800628,51042913856490028 ⋆ Diagonal sums of the Riordan matrix A121576. ● a(n) = [x ^ n](1 - 2 * x - 2 * x ^ 2) * (1 + 2 * x) ^ (n + 1) / ((1 + 2 * x - x ^ 2 + x ^ 3)(1 - x) ^ (n + 1)). ●

▶ [A185109] 2,7,29,146,877,6140,49121,442090,4420901,48629912,583558945,7586266286,106207728005,1593115920076,25489854721217,433327530260690,7799895544692421,148198015349156000,2963960306983120001,62243166446645520022 ⋆ a(0)=2; for n > 0, a(n) = (n + 2) * a(n - 1) + 1. ● a(n) = e * Gamma(n + 3,1) - (3 / 2) * (n + 2)!, where Gamma(a,x) is the incomplete gamma function. [_ Bruno Berselli _ , Dec 24 2012] ● a(n) = (n + 3) * a(n - 1) - (n + 1) * a(n - 2). - _ Vaclav Kotesovec _ , Aug 13 2013 ●

▶ [A042913] 1,2,7,30,37,770,4657,5427,80635,86062,597007,12026202,12623209,62519038,200180323,462879684,28898720731,58260321146,203679684169,872979057822,1076658741991,22406153897642,135513582127843,157919736025485,2346389886484633 ⋆ Denominators of continued fraction convergents to sqrt(988). ● a(n) = 29098901054 * a(n - 16) - a(n - 32) for n>31. - _ Vincenzo Librandi _ , Feb 01 2014 ●

▶ [A041805] 1,1,2,7,30,97,127,224,9087,9311,18398,64505,276418,893759,1170177,2063936,83727617,85791553,169519170,594349063,2546915422,8235095329,10782010751,19017106080,771466253951 ⋆ Denominators of continued fraction convergents to sqrt(423). ● a(n) = 9214 * a(n - 8) - a(n - 16) for n>15. - _ Vincenzo Librandi _ , Dec 24 2013 ●

▶ [A097924] 2,7,30,127,538,2279,9654,40895,173234,733831,3108558,13168063,5578081 0,236291303,1000946022,4240075391,17961247586,76085065735,322301510526,1365291107839,5783465941882,24499154875367,103780085443350,439619496648767,1862258072038418 ⋆ a(n) = 4 * a(n - 1) + a(n - 2), n>=2, a(0) = 2, a(1) = 7. ● a(n) = ((2 * sqrt(5) + 3) * (2 + sqrt(5)) ^ n + (2 * sqrt(5) - 3) * (2 - sqrt(5)) ^ n) / (2 * sqrt(5)). ● a(n) = 4 * a(n - 1) + a(n - 2) for n>=2, a(0)=2, a(1)=7. G.f.: (2 - x) / (1 - 4 * x - x ^ 2). - _ Philippe Deléham _ , Nov 20 2008 ●

▶ [A116363] 1,2,7,30,141,698,3571,18686,99385,535122,2908863,15932766,87809541,486421770,2706138987,15110359038,84637982961,475381503266,2676447372535,15100548901790,85357620588541,483304834607322 ⋆ a(n) = dot product of row n in Catalan triangle A033184 with row n in Pascal's triangle. ● a(n) = Sum _{ k=0..n } C(n,k) * C(2 * n - k + 1,n - k) * (k + 1) / (2 * n - k + 1). ●

▶ [A186858] 0,1,2,7,30,141,703,3653,19567,107270,598955,3394374,19474061,112884523,660133281,3889762894,23071999207,137648379106,825454689096,4972910455246,30082871471563,182660631479932,1112852638627219,6800915421684405,41679320208737561 ⋆ G.f. A(x) satisfies A(x) = x * (A(x) ^ 5 + 3 * A(x) ^ 4 + 4 * A(x) ^ 3 + 3 * A(x) ^ 2 + 2 * A(x) + 1). ● a(n) = sum(k=0..n - 1, binomial(k + n,n - k - 1) * sum(j=0..n, binomial(n,j) * binomial(j,k - 2 * n + 2 * j))) / n, n>0. ●

▶ [A369441] 1,2,7,30,141,704,3666,19686,108222,606062,3445308,19829680,115323955,676659960,4000719012,23811922678,142557391306,857894530348,5186614665121,31487226410770,191871141682557,1173163962971056,7195329233469552,44255915928488880 ⋆ Expansion of (1 / x) * Series _ Reversion(x / ((1 + x) ^ 2 * (1 + x ^ 2) ^ 2)). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 2) } binomial(2 * n + 2,k) * binomial(2 * n + 2,n - 2 * k). ●

▶ [A371432] 1,2,7,30,142,714,3740,20178,111325,625042,3559101,20502014,119249277,699330360,4130235408,24543145310,146629131642,880184547880,5305961255490,32107022363150,194947974895960,1187354222296110,7252099548616320,44408257163905050 ⋆ Expansion of (1 / x) * Series _ Reversion(x * ((1 - x) ^ 2 + x ^ 4)). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 4) } (- 1) ^ k * binomial(n + k,k) * binomial(3 * n - 2 * k + 1,n - 4 * k). ●

▶ [A366089] 1,2,7,30,142,715,3756,20349,112864,637659,3656775,21229923,124531256,736920158,4393859967,26371222935,159193382812,965923527255,5887659026592,36034716884127,221362690616841,1364404640452602,8435444693847402 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 - x) ^ 3 / (1 - x - x ^ 4)). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 4) } (- 1) ^ k * binomial(n + 1,k) * binomial(3 * n - 3 * k + 1,n - 4 * k). ●

▶ [A368936] 1,2,7,30,142,715,3756,20349,112865,637681,3657075,21233199,124562708,737197980,4396176336,26389742175,159336837840,967007923321,5895699043010,36093405644877,221785663880176,1367420967329725,8456765007380190,52447676008911675 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 - x) * (1 - x + x ^ 4)). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 4) } (- 1) ^ k * binomial(n + k,k) * binomial(3 * n - 3 * k + 1,n - 4 * k). ●

▶ [A260771] 1,2,7,30,142,716,3771,20502,114194,648276,3737270,21819980,128757020,766680856,4600866643,27797553638,168949310378,1032267189636,6336728149794,39062959379620,241720286906116,1500910751651752,9348824475860702,58398701313158780 ⋆ Certain directed lattice paths. ● a(n) = Sum _{ m=0..n + 1 } ((- 1) ^ (n - m + 1) * binomial(n + 1,m) * Sum _{ i=m..n + m } (binomial(i - 1,i - m) * Sum _{ j=0..n - m + 1 } (binomial(j,n + m - j - i) * 2 ^ (- n + m + 2 * j + i) * 3 ^ (n - m - j + 1) * binomial(n - m + 1,j)))) / (n + 1). - _ Vladimir Kruchinin _ , Feb 28 2016 ●

▶ [A260773] 1,1,2,7,30,142,716,3771,20502,114194,648276,3737270,21819980,128757020,766680856,4600866643,27797553638,168949310378,1032267189636,6336728149794,39062959379620,241720286906116,1500910751651752,9348824475860702,58398701313158780 ⋆ Certain directed lattice paths. ● a(n) = (1 / n) * Sum _{ j=0..floor((n - 1) / 4) } (- 1) ^ j * C(n,j) * C(3 * n - 4 * j - 2,n - 4 * j - 1), a(0)=1. - _ Vladimir Kruchinin _ , Apr 04 2019 ●

▶ [A368937] 1,2,7,30,143,727,3861,21165,118845,680064,3951291,23247874,138229486,829292780,5013767772,30516496017,186837457296,1149894814718,7110026033305,44146396259805,275139524189497,1720647439298395,10793938343564655,67905034046934225 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 - x) * (1 - x + x ^ 5)). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 5) } (- 1) ^ k * binomial(n + k,k) * binomial(3 * n - 4 * k + 1,n - 5 * k). ●

▶ [A174796] 1,2,7,30,143,728,3148,15986,86009,478907,2731365,13131703,72135374,412835191,2416852480,14369476066,72067537808,409636973141,2412844770335,14479410843183,87964452906330,451313038006432 ⋆ Number of admissible sequences of order j; related to 7x + 1 problem ● a(1)=1 and a(k + 1)=Sum _{ m=1..k } (- 1) ^ (m - 1) * binomial(floor((k - m + 1) * (log(7) / log(2))) + m - 1,m) * a(k - m + 1)) for k >= 1. - _ Vladimir M. Zarubin _ , Sep 25 2015 ●

▶ [A006013] 1,2,7,30,143,728,3876,21318,120175,690690,4032015,23841480,142498692,859515920,5225264024,31983672534,196947587823,1219199353190,7583142491925,47365474641870,296983176369495,1868545312633440,11793499763070480 ⋆ a(n) = binomial(3 * n + 1,n) / (n + 1). ● a(n) is the top left term in M ^ n, where M is the infinite square production matrix: ● a(n) is the sum of top row terms in Q ^ n, where Q is the infinite square production matrix as follows: ● a(n) = (1 / 4 ^ n) * Product _{ 1 <= i <= j <= 2 * n } (2 * i + j + 2) / (2 * i + j - 1). Cf. A000260. - _ Peter Bala _ , Feb 21 2023 ● a(n) = Integral _{ x=0..27 / 4 } x ^ n * W(x) dx, where ●

▶ [A368933] 1,2,7,30,143,729,3891,21471,121505,701316,4112751,24435424,146773582,889813460,5437598036,33459382065,207138653334,1289231982454,8062548100445,50637167131635,319255808742145,2019867936975125,12819928874057325,81603361510347675 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 - x) * (1 - x - x ^ 5)). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 5) } binomial(n + k,k) * binomial(3 * n - 4 * k + 1,n - 5 * k). ●

▶ [A366055] 1,2,7,30,144,741,3996,22287,127494,743919,4410255,26489073,160843708,985729010,6089215057,37875775533,237021929322,1491204370335,9426547131330,59843910602283,381378377720469,2438954925930558,15646857920046108 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 - x) ^ 3 / (1 - x + x ^ 4)). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 4) } binomial(n + 1,k) * binomial(3 * n - 3 * k + 1,n - 4 * k). ●

▶ [A368932] 1,2,7,30,144,741,3996,22287,127495,743941,4410555,26492349,160875186,986007700,6091548256,37894543413,237168491610,1492323419929,9434943086870,59906035386393,381832957589226,2442251022673595,15670578495195870 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 - x) * (1 - x - x ^ 4)). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 4) } binomial(n + k,k) * binomial(3 * n - 3 * k + 1,n - 4 * k). ●

▶ [A369160] 1,2,7,30,144,742,4012,22458,129035,756602,4509141,27233726,166320987,1025356360,6372494608,39882831334,251146002084,1590079213920,10115878798130,64634124182670,414578955678690,2668578654593970,17232252926468640,111602332042716450 ⋆ Expansion of (1 / x) * Series _ Reversion(x * ((1 - x) ^ 2 - x ^ 4)). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 4) } binomial(n + k,k) * binomial(3 * n - 2 * k + 1,n - 4 * k). ●

▶ [A243632] 0,1,2,7,30,144,744,4047,22858,132830,789124,4771086,29259992,181569062,1137891460,7191411375,45780189690,293282202470,1889328747180,12231207808050,79532035376500,519196901292440 ⋆ Expansion of ((1 - sqrt(1 - 4 * x)) / 2 - sqrt(((- sqrt(1 - 4 * x) - 11) * (1 - sqrt(1 - 4 * x))) / 4 + 1) + 1) / 4. ● a(n) = (1 / n) * Sum _{ k=0..n } binomial(n + k - 1,k) * binomial(3 * n - 2,n - 4 * k - 1), n>1, a(0)=0. ●

▶ [A196148] 1,2,7,30,146,772,4331,25398,154158,961820,6137734,39909740,263665252,1765815560,11966535091,81937361702,566185489878,3944202596652,27676632525362,195481707009220,1388890568962556 ⋆ Antidiagonal sums of square array A111910. ● a(n) = Sum _{ k = 0..n } S(n - k,k) where S(n,k) = (n + k + 1)! * (2 * n + 2 * k + 1)! / ((n + 1)! * (k + 1)! * (2 * n + 1)! * (2 * k + 1)!). ● a(n) = hypergeometric3F2([- n, - n - 1 / 2, - n - 1], [3 / 2, 2], - 1). - _ G. C. Greubel _ , Feb 11 2021 ●

▶ [A193464] 0,2,7,30,146,852,5823,45740,405844,4012710,43733975,520795002,6726601062,93651619880,1398047697151,22275111534552,377278848390248,6768744159489930,128228860181918439,2557808459478878870,53585748788874537850,1176328664895760953852 ⋆ Row sums of triangle A076731. ● a(n) = sum((1 / (n - k)!) * sum(((- 1) ^ j) * binomial(k,j) * (n - j)!, j=0..k), k=1..n). ●

▶ [A136574] 1,1,2,7,30,149,868,5907,46226,409105,4037904,43954703,522956302,6749977101,93928268300,1401602636299,22324392524298,378011820620297,6780385526348296,128425485935180295,2561327494111820294 ⋆ Row sums of triangle A136573. ● a(n) = n! * (n + 1) + the sum of the first (n + 1) terms of A033312: (0, 0, 1, 5, 23, 119, 719, ...), where A033312 = (k! - 1, k=0,1,2,...). ● a(n) = a(n - 1) + n! - 1. - _ David Eppstein _ , Dec 21 2017 ●

▶ [A209801] 1,2,7,30,152,878,5653,39952,306419,2527984,22277080,208483014,2062199125,21472152822,234526948183,2678973711602,31919113081724,395750219427590,5095324584255641,67996852799627404,938939425151949211,13395286474394627364,197162835188949226772 ⋆ The number of partitions of the set [n] where each element can be colored 1 or 2 avoiding the patterns 1 ^ 11 ^ 2 in the equality sense. ● a(n) = sum(sum(binomial(n, i) * binomial(n - i, j) * add(binomial(n - i - j, p) * S(p, j) * j! * B(n - i - j - p), p = j .. n - i - j), j = 0 .. floor((n - i) / 2))), i = 0 .. n), where B(n) is the n - th Bell number and S(n,k) is the Stirling number of the second kind. ● a(n) = Sum _{ j=1..n } (j + 1) * binomial(n - 1,j - 1) * a(n - j) for n>0, a(0)=1. - _ Alois P. Heinz _ , Aug 29 2019 ●

▶ [A144495] 2,7,30,155,946,6687,53822,486355,4877250,53759351,646098622,8409146187,117836551730,1768850337295,28318532194206,481652022466307,8673291031865602,164849403644999655,3297954931572397790,69274457019123638011,1524368720086682440242 ⋆ Row 2 of array in A144502. ● a(n) = (1 / 2) * (floor((n + 1) * (n + 1)! * e) + floor(n * n! * e)). [_ Gary Detlefs _ , Jun 06 2010] ● a(n) = ((4 + 3 * n) * a(n - 1) - (n + 3) * (n - 1) * a(n - 2) + (n - 1) * (n - 2) * a(n - 3)) / 2. - _ Robert Israel _ , Oct 02 2016 ● a(n) = (1 / 2) * e * Integral _{ x >= 1 } x ^ n * (x ^ 2 - 1) * exp(- x). ● a(2 * n) is even and a(2 * n + 1) is odd. More generally, a(n + k) == a(n) (mod k) for all n and k. It follows that for each positive integer k, the sequence obtained by reducing a(n) modulo k is periodic, with the exact period dividing k. Various divisibility properties of the sequence follow from this; for example, a(3 * n + 2) == 0 (mod 3), a(5 * n + 2) == a(5 * n + 3) (mod 5), a(7 * n + 1) == 0 (mod 7) and a(11 * n + 4) == 0 (mod 11). (End) ●

► [A066114] 1,2,7,30,156,960,6840,55440,504000,5080320,56246400,678585600,8861529600,124540416000,1874333260800,30076510464000,512608352256000,9247873130496000,176065276907520000,3527707911856128000,74203511249387520000 ⋆ a(0) = 1; for n > 0, a(n) = (n! * (3 * n + 1)) / 2. ● a(n) = n - th derivative of (1 + 2 / x + 3 / x ^ 2) / 2 at - 1. - _ Luc Rousseau _ , May 03 2022 ●

► [A088128] 1,2,7,30,157,970,6931,56294,512569,5173074,57330271,692227822,9045871957,127205130650,1915394962027,30748771424310,524265894691441,9461374592096674,180184121539899319,3611206508019111614,75978292413560272334 1,1674381620327287502442 ⋆ Expansion of e.g.f.: cosh(x) / (1 - x) ^ 2. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n,2 * k) * (n - 2 * k + 1)!. - _ Ilya Gutkovskiy _ , Apr 10 2022 ●

► [A114198] 1,2,7,31,142,659,3113,14918,72199,351983,1726022,8504509,42070429,208812722,1039387519,5186451311,25935769702,129942777227,652133298421,3277734587302,16496741964221,83129076840317,419362231888882 ⋆ a(n) = Sum _{ k=0..n } binomial(n,k) ^ 2 * F(k + 1). ● a(n) = (phi ^ (n - 1) * P _ n(sqrt(5) - 2) - (1 - phi) ^ (n - 1) * P _ n(- sqrt(5) - 2)) / sqrt(5), where phi = (1 + sqrt(5)) / 2, P _ n(x) is the Legendre polynomial. ●

► [A055836] 2,7,31,145,701,3458,17298,87417,445225,2281565,11750245,60763950,315315014,1641046720,8562466432,44775095601,234594444741,1231249999640,6472043549400,34067089542255,179543120927115 ⋆ T(2n + 2, n), where T is the array in A055830. ● a(n) = binomial(2 * n + 1,n) + Sum _{ i=ceiling(n / 2)..n } binomial(i + 1,n - i + 1) * binomial(n + i,n). - _ Vladimir Kruchinin _ , Nov 26 2014 ● a(n) = C(c + 1,n - c + 1) * C(n + c,n) * hypergeom([1,c + 2, - n + c - 1,n + c + 1],[c + 1, - n / 2 + c + 1 / 2, - n / 2 + c + 1], - 1 / 4) where c=ceiling(n / 2). - _ Peter Luschny _ , Nov 28 2014 ●

► [A369622] 1,2,7,31,151,783,4243,23740,136099,795321,4719980,28370532,172357487,1056658346,6528779587,40614467912,254167595939,1599012530917,10107091256418,64155246033712,408780285886008,2613634555525584,16763436345211527,107827070566159112 ⋆ Expansion of (1 / x) * Series _ Reversion(x / (1 / (1 - x) ^ 2 + x ^ 3)). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 3) } binomial(n + 1,k) * binomial(3 * n - 5 * k + 1,n - 3 * k). ●

► [A369265] 1,2,7,31,153,806,4439,25250,147193,874732,5279635,32276245,199439761,1243633652,7815804351,49455190791,314807497953,2014530780524,12952334769203,83628832755779,542022781854953,3525150296312984,22998642171764363,150478455899387966 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 - x) ^ 2 / (1 + x ^ 3)). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 3) } binomial(n + 1,k) * binomial(3 * n - 3 * k + 1,n - 3 * k). ●

► [A369297] 1,2,7,31,153,806,4440,25266,147364,876282,5292527,32378125,200218715,1249456536,7858638756,49766595855,317051378103,2030589300596,13066646029059,84439101344619,547746622599561,3565472378360110,23282050305073680,152466688160732190 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 - x) ^ 2 * (1 - x ^ 3)). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 3) } binomial(n + k,k) * binomial(3 * n - 3 * k + 1,n - 3 * k). ●

► [A366052] 1,2,7,31,154,819,4559,26226,154664,930040,5680920,35150493,219850505,1387717660,8828668582,56553846890,364449091112,2361118198094,15369247139879,100468188756849,659271433474584,4341140182940382,28675590236716905 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 - x) ^ 3 / (1 - x + x ^ 3)). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 3) } binomial(n + 1,k) * binomial(3 * n - 2 * k + 1,n - 3 * k). ●

► [A368931] 1,2,7,31,154,819,4560,26244,154874,932074,5698745,35297535,221016593,1396717756,8896798020,57062237502,368201804973,2388587515239,15568995139404,101913055166811,669678357109300,4415837460391845,29210203356645090 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 - x) * (1 - x - x ^ 3)). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 3) } binomial(n + k,k) * binomial(3 * n - 2 * k + 1,n - 3 * k). ●

► [A007863] 1,2,7,31,154,820,4575,26398,156233,943174,5785416,35955297,225914342,1432705496,9158708775,58954911423,381806076426,2485972170888,16263884777805,106858957537838,704810376478024,4664987368511948,30974829705533240,206266525653071416 ⋆ Number of hybrid binary trees with n internal nodes. ● a(n) = 3F2({- n, n + 1, n + 2 } ; { 1, 3 / 2 })(- (1 / 4)). - _ Olivier Gérard _ , Apr 23 2009 ● a(n) = (1 / (n + 1)) * Sum _{ k=0..n } binomial(n + k,n) * binomial(n + k + 1,n - k). - _ Vladimir Kruchinin _ , Dec 24 2010 ●

► [A369214] 1,2,7,31,155,833,4696,27393,163944,1001022,6211049,39048685,248213672,1592561156,10300192220,67083304750,439571860881,2895898913453,19169805142929,127442939722175,850536450459795,5696270624620125,38271171118343550 ⋆ Expansion of (1 / x) * Series _ Reversion(x * ((1 - x) ^ 2 - x ^ 3)). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 3) } binomial(n + k,k) * binomial(3 * n - k + 1,n - 3 * k). ●

► [A125275] 1,1,2,7,31,162,968,6481,47893,386098,3364562,31460324,313743665,3320211313,37124987124,436985496790,5397178181290,69748452377058,940762812167126,13213888481979449,192891251215160017 ⋆ Eigensequence of triangle A039599: a(n) = Sum _{ k=0..n - 1 } A039599(n - 1,k) * a(k) for n > 0 with a(0) = 1. ● a(n) = Sum _{ k=0..n - 1 } a(k) * C(2 * n - 1, n - k - 1) * (2 * k + 1) / (2 * n - 1) for n > 0 with a(0) = 1. ●

► [A002872] 1,2,7,31,164,999,6841,51790,428131,3827967,36738144,376118747,4086419601,46910207114,566845074703,7186474088735,95318816501420,1319330556537631,19013488408858761,284724852032757686,4422344774431494155,71125541977466879231 ⋆ Number of partitions of { 1..2n } that are invariant under a permutation consisting of n 2 - cycles. ● a(n) = Sum _{ k=0..2n } Aeven(n,k). (End) ●

► [A260532] 1,2,7,31,165,1025,7310,59284,543702,5618267,65200918,846462826,12229783811,195394019337,3427472046792,65526442181293,1355785469986828,30166624979467869,717769036033944699,18174105506247664633,487655384740384445407,13816406622559942660420 ⋆ Coefficients in asymptotic expansion of sequence A051295. ● a(k) ~ 2 * (k - 1)! / (log(2)) ^ k. ●

► [A193657] 1,2,7,31,165,1031,7423,60621,554249,5611771,62353011,754471433,9876716941,139097096919,2097156230471,33704296561141,575219994643473,10389911153247731,198019483156015579 ⋆ First difference of A002627. ● a(n) = 1 - n * Gamma(n + 1) + e * n * Gamma(n + 1,1). - _ Peter Luschny _ , May 30 2014 ● a(n) + (- n - 2) * a(n - 1) + (n - 1) * a(n - 2)=0. - _ R. J. Mathar _ , May 30 2014 ● a(1) = 2 and a(n) = (n ^ 2 * a(n - 1) - 1) / (n - 1) for n >= 2. See A082425 for solutions to this recurrence with different starting values. ●

► [A245313] 1,1,2,7,31,176,1158,8919,76751,742597,7865088,91553100,1150905332,15665172108,227991734414,3554320236911,58795765799791,1033303679424539,191510798946826 74,3746629488149988 55,76911312230115512 55,16578596967393557590 4,37341706687414194885 52 ⋆ G.f. satisfies: A(x) = 1 + x * A(x) + x ^ 2 * A(x) ^ 2 + 3 * x ^ 3 * A(x) * A'(x) + x ^ 4 * A(x) * A''(x). ● a(n) = [x ^ n] G(x) ^ (n + 1) / (n + 1) for n>=0 where G(x) is the g.f. of A245312. ● a(n) = [x ^ (n + 2)] G(x) ^ (n + 1) / (n + 1) ^ 3 for n>=0 where G(x) is the g.f. of A245312. ●

► [A047850] 1,2,7,32,157,782,3907,19532,97657,488282,2441407,12207032,61035157,305175782,1525878907,7629394532,38146972657,190734863282,953674316407,4768371582032,23841857910157,119209289550782,596046447753907 ⋆ a(n) = (5 ^ n + 3) / 4. ● a(n) = 6 * a(n - 1) - 5 * a(n - 2) for n > 1. ● a(n) = 5 * a(n - 1) - 3 (with a(0)=1). - _ Vincenzo Librandi _ , Aug 06 2010 ●

► [A201373] 2,7,32,157,786,3739,15574,55410,170616,465037,1145954,2597729,5492076,10947133,20749996,37660122,65814022,111254955,182614908,291980013,455974718,697104503,1045401722,1540424266,2233662188 ⋆ Number of n X 6 0..1 arrays with rows and columns lexicographically nondecreasing read forwards, and nonincreasing read backwards. ● a(n) = 11 * a(n - 1) - 55 * a(n - 2) + 165 * a(n - 3) - 330 * a(n - 4) + 462 * a(n - 5) - 462 * a(n - 6) + 330 * a(n - 7) - 165 * a(n - 8) + 55 * a(n - 9) - 11 * a(n - 10) + a(n - 11) for n>11. ●

► [A226994] 1,2,7,32,161,842,4495,24320,132865,731282,4048727,22523360,125797985,704966810,3961924127,22321190912,126027618305,712917362210,4039658528935,22924714957472,130271906898721,741188107113962,4221707080583087,24070622500965632 ⋆ Number of lattice paths from (0,0) to (n,n) consisting of steps U=(1,1), H=(1,0) and S=(0,1) such that the first step leaving the diagonal (if any) is an H step. ● a(n) = 1 / 2 + LegendreP(n, 3) / 2. - _ Benedict W. J. Irwin _ , Oct 06 2016 ● a(n) = 1 + Sum _{ k=1..n } binomial(n,k) ^ 2 * 2 ^ (k - 1). - _ Ilya Gutkovskiy _ , Nov 15 2021 ●

► [A369267] 1,2,7,32,163,884,5009,29310,175750,1074264,6668825,41929970,266464579,1708829584,11044663663,71871779008,470495357634,3096311833496,20472771422946,135937759368388,906056228361095,6059922934991008,40657629626645463 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 - x) ^ 2 / (1 + x ^ 3) ^ 2). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 3) } binomial(2 * n + 2,k) * binomial(3 * n - 3 * k + 1,n - 3 * k). ●

► [A369298] 1,2,7,32,163,884,5011,29342,176092,1077384,6695093,42140930,268108170,1721372836,11138994028,72573587520,475674650717,3134297846792,20750020222815,137953554890508,920667400056250,6165565645765092,41419898169301995 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 - x) ^ 2 * (1 - x ^ 3) ^ 2). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 3) } binomial(2 * n + k + 1,k) * binomial(3 * n - 3 * k + 1,n - 3 * k). ●

► [A368962] 1,2,7,32,165,910,5251,31314,191463,1193808,7561825,48522630,314752515,2060587112,13597183916,90342651982,603886553067,4058197580308,27401404029181,185806213609730,1264774546754103,8639226724499070,5919840468004991 5 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 - x - x ^ 3) ^ 2). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 3) } binomial(2 * n + k + 1,k) * binomial(3 * n - 2 * k + 1,n - 3 * k). ●

► [A108524] 1,2,7,32,166,926,5419,32816,203902,1292612,8327254,54358280,358769152,2390130038,16051344307,108548774240,738563388214,5052324028508,34727816264050,239733805643552,1661351898336676,11553558997057772,80603609263563262,563972937201926432 ⋆ Number of ordered rooted trees with n generators. ● a(n) = sum(i=1..n + 1, (i * C(n + 1,i) * sum(j=0..n - i, (- 1) ^ j * 2 ^ (n - j) * C(n,j) * C(2 * n - j - i - 1,n - 1))) / 2 ^ i) / (n * (n + 1)). - _ Vladimir Kruchinin _ , May 10 2011 ● a(n) is upper left term in the following infinite square production matrix: ●

► [A366400] 1,2,7,32,167,942,5593,34438,217888,1407938,9252168,61641846,415412036,2826736736,19395080061,134034296976,932110471089,6518146460274,45805553781349,323313555424924,2291130483593189,16294149468133930,116259325138469680 ⋆ G.f. A(x) satisfies A(x) = (1 + x * A(x) ^ (5 / 2)) / (1 - x). ● a(n) = Sum _{ k=0..n } binomial(n + 3 * k / 2,n - k) * binomial(5 * k / 2,k) / (3 * k / 2 + 1). ●

► [A125277] 1,1,2,7,32,169,981,6113,40386,280871,2047316,15595317,123876270,1024188790,8799533250,78443220865,724472766347,6922133112818,68331103658847,695983854400857,7305630631254242,78941171881894716 ⋆ Eigensequence of triangle A110616: a(n) = Sum _{ k=0..n - 1 } A110616(n - 1,k) * a(k) for n>0 with a(0)=1. ● a(n) = Sum _{ k=0..n - 1 } a(k) * C(3 * n - 2 * k - 2,n - k - 1) * (k + 1) / (3 * n - 2 * k - 2) for n>0 with a(0)=1. ●

► [A179488] 1,1,2,7,32,172,1052,7177,53792,437992,3841772,36060262,360234512,3812425912,42576007352,500022862357,6157034292032,79278216024592,1064888929532492,14890014669234922,216315676347260912 ⋆ G.f.: A(x) satisfies A(x) = x / (1 - (1 - 2x) * A(x / (1 - 2x))). ● a(n) = upper left term of M ^ (n - 1), M = an infinite square production matrix as follows (with the odd integers as the main diagonal): ●

► [A005362] 1,2,7,32,177,1122,7898,60398,494078,4274228,38763298,366039104,3579512809,36091415154,373853631974,3966563630394,42997859838010,475191259977060,5344193918791710,61066078557804360,707984385321707910,8318207051955884772,98936727936728464152 ⋆ Hoggatt sequence with parameter d=4. ● a(n) = Hypergeometric4F3([- 3 - n, - 2 - n, - 1 - n, - n], [2, 3, 4], 1). ● a(n) = S(4,n) where S(d,n) is defined in A005364. - _ Sean A. Irvine _ , May 29 2016 ●

► [A190123] 1,1,2,7,32,177,1184,9175,81280,810081,8967168,109200551,1450641408,20876239633,323542851584,5372445971063,95157141241856,1790769169786049,35682993123753984,750523142329023815,16616642326426025984,386288476226459349361,9407703499451286945792 ⋆ Expansion of e.g.f.: 1 / (1 - tan(sin(x))). ● a(n) = Sum _{ m=1..n } Sum _{ k=m..n } ((((- 1) ^ (k - m) + 1) * (Sum _{ j=m..k } binomial(j - 1,m - 1) * j! * 2 ^ (k - j - 1) * stirling2(k,j) * (- 1) ^ ((m + k) / 2 + j),j,m,k)) * ((- 1) ^ (n - k) + 1) * Sum _{ i=0..k / 2 } (2 * i - k) ^ n * binomial(k,i) * (- 1) ^ ((n + k) / 2 - i))) / (2 ^ k * k!))), n>0, a(0)=1. ●

► [A121555] 1,2,7,32,178,1164,8748,74304,704016,7362720,84255840,1047358080,14054739840,202514376960,3118666924800,51119166873600,888640952371200,1

6330301780889600,3163224201145344 00,6441691128993792000 ⋆ Number of 1 - cell columns in all deco polyominoes of height n. ● a(1)=1, a(n) = n * a(n - 1) + (n - 2)! * (n - 2) for n>=2. ● a(n) = n! * (h(n) - (n - 1) / n), where h(n)=sum(1 / k,k=1..n). [_ Gary Detlefs _ , Aug 13 2010] ●

▶ [A351813] 1,1,2,7,32,179,1184,8977,76391,719132,7405261,82654011,992533974,12744345310,174073918884,2518084939316,38429337167618,616676966998463,10374679318111371,182506045254212184,3349265281648290030,63984975864984809787,1270096455615572678617 ⋆ G.f. A(x) satisfies: A(x) = 1 + x * A(x / (1 - x) ^ 3) / (1 - x). ● a(0) = 1; a(n) = Sum _{ k=0..n - 1 } binomial(n + 2 * k - 1,n - k - 1) * a(k). ●

▶ [A097900] 1,2,7,32,180,1200,9240,80640,786240,8467200,99792000,1277337600,17643225600,261534873600,4140968832000,69742632960000,1244905998336000,23475370254336000,466306218233856000,9731608032706560000 ⋆ Number of runs of length 1 in all permutations of [n]. (The permutation 3574162 has two runs of length 1: 357 / 4 / 16 / 2.) ● a(n) = n! * (n + 4) / 6 for n >= 2. ●

▶ [A373772] 1,1,2,7,32,180,1210,9450,84000,836920,9234400,111742400,1471023400,20925905000,319830310800,5226116295400,90906373958400,1676967192700800,32697692264036800,671856896755844800,14509136903381120000,328520930667097168000 ⋆ Expansion of e.g.f. exp(x ^ 3 / (6 * (1 - x))) / (1 - x). ● a(n) = n! * Sum _{ k=0..floor(n / 3) } binomial(n - 2 * k,n - 3 * k) / (6 ^ k * k!). ●

▶ [A000153] 0,1,2,7,32,181,1214,9403,82508,808393,8743994,103459471,1328953592,18414450877,273749755382,4345634192131,73362643649444,1312349454922513,24796092486996338,493435697986613143,10315043624498196944 ⋆ a(n) = n * a(n - 1) + (n - 2) * a(n - 2), with a(0) = 0, a(1) = 1. ● a(n) = round(1 / 2 * (n ^ 2 + 3 * n + 1) * n! / exp(1)) / n , n>=1. - _ Simon Plouffe _ , March 1993 ● a(n) = hypergeom([3, - n + 1], [], 1)) * (- 1) ^ (n + 1) for n>=1. - _ Peter Luschny _ , Sep 20 2014 ● a(n) = KummerU(- n + 1, - n - 1, - 1) for n >= 1. - _ Peter Luschny _ , May 10 2022 ● a(n) = (n ^ 2 + 3 * n + 1) * Gamma(n, - 1) / (2 * exp(1)) + (1 + n / 2) * (- 1) ^ n for n >= 1. - _ Martin Clever _ , Apr 06 2023 ●

▶ [A006154] 1,1,2,7,32,181,1232,9787,88832,907081,10291712,128445967,1748805632,25794366781,409725396992,6973071372547,126585529106432,2441591202059281,49863806091395072,1074927056650469527,24392086908129247232,581176736647853024581 ⋆ Number of labeled ordered partitions of an n - set into odd parts. ● a(0) = a(1) = 1, a(n) = Sum _{ k=1..ceiling(n / 2) } C(n,2 * k - 1) * a(n - 2 * k + 1). - _ Ralf Stephan _ , Apr 29 2004 ● a(n) = Sum _{ k=1..n } Sum _{ i=0..k } (- 1) ^ i * (k - 2 * i) ^ n * binomial(k,i) / 2 ^ k, n > 0, a(0)=1. - _ Vladimir Kruchinin _ , May 28 2011 ● a(n) = D ^ n(1 / (1 - x)) evaluated at x = 0, where D is the operator sqrt(1 + x ^ 2) * d / dx. Cf. A003724 and A000111. - _ Peter Bala _ , Dec 06 2011 ●

▶ [A189780] 1,1,2,7,32,189,1328,11019,104064,1111641,13166592,172006671,2448559104,37814647701,628513744896,11201565483219,212867324706816,4299987047933745 ⋆ E.g.f.: 1 / (1 - arcsin(x)). ● a(n)= (n - 1)! * sum(m=1..n - 1, m * (1 + (- 1) ^ (n - m)) / 2 * sum(k=1..n - m (sum(j=1..k, binomial(k,j) * 2 ^ (1 - j) * sum(i=0..floor(j / 2), (- 1) ^ ((n - m) / 2 - i - j) * binomial(j,i) * (j - 2 * i) ^ (n - m + j) / (n - m + j)!))) * binomial(k + n - 1,n - 1))) + n!, n>0, a(0)=1. ●

▶ [A270229] 1,2,7,32,193,1382,11719,112604,1221889,14639786,192949639,2760749048,42732172993,709490574158,12596398359367,237750425419508,4757710386662401,100516614496518866,2236829315345704711,52262526676903613264,1279512810244450887361 ⋆ Number of matchings (i.e., Hosoya index) in P _{ 2 } X K _{ n } . ● a(n) = (n + 1) * a(n - 1) + (n - 1) ^ 2 * a(n - 2) - (n - 2) * (n - 1) ^ 2 * a(n - 3) + (n - 3) * (n - 2) * (n - 1) * a(n - 4). ●

▶ [A112006] 0,1,2,7,32,194,1473,13424,142722,1734155,23704880,360035434,6015135425,109631190368,2164636394634,46027826357795,1048622566013472,25482771281706578,657965393430769025,17988006311731338448 ⋆ A logarithmic transform of the Fibonacci numbers A000045. ● a(n) = Fibonacci(n) + Sum _{ k=1..n - 1 } binomial(n - 1,k - 1) * a(k) * Fibonacci(n - k). - _ Ilya Gutkovskiy _ , Jul 11 2020 ●

▶ [A162257] 2,7,33,82,160,273,427,628,882,1195,1573,2022,2548,3157,3855,4648,5542,6543,7657,8890,10248,11737,13363,15132,17050 ⋆ a(n) = (2 * n ^ 3 + 5 * n ^ 2 - 11 * n) / 2. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). (End) ●

▶ [A366237] 1,2,7,33,161,843,4601,25896,149254,876480,5225616,31547730,192470212,1184804588,7349888208,45902094845,288368474907,1821096958308,11554270204142,73615309821574,470795634833760,3021222108762826,19448517295201332 ⋆ G.f. A(x) satisfies A(x) = 1 + x + x * (1 + x) ^ 3 * A(x) ^ 2. ● a(n) = Sum _{ k=0..n } binomial(4 * k + 1,n - k) * binomial(2 * k,k) / (k + 1). ●

▶ [A369269] 1,2,7,33,173,962,5586,33498,205846,1289386,8202247,52845855,344129832,2261377872,14976646685,99863119809,669860309538,4517037850220,30603008068997,208211448723097,1421986458302466,9745007758311114,66993247112160800 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 - x) ^ 2 / (1 + x ^ 3) ^ 3). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 3) } binomial(3 * n + 3,k) * binomial(3 * n - 3 * k + 1,n - 3 * k). ●

▶ [A369300] 1,2,7,33,173,962,5589,33546,206359,1294096,8242375,53173095,346724250,2281555440,15131448440,101038950441,678724811604,4583483218340,31098830566098,211898222878937,1449322361547669,9947227335902244,68486384818253877 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 - x) ^ 2 * (1 - x ^ 3) ^ 3). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 3) } binomial(3 * n + k + 2,k) * binomial(3 * n - 3 * k + 1,n - 3 * k). ●

▶ [A054727] 1,2,7,33,181,1083,6854,45111,305629,2117283,14929212,106790500,773035602,5652275723,41683912721,309691336359,2315772552485,17415395593371,131632335068744,999423449413828,7618960581522348,58295017292748756,447517868947619432,3445923223190363608 ⋆ Number of forests of rooted trees with n nodes on a circle without crossing edges. ● a(n) = Sum _{ j=1..n } binomial(n, j - 1) * binomial(3 * n - 2 * j - 1, n - j) / (2 * n - j). ●

▶ [A086618] 1,2,7,33,183,1118,7281,49626,349999,2535078,18758265,141254655,1079364105,8350678170,65298467487,515349097713,4100346740511,32858696386766,265001681344569 ⋆ a(n) = Sum { k=0..n } binomial(n,k) ^ 2 * C(k), where C() = A000108() are the Catalan numbers. ● a(n) = hypergeom([1 / 2, - n, - n], [1,2], 4). - _ Vladimir Reshetnikov _ , Oct 03 2016 ●

▶ [A162661] 1,1,2,7,33,189,1249,9237,74972,659042,6215154,62435805,664459091,7458334388,87979090059,1087309348481,14041705640439,189050930463638,2648140182064473,38521885088392896,580970615943277573 ⋆ G.f. satisfies: A(x) = 1 + x * A(x) * A(x * A(x) ^ 2). ● a(n,m) = Sum _{ k=0..n } m * C(2n - k + m,k) / (2n - k + m) * a(n - k,k). ●

▶ [A299043] 1,1,2,7,33,191,1293,9941,85137,801067,8194281,90367696,1067146336,13418399528,178808377777,2514944176091,37204969293137,577131827509491,9362170099804501,158438822236836110,2791230865213193695,51090157185364462103,969892719975254406849,19066076629590290124814,387539455534509836620517 ⋆ G.f. Sum _{ n>=0 } Series _ Reversion(x * (1 - x) ^ n) ^ n. ● a(n) = Sum _{ k=0..n } binomial(n * (n - k) + k, k) * (n - k) ^ 2 / (n * (n - k) + k). ●

▶ [A104981] 0,1,2,7,33,191,1297,10063,87669,847015,8989301,103996703,1303132269,17589153719,254509227541,3931158238735,64573130459613,1124144767682215,20677664894412965,400760695386194687,8163539437728923181 ⋆ Column 1 of triangle A104980; also equals column 0 of triangle A104986, which equals the matrix logarithm of A104980. ● a(n) = sum of top row terms of M ^ (n - 1). Example: top row of M ^ 4 = (71, 71, 38, 10, 1), sum = 191 = a(5). (End) ●

▶ [A058797] 0,1,1,1,2,7,33,191,1304,10241,90865,898409,9791634,116601199,1506023953,20967734143,313009988192,4987192076929,84469255319601,1515459403675889,28709259414522290,572669728886769911,11997355047207645841 ⋆ a(n) = n * a(n - 1) - a(n - 2), with a(- 1) = 0, a(0) = 1. ● a(n) is asymptotic to c * n! with c = BesselJ(0, 2) = Sum (- 1) ^ k / (k!) ^ 2 = 0.223890779... (A091681). - _ Franklin T. Adams - Watters _ and Alec Mihailovs (alec(AT)mihailovs.com), Aug 17 2005 ● a(n) = Pi * (BesselJ[n + 1, 2] * BesselY[0, 2] - BesselJ[0, 2] * BesselY[n + 1, 2]). - _ Roger L. Bagula _ , Sep 03 2006. [Offset adapted. - _ Wolfdieter Lang _ , Mar 08 2013] ● a(n + 2) * (a(n) + a(n + 1) + a(n + 2)) = a(n + 1) * (a(n + 1) + a(n + 3)) for all n in Z. - _ Michael Somos _ , Mar 07 2011 ● a(- 2 - n) = - (- 1) ^ n * a(n) for all n in Z. - _ Michael Somos _ , Mar 07 2011 ●

▶ [A121965] 0,1,1,1,2,7,33,191,1304,10241,90865,898409,9791634,116601199,1506023953,20967734143,313009988192,4987192076929,84469255319601,1515459403675889,28709259414522290,572669728886769911,11997355047207645841,2633691413096814385 91 ⋆ a(n) = (n - 1) * a(n - 1) - a(n - 2), a(0)=0, a(1)=1. ● a(n) = (J _ n(2) * Y _ 0(2) - J _ 0(2) * Y _ n(2)) / (J _ 1(2) * Y _ 0(2) - J _ 0(2) * Y _ 1(2)) where J and Y are Bessel functions. ● a(- n) = (- 1) ^ n * a(n). - _ Michael Somos _ , Jan 28 2014 ● a(n + 1) = Sum _{ k=0..n / 2 } (- 1) ^ k * (n - k)! / k! * binomial(n - k, k) if n>= - 1. - _ Michael Somos _ , Jan 28 2014 ●

▶ [A337058] 1,1,2,7,33,191,1323,10711,99151,1032385,11943003,151979213,2109829857,31730171539,513903517585,8917723105003,165065061436755,3246274767649637,67598797715175999,1485845872704318265,34378343609138619685,835190283258080561671 ⋆ E.g.f.: 1 / (2 + x ^ 2 / 2 - exp(x)). ● a(0) = 1; a(n) = n * a(n - 1) + Sum _{ k=3..n } binomial(n,k) * a(n - k). ●

▶ [A006595] 1,2,7,33,192,1320,10440,93240,927360,10160640,121564800,1576713600,22034073600,330032102400,5274286617600,89575694208000,1611054821376000,30589118816256000,611426688897024000,12833558093131776000,282216632948490240000 ⋆ a(n) = (n + 2)! / 4 + n! / 2. ● a(n) + (- n - 2) * a(n - 1) + 2 * a(n - 2) + 2 * (- n + 2) * a(n - 3)=0. - _ R. J. Mathar _ , May 30 2014 ●

▶ [A059099] 1,2,7,33,198,1453,12669,128320,1482721,19260421,277913552,4410640919,76360030701,1432144732762,28926138244883,625974400305541,14449445989893990,354384475357492593,9202837263156670345 ⋆ Expansion of exp(exp(x) - 1) / (2 - exp(x)). ● a(n) = Sum _{ m=0..n } Sum _{ i=0..n } stirling2(n, i) * Product _{ j=1..m } (i - j + 1). ●

▶ [A222940] 2,7,33,273,2433,21873,196833,1771473,15943233,143489073,1291401633,11622614673,104603532033,941431788273,8472886094433,76255974849873,686303773648833,6176733962839473,55590605665555233,500315450989997073 ⋆ Number of n X 2 0..4 arrays with no element equal to another at a city block distance of exactly two, and new values 0..4 introduced in row major order. ● a(n) = 3 + 10 * 3 ^ (2 * n - 5) for n>2 ●

▶ [A206240] 1,1,2,7,34,192,1206,8033,55974,403016,2977866,22464381,172388026,1341929845,10573800028,84192383755,676491536028,5479185281572,44692412971566,366844007355202,3028143252035976,25123376972033392,209401287806758273,1752674793617241002 ⋆ Number of partitions of n ^ 2 - n into parts not greater than n. ● a(n) = [x ^ (n ^ 2 - n)] Product _{ k=1..n } 1 / (1 - x ^ k). ●

▶ [A199475] 1,2,7,34,195,1225,8146,56336,401005,2918308,21614216,162385693,1234515922,9479336440,73410868630,572719097908,4496923141241,35509806367132,281814387290431,2246608404455588,17982234787607464,144458551104066553,1164342291135424494 ⋆ G.f. satisfies: A(x) = Sum _{ n>=0 } x ^ n * (1 - A(x) ^ (2 * n + 2)) / (1 - A(x) ^ 2). ● a(n) = 1 + Sum _{ i=0..n - 1 } Sum _{ j=0..n - i - 1 } a(i) * a(j) * a(n - i - j - 1). - _ Ilya Gutkovskiy _ , Jul 25 2021 ●

▶ [A237645] 1,1,2,7,34,201,1357,10109,81397,698948,6341597,60391832,600661215,6215862360,66726103981,741259084280,8504902411004,100618874020119,1225724374602147,15356200178917791,197646961110310062,2610956607315266757,35370366025297098315 ⋆ G.f. satisfies: A(x) = G(x * A(x)) where G(x) = - 1 + x + A(x) + 1 / A(x). ● a(n) = [x ^ n] (- 1 + x + A(x) + 1 / A(x)) ^ (n + 1) / (n + 1). ●

▶ [A145345] 1,1,2,7,34,203,1398,10706,89120,794347,7502170,74511150,773864654,8368430208,93905460014,1090519614152,13077315637592,161643281777801,2056306418177832,26887064722265250,360939404438509866 ⋆ G.f. satisfies: A(x / A(x)) = 1 + x * A(x). ● a(n) = [x ^ (n - 1)] (2 / (n + 1)) * A(x) ^ (n + 1) for n>=1 with a(0)=1; i.e., a(n) equals 2 / (n + 1) times the coefficient of x ^ (n - 1) in A(x) ^ (n + 1) for n>=1. - _ Paul D. Hanna _ , Nov 15 2008 ●

▶ [A056543] 1,1,2,7,34,203,1420,11359,102230,1022299,11245288,134943455,1754264914,24559708795,368395631924,5894330110783,100203611883310,1803665013899579,34269635264092000,685392705281839999,14393246810918639978,316615429840210079515,7282928286324831828844 ⋆ a(n) = n * a(n - 1) - 1 with a(1)=1. ● a(n) = n! * (2 - Sum _{ k=1..n }{ k! ^ (- 1) }), with n>=1. - _ Paolo P. Lava _ , Jun 25 2010 ●

▶ [A357829] 0,1,1,2,7,34,205,1456,11837,108150,1096011,12196128,147814359,1938062490,27333191613,412614191808,6638401596645,113398127795862,2049808 0

94564139,39091473755006400,784404343854767727,1652063466892281042 6,364400233375642255303 5 ★ a(n) = Sum _{ k=0..floor((n - 1) / 3) } |Stirling1(n,3 * k + 1)|. ● a(n) = ((1) _ n + w ^ 2 * (w) _ n + w * (w ^ 2) _ n) / 3, where (x) _ n is the Pochhammer symbol. ●

► [A075834] 1,1,1,2,7,34,206,1476,12123,111866,1143554,12816572,156217782,2057246164,29111150620,440565923336,7101696260883,121489909224618,2198572792193786,41966290373704332,842706170872913634,17759399688526009020,391929722837419044420 ★ Coefficients of power series A(x) such that n - th term of A(x) ^ n = n! x ^ (n - 1) for n > 0. ● a(0)=a(1)=1, a(n) = (n - 1) * a(n - 1) + Sum _{ j=2..n - 2 } (j - 1) * a(j) * a(n - j), n >= 2. - _ David Callan _ ●

► [A011800] 1,1,2,7,34,206,1486,12412,117692,1248004,14625856,187638716,2614602112,39310384192,634148436104,10923398137576,200069534481616,3882002527006352,79535575126745632,1715658099715217584 ★ Number of labeled forests of n nodes each component of which is a path. ● a(n) = n! * Sum _{ k=1..n } (Sum _{ i=0..n - k } binomial(k,n - k - i) * binomial(k + i - 1,k - 1) * 2 ^ (- n + k + i) * (- 1) ^ (n - k - i)) / k!, n > 0, a(0) = 1. - _ Vladimir Kruchinin _ , Nov 25 2012 ●

► [A145845] 1,2,7,34,208,1504,12283,109778,1050820,10614856,111978128,1224261856,13792583296,159411938560,1883550536707,22687603653106,277940485660012,3456490397570392,43565433620294908,555752354850506312,7167182317486700416,93348781597357983232,1226830676118851157712 ★ Number of permutations of length 2n + 1 which are invariant under the reverse - complement map and have no decreasing subsequences of length 5. ● a(n) = sum(j=0, n, C(n,j) ^ 2 * (1 / ((j + 1) ^ 2 (j + 2))) * sum(i=0, j, C(2 * i,i) * C(j + 1,i + i) * C(j + 2,i + 1))) where C(n,j) = n! / (j!(n - j)!). ●

► [A002720] 1,2,7,34,209,1546,13327,130922,1441729,17572114,234662231,3405357682,53334454417,896324308634,16083557845279,306827170866106,6199668952527617,132240988644215842,2968971263911288999,69974827707903049154,1727194482044146637521,44552237162692939114282 ★ Number of partial permutations of an n - set; number of n X n binary matrices with at most one 1 in each row and column. ● a(n) = Sum _{ k=0..n } k! * C(n, k) ^ 2. ● a(n) = Sum _{ k>=0 } (k + n)! / ((k!) ^ 2 * exp(1)). - _ Robert G. Wilson v _ , May 02 2002 [corrected by _ Vaclav Kotesovec _ , Aug 28 2012] ● a(n) = Sum _{ k=0..n } C(n, k)n! / k!. - _ Paul Barry _ , May 07 2004 ● a(n) = Sum _{ k=0..n } P(n, k) * C(n, k); a(n) = Sum _{ k=0..n } n! ^ 2 / (k! * (n - k)! ^ 2). - _ Ross La Haye _ , Sep 20 2004 ● a(n) = Sum _{ k=0..n } (- 1) ^ (n - k) * Stirling1(n, k) * Bell(k + 1). - _ Vladeta Jovovic _ , Mar 18 2005 ● a(n) = (n! / e) * Sum _{ k>=0 } binomial(n + k,n) / k!. - _ Gottfried Helms _ , Nov 25 2006 ●

► [A074059] 1,1,2,7,34,213,1630,14747,153946,1821473,24087590,352080111,56364517 94,98081813581,1843315388078,37209072076483,802906142007946,18443166021077145,449326835001457846 ★ Dimension of the cohomology ring of the moduli space of n - pointed curves of genus 0 satisfying the associativity equations of physics (also known as the WDVV equations). ● a(n) = D ^ n(exp(x)) evaluated at x = 0, where D is the operator 1 / (1 - x) * exp(- x) * d / dx. Cf. A061356. - _ Peter Bala _ , Dec 08 2011 ● a(1) = 1; a(n) = a(n - 1) + Sum _{ k=2..n - 1 } binomial(n - 1,k) * a(k) * a(n - k). - _ Ilya Gutkovskiy _ , Aug 28 2020 ●

► [A171792] 1,1,2,7,34,214,1652,15121,160110,1925442,25924260,386354366,6314171932,112286067892,2158562109096,44605949528355,986049177712850,23218586050641090,580198948211652348,15334750335623526670,427408226085246086676,12528910074528593086980 ★ G.f. A(x) satisfies: A(x) = (x + A(x + x ^ 2)) / 2 with A(0)=0. ● a(k) is odd iff k is a power of 2: a(2 ^ n) == 1 (mod 2) for n >=0. ●

► [A143740] 1,1,2,7,34,216,1696,15898,173468,2161036,30282076,471599316,8082816160,151218316120,3066890630168,67031194526416,1570793031033616,39290173530686544,1044871388684004304,29440090627527552976 ★ E.g.f. satisfies A(x) = exp(x + x ^ 2 / 2 * A(x)). ● a(n) = n! * Sum _{ k=0..floor(n / 2) } (1 / 2) ^ k * (k + 1) ^ (n - k - 1) / (k! * (n - 2 * k)!). (End) ●

► [A029894] 1,2,7,34,221,1736,15584,153228,1611189,17826202,205282376,2441437708,29816628471,372314544202,4737438631001,61264426341926,803488037899349,10668478221202710,143203795004873285,1940953294927992976,26536578116407809962,365653739580163294032 ★ Number of directed (or Gale - Ryser) graphical partitions: degree - vector pairs (in - degree, out - degree) for directed graphs (loops allowed) with n vertices; or possible ordered pair (row - sum, column - sum) vectors for a 0 - 1 matrix. ● a(n) = F(n, n, 0, n) where F(b, c, t, w) = Sum _{ i=0..b } Sum _{ j=ceiling((t + i) / w))..min(t + i, c) } F(i, j, t + i - j, w - 1) for w > 0, F(b, c, 0, 0) = 1 and F(b, c, t, 0) = 0 for t > 0. - _ Andrew Howroyd _ , Nov 01 2019 ●

► [A287327] 2,7,35,196,1127,6517,37730,218491,1265327,7327852,42437675,245768761,1423317602,8242841887,47736669995,276456796756,1601040887327,9272088633997,53697334226690,310976719148851,1800955694455127,10429852827143932,60402279928821635 ★ Number of independent vertex sets (and vertex covers) in the 2n - crossed prism graph. ● a(n) = 7 * a(n - 1) - 7 * a(n - 2) for n > 1. ●

► [A024719] 1,2,7,35,200,1201,7389,46149,291306,1853581,11868586,76380826,493606726,3201081874,20821158234,135776966762,887393271311,5811082966886,38119865826421,250447855600321,1647729357535486,10854207824989831,71581930485576631,472560922429972951,3122648143126315651 ★ a(n) = (1 / 3) * (2 + Sum _{ k=0..n } C(3k,k)). ● a(n) = Sum _{ k=0..n } C(k - n,2n - 2k). - _ Paul Barry _ , Mar 15 2010 ●

► [A172511] 1,1,2,7,35,210,1365,9165,62322,425867,2915551,19974626,136884937,938162617,6430103330,44072167855,302074043195,2070443441970,14191023001437,97266699113157,666675822475026,4569463931720051 ★ a(n) = a(n - 1) * (11 * a(n - 1) - a(n - 2)) / (a(n - 1) + 4 * a(n - 2)), with a(0) = a(1) = 1. ● a(0)=1, a(1)=1, a(2)=2, a(3)=7, a(4)=35, a(n)=11 * a(n - 1) - 33 * a(n - 2) + 33 * a(n - 3) - 11 * a(n - 4) + a(n - 5). - _ Harvey P. Dale _ , Nov 18 2013 ● a(n) = a(1 - n) for all n in Z. - _ Michael Somos _ , Sep 22 2014 ● a(n) = b(n + 1) * b(n) * b(n - 1) * b(n - 2) / 6 for all n in Z where b = A005247. - _ Michael Somos _ , Sep 22 2014 ●

► [A130458] 1,1,2,7,35,212,1428,10267,77135,598181,4751615,38461850,316092109,2630445194,22120687226,187690113725,1604795498322,13813404577299,119599962452008,1040921980534597,9101592487671717,79913794344218953 ★ Final term in the rows of triangle A130457: a(n) = A130457(n, 3n), for n>=0. ● a(n) = Sum _{ k=1..n } ((k * binomial(4 * n - 3 * k - 1,n - k)) / (3 * n - 2 * k)), n>0, a(0)=1. - _ Vladimir Kruchinin _ , Jun 27 2016 ●

► [A003575] 1,2,7,35,214,1523,12349,112052,1120849,12219767,1439429921819256321,24526654381,350974470746,5308470041299,84554039118383,1413794176669942,24745966692370607,452277149756692105,8612255652371171012,170517319084490074405 ★ Dowling numbers: e.g.f.: exp(x + (exp(b * x) - 1) / b) with b=3 . ● a(n) = exp(- 1 / 3) * Sum _{ k>=0 } (3 * k + 1) ^ n / (3 ^ k * k!). - _ Ilya Gutkovskiy _ , Apr 16 2020 ●

► [A350309] 1,2,7,35,215,1535,12455,113255,1141415,12632615,152341415,1988514215,27934434215,420236744615,6740662856615,114841743944615,2071122598472615,39418302548552615,789563088403016615,16603426141551176615,365724864314899016615,8421063413387754056615 ★ a(n) = (n + 2) * a(n - 1) + (n + 1) * (A003422(n) - 4) / 6 for n > 0 with a(0) = 1. ● a(n) = s(n, 2) for n >= 0. ●

► [A014307] 1,1,2,7,35,226,1787,16717,180560,2211181,30273047,458186752,7596317885,136907048461,2665084902482,55726440112987,1245661569161135,2964226472818906 6,748158516941653967,19962900431638852297,561472467839585937560,1660208829182201758812 1 ★ Expansion of the e.g.f. sqrt(exp(x) / (2 - exp(x))). ● a(n + 1) = 1 + Sum _{ j=1..n } (- 1 + binomial(n + 1,j)) * a(j). - _ Jon Perry _ , Apr 25 2005, corrected by _ Vaclav Kotesovec _ , Jan 07 2014 ● a(n) = Sum _{ m=1..n } (Sum _{ k=m..n } Stirling2(n,k) * k! * binomial(k - 1, m - 1)) * (1 / m) * binomial(2 * m - 2,m - 1) * (- 1) ^ (m - 1) / 2 ^ (m - 1)). ● a(0) = 1 and a(n) = a(n - 1) + Sum _{ k=1..n - 1 } binomial(n - 1, k - 1) * a(k) for n > 0. - _ Seiichi Manyama _ , Oct 20 2019 ● a(n) = Sum _{ k=0..n } (- 1) ^ (n - k) * Stirling2(n, k) * (2 * k - 1)!! (see Qi / Ward). - _ Peter Luschny _ , Oct 19 2021 ●

► [A003713] 0,1,2,7,35,228,1834,17582,195866,2487832,35499576,562356672,9794156448,186025364016,3826961710272,84775065603888,2011929826983504,50929108873336320,1369732445916318336,39005083331889816960,1172419218038422659456,37095226237402478348544 ★ Expansion of e.g.f. log(1 / (1 + log(1 - x))). ● a(0) = 0; a(n) = (n - 1)! + Sum _{ k=1..n - 1 } binomial(n - 1,k) * (k - 1)! * a(n - k). - _ Ilya Gutkovskiy _ , Jul 18 2020 ●

► [A192816] 0,1,2,7,36,173,806,3763,17608,82393,385482,1803487,8437740,39476613,184694254,864105611,4042781584,18914450865,88492648850,414019362743,1937020023220,9062490569821,42399528318646,198369310046307,928085399264344 ★ a(n) = A192815(n) / 2. ● a(n) = 5 * a(n - 1) - 3 * a(n - 2) + 7 * a(n - 3). ●

► [A249691] 2,7,36,204,1210,7371,45696,286824,1817046,11593725,74397180,479634480,3104160696,20155648324,131239189440,856606186128,5602957906638,36716657444145,241006055925180,1584293462159100,10428491209564890 ★ a(n) = binomial(3 * n,n) * (5 * n + 2) / (2 * n + 1). ● a(n) = Sum _{ k=0..n } binomial(n,k) * Sum _{ j=0..(k + 1) } (- 1) ^ (j - k - 1) * binomial(k + 1,j) * binomial(n + 2 * j,n + 1))). ● a(n) = sum(k=0..n, binomial(n,k) * (binomial(2 * n + 2,k + 1) - binomial(2 * n,k + 1))). - _ Vladimir Kruchinin _ , Nov 26 2014 ●

► [A129261] 1,2,7,36,204,1222,7513,46950,296691,1890232,12118424,78080402,505134625,3279051382,21347213562,139319046744,911204289149,5970941722698,39192011365250,257632856738690,1695850232984011 ★ a(n) = coefficient of x ^ n in Product _{ k=0..n } (1 + 2x + 3x ^ 2 + ... + (k + 1) * x ^ k). ● a(n) = [x ^ n] Product _{ k=1..n + 1 } { (1 - (k + 1) * x ^ k + k * x ^ (k + 1)) / (1 - x) ^ 2 } for n>0, with a(0)=1. ●

► [A371545] 1,2,7,36,209,1312,8663,59298,416961,2993790,21857208,161768154,1210949944,9152366596,69745701746,535304423948,4134240993874,32105769989714,250551371644825,1963871015580984,15454014753626079,122044659649929546,966951068210379441 ★ G.f. A(x) satisfies A(x) = (1 + x * A(x) ^ 2 / (1 + x)) ^ 2. ● a(n) = 2 * Sum _{ k=0..n } (- 1) ^ (n - k) * binomial(n - 1,n - k) * binomial(4 * k + 2,k) / (4 * k + 2). ●

► [A370471] 1,2,7,36,215,1396,9571,68174,499554,3741430,28512825,220388592,1723616516,13614340486,108450776960,870264507952,7028286595932,57081622558906,465925734601567,3820141417134780,31447663707379395,259821859662976686,2153756454578830070 ★ G.f. satisfies A(x) = 1 + x * A(x) ^ (1 / 2) * (1 + A(x) ^ (5 / 2)). ● a(n) = Sum _{ k=0..n } binomial(n,k) * binomial(n / 2 + 5 * k / 2 + 1,n) / (n / 2 + 5 * k / 2 + 1). ●

► [A373773] 1,1,2,7,36,240,1930,17990,189840,2233000,28949200,410009600,6297999400,104275571400,1851050401200,35065930299400,705993054166400,1505159324148480 0,33870593342666080 0,802158539202660640 0,19941616274096316800,5191567315003621552000 ★ Expansion of e.g.f. exp(x ^ 3 / (6 * (1 - x) ^ 2)) / (1 - x). ● a(n) = n! * Sum _{ k=0..floor(n / 3) } binomial(n - k,n - 3 * k) / (6 ^ k * k!). ●

► [A088313] 0,1,2,7,36,241,1950,18271,193256,2270017,29272410,410815351,6231230412,101560835377,1769925341366,32838929702671,646218442877520,13441862819232001,294656673023216946,6788407001443004647,163962850573039534580,4142654439686285737201 ★ Number of "sets of lists" (cf. A000262) with an odd number of lists. ● a(n) = Sum _{ k=1..floor((n + 1) / 2) } n! / (2 * k - 1)! * binomial(n - 1, 2 * k - 2). ● a(n) = n! * hypergeom([1 / 2 - n / 2, 1 - n / 2], [1 / 2, 1, 3 / 2], 1 / 4) for n >= 1. - _ Peter Luschny _ , Dec 14 2022 ●

► [A029768] 0,1,1,2,7,36,245,2076,21059,248836,3356609,50896380,856958911,15864014388,320245960333,7001257954796,164792092647355,4154906594518116,111719929072986521,3191216673497748444 ★ Number of increasing mobiles with n elements. ● a(n) = e ^ (1 - n) * limit(w - > 1, (d ^ (n - 2) / dw ^ (n - 2))(((w - 1) / (Ei(1,1) - Ei(1,w))) ^ (n - 1))) for n >= 2. (End) ● a(n) = sum(i=1..n - 2,binomial(n - 2,i) * a(i) * a(n - i)) + a(n - 1), a(0)=0, a(1)=1. - _ Vladimir Kruchinin _ , Jan 24 2011 ●

► [A259793] 1,1,2,7,36,253,1886,14800,118238,955639,7750456,62777522,506272363,4056634991,32252971687,254209569990,1985108901344,15352968310930,117579612410477,891596419221856,6694250497509934,49768995849050468,366423320400440927,2671969175372760210 ★ Number of partitions of n ^ 4 into fourth powers. ● a(n) = [x ^ (n ^ 4)] Product _{ j>=1 } 1 / (1 - x ^ (j ^ 4)). - _ Alois P. Heinz _ , Jul 10 2015 ●

► [A042465] 1,1,2,7,37,44,257,815,1072,1887,102970,104857,207827,728338,384957 17,4577855,26738792,84794231,111533023,196327254,10713204739,10909531993,21622736732,75777742189,400511447677 ★ Denominators of continued fraction co

nvergents to sqrt(760). • a(n) = 104042 * a(n - 10) - a(n - 20) for n>19. - _ Vincenzo Librandi _ , Jan 23 2014 •

► [A062394] 2,7,37,217,1297,7777,46657,279937,1679617,10077697,60466177,362797057,2176782337,13060694017,78364164097,470184984577,2821109907457,16926659444737,101559956668417,609359740010497,3656158440062977 ⋆ a(n) = 6 ^ n + 1. • a(n) = 6 * a(n - 1) - 5. • a(n) = 7 * a(n - 1) - 6 * a(n - 2). •

► [A135164] 2,7,37,253,1873,13957,102817,747733,5380993,38420677,272769697,1928677813,13597682113,95669909797,672124356577,4717058313493,33080385791233,231867703805317,1624599288327457,11379822861830773,79696902353804353,558069037387531237,3907436894177226337 ⋆ a(n) = 7 ^ n - 5 ^ n + 3 ^ n + 2 ^ n. • a(n) = 7 ^ n - 5 ^ n + 3 ^ n + 2 ^ n. • a(n) = 17 * a(n - 1) - 101 * a(n - 2) + 247 * a(n - 3) - 210 * a(n - 4) for n>3. (End) •

► [A001515] 1,2,7,37,266,2431,27007,353522,5329837,90960751,1733584106,36496226977,841146804577,21065166341402,569600638022431,16539483668991901,513293594376771362,16955228098102446847 ⋆ Bessel polynomial y _ n(x) evaluated at x=1. • a(n) = Sum _{ k = 0..n } binomial(n + k,2 * k) * (2 * k)! / (k! * 2 ^ k). • a(- 1 - n) = a(n) and (a(n + 1) + a(n + 2)) ^ 2 = a(n) * a(n + 2) + a(n + 1) * a(n + 3) for all integer n. - _ Michael Somos _ , Apr 08 2012 • a(n) = (2 * BesselI(1 / 2, 1) + BesselI(3 / 2, 1)) * BesselK(n + 1 / 2, 1). - _ Jean - François Alcover _ , Feb 03 2014 • a(n) = exp(1) * sqrt(2 / Pi) * BesselK(1 / 2 + n,1). - _ Gerry Martens _ , Jul 22 2015 • a(n) = (1 / n!) * Integral _{ x = 0..inf } exp(- x) * x ^ n * (1 + x / 2) ^ n dx. • a(n) = (1 / 2) _{ n } * 2 ^ n * hypergeometric1f1(- n; - 2 * n; 2). •

► [A032109] 1,1,2,7,38,271,2342,23647,272918,3543631,51123782,811316287,14045783798,263429174191,5320671485222,115141595488927,2657827340990678,65185383514567951,1692767331628422662,46400793659664205567,1338843898122192101558,40562412499252036940911 ⋆ "BIJ" (reversible, indistinct, labeled) trans form of 1,1,1,1,... • a(n) = Sum _{ s in S _ n ^ even } Product _{ i=1..n } binomial(i,s(i) - 1), where s ranges over the set S _ n ^ even of even permutations of [n]. - _ Jose A. Rodriguez _ , Feb 02 2021 •

► [A364336] 1,2,7,39,242,1634,11631,85957,653245,5072862,40077807,321106623,2602911282,21308131235,175909559897,1462846379247,12242600576066,103035285071630,871490142773640,7404121610615520,63157400073057627,540689217572662413,4644083121177225292 ⋆ G.f. satisfies A(x) = (1 + x) * (1 + x * A(x) ^ 3). • a(n) = Sum _{ k=0..n } binomial(3 * k + 1,k) * binomial(3 * k + 1,n - k) / (3 * k + 1). •

► [A112944] 1,2,7,39,308,3013,33300,394340,4878109,62232321,812825244,10818489817,146250545528,2003199281223,27747288947266,388087900316025,5474206895126243,77795972452841542,1112947041203866164,16016508647052018408,231727628211887783830,3368855109532696440867 ⋆ Number of unrooted regular odd - valent planar maps with 2 vertices; maps are considered up to orientation - preserving homeomorphisms and the vertices are of valency 2n + 1. • a(n) = (1 / 2)binomial(2n, n) + (1 / (4n + 2))sum _{ k|(2n + 1) } phi(k) * binomial(2 * floor(n / k), floor(n / k)) ^ 2, where phi(k) is the Euler function A000010. •

► [A189826] 2,7,40,199,856,3359,12440,44335,153808,523159,1752928,5804759,19041608,61981807,200458504,644783071,2064276256,6581953703,20911793168,66230028871,209167217752,658918365247,2070973772920,6495510239759,20334154874096 ⋆ a(n) = (3 ^ n - n) * (n - 1) - 2 ^ n * (n - 2). • a(n) = (3 ^ n - n) * (n - 1) - 2 ^ n * (n - 2). •

► [A361597] 1,1,2,7,40,320,3130,34930,432320,5866840,86816800,1395455600,24270908200,454897042600,9146979842000,196443726879400,4486709145318400,108548344109004800,2771885136281060800,74475606190225240000,2099591224223100608000 ⋆ Expansion of e.g.f. exp(x ^ 3 / (6 * (1 - x) ^ 3)) / (1 - x). • a(n) = n! * Sum _{ k=0..floor(n / 3) } binomial(n,3 * k) / (6 ^ k * k!). •

► [A162653] 1,1,2,7,40,321,3216,38263,530048,8423425,151248640,3026679591,66766414848,1609663922881,42114534017024,1188556743874711,35992306103517184,1164129150556067841,40053439019074387968 ⋆ E.g.f. satisfies: A(x) = 1 + sinh(x * A(x)). • a(n) = Sum _{ k=0..n } C(n + 1,k) / (n + 1) * Sum _{ j=0..k } (- 1) ^ (k - j) * C(k,j) * (2j - k) ^ n / 2 ^ k. • a(n,m) = Sum _{ k=0..n } m * C(n + m,k) / (n + m) * Sum _{ j=0..k } (- 1) ^ (k - j) * C(k,j) * (2j - k) ^ n / 2 ^ k. •

► [A084871] 1,2,7,41,398,6177,128232,2881531,62769238,1288737197,25012685732,463681018671,8294783320578,144410750517217,2462999084589232,41359616334934211,686406989350511918,11290725888842193237 ⋆ Number of 4 - multianti chains of an n - set. • a(n) = (16 ^ n - 12 * 12 ^ n + 24 * 10 ^ n + 4 * 9 ^ n - 6 * 8 ^ n + 6 * 7 ^ n - 108 * 6 ^ n + 108 * 5 ^ n + 83 * 4 ^ n - 166 * 3 ^ n + 90 * 2 ^ n) / 4!. • a(n) = 82 * a(n - 1) - 2970 * a(n - 2) + 62700 * a(n - 3) - 856713 * a(n - 4) + 7947786 * a(n - 5) - 51019100 * a(n - 6) + 226259000 * a(n - 7) - 678011136 * a(n - 8) + 1304341632 * a(n - 9) - 1445575680 * a(n - 10) + 696729600 * a(n - 11). (End) •

► [A366453] 1,2,7,42,287,2142,16898,138600,1170037,10098774,88712736,790540296,7128879940,64933227996,596523624144,5520761026854,51424824505054,481741853731110,4535711525840271,42897532229559714,407358615638833341,3882484733036731500 ⋆ G.f. A(x) satisfies A(x) = 1 + x + x * A(x) ^ (7 / 2). • a(n) = Sum _{ k=0..n } binomial(5 * k / 2 + 1,n - k) * binomial(7 * k / 2,k) / (5 * k / 2 + 1). •

► [A041507] 1,2,7,44,139,322,10443,21208,74067,465610,1470897,3407404,110507825,224423054,783776987,4927084976,15565031915,36057148806,116939379707,2374844736220,8293928002367,52138412750422,164709166253633,381556745257688 ⋆ Denominators of continued fraction convergents to sqrt(270). • a(n) = 10582 * a(n - 6) - a(n - 12) for n>11. - _ Vincenzo Librandi _ , Dec 19 2013 •

► [A056854] 2,7,47,322,2207,15127,103682,710647,4870847,33385282,228826127,1568397607,10749957122,73681302247,505019158607,3461452808002,23725150497407,162614600673847,1114577054219522,7639424778862807,52361396397821277,358890350005878082,2459871053643326447 ⋆ a(n) = Lucas(4 * n). • a(n) = 7 * a(n - 1) - a(n - 2) with a(0)=2, a(1)=7. • a(n) = ((7 + sqrt(45)) / 2) ^ n + ((7 - sqrt(45)) / 2) ^ n. • a(n) = Fibonacci(8 * n) / Fibonacci(4 * n), n>0. - _ Gary Detlefs _ , Dec 26 2010 • a(n) = Fibonacci(4 * n + 2) - Fibonacci(4 * n - 2), where Fibonacci(- 2) = - 1. - _ Bruno Berselli _ , May 25 2015 • a(n) = trace(M ^ n), where M is the 2 X 2 matrix [0, 1; 1, 1] ^ 4 = [2, 3; 3, 5]. • a(2k + 1) / 7 is the numerator of the continued fraction [3 * sqrt(5), 3 * sqrt(5), ..., 3 * sqrt(5)] with 2k copies of 3 * sqrt(5), for k>0. - _ Greg Dresden _ and _ Tracy Z. Wu _ , Sep 10 2020 •

► [A086902] 2,7,51,364,2599,18557,132498,946043,6754799,48229636,344362251,2458765393,17555720002,125348805407,894997357851,6390330310364,45627309530399,325781497023157,2326097788692498,16608466017870643,118585359913786999,846705985414379636 ⋆ a(n) = 7 * a(n - 1) + a(n - 2), starting with a(0) = 2 and a(1) = 7. • a(n) = ((7 + sqrt(53)) / 2) ^ n + ((7 - sqrt(53)) / 2) ^ n. •

► [A371617] 1,2,7,54,419,3644,33366,317672,3113559,31200060,318219653,3292546660,34475311605,364621943538,3889561661610,41799988930926,452126713579192,4918321519144206,53773399008883695,590578523863692086,6512515698908748358 ⋆ G.f. satisfies A(x) = (1 + x / (1 - x * A(x) ^ 3) ^ 3) ^ 2. • a(n) = Sum _{ k=0..n } binomial(6 * (n - k) + 2,k) * binomial(n + 2 * k - 1,n - k) / (3 * (n - k) + 1). •

► [A048898] 0,2,7,57,182,2057,14557,45807,280182,280182,6139557,25670807,123327057,123327057,5006139557,11109655182,102662389557,407838170807,3459595983307,3459595983307,79753541295807,365855836217682,2273204469030182,22732044690301 82,49956920289342682 ⋆ One of the two successive approximations up to 5 ^ n for the 5 - adic integer sqrt(- 1). • a(n) == 2 ^ (5 ^ (n - 1)) (mod 5 ^ n), n>=1. • a(n) * a(n - 1) + 1 == 0 (mod 5 ^ (n - 1)), n>=1. • a(n) == L(5 ^ n,2) (mod 5 ^ n), where L(n,x) denotes the n - th Lucas polynomial of A114525. - _ Peter Bala _ , Nov 20 2022 •

► [A178769] 2,7,57,557,5557,55557,555557,5555557,55555557,555555557,5555555557,55555555557,555555555557,5555555555557,55555555555557,555555555555557,5555555555555557,55555555555555557 ⋆ a(n) = (5 * 10 ^ n + 13) / 9. • a(n) ^ (4 * k + 2) + 1 == 0 (mod 250) for n>1, k>=0. • a(n) - 11 * a(n - 1) + 10 * a(n - 2) = 0 (n>1). • a(n) = a(n - 1) + 5 * 10 ^ (n - 1) = 10 * a(n - 1) - 13 for n>0. •

► [A042051] 1,2,7,65,722,787,1509,2296,3805,17516,21321,38837,60158,98995,1149103,10440922,32471869,75384660,3500166229,7075717118,24727317583,229621575365,2550564646598,2780186221963,5330750868561 ⋆ Denominators of continued fraction convergents to sqrt(549). • a(n) = 3532638098 * a(n - 18) - a(n - 36). - _ Wesley Ivan Hurt _ , Jun 26 2022 •

► [A042791] 1,2,7,79,86,681,767,2982,6731,36637,43368,80005,123373,573497,17328283,69886629,87214912,157101541,244316453,1378683806,3001684065,10383736001,13385420066,104081676463,117467096529 ⋆ Denominators of continued fraction convergents to sqrt(926). • a(n) = 609120594284670 * a(n - 28) - a(n - 56) for n>55. - _ Vincenzo Librandi _ , Jan 29 2014 •

► [A041291] 1,1,2,7,86,265,351,616,15135,15751,30886,108409,1331794,4103791,5435585,9539376,234380609,243919985,478300594,1678821767,20624161798,63551307161,84175468959,147726776120,3629618095839 ⋆ Denominators of continued fraction convergents to sqrt(158). • a(n) = 15486 * a(n - 8) - a(n - 16). - _ Vincenzo Librandi _ , Dec 14 2013 •

► [A056161] 2,7,94,263,3218,8959,109342,304367,3714434,10339543,126181438,351240119,4286454482,11931824527,145613270974,405330793823,4946564758658,13769315165479,168037588523422,467751384832487,5708331445037714,15889777769139103,193915231542758878 ⋆ Solutions (value of x) of Diophantine equation 2 * x ^ 2 + 3 * x + 2 = r ^ 2. • a(n) = a(n - 1) + 34 * a(n - 2) - 34 * a(n - 3) - a(n - 4) + a(n - 5). - _ Colin Barker _ , May 17 2015 •

► [A101429] 2,7,115,1366,13561,135178,1351546,13546438,135481777,1354575715 ⋆ Sum of digits of (2 ^ (10 ^ n)). • a(n)= sum _{ m=0..floor(log(2 ^ (10 ^ n)) } floor(10 * ((2 ^ (10 ^ n)) / (10 ^ (((floor(log(2 ^ (10 ^ n))) + 1)) - m)) - floor ((2 ^ (10 ^ n)) / (10 ^ (((floor(log(2 ^ (10 ^ n))) + 1)) - m)))))) •

► [A041727] 1,1,2,7,135,412,547,959,36989,37948,74937,262759,5067358,15464833,20532191,35997024,1388419103,1424416127,2812835230,9862921817,190208349753,580487971076,770696320829,1351184291905,52115699413219 ⋆ Denominators of continued fraction convergents to sqrt(383). • a(n) = 37536 * a(n - 8) - a(n - 16) for n>15. - _ Vincenzo Librandi _ , Dec 23 2013 •

► [A073860] 2,7,503,1889,30367 ⋆ Smallest primes such that every partial sum is an n - th power. • a(n) = x ^ n - sum(a(i), i=1..n - 1), for some integer x and a(n) prime for all n. - Francois Jooste (pin(AT)myway.com), Mar 09 2003 •

► [A082891] 2,7,1129,1327,19609,31397,155921,370261,1357201,2010881,20831323,20831323 ⋆ Smallest prime p[j] such that quotient q[j], obtained when consecutive prime differences are divided by logarithm of smaller prime,p[j], is larger than n. • a(n)=Min { p[x]; (p[x + 1] - p[x]) / log(p[x])>n } •

► [A290378] 2,8,8,16,37,80,156,304,602,1173,2290,4456,8686,16892,32833,63776,123864,240524,467060,907061,1761894,3423164,6652706,12933280,25151787 ⋆ Number of minimal dominating sets in the n - gear graph. • a(n) = 4 * a(n - 1) - 3 * a(n - 2) - 4 * a(n - 3) + 4 * a(n - 4) - a(n - 5) + a(n - 6) + 3 * a(n - 7) - 3 * a(n - 8) + 2 * a(n - 10) + 3 * a(n - 11) - a(n - 13) for n > 13. •

► [A116471] 0,2,8,8,18,18,32,32,50,50,72,72,98,98,128,128,162,162,200,200,242,242,288,288,338 ⋆ Values 2 * (n -+ 1) ^ 2 sorted. • a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n > 6. • a(n) = (2 * n ^ 2 + 2 * n - (2 * n + 1) * (- 1) ^ n + 1) / 4, with n > 1 and a(1) = 0. - _ Bruno Berselli _ , Oct 07 2014 •

► [A237415] 0,1,2,8,9,10,11,12,18,19,20,21,22,28,29,30,31,32,38,39,40,41,42,48,49 ⋆ For k in { 2,3,...,9 } define a sequence as follows: a(0)=0; for n>=0, a(n + 1) =a(n) + 1, unless a(n) ends in k, in which case a(n + 1) is obtained by replacing the last digit of a(n) with the digit(s) of k ^ 3. This is k(2). • a(n) = a(n - 1) + a(n - 5) - a(n - 6). - _ Vincenzo Librandi _ , Feb 12 2014 •

► [A047469] 0,1,2,8,9,10,16,17,18,24,25,26,32,33,34,40,41,42,48,49,50,56,57,58,64 ⋆ Numbers that are congruent to { 0, 1, 2 } mod 8. • a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. • a(n) = (24 * n - 39 - 15 * cos(2 * n * Pi / 3) + 5 * sqrt(3) * sin(2 * n * Pi / 3)) / 9. • a(3k) = 8k - 6, a(3k - 1) = 8k - 7, a(3k - 2) = 8k - 8. (End) • a(n) = n + 5 * floor((n - 1) / 3) - 1. - _ Bruno Berselli _ , Feb 06 2017 •

► [A283774] 1,2,8,9,10,16,17,18,24,25,26,32,33,34,40,41,48,49,55,56,57,63,64,65,71 ⋆ Numbers k such that U(k) == 2 mod 3, where U = A001950 = upper Wythoff sequence. • a(n + 1) - a(n) is in { 1,6,7 } for every n. •

► [A345019] 1,2,8,9,11,12,18,19,21,22,28,29,31,32,38,39,41,42,48,49,51,52,58,59,61 ⋆ Numbers whose last digit is refactorable. ● a(n) = 10 * floor((n - 1) / 4) + (10 + (- 1) ^ n + 7 * cos(n * Pi / 2) - 7 * sin(n * Pi / 2)) / 2. ●

► [A047353] 1,2,8,9,15,16,22,23,29,30,36,37,43,44,50,51,57,58,64,65,71,72,78,79,85 ⋆ Numbers that are congruent to { 1, 2 } mod 7. ● a(n) = 7 * n / 2 - 15 / 4 - 5 * (- 1) ^ n / 4. ●

► [A221049] 1,2,8,9,36,37,148,149,596,597,2388,2389,9556,9557,38228,38229,152916,152917,611668,611669,2446676,2446677,9786708,9786709,39146836 ⋆ Expansion of (1 + 2 * x + 3 * x ^ 2 - x ^ 3) / ((1 - x) * (1 + x) * (1 - 2 * x) * (1 + 2 * x)). ● a(n) = a(n - 1) * 4 if n even, a(n) = a(n - 1) + 1 if n odd. ● a(n) = 5 * a(n - 2) - 4 * a(n - 4) with a(0)=1, a(1)=2, a(2)=8, a(3)=9. ●

► [A329952] 0,1,2,8,10,16,17,18,24,26,32,33,34,40,42,48,49,50,56,58,64,65,66,72,74 ⋆ Numbers k such that binomial(k,3) is divisible by 8. ● a(n) = a(n - 1) + a(n - 5) - a(n - 6) for n>6. - _ Colin Barker _ , Nov 29 2019 ●

► [A079930] 1,2,8,10,16,18,19,26,30,36,38,41,43,45,50,51,59,65,68,70,74,75,82,84,87 ⋆ Greedy powers of (1 / sqrt(e)): sum _{ n=1..inf } (1 / sqrt(e)) ^ a(n) = 1. ● a(n)=sum _{ k=1..n } floor(g _ k) where g _ 1=1, g _{ n + 1 } =log _ x(x ^ frac(g _ n) - x) (n>0) at x=(1 / sqrt(e)) and frac(y) = y - floor(y). ●

► [A047467] 0,2,8,10,16,18,24,26,32,34,40,42,48,50,56,58,64,66,72,74,80,82,88,90,96 ⋆ Numbers that are congruent to { 0, 2 } mod 8. ● a(n) = 8 * n - a(n - 1) - 14 with a(1)=0. - _ Vincenzo Librandi _ , Aug 06 2010 ● a(n) = floor((8 / 3) * floor(3 * n / 2)). - _ Clark Kimberling _ , Jul 04 2012 ●

► [A294157] 2,8,10,18,28,46,74,120,194,314,508,822,1330,2152,3482,5634,9116,14750,23866,38616,62482,101098,163580,264678,428258 ⋆ Fibonacci sequence beginning 2, 8. ● a(n) = a(n - 1) + a(n - 2). ● a(n) = Lucas(n) + g(0,7;n), see A022090; ● a(n) = Fibonacci(n) + g(2,7;n), see A022113; ● a(n) = 2 * g(1,8;n) - g(0,8;n); ● a(n) = g(1,k;n) + g(1,8 - k;n) for all k in Z. ● a(h + k) = a(h) * Fibonacci(k - 1) + a(h + 1) * Fibonacci(k) for all h, k in Z (see S. Vajda in References section). For h=0 and k=n: ●

► [A062880] 0,2,8,10,32,34,40,42,128,130,136,138,160,162,168,170,512,514,520,522,544,546,552,554,640 ⋆ Zero together with the numbers which can be written as a sum of distinct odd powers of 2. ● a(2 * n) = 4 * a(n). ● a(2 * n + 1) = 4 * a(n) + 2. ●

► [A220269] 2,8,11,17,26,38,40,41,48,57,68,68,70,87,96,100,108,109,110,115,136,149,151,161,161 ⋆ a(n) is the smallest number, such that for all N >= a(n) there are at least n primes between 3 * N and 4 * N. ● a(n) <= ceiling(R _ (4 / 3)(n) / 4), where R _ v(n) (v>1) are generalized Ramanujan numbers (see Shevelev's link). In particular, for n >= 1, { R _ (4 / 3)(n) } = { 11, 29, 59, 67, 101, 149, 157, 163, 191, 227, 269, 271, 307, 379, ... } . Moreover, if R _ (4 / 3)(n) = = 1 (mod 4), then a(n) = ceiling(R _ (4 / 3)(n) / 4). ●

► [A362869] 1,2,8,11,22,27,43,50,71,80,106,117,148,161,197,212,253,270,316,335,386,407,463,486,547 ⋆ a(n) is equal to the number of cells in one octant of the octagon of unit squares with side equal n. ● a(n) = k * (k + 1) / 2 - floor(n ^ 2 / 4), where k = ceiling((n + 2 * (n - 1)) / 2). ●

► [A080058] 1,2,8,12,14,16,25,39,42,44,46,49,51,53,59,70,73,78,81,83,85,86,101,103,105 ⋆ Greedy powers of (1 / zeta(2)): sum _{ n=1..inf } (1 / zeta(2)) ^ a(n) = 1, where 1 / zeta(2) = 6 / Pi ^ 2 = .607927101854... ● a(n)=sum _{ k=1..n } floor(g _ k) where g _ 1=1, g _{ n + 1 } =log _ x(x ^ frac(g _ n) - x) (n>0) at x=(1 / zeta(2)) and frac(y) = y - floor(y). See A077468 for mathematica program by _ Robert G. Wilson v _ . ●

► [A005796] 2,8,12,14,18,20,24,30 ⋆ Degrees of fundamental invariants of Weyl group W(E _ 8). ● a(n) = Prime(n + 2) + 1, for n = 2, 3, ..., 8. [_ Jonathan Sondow _ , Apr 16 2009] ●

► [A277568] 2,8,12,14,20,26,32,38,44,48,50,56,62,68,72,74,80,84,86,92,98,104,110,116,120 ⋆ Numbers k such that k / 6 ^ m == 2 (mod 6), where 6 ^ m is the greatest power of 6 that divides k. ● a(n) = 5n + O(log n). - _ Charles R Greathouse IV _ , Nov 03 2016 ●

► [A290608] 2,8,12,16,30,48,74,124,200,320,522,844,1362,2208,3572,5776,9350,15128,24474,39604,64080,103680,167762,271444,439202 ⋆ Number of maximal independent vertex sets (and minimal vertex covers) in the n - Moebius ladder graph. ● a(n) = Lucas(n) - 2 * cos(2 * n * Pi / 3). ● a(n) = a(n - 2) + 2 * a(n - 3) + a(n - 4). ●

► [A090772] 2,8,12,18,22,28,32,38,42,48,52,58,62,68,72,78,82,88,92,98,102,108,112,118,122 ⋆ Numbers that are congruent to { 2, 8 } mod 10. ● a(n) = 10 * n - a(n - 1) - 10 (with a(1)=2). - _ Vincenzo Librandi _ , Nov 16 2010 ●

► [A013654] 2,8,12,24,30,48,56,80,90,120,132,168,182,224,240,288,306,360,380,440,462,528,552,624,650 ⋆ Each term of the period of continued fraction for sqrt(n) divides n. ● a(2n)= 2 * (n + 1) * (2n), a(2n + 1)= 2 * (n + 1) * (2n + 1). - _ Frank Ellermann _ , Feb 22 2002 ● a(n) = n * (n + 1 + (1 + (- 1) ^ n) / 2). - _ Wesley Ivan Hurt _ , Nov 19 2013 ●

► [A107755] 2,8,12,26,30,36,38,80,84,90,92,108,110,116,120,242,246,252,254,270,272,278,282,324,326 ⋆ Numbers k such that Sum _{ j=1..k } Catalan(j) == 0 (mod 3). ● a(2 ^ j) = 2 * a(2 ^ j - 1) + 2 (resp. + 4) if j is even (resp. odd). - _ M. F. Hasler _ , Feb 25 2008 ●

► [A115102] 2,8,12,28,52,108,212,428,852,1708,3412,6828,13652,27308,54612,109228,218452,436908,873812,1747628,3495252,6990508,13981012,27962028,55924052 ⋆ a(0)=2, a(1)=8, a(n)=a(n - 1) + 2 * a(n - 2). ● a(n) = (4 * (- 1) ^ n + 5 * 2 ^ n) / 3. - _ Harvey P. Dale _ , Sep 02 2016 ●

► [A176961] 1,2,8,12,36,52,148,212,596,852,2388,3412,9556,13652,38228,54612,152916,218452,611668,873812,2446676,3495252,9786708,13981012,39146836 ⋆ a(n) = (3 * 2 ^ (n + 1) - 8 - (- 2) ^ n) / 6. ● a(n) = a(n - 1) + 4 * a(n - 2) - 4 * a(n - 3). ●

► [A176968] 1,2,8,12,60,84,444,612,3276,4500,24156,33156,178092,244404,1312956,1801764,9679500,13283028,71360028,97926084,526086252,721938420,3878455932,5322332772,28593068364 ⋆ Expansion of x * (1 + 2 * x - x ^ 2 - 6 * x ^ 3) / (1 - 9 * x ^ 2 + 12 * x ^ 4). ● a(n) = a(n - 1) + 6 * a(n - 2) if n is odd. a(n) = a(n - 1) + 2 * a(n - 2) if n is even. - _ R. J. Mathar _ , Jun 18 2014 ●

► [A077241] 1,2,8,13,47,76,274,443,1597,2582,9308,15049,54251,87712,316198,511223,1842937,2979626,10741424,17366533,62605607,101219572,364892218,589950899,2126747701 ⋆ Combined Diophantine Chebyshev sequences A054488 and A077413. ● a(n) = (- 1) ^ n * ((4 - 5 * sqrt(2)) * (1 - (- 1) ^ n * sqrt(2)) ^ (2 * floor((n + 1) / 2)) + (4 + 5 * sqrt(2)) * (1 + (- 1) ^ n * sqrt(2)) ^ (2 * floor((n + 1) / 2))) / 8. [_ Bruno Berselli _ , Mar 10 2013] ●

► [A228469] 2,8,13,49,80,302,493,1861,3038,11468,18721,70669,115364,435482,710905,2683561,4380794,16536848,26995669,101904649,166354808,627964742,1025124517,3869693101,6317101910 ⋆ a(n) = 6 * a(n - 2) + a(n - 4), where a(0) = 2, a(1) = 8, a(2) = 13, a(3) = 49. ● a(n) = (3 + sqrt(10)) ^ (1 / 4 * ((- 1) ^ n - 1) + 1 / 2 * n) * (5 / 2 + sqrt(10) * (4 / 5 - 9 / 20 * (- 1) ^ n) - 3 / 2 * (- 1) ^ n) + (3 - sqrt(10)) ^ (1 / 4 * ((- 1) ^ n - 1) + 1 / 2 * n) * (5 / 2 - sqrt(10) * (4 / 5 - 9 / 20 * (- 1) ^ n) - 3 / 2 * (- 1) ^ n). - _ Paolo P. Lava _ , Sep 12 2013 ●

► [A349818] 1,1,1,2,8,13,74,124,784,1364,9069,16194,111144,202070,1418196,2612376,18642208,34682348,250706548,470066728,3433030048,6477333149,47703926354,90472092748,670963514192 ⋆ Central column (ignoring the zeros) of A349815, or leading entries in rows of A349816. ● a(n) = [x ^ floor(3 * n / 2 + 1)](- 1 - x + x ^ 2 + 3 * x ^ 3) * (1 + x + x ^ 2 + x ^ 3) ^ (n - 1) for n > 0. - _ Andrew Howroyd _ , Feb 28 2023 ●

► [A002248] 2,8,14,16,22,56,142,288,518,968,1982,4144,8374,16472,32494,65088,131174,263144,525086,1047376,2094358,4193912,8393806,16783200,33550022 ⋆ Number of points on y ^ 2 + xy = x ^ 3 + x ^ 2 + x over GF(2 ^ n). ● a(n) = 4 * a(n - 1) - 7 * a(n - 2) + 8 * a(n - 3) - 4 * a(n - 4). - _ Vincenzo Librandi _ , Jun 18 2012 ●

► [A016933] 2,8,14,20,26,32,38,44,50,56,62,68,74,80,86,92,98,104,110,116,122,128,134,140,146 ⋆ a(n) = 6n + 2. ● a(n) = 2 * (6 * n - 1) - a(n - 1) (with a(0)=2). - _ Vincenzo Librandi _ , Nov 20 2010 ●

► [A064148] 2,8,14,21,24,27,29,30,33,34,38,41,42,44,48,49,57,63,66,70,75,78,80,85,86 ⋆ Numbers k such that mu(k) = mu(k + 1), where mu is the Möbius function (A008683). ● a(n) seems to be asymptotic to c * n with c=3.7.... Using heuristic arguments (cf. A074820): c maybe = 1 / (3A / 2 + 1 - 12 / Pi ^ 2) ~ 3.729994018, where A ~ 0.3226340989 is the product over all primes p of 1 - 2 / p ^ 2 (cf. A065474). - _ Benoit Cloitre _ , Sep 08 2002 ●

► [A120413] 0,2,8,14,24,34,48,62,80,98,120,142,168,194,224,254,288,322,360,398,440,482,528,574,624 ⋆ Largest even number strictly less than n ^ 2. ● a(n) = (- 1 + (- 1) ^ n + 4 * n + 2 * n ^ 2) / 2. ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4). ● a(n) = n ^ 2 - 2 for even n; a(n) = n ^ 2 - 1 for odd n. -_ Dennis P. Walsh _ , Apr 15 2016 ●

► [A053697] 1,2,8,14,27,94,137,284,947,1384,2847,9484,13847,28484,94847,138484,284847,948484,1384847,2848484,9484847,13848484,28484847,94848484,138484847 ⋆ a(n + 1)=a(n) + a ^ (n), where the addition is in base 11 and where a ^ (n) is obtained from a(n) by replacing each digit with its multiplicative inverse modulo 11. Zero digits, if any, are deleted. ● a(n) = a(n - 2) + 10 * a(n - 3) - 10 * a(n - 5) for n>7. ● a(6 * k - 4) = 2 * 10 ^ (2 * k - 2) + 84 * (10 ^ (2 * k - 2) - 1) / 99. ● a(6 * k - 3) = 94 * 10 ^ (2 * k - 3) + 84 * (10 ^ (2 * k - 3) - 10) / 99 + 7. ● a(6 * k - 2) = 13 * 10 ^ (2 * k - 2) + 84 * (10 ^ (2 * k - 2) - 1) / 99. ● a(6 * k - 1) = 2 * 10 ^ (2 * k - 1) + 84 * (10 ^ (2 * k - 1) - 10) / 99 + 7. ● a(6 * k) = 94 * 10 ^ (2 * k - 2) + 84 * (10 ^ (2 * k - 2) - 1) / 99. ●

► [A196227] 0,0,2,8,14,28,34,56,70,92,106,144,158,204,226,256,286,348,370,440,470,516,554,640,670 ⋆ Number of 2 X 2 integer matrices with elements from { 1, ...,n } whose determinant is 1. ● a(n) = - 2 * (n + 1) + 4 * Sum _{ k=1..n } phi(k) for n > 0. ●

► [A299337] 1,2,8,14,35,56,112,168,294,420,672,924,1386,1848,2640,3432,4719,6006,8008,10010,13013,16016,20384,24752,30940 ⋆ Expansion of 1 / ((1 - x) ^ 7 * (1 + x) ^ 5). ● a(n) = (2 * n ^ 6 + 72 * n ^ 5 + 1040 * n ^ 4 + 7680 * n ^ 3 + 30368 * n ^ 2 + 60288 * n + 46080) / 46080 for n even. ● a(n) = (2 * n ^ 6 + 72 * n ^ 5 + 1010 * n ^ 4 + 6960 * n ^ 3 + 24278 * n ^ 2 + 39048 * n + 20790) / 46080 for n odd. ● a(n) = 2 * a(n - 1) + 4 * a(n - 2) - 10 * a(n - 3) - 5 * a(n - 4) + 20 * a(n - 5) - 20 * a(n - 7) + 5 * a(n - 8) + 10 * a(n - 9) - 4 * a(n - 10) - 2 * a(n - 11) + a(n - 12) for n>11. ●

► [A162484] 2,8,14,36,82,200,478,1156,2786,6728,16238,39204,94642,228488,551614,1331716,3215042,7761800,18738638,45239076,109216786,263672648,636562078,1536796804,3710155682 ⋆ a(1) = 2, a(2) = 8; a(n) = 2 a(n - 1) + a(n - 2) - 4 * (n mod 2). ● a(n) = 1 + (- 1) ^ n + (1 - sqrt(2)) ^ n + (1 + sqrt(2)) ^ n. - _ Colin Barker _ , Dec 16 2017 ●

► [A333575] 1,2,8,14,38,74,170,338,724,1448,3000,6008,12240,24512,49504,99104,199232,398720,799616,1599872,3204352,6410240,12830208,25664000,51348480 ⋆ Number of Hamiltonian paths in the n X 3 grid graph which start at any of the n vertices on left side of the graph and terminate at any of the n vertices on the right side. ● a(n) = 2 * a(n - 1) + 4 * a(n - 2) - 8 * a(n - 3) - 4 * a(n - 4) + 8 * a(n - 5) for n>8. - _ Colin Barker _ , Mar 27 2020 [Confirmed by _ Andrew Howroyd _ , Mar 27 2020] ●

► [A080095] 2,8,16,16,64,128,128,512,1024,1024,4096,8192,8192,32768,65536,65536,262144,524288,524288,2097152,4194304,4194304,16777216,33554432,33554432 ⋆ Let sum(k>=0, k ^ n / (2 * k + 1)!) = (x(n) * e + y(n) / e) / z(n), where x(n) and z(n) are >0, then a(n)=z(n). ● a(n) = 2 ^ b(n) and { b(n) } = { 1, 3, 4, 4, 6, 7, 7, 9, 10, 10, 12, 13, 13, 15, .. } where b(3n - 2)=3n - 2, b(3n - 1)=3n, b(3n)=b(3n + 1)=3n + 1, for n>0. ●

► [A136514] 0,2,8,16,30,44,60,82,108,138,166,196,238,278,324,366,416,468,526,588,644,714,780,848,930 ⋆ Number of unit square lattice cells inside half - plane (two adjacent quadrants) of origin centered circle of radius n. ● a(n) = 2 * Sum _{ k=1..n - 1 } floor(sqrt(n ^ 2 - k ^ 2)). ●

► [A077071] 0,2,8,16,30,46,66,88,118,150,186,224,268,314,364,416,478,542,610,680,756,834,916,1000,1092 ⋆ Row sums of A077070. ● a(n) is asymptotic to 2 * n ^ 2 and it seems that a(n) = 2 * n ^ 2 + O(n ^ (3 / 2)) (where O(n ^ (3 / 2)) / n ^ (3 / 2) is bounded and O(n ^ (3 / 2)) < 0). - _ Benoit Cloitre _ , Oct 30 2002 ●

► [A210729] 1,2,8,16,31,55,95,160,266,438,717,1169,1901,3086,5004,8108,13131,21259,34411,55692,90126,145842,235993,381861,617881 ⋆ a(n) = a(n - 1) + a(n - 2) + n + 3 with n>1, a(0)=1, a(1)=2. ● a(n) = 3 * Fibonacci(n + 1) + 2 * Fibonacci(n + 3) - n - 6. - _ Vaclav Kotesovec _ , May 13 2012 ● a(n) = 2 * Lucas(n + 2) + Fibonacci(n + 1) - (n + 6). - _ G. C. Greubel _ , Jul 09 2019 ●

► [A346461] 2,8,16,32,128,256,512,2048,4096,8192,32768,65536,131072,524288,1048576,2097152,8388608,16777216,33554432,134217728,268435456,536870912,2147483648,4294967296,8589934592 ⋆ a(n) = 2 ^ A042965(n + 1). ● a(n) = 2 ^ (floor((4 * n + 1) / 3)). ● a(n) = a(n - 1) * a(n - 3) / a(n - 4) for n > 4. ● a(n) = 16 * a(n - 3) for n > 3. (End) ●

► [A096227] 2,8,16,44,96,268,648,1832,4784,13456,36832,102944,289216,804928,2292608,6365312,18257664,50626816,145731072,403833344 ⋆ Number of different triangles created when a square sheet of paper is folded n times, the first time by one of the diagonal of the square sheet and the by the median of the square triangle. ● a(1)=2, a(2)=8, a(3)=16, a(4)=44, a(5)=96 are easily counted. Now if n even > 4 define X(4)=10 and X(n)=2 * (X(n - 2) - 1), then a(n)=3 * 2 ^ (3 * (n / 2) - 1) + 2 ^ ((n / 2) - 1) * (2 * X(n - 2) - 1); if n odd > 5 define X(5)=8 and Y(5)=2, X(n)=4 * X(n - 2) - 5 * (2 * Y(n - 2) - 1) and Y(n)=2 * Y(n - 2) - 1 then a(n)=2 ^ (3 * (((n + 1) / 2) - 1)) + 2 ^ (((n + 1) / 2) - 1) * (4 * X(n - 2) - 5 * (2 * (Y(n - 2) - 1) ●

► [A191309] 0,0,0,0,1,2,8,16,47,94,244,488,1186,2372,5536,11072,25147,50294,112028,224056,491870,983740,2135440,4270880,9188406 ⋆ Number of peaks at height >= 2 in all dispersed Dyck paths of length n (i.e., Motzkin paths of length n with no (1,0) steps at positive heights). ● a(2 * n + 1) = 2 * a(2 * n). ●

► [A134353] 1,2,8,16,48,96,256,512,1280,2560,6144,12288,28672,57344,131072,262144,589824,1179648,2621440,5242880,11534336,23068672,50331648,100663296,218103808 ⋆ Row sums of triangle A134352. ● a(n) = 2 ^ (n - 2) * (2 * n + 3 + (- 1) ^ n). ●

► [A076508] 2,8,16,48,192,384,1152,4608,9216,27648,110592,221184,663552,2654208,5308416,15925248,63700992,127401984,382205952,1528823808,3057647616,9172942848,36691771392,73383542784,220150628352 ⋆ Expansion of 2 * x * (1 + 4 * x + 8 * x ^ 2) / (1 - 24 * x ^ 3). ● a(n) = 2 ^ n * b(n - 1) where b(n) = 1, 2, 2, 3, 6, 6, 9, 18, 18, 27, 54, ... (n >= 0) is A038754 with each 2nd term repeated. - _ R. J. Mathar _ , May 21 2018 ●

► [A099888] 1,2,8,16,80,160,640,2784,6560,21824,65280,131072,524800,1056192,4201728,8408000,43046720,86135424,361186816,1467183104,3443838080,11367226112,32550397696,70111011712,282403304960 ⋆ XOR BINOMIAL transform of the powers of 3. ● a(n) = SumXOR _{ k=0..n } (C(n, k) mod 2) * 3 ^ k, where SumXOR is summation under XOR. ●

► [A046161] 1,2,8,16,128,256,1024,2048,32768,65536,262144,524288,4194304,8388608,33554432,67108864,2147483648,4294967296,17179869184,34359738368,274877906944,549755813888,2199023255552,4398046511104,70368744177664 ⋆ a(n) = denominator of binomial(2n,n) / 4 ^ n. ● a(n) = denominator(binomial(- 1 / 2, n)). - _ Peter Luschny _ , Nov 21 2012 ●

► [A191999] 1,2,8,16,160,640,2048,12288,24576,32768,327680,786432,10485760,62914560,125829120,167772160,9730785280,583847116800,3503082700800,245215789056000 ⋆ Denominators of partial products of a Hardy - Littlewood constant. ● a(n) = denominator(r(n)) with ●

► [A034972] 2,8,17,29,44,63,85,110,138,170,205,243,284,329,376,427,482,539,600,664,731,802,876,953,1033 ⋆ a(n) = floor(T _ (n + 1) / T _ (n)) where T _ n is n - th tangential or "Zag" number (see A000182). ● a(n) = floor(T(n + 1) / T(n)) where T(n) is n - th coefficient in expansion of tan(x). ●

► [A295147] 1,2,8,17,39,80,167,337,682,1368,2745,5495,11000,22006,44024,88055,176123,352254,704522,1409053,2818121,5636252,11272520,22545051,45090119 ⋆ Solution of the complementary equation a(n) = a(n - 1) + 2 * a(n - 2) + b(n - 1), where a(0) = 1, a(1) = 2, b(0) = 3, b(1) = 4, and (a(n)) and (b(n)) are increasing complementary sequences. ● a(n + 1) / a(n) - > 2. ●

► [A117612] 2,8,18,20,34,40,58,68,92,132,138 ⋆ An old nuclear shell closure sequence for 2 nucleon states (related to A007290 and A018226) in a square potential well. ● a(n) = 2 * (2 * l + 1) for quantum number l. ●

► [A268810] 0,2,8,18,30,44,62,84,108,134,164,198,234,272,314,360,408,458,512,570,630,692,758,828,900 ⋆ a(n) = 2 * floor(3 * n * (n + 1) / 4). ● a(n) = (3 * n ^ 2 - 3 * n + cos(n * Pi / 2) + sin(n * Pi / 2) - 1) / 2. ● a(n) = (1 / 4 + i / 4) * ((i - 1) + (- i) ^ n - i * i ^ n - (- 3 * i + 3) * n + (- 3 * i + 3) * n ^ 2), where i is the imaginary unit. ● a(n) = (3 * n ^ 2 - 3 * n + (- 1) ^ binomial(n + 1,2) - 1) / 2. ●

► [A293296] 0,2,8,18,31,49,71,97,126,160,198,240,285,335,389,447,508,574,644,718,795,877,963,1053,1146 ⋆ a(n) = 2 * n ^ 2 - floor(n / 4). ● a(n) = [x ^ n] (- x * (2 + 4 * x + 4 * x ^ 2 + 3 * x ^ 3 + 3 * x ^ 4) / ((x + 1) * (x ^ 2 + 1) * (x - 1) ^ 3)). ● a(n) = n! [x ^ n] (3 * exp(x) - exp(- x) + 14 * exp(x) * x + 16 * exp(x) * x ^ 2 - 2 * cos(x) - 2 * sin(x)) / 8. ● a(n) = a(n - 6) - 2 * a(n - 5) + a(n - 4) - a(n - 2) + 2 * a(n - 1) for n >= 6. ●

► [A001105] 0,2,8,18,32,50,72,98,128,162,200,242,288,338,392,450,512,578,648,722,800,882,968,1058,1152 ⋆ a(n) = 2 * n ^ 2. ● a(n) = 4 * n + a(n - 1) - 2, n > 0. - _ Vincenzo Librandi _ ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Artur Jasinski _ , Nov 24 2011 ● a(n) = floor(1 / (1 - cos(1 / n))), n > 0. - _ Clark Kimberling _ , Oct 08 2014 ● a(n) = Sum _{ j=1..n } Sum _{ i=1..n } ceiling((i + j - n + 4) / 3). - _ Wesley Ivan Hurt _ , Mar 12 2015 ●

► [A190787] 2,8,18,32,72,128,288,512,1152,2048,4608,8192,18432,32768,73728,131072,294912,524288,1179648,2097152,4718592,8388608,18874368,33554432,75497472 ⋆ Odd powers of 2 and 9 times odd powers of 2, sorted. ● a(n) = 2 ^ (n - 3) * (17 - (- 1) ^ n), for n>1. (End) ●

► [A292764] 2,8,18,36,66,120,210,360,618,1052,1790,3040,5162,8756,14854,25192,42722,72444,122846,208304,353210 ⋆ Minimal number of moves for the cyclic variant of Hanoi's tower for 4 pegs and n disks, with the final peg two steps away. ● a(n) = a(n - 1) + a(n - 2) + a(n - 3) - 2 * a(n - 5) for n>10. [corrected by _ Paul Zimmermann _ , Oct 07 2020 ●

► [A212518] 0,0,0,0,2,8,18,45,84,144,240,375,540,792,1092,1470,1960,2560,3240,4131,5130,6300,7700,9317,11088 ⋆ Number of (w,x,y,z) with all terms in { 1,...,n } and w>2x and y>3z. ● a(n) = 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4) - 4 * a(n - 5) + 2 * a(n - 7) - 2 * a(n - 9) + 4 * a(n - 11) + a(n - 12) - 2 * a(n - 13) - 2 * a(n - 14) + a(n - 16). ●

► [A201348] 2,8,18,47,118,273,585,1174,2228,4030,6992,11697,18950,29839,45807,68736,101044,145796,206830,288899,397830,540701,726037,964026,1266756 ⋆ Number of n X 3 0..1 arrays with rows and columns lexicographically nondecreasing and every element equal to at least one horizontal or vertical neighbor. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>9. ●

► [A102713] 1,2,8,18,48,110,260,586,1320,2918,6412,13954,30192,64926,138964,296122,628664,1330134,2805916,5903090,12388736,25942542,54215268,113090858,235502408 ⋆ Total sum of odd parts in all compositions of n. ● a(n) = ((15 * n + 4) * 2 ^ (n - 1) - 2 * (3 * n + 1) * (- 1) ^ n) / 27. ● a(n) = 2 * a(n - 1) + 3 * a(n - 2) - 4 * a(n - 3) - 4 * a(n - 4) for n>4. ●

► [A114723] 0,1,1,2,8,18,49,129,338,890,2340,6153,16181,42550,111892,294238,773745,2034685,5350526,14070054,36999432,97295857,255854841,672810762,1769262288 ⋆ G.f.: x * (1 - 2 * x ^ 2) / (1 - x - 3 * x ^ 2 - 3 * x ^ 3 - x ^ 4). ● a(n) = a(n - 1) + 3 * a(n - 2) + 3 * a(n - 3) + a(n - 4). G.f.: x * (2 * x ^ 2 - 1) / (x ^ 4 + 3 * x ^ 3 + 3 * x ^ 2 + x - 1). [_ Colin Barker _ , Oct 11 2012] ●

► [A153335] 0,1,2,8,18,52,116,296,650,1556,3372,7768,16660,37416,79592,175568,371034,807604,1697660,3657464,7654460,16357496,34106712,72407728,150499908 ⋆ Number of zig - zag paths from top to bottom of an n X n square whose color is not that of the top right corner. ● a(n) = (n + 1)2 ^ (n - 2) - 2(n - 1)binomial(n - 2,(n - 2) / 2) for n even, a(n) = (n + 1)2 ^ (n - 2) - (n)binomial(n - 1,(n - 1) / 2) for n odd. ●

► [A136201] 0,0,0,1,2,8,18,53,124,328,780,1969,4718,11648,28014,68405,164824,400240,965304,2337409,5640122,13637336,32914794,79525973,191966740 ⋆ a(n) = 2 * a(n - 1) + 4 * a(n - 2) - 6 * a(n - 3) - 3 * a(n - 4). ● a(n) = (1 / 8) * (1 + sqrt(2)) ^ n + (1 / 8) * (1 - sqrt(2)) ^ n + (1 / 24) * 3 ^ (n / 2) * (- 3 - sqrt(3) - 3(- 1) ^ n + (- 1) ^ n * sqrt(3)). - _ Emeric Deutsch _ , Mar 31 2008 ●

► [A236327] 2,8,19,30,32,38,49,60,62,68,79,90,92,98,109,120,122,128,139,150,152,158,169,180,182 ⋆ a(n) * Pi is the total length of irregular spiral (center points: 1, 2, 3, 4, 5; pattern 2) after n rotations. ● a(n) = a(n - 1) + a(n - 4) - a(n - 5). ●

► [A256321] 0,2,8,19,33,52,75,102,133,169,208,252,300,352,408,469,533,602,675,752,833,919,1008,1102,1200 ⋆ Number of partitions of 5n into exactly 3 parts. ● a(n) = a(n - 1) + a(n - 2) - a(n - 4) - a(n - 5) + a(n - 6) for n>5. ●

► [A192136] 1,2,8,19,35,56,82,113,149,190,236,287,343,404,470,541,617,698,784,875,971,1072,1178,1289,1405 ⋆ a(n) = (5 * n ^ 2 - 3 * n + 2) / 2. ● a(n) = (5 * n ^ 2 - 3 * n + 2) / 2. ● a(n) = 2 * a(n - 1) - a(n - 2) + 5. ● a(n) = a(n - 1) + 5 * n - 4. ● a(n) = 5 * binomial(n + 2, 2) - 9 * n - 4. ●

► [A030504] 2,8,19,38,66,107,160,230,317,424,553,705,883,1088,1324,1591,1891,2227,2601,3015,3470,3969,4514,5106,5748 ⋆ Graham - Sloane - type lower bound on the size of a ternary (n,3,4) constant - weight code. ● a(n) = ceiling(binomial(n, w) * 2 ^ w / (2 * n + 1)) with w=4. ●

► [A327728] 0,2,8,19,40,77,132,217,340,510,742,1054,1456,1976,2634,3453,4464,5703,7194,8987,11120,13636,16588,20036,24024 ⋆ Number of unlabeled multigraphs with loops allowed and n edges covering three vertices. ● a(n) = 2 * a(n - 1) + a(n - 2) - 2 * a(n - 3) - 3 * a(n - 4) + 6 * a(n - 6) - 3 * a(n - 8) - 2 * a(n - 9) + a(n - 10) + 2 * a(n - 11) - a(n - 12) for n > 12. ●

► [A101427] 1,2,8,19,42,78,139,224,350,517,744,1032,1405,1862,2432,3115,3942,4914,6067,7400,8954,10729,12768,15072,17689 ⋆ Number of different cuboids with volume (pq) ^ n, where p,q are distinct prime numbers. ● a(n) = a(n - 1) + 2 * a(n - 2) - a(n - 3) - 2 * a(n - 4) - a(n - 5) + 2 * a(n - 6) + a(n - 7) - a(n - 8) + 12, n>=8. ● a(n) = 4 * a(n - 6) - 6 * a(n - 12) + 4 * a(n - 18) - a(n - 24) + 1296, n>=24. (End) ●

► [A129445] 1,2,8,19,79,188,782,1861,7741,18422,76628,182359,758539,1805168,7508762,17869321,74329081,176888042,735782048,1751011099,7283491399,17333222948,72099131942,171581218381,713707828021 ⋆ Numbers k > 0 such that k ^ 2 is a centered triangular number. ● a(n) = 10 * a(n - 2) - a(n - 4), a(1..4) = 1, 2, 8, 19. - _ Zak Seidov _ , Jun 11 2013 ●

► [A077588] 1,2,8,20,38,62,92,128,170,218,272,332,398,470,548,632,722,818,920,1028,1142,1262,1388,1520,1658 ⋆ Maximum number of regions into which the plane is divided by n triangles. ● a(n) = 3n ^ 2 - 3n + 2 for n > 0. ● a(n) is the nearest integer to (Sum _{ k>=n } 1 / k ^ 2) / (Sum _{ k>=n } 1 / k ^ 4). - _ Benoit Cloitre _ , Jun 12 2003 ● a(n) = a(n - 1) + 6 * n - 6 (with a(1) = 2). - _ Vincenzo Librandi _ , Dec 07 2010 ●

► [A128445] 1,1,2,8,20,40,68,104,148,200,260,328,404,488,580,680,788,904,1028,1160,1300,1448,1604,1768,1940 ⋆ Number of facets of the Alternating Sign Matrix polytope ASM(n). ● a(n) = 4 * ((n - 2) ^ 2 + 1) for n >= 3. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3), n > 5. ●

► [A007290] 0,0,0,2,8,20,40,70,112,168,240,330,440,572,728,910,1120,1360,1632,1938,2280,2660,3080,3542,4048 ⋆ a(n) = 2 * binomial(n,3). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Vincenzo Librandi _ , Jun 19 2012 ● a(n) = (2 * n - 3 * n ^ 2 + n ^ 3) / 3. - _ T. D. Noe _ , May 20 2013 ● a(n + 2) = delta(- n) = - delta(n) for n >= 0, where delta is the p - derivation over the integers with respect to prime p = 3. - _ Danny Rorabaugh _ , Nov 10 2017 ● a(n) = Sum _{ m=0..n - 2 } Sum _{ k=0..n - 2] abs(m - k). - _ Nicolas Bělohoubek _ , Nov 06 2022 ● a(n + 1) = 2 * Sum _{ k=1..floor(n / 2) } (n - (2k - 1)) ^ 2, for n >= 2. (End) ●

► [A049031] 0,0,2,8,20,40,80,140,224,336,504,720,990,1320,1760,2288,2912,3640,4550,5600,6800,8160,9792,11628,13680 ⋆ Maximization of sums of cubes of integer differences (b _ [i] - i) ^ 3 over permutations { b _ [i], for i - 1,2,...,n } on first n integers. ● a(n) = r * (n - r + 1) * (n - r) * (n - r - 1) / 3, where r = floor((n + 1) / 4). - _ Vladeta Jovovic _ , Dec 22 2004 ●

► [A057566] 0,1,2,8,20,43,78,130,200,293,410,556,732,943,1190,1478,1808,2185,2610,3088,3620,4211,4862,5578,6360 ⋆ Number of collinear triples in a 3 X n rectangular grid. ● a(n) = a(n - 1) + b(n), with a(0)= - 2, b(0)=8 and being b(n) = b(n - 1) - 7 + Sum _{ k=0..n } (5 * (k mod 2) + ((k + 1) mod 2)). - _ Paolo P. Lava _ , Aug 24 2007 ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - 2 * a(n - 3) + 3 * a(n - 4) - a(n - 5) = n ^ 3 / 2 - n ^ 2 + n + (1 - (- 1) ^ n) / 4. ●

► [A296954] 0,1,2,8,20,44,92,188,380,764,1532,3068,6140,12284,24572,49148,98300,196604,393212,786428,1572860,3145724,6291452,12582908,25165820 ⋆ Expansion of x * (1 - x + 4 * x ^ 2) / ((1 - x) * (1 - 2 * x)). ● a(n) = 3 * 2 ^ (n - 1) - 4 for n>1. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>3. ●

► [A131128] 1,2,8,20,44,92,188,380,764,1532,3068,6140,12284,24572,49148,98300,196604,393212,786428,1572860,3145724,6291452,12582908,25165820,50331644 ⋆ Binomial transform of [1, 1, 5, 1, 5, 1, 5, ...]. • a(n) = 3 * 2 ^ n - 4 for n >= 1; a(0)=1. Formula follows by replacing [1,1,5,1,5,1,...] with [1,3 - 2,3 + 2,3 - 2, 3 + 2,3 - 2,...]. - _ Emeric Deutsch _ , Jun 19 2007 • a(n) = 2 * a(n - 1) + 4 for n >= 2, a(0)=1, a(1)=2. - _ Philippe Deléham _ , Sep 23 2009 •

► [A285185] 0,2,8,20,52,128,320,792,1968,4880,12112,30048,74560,184992,459008,1138880,2825792,7011328,17396480,43164032,107098368,265731840,659332352,1635931648,4059064320 ⋆ Expansion of (2 * x + 4 * x ^ 2) / (1 - 2 * x - 2 * x ^ 2 + 2 * x ^ 3). • a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) for n>2. - _ Colin Barker _ , Apr 23 2017 •

► [A024997] 2,8,20,58,162,462,1318,3782,10886,31436,91016,264134,768094,2237640,6529284,19079574,55826166,163538472,479588844,1407813438,4136307798,12163015662,35793391662,105407889930,310620540202 ⋆ a(n) = number of (s(0), s(1), ..., s(n)) such that every s(i) is an integer, s(0) = 0 = s(n), |s(i) - s(i - 1)| = 1 for i = 1,2; |s(i) - s(i - 1)| <= 1 for i >= 3. Also a(n) = T(n,n), where T is the array defined in A024996. • a(n) = 2 * Sum _{ k=0..floor(n / 2) } binomial(n, 2 * k) * binomial(2 * k + 1, k + 1), for n>=1. •

► [A099177] 0,1,2,8,20,60,160,448,1216,3344,9120,24960,68160,186304,508928,1390592,3799040,10379520,28357120,77473792,211661824,578272256,1579868160,4316282880,11792302080 ⋆ a(n)=2a(n - 1) + 4a(n - 2) - 4a(n - 3) - 4a(n - 4). • a(n)=sum { k=0..floor((n + 1) / 2), binomial(n - k + 1, k - 1)2 ^ (n - k) } - _ Paul Barry _ , Oct 23 2004 •

► [A100097] 0,1,2,8,20,64,172,512,1416,4096,11468,32768,92248,262144,739832,2097152,5925520,16777216,47429900,134217728,379536440,1073741824,3036661032,8589934592,24294699120 ⋆ An inverse Chebyshev transform of the Pell numbers. • a(2 * n) = 8 ^ n / (2 * sqrt(2)) - 2 ^ n * (2 * n - 1)!! * hypergeom([1, n + 1 / 2], [n + 1], 1 / 2) / (4 * n!), a(2 * n + 1) = 8 ^ n. - _ Vladimir Reshetnikov _ , Oct 13 2016 •

► [A133467] 1,2,8,20,68,188,596,1724,5300,15644,47444,141308,425972,1273820,3829652,11472572,34450484,103285916,309988820,929704316,2789637236,8367863132,25105686548,75312865340,225946984628 ⋆ a(n) = a(n - 1) + 6 * a(n - 2) for n >= 2, a(0)=1, a(1)=2. • a(n) = (4 / 5) * 3 ^ n + (1 / 5) * (- 2) ^ n, with n >= 0. - _ Paolo P. Lava _ , Nov 18 2008 •

► [A005559] 1,2,8,20,75,210,784,2352,8820,27720,104544,339768,1288287,4294290,16359200,55621280,212751396,734959368,2821056160,9873696560,38013731756,134510127752,519227905728,1854385377600,7174705330000 ⋆ Number of walks on square lattice. • a(n) = C(n + 1,ceiling((n - 1) / 2)) * C(n,floor((n - 1) / 2)) - C(n + 1,ceiling((n - 2) / 2)) * C(n,floor((n - 2) / 2)). - _ Paul D. Hanna _ , Apr 16 2004 •

► [A001471] 0,0,0,2,8,20,80,350,1232,5768,31040,142010,776600,4874012,27027728,168369110,1191911840,7678566800,53474964992,418199988338,3044269834280,23364756531620,199008751634000,1605461415071822 ⋆ Number of degree - n permutations of order exactly 3. • a(n) = a(n - 1) + (1 + a(n - 3)) * (n - 1)(n - 2). • a(n) = Sum _{ j=1..floor(n / 3) } n! / (j! * (n - 3 * j)! * (3 ^ j)). •

► [A358681] 2,8,21,36,64,90,120,157,208,256,306,360,432,504,576,650,750,832,928,1025,1122,1254,1360,1480,1612 ⋆ Largest area (doubled) of a triangle enclosed by a circle of radius n such that the center of the circle and the vertices of the triangle all have integer coordinates. • a(n) / n ^ 2 tends to sqrt(3) * 3 / 2. •

► [A212981] 0,2,8,21,43,77,125,190,274,380,510,667,853,1071,1323,1612,1940,2310,2724,3185,3695,4257,4873,5546,6278 ⋆ Number of (w,x,y) with all terms in { 0,...,n } and w <= x + y and x < y. • a(n) = 3 * a(n - 1) - 2 * a(n - 2) - 2 * a(n - 3) + 3 * a(n - 4) - a(n - 5). • a(n) = (20 * n ^ 3 + 42 * n ^ 2 + 28 * n + 3 * (1 - (- 1) ^ n)) / 48. - _ Luce ETIENNE _ , Feb 17 2015 •

► [A051744] 2,8,21,45,85,147,238,366,540,770,1067,1443,1911,2485,3180,4012,4998,6156,7505,9065,10857,12903,15226,17850,20800 ⋆ a(n) = n * (n + 1) * (n ^ 2 + 5 * n + 18) / 24. • a(n) = binomial(n + 3, n - 1) + binomial(n + 1, n - 1). • a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Vincenzo Librandi _ , Apr 27 2012 • a(n) = sum _{ k=1..n } sum { j=1..k } sum { i=1..j } (i + binomial(j,k)). - _ Wesley Ivan Hurt _ , Nov 01 2014 •

► [A141582] 0,0,2,8,21,48,93,168,278,440,660,960,1347,1848,2471,3248,4188,5328,6678,8280,10145,12320,14817,17688,20946 ⋆ a(n) = number of ways to dispose two pawns on a chessboard of size n X n (two dispositions are equivalent if one can be rotated or reflected to give the other one). • a(n) = 3 * a(n - 1) - a(n - 2) - 5 * a(n - 3) + 5 * a(n - 4) + a(n - 5) - 3 * a(n - 6) + a(n - 7) for n>6. - _ Colin Barker _ , Feb 21 2015 •

► [A014409] 0,2,8,21,49,93,171,278,446,660,970,1347,1863,2471,3269,4188,5356,6678,8316,10145,12365,14817,17743,20946,24714 ⋆ Number of inequivalent ways (mod D _ 4) a pair of checkers can be placed on an n X n board. • a(2 * n) = n / 2 * (2 * n ^ 3 + 3 * n - 1); a(2 * n + 1) = n / 2 * (2 * n ^ 3 + 4 * n ^ 2 + 7 * n + 3). • a(0)=0, a(1)=2, a(2)=8, a(3)=21, a(4)=49, a(5)=93, a(6)=171, a(7)=278, a(n)=2 * a(n - 1) + 2 * a(n - 2) - 6 * a(n - 3) + 0 * a(n - 4) + 6 * a(n - 5) - 2 * a(n - 6) - 2 * a(n - 7) + a(n - 8). - _ Harvey P. Dale _ , May 06 2012 •

► [A237268] 1,2,8,21,55,144,377,987,2584,6765,17711,46368,121393,317811,832040,2178309,5702887,14930352,39088169,102334155,267914296,701408733,1836311903,4807526976,12586269025 ⋆ a(1)=1; for n > 1, a(n) is the smallest F(m) > F(n) such that F(n) divides F(m), where F(k) denotes the k - th Fibonacci number. • a(n) = 3 * a(n - 1) - a(n - 2) for n>4. • a(n) = (((3 + sqrt(5)) / 2) ^ n - ((3 - sqrt(5)) / 2) ^ n) / sqrt(5) for n > 2. - _ Stefano Spezia _ , Apr 15 2022 •

► [A143212] 1,2,8,21,60,160,429,1134,2992,7865,20648,54144,141897,371722,973560,2549421,6675460,17478176,45761045,119808150,313668576,821205937,2149962768,5628704256,14736185425 ⋆ a(n) = F(n) * (F(n + 2) - 1) = A000045(n) * A000071(n + 2) = row sums of triangle A143211. • a(n) = F(n) * sum { k=0..n } F(k). - _ Paul Barry _ , Jan 05 2009 •

► [A107361] 1,2,8,21,68,196,601,1782,5380,16085,48344,144888,434897,1304314,3913552,11739669,35220604,105659228,316981865,950938830,2852827436,8558464597,25675422448,77026220976,231078737953 ⋆ G.f. 1 / ((3 * x - 1) * (x ^ 2 - x - 1)). • a(0)=1, a(1)=2, a(2)=8, a(n)=2 * a(n - 1) + 4 * a(n - 2) - 3 * a(n - 3). - _ Harvey P. Dale _ , Jan 24 2015 •

► [A185309] 0,0,1,2,8,21,78,247,950,3421,13872,54925,235262,1004213,4533144,20600553,97664002,468473957,2324089996,11693569137,60499459054,317757980069,1709245538312,9335437059969,52066575517770 ⋆ a(0)=0, a(1)=0; for n>1, a(n) = a(n - 1) + (n + 1) * a(n - 2) + 1. • a(n) = 2 * a(n - 1) + n * a(n - 2) - n * a(n - 3). - _ Vincenzo Librandi _ , Dec 24 2012 •

► [A212970] 0,2,8,22,44,80,128,196,280,390,520,682,868,1092,1344,1640,1968,2346,2760,3230,3740,4312,4928,5612,6344 ⋆ Number of (w,x,y) with all terms in { 0,...,n } and w != x and x < range(w,x,y). • a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + a(n - 4) + 2 * a(n - 5) - a(n - 6). • a(n) = (10 * n ^ 3 + 24 * n ^ 2 + 8 * n + (6 * n) * (n mod 2)) / 24. (End) •

► [A212683] 0,0,2,8,22,46,84,138,212,308,430,580,762,978,1232,1526,1864,2248,2682,3168,3710,4310,4972,5698,6492 ⋆ Number of (w,x,y,z) with all terms in { 1,...,n } and |x - y| = w + |y - z|. • a(n) = 3 * a(n - 1) - 2 * a(n - 2) - 2 * a(n - 3) + 3 * a(n - 4) - a(n - 5). • a(n) = (2 * n ^ 3 - 3 * n ^ 2 + 2 * n - (n mod 2)) / 4 . - _ Ayoub Saber Rguez _ , Sep 02 2021 •

► [A094533] 0,0,2,8,22,48,98,178,316,524,856,1334,2066,3084,4578,6626,9530,13434,18854,26022,35764,48520,65526,87550,116536 ⋆ Number of one - element transitions among partitions of the integer n for labeled parts. • a(n) = Sum _ p =1 ^ P(n) Sum _ i=1 ^ D(p) Sum _ j=i ^ D(p) 1 [subject to: d(i, p) <= d(j, p)]; P(n) = number of partitions of n, D(p) = number of digits in partition p, d(i, p) and d(j, p) = digits number i and j in partition p of integer n. • a(n) = Sum _ i=1 ^ P(n) p(i, n) ^ 2 - p(i, n), where P(n) is the number of integer partitions of n and p(i, n) is the number of parts of the i - th partition of n. •

► [A145654] 0,2,8,22,52,114,240,494,1004,2026,4072,8166,16356,32738,65504,131038,262108,524250,1048536,2097110,4194260,8388562,16777168,33554382,67108812 ⋆ Partial sums of A000918, starting from index 1. • a(n) = 2 * (- 1 + 2 ^ n - n). • a(n) = Sum _{ i=1..n - 1 } (n - i) * 2 ^ i with a(1)=0. - _ Bruno Berselli _ , Feb 10 2014 •

► [A221880] 1,2,8,22,57,136,315,710,1577,3460,7527,16258,34917,74624,158819,336766,711777,1500028,3152991,6611834,13835357,28894072,60234843,125363062,260512857 ⋆ Number of order - preserving or order - reversing full contraction mappings (of an n - chain) with exactly 1 fixed point. • a(n) = - n + (2 ^ (n - 1) * (21 * n + 34) - 8 * (- 1) ^ n) / 36 for n>1, a(1)=1. [_ Bruno Berselli _ , Mar 01 2013] •

► [A295141] 1,2,8,22,57,142,348,847,2052,4962,11988,28951,69904,168774,407468,983727,2374940,5733626,13842212,33418071,80678377,194774849,470228100 ⋆ Solution of the complementary equation a(n) = 2 * a(n - 1) + a(n - 2) + b(n - 2), where a(0) = 1, a(1) = 2, b(0) = 3, b(1) = 4, and (a(n)) and (b(n)) are increasing complementary sequences. • a(n + 1) / a(n) - > 1 + sqrt(2). •

► [A074352] 0,0,0,2,8,22,60,146,352,814,1860,4170,9256,20326,44300,95874,206320,441758,941780,2000058,4233144,8932310,18796700,39457522,82643328 ⋆ Coefficient of q ^ 1 in nu(n), where nu(0)=1, nu(1)=b and, for n>=2, nu(n)=b * nu(n - 1) + lambda * (1 + q + q ^ 2 + ... + q ^ (n - 2)) * nu(n - 2) with (b,lambda)=(1,2). • a(0) = 0 for n>0, a(n) = (1 / 27) * (2 ^ n * (6 * n - 11) + (- 1) ^ n * (6 * n - 16)). • a(n) = 2 * a(n - 1) + 3 * a(n - 2) - 4 * a(n - 3) - 4 * a(n - 4) for n>4. •

► [A321573] 1,2,8,22,68,202,608,1822,5468,16402,49208,147622,442868,1328602,3985808,11957422,35872268,107616802,322850408,968551222,2905653668,8716961002,26150883008,78452649022,235357947068 ⋆ Row sums of A321624. • a(0)=1, a(1)=2, a(2)=8, a(n)=2 * a(n - 1) + 3 * a(n - 2) , for n>2. • a(0)=1, a(n) = (5 * 3 ^ (n - 1) - (- 1) ^ (n - 1)) / 2, for n>0 . (End) •

► [A045695] 0,1,2,8,22,70,202,622,1844,5576,16658,50114,150140,450824,1351850,4056794,12168538,36509302,109522330,328578142,985717768,2957186620,8871509746,26614629466,79843738258 ⋆ Number of ternary words of length n (beginning 0) with autocorrelation function 2 ^ (n - 1) + 1. • a(2n) = 3 * a(2n - 1) + 2 * a(n) for n >= 2; a(2n - 1) = 3 * a(2n - 2) - a(n) for n >= 2 •

► [A072929] 2,8,22,78,254,952,3434,12948,48642,185016,705434,2705178,10400602,40120040,155117794,601093338,2333606222,9075184872,35345263802,137846713906,538257877894,2104099669160,8233430727602,32247606401148 ⋆ a(n) = Sum _{ d dividing n } binomial(2d,d). • a(n) = Sum _{ k=1..n } C(2 * gcd(n,k), gcd(n,k)) / phi(n / gcd(n,k)) = Sum _{ k=1..n } C(2 * n / gcd(n,k),n / gcd(n,k)) / phi(n / gcd(n,k)) where phi = A000010. - _ Richard L. Ollerton _ , May 19 2021 •

► [A065694] 2,8,23,47,80,365,3089,19916,96287,369983,1188008,3489557,11440865,49588820,250207799,1210364111,5215038272,20004134333,70879879793,248964475292,941859229775,3946659132575,17384730325784,75199501505381 ⋆ Braided power sequence: A065692 is b(n + 1)=3b(n) + 2d(n) - c(n), A065693 is c(n + 1)=3c(n) + 2b(n) - d(n) and this is d(n + 1)=3d(n) + 2c(n) - b(n), starting with b(0)=0, c(0)=1 and d(0)=2. • a(n) = 9 * a(n - 1) - 33 * a(n - 2) + 52 * a(n - 3) for n>2. •

► [A203298] 2,8,23,47,91,151,246,366,540,750,1037,1373,1813,2317,2956,3676,4566,5556,6755,8075,9647,11363,13378,15562,18096 ⋆ Second elementary symmetric function of the first n terms of (1,2,2,3,3,4,4,5,5...). • a(n) = (6 * n ^ 4 + 40 * n ^ 3 + 48 * n ^ 2 - 112 * n) / 192 for n even. • a(n) = (6 * n ^ 4 + 40 * n ^ 3 + 36 * n ^ 2 - 136 * n + 54) / 192 for n odd. • a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 6 * a(n - 3) + 6 * a(n - 5) - 2 * a(n - 6) - 2 * a(n - 7) + a(n - 8) for n>9. •

► [A154144] 2,8,23,53,138,312,807,1821,4706,10616,27431,61877,159882,360648,931863,2102013,5431298,12251432,31655927,71406581,184504266,416188056,1075369671,2425721757,6267713762 ⋆ Indices k such that 13 plus the k - th triangular number is a perfect square. • a(n) = + a(n - 1) + 6 * a(n - 2) - 6 * a(n - 3) - a(n - 4) + a(n - 5). • a(1..4) = (2,8,23,53); a(n) = 6 * a(n - 2) - a(n - 4) + 2, for n >2. - _ Ctibor O. Zizka _ , Nov 10 2009 •

► [A355551] 1,2,8,23,61,144,322,689,1439,2954,6004,12123,24385,48932,98054,196325,392899,786078,1572472,3145295,6290981,12582392,25165258,50331033,100662631 ⋆ Number of ways to select 3 or more collinear points from a 3 X n grid. • a(n) = 3 * (2 ^ n - 1 - n * (n + 1) / 2) + ceiling(n ^ 2 / 2). • a(n) = (3 * 2 ^ (n + 2) - 4 * n ^ 2 - 6 * n - 11 - (- 1) ^ n) / 4. (End) •

► [A180664] 0,2,8,23,63,167,440,1154,3024,7919,20735,54287,142128,372098,974168,2550407,6677055,17480759,45765224,119814914,313679520,821223647,2149991423,5628750623,14736260448 ⋆ Golden Triangle sums: a(n) = a(n - 1) + A0016

54(n + 1) with a(0)=0. • a(n) = (- 15 + (- 1) ^ n + (6 - 2 * A) * A ^ (- n - 1) + (6 - 2 * B) * B ^ (- n - 1)) / 10 with A=(3 + sqrt(5)) / 2 and B=(3 - sqrt(5)) / 2. • a(n) = (1 / 10) * ((- 1) ^ n - 15 + 2 * Lucas(2 * n + 4)). - _ G. C. Greubel _ , Jan 21 2022 •

► [A290926] 0,2,8,23,64,182,520,1475,4152,11624,32408,90028,249272,688140,189 4600,5203665,14260968,39004962,106486512,290226621,789776888,2146082610,58 23823120,15784464728,42731452816 ⋆ p - INVERT of the positive integers, whe re p(S) = (1 - S ^ 2) ^ 2. • a(n) = 8 * a(n - 1) - 26 * a(n - 2) + 48 * a(n - 3) - 5 9 * a(n - 4) + 48 * a(n - 5) - 26 * a(n - 6) + 8 * a(n - 7) - a(n - 8). •

► [A084744] 1,2,8,24,48,384,1152,2304,9216,46080,414720,829440,13271040,7962 6240,318504960,637009920,1911029760,15288238080,107017666560,53508833280 0,1070176665600,9631589990400,38526359961600,77052719923200 ⋆ Product of a ll composite numbers from 1 to the n - th nonprime number divided by product of all the prime divisors of each of those composite numbers which exceed the p reviously stated value. • a(1)=1, a(n) = a(n - 1) * n / (n's prime factors). •

► [A152132] 2,8,24,54,104,174,270,396,558,756,996,1282,1620,2010,2458,2968,354 6,4192,4912,5710,6592,7558,8614,9764,11014 ⋆ Maximal length of rook tour on a n n X n + 1 board. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 4) - 3 * a(n - 5) + 3 * a(n - 6) - a(n - 7). •

► [A330520] 0,0,2,8,24,54,108,192,320,500,750,1080,1512,2058,2744,3584,4608,58 32,7290,9000,11000,13310,15972,19008,22464 ⋆ Sum of even integers <= n time s the sum of odd integers <= n. • a(2k + i) = (k + i) ^ 3 (k + 1 - i), with i = 0 or 1. - _ M. F. Hasler _ , Dec 19 2019 •

► [A051745] 2,8,24,60,131,258,469,800,1296,2012,3014,4380,6201,8582,11643,155 20,20366,26352,33668,42524,53151,65802,80753,98304,118780 ⋆ a(n) = n * (n ^ 4 + 10 * n ^ 3 + 35 * n ^ 2 + 50 * n + 144) / 120. • a(n) = binomial(n + 4, n - 1) + binomial(n, n - 1). • a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6), with a(1)=2, a(2)=8, a(3)=24, a(4)=60, a(5) =131, a(6)=258. - _ Harvey P. Dale _ , Apr 07 2013 •

► [A131064] 1,2,8,24,60,136,292,608,1244,2520,5076,10192,20428,40904,81860,16 3776,327612,655288,1310644,2621360,5242796,10485672,20971428,41942944,8388 5980 ⋆ Binomial transform of [1, 1, 5, 5, 5, ...]. • a(n) = 5 * 2 ^ n - 4 * (n + 1). • a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 2 * a(n - 3). - _ Vincenzo Librandi _ , Jul 05 2012 •

► [A234933] 0,0,0,0,2,8,24,62,148,336,738,1584,3344,6974,14412,29576,60370,122 712,248616,502398,1013156,2039840,4101570,8238560,16534432 ⋆ The number of binary sequences that contain at least two consecutive 1's and contain at least t wo consecutive 0's. • a(n) = 2 ^ (- n) * (5 * 2 ^ n * (2 + 2 ^ n) + (1 - sqrt(5)) ^ n * (- 5 + 3 * sqrt(5)) - (1 + sqrt(5)) ^ n * (5 + 3 * sqrt(5))) / 5 for n>0. • a(n) = 4 * a(n - 1) - 4 * a(n - 2) - a(n - 3) + 2 * a(n - 4) for n>4. •

► [A134401] 1,2,8,24,64,160,384,896,2048,4608,10240,22528,49152,106496,22937 6,491520,1048576,2228224,4718592,9961472,20971520,44040192,92274688,192937 984,402653184 ⋆ Row sums of triangle A134400. • a(n) = n * 2 ^ n, n > 1. - Eu geny Yakimovitch (Eugeny.Yakimovitch(AT)gmail.com), Jan 08 2008 • a(n) = 4 * a(n - 1) - 4 * a(n - 2) for n > 2. •

► [A333186] 2,8,24,64,161,385,899,2053,4617,10257,22559,49208,106601,229571,4 91884,1049258,2229509,4721020,9966072,20980260,44056840,92306470,19299878 4,402769716,839084537 ⋆ a(n) = floor(2 ^ n csc(1 / n)). • a(n) = floor(2 ^ n csc (1 / n)). •

► [A229136] 2,8,24,64,192,768,3584,16384,69632,278528,1081344,4194304,165150 72,66060288,266338304,1073741824,4311744512,17246978048,68853694464,27487 7906944,1098437885952,4393751543808,17583596109824,70368744177664,281543 696187392 ⋆ Number of solutions to Sum _{ i=1..n } x _ i ^ 2 == 1 (mod 4) w ith x _ i in 0..3. • a(n) = 4 * a(n - 1) - 8 * a(n - 2) + 2 ^ (2 * n - 3) for n >= 3 . - _ Petros Hadjicostas _ , Dec 20 2019 •

► [A293006] 0,0,2,8,24,68,188,516,1412,3860,10548,28820,78740,215124,587732,1 605716,4386900,11985236,32744276,89459028,244406612,667731284,1824275796,4 984014164,13616579924 ⋆ Expansion of 2 * x ^ 2 * (x + 1) / (2 * x ^ 3 - 3 * x + 1). • a(n) = (- 8 + (1 - sqrt(3)) ^ (1 + n) + (1 + sqrt(3)) ^ (1 + n)) / 6 for n >0. • a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>3. •

► [A131569] 1,2,8,24,71,198,541,1452,3862,10208,26885,70644,185369,485982,127 3420,3335640,8735707,22875050,59895221,156819960,410579786,1074943872,2814 291433,7367994504,19289795761 ⋆ a(n) = (1 / 2) * (F(n + 2) - 1) * (F(n + 2) - 2) + F(n), where F() are the Fibonacci numbers. • a(n) = 4 * a(n - 1) - 2 * a(n - 2) - 6 * a(n - 3) + 4 * a(n - 4) + 2 * a(n - 5) - a(n - 6). •

► [A290904] 0,2,8,24,72,222,688,2128,6576,20322,62808,194120,599960,1854270,5 730912,17712288,54742624,169190722,522910632,1616137848,4994929128,154376 16926,47712391952,147462678768,455756685840 ⋆ p - INVERT of the positive i ntegers, where p(S) = 1 - 2 * S ^ 2. • a(n) = 4 * a(n - 1) - 4 * a(n - 2) + 4 * a(n - 3) - a(n - 4). •

► [A228404] 1,2,8,24,76,249,836,2860,9932,34918,124032,444448,1604664,583176 5,21316860,78319140,289064460,1071275370,3984871440,14872552560,556782704 40,209027020410,786750047304,2968257334104,11223268563896 ⋆ The number o f complete binary trees with bicolored twigs. A twig is a vertex with one child on the boundary and the other child having no descendants. • a(n - 4) + (- 5 * n ^ 2 + 130153 * n - 508806) * a(n - 5) + 13650 * (2 * n - 11) * (n - 7) * a(n - 6) = 0. - _ R. J. Mathar _ , Aug 08 2015 •

► [A085449] 0,1,2,8,24,80,256,832,2688,8704,28160,91136,294912,954368,308838 4,9994240,32342016,104660992,338690048,1096024064,3546808320,11477712896,3 7142659072,120196169728,388962975744 ⋆ Horadam sequence (0,1,4,2). • a(n) = s * a(n - 1) + r * a(n - 2); for n > 1, where a(0) = 0, a(1) = 1, s = 2, r = 4. • a(n) = sqrt(5) * ((1 + sqrt(5)) ^ n - (1 - sqrt(5)) ^ n) / 10. • a(n) = Sum _{ k=0..floor(n / 2) } C(n, 2 * k + 1)5 ^ k . (End) • a(n) = 2 ^ (n - 1) * Fib(n). - _ Paul Barry _ , Mar 22 2004 • a(n) = - (- 4) ^ n * a(- n) for all integer n. - _ Michael Somos _ , Mar 07 2021 •

► [A063727] 1,2,8,24,80,256,832,2688,8704,28160,91136,294912,954368,3088384,9 994240,32342016,104660992,338690048,1096024064,3546808320,11477712896,371 42659072,120196169728,388962975744,1258710630400 ⋆ a(n) = 2 * a(n - 1) + 4 * a(n - 2), a(0)=1, a(1)=2. • a(n) = sqrt(5) / 10 * ((1 + sqrt(5)) ^ (n + 1) - (1 - sqrt(5)) ^ (n + 1)). • a(2 * n) = 4 * a(n - 1) ^ 2 + a(n) ^ 2. • a(n) = 2 ^ n * Fibonacci(n + 1). - _ Vladeta Jovovic _ , Oct 25 2003 • a(n) = sum { k=0..flo or(n / 2), C(n, 2 * k + 1) * 5 ^ k } . - _ Paul Barry _ , Nov 15 2003 • a(n) = U(n, i / sqrt(4))(- i * sqrt(4)) ^ n, i ^ 2= - 1. - _ Paul Barry _ , Nov 17 2003 • a(n) = A(n - 1,n) = A(n,n - 1); A(i,j) = A(i - 1,j) + A(i,j - 1) - abs(A(i - 1,j) - A(i,j - 1)). - _ Carmine Suriano _ , May 13 2010 •

► [A094038] 0,1,2,8,24,84,280,960,3264,11152,38048,129920,443520,1514304,5170 048,17651712,60266496,205762816,702517760,2398545920,8189147136,279594977 28,95459694592,325919784960,1112759746560 ⋆ Binomial transform of (Pell(- n) + Pell(n)) / 2. • a(n)=(sqrt(2) / 8)((2 + sqrt(2)) ^ n - (2 - sqrt(2)) ^ n + (sq rt(2)) ^ n - (- sqrt(2)) ^ n). •

► [A007223] 1,2,8,24,85,286,1008,3536,12618,45220,163504,594320,2173197,7983 990,29465440,109174560,405995326,1514797020,5669021488,21275014800,800472 72578,301892460012,1141069157408,4321730134624,16399422757300 ⋆ Number o f distinct perforation patterns for deriving (v,b) = (n + 2,n) punctured convolu tional codes from (2,1). • a(n) = (1 / n) * Sum _{ k|gcd(n + 2,n) } phi(k) * bi nomial(2 * n / k, (n + 2) / k). • a(n) = (1 / n) * (binomial(2 * n, n + 2) + [(n mod 2) == 0] * binomial(n, (n / 2) + 1)). • a(n) = (- 2 * c(n) + c(n + 1) + [(n mod 2) == 0] * c(n / 2)) / 2 for n >= 1, where c = A000108. (End) •

► [A106189] 1,2,8,24,86,300,1096,4032,15062,56684,214880,818800,3133916,1203 8200,46384432,179193920,693849254,2691994060,10462833808,40729251920,1587 72196436,619716378280,2421643356592,9472863484160,37090890396284 ⋆ Expan sion of 1 / ((1 - 2x ^ 2)sqrt(1 - 4x)). • a(n)=sum { k=0..floor(n / 2), binomial(2(n - 2k), n - 2k) * 2 ^ k } . •

► [A106183] 1,2,8,24,88,304,1120,4096,15328,57536,218112,830208,3176704,1219 6352,46982144,181452800,702465536,2724948992,10589474816,41217216512,1606 57903616,627019489280,2449986043904,9583049572352,37519931654144 ⋆ Expan sion of 1 / sqrt(1 - 4x - 4x ^ 2 + 16x ^ 3). • a(n)=sum { k=0..floor(n / 2), C(2 k, k)C(2(n - 2k), n - 2k) } . •

► [A060899] 1,2,8,24,96,320,1280,4480,17920,64512,258048,946176,3784704,1405 7472,56229888,210862080,843448320,3186360320,12745441280,48432676864,1937 30707456,739699064832,2958796259328,11342052327424 ⋆ Number of walks of le ngth n on square lattice, starting at origin, staying on points with x + y >= 0. • a(n) = 2 ^ n * binomial(n, [n / 2]); • a(n) = (- 4) ^ n * hypergeom([3 / 2, - n],[2],2). - _ Peter Luschny _ , Apr 26 2016 •

► [A330505] 1,2,8,24,144,960,5760,40320,524160,4354560,43545600,638668800,67 06022400,99632332800,2092278988800,20922789888000,376610217984000,924787 3130496000,12804747411456000,2919482409811968000,77852864261652480000 ⋆ Expansion of e.g.f. Sum _{ k>=1 } arctanh(x ^ k). • a(n) = (n - 1)! * Sum _{ d|n, n / d odd } d. •

► [A066374] 2,8,25,67,165,387,881,1967,4333,9451,20457,44007,94181,200675,425 953,901087,1900509,3997659,8388569,17563607,36700117,76546003,159383505,33 1349967,687865805 ⋆ (3 * n + 4) * 2 ^ (n - 3) - (2 * n - 1). • a(2)=2, a(3)=8, a(4)=25, a(5)=67, a(n)=6 * a(n - 1) - 13 * a(n - 2) + 12 * a(n - 3) - 4 * a(n - 4). - _ Harvey P. Dale _ , Oct 23 2013 •

► [A115256] 1,2,8,25,90,312,1145,4186,15640,58681,222298,845848,3235385,1241 8650,47827992,184688185,714884186,2772776984,10774163001,41932100698,1634 30680600,637793652281,2491918144602,9746480252952,38157725306425 ⋆ Diago nal sums of correlation triangle of central binomial coefficients. • a(n) = Sum _{ k=0..floor(n / 2) } (Sum _{ j=0..n - k } [j<=k] * C(2k - 2j, k - j)[j<=n - 2k] * C(2n - 4k - 2j, n - 2k - j) }). (End) •

► [A212691] 0,0,2,8,26,50,100,154,252,348,510,660,902,1118,1456,1750,2200,258 4,3162,3648,4370,4970,5852,6578,7636 ⋆ Number of (w,x,y,z) with all terms in { 1,...,n } and w + |x - y|<=|x - z| + |y - z|. • a(n)=a(n - 1) + 3 * a(n - 2) - 3 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) + a(n - 6) - a(n - 7). • a(n) = n * (n - 1) * (14 * n - 7 + 3 * (- 1) ^ n) / 24. - _ R. J. Mathar _ , Jul 01 2013 •

► [A227015] 2,8,26,60,117,203,324,487,696,958,1279,1666,2123,2657,3274,3981,47 82,5684,6693,7816,9057,10423,11920,13555,15332 ⋆ a(n) = floor(M(g(n - 1) + 1, ..., g(n))), where M = harmonic mean and g(n) = n ^ 3 + n ^ 2 + n + 1. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 4) - 3 * a(n - 5) + 3 * a(n - 6) - a(n - 7) for n > 2 (conjectured). • a(n) = (1 / 2) * ((- 1) ^ (n - 1)! + 2 * n ^ 3 - n ^ 2 + n + 3 + 2 * floor(max(0, n - 4) / 4)) (conjectured). •

► [A100504] 2,8,26,64,130,232,378,576,834,1160,1562,2048,2626,3304,4090,4992,6 018,7176,8474,9920,11522,13288,15226,17344,19650 ⋆ a(n) = (4 * n ^ 3 + 6 * n ^ 2 + 8 * n + 6) / 3. • a(n) = a(n - 1) + (2 * n) ^ 2 + 2. - _ Philippe Deléham _ , Jan 18 2012 • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). (En d) •

► [A357283] 0,0,0,0,2,8,26,68,166,376,826,1756,3678,7584,15522,31524,63782,128 552,258602,519212,1041454,2086960,4180018,8368180,16748598 ⋆ a(n) = numbe r of subsets S of { 1,2,...,n } having more than 1 element such that (sum of leas t two elements of S) < max(S). • a(n) = 4 * a(n - 1) - 3 * a(n - 2) - 6 * a(n - 3) + 10 * a(n - 4) - 4 * a(n - 5). •

► [A167826] 0,0,0,0,0,2,8,26,74,194,482,1152,2674,6068,13524,29704,64460,13848 2,294988,623834,1311086,2740666,5702270,11815752,24395678 ⋆ a(n) is the num ber of n - tosses having a run of 3 or more heads and a run of 3 or more tails fo r a fair coin. • a(n) = 2 ^ n - 2 * (tribonacci(n + 3) - Fibonacci(n + 1)), where tribonacci = A000073. • a(n) = 4 * a(n - 1) - 3 * a(n - 2) - 3 * a(n - 3) + 3 * a(n - 5) + 2 * a(n - 6). •

► [A224289] 0,0,0,2,8,26,79,232,664,1856,5072,13568,35584,91648,232192,57958 4,1427456,3473408,8359936,19922944,47054848,110231552,256311296,59192115 2,1358430208 ⋆ Number of permutations of length n containing exactly 1 occurr ence of 123 and 2 occurrences of 132. • a(n) = 2 ^ (- 8 + n) * (- 136 + 70 * n - 11 * n ^ 2 + n ^ 3) for n>3. G.f.: - x ^ 4 * (x ^ 3 - 10 * x ^ 2 + 8 * x - 2) / (2 * x - 1) ^ 4. - _ Colin Barker _ , Apr 14 2013 •

► [A279735] 0,2,8,26,80,240,708,2062,5944,16990,48220,136032,381768,1066586,2 968040,8230370,22751528,62716752,172447884,473081830,1295113240,353874986 2,9652296628,26285128896,71472896400 ⋆ Number of n X 2 0..1 arrays with no element equal to a strict majority of its horizontal and antidiagonal neighbors, with the exception of exactly one element, and with new values introduced in o rder 0 sequentially upwards. • a(n) = (- 1) * (2 ^ (1 - n) * (sqrt(5) * ((3 - sqrt

(5)) ^ n - (3 + sqrt(5)) ^ n) + 5 * (3 - sqrt(5)) ^ n * (2 + sqrt(5)) * n - 5 * (- 2 + sqrt(5)) * (3 + sqrt(5)) ^ n * n)) / 25. ●

▶ [A024023] 0,2,8,26,80,242,728,2186,6560,19682,59048,177146,531440,1594322,4782968,14348906,43046720,129140162,387420488,1162261466,3486784400,10460353202,31381059608,94143178826,282429536480 ⋆ a(n) = 3 ^ n - 1. ● a(n) = Sum _{ k=1..n } Sum _{ m=1..k } binomial(k - 1,m - 1) * 2 ^ m, n >= 1. a(0)=0. From the sequence combinatorics mentioned above. Twice partial sums of powers of 3. ● a(n) = 3 * a(n - 1) + 2 (with a(0)=0). - _ Vincenzo Librandi _ , Nov 19 2010 ●

▶ [A103453] 1,2,8,26,80,242,728,2186,6560,19682,59048,177146,531440,1594322,4782968,14348906,43046720,129140162,387420488,1162261466,3486784400,10460353202,31381059608,94143178826,282429536480 ⋆ a(n) = 0 ^ n + 3 ^ n - 1. ● a(n) = Sum _{ k=0..n } (2 * 0 ^ (n - k) - 1) * 0 ^ (k * (n - k)) * 3 ^ k. ●

▶ [A128634] 0,2,8,26,82,262,856,2858,9722,33590,117570,416022,1485798,5348878,19389688,70715338,259289578,955277398,3534526378,13128240838,48932534038,182965127278,686119227298,2579808294646,9723892802902 ⋆ Number of parallel permutations of length n. ● a(n) = - 2 + 2 * binomial(2 * n,n) / (n + 1). ●

▶ [A343485] 0,2,8,26,86,276,856,2586,7826,23628,71128,213546,641246,1925076,5777416,17333706,52006586,156031788,468115048,1404358266,4213124006,12639480276,37918617976,113755972026,341268358946 ⋆ Area of the convex hull around terdragon expansion level n, measured in unit triangles. ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) + 4 * a(n - 3) + 6 * a(n - 4) - 36 * a(n - 5) + 36 * a(n - 6) - 36 * a(n - 7) + 27 * a(n - 8), for n>=10. ●

▶ [A052543] 1,2,8,26,90,306,1046,3570,12190,41618,142094,485138,1656366,5655186,19308014,65921682,225070702,768439442,2623616366,8957586578,30583113582,104417281170,356502897518,1217177027730,4155702315886 ⋆ Expansion of (1 - x) / (1 - 3 * x - 2 * x ^ 2 + 2 * x ^ 3). ● a(n) = 3 * a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3), with a(0)=1, a(1)=2, a(2)=8. ● a(n) = Sum _{ alpha = RootOf(1 - 3 * x - 2 * x ^ 2 + 2 * x ^ 3) } (1 / 98) * (13 + 25 * alpha - 16 * alpha ^ 2) * alpha ^ (- n - 1). ●

▶ [A301699] 0,1,2,8,26,94,330,1178,4186,14914,53098,189122,673530,2398834,8543498,30428162,108371354,385970386,1374653610,4895901602,17437011514,62102837746,221182535242,787753281218,2805624912090 ⋆ Generating function = g(g(x)), where g(x) = g.f. of Jacobsthal numbers A001045. ● a(n) = 3 * a(n - 1) + 4 * a(n - 2) - 6 * a(n - 3) - 4 * a(n - 4). - _ Vincenzo Librandi _ , Mar 30 2018 ●

▶ [A129368] 1,2,8,26,96,342,1266,4678,17548,66098,250854,956034,3660190,14059866,54176466,209290554,810370944,3143964294,12219099594,47564314774,185410843594,723668533278,2827767496998,11061197519166 ⋆ a(n)=sum { k=floor((n + 1) / 2)..n, C(2k,k) } . ● a(n)=sum { k=0..floor(n / 2), C(2n - 2k,n - k) } ; - _ Paul Barry _ , Oct 09 2007 ●

▶ [A295934] 2,8,26,106,442,1849,7723,32176,133706,554269,2292655,9464547,39002251,160466401,659249461,2704861756,11084629546,45375676501,185562634951,758155908511,3094982778031,12624593782321,51458942047501,209609423940151,853271593454827 ⋆ Number of (not necessarily maximal) cliques in the n - odd graph. ● a(n) = binomial(2 * n - 1, n) + n * binomial(2 * n, n) / 4 + 1 for n > 2. ●

▶ [A184628] 2,8,27,64,125,216,343,512,729,1000,1331,1728,2197,2744,3375,4096,4913,5832,6859,8000,9261,10648,12167,13824,15625 ⋆ Floor(1 / frac((4 + n ^ 4) ^ (1 / 4))), where frac(x) is the fractional part of x. ● a(n) = floor(1 /{ (4 + n ^ 4) ^ (1 / 4) }), where {} =fractional part. ●

▶ [A289864] 2,8,27,72,169,367,764,1553,3120,6234,12433,24790,49451,98705,197130,393879,787258,1573876,3146951,6292916,12584637,25167843,50333992,100665997,201329684 ⋆ Number of cliques in the n - triangular honeycomb queen graph. ● a(n) = (4 * n ^ 3 - 18 * n ^ 2 - 68 * n - 79 - (- 1) ^ n + 3 * 2 ^ (n + 5)) / 16. ● a(n) = 5 * a(n - 10 - 8 * a(n - 2) + 2 * a(n - 3) + 7 * a(n - 4) - 7 * a(n - 5) + 2 * a(n - 6). ●

▶ [A290056] 1,2,8,27,76,192,456,1045,2344,5186,11364,24719,53444,114948,246096,524713,1114640,2359942,4981516,10486691,22021196,46138632,96470488,201328317,419432376 ⋆ Number of cliques in the n - triangular graph. ● a(n) = 1 + binomial(n,2) + (2 ^ (n - 1) - n) * n + binomial(n,3). ● a(n) = 8 * a(n - 1) - 26 * a(n - 2) + 44 * a(n - 3) - 41 * a(n - 4) + 20 * a(n - 5) - 4 * a(n - 6). - _ Eric W. Weisstein _ , Jul 29 2017 ● a(n) = (6 + (- 1 + 3 * 2 ^ n) * n - 6 * n ^ 2 + n ^ 3) / 6. ●

▶ [A054109] 1,2,8,27,99,363,1353,5082,19228,73150,279566,1072512,4127788,15930512,61628248,238911947,927891163,3609676487,14062955413,54860308997,214268628223,837780853637,3278934510163,12844867331387 ⋆ a(n) = T(2 * n + 1, n), array T as in A054106. ● a(n - 1) = (1 / 2) * (- 1) ^ n * Sum _{ k=1..n } (- 1) ^ k * binomial(2k, k). - _ Benoit Cloitre _ , Nov 07 2002 ● a(n) = Sum _{ k=0..n } (- 1) ^ (n - k) * binomial(2k + 1,k + 1). - _ Paul Barry _ , Jan 17 2020 ● a(n) = binomial(2 * n + 3, n + 2) * hypergeom([1, n + 5 / 2], [n + 3], - 4) + (- 1) ^ n * (5 - sqrt(5)) / 10. - _ Peter Luschny _ , Jan 18 2020 ●

▶ [A276940] 2,8,27,128,750,5184,41160,368640,3674160,40320000,482993280,6270566400,87697209600,1314380390400,21016195200000,357082280755200,6424604169984000,122021710626816000,2439660069310464000,51218989645824000000,1126555274886193152000,25905540583064862720000,621623493403188756480000,15538186060797648568320000 ⋆ a(1) = 2; for n > 1, a(n) = (n - 2)! * n ^ 3. ● a(1) = 2; for n > 1, a(n) = (n - 2)! * n ^ 3. ●

▶ [A082107] 1,2,8,28,79,190,406,792,1437,2458,4004,6260,9451,13846,19762,27568,37689,50610,66880,87116,112007,142318,178894,222664,274645 ⋆ Diagonal sums of number array A082105. ● a(n) = (n ^ 5 + 20 * n ^ 3 + 9 * n + 30) / 30. ●

▶ [A135263] 2,8,28,82,244,728,2186,6560,19684,59050,177148,531440,1594322,4782968,14348908,43046722,129140164,387420488,1162261466,3486784400,10460353204,31381059610,94143178828,282429536480,847288609442 ⋆ a(n) = 2 * A132357(n). ● a(n) = 3 * a(n - 1) - a(n - 3) + a(n - 4). ●

▶ [A048497] 1,2,8,28,84,228,580,1412,3332,7684,17412,38916,86020,188420,409604,884740,1900548,4063236,8650756,18350084,38797316,81788932,171966468,360710148,754974724 ⋆ a(n) = 2 ^ (n - 1) * (4 * n - 6) + 4. ● a(n) = 5 * a(n - 1) - 8 * a(n - 2) + 4 * a(n - 3). ●

▶ [A178222] 0,2,8,28,88,270,816,2456,7376,22138,66424,199284,597864,1793606,5380832,16142512,48427552,145282674,435848040,1307544140,3922632440,11767897342,35303692048,105911076168,317733228528 ⋆ Partial sums of floor(3 ^ n / 4). ● a(n) = round((3 * 3 ^ n - 4 * n - 4) / 8). ● a(n) = floor((3 * 3 ^ n - 4 * n - 3) / 8). ● a(n) = ceiling((3 * 3 ^ n - 4 * n - 5) / 8). ● a(n) = round((3 * 3 ^ n - 4 * n - 3) / 8). ● a(n) = a(n - 2) + 3 ^ (n - 1) - 1, n > 2. ● a(n) = (3 * 3 ^ n - 4 * n - 4 + (- 1) ^ n) / 8. ●

▶ [A279193] 1,2,8,28,88,288,888,2888,8888,28888,88888,288888,888888,2888888,8888888,28888888,88888888,288888888,888888888,2888888888,8888888888,28888888888,88888888888,288888888888,888888888888 ⋆ Least positive integer whose decimal digits divide the plane into n regions (version for people who write 2 with a curlicue). ● a(n) = a(n - 1) + 10 * a(n - 2) - 10 * a(n - 3) for n>4. ● a(n) = ((26 - (13 - 4 * sqrt(10)) * (1 - (- 1) ^ n)) * sqrt(10 ^ n) - 80) / 90 for n>1, a(1)=1. - _ Bruno Berselli _ , Dec 15 2016 ●

▶ [A060995] 0,2,8,28,96,328,1120,3824,13056,44576,152192,519616,1774080,6057088,20680192,70606592,241065984,823050752,2810071040,9594182656,32756588544,111837988864,381838778368,1303679135744 ⋆ Number of routes of length 2n on the sides of an octagon from a point to opposite point. ● a(n) = (2 + sqrt(2)) ^ (n - 1) / sqrt(2) - (2 - sqrt(2)) ^ (n - 1) / sqrt(2). ● a(n) = 4 * a(n - 1) - 2 * a(n - 2). ●

▶ [A291383] 2,8,28,98,344,1208,4240,14884,52248,183408,643824,2260040,7933504,27849280,97760384,343171984,1204649632,4228727296,14844261824,52108375328,182918006400,642104016000,2254002082560,7912309005376,27774878417792 ⋆ p - INVERT of (1,1,0,0,0,0,...), where p(S) = 1 - 2 S - 2 S ^ 2. ● a(n) = 2 * a(n - 1) + 4 * a(n - 2) + 4 * a(n - 3) + 2 * a(n - 4) for n >= 5. ●

▶ [A066796] 2,8,28,98,350,1274,4706,17576,66196,250952,956384,3660540,14061140,54177740,209295260,810375650,3143981870,12219117170,47564380970,185410909790,723668784230,2827767747950,11061198475550,43308802158650 ⋆ a(n) = Sum _{ i=1..n } binomial(2 * i,i). ● a(n) = Sum _{ k=1..n } (2k)! / (k!) ^ 2. - _ Alexander Adamchuk _ , Jul 02 2006 ● a(n) = Sum _{ k=1..n } binomial(2k,k). - _ Alexander Adamchuk _ , Jan 04 2007 ●

▶ [A104934] 1,2,8,28,100,356,1268,4516,16084,57284,204020,726628,2587924,9217028,32826932,116914852,416398420,1483024964,5281871732,18811665124,66998738836,238619546756,849856117940,3026807447332,10780134577876 ⋆ Expansion of (1 - x) / (1 - 3 * x - 2 * x ^ 2). ● a(0)=1, a(1)=2, a(n) = 3 * a(n - 1) + 2 * a(n - 2) for n > 1. - _ Philippe Deléham _ , Sep 19 2006 ● a(n) = (1 / 2) * (3 / 2 + (1 / 2) * sqrt(17)) ^ n - (1 / 34) * sqrt(17) * (3 / 2 - (1 / 2) * sqrt(17)) ^ n + (1 / 34) * (3 / 2 + (1 / 2) * sqrt(17)) ^ n * sqrt(17) + (1 / 2) * (3 / 2 - (1 / 2) * sqrt(17)) ^ n, with n >= 0. - _ Paolo P. Lava _ , Nov 19 2008 ● a(n) = ((17 + sqrt(17)) / 34) * ((3 + sqrt(17)) / 2) ^ n + ((17 - sqrt(17)) / 34) * ((3 - sqrt(17)) / 2) ^ n. - _ Richard Choulet _ , Nov 19 2008 ● a(n) = 2 * a(n - 1) + 4 * Sum _{ k=0..n - 2 } a(k) for n > 0. - Vania Mascioni (vmascioni(AT)bsu.edu), Mar 09 2009 ● a(n) = (i * sqrt(2)) ^ (n - 1) * (i * sqrt(2) * Chebyshev U(n, - 3 * i / (2 * sqrt(2))) - ChebyshevU(n - 1, - 3 * i / (2 * sqrt(2)))). - _ G. C. Greubel _ , Jun 27 2021 ●

▶ [A114590] 1,2,8,28,103,382,1432,5408,20546,78436,300636,1156188,4459267,17241526,66807856,259361920,1008598126,3928120924,15319329472,59817190552,233826979750,914962032172,3583556424208,14047386554368,55108441878868 ⋆ Number of peaks at even levels in all hill - free Dyck paths of semilength n + 2 (a hill in a Dyck path is a peak at level 1). ● a(n)=sum { k=0..n, sum { j=0..n - k, C(n - j,k - j) * C(n - j,k) * (j + 1) }} ; - _ Paul Barry _ , Nov 03 2006 ●

▶ [A133592] 1,2,8,28,104,376,1376,5008,18272,66592,242816,885184,3227264,11765632,42894848,156383488,570136064,2078573056,7577962496,27627363328,100722501632,367209183232,1338753376256,4880761851904,17794043961344 ⋆ a(n) = 2 * a(n - 1) + 6 * a(n - 2) for n>=3, a(0)=1, a(1)=2, a(2)=8. ● a(n) = ((7 + 2 * sqrt(7)) / 21) * (1 + sqrt(7)) ^ n + ((7 - 2 * sqrt(7)) / 21) * (1 - sqrt(7)) ^ n for n=>1. [_ Richard Choulet _ , Nov 19 2008] ●

▶ [A293169] 1,1,1,1,1,1,1,2,8,29,85,211,463,925,1718,3017,5097,8464,14197,24753,45697,89150,180254,368734,748924 ⋆ a(n) = Sum _{ k=0..n } binomial(k, 6 * (n - k)). ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) + a(n - 7) for n>6. ●

▶ [A306847] 1,1,1,1,1,1,2,8,29,85,211,463,926,1730,3095,5461,9829,18565,37130,77540,164921,349525,728575,1486675,2973350 ⋆ a(n) = Sum _{ k=0..floor(n / 6) } binomial(n,6 * k). ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) for n > 5. ● a(n) = (4 ^ n + (1 - t) ^ n + (1 + t) ^ n + (3 - t) ^ n + (3 + t) ^ n) / (6 * 2 ^ n) for n > 0 and a(0) = 1, where t = i * sqrt(3) and i = sqrt(- 1). - _ Bruno Berselli _ , Mar 13 2019 ●

▶ [A364523] 1,1,1,1,1,1,2,8,29,85,211,463,931,1795,3550,7736,18929,49505,130000,330430,804271,1885675,4327555,9929515,23224435 ⋆ G.f. satisfies A(x) = 1 + x * A(x) + x ^ 6 * A(x) ^ 6. ● a(n) = Sum _{ k=0..floor(n / 6) } binomial(n,6 * k) * binomial(6 * k,k) / (5 * k + 1). ●

▶ [A212385] 1,1,1,1,1,1,2,8,29,85,211,464,943,1873,3914,9101,23298,61915,162283,409888,996456,2360486,5555333,13244114,32357022 ⋆ Number of Dyck n - paths all of whose ascents have lengths equal to 1 (mod 5). ● a(n) = Sum _{ k=0..n } (binomial(4 * k - 3 * n - 1,n - k) * binomial(n + 1,5 * k - 4 * n)) / (n + 1). - _ Vladimir Kruchinin _ , Mar 05 2016 ●

▶ [A365760] 1,1,1,1,1,2,8,29,85,211,469,1003,2263,5734,15926,45188,124730,330583,850783,2175406,5650746,15064128,41006034,112492472,307511726 ⋆ G.f. satisfies A(x) = 1 + x * A(x) * (1 + x ^ 4 * A(x) ^ 5). ● a(n) = Sum _{ k=0..floor(n / 5) } binomial(n - 4 * k,k) * binomial(n + k + 1,n - 4 * k) / (n + k + 1) = Sum _{ k=0..floor(n / 5) } binomial(n + k,6 * k) * binomial(6 * k,k) / (5 * k + 1). ●

▶ [A373906] 1,1,1,1,2,8,29,85,212,476,1016,2172,4825,11213,26763,64095,151851,354737,820328,1889968,4361521,10106859,23509678,54793282,127709888 ⋆ a(n) = Sum _{ k=0..floor(n / 4) } binomial(n + 2 * k,n - 4 * k). ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 14 * a(n - 4) + 6 * a(n - 5) - a(n - 6). ●

▶ [A365758] 1,1,1,1,1,2,8,29,85,212,481,1081,2627,7100,20328,58023,160430,430391,1140892,3051678,8334638,23199896,65148939,182781853,510225082 ⋆ G.f. satisfies A(x) = 1 + x * A(x) / (1 - x ^ 4 * A(x) ^ 5). ● a(n) = Sum _{ k=0..floor(n / 4) } binomial(n - 3 * k - 1,k) * binomial(n + k + 1,n - 4 * k) / (n + k + 1). ●

► [A365759] 1,1,1,1,2,8,29,85,217,541,1471,4447,13975,43103,129083,382535,1147956,3519462,10947483,34162483,106341406,330590764,1030528133,3229411337,10170424724 ⋆ G.f. satisfies A(x) = 1 + x * A(x) * (1 + x ^ 3 * A(x) ^ 5). ● a(n) = Sum _{ k=0..floor(n / 4) } binomial(n - 3 * k,k) * binomial(n + 2 * k + 1,n - 3 * k) / (n + 2 * k + 1) = Sum _{ k=0..floor(n / 4) } binomial(n + 2 * k,6 * k) * binomial(6 * k,k) / (5 * k + 1). ●

► [A373905] 1,1,1,2,8,29,86,224,554,1381,3556,9382,24901,65737,172321,450017,1174985,3072365,8044478,21074012,55199573,144535714,378366976,990441502,2592800365 ⋆ a(n) = Sum _{ k=0..floor(n / 3) } binomial(n + 3 * k,n - 3 * k). ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 21 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). ●

► [A365757] 1,1,1,1,2,8,29,86,229,619,1836,5846,18802,59356,185187,581476,1855412,5997965,19491730,63395718,206433172,674452128,2213463944,7293253791,24098638133 ⋆ G.f. satisfies A(x) = 1 + x * A(x) / (1 - x ^ 3 * A(x) ^ 5). ● a(n) = Sum _{ k=0..floor(n / 3) } binomial(n - 2 * k - 1,k) * binomial(n + 2 * k + 1,n - 3 * k) / (n + 2 * k + 1). ●

► [A365761] 1,1,1,2,8,29,91,289,1009,3706,13606,49822,184726,696052,2648746,10132072,38952970,150635860,585724594,2287631614,8968247626,35281363830,139256375922,551306272137,2188516471579 ⋆ G.f. satisfies A(x) = 1 + x * A(x) * (1 + x ^ 2 * A(x) ^ 5). ● a(n) = Sum _{ k=0..floor(n / 3) } binomial(n - 2 * k,k) * binomial(n + 3 * k + 1,n - 2 * k) / (n + 3 * k + 1) = Sum _{ k=0..floor(n / 3) } binomial(n + 3 * k,6 * k) * binomial(6 * k,k) / (5 * k + 1). ●

► [A100477] 0,1,2,8,29,105,381,1382,5013,18184,65960,239261,867887,3148143,11419464,41422565,150254766,545028892,1977018773,7171368869,26013173045,94359275646,342275541897,1241558350028,4503585409524 ⋆ a(n) = 3 * a(n - 1) + 2 * a(n - 2) + a(n - 3) if n>=3, otherwise a(n) = n. ● a(0)=0, a(1)=1, a(2)=2, a(n)=3 * a(n - 1) + 2 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Jun 19 2015 ●

► [A369268] 1,1,2,8,29,105,414,1695,7046,29853,128644,561262,2474142,11006108,49343508,222715440,1011217425,4615519083,21165513228,97467424198,450541090701,2089777230606,9723511785608,45371996501895,212271904284993 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 - x) / (1 + x ^ 3) ^ 3). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 3) } binomial(3 * n + 3,k) * binomial(2 * n - 3 * k,n - 3 * k). ●

► [A369299] 1,1,2,8,29,105,417,1719,7181,30603,132736,582790,2585352,11575613,52237278,237328704,1084701387,4983867447,23007263941,106658256768,496336303014,2317687534865,10856677523580,51001805706435,240225121539000 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 - x) * (1 - x ^ 3) ^ 3). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 3) } binomial(3 * n + k + 2,k) * binomial(2 * n - 3 * k,n - 3 * k). ●

► [A345131] 1,2,8,29,118,427,1671,6260,24034,91301,351261,1345434,5191170,20018845,77500485,300290041,1166450850,4535971707,17670369300,68913194733,269114332057,1051984590581,4116622325140,16123381985750,63204699026898 ⋆ Number of ordered n - tuples of integers from [1..n] with no global factor. ● a(n) = Sum _{ k=1..n } Sum _{ d|k } mu(k / d) * binomial(d + n - 2, d - 1). ● a(n) = [x ^ n] (1 / (1 - x)) * Sum _{ k>=1 } mu(k) * x ^ k / (1 - x ^ k) ^ n. ●

► [A287045] 0,1,2,8,29,140,661,3622,19993,120909,744890,4887401,32795272,230728608,1661537689,12426619200,95087157771,750968991327,6062088334528,50288003979444,425889463252945,3694698371069796,32683415513480237,295430131502604353,2719833636188015674 ⋆ a(n) is the number of size n affine closed term s of variable size 0. ● a(n) = (3 * a(n - 1) + (6 * n - 10) * a(n - 2) - a(n - 3) + 2 * b(n - 1) - b(n - 2) - b(n - 3)) / 2, where b(n) = Sum _{ k=1..n - 1 } a(k) * a(n - k). ●

► [A000162] 1,1,2,8,29,166,1023,6922,48311,346543,2522522,18598427,138462649,1039496297,7859514470,59795121480 ⋆ Number of 3 - dimensional polyominoes (or polycubes) with n cells. ● a(n) = A066273 + A066281 + A066283 + A066287 + A066288 + A066453 + A066545. ● a(n) = 2 * A038119 - A007743. ● a(n) = A000105 + A006759. ●

► [A373904] 1,1,2,8,30,98,303,937,2936,9260,29209,91999,289547,911255,2868341,9029425,28424456,89478064,281667368,886657848,2791106585,8786123349,27657838272,87064092870,274068969337 ⋆ a(n) = Sum _{ k=0..floor(n / 2) } binomial(n + 4 * k,n - 2 * k). ● a(n) = 6 * a(n - 1) - 14 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). ●

► [A365693] 1,1,1,2,8,30,103,368,1407,5531,21905,87689,355929,1461022,6046160,25194331,105661615,445692621,1889454880,8045796200,34398989998,147606568810,635481458969,2744158752772,11882687400375 ⋆ G.f. satisfies A(x) = 1 + x * A(x) / (1 - x ^ 2 * A(x) ^ 5). ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n - k - 1,k) * binomial(n + 3 * k + 1,n - 2 * k) / (n + 3 * k + 1). ●

► [A168605] 1,2,8,30,104,342,1088,3390,10424,31782,96368,291150,877544,2640822,7938848,23849310,71613464,214971462,645176528,1936053870,5809210184,17429727702,52293377408,156888520830,470682339704 ⋆ Number of ways of partitioning the multiset { 1,1,1,2,3,...,n - 2 } into exactly three nonempty parts. ● a(n) = (5 * 3 ^ (n - 3) - 3 * 2 ^ (n - 2) + 3) / 3 for n >= 4, with a(3) = 1. ●

► [A127865] 2,8,30,108,354,1152,3614,11204,34170,103176,308598,916236,2702834,7929872,23155182,67333140,195082218,563367960,1622185958,4658753564,13347741666,38160007200,108881256414,310108078116,881761288154 ⋆ Number of square tiles in all tilings of a 2 X n board with 1 X 1 and L - shaped tiles (where the L - shaped tiles cover 3 squares). ● a(n) = (2 * n - 12) * (- 1) ^ n + (2 / 3) * ((9 - 5 * sqrt(3)) * (1 + sqrt(3)) ^ n + (9 + 5 * sqrt(3)) * (1 - sqrt(3)) ^ n) + (n / sqrt(3)) * ((sqrt(3) - 1) * (1 + sqrt(3)) ^ n + (sqrt(3) + 1) * (1 - sqrt(3)) ^ n). ●

► [A199923] 1,2,8,30,108,378,1296,4374,14580,48114,157464,511758,1653372,5314410,17006112,54206982,172186884,545258466,1721868840,5423886846,17046501516,53464027482,167365651248,523017660150,1631815099668 ⋆ a(n) = Sum _{ k=0..3 ^ (n - 1) } gcd(k,3 ^ (n - 1)) for n > 0 and a(0) = 1. ● a(n) are the row sums of A199922. ● a(n) = 2 * (n + 2) * 3 ^ (n - 2), n > 0. - _ Sean A. Irvine _ , Jun 27 2022 ●

► [A230269] 0,0,2,8,30,108,386,1376,4902,17460,62186,221480,788814,2809404,10005842,35636336,126920694,452034756,1609945658,5733906488,20421610782,72732645324,259041157538,922588763264,3285848604870 ⋆ Number of n X 2 0..2 arrays x(i,j) with each element horizontally or vertically next to at least one element with value (x(i,j) + 1) mod 3, and upper left element zero. ● a(n) = - 1 / 2 + (2 ^ (- 2 - n) * (- (- 5 + sqrt(17)) * (3 + sqrt(17)) ^ n - (3 - sqrt(17)) ^ n * (5 + sqrt(17)))) / sqrt(17). ●

► [A052530] 0,2,8,30,112,418,1560,5822,21728,81090,302632,1129438,4215120,15731042,58709048,219105150,817711552,3051741058,11389252680,42505269662,158631825968,592022034210,2209456310872,8245803209278,30773756526240 ⋆ a(n) = 4 * a(n - 1) - a(n - 2), with a(0) = 0, a(1) = 2. ● a(n) = Sum(- (1 / 3) * (- 1 + 2 * alpha) * alpha ^ (- 1 - n), alpha = root of (1 - 4 * Z + Z ^ 2), ● a(n) = ((2 + sqrt(3)) ^ (n + 1) - (2 - sqrt(3)) ^ (n + 1)) - ((2 + sqrt(3)) ^ (n) - (2 - sqrt(3)) ^ (n)) + ((2 + sqrt(3)) ^ (n - 1) - (2 - sqrt(3)) ^ (n - 1))) / (3 * sqrt(3)). (End) ● a(n) = (2 * sinh(2n * arcsinh(1 / sqrt(2)))) / sqrt(3). - _ Herbert Kociemba _ , Apr 24 2008 ● a(n) = ((3 - 2 * sqrt(3)) / 3) * (2 - sqrt(3)) ^ (n - 1) + ((3 + 2 * sqrt(3)) / 3) * (2 + sqrt(3)) ^ (n - 1). - _ Vincenzo Librandi _ , Nov 20 2010 ● a(n) = floor((2 + sqrt(3)) ^ n / sqrt(3)). - _ Zak Seidov _ , Mar 31 2011 ● a(n) = ((2 + sqrt(3)) ^ n - (2 - sqrt(3)) ^ n) / sqrt(3). (See Horadam for construction.) - _ Johannes Boot _ , Jan 08 2012 ●

► [A073663] 1,2,8,30,113,428,1629,6226,23881,91884,354484,1370812,5312058,20622904,80196055,312319530,1217938665,4755296460,18586968840,72723903780,284804791230,1116315593640,4378929921210,17189573707956 ⋆ Total number of branches of length k (k>=1) in all ordered trees with n + k edges (it is independent of k). ● a(n) = binomial(2n + 2, n) - 2 * binomial(2n, n - 1) + binomial(2n - 2, n - 2) (n > 0). ● a(n) = 3 * (3 * n ^ 3 + 2 * n ^ 2 + n - 2) * binomial(2 * n, n) / (2 * (n + 1) * (n + 2) * (2 * n - 1)) (n > 0). ●

► [A155116] 1,2,8,30,114,432,1638,6210,23544,89262,338418,1283040,4864374,18442242,69919848,265086270,1005018354,3810313872,14445996678,54768931650,207644784984,787241149902,2984657804658,11315696863680,42901064005014 ⋆ a(n) = 3 * a(n - 1) + 3 * a(n - 2), n>2, a(0)=1, a(1)=2, a(2)=8. ● a(n) = ((2 + 4 * A) * A ^ (- n - 1) + (2 + 4 * B) * B ^ (- n - 1)) / 21 with A=(- 3 + sqrt(21)) / 6 and B=(- 3 - sqrt(21)) / 6 for n>=1 with a(0)=1. [corrected by _ Johannes W. Meijer _ , Aug 12 2010] ● a(n) = (1 / 3) * [n=0] - 2 * (sqrt(3) * i) ^ (n - 2) * ChebyshevU(n, - sqrt(3) * i / 2). - _ G. C. Greubel _ , Mar 25 2021 ●

► [A133915] 1,2,8,30,116,452,1772,6974,27524,108852,431168,1709996,6788536,26971856,107235668,426594110,1697855876,6760326116,26927208368,107288242820,427596003416,1704598377176,6796820059928,27106584400460,108123625907816 ⋆ a(n) = Sum _{ i=0..n } C(2n - i,n + i) * 2 ^ i. ● a(n) = Sum _{ k=0..n } C(2n - k,n + k) * 2 ^ k. ●

► [A359117] 1,2,8,30,250,548,3180,7468,20684,36164,112406,163600,425144,636208,1028934,1581766,3323182,4249976,8216442,10668790,15329216 ⋆ Number of regions in the planar Farey Ring graph FR(n) defined in A359116, including the regions bewteen the convex hull and the bounding circle. ● a(n) = A359118 - A359116 + 1 by Euler's formula. ●

► [A007468] 2,8,31,88,199,384,659,1056,1601,2310,3185,4364,5693,7360,9287,11494,14189,17258,20517,24526,28967,33736,38917,45230,51797 ⋆ Sum of next n primes. ● a(n) = prime(1 + n(n - 1) / 2) + ... + prime(n + n(n - 1) / 2), where prime(i) is i - th prime. ●

► [A216318] 0,1,2,8,31,119,456,1749,6721,25883,99892,386308,1496782,5809478,22584160,87922215,342741285,1337698515,5226732060,20442936360,80031775890,313585934610,1229695855440,4825705232010,18950613058026 ⋆ Number of peaks in all Dyck n - paths after changing each valley to a peak by the transform DU - > UD. ● a(n) = C(2 * n - 2,n - 1) * (5 * (n - 1) ^ 2 + 5 * (n - 1) + 2) / (2 * n * (n + 1)), n>1, a(0)=0, a(1)=1. - _ Vladimir Kruchinin _ , Oct 30 2020 ●

► [A018916] 2,8,31,120,464,1794,6936,26816,103676,400832,1549696,5991432,23164064,89556864,346244592,1338650240,5175487232,20009459744,77360538496,299091179520,1156345798592,4470662117376,17284466110464,66825172844672 ⋆ Define the sequence T(a(0),a(1)) by a(n + 2) is the greatest integer such that a(n + 2) / a(n + 1) < a(n + 1) / a(n) for n >= 0. This is T(2,8). ● a(n) = 4 * a(n - 1) - 2 * a(n - 3) with a(0)=2, a(1)=8 and a(2)=31. ● a(n) = (119 - 24 * z1 - 64 * z1 ^ 2) * z1 ^ (- n - 1) / 202 + (119 - 24 * z2 - 64 * z2 ^ 2) * z2 ^ (- n - 1) / 202 + (119 - 24 * z3 - 64 * z3 ^ 2) * z3 ^ (- n - 1) / 202 with alpha=2 * arctan(sqrt(303) / 9), p=(sqrt(6) / 3) * sin((alpha + Pi) / 6), q=sqrt(2) * cos((alpha + Pi) / 6), z1:=2 * p, z2=(- q - p) and z3=(q - p). ●

► [A129427] 1,2,8,31,140,722,4439,32654,289519,3054067,37584620,527968286,8308434931,144345554051,2738280739075,56245013793246,1242596591479816,29366532494796900,739033832149588904,19726887762569763453 ⋆ Number of isomorphism classes of 3 - regular multigraphs of order 2n, loops allowed. ● a(n)=N \{ S _{ 2n } [S _ 3] * S _{ 3n } [S _ 2] \} . - _ Jason Kimberley _ , Sep 17 2009 ●

► [A052481] 1,2,8,32,112,352,1024,2816,7424,18944,47104,114688,274432,647168,1507328,3473408,7929856,17956864,40370176,90177536,200278016,442499072,973078528,2130706432,4647288832 ⋆ a(n) = 2 ^ n * (binomial(n,2) + 1). ● a(n) = 6 * a(n - 1) - 12 * a(n - 2) + 8 * a(n - 3). ●

► [A306292] 0,0,2,8,32,112,394,1360,4736,16544,58324,207088,741184,2671008,9688410,35344800,129620480,477590080,1767170812,6563935664,24465914304,91481858208,343058261572,1289901443168 ⋆ Number of asymmetric Dyck paths of semilength n. ● a(n) = (2n)! / (n! (n + 1))! - n! / ((floor(n / 2))! (ceiling(n / 2))!). ●

► [A289451] 1,1,1,2,8,32,117,408,1402,4826,16751 ⋆ Related to number of mesh patterns of length 2 that avoid the pattern 231. ● a(n) = binomial(2 * n,n) / (n + 1) - (n - 1) * n / 2. ●

► [A081294] 1,2,8,32,128,512,2048,8192,32768,131072,524288,2097152,8388608,33554432,134217728,536870912,2147483648,8589934592,34359738368,137438953472,549755813888,2199023255552,8796093022208,35184372088832 ⋆ Expansion of (1 - 2 * x) / (1 - 4 * x). ● a(n) = 4 * a(n - 1) n > 1, with a(0)=1, a(1)=2. ● a(n) = (4 ^ n + 0 ^ n) / 2 (i.e., 1 followed by 4 ^ n / 2, n > 0). ● a(n) = Sum _{ k=0..n } C(2 * n, 2 * k). - _ Paul Barry _ , May 20 2003 ● a(n) = Sum _{ k=0..n } Sum _{ j=0..n } C(2 * (n - k), j) * C(2 * k, j). - _ Paul Barry _ , Jun 04 2005 ● a(n) = Integral _{ x=0..4 } p(n,x) ^ 2 / (Pi * sqrt(x(4 - x))) dx, where p(n,x) is the sequence of orthogonal polynomials defined by C(2 * n,n): p(n,x) = (2 * x - 4) * p(n - 1,x) - 4 * p(n - 2,x), with p(0,x)=1, p(1,x)= - 2 + x. - _ P

aul Barry _ , Mar 01 2007 ● a(n) = ((2 + sqrt(4)) ^ n + (2 - sqrt(4)) ^ n) / 2. - Al Hakanson (hawkuu(AT)gmail.com), Nov 22 2008 ●

► [A004171] 2,8,32,128,512,2048,8192,32768,131072,524288,2097152,8388608,33554432,134217728,536870912,2147483648,8589934592,34359738368,137438953472,549755813888,2199023255552,8796093022208,35184372088832,140737488355328,562949953421312 ⋆ a(n) = 2 ^ (2n + 1). ● a(n) = 2 * 4 ^ n. ● a(n) = 4 * a(n - 1). ●

► [A006139] 1,2,8,32,136,592,2624,11776,53344,243392,1116928,5149696,23835904,110690816,515483648,2406449152,11258054144,52767312896,247736643584,1164829376512,5484233814016,25852072517632,121997903495168 ⋆ n * a(n) = 2 * (2 * n - 1) * a(n - 1) + 4 * (n - 1) * a(n - 2) with a(0) = 1. ● a(n) = Sum _{ k=0..n } C(2 * k, k) * C(k, n - k). - Detlef Pauly (dettodet(AT)yahoo.de), Nov 08 2001 ● a(n) = Sum _{ k=0..floor(n / 2) } C(n,2k) * C(2k,k) * 2 ^ (n - k). - _ Paul Barry _ , Sep 19 2006 ● a(n) = 2 ^ n * hypergeom([- n / 2, 1 / 2 - n / 2], [1], 2). - _ Peter Luschny _ , Sep 18 2014 ●

► [A179469] 1,2,8,32,140,624,2928,14048,69200,347040,1768120,9122144,47572128,250341312,1327718272,7089595552,38082093120,205638343552,1115635692576,6078058719232,33239328613648,182402290944576,1004073853702320 ⋆ G.f. satisfies A(x) = exp(Sum _{ n>=1 } 2 ^ n * A(x ^ n) * x ^ n / n). ● a(0) = 1; a(n) = (1 / n) * Sum _{ k=1..n } (Sum _{ d|k } d * 2 ^ (k / d) * a(d - 1)) * a(n - k). (End) ●

► [A105483] 1,2,8,32,141,672,3451,18962,110882,686866,4489422,30853656,222276063,1674067342,13149209956,107481488424,912490408782,8031867965568,73181346933680,689194657064660,6699707386510583,67143409071264516,692926011957479445,7356058078964945382 ⋆ Number of partitions of { 1...n } containing one string of 3 consecutive integers, counted within a block. ● a(n) = Sum _{ k=1..n } c(n, k, 1), where c(n, k, 1) is the case r=1 of c(n, k, r) given by c(n, k, r) =c(n - 1, k - 1, r) + (k - 1)c(n - 1, k, r) + c(n - 2, k - 1, r) + (k - 1)c(n - 2, k, r) + c(n - 1, k, r - 1) - c(n - 2, k - 1, r - 1) - (k - 1)c(n - 2, k, r - 1), r=0, 1, .., n - k - 1, k=1, 2, .., n - 2r, c(n, k, 0) = Sum _{ 0..floor(n / 2) } binomial(n - j, j) * S2(n - j - 1, k - 1). ●

► [A084137] 1,2,8,32,144,672,3200,15360,73984,356864,1722368,8314880,40144896,193830912,935886848,4518838272,21818834944,105350561792,508677324800,2456111022080,11859152338944,57261051346944,276480810549248 ⋆ Binomial transform of A084136. ● a(n) = ((2 + sqrt(8)) ^ n + (2 - sqrt(8)) ^ n + 2 ^ (n + 1)) / 4. ● a(n) = 6 * a(n - 1) - 4 * a(n - 2) - 8 * a(n - 3). - _ G. C. Greubel _ , Oct 13 2022 ●

► [A129400] 1,2,8,32,144,672,3264,16256,82688,427520,2240512,11874304,63533056,342712320,1861779456,10176823296,55932813312,308907737088,1713473323008,9541666209792,53322206674944,298943898451968 ⋆ Number of walks of length n on one 60 - degree wedge of the equilateral triangular lattice. The walk can go along the walls of the wedge, but cannot cross the walls. ● a(n) = 2 ^ n * GegenbauerC(n, - n - 1, - 1 / 2) / (n + 1). - _ Peter Luschny _ , May 09 2016 ●

► [A202814] 1,2,8,32,148,712,3584,18496,97444,521096,2820448,15414016,84917584,470982176,2627289344,14728751872,82928400164,468699173576,2657978454944,15118824666496,86230489902928,493021885470496,2825114755879424,16221295513400576,93312601350167824 ⋆ Moments of the quadratic coefficient of the characteristic polynomial of a random matrix in U(1) X U(1) (embedded in USp(4)). ● a(n) is the constant term of (2 + x + y + 1 / x + 1 / y) ^ n. ●

► [A054116] 1,2,8,32,152,872,5912,46232,409112,4037912,43954712,522956312,6749977112,93928268312,1401602636312,22324392524312,378011820620312,6780385526348312,124825485935180312,2561327494111820312 ⋆ T(n,n - 1), array T as in A054115. ● a(1)=1 and, for n>=2, a(n) = sum(k=2..n, k!). - _ Robert G. Wilson v _ , Nov 12 2004 ●

► [A193778] 1,2,8,32,160,832,4864,29696,195584,1341440,9723904,73105408,574062592,4657184768,39165624320,339133595648,3028204650496,27760959422464,261439835078656,2521668748574720,24912764963127296,251559029812232192,2595790316527157248 ⋆ Number of signed permutations of length 2n invariant under D and D'bar. ● a(n) = 2 * a(n - 1) + 4 * (n - 1) * a(n - 2). ● a(n) = 2 ^ n * hypergeom([- n / 2, (1 - n) / 2], [], 2). ● a(n) = n! * [x ^ n] exp(2 * x * (x + 1)). (End) ●

► [A277432] 0,1,2,8,32,164,984,6896,55168,496528,4965280,54618112,655417344,8520425536,119285957504,1789289362688,28628629803008,486686706651392,8760360719725056,166446853674776576,3328937073495531520,69907678543406162944,1537968927954935584768 ⋆ E.g.f.: sinh(sqrt(2) * x) / (sqrt(2) * (1 - x)). ● a(n) = (Gamma(n + 1, sqrt(2)) * exp(sqrt(2)) - Gamma(n + 1, - sqrt(2)) / exp(sqrt(2))) / (2 * sqrt(2)). ●

► [A051636] 1,1,2,8,32,167,947,6974,53426,454682,4303532,50366912,553031624,6760260236,90333982832,1369522152392,20986020606632,350528387240264,5751957395258096,111685506968916032,2139383543480892032,41770889787387327252,869742098042083451264 ⋆ Number of "labeled" cyclic subgroups of alternating group A _ n. ● a(n) = 1 / 2 * Sum _{ pi } (1 + (- 1) ^ (k _ 2 + k _ 4 + ...)) * n! / (k _ 1! * 1 ^ k _ 1 * k _ 2! * 2 ^ k _ 2 * ... * k _ n! * n ^ k _ n * phi(lcm { i:k _ i != 0 })), where pi runs through all partitions k _ 1 + 2 * k _ 2 + ... + n * k _ n=n and phi is Euler's function. ●

► [A081358] 0,1,2,8,32,184,1104,8448,67584,648576,6485760,74972160,899665920,12174658560,170445219840,2643856588800,42301705420800,740051782041600,13320932076748800,259500083163955200,5190001663279104000,111422936937037824000,2451304612614832128000 ⋆ E.g.f.: log((1 + x) / (1 - x)) / (2 * (1 - x)). ● a(n) = n! * Sum _{ k=0..n, k odd } 1 / k. ● a(n) = n! / 2 * (Psi(ceiling(n / 2) + 1 / 2) + gamma + 2 * log(2)). - _ Vladeta Jovovic _ , Oct 20 2003 ● a(n) = n! * Sum _{ k=1..n } (- 1) ^ (k + 1) * 2 ^ (k - 1) * binomial(n, k) / k. - _ Vladeta Jovovic _ , Aug 12 2005 ● a(n) = n * a(n - 1) + ((- 1) ^ (n + 1) + 1) / 2 * (n - 1)!. - _ Gary Detlefs _ , Aug 06 2010 ●

► [A206303] 1,1,2,8,32,184,1264,9568,79232,816128,8769536,101867776,1322831872,18122579968,268425347072,4436611211264,73309336469504,1303024044310528,25235367455752192,497968598916333568,10431118327503650816,234674470003955204096,5359992446798535852032 ⋆ Expansion of e.g.f.: Product _{ n>=1 } (1 - x ^ (2 * n - 1)) ^ (- 1 / (2 * n - 1)). ● a(n) / n! is the Euler transform of [1, 0, 1 / 3, 0, 1 / 5, 0, 1 / 7, 0, ...]. ●

► [A262480] 1,1,1,2,8,32,192,1272,10176,90816,908160,9980160,119761920,1556766720,21794734080,326918753280,5230700052480,88921859604480,1600593472880640,30411275148656640,608225502973132800,12772735543856332800,281000181964839321600,6463004184741681561600,155112100433800357478400 ⋆ Number of trivial c - Wilf equivalence classes in the symmetric group S _ n. ● a(0) = a(1) = 1, a(2 * n) = ((2 * n)! + (2 * n)!!) / 4, a(2 * n + 1) = ((2 * n + 1)! + (2 * n)!!) / 4, for n >= 1. ●

► [A037513] 2,8,33,134,536,2145,8582,34328,137313,549254,2197016,8788065,35152262,140609048,562436193,2249744774,8998979096,35995916385,143983665542,575934662168,2303738648673,9214954594694,36859818378776 ⋆ Base - 4 digits are, in order, the first n terms of the periodic sequence with initial period 2,0,1. ● a(n) = 4 * a(n - 1) + a(n - 3) - 4 * a(n - 4). - _ Vincenzo Librandi _ , Jun 22 2012 ●

► [A099015] 1,2,8,33,140,592,2509,10626,45016,190685,807764,3421728,14494697,61400482,260096680,1101787113,4667245276,19770767984,83750317589,3547720377 30,1502838469496,6366125914117,26967342128548 ⋆ a(n) = Fib(n + 1) * (2 * Fib(n) ^ 2 + Fib(n) * Fib(n - 1) + Fib(n - 1) ^ 2). ● a(n) = (3 * Fib(3 * n + 1) + (- 1) ^ n * Fib(n - 3)) / 5. ● a(n) = (2 + sqrt(5)) ^ n * (3 / 10 + 3 * sqrt(5) / 50) + (2 - sqrt(5)) ^ n * (3 / 10 - 3 * sqrt(5) / 50) + (- 1) ^ n * ((1 / 2 - sqrt(5) / 2) ^ n * (1 / 5 + 2 * sqrt(5) / 25) + (1 / 5 - 2 * sqrt(5) / 25) * (1 / 2 + sqrt(5) / 2) ^ n). ●

► [A053817] 1,2,8,33,148,765,4626,32431,259512,2335689,23356990,256927011,3083124276,40080615757,561128620794,8416929312135,134670868994416,2289404772905361,41209285912296822,782976432333639979,15659528646672799980,328850101580128800021 ⋆ a(0)=1, a(n) = n * (a(n - 1) + n). ● a(n)= n! + floor(2 * e * n! - n) - 2, n>1. - _ Gary Detlefs _ , Jun 22 2010 ●

► [A204090] 1,2,8,34,134,498,1786,6274,21778,75074,257762,882946,3020354,10323714,35270530,120467458,411394306,1404773378,4796567042,16377245698,55916897282,190915194882,651831179266,2225502715906,7598365282306 ⋆ The number of 1 X n Haunted Mirror Maze puzzles with a unique solution where mirror orientation is fixed. ● a(n) = 7 * a(n - 1) - 16 * a(n - 2) + 14 * a(n - 3) - 4 * a(n - 4), a(0)=1, a(1)=2, a(2)=8, a(3)=34. ● a(n) = 2 - 2 ^ (1 + n) + ((2 + sqrt(2)) ^ (1 + n) - (2 - sqrt(2)) ^ (1 + n)) / (2 * sqrt(2)). - _ Colin Barker _ , Nov 26 2016 ●

► [A117616] 0,2,8,34,136,546,2184,8738,34952,139810,559240,2236962,8947848,35791394,143165576,572662306,2290649224,9162596898,36650387592,146601550370,586406201480,2345624805922,9382499223688,37529996894754 ⋆ a(0)=0, a(n)= 4a(n - 1) + 2 for n odd, a(n)=4a(n - 1) for n even. ● a(n) = (- 5 - 3 * (- 1) ^ n + 2 ^ (3 + 2 * n)) / 15. a(n) = 4 * a(n - 1) + a(n - 2) - 4 * a(n - 3). G.f.: 2 * x / ((x - 1) * (x + 1) * (4 * x - 1)). [_ Colin Barker _ , Feb 17 2013] ●

► [A369836] 1,2,8,34,140,571,2328,9496,38740,158045,644761,2630364,10730820,43777405,178594110,728591751,2972359720,12126025705,49469281395,201814663875,823322219501,3358821723401,13702634402876,55901207340276,228054320813276 ⋆ Number of compositions of 5 * n into parts 1 and 5. ● a(n) = Sum _{ k=0..n } binomial(n + 4 * k,n - k). ● a(n) = 6 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ●

► [A014445] 0,2,8,34,144,610,2584,10946,46368,196418,832040,3524578,14930352,63245986,267914296,1134903170,4807526976,20365011074,86267571272,365435296162,1548008755920,6557470319842,27777890035288,117669030460994,498454011879264 ⋆ Even Fibonacci numbers; or, Fibonacci(3 * n). ● a(n) = Sum _{ k=0..n } binomial(n, k) * F(k) * 2 ^ k. - _ Benoit Cloitre _ , Oct 25 2003 ● a(n) = 4 * a(n - 1) + a(n - 2), with a(- 1) = 2, a(0) = 0. ● a(n) = (F(n + 1)) ^ 3 + (F(n)) ^ 3 - (F(n - 1)) ^ 3. (End) ● a(n) = Sum _{ k=0..floor((n - 1) / 2) } C(n, 2 * k + 1) * 5 ^ k * 2 ^ (n - 2 * k). - Mario Catalani (mario.catalani(AT)unito.it), Jul 22 2004 ● a(n) = Sum _{ k=0..n } F(n + k) * binomial(n, k). - _ Benoit Cloitre _ , May 15 2005 ● a(n) = second binomial transform of (2,4,10,20,50,100,250). This is 2 * (1,2,5,10,25,50,125) or 5 ^ n (offset 0): * 2 for the odd numbers or * 4 for the even. The sequences are interpolated. Also a(n) = 2 * ((2 + sqrt(5)) ^ n - (2 - sqrt(5)) ^ n) / sqrt(20). - Al Hakanson (hawkuu(AT)gmail.com), May 02 2009 ●

► [A113440] 1,2,8,34,146,627,2689,11521,49337,211233,904306,3871305,16572812,70947073,303719624,1300203634,5566087073,23828058969,102006385362,436682772844,1869410868456,8002827727921,34259590954322 ⋆ First row of A113439. ● a(n) = 9 * a(n - 1) - 28 * a(n - 2) + 38 * a(n - 3) - 20 * a(n - 4) + a(n - 5). ●

► [A034999] 1,2,8,34,148,650,2864,12634,55756,246098,1086296,4795090,21166468,93433178,412433792,1820570506,8036386492,35474325410,156591247016,691227204226,3051224496244,13468756547882,59453967813584,262442511046330,1158477291582892 ⋆ Number of ways to cut a 2 X n rectangle into rectangles with integer sides. ● a(n) = 1 + 3 ^ (n - 1) + Sum _{ i=1..n - 1 } (1 + 3 ^ (i - 1)) a(n - i). ● a(n) = 6a(n - 1) - 7a(n - 2), a(n) = ((4 + sqrt(2)) (3 + sqrt(2)) ^ n + (4 - sqrt(2)) (3 - sqrt(2)) ^ n) / 14. - _ N. Sato _ , May 10 2006 ●

► [A085362] 1,2,8,34,150,678,3116,14494,68032,321590,1528776,7301142,35003238,168359754,812041860,3926147730,19022666310,92338836390,448968093320,2186194166950,10659569748370,52037098259090,254308709196660 ⋆ a(0)=1; for n>0, a(n) = 2 * 5 ^ (n - 1) - (1 / 2) * Sum _{ i=1..n - 1 } a(i) * a(n - i). ● a(n) = Sum _{ k=0..n } binomial(2 * k,k) * binomial(n - 1,n - k). - _ Vladimir Kruchinin _ , May 30 2016 ● a(n) = 2 * hypergeom([3 / 2, 1 - n], [2], - 4) for n>0. - _ Peter Luschny _ , Jan 30 2017 ● a(0) = 1; a(n) = (2 / n) * Sum _{ k=0..n - 1 } (n + k) * a(k). - _ Seiichi Manyama _ , Mar 28 2023 ●

► [A074606] 2,8,34,152,706,3368,16354,80312,397186,1972808,9824674,49005272,244672066,1222297448,6108298594,30531927032,152630937346,763068593288,3815084686114,19074648589592,95370918425026,476847618556328 ⋆ a(n) = 3 ^ n + 5 ^ n. ● a(n) = 8 * a(n - 1) - 15 * a(n - 2) with a(0)=2, a(1)=8. - _ Vincenzo Librandi _ , Jul 21 2010 ●

► [A368763] 1,2,8,34,156,815,4946,34706,277768,2500077,25000990,275011176,3300134476,42901748643,600624481562,9009367224110,144149875586576,2450547884972761,44109861929510838,838087376660707252,16761747533214146580,351996698197497079951 ⋆ a(n) = n! * (1 + Sum _{ k=0..n } binomial(k + 2,3) / k!). ● a(0) = 1; a(n) = n * a(n - 1) + binomial(n + 2,3). ●

► [A046649] 2,8,34,160,806,4256,23256,130416,746350,4341480,25594530,152585472,918324904,5572034240,34048494608,209347674768,1294227005694,8040125464280,50165404177350,314229490307040,1975283452131990,12456968750889600,78790615438385760,497700263517332800 ⋆ a(n) is the number of nonseparable planar maps with 2 * n + 1 edges and a fixed outer face of 4 edges which are invariant under a rotation of a 1 / 2 turn. (Column 2 of A091665.) ● a(n) = 4 * (7 * n - 11) * (3 * n - 5)! / ((n - 2)! * (2 * n - 1)!). - _ Emeric Deutsch _ , Mar 03 2004 ●

► [A184786] 1,1,2,8,35,147,654,3009,14219,68605,336623,1674517,8425573,428062002192854591131431170,5874504011,30670279153,160916320637,847994498527,4486473924741,23821682237692,126897559943046,677992017255423 ⋆ Let A(x) satisfy: A(x) = 1 + x * A(x) ^ (phi ^ 2) where phi = (sqrt(5) + 1) / 2, then this sequence equals the integer part of the coefficients of A(x). ● a(n) = floor(binomial(phi ^ 2 * n, n) / (phi * n + 1)) where phi = (sqrt(5) + 1) / 2. ●

► [A082759] 1,2,8,35,160,752,3599,17446,85376,420884,2087008,10398016,52010479,261021854,1313707256,6628095035,33512880640,169768235840,861450392708,4377796514152,22277498220160,113502759811000,578931209245760,2955873376166144,15105883318474991 ⋆ a(n) = Sum _{ k = 0..n } binomial(n,k) * trinomial(n,k), where trinomial(n,k) = trinomial coefficients. ● a(n) = Sum _{ k = 0..n } C(n + k, n - k) * C(n, k). - _ Benoit Cloitre _ , Jun 20 2003 ● a(n) = Sum _{ k = 0..n } C(2 * n - k, k) * C(n, k). - _ Paul Barry _ , Jan 20 2005 ● a(n) = Sum _{ k = 0..n } (- 1) ^ k * C(n, k) * C(3 * n - 2 * k, n - k). - _ Peter Bala _ , Jul 13 2016 ● a(n) = [x ^ n] (1 + 2 * x + 2 * x ^ 2 + x ^ 3) ^ n. ●

► [A243204] 1,2,8,35,160,752,3605,17544,86400,429605,2153008,10860720,55086421,280692440,1435868960,7369703660,37934443008,195748568256,1012292239955,5244933087000,27220980100160,141486701601630 ⋆ Expansion of 2 * x / ((1 - sqrt(1 - 2 * (1 - sqrt(1 - 4 * x)))) * sqrt(1 - 2 * (1 - sqrt(1 - 4 * x))) * sqrt(1 - 4 * x)). ● a(n) = Sum _{ k=0..n } binomial(2 * k - 1,k) * binomial(2 * n - k - 1,n - k)). ●

► [A137265] 1,1,2,8,35,163,796,4024,20885,110654,596064,3254752,17974893,100227022,563482140,3190633232,18179765509,104158703503,599698459613,3467978715612,20134256546896,117313279477959,685756774642494,4020515276730588,23636036336651811 ⋆ G.f. y(x) is solution of x y ^ 3 - (1 + x ^ 2) y + 1 = 0 with y(0) = 1. ● a(0) = 1, a(1) = 1, a(n) = - a(n - 2) + sum _{ i=0 }^{ n - 1 } sum _{ j=0 }^{ n - 1 - i } a(i) a(j) a(n - 1 - i - j). ●

► [A364472] 1,1,2,8,35,163,808,4162,22041,119325,657384,3673394,20769983,118610807,683131766,3963486380,23144000681,135911263309,802143851323,4755506884495,28306896506651,169110331570307,1013643450123455,6094125091837335,36739933169338731 ⋆ G.f. satisfies A(x) = 1 + x * A(x) + x ^ 2 * A(x) ^ 6. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n + 4 * k,k) * binomial(n + 3 * k, n - 2 * k) / (5 * k + 1) = Sum _{ k=0..floor(n / 2) } binomial(n + 4 * k,6 * k) * binomial(6 * k,k) / (5 * k + 1). ●

► [A303070] 1,2,8,35,164,787,3857,19147,96004,485009,2465013,12589315,64555985,332158127,1714001409,8866730665,45968787524,238778897128,1242417984179,6474394344503,33784931507529,176515163156311,923265560495737,4834081924982522,25334170138318345 ⋆ a(n) = [x ^ n] (1 / (1 - x)) * Product _{ k>=1 } 1 / (1 - x ^ k) ^ n. ● a(n) = [x ^ n] (1 / (1 - x)) * exp(n * Sum _{ k>=1 } x ^ k / (k * (1 - x ^ k))). ●

► [A371826] 1,2,8,35,170,872,4740,26994,161006,1001009,6476976,43480373,302250196,2170406149,16070240276,122453910495,958755921686,7701233828576,63381318474768,533793776053926,4595440308780620,40400161269188412,362367733795887848 ⋆ a(n) = Sum _{ k=0..floor(n / 2) } n ^ k * binomial(2 * n - k,n - 2 * k). ● a(n) = [x ^ n] 1 / ((1 - x - n * x ^ 2) * (1 - x) ^ n). ●

► [A123290] 2,8,36,156,652,2668,10796,43436,174252,698028,2794156,11180716,44731052,178940588,715795116,2863245996,11453115052,45812722348,183251413676,733006703276,2932028910252,11728119835308,46912487729836 ⋆ Number of distinct binomial(n,2) - tuples of zeros and ones that are obtained as the collection of all 2 X 2 minor determinants of a 2 X n matrix over GF(2). ● a(n) = (2 ^ (2n - 1) - 2 ^ n - 2 ^ (n - 1) + 4) / 3 = 1 + (2 ^ n - 1) * (2 ^ (n - 1) - 1) / 3 ● a(2)=2, a(3)=8, a(4)=36, a(n)=7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3). - _ Harvey P. Dale _ , Oct 03 2011 ● a(2)=2, a(n) = 4 * (a(n - 1) - 1) + 2 ^ (n - 1). - _ Vincenzo Librandi _ , Oct 04 2011 ●

► [A228791] 2,8,36,156,672,2892,12444,53544,230388,991308,4265376,18352956,78968652,339784392,1462016004,6290726844,27067586208,116465750508,501125993916,2156232718056,9277785608532,39920229888492,171767792616864 ⋆ Number of n X 3 binary arrays with top left element equal to 1 and no two ones adjacent horizontally or nw - se. ● a(n) = - (2 ^ (1 - n) * ((- 11 + sqrt(13)) * (5 + sqrt(13)) ^ n + (5 - sqrt(13)) ^ n * (11 + sqrt(13)))) / (9 * sqrt(13)) for n>1. ●

► [A326244] 1,1,2,8,36,160,704,3088,13536,59328,260032,1139712 ⋆ Number of labeled n - vertex simple graphs without crossing or nesting edges. ● a(n) = 6 * a(n - 1) - 8 * a(n - 2) + 4 * a(n - 3) for n>2. ●

► [A147722] 1,2,8,36,164,748,3412,15564,70996,323852,1477268,6738636,30738644,140215948,639602452,2917580364,13308696916,60708323852,276924225428,1263204479436,5762173946324,26284460772748,119897955971092,546920858309964,2494808379607636 ⋆ Row sums of Riordan array ((1 - 3x) / (1 - 4x + x ^ 2), x (1 - x) / (1 - 4x + x ^ 2)). ● a(n) = 5 * a(n - 1) - 2 * a(n - 2), a(0)=1, a(1)=2. [_ Philippe Deléham _ , Nov 13 2008] ● a(n) = (1 / 2) * [(5 / 2) + (1 / 2) * sqrt(17)] ^ n + (1 / 2) * [(5 / 2) - (1 / 2) * sqrt(17)] ^ n - (1 / 34) * [(5 / 2) + (1 / 2) * sqrt(17)] ^ n * sqrt(17) + (1 / 34) * sqrt(17) * [(5 / 2) - (1 / 2) * sqrt(17)] ^ n, with n>=0. [_ Paolo P. Lava _ , Nov 18 2008] ●

► [A206902] 1,2,8,36,166,768,3554,16446,76102,352152,1629536,7540458,34892452,161460114,747134894,3457265922,15998031616,74028732924,342557973998,1585140808368,7335025230994,33941839649382,157061283704438,726779900373936,3363075935260696 ⋆ Number of nonisomorphic graded posets with 0 and uniform Hasse diagram of rank n with no 3 - element antichain. ● a(n) = 6 * a(n - 1) - 7 * a(n - 2) + 3 * a(n - 3), a(1)=2, a(2)=8, a(3)=36. ●

► [A330793] 1,2,8,36,170,826,4088,20496,103752,529100,2714140,13989560,72393412,375877684,1957199120,10216355632,53443289946,280101010170,1470508417340,7731675774900,40706787482130,214580612067690,1132389348358320,5981916549623040,31629125981208600 ⋆ a(n) = A193737(2 * n, n). ● a(n) = [x ^ n] (16 + 8 * hypergeom([2 / 3, 1 / 3], [1 / 2], (1 + x) * 27 / 32) + sqrt(18 * (1 + x)) * hypergeom([7 / 6, 5 / 6], [3 / 2], (1 + x) * 27 / 32)) / 48. ● a(n) = [x ^ n] (1 / (3 * sqrt(5 - 27 * x))) * (sqrt(5 - 27 * x) + 2 * sqrt(2) * cos((1 / 6) * arccos(1 - (27 * (1 + x)) / 16)) + 2 * sqrt(6) * sin((1 / 3) * arcsin((3 / 4) * sqrt(3 / 2) * sqrt(1 + x)))). ●

► [A352862] 1,2,8,36,170,865,4742,27757,172375,1130865,7809057,56572404,428710587,3389749264,27901667938,238599540142,2115876327408,19425465343555,184355895494512,1806122902809371,18242807108024625,189750478368293523,2030261803964224359,22323607721661782198 ⋆ a(n) = 1 + Sum _{ k=0..n - 1 } binomial(n + 3,k + 4) * a(k). ● a(0) = 1; a(n) = a(n - 1) + Sum _{ k=0..n - 1 } binomial(n + 2,k + 3) * a(k). ●

► [A109980] 1,2,8,36,172,852,4324,22332,116876,618084,3296308,17702412,95627580,519170004,2830862532,15494401116,85091200620,468692890308,2588521289812,14330490031020,79509491551772,442019710668852 ⋆ Number of Delannoy paths of length n with no (1,1) - steps on the line y=x. ● a(n) is the upper left term in M ^ n, M = an infinite square production matrix as follows: ●

► [A186338] 1,2,8,36,172,860,4460,23820,130268,726236,4112972,23599724,136906748,801671996,4732110828,28128179276,168222049052,1011509012636,6111445499532,37084090264364,225899543897916,1380918157453052,8468524718133804,52085281291575052 ⋆ Expansion of 1 / (1 - 2x / (1 - 2x / (1 - x / (1 - 2x / (1 - 2x / (1 - x / (1 - 2x / (1 - ... (continued fraction). ● a(n) = Sum _{ j=0..n } Sum _{ i=0..j } C(j + 1, i) * C(2 * j - i, j - i) * C(n - j + i - 1,n - j) / (j + 1) * 2 ^ (n - j). ● a(n) = Sum _{ i=0..n - 1 } a(i) * (2 ^ (n - i - 1) + a(n - i - 1)). (End) ●

► [A110837] 1,2,8,36,176,864,4304,21448,107168,535488,2677088,13383712,66916832,334575552,1672869152,8364302864,41821471424,209107142784,1045535499584,5227676426944,26138381063744,130691899964544,653459494468544,3267297445575296,16336487201109056 ⋆ Number of ways to fold a strip of n stamps taking account of order and direction of folds. ● a(n) = 2 * Sum _{ 0<k<n } max { a(k), a(n - k) } starting with a(1)=1. ●

► [A372088] 1,2,8,36,176,904,4808,26240,146096,826496,4737088,27447936,160514144,946139584,5615411904,33529225856,201268922112,1213912449280,7352607996160,44705058498560,272757529797120,1669423083509760,10247263603251200,63066403179974656 ⋆ G.f. A(x) satisfies A(x) = 1 / (1 - 4 * x * (1 + x * A(x))) ^ (1 / 2). ● a(n) = Sum _{ k=0..n } 4 ^ k * binomial(n / 2 + k / 2 - 1 / 2,k) * binomial(k,n - k) / (n - k + 1). ●

► [A369619] 1,2,8,36,181,968,5411,31230,184701,1113534,6818157,42283904,265051573,1676628944,10689175724,68613428764,443067507573,2876254564034,18759923273027,122876716755094,807909302669408,5330342236103396,35278723624832375 ⋆ Expansion of (1 / x) * Series _ Reversion(x / (1 / (1 - x) ^ 2 + x ^ 2)). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 2) } binomial(n + 1,k) * binomial(3 * n - 4 * k + 1,n - 2 * k). ●

► [A243948] 1,2,8,36,182,964,5296,29832,171238,997244,5874992,34937400,209392796,1263258760,7664233696,46726270992,286089651718,1758215706476,10841476837424,67049791851672,415784950498964,2584585251386296,16101542183281312,100511325748165488,628579719997550044 ⋆ G.f.: Sum _{ n>=0 } x ^ n / (1 - x) ^ (2 * n + 1) * [Sum _{ k=0..n } C(n,k) ^ 2 * x ^ k] * [Sum _{ k=0..n } C(n,k) ^ 2 * 2 ^ k * x ^ k]. ● a(n) = Sum _{ k=0..[n / 2] } Sum _{ j=0..n - 2 * k } C(n - k, k + j) ^ 2 * C(k + j, k) ^ 2 * 2 ^ k. ●

► [A001540] 0,2,8,36,184,1110,7776,62216,559952,5599530,61594840,739138092,9608795208,134523132926,2017846993904,32285551902480,548854382342176,9879378882159186,187708198761024552,3754163975220491060,78837443479630312280,1734423756551866870182 ⋆ Number of transpositions needed to generate permutations of length n. ● a(n) = - 1 + n! * Sum { k=0..floor(n / 2) } 1 / (2 * k)! = - 1 + round(n! * cosh(1)). ●

► [A052582] 0,2,8,36,192,1200,8640,70560,645120,6531840,72576000,878169600,11496038400,161902540800,2440992153600,39230231040000,669529276416000,12093372555264000,230485453406208000 ⋆ a(n) = 2 * n * n!. ● a(n) = (a(n - 1) ^ 2 - 2 * a(n - 2) ^ 2 + a(n - 2) * a(n - 3) - 4 * a(n - 1) * a(n - 3)) / (a(n - 2) - a(n - 3)) if n>2. - _ Michael Somos _ , Oct 20 2011 ● a(n) = 2 * n * n!. - _ Gary Detlefs _ , Sep 16 2010 ● a(n + 1) = a(n) * (n + 1) ^ 2 / n. - _ Reinhard Zumkeller _ , Nov 12 2011 ●

► [A367920] 1,2,8,36,196,1196,8116,60108,481140,4126540,37671540,364068172,3707910772,39645022540,443540780660,5177560304972,62903920321140,793654042136908,10378403752717940,140413475790402892,1962339063781284468,28287778534523140428,420059992540347885172 ⋆ Expansion of e.g.f. exp(4 * (exp(x) - 1) - 2 * x). ● a(n) = exp(- 4) * Sum _{ k>=0 } 4 ^ k * (k - 2) ^ n / k!. ● a(0) = 1; a(n) = - 2 * a(n - 1) + 4 * Sum _{ k=1..n } binomial(n - 1,k - 1) * a(n - k). ●

► [A233744] 1,2,8,36,200,1300,9720,82180,775520,8082180,92205800,1143084580,15302486160,220019440420,3381685263320,55333244924100,960361672886720,17622501030879940,340893902373527880,6933456765092580580,147919915357498809200,3303011756746128625380 ⋆ Numbers p = a(n) such that p divided by (n - 1)! is equal to the average number of elements of partition sets of n elements excluding sets with a singleton. ● a(n) = (n - 1)! * S(n), with S(n) = 1 + 1 / (n - 1) * sum of previous S(i) with i in (2, n - 2). ●

► [A052618] 1,2,8,36,216,1440,11520,100800,1008000,10886400,130636800,1676505600,23471078400,348713164800,5579410636800,94152554496000,1694745980928000,32011868528640000,640237370572800000,13380961044971520000,294381142989373440000 ⋆ Expansion of e.g.f. 1 / ((1 - x) ^ 2 * (1 - x ^ 2)). ● a(n) = (1 / 8 * (- 1) ^ (- n) + 1 / 4 * n ^ 2 + n + 7 / 8) * n! for n>0. ● a(n) = n! * floor((n + 2) / 2) * ceiling((n + 2) / 2). ●

► [A183908] 2,8,37,124,309,637,1163,1953,3085,4650,6753,9514,13069,17571,23191,30119,38565,48760,60957,75432,92485,112441,135651,162493,193373 ⋆ Number of nondecreasing arrangements of n + 2 numbers in 0..5 with each number being the sum mod 6 of two others. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>7. ●

► [A046814] 1,2,8,37,179,881,4369,21746,108444,541362,2704158,13512392,67534828,337584992,1687627800,8437136085,42182258715,210899507685,1054456597965,5272139698215,26360193558735,131799177579015 ⋆ Row sums of triangle A046527. ● a(n) = 5 * a(n - 1) - 3 * C(n) / (2 * n - 1), a(0)=1. ●

► [A155609] 1,2,8,38,176,782,3368,14198,58976,242462,989528,4017158,16245776,65514542,263652488,1059392918,4251920576,17050729022,68332056248,273715645478,1096024843376,4387586157902,17560804984808,70274600998838 ⋆ a(n) = 4 ^ n - 3 ^ n + 1. ● a(n) = 7 * a(n - 1) - 12 * a(n - 2) + 6 with a(0)=1, a(1)=2. - _ Vincenzo Librandi _ , Jul 21 2010 ●

► [A199213] 2,8,38,188,938,4688,23438,117188,585938,2929688,14648438,73242188,366210938,1831054688,9155273438,45776367188,228881835938,1144409179688,5722045898438,28610229492188,143051147460938,715255737304688 ⋆ a(n) = (3 * 5 ^ n + 1) / 2. ● a(n) = 5 * a(n - 1) - 2. ● a(n) = 6 * a(n - 1) - 5 * a(n - 2). ●

► [A002003] 0,2,8,38,192,1002,5336,28814,157184,864146,4780008,26572086,148321344,830764794,4666890936,26283115038,148348809216,838944980514,4752575891144,26964373486406,153196621856192,871460014012682,4962895187697048,28292329581548718 ⋆ a(n) = 2 * Sum _{ k=0..n - 1 } binomial(n - 1, k) * binomial(n + k, k). ● a(n) = T(n, n - 1), array T as in A064861. ● a(n) = T(n, n - 2), array T as in A049600. ● a(n) = 2 * JacobiP(n - 1,0,1,3) = ((7 * n + 3) * LegendreP(n,3) - (n + 1) * LegendreP(n + 1,3)) / (2 * n) for n > 0. - _ Mark van Hoeij _ , Jul 12 2010 ● a(n) = Hyper2F1([- n, n], [1], - 1) for n > 0. - _ Peter Luschny _ , Aug 02 2014 ● a(n) = [x ^ n] ((1 + x) / (1 - x)) ^ n for n > 0. - _ Seiichi Manyama _ , Jun 07 2018 ● a(n) = 2 * Sum _{ k = 0..n - 1 } 2 ^ k * C(n,k + 1) * C(n - 1,k). ●

► [A123164] 1,2,8,38,192,1002,5336,28814,157184,864146,4780008,26572086,148321344,830764794,4666890936,26283115038,148348809216,838944980514,4752575891144,26964373486406,153196621856192,871460014012682,4962895187697048,28292329581548718,161439727075246592 ⋆ Row sums of A123160. ● a(n) = Sum _{ k=0..n } C(n, k) * C(n + k - 1, k). - _ Paul Barry _ , Aug 22 2007 ● a(n) = Jacobi _ P(n, 0, - 1, 3). - _ Paul Barry _ , Sep 27 2009 ● a(n + 1) - a(n) = (2 * n + 1) * A006318 (n >= 0); ● a(n) = Hypergeometric2F1([- n, n], [1], - 1). - _ Peter Luschny _ , Aug 02 2014 ● a(n) = Sum _{ k = 0..floor(n / 2) } (- 1) ^ k * C(n, k) * C(3 * n - 2 * k - 1, n - 2 * k). ● a(p) == 2 (mod p ^ 3) for prime p >= 5. ●

► [A364723] 1,1,2,8,38,196,1073,6120,35968,216304,1324676,8232981,51796538,329229344,2111031444,13638557196,88695018723,580153216512,3814285704000,25192499164320,167075960048996,1112162062296061,7428213584196010,49766086788057256 ⋆ G.f. satisfies A(x) = 1 + x * A(x) / (1 - x * A(x) ^ 4). ● a(n) = (1 / n) * Sum _{ k=0..n - 1 } binomial(n,k) * binomial(n + 3 * k,n - 1 - k) for n > 0. ●

► [A372107] 1,2,8,38,198,1094,6296,37338,226596,1400518,8785524,55793170,358000418,2317478554,15116570956,99259594982,655580568854,4352370307750,29028865425828,194416887461778,1306961109488350,8815875534728018,59650171332148564 ⋆ G.f. A(x) satisfies A(x) = 1 / (1 - 4 * x / (1 - x * A(x))) ^ (1 / 2). ● a(n) = Sum _{ k=0..n } 4 ^ k * binomial(n / 2 + k / 2 - 1 / 2,k) * binomial(n - 1,n - k) / (n - k + 1). ●

► [A266797] 2,8,38,200,1112,6368,37088,218240,1292672,7689728,45874688,274196480,1640978432,9829081088,58907353088,353175633920,2117979963392,12703584616448,76204327436288,457157244354560,2742668586647552,16454912005111808,98725073977868288 ⋆ a(n) = (6 ^ n + 4 ^ n + 3 * 2 ^ n) / 8. ● a(n) = 2 ^ (n - 3) * (2 ^ n + 3 ^ n + 3). ● a(n) = 12 * a(n - 1) - 44 * a(n - 2) + 48 * a(n - 3) for n>3. ●

► [A369208] 1,2,8,38,200,1122,6576,39790,246672,1558658,10001592,64997814,426922392,2829624514,18901301984,127115260894,859978039840,5848754717314,39964745880552,274231943135686,1888891689752680,13055393137141282,90517646431869328 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 - x) ^ 2 / (1 + x ^ 2)). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 2) } binomial(n + 1,k) * binomial(3 * n - 2 * k + 1,n - 2 * k). ●

► [A365751] 1,2,8,38,201,1134,6688,40734,254237,1617572,10452416,68408626,452530659,3020870352,20324167488,137672551630,938154745773,6426806842566,44234352581896,305743015718028,2121318029754770,14769052147618740,103148538125870880 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 + x) * (1 - x) ^ 3). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..n } (- 1) ^ k * binomial(n + k,k) * binomial(4 * n - k + 2,n - k). ●

► [A275707] 1,2,8,38,216,1402,10156,80838,698704,6498674,64579284,681642238,7605025720,89318058858,1100376445564,14176837311158,190498308591264,2663482511782114,38667106019619748,581765160424218606,9055862445043643656,145619330650420134362 ⋆ Number of partial functions f: { 1,2,...,n }- > { 1,2,..., n } such that every element in the domain of definition of f is mapped to a fixed point or to an element that is undefined by f. ● a(0) = 1; a(n) = Sum _{ k= 1..n } 2 * k * binomial(n - 1,k - 1) * a(n - k). - _ Ilya Gutkovskiy _ , Nov 24 2017 ● a(n) = Sum _{ k=0..n } 2 ^ k * k ^ (n - k) * binomial(n,k). (End) ●

► [A096654] 1,2,8,38,222,1522,11986,106542,1054766,11506538,137119578,1772006854,24681524038,368577425634,5874202721042,99515904921182,1785757627196766,33835407673201882,675016383080377546,14143200407398386678,310507536216973671158 ⋆ Denominators of self - convergents to 1 / (e - 2). ● a(n) = (n + 1) * a(n - 1) + n * a(n - 2), with a(0)=1, a(1)=2. - _ Alex Ratushnyak _ , Aug 05 2012 ● a(n) = (n + 1)! - 2 * floor(((n + 1)! + 1) / e) + (n + 2)! - 2 * floor(((n + 2)! + 1) / e). (End) ● a(n) = ((n + 3)! - 2 * floor(((n + 3)! + 1) / e)) / (n + 2). - _ Gary Detlefs _ , Jul 11 2010 [corrected by _ Gary Detlefs _ , Oct 26 2020] ●

► [A318917] 1,1,2,8,38,262,1732,16144,153596,1660796,19415384,264084064,3664187848,57366995272,936097392752,16131362629568,302946516251408,6034409270818576,125044362929875744,2756094464546395264,63280996793936902496 ⋆ Expansion of e.g.f. exp(Sum _{ k>=1 } phi(k) * x ^ k / k), where phi is the Euler totient function A000010. ● a(n) / n! ~ 3 ^ (1 / 4) * exp(2 * sqrt(6 * n) / Pi) / (Pi * 2 ^ (3 / 4) * n ^ (3 / 4)). ● a(0) = 1; a(n) = (n - 1)! * Sum _{ k=1..n } phi(k) * a(n - k) / (n - k)!. - _ Seiichi Manyama _ , Apr 29 2022 ●

► [A206901] 1,2,8,39,199,1027,5316,27539,142694,739416,3831589,19855045,102887673,533158028,2762794601,14316644946,74188042696,384438233215,1992137140383,10323141778619,53493935746148,277202543857995,1436447874880342,7443591492820888 ⋆ Number of nonisomorphic graded posets with 0 of rank n with no 3 - element antichain. ● a(n + 3) = 7a(n + 2) - 10a(n + 1) + 3a(n), a(0)=1, a(1)=2, a(2)=8. ●

► [A366049] 1,2,8,39,211,1218,7349,45790,292361,1902834,12577737,84205212,569788192,3890728052,26775751320,185525538183,1293171205833,9061500578178,63794947215218,451028012126797,3200898741338041,22794860112273294,162841330273522907 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 - x) ^ 3 / (1 - x + x ^ 2)). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 2) } binomial(n + 1,k) * binomial(3 * n - k + 1,n - 2 * k). ●

► [A326963] 1,1,2,8,39,277,2348,23684,272955,3543901,51124052,811318628,14045786139,263429197837,5320671508868,115141595761844,2657827341263595,65185383518111581,1692767331631966292,46400793659715329348,1338843898122243225339,40562412499252848257197 ⋆ Number of length n arrays with entries that cover an initial interval of positive integers counting chiral pairs as equivalent, i.e., the arrays are reversible. ● a(n) = Sum _{ k=0..n } (k! / 2) * (Stirling2(n, k) + Stirling2(ceiling(n / 2), k)). ●

► [A074092] 1,2,8,40,144,448,1280,3456,8960,22528,55296,133120,315392,737280,1703936,3899392,8847360,19922944,44564480,99090432,219152384,482344960,1056964608,2306867200,5016387584 ⋆ Number of plane binary trees of size n + 3 and contracted height n. ● a(n) = 6 * a(n - 1) - 12 * a(n - 2) + 8 * a(n - 3) for n>4. G.f.: (1 - 4 * x + 8 * x ^ 2 + 8 * x ^ 3 - 16 * x ^ 4) / (1 - 2 * x) ^ 3. [_ Colin Barker _ , Mar 21 2012] ●

► [A186947] 1,2,8,40,192,864,3712,15488,63488,257536,1038336,4171776,16728064,67002368,268206080,1073250304,4293918720,17177640960,68714758144,274867945472,1099490656256,4398002470912,17592093769728,70368551239680,281474574057472 ⋆ a(n) = 4 ^ n - n * 2 ^ n. ● a(n) = 4 * a(n - 1) + 2 ^ n * (n - 2), n>=1. - _ Vincenzo Librandi _ , Mar 13 2011 ●

► [A027617] 0,0,0,2,8,40,200,1400,11200,103040,1030400,11334400,135766400,1764963200,24709484800,370687116800,5930993868800,100826895769600,1814871926067200,34482566595276800,689651331905536000,14482682605174784000,318619017313845248000 ⋆ Number of permutations of n elements containing a 3 - cycle. ● a(n) = n! * (1 - Sum _{ k=0..floor(n / 3) } (- 1) ^ k / (3 ^ k * k!)). ●

► [A187071] 1,2,8,40,206,1084,5802,31440,171946,947132,5247010,29203928,163176586,914744612,5142354178,28978786976,163652047834,925925993132,5247514156418,29783577676840,169270380108906,963186164033652 ⋆ Expansion of d / dx arctan(x * A001003(x)). ● a(n) = Sum _{ k=0..n } (Sum _{ j=0..n - k } (- 1) ^ j * 2 ^ (- j) * binomial(n + 1, j) * binomial(2 * n - k - j, n))) * (2 ^ (n - k - 1)) * (1 - (- 1) ^ (k + 1)) * (- 1) ^ (k / 2). ●

► [A154626] 1,2,8,40,208,1088,5696,29824,156160,817664,4281344,22417408,117379072,614604800,3218112512,16850255872,88229085184,461973487616,2418924584960,12665653559296,66318223015936,347246723858432,1818207451086848,9520257811087360 ⋆ a(n) = 2 ^ n * A001519(n). ● a(n) = (((3 - sqrt(5)) ^ n * (1 + sqrt(5)) + (- 1 + sqrt(5)) * (3 + sqrt(5)) ^ n)) / (2 * sqrt(5)). ● a(n) = 6 * a(n - 1) - 4 * a(n - 2) for n>1. ●

► [A113449] 2,8,40,216,1218,7000,40560,235824,1373090,7999592,46616920,271683720,1583441442,9228858808,53789455200,313507253856,1827252574658,10650004589000,62072766255880,361786571934264,2108646614622210 ⋆ Sum of the square root of n - th square triangular number and n - th Pell (or lambda) number (A000129). ● a(n) = sqrt(((17 + 12 * sqrt(2)) ^ n + (17 - 12 * sqrt(2)) ^ n - 2) / 32) + ((1 + sqrt(2)) ^ n - (1 - sqrt(2)) ^ n) / (2 * sqrt(2)). - _ Stefan Steinberger _ , Jun 17 2007 ● a(n) = sqrt((Q _{ 4 * n } - 2) / 32) + P _{ n } , where P _{ n } and the Pell numbers and Q _{ n } are the Pell - Lucas numbers. ● a(n) = 8 * a(n - 1) - 12 * a(n - 2) - 4 * a(n - 3) + a(n - 4). ●

► [A143388] 1,2,8,40,221,1288,7752,47652,297275,1874730,11920740,76292736,490828828,3171317360,20563942288,133749903324,872196460359,5700580759510,37332393806400,244914161562840,1609234420792845 ⋆ a(n) = Sum _{ k=0..n } A033184(n,k) * A033184(n,n - k), where Catalan triangle entry A033184(n,k) = C(2 * n - k,n - k) * (k + 1) / (n + 1). ● a(n) = (n ^ 2 + 3 * n + 6) * (3 * n + 1)! / (n! * (2 * n + 3)!) . ●

► [A219587] 1,2,8,40,224,1296,7568,44304,259536,1520656,8910160,52209040,305919696,1792542992,10503446608,61545189520,360625475024,2113093401616,12381720203088,72550979111824,425114158957776,2490966357221136,14595875630354000,85524874633320080 ⋆ Noncrossing, nonnesting, 2 - arc - colored permutations on the set { 1..n } where lower arcs even of different colors do not cross. ● a(n) = 7 * a(n - 1) - 6 * a(n - 2) - 4 * a(n - 3) for n>2. - _ Colin Barker _ , Jun 22 2019 ●

► [A092807] 1,2,8,40,224,1312,7808,46720,280064,1679872,10078208,60467200,362799104,2176786432,13060702208,78364180480,470185017344,2821109972992,16926659575808,101559956930560,609359740534784 ⋆ Expansion of (1 - 6 * x + 4 * x ^ 2) / ((1 - 2 * x) * (1 - 6 * x)). ● a(n) = (6 ^ n + 3 * 2 ^ n + 2 * 0 ^ n) / 6. ● a(0)=1, a(1)=2, a(2)=8, a(n) = 8 * a(n - 1) - 12 * a(n - 2). - _ Harvey P. Dale _ , Aug 23 2011 ●

► [A074601] 2,8,40,224,1312,7808,46720,280064,1679872,10078208,60467200,362799104,2176786432,13060702208,78364180480,470185017344,2821109972992,16926659575808,101559956930560,609359740534784,3656158441111552 ⋆ a(n) = 2 ^ n + 6 ^ n. ● a(n) = 6 * a(n - 1) - 2 ^ n = 8 * a(n - 1) - 12 * a(n - 2). ●

► [A052701] 0,1,2,8,40,224,1344,8448,54912,366080,2489344,17199104,120393728,852017152,6085836800,43818024960,317680680960,2317200261120,16992801914880,125210119372800,926554883358720,6882979133521920 ⋆ a(0) = 0; for n >= 1, a(n) = 2 ^ (n - 1) * C(n - 1), where C(n) = A000108(n) Catalan numbers, n >0. ● a(n) = 8 ^ (n - 1) * GAMMA(n - 1 / 2) / GAMMA(n + 1) / Pi ^ (1 / 2) , n>0. ● a(0)=0, a(1)=1; a(n) = 2 * Sum _{ i=1..n - 1 } a(i) * a(n - i). - _ Benoit Cloitre _ , Mar 16 2004 ●

► [A151374] 1,2,8,40,224,1344,8448,54912,366080,2489344,17199104,120393728,852017152,6085836800,43818024960,317680680960,2317200261120,16992801914880,125210119372800,926554883358720,6882979133521920,51309480813527040,383705682605506560,2877792619541299200 ⋆ Number of walks within N ^ 2 (the first quadrant of Z ^ 2) starting at (0, 0), ending on the vertical axis and consisting of 2n steps taken from { (- 1, - 1), (- 1, 0), (1, 1) } . ● a(n) is the top left term in M ^ n, M = the following infinite square production matrix: ● a(n) = 4 ^ n * 2F1((1 - n) / 2, - n / 2;1;1) / (n + 1). - _ Benedict W. J. Irwin _ , Jul 12

2016 ● a(n) = 2 * Sum _{ k=1..n } a(k - 1) * a(n - k), a(0) = 1. - _ Mehdi Naima _ , Jan 16 2023 ●

► [A305406] 1,2,8,40,234,1544,11242,89016,758504,6900012,66590782,678322704,7262393832,81431657220,953339019606,11622207372104,147199295291518,1932876310310488,26265519359529974,368752956750812256,5340795881536757632,7969117945892583967 6,122352438342992803930 6 ★ Expansion of Sum _{ k>=0 } binomial(2 * k,k) * x ^ k / Product _{ j=1..k } (1 - j * x). ● a(n) = Sum _{ k=0..n } Stirling2(n,k) * binomial(2 * k,k). ●

► [A296050] 0,0,1,2,8,40,236,1648,13125,117794,1175224,12903874,154615096,2007498192,28075470833,420753819282,6726830163592,114278495205524,2055782983578788,39039148388975552,780412763620655061,16381683795665956242,360258256118419518680,8283042472303599966974 ★ Number of permutations p of [n] such that min _{ j=1..n } |p(j) - j| = 1. ● a(n) is odd <=> n in { A016933 } . ● a(n) is even <=> n in { A047252 } . ●

► [A055882] 1,2,8,40,240,1664,12992,112256,1059840,10827264,118758400,1389711360,17258893312,226463227904,3127694491648,45316785602560,686826595745792,10861264214949888,178802342273744896,3058036745204924416,54236710945813430272,995874184692762673152 ★ a(n) = 2 ^ n * Bell(n). E.g.f.: exp(exp(2x) - 1). ● a(n) = exp(- 1) * 2 ^ n * sum(k=>0, k ^ n / k!). - _ Benoit Cloitre _ , May 20 2002 ●

► [A349105] 1,1,2,8,40,243,1796,15502,152608,1690613,20814208,281859540,4163795648,66636761575,1148477490304,21207704998010,417728195909632,8742243282090153,193720478508563456,4531158728871170080,111562803180301643776,2884156736234559267611 ★ Expansion of e.g.f. 1 / (1 - (sinh(x) + x * cosh(x)) / 2). ● a(0) = 1; a(n) = Sum _{ k=0..floor((n - 1) / 2) } (k + 1) * binomial(n,2 * k + 1) * a(n - 2 * k - 1). ●

► [A000828] 1,1,2,8,40,256,1952,17408,177280,2031616,25866752,362283008,5535262720,91620376576,1633165156352,31191159799808,635421069967360,13753735117275136,315212388819402752,7625476699018231808 ★ E.g.f. cos(x) / (cos(x) - sin(x)). ● a(n) = sum(evenp(n + k), k=1..n, (- 1) ^ ((n + k) / 2) * sum(j=k..n , j! / n! * stirling2(n,j) * 2 ^ (n - j) * (- 1) ^ (n + j - k) * binomial(j - 1,k - 1)), n>0. - _ Vladimir Kruchinin _ , Aug 18 2010 ● a(n) = (- 1) ^ ((n ^ 2 - n) / 2) * 4 ^ n * (E _{ n } (1 / 2) + E _{ n } (1)) / 2 for n >= 0, where E _{ n } (x) is an Euler polynomial. - _ Peter Luschny _ , Nov 25 2010 ● a(n) = (2 * i) ^ (n - 1) * Sum _{ k = 1..n } (- 1) ^ (n - k) * k! * Stirling2(n,k) * ((1 - i) / 2) ^ (k - 1), where i = sqrt(- 1). ● a(0) = a(1) = 1; a(n) = 2 * Sum _{ k=1..n - 1 } binomial(n - 1,k) * a(k) * a(n - k - 1). - _ Ilya Gutkovskiy _ , Nov 21 2020 ●

► [A254399] 0,2,8,41,179,794,3422,14706,62754,267179,1135079,4817276,20429252,86600786,367005092,1555075557,6588493275,27912159494,118245265874,500914535330,2121959178350,8988897300407,38077930682063,161301621015576,683287035188904 ★ A Fibonacci sum: a(n) = Sum _{ j=0..n - 1 } F(j) ^ 2 * F(2 * n - j), in which the F's are the Fibonacci numbers. ● a(n) = (1 / 2) * (F(2 * n) + F(n) ^ 2 * F(n + 1) - F(n) * F(n + 1) ^ 2 + F(n + 1) ^ 3 - F(2 * n + 1)). ● a(n) = 3 * (- 1) ^ n * F(n - 1) / 10 + (- 1) ^ n * F(n) / 10 - F(2 * n - 1) / 2 + F(3 * n + 1) / 5. - _ Ehren Metcalfe _ , Mar 25 2016 ●

► [A337753] 2,8,41,208,1042,5209,26042,130208,651041,3255208,16276042,8138020 9,406901042,2034505208,10172526041,50862630208,254313151042,1271565755209,6357828776042,31789143880208,158945719401041,794728597005208,3973642985026042,19868214925130209 ★ The number of n - digit numbers which are divisible by 3 and where all decimal digits are odd. ● a(n) = 6 * a(n - 1) - 6 * a(n - 2) + 5 * a(n - 3). ●

► [A340992] 1,2,8,41,216,1172,6491,36430,206472,1179104,6774048,39107400,226683903,1318427762,7690414740,44970645116,263545466456,1547445069318,9101515979306,53613206171619,316243949777696,1867702439169958,11042787840419398,65357054283015120 ★ a(n) is the (2n) - th term of the n - fold self - convolution of the number of divisors function tau. ● a(n) = [x ^ (2n)] (Sum _{ j>=1 } tau(j) * x ^ j) ^ n. ●

► [A348474] 1,2,8,41,220,1212,6803,38691,222196,1285610,7482718,43762754,256972507,1514020484,8945944435,52990732161,314568593860,1870939233546,11146516959176,66508200091575,397375460647690,2377167144881136,14236462650026064,85346464443885086 ★ Number of compositions of n into exactly 2n nonnegative parts such that each positive i - th part is odd if i is odd. ● a(n) = Sum _{ i = 0..n } Sum _{ j = 0..n } binomial(n,i + 2 * j) * binomial(2 * i + 2 * j - 1, i) * binomial(n + j - 1,j). ●

► [A333093] 1,2,8,41,232,1377,8399,52138,327656,2077934,13270633,85226594,549837391,3560702069,23132584742,150695482041,984021596136,6438849555963,42208999230224,277144740254566,1822379123910857,11998811140766701,79095365076843134 ★ a(n) is the n - th order Taylor polynomial (centered at 0) of c(x) ^ n evaluated at x = 1, where c(x) = (1 - sqrt(1 - 4 * x)) / (2 * x) is the o.g.f. of the Catalan numbers A000108. ● a(n) = Sum _{ k = 0..n } n / (n + k) * binomial(n + 2 * k - 1,k) for n >= 1. ● a(n) = [x ^ n] ((1 + x) * c(x / (1 + x))) ^ n = [x ^ n] ((1 + x) * (1 + x * M(x))) ^ n, where M(x) = (1 - x - sqrt(1 - 2 * x - 3 * x ^ 2)) / (2 * x ^ 2) is the o.g.f. of the Motzkin numbers A001006. ●

► [A093935] 1,2,8,41,249,1754,14084,127057,1272625,14015014,168323364,2189619553,30670104577,460235322854,7366138539416,125257398648401,2255126454472401,42855262052316218,857238357862313360 ★ a(1) = 1, a(n + 1) = a(n) + n * (a(1) + a(2) + ... + a(n)). ● a(1)=1, a(2)=2, a(n + 1) = ((n ^ 2 + n - 1) * a(n) - n * a(n - 1)) / (n - 1) (n >= 2). - _ Emeric Deutsch _ , Apr 18 2005 ●

► [A099240] 1,2,8,41,250,1757,13917,122166,1173662,12222605,136927351,1639768418,20880556880,281460326864,4000651782511,59761935358025,935445106491702,15303039199768237,261030618751031385,4632889302298054713 ★ Main diagonal of A099239. ● a(n) = Sum _{ j=0..n } binomial(n ^ 2 - (n - 1) * (j - 1), j). ● a(n) = Sum _{ j=0..n } binomial(n + (n - 1) * (j + 1), n * (j + 1) - 1) with a(0) = 1. ●

► [A134055] 1,1,2,8,41,252,1782,14121,123244,1169832,11960978,130742196,1518514076,18645970943,241030821566,3268214127548,46338504902485,685145875623056,10538790233183702,168282662416550040,2784205185437851772,47646587512911994120 ★ a(n) = Sum _{ k=1..n } C(n - 1,k - 1) * S2(n,k) for n>0, a(0)=1, where S2(n,k) = A048993(n,k) are Stirling numbers of the 2nd kind. ● a(n) mod 2 = 1 <=> n in { A048297 } or n = 0. (End) ●

► [A136281] 1,1,2,8,41,253,1858,15796,152219,1638323,19467494,252998224,3568259503,54263159347,884834059454,15397757661092,284767413357977,5576696746139689,115269732256964626,2507575465491619672,57262481225957071721,1369461739453440893261 ★ Number of graphs on n labeled nodes with degree at most 2. ● a(n) = (2 * n - 1) * a(n - 1) - (n - 1) ^ 2 * a(n - 2) + (n - 2) * (n - 1) * a(n - 3) - (n - 3) * (n - 2) * (n - 1) / 2 * a(n - 4). - _ Vaclav Kotesovec _ , Aug 10 2013 ●

► [A231103] 0,2,8,42,208,1042,5208,26042,130208,651042,3255208,16276042,81380208,406901042,2034505208,10172526042,50862630208,254313151042,1271565755208,6357828776042,31789143880208,158945719401042,794728597005208 ★ Number of n X 3 0..3 arrays x(i,j) with each element horizontally or antidiagonally next to at least one element with value (x(i,j) + 1) mod 4, no adjacent elements equal, and upper left element zero. ● a(n) = (5 ^ n + 5) / 15 for n even. ● a(n) = (5 ^ n - 5) / 15 for n odd. ●

► [A366238] 1,2,8,42,224,1281,7630,46816,294008,1880588,12209474,80251889,532988530,3571260662,24112334292,163887278097,1120445503036,7699924478714,53160597794588,368549236730128,2564649436452878,17907555498455680,125426544531794332 ★ G.f. A(x) satisfies A(x) = 1 + x + x * (1 + x) ^ 4 * A(x) ^ 2. ● a(n) = Sum _{ k=0..n } binomial(5 * k + 1,n - k) * binomial(2 * k,k) / (k + 1) . ●

► [A129277] 1,2,8,42,241,1444,8867,55320,349009,2220242,14215521,91487834,591285123,3834960060,24947236547,162704291214,1063516446543,6965286759424,45696734431169,300262228345720,1975679169075314 ★ Column 1 of triangle A129276; a(n) is the coefficient of q ^ n in the squared q - factorial of n + 1. ● a(n) = [q ^ n] Product _{ i=1..n + 1 } { (1 - q ^ i) / (1 - q) }^ 2. ●

► [A133417] 2,8,42,248,1442,8408,49002,285608,1664642,9702248,56548842,329590808,1920996002,11196385208,65257315242,380347506248,2216827722242,12920618827208,75306885241002,438920692618808,2558217270471842,14910382930212248,86904080310801642,506514098934597608 ★ a(n) = sqrt(2 * (P(n) ^ 4 + 16 * P(n + 1) ^ 4 + P(n + 2) ^ 4)), where P() = Pell numbers A000129. ● a(n) = 5 * a(n - 1) + 5 * a(n - 2) - a(n - 3). ● a(n) = (2 * (- 1) ^ n + 5 * (3 - 2 * sqrt(2)) ^ (1 + n) + 5 * (3 + 2 * sqrt(2)) ^ (1 + n)) / 4 for n>=0. - _ Colin Barker _ , Nov 04 2016 ●

► [A100327] 1,2,8,42,252,1636,11188,79386,579020,4314300,32697920,251284292,1953579240,15336931928,121416356108,968187827834,7769449728780,62696580696172,508451657412496,4141712433518956,33872033298518728,278014853384816184,2289376313410678312 ★ Row sums of triangle A100326, in which row n equals the inverse binomial of column n of square array A100324. ● a(n) = Sum _{ k=1..n } 2 * binomial(n, k) * binomial(2n + k, k - 1) / n for n>0 with a(0) =1. ● a(n) = 2 ^ n * binomial(3 * n,2 * n) * hypergeometric([- 1 - 2 * n, - n], [- 3 * n],1 / 2) / (n + 1 / 2). - _ Peter Luschny _ , Jun 10 2017 ●

► [A018934] 0,0,0,2,8,42,256,1810,14568,131642,1320128,14551074,174879880,2276108362,31894886208,478775722802,7664993150696,130369025763930,2347604596782208,44619881467365442,892659329531868168,18750556523491299434,412601744497992787776 0,94916301638007269927 22 ★ From the game of Mousetrap. ● a(n) = floor((n! + 1) / e) - floor(((n - 2)! + 1) / e), n > 2. - _ Gary Detlefs _ , Mar 27 2011 ●

► [A013999] 1,1,2,8,42,258,1824,14664,132360,1326120,14606640,175448160,2282469840,31972303440,479793807360,7679384173440,130586660507520,2351111258805120,44679858911251200,893744703503769600,18771276190401504000,413017883356110278400 ★ From applying the "rational mean" to the number e. ● a(n) = sum(binomial(n - k + 1,k) * (- 1) ^ k * (n - k + 1)!, k=0..floor((n + 1) / 2)). - _ Emanuele Munarini _ , Jul 01 2013 ●

► [A188912] 1,2,8,42,260,1816,13962,116094,1029124,9609144,93569808,942642696,9763181946,103455616400,1117379189926,12264816349938,136501928050116,1537591374945704,17503603786398576,201128739609458904,2330480521265639136 ★ Binomial convolution of the binomial coefficients bin(3n,n) / (2n + 1) (A001764). ● a(n) = Sum _{ k=0..n } binomial(n, k) * binomial(3 * k, k) * binomial(3 * n - 3 * k, n - k) / ((2 * k + 1) * (2 * n - 2 * k + 1)). ●

► [A121635] 1,1,2,8,42,264,1920,15840,146160,1491840,16692480,203212800,2674425600,37841126400,572885913600,9240898867200,158228598528000,2866422214656000,54775863926784000,1101208277385216000,23234214178086912000,513342323725271040000 ★ Number of deco polyominoes of height n, having no 2 - cell columns starting at level 0. A deco polyomino is a directed column - convex polyomino in which the height, measured along the diagonal, is attained only in the last column. ● a(1)=1, a(2)=1, a(n) = (n - 2) * [(n - 2)! + a(n - 1)] for n>=3. ●

► [A351814] 1,1,2,8,42,272,2115,19010,192760,2172468,26896081,362184998,5262526484,81969555736,1361249430071,23989460080079,446832403813788,8765575657218860,180544405959236487,3893718987163468969,87711985393624557487,2059264143275898894916 ★ G.f. A(x) satisfies A(x) = 1 + x * A(x / (1 - x) ^ 4) / (1 - x). ● a(0) = 1; a(n) = Sum _{ k=0..n - 1 } binomial(n + 3 * k - 1,n - k - 1) * a(k). ●

► [A027836] 1,2,8,43,268,1824,13156,98865,765948,6075256,49094708,402801425,3346590068,28099903160,238079915640,2032914717645,17476713955548,151143219598008,1314045772469632,11478299163026540,100688538612524720,886622619082002120,7834289222109530340 ★ Total number of vertices in all loopless rooted planar maps with n edges. ● a(n) = 12 * n * (4 * n - 1)! * (5 * n ^ 2 + 13 * n + 2) / (n! * (3 * n + 3)!) for n > 0. ●

► [A276497] 1,2,8,43,339,3243,42325,646022,12283523,300369787,8028643000,259488750 73,9414916809083,362597750396727,15397728527812844,742238179058722876,40068968501510691878 ★ Maximum number of different possible residues of the division of prime(k) by primorial(n), with k such that prime(k) > primorial(n). ● a(n) = pi(primorial(n)) - n + 1, n > 0. ●

► [A128656] 2,8,44,240,1248,6224,30052,141536,653744,2973072,13351192,59333408,261378944,1142885664,4965331028,21452209600,92230169232,394819386896,1683663903016,7155148746912,30313584232640,128067598573408 ★ Number of polygons on n vertices with four faces such that the source of the polygon lies on exactly two faces. ● a(n) = 2(n + 2) * 4 ^ (n - 3) - 2 * (n + 1) * C(2 * n - 4,n - 3). ●

► [A208044] 2,8,44,244,1356,7540,41932,233204,1296972,7213172,40116428,223109620,1240835916,6900974452,38380133836,213453141236,1187130917964,6602291295860,36718991727308,204214611724276,1135750348251468 ⋆ Number of n X 3 0..3 arrays with new values 0..3 introduced in row major order and no element equal to any horizontal, vertical or antidiagonal neighbor (colorings ignoring permutations of colors). ● a(n) = (2 ^ (- 5 - n) * ((7 - sqrt(17)) ^ n * (- 13 + 5 * sqrt(17)) + (7 + sqrt(17)) ^ n * (13 + 5 * sqrt(17)))) / sqrt(17) for n>1. ●

► [A362413] 1,1,2,8,44,244,1744,13768,127952,1270736,14384096,172799296,2306400832,32442943168,498547591424,8031916728704,139611091407104,2533449773986048,49133884886866432,991341134236389376,21218511117198020505 6,47108343403167433625 6 ⋆ The second moment of an n X n symmetric random +- 1 matrix. ● a(n) = (p(n) + Sum _{ i=1..n - 1 } p(n - i) * a(i) / i!) * (n - 1)!. - _ Chai Wah Wu _ , Apr 20 2023 ●

► [A047851] 1,2,8,44,260,1556,9332,55988,335924,2015540,12093236,72559412,435356468,2612138804,15672832820,94036996916,564221981492,3385331888948,20311991333684,121871948002100,731231688012596 ⋆ a(n) = T(3,n), array T given by A047848. ● a(n) = (6 ^ n + 4) / 5. - _ Ralf Stephan _ , Feb 14 2004 ● a(0) = 1, a(1) = 2, a(n) = 7 * a(n - 1) - 6 * a(n - 2) for n > 1. ● a(n) = 6 * a(n - 1) - 4 (with a(0)=1). - _ Vincenzo Librandi _ , Aug 06 2010 ●

► [A261266] 1,2,8,44,264,1632,10256,65200,418144,2700224,17534208,114380928,748988928,4920379648,32413343488,214038123264,1416349369856,93897567303 68,62352450867200,414660440811520,2761261291024384 ⋆ Expansion of ((x - 1 / 2) * (1 / sqrt(8 * x ^ 2 - 8 * x + 1) + 1) - x) / (x - 1). ● a(n) = Sum _{ l=0..n } (C(n,l) * Sum _{ i=l..n } (C(i + l - 1,i) * C(n - l,n - i))). ●

► [A141147] 2,8,44,268,1732,11624,80096,562748,4013396,28964128,211054120,1550226880,11463513440,85257846080,637243586944,4783617720892,36046416801268,272543202174704,2066898899119448,15717398604230888 ⋆ Number of linear arrangements of n blue, n red and n green items such that the first item is blue and there are no adjacent items of the same color (first and last elements considered as adjacent). ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n,2k) * binomial(2k,k) * binomial(n - 1 + k,k) * 2 ^ (n - 2k). ● a(n) = 2 ^ n * Hypergeometric([n,(1 - n) / 2, - n / 2],[1, 1],1). - _ Peter Luschny _ , Jan 15 2012 ● a(n) = (1 / n) * Sum _{ k = floor(n / 2)..n } k * binomial(n,k) ^ 2 * binomial(2 * k,n). - _ Peter Bala _ , Mar 19 2023 ●

► [A346626] 1,2,8,44,280,1936,14128,107088,834912,6652608,53934080,443467136,3689334272,30997608960,262651640064,2241857334528,19257951946240,166362924583936,1444351689281536,12595885932259328,110287974501355520,969178569410404352,8544982917273509888,75565732555028701184 ⋆ G.f. A(x) satisfies: A(x) = (1 + x * A(x) ^ 3) / (1 - x). ● a(0) = 1; a(n) = a(n - 1) + Sum _{ i=0..n - 1 } Sum _{ j=0..n - i - 1 } a(i) * a(j) * a(n - i - j - 1). ●

► [A179489] 1,1,2,8,44,288,2172,18516,175352,1819868,20491844,248417128,3221797252,44464876996,650076797232,10028658649668,162695157490644,2767333692834768,49221196196394252,913310582666986596 ⋆ G.f.: A(x) = x / (1 - (1 - 3x) * A(x / (1 - 3x))). ● a(n) = the upper left term in M ^ (n - 1), M = an infinite square production matrix with the series 3 * n - 2 as the main diagonal: ●

► [A240165] 1,2,8,44,288,2192,18976,182912,1934848,22231808,275203584,3645178880,51370694656,766634946560,12066538676224,199607631945728,3459736006950912,62662715180515328,1183139425871331328,23237689444403511296,473852525131782946816,10014501808427774246912 ⋆ E.g.f.: exp(x * (1 + exp(2 * x))). ● a(n) = Sum _{ k=0..n } binomial(n,k) * (2 * k + 1) ^ (n - k) for n>=0. ●

► [A357832] 0,1,1,2,8,44,290,2194,18690,177072,1848048,21079332,260998584,3487438476,50030096844,767092681992,12520306878720,216760973139072,3967857438205320,76575231882844056,1553981718941428824,33082675130470434336,737250032464248840192 ⋆ a(n) = Sum _{ k=0..floor((n - 1) / 3) } 2 ^ k * |Stirling1(n,3 * k + 1)|. ● a(n) = ((2 ^ (1 / 3)) _ n + w ^ 2 * (2 ^ (1 / 3) * w) _ n + w * (2 ^ (1 / 3) * w ^ 2) _ n) / (3 * 2 ^ (1 / 3)), where (x) _ n is the Pochhammer symbol. ●

► [A111537] 1,2,8,44,296,2312,20384,199376,2138336,24936416,314142848,4252773824,61594847360,950757812864,15586971531776,270569513970944,4959071121374720,95721139472072192,1941212789888952320,41271304403571227648,918030912312297752576,21325054720042613565440 ⋆ Column 1 of triangle A111536. ● a(n + 1) = (n + 3)! - 2 * (n + 2)! - Sum _{ k=0..n - 1 } (n - k + 1)! * a(k + 1). ● a(n + 1) is the moment of order n for the measure of density x * exp(- x) / ((x * exp(- x) * Ei(x) - 1) ^ 2 + (Pi * x * exp(- x)) ^ 2) on the interval 0..infinity. ● a(0) = 1; a(n) = n * a(n - 1) + Sum _{ k=0..n - 1 } a(k) * a(n - k - 1). - _ Ilya Gutkovskiy _ , Jul 05 2020 ●

► [A052897] 1,2,8,44,304,2512,24064,261536,3173888,42483968,621159424,9841950208,167879268352,3065723549696,59651093528576,1231571119812608,26883546193002496,618463501807058944 ⋆ Expansion of e.g.f.: exp(2 * x / (1 - x)). ● a(n) = n! * L(n, - 1, - 2). - _ Karol A. Penson _ , Oct 16 2006 [Here L(n,a,x) is the n - th generalized Laguerre polynomial with parameter a, evaluated at x. L(n,a,x) is 1 if n=0, a + 1 - x if n=1 and otherwise (2 * n + a - 1 - x) / n * L(n - 1,a,x) - (n + a - 1) / n * L(n - 2,a,x). - _ Peter Luschny _ , Nov 20 2011] ●

► [A172109] 0,2,8,44,308,2612,25988,296564,3816548,54667412,862440068,14857100084,277474957988,5584100659412,120462266974148,2772968936479604,67843210855558628,1757952715142990612,48093560991292628228 ⋆ a(n) is the number of ordered partitions of { 1,1,2,3,...,n - 1 } . ● a(n) = Sum _{ k=1..n - 1 } Stirling2(n - 1,k) * (k + 1)!. - _ Karol A. Penson _ , Sep 04 2015 ●

► [A005363] 1,2,8,44,310,2606,25202,272582,3233738,41454272,567709144,8230728508,125413517530,1996446632130,33039704641922,566087847780250,10006446665899330,181938461947322284,3393890553702212368,64807885247524512668,1264344439859632559216 ⋆ Hoggatt sequence with parameter d=5. ● a(n) = Hypergeometric5F4([- 4 - n, - 3 - n, - 2 - n, - 1 - n, - n], [2,3,4,5], - 1). ● a(n) = S(5, n) where S(d,n) is defined in A005364. - _ Sean A. Irvine _ , May 29 2016 ●

► [A358436] 1,2,8,45,322,2730,26004,268554,2940080,33635316,398300344,4849845000,60429982144,767721774800,9916427702880,129937069996965,1724052965464890,23129299114182030,313351935000465900,4282621342230699930,58994556159403576140,818487022124443918740 ⋆ a(n) = Sum _{ j=0..n } C(n) * C(n - j), where C(n) is the n - th Catalan number. ● a(n) = C(n) * (C(n) * hypergeom([1, - n - 1], [1 / 2 - n], 1 / 4) + 1 / 2). ● a(n) = ((- 64 * n ^ 3 + 160 * n ^ 2 - 112 * n + 24) * a(n - 2) + (20 * n ^ 3 - 14 * n ^ 2 + 2 * n) * a(n - 1)) / (n * (n + 1) ^ 2). ●

► [A266507] 2,8,46,268,1562,9104,53062,309268,1802546,10506008,61233502,356895004,2080136522,12123924128,70663408246,411856525348,2400475743842,13990997937704,81545511882382,475282073356588,2770146928257146,16145599496186288,94103450048860582 ⋆ a(n) = 6 * a(n - 1) - a(n - 2) with a(0) = 2, a(1) = 8. ● a(n) = (- sqrt(2) * (1 + sqrt(2)) ^ (2 * n + 1) - 3 * (1 - sqrt(2)) ^ (2 * n + 1) - sqrt(2) * (1 - sqrt(2)) ^ (2 * n + 1) + 3 * (1 + sqrt(2)) ^ (2 * n + 1)) / sqrt(8). ●

► [A337060] 1,1,2,8,46,324,2708,26424,295272,3714600,51929472,798610416,13399081584,243556758912,4767863027328,100004300847744,2237419620187776,53187370914349440,1338373435337261312,35568441673932566016,994744655047298951424,29211127285363209561600 ⋆ E.g.f.: 1 / (1 + x ^ 2 / 2 + log(1 - x)). ● a(0) = 1; a(n) = n * a(n - 1) + Sum _{ k=3..n } binomial(n,k) * (k - 1)! * a(n - k). ●

► [A005840] 1,1,2,8,46,332,2874,29024,334982,4349492,62749906,995818760,17239953438,323335939292,6530652186218,141326092842416,3262247252671414,80009274870905732,2077721713464798210,56952857434896699992,1643312099715631960910 ⋆ Expansion of (1 - x) * e ^ x / (2 - e ^ x). ● a(n + 1) = n * (a(n) - a(n - 1)) + Sum _{ k=0..n } binomial(n, k) * a(k) * a(n - k). - _ Michael Somos _ , Aug 01 2016 ● a(n) = (1 - n) + Sum _{ k=0..n - 1 } binomial(n, k) * a(k). - _ Michael Somos _ , Aug 01 2016 ●

► [A052801] 1,2,8,46,342,3108,33324,411360,5741856,89379120,1534623936,28804923024,586686138384,12885385945248,303537419684064,7633673997722496,204125888803996800,5782960189212871680 ⋆ A simple grammar: labeled pairs of sequences of cycles. ● a(n) = Sum _{ k=0..n } (- 1) ^ (n - k) * Stirling1(n, k) * (k + 1)!. - _ Vladeta Jovovic _ , Sep 21 2003 ● a(n) = D ^ n(1 / (1 - x) ^ 2) evaluated at x = 0, where D is the operator exp(x) * d / dx. Cf. A052811. - _ Peter Bala _ , Nov 25 2011 ● a(n) = Sum _{ k=2..n + 1 } k! * s(n,k) where s(n,k) is the unsigned Stirling number of the first kind, (A132393). (End) ●

► [A099765] 1,1,2,8,46,352,3364,38656,519446,7996928,138826588,2683604992,57176039628,1331300646912,33636118326984,916559498182656,26795449170328038,836606220759859200,27784046218331805100 ⋆ a(n) = (1 / Pi) * (2 ^ n / n) * (n - 1)! * Integral _{ t>=0 } (sin(t) / t) ^ n dt. ● a(n) = (1 / n) * Sum _{ k=0, floor(n / 2) } (- 1) ^ k * binomial(n, k) * (n - 2 * k) ^ (n - 1). ●

► [A254747] 1,2,8,47,312,2162,15311,109965,797824,5833298,42910998,317224800,2354712927,17538747124,131017428431,981194304302,7364370502896,55380344444150,417176211054422,3147365470080480,23777750075552262 ⋆ a(n) = (1 + Sum _{ j=0..n } (C(n,j) * C(3 * j - 1,j))) / 2. ● a(n) = (hypergeom([1 / 3,2 / 3, - n],[1 / 2,1], - 27 / 4) + 2) / 3. - _ Peter Luschny _ , Feb 07 2015 ●

► [A292277] 0,2,8,48,240,1280,6656,34944,182784,957440,5012480,26247168,137428992,719593472,3767828480,19728629760,103300399104,540888006656,2832126181376,14829205585920,77646727741440,406563546202112,2128794362052608,11146511995895808 ⋆ a(n) = 2 ^ n * F(n) * F(n + 1), where F = A000045. ● a(n) = 4 * a(n - 1) + 8 * a(n - 2) - 8 * a(n - 3). ●

► [A104190] 2,8,48,270,1392,6862,32440,149114,674344,3003292,13234674,57809228,250594424,1079480960,4624303560,19720668918,83744226026,354354250476,1494620712320,6286217598392 ⋆ Sums of primes between successive powers of two. ● a(n) = Sum[Prime[i], { i, 2 ^ n, 2 ^ (n + 1) - 1 }] ●

► [A152661] 0,2,8,48,288,2160,17280,161280,1612800,18144000,217728000,2874009600,40236134400,610248038400,9763968614400,167382319104000,3012881743872000,57621363351552000,1152427267031040000,24329020081766400000,535238441798860800000 ⋆ Number of permutations of [n] for which the first two entries have the same parity (n>=2). ● a(2n) = 2 * (n!) ^ 2 * binomial(2 * n - 2,n); ● a(2n + 1) = n! * (n + 1)! * binomial(2n,n - 1). ●

► [A228568] 2,8,48,320,2176,14848,101376,692224,4726784,32276480,220397568,1504968704,10276569088,70172803072,479169871872,3271976550400,22342453428224,152563815022592,1041770892754944,7113656621858816,48575085832830976,331691433687777280 ⋆ a(n) = 2 ^ n * A056236(n). ● a(n) = ((4 - 2 * sqrt(2)) ^ n + (2 * (2 + sqrt(2))) ^ n). ● a(n) = 8 * a(n - 1) - 8 * a(n - 2) for n>1. ●

► [A063075] 1,2,8,48,390,3656,37834,417540,4836452,58130756,719541996,9121965276,117959864244,1551101290792,20689450250926,279395018584860,3813887739881184,52557835511244660,730403326965323706 ⋆ Number of partitions of 2n ^ 2 whose Ferrers - plot fits within a 2n X 2n box and cover an n X n box; number of ways to cut a 2n X 2n chessboard into two equal - area pieces along a non - descending line from lower left to upper right and passing through the center. ● a(n) = [q ^ (n ^ 2)](Product _{ j=1..n } (1 - q ^ (n + j)) / (1 - q ^ j)) ^ 2. - _ Tani Akinari _ , Jan 28 2022 ●

► [A366239] 1,2,8,49,329,2401,18452,147140,1206157,10101011,86047138,743288984,6495476548,57321239999,510104531479,4572492374150,41247768216331,374175606700172,3411195598361653,31236732721224722,287182875831208468,2649838553953071239 ⋆ G.f. A(x) satisfies A(x) = 1 + x + x * (1 + x) ^ 2 * A(x) ^ 3. ● a(n) = Sum _{ k=0..n } binomial(4 * k + 1,n - k) * binomial(3 * k,k) / (2 * k + 1). ●

► [A364592] 1,2,8,49,365,3001,26193,238119,2230151,21368167,208459419,2063563791,20675793627,209277092776,2136720896514,21979879393677,227582114799201,2369983696546858,24806423607475896,260829829404493787,2753744691645428399 ⋆ G.f. satisfies A(x) = 1 / (1 - x) + x * (1 - x) * A(x) ^ 4. ● a(n) = Sum _{ k=0..n } binomial(n + k,2 * k) * binomial(4 * k,k) / (3 * k + 1). ●

► [A058864] 1,2,8,49,402,4144,51515,750348,12537204,236424087,4967735896,115102258660,2915655255385,80164472149454,2377679022913612,75674858155603353,2572626389524849478,93040490884813025684 ⋆ Number of labeled chordal graphs (connected or not) on n nodes with no induced path P _ 4. ● a(n) = Sum _{ k=0..n } (- 1) ^ (n - k) * Stirling2(n, k) * (k + 1) ^ (k - 1). - _ Vladeta Jovovic _ , Nov 12 2003 ●

► [A034491] 2,8,50,344,2402,16808,117650,823544,5764802,40353608,282475250,1977326744,13841287202,96889010408,678223072850,4747561509944,33232930569602,232630513987208,1628413597910450,11398895185373144 ⋆ a(n) = 7 ^ n + 1. ● a(n) = 7 * a(n - 1) - 6. ● a(n) = 8 * a(n - 1) - 7 * a(n - 2). ●

► [A186182] 1,1,2,8,50,388,3363,31132,301156,3007000,30753169,320492869,3391067666,36331532588,393353506931,4296895624750,47300050998991,524168531729460,5842914510975105,65470405191871331,737008925038212059,8331166456981245521 ⋆ Expansion of 1 / (1 - x * A002294(x)). ● a(n) = Sum _{ k=1..n } k / (4 * n - 3 * k) * binomial(5 * n - 4 * k - 1,n - k), n>0; a(0) = 1. ●

► [A121677] 1,1,2,8,50,402,3932,45075,588450,8580542,137799497,2410575026,45531000715,921946835474,19895218322982,455271977561120,11000793881924130,279648297003419318,7454931579222301709 ⋆ a(n) = A121676(n) / (n + 1) = [x ^ n] (1 + x * (1 + x) ^ (n - 1)) ^ (n + 1) / (n + 1). ● a(n) = Sum _{ k=0..n + 1 } C(n + 1,k) * C((n - 1) * k,n - k) / (n + 1). ●

► [A030518] 0,2,8,52,248,1302,6448,32552,162448,813802,4067448,20345052,101717448,508626302,2543092448,12715657552,63578092448,317891438802,1589456217448,7947285970052,39736424967448,198682149251302,993410721842448,4967053731282552 ⋆ Number of walks of length n between two vertices on an icosahedron at distance 2. ● a(n) = 5 ^ n / 12 - (- 1) ^ n / 12 - (sqrt(5)) ^ (n + 1) / 20 - (- sqrt(5)) ^ (n + 1) / 20. ● a(n) = 4 * a(n - 1) + 10 * a(n - 2) - 20 * a(n - 3) - 25 * a(n - 4). (End) ● a(n) = (5 ^ n - 1) / 12 for n even. ● a(n) = (- 6 * 5 ^ ((n - 1) / 2) + 5 ^ n + 1) / 12 for n odd. (End) ●

► [A079503] 0,2,8,54,320,1250,3672,8918,18944,36450,65000,109142,174528,268034,397880,573750,806912,1110338,1498824,1989110,2600000,3352482,4269848,5377814,6704640 ⋆ a(n) = (n - 1) ^ 3 * ((n - 2) ^ 2 - 2 * (n - 3)). ● a(1)=0, a(2)=2, a(3)=8, a(4)=54, a(5)=320, a(6)=1250, a(n)=6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). - _ Harvey P. Dale _ , Dec 30 2012 ●

► [A052694] 1,2,8,54,384,3840,46080,645120,10321920,185794560,3715891200,81749606400,1961990553600,51011754393600,1428329123020800,42849873690624000,1371195958099968000,46620662575398912000 ⋆ Expansion of e.g.f. (1 + x ^ 3 - 2 * x ^ 4) / (1 - 2 * x). ● a(n) = 2 ^ n * n! + 6 * [n=3]. ●

► [A113248] 0,0,2,8,56,336,2496,19968,181248,1812480,19956480,239477760,3113487360,43588823040,653836861440,10461389783040,177843708887040,3201186759966720,60822550111518720,1216451002230374400 ⋆ Number of permutations p i in S _ n such that maj pi and maj pi ^ (- 1) have opposite parity where maj i s the major index. Equivalently, the number of pi such that maj pi and inv pi h ave opposite parity where inv is the inversion number. ● a(2n) = 2 n ^ 2 a(2n - 2) + 2 n (n - 1) b(2n - 2) and a(2n + 1) = 2 n (n + 1) a(2n - 1) + 2 n ^ 2 b(2n - 1) where b(n) is sequence A113247 ●

► [A333564] 2,8,56,384,2752,20096,148864,1114112,8403968,63787008,486584320,3727196160,28649455616,220869853184,1707123245056,13223868760064,102636144295936,797982357192704,6213784327684096,48452953790480384,378291752487878656,2956824500391378944 ⋆ a(n) = [x ^ n] (c(x) / c(- x)) ^ n, where c(x) = (1 - sqrt(1 - 4 * x)) / (2 * x) is the o.g.f. of the Catalan numbers A000108. ● a(n) = (- 1) ^ (n + 1) + Sum _{ k = 0..n - 1 } n ^ 2 / ((n - k) * (2 * n - k)) * C(n - k,k) * C(3 * n - 2 * k - 1,n - k). ●

► [A366267] 1,2,8,56,448,3920,36288,349440,3464448,35125760,362522624,3795914240,40224968704,430579701760,4648899846144,50568103690240,553632271155200,6096025799852032,67464070696927232,750003531943903232,8371814935842258944 ⋆ G.f. A(x) satisfies A(x) = 1 + x + x * A(x) ^ 4. ● a(n) = Sum _{ k=0..n } binomial(3 * k + 1,n - k) * binomial(4 * k,k) / (3 * k + 1). ●

► [A124212] 1,2,8,56,560,7232,114368,2139776,46223360,1132124672,30999600128,938366468096,31114518056960,1121542540992512,43664751042265088,1826043989622358016,81635676596544143360 ⋆ E.g.f.: exp(x) / sqrt(2 - exp(2 * x)). ● a(n) = 1 / sqrt(2) * Sum _{ k >= 0 } (1 / 8) ^ k * binomial(2 * k,k) * (2 * k + 1) ^ n = 1 / sqrt(2) * Sum _{ k >= 0 } (- 1 / 2) ^ k * binomial(- 1 / 2,k) * (2 * k + 1) ^ n. Cf. A176785, A124214 and A229558. ● a(n) = Sum _{ k = 0..n } (Sum _{ i = 0..k } (- 1) ^ (k - i) / 4 ^ k * binomial(2 * k,k) * binomial(k,i) * (2 * i + 1) ^ n). (End) ●

► [A214872] 1,2,8,59,663,10609,225219,6057298,199290037,7805646133,356263294786,18626811747385 ⋆ The number of subsets of positive integers of cardinality n, produced as the steps in a computation starting with 1 and using the operations of multiplication, addition, or subtraction. ● a(n) >= a(n - 1) * 2 * (n - 1) and a(2)=2 Hence a(n) >= 2 ^ (n - 1) * (n - 1)! . ●

► [A305730] 0,0,2,8,60,440,3710,34608,355992,4004880,48948570,646121080,9163171732,138974771208,2244977073430,38485321258720,697867158824880,13346709412525728,268504389357870642,5668425997555046760,125302048367006296940,2894477317277845459160 ⋆ a(n) is the total displacement of all letters in all permutations of n letters with no fixed points. ● a(n) = n * (n + 1)! / 3 * Sum _{ k=0..n } (- 1) ^ k / k!. ● a(n) = n * (n + 1) * (a(n - 1) / (n - 1) + (- 1) ^ n / 3) for n > 1. ●

► [A052707] 0,2,8,64,640,7168,86016,1081344,14057472,187432960,2549088256,35223764992,493132709888,6979724509184,99710350131200,1435829041889280,20819521107394560,303720072625520640,4454561065174302720 ⋆ Odd powers of 2 multiplied by Catalan numbers. ● a(n) = 16 ^ n * (Gamma(n - 1 / 2) / (8 * Gamma(n + 1) * Pi ^ (1 / 2))), n>0. ●

► [A231280] 0,2,8,66,400,2722,17688,117026,768800,5064642,33328168,219415586,1444225200,9506897762,62579419448,411934939746,2711589889600,17849253534082,117494042259528,773413479117506,5091052634882000 ⋆ Number of n X 3 0..3 arrays x(i,j) with each element horizontally or antidiagonally next to at least one element with value (x(i,j) + 1) mod 4, and upper left element zero. ● a(n) = ((2 - sqrt(21)) ^ n * (2 + sqrt(21)) + (- 2 + sqrt(21)) * (2 + sqrt(21)) ^ n) / (17 * sqrt(21)). ●

► [A086594] 2,8,66,536,4354,35368,287298,2333752,18957314,153992264,1250895426,10161155672,82540140802,670482282088,5446398397506,44241669462136,35937975409459 4,2919279702218888,23713617371845698,192628218676984472,1564739366787721474 ⋆ a(n) = 8 * a(n - 1) + a(n - 2), starting with a(0)=2 and a(1)=8. ● a(n) = (4 + sqrt(17)) ^ n + (4 - sqrt(17)) ^ n. ●

► [A026739] 1,1,2,8,72,384,3840,80640,645120,10321920,309657600,3715891200,102187008000,3310859059200,51011754393600,1428329123020800,68559797904998400,1942527607308288000 ⋆ Number of subgroups L of Z ^ n with the property that for every a in Z ^ n there exists precisely one b in L with d(a,b) <= 1. Here d denotes Euclidean distance. ● a(n) = 2 ^ n * n! * sum(1 / |Aut(G)|), where the sum is over all isomorphism classes of Abelian groups of order 2 * n + 1. ●

► [A060635] 2,8,72,450,3200,21632,149058,1019592,6993800,47922050,328499712,2251473408,15432082562,105772401800,724976569800,4969058770242,34058447431808,233440040239232,1600021920672450,10966713178192200 ⋆ a(n) is the number of 2 X 1 domino tilings of the set S in the plane R ^ 2 consisting of the union of the following two rectangles: rectangle1: |x| <= n, |y| <= 1, rectangle2: |x| <= 1, |y| <= n. ● a(n) = 2 * F(n) ^ 2 * F(n + 1) ^ 2 where F(n) is the n - th Fibonacci number - sequence A000045. ●

► [A120378] 2,8,248,2474,2900,6600,24746,105704 ⋆ Integers n such that 2 * 11 ^ n - 1 is prime. ● a(n) = n - th integer k such that 2 * 11 ^ k - 1 is prime. ●

► [A296406] 1,1,1,2,8,278,145058,447905202 ⋆ Number of non - isomorphic arrangements of n pairwise intersecting pseudo - circles on a sphere, reduced for mirror symmetry. ● a(n) = 2 ^ (\ Theta(n ^ 2)). (cf. Arrangements of Pseudocircles: On Circularizability) ●

► [A281899] 0,1,2,9,10,11,18,19,20,27,28,29,36,37,38,45,46,47,54,55,56,63,64,65,72 ⋆ a(n) = n + 6 * floor(n / 3). ● a(n) = a(n - 1) + a(n - 3) - a(n - 4). ● a(n) = 3 * n - 2 * (n mod 3). In general, n + 3 * h * floor(n / 3) = (h + 1) * n - h * (n mod 3). ● a(n) + a(n + s) = a(2 * n + s - 1) + 1, where s is nonnegative and not divisible by 3. Example: for s=14, a(n) + a(n + 14) = a(2 * n + 13) + 1; for n=3, a(3) + a(17) = a(19) + 1 = 9 + 47 = 55 + 1 = 56. ● a(6 * k + r) = 18 * k + a(r), where 0 <= r <= 5. ●

► [A031443] 2,9,10,12,35,37,38,41,42,44,49,50,52,56,135,139,141,142,147,149,150,153,154,156,163 ⋆ Digitally balanced numbers: positive numbers that in base 2 have the same number of 0's as 1's. ● a(n + 1) = a(n) + 2 ^ k + 2 ^ (m - 1) - 1 + floor((2 ^ (k + m) - 2 ^ k) / a(n)) * (2 ^ (2 * m) + 2 ^ (m - 1)) where k is the largest integer such that 2 ^ k divides a(n) and m is the largest integer such that 2 ^ m divides a(n) / 2 ^ k + 1. - Ulrich Schimke (UlrSchimke(AT)aol.com) ●

► [A047468] 1,2,9,10,17,18,25,26,33,34,41,42,49,50,57,58,65,66,73,74,81,82,89,90,97 ⋆ Numbers that are congruent to { 1, 2 } mod 8. ● a(n) = 8 * n - a(n - 1) - 13 (with a(1)=1). - _ Vincenzo Librandi _ , Aug 06 2010 ● a(n) = 1 + 8 * floor((n - 1) / 2) + ((n - 1) mod 2). - _ Alois P. Heinz _ , May 13 2012 ● a(n) = (- 3 * (3 + (- 1) ^ n) + 8 * n) / 2. - _ Colin Barker _ , May 14 2012 ● a(1)=1, a(2)=2, a(3)=9, a(n) = a(n - 1) + a(n - 2) - a(n - 3). - _ Harvey P. Dale _ , Mar 26 2013 ●

► [A320919] 1,2,9,10,18,20,28,29,36,37,38,45,46,54,56,64,65,72,73,74,81,82,90,92,100 ⋆ Positive integers k such that binomial(k, 3) is divisible by 6. ● a(n) = a(n - 1) + a(n - 9) - a(n - 10) for n>10. ●

► [A081346] 1,2,9,10,25,26,49,50,81,82,121,122,169,170,225,226,289,290,361,362,441,442,529,530,625 ⋆ First column in maze arrangement of natural numbers A081344. ● a(n) = n ^ 2 + n + 1 + n * (- 1) ^ n. ●

► [A179888] 2,9,10,37,38,41,42,149,150,153,154,165,166,169,170,597,598,601,602,613,614,617,618,661,662 ⋆ Starting with a(1)=2: if m is a term then also 4 * m + 1 and 4 * m + 2. ● a(2n) = 4 * a(floor(n / 2)) + n mod 2 + 1 for n>1; ● a(n) = SUM((bit(k) + 1) * 4 ^ k: 0<=k<=L), where bit() and L such that n=SUM(bit(k) * 2 ^ k: 0<=k<=L). ●

► [A072065] 0,2,9,11,12,14,21,23,24,26,33,35,36,38,45,47,48,50,57,59,60,62,69,71,72 ⋆ Define a "piece" to consist of 3 mutually touching pennies welded together to form a triangle; sequence gives side lengths of triangles that can be made from such pieces. ● a(1)=0, a(2)=2, a(3)=9, a(4)=11, a(5)=12, a(n) = a(n - 1) + a(n - 4) - a(n - 5). - _ Harvey P. Dale _ , Jan 30 2015 ● a(n) = (3 / 4 + (3 * i) / 4) * (i ^ n - i * (- i) ^ n) - (- 1) ^ n / 2 + 3 * (n + 1) - 5 where i = sqrt(- 1). ●

► [A043307] 1,2,9,11,18,19,82,83,99,100,163,164,171,173,738,740,747,748,892,893,900,902,1467,1469,1476 ⋆ a(n) = A033001(n) / 4. ● a(4k + 5) = 9 * a(2k + 2) . ●

► [A022114] 2,9,11,20,31,51,82,133,215,348,563,911,1474,2385,3859,6244,10103,16347,26450,42797,69247,112044,181291,293335,474626 ⋆ Fibonacci sequence beginning 2 9. ● a(n) = 10 * F(n) + F(n - 3). - _ J. M. Bergot _ , Jul 17 2017 ● a(n) = Fibonacci(n + 5) - Lucas(n - 2). - _ Greg Dresden _ and Christina Savory, Mar 01 2022 ●

► [A041099] 1,1,2,9,11,20,291,311,602,2719,3321,6040,87881,93921,181802,821129,1002931,1824060,26539771,28363831,54903602,247978239,302881841,550860080,8014922961 ⋆ Denominators of continued fraction convergents to sqrt(57). ● a(n) = 302 * a(n - 6) - a(n - 12). G.f.: - (x ^ 4 - x ^ 3 + 2 * x ^ 2 + x + 1) * (x ^ 6 - 10 * x ^ 3 - 1) / (x ^ 12 - 302 * x ^ 6 + 1). [_ Colin Barker _ , Jul 18 2012] ●

► [A041581] 1,1,2,9,11,20,691,711,1402,6319,7721,14040,485081,499121,984202,4435929,5420131,9856060,340526171,350382231,690908402,3114015839,3804924241,6918940080,239048886961 ⋆ Denominators of continued fraction convergents to sqrt(308). ● a(n) = 702 * a(n - 6) - a(n - 12) for n>11. - _ Vincenzo Librandi _ , Dec 20 2013 ●

► [A041651] 1,1,2,9,11,42,53,254,307,561,20503,21064,41567,187332,228899,874029,1102928,5285741,6388669,11674410,426667429,438341839,865009268,3898378911,4763388179 ⋆ Denominators of continued fraction convergents to sqrt(344). ● a(n) = 20810 * a(n - 10) - a(n - 20) for n>19. - _ Vincenzo Librandi _ , Dec 22 2013 ●

► [A042687] 1,1,2,9,11,75,86,161,569,3575,11294,14869,26163,171847,198010,963887,1161897,2125784,124457369,126583153,251040522,1130745241,1381785763,9421459819,10803245582 ⋆ Denominators of continued fraction convergents to sqrt(873). ● a(n) = 125619266 * a(n - 18) - a(n - 36) for n>35. - _ Vincenzo Librandi _ , Jan 26 2014 ●

► [A041335] 1,2,9,11,97,593,690,1283,1973,3256,8485,20226,28711,48937,77648,126585,837158,6823849,7661007,37467877,82596761,2184983663,4452564087,1999524001 1,24447804098 ⋆ Denominators of continued fraction convergents to sqrt(181). ● a(n) = 2222451540 * a(n - 21) + a(n - 42) for n>41. [_ Bruno Berselli _ , Dec 16 2013] ●

► [A178312] 0,1,2,9,12,30,36,70,80,135,150,231,252,364,392,540,576,765,810,1045,1100,1386,1452,1794,1872 ⋆ a(n) = n * T(ceiling(n / 2)), where T are the triangular numbers, A000217. ● a(n) = (n, n, n, n, n, ...) * (1, 0, 2, 0, 3, ...) using l

ength n vectors. • a(n) = n * (2 * n * (n + 3) - (2 * n + 3) * (- 1) ^ n + 3) / 16. - _ Bruno Berselli _ , Feb 14 2011 •

► [A253608] 2,9,12,35,42,49,56,135,150,165,180,195,210,225,240,527,558,589,620,651,682,713,744,775,806 ⋆ The binary representation of a(n) is the concatenation of n and the binary complement of n, A035327(n). • a(n) = (n + 1) * (2 ^ BL(n) - 1), where BL(n) is the binary length of n. •

► [A129345] 2,9,12,53,70,309,408,1801,2378,10497,13860,61181,80782,356589,470832,2078353,2744210,12113529,15994428,70602821,93222358,411503397,543339720,2398417561,3166815962 ⋆ a(2n) = A001542(n + 1), a(2n + 1) = A038761(n + 1); a Pellian - related sequence. • a(n) = ((- 1 - sqrt(2)) ^ (1 + n) - (- 1 + sqrt(2)) ^ (1 + n) + (1 - sqrt(2)) ^ n * (- 4 + 3 * sqrt(2)) + (1 + sqrt(2)) ^ n * (4 + 3 * sqrt(2))) / (2 * sqrt(2)). • a(n) = 6 * a(n - 2) - a(n - 4) for n>3. •

► [A144472] 1,2,9,13,31,57,119,233,471,937,1879,3753,7511,15017,30039,60073,120151,240297,480599,961193,1922391,3844777,7689559,15379113,30758231 ⋆ Negative values along the main diagonal of the array defined by A020806 and its differences. • a(n) = 11 * 2 ^ (n - 2) / 3 - 5 * (- 1) ^ n / 3, n>1. - _ R. J. Mathar _ , Oct 24 2008 • a(n) = (11 * 2 ^ n - 20) / 12 for n>1 and even. • a(n) = (11 * 2 ^ n + 20) / 12 for n>1 and odd. • a(n) = a(n - 1) + 2 * a(n - 2) for n>3. •

► [A324275] 2,9,14,27,34,53,64,89,102,133,150,187,206,249,272,321,346,401,430,491,522,589,624,697,734 ⋆ Numbers k for which A324274(k) is 0, i.e., starting squares in A324274 that yield a path of infinite length. • a(n) = (5 + 7 * (- 1) ^ n + (2 - 2 * i) * (- i) ^ n + (2 + 2 * i) * i ^ n + (26 + 6 * (- 1) ^ n) * n + 18 * n ^ 2) / 16 where i=sqrt(- 1). • a(n) = a(n - 1) + a(n - 2) - a(n - 3) + a(n - 4) - a(n - 5) - a(n - 6) + a(n - 7) for n>7. •

► [A319967] 2,9,15,22,26,33,39,46,53,59,66,70,77,83,90,96,103,107,114,120,127,134,140,147,151 ⋆ a(n) = A003145(A003144(n)) where A003144 and A003145 are positions of '1' and '2' in the tribonacci word A092782. • a(n + 1) = B(A(n)) = B(A(n) + 1) - 2 = A(n) + B(n) + n + 1, for n >= 0, where B = A278039 and A = A278040. For a proof see the W. Lang link in A278040, Proposition 9, eq. (51). - _ Wolfdieter Lang _ , Dec 13 2018 •

► [A063094] 2,9,15,23,29,37,43,51,57,65,71,79,85,93,99,107,113,121,127,135,141,149,155,163,169 ⋆ Dimension of the space of weight 2n cusp forms for Gamma _ 0(26). • a(n) = ((- 1) ^ n + 14 * n - 11) / 2 for n>1. • a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n>4. •

► [A017005] 2,9,16,23,30,37,44,51,58,65,72,79,86,93,100,107,114,121,128,135,142,149,156,163,170 ⋆ a(n) = 7n + 2. • a(n) = 2 * a(n - 1) - a(n - 2). - _ Wesley Ivan Hurt _ , Mar 22 2021 •

► [A131189] 2,9,16,23,30,37,51,58,65,72,79,86,100,107,114,121,128,135,149,156,163,170,177,184,198 ⋆ Numbers n>=0 such that d(n) = (n ^ 1 + 1) (n ^ 2 + 2) ... (n ^ 14 + 14) / 14!, e(n) = (n ^ 1 + 1) (n ^ 2 + 2) ... (n ^ 15 + 15) / 15!, and f(n) = (n ^ 1 + 1) (n ^ 2 + 2) ... (n ^ 16 + 16) / 16! take nonintegral values. • a(n) = 7 * [(7n + 1) / 6] - 5, if n mod 6 = 5; a(n) = 7 * [(7n + 1) / 6] + 2, otherwise. For e(n) and g(n), proof is similar; see also the comments. - _ Max Alekseyev _ •

► [A085960] 1,2,9,16,25,34,49,64,81,100,121,144,169,196,225,256,289,324,361,400,441,484,529,576,625 ⋆ Size of the largest code of length 4 and minimum distance 3 over an alphabet of size n. This is usually denoted by A _{ n } (4,3). • a(n) = 2 if n = 2, a(n) = 34 if n = 6, otherwise a(n) = n ^ 2. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>9. •

► [A248434] 2,9,16,29,42,61,80,105,130,161,192,229,266,309,352,401,450,505,560,621,682,749,816,889,962 ⋆ Number of length three 0..n arrays with the sum of two elements equal to twice the third. • a(n) = a(n - 1) + 1 + 6 * floor(n / 2) • a(n) = (1 + 3 * (- 1) ^ n + 4 * n + 6 * n ^ 2) / 4 for n>0. •

► [A213389] 0,1,2,9,16,35,54,91,128,189,250,341,432,559,686,855,1024,1241,1458,1729,2000,2331,2662,3059,3456 ⋆ Number of (w,x,y) with all terms in { 0,...,n } and max(w,x,y) < 2 * min(w,x,y). • a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + a(n - 4) + 2 * a(n - 5) - a(n - 6). • a(n) = n * ceiling(n ^ 2 / 4). - _ Wesley Ivan Hurt _ , Jun 15 2013 • a(n) = n * (2 * n ^ 2 + 3 * (1 - (- 1) ^ n)) / 8. - _ Luce ETIENNE _ , Jul 17 2016 •

► [A078707] 1,1,2,9,16,125,216,2401,4096,59049,100000,1771561,2985984,62748517,105413504,2562890625,4294967296,118587876497,198359290368,6131066257801,10240000000000,350277500542221,584318301411328,21914624432020321,36520347436056576 ⋆ Number of vectors of length n that are symmetric about the middle, where each element is drawn from a set of n distinct elements. • a(n) = n ^ (floor((n + 1) / 2)) = n ^ ceiling(n / 2). •

► [A083707] 0,1,2,9,17,37,63,108,165,252,358,506,684,917,1192,1539,1941,2433,2997,3670,4433,5328,6332,7492,8784 ⋆ G.f.: (x + 4 * x ^ 3 + x ^ 5) / ((1 - x) ^ 2 * (1 - x ^ 2) ^ 2 * (1 - x ^ 3)). • a(0)=0, a(1)=1, a(2)=2, a(3)=9, a(4)=17, a(5)=37, a(6)=63, a(7)=108, a(8)=165, a(n)=2 * a(n - 1) + a(n - 2) - 3 * a(n - 3) - a(n - 4) + a(n - 5) + 3 * a(n - 6) - a(n - 7) - 2 * a(n - 8) + a(n - 9). - _ Harvey P. Dale _ , May 01 2015 •

► [A028881] 2,9,18,29,42,57,74,93,114,137,162,189,218,249,282,317,354,393,434,477,522,569,618,669,722 ⋆ a(n) = n ^ 2 - 7. • a(n) = a(n - 1) + 2 * n - 1, with a(3)=2. - _ Vincenzo Librandi _ , Aug 05 2010 •

► [A083423] 1,2,9,18,81,162,729,1458,6561,13122,59049,118098,531441,1062882,4782969,9565938,43046721,86093442,387420489,774840978,3486784401,6973568802,31381059609,62762119218,282429536481 ⋆ a(n) = (5 * 3 ^ n + (- 3) ^ n) / 6. • a(n + 3) = a(n + 2) * a(n + 1) / a(n). (End) • a(n) = 9 * a(n - 2). - _ Vincenzo Librandi _ , Mar 20 2011 •

► [A297470] 1,2,9,18,225,450,11025,22050,893025,1786050,108056025,216112050,18261468225,36522936450,4108830350625,8217660701250,1187451971330625,2374903942661250,428670161650355625,857340323300711250,189043541287806830625,378087082575613661250 ⋆ Number of maximal matchings in the n - barbell graph. • a(2n) = 2 * (2 * n - 1)!! ^ 2, a(2n - 1) = (2 * n - 1)!! ^ 2. - _ Andrew Howroyd _ , Dec 30 2017 •

► [A047883] 0,2,9,20,27,32,39,46,53,60,67,74,81,88,95,102,109,116,123,130,137,144,151,158,165 ⋆ Squares on unbounded chessboard for which the least number of knight's moves from corner (0,0) is n. • a(n)=7 + a(n - 1) for n >= 6. •

► [A248121] 2,9,20,34,53,76,102,133,168,206,249,296,346,401,460,522,589,660,734,813,896,982,1073,1168,1266 ⋆ a(n) = floor(1 / (1 / n - Pi ^ 2 / 6 + Sum _{ h =1..n } 1 / h ^ 2)). • a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) - 2 * a(n - 4) + a(n - 5) for n > 5. •

► [A173102] 2,9,20,36,56,81,110,144,182,225,272,324,380,441,506,576,650,729,812,900,992,1089,1190,1296,1406 ⋆ Number of partitions x + y = z with { x,y,z } in { 1,2,3,...,3n } and z > y >= x. • a(n) = (- 1 + (- 1) ^ n + 18 * n ^ 2) / 8. • a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4). • a(n) = (9 * n ^ 2 - 1) / 4 if n is odd and a(n) = 9n ^ 2 / 4 if n is even. •

► [A373732] 0,2,9,20,36,57,83,113,147,187,230,279,332,390,452,519,591,667,748,833,923,1018,1117,1221,1330 ⋆ a(n) = floor(4 * n ^ 2 / sqrt(3)). • a(n) = floor(4 * n ^ 2 / sqrt(3)). •

► [A041285] 1,2,9,20,489,998,4481,9960,243521,497002,2231529,4960060,121272969,247505998,1111296961,2470099920,60393695041,123257490002,5534236550049,1230104800100,30075938857449,61381982514998,2756038689174413,6125897203498801,497777515731456 1 ⋆ Denominators of continued fraction convergents to sqrt(155). • a(n) = 498 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Dec 14 2013 •

► [A005476] 0,2,9,21,38,60,87,119,156,198,245,297,354,416,483,555,632,714,801,893,990,1092,1199,1311,1428 ⋆ a(n) = n * (5 * n - 1) / 2. • a(n) = C(5 * n,2) / 5 for n>=0. - _ Zerinvary Lajos _ , Jan 02 2007 • a(n) = a(n - 1) + 5 * n - 3 for n>0, a(0)=0. - _ Vincenzo Librandi _ , Nov 18 2010 •

► [A131476] 0,0,2,9,21,41,72,114,170,243,333,443,576,732,914,1125,1365,1637,1944,2286,2666,3087,3549,4055,4608 ⋆ a(n) = floor(n ^ 3 / 3). • a(n) = (3 * n ^ 3 + 3 * cos(2 * Pi * n / 3) + sqrt(3) * sin(2 * Pi * n / 3) - 3) / 9. - _ Vladimir Reshetnikov _ , Oct 09 2016 • a(n) = (n - 1) * n * (n + 1) / 3 + floor(n / 3). - _ Bruno Berselli _ , Jun 08 2017 •

► [A192971] 1,2,9,21,44,83,149,258,437,729,1204,1975,3225,5250,8529,13837,22428,36331,58829,95234,154141,249457,403684,653231,1057009 ⋆ Constant term of the reduction by x ^ 2 - > x + 1 of the polynomial p(n,x) defined at Comments. • a(n) = 3 * a(n - 1) - 2 * a(n - 2) - a(n - 3) + a(n - 4). • a(n) = 4 * Fibonacci(n + 3) + Lucas(n + 2) - 2 * (2 * n + 5). - _ G. C. Greubel _ , Jul 24 2019 •

► [A343850] 2,9,22,39,62,89,122,159,201,248,301,358,420,488,560,637,719,806,898,995,1098,1205,1317,1434,1556 ⋆ Integer part of the area of an irregular hexagon, formed by the regular overlap of two regular pentagons each of side length n. • a(n) = floor(2 * n ^ 2 * cos(Pi / 10) * (1 + sin(Pi / 10))). •

► [A056105] 1,2,9,22,41,66,97,134,177,226,281,342,409,482,561,646,737,834,937,1046,1161,1282,1409,1542,1681 ⋆ First spoke of a hexagonal spiral. • a(n) = 3 * n ^ 2 - 2 * n + 1. • a(n) = a(n - 1) + 6 * n - 5. • a(n) = 2 * a(n - 1) - a(n - 2) + 6. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). •

► [A212069] 0,1,2,9,22,41,72,115,170,243,334,443,576,733,914,1125,1366,1637,1944,2287,2666,3087,3550,4055,4608 ⋆ Number of (w,x,y,z) with all terms in { 1,...,n } and 3 * w = x + y + z. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + 2 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) - a(n - 6). •

► [A106058] 0,0,0,2,9,22,42,70,107,154,212,282,365,462,574,702,847,1010,1192,1394,1617,1862,2130,2422,2739 ⋆ 4th diagonal of triangle in A059317. • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n >= 6. •

► [A166754] 1,2,9,22,53,114,241,494,1005,2026,4073,8166,16357,32738,65505,131038,262109,524250,1048537,2097110,4194261,8388562,16777169,33554382,67108813 ⋆ a(n) = 4 * A061547(n + 1) - 3 * A166753(n). • a(n) = (2 ^ (n + 3) + (- 1) ^ n - (4 * n + 7)) / 2. • a(n) = 3 * a(n - 1) - a(n - 2) - 3 * a(n - 3) + 2 * a(n - 4). •

► [A091002] 0,0,1,2,9,22,77,210,673,1934,5973,17578,53417,158886,479389,1432706,4309041,12905278,38759525,116191194,348748345,1045895510,3138385581,9413758642,28244072129 ⋆ Number of walks of length n between non - adjacent nodes on the Petersen graph. • a(n) = (3 ^ (n + 1) - (- 2) ^ (n + 1) - 5) / 30. • a(n) = Sum _{ k=1..n } binomial(n - k, k) * 6 ^ (k - 1). - _ Zerinvary Lajos _ , Sep 30 2006 •

► [A254710] 1,2,9,22,119,300,1651,4172,22989,58102,320189,809250,4459651,11271392,62114919,156990232,865149209,2186591850,12049974001,30455295662,167834486799,424187547412,2337632841179,5908170368100,32559025289701 ⋆ Indices of centered square numbers (A001844) which are also pentagonal numbers (A000326). • a(n) = a(n - 1) + 14 * a(n - 2) - 14 * a(n - 3) - a(n - 4) + a(n - 5). •

► [A209294] 2,9,23,44,72,107,149,198,254,317,387,464,548,639,737,842,954,1073,1199,1332,1472,1619,1773,1934,2102 ⋆ a(n) = (7 * n ^ 2 - 7 * n + 4) / 2. • a(n) = (7 * n ^ 2 - 7 * n + 4) = 7 * T(n) + 2 with T = A000217. • a(n) = a(- n + 1) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Bruno Berselli _ , Jan 18 2013 •

► [A101986] 0,2,9,23,46,80,127,189,268,366,485,627,794,988,1211,1465,1752,2074,2433,2831,3270,3752,4279,4853,5476 ⋆ Maximum sum of products of successive pairs in a permutation of order n + 1. • a(n) = n * (2 * n ^ 2 + 9 * n + 1) / 6. • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>3, a(0)=0, a(1)=2, a(2)=9, a(3)=23. - _ L. Edson Jeffery _ , Jan 17 2012 •

► [A154118] 1,2,9,23,51,107,219,443,891,1787,3579,7163,14331,28667,57339,114683,229371,458747,917499,1835003,3670011,7340027,14680059,29360123,58720251 ⋆ Expansion of (1 - x + 5x ^ 2) / ((1 - x) * (1 - 2x)). • a(n) = 7 * 2 ^ (n - 1) - 5, n>=1, with a(0)=1. • a(n) = 2 * a(n - 1) + 5, n>1, with a(0)=1, a(1)=2. • a(n) = 3 * a(n - 1) - 2 * a(n - 2), n>2, with a(0)=1, a(1)=2, a(2)=9. •

► [A133469] 1,2,9,23,86,247,849,2578,8521,26567,86214,272183,875681,2780962,8910729,28377463,90752566,289394807,924662769,2950426418,9423065801,30076050727,96037511334,306569866423,978832445761 ⋆ a(n) = a(n - 1) + 7 * a(n - 2) for n >= 2, a(0)=1, a(1)=2. • a(n) = ((29 + 3 * sqrt(29)) / 58) * (0.5 + 0.5 * sqrt(29)) ^ n + ((29 - 3 * sqrt(29)) / 58) * (0.5 - 0.5 * sqrt(29)) ^ n. - _ Richard Choulet _ , Nov 20 2008 •

► [A204556] 1,2,9,24,45,90,133,224,297,450,561,792,949,1274,1485,1920,2193,2754,3097,3800,4221,5082,5589,6624,7225 ⋆ Left edge of the triangle A045975. • a(n) = n * (2 * n ^ 2 - 3 * n + (- 1) ^ n * (n - 3) + 3) / 4. • a(n) = (n ^ 3 - n ^ 2) / 2 for n even. • a(n) = (n ^ 3 - 2 * n ^ 2 + 3 * n) / 2 for n odd. •

► [A185669] 2,9,24,47,78,117,164,219,282,353,432,519,614,717,828,947,1074,1209,1352,1503,1662,1829,2004,2187,2378 ⋆ a(n) = 4 * n ^ 2 + 3 * n + 2. • a(n) = a(n - 1) + 8 * n - 1. • a(n) = 2 * a(n - 1) - a(n - 2) + 8. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). •

► [A360518] 2,9,24,47,497,4997,49997,499997,4999997,49999997,499999997,4999999997,49999999997,499999999997,4999999999997,49999999999997,499999999999997,4999999999999997,49999999999999997,499999999999999997,4999999999999999997,49999999999999999997,499999999999999999997 ⋆ Numbers j such that there exists a number i < = j with the property that i + j and i * j have the same decimal digits in revers e order. • a(n) = (10 ^ n - 600) / 200 for n > 3. •
► [A006002] 0,2,9,24,50,90,147,224,324,450,605,792,1014,1274,1575,1920,2312,2754,3249,3800,4410,5082,5819,6624,7500 ⋆ a(n) = n * (n + 1) ^ 2 / 2. • a(n) = (n + 1) * binomial(n + 1, 2). - _ Zerinvary Lajos _ , Jan 10 2006 • a(n) = 2 * b inomial(n + 1, 2) + 3 * binomial(n + 1, 3). - _ Gary Detlefs _ , Jun 06 2010 • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Harvey P. Dale _ , Aug 14 2012 • a(n) = Sum _{ j=1..n } Sum _{ i=1..j } (2 * j - i + 1). - _ W esley Ivan Hurt _ , Nov 17 2014 • a(n) = Sum _{ i=0..n } n * (n - i) + i. - _ Bruno Berselli _ , Jan 13 2016 •
► [A356114] 0,0,0,2,9,24,55,118,245,500,1011,2034,4081,8176,16367,32750,65517,131052,262123,524266,1048553,2097128,4194279,8388582,16777189 ⋆ Number of irreducible permutations of n with partition type [2, 1, 1, ..., 1] (with '1' take n n - 2 times). • a(n) = 2 ^ n - n - 3 for n >= 3. • a(n) = Eulerian1(n, n - 2) - 2 for n >= 3. •
► [A122006] 0,1,2,9,24,81,234,729,2160,6561,19602,59049,176904,531441,1593594,4782969,14346720,43046721,129133602,387420489,1162241784,3486784401,10460294154,31381059609,94143001680 ⋆ Expansion of x ^ 2 * (1 - x) / ((1 - 3 * x) * (1 - 3 * x ^ 2)). • a(n) = 3 * a(n - 1) + 3 * a(n - 2) - 9 * a(n - 3). - _ Philippe Deléham _ , Mar 09 2009 • a(n) = 3 ^ (n - 2) for n even. • a(n) = 3 ^ (n - 2) - 3 ^ ((n - 3) / 2) for n odd. (End) •
► [A363660] 2,9,24,90,258,1043,3440,13419,48850,187836,705444,2725099,10400614,40233015,155133856,601820876,2333606238,9079958260,35345263820,137876637843,538259060526,2104292500739,8233430727624,32248866496625,126410606580284 ⋆ a(n) = Sum _{ d|n } binomial(d + n,n). • a(n) = [x ^ n] Sum _{ k>0 } (1 / (1 - x ^ k) ^ (n + 1) - 1). • a(n) = [x ^ n] Sum _{ k>0 } binomial(k + n,n) * x ^ k / (1 - x ^ k). •
► [A213720] 0,0,1,2,9,24,97,314,1285,4740,20161,81782,364037,1590768,7415361,34458418,167934917,822644860,4181343201,21456885262,113446435685,606954796712,3329669253153,18503539170954,105074939752933 ⋆ a(0)=0, a(1)=0; for n>1, a(n) = a(n - 1) + (n + 2) * a(n - 2) + 1. • a(n) = 2 * a(n - 1) + (n + 1) * a(n - 2) - (n + 1) * a(n - 3) with a(0)=a(1)=0, a(2)=1. - _ Vincenzo Librandi _ , Dec 24 2012 •
► [A073981] 0,2,9,24,126,972,7056,46656,297432,1806624,10478160,60466176,356638464,2142770112,12958657344,78328332288,471877757568,2832129868032,16960580969472,101559956668416,608764662139392,3652649829734400,21926486787222528,131621703842267136 ⋆ Number of strings of length n over Z _ 6 with tra ce 1 and subtrace 4. • a(n; t, s) = a(n - 1; t, s) + a(n - 1; t + 5, s + 5t + 1) + a (n - 1; t + 4, s + 4t + 4) + a(n - 1; t + 3, s + 3t + 3) + a(n - 1; t + 2, s + 2t + 2) + a(n - 1; t + 1, s + t + 1) where t is the trace and s is the subtrace. •
► [A005582] 0,2,9,25,55,105,182,294,450,660,935,1287,1729,2275,2940,3740,4692,5814,7125,8645,10395,12397,14674,17250,20150 ⋆ a(n) = n * (n + 1) * (n + 2) * (n + 7) / 24. • a(n) = binomial(n + 3, n - 1) + binomial(n + 2, n - 1). • a(n) = binomial(n,4) + 2 * binomial(n,3), n>=2. - _ Zerinvary Lajos _ , Jul 26 2006 • a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). • a(n) = Sum _{ k=1..n } (Sum _{ i=1..k } i(n - k + 2)). - _ Wesley Ivan Hu rt _ , Sep 26 2013 •
► [A116454] 0,2,9,25,59,129,271,557,1131,2281,4583,9189,18403,36833,73695,147421,294875,589785,1179607,2359253,4718547,9437137,18874319,37748685,75497419 ⋆ Smallest m such that A116452(m) = n. • a(n + 1) = (a(n) + n) * 2 + 1 fo r n>1. • a(0)=0, a(1)=2, a(2)=9, a(3)=25, a(n)=4 * a(n - 1) - 5 * a(n - 2) + 2 * a(n - 3) [From Harvey P. Dale, Jul 18 2011] •
► [A295143] 1,2,9,25,65,162,397,966,2340,5658,13669,33010,79704,192434,464589,1121630,2707868,6537386,15782661,38102730,91988144,222079042 ⋆ Solution o f the complementary equation a(n) = 2 * a(n - 1) + a(n - 2) + b(n - 1), where a (0) = 1, a(1) = 2, b(0) = 3, b(1) = 4, and (a(n)) and (b(n)) are increasing comp lementary sequences. • a(n + 1) / a(n) - > 1 + sqrt(2). •
► [A093122] 0,1,2,9,25,88,273,903,2890,9405,30349,98352,318045,1029587,3331210,10781001,34886465,112897544,365339961,1182271695,3825900650,12380892261,40065380357,129654340704,419570185125 ⋆ a(n) = Jacobsthal(n) * Fibonacci(n + 1). • a(n) = (2 ^ n / 3 - (- 1) ^ n / 3) * (((1 + sqrt(5)) / 2) ^ (n + 1) / sq rt(5) - ((1 - sqrt(5)) / 2) ^ (n + 1) / sqrt(5)). • a(n) = a(n - 1) + 7 * a(n - 2) + 2 * a(n - 3) - 4 * a(n - 4). - _ Wesley Ivan Hurt _ , Sep 04 2022 •
► [A221574] 2,9,26,59,114,197,314,471,674,929,1242,1619,2066,2589,3194,3887,4674,5561,6554,7659,8882,10229,11706,13319,15074 ⋆ Number of 0..n arrays of len gth 3 with each element differing from at least one neighbor by something othe r than 1. • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>3. •
► [A082289] 2,9,26,59,116,206,340,530,790,1135,1582,2149,2856,3724,4776,6036,7530,9285,11330,13695,16412,19514,23036,27014,31486 ⋆ Expansion of x ^ 4 * (2 + x) / ((1 + x) * (1 - x) ^ 5). • a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 5 * a(n - 4) - 4 * a(n - 5) + a(n - 6); a(4)=2, a(5)=9, a(6)=26, a(7)=59, a(8)=116, a(9)=206 . - _ Harvey P. Dale _ , Aug 26 2013 •
► [A213387] 0,2,9,26,63,140,297,614,1251,2528,5085,10202,20439,40916,81873,163790,327627,655304,1310661,2621378,5242815,10485692,20971449,41942966,83886003 ⋆ a(n) = 5 * 2 ^ (n - 1) - 2 - 3 * n. • a(1)=0, a(2)=2, a(3)=9, a(n)=4 * a(n - 1) - 5 * a(n - 2) + 2 * a(n - 3). - _ Harvey P. Dale _ , Sep 28 2012 •
► [A153977] 2,9,27,65,135,252,434,702,1080,1595,2277,3159,4277,5670,7380,9452,11934,14877,18335,22365,27027,32384,38502,45450,53300 ⋆ One - fourth of par tial sums of A153976. • a(0)=2, a(1)=9, a(2)=27, a(3)=65, a(4)=135; for n>4, a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ H arvey P. Dale _ , Aug 02 2011 •
► [A051746] 2,9,27,66,141,273,490,828,1332,2057,3069,4446,6279,8673,11748,15640,20502,26505,33839,42714,53361,66033,81006,98580,119080 ⋆ a(n) = n(n + 7)(n + 1)(n ^ 2 + 2n + 12) / 120. • a(n) = binomial(n + 4, n - 1) + binomial(n + 1, n - 1). •
► [A256233] 1,2,9,27,74,197,519,1362,3569,9347,24474,64077,167759,439202,1149849,3010347,7881194,20633237,54018519,141422322,370248449,969323027,2537720634,6643838877,17393795999 ⋆ a(n) = L(2 * n + 1) - 2, where L is A000032. • a(n) = 4 * a(n - 1) - 4 * a(n - 2) + a(n - 3). • a(n) = (- 2 + (2 ^ (- 1 - n) * ((3 - sqrt(5)) ^ n * (- 5 + sqrt(5)) + (3 + sqrt(5)) ^ n * (5 + sqrt(5)))) / sqrt(5)). - _ Colin Barker _ , Nov 03 2016 •
► [A248658] 1,1,1,2,9,28,66,153,433,1345,3952,10991,30954,90988,271845,804153,2361457,6979690,20842285,62493914,187274712,561448399,1688263179,5093148285,15393417178 ⋆ G.f.: Sum _{ n>=0 } x ^ n * Sum _{ k=0..n } binomial(n, k) ^ 3 * x ^ (2 * k). • a(n) = Sum _{ k=0..[n / 3] } C(n - 2 * k,k) ^ 3. •
► [A121643] 1,1,1,2,9,28,66,153,433,1352,4104,12188,37506,124155,422307,1437135,5058945,18255295,65336580,232233723,832793160,3003712770,10788778026,38582183151,137946936834 ⋆ a(n) = sum of cubes of the coefficients of x ^ n in x ^ (n - 3k) * A(x ^ 3) ^ (n - 3k + 1), as k varies from 0 to floor(n / 3) for n>0, with a(0)=1. • a(n) = Sum _{ k=0..[n / 3] } { [x ^ n] x ^ (n - 3k) * A(x ^ 3) ^ (n - 3k + 1) }^ 3 for n>0, with a(0)=1. •
► [A131066] 1,2,9,28,71,162,349,728,1491,3022,6089,12228,24511,49082,98229,196528,393131,786342,1572769,3145628,6291351,12582802,25165709,50331528,100663171 ⋆ Binomial transform of [1, 1, 6, 6, 6, ...]. • a(n) = 6 * 2 ^ n - 5 * (n + 1) . • a(n) = 2 * a(n - 1) + 5 * n - 5. - _ Kritsada Moomuang _ , Jul 03 2020 • a (n) = 4 * a(n - 1) - 5 * a(n - 2) + 2 * a(n - 3). - _ Wesley Ivan Hurt _ , Jul 10 2020 •
► [A058877] 0,2,9,28,75,186,441,1016,2295,5110,11253,24564,53235,114674,245745,524272,1114095,2359278,4980717,10485740,22020075,46137322,96468969,201326568,419430375 ⋆ Number of labeled acyclic digraphs with n nodes containing e xactly n - 1 points of in - degree zero. • a(n) = 6 * a(n - 1) - 13 * a(n - 2) + 12 * a(n - 3) - 4 * a(n - 4). (End) • a(n) = Sum _{ k=1..n - 1 } binomial(n, k) * (n - k). - _ Michael Somos _ , Mar 29 2012 •
► [A360479] 1,1,1,2,9,28,81,369,1753,7323,36337,207401,1114345,6308368,40326033,256982157,1658573497,11650405774,83966740913,608348063576,4659734909385,36973835868521,295709600709585,2454457098977559,21106884235025305 ⋆ Ex pansion of Sum _{ k>=0 } (x * (1 + (k * x) ^ 2)) ^ k. • a(n) = Sum _{ k=0.. floor(n / 3) } (n - 2 * k) ^ (2 * k) * binomial(n - 2 * k,k). •
► [A109188] 1,2,9,28,95,306,987,3144,9963,31390,98483,307836,959257,2981174,9243405,28601712,88342659,272428758,838903371,2579937060,7924966749,24317716038,74546117121,228317474952,698708409525 ⋆ Number of (1,0) steps in all G rand Motzkin paths of length n. • a(n) = n * hypergeom([1 - n / 2, 1 / 2 - n / 2], [1], 4) . - _ Peter Luschny _ , Sep 18 2014 •
► [A002532] 0,1,2,9,28,101,342,1189,4088,14121,48682,167969,579348,1998541,6893822,23780349,82029808,282961361,976071762,3366950329,11614259468,40063270581,138197838502,476712029909,1644413253328 ⋆ a(n) = 2 * a(n - 1) + 5 * a(n - 2), a(0) = 0, a(1) = 1. • a(2 * n + 1) = 5 * a(n) ^ 2 + a(n + 1) ^ 2. • a(n) = ((1 + sqrt(6)) ^ n - (1 - sqrt(6)) ^ n) / (2 * sqrt(6)). (end) • a(n) = Sum _{ k=0..n } binomial(n, 2 * k + 1) * 6 ^ k. - _ Paul Barry _ , Sep 29 2004 •
► [A360023] 0,1,2,9,28,105,366,1281,4376,14769,49210,162393,531444,1727193,5580134,17936145,57395632,182948577,581130738,1840247337,5811307340,18305618121,57531942622,180441092769,564859072968 ⋆ Expansion of e.g.f. x * exp(x) * (cosh(x)) ^ 2. • a(n) = n * (3 ^ (n - 1) + (- 1) ^ (n - 1) + 2) / 4. •
► [A098518] 0,1,2,9,28,105,366,1337,4824,17649,64570,237545,875700,3238105,11998182,44550105,165701168,617297761,2302877682,8602038473,32168532940,120425227209,451253210078,1692411415161,6352491269640 ⋆ E.g.f. exp(x) * Bessel I(1,2 * sqrt(2) * x) / sqrt(2). • a(n) = sum { k=0..floor(n / 2), binomial(n, k) * binomial(n - k, k + 1) * 2 ^ k } . •
► [A086511] 2,9,28,121,336,1081,3060,8409,23527,64541,175198,480865,1304499,3523885,9557956,25874753,70115413,189961183,514272412,1394193581,3779849620,10246935645,27788566030,75370121161,204475052376 ⋆ a(n) is the smallest i nteger k > 1 such that k > n * pi(k), where pi() denotes the prime counting fu nction. • a(n) >= exp(n / 2 + sqrt(n ^ 2 + 4n) / 2), n >= 6. •
► [A041877] 1,2,9,29,38,105,1088,2281,3369,12388,52921,118230,5018581,10155392,45640149,147075839,192715988,532507815,5517794138,11568096091,170858902 29,62825766778,268388957341,599603681460,25451743578661 ⋆ Denominators o f continued fraction convergents to sqrt(460). • a(n) = 5071502 * a(n - 12) - a(n - 24) for n>23. - _ Vincenzo Librandi _ , Dec 26 2013 •
► [A152891] 0,2,9,29,83,226,602,1588,4171,10935,28645,75012,196404,514214,1346253,3524561,9227447,24157798,63245966,165580120,433494415,1134903147,2971215049,7778742024,20365011048 ⋆ a(1) = b(1) = 0; for n > 1, b(n) = b(n - 1) + n - 1 + a(n - 1) and a(n) = a(n - 1) + n - 1 + b(n). • a(n) = Fibonacci(2 * n + 1) - n - 1. - _ Emeric Deutsch _ , Jun 01 2009 •
► [A181545] 1,1,2,9,29,92,343,1281,4720,17899,68933,266364,1037423,4072439,16065148,63658521,253356763,1012049086,4055596343,16299779331,65683233938,265310551667,1073968967929,4355988107100,17699727361051 ⋆ G.f.: A(x) = Su m _{ n>=0 } (3n)! / (n!) ^ 3 * x ^ (3n) / (1 - x - x ^ 2) ^ (3n + 1). • a(n) = Sum _{ k=0..floor(n / 2) } binomial(n - k,k) ^ 3. •
► [A069006] 1,2,9,29,105,365,1287,4516,15873,55759,195910,688286,2418195,8495917,29849041,104869718,368442700,1294463368,4547886208,15978257251,56137003923,197228218022,692929213991,2434493909304,8553197751125 ⋆ Let M den ote the 5 X 5 matrix with rows / 1,1,1,1,1 / 1,1,1,1,0 / 1,1,0,0,0 / 1,0 ,0,0,0 / and A(n) = vector (x(n),y(n),z(n),t(n),u(n)) = M ^ n * A where A is th e vector (1,1,1,1,1); then a(n) = t(n). • a(n) = 3 * a(n - 1) + 3 * a(n - 2) - 4 * a (n - 3) - a(n - 4) + a(n - 5), n >= 0, with a(- 5)=0, a(- 4)= - 1, a(- 3)=a(- 2) =a(- 1)=0. - _ Wolfdieter Lang _ , Nov 04 2013 •
► [A360812] 1,1,1,2,9,29,113,613,3033,17010,110929,713249,5061097,38762873,302389553,2544613578,22404995001,203762678941,1960880744337,19509713674397,201306862742217,2166901479447194,24018963506471921,275731857268608677,3271769647891351705 ⋆ Expansion of Sum _{ k>=0 } (x / (1 - (k * x) ^ 2)) ^ k. • a(n) = Sum _{ k=0..floor(n / 2) } (n - 2 * k) ^ (2 * k) * binomial(n - k - 1,k). •
► [A268586] 0,0,0,2,9,30,88,240,624,1568,3840,9216,21760,50688,116736,266240,602112,1351680,3014656,6684672,14745600,32374784,70778880,154140672,334495744 ⋆ Expansion of (x ^ 3 * (3 * x - 2)) / (2 * x - 1) ^ 3. • a(n) = 2 ^ (n - 5) * (

n - 2) * (n + 5) for n>1. ● a(n) = 6 * a(n - 1) - 12 * a(n - 2) + 8 * a(n - 3) for n>4. ●

► [A273652] 2,9,30,90,255,693,1820,4644,11565,28215,67650,159822,372827,860265,1966200,4456584,10027161,22413483,49807550,110100690,242221287,530579709,1157628180,2516582700,5452595525 ⋆ Number of forests of labeled rooted trees of height at most 1, with n labels, two of which are used for root nodes and any root may contain >= 1 labels. ● a(n) = C(n,2) * Sum _{ j=0..2 } Stirling2(2,j) * j ^ (n - 2). ●

► [A056283] 0,0,2,9,30,91,258,729,2018,5613,15546,43315,120750,338259,950062,2678499,7573350,21480739,61088874,174184755,497812638,1425847623,4092087522,11765822365,33887517870 ⋆ Number of n - bead necklaces with exactly three different colored beads. ● a(n) = (k! / n) Sum _{ d|n } phi(d) S2(n / d,k), where k=3 is the number of colors and S2 is the Stirling subset number A008277. ●

► [A101604] 1,2,9,30,109,386,1377,4902,17461,62186,221481,788814,2809405,10005842,35636337,126920694,452034757,1609945658,5733906489,20421610782,72732645325,259041157538,922588763265,3285848604870,11702723341141 ⋆ a(n) = 2 * a(n - 1) + 5 * a(n - 2) + 2 * a(n - 3). ● a(n) = (3 / 4 + sqrt(17) / 4) ^ n * (1 / 4 + 7 * sqrt(17) / 68) + (1 / 4 - 7 * sqrt(17) / 68) * (3 / 4 - sqrt(17) / 4) ^ n + (- 1) ^ n / 2; ●

► [A343565] 1,2,9,30,125,428,1715,6270,24255,91367,352715,1345448,5200299,20019526,77554749,300295038,1166803109,4535971916,17672631899,68913247655,269128640958,1051984969598,4116715363799,16123381989000,63205303195125 ⋆ a(n) = | { (x _ 1, x _ 2, ... , x _ n) : 1 <= x _ 1 <= x _ 2 <= ... <= x _ n <= n, gcd(x _ 1, x _ 2, ... , x _ n, n) = 1 } |. ● a(n) = Sum _{ d|n } mu(n / d) * binomial(d + n - 1, n). ● a(n) = [x ^ n] Sum _{ k>=1 } mu(k) * x ^ k / (1 - x ^ k) ^ (n + 1). ●

► [A211924] 0,2,9,31,80,171,322,554,891,1360,1991,2817,3874,5201,6840,8836,11237,14094,17461,21395,25956,31207,37214,44046,51775 ⋆ Number of lower triangular n X n arrays colored with integers 0 upwards introduced in row major order, with no element equal to any horizontal, vertical or antidiagonal neighbor, and containing the value n(n + 1) / 2 - 2 ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. ●

► [A082114] 1,2,9,32,89,210,441,848,1521,2578,4169,6480,9737,14210,20217,28128,38369,51426,67849,88256,113337,143858,180665,224688,276945 ⋆ Diagonal sums of number array A082110. ● a(n) = (n + 1) * (n ^ 4 - n ^ 3 + 26 * n ^ 2 - 26 * n + 30) / 30. ●

► [A074084] 0,0,0,2,9,32,102,306,883,2480,6828,18514,49597,131568,346194,904738,2350695,6076960,15641304,40103778,102473969,261046144,663180222,1680628946,4249496795 ⋆ Coefficient of q ^ 1 in nu(n), where nu(0)=1, nu(1)=b and, for n>=2, nu(n)=b * nu(n - 1) + lambda * (1 + q + q ^ 2 + ... + q ^ (n - 2)) * nu(n - 2) with (b,lambda)=(2,1). ● a(n) = 4a(n - 1) - 2a(n - 2) - 4a(n - 3) - a(n - 4) for n>=5. ●

► [A053152] 0,2,9,32,105,332,1029,3152,9585,29012,87549,263672,793065,2383292,7158069,21490592,64504545,193579172,580868589,1742867912,5229128025,15688432652,47067395109,141206379632,423627527505 ⋆ Number of 2 - element intersecting families whose union is an n - element set. ● a(n) = (1 / 2!) * (3 ^ n - 2 ^ n - 1). ● a(n) = 6 * a(n - 1) - 11 * a(n - 2) + 6 * a(n - 3). ● a(n) = floor((3 ^ n - 2 ^ n) / 2). - _ Wesley Ivan Hurt _ , Mar 16 2015 ●

► [A077644] 1,2,9,32,107,347,1108,3515,11132,35219,111391,352269,1113996,3522791,11140072,35228031,111400846,352280442,1114008610,3522804578,11140086260 ⋆ Number of decimal digits of A070177(n). ● a(n) = (Pi * sqrt(2 / 3) * sqrt(10) ^ n - log(48) / 2 - n * log(10)) / log(10) + O(1). - _ Charles R Greathouse IV _ , Jul 10 2012 ●

► [A292482] 2,9,32,112,384,1296,4320,14256,46656,151632,489888,1574640,5038848,16061328,51018336,161558064,510183360,1607077584,5050815264,15841193328,49589822592,154968195600,483500770272,1506290861232,4686238234944 ⋆ p - INVERT of the odd positive integers, where p(S) = (1 - S) ^ 2. ● a(n) = 6 * a(n - 1) - 9 * a(n - 2) for n >= 3. ● a(n) = 16 * 3 ^ (n - 3) * (4 + n) for n>1. - _ Colin Barker _ , Oct 03 2017 ●

► [A053369] 2,9,32,115,420,1554,5808,21879,82940,316030,1209312,4644094,17889032,69089700,267444000,1037348415,4030774380,15687019590,61137753600,238580530650,932105099640,3645473785980,14271279927840,55918717024950,219283705045080 ⋆ Linear recursion with Catalan numbers. ● a(n) = (7n + 2) * C(n) where C(n)=Catalan numbers (A000108). ●

► [A006253] 1,2,9,32,121,450,1681,6272,23409,87362,326041,1216800,4541161,16947842,63250209,236052992,880961761,3287794050,12270214441,45793063712,170902040409,637815097922,2380358351281,8883618307200,33154114877521 ⋆ Number of perfect matchings (or domino tilings) in C _ 4 X P _ n. ● a(n) = |U(n,i / sqrt(2))| ^ 2 where U(n,x) denotes the Chebyshev polynomial of the second kind. ● a(n - 1) = the bottom left entry of the 2 X 2 matrix T(n, M), where M is the 2 X 2 matrix [0, 2; 1, 1] and T(n,x) denotes the Chebyshev polynomial of the first kind. ● a(n) = (2 * (- 1) ^ n + (2 - sqrt(3)) ^ (1 + n) + (2 + sqrt(3)) ^ (1 + n)) / 6. - _ Colin Barker _ , Dec 16 2017 ● a(n) = (1 XOR a(n - 1)) ^ 2 / a(n - 2). - _ Jon Maiga _ , Nov 16 2018 ● a(n) = a(- 2 - n) for all n in Z. - _ Michael Somos _ , Mar 17 2022 ●

► [A075364] 1,2,9,32,125,529,2401,11585,59049,316227,1771561,10343751,62748517,394421215,2562890625,17179869184,118587876497,841567195983,6131066257801,45794672179195,350277500542221,2740695769692949 ⋆ a(n) = floor(geometric mean of n - th row of A075363). ● a(n) = floor(n ^ ((n + 1) / 2)). ●

► [A048498] 1,2,9,33,101,277,709,1733,4101,9477,21509,48133,106501,233477,507909,1097733,2359301,5046277,10747909,22806533,48234501,101711877,213909509,448790533,939524101 ⋆ 2 ^ (n - 1) * (5n - 8) + 5. ● a(0)=1, a(1)=2, a(2)=9, a(n)=5 * a(n - 1) - 8 * a(n - 2) + 4 * a(n - 3). - _ Harvey P. Dale _ , Jun 14 2011 ●

► [A202206] 1,2,9,33,126,477,1809,6858,26001,98577,373734,1416933,5372001,20366802,77216409,292749633,1109898126,4207943277,15953524209,60484402458,229313780001,869394547377,3296124982134 ⋆ a(n) = 3 * a(n - 1) + 3 * a(n - 2) with a(0)=1 and a(1)=2. ● a(n) = 1 / 2 * ((3 / 2 + 1 / 2 * sqrt(21)) ^ n + (3 / 2 - 1 / 2 * sqrt(21)) ^ n) + 1 / 42 * sqrt(21) * ((3 / 2 + 1 / 2 * sqrt(21)) ^ n - (3 / 2 - 1 / 2 * sqrt(21)) ^ n). - Paolo P. Lava, Jan 31 2012. ●

► [A263685] 1,1,2,9,33,192,1272,10182,90822,908160,9980160,119761980,1556766780,21794734080,326918753280,5230700053320,88921859605320,1600593472880640,30411275148656640,608225502973147920,12772735543856347920,281000181964839321600,6463004184741681561600 ⋆ Number of inequivalent placements of n nonattacking rooks on n X n board up to rotations of the board. ● a(n) = (P(n) + G(n) + 2 * R(n)) / 4, where P,G,R are defined in Robinson (1976). See also Maple code in A000903. ●

► [A288958] 2,9,34,105,286,721,1730,4017,9118,20361,44914,98137,212798,458529,982786,2096865,4456126,9436825,19922546,41942601,88079902,184548849,385875394,805305745,1677720926 ⋆ Number of cliques in the n X n rook graph. ● a(n) = 1 + 2 * n * (2 ^ n - 1) - n ^ 2. ● a(n) = 7 * a(n - 1) - 19 * a(n - 2) + 25 * a(n - 3) - 16 * a(n - 4) + 4 * a(n - 5). ●

► [A120989] 2,9,34,123,440,1573,5642,20332,73644,268090,980628,3603065,13293540,49234605,182991450,682341000,2551955340,9570762990,35985909180,135628219350,512302356384,1939078493154,7353556121924,27936898370248,106313496846200 ⋆ Level of the first leaf (in preorder traversal) of a binary tree, summed over all binary trees with n edges. A binary tree is a rooted tree in which each vertex has at most two children and each child of a vertex is designated as its left or right child. ● a(n) = 2n(7n + 13)binomial(2n + 1,n) / [(n + 2)(n + 3)(n + 4)]. ●

► [A010763] 0,2,9,34,125,461,1715,6434,24309,92377,352715,1352077,5200299,20058299,77558759,300540194,1166803109,4537567649,17672631899,68923264409,269128937219,1052049481859,4116715363799,16123801841549,63205303218875 ⋆ a(n) = binomial(2n + 1, n + 1) - 1. ● a(n) = (n / (2n + 2)) * Sum _{ k = 1..n + 1 } C(2n + 2, k) / C(n + 1, k). - _ Benoit Cloitre _ , Aug 20 2002 ● a(n) = Sum _{ i = 1..n } C(n + i, n). - _ Benoit Cloitre _ , Oct 15 2002 ● a(n + 1) = C(2n - 1, n - 1) - 1. - _ Alonso del Arte _ , Dec 15 2012 ●

► [A077234] 2,9,34,127,474,1769,6602,24639,91954,343177,1280754,4779839,17838602,66574569,248459674,927264127,3460596834,12915123209,48199896002,179884460799,671337947194,2505467327977,9350531364714,34896658130879,130236101158802 ⋆ Bisection (odd part) of Chebyshev sequence with Diophantine property. ● a(n) = 4 * a(n - 1) - a(n - 2) with a(0)=2 and a(1)=9. - _ Philippe Deléham _ , Nov 16 2008 ● a(n) = - (5 / 6) * sqrt(3) * [2 - sqrt(3)] ^ n + (5 / 6) * sqrt(3) * [2 + sqrt(3)] ^ n + [2 - sqrt(3)] ^ n + [2 + sqrt(3)] ^ n, with n>=0. - _ Paolo P. Lava _ , Nov 20 2008 ●

► [A083141] 2,9,35,91,209,377,629,817,1219,1769,2201,2923,3649,4343,5029,5989,7729,8479,10117,11573,12629,14299,16019,17711,21631 ⋆ Main diagonal of array in A083140. ● a(n) = prime(n) * prime(2 * n - 2). ●

► [A001571] 0,2,9,35,132,494,1845,6887,25704,95930,358017,1336139,4986540,18610022,69453549,259204175,967363152,3610248434,13473630585,50284273907,187663465044,700369586270,2613814880037,9754889933879,36405744855480 ⋆ a(n) = 4 * a(n - 1) - a(n - 2) + 1, with a(0) = 0, a(1) = 2. ● a(n) = - (1 / 2) - (1 / 4) * sqrt(3) * (2 - sqrt(3)) ^ n + (1 / 4) * sqrt(3) * (2 + sqrt(3)) ^ n + (1 / 4) * (2 - sqrt(3)) ^ n + (1 / 4) * (2 + sqrt(3)) ^ n, with n >= 0. - _ Paolo P. Lava _ , Jul 31 2008 ● a(n) = sqrt((- 2 + (2 - sqrt(3)) ^ n + (2 + sqrt(3)) ^ n) * (2 + (2 - sqrt(3)) ^ (1 + n) + (2 + sqrt(3)) ^ (1 + n))) / (2 * sqrt(2)). - _ Gerry Martens _ , Jun 05 2015 ● a(n) = ((1 + sqrt(3)) * (2 + sqrt(3)) ^ n + (1 - sqrt(3)) * (2 - sqrt(3)) ^ n) / 4 - (1 / 2). - _ Vladimir Pletser _ , Jan 15 2021 ● a(n) = (ChebyshevU(n, 2) + ChebyshevU(n - 1, 2) - 1) / 2. - _ G. C. Greubel _ , Feb 02 2022 ●

► [A092431] 2,9,35,135,527,2079,8255,32895,131327,524799,2098175,8390655,33558527,134225919,536887295,2147516415,8590000127,34359869439,137439215615,549756338175,2199024304127,8796095119359,35184376283135,140737496743935,562949970198527 ⋆ Numbers having in binary representation a leading 1 followed by n zeros and n - 1 ones. ● a(n) = 2 ^ (2 * n - 1) + 2 ^ (n - 1) - 1. ●

► [A289782] 2,9,35,146,593,2428,9911,40495,165399,675637,2759792,11273144,46048100,188095781,768327108,3138436438,12819777601,52365789305,213901984464,873739509697,3569021260182,14578615958179,59550231769665,243248749683441,993614171826023 ⋆ p - INVERT of the Lucas numbers (A000032), where p(S) = 1 - S - S ^ 2. ● a(n) = 4 * a(n - 1) + 2 * a(n - 2) - 7 * a(n - 3) + a(n - 4). ●

► [A110224] 1,2,9,35,152,637,2709,11458,48565,205679,871344,3690953,15635321,66231970,280563633,1188485803,5034507976,21326515877,90340574445,382688808866,1621095817661,6867072066967,29089384105824 ⋆ a(n) = Fibonacci(n) ^ 3 + Fibonacci(n + 1) ^ 3. ● a(n) = 3 * a(n - 1) + 6 * a(n - 2) - 3 * a(n - 3) - a(n - 4). ● a(n) = (3 * (- 1) ^ n * Fibonacci(n - 1) + 2 * Fibonacci(3 * n + 2)) / 5. ●

► [A073989] 1,2,9,36,126,756,6300,46656,297432,1784592,10478160,60963840,358108128,2142770112,12958657344,78364164096,471877757568,2831266545408,16957996040448,101559956668416,608764662139392,3652587972836352,21926486787222528,131623189859008512 ⋆ Number of strings of length n over Z _ 6 with trace 3 and subtrace 0. ● a(n; t, s) = a(n - 1; t, s) + a(n - 1; t + 5, s + 5t + 1) + a(n - 1; t + 4, s + 4t + 4) + a(n - 1; t + 3, s + 3t + 3) + a(n - 1; t + 2, s + 2t + 2) + a(n - 1; t + 1, s + t + 1) where t is the trace and s is the subtrace. ●

► [A007946] 2,9,36,140,540,2079,8008,30888,119340,461890,1790712,6953544,27041560,105306075,410605200,1602881040,6263890380,24502865310,95937144600,375945078600,1474358525640,5786272150230,22724268808176,89301056353200,351140573438200 ⋆ a(n) = 6 * (2 * n + 1)! / ((n!) ^ 2 * (n + 3)). ● a(n) = C(2n + 2, n) + C(2n + 3, n). - _ Emeric Deutsch _ , May 16 2003 ● a(n) = ((6 * (2 * n + 1)) / (n + 3)) * binomial(2 * n,n). ● a(x) ~ exp(x * log(4) - (log(Pi) + cos(2 * Pi * x) * (log(x) + 1 / (4 * x))) / 2 + log((12 * x + 6) / (3 + x))). For example, this formula gives a(100) = 0.10602088... * 10 ^ 61. ● a(n) = 12 * 4 ^ n * Gamma(3 / 2 + n) / (sqrt(Pi) * (3 + n) * Gamma(1 + n)). - _ Peter Luschny _ , Dec 14 2015 ● a(n) = 2 * Sum _{ i=0..n } (1 / (i + 1) * binomial(2 * i + 3,i + 3) * binomial(2 * (n - i),n - i)). - _ Vladimir Kruchinin _ , Apr 20 2016 ●

► [A077836] 1,2,9,36,141,558,2205,8712,34425,136026,537489,2123820,8392005,33159942,131027301,517737744,2045774961,8083620018,31941398169,126212379444,498712192893,1970597911518,7786567451565,30767632667928,121574394093033 ⋆ Expansion of (1 - x) / (1 - 3 * x - 3 * x ^ 2 - 3 * x ^ 3). ● a(0)=1, a(1)=2, a

(2)=9, a(n)=3 * a(n - 1) + 3 * a(n - 2) + 3 * a(n - 3). - _ Harvey P. Dale _ , Dec 15 2013 ●

▶ [A003125] 2,9,36,142,558,2189,8594,33796,133097,524743,2070466,8177715,32332378,127948218,506708043,2007924808,7960694208,31576775077,125313590701,497543433995,1976277486929,7852859853208,31214015140480,124106224171554 ⋆ Value of an urn with n balls of type - 1 and n + 2 balls of type + 1. ● a(n) = B(n, n + 2). - _ Sean A. Irvine _ , Feb 02 2015 ●

▶ [A055841] 1,2,9,36,144,576,2304,9216,36864,147456,589824,2359296,9437184,37748736,150994944,603979776,2415919104,9663676416,38654705664,154618822656,618475290624,2473901162496,9895604649984,39582418599936,158329674399744 ⋆ Number of compositions of n into 3 * j - 1 kinds of j's for all j >= 1. ● a(n) = 9 * 4 ^ (n - 2), a(0)=1, a(1)=2. ● a(0)=1, a(1)=2, a(3)=9, a(n + 1)=4 * a(n) for n >= 3. ● a(n) = 4 * a(n - 1) + (- 1) ^ n * C(2,2 - n). ●

▶ [A037521] 2,9,36,146,585,2340,9362,37449,149796,599186,2396745,9586980,38347922,153391689,613566756,2454267026,9817068105,39268272420,157073089682,628292358729,2513169434916,10052677739666,40210710958665 ⋆ Base - 4 digits are, in order, the first n terms of the periodic sequence with initial period 2, 1, 0. ● a(n) = floor(4 ^ (n + 1) / 7). - _ Mircea Merca _ , Dec 26 2010 ● a(n) = 4 * a(n - 1) + a(n - 3) - 4 * a(n - 4). ●

▶ [A289805] 2,9,36,153,624,2584,10632,43865,180774,745347,3072528,12666854,52218790,215273737,887468000,3658604277,15082652352,62178493132,256331858332,1056732372729,4356396740786,17959318086575,74037587378784,305221185520298,1258279413185322 ⋆ p - INVERT of A103889, where p(S) = 1 - S - S ^ 2. ● a(n) = 4 * a(n - 1) + 2 * a(n - 2) - 8 * a(n - 3) + 8 * a(n - 4) - 2 * a(n - 5) + a(n - 6). ●

▶ [A137955] 1,1,2,9,36,172,842,4310,22676,121896,666884,3699973,20771096,117765084,673367034,3878538930,22483446152,131070712924,767929882240,4519387797894,26704456819984,158367557278412,942285096541344,5623496055739052,33653373190735484 ⋆ G.f. satisfies A(x) = 1 + x * (1 + x * A(x) ^ 4) ^ 2. ● a(n) = Sum _{ k=0..n - 1 } C(2 * (n - k),k) / (n - k) * C(4 * k,n - k - 1) for n>0 with a(0)=1. - _ Paul D. Hanna _ , Jun 16 2009 ●

▶ [A305206] 1,1,2,9,36,190,1070,6797,46942,350901,2806187,23894662,215598410,2053090936,20557071012,215697357449,2364810631734,27023086395647,321160376470277,3962047673946906,50648323260067319,669819485900273336,9150740338219903590,128965789655207156299 ⋆ a(n) = [x ^ n] exp(Sum _{ k>=1 } (- 1) ^ (k + 1) * x ^ k / (k * (1 - x ^ k) ^ n)). ● a(n) = [x ^ n] Product _{ k>=1 } (1 + x ^ k) ^ binomial(n + k - 2,n - 1). ●

▶ [A111601] 1,2,9,36,225,1350,11025,88200,893025,8930250,108056025,1296672300,18261468225,255660555150,4108830350625,65741285610000,1187451971330625,21374135483951250,428670161650355625,8573403233007112500 ⋆ Exponential (binomial) convolution of A001818 (with interspersed zeros) and A000142 (factorials). ● a(n) = n! * Sum _{ k=0..floor((n - 1) / 2) } binomial(2 * k, k) / (4 ^ k). ● a(n) = (n + 1) / (n ^ 2) * a(n - 1) + (n + 1) / (n - 1) * a(n - 2); a(0)=1, a(1)=2. - _ Sergei N. Gladkovskii _ , Jul 27 2012 ●

▶ [A280351] 1,1,1,1,1,1,1,1,2,9,37,121,331,793,1717,3433,6436,11441,19449,31825,50389,77521,116281,170545,245158 ⋆ Expansion of Sum _{ k>=0 } (x / (1 - x)) ^ (k ^ 3). ● a(0) = 1; a(n) = Sum _{ k=1..floor(n ^ (1 / 3)) } binomial(n - 1, k ^ 3 - 1) for n > 0. - _ Jerzy R Borysowicz _ , Dec 22 2022 ●

▶ [A306721] 1,1,1,1,1,1,1,2,9,37,121,331,793,1717,3433,6437,11456,19569,32505,53449,89149,155041,286825,564929 ⋆ a(n) = Sum _{ k=0..n } binomial(k, 7 * (n - k)). ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) + a(n - 8) for n > 7. ●

▶ [A306852] 1,1,1,1,1,1,1,2,9,37,121,331,793,1717,3434,6451,11561,20129,34885,62017,116281,232562,490337,1062601,2309385 ⋆ a(n) = Sum _{ k=0..floor(n / 7) } binomial(n,7 * k). ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + 2 * a(n - 7) for n > 6. ●

▶ [A275425] 1,1,1,1,1,1,1,2,9,37,121,331,793,1717,5149,32176,217361,1186329,5282785,20004037,66589681,266164921,2012163385,18230119678,137986473241 ⋆ Number of set partitions of [n] such that seven is a multiple of each block size. ● a(n) = n! * Sum _{ k=0..floor(n / 7) } (1 / 7!) ^ k * binomial(n - 6 * k,k) / (n - 6 * k)!. ● a(n) = a(n - 1) + binomial(n - 1,6) * a(n - 7) for n > 6. (End) ●

▶ [A373912] 1,1,1,1,1,1,2,9,37,121,331,793,1718,3448,6556,12121,22509,43453,89150,193823,436304,989759,2219064,4869285,10434412 ⋆ Number of compositions of 7 * n into parts 6 and 7. ● a(n) = Sum _{ k=0..floor(n / 6) } binomial(n + k,n - 6 * k). ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 6 * a(n - 6) + a(n - 7). ●

▶ [A212386] 1,1,1,1,1,1,1,2,9,37,121,331,793,1718,3454,6646,12841,26589,61813,158918,426401,1134431,2914055,7171539,16967745 ⋆ Number of Dyck n - paths all of whose ascents have lengths equal to 1 (mod 6). ● a(n) = Sum _{ k=0..n } (binomial(5 * k - 4 * n - 1,n - k) * binomial(n + 1,6 * k - 5 * n)) / (n + 1). - _ Vladimir Kruchinin _ , Mar 05 2016 ●

▶ [A373911] 1,1,1,1,1,2,9,37,121,331,794,1732,3553,7116,14501,31078,70607,166922,399315,946121,2197582,4998597,11188280,24835641,55117511 ⋆ Number of compositions of 7 * n into parts 5 and 7. ● a(n) = Sum _{ k=0..floor(n / 5) } binomial(n + 2 * k,n - 5 * k). ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 22 * a(n - 5) - 7 * a(n - 6) + a(n - 7). ●

▶ [A373910] 1,1,1,1,2,9,37,121,332,808,1837,4113,9497,23091,58462,150129,382810,960520,2373982,5816480,14230964,34948927,86295036,213973997,531470618 ⋆ Number of compositions of 7 * n into parts 4 and 7. ● a(n) = Sum _{ k=0..floor(n / 4) } binomial(n + 3 * k,n - 4 * k). ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 34 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). ●

▶ [A373909] 1,1,1,2,9,37,122,346,913,2398,6515,18317,52226,148408,417810,1168085,3258813,9103828,25488736,71462437,200406479,561770980,1573939555,4408629727,12348599802 ⋆ Number of compositions of 7 * n into parts 3 and 7. ● a(n) = Sum _{ k=0..floor(n / 3) } binomial(n + 4 * k,n - 3 * k). ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 36 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). ●

▶ [A206374] 2,9,37,149,597,2389,9557,38229,152917,611669,2446677,9786709,39146837,156587349,626349397,2505397589,10021590357,40086361429,160345445717,641381782869,2565527131477,10262108525909,41048434103637,164193736414549,656774945658197 ⋆ a(n) = (7 * 4 ^ n - 1) / 3. ● a(n) = 4 * a(n - 1) + 1 for n >0, a(0)=2. - _ Bruno Berselli _ , Oct 22 2015 ● a(n) = 5 * a(n - 1) - 4 * a(n - 2) for n >= 2. - _ Wesley Ivan Hurt _ , Jun 30 2020 ●

▶ [A178875] 0,0,2,9,37,151,606,2426,9708,38835,155343,621377,2485512,9942052,39768214,159072861,636291449,2545165803,10180663218,40722652878,162890611520,651562446087,2606249784355,10424999137429,41699996549724 ⋆ Partial sums of round(4 ^ n / 9). ● a(n) = round((4 * 4 ^ n - 3 * n - 4) / 27) = round((8 * 4 ^ n - 6 * n - 17) / 54). ● a(n) = floor((4 * 4 ^ n - 3 * n - 4) / 27). ● a(n) = ceiling((4 * 4 ^ n - 3 * n - 13) / 27). ● a(n) = a(n - 3) + (7 * 4 ^ (n - 2) - 1) / 3, n > 2. ● a(n) = 5 * a(n - 1) - 4 * a(n - 2) + a(n - 3) - 5 * a(n - 4) + 4 * a(n - 5), n > 4. ●

▶ [A012493] 0,2,9,37,151,616,2513,10252,41824,170625,696081,2839729,11584946,47261895,192809420,786584466,3208946545,13091204281,53406819691,217878227876,888855064897,3626169232672,14793304131648 ⋆ Take every 5th term of Padovan sequence A000931, beginning with the fifth term. ● a(n + 3) = 5 * a(n + 2) - 4 * a(n + 1) + a(n). ●

▶ [A106851] 0,2,9,37,152,626,2585,10701,44400,184610,769065,3209461,13415048,56153618,235357241,987609501,4148575200,17443003202,73402179657,309116995525,1302649664888,5492768393906,23173154692697,97810060234605 ⋆ Expansion of (- 3 * x ^ 3 - 7 * x ^ 2 + 2 * x) / ((1 - 4 * x - x ^ 2) * (1 - 4 * x + x ^ 2)). ● a(0)=0, a(1)=2, a(2)=9, a(3)=37, a(n)=8 * a(n - 1) - 16 * a(n - 2) + a(n - 4) [_ Harvey P. Dale _ , Aug 05 2011] ●

▶ [A041515] 1,1,2,9,38,47,85,2767,2852,5619,25328,106931,132259,239190,7786339,8025529,15811868,71273001,300903872,372176873,673080745,21910760713,22583841458,44494602171,200562250142 ⋆ Denominators of continued fraction convergents to sqrt(274). ● a(n) = 2814 * a(n - 7) + a(n - 14) for n>13. - _ Vincenzo Librandi _ , Dec 19 2013 ●

▶ [A373908] 1,1,2,9,38,136,452,1495,5031,17114,58282,198032,671856,2278870,7731892,26238839,89047335,302191369,1025487338,3479970844,11809261583,40074827170,135994407483,461498426696,1566098800484 ⋆ Number of compositions of 7 * n into parts 2 and 7. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n + 5 * k,n - 2 * k). ● a(n) = 7 * a(n - 1) - 20 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). ●

▶ [A007224] 2,9,38,143,546,2066,7752,29070,108968,408595,1533870,5766243,21710850,81880920,309328008,1170524970,4436618940,16842720336,64037794548,243836217702,929759970392,3549992610584,13571935767600,51950354135888 ⋆ Number of distinct perforation patterns for deriving (v,b) = (n + 3,n) punctured convolutional codes from (2,1). ● a(n) = (1 / n) * Sum _{ k|gcd(n + 3,n) } phi(k) * binomial(2 * n / k, (n + 3) / k). ● a(n) = (1 / n) * (binomial(2 * n, n + 3) + 2 * [(n mod 3) == 0] * binomial(2 * n / 3, (n / 3) + 1)). (End) ●

▶ [A291265] 2,9,38,153,596,2268,8480,31275,114086,412443,1479926,5276664,18711758,66041901,232129190,812934621,2837740232,9877082004,34288573484,118752490863,410394698534,1415492232255,4873386985130,16750755602928,57487476629594 ⋆ a(n) = (1 / 3) * A291232(n). ● a(n) = 6 * a(n - 1) - 7 * a(n - 2) - 6 * a(n - 3) - a(n - 4) for n >= 5. ● a(n) = (((3 - sqrt(13)) / 2) ^ n * (- 3 + sqrt(13)) * (- 39 + 17 * sqrt(13) - 39 * n) + 2 ^ (- n) * (3 + sqrt(13)) ^ (1 + n) * (39 + 17 * sqrt(13) + 39 * n)) / 338. - _ Colin Barker _ , Aug 26 2017 ●

▶ [A037489] 2,9,38,153,614,2457,9830,39321,157286,629145,2516582,10066329,40265318,161061273,644245094,2576980377,10307921510,41231686041,164926744166,659706976665,2638827906662,10555311626649,42221246506598 ⋆ Base 4 digits are, in order, the first n terms of the periodic sequence with initial period 2,1. ● a(n) = 4a(n - 1) + a(n - 2) - 4a(n - 3). ●

▶ [A037569] 2,9,38,154,617,2470,9882,39529,158118,632474,2529897,10119590,40478362,161913449,647653798,2590615194,10362460777,41449843110,165799372442,663197489769,2652789959078,10611159836314,42444639345257 ⋆ Base 4 digits are, in order, the first n terms of the periodic sequence with initial period 2,1,2. ● a(n) = 4 * (n - 1) + a(n - 3) - 4 * a(n - 4). - _ Vincenzo Librandi _ , Jun 17 2012 ●

▶ [A291462] 2,9,38,161,680,2872,12128,51214,216264,913228,3856328,16284284,68764352,290374208,1226175744,5177825416,21864627616,92328709904,389880441696,1646365025296,6952176889728,29357258422912,123968166486528,523485745182432,2210545926231680 ⋆ a(n) = (1 / 2) * A291417(n).. ● a(n) = 4 * a(n - 1) + 2 * a(n - 2) - 4 * a(n - 3) - 2 * a(n - 4) for n >= 5. ●

▶ [A001077] 1,2,9,38,161,682,2889,12238,51841,219602,930249,3940598,16692641,70711162,299537289,1268860318,5374978561,22768774562,96450076809,408569081798,1730726404001,7331474697802,31056625195209 ⋆ Numerators of continued fraction convergents to sqrt(5). ● a(n) = 4 * a(n - 1) + a(n - 2), a(0)=1, a(1)=2. ● a(n) = ((2 + sqrt(5)) ^ n + (2 - sqrt(5)) ^ n) / 2. ● a(n) = ((- i) ^ n) * T(n, 2 * i), with T(n, x) Chebyshev's polynomials of the first kind A053120 and i ^ 2 = - 1. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n, 2k) * 5 ^ k * 2 ^ (n - 2k). - _ Paul Barry _ , Nov 15 2003 ● a(n) = 4 * a(n - 1) + a(n - 2) when n > 2; a(1) = 1, a(2) = 2. - Alex Vinokur (alexvn(AT)barak - online.net), Oct 25 2004 ● a(n) = F(3 * n) / 2 + F(3 * n - 1) where F() = Fibonacci numbers A000045. - _ Gerald McGarvey _ , Apr 28 2007 ●

▶ [A105484] 1,2,9,38,177,882,4711,26795,161583,1028992,6896067,48487476,356703531,2738868784,21901044795,182022288438,1569519971934,14017732109520,129480496353104,1235228480628932,12154988981496309,123229919746398894,1285758785855488107 ⋆ Number of partitions of { 1...n } containing 2 strings of 3 consecutive integers, where each string is counted within a block and a string of more than 3 consecutive integers are counted three at a time. ● a(n) = Sum _{ k=1..n } c(n, k, 2), where c(n, k, 2) is the case r =2 of c(n, k, r) given by c(n, k, r)=c(n - 1, k - 1, r) + (k - 1)c(n - 1, k, r) + c(n - 2, k - 1, r) + (k - 1)c(n - 2, k, r) + c(n - 1, k, r - 1) - c(n - 2, k - 1, r - 1) - (k - 1)c(n - 2, k, r - 1), r=0, 1, .., n - k - 1, k=1, 2, .., n - 2r, c(n, k, 0) = Sum _{ j= 0..floor(n / 2) } binomial(n - j, j) * S2(n - j - 1, k - 1). ●

▶ [A249925] 1,2,9,38,186,932,4889,26238,143966,802652,4536874,25932348,149650516,870675912,5101656889,30078478318,178309845686,1062198928812,6355149937934,38172142221748,230094601968876,1391444403490552,8439240940653834,51323083138005388,312896262064813036 ⋆ G.f. satisfies: A(x) = 1 + 2 * x * A(x) + 5 * x ^ 2 * A(x) ^ 2. ● a(n) = Sum _{ k=0..n } Fibonacci(n - k + 1) * Fib

onacci(k + 1) * C(2 * (n - k),n - k) * C(2 * k,k) / ((n - k + 1) * (k + 1)). • a(n) == 1 (mod 2) iff n = 2 * (2 ^ k - 1) for k>=0. •

► [A370397] 1,1,2,9,38,203,1274,9241,76242,705241,7228724,81323154,996208647,13199764580,188096645269,2868473840361,46612699905873,804069073376312,14674260589117694,282479516340515613,5720210205895441171 ⋆ a(n) = floor(g(n + 1 / 4)), where g(x) is the function defined for all real numbers except the negative integers by the recurrence formula g(x + 1) = g(x) * (x + 1), with g(x) = 1 for 0 <= x < 1. • a(n) = floor((Product _{ k=1..n } (4 * k + 1)) / 4 ^ n) . • a(n) = floor(Product _{ k=0..floor(n - 3 / 4) } (n - k + 1 / 4)). • a(n) = floor((4 * n + 1) * gamma(n + 1 / 4) / gamma(1 / 4)). •

► [A202832] 1,2,9,38,211,1182,7639,50738,368841,2767202,22132249,182624598,1582522891,14122521662,131109031239,1250794578818,12334766500561,124733099306562,1297921351160809,13821821639912198,150946171640101251,1684074507271422302,19217497036753475959 ⋆ E.g.f: exp(2 * x + 5 * x ^ 2 / 2). • a(n) = Sum _{ k=0..[n / 2] } 2 ^ (n - 3 * k) * 5 ^ k * n! / ((n - 2 * k)! * k!). •

► [A037737] 2,9,39,156,626,2505,10023,40092,160370,641481,2565927,10263708,41054834,164219337,656877351,2627509404,10510037618,42040150473,168160601895,672642407580,2690569630322,10762278521289,43049114085159 ⋆ Base 4 digits are, in order, the first n terms of the periodic sequence with initial period 2,1,3,0. • a(n) = 4 * a(n - 1) + a(n - 4) - 4 * a(n - 5). - _ Vincenzo Librandi _ , Jun 17 2012 •

► [A037632] 2,9,39,158,633,2535,10142,40569,162279,649118,2596473,10385895,41543582,166174329,664697319,2658789278,10635157113,42540628455,170162513822,680650055289,2722600221159,10890400884638,43561603538553 ⋆ Base 4 digits are, in order, the first n terms of the periodic sequence with initial period 2,1,3. • a(n) = 4 * a(n - 1) + a(n - 3) - 4 * a(n - 4). - _ Vincenzo Librandi _ , Jun 17 2012 •

► [A361358] 2,9,39,170,742,3239,14139,61720,269422,1176089,5133899,22410650,97827642,427040159,1864128519,8137349760,35521403402,155059096249,676868620799,2954687218650,12897889327102,56302253600359,245772287239139,1072852564721720 ⋆ Expansion of x * (2 - x) / (1 - 5 * x + 3 * x ^ 2 - x ^ 3). • a(n) = 5 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n > 3. •

► [A097070] 1,2,9,40,175,756,3234,13728,57915,243100,1016158,4232592,17577014,72804200,300874500,1240940160,5109183315,21002455980,86213785350,353452638000,1447388552610,5920836618840,24197138082780,98801168731200,403095046038750 ⋆ Consider all compositions (ordered partitions) of n into n parts, allowing zeros. E.g., for n = 3 we get 300, 030, 003, 210, 120, 201, 102, 021, 012, 111. Then a(n) is the total number of 1's. • a(n) = n * binomial(2 * n - 3, n - 1). • a(n) = Sum _{ k=0..n } k * binomial(n, k) * binomial(n - 2, k - 2). •

► [A164033] 2,9,40,177,782,3453,15244,67293,297050,1311249,5788144,25550121,112783718,497851461,2197622740,9700776213,42821298098,189022355097,834385043896,3683153777697,16258227358910,71767287970581 ⋆ a(n) = ((4 + 3 * sqrt(2)) * (3 + sqrt(2)) ^ n + (4 - 3 * sqrt(2)) * (3 - sqrt(2)) ^ n) / 4. • a(n) = 6 * a(n - 1) - 7 * a(n - 2) for n > 1; a(0) = 2, a(1) = 9. •

► [A107979] 2,9,40,178,792,3524,15680,69768,310432,1381264,6145920,27346208,121676672,541399104,2408949760,10718597248,47692288512,212206348544,944209971200,4201252581888,18693430269952,83176226243584 ⋆ a(n) = 4 * a(n - 1) + 2 * a(n - 2) for n>1, with a(0)=2, a(1)=9. • a(n) = 1 / 12 * ((sqrt(6) - 3)(- (2 - sqrt(6)) ^ n) + (3 + sqrt(6))(2 + sqrt(6)) ^ n). - _ Harvey P. Dale _ , Jun 21 2011 •

► [A370479] 1,2,9,40,184,872,4232,20936,105208,535624,2757000,14324456,75028152,395750568,2100380424,11208429960,60103977976,323708642952,1750294676744,9497584905128,51703651336888,282302043458536,1545558070957960,8482843567140680 ⋆ G.f. satisfies A(x) = (1 + x * (A(x) ^ (1 / 2) / (1 - x)) ^ 2) ^ 2. • a(n) = 2 * Sum _{ k=0..n } binomial(2 * k + 2,k) * binomial(n + k - 1,n - k) / (2 * k + 2). •

► [A038112] 1,2,9,40,190,924,4578,22968,116325,593450,3045185,15699840,81260816,421993040,2197653240,11472991008,60023749566,314621200260,1651883008050,8685998428800,45734484854520,241098942106440,1272406536645660 ⋆ a(n) = T(2n,n), where T(n,k) is in A037027. • a(n) = Sum _{ k=0..n } C(n + k,k) * C(k,n - k). - _ Paul Barry _ , May 13 2006 • a(n) = Sum _{ j=0..n } binomial(2 * j, n) * binomial(n + j, 2 * j). - _ Zerinvary Lajos _ , Aug 22 2006 • a(n) = [x ^ n] (1 / (1 - x - x ^ 2)) ^ (n + 1). - _ Paul Barry _ , Mar 23 2011 •

► [A367044] 1,1,2,9,40,192,963,5000,26649,144990,802023,4497150,25504380,146037955,843134220,4902661503,28686940053,168785282241,997968554037,5926617173205,35335723342962,211433954924955,1269252184538408,7642065274626855,46137678521488140 ⋆ G.f. satisfies A(x) = 1 - x ^ 2 + x * A(x) ^ 3. • a(n) = Sum _{ k=0..floor(n / 2) } (- 1) ^ k * binomial(2 * (n - 2 * k) + 1,k) * binomial(3 * (n - 2 * k),n - 2 * k) / (2 * (n - 2 * k) + 1). •

► [A052512] 0,1,2,9,40,205,1176,7399,50576,372537,2936080,24617131,218521128,2045278261,20112821288,207162957135,2228888801056,24989309310961,291322555295904,3524580202643155,44176839081266360,572725044269255661,7668896804574138232,105920137923940473079 ⋆ Number of rooted labeled trees of height at most 2. • a(n) = Sum _{ k=0..n - 1 } n * C(n - 1,k) * (n - k - 1) ^ k. - _ Alois P. Heinz _ , Mar 15 2013 •

► [A038156] 0,0,2,9,40,205,1236,8659,69280,623529,6235300,68588311,823059744,10699776685,149796873604,2246953104075,35951249665216,611171244308689,11001082397556420,209020565553571999,4180411311071440000,87788637532500040021,1931350025715005280484 ⋆ a(n) = n! * Sum _{ k=1..n - 1 } 1 / k!. • a(n) = floor((e - 1) * n!) - 1. • a(0) = a(1) = 0, a(n) = n * (a(n - 1) + 1) for n>1. - _ Philippe Deléham _ , Oct 16 2009 •

► [A020698] 2,9,41,187,853,3891,17749,80963,369317,1684659,7684661,35053987,159900613,729395091,3327174229,15177080963,69231056357,315801119859,1440543486581,6571115193187,29974488992773,136730214577491,623702094901909,2845050045354563 ⋆ a(n) = 5 * a(n - 1) - 2 * a(n - 2), with a(0)=2, a(1)=9. • a(k - 1) = [M ^ k] _ 1,3, where M is the 3 X 3 matrix [2,1,2; 1,1,1; 2,1,2]. - _ Simone Severini _ , Jun 12 2006 • a(n) = ((17 + 4 * sqrt(17)) * (5 + sqrt(17)) ^ n + (17 - 4 * sqrt(17)) * (5 - sqrt(17)) ^ n) / (17 * 2 ^ n). •

► [A074611] 2,9,41,189,881,4149,19721,94509,456161,2215269,10814201,53022429,260917841,1287811989,6371951081,31591319949,156882857921,780119322309,3883416742361,19348364235069,96466943268401,481235204714229 ⋆ 4 ^ n + 5 ^ n. • a(n) = 9 * a(n - 1) - 20 * a(n - 2) with n>1, a(0)=2, a(1)=9. [_ Vincenzo Librandi _ , Jul 21 2010] •

► [A362381] 1,1,1,2,9,41,191,1191,9353,77897,704861,7352621,85323921,1058023825,14155416003,206100005931,3217934262481,53320102598481,939087824434009,17562552535939705,346668611080774081,7196193133818592961,156944931623033340711 ⋆ E.g.f. satisfies A(x) = exp(x + x ^ 3 / 6 * A(x)). • a(n) = n! * Sum _{ k=0..floor(n / 3) } (1 / 6) ^ k * (k + 1) ^ (n - 2 * k - 1) / (k! * (n - 3 * k)!). •

► [A192661] 1,1,2,9,41,206,1150,7023,46279,325845,2432608,19138508,157893016,1360356046,12197663221,113489506443,1092914231524,10869407462093,111421588497433,1175241503062627,12735340966302227,141585732942425447,1612917155538690101 ⋆ Floor - Sqrt transform of central Stirling numbers of the second kind (A007820). • a(n) = floor(sqrt(stirling2(2 * n,n))). •

► [A330016] 0,1,2,9,41,233,1531,11537,98047,928529,9700111,110843729,1375599151,18427159889,265038487471,4074124514129,66660157879471,1156745432699729,21220242625821871,410344904191816529,8342603132569783471,177902207647600456529,3970574571687854263471 ⋆ a(n) = Sum _{ k=1..n } (- 1) ^ (n - k) * H(k) * k!, where H(k) is the k - th harmonic number. • a(n) = Sum _{ k=1..n } (- 1) ^ (n - k) * |Stirling1(k + 1,2)|. •

► [A162273] 2,9,42,198,936,4428,20952,99144,469152,2220048,10505376,49711968,235239552,1113165504,5267555712,24926341248,117952713216,558158231808,2641233111552,12498449278464,59143297001472,279869086338048 ⋆ a(n) = ((2 + sqrt(3)) * (3 + sqrt(3)) ^ n + (2 - sqrt(3)) * (3 - sqrt(3)) ^ n) / 2. • a(n) = 6 * a(n - 1) - 6 * a(n - 2) for n > 1; a(0) = 2, a(1) = 9. •

► [A368764] 1,2,9,42,203,1085,6636,46662,373626,3363129,33632005,369953056,4439438037,57712696301,807977750594,12119666261970,193914660195396,3296549223326577,59337886019884371,1127419834377810364,22548396687556216135,473516330438680549461 ⋆ a(n) = n! * (1 + Sum _{ k=0..n } binomial(k + 3,4) / k!). • a(0) = 1; a(n) = n * a(n - 1) + binomial(n + 3,4). •

► [A276508] 0,2,9,42,208,1041,5208,26042,130209,651042,3255208,16276041,81380208,406901042,2034505209,10172526042,50862630208,254313151041,1271565755208,6357828776042,31789143880209,158945719401042,794728597005208,3973642985026041,19868214925130208 ⋆ a(n) = (2 * 5 ^ n + 3 * (- 1) ^ (floor((n - 1) / 3)) + (- 1) ^ n) / 6. • a(n) = 6 * a(n - 1) - 6 * a(n - 2) + 5 * a(n - 3). • a(n) = (5 ^ n + sqrt(3) * sin(Pi * n / 3) - cos(Pi * n / 3)) / 3. •

► [A121365] 1,1,1,2,9,43,185,732,2737,9845,34449,118102,398585,1328607,4384393,14348912,46633953,150663529,484275617,1549681962,4939611241,15690529811,49686677721,156905298052,494251688849 ⋆ a(n) = 6 * a(n - 1) - 9 * a(n - 2) + n + 1. • a(n) = (36 + (n - 4) * 3 ^ n + 9 * n) / 36. •

► [A371125] 1,2,9,43,196,882,3970,17887,80608,363254,1636944,7376591,33241289,149795989,675029164,3041899638,13707783053,61771701389,278363253873,1254394801761,5652708454881,25472931513057,114789263420590,517277526141329,2331019740675071 ⋆ Number of compositions of 6 * n into parts 1 and 6. • a(n) = Sum _{ k=0..n } binomial(n + 5 * k,n - k). • a(n) = 7 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). •

► [A002310] 1,2,9,43,206,987,4729,22658,108561,520147,2492174,11940723,57211441,274116482,1313370969,6292738363,30150320846,144458865867,692144008489,3316261176578,15889161874401,76129548195427,364758579102734,1747663347318243 ⋆ a(n) = 5 * a(n - 1) - a(n - 2). • a(n) = (1 / 42) * sqrt(21) * (5 / 2 - (1 / 2) * sqrt(21)) ^ n - (1 / 42) * (5 / 2 + (1 / 2) * sqrt(21)) ^ n * sqrt(21) + (1 / 2) * (5 / 2 + (1 / 2) * sqrt(21)) ^ n + (1 / 2) * (5 / 2 - (1 / 2) * sqrt(21)) ^ n, with n >= 0. - _ Paolo P. Lava _ , Nov 21 2008 •

► [A334680] 0,2,9,43,218,1155,6324,35511,203412,1184040,6983925,41652468,250763464,1521935948,9301989144,57203999295,353701790376,2197600497330,13713291247635,85907187607395,540072341320050,3406202392821375,21545888897092560,136655834260685220,868897745157965328 ⋆ a(n) is the total number of down - steps after the final up - step in all 2 - Dyck paths of length 3 * n (n up - steps and 2 * n down - steps). • a(n) = binomial(3 * (n + 1) + 1, n + 1) / (3 * (n + 1) + 1) - binomial(3 * n + 1, n) / (3 * n + 1). • a(n) = (17 + 23 * n) * binomial(3 * n, n - 1) / ((2 * n + 2) * (2 * n + 3)). •

► [A294270] 0,2,9,44,100,252,441,848,1296,2150,3025,4572,6084,8624,11025,14912,18496,24138,29241,37100,44100,54692,64009,77904,90000 ⋆ Sum of the cubes of the parts in the partitions of n into two parts. • a(n) = Sum _{ i=1..floor(n / 2) } i ^ 3 + (n - i) ^ 3. • a(n) = n ^ 2 * (4 * n ^ 2 - 7 * n + 4 + n * (- 1) ^ n) / 16. • a(n) = a(n - 1) + 4 * a(n - 2) - 4 * a(n - 3) - 6 * a(n - 4) + 6 * a(n - 5) + 4 * a(n - 6) - 4 * a(n - 7) - a(n - 8) + a(n - 9) for n>9. (End) •

► [A199308] 2,9,44,219,1094,5469,27344,136719,683594,3417969,17089844,85449219,427246094,2136230469,10681152344,53405761719,267028808594,1335144042969,6675720214844,33378601074219,166893005371094,834465026855469 ⋆ (7 * 5 ^ n + 1) / 4. • a(n) = 5 * a(n - 1) - 1. • a(n) = 6 * a(n - 1) - 5 * a(n - 2). •

► [A176479] 1,2,9,44,225,1182,6321,34232,187137,1030490,5707449,31760676,177435297,994551222,5590402785,31500824304,177880832001,1006362234162,5703029112297,32367243171740,183945502869345,1046646207221582,5961966567317649,33995080211156904 ⋆ a(n) = (n + 1) * A001003(n). • a(n) = Sum _{ k=0..n } binomial(n - 1,n - k) * binomial(n + k,n). - _ Nikos Apostolakis _ , Dec 31 2016 • a(n) = (n + 1) * hypergeom([1 - n, - n], [2], 2). - _ Peter Luschny _ , Jan 02 2017 •

► [A162356] 2,9,44,226,1192,6372,34288,185096,1000736,5414544,29306048,158644768,858873472,4649961024,25175459584,136304222336,737977344512,3995559643392,21632794323968,117124519584256,634137036138496 ⋆ a(n) = 8 * a(n - 1) - 14 * a(n - 2) for n>1; a(0) = 2; a(1) = 9. • a(n) = ((4 + sqrt(2)) ^ (n + 1) + (4 - sqrt(2)) ^ (n + 1)) / 4. •

► [A364476] 1,1,2,9,44,226,1241,7093,41666,250260,1529993,9488398,59545909,377451385,2413157855,15542535697,100753850132,656856027658,4303970039402,28328599504756,187214549485759,1241775795647609,8263989319451514,55163575187733922 ⋆ G.f. satisfies A(x) = 1 + x * A(x) + x ^ 2 * A(x) ^ 7. • a(n) = Sum _{ k=0..floor(n / 2) } binomial(n + 5 * k,k) * binomial(n + 4 * k,n - 2 * k) / (6 * k + 1) = Sum _{ k=0..floor(n / 2) } binomial(n + 5 * k,7 * k) * binomial(7 * k,k) / (6 * k + 1). •

► [A026302] 1,2,9,44,230,1242,6853,38376,217242,1239980,7123765,41141916,238637282,1389206210,8112107475,47495492400,278722764954,1638970147188,9654874654438,56965811111240,336590781348276,1991357644501170 ★ a(n) = number of (s(0), s(1), ..., s(n)) such that s(i) is a nonnegative integer and |s(i) - s(i - 1)| <= 1 for i = 1,2,...,n, s(0) = 0, s(2n) = n. Also a(n) = T(2n,n), where T is the array in A026300. ● a(n) = binomial(2 * n,n) * hypergeom([- n / 2, 1 / 2 - n / 2],[n + 2],4). - _ Mark van Hoeij _ , Jun 02 2010 ● a(n) = [x ^ n] ((1 - x - sqrt (1 - 2 * x - 3 * x ^ 2)) / (2 * x ^ 2)) ^ (n + 1). ● a(n) = [x ^ n] (1 / (1 - x - x ^ 2 / (1 - x - x ^ 2 / (1 - x - x ^ 2 / (1 - x - x ^ 2 / (1 - x - x ^ 2 / (1 - ...))))))) ^ (n + 1), a continued fraction. (End) ●

► [A371576] 1,2,9,44,240,1390,8404,52426,334964,2180928,14418123,96525656,653077411,4458529390,30674865164,212472058410,1480446579602,1036956014779 8,72972217926122,515674254743332,3657933383804959,26036659997517572,1859 05008055923918 ★ G.f. satisfies A(x) = (1 + x * A(x) ^ (3 / 2) * (1 + x)) ^ 2. ● a(n) = 2 * Sum _{ k=0..n } binomial(3 * k + 2,k) * binomial(k,n - k) / (3 * k + 2). ●

► [A246812] 1,2,9,44,241,1374,8145,49512,306729,1927802,12256753,78661620,508786129,3312561638,21688815729,142699137072,942873631497,6253352120322,41611854129585,277723513754364,1858529465302329,12467403845702526,83817799189753785,564633483609422808,3810607016379076521 ★ G.f.: Sum _{ n>=0 } x ^ n / (1 - x) ^ (2 * n + 1) * [Sum _{ k=0..n } C(n,k) ^ 2 * x ^ k] * [Sum _{ k=0..n } C(n,k) ^ 2 * 3 ^ k * x ^ k]. ● a(n) = Sum _{ k=0..[n / 2] } 3 ^ k * Sum _{ j=0..n - 2 * k } C(n - k, k + j) ^ 2 * C(k + j, j) ^ 2. ●

► [A052881] 0,0,2,9,44,250,1644,12348,104544,986256,10265760,116915040,1446526080,19323757440,277238626560,4251984710400,69426608025600,1202482800691200,22021300630425600,425162773111910400 ★ E.g.f.: log(1 / (1 - x)) * x / (1 - x). ● a(n) = 2 * (n - 1) * (n - 1)! * hypergeom([1,1,2 - n], [2,n + 1], - 1)) for n >=2. - _ Peter Luschny _ , Jun 11 2016 ●

► [A360684] 1,1,2,9,44,308,2391,22851,241570,2937179,39192998,579482352,93282600 61,162563246381,3062996934322,61499850730949,1327236820161040,30176760155713420,733829463528115523,18639130961053854975,504241689606231891890 ★ Expansion of Sum _{ k>=0 } (x * (1 + k ^ 2 * x)) ^ k. ● a(n) = Sum _{ k=0..floor(n / 2) } (n - k) ^ (2 * k) * binomial(n - k,k). ●

► [A074607] 2,9,45,243,1377,8019,47385,282123,1686177,10097379,60525225,362974203,2177313777,13062288339,78368947065,470199333483,2821152954177,16926788584899,101560344088905,609360902271963,3656161926847377 ★ a(n) = 3 ^ n + 6 ^ n. ● a(n) = 9 * a(n - 1) - 18 * a(n - 2) with a(0)=2, a(1)=9. - _ Vincenzo Librandi _ , Jul 21 2010 ●

► [A162725] 1,1,2,9,46,221,1002,4369,18566,77541,320002,1309529,5326686,21572461,87087002,350739489,1410132406,5662052981,22712782002,91044838249,364760483726,1460785327101,5848371485002,23409176469809,93683777468646 ★ a(n) = 8 * a(n - 1) - 19 * a(n - 2) + 12 * a(n - 3) (n >= 3) with a(0) = a(1) = 1, a(2) = 2. ● a(n) = 4 ^ n / 3 - 3 ^ n / 2 + 7 / 6. - _ Emeric Deutsch _ , Jul 19 2009 ●

► [A270386] 1,2,9,46,256,1510,9283,58848,381963,2525916,16958498,115288674,792042589,5490312864,38352695246,269719400974,1908059370583,13568804436340,96942782340802,695513575242284,5008808999633736,36195063931874308,262372258663337954 ★ Expansion of (4 / (3 * x / (1 - x))) * sin((1 / 3) * arcsin(sqrt (27 * x / 4 / (1 - x)))) ^ 2. ● a(n) = Sum _{ k=0..n } (binomial(n - 1,n - k) * (binomial(3 * k + 1,k + 1)) / (2 * k + 1))). ● a(n) = 2 * hypergeometric([5 / 3, 7 / 3, 1 - n],[5 / 2, 3], - 27 / 4)) for n>0. - _ Peter Luschny _ , Mar 16 2016 ●

► [A218045] 0,0,1,2,9,46,262,1588,10053,65686,439658,2999116,20774154,145726348,1033125004,7390626280,53281906861,386732675046,2823690230850,20725376703324,152833785130398,1131770853856100,8412813651862868 ★ Number of truth tables of bracketed formulas (case 3). ● a(n + 1) = (Sum _{ k = 0..n } (Sum _{ i=0..n - k } (binomial(k, 2 * k + i + 1 - n) * binomial(k + i - 1, i))) * binomial(2 * n,k)) / n. - _ Vladimir Kruchinin _ , Nov 19 2014 ●

► [A161798] 1,2,9,46,262,1590,10081,65986,442518,3024772,20996141,147603198,1048747751,7519252606,54332565330,395264527626,2892666314150,21281120904168,157299607827727,1167582500757800,8699515577902203 ★ G.f. satisfies: A(x) = 1 / (1 - x / (1 - x * A(x)) ^ 3) ^ 2. ● a(n) = Sum _{ k=0..n } C(2 * n - k + 1,k) / (n - k + 1) * C(n + 2 * k - 1,n - k). ● a(n,m) = Sum _{ k=0..n } C(2 * n - k + m,k) * m / (n - k + m) * C(n + 2 * k - 1,n - k). ●

► [A365855] 1,2,9,46,264,1612,10291,67830,458109,3153744,22049065,156127140,1117369884,8069610992,58735003740,430416574918,3172987081311,23514565653058,175083678670264,1309132916709168,9825882638364144,74003924059921940,559112987425763365 ★ Expansion of (1 / x) * Series _ Reversion(x * (1 + x) ^ 2 * (1 - x) ^ 4). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..n } (- 1) ^ k * binomial(2 * n + k + 1,k) * binomial(5 * n - k + 3,n - k). ●

► [A134091] 1,2,9,46,285,2021,16023,139812,1326111,13544857,147880458,1715413558,21036674321,271585117428,3677831536291,52081368845176,769123715337395,11816582501728389,188470925178659344,3114771205613655362 ★ Column 1 of triangle A134090. ● a(n) = [x ^ n] Sum _{ k=0..n + 1 } C(n + 1,k) * x ^ k / (1 - k * x) / [Product _{ i=1..k } (1 - i * x)]. ●

► [A219614] 1,1,2,9,46,335,2786,28357,325382,4280859,62437882,1010306825,17852477006,343275422503,7120802805650,158697470231757,3778977532041430,95794295907958547,2574920565897373610,73164585387874543057,219102845084143 7523230,6897461339753284915331 1 ★ Number of ways to put n labeled objects into n labeled boxes so that no two nonempty boxes are adjacent. ● a(n) = Sum _{ k>=0 } binomial(n - k + 1,k) * Stirling2(n,k) * k!. ●

► [A042793] 1,2,9,47,150,797,3338,7473,451718,910909,4095354,21387679,68258391,362679634,1518976927,3400633488,205556986207,414514605902,1863615409815,9732591654977,31061390374746,165039543528707,691219564489574,1547478672507855,9353993991460874 ★ Denominators of continued fraction convergents to sqrt(927). ● a(n) = 455056 * a(n - 8) - a(n - 16) for n>15. - _ Vincenzo Librandi _ , Jan 29 2014 ●

► [A228341] 1,2,9,47,291,2084,16963,154751,1564473,17363954,209931921,2746478927,38660636899,582656032412,9361157155491,159722327675759,2884363055319153,54962620378739666,1102136770630112473,23199834803611101599 ★ Third diagonal (T(n,2)) of triangle in A228340. ● a(2) = 1, a(3) = 2; thereafter, a(n) = n * a(n - 1) + a(n - 2). ●

► [A188818] 1,2,9,48,256,1360,7056,36000,179776,884256,4276624,20432608,96353856,449990080,2080089664,9540782208,43403888896,196212020800,881112632976,3936117388896,17487049789504,77350773736512,340574032803904,1493986588951168,6528047911024896 ★ Number of n X n binary arrays without the pattern 0 1 diagonally or antidiagonally. ● a(n) = (2 ^ (n - 2) + 2 * Sum _{ k=0..floor((n + 1) / 2) } Sum _{ l=k + 1..floor((n + 1) / 2) } binomial(n - 1, n - k - l) - binomial(n - 1, n + k - l + 1)) * (2 ^ (n - 2) + 2 * Sum _{ k=0..floor(n / 2) } Sum _{ l=k + 1..floor(n / 2) } binomial(n - 1, n - k - l - 1) - binomial(n - 1, n + k - l + 1)) for n>1. ●

► [A190315] 1,2,9,48,265,1500,8638,50360,296325,1756160,10467556,62683896,376838098,2272896626,13747543035,83354081728,506467851061,3083121435312,18799746616104,114804614071760,702016963933404,4297947201746176,26342178216979384 ★ Central coefficients of the Riordan matrix ((1 - x - x ^ 2) / (1 - 2x - x ^ 2),(x - x ^ 2 - x ^ 3) / (1 - 2x - x ^ 2)) (A190215). ● a(n) = Sum _{ i=0..n } binomial(n + i,n) * Sum _{ j=0..n - i } binomial(i + j - 1,j) * binomial(j,n - i - j). ●

► [A174687] 1,2,9,48,275,1638,9996,62016,389367,2466750,15737865,100975680,650872404,4211628008,27341497800,177996090624,1161588834303,7596549816030,49772989810635,326658445806000,2147042307851595,14130873926790390,93115841412899760 ★ Central coefficients T(2n,n) of the Catalan triangle A033184. ● a(n) = [x ^ n] ((1 - sqrt(1 - 4 * x)) / (2 * x)) ^ (n + 1). - _ Ilya Gutkovskiy _ , Nov 01 2017 ●

► [A153297] 1,2,9,48,276,1656,10212,64190,409218,2637282,17143506,112224228,738926064,4889332266,32488240779,216664589058,1449568426292,9725637277248,65417353098837,441013558347228,2979206654245122 ★ G.f.: A(x) = F(x * G(x) ^ 2) ^ 2 where F(x) = G(x / F(x)) = 1 + x * F(x) ^ 2 is the g.f. of A000108 (Catalan) and G(x) = F(x * G(x)) = 1 + x * G(x) ^ 3 is the g.f. of A001764. ● a(n) = Sum _{ k=0..n } C(2k + 2,k) / (k + 1) * C(3n - k,n - k) * 2k / (3n - k) for n>0 with a(0)=1. ●

► [A364734] 1,1,2,9,48,276,1687,10750,70597,474478,3247844,22563904,158693152,1127661358,8083795761,58390722901,424562043703,3104994695198,22825260066996,168564068029385,1249985066423749,9303815610715531,69483859839881494,520527161650519576 ★ G.f. satisfies A(x) = 1 + x * A(x) / (1 - x * A(x) ^ 5). ● a(n) = (1 / n) * Sum _{ k=0..n - 1 } binomial(n,k) * binomial(n + 4 * k,n - 1 - k) for n > 0. ●

► [A153390] 1,2,9,48,278,1696,10736,69886,465019,3149476,21643433,150554144,1058101315,7502183626,53599160532,385494328218,2788827078507,20280590381098,148167425970522,1087007419753186,8004683588800899 ★ G.f.: A(x) = F(x * G(x)) ^ 2 where F(x) = G(x * F(x)) = 1 + x * F(x) ^ 3 is the g.f. of A001764 and G(x) = F(x / G(x)) = 1 + x * G(x) ^ 2 is the g.f. of A000108 (Catalan). ● a(n) = Sum _{ k=0..n } C(3k + 2,k) * 2 / (3k + 2) * C(2n - k,n - k) * k / (2n - k) for n>0 with a(0)=1. ●

► [A368961] 1,2,9,48,286,1820,12116,83334,587537,4223582,30840355,228111390,1705509981,12868775056,97867753424,749401318160,5772939358590,44708058004740,347879528717526,2718400037837988,21323471768334120,167844335760482220,1325332432687278960 ★ Expansion of (1 / x) * Series _ Reversion(x * (1 - x - x ^ 2) ^ 2). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 2) } binomial(2 * n + k + 1,k) * binomial(3 * n - k + 1,n - 2 * k). ●

► [A074143] 1,2,9,48,300,2160,17640,161280,1632960,18144000,219542400,2874009600,40475635200,610248038400,9807557760000,167382319104000,3023343138816000,57621363351552000,1155628453883904000,24329020081766400000,536454892802949120000 ★ a(1) = 1; a(n) = n * Sum _{ k=1..n - 1 } a(k). ● a(n) = n ^ 2 * a(n - 1) / (n - 1) for n > 2. ● a(n) = ((n + 1)! - n!) / 2 for n > 1. - _ Vladimir Joseph Stephan Orlovsky _ , Apr 03 2011 ● a(n) = sum(j = 0..n, (- 1) ^ (n - j) * binomial(n, j) * (j) ^ (n + 1)) / (n + 1), n > 1, a(1) = 1. - _ Vladimir Kruchinin _ , Jun 01 2013 ● a(n) = numerator(n! / 2 * n). - _ Vincenzo Librandi _ , Apr 15 2014 ● a(n) is F(n;p) = n ^ 2(n - 1)! / 2 if p = n - 1 in A ^ c _ n. For instance for n=4 and p=n - 1: F(4; 4 - 1)= 4 ^ 2(4 - 1)! / 2 = 16 * 6 / 2 = 48. - _ Bakare Gatta Naimat _ , Nov 18 2015 ●

► [A205571] 1,1,2,9,48,305,2400,22057,230272,2708001,35412480,509177801,79864688864,135718942801,2483729876992,48699677975145,1018542571110 40,22634000289407297,532557637644976128,13226748101381102473,345792863300174479360,9492229607399841038961 ★ E.g.f.: 1 / (1 - x * cosh(x)). ● a(2 * n - 1) == 1 (mod 4), a(2 * n + 2) == 0 (mod 4), for n>=1. ● a(0) = 1; a(n) = Sum _{ k=0..floor((n - 1) / 2) } binomial(n,2 * k + 1) * (2 * k + 1) * a(n - 2 * k - 1). - _ Ilya Gutkovskiy _ , Mar 10 2022 ●

► [A358264] 1,1,2,9,48,315,2520,23415,248640,2972025,39463200,576413145,9184855680,158550787395,2947473809280,58707685211175,1247293022976000,2815603910859825,6729722055568 51200,16978695795089253225,450907982644863744000,1257363414496077396007 5 ★ Expansion of e.g.f. 1 / (1 - x * exp(x ^ 2 / 2)). ● a(n) = n! * Sum _{ k=0..floor(n / 2) } (n - 2 * k) ^ k / (2 ^ k * k!). ●

► [A191005] 1,1,2,9,48,325,2640,24997,270592,3295017,44582400,663532001,10773295104,189494874413,3589475821568,72849709631805,1577078610001920,36275031333172945,883457851718762496,22711455593084360761,614582936996534026240 ★ E.g.f. cos(x) / (cos(x) - x) ● a(n)=n! * (2 * sum(m..1,(n - 1) / 2, (sum(j= 0..m, binomial(n / 2 - m + j - 1,j) * 4 ^ (m - j) * sum(i=0..j, (i - j) ^ (2 * m) * binomial(2 * j,i) * (- 1) ^ (m + j - i)))) / (2 * m)!) + 1), n>0, a(0)=1. ●

► [A055997] 1,2,9,50,289,1682,9801,57122,332929,1940450,11309769,65918162,384199201,2239277042,13051463049,76069501250,443365544449,2584123765442,15061377048201,87784138523762,511643454094369,2982076586042450,17380816062160329,101302819786919522 ★ Numbers n such that n(n - 1) / 2 is a square. ● a(n) = 6 * a(n - 1) - a(n - 2) - 2; n >= 3, a(1) = 1, a(2) = 2. ● a(n) = (1 / 2) + (1 / 4) * (3 + 2 * sqrt(2)) ^ (n - 1) + (1 / 4) * (3 - 2 * sqrt(2)) ^ (n - 1). - _ Antonio Alberto Olivares _ , Feb 21 2006; corrected by _ Michel Marcus _ , Apr 20 2020 ● a(n) = + 7 * a(n - 1) - 7 * a(n - 2) + 1 * a(n - 3). - _ Joerg Arndt _ , Mar 06 2013 ● a(n) = (1 / 4) * (t ^ 2 + t ^ (- 2) + 2), where t = (1 + sqrt(2)) ^ (n - 1). - _ Ridouane Oudra _ , Nov 29 2019 ●

▶ [A115599] 2,9,50,289,1682,9801,57122,332929,1940450,11309769,65918162,384199201,2239277042,13051463049,76069501250,443365544449,2584123765442,15061377048201,87784138523762,511643454094369,2982076586042450,17380816062160329,101302819786919522 ⋆ Consider all Pythagorean triples (X,X + 1,Z) ordered by increasing Z; sequence gives Z - X values. • a(n) = (2 + (3 - 2 * sqrt(2)) ^ n + (3 + 2 * sqrt(2)) ^ n) / 4. • a(n) = 7 * a(n - 1) - 7 * a(n - 2) + a(n - 3). •
▶ [A225006] 1,2,9,50,295,1792,11088,69498,439791,2803658,17978389,115837592,749321716,4863369656,31655226108,206549749930,1350638103791,8848643946550,58069093513635,381650672631330,2511733593767295,16550500379912640,109176697072162080 ⋆ Number of n X n 0..1 arrays with rows unimodal and columns nondecreasing. • a(n) = Sum _{ d=0..n } binomial(2d + n - 1,n - 1). Also, a(n) is the coefficient of x ^ (2n) in (1 + x) ^ (- n - 1) / (1 - x). - _ Max Alekseyev _ , Sep 14 2015 •
▶ [A192945] 1,1,2,9,50,311,2072,14460,104346,772255,5829538,44710705,347424376,2729299748,21640457360,172957598120,1391926695402,11270059892943,91740990170150,750364940281275,6163650579487170,50824871829196575 ⋆ G.f. satisfies: A(x) = 1 + x * Sum _{ n>=0 } (A(x) ^ 2 - 1) ^ n. • a(n) = (1 / n) * Sum _{ k=0..n - 1 } binomial(n + k - 1, n - 1) * Sum _{ i=ceiling((n - k - 1) / 2)..n - k - 1 } binomial(i, n - k - i - 1) * binomial(n + k + i - 1, n + k - 1), n > 0, a(0)=1. - _ Vladimir Kruchinin _ , Oct 11 2011 •
▶ [A026945] 1,2,9,51,323,2188,15511,113634,853467,6536382,50852019,400763223,3192727797,25669818476,208023278209,1697385471211,13933569346707,114988706524270,953467954114363,7939655757745265,66368199913921497 ⋆ A bisection of the Motzkin numbers A001006. • a(n) = (2 / Pi) * integral(x= - 1..1, (1 + 2 * x) ^ (2 * n) * sqrt(1 - x ^ 2)). - _ Peter Luschny _ , Sep 11 2011 • a(n) = ((9 - 9 * n) * (2 * n - 3) * (4 * n + 1) * a(n - 2) + ((8 * n - 2)) * (10 * n ^ 2 - 5 * n - 3) * a(n - 1)) / ((1 + 2 * n) * (4 * n - 3) * (n + 1)) for n>=2. • a(n) = hypergeom([1 / 2 - n, - n], [2], 4). (End) •
▶ [A355397] 1,2,9,51,350,2799,25373,255854,2831177,34023919,440414146,609934645 5,89873849705,1402403637418,23081230257449,399284248276827,7238080522101270,137125745341692863,2708536196071195365,55660194042713099510,1187724805063462045289 ⋆ Expansion of e.g.f. exp(exp(3 * x) / 3 + exp(2 * x) / 2 - 5 / 6). • a(0) = 1; a(n) = Sum _{ k=1..n } (3 ^ (k - 1) + 2 ^ (k - 1)) * binomial(n - 1,k - 1) * a(n - k). •
▶ [A193465] 0,2,9,52,335,2466,20447,189064,1930959,21603430,262869959,3457226268,48880169351,739429561066,11918051268255,203914545928336,3691384616598047,70491995143458894,1416242276574905879,29862732908481855460,659413025994777460119 ⋆ Row sums of triangle A061312. • a(n) = ((n - n ^ 3) * a(n - 3) + (2 * n + n ^ 2 - n ^ 3) * a(n - 2) - (1 - n - 2 * n ^ 2) * a(n - 1)) / n with a(0) = 0, a(1) = 2 and a(2) = 9. •
▶ [A069271] 1,2,9,52,340,2394,17710,135720,1068012,8579560,70068713,580034052,4855986044,41043559340,349756577100,3001701610320,25921837477692,225083787458904,1963988670706228,17211860478150800,151433425446423120 ⋆ a(n) = binomial(4 * n + 1,n) * 2 / (3 * n + 2). • a(n) is the sum of top row terms in M ^ n, where M is the infinite square production matrix with the triangular series in each column as follows, with the rest zeros: • a(n) = 2 * binomial(4n + 1,n - 1) / n for n>0, a(0)=1. - _ Bruno Berselli _ , Jan 19 2014 • a(n) = binomial(4 * n + 2,n) / (2 * n + 1). - _ Alexander Burstein _ , Nov 08 2021 •
▶ [A355789] 1,1,1,2,9,52,363,3082,30817,353640,4582451,66201126,1055059569,18388749628,347959910171,7104264359810,155670829426113,3644019928871376,90755590315468003,2396199304577668190,66855611152288637713,1965490144910199279780 ⋆ E.g.f. satisfies log(A(x)) = (1 - exp(- 2 * x)) * A(x) / 2. • a(n) = Sum _{ k=0..n } (- 2) ^ (n - k) * (k + 1) ^ (k - 1) * Stirling2(n,k). •
▶ [A052882] 0,1,2,9,52,375,3246,32781,378344,4912515,70872610,1124723193,19471590876,365190378735,7376016877334,159620144556645,3684531055645648,90366129593683035,2346673806524446218,64325158601880061137,1856031746386568222660,56231443721132068265415 ⋆ A simple grammar: rooted ordered set partitions. • a(0) = 0, a(1) = 1; a(n) = n! * [x ^ n] exp(x) * Sum _{ k=1..n - 1 } a(k) * x ^ k / k!. - _ Ilya Gutkovskiy _ , Oct 17 2017 •
▶ [A110322] 1,2,9,52,425,4206,50737,708464,11350257,204171130,4084757561,89849981772,2156575777369,56068679418662,1569955094823585,47098171778191816,1507149193966389857,51242941744764975474 ⋆ Row sums of A110321, a number triangle related to the Jacobsthal numbers. • a(n) - n * a(n - 1) - 2 * n * (n - 1) * a(n - 2) - 1 = 0. - _ Martin Clever _ , Mar 22 2023 • a(n) = (2 * e ^ (1 / 2) * 2 ^ n * Gamma(n + 1,1 / 2) + e ^- 1 * (- 1) ^ n * Gamma(n + 1, - 1)) / 3. - _ Martin Clever _ , Mar 25 2023 •
▶ [A161631] 1,1,2,9,52,425,4206,50827,713000,11500785,208833850,4226139731,94226705772,2296472176297,60727113115046,1732020500240955,52998549321251536,1731977581804704737,60205422811336194546 ⋆ E.g.f. satisfies A(x) = 1 + x * exp(x * A(x)). • a(n) = n! * Sum _{ k=0..n } C(n - k + 1,k) / (n - k + 1) * k ^ (n - k) / (n - k)!. • a(n,m) = n! * Sum _{ k=0..n } m * C(n - k + m,k) / (n - k + m) * k ^ (n - k) / (n - k)!. •
▶ [A121678] 1,2,9,52,425,4236,49294,655096,9731313,159114880,2832245911,54400757016,1119436524947,24532373640334,569732648555295,13962373137304496,359767723241891425,9715902692094061488 ⋆ a(n) = [x ^ n] (1 + x * (1 + x) ^ n) ^ (n + 1). • a(n) = Sum _{ k=0..n + 1 } C(n + 1,k) * C(n * k,n - k). •
▶ [A074602] 2,9,53,351,2417,16839,117713,823671,5765057,40354119,282476273,1977328791,13841291297,96889018599,678223089233,4747561542711,33232930635137,232630514118279,1628413598172593,11398895185897431 ⋆ a(n) = 2 ^ n + 7 ^ n. • a(n) = 7 * a(n - 1) - 2 ^ n = 9 * a(n - 1) - 14 * a(n - 2). •
▶ [A351815] 1,1,2,9,53,386,3422,35300,412084,5364255,76952267,1203835714,20362911276,369906504888,7175947738672,147944905766929,3227970924123268,74264452788294013,1795825803391367571,45514495928632484735,1205981001167335524448,33331235326744168532151 ⋆ G.f. A(x) satisfies A(x) = 1 + x * A(x / (1 - x) ^ 5) / (1 - x). • a(0) = 1; a(n) = Sum _{ k=0..n - 1 } binomial(n + 4 * k - 1,n - k - 1) * a(k). •
▶ [A073986] 0,2,9,54,300,1296,6300,39312,262440,1679616,10349856,62355744,369476640,2179768320,12958657344,77751944064,468419708160,2821109907456,16957996040448,101753146100736,609954817881600,3656158440062976,21926115464435712,131557435432187904 ⋆ Number of strings of length n over Z _ 6 with trace 2 and subtrace 3. • a(n; t, s) = a(n - 1; t, s) + a(n - 1; t + 5, s + 5t + 1) + a(n - 1; t + 4, s + 4t + 4) + a(n - 1; t + 3, s + 3t + 3) + a(n - 1; t + 2, s + 2t + 2) + a(n - 1; t + 1, s + t + 1) where t is the trace and s is the subtrace. •
▶ [A371698] 2,9,54,323,1848,10293,56738,312327,1723692,9549785,53121654,296593547,1661423104,9333552509,52565738570,296696569871,1677887732820,9505147063713,53928737011358,306393222740883,1742919983985192,9925790283119429,56584658970159474,322879453747840023 ⋆ Number of partial order - preserving or - reversing transformations of a chain of length n. • a(n) = 4 * Sum _{ k=0..n - 1 } binomial(n - 1, k) * binomial(n + k, k) - (1 + n * (2 ^ n - 1)). •
▶ [A370474] 1,2,9,54,372,2778,21873,178786,1502649,12904524,112741664,998871030,8953443276,81047485148,739846170864,6803054508702,62954736555836,585850907166084,5479077065774682,51470699845616004,485456696541512442,4595280949098247422 ⋆ G.f. satisfies A(x) = 1 + x * A(x) ^ (3 / 2) * (1 + A(x) ^ (3 / 2)). • a(n) = Sum { k=0..n } binomial(n,k) * binomial(3 * n / 2 + 3 * k / 2 + 1,n) / (3 * n / 2 + 3 * k / 2 + 1). •
▶ [A089436] 1,2,9,54,374,2820,22485,186494,1592778,13914108,123750874,1116809628,10201516332,94140605832,876332565837,8219124900558,77594375595266,736785675010380,7031930543228910,67420537625021460,649070964647075700 ⋆ Number of non - crossing connected graphs on n nodes on a circle in which a fixed (distinguished) node has degree one. • a(n) = Sum _{ k=2..2 * n - 4 } 2 * binomial(k - 2, n - 3) * binomial(3 * n - 5, 2 * n - k - 4) / (n - 2) for n > 2. - _ Andrew Howroyd _ , Nov 12 2017 •
▶ [A368178] 1,2,9,54,375,2848,22981,193742,1688427,15101778,137930199,1281629088,12081441411,115288530516,1111783691037,10819906562622,106147110898419,1048748721598078,10427413491373843,104265186535823798,1047894080773661481 ⋆ Number of ordered trees with n + 1 leaves, no node of outdegree 1, and having as many leaves marked as the number of nodes of outdegree greater than 1. • a(n) = Sum _{ k=1..n } binomial(n + k, k) * binomial(n, k - 1) * binomial(n, k) / n for n > 0. • a(n) = (n + 1) * hypergeom([1 - n, - n, n + 2], [2, 2], 1). - _ Peter Luschny _ , Jan 03 2024 •
▶ [A366177] 1,2,9,55,382,2866,22648,185722,1565725,13486036,118163960,1049908872,9437623630,85671158757,784247925911,7231502249005,67106161264660,626221543735984,5872908642398977,55323451127462123,523240983692525619,4966658879361416551 ⋆ G.f. A(x) satisfies A(x) = 1 / (1 - x) + x * A(x) ^ 3 / (1 - x) ^ 2. • a(n) = Sum _{ k=0..n } binomial(n + 3 * k,n - k) * binomial(3 * k,k) / (2 * k + 1). •
▶ [A036074] 1,2,9,55,412,3619,36333,408888,5080907,68914023,1011165446,15935379409,268125052373,4792458452162,90605469012877,1805135197261131,37775862401203916,827992670793489263 ⋆ Expansion of e.g.f. exp((exp(p * x) - p - 1) / p + exp(x)) for p=4. • a(n) = sum(sum(binomial(m,i) * sum(binomial(i,j) * (1 / 4) ^ j * (3 * j + i) ^ n,j,0,i) * (- 5 / 4) ^ (m - i),i,0,m) / m!,m,1,n), n > 0. - _ Vladimir Kruchinin _ , Sep 14 2010 •
▶ [A081004] 2,9,56,378,2585,17712,121394,832041,5702888,39088170,267914297,1836311904,12586269026,86267571273,591286729880,4052739537882,27777890035289,190392490709136,1304969544928658,8944394323791465,61305790721611592,420196140727489674 ⋆ a(n) = Fibonacci(4n + 2) + 1, or Fibonacci(2n + 2) * Lucas(2n). • a(n) = 8 * a(n - 1) - 8 * a(n - 2) + a(n - 3). • a(n) = 1 + (1 / 2) *{ [(7 / 2) - (3 / 2) * sqrt(5)] ^ n + [(7 / 2) + (3 / 2) * sqrt(5)] ^ n }+ (3 / 10) * sqrt(5) *{ [(7 / 2) + (3 / 2) * sqrt(5)] ^ n - [(7 / 2) - (3 / 2) * sqrt(5)] ^ n } , with n>=0. - _ Paolo P. Lava _ , Dec 01 2008 •
▶ [A198953] 1,2,9,56,400,3095,25240,213633,1859006,16527544,149472480,1370794835,12718060947,119158146283,1125816405458,10714275588727,102615375322564,988302823695146,9565859385140272,93000625498797314,907782305262566776,8892941663606408172 ⋆ G.f. satisfies A(x) = (1 + x * A(x)) * (1 + x * A(x) ^ 3). • a(n) = Sum _{ j=0..n } ((Sum _{ k=0..j } ((binomial(2 * n + 2 * k + 2, j - k) * binomial(n + 2 * k,k)) / (k + n + 1))) * (- 1) ^ (n - j) * binomial(2 * n - j,n - j)). - _ Vladimir Kruchinin _ , Mar 13 2016 • a(n) = Sum _{ k=0..n } binomial(n + 2 * k + 1,k) * binomial(n + 2 * k + 1,n - k) / (n + 2 * k + 1). - _ Seiichi Manyama _ , Jul 19 2023 •
▶ [A186262] 1,2,9,56,420,3564,33033,327184,3413124,37119160,417733316,4837527072,57397642640,695394516600,8579210711625,107541060458400,1367139314643300,17599273282621800,229116465142280100,3013124257920348000,39991185556010816400 ⋆ Expansion of 3F2(2, 1 / 2, 3 / 2; 3, 4;16 x). • a(n) = C(2 * n,n) * C(2 * n + 2,n) / C(n + 3,3). - _ Vaclav Kotesovec _ , Oct 28 2012 •
▶ [A223381] 2,9,57,366,2358,15204,98052,632376,4078488,26304144,169648272,1094144736,7056675168,45511953984,293528880192,1893111501696,12209603211648,78745710676224,507869653293312,3275500119584256 ⋆ Number of n X 2 0..2 arrays with all horizontally or vertically connected equal values in a straight line, and new values 0..2 introduced in row major order. • a(n) = (- (4 - sqrt(6)) ^ n * (- 6 + sqrt(6)) + (4 + sqrt(6)) ^ n * (6 + sqrt(6))) / 40 for n>1. •
▶ [A047852] 1,2,9,58,401,2802,19609,137258,960801,6725602,47079209,329554458,2306881201,16148168402,113037178809,791260251658,5538821761601,38771752331202,271402266318409,1899815864228858 ⋆ a(n) = T(4,n), array T given by A047848. • a(n) = (7 ^ n + 5) / 6. - _ Ralf Stephan _ , Feb 14 2004 • a(0) = 1, a(1) = 2, a(n) = 8 * a(n - 1) - 7 * a(n - 2) for n > 1. • a(n) = 7 * a(n - 1) - 5, with a(0)=1. - _ Vincenzo Librandi _ , Aug 06 2010 •
▶ [A366401] 1,2,9,58,436,3572,30935,278532,2581043,24453404,235790159,2306367444,22829030276,228240387070,2301498462245,23379656027868,239038022347243,2457891085704180,25400777844198274,263685720722690420,2748421883496133866 ⋆ G.f. A(x) satisfies A(x) = (1 + x * A(x) ^ (7 / 2)) / (1 - x). • a(n) = Sum _{ k=0..n } binomial(n + 5 * k / 2,n - k) * binomial(7 * k / 2,k) / (5 * k / 2 + 1). •
▶ [A059115] 1,2,9,58,485,4986,60877,861554,13878153,250854130,5030058161,110837000682,2662669300909,69270266115818,1940260799150325,58220372514830626,1863293173842259217,63356877145370671074 ⋆ Expansion of e.g.f.: ((1 - x) / (1 - 2 * x)) * exp(x / (1 - x)). • a(n) = n! * Sum _{ k=0..n } LaguerreL(n - k, k - 1, - 1). - _ G. C. Greubel _ , Feb 23 2021 •
▶ [A366240] 1,2,9,60,432,3378,27792,237122,2079132,18620709,169614960,1566540573,14635978998,138080055192,1313596636812,12587218990644,121378106852988,1176981533610012,11469587139406515,112265849283068877,11032562003556

96855 ⋆ G.f. A(x) satisfies A(x) = 1 + x + x * (1 + x) ^ 3 * A(x) ^ 3. • a(n) = Sum _{ k=0..n } binomial(5 * k + 1,n - k) * binomial(3 * k,k) / (2 * k + 1). •

► [A116364] 1,2,9,60,490,4534,45689,489920,5508000,64276492,773029466,953103552,119990158054,1537695160070,20009930706137,263883333450760,3521003563829212,47470845904561648,645960472314074400 ⋆ Row squared sums of Catalan triangle A033184. • a(n) = Sum _{ k=0..n } (C(2 * n - k + 1,n - k) * (k + 1) / (2 * n - k + 1)) ^ 2. •

► [A120970] 1,1,2,9,60,504,4946,54430,655362,8496454,117311198,1711459903,2628829200,420370445830,7021029571856,121859518887327,2192820745899978,40831103986939664,785429260324068156,15585831041632684997,318649154587152781210 ⋆ G.f. satisfies: A(x / A(x) ^ 2) = 1 + x ; thus A(x) = 1 + Series _ Reversion(x / A(x) ^ 2). • a(n) = [x ^ (n - 1)] (1 / n) * A(x) ^ (2n) for n>=1 with a(0)=1; i.e., a(n) equals 1 / n times the coefficient of x ^ (n - 1) in A(x) ^ (2n) for n>=1. [_ Paul D. Hanna _ , Nov 16 2008] •

► [A349289] 1,2,9,61,493,4371,41065,401563,4044097,41658044,436862457,4648331765,50057856881,544557984498,5975422922413,66059269445451,735064865871889,8226310738656892,92531697191189777,1045551973586825023,11862334695799444993 ⋆ G.f. A(x) satisfies: A(x) = 1 / ((1 - x) * (1 - x * A(x) ^ 3)). • a(n) = Sum _{ k=0..n } binomial(n + 2 * k,3 * k) * binomial(4 * k,k) / (3 * k + 1). • a(n) = F([1 / 4, 1 / 2, 3 / 4, (1 + n) / 2, (2 + n) / 2, - n], [1 / 3, 2 / 3, 2 / 3, 1, 4 / 3], - 2 ^ 10 / 3 ^ 6) where F is the generalized hypergeometric function. - _ Stefano Spezia _ , Nov 13 2021 •

► [A074181] 1,2,9,64,125,1296,16807,262144,531441,10000000,214358881,5159780352,10604499373,289254654976,8649755859375,281474976710656,5826222372297761,20822964865671168,799006685782884121 ⋆ Smallest power of n >= n!. • a(n) = n ^ ceiling(log _ n(n!)) for n>1. •

► [A067297] 1,2,9,64,584,6144,70576,859520,10909440,142773760,1913027840,26115182592,361936623616,5079287545856,72033971859456,1030768222437376,14864066521333760,215791593346695168 ⋆ Convolution of C(2,2; n) := A064340(n) (generalized Catalan numbers) with itself. • a(n)=sum(C(2, 2; k)C(2, 2; n - k), k=0..n). •

► [A364337] 1,2,9,68,580,5406,53270,545844,5757332,62094217,681653493,7591431752,85558696024,974024788280,11184192097016,129378232148016,1506363564912368,17639001584452320,207593804132718948,2454236122156830254,2913271409692056954,34708678603510398344 6 ⋆ G.f. satisfies A(x) = (1 + x) * (1 + x * A(x) ^ 4). • a(n) = Sum _{ k=0..n } binomial(4 * k + 1,k) * binomial(4 * k + 1,n - k) / (4 * k + 1). •

► [A186183] 1,1,2,9,68,646,6857,77695,919642,11233858,140544189,1791614714,23187320736,303861373679,4023883823059,53762917329659,723854999871943,9811154512175468,133762940465746744,1833187046654598058,25239916331888828 96 ⋆ Expansion of 1 / (1 - x * A002295(x)). • a(n) = Sum _{ k=1..n } k / (5 * n - 4 * k) * binomial(6 * n - 5 * k - 1,n - k) if n>0; a(0)=1. •

► [A056918] 2,9,79,702,6239,55449,492802,4379769,38925119,345946302,3074591599,27325378089,242853811202,2158358922729,19182376493359,170483029517502,1515164889164159,13466000972959929,119678843867475202 ⋆ a(n) = 9 * a(n - 1) - a(n - 2); a(0)=2, a(1)=9. • a(n) = { 9 * [((9 + sqrt(77)) / 2) ^ n - ((9 - sqrt(77)) / 2) ^ n] - 2 * [((9 + sqrt(77)) / 2) ^ (n - 1) - ((9 - sqrt(77)) / 2) ^ (n - 1)] }/ sqrt(77). • a(n) = ap ^ n + am ^ n, with ap := (9 + sqrt(77)) / 2 and am := (9 - sqrt(77)) / 2. •

► [A087798] 2,9,83,756,6887,62739,571538,5206581,47430767,432083484,3936182123,35857722591,326655685442,2975758891569,27108485709563,246952130277636,2249677658208287,20494051054152219,186696137145578258 ⋆ a(n) = 9 * a(n - 1) + a(n - 2), starting with a(0) = 2 and a(1) = 9. • a(n) = ((9 + sqrt(85)) / 2) ^ n + ((9 - sqrt(85)) / 2) ^ n. •

► [A291622] 2,9,94,777,3286,10771,29366,69873,149950,297111,553114,980953,1677014,2793771,4584286,7492065,12335422,20688751,35673698,63602601,117391702,223644675,437338630,872239057,1763820926 ⋆ Number of irredundant sets in the n X n rook complement graph. • a(n) = 2 * n * (2 ^ n) + (5 * n ^ 6 - 21 * n ^ 5 + 47 * n ^ 4 - 51 * n ^ 3 + 8 * n ^ 2 - 24 * n + 12) / 12 for n > 3. • a(n) = 11 * a(n - 1) - 53 * a(n - 2) + 147 * a(n - 3) - 259 * a(n - 4) + 301 * a(n - 5) - 231 * a(n - 6) + 113 * a(n - 7) - 32 * a(n - 8) + 4 * a(n - 9) for n > 12. •

► [A041239] 1,2,9,101,413,927,20807,42541,190971,2143222,8763859,19670940,441524539,902720018,4052404611,45479170739,185969087567,417417345873,9369150696773,19155718739419,85992025654449 ⋆ Denominators of continued fraction convergents to sqrt(131). • a(n) = 21220 * a(n - 6) - a(n - 12). G.f.: - (x ^ 10 - 2 * x ^ 9 + 9 * x ^ 8 - 101 * x ^ 7 + 413 * x ^ 6 - 927 * x ^ 5 - 413 * x ^ 4 - 101 * x ^ 3 - 9 * x ^ 2 - 2 * x - 1) / (x ^ 12 - 21220 * x ^ 6 + 1). [_ Colin Barker _ , Jul 19 2012] •

► [A098610] 2,9,101,999,10001,99999,1000001,9999999,100000001,999999999,1000000001,99999999999,1000000000001,9999999999999,100000000000001,9999999999999999,1000000000000001,99999999999999999,1000000000000000001,9999999999999999999,100000000000000000001 ⋆ a(n) = 10 ^ n + (- 1) ^ n. • a(n) = 9 * a(n - 1) + 10 * a(n - 2) for n > 1. •

► [A309452] 0,2,9,107,450,450,67678,655923,2303009,13832611,54186218,1749037712,13612998170,27454285371,124343295778,4193681732872,18436366262701,217833949680307,1380986519616342,3009400117526791,3009400117526791,16259393271250793,35138691172124583 5 ⋆ The successive approximations up to 7 ^ n for 7 - adic integer 4 ^ (1 / 5). • a(0) = 0 and a(1) = 2, a(n) = a(n - 1) + 2 * (a(n - 1) ^ 5 - 4) mod 7 ^ n for n > 1. •

► [A295331] 1,2,9,128,521,649,1819,2468,11691,166142,676259,842401,2361061,3203462,15174909,215652188,877783661,1093435849,3064655359,4158091208,19697020191,279916373882,1139362515719,1419278889601,3977920294921 ⋆ Numerators of continued fraction convergents to sqrt(13) / 2 = A295330. • a(n) = 1298 * a(n - 6) - a(n - 12), n >= 12, with inputs a(0)..a(11). •

► [A041795] 1,2,9,182,737,1656,66977,135610,609417,12323950,49905217,112134384,4535280577,9182695538,41266062729,834503950118,3379281863201,7593067676520,307101988924001,621797045524522,2794290171022089,56507600465966302 ⋆ Denominators of continued fraction convergents to sqrt(418). • a(n) = 67714 * a(n - 6) - a(n - 12) for n>11. - _ Vincenzo Librandi _ , Dec 24 2013 •

► [A042675] 1,2,9,263,1061,2385,139391,281167,1264059,36938878,149019571,334978020,19577744731,39490467482,177539614659,5188139292593,20930096785031,47048332862655,274973340281902 1,5546515138500697,24935793956821809,72868453986833158 ⋆ Denominators of continued fraction convergents to sqrt(867). • a(n) = 140452 * a(n - 6) - a(n - 12) for n>11. - _ Vincenzo Librandi _ , Dec 20 2013 •

► [A007089] 0,1,2,10,11,12,20,21,22,100,101,102,110,111,112,120,121,122,200,201,202,210,211,212,220 ⋆ Numbers in base 3. • a(0)=0, a(n) = 10 * a(n / 3) if n==0 (mod 3), a(n) = a(n - 1) + 1 otherwise. - _ Benoit Cloitre _ , Dec 22 2002 • a(n) = 10 * a(floor(n / 3)) + (n mod 3) if n > 0, a(0) = 0. - _ M. F. Hasler _ , Feb 15 2023 •

► [A169683] 0,1,2,10,11,12,20,100,101,102,110,111,112,120,200,1000,1001,1002,1010,1011,1012,1020,1100,1101,1102 ⋆ The canonical skew - binary numbers. • a(0) = 0; for n >= 1, a(2 ^ n - 1 + i) = a(i) + 10 ^ (n - 1) for 0 <= i <= 2 ^ n - 1. - _ Jianing Song _ , May 16 2022 •

► [A104459] 1,2,10,11,100,110,1000,1100,10000,11000,100000,110000,1000000,1100000,10000000,11000000,100000000,110000000,1000000000,1100000000,10000000000,11000000000,100000000000,110000000000,1000000000000 ⋆ Possible differences between adjacent palindromes. • a(n) = 2 if n = 2; 11 * 10 ^ ((n - 4) / 2) if n even >= 4; 10 ^ ((n - 1) / 2) if n odd. • a(n) = 10 * a(n - 2), starting 1,2,10,11. •

► [A104238] 2,10,12,16,22,126,136,180,256,268,276,366,388,396,438,462,606,642,652,658,676,738,760,768,982 ⋆ Positive integers n such that n ^ 5 + 1 is semiprime. • a(n) ^ 5 + 1 is semiprime. a(n) + 1 is prime and a(n) ^ 4 - a(n) ^ 3 + a(n) ^ 2 - a(n) + 1 is prime. •

► [A022367] 2,10,12,22,34,56,90,146,236,382,618,1000,1618,2618,4236,6854,11090,17944,29034,46978,76012,122990,199002,321992,520994 ⋆ Fibonacci sequence beginning 2, 10. • a(n) = 11 * F(n) + F(n - 3). - _ J. M. Bergot _ , Jul 19 2017 •

► [A061855] 0,2,10,12,42,52,56,170,178,204,212,232,240,682,722,738,812,852,868,920,936,976,992,2730,2762 ⋆ Symmetric totally balanced binary sequences: those terms of A014486 which are equal to their reversed complement. • a(0) = 0 and the rest with the Maple function map(op, [seq(PalTotBalBinSequences(j), j =1..10)]); •

► [A062317] 1,2,10,13,29,34,58,65,97,106,146,157,205,218,274,289,353,370,442,461,541,562,650,673,769 ⋆ Numbers k such that 5 * k - 1 is a perfect square. • a(n) = ((2 + 5 * (n - 1) / 2) ^ 2 + 1) / 5 if n is odd; a(n) = ((3 + 5 * (n - 2) / 2) ^ 2 + 1) / 5 if n is even. • a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). • a(n) = (10 * n * (n - 1) + 5 - (6 * n - 3) * (- 1) ^ n) / 8. - _ Eric Simon Jacob _ , Jan 20 2020 •

► [A091999] 2,10,14,22,26,34,38,46,50,58,62,70,74,82,86,94,98,106,110,118,122,130,134,142,146 ⋆ Numbers that are congruent to { 2, 10 } mod 12. • a(n) = 12 * (n - 1) - a(n - 1), with a(1)=2. - _ Vincenzo Librandi _ , Nov 16 2010 • a(n) = a(n - 1) + a(n - 2) - a(n - 3); a(1)=2, a(2)=10, a(3)=14. - _ Harvey P. Dale _ , Jun 24 2013 • a(n) = 6 * n - 3 + (- 1) ^ n. - _ Wesley Ivan Hurt _ , Apr 23 2015 •

► [A212160] 2,10,15,23,28,36,41,49,54,62,67,75,80,88,93,101,106,114,119,127,132,140,145,153,158 ⋆ Numbers that are congruent to { 2, 10 } mod 13. • a(n) = (1 / 4) * (26 * n - 3 * (- 1) ^ n + 11). - _ Paolo P. Lava _ , May 16 2012 •

► [A134861] 2,10,15,23,31,36,44,49,57,65,70,78,86,91,99,104,112,120,125,133,138,146,154,159,167 ⋆ Wythoff BAA numbers. • a(n) = B(A(A(n))), n>=1, with A=A000201, the lower Wythoff sequence and B=A001950, the upper Wythoff sequence. •

► [A181474] 1,2,10,15,42,56,120,150,275,330,546,637,980,1120,1632,1836,2565,2850,3850,4235,5566,6072,7800,8450,10647 ⋆ Sequence related to the Hankel transform of A105523(n + 5). • a(n) = 2 ^ n * (n + 2) * (n + 3) * Gamma(floor(n / 2) + 3) * Gamma(floor((n + 1) / 2) + 1 / 2) / (12n! * sqrt(Pi)) (suggested by WolframAlpha). • a(n) = + a(n - 1) + 4 * a(n - 2) - 4 * a(n - 3) - 6 * a(n - 4) + 6 * a(n - 5) + 4 * a(n - 6) - 4 * a(n - 7) - a(n - 8) + a(n - 9). a(n) = (n + 3) * (n + 2) * (2 * n ^ 2 + 2 * (- 1) ^ n * n + 10 * n + 5 * (- 1) ^ n + 11) / 96. [_ R. J. Mathar _ , Oct 23 2010] •

► [A105041] 2,10,16,18,46,52,66,72,78,106,136,148,226,228,240,262,282,330,442,508,616,630,732,750,756 ⋆ Positive integers k such that k ^ 7 + 1 is semiprime. • a(n) ^ 7 + 1 is semiprime. a(n) + 1 is prime and a(n) ^ 6 - a(n) ^ 5 + a(n) ^ 4 - a(n) ^ 3 + a(n) ^ 2 - a(n) + 1 is prime. •

► [A366508] 2,10,17,50,122,325,842,2210,5777,15130,39602,103685,271442,710650,1860497,4870850,12752042,33385285,87403802,228826130,599074577,1568397610,4106118242,10749957125,28143753122 ⋆ a(n) = Lucas(2 * n) + 2 * (- 1) ^ n + 1. • a(n) = 3 * a(n - 1) - 3 * a(n - 3) + a(n - 4). •

► [A077247] 1,2,10,17,79,134,622,1055,4897,8306,38554,65393,303535,514838,2389726,4053311,18814273,31911650,148124458,251239889,1166181391,1978007462,9181326670,15572819807,72284431969 ⋆ Combined Diophantine Chebyshev sequences A077245 and A077243. • a(n) = 8 * a(n - 2) - a(n - 4), n >= 4. • a(n) = (a(n - 2) * a(n - 4) - 168) / a(n - 6), n >= 6. • a(n) = (a(n - 1) * a(n - 2) - 15 / 2 - 9 / 2 * (- 1) ^ n) / a(n - 3), n >= 3. (End) •

► [A017089] 2,10,18,26,34,42,50,58,66,74,82,90,98,106,114,122,130,138,146,154,162,170,178,186,194 ⋆ a(n) = 8 * n + 2. • a(n) = 8 * n + 2; a(n) = 2 * a(n - 1) - a(n - 2). - _ Vincenzo Librandi _ , May 28 2011 •

► [A018227] 2,10,18,36,54,86,118,168,218,290,362,460,558,686,814,976,1138,1338,1538,1780,2022,2310,2598,2936,3274 ⋆ Magic numbers: atoms with full shells containing any of these numbers of electrons are considered electronically stable. • a(n) = a(n - 1) + ((2 * n + 3 + (- 1) ^ n) ^ 2) / 8; a(n) = (2 * n ^ 3 + 12 * n ^ 2 + 25 * n - 6 + (- 1) ^ n * (3 * n + 6)) / 12. - _ Warut Roonguthai _ , Jun 20 2005 • a(n) = n * ((n + 3) ^ 2 + 2) / 6 + (n + 2) * (1 + (- 1) ^ n) / 4 - 1, n >= 1. • a(n) = (n + 1) * (n + 2) * (n + 3) / 6 + (n + 2) * (1 + (- 1) ^ n) / 4 - 2, n >= 1. • a(n) = T _{ n + 1 } + (n + 2) * (1 + (- 1) ^ n) / 4 - 2, n >= 1, where T _ n is the n - th tetrahedral number. •

► [A317714] 0,0,1,2,10,18,45,72,136,200,325,450,666,882,1225,1568,2080,2592,3321,4050,5050,6050,7381,8712,10440 ⋆ Chessboard rectangles sequence (see Comments), also A037270 interleaved with A163102. • a(n) = 2 * a(n - 1) + 2 * a(n

- 2) - 6 * a(n - 3) + 6 * a(n - 5) - 2 * a(n - 6) - 2 * a(n - 7) + a(n - 8), with a(1) =0, a(2)=0, a(3)=1, a(4)=2, a(5)=10, a(6)=18, a(7)=45, a(8)=72. ● a(n) = (5 - 5 * (- 1) ^ n - 12 * n + 12 * (- 1) ^ n * n + 14 * n ^ 2 - 6 * (- 1) ^ n * n ^ 2 - 8 * n ^ 3 + 2 * n ^ 4) / 64. ● a(n) = Sum _{ i=1..n - 1 } floor(i / 2) ^ 3. - _ Ridouane Oudra _ , Jul 24 2019 ● a(n) = (1 / 2) * (t ^ 2 + 2 * (n - 1) * t ^ 3 - 3 * t ^ 4), where t = floor(n / 2). - _ Ridouane Oudra _ , Aug 15 2019 ●

► [A139592] 0,2,10,20,36,54,78,104,136,170,210,252,300,350,406,464,528,594,666,740,820,902,990,1080,1176 ⋆ A033585(n) followed by A139271(n + 1). ● a(n) = 2 * floor((n + 1 / 4) ^ 2). [From _ Reinhard Zumkeller _ , Feb 07 2010] ●

► [A004643] 1,2,10,20,100,200,1000,2000,10000,20000,100000,200000,1000000,2000000,10000000,20000000,100000000,200000000,1000000000,2000000000,10000000000,20000000000,100000000000,200000000000 ⋆ Powers of 2 written in base 4. ● a(n) = 10 * a(n - 2) for n > 1. ● a(n) = (3 - (- 1) ^ n) / 2 * 10 ^ floor(n / 2). - _ Bernard Schott _ , Sep 17 2020 ●

► [A080881] 1,2,10,21,106,223,1126,2369,11962,25167,127078,267361,1350010,2840303,14341798,30173889,152359738,320551567,1618589926,3405371681,17195050234,36176882223,182671192870,384324217729,1940602920634 ⋆ a(n) * a(n + 3) - a(n + 1) * a(n + 2) = 2 ^ n, given a(0)=1, a(1)=2, a(2)=10. ● a(n + 4) = 11 * a(n + 2) - 4 * a(n) [From _ Richard Choulet _ , Dec 06 2008] ● a(n) = (3 / 140 * 15 ^ (1 / 2) * 7 ^ (1 / 2) + 1 / 4 + 3 / 56 * 7 ^ (1 / 2) + 1 / 24 * 15 ^ (1 / 2)) * sqrt((11 + sqrt(105)) / 2) ^ n + (- 3 / 140 * 15 ^ (1 / 2) * 7 ^ (1 / 2) + 1 / 4 - 3 / 56 * 7 ^ (1 / 2) + 1 / 24 * 15 ^ (1 / 2)) * sqrt((11 - sqrt(105)) / 2) ^ n + (3 / 140 * 15 ^ (1 / 2) * 7 ^ (1 / 2) - 1 / 24 * 15 ^ (1 / 2) - 3 / 56 * 7 ^ (1 / 2) + 1 / 4) * (- sqrt((11 + sqrt(105)) / 2)) ^ n + (1 / 4 + 3 / 56 * 7 ^ (1 / 2) - 1 / 24 * 15 ^ (1 / 2) - 3 / 140 * 15 ^ (1 / 2) * 7 ^ (1 / 2)) * (- sqrt((11 - sqrt(105)) / 2)) ^ n [From _ Richard Choulet _ , Dec 07 2008] ●

► [A032526] 0,2,10,22,40,62,90,122,160,202,250,302,360,422,490,562,640,722,810,902,1000,1102,1210,1322,1440 ⋆ a(n) = floor(5 * n ^ 2 / 2). ● a(n) = 2n ^ 2 + floor(n ^ 2 / 2). [_ Wesley Ivan Hurt _ , Jun 14 2013] ●

► [A255606] 2,10,23,41,64,93,127,166,210,259,314,374,439,509,584,665,750,841,937,1039,1145,1257,1374,1496,1623 ⋆ Integer part of the area of a hexagon with side length n. ● a(n) = floor(6 * n ^ 2 / (4 * tan(Pi / 6))), n >= 1. ●

► [A293403] 0,2,10,23,41,65,94,128,167,212,261,316,376,442,513,589,670,756,848,945,1047,1154,1267,1384,1507 ⋆ Greatest integer k such that k / n ^ 2 < (3 + sqrt(5)) / 2. ● a(n) = floor(r * n ^ 2), where r = (3 + sqrt(5)) / 2. ●

► [A120845] 2,10,23,50,117,300,823,2350,6857,20240,60123,179250,535597,1602580,4799423,14381750,43112337,129271320,387682723,1162785850,3487833077,10462450460,31385254023,94151567550,282446313817 ⋆ a(n) = 2 ^ n + 3 ^ n + 5 * n. ● a(n) = 7 * a(n - 1) - 17 * a(n - 2) + 17 * a(n - 3) - 6 * a(n - 4). - _ Vincenzo Librandi _ , Feb 26 2013 ●

► [A293412] 0,2,10,24,43,67,97,133,173,220,271,328,391,459,532,611,695,785,880,981,1087,1198,1315,1437,1565 ⋆ Greatest integer k such that k / n ^ 2 < e. ● a(n) = floor(e * n ^ 2). ●

► [A224837] 2,10,24,43,68,98,133,174,221,273,330,393,461,535,614,699,789,885,986,1092,1204,1322,1445,1573,1707 ⋆ Surface area of Johnson square pyramid (rounded down) with all the edge - lengths equal to n. ● a(n) = floor((1 + sqrt(3)) * n ^ 2). ●

► [A049450] 0,2,10,24,44,70,102,140,184,234,290,352,420,494,574,660,752,850,954,1064,1180,1302,1430,1564,1704 ⋆ Pentagonal numbers multiplied by 2: a(n) = n * (3 * n - 1). ● a(n) = a(n - 1) + 6 * n - 4 (with a(0)=0). - _ Vincenzo Librandi _ , Aug 06 2010 ●

► [A270822] 1,2,10,24,86,224,708,1920,5734,15872,46124,129024,369916,1040384,2962760,8355840,23714950,66977792,189768220,536346624,1518330516,4292870144,12147349560,34351349760,97181500636 ⋆ Expansion of 1 / ((1 - 4 * x ^ 2) ^ (3 / 2) - 2 * x * (1 - 4 * x ^ 2)). ● a(n) = (n + 1) * 2 ^ n * Sum _{ i=0..n / 2 } (binomial((n - 1) / 2,i) / (n - 2 * i + 1)). ●

► [A254709] 1,2,10,25,137,346,1906,4817,26545,67090,369722,934441,5149561,13015082,71724130,181276705,998988257,2524858786,13914111466,35166746297,193798572265,489809589370,2699265900242,6822167504881,37595924031121 ⋆ Indices of pentagonal numbers (A000326) which are also centered square numbers (A001844). ● a(n) = a(n - 1) + 14 * a(n - 2) - 14 * a(n - 3) - a(n - 4) + a(n - 5). ●

► [A069894] 2,10,26,50,82,122,170,226,290,362,442,530,626,730,842,962,1090,1226,1370,1522,1682,1850,2026,2210,2402 ⋆ Centered square numbers: a(n) = 4 * n ^ 2 + 4 * n + 2. ● a(n) = (2 * n + 1) ^ 2 + 1. - _ Vladimir Joseph Stephan Orlovsky _ , Nov 10 2008 [Corrected by _ R. J. Mathar _ , Sep 16 2009] ● a(n) = 8 * n + a(n - 1) for n > 0, a(0)=2. - _ Vincenzo Librandi _ , Aug 08 2010 ● a(n + 1) = a(n) + 4 + 4 * sqrt(a(n) - 1). ● a(n - 1) * a(n + 1) = (a(n) - 4) ^ 2 + 16. ● a(n + 1) = 2 * a(n) - a(n - 1) + 8 for n > 2, a(0)=2, a(1)=10, a(2)=26. ● a(n + 1) = 3 * a(n) - 3 * a(n - 1) + a(n - 2) for n > 3; a(0)=2, a(1)=10, a(2)=26, a(3)=50. ●

► [A212969] 0,0,2,10,26,56,100,166,252,368,510,690,902,1160,1456,1806,2200,2656,3162,3738,4370,5080,5852,6710,7636 ⋆ Number of (w,x,y) with all terms in { 0,...,n } and w != x and x > range(w,x,y). ● a(n) = (n - 1) * (2 * n * (7 * n - 2) - 3 * (- 1) ^ n + 3) / 24. ● a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + a(n - 4) + 2 * a(n - 5) - a(n - 6). ●

► [A131130] 1,2,10,26,58,122,250,506,1018,2042,4090,8186,16378,32762,65530,131066,262138,524282,1048570,2097146,4194298,8388602,16777210,33554426,67108858 ⋆ Binomial transform of [1,1,7,1,7,1,7,1,...]. ● a(n) = 4 * 2 ^ n - 6 for n >= 1; a(0)=1. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2), n > 2; a(0)=1, a(1)=2, a(2)=10. ● a(n) = 2 * a(n - 1) + 6 for n > 1, a(0)=1, a(1)=2. - _ Philippe Deléham _ , Sep 25 2009 ●

► [A241688] 0,0,0,0,0,0,2,10,26,60,110,190,304,466,676,958,1312,1762,2310,2984,3786,4750,5874,7196,8720 ⋆ Number of Sidon subsets of { 1,...,n } of size 4. ● a(n) = a(n - 11) + a(n - 8) - a(n - 3) + 2 * (a(n - 6) + a(n - 1) - a(n - 10) - a(n - 5)). - _ Fung Lam _ , May 02 2014 ●

► [A084182] 1,2,10,26,82,242,730,2186,6562,19682,59050,177146,531442,1594322,4782970,14348906,43046722,129140162,387420490,1162261466,3486784402,10460353202,31381059610,94143178826,282429536482 ⋆ 3 ^ n + (- 1) ^ n - [1 / (n + 1)], where [] represents the floor function. ● a(n) = 3 ^ n + (- 1) ^ n - 0 ^ n. ●

► [A322201] 0,2,10,26,90,262,994,3446,13050,48698,185310,705454,2706354,10400626,40123534,155118406,601106490,2333606254,9075235522,35345263838,137846899790,538257884918,2104100374694,8233430727646,32247609134418 ⋆ Main diagonal of square table A322200. ● a(n) = coefficient of x ^ n * y ^ n / (2 * n) in Sum _{ n>=1 } - log(1 - (x ^ n + y ^ n)) for n>=0. ●

► [A099583] 0,0,1,2,10,26,91,260,820,2420,7381,22022,66430,198926,597871,1792520,5380840,16139240,48427561,145272842,435848050,1307514626,3922632451,11767808780,35303692060 ⋆ a(n) = Sum _{ k=0..floor(n / 2) } binomial(n - k, k - 1) * 2 ^ (n - k - 1) * (3 / 2) ^ (k - 1). ● a(n) = 2 * a(n - 1) + 6 * a(n - 2) - 6 * a(n - 3) - 9 * a(n - 4). ● a(0)=0, a(1)=0; a(2)=1; a(n) = 2 * a(n - 1) + 3 * a(n - 2) if n is odd; a(n) = 2 * a(n - 1) + 3 * a(n - 2) + 3 ^ m (m=1,2,3...) if n is even. - _ Vincenzo Librandi _ , Jun 26 2010 ● a(n) = (1 / 8) * (3 ^ n - (- 1) ^ n - 2 * (1 - (- 1) ^ n) * 3 ^ ((n - 1) / 2)). ●

► [A133479] 1,2,10,26,106,314,1162,3674,12970,42362,146122,485018,1653994,5534138,18766090,63039194,213167914,717481466,2422824778,8162676506,27545274730,92846686778,313208884618,1055982378842,3561653455786 ⋆ a(n) = a(n - 1) + 8 * a(n - 2) for n >= 2, a(0)=1, a(1)=2. ● a(n) = - (1 / 22) * (1 / 2 - (1 / 2) * sqrt(33)) ^ n * sqrt(33) + (1 / 2) * (1 / 2 - (1 / 2) * sqrt(33)) ^ n + (1 / 22) * sqrt(33) * (1 / 2 + (1 / 2) * sqrt(33)) ^ n + (1 / 2) * (1 / 2 + (1 / 2) * sqrt(33)) ^ n, with n >= 0. - _ Paolo P. Lava _ , Nov 18 2008 ● a(n) = ((11 + sqrt(33)) / 22) * (1 / 2 + (1 / 2) * sqrt(33)) ^ n + ((11 - sqrt(33)) / 22) * (1 / 2 - (1 / 2) * sqrt(33)) ^ n. - _ Richard Choulet _ , Nov 20 2008 ●

► [A220700] 0,0,1,2,10,27,118,389,1688,6357,28302,117301,541832,2418649,11629794,55165477,276131564,1379441105,7178203950,37525908261,202624599112,1103246397377,6168861375178,34853267706981,201412524836788 ⋆ a(0)=0, a(1)=0; for n>1, a(n) = a(n - 1) + (n + 3) * a(n - 2) + 1 ● a(0)=a(1)=0, a(2)=1, a(n) = 2 * a(n - 1) + (n + 2) * a(n - 2) - (n + 2) * a(n - 3). ●

► [A006331] 0,2,10,28,60,110,182,280,408,570,770,1012,1300,1638,2030,2480,2992,3570,4218,4940,5740,6622,7590,8648,9800 ⋆ a(n) = n * (n + 1) * (2 * n + 1) / 3. ● a(n) = 2 * binomial(n + 1,3) + 2 * binomial(n + 2,3). ● a(n) = Sum _{ i=0..n } T(i,n - i), array T as in A048147. - _ N. J. A. Sloane _ , Dec 11 1999 ● a(n) = sum(a * b), where the summing is over all unordered partitions 2 * n + 1=a + b. - _ Vladimir Shevelev _ , May 11 2012 ● a(n) = binomial(2 * n + 2, 3) / 2. - _ Ronan Flatley _ , Dec 13 2012 ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>3, with a(0)=0, a(1)=2, a(2)=10, a(3)=28. - _ Harvey P. Dale _ , Apr 12 2013 ●

► [A291053] 2,10,28,88,217,493,989,1794,3016,4785,7256,10612,15067,20869,28303,37694,49410,63865,81522,102896,128557,159133,195313,237850,287564 ⋆ Number of maximal irredundant sets in the n - Andrasfai graph. ● a(n) = (- 3120 + 10932 * n - 4970 * n ^ 2 + 765 * n ^ 3 - 10 * n ^ 4 + 3 * n ^ 5) / 120 for n > 3. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n > 9. ●

► [A104657] 2,10,28,106,190,292,556,756,858,906,1012,1030,1032,1060,1372,1450,1488,1720,1722,1758,1782,1822,1972,2356,2436 ⋆ Positive integers n such that n ^ 19 + 1 is semiprime (A001358). ● a(n) ^ 19 + 1 is semiprime (A001358). ●

► [A371943] 0,0,0,1,2,10,28,116,388,1588,5960,25168,102856,453608,1985008,9163360,42486128,205065136,1000056928,5035366208,25689681760,134588839648,715328668736,3889568161408,21463055829568 ⋆ Number of permutations that end with a consecutive pattern 123, and avoid consecutive patterns 123 and 213 elsewhere. ● a(0)=a(1)=a(2)=0, a(3)=1, a(4)=2; a(n) = a(n - 1) + (n - 1) * a(n - 2) + b(n - 1), where b(n) = b(n - 1) + (n - 1) * b(n - 2) is the same sequence as A059480, up to the first initial terms. Here, our b(n) has initial terms 0, 0, 0, 1, 4. ●

► [A106184] 1,2,10,28,118,380,1508,5240,20326,73836,284396,1061128,4085820,15500120,59820040,229366768,887943046,3428967500,13315684764,51678099304,201246353492,783890932488,3060144292600,11953056489104 ⋆ Expansion of 1 / sqrt(1 - 4 * x - 8 * x ^ 2 + 32 * x ^ 3). ● a(n) = Sum _{ k=0..floor(n / 2) } C(2 * k, k) * C(2(n - 2 * k), n - 2 * k) * 2 ^ k. ● a(n) = C(2 * n,n) * hypergeom([1 / 2, - n / 2, - n / 2 + 1 / 2],[- n / 2 + 3 / 4, - n / 2 + 1 / 4],1 / 2). - _ Peter Luschny _ , Feb 23 2016 ●

► [A203551] 0,2,10,29,64,120,202,315,464,654,890,1177,1520,1924,2394,2935,3552,4250,5034,5909,6880,7952,9130,10419,11824 ⋆ a(n) = n * (5n ^ 2 + 3n + 4) / 6. ● a(n) = Sum _{ k = 1..n } A(- k, k - n - 1) where A(i, j) = i ^ 2 + i * j + j ^ 2 + i + j + 1. ●

► [A344791] 2,10,29,66,129,228,374,580,860,1230,1707,2310,3059,3976,5084,6408,7974,9810,11945,14410,17237,20460,24114,28236,32864 ⋆ a(n) is the number of 2 - point antichains in the poset D _{ 2n + 1 } of type D, whose elements are compositions of 2n + 1. ● a(n) = (1 - (- 1) ^ n - 8 * n - 4 * n ^ 2 + 8 * n ^ 3 + 2 * n ^ 4) / 32. - _ Stefano Spezia _ , Jun 02 2021 ●

► [A192976] 0,1,2,10,29,70,148,289,534,950,1645,2794,4680,7761,12778,20930,34157,55598,90332,146577,237630,385006,623517,1009490,1634064 ⋆ Coefficient of x in the reduction by x ^ 2 - > x + 1 of the polynomial p(n,x) defined at Comments. ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + a(n - 3) + 2 * a(n - 4) - a(n - 5). ● a(n) = Fibonacci(n + 4) + 3 * Lucas(n + 3) - (2 * n ^ 2 + 8 * n + 15). - _ G. C. Greubel _ , Jul 24 2019 ●

► [A101561] 1,2,10,29,82,236,730,2216,6571,19604,59050,177410,531442,1593596,4783060,14351123,43046722,129133838,387420490,1162281098,3486785140,10460294156,31381059610,94143358424,282429536563 ⋆ a(n)=(- 1) ^ n * coefficient of x ^ n in sum { k>=1,x ^ (k - 1) / (1 + 3x ^ k) } . ● a(n)=sum { k=0..n, (- 1) ^ (n - k) * if(mod(n + 1, k + 1)=0, 1, 0) * 3 ^ k } ●

► [A034262] 0,2,10,30,68,130,222,350,520,738,1010,1342,1740,2210,2758,3390,4112,4930,5850,6878,8020,9282,10670,12190,13848 ⋆ a(n) = n ^ 3 + n. ● a(n) = - a(- n) for all n in Z. - _ Michael Somos _ , Jul 11 2017 ●

► [A034827] 0,0,0,0,2,10,30,70,140,252,420,660,990,1430,2002,2730,3640,4760,6120,7752,9690,11970,14630,17710,21252 ⋆ a(n) = 2 * binomial(n,4). ● a(n) = Sum _{ k=1..n - 3 } (Sum _{ i=1..k } i * (2 * k - n + 4)). - _ Wesley Ivan Hurt _ , Sep 26 2013 ●

► [A051667] 0,2,10,30,74,166,354,734,1498,3030,6098,12238,24522,49094,98242,196542,393146,786358,1572786,3145646,6291370,12582822,25165730,50331550,100

663194 ⋆ a(n) = 6 * 2 ^ n - 4 * n - 6. • a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 2 * a (n - 3). •

► [A058966] 1,2,10,30,78,190,446,1022,2302,5118,11262,24574,53246,114686,245758,524286,1114110,2359294,4980734,10485758,22020094,46137342,96468990,201326590,419430398 ⋆ a(3) = 1, otherwise a(n) = n * 2 ^ (n - 3) - 2 ^ (n - 2) - 2. • a(n) = 5 * a(n - 1) - 8 * a(n - 2) + 4 * a(n - 3) for n>6. •

► [A285956] 0,0,0,0,2,10,30,102,204,444,740,1300,1950,3030,4242,6090,8120,11032,14184,18504,23130,29250,35750,44110,52932 ⋆ Number of orthogonal rectangles with vertices on an n X n square grid of points but with no vertices on the grid's diagonals. • a(n) = (n ^ 4 - 10 * n ^ 3 + 33 * n ^ 2 - 34 * n) / 4 for n even. • a(n) = (n ^ 4 - 10 * n ^ 3 + 37 * n ^ 2 - 58 * n + 30) / 4 for n odd. • a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 6 * a(n - 3) + 6 * a(n - 5) - 2 * a(n - 6) - 2 * a(n - 7) + a(n - 8) for n>7. •

► [A219667] 1,2,10,30,111,296,711,1625,3583,7088,13377,24143,41376,68551,111068,174887,269592,410043,612350,900484,1310108,1879862,2664399,3740002,5188376 ⋆ Number of happy numbers without zeros and with digits in nondecreasing order <= 10 ^ n. • a(n) is the sum of all h(d,0 <= x <= 81 * d, 1), where x is a happy number. •

► [A162249] 1,1,2,10,30,131,582,3196,13986,70100,336416,1723518,8487202,44468780,228236112,1241788448,6421700878,34682391148,182473774272,993091141104,5264377375260,28721435063423,153844326005054,843854383167940 ⋆ a(n) = sum of the squares of the coefficients of x ^ (2k) in A(x ^ 2) ^{ 2 * (n - 2k) + 1 } , as k varies from 0 to floor(n / 2), with a(0)=1. • a(n) = Sum _{ k=0..n \ 2 } ([x ^ (2 * k)] A(x ^ 2) ^{ 2 * (n - 2 * k) + 1 }) ^ 2 for n>0 with a(0)=1. •

► [A090809] 0,0,2,10,31,75,155,287,490,786,1200,1760,2497,3445,4641,6125,7940,10132,12750,15846,19475,23695,28567,34155,40526 ⋆ Coefficient of the irreducible character of S _ m indexed by (m - 2n + 2,2n - 2) in the n - th Kronecker power of the representation indexed by (m - 2,2). • a(n) = 2 * binomial(n, 2) + 4 * binomial(n, 3) + 3 * binomial(n, 4) = (n - 1) * n * (3 * n ^ 2 + n + 10) / 24 . •

► [A051747] 2,10,31,76,161,308,546,912,1452,2222,3289,4732,6643,9128,12308,16320,21318,27474,34979,44044,54901,67804,83030,100880,121680 ⋆ a(n) = n * (n + 1) * (n + 2) * (n ^ 2 + 7 * n + 32) / 120. • a(n) = binomial(n + 4, n - 1) + binomial(n + 2, n - 1). • a(1)=2, a(2)=10, a(3)=31, a(4)=76, a(5)=161, a(6)=308, a(n)=6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). - _ Harvey P. Dale _ , Oct 03 2012 •

► [A193008] 1,2,10,31,78,170,339,636,1144,1997,3412,5740,9549,15758,25854,42243,68818,111878,181615,294520,477276,773057,1251720,2026296,3279673 ⋆ Constant term of the reduction by x ^ 2 - >x + 1 of the polynomial p(n,x) defined at Comments. • a(n)=4 * a(n - 1) - 5 * a(n - 2) + a(n - 3) + 2 * a(n - 4) - a(n - 5). •

► [A011921] 0,0,0,0,2,10,32,76,152,274,458,720,1080,1560,2184,2978,3970,5192,6676,8456,10570,13058,15960,19320,23184 ⋆ [n(n - 1)(n - 2)(n - 3) / 11]. • a(n) = + 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) + a(n - 11) - 4 * a(n - 12) + 6 * a(n - 13) - 4 * a(n - 14) + a(n - 15). G.f.: 2 * x ^ 4 * (1 + x + 2 * x ^ 2 + x ^ 4 + 2 * x ^ 5 + x ^ 6 + 2 * x ^ 8 + x ^ 9 + x ^ 10) / ((1 - x) ^ 5 * (1 + x + x ^ 2 + x ^ 3 + x ^ 4 + x ^ 5 + x ^ 6 + x ^ 7 + x ^ 8 + x ^ 9 + x ^ 10)). - _ R. J. Mathar _ , Apr 15 2010 •

► [A212714] 0,0,2,10,32,78,162,300,512,820,1250,1830,2592,3570,4802,6328,8192,10440,13122,16290,20000,24310,29282,34980,41472 ⋆ Number of (w,x,y,z) with all terms in { 1,...,n } and |w - x| >= w + |y - z|. • a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 5 * a(n - 4) - 4 * a(n - 5) + a(n - 6). • a(n) = floor(n ^ 4 / 8). - _ Wesley Ivan Hurt _ , Jul 14 2013 •

► [A131068] 1,2,10,32,82,188,406,848,1738,3524,7102,14264,28594,57260,114598,229280,458650,917396,1834894,3669896,7339906,14679932,29359990,58720112,117440362 ⋆ Binomial transform of [1, 1, 7, 7, 7, ...]. • a(n) = 7 * 2 ^ n - 6 * (n + 1). • a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 2 * a(n - 3). - _ Vincenzo Librandi _ , Jul 05 2012 •

► [A324172] 0,0,0,0,2,10,32,84,198,438,932,1936,3962,8034,16200,32556,65294,130798,261836,523944,1048194,2096730,4193840,8388100,16776662 ⋆ Number of subsets of { 1,...,n } that cross their complement. • a(0) = 0; a(n) = 2 ^ n - n ^ 2 + n - 2. • a(n) = 5 * a(n - 1) - 9 * a(n - 2) + 7 * a(n - 3) - 2 * a(n - 4) for n>4. - _ Colin Barker _ , Feb 18 2019 •

► [A084154] 0,1,2,10,32,116,392,1352,4608,15760,53792,183712,627200,2141504,7311488,24963200,85229568,290992384,993509888,3392055808,11581202432,39540700160,135000393728,460920178688,1573679923200 ⋆ Binomial transform of sinh(x) * cosh(sqrt(2) * x). • a(n) = 4 * a(n - 1) - 8 * a(n - 3) + 4 * a(n - 4), a(0)=0, a(1)=1, a(2)=2, a(3)=10. • a(n) = ((2 + sqrt(2)) ^ n + (2 - sqrt(2)) ^ n - sqrt(2) ^ n - (- sqrt(2)) ^ n) / 4. •

► [A083099] 0,1,2,10,32,124,440,1624,5888,21520,78368,285856,1041920,3798976,13849472,50492800,184082432,671121664,2446737920,8920205824,32520839168,118562913280,432250861568,1575879202816,5745263575040 ⋆ a(n) = 2 * a(n - 1) + 6 * a(n - 2), a(0) = 0, a(1) = 1. • a(n - 1) = Sum _{ k=0..n } binomial(n, 2k + 1) * 7 ^ k. (End) • a(n) = - (1 / 14) * (1 - sqrt(7)) ^ n * sqrt(7) + (1 / 14) * (1 + sqrt(7)) ^ n * sqrt(7). - _ Paolo P. Lava _ , Jun 10 2008 • a(n) = Sum _{ k=1,3,5,...<=n } binomial(n,k) * 7 ^ ((k - 1) / 2). - _ Vladimir Shevelev _ , Feb 06 2014 • a(n) = i ^ (n - 1) * 6 ^ ((n - 1) / 2) * ChebyshevU(n - 1, - i / sqrt(6)). - _ G. C. Greubel _ , Jun 01 2023 •

► [A264960] 1,2,10,32,146,512,2248,8192,35218,131072,556040,2097152,8815496,33554432,140107040,536870912,2230302098,8589934592,35541690568,137438953472,566823203656,2199023255552,9044910175520,35184372088832,144393718191496 ⋆ Half - convolution of the central binomial coefficients A000984 with itself. • a(n) = Sum _{ k = 0..floor(n / 2) } binomial(2 * k,k) * binomial(2 * n - 2 * k, n - k). •

► [A236921] 0,0,1,2,10,32,232,992,10096,53408,727360,4569536,79501696,578101376,12337163008,101945840384,2582987522560,23913303638528,701604503968768,7194776722623488,239847438803052544,2698941227297687552,100744097104231198720,1234263151585971974144,50993324690816940089344 ⋆ Number of n - permutations which fix at least one odd prefix. • a(0)=a(1)=0; a(n) = Sum _ (k =1,3,5,..., whichever is odd among { n - 1, n - 2 }) (k! - a(k)) * (n - k)!. •

► [A059924] 0,2,10,34,80,158,274,438,656,938,1290,1722,2240,2854,3570,4398,5344,6418,7626,8978,10480,12142,13970,15974,18160 ⋆ Write the numbers from 1 to n ^ 2 in a spiraling square; a(n) is the total of the sums of the two diagonals. • a(n) = 3a(n - 1) - 2a(n - 2) - 2a(n - 3) + 3a(n - 4) - a(n - 5), a(0) = 0, a(1) = 2, a(2) = 10, a(3) = 34, a(4) = 80. • a(n) = (16 * n ^ 3 - 6 * n ^ 2 + 8 * n + 3 - 3 * (- 1) ^ n) / 12. - _ Frank Ellermann _ , Mar 16 2002 •

► [A304159] 2,10,34,86,178,322,530,814,1186,1658,2242,2950,3794,4786,5938,7262,8770,10474,12386,14518,16882,19490,22354,25486,28898 ⋆ a(n) = 2 * n ^ 3 - 4 * n ^ 2 + 6 * n - 2 (n>=1). • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>4. •

► [A036799] 0,2,10,34,98,258,642,1538,3586,8194,18434,40962,90114,196610,425986,917506,1966082,4194306,8912898,18874370,39845890,83886082,176160770,369098754,771751938 ⋆ a(n) = 2 + 2 ^ (n + 1) * (n - 1). • a(n) = (n - 1) * 2 ^ (n + 1) + 2. • a(n) = Sum _{ k=1..n } k * 2 ^ k. - _ Benoit Cloitre _ , Oct 25 2002 • a(n) = 5 * a(n - 1) - 8 * a(n - 2) + 4 * a(n - 3) for n > 2. - _ Wesley Ivan Hurt _ , Nov 12 2015 • a(n) = Sum _{ k=0..n } Sum _{ i=0..n } k * binomial(k,i). - _ Wesley Ivan Hurt _ , Sep 21 2017 •

► [A108924] 1,2,10,34,146,562,2290,9074,36466,145522,582770,2329714,9321586,37280882,149134450,596515954,2386107506,9544342642,38177545330,152709831794,610840026226,2443358706802,9773437623410,39093744901234 ⋆ J(n) ^ 2 + J(n + 1) ^ 2, with J(n) the Jacobsthal number A001045(n). • a(0)=1, a(1)=2, a(2)=10, a(n)=3 * a(n - 1) + 6 * a(n - 2) - 8 * a(n - 3). - _ Harvey P. Dale _ , Apr 11 2013 •

► [A236377] 1,1,2,10,35,59,84,132,213,293,374,494,663,831,1000,1224,1513,1801,2090,2450,2891,3331,3772,4300,4925 ⋆ Real part of Sum _{ k=0..n } (k + i ^ k) ^ 2, where i=sqrt(- 1). • a(n) = 3 * a(n - 1) - 4 * a(n - 2) + 4 * a(n - 3) - 2 * a(n - 4) - 2 * a(n - 5) + 4 * a(n - 6) - 4 * a(n - 7) + 3 * a(n - 8) - a(n - 9). •

► [A100230] 1,2,10,35,118,392,1297,4286,14158,46763,154450,510116,1684801,5564522,18378370,60699635,200477278,662131472,2186871697,7222746566,23855111398,78788080763,260219353690,859446141836,2838557779201 ⋆ Main diagonal of triangle A100229. • a(n) = 3 * a(n - 1) + a(n - 2) + 3 for n>1, with a(0)=1, a(1)=2. • a(0)=1, a(1)=2, a(2)=10, a(n)=4 * a(n - 1) - 2 * a(n - 2) - a(n - 3). [_ Harvey P. Dale _ , May 06 2012] •

► [A146983] 1,2,10,35,133,494,1846,6887,25705,95930,358018,1336139,4986541,18610022,69453550,259204175,967363153,3610248434,13473630586,50284273907,187663465045,700369586270,2613814880038,9754889933879,36405744855481 ⋆ a(n) = A002531(n) * A002531(n + 1). • a(n) = (- 1) ^ n + 3 * Sum _{ k = 1..n } (- 1) ^ (n - k) * 6 ^ (k - 1) * binomial(n + k,2 * k). • a(n) = (- 1) ^ n * R(n, - 3), where R(n,x) is the n - th row polynomial of A211955. • a(n) = (- 1) ^ n * 1 / u * T(n,u) * T(n + 1,u) with u = sqrt(- 1 / 2) and T(n,x) denotes the Chebyshev polynomial of the first kind Cf. A182432. • a(n) = 3 * a(n - 1) + 3 * a(n - 2) - a(n - 3). •

► [A212573] 0,0,2,10,36,92,202,386,680,1112,1730,2570,3692,5140,6986,9282,12112,15536,19650,24522,30260,36940,44682,53570,63736 ⋆ Number of (w,x,y,z) with all terms in { 1,...,n } and |w - x|>|x - y| + |y - z|. • a(n) = 3 * a(n - 1) - a(n - 2) - 5 * a(n - 3) + 5 * a(n - 4) + a(n - 5) - 3 * a(n - 6) + a(n - 7). • a(n) = (2 * (n - 3) * n * (5 * n ^ 2 - 15 * n + 31) - 3 * (2 * n - 3) * (- 1) ^ n + 87) / 48. [_ Bruno Berselli _ , Jun 14 2012] •

► [A192858] 2,10,36,120,382,1178,3550,10514,30720,88788,254342,723190,2043386,5742490,16062492,44744688,124192270,343594514,947857750,2608015778,7159034232,19609583820,53608363286,146290947310,398552156402 ⋆ Hosoya indices of the 2n - wheel graphs W _{ 2n } . • a(n) = 6 * a(n - 1) - 11 * a(n - 2) + 6 * a(n - 3) - a(n - 4). • a(n) = ((3 + r) ^ n * ((5 - r) * n + 3 * r - 5) + (3 - r) ^ n * ((5 + r) * n - 3 * r - 5)) / (5 * 2 ^ n) with r=sqrt(5). - _ Bruno Berselli _ , Aug 31 2011 •

► [A001582] 1,2,10,36,145,560,2197,8568,33490,130790,510949,1995840,7796413,30454814,118965250,464711184,1815292333,7091038640,27699580729,108202305420,422668460890,1651061182538,6449506621417,25193576136960 ⋆ Product of Fibonacci and Pell numbers. • a(n) = 11 * a(n - 2) + 16 * a(n - 3) + 3 * a(n - 4) - 2 * a(n - 5). • a(n) = 2 * a(n - 1) + 7 * a(n - 2) + 2 * a(n - 3) - a(n - 4). (End) • a(n) = ((10 + 5 * sqrt(2) + 2 * sqrt(5) + sqrt(10)) * ((1 + sqrt(2) + sqrt(5) + sqrt(10)) / 2) ^ n + (10 - 5 * sqrt(2) - 2 * sqrt(5) + sqrt(10)) * ((1 - sqrt(2) - sqrt(5) + sqrt(10)) / 2) ^ n + (10 + 5 * sqrt(2) - 2 * sqrt(5) - sqrt(10)) * ((1 + sqrt(2) - sqrt(5) - sqrt(10)) / 2) ^ n + (10 - 5 * sqrt(2) + 2 * sqrt(5) - sqrt(10)) * ((1 - sqrt(2) + sqrt(5) - sqrt(10)) / 2) ^ n) / 40. - _ Tim Monahan _ , Aug 03 2011 •

► [A144895] 1,2,10,36,204,1104,7776,57600,505440,4803840,51442560,597784320,7609593600,104364288000,1541746483200,24329797632000,409042632499200,7290954768384000,137384159367168000,2727604332085248000,56913717580296192000,1244955414746824704000 ⋆ Second column of triangle A134134 (S2'(2) = S1hat(2)). • a(n) = Sum _{ i=1..floor(n / 2) + 1 } i! * (n - i + 2)!. - _ Wesley Ivan Hurt _ , Mar 18 2016 •

► [A154323] 1,2,10,37,101,226,442,785,1297,2026,3026,4357,6085,8282,11026,14401,18497,23410,29242,36101,44101,53362,64010,76177,90001 ⋆ Central coefficients of number triangle A113582. • a(n) = (n ^ 4 + 2 * n ^ 3 + n ^ 2 + 4) / 4. • a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). • a(n) = a(n - 1) + n ^ 3. - _ Charles U. Lonappan _ , Jun 09 2021 •

► [A191349] 1,1,1,2,10,37,102,251,667,2011,6246,18686,54183,157438,466579,1400509,4202829,12556360,37480728,112227269,337221408,1014992763,3055963443,9203918219,27745375212 ⋆ Binomial sums a(n) = sum(binomial(n - k,2 * k) ^ 2,k =0..floor(n / 3)). • a(n) = sum(binomial(2 * k,k) * sum(binomial(n + k - i,2 * k) * binomial(n - k - i,2 * i) * (- 1) ^ (n - k - i),i=0..floor((n - k) / 3)),k=0..n). •

► [A005968] 0,1,2,10,37,162,674,2871,12132,51436,217811,922780,3908764,16558101,70140734,297121734,1258626537,5331629710,22585142414,95672204155,405273951280,1716768021816,7272346018247,30806152127640,130496954475672 ⋆ Sum of cubes of first n Fibonacci numbers. • a(n) = (1 / 2) * (F(n) * F(n + 1) ^ 2 + (- 1) ^ (n - 1) * F(n - 1) + 1). - _ Benoit Cloitre _ , Aug 06 2004 • a(n) = (1 / 10) * (F(3 * n + 2) - (- 1) ^ (n) * 6 * F(n - 1) + 5). - Art Benjamin and Timothy A. Carnes • a(n + 5) = 4 * a(n + 4) + 3 * a(n + 3) - 9 * a(n + 2) + 2 * a(n + 1) + a(n). - _ Benoit Cloitre _ , Sep 12 2004 •

► [A048499] 1,2,10,38,118,326,838,2054,4870,11270,25606,57350,126982,278534,606214,1310726,2818054,6029318,12845062,27262982,57671686,121634822,255852550,536870918,1124073478 ⋆ a(n) = 2 ^ (n - 1) * (6 * n - 10) + 6. ● a(n) = T(5, n), array T given by A048494. ● a(0)=1, a(1)=2, a(2)=10, a(n) = 5 * a(n - 1) - 8 * a(n - 2) + 4 * a(n - 3). - _ Harvey P. Dale _ and _ Vincenzo Librandi _ , Sep 23 2011 ●

► [A119358] 1,1,2,10,38,126,452,1716,6470,24310,92252,352716,1352540,5200300,20056584,77558760,300546630,1166803110,4537543340,17672631900,68923356788,269128937220,1052049129144,4116715363800,16123803193628 ⋆ Number of n - element subsets of [2n] having an even sum. ● a(n) = Sum _{ k=0..floor(n / 2) } C(n,2k) ^ 2. ● a(n) = C(2n,n) / 2 + sin(Pi * (n + 1) / 2) * C(n,n / 2) / 2. ● a(n) = hypergeom([(1 - n) / 2, (1 - n) / 2, - n / 2, - n / 2], [1 / 2, 1 / 2, 1], 1). - _ Vladimir Reshetnikov _ , Oct 04 2016 ●

► [A281199] 0,2,10,38,130,420,1308,3970,11822,34690,100610,289032,823800,2332418,6566290,18394910,51310978,142587180,394905492,1090444930,3002921270,8249479162,22612505090,61857842448,168903452400 ⋆ Number of n X 2 0..1 arrays with no element equal to more than one of its horizontal and antidiagonal neighbors, with the exception of exactly one element, and with new values introduced in order 0 sequentially upwards. ● a(n) = (2 ^ (- n) * (2 * sqrt(5) * ((3 - sqrt(5)) ^ n - (3 + sqrt(5)) ^ n) - 5 * (3 - sqrt(5)) ^ n * (1 + sqrt(5)) * n + 5 * (- 1 + sqrt(5)) * (3 + sqrt(5)) ^ n * n)) / 25. ●

► [A056182] 0,2,10,38,130,422,1330,4118,12610,38342,116050,350198,1054690,3172262,9533170,28632278,85962370,258018182,774316690,2323474358,6971471650,20916512102,62753730610,188269580438,564825518530 ⋆ First differences of A003063. ● a(n) = 2 * (3 ^ n - 2 ^ n). ● a(n) = 5 * a(n - 1) - 6 * a(n - 2). G.f.: 2 * x / ((2 * x - 1) * (3 * x - 1)). [_ Colin Barker _ , Dec 10 2012] ● a(n) = sum _{ i=1..n } binomial(n, i) * 2 ^ (n - i + 1). - _ Wesley Ivan Hurt _ , Feb 10 2014 ●

► [A120278] 2,10,38,136,486,1760,6466,24042,90238,341190,1297574,4958114,19019254,73196994,282492254,1092867904,4236849774,16455966944,64020347914,249431257704,973100041934,3800867789884,14862066265434,58170868424084 ⋆ Sum[Sum[C(2k,k), { k,1,m }], { m,1,n }], where C(2k,k)=(2k)! / (k!) ^ 2=A000984[k]. ● a(n) = Sum[Sum[(2k)! / (k!) ^ 2, { k,1,m }], { m,1,n }]. ● a(n) = 2 * Sum[A079309[k], { k,1,n }] = Sum[A066796[k], { k,1,n }]. - _ Alexander Adamchuk _ , Sep 01 2006 ●

► [A143960] 2,10,38,142,542,2110,8318,33022,131582,525310,2099198,8392702,33562622,134234110,536903678,2147549182,8590065662,34360000510,137439477758,549756862462,2199025352702,8796097216510,35184380477438,140737505132542,562949986975742 ⋆ a(n) = the n - th positive integer with exactly n zeros and n ones in its binary representation. ● a(n) = 2 ^ (2n - 1) + 2 ^ n - 2. ●

► [A122117] 1,2,10,38,154,614,2458,9830,39322,157286,629146,2516582,10066330,40265318,161061274,644245094,2576980378,10307921510,41231686042,164926744166,659706976666,2638827906662,10555311626650,42221246506598 ⋆ a(n) = 3 * a(n - 1) + 4 * a(n - 2), with a(0)=1, a(1)=2. ● a(2 * n) = 4 * a(2 * n - 1) + 2, a(2 * n + 1) = 4 * a(2 * n) - 2. ● a(n) = (2 * (- 1) ^ n + 3 * 4 ^ n) / 5, with n >= 0. - _ Paolo P. Lava _ , Jul 31 2008 ●

► [A174395] 0,2,10,40,140,462,1470,4580,14080,42922,130130,393120,1184820,3565382,10717990,32197660,96680360,290215842,870997050,2613690200,7842468700,23530202302,70596199310,211799782740,635421717840 ⋆ The number of different 4 - colorings for the vertices of all triangulated planar polygons on a base with n vertices if the colors of two adjacent boundary vertices are fixed. ● a(n) = (3 ^ n - 2 ^ (n + 2) + 6 + (- 1) ^ n) / 12. ● a(n) = 5 * a(n - 1) - 5 * a(n - 2) - 5 * a(n - 3) + 6 * a(n - 4). G.f.: - 2 * x ^ 4 / ((x - 1) * (x + 1) * (2 * x - 1) * (3 * x - 1)). - _ Colin Barker _ , Sep 22 2013 ●

► [A320526] 0,0,0,2,10,40,141,464,1480,4600,14145,43052,130480,393820,1186521,3568784,10725760,32213200,96714465,290284052,871142800,2613981700,7848300201,23531425304,70598731840 ⋆ a(n) is the number of chiral pairs of color patterns (set partitions) in a row of length n using exactly 3 colors (subsets). ● a(n) = (S2(n,k) - A(n,k)) / 2, where k=3 is the number of colors (sets), S2 is the Stirling subset number A008277 and A(n,k) = [n>1] * (k * A(n - 2,k) + A(n - 2,k - 1) + A(n - 2,k - 2)) + [n<2 & n==k & n>=0]. ●

► [A193519] 0,0,2,10,40,144,490,1610,5168,16320,50930,157546,484120,1480080,4507162,13683050,41439200,125259264,378051170,1139641930,3432176008,10328516880,31062778570,93374780426,280574458640 ⋆ a(n) = (2 / 3) * Sum _{ i=1..n - 1 } A000129(i) * 3 ^ (n - i). ● a(n) = 5 * a(n - 1) - 5 * a(n - 2) - 3 * a(n - 3), a(0) = a(1) = 0, a(2) = 2. - _ Philippe Deléham _ , Apr 27 2012 ●

► [A268329] 2,10,40,150,550,2002,7280,26520,96900,355300,1307504,4828850,17895150,66533250,248124000,927983760,3479939100,13082337900,49295766000,186156379500,704415740028,2670587146260,10142836030240,38586876202000,147029304149000 ⋆ Expansion of (1 - sqrt(1 - 4 * x)) ^ 5 / 16. ● a(n) = 10 * binomial(2n - 6,n - 5) / n. ●

► [A052978] 1,2,10,40,172,728,3096,13152,55888,237472,1009056,4287616,18218688,77413760,328941952,1397720576,5939111168,25236118016,107231812096,455643039744,1936091311104,8226724075520,34956506765312,148535109967872,631146557100032 ⋆ Expansion of (1 - 2 * x) / (1 - 4 * x - 2 * x ^ 2 + 4 * x ^ 3). ● a(n) = Sum(- 1 / 158 * (- 11 - 42 * r + 24 * r ^ 2) * r ^ (- 1 - n) where r=RootOf(1 - 4 *_ Z - 2 *_ Z ^ 2 + 4 *_ Z ^ 3)) ●

► [A344501] 1,1,2,10,40,176,916,4852,27350,163270,1009396,6504356,43400512,298682320,2118282440,15433768456,115345136566,882900083222,6910879999420,55255039432300,450744068706896,3747796352076736,31734090674951512,273414453918459800,2395202886317347900 ⋆ a(n) = Sum _{ k=0..n } binomial(n, k) * HT(n, k) = Sum _{ k=0..n } (- 1) ^ (n - k) * binomial(n, k) * HT(n, k), where HT(n, k) is the Hermite triangle A099174. ● a(n) = Sum _{ j=0..n } even(n - j) * binomial(n, j) * 2 ^ ((j - n) / 2) * n! / (j! * ((n - j) / 2)!), where even(k) = 1 if k is even and otherwise 0. ●

► [A281433] 1,1,2,10,40,296,1576,15352,104000,1276480,10556416,156843776,1533722752,26777626240,302395339520,6068829396736,77740741758976,1763457842941952,25267740818452480,639308368122204160,10131932297407840256,282891828731667890176 ⋆ Number of maximal matchings in the 2 X n rook graph. ● a(n) = Sum _{ k=0..n / 2 } (2 * k - 1)!! ^ 2 * binomial(n,2 * k) * (1 + 2 * k * (n - 2 * k)). ●

► [A277379] 1,1,2,10,40,296,1936,17872,164480,1820800,21442816,279255296,3967316992,59837670400,988024924160,17009993230336,318566665977856,6177885274406912,129053377688043520,2786107670662021120,64136976817284448256,1525720008470138454016 ⋆ E.g.f.: exp(x / (1 - x ^ 2)) / sqrt(1 - x ^ 2). ● a(n) = | H _ n((1 + i) / 2)| ^ 2 / 2 ^ n = H _ n((1 + i) / 2) * H _ n((1 - i) / 2) / 2 ^ n, where H _ n(x) is n - th Hermite polynomial, i = sqrt(- 1). ●

► [A297047] 0,2,10,41,154,562,2023,7240,25842,92129,328270,1169390,4165231,14835316,52837774,188186161,670237602,2387090906,8501757271,30279468752,107841945274,384084812929,1367938393414,4871984909782,17351831683935 ⋆ Number of edge covers in the n - wheel graph. ● a(n) = 4 * a(n - 1) - 5 * a(n - 3) - 2 * a(n - 4). ● a(n) = 2 ^ (- 2 - n) * (2 * (1 - sqrt(5)) ^ n * (1 + sqrt(5)) - 2 * (- 1 + sqrt(5)) * (1 + sqrt(5)) ^ n - 3 * (3 - sqrt(17)) ^ n - sqrt(17) * (3 - sqrt(17)) ^ n - 3 * (3 + sqrt(17)) ^ n + sqrt(17) * (3 + sqrt(17)) ^ n). - _ Colin Barker _ , Dec 28 2017 ●

► [A135512] 2,10,41,166,670,2700,10869,43718,175730,705988,2835002,11380060,45666236,183199832,734768013,2946348102,11812385898,47350033812,189775422798,760507313652,3047308092708,12209106348072,48911419819458 ⋆ Number A(Bn,K) of all D - invariant ideals of the algebra NBn(K) of classical type over a field K if 2K=0. ● a(n) = 3 * 4 ^ (n - 1) - 2 * binomial(2 * (n - 1),n - 1) * (n * (n - 1) + 1) / (n * (n + 1)). ●

► [A020988] 0,2,10,42,170,682,2730,10922,43690,174762,699050,2796202,11184810,44739242,178956970,715827882,2863311530,11453246122,45812984490,183251937962,733007751850,2932031007402,11728124029610,46912496118442,187649984473770 ⋆ a(n) = (2 / 3) * (4 ^ n - 1). ● a(n) = 4 * a(n - 1) + 2, a(0) = 0. ● a(n) = a(n - 1) + 2 ^ (2n - 1), a(0) = 0. - _ Washington Bomfim _ , Jan 22 2011 ● a(n) = 5 * a(n - 1) - 4 * a(n - 2) (n > 1), a(0) = 0, a(1) = 2. - _ L. Edson Jeffery _ , Mar 02 2012 ● a(n) = Sum _{ k=0..n } binomial(2n + 1, ((n + 2) mod 3) + 3k). (End) ●

► [A084480] 1,2,10,42,182,790,3432,14914,64814,281680,1224182,5320310,23122148,100489226,436727814,1898026232,8248853134,35849651070,155803171860,677123141810,2942788286798,12789406189672,55582969192486,241564496305670,1049843265359828 ⋆ Number of tilings of a 4 X 2n rectangle with L tetrominoes. ● a(n) = 4 * a(n - 1) + 2 * a(n - 2) - a(n - 3) - 4 * a(n - 4) - 4 * a(n - 5) - 2 * a(n - 6) for n>5. - _ Colin Barker _ , Mar 28 2017 ●

► [A309182] 1,2,10,42,201,1028,5538,30666,173593,1001402,5864750,34769364,208267320,1258574116,7663720710,46976034378,289628805623,1794932294978,11175157356522,69864075597442,438403736549145,2760351027094300,17433869214973754,110420300879752980 ⋆ (1 / 3) times the number of n - member subsets of [3n] whose elements sum to a multiple of n. ● a(n) = 1 / (3n) * Sum _{ d|n } binomial(3d,d) * (- 1) ^ (n + d) * phi(n / d). ●

► [A064835] 0,0,2,10,44,120,270,522,920,1504,2330,3450,4932,6840,9254,12250,15920,20352,25650,31914,39260,47800,57662,68970,81864 ⋆ If n mod 2 = 0 then a(n) = n ^ 4 / 4 - 2 * n ^ 2 + 3 * n; otherwise, a(n) = n ^ 4 / 4 - 2 * n ^ 2 + 3 * n - 5 / 4. ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 5 * a(n - 4) - 4 * a(n - 5) + a(n - 6). - _ Vincenzo Librandi _ , Jun 19 2018 ●

► [A068551] 0,2,10,44,186,772,3172,12952,52666,213524,863820,3488872,14073060,56708264,228318856,918624304,3693886906,14846262964,59644341436,239532643144,961665098956,3859788636664,15488087080696,62135313450064 ⋆ a(n) = 4 ^ n - binomial(2 * n,n). ● a(n) = Sum _{ k >= 1 } binomial(2 * m - 2 * k, m - k) * binomial(2 * k, k). ● a(n + 1) = 4 * a(n) + 2 * C(n), where C(n) = Catalan numbers. ●

► [A099919] 0,2,10,44,188,798,3382,14328,60696,257114,1089154,4613732,19544084,82790070,350704366,1485607536,6293134512,26658145586,112925716858,478361013020,2026369768940,8583840088782,36361730124070 ⋆ a(n) = F(3) + F(6) + F(9) + ... + F(3n), F(n) = Fibonacci numbers A000045. ● a(n) = Sum _{ 0 <= j <= i <= n } binomial(i, j) * F(i + j). - _ Benoit Cloitre _ , May 21 2005 ● a(n) = 4 * a(n - 1) + a(n - 2) + 2, n > 1. - _ Gary Detlefs _ , Dec 08 2010 ● a(n) = 5 * a(n - 1) - 3 * a(n - 2) - a(n - 3), n > 2. - _ Gary Detlefs _ , Dec 08 2010 ● a(n) = (Fibonacci(3 * n + 3) + Fibonacci(3 * n) - 2) / 4. - _ Gary Detlefs _ , Dec 08 2010 ● a(n) = (- 10 + (5 - 3 * sqrt(5)) * (2 - sqrt(5)) ^ n + (2 + sqrt(5)) ^ n * (5 + 3 * sqrt(5))) / 20. - _ Colin Barker _ , Nov 26 2016 ●

► [A084059] 1,2,10,44,196,872,3880,17264,76816,341792,1520800,6766784,30108736,133968512,596091520,2652303104,11801395456,52510188032,233643543040,1039594548224,4625665278976,20581850212352,91578731407360 ⋆ a(n) = 4 * a(n - 1) + 2 * a(n - 2) for n>1, a(0)=1, a(1)=2. ● a(n) = ((2 + sqrt(6)) ^ n + (2 - sqrt(6)) ^ n) / 2. - _ Paul Barry _ , May 13 2003 ● a(n) = Sum _{ k=0..floor(n / 2) } C(n,2k) * 2 ^ (n - k) * 3 ^ k. - _ Paul Barry _ , Jan 15 2007 ● a(n) = (- i) ^ n * 2 ^ (n / 2) * ChebyshevT(n, i * sqrt(2)) = 2 ^ ((n - 2) / 2) * Lucas(n, 2 * sqrt(2)). - _ G. C. Greubel _ , Jan 03 2020 ●

► [A084609] 1,2,10,44,214,1052,5284,26840,137638,710828,3692140,19266920,100932220,530479640,2795917960,14771797424,78210099718,414862155980,2204273582236,11729283976136,62496686731924,333400654676168 ⋆ Coefficients of 1 / sqrt(1 - 4 * x - 8 * x ^ 2); also, a(n) is the central coefficient of (1 + 2 * x + 3 * x ^ 2) ^ n. ● a(n) = Sum _{ k = 0..floor(n / 2) } C(n,k) * C(2 * (n - k),n) * 2 ^ k. - _ Paul Barry _ , Sep 08 2004 ● a(n) = Sum _{ k = 0..floor(n / 2) } C(n,2 * k) * C(2 * k,k) * 3 ^ k * 2 ^ (n - 2 * k); a(n) = Sum _{ k = 0..floor(n / 2) } C(n,k) * C(n - k,k) * 3 ^ k * 2 ^ (n - 2k). - _ Paul Barry _ , Sep 19 2006 ● a(n) = (2 * (2 * n - 1) * a(n - 1) + 8 * (n - 1) * a(n - 2)) / n, a(0)=1, a(1)=2. - _ Sergei N. Gladkovskii _ , Jul 20 2012 ● a(n) = 2 ^ n * hypergeom([(1 - n) / 2, - n / 2], [1], 3) = binomial(2 * n, n) * hypergeom([(1 - n) / 2, - n / 2], [1 / 2 - n], - 2). - _ Vladimir Reshetnikov _ , Oct 10 2016 ● a(n) = (- 2 * sqrt(- 2)) ^ n * P(n, sqrt(- 1 / 2)), where P(n,x) denotes the n - th Legendre polynomial. - _ Peter Bala _ , Feb 07 2022 ●

► [A105485] 1,2,10,44,215,1112,6141,35968,222659,1451770,9939702,71265036,533744979,4166533826,33831424388,285213338300,2492259168784,22538314947452,210639529104328,2031804667766532,20203377516199587,206861906112012524,2178715175981722659 ⋆ Number of partitions of { 1...n } containing 3 strings of 3 consecutive integers, where each string is counted within a block and a stri

ng of more than 3 consecutive integers are counted three at a time. ● a(n) = S um _{ k=1..n } c(n, k, 3), where c(n, k, 3) is the case r=3 of c(n, k, r) given b y c(n, k, r)=c(n - 1, k - 1, r) + (k - 1)c(n - 1, k, r) + c(n - 2, k - 1, r) + (k - 1)c(n - 2, k, r) + c(n - 1, k, r - 1) - c(n - 2, k - 1, r - 1) - (k - 1)c(n - 2, k, r - 1), r=0, 1, .., n - k - 1, k=1, 2, .., n - 2r, c(n, k, 0) = Sum _{ j= 0..floor(n / 2) } binomi al(n - j, j) * S2(n - j - 1, k - 1). ●

▶ [A142983] 1,2,10,44,288,1896,15888,137952,1419840,15255360,186693120,2387 093760,33898314240,502247692800,8123141376000,136785729024000,2483065912 320000,46822564905984000,942853671825408000,19678282007924736000,4353551 06185252083200 0 ★ a(1) = 1, a(2) = 2, a(n + 2) = 2 * a(n + 1) + (n + 1) * (n + 2) * a(n). ● a(n) = n! * p(n + 1) * sum { k = 1..n } (- 1) ^ (k + 1) / (p(k) * p (k + 1)), where p(n) = n. Recurrence: a(1) = 1, a(2) = 2, a(n + 2) = 2 * a(n + 1) + (n + 1) * (n + 2) * a(n). The sequence b(n):= n! * p(n + 1) satisfies th e same recurrence with b(1) = 2, b(2) = 6. Hence we obtain the finite continue d fraction expansion a(n) / b(n) = 1 / (2 + 1 * 2 / (2 + 2 * 3 / (2 + 3 * 4 / (2 + ... + (n - 1) * n / 2)))), for n >=2. The behavior of a(n) for large n is given by lim n - > infinity a(n) / b(n) = 1 / (2 + 1 * 2 / (2 + 2 * 3 / (2 + 3 * 4 / (2 + ... + n * (n + 1) / (2 + ...))))) = sum { k = 1..inf } (- 1) ^ (k + 1) / (k * (k + 1)) = 2 * log(2) - 1; ●

▶ [A306752] 1,1,1,1,1,1,1,1,1,2,10,46,166,496,1288,3004,6436,12871,24312,43776,7 5736,126940,208336,340120,564928 ★ a(n) = Sum _{ k=0..n } binomial(k, 8 * (n - k)). ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) + a(n - 9) for n > 8. ●

▶ [A306859] 1,1,1,1,1,1,1,1,2,10,46,166,496,1288,3004,6436,12872,24328,43912,76 552,130816,223840,394384,735472,1470944 ★ a(n) = Sum _{ k=0..floor(n / 8) } binomial(n,8 * k). ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) for n > 7. ●

▶ [A373913] 1,1,1,1,1,1,2,10,46,166,496,1288,3004,6437,12888,24464,44728,804 28,146320,278104,564929,1225811,2778772,6396236 ★ Number of compositions of 8 * n into parts 7 and 8. ● a(n) = Sum _{ k=0..floor(n / 7) } binomial(n + k,n - 7 * k). ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 9 * a(n - 7) - a(n - 8). ●

▶ [A212387] 1,1,1,1,1,1,1,1,2,10,46,166,496,1288,3004,6437,12895,24583,45799,87 211,180235,420547,1087220,2941931,7927664 ★ Number of Dyck n - paths all of whose ascents have lengths equal to 1 (mod 7). ● a(n) = Sum _{ k=0..n } (bin omial(6 * k - 5 * n - 1,n - k) * binomial(n + 1,7 * k - 6 * n)) / (n + 1). - _ Vlad imir Kruchinin _ , Mar 05 2016 ●

▶ [A290923] 2,10,46,208,938,4230,19078,86048,388106,1750490,7895302,3561048 0,160615298,724429270,3267420814,14737172032,66469626002,299800475370,13 52201455582,6098885514512,27508034668634,124070532153830,55960002720539 8,2523985228499040 ★ p - INVERT of the positive integers, where p(S) = 1 - 2 * S - 2 * S ^ 2. ● a(n) = 6 * a(n - 1) - 8 * a(n - 2) + 6 * a(n - 3) - a(n - 4). ●

▶ [A204091] 1,2,10,46,210,958,4370,19934,90930,414782,1892050,8630686,39369 330,179585278,819187730,3736768094,17045465010,77753788862,354678014290,1 617882493726,7380056440050,33664517212798,153562473183890,70048333149385 4,3195291711101490 ★ The number of 1 X n Haunted Mirror Maze puzzles with a unique solution ending with a mirror. ● a(n) = 5 * a(n - 1) - 2 * a(n - 2) with a(1) = 2, a(2) = 10. ● a(n) = 2 * sum _{ i=0 }^{ i=n - 1 } a(n)(2 ^ (n - i) - 1) , a(0) = 1. ● a(n) = (2 ^ (1 - n) * ((5 + sqrt(17)) ^ n - (5 - sqrt(17)) ^ n)) / sqr t(17) for n>0. - _ Colin Barker _ , Nov 26 2016 ●

▶ [A006213] 0,2,10,46,224,1202,7120,46366,329984,2551202,21306880,19125268 6,1836652544,18793429202,204154071040,2346705139006,28459289083904,363156 549211202,4864231397785600,68237760828425326,1000569392347480064,1530648 7540377673202 ★ Number of down - up permutations of n + 4 starting with n + 1. ● a(n) = T(n + 3, n), where T is the triangle in A008282. (End) ●

▶ [A181296] 0,2,10,48,208,864,3472,13640,52664,200616,755992,2823688,1046885 6,38570504,141341944,515532424,1872673144,6777925768,24453094264,87966879 368,315629269368,1129834372744,4035747287416,14387491636872 ★ The number of odd entries in all the 2 - compositions of n. ● a(n) = 7 * a(n - 1) - 12 * a(n - 2) - 4 * a(n - 3) + 12 * a(n - 4) - 4 * a(n - 5). [_ Harvey P. Dale _ , Nov 11 20 11] ●

▶ [A239073] 1,2,10,48,208,874,3600,14622,58976,236824,949094,3800126,1520781 2,60846154,243414326,973716670,3894985588,15580180122,62321195992,2492857 35518,997144844044,3988583179554,15954340324098,63817376508852,255269536 476262 ★ Given a circle of radius R into which small circles of radius R / 2 ^ n are packed in a ”hexagonal pattern” (see Comments), a(n) is the maximum nu mber of small circles. ● a(n) = 2 ^ n + 2 * Sum _{ i odd, <= iMax } (2 * floo r(sqrt(x - 3 * i ^ 2) / 2) + 1) + 2 * Sum _{ i even, 0 < i <= iMax } 2 * floor(sqrt(x - 3 * i ^ 2) / 2 + 1 / 2) where x = (2 ^ n - 1) ^ 2 and iMax = floor(sqrt(x / 3)). - _ Jon E. Schoenfield _ , Mar 17, Mar 23 2014 ●

▶ [A114693] 2,10,48,232,1138,5666,28592,145984,752978,3918282,20547456,1084 82952,576187554,3076640898,16506527392,88938911296,481067145826,261121295 8154,14218923060752,77653486423528,425227486222482 ★ Number of returns to the x - axis in all hill - free Schroeder paths of length 2n + 4. A Schroeder path of length 2n is a lattice path from (0,0) to (2n,0) consisting of U=(1,1), D=(1, - 1) and H=(2,0) steps and never going below the x - axis. A hill is a peak at heig ht 1. ● a(n) = Sum _{ k=0..n + 1 } ((k ^ 3 + 8 * k ^ 2 + 15 * k + 8) * Sum _{ j=0..n - k } ((- 1) ^ j * 2 ^ (n + 1 - j) * binomial(n + 1,j) * binomial(2 * n - k - j,n))) / (8 * (n + 1)). - _ Vladimir Kruchinin _ , Feb 27 2016. ●

▶ [A037256] 0,1,2,10,48,296,2080,16752,151424,1519744,16766208,201685760,262 7316736,36847260672,553551644672,8868624615424,150943592939520,271981626 4613888,5172464606475776,103535938788391936,217590100386743582 72,47902 7478333199482880 ★ a(n) = n! * Sum _{ i=0..n - 1 } (n - i) * (- 2) ^ i / (i + 1)!. ● a(n) = 2 * (n - 1) * a(n - 1) - (n - 4) * (n - 1) * a(n - 2) - 2 * (n - 2) * (n - 1) * a(n - 3). - _ Vaclav Kotesovec _ , Oct 08 2012 ● a(n) = (- 2) ^ n + (n + 1)! / 2 - (3 + n) * Gamma(1 + n, - 2) / (2 * e ^ 2). - _ Benedict W. J. Irwin _ , Jul 06 2020 ●

▶ [A337348] 0,2,10,50,210,882,3570,14450,57970,232562,930930,3726450,1490853 0,59645042,238591090,954408050,3817675890,15270878322,61083688050,2443354 51250,977342504050,3909372812402,15637494045810,62549987368050,250199960 657010 ★ Numbers formed as the product of two numbers without consecutive e qual binary digits and sharing no common bits between them. ● a(n) = 5 * a(n - 1) - 20 * a(n - 3) + 16 * a(n - 4) for n>4. ●

▶ [A371605] 1,1,1,2,10,50,230,1260,9240,76440,651000,6006000,62739600,719518 800,8736327600,112588476000,1558917360000,23070967920000,36050745931200 0,5925688056288000,10261915071408000 0,18695575149451200 00,35676360727207 200000 ★ Expansion of e.g.f. 1 / (1 - x + x ^ 2 / 2 - x ^ 3 / 3). ● a(n) = n * a(n - 1) - n * (n - 1) * a(n - 2) / 2 + n * (n - 1) * (n - 2) * a(n - 3) / 3. ●

▶ [A180266] 0,1,2,10,50,238,1092,4884,21450,92950,398684,1696396,7171892,30 161740,126293000,526864680,2191034970,9086921190,37596989100,15523257750 0,639749274780,2632212288420,10814090022840,44369043365400 ★ a(0) = 0; a(n) = C(2 * n - 2,n - 1) * (n ^ 2 - 2 * n + 2) / n for n >= 1. ● a(n) = [x ^ n] x * (1 - 3 * x + n * x) / (1 - x) ^ (n + 1). (End) ●

▶ [A020699] 1,2,10,50,250,1250,6250,31250,156250,781250,3906250,19531250,976 56250,488281250,2441406250,12207031250,61035156250,305175781250,152587890 6250,7629394531250,38146972656250,190734863281250,953674316406250 ★ Expa nsion of (1 - 3 * x) / (1 - 5 * x). ● a(n) = 2 * 5 ^ (n - 1) for n>0. ● a(0)=1, a(1)=2, a(n) = 5 * a(n - 1) for n>=2. [_ Vincenzo Librandi _ , Jan 01 2011] ●

▶ [A020729] 2,10,50,250,1250,6250,31250,156250,781250,3906250,19531250,9765 6250,488281250,2441406250,12207031250,61035156250,305175781250,1525878906 250,7629394531250,38146972656250,190734863281250,953674316406250,4768371 582031250,23841857910156250 ★ Pisot sequences E(2,10), L(2,10), P(2,10), T(2, 10). ● a(n) = 2 * 5 ^ n. ● a(n) = 5 * a(n - 1). ●

▶ [A110170] 1,2,10,50,258,1362,7306,39650,217090,1196834,6634890,36949266,20 6549250,1158337650,6513914634,36718533570,207412854786,1173779487810,6653 482333450,37770112857074,214694383882498,1221832400430482,69610379469382 50,39697830840765090,226596964146630658 ★ First differences of the central De lannoy numbers (A001850). ● a(n) = P _ n(3) - P _{ n - 1 } (3) (n >= 1), wh ere P _ j is j - th Legendre polynomial. ● a(n) = sum { k = 0..n, (0 ^ (n + k) + C(n + k - 1, 2k - 1)) * C(2k, k) } = 0 ^ n + sum { k = 0..n, C(n + k - 1, 2k - 1) * C(2k, k) } . (End) ● a(n) = 2 * hypergeom([1 - n, - n], [1], 2) for n>0. - _ Peter Luschny _ , May 22 2017 ● a(0) = 1; a(n) = (2 / n) * Sum _{ k=0..n - 1 } (n ^ 2 - k ^ 2) * a(k). - _ Seiichi Manyama _ , Mar 28 2023 ●

▶ [A027908] 1,2,10,50,266,1452,8074,45474,258570,1481108,8533660,49402850,28 7134346,1674425300,9792273690,57407789550,337281021450,1985342102964,1170 6001102180,69124774458092,408737856117916,2419833655003752,1434191042895 3018,85087759173024870 ★ a(n) = T(2 * n, n), T given by A027907. ● a(n) = G egenbauerC(n, - 2 * n, - 1 / 2). - _ Peter Luschny _ , May 09 2016 ● a(n) = [x ^ (2 * n)](1 + x ^ 2 + x ^ 4) ^ (2 * n). ● a(n) = Sum _{ k = 0..floor(n / 2) } C(2 * n, n - k) * C(n - k, k). ● a(n) = C(2 * n,n) * hypergeom([- n / 2, (1 - n) / 2], [n + 1], 4) ●

▶ [A037514] 2,10,51,257,1285,6426,32132,160660,803301,4016507,20082535,1004 12676,502063382,2510316910,12551584551,62757922757,313789613785,156894806 8926,7844740344632,39223701723160,196118508615801,980592543079007 ★ Base 5 digits are, in order, the first n terms of the periodic sequence with initial peri od 2,0,1. ● a(n) = 5 * a(n - 1) + a(n - 3) - 5 * a(n - 4). - _ Vincenzo Librandi _ , May 31 2013 ●

▶ [A307208] 2,10,52,158,466,1192,2914,6722,14972,32286,67914,139824,282754,5 62970,1105892,2146846,4124258,7849496,14815202,27752338,51632620,9546550 2,175508250,320981472,584214530 ★ a(n) is the forgotten index of the Fibonacci cube Gamma(n). ● a(n) = Sum _{ k=1..n } T(n,k) * k ^ 3 where T(n,k) = Su m _{ i=0..k } binomial(n - 2 * i, k - i) * binomial(i + 1, n - k - i + 1). ● a(n) = 4 * a(n - 1) - 2 * a(n - 2) - 8 * a(n - 3) + 5 * a(n - 4) + 8 * a(n - 5) - 2 * a(n - 6) - 4 * a(n - 7) - a(n - 8) for n>8. ●

▶ [A075436] 2,10,52,274,1452,7716,41064,218722,1165564,6213100,33125336,176 629268,941884088,5022886536,26786945232,142857244674,761881733148,4063282 813596,21670523246712,115574945807004,616395334890408,3287425475237496,1 7532874879557552 ★ Right - or upward - moving paths connecting opposite cor ners of an n X n chessboard, visiting the diagonal in 0 up to (n - 2) intermediat e points between start and finish. Equivalently, subdivide the chessboard into 1 up to (n - 1) blocks along the diagonal in all possible ways and sum the path - c ount over all sub - blocks. ● a(n) = 2 ^ (4 * n - 7) / 3 ^ (n - 2) * (1 - Sum _{ k =2..n - 1 } C(2 * k - 1,k) * 3 ^ (k - 2) / ((2 * k - 1) * 2 ^ (4 * k - 4))), for n>2. - _ Vaclav Kotesovec _ , Oct 28 2012 ●

▶ [A344576] 0,2,10,52,278,1510,8288,45834,254922,1424252,7986550,44921582,25 3320352,1431678194,8106897418,45982821860,261206625526,1485765938390,8461 264982176,48237937154554,275275548126890,1572297656021292,89878880159967 90,51417128080562142 ★ a(n) = f(n,n) where f(0,n) = f(n,0) = Fibonacci(n) and f(m,n) = f(m - 1,n) + f(m,n - 1) + f(m - 1,n - 1). ● a(n) = ((79 - 97 * n + 26 * n ^ 2) * a(n - 1) + (- 9 + 9 * n - 2 * n ^ 2) * a(n - 4) + (107 - 111 * n + 26 * n ^ 2) * a(n - 3) + (- 322 + 352 * n - 88 * n ^ 2) * a(n - 2)) / (5 - 7 * n + 2 * n ^ 2) for n >= 4. - _ José María Grau Ribas _ , Jun 19 2021 ●

▶ [A074612] 2,10,52,280,1552,8800,50752,296320,1745152,10339840,61514752,36 6991360,2193559552,13127802880,78632599552,471258726400,2825404874752,169 43839313920,101628676145152,609634617917440 ★ a(n) = 4 ^ n + 6 ^ n. ● a(n) = 10 * a(n - 1) - 24 * a(n - 2) with a(0)=2, a(1)=10. [_ Vincenzo Librandi _ , Jul 21 2010] ●

▶ [A238796] 1,1,2,10,52,326,2256,17102,139448,1210582,11116360,107154092,108 0800788,11345351096,123697222208,1395340522214,16260899226608,1952142692 03174,241141956236834 4,30583990129966436,39787667501054883 2,530048325565 3341714 ★ Symmetric (0,1) - matrices of order n where the numbers of 1’s is eq ual to the order n. ● a(n) = [x ^ n](1 + x) ^ n * (1 + x ^ 2) ^ binomial(n, 2). ● a(n) = sum(binomial(n, 2k) * binomial(binomial(n, 2), k), k=0..n / 2). ● a(n) = sum(binomial(n ^ 2 - 2k, n - k) * binomial(binomial(n, 2), k) * (- 2) ^ k, k= 0..n). ●

▶ [A373907] 1,2,10,53,264,1294,6349,31200,153366,753836,3705166,18211117,895 08951,439943336,2162355196,10628140702,52238121106,256754344524,126196716 4192,6202664757387,30486569842400,149843813435961,736493759087077,361992 2936674360 ★ Number of compositions of 7 * n into parts 1 and 7. ● a(n) = Su

m _{ k=0..n } binomial(n + 6 * k,n - k). ● a(n) = 8 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). ●

► [A247102] 2,10,53,298,1727,10207,61154,370090,2256983,13848085,85387040,528646015,3284180720,20462505850,127816245053,800143927210,5018683475087,31532297088781,198419993271440,1250291989478773,7888160383113014 ⋆ G.f.: (6 * x + 2) / (sqrt(- 3 * x ^ 2 - 6 * x + 1) * (4 * x ^ 2 + 4 * x)) - (2 * x + 1) / (2 * x ^ 2 + 2 * x). ● a(n) = sum(i=0..n + 1, binomial(2 * n - i + 1,n - i + 1) * sum(j=0..n + 1, binomial(j, - j + i) * binomial(n + 1,j)). ●

► [A369263] 1,2,10,54,329,2126,14356,100030,713956,5193064,38354066,286860714,2168308302,16537766036,127114940840,983657456878,7657060437148,59917814944376,471062428422152,3718952705982232,29471640802526185,2343560622452489566,186940560453713411 6 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 - x) ^ 2 / (1 + x ^ 2) ^ 3). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 2) } binomial(3 * n + 3,k) * binomial(3 * n - 2 * k + 1,n - 2 * k). ●

► [A365879] 1,2,10,54,332,2162,14734,103630,746857,5486206,40926152,309202686,2361065920,18192978966,141280871840,1104603758526,8687878404289,68692224882620,545681467048132,4353096328518810,34858239962177764,280095777427596008 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 + x) ^ 3 * (1 - x) ^ 5). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..n } (- 1) ^ k * binomial(3 * n + k + 2,k) * binomial(6 * n - k + 4,n - k). ●

► [A202365] 1,1,2,10,54,336,2400,19440,176400,1774080,19595520,235872000,3073593600,43110144000,647610163200,10374216652800,176536039680000,3180264062976000,60466862776320000,1210048630382592000,25423825985445888000,559567461880627200000,12874917427270778880000 ⋆ G.f.: Sum _{ n>=0 } (n - x) ^ n * x ^ n / (1 + n * x - x ^ 2) ^ n. ● a(n) = (n - 1) * (n + 2) / 2 * (n - 1)!, for n>1 with a(0)=a(1)=1. ●

► [A371816] 1,2,10,55,322,1947,12013,75154,474946,3024742,19381045,124797862,806875421,5234713031,34060165282,222174355575,1452425614146,9513309908589,62418283102246,410161124310550,2698932409666237,17781425199962255,117281204608676426 ⋆ a(n) = Sum _{ k=0..floor(n / 3) } (- 1) ^ k * binomial(3 * n - 3 * k - 1,n - 3 * k). ● a(n) = [x ^ n] 1 / ((1 + x ^ 3) * (1 - x) ^ (2 * n)). ● a(n) = binomial(3 * n - 1, n) * hypergeom([1, (1 - n) / 3, (2 - n) / 3, - n / 3], [1 / 3 - n, 2 / 3 - n, 1 - n], - 1). - _ Stefano Spezia _ , Apr 07 2024 ●

► [A108490] 1,2,10,56,268,1448,7864,42752,236368,1313696,7339552,41217920,232321984,1313731712,7449834880,42347380736,241225384192,1376662561280,7869527190016,45051709749248,258256281078784,1482218578159616 ⋆ Expansion of 1 / sqrt(1 - 4x - 8x ^ 2 - 24x ^ 3 + 36x ^ 4). ● a(n) = Sum _{ k=0..n } C(n - k, k) ^ 2 * 3 ^ k * 2 ^ (n - k). ●

► [A370195] 1,2,10,56,322,1902,11440,69680,428418,2653292,16527910,103443144,649964176,4097464490,25904239560,164168677056,1042651014018,6634470805556,42286359318364,269925368946896,1725325033144622,11041442722096094,70739175615642016 ⋆ Coefficient of x ^ n in the expansion of ((1 + x) ^ 2 * (1 + x ^ 2) ^ 2) ^ n. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(2 * n,k) * binomial(2 * n,n - 2 * k). ●

► [A165817] 1,2,10,56,330,2002,12376,77520,490314,3124550,20030010,129024480,834451800,5414950296,35240152720,229911617056,1503232609098,9847379391150,64617565719070,424655979547800,2794563003870330,18412956934908690,121455445321173600 ⋆ Number of compositions (= ordered integer partitions) of n into 2n parts. ● a(n) = 9 * sqrt(3) * GAMMA(n + 5 / 3) * GAMMA(n + 4 / 3) * 27 ^ n / (Pi * GAMMA(2 * n + 3)). ● a(n) = binomial(3 * n - 1, n); ● a(n) = Sum _{ i=1..P(n) } (2 * n)! / ((2 * n - p(i))! * (Prod _{ j=1..d(i) } m(i,j)!)). ● a(n) = rf(2 * n,n) / ff(n,n), where rf is the rising factorial and ff the falling factorial. - _ Peter Luschny _ , Nov 21 2012 ● a(n) = Sum _{ k=0..n } (binomial(n - 1,n - k) * binomial(2 * n,k)). - _ Vladimir Kruchinin _ , Oct 06 2015 ● a(n) = [x ^ n] 1 / (1 - x) ^ (2 * n). - _ Ilya Gutkovskiy _ , Oct 03 2017 ●

► [A243644] 1,2,10,56,334,2072,13192,85500,561190,3717740,24802540,166376256,1120966084,7579795628,51408124372,349559178116,2382166791750,16265392884140,111249729804220,762067793838960,5227330405163524 ⋆ Expansion of x * log'(((1 - sqrt(1 - 4 * x)) / 2 - sqrt(((- sqrt(1 - 4 * x) - 11) * (1 - sqrt(1 - 4 * x))) / 4 + 1) + 1) / 4). ● a(n) = Sum _{ k=0..n } binomial(n + (k) - 1,(k)) * binomial(3 * n - 1,n - 4 * k). ● a(n) = [x ^ n] ((1 - x) ^ 2 / ((1 - x) ^ 4 - x ^ 4)) ^ n. O.g.f. A(x) is essentially obtained by logarithmically differentiating the o.g.f of A243632. - _ Peter Bala _ , Oct 02 2015 ●

► [A000172] 1,2,10,56,346,2252,15184,104960,739162,5280932,38165260,278415920,2046924400,15148345760,112738423360,843126957056,6332299624282,47737325577620,361077477684436,2739270870994736,20836827035351596 ⋆ The Franel number a(n) = Sum _{ k = 0..n } binomial(n,k) ^ 3. ● a(n) = (n!) ^ 3 * [x ^ n] hypergeom([], [1, 1], x) ^ 2. - _ Peter Luschny _ , May 31 2017 ● a(n) = Sum _{ k=0..floor(n / 2) } (n + k)! / (k! ^ 3 * (n - 2 * k)!) * 2 ^ (n - 2 * k). ● a(n) = [x ^ n] (1 - x ^ 2) ^ n * P(n,(1 + x) / (1 - x)), where P(n,x) denotes the n - th Legendre polynomial. See Gould, p. 56. - _ Peter Bala _ , Mar 24 2022 ● a(n) = (2 ^ n / (4 * Pi ^ 2)) * Integral _{ x,y=0..2 * Pi } (1 + cos(x) + cos(y) + cos(x + y)) ^ n dx dy = (8 ^ n / (Pi ^ 2)) * Integral _{ x,y=0..Pi } (cos(x) * cos(y) * cos(x + y)) ^ n dx dy (Pla, 1995). - _ Amiram Eldar _ , Jul 16 2022 ● a(n) = Sum _{ k = 0..n } m ^ (n - k) * binomial(n,k) * binomial(n + 2 * k,n) * binomial(2 * k,k) at m = - 4. Cf. A081798 (m = 1), A006480 (m = 0), A124435 (m = - 1), A318109 (m = - 2) and A318108 (m = - 3). - _ Peter Bala _ , Mar 16 2023 ●

► [A191277] 1,1,2,10,56,376,3152,30640,338816,4226176,58564352,892337920,14834994176,267186021376,5182147684352,107689460377600,2387077442011136,56219583797886976,1401949974947889152,36902741817196871680,1022494706646806429696 ⋆ Expansion of e.g.f. 1 / (1 - sinh(x) * cosh(x)). ● a(n) = Sum _{ k=1..n } Sum _{ i=0..k } (- 1) ^ i * (k - 2 * i) ^ n * binomial(k,i), n>0, a(0)=1. ● a(0) = 1; a(n) = Sum _{ k=0..floor((n - 1) / 2) } 4 ^ k * binomial(n,2 * k + 1) * a(n - 2 * k - 1). - _ Seiichi Manyama _ , Jun 30 2022 ●

► [A336961] 1,2,10,56,384,3022,26626,258624,2734360,31168682,380196414,4932536908,67717987948,979613124414,14877703575130,236469561581768,3922587278751504,67743812585483218,1215417753459838198,22609895367286957572,435341977596130683316 ⋆ Expansion of e.g.f. exp(x * (2 + x) * exp(x)). ● a(0) = 1; a(n) = Sum _{ k=1..n } binomial(n - 1,k - 1) * k * (k + 1) * a(n - k). ●

► [A265954] 1,1,2,10,56,394,3332,32782,368072,4651666,65440748,1015205974,17225810768,317432262298,6313880504564,134828046043486,3076458785723864,74696205255843490,1922729345267645180,52297599798809376358,1498690940537194229600 ⋆ Coefficients in asymptotic expansion of sequence A265950. ● a(k) ~ k! / (4 * (log(2)) ^ (k + 1)). ●

► [A371770] 1,2,10,57,338,2057,12741,79914,505954,3226638,20696685,133382658,862978221,5601919325,36467212610,237974911737,1556281907586,10196788555859,66921360130374,439860632463462,2895002186799453,19077000179746293,125849150650146714 ⋆ a(n) = Sum _{ k=0..floor(n / 3) } binomial(3 * n - 3 * k - 1,n - 3 * k). ● a(n) = [x ^ n] 1 / ((1 - x ^ 3) * (1 - x) ^ (2 * n)). ●

► [A369487] 1,2,10,57,365,2492,17797,131290,992704,7652558,59918667,475213662,3809620760,30820493162,251309225465,2063207320841,17040385542611,141487339935740,1180337222858348,9888553030497869,83160409524964381,701782096849536054 ⋆ Expansion of (1 / x) * Series _ Reversion(x / (1 - x) * (1 - x - x ^ 2) ^ 3). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 2) } binomial(3 * n + k + 2,k) * binomial(3 * n - k + 1,n - 2 * k). ●

► [A075870] 2,10,58,338,1970,11482,66922,390050,2273378,13250218,77227930,450117362,2623476242,15290740090,89120964298,519435045698,3027489309890,17645500813642,102845515571962,599427592618130,3493720040136818,20362892648202778,118683635849079850 ⋆ Numbers k such that 2 * k ^ 2 - 4 is a square. ● a(n) = (1 / sqrt(2)) * ((1 + sqrt(2)) ^ (2 * n - 1) - (1 - sqrt(2)) ^ (2 * n - 1)) = 6 * a(n - 1) - a(n - 2). ● a(n) = round(((2 + sqrt(2)) * (3 + 2 * sqrt(2)) ^ (n - 1)) / 2). - _ Paul Weisenhorn _ , Jun 11 2020 ● a(n) = 2 * Pell(2 * n - 1). ●

► [A074608] 2,10,58,370,2482,17050,118378,825730,5771362,40373290,282534298,1977503890,13841818642,96890604730,678227855818,4747575858850,33232973616322,232630643127370,1628413985330938,11398896347634610 ⋆ a(n) = 3 ^ n + 7 ^ n. ● a(n) = 10 * a(n - 1) - 21 * a(n - 2) with a(0)=2, a(1)=10. - _ Vincenzo Librandi _ , Jun 11 2020 ●

► [A108450] 2,10,58,402,3122,26010,227050,2049186,18964194,178976426,1715905050,16665027378,163611970066,1621103006010,16189480081354,162791835045698,1646810150270914,16748008972020554,171135004105459194 ⋆ Number of pyramids in all paths from (0,0) to (3n,0) that stay in the first quadrant (but may touch the horizontal axis), consisting of steps u=(2,1), U=(1,2), or d=(1, - 1) (a pyramid is a sequence u ^ pd ^ p or U ^ pd ^ (2p) for some positive integer p, starting at the x - axis). ● a(n) = 2 * Sum _{ k=0..n - 1 } (Sum _{ i=0..k } (binomial(2 * k + 2,k - i) * binomial(2 * k + i + 1,2 * k + 1)) / (k + 1)). - _ Vladimir Kruchinin _ , Feb 29 2016 ●

► [A370247] 1,2,10,59,362,2277,14575,94474,618154,4074197,27008885,179897720,1202961215,8070830588,54302131642,366252974259,2475575739306,16764524795037,113719280941453,772551326290528,5255393538550837,35794109754866998,244060675562790316 ⋆ Coefficient of x ^ n in the expansion of (1 / (1 - x) ^ 2 * (1 + x ^ 3)) ^ n. ● a(n) = Sum _{ k=0..floor(n / 3) } binomial(n,k) * binomial(3 * n - 3 * k - 1,n - 3 * k). ●

► [A370273] 1,2,10,59,362,2277,14581,94572,619242,4084538,27099435,180651913,1209036725,8118629365,54671662692,369071775684,2496852123882,16923762715911,114902801532622,781296976824693,5319705042364587,36265061394634215,247497082392976415 ⋆ Coefficient of x ^ n in the expansion of 1 / ((1 - x) ^ 2 * (1 - x ^ 3)) ^ n. ● a(n) = Sum _{ k=0..floor(n / 3) } binomial(n + k - 1,k) * binomial(3 * n - 3 * k - 1,n - 3 * k). ●

► [A340987] 1,2,10,59,362,2287,14719,95965,631714,4189334,27946335,187319827,1260570515,8511460908,57634550179,391232510284,2661483301282,18140003082945,123846214549072,846801764644618,5797865791444367,39745254613927264,272762265331208465 ⋆ Number of colored integer partitions of 2n such that all colors from an n - set are used. ● a(n) = [x ^ (2n)] (- 1 + Product _{ j>0 } 1 / (1 - x ^ j)) ^ n. ●

► [A372415] 1,2,10,59,366,2332,15121,99276,657894,4391438,29482320,198865680,1346655921,9149295482,62336961732,425760311734,2914151872614,19983724103726,137267022656710,944287970305935,6504676822047876,44861522295224400,309742638630690264 ⋆ Coefficient of x ^ n in the expansion of ((1 - x + x ^ 3) / (1 - x) ^ 3) ^ n. ● a(n) = Sum _{ k=0..floor(n / 3) } binomial(n,k) * binomial(3 * n - 2 * k - 1,n - 3 * k). ●

► [A372476] 1,2,10,59,366,2332,15127,99388,659262,4405379,29611120,199986085,1356018339,9225340880,62941829996,430495159084,2950754125870,20263845589461,139393311839827,960318328961614,6624842357972916,45757925847607270,316401673996278705 ⋆ Coefficient of x ^ n in the expansion of 1 / ((1 - x) * (1 - x - x ^ 3)) ^ n. ● a(n) = Sum _{ k=0..floor(n / 3) } binomial(n + k - 1,k) * binomial(3 * n - 2 * k - 1,n - 3 * k). ●

► [A262910] 1,2,10,59,366,2337,15205,100235,667222,4474733,30188335,204646532,1392850785,9511878729,65144238981,447263887479,3077459618886,21215286546705,146500755609415,1013180180867125,7016536189029551,48650933146617728,337709155342663620 ⋆ a(n) = Sum _{ k=0..n } binomial(k + n - 1,k) * binomial(k + n,2 * k). ● a(n) = hypergeom([- n, n, n + 1], [1 / 2, 1], - 1 / 4). - _ Peter Luschny _ , Oct 08 2015 ●

► [A370281] 1,2,10,59,370,2392,15757,105156,708546,4809695,32841380,225321967,1552063981,10726766624,74348039020,516586596484,3597106344450,25095046641861,175369603836301,1227366066102925,8601637753421020,60355768595163030,423972992316330225 ⋆ Coefficient of x ^ n in the expansion of 1 / ((1 - x) ^ 2 - x ^ 3) ^ n. ● a(n) = Sum _{ k=0..floor(n / 3) } binomial(n + k - 1,k) * binomial(3 * n - k - 1,n - 3 * k). ●

► [A202482] 1,2,10,59,385,2672,19336,144218,1100530,8549888,67386652,537437222,4328934754,35162809688,287688325672,2368563539171,19608128003473,163116600371846,1362822870625762,11430476370562259 ⋆ Expansion of (1 - (1 - 9 * x) ^ (1 / 3)) / (4 - (1 - 9 * x) ^ (1 / 3)). ● a(n):=1 / n * sum(i=1..n, i * sum(k=0..n - i, binomial(k,n - k - i) * 3 ^ (k) * (- 1) ^ (n - k + 1) * binomial(n + k - 1,n - 1))). ●

► [A246480] 2,10,60,172,462,966,1880,3256,5370,8290,12372,17700,24710,33502,44592,58096,74610,94266,117740,145180,177342,214390,257160,305832,361322 ⋆ Number of length 1 + 3 0..n arrays with no pair in any consecutive four terms totalling exactly n. ● a(n) = - n + 3 * n ^ 2 - 2 * n ^ 3 + n ^ 4 for n even. ● a(n) = - 3 + 3 * n + 3 * n ^ 2 - 2 * n ^ 3 + n ^ 4 for n odd. ●

► [A114620] 0,2,10,60,348,2030,11830,68952,401880,2342330,13652098,79570260,463769460,2703046502,15754509550,91824010800,535189555248,3119313320690,18180690368890,105964828892652,617608282987020 ⋆ 2 * A084158 (twice Pell triangles). ● a(n) = ((sqrt(2) + 1) ^ (2 * n + 1) - (sqrt(2) - 1) ^ (2 * n + 1) - 2 * (- 1) ^ n) / 8. - corrected by _ Ilya Gutkovskiy _ , Jul 18 2016 ● a(n + 1) = 6 * a(n) - a(n - 1) + 2 * (- 1) ^ n : a(n + 1) = 5 * a(n) + 5 * a(n - 1) - a(n - 2). ●

► [A004981] 1,2,10,60,390,2652,18564,132600,961350,7049900,52169260,388898120,2916735900,21987701400,166478310600,1265235160560,9647418099270,73774373700300,565603531702300,4346216612028200,33465867912617140,258165266754475080,1994913424920943800 ⋆ a(n) = (2 ^ n / n!) * Product _{ k=0..n - 1 } (4 * k + 1). ● a(n) = (Sum _{ m=1..n } m * Sum _{ k=m..n } binomial(- m + 2 * k - 1,k - 1) * 2 ^ (n + m - k) * binomial(2 * n - k - 1,n - 1)) / n, n>0, a(0)=1. - _ Vladimir Kruchinin _ , Dec 26 2011 ● a(n) = (- 8) ^ n * binomial(- 1 / 4,n). ●

► [A262001] 1,2,10,60,400,2900,22700,191600,1746400,17230000,184348000,2140118000,26925784000,366118706000,5359236310000,84077608400000,1407341155720000,25027454132360000,471046698018440000,9351091483806800000,195213433887227200000,4274234604872786800000,97924306054031604400000 ⋆ G.f.: 1 / (1 - x * F'(x) / F(x)) where F(x) = Sum _{ n>=0 } x ^ n / n! * Product _{ k=1..n } (k ^ 2 + 1). ● a(n) == 0 (mod 10) for n>1. ●

► [A098616] 1,2,10,60,406,2940,22308,175032,1408550,11561836,96425836,814773960,6960289532,60012947800,521582661000,4564643261040,40190674554630,355772529165900,3164408450118300,28266363849505320,253466716153665300,2280803103062033160,20588945107316958840 ⋆ Product of Pell and Catalan numbers: a(n) = A000129(n + 1) * A000108(n). ● a(n) == 0 (mod 10) for n = (5 ^ k + (- 1) ^ k) / 2 through n = 5 ^ k - 1 when k>=1. ●

► [A052600] 1,2,10,60,504,5040,61200,856800,13749120,247484160,4953312000,108972864000,2615827737600,68011521177600,1904409771264000,57132293137920000,1828254303203328000,62160646308913152000 ⋆ Expansion of e.g.f. 1 / ((1 - 2 * x) * (1 - x ^ 2)). ● a(n) = (4 / 3 * 2 ^ n + Sum _ (- 1 / 6 * (2 +_ alpha) *_ alpha ^ (- 1 - n), _ alpha=RootOf(- 1 +_ Z ^ 2))) * n! ● a(n) = (4 * 2 ^ n - 1) / 3 * n! if n is even, a(n) = (4 * 2 ^ n - 2) / 3 * n! otherwise. ●

► [A155626] 1,2,10,62,370,2102,11530,61742,325090,1690982,8717050,44633822,227363410,1153594262,5835080170,29443836302,148292923330,745759583942,3745977788890,18798608421182,94267920012850,472439111692022 ⋆ a(n) = 5 ^ n - 4 ^ n + 1. ● a(n) = 9 * a(n - 1) - 20 * a(n - 2) + 12 with a(0)=1, a(1)=2. - _ Vincenzo Librandi _ , Jul 21 2010 ● a(n) = 10 * a(n - 1) - 29 * a(n - 2) + 20 * a(n - 3). - _ Wesley Ivan Hurt _ , Jun 07 2021 ●

► [A092165] 2,10,62,370,2222,13330,79982,479890,2879342,17276050,103656302,621937810,3731626862,22389761170,134338567022,806031402130,4836188412782,29017130476690,174102782860142,1044616697160850,6267700182965102,37606201097790610,225637206586743662 ⋆ Let M = 2 X 2 matrix [1 2 / 5 4]; a(n) = (1, 2) entry of M ^ n. ● a(n) = (2 * 6 ^ n - 2 * (- 1) ^ n) / 7. ●

► [A370249] 1,2,10,62,394,2552,16810,112114,754698,5116832,34891260,239036470,1644001546,11344059092,78497737370,544507428962,3785080540682,26360971309824,183895618774084,1284778549054704,8988079638054044,62955181189933276,441442177486335002 ⋆ Coefficient of x ^ n in the expansion of (1 / (1 - x) ^ 2 * (1 + x ^ 3) ^ 2) ^ n. ● a(n) = Sum _{ k=0..floor(n / 3) } binomial(2 * n,k) * binomial(3 * n - 3 * k - 1,n - 3 * k). ●

► [A370275] 1,2,10,62,394,2552,16822,112310,756874,5137676,35076360,240606082,1656906550,11447855850,79319081054,550925792312,3834743187594,26742188401900,186802789016908,1306827910585782,9154542088193544,64206944261628146,450823141806229290 ⋆ Coefficient of x ^ n in the expansion of 1 / ((1 - x) ^ 2 * (1 - x ^ 3) ^ 2) ^ n. ● a(n) = Sum _{ k=0..floor(n / 3) } binomial(2 * n + k - 1,k) * binomial(3 * n - 3 * k - 1,n - 3 * k). ●

► [A370626] 1,2,10,62,402,2662,17914,122040,839154,5811758,40482530,283311470,1990464450,14030571258,99179197512,702789627712,4990636603986,35506061422530,253030893941362,1805893735209486,12906043894108162,92346511605008562,661494201448139850 ⋆ Coefficient of x ^ n in the expansion of 1 / (1 - x - x ^ 3) ^ (2 * n). ● a(n) = Sum _{ k=0..floor(n / 3) } binomial(2 * n + k - 1,k) * binomial(3 * n - 2 * k - 1,n - 3 * k). ●

► [A243034] 1,2,10,62,422,2992,21736,160442,1197798,9018656,68355820,520851212,3986036204,30615867128,235879185188,1822138940482,14108173076358,109454660444336,850687921793836,6622072711690452 ⋆ Expansion of A(x) = x * F'(x) / (F(x) - F(x) ^ 2), where F(x) = (- 1 - sqrt(1 - 8 * x) + sqrt(2 + 2 * sqrt(1 - 8 * x) + 8 * x)) / 4. ● a(n) = 1 + n * Sum _{ m=0..n } (Sum _{ k=1..(n - m) } (binomial(k, n - m - k) * binomial(n + 2 * k - 1, n + k - 1)) / (n + k))). ●

► [A107841] 1,2,10,62,430,3194,24850,199910,1649350,13879538,118669210,1027945934,9002083870,79568077034,708911026210,6359857112438,57403123415350,520895417047010,4749381474135850,43489017531266654,399755692955359630,3687437532852484442,34121911117572911410 ⋆ Series reversion of x(1 - 3x) / (1 - x). ● a(n) = (1 / (n + 1))sum { k=0..n, C(n + 1, k)C(2n - k, n)(- 1) ^ k * 3 ^ (n - k) } . ● a(n) = (1 / (n + 1))sum { k=0..n, C(n + 1, k + 1)C(n + k, k)(- 1) ^ (n - k) * 3 ^ k } . ● a(n) = sum { k=0..n, (1 / (k + 1)) * C(n, k)C(n + k, k)(- 1) ^ (n - k) * 3 ^ k } . ● a(n + 1) is the coefficient of x ^ (n + 1) in 2 * sum { j,1,n } ((sum { k,1,n } a(k)x ^ k) ^ (j + 1)), a(1)=1 with offset by 1. - _ Fung Lam _ , Dec 31 2013 ●

► [A245519] 0,0,0,2,10,64,336,1872,11104,71944,508032,3511232,27192704,223750464,1947253504,17899536448,173156535168,1760383827776,18752453106176,209034916385472,2432351796434560,29509268795249700 ⋆ Number of alpha - labeled graphs with n edges and at most n vertices. ● a(n) = Sum _{ L=1..n - 2 } Sum _{ i=1..n - 1 } Product _{ k=1..n } d(L,k,i), where ●

► [A078531] 1,2,10,64,462,3584,29172,245760,2124694,18743296,168043980,1526726656,14025209100,130056978432,1215785268840,11445014102016,108401560073190,1032295389593600,9877854438949980,94927710773575680 ⋆ Coefficients of power series that satisfies A(x) ^ 2 - 4 * x * A(x) ^ 3 = 1, A(0)=1. ● a(n) = 2 * (sum _{ i=0..n - 2 } binomial(3n - 3, i) * binomial(2n - 2 - i, n)) / (n - 1) for n>1. - _ Emeric Deutsch _ , Nov 29 2002 ● a(n) = 2 ^ (2n) * binomial(3n / 2 - 1 / 2, n) / (n + 1). - _ Emeric Deutsch _ , Dec 10 2002 ●

► [A064170] 1,1,2,10,65,442,3026,20737,142130,974170,6677057,45765226,3136795220,2149991425,14736260450,101003831722,692290561601,4745030099482,32522920134770,222915410843905,1527884955772562,10472279279564026,71778070001175617,491974210728665290 ⋆ a(1) = 1; a(n + 1) = product of numerator and denominator in Sum _{ k=1..n } 1 / a(k). ● a(n) = Fibonacci(2 * n - 5) * Fibonacci(2 * n - 3), for n >= 3. - _ Barry Cipra _ , Jun 06 2002 ● a(n) = F(2 * n - 3) * F(2 * n - 5) = 1 + F(2 * (n - 2)) ^ 2, for n >= 2, with F(- 1) = 1. See the W. Lang comments above. - _ Wolfdieter Lang _ , May 26 2020 ●

► [A027307] 1,2,10,66,498,4066,34970,312066,2862562,26824386,255680170,2471150402,24161357010,238552980386,2375085745978,23818652359682,240382621607874,2439561132029314,24881261270812490,254892699352950850 ⋆ Number of paths from (0,0) to (3n,0) that stay in first quadrant (but may touch horizontal axis) and where each step is (2,1), (1,2) or (1, - 1). ● a(n) = (1 / n) * Sum _{ i =0..n - 1 } 2 ^ (i + 1) * binomial(2 * n, i) * binomial(n, i + 1)), n>0. ● a(n) = Sum _{ k=0..n } C(2 * n + k, n + 2 * k) * C(n + 2 * k, k) / (n + k + 1). - _ Paul D. Hanna _ , Mar 30 2005 ● a(n) = 2 * hypergeom([1 - n, - 2 * n], [2], 2) for n >= 1. - _ Peter Luschny _ , Nov 08 2021 ● a(n) = (1 / n) * Sum _{ k=0..n - 1 } (- 1) ^ k * 2 ^ (n - k) * binomial(n,k) * binomial(3 * n - k,n - 1 - k) for n > 0. - _ Seiichi Manyama _ , Aug 09 2023 ●

► [A366178] 1,2,10,67,502,4045,34279,301232,2720266,25091431,235394601,2239139980,21546299491,209361514219,2051379996574,20245794958408,201079938971546,2008276118393320,20157131084034349,203215717750220949,2056913539436637829 ⋆ G.f. A(x) satisfies A(x) = 1 / (1 - x) + x * A(x) ^ 3 / (1 - x) ^ 3. ● a(n) = Sum _{ k=0..n } binomial(n + 4 * k,n - k) * binomial(3 * k,k) / (2 * k + 1). ●

► [A208561] 2,10,68,464,3168,21632,147712,1008640,6887424,47030272,321142784,2192900096,14974058496,102249267200,698201669632,4767619219456,32555340398592,222301769433088,1517971432275968,10365357302743040 ⋆ Number of n X 2 0..2 arrays with new values 0..2 introduced in row major order and no element equal to more than one of its immediate leftward or upward or left - upward diagonal neighbors. ● a(n) = ((4 - 2 * sqrt(2)) ^ n * (- 1 + sqrt(2)) + (1 + sqrt(2)) * (2 * (2 + sqrt(2))) ^ n) / (8 * sqrt(2)) for n>1. ●

► [A152621] 1,2,10,68,484,3464,24808,177680,1272592,9114656,65281696,467565632,3348834880,23985285248,171789272704,1230402470144,8812484124928,63117458178560,452064760678912,3237813336359936,23190118126806016 ⋆ a(n)=8 * a(n - 1) - 6 * a(n - 2), n>1 ; a(0)=1, a(1)=2. ● a(n)=(1 / 2) *{ [4 - sqrt(10)] ^ n + [4 + sqrt(10)] ^ n }+ (1 / 10) * sqrt(10) *{ [4 - sqrt(10)] ^ n - [4 + sqrt(10)] ^ n } , with n>=0 [From _ Paolo P. Lava _ , Dec 12 2008] ●

► [A147725] 1,2,10,68,502,3770,28408,214202,1615330,12181748,91867102,692804690,5224704088,39401485202,297141621850,2240858259428,16899166494502,127443057596810,961096686931768,7247996548821002,54659905383139570 ⋆ Row sums of triangle in A147724. ● a(n)=9 * a(n - 1) - 11 * a(n - 2) for n>2, a(0)=1, a(1)=2, a(2)=10. G.f.: (1 - 7x + 3x ^ 2) / (1 - 9x + 11x ^ 2). ● a(n)=[(9 / 2) + (1 / 2) * sqrt(37)] ^ (n - 1) - (1 / 37) * sqrt(37) * [(9 / 2) - (1 / 2) * sqrt(37)] ^ (n - 1) + (1 / 37) * [(9 / 2) + (1 / 2) * sqrt(37)] ^ (n - 1) * sqrt(37) + [(9 / 2) - (1 / 2) * sqrt(37)] ^ (n - 1) + (3 / 11) * [C(2 * n,n) mod 2], with n>=0 [From _ Paolo P. Lava _ , Nov 18 2008] ●

► [A074603] 2,10,68,520,4112,32800,262208,2097280,16777472,134218240,1073742848,8589936640,68719480832,549755822080,4398046527488,35184372121600,281474976776192,2251799813816320,18014398509744128,144115188076380160 ⋆ a(n) = 2 ^ n + 8 ^ n. ● a(n) = 8 * a(n - 1) - 2 ^ n = 10 * a(n - 1) - 16 * a(n - 2). ●

► [A110520] 1,2,10,68,538,4652,42628,406856,4001914,40285724,413049580,4298523704,45288486436,482122686008,5178044596168,56038403289488,610508962548538,6690154684006268,73693477140179548,815508203755227608 ⋆ Expansion of 1 / (1 - 2 * x * c(3 * x)), c(x) the g.f. of A000108. ● a(0)=1, a(n) = Sum _{ k=0..n } Sum _{ j=0..n } j * C(2n - j - 1, n - j) * C(j, k) * 3 ^ (n - j) / n, n > 0. ● a(n) = the top left term in M ^ n, M = the infinite square production matrix: ●

► [A121201] 2,10,70,462,3018,19922,133262,901654,6155410,42306714,292240854,2026154846,14085427802,98109713506,684326588446,4778079088038,33385518460194,233393453440298,1632228295176038,11417968671701230 ⋆ 7 ^ n + 5 ^ n - 2n. ● a(n) = 14 * a(n - 1) - 60 * a(n - 2) + 82 * a(n - 3) - 35 * a(n - 4). - _ Vincenzo Librandi _ , Feb 26 2013 ●

► [A051405] 2,10,70,574,5002,44530,399310,3589414,32291602,290585050,2615147350,23535971854,211822683802,1906400965570,17157599124190,154418363419894,1389765184685602,12507886403890090,112570976860169830,1013138789417005534 ⋆ a(n) = (3 ^ n + 1) * (3 ^ (n + 1) + 1) / 4. ● a(0)=2, a(1)=10, a(2)=70, a(n)=13 * a(n - 1) - 39 * a(n - 2) + 27 * a(n - 3). - _ Harvey P. Dale _ , Jul 13 2012 ●

► [A005568] 1,2,10,70,588,5544,56628,613470,6952660,81662152,987369656,12228193432,154532114800,1986841476000,25928281261800,342787130211150,4583937702039300,61923368957373000,844113292629453000,11600528392993339800,160599522947154548400,2238236829690383152800 ⋆ Product of two successive Catalan numbers C(n) * C(n + 1). ● a(n) = binomial(2 * n,n) * binomial(2 * n + 2, n + 1) / ((n + 1)(n + 2)). ● a(n) = 2 * (2 * n + 1) * binomial(2 * n,n) ^ 2 / ((n + 2)(n + 1) ^ 2). ●

► [A366241] 1,2,10,72,552,4593,40185,364413,3395217,32305005,312589540,3066565720,30430287693,304907935707,3080617021926,31349533179726,321038696185371,3305935381202847,34211612434972446,355605873560512974,3710978684625678870 ⋆ G.f. A(x) satisfies A(x) = 1 + x + x * (1 + x) ^ 4 * A(x) ^ 3. ● a(n) = Sum _{ k=0..n } binomial(6 * k + 1,n - k) * binomial(3 * k,k) / (2 * k + 1). ●

► [A047853] 1,2,10,74,586,4682,37450,299594,2396746,19173962,153391690,1227133514,9817068106,78536544842,628292358730,5026338869834,40210710958666,321685687669322,2573485501354570,20587884010836554,164703072086692426 ⋆ a(n) = T(5,n), array T given by A047848. ● a(n) = (8 ^ n + 6) / 7. - _ Ralf Stephan _ , Feb 14 2004 ● a(0)=1, a(1)=2; a(n) = 9 * a(n - 1) - 8 * a(n - 2) for n>1. ● a(n) = 8 * a(n - 1) - 6 for n>0, a(0)=1. - _ Vincenzo Librandi _ , Aug 06 2010 ●

► [A349310] 1,2,10,74,642,6082,60970,635818,6826690,74958914,837833482,9500939978,109037364930,1264049402754,14780619799722,174121322204074,2064572904600706,24620095821589378,295087003429677322,3552841638851183690,42950

428996378731010 ⋆ G.f. A(x) satisfies: A(x) = (1 + x * A(x) ^ 4) / (1 - x). • a(n) = Sum _{ k=0..n } binomial(n + 3 * k,4 * k) * binomial(4 * k,k) / (3 * k + 1). • a(n) = F([(1 + n) / 3, (2 + n) / 3, (3 + n) / 3, - n], [2 / 3, 1, 4 / 3], - 1), where F is the generalized hypergeometric function. - _ Stefano Spezia _ , Nov 14 2021 •

▶ [A092881] 1,2,10,74,730,8282,92170,959114,9359290,86810042,775127530,6729173354,57217937050,479099439002,3966035935690,32552638110794,265489098246010,2154919024055162,17428334622452650,140575105877211434 ⋆ Number of ordered 3 - multiantichains on an n - set. • a(n) = 8 ^ n - 6 * 6 ^ n + 6 * 5 ^ n + 6 * 4 ^ n - 12 * 3 ^ n + 6 * 2 ^ n. •

▶ [A240599] 2,10,78,694,6570,64450,646870,6596334,68050578,708277498,7423267742,78238452390,828411940538,8805333110194,93899794491046,1004158446353374,10764586985847330,115642794779838442 ⋆ Expansion of A(x) = x * B'(x) * (B(x) - x) / B(x) ^ 2 where B(x) / x is g.f. of A027307. • a(n) = sum(k=1..n, 2 ^ k * binomial(n - 1,n - k) * sum(i=0..k, i * (- 1) ^ (i - k) * binomial(k,i) * sum (j=0..n, ((- 1) ^ j * 2 ^ (n - j) * (2 * n - j + i - 1)!) / (j! * (n - j)! * (n - j + i)!)))). •

▶ [A100248] 1,2,10,79,777,8606,102512,1282129,16605538,220781427,2995985345,41325515589,577713950666,8166924383923,116550061698966,1676836298476274,24295472856858786,354190017808427947,5191706917095917442,76469028773023897070,1131207622704483680933,16799374652884761512521 ⋆ Row sums of the slanted Catalan convolution table A100247. • a(n) = Sum _{ k=0..2n } C(n + 2 * k - [k / 2], k) * (n - [k / 2]) / (n + 2 * k - [k / 2]). •

▶ [A152600] 1,2,10,80,790,8720,103060,1275680,16326190,214280720,2868504460,39014154080,537592643740,7488960021920,105295566289960,1492291482505280,21296015905884190,305755507155234320 ⋆ a(n)=0 ^ n + sum { k=0..n - 1, C(n + k - 1,2k) * A000108(k) * 3 ^ k * 2 ^ (n - k) } • a(n) = 2 ^ n * (4 * (n + 1) * LegendreP(n + 1,4) - (31 * n + 16) * LegendreP(n,4)) / (3 * n * (n - 1)) for n >1. - _ Mark van Hoeij _ , May 27 2010 •

▶ [A132397] 2,10,86,682,5462,43690,349526,2796202,22369622,178956970,1431655766,11453246122,91625968982,733007751850,5864062014806,46912496118442,375299968947542,3002399751580330,24019198012642646,192153584101141162 ⋆ Second trisection of A024494. • a(0)=2, a(1)=10, a(n) = 7 * a(n - 1) + 8 * a(n - 2). - _ Harvey P. Dale _ , Oct 14 2015 • a(n) = Sum _{ k=0..n } binomial(3 * n + 2,3 * k + 1). • a(n) = 2 * ((- 1) ^ n + 2 ^ (1 + 3 * n)) / 3 for n>1. - _ Colin Barker _ , Jun 05 2020 •

▶ [A186184] 1,1,2,10,89,1002,12592,168805,2363241,34138860,505042286,7612594936,116492572621,1804984878387,28260999959595,446441276449715,7106718529937710,113886198966545724 ⋆ Expansion of 1 / (1 - x * A002296(x)). • a(n) = Sum _{ k=1..n } (k / (6 * n - 5 * k)) * binomial(7 * n - 6 * k - 1, n - k), n > 0. •

▶ [A087799] 2,10,98,970,9602,95050,940898,9313930,92198402,912670090,9034502498,89432354890,885289046402,8763458109130,86749292044898,858729462339850,8500545331353602,84146723851196170,832966693180608098,8245520207954884810 ⋆ a(n) = 10 * a(n - 1) - a(n - 2), starting with a(0) = 2 and a(1) = 10. • a(n) = (5 + sqrt(24)) ^ n + (5 - sqrt(24)) ^ n. • a(- n) = a(n). - _ Michael Somos _ , Feb 25 2014 • a(n) = 2 * T(n,5), where T(n,x) denotes the n - th Chebyshev polynomial of the first kind. •

▶ [A086927] 2,10,102,1030,10402,105050,1060902,10714070,108201602,1092730090,11035502502,111447755110,1125513053602,11366578291130,114791295964902,1159279537940150,11707586675366402,118235146291604170 ⋆ a(n) = 10 * a(n - 1) + a(n - 2), starting with a(0) = 2 and a(1) = 10. • a(n) = (5 + sqrt(26)) ^ n + (5 - sqrt(26)) ^ n. •

▶ [A003222] 2,10,108,982,8120,65426,524132,4194094,33554160,268435114,2147483228,17179868678,137438952872,1099511627074,8796093021396,70368744176734,562949953420256,4503599627369306,36028797018962636 ⋆ a(n) = 2 ^ (3 * n + 1) - 2 * n * (2 * n + 1). • a(n) = 11 * a(n - 1) - 27 * a(n - 2) + 25 * a(n - 3) - 8 * a(n - 4). •

▶ [A252707] 2,10,1000000000 ⋆ "Smallest interesting" sequence such that each term has as many digits as the previous term's value. • a(1) = 2, a(n) = 10 ^ (a(n - 1) - 1). •

▶ [A007931] 1,2,11,12,21,22,111,112,121,122,211,212,221,222,1111,1112,1121,1122,1211,1212,1221,1222,2111,2112,2121 ⋆ Numbers that contain only 1's and 2's. Nonempty binary strings of length n in lexicographic order. • a(n) = Sum _{ j =0..m - 1 } (1 + b(j) mod 2) * 10 ^ j, where m = floor(log _ 2(n + 1)), b(j) = floor((n + 1 - 2 ^ m) / (2 ^ j)). • a(k * (2 ^ n - 1)) = k * (10 ^ n - 1) / 9, k= 1, 2. • a(3 * 2 ^ n - 2) = (11 * 10 ^ n - 2) / 9 = 10 ^ n + 2 * (10 ^ n - 1) / 9. • a(2 ^ n - 2) = 2 * (10 ^ (n - 1) - 1) / 9, n>1. • a(n) <= (10 ^ log _ 2(n + 1) - 1) / 9, equality holds for n=2 ^ k - 1, k>0. • a(n) > (2 / 10) * (10 ^ log _ 2(n + 1) - 1) / 9. •

▶ [A140148] 1,2,11,12,37,38,87,88,169,170,291,292,461,462,687,688,977,978,1339,1340,1781,1782,2311,2312,2937 ⋆ a(1)=1, a(n)=a(n - 1) + n ^ 2 if n odd, a(n)=a(n - 1) + n ^ 0 if n is even. • a(n)=a(n - 1) +{ [1 - (- 1) ^ n] / 2 }* n ^ 2 +{ [1 + (- 1) ^ n] / 2 } , with a(1)=1 a(n)=(- 1 / 4) - (1 / 4) * (- 1) ^ n * n + (1 / 4) * (- 1) ^ n + (1 / 6) * n ^ 3 - (1 / 4) * (- 1) ^ n * n ^ 2 + (1 / 4) * n ^ 2 + (7 / 12) * n, with n>=1 - _ Paolo P. Lava _ , Jun 06 2008 • a(n)=a(n - 1) + 3a(n - 2) - 3a(n - 3) - 3a(n - 4) + 3a(n - 5) + a(n - 6) - a(n - 7). G.f.: x * (1 + x + 6 * x ^ 2 - 2 * x ^ 3 + x ^ 4 + x ^ 5) / ((1 + x) ^ 3 * (x - 1) ^ 4). [From _ R. J. Mathar _ , Feb 22 2009] •

▶ [A113626] 1,2,11,13,17,19,23,26,29,31,37,38,41,43,46,47,53,58,59,61,62,67,71,73,74 ⋆ Numbers simultaneously heptagon - free, pentagon - free, squarefree and triangle - free. • a(n) has no factor >1 of form b * (b + 1) / 2, c ^ 2, d * (3 * d - 1) / 2, nor e * (5 * e - 3) / 2. •

▶ [A022115] 2,11,13,24,37,61,98,159,257,416,673,1089,1762,2851,4613,7464,12077,19541,31618,51159,82777,133936,216713,350649,567362 ⋆ Fibonacci sequence beginning 2, 11. • a(n) = 12 * F(n) + F(n - 3). - _ J. M. Bergot _ , Jul 20 2017 •

▶ [A041885] 1,1,2,11,13,24,37,209,246,455,19356,19811,39167,215646,254813,470459,725272,4096819,4822091,8918910,379416311,388335221,767751532,422709288 1,4994844413 ⋆ Denominators of continued fraction convergents to sqrt(464). • a(n) = 19602 * a(n - 10) - a(n - 20) for n>19. - _ Vincenzo Librandi _ , Dec 26 2013 •

▶ [A242776] 2,11,13,29,31,47,67,83,101,103,137,139,157,173,191,193,211,227,229,263,281,283,317,337,353 ⋆ Primes p such that 2 ^ p + p ^ 2 is not squarefree. • a(n) < (4 + o(1))n log n. - _ Charles R Greathouse IV _ , May 27 2014 •

▶ [A041447] 1,2,11,13,37,161,2452,9969,22390,32359,184185,400729,12206055,24812839,136270250,161083089,458436428,1994828801,30380868443,123518302573,277417473589,400935776162,2282096354399,4965128484960,151235950903199 ⋆ Denominators of continued fraction convergents to sqrt(239). • a(n) = 1239024 * a(n - 12) - a(n - 24) for n>23. - _ Vincenzo Librandi _ , Dec 18 2013 •

▶ [A041163] 1,1,2,11,13,76,89,165,3059,3224,6283,34639,40922,239249,280171,519420,9629731,10149151,19778882,109043561,128822443,753155776,881978219,1635133995,30314390129 ⋆ Denominators of continued fraction convergents to sqrt(91). • a(n) = 3148 * a(n - 8) - a(n - 16). - _ Vincenzo Librandi _ , Dec 12 2013 •

▶ [A041971] 1,1,2,11,13,193,978,1171,2149,7618,32621,40239,113099,153338,266437,419775,4464187,4883962,9348149,14232111,37812371,52044482,245990299,790015379,1036005678 ⋆ Denominators of continued fraction convergents to sqrt(508). • a(n) = 89515213717502 * a(n - 32) - a(n - 64) for n>63. - _ Vincenzo Librandi _ , Dec 28 2013 •

▶ [A077475] 1,2,11,14,25,28,30,37,39,41,43,46,48,51,54,57,60,64,66,71,76,78,80,82,84 ⋆ Greedy powers of (8 / 13): Sum _{ n>=1 } (8 / 13) ^ a(n) = 1. • a(n) =sum _{ k=1..n } floor(g _ k) where g _ 1=1, g _{ n + 1 } =log _ x(x ^ frac (g _ n) - x) (n>0) at x=(8 / 13) and frac(y) = y - floor(y). • a(n) seems to be asymptotic to c * n with c around 3.7... - _ Benoit Cloitre _ •

▶ [A306278] 2,11,16,25,30,39,44,53,58,67,72,81,86,95,100,109,114,123,128,137,142,151,156,165,170 ⋆ Numbers congruent to 2 or 11 mod 14. • a(n) = 7 * n - 4 + (- 1) ^ n. • a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n > 3. •

▶ [A087379] 2,11,17,29,37,41,59,73,83,103,127,149,179,211,227,263,307,347,373,401,439,487,521,563,613 ⋆ Beginning with 2, primes such that the difference between two successive terms is a distinct composite number. • a(n) = n - th partial sum of A068632. - _ David Wasserman _ , May 24 2005 •

▶ [A104272] 2,11,17,29,41,47,59,67,71,97,101,107,127,149,151,167,179,181,227,229,233,239,241,263,269 ⋆ Ramanujan primes R _ n: a(n) is the smallest number such that if x >= a(n), then pi(x) - pi(x / 2) >= n, where pi(x) is the number of primes <= x. • a(n) = 1 + max { k: pi(k) - pi(k / 2) = n - 1 } . • a(n) = max { prime p: pi(p) - pi(p / 2) = n } (see Shevelev 2012). - _ Jonathan Sondow _ , Mar 23 2016 •

▶ [A105076] 0,1,2,11,19,90,153,712,1208,5609,9514,44163,74907,347698,589745,2737424,4643056,21551697,36554706,169676155,287794595,1335857546,2265802057,10517184216,17838621864 ⋆ Numbers k such that 60 * k ^ 2 + 60 * k + 1 is a square. • a(n) = a(n - 1) + 8 * a(n - 2) - 8 * a(n - 3) - a(n - 4) + a(n - 5). •

▶ [A103200] 1,2,11,19,90,153,712,1208,5609,9514,44163,74907,347698,589745,2737424,4643056,21551697,36554706,169676155,287794595,1335857546,2265802057,10517184216,17838621864,82801616185 ⋆ a(1)=1, a(2)=2, a(3)=11, a(4)=19; a(n) = a(n - 4) + sqrt(60 * a(n - 2) ^ 2 + 60 * a(n - 2) + 1) for n >= 5. • a(1)=1, a(2)=2, a(3)=11, a(4)=19, a(5)=90, a(n) = a(n - 1) + 8 * a(n - 2) - 8 * a(n - 3) - a(n - 4) + a(n - 5). - _ Harvey P. Dale _ , Sep 27 2011 •

▶ [A056637] 2,11,23,47,283,719,1439,2879,34549,138197,1266767,14920303,36449279,377982107,1432349099,22111003847,110874748763 ⋆ a(n) is the least prime of class n - , according to the Erdős - Selfridge classification of primes. • a(n + 1) >= 2 * a(n) + 1, since a(n + 1) - 1 is even and must have a factor of class n - which is odd (n>1) and >= a(n). a(n + 1) <= min { p = 2 * k * a(n) + 1 | k=1,2,3... such that p is prime } , since a(n) is a prime of class n - . - _ M. F. Hasler _ , Apr 05 2007 •

▶ [A338225] 2,11,23,66,167,443,1154,3027,7919,20738,54287,142131,372098,974171,2550407,6677058,17480759,45765227,119814914,313679523,821223647,2149991426,5628750623,14736260451,38580030722 ⋆ a(n) = F(n + 3) * F(n + 1) + (- 1) ^ n where F(n) = A000045(n) are the Fibonacci numbers. • a(n) = F(n + 3) * F(n + 1) + (- 1) ^ n, for n > 0. •

▶ [A042347] 1,2,11,24,35,59,94,153,1930,2083,4013,6096,10109,26314,141679,309672,16244623,32798918,180239213,393277344,573516557,966793901,1540310458,2507104359,31625562766 ⋆ Denominators of continued fraction convergents to sqrt(700). • a(n) = 16386302 * a(n - 16) - a(n - 32) for n>31. - _ Vincenzo Librandi _ , Jan 20 2014 •

▶ [A041803] 1,1,2,11,24,35,129,2615,7974,10589,29152,156349,185501,341850,13859501,14201351,28060852,154505611,337072074,491577685,1811805129,36727680265,111994845924,148722526189,409439898302 ⋆ Denominators of continued fraction convergents to sqrt(422). • a(n) = 14045002 * a(n - 14) - a(n - 28) for n>27. - _ Vincenzo Librandi _ , Dec 24 2013 •

▶ [A220281] 2,11,24,37,38,39,50,96,96,96,96,97,97,125,125,132,178,178,178,179,179,180,213,221,222 ⋆ a(n) is the smallest number, such that for all N >= a(n) there are at least n primes between 14 * N and 15 * N. • a(n) <= ceiling(R _ (15 / 14)(n) / 15), where R _ v(n) (v>1) are generalized Ramanujan numbers (see Shevelev's link). In particular, for n >= 1, { R _ (15 / 14)(n) } = { 127, 307, 347, 563, 569, 733, 1423, 1427, 1429, 1433, 1439, 1447, ... } . Moreover, if R _ (15 / 14)(n) == 1 or 2 (mod 10), then a(n) = ceiling(R _ (15 / 14)(n) / 15). •

▶ [A080663] 2,11,26,47,74,107,146,191,242,299,362,431,506,587,674,767,866,971,1082,1199,1322,1451,1586,1727,1874 ⋆ a(n) = 3 * n ^ 2 - 1. • a(n) = - Re((1 + n * i) ^ 3) where i=sqrt(- 1). - _ Gary W. Adamson _ , Aug 14 2006 • a(n) = 3 * n ^ 2 - 1. - _ Stephen Crowley _ , Jul 06 2009 • a(n) = a(n - 1) - 3 * a(n - 2) + 3 * a(n - 3). - _ Johannes W. Meijer _ , Oct 16 2009 • a(n) = a(n - 1) + 6 * n - 3 for n > 1. - _ Vincenzo Librandi _ , Aug 08 2010 •

▶ [A218471] 0,2,11,27,50,80,117,161,212,270,335,407,486,572,665,765,872,986,1107,1235,1370,1512,1661,1817,1980 ⋆ a(n) = n * (7 * n - 3) / 2. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) with a(0)=0, a(1)=2, a(2)=11. •

▶ [A054552] 1,2,11,28,53,86,127,176,233,298,371,452,541,638,743,856,977,1106,1243,1388,1541,1702,1871,2048,2233 ⋆ a(n) = 4 * n ^ 2 - 3 * n + 1. • a(n) = 8 * n + a(n - 1) - 7 (with a(0)=1). - _ Vincenzo Librandi _ , Aug 07 2010 • a(n) =

3 * a(n - 1) - 3 * a(n - 2) + a(n - 3); a(0)=1, a(1)=2, a(2)=11. - _ Harvey P. Dale _ , Oct 10 2011 ●

▶ [A254627] 1,2,11,28,189,494,3383,8856,60697,158906,1089155,2851444,19544085,51167078,350704367,918155952,6293134513,16475640050,112925716859,2956433640940,2026369768941,5305104928862,36361730124071,95196245354568,652484772464329 ★ Indices of centered pentagonal numbers (A005891) that are also triangular numbers (A000217). ● a(n) = a(n - 1) + 18 * a(n - 2) - 18 * a(n - 3) - a(n - 4) + a(n - 5). ● a(n) = (10 - sqrt(5) * (2 - sqrt(5)) ^ n - 5 * (- 2 + sqrt(5)) ^ n - 2 * sqrt(5) * (- 2 + sqrt(5)) ^ n + sqrt(5) * (2 + sqrt(5)) ^ n + (- 2 - sqrt(5)) ^ n * (- 5 + 2 * sqrt(5))) / 20. - _ Colin Barker _ , Jun 06 2016 ● a(n) = (2 + (1 + 2 * (- 1) ^ n) * Fibonacci(3 * n) - (- 1) ^ n * Lucas(3 * n)) / 4. - _ G. C. Greubel _ , Apr 19 2019 ●

▶ [A062123] 2,11,29,56,92,137,191,254,326,407,497,596,704,821,947,1082,1226,1379,1541,1712,1892,2081,2279,2486,2702 ★ a(n) = (9n ^ 2 + 9n + 4) / 2. ● a(n) = 9 * n + a(n - 1), with n>0, a(0)=2. - _ Vincenzo Librandi _ , Aug 07 2010 ●

▶ [A117560] 2,11,29,59,104,167,251,359,494,659,857,1091,1364,1679,2039,2447,2906,3419,3989,4619,5312,6071,6899,7799,8774 ★ a(n) = n * (n ^ 2 - 1) / 2 - 1. ● a(n) = n * (n ^ 2 - 1) / 2 - 1. ●

▶ [A024178] 2,11,29,61,115,196,312,474,690,971,1331,1781,2335,3010,3820,4782,5916,7239,8771,10535,12551,14842,17434,20350,23616 ★ a(n) = floor(3rd elementary symmetric function of 2,3,...,n + 3) / (2 + 3 + ... + n + 3)). ● a(n) = floor((1 / 24) * n * (n + 1) * (n ^ 2 + 9 * n + 22)). - _ Ivan Neretin _ , May 21 2018 ●

▶ [A154251] 1,2,11,29,65,137,281,569,1145,2297,4601,9209,18425,36857,73721,147449,294905,589817,1179641,2359289,4718585,9437177,18874361,37748729,75497465 ★ Expansion of (1 - x + 7x ^ 2) / ((1 - x)(1 - 2x)). ● a(n) = 3 * a(n - 1) - 2 * a(n - 2), n>2, with a(0)=1, a(1)=2, a(2)=11. ● a(n) = 9 * 2 ^ (n - 1) - 7, n>0, with a(0)=1. ● a(n) = 2 * a(n - 1) + 7, n>1, with a(0)=1, a(1)=2. ● a(n) = 9 * 2 ^ (n - 1) - 7 for n >= 1. ●

▶ [A133558] 1,2,11,29,128,389,1541,5042,18911,64289,234488,813089,2923481,10241282,36552611,128724149,457697648,1616214989,5735493821,20281428722,71900873111,254433731609,901541589608,3191445174089,11305319480561 ★ a(n) = a(n - 1) + 9 * a(n - 2) for n >= 2, a(0)=1, a(1)=2. ● a(n) = (1 / 2) * (1 / 2 - (1 / 2) * sqrt(37)) ^ n + (1 / 2) * (1 / 2 + (1 / 2) * sqrt(37)) ^ n + (3 / 74) * (1 / 2 + (1 / 2) * sqrt(37)) ^ n * sqrt(37) - (3 / 74) * (1 / 2 - (1 / 2) * sqrt(37)) ^ n * sqrt(37), with n >= 0. - _ Paolo P. Lava _ , Nov 18 2008 ●

▶ [A162260] 2,11,30,62,110,177,266,380,522,695,902,1146,1430,1757,2130,2552,3026,3555,4142,4790,5502,6281,7130,8052,9050 ★ a(n) = (n ^ 3 + 4 * n ^ 2 - n) / 2. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). (End) ●

▶ [A190154] 1,1,2,11,30,91,303,936,2936,9300,29209,91917,289547,911218,2868341,9029949,28424456,89477119,281667368,886657081,2791106585,8786130132,27657838272,87064082194,274068969337 ★ Diagonal sums of the triangle A190152. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(3 * n - 4 * k,3 * n - 6 * k). ●

▶ [A121346] 2,11,31,68,124,205,316,460,642,866,1138,1461,1839,2278,2781,3354,4000,4724,5531,6424,7409,8490,9671,10956,12351 ★ Conjectured lower bound for the number of spheres of radius 1 that can be packed in a sphere of radius n. ● a(n) = floor(K * (1 - 2 * d) / d ^ 3 + 1 / (2 * d ^ 2)), where d=1 / n and K = Pi / (3 * sqrt(2)). ●

▶ [A033994] 2,11,32,70,130,217,336,492,690,935,1232,1586,2002,2485,3040,3672,4386,5187,6080,7070,8162,9361,10672,12100,13650 ★ a(n) = n * (n + 1) * (5 * n + 1) / 6. ● a(n) = Sum _{ i=1..n } Sum _{ j=1..n } i + min(i,j). - _ Enrique Pérez Herrero _ , Jan 15 2013 ● a(n) = Sum _{ i=1..n } i * (n + i). - _ Charlie Marion _ , Apr 10 2013 ●

▶ [A094792] 2,11,32,71,134,227,356,527,746,1019,1352,1751,2222,2771,3404,4127,4946,5867,6896,8039,9302,10691,12212,13871,15674 ★ a(n) = (1 / n!) * A001565(n). ● a(n) = n ^ 3 + 3 * n ^ 2 + 5 * n + 2. ● a(n) = Sum _{ i=0..3 } (- 1) ^ i * binomial(3,i) * (n - i)! / (n - 3)!. - Fiona T. Brunk (fbrunk(AT)mcs.st - and.ac.uk), May 23 2006 ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Fung Lam _ , Apr 17 2014 ●

▶ [A173707] 0,0,2,11,32,73,145,259,429,672,1005,1448,2024,2756,3670,4795,6160,7797,9741,12027,14693,17780,21329,25384,29992 ★ Partial sums of floor(n ^ 3 / 3). ● a(n) = Sum _{ k=0..n } floor(k ^ 3 / 3). ● a(n) = round((n ^ 4 + 2 * n ^ 3 + n ^ 2 - 4 * n) / 12). ● a(n) = round((n ^ 4 + 2 * n ^ 3 + n ^ 2 - 4 * n - 2) / 12). ● a(n) = floor((n ^ 4 + 2 * n ^ 3 + n ^ 2 - 4 * n) / 12). ● a(n) = ceiling((n + 1) * (n ^ 3 + n ^ 2 - 4) / 12). ● a(n) = a(n - 3) + n ^ 3 - 3 * n ^ 2 + 5 * n - 4, n > 2. ●

▶ [A332612] 0,0,2,11,32,77,148,268,442,691,1018,1472,2036,2780,3686,4786,6100,7724,9598,11863,14454,17437,20818,24772,29172 ★ a(n) = Sum _{ i=2..n - 1, j=1..i - 1, gcd(i,j)=1 } (n - i) * (n - j). ● a(n) = (Sum _{ i=2..n - 1 } (n - i) * (2 n - i) * phi(i)) / 2. - _ Chai Wah Wu _ , Aug 17 2021 ●

▶ [A085786] 2,11,33,74,140,237,371,548,774,1055,1397,1806,2288,2849,3495,4232,5066,6003,7049,8210,9492,10901,12443,14124,15950 ★ a(n) = n * (2 * n ^ 2 + n + 1) / 2. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ●

▶ [A328152] 0,0,2,11,34,80,160,287,476,744,1110,1595,2222,3016,4004,5215,6680,8432,10506,12939,15770,19040,22792,27071,31924 ★ a(n) is the number of squares of side length greater than 1 having vertices at the points of an n X n grid of dots. ● a(n) = n ^ 2 * (n ^ 2 - 1) / 12 - (n - 1) ^ 2. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ● a(n) = (- 12 + 24 * n - 13 * n ^ 2 + n ^ 4) / 12. ●

▶ [A041389] 1,2,11,35,81,278,1471,3220,91631,186482,1024041,3258605,7541251,25882358,136953041,299788440,8531029361,17361847162,95340265171,303382642675,702105550521,2409699294238,12750602021711,27910903337660,794255895476191 ★ Denominators of continued fraction convergents to sqrt(209). ● a(n) = 93102 * a(n - 8) - a(n - 16) for n>15. - _ Vincenzo Librandi _ , Dec 17 2013 ●

▶ [A205342] 2,11,35,82,160,277,441,660,942,1295,1727,2246,2860,3577,4405,5352,6426,7635,8987,10490,12152,13981,15985,18172,20550 ★ Number of length 5 nonnegative integer arrays starting and ending with 0 with adjacent elements unequal but differing by no more than n. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>4. ●

▶ [A000914] 0,2,11,35,85,175,322,546,870,1320,1925,2717,3731,5005,6580,8500,10812,13566,16815,20615,25025,30107,35926,42550,50050 ★ Stirling numbers of the first kind: s(n + 2, n). ● a(n) = binomial(n + 2, 3) * (3 * n + 5) / 4 = (n + 1) * n * (n + 2) * (3 * n + 5) / 24. ● a(n) = Sum _{ i=1..n } i * (i + 1) ^ 2 / 2. - _ Jon Perry _ , Jul 31 2003 ● a(n) = a(n - 1) + (n + 1) * binomial(n + 1,2) for n >= 1. - _ Dennis P. Walsh _ , Sep 21 2015 ●

▶ [A242300] 0,2,11,35,105,292,796,2130,5655,14927,39281,103160,270600,709282,1858291,4867275,12746265,33375932,87388676,228801650,599034975,1568333527,4106014561,10749789360,28143481680 ★ a(n) = Sum _{ 0<=i<j<=n } L(i) * L(j), where L(k)=A000032(k) is the k - th Lucas number. ● a(n) = (L(n + 1) - 1) ^ 2 + L(n - 1) + (5 * (- 1) ^ n - 3) / 2. - _ Colin Barker _ , May 13 2014 ●

▶ [A154416] 1,1,1,2,11,35,274,1624,13068,118124,1026576,12753576,120543840,1931559552,20313753096,392156797824,5056995703824,102992244837120,1583313975727488,34012249593822720,610116075740491776,13803759753640704000,284093315901811468800 ★ Maximal Stirling numbers of the first kind. ● a(n) = max _{ m=0..n } StirlingS1(n,m). ●

▶ [A184538] 2,11,36,85,166,288,457,682,972,1333,1774,2304,2929,3658,4500,5461,6550,7776,9145,10666,12348,14197,16222,18432,20833 ★ Floor[1 /{ (3 + n ^ 4) ^ (1 / 4) }], where {} =fractional part. ● a(n)=floor[1 /{ (3 + n ^ 4) ^ (1 / 4) }], where {} =fractional part. ●

▶ [A238706] 0,2,11,36,89,183,335,565,894,1347,1952,2738,3738,4988,6525,8390,10627,13281,16401,20039,24248,29085,34610,40884,47972 ★ Sum of the smallest parts of the partitions of 4n into 4 parts with smallest part greater than 1. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 5 * a(n - 3) - 5 * a(n - 4) + 6 * a(n - 5) - 4 * a(n - 6) + a(n - 7) for n > 7. - _ Wesley Ivan Hurt _ , Oct 07 2017 ●

▶ [A071244] 0,0,2,11,36,90,190,357,616,996,1530,2255,3212,4446,6006,7945,10320,13192,16626,20691,25460,31010,37422,44781,53176 ★ n * (n - 1) * (n ^ 2 + 2) / 6. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5), n > 4, a(0)=0, a(1)=0, a(2)=2, a(3)=11, a(4)=36. [_ Yosu Yurramendi _ , Sep 03 2013] ●

▶ [A005583] 2,11,36,91,196,378,672,1122,1782,2717,4004,5733,8008,10948,14688,19380,25194,32319,40964,51359,63756,78430,95680,115830,139230 ★ Coefficients of Chebyshev polynomials. ● a(n) = binomial(n + 4, n - 1) + binomial(n + 3, n - 1) = (1 / 120) * n * (n + 9) * (n + 3) * (n + 2) * (n + 1). ● a(n) = binomial(n + 3,5) + 2 * binomial(n + 3,4). - _ Yuchun Ji _ , May 23 2019 ●

▶ [A176916] 2,11,36,141,646,3151,15656,78161,390666,1953171,9765676,48828181,244140686,1220703191,6103515696,30517578201,152587890706,762939453211,3814697265716,19073486328221,95367431640726,476837158203231 ★ 5 ^ n + 5n + 1. ● a(n)= + 7 * a(n - 1) - 11 * a(n - 2) + 5 * a(n - 3). G.f.: (- 2 + 3 * x + 19 * x ^ 2) / ((5 * x - 1) * (x - 1) ^ 2). [From _ R. J. Mathar _ , Apr 29 2010] ●

▶ [A015519] 0,1,2,11,36,149,550,2143,8136,31273,119498,457907,1752300,6709949,25685998,98341639,376485264,1441362001,5518120850,21125775707,80878397364,309637224677,1185423230902,4538307034543,17374576685400 ★ a(n) = 2 * a(n - 1) + 7 * a(n - 2). ● a(n) = sum(k=0..floor((n - 1) / 2), comb(n - k - 1, k) * (7 / 2) ^ k * 2 ^ (n - k - 1)). - _ Paul Barry _ , Jul 17 2004 ● a(n) = sum { k=0..n, binomial(n, 2 * k + 1) * 8 ^ k } . - _ Paul Barry _ , Sep 29 2004 ●

▶ [A096977] 0,1,2,11,36,157,598,2447,9672,38913,155194,621683,2484908,9943269,39765790,159077719,636281744,2545185225,10180624386,40722730555,162890456180,651562756781,2606249162982,10425000380191,41699994064216 ★ a(n) = 4 * a(n - 1) + 3 * a(n - 2) - 14 * a(n - 3) + 8 * a(n - 4). ● a(n) = 4 * 4 ^ n / 27 - 4 * (- 2) ^ n / 27 + n / 9. ● a(n) = 4 * a(n - 1) + 3 * a(n - 2) - 14 * a(n - 3) + 8 * a(n - 4). ●

▶ [A084098] 0,1,2,11,36,341,1702,23071,154056,2691241,22470602,479886131,4808343276,121361260541,1418683841902,41316096677191,551971861815696,18218322689532241,273815850521907602,10100775754144668251 ★ Expansion of e.g.f. exp(x) * tan(2 * x) / 2. ● a(n) = i * ((4i) ^ n * EulerE(n, - i / 4) - 1) / 2. - _ Benedict W. J. Irwin _ , May 26 2016 ● a(n) = (i / 2) * (- 1 + (2 * i) ^ n * Sum _{ j=0..n } binomial(n,j) * (- 1 - i / 2) ^ j * EulerE(n - j)). - _ G. C. Greubel _ , Oct 14 2022 ●

▶ [A059673] 0,2,11,38,109,284,699,1658,3833,8696,19447,42998,94197,204788,442355,950258,2031601,4325360,9175023,19398638,40894445,85983212,180355051,377487338,788529129 ★ Sum of binary numbers with n 1's and one (non - leading) 0. ● a(n) = (2n - 1) * 2 ^ n + 1 - n. ● a(0)=0, a(1)=2, a(2)=11, a(3)=38, a(n)= 6 * a(n - 1) - 13 * a(n - 2) + 12 * a(n - 3) - 4 * a(n - 4). - _ Harvey P. Dale _ , May 17 2015. [This is equivalent to the g.f. - x * (2 * x ^ 2 + x - 2) / ((x - 1) ^ 2 * (2 * x - 1) ^ 2) given by _ Colin Barker _ . - _ N. J. A. Sloane _ , May 17 2015] ●

▶ [A294152] 0,2,11,38,112,309,828,2190,5759,15106,39580,103657,271416,710618,1860467,4870814,12752008,33385245,87403764,228826086,599074535,1568397562,4106118196,10749957073,28143753072 ★ Chromatic invariant of the n - antiprism graph. ● a(n) = phi ^ (2 * n) + phi ^ (- 2 * n) - 2 * n - 1. ● a(n) = 5 * a(n - 1) - 8 * a(n - 2) + 5 * a(n - 3) - a(n - 4). ● a(n) = - 1 + ((3 - sqrt(5)) / 2) ^ n + ((3 + sqrt(5)) / 2) ^ n - 2 * n. - _ Colin Barker _ , Nov 16 2017 ●

▶ [A276659] 0,2,11,39,114,300,741,1757,4052,9162,20415,44979,98214,212888,458633,982905,2097000,4456278,9436995,19922735,41942810,88080132,184549101,385875669,805306044 ★ Accumulation of the upper left triangle used in binomial transform of nonnegative integers. ● a(n) = n * (2 ^ (n + 2) - n - 3) / 2. ● a(n) = 7 * a(n - 1) - 19 * a(n - 2) + 25 * a(n - 3) - 16 * a(n - 4) + 4 * a(n - 5) for n > 4. ● a(n) = Sum _{ k=2..n + 3 } Sum _{ i=2..n + 3 } k * C(n - i + 3,k). - _ Wesley Ivan Hurt _ , Sep 20 2017 ●

▶ [A361493] 1,1,2,11,39,172,1163,6547,41772,335139,2486215,20078610,186139957,1676540257,16077206122,168739976555,1763716943267,19358116589964,226362412711759,2669223655597955,32748447519013132,421204995451111971,5496921281576148363 ★ Expansion of e.g.f. exp(exp(x) - 1 + x ^ 3). ● a(0) = a(1) = 1, a(2) = 2; a(n) = 6 * binomial(n - 1,2) * a(n - 3) + Sum _{ k=1..n } binomial(n - 1,k - 1) * a(n - k). ●

▶ [A193005] 0,1,2,11,40,115,280,611,1234,2357,4320,7677,13328,22733,38258,63735,105368,173199,283480,462511,752850,1223361,1985472,3219481,5217120 ★ Coefficient of x in the reduction by x ^ 2 - >x + 1 of the polynomial p(n,x) defined at Comments. ● a(n) = 5 * a(n - 1) - 9 * a(n - 2) + 6 * a(n - 3) + a(n - 4) - 3

* a(n - 5) + a(n - 6). ● a(n) = 10 * F(n + 4) + 4 * F(n + 5) - 50 - 24 * n - 6 * n ^ 2 - n ^ 3, where F = A000045. - _ Greg Dresden _ , Jan 01 2021 ●

► [A152895] 0,2,11,40,123,349,951,2539,6710,17645,46290,121302,317706,831920,2178173,5702734,14930181,39087979,102333945,267914065,701408480,1836311627,4807526676,12586268700,32951279748 ⋆ Partial sums of A152891. ● a(1)=0, a(2)=2, a(3)=11, a(4)=40, a(5)=123, a(n)=6 * a(n - 1) - 13 * a(n - 2) + 13 * a(n - 3) - 6 * a(n - 4) + a(n - 5). - _ Harvey P. Dale _ , Mar 26 2015 ●

► [A144841] 1,1,2,11,41,121,316,757,1961,6281,22166,74031,221937,596961,1460096,3294761,6945521,13818417,26161386,47446611 ⋆ Conjectured values for maximal number of regions obtained by joining each triple of n points on a 3 dimensional sphere by a plane. ● a(n) = 280 * C(n,9) + 10 * C(n,6) + 6 * C(n,4) + C(n,3) + 1. ●

► [A203574] 2,11,41,137,435,1338,4024,11899,34723,100255,286947,815316,2302286,6466667,18079805,50343893,139683219,386328654,1065440068,2930780635,8043131767,22026515371,60203886531,164259660072,447431169050 ⋆ Bisection of A099924 (Lucas convolution); one half of the terms with odd arguments. ● a(n) = 6 * a(n - 1) - 11 * a(n - 2) + 6 * a(n - 3) - a(n - 4); a(0)=2, a(1)=11, a(2)=41, a(3)=137. - _ Harvey P. Dale _ , Oct 12 2015 ●

► [A070778] 1,2,11,41,176,721,3003,12439,51623,214103,888173,3684174,15282475,63393324,262962987,1090800411,4524765831,18769248040,77856998326,322959774150,1339674254489,5557122741105,23051583675890,95620617831960,396645310086831 ⋆ Let M denote the 6 X 6 matrix = row by row / 1,1,1,1,1,1 / 1,1,1,1,1,0 / 1,1,1,1,0,0 / 1,1,1,0,0,0 / 1,1,0,0,0,0 / 1,0,0,0,0,0 / and A(n) the vector (x(n),y(n),z(n),t(n),u(n),v(n)) = M ^ n * A where A is the vector (1,1,1,1,1,1); the n a(n) = u(n). ● a(n) = 3 * a(n - 1) + 6 * a(n - 2) - 4 * a(n - 3) - 5 * a(n - 4) + a(n - 5) + a(n - 6). - _ Wesley Ivan Hurt _ , Oct 09 2017 ●

► [A089658] 0,2,11,42,136,400,1104,2912,7424,18432,44800,107008,251904,585728,1347584,3072000,6946816,15597568,34799616,77201408,170393600,374341632,818937856,1784676352,3875536896 ⋆ a(n) = S1(n,1), where S1(n, t) = Sum _{ k=0..n } (k ^ t * Sum _{ j=0..k } binomial(n,j)). ● a(n) = n * (5 + 3 * n) * 2 ^ (n - 3). (See Wang and Zhang p. 333.) ● a(n) = 6 * a(n - 1) - 12 * a(n - 2) + 8 * a(n - 3) for n > 2. ●

► [A140322] 1,2,11,42,171,682,2731,10922,43691,174762,699051,2796202,11184811,44739242,178956971,715827882,2863311531,11453246122,45812984491,183251937962,733007751851,2932031007402,11728124029611,46912496118442,187649984473771 ⋆ a(n) = - 1 / 6 + (- 1) ^ n / 2 + 2 * 4 ^ n / 3. ● a(n) = 4 * a(n - 1) + a(n - 2) - 4 * a(n - 3). ●

► [A048500] 1,2,11,43,135,375,967,2375,5639,13063,29703,66567,147463,323591,704519,1523719,3276807,7012359,14942215,31719431,67108871,141557767,297795591,624951303,1308622855 ⋆ a(n) = 2 ^ (n - 1) * (7 * n - 12) + 7. ● a(n) = T(6, n), array T given by A048494. ● a(0)=1, a(1)=2, a(2)=11, a(n) = 5 * a(n - 1) - 8 * a(n - 2) + 4 * a(n - 3). - _ Harvey P. Dale _ and _ Vincenzo Librandi _ , Sep 23 2011 ●

► [A197189] 1,2,11,43,184,767,3221,13498,56599,237287,994856,4171003,17487289,73316882,307387091,1288745683,5403172504,22653245927,94975600301,398193030538,1669457093119,6999336432047,29345294761736,123032566445443,515824173145009 ⋆ a(n) = 3 * a(n - 1) + 5 * a(n - 2), with a(0)=1, a(1)=2. ● a(n) = ((29 + sqrt(29)) * (3 + sqrt(29)) ^ n + (29 - sqrt(29)) * (3 - sqrt(29)) ^ n) / (58 * 2 ^ n). ●

► [A050620] 2,11,43,209,1042,6771,26823,130599,651237,3255306,21158903,83821639,408121757,2035115566,13224589033,52388661704,331370112102,1691563962301,6567827879588,41430886596044,211450306579272,1059399469695886,5298071316879193,20530429091056784 ⋆ Quotients arising from sequence A035014. ● a(n) = a(n - 1) / 2 + 5 ^ (n - 1) * (4 - [a(n - 1) mod 2]) / 2. - Antonio G. Astudillo (afg _ astudillo(AT)hotmail.com), Jun 17 2001 ●

► [A037744] 2,11,44,177,710,2843,11372,45489,181958,727835,2911340,11645361,46581446,186325787,745303148,2981212593,11924850374,47699401499,190797605996,763190423985,3052761695942,12211046783771,48844187135084 ⋆ Base 4 digits are, in order, the first n terms of the periodic sequence with initial period 2,3,0,1. ● a(1)=2, a(2)=11, a(3)=44, a(4)=177, a(5)=710, a(n)=4 * a(n - 1) + a(n - 4) - 4 * a(n - 5). - _ Harvey P. Dale _ , Apr 29 2015 ●

► [A181270] 1,2,11,44,188,752,3056,12224,49088,196352,786176,3144704,12581888,50327552,201322496,805289984,3221209088,12884836352,51539542016,206158168064,824633458688,3298533834752,13194138484736,52776553938944 ⋆ Number of 2 X n binary matrices M with rows in strictly increasing order and rows of M * Mtranspose (mod 2) in strictly increasing order. ● a(n) = 4 * a(n - 1) + 4 * a(n - 2) - 16 * a(n - 3) for n>4. ●

► [A110679] 1,2,11,44,189,798,3383,14328,60697,257114,1089155,4613732,19544085,82790070,350704367,1485607536,6293134513,26658145586,112925716859,478361013020,2026369768941,8583840088782,36361730124071,154030760585064,652484772464329 ⋆ a(n + 3) = 3 * a(n + 2) + 5 * a(n + 1) + a(n), a(0) = 1, a(1) = 2, a(2) = 11. ● a(n) = (- 1) ^ n * Sum _{ k=0..n } (- 1) ^ k * Fibonacci(3 * k + 1). - _ Gary Detlefs _ , Jan 22 2013 ● a(n) = (Fibonacci(3 * n + 2) + (- 1) ^ n) / 2. - _ Roberto Tauraso _ , Mar 21 2017 ● a(n) = 3 * a(n - 1) + 5 * a(n - 2) + a(n - 3) for n>2. ●

► [A120279] 2,11,45,170,631,2346,8780,33089,125466,478181,1830258,7030557,27088856,104647615,405187809,1571990918,6109558567,23782190466,92705454875,361834392094,1413883873953,5530599237752,21654401079301,84859704298176 ⋆ a(n) = Sum[Sum[(i + j)! / i! / j!, { i,1,j }], { j,1,n }]. ● a(n) = Sum _{ k=1..n } Sum _{ i=1..k } C(k + i,i). - _ Wesley Ivan Hurt _ , Sep 19 2017 ●

► [A037639] 2,11,45,182,731,2925,11702,46811,187245,748982,2995931,11983725,47934902,191739611,766958445,3067833782,12271335131,49085340525,196341362102,785365448411,3141461793645,12565847174582,50263388698331 ⋆ Base 4 digits are, in order, the first n terms of the periodic sequence with initial period 2,3,1. ● a(n) = 4 * a(n - 1) + a(n - 3) - 4 * a(n - 4). - _ Vincenzo Librandi _ , Jun 17 2012 ●

► [A042927] 1,1,2,11,46,149,1834,5651,24438,127841,152279,280120,17519719,17799839,35319558,194397629,812910074,2633127851,32410444286,99864460709,431868287122,2259205896319,2691074183441,4950280079760,309608439128561 ⋆ Denominators of continued fraction convergents to sqrt(995). ● a(n) = 17671998 * a(n - 12) - a(n - 24) for n>23. - _ Vincenzo Librandi _ , Feb 01 2014 ●

► [A292533] 2,11,46,187,748,2948,11480,44273,169374,643601,2431526,9140616,34212350,127563959,474022478,1756118055,6488228880,23912815820,87935847700,322713694333,1182114988606,4322734288413,15782353895178,57537481431056,209479529802682 ⋆ p - INVERT of the squares (A000290), where p(S) = (1 - S) ^ 2. ● a(n) = 8 * a(n - 1) - 20 * a(n - 2) + 18 * a(n - 3) - 12 * a(n - 4) + 4 * a(n - 5) - a(n - 6) for n >= 7. ●

► [A198693] 2,11,47,191,767,3071,12287,49151,196607,786431,3145727,12582911,50331647,201326591,805306367,3221225471,12884901887,51539607551,206158430207,824633720831,3298534883327,13194139533311,52776558133247 ⋆ a(n) = 3 * 4 ^ n - 1. ● a(n) = 4 * a(n - 1) + 3. ● a(n) = 5 * a(n - 1) - 4 * a(n - 2), for n > 1. ●

► [A178710] 0,2,11,47,193,778,3118,12480,49929,199725,798911,3195656,12782636,51130558,204522247,818089003,3272356029,13089424134,52357696554,209430786236,837723144965,3350892579881,13403570319547,53614281278212,214457125112872 ⋆ Partial sums of floor(4 ^ n / 7). ● a(n) = round((8 * 4 ^ n - 14 * n - 13) / 42). ● a(n) = floor((8 * 4 ^ n - 14 * n - 8) / 42). ● a(n) = ceiling((8 * 4 ^ n - 14 * n - 18) / 42). ● a(n) = round((8 * 4 ^ n - 14 * n - 8) / 42). ● a(n) = a(n - 3) + 3 * 4 ^ (n - 2) - 1, n > 3. ● a(n) = 5 * a(n - 1) - 4 * a(n - 2) + a(n - 3) - 5 * a(n - 4) + 4 * a(n - 5), n > 5. ●

► [A054894] 1,2,11,48,227,1054,4921,22944,107017,499106,2327795,10856592,50634107,236152510,1101392305,5136786240,23957470033,111735303362,521122556315,2430464772336,11335450631123,52867436085214,246568565219689,1149971737922784,5363356017597913 ⋆ a(n + 1) = 4 * a(n) + 4 * a(n - 1) - 4 * a(n - 2) - a(n - 3) with a(1)=1, a(2)=2, a(3)=11, a(4)=48. ● a(n) = Sum _{ k=1..n } Fibonacci(k) ^ 3 * a(n - k), with a(0)=1. - _ Vladeta Jovovic _ , Apr 23 2003 ●

► [A108851] 1,2,11,50,233,1082,5027,23354,108497,504050,2341691,10878914,50540729,234799658,1090820819,5067682250,23543191457,109375812578,508132824683,2360658736466,10967033419913,50950109889050 ⋆ a(n) = 4 * a(n - 1) + 3 * a(n - 2), a(0) = 1, a(1) = 2. ● a(n) = ((2 + sqrt(7)) ^ n + (2 - sqrt(7)) ^ n) / 2. ● a(n + 1) / a(n) converges to 2 + sqrt(7) = 4.645751311064... ●

► [A105486] 1,2,11,50,255,1362,7746,46556,294965,1963865,13703812,99974851,760824922,6027441398,49616033975,423649629415,3746306203604,34259548971914,323564415957687,3152120868598090,31638011553779137,326825518800658174,3471291152755614386 ⋆ Number of partitions of { 1...n } containing 4 strings of 3 consecutive integers, where each string is counted within a block and a string of more than 3 consecutive integers are counted three at a time. ● a(n) = Sum _{ k=1..n } (c(n, k, 4),), where c(n, k, 4) is the case r=4 of c(n, k, r) given by c(n, k, r)=c(n - 1, k - 1, r) + (k - 1)c(n - 1, k, r) + c(n - 2, k - 1, r) + (k - 1)c(n - 2, k, r) + c(n - 1, k, r - 1) - c(n - 2, k - 1, r - 1) - (k - 1)c(n - 2, k, r - 1), r=0, 1, .., n - k - 1, k=1, 2, .., n - 2r, c(n, k, 0) = Sum _{ j= 0..floor(n / 2) } binomial(n - j, j) * S2(n - j - 1, k - 1). ●

► [A137960] 1,1,2,11,50,275,1560,9212,56082,348675,2207120,14171155,92075064,604266000,3999688050,26670727220,178997024610,1208160130227,8195828345756,55849242272130,382119958804520,2624041637846210 ⋆ G.f. satisfies A(x) = 1 + x * (1 + x * A(x) ^ 5) ^ 2. ● a(n) = Sum _{ k=0..n - 1 } C(2 * (n - k),k) / (n - k) * C(5 * k,n - k - 1) for n>0 with a(0)=1. - _ Paul D. Hanna _ , Jun 16 2009 ●

► [A119366] 0,1,1,1,2,11,51,177,519,1513,5042,18866,71270,257974,905425,3193737,11578842,42930441,159998493,593445318,2194106568,8138471667,30399156174,114219616809,430344635913 ⋆ Number of rooted planar n - trees whose number of leaves is equal to 1 modulo 3. ● a(n)=sum { k=0..n, if(mod(n - k,3)=1, (1 / n) * C(n,k) * C(n,k + 1), 0) } ● a(0)=0, a(n)=sum { k=0..floor(n / 3), (1 / n) * C(n,3k + 1)C(n,3k) } ,n>0; - _ Paul Barry _ , Jan 25 2007 ●

► [A291386] 2,11,54,252,1134,4977,21438,91017,381996,1588248,6552252,26853687,109438938,443837799,1792373346,7211142612,28915704810,115603540605,460942202070,1833459620517,7276826042712,28823185892016,113957884236024,449793742386627 ⋆ a(n) = (1 / 3) * A099432(n + 1). ● a(n) = 6 * a(n - 1) - 3 * a(n - 2) - 18 * a(n - 3) - 9 * a(n - 4) for n >= 5. ●

► [A115205] 1,1,1,1,1,1,1,1,1,2,11,56,221,716,2003,5006,11441,24311,48621,92379,167961,293931,497421,817191,1307505 ⋆ a(n) = binomial(n, 9) + 1. ● a(n) = (1 / 9!) * (n + 1) * (n ^ 8 - 37 * n ^ 7 + 583 * n ^ 6 - 5119 * n ^ 5 + 27568 * n ^ 4 - 94852 * n ^ 3 + 212976 * n ^ 2 - 322560 * n + 9!) = binomial(n,9) + 1. - _ G. C. Greubel _ , Feb 05 2016 ●

► [A306753] 1,1,1,1,1,1,1,1,1,1,2,11,56,221,716,2003,5006,11441,24311,48621,92380,167980,294121,498751,824506 ⋆ a(n) = Sum _{ k=0..n } binomial(k, 9 * (n - k)). ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) + a(n - 10) for n > 9. ●

► [A306860] 1,1,1,1,1,1,1,1,1,2,11,56,221,716,2003,5006,11441,24311,48622,92398,168151,295261,504736,850840,1442101 ⋆ a(n) = Sum _{ k=0..floor(n / 9) } binomial(n,9 * k). ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + 2 * a(n - 9) for n > 8. ●

► [A198769] 2,11,56,281,1406,7031,35156,175781,878906,4394531,21972656,109863281,549316406,2746582031,13732910156,68664550781,343322753906,1716613769531,8583068847656,42915344238281,214576721191406,1072883605957031 ⋆ (9 * 5 ^ n - 1) / 4. ● a(n) = 5 * a(n - 1) + 1. a(n) = 6 * a(n - 1) - 5 * a(n - 2), n>1. ●

► [A041129] 1,1,2,11,57,68,125,2068,2193,4261,23498,121751,145249,267000,4417249,4684249,9101498,50191739,260060193,310251932,570312125,9435245932,10005558057,19440803989,107209578002 ⋆ Denominators of continued fraction convergents to sqrt(73). ● a(n) = 2136 * a(n - 7) + a(n - 14). - _ Vincenzo Librandi _ , Dec 11 2013 ●

► [A037490] 2,11,57,286,1432,7161,35807,179036,895182,4475911,22379557,111897786,559488932,2797444661,13987223307,69936116536,349680582682,1748402913411,8742014567057,43710072835286,218550364176432,1092751820882161 ⋆ Base 5 digits are, in order, the first n terms of the periodic sequence with initial pe

riod 2,1. ● a(n) = 5a(n - 1) + a(n - 2) - 5a(n - 3). ● a(n) = (11 * 5 ^ n - 2 * (- 1) ^ n - 9) / 24. - _ Stefano Spezia _ , Jul 21 2021 ●

► [A120464] 0,2,11,57,292,1495,7653,39176,200543,1026585,5255116,26901079,137707341,704927552,3608542943,18472227585,94559825764,484054270519,2477886723189,12684368234936,64931619356831,332386691572713 ⋆ a(n) = 5 * a(n - 1) + a(n - 2) - 2 * a(n - 3). ● a(n) = 5 * a(n - 1) + a(n - 2) - 2 * a(n - 3). G.f.: x * (2 + x) / (1 - 5 * x - x ^ 2 + 2 * x ^ 3). [_ Colin Barker _ , May 02 2012] ●

► [A164581] 1,2,11,57,296,1537,7981,41442,215191,1117397,5802176,30128277,156443561,812346082,4218173971,21903215937,113734253656,590574484217,3066606674741,15923607857922,82684645964351,429346837679677,2229418834362736,11576441009493357 ⋆ a(n) = 5 * a(n - 1) + a(n - 2), with a(0)=1, a(1)=2. ● a(n) = (2 ^ (- 1 - n) * ((5 - sqrt(29)) ^ n * (1 + sqrt(29)) + (- 1 + sqrt(29)) * (5 + sqrt(29)) ^ n)) / sqrt(29). - _ Colin Barker _ , Oct 13 2015 ●

► [A162771] 2,11,58,304,1592,8336,43648,228544,1196672,6265856,32808448,171787264,899489792,4709789696,24660779008,129125515264,676109975552,3540157792256,18536506851328,97058409938944,508204432228352 ⋆ a(n) = ((2 + sqrt(5)) * (3 + sqrt(5)) ^ n + (2 - sqrt(5)) * (3 - sqrt(5)) ^ n) / 2. ● a(n) = 6 * a(n - 1) - 4 * a(n - 2) for n > 1; a(0) = 2, a(1) = 11. [corrected by _ Harvey P. Dale _ , Aug 15 2013] ●

► [A139172] 0,2,11,59,359,2519,20159,181439,1814399,19958399,239500799,3113510399,43589145599,653837183999,10461394943999,177843714047999,3201186852863999,60822550204415999,1216451004088319999 ⋆ Natural numbers of the form (n! - 2) / 2. ● a(n) = Sum _{ k=1..floor(n / 2) } s(n,n - 2 * k), where s(n,k) are Stirling numbers of the first kind, A048994. - _ Mircea Merca _ , Apr 07 2012 ● a(n) = n * (a(n - 1) + 1) - 1. - _ Bob Selcoe _ , Mar 28 2015 ●

► [A164034] 2,11,60,326,1768,9580,51888,280984,1521440,8237744,44601792,241485920,1307462272,7078895296,38326690560,207508990336,1123498254848,6082860174080,32933905824768,178311204161024,965414951741440 ⋆ a(n) = ((4 + 3 * sqrt(2)) * (4 + sqrt(2)) ^ n + (4 - 3 * sqrt(2)) * (4 - sqrt(2)) ^ n) / 4. ● a(n) = 8 * a(n - 1) - 14 * a(n - 2) for n > 1; a(0) = 2, a(1) = 11. ●

► [A275229] 2,11,61,339,1885,10483,58301,324243,1803293,10029107,55777405,310208979,1725243613,9595033459,53363285309,296782729491,1650572823965,9179747931827,51053652931069,283937587062867,1579133885991517 ⋆ Number of 3 X n 0..2 arrays with no element equal to any value at offset (- 2, - 1) (- 2,1) or (- 1,0) and new values introduced in order 0..2. ● a(n) = (2 ^ (- 4 - n) * ((7 - sqrt(17)) ^ n * (- 11 + 3 * sqrt(17)) + (7 + sqrt(17)) ^ n * (11 + 3 * sqrt(17))) / sqrt(17). ●

► [A074615] 2,11,61,341,1921,10901,62281,358061,2070241,12030821,70231801,411625181,2420922961,14281397141,84467679721,500702562701,2973697798081,17689598897861,105374653934041,628433226338621 ⋆ a(n) = 5 ^ n + 6 ^ n. ● a(n) = 11 * a(n - 1) - 30 * a(n - 2) with a(0)=2, a(1)=11. - _ Vincenzo Librandi _ , Jul 21 2010 ●

► [A308729] 0,2,11,61,379,2668,21160,187388,1836396,19753416,231545016,2939000832,40172455296,588444153984,9197306248320,152803737342720,2689320607107840,49986863946616320,978529776749959680,20123805782225664000,433785771471677184000,9780622725328777728000 ⋆ a(n) / n! is the expected number of left - to - right maxima in the lexicographical or colexicographical ordering of all the 2 - subsets of [n] under a random permutation of [n], when the 2 - subsets hold the worst order of ranks. ● a(n) = n * a(n - 1) + s(n,2) + (n - 1)! with the initial condition a(1)=0. ● a(n) = s(n + 1,3) + s(n + 1,2) - n!, where s(n,k) is the unsigned Stirling number of the first kind. ●

► [A162274] 2,11,62,353,2018,11555,66206,379433,2174786,12465659,71453054,409570865,2347677218,13456996499,77136168158,442148390777,2534416940162,14527406441195,83271831307454,477318366724097 ⋆ a(n) = ((2 + sqrt(3)) * (4 + sqrt(3)) ^ n + (2 - sqrt(3)) * (4 - sqrt(3)) ^ n) / 2. ● a(n) = 8 * a(n - 1) - 13 * a(n - 2) for n > 1; a(0) = 2, a(1) = 11. ●

► [A183160] 1,2,11,62,367,2232,13820,86662,548591,3498146,22436251,144583496,935394436,6071718512,39523955552,257913792342,1686627623151,11050540084902,72522925038257,476669316338542,3137209052543927,20672732229560032,136374124374593072,900541325129687272 ⋆ a(n) = Sum _{ k=0..n } C(n + k,n - k) * C(2 * n - k,k). ● a(n) = sum(k=0..n, binomial(2 * n + k,k) * cos((n + k) * Pi)). [Arkadiusz Wesolowski, Apr 02 2012] ● a(n) = C(3 * n + 1,n) * Hyper2F1([1, - n],[2 * n + 2],2). - _ Peter Luschny _ , May 19 2015 ● a(n) = [x ^ n] 1 / ((1 - x ^ 2) * (1 - x) ^ (2 * n)). - _ Ilya Gutkovskiy _ , Oct 25 2017 ● a(n) = Hypergeometric 4F3([- n, - n, 1 / 2 - n, n + 1], [1 / 2, 1, - 2 * n], 1). (End) ●

► [A065928] 2,11,63,366,2132,12425,72417,422076,2460038,14338151,83568867,487075050,2838881432,16546213541,96438399813,562084185336,3276066712202,19094316087875,111289829815047,648644662802406,3780578146999388,22034824219193921,128428367168164137 ⋆ (x,y) = (a(n),a(n + 1)) are the solutions of (t(x) + t(y)) / (1 + xy)) = t(2) = 3, where t(n) denotes the n - th triangular number t(n) = n(n + 1) / 2. ● a(n) = 2 * t(m) * a(n - 1) - a(n - 2) - 1, a(0) = m, a(1) = m ^ 3 + m ^ 2 - 1 with m = 2. ● a(0)=2, a(1)=11, a(2)=63, a(n)=7 * a(n - 1) - 7 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Nov 06 2011 ● a(n) = (4 + (14 - 11 * sqrt(2)) * (3 - 2 * sqrt(2)) ^ n + (3 + 2 * sqrt(2)) ^ n * (14 + 11 * sqrt(2))) / 16. - _ Colin Barker _ , Mar 05 2016 ●

► [A080049] 0,2,11,63,388,2734,21893,197069,1970726,21678036,260136487,3381774403,47344841720,710172625898,11362762014473,193166954246169,3477005176431178,66063098352192544,1321261967043851051 ⋆ Operation count to create all permutations of n distinct elements using Algorithm L (lexicographic permutation generation) from Knuth's The Art of Computer Programming, Vol. 4, chapter 7.2.1.2. Sequence gives number of interchange operations in step L4. ● a(2)=0, a(n)=n * a(n - 1) + (n - 1) * floor((n - 1) / 2). ● a(n) = floor (c * n! - (n - 1) / 2) for n>=2. ●

► [A373890] 1,2,11,64,345,1824,9661,51284,272333,1445995,7677250,40760798,216412235,1149004281,6100444144,32389272248,171965334801,913020717480,4847528344990,25737127996244,136646907481155,725503534206186,3851937726561990,20451208781128462 ⋆ Number of compositions of 8 * n into parts 1 and 8. ● a(n) = Sum _{ k=0..n } binomial(n + 7 * k,n - k). ● a(n) = 9 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8). ●

► [A038725] 1,2,11,64,373,2174,12671,73852,430441,2508794,14622323,85225144,496728541,2895146102,16874148071,98349742324,573224305873,3340996092914,19472752251611,113495517416752,661500352248901 ⋆ a(n) = 6 * a(n - 1) - a(n - 2), n >= 2, a(0)=1, a(1)=2. ● a(n) = 7 * a(n - 1) - 7 * a(n - 2) + a(n - 3); a(n) = ((4 - sqrt(2)) / 8) * (3 + 2 * sqrt(2)) ^ (n - 1) + ((4 + sqrt(2)) / 8) * (3 - 2 * sqrt(2)) ^ (n - 1). - _ Antonio Alberto Olivares _ , Mar 29 2008 ● a(n) = 6 * a(n - 1) - a(n - 2), n >= 1, a(- 1) = 4, a(0) = 1. (See the name.) (End) ●

► [A161947] 2,11,64,387,2398,15079,95636,609543,3895802,24938531,159781864,1024232427,6567341398,42116068159,270111829436,1732448726703,11111915190002,71272831185851,457154262488464,2932267507610067 ⋆ a(n) = ((4 + sqrt(2)) * (5 + sqrt(2)) ^ n + (4 - sqrt(2)) * (5 - sqrt(2)) ^ n) / 4. ● a(n) = 10 * a(n - 1) - 23 * a(n - 2) for n>1; a(0) = 2; a(1) = 11. ●

► [A199412] 2,11,65,389,2333,13997,83981,503885,3023309,18139853,108839117,653034701,3918208205,23509249229,141055495373,846332972237,5077997833421,30467987000525,182807922003149,1096847532018893,6581085192113357,39486511152680141 ⋆ a(n) = (9 * 6 ^ n + 1) / 5. ● a(n) = 6 * a(n - 1) - 1. ● a(n) = 7 * a(n - 1) - 6 * a(n - 2). ●

► [A074613] 2,11,65,407,2657,17831,121745,839927,5830337,40615751,283523825,1981521047,13858064417,96956119271,678491508305,4748635251767,33237225536897,232647693856391,1628482317387185,11399170063280087 ⋆ a(n) = 4 ^ n + 7 ^ n. ● a(n) = 11 * a(n - 1) - 28 * a(n - 2) with a(0)=2, a(1)=11. - _ Vincenzo Librandi _ , Jul 21 2010 ●

► [A143816] 0,1,1,1,2,11,66,352,1730,8233,39987,209793,1240603,8287281,60473869,463764484,3647602117,29165686541,237499318823,1984374301872,17167462137733,154885317758354,1461156867801556,14381004640256202,146852743814531169 ⋆ Let A(0) = 1, B(0) = 0 and C(0) = 0. Let B(n + 1) = Sum _{ k = 0..n) binomial(n,k) * A(k), C(n + 1) = Sum _{ k = 0..n) binomial(n,k) * B(k) and A(n + 1) = Sum _{ k = 0..n) binomial(n,k) * C(k). This entry gives the sequence B(n). ● a(n) = Sum _{ k = 0..floor((n - 1) / 3) } Stirling2(n,3k + 1). ● a(n) = (Bell _ n(1) + w ^ 2 * Bell _ n(w) + w * Bell _ n(w ^ 2)) / 3, where Bell _ n(x) is n - th Bell polynomial and w = exp(2 * Pi * i / 3). - _ Seiichi Manyama _ , Oct 13 2022 ●

► [A153298] 1,2,11,68,443,2974,20361,141356,991738,7015814,49967892,357896120,2575844046,18616823352,135051785186,982949932092,7175591019313,52524480778590,385429134781530,2834791998208500,20893844524709649 ⋆ G.f.: A(x) = F(x * G(x) ^ 3) ^ 2 = F(G(x) - 1) ^ 2 where F(x) = G(x / F(x)) = 1 + x * F(x) ^ 2 is the g.f. of A000108 (Catalan) and G(x) = F(x * G(x)) = 1 + x * G(x) ^ 3 is the g.f. of A001764. ● a(n) = Sum _{ k=0..n } C(2k + 2,k) / (k + 1) * C(3n,n - k) * k / n for n>0 with a(0)=1. ●

► [A153393] 1,2,11,68,449,3102,22167,162626,1218411,9285888,71778489,561453704,4436120129,35354290118,283876985742,2294347190142,18650560232199,152386763938940,1250801705584643,10308949444236522,85281112255921359 ⋆ G.f.: A(x) = F(x * G(x) ^ 2) ^ 2 where F(x) = G(x * F(x)) = 1 + x * F(x) ^ 3 is the g.f. of A001764 and G(x) = F(x / G(x)) = 1 + x * G(x) ^ 2 is the g.f. of A000108 (Catalan). ● a(n) = Sum _{ k=0..n } C(3k + 2,k) * 2 / (3k + 2) * C(2n,n - k) * k / n for n>0 with a(0)=1. ●

► [A135166] 2,11,69,449,2961,19721,132609,899609,6149121,42287561,292182849,2025979769,14084900481,98108127401,684321821889,4778064771929,33385475479041,233393324431241,1632227908017729,11417967509964089,79887630243516801,559022690783231081,3912205202997138369 ⋆ a(n) = 7 ^ n + 5 ^ n - 3 ^ n + 2 ^ n. ● a(n) = 7 ^ n + 5 ^ n - 3 ^ n + 2 ^ n. ● a(0)=2, a(1)=11, a(2)=69, a(3)=449, a(n) = 17 * a(n - 1) - 101 * a(n - 2) + 247 * a(n - 3) - 210 * a(n - 4). - _ Harvey P. Dale _ , Feb 01 2013 ●

► [A371577] 1,2,11,70,505,3910,31772,267280,2307982,20339946,182207333,1654250474,15187764411,140767293560,1315349040350,12377806027892,117200381305538,1115791797318548,10674418686087377,102563189093302366,988936204356178417 ⋆ G.f. satisfies A(x) = (1 + x * A(x) ^ 2 * (1 + x)) ^ 2. ● a(n) = Sum _{ k=0..n } binomial(4 * k + 2,k) * binomial(k,n - k) / (2 * k + 1). ●

► [A371518] 1,2,11,72,525,4104,33647,285526,2486809,22103726,199697284,1828472914,16929944932,158246198836,1491210732346,14151603542612,135130396860130,1297381593071890,12516650939119421,121281286192026308,1179769340479567499 ⋆ G.f. A(x) satisfies A(x) = (1 + x * A(x) ^ 2 / (1 - x)) ^ 2. ● a(n) = 2 * Sum _{ k=0..n } binomial(n - 1,n - k) * binomial(4 * k + 1,k) / (3 * k + 2). ●

► [A074609] 2,11,73,539,4177,33011,262873,2099339,16783777,134237411,1073800873,8590111739,68720008177,549757408211,4398051294073,35184386437739,281475019757377,2251799942825411,18014398896902473,144115189238117339 ⋆ a(n) = 3 ^ n + 8 ^ n. ● a(n) = 11 * a(n - 1) - 24 * a(n - 2) with a(0)=2, a(1)=11. - _ Vincenzo Librandi _ , Jul 21 2010 ●

► [A199417] 2,11,74,515,3602,25211,176474,1235315,8647202,60530411,423712874,2965990115,20761930802,145333515611,1017334609274,7121342264915,49849395854402,348945770980811,2442620396865674,17098342778059715 ⋆ (3 * 7 ^ n + 1) / 2. ● a(n) = 7 * a(n - 1) - 3. ● a(n) = 8 * a(n - 1) - 7 * a(n - 2). ●

► [A319743] 1,2,11,74,602,5452,53559,558602,6106034,69298580,811086718,9740402476,119550632788,1495039156600,19002275811887,244983878813514,3198363309664658,42225545561470084,563083734161627910,7576864105285884420,102790882283750139060,1404908982711268821720 ⋆ Row sums of A174158. ● a(n) = Sum _{ m=1..n } (binomial(n - 1, m - 1) * binomial(n, m - 1) / m) ^ 2. ● a(n) = 4F3([1 - n, 1 - n, - n, - n], [1, 2, 2], 1), where F is the generalized hypergeometric function. ●

► [A094569] 2,11,78,532,3649,25008,171410,1174859,8052606,55193380,378301057,2592914016,17772097058,121811765387,834910260654,5722560059188,39223010153665,268838511016464,1842646566961586,12629687457714635,86565165637040862,593326472001571396 ⋆ Associated with alternating row sums of array in A094568. ● a(n) = F(4n + 3) - a(n - 1) for n >= 1, where a(0) = 2. ● a(n) = (Fib(4n + 5) + (- 1) ^ n) / 3. - _ Ralf Stephan _ , Dec 04 2004 ● a(n) = (- 1) ^ n * sum((- 1) ^ k * Fibonacci(4 * k + 3), k=0..n). - _ Gary Detlefs _ , Jan 22 2013 ● a(n) = 6 * a(n - 1) + 6 * a(n - 2) - a(n - 3). - _ Colin Barker _ , Nov 19 2014 ●

► [A118969] 1,2,11,80,665,5980,56637,556512,5620485,57985070,608462470,6474009360,69682358811,757366074080,8300675584120,91634565938880,10180027559

77245,11372548404732930,127677890035721025,1439777493407492640 ⋆ a(n) = 2 * binomial(5 * n + 1,n) / (4 * n + 2). ● a(n) is sum of top row terms in M ^ n, where M is an infinite square production matrix with the tetrahedral series in e ach column (A000292), as follows: ● a(n) = 2 * binomial(5n + 1,n - 1) / n for n >0, a(0)=1. - _ Bruno Berselli _ , Jan 19 2014 ●

▶ [A215654] 1,2,11,81,684,6257,60325,603641,6210059,65272503,697898849,7566847547,82999675563,919376968734,10269588489433,115548651723889,1308374198000780,14897993185500455,170482798370871370,1959574731164246402,22614008012647634411,261915716386286916342 ⋆ G.f. satisfies: A(x) = (1 + x * A(x) ^ 2) * (1 + x * A(x) ^ 3). ● a(n) = [x ^ n] ((1 + x) / (1 - x - x ^ 2)) ^ (2 * n + 1) / (2 * n + 1). ● a(n) = 1 / (2 * n + 1) * Sum _{ i=0..n } C(2 * n + i,i) * C (2 * n + i + 1,n - i). - _ Vladimir Kruchinin _ , Apr 04 2019 ●

▶ [A209094] 2,11,82,612,4568,34096,254496,1899584,14178688,105831168,789934592,5896152064,44009478144,328491216896,2451891822592,18301169713152,136601790414848,1019609644466176,7610469994070016,56805321374695424 ⋆ Number of n X 2 0..2 arrays with new values 0..2 introduced in row major order and n o element equal to more than one of its immediate leftward or upward or right - upward antidiagonal neighbors. ● a(n) = ((4 - 2 * sqrt(3)) ^ n * (- 1 + sqrt(3)) + (1 + sqrt(3)) * (2 * (2 + sqrt(3))) ^ n) / (8 * sqrt(3)) for n>1. ●

▶ [A352655] 2,11,83,699,6252,58106,554633,5399099,53356322,533627511,5388927513,54859837434,562267554552,5796123147756,60047675871333,6248019528986 19,6526036790730942,68395815476047901,718992874207884953,7578808590187108199 ⋆ a(n) = (1 / 2) * (A005258(n) + A005258(n - 1)). ● a(n) = (1 / 2) * Sum _{ k = 0..n } (2 * n ^ 2 - k * n + k ^ 2) / (n * (n + k)) * binomial(n,k) ^ 2 * b inomial(n + k,k). ● a(n) = (1 / 2) * Sum _{ k = 0..n - 1 } (4 * n + k) * (n - k) / (n * (n + k)) * binomial(n,k) ^ 2 * binomial(n + k,k) for n >= 1. ●

▶ [A074604] 2,11,85,737,6577,59081,531505,4783097,43046977,387421001,3486785425,31381061657,282429540577,2541865836521,22876792471345,2058911321274 17,18530201889177377,166771817699797641,1500946352972612 65 ⋆ a(n) = 2 ^ n + 9 ^ n. ● a(n) = 9 * a(n - 1) - 2 ^ n = 11 * a(n - 1) - 18 * a(n - 2). ●

▶ [A135404] 1,2,11,85,782,8004,88044,1020162,12294260,152787976,1946310467,25302036071,334560525538,4488007049900,60955295750460,836838395382645,115 97595644244186,1620745756069848 88,2281839419729917410,32340239369121304038,461109219391987625316,6610306991283738684600 ⋆ Gessel sequence: the n umber of paths of length 2m in the plane, starting and ending at (0,1), with uni t steps in the four directions (north, east, south, west) and staying in the region y > 0, x > - y. ● a(n) = (2 ^ (2 / 3 + 4 * n) * Gamma(4 / 3) * Gamma(1 / 2 + n) * Gamma(5 / 6 + n)) / (Pi * Gamma(5 / 3 + n) * Gamma(2 + n)). - _ B enedict W. J. Irwin _ , Aug 10 2016 ●

▶ [A370475] 1,2,11,86,785,7818,82360,902394,10178528,117402240,1378372807,16417823232,197903156219,2409689022268,29593911665705,366158474520010,455984889422462,5710965615437092 2,71889682271309245 7,909047511257283981 0,1154171753370507275 90 ⋆ G.f. satisfies A(x) = 1 + x * A(x) ^ (3 / 2) * (1 + A(x) ^ (5 / 2)). ● a(n) = Sum { k=0..n } binomial(n,k) * binomial(3 * n / 2 + 5 * k / 2 + 1,n) / (3 * n / 2 + 5 * k / 2 + 1). ●

▶ [A215623] 1,2,11,89,836,8551,92445,1039030,12019135,142151324,1711116646,20894534324,258195565959,3222677162409,40569811695707,514520507077695,6567611974106756,84310605465652750,1087798325715407703,1409847516842086539 6,18346581624139478719 6 ⋆ G.f. satisfies A(x) = (1 + x * A(x)) * (1 + x * A(x) ^ 4). ● a(n) = Sum _{ k=0..n } binomial(n + 3 * k + 1,k) * binomial(n + 3 * k + 1,n - k) / (n + 3 * k + 1). - _ Seiichi Manyama _ , Jul 19 2023 ●

▶ [A371537] 1,2,11,90,845,8620,92792,1037474,11930952,140223730,1676824810,20336742860,249554057158,3092735367966,38653949888993,486656046354650,6166315484899445,78573243500307870,1006223574171080479,1294358172136298370 8,1671702009189987541 29 ⋆ G.f. A(x) satisfies A(x) = (1 + x * A(x) ^ 3 / (1 + x)) ^ 2. ● a(n) = 2 * Sum _{ k=0..n } (- 1) ^ (n - k) * binomial(n - 1,n - k) * binomial(6 * k + 2,k) / (6 * k + 2). ●

▶ [A047854] 1,2,11,92,821,7382,66431,597872,5380841,48427562,435848051,3922632452,35303692061,317733228542,2859599056871,25736391511832,231627523606481,2084647712458322 ⋆ a(n) = T(6,n), array T given by A047848. ● a(n) = (9 ^ n + 7) / 8. - _ Ralf Stephan _ , Feb 14 2004 ● a(0) = 1, a(1) = 2, a(n) = 1 0 * a(n - 1) - 9 * a(n - 2) for n > 1. ● a(n) = 9 * a(n - 1) - 7 (with a(0)=1). - _ Vincenzo Librandi _ , Aug 06 2010 ●

▶ [A366402] 1,2,11,92,905,9734,110867,1314140,16041947,200302394,2546194497,32840654064,428708791851,5653487876454,75201937732737,1007829909427734,13594917784717860,184440900147250722,2515052824018153080,34451608720123170686,473853214173320181668 ⋆ G.f. A(x) satisfies A(x) = (1 + x * A(x) ^ (9 / 2)) / (1 - x). ● a(n) = Sum _{ k=0..n } binomial(n + 7 * k / 2,n - k) * bino mial(9 * k / 2,k) / (7 * k / 2 + 1). ●

▶ [A003579] 1,2,11,99,1066,13283,190933,3117900,56729565,1132679479,24564972756,574431351673,14394977015245,384489778509034,10894501505088695,326149933663962479,10280153573323314858 ⋆ Dowling numbers: e.g.f. exp(x + (exp(b * x) - 1) / b), with b=7. ● a(n) = exp(- 1 / 7) * Sum _{ k>=0 } (7 * k + 1) ^ n / (7 ^ k * k!). - _ Ilya Gutkovskiy _ , Apr 16 2020 ●

▶ [A057076] 2,11,119,1298,14159,154451,1684802,18378371,200477279,2186871698,23855111399,260219353691,2838557779202,30963916217531,337764520613639,3684445810532498,40191139395243839,438418087537149731 ⋆ A Chebyshev or ge neralized Fibonacci sequence. ● a(n) = a(- n). - _ Michael Somos _ , Apr 25 2 003 ● a(n) = ap ^ n + am ^ n, with ap := (11 + sqrt(117)) / 2 and am := (11 - sqrt(117)) / 2. ●

▶ [A001946] 2,11,123,1364,15127,167761,1860498,20633239,228826127,2537720636,28143753123,312119004989,3461452808002,38388099893011,425730551631123,4721424167835364,52361396397820127,580696784543856761,6440026026380244498,71420983074726546239 ⋆ a(n) = 11 * a(n - 1) + a(n - 2). ● a(n) = Lucas(5n) = Fibonacci(5n - 1) + Fibonacci(5n + 1). - _ Alexander Adamchuk _ , Oct 25 2006 ● a(n) = ((11 + 5 * sqrt(5)) / 2) ^ n + ((11 - 5 * sqrt(5)) / 2) ^ n. - _ Ta nya Khovanova _ , Feb 06 2007 ● a(n) = Fibonacci(10 * n) / Fibonacci(5 * n) f or n >= 1. ● a(n) = (Fibonacci(5 * n + 2 * k) - F(5 * n - 2 * k)) / Fibonacci(2 * k) for nonzero integer k. ● a(n) = (Fibonacci(5 * n + 2 * k + 1) + F(5 * n - 2 * k - 1)) / Fibonacci(2 * k + 1) for arbitrary integer k. ● a(n) = Sum _{ k = 0..2 * n } binomial(2 * n,k) * Lucas(n + k). (End) ●

▶ [A041725] 1,1,2,11,134,145,859,1004,1863,4730,16053,20783,390147,410930,1622937,3656804,5279741,8936545,49962466,58899011,7567505983842652001,4599402599,8442054600,325397477399 ⋆ Denominators of continued fraction convergen ts to sqrt(382). ● a(n) = 329996879998 * a(n - 24) - a(n - 48) for n>47. - _ Vin cenzo Librandi _ , Dec 23 2013 ●

▶ [A168457] 2,12,12,22,22,32,32,42,42,52,52,62,62,72,72,82,82,92,92,102,102,112,112,122,122 ⋆ a(n) = (10 * n + 5 * (- 1) ^ n - 1) / 2. ● a(n) = 10 * n - a(n - 1) - 6 for n>1, a(1)=2. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3). (End) ● a(n) = 2 + 1 0 * Floor(n / 2). - _ Vincenzo Librandi _ , Sep 19 2013 ●

▶ [A251421] 2,12,12,40,56,144,240,544,992,2112,4032,8320,16256,33024,65280,131584,261632,525312,1047552,2099200,4192256,8392704,16773120,33562624,67100672 ⋆ Number of length n + 2 0..1 arrays with the sum of the maximum minus twice the median plus the minimum of adjacent triples multiplied by some arra ngement of +- 1 equal to zero. ● a(n) = 2 * (2 ^ (n / 2) + 2 ^ n) for n even. ● a(n) = 2 * (2 ^ n - 2 ^ ((n - 3) / 2 + 1)) for n odd. ●

▶ [A143795] 1,2,12,13,23,24,34,35,45,46,56,57,67,68,78,79,89,90,100,101,111,112,122,123,133 ⋆ a(1) = 1, then for n > 1, a(n) = a(n - 1) + 1 for n even, or a(n) = a(n - 1) + 10 for n odd. ● a(n) = (22 * n - 27 - 9 * (- 1) ^ n) / 4. ● a(n) = a(n - 2) + 11. (End) ● a(n) = 11 * n - a(n - 1) - 19 (with a(1)=1). - _ Vincenzo Lib randi _ , Nov 25 2010 ●

▶ [A022368] 2,12,14,26,40,66,106,172,278,450,728,1178,1906,3084,4990,8074,13064,21138,34202,55340,89542,144882,234424,379306,613730 ⋆ Fibonacci sequence b eginning 2, 12. ● a(n) = 2 * (Fibonacci(n + 2) + 4 * Fibonacci(n)). - _ G. C. G reubel _ , Aug 27 2017 ●

▶ [A036499] 1,2,12,15,35,40,70,77,117,126,176,187,247,260,330,345,425,442,532,551,651,672,782,805,925 ⋆ Numbers of the form k * (k + 1) / 6 for k = 2 or 3 mo dulo 6. ● a(n) = (3 * n * n - 5 * n + 2) / 2 + (2 * n - 1) * (n mod 2). - _ Frank Ellermann _ , Mar 16 2002 ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n>5. - _ Wesley Ivan Hurt _ , Jan 18 2016 ●

▶ [A113802] 2,12,16,26,30,40,44,54,58,68,72,82,86,96,100,110,114,124,128,138,142,152,156,166,170 ⋆ Numbers that are congruent to { 2, 12 } mod 14. ● a(n) = 14 * n - a(n - 1) - 14 (with a(1) = 2). - _ Vincenzo Librandi _ , Nov 13 2010 ● a(n) = 7 * n - (7 - 3 * (- 1) ^ n) / 2. ●

▶ [A120350] 2,12,18,24,36,72,80,180,240,252,360,396,450,468,480,504,560,612,684,720,792,828,880,882,896 ⋆ Refactorable numbers k such that the number of od d divisors and the number of even divisors of k are both divisors of k. ● a(n) = k is even, r = number of odd divisors of k, s = number of even divisors of k and t = r + s = number of divisors of k, are all divisors of k. ●

▶ [A115109] 1,2,12,18,62,420,682,5828,16852,61952,201184,669920,2184064,7126784,23147776,75118592,243460096,788658176,2553683968,8267055104,2675895508,86606348288,280288952320,907084169216,2935485890560 ⋆ Expansion of (1 - 2 * x + 4 * x ^ 2 - 22 * x ^ 3 + 6 * x ^ 4 + 268 * x ^ 5 - 854 * x ^ 6 + 3596 * x ^ 7 - 3100 * x ^ 8) / ((1 - 2 * x) / (1 - 2 * x - 4 * x ^ 2)). ● a(n) = + 4 * a(n - 1) - 8 * a(n - 3). - _ Colin Barker _ , Mar 15 2013 ●

▶ [A048001] 0,0,0,0,0,0,2,12,18,63,168,224,504,1014,1270,2420,4620,5742,12012,27027,35035,84119,199304,260064,601664 ⋆ Number of nonempty subsets of { 1,2 ,...,n } in which exactly 1 / 6 of the elements are <= n / 3. ● a(n) = Sum _{ k =1..ceiling(2 * n / 3) / 5 } binomial(floor(n / 3),k) * binomial(ceiling(2 * n / 3) ,5 * k). - _ Robert Israel _ , Nov 12 2018 ●

▶ [A291698] 1,1,2,12,20,55,294,497,1224,2520,14410,21912,54300,104286,220710,1105215,1697552,3839382,7356762,14873580,26275620,132112596,188666126,423247104,772560600 ⋆ a(n) = [x ^ n] Product _{ k>=1 } (1 + n * x ^ k). ● a(n) == 0 (mod n); a(n) == n (mod n ^ 2). - _ Peter Bala _ , Aug 31 2017 ●

▶ [A094626] 0,1,2,12,22,122,222,1222,2222,12222,22222,122222,222222,1222222,2222222,12222222,22222222,122222222,222222222,1222222222,2222222222,12222222222,22222222222,122222222222,222222222222 ⋆ Expansion of x * (1 + x) / ((1 - x) * (1 - 10 * x ^ 2)). ● a(n) = 10 ^ (n / 2) * (11 * sqrt(10) / 180 + 1 / 9 - (11 * sqrt(10) / 180 - 1 / 9) * (- 1) ^ n) - 2 / 9. ● a(n) = 2 * (10 ^ (n / 2) - 1) / 9 for n even. ● a(n) = (11 * 10 ^ ((n - 1) / 2) - 2) / 9 for n odd. ●

▶ [A353011] 2,12,24,36,60,72,84,96,108,180,240,252,360,480,504,720,792,1260,1440,1680,1800,2160,2340,2640,3360 ⋆ Indices of "late birds" in A090395 (denomi nator of d(n) / n): indices n such that A090395(k) > A090395(n) for all k > n. ● a(n + 1) > a(n). ●

▶ [A052565] 1,1,2,12,24,120,720,5040,40320,362880,3628800,39916800,479001600,6227020800,87178291200,1307674368000,20922789888000,355687428096000,6402373705728000,121645100408832000,2432902008176640000,51090942171709440000,1124000727777607680000 ⋆ E.g.f. (1 + x ^ 3 - x ^ 4) / (1 - x). ● a(n) = n! fo r n>3. ●

▶ [A176710] 1,2,12,24,144,288,1728,3456,20736,41472,248832,497664,2985984,5971968,35831808,71663616,429981696,859963392,5159780352,10319560704,61917364224 ⋆ Mix A001021, 2 * A001021. ● a(n)= + 12 * a(n - 2). G.f.: (- 1 - 2 * x) / (- 1 + 12 * x ^ 2). [From _ R. J. Mathar _ , Apr 26 2010] ● a(n)=(1 / 12) * [3 - 1 * (- 1) ^ n] *{ 12 ^ (1 / 2) * n * 12 ^ [(1 / 4) * (- 1) ^ n] * 108 ^ (1 / 4) } , with n>=0 [From _ Paolo P. Lava _ , May 21 2010] ●

▶ [A211374] 1,1,2,12,24,360,720,20160,40320,1814400,3628800,239500800,479001600,43589145600,87178291200,10461394944000,20922789888000,3201186852864000,6402373705728000,121645100408832000,2432902008176640000,562000363888803840000 ⋆ Product of all the parts in the partitions of n into exactly 2 parts. ● a(n) = ((n - 1)! * floor(n / 2)!) / (n - 1 - floor(n / 2))!. ● a(n) = P(n - 1, f loor(n / 2)) * floor(n / 2)!, where P(n,k) are the k - permutations of n objects. - _ Wesley Ivan Hurt _ , Jun 07 2013 ● a(n) = Product _{ i=1..floor(n / 2) } i * (n - i). - _ Wesley Ivan Hurt _ , Nov 14 2017 ●

▶ [A091137] 1,2,12,24,720,1440,60480,120960,3628800,7257600,479001600,958003200,2615348736000,5230697472000,31384184832000,62768369664000,32011868528640000,64023737057280000,510909421717094400000 ⋆ Largest number m such that number of times m divides k! is almost k / n for large k, i.e., largest m wit h A090624(m)=n. ● a(n) = Product _ p { p prime } p ^ floor(n / (p - 1)). ● a (2n + 1) = 2 * a(2n). ●

▶ [A152811] 2,12,26,44,66,92,122,156,194,236,282,332,386,444,506,572,642,716,794,876,962,1052,1146,1244,1346 ⋆ a(n) = 2 * (n ^ 2 + 2 * n - 2). ● a(n) = a(n - 1) + 4 * n + 2 for n>1, a(1)=2. ●

▶ [A166151] 2,12,27,47,72,102,137,177,222,272,327,387,452,522,597,677,762,852,947,1047,1152,1262,1377,1497,1622 ⋆ a(n) = (5 * n ^ 2 + 5 * n - 6) / 2. ● a(n) = 5 * n * (n + 1) / 2 - 3. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A154149] 2,12,27,77,162,452,947,2637,5522,15372,32187,89597,187602,522212,1093427,3043677,6372962,17739852,37144347,103395437,216493122,602632772,1261814387,3512401197,7354393202 ⋆ Indices k such that 22 plus the k - th triangular number is a perfect square. ● a(n)= + a(n - 1) + 6 * a(n - 2) - 6 * a(n - 3) - a(n - 4) + a(n - 5). ●

▶ [A211623] 0,2,12,28,54,86,128,176,234,298,372,452,542,638,744,856,978,1106,1244,1388,1542,1702,1872,2048,2234 ⋆ Number of ordered triples (w,x,y) with all terms in {- n,... - 1,1,...,n } and - 1<=w + 2x + 3y<=1. ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4) for n>4. ● a(n) = 4 * n ^ 2 - 3 * n + 2 for n>0 and even. ● a(n) = 4 * n ^ 2 - 3 * n + 1 for n odd. ●

▶ [A002939] 0,2,12,30,56,90,132,182,240,306,380,462,552,650,756,870,992,1122,1260,1406,1560,1722,1892,2070,2256 ⋆ a(n) = 2 * n * (2 * n - 1). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ● a(n) = a(n - 1) + 8 * n - 6 (with a(0)=0). - _ Vincenzo Librandi _ , Nov 12 2010 ●

▶ [A118239] 1,2,12,30,56,90,132,182,240,306,380,462,552,650,756,870,992,1122,1260,1406,1560,1722,1892,2070,2256 ⋆ Engel expansion of cosh(1). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A301774] 2,12,30,74,200,522,1362,3572,9350,24474,64080,167762,439202,1149852,3010350,7881194,20633240,54018522,141422322,370248452,969323030,2537720634,6643838880,17393796002,45537549122 ⋆ Number of odd chordless cycles in the (2n + 1) - prism graph. ● a(n) = 2 * a(n - 1) + a(n - 2) + 2 * a(n - 3) - a(n - 4). ●

▶ [A117625] 1,2,12,31,59,96,142,197,261,334,416,507,607,716,834,961,1097,1242,1396,1559,1731,1912,2102,2301,2509 ⋆ Maximum number of regions defined by n zigzag - lines in the plane when a zigzag - line is defined as consisting of two parallel infinite half - lines joined by a straight line segment. ● a(n) = (9 * n ^ 2 - 7 * n + 2) / 2 = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Jul 08 2012 ●

▶ [A254962] 1,2,12,31,211,552,3782,9901,67861,177662,1217712,3188011,21850951,57206532,392099402,1026529561,7035938281,18420325562,126254789652,330539330551,2265550275451,5931287624352,40653650168462,106432637907781,729500152756861 ⋆ Indices of hexagonal numbers (A000384) that are also centered pentagonal numbers (A005891). ● a(n) = a(n - 1) + 18 * a(n - 2) - 18 * a(n - 3) - a(n - 4) + a(n - 5). ● a(n) = (2 + (2 - r) ^ n - (- 2 - r) ^ n * (- 2 + r) + 2 * (- 2 + r) ^ n + r * (- 2 + r) ^ n + (2 + r) ^ n) / 8 where r = sqrt(5). - _ Colin Barker _ , Nov 25 2016 ●

▶ [A225525] 2,12,32,56,132,288,464,752,1976,2952,4776,10304,14588,26976,65472,70624,128556,300456,373960,726096,1566464,1900944,3075792,6635648,10401182 ⋆ a(n) = (sigma(2 * n) - sigma(n)) * Lucas(n) where Lucas(n) = A000204(n) and sigma(n) = A000203(n) is the sum of divisors of n. ● a(n) == 0 (mod 2); a(n) == 2 (mod 4) iff n is congruent to 1 or 5 mod 6 (A007310). ●

▶ [A240395] 2,12,32,62,118,206,351,568,882,1322,1921,2716,3748,5062,6707,8736,11206,14178,17717,21892,26776,32446,38983,46472,55002 ⋆ Number of 3 X n 0..3 arrays with no element equal to zero plus the sum of elements to its left or one plus the sum of the elements above it or two plus the sum of the elements diagonally to its northwest, modulo 4. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>10. ●

▶ [A154252] 1,2,12,32,72,152,312,632,1272,2552,5112,10232,20472,40952,81912,163832,327672,655352,1310712,2621432,5242872,10485752,20971512,41943032,83886072 ⋆ Expansion of (1 - x + 8x ^ 2) / ((1 - x)(1 - 2x)) . ● a(n) = 3 * a(n - 1) - 2 * a(n - 2), n>2, with a(0)=1, a(1)=2, a(2)=12. ● a(n) = 2 * a(n - 1) + 8, n>1, with a(0)=1, a(1)=2. ● a(n) = 10 * 2 ^ (n - 1) - 8, n>=1, with a(0)=1. ● a(n) = - 8 + 5 * 2 ^ (n - 1) + 4 *{ C[2 * (n - 1),n - 1] mod 2 } , with n>=1. - _ Paolo P. Lava _ , Jan 14 2009 ●

▶ [A212761] 0,2,12,32,90,162,336,512,900,1250,1980,2592,3822,4802,6720,8192,11016,13122,17100,20000,25410,29282,36432,41472,50700 ⋆ Number of (w,x,y,z) with all terms in { 0,...,n } , w odd, x and y even. ● a(n)=a(n - 1) + 4 * a(n - 2) - 4 * a(n - 3) - 6 * a(n - 4) + 6 * a(n - 5) + 4 * a(n - 6) - 4 * a(n - 7) - a(n - 8) + a(n - 9). ● a(n) = (n + 1) * (2 * n ^ 3 + 7 * n ^ 2 + 7 * n + 1 + (n ^ 2 + n - 1) * (- 1) ^ n) / 16. - _ Luce ETIENNE _ , Oct 10 2015 ●

▶ [A102080] 2,12,32,108,342,1104,3544,11396,36626,117732,378424,1216380,3909830,12567448,40395792,129844996,417363330,1341539196,4312135920,13860583628,44552347606,143205490528,460308235560,1479577849604,4755836293842 ⋆ Number of matchings in the C _ n X P _ 2 (n - prism) graph. ● a(n) = 2 * a(n - 1) + 4 * a(n - 2) - a(n - 4) for n>4. ●

▶ [A363661] 2,12,32,150,282,1890,3488,21582,54650,282612,705564,4072224,10400782,55006530,158987232,790611350,2333606526,11573213196,35345264180,168673694070,540848064614,2500462200182,8233430728152,37445946291600,126411051769652 ⋆ a(n) = Sum _{ d|n } (n / d) ^ d * binomial(d + n,n). ● a(n) = [x ^ n] Sum _{ k>0 } (1 / (1 - k * x ^ k) ^ (n + 1) - 1). ●

▶ [A133577] 1,2,12,32,152,472,1992,6712,26632,93752,360072,1297592,4898312,17874232,66857352,245599672,914173192,3370169912,12511901832,46213600952,171332619272,633468628792,2346794821512,8681481109432 ⋆ a(n) = a(n - 1) + 10 * a(n - 2) for n >= 2, a(0)=1, a(1)=2. ● a(n) = (1 / 2) * ((1 / 2) - (1 / 2) * sqrt(41)) ^ n + (3 / 82) * sqrt(41) * ((1 / 2) + (1 / 2) * sqrt(41)) ^ n - (3 / 82) * sqrt(41) * ((1 / 2) - (1 / 2) * sqrt(41)) ^ n + (1 / 2) * ((1 / 2) + (1 / 2) * sqrt(41)) ^ n, with n >= 0. - _ Paolo P. Lava _ , Nov 18 2008 ●

▶ [A106185] 1,2,12,32,160,480,2208,7104,31104,104960,444928,1554432,6444544,23112704,94341120,345243648,1393754112,5181456384,20755267584,78122680320,311231840256,1183024939008,4695356866560,17987367075840 ⋆ Expansion of 1 / sqrt(1 - 4 * x - 12 * x ^ 2 + 48 * x ^ 3). ● a(n) = Sum _{ k=0..floor(n / 2) } C(2 * k,k) * C(2 * (n - 2 * k), n - 2 * k) * 3 ^ k. ●

▶ [A242709] 0,2,12,33,85,165,315,518,846,1260,1870,2607,3627,4823,6405,8220,10540,13158,16416,20045,24465,29337,35167,41538,49050 ⋆ Nonequivalent ways to place two different markers (e.g., a pair of Go stones, black and white) on an n X n grid. ● a(n) = n * (n ^ 3 + n * 3 ^ (n mod 2) - 2 * 2 ^ (n mod 2)) / 8. - _ Wesley Ivan Hurt _ , May 21 2014 ●

▶ [A011379] 0,2,12,36,80,150,252,392,576,810,1100,1452,1872,2366,2940,3600,4352,5202,6156,7220,8400,9702,11132,12696,14400 ⋆ a(n) = n ^ 2 * (n + 1). ● a(n) = Sum _{ j=1..n } (Sum _{ i=1..n } (i + j)), row sums of A126890 skipping numbers in the first column. - _ Alexander Adamchuk _ , Oct 12 2004 ●

▶ [A169630] 0,1,2,12,36,125,384,1183,3528,10404,30250,87131,248832,705757,1989806,5581500,15586704,43356953,120187008,332134459,915304500,2516113236,6900949462,18888143927,51599794176 ⋆ a(n) = n times the square of Fibonacci(n) . ● a(n) = 4 * a(n - 1) - 10 * a(n - 3) + 4 * a(n - 5) - a(n - 6). ●

▶ [A192385] 0,1,2,12,36,156,544,2144,7872,30096,112416,425536,1598528,6031296,22699008,85552128,322177024,1213849856,4572111360,17224104960,64880993280,244410981376,920685043712,3468237545472,13064787542016 ⋆ a(n) = A192384(n) / 2. ● a(n) = (1 / 2) * Sum _{ k=0..n - 1 } T(n, k) * Fibonacci(k). ● a(n) = 2 * a(n - 1) + 8 * a(n - 2) - 4 * a(n - 3) - 4 * a(n - 4). ●

▶ [A185788] 0,2,12,37,84,160,272,427,632,894,1220,1617,2092,2652,3304,4055,4912,5882,6972,8189,9540,11032,12672,14467,16424 ⋆ Sum of the first k - 1 numbers in the k - th column of the natural number array A000027, by antidiagonals. ● a(n) = (n - 1) * (7 * n ^ 2 - 11 * n + 6) / 6. - Corrected by _ Manfred Arens _ , Mar 11 2016 ●

▶ [A035597] 0,2,12,38,88,170,292,462,688,978,1340,1782,2312,2938,3668,4510,5472,6562,7788,9158,10680,12362,14212,16238,18448 ⋆ Number of points of L1 norm 3 in cubic lattice Z ^ n. ● a(n) = (4 * n ^ 3 + 2 * n) / 3. ● a(0)=0, a(1)=2, a(2)=12, a(3)=38, a(n)=4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). G.f.: (2 * x * (x + 1) ^ 2) / (x - 1) ^ 4. - _ Harvey P. Dale _ , Sep 18 2011 ●

▶ [A000913] 0,1,2,12,38,143,490,1768,6268,22610,81620,297160,1086172,3991995,14731290,54587280,202992808,757398510,2834493948,10637507400,40023577524,150946230006,570534370692,2160865067312,8199710635816 ⋆ Number of bond - rooted polyenoids with n edges. ● a(n) = (1 / 4) * c(n + 2) - (1 / 2) * c(n + 1) - (3 / 4) * c((n + 1) / 2) + (1 / 2) * c((n - 1) / 4), where c(n) = binomial(2n, n) / (n + 1) are the Catalan numbers for n a nonnegative integer and 0 otherwise. ●

▶ [A086602] 0,0,2,12,39,95,195,357,602,954,1440,2090,2937,4017,5369,7035,9060,11492,14382,17784,21755,26355,31647,37697,44574 ⋆ a(n) = A000217(A000217(n)) - n ^ 2. ● a(n) = 3 * C(n + 2,4) - C(n,2). - _ Zerinvary Lajos _ , May 02 2007, corrected Jun 12 2018 ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) = n * (n - 1) * (n ^ 2 + 3 * n - 2) / 8. [_ R. J. Mathar _ , Oct 30 2009] ●

▶ [A290131] 0,2,12,40,96,204,368,634,1012,1544,2236,3186,4360,5898,7764,10022,12712,16026,19844,24448,29708,35756,42604,50602,59496 ⋆ Number of regions in a regular drawing of the complete bipartite graph K _{ n,n } . ● a(n) = 2 * (n - 1) ^ 2 + Sum _{ i=2..n - 1 } (n - i) * (2n - i) * phi(i). - _ Chai Wah Wu _ , Aug 16 2021 ●

▶ [A008911] 0,0,2,12,40,100,210,392,672,1080,1650,2420,3432,4732,6370,8400,10880,13872,17442,21660,26600,32340,38962,46552,55200 ⋆ a(n) = n ^ 2 * (n ^ 2 - 1) / 6. ● a(n) = n * binomial(n + 1,3). - _ Martin Renner _ , Apr 03 2011 ● a(n) = binomial(n ^ 2,2) / 3. ●

▶ [A005719] 2,12,40,101,216,413,728,1206,1902,2882,4224,6019,8372,11403,15248,20060,26010,33288,42104,52689,65296,80201,97704,118130,141830 ⋆ Quadrinomial coefficients. ● a(n)= binomial(n, 2) * (n ^ 3 + 11 * n ^ 2 + 46 * n - 24) / 60, n >= 2. ● a(n) = 2 * binomial(n,2) + 6 * binomial(n,3) + 4 * binomial(n,4) + binomial(n,5) (see comment in A071675). - _ Vladimir Shevelev _ and _ Peter J. C. Moses _ , Jun 22 2012 ●

▶ [A003683] 0,1,2,12,40,176,672,2752,10880,43776,174592,699392,2795520,11186176,44736512,178962432,715816960,2863333376,11453202432,45813071872,183251763200,733008101376,2932030308352,11728125427712 ⋆ a(n) = 2 ^ (n - 1) * (2 ^ n - (- 1) ^ n) / 3. ● a(1) = 1, a(2) = 2; a(n) = 2 * a(n - 1) + 8 * a(n - 2). - _ Barry E. Williams _ , Jan 04 2000 ● a(n) = ((1 + 3) ^ n - (1 - 3) ^ n) / 6. - _ Paul Barry _ , May 14 2003 ● a(n) = Sum _{ k=0..floor(n / 2) } C(n, 2 * k + 1) * 9 ^ k. - _ Paul Barry _ , May 20 2003 ●

▶ [A188572] 0,1,2,12,40,184,720,3072,12544,52416,216448,899328,3724800,15452672,64052224,265617408,1101234176,4566192128,18932244480,78498938880,325475532800,1349511512064,5595423113216,23200121487360,96193798471680 ⋆ Coefficients of the term by sqrt(3) in (1 + sqrt(2) + sqrt(3)) ^ n sequence, denoted as C3(n). ● a(n) = + 4 * a(n - 1) + 4 * a(n - 2) - 16 * a(n - 3) + 8 * a(n - 4). ●

▶ [A098519] 0,1,2,12,40,185,726,3157,13112,56331,239230,1028522,4414224,19045039,82237442,356104140,1544056864,6707220443,29172892518,127058629852,554006070200,2418204764451,10565384173762,46202462762837,202207635999240 ⋆ E.g.f. exp(x) * BesselI(1,2 * sqrt(3) * x) / sqrt(3). ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n, k) * binomial(n - k, k + 1) * 3 ^ k. ●

▶ [A277935] 0,2,12,42,112,252,504,924,1584,2574,4004,6006,8736,12376,17136,23256,31008,40698,52668,67298,85008,106260,131560,161460,196560 ⋆ Number of ways 2 * n - 1 people can vote on three candidates so that the Condorcet paradox arises. ● a(n) = (2 / 5!) * n * (n - 1) * (n + 3) * (n + 2) * (n + 1). ●

▶ [A290928] 0,0,2,12,42,115,288,738,2020,5751,16362,45697,125538,342318,930350,2547630,6960042,18990309,51699042,140439411,380871538,1031705466,2792009100,7548723827,20389716864 ⋆ p - INVERT of the positive integers, where p(S) = (1 - S ^ 3) ^ 2. ● a(n) = 12 * a(n - 1) - 66 * a(n - 2) + 222 * a(n - 3) - 507 * a(n - 4) + 822 * a(n - 5) - 965 * a(n - 6) + 822 * a(n - 7) - 507 * a(n - 8) + 222 * a(n - 9) - 66 * a(n - 10) + 12 * a(n - 11) - a(n - 12). ●

▶ [A066258] 0,1,2,12,45,200,832,3549,14994,63580,269225,1140624,4831488,20466953,86698690,367262700,1555747893,6590256856,27916771136,118257348165,500946152850,2122041977276,8989114033297,38078498156832 ⋆ a(n) = Fibonacci(n) ^ 2 * Fibonacci(n + 1). ● a(n) = (1 / 5) * (F(3n + 1) - (- 1) ^ n * F(n + 2)) . - _ Ralf Stephan _ , Jul 26 2005 ● a(n) = 3 * a(n - 1) + 6 * a(n - 2) - 3 * a(n - 3) - a(n - 4). E.g., a(6) = 832 = 3 * 200 + 6 * 45 - 3 * 12 - 2. - _ Zak Seidov _ , May 07 2015 ●

▶ [A003993] 2,12,46,152,474,1444,4358,13104,39346,118076,354270,1062856,3188618,9565908,28697782,86093408,258280290,774840940,2324522894,6973568760,20

920706362,62762119172,188286357606,564859072912,1694577218834 ★ Sequence b _ 3 (n) arising from homology of partitions with even number of blocks. ● a(n) = 2 * 3 ^ (n - 1) - 2 * n. - _ Vaclav Kotesovec _ , Nov 19 2012 ● a(n) = 5 * a(n - 1) - 7 * a(n - 2) + 3 * a(n - 3) for n>4. ●

► [A001815] 0,0,2,12,48,160,480,1344,3584,9216,23040,56320,135168,319488,745472,1720320,3932160,8912896,20054016,44826624,99614720,220200960,484442112,1061158912,2315255808 ★ a(n) = binomial(n,2) * 2 ^ (n - 1). ● a(n) = Sum _{ i=0..n } i * (n - i) * binomial(n, i). - _ Benoit Cloitre _ , Nov 11 2004 ● a(n) = Sum _{ k=0..n } k * 2 ^ (k - 1). - _ Zerinvary Lajos _ , Oct 09 2006 ● a(n) = Sum _{ j=0..n } binomial(n - 1,j) * n * j. - _ Zerinvary Lajos _ , Oct 19 2006 ● a(n) = 2 ^ (n - 2) * n * (n - 1). - Tobias Friedrich (tfried(AT)mpi - inf.mpg.de), Jun 18 2009 ● a(n) = 2 * a(n - 1) + n * 2 ^ n. ● a(n) = a(1 - n) * 2 ^ (2 * n - 1) for all n in Z. - _ Michael Somos _ , Oct 25 2016 ●

► [A354131] 1,2,12,48,216,936,4104,17928,78408,342792,1498824,6553224,28652616,125277192,547747272,2394904968,10471198536,45783025416,200176267464,875226954888,3826738469448,16731577137672,73155162229704,319854949515144,1398495821923656 ★ Number of tilings of a 2 X n rectangle using 2 X 2 and 1 X 1 tiles, right trominoes and dominoes. ● a(n) = 3 * a(n - 1) + 6 * a(n - 2). ●

► [A370696] 1,1,2,12,48,240,1800,12600,100800,967680,9676800,106444800,1297296000,16864848000,236107872000,3552515366400,56840245862400,966284179660800,17402007419596800,330638140972339200,6612762819446784000,138878156300083200000 ★ Expansion of e.g.f. exp(x ^ 3) / (1 - x). ● a(n) = n! * Sum _{ k=0..floor(n / 3) } 1 / k!. ●

► [A052591] 0,1,2,12,48,360,2160,20160,161280,1814400,18144000,239500800,2874009600,43589145600,610248038400,10461394944000,167382319104000,3201186852864000,57621363351552000,1216451004088320000,24329020081766400000,562003638838038400000 ★ Expansion of e.g.f. x / ((1 - x)(1 - x ^ 2)). ● a(n) = ((1 / 4) * (- 1) ^ (1 - n) + (1 / 2) * n + 1 / 4) * n!. ● a(n) = (n + 1)! / 2 if n is odd; a(n) = n! * n / 2 if n is even. ●

► [A359118] 1,2,12,48,457,1027,6190,14652,40852,71601,223637,325661,847984,1269433,2053303,3157887,6638971,8490949,16421392,21323264,30639928 ★ Number of edges in the planar Farey Ring graph FR(n) defined in A359116, including the regions bewteen the convex hull and the bounding circle. ● a(n) = A359116 + A359117 - 1 by Euler's formula. ●

► [A338522] 1,2,12,48,480,1440,30240,161280,2177280,14515200,399168000,1916006400,74724249600,523069747200,10461394944000,167382319104000,5690998849536000,38414242234368000,2189611807358976000,19463216065413120000,613091306060513280000 ★ Number of cyclic Latin squares of order n. ● a(n) = phi(n) * n!. ●

► [A323678] 1,2,12,50,72,142,5346,38338,240902,1369462,8927272,29594702,78001922,259042422,2690290778,26069217364,144738683318,959061370318,7256969189340,35982546596434,223064363341712,1127137948649166,4200987237905836,14295780646046930,50369139372748128 ★ Coefficients of x ^ (n * (n + 3)) in Sum _{ n>=0 } x ^ n * (1 + x ^ n) ^ n / (1 + x ^ (n + 1)) ^ (n + 1). ● a(n) = [x ^ (n * (n + 3))] Sum _{ k>=0 } x ^ k * (1 + x ^ k) ^ k / (1 + x ^ (k + 1)) ^ (k + 1). ● a(n) = [x ^ (n * (n + 3))] Sum _{ k>=0 } (- x) ^ k * (1 - x ^ k) ^ k / (1 - x ^ (k + 1)) ^ (k + 1). ●

► [A129743] 2,12,50,192,722,2700,10082,37632,140450,524172,1956242,7300800,27246962,101687052,379501250,1416317952,5285770562,19726764300,73621286642,274758382272,1025412242450,3826890587532,14282150107682 ★ a(n) = - (u ^ n - 1) * (v ^ n - 1) with u = 2 + sqrt(3), v = 2 - sqrt(3). ● a(n) = 5 * a(n - 1) - 5 * a(n - 2) + a(n - 3). - _ Eric W. Weisstein _ , Jul 15 2011 ●

► [A115243] 0,2,12,50,204,818,3276,13106,52428,209714,838860,3355442,13421772,53687090,214748364,858993458,3435973836,13743895346,54975581388,219990225554,879609302220,3518437208882,14073748835532,56294995342130,225179981368524 ★ G.f.: (4 * x ^ 2 + 2 * x) / (4 * x ^ 3 - x ^ 2 - 4 * x + 1). ● a(n) = InverseZTransform[(1 + 2 * x) / (1 - x - 16 * x ^ 2 + 16 * x ^ 3), x, n] * 2 ^ (2 * n). ● a(n) = 5 * a(n - 1) - 4 * a(n - 2) + 2 * (- 1) ^ n. ● a(n) = 4 * a(n - 1) + a(n - 2) - 4 * a(n - 3). - _ Gary Detlefs _ Dec 17 2010 ● a(n) = (4 ^ (n + 1) + (- 1) ^ n) / 5 - 1. - _ Robert Israel _ , Mar 09 2016 ● a(n) = 4 * a(n - 1) + 3 + (- 1) ^ n. - _ Mikel Mcdaniel _ , Jan 10 2019 ●

► [A241683] 0,0,0,2,12,50,220,882,3612,14450,58140,232562,931612,3726450,14911260,59645042,238602012,954408050,3817719580,15270878322,61083862812,244335451250,977343203100,3909372812402 ★ Total number of 2 X 2 squares appearing in the Thue - Morse sequence logical matrices after n stages. ● a(n) = (1 / 18) * (4 ^ n - 3 * 2 ^ n - 6 * (- 1) ^ n + (- 2) ^ n - 2), n>0 (from g.f.). - _ Ralf Stephan _ , Apr 27 2014 ●

► [A057547] 2,12,52,56,212,216,228,232,240,852,856,868,872,880,916,920,932,936,944,964,968,976,992,3412,3416 ★ A014486 - encodings of Catalan mountain ranges with no sea - level valleys, i.e., the rooted plane general trees with root degree = 1. ● a(n) = alltrees2singletrunked(A014486[n]) (see Maple code below and in A057501). ●

► [A179259] 2,12,52,140,294,532,872,1332,1930,2684,3612,4732,6062,7620,9424,11492,13842,16492,19460,22764,26422,30452,34872,39700,44954 ★ Arises in covering a graph by forests and a matching. ● a(n) = (n + 2) * (3 * n ^ 2 + 1). ●

► [A080675] 2,12,52,212,852,3412,13652,54612,218452,873812,3495252,13981012,55924052,223696212,894784852,3579139412,14316557652,57266230612,229064922452,916259689812,3665038759252,14660155037012,58640620148052,234562480592212,938249922368852 ★ a(n) = (5 * 4 ^ n - 8) / 6. ● a(1)=2, a(2)=12, a(n)= 5 * a(n - 1) - 4 * a(n - 2). - _ Harvey P. Dale _ , Oct 16 2012 ●

► [A007225] 2,12,52,232,952,3888,15504,61333,240350,937508,3641820,14112560,54587280,210907168,814278240,3142611402,12126758436,46796872472,180619420520,697320058864,2693097842512,10405151052320,40219629005920 ★ Number of distinct perforation patterns for deriving (v,b) = (n + 4,n) punctured convolutional codes from (2,1). ● a(n) = (1 / n) * Sum _{ k|gcd(n + 4,n) } phi(k) * binomial(2 * n / k, (n + 4) / k). ● a(n) = (1 / n) * (binomial(2 * n, n + 4) + [(n mod 2) == 0] * binomial(n, (n / 2) + 2) + 2 * [(n mod 4) == 0] * binomial(n / 2, (n / 4) + 1)). (End) ●

► [A212697] 2,12,54,216,810,2916,10206,34992,118098,393660,1299078,4251528,13817466,44641044,143489070,459165024,1463588514,4649045868,14721978582,46490458680,146444944842,460255540932,1443528742014,4518872583696,14121476824050 ★ a(n) = 2 * n * 3 ^ (n - 1). ● a(n) = n * (b - 1) * b ^ (n - 1). For this sequence, set b=3. ● a(n) = Sum _{ j=1..n } binomial(n,j) * j * 2 ^ j. - _ Geoffrey Critzer _ , Mar 01 2015 ●

► [A145766] 0,2,12,54,224,906,3636,14558,58248,233010,932060,3728262,14913072,59652314,238609284,954437166,3817748696,15270994818,61083979308,244335917270,977343669120,3909374676522,15637498706132,62549994824574 ★ Partial sums of A020988. ● a(n) = 6 * a(n - 1) - 9 * a(n - 2) + 4 * a(n - 3), for n>2, with { a(k) } = { 0,2,12 } , k=0,1,2. - _ L. Edson Jeffery _ , Mar 01 2012 ●

► [A127214] 2,12,56,176,672,2496,9088,33536,123392,453632,1669120,6139904,22585344,83083264,305627136,1124270080,4135714816,15213527040,55964073984,205867974656,757300461568,2785785413632,10247716470784,37696978288640,13867110576947 2 ★ a(n) = 2 ^ n * tribonacci(n) or (2 ^ n) * A001644(n + 1). ● a(n) = Trace of matrix [({ 2,2,2 } , { 2,0,0 } m { 0,2,0) ^ n]. ● a(n) = 2 ^ n * Trace of matrix [({ 1,1,1 } , { 1,0,0 } ,0,1,0) ^ n]. ● a(n) = 2 * a(n - 1) + 4 * a(n - 2) + 8 * a(n - 3). ●

► [A127216] 2,12,56,240,832,3264,12672,48896,187904,724992,2795520,10776576,41541632,160153600,617414656,2380201984,9175957504,35374497792,136373075968,525735034880,2026773676032,7813464064000,30121872326656,116123550875648,447670682386432 ★ a(n) = 2 ^ n * tetranacci(n) or (2 ^ n) * A001648(n). ● a(n) = Trace of matrix [({{ 2,2,2,2 } , { 2,0,0,0 } , { 0,2,0,0), { 0,0,2,0 }}) ^ n] a(n) = 2 ^ n Trace of matrix [({{ 1,1,1,1 } , { 1,0,0,0 } , { 0,1,0,0 } , { 0,0,1,0 }) ^ n]. ● a(n) = 2 * a(n - 1) + 4 * a(n - 2) + 8 * a(n - 3) + 16 * a(n - 4). ●

► [A006659] 2,12,56,240,990,4004,16016,63648,251940,994840,3922512,15452320,60843510,239519700,942871200,3711935040,14615744220,57562286760,226760523600,893550621600,3522078700140,13887053160552 ★ Number of closed meander systems of order n + 1 with n components. ● a(n) = 2 * binomial(2n + 2, n - 1). - _ Emeric Deutsch _ , Oct 09 2008 ● a(n) = { (- 56 - 30 * n - 4 * n ^ 2) * a(n + 1) + (8 * n + 12 + n ^ 2) * a(n + 2), a(0)=2, a(1)=12 } . - _ Simon Plouffe _ (master's thesis, 1992) ●

► [A127221] 2,12,56,240,992,3648,14464,57088,224768,883712,3471360,13651968,53682176,211075072,829915136,3263102976,12830244864,50447253504,198353354752,779904614400,3066503888896,12057176965120,47407572189184,186401664532480,732912043425792 ★ a(n) = 2 ^ n * pentanacci(n) or (2 ^ n) * A023424(n - 1). ● a(n) = Trace of matrix [({{ 2,2,2,2,0 } , { 2,0,0,0,0 } , { 0,2,0,0,0), { 0,0,2,0,0 } , { 0,0,0,2,0 }) ^ n]. ● a(n) = 2 ^ n * Trace of matrix [({{ 1,1,1,1,1 } , { 1,0,0,0,0 } , { 0,1,0,0,0 } , { 0,0,1,0,0 } , { 0,0,0,1,0) ^ n]. ● a(n) = 2 * a(n - 1) + 4 * a(n - 2) + 8 * a(n - 3) + 16 * a(n - 4) + 32 * a(n - 5). - _ Colin Barker _ , Sep 02 2013 ●

► [A020522] 0,2,12,56,240,992,4032,16256,65280,261632,1047552,4192256,16773120,67100672,268419072,1073709056,4294901760,17179738112,68719214592,274877382656,1099510579200,4398044413952,17592181850112,70368735789056,281474959933440 ★ a(n) = 4 ^ n - 2 ^ n. ● a(n) = 6 * a(n - 1) - 8 * a(n - 2). (End) ● a(n) = (4 ^ (n / 2) - 4 ^ (n / 4)) * (4 ^ (n / 2) + 4 ^ (n / 4)). - _ Bruno Berselli _ , Apr 09 2018 ●

► [A084128] 1,2,12,56,272,1312,6336,30592,147712,713216,3443712,16627712,80285696,387653632,1871757312,9037643776,43637604352,210700992512,1017354387456,4912221519872,23718303629312,114522100596736,552961616904192,2669934870003712 ★ a(n) = 4 * a(n - 1) + 4 * a(n - 2), a(0)=1, a(1)=2. ● a(n) = 4 * a(n - 1) + 4 * a(n - 2), a(0)=1, a(1)=2. ● a(n) = (2 + 2 * sqrt(2)) ^ n / 2 + (2 - 2 * sqrt(2)) ^ n / 2. ●

► [A105487] 1,2,12,56,297,1632,9531,58634,379371,2574254,18276457,135463074,1046041114,8399533370,70013963418,604840440328,5407301690915,49958478263502,476403955991034,4683463406478004,47414166201239781,493803423334040824,5285548108715948453 ★ Number of partitions of { 1...n } containing 5 strings of 3 consecutive integers, where each string is counted within a block and a string of more than 3 consecutive integers are counted three at a time. ● a(n) = Sum _{ k=1..n } c(n, k, 5), where c(n, k, 5) is the case r=5 of c(n, k, r) given by c(n, k, r)=c(n - 1, k - 1, r) + (k - 1)c(n - 1, k, r) + c(n - 2, k - 1, r) + (k - 1)c(n - 2, k, r) + c(n - 1, k, r - 1) - c(n - 2, k - 1, r - 1) - (k - 1)c(n - 2, k, r - 1), r=0, 1, .., n - k - 1, k=1, 2, .., n - 2r, c(n, k, 0) = Sum _{ j= 0..floor(n / 2) } binomial(n - j, j) * S2(n - j - 1, k - 1). ●

► [A098453] 1,2,12,56,304,1632,9024,50304,283392,1607168,9167872,52537344,302239744,1744412672,10096263168,58576306176,340566147072,1983765676032,11574393962496,67631502065664,395710949228544,2318088492023808,13594307705438208,79802741538422784,468895276304695296 ★ Expansion of 1 / sqrt(1 - 4 * x - 12 * x ^ 2). ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n, k) * binomial(2 * (n - k), n) * 3 ^ k. ● a(n) = (- 2) ^ n * hypergeom([- n,1 / 2], [1], 4). - _ Peter Luschny _ , Apr 26 2016 ● a(n) = 2 ^ n * GegenbauerC(n, - n, - 1 / 2)). - _ Peter Luschny _ , May 08 2016 ●

► [A100103] 1,2,12,58,248,1014,4084,16370,65520,262126,1048556,4194282,16777192,67108838,268435428,1073741794,4294967264,17179869150,68719476700,274877906906,1099511627736,4398046511062,17592186044372,70368744177618 ★ a(n) = 2 ^ (2 * n) - 2 * n. ● a(n) = 6 * a(n - 1) - 9 * a(n - 2) + 4 * a(n - 3). ●

► [A054145] 0,2,12,58,256,1072,4336,17112,66304,253280,956608,3579680,13292544,49039360,179912448,656874368,2388205568,8650598912,31231020032,112419973632,403596148736,1445463642112,5165581660160,18423238924288 ★ Row sums of array T as in A054144. ● a(n) = ((n - 2) * ((2 + sqrt(2)) ^ n + (2 - sqrt(2)) ^ n) + sqrt(2) * ((2 + sqrt(2)) ^ n - (2 - sqrt(2)) ^ n)) / 8. - _ G. C. Greubel _ , Jul 31 2019 ●

► [A005430] 0,2,12,60,280,1260,5544,24024,102960,437580,1847560,7759752,32449872,135207800,561632400,2326762800,9617286240,39671305740,163352435400,671560012200,2756930576400,11303415363240,46290177201840,189368906734800,773942488394400 ★ Apéry numbers: n * C(2 * n,n). ● a(n - 1) = Sum _{ k=0..floor(n / 2) } k * C(n,k) * C(n - k,k) * 2 ^ (n - 2 * k). - _ Robert FERREOL _ , Aug 29 2015 ●

► [A094434] 0,2,12,60,288,1368,6480,30672,145152,686880,3250368,15380928,72783360,344414592,1629787392,7712236800,36494696448,172694757888,817200368640,3867033664512,18298999775232,86591796664320,409756781334528 ★ a(n) = rightmost term of M ^ n * [1 0 0], with M = the 3 X 3 matrix [1 - 1 0 / - 1 3 - 2

/ 0 - 2 2]. ● a(n) = 6 * a(n - 1) - 6 * a(n - 2). G.f.: 2 * x ^ 2 / (1 - 6 * x + 6 * x ^ 2). [_ Colin Barker _ , Sep 05 2012] ●

► [A038154] 0,0,2,12,60,320,1950,13692,109592,986400,9864090,108505100,1302061332,16926797472,236975164790,3554627472060,56874039553200,966858672404672,17403456103284402,330665665962403980,6613313319248079980,138879579704209680000 ⋆ a(n) = n! * Sum _{ k=0..n - 2 } 1 / k!. ● a(n) = floor(n! * exp(1)) - n - 1, n>0. - _ Vladeta Jovovic _ , Aug 25 2001 ● a(n) = n * a(n - 1) + n * (n - 1), for n>=3, a(2)=2 and a(3) = 12. - _ Ian Myers _ , Jul 19 2012 ●

► [A371399] 1,2,12,60,340,1932,11256,66264,394020,2359500,14211912,86004360,522502344,3184844600,19467675120,119288938800,732508344516,4506518476620,27771180181800,171393806476200,1059200506065240,6553715347503720,40595235803924880,251709010315822800 ⋆ a(n) = 2 ^ n * Sum _{ k=0..n } binomial(k + n, k) * binomial(2 * n - k, n) * (- 1 / 2) ^ k. ● a(n) = 2 ^ n * binomial(2 * n, n) * hypergeom([- n, 1 + n], [- 2 * n], - 1 / 2). ●

► [A362244] 1,1,2,12,60,440,3810,37212,430696,5482080,78252390,1227201140,20955546348,388492703040,7745445183658,165550236166980,3773990094033360,91401848785134272,2344168680183033678,63455096201600595060,1808160553359068792020 ⋆ Expansion of e.g.f. 1 / (1 - x * exp(- x * (exp(- x) - 1))). ● a(n) = n! * Sum _{ i=0..n } (- 1) ^ (n - i) * (Sum _{ j=0..n - i } i ^ j * Stirling2(n - i - j,j) / (n - i - j)!). ●

► [A362238] 1,1,2,12,60,460,3900,39438,456288,5896224,85230000,1349017560,23353941600,437432418696,8828284404576,190867622500800,4401749312069760,107859517575659520,2798352667710645120,76636669899079699776,2209235394261812751360 ⋆ Expansion of e.g.f.: 1 / (1 - x * (1 + x) ^ x). ● a(n) = n! * Sum _{ i=0..n } Sum _{ j=0..n - i } i ^ j * Stirling1(n - i - j,j) / (n - i - j)!. ●

► [A125831] 0,2,12,62,312,1562,7812,39062,195312,976562,4882812,24414062,122070312,610351562,3051757812,15258789062,76293945312,381469726562,1907348632812,9536743164062,47683715820312,238418579101562,1192092895507812,5960464477539062,29802322387695312 ⋆ a(n) = (5 ^ n - 1) / 2. ● a(n) = 5 * a(n - 1) + 2 with n>0, a(0)=0. - _ Vincenzo Librandi _ , Sep 30 2010 ● a(n) = 6 * a(n - 1) - 5 * a(n - 2). ●

► [A289787] 2,12,62,312,1570,7908,39838,200688,1010978,5092860,25655582,129241512,651061762,3279762132,16521995710,83230530528,419278719938,2112141348588,10640036959358,53599815453720,270012240337762,1360202629711812,6852101192007262 ⋆ p - INVERT of the even positive integers (A005843), where p(S) = 1 - S - S ^ 2. ● a(n) = 6 * a(n - 1) - 6 * a(n - 2) + 6 * a(n - 3) - a(n - 4). ●

► [A361812] 1,2,12,62,342,1932,11094,64480,378150,2233304,13263772,79136844,473969586,2847911596,17159547804,103640073972,627280131594,3803643145596,23102172930156,140522319418164,855880464524472,5219168576004184,31861229045809436 ⋆ Expansion of 1 / sqrt(1 - 4 * x * (1 + x) ^ 3). ● a(n) = Sum _{ k=0..n } binomial(2 * k,k) * binomial(3 * k,n - k). ●

► [A368760] 1,2,12,63,316,1705,10446,73465,588232,5294817,52949170,582442201,6989308140,90861008017,1272054114982,19080811728105,305292987653776,5189980790119105,93419654222149722,1774973430220851577,35499468604417039540,745488840692757839601 ⋆ a(n) = n! * (1 + Sum _{ k=0..n } k ^ 3 / k!). ● a(0) = 1; a(n) = n * a(n - 1) + n ^ 3. ●

► [A006646] 0,0,2,12,64,320,1568,7616,36864,178176,860672,4156416,20070400,96911360,467935232,2259402752,10909384704,52675215360,254338531328,1228055248896,5929575645184,28630524624896 ⋆ Exponential self - convolution of Pell numbers. ● a(n) = ((2 + sqrt(8)) ^ n + (2 - sqrt(8)) ^ n - 2 ^ (n + 1)) / 8; E.g.f.: exp(2x)(sinh(sqrt(2) * x)) ^ 2 / 2 = (exp(x) * sinh(sqrt(2) * x) / sqrt(2)) ^ 2. - _ Paul Barry _ , May 16 2003 ●

► [A087635] 0,2,12,64,336,1760,9216,48256,252672,1323008,6927360,36272128,189923328,994451456,5207015424,27264286720,142757658624,747488804864,3913902194688,20493457948672,107305138913280,561857001684992 ⋆ a(n) = S(n,3) where S(n,m) = Sum _{ k=0..n } binomial(n,k) * fibonacci(m * k). ● a(n) = Sum _{ 0<=j<=i<=n } C(i,j) * C(n,i) * Fibonacci(i + j). - _ Benoit Cloitre _ , May 21 2005 ● a(n) = 2 ^ n * Fibonacci(2 * n). - _ Benoit Cloitre _ , Sep 13 2005 ● a(n) = Sum _{ k=0..n } C(n,k) * Fibonacci(k) * Lucas(n - k). - _ Ross La Haye _ , Aug 14 2006 ● a(n) = - (1 / 5) * (3 - sqrt(5)) ^ n * sqrt(5) + (1 / 5) * sqrt(5) * (3 + sqrt(5)) ^ n. - _ Paolo P. Lava _ , Jun 25 2008 ●

► [A180038] 1,2,12,64,344,1848,9928,53336,286536,1539352,8269832,44427864,238678984,1282250648,6888611208,37007557336,198815009096,1068090160152,5738080818952,30826584415064,165609083713224,889698587396248 ⋆ Eight white queens and one red queen on a 3 X 3 chessboard. G.f.: (1 - 3 * x) / (1 - 5 * x - 2 * x ^ 2). ● a(n) = 5 * a(n - 1) + 2 * a(n - 2) with a(0) = 1 and a(1) = 2. ● a(n) = ((19 * A - 1) * A ^ (- n - 1) + (19 * B - 1) * B ^ (- n - 1)) / 33 with A = (- 5 + sqrt(33)) / 4 and B = (- 5 - sqrt(33)) / 4. ●

► [A190155] 1,2,12,64,385,2346,14672,92936,595179,3841970,24959726,162988464,1068860884,7034520304,46437268905,307351081056,2038878634695,13552394472612,90242046694715,601847594327000,4019556724362165,26879647264387170 ⋆ Central coefficients of the Riordan matrix (g(x),x * g(x)), where g(x) = (1 - x - x ^ 2 - sqrt(1 - 2 * x - 5 * x ^ 2 + 2 * x ^ 3 + x ^ 4)) / (2 * x ^ 2) (A132276). ● a(n) = Sum _{ i=0..(n / 2) } (binomial(n + 2 * i,i) * ((n + 1) / (i + n + 1)) * Sum _{ j=0..(n - 2 * i) } (binomial(2 * n - j,n + 2 * i) * binomial(n - 2 * i - j, j)). ●

► [A190153] 1,2,12,65,351,1897,10252,55405,299426,1618192,8745217,47261895,255418101,1380359512,7459895657,40315615410,217878227876,1177482265857,6363483400447,34390259761825,185855747875876,1004422742303477,5428215467030962 ⋆ Row sums of the triangle A190152. ● a(n) = Sum _{ k=0..n } binomial(3 * n - k,3 * n - 3 * k). ● a(n) = 5 * a(n - 1) + 2 * a(n - 2) + a(n - 3). ●

► [A372369] 1,2,12,65,388,2352,14565,91289,577764,3683459,23621462,152203482,984598741,6390596591,41596873869,271424778015,1774892605284,11628321367815,76311803660025,501554760288813,3300889231760238,21750690436059188,143481522241226962 ⋆ Coefficient of x ^ n in the expansion of ((1 + x + x ^ 2) ^ 3 / (1 + x)) ^ n. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(3 * n,k) * binomial(2 * n - k,n - 2 * k). ●

► [A359489] 1,2,12,68,396,2358,14262,87252,538440,3345434,20899816,131154264,826135794,5220372274,33077821314,210087769632,1337104370320,8525602760550,54449281992528,348250972411252,2230296171922008,14300414859019290,91793780179790 ⋆ Expansion of 1 / sqrt(1 - 4 * x / (1 - x) ^ 3). ● a(n) = Sum _{ k=0..n } binomial(2 * k,k) * binomial(n + 2 * k - 1,n - k). ● a(0) = 1; a(n) = (2 / n) * Sum _{ k=0..n - 1 } (n + k) * binomial(n + 1 - k,2) * a(k). - _ Seiichi Manyama _ , Mar 28 2023 ●

► [A026306] 0,2,12,69,392,2235,12804,73710,426192,2473704,14405800,84137130,492652824,2891110235,16999928820,100136858625,590778928800,3490370847876,20647839813048,122287764072938,725023671281520,4302720916638417 ⋆ a(n) = T(2n,n + 1), where T is the array in A026300. ● a(n) = n * (Sum _{ j=0..2 * n + 1 } binomial(j, - 3 * n + 2 * j - 1) * binomial(2 * n + 1,j))) / (2 * n + 1) - _ Vladimir Kruchinin _ , May 15 2014 ●

► [A001542] 0,2,12,70,408,2378,13860,80782,470832,2744210,15994428,93222358,543339720,3166815962,18457556052,107578520350,627013566048,3654502875938,21300003689580,124145519261542,723573111879672 ⋆ a(n) = 6 * a(n - 1) - a(n - 2) for n > 1, a(0)=0 and a(1)=2. ● a(n) = ((3 + 2 * sqrt(2)) ^ n - (3 - 2 * sqrt(2)) ^ n) / (2 * sqrt(2)). ● a(n) = (C ^ (2n) - C ^ (- 2n)) / sqrt(8) where C = sqrt(2) + 1. - _ Gary W. Adamson _ , May 11 2003 ● a(n) = ((1 + sqrt(2)) ^ (2 * n) - (1 - sqrt(2)) ^ (2 * n)) / (2 * sqrt(2)). - _ Antonio Alberto Olivares _ , Dec 24 2003 ● a(n) = sinh(2 * n * arcsinh(1)) / sqrt(2). - _ Herbert Kociemba _ , Apr 24 2008 ● a(n) = - a(- n) for all n in Z. - _ Michael Somos _ , Jan 20 2017 ●

► [A119921] 2,12,72,336,1632,6720,29568,120576,499200,2012160,8214528,32894976,132882432,532070400,2136637440,8551464960,34282536960,137135652864,549148164096,2196721631232,8791208755200,35166005231616 ⋆ Number of rationals in [0, 1) having at most n preperiodic bits, then at most n periodic bits. ● a(n) = 2 ^ n * sum _{ j=1..n } sum _{ d|j } (2 ^ d - 1) * mu(j / d) ●

► [A167747] 1,2,12,72,432,2592,15552,93312,559872,3359232,20155392,120932352,725594112,4353564672,26121388032,156728328192,940369969152,5642219814912,33853318889472,203119913336832,1218719480020992,7312316880125952,43873901280755712,263243407684534272 ⋆ a(n) = phi(6 ^ n). ● a(n + 1) = 2 * 6 ^ n. - _ Charles R Greathouse IV _ , Nov 12 2009 ● a(n) = ((8 * n - 4) * a(n - 1) - 12 * (n - 2) * a(n - 2)) / n, a(0)=1, a(1)=2. - _ Sergei N. Gladkovskii _ , Jul 19 2012 ●

► [A062119] 0,2,12,72,480,3600,30240,282240,2903040,32659200,399168000,5269017600,74724249600,1133317785600,18307441152000,313841848320000,5690998849536000,108840352997376000,2189611807358976000 ⋆ a(n) = n! * (n - 1). ● a(n) = n! * (n - 1). ●

► [A052556] 1,1,2,12,72,480,4320,45360,524160,6894720,101606400,1636588800,28740096000,547977830400,11245999564800,247150455552000,5795612798976000,144409095806976000,3809412354908160000 ⋆ Expansion of e.g.f. 1 / (1 - x - x ^ 3). ● a(n) = n * a(n - 1) + n * (n - 1) * (n - 2) * a(n - 3), with a(0)=1, a(1)=1, a(2)=2. ● a(n) = Sum(1 / 31 * (4 + 6 *_ alpha ^ 2 + 9 *_ alpha) *_ alpha ^ (- 1 - n), _ alpha=RootOf(- 1 +_ Z +_ Z ^ 3)) * n!. ●

► [A144086] 0,1,2,12,72,540,4680,46200,510720,6244560,83613600,1216131840,19084222080,321271030080,5773503415680,110288062684800,2231100039168000,47640952315756800,1070630750168179200,25255541547460224000,623884298434645248000,16104652019138319436800 ⋆ Number of partial bijections (or subpermutations) of an n - element set with exactly 1 fixed point. ● a(n) = n! * Sum _{ m=0..n - 1 } (- 1 ^ m / m!) * Sum _{ j=0..n - m } C(n - m) / j!; ●

► [A078469] 1,2,12,74,456,2810,17316,106706,657552,4052018,24969660,153869978,948189528,5843007146,36006232404,221880401570,1367288641824,8425612252514,51920962156908,319951385193962,1971629273320680 ⋆ Number of different compositions of the ladder graph L _ n. ● a(n) = 6 * a(n - 1) + a(n - 2). ● a(n) = ((3 + s) ^ n - (3 - s) ^ n) / s, where s = sqrt(10) (assumes a(0) = 0). ●

► [A074616] 2,12,74,468,3026,19932,133274,901668,6155426,42306732,292240874,2026154868,14085427826,98109713532,684326588474,4778079088068,33385518460226,233393453440332,1632228295176074,11417968671701268 ⋆ a(n) = 5 ^ n + 7 ^ n. ● a(n) = 12 * a(n - 1) - 35 * a(n - 2) with a(0)=2, a(1)=12. - _ Vincenzo Librandi _ , Jul 21 2010 ●

► [A370242] 1,2,12,74,480,3202,21756,149746,1040640,7285538,51307212,363057114,2579270304,18385404546,131429288828,941857237474,6764184258560,48671099313730,350799656912652,2532218940625642,18303373070813280,132462237913391362,959699439413581692 ⋆ Coefficient of x ^ n in the expansion of (1 / (1 - x) ^ 2 * (1 + x ^ 2)) ^ n. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n,k) * binomial(3 * n - 2 * k - 1,n - 2 * k). ●

► [A352373] 2,12,74,484,3252,22260,154352,1080612,7621526,54071512,385454940,2758690636,19810063392,142662737376,1029931873824,7451492628260,54013574117106,392188079586468,2851934621212598,20766924805302984,151403389181347160,1105047483656041080 ⋆ a(n) = [x ^ n] (1 / ((1 - x) ^ 2 * (1 - x ^ 2))) ^ n for n >= 1. ● a(n) = Sum _{ k = 0..floor(n / 2) } binomial(3 * n - 2 * k - 1, n - 2 * k) * binomial(n + k - 1,k). ● a(n) = Sum _{ k = 0..n } (- 1) ^ k * binomial(4 * n - k - 1,n - k) * binomial(n + k - 1,k). ● a(n) = binomial(4 * n - 1,n) * hypergeom([n, - n], [1 - 4 * n], - 1). ●

► [A198474] 2,12,76,492,3212,21036,137932,904812,5936396,38950572,255572812,1676946156,11003350412,72199015212,473737530316,3108453529452,20396281280012,133831275048876,878140974959692,5761968373855212 ⋆ Number of 2n X 2 0..2 arrays with values 0..2 introduced in row major order and each element equal to an odd number of horizontal and vertical neighbors. ● a(n) = (2 ^ (- 4 - n) * ((9 - sqrt(17)) ^ n * (- 5 + 3 * sqrt(17)) + (9 + sqrt(17)) ^ n * (5 + 3 * sqrt(17)))) / sqrt(17). ●

► [A121680] 1,2,12,76,655,6816,81690,1109816,16782399,278438740,5016899833,97368894756,2021749249403,44658312247290,1044437050070340,25757381769393392,667470006331599523,18119105978249333988 ⋆ a(n) = [x ^ n] (1 + x * (1 + x) ^ (n + 1)) ^ (n + 1). ● a(n) = Sum _{ k=0..n + 1 } C(n + 1,k) * C((n + 1) * k,n - k). ●

► [A372410] 1,2,12,77,516,3552,24891,176647,1265508,9132530,66288762,483442434,3539626635,26002266656,191556630375,1414649524077,10469628711396,77630719516650,576585458828844,4288881479411395,31945446999811266,238233164413294792,1778587750475510316 ⋆ Coefficient of x ^ n in the expansion of ((1 - x + x ^ 2) / (1 - x) ^ 3) ^ n. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n, k) * binomial(3 * n - k - 1,n - 2 * k). ●

► [A372233] 1,2,12,77,520,3612,25557,183192,1325808,9666635,70897112,522472392,3865669717,28697325048,213649228560,1594540806612,11926354293792,89372808145692,670865679851667,5043360211505000,37965778448487120,286151354441445570,2159143860124095120 ★ Coefficient of x ^ n in the expansion of 1 / ((1 - x) * (1 - x - x ^ 2)) ^ n. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n + k - 1,k) * binomial(3 * n - k - 1,n - 2 * k). ●

► [A081014] 2,12,77,522,3572,24477,167762,1149852,7881197,54018522,370248452,2537720637,17393796002,119218851372,817138163597,5600748293802,38388099893012,263115950957277,1803423556807922,12360848946698172 ★ a(n) = Lucas(4 * n + 1) + 1, or Lucas(2 * n) * Lucas(2 * n + 1). ● a(n) = 8 * a(n - 1) - 8 * a(n - 2) + a(n - 3). ● a(n) = 1 + (1 / 2) * (((7 / 2) - (3 / 2) * sqrt(5)) ^ n + ((7 / 2) + (3 / 2) * sqrt(5)) ^ n + (1 / 2) * sqrt(5) * (((7 / 2) + (3 / 2) * sqrt(5)) ^ n - ((7 / 2) - (3 / 2) * sqrt(5)) ^ n), with n >= 0. - _ Paolo P. Lava _ , Dec 01 2008 ● a(n) = 7 * a(n - 1) - a(n - 2) - 5, n >= 2. - _ R. J. Mathar _ , Nov 07 2015 ●

► [A270775] 2,12,80,252,1100,1872,4352,6156,11132,22736,27900,47952,65600,75852,99452,143312,198476,219600,291852,347900,378432,480636,558092,689216,893952 ★ a(n) is the number of invertible 2 X 2 upper triangular matrices over Z _ p where p = prime(n). ● a(n) = p * (p - 1) ^ 2 where p = prime(n). ●

► [A240836] 2,12,80,546,3740,25632,175682,1204140,8253296,56568930,387729222,2657535552,18215019650,124847601996,855718194320,5865179758242,40200540113372,275538601035360,1888569667134146,12944449068903660,88722573815191472,608113567637436642 ★ Numbers n such that n ^ 3 = x * y * z where 2 <= x <= y <= z , n ^ 3 + 1 = (x - 1) * (y + 1) * (z + 1). ● a(n) = 2 * F(2n) * F(2n - 1) where F(n) are the Fibonacci numbers (A000045). ●

► [A270919] 1,2,12,80,552,3912,28224,206208,1520784,11297546,84413912,633713808,4776117216,36115518376,273868321536,2081866609920,15859616674336,121046064563376,925411686479820,7085465166635440,54323193841192752,416993869451825424,3204447137019290944 ★ Coefficient of x ^ n in Product _{ k>=1 } ((1 + x ^ k) / (1 - x ^ k)) ^ n. ● a(n) = [x ^ n] 1 / theta _ 4(x) ^ n, where theta _ 4() is the Jacobi theta function. - _ Ilya Gutkovskiy _ , Nov 03 2017 ●

► [A069723] 1,2,12,80,560,4032,29568,219648,1647360,12446720,94595072,722362368,5538111488,42600857600,328635187200,2541445447680,19696202219520,152935217233920,1189496134041600,9265548833587200,72271280901980160 ★ a(n) = 2 ^ (n - 1) * binomial(2 * n - 3, n - 1). ● a(n) = Sum _{ k=0..n } binomial(n + k - 1,k) * binomial(2 * n - 1, n - k). - _ Vladimir Kruchinin _ , Nov 11 2016 ●

► [A063481] 2,12,80,576,4352,33792,266240,2113536,16842752,134479872,1074790400,8594128896,68736253952,549822922752,4398314946560,35185445830656,281479271677952,2251816993554432,18014467228958720,144115462953762816 ★ a(n) = 4 ^ n + 8 ^ n. ● a(n)=12 * a(n - 1) - 32 * a(n - 2) with a(0)=2, a(1)=12. - _ Vincenzo Librandi _ , Jul 21 2010 ●

► [A274782] 1,2,12,80,580,4452,35364,288024,2389860,20117240,171297412,1472316144,12753610324,111204119600,975106366680,8592062844480,76030953610980,675323181536760,6018366674614800,53794511697141600,482124714647540580,4331431183551057960,38999393295271719960 ★ Diagonal of the rational function 1 / (1 - x - x y - x z - y z). ● a(n) = Sum _{ k = 0..n } C(n,k) * C(n + k,k) * C(k,n - k) (apply Eger, Theorem 3 to the set of column vectors S = { [1,0,0], [1,1,0], [1,0,1], [0,1,1] }). - _ Peter Bala _ , Jan 26 2018 ● a(n) = [x ^ n] Legendre _ P(n,1 + 2 * x + 2 * x ^ 2). - _ Peter Bala _ , Dec 24 2020 ●

► [A199420] 2,12,82,572,4002,28012,196082,1372572,9608002,67256012,470792082,3295544572,23068812002,161481684012,1130371788082,7912602516572,55388217616002,387717523312012,2714022663184082,18998158642288572 ★ a(n) = (5 * 7 ^ n + 1) / 3. ● a(n) = 7 * a(n - 1) - 2. ● a(n) = 8 * a(n - 1) - 7 * a(n - 2). ●

► [A105927] 0,0,2,12,84,640,5430,50988,526568,5940576,72755370,961839340,13656650172,207316760352,3351430059614,57487448630220,1042952206111440,19954639072648768,401578933206288978,8480263630552747596,187505565234912994340,4332318322289242716480 ★ Let d(n) = A000166(n); then a(n) = ((n ^ 2 + n - 1) * d(n) + (- 1) ^ (n - 1) * (n - 1)) / 2. ● a(n) = n * (n - 1) * (a(n - 1) + a(n - 2)) / (n - 2) for n >= 3, a(n) = n * (n - 1) for n < 3. - _ Alois P. Heinz _ , Jun 03 2014 ● a(n) = (n ^ 2 + n + 1) * n! / e + O(1). - _ Charles R Greathouse IV _ , Apr 07 2017 ●

► [A372086] 1,2,12,84,664,5624,49928,458480,4318896,41503168,405267840,4009684608,40109536992,404977089792,4121810315584,42243756499328,435593319238144,4515817056202496,47040399766319360,492117122988795392,5168258741713256960 ★ G.f. A(x) satisfies A(x) = 1 / (1 - 4 * x * (1 + x) * A(x)) ^ (1 / 2). ● a(n) = Sum _{ k=0..n } 4 ^ k * binomial(3 * k / 2 - 1 / 2,k) * binomial(k,n - k) / (k + 1). ●

► [A052867] 0,0,2,12,84,720,7440,90720,1280160,20563200,370863360,7424524800,163419379200,3923023104000,102011054745600,2856483889459200,85697132032512000,2742350070620160000,93240613775941632000 ★ E.g.f.: log(- (- 1 + x) ^ 2 / (- 1 + 2 * x)). ● a(n) = - 2 * GAMMA(n + 1) + 2 ^ (n + 1) * GAMMA(n + 1). ●

► [A372104] 1,2,12,86,686,5858,52404,484814,4600652,44534386,438034928,4365350062,43983695242,447305878226,4585518132768,47335424695142,491615988964766,5133343692822146,53858312462193328,567501135052136702,6002857276349252630 ★ G.f. A(x) satisfies A(x) = 1 / (1 - 4 * x * A(x) / (1 - x)) ^ (1 / 2). ● a(n) = Sum _{ k=0..n } 4 ^ k * binomial(3 * k / 2 - 1 / 2,k) * binomial(n - 1,n - k) / (k + 1). ●

► [A290568] 0,2,12,87,212,212,9587,56462,212712,603337,4509587,4509587,4509587,4509587,2445915837,20756462712,142826775212,600590447087,288940880646 2,181481978689 62,94442143181462,94442143181462,1524953617790837,6293325199822087,6293325199822087 ★ The successive approximations up to 5 ^ n for 5 - adic integer 3 ^ (1 / 3). ● a(0) = 0 and a(1) = 2, a(n) = a(n - 1) + 2 * (a(n - 1) ^ 3 - 3) mod 5 ^ n for n > 1. ●

► [A356830] 0,2,12,88,520,2654,12376,54612,232788,970538,3988644,16239088,65709280,264814166,1064414128,4271035692,17118683052,68563527650,274481537148,1098506723080,4395504614584,17585769696206,70352578566664,281434319454084,1125797816327940 ★ Number of vertex cuts in the n - prism graph. ● a(n) = 10 * a(n - 1) - 35 * a(n - 2) + 48 * a(n - 3) - 11 * a(n - 4) - 22 * a(n - 5) + 7 * a(n - 6) + 4 * a(n - 7). ●

► [A059435] 1,2,12,88,720,6304,57792,547712,5323008,52761088,531311616,5420488704,55905767424,581954543616,6106210615296,64513688174592,685741070942208,7328106153115648,78684992821788672,848487859401261056 ★ Number of lattice paths in plane starting at (0,0) and ending at (n,n) with steps from { (i,j) : i + j > 0, i, j >= 0 } that never go below the line y = x. ● a(n) = (1 / (n + 1)) * Sum _{ k=0..n } C(n + 1, k) * C(2 * n - k, n)(- 1) ^ k * 4 ^ (n - k) * 2 ^ k; ● a(n) = Sum _{ k=0..n } (1 / n) * C(n, k) * C(n, k + 1) * 4 ^ k * 2 ^ (n - k); ● a(n) = Sum _{ k=1..n } N(n, k) * 2 ^ (n + k - 1) } , for n >= 1, where N(n, k) are the Narayana numbers (A001263). [Corrected by _ Alejandro H. Morales _ , May 14 2015] ●

► [A372090] 1,2,12,88,728,6464,60192,579968,5733728,57834496,592831616,6157627392,64667721472,685526908928,7325711938560,78832088481792,853511147742720,9290927259254784,101623578654689280,1116343335709048832,12310726500144599040 ★ G.f. A(x) satisfies A(x) = 1 / (1 - 4 * x * A(x) * (1 + x * A(x))) ^ (1 / 2). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..n } 4 ^ k * binomial(n / 2 + k - 1 / 2,k) * binomial(k,n - k). ● a(n) = 4 ^ n * binomial((3 * n - 1) / 2, n) * hypergeom([(1 - n) / 2, - n / 2], [(1 - 3 * n) / 2], - 1) / (n + 1). - _ Stefano Spezia _ , Apr 18 2024 ●

► [A074610] 2,12,90,756,6642,59292,532170,4785156,43053282,387440172,3486843450,31381236756,282430067922,2541867422652,22876797237930,205891146443556,1853020231889562,16677181828806732,150094635684419610 ★ a(n) = 3 ^ n + 9 ^ n. ● a(n) = 12 * a(n - 1) - 27 * a(n - 2) with a(0)=2, a(1)=12. - _ Vincenzo Librandi _ , Jul 21 2010 ●

► [A372109] 1,2,12,90,758,6850,64904,636250,6399120,65661250,684665828,7233956250,77278356246,833291781250,9057750917944,99144375156250,1091857567068742,12089416175781250,134501879883249300,1502857085910156250,16857310306553767026 ★ G.f. A(x) satisfies A(x) = ((1 - x * A(x)) / (1 - 5 * x * A(x))) ^ (1 / 2). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..n } 4 ^ k * binomial(n / 2 + k - 1 / 2,k) * binomial(n - 1,n - k). ●

► [A155639] 1,2,12,92,672,4652,31032,201812,1288992,8124572,50700552,313968932,1932641712,11839990892,72260648472,439667406452,2668522016832,16163719991612,97745259402792,590286253682372,3560791008422352 ★ a(n) = 6 ^ n - 5 ^ n + 1 ^ n. ● a(n) = 11 * a(n - 1) - 30 * a(n - 2) + 20 with a(0)=1, a(1)=2. - _ Vincenzo Librandi _ , Jul 21 2010 ●

► [A333473] 1,2,12,92,752,6352,54768,478928,4231424,37680320,337622912,3040354176,27492359936,249463806464,2270319909632,20714443816192,189418898063360,1735482632719360,15928224355854336,146414296847992832,1347721096376573952,12421053168197722112 ★ a(n) = [x ^ n] (S(x / (1 + x)) ^ n, where S(x) = (1 - x - sqrt(1 - 6 * x + x ^ 2)) / (2 * x) is the o.g.f. of the large Schröder numbers A006318. ● a(n) = [x ^ n] ((1 - sqrt(1 - 4 * x - 4 * x ^ 2)) / (2 * x)) ^ n . ●

► [A103882] 1,2,12,92,780,7002,65226,623576,6077196,60110030,601585512,6078578508,61908797418,634756203018,6545498596110,67830161708592,705951252118284,7375213677918294,77310179609631564,812839595630249540,8569327862277434280,90562666977432643862 ★ a(n) = Sum _{ i=0..n } C(n + 1,i) * C(n - 1,i - 1) * C(2n - i,n). ● a(n) = Sum _{ k = 0..n } C(n,k) ^ 2 * C(n + k - 1,k). Cf. A005258. ● a(n) = hypergeometric([- n, - n, n], [1, 1], 1). - _ Peter Luschny _ , Jan 19 2020 ● a(n) = Sum _{ k = 1..n } C(n,k) * C(n + k,k) * C(n - 1,k - 1) for n >= 1. ● a(n) = [x ^ n] P(n, (1 + x) / (1 - x)), where P(n,x) denotes the n - th Legendre polynomial. Cf. A156554. (End) ● a(n) = Sum _{ k = 0..n } binomial(2 * n - k - 1,n - k) * binomial(n,k) ^ 2. Cf. A108628. - _ Peter Bala _ , Mar 24 2022 ● a(n) = [x ^ n * y ^ n * z ^ (n - 1)] 1 / (1 - x - y - z + x * z + y * z - x * y * z) for n >= 1. ●

► [A304979] 1,2,12,92,792,7302,70464,702536,7178568,74771570,790906012,8472417384,91724327928,1001987961834,11030476949952,122247789508992,1362840516623944,15272530735735338,171946029518128956,1943927810200670820,22059590401383177792,251183781609841838444 ★ The nonzero terms of the cogrowth sequence of (Z / 5Z) ^* 2 = <x|x ^ 5=1> * <y|y ^ 5=1> with respect to the generating set { (x,1), (1,y) } . ● a(n) satisfies the recurrence (2120000 * (5 * n + 1)) * (5 * n + 2) * (5 * n + 3) * (5 * n + 4) * a(n) + (250 * (160980199 * n ^ 4 + 1129209134 * n ^ 3 + 2872721885 * n ^ 2 + 3155706646 * n + 1267579560)) * a(n + 1) - (50 * (109722203 * n ^ 4 + 959367613 * n ^ 3 + 3144281425 * n ^ 2 + 4572924587 * n + 2485585548)) * a(n + 2) + (60 * (4290021 * n ^ 4 + 51502996 * n ^ 3 + 243316306 * n ^ 2 + 532456081 * n + 451079946)) * a(n + 3) - (3 * (2673299 * n ^ 4 + 44756419 * n ^ 3 + 283571239 * n ^ 2 + 805783469 * n + 866093430)) * a(n + 4) + (4008 * (n + 5)) * (4 * n + 17) * (2 * n + 9) * (4 * n + 19) * a(n + 5) = 0. ●

► [A003123] 2,12,92,800,7554,75664,792448,8595120,95895816,1095130728,12753454896,151017596448,1814135701956,22067487234504,271407264938656,3370796862212944,42230992336570032,533252038221313888,6781213722509638192,86790636905453265216 ★ Number of Hamiltonian rooted triangulations with n internal nodes and 4 external nodes. ● a(n) = f(n, 4) where f(n, k) is defined in A003122. - _ Sean A. Irvine _ , Feb 02 2015 ●

► [A306258] 0,0,2,12,96,720,6480,60480,645120,7257600,90720000,1197504000,17244057600,261534873600,4271736268800,73229764608000,1339058552832000,25609494822912000,518592270163968000,10948059036794880000,243290200817664000000 ★ a(n) = floor(n ^ 2 / 4) * n!. ● a(n) = floor(n ^ 2 / 4) * n!. ●

► [A052691] 1,1,2,12,96,840,8640,105840,1491840,23587200,413683200,7983360000,168129561600,3835844812800,94239732787200,2480658276096000,69651967537152000,2077929594936832000,65637135231123456000 ★ Expansion of e.g.f. (1 - x) / (1 - 2 * x + x ^ 2 - x ^ 3). ● a(n) = (n! / 23) * Sum _{ alpha=RootOf(- 1 + 2 * Z - Z ^ 2 + Z ^ 3) } (1 + 6 * alpha + 3 * alpha ^ 2) *_ alpha ^ (- 1 - n). ●

► [A322543] 1,2,12,96,879,8712,90972,985728,10979577,124937892,1446119664,16972881120,201526230555,2416309004872,29215072931136,355800894005760,4360705642282569,53744080256387478,665667989498682936,8281518339078928800,103441301833577854041,1296713265300164761632 ★ Number of triadic partitions of the unit square into (2n + 1) subrectangles. ● a(n) = [x ^ (2n + 1)] G(x), where G(x) satisfies: G(x) ^ 9 - 2 * G(x) ^ 3 + G(x) - x = 0. ●

► [A213422] 0,1,2,12,96,880,8720,90752,975936,10737152,120093056,1360051456,15556087296,179424700416,2084953411584,24393551634432,287204585508864,3400978267127808,40480500900446208,484006813958356992,5810240353159839744,70001749695581061120 ★ G.f. satisfies: A(A(x) - 4 * A(x) ^ 2) = x. ● a(n) = T(n,1), T(n,m) = 1 / 2 * (4 ^ (n - m) * m / n * C(2 * n - m - 1,n - 1) - sum(i=m + 1..n - 1, T(n,i) * T(i,m))), n>m, T(n,n)=1. [_ Dmitry Kruchinin _ , Dec 02 2012] ●

► [A000888] 1,2,12,100,980,10584,121968,1472328,18404100,236390440,3103161776,41469525552,562496897872,7726605740000,107289439704000,1503840313184400,21252802073091300,302539888334593800,4334635827016110000,62464383654579522000,904841214653480504400 ★ a(n) = (2 * n)! ^ 2 / ((n + 1)! * n! ^ 3). ● a(n) = binomial(2 * n,n) ^ 2 / (n + 1). - _ Zerinvary Lajos _ , May 27 2006 ● a(n) = C(n) * binomial(2 * n,n) = Sum _{ k=0..2 * n } binomial(2 * n,k) * C(k) * C(2 * n - k) where C(k) are Catalan numbers (A000108), see Prodinger. - _ Michel Marcus _ , Nov 19 2019 ●

► [A137483] 2,12,102,912,8202,73812,664302,5978712,53808402,484275612,4358480502,39226324512,353036920602,3177332285412,28595990568702,257363915118312,2316275236064802,20846477124583212,187618294121248902,1688564647091240112,15197081823821161002 ★ a(n + 1) = 9 * a(n) - 6, a(0) = 2. ● a(n) = (3 + 5 * 9 ^ n) / 4. ● a(n) = 10 * a(n - 1) - 9 * a(n - 2) for n>1. ●

► [A050621] 2,12,104,1008,10016,100032,1000064,10000128,100000256,1000000512,10000001024,100000002048,1000000004096,10000000008192,100000000016384,1000000000032768,10000000000065536,100000000000131072 ★ Smallest n - digit number divisible by 2 ^ n. ● a(n) = 10 ^ (n - 1) + 2 ^ (n - 1). ● a(n) = 12 * a(n - 1) - 20 * a(n - 2) for n>1. - _ Vincenzo Librandi _ , Sep 12 2014 ●

► [A157328] 1,2,12,104,1072,12192,147648,1867392,24380160,326105600,4445965312,61555599360,863154221056,12233140576256,174954419109888,2521749245558784,36595543723671552,534249057803698176 ★ Expansion of 1 / (1 - 2x * c(4x)) with c(x) g.f. of Catalan numbers (A000108). ● a(n) = upper left term in M ^ n, M = an infinite square production matrix as follows: ●

► [A047855] 1,2,12,112,1112,11112,111112,1111112,11111112,111111112,1111111112,11111111112,111111111112,1111111111112,11111111111112,111111111111112,1111111111111112,11111111111111112,111111111111111112,1111111111111111112 ★ a(n) = T(7, n), array T given by A047848. ● a(n) = (10 ^ n + 8) / 9. - _ Ralf Stephan _ , Feb 14 2004 ● a(0) = 1, a(1) = 2, a(n) = 11 * a(n - 1) - 10 * a(n - 2) for n > 1. - Lambert Klasen (lambert.klasen(AT) gmx.net), Jan 28 2005 ● a(n) = 10 * a(n - 1) - 8 (with a(0) = 1). - _ Vincenzo Librandi _ , Aug 06 2010 ●

► [A053312] 2,12,112,2112,22112,122112,2122112,12122112,212122112,1212122112,11212122112,111212122112,1111212122112,11111212122112,211111212122112,1211111212122112,11211111212122112,111211111212122112,1111211111212122112,11111211111212122112,111111211111212122112 ★ a(n) contains n digits (either '1' or '2') and is divisible by 2 ^ n. ● a(n) = a(n - 1) + 10 ^ (n - 1) * (2 - [a(n - 1) / 2 ^ (n - 1) mod 2]), i.e., a(n) ends with a(n - 1); if the (n - 1) - th term is divisible by 2 ^ n then the n - th term begins with a 2; if not, then the n - th term begins with a 1. ●

► [A034524] 2,12,122,1332,14642,161052,1771562,19487172,214358882,2357947692,25937424602,285311670612,3138428376722,34522712143932,379749833583242,4177248169415652,45949729863572162,505447028499293772 ★ a(n) = 11 ^ n + 1. ● a(n) = 11 * a(n - 1) - 10. ●

► [A246738] 2,12,124,424,1566,3876,9368,18768,36250,63100,106452,168312,259574,383124,554416,777376,1072818,1445868,1923500,2512200,3245902,4132612,5214024,6499824,8040266 ★ Number of length 1 + 4 0..n arrays with no pair in any consecutive five terms totalling exactly n. ● a(n) = 10 * n - 20 * n ^ 2 + 15 * n ^ 3 - 5 * n ^ 4 + n ^ 5 for n even. ● a(n) = 16 - 15 * n - 10 * n ^ 2 + 15 * n ^ 3 - 5 * n ^ 4 + n ^ 5 for n odd. ●

► [A073551] 2,12,132,1332,13332,133332,1333332,13333332,133333332,1333333332,13333333332,133333333332,1333333333332,13333333333332,133333333333332,1333333333333332,13333333333333332,133333333333333332,1333333333333333332,13333333333333333332,133333333333333333332,1333333333333333333332,13333333333333333333332,133333333333333333333332,1333333333333333333333332 ★ Number of Fibonacci numbers F(k), k <= 10 ^ n, which end in 3. ● a(n) = (4 / 3) * (10 ^ n - 1). [_ Jason Earls _ , Nov 28 2009] ●

► [A087800] 2,12,142,1692,20162,240252,2862862,34114092,406506242,4843960812,57721023502,687808321212,8195978831042,97663937651292,1163771272984462,13867591338162252,165247324784962562,1969100306081388492 ★ a(n) = 12 * a(n - 1) - a(n - 2), with a(0) = 2 and a(1) = 12. ● a(n) = (6 + sqrt(35)) ^ n + (6 - sqrt(35)) ^ n. ● a(- n) = a(n). - _ Michael Somos _ , May 28 2014 ●

► [A007986] 2,12,242,2772,29282,320892,3543122,38987652,428717762,4715748972,51874849202,570624951732,6276856753442,69045406572252,759499667166482,8354496533703012,91899459727144322,1010894054854998732,11119834626984462962 ★ Co - growth function of a certain group. ● a(n) = 2 * 11 ^ (n - 1) + (- 1) ^ (n / 2) * 5 * 11 ^ (n / 2 - 1) * (cos(Pi * n) + 1) [from Humphries]. _ Sean A. Irvine _ , Feb 26 2018 ●

► [A192892] 1,2,12,343,34997,12515441,15749457081,72424550598849,1282759836215548737 ★ Number of n X n binary matrices whose determinants equal their permanents. ● a(n) <= 2 ^ (n ^ 2), with equality for n<=1. ●

► [A069714] 2,12,1320,851760 ★ Least integer such that quotient q=[sigma(n) - n] / [n - phi(n)] defining A068418 equals n. ● a(n) = Min { x; A001065[x] / A051953[x]=n } . ●

► [A022116] 2,13,15,28,43,71,114,185,299,484,783,1267,2050,3317,5367,8684,14051,22735,36786,59521,96307,155828,252135,407963,660098 ★ Fibonacci sequence beginning 2, 13. ● a(n) = 4 * Fibonacci(n + 2) + 3 * Fibonacci(n + 3) - 4 * Lucas(n). - _ Lechoslaw Ratajczak _ , Feb 10 2020 ● a(n) = 2 * Fibonacci(n + 2) + 9 * Fibonacci(n). - _ G. C. Greubel _ , Feb 12 2020 ●

► [A041201] 1,1,2,13,15,28,575,603,1178,7671,8849,16520,339249,355769,695018,4525877,5220895,9746772,200156335,209903107,410059442,2670259759,3080319201,5750578960,118091898401 ★ Denominators of continued fraction convergents to sqrt(111). ● a(n) = 590 * a(n - 6) - a(n - 12). G.f.: - (x ^ 2 - 2 * x - 1) * (x ^ 4 - x ^ 3 + 2 * x ^ 2 + x + 1) * (x ^ 4 + 2 * x ^ 3 + 5 * x ^ 2 - 2 * x + 1) / (x ^ 12 - 590 * x ^ 6 + 1). [_ Colin Barker _ , Jul 19 2012] ●

► [A295336] 1,2,13,15,43,58,391,449,1289,1738,11717,13455,38627,52082,351119,403201,1157521,1560722,10521853,12082575,34687003,46769578,315304471,362074049,1039452569 ★ Numerators of the convergents to sqrt(14) / 2 = A294969. ● a(n) = 30 * a(n - 4) - a(n - 8), n >= 8, with inputs a(0)..a(7). ●

► [A177964] 2,13,17,28,32,43,47,58,62,73,77,88,92,103,107,118,122,133,137,148,152,163,167,178,182 ★ Indices m for which A177961(m) = 4. ● a(n + 2) = a(n) + 15. ● a(n) == (- 1) ^ n (mod 3). ● a(n) = 15 * (n / 2 - 1 / 4) + 7 * (- 1) ^ n / 4. - _ R. J. Mathar _ , Oct 25 2010 ●

► [A168672] 2,13,19,30,36,47,53,64,70,81,87,98,104,115,121,132,138,149,155,166,172,183,189,200,206 ★ Numbers that are congruent to { 2,13 } mod 17. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3). - _ Vincenzo Librandi _ , Jul 11 2012 ● a(n) = (34 * n + 5 * (- 1) ^ n - 21) / 4. - _ Vincenzo Librandi _ , Jan 06 2013, modified Jul 07 2015 ●

► [A017413] 2,13,24,35,46,57,68,79,90,101,112,123,134,145,156,167,178,189,200,211,222,233,244,255,266 ★ a(n) = 11 * n + 2. ● a(n) = 2 * a(n - 1) - a(n - 2). ●

► [A263537] 1,2,13,25,31,43,55,61,73,85,91,103,115,121,133,145,151,163,175,181,193,205,211,223,235 ★ Integers k such that A098531(k) is divisible by A000071(k + 2). ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>6. ●

► [A117983] 1,2,13,26,52,338,757,1514,9841,19682,39364,255866,511732,1023464,6652516,14899274,29798548,193690562,387440173,774880346,5036722249,100073444498,20146888996,130954778474,293292210961 ★ A modified Legendre - binomial transform of 2 ^ n for p=3. ● a(n)=sum { k=0..n, (- 1) ^ (n - k) * L(C(n, k) / 3) * 3 ^ k } where L(j / p) is the Legendre symbol of j and p. ●

► [A041575] 1,2,13,28,965,1958,12713,27384,943769,1914922,12433301,26781524,923005117,1872791758,12159755665,26192303088,902698060657,1831588424402,11892228607069,25616045638540,882837780317429,1791291606273398,11630587417957817,25052466442189032 ★ Denominators of continued fraction converge nts to sqrt(305). ● a(n) = 978 * a(n - 4) - a(n - 8) for n>7. - _ Vincenzo Librandi _ , Dec 20 2013 ●

► [A042917] 1,2,13,28,1749,3526,22905,49336,3081737,6212810,40358597,86930004,5430018845,10946967694,71111825009,153170617712,9567690123153,19288550864018,125298995307261,269886541478540,16858264566976741,33986415675432022,220776758619568873 ★ Denominators of continued fraction convergents to sqrt(990). ● a(n) = 1762 * a(n - 4) - a(n - 8) for n>7. - _ Vincenzo Librandi _ , Feb 01 2014 ●

► [A030452] 1,2,13,29,194,433,2897,6466,43261,96557,646018,1441889,9647009,21531778,144059117,321534781,2151239746,4801489937,32124537073,71700814274,479716816349,1070710724173,7163627708162,15988960048321 ★ Markov numbers satisfying region 5 (x=5) of the equation x ^ 2 + y ^ 2 + z ^ 2 = 3xyz. ● a(n) = 15 * a(n - 2) - a(n - 4). ●

► [A185950] 1,2,13,32,59,94,137,188,247,314,389,472,563,662,769,884,1007,1138,1277,1424,1579,1742,1913,2092,2279 ★ a(n) = 4 * n ^ 2 - n - 1. ● a(n) = a(n - 1) + 8 * n - 5. ● a(n) = 2 * a(n - 1) - a(n - 2) + 8. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A062708] 0,2,13,33,62,100,147,203,268,342,425,517,618,728,847,975,1112,1258,1413,1577,1750,1932,2123,2323,2532 ★ Write 0,1,2,3,4,... in a triangular spiral; then a(n) is the sequence found by reading the terms along the line from 0 in the direction 0,2,... ● a(n) = n * (9 * n - 5) / 2. ● a(n) = 9 * n + a(n - 1) - 7 (with a(0)=0). - _ Vincenzo Librandi _ , Aug 07 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A190816] 1,2,13,34,65,106,157,218,289,370,461,562,673,794,925,1066,1217,1378,1549,1730,1921,2122,2333,2554,2785 ★ a(n) = 5 * n ^ 2 - 4 * n + 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3); a(0)=1, a(1)=2, a(2)=13. ●

► [A254965] 1,2,13,34,275,736,6027,16148,132309,354510,2904761,7783062,63772423,170872844,1400088535,3751419496,30738175337,82360356058,674839768869,1808176413770,14815736739771,39697520746872,325271368506083,871537280017404,7141154370394045 ★ Indices of centered hexagonal numbers (A003215) that are also heptagonal numbers (A000566). ● a(n) = a(n - 1) + 22 * a(n - 2) - 22 * a(n - 3) - a(n - 4) + a(n - 5). ●

► [A011919] 0,0,0,0,2,13,40,93,186,336,560,880,1320,1906,2669,3640,4853,6346,8160,10336,12920,15960,19506,23613,28336 ★ a(n) = floor(n * (n - 1) * (n - 2) * (n - 3) / 9). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) + a(n - 9) - 4 * a(n - 10) + 6 * a(n - 11) - 4 * a(n - 12) + a(n - 13). ●

► [A263979] 2,13,41,41,61,113,113,181,181,269,313,313,421,421,613,613,613,761,761,929,1013,1013,1201,1201,1301 ★ Least prime p of the form p = a ^ 2 + b ^ 2 with a > n and b > n. ● a(n) == 1 or 2 mod 4. ●

► [A042795] 1,2,13,41,54,95,149,1287,19454,156919,176373,333292,509665,1862287,11683387,25229061,1525427047,3076083155,19981925977,63021861086,8300378706 3,146025648149,229029435212,1978261129845,29902946382887 ★ Denominators of continued fraction convergents to sqrt(928). ● a(n) = 1537110434 * a(n - 16) - a(n - 32) for n>31. - _ Vincenzo Librandi _ , Jan 29 2014 ●

► [A263980] 2,13,41,61,113,181,269,313,421,613,761,929,1013,1201,1301,1637,1741,1861,2113,2381,2521,2969,3121,3449,3613 ★ Least prime of the form a ^ 2 + b ^ 2 with a > k and b > k, for some number k. ● a(n) == 1 or 2 mod 4. ●

► [A296197] 0,2,13,42,102,208,379,636,1004,1510,2185,3062,4178,5572,7287,9368,11864,14826,18309,22370,27070,32472,38643,45652,53572 ★ Harary index of the n X n bishop graph. ● a(n) = (3 + 8 * n - 36 * n ^ 2 + 16 * n ^ 3 + 6 * n ^ 4 - 3 (- 1) ^ n) / 48. ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 5 * a(n - 4) - 4 * a(n - 5) + a(n - 6). ●

► [A308731] 2,13,44,105,224,397,660,1001,1464,2105,2866,3849,5030,6373,7946,9829,12048,14489,17310,20459,23872,27731,31972,36707,42060 ★ a(n) is the sum of the terms of the symmetric square array defined by M(i,j) = prime(i) + i - j for i >= j and M(i,j) = M(j,i) if i < j. ● a(n) = a(n - 1) + (2n - 1) * prime(n) + n * (n - 1). - _ Charlie Neder _ , Jun 21 2019 ●

► [A084156] 0,1,2,13,44,181,662,2521,9368,35113,130922,489061,1824836,6811741,25420670,94875313,354076208,1321442641,4931681234,18405321661,68689566044,256353060613,956722558310,3570537526921,13325427195080 ★ Binomial transform of sinh(x) * cosh(sqrt(3) * x). ● a(n) = 4 * a(n - 1) + 2 * a(n - 2) - 12 * a(n - 3) + 3 * a(n - 4). ● a(n) = ((2 + sqrt(3)) ^ n + (2 - sqrt(3)) ^ n - (sqrt(3)) ^ n - (- sqrt(3)) ^ n) / 4. ●

► [A002534] 0,1,2,13,44,205,806,3457,14168,59449,246410,1027861,4273412,17797573,74055854,308289865,1283082416,5340773617,22229288978,92525540509,385114681820,1602959228221,6671950592822,27770534239633,115588623814664 ★ a(n) = 2 * a(n - 1) + 9 * a(n - 2). ● a(n) = Sum _{ k=0..n } binomial(n, 2 * k + 1) * 10 ^ k. (End) ● a(n) = ((1 + sqrt(10)) ^ n - (1 - sqrt(10)) ^ n) / (2 * sqrt(10)). - _ Artur Jasinski _ , Dec 10 2006 ●

► [A212501] 0,0,2,13,45,115,245,462,798,1290,1980,2915,4147,5733,7735,10220,13260,16932,21318,26505,32585,39655,47817,57178,67850 ★ Number of (w,x,y,z) with all terms in { 1,...,n } and w > x < y >= z. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n > 4. ● a(n) = (n - 1) * n * (n + 1) * (5 * n - 2) / 24. - _ Bruno Berselli _ , May 31 2012 ●

► [A117717] 0,2,13,45,116,250,477,833,1360,2106,3125,4477,6228,8450,11221,14625,18752,23698,29565,36461,44500,53802,64493,76705,90576 ★ Maximal number of regions obtained by a straight line drawing of the complete bipartite graph K _{ n,n } . ● a(n) = n ^ 2 - 2n + C(n,2) ^ 2 + 1 ● a(n) = (n - 1) ^ 2 * (n ^ 2 + 4) / 4. - _ Vincenzo Librandi _ , Sep 09 2011 ● a(n)=5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5), n>5. - _ Harvey P. Dale _ , Oct 16 2012 ●

► [A176060] 0,2,13,46,120,260,497,868,1416,2190,3245,4642,6448,8736,11585,15080,19312,24378,30381,37430,45640,55132,66033,78476,92600 ★ a(n) = n * (n + 1) * (3 * n ^ 2 + 5 * n + 4) / 12. ● a(n) = sum(k * (k * (k - 1) + n + 1), k=1..n) with n>0 (summation proposed in the Problem 923, see References). ● a(0)=0, a(1)=2, a(2)=13, a(3)=46, a(4)=120, a(n)=5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Harvey P. Dale _ , Jul 14 2011 ●

► [A005584] 2,13,49,140,336,714,1386,2508,4290,7007,11011,16744,24752,35700,50388,69768,94962,127281,168245,219604,283360,361790,457470,573300,712530 ★ Coefficients of Chebyshev polynomials. ● a(n) = binomial(n + 5, n - 1) + binomial(n + 4, n - 1) = 1 / 720 * n * (n + 11) * (n + 4) * (n + 3) * (n + 2) * (n + 1). ● a(n) = binomial(n,6) + 2 * binomial(n,5), n >= 5. - _ Zerinvary Lajos _ , Jul 26 2006 ● a(n) = (n + 11) * Pochhammer(n, 5) / 6!. ●

► [A072416] 2,13,49,149,373,835,1727,3383,6341,11419,19966,34067,56967,93578,151313,241281,379934,591413,910879,1389289,2099905,3147743,4682362,6914234,10141072 ★ a(1) = 2; a(n) = half of the a(n - 1) - th even nontotient number. ● a(5) = 373 = 746 / 2, where 746 is the a(4) = 149th term in A005277. ●

► [A056297] 0,0,0,1,2,13,50,221,866,3437,13250,51075,194810,742651,2823766,10738881,40843370,155494751,592614050,2261625725,8643289534,33080920607,126797503250,486710971595,1870851589554 ★ Number of n - bead necklace structures using exactly four different colored beads. ● a(n) = (1 / n) * Sum _{ d|n } phi(d) * ([d==0 mod 12] * (S2(n / d + 3, 4) - 3 * S2(n / d + 2,4) + 2 * S2(n / d + 1, 4)) + [d==6 mod 12] * (3 * S2(n / d + 2, 4) - 9 * S2(n / d + 1, 4) + 3 * S2(n / d, 4)) + [d==4 mod 12 | d==8 mod 12] * (S2(n / d + 3, 4) - 5 * S2(n / d + 2, 4) - 10 * S2(n / d + 1, 4) - 8 * S2(n / d, 4)) + [d==3 mod 12 | d=9 mod 12] * (2 * S2(n / d + 2, 4) - 8 * S2(n / d + 1, 4) - 2 * S2(n / d,4)) + [d==2 mod 12 | d==10 mod 12] * (S2(n / d + 2, 4) - S2(n / d + 1, 4) + 9 * S2(n / d, 4)) + [d mod 12 in { 1,5,7,11 }] * S2(n / d, 4)), where S2(n,k) is the Stirling subset number, A008277. ●

► [A030517] 1,2,13,52,273,1302,6573,32552,163073,813802,4070573,20345052,101733073,508626302,2543170573,12715657552,63578483073,317891438802,1589458170573,7947285970052,39736434733073,198682149251302,993410770670573,4967053731282552 ★ Number of walks of length n between two vertices on an icosahedron at distance 1. ● a(n) = 5 ^ n / 12 - (- 1) ^ n / 12 + (sqrt(5)) ^ (n + 1) / 20 + (- sqrt(5)) ^ (n + 1) / 20. ● a(n) = 4 * a(n - 1) + 10 * a(n - 2) - 20 * a(n - 3) - 25 * a(n - 4) for n>=5. (End) ● a(n) = (5 ^ n - 1) / 12 for n even. ● a(n) = (6 * 5 ^ ((n - 1) / 2) + 5 ^ n + 1) / 12 for n odd. (End) ●

► [A048502] 1,2,13,53,169,473,1225,3017,7177,16649,37897,85001,188425,413705,901129,1949705,4194313,8978441,19136521,40632329,85983241,181403657,381681673,801112073,1677721609 ★ a(n) = 2 ^ (n - 1) * (9 * n - 16) + 9. ● a(n) = T(8, n), array T given by A048494. ●

► [A229736] 0,0,0,0,0,2,13,56,201,652,1987,5812,16527,46062,126511,343698,926073,2479562,6606805,17537444,46415109,122559832,323033839,850211680,2235203355 ★ Expansion of x ^ 5 * (2 - 5 * x + 3 * x ^ 2 - x ^ 3) / ((1 - x) ^ 2 * (1 - 2 * x) ^ 2 * (1 - 3 * x + x ^ 2)). ● a(n) = 9 * a(n - 1) - 32 * a(n - 2) + 57 * a(n - 3) - 53 * a(n - 4) + 24 * a(n - 5) - 4 * a(n - 6). - _ Wesley Ivan Hurt _ , Jun 20 2022 ●

► [A187560] 2,13,59,247,1007,4063,16319,65407,261887,1048063,4193279,16775167,67104767,268427263,1073725439,4294934527,17179803647,68719345663,274877644799,1099511103487,4398045462527,17592183947263,70368739983359,281474968322047,1125899890065407 ★ a(n) = 4 ^ (n + 1) - 2 ^ n - 1. ● a(0)=2, a(1)=13, a(2)=59, a(n)=7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3). - _ Harvey P. Dale _ , Feb 25 2013 ●

► [A290721] 2,13,60,251,1018,4089,16376,65527,262134,1048565,4194292,16777203,67108850,268435441,1073741808,4294967279,17179869166,68719476717,274877906924,1099511627755,4398046511082,17592186044393,70368744177640,281474976710631,1125899906842598 ★ a(n) = 4 ^ n - n - 1. ● a(n) = 4 ^ n - n - 1. ● a(n) = 6 * a(n - 1) - 9 * a(n - 2) + 4 * a(n - 3). ●

► [A081340] 1,2,13,62,313,1562,7813,39062,195313,976562,4882813,24414062,122070313,610351562,3051757813,15258789062,76293945313,381469726562,1907348632813,9536743164062,47683715820313,238418579101562 ★ (5 ^ n + (- 1) ^ n) / 2. ● a(n) = 4 * a(n - 1) + 5 * a(n - 2), a(0)=1, a(1)=2. ● a(n) = ((2 + sqrt(9)) ^ n + (2 - sqrt(9)) ^ n) / 2. - Al Hakanson (hawkuu(AT)gmail.com), Dec 08 2008 ●

► [A127531] 0,0,2,13,64,285,1210,5005,20384,82212,329460,1314610,5230016,20764055,82317690,326012925,1290244800,5103910680,20183646780,79802261190,315492902400,1247247742650,4930910180196,19495286167698,77085553829824 ★ Number of jumps in all binary trees with n edges. ● a(n) = binomial(2 * n, n - 2) - binomial(2 * n - 2, n - 2). ● a(n) = 4 ^ (n - 1) * (n - 1) * (3 * n ^ 2 - 5 * n - 2) * Gamma(n - 1 / 2) / (sqrt(Pi) * Gamma(n + 3)). ●

► [A137967] 1,1,2,13,66,406,2602,17271,118444,829514,5914980,42791085,313277294,2316793170,17281455882,129867946828,982293317064,7472406051744,57132051350160,438797394096378,3383870656327576,26191385476141936 ★ G.f. satisfies A(x) = 1 + x * (1 + x * A(x) ^ 6) ^ 2. ● a(n) = Sum _{ k=0..n - 1 } C(2 * (n - k),k) / (n - k) * C(6 * k,n - k - 1) for n>0 with a(0)=1. - _ Paul D. Hanna _ , Jun 16 2009 ●

► [A136780] 1,2,13,68,358,1871,9757,50825,264622,1377455,7169434,37314044,194200651,1010706167,5260139653,27375923678,142475405353,741499470476,3859061584762,20084107492055,104525763472957,543994053280925,2831163512738434,14734511818610939 ★ Number of primitive multiplex juggling sequences of length n, base state <1,1,1> and hand capacity 2. ● a(n) = 7 * a(n - 1) - 8 * a(n - 2) - 7 * a(n - 3) for n>3. - _ Colin Barker _ , Aug 31 2016 ●

► [A188676] 1,2,13,71,424,2579,15985,100295,635176,4051649,25993366,167543354,1084134346,7038291098,45821937982,299045487602,1955803426045,12815265660680,84111082917925,552872886403775,3638971619401720 ★ Alternate partial sums of the binomial coefficients binomial(3 * n,n). ● a(n) = sum(k=0..n, (- 1) ^ (n - k) * binomial(3 * k,k)). ●

► [A289790] 2,13,72,385,2056,11000,58872,315065,1686086,9023167,48287964,258415702,1382925814,7400803253,39605804028,211952630117,1134276112400,6070140759292,32484690838716,173843602765153,930333564584074,4978731041147699,26643951936925764 ★ p - INVERT of A016789, where p(S) = 1 - S - S ^ 2. ● a(n) = 6 * a(n - 1) - 5 * a(n - 2) + 8 * a(n - 3) + a(n - 4). ●

► [A109112] 2,13,72,393,2142,11673,63612,346653,1889082,10294533,56099952,305716113,1665996822,9078832593,49475005092,269613532773,1469256181362,8006696489853,43632410395032,237774372900633,1295749006218702 ★ a(n) = 6 * a(n - 1) - 3 * a(n - 2), a(0)=2, a(1)=13. ● a(n) = (1 / (2 * sqrt(6))) * ((2 * sqrt(6) + 7) * (3 + sqrt(6)) ^ n + (2 * sqrt(6) - 7) * (3 - sqrt(6)) ^ n). ●

► [A154357] 2,13,74,185,346,557,818,1129,1490,1901,2362,2873,3434,4045,4706,5417,6178,6989,7850,8761,9722,10733,11794,12905,14066 ★ a(n) = 25 * n ^ 2 - 14 * n + 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Feb 08 2012 ●

► [A077413] 2,13,76,443,2582,15049,87712,511223,2979626,17366533,101219572,589950899,3438485822,20040964033,116807298376,680802826223,3968009658962,23127255127549,134795521106332,785645871510443,4579079707956326,26688832376227513,155553914549408752 ★ Bisection (odd part) of Chebyshev sequence with Diophantine property. ● a(n) = 6 * a(n - 1) - a(n - 2), a(- 1)= - 1, a(0)=2. ● a(n) = (((3 - 2 * sqrt(2)) ^ n * (- 7 + 4 * sqrt(2)) + (3 + 2 * sqrt(2)) ^ n * (7 + 4 * sqrt(2)))) / (4 * sqrt(2)). - _ Colin Barker _ , Oct 12 2015 ●

► [A198849] 2,13,79,475,2851,17107,102643,615859,3695155,22170931,133025587,798153523,4788921139,28733526835,172401161011,1034406966067,6206441796403,37238650778419,223431904670515,1340591428023091,8043548568138547 ★ a(n) = (11 * 6 ^ n - 1) / 5. ● a(n) = 6 * a(n - 1) + 1. ● a(n) = 7 * a(n - 1) - 6 * a(n - 2), n > 1. ●

► [A135167] 2,13,79,487,3091,20143,133939,903727,6161731,42325903,292298899,2026329967,14085955171,98111299663,684331355059,4778093404207,33385561441411,233393582449423,1632228682334419,11417969833438447,79887637214988451,559022711699743183,3912205265750868979 ★ a(n) = 7 ^ n + 5 ^ n + 3 ^ n - 2 ^ n. Constants are the prime numbers in decreasing order. ● a(n) = 7 ^ n + 5 ^ n + 3 ^ n - 2 ^ n. ● a(n) = 17 * a(n - 1) - 101 * a(n - 2) + 247 * a(n - 3) - 210 * a(n - 4). ●

► [A037491] 2,13,80,481,2888,17329,103976,623857,3743144,22458865,134753192,808519153,4851114920,29106689521,174640137128,1047840822769,6287044936616,37722269619697,226333617718184,1358001706309105 ★ Base 6 digits are, in order, the first n terms of the periodic sequence with initial period 2,1. ● a(n) = 6a(n - 1) + a(n - 2) - 6a(n - 3). ●

► [A179237] 1,2,13,80,493,3038,18721,115364,710905,4380794,26995669,166354808,1025124517,6317101910,38927735977,239883517772,1478228842609,9109256573426,56133768283165,345911866272416,2131604965917661,13135541661778382,80944854936587953 ★ a(0) = 1, a(1) = 2; a(n + 1) = 6 * a(n) + a(n - 1) for n>1. ● a(n) = ((3 - sqrt(10)) ^ n * (1 + sqrt(10)) + (- 1 + sqrt(10)) * (3 + sqrt(10)) ^ n) / (2 * sqrt(10)). - _ Colin Barker _ , Oct 13 2015 ●

► [A074581] 0,2,13,81,504,3136,19513,121415,755476,4700770,29249425,181997601,1132436852,7046319384,43844049029,272809183135,1697490356184,10562230626642,65720971788709,408933139743937,2544489349890656 ★ a(n)=T(3n + 1), where T(n) are tribonacci numbers A000073. ● a(n) = 7a(n - 1) - 5a(n - 2) + a(n - 3), a(0)=0, a(1)=2, a(2)=13. ●

► [A162772] 2,13,82,513,3202,19973,124562,776793,4844162,30208573,188382802,1174768113,7325934082,45685023413,284894912402,1776624041673,11079148296962,69090321917293,430851944071762,2686822011483873 ★ a(n) = ((2 + sqrt(5)) * (4 + sqrt(5)) ^ n + (2 - sqrt(5)) * (4 - sqrt(5)) ^ n) / 2. ● a(n) = 8 * a(n - 1) - 11 * a(n - 1) for n > 1; a(0) = 2, a(1) = 13. ●

► [A079752] 0,2,13,82,579,4638,41749,417498,4592487,55109854,716428113,10029993594,150449903923,2407198462782,40922373867309,736602729611578,13995451862619999,279909037252399998,5878089782300399977 ★ Operation count to create all permutations of n distinct elements using the "streamlined" version of Algorithm L lexicographic permutation generation) from Knuth's The Art of Computer Programming, Vol. 4, chapter 7.2.1.2. Sequence gives number of times the search for an element exchangeable with a _ j has to be started. ● a(3)=0, a(n) = n * a(n - 1) + n - 2 for n>=4 ●

► [A164035] 2,13,84,541,3478,22337,143376,920009,5902442,37864213,242885964,1557982741,9993450238,64100899337,411159637896,2637275694209,16916085270482,108503511738013,695965156159044,4464070791616141 ★ a(n) = ((4 + 3 * sqrt(2)) * (5 + sqrt(2)) ^ n + (4 - 3 * sqrt(2)) * (5 - sqrt(2)) ^ n) / 4. ● a(n) = 10 * a(n - 1) - 23 * a(n - 2) for n > 1; a(0) = 2, a(1) = 13. ●

► [A074619] 2,13,85,559,3697,24583,164305,1103479,7444417,50431303,342941425,2340123799,16018069537,109949704423,756587236945,5217746494519,36054040477057,249557173431943,1729973554578865,12008254925383639 ★ a(n) = 6 ^ n + 7 ^ n. ● a(n)=13 * a(n - 1) - 42 * a(n - 2) with a(0)=2, a(1)=13. - _ Vincenzo Librandi _ , Jul 21 2010 ●

► [A162275] 2,13,86,574,3848,25852,173864,1169896,7873952,53001808,356791136,2401871584,16169310848,108851933632,732794497664,4933202436736,33210545418752,223575000579328,1505118006580736,10132530053062144,68212704385845248,459211382691085312 ★ a(n) = 10 * a(n - 1) - 22 * a(n - 2) for n > 1; a(0) =

2, a(1) = 13. ● a(n) = 10 * a(n - 1) - 22 * a(n - 2) for n > 1; a(0) = 2, a(1) = 13. ● a(n) = ((2 + sqrt(3)) * (5 + sqrt(3)) ^ n + (2 - sqrt(3)) * (5 - sqrt(3)) ^ n) / 2. ●

▶ [A033891] 1,2,13,89,610,4181,28657,196418,1346269,9227465,63245986,433494437,2971215073,20365011074,139583862445,956722026041,6557470319842,4494557021285 3,308061521170129,2111485077978050 ⋆ a(n) = Fibonacci(4 * n + 3). ● a(n) = 7 * a(n - 1) - a(n - 2). - _ Floor van Lamoen _ , Dec 10 2001 ● a(n) = (7 / 2 - (3 / 2) * sqrt(5)) ^ n - (2 / 5) * (7 / 2 - (3 / 2) * sqrt(5)) ^ n * sqrt(5) + (2 / 5) * sqrt(5) * (7 / 2 + (3 / 2) * sqrt(5)) ^ n + (7 / 2 + (3 / 2) * sqrt(5)) ^ n, with n>=0. - _ Paolo P. Lava _ , Jun 25 2008 ● a(n) = Fibonacci(2 * n + 2) ^ 2 + Fibonacci(2 * n + 1) ^ 2. - _ Gary Detlefs _ , Oct 12 2011 ● a(2 * n + 1) = a(n) ** a(n) = Fibonacci(8 * n + 7); a(3 * n + 2) = a(n) ** a(n) ** a(n) = Fibonacci(12 * n + 11) and so on. (End) ●

▶ [A172968] 1,2,13,89,610,4181,28657,196418,1346269,9227465,63245986,433494437,2971215073,20365011074,139583862445,956722026041,6557470319842,44945570212853,308061521170129,2111485077978050,14472334024676221 ⋆ a(n) = 7 * a(n - 1) - a(n - 2) for n>1, a(0)=1, a(1)=2. ● a(n) = (1 / 10) * ((5 + sqrt(5)) * ((7 - 3 * sqrt(5)) / 2) ^ n + ((5 - sqrt(5)) * ((7 + 3 * sqrt(5)) / 2) ^ n)). ● a(n) = sqrt(1 - 2 * F(2n + 1) * F(2n + 2) + 5 * (F(2n + 1) * F(2n + 2)) ^ 2), where F = A000045. ● a(n) = (Lucas(4 * n) - Fibonacci(4 * n)) / 2, where Lucas = A000032. - _ Gary Detlefs _ , Nov 28 2010 ● a(n) = Fibonacci(4 * n - 1). - _ G. C. Greubel _ , Jul 15 2019 ● a(n) = (a(n - 1) ^ 2 + 9) / a(n - 2). - _ Klaus Purath _ , Aug 30 2020 ●

▶ [A074617] 2,13,89,637,4721,35893,277769,2175277,17167841,136170853,1083507449,8638762717,68963617361,550976517013,4404150026729,35214889666957,281627564601281,2252562753138373,18018213206747609,144134261562183997 ⋆ a(n) = 5 ^ n + 8 ^ n. ● a(n) = 13 * a(n - 1) - 40 * a(n - 2) with a(0)=2, a(1)=13. - _ Vincenzo Librandi _ , Jul 21 2010 ●

▶ [A337169] 1,2,13,89,691,5720,49555,443630,4071595,38105342,362271823,3488988101,33967656469,333752559392,3305347855573,32960499084305,330664662067795,3335002912108670,33796042027030855,343940115478559699,3513702627928096681,36021007341027948032 ⋆ a(n) = (- 1) ^ n + 3 * Sum _{ k=0..n - 1 } a(k) * a(n - k - 1). ● a(n) = Sum _{ k=0..n } (- 1) ^ (n - k) * binomial(n,k) * 3 ^ k * Catalan(k). ●

▶ [A199489] 2,13,90,629,4402,30813,215690,1509829,10568802,73981613,517871290,3625099029,25375693202,177629852413,1243408966890,8703862768229,60927039377602,426489275643213,2985424929502490,20897974506517429 ⋆ (11 * 7 ^ n + 1) / 6. ● a(n) = 7 * a(n - 1) - 1. ● a(n) = 8 * a(n - 1) - 7 * a(n - 2). ●

▶ [A074614] 2,13,97,793,6817,60073,535537,4799353,43112257,387682633,3487832977,31385253913,282446313697,2541932937193,22877060890417,205892205836473,1853024483819137,16677198879535753,150094704016475857 ⋆ a(n) = 4 ^ n + 9 ^ n. ● a(n) = 2 ^ (2 * n) + 3 ^ (2 * n). ● a(n) = 13 * a(n - 1) - 36 * a(n - 2) with a(0)=2, a(1)=13. - _ Vincenzo Librandi _ , Jul 21 2010 ●

▶ [A077246] 2,13,102,803,6322,49773,391862,3085123,24289122,191227853,1505533702,11853041763,93318800402,734697361453,5784260091222,45539383368323,358530806855362,2822707071474573,22223125764941222 ⋆ Bisection (even part) of Chebyshev sequence with Diophantine property. ● a(n)= 8 * a(n - 1) - a(n - 2), a(- 1) := 3, a(0)=2. ● a(n)=[4 - sqrt(15)] ^ n - (1 / 6) * [4 - sqrt(15)] ^ n * sqrt(15) + [4 + sqrt(15)] ^ n + (1 / 6) * sqrt(15) * [4 + sqrt(15)] ^ n, with n>=0 - _ Paolo P. Lava _ , Jul 08 2008 ●

▶ [A371578] 1,2,13,102,916,8880,90607,958794,10426089,115798342,1308035135,14980661482,173553196140,2030265152576,23948922940698,284543368174220,3402103050539715,40903437537402792,494215527894112099,5997782678374854902,73078635875447981850 ⋆ G.f. satisfies A(x) = (1 + x * A(x) ^ (5 / 2) * (1 + x)) ^ 2. ● a(n) = 2 * Sum _{ k=0..n } binomial(5 * k + 2,k) * binomial(k,n - k) / (5 * k + 2). ●

▶ [A371583] 1,2,13,104,940,9166,94044,1000602,10939780,122161128,1387361151,15974899766,186069556707,2188416960148,25953579753464,310022550197360,3726709235290628,45047517497268968,547217895030263028,6676784544374859088,81789906534091716353 ⋆ G.f. satisfies A(x) = (1 + x * A(x) ^ (5 / 2) / (1 - x)) ^ 2. ● a(n) = 2 * Sum _{ k=0..n } binomial(5 * k + 2,k) * binomial(n - 1,n - k) / (5 * k + 2). ●

▶ [A245806] 2,13,109,1027,10081,100243,1000729,10002187,100006561,1000019683,10000059049,100000177147,1000000531441,10000001594323,100000004782969,1000000014348907,10000000043046721,100000000129140163,1000000000387420489,10000000001162261467 ⋆ 3 ^ n + 10 ^ n. ● a(n) = 13 * a(n - 1) - 30 * a(n - 2) for n>1. ●

▶ [A208316] 2,13,113,982,8534,74164,644516,5601112,48675992,423014608,3676172816,31947470176,277636798304,2412779207488,20968054449728,182221110842752,1583577213440384,13761944372579584,119597018261278976 ⋆ Number of n X 2 0..2 arrays with new values 0..2 introduced in row major order and no element equal to more than two of its immediate leftward or upward or left - upward diagonal neighbors. ● a(n) = ((4 - sqrt(22)) ^ n * (- 5 + sqrt(22)) + (4 + sqrt(22)) ^ n * (5 + sqrt(22))) / (12 * sqrt(22)) for n>1. ●

▶ [A110369] 2,13,114,1115,11116,111117,1111118,11111119,111111120,1111111121,11111111122,111111111123,1111111111124,11111111111125,111111111111126,1111111111111127,11111111111111128,111111111111111129,1111111111111111130 ⋆ (Digit 1 repeated n times) + n. ● a(n) = (10 ^ n - 1) / 9 + n. - _ Klaus Purath _ , Mar 18 2021a(n) = ●

▶ [A212071] 1,2,13,114,1150,12586,145299,1741844,21475146,270570300,3468352701,45089941936,593082894768,7878407177270,105542811922950,1424267372100456,19343105144742098,264182048662182420,3626176386241346070,49995713597946235350,692084935397470961346 ⋆ G.f. satisfies: A(x) = (1 + x * A(x) ^ 3) ^ 2. ● a(n) = 2 * binomial(6 * n + 2,n) / (6 * n + 2). ● a(n) = 2 * binomial(6n + 1, n - 1) / n for n>0, a(0)=1. [_ Bruno Berselli _ , Jan 19 2014] ●

▶ [A215624] 1,2,13,130,1518,19358,261323,3670828,53100530,785657529,11834135909,180863294507,2797643204500,43715591710804,689030031494554,10941710269299893,174889301792724294,2811464199460768704,45426696813655278251 ⋆ G.f. satisfies A(x) = (1 + x * A(x)) * (1 + x * A(x) ^ 5). ● a(n) = Sum _{ k=0..n } binomial(n + 4 * k + 1,k) * binomial(n + 4 * k + 1,n - k) / (n + 4 * k + 1). - _ Seiichi Manyama _ , Jul 19 2023 ●

▶ [A047856] 1,2,13,134,1465,16106,177157,1948718,21435889,235794770,2593742461,28531167062,313842837673,3452271214394,37974983358325,417724816941566,4594972986357217 ⋆ a(n) = T(8,n), array T given by A047848. ● a(n) = (11 ^ n + 9) / 10. - _ Ralf Stephan _ , Feb 14 2004 ● a(0) = 1, a(1) = 2, a(n) = 12 * a(n - 1) - 11 * a(n - 2) for n > 1. ● a(n) = 11 * a(n - 1) - 9, with a(0)=1. - _ Vincenzo Librandi _ , Aug 06 2010 ●

▶ [A042677] 1,2,13,249,511,9958,60259,130476,7627867,15386210,99945127,1914343623,3928632373,76558358710,463278784633,1003115927976,58644002607241,118291121142458,768390729461989,1471771498092024 9,30203820691302487,588590308115667502 ⋆ Denominators of continued fraction convergents to sqrt(868). ● a(n) = 7688126 * a(n - 8) - a(n - 16) for n>15. - _ Vincenzo Librandi _ , Dec 20 2013 ●

▶ [A147832] 0,2,14,16,28,30,42,44,56,58,70,72,84,86,98,100,112,114,126,128,140,142,154,156,168 ⋆ Numbers congruent (0,2) mod 14. ● a(n) = 14 * n - a(n - 1) - 26 (with a(1)=0). - _ Vincenzo Librandi _ , Dec 17 2010 ●

▶ [A022369] 2,14,16,30,46,76,122,198,320,518,838,1356,2194,3550,5744,9294,15038,24332,39370,63702,103072,166774,269846,436620,706466 ⋆ Fibonacci sequence beginning 2, 14. ● a(n) = 2 * (Fibonacci(n + 2) + 5 * Fibonacci(n)). - _ G. C. Greubel _ , Aug 27 2017 ●

▶ [A247035] 2,14,22,58,266,398,1042,4774,7142,18698,85666,128158,335522,1537214,2299702,6020698,27584186,41266478,108037042,494978134,740496902,1938646058,8882022226,13287677758,34787592002 ⋆ Expansion of 2 * (x + 1) * (x ^ 4 + 6 * x ^ 3 + 5 * x ^ 2 + 6 * x + 1) / (x ^ 6 - 18 * x ^ 3 + 1). ● a(n) = (7 / 2) * (3 * F(2n) + F(2n - 1)) if n==1 (mod 3); otherwise a(n) = 2 * (3 * F(2n) + F(2n - 1)), where F = A000045. [_ Robert Israel _ , see Link section] ●

▶ [A220274] 2,14,23,23,34,36,57,58,60,60,77,86,100,100,102,123,149,149,149,149,187,187,200,200,200 ⋆ a(n) is the smallest number such that for all N >= a(n) there are at least n primes between 9 * N and 10 * N. ● a(n) <= ceiling(R _ (10 / 9)(n) / 10), where R _ v(n) (v>1) are generalized Ramanujan numbers (see Shevelev's link). In particular, for n >= 1, { R _ (10 / 9) (n) } = { 127, 223, 227, 269, 349, 359, 569, 587, 593, 739, 809, 857, 991, 1009, ... } . Moreover, if R _ (10 / 9)(n) == 1 (mod 10), then a(n) = ceiling(R _ (10 / 9)(n) / 10). ●

▶ [A226334] 2,14,23,67,100,202,281,479,636,971,1243,1770,2205,2980,3630,4725,5654,7140,8415,10381,12082,14614,16823,20027,22840 ⋆ Number of nondecreasing - 2..2 vectors of length n whose dot product with some other - 2..2 vector equals n. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) + a(n - 4) - a(n - 5) - 4 * a(n - 6) + 4 * a(n - 7) + a(n - 8) - a(n - 9) + 2 * a(n - 10) - 2 * a(n - 11) - a(n - 12) + a(n - 13) for n>13. ●

▶ [A109255] 2,14,24,70,114,140,234,310,444,660,784,850,990,1064,1564,1850,2054,2494,2730,3104,3234,4370,4524,4840,5504 ⋆ a(n) = (p ^ 2 - 1) / 12, where p is the n - th prime of the form 4 * k + 1. ● a(n) = Sum _{ k=1..(p - 1) / 4 } floor(sqrt(k * p)), where p = primes of the form 4 * n + 1. ●

▶ [A017545] 2,14,26,38,50,62,74,86,98,110,122,134,146,158,170,182,194,206,218,230,242,254,266,278,290 ⋆ a(n) = 12 * n + 2. ● a(n) = 2 * a(n - 1) - a(n - 2). - _ Vincenzo Librandi _ , Jun 07 2011 ●

▶ [A200039] 0,2,14,28,52,78,114,152,200,250,310,372,444,518,602,688,784,882,990,1100,1220,1342,1474,1608,1752 ⋆ Number of - n..n arrays x(0..2) of 3 elements with sum zero and with zeroth through 2nd differences all nonzero. ● a(n) = - 5 * n + 3 * n ^ 2 for n even. ● a(n) = 2 - 5 * n + 3 * n ^ 2 for n odd. ●

▶ [A202638] 1,2,14,31,223,494,3554,7873,56641,125474,902702,1999711,14386591,31869902,229282754,507918721,3654137473,8094829634,58236916814,129009355423,928136531551,2056054857134,14791947588002,32767868358721 ⋆ y - values in the solution to x ^ 2 - 7 * y ^ 2 = - 3. ● a(n) = a(- n + 1) = ((7 + 2 * sqrt(7) * (- 1) ^ n) * (8 - 3 * sqrt(7)) ^ floor(n / 2) + (7 - 2 * sqrt(7) * (- 1) ^ n) * (8 + 3 * sqrt(7)) ^ floor(n / 2)) / 14. ●

▶ [A083015] 1,2,14,32,206,512,3128,8192,48238,131072,750584,2097152,11746424,33554432,184558304,536870912,2908113518,8589934592,45923227448,137438953472,726419131576,2199023255552,11506072128224,35184372088832 ⋆ a(n) = the number of ordered pairs of n - bit bit strings, such that both bit strings have at least n / 2 one - bits, or both have at most n / 2 one - bits. ● a(n) = 4 ^ n / 2 + 2 ^ n * c - c ^ 2 / 2; where c is (n choose n / 2) for even n, 0 for odd n. ●

▶ [A060626] 2,14,34,62,98,142,194,254,322,398,482,574,674,782,898,1022,1154,1294,1442,1598,1762,1934,2114,2302,2498 ⋆ Number of right triangles of a given area required to form successively larger squares. ● a(n) = 4 * n ^ 2 + 8 * n + 2. ● a(n) = 8 * n + a(n - 1) + 4 with n>0, a(0)=2. - _ Vincenzo Librandi _ , Aug 07 2010 ●

▶ [A145910] 2,14,35,65,104,152,209,275,350,434,527,629,740,860,989,1127,1274,1430,1595,1769,1952,2144,2345,2555,2774 ⋆ a(n) = (1 + 3 * n) * (4 + 3 * n) / 2. ● a(n) = 2 + 9 / 2 * n ^ 2 + 15 / 2 * n. - _ Paolo P. Lava _ , Oct 28 2008 ● a(n) = 2 * a(n - 1) - a(n - 2) + 9. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A135706] 0,2,14,36,68,110,162,224,296,378,470,572,684,806,938,1080,1232,1394,1566,1748,1940,2142,2354,2576,2808 ⋆ a(n) = n * (5 * n - 3). ● a(n) = a(n - 1) + 10 * n - 8 (with a(0)=0). - _ Vincenzo Librandi _ , Nov 24 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A091520] 1,2,14,36,214,604,3340,9928,52582,161708,831588,2620920,13187836,42350744,209519576,682960784,3332923526,10998087884,53067486836,176924683544,845545262996,2843923177544,13479791673896,45685735967984 ⋆ Expansion of 1 / ((1 - 4 * x) * sqrt(1 + 4 * x)) in powers of x. ● a(n) = 4 ^ n * Sum _{ k=0, n } binomial(2 * k, k) / (- 4) ^ k. ● a(n) = 2 ^ (n - 1) * (sqrt(2) * 2 ^ n + (- 1) ^ n * (2n + 1)!! * hypergeom([1,n + 3 / 2], [n + 2], - 1) / (n + 1)!. ● a(n) = 2 ^ n * (2 * n + 1)!! * hypergeom([- n,1 / 2], [3 / 2], 2) / n!. (End) ● a(n + 1) = 4 * a(n) - (- 1) ^ (n) * binomial(2n + 2,n + 1). - _ G. C. Greubel _ , Nov 02 2015 ●

▶ [A254964] 1,2,14,37,301,806,6602,17689,144937,388346,3182006,8525917,69859189,187181822,1533720146,4109474161,33671984017,90221249714,739249928222,1980758019541,16229826436861,43486455180182,356316931682714,954721255944457,7822742670582841 ⋆ Indices of heptagonal numbers (A000566) that are al

so centered hexagonal numbers (A003215). • a(n) = a(n - 1) + 22 * a(n - 2) - 22 * a(n - 3) - a(n - 4) + a(n - 5). •

► [A290124] 1,2,14,38,206,662,3134,11078,48686,181622,765854,2945318,12135566,47479382,193106174,762858758,3080132846,12234437942,49196032094,196009287398,786361672526,3138473121302,12574813191614,50236490647238,201134248946606 ⋆ a(n) = a(n - 1) + 12 * a(n - 2) with a(1) = 1 and a(2) = 2. • a(n) = (5 / 28) * 4 ^ n - (2 / 21) * (- 3) ^ n. •

► [A108478] 1,1,2,14,43,127,468,1596,5253,17917,60918,205194,694287,2351611,7951336,26894840,91004105,307854073,1041410602,3523170438,11918842803,40320750711,136404504124,461454010164,1561085306061 ⋆ Diagonal sums of number triangle A108477. • a(n) = sum _{ k=0..floor(n / 2) } (sum _{ j=0..n - k } C (2(n - 2k), j) * C(2k, j) * 2 ^ j). •

► [A268684] 0,2,14,44,100,190,322,504,744,1050,1430,1892,2444,3094,3850,4720,5712,6834,8094,9500,11060,12782,14674,16744,19000 ⋆ a(n) = n * (n + 1) * (4 * n - 1) / 3. • a(n) = Sum _{ k = 0..n } 2 * k * (2 * k - 1). • a(n) mod 2 = 0. •

► [A212902] 0,0,2,14,44,110,228,426,726,1168,1780,2612,3700,5104,6866,9058,11728,14958,18804,23358,28682,34880,42020,50216,59544 ⋆ Number of (w,x,y,z) with all terms in { 0,...,n } and |w - x|<|x - y|<|y - z|. • a(n) = 2 * a(n - 1) + a(n - 2) - 3 * a(n - 3) - a(n - 4) + a(n - 5) + 3 * a(n - 6) - a(n - 7) - 2 * a(n - 8) + a(n - 9). •

► [A036659] 2,14,45,104,200,342,539,800,1134,1550,2057,2664,3380,4214,5175,6272,7514,8910,10469,12200,14112,16214,18515,21024,23750 ⋆ Product of n with sum of next n consecutive integers. • a(n) = 2 + (3 * n * n + 10 * n + 11) * n / 2. - _ Frank Ellermann _ , Mar 16 2002 • a(n) = n ^ 2(3n + 1) / 2. - Ronnie B Kon (ronniekon(AT)yahoo.com), Jun 09 2006 •

► [A083102] 1,2,14,48,236,952,4264,18048,78736,337952,1463264,6306048,27244736,117549952,507547264,2190594048,9456660736,40819261952,176205131264,760602882048,3283257076736,14172542973952,61177656715264 ⋆ a(n) = 2 * a(n - 1) + 10 * a(n - 2). • a(n) = Sum _{ k=0..n } binomial(n,2 * k + 1) * 11 ^ k. (End) • a(n) = ((1 + sqrt(11)) ^ n - (1 - sqrt(11)) ^ n) / (2 * sqrt(11)). - _ Rolf Pleisch _ , Jul 06 2009 •

► [A153978] 0,2,14,50,130,280,532,924,1500,2310,3410,4862,6734,9100,12040,15640,19992,25194,31350,38570,46970,56672,67804,80500,94900 ⋆ a(n) = n * (n - 1) * (n + 1) * (3 * n - 2) / 12. • a(n) = Sum _{ i=1..n - 1 } binomial(i + 1,i) * i ^ 2. - _ Enrique Pérez Herrero _ , Jun 28 2014 • a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n > 4. - _ Vincenzo Librandi _ , Jun 30 2014 • a(n) = Sum _{ k=1..n - 1 } k * ((n - 1) * n / 2 + k) for n > 1. - _ J. M. Bergot _ , Feb 16 2018 •

► [A363706] 2,14,52,140,310,602,1064,1752,2730,4070,5852,8164,11102,14770,19280,24752,31314,39102,48260,58940,71302,85514,101752,120200,141050 ⋆ a(n) is the sigma irregularity of the n - th power of a path graph of length at least 3 * n . • a(n) = (n ^ 4 + 2 * n ^ 3 + 2 * n ^ 2 + n) / 3. •

► [A067056] 1,2,14,54,154,364,756,1428,2508,4158,6578,10010,14742,21112,29512,40392,54264,71706,93366,119966,152306,191268,237820,293020,358020 ⋆ a(n) = (1) * (2 + 3 + 4 + ... + n) + (1 + 2) * (3 + 4 + 5 + ... + n) + (1 + 2 + 3) * (4 + 5 + 6 + ... + n) + ... + (1 + 2 + 3 + ... + n - 1) * n. • a(n) = Sum _{ r=1..n - 1 } t(r) * (t(n) - t(r)), where t(r) is the r - th triangular number, n>1. • a(n) = n * (2 * n ^ 4 + 5 * n ^ 3 - 5 * n - 2) / 60 = (n - 1) * n * (n + 1) * (n + 2) * (2 * n + 1) / 60, n>1. - _ Ralf Stephan _ , Apr 30 2004 • a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>7. •

► [A208428] 2,14,54,216,864,3456,13824,55296,221184,884736,3538944,14155776,56623104,226492416,905969664,3623878656,14495514624,57982058496,231928233984,927712935936,3710851743744,14843406974976,59373627899904 ⋆ Number of n X 2 0..2 arrays with new values 0..2 introduced in row major order and no element equal to any knight - move neighbor (colorings ignoring permutations of colors). • a(n) = 27 * 2 ^ (2 * n - 5) for n>2. •

► [A277761] 0,1,2,14,56,284,1304,6248,29408,139472,659360,3121376,14768000,69887936,330703232,1564924544,7405262336,35042157824,165821110784,784674242048,3713117739008,17570663078912,83145267845120,393447636985856 ⋆ Number of n X 2 0..2 arrays with every element equal to some element at offset (- 1, - 1) (- 1,0) (- 1,1) (0, - 1) (0,1) or (1,0) both plus 1 mod 3 and minus 1 mod 3, with new values introduced in order 0..2. • a(n) = (3 * (- 1) ^ n * 2 ^ (2 + n) - (- 5 + sqrt(3)) * (3 + sqrt(3)) ^ n + (3 - sqrt(3)) ^ n * (5 + sqrt(3))) / 132. •

► [A212895] 0,0,2,14,58,168,376,716,1224,1936,2888,4116,5656,7544,9816,12508,15656,19296,23464,28196,33528,39496,46136,53484,61576 ⋆ Number of (w,x,y,z) with all terms in { 0,...,n } and (least gapsize)=2. • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>=9. •

► [A096367] 2,14,58,194,578,1602,4226,10754,26626,64514,153602,360450,835586,1916930,4358146,9830402,22020098,49020930,108527618,239075330,524288002,1145044994,2491416578,5402263554,11676942338 ⋆ Number of winning paths of length n + 1 across an n X n Hex board. • a(n) = (n - 2) * (n + 1) * 2 ^ (n - 3) - 2 ^ (n - 1) + 2. •

► [A167555] 2,14,63,209,559,1281,2618,4902,8568,14168,22385,34047,50141,71827,100452,137564,184926,244530,318611,409661,520443,654005,813694,1003170,1226420 ⋆ The third left hand column of triangle A167552. • a(n) = (14 * n ^ 5 - 115 * n ^ 4 + 400 * n ^ 3 - 665 * n ^ 2 + 486 * n - 120) / 5!. • a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). • a(n) - 5 * a(n - 1) + 10 * a(n - 2) - 10 * a(n - 3) + 5 * a(n - 4) - a(n - 5) = 2 * 7. •

► [A222715] 2,14,66,198,508,1092,2156,3876,6606,10626,16478,24570,35672,50344,69624,94248,125562,164502,212762,271502,342804,428076,529828,649740,790790 ⋆ The number of binary pattern classes in the (2,n) - rectangular grid with 5 '1's and (2n - 5) '0's: two patterns are in same class if one of them can be obtained by a reflection or 180 - degree rotation of the other. • a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) - 4 * (2 * n ^ 2 - 22 * n + 63) * (- 1) ^ n, with n>8, a(3)=2, a(4)=14, a(5)=66, a(6)=198, a(7)=508, a(8)=1092. • a(n) = 3 * a(n - 1) - 8 * a(n - 3) + 6 * a(n - 4) + 6 * a(n - 5) - 8 * a(n - 6) + 3 * a(n - 8) - a(n - 9), with n>11. • a(n) = (n - 2) * (n - 1) * (8 * n ^ 3 - 16 * n ^ 2 + 6 * n - 15 * (- 1) ^ n + 15) / 120. (End) • a(n) = (1 / 4) * (binomial(2 * n,5) + 2 * binomial(n - 1,2) * (1 / 2) * (1 - (- 1) ^ n)). [_ Yosu Yurramendi _ and María Merino, Aug 21 2013] •

► [A084132] 1,2,14,68,356,1832,9464,48848,252176,1301792,6720224,34691648,179087936,924501632,4772534144,24637146368,127183790336,656558039552,3389334900224,17496687838208,90322760754176,466271170045952 ⋆ a(n) = 4 * a(n - 1) + 6 * a(n - 2), a(0)=1, a(1)=2. • a(n) = (2 + sqrt(10)) ^ n / 2 + (2 - sqrt(10)) ^ n / 2. • a(n) = 2 * i ^ n * 6 ^ ((n - 2) / 2) * (3 * ChebyshevU(n, 2 / (i * sqrt(6))) + i * sqrt(6) * ChebyshevU(n - 1, 2 / (i * sqrt(6)))). - _ G. C. Greubel _ , Oct 13 2022 •

► [A084770] 1,2,14,68,406,2332,13964,83848,509926,3118892,19194724,118654648,736365436,4584612632,28623792344,179142212368,1123532958086,7059622447052,44431918660724,280059644507608,1767597777222676 ⋆ Coefficients of 1 / (1 - 4x - 16x ^ 2) ^ (1 / 2); also, a(n) is the central coefficient of (1 + 2x + 5x ^ 2) ^ n. • a(n) = Sum _{ k=0..floor(n / 2) } binomial(n, k) * binomial(2(n - k), n) * 4 ^ k. - _ Paul Barry _ , Sep 08 2004 • a(n) = 2 ^ n * hypergeom([(1 - n) / 2, - n / 2], [1], 5). - _ Vladimir Reshetnikov _ , Oct 10 2016 • a(n) = (4 / i) ^ (2 * n + 1) * a(- 1 - n), and 0 = a(n) * (+ 256 * a(n + 1) + 96 * a(n + 2) - 32 * a(n + 3)) + a(n + 1) * (+ 32 * a(n + 1) + 16 * a(n + 2) - 6 * a(n + 3)) + a(n + 2) * (- 2 * a(n + 2) + a(n + 3)) for all n in Z. - _ Michael Somos _ , Sep 30 2017 •

► [A206947] 0,0,0,2,14,70,306,1248,4888,18666,70110,260414,959882,3519232,12854064,46824210,170243566,618125238,2242100898,8126927456,29442587720,106626616954,386046638142,1397431266222,5057790129274 ⋆ Number of nonisomorphic graded posets with 0 and non - uniform Hasse graph of rank n, with exactly 2 elements of each rank above 0. • a(n) = 8 * a(n - 1) - 21 * a(n - 2) + 20 * a(n - 3) - 5 * a(n - 4), a(1)=0, a(2)=0, a(3)=2, a(4)=14. •

► [A203241] 2,14,70,310,1302,5334,21590,86870,348502,1396054,5588310,22361430,89462102,357881174,1431590230,5726491990,22906230102,91625444694,366502827350,1466013406550,5864057820502,23456239670614,93824975459670 ⋆ Second elementary symmetric function of the first n terms of (1,2,4,8,...). • a(n) = (2 - 3 * 2 ^ n + 4 ^ n) / 3. • a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3). • a(n) = Sum _{ k=0...n - 2 } 2 ^ k * (2 ^ (n - 1) - 1 + 2 ^ k). - _ J. M. Bergot _ , Mar 21 2018 •

► [A095933] 2,14,72,330,1430,6008,24786,101118,409640,1652090,6643782,26667864,106914242,428292590,1714834440,6863694378,27466183286,109894593848,439656551730,1758830875230,7035859329512,28144840135514 ⋆ Number of walks of length 2n + 1 between two nodes at distance 5 in the cycle graph C _ 10. • a(n) = 4 ^ n / 5 * Sum _{ r=0..9 } (- 1) ^ r * Cos(Pi * r / 5) ^ (2n + 1). • a(n) = 7a(n - 1) - 13a(n - 2) + 4a(n - 3). • a(n) = (8 / 5) * 4 ^ n + 2 / 5 * (sqrt(5) - 2) * 2 ^ n * (3 + sqrt(5)) ^ (- n) - 2 / 5 * (sqrt(5) + 2) * 2 ^ n * (3 - sqrt(5)) ^ (- n). - Maksym Voznyy (voznyy(AT)mail.ru), Jul 24 2008 •

► [A290698] 2,14,74,286,1157,4778,19623,80478,330293,1355629,5563527,22832914,93707772,384582275,1578347684,6477630782,26584574434,109104640685,447771795953,1837681518261,7541951930181,30952609765223,127031312347552,521343900861138 ⋆ Number of minimal edge covers in the n - antiprism graph. • a(n) = 2 * a(n - 1) + 5 * a(n - 2) + 12 * a(n - 3) + 11 * a(n - 4) + 5 * a(n - 5) - 3 * a(n - 6) - 4 * a(n - 7) - a(n - 8) + a(n - 9). •

► [A138156] 0,2,14,74,352,1588,6946,29786,126008,527900,2195580,9080772,37392864,153434536,627778954,2562441466,10438340104,42449348236,172376641924,699100282156,2832205421824,11462854280536,46354571222164 ⋆ Sum of the path lengths of all binary trees with n edges. • a(n) = 4 ^ (n + 1) - (3 * n + 4) * C(2 * n + 2,n + 1) / (n + 2). •

► [A192809] 0,0,2,14,74,366,1786,8702,42410,206734,1007834,4913310,23953034,116774190,569289402,2775359806,13530239338,65961672910,321571716762,1567703857118,7642759781962,37259445922414,181644634930298,885541171698814 ⋆ Coefficient of x in the reduction of the polynomial (x ^ 2 + 2) ^ n by x ^ 3 -> x ^ 2 + 2. • a(n) = 7 * a(n - 1) - 12 * a(n - 2) + 8 * a(n - 3). •

► [A198762] 2,14,74,374,1874,9374,46874,234374,1171874,5859374,29296874,146484374,732421874,3662109374,18310546874,91552734374,457763671874,2288818359374,11444091796874,57220458984374,286102294921874,1430511474609374 ⋆ 3 * 5 ^ n - 1= 2 * A057651(n). • a(n) = 5 * a(n - 1) + 4. • a(n) = 6 * a(n - 1) - 5 * a(n - 2), n>1. •

► [A119913] 0,0,2,14,74,394,2344,16036,125628,1112028,10976118,119481218,1421542550,18348340022,255323504812,3809950976872,60683990530072,1027542662934744,18430998766219146,349096664728623126,6962409983976703106,145841989688186383106 ⋆ Number of directed simple cycles in the complete graph K _ n . • a(n) = Sum _{ k=3..n } C(n,k) * (k - 1)!. • a(n) = Sum _{ i=2..n - 1 } (floor(e * i!)) - (n + 3)(n - 2) / 2. •

► [A172060] 0,2,14,76,374,1748,7916,35096,153254,661636,2831300,12030632,50826684,213707336,894945944,3734901296,15540685574,64496348516,267060529364,1103587381256,4552196053844,18747042089816,77092267322984,316602500019536,1298657603761244 ⋆ The number of returns to the origin in all possible one - dimensional walks of length 2n. • a(n) = (2n + 1)! / (n!) ^ 2 - 4 ^ n. • a(n) = 4 * a(n - 1) + binomial(2n,n). •

► [A185055] 0,0,2,14,76,388,1950,9762,48824,244136,1220698,6103510,30517572,152587884,762939446,3814697258,19073486320,95367431632,476837158194,2384185791006,11920928955068,59604644775380,298023223876942,1490116119384754,7450580596923816 ⋆ Number of representations of 5 ^ (2n) as a sum a ^ 2 + b ^ 2 + c ^ 2 with 0 < a <= b <= c. • a(n) = (5 ^ n - 4n - 1) / 8. •

► [A278417] 0,2,14,78,388,1810,8106,35294,150536,632034,2620870,10759342,43804812,177105266,711809378,2846259390,11330543632,44929049794,177540878718,699402223118,2747583822740,10766828545746,42095796462874,164244726238366,639620518118424 ⋆ a(n) = n * ((2 + sqrt(3)) ^ n + (2 - sqrt(3)) ^ n) / 2. • a(n) = 7 * a(n - 1) - 10 * a(n - 2) - 10 * a(n - 3) + 7 * a(n - 4) - a(n - 5) for n>6. •

► [A339240] 0,2,14,78,396,1910,8916,40684,182552,808614,3545220,15414212,66556584,285707708,1220340296,5189913240,21988512304,92850096902,390913863012,1641450064084,6876023427080,28741451864916,119902111845208,499304732388968,2075821104461136 ⋆ a(n) = n * 2 ^ (2 * n - 2) + n * binomial(2 * n,n) / 2. • a(n) = Sum _{ k=0..n } binomial(n, k) * k * Sum _{ j=0..k } binomial(n, j). •

► [A133224] 0,2,14,78,400,1960,9312,43232,197120,885888,3934720,17307136,75509760,327182336,1409343488,6039920640,25770065920,109522223104,4638576476 16,1958507577344,8246342451200 ★ Let P(A) be the power set of an n - element set A and let B be the Cartesian product of P(A) with itself. Remove (y,x) from B when (x,y) is in B and x <> y and let R35 denote the reduced set B. The n a(n) = the sum of the sizes of the union of x and y for every (x,y) in R35. ● a(n) = n * (2 ^ (n - 2) + 3 * 2 ^ (2 * n - 3)). ●

► [A361813] 1,2,14,80,486,3030,19184,122924,794678,5173160,33863666,2226835 88,1469908848,9733916596,64636957300,430240178484,2869778018070,19177245 746844,128361805431752,860443079597872,5775392952659170,3881140851484803 2,261101034656317244 ★ Expansion of 1 / sqrt(1 - 4 * x * (1 + x) ^ 4). ● a(n) = Sum _{ k=0..n } binomial(2 * k,k) * binomial(4 * k,n - k). ●

► [A077444] 2,14,82,478,2786,16238,94642,551614,3215042,18738638,109216786,6 36562078,3710155682,21624372014,126036076402,734592086398,4281516441986,2 4954506565518,145445522951122,847718631141214,4940866263896162,287974789 52235758,167844007449518386 ★ Numbers k such that (k ^ 2 + 4) / 2 is a square. ● a(n) = (((3 + 2 * sqrt(2)) ^ n - (3 - 2 * sqrt(2)) ^ n) + ((3 + 2 * sqrt(2)) ^ (n - 1) - 3 - 2 * sqrt(2)) ^ (n - 1))) / (2 * sqrt(2)). ● a(n) = (1 + sqrt(2)) ^ (2 * n - 1) - (1 + sqrt(2)) ^ (1 - 2 * n). - _ Gerson Washiski Barbosa _ , Sep 19 2010 ● a(n) = floor((1 + sqrt(2)) ^ (2 * n - 1)). - _ Thomas Ordowski _ , Jun 07 2013 ●

► [A053141] 0,2,14,84,492,2870,16730,97512,568344,3312554,19306982,11252934 0,655869060,3822685022,22280241074,129858761424,756872327472,441137520341 0,25711378892990,149856898154532,873430010034204 ★ a(0)=0, a(1)=2 then a(n) = a(n - 2) + 2 * sqrt(8 * a(n - 1) ^ 2 + 8 * a(n - 1) + 1). ● a(n) = 6 * a(n - 1) - a(n - 2) + 2, a(0) = 0, a(1) = 2. ● a(n) = 7 * a(n - 1) - 7 * a(n - 2) + a(n - 3). ● a(n) = - (1 / 2) - (1 - sqrt(2)) / (4 * sqrt(2)) * (3 - 2 * sqrt(2)) ^ n + (1 + sqrt(2)) / (4 * sqrt(2)) * (3 + 2 * sqrt(2)) ^ n. (End) ● a(n) = sqrt(2) * cosh((2 * n + 1) * log(1 + sqrt(2))) / 4 - 1 / 2 = (sqrt(1 + 4 * A029549) - 1) / 2. - _ Bill Gosper _ , Feb 07 2010 [typo corrected by _ Vaclav Kotesovec _ , Feb 05 2016] ● a(n) = (a(n - 1) * (a(n - 1) - 2)) / a(n - 2) for n > 2. - _ Vladimir Pletser _ , Apr 08 2020 ● a(n) = (ChebyshevU(n, 3) - ChebyshevU(n - 1, 3) - 1) / 2 = (Pell(2 * n + 1) - 1) / 2. - _ G. C. Greubel _ , Apr 27 2020 ●

► [A005610] 2,14,86,518,3110,18662,111974,671846,4031078,24186470,14511882 2,870712934,5224277606,31345665638,188073993830,1128443962982,67706637778 94,40623982667366,243743896004198,1462463376025190 ★ Number of Boolean functions realized by cascades of n gates. ● a(n) = (2 / 5) * (6 * 6 ^ (n - 1) - 1). - _ Ralf Stephan _ , Apr 19 2004 ● a(n) = 6 * a(n - 1) + 2 for n > 1. - _ Georg Fischer _ , Nov 13 2018 ●

► [A162478] 1,2,14,88,566,3722,24856,167868,1143462,7841434,54065574,374437 404,2602879712,18150990238,126918338116,889551010728,6247598686710,439588 81741086,309801915943318,2186512103767096,15452093394793006 ★ Expansion of 1 / sqrt(1 - 4x / (1 - x) ^ 4). ● a(0) = 1; a(n) = (2 / n) * Sum _{ k=0..n - 1 } (n + k) * binomial(n + 2 - k,3) * a(k). - _ Seiichi Manyama _ , Mar 28 2023 ●

► [A109113] 2,14,90,582,3762,24318,157194,1016118,6568290,42458094,27445343 4,1774094886,11467929618,74129862366,479182963050,3097487365398,200224730 81538,129427300585422,836631222757146,5408069238299142 ★ a(n) = 6a(n - 1) + 3a(n - 2), a(0)=2, a(1)=14. ● a(n) = ((3 + 2 * sqrt(3)) ^ (n + 1) + (3 - 2 * sqrt(3)) ^ (n + 1)) / 3. ●

► [A288470] 1,2,14,92,646,4652,34124,253528,1901638,14368844,109208164,8339 81128,6394017436,49185717752,379438594136,2934361958192,22741538394694,17 6582855512588,1373431963785332,10698376362421096,83447762846703796,65169 0159076273192,509505157142032426 4,3987444911546993915 2,3123507613707345 41596 ★ a(n) = Sum _{ k=0..n } binomial(n,k) * binomial(2 * n,2 * k). ● a(n) = hypergeom([- n, - n,1 / 2 - n],[1 / 2,1], - 1). ●

► [A351857] 2,14,92,654,4752,35204,264112,2000526,15264866,117161264,903533 380,6995547780,54343476072,423360920528,3306313730592,25876855432846,2029 09132368942,1593755466338030,12537009118650016,98753463725849904,7788259 17274945408,614906982656473878 0 ★ Number of nonnegative integer solutions to n = x _ 1 + x _ 2 + ... + x _ (2 * n) + 2 * y _ 1 + 2 * y _ 2 + ... + 2 * y _ (2 * n). ● a(n) = [x ^ n] (1 / ((1 - x) * (1 - x ^ 2))) ^ (2 * n). ● a(n) = Sum _{ k = 0..floor(n / 2) } C(3 * n - 2 * k - 1,n - 2 * k) * C(2 * n + k - 1,k). ● a(n) = Sum _{ k = 0..n } (- 1) ^ k * C(5 * n - k - 1,n - k) * C(2 * n + k - 1,k). ●

► [A141146] 0,2,14,96,664,4660,33144,238448,1732112,12685428,93552700,69407 2720,5176136640,38777105120,291661779920,2201518518240,16670124621472,126 586920736564,963723103197516,7354034055776864,56236603567496720 ★ Number of linear arrangements of n blue, n red and n green items such that first and last elements are blue but there are no adjacent items of the same color. ● a(n) = Sum[k=0..[n / 2]] binomial(n - 1,2k) * binomial(2k,k) * binomial(n - 1 + k,k + 1) * 2 ^ (n - 1 - 2k). ●

► [A286445] 0,2,14,97,398,1290,3366,7731,15888,30248,53850,91147,147496,2302 90,348148,512457,736204,1035986,1430420,1942691,2598470,3429064,4468784,57 58755,7343670 ★ Number of non - equivalent ways to tile an n X n X n triangular area with three 2 X 2 X 2 triangular tiles and an appropriate number (= n ^ 2 - 12) of 1 X 1 X 1 tiles. ● a(n) = (n ^ 6 - 9 * n ^ 5 + 6 * n ^ 4 + 165 * n ^ 3 - 447 * n ^ 2 - 372 * n + 1736) / 36 + IF(MOD(n, 2) = 1, - n ^ 2 + 6 * n - 9) / 2 + IF(MOD(n, 3) = 0, - 2) / 9 for n >= 4. ●

► [A109808] 2,14,98,686,4802,33614,235298,1647086,11529602,80707214,5649504 98,3954653486,27682574402,193778020814,1356446145698,9495123019886,664658 61139202,465261027974414,3256827195820898,22797790370746286,159584532595 224002,1117091728166568014 ★ a(n) = 2 * 7 ^ (n - 1). ● a(n) = 2 * 7 ^ (n - 1); a(n) = 7 * a(n - 1) where a(1) = 2. ●

► [A370617] 1,2,14,98,726,5522,42770,335512,2656998,21195944,170076214,137 1181110,11098310730,90128497032,734008622872,5992486341248,490280473536 70,401885885751630,3299812135410080,27134786911366212,22343363527282012 6,1842041118321640390 ★ Coefficient of x ^ n in the expansion of 1 / (1 - x - x ^ 2) ^ (2 * n). ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(2 * n + k - 1,k) * binomial(3 * n - k - 1,n - 2 * k). ●

► [A037719] 2,14,99,696,4874,34118,238827,1671792,11702546,81917822,5734247 55,4013973288,28097813018,196684691126,1376792837883,9637549865184,674628 49056290,472239943394030,3305679603758211,2313975726307480,161978300584 152362,1133848104089066534 ★ Base - 7 digits are, in order, the first n terms of the periodic sequence with initial period 2,0,1,3. ● a(n) = 8 * a(n - 1) - 8 * a(n - 2) + 8 * a(n - 3) - 7 * a(n - 4). ● a(n) = 1 / 100 * (- (2 - 11 * i) * (- i) ^ n - (2 + 11 * i) * i ^ n + 29 * 7 ^ n - 25) where i=sqrt(- 1). ●

► [A074620] 2,14,100,728,5392,40544,308800,2377088,18456832,144295424,11342 08000,8952731648,70896259072,562816507904,4476410675200,35654557073408,28 4296086618112,2268726473129984,18115958466150400,144724547815866368 ★ a(n) = 6 ^ n + 8 ^ n. ● a(n) = 14 * a(n - 1) - 48 * a(n - 2) with a(0)=2, a(1)=14. - _ Vincenzo Librandi _ , Jul 21 2010 ●

► [A037726] 2,14,101,708,4958,34706,242945,1700616,11904314,83330198,583311 389,4083179724,28582258070,200075806490,1400530645433,9803714518032,68626 001626226,480382011383582,3362674079685077,23538718557795540,16477102990 4568782,115339720933198147 4 ★ Base - 7 digits are, in order, the first n terms of the periodic sequence with initial period 2,0,3,1. ● a(n) = 7 * a(n - 1) + a(n - 4) - 7 * a(n - 5). ● a(n) = 1 / 200 * (- 25 * (- 1) ^ n + (8 + 6 * i) * (- i) ^ n + (8 - 6 * i) * i ^ n + 59 * 7 ^ n - 50) where i=sqrt(- 1). ●

► [A051708] 1,2,14,106,838,6802,56190,470010,3968310,33747490,288654574,248 0593546,21400729382,185239360178,1607913963614,13991107041306,1220020828 09110,1065855419418690,9327252391907790,81744134786314410,71736736305279 6678,630308071496717896 2 ★ Number of ways to move a chess rook from the lower left corner to square (n,n), with the rook moving only up or right. ● a(n) is asymptotic to (sqrt(2) / 27) * 9 ^ n / (sqrt(Pi * n)). - Martin J. Erickson, Nov 09 2007 ● a(n + 1) = Sum _{ i=0..n } (C(n - 1,n - i) * Sum _{ k=0..n } (C(k + i,i) * C(n - 1,n - k))). - _ Vladimir Kruchinin _ , Apr 20 2015 ● a(n) = Sum _{ k=0..n } (k + 1) * C(n - 2,k - 1) * hypergeom([2 + k,2 - n],[2], - 1) for n >= 2. - _ Peter Luschny _ , Apr 20 2015 ●

► [A074618] 2,14,106,854,7186,62174,547066,4861094,43437346,389373614,34965 50026,31429887734,282673677106,2543086531454,22882895970586,205921649672 774,1853172776742466,16677944639119694,150098449994264746 ★ a(n) = 5 ^ n + 9 ^ n. ● a(n) = 14 * a(n - 1) - 45 * a(n - 2) with a(0)=2, a(1)=14. - _ Vincenzo Librandi _ , Jul 21 2010 ●

► [A108436] 2,14,106,862,7378,65550,599002,5594942,53181730,512784142,50034 10762,49312114334,490192537586,4909102791694,49482525122490,501626536004 734,5111038278845506,52312236295906830,537605889306476074 ★ Number of returns to the x - axis in all paths from (0,0) to (3n,0) that stay in the first quadrant (but may touch the horizontal axis), consisting of steps u=(2,1), U=(1,2), or d=(1, - 1). ● a(n) = 2 + (1 / n) * Sum _{ j=0..n - 2 } (3n - j) * 2 ^ (n - j) * binomial(n, j) * binomial(2n, n - j - 1) / (n + j + 2). ●

► [A111713] 0,1,2,14,108,930,8700,86598,904176,9804516,109624536,125713613 0,14726063264,175650153588,2128038439176,26133761328150,324786698542440,4 079191750094776,51716838331485472,661227615895716180,8518677674587163584 ★ Number of reduced tree pairs of n - carets. ● a(n) = Sum _{ k=1..n } (- 1) ^ (k + n) * binomial(k + 1,n - k) * (binomial(2 * k,k) / (k + 1)) ^ 2. ●

► [A359108] 1,2,14,110,910,7752,67298,592020,5259150,47071640,423830264,383 4669566,34834267234,317506779800,2902365981900,26597044596360,2442634685 39790,22475757907128 24,207160448827917 20,191230475831922200,176765807110 6087160,163596173585453294 40 ★ a(n) = A128899(2 * n, n) = 2 * binomial(4 * n - 1, 3 * n) for n >= 1 and a(0) = 1. ● a(n) = (8 * (2 * n - 1) * (4 * n - 3) * (4 * n - 1) * a(n - 1)) / (3 * n * (3 * n - 2) * (3 * n - 1))) for n >= 2. ● a(n) = [x ^ (2 * n)] C(x ^ 2) ^ (2 * n), where C(x) = (1 - sqrt(1 - 4 * x)) / (2 * x) is the g.f. of the Catalan numbers A000108. - _ Peter Bala _ , Apr 27 2023 ●

► [A208393] 2,14,117,1017,8838,76806,667476,5800644,50410008,438083928,3807 131472,33085555344,287527231584,2498731184736,21715012867392,18871249004 7552,1639989997584768,14252194920963456,123857499353216256 ★ Number of 2 X n 0..2 arrays with new values 0..2 introduced in row major order and no element equal to more than two of its immediate leftward or upward or right - upward antidiagonal neighbors. ● a(n) = ((4 - sqrt(22)) ^ n * (- 2 + sqrt(22)) + (2 + sqrt(22)) * (4 + sqrt(22)) ^ n) / (8 * sqrt(22)) for n>2. ●

► [A351856] 2,14,119,1086,10252,98735,963832,9502014,94386908,943206264,947 1346755,95491466655,966026045376,9800968460024,99685873633744,1016118049 037630,10377363759903252,106161722891946356,1087696666197827374,11159365 823946907336,114631982782490824420 ★ Number of nonnegative integer solutions to 2 * n = x _ 1 + x _ 2 + ... + x _ n + 2 * y _ 1 + 2 * y _ 2 + ... + 2 * y _ n. ● a(n) = [x ^ (2 * n)] (1 / ((1 - x) * (1 - x ^ 2))) ^ n. ● a(n) = Sum _{ k = 0..n } C(3 * n - 2 * k - 1,2 * n - 2 * k) * C(n + k - 1,k). ● a(n) = Sum _{ k = 0..2 * n } (- 1) ^ k * C(4 * n - k - 1,2 * n - k) * C(n + k - 1,k). ●

► [A199560] 2,14,122,1094,9842,88574,797162,7174454,64570082,581130734,5230 176602,47071589414,423644304722,3812798742494,34315188682442,30883669814 1974,277953028327762,2501577254949854,22514195294498682 ★ (3 * 9 ^ n + 1) / 2. ● a(n) = 9 * a(n - 1) - 4. ● a(n) = 10 * a(n - 1) - 9 * a(n - 2). ●

► [A060468] 1,2,14,124,1314,15272,187692,2399784,31592878,425363952,5830034 720,81072032060,1140994231458,16221323177468,232615054822964,33606826696 55028,48870013251334676,714733339229024336 ★ Number of fair distributions (equal sum) of the integers { 1,..,4n } between A and B = number of solutions to the equation {+- 1 +- 2 +- 3 ... +- 4 * n = 0 } . ● a(n) = coefficient of q ^ 0 in Product _{ k=1..4 * n } (q ^ (- k) + q ^ k). ●

► [A155650] 1,2,14,128,1106,9032,70994,543608,4085186,30275912,222009074,16 14529688,11664504866,83828316392,599858908754,4277376525368,304118206621 46,215703854542472,1526853641242034,10789535445362648 ★ a(n) = 7 ^ n - 6 ^ n + 1. ● a(n) = 13 * a(n - 1) - 42 * a(n - 2) + 30 with a(0)=1, a(1)=2. [_ Vincenzo Librandi _ , Jul 21 2010] ●

► [A363983] 1,2,14,128,1310,14252,161168,1872096,22179102,266766500,3247293 764,39914850560,494587904720,6170138404640,77420709800000,9763087695601 2,1236539137484931 0,1572142889946208 20,2005631418267291740 ★ a(n) = Sum _{ k = floor((n + 1) / 2)..n } (- 1) ^ (n + k) * binomial(n,k) * binomial(n + k - 1,k) * binomial(2 * k,n). ● a(2 * n) = (- 1) ^ n * (2 / 3) * (3 * n)! / n! ^ 3 * hypergeom([3 * n, n + 1 / 2, - n],[n + 1, 1 / 2], 1) for n >= 1. ● a(2 * n + 1) = 2 * binomial(4 * n + 1, 2 * n + 1) * binomial(4 * n + 1, 2 * n) * hypergeom([- n, - (2 * n + 1), - (2 * n + 1) / 2], [- (4 * n + 1), - (4 * n + 1) / 2], 1). ●

► [A246481] 2,14,132,484,1734,4386,10376,20840,39690,68950,115212,181644,278222,409514,589584,824656,1133586,1524510,2021780,2635700,3396822,4317874,5436312,6767544,8356634 ⋆ Number of length 2 + 3 0..n arrays with no pair in any consecutive four terms totalling exactly n. ● a(n) = 5 * n - 11 * n ^ 2 + 10 * n ^ 3 - 4 * n ^ 4 + n ^ 5 for n even. ● a(n) = 9 - 10 * n - 4 * n ^ 2 + 10 * n ^ 3 - 4 * n ^ 4 + n ^ 5 for n odd. ●

► [A073553] 2,14,134,1334,13334,133334,1333334,13333334,133333334,1333333334,13333333334,133333333334,1333333333334,13333333333334,133333333333334,1333333333333334,13333333333333334,133333333333333334,1333333333333333334,13333333333333333334,133333333333333333334,1333333333333333333334,13333333333333333333334,133333333333333333333334,1333333333333333333333334 ⋆ Number of Fibonacci numbers F(k), k <= 10 ^ n, which end in 5. ● a(n) = (2 * 10 ^ n + 10) / 15. - _ Robert Gerbicz _ , Sep 06 2002 ●

► [A144097] 1,2,14,134,1482,17818,226214,2984206,40503890,561957362,7934063678,113622696470,1646501710362,24098174350986,355715715691350,5289547733908510,79163575684710818,1191491384838325474 ⋆ The 4 - Schroeder numbers: a(n) = number of lattice paths (Schroeder paths) from (0,0) to (3n,n) with unit steps N=(0,1), E=(1,0) and D=(1,1) staying weakly above the line y = 3x. ● a(n) = Sum _{ k=0..n } binomial(n,k) * binomial(3 * n + k + 1, n) / (3 * n + k + 1). ● a(n) = (1 / n) * Sum _{ k=1..n } 2 ^ k * binomial(n,k) * binomial(3 * n,k - 1) for n > 0. (End) ● a(n) = 2 * hypergeom([1 - n, - 3 * n], [2], 2) for n > = 1. (End) ● a(n) = (1 / n) * Sum _{ k=0..n - 1 } (- 1) ^ k * 2 ^ (n - k) * binomial(n,k) * binomial(4 * n - k,n - 1 - k) for n > 0. - _ Seiichi Manyama _ , Aug 09 2023 ●

► [A196791] 1,2,14,158,1886,22622,271454,3257438,39089246,469070942,5628851294,67546215518,810554586206,9726655034462,116719860413534,1400638324962398,16807659899548766,201691918794585182,2420303025535022174 ⋆ a(n) = T(9,n), array T given by A047848. ● a(n) = (12 ^ n + 10) / 11; a(0)=1, a(n) = 12 * a(n - 1) - 10. ●

► [A141012] 0,2,14,170,2198,28562,371294,4826810,62748518,815730722,10604499374,137858491850,1792160394038,23298085122482,302875106592254,3937376385699290,51185893014090758 ⋆ a(0) = 0, a(n) = 13 ^ (n - 1) + 1. ● a(n) = 14 * a(n - 1) - 13 * a(n - 2), n > 2. ● a(n) = 13 * a(n - 1) - 12, n > 1. - _ Vincenzo Librandi _ , Sep 17 2011 ●

► [A090300] 2,14,198,2786,39202,551614,7761798,109216786,1536796802,21624372014,304278004998,4281516441986,60245508192802,847718631141214,11928306344169798,167844007449518386,2361744410637427202 ⋆ a(n) = 14 * a(n - 1) + a(n - 2), starting with a(0) = 2 and a(1) = 14. ● a(n) = 14 * a(n - 1) + a(n - 2), starting with a(0) = 2 and a(1) = 14. ● a(n) = (7 + sqrt(50)) ^ n + (7 - sqrt(50)) ^ n. ●

► [A242876] 2,14,384,52362,25309575,49866168063 ⋆ Number of n X n nonograms (hanjie) which can be solved uniquely. ● a(n) >= F(n) ^ 2 * a(n - 1), since there are F(n) ways to fill the last row (resp., column) such that the first and last squares are filled and no consecutive squares are unfilled. These configurations can be solved without looking at the other rows or columns and so allow expanding an (n - 1) X (n - 1) configuration to an n X n configuration. Thus a(n) >> phi ^ (n * (n + 1)). (F(n) is the n - th Fibonacci number, A000045.) - _ Charles R Greathouse IV _ , Sep 02 2014 ●

► [A267711] 0,1,2,15,16,17,30,31,32,45,46,47,60,61,62,75,76,77,90,91,92,105,106,107,120 ⋆ Numbers k such that k mod 3 = k mod 5. ● a(n) = (1 / 3) * (15 * n - 12 * cos((2 * Pi * n) / 3) + 4 * sqrt(3) * sin((2 * Pi * n) / 3) - 27). ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n > 4. - _ Colin Barker _ , Jan 28 2016 ●

► [A022117] 2,15,17,32,49,81,130,211,341,552,893,1445,2338,3783,6121,9904,16025,25929,41954,67883,109837,177720,287557,465277,752834 ⋆ Fibonacci sequence beginning 2, 15. ● a(n) = a(n - 1) + a(n - 2). - _ Wesley Ivan Hurt _ , Oct 01 2021 ●

► [A041797] 1,2,15,17,49,164,213,590,803,15847,16650,49147,65797,246538,558873,805411,6196750,13198911,534153190,1081505291,8104690227,9186195518,26477081263,88617439307,115094520570 ⋆ Denominators of continued fraction convergents to sqrt(419). ● a(n) = 540349940 * a(n - 18) - a(n - 36) for n>35. - _ Vincenzo Librandi _ , Dec 24 2013 ●

► [A041289] 1,1,2,15,17,100,217,317,534,851,1385,3621,19490,23111,181267,204378,385645,9459858,9845503,19305361,144983030,164288391,966424985,2097138361,3063563346 ⋆ Denominators of continued fraction convergents to sqrt(157). ● a(n) = 9664236 * a(n - 17) + a(n - 34) for n>33. [_ Bruno Berselli _ , Dec 14 2013] ●

► [A042685] 1,1,2,15,17,236,253,2007,2260,4267,249746,254013,503759,3780326,4284085,59473431,63757516,505776043,569533559,1075309602,62937490475,64012800077,126950290552,952664833941,1079615124493 ⋆ Denominators of continued fraction convergents to sqrt(872). ● a(n) = 252006 * a(n - 10) - a(n - 20) for n>19. - _ Vincenzo Librandi _ , Dec 21 2013 ●

► [A169597] 2,15,21,34,40,53,59,72,78,91,97,110,116,129,135,148,154,167,173,186,192,205,211,224,230 ⋆ Numbers that are congruent to { 2, 15 } mod 19. ● a(n) = (38 * n + 7 * (- 1) ^ n - 23) / 4. - _ Vincenzo Librandi _ , Jan 06 2013, modified Jul 07 2015 ● a(n) = a(n - 1) + a(n - 2) - a(n - 3). - _ Vincenzo Librandi _ , Jan 06 2013 ●

► [A175828] 1,2,15,26,53,74,115,146,201,242,311,362,445,506,603,674,785,866,991,1082,1221,1322,1475,1586,1753 ⋆ a(n) = (n * (6 * n + 1) + (n + 2) * (- 1) ^ n) / 2. ● a(n) - a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) + a(n - 4) - a(n - 5) = 0 for n>4. ●

► [A153080] 2,15,28,41,54,67,80,93,106,119,132,145,158,171,184,197,210,223,236,249,262,275,288,301,314 ⋆ a(n) = 13 * n + 2. ● a(n) = 2 * a(n - 1) - a(n - 2). - _ Vincenzo Librandi _ , Feb 25 2012 ●

► [A212975] 1,2,15,28,65,102,175,248,369,490,671,852,1105,1358,1695,2032,2465,2898,3439,3980,4641,5302,6095,6888,7825 ⋆ Number of (w,x,y) with all terms in { 0,...,n } and even range. ● a(n) = (n + 1) * (2 * n * (n + 2) + 3 * (- 1) ^ n + 1) / 4. ● a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + a(n - 4) + 2 * a(n - 5) - a(n - 6). ●

► [A128828] 1,2,15,28,65,120 ⋆ The number of regular hexagons found by constructing n equally - spaced points on each side of the hexagon and drawing lines parallel to the hexagon side. ● a(n) = (11 * n ^ 4 + 78 * n ^ 3 + 1413 * n ^ 2 - 2322 * n + 324) / 324 when n = 3k, ●

► [A243469] 1,2,15,32,239,510,3809,8128,60705,129538,967471,2064480,15418831,32902142,245733825,524369792,3916322369,8357014530,62415424079,133187862688,994730462895,2122648788478,15853271982241,33829192752960,252657621252961 ⋆ Denominators of the rational convergents to the periodic continued fraction 1 / (2 + 1 / (7 + 1 / (2 + 1 / (7 + ...)))). ● a(2 * n + 1) = product { k = 1..n } (14 + 4 * cos ^ 2(k * Pi / (2 * n + 1)); ● a(2 * n) = 2 * product { k = 1..n - 1 } (14 + 4 * cos ^ 2(k * Pi / (2 * n)). ●

► [A295367] 1,2,15,37,82,161,299,532,921,1563,2616,4335,7133,11692,19097,31095,50534,82009,132963,215434,348903,564889,914392,1479931,2395025 ⋆ Solution of the complementary equation a(n) = a(n - 1) + a(n - 2) + b(n - 1) * b(n - 2), where a(0) = 1, a(1) = 2, b(0) = 3, b(1) = 4, and (a(n)) and (b(n)) are increasing complementary sequences. ● a(n) / a(n - 1) - > (1 + sqrt(5)) / 2 = golden ratio (A001622). ●

► [A180223] 0,2,15,39,74,120,177,245,324,414,515,627,750,884,1029,1185,1352,1530,1719,1919,2130,2352,2585,2829,3084 ⋆ a(n) = (11 * n ^ 2 - 7 * n) / 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) with n>2. - _ Bruno Berselli _ , Aug 19 2010 ●

► [A033568] 1,2,15,40,77,126,187,260,345,442,551,672,805,950,1107,1276,1457,1650,1855,2072,2301,2542,2795,3060,3337 ⋆ Second pentagonal numbers with odd index: a(n) = (2 * n - 1) * (3 * n - 1). ● a(n) = a(n - 1) + 12 * n - 11 (with a(0)=1). - _ Vincenzo Librandi _ , Nov 17 2010 ●

► [A249997] 1,2,15,40,221,702,3355,11780,52041,193402,817895,3138720,12953461,50618102,206059635,813476860,3286192481,13047914802,52482224575,209057202200,838843897101,3347530323502,13413657088715,53584020970740,214547906035321 ⋆ Expansion of 1 / ((1 - x) * (1 + 3 * x) * (1 - 4 * x)). ● a(n) = (- 1) ^ n * 3 ^ (n + 2) / 28 + 4 ^ (n + 2) / 21 - 1 / 12. - _ R. J. Mathar _ , Jan 09 2015 ●

► [A254856] 1,2,15,40,377,1026,9775,26624,253761,691186,6587999,17944200,171034201,465858002,4440301215,12094363840,115276797377,313987601826,2992756430575,8151583283624,77696390397561,211627177772386,2017113393905999,5494155038798400 ⋆ Indices of centered heptagonal numbers (A069099) that are also octagonal numbers (A000567). ● a(n) = a(n - 1) + 26 * a(n - 2) - 26 * a(n - 3) - a(n - 4) + a(n - 5). ●

► [A162256] 2,15,45,98,180,297,455,660,918,1235,1617,2070,2600,3213,3915,4712,5610,6615,7733,8970,10332,11825,13455,15228,17150 ⋆ a(n) = (2 * n ^ 3 + 5 * n ^ 2 - 3 * n) / 2. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). (End) ●

► [A229013] 2,15,46,101,186,307,470,681,946,1271,1662,2125,2666,3291,4006,4817,5730,6751,7886,9141,10522,12035,13686,15481,17426 ⋆ Number of arrays of median of three adjacent elements of some length - 5 0..n array, with no adjacent equal elements in the latter. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>4. ●

► [A256328] 0,2,15,47,108,206,351,551,816,1154,1575,2087,2700,3422,4263,5231,6336,7586,8991,10559,12300,14222,16335,18647,21168 ⋆ Number of partitions of 6 n into exactly 4 parts. ● a(n) = (- 1 + (- 1) ^ n + 6 * n ^ 2 + 12 * n ^ 3) / 8. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - 2 * a(n - 3) + 3 * a(n - 4) - a(n - 5) for n>4. ●

► [A041719] 1,2,15,47,109,265,1699,20653,22352,110061,132413,242474,374887,1367135,5843427,112392248,455412419,1478629505,1934041924,3412671429,5346713353,24799524841,30146238194,386554383169,2349472537208 ⋆ Denominators of continued fraction convergents to sqrt(379). ● a(n) = 25882394441081380 * a(n - 30) - a(n - 60) for n>59. - _ Vincenzo Librandi _ , Dec 23 2013 ●

► [A290631] 2,15,50,119,234,407,650,975,1394,1919,2562,3335,4250,5319,6554,7967,9570,11375,13394,15639,18122,20855,23850,27119,30674 ⋆ a(n) = (n ^ 2 + 1) * (2 * n - 1). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n > 4. (End) ●

► [A007972] 2,15,52,129,266,487,820,1297,1954,2831,3972,5425,7242,9479,12196,15457,19330,23887,29204,35361,42442,50535,59732,70129,81826 ⋆ Number of permutations that are 2 ”block reversals” away from 12...n. ● a(n) = (n ^ 4 + 6 * n ^ 3 + 11 * n ^ 2 - 12 * n + 6) / 6 (conjectured). - _ Giovanni Resta _ , Jun 08 2015 ●

► [A015520] 0,1,2,15,52,269,1110,5179,22568,102105,452458,2028071,9033180,40375141,180115262,804357075,3589982032,16027891889,71545586130,319397983039,1425797413508,6364972640445,28413716829478 ⋆ a(n) = 2 * a(n - 1) + 11 * a(n - 2), a(0) = 0, a(1) = 1. ● a(n) = 2 * a(n - 1) + 11 * a(n - 2). ● a(n) = Sum _{ k=0..n } binomial(n, 2 * k + 1) * 12 ^ k. - _ Paul Barry _ , Sep 29 2004 ● a(n) = 11 ^ n * (A ^ n - B ^ n) / (4 * sqrt(3)) where A = 1 / (2 * sqrt(3) - 1) and B = - 1 / (2 * sqrt(3) + 1). (End) ● a(n) = (Ap ^ n - Am ^ n) / (Ap - Am), where Ap = 1 + 2 * sqrt(3) and Am = 1 - 2 * sqrt(3). (Binet - de Moivre type formula.) This coincides with the preceding formula. - _ Wolfdieter Lang _ , Feb 17 2018 ●

► [A098520] 0,1,2,15,52,285,1206,6027,27560,134073,633130,3062279,14676828,71045845,343195230,1665555075,8084777040,39343835505,191627687250,934855945215,4565076327300,22318461756045,109211684822790,534907610833275,2621997452787192 ⋆ E.g.f. exp(x) * BesselI(1,4 * x) / 2. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n, k) * binomial(n - k, k + 1)4 ^ k. ● a(n) = 2 ^ (n - 1) * GegenbauerC(n - 1, - n, - 1 / 4). - _ Peter Luschny _ , May 08 2016 ●

► [A056078] 0,0,2,15,54,141,306,588,1036,1710,2682,4037,5874,8307,11466,15498,20568,26860,34578,43947,55214,68649,84546,103224,125028 ⋆ Number of proper T _ 1 - hypergraphs with 3 labeled nodes and n hyperedges. ● a(n) = C(n + 5,5) - 6 * C(n + 3,3) + 6 * C(n + 2,2) + 3 * C(n + 1,1) - 6 * C(n,0). ● a(n + 1) = (n ^ 4 + 20 * n ^ 3 + 35 * n ^ 2 - 140 * n + 84) * n / 120. ● a(n) = (- 240 + 394 * n - 135 * n ^ 2 - 35 * n ^ 3 + 15 * n ^ 4 + n ^ 5) / 120. ●

► [A126019] 1,2,15,58,239,954,3823,15290,61167,244666,978671,3914682,15658735,62634938,250539759,1002159034,4008636143,16034544570,64138178287,256552713146,1026210852591,4104843410362,16419373641455,65677494565818 ⋆ a(0)=1, a(1)=2; for n>1, a(n)=3 * a(n - 1) + 4 * a(n - 2) + 5. ● a(n) = (28 * 4 ^ n + 27(- 1) ^ n - 25) / 30. ●

► [A071237] 0,2,15,60,170,390,777,1400,2340,3690,5555,8052,11310,15470,20685,27120,34952,44370,55575,68780,84210,102102,122705,146280,173100 ⋆ a(n) = n * (n + 1) * (n ^ 2 + 1) / 2. ● a(0) = 0, a(1) = 2; for n >= 2, a(n) = ceiling(n ^ 5 / (2 * n - 2)) - 1. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>4, a(0)=0, a(1)=2, a(2)=15, a(3)=60, a(4)=170. [_ Yosu Yurramendi _ , Sep 03 2013] ●

► [A006470] 2,15,60,175,420,882,1680,2970,4950,7865,12012,17745,25480,35700,48960,65892,87210,113715,146300,185955,233772,290950,358800,438750,532350 ⋆ Number of tree - rooted planar maps with 3 faces and n vertices and no isthmuses. ● a(n) = (n + 1) * binomial(n + 3, 4). ● a(n) = binomial(n + 2, 2) * binomial(n + 4, 3) / 2; ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). ● a(n) = n * (n + 1) ^ 2 * (n + 2) * (n + 3) / 24. (End) ●

► [A084169] 0,1,2,15,60,319,1470,7267,34680,168435,810898,3921103,18918900,91381991,441150502,2130258075,10285325040,49663079099,239791814010,1157823924167,5590452446700,26993130847215,130334271942158 ⋆ A Pell Jacobsthal product. ● a(n) = (2 ^ n - (- 1) ^ n) * ((1 + sqrt(2)) ^ n - (1 - sqrt(2)) ^ n) / (6 * sqrt(2)). ●

► [A267596] 1,2,15,63,255,1023,4095,16383,65535,262143,1048575,4194303,16777215,67108863,268435455,1073741823,4294967295,17179869183,68719476735,274877906943,1099511627775,4398046511103,17592186044415,70368744177663,281474976710655 ⋆ Decimal representation of the n - th iteration of the "Rule 173" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = 5 * a(n - 1) - 4 * a(n - 2) for n>3. ●

► [A176972] 2,15,64,365,2430,16843,117692,823593,5764858,40353671,282475320,1977326821,13841287286,96889010499,678223072948,4747561510049,33232930569714,232630513987327,1628413597910576,11398895185373277 ⋆ a(n) = 7 ^ n + 7 * n + 1. ● a(n) = 7 * a(n - 1) - 42 * (n - 1) + 1, with n > 0. For n=5, a(5) = 7 * 2430 - 42 * 4 + 1 = 16843. [_ Bruno Berselli _ , May 18 2010] ● a(n) = 9 * a(n - 1) - 15 * a(n - 2) + 7 * a(n - 3). ●

► [A091135] 2,15,69,252,804,2349,6455,16962,43086,106587,258153,614520,1441928,3342489,7667883,17432766,39321810,88080615,196083965,434110740,956301612,2097152325,4580180319,9965666682,21609054614 ⋆ Number of Dyck paths of semilength n + 4, having exactly two long ascents (i.e., ascents of length at least two). ● a(n) = (n ^ 2 + 9 * n + 20) / 2 + 2 ^ (n + 1) * (n ^ 2 + 3 * n - 4). ● a(n) = 9 * a(n - 1) - 33 * a(n - 2) + 63 * a(n - 3) - 66 * a(n - 4) + 36 * a(n - 5) - 8 * a(n - 6) for n>5. - _ Colin Barker _ , Apr 09 2019 ●

► [A308914] 2,15,75,308,1120,3744,11760,35200,101376,282880,768768,2042880,5324800,13647872,34467840,85917696,211681280,516096000,1246429184,2984509440,7090470912,16724787200,39190528000,91276443648,211392921600 ⋆ Number of unordered pairs of non - intersecting non - selfintersecting paths with nodes that cover all vertices of a convex n - gon, n > 3. ● a(n) = (1 / 3) * n * (n - 1) * (n - 3) * (n + 4) * 2 ^ (n - 8). ● a(n) = 10 * a(n - 1) - 40 * a(n - 2) + 80 * a(n - 3) - 80 * a(n - 4) + 32 * a(n - 5) for n > 8. ●

► [A099743] 0,0,2,15,75,313,1179,4161,14051,45993,147195,463345,1440723,4438905,13582955,41350977,125404611,379228489,1144370139,3447856017,10375942835,31198607385,93749962827,281584384225,845476670115 ⋆ Number of permutations with exactly 1 valley which avoid the pattern 1324. ● a(n) = - 7 * 2 ^ (n - 3) + 3 ^ n - 9 * 2 ^ (n - 4) * n - 2 ^ (n - 4) * n ^ 2. ● a(n) = 9 * a(n - 1) - 30 * a(n - 2) + 44 * a(n - 3) - 24 * a(n - 4) for n>4. ●

► [A283842] 0,0,0,2,15,75,319,1256,4754,17624,64613,235465,855293,3101198,11233632,40670374,147200107,532681447,1927472251,6974085108,25233326446,91296730996,330318071345,1195108798917,4323957832185 ⋆ Expansion of x ^ 3 * (2 - 3 * x) / ((1 - x) ^ 2 * (1 - 2 * x) * (1 - 5 * x + 5 * x ^ 2)). ● a(n) = 2 - 2 ^ n + (2 ^ (- 1 - n) * (- (5 - sqrt(5)) ^ n * (3 + sqrt(5)) - (- 3 + sqrt(5)) * (5 + sqrt(5)) ^ n)) / sqrt(5) + n. - _ Colin Barker _ , Mar 29 2017 ●

► [A102289] 0,1,2,15,76,665,5286,56287,597080,7601841,99702730,1484554511,23049638052,393702612745,7036703742446,135702811542495,2737989749177776,58848546456947297,1321063959370833810,31310238786268648591,773291778432688011260,20031956775840631151481 ⋆ Total number of odd lists in all sets of lists, cf. A000262. ● a(n) = n * a(n - 1) + n ^ 2 * a(n - 2) - (n - 2) ^ 2 * n * a(n - 3). - _ Vaclav Kotesovec _ , Sep 29 2013 ●

► [A036239] 0,2,15,80,375,1652,7035,29360,120975,494252,2007555,8120840,32753175,131818052,529680075,2125927520,8525298975,34165897052,136857560595,548011897400,2193792030375,8780400395252,35137296305115,140596265198480 ⋆ Number of 2 - element intersecting families of an n - element set; number of 2 - way interactions when 2 subsets of power set on { 1..n } are chosen at random. ● a(n) = 1 / 2 * (4 ^ n - 3 ^ n - 2 ^ n + 1). ● a(n) = 3 * StirlingS2(n + 1,4) + 2 * StirlingS2(n + 1,3). - _ Ross La Haye _ , Jan 10 2008 ● a(0)=0, a(1)=2, a(2)=15, a(3)=80, a(n)=10 * a(n - 1) - 35 * a(n - 2) + 50 * a(n - 3) - 24 * a(n - 4). ●

► [A002740] 0,0,0,2,15,84,420,1980,9009,40040,175032,755820,3233230,13728792,57946200,243374040,1017958725,4242920400,17631691440,73078721100,302202005490,1247182879800,5137916074200,21132472200840,86794082253450 ⋆ Number of tree - rooted bridgeless planar maps with two vertices and n faces. ● a(n + 3) = (2 * (n + 2))! / (2 * n! * (n + 3)!). - _ Wolfdieter Lang _ ● a(n + 2) = Sum _{ k=0..n } k * binomial(k + n, k). - _ Benoit Cloitre _ , Oct 25 2003 ● a(n) = Sum _{ k=2..n } Sum _{ j=1..n } binomial(2 * n,n) / (2 * (n + 1)), n >= 0. - _ Zerinvary Lajos _ , May 09 2007 ● a(n) = (n - 2) * binomial(2n - 2, n - 2) / 2 + 0 ^ n. - _ Wesley Ivan Hurt _ , Sep 24 2014 ●

► [A178750] 0,0,2,15,84,431,2167,10847,54249,271262,1356331,6781678,33908414,169542094,847710496,4238552509,21192762578,105963812925,529819064661,2649095323341,13245476616743,66227383083756,331136915418825,1655684577094172,8278422885470908 ⋆ Partial sums of floor(5 ^ n / 9). ● a(n) = round((5 * 5 ^ n - 18 * n - 18) / 36). ● a(n) = floor((5 * 5 ^ n - 18 * n - 5) / 36). ● a(n) = ceiling((5 * 5 ^ n - 18 * n - 31) / 36). ● a(n) = a(n - 6) + 434 * 5 ^ (n - 5) - 3, n > 6. ● a(n) = 7 * a(n - 1) - 11 * a(n - 2) + 4 * a(n - 3) + 7 * a(n - 4) - 11 * a(n - 5) + 5 * a(n - 6), n > 5. ●

► [A108475] 1,2,15,84,493,2870,16731,97512,568345,3312554,19306983,112529340,655869061,3822685022,22280241075,129858761424,756872327473,4411375203410,25711378892991,149856898154532,873430010034205,5090723162050694,29670908962269963 ⋆ Expansion of (1 - 3 * x) / (1 - 5 * x - 5 * x ^ 2 + x ^ 3). ● a(n) = 5 * a(n - 1) + 5 * a(n - 2) - a(n - 3). ● a(n) = Sum _{ k=0..n } Sum _{ j=0..n } binomial(2(n - k), j) * binomial(2 * k, j)2 ^ j. ● a(n) = (4 * (- 1) ^ n - (3 - 2 * sqrt(2)) ^ n * (- 2 + sqrt(2)) + (2 + sqrt(2)) * (3 + 2 * sqrt(2)) ^ n) / 8. - _ Colin Barker _ , Nov 04 2016 ● a(n) = (- 1) ^ n * Re(sqrt(1 + i) * cos((n + 1 / 2) * arccos(i)) * sin(n * arccos(i)) + 1), where i = sqrt(- 1). - _ Daniel Suteu _ , Jun 23 2018 ●

► [A153445] 2,15,86,634,3956,18549,69065 ⋆ Take n points in general position in space; draw all planes through all triples of these points; sequence gives number of connected regions formed. ● a(n)=1 + (n ^ 9 - 9n ^ 8 + 6n ^ 7 + 180n ^ 6 - 663n ^ 5 + 369n ^ 4 + 3536n ^ 3 - 8964n ^ 2 + 2952n) / 1296 ●

► [A275794] 2,15,88,513,2990,17427,101572,592005,3450458,20110743,117214000,683173257,3981825542,23207779995,135264854428,788381346573,4595023225010,26781758003487,156095524795912,909791390771985,5302652819835998,30906125528244003 ⋆ One half of the y members of the positive proper solutions (x = x1(n), y = y1(n)) of the first class for the Pell equation x ^ 2 - 2 * y ^ 2 = + 7 ^ 2. ● a(n) = 6 * a(n - 1) - a(n - 2) for n >= 1, with a(- 1) = - 3 and a(0) = 2. ● a(n) = (((3 - 2 * sqrt(2)) ^ n * (- 9 + 4 * sqrt(2)) + (3 + 2 * sqrt(2)) ^ n * (9 + 4 * sqrt(2)))) / (4 * sqrt(2)). - _ Colin Barker _ , Sep 28 2016 ●

► [A258390] 2,15,98,630,4092,27027,181610,1239810,8582756,60138078,425800564,3042175500,21906338040,158830645635,1158564772890,8496271312650,62604582047700,463275674416170,3441483002640540,25654715940496500,191852749820189640,1438859966711035950 ⋆ Number of 2n - length strings of balanced parentheses of exactly 2 different types that are introduced in ascending order. ● a(n) = (2 * n - 1) * (6 * n * a(n - 1) - 8 * (2 * n - 3) * a(n - 2)) / (n * (n + 1)) for n >2, a(2)=2, a(n)=0 for n<2. ●

► [A081018] 0,2,15,104,714,4895,33552,229970,1576239,10803704,74049690,507544127,3478759200,23843770274,163427632719,1120149658760,7677619978602,52623190191455,360684711361584,2472169789339634,16944503814015855,116139356908771352,796030994547383610 ⋆ a(n) = (Lucas(4n + 1) - 1) / 5, or Fibonacci(2n) * Fibonacci(2n + 1), or A081017(n) / 5. ● a(n) = 8 * a(n - 1) - 8 * a(n - 2) + a(n - 3). ● a(n) = Fibonacci(3) + Fibonacci(7) + Fibonacci(11) + ... + Fibonacci(4n + 3). ● a(n) = - (1 / 5) + (1 / 10) * (7 / 2 - (3 / 2) * sqrt(5)) ^ n - (1 / 10) * (7 / 2 - (3 / 2) * sqrt(5)) ^ n * sqrt(5) + (1 / 10) * sqrt(5) * (7 / 2 + (3 / 2) * sqrt(5)) ^ n + (1 / 10) * (7 / 2 + (3 / 2) * sqrt(5)) ^ n. - _ Paolo P. Lava _ , Oct 06 2008 ●

► [A006675] 0,0,2,15,104,770,6264,56196,554112,5973264,69998400,886897440,12089295360,176484597120,2748022986240,45472329504000,796983880089600,14751208762214400,287543058350284800 ⋆ Number of paths through an array. ● a(n) = n * n! * (H(n) - 1) where H(n) = Sum _{ k=1..n } 1 / k. ●

► [A037733] 2,15,105,738,5168,36177,253239,1772676,12408734,86861139,608027973,4256195814,29793370700,208553594901,1459875164307,10219126150152,71533883051066,500737181357463,3505160269502241 ⋆ Base 7 digits are, in order, the first n terms of the periodic sequence with initial period 2,1,0,3. ● a(n) = 7a(n - 1) + a(n - 4) - 7a(n - 5). ●

► [A037492] 2,15,107,750,5252,36765,257357,1801500,12610502,88273515,617914607,4325402250,30277815752,211944710265,1483612971857,10385290803000,72697035621002,508879249347015,3562154745429107 ⋆ Base 7 digits are, in order, the first n terms of the periodic sequence with initial period 2,1. ● a(n) = 7 * a(n - 1) + a(n - 2) - 7 * a(n - 3). ●

► [A037740] 2,15,108,756,5294,37059,259416,1815912,12711386,88979703,622857924,4360005468,30520038278,213640267947,1495481875632,10468373129424,73278611905970,512950283341791,3590651983392540 ⋆ Base - 7 digits are, in order, the first n terms of the periodic sequence with initial period 2,1,3,0. ● a(n) = 7 * a(n - 1) + a(n - 4) - 7 * a(n - 5). - _ Charles R Greathouse IV _ , Jan 16 2011 ● a(n) = (63 * 7 ^ n + (7 - (- 1) ^ n) * (25 + 2 * i ^ (n * (n + 1))) - 225) / 200, where i=sqrt(- 1). - _ Bruno Berselli _ , Sep 19 2011 ●

► [A154635] 1,2,15,108,774,5544,39708,284400,2036952,14589216,104492016,748400832,5360254560,38391631488,274971524544,1969422407424,14105550112128,101027866452480,723589630947072,5182549848861696,37118861005211136,265855588948518912 ⋆ Ratio of the sum of the bends of the 5 - dimensional spheres added in the n - th generation of Apollonian packing to the sum of the bends of the initial configuration of seven mutually tangent spheres. ● a(n) = (((4 - sqrt(10)) ^ n * (- 8 + sqrt(10)) + (4 + sqrt(10)) ^ n * (8 + sqrt(10)))) / (12 * sqrt(10)) for n>0. ● a(n) = 8 * a(n - 1) - 6 * a(n - 2) for n>2. ●

► [A162773] 2,15,110,800,5800,42000,304000,2200000,15920000,115200000,833600000,6032000000,43648000000,315840000000,2285440000000,16537600000000,119667200000000,865920000000000,6265856000000000,45340160000000000 ⋆ a(n) = ((2 + sqrt(5)) * (5 + sqrt(5)) ^ n + (2 - sqrt(5)) * (5 - sqrt(5)) ^ n) / 2. ● a(n) = 10 * a(n - 1) - 20 * a(n - 2) for n > 1; a(0) = 2, a(1) = 15. ●

► [A022026] 2,15,112,836,6240,46576,347648,2594880,19368448,144568064,1079070720,8054293504,60118065152,448727347200,3349346516992,24999862747136,186601515909120,1392812676284416,10396095346638848,77597512067973120,579195715157229568 ⋆ Define the sequence T(a(0),a(1)) by a(n + 2) is the greatest integer such that a(n + 2) / a(n + 1) < a(n + 1) / a(n) for n >= 0. This is T(2, 15). ● a(n) = sum of the entries in the 2 X 2 matrix A ^ n where A is the 2 X 2 matrix [4, 4; 3, 4]. ● a(n) = (1 + 7 * sqrt(3) / 12) * (4 + 2 * sqrt(3)) ^ n + (1 - 7 * sqrt(3) / 12) * (4 - 2 * sqrt(3)) ^ n. See Desjarlais and Molina. (End) ● a(n + 1) = ceiling(a(n) ^ 2 / a(n - 1)) - 1 for all n > 0. - _ M. F. Hasler _ , Feb 10 2016 ●

► [A052874] 0,0,2,15,112,925,8556,88249,1007056,12612681,172092340,2541367741,40385290584,687120886621,12461362029676,239945693311185,4888311943969696,105038684764873489,2373935421890157156,56288808913905658981,1397063652149884343080,36219993180755369947941 ⋆ E.g.f.: - x / (- 1 + x) * (exp(- x / (- 1 + x)) - 1). ● a(n) = n! * (LaguerreL(n - 1, - 1) - 1) for n >= 1. - _ Peter Luschny _ , Mar 28 2023 ●

► [A074622] 2,15,113,855,6497,49575,379793,2920695,22542017,174571335,1356217073,10567261335,82560763937,646644482295,5076269583953,39931933598775,314707907280257,2484430327672455,19642812107392433,155514083261229015 ⋆ a

(n) = 7 ^ n + 8 ^ n. ● a(n) = 15 * a(n - 1) - 56 * a(n - 2) with a(0)=2, a(1)=15. - _ Vincenzo Librandi _ , Jul 21 2010 ●

▶ [A246570] 1,2,15,116,1001,9322,89363,881376,8860677,90407666,933482527,9731366060,102259648701,1081810639970,11510355762339,123077391281248,1321739147949829,14248409211657754,154118033900091139,1672053762899099700,18189628173538580233,198362957005290443978 ★ G.f.: Sum _{ n>=0 } x ^ n / (1 - x) ^ (4 * n + 1) * [Sum _{ k=0..2 * n } C(2 * n,k) ^ 2 * x ^ k] ^ 2. ● a(n) = Sum _{ k=0..n } Sum _{ j=0..k } C(2 * n - k - j,k) ^ 2 * C(k,j) ^ 2. ●

▶ [A074621] 2,15,117,945,7857,66825,578097,5062905,44726337,397498185,3547250577,31743856665,284606318817,2554926522345,22955156619057,206361317079225,1855841298759297,16694108359111305,150196195253667537 ★ a(n) = 6 ^ n + 9 ^ n. ● a(n) = 15 * a(n - 1) - 54 * a(n - 2) with a(0)=2, a(1)=15. - _ Vincenzo Librandi _ , Jul 21 2010 ●

▶ [A341929] 1,2,15,118,929,7314,57583,453350,3569217,28100386,221233871,1741770582,13712930785,107961675698,849980474799,6691882122694,52685076506753,414788729931330,3265624762943887,25710209373619766,202416050226014241,1593618192434494162,12546529489249939055,98778617721565018278 ★ Bisection of the numerators of the convergents of cf (1,1,6,1,6,1,...,6,1). ● a(n) = 8 * a(n - 1) - a(n - 2) for n >= 2. ●

▶ [A085228] 2,15,124,153,1237,1328,1537,1628,1794,13793,14091,14797,15095,15668,17234,17532,18238,18536,19109,20244,20542,21115,22117,164867,165869 ★ Diagonal of array A085205. ● a(n) = A085205bi(n, n). ●

▶ [A051407] 2,15,126,1107,9882,88695,797526,7175547,64573362,581140575,5230206126,47071677987,423644570442,3812799539655,34315191073926,308836705316427,2779530304801122,25015772614069935,225141953139208926,2026277577090618867,18236498190328785402 ★ a(n) = 3 ^ n * (3 ^ (n + 1) + 1) / 2. ● a(n) = 12 * a(n - 1) - 27 * a(n - 2) for n>1. ●

▶ [A371580] 1,2,15,126,1211,12544,136668,1543696,17914325,212308682,2558783193,31265632206,386430721728,4822586987324,60686262591525,769167948066520,9810280980482827,125819903217235130,1621648696092783746,20993171222948561746,272848383910348808089 ★ G.f. satisfies A(x) = (1 + x * A(x) ^ (5 / 2) * (1 + x) ^ 2) ^ 2. ● a(n) = 2 * Sum _{ k=0..n } binomial(5 * k + 2,k) * binomial(2 * k,n - k) / (5 * k + 2). ●

▶ [A371585] 1,2,15,130,1263,13210,145254,1655566,19385489,231803136,2818714210,34749228048,433317651224,5455934825956,69267925684377,885756704750960,11397912218979769,147483397060856046,1917785255491649284,25047838828467708506,328444729414573179950 ★ G.f. satisfies A(x) = (1 + x * A(x) ^ (5 / 2) / (1 - x) ^ 2) ^ 2. ● a(n) = 2 * Sum _{ k=0..n } binomial(5 * k + 2,k) * binomial(n + k - 1,n - k) / (5 * k + 2). ●

▶ [A196792] 1,2,15,184,2381,30942,402235,5229044,67977561,883708282,11488807655,149346699504,1941507093541,25239592216022,328114698808275,4265491084507564,55451384098598321,720867993281778162,9371283912663116095 ★ a(n) = T(10,n), array T given by A047848. ● a(n) = (13 ^ n + 11) / 12; a(0)=1, a(n) = 13 * a(n - 1) - 11. ●

▶ [A208402] 2,15,187,2795,43947,700075,11188907,178973355,2863377067,45813246635,733008800427,11728128223915,187650001250987,3002399818689195,48038396293720747,768614337478306475,12297829386768001707 ★ Number of n X 2 0..3 arrays with new values 0..3 introduced in row major order and no element equal to more than two of its immediate leftward or upward or right - upward antidiagonal neighbors. ● a(n) = (8 + 3 * 2 ^ (1 + 2 * n) + 16 ^ n) / 24. ●

▶ [A078365] 2,15,223,3330,49727,742575,11088898,165590895,2472774527,36926027010,551417630623,8234338432335,122963658854402,1836220544383695,27420344506901023,409468947059131650 ★ A Chebyshev T - sequence with Diophantine property. ● a(n)=15 * a(n - 1) - a(n - 2), n >= 1; a(- 1)=15, a(0)=2. ● a(n) = ap ^ n + am ^ n, with ap := (15 + sqrt(221)) / 2 and am := (15 - sqrt(221)) / 2. ● a(n)=(15 / 2) * [15 / 2 + (1 / 2) * sqrt(221)] ^ n - (1 / 2) * [15 / 2 + (1 / 2) * sqrt(221)] ^ n * sqrt(221) + (1 / 2) * sqrt(221) * [15 / 2 - (1 / 2) * sqrt(221)] ^ n + (15 / 2) * [15 / 2 - (1 / 2) * sqrt(221)] ^ n, with n>=0 - _ Paolo P. Lava _ , Jun 19 2008 ●

▶ [A090301] 2,15,227,3420,51527,776325,11696402,176222355,2655031727,40001698260,602680505627,9080209282665,136805819745602,2061167505466695,31054318401746027,467875943531657100,7049193471376602527 ★ a(n) = 15 * a(n - 1) + a(n - 2), starting with a(0) = 2 and a(1) = 15. ● a(n) = 15 * a(n - 1) + a(n - 2), starting with a(0) = 2 and a(1) = 15. ● a(n) = ((15 + sqrt(229)) / 2) ^ n + ((15 - sqrt(229)) / 2) ^ n. ● a(n) = Lucas(n, 15) = 2 * (- i) ^ n * ChebyshevT(n, 15 * i / 2). - _ G. C. Greubel _ , Dec 31 2019 ●

▶ [A217307] 1,2,16,17,115,121,509,821,3251,4721,5749,22760,25301,41673,142950,173819,291714,920561,1222716,2041709,4450031,8559017,9350687,14295199,31150219 ★ Minimal natural number (in decimal representation) with n prime substrings in base - 7 representation (substrings with leading zeros are considered to be nonprime). ● a(n) > 7 ^ floor(sqrt(8 * n - 7) - 1) / 2), for n>0. ● a(n) <= (7 ^ n - 1) / 3, n>0. ● a(n + 1) <= 7 * a(n) + 2. ●

▶ [A022370] 2,16,18,34,52,86,138,224,362,586,948,1534,2482,4016,6498,10514,17012,27526,44538,72064,116602,188666,305268,493934,799202 ★ Fibonacci sequence beginning 2, 16. ● a(n) = 2 * (Fibonacci(n + 2) + 6 * Fibonacci(n)). - _ G. C. Greubel _ , Aug 27 2017 ●

▶ [A228158] 2,16,22,176,222,1776,2222,17776,22222,177776,222222,1777776,2222222,17777776,22222222,177777776,222222222,1777777776,2222222222,177777777776,22222222222,1777777777776,222222222222,17777777777776,2222222222222 ★ Numbers n such that the cardinality of (natural numbers <=n with a first digit of 1) = n / 2. ● a(n) for odd values of n is simply "2" repeated (n + 1) / 2 times (sum as i=1 - >(n / 2) of 10 ^ (i - 1)). For even values of n, it's a(n - 1) * 8. ●

▶ [A212765] 0,1,2,16,24,81,108,256,320,625,750,1296,1512,2401,2744,4096,4608,6561,7290,10000,11000,14641,15972,20736,22464 ★ Number of (w,x,y,z) with all terms in { 0,...,n } , w even and x, y, and z odd. ● a(n)=a(n - 1) + 4 * a(n - 2) - 4 * a(n - 3) - 6 * a(n - 4) + 6 * a(n - 5) + 4 * a(n - 6) - 4 * a(n - 7) - a(n - 8) + a(n - 9). ● a(n)=((2 * n ^ 4 + 6 * n ^ 3 + 6 * n ^ 2 + 4 * n + 1) - (2 * n ^ 3 + 6 * n ^ 2 + 4 * n + 1) * (- 1) ^ n) / 32. - _ Luce ETIENNE _ , Apr 05 2014 ●

▶ [A120069] 1,2,16,32,128,256,4096,8192,32768,65536,524288,1048576,4194304,8388608,268435456,536870912,2147483648,4294967296,34359738368,6871947676 6,274877906944,549755813888,8796093022208 ★ Denominators of partial sums of a convergent series involving scaled Catalan numbers A000108. ● a(n) = denominator(r(n)) with the rationals r(n) defined above. ●

▶ [A327542] 1,2,16,36,171,512,2087,6984,26512,92682,341573,1216512,4429309,15898766,57595536,207410832,749793263,2703799808,9765692771,35235657396,127218945296,459128080534,1657436539337,5982212358144,21594204190521 ★ A linear divisibility sequence of order 8. ● a(2 * n) = (1 / 4) * Sum _{ i = 1..4 } (alpha(i) ^ (2 * n) - 1 / alpha(i) ^ (2 * n)), where alpha(i), 1 <= i <= 4, are the zeros of the quartic polynomial 1 + x - 2 * x ^ 2 + 3 * x ^ 3 + x ^ 4. ● a(2 * n + 1) = (- 1 / 4) * Sum _{ i = 1..4 } (alpha(i) ^ (2 * n + 1) + 1 / alpha(i) ^ (2 * n + 1)). ● a(2 * n) ^ 2 = (- 1 / 16) * Product _{ i = 1..6 } (1 - beta(i) ^ (2 * n)), where beta(i), 1 <= i <= 6, are the zeros of the sextic polynomial x ^ 6 + 2 * x ^ 5 + 2 * x ^ 4 - 14 * x ^ 3 + 2 * x ^ 2 + 2 * x + 1. ● a(2 * n + 1) ^ 2 = (1 / 16) * Product _{ i = 1..6 } (1 + beta(i) ^ (2 * n + 1)). ● a(n) = 2 * a(n - 1) + 7 * a(n - 2) - 6 * a(n - 3) + 4 * a(n - 4) + 6 * a(n - 5) + 7 * a(n - 6) - 2 * a(n - 7) - a(n - 8). ●

▶ [A166154] 2,16,37,65,100,142,191,247,310,380,457,541,632,730,835,947,1066,1192,1325,1465,1612,1766,1927,2095,2270 ★ a(n) = 7 * n * (n + 1) / 2 - 5. ● a(n) = a(n - 1) + 7 * n = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A211620] 0,2,16,38,76,122,184,254,340,434,544,662,796,938,1096,1262,1444,1634,1840,2054,2284,2522,2776,3038,3316 ★ Number of ordered triples (w,x,y) with all terms in {- n,... - 1,1,...,n } and - 1<=2w + x + y<=1. ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4) for n>4. ● a(n) = 6 * n ^ 2 - 6 * n + 4 for n>0 and even. ● a(n) = 6 * n ^ 2 - 6 * n + 2 for n odd. ●

▶ [A139267] 0,2,16,42,80,130,192,266,352,450,560,682,816,962,1120,1290,1472,1666,1872,2090,2320,2562,2816,3082,3360 ★ Twice octagonal numbers: 2 * n * (3 * n - 2). ● a(n) = a(n - 1) + 12 * n - 10, with n>0, a(0)=0. - _ Vincenzo Librandi _ , Aug 03 2010 ●

▶ [A254855] 1,2,16,43,407,1108,10558,28757,274093,746566,7115852,19381951,184738051,503184152,4796073466,13063405993,124513172057,339145371658,3232546400008,8804716257107,83921693228143,228583477313116,2178731477531702,5934365693883901 ★ Indices of octagonal numbers (A000567) that are also centered heptagonal numbers (A069099). ● a(n) = a(n - 1) + 26 * a(n - 2) - 26 * a(n - 3) - a(n - 4) + a(n - 5). ●

▶ [A220250] 2,16,48,256,928,4096,15872,65536,259584,1048576,4182016,16777216,67051520,268435456,1073479680,4294967296,17178689536,68719476736,274872664064,1099511627776,4398023442432,17592186044416,70368643514368 ★ Sum of neighbor maps: number of nX2 binary arrays indicating the locations of corresponding elements equal to the sum mod 3 of their king - move neighbors in a random 0..2 nX2 array ● a(n) = 4 ^ n - 2 ^ (n - 2) * (n + 1) * (1 - (- 1) ^ n). - _ Vaclav Kotesovec _ , Jul 06 2013 ●

▶ [A192388] 0,1,2,16,48,256,928,4288,16896,73728,301056,1283072,5318656,22446080,93634560,393543680,1646034944,6906380288,28918677504,121248940032,507934408704,2129004593152,8920531730432,37385660268544,156658714017792 ★ a(n) = A192387(n) / 2. ● a(n) = (1 / 2) * Sum _{ k=0..n - 1 } T(n, k) * Fibonacci(k - 1). ● a(n) = 2 * a(n - 1) + 12 * a(n - 2) - 8 * a(n - 3) - 16 * a(n - 4). ●

▶ [A295906] 2,16,50,104,178,272,386,520,674,848,1042,1256,1490,1744,2018,2312,2626,2960,3314,3688,4082,4496,4930,5384,5858 ★ Number of (not necessarily maximal) cliques in the n X n king graph. ● a(n) = 2 * (5 * n ^ 2 - 8 * n + 4). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A090453] 2,16,51,118,230,402,651,996,1458,2060,2827,3786,4966,6398,8115,10152,12546,15336,18563,22270,26502,31306,36731,42828,49650 ★ Third column (m=4) of array A090452. ● a(n)= (n + 1) * (n ^ 3 + 15 * n ^ 2 + 56 * n + 24) / 12. ●

▶ [A033431] 0,2,16,54,128,250,432,686,1024,1458,2000,2662,3456,4394,5488,6750,8192,9826,11664,13718,16000,18522,21296,24334,27648 ★ a(n) = 2 * n ^ 3. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Wesley Ivan Hurt _ , Aug 25 2014 ●

▶ [A107610] 2,16,56,190,556,1821,4928,14136,39017,107405,291330,791513,2148323,5797898,15726486,42605113,115371428,312629484,847000031,2295700537,6223257066,16874397811,45764114391,124142354193,336811260666 ★ Least number k such that round(k / pi(k)) = n. ● a(n) = min { k >= 2 : round(k / pi(k)) = n } . ●

▶ [A091914] 1,2,16,56,304,1280,6208,27776,130048,593408,2747392,12615680,58200064,267788288,1233977344,5681414144,26170556416,120518082560,555082842112,2556382674944,11773759455232,54224111009792,249733335482368 ★ a(n) = 2 * a(n - 1) + 12 * a(n - 2). ● a(n) = ((1 + sqrt(13)) * (1 + sqrt(13)) ^ n - (1 - sqrt(13)) * (1 - sqrt(13)) ^ n) / (2 * sqrt(13)). ● a(n) = Sum _{ k=0..floor(n / 2) } C(n + 1,2 * k + 1) * 13 ^ k. - _ Paul Barry _ , Jan 15 2007 ●

▶ [A152665] 0,1,2,16,60,540,3024,32256,241920,3024000,28512000,410572800,4670265600,76281004800,1017080064000,18598035456000,284549942476800,5762136335155200,99527809425408000,2211729098342400000 ★ Number of leading even entries in all permutations of { 1,2,...,n } . ● a(2n + 1) = n(2n + 1)! / (n + 2); ● a(2n) = n(2n)! / (n + 1). ●

▶ [A212899] 0,0,0,2,16,62,186,456,962,1818,3162,5156,7986,11862,17018,23712,32226,42866,55962,71868,90962,113646,140346,171512,207618 ★ Number of (w,x,y,z) with all terms in { 0,...,n } and (least gapsize)>2. ● a(n)=5 * a(n - 1) + 10 * a(n - 2) - 10 * a(n - 3) + 5 * a(n - 4) - a(n - 5) for n>=9. ●

▶ [A076616] 0,0,0,2,16,64,208,608,1664,4352,11008,27136,65536,155648,364544,843776,1933312,4390912,9895936,22151168,49283072,109051904,240123904,526385152,1149239296 ★ Number of permutations of { 1,2,...,n } that result in a binary search tree (when elements of the permutation are inserted in that order) of height n - 1 (i.e., the second largest possible height). ● a(n) = 2 ^ (n - 3) * (n ^ 2 - n + 4) for n>2. ● a(n) = 6 * a(n - 1) - 12 * a(n - 2) + 8 * a(n - 3) for n>5. ●

▶ [A110048] 1,2,16,64,336,1568,7680,36864,178432,860672,4157440,20070400,96915456,467935232,2259419136,10909384704,52675280896,254338531328,1228055511040,5929575645184,28630525673472,138240403177472 ★ Expansion of 1 / ((1 + 2 * x) * (1 - 4 * x - 4 * x ^ 2)). ● a(n) = 2 * a(n - 1) + 12 * a(n - 2) + 8 * a(n - 3), where a(1)=1, a(2)=2, a(3)=16. ● a(n) = 2 ^ (n - 3) * (4 * (- 1) ^ (1 - n) + (sqrt(2) - 1) ^ (- n) + (- sqrt(2) - 1) ^ (- n)) . (End) ●

► [A035598] 0,2,16,66,192,450,912,1666,2816,4482,6800,9922,14016,19266,25872,34050,44032,56066,70416,87362,107200,130242,156816,187266,221952 ★ Number of points of L1 norm 4 in cubic lattice Z ^ n. ● a(n) = 2 * n ^ 2 * (n ^ 2 + 2) / 3. - _ Frank Ellermann _ , Mar 16 2002 ● a(n) = 2 * n * Hypergeometric2F1(1 - n,1 - k,2,2), where k=4. ●

► [A167566] 2,16,67,202,497,1064,2058,3684,6204,9944,15301,22750,32851,46256,63716,86088,114342,149568,192983,245938,309925,386584,477710,585260,711360 ★ The third left hand column of triangle A167565. ● a(n) = (7 * n ^ 5 - 30 * n ^ 4 + 45 * n ^ 3 - 30 * n ^ 2 + 8 * n) / 5!. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). ● a(n) - 5 * a(n - 1) + 10 * a(n - 2) - 10 * a(n - 3) + 5 * a(n - 4) - a(n - 5) = 7. (End) ●

► [A007758] 0,2,16,72,256,800,2304,6272,16384,41472,102400,247808,589824,1384448,3211264,7372800,16777216,37879808,84934656,189267968,419430400,924844032,2030043136,4437573632,9663676416 ★ a(n) = 2 ^ n * n ^ 2. ● a(n) = Sum _{ k=1..n } k * 2 ^ k. - _ Zerinvary Lajos _ , Oct 09 2006 ●

► [A212897] 0,0,2,16,74,230,562,1172,2186,3754,6050,9272,13642,19406,26834,36220,47882,62162,79426,100064,124490,153142,186482,224996,269194 ★ Number of (w,x,y,z) with all terms in { 0,...,n } and (least gapsize)>1. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>=7. ● a(n) = n ^ 4 - 5 * n ^ 3 + 12 * n ^ 2 - 16 * n + 10 with n>1, a(0)=a(1)=0. [_ Bruno Berselli _ , Jun 12 2012] ●

► [A289837] 1,1,2,16,76,261,757,2003,5035,12286,29426,69554,162670,376923,865971,1973941,4466853,10040524,22430584,49829116,110127536,242254321,530619937,1157676711,2516640751 ★ Number of cliques in the n - tetrahedral graph. ● a(n) = 1 + binomial(n,3) + (2 ^ (n - 2) - n + 1) * binomial(n,2) + 5 * binomial(n,4). - _ Andrew Howroyd _ , Jul 18 2017 ● a(n) = 11 * a(n - 1) - 52 * a(n - 2) + 138 * a(n - 3) - 225 * a(n - 4) + 231 * a(n - 5) - 146 * a(n - 6) + 52 * a(n - 7) - 8 * a(n - 8). - _ Eric W. Weisstein _ , Jul 21 2017 ● a(n) = (24 - (34 + 3 * 2 ^ n) * n + (67 + 3 * 2 ^ n) * n ^ 2 - 38 * n ^ 3 + 5 * n ^ 4) / 24. ●

► [A336174] 0,0,0,2,16,80,360,1680,8064,39872,209920,1168640,6779520,41403648,265434624,1765487360,12227461120,88163164160,656547803136,5054718763008,40261284495360,330010833797120,2783003768258560,24166721457815552,215318925878132736 ★ Number of non - symmetric binary n X n matrices M over the reals such that M ^ 2 is the transpose of M. ● a(n) = 2 ^ n * (add(n! / (24 ^ k * k! * (n - 3 * k)!), k=0..n / 3) - 1). ● a(n) = 2 ^ n * (hypergeom([- n / 3, (1 - n) / 3, (2 - n) / 3], [], - 9 / 8) - 1). ● a(n) = [x ^ n] exp(x * (x ^ 2 + 6) / 3) - exp(2 * x). (End) ●

► [A069440] 2,16,88,414,1810,7616,31376,127710,516170,2077552,8341288,33440190,133941922,536205056,2145876128,8586053694,34350369050,137416333936,549701205496 ★ Half the number of n X 2 binary arrays with no path of adjacent 1's or adjacent 0's from top row to bottom row. ● a(n) = 7 * a(n - 1) - 13 * a(n - 2) + 3 * a(n - 3) + 4 * a(n - 4). ●

► [A000431] 0,0,0,2,16,88,416,1824,7680,31616,128512,518656,2084864,8361984,33497088,134094848,536608768,2146926592,8588754944,34357248000,137433710592,549744803840,2199000186880,8796044787712,35184271425536 ★ Expansion of 2 * x ^ 3 / ((1 - 2 * x) ^ 2 * (1 - 4 * x)). ● a(n) = (4 ^ n - n 2 ^ (n + 1)) / 8 for n >= 1. ● a(n) = 2 ^ (n - 2) * (2 ^ (n - 1) - n), n >= 1. - _ Daniel Forgues _ , Feb 24 2015 ●

► [A253487] 2,16,90,448,2100,9504,42042,183040,787644,3359200,14226212,59907456,251100200,1048380480,4362680250,18103127040,74934688620,309509877600,1275964023180,5251296336000,21579247511640,88555121603520,362957071241700,1485969577717248 ★ Number of lattice paths of 2 * n + 2 steps in the first quadrant from (0,0) to (n,n). ● a(n) = (4 * n + 4) * (2 * n + 1) * binomial(2 * n, n) / (n + 2). ● a(n) = 2 * (n + 5) * (n + 1) * a(n - 1) / (n * (n + 2)) + (8 * n - 4) * a(n - 2) / (n + 2). ●

► [A214824] 2,16,91,456,2145,9724,43043,187408,806208,3436720,14545982,61214960,256411935,1069854660,4449173475,18450500640,76326664260,315077780160,1298203997610,5340028714800,21932944632690,89963953083576,368565304248846,1508283816983776 ★ Number of solid standard Young tableaux of shape [[(2) ^ n],[2]]. ● a(n) = 2 * (2 * n + 1) * (n ^ 2 + 5 * n + 2) * n / ((n - 1) * (n + 3) * (n ^ 2 + 3 * n - 2)) * a(n - 1); a(1) = 2. ●

► [A317451] 0,2,16,92,464,2182,9824,42936,183648,772746,3209968,13196564,53791408,217700110,875718080,3504277360,13959102912,55383875346,218965651152,862983998924,3391602170512,13295446717334,51999641009696,202948920530728,790569797639456 ★ a(n) = (n * A003500(n) - A231896(n)) / 2. ● a(n) = (sqrt(3) * ((2 - sqrt(3)) ^ n - (2 + sqrt(3)) ^ n) + 3 * ((2 - sqrt(3)) ^ (1 + n) + (2 + sqrt(3)) ^ (1 + n)) * n) / 18. ● a(n) = 8 * a(n - 1) - 18 * a(n - 2) + 8 * a(n - 3) - a(n - 4) for n>3. ●

► [A220932] 2,16,92,556,3332,19996,119972,719836,4319012,25914076,155484452,932906716,5597440292,33584641756,201507850532,1209047103196,7254282619172,43525695715036,261154174290212,1566925045741276 ★ Equals two maps: number of n X 3 binary arrays indicating the locations of corresponding elements equal to exactly two of their horizontal and antidiagonal neighbors in a random 0..2 n X 3 array. ● a(n) = (2 ^ n * 3 ^ (n + 1) + 4) / 7 for n even. ● a(n) = (2 ^ n * 3 ^ (n + 1) - 4) / 7 for n odd ●

► [A295903] 2,16,94,293,742,1642,3458,7087,14506,29804,61750,128761,269822,566830,1191898,2505443,5261218,11032048,23094830,48265261,100699222,209756786,436255474,906024343,1879110362 ★ Number of (not necessarily maximal) cliques in the n X n queen graph. ● a(n) = 3 * 2 ^ (n + 1) + n * ((- 1) ^ (n + 1) + 2 ^ (n + 2) + n * (9 * n - 26) - 2) / 2 - 5. ● a(n) = 6 * a(n - 1) - 11 * a(n - 2) + 21 * a(n - 4) - 18 * a(n - 5) - 5 * a(n - 6) + 12 * a(n - 7) - 4 * a(n - 8). ●

► [A002699] 0,2,16,96,512,2560,12288,57344,262144,1179648,5242880,23068672,100663296,436207616,1879048192,8053063680,34359738368,146028888064,618475290624,2611340115968,10995116277760,46179488366592,193514046488576 ★ a(n) = n * 2 ^ (2 * n - 1). ● a(n) = 8 * a(n - 1) - 16 * a(n - 2) with n>1, a(0)=0, a(1)=2. - _ Vincenzo Librandi _ , Mar 20 2013 ●

► [A005058] 0,2,16,98,544,2882,14896,75938,384064,1933442,9706576,48650978,243609184,1219108802,6098732656,30503229218,152544843904,762810312962,3814309845136,19072324066658,95363944856224 ★ a(n) = 5 ^ n - 3 ^ n. ● a(n) = 8 * a(n - 1) - 15 * a(n - 2) for n>1, a(0)=0, a(1)=2. - _ Vincenzo Librandi _ , Jan 24 2011 ●

► [A082639] 0,2,16,98,576,3362,19600,114242,665856,3880898,22619536,131836322,768398400,4478554082,26102926096,152139002498,886731088896,5168247530882,30122754096400,175568277047522,1023286908188736 ★ Numbers n such that 2 * n * (n + 2) is a square. ● a(n) = (1 / 2) * (s ^ n + t ^ n) - 1, where s = 3 + 2 * sqrt(2), t = 3 - 2 * sqrt(2). Note: s=1 / t. a(n) = 6 * a(n - 1) - a(n - 2) + 4, a(0)=0, a(1)=2. ●

► [A361814] 1,2,16,100,660,4482,30886,215364,1515000,10730800,76426846,546792056,3926775646,28290272420,204375145480,1479963148220,10739326203132,78072933869364,568503202324540,4145718464390120,30271771382355430,221305746414518180 ★ Expansion of 1 / sqrt(1 - 4 * x * (1 + x) ^ 5). ● a(n) = Sum _{ k=0..n } binomial(2 * k,k) * binomial(5 * k,n - k). ●

► [A032260] 2,16,102,528,2470,11016,47950,205792,874998,3694920,15519262,64899456,270415262,1123264408,4653525150,19234571968,79342610902,326704870152,1343120023678,5513861152000,22606830725598,92580354402712,378737813468542,1547884976787648 ★ Number of n X n (0,1) matrices such that each row and each column is nondecreasing or nonincreasing. ● a(n) = 2 * n * (binomial(2 * n, n) - n). G.f.: 4 * x / (1 - 4 * x) ^ (3 / 2) - 2 * x * (1 + x) / (1 - x) ^ 3. - _ Vladimir Baltic _ and _ Vladeta Jovovic _ , Jul 10 2003 ●

► [A359758] 1,2,16,110,770,5512,40066,294484,2182850,16288430,122198926,920820578,6964483628,52840433000,401990254180,3065365241440,23422905551018,179302895759782,1374785979255880,10556280995419090,81161958814162700,624750086745027388 ★ Expansion of 1 / sqrt(1 - 4 * x / (1 - x) ^ 5). ● a(n) = Sum _{ k=0..n } binomial(2 * k,k) * binomial(n + 4 * k - 1,n - k). ● a(0) = 1; a(n) = (2 / n) * Sum _{ k=0..n - 1 } (n + k) * binomial(n + 3 - k,4) * a(k). ●

► [A370245] 1,2,16,110,828,6352,49696,393668,3148316,25362992,205519616,1673272702,13677016932,112165564656,922490228032,7605558361960,62839438825244,520180768020464,4313251202569216,35818392770702104,297846498752214128,2479748570715505472 ★ Coefficient of x ^ n in the expansion of (1 / (1 - x) ^ 2 * (1 + x ^ 2) ^ 3) ^ n. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(3 * n,k) * binomial(3 * n - 2 * k - 1,n - 2 * k). ●

► [A370270] 1,2,16,110,840,6502,51424,411602,3326600,27082460,221776016,1824750424,15073212648,124926064460,1038330110400,8651387371360,72238476287112,604327981885262,5064140053702240,42500097815152940,357157266768270840,3005093769261481238 ★ Coefficient of x ^ n in the expansion of 1 / ((1 - x) ^ 2 * (1 - x ^ 2) ^ 3) ^ n. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(3 * n + k - 1,k) * binomial(3 * n - 2 * k - 1,n - 2 * k). ●

► [A361743] 1,2,16,114,768,5010,32016,201698,1257472,7777314,47800080,292292946,1779856128,10799942322,65336473104,394246725570,2373580947456,14262064668738,85546366040592,512323096241714,3063932437123840,18300660294266322,109183694129335056 ★ Central circular Delannoy numbers: a(n) is the number of Delannoy loops on an n X n toroidal grid. ● a(n) = Sum _{ k=0..n } binomial(n,k) ^ 2 * k * 2 ^ k for n >= 1. ● a(n) = 2 * n ^ 2 * hypergeom([1 - n, 1 - n], [2], 1) for n >= 1. - _ Peter Luschny _ , Mar 22 2023 ●

► [A125725] 0,2,16,114,800,5602,39216,274514,1921600,13451202,94158416,659108914,4613762400,32296336802,226074357616,1582520503314,11077643523200,77543504662402,542804532636816,3799631728457714,26597422099204000 ★ Numbers whose base - 7 representation is 222....2. ● a(n) = 7 * a(n - 1) + 2, with a(1)=0. - _ Vincenzo Librandi _ , Sep 30 2010 ●

► [A162723] 1,1,2,16,116,676,3452,16276,72956,316276,1340252,5590036,23054396,94314676,383578652,1553331796,6270493436,25253701876,101530450652,407669649556,1635323974076,6555235693876,26262769508252 ★ a(n) = 9 a (n - 1) - 26 a(n - 2) + 24 a(n - 3) (n >= 3) with a(0) =a(1)=1, a(2)=2. ● a(n)=7 * 2 ^ (n - 1) + 3 * 2 ^ (2 * n - 1) - 4 * 3 ^ n. G.f.: - (1 - 8 * x + 19 * x ^ 2) / ((3 * x - 1) * (2 * x - 1) * (4 * x - 1)) [From _ R. J. Mathar _ , Jul 13 2009] ●

► [A288964] 0,0,2,16,116,888,7416,67968,682272,7467840,88678080,1136712960,15655438080,230672171520,3621985113600,60392753971200,1065907048550400,19855856150323200,389354639411404800,8017578241634304000,172991656889856000000,3903132531903897600000 ★ Number of key comparisons to sort all n! permutations of n elements by quicksort. ● a(n) = n! * (2 * (n + 1) * H(n) - 4 * n). ● a(n) = ((2 * n ^ 2 - 3 * n - 1) * a(n - 1) - (n - 1) ^ 2 * n * a(n - 2)) / (n - 2) for n >= 3, a(n) = n * (n - 1) for n < 3. - _ Alois P. Heinz _ , Jun 21 2017 ●

► [A159324] 0,0,2,16,118,926,7956,75132,777456,8771184,107307360,1416252960,20068629120,304002322560,4903642679040,83928856838400,1519397749094400,29010025797580800,582647327132774400,12280347845905305600,271030782903552000000,6251213902855219200000 ★ n! times the average number of comparisons required by an insertion sort of n (distinct) elements. ● a(n) = a(n - 1) * (n) + n! * (n + 1) / 2 - (n - 1)!. ● a(n) = n! / 4 * (n ^ 2 + 3 * n - 4 * H(n)), where H(n) = Sum _{ k=1..n } 1 / k. - _ Gary Detlefs _ , Sep 02 2010 ● a(n) = ((2 * n ^ 3 - n ^ 2 - 5 * n + 2) * a(n - 1) - (n + 2) * (n - 1) ^ 3 * a(n - 2)) / ((n - 2) * (n + 1)) for n>2. - _ Alois P. Heinz _ , Dec 16 2016 ●

► [A136782] 1,2,16,119,934,7463,60145,486605,3943960,31992446,259613953,2107099586,17103200263,138830852135,1126943433241,9147906485462,74257943539984,602788362550355,4893134369283898,39720031331092499,322427514601782961,2617306853237874173 ★ Number of primitive multiplex juggling sequences of length n, base state <2,2> and hand capacity 2. ● a(n) = 13 * a(n - 1) - 43 * a(n - 2) + 24 * a(n - 3) + 27 * a(n - 4) for n>4. - _ Colin Barker _ , Aug 31 2016 ●

► [A370621] 1,2,16,119,948,7732,64231,540311,4588076,39244106,337624066,2918384229,25325306031,220497804256,1925231880973,16850975055139,147807248526268,1298926641563548,11434042768577866,100800817171002817,889839745865544598 ★ Coefficient of x ^ n in the expansion of ((1 - x) / (1 - x - x ^ 2) ^ 3) ^ n. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(3 * n + k - 1,k) * binomial(3 * n - k - 1,n - 2 * k). ●

► [A338186] 2,16,126,1100,9850,88584,797174,7174468,64570098,581130752,5230176622,47071589436,423644304746,3812798742520,34315188682470,308836698142004,2779530283277794,25015772549499888,225141952945498718,2026277576509488172,18236498188585393242,164128483697268538856 ★ Expansion of (2 - 6 * x - 12 * x ^ 2) / ((1 - x) ^ 2 * (1 - 9 * x)). ● a(n) = 11 * a(n - 1) - 19 * a(n - 2) + 9 * a(n - 3) for n >= 3. ●

► [A022027] 2,16,127,1008,8000,63492,503904,3999232,31739888,251903488,1999230976,15866888256,125927492096,999423012864,7931916549888,62951622430720,499615287394304,3965194632954880,31469750573916160,249759543441752064,1982215569002196992,15731845549721911296 ★ Define the sequence T(a(0),a(1)) by a(n + 2) is the greatest integer such that a(n + 2) / a(n + 1) < a(n + 1) / a(n) for n >= 0. This is T(2,16). ● a(n + 1) = ceiling(a(n) ^ 2 / a(n - 1)) - 1 for n>0. - _ M. F. Hasler _ , Feb 11 2016 ●

► [A013730] 2,16,128,1024,8192,65536,524288,4194304,33554432,268435456,2147483648,17179869184,137438953472,1099511627776,8796093022208,70368744177664,562949953421312,4503599627370496,36028797018963968,288230376151711744,2305843009213693952 ★ a(n) = 2 ^ (3n + 1). ● a(n) = 8 * a(n - 1), n > 0; a(0)=2. ●

► [A371814] 1,2,16,128,1068,9142,79612,701864,6244892,55962920,504375396,4567003520,41513817444,378596616452,3462411408136,31742042431048,291616814436124,2684123914512280,24746511514749280,228491677484832896,2112549277665243328 ★ a(n) = Sum _{ k=0..n } (- 1) ^ k * binomial(4 * n - k - 1,n - k). ● a(n) = [x ^ n] 1 / ((1 + x) * (1 - x) ^ (3 * n)). ● a(n) = binomial(4 * n - 1, n) * hypergeom([1, - n], [1 - 4 * n], - 1). - _ Stefano Spezia _ , Apr 07 2024 ●

► [A214623] 1,2,16,128,1156,10952,107584,1083392,11115556,115702472,1218289216,12948910592,138708574096,1495661223968,16218468710656,176727219273728,1933956651447076,21243204576601928,234121111199439424,2587943032046002688 ★ Braid numbers B((n,n) - >(n,n)). ● a(n) = (- 2) ^ n * hypergeom([1 / 2, - n, n + 1], [1, 1], 2). - _ Peter Luschny _ , Mar 14 2018 ●

► [A037517] 2,16,129,1034,8272,66177,529418,4235344,33882753,271062026,2168496208,17347969665,138783757322,1110270058576,8882160468609,71057283748874,568458269990992,4547666159927937 ★ Base 8 digits are, in order, the first n terms of the periodic sequence with initial period 2,0,1. ● a(1)=2, a(2)=16, a(3)=129, a(4)=1034, a(n)=8 * a(n - 1) + a(n - 3) - 8 * a(n - 4). - _ Harvey P. Dale _ , May 09 2015 ●

► [A022018] 2,16,129,1040,8385,67604,545057,4394520,35430801,285660700,2303138321,18569044064,149712848033,1207059275044,9731910872129,78463494859944,632611632651505,5100428912583468,41122188953879473,331547494013013232,2673100425407651457 ★ Define the sequence UD(a(0),a(1)) by a(n) is the least integer such that a(n) / a(n - 1) > a(n - 1) / a(n - 2) + 1 for even n >= 2 and such that a(n) / a(n - 1) > a(n - 1) / a(n - 2) for odd n>=2. This is UD(2,16). ● a(n) = 8 * a(n - 1) + a(n - 2) - 4 * a(n - 3) for n>2. - _ Colin Barker _ , Aug 09 2016 ●

► [A074623] 2,16,130,1072,8962,75856,649090,5606512,48811522,427774096,3769259650,33358386352,296270823682,2638754838736,23555015527810,210638693604592,1886253119421442,16909812213653776,151723048894909570 ★ a(n) = 7 ^ n + 9 ^ n. ● a(n) = 16 * a(n - 1) - 63 * a(n - 2) with a(0)=2, a(1)=16. - _ Vincenzo Librandi _ , Jul 21 2010 ●

► [A275636] 0,2,16,130,1120,9922,88816,797890,7176640,64576642,581150416,5230235650,47071766560,423644836162,3812800336816,34315193465410,308836712490880,2779530326324482,25015772678640016,225141953332919170,2026277577671749600 ★ a(n) = (3 ^ n - 1) * (3 ^ n + 3) / 3!. ● a(n) = 13 * a(n - 1) - 39 * a(n - 2) + 27 * a(n - 3) for n > 2. ● a(n) = (2 * 3 ^ n + 9 ^ n - 3) / 6. - _ Colin Barker _ , Aug 10 2016 ●

► [A369580] 2,16,138,1216,10802,96336,861114,7708416,69072354,619380496,5557080938,49879087296,447852531986,4022246329936,36132550233498,324645166734336,2917340834679234,26219438520320016,235672871308226634,2118552629658530496,19046140604787232242,171241206828437556816 ★ a(n) := f(n, n), where f(0,0) = 1 / 3, f(0,k) = 0 and f(k,0) = 3 ^ (k - 1) if k > 0, and f(n, m) = f(n, m - 1) + f(n - 1, m) + 3 * f(n - 1, m - 1) otherwise. ● a(n) = Sum _{ i>=n } Sum _{ j=0..n - 1 } binomial(i - 1,n - 1) * binomial(i - 1,j) * 3 ^ (2n - 1) / 2 ^ (2i - 1). ● a(n) = 3 ^ (2n - 1) * A(n, n) where A(0, k) = 0 for k > 0, A(k, 0) = 1 for k >= 0 and A(n, m) = (A(n - 1, m) + A(n, m - 1) + A(n - 1, m - 1)) / 3. ●

► [A199565] 2,16,142,1276,11482,103336,930022,8370196,75331762,677985856,6101872702,54916854316,494251688842,4448265199576,40034386796182,360309481165636,3242785330490722,29185067974416496,262665611769748462 ★ (7 * 9 ^ n + 1) / 4. ● a(n) = 9 * a(n - 1) - 2. ● a(n) = 10 * a(n - 1) - 9 * a(n - 2). ●

► [A003768] 2,16,144,1216,10004,82608,682636,5639688,46590712,384898384,3179752720,26268806752,217013752672,1792809557568,14810886647616,122356756509056,1010822390349184,8350678243197184,68987220485229824,569922160991852032 ★ Number of spanning trees with degrees 1 and 3 in W _ 4 X P _ n. ● a(1) = 2, a(2) = 16, a(3) = 144, a(4) = 1216, a(5) = 10004, a(6) = 82608, a(7) = 682636, a(8) = 5639688, a(9) = 46590712, a(10) = 384898384, a(11) = 3179752720 and ● a(n) = 14 * a(n - 1) - 62 * a(n - 2) + 148 * a(n - 3) - 264 * a(n - 4) + 336 * a(n - 5) - 256 * a(n - 6) + 128 * a(n - 7) - 64 * a(n - 8). ●

► [A103885] 1,2,16,146,1408,14002,142000,1459810,15158272,158611106,16697520162,17664712562,187641279616,2000029880786,21380213588848,229129634462146,2460955893981184,26482855453375042,285475524009208720,3082024598888203090,33319523640218177408 ★ a(n) = [x ^ (2 * n)] ((1 + x) / (1 - x)) ^ n. ● a(n) = Sum _{ i=0..n } 2 ^ i * binomial(n,i) * binomial(2 * n - 1,i - 1). [Original definition, with summation range { i=1..n } .] ● a(n) = [x ^ n] (1 / (1 - x - x / (1 - x - x / (1 - x - x / (1 - x - x / (1 - ...)))))) ^ n, a continued fraction. - _ Ilya Gutkovskiy _ , Sep 29 2017 ● a(n) = 2 * n * hypergeom([1 - 2 * n, 1 - n], [2], 2) for n >= 1. - _ Peter Luschny _ , Dec 30 2019 ● a(n) = Sum _{ k = 0..n } C(n, k) * C(2 * n + k - 1, n - 1). ● a(n) = Sum _{ k = 0..n } C(2 * n, 2 * k) * C(2 * n - k - 1, n - 1). ● a(n) = (1 / 2) * Sum _{ k = 0..n } C(2 * n, n - k) * C(2 * n + k - 1, k). Cf. A156894. ●

► [A309440] 1,2,16,160,1591,15905,159041,1590405,15904042,159040419,1590404183,15904041824,159040418240,1590404182399,15904041823989,159040418239888,1590404182398875,15904041823988748,159040418239887480,1590404182398874791,15904041823988747910,159040418239887479099 ★ The number of digits of the greatest product from addends that sum up to 10 ^ n. ● a(n) = 1 + floor(log _ 10(36) + 10 * log _ 10(27) * R _ (n - 1)), R _ k being the k - th repunit, i.e., 111...111 with only digit 1 appearing k times. ●

► [A155659] 1,2,16,170,1696,15962,144496,1273610,11012416,93864122,791266576,6612607850,54878189536,452866803482,3719823438256,30436810578890,248242046141056,2019169299698042,16385984911571536,132716292890482730 ★ 8 ^ n - 7 ^ n + 1. ● a(n)=15 * a(n - 1) - 56 * a(n - 2) + 42 with a(0)=1, a(1)=2 - _ Vincenzo Librandi _ , Jul 21 2010 ●

► [A108999] 1,2,16,170,1856,20082,214864,2282394,24165120,255708578,2708805776,28752157898,305908697152,3262741154194,34882914424528,373781033269306,4013444615232512,43174945822078530,465247083731404048 ★ Main diagonal of square array A108998, in which row n equals the coordination sequence of B _ n lattice. ● a(n) = Sum _{ j=0..n } C(2 * n - j - 1, n - j) * (C(2 * n + 1, 2 * j) - 2 * n * C(n - 1, j - 1)). ●

► [A090305] 2,16,258,4144,66562,1069136,17172738,275832944,4430499842,71163830416,1143051786498,18359992414384,294902930416642,4736806879080656,76083812995707138,1222077814810394864,19629328849962024962 ★ a(n) = 16 * a(n - 1) + a(n - 2), starting with a(0) = 2 and a(1) = 16. ● a(n) = 16 * a(n - 1) + a(n - 2), starting with a(0) = 2 and a(1) = 16. ● a(n) = (8 + sqrt(65)) ^ n + (8 - sqrt(65)) ^ n. ● a(n) ^ 2 = a(2n) - 2 if n = 1, 3, 5, ...; ● a(n) ^ 2 = a(2n) + 2 if n = 2, 4, 6, ... ● a(n) = Lucas(n, 16) = 2 * (- i) ^ n * ChebyshevT(n, 8 * i). - _ G. C. Greubel _ , Dec 31 2019 ●

► [A246739] 2,16,260,1096,5430,15960,47432,109552,246890,483520,920652,1606776,2735390,4392136,6907280,10419040,15447762,22202352,31455380,43507240,59453702,79710136,105775320,138205776,178991930 ★ Number of length 2 + 4 0..n arrays with no pair in any consecutive five terms totalling exactly n. ● a(n) = - 58 * n + 111 * n ^ 2 - 87 * n ^ 3 + 36 * n ^ 4 - 8 * n ^ 5 + n ^ 6 for n even. ● a(n) = - 70 + 80 * n + 34 * n ^ 2 - 71 * n ^ 3 + 36 * n ^ 4 - 8 * n ^ 5 + n ^ 6 for n odd. ●

► [A119480] 1,2,17,19,31,38,47,59,61,62,71,94,101,103,107,109,118,122,137,149,151,157,167,181,197 ★ Numbers n such that the Bernoulli number B _{ 4n } has denominator 30. ● a(n) = A051225[n] / 2. ●

► [A041339] 1,1,2,17,19,36,955,991,1946,16559,18505,35064,930169,965233,1895402,16128449,18023851,34152300,905983651,940135951,1846119602,15709092767,17555212369,33264305136,882427145905 ★ Denominators of continued fraction convergents to sqrt(183). ● a(n) = 974 * a(n - 6) - a(n - 12). - _ Vincenzo Librandi _ , Dec 16 2013 ●

► [A042925] 1,1,2,17,19,36,2251,2287,4538,38591,43129,81720,5109769,5191489,10301258,87601553,97902811,185504364,11599173379,11784677743,23383851122,198855486719,222239337841,421094824560,26330118460561 ★ Denominators of continued fraction convergents to sqrt(994). ● a(n) = 2270 * a(n - 6) - a(n - 12) for n>11. - _ Vincenzo Librandi _ , Feb 01 2014 ●

► [A042055] 1,2,17,19,169,357,16591,33539,284903,318442,2832439,5983320,278065159,562113638,4774974263,5337087901,47471677471,100280442843,4660372048249,9421024539341,80028568362977,89449592902318,795625311581521,1680700216065360 ★ Denominators of continued fraction convergents to sqrt(551). ● a(n) = 16760 * a(n - 6) - a(n - 12). - _ Wesley Ivan Hurt _ , Sep 05 2022 ●

► [A086322] 2,17,23,167,173,227,233,1667,1733,2267,2273,2333,16673,17327,17333,22727,23327,23333,173267,173273,227267,233267,233327,1732727,2272667 ★ Primes produced by repeated application of the formula p - > (10p +- 3) starting at the prime 2. ● a(n) = (10 * a(n - m)) - 3 or (10 * a(n - m)) + 3. ●

► [A063118] 2,17,31,47,61,77,91,107,121,137,151,167,181,197,211,227,241,257,271,287,301,317,331,347,361 ★ Dimension of the space of weight 2n cusp forms for Gamma _ 0(50). ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n > 4; ● a(n) = a(n - 2) + 30 for n > 3. (End) ●

► [A267540] 2,17,31,47,61,107,137,151,167,181,197,211,227,241,257,271,317,331,347,421,467,541,557,571,587 ★ Primes p such that p (mod 3) = p (mod 5). ● a(n) = 1 / 2 * ((- 1) ^ n * (3 * (- 1) ^ n * (10n + 81) - 1)) with (1<n<10) for a(7)..a(16). ●

► [A212740] 0,1,2,17,32,97,162,337,512,881,1250,1921,2592,3697,4802,6497,8192,10657,13122,16561,20000,24641,29282,35377,41472 ★ Number of (w,x,y,z) with all terms in { 0,...,n } and max { w,x,y,z } <2 * min { w,x,y,z } . ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 6 * a(n - 3) + 6 * a(n - 5) - 2 * a(n - 6) - 2 * a(n - 7) + a(n - 8). ● a(n) = 3 * n ^ 2 / 8 + 1 / 16 + n ^ 4 / 8 - (- 1) ^ n / 16 - 3 * (- 1) ^ n * n ^ 2 / 8. - _ R. J. Mathar _ , Jul 01 2013 ●

► [A212742] 1,2,17,32,97,162,337,512,881,1250,1921,2592,3697,4802,6497,8192,10657,13122,16561,20000,24641,29282,35377,41472,49297 ★ Number of (w,x,y,z) with all terms in { 0,...,n } and max { w,x,y,z } <=2 * min { w,x,y,z } . ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 6 * a(n - 3) + 6 * a(n - 5) - 2 * a(n - 6) - 2 * a(n - 7) + a(n - 8). ●

► [A226488] 0,2,17,45,86,140,207,287,380,486,605,737,882,1040,1211,1395,1592,1802,2025,2261,2510,2772,3047,3335,3636 ★ a(n) = n * (13 * n - 9) / 2. ● a(0)=0, a(1)=2, a(2)=17; for n>2, a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Jun 19 2013 ●

► [A023256] 2,17,47,61,101,131,151,331,367,461,607,751,937,971,1151,1321,1327,1361,1481,1511,1607,1811,1847,1907,2081 ★ Primes that remain prime through 2 iterations of function f(x) = 6x + 1. ● a(n) == 1 or 7 (mod 10) for n > 1. - _ John Cerkan _ , Sep 14 2016 ●

► [A360416] 2,17,48,95,158,237,332,443,570,713,872,1047,1238,1445,1668,1907,2162,2433,2720,3023,3342,3677,4028,4395,4778 ★ a(n) = 8 * n ^ 2 - 9 * n + 3. ● a(n) = 8 * n ^ 2 - 9 * n + 3. ●

► [A212836] 2,17,50,107,194,317,482,695,962,1289,1682,2147,2690,3317,4034,4847,5762,6785,7922,9179,10562,12077,13730,15527,17474 ★ Number of 0..n arrays of length 3 with 0 never adjacent to n. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>4. ●

► [A125200] 2,17,57,134,260,447,707,1052,1494,2045,2717,3522,4472,5579,6855,8312,9962,11817,13889,16190,18732,21527,24587,27924,31550 ★ a(n) = n * (4 * n ^ 2 + n - 1) / 2. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ R. J. Mathar _ , Feb 12 2010 ●

► [A071402] 0,2,17,59,140,273,471,748,1117,1590,2182,2904,3770,4793,5987,7363,8936,10719,12724,14964,17454,20205,23231,26545,30160 ★ Rounded volume of a regular icosahedron with edge length n. ● a(n) = round(n ^ 3 * (3 + sqrt(5)) * 5 / 12). ●

► [A228641] 2,17,59,140,274,473,752,1122,1598,2193,2919,3789,4818,6018,7402,8983,10775,12791,15043,17545,20311,23353,26685,30319,34269 ★ Volume of torus

(rounded down) with major radius = n and minor radius = n / 3. • a(n) = floor(2 / 9 * Pi ^ 2 * n ^ 3). •

▶ [A034721] 1,2,17,66,169,346,617,1002,1521,2194,3041,4082,5337,6826,8569,10586,12897,15522,18481,21794,25481,29562,34057,38986,44369 ⋆ a(n) = (10 * n ^ 3 - 9 * n ^ 2 + 2 * n) / 3 + 1. • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Vincenzo Librandi _ , Jun 21 2012 •

▶ [A056074] 2,17,71,212,518,1106,2142,3852,6534,10571,16445,24752,36218,51716,72284,99144,133722,177669,232883,301532,386078,489302,614330,764660,944190 ⋆ Number of 3 - element ordered antichain covers of an unlabeled n - element set. • a(n) = C(n + 6, 6) - 6 * C(n + 4, 4) + 6 * C(n + 3, 3) + 3 * C(n + 2, 2) - 6 * C(n + 1, 1) + 2 * C(n, 0). • a(0)=2, a(1)=17, a(2)=71, a(3)=212, a(4)=518, a(5)=1106, a(6)=2142, a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). - _ Harvey P. Dale _ , Jul 12 2011 • a(n) = n * (n ^ 5 + 21 * n ^ 4 - 5 * n ^ 3 - 345 * n ^ 2 + 724 * n - 396) / 720. - _ Charles R Greathouse IV _ , Feb 19 2017 •

▶ [A060352] 2,17,80,323,1214,4373,15308,52487,177146,590489,1948616,6377291,20726198,66961565,215233604,688747535,2195382770,6973568801,22082967872,69735688019,219667417262,690383311397,2165293113020 ⋆ a(n) = n * 3 ^ n - 1. • a(n) = 7 * a(n - 1) - 15 * a(n - 2) + 9 * a(n - 3), a(1)=2, a(2)=17, a(3)=80. - _ Harvey P. Dale _ , Dec 14 2012 •

▶ [A002523] 1,2,17,82,257,626,1297,2402,4097,6562,10001,14642,20737,28562,38417,50626,65537,83522,104977,130322,160001,194482,234257,279842,331777 ⋆ a(n) = n ^ 4 + 1. • a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). (End) •

▶ [A360747] 1,1,1,1,2,17,82,257,690,3484,26978,160347,726085,3529206,26885924,220706533,1474182023,8834370165,65392181686,604821608674,5230627589958,39543579302104,312733691925723,3013530105191283,30474809255061289 ⋆ Expansion of Sum _{ k>=0 } (x * (1 + (k * x) ^ 3)) ^ k. • a(n) = Sum _{ k=0..floor(n / 4) } (n - 3 * k) ^ (3 * k) * binomial(n - 3 * k,k). •

▶ [A360813] 1,1,1,1,2,17,82,258,818,5671,43363,240520,1183168,8547054,77831681,596258173,4031934111,33313129161,338733239446,3187239159511,27197807726066,260179611473044,2918973182685904,31820249821418229,324095879718659899 ⋆ Expansion of Sum _{ k>=0 } (x / (1 - (k * x) ^ 3)) ^ k. • a(n) = Sum _{ k=0..floor(n / 3) } (n - 3 * k) ^ (3 * k) * binomial(n - 2 * k - 1,k). •

▶ [A320644] 0,0,0,0,2,17,84,388,1586,6405,24927,96404,368641,1407515,5357974,20403120,77699323,296229485,1130614092,4321324766,16539645539,63397442097,243352167691,935420468092 ⋆ Number of chiral pairs of color patterns (set partitions) in a cycle of length n using exactly 4 colors (subsets). • a(n) = - Ach(n,k) / 2 + (1 / 2n) * Sum _{ d|n } phi(d) * A(d,n / d,k), where k=4 is number of colors or sets, Ach(n,k) = [n>=0 & n<2 & n==k] + [n>1] * (k * Ach(n - 2,k) + Ach(n - 2,k - 1) + Ach(n - 2,k - 2)), and A(d,n,k) = [n==0 & k==0] + [n>0 & k>0] * (k * A(d,n - 1,k) + Sum _{ j|d } A(d,n - 1,k - j)). •

▶ [A129123] 1,1,2,17,98,882,7812,78129,815474,8955650,101869508,1194964498,14374530436,176681194276,2212121332488,28145258688369,363177582488274,4745064935840178,62687665026816228,836447728509168930,11261240896657686660,152847558411986548260 ⋆ Number of 4 - tuples of standard tableau with height less than or equal to 2. • a(n) = Sum _{ j=0..floor(n / 2) } ((n - 2 * j + 1) / (n - j + 1)) ^ 4 * binomial(n,j) ^ 4. - _ G. C. Greubel _ , Nov 08 2022 •

▶ [A127533] 0,0,0,2,17,100,506,2366,10556,45696,193800,810084,3350479,13748020,56071470,227613750,920540040,3711935040,14932102320,59951235420,240316859250,962056169256,3847193657076,15370712686252,61364157982952 ⋆ Sum of jump - lengths of all binary trees with n edges. • a(n) = binomial(2 * n + 1,n - 3) + binomial(2 * n,n - 3). •

▶ [A198796] 2,17,107,647,3887,23327,139967,839807,5038847,30233087,181398527,1088391167,6530347007,39182082047,235092492287,1410554953727,8463329722367,50779978334207,304679870005247,1828079220031487 ⋆ 3 * 6 ^ n - 1. • a(n) = 6 * a(n - 1) + 5. a(n) = 7 * a(n - 1) - 6 * a(n - 2), n>1. •

▶ [A213785] 0,0,2,17,113,693,4123,24234,141738,827298,4824716,28127435,163955435,955642695,5569991317,32464523892,189217679988,1102842830628,6427842380918,37464218883749,218357488856453,1272680757553593,7417727160997231,43233682460792670 ⋆ a(n) = Sum(P(i) * P(j), 1<=i<j<=n), where P(k) is the k - th Pell number A000129(k). • a(n) = 9 * a(n - 1) - 20 * a(n - 2) + 8 * a(n - 3) + 5 * a(n - 4) - a(n - 5). - _ Vincenzo Librandi _ , Jun 20 2012 •

▶ [A294271] 0,2,17,114,354,1060,2275,4932,8772,15958,25333,41270,60710,91672,127687,182408,243848,333930,432345,572666,722666,931788,1151403,1451980,1763020 ⋆ Sum of the fourth powers of the parts in the partitions of n into two parts. • a(n) = Sum _{ i=1..floor(n / 2) } i ^ 4 + (n - i) ^ 4. • a(n) = (1 / 480) * (n * (- 16 + 160 * n ^ 2 + 15 * (- 15 + (- 1) ^ n) * n ^ 3 + 96 * n ^ 4)). • a(n) = a(n - 1) + 5 * a(n - 2) - 5 * a(n - 3) - 10 * a(n - 4) + 10 * a(n - 5) + 10 * a(n - 6) - 10 * a(n - 7) - 5 * a(n - 8) + 5 * a(n - 9) + a(n - 10) - a(n - 11) for n>11. •

▶ [A037747] 2,17,119,834,5840,40883,286181,2003268,14022878,98160149,687121043,4809847302,33668931116,235682517815,1649777624705,11548443372936,80839103610554,565873725273881,3961116076917167 ⋆ Base 7 digits are, in order, the first n terms of the periodic sequence with initial period 2,3,0,1. • a(n) = 7a(n - 1) + a(n - 4) - 7a(n - 5). •

▶ [A037754] 2,17,120,840,5882,41177,288240,2017680,14123762,98866337,692064360,4844450520,33911153642,237378075497,1661646528480,11631525699360,81420679895522,569944759268657,3989613314880600,27927293204164200 ⋆ Base 7 digits are, in order, the first n terms of the periodic sequence with initial period 2,3,1,0. • a(n) = (1 / 2) * floor(7 ^ (n + 1) / 10). - _ Mircea Merca _ , Dec 27 2010 • a(n) = + 8 * a(n - 1) - 8 * a(n - 2) + 8 * a(n - 3) - 7 * a(n - 4) for n > 4. - _ R. J. Mathar _ , Jan 03 2011 •

▶ [A291390] 2,17,130,940,6550,44475,296250,1944375,12612500,81035000,5165375003270615625,20591031250,128998328125,804673593750,5000444062500,30969644531250,191231146484375,1177627753906250,7234317013671875,44342955390625000,271252632343750000 ⋆ a(n) = (1 / 5) * A291389(n). • a(n) = 10 * a(n - 1) - 15 * a(n - 2) - 50 * a(n - 3) - 25 * a(n - 4) for n >= 5. •

▶ [A261120] 2,17,134,989,7082,50057,351854,2467349,17284562,121031297,847337174,5931714509,41523064442,290664639737,2034662044094,14242663006469,99698727138722,697891348251377,4885240212600614,34196683812727229,239376793662659402,1675637576559322217 ⋆ The number of distinct triple points in the set of function values FLSN(m / 6 / 7 ^ n), m in 0, 1, 2... 6 * 7 ^ n, where FLSN :[0,1] is the "flowsnake" plane filling curve. • a(n)= 2 t(n - 1) + 1 / 2 v(n - 1). • a(n) = (7 - 7 * 3 ^ n + 6 * 7 ^ n) / 14. • a(n) = 11 * a(n - 1) - 31 * a(n - 2) + 21 * a(n - 3) for n>3. •

▶ [A077243] 2,17,134,1055,8306,65393,514838,4053311,31911650,251239889,1978007462,15572819807,122604550994,965263588145,7599504154166,59830769645183,471046653007298,3708542454413201,29197292982298310 ⋆ Bisection (odd part) of Chebyshev sequence with Diophantine property. • a(n)= 8 * a(n - 1) - a(n - 2), a(- 1)= - 1, a(0)=2. • a(n)=[4 - sqrt(15)] ^ n - (3 / 10) * [4 - sqrt(15)] ^ n * sqrt(15) + [4 + sqrt(15)] ^ n + (3 / 10) * sqrt(15) * [4 + sqrt(15)] ^ n, with n >=0 - _ Paolo P. Lava _ , Jul 08 2008 •

▶ [A132433] 2,17,137,1097,8777,70217,561737,4493897,35951177,287609417,2300875337,18407002697,147256021577,1178048172617,9424385380937,75395083047497,603160664379977,4825285315039817,38602282520318537,308818260162548297,2470546081300386377 ⋆ a(1) = 2; for n>=2, a(n) = 8 * a(n - 1) + 1. • a(n) = - 1 / 7 + (15 / 7) * 8 ^ n. - _ Paolo P. Lava _ , Jul 08 2008 • a(n) = 9 * a(n - 1) - 8 * a(n - 2) for n>2. •

▶ [A037493] 2,17,138,1105,8842,70737,565898,4527185,36217482,289739857,2317918858,18543350865,148346806922,1186774455377,9494195643018,75953565144145,607628521153162,4861028169225297 ⋆ Base 8 digits are, in order, the first n terms of the periodic sequence with initial period 2,1. • a(n) = 8a(n - 1) + a(n - 2) - 8a(n - 3). •

▶ [A163066] 2,17,142,1177,9722,80177,660742,5443417,44838002,369310097,3041743102,25052304217,206333614442,1699381942577,13996241263222,115274054938777,949405180105442,7819366458163217,64400836914689902,530409682773219097 ⋆ a(n) = 12 * a(n - 1) - 31 * a(n - 2) for n > 1; a(0) = 2, a(1) = 17. • a(n) = ((2 + sqrt(5)) * (6 + sqrt(5)) ^ n + (2 - sqrt(5)) * (6 - sqrt(5)) ^ n) / 2. •

▶ [A074624] 2,17,145,1241,10657,91817,793585,6880121,59823937,521638217,4560526225,39970994201,351149013217,3091621642217,27274838966065,241075504183481,2134495165562497,18928981513351817,168109033806481105 ⋆ a(n) = 8 ^ n + 9 ^ n. • a(n) = 17 * a(n - 1) - 72 * a(n - 2) with a(0)=2, a(1)=17. - _ Vincenzo Librandi _ , Jul 21 2010 •

▶ [A245807] 2,17,149,1343,12401,116807,1117649,10823543,105764801,1040353607,10282475249,101977326743,1013841287201,10096889010407,100678223072849,1004747561509943,10033232930569601,100232630513987207,1001628413597910449,10011398895185373143 ⋆ a(n) = 7 ^ n + 10 ^ n. • a(n) = 17 * a(n - 1) - 70 * a(n - 2). •

▶ [A126109] 2,17,167,1667,16667,166667,1666667,16666667,166666667,1666666667,16666666667,166666666667,1666666666667,16666666666667,166666666666667,1666666666666667,16666666666666667 ⋆ a(n) = (5 * 10 ^ n + 1) / 3. • a(n) = 10 * a(n - 1) - 3. • a(n) = 11 * a(n - 1) - 10 * a(n - 2). •

▶ [A041879] 1,2,17,172,189,361,550,911,1461,2372,3833,6205,65883,533269,1132421,48094951,97322323,826673535,8364057673,9190731208,17554788881,2674552089,44300308970,71045829059,115346138029 ⋆ Denominators of continued fraction convergents to sqrt(461). • a(n) = 48628220 * a(n - 15) + a(n - 30) for n>29. - _ Vincenzo Librandi _ , Dec 26 2013 •

▶ [A199751] 2,17,182,1997,21962,241577,2657342,29230757,321538322,3536921537,38906136902,427967505917,4707642565082,51784068215897,569624750374862,6265872254123477,68924594795358242,758170542748940657,8339875970238347222 ⋆ (3 * 11 ^ n + 1) / 2. • a(n) = 11 * a(n - 1) - 5. • a(n) = 12 * a(n - 1) - 11 * a(n - 2). •

▶ [A198287] 2,17,272,4667,80702,1397477,24207692,419373647,7265397242,125869473977,2180631250952,37778460128867,654494991508022,11338834542738317,196440265628093252,3403240245856247927,58959623892961901042 ⋆ Number of 2 n X 2 0..3 arrays with values 0..3 introduced in row major order and each element equal to exactly one horizontal and vertical neighbor. • a(n) = (216 - (11 - 2 * sqrt(10)) ^ n * (- 8 + sqrt(10)) + (8 + sqrt(10)) * (11 + 2 * sqrt(10)) ^ n) / 216. •

▶ [A078367] 2,17,287,4862,82367,1395377,23639042,400468337,6784322687,114933017342,1947076972127,32985375508817,558804306677762,9466687838013137,160374888939545567,2716906424134261502 ⋆ A Chebyshev T - sequence with Diophantine property. • a(n)=17 * a(n - 1) - a(n - 2), n >= 1; a(- 1)=17, a(0)=2. • a(n) = ap ^ n + am ^ n, with ap := (17 + sqrt(285)) / 2 and am := (17 - sqrt(285)) / 2. •

▶ [A090306] 2,17,291,4964,84679,1444507,24641298,420346573,7170533039,122319408236,2086600473051,35594527450103,607193567124802,10357885168571737,176691241432844331,3014108989526925364,51416544063390575519 ⋆ a(n) = 17 * a(n - 1) + a(n - 2), starting with a(0) = 2 and a(1) = 17. • a(n) = 17 * a(n - 1) + a(n - 2), starting with a(0) = 2 and a(1) = 17. • a(n) = ((17 + sqrt(293)) / 2) ^ n + ((17 - sqrt(293)) / 2) ^ n. • a(n) = Lucas(n, 17) = 2 * (- i) ^ n * ChebyshevT(n, 17 * i / 2). - _ G. C. Greubel _ , Dec 30 2019 •

▶ [A122207] 2,17,8893,24133,768373,1583293,2180741,3875933,6426919,173472547,289093219,741938801,2738357903,2895147163,3058653607,17056871941,24109439269,26602406177,29286422621,62073696299,65420584637,68902997299 ⋆ Primes of the form A109724[n] = A007504[n ^ 2] or the sum of the first n ^ 2 primes. • a(n) = A109724[A122208[n]] = A007504[A122208[n] ^ 2]. •

▶ [A231864] 0,1,2,18,19,44,45,189,225,274,275,531,532,613,677,1701,1702,2143,2144,2720,2820,2989,2990,4926,5026 ⋆ Partial sums of the second power of arithmetic derivative function A003415. • a(n) = sum((i') ^ 2, i=1..n) where i'=A003415. •

▶ [A022371] 2,18,20,38,58,96,154,250,404,654,1058,1712,2770,4482,7252,11734,18986,30720,49706,80426,130132,210558,340690,551248,891938 ⋆ Fibonacci sequence beginning 2, 18. • a(n) = 2 * (Fibonacci(n + 2) + 7 * Fibonacci(n)). - _ G. C. Greubel _ , Aug 27 2017 •

▶ [A266956] 1,2,18,21,53,58,106,113,177,186,266,277,373,386,498,513,641,658,802,821,981,1002,1178,1201,1393 ⋆ Numbers m such that 9 * m + 7 is a square. • a(n) = a(- n + 1) = (18 * (n - 1) * n - 7 * (2 * n - 1) * (- 1) ^ n + 1) / 8. •

► [A322489] 2,18,22,38,42,58,62,78,82,98,102,118,122,138,142,158,162,178,182,198,202,218,222,238,242 ⋆ Numbers k such that k ^ k ends with 4. ● a(n) = - a(- n + 1) = a(n - 1) + a(n - 2) - a(n - 3). ● a(n) = 10 * n + 3 * (- 1) ^ n - 5. Therefore: ● a(n) = 10 * n - 8 for odd n; ● a(n) = 10 * n - 2 for even n. ● a(n + 2 * k) = a(n) + 20 * k. ●

► [A191461] 1,1,1,2,18,24,480,720,23520,100800,1874880,3628800,341953920,479001600,36739422720,468583315200,8960682931200,20922789888000,428984444528640,6402373705728000,101264718903828480,1889553893017190400,3503784375442391040 00 ⋆ E.g.f.: A(x) = Sum _{ n>=0 } binomial(x ^ n + n - 1, n). ● a(p) = (p - 1)! for prime p. ●

► [A139268] 0,2,18,48,92,150,222,308,408,522,650,792,948,1118,1302,1500,1712,1938,2178,2432,2700,2982,3278,3588,3912 ⋆ Twice nonagonal numbers (or twice 9 - gonal numbers): a(n) = n(7n - 5). ● a(n) = 14 * n + a(n - 1) - 12, with a(0)= 0. - _ Vincenzo Librandi _ , Aug 03 2010 ●

► [A048910] 1,2,18,49,529,1458,15842,43681,474721,1308962,14225778,39225169,426298609,1175446098,12774732482,35224157761,382815675841,1055549286722,11471695542738,31631254443889,343768050606289,947882084029938,10301569822645922,28404831266454241 ⋆ Indices of 9 - gonal numbers that are also square. ● a(n) = 30 * a(n - 2) - a(n - 4) - 10. ● a(n) = a(n - 1) + 30 * a(n - 2) - 30 * a(n - 3) - a(n - 4) + a(n - 5). ● a(n) = 1 / 56 * ((p - q * (- 1) ^ n) * (2 * sqrt (2) + sqrt(7)) ^ (n - 1) + (p + q * (- 1) ^ n) * (2 * sqrt(2) - sqrt(7)) ^ n + 20). ● a(n) = ceiling (1 / 56 * (p - q * (- 1) ^ n) * (2 * sqrt(2) + sqrt(7)) ^ (n - 1)). ●

► [A077591] 1,2,18,50,98,162,242,338,450,578,722,882,1058,1250,1458,1682,1922,2178,2450,2738,3042,3362,3698,4050,4418 ⋆ Maximum number of regions into which the plane can be divided using n (concave) quadrilaterals. ● a(n) = 8 * n ^ 2 - 8 * n + 2 = 2 * (2 * n - 1) ^ 2, n > 0, a(0)=1. [It would be nice to have a proof, or even a reference to a proof. - _ N. J. A. Sloane _ , Nov 30 2017] ●

► [A058794] 2,18,52,110,198,322,488,702,970,1298,1692,2158,2702,3330,4048,4862,5778,6802,7940,9198,10582,12098,13752,15550,17498 ⋆ Row 3 of A007754. ● a(n) = n ^ 3 + 6 * n ^ 2 + 9 * n + 2. ●

► [A085293] 2,18,56,238,902,3564,13862,54238,211736,827298,3231362,12623044,49308482,192613698,752401496,2939092798,11480914982,44847668844,175187526662,684331472398,2673190054136,10442227799538,40790261396162,159338166024964,622419427368002 ⋆ Product of Lucas (A000204) and a Pell Companion series (A002203). ● a(n) = (((1 + sqrt(5)) / 2) ^ n + ((1 - sqrt(5)) / 2) ^ n) * ((1 + sqrt(2)) ^ n + (1 - sqrt(2)) ^ n). ● a(n) = 2 * a(n - 1) + 7 * a(n - 2) + 2 * a(n - 3) - a(n - 4). ●

► [A213820] 2,18,60,140,270,462,728,1080,1530,2090,2772,3588,4550,5670,6960,8432,10098,11970,14060,16380,18942,21758,24840,28200,31850 ⋆ Principal diagonal of the convolution array A213819. ● a(n) = - n + n ^ 2 + 2 * n ^ 3. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ●

► [A078837] 0,2,18,60,270,462,1080,1530,2772,5670,6960,11970,16380,18942,24840,35802,49590,54870,72930,86940,94572,120120,139482,172260,223440 ⋆ a(n) = Sum _{ k=1..prime(n) - 1 } floor(k ^ 3 / prime(n)). ● a(n) = (1 / 4) * (prime(n) - 2) * (prime(n) - 1) * (prime(n) + 1). ●

► [A073976] 0,2,18,72,300,1440,7056,39312,252720,1658880,10349856,62099136,367960320,2179768320,12976433280,77787495936,468419708160,2821539889152,16960580969472,101753146100736,609923828966400,3656096522698752,21926115464435712,131556692786614272 ⋆ Number of strings of length n over Z _ 6 with trace 0 and subtrace 5. ● a(n; t, s) = a(n - 1; t, s) + a(n - 1; t + 5, s + 5t + 1) + a(n - 1; t + 4, s + 4t + 4) + a(n - 1; t + 3, s + 3t + 3) + a(n - 1; t + 2, s + 2t + 2) + a(n - 1; t + 1, s + t + 1) where t is the trace and s is the subtrace. ●

► [A152887] 0,1,2,18,72,720,4320,50400,403200,5443200,54432000,838252800,10059033600,174356582400,2440992153600,47076277248000,753220435968000,1600593426432000,28810681675776000,669048052248576000,13380961044971520000,337200218333282304000 0 ⋆ Number of descents beginning with an even number and ending with an odd number in all permutations of { 1,2,...,n } . ● a(2n) = (2n - 1)! * C(n + 1,2); a(2n + 1) = (2n)! * C(n + 1,2). ● a(n) = (n - 1)! * (2 * n * (n + 1) + (2 * n + 1) * (- 1) ^ n - 1) / 16. - _ Bruno Berselli _ , Nov 07 2011 ●

► [A024171] 0,0,0,2,18,77,241,623,1406,2868,5415,9608,16203,26188,40830,61720,90827,130548,183773,253942,345116,462042,610231,796034,1026724 ⋆ Integer part of ((4th elementary symmetric function of 1,2,...,n) / (1 + 2 + ... + n)). ● a(n) = floor((1 / 2880) * (n - 3) * (n - 2) * (n - 1) * (15 * n ^ 3 + 15 * n ^ 2 - 10 * n - 8)). ●

► [A213830] 2,18,78,230,540,1092,1988,3348,5310,8030,11682,16458,22568,30240,39720,51272,65178,81738,101270,124110,150612,181148,216108,255900,300950 ⋆ Antidiagonal sums of the convolution array A213828. ● a(n) = (2 * n + n ^ 2 + 2 * n ^ 3 + 3 * n ^ 4) / 4. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ●

► [A064057] 2,18,80,255,666,1520,3144,6030,10890,18722,30888,49205,76050,114480,168368,242556,343026,477090,653600,883179,1178474,1554432,2028600,2621450,3356730 ⋆ Eighth column of quintinomial coefficients. ● a(n) = 2 * C(n + 2,2) + 12 * C(n + 2,3) + 20 * C(n + 2,4) + 15 * C(n + 2,5) + 6 * C(n + 2,6) + C(n + 2,7) (see comment in A213887). - _ Vladimir Shevelev _ and _ Peter J. C. Moses _ , Jun 22 2012 ●

► [A091940] 0,2,18,84,260,630,1302,2408,4104,6570,10010,14652,20748,28574,38430,50640,65552,83538,104994,130340,160020,194502,234278,279864,331800 ⋆ Given n colors, sequence gives number of ways to color the vertices of a square such that no edge has the same color on both of its vertices. ● a(n) = 2 * C(n,2) + 12 * C(n,3) + 24 * C(n,4) = n * (n - 1) * (n ^ 2 - 3 * n + 3). ● a(n) = (n - 1) + (n - 1) ^ 4. - _ Rainer Rosenthal _ , Dec 03 2006 ●

► [A068605] 2,18,84,300,930,2646,7112,18360,45990,112530,270204,638820,1490762,3440430,7864080,17825520,40107726,89652906,199229060,440401500,968883762,2122317318,4630511064,10066329000,21810380150 ⋆ Number of functions from [1,2,...,n] to [1,2,...,n] such that the image contains exactly two elements. ● a(n) = C(n, 2) * (2 ^ n - 2). ●

► [A172529] 0,2,18,88,200,486,980,1760,2916,4550,6776,9720,13520,18326,24300,31616,40460,51030,63536,78200,95256,114950,137540,163296,192500 ⋆ Number of ways to place 2 nonattacking knights on an n X n toroidal board. ● a(n) = n ^ 2 * (n + 3) * (n - 3) / 2, n>=5. ●

► [A201236] 0,2,18,88,250,558,1078,1888,3078,4750,7018,10008,13858,18718,24750,32128,41038,51678,64258,79000,96138,115918,138598,164448,193750 ⋆ Number of ways to place 2 non - attacking wazirs on an n X n toroidal board. ● a(n) = n ^ 2 * (n ^ 2 - 5) / 2, n>=3. ●

► [A036800] 0,2,18,90,346,1146,3450,9722,26106,67578,169978,417786,1007610,2392058,5603322,12976122,29753338,67633146,152567802,341835770,761266170,1686110202,3716153338,8153726970,17817403386 ⋆ a(n) = - 6 + 2 ^ (n + 1) * (3 - 2 * n + n ^ 2). ● a(n) = Sum _{ k=0..n } 2 ^ k * k ^ 2. - _ Benoit Cloitre _ , Jun 11 2003 ● a(0)=0, a(1)=2, a(2)=18, a(3)=90, a(n)=7 * a(n - 1) - 18 * a(n - 2) + 20 * a(n - 3) - 8 * a(n - 4). - _ Harvey P. Dale _ , Jun 13 2015 ● a(n) = Sum _{ k=0..n } Sum _{ i=0..n } k ^ 2 * C(k,i). - _ Wesley Ivan Hurt _ , Sep 21 2017 ●

► [A157052] 2,18,92,340,1010,2562,5768,11832,22530,40370,68772,112268,176722,269570,400080,579632,822018,1143762,1564460,2107140,2798642,3670018,4756952,6100200,7746050 ⋆ Number of integer sequences of length n + 1 with sum zero and sum of absolute values 6. ● a(n) = T(n,3); T(n,k) = Sum _{ i=1..n } binomial(n + 1,i) * binomial(k - 1,i - 1) * binomial(n - i + k,k). ● a(n) = n * (n + 1) * (n ^ 4 + 2 * n ^ 3 + 11 * n ^ 2 + 10 * n + 12) / 36. - _ Bruno Berselli _ , Mar 17 2012 ●

► [A087291] 0,2,18,98,450,1922,7938,32258,130050,522242,2093058,8380418,33538050,134184962,536805378,2147352578,8589672450,34359214082,137437904898,549753716738,2199019061250 ⋆ Number of pairs of polynomials (f,g) in GF(2)[x] satisfying 1 <= deg(f) <= n, 1 <= deg(g) <= n and gcd(f,g) = 1. ● a(n) = 2 * (2 ^ n - 1) ^ 2. ●

► [A267691] 1,1,2,18,99,355,980,2276,4677,8773,15334,25334,39975,60711,89272,127688,178313,243849,327370,432346,562667,722667,917148,1151404,1431245 ⋆ a(n) = (n + 1) * (6 * n ^ 4 - 21 * n ^ 3 + 31 * n ^ 2 - 31 * n + 30) / 30. ● a(n + 1) = a(n) + n ^ 4. ●

► [A219758] 0,0,0,0,2,18,99,432,1641,5674,18315,56076,164621,466958,1287183,3463184,9125905,23617554,60162067,151126036,374931477,919863318,2234253335,5377622040,12836667417 ⋆ Expansion of x ^ 4 * (2 - 6 * x + 5 * x ^ 2 + 2 * x ^ 3 - 4 * x ^ 4) / ((1 - x) ^ 2 * (1 - 2 * x) ^ 5). ● a(n) = 2 ^ (n - 7) * (n ^ 4 - 2 * n ^ 3 - 25 * n ^ 2 + 194 * n - 576) / 3 + n + 1 with n>1, a(0)=a(1)=0. [_ Bruno Berselli _ , Nov 29 2012] ●

► [A006043] 2,18,108,540,2430,10206,40824,157464,590490,2165130,7794468,27634932,96722262,334807830,1147912560,3902902704,13172296626,44165935746,147219785820,488149816140,1610894393262,5292938720718,17322344904168,56485907296200,183579198712650 ⋆ A traffic light problem: expansion of 2 / (1 - 3 * x) ^ 3. ● a(n) = (n + 2) * (n + 1) * 3 ^ n. - _ Zerinvary Lajos _ , Apr 25 2007 , corrected by _ R. J. Mathar _ , Mar 14 2011 ●

► [A038721] 2,18,110,570,2702,12138,52670,223290,931502,3842058,15718430,63928410,258885902,1045076778,4208939390,16921719930,67944897902,272553908298,1092539107550,4377127901850,17529428119502,70180466208618 ⋆ k=2 column of A038719. ● a(1)=2, a(2)=18, a(3)=110, a(n)=9 * a(n - 1) - 26 * a(n - 2) + 24 * a(n - 3). - _ Harvey P. Dale _ , Aug 16 2012 ●

► [A308700] 0,0,2,18,112,600,2976,14112,65024,293760,1308160,5761536,25153536,109025280,469704704,2013143040,8589672448,36506664960,154617643008,652832538624,2748773826560,11544861081600,48378488553472,202310091276288,844424829468672 ⋆ a(n) = n * 2 ^ (n - 2) * (2 ^ (n - 1) - 1). ● a(n) = 12 * a(n - 1) - 52 * a(n - 2) + 96 * a(n - 3) - 64 * a(n - 4) for n > 3. ● a(n) = n * 2 ^ (n - 2) * (2 ^ (n - 1) - 1). ●

► [A064837] 0,2,18,114,420,1170,2710,5538,10312,17890,29338,45970,69356,101362,144158,200258,272528,364226,479010,620978,794676,1005138,1257894,1559010,1915096 ⋆ a(n) = (6 * n ^ 4 + 30 * n ^ 3 - 20 * n ^ 2 + 14) * n / 30 + (n mod 2). ● a(0)=0, a(1)=2, a(2)=18, a(3)=114, a(4)=420, a(5)=1170, a(6)=2710, a(n) = 5 * a(n - 1) - 9 * a(n - 2) + 5 * a(n - 3) + 5 * a(n - 4) - 9 * a(n - 5) + 5 * a(n - 6) - a(n - 7). - _ Harvey P. Dale _ , Sep 15 2014 ●

► [A224902] 1,2,18,114,450,2298,10466,43314,184402,749490,2942274,11437026,43364818,161089130,589901682,2123791130,7531395154,26360805018,91057065522,310718196626,1048405959266,3499152601394,11559430074418,37818135048962,122580207033106 ⋆ O.g.f.: exp(Sum _{ n>=1 } (sigma(2 * n ^ 4) - sigma(n ^ 4)) * x ^ n / n). ● a(n) == 2 (mod 4) for n>0 (conjecture). ●

► [A153338] 0,2,18,116,650,3372,16660,79592,371034,1697660,7654460,34106712,150499908,658707896,2863150440,12371226064,53178791162,227561427612,969890051884,4119092850680,17438036501676,73611934643368,309935825654168,1301878616066736 ⋆ Number of zig - zag paths from top to bottom of a 2n - 1 by 2n - 1 square whose color is not that of the top right corner. ● a(n) = n * 2 ^ (2 * n - 2) - (2 * n - 1) * binomial(2 * n - 2,n - 1). ●

► [A007798] 0,0,2,18,116,660,3542,18438,94376,478440,2411882,12118458,60769436,304378620,1523487422,7622220078,38125449296,190670293200,953480606162,4767790451298,23840114517956,119204059374180,596030757224102,2980185167180118,14901019979079416 ⋆ Expected number of random moves in Tower of Hanoi problem with n disks starting with a randomly chosen position and ending at a position with all disks on the same peg. ● a(n) = (5 ^ n - 2 * 3 ^ n + 1) / 4. - _ Henry Bottomley _ , Jun 06 2000, proved by _ Max Alekseyev _ , Feb 04 2008 ● a(n) = 9 * a(n - 1) - 23 * a(n - 2) + 15 * a(n - 3). ●

► [A119578] 0,2,18,120,700,3780,19404,96096,463320,2187900,10161580,46558512,210924168,946454600,4212243000,18614102400,81746933040,357041751660,1551848136300,6715600122000,28947771052200,124337568995640,532337037821160,2272426880817600,9674281104930000 ⋆ a(n) = (n + n ^ 2) * binomial(2 * n,n) / 2. ● a(n) = (n + 1) * Gamma(2 * n) / Gamma(n) ^ 2 for n > 0. - _ Shanzhen Gao _ , Apr 26 2011 ●

► [A360132] 1,2,18,134,1010,7788,60978,482708,3853338,30964238,250150176,2029781310,16530857930,135051216620,1106287906140,9083459084364,74734798117570,615998603183550,5085522355488150,42045309424052250,348067638153560040,2884832348569699340 ⋆ Expansion of 1 / sqrt(1 - 4 * x / (1 - x) ^ 6). ● a(n) = Sum _{ k=0..n } binomial(2 * k,k) * binomial(n + 5 * k - 1,n - k). ● a(0) = 1 ; a(n) = (2 / n) * Sum _{ k=0..n - 1 } (n + k) * binomial(n + 4 - k,5) * a(k). ●

► [A154636] 1,2,18,138,1050,7986,60738,461946,3513354,26720994,203227890,1545660138,11755597434,89407799058,679995600162,5171741404122,39333944432490,299156331247554,2275248816682962,17304521539721034,131610425867719386,1000969842322591986 ⋆ a(n) is the ratio of the sum of the bends of the circles that are drawn in the n - th generation of Apollonian packing to the sum of the bends of the circles in the initial configuration of 3 circles. ● a(n) = ((- (- 7 + sqrt(13)) * (4 + sqrt(13)) ^ n - (4 - sqrt(13)) ^ n * (7 + sqrt(13)))) / (3 * sqrt(13)) for n>0. ● a(n) = 8 * a(n - 1) - 3 * a(n - 2) for n>2. ●

► [A216584] 1,2,18,140,1330,12852,130284,1348776,14247090,152618180,1654120468,18096447096,199536967084,2214714164600,24720932068200,277289164574640,3123590583844530,35318969120870820,400692715550057700,4559427798654821400,52020436064931914580 ⋆ a(n) = A002426(n) * A000984(n); product of central trinomial coefficients and central binomial coefficients. ● a(n) = binomial(2 * n, n) * Sum _{ k=0..floor(n / 2) } binomial(n, 2 * k) * binomial(2 * k, k). ● a(n) = [x ^ n * y ^ n] (1 + (x + y) ^ 2 + (x + y) ^ 4) ^ n. - _ Peter Bala _ , Feb 17 2020 ●

► [A226733] 1,2,18,142,1186,10152,88414,779508,6936066,62159224,560238728,5072970366,46114086446,420558296888,3846232573236,35261290343112,323952686556354,2981787128165592,27491128592627800,253835886034173848,2346892194318851016,21724880414632781472 ⋆ G.f.: 1 / (1 + 8 * x * G(x) ^ 2 - 10 * x * G(x) ^ 3) where G(x) = 1 + x * G(x) ^ 4 is the g.f. of A002293. ● a(n) = Sum _{ k=0..n } C(2 * k, n - k) * C(4 * n - 2 * k, k). ● a(n) = Sum _{ k=0..n } C(n + 2 * k, n - k) * C(3 * n - 2 * k, k). ● a(n) = Sum _{ k=0..n } C(2 * n + 2 * k, n - k) * C(2 * n - 2 * k, k). ● a(n) = Sum _{ k=0..n } C(3 * n + 2 * k, n - k) * C(n - 2 * k, k). ● a(n) = Sum _{ k=0..n } C(4 * n + 2 * k, n - k) * C(- 2 * k, k). ●

► [A125835] 0,2,18,146,1170,9362,74898,599186,4793490,38347922,306783378,2454267026,19634136210,157073089682,1256584717458,10052677739666,80421421917330,643371375338642,5146971002709138,41175768021673106,329406144173384850,2635249153387078802,21081993227096630418 ⋆ Numbers whose base - 8 or octal representation is 22222222.....2. ● a(n) = 2 * (8 ^ (n - 1) - 1) / 7. ● a(n) = 8 * a(n - 1) + 2, with a(1)=0. - _ Vincenzo Librandi _ , Sep 30 2010 ●

► [A356623] 2,18,148,1208,9854,80378,655632,5347896,43622018,355818522,2902360468,23674136576,193106524430,1575142124306,12848207584320,104800979913168,854846508252578,6972859922465346,56876614724333236 ⋆ Number of ways to tile a hexagonal strip made up of 4 * n + 2 equilateral triangles, using triangles and diamonds. ● a(n) = 9 * a(n - 1) - 7 * a(n - 2) + a(n - 3). ●

► [A052838] 0,0,2,18,158,1510,15962,186270,2385182,33290862,503277242,8193803926,142938943886,2659770747270,52581058479770,1100423513438766,24302677755662654,564770268904566238 ⋆ Expansion of e.g.f.: (exp(x / (1 - x)) - 1) ^ 2. ● a(n) = 2 * n! * Sum _{ j=0..n - 1 } binomial(n - 1, j) * (2 ^ j - 1) / (j + 1)!. ● a(n) = n! * (LaguerreL(n, - 1, - 2) - 2 * LaguerreL(n, - 1, - 1)) + [n=0]. (End) ●

► [A270369] 1,2,18,162,1458,13122,118098,1062882,9565938,86093442,774840978,6973568802,62762119218,564859072962,5083731656658,45753584909922,411782264189298,3706040377703682,33354363399333138,300189270593998242,2701703435345984178 ⋆ Expansion of (1 - 7 * x) / (1 - 9 * x). ● a(n) = 9 * a(n - 1) for n>1. ● a(n) = 2 * 9 ^ (n - 1) for n>0. ●

► [A352654] 0,0,2,18,162,1500,14240,137886,1356194,13507416,135916002,1379301990,14097919968,144977296932,1498750896708,15564971674518,162298598439330,1698353774374704,17828728267167326,187693442844729174,1981038544180652162,20957881615473229620 ⋆ a(0) = 0, a(n) = [x ^ n] P(n - 1,(1 + x) / (1 - x)) for n >= 1, where P(n,x) denotes the n - th Legendre polynomial. ● a(n) = Sum _{ k = 1..n - 1 } binomial(n - 1,k) * binomial(n - 1,k - 1) * binomial(n + k - 1,k). ● a(n) = Sum _{ k = 1..n - 1 } (- 1) ^ (n + k - 1) * binomial(n - 1,k) * binomial(n + k - 1,k) * binomial(n + k - 1,k - 1). ● a(n) = Sum _{ k = 0..n } (- 1) ^ (n + k) * binomial(n,k) * binomial(n + k - 1,k) ^ 2 for n >= 1. ●

► [A005260] 1,2,18,164,1810,21252,263844,3395016,44916498,607041380,8345319268,116335834056,1640651321764,23365271704712,335556407724360,4854133484555664,70666388112940818,1034529673001901732 ⋆ a(n) = Sum _{ k = 0..n } binomial(n,k) ^ 4. ● a(n) = hypergeom([- n, - n, - n, - n], [1, 1, 1], 1). - _ Peter Luschny _ , Jul 27 2016 ● a(n) = Sum _{ k=0..n } C(n,k) * C(n + k,k) * C(2k,k) * C(2n - 2k,n - k) * (- 1) ^ (n - k). This can be proved via the Zeilberger algorithm. - _ Zhi - Wei Sun _ , Aug 23 2020 ● a(n) = (- 1) ^ n * binomial(2 * n, n) * hypergeom([1 / 2, - n, - n, n + 1], [1, 1, 1 / 2 - n], 1). - _ Peter Luschny _ , Aug 24 2020 ● a(n) = Sum _{ k=0..n } binomial(n,k) ^ 2 * binomial(2 * k, n) * binomial(2 * n - k,n) [Theorem 1 in Belbachir and Otmani]. - _ Michel Marcus _ , Dec 06 2020 ● a(n) = [x ^ n] (1 - x) ^ (2 * n) P(n,(1 + x) / (1 - x)) ^ 2, where P(n,x) denotes the n - th Legendre polynomial. See Gould, p. 66. This formula is equivalent to the binomial sum identity of Zhi - Wei Sun given above. - _ Peter Bala _ , Mar 24 2022 ●

► [A052665] 0,0,2,18,168,1800,22320,317520,5120640,92534400,1854316800,40834886400,980516275200,25499650176000,714077383219200,21423629170944000,685577056260096000,23309975600271360000 ⋆ a(0)=0, for n >= 1, a(n) = ((2 ^ (n - 1) - 1) * n!. ● a(n) = n! * A0000225(n - 1). - _ R. J. Mathar _ , Jun 03 2022 ●

► [A132306] 1,2,18,179,1874,20202,221943,2470827,27777618,314642708,3585365618,41054041602,471980219543,5444542749674,62987391100239,730515277512729,8490829425196626,98878672140171984,1153433769999190212 ⋆ a(n) = Sum _{ k=0..2n - 1 } C(2n - 1,k) * trinomial(n,k) for n>0 with a(0)=1. ● a(n) = Sum _{ k=0..2n } C(2n,k) * trinomial(n,k) / 2 for n>0 with a(0)=1. ● a(n) = Sum _{ k=0..2n } C(- 2n - 1,k) * trinomial(n,k) / 2 for n>0 with a(0)=1. ● a(n) = Sum _{ k=0..2n } C(- 2n,k) * trinomial(n,k). ●

► [A337855] 0,2,18,180,1800,18000,180000,1800000,18000000,180000000,1800000000,18000000000,180000000000,1800000000000,18000000000000,180000000000000,1800000000000000,18000000000000000,180000000000000000,1800000000000000000,18000000000000000000,180000000000000000000 ⋆ Number of n - digit positive integers that are the product of two integers ending with 5. ● a(n) = 10 * a(n - 1) for n > 3 , with a(1) = 0, a(2) = 2 and a(3) = 18. ● a(n) = 18 * 10 ^ (n - 3) for n > 2. ● a(n) = 2 * floor((k + 27 * 10 ^ (n - 2)) / 30), with 2 < k < 28 . [This formula was found in the form k = 7 by _ Christian Krause _ 's LODA miner] - _ Stefano Spezia _ , Dec 06 2021 ●

► [A155542] 2,18,194,2002,20866,216978,2257474,23484242,244310786,2541592338,26440508354,275063875282,2861523711106,29768786570898,309688385344834,3221726747031122,33516023609869826,348671357554736658,3627271450684638914,37734955544345527762 ⋆ Expansion of (2 + 2 * x) / (1 - 8 * x - 25 * x ^ 2). ● a(n) = 8 * a(n - 1) + 25 * a(n - 2) for n>1. ● a(n) = ((4 - sqrt(41)) ^ n * (- 5 + sqrt(41)) + (4 + sqrt(41)) ^ n * (5 + sqrt(41))) / sqrt(41). ●

► [A157765] 2,18,194,2066,22018,234642,2500546,26647954,283983362,3026369298,32251576514,343700350226,3662764537858,39033547830162,415974830066626,4432983135477394,47241655165240322,503447433600744978,5365165922164132034,57175791256846535186 ⋆ Expansion of (2 - 2 * x) / (1 - 10 * x - 7 * x ^ 2). ● a(n) = ((5 - 4 * sqrt(2)) ^ n * (- 1 + sqrt(2)) + (1 + sqrt(2)) * (5 + 4 * sqrt(2)) ^ n) / sqrt(2). ● a(n) = 10 * a(n - 1) + 7 * a(n - 2) for n > 1. ●

► [A156341] 2,18,194,2130,23426,257682,2834498,31179474,342974210,3772716306,41499879362,456498672978,5021485402754,55236339430290,607599733733186,6683597071065042,73519567781715458,808715245598870034,8895867701587570370,97854544717463274066 ⋆ Expansion of (2 - 6 * x) / (1 - 12 * x + 11 * x ^ 2). ● a(n) = 12 * a(n - 1) - 11 * a(n - 2) for n>=2, a(0)=2, a(1)=18. ● a(n) = a(n - 1) + 16 * 11 ^ (n - 1) for n >=1, a(0)=2. ● a(n) = 10 * a(n - 1) + 11 * a(n - 2) - 8 for n>=2, a(0)=2, a(1)=18. ● a(n) = (8 / 5) * 11 ^ n + 2 / 5. (End) ●

► [A155666] 1,2,18,218,2466,26282,269298,2685818,26269506,253202762,2413042578,22791125018,213710059746,1992110014442,18478745943858,170706760005818,1571545212141186,14425381885981322,132080236787517138 ⋆ 9 ^ n - 8 ^ n + 1. ● a(n)=17 * a(n - 1) - 72 * a(n - 2) + 56 with a(0)=1, a(1)=2 - _ Vincenzo Librandi _ , Jul 21 2010 ●

► [A090307] 2,18,326,5886,106274,1918818,34644998,625528782,11294163074,203920464114,3681862517126,66477445772382,1200275886420002,21671443401332418,391286257110403526,7064824071388595886 ⋆ a(n) = 18 * a(n - 1) + a(n - 2), starting with a(0) = 2 and a(1) = 18. ● a(n) = 18 * a(n - 1) + a(n - 2), starting with a(0) = 2 and a(1) = 18. ● a(n) = (9 + sqrt(82)) ^ n + (9 - sqrt(82)) ^ n. ● a(n) = Lucas(n, 18) = 2 * (- i) ^ n * ChebyshevT(n, 9 * i). - _ G. C. Greubel _ , Dec 30 2019 ●

► [A041451] 1,1,2,19,21,124,393,1303,1696,2999,10693,35078,186083,221161,2176532,2397693,4574225,139624443,144198668,283823111,2698606667,2982429778,1761055555,55814696449,185054844904 ⋆ Denominators of continued fraction convergents to sqrt(241). ● a(n) = 142022136 * a(n - 17) + a(n - 34) for n>33. - _ Vincenzo Librandi _ , Dec 18 2013 ●

► [A268492] 2,19,21,209,2089,2321,23209,77363,773629,2578763,25787629,28652921,286529209,955097363,9550973629,10612192921,35373976403,353739764029,1179132546763,1310147274181,4367157580603,4852397311781,48523973117809,161746577059363 ⋆ Orbit of 2 under the map A268488: n - > least number k of the form k = n * (last digit of k) + (k without its last digit). ● a(n) = 10 * a(n - 1) - 1 unless divisible by 3 or 9, then a(n) = (10 * a(n - 1) - 1) /{ 3,9 } , respectively. - _ Bob Selcoe _ , Feb 17 2016 ●

► [A307554] 0,0,0,0,2,19,47,63,80,99,120,143,168,195,224,255,288,323,360,399,440,483,528,575,624 ⋆ Longest path length in the n X n fiveleaper graph. ● a(n) = n ^ 2 - 1 for n>7. ●

► [A125201] 2,19,52,101,166,247,344,457,586,731,892,1069,1262,1471,1696,1937,2194,2467,2756,3061,3382,3719,4072,4441,4826 ⋆ a(n) = 8 * n ^ 2 - 7 * n + 1. ● a(1) = 2, a(n) = a(n - 1) + 16 * n - 15. ● a(n) = 2 * a(n - 1) - a(n - 2) + 16 with a(1) = 2 and a(2) = 19. ●

► [A079773] 0,1,2,19,68,421,1862,10039,48008,246601,1213322,6125659,30451148,152787181,762341582,3816490879,19068105488,95383574161,476788730642,2384331073699,11920493107028,59605952319541,298019301244502 ⋆ a(n) = 2 * a(n - 1) + 15 * a(n - 2) with n>0, a(0)=0, a(1)=1. ● a(n) = (5 ^ n - (- 3) ^ n) / 8. ● a(n) = sum(k=1..n, binomial(n, 2 * k - 1) * 4 ^ (2 * (k - 1))). ●

► [A110050] 2,19,73,369,1697,8241,39441,190609,918929,4437649,21421201,103433361,499397777,2411316369,11642774673,56216331409,271436096657,1310609581201,6328181400721,30555163403409,147533373973649 ⋆ Expansion of (2 + 9 * x - 24 * x ^ 3 + 16 * x ^ 4 - 30 * x ^ 2) / ((1 - x) * (2 * x + 1) * (2 * x - 1) * (4 * x ^ 2 + 4 * x - 1)). ● a(n) = 5 * a(n - 1) + 4 * a(n - 2) - 24 * a(n - 3) + 16 * a(n - 5) for n>4. - _ Colin Barker _ , May 11 2019 ●

► [A056005] 0,0,0,2,19,90,302,820,1926,4068,7920,14454,25025,41470,66222,102440,154156,226440,325584,459306,636975,869858,1171390,1557468,2046770 ⋆ Number of 3 - element ordered antichains on an unlabeled n - element set; T _ 1 - hypergraphs with 3 labeled nodes and n hyperedges. ● a(n) = C(n + 7, 7) - 6 * C(n + 5, 5) + 6 * C(n + 4, 4) + 3 * C(n + 3, 3) - 6 * C(n + 2, 2) + 2 * C(n + 1, 1). ● a(n) = n * (n - 2) * (n - 1) * (n + 1) * (n ^ 3 + 30 * n ^ 2 + 131 * n - 270) / 5040. ●

► [A193047] 0,1,2,19,102,377,1104,2777,6282,13155,25998,49153,89792,159681,278034,476131,804790,1346457,2234768,3686201,6051290,9897491,16143262,26275009,42698112 ⋆ Coefficient of x in the reduction by x ^ 2 - >x + 1 of the polynomial p(n,x) defined at Comments. ● a(n)=6 * a(n - 1) - 14 * a(n - 2) + 15 * a(n - 3) - 5 * a(n - 4) - 4 * a(n - 5) + 4 * a(n - 6) - a(n - 7). ●

► [A089659] 0,2,19,104,440,1600,5264,16128,46848,130560,352000,923648,2369536,5963776,14766080,36044800,86900736,207224832,489357312,1145569280,2666761600,6136266752,14060355584,32027705344,72561459200 ⋆ a(n) = S1(n,2), where S1(n, t) = Sum _{ k=0..n } (k ^ t * Sum _{ j=0..k } binomial(n,j)). ● a(n) = 2 ^ (n - 3) * n * (7 * n ^ 2 + 12 * n + 5) / 3. (see Wang and Zhang p. 333) ● a(n) = 8 * a(n - 1) - 24 * a(n - 2) + 32 * a(n - 3) - 16 * a(n - 4) for n > 3. ●

► [A082291] 2,19,118,695,4058,23659,137902,803759,4684658,27304195,159140518,927538919,5406093002,31509019099,183648021598,1070379110495,6238626641378,36361380737779,211929657785302,1235216565974039 ⋆ Expansion of x(2 + 5 x - x ^ 2) / ((1 - x)(1 - 6x + x ^ 2)). ● a(n) = 6a(n - 1) - a(n - 2) + 6. ● a(- 1 - n) = - 3 - a(n). ● a(n) = round(((3 + sqrt(8)) ^ n * (1 + sqrt(2)) - 6) / 4); ● a(n + 3) = 7 * (a(n + 2) - a(n + 1)) + a(n); ● a(n) = 7 * a(n - 1) - 7 * a(n - 2) + a(n - 3) with a(1)=2, a(2)=19, and a(3)=118. - _ Harvey P. Dale _ , Jul 19 2012 ●

► [A055518] 1,2,19,118,875,6180,44389,317236,2270893,16247718,116267271,831957002,5953209015,42598982984,304823192665,2181205436792,15607926184313,111684733527034,799175992102923,5718617425358462,40920380028968819 ⋆ a _{ k + 1 } = 6 * a _ k + 11 * a _{ k - 1 } - 19 * a _{ k - 2 } - 4 * a _{ k - 3 } + a _{ k - 4 } , a _ 1=1, a _ 2=2, a _ 3=19, a _ 4=118, a _ 5=875. ● a(n) = Sum _{ k=1..n } Fibonacci(k) ^ 4 * a(n - k), a(0)=1. - _ Vladeta Jovovic _ , Apr 23 2003 ●

► [A289230] 0,2,19,127,536,1688,4357,9789,19844,37172,65397,109335,175214,270934,406329,593463,846934,1184212,1625979,2196509,2924050,3841240,4985531,6399647,8132044 ⋆ Number of nonequivalent ways to select 3 disjoint point triples from an n X n X n triangular point grid, each point triple forming a 2 X 2 X 2 triangle. ● a(n) = (n ^ 6 - 6 * n ^ 5 - 24 * n ^ 4 + 220 * n ^ 3 - 153 * n ^ 2 - 1488 * n + 2592) / 36 + IF(MOD(n, 2) = 1, - 1) / 2 + IF(MOD(n, 3) = 1, - 2) / 9. ●

► [A206948] 0,0,0,2,19,131,791,4446,23913,124892,638878,3218559,16027375,79093773,387540260,1887974063,9154751912,44221373872,212931964415,1022594028515,4900116587043,23437066655010,111923110602497 ⋆ Number of nonisomorphic graded posets with 0 and non - uniform Hasse graph of rank n, with exactly 2 elements of each rank level above 0. ● a(n) = 11 * a(n - 1) - 40 * a(n - 2) + 55 * a(n - 3) - 30 * a(n - 4) + 6 * a(n - 5), a(0)=0, a(1)=0, a(2)=0, a(3)=2, a(4)=19, a(5)=131. ●

► [A178829] 0,2,19,139,979,6861,48038,336278,2353958,16477720,115344057,807408417,5651858937,39563012579,276941088076,1938587616556,13570113315916,94990793211438,664935552480095,4654548867360695 ⋆ Partial sums of (1 / 2) * floor(7 ^ n / 10). ● a(n) = round((7 * 7 ^ n - 30 * n - 25) / 60) / 2. ● a(n) = floor((7 * 7 ^ n - 30 * n - 7) / 60) / 2. ● a(n) = ceiling((7 * 7 ^ n - 30 * n - 43) / 60) / 2. ● a(n) = a(n - 4) + 20 * 7 ^ (n - 3) - 1 , n > 4. ● a(n) = (7 ^ (n + 1) - 30 * n + 6 * (2 + (- 1) ^ n) * (- 1) ^ ((2 * n - 1 + (- 1) ^ n) / 4) - 25) / 120. ●

► [A037526] 2,19,171,1541,13870,124830,1123472,10111249,91001241,819011171,7371100540,66339904860,597059143742,5373532293679,48361790643111,435256115788001,3917305042092010,35255745378828090,317301708409452812,2855715375685075309,25701438381165677781,231312945430491100031 ⋆ Base 9 digits are, in order, the first n terms of the periodic sequence with initial period 2,1,0. ● a(n) = floor(171 * 9 ^ n / 728). - _ Kevin Ryde _ , Jul 21 2022 ●

► [A037494] 2,19,173,1558,14024,126217,1135955,10223596,92012366,828111295,7453001657,67077014914,603693134228,5433238208053,48899143872479,4400922948523 12,3960830653670810 ⋆ Base 9 digits are, in order, the first n terms of the periodic sequence with initial period 2,1. ● a(n) = 9 * a(n - 1) + a(n - 2) - 9 * a(n - 3). ●

► [A163067] 2,19,178,1656,15352,142064,1313408,12136896,112126592,1035748864,9566914048,88363846656,816149635072,7538085638144,69622614990848,643040841793536,5939176725512192,54854677118255104,506641703733035008 ⋆ a(n) = 14 * a(n - 1) - 44 * a(n - 2) for n > 1; a(0) = 2, a(1) = 19. ● a(n) = ((2 + sqrt(5)) * (7 + sqrt(5)) ^ n + (2 - sqrt(5)) * (7 - sqrt(5)) ^ n) / 2. ●

► [A221904] 2,19,181,1729,16561,159049,1531441,14782969,143046721,1387420489,13486784401,131381059609,1282429536481,12541865828329,122876792454961,1205891132094649,11853020188851841 ⋆ 9 ^ n + 10 ^ n. ● a(n) = 19 * a(n - 1) - 90 * a(n - 2), a(1)=2, a(2)=19. ●

► [A140781] 1,2,19,188,1861,18422,182359,1805168,17869321,176888042,1751011099,17333222948,171581218381,1698478960862,16813208390239,166433604941528,1647522841025041,16308794805308882,161440425212063779,1598095457315328908,15819514147941225301 ⋆ a(n) = 10 * a(n - 1) - a(n - 2). ● a(n) = 10 * a(n - 1) - a(n - 2); n>1; given a(0) = 1, a(1) = 2. a(n) = term (1,1) in X ^ n, where X = the 2x2 matrix [2,3; 5,8]. ● a(n) = (- 1 / 8) * [5 + 2 * sqrt(6)] ^ n * sqrt(6) + (1 / 8) * sqrt(6) * [5 - 2 * sqrt(6)] ^ n + (1 / 2) * [5 + 2 * sqrt(6)] ^ n + (1 / 2) * [5 - 2 * sqrt(6)] ^ n, with n>=0 - _ Paolo P. Lava _ , Jun 06 2008 ●

► [A124125] 2,19,245,3631,58121,973843,16773677,293759095,5196109073,92455824667,1650850175669,29537478199039,529130102195225,9485447592486691,170110949757514301,3051485664370912903,54745886982174938657 ⋆ a(n)=(1 / (4n)) * sum(k=1,n,F(6k) * B(2n - 2k) * binomial(2n,2k)) where F=Fibonacci numbers and B=Bernoulli numbers. ● a(n)=(1 / 4) * (F(6n - 3) + 4 ^ n * F(2n - 1) + 2 * 5 ^ (n - 1)) ●

► [A233107] 2,19,313,6046,123352,2565169,53692063,1126297996,23643610702,496455294319,10425137467813,218924920833946,4597402575582052,96545308753707469,2027450466493247563,42576452675015933896 ⋆ Number of n X 2 0..5 arrays with no element x(i,j) adjacent to value 5 - x(i,j) horizontally or vertically, top left element zero, and 1 appearing before 2 3 and 4, and 2 appearing before 3 in row major order. ● a(n) = (105 + 18 * 7 ^ n + 5 * 21 ^ n) / 168. ●

► [A078369] 2,19,359,6802,128879,2441899,46267202,876634939,16609796639,314709501202,5962870726199,112979834296579,2140653980908802,40559445802970659,768488816275533719,14560728063432170002 ⋆ A Chebyshev T - sequence with Diophantine property. ● a(n)=19 * a(n - 1) - a(n - 2), n >= 1; a(- 1)=19, a(0)=2. ● a(n) = ap ^ n + am ^ n, with ap := (19 + sqrt(357)) / 2 and am := (19 - sqrt(357)) / 2. ●

► [A090308] 2,19,363,6916,131767,2510489,47831058,911300591,17362542287,330799604044,6302555019123,120079344967381,2287810109399362,43588471423555259,830468767156949283,15822495047405591636 ⋆ a(n) = 19 * a(n - 1) + a(n - 2), starting with a(0) = 2 and a(1) = 19. ● a(n) = 19 * a(n - 1) + a(n - 2), starting with a(0) = 2 and a(1) = 19. ● a(n) = ((19 + sqrt(365)) / 2) ^ n + ((19 - sqrt(365)) / 2) ^ n. ● a(n) = Lucas(n, 19) = 2 * (- i) ^ n * ChebyshevT(n, 19 * i / 2). - _ G. C. Greubel _ , Dec 30 2019 ●

► [A217394] 2,20,21,22,23,24,25,26,27,28,29,200,201,202,203,204,205,206,207,208,209,210,211,212,213 ⋆ Numbers starting with 2. ● a(n) = n + (17 * 10 ^ floor(log _ 10(9 * n - 8)) - 8) / 9. - _ Alan Michael Gómez Calderón _ , May 15 2023 ●

► [A024629] 0,1,2,20,21,22,210,211,212,2100,2101,2102,2120,2121,2122,21010,21011,21012,21200,21201,21202,21220,21221,21222,210110 ⋆ n written in fractional base 3 / 2. ● a(0)=0, a(3n + r) = 10 * a(2n) + r for n >= 0 and r = 0, 1, 2. - _ Jianing Song _ , Oct 15 2022 ●

► [A022372] 2,20,22,42,64,106,170,276,446,722,1168,1890,3058,4948,8006,12954,20960,33914,54874,88788,143662,232450,376112,608562,984674 ⋆ Fibonacci sequence beginning 2, 20. ● a(n) = 2 * (Fibonacci(n + 2) + 8 * Fibonacci(n)). - _ G. C. Greubel _ , Aug 27 2017 ●

► [A268742] 0,1,2,20,30,31,44,98,120,121,146,236,270,271,308,434,480,481,530,692,750,751,812,1010,1080 ⋆ Expansion of x * (1 + x + 18 * x ^ 2 + 10 * x ^ 3 - x ^ 4 + 11 * x ^ 5 + 18 * x ^ 6 + 2 * x ^ 7) / (1 - x - 2 * x ^ 4 + 2 * x ^ 5 + x ^ 8 - x ^ 9). ● a(n) = (30 * (n - 1) * n + 2 * (18 * n - 3 * (- 1) ^ n - 11) * (- 1) ^ (n * (n + 1) / 2) - (6 * n + 1) * (- 1) ^ n + 13) / 16 + 1. Therefore: ● a(4 * k) = 30 * k ^ 2; ● a(4 * k + 1) = 30 * k ^ 2 + 1; ● a(4 * k + 2) = 30 * k ^ 2 + 12 * k + 2; ● a(4 * k + 3) = 30 * k ^ 2 + 48 * k + 20. ●

► [A050684] 1,2,20,38,290,542,3710,6878,44390,81902,509510,937118,5685590,10434062,62170310,113906558,669532790,1225159022,7125795110,13026431198,75132155990,137237880782,786189403910,1435140927038 ⋆ Number of nonzero palindromes < 10 ^ n and containing at least one digit '1'. ● a(2n) = 2 * (10 ^ n - 9 ^ n); a(2n + 1) = 2 * (10 ^ n - 9 ^ n) + 9 * 10 ^ n - 8 * 9 ^ n. - _ David Wasserman _ , Feb 14 2002 ●

► [A266842] 1,2,20,43,336,687,5440,10943,87296,174847,1397760,2796543,22368256,44740607,357908480,715833343,5726601216,11453267967,91625881600,183252025343,1466015154176,2932031356927,23456246661120,46912497516543,375299963355136 ⋆ Decimal representation of the n - th iteration of the "Rule 69" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = 21 * a(n - 2) - 84 * a(n - 4) + 64 * a(n - 6) for n>5. ●

► [A139271] 0,2,20,54,104,170,252,350,464,594,740,902,1080,1274,1484,1710,1952,2210,2484,2774,3080,3402,3740,4094,4464 ⋆ a(n) = 2 * n * (4 * n - 3). ● a(n) = 8 * n ^ 2 - 6 * n. ● a(n) = 16 * n + a(n - 1) - 14 (with a(0)=0). - _ Vincenzo Librandi _ , Aug 03 2010 ●

► [A001504] 2,20,56,110,182,272,380,506,650,812,992,1190,1406,1640,1892,2162,2450,2756,3080,3422,3782,4160,4556,4970,5402 ⋆ a(n) = (3 * n + 1) * (3 * n + 2) . ● a(n) = 18 * n + a(n - 1) with a(0) = 2. - _ Vincenzo Librandi _ , Nov 12 2010 ●

► [A183907] 1,2,20,66,148,275,457,705,1031,1448,1970,2612,3390,4321,5423,6715,8217,9950,11936,14198,16760,19647,22885,26501,30523 ⋆ Number of nondecreasing arrangements of n + 2 numbers in 0..4 with each number being the sum mod 5 of two others. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>6. ●

► [A287485] 2,20,68,304,1232,5168,21408,89088,370112,1538560,6394368,26577664,110464512,459127808,1908282368,7931445248,32965660672,137016012800,569483091968,2366956929024,9837842644992,40889273090048,169949115056128,706363785412608,2935877583634432 ⋆ Number of independent vertex sets and vertex covers in the n - web graph. ● a(n) = 2 * a(n - 1) + 8 * a(n - 2) + 4 * a(n - 3). ●

► [A259110] 0,2,20,70,168,330,572,910,1360,1938,2660,3542,4600,5850,7308,8990,10912,13090,15540,18278,21320,24682,28380,32430,36848 ⋆ 2 * A000447(n). ● a(n) = (2 * n * (4 * n ^ 2 - 1)) / 3. - _ Colin Barker _ , Jun 28 2015 ● a(n) = 2 * binomial(2 * n + 1, 3). - _ Michel Marcus _ , Mar 05 2022 ●

► [A161007] 0,1,2,20,72,464,2080,11584,56448,298240,1499648,7771136,39536640,203411456,1039409152,5333401600,27297349632,139929124864,716615843840,3672097685504,18810048872448,96373660712960,493708103385088,2529394778177536,12958119210516480 ⋆ a(n + 1) = 2 * a(n) + 16 * a(n - 1), a(0)=0, a(1)=1. ● a(n) = ((1 + sqrt(17)) ^ n - (1 - sqrt(17)) ^ n) / (2 * sqrt(17)). ● a(n) = (4 * i) ^ n * ChebyshevU(n, - i / 4). - _ G. C. Greubel _ , Oct 15 2022 ●

► [A331760] 2,20,83,237,534,1054,1892,3114,4880,7327,10530,14730,20066,26689,34882,44902,56850,70946,87644,106986,129470,155457,184920,218596,256675 ⋆ a(n) = A115004(2n) / 4. ● a(n) = n ^ 2 + (Sum _{ i=2..2n } (2 * n + 1 - i) * (4 * n + 2 - i) * phi(i)) / 4. - _ Chai Wah Wu _ , Aug 17 2021 ●

► [A098077] 2,20,84,240,550,1092,1960,3264,5130,7700,11132,15600,21294,28420,37200,47872,60690,75924,93860,114800,139062,166980,198904,235200,276250 ⋆ a(n) = n ^ 2 * (n + 1) * (2 * n + 1) / 3. ● a(n) = Sum _{ j=1..n } Sum _{ i=1..n } (i ^ 2 + j ^ 2). ● a(n) = a(n - 1) + (8 * n ^ 3 - 3 * n ^ 2 + n) / 3. - _ Torlach Rush _ , Jan 07 2020 ●

► [A071253] 0,2,20,90,272,650,1332,2450,4160,6642,10100,14762,20880,28730,38612,50850,65792,83810,105300,130682,160400,194922,234740,280370,332352 ⋆ a(n) = n ^ 2 * (n ^ 2 + 1). ● a(n) = (1 / 4) * sinh(2 * arcsinh(n)) ^ 2. - _ Artur Jasinski _ , Feb 10 2010 ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Wesley Ivan Hurt _ , Apr 16 2023 ●

► [A035599] 0,2,20,102,360,1002,2364,4942,9424,16722,28004,44726,68664,101946,147084,207006,285088,385186,511668,669446,864008,1101450,1388508,1732590,2141808 ⋆ Number of points of L1 norm 5 in cubic lattice Z ^ n. ● a(n) = (4 * n ^ 4 + 20 * n ^ 2 + 6) * n / 15. - _ Frank Ellermann _ , Mar 16 2002 ● a(n) = 2 * n * Hypergeometric2F1(1 - n,1 - k,2,2), where k=5. ●

► [A267678] 1,2,20,104,468,1960,8020,32424,130388,522920,2094420,8383144,33543508,134195880,536827220,2147396264,8589759828,34359388840,137438254420,549754415784,2199020459348,8796087429800,35184360904020,140737465985704,562949908682068 ⋆ Decimal representation of the n - th iteration of the "Rule 197" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = 6 * a(n - 1) - 7 * a(n - 2) - 6 * a(n - 3) + 8 * a(n - 4) for n>5. ●

► [A282818] 0,0,0,2,20,110,460,1540,4312,10500,22920,45870,85580,150722,252980,407680,634480,958120,1409232,2025210,2851140,3940790,5357660,7176092,9482440 ⋆ Number of inequivalent ways to color the edges of a tetrahedron using at most n colors so that no two adjacent edges have the same color. ● a(n) = n * (n - 1) * (n - 2) * (n ^ 3 - 9 * n ^ 2 + 32 * n - 38) / 12. ●

► [A278772] 0,2,20,117,503,1750,5209,13751,33000,73282,152581,300872,566293,1023724,1786462,3021818,4971616,7978746,12521114,19254543,29066411,43142066,63046335,90822745,129113400 ⋆ Number of n X 2 0..1 arrays with rows in n ondecreasing lexicographic order and columns in nonincreasing lexicographic order, but with exactly two mistakes. ● a(n) = 11 * a(n - 1) - 55 * a(n - 2) + 165 * a(n - 3) - 330 * a(n - 4) + 462 * a(n - 5) - 462 * a(n - 6) + 330 * a(n - 7) - 165 * a(n - 8) + 55 * a(n - 9) - 11 * a(n - 10) + a(n - 11) for n>11. ●

► [A219837] 0,0,0,0,2,20,120,567,2320,8596,29578,96058,297776,888460,2567534,7221974,19849284,53473464,141559090,369018290,948897336,2410350276,6055659350,15063123950,37130340492 ★ Expansion of x ^ 4 * (2 - 10 * x + 18 * x ^ 2 - 7 * x ^ 3 - 21 * x ^ 4 + 25 * x ^ 5 - x ^ 6) / ((1 - x) ^ 3 * (1 - 2 * x) ^ 6). ● a(n) = 2 ^ (n - 10) * (n ^ 5 - 16 * n ^ 4 + 547 * n ^ 3 - 7976 * n ^ 2 + 55660 * n - 158832) / 3 + (3 * n + 17) * n + 52 with n>1, a(0)=a(1)=0. ●

► [A279112] 0,0,2,20,138,505,1547,3759,8313,16350,30344,52470,87212,138255,212953,317065,461827,655724,915038,1251720,1688414,2241365,2941047,3808915,4884893 ★ Number of non - equivalent ways to place 3 non - attacking kings on a n n X n board. ● a(n) = (n ^ 6 - 27 * n ^ 4 + 44 * n ^ 3 + 146 * n ^ 2 - 404 * n + 240 + IF(MOD(n, 2) = 1, 8 * n ^ 3 - 21 * n ^ 2 + 16 * n - 51)) / 48 for n >=2. ● a(n) = 3 * a(n - 1) + a(n - 2) - 11 * a(n - 3) + 6 * a(n - 4) + 14 * a(n - 5) - 14 * a(n - 6) - 6 * a(n - 7) + 11 * a(n - 8) - a(n - 9) - 3 * a(n - 10) + a(n - 11). ● a(n) = (n ^ 6 - 27 * n ^ 4 + 44 * n ^ 3 + 146 * n ^ 2 - 404 * n + 240) / 48 for n>1. ● a(n) = (n ^ 6 - 27 * n ^ 4 + 52 * n ^ 3 + 125 * n ^ 2 - 388 * n + 189) / 48 for n>1. ●

► [A081006] 2,20,143,986,6764,46367,317810,2178308,14930351,102334154,701408732,4807526975,32951280098,225851433716,1548008755919,10610209857722,72723460248140,498454011879263,3416454622906706,23416728348467684,160500643816367087 ★ a(n) = Fibonacci(4n) - 1, or Fibonacci(2n + 1) * Lucas(2n - 1). ● a(n) = 8 * a(n - 1) - 8 * a(n - 2) + a(n - 3). ● a(n) = - 1 + (3 / 2) *{ [(7 / 2) - (3 / 2) * sqrt(5)] ^ n + [(7 / 2) + (3 / 2) * sqrt(5)] ^ n }+ (7 / 10) * sqrt(5) *{ [(7 / 2) + (3 / 2) * sqrt(5)] ^ n - [(7 / 2) - (3 / 2) * sqrt(5)] ^ n } , with n>=0. - _ Paolo P. Lava _ , Dec 01 2008 ●

► [A000183] 0,0,0,1,2,20,144,1265,12072,126565,1445100,17875140,238282730,3407118041,52034548064,845569542593,14570246018686,265397214435860,5095853023109484,102877234050493609,2178674876680100744,48296053720501168037,1184809118766593966600 ★ Number of discordant permutations of length n. ● a(n) = (- 1) ^ n * (4 * n + f(n)) + (n / (n - 1)) * ((n + 1) * a(n - 1) + 2 * (- 1) ^ n * f(n - 1)) - ((2 * n) / (n - 2)) * ((n - 3) * a(n - 2) + (- 1) ^ n * f(n - 2)) + (n / (n - 3)) * ((n - 5) * a(n - 3) + 2 * (- 1) ^ (n - 1) * f(n - 3)) + (n / (n - 4)) * (a(n - 4) + (- 1) ^ (n - 1) * f(n - 4)). ●

► [A198647] 2,20,146,1028,7202,50420,352946,2470628,17294402,121060820,847425746,5931980228,41523861602,290667031220,2034669218546,14242684529828,99698791708802,697891541961620,4885240793731346,34196685556119428 ★ 3 * 7 ^ n - 1 ● a(n) = 7 * a(n - 1) + 6, a(0)=2. ● a(n) = 8 * a(n - 1) - 7 * a(n - 2). - _ Harvey P. Dale _ , Jan 27 2012 ●

► [A105489] 2,20,150,1040,7105,49112,347760,2537640,19135875,149285400,1205088742,10062575068,86859191510,774456785200,7126496659960,67617733760064,660932425168071,6649326113764980,68793130453044760,731299516881396540 ★ Number of partitions of { 1...n } containing 3 detached pairs of consecutive integers, i.e., partitions in which only 1 - or 2 - strings of consecutive integers can appear in a block and there are exactly three 2 - strings. ● a(n) = binomial(n - 3, 3) * Bell(n - 4), which is the case r=3 in the general case of r pairs, d(n,r) = binomial(n - r, r) * Bell(n - r - 1), which is the case t=2 of the general formula d(n,r,t) = binomial(n - r * (t - 1), r) * Bell(n - r * (t - 1) - 1). ●

► [A248337] 0,2,20,152,1040,6752,42560,263552,1614080,9815552,59417600,358602752,2160005120,12993585152,78095728640,469111242752,2816814940160,16909479575552,101491237191680,609084862103552,3655058928435200,21932552593866752 ★ 6 ^ n - 4 ^ n. ● a(n) = 10 * a(n - 1) - 24 * a(n - 2). ●

► [A270444] 2,20,152,1136,8480,63296,472448,3526400,26321408,196465664,1466439680,10945654784,81699479552,609813217280,4551707820032,33974409691136,253588446248960,1892809931227136,14128125664821248,105453765593661440 ★ Expansion of 2 * (1 + 2 * x) / (1 - 8 * x + 4 * x ^ 2). ● a(n) = (1 + sqrt(3)) ^ (2 * n - 1) + (1 - sqrt(3)) ^ (2 * n - 1). ●

► [A093130] 0,2,20,160,1200,8800,64000,464000,3360000,24320000,176000000,1273600000,9216000000,66688000000,482560000000,3491840000000,25267200000000,182835200000000,1323008000000000,9573376000000000 ★ Third binomial transform of Fibonacci(3n). ● a(n) = ((5 + sqrt(5)) ^ n - (5 - sqrt(5)) ^ n) / sqrt(5). ● a(0)=0, a(1)=2, a(n) = 10 * a(n - 1) - 20 * a(n - 2). - _ Harvey P. Dale _ , Jun 24 2015 ● a(2 * n) = 2 ^ (2 * n) * 5 ^ n * Fibonacci(2 * n), a(2 * n + 1) = 2 ^ (2 * n + 1) * 5 ^ n * Lucas(2 * n + 1). - _ G. C. Greubel _ , Dec 27 2019 ●

► [A115489] 2,20,168,1360,10912,87360,699008,5592320,44739072,357913600,2863310848,22906490880,183251935232,1466015498240,11728124018688,93824992215040,750599937851392,6004799503073280,48038396025110528 ★ Number of monic irreducible polynomials of degree 3 in GF(2 ^ n)[x]. ● a(0)=0, a(1)=2, a(n)= 10a(n - 1) - 16a(n - 2). - _ T. D. Noe _ , Nov 30 2006 ● a(n) = - (1 / 3) * 2 ^ n + (1 / 3) * 8 ^ n, with n>=0. - _ Paolo P. Lava _ , Jun 12 2008 ●

► [A105493] 2,20,170,1340,10375,80652,636990,5143740,42613980,362863600,3178544754,28650249848 ★ Number of partitions of { 1,...,n } containing 3 strings of 3 consecutive integers such that only v - strings of consecutive integers can appear in a block, where v = 1,2,3. ● a(n)=Sum(w(n, k, 3), k=1...n), where w(n, k, 3) is the case r=3 of w(n, k, r) given by w(m, k, r)=w(m - 1, k - 1, r) + (k - 1)w(m - 1, k, r) + w(m - 2, k - 1, r) + (k - 1)w(m - 2, k, r) + w(m - 3, k - 1, r - 1) + (k - 1)w(m - 3, k, r - 1) r=0, 1, ..., floor(n / 3), k=1, 2, ..., n - 2r, w(n, k, 0)=sum(binomial(n - j, j) * S2(n - j - 1, k - 1), j=0..floor(n / 2)). ●

► [A125857] 0,2,20,182,1640,14762,132860,1195742,10761680,96855122,871696100,7845264902,70607384120,635466457082,5719198113740,51472783023662,463255047212960,4169295424916642,37523658824249780,337712929418248022 ★ Numbers whose base - 9 representation is 22222222.....2. ● a(n) = (9 ^ (n - 1) - 1) * 2 / 8. ● a(n) = 9 * a(n - 1) + 2 (with a(1)=0). - _ Vincenzo Librandi _ , Sep 30 2010 ● a(n) = 10 * a(n - 1) - 9 * a(n - 2). ● a(n) = - a(2 - n) * 9 ^ (n - 1) for all n in Z. - _ Michael Somos _ , Jul 02 2017 ●

► [A001078] 0,2,20,198,1960,19402,192060,1901198,18819920,186298002,1844160100,18255302998,180708869880,1788833395802,17707625088140,175287417485598,1735166549767840,17176378080192802,170028614252160180,1683109764441408998 ★ a(n) = 10 * a(n - 1) - a(n - 2) with a(0) = 0, a(1) = 2. ● a(n) = ((5 + 2 * sqrt(6)) ^ n - (5 - 2 * sqrt(6)) ^ n) / (2 * sqrt(6)). ● a(- n) = - a(n). ● a(n) = 9 * (a(n - 1) + a(n - 2)) - a(n - 3). ● a(n) = 11 * (a(n - 1) - a(n - 2)) + a(n - 3). (End) ● a(n) = sinh(2n * arcsinh(sqrt(2))) / sqrt(6). - _ Herbert Kociemba _ , Apr 24 2008 ●

► [A299865] 2,20,198,1981,19818,198179,1981783,19817838,198178379,1981783783,19817837830,198178378308,1981783783079,19817837830783,198178378307837,1981783783078363,19817837830783638,198178378307836379,1981783783078363783,19817837830783637836,198178378307836378362,1981783783078363783612 ★ The sum of the first n terms of the sequence is the concatenation of the first n digits of the sequence, and a(1) = 2. ● a(n) = c(n) - c(n - 1), where c(n) = concatenation of the first n digits, c(n) ~ 0.22 * 10 ^ n, a(n) ~ 0.198 * 10 ^ n. See A300000 for the proof. - _ M. F. Hasler _ , Feb 22 2018 ●

► [A093136] 1,2,20,200,2000,20000,200000,2000000,20000000,200000000,2000000000,20000000000,200000000000,2000000000000,20000000000000,200000000000000,2000000000000000,20000000000000000,200000000000000000,2000000000000000000,20000000000000000000,200000000000000000000,2000000000000000000000,20000000000000000000000,200000000000000000000000,2000000000000000000000000,20000000000000000000000000,200000000000000000000000000,2000000000000000000000000000,20000000000000000000000000000,200000000000000000000000000000,2000000000000000000000000000000,20000000000000000000000000000000,200000000000000000000000000000000,2000000000000000000000000000000000,20000000000000000000000000000000000,200000000000000000000000000000000000,2000000000000000000000000000000000000,20000000000000000000000000000000000000,200000000000000000000000000000000000000,2000000000000000000000000000000000000000,20000000000000000000000000000000000000000,200000000000000000000000000000000000000000,2000000000000000000000000000000000000000000,20000000000000000000000000000000000000000000,200000000000000000000000000000000000000000000,2000000000000000000000000000000000000000000000,20000000000000000000000000000000000000000000000,200000000000000000000000000000000000000000000000,2000000000000000000000000000000000000000000000000,20000000000000000000000000000000000000000000000000,200000000000000000000000000000000000000000000000000 ★ Expansion of (1 - 8 * x) / (1 - 10 * x). ● a(n) = (2 * 10 ^ n + 8 * 0 ^ n) / 10. ● a(n) = 2 * 10 ^ (n - 1), n > 0. - _ Vincenzo Librandi _ , Aug 02 2010 ●

► [A037519] 2,20,201,2012,20120,201201,2012012,20120120,201201201,2012012012,20120120120,201201201201,2012012012012,20120120120120,201201201201201,2012012012012012 ★ Decimal expansion of a(n) is given by the first n terms of the periodic sequence with initial period 2,0,1. ● a(n) = 10 * a(n - 1) + ((n + 1) mod 3), with a(0)=0. - _ Paolo P. Lava _ , Jul 30 2009 ●

► [A037722] 2,20,201,2013,20132,201320,2013201,20132013,201320132,2013201320,20132013201,201320132013,2013201320132,20132013201320,201320132013201,2013201320132013 ★ Decimal expansion of a(n) is given by the first n terms of the periodic sequence with initial period 2,0,1,3. ● a(n) = 10 * a(n - 1) + (1 / 4) * (- (n mod 4) + 3 * ((n + 2) mod 4) + 2 * ((n + 3) mod 4)), with a(0)=0. - _ Paolo P. Lava _ , Jul 30 2009 ●

► [A037729] 2,20,203,2031,20312,203120,2031203,20312031,203120312,2031203120,20312031203,203120312031,2031203120312,20312031203120,203120312031203,2031203120312031 ★ Decimal expansion of a(n) is given by the first n terms of the periodic sequence with initial period 2,0,3,1. ● a(n) = 10 * a(n - 1) + (1 / 4) * (3 * (n mod 4) - 2 * ((n + 1) mod 4) + 3 * ((n + 2) mod 4)), with a(0)=0. - _ Paolo P. Lava _ , Jul 30 2009 ●

► [A037624] 2,20,203,2032,20320,203203,2032032,20320320,203203203,2032032032,203203203203,20320320320,203203203203203,2032032032032,20320320320320,203203203203203203,2032032032032032,20320320320320320 ★ Decimal expansion of a(n) is given by the first n terms of the periodic sequence with initial period 2,0,3. ● a(n) = 10 * a(n - 1) + (1 / 9) * (- 4 * (n mod 3) + 11 * ((n + 1) mod 3) + 8 * ((n + 2) mod 3)) for n > 0. - _ Paolo P. Lava _ , Jul 30 2009 ●

► [A199761] 2,20,218,2396,26354,289892,3188810,35076908,385845986,4244305844,46687364282,513561007100,5649171078098,62140881859076,683549700449834,7519046704948172,82709513754429890,909804651298728788,10007851164286016666 ★ (9 * 11 ^ n + 1) / 5. ● a(n) = 11 * a(n - 1) - 2. ● a(n) = 12 * a(n - 1) - 11 * a(n - 2). ●

► [A109106] 2,20,250,3250,42500,556250,7281250,95312500,1247656250,16332031250,213789062500,2798535156250,36633300781250,479536132812500,6277209472656250,82169738769531250,1075615844726562500 ★ a(n) = (1 / sqrt(5)) * ((sqrt(5) + 1) * ((15 + 5 * sqrt(5)) / 2) ^ (n - 1) + (sqrt(5) - 1) * ((15 - 5 * sqrt(5)) / 2) ^ (n - 1)). ● a(n) = 2 * 5 ^ (n - 1) * Fibonacci(2 * n - 1). - _ Ehren Metcalfe _ , Apr 21 2018 ●

► [A099976] 2,20,252,3432,48620,705432,10400600,155117520,2333606220,35345263800,538257874440,8233430727600,126410606437752,1946939425648112,30067266499541040,465428353255261088,7219428434016265740 ★ Bisection of A000984. ● a(n) = binomial(4n + 2, 2n + 1). - _ Emeric Deutsch _ , Dec 20 2004 ●

► [A155671] 1,2,20,272,3440,40952,468560,5217032,56953280,612579512,6513215600,68618940392,717570463520,7458134171672,77123207545040,794108867905352,8146979811148160,83322818300333432,849905364703000880 ★ a(n) = 10 ^ n - 9 ^ n + 1 ^ n. ● a(n) = 19 * a(n - 1) - 90 * a(n - 2) + 72 with a(0)=1, a(1)=2. - _ Vincenzo Librandi _ , Jul 21 2010 ● a(n) = 20 * a(n - 1) - 109 * a(n - 2) + 90 * a(n - 3). - _ Wesley Ivan Hurt _ , Apr 21 2021 ●

► [A246482] 2,20,292,1376,6534,20004,57416,133664,293770,574100,1073772,1865280,3134222,5007716,7797904,11708864,17227026,24659604,34722740,47856800,65070742,86971940,114932952,149765856,193285274 ★ Number of length 3 + 30..n arrays with no pair in any consecutive four terms totalling exactly n. ● a(n) = - 20 * n + 43 * n ^ 2 - 40 * n ^ 3 + 21 * n ^ 4 - 6 * n ^ 5 + n ^ 6 for n even. ● a(n) = - 26 + 37 * n + 5 * n ^ 2 - 30 * n ^ 3 + 21 * n ^ 4 - 6 * n ^ 5 + n ^ 6 for n odd. ●

► [A090309] 2,20,402,8060,161602,3240100,64963602,1302512140,26115206402,523606640180,10498248010002,210488566840220,4220269584814402,84615880263128260,1696537874847379602,34015373377210720300 ★ a(n) = 20 * a(n - 1) + a(n - 2), starting with a(0) = 2 and a(1) = 20. ● a(n) = 20 * a(n - 1) + a(n - 2), starting with a(0) = 2 and a(1) = 20. ● a(n) = (10 + sqrt(101)) ^ n + (10 - sqrt(101)) ^ n. ● a(n) = Lucas(n, 20) = 2 * (- i) ^ n * ChebyshevT(n, 10 * i). - _ G. C. Greubel _ , Dec 30 2019 ●

► [A322925] 0,1,2,21,22,221,222,2221,2222,22221,22222,222221,222222,2222221,2222222,22222221,22222222,222222221,222222222,2222222221,2222222222,22222222221,22222222222,222222222221,222222222222 ★ Expansion of x * (1 + 2 * x + 10 * x ^ 2) / ((1 - x ^ 2) * (1 - 10 * x ^ 2)). ● a(n) = 11 * a(n - 2) - 10 * a(n - 4). ● a(n) = 2 * (10 ^ n - 1) / 9 for n even; a(n) = (2 * 10 ^ n - 11) / 9 otherwise. ● a(n) = (2 / 9) * 10 ^ floor((n + 1) / 2) + (- 1) ^ n / 2 - 13 / 18. - _ Bruno Berselli _ , Mar 16 2019 ●

► [A294116] 2,21,23,44,67,111,178,289,467,756,1223,1979,3202,5181,8383,13564,21947,35511,57458,92969,150427,243396,393823,637219,1031042 ★ Fibonacci sequence beginning 2, 21. ● a(n) = a(n - 1) + a(n - 2). ● a(n) = Lucas(n) + g(0,20;n), see A022354; ● a(n) = Fibonacci(n) + g(2,20;n), see A022372; ● a(n) = 2 * g(1,21;n) - g(0,21;n); ● a(n) = g(1,k;n) + g(1,21 - k;n) for all k in Z. ● a(h + k) = a(h) * Fibonacci(k - 1) + a(h + 1) * Fibonacci(k) for all h, k in Z (see S. Vajda in References section). For h=0 and k=n: ●

► [A041513] 1,1,2,21,23,44,1431,1475,2906,30535,33441,63976,2080673,2144649,4225322,44397869,48623191,93021060,3025297111,3118318171,6143615282,64554470991,70698086273,135252557264,4398779918721 ⋆ Denominators of continued fraction convergents to sqrt(273). ● a(n) = 1454 * a(n - 6) - a(n - 12) for n>11. - _ Vincenzo Librandi _ , Dec 19 2013 ●
► [A042565] 1,2,21,23,205,228,433,1094,1527,2621,4148,15065,94538,1716749,1811287,8961897,10773184,30508265,41281449,1145107388,1186388837,3517885062,4704273899,22334980658,27039254557 ⋆ Denominators of continued fraction convergents to sqrt(811). ● a(n) = 2764144327157232820 * a(n - 38) - a(n - 76) for n >75. - _ Vincenzo Librandi _ , Jan 25 2014 ●
► [A266873] 1,2,21,42,341,682,5461,10922,87381,174762,1398101,2796202,22369621,44739242,357913941,715827882,5726623061,11453246122,91625968981,183251937962,1466015503701,2932031007402,23456248059221,46912496118442,375299968947541 ⋆ Decimal representation of the n - th iteration of the "Rule 77" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = ((- 1) ^ n + 3 * 2 ^ (2 * n + 1) + (- 1) ^ n * 2 ^ (2 * n + 1) - 3) / 6. ● a(n) = 17 * a(n - 2) - 16 * a(n - 4) for n>3. ●
► [A231807] 1,1,2,21,52,305,7836,24703,155688,1034433,67124260,235173191,1728147312,11309344813,106962615592,14055613872945,55558358852176,450373499691137,3156524223157332,28327606849223119,307533111218771040,81782486813477643501 ⋆ Number of endofunctions on [n] with distinct cardinalities of the nonempty preimages. ● a(n) = n! * Sum _{ lambda } multinomial(n;lambda) / (n - |lambda|)!, where lambda ranges over all partitions of n into distinct parts (A118457). ●
► [A351118] 1,2,21,52,905,2436,58513,165096,5053329,14690260,546376721,1621207512,70973853145,213746971816,10765350278145,32788134075856,1867372988701217,5737757882873652,364586039726904145,1128184012390456440,7912098014900361284 1 ⋆ a(n) is the number of endofunctions on an n - set where there is an element with a preimage of cardinality greater than n / 2. ● a(n) = n * Sum _{ k=0..floor((n - 1) / 2) } binomial(n,k) * (n - 1) ^ k. ●
► [A180232] 0,2,21,57,110,180,267,371,492,630,785,957,1146,1352,1575,1815,2072,2346,2637,2945,3270,3612,3971,4347,4740 ⋆ a(n) = n * (17 * n - 13) / 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●
► [A075681] 0,0,2,21,60,121,207,321,466,645,861,1117,1416,1761,2155,2601,3102,3661,4281,4965,5716,6537,7431,8401,9450 ⋆ Difference between (n - 1) * (n - 2) ^ 3 and A003878(n). ● a(n) = 1 / 2 * n ^ 3 + 7 / 2 * n ^ 2 - 23n + 25, for n> 3. G.f.: (x ^ 7 - x ^ 6 - 12x ^ 5 + 13x ^ 4 + 2x ^ 3) / (1 - x) ^ 4. - _ Ralf Stephan _ , Mar 13 2003 ●
► [A212257] 1,2,21,64,157,322,601,1024,1641,2498,3661,5184,7141,9602,12657,16384,20881,26242,32581,40000,48621,58562,69961,82944,97657 ⋆ Number of (v,w,x,y,z) with all terms in { 0,1,...,n } and v=average(w,x,y,z). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - 4 * a(n - 5) + 6 * a(n - 6) - 4 * a(n - 7) + a(n - 8). ● a(n) = (1 + 7 * (- 1) ^ n) / 8 + n + 3 * n ^ 2 / 2 + n ^ 3 + n ^ 4 / 4 - sin(n * Pi / 2). ●
► [A213827] 0,2,21,90,260,600,1197,2156,3600,5670,8525,12342,17316,23660,31605,41400,53312,67626,84645,104690,128100,155232,186461,222180,262800 ⋆ a(n) = n ^ 2 * (n + 1) * (3 * n + 1) / 4. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ● a(n) = sum(i * (n ^ 2 + i ^ 2), i=1..n). [_ Bruno Berselli _ , Aug 25 2014] ●
► [A129556] 0,2,21,95,816,3626,31005,137711,1177392,5229410,44709909,198579887,1697799168,7540806314,64471658493,286352060063,2448225223584,10873837476098,92968086837717,412919472031679,3530339074609680,15680066099727722,134059916748330141 ⋆ Numbers k such that the k - th centered pentagonal number A005891(k) = (5k ^ 2 + 5k + 2) / 2 is a square. ● a(n) = (x ^ (2 * (n + 1)) + (- 1) ^ n * (x ^ (2 * n + 1) + 1) - x) / (2 * x ^ n * (x ^ 2 + 1)) - (1 / 2), with x=3 + sqrt(10). - _ Federico Provvedi _ , Apr 04 2023 ●
► [A188530] 2,21,107,471,1967,8031,32447,130431,523007,2094591,8383487,33544191,134197247,536829951,2147401727,8589770751,34359410687,137438298111,549754503167,2199020634111 ⋆ 2 ^ (2n + 1) - 5 * 2 ^ (n - 1) - 1. ● a(n) = 2 ^ (2n + 1) - 2 ^ (n + 1) - 2 ^ (n - 1) - 1. ● a(n)= + 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3). G.f. (x * (- 2 - 7 * x + 12 * x ^ 2)) / ((x - 1) * (2 * x - 1) * (4 * x - 1)). - _ R. J. Mathar _ , Apr 04 2011 ● a(n) = 2 * 4 ^ n - 5 * 2 ^ (n - 1) - 1. - _ Karl V. Keller, Jr. _ , Jun 09 2022 ●
► [A095262] 2,21,137,735,3557,16191,70877,302295,1266437,5239311,21481517,87506055,354778517,1433405631,5776554557,23235129015,93327477797,374471255151,1501369969997,6015936563175,24095119972277,96474608387871 ⋆ A sequence derived from a truncated Pascal's Triangle matrix. ● a(n) = (7 * 2 ^ n - 2 * 3 ^ (2 + n) + 11 * 4 ^ n) / 2. ●
► [A077249] 2,21,208,2059,20382,201761,1997228,19770519,195707962,1937309101,19177383048,189836521379,1879187830742,18602041786041,184141230029668,1822810258510639,18043961355076722,178616803292256581,176812407156748908 8,17502623912382634299 ⋆ Bisection (odd part) of Chebyshev sequence with Diophantine property. ● a(n) = 10 * a(n - 1) - a(n - 2), a(- 1) := - 1, a(0)=2. ●
► [A037527] 2,21,210,2102,21021,210210,2102102,21021021,210210210,2102102102,21021021021,210210210210,2102102102102,21021021021021,210210210210210,2102102102102102,21021021021021021 ⋆ Decimal expansion of a(n) is given by the first n terms of the periodic sequence with initial period 2,1,0. ● a(n) = 10 * a(n - 1) + (1 / 3) * (2 * (n mod 3) + 2 * ((n + 1) mod 3) - ((n + 2) mod 3)), with a(0)=0. - _ Paolo P. Lava _ , Jul 30 2009 ● a(1)=2, a(2)=21, a(3)=210, a(4)=2102, a(n) = 10 * a(n - 1) + a(n - 3) - 10 * a(n - 4). - _ Harvey P. Dale _ , Jan 02 2013 ●
► [A037736] 2,21,210,2103,21032,210321,2103210,21032103,210321032,2103210321,21032103210,210321032103,2103210321032,21032103210321,210321032103210,2103210321032103 ⋆ Decimal expansion of a(n) is given by the first n terms of the periodic sequence with initial period 2,1,0,3. ● a(n) = 10 * a(n - 1) + (1 / 2) * (- (n mod 4) + ((n + 1) mod 4) + ((n + 2) mod 4) + ((n + 3) mod 4)), with a(0)=0. - _ Paolo P. Lava _ , Jul 30 2009 ● a(n) = 10 * a(n - 1) + a(n - 4) - 10 * a(n - 5). G.f: x * (2 + x + 3 * x ^ 3) / ((x - 1) * (10 * x - 1) * (1 + x) * (1 + x ^ 2)). - _ R. J. Mathar _ , Oct 05 2009 ●
► [A037559] 2,21,211,2112,21121,211211,2112112,21121121,211211211,2112112112,21121121121,211211211211,2112112112112,21121121121121,211211211211211,2112112112112112 ⋆ Decimal expansion of a(n) is given by the first n terms of the periodic sequence with initial period 2,1,1. ● a(n) = 10 * a(n - 1) + (1 / 9) * (4 * (n mod 3) + 7 * ((n + 1) mod 3) + ((n + 2) mod 3)), with a(0)=0. - _ Paolo P. Lava _ , Jul 30 2009 ●
► [A037495] 2,21,212,2121,21212,212121,2121212,21212121,212121212,2121212121,21212121212,212121212121,2121212121212,21212121212121,212121212121212,2121212121212121 ⋆ Decimal expansion of a(n) is given by the first n terms of the periodic sequence with initial period 2,1. ● a(n) = 10 * a(n - 1) + (1 / 2) * (3 - (- 1) ^ n), with a(0)=0. ●
► [A037575] 2,21,212,2122,21221,212212,2122122,21221221,212212212,2122122122,21221221221,212212212212,2122122122122,21221221221221,212212212212212,2122122122122122 ⋆ Decimal expansion of a(n) is given by the first n terms of the periodic sequence with initial period 2,1,2. ● a(n) = 10 * a(n - 1) + (1 / 9) * (2 * (n mod 3) + 8 * ((n + 1) mod 3) + 5 * ((n + 2) mod 3)), with a(0)=0. - _ Paolo P. Lava _ , Jul 30 2009 ●
► [A037743] 2,21,213,2130,21302,213021,2130213,21302130,213021302,2130213021,21302130213,213021302130,2130213021302,21302130213021,213021302130,2130213021302130,21302130213021302,213021302130213021,2130213021302130213 ⋆ Decimal expansion of a(n) is given by the first n terms of the periodic sequence with initial period 2,1,3,0. ● a(n) = 10 * a(n - 1) + (1 / 4) * (4 * (n mod 4) - ((n + 1) mod 4) + 2 * ((n + 2) mod 4) - ((n + 3) mod 4)), with a(0)=0. - _ Paolo P. Lava _ , Jul 30 2009 ● a(n) = 10 * a(n - 1) + a(n - 4) - 10 * a(n - 5). G.f.: x * (2 + x + 3 * x ^ 2) / ((x - 1) * (10 * x - 1) * (1 + x) * (x ^ 2 + 1)). - _ R. J. Mathar _ , Oct 05 2009 ●
► [A037638] 2,21,213,2132,21321,213213,2132132,21321321,213213213,2132132132,21321321321,213213213213,2132132132132 ⋆ Decimal expansion of a(n) is given by the first n terms of the periodic sequence with initial period 2,1,3. ● a(n) = 10 * a(n - 1) + ((n + 1) mod 3) + ((n + 2) mod 3), with a(0)=0. - _ Paolo P. Lava _ , Jul 30 2009 ●
► [A163068] 2,21,218,2249,23122,237261,2431978,24913249,255125282,2612122821,26741573498,273749929529,2802246036082,28684690735101,293622535632778,3005563816753489,30765291465721922,314916398263094901 ⋆ a(n) = 16 * a(n - 1) - 59 * a(n - 2) for n > 1; a(0) = 2, a(1) = 21. ● a(n) = ((2 + sqrt(5)) * (8 + sqrt(5)) ^ n + (2 - sqrt(5)) * (8 - sqrt(5)) ^ n) / 2. ●
► [A134490] 2,21,233,2584,28657,317811,3524578,39088169,433494437,4807526976,53316291173,591286729879,6557470319842,72723460248141,806515533049393,8944394323791464,99194853094755497,1100087778366101931 ⋆ a(n) = Fibonacci(5n + 3). ● a(n) = 11a(n - 1) + a(n - 2). - _ Paul Curtz _ , May 07 2008 ● a(n) = - (2 / 5) * (11 / 2 - (5 / 2) * sqrt(5)) ^ n * sqrt(5) + (11 / 2 - (5 / 2) * sqrt(5)) ^ n + (2 / 5) * sqrt(5) * (11 / 2 + (5 / 2) * sqrt(5)) ^ n + (11 / 2 + (5 / 2) * sqrt(5)) ^ n. - _ Paolo P. Lava _ , Oct 03 2008 ●
► [A094797] 1,2,21,301,4001,50001,600001,7000001,80000001,900000001,1000000001,110000000001,1200000000001,13000000000001,140000000000001,1500000000000001,16000000000000001,170000000000000001,1800000000000000001,19000000000000000001 ⋆ Number of times 1 is used in writing out all numbers 1 through 10 ^ n. ● a(n) = n * 10 ^ (n - 1) + 1. ● a(n) = 21 * a(n - 1) - 120 * a(n - 2) + 100 * a(n - 3). - _ Colin Barker _ , May 23 2014 ●
► [A090729] 2,21,439,9198,192719,4037901,84603202,1772629341,37140612959,778180242798,16304644485799,341619353958981,7157701788652802,149970118207749861,3142214780574094279,65836540273848229998 ⋆ a(n) = 21a(n - 1) - a(n - 2), starting with a(0) = 2 and a(1) = 21. ● a(n) = ap ^ n + am ^ n, with ap := (21 + sqrt(437)) / 2 and am := (21 - sqrt(437)) / 2. ●
► [A090310] 2,21,443,9324,196247,4130511,86936978,1829807049,38512885007,810600392196,17061121121123,359094143935779,7558038143772482,159077895163157901,3348193836570088403,70471148463135014364 ⋆ a(n) = 21 * a(n - 1) + a(n - 2), starting with a(0) = 2 and a(1) = 21. ● a(n) = 21 * a(n - 1) + a(n - 2), starting with a(0) = 2 and a(1) = 21. ● a(n) = ((21 + sqrt(445)) / 2) ^ n + ((21 - sqrt(445)) / 2) ^ n. ● a(n) = Lucas(n, 21) = 2 * (- i) ^ n * ChebyshevT(n, 21 * i / 2). - _ G. C. Greubel _ , Dec 30 2019 ●
► [A094625] 0,2,22,33,242,343,2442,3443,24442,34443,244442,344443,2444442,34444443,24444442,34444443,244444442,344444443,2444444442,34444444443,24444444442,34444444443,244444444442,344444444443,2444444444442 ⋆ Expansion of x * (2 + 22 * x + 11 * x ^ 2) / ((x - 1) * (1 + x) * (10 * x ^ 2 - 1)). ● a(n) = 10 ^ (n / 2) * (31 * sqrt(10) / 180 + 11 / 9 - (31 * sqrt(10) / 180 - 11 / 9) * (- 1) ^ n) - (- 1) ^ n / 2 - 35 / 18; ●
► [A221762] 1,2,22,41,439,818,8758,16319,174721,325562,3485662,6494921,69538519,129572858,1387284718,2584962239,27676155841,51569671922,552135832102,1028808476201,11015040486199,20524599852098,219748673891878,409463188565759 ⋆ Numbers m such that 11 * m ^ 2 + 5 is a square. ● a(n) = - a(1 - n) = ((- 11 * (- 1) ^ n + 4 * t) * (10 + 3 * t) ^ floor(n / 2) - (11 * (- 1) ^ n + 4 * t) * (10 - 3 * t) ^ floor(n / 2)) / 22, where t=sqrt(11). ● a(n) = 20 * a(n - 2) - a(n - 4) for n>4, a(1)=1, a(2)=2, a(3)=22, a(4)=41. ● a(n) * a(n - 3) - a(n - 1) * a(n - 2) = - (3 / 2) * (9 - 7 * (- 1) ^ n). ●
► [A152995] 0,2,22,60,116,190,282,392,520,666,830,1012,1212,1430,1666,1920,2192,2482,2790,3116,3460,3822,4202,4600,5016 ⋆ Twice 11 - gonal numbers: a(n) = n * (9 * n - 7). ● a(n) = a(n - 1) + 18 * n - 16 (with a(0)=0). - _ Vincenzo Librandi _ , Nov 27 2010 ● a(0)=0, a(1)=2, a(2)=22, a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Nov 02 2011 ●
► [A273366] 2,22,62,122,202,302,422,562,722,902,1102,1322,1562,1822,2102,2402,2722,3062,3422,3802,4202,4622,5062,5522,6002 ⋆ a(n) = 10 * n ^ 2 + 10 * n + 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). (End) ●
► [A291915] 0,0,0,2,22,82,268,742,1902,4562,10452,23068,49432,103364,211764,426354,845626,1655454,3203876,6137946,11652946,21944034,41021256,76174360,140595760 ⋆ Number of 6 - cycles in the n - Fibonacci cube graph. ● a(n) = 4 * a(n - 1) - 2 * a(n - 2) - 8 * a(n - 3) + 5 * a(n - 4) + 8 * a(n - 5) - 2 * a(n - 6) - 4 * a(n - 7) - a(n - 8). ●
► [A172229] 0,2,22,84,215,442,792,1292,1969,2850,3962,5332,6987,8954,11260,13932,16997,20482,24414,28820,33727,39162,45152,51724,58905 ⋆ Number of ways

to place 3 nonattacking wazirs on a 3 X n board. ● a(n) = (3 * n - 5) * (3 * n ^ 2 - 8 * n + 8) / 2, n>=2. ●

► [A212894] 0,2,22,92,246,520,950,1572,2422,3536,4950,6700,8822,11352,14326,17780,21750,26272,31382,37116,43510,50600,58422,67012,76406 ⋆ Number of (w,x,y,z) with all terms in { 0,...,n } and (least gapsize)=1. ● a(n) = 2 * (n - 1) * (3 * n ^ 2 - 3 * n + 5) with n>1, a(0)=0, a(1)=2. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>=6. ●

► [A281647] 2,22,98,838,3722,31822,141338,1208398,5367122,45887302,203809298,1742509078,7739386202,66169457662,293892866378,2512696882078,11160189536162,95416312061302,423793309507778,3623307161447398,16092985571759402,137590255822939822 ⋆ Solutions x to the negative Pell equation x ^ 2 - 10 * y ^ 2 = - 6 with x > y > 0. ● a(n) = 38 * a(n - 2) - a(n - 4) for n>4. ● a(n) = ((3 - r) ^ n + (- 3 - r) ^ n * (- 3 + r) - 3 * (- 3 + r) ^ n - r * (- 3 + r) ^ n + (3 + r) ^ n) / 2, where r=sqrt(10). ●

► [A286778] 0,2,22,142,734,3390,14718,61694,253438,1029118,4151294,16683006,66904062,267993086,1072791550,4292935678,17175543806,68710301694,274858508286,1099470733310,4397960527870,17592005689342,70368366690302,281474188181502,1125898262675454 ⋆ Sum of the common path length over all 2 - tuples of nodes in a complete binary tree of height n. ● a(n) = Sum _{ d=1..n } 2 ^ d * (2 ^ (n + 1 - d) - 1) ^ 2. ● a(n) = 4 * 2 ^ (2 * n) - (4 * n + 2) * 2 ^ n - 2. ● a(n) = 9 * a(n - 1) - 28 * a(n - 2) + 36 * a(n - 3) - 16 * a(n - 4) for n>3. - _ Colin Barker _ , Jul 05 2017 ●

► [A282819] 0,0,2,22,152,680,2270,6202,14672,31152,60810,110990,191752,316472,502502,771890,1152160,1677152,2387922,3333702,4572920,6174280,8217902,10796522,14016752 ⋆ Number of inequivalent ways to color the edges of a tetrahedron using at most n colors so that no two opposite edges have the same color. ● a(n) = n * (n - 1) * (n ^ 4 - 2 * n ^ 3 + n ^ 2 + 8) / 12. ●

► [A000184] 2,22,164,1030,5868,31388,160648,795846,3845020,18211380,84876152,390331292,1775032504,7995075960,35715205136,158401506118,698102372988,3059470021316,13341467466520,57918065919924,250419305769512,1078769490401032,4631680461623664,19825379450255900,84622558822506328 ⋆ Number of genus 0 rooted maps with 3 faces with n vertices. ● a(n) = 4 ^ n * GAMMA(n + 3 / 2) / (3 * sqrt(Pi) * GAMMA(n)) - n * 4 ^ (n - 1). - _ Mark van Hoeij _ , Jul 06 2010 ●

► [A007613] 1,2,22,170,1366,10922,87382,699050,5592406,44739242,357913942,2863311530,22906492246,183251937962,1466015503702,11728124029610,93824992236886,750599937895082,6004799503160662,48038396025285290,384307168202282326,3074457345618258602 ⋆ a(n) = (8 ^ n + 2 * (- 1) ^ n) / 3. ● a(n) = Sum _{ k=0..n } binomial(3 * n, 3 * k). - _ Paul Barry _ , Jan 13 2005 ● a(n) = 8 * a(n - 1) + 6 * (- 1) ^ n. - _ Paul Curtz _ , Nov 19 2007 ● a(n) = 7 * a(n - 1) + 8 * a(n - 2). ●

► [A346796] 0,2,22,180,1340,9622,68082,478760,3357880,23524842,164732942,1153307740,8073685620,56517393662,395626538602,2769400119120,19385843880560,135701036304082,949907641549062,6649354653104900 ⋆ Number of equivalence classes of triangles in an n - dimensional hypercube, equivalent up to translation of difference vectors corresponding to edges. ● a(n) = (7 ^ n - 3 ^ (n + 1) + 2) / 12. ●

► [A037567] 2,22,221,2212,22122,221221,2212212,22122122,221221221,2212212212,221221221221,2212212212212,221221221221221,2212212212212,221221221221221,2212212212212212 ⋆ Decimal expansion of a(n) is given by the first n terms of the periodic sequence with initial period 2,2,1. ● a(n) = 10 * a(n - 1) + (1 / 9) *{ 8 * (n mod 3) + 5 * [(n + 1) mod 3] + 2 * [(n + 2) mod 3] } , with a(0)=0. [_ Paolo P. Lava _ , Jul 30 2009] ● a(n) = floor(221 / 999 * 10 ^ n). ● a(n) = 10 * a(n - 1) + 1 + (n ^ 2 mod 3). ●

► [A002276] 0,2,22,222,2222,22222,222222,2222222,22222222,222222222,2222222222,22222222222,222222222222,2222222222222,22222222222222,222222222222222,2222222222222222,22222222222222222,222222222222222222,2222222222222222222,22222222222222222222,222222222222222222222 ⋆ a(n) = 2 * (10 ^ n - 1) / 9. ● a(n) = 10 * a(n - 1) + 2, with a(0) = 0. - _ Paolo P. Lava _ , Jan 23 2009 ● a(n) = a(n - 1) + 2 * 10 ^ (n - 1) with a(0) = 0; Also: a(n) = 11 * a(n - 1) - 10 * a(n - 2) with a(0) = 0, a(1) = 2. - _ Vincenzo Librandi _ , Jul 22 2010 ●

► [A089182] 2,22,232,2332,23532,235532,2357532,23577532,235817532,2358217532,23582417532,235824417532,2358248417532,23582488417532,235824908417532,2358249108417532,23582491508417532,235824915508417532 ⋆ Prime digit palindromes 2,...,23577532 continued by adding 10 ^ (n - k) and 10 ^ (k - 1) times prime(k). ● a(n) = Sum _{ k=1..floor(n / 2) } prime(k) * (10 ^ (n - k) + 10 ^ (k - 1)) + (n mod 2) * prime((n + 1) / 2) * 10 ^ floor(n / 2). - _ M. F. Hasler _ , Apr 06 2009 ●

► [A151617] 2,22,242,2662,7986,45254,178354,854502,3670898,16741318,73862514,331879526,1476246706,6603168198,29445050162,131524950502,586945452786,2620665361094,11697730702834,52222780377702,233120598486578,1040691781127878,4645710145608114,20739029883622886,92580871368935026 ⋆ Row sums of A153521. ● a(n) = 2 * a(n - 1) + 11 * a(n - 2), for n>4, with a(1)=2, a(2)=22, a(3)=242, a(4)=2662. ● a(n) = 2 * a(n - 1) + prime(j) * a(n - 2), for n > 4, with a(1) = 2, a(2) = 2 * prime(j), a(3) = 2 * prime(j) ^ 2, a(4) = 2 * prime(j) ^ 3 for j = 5. ● a(n) = 2 * (prime(j) - 3) * [n=1] - 2 * prime(j) * (prime(j) - 3) * [n=2] + 2 * prime(j) ^ 2 * (i * sqrt(prime(j))) ^ (n - 3) * (ChebyshevU(n - 3, - i / Sqrt(prime(j))) - ((prime(j) - 2) * i / sqrt(prime(j))) * ChebyshevU(n - 4, - i / sqrt(prime(j)))) for j = 5. (End) ●

► [A155674] 1,2,22,332,4642,61052,771562,9487172,114358882,1357947692,15937424602,185311670612,2138428376722,24522712143932,279749833583242,3177248169415652,35949729863572162,405447028499293772 ⋆ 11 ^ n - 10 ^ n + 1 ^ n ● a(n)=21 * a(n - 1) - 110 * a(n - 2) + 90 with a(0)=1, a(1)=2 [From _ Vincenzo Librandi _ , Jul 21 2010] ●

► [A097232] 2,23,83,157,181,211,223,227,229,233,239,251,283,311,331,347,353,359,367,421,431,433,439,443,461 ⋆ Starting primes for which there are no solutions in A097231. ● a(n) = the n - th starting prime for which there are no solutions in A097231. ●

► [A099134] 0,1,2,23,84,605,2806,17107,87528,500089,2663210,14828111,80257212,442248533,2409384094,13221490315,72221278416,395650872817,2163506035538,11844378654599,64795371984420,354633938406221 ⋆ Expansion of x / (1 - 2x - 19x ^ 2). ● a(n) = 2a(n - 1) + 19a(n - 2). ● a(n) = sum { k=0..n, (- 1) ^ (n - k)binomial(n, k)4 ^ (k - 1) * Fib(k) } . ● a(n) = sum { k=0..n, binomial(n, 2k + 1)20 ^ k } . ● a(n) = - (1 / 20) * [1 - 2 * sqrt(5)] ^ n * sqrt(5) + (1 / 20) * [1 + 2 * sqrt(5)] ^ n * sqrt(5), with n>=0 - _ Paolo P. Lava _ , Jun 10 2008 ●

► [A131464] 2,23,86,215,434,767,1238,1871,2690,3719,4982,6503,8306,10415,12854,15647,18818,22391,26390,30839,35762,41183,47126,53615,60674 ⋆ a(n) = 4 * n ^ 3 - 3 * n ^ 2 + 2 * n - 1. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Vincenzo Librandi _ , Feb 12 2013 ●

► [A270868] 2,23,92,263,614,1247,2288,3887,6218,9479,13892,19703,27182,36623,48344,62687,80018,100727,125228,153959,187382,225983,270272,320783,378074 ⋆ a(n) = n ^ 4 + 3 * n ^ 3 + 8 * n ^ 2 + 9 * n + 2. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ● a(2 * m) == 0 (mod 2). ● a(4 * m + 2) == 0 (mod 4). ●

► [A239186] 2,23,93,243,492,878,1432,2165,3123,4337,5810,7596,9726,12195,15065,18367,22088,26298,31028,36257,42063,48477,55470,63128,71482 ⋆ Sum of the largest two parts in the partitions of 4n into 4 parts with smallest part equal to 1. ● a(n) = 2 * a(n - 1) - a(n - 2) + 2 * a(n - 3) - 4 * a(n - 4) + 2 * a(n - 5) - a(n - 6) + 2 * a(n - 7) - a(n - 8). - _ Wesley Ivan Hurt _ , Nov 19 2021 ●

► [A041579] 1,1,2,23,117,140,537,9269,28344,37613,216409,2418112,2634521,5052633,174424043,179476676,353900719,4072384585,20715823644,24788208229,95080448331,1641155829856,5018547937899,6659703767755,38317066776674 ⋆ Denominators of continued fraction convergents to sqrt(307). ● a(n) = 177058564 * a(n - 14) - a(n - 28) for n>27. [_ Bruno Berselli _ , Dec 20 2013] ●

► [A356828] 0,2,23,147,748,3414,14719,61495,252364,1024938,4137207,16639339,66775964,267631726,1071801407,4290282671,17168559452,68692172578,274811988823,1099352487299,4397662311948,17591258505542,70366504900671,281469570617703,1125886855379628 ⋆ Number of vertex cuts in the n - ladder graph P _ 2 x P _ n. ● a(n) = 4 ^ n + 2 * n + (10 - LucasL(n + 3, 2)) / 4. ● a(n) = 8 * a(n - 1) - 20 * a(n - 2) + 16 * a(n - 3) + a(n - 4) - 4 * a(n - 5). ●

► [A198851] 2,23,191,1535,12287,98303,786431,6291455,50331647,402653183,3221225471,25769803775,206158430207,1649267441663,13194139533311,105553116266495,844424930131967,6755399441055743,54043195528445951 ⋆ a(n) = 3 * 8 ^ n - 1. ● a(n) = 8 * a(n - 1) + 7. a(n) = 9 * a(n - 1) - 8 * a(n - 2) for n > 1. ●

► [A037750] 2,23,230,2301,23012,230123,2301230,23012301,230123012,2301230123,23012301230,230123012301,2301230123012,23012301230123,230123012301230,2301230123012301 ⋆ Decimal expansion of a(n) is given by the first n terms of the periodic sequence with initial period 2,3,0,1. ● a(n) = 10 * a(n - 1) + ((n + 1) mod 4), with a(0)=0. - _ Paolo P. Lava _ , Jul 30 2009 ●

► [A037631] 2,23,230,2302,23023,230230,2302302,23023023,230230230,2302302302,23023023023,230230230230,2302302302302,23023023023023,230230230230230,2302302302302302 ⋆ Decimal expansion of a(n) is given by the first n terms of the periodic sequence with initial period 2,3,0. ● a(n) = 10 * a(n - 1) + (1 / 9) * (14 * (n mod 3) + 2 * ((n + 1) mod 3) - ((n + 2) mod 3)), with a(0)=0. - _ Paolo P. Lava _ , Jul 30 2009 ●

► [A037757] 2,23,231,2310,23102,231023,2310231,23102310,231023102,2310231023,23102310231,231023102310,2310231023102,23102310231023,231023102310231,2310231023102310,23102310231023102,231023102310231023,2310231023102310231 ⋆ Decimal expansion of a(n) is given by the first n terms of the periodic sequence with initial period 2,3,1,0. ● a(n) = 10 * a(n - 1) + (1 / 4) * (2 * (n mod 4) + 3 * ((n + 1) mod 4) - ((n + 3) mod 4)) for n > 0. - _ Paolo P. Lava _ , Jul 30 2009 ●

► [A037645] 2,23,231,2312,23123,231231,2312312,23123123,231231231,2312312312,23123123123,231231231231,2312312312312 ⋆ Decimal expansion of a(n) is given by the first n terms of the periodic sequence with initial period 2,3,1. ● a(n) = 10 * a(n - 1) + (n mod 3) + 1, with a(0)=0. - _ Paolo P. Lava _ , Jul 30 2009 ●

► [A198972] 2,23,233,2333,23333,233333,2333333,23333333,233333333,2333333333,23333333333,233333333333,2333333333333,23333333333333,233333333333333,2333333333333333,23333333333333333,233333333333333333 ⋆ (7 * 10 ^ n - 1) / 3. ● a(n) = 10 * a(n - 1) + 3. ● a(n) = 11 * a(n - 1) - 10 * a(n - 2), n > 1. ●

► [A091693] 1,2,23,334,4445,55556,666667,7777778,88888889,1000000000,11111111111,122222222222,1333333333333,14444444444444,155555555555555,1666666666666666,17777777777777777,188888888888888888 ⋆ a(n) = (n * 10 ^ n - n + 9) / 9. ● a(n) = 22 * a(n - 1) - 141 * a(n - 2) + 220 * a(n - 3) - 100 * a(n - 4). - _ Wesley Ivan Hurt _ , May 17 2023 ●

► [A052686] 0,0,2,24,24,120,720,5040,40320,362880,3628800,39916800,479001600,6227020800,87178291200,1307674368000,20922789888000,355687428096000,6402373705728000,121645100408832000,2432902008176640000 ⋆ Expansion of e.g.f. x ^ 2 * (1 + 3 * x - 3 * x ^ 2) / (1 - x). ● a(n) = n!, n>3. ●

► [A022374] 2,24,26,50,76,126,202,328,530,858,1388,2246,3634,5880,9514,15394,24908,40302,65210,105512,170722,276234,446956,723190,1170146 ⋆ Fibonacci sequence beginning 2, 24. ● a(n) = a(n - 1) + a(n - 2). - _ Wesley Ivan Hurt _ , May 10 2021 ●

► [A212759] 1,2,24,32,135,162,448,512,1125,1250,2376,2592,4459,4802,7680,8192,12393,13122,19000,20000,27951,29282,39744,41472,54925 ⋆ Number of (w,x,y,z) with all terms in { 0,...,n } and w, x, and y even. ● a(n) = a(n - 1) + 4 * a(n - 2) - 4 * a(n - 3) - 6 * a(n - 4) + 6 * a(n - 5) + 4 * a(n - 6) - 4 * a(n - 7) - a(n - 8) + a(n - 9). ● a(n) = (n + 1) * (2 * n ^ 3 + 9 * n ^ 2 + 15 * n + 9 + (3 * n ^ 2 + 9 * n + 7) * (- 1) ^ n) / 16. - _ Luce ETIENNE _ , Sep 23 2015 ●

► [A152965] 0,2,24,66,128,210,312,434,576,738,920,1122,1344,1586,1848,2130,2432,2754,3096,3458,3840,4242,4664,5106,5568 ⋆ Twice 12 - gonal numbers: a(n) = 2 * n * (5 * n - 4). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Jul 10 2012 ●

► [A068379] 2,24,80,168,288,440,624,840,1088,1368,1680,2024,2400,2808,3248,3720,4224,4760,5328,5928,6560,7224,7920,8648,9408 ⋆ Engel expansion of sinh(1 / 2). ● a(1) = 2, a(n) = 8 * (n * (2 * n - 3) + 1) for n>1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>3. G.f.: x * (2 + 18 * x + 14 * x ^ 2 - 2 * x ^ 3) / (1 - x) ^ 3. - _ Colin Barker _ , Apr 13 2012 ●

► [A172225] 0,2,24,96,260,570,1092,1904,3096,4770,7040,10032,13884,18746,24780,32160,41072,51714,64296,79040,96180,115962,138644,164496,193800 ⋆ Number of ways to place 2 nonattacking wazirs on an n X n board. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Vincenzo Librandi _ , Apr 30 2013 ●

► [A145889] 0,1,2,24,96,1080,6480,80640,645120,9072000,90720000,1437004800,17244057600,305124019200,4271736268800,83691159552000,1339058552832000,28810681675776000,518592270163968000,12164510040883200000 ⋆ Number of even entries that are followed by a smaller entry in all permutations of { 1,2,...,n } . ● a(2n) = n(2n)! / 2; a(2n + 1) = n ^ 2 * (2n)!. ●

► [A212568] 0,0,2,24,98,272,608,1184,2092,3440,5350,7960,11422,15904,21588,28672,37368,47904,60522,75480,93050,113520,137192,164384,195428 ⋆ Number of (w,x,y,z) with all terms in { 1,...,n } and w<|x - y| + |y - z|. ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 5 * a(n - 4) - 4 * a(n - 5) + a(n - 6). ●

► [A179824] 2,24,108,320,750,1512,2744,4608,7290,11000,15972,22464,30758,41160,54000,69632,88434,110808,137180,168000,203742,244904,292008,345600,406250 ⋆ Chromatic polynomial of the star graph on 4 vertices (claw graph) and the path graph on 4 vertices. ● a(n) = n * (n - 1) ^ 3. - Jaime Soffer (jaime.soffer(AT)gmail.com), Jul 30 2010 ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Vincenzo Librandi _ , Mar 12 2014 ●

► [A098455] 1,2,24,128,1096,7632,60864,461568,3648096,28551872,226695424,1799989248,14380907776,115126211072,924791445504,7444100947968,60057602459136,485388465196032,3929580292706304,31858982479331328 ⋆ Expansion of 1 / sqrt(1 - 4x - 36x ^ 2). ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n, k) * binomial(2(n - k), n) * 9 ^ k. ●

► [A290775] 0,0,2,24,138,532,1596,4032,8988,18216,34254,60632,102102,164892,256984,388416,571608,821712,1156986,1599192,2174018,2911524,3846612,5019520,6476340 ⋆ Number of 5 - cycles in the n - triangular honeycomb bishop graph. ● a(n) = 2 / 5 * binomial(n + 1, 4) * (8 - 7 * n + 2 * n ^ 2). ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). ●

► [A035600] 0,2,24,146,608,1970,5336,12642,27008,53154,97880,170610,284000,454610,703640,1057730,1549824,2220098,3116952,4298066,5831520,7796978,10286936,13408034,17282432 ⋆ Number of points of L1 norm 6 in cubic lattice Z ^ n. ● a(n) = (4 * n ^ 6 + 40 * n ^ 4 + 46 * n ^ 2) / 45. - _ Frank Ellermann _ , Mar 16 2002 ●

► [A288443] 2,24,160,896,4608,22528,106496,491520,2228224,9961472,44040192,192937984,838860800,3623878656,15569256448,66571993088,283467841536,1202590842880,5085241278464,21440476741632,90159953477632,378231999954944,1583296743997440,6614661952700416,27584547717644288 ⋆ a(n) = (2n + 1) * 2 ^ (2n + 1); numbers k such that v(k) * 2 ^ v(k) = k, where v(n) = A007814(n) is 2 - adic valuation of n. ● a(n) = (2n + 1) * 2 ^ (2n + 1). ●

► [A108476] 1,2,24,160,1232,9120,68224,508928,3799296,28357120,211662848,1579868160,11792306176,88018952192,656982441984,4903783628800,36602339459072,273203580764160,2039219289063424,15220939987877888 ⋆ Expansion of (1 - 4x) / (1 - 6x - 12x ^ 2 + 8x ^ 3). ● a(0)=1, a(1)=2, a(2)=24, a(n)=6 * a(n - 1) + 12 * a(n - 2) - 8 * a(n - 3) [From Harvey P. Dale, Feb 21 2012] ●

► [A157053] 2,24,162,780,2970,9492,26474,66222,151560,322190,643632,1219374,2206932,3838590,6447660,10501172,16639974,25727292,38906870,57671880,83945862,120177024,169447302,235597650,323371100 ⋆ Number of integer sequences of length n + 1 with sum zero and sum of absolute values 8. ● a(n) = T(n,4); T(n,k) = Sum _{ i=1..n } binomial(n + 1,i) * binomial(k - 1,i - 1) * binomial(n - i + k,k). ● a(n) = n * (n + 1) * (n ^ 2 + n + 6) * (n ^ 4 + 2 * n ^ 3 + 23 * n ^ 2 + 22 * n + 24) / 576. - _ Bruno Berselli _ , Mar 17 2012 ●

► [A002736] 0,2,24,180,1120,6300,33264,168168,823680,3938220,18475600,85357272,389398464,1757701400,7862853600,34901442000,153876579840,674412197580,2940343837200,12759640231800,55138611528000,237371722628040,1018383898440480 ⋆ Apéry numbers: a(n) = n ^ 2 * C(2n,n). ● a(n) = (2n)! / (Gamma(n)) ^ 2. - _ Diego Rattaggi _ , Mar 30 2020 ● a(n) = Sum _{ k=0..2 * n } binomial(2 * n,k) * abs(n - k) ^ 3 (Bruckman, 1999; Strazdins, 2000). - _ Amiram Eldar _ , Jan 12 2022 ●

► [A059387] 0,2,24,182,1200,7502,45864,277622,1672800,10057502,60406104,362617862,2176246800,13059091502,78359364744,470170602902,2821066795200,16926530173502,101559568985784,609358577224742,3656154952230000 ⋆ Jordan function J _ n(6) (see A059379). ● a(n - 1) = (limit of (Sum _{ k>=0 } (1 / (6 * k + 1) ^ s - 1 / (6 * k + 2) ^ s - 2 / (6 * k + 3) ^ s - 1 / (6 * k + 4) ^ s + 1 / (6 * k + 5) ^ s + 2 / (6 * k + 6) ^ s) as s - > n)) / zeta(n) * 6 ^ (n - 1). - _ Mats Granvik _ , Nov 14 2013 ●

► [A052780] 0,0,2,24,192,1280,7680,43008,229376,1179648,5898240,28835840,138412032,654311424,3053453312,14092861440,64424509440,292057776128,1314259992576,5875515260928,26113401159680 ⋆ Expansion of e.g.f. x ^ 2 * exp(4 * x). ● a(n) = n * (n - 1) * 4 ^ (n - 2). ●

► [A245019] 0,2,24,194,1320,8162,47544,266114,1448520,7727522,40616664,211117634,1088079720,5571427682,28384443384,144041002754,728708854920,3677645732642,18524892775704,93171895169474,468051525534120,2349032799986402 ⋆ Number of ordered n - tuples of positive integers, whose minimum is 0 and maximum is 4. ● a(n) = 5 ^ n - 2 * 4 ^ n + 3 ^ n. ● a(n) = 12 * a(n - 1) - 47 * a(n - 2) + 60 * a(n - 3). G.f.: - 2 * x ^ 2 / ((3 * x - 1) * (4 * x - 1) * (5 * x - 1)). - _ Colin Barker _ , Sep 17 2014 ●

► [A189769] 2,24,200,1400,8820,51744,288288,1544400,8022300,40646320,201753552,984312784,4732273000,22465296000,105479913600,490481598240,2261264427180,10345654242000,47009200854000,212283654382800,953254695633240,4258696302569280,18936890673480000 ⋆ Number of one - sided prudent walks from (0, 0) to (n,n), with 3 + n east steps, 3 west steps and n north steps. ● a(n) = (n + 1) * (2 + n) * Gamma(2 * n) / (3 * (Gamma(n) ^ 2). ●

► [A121213] 0,2,24,218,1776,13682,102024,745418,5374176,38400482,272709624,1928498618,13597146576,95668307282,672119557224,4717043931818,33080342678976,231867574534082,1624598900644824,11379821699045018 ⋆ 7 ^ n - 5 ^ n. ● a(n)=12 * a(n - 1) - 35 * a(n - 2) with a(0)=0, a(1)=2 - _ Vincenzo Librandi _ , Jul 21 2010 ●

► [A147538] 2,24,224,1920,15872,129024,1040384,8355840,66977792,536346624,4292870144,34351349760,274844352512,2198889037824,17591649173504,140735340871680,1125891316908032,9007164895002624,72057456598974464,576460202547609600 ⋆ Numbers whose binary representation is the concatenation of n 1's and 2n - 1 digits 0. ● a(n) = 12 * a(n - 1) - 32 * a(n - 2). ●

► [A219205] 0,2,24,234,2160,19602,176904,1593594,14346720,129133602,1162241784,10460294154,94143001680,847288078002,7625595890664,68630372581914,617673381935040,5559060523508802,50031544969859544,450283905503576874 ⋆ 3 ^ (n - 1) * (3 ^ n - 1), n >= 0. ● a(n) = 12 * a(n - 1) - 27 * a(n - 2). G.f.: 2 * x / ((3 * x - 1) * (9 * x - 1)). [_ Colin Barker _ , Nov 23 2012] ●

► [A132596] 0,2,24,242,2400,23762,235224,2328482,23049600,228167522,2258625624,22358088722,221322261600,2190864527282,21687323011224,214682365584962,2125136332838400,21036680962799042,208241673295152024 ⋆ X - values of solutions to the equation X * (X + 1) - 6 * Y ^ 2 = 0. ● a(n) = 10 * a(n - 1) - a(n - 2) + 4, a(0)=0, a(1)=2. ● a(n) = - 1 / 2 + (1 / 4) * (5 + 2 * sqrt(6)) ^ n + (1 / 4) * (5 - 2 * sqrt(6)) ^ n, with n>=0. - _ Paolo P. Lava _ , Jul 15 2008 ●

► [A099669] 2,24,246,2468,24690,246912,2469134,24691356,246913578,2469135800,24691358022,246913580244,2469135802466,24691358024688,246913580246910,2469135802469132,24691358024691354,246913580246913576,2469135802469135798,24691358024691358020 ⋆ Partial sums of repdigits of A002276. ● a(n) = (2 / 81) * (10 ^ (n + 1) - 9 * n - 10). - R. Piyo (nagoya314(AT)yahoo.com), Dec 10 2004 ● a(n) = 12 * a(n - 1) - 21 * a(n - 2) + 10 * a(n - 3). - _ Matthew House _ , Jun 30 2016 ●

► [A173228] 2,24,249,2499,24999,249998,2499999,24999999,249999998,2499999997,24999999997,249999999997,2499999999997,24999999999998,249999999999997,2499999999999996,24999999999999995,249999999999999995,2499999999999999995,24999999999999999996 ⋆ The number of trailing zeros in (10 ^ n)! ● a(n) = Sum _{ k>=1 } floor(10 ^ n / 5 ^ k). - _ Stephen G Cappella _ , Dec 13 2017 ●

► [A221082] 2,24,270,3024,33858,379080,4244238,47519136,532031490,5956705656,66692184462,746695862640,8360120691522,93601185534504,1047973140190350,11733267012473664,131367445887970818,1470809947543386840 ⋆ Number of n X 3 arrays of occupancy after each element moves to some horizontal or antidiagonal neighbor. ● a(n) = ((- (6 - 3 * sqrt(3)) ^ n + (3 * (2 + sqrt(3))) ^ n)) / (3 * sqrt(3)). ●

► [A041723] 1,1,2,25,27,52,2003,2055,4058,50751,54809,105560,4066089,4171649,8237738,103024505,111262243,214286748,8254158667,8468445415,16722604082,209139694399,225862298481,435001992880,16755938027921 ⋆ Denominators of continued fraction convergents to sqrt(381). ● a(n) = 2030 * a(n - 6) - a(n - 12) for n>11. - _ Vincenzo Librandi _ , Dec 23 2013 ●

► [A041071] 1,2,25,52,649,1350,16849,35048,437425,909898,11356201,23622300,294823801,613269902,7654062625,15921395152,198710804449,413343004050,5158826853049,10730996710148,133930787374825,278592571459798,3477041644892401,7232675861244600 ⋆ Denominators of continued fraction convergents to sqrt(42). ● a(n) = 26 * a(n - 2) - a(n - 4). - _ Vincenzo Librandi _ , Dec 10 2013 ●

► [A123012] 1,2,25,92,709,3350,21589,113528,680425,3744938,21778801,122201300,701757421,3969742142,22676390125,128717365232,733638923089,4170342516050,23747102416969,135071397670988,768831946098325,4374163243287398,24893797354639621,141645022818314600 ⋆ Expansion of 1 / (1 - 2 * x - 21 * x ^ 2). ● a(0)=1, a(1)=2, a(n) = 2 * a(n - 1) + 21 * a(n - 2) for n>1. - _ Philippe Deléham _ , Sep 19 2009 ● a(n) = (1 / 2 + sqrt(22) / 44) * (1 + sqrt(22)) ^ n + (1 / 2 - sqrt(22) / 44) * (1 - sqrt(22)) ^ n. - _ Antonio Alberto Olivares _ , Jun 08 2011 ●

► [A063264] 2,25,140,540,1666,4417,10480,22825,46420,89232,163592,288015,489580,806990,1294448,2026502,3104030,4661555,6876100,9977814,14262622,20107175,27986400,38493975,52366080 ⋆ Tenth column (k=9) of sextinomial array A063260. ● a(n) = 2 * C(n + 2,2) + 19 * C(n + 2,3) + 52 * C(n + 2,4) + 70 * C(n + 2,5) + 56 * C(n + 2,6) + 28 * C(n + 2,7) + 8 * C(n + 2,8) + C(n + 2,9) (see comment in A213888). - _ Vladimir Shevelev _ and _ Peter J. C. Moses _ , Jun 22 2012 ●

► [A215298] 2,25,174,962,4804,22689,103510,461318,2021916,8752042,37520972,159633060,674969224,2839400945,11893509990,49637986590,206519808300,856904298030,3547095101220,14652264350940,60412895258040,248675669866650,1022088942267900,4195255959533052 ⋆ Number of solid standard Young tableaux of shape [[n,n - 2],[2]]. ● a(n) = 12 * (1 - 4 * n + 10 * n ^ 2 - 8 * n ^ 3 + 2 * n ^ 4) * (2 * n - 4)! / ((n - 2)! * (n + 1)!). - _ Vaclav Kotesovec _ , Sep 02 2014 ●

► [A094218] 0,0,0,2,25,198,1274,7280,38556,193800,937992,4412826,20309575,91861770,409704750,1806342720,7887861960,34166674800,146977222320,628521016500,2673950235138,11324837666604,47773836727540,200828153398752 ⋆ Number of permutations of length n with exactly 2 occurrences of the pattern 2 - 13. ● a(n) = n * binomial(2 * n,n - 4) / 2. ●

► [A152997] 0,2,26,72,140,230,342,476,632,810,1010,1232,1476,1742,2030,2340,2672,3026,3402,3800,4220,4662,5126,5612,6120 ⋆ Twice 13 - gonal numbers: a(n) = n * (11 * n - 9). ● a(n) = a(n - 1) + 22 * n - 20 (with a(0)=0). - _ Vincenzo Librandi _ , Nov 27 2010 ●

► [A202077] 2,26,78,264,504,1128,1786,3262,4660,7540,10092,15066,19278,27174,33644,45428,54846,71622,84770,107780,125532,156156,179478,219234,249184 ⋆ Number of arrays of 5 integers in - n..n with sum zero and the sum of every adjacent pair being odd. ● a(n) = (230 * n ^ 4 + 552 * n ^ 3 + 424 * n ^ 2 + 96 * n) / 384 for n even. ● a(n) = (230 * n ^ 4 + 368 * n ^ 3 + 148 * n ^ 2 + 16 * n + 6) / 384 for n odd. ●

► [A072415] 2,26,182,878,3626,13508,46922,155156,494468,1529590,4615074,13633310,39548078,112918434,317920082,883996002 ⋆ a(1) = 2; a(n) = a(n - 1) - th even nontotient number. ● a(3)=182 is the 26th = a(2) - th term in A005277. ●

► [A198960] 2,26,242,2186,19682,177146,1594322,14348906,129140162,1162261466,10460353202,94143178826,847288609442,7625597484986,68630377364882,617673396283946,5559060566555522,50031545098999706,450283905890997362 ⋆ 3 * 9 ^ n - 1. ● a(n) = 9 * a(n - 1) + 8, n>0. ● a(n) = 10 * a(n - 1) - 9 * a(n - 2), n >1. ●

► [A363985] 1,2,26,272,3418,44252,597104,8249152,116158298,1659335492,23979247276,349798313152,5142733169776,76108788764192,1132729444052288,169409

44956246272,254449319912898394,383616299408810517 2,58028561918702719604 ⋆ a(n) = Sum _{ k = 0..n } (- 4) ^ (n - k) * binomial(n,k) * binomial(2 * n + k,k) * binomial(2 * k,k). ● a(n) = (- 4) ^ n * hypergeom(- n, 2 * n + 1, 1 / 2], [1, 1], 1). ●

► [A280089] 1,2,27,100,245,486,847,1352,2025,2890,3971,5292,6877,8750,10935,13456,16337,19602,23275,27380,31941,36982,42527,48600,55225 ⋆ a(n) = 4 * n ^ 3 - 3 * n + 1. ● a(n) = (2n - 1) ^ 2 * (n + 1). ●

► [A041801] 1,1,2,27,137,164,629,793,2215,3008,5223,8231,21685,203396,225081,1778963,5561970,18464873,42491716,103448305,352836631,1161958198,8486544017,9648502215,95323063952 ⋆ Denominators of continued fraction convergents to sqrt(421). ● a(n) = 88084891393642836 * a(n - 37) + a(n - 74) for n>73. - _ Vincenzo Librandi _ , Dec 24 2013 ●

► [A166942] 2,27,148,509,1350,3031,6056,11097,19018,30899,48060,72085,104846,148527,205648,279089,372114,488395,632036,807597,1020118,1275143,1578744,1937545,2358746 ⋆ One fifth of product plus sum of five consecutive nonnegative numbers. ● a(n) = (n ^ 5 + 10n ^ 4 + 35n ^ 3 + 50n ^ 2 + 29n + 10) / 5. - _ Charles R Greathouse IV _ , Nov 02 2009 ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) + 24 for n > 4; a(0)=2, a(1)=27, a(2)=148, a(3)=509, a(4)=1350. - _ Klaus Brockhaus _ , Nov 14 2009 ●

► [A011543] 2,27,271,2718,27182,271828,2718281,27182818,271828182,2718281828,27182818284,271828182845,2718281828459,27182818284590,271828182845904,2718281828459045,27182818284590452,271828182845904523,2718281828459045235,27182818284590452353,271828182845904523536 ⋆ Decimal expansion of e truncated to n places. ● a(n) = floor(e * 10 ^ n). ●

► [A199021] 2,27,302,3327,36602,402627,4428902,48717927,535897202,5894869227,64843561502,713279176527,7846070941802,86306780359827,949374583958102,10443120423539127,114874324658930402,1263617571248234427 ⋆ (5 * 11 ^ n - 1) / 2. ● a(n) = 11 * a(n - 1) + 5. ● a(n) = 12 * a(n - 1) - 11 * a(n - 2), n>1. ●

► [A051958] 0,1,2,28,104,880,4256,29632,161408,1033984,5941760,36699136,216000512,1312780288,7809572864,47125872640,281681494016,1694383931392,10149123719168,60963461791744,365505892843520,2194134868688896 ⋆ a(n) = 2 a(n - 1) + 24 a(n - 2), a(0)=0, a(1)=1. ● a(n) = (6 ^ n - (- 4) ^ n) / 10. ●

► [A213829] 2,28,114,296,610,1092,1778,2704,3906,5420,7282,9528,12194,15316,18930,23072,27778,33084,39026,45640,52962,61028,69874,79536,90050 ⋆ Principal diagonal of the convolution array A213828. ● a(n) = 2 * (n - 3 * n ^ 2 + 3 * n ^ 3). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ●

► [A338426] 1,2,28,154,1206,8364,60614,432636,3104484,22235310,159360540,1141875800,8182608226,58634396372,420162632840,3010793013534,21574706493988,154599722419136,1107828637412194,7938463325113516,56885333141857872,407628148378295190 ⋆ a(n) is the number of paths a chess king can take from (0,0) to (n +1,0) touching each point in {- 1,0,1 } X { 1,2,...,n } exactly once. ● a(n) = 7 * a(n - 1) + 6 * a(n - 2) - 39 * a(n - 3) + 29 * a(n - 4) + 28 * a(n - 5) - 26 * a(n - 6) - 10 * a(n - 7) + 6 * a(n - 8) for n >= 8. ●

► [A006332] 0,2,28,168,660,2002,5096,11424,23256,43890,77924,131560,212940,332514,503440,742016,1068144,1505826,2083692,2835560,3801028,5026098,6563832,8475040,10829000 ⋆ From the enumeration of corners. ● a(n) = (n * (1 + n) ^ 2 * (2 + n) * (1 + 2 * n) * (3 + 2 * n)) / 90. ● a(n) = binomial(n + 2, 3) * binomial(2 * n + 3, 3) / 5. (End) ●

► [A065340] 2,28,182,864,3474,12660,43358,142552,455930,1430796,4431078,13595664,41441570,125732836,380212142,1147057800,3454803594,10393245180,31240551350,93849578560,281817169202,846013542228,2539215029502,7620094559544,22865383949594 ⋆ Third diagonal of triangle in A046740. ● a(n) = 3 ^ n - (3 * n + 1) * 2 ^ (n - 1) + 2 * n ^ 2 - 2 * n + 1. - _ Vladeta Jovovic _ , Jan 04 2003 ●

► [A035601] 0,2,28,198,952,3530,10836,28814,68464,148626,299660,568150,1022760,1761370,2919620,4680990,7288544,11058466,16395516,23810534,33940120,47568618,65652532,89347502,120037968 ⋆ Number of points of L1 norm 7 in cubic lattice Z ^ n. ● a(n) = (8 * n ^ 6 + 4 * 5 * 7 * n ^ 4 + 8 * 7 * 7 * n ^ 2 + 2 * 5 * 9) * n / (5 * 7 * 9). - _ Frank Ellermann _ , Mar 16 2002 ●

► [A147537] 2,28,248,2032,16352,131008,1048448,8388352,67108352,536869888,4294965248,34359734272,274877898752,2199023239168,17592186011648,140737488289792,1125899906711552,9007199254478848,72057594037403648,576460752302374912,4611686018425290752 ⋆ Numbers whose binary representation is the concatenation of 2n - 1 digits 1 and n digits 0. ● a(n) = 10 * a(n - 1) - 16 * a(n - 2). ●

► [A229581] 2,28,264,2160,16416,119232,839808,5785344,39191040,262020096,1733363712,11367641088,74010599424,478892113920,3082323787776,19747769352192,126009575866368,801195213717504,5077997833420800,32092946307219456 ⋆ Number of defective 3 - colorings of an n X 3 0..2 array connected horizontally and antidiagonally with exactly one mistake, and colors introduced in row - major 0..2 order. ● a(n) = 2 ^ (n + 1) * 3 ^ (n - 1) * (4 * n + 3). ●

► [A097353] 1,2,28,284,2849,28500,285008,2850083,28500834,285008350,2850083504,28500835049,285008350498,2850083504986,28500835049863,285008350498633,2850083504986335,28500835049863359,285008350498633597,2850083504986335973 ⋆ Number of digits of the (10 ^ n) - th tetranacci number (A000078(10 ^ n)). ● a(n) = floor(log _ 10(r) + (10 ^ n - 2) * log _ 10(x)) + 1 for n >= 1, where x is the positive real root of the tetranacci limit equation x ^ 4 - x ^ 3 - x ^ 2 - x - 1 = 0, x = 1.92756... and r is the positive real root of the tetranacci auxiliary equation 563r ^ 4 - 20r ^ 2 - 5r - 1 = 0, r = 0.293813... - Herman Jamke (hermanjamke(AT)fastmail.fm), May 01 2007 ●

► [A011944] 0,2,28,390,5432,75658,1053780,14677262,204427888,2847313170,39657956492,552364077718,7693439131560,107155783764122,1492487533566148,20787669686161950,289534888072701152 ⋆ a(n) = 14 * a(n - 1) - a(n - 2) with a(0) = 0, a(1) = 2. ● a(n) = ((7 + 2 * sqrt(12)) ^ (n - 1) - (7 - 2 * sqrt(12)) ^ (n - 1)) / (2 * sqrt(12)). - _ Gregory V. Richardson _ , Oct 13 2002 ● a(n) = 13 * (a(n - 1) + a(n - 2)) - a(n - 3). a(n) = 15 * (a(n - 1) - a(n - 2)) + a(n - 3). - _ Mohamed Bouhamida _ , Sep 20 2006 ● a(n) = sinh(2n * arcsinh(sqrt(3))) / sqrt(12). - _ Herbert Kociemba _ , Apr 24 2008 ●

► [A140152] 1,2,29,30,155,156,499,500,1229,1230,2561,2562,4759,4760,8135,8136,13049,13050,19909,19910,29171,29172,41339,41340,56965 ⋆ a(1)=1, a(n)=a(n - 1) + n ^ 3 if n odd, a(n)=a(n - 1) + n ^ 0 if n is even. ● a(n) = a(n - 1) +{ [1 - (- 1) ^ n] / 2 }* n ^ 3 +{ [1 + (- 1) ^ n] / 2 } , with a(1)=1 a(n)= (- 5 / 16) + (5 / 16) * (- 1) ^ n - (1 / 4) * (- 1) ^ n * n ^ 3 + (1 / 4) * n ^ 3 - (3 / 8) * (- 1) ^ n * n ^ 2 + (1 / 8) * n ^ 2 + (1 / 2) * n + (1 / 8) * n ^ 4, with n>=1. - _ Paolo P. Lava _ , Jun 06 2008 ● a(n) = a(n - 1) + 4 * a(n - 2) - 4 * a(n - 3) - 6 * a(n - 4) + 6 * a(n - 5) + 4 * a(n - 6) - 4 * a(n - 7) - a(n - 8) + a(n - 9). G.f.: x * (- 1 - x - 23 * x ^ 2 + 3 * x ^ 3 - 23 * x ^ 4 - 3 * x ^ 5 - x ^ 6 + x ^ 7) / ((1 + x) ^ 4 * (x - 1) ^ 5). [_ R. J. Mathar _ , Feb 22 2009] ●

► [A041969] 1,1,2,29,31,60,2671,2731,5402,78359,83761,162120,7217041,7379161,14596202,211725989,226322191,438048180,19500442111,19938490291,39438932402,572083543919,611522476321,1183606020240,52690187366881 ⋆ Denominators of continued fraction convergents to sqrt(507). ● a(n) = 2702 * a(n - 6) - a(n - 12) for n>11. - _ Vincenzo Librandi _ , Dec 28 2013 ●

► [A041097] 1,2,29,60,869,1798,26041,53880,780361,1614602,23384789,48384180,700763309,1449910798,20999514481,43448939760,629284671121,1302018282002,18857540619149,39017099520300,565096933903349,1169210967326998,16934050476481321,35037311920289640 ⋆ Denominators of continued fraction convergents to sqrt(56). ● a(n) = 30 * a(n - 2) - a(n - 4). - _ Vincenzo Librandi _ , Dec 11 2013 ●

► [A253305] 2,29,100,1777,6178,110125,382916,6825953,23734594,423098941,1471161892,26225308369,91188302690,1625546019917,5652203604868,100757627926465,350345435199106,6245347385420893,21715764778739684,387110780268168881,1346027070846661282 ⋆ Numbers n such that the octagonal number O(n) is equal to the sum of the heptagonal numbers H(m) and H(m + 1) for some m. ● a(n) = a(n - 1) + 62 * a(n - 2) - 62 * a(n - 3) - a(n - 4) + a(n - 5). ●

► [A123004] 0,1,2,29,108,941,4582,32689,179928,1177081,6852362,43131749,257572548,1593438821,9626191342,59088353209,358831489968,2194871810161,13360530869522,81592856993069,497198985724188,3034219396275101 ⋆ Expansion of g.f. x ^ 2 / (1 - 2 * x - 25 * x ^ 2). ● a(n) = 2 * a(n - 1) + 25 * a(n - 2). ● a(n) = ((1 + sqrt(26) ^ n - (1 - sqrt(26)) ^ n) / (2 * sqrt(26)). - _ Rolf Pleisch _ , Jul 06 2009 ● a(n) = (5 * i) ^ (n - 2) * ChebyshevU(n - 2, - i / 5). - _ G. C. Greubel _ , Jul 12 2021 ●

► [A198698] 2,29,299,2999,29999,299999,2999999,29999999,299999999,2999999999,29999999999,299999999999,2999999999999,29999999999999,299999999999999,2999999999999999,29999999999999999,299999999999999999 ⋆ 3 * 10 ^ n - 1. ● a(n) = 10 * a(n - 1) + 9, a(0)=2. a(n) = 11 * a(n - 1) - 10 * a(n - 2), n>1. ●

► [A157870] 2,30,90,182,306,462,650,870,1122,1406,1722,2070,2450,2862,3306,3782,4290,4830,5402,6006,6642,7310,8010,8742,9506 ⋆ a(n) = (4n + 1) * (4n + 2) = (4n + 2)! / (4n)!. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Jul 10 2012 ●

► [A078838] 0,2,30,120,630,1122,2760,3978,7392,15498,19140,33390,46020,53382,70380,102102,142158,157530,210210,251160,273492,348348,405162,501468,652080 ⋆ a(n) = Sum _{ k=1..(p - 1) * (p - 2) } floor((k * p) ^ (1 / 3)) where p is the n - th prime. ● a(n) = (1 / 4) * (3 * p - 5) * (p - 2) * (p - 1) where p = prime(n). ●

► [A267851] 1,2,30,126,510,2046,8190,32766,131070,524286,2097150,8388606,33554430,134217726,536870910,2147483646,8589934590,34359738366,137438953470,549755813886,2199023255550,8796093022206,35184372088830,140737488355326,562949953421310 ⋆ Decimal representation of the n - th iteration of the "Rule 229" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = 5 * a(n - 1) - 4 * a(n - 2) for n>3. ●

► [A154413] 0,0,0,2,30,202,2016,14394,151290,1294478,15660744,162298842,2274318228,27968231436,447527038848,6382757516250,114890215021650,1865385066804550,37307710791708600,679562209260462054 ⋆ a(n) = A006551(n) - A018224(n). ● a(n) = Eulerian[n,Floor[n / 2]] - Binomial[n,Floor[n / 2]] ^ 2. ●

► [A157054] 2,30,252,1500,7002,27174,91112,271224,731502,1815506,4197468,9129276,18827718,37060506,70006512,127485584,224676522,384468534,640622012,1041949020,1657762722,2584888350,3956576472,5953712520,8818775030 ⋆ Number of integer sequences of length n + 1 with sum zero and sum of absolute values 10. ● a(n) = T(n,5); T(n,k) = Sum _{ i=1..n } binomial(n + 1,i) * binomial(k - 1,i - 1) * binomial(n - i + k,k). ● a(n) = n * (n + 1) * (n ^ 8 + 4 * n ^ 7 + 66 * n ^ 6 + 184 * n ^ 5 + 1089 * n ^ 4 + 1876 * n ^ 3 + 4604 * n ^ 2 + 3696 * n + 2880) / 14400. ●

► [A189770] 2,30,300,2450,17640,116424,720720,4247100,24066900,132100540,706137432,3691172940,18929092000,95477508000,474659611200,2329787591640,11306322135900,54314684770500,258550604697000,1220631012701100,5719528173799440,26616851891058000 ⋆ Number of one - sided prudent walks from (0,0) to (n,n), with 4 + n east steps, 4 west steps and n north steps. ● a(n) = (n + 1)(2 + n)(n + 3) Gamma(1 + 2n) / (24n(Gamma(n)) ^ 2). ●

► [A245020] 0,2,30,302,2550,19502,140070,963902,6433590,41983502,269335110,1705278302,10686396630,66425568302,410223570150,2520229093502,15417960407670,93999281613902,571487645261190,3466523088409502,20987674370482710,126870924446280302 ⋆ Number of ordered n - tuples of positive integers, whose minimum is 0 and maximum is 5. ● a(n) = 6 ^ n - 2 * 5 ^ n + 4 ^ n. ● a(n) = 15 * a(n - 1) - 74 * a(n - 2) + 120 * a(n - 3) for n>3. G.f.: - 2 * x ^ 2 / ((4 * x - 1) * (5 * x - 1) * (6 * x - 1)). - _ Colin Barker _ , Sep 18 2014 ●

► [A277660] 0,0,2,30,310,2730,21980,167076,1220100,8650620,59958030,408172050,2738441706,18151701750,119100934680,774719545320,5001728701800,32081745977496,204596905143930,1298154208907430,8199305968563710,51576591659861730,323239814342259892,2019025558874685900 ⋆ 2nd - order coefficients of the 1 / N - expansion of traces of negative powers of complex Wishart matrices with parameter c=2. ● a(n) = 2 * C _ (n - 2) ^ (5 / 2)(3) for n >= 2, where C _ n ^ (m)(x) is the Gegenbauer polynomial. - _ Andrey Zabolotskiy _ , Oct 26 2016 ●

► [A089433] 2,30,315,2856,23940,191268,1480050,11196900,83304936,611931320,4450217772,32104210320,230080173960,1639890119016,11634355574100,82216112723640,579022013389050,4065827626164150,28475852003986695 ⋆ Number of noncrossing connected graphs on n nodes having exactly two interior faces. ● a(n) = n * binomial(3n - 3, n - 4) / 2. ●

► [A216119] 0,0,0,2,30,360,4200,50400,635040,8467200,119750400,1796256000,28540512000,479480601600,8499883392000,158664489984000,3112264995840000,64023737057280000,1378644471300096000,31019500604252160000,728045925946859520000,17796678189812121600000 ⋆ Number of stretching pairs in all permutations in S _ n. ● a(n) = n! * (n - 2) * (n - 3) / 24. ●

► [A083446] 2,30,382,4550,52062,579670,6328142,68064390,723690622,7624326710,79730051502,828681574630,8569245282782,88234318656150,905219979016462,9258090922259270,94433929411444542,961016475814111990 ⋆ a(n) = ((10 ^ n - 1) - 9 ^ n) / 9. ● a(n) = 20 * a(n - 1) - 109 * a(n - 2) + 90 * a(n - 3). - _ Matthew House _ , Jan 16 2017 ●

► [A091345] 0,0,2,30,398,5430,79022,1238790,20944478,381167670,7443745742,155454939750,3459933837758,81801569650710,2048133412585262,54153668865539910,1508122968767710238,44130728380569410550 ⋆ Exponential convolution of A069321(n) with itself, where we set A069321(0)=0. ● a(n)=Sum(C(n, k)Sum(i!i Stirling2(k, i), i=1, .., k)Sum(i!i Stirling2(n - k, i), i=1, .., n - k), k=0, .., n) ●

► [A247099] 0,1,2,31,32,33,64,211,242,243,244,275,486,781,992,1023,1024,1025,1056,1267,2048,2101,2882,3093,3124 ⋆ Numbers which are the sum or difference of two fifth powers. ● a(n) << n ^ (5 / 2). Can this be improved? ●

► [A104095] 0,1,1,2,31,80,690,2522,16463,71361,410068,1933079,10454444,51354986,269730280,1351952533,7000832157,35436588070,182241654663,926897102096,4750855253550,24219753328074,123937215821147,632547978692149 ⋆ Let v[0] = { 0,1,1,2 } , v[n]=M.v[n - 1], where M= {{ 0, 1, 0, 0 } , { 0, 0, 1, 0 } , { 0, 0, 0, 1 } , { 1, 10, 19, 1 }} ; then a(n) =v[n][[1]] (the first term). ● a(0)=0, a(1)=a(2)=1, a(3)=2, a(n)=a(n - 1) + 19a(n - 2) + 10a(n - 3) + a(n - 4) [From Harvey P. Dale, Apr 26 2011] ●

► [A212569] 0,1,2,31,96,321,690,1471,2576,4465,6930,10671,15312,21841,29666,40111,52320,68001,85986,108415,133760,164641,199122,240351,285936 ⋆ Number of (w,x,y,z) with all terms in { 0,...,n } such that range { w,x,y,z } is not one of the numbers w,x,y,z. ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 6 * a(n - 3) + 6 * a(n - 5) - 2 * a(n - 6) - 2 * a(n - 7) + a(n - 8). ● a(n) = ((n - 1) * n * (2 * n * (2 * n - 5) - 3 * (- 1) ^ n + 11) - 2 * (- 1) ^ n + 2) / 4. - _ Todd Silvestri _ , Nov 16 2014 ●

► [A267888] 1,2,31,127,511,2047,8191,32767,131071,524287,2097151,8388607,33554431,134217727,536870911,2147483647,8589934591,34359738367,137438953471,549755813887,2199023255551,8796093022207,35184372088831,140737488355327,562949953421311 ⋆ Decimal representation of the n - th iteration of the ”Rule 237” elementary cellular automaton starting with a single ON (black) cell. ● a(n) = 5 * a(n - 1) - 4 * a(n - 2) for n>3. ● a(n) = 2 ^ (2 * n + 1) - 1 for n>1. - _ Colin Barker _ , Nov 25 2016 ●

► [A229014] 2,31,130,359,794,1527,2666,4335,6674,9839,14002,19351,26090,34439,44634,56927,71586,88895,109154,132679,159802,190871,226250,266319,311474 ⋆ Number of arrays of median of three adjacent elements of some length 6 0..n array, with no adjacent equal elements in the latter. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

► [A042059] 1,1,2,31,157,188,909,2006,2915,4921,17678,22599,62876,399855,862586,1262441,4649909,5912350,10562259,27036868,118709731,145746599,847442726,12857387489,13704830215 ⋆ Denominators of continued fraction convergents to sqrt(553). ● a(n) = 1249271674814 * a(n - 26) - a(n - 52). - _ Wesley Ivan Hurt _ , Sep 05 2022 ●

► [A188225] 2,31,256,1496,6936,27132,93024,286824,810084,2124694,5230016,12183560,27041560,57500460,117675360,232676280,445962870,830905245,1508593920,2674776720,4639918800,7887861960,13160496960,21578373360,34810394760 ⋆ Number of ways to select 15 knights from n knights sitting at a round table if no adjacent knights are chosen. ● a(n) = C(n - 15, 15) + C(n - 16, 14) ●

► [A004842] 0,1,2,32,33,64,243,244,275,486,1024,1025,1056,1267,2048,3125,3126,3157,3368,4149,6250,7776,7777,7808,8019 ⋆ Numbers that are the sum of at most 2 positive 5th powers. ● a(n) << n ^ (5 / 2). - _ Charles R Greathouse IV _ , Nov 30 2014 ●

► [A274654] 1,2,32,128,4096,16384,131072,524288,33554432,134217728,1073741824,4294967296,68719476736,274877906944,2199023255552,8796093022208,1125899906842624,4503599627370496,36028797018963968,144115188075855872,2305843009213693952 ⋆ Denominators of coefficients of z ^ n / n! for the expansion of Fricke’s hypergeometric function F _ 1(1 / 2,1 / 2;z). ● a(n) = denominator(r(n)), with the rationals (in lowest terms) defined by the recurrence ●

► [A244730] 0,2,32,162,512,1250,2592,4802,8192,13122,20000,29282,41472,57122,76832,101250,131072,167042,209952,260642,320000,388962,468512,559682,663552 ⋆ a(n) = 2 * n ^ 4. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>4. ●

► [A169833] 2,32,170,596,1690,4232,9802,21580,45946,95680,196362,399172,806490,1623096,3258570,6532092,13082042,26185200,52395146,104819060,209671322,419380712,838804810,1677658796,3355373050 ⋆ a(n) = 25 * 2 ^ (n + 3) - (198 + 392 * n / 3 + 36 * n ^ 2 + 10 * n ^ 3 / 3). ● a(n) - 6 * a(n - 1) + 14 * a(n - 2) - 16 * a(n - 3) + 9 * a(n - 4) - 2 * a(n - 5) = 0, with n>4. (End) ●

► [A228582] 0,0,0,0,2,32,198,868,2860,7984,19380,42696,86526,164560,296010,509132,841464,1345184,2086920,3155472,4660890,6745152,9580142,13381940,18407268 ⋆ The number of binary pattern classes in the (2,n) - rectangular grid with 7 ’1’s and (2n - 7) ’0’s: two patterns are in same class if one of them can be obtained by a reflection or 180 - degree rotation of the other. ● a(n) = (1 / 4) * (binomial(2 * n, 7) + 2 * binomial(n - 1, 3) * (1 / 2) * (1 - (- 1) ^ n)) = (n - 3) * (n - 2) * (n - 1)(2 * n * (2n - 5) * (2 * n - 3) * (2 * n - 1) - 105 * (- 1) ^ n + 105) / 2520. ●

► [A128789] 0,2,32,216,1024,4000,13824,43904,131072,373248,1024000,2725888,7077888,17997824,44957696,110592000,268435456,643956736,1528823808,3596091392,8388608000,19421724672,44660948992,102064193536,231928233984 ⋆ n ^ 3 * 2 ^ n. ● a(0)=0, a(1)=2, a(2)=32, a(3)=216, a(n)=8 * a(n - 1) - 24 * a(n - 2) + 32 * a(n - 3) - 16 * a(n - 4). - _ Harvey P. Dale _ , Jun 14 2013 ●

► [A053316] 2,32,232,3232,23232,223232,2223232,32223232,232223232,3232223232,23232223232,323232223232,3323232223232,33323232223232,333323232223232,3333232322232232 ⋆ a(n) contains n digits (either ’2’ or ’3’) and is divisible by 2 ^ n. ● a(n) = a(n - 1) + 10 ^ (n - 1) * (2 + (a(n - 1) / 2 ^ (n - 1) mod 2)), i.e., a(n) ends with a(n - 1); if a(n - 1) is divisible by 2 ^ n then a(n) begins with a 2, if not then a(n) begins with a 3. ●

► [A008512] 2,32,242,992,2882,6752,13682,24992,42242,67232,102002,148832,210242,288992,388082,510752,660482,840992,1056242,1310432,1608002,1953632,2352242,2808992,3329282 ⋆ Number of points on the surface of 5 - dimensional cube. ● a(n) = (n + 1) ^ 5 - (n - 1) ^ 5. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Wesley Ivan Hurt _ , May 04 2021 ●

► [A035602] 0,2,32,258,1408,5890,20256,59906,157184,374274,822560,1690370,3281280,6065410,10746400,18347010,30316544,48663554,76117536,116323586,174074240,255582978,368804128,523804162,733189632 ⋆ Number of points of L1 norm 8 in cubic lattice Z ^ n. ● a(n) = (2 * n ^ 8 + 8 * 7 * n ^ 6 + 4 * 7 * 11 * n ^ 4 + 8 * 3 * 11 * n ^ 2) / (5 * 7 * 9). - _ Frank Ellermann _ , Mar 16 2002 ●

► [A212797] 2,32,294,2304,16810,117600,799694,5326848,34928082,226195360,1450199542,9220780800,58221203066,365440965344,2282085037470,1418769742336,87860208024994,542209573735200,3335797263902918,20465738163774720,125247216613782858 ⋆ Number of spanning trees in C _ 2 X C _ n. ● a(n) = 14 * a(n - 1) - 63 * a(n - 2) + 100 * a(n - 3) - 63 * a(n - 4) + 14 * a(n - 5) - a(n - 6) for n > 6. (End) ●

► [A323639] 1,2,32,332,3332,33332,333332,3333332,33333332,333333332,3333333332,33333333332,333333333332,3333333333332,33333333333332,333333333333332,3333333333333332,33333333333333332,333333333333333332,3333333333333333332 ⋆ a(n) = 3 * (10 ^ n - 4) / 9. ● a(n) = 11 * a(n - 1) - 10 * a(n - 2). ●

► [A060868] 2,32,338,3200,29282,264992,2389298,21516800,193690562,1743333152,15690352658,141214236800,1270931319842,11438391444512,102945551698418,926510051379200,8338590720693122,75047317261079072,675425857674234578 ⋆ Number of n X n matrices over GF(3) with rank 1. ● a(n) = 1 / 2 * (3 ^ n - 1) ^ 2. ●

► [A270445] 2,32,352,3712,38912,407552,4268032,44695552,468058112,4901568512,51329892352,537533612032,5629125066752,58948963008512,617321555034112,6464675252273152,67698958146732032,708952693724413952,7424248994345254912 ⋆ Expansion of 2 * x * (1 + 4 * x) / (1 - 12 * x + 16 * x ^ 2). ● a(n) = 12 * a(n - 1) - 16 * a(n - 2) for n>2. G.f.: 2 * x * (1 + 4 * x) / (1 - 12 * x + 16 * x ^ 2). - _ Colin Barker _ , Mar 17 2016 ● a(n) = (1 + sqrt(5)) ^ (2 * n - 1) + (1 - sqrt(5)) ^ (2 * n - 1). ●

► [A199019] 2,32,362,3992,43922,483152,5314682,58461512,643076642,7073843072,77812273802,855935011832,9415285130162,103568136431792,1139249500749722,12531744508246952,137849189590716482,1516341085497881312 ⋆ 3 * 11 ^ n - 1. ● a(n) = 11 * a(n - 1) + 10. ● a(n) = 12 * a(n - 1) - 11 * a(n - 2), n>1. ●

► [A191467] 0,2,32,386,4160,42242,413792,3959426,37281920,347066882,3204309152,29403732866,268588249280,2444976817922,22198569382112,201143570584706,1819787258282240,16444551185679362,148466221699088672,1339452822487618946 ⋆ 9 ^ n - 7 ^ n. ● a(n) = 16 * a(n - 1) - 63 * a(n - 2). ●

► [A294328] 0,2,32,432,5432,65432,765432,8765432,98765432,1098765432,12098765432,132098765432,1432098765432,15432098765432,165432098765432,1765432098765432,18765432098765432,198765432098765432,2098765432098765432,22098765432098765432 ⋆ a(n) = ((9 * n + 8) * 10 ^ n - 8) / 81. ● a(n) = 21 * a(n - 1) - 120 * a(n - 2) + 100 * a(n - 3) for n>2. ●

► [A013776] 2,32,512,8192,131072,2097152,33554432,536870912,8589934592,137438953472,2199023255552,35184372088832,562949953421312,9007199254740992,144115188075855872,2305843009213693952 ⋆ a(n) = 2 ^ (4 * n + 1). ● a(n) = 16 * a(n - 1), n > 0, a(0) = 2. ● a(n) = Sum _{ k = 0..n } binomial(2 * k,k) * binomial(4 * n + 2 - 2 * k, 2 * n + 1 - k). ●

► [A068183] 2,32,3222,53222,5332222,75332222,75332222222,7533332222222,755333322222222 ⋆ Largest number without decimal digits equal to 1 whose product of digits gives n!. ● a(n)=Max { x; f[x]=n! } , where x has no digit=1 and f[x _] := Apply[Times, IntegerDigits[x]]. ●

► [A041127] 1,2,33,68,1121,2310,38081,78472,1293633,2665738,43945441,90556620,1492851361,3076259342,50713000833,104502261008,1722749176961,3550000614930,58522759015841,120595518646612,1988051057361633,4096697633369878,67535213191279681 ⋆ Denominators of continued fraction convergents to sqrt(72). ● a(n) = 34 * a(n - 2) - a(n - 4). - _ Vincenzo Librandi _ , Dec 11 2013 ●

► [A002561] 0,1,2,33,244,1025,3126,7777,16808,32769,59050,100001,161052,248833,371294,537825,759376,1048577,1419858,1889569,2476100,3200001,4084102,5153633,6436344 ⋆ a(n) = n ^ 5 + 1. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6), n > 4. - _ Harvey P. Dale _ , Aug 13 2013 ●

► [A294272] 0,2,33,308,1300,4668,12201,30032,61776,123950,220825,389652,630708,1018808,1539825,2331968,3347776,4826682,6657201,9233300,12333300,16578452,21571033,28256208,35970000 ⋆ Sum of the fifth powers of the parts in the partitions of n into two parts. ● a(n) = Sum _{ i=1..floor(n / 2) } i ^ 5 + (n - i) ^ 5. ● a(n) = (1 / 192) * (n ^ 2 * (- 16 + 80 * n ^ 2 + 3 * (- 31 + (- 1) ^ n) * n ^ 3 + 32 * n ^ 4)). ● a(n) = a(n - 1) + 6 * a(n - 2) - 6 * a(n - 3) - 15 * a(n - 4) + 15 * a(n - 5) + 20 * a(n - 6) - 20 * a(n - 7) - 15 * a(n - 8) + 15 * a(n - 9) + 6 * a(n - 10) - 6 * a(n - 11) - a(n - 12) + a(n - 13) for n>13. ●

► [A263226] 0,2,34,96,188,310,462,644,856,1098,1370,1672,2004,2366,2758,3180,3632,4114,4626,5168,5740,6342,6974,7636,8328 ⋆ a(n) = 15 * n ^ 2 - 13 * n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Oct 13 2015 ●

► [A200166] 2,34,128,348,726,1326,2180,3352,4874,6810,9192,12084,15518,19558,24236,29616,35730,42642,50384,59020,68582,79134,90708,103368,117146 ⋆ Number of - n..n arrays x(0..2) of 3 elements with nonzero sum and with zero through 2 differences all nonzero. ● a(n) = 11 * n - 13 * n ^ 2 + 8 * n ^ 3 for n even. ● a(n) = - 4 + 11 * n - 13 * n ^ 2 + 8 * n ^ 3 for n odd. ●

► [A213826] 2,34,132,332,670,1182,1904,2872,4122,5690,7612,9924,12662,15862,19560,23792,28594,34002,40052,46780,54222,62414,71392,81192,91850 ⋆ Principal diagonal of the convolution array A213825. ● a(n) = - n - 3 * n ^ 2 + 6 * n * 3. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ●

► [A259108] 0,2,34,196,708,1958,4550,9352,17544,30666,50666,79948,121420,178542,255374,356624,487696,654738,864690,1125332,1445332,1834294,2302806,286

2488,3526040 ⋆ a(n) = 2 * A000538(n). ● a(n) = - n / 15 + (2 * n ^ 3) / 3 + n ^ 4 + (2 * n ^ 5) / 5. - _ Colin Barker _ , Jun 28 2015 ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). - _ Wesley Ivan Hurt _ , Oct 01 2021 ●

► [A036827] 0,2,34,250,1274,5274,19098,63002,194074,567322,1591322,4317210,11395098,29392922,74350618,184942618,453378074,1097334810,2626158618,6222250010,14610858010,34032582682,78693531674,180757725210,412685959194 ⋆ a(n) = 26 + 2 ^ (n + 1) * (- 13 + 9 * n - 3 * n ^ 2 + n ^ 3). ● a(n) = Sum _{ k=0..n } 2 ^ k * k ^ 3. - _ Benoit Cloitre _ , Jun 11 2003 ● a(n) = 9 * a(n - 1) - 32 * a(n - 2) + 56 * a(n - 3) - 48 * a(n - 4) + 16 * a(n - 5) for n>4 with a(0)=0, a(1)=2, a(2)=34, a(3)=250, a(4)=1274. - _ Harvey P. Dale _ , Dec 15 2011 ● a(n) = Sum _{ k=0..n } Sum _{ i=0..n } k ^ 3 * C(k,i). - _ Wesley Ivan Hurt _ , Sep 21 2017 ●

► [A136362] 1,2,34,254,898,2302,4898,9214,15874,25598,39202,57598,81794,112894,152098,200702,260098,331774,417314,518398,636802,774398,933154,1115134,1322498 ⋆ Numbers n such that P + n is not irreducible, where P = x ^ 8 - 8 * x ^ 6 + 20 * x ^ 4 - 16 * x ^ 2 + 2. ● a(1) = 1; a(2) = 2; for n > 2, a(n) = 4 * n ^ 2 * (n - 2) ^ 2 - 2. ●

► [A263689] 1,1,2,34,277,1301,4426,12202,29009,61777,120826,220826,381877,630709,1002002,1539826,2299201,3347777,4767634,6657202,9133301,12333301,16417402,21571034,28007377 ⋆ a(n) = (2 * n ^ 6 - 6 * n ^ 5 + 5 * n ^ 4 - n ^ 2 + 12) / 12. ● a(n + 1) = a(n) + n ^ 5, a(0) = 1. ●

► [A098531] 0,1,2,34,277,3402,36170,407463,4491564,49926988,553211363,6137270812,68054635036,754774491429,8370420537086,92830050637086,1029498223070793,11417322172518550,126619992693837974,1404237451180502875,15573231068749231000 ⋆ Sum of fifth powers of first n Fibonacci numbers. ● a(n) = - 7 / 22 + 2 * F(n + 2) / 5 + (F(5 * (n + 1)) + F(5 * n)) / (5 * 55) - (- 1) ^ n * (F(3 * (n + 1)) - F(3 * n)) / (2 * 10), where F=A000045. One may use F(5 * (n + 1)) + F(5 * n) = F(5 * n + 1) + 4 * F(5 * n + 2) (due to the Binet - de Moivre formula). ●

► [A296995] 2,34,341,2902,23092,178393,1359598,10296846,77752133,586292914,4418053928,33282217873,250685741074,1888064403826,14219675836741,1070917053164 46,8065267552133 24,6074075885446057,45744715781412614,344509590254476102,2595456978760459973 ⋆ Number of edge covers in the n - dipyramidal graph. ● a(n) = 11 * a(n - 1) - 24 * a(n - 2) - 21 * a(n - 3) + 33 * a(n - 4) + 34 * a(n - 5) + 8 * a(n - 6) for n > 6. ●

► [A098704] 2,34,546,8738,139810,2236962,35791394,572662306,9162596898,146601550370,2345624805922,37529996894754,600479950316066,9607679205057058,153722867280912930,2459565876494606882 ⋆ Decimal form of the binary numbers 10, 100010, 1000100010, 10001000100010, 100010001000100010,... ● a(n) = (2 ^ (4 * n - 3) - 2) / 15. ● a(n) = 17 * a(n - 1) - 16 * a(n - 2). ● a(n) = 16 * a(n - 1) + 2). ● a(n) = 2 * 16 ^ (n - 2) + a(n - 1). ●

► [A042459] 1,1,2,35,37,220,1137,1357,24206,25563,49769,2713089,2762858,5475947,95853957,101329904,602503477,3113847289,3716350766,66291810311,70008161077,136299971388,7430206616029,7566506587417,14996713203446 ⋆ Denominators of continued fraction convergents to sqrt(757). ● a(n) = 2738652 * a(n - 11) + a(n - 22) for n>21. - _ Vincenzo Librandi _ , Jan 22 2014 ●

► [A257601] 2,35,100,210,380,627,970,1430,2030,2795,3752,4930,6360,8075,10110,12502,15290,18515,22220,26450,31252,36675,42770,49590,57190 ⋆ a(n) = (n ^ 4 + 20 * n ^ 3 + 125 * n ^ 2 + 250 * n + 24) / 12. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Vincenzo Librandi _ , Jun 08 2015 ●

► [A193576] 2,35,243,1064,3500,9477,22295,47168,91854,167375,288827,476280,755768,1160369,1731375,2519552,3586490,5006043,6865859,9269000,12335652,16204925,21036743,27013824,34343750 ⋆ T(n) ^ 3 + n ^ 3 where T(n) is a triangular number. ● a(n) = (n ^ 3 + (n ^ 3 + 3 * n ^ 2 + 3 * n + 9) / 8) = (1 / 8) * (n + 3) * (n ^ 2 + 3) * n ^ 3 ●

► [A089660] 0,2,35,276,1522,6820,26664,94640,312512,975744,2913280,8386048,23416320,63724544,169637888,443043840,1137934336,2879979520,7194083328,17761304576,43390730240,104997322752,251881062400,599482433536,1416470986752 ⋆ a(n) = S1(n,3), where S1(n, t) = Sum _{ k=0..n } (k ^ t * Sum _{ j=0..k } binomial(n,j)). ● a(n) = n * (15 * n ^ 3 + 30 * n ^ 2 + 21 * n - 2) * 2 ^ (n - 6). - _ R. J. Mathar _ , Sep 16 2009 ● a(n) = 10 * a(n - 1) - 40 * a(n - 2) + 80 * a(n - 3) - 80 * a(n - 4) + 32 * a(n - 5) for n > 4. - _ Chai Wah Wu _ , Jun 21 2016 ●

► [A055519] 1,1,2,35,312,3779,41590,474169,5342808,60450145,682988978,7720432691,87256315920,986227664411,11146765278382,125986353493225,1423957841588232,16094263592763889,181905138292910570,2055979904686591259,23237679087969620328,262643489044489470155 ⋆ a(n) = 9 * a(n - 1) + 33 * a(n - 2) - 76 * a(n - 3) - 33 * a(n - 4) + 9 * a(n - 5) + a(n - 6), a(0)=a(1)=1, a(2)=2, a(3)=35, a(4)=312, a(5)=3779. ● a(n) = Sum _{ k=1..n } Fibonacci(k) ^ 5 * a(n - k), a(0)=1. - _ Vladeta Jovovic _ , Apr 23 2003 ●

► [A199032] 2,35,431,5183,62207,746495,8957951,107495423,1289945087,15479341055,185752092671,2229025112063,26748301344767,320979616137215,3851755393646591,46221064723759103,554652776685109247,6655833320221310975 ⋆ a(n) = 3 * 12 ^ n - 1. ● a(n) = 12 * a(n - 1) + 11. ● a(n) = 13 * a(n - 1) - 12 * a(n - 2). ●

► [A187298] 0,2,36,98,198,330,494,690,918,1178,1470,1794,2150,2538,2958,3410,3894,4410,4958,5538,6150,6794,7470,8178,8918 ⋆ Number of 3 - step one space leftwards or up, two space rightwards or down asymmetric rook's tours on an n X n board summed over all starting positions. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>6. ●

► [A278930] 2,36,100,2081,8257,32897,131329,524801,2098177,8390657,33558529,134225921,536887297,2147516417,8590000129,34359869441,137439215617,549756338177,2199024304129,8796095119361,35184376283137,140737496743937,562949970198529,2251799847239681 ⋆ a(n) is the least positive integer that differs (in absolute value) by an (n + 1) - st power from the reverse of its binary representation. ● a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3) for n>6. ●

► [A199944] 2,36,142,376,778,1404,2294,3504,5074,7060,9502,12456,15962,20076,24838,30304,36514,43524,51374,60120,69802,80476,92182,104976,118898 ⋆ Number of - n..n arrays x(0..2) of 3 elements with zeroth through 2nd differences all nonzero. ● a(n) = 6 * n - 10 * n ^ 2 + 8 * n ^ 3 for n even. ● a(n) = - 2 + 6 * n - 10 * n ^ 2 + 8 * n ^ 3 for n odd. ●

► [A099903] 2,36,216,800,2250,5292,10976,20736,36450,60500,95832,146016,215306,308700,432000,591872,795906,1052676,1371800,1764000,2241162,2816396,3504096,4320000,5281250 ⋆ Sum of all matrix elements of n X n matrix M(i,j) = i ^ 3 + j ^ 3, (i,j = 1..n). a(n) = n ^ 3 * (n + 1) ^ 2 / 2. ● a(n) = Sum _{ i=1..n, j=1..n } (i ^ 3 + j ^ 3). ● a(n) = 2 * n * Sum _{ k=1..n } k ^ 3. - _ Gary Detlefs _ , Oct 26 2011 ● a(n) = (n ^ 5 + 2 * n ^ 4 + n ^ 3) / 2. - _ Charles R Greathouse IV _ , Oct 27 2011 ●

► [A273325] 1,2,36,300,1960,11340,60984,312312,1544400,7438860,35103640,162954792,746347056,3380195000,15164074800,67476121200,298135873440,1309153089420,5717335239000,24847720451400,107520292479600,463440029892840,1990477619679120,8521600803066000 ⋆ Number of endofunctions on [2n] such that the minimal cardinality of the nonempty preimages equals n. ● a(n) = C(2 * n,n) * C(2 * n,2) for n>0, a(0)=1. ● a(n) = 2 * C(2 * (n - 1),n - 1) * (2 * n - 1) ^ 2, a(0)=1. ● a(n) = 2 * (2 * n - 1) ^ 2 * a(n - 1) / ((n - 1) * (2 * n - 3)) for n>1, a(n) = 2 ^ n for n=0..1. ●

► [A035603] 0,2,36,326,1992,9290,35436,115598,332688,864146,2060980,4573910,9545560,18892250,35704060,64797470,113461024,192441122,317222212,509663334,800061160,1229718378,1854105484,2746713774,4003707568 ⋆ Number of points of L1 norm 9 in cubic lattice Z ^ n. ● a(n) = (4 * n ^ 9 + 168 * n ^ 7 + 1596 * n ^ 5 + 3272 * n ^ 3 + 630 * n) / (5 * 7 * 9 * 9). - _ Frank Ellermann _ , Mar 16 2002 ●

► [A157055] 2,36,362,2570,14240,65226,256508,889716,2777370,7925720,20934474,51697802,120353324,265953170,561075720,1135620536,2214405618,4175000796,7634582090,13577591370,23539760552,39868752506,66087441092,107392871070,171332460650 ⋆ Number of integer sequences of length n + 1 with sum zero and sum of absolute values 12. ● a(n) = T(n,6); T(n,k) = Sum _ (i=1..n } binomial(n + 1,i) * binomial(k - 1,i - 1) * binomial(n - i + k,k). ● a(n) = n * (n + 1) * (n ^ 10 + 5 * n ^ 9 + 120 * n ^ 8 + 450 * n ^ 7 + 4173 * n ^ 6 + 10965 * n ^ 5 + 48530 * n ^ 4 + 79300 * n ^ 3 + 163176 * n ^ 2 + 125280 * n + 86400) / 518400. ●

► [A193127] 2,36,384,3528,30250,248832,1989806,15586704,120187008,915304500,6900949462,51599794176,383142771674,2828107288188,20768716848000,151840963183392,1105779284582146,8024954790380544,58059628319357318,418891171182561000 ⋆ Numbers of spanning trees of the antiprism graphs. ● a(n) = 2 / 5 * n * (phi ^ (4 * n) + phi ^ (- 4 * n) - 2), where phi is the golden ratio. ● a(n) = + 16 * a(n - 1) - 80 * a(n - 2) + 130 * a(n - 3) - 80 * a(n - 4) + 16 * a(n - 5) - a(n - 6). ●

► [A248343] 0,2,36,488,5904,67232,737856,7902848,83222784,865782272,8926258176,91410065408,931280523264,9450244186112,95601953488896,964815627911168,9718525023289344,97748200186314752,981985601490518016,9855884811924144128 ⋆ 10 ^ n - 8 ^ n. ● a(n) = 18 * a(n - 1) - 80 * a(n - 2). ●

► [A025608] 0,0,2,36,560,8160,116192,1638336,23006720,322513920,4517714432,63263118336,885774356480,12401385185280,173622657769472,2430736799809536,34030432743587840,476426763687690240,6669978923292557312,93379730316084903936,1307316376765123788800 ⋆ Number of n - move rook paths on 8 X 8 board from given corner to opposite corner. ● a(0)=0, a(1)=0, a(2)=2, a(n)=18 * a(n - 1) - 44 * a(n - 2) - 168 * a(n - 3). - _ Harvey P. Dale _ , Mar 09 2013 ●

► [A207832] 0,2,36,646,11592,208010,3732588,66978574,1201881744,21566892818,387002188980,6944472508822,124613502969816,2236098580947866,40125160954091772,720016798592704030 ⋆ Numbers x such that 20 * x ^ 2 + 1 is a perfect square. ● a(n) = 18 * a(n - 1) - a(n - 2). ● a(n) = Fibonacci(6 * n) / 4. - _ Bruno Berselli _ , Jun 19 2019 ●

► [A290803] 0,2,37,37,2095,14100,47714,165363,988906,29812911,271934553,1401835549,9311142521,36993716923,133882727330,2846775018726,12341898038612,145273620317016,1308426190253051,1308426190253051,35505111746372480,354674176936820484 ⋆ One of the two successive approximations up to 7 ^ n for the 7 - adic integer sqrt(- 3). These are the numbers congruent to 2 mod 7 (except for the initial 0). ● a(0) = 0 and a(1) = 2, a(n) = a(n - 1) + 5 * (a(n - 1) ^ 2 + 3) mod 7 ^ n for n > 1. ● a(n) = L(7 ^ n,2) (mod 7 ^ n) = ((1 + sqrt(2)) ^ (7 ^ n) + (1 - sqrt(2)) ^ (7 ^ n)) (mod 7 ^ n), where L(n,x) denotes the n - th Lucas polynomial of A114525. - _ Peter Bala _ , Nov 28 2022 ●

► [A041161] 1,2,37,76,1405,2886,53353,109592,2026009,4161610,76934989,158031588,2921503573,6001038734,110940200785,227881440304,4212806126257,8653493692818,159975692596981,328604878886780 ⋆ Denominators of continued fraction convergents to sqrt(90). ● a(n) = 38 * a(n - 2) - a(n - 4), - _ Vincenzo Librandi _ , Dec 12 2013 ●

► [A309429] 2,37,83,137,229,317,409,557,677,829,991,1187,1423,1597,1871,2083,2347,2633,2939,3307,3581,3967,4297,4673,5051 ⋆ Least Luhn prime in base 2n: primes p such that p + reverse(p) in base 2n is also a prime. ● a(n) > 8 * n ^ 2 for n > 1. ●

► [A134596] 2,37,137,1379,13679,123479,1234679,12345679,102345679,1123456789,10123456789 ⋆ The largest n - digit primeval number A072857. ● a(n) = max { m in A072857, m < 10 ^ n } . - _ M. F. Hasler _ , Mar 12 2014 ●

► [A098456] 1,2,38,212,2566,20092,210524,1884136,18854854,178415852,1764019828,17115907096,169100140444,1661540282456,16458178007288,162887627833552,1618680238292294,16095872154638156,160435286115927044 ⋆ Expansion of 1 / sqrt(1 - 4x - 64x ^ 2). ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n, k) * binomial(2(n - k), n) * 16 ^ k. ●

► [A080920] 0,1,2,39,148,1661,8502,75139,447848,3525561,22725802,168846239,1133095548,8175809461,56009963102,398173257339,2756695223248,19449454453361,135383241720402,951497389308439,6641408238830948 ⋆ a(n) = 2a(n - 1) + 35a(n - 2), a(0)=0, a(1)=1. ● a(n) = 7 ^ n / 12 - (- 5) ^ n / 12. ● a(n) = Sum { k=1..n, binomial(n, 2k - 1) * 6 ^ (2(k - 1)) } . ●

► [A042683] 1,1,2,39,197,236,1377,1613,4603,6216,10819,17035,27854,44889,72743,117632,308007,425639,2436202,2861841,16745407,321024574,337769981,658794555,38547854171 ⋆ Denominators of continued fraction convergents to sqrt(871)

. ● a(n) = 38885624152 * a(n - 24) - a(n - 48) for n>47. - _ Vincenzo Librandi _ , Jan 26 2014 ●

▶ [A003760] 2,40,240,1558,8300,43438,212700,1014700,4691580,21257258,94520524,414149254,1791339472,7664373014,32481662616,136520499746,569599125312,2361080470268,9730117780704,39888323454064 ⋆ Number of Hamiltonian paths in D _ 4 X P _ n. ● a(1) = 2, ● a(2) = 40, ● a(3) = 240, ● a(4) = 1558, ● a(5) = 8300, ● a(6) = 43438, ●

▶ [A035604] 0,2,40,402,2720,14002,58728,209762,658048,1854882,4780008,11414898,25534368,53972178,108568488,209070018,387328512,693230658,1202893992,2029779538,3339504032,5369283570,8453107432,13053926690,19804348032 ⋆ Number of points of L1 norm 10 in cubic lattice Z ^ n. ● a(n) = 2n ^ 2 / 14175 * (2n ^ 8 + 120n ^ 6 + 1806n ^ 4 + 7180n ^ 2 + 5067). ●

▶ [A139747] 0,2,40,602,8080,102002,1240120,14704202,171312160,1970527202,22450640200,253930611002,2855998840240,31980846315602,356873041128280,3971357037321002,44096709674720320,488769846799627202,5409822678195232360,59808238730741554202 ⋆ a(n) = 11 ^ n - 9 ^ n. ● a(n) = 20 * a(n - 1) - 99 * a(n - 2). - _ Vincenzo Librandi _ , Jun 02 2011 ●

▶ [A042923] 1,1,2,41,43,84,5251,5335,10586,217055,227641,444696,27798793,28243489,56042282,1149089129,1205131411,2354220540,147166804891,149521025431,296687830322,6083277631871,6379965462193,12463243094064,779101037294161 ⋆ Denominators of continued fraction convergents to sqrt(993). ● a(n) = 5294 * a(n - 6) - a(n - 12) for n > 11. - _ Vincenzo Librandi _ , Feb 01 2014 ●

▶ [A007533] 2,41,130,269,458,697,986,1325,1714,2153,2642,3181,3770,4409,5098,5837,6626,7465,8354,9293,10282,11321,12410,13549,14738 ⋆ a(n) = (5n + 1) ^ 2 + 4n + 1. ● a(n) = 25n ^ 2 + 14n + 2. ●

▶ [A287335] 2,41,170,443,914,1637,2666,4055,5858,8129,10922,14291,18290,22973,28394,34607,41666,49625,58538,68459,79442,91541,104810,119303,135074 ⋆ Nonnegative numbers k such that 3 * k + 2 is a cube. ● a(n) = 9 * n ^ 3 - 9 * n ^ 2 + 3 * n - 1. ●

▶ [A212837] 2,41,178,497,1106,2137,3746,6113,9442,13961,19922,27601,37298,49337,64066,81857,103106,128233,157682,191921,231442,276761,328418,386977,453026 ⋆ Number of 0..n arrays of length 4 with 0 never adjacent to n. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

▶ [A202865] 2,42,228,776,2046,4578,9128,16704,28602,46442,72204,108264,157430,222978,308688,418880,558450,732906,948404,1211784,1530606,1913186,2368362,2906880,3538730 ⋆ Number of 3 X 3 0..n arrays with row and column sums one greater than the previous row and column. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. ●

▶ [A360786] 0,2,42,400,2840,17376,97440,516608,2634624,13058560,63320576,301707264,1417009152,6575120384,30195425280,137430827008,620604391424,2783097520128,12403773407232,54975376916480,242441862512640,1064326263734272,4653131038195712,20266193591992320 ⋆ Number of ways to place two dimers on an n - cube. ● a(n) = 2 ^ (n - 2) * n * (1 - 2 * n + n * 2 ^ (n - 1)). ● a(n) = 18 * a(n - 1) - 132 * a(n - 2) + 504 * a(n - 3) - 1056 * a(n - 4) + 1152 * a(n - 5) - 512 * a(n - 6) for n > 6. ●

▶ [A070808] 1,2,42,407,6890,88502,1385727,19762290,303169770,4514031830,69135179542,1050132147077,16141218975167,247800513084152,3825796483371170,59118992260132532,916434202205565162 ⋆ Sum(((- 1) ^ k * binomial(4 * n,k)),k=n..2 * n). ● a(n) = 1 / 2 * (- 1) ^ (2 * n) * binomial(4 * n, 2 * n) + 1 / 4 * (- 1) ^ n * binomial(4 * n, n). ●

▶ [A157056] 2,42,492,4060,26070,137886,623576,2476296,8809110,28512110,85014204,235895244,614266354,1511679210,3536846160,7907476016,16967926746,35078339106,70098276620,135798494460,255689552382,468969729382,839584669992,1469778991800,2520031983950 ⋆ Number of integer sequences of length n + 1 with sum zero and sum of absolute values 14. ● a(n) = T(n,7); T(n,k) = Sum _{ i=1..n } binomial(n + 1,i) * binomial(k - 1,i - 1) * binomial(n - i + k,k). ● a(n) = n * (n + 1) * (n ^ 12 + 6 * n ^ 11 + 197 * n ^ 10 + 930 * n ^ 9 + 12363 * n ^ 8 + 43938 * n ^ 7 + 300551 * n ^ 6 + 751710 * n ^ 5 + 2756536 * n ^ 4 + 4309656 * n ^ 3 + 7816752 * n ^ 2 + 5780160 * n + 3628800) / 25401600. ●

▶ [A349927] 0,0,2,43,276,1150,3710,10017,23688,50556,99450,183095,319132,531258,850486,1316525,1979280,2900472,4155378,5834691,8046500,10918390,14599662,19263673,25110296 ⋆ Number of transitive relations on an n - set with exactly three ordered pairs. ● a(n) = 2 * C(n,2) + 37 * C(n,3) + 116 * C(n,4) + 180 * C(n,5) + 120 * C(n,6). ● a(n) = (1 / 6) * (n ^ 6 - 6 * n ^ 5 + 24 * n ^ 4 - 47 * n ^ 3 + 38 * n ^ 2 - 10 * n). ●

▶ [A242856] 2,44,224,686,1622,3272,5924,9914,15626,23492,33992,47654,65054,86816,113612,146162,185234,231644,286256,349982,423782,508664,605684,715946,840602 ⋆ Number of 2 - matchings of the n X n grid graph. ● a(n) = 2 * n ^ 4 - 4 * n ^ 3 - 5 * n ^ 2 + 13 * n - 4. ●

▶ [A035605] 0,2,44,486,3608,20330,93060,361550,1229360,3742290,10377180,26572086,63521352,143027898,305568564,623207070,1219605600,2300164770,4196289420,7428962950,12798246520,21507034122 ⋆ Number of points of L1 norm 11 in cubic lattice Z ^ n. ● a(n) = (2 * n * (14175 + 83754 * n ^ 2 + 50270 * n ^ 4 + 7392 * n ^ 6 + 330 * n ^ 8 + 4 * n ^ 10)) / 155925. ●

▶ [A041241] 1,2,45,92,2069,4230,95129,194488,4373865,8942218,201102661,411147540,9246348541,18903844622,425130930225,869165705072,19546776441809,39962718588690,898726585392989,1837415889374668,41321876151635685,84481168192646038 ⋆ Denominators of continued fraction convergents to sqrt(132). ● a(n) = 46 * a(n - 2) - a(n - 4). - _ Vincenzo Librandi _ , Dec 13 2013 ●

▶ [A019579] 2,45,160,375,756,1372,2304,3645,5500,7986,11232,15379,20580,27000,34816,44217,55404,68590,84000,101871,122452,146004,172800,203125,237276 ⋆ Place n distinguishable balls in n boxes (in n ^ n ways); let f(n,k) = number of ways that max in any box is k, for 1 <= k <= n; sequence gives f(n,n - 2) / n. ● a(n) = n * (n - 1) ^ 3 / 2, n >= 5. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Wesley Ivan Hurt _ , Dec 27 2021 ●

▶ [A151583] 0,2,45,260,1115,4230,15113,52232,176823,590090,1948133,6376716,20725523,66960782,215232705,688746512,2195381615,6973567506,22082966429,69735686420,219667415499,690383309462,2165293110905,6778308873240,21182215233575 ⋆ Number of permutations of 2 indistinguishable copies of 1..n arranged in a circle with exactly 2 adjacent element pairs in decreasing order. ● a(n) = n * (3 ^ n - 4 * n) for n > 1. - _ Andrew Howroyd _ , May 04 2020 ● a(n) = 9 * a(n - 1) - 30 * a(n - 2) + 46 * a(n - 3) - 33 * a(n - 4) + 9 * a(n - 5) for n>6. ●

▶ [A360065] 1,2,45,412,4705,50374,549109,5955544,64683649,702259786,7625147293,82791470836,898931464993,9760376329678,105975828745957,1150659965697328,12493588746237697,135652375422278290,1472880803124594061,15992184812239930060,173639288800074705121 ⋆ Number of 3 - dimensional tilings of a 2 X 2 X n box using 2 X 1 X 1 dominos and trominos (L - shaped connection of 3 cubes). ● a(n) = 2 * a(n - 1) + b(n - 1) + c(n - 1) + 13 * a(n - 2) + 2 * b(n - 2) + c(n - 2) + 2 * d(n - 2), ● a(n) = 7 * a(n - 1) + 42 * a(n - 2) + 6 * a(n - 3) - 81 * a(n - 4) + 27 * a(n - 5) for n >= 5. ●

▶ [A174592] 2,46,658,9182,127906,1781518,24813362,345605566,4813664578,67045698542,933826115026,13006519911838,181157452650722,2523197817198286,35143611988125298,489487370016555902,6817679568243657346 ⋆ Numbers n such that n ^ 2 + 2 * (n + 2) ^ 2 is a square. ● a(n) = 15 * a(n - 1) - 15 * a(n - 2) + a(n - 3). ● a(n) = - 4 / 3 + ((sqrt(3) + 1) ^ (4n - 1) - (sqrt(3) - 1) ^ (4n - 1)) / (3 * 2 ^ (2n - 1)). (End) ●

▶ [A304725] 2,47,194,527,1154,2207,3842,6239,9602,14159,20162,27887,37634,49727,64514,82367,103682,128879,158402,192719,232322,277727,329474,388127,454274 ⋆ a(n) = n ^ 4 + 8 * n ^ 3 + 20 * n ^ 2 + 16 * n + 2. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ●

▶ [A128822] 2,47,206,551,1154,2087,3422,5231,7586,10559,14222,18647,23906,30071,37214,45407,54722,65231,77006,90119,104642,120647,138206,157391,178274 ⋆ Number of solutions to x / 3 + y / 4 + z / 6 < n with x,y,z>=1 . ● a(n)=12 * n ^ 3 - 15 * n ^ 2 + 6 * n - 1 . ●

▶ [A276509] 2,47,497,4997,49997,499997,4999997,49999997,499999997,4999999997,49999999997,499999999997,4999999999997,49999999999997,499999999999997,4999999999999997,49999999999999997,499999999999999997,4999999999999999997,49999999999999999997 ⋆ Numbers k in base 10 such that the digits of 2 + k are the digits of 2k written in reverse order. ● a(n) = 5 * 10 ^ (n - 1) - 3. - _ Peter Bala _ , Sep 06 2016 ●

▶ [A101362] 0,2,48,324,1280,3750,9072,19208,36864,65610,110000,175692,269568,399854,576240,810000,1114112,1503378,1994544,2606420,3360000,4278582,5387888,6716184,8294400 ⋆ a(n) = (n + 1) * n ^ 4. ● a(n) + 6 * Sum _{ i=1..n } i ^ 3 + 4 * Sum _{ i=1..n } i ^ 2 + Sum _{ i=1..n } i = 5 * Sum _{ i=1..n } i ^ 4. ●

▶ [A231654] 0,0,2,48,526,3450,16536,63104,204202,580669,1491096,3520768,7754502,16098425,31770760,59998736,109022244,191454654,326158974,540703008,874630262,1383621756,2144889472,3263884272,4882793214 ⋆ Number of non - equivalent ways to choose 5 points in an equilateral triangle grid of side n. ● a(n) = (n ^ 10 + 5 * n ^ 9 - 10 * n ^ 8 - 70 * n ^ 7 + 25 * n ^ 6 + 584 * n ^ 5 - 420 * n ^ 4 - 480 * n ^ 3 - 1216 * n ^ 2 + 1536 * n + B) / 23040 where B = 375 * n ^ 4 - 1170 * n ^ 3 + 210 * n ^ 2 - 405 * n + 1035 if n odd, and B = 0 if n even. ●

▶ [A035606] 0,2,48,578,4672,28610,142000,596610,2187520,7159170,21278640,58227906,148321344,354870594,803467056,1732242690,3575055360,7094825730,13591279920,25216532290,45443741760,79749022402 ⋆ Number of points of L1 norm 12 in cubic lattice Z ^ n. ● a(n) = 2 * n ^ 2 * (146430 + 239327 * n ^ 2 + 74800 * n ^ 4 + 6996 * n ^ 6 + 220 * n ^ 8 + 2 * n ^ 10) / 467775. ●

▶ [A157057] 2,48,642,6040,44130,264936,1356194,6077196,24314490,88206140,293744154,907129236,2619716554,7125357540,18363363690,45076309166,105864434424,238815143406,519252051080,1091481669390,2224042468032,4403475647758,8489857618992,15969368635950 ⋆ Number of integer sequences of length n + 1 with sum zero and sum of absolute values 16. ● a(n) = T(n,8); T(n,k) = Sum _{ i=1..n } binomial(n + 1,i) * binomial(k - 1,i - 1) * binomial(n - i + k,k). ● a(n) = (12870 / 16!) * n * (n + 1) * (203212800 + 349090560 * n + 487608192 * n ^ 2 + 296058000 * n ^ 3 + 196660016 * n ^ 4 + 61391512 * n ^ 5 + 25601072 * n ^ 6 + 4564385 * n ^ 7 + 1344383 * n ^ 8 + 138621 * n ^ 9 + 30835 * n ^ 10 + 1715 * n ^ 11 + 301 * n ^ 12 + 7 * n ^ 13 + n ^ 14). - _ G. C. Greubel _ , Jan 24 2022 ●

▶ [A041287] 1,2,49,100,2449,4998,122401,249800,6117601,12485002,305757649,624000300,15281764849,31187529998,763782484801,1558752499600,38173842475201,77906437450002,1907928341275249,3893763120000500,95358243221287249,194610249562574998 ⋆ Denominators of continued fraction convergents to sqrt(156). ● a(n) = 50 * a(n - 2) - a(n - 4). - _ Vincenzo Librandi _ , Dec 14 2013 ●

▶ [A243720] 2,49,1244,12329,81900,398907,1562362,5153001,14907120,38753358,92417760,204977323,427812496,847346181,1604300270 ⋆ Number of inequivalent (mod D _ 8) ways to place 5 nonattacking knights on an n X n board. ● a(n) = (n ^ 10 - 90 * n ^ 8 + 240 * n ^ 7 + 3235 * n ^ 6) / 960 + O(n ^ 5) for n >= 8. ●

▶ [A089304] 0,2,51,975,14699,196923,2469147,29691371,346913595,3969135819,44691358043,496913580267,5469135802491,59691358024715,646913580246939,6969135802469163,74691358024691387,796913580246913611,8469135802469135835,89691358024691358059 ⋆ Sum of all digits in all even numbers from 0 to 222...2 (with n 2's). ● a(n) = (2880 * n + 10 ^ n (81 * n - 167) - 2020) / 1620. ● a(n) = 22 * a(n - 1) - 141 * a(n - 2) + 220 * a(n - 2) - 100 * a(n - 4). ●

▶ [A080921] 0,1,2,52,200,2896,15392,169792,1078400,10306816,72376832,639480832,4753049600,40201179136,308548739072,2546754076672,19903847628800,162051890937856,1279488468058112,10337467701133312,82090381869056000 ⋆ a(n) = 2 * a(n - 1) + 48 * a(n - 2), a(0)=0, a(1)=1. ● a(n) = (8 ^ n - (- 6) ^ n) / 14 . ● a(n) = Sum { k=1..n, binomial(n, 2k - 1) * 7 ^ (2(k - 1)) } ●

▶ [A053455] 0,1,2,52,200,2896,15392,169792,1078400,10306816,72376832,639480832,4753049600,40201179136,308548739072,2546754076672,19903847628800,162051890937856,1279488468058112,10337467701133312,82090381869056000,660379213392510976,5261096756499709952,42220395755839946752 ⋆ a(n) = ((8 ^ n) - (- 6) ^ n) / 14. ● a(n) = 2 * a(n - 1) + 48 * a(n - 2), n>=2; a(0)=0, a(1)=1. ●

▶ [A053317] 2,52,552,5552,55552,255552,5255552,55255552,255255552,2255255552,22255255552,222255255552,5222255255552,55222255255552,255222255255552,2255222255255552,22255222255255552,222255222255255552 ⋆ a(n) contains n digits (either '2' or '5') and is divisible by 2 ^ n. ● a(n) = a(n - 1) + 10 ^ (n - 1) * (2 + 3 * (a(n - 1) / 2 ^ (n - 1) mod 2)), i.e., a(n) ends with a(n - 1); if a(n - 1) is divisible by 2 ^ n then a(n) begins with a 2, if not then a(n) begins with a 5. ●

► [A212889] 1,2,53,104,349,594,1273,1952,3401,4850,7501,10152,14533,18914,25649,32384,42193,52002,65701,79400,97901,116402,140713,165024,196249 ⋆ Number of (w,x,y,z) with all terms in { 0,...,n } and even range. ● a(n)=2a(n - 1) + 2 * a(n - 2) - 6 * a(n - 3) + 6 * a(n - 5) - 2 * a(n - 6) - 2 * a(n - 7) + a(n - 8). ●

► [A041337] 1,2,53,108,2861,5830,154441,314712,8336953,16988618,450041021,917070660,24293878181,49504827022,1311419380753,2672343588528,70792352682481,144257048953490,3821475625473221,7787208299899932,206288891422871453,420364991145642838 ⋆ Denominators of continued fraction convergents to sqrt(182). ● a(n) = 54 * a(n - 2) - a(n - 4). - _ Vincenzo Librandi _ , Dec 15 2013 ●

► [A212242] 1,2,53,204,625,1556,3357,6558,11809,20000,32211,49762,74263,107564,151875,209716,283967,377918,495219,640000,816821,1030722,1287273,1592524,1953125 ⋆ Number of (u,v,w,x,y,z) with all terms in { 0,1,...,n } and 5u=v + w + x + y + z. ● a(n)=5a(n - 1) - 10a(n - 2) + 10a(n - 3) - 5a(n - 4) + 2a(n - 5) - 5a(n - 6) + 10a(n - 7) - 10a(n - 8) + 5a(n - 9) - a(n - 10). ●

► [A123005] 0,1,2,53,204,3005,16006,179257,1142808,11069209,78136010,698663261,5225991012,44686481813,345446523214,2880530655265,22687940948016,186521884004017,1484752874460818,12109078065118469,96971046978817020 ⋆ Expansion of g.f. x ^ 2 / (1 - 2 * x - 49 * x ^ 2). ● a(n) = 2 * a(n - 1) + 49 * a(n - 2) . ● a(n) = (7 * i) ^ (n - 2) * ChebyshevU(n - 2, - i / 7). - _ G. C. Greubel _ , Jul 12 2021 ●

► [A157058] 2,54,812,8580,70310,472626,2703512,13507416,60110030,241925530,891454124,3037849828,9654482474,28818500830,81289041680,217815522736,556959705302,1364497268946,3214138597460,7302195414780,16045139112002,34183012888134,70764981877592 ⋆ Number of integer sequences of length n + 1 with sum zero and sum of absolute values 18. ● a(n) = T(n,9); T(n,k) = Sum _{ i=1..n } binomial(n + 1,i) * binomial(k - 1,i - 1) * binomial(n - i + k,k). ● a(n) = (48620 / 18!) * n * (n + 1) * (14631321600 + 26760222720 * n + 3845281766 4 * n ^ 2 + 25217041536 * n ^ 3 + 17311651344 * n ^ 4 + 5993468992 * n ^ 5 + 2592460808 * n ^ 6 + 533444296 * n ^ 7 + 163476113 * n ^ 8 + 20735776 * n ^ 9 + 4812092 * n ^ 10 + 370160 * n ^ 11 + 67942 * n ^ 12 + 2912 * n ^ 13 + 436 * n ^ 14 + 8 * n ^ 15 + n ^ 16). - _ G. C. Greubel _ , Jan 24 2022 ●

► [A157262] 2,55,180,377,646,987,1400,1885,2442,3071,3772,4545,5390,6307,7296,8357,9490,10695,11972,13321,14742,16235,17800,19437,21146 ⋆ a(n) = 36 * n ^ 2 - 55 * n + 21. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Jan 27 2012 ●

► [A045819] 2,56,252,688,1514,2664,4396,7056,9828,13720,19264,24336,31502,40880,48780,59584,74592,86688,101308,123088,137844,159016,190764,207648,235986 ⋆ Theta series of E _ 8 lattice with respect to midpoint of edge. ● a(n) = 2 * sigma _ 3(2n + 1). - _ Benoit Cloitre _ , Apr 12 2003 ●

► [A287988] 2,56,396,2040,9130,37944,151172,586608,2235618,8407640,31292844,115494312,423283562,1542120664,5589611460,20170172896,72499928322,259692909048,927342338956,3302291258200,11730149911914,41572470711288,147031327493572,519029653663056 ⋆ Number of (undirected) paths in the n - antiprism graph. ● a(n) = 10 * a(n - 1) - 37 * a(n - 2) + 64 * a(n - 3) - 58 * a(n - 4) + 36 * a(n - 5) - 26 * a(n - 6) + 16 * a(n - 7) - 5 * a(n - 8) + 2 * a(n - 9) - a(n - 10) for n>10. ●

► [A056046] 0,0,0,2,56,790,8380,76482,638736,5043950,38390660,285007162,2079779416,14995363110,107204473740,761823557042,5390550296096,38026057186270,267656481977620,1881017836414122,13204444871932776,92618543463601430,649270263511862300 ⋆ Number of 3 - antichain covers of a labeled n - set. ● a(n) = (1 / 6) * (7 ^ n - 6 * 5 ^ n + 6 * 4 ^ n + 3 * 3 ^ n - 6 * 2 ^ n + 2). ●

► [A041391] 1,2,57,116,3305,6726,191633,389992,11111409,22612810,644270089,1311152988,37356553753,76024260494,2166035847585,4408095955664,125592722606177,255593541168018,7282211875310681,14820017291789380,422242696045413321 ⋆ Denominators of continued fraction convergents to sqrt(210). ● a(n) = 58 * a(n - 2) - a(n - 4) for n>3. - _ Vincenzo Librandi _ , Dec 17 2013 ●

► [A245783] 1,2,57,166,5561,16242,544897,1591526,53394321,155953282,5232098537,15281830086,512692262281,1497463395122,50238609604977,146736130891846,4922871049025441,14378643364005762,482391124194888217,1408960313541672806,47269407300050019801 ⋆ Numbers n such that the hexagonal number H(n) is equal to the sum of the pentagonal numbers P(m) and P(m + 1) for some m. ● a(n) = a(n - 1) + 98 * a(n - 2) - 98 * a(n - 3) - a(n - 4) + a(n - 5). ●

► [A229015] 2,57,332,1145,3002,6635,13040,23515,39698,63605,97668,144773,208298,292151,400808,539351,713506,929681,1195004,1517361,1905434,2368739,2917664,3563507,4318514 ⋆ Number of arrays of median of three adjacent elements of some length 7 0..n array, with no adjacent equal elements in the latter. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. ●

► [A104494] 2,58,66,166,268,270,408,600,672,808,822,970,1050,1090,1150,1200,1212,1380,1578,1752,1912,1950,1986,2016,2038 ⋆ Positive integers n such that n ^ 17 + 1 is semiprime (A001358). ● a(n) ^ 17 + 1 is semiprime (A001358). ●

► [A343578] 2,58,178,362,610,922,1298,1738,2242,2810,3442,4138,4898,5722,6610,7562,8578,9658,10802,12010,13282,14618,16018,17482,19010 ⋆ a(n) = 32 * n ^ 2 - 40 * n + 10. ● a(n) = determinant(matrix[4 * n - 1, - 4 * n + 2, 4 * n - 3, 4 * n - 4]). - _ Peter Luschny _ , Apr 24 2021 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Wesley Ivan Hurt _ , May 02 2021 ●

► [A006333] 0,2,60,660,4290,20020,74256,232560,639540,1586310,3617900,7696260,15438150,29451240,53796160,94607040,160908264,265670730,427156860,670609940,1030350090,1552346268,2297341200,3344614000,4796473500 ⋆ From the enumeration of corners. ● a(n) = (n * (1 + n) ^ 2 * (2 + n) ^ 2 * (3 + n) * (1 + 2 * n) * (3 + 2 * n) * (5 + 2 * n)) / 7560. ●

► [A157059] 2,60,1002,11750,106752,794598,5025692,27717948,135916002,601585512,2432878866,9079799742,31534801116,102644594262,315029394792,916470530808,2538818182782,6724224543708,17088309885542,41800229045610,986982808 79352,225524301678170 ⋆ Number of integer sequences of length n + 1 with sum zero and sum of absolute values 20. ● a(n) = T(n,10); T(n,k) = Sum _{ i=1..n } binomial(n + 1, i) * binomial(k - 1, i - 1) * binomial(n - i + k, k). ● a(n) = (184756 / 20!) * n * (n + 1) * (1316818944000 + 2540101939200 * n + 3742987138560 * n ^ 2 + 2615609097216 * n ^ 3 + 1848671853984 * n ^ 4 + 695217071376 * n ^ 5 + 310567813984 * n ^ 6 + 71342133912 * n ^ 7 + 22639753938 * n ^ 8 + 3337504857 * n ^ 9 + 803922153 * n ^ 10 + 76623228 * n ^ 11 + 14628472 * n ^ 12 + 873558 * n ^ 13 + 136302 * n ^ 14 + 4644 * n ^ 15 + 606 * n ^ 16 + 9 * n ^ 17 + n ^ 18). ● a(n) = (n + 1) * binomial(n + 9, 10) * Hypergeometric3F2([- 9, - n, 1 - n], [2, - n - 9], 1). (End) ●

► [A041449] 1,2,61,124,3781,7686,234361,476408,14526601,29529610,900414901,1830359412,55811197261,113452753934,3459393815281,7032240384496,214426605350161,435885451084818,13290990137894701,27017865726874220,823826961944121301,1674671789615116822 ⋆ Denominators of continued fraction convergents to sqrt(240). ● a(n) = 62 * a(n - 2) - a(n - 4) for n>3. - _ Vincenzo Librandi _ , Dec 18 2013 ●

► [A172230] 0,2,61,405,1502,4072,9091,17791,31660,52442,82137,123001,177546,248540,339007,452227,591736,761326,965045,1207197,1492342,1825296,2211131,2655175,3163012 ⋆ Number of ways to place 4 nonattacking wazirs on a 4 X n board. ● a(n) = (64 * n ^ 4 - 432 * n ^ 3 + 1235 * n ^ 2 - 1797 * n + 1122) / 6, n>=3. ●

► [A296361] 2,62,116,200,318,476,682,946,1272,1674,2152,2724,3394,4176,5078,6110,7284,8614,10108,11784,13646,15716,18002,20522,23288 ⋆ Number of monohedral disk tilings of type C ^ t _{ 3,n } . ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - 2 * a(n - 3) + 3 * a(n - 4) - 3 * a(n - 6) + 2 * a(n - 7) + 2 * a(n - 8) - 3 * a(n - 9) + a(n - 10) for n>11. ●

► [A047707] 0,0,0,2,64,1090,14000,153762,1533504,14356610,128722000,1119607522,9528462944,79817940930,660876543600,5424917141282,44246078560384,359144709794050,2904688464582800,23429048035827042,188593339362097824 ⋆ Number of monotone Boolean functions of n variables with 3 mincuts. Also Sperner systems with 3 blocks. ● a(n) = (2 ^ n) * (2 ^ n - 1) * (2 ^ n - 2) / 6 - (6 ^ n - 5 ^ n - 4 ^ n + 3 ^ n). ● a(n) = Binomial(2 ^ n,3) - (6 ^ n - 5 ^ n - 4 ^ n + 3 ^ n). - _ Ross La Haye _ , Jan 26 2016 ●

► [A041511] 1,2,65,132,4289,8710,283009,574728,18674305,37923338,1232221121,2502365580,81307919681,165118204942,5365090477825,10895299160592,354014663616769,718924626394130,23359602708228929,47438130042851988,1541379764079492545,3130197658201837078 ⋆ Denominators of continued fraction convergents to sqrt(272). ● a(n) = 66 * a(n - 2) - a(n - 4) for n>3. - _ Vincenzo Librandi _ , Dec 19 2013 ●

► [A294273] 0,2,65,858,4890,21244,67171,188916,446964,994030,1978405,3796622,6735950,11680408,19092295,30745064,47260136,71929146,105409929,153455810,216455810,303993492,415601835,566623708,754740700 ⋆ Sum of the sixth powers of the parts in the partitions of n into two parts. ● a(n) = Sum _{ i=1..floor(n / 2) } i ^ 6 + (n - i) ^ 6. ● a(n) = (n / 42 - n ^ 3 / 6 + n ^ 5 / 2 + 1 / 128 * (- 63 + (- 1) ^ n) * n ^ 6 + n ^ 7 / 7). ● a(n) = a(n - 1) + 7 * a(n - 2) - 7 * a(n - 3) - 21 * a(n - 4) + 21 * a(n - 5) + 35 * a(n - 6) - 35 * a(n - 7) - 35 * a(n - 8) + 35 * a(n - 9) + 21 * a(n - 10) - 21 * a(n - 11) - 7 * a(n - 12) + 7 * a(n - 13) + a(n - 14) - a(n - 15) for n>15. ●

► [A131472] 0,2,66,732,4100,15630,46662,117656,262152,531450,1000010,1771572,2985996,4826822,7529550,11390640,16777232,24137586,34012242,47045900,64000020,85766142,113379926,148035912,191103000 ⋆ a(n) = n ^ 6 + n. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7); a(0)=0, a(1)=2, a(2)=66, a(3)=732, a(4)=4100, a(5)=15630, a(6)=46662. - _ Harvey P. Dale _ , May 03 2012 ●

► [A098532] 0,1,2,66,795,16420,278564,5105373,90871494,1635675910,29316316535,526297607496,9442398055752,169448124595321,3040546683808010,54560921044808010,979052407236876819,17568407254504944748 ⋆ Sum of sixth powers of first n Fibonacci numbers. ● a(n)= (F(n) ^ 5 * F(n + 3) + F(2 * n)) / 4. - _ Gary Detlefs _ , Jan 05 2013 ●

► [A157060] 2,66,1212,15620,155850,1272810,8823080,53265960,285510150,1379301990,6078578508,24680519604,93093230958,328512273390,1091144804400,3429182092560,10244035242630,29206656395910,79759293448100 ⋆ Number of integer sequences of length n + 1 with sum zero and sum of absolute values 22. ● a(n) = T(n,11); T(n,k) = Sum _{ i=1..n } binomial(n + 1, i) * binomial(k - 1, i - 1) * binomial(n - i + k, k). ● a(n) = (n + 1) * binomial(n + 10, 11) * Hypergeometric3F2([- 10, - n, 1 - n], [2, - n - 10], 1). ● a(n) = (705432 / 22!) * n * (n + 1) * (144850083840000 + 292579402752000 * n + 440986525516800 * n ^ 2 + 325146872079360 * n ^ 3 + 235868591146176 * n ^ 4 + 94960596391200 * n ^ 5 + 43658519177360 * n ^ 6 + 10953312870160 * n ^ 7 + 3585704220196 * n ^ 8 + 593523073650 * n ^ 9 + 147783744195 * n ^ 10 + 16467776610 * n ^ 11 + 3255909581 * n ^ 12 + 242376100 * n ^ 13 + 39230830 * n ^ 14 + 1873860 * n ^ 15 + 254046 * n ^ 16 + 7050 * n ^ 17 + 815 * n ^ 18 + 10 * n ^ 19 + n ^ 20). ●

► [A160958] 1,2,67,260,4741,25862,350407,2330120,26735881,200269322,2084899147,16786765580,164922177421,1387410586382,13164918350287,113736703642641056863263353361,927913885619342,8514066330647827,75486707454747530 ⋆ a(n) = (9 ^ n - (- 7) ^ n) / (9 - (- 7)). ● a(n) = 2a(n - 1) + 63a(n - 2), a(1)=1 a(2)=2. ●

► [A089661] 0,2,67,764,5492,30304,140672,577920,2167680,7577088,25037056,79016960,240028672,705961984,2019713024,5641535488,15431565312,41438281728,109462880256,284942925824,732004876288,1858158460928,4665915736064,11600782163968,28582042664960 ⋆ a(n) = S1(n,4), where S1(n,t) = Sum _{ k=0..n } k ^ t * Sum _{ j=0..k } binomial(n,j). ● a(n) = (1 / 15) * n * (n + 1) * (93 * n ^ 3 + 132 * n ^ 2 + 53 * n - 38) * 2 ^ (n - 5). (See Wang and Zhang, p. 334) ● a(n) = 12 * a(n - 1) - 60 * a(n - 2) + 160 * a(n - 3) - 240 * a(n - 4) + 192 * a(n - 5) - 64 * a(n - 6) for n > 5. ● a(n) = 2 ^ (n - 5) * n * (93 * n ^ 4 + 225 * n ^ 3 + 185 * n ^ 2 + 15 * n - 38) / 15. - _ Ilya Gutkovskiy _ , Jun 21 2016 ●

► [A251793] 0,2,68,286,6760,28122,662508,2755766,64919120,270037042,6361411348,26460874446,623353393080,2592895658762,61082271110588,254077313684326,5985439215444640,24896983845405282,586511960842464228,2439650339536033406 ⋆ Numbers n such that the sum of the triangular numbers T(n) and T(n + 1) is equal to the sum of the octagonal numbers N(m) and N(m + 1) for some m . ● a(n) = a(n - 1) + 98 * a(n - 2) - 98 * a(n - 3) - a(n - 4) + a(n - 5). ●

► [A041577] 1,2,69,140,4829,9798,337961,685720,23652441,47990602,1655332909,3358656420,115849651189,235057958798,8107820250321,16450698459440,567431567871281,1151313834202002,39712101930739349,80575517695680700,27792797

03583883149 ⋆ Denominators of continued fraction convergents to sqrt(306). ● a(n) = 70 * a(n - 2) - a(n - 4) for n>3. - _ Vincenzo Librandi _ , Dec 20 2013 ●
▶ [A321244] 0,2,69,1572,19865,153480,830802,3476144,12003462,35757630,94780235,228579252,509929719,1065625652,2106541920,3969848640,7176749852,12509692794,21113614017,34626453860,55344881445,86431928352,132174030494,198295824432,292341936450 ⋆ Non - isomorphic proper colorings of the 3 X 3 grid graph using at most n colors under rotational and reflectional symmetries. ● a(n) = (1 / 8) * n ^ 9 - (3 / 2) * n ^ 8 + (33 / 4) * n ^ 7 - (53 / 2) * n ^ 6 + (217 / 4) * n ^ 5 - (291 / 4) * n ^ 4 + (507 / 8) * n ^ 3 - (133 / 4) * n ^ 2 + 8 * n. ● a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10) for n>10. ●
▶ [A259317] 0,2,70,588,2772,9438,26026,61880,131784,257754,471086,814660,1345500,2137590,3284946,4904944,7141904,10170930,14202006,19484348,26311012,35023758,46018170,59749032,76735960 ⋆ a(n) = 2 * (2 * n + 1) * A000538(n) - 4 * A000330(n) ^ 2. ● a(n) = (n * (1 + 2 * n) ^ 2 * (- 3 + n + 8 * n ^ 2 + 4 * n ^ 3)) / 45. - _ Colin Barker _ , Jun 28 2015 ●
▶ [A157368] 2,71,238,503,866,1327,1886,2543,3298,4151,5102,6151,7298,8543,9886,11327,12866,14503,16238,18071,20002,22031,24158,26383,28706 ⋆ a(n) = 49 * n ^ 2 - 78 * n + 31. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●
▶ [A053318] 2,72,272,2272,22272,222272,2222272,27222272,727222272,2727222272,72727222272,772727222272,7772727222272,77777272722272,277777272722272,2277777272722272,72277777272722272,722777772727222272,272277772727222272 ⋆ a(n) contains n digits (either '2' or '7') and is divisible by 2 ^ n. ● a(n) = a(n - 1) + 10 ^ (n - 1) * (2 + 5 * (a(n - 1) / 2 ^ (n - 1) mod 2)), i.e., a(n) ends with a(n - 1); if a(n - 1) is divisible by 2 ^ n then a(n) begins with a 2, if not then a(n) begins with a 7. ●
▶ [A163274] 0,2,72,648,3200,11250,31752,76832,165888,328050,605000,1054152,1752192,2798978,4321800,6480000,9469952,13530402,18948168,26064200,35280000,47064402,61960712,80594208,103680000 ⋆ a(n) = n ^ 4 * (n + 1) ^ 2 / 2. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). ●
▶ [A157061] 2,72,1442,20260,220250,1958460,14768810,96900810,563873400,2953859370,14097919968,61908797418,252208679268,959882556570,3433533723900,11603837100660,37221177046410,113779617228060,332648955112250,933146517188760,2518877938240202 ⋆ Number of integer sequences of length n + 1 with sum zero and sum of absolute values 24. ● a(n) = T(n,12); T(n,k) = Sum _{ i=1..n } binomial(n + 1, i) * binomial(k - 1, i - 1) * binomial(n - i + k, k). ● a(n) = (n + 1) * binomial(n + 11, 12) * Hypergeometric3F2([- 11, - n, 1 - n], [2, - n - 11], 1). ● a(n) = (2704156 / 24!) * n * (n + 1) * (19120211066880000 + 40213832085504000 * n + 61866024285081600 * n ^ 2 + 47770238895160320 * n ^ 3 + 35477403021764352 * n ^ 4 + 15129353226246336 * n ^ 5 + 7138320279252096 * n ^ 6 + 1926081009812080 * n ^ 7 + 648411230685152 * n ^ 8 + 11778779214 3956 * n ^ 9 + 30215435337736 * n ^ 10 + 3799367698665 * n ^ 11 + 77517712 8207 * n ^ 12 + 67808650591 * n ^ 13 + 11342892341 * n ^ 14 + 678888650 * n ^ 15 + 95251222 * n ^ 16 + 3725106 * n ^ 17 + 446226 * n ^ 18 + 10285 * n ^ 19 + 1067 * n ^ 20 + 11 * n ^ 21 + n ^ 22). ●
▶ [A041647] 1,2,73,148,5401,10950,399601,810152,29565073,59940298,2187415801,4434771900,161839204201,328113180302,11973913695073,24275940570448,885907774231201,1796091489032850,65545201379413801,132886494247860452,4849458994302390073 ⋆ Denominators of continued fraction convergents to sqrt(342). ● a(n) = 74 * a(n - 2) - a(n - 4) for n>3. - _ Vincenzo Librandi _ , Dec 22 2013 ●
▶ [A041721] 1,2,77,156,6005,12166,468313,948792,36522409,73993610,2848279589,5770552788,222129285533,450029123854,17323235991985,35096501107824,1350990278089297,2737077057286418,105359918454973181,213456913967232780,8216722649209818821 ⋆ Denominators of continued fraction convergents to sqrt(380). ● a(n) = 78 * a(n - 2) - a(n - 4) for n>3. - _ Vincenzo Librandi _ , Dec 23 2013 ●
▶ [A338588] 2,77,334,881,1826,3277,5342,8129,11746,16301,21902,28657,36674,46061,56926,69377,83522,99469,117326,137201,159202,183437,210014,239041,270626 ⋆ a(n) / A002939(n + 1) is the Kirchhoff index of the disjoint union of two complete graphs each on n and n + 1 vertices with the empty graph on n + 1 vertices. ● a(n) = 18 * n ^ 3 + 37 * n ^ 2 + 20 * n + 2. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Wesley Ivan Hurt _ , Nov 08 2020 ●
▶ [A157062] 2,78,1692,25740,302850,2912910,23744840,168278760,1056789450,5968878630,30684132468,144977296932,634756203018,2593322651430,9946019437200,35995371261360,123490242018990,403237594259010,1257743358034100,3759426449644740,10799525727846702 ⋆ Number of integer sequences of length n + 1 with sum zero and sum of absolute values 26. ● a(n) = T(n,13); T(n,k) = Sum _{ i=1..n } binomial(n + 1, i) * binomial(k - 1, i - 1) * binomial(n - i + k, k). ● a(n) = (n + 1) * binomial(n + 12, 13) * Hypergeometric3F2([- 12, - n, 1 - n], [2, - n - 12], 1). ● a(n) = (10400600 / 26!) * n * (n + 1) * (2982752926433280000 + 6502800338141184000 * n + 10192999816651161600 * n ^ 2 + 8194549559065989120 * n ^ 3 + 6217354001317404672 * n ^ 4 + 2785907939555600640 * n ^ 5 + 1345736958526293696 * n ^ 6 + 386128480881709632 * n ^ 7 + 133329525393692848 * n ^ 8 + 26155830342678960 * n ^ 9 + 6893260441243396 * n ^ 10 + 955286585044572 * n ^ 11 + 200534847420673 * n ^ 12 + 19880275030680 * n ^ 13 + 3426180791086 * n ^ 14 + 242021337492 * n ^ 15 + 35027635423 * n ^ 16 + 1724131200 * n ^ 17 + 213288856 * n ^ 18 + 6959172 * n ^ 19 + 746383 * n ^ 20 + 14520 * n ^ 21 + 1366 * n ^ 22 + 12 * n ^ 23 + n ^ 24). ●
▶ [A195000] 2,80,248,458,672,888,1104,1320,1536,1752,1968,2184,2400,2616,2832,3048,3264,3480,3696,3912,4128,4344,4560,4776,4992 ⋆ Number of lower triangles of a 4 X 4 0..n array with each element differing from all of its horizontal and vertical neighbors by one. ● a(n) = 24 * (9 * n - 17) for n>4. ● a(n) = 2 * a(n - 1) - a(n - 2) for n>6. ●
▶ [A041799] 1,2,81,164,6641,13446,544481,1102408,44640801,90384010,3660001201,7410386412,300075457681,607561301774,24602527528641,49812616359056,2017107181890881,4084026980140818,165378186387523601,334840399755188020,13558994176595044401 ⋆ Denominators of continued fraction convergents to sqrt(420). ● a(n) = 82 * a(n - 2) - a(n - 4) for n>3. - _ Vincenzo Librandi _ , Dec 24 2013 ●
▶ [A187858] 0,2,81,254,578,1030,1610,2318,3154,4118,5210,6430,7778,9254,10858,12590,14450,16438,18554,20798,23170,25670,28298,31054,33938 ⋆ Number of 3 - step one space for components leftwards or up, two space for components rightwards or down asymmetric quasi - queen's tours (antidiagonal moves become knight moves) on an n X n board summed over all starting positions. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>6. ●
▶ [A061994] 0,0,0,0,2,82,982,7002,34568,131248,412596,1123832,2739386,6106214,12654614,24675650,45704724,80999104,138170148,227938788,365106738,569681574,868289594,1295775946,1897176508 ⋆ Number of ways to place 4 nonattacking queens on an n X n board. ● a(n) = n ^ 8 / 24 - 5n ^ 7 / 6 + 65n ^ 6 / 9 - 1051n ^ 5 / 30 + 817n ^ 4 / 8 - 19103n ^ 3 / 108 + 3989n ^ 2 / 24 - 18131n / 270 + 253 / 54 + (n ^ 3 / 4 - 21n ^ 2 / 8 + 7n - 7 / 2) * (- 1) ^ n + 32 * (n - 1) / 27 * cos(2 * Pi * n / 3) + 40 / 81 * sqrt(3) * sin(2 * Pi * n / 3). - _ Vaclav Kotesovec _ , Feb 11 2010 ●
▶ [A140157] 1,2,83,84,709,710,3111,3112,9673,9674,24315,24316,52877,52878,103503,103504,187025,187026,317347,317348,511829,511830,791671,791672,1182297 ⋆ a(1)=1, a(n) = a(n - 1) + n ^ 4 if n odd, a(n) = a(n - 1) + n ^ 0 if n is even. ● a(n) = a(n - 1) + ((1 - (- 1) ^ n) / 2) * n ^ 4 + ((1 + (- 1) ^ n) / 2), with a(1)=1. ● a(n) = - 1 / 4 + (1 / 4) * (- 1) ^ n * n + (1 / 4) * (- 1) ^ n - (1 / 2) * (- 1) ^ n * n ^ 3 + (1 / 6) * n ^ 3 + (29 / 60) * n + (1 / 10) * n ^ 5 - (1 / 4) * (- 1) ^ n * n ^ 4 + (1 / 4) * n ^ 4, with n >= 1. (End) ●
▶ [A157063] 2,84,1962,32130,406800,4208610,36881420,280819260,1893408750,11472968760,63221641758,319917948246,1498750896708,6545498596110,26808012135000,103501142484360,378407481456870,1315394383751460,4363052456797550,13853429338548630 ⋆ Number of integer sequences of length n + 1 with sum zero and sum of absolute values 28. ● a(n) = T(n,14); T(n,k) = Sum _{ i=1..n } binomial(n + 1, i) * binomial(k - 1, i - 1) * binomial(n - i + k, k). ● a(n) = (n + 1) * binomial(n + 13, 14) * Hypergeometric3F2([- 13, - n, 1 - n], [2, - n - 13], 1). ● a(n) = (40116600 / 28!) * n * (n + 1) * (542861032610856960000 + 1222285449585328128000 * n + 1949147924290921267200 * n ^ 2 + 1623917017366475120640 * n ^ 3 + 1256475121883342659584 * n ^ 4 + 587860847016245577216 * n ^ 5 + 290144191606881266304 * n ^ 6 + 87769963981312971072 * n ^ 7 + 30175093125223268880 * n ^ 8 + 6493644952485577744 * n ^ 9 + 1754084550497496360 * n ^ 10 + 263474544214276252 * n ^ 11 + 56764614862429890 * n ^ 12 + 6225163072052509 * n ^ 13 + 1102423601827845 * n ^ 14 + 88588233707662 * n ^ 15 + 13189509162960 * n ^ 16 + 769151138899 * n ^ 17 + 97984044015 * n ^ 18 + 4039324432 * n ^ 19 + 446558970 * n ^ 20 + 12345619 * n ^ 21 + 1198275 * n ^ 22 + 19942 * n ^ 23 + 1716 * n ^ 24 + 13 * n ^ 25 + n ^ 26). ●
▶ [A041881] 1,2,85,172,7309,14790,628489,1271768,54042745,109357258,4647047581,9403452420,399592049221,808587550862,34360269185425,69529125921712,2954583557897329,5978696241716370,254059825709984869,514098347661686108,21846190427500801405 ⋆ Denominators of continued fraction convergents to sqrt(462). ● a(n) = 86 * a(n - 2) - a(n - 4) for n>3. - _ Vincenzo Librandi _ , Dec 26 2013 ●
▶ [A249305] 2,89,149,151,383,409,443 ⋆ Primes p such that 2 ^ p - p ^ 2 is not squarefree. ● a(n) < (21 + e)n log n for any e > 0 and all large enough n. - _ Charles R Greathouse IV _ , Oct 28 2014 ●
▶ [A041967] 1,2,89,180,8009,16198,720721,1457640,64856881,131171402,5836398569,11803968540,525211014329,1062225997198,47263154891041,95588535779280,4253158729179361,8601905994138002,382737022471251449,774075950936640900,34442078863683451049 ⋆ Denominators of continued fraction convergents to sqrt(506). ● a(n) = 90 * a(n - 2) - a(n - 4) for n>3. - _ Vincenzo Librandi _ , Dec 28 2013 ●
▶ [A157064] 2,90,2252,39500,535502,5930022,55599992,452715672,3262336002,21114177018,124188986196,670283877588,3346707628446,15564971674518,67830161708592,278406848295312,1081149205136382,3988232552194662,14025412751733092,47171740235162340 ⋆ Number of integer sequences of length n + 1 with sum zero and sum of absolute values 30. ● a(n) = T(n,15); T(n,k) = Sum _{ i=1..n } binomial(n + 1, i) * binomial(k - 1, i - 1) * binomial(n - i + k, k). ● a(n) = (n + 1) * binomial(n + 14, 15) * Hypergeometric3F2([- 14, - n, 1 - n], [2, - n - 14], 1). ● a(n) = (155117520 / 30!) * n * (n + 1) * (1140008168482799616000000 + 2642799988694709043200000 * n + 4281982068774842449920000 * n ^ 2 + 3683106445870326730752000 * n ^ 3 + 2901676787802900065894400 * n ^ 4 + 1410414295797783684495360 * n ^ 5 + 710046680645720922416640 * n ^ 6 + 224937111185720616533760 * n ^ 7 + 81203706069562644771840 * n ^ 8 + 17979105703972839025600 * n ^ 9 + 4967799392042802286400 * n ^ 10 + 798868379919629619600 * n ^ 11 + 176267718348219170400 * n ^ 12 + 21019888553205045350 * n ^ 13 + 3816510173270649750 * n ^ 14 + 340374959041988500 * n ^ 15 + 52010440316643750 * n ^ 16 + 3461748674504230 * n ^ 17 + 453034254895950 * n ^ 18 + 22200347469300 * n ^ 19 + 2523512941950 * n ^ 20 + 88444055700 * n ^ 21 + 8833810050 * n ^ 22 + 209636700 * n ^ 23 + 18577650 * n ^ 24 + 267540 * n ^ 25 + 21210 * n ^ 26 + 140 * n ^ 27 + n ^ 28). ●
▶ [A053313] 2,92,992,2992,92992,292992,2292992,22292992,222292992,2222292992,22222292992,922222292992,9922222292992,29922222292992,929922222292992,9929922222292992,99929922222292992,999929922222292992 ⋆ a(n) contains n digits (either '2' or '9') and is divisible by 2 ^ n. ● a(n)=a(n - 1) + 10 ^ (n - 1) * (2 + 7 * [a(n - 1) / 2 ^ (n - 1) mod 2]) i.e. a(n) ends with a(n - 1); if (n - 1) - th term is divisible by 2 ^ n then n - th term begins with a 2, if not then n - th term begins with a 7. ●
▶ [A042057] 1,2,93,188,8741,17670,821561,1660792,77217993,156096778,7257669781,14671436340,682143741421,1378958919182,64114254023793,129607466966768,6026057734495121,12181722935957010,566385312788517581,1144952348512992172 ⋆ Denominators of continued fraction convergents to sqrt(552). ● a(n) = 94 * a(n - 2) - a(n - 4). - _ Wesley Ivan Hurt _ , Sep 05 2022 ●
▶ [A069121] 0,2,96,1620,17920,157500,1197504,8240232,52715520,318995820,1847560000,10328229912,56073378816,297051536600,1541119305600,7852824450000,39392404439040,194905125100620,952671403252800 ⋆ a(n) = n ^ 4 * binomial

(2n,n). ● a(n) = a(n - 1) * (4 * n - 2) * n ^ 3 / (n - 1) ^ 4, n>1. - _ Michael Somos _ , Apr 18 2003 ●

► [A157065] 2,96,2562,47920,692610,8174544,81659522,708113304,5431848930,37403270520,233931828834,1341750437352,7114703302434,35117045235720,162298598439330,705951252118284,2903050518427962,11331495633292524,42132555868774010,149703679118108220 ★ Number of integer sequences of length n + 1 with sum zero and sum of absolute values 32. ● a(n) = T(n,16); T(n,k) = Sum _{ i=1..n } binomial(n + 1, i) * binomial(k - 1, i - 1) * binomial(n - i + k, k). ● a(n) = (n + 1) * binomial(n + 15, 16) * Hypergeometric3F2([- 15, - n, 1 - n], [2, - n - 15], 1). ● a(n) = (601080390 / 32!) * n * (n + 1) * (2736019604358719078400000 + 6513721198139721646080000 * n + 10711005044935603322880000 * n ^ 2 + 9481752780405010521292800 0 * n ^ 3 + 7596141142753960859566080 0 * n ^ 4 + 3820245828085115852673024 0 * n ^ 5 + 1958795088755404603978137 6 * n ^ 6 + 646356068942587618043520 0 * n ^ 7 + 237979299163122855321984 0 * n ^ 8 + 55330409599969210377216 0 * n ^ 9 + 15611412514234006179174 4 * n ^ 10 + 2662454020613531430000 0 * n ^ 11 + 600539458743294770960 0 * n ^ 12 + 76887890229153963960 0 * n ^ 13 + 14285483764459823664 0 * n ^ 14 + 13893755540913698625 * n ^ 15 + 2174500936993696575 * n ^ 16 + 161097628663020825 * n ^ 17 + 21612664028370855 * n ^ 18 + 1212359721607125 * n ^ 19 + 141388292047275 * n ^ 20 + 5907926749725 * n ^ 21 + 605873224515 * n ^ 22 + 18281995875 * n ^ 23 + 1664663325 * n ^ 24 + 34287435 * n ^ 25 + 2794869 * n ^ 26 + 35175 * n ^ 27 + 2585 * n ^ 28 + 15 * n ^ 29 + n ^ 30). ●

► [A042151] 1,2,97,196,9505,19206,931393,1881992,91267009,184416010,8943235489,18070886988,876345810913,1770762508814,85872946233985,173516654976784,8414672385119617,17002861425216018,824552020795488481,1666106903016192980,80797683365572751521 ★ Denominators of continued fraction convergents to sqrt(600). ● a(n) = 98 * a(n - 2) - a(n - 4) for n>3. - _ Vincenzo Librandi _ , Jan 15 2014 ●

► [A212838] 2,99,634,2309,6306,14407,29114,53769,92674,151211,235962,354829,517154,733839,1017466,1382417,1844994,2423539,3138554,4012821,5071522,6342359,7855674,9644569,11745026 ★ Number of 0..n arrays of length 5 with 0 never adjacent to n. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. ●

► [A278684] 0,0,2,99,2102,19987,124676,571418,2122841,6704061,18711691,47235845,109938296,238950999,490309398,957267228,1790325363,3224010105,5615368229,9493358359,15627413290,25112609019,39484650296,60859027054,92114682749 ★ Number of non - equivalent ways to place 5 non - attacking ferses on an n X n board. ● a(n) = (n ^ 10 - 50 * n ^ 8 + 80 * n ^ 7 + 955 * n ^ 6 - 2828 * n ^ 5 - 7090 * n ^ 4 + 36860 * n ^ 3 - 10856 * n ^ 2 - 133712 * n + 161280 + ((1 - (- 1) ^ n) / 2) * (52 * n ^ 5 - 145 * n ^ 4 - 580 * n ^ 3 + 2320 * n ^ 2 - 1152 * n - 15)) / 960 for n >= 4. ● a(n) = 5 * a(n - 1) - 4 * a(n - 2) - 20 * a(n - 3) + 40 * a(n - 4) + 16 * a(n - 5) - 100 * a(n - 6) + 44 * a(n - 7) + 110 * a(n - 8) - 110 * a(n - 9) - 44 * a(n - 10) + 100 * a(n - 11) - 16 * a(n - 12) - 40 * a(n - 13) + 20 * a(n - 14) + 4 * a(n - 15) - 5 * a(n - 16) + a(n - 17) for n >= 21. ●

► [A042249] 1,2,101,204,10301,20806,1050601,2122008,107151001,216424010,10928351501,22073127012,1114584702101,2251242531214,113676711262801,229604665056816,11593909964103601,23417424593264018,1182465139627304501,2388347703847873020 ★ Denominators of continued fraction convergents to sqrt(650). ● a(n) = 102 * a(n - 2) - a(n - 4) for n>3. - _ Vincenzo Librandi _ , Jan 18 2014 ●

► [A125819] 0,1,2,101,396,10589,59590,1146313,8072856,127338073,1037743178,14427279437,129515647140,1658477399669,15879972571918,192632252911729,1925621845299504,22536572223036721,231858463440125330,2649764432514812597,27789799818721782204 ★ a(n) = ((1 + 7 * sqrt(2)) ^ n - (1 - 7 * sqrt(2)) ^ n) / (14 * sqrt(2)). ● a(0)=0, a(1)=1, a(n) = 2 * a(n - 1) + 97 * a(n - 2) for n>=2. ● a(n) = - (- 97) ^ n * a(- n) for all n in Z. - _ Michael Somos _ , Aug 17 2018 ●

► [A157066] 2,102,2892,57460,882030,11053434,117206264,1078467624,8774904690,64062783510,424600608564,2579499722124,14479567043214,75613799423610,369504358622640,1698353774374704,7375213677918294,30379740299612514,119122913376492980,446056017133748 60 ★ Number of integer sequences of length n + 1 with sum zero and sum of absolute values 34. ● a(n) = T(n,17); T(n,k) = Sum _{ i=1..n } binomial(n + 1, i) * binomial(k - 1, i - 1) * binomial(n - i + k, k). ● a(n) = (n + 1) * binomial(n + 16, 17) * Hypergeometric3F2([- 16, - n, 1 - n], [2, - n - 16], 1). ● a(n) = (2333606220 / 34!) * n * (n + 1) * (7441973323855715893248000000 + 18155084795637437929881600000 * n + 30268626521952180908851200000 * n ^ 2 + 27504128369891325149577216000 * n ^ 3 + 22380511931408981359868313600 * n ^ 4 + 11606451235232148856801198080 * n ^ 5 + 6053325843616709826370609152 * n ^ 6 + 2071495721724703057714876416 * n ^ 7 + 776772176331488107582976256 * n ^ 8 + 188575401978015909077544960 * n ^ 9 + 54249004662342491124700928 * n ^ 10 + 9739700938346246478267904 * n ^ 11 + 2242198636428402181902944 * n ^ 12 + 305221374822225945324800 * n ^ 13 + 57932851765719841948880 * n ^ 14 + 6064778909442097812240 * n ^ 15 + 970512936702416581665 * n ^ 16 + 786105699882408096 00 * n ^ 17 + 10791805239981923160 * n ^ 18 + 675564468731071680 * n ^ 19 + 80680394732550780 * n ^ 20 + 3869168748681600 * n ^ 21 + 406620563860680 * n ^ 22 + 14666674470240 * n ^ 23 + 1369455578790 * n ^ 24 + 35960795520 * n ^ 25 + 3007754088 * n ^ 26 + 54285504 * n ^ 27 + 4095964 * n ^ 28 + 45440 * n ^ 29 + 3112 * n ^ 30 + 16 * n ^ 31 + n ^ 32). ●

► [A042351] 1,2,105,212,11129,22470,1179569,2381608,125023185,252427978,13251278041,26754984060,1404510449161,2835775882382,148864856333025,300565488548432,15778270260851489,31857106010251410,1672347782793924809,3376552671598101028 ★ Denominators of continued fraction convergents to sqrt(702). ● a(n) = 106 * a(n - 2) - a(n - 4) for n>3. - _ Vincenzo Librandi _ , Jan 20 2014 ●

► [A229016] 2,105,830,3527,10860,27379,60180,119653,220318,381749,629586,996635,1524056,2262639,3274168,4632873,6426970,8760289,11753990,15548367,20304740,26207435,33465852,42316621,53025846 ★ Number of arrays of median of three adjacent elements of some length 8 0..n array, with no adjacent equal elements in the latter. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

► [A157067] 2,108,3242,68190,1107920,14692734,164826956,1604095524,13799638910,106481351240,745616925614,4783532975546,28342922553764,156153427053890,804648531335960,3897769097766104,17828728267167326,77310179609631564,318931533062574470 ★ Number of integer sequences of length n + 1 with sum zero and sum of absolute values 36. ● a(n) = T(n,18); T(n,k) = Sum _{ i=1..n } binomial(n + 1, i) * binomial(k - 1, i - 1) * binomial(n - i + k, k). ● a(n) = (n + 1) * binomial(n + 17, 18) * Hypergeometric3F2([- 17, - n, 1 - n], [2, - n - 17], 1). ● a(n) = (9075135300 / 36!) * n * (n + 1) * (227724383709984906333388800000 + 568196949397060317672898560000 0 * n + 959643321536269695673958400000 * n ^ 2 + 893082993205993257122109849600 0 * n ^ 3 + 737377958819114432972094504960 0 * n ^ 4 + 393204278081499023329892794368 0 * n ^ 5 + 208361434231300867651696279552 * n ^ 6 + 73678423018924320270905253888 0 * n ^ 7 + 28103253479209672578562911897 6 * n ^ 8 + 7090920000290816600663935411 2 * n ^ 9 + 2077132483861257675513726950 4 * n ^ 10 + 390258156639377371469894400 * n ^ 11 + 91567640429966599539582406 4 * n ^ 12 + 13151511751488397636173884 8 * n ^ 13 + 2546363602353874083410662 4 * n ^ 14 + 284068082630651924367640 0 * n ^ 15 + 46407583076661707655869 0 * n ^ 16 + 4055355434034276962590 5 * n ^ 17 + 568779559992521964142 5 * n ^ 18 + 3901834165114006278 00 * n ^ 19 + 476401664653017520 80 * n ^ 20 + 25555323475499328 60 * n ^ 21 + 2747513247501876 60 * n ^ 22 + 11400551973525000 * n ^ 23 + 1089674111434740 * n ^ 24 + 34284748268550 * n ^ 25 + 2937122649078 * n ^ 26 + 67743183720 * n ^ 27 + 5238258144 * n ^ 28 + 83536028 * n ^ 29 + 5866156 * n ^ 30 + 57800 * n ^ 31 + 3706 * n ^ 32 + 17 * n ^ 33 + n ^ 34). ●

► [A006334] 0,2,110,2002,20020,136136,705432,2984520,10786908,34370050,98768670,260390130,638110200,1468635168,3200871520,6650874912,13248113736,25415833170,47143878782,84832157410,148507792972,253549890440,423093671000,691331713800,1107985378500 ★ From the enumeration of corners. ● a(n) = (n * (1 + n) ^ 2 * (2 + n) ^ 2 * (3 + n) ^ 2 * (4 + n) * (1 + 2 * n) * (3 + 2 * n) * (5 + 2 * n) * (7 + 2 * n)) / 1360800. ●

► [A173214] 0,0,0,0,2,112,1754,13074,63400,234014,712248,1882132,4457246,9679760,19584514,37367934,67849336,118085614,198107620,321870956,508359070,782972820,1179105738,1740089734,2521359260 ★ Number of ways to place 4 nonattacking amazons (superqueens) on an n X n board. ● a(n) = n ^ 8 / 24 - 5n ^ 7 / 6 + 47n ^ 6 / 9 + 43n ^ 5 / 10 - 5053n ^ 4 / 24 + 112585n ^ 3 / 108 - 15433n ^ 2 / 8 + 55669n / 270 + 119917 / 54 + (n ^ 3 / 4 - 21n ^ 2 / 8 + 7n - 3 / 2) * (- 1) ^ n + 32 / 27 * (n - 1) * cos(2 * Pi * n / 3) + 40 * sqrt(3) * sin(2 * Pi * n / 3) / 81, n>=6. ●

► [A140986] 0,0,2,114,2652,29660,198030,932862,3440024,10599192,28478970,68716010,152040372,313269684,608134982,1122341430,1983307440,3375066032,5556852594,8885943522,13845350540,21077015820,31421193342,45962742254,66085098312 ★ Number of n - colorings of the cubical graph. ● a(n) = n ^ 8 - 12 * n ^ 7 + 66 * n ^ 6 - 214 * n ^ 5 + 441 * n ^ 4 - 572 * n ^ 3 + 423 * n ^ 2 - 133 * n. ●

► [A157068] 2,114,3612,80180,1374690,19234194,227605448,2335932504,21186110970,172295622730,1271112537684,8588601364668,53573492643034,310601807143530,1683493452034320,8573748834211984,41210997268585158,187693442844729174,812839595630249540 ★ Number of integer sequences of length n + 1 with sum zero and sum of absolute values 38. ● a(n) = T(n,19); T(n,k) = Sum _{ i=1..n } binomial(n + 1, i) * binomial(k - 1, i - 1) * binomial(n - i + k, k). ● a(n) = (n + 1) * binomial(n + 18, 19) * Hypergeometric3F2([- 18, - n, 1 - n], [2, - n - 18], 1). ● a(n) = (35345263800 / 38!) * n * (n + 1) * (7788173922881483796601896960000 0 + 19842239560057435695813230592000 0 * n + 33922148238765836682612234240 0 * n ^ 2 + 32270796346410254845789281976320 0 * n ^ 3 + 27011148210858727765745036623872 00 * n ^ 4 + 14774866636261672577232103676313 60 * n ^ 5 + 7946786974944828554992807035863 04 * n ^ 6 + 2894852648863425909442265013288 96 * n ^ 7 + 1121956416148050019378088532080 64 * n ^ 8 + 293095320272523338384119832478 72 * n ^ 9 + 87321004296528531301687230174 72 * n ^ 10 + 17085667428016970114351747358 72 * n ^ 11 + 4080817048705800483843709299 2 * n ^ 12 + 614603454674843078328395191 68 * n ^ 13 + 121230271571327109115333275 84 * n ^ 14 + 14298582910205269163512480328n ^ 15 + 2381505058455456466470302 04 * n ^ 16 + 222226805381963345901159308n ^ 17 + 31798194584075548168182 35 * n ^ 18 + 2358230492455529682532 50 * n ^ 19 + 293942174447750307809 85 * n ^ 20 + 17315150592375085755608n ^ 21 + 1901602341333145656140 * n ^ 22 + 884451262044892788 0 * n ^ 23 + 864030358357843740 * n ^ 24 + 31339517913669420 * n ^ 25 + 2745580274521866 * n ^ 26 + 76036376515644 * n ^ 27 + 6015727425006 * n ^ 28 + 122857968168 * n ^ 29 + 8831668028 * n ^ 30 + 125358408 * n ^ 31 + 8231808 * n ^ 32 + 72522 * n ^ 33 + 4371 * n ^ 34 + 18 * n ^ 35 + n ^ 36). ●

► [A042681] 1,2,117,236,13805,27846,1628873,3285592,192193209,387672010,22677169789,45742011588,2675713841893,5397169695374,315711556173585,636820282042544,37251287914641137,75139396111324818,4395336262371480581,8865811920854285980 ★ Denominators of continued fraction convergents to sqrt(870). ● a(n) = 118 * a(n - 2) - a(n - 4) for n>3. - _ Vincenzo Librandi _ , Dec 21 2013 ●

► [A157069] 2,120,4002,93500,1687002,24836196,309182762,3337508646,31830097752,272125000774,2109875558208,14977318285254,98118326104708,597217934730774,3397036441760412,18148572883826236,91470993083858322,436643312483178036,1981038544180652162 ★ Number of integer sequences of length n + 1 with sum zero and sum of absolute values 40. ● a(n) = T(n,20); T(n,k) = Sum _{ i=1..n } binomial(n + 1,i) * binomial(k - 1,i - 1) * binomial(n - i + k,k). ● a(n) = (n + 1) * binomial(n + 19, 20) * Hypergeometric3F2([- 19, - n, 1 - n], [2, - n - 19], 1). ● a(n) = (137846528820 / 40!) * n * (n + 1) * (2959506090649638427087202848000000 0 + 7688026337356573756544436672000000 0 * n + 1329504929585504813849213140992000000 * n ^ 2 + 1290742342817244773843889039605760000 * n ^ 3 + 1094357439529328748585160780021760000 * n ^ 4 + 612766113778575140689735509285273600 * n ^ 5 + 334228753141512703020765378377809920 * n ^ 6 + 125103295909205358813292403873120256 * n ^ 7 + 49218727808847235410751174949228544 * n ^ 8 + 13269339361037181895414921845144576 * n ^ 9 + 4016584445427935868170163264804864 * n ^ 10 + 815165270428049073818572136963328 * n ^ 11 + 197974483136507211917478313071872 * n ^ 12 + 31108483670185057904093220506 88 * n ^ 13 + 6244038933930696351877891958

272 * n ^ 14 + 77368366657332173553260747625 6 * n ^ 15 + 1312173851988505 94964429765744 * n ^ 16 + 1296947821557997443053762727 6 * n ^ 17 + 189093 551080434316884027810 4 * n ^ 18 + 150029328423053669455781465 * n ^ 19 + 190660830723331258786575 35 * n ^ 20 + 121646585396097884355151 5 * n ^ 21 + 136285407600184771625385 * n ^ 22 + 69735952443035710610 60 * n ^ 23 + 6 9538202271827383494 0 * n ^ 24 + 2832559361599341066 0 * n ^ 25 + 253414122 0949541220 * n ^ 26 + 8105984829186017 4 * n ^ 27 + 6552284226337026 * n ^ 28 + 160984848978954 * n ^ 29 + 11828920639006 * n ^ 30 + 215437887572 * n ^ 31 + 14466923228 * n ^ 32 + 183962712 * n ^ 33 + 11343228 * n ^ 34 + 8988 9 * n ^ 35 + 5111 * n ^ 36 + 19 * n ^ 37 + n ^ 38). ●

▶ [A337989] 1,2,120,131204813713122 ⋆ Number of compositions (ordered parti tions) of n ^ n into n - th powers. ● a(n) = [x ^ (n ^ n)] 1 / (1 - Sum _{ k>=1 } x ^ (k ^ n)). ●

▶ [A042799] 1,2,121,244,14761,29766,1800721,3631208,219673201,442977610,267 98329801,54039637212,3269176562521,6592392762254,398812742297761,8042178 77357776,486518853837643 21,981079886448864 18,593513120407694940 1,1196837 0396798785220 ⋆ Denominators of continued fraction convergents to sqrt(930). ● a(n) = 122 * a(n - 2) - a(n - 4) for n>3. - _ Vincenzo Librandi _ , Jan 29 201 4 ●

▶ [A042921] 1,2,125,252,15749,31750,1984249,4000248,249999625,503999498,314 97968501,63499936500,3968494031501,8000487999502,499998750000625,1007997 988000752,629958740060474 9,126999746000095250,793698012601195274 9,16000 959998024000748 ⋆ Denominators of continued fraction convergents to sqrt(992). ● a(n) = 126 * a(n - 2) - a(n - 4) for n>3. - _ Vincenzo Librandi _ , Feb 01 2014 ●

▶ [A123006] 0,1,2,125,492,16109,91750,2132689,15367128,288789625,243700173 8,39817548101,374512306500,5566947933221,56449884952942,786500469825625,8 403437018957232,111973430886815089,1240762741067455250 ⋆ Expansion of x ^ 2 / (1 - 2 * x - 121 * x ^ 2). ● a(n) = 2 * a(n - 1) + 121 * a(n - 2). ● a(n) = (11 * i) ^ (n - 2) * ChebyshevU(n - 2, - i / 11). - _ G. C. Greubel _ , Jul 12 2021 ●

▶ [A157070] 2,126,4412,108220,2049770,31674678,413820584,4687156248,468947 86710,420487598410,3418440803052,25437258929836,174630760523102,11135212 28343010,6633053884912560,3709783855399364 8,195668363575483134,977073310 632294978,4635352353992402420 ⋆ Number of integer sequences of length n + 1 with sum zero and sum of absolute values 42. ● a(n) = T(n,21); T(n,k) = Sum _{ i=1..n } binomial(n + 1, i) * binomial(k - 1, i - 1) * binomial(n - i + k, k). ● a(n) = (n + 1) * binomial(n + 20, 21) * Hypergeometric3F2([- 20, - n, 1 - n], [2 , - n - 20], 1). ● a(n) = (538257874440 / 42!) * n * (n + 1) * (12429925580918 848139376627548160000000 0 + 3288161183503660254602849151200000000 0 * n + 5748328763434303230896837650024000000 0 * n ^ 2 + 5687018825749529012 914176594542592000 00 * n ^ 3 + 4880652187310657194171476357336268800 00 * n ^ 4 + 2792489165775881340588592345985843200 0 * n ^ 5 + 1543385221483 1 474197166442069167308800 0 * n ^ 6 + 5922795934469650476199811719426670 5 920 * n ^ 7 + 2363326364695066411061539933838932377 6 * n ^ 8 + 6557497087 812561104289290673945292800 * n ^ 9 + 2014840321470361119845933104915307520 * n ^ 10 + 4227011024883393283672035628206950 40 * n ^ 11 + 104284338 041749995423701069631220992 * n ^ 12 + 17025052804207868558201481522726 400 * n ^ 13 + 3473748992461285895698788698610560 * n ^ 14 + 449827918639 409055961252979192960 * n ^ 15 + 7760269771548770268312315057212 8 * n ^ 1 6 + 807152855452060116011439877080 0 * n ^ 17 + 1197769342263854188918636 742220 * n ^ 18 + 100831028153769404548233777380 * n ^ 19 + 1304930629806 8383096447853569 * n ^ 20 + 8922373201102736318647870 00 * n ^ 21 + 101851 737197591285675901050 * n ^ 22 + 5654771034611195278152900 * n ^ 23 + 574 799001272234774582445 * n ^ 24 + 2580438977308270917600 0 * n ^ 25 + 23545 58801452942771200 * n ^ 26 + 8472796070157209748 0 * n ^ 27 + 698835741014 0155794 * n ^ 28 + 198659321097901200 * n ^ 29 + 14901112723277580 * n ^ 3 0 + 327062325560360 * n ^ 31 + 22429224033778 * n ^ 32 + 366602803600 * n ^ 33 + 23094295940 * n ^ 34 + 264617940 * n ^ 35 + 15377517 * n ^ 36 + 1102 00 * n ^ 37 + 5930 * n ^ 38 + 20 * n ^ 39 + n ^ 40). ●

▶ [A106318] 2,128,1458,8192,31250,93312,235298,524288,1062882,2000000,35431 22,5971968,9653618,15059072,22781250,33554432,48275138,68024448,94091762,1 28000000,171532242,226759808,296071778,382205952,488281250 ⋆ Bhaskara twi ns: n such that 2 * n ^ 2 = X ^ 3 and 2 * n ^ 3 = Y ^ 2. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). - _ Wesley Ivan Hurt _ , Apr 23 2021 ●

▶ [A258806] 1,2,129,2188,16385,78126,279937,823544,2097153,4782970,1000000 1,19487172,35831809,62748518,105413505,170859376,268435457,410338674,61222 0033,893871740,1280000001,1801088542,2494357889,3404825448,4586471425 ⋆ a(n) = n ^ 7 + 1. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8). ● a(n) = (n + 1) * (n ^ 6 - n ^ 5 + n ^ 4 - n ^ 3 + n ^ 2 - n + 1). ●

▶ [A294274] 0,2,129,2444,18700,99012,376761,1216688,3297456,8158550,1808042 5,37847532,73399404,136971464,241561425,414517952,680856256,1095977898,170 3414961,2607286700,3877286700,5697862412,8172733129,11613390384,161640300 00 ⋆ Sum of the seventh powers of the parts in the partitions of n into two part s. ● a(n) = Sum _{ i=1..floor(n / 2) } i ^ 7 + (n - i) ^ 7. ● a(n) = a(n - 1) + 8 * a(n - 2) - 8 * a(n - 3) - 28 * a(n - 4) + 28 * a(n - 5) + 56 * a(n - 6) - 56 * a(n - 7) - 70 * a(n - 8) + 70 * a(n - 9) + 56 * a(n - 10) - 56 * a(n - 11) - 28 * a(n - 12) + 28 * a(n - 13) + 8 * a(n - 14) - 8 * a(n - 15) - a(n - 16) + a(n - 17) for n>17. ●

▶ [A259109] 0,2,130,1588,9780,41030,134342,369640,893928,1956810,3956810,74 99932,13471900,23125518,38184590,60965840,94520272,142795410,210819858,304 911620,432911620,604443862,831203670,1127275448,1509481400 ⋆ 2 * A000540. ● a(n) = n / 21 - n ^ 3 / 3 + n ^ 5 + n ^ 6 + (2 * n ^ 7) / 7. - _ Colin Barker _ , Jun 28 2015 ●

▶ [A089662] 0,2,131,2172,20386,138580,763824,3631712,15470144,60527232,2212 97920,765580288,2529498624,8039103488,24713744384,73818562560,2150110658 56,612515381248,1710842904576,4695105732608,12682107944960,3376810898227 2,88748191645696 ⋆ a(n) = S1(n,5), where S1(n,t) = Sum _{ k=0..n } k ^ t * S um _{ j=0..k } binomial(n,j). ● a(n) = 14 * a(n - 1) - 84 * a(n - 2) + 280 * a(n - 3) - 560 * a(n - 4) + 672 * a(n - 5) - 448 * a(n - 6) + 128 * a(n - 7) for n > 6. ● a(n) = 2 ^ (n - 7) * n * (21 * n ^ 5 + 61 * n ^ 4 + 55 * n ^ 3 + 15 * n ^ 2 - 2 8 * n + 4). - _ Ilya Gutkovskiy _ , Jun 21 2016 ●

▶ [A157071] 2,132,4842,124410,2468160,39944058,546468188,6480461988,678712 67730,636929126680,5418075931842,42175511270802,302809501559292,20187562 13756730,125691567813382 80,7345346392102928 8,40468103035977403 8,21100834 85993094708,1044917201046725411 0 ⋆ Number of integer sequences of length n + 1 with sum zero and sum of absolute values 44. ● a(n) = T(n,22); T(n,k) = S um _{ i=1..n } binomial(n + 1, i) * binomial(k - 1, i - 1) * binomial(n - i + k, k). ● a(n) = (n + 1) * binomial(n + 21, 22) * Hypergeometric3F2([- 21, - n, 1 - n], [2, - n - 21], 1). ● a(n) = (2104098963720 / 44!) * n * (n + 1) * (5742625618 384507840392001927249920000000 0 + 1545233310498620618719207228440576000 000000 * n + 2729310427301820503089539338521804800000 0 * n ^ 2 + 274811 760152840277181518317732914790400000 * n ^ 3 + 2385724053467447565222 23 079981931560960000 * n ^ 4 + 1392623690521980980429530671328607060640 00 * n ^ 5 + 7793593861595941545962101317540347904000 0 * n ^ 6 + 30604426182 364394781448082978276352983040 * n ^ 7 + 1237592143262284466583993749 33 01408202752 * n ^ 8 + 3525862191155367176504575677468901072896 * n ^ 9 + 1098754428098133845773800888636057839616 * n ^ 10 + 2375995561004903532 2241264122638256640 0 * n ^ 11 + 5949362875150232422967430565659469670 4 * n ^ 12 + 1005554549442078517778680692575523763 2 * n ^ 13 + 2083707534251 4371875169740418889280512 * n ^ 14 + 2807692272530939876637734390579692 8 0 * n ^ 15 + 4922240954708360376644924980517881 6 * n ^ 16 + 5358702844213 7594923184383941242 88 * n ^ 17 + 8085457620408415634860500984353 68 * n ^ 18 + 7173709119458240286857537673618 0 * n ^ 19 + 9444831471354374079538 6 88193458 * n ^ 20 + 6862490741503824629469365189 49 * n ^ 21 + 79734029925 781576979739452669 * n ^ 22 + 4751390699139789217700561850 * n ^ 23 + 491 8138385468100476523544 40 * n ^ 24 + 2399240710188114190554334 5 * n ^ 25 + 2230301742551313936748845 * n ^ 26 + 8859005267463810723096 0 * n ^ 27 + 7 4471950603722808958 8 * n ^ 28 + 2385361119601736260 74 * n ^ 29 + 1824317 6552448224154 * n ^ 30 + 464026161597715500 * n ^ 31 + 32458785389210936 * n ^ 32 + 640384199972538 * n ^ 33 + 41164050437258 * n ^ 34 + 6072337030 20 * n ^ 35 + 36020303474 * n ^ 36 + 373840257 * n ^ 37 + 20541577 * n ^ 38 + 133770 * n ^ 39 + 6832 * n ^ 40 + 21 * n ^ 41 + n ^ 42). ●

▶ [A157072] 2,138,5292,142140,2947590,49858158,712832792,8832976488,966487 71870,947399938870,8416542780492,68407265558268,512700872216442,35671681 62771570,231727119633463 20,141251698411654288,811481822951916942,4410812 923746903558,2276236953118943114 0 ⋆ Number of integer sequences of length n + 1 with sum zero and sum of absolute values 46. ● a(n) = T(n,23); T(n,k) = S um _{ i=1..n } binomial(n + 1, i) * binomial(k - 1, i - 1) * binomial(n - i + k, k). ● a(n) = (n + 1) * binomial(n + 22, 23) * Hypergeometric3F2([- 22, - n, 1 - n], [2, - n - 22], 1). ● a(n) = (8233430727600 / 46!) * n * (n + 1) * (290576856 290256096723835297518845952000000 0 + 7945218314727479503207812618308 8 128000000000 * n + 1417145704918027899577887871738891468800000000 * n ^ 2 + 1450592335774011853606452553176028545024000 00 * n ^ 3 + 1273112386316 983552257287537125665905049600 00 * n ^ 4 + 7571535165804062225322315972 8830038933504000 * n ^ 5 + 4287719183322276523407837629079188943667200 0 * n ^ 6 + 1720043029782749089952439227686671114829824 0 * n ^ 7 + 70440539 857174998963479352932862721482424 32 * n ^ 8 + 2056356540242318373959793 917651894923345920 * n ^ 9 + 6494404924468520156869884277249313997250 56 * n ^ 10 + 1443979728050070633375644160105428510699 52 * n ^ 11 + 36667320 366669588030104490299079773399040 * n ^ 12 + 6396965852709968433012959 0 28877233569280 * n ^ 13 + 1345127187454407600202359730144941101312 * n ^ 14 + 1879107947435971758832427898048966269 44 * n ^ 15 + 3344793899189690 2409607083541643054848 * n ^ 16 + 3794396649208001585975013323140823680 * n ^ 17 + 5815967305566659032137146826783336 48 * n ^ 18 + 5408697490935 7210248192242794085176 * n ^ 19 + 7237583584021550113709859989257256 * n ^ 20 + 5550283238898897560010010188442 70 * n ^ 21 + 6557397931925864867 9066391179799 * n ^ 22 + 4158352352131928037710752254818 * n ^ 23 + 437873 8183106826130989437218 59 * n ^ 24 + 2296006244158167885255673025 0 * n ^ 2 5 + 2172171883621041163474766945 * n ^ 26 + 9389320498949578886734305 0 * n ^ 27 + 8036153654616364534710453 * n ^ 28 + 2845375639800380344303 80 * n ^ 29 + 2216457297099507571421 4 * n ^ 30 + 6361471219223049743 88 * n ^ 3 1 + 4533992367613641427 0 * n ^ 32 + 1038127683748744820 * n ^ 33 + 680166 31509831858 * n ^ 34 + 1212869363347796 * n ^ 35 + 73356699164562 * n ^ 36 + 981609846470 * n ^ 37 + 55012667347 * n ^ 38 + 519602314 * n ^ 39 + 2707 5279 * n ^ 40 + 160930 * n ^ 41 + 7821 * n ^ 42 + 22 * n ^ 43 + n ^ 44). ●

▶ [A140898] 0,1,2,140,552,20144,115360,2970304,21629568,447220480,383606220 8,68494109696,658692679680,10632584278016,110847372992512,16677262077952 00,184106951425720 32,263632154545291264,303111884848037888 0,419162107151 20369664,496064584823572267008 ⋆ Expansion of - x ^ 2 / (136 * x ^ 2 + 2 * x - 1). ● a(n)= ((1 + sqrt(137)) ^ n - (1 - sqrt(137)) ^ n) / (2 * sqrt(137)). ●

▶ [A120814] 0,0,0,0,0,2,140,3262,47802,535990,5038418,41781432,315447990,221 4289350,14664659100,92612930280,562220244768,3301016862024,1883620543520 8,104862661271840,571336322754792,3054404571541092,16056744308319000 ⋆ N umber of permutations of length n with exactly 6 occurrences of the pattern 2 - 13. ● a(n) = (20160 + 44448n + 548n ^ 2 - 4196n ^ 3 - 565n ^ 4 + 67n ^ 5 + 1 7n ^ 6 + n ^ 7) / (720(n + 7)(n + 6))binomial[2n, n - 6]; generating function = x ^ 6 C ^ 13 (- 42 + 4054C - 18354C ^ 2 + 36038C ^ 3 - 40660C ^ 4 + 30080C ^ 5 - 16090C ^ 6 + 6914C ^ 7 - 2604C ^ 8 + 840C ^ 9 - 202C ^ 10 + 30C ^ 11 - 2C ^ 12) / (2 - C) ^ 11, where C=(1 - Sqrt[1 - 4x]) / (2x) is the Catalan functio n. ●

▶ [A163275] 0,2,144,1944,12800,56250,190512,537824,1327104,2952450,605000 0,11595672,21026304,36386714,60505200,97200000,151519232,230016834,3410670 24,495219800,705600000,988352442,1363135664,1853666784 ⋆ a(n) = n ^ 5 * (n + 1) ^ 2 / 2. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8). ●

▶ [A157073] 2,144,5762,161480,3493730,61651128,919453346,11883194148,13559 5653690,1385919151540,12835654787802,108738668285884,849286949294602,615 6408373152940,41657479594194090,264432781857156298,1581589562174104296,8 94766959379341517 8 ⋆ Number of integer sequences of length n + 1 with sum z

ero and sum of absolute values 48. • a(n) = T(n,24); T(n,k) = Sum _{ i=1..n } binomial(n + 1, i) * binomial(k - 1, i - 1) * binomial(n - i + k, k). • a(n) = (n + 1) * binomial(n + 23, 24) * Hypergeometric3F2([- 23, - n, 1 - n], [2, - n - 23], 1). • a(n) = (32247603683100 / 48!) * n * (n + 1) * (160398424672221365391557084230402965504000000000 + 44525931866766327588017194683735799234560000 0000 * n + 80162352992638760747141669078132808744960000000 * n ^ 2 + 833321320560369184881053230403162206356480000 * n ^ 3 + 7389893990104692 33323155469641331156136755200000 * n ^ 4 + 4472303260376748565397094550570321307290828800 0 * n ^ 5 + 2561268957036363969851434829972161049395200000000 * n ^ 6 + 1048081293656489857692126719151863801090408448 0 * n ^ 7 + 434400531909714248960672407282961518282565222 4 * n ^ 8 + 129712205188526224004180875428943025709652377 6 * n ^ 9 + 41488776278219545353060060142109388295677542 4 * n ^ 10 + 9464481231464149532313629147549307598428979 2 * n ^ 11 + 2435535268216863412840621305706999474167398 4 * n ^ 12 + 437447351912930309971555666081906771842048 0 * n ^ 13 + 93270470830654182573411807803214086698598 4 * n ^ 14 + 13466468400991701589220429336819658340326 4 * n ^ 15 + 2431824858482782995150329678316942406406 4 * n ^ 16 + 286380954717644563087917027583152493286 4 * n ^ 17 + 44555485384016851904697790813546299686 4 * n ^ 18 + 4323273495276849583091755572393669105 6 * n ^ 19 + 587483026676113461193817122380638318 4 * n ^ 20 + 47284005721971479792787934215493928 * n ^ 21 + 5675509994160967832857853237276878 4 * n ^ 22 + 380361202271977319643486224179491 3 * n ^ 23 + 40708078347792172401474137976159 9 * n ^ 24 + 2274505228889878682787020700757 * n ^ 25 + 218795419666745762779837660149 9 * n ^ 26 + 10178900247748562221469151293 5 * n ^ 27 + 886156562071717331945110540 1 * n ^ 28 + 341896269373157379303910179 * n ^ 29 + 27099899470126559155285701 * n ^ 30 + 8609383896339990872890980 * n ^ 31 + 624597417663576957766566 * n ^ 32 + 161586472598044466885 0 * n ^ 33 + 10780016867953347556 6 * n ^ 34 + 2233886413294116126 * n ^ 35 + 137618394169017186 * n ^ 36 + 2229052716036366 * n ^ 37 + 127282327855386 * n ^ 38 + 1552111826309 * n ^ 39 + 82428676891 * n ^ 40 + 711564777 * n ^ 41 + 35254791 n ^ 42 + 192027 * n ^ 43 + 8901 * n ^ 44 + 23 * n ^ 45 + n ^ 46). •

► [A157074] 2,150,6252,182500,4112502,75578370,1173777752,15795816120,187652162502,1996568642530,19245807386652,169668375420180,1378768046330402,10396793993805030,73166155146412752,482928212647720720,3002693915693248002,17655197338344400470 ⋆ Number of integer sequences of length n + 1 with sum zero and sum of absolute values 50. • a(n) = T(n,25); T(n,k) = Sum _{ i=1..n } binomial(n + 1, i) * binomial(k - 1, i - 1) * binomial(n - i + k, k). • a(n) = (n + 1) * binomial(n + 24, 25) * Hypergeometric3F2([- 24, - n, 1 - n], [2, - n - 24], 1). • a(n) = (126410606437752 / 50!) * n * (n + 1) * (962390548033328192349342505382417793024000000000 + 2710051533927129680504290510456776252454696000000000 * n + 4922659993471956048182845582623667535216640000000000 * n ^ 2 + 5192317570544581350794593882064923048017920000000 * n ^ 3 + 4650282959502171571687910292356590782853939200000 * n ^ 4 + 28607394119885617552139740430561122618473185280000 * n ^ 5 + 1655958849721341788378109816443967973880758272000 0 * n ^ 6 + 690319231162766649891710467410450145839729868800 0 * n ^ 7 + 289403620444277159788558047178545667046194544640 0 * n ^ 8 + 88252935878948876377646630321568918645729918976 * n ^ 9 + 28570471428554597060901230378272170138430400102 4 * n ^ 10 + 6674419369555758807861618931940209878153648537 6 * n ^ 11 + 1739421967994941331365273572255041762756841062 4 * n ^ 12 + 320921257584962907891108310986112050485246361 6 * n ^ 13 + 69334001564432630706176597639683120789377638 4 * n ^ 14 + 10318372340530721335294140989368933084962201 6 * n ^ 15 + 1889027095945116519394120348213871130650598 4 * n ^ 16 + 230192369434173529736358128829498119389593 6 * n ^ 17 + 36324639956834008215166929856023534786406 4 * n ^ 18 + 3663295746382514195567800322961312655833 6 * n ^ 19 + 505127138771606168198281953551771018366 4 * n ^ 20 + 42469996073409610944324371466432555321 6 * n ^ 21 + 5174889166221981155728227420134150178 4 * n ^ 22 + 364428961223049619774680212202339861 6 * n ^ 23 + 39609387059635704264829491627460100 9 * n ^ 24 + 2341697017680939347308600553473257 6 * n ^ 25 + 228847960870086597139094285817992 4 * n ^ 26 + 11358430220651035639597594619697 6 * n ^ 27 + 1004961863103490217483632766547 4 * n ^ 28 + 41781533652110658724917263702 4 * n ^ 29 + 3366891203712204329522028047 6 * n ^ 30 + 116696062106343687210031562 4 * n ^ 31 + 8609920427079115380345275 1 * n ^ 32 + 246855263798085149994758 4 * n ^ 33 + 16753646112358889783741 6 * n ^ 34 + 392753589628527308918 4 * n ^ 35 + 24621836551329669031 6 * n ^ 36 + 464027308967823206 4 * n ^ 37 + 269714108783157936 * n ^ 38 + 3986042964314664 * n ^ 39 + 215542329647711 * n ^ 40 + 2405227111584 * n ^ 41 + 121370670916 * n ^ 42 + 961331184 * n ^ 43 + 45396066 * n ^ 44 + 22742 4 * n ^ 45 + 10076 * n ^ 46 + 24 * n ^ 47 + n ^ 48). •

► [A202107] 2,162,2592,20000,101250,388962,1229312,3359232,8201250,18301250,37949472,74030112,137149922,243101250,414720000,684204032,1095962562,1710072162,2606420000,3889620000,5694792642,8194304162,11605565952,16200000 00,22313281250 ⋆ n ^ 4 * (n + 1) ^ 4 / 8. • a(n) = 2 * sum(k, k=1..n) ^ 4 = sum(k ^ 5 + k ^ 7, k=1..n). •

► [A259319] 2,164,1414,6216,19338,48620,105742,206992,374034,634676,1023638,1583320,2364570,3427452,4842014,6689056,9060898,12062148,15810470,20437352,26088874,32926476,41127726,50887088,62416690 ⋆ a(n) = 2 * A002309(n). • a(n) = (2 * n * (7 - 40 * n ^ 2 + 48 * n ^ 4)) / 15. - _ Colin Barker _ , Jun 29 2015 •

► [A172231] 0,2,174,1998,10741,38438,107004,251354,522528,990816,1748883,2914894,4635639,7089658,10490366,15089178,21178634,29095524,39224013,51998766 ⋆ Number of ways to place 5 nonattacking wazirs on a 5 X n board. • a(n) = (625 * n ^ 5 - 5750 * n ^ 4 + 23535 * n ^ 3 - 54202 * n ^ 2 + 70640 * n - 41616) / 24, n>=4. •

► [A229017] 2,193,2054,10735,38768,111311,273124,597477,1197190,2238005,3954490,6668675,10811620,16948115,25804712,38301289,55586346,79076233,110498510,151939639,205897208,275336887,363754316,475242125,614562286 ⋆ Number of arrays of median of three adjacent elements of some length 9 0..n array, with no adjacent equal elements in the latter. • a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. •

► [A180301] 1,2,200,201,202,2000,2001,2002,2200,2201,2202,2000000000000,2000000000001,2000000000002,2000000000200,2000000000201,2000000000202,2000000002000,2000000002001,2000000002002,2000000002200,2000000002201,2000000002202 ⋆ Starting with 1, the next entry is the next higher integer whose spelling in US English comes lexicographically later. • a(12 + i) = 2 * 10 ^ 12 + a(i), for i in 1..11. • a(24 + i) = 2 * 10 ^ 36 + a(i), for i in 1..23. • a(48 + i) = 2 * 10 ^ 63 + a(i), for i in 1..47. (End) •

► [A212839] 2,239,2258,10727,35954,97127,226274,472943,909602,1637759,2794802,4561559,7170578,10915127,16158914,23346527,33014594,45803663,62470802,83902919,111130802,145343879,187905698,240370127,304498274 ⋆ Number of 0..n arrays of length 6 with 0 never adjacent to n. • a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. •

► [A140162] 1,2,245,246,3371,3372,20179,20180,79229,79230,240281,240282,611575,611576,1370951,1370952,2790809,2790810,5266909,5266910,9351011,9351012,15787355,15787356,25552981 ⋆ a(1)=1, a(n) = a(n - 1) + n ^ 5 if n odd, a(n) = a(n - 1) + n ^ 0 if n is even. • a(n) = a(n - 1) + ((1 - (- 1) ^ n) / 2) * n ^ 5 + ((1 + (- 1) ^ n) / 2), with a(1)=1. • a(n) = - 1 / 8 + (1 / 8) * (- 1) ^ n + (5 / 8) * (- 1) ^ n * n ^ 2 - (1 / 24) * n ^ 2 + (1 / 2) * n + (1 / 12) * n ^ 6 - (1 / 4) * (- 1) ^ n * n ^ 5 + (1 / 4) * n ^ 5 - (5 / 8) * (- 1) ^ n * n ^ 4 + (5 / 24) * n ^ 4, with n >= 1. •

► [A060890] 1,2,257,6562,65537,390626,1679617,5764802,16777217,43046722,100000001,214358882,429981697,815730722,1475789057,2562890626,4294967297,6975757442,11019960577,16983563042,25600000001,37822859362,54875873537 ⋆ n ^ 8 + 1. • a(0)=1, a(1)=2, a(2)=257, a(3)=6562, a(4)=65537, a(5)=390626, a(6)=1679617, a(7)=5764802, a(8)=16777217, a(n)=9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9). - _ Harvey P. Dale _ , Mar 12 2013 •

► [A294275] 0,2,257,7074,72354,469540,2142595,7972932,24684612,68121958,167731333,383769830,812071910,1633567432,3103591687,5683259528,9961449608,16980253770,27957167625,45040730666,70540730666,108577948908,163239463563,241980430540,351625763020 ⋆ Sum of the eighth powers of the parts in the partitions of n into two parts. • a(n) = Sum _{ i=1..floor(n / 2) } i ^ 8 + (n - i) ^ 8. • a(n) = a(n - 1) + 9 * a(n - 2) - 9 * a(n - 3) - 36 * a(n - 4) + 36 * a(n - 5) + 84 * a(n - 6) - 84 * a(n - 7) - 126 * a(n - 8) + 126 * a(n - 9) + 126 * a(n - 10) - 126 * a(n - 11) - 84 * a(n - 12) + 84 * a(n - 13) + 36 * a(n - 14) - 36 * a(n - 15) - 9 * a(n - 16) + 9 * a(n - 17) + a(n - 18) - a(n - 19) for n>19. •

► [A089663] 0,2,259,6284,77180,646960,4235864,23313408,112793088,493969920,1998346240,7577934848,27232132096,93517705216,308908943360,986642513920,3059995508736,9247515082752,27310549696512,79012328898560,224396746424320,626707269681152 ⋆ a(n) = S1(n, 6), where S1(n, t) = Sum _{ k=0..n } (k ^ t * Sum _{ j=0..k } binomial(n,j)). • a(n) = (1 / 21) * n * (n + 1) * (381 * n ^ 5 + 921 * n ^ 4 + 381 * n ^ 3 + 39 * n ^ 2 - 746 * n + 368) * 2 ^ (n - 7). (See Wang and Zhang, p. 334.) • a(n) = 16 * a(n - 1) - 112 * a(n - 2) + 448 * a(n - 3) - 1120 * a(n - 4) + 1792 * a(n - 5) - 1792 * a(n - 6) + 1024 * a(n - 7) - 256 * a(n - 8) for n > 7. • a(n) = 2 ^ (n - 7) * n * (381 * n ^ 6 + 1302 * n ^ 5 + 1302 * n ^ 4 + 420 * n ^ 3 - 707 * n ^ 2 - 378 * n + 368) / 21. - _ Ilya Gutkovskiy _ , Jun 21 2016 •

► [A279450] 0,0,2,285,9110,126396,1055025,6266614,29198740,113262680,380775248,1140764611,3108667306,7824370092,18407341855,40855872764,86201399496,173952773328,337453762782,631982899545,1146743732126,2022212701212,3474824082125,5831439251154,9576836632860 ⋆ Number of nonequivalent ways to place 6 points on an n X n square grid so that no more than 2 points are on a vertical or horizontal straight line. • a(n) = (n ^ 12 - 55 * n ^ 10 + 210 * n ^ 9 + 93 * n ^ 8 - 2220 * n ^ 7 + 6052 * n ^ 6 - 8040 * n ^ 5 + 4236 * n ^ 4 + 3240 * n ^ 3 - 5872 * n ^ 2 + 2400 * n) / 5760 + IF(MOD(n, 2) = 1, 2 * n ^ 6 - 18 * n ^ 5 + 53 * n ^ 4 - 64 * n ^ 3 + 33 * n ^ 2 - 12 * n + 5) / 128. • a(n) = 6 * a(n - 1) - 8 * a(n - 2) - 22 * a(n - 3) + 69 * a(n - 4) - 8 * a(n - 5) - 176 * a(n - 6) + 168 * a(n - 7) + 182 * a(n - 8) - 364 * a(n - 9) + 364 * a(n - 11) - 182 * a(n - 12) - 168 * a(n - 13) + 176 * a(n - 14) + 8 * a(n - 15) - 69 * a(n - 16) + 22 * a(n - 17) + 8 * a(n - 18) - 6 * a(n - 19) + * a(n - 20). •

► [A172232] 0,2,504,10010,78052,368868,1280832,3612344,8774380,19049692,37898664,70311824,123209012,205885204,330502992,512631720,771833276,1132294540,1623506488,2280989952,3147068036,4271685188,5713272928,7539662232,9829042572 ⋆ Number of ways to place 6 nonattacking wazirs on a 6 X n board. • a(n) = 2 * (486 * n ^ 6 - 5670 * n ^ 5 + 30240 * n ^ 4 - 95230 * n ^ 3 + 187899 * n ^ 2 - 220775 * n + 120540) / 15, n>=5. •

► [A294276] 0,2,513,20708,282340,2255148,12313161,52928912,186884496,576258110,1574304985,3942330372,9092033028,19736886008,40357579185,78935156288,147520415296,266495712282,464467582161,788155279940,1299155279940,2095793274212,3300704544313 ⋆ Sum of the ninth powers of the parts in the partitions of n into two parts. • a(n) = Sum _{ i=1..floor(n / 2) } i ^ 9 + (n - i) ^ 9. • a(n) = a(n - 1) + 10 * a(n - 2) - 10 * a(n - 3) - 45 * a(n - 4) + 45 * a(n - 5) + 120 * a(n - 6) - 120 * a(n - 7) - 210 * a(n - 8) + 210 * a(n - 9) + 252 * a(n - 10) - 252 * a(n - 11) - 210 * a(n - 12) + 210 * a(n - 13) + 120 * a(n - 14) - 120 * a(n - 15) - 45 * a(n - 16) + 45 * a(n - 17) + 10 * a(n - 18) - 10 * a(n - 19) - a(n - 20) + a(n - 21) for n>21. •

► [A196290] 0,2,514,19686,262148,1953130,10077702,40353614,134217736,387420498,1000000010,2357947702,5159780364,10604499386,20661046798,38443359390,68719476752,118587876514,198359290386,322687697798,512000000020,794280046602,1207269217814,1801152661486,2641807540248 ⋆ a(n) = n ^ 9 + n. • a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10). - _ Wesley Ivan Hurt _ , May 04 2023 •

► [A201247] 0,0,2,552,29412,527654,5196928,34528698,173951172,714042302,2503447216,7744201834,21635290132,55540293510,132752090192,298491879178,636559136340,1296099575166,2533344878048,4774975629082,8712052571140,15436347060646,26634487077600 ⋆ Number of ways to place 6 non - attacking ferses on an n X n board. • a(n) = n ^ 12 / 720 - 5n ^ 10 / 48 + n ^ 9 / 6 + 461n ^ 8 /

144 - 29n ^ 7 / 3 - 2147n ^ 6 / 48 + 1289n ^ 5 / 6 + 65807n ^ 4 / 360 - 6356n ^ 3 / 3 + 9185n ^ 2 / 6 + 22834n / 3 - 11478, n>=5. ●

▶ [A212840] 2,577,8042,49835,204994,654797,1758602,4159927,8927810,17738489,33102442,58641827,99423362,162351685,256628234,394280687,590768002,865666097,1243439210,1754301979,2435177282,3330754877,4494655882 ⋆ Number of 0..n arrays of length 7 with 0 never adjacent to n. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. ●

▶ [A190579] 0,0,2,998,51618,873852,8039322,50272978,240764814,947860554,3210392210,9649651136,26316155354,66191981440,155482089002,344411086374,725043524246,1459722296638,2825136685698,5278863810724,9557560367842 ⋆ Number of ways to place 6 nonattacking grasshoppers on an n x n chessboard. ● a(n) = n ^ 12 / 720 - n ^ 10 / 48 - 5n ^ 9 / 9 + 509n ^ 8 / 144 - 187n ^ 7 / 90 + 701n ^ 6 / 48 - 14467n ^ 5 / 36 + 666917n ^ 4 / 360 - 471121n ^ 3 / 180 - 59875n ^ 2 / 24 + 57101n / 6 - 11339 / 2 - (9n ^ 2 / 8 - n - 7 / 2) * (- 1) ^ n, n>5. ●

▶ [A294279] 0,2,1025,61098,1108650,10933324,71340451,354864276,1427557524,4924107550,14914341925,40912232702,102769130750,240910097848,5298822775,75,1107606410024,2206044295976,4225524980826,7792505423049,13933571680850,24163571680850,40869390083652 ⋆ Sum of the tenth powers of the parts in the partitions of n into two parts. ● a(n) = Sum _{ i=1..floor(n / 2) } i ^ 10 + (n - i) ^ 10. ● a(2 * k) = (6144 * k ^ 10 - 16863 * k ^ 9 + 14080 * k ^ 8 - 4224 * k ^ 6 + 1056 * k ^ 4 - 132 * k ^ 2 + 5) * k / 33. ● a(2 * k + 1) = (6144 * k ^ 10 + 16896 * k ^ 9 + 14080 * k ^ 8 - 4224 * k ^ 6 + 1056 * k ^ 4 - 132 * k ^ 2 + 5) * k / 33. ●

▶ [A247821] 2,1334,1969,28669,86006,126961,338603654,536801281,36647972050691270,375344017599431990,500461553802019261,554079264075351985 ⋆ Numbers k such that sigma(sigma(2k - 1)) is a prime p. ● a(n) - 1 = numbers n such that sigma(sigma(2n + 1)) is a prime p: 1, 1333, 1968, 28668, 86005, 126960, ... ●

▶ [A212841] 2,1393,28642,231521,1168786,4414417,13667858,36590017,87627106,192124721,392074882,753879073,1378550642,2414820241,4075648306,6658688897,10571289538,16360652017,24749819426,36680195041,53361338962 ⋆ Number of 0..n arrays of length 8 with 0 never adjacent to n. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>9. ●

▶ [A259323] 2,1460,32710,268008,1330890,4874012,14527630,37308880,85584018,179675780,351208022,647279800,1135561050,1910402028,3100048670,4875056032,7457991970,11134523220,16265976038,23303463560,32803672042,45446398140,62053929390,83612360048,111294934450 ⋆ 2 * A259322(n). ● a(n) = 2 * (n * (- 31 + 196 * n ^ 2 - 336 * n ^ 4 + 192 * n ^ 6)) / 21. - _ Colin Barker _ , Jun 29 2015 ●

▶ [A172234] 0,2,1478,50726,573797,3581924,15516804,52550366,149162199,370817854,831571604,1717417198,3316210152,6054985120,10545491888,17638773534,28489610297,44631652698,68064067456,101350519742,147731315314,211249526076,296891922604,410745537182 ⋆ Number of ways to place 7 nonattacking wazirs on a 7 X n board. ● a(n) = (117649 * n ^ 7 - 1663893 * n ^ 6 + 10942729 * n ^ 5 - 43685355 * n ^ 4 + 114945646 * n ^ 3 - 199980312 * n ^ 2 + 213228096 * n - 107390880) / 720, n>=6. ●

▶ [A023291] 2,1487,2207,2927,8807,11117,16187,17657,26357,44927,45377,48497,91757,110237,117167,122327,125387,126107,145007,170927,174527,190787,193847,203897,230567 ⋆ Primes that remain prime through 3 iterations of function f(x) = 8x + 1. ● a(n) == 17 (mod 30) for n > 1. - _ John Cerkan _ , Sep 23 2016 ●

▶ [A201242] 0,0,0,2,1550,546516,28482279,585632520,6829066665,54504255500,331490619174,1642426038486,6930083422496,25686190415144,85541928717375,260349711114720,733731834393719,1934755847570808,4813391235753128,11375736647373750,25684539545337246 ⋆ Number of ways to place 8 non - attacking wazirs on an n X n toroidal board. ● a(n) = n ^ 2 * (n ^ 14 - 140n ^ 12 + 8722n ^ 10 - 313880n ^ 8 + 7061089n ^ 6 - 99573740n ^ 4 + 817978188n ^ 2 - 3033601200) / 40320, n>=9. ●

▶ [A158348] 0,0,2,2970,1321860,187430900,10199069190,269591166222,4221404762120,44876701584360,355148098691850,2230178955481730,1163099838533569,2520971170784706 20,205557074788375310,728566149746575350,235565780190865 5 20,703425374727504891 2 ⋆ Number of n - colorings of the Hypercube Graph Q4. ● a(n) = n ^ 16 - 32 * n ^ 15 + ... (see Maple program). ●

▶ [A243649] 0,0,0,0,0,2,3161,147502,2251309,19028431,111126797,503008566,1888247929,6139119795,17805426945,47050056470,115056780421,263499318031,5704273057 81,1175960541134,2322552621393,4416363482851,8118552261033,14478163221342,25121835774173 ⋆ Number of ways six L - tiles can be placed on an n X n square. ● a(n) = (n ^ 12 - 12 * n ^ 11 - 39 * n ^ 10 + 950 * n ^ 9 - 815 * n ^ 8 - 29672 * n ^ 7 + 69499 * n ^ 6 + 452518 * n ^ 5 - 1454446 * n ^ 4 - 3319216 * n ^ 3 + 12944320 * n ^ 2 + 9142512 * n - 41687280) / 720 for n>=6, a(5) = 2, a(n) = 0 for n<5. ●

▶ [A178410] 0,2,4374,259289,4255370,35093344,189681689,771464278,2559099153,7285273805,18416621598,42342480425,90097012004,179755977430,339666241815,612682858064,1061605357051,1776021648675,2880784715492 ⋆ Number of ways to place 8 nonattacking wazirs on an 8 X n board. ● a(n) = (1048576 * n ^ 8 - 17432576 * n ^ 7 + 136349696 * n ^ 6 - 658958720 * n ^ 5 + 2161896569 * n ^ 4 - 4945969574 * n ^ 3 + 7719028159 * n ^ 2 - 7516702410 * n + 3494080800) / 2520, n >= 7. ●

▶ [A213619] 1,2,65536 ⋆ Let m be the n - th hyperoperation applied to n (see A189896). a(n) is the m - th hyperoperation applied to n and m. ● a(n) = H _ H _ n(n,n)(n,H _ n(n,n)). ●

▶ [A331870] 2,758642,7057466,10805846,50860946,59677526,61800878,155045678,178551374,217281146,343943882,359455694,432175586,609069506,1449599486,1721358698,1829675354,1884592706,2013264194,2116706282,2680549946,2971193186,3084402122,3252387386,3454785386 ⋆ Even numbers n which divide the sum of the Fibonacci numbers F(1) + ... + F(n) but are not a multiple of 24. ● a(n) == 2 (mod 12) for all n. ●

▶ [A098528] 1,1,1,3,3,3,3,7,11,15,27,39,51,63,91,135,195,303,459,663,915,1279,1819,2599,3811 ⋆ Expansion of (1 + 2 * x ^ 3) / (1 - x - 4 * x ^ 7). ● a(n) = a(n - 1) + 4 * a(n - 7); ● a(n) = Sum _{ k=0..floor(n / 3) } binomial(n - 3k, floor(k / 2)) * 2 ^ k. ●

▶ [A002036] 3,3,3,4,5,5,6,6,7,9,9,10,11,11,12,13,14,15,16,17,17,18,19,20,21 ⋆ Compressed primes: a(n) is the nearest integer to prime(n) / log prime(n). ● a(n) = n - O(n / log n). - _ Charles R Greathouse IV _ , Nov 30 2022 ●

▶ [A022877] 1,3,3,3,4,5,6,8,10,13,17,22,29,38,50,66,87,115,152,200,264,349,461,609,804 ⋆ a(n) = floor(a(n - 1) / a(1) + a(n - 3) / a(3) + a(n - 5) / a(5) + ...), for n >= 3 with a(1) = 1 and a(2) = 3. ● a(1)=1; a(2)=3; a(n) = floor(Sum _{ i=1..floor(n / 2) } a(n - (2 * i - 1)) / a(2 * i - 1)). - _ Iain Fox _ , Oct 19 2018 ●

▶ [A098524] 1,1,3,3,3,7,11,23,35,47,75,119,211,351,539,839,1315,2159,3563,5719,9075,14335,22971,37223,60099 ⋆ Expansion of (1 + 2x ^ 2) / (1 - x - 4x ^ 5). ● a(n)=a(n - 1) + 4a(n - 5); a(n)=sum { k=0..floor(n / 2), binomial(n - 2k, floor(k / 2))2 ^ k } . ●

▶ [A291407] 0,0,1,3,3,3,12,30,43,57,120,259,438,708,1360,2703,4827,8276,15114,28488,51769,92031,167334,309341,564237 ⋆ p - INVERT of (1,1,0,0,0,0,...), where p(S) = 1 - S ^ 3 - S ^ 6. ● a(n) = a(n - 3) + 3 * a(n - 4) + 3 * a(n - 5) + 2 * a(n - 6) + 6 * a(n - 7) + 15 * a(n - 8) + 20 * a(n - 9) + 15 * a(n - 10) + 6 * a(n - 11) + a(n - 12) for n >= 13. ●

▶ [A073748] 3,3,3,21,77,231,819,2769,9301,31571,106763,361045,1221685,4132743,13980747,47297217,160004685,541291715,1831178355,6194830005,20956959933,70896891079,239842458947,811381229009,2744883043045 ⋆ a(n) = S(n) * S(n - 1), where S(n) are the generalized tribonacci numbers A001644. ● a(n) = S(2 * n - 1) + C(n - 1) - C(n - 2), where S(n) is A001644, C(n) is A073145. ● a(0)= - 3, a(1)=3, a(2)=3, a(3)=21, a(4)=77, a(5)=231, a(n) = 2 * a(n - 1) + 3 * a(n - 2) + 6 * a(n - 3) - a(n - 4) - a(n - 6). - _ Harvey P. Dale _ , Nov 18 2013 ●

▶ [A372019] 1,3,3,3,30,57,84,867,1893,3162,33132,76953,136812,1446204,3478764,6420387,68260134,167946159,317782524,3392340186,8479140510,16332164868,174873206424,442212416121,863222622780 ⋆ G.f. A(x) satisfies A(x) = (1 + 9 * x * A(x) / (1 - x * A(x))) ^ (1 / 3). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..n } 9 ^ k * binomial(n / 3 + 1 / 3,k) * binomial(n - 1,n - k). ●

▶ [A007768] 3,3,4,4,6,17,36,44,49,74,122,126,744,7814,9238,9432,52114,33241100,85747623,353210861,355051655,1950030118,32235431345,50590143817,58937626393 ⋆ From Engel product expansion of 4 / 7. ● a(n) = 1 + floor(1 / ((1 - A(n)) * b(n - 1))), A(n) = A(n - 1) * b(n - 1) / (b(n - 1) - 1), b(n) = Product _{ k=1..n } a(n), b(0) = 1, A(1) = 4 / 7. - _ Sean A. Irvine _ , Jan 23 2018 ●

▶ [A063197] 0,1,1,3,3,4,5,6,6,8,8,9,10,11,11,13,13,14,15,16,16,18,18,19,20 ⋆ Dimension of the space of weight 2n cuspidal newforms for Gamma _ 0(9). ● a(n) = a(n - 2) + a(n - 3) - a(n - 5) for n > 5. ● a(n) = n - 1 - floor((n - 1) / 2) + floor((n - 1) / 3). - _ Ridouane Oudra _ , Oct 15 2020 ●

▶ [A104803] 1,3,3,4,5,6,7,9,11,14,17,22,27,34,43,54,69,87,111,141,179,227,289,367,467 ⋆ a(n) = floor(sqrt(a(n - 1) ^ 2 + a(n - 2) ^ 2)), a(1)=1, a(2)=3. ● a(n) = floor(sqrt(a(n - 1) ^ 2 + a(n - 2) ^ 2)) with a(1)=1, a(2)=3. ●

▶ [A130481] 0,1,3,3,4,6,6,7,9,9,10,12,12,13,15,15,16,18,18,19,21,21,22,24,24 ⋆ a(n) = Sum _{ k=0..n } (k mod 3) (i.e., partial sums of A010872). ● a(n) = n + 1 - (Fibonacci(n + 1) mod 2). - _ Gary Detlefs _ , Mar 13 2011 ● a(n) = floor((n + 1) / 3) + floor(2 * (n + 1) / 3). - _ Clark Kimberling _ , May 28 2010 ● a(n) = n when n + 1 is not a multiple of 3, and a(n) = n + 1 when n + 1 is a multiple of 3. - _ Dennis P. Walsh _ , Aug 06 2012 ● a(n) = n + 1 - sign((n + 1) mod 3). - _ Wesley Ivan Hurt _ , Sep 25 2017 ● a(n) = n + (1 - cos(2 * (n + 2) * Pi / 3)) / 3 + sin(2 * (n + 2) * Pi / 3) / sqrt(3). - _ Wesley Ivan Hurt _ , Sep 27 2017 ● a(n) = n + 1 - (n + 1) ^ 2 mod 3. - _ Ammar Khatab _ , Aug 14 2020 ●

▶ [A092200] 1,3,3,4,6,6,7,9,9,10,12,12,13,15,15,16,18,18,19,21,21,22,24,24,25 ⋆ Expansion of (1 + 2x) / ((1 - x)(1 - x ^ 3)). ● a(n) = 4 / 3 + n + 2 * cos(Pi * 2(n - 1) / 3) / 3; ● a(n) = Sum _{ k=0..n } (k + 1) mod 3; ● a(n) = (n + 1) * (n + 2) / 2 - 3 * Sum _{ k=0..n } floor((k + 1) / 3); ● a(n) = 1 + n + Sum _{ k=0..n } Jacobi(k, 3). ● a(n) = a(n - 1) + a(n - 3) - a(n - 4); a(0)=1, a(1)=3, a(2)=3, a(3)=4. - _ Harvey P. Dale _ , Sep 15 2011 ● a(n) = n + 1 when n + 2 is not a multiple of 3, and a(n) = n + 2 when n + 2 is a multiple of 3. - _ Dennis P. Walsh _ , Aug 06 2012 ●

▶ [A152949] 3,3,4,6,9,13,18,24,31,39,48,58,69,81,94,108,123,139,156,174,193,213,234,256,279 ⋆ a(n) = 3 + binomial(n - 1,2). ● a(n) = a(n - 1) + n - 2 (with a(1)=3). - _ Vincenzo Librandi _ , Nov 27 2010 ●

▶ [A051263] 1,1,1,3,3,4,7,7,9,13,14,17,22,24,28,35,38,43,52,56,63,74,79,88,101 ⋆ Expansion of 1 / ((1 - x) * (1 - x ^ 3) ^ 2 * (1 - x ^ 5)). ● a(- 12 - n) = - a(n). a(n) = a(n - 1) + 2 * a(n - 3) - 2 * a(n - 4) + a(n - 5) - 2 * a(n - 6) + a(n - 7) - 2 * a(n - 8) + 2 * a(n - 9) + a(n - 11) - a(n - 12). - _ Michael Somos _ , Mar 21 2003 ●

▶ [A049854] 1,3,3,4,8,15,26,45,79,139,244,428,751,1318,2313,4059,7123,12500,21936,38495,67554,118549,208039,365083,640676 ⋆ a(n)=Sum { a(k): k=0,1,2,...,n - 3,n - 1 } ; a(n - 2) is not a summand; 2 initial terms required. ● a(n)=2 * a(n - 1) - a(n - 2) + a(n - 3); 3 initial terms required. ●

▶ [A065678] 0,1,1,1,1,3,3,4,9,11,13,31,37,44,105,125,149,355,423,504,1201,1431,1705,4063,4841 ⋆ Minimum value t such that all quadruples of Diffy _ length >= n have a maximal value >= t. ● a(n) = 3 * a(n - 3) + a(n - 6) + a(n - 9). ●

▶ [A045794] 1,1,1,3,3,4,9,11,13,31,37,44,105,125,149,355,423,504,1201,1431,1705,4063,4841,5768,13745 ⋆ Consider all quadruples { a,b,c,d } which reach { k,k,k,k } in n steps under map { a,b,c,d }- > { |a - b|,|b - c|,|c - d|,|d - a| } ; look at max { a,b,c,d } ; sequence gives minimal value of this. ● a(n) = 3 * a(n - 3) + a(n - 6) + a(n - 9). ●

▶ [A130626] 3,3,4,9,21,44,87,171,340,681,1365,2732,5463,10923,21844,43689,87381,174764,349527,699051,1398100,2796201,5592405,11184812,22369623 ⋆ Second differences of A130624. ● a(n) = 3a(n - 1) - 3a(n - 2) + 2a(n - 3). - _ Paul Curtz _ , Apr 24 2008 ● a(n) = (5 / 6) * (1 / 2 - (1 / 2) * i * sqrt(3)) ^ n + (5 / 6) * (1 / 2 + (1 / 2) * i * sqrt(3)) ^ n + (4 / 3) * 2 ^ n - (1 / 6) * i * (1 / 2 - (1 / 2) * i * sqrt(3)) ^ n * sqrt(3) + (1 / 6) * i * (1 / 2 + (1 / 2) * i * sqrt(3)) ^ n * sqrt(3), with n >= 0 and i=sqrt(- 1). - _ Paolo P. Lava _ , Jun 12 2008 ●

▶ [A175796] 3,3,4,9,256 ⋆ H _ n(n, 2) where H _ c(a, b) is the hyperoperation function with operator c. ● a(n) = H _ n(n, 2) ●

► [A306521] 3,3,4,28,42,104,136,329,510,856,1449,2212,2782,3434,4188,5042,6001,7082,8276,9604,11062,12666,14405,31651,35694 ⋆ Least integer N > 2 such that the number of primes (<=N) <= the number of base - n - zero containing numbers (<=N). ● a(n) = min(k > 2 | pi(k) <= numOfZeroNum _ n(k)). Because of d = d(n) < 1, numOfZeroNum _ n(k) = k * (1 + O(k ^ (d - 1)), pi(k) = k / log(k) * (1 + o(1)), and pi(3) = 2 >= 2 = numOfZeroNum _ n(3), this minimum always exists (for n > 2). The case n = 2 is obvious. See A324160 regarding general formulas for numOfZeroNum _ n(k). ● a(n) > e * (1 + c1 / c2 * (1 + sqrt(1 + c2 * c3 / c1 ^ 2))) ^ (1 / (1 - d)), for n > 6, ● a(n) > e * (1 + 1 / (sqrt(n * log(n)) - 2)) ^ (1 / (1 - d)). ● a(n) > e * (1 + 1 / (sqrt(n * log(n)) - 2)) ^ ((n - 1 / 2) * log(n)). ● a(n) = O(sqrt(n) * e ^ sqrt(n * log(n))). ●

► [A338215] 1,1,1,3,3,5,5,6,8,9,9,11,11,12,13,14,14,16,16,17,19,20,20,21,22 ⋆ a(n) = A095117(A062298(n)). ● a(n) = n - pi(n) + pi(n - pi(n)), where pi(n) is the prime count of n. ●

► [A063196] 0,1,3,3,5,5,7,7,9,9,11,11,13,13,15,15,17,17,19,19,21,21,23,23,25 ⋆ Dimension of the space of weight 2n cuspidal newforms for Gamma _ 0(7). ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n > 4. ●

► [A237718] 1,1,1,1,1,1,1,1,1,3,3,5,5,7,7,9,9,11,15,17,25,27,39,41,57 ⋆ 9 - distance Pell numbers. ● a(0)=1, a(1)=1, a(2)=1, a(3)=1, a(4)=1, a(5)=1, a(6)=1, a(7)=1, a(8)=1; a(n) = 2 * a(n - 9) + a(n - 2) for n>=9. ● a(2 * n) = Sum _{ j=0..n / 9 } Binomial[n - 7j, 2j] * 2 ^{ 2j } + Sum _{ j=0..(n - 5) / 9 } Binomial[n - 4 - 7j, 2j + 1] * 2 ^{ 2j + 1 } . ● a(2 * n + 1) = Sum _{ j=0..n / 9 } Binomial[n - 7j, 2j] * 2 ^{ 2j } + Sum _{ j=0..(n - 4) / 9 } Binomial[n - 3 - 7j, 2j + 1] * 2 ^{ 2j + 1 } . ●

► [A237716] 1,1,1,1,1,1,1,3,3,5,5,7,7,9,13,15,23,25,37,39,55,65,85,111,135 ⋆ 7 - distance Pell sequence. ● a(0)=1, a(1)=1, a(2)=1, a(3)=1, a(4)=1, a(5)=1, a(6)=1; a(n) = 2 * a(n - 7) + a(n - 2) for n>=7. ● a(2 * n) = Sum _{ j=0..n / 7 } Binomial[n - 5j, 2j] * 2 ^{ 2j } + Sum _{ j=0..(n - 4) / 7 } Binomial[n - 3 - 5j,2j + 1 }* 2 ^{ 2j + 1 } . ● a(2 * n + 1) = Sum _{ j=0..n / 7 } Binomial[n - 5j, 2j] * 2 ^{ 2j } + Sum _{ j=0..(n - 3) / 7 } Binomial[n - 2 - 5j,2j + 1 }* 2 ^{ 2j + 1 }). ●

► [A237714] 1,1,1,1,1,3,3,5,5,7,11,13,21,23,35,45,61,87,107,157,197,279,371,493,685 ⋆ Expansion of (1 + x) / (1 - x ^ 2 - 2 * x ^ 5). ● a(0)=1, a(1)=1, a(2)=1, a(3)=1, a(4)=1, a(n) = 2 * a(n - 5) + a(n - 2) for n>=5. ● a(2n) = sum _{ j=0 }^{ n / 5 } C(n - 3j,2j) * 2 ^ (2j) + sum _{ j=0 }^{ (n - 3) / 5 } C(n - 2 - 3j,2j + 1) * 2 ^ (2j + 1). ● a(2n + 1) = sum _{ j=0 }^{ n / 5 } C(n - 3j,2j) * 2 ^ (2j) + sum _{ j=0 }^{ (n - 2) / 5 } C(n - 1 - 3j,2j + 1) * 2 ^ (2j + 1). ●

► [A339555] 1,1,1,1,3,3,5,5,11,25,41,41,80,80,144,284,568,568,1147,1147,2339,4667,8763,8763,17548 ⋆ Number of subsets of { 2..n } such that the product of the elements is a perfect power. ● a(p) = a(p - 1) for p prime. ●

► [A131209] 0,1,3,3,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25 ⋆ Maximal distance between two signed permutations of n elements. ● a(n) = n + 1 except for n=0,1,3. ●

► [A265430] 0,1,3,3,5,6,8,8,10,11,13,13,15,16,18,18,20,21,23,23,25,26,28,28,30 ⋆ Number of OFF (white) cells in the n - th iteration of the "Rule 188" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = 1 / 8 * (10 * n + 3 * (- 1) ^ n - (1 - i) * (- i) ^ n - (1 + i) * i ^ n - 1) where i = sqrt(- 1). ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>4. ●

► [A222657] 1,3,3,5,7,7,9,11,11,13,15,15,17,19,19,21,23,23,25,27,27,29,31,31,33 ⋆ a(n) = 2 * floor((2 * n + 1) / 3) + 1. ● a(n + 3) = a(n) + 4. ● a(n) = (12 * n + 9 + 4 * sqrt(3) * sin(2 * n * Pi / 3)) / 9. - _ Wesley Ivan Hurt _ , Sep 29 2017 ●

► [A293990] 1,3,3,5,7,9,9,11,13,15,15,17,19,21,21,23,25,27,27,29,31,33,33,35,37 ⋆ a(n) = (3 * n + ((n - 2) mod 4)) / 2. ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n > 5. ● a(n + 8) = a(n) + 12. - _ David A. Corneth _ , Oct 21 2017 ●

► [A323703] 1,3,3,5,7,9,11,13,15,19,21,25,27,29,31,35,39,41,45,47,49,53,55,59,65 ⋆ Number of values of (X ^ 3 + X) mod prime(n). ● a(n) = prime(n) - 2 * floor(prime(n) / 6 + 1 / 2), for n >= 3. - _ Ridouane Oudra _ , Jun 13 2020 ●

► [A086341] 1,3,3,5,7,9,15,17,31,33,63,65,127,129,255,257,511,513,1023,1025,2047,2049,4095,4097,8191 ⋆ a(n) = 2 * 2 ^ floor(n / 2) - (- 1) ^ n. ● a(n) = (1 + 1 / sqrt(2)) * sqrt(2) ^ n + (1 - 1 / sqrt(2)) * (- sqrt(2)) ^ n - (- 1) ^ n. ● a(n) = a(n - 1) + 2 * a(n - 2) + 2 * a(n - 3); a(0)=1, a(1)=3, a(2)=3. - _ Harvey P. Dale _ , Mar 10 2013 ●

► [A128424] 1,3,3,5,7,10,14,20,29,42,61,89,130,190,278,407,596,873,1279,1874,2746,4024,5897,8642,12665 ⋆ a(n) = floor(sqrt(a(n - 1) ^ 2 + a(n - 2) ^ 2 + a(n - 1) * a(n - 2))), a(1)=1, a(2)=3. ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) - a(n - 4) for n>7. ●

► [A306276] 1,1,1,1,3,3,5,7,11,15,23,33,49,71,105,153,225,329,483,707,1037,1519,2227,3263,4783 ⋆ a(0) = a(1) = a(2) = a(3) = 1; thereafter a(n) = a(n - 2) + a(n - 3) + a(n - 4). ● a(n) = a(n - 2) + a(n - 3) + a(n - 4) for n >= 4, a(n) = 1 for n < 4. ●

► [A001588] 1,3,3,5,7,11,17,27,43,69,111,179,289,467,755,1221,1975,3195,5169,8363,13531,21893,35423,57315,92737 ⋆ a(n) = a(n - 1) + a(n - 2) - 1. ● a(n) = F(n - 2) + F(n + 1) + 1, n >= 0 (where F(n) is the n - th Fibonacci number). - _ Zerinvary Lajos _ , Feb 01 2008 ● a(n) = 1 + (2 / 5) * ((1 / 2) + (1 / 2) * sqrt(5)) ^ n * sqrt(5) - (2 / 5) * sqrt(5) * ((1 / 2) - (1 / 2) * sqrt(5)) ^ n, with n >= 0. - _ Paolo P. Lava _ , Nov 21 2008 ●

► [A107029] 1,1,3,3,5,7,11,19,35,69,151,339,829,2111,5607,15737,45289,136477,423279,1353671,4471673,15114479,52605755,187162155,681817179 ⋆ Diagonal sums of number triangle A107027. ● a(n)=sum { k=0..floor(n / 2), (n - 2k - 1)C((n - 2k) * k, k) - (n - 2k - 2) * sum { j=0..k, C((n - 2k) * k, j) }} ●

► [A193744] 3,3,5,8,10,15,20,27,37,49,66,88,117,156,207,275,365,484,642,851,1128,1495,1981,2625,3478 ⋆ Partial sum of Perrin numbers. ● a(n)=Perrin(n + 5) - 2 ● a(n)=r1 ^ (n + 5) + r2 ^ (n + 5) + r3 ^ (n + 5) - 2, where r1, r2, r3 are three roots of x ^ 3 - x - 1=0. ●

► [A373566] 1,3,3,5,8,13,21,34,55,89,144,233,377,610,987,1597,2584,4181,6765,10946,17711,28657,46368,75025,121393 ⋆ Expansion of x - 1 / (x - 1 / (x + 1)). ● a(n) = [x ^ n] (x ^ 3 + x ^ 2 - 2 * x - 1) / (x ^ 2 + x - 1). ● a(n) = 2 ^ (- n - 1) * ((1 - sqrt(5)) ^ n * (sqrt(5) - 3) + (1 + sqrt(5)) ^ n * (sqrt(5) + 3)) / sqrt(5) for n <> 1. ●

► [A293676] 0,3,3,5,8,14,22,35,57,92,150,242,391,633,1025,1658,2683,4341,7024,11365,18389,29754,48143,77898,126041 ⋆ a(n) is the integer k that minimizes |e - k / Fibonacci(n)|. ● a(n) = floor(1 / 2 + e * Fibonacci(n)). ●

► [A287195] 1,3,3,5,9,9,12,18,18,22,30,30,35,45,45,51,63,63,70,84,84,92,108,108,117 ⋆ Independence and clique covering number of the n - triangular honeycomb acute knight graph. ● a(n) = a(n - 1) + 2 * a(n - 3) - 2 * a(n - 4) - a(n - 6) + a(n - 7) for n>7. ●

► [A179437] 0,1,1,1,1,1,3,3,5,9,9,13,15,15,17,21,25,25,29,31,31,35,37,41,47 ⋆ a(n) = |2n - prime(n)|. ● a(n) = prime(n) - 2 * n for n != 2, 3, 4; a(n) = 1 otherwise. - _ Jianing Song _ , Jan 15 2023 ●

► [A091916] 1,1,1,3,3,5,9,9,15,27,27,45,81,81,135,243,243,405,729,729,1215,2187,2187,3645,6561 ⋆ Maximum of odd products of partitions of n. ● a(3 * n) = 3 ^ n; a(3 * n + 1) = a(3 * n); a(3 * n + 2) = 5 * 3 ^ (n - 1) for n >= 1. ●

► [A159284] 0,1,1,1,3,3,5,9,11,19,29,41,67,99,149,233,347,531,813,1225,1875,2851,4325,6601,10027 ⋆ Expansion of x * (1 + x) / (1 - x ^ 2 - 2 * x ^ 3). ● a(n) = a(n - 2) + 2 * a(n - 3), a(0)=0, a(1) = a(2) =1. - _ G. C. Greubel _ , Apr 30 2017 ●

► [A104220] 1,1,1,3,3,5,9,13,21,35,55,89,145,233,377,611,987,1597,2585,4181,6765,10947,17711,28657,46369 ⋆ a(n) = 1 + Fibonacci(n) - (Fibonacci(n) mod 2). ● a(n) = (1 + 3 * Fibonacci(n) + 2 * (- 1) ^ n * ChebyshevT(n, 1 / 2)) / 3. - _ G. C. Greubel _ , Jul 07 2022 ●

► [A000198] 1,1,3,3,5,9,21,21,81,81,81,243,243,441,1215,1701,1701,6561,6561,6561,45927,45927,45927,137781,137781 ⋆ Largest order of automorphism group of a tournament with n nodes. ● a(3 ^ k) = 3 ^ ((3 ^ k - 1) / 2), a(5 * 3 ^ k) = 5 * 3 ^ ((5 * 3 ^ k - 5) / 2), a(7 * 3 ^ k) = 7 * 3 ^ ((7 * 3 ^ k - 5) / 2), and, for all other n, a(n) = max(a(i)a(n - i)) where the maximum is taken over 1 <= i <= n - 1 (from Alspach and Berggren (1973) Theorem 4). ● a(3r) = (3 ^ r)a(r), a(n) = a(n - 1) for n = 1, 2 or 4 mod 9, a(9k + 8) = max(a(9k + 7), a(5)a(9k + 3)), a(9k + 5) = max(a(2)a(9k + 3), a(5)a(9k), a(7)a(9k - 2)), a(9k + 7) = a(7)a(9k) (from Alspach and Berggren (1973) Theorem 5). ●

► [A100886] 0,1,3,3,5,10,14,23,39,61,99,162,260,421,683,1103,1785,2890,4674,7563,12239,19801,32039,51842,83880 ⋆ Expansion of x * (1 + 3 * x + 2 * x ^ 2) / ((1 + x + x ^ 2) * (1 - x - x ^ 2)). ● a(n) = a(n - 2) + 2a(n - 3) + a(n - 4), a(0) = 0, a(1) = 1, a(2) = 3, a(3) = 3. ● a(n) = n * sum(j=1,floor(n / 2), binomial(2 * j,n - 2 * j) / (2 * j)). - _ Vladimir Kruchinin _ , Apr 09 2011 (with offset 1, cf. Pari code) ● a(n) = floor(phi ^ (n + 1) / 2), n mod 3 = 0,1; a(n) = floor((phi ^ (n + 1) + 3) / 2), n mod 3 = 2, phi = (1 + sqrt(5)) / 2; from Binet's formula or the relation to the Lucas numbers A000032. - _ Wojciech Florek _ , Mar 03 2018 ●

► [A133190] 1,3,3,5,13,27,51,101,205,411,819,1637,3277,6555,13107,26213,52429,104859,209715,419429,838861,1677723,3355443,6710885,13421773 ⋆ a(n) = 2 * a(n - 1) - a(n - 2) + 2 * a(n - 3). ● a(n) = ((1 - 7 * i) * i ^ n + 8 * 2 ^ n + (1 + 7 * i) * (- i) ^ n) / 10, with n>=0 and i=sqrt(- 1). - _ Paolo P. Lava _ , Jun 09 2008 ●

► [A052898] 3,3,5,13,49,241,1441,10081,80641,725761,7257601,79833601,958003201,12454041601,174356582401,2615348736001,41845579776001,711374856192001,12804747411456001,243290200817664001 ⋆ 2 * n! + 1. ● a(0)=3; for n>0, a(n) = n * a(n - 1) - n + 1. ●

► [A188270] 1,3,3,6,6,10,10,15,17,23,27,34,40,48,56,65,75,87,99,114,128,146,162,183,201 ⋆ Number of nondecreasing strings of numbers (x(i), i=1..n) in - 2..2 with sum x(i) ^ 3 equal to 0. ● a(n) - (n ^ 3 / 108 + (5 / 72) * n ^ 2 + (19 / 36) * n) is periodic with period 18. (End) ●

► [A333885] 0,0,0,1,1,3,3,6,7,9,9,16,16,18,20,26,26,33,33,40,42,44,44,59,60 ⋆ Number of triples (i,j,k) with 1 <= i < j < k <= n such that i divides j divides k. ● a(n) = Sum _{ m=1..n } Sum _{ d|m, d<m } (tau(d) - 1). - _ Alois P. Heinz _ , Apr 09 2020 ●

► [A211541] 0,0,1,1,3,3,6,7,11,11,17,18,24,25,33,34,43,44,54,56,67,68,81,83,96 ⋆ Number of ordered triples (w,x,y) with all terms in { 1,...,n } and 2w=3x - 4y. ● a(n) = a(n - 2) + a(n - 3) + a(n - 4) - a(n - 5) - a(n - 6) - a(n - 7) + a(n - 9). ●

► [A056508] 0,1,1,3,3,6,7,13,15,25,31,50,63,99,127,197,255,391,511,777,1023,1551,2047,3090,4095 ⋆ Number of periodic palindromic structures of length n using exactly two different symbols. ● a(2n + 1) = 2 ^ n - 1. - _ Andrew Howroyd _ , Apr 07 2017 ●

► [A078477] 1,1,1,3,3,6,7,15,15,30,31,63,63,126,127,255,255,510,511,1023,1023,2046,2047,4095,4095 ⋆ Number of rational knots with n crossings and unknotting number = 1 (chiral pairs counted only once). ● a(n) = 2 * a(n - 2) + a(n - 4) - 2 * a(n - 6) for n>10. - _ Colin Barker _ , Dec 26 2015 ●

► [A309455] 0,0,0,3,3,6,8,11,13,18,19,24,27,33,36,44,47,54,59,66,70,81,84,95,100 ⋆ Number of squarefree parts in the partitions of n into 3 parts. ● a(n) = Sum _{ j=1..floor(n / 3) } Sum _{ i=j..floor((n - j) / 2) } (mu(i) ^ 2 + mu(j) ^ 2 + mu(n - i - j) ^ 2), where mu is the Möbius function (A008683). ●

► [A168637] 0,1,3,3,6,8,11,16,21,29,39,52,70,93,124,165,219,291,386,512,679,900,1193,1581,2095 ⋆ a(n) = a(n - 1) + a(n - 2) - a(n - 4) starting a(0)=0, a(1)=1, a(2)=a(3)=3. ● a(n) = a(n - 2) + a(n - 3) + 2. - _ Greg Dresden _ , May 18 2020 ●

► [A289143] 0,0,3,3,6,9,12,18,21,27,33,39,45,51,60,67,75,84,94,105,114,126,138,150,162 ⋆ Matching number of the n - triangular honeycomb acute knight graph. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) - a(n - 6) + 3 * a(n - 7) - 3 * a(n - 8) + a(n - 9) for n>9. ●

► [A293675] 0,3,3,6,9,14,22,36,58,93,150,242,392,634,1025,1659,2683,4342,7025,11366,18390,29755,48144,77898,126042 ⋆ a(n) is the least integer k such that k / Fibonacci(n) > e. ● a(n) = ceiling(e * Fibonacci(n)). ●

► [A022086] 0,3,3,6,9,15,24,39,63,102,165,267,432,699,1131,1830,2961,4791,7752,12543,20295,32838,53133,85971,139104 ⋆ Fibonacci sequence beginning 0, 3. ● a(n) = round(((6 * phi - 3) / 5) * phi ^ n) for n>2. - _ Thomas Baruchel _ , Sep 08 2004 ● a(n) = 3 * F(n). Also, a(n) = F(n - 2) + F(n + 2) for n>1, with F=A000045. ● a(n) = F(n + 4) + F(n - 4) - 4 * F(n). - _ Bruno Berselli _ , Dec 29 2016 ●

► [A097135] 1,3,3,6,9,15,24,39,63,102,165,267,432,699,1131,1830,2961,4791,7752,12543,20295,32838,53133,85971,139104 ⋆ a(0) = 1; for n>0, a(n) = 3 * Fibona

cci(n). • a(n) = a(n - 1) + a(n - 2) for n>2. • a(n) = L(n + 1) - F(n - 1) for n >=1, where L=A000032 and F=A000045. - _ Paolo P. Lava _ , Sep 17 2015 •
▶ [A293677] 0,3,3,6,9,15,25,40,65,106,172,279,452,731,1184,1916,3100,5017,8117,13134,21252,34387,55640,90028,145669 ⋆ a(n) is the greatest integer k such that k / Fibonacci(n) < Pi. • a(n) = floor(Pi * Fibonacci(n)). •
▶ [A293679] 0,3,3,6,9,16,25,41,66,107,173,280,452,732,1184,1916,3101,5017,8118,13135,21253,34388,55641,90029,145669 ⋆ a(n) is the integer k that minimizes | k / Fibonacci(n) - Pi|. • a(n) = floor(1 / 2 + Pi * Fibonacci(n)). •
▶ [A049871] 1,3,3,6,10,20,37,70,130,243,453,846,1579,2948,5503,10273,19177,35799,66828,124752,232882,434735,811546,1514962,2828071 ⋆ a(n)=Sum { a(k): k=0,1,2,...,n - 4,n - 2,n - 1 } ; a(n - 3) is not a summand; 3 initial terms required. • a(n)=2 * a(n - 1) - a(n - 3) + a(n - 4); 4 initial terms required. •
▶ [A367644] 3,3,6,11,18,30,52,91,159,278,487,854,1498,2628,4611,8091,14198,24915,43722,76726,134644,236283,414647,727654,1276943 ⋆ Number of maximal independent vertex sets and minimal vertex covers in the n - trapezohedral graph. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + 2 * a(n - 3) - a(n - 4). •
▶ [A052560] 3,3,6,18,72,360,2160,15120,120960,1088640,10886400,119750400,1437004800,18681062400,261534873600,3923023104000,62768369664000,1067062284288000,19207121117184000,364935301226496000,7298706024529920000,153272826515128320000 ⋆ a(n) = 3 * n!. • a(n) = n * a(n - 1), with a(0) = 3. •
▶ [A284710] 3,3,6,23,43,102,213,447,978,2083,4491,9650,20699,44495,95536,205215,440813,946758,2033611,4367943,9381882,20151431,43283105,92967858,199685543 ⋆ Number of maximal matchings in the n - Moebius ladder. • a(n) = a(n - 1) + 2 * a(n - 2) + a(n - 3) - a(n - 4) + 2 * a(n - 5) + a(n - 6) - a(n - 7) - a(n - 8). •
▶ [A063212] 1,3,3,7,7,9,11,13,13,17,17,19,21,23,23,27,27,29,31,33,33,37,37,39,41 ⋆ Dimension of the space of weight 2n cuspidal newforms for Gamma _ 0(44). • a(n) = a(n - 2) + a(n - 3) - a(n - 5). G.f.: x * (1 + 3 * x + 2 * x ^ 2 + 3 * x ^ 3 + x ^ 4) / ((1 - x) ^ 2 * (1 + x) * (1 + x + x ^ 2)). [_ Colin Barker _ , Sep 27 2012] •
▶ [A336416] 1,1,1,1,3,3,7,7,11,18,36,36,47,47,84,122,166,166,221,221,346,416,717,717,1001 ⋆ Number of perfect - power divisors of n!. • a(p) = a(p - 1) for prime p. - _ David A. Corneth _ , Aug 19 2020 •
▶ [A263869] 3,3,7,7,16,17,41,48,113,141,303,387,752,962,1713,2175,3607,4531,7095,8811,13168,16171,23257,28262,39365 ⋆ Number of (n + 1) X (4 + 1) 0..1 arrays with each row and column divisible by 3, read as a binary number with top and left being the most significant bits, and rows and columns lexicographically nondecreasing. • a(n) = (315 * (2889 - 841 * (- 1) ^ n) + (537927 - 96327 * (- 1) ^ n) * n - 21 * (- 4723 + 755 * (- 1) ^ n) * n ^ 2 - 7 * (- 1469 + 45 * (- 1) ^ n) * n ^ 3 - 105 * (3 + 5 * (- 1) ^ n) * n ^ 4 - 7 * (- 29 + 9 * (- 1) ^ n) * n ^ 5 + 42 * n ^ 6 + 2 * n ^ 7) / 645120. •
▶ [A182559] 0,1,1,3,3,7,8,16,20,36,46,78,100,166,212,346,442,713,910,1456,1858,2955,3770,5971,7617 ⋆ a(n) = a(n - 2) * 2 + floor(sqrt(a(n - 1))). • a(0)=0, a(1)=1, a(n) = a(n - 2) * 2 + floor(sqrt(a(n - 1))). •
▶ [A285187] 1,3,3,7,9,15,22,33,48,71,101,147,208,297,419,591,829,1161,1619,2255,3130,4339,6000,8285,11419 ⋆ a(n) = Sum(psi(k - 1) * psi(n - k - 1),k=0..n) + (1 - (- 1) ^ n) / 2, where psi(k) = A000931(k + 6). • a(n) = 3 * a(n - 2) + 2 * a(n - 3) - 3 * a(n - 4) - 4 * a(n - 5) + 2 * a(n - 7) + a(n - 8) for n>7. (End) •
▶ [A258289] 1,1,1,3,3,7,9,17,21,43,57,109,157,301,447,895,1307,2663,4207,8463,13283,28489,45151,95485,157767 ⋆ Number of partitions of 1, 2, 3, or more copies of n into distinct parts. • a(n) = Sum _{ k=1..max(1,ceiling(n / 2)) } 1 / k! * [Product _{ i=1..k } x _ i ^ n] Product _{ j>0 } (1 + Sum _{ i=1..k } x _ i ^ j). •
▶ [A066983] 1,1,1,3,3,7,9,17,25,43,67,111,177,289,465,755,1219,1975,3193,5169,8361,13531,21891,35423,57313 ⋆ a(n + 2) = a(n + 1) + a(n) + (- 1) ^ n, with a(1) = a(2) = 1. • a(n) = 2 * Fibonacci(n - 2) + (- 1) ^ n. - _ Vladeta Jovovic _ , Mar 19 2003 • a(n) = floor(phi ^ (n - 1)) - floor(phi ^ (n - 1) / sqrt(5)). - _ Federico Provvedi _ , Mar 26 2013 • a(1) = a(2) = a(3) = 1; for n > 3, a(n) = 2 * a(n - 2) + a(n - 3). - _ Taras Goy _ , Aug 03 2018 • a(n) = (- 1) ^ n + (- 1 - 3 / sqrt(5)) * ((1 / 2) * (1 - sqrt(5))) ^ n + (- 1 + 3 / sqrt(5)) * ((1 / 2) * (1 + sqrt(5))) ^ n. - _ Stefano Spezia _ , Jul 22 2019 •
▶ [A122012] 0,3,3,7,9,18,24,47,63,123,165,322,432,843,1131,2207,2961,5778,7752,15127,20295,39603,53133,103682,139104 ⋆ G.f.: x ^ 2 * (3 + 3 * x - 2 * x ^ 2) / ((x ^ 2 - x - 1) * (x ^ 2 + x - 1)). • a(n)= 3 * a(n - 2) - a(n - 4). •
▶ [A056295] 0,1,1,3,3,7,9,19,29,55,93,179,315,595,1095,2067,3855,7315,13797,26271,49939,95419,182361,349715,671091 ⋆ Number of n - bead necklace structures using exactly two different colored beads. • a(n) = (1 / n) * Sum _{ d|n } phi(d) * S2(n / d + [d == 0 mod 2], 2), where S2(n, k) is the Stirling subset number, A008277. (End) •
▶ [A013915] 3,3,7,10,16,24,37,57,89,140,222,354,567,911,1467,2366,3820,6172,9977,16133,26093,42208,68282,110470,178731 ⋆ a(n) = F(n) + L(n) + n, where F(n) (A000045) and L(n) (A000204) are Fibonacci and Lucas numbers respectively. • a(n) = a(n - 1) + a(n - 2) - n + 3. • a(n) = 3 * a(n - 1) - 2 * a(n - 2) - a(n - 3) + a(n - 4). •
▶ [A136445] 3,3,7,10,17,25,40,57,85,121,172,240,335,459,630,856,1160,1564,2105,2821,3777,5044,6728,8961,11926 ⋆ Size of the BDD for the hidden weighted bit function, with the variables in their natural ordering. • a(n) = (56 * P(n + 2) + 77 * P(n + 1) + 47 * P(n)) / 23 - floor(n ^ 2 / 4) - floor((7 * n + 1) / 3) + (n mod 2) - 10, where P = A001608. - _ Don Knuth _ , Dec 09 2008 •
▶ [A362055] 1,1,1,3,3,7,11,17,33,49,89,147,243,423,691,1185,1985,3329,5649,9443,15971,26855,45179,76209,128097 ⋆ Number of compositions of n that are anti - palindromic modulo 2. • a(n) = Sum _{ 3 * i + j + r + 2 * s + 2 * d = n } (- 1) ^ r * 2 ^ i * binomial(i + j,j) * binomial(i,r) * binomial(i + s - 1,s) * binomial(i + d - 1,d). •
▶ [A022403] 3,3,7,11,19,31,51,83,135,219,355,575,931,1507,2439,3947,6387,10335,16723,27059,43783,70843,114627,185471,300099 ⋆ a(0)=a(1)=3; thereafter a(n) = a(n - 1) + a(n - 2) + 1. • a(n) = 4 * Fibonacci(n + 1) - 1. - _ G. C. Greubel _ , Mar 01 2018 • a(n) = (- 1 + (2 ^ (1 - n) * (- (1 - sqrt(5)) ^ (1 + n) + (1 + sqrt(5)) ^ (1 + n))) / sqrt(5)). - _ Colin Barker _ , Mar 02 2018 •
▶ [A277955] 1,3,3,7,11,23,43,87,171,343,683,1367,2731,5463,10923,21847,43691,87383,174763,349527,699051,1398103,2796203,5592407,11184811 ⋆ Decimal representation of the x - axis, from the origin to the right edge, of the n - th stage of growth of the two - dimensional cellular automaton defined by "Rule 14", based on the 5 - celled von Neumann neighborhood. • a(n) = (3 - 2 * (- 1) ^ n + 2 ^ (1 + n)) / 3. • a(n) = 2 * a(n - 1) + a(n - 2) - 2 * a(n - 3) for n>2. (End) •
▶ [A068626] 1,3,3,7,12,12,19,27,27,37,48,48,61,75,75,91,108,108,127,147,169,192,192,217 ⋆ a(3n) = a(3n - 1) = 3 * n ^ 2, a(3n - 2) = 3 * n ^ 2 - 3 * n + 1. • a(n) = a(n - 1) + 2 * a(n - 3) - 2 * a(n - 4) - a(n - 6) + a(n - 7) for n>7. •
▶ [A219211] 3,3,7,12,21,35,57,91,142,216,320,462,651,897,1211,1605,2092,2686,3402,4256,5265,6447,7821,9407,11226 ⋆ Number of n X 2 arrays of the minimum value of corresponding elements and their horizontal, vertical, diagonal or antidiagonal neighbors in a random, but sorted with lexicographically nondecreasing rows and columns, 0..2 n X 2 array. • a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>6. •
▶ [A088859] 3,3,7,12,23,43,82,157,303,588,1147,2247,4418,8713,17227,34132,67743,134643,267922,533637,1063703,2121628,4233907,8452687,16880898 ⋆ a(n) = L(n) + 2 ^ n where L(n) = A000032(n) (the Lucas numbers). • a(0)=3, a(1)=3, a(2)=7 and a(n) = 3 * a(n - 1) - a(n - 2) - 2 * a(n - 3) for n >= 3. •
▶ [A173321] 3,3,7,23,95,479,2879,20159,161279,1451519,14515199,159667199,1916006399,24908083199,348713164799,5230697471999,83691159551999,1422749712383999,25609494822911999,486580401635327999 ⋆ a(n) = 4 * n! - 1. • a(n) = n * a(n - 1) + n - 1 for n > 0, a(0) = 3. - _ Vincenzo Librandi _ , Sep 30 2013 •
▶ [A113166] 0,1,1,3,3,8,8,17,23,41,55,102,144,247,387,631,987,1636,2584,4233,6787,11011,17711,28794,46380 ⋆ Total number of white pearls remaining in the chest - see Comments. • a(n) = Sum _{ k=1..floor(n / 2) } (k / (n - k)) * Sum _{ j=1..gcd(n,k) } binomial((n - k) * gcd(n,k,j) / gcd(n,k), k * gcd(n,k,j) / gcd(n,k)) (Alekseyev). • a(p) = Fibonacci(p - 1) for all primes p. (_ Creighton Dement _ and _ Antti Karttunen _ , proved by _ Max Alekseyev _). • a(n) = Sum _{ d|n } phi(n / d) * Fibonacci(d - 1), where phi=A000010. - _ Maxim Karimov _ and Vladislav Sulima, Aug 20 2021 •
▶ [A279910] 0,0,3,3,8,11,18,18,21,26,37,40,53,60,68,68,85,88,107,112,122,133,156,159,164 ⋆ a(n) = Sum _{ k=1..n } prime(k + 1) * floor(n / prime(k + 1)). • a(n) = - 2 * floor(n / 2) + Sum _{ k=1..n } prime(k) * floor(n / prime(k)) . •
▶ [A105039] 1,1,3,3,8,11,20,34,59,96,167,282,475,800,1352,2275,3828,6426,10785,18085,30297,50698,84770,141623,236425 ⋆ Number of compositions of n with unique smallest part. • a(n) = 1 + sum(k=2..[(n + 3) / 2], k * sum(s=1..[(n - 1) / k], binomial(n - k * s - 1, k - 2))). - _ Max Alekseyev _ , Apr 15 2005 •
▶ [A213030] 0,0,1,3,3,8,12,12,21,27,27,40,48,48,65,75,75,96,108,108,133,147,147,176,192 ⋆ [2n / 3] ^ 2 - [n / 3] ^ 2, where []=floor. • a(n) = a(n - 1) + 2 * a(n - 3) - 2 * a(n - 4) - a(n - 6) + a(n - 7). •
▶ [A090597] 0,1,1,3,3,8,12,27,45,96,176,363,693,1408,2752,5547,10965,22016,43776,87723,174933,350208,699392,1399467,2796885 ⋆ a(n) = - a(n - 1) + 5(a(n - 2) + a(n - 3)) - 2(a(n - 4) + a(n - 5)) - 8(a(n - 6) + a(n - 7)). • a(n) = + a(n - 1) + 3 * a(n - 2) - a(n - 3) - 2 * a(n - 5) - 4 * a(n - 6). - _ R. J. Mathar _ , Nov 23 2011 • a(n) = (J(n - 3) + J((n - 3) / 2)) / 2 if n is odd; (J(n - 3) + J(n / 2)) / 2 if n is even, where J is the Jacobsthal number A001045. - _ David Scambler _ , Dec 12 2011 •
▶ [A219349] 3,3,8,15,27,46,76,122,190,287,421,601,837,1140,1522,1996,2576,3277,4115,5107,6271,7626,9192,10990,13042 ⋆ Number of n X 3 arrays of the minimum value of corresponding elements and their horizontal, vertical, diagonal or antidiagonal neighbors in a random, but sorted with lexicographically nondecreasing rows and columns, 0..1 n X 3 array. • a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n > 8. •
▶ [A327327] 0,0,3,3,8,17,24,24,36,51,62,83,96,117,140,140,157,193,212,247,278,311,334,379,409 ⋆ Partial sums of the sum of nonpowers of 2 dividing n. • a(n) = a(n - 1) when n is a power of 2. •
▶ [A027376] 1,3,3,8,18,48,116,312,810,2184,5880,16104,44220,122640,341484,956576,2690010,7596480,21522228,61171656,174336264,498111952,1426403748,4093181688,11767874940 ⋆ Number of ternary irreducible monic polynomials of degree n; dimensions of free Lie algebras. • a(n) = (1 / n) * Sum _{ d|n } mu(d) * 3 ^ (n / d). •
▶ [A056449] 1,3,3,9,9,27,27,81,81,243,243,729,729,2187,2187,6561,6561,19683,19683,59049,59049,177147,177147,531441,531441 ⋆ a(n) = 3 ^ floor((n + 1) / 2). • a(n) = k ^ ceiling(n / 2), where k = 3 is the number of possible colors. - _ Robert A. Russell _ , Nov 07 2018 •
▶ [A124281] 1,1,3,3,9,11,29,39,93,135,301,463,981,1575,3213,5327,10565,17943,34845,60255,115189,201895,381453,675375,1264869 ⋆ Expansion of 1 / (1 - x - 2 * x ^ 2 + 2 * x ^ 3 - 2 * x ^ 4). • a(n)=sum { k=0..floor(n / 2), sum { j=0..n - 2k, C(j,n - 2k - j)C(k,n - 2k - j) * 2 ^ k }} •
▶ [A215885] 3,3,9,24,69,198,570,1641,4725,13605,39174,112797,324786,935184,2692755,7753479,22325253,64283004,185095533,532961346,1534601034,4418707569,12723161361,36634883049,105485941578 ⋆ a(n) = 3 * a(n - 1) - a(n - 3), with a(0) = 3, a(1) = 3, and a(2) = 9. • a(n) = c(1) ^ (- n) + c(2) ^ (- n) + c(4) ^ (- n) = (- c(1) * c(2)) ^ n + (- c(1) * c(4)) ^ n + (- c(2) * c(4)) ^ n, where c(j) := 2 * cos(2 * Pi * j / 9). • a(n) = ceiling(r ^ n) for n >= 1, where r = 1 / A130880 is the largest root of x ^ 3 - 3 * x ^ 2 + 1. - _ Tamas Lengyel _ , Feb 20 2022 •
▶ [A117976] 1,3,3,9,27,27,57,171,171,513,1539,1539,4617,13851,13851,29241,87723,87723,261633,784899,784899,2354697,7064091,7064091,14913081 ⋆ Legendre - binomial transform of 2 ^ n for p=3. • a(n)=sum { k=0..n, L(C(n,k) / 3) * 2 ^ k } where L(j / p) is the Legendre symbol of j and p. •
▶ [A032086] 3,3,9,36,108,351,1053,3240,9720,29403,88209,265356,796068,2390391,7171173,21520080,64560240,193700403,581101209,1743362676,5230088028,15690441231,47071323693,141214502520,423643507560 ⋆ Number of reversible strings with n beads of 3 colors. If more than 1 bead, not palindromic. • a(n) = 3 * a(n - 1) + 3 * a(n - 2) - 9 * a(n - 3) for n > 4. • a(n) = (2 * 3 ^ n - 2 * 3 ^ (n / 2)) / 4 for n > 2 and even. • a(n) = (2 * 3 ^ n - 2 * 3 ^ ((n + 1) / 2)) / 4 for n > 2 and odd. •

► [A245023] 3,3,9,39,153,543,1809,5799,18153,55983,171009,519159,1569753,4733823,14250609,42850119,128746953,386634063,1160688609,3483638679,10454061753,31368476703,94118013009,282379204839,847187946153 ⋆ Number of cases of tie (no winner) in the n - person rock - paper - scissors game. ● a(n) = 5 * a(n - 1) - 5 * a(n - 2) - 5 * a(n - 3) + 6 * a(n - 4). - _ Colin Barker _ , Jul 26 2014 ●
► [A236170] 0,0,0,1,3,3,10,13,20,29,49,54,93,116,151,206,287,342,479,579,752,968,1242,1489,1923 ⋆ Number of partitions of n which have nonconstant reversal s ums, as defined in Comments. ● a(n) = p(n) - sum of C(floor(n / d) + floor(d / 2) - 1,floor(d / 2)) where C(n,k) denotes the binomial coefficient and d ranges a mong the divisors of 2 * n. - _ Giovanni Resta _ , Jan 24 2014 ●
► [A024313] 3,3,10,17,37,59,114,185,334,540,938,1518,2573,4163,6946,11239,18559,30029,49248,79685,130090,210490,342596,554332,900423 ⋆ a(n) = s(1) * t(n) + s(2) * t(n - 1) + ... + s(k) * t(n + 1 - k), where k = floor((n + 1) / 2)), s = (na tural numbers >= 3), t = A023531. ● a(2 * n) = Lucas(2 * n + 3) + F(2 * n + 2) - Lucas(n + 3) - (n + 1) * F(n + 2). ●
► [A121446] 3,3,10,42,198,1001,5304,29070,163438,937365,5462730,32256120,192565800,1160346492,7048030544,43108428198,265276342782,1641229898525,10202773534590,63698396932170,399223286267190,2510857763851185,15842014607109600,100244747986099080 ⋆ Number of ternary trees with n edges and such that the first leaf in the preorder traversal is at level 1. ● a(1) = 3 and a(n) = (2 / n) * binomial(3 * n - 3, n - 1) for n >= 2. ●
► [A321082] 0,1,3,3,11,11,11,11,11,267,267,1291,3339,7435,15627,15627,15627,15627,15627,15627,15627,539915,539915,539915,4734219,13122827 ⋆ Approximations up t o 2 ^ n for 2 - adic integer log _ (- 3)(5). ● a(2) = 0; for n >= 3, a(n) = a(n - 1) if (- 3) ^ a(n - 1) - 5 is divisible by 2 ^ n, otherwise a(n - 1) + 2 ^ (n - 3). ●
► [A318961] 3,3,11,11,11,75,75,331,843,1867,3915,8011,16203,16203,16203,81739,212811,474955,474955,474955,2572107,6766411,6766411,23543627,57098059 ⋆ One of the two successive approximations up to 2 ^ n for 2 - adic integer sqrt(- 7). This is the 3 (mod 4) case. ● a(2) = 3; for n >= 3, a(n) = a(n - 1) if a(n - 1) ^ 2 + 7 is divisible by 2 ^ (n + 1), otherwise a(n - 1) + 2 ^ (n - 1). ●
► [A032308] 1,3,3,12,12,21,48,57,84,120,228,264,399,516,732,1119,1416,1884,2532,3324,4296,6168,7545,9984,12684 ⋆ Expansion of Product _{ k>=1 } (1 + 3 * x ^ k). ● a(n) = (1 / 4) * [x ^ n] QPochammer(- 3, x). - _ Vladimir Reshetnikov _ , Nov 20 2015 ●
► [A049606] 1,1,1,3,3,15,45,315,315,2835,14175,155925,467775,6081075,42567525,638512875,638512875,10854718875,97692469875,1856156927625,928078463812 5,194896477400625,2143861251406875,49308808782358125,147926426347074375 ⋆ Largest odd divisor of n!. ● a(n) = numerator(2 * Sum _{ i>=1 } (- 1) ^ i * (1 - zeta(n + i + 1)) * (Product _{ j=1..n } i + j)). - _ Gerry Martens _ , Mar 10 2011 ● a(n) = denominator([t ^ n] 1 / (tanh(t) - 1)). - _ Peter Luschny _ , Aug 04 2011 ●
► [A215076] 3,3,17,66,269,1088,4406,17839,72229,292449,1184102,4794331,19411850,78596976,318232659,1288497731,5217020805,21123285998,85526438945,346289481632,1402097486674,5676976825495,22985609904813,93066834503093,376819919954026 ⋆ a(n) = 3 * a(n - 1) + 4 * a(n - 2) + a(n - 3) with a(0)=3, a(1)=3, a(2)=17. ● a(n) = Sum _{ i + 2j + 3k=n } 3 ^ i * 4 ^ j * n * (i + j + k - 1)! / (i! * j! * k!). ● a(n) = r ^ n + s ^ n + t ^ n where { r,s,t } are the roots of 1 + 4 * x + 3 * x ^ 2 - x ^ 3. - _ Joerg Arndt _ , Jul 09 2020 ● a(n) = 3 * a(n - 1) + 4 * a(n - 2) + a(n - 3). - _ Wesley Ivan Hurt _ , Jul 09 2020 ●
► [A189737] 3,3,18,63,243,918,3483,13203,50058,189783,719523,2727918,10342323,39210723,148659138,563609583,2136806163,8101247238,30714160203,116446222323,441481147578,1673782109703,6345789771843,24058715644638,91213516249443 ⋆ a(1)=3, a(2)=3, a(n)=3 * a(n - 1) + 3 * a(n - 2) ● a(n)=3 / 2 * ((3 / 2 + 1 / 2 * sqrt(21)) ^ (n - 1) + (3 / 2 - 1 / 2 * sqrt(21)) ^ (n - 1) + 1 / 14 * sqrt(21) * ((3 / 2 - 1 / 2 * sqrt(21)) ^ (n - 1) - (3 / 2 + 1 / 2 * sqrt(21)) ^ (n - 1)). - Paolo P. Lava, May 24 2011 ●
► [A214778] 3,3,21,84,381,1668,7374,32511,143445,632775,2791506,12314613,54325650,239656134,1057236915,4663973199,20574997221,90766067772,400412159841,1766407883376,7792462676946,34376247490935,151649926417857,668999726876127,2951274986626458 ⋆ a(n) = 3 * a(n - 1) + 6 * a(n - 2) + a(n - 3), with a(0) = 3, a(1) = 3, and a(2) = 21. ● a(n) = (c(1) / c(2)) ^ n + (c(2) / c(4)) ^ n + (c(4) / c(1)) ^ n, where c(j) := Cos(2 * Pi * j / 9). ●
► [A096351] 1,1,3,3,30,90,315,315,11340,113400,1247400,3742200,48648600,170270100,638512875,638512875,86837751000,3126159036000,118794043368000,1187940433680000,49893498214560000,548828480360160000,6311527524141840000 ⋆ Number of meaningfully different ways to design a neutral single - elimination t ournament with n teams. ● a(n) = 1 if n = 1. a(n) = ((n! / ((n / 2)! * (n / 2)!)) * (a(n / 2)) ^ 2) / 2 if n is even. a(n) = ((n! / ((((n - 1) / 2)! * ((n + 1) / 2)!))) * a((n + 1) / 2) * a((n - 1) / 2)) if n is odd and > 1. ●
► [A344934] 1,1,3,3,30,135,315,315,11340,198450,2182950,16372125,85135050,297972675,638512875,638512875,86837751000,5861548192500,259861969867500,8445514020693750,212826953321482500,4292010225316563750,705115965587721187 50,951906553543423603125,1057673948381581781250 0 ⋆ Number of rooted binary phylogenetic trees with n leaves and minimal Sackin tree balance index. ● a(n) = g(n) + sum over all described pairs (na,nb): binomial(n,na) * a(na) * a(nb). ● a(n) = g(n) + Sum _{ i=floor(n / 2) + 1..2 ^ (k - 1), i <= 2 ^ (k - 2) } binomial(n,i) * a(i) * a(n - i), where k = ceiling(log _ 2(n)) and g(n)=0 for odd n, g(n) = binomial(n,n / 2) * a(n / 2) / 2 for even n. ●
► [A290567] 0,3,3,53,303,2178,5303,67803,67803,849053,6708428,6708428,6708428,983270928,983270928,25397333428,147467645928,605231317803,1368170770928,5182868036553,43329840692803,43329840692803,43329840692803,4811701422724053,52495417243036553 ⋆ The successive approximations up to 5 ^ n for 5 - adic integer 2 ^ (1 / 3). ● a(0) = 0 and a(1) = 3, a(n) = a(n - 1) + 2 * (a(n - 1) ^ 3 - 2) mod 5 ^ n for n > 1. ●
► [A215560] 3,3,101,444,5981,38468,390974,2948431,26868565,216624495,1888775906,15657923053,134074085330,1124375492334,9556192325235,80523923708399,682280993578341,5760499663646612,48746948619251921,411906111379078256,3483838470286469746,29447943482916260935 ⋆ a(n) = 3 * a(n - 1) + 46 * a(n - 2) + a(n - 3) with a(0)=a(1)=3, a(2)=101. ● a(n) = (c(1) ^ 4 / c(2)) ^ n + (c(2) ^ 4 / c(4)) ^ n + (c(4) ^ 4 / c(1)) ^ n, where c(j) = 2 * cos(2 * Pi * j / 7). ●
► [A121500] 3,4,4,5,6,6,7,7,8,9,9,10,11,12,12,13,14,14,15,16,16,17,18,19,19 ⋆ Minimal polygon values for a certain polygon problem leading to an approximation of Pi. ● a(n) = min(abs(E(n,m)),m >= 3), n>=3 (checked for m=3..3 + 500), with E(n,m):= ((Fin(n) + Fout(m)) / 2 - Pi) / Pi), where Fin(n):=(n / 2) * sin (2 * Pi / n) and Fout(m):= m * tan(Pi / m). Fin(n) is the area of the regular n - gon inscribed in the unit circle. Fout(n) is the area of a regular n - gon circum scribing the unit circle. ●
► [A157726] 3,4,4,5,6,8,11,16,24,37,58,92,147,236,380,613,990,1600,2587,4184,6768,10949,17714,28660,46371 ⋆ a(n) = Fibonacci(n) + 3. ● a(0) = 3, a(1) = 4, a(n) = a(n - 2) + a(n - 1) - 3. - _ Reinhard Zumkeller _ , Jul 30 2013 ●
► [A098181] 1,3,4,4,5,7,8,8,9,11,12,12,13,15,16,16,17,19,20,20,21,23,24,24,25 ⋆ Two consecutive odd numbers separated by multiples of four, repeated twice, between them, written in increasing order. ● a(n) = ((2 * n + 3) - cos(Pi * n / 2) + sin(Pi * n / 2)) / 2. ● a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4). ● a(n) = floor(C(n + 3, 2) / 2) - floor(C(n + 1, 2) / 2). - _ Paul Barry _ , Jan 01 2005 ● a(4 * n) = 4 * n + 1, a(4 * n + 1) = 4 * n + 3, a(4 * n + 2) = a(4 * n + 3) = 4 * n + 4. - _ Philippe Deléham _ , Apr 06 2007 ● a(- 3 - n) = - a(n) for all n in Z. - _ Michael Somos _ , Sep 11 2014 ● a(n) = (2 * n + 3 - (- 1) ^ ceiling(n / 2)) / 2. - _ Wesley Ivan Hurt _ , Sep 29 2017 ●
► [A322407] 0,1,3,4,4,5,7,8,9,11,12,12,13,15,16,18,19,19,20,22,23,24,26,27,27 ⋆ Compound sequence a(n) = A319198(A278039(n)), for n >= 0. ● a(n) = z(B(n)) = Sum _{ j=0..B(n) } t(j), n >= 0, with z = A319198, B = A278039 and t = A080843. ● a(n) = Sum _{ k=1..n - 1 } d(k), where d is the tribonacci sequence on the alphabet { 1,2,0 } . - _ Michel Dekking _ , Oct 08 2019 ●
► [A014683] 1,3,4,4,6,6,8,8,9,10,12,12,14,14,15,16,18,18,20,20,21,22,24,24,25 ⋆ In the sequence of positive integers add 1 to each prime number. ● a(n) = n + pi(n) - pi(n - 1). - _ Wesley Ivan Hurt _ , Jun 15 2013 ●
► [A213222] 3,4,4,6,6,8,8,10,10,12,12,14,14,16,16,18,18,20,20,22,22,24,24,26,26 ⋆ Minimum number of distinct slopes formed by n noncollinear points in the plane. ● a(n) = 2 * floor(n / 2) for n > 3. ●
► [A117571] 1,1,3,4,4,6,7,7,9,10,10,12,13,13,15,16,16,18,19,19,21,22,22,24,25 ⋆ Expansion of (1 + 2 * x ^ 2) / ((1 - x) * (1 - x ^ 3)). ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>3. ● a(n) = cos(2 * Pi * n / 3 + Pi / 6) / sqrt(3) - sin(2 * Pi * n / 3 + Pi / 6) / 3 + (3n + 2) / 3. ● a(n) = 1 + floor((n + 1) / 3) + floor(2 * n / 3). - _ Wesley Ivan Hurt _ , Jul 25 2016 ● a(n) = n + sign((n - 1) mod 3). - _ Wesley Ivan Hurt _ , Sep 25 2017 ●
► [A100478] 1,1,1,1,1,3,4,4,6,7,9,10,11,14,15,17,19,21,23,24,27,30,30,32,34 ⋆ Pentanacci pi function: a(1)=a(2)=a(3)=a(4)=a(5)=1; for n>5, a(n) = pi(Sum _{ j=1..5 } a(n - j)) where pi = A000720. ● a(n) = pi(a(n - 1) + a(n - 2) + a(n - 3) + a(n - 4) + a(n - 5)) with a(1) = a(2) = a(3) = a(4) = a(5) = 1. ●
► [A047877] 0,3,4,4,6,9,11,14,18,21,26,32,34,41,49,52,59,69,73,82,92,97,108,120,124 ⋆ a(n) = (1 / 2) * Sum _{ i=0..n } T(i,n - i), array T as in A049604. ● a(n) = 2 * a(n - 3) + a(n - 4) - a(n - 6) - 2 * a(n - 7) + a(n - 10) for n > 14 (conjectured). ●
► [A360724] 0,1,1,3,4,4,6,10,13,15,16,16,18,22,28,36,43,49,54,58,61,63,64,64,66 ⋆ Hajnal's recurrence: a(2n) = a(n) + 3 * a(n - 1); a(2n + 1) = 3 * a(n) + a(n - 1), with initial values a(0) = 0, a(1) = 1. ● a(n) = 10 * 4 ^ i + (n + 1)(n + 2) - (6n + 9) * 2 ^ i, if 3 * 2 ^ i <= n < 4 * 2 ^ i; a(n) = (6n + 9) * 2 ^ i - 14 * 4 ^ i - (n + 1)(n + 2) / 2, if 4 * 2 ^ i <= n < 6 * 2 ^ i. ●
► [A089640] 1,1,1,1,3,4,4,6,11,15,18,27,43,59,78,115,172,239,330,480,698,980,1379,1988,2856 ⋆ Enumeration of partial sums of 1 + [1,2] + [2,3] + [1,2] + [2,3] + ... ● a(n) = Sum _{ k=0..n } C(k, n - floor((3 * k + 2) / 2)), where C(n, k) is the usual binomial coefficient. - _ John W. Layman _ , Jan 06 2004 [corrected by _ Peter Luschny _ , Jan 13 2023] ● a(n) = a(n - 3) + 2 * a(n - 4) + a(n - 5) for n > 5. ●
► [A121924] 0,1,1,3,4,4,7,9,10,10,14,17,19,20,20,25,29,32,34,35,35,41,46,50,53 ⋆ Number of splitting steps that one can take with a sequence of n 2's. ● a(n) = binomial(b(n),3) + (n - binomial(b(n),2)) * (b(n) ^ 2 + 3b(n) - 2(n + 1)) / 4, where b(n) = floor(sqrt(2n + 1 / 4) + 1 / 2) - Stephan Wagner (swagner(AT)sun.ac.za), Jul 18 2007 ●
► [A087328] 1,3,4,4,9,12,15,16,22,27,31,36,43,51,58,64,75,83,93,100,112,123,133,144,157 ⋆ Independence numbers for KT _ 3 knight on hexagonal board. ● a(n) = ceiling(n ^ 2 / 4) if n == 0, 1, 4, 8, 11 (mod 12), ceiling(n ^ 2 / 4) + 1 if n = = 3, 9 (mod 12) and ceiling(n ^ 2 / 4) + 2 if n == 2, 5, 6, 7, 10 (mod 12) and n != 6. ●
► [A348133] 3,4,5,5,6,7,7 ⋆ Minimal number of horizontal and vertical lines needed to partition a square into rectangles which can be reassembled into n distinct squares. ● a(n) <= a(n - 2) + 2. ● a(k + m - 1) <= a(k) + a(m). ●
► [A181132] 0,0,1,1,3,4,5,5,8,10,12,13,15,16,17,17,21,24,27,29,32,34,36,37,40 ⋆ a(0)=0; thereafter a(n) = total number of 0's in binary expansions of 1, ..., n. ● a(0)=0; thereafter a(2n) = a(n) + a(n - 1) + n, a(2n + 1) = 2a(n) + n. G.f.: (1 / (1 - x) ^ 2) * Sum _{ k >= 0 } x ^ (2 ^ (k + 1)) / (1 + x ^ (2 ^ k)). - _ N. J. A. Sloane _ , Mar 10 2016 ●
► [A184985] 0,1,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25 ⋆ Nonnegative integers excluding 2. ● a(1) = 0, a(2) = 1, a(n) = n for n > 2. - _ Wesley Ivan Hurt _ , Jun 17 2019 ●
► [A065475] 1,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26 ⋆ Natural numbers excluding 2. ● a(n) = n + 1 for n>1, a(n) = a(n - 1) + 1 for n >2. - _ Wesley Ivan Hurt _ , Mar 13 2016 ● a(n) = n + [n>1], a(n) = 1 + n - floor(1 / n). - _ Alan Michael Gómez Calderón _ , May 12 2023 ●
► [A009056] 3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27 ⋆ Numbers >= 3. ● a(n) = n + 2. ●
► [A052404] 0,1,3,4,5,6,7,8,9,10,11,13,14,15,16,17,18,19,30,31,33,34,35,36,37 ⋆ Numbers without 2 as a digit. ● a(n) = replace digits d > 1 by d + 1 in base - 9 representation of n - 1. - _ Reinhard Zumkeller _ , Oct 07 2014 ●
► [A329779] 1,3,4,5,6,7,8,9,10,11,13,15,17,19,21,22,23,24,25,26,27,28,29,31,33 ⋆ Numbers that are either odd or are congruent to {+- 4, +- 6, +- 8, +- 10 } (mod 32). ● a(n) = 2 * a(n - 1) - a(n - 2) - a(n - 8) + 2 * a(n - 9) - a(n - 10) - a(n - 16) + 2 * a(n - 17) - a(n - 18) for n>18. ●

► [A047565] 0,1,3,4,5,6,7,8,9,11,12,13,14,15,16,17,19,20,21,22,23,24,25,27,28 ⋆ Numbers that are congruent to { 0, 1, 3, 4, 5, 6, 7 } mod 8. • a(n) = a(n - 1) + a(n - 7) - a(n - 8) for n>8. (End) • a(n) = a(n - 7) + 8 for n>7. • a(n) = (56 * n - 42 + (n mod 7) + ((n + 1) mod 7) + ((n + 2) mod 7) + ((n + 3) mod 7) - 6 * ((n + 4) mod 7) + ((n + 5) mod 7) + ((n + 6) mod 7)) / 49. • a(7 * k) = 8 * k - 1, a(7 * k - 1) = 8 * k - 2, a(7 * k - 2) = 8 * k - 3, a(7 * k - 3) = 8 * k - 4, a(7 * k - 4) = 8 * k - 5, a(7 * k - 5) = 8 * k - 7, a(7 * k - 6) = 8 * k - 8. (End) •

► [A047310] 0,1,3,4,5,6,7,8,10,11,12,13,14,15,17,18,19,20,21,22,24,25,26,27,28 ⋆ Numbers that are congruent to { 0, 1, 3, 4, 5, 6 } mod 7. • a(n) = a(n - 1) + a(n - 6) - a(n - 7) for n>7. • a(n) = n + floor((n - 3) / 6). (End) • a(n) = (42 * n - 33 - 3 * cos(n * Pi) + 4 * sqrt(3) * cos((1 - 4 * n) * Pi / 6) - 12 * sin((1 + 2 * n) * Pi / 6)) / 36. • a(6k) = 7k - 1, a(6k - 1) = 7k - 2, a(6k - 2) = 7k - 3, a(6k - 3) = 7k - 4, a(6k - 4) = 7k - 6, a(6k - 5) = 7k - 7. (End) •

► [A073071] 3,4,5,6,7,8,10,11,12,14,15,16,17,19,20,21,23,24,25,27,28,29,31,32,33 ⋆ Least k such that k! > prime(1) * prime(2) * ... * prime(n) where prime(n) is the n - th prime. • a(n) should be asymptotic to C * n (where 1<C<3 / 2). •

► [A047563] 0,3,4,5,6,7,8,11,12,13,14,15,16,19,20,21,22,23,24,27,28,29,30,31,32 ⋆ Numbers that are congruent to { 0, 3, 4, 5, 6, 7 } mod 8. • a(n) = a(n - 1) + a(n - 6) - a(n - 7) for n>7. • a(n) = (24 * n - 9 + 3 * cos(n * Pi) - 12 * cos(n * Pi / 3) - 4 * sqrt(3) * sin(2 * n * Pi / 3)) / 18. • a(6k) = 8k - 1, a(6k - 1) = 8k - 2, a(6k - 2) = 8k - 3, a(6k - 3) = 8k - 4, a(6k - 4) = 8k - 5, a(6k - 5) = 8k - 8. (End) •

► [A183300] 1,3,4,5,6,7,9,10,11,12,13,14,15,16,17,19,20,21,22,23,24,25,26,27,28 ⋆ Positive integers not of the form 2n ^ 2. • a(n) = n + floor(sqrt(n / 2) + 1 / 4). - _ Ridouane Oudra _ , Jan 26 2023 •

► [A047252] 0,1,3,4,5,6,7,9,10,11,12,13,15,16,17,18,19,21,22,23,24,25,27,28,29 ⋆ Numbers that are congruent to { 0, 1, 3, 4, 5 } mod 6. • a(n) = floor((6n - 3) / 5). - _ Gary Detlefs _ , Mar 07 2010 •

► [A047564] 1,3,4,5,6,7,9,11,12,13,14,15,17,19,20,21,22,23,25,27,28,29,30,31,33 ⋆ Numbers that are congruent to { 1, 3, 4, 5, 6, 7 } mod 8. • a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - 2 * a(n - 4) + 2 * a(n - 5) - a(n - 6) for n>6. • a(n) = (12 * n - 3 - sqrt(3) * (cos((1 - 4 * n) * Pi / 6) + 3 * cos((1 + 2 * n) * Pi / 6))) / 9. • a(6k) = 8k - 1, a(6k - 1) = 8k - 2, a(6k - 2) = 8k - 3, a(6k - 3) = 8k - 4, a(6k - 4) = 8k - 5, a(6k - 5) = 8k - 7. (End) •

► [A047562] 3,4,5,6,7,11,12,13,14,15,19,20,21,22,23,27,28,29,30,31,35,36,37,38,39 ⋆ Numbers that are congruent to { 3, 4, 5, 6, 7 } mod 8. • a(n) = a(n - 1) + a(n - 5) - a(n - 6) for n>6. • a(n) = a(n - 5) + 8 for n > 5. • a(n) = n + 2 + 3 * floor((n - 1) / 5). • a(n) = (8 * n + 7 - 3 * ((n + 4) mod 5)) / 5. • a(5k) = 8k - 1, a(5k - 1) = 8k - 2, a(5k - 2) = 8k - 3, a(5k - 3) = 8k - 4, a(5k - 4) = 8k - 5. (End) •

► [A026475] 1,3,4,5,6,7,19,20,21,22,36,37,38,39,53,54,55,69,70,71,72,86,87,88,102 ⋆ a(1)=1, a(2)=3, otherwise a(n) = least positive integer > a(n - 1) and not a(i) + a(j) + a(k) for 1 <= i < j < k <= n. • a(n + 7) = a(n) + 33 for n >= 8. - _ Robert Israel _ , Aug 27 2018 • a(n) = a(n - 1) + a(n - 7) - a(n - 8) for n>15. •

► [A003619] 1,3,4,5,6,8,9,10,11,12,13,14,15,16,17,18,19,21,22,23,24,25,26,27,28 ⋆ Not of form [e ^ m], m >= 1. • a(n) = n + [log (n + 1 + [log (n + 1)])]. •

► [A001965] 0,1,3,4,5,6,8,9,10,11,12,14,15,16,17,19,20,21,22,24,25,26,27,29,30 ⋆ u - pile count for the 4 - Wythoff game with i=2. • a(n) = floor((n + 1 / 2) * (sqrt(5) - 1)). - _ R. J. Mathar _ , Feb 14 2011 •

► [A047207] 0,1,3,4,5,6,8,9,10,11,13,14,15,16,18,19,20,21,23,24,25,26,28,29,30 ⋆ Numbers that are congruent to { 0, 1, 3, 4 } mod 5. • a(n) = floor((5 * n - 3) / 4). - _ Gary Detlefs _ , Mar 06 2010 • a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. • a(n) = (10 * n - 9 - i ^ (2 * n) + (1 - i) * i ^ (- n) + (1 + i) * i ^ n) / 8, where i=sqrt(- 1). •

► [A001957] 0,1,3,4,5,6,8,9,10,12,13,14,16,17,18,19,21,22,23,25,26,27,29,30,31 ⋆ u - pile positions in the 3 - Wythoff game with i=1. • a(n) = floor((n + 1 / 3) * (sqrt(13) - 1) / 2). - _ R. J. Mathar _ , Feb 14 2011 •

► [A047428] 0,1,3,4,5,6,8,9,11,12,13,14,16,17,19,20,21,22,24,25,27,28,29,30,32 ⋆ Numbers that are congruent to { 0, 1, 3, 4, 5, 6 } mod 8. • a(n) = a(n - 1) + a(n - 6) - a(n - 7) for n>7. • a(n) = (24 * n - 27 - 3 * cos(n * Pi) - 6 * cos(n * Pi / 3) + 2 * sqrt(3) * sin(2 * n * Pi / 3)) / 18. • a(6k) = 8k - 2, a(6k - 1) = 8k - 3, a(6k - 2) = 8k - 4, a(6k - 3) = 8k - 5, a(6k - 4) = 8k - 7, a(6k - 5) = 8k - 8. (End) •

► [A047309] 1,3,4,5,6,8,10,11,12,13,15,17,18,19,20,22,24,25,26,27,29,31,32,33,34 ⋆ Numbers that are congruent to { 1, 3, 4, 5, 6 } mod 7. • a(n) = a(n - 1) + a(n - 5) - a(n - 6). - _ Wesley Ivan Hurt _ , Mar 09 2023 •

► [A051916] 3,4,5,6,8,10,12,15,16,20,24,30,32,40,48,60,64,80,96,120,128,160,192,240,256 ⋆ The Greek sequence: 2 ^ a * 3 ^ b * 5 ^ c where a = 0,1,2,3,..., b,c in { 0,1 } , excluding the terms 1,2; that is: (a,b,c) != (0,0,0), (1,0,0). • a(n + 4) = 2 * a(n) for n > 8. - _ Reinhard Zumkeller _ , Mar 19 2010 •

► [A100585] 3,4,5,6,8,10,13,17,22,29,38,50,66,88,117,156,208,277,369,492,656,874,1165,1553,2070 ⋆ a(n + 1) = a(n) + floor(a(n) / 3), a(1) = 3. • a(1)=3, a(n + 1) = a(n) + floor(a(n) / 3). - _ Ben Paul Thurston _ , Jan 09 2008 •

► [A047426] 0,3,4,5,6,8,11,12,13,14,16,19,20,21,22,24,27,28,29,30,32,35,36,37,38 ⋆ Numbers that are congruent to { 0, 3, 4, 5, 6 } mod 8. • a(n) = a(n - 1) + a(n - 5) - a(n - 6) for n > 6, a(n) = a(n - 5) + 8 for n > 5. • a(n) = (40 * n - 30 + 3 * (n mod 5) + 3 * ((n + 1) mod 5) + 3 * ((n + 2) mod 5) - 7 * ((n + 3) mod 5) - 2 * ((n + 4) mod 5)) / 25. • a(5k) = 8k - 2, a(5k - 1) = 8k - 3, a(5k - 2) = 8k - 4, a(5k - 3) = 8k - 5, a(5k - 4) = 8k - 8. (End) •

► [A047250] 0,3,4,5,6,9,10,11,12,15,16,17,18,21,22,23,24,27,28,29,30,33,34,35,36 ⋆ Numbers that are congruent to { 0, 3, 4, 5 } (mod 6). • a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. • a(n) = (6 * n - 3 + i ^ (2 * n) - (1 + i) * i ^ (- n) - (1 - i) * i ^ n) / 4 where i=sqrt(- 1). • a(n) = (6 * n - 3 + (- 1) ^ n - 2 * (- 1) ^ (n * (n - 1) / 2)) / 4. • a(n) = a(n - 4) + 6, a(1)=0, a(2)=3, a(3)=4, a(4)=5, for n > 4. •

► [A047427] 1,3,4,5,6,9,11,12,13,14,17,19,20,21,22,25,27,28,29,30,33,35,36,37,38 ⋆ Numbers that are congruent to { 1, 3, 4, 5, 6 } mod 8. • a(n) = a(n - 1) + a(n - 5) - a(n - 6) for n > 6, a(n) = a(n - 5) + 8 for n > 5. • a(n) = (40 * n - 25 + 3 * (n mod 5) + 3 * ((n + 1) mod 5) + 3 * ((n + 2) mod 5) - 2 * ((n + 3) mod 5) - 7 * ((n + 4) mod 5)) / 25. • a(5k) = 8k - 2, a(5k - 1) = 8k - 3, a(5k - 2) = 8k - 4, a(5k - 3) = 8k - 5, a(5k - 4) = 8k - 7. (End) •

► [A047307] 3,4,5,6,10,11,12,13,17,18,19,20,24,25,26,27,31,32,33,34,38,39,40,41,45 ⋆ Numbers that are congruent to { 3, 4, 5, 6 } mod 7. • a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. • a(n) = (14 * n + 1 - 3 * i ^ (2 * n) - (3 - 3 * i) * i ^ (- n) - (3 + 3 * i) * i ^ n) / 8 where i=sqrt(- 1). •

► [A047425] 3,4,5,6,11,12,13,14,19,20,21,22,27,28,29,30,35,36,37,38,43,44,45,46,51 ⋆ Numbers that are congruent to { 3, 4, 5, 6 } mod 8. • a(n) = 8 * floor((n - 1) / 4) + ((n - 1) mod 4) + 3. • a(n) = OR(n - 1, 1) + OR(n - 1, 2). - _ Gary Detlefs _ , Oct 20 2013 • a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. • a(n) = (4 * n - 1 - i ^ (2 * n) - (1 - i) * i ^ (- n) - (1 + i) * i ^ n) / 2 where i=sqrt(- 1). •

► [A078358] 1,3,4,5,7,8,9,10,11,13,14,15,16,17,18,19,21,22,23,24,25,26,27,28,29 ⋆ Non - oblong numbers: Complement of A002378. • a(n) = ceiling(sqrt(n)) + n - 1. - _ Leroy Quet _ , Jul 06 2007 •

► [A183574] 3,4,5,7,8,9,11,12,13,14,15,17,18,19,20,21,23,24,25,26,27,28,29,31,32 ⋆ n + Floor[sqrt(2n + 2)]. • a(n)=n + Floor[sqrt(2n + 2)]. •

► [A276212] 1,3,4,5,7,8,9,11,12,13,14,16,17,18,19,21,22,23,24,25,27,28,29,30,31 ⋆ Position of n ^ r in the joint ranking of { h ^ r } and { k ^ s } , where r = sqrt(2), s = sqrt(5), h > 1, k > 1. • a(n) = n + floor(n ^ (r / s)); the complement is given by n + floor(n ^ (s / r)). •

► [A042965] 0,1,3,4,5,7,8,9,11,12,13,15,16,17,19,20,21,23,24,25,27,28,29,31,32 ⋆ Nonnegative integers not congruent to 2 mod 4. • a(n) = n - 1 + (3n - 3 - sqrt(3) * (1 - 2 * cos(2 * Pi * (n - 1) / 3)) * sin(2 * Pi * (n - 1) / 3)) / 9. Partial sums of the period - 3 sequence 0, 1, 1, 2, 1, 1, 2, 1, 1, 2, ... (A101825). - _ Ralf Stephan _ , May 19 2013 • a(n) = floor((4 * n - 3) / 3). - _ Gary Detlefs _ , May 14 2011 • a(2 - n) = - a(n). (End) • a(n) = (12 * n - 12 + 3 * cos(2 * n * Pi / 3) + sqrt(3) * sin(2 * n * Pi / 3)) / 9. • a(3k) = 4k - 1, a(3k - 1) = 4k - 3, a(3k - 2) = 4k - 4. (End) • a(n) = round((4 * n - 4) / 3). - _ Mats Granvik _ , Sep 24 2016 •

► [A184744] 1,3,4,5,7,8,10,11,12,14,15,16,18,19,21,22,23,25,26,27,29,30,31,33,34 ⋆ floor(nr + h), where r=1 + 1 / e, h=1 / 2; complement of A184745. • a(n)=floor(nr + h), where r=1 + 1 / e, h=1 / 2. •

► [A063732] 0,1,3,4,5,7,8,10,11,12,14,15,16,18,19,21,22,23,25,26,28,29,30,32,33 ⋆ Numbers whose Lucas representation excludes L _ 0 = 2. • a(n) = floor((3 - phi) * n) - 1, where phi is the golden mean. - _ Michel Dekking _ , Aug 26 2019 •

► [A184620] 1,3,4,5,7,8,10,11,12,14,15,17,18,20,21,22,24,25,27,28,29,31,32,34,35 ⋆ a(n) = floor(nr + h), where r=sqrt(2), h=1 / 4; complement of A184621. • a(n) = floor(n * r + h), where r=sqrt(2), h=1 / 4. •

► [A136119] 1,3,4,5,7,8,10,11,13,14,15,17,18,20,21,22,24,25,27,28,29,31,32,34,35 ⋆ Limiting sequence when we start with the positive integers (A000027) and delete in step n >= 1 the term at position n + a(n). • a(n) = ceiling((n - 1 / 2) * sqrt(2)). This can be proved in the same way as the formula given for A099267. There are some generalizations. For instance, it is possible to consider "a(n) + K * n" instead of "a(n) + n" for deleting terms where K=0,1,2,... is fixed. The constant involved in the Beatty sequence for the sequence of deleted terms the n depends on K and equals (K + 1 + sqrt((K + 1) ^ 2 + 4)) / 2. K=0 is related to A099267. 1 + A001954 is the complement sequence of this sequence A136119. - _ Benoit Cloitre _ , Apr 18 2008 • a(n) = floor(1 + 2 * sqrt(T(n - 1))), with triangular numbers T(). - _ Ralf Steiner _ , Oct 23 2019 •

► [A184618] 1,3,4,5,7,8,10,11,13,14,15,17,18,20,21,22,24,25,27,28,30,31,32,34,35 ⋆ a(n) = floor(n * r + h), where r=sqrt(2) and h=1 / 3; complement of A184619. • a(n) = floor(n * r + h), where r=sqrt(2), h=1 / 3. •

► [A047500] 0,3,4,5,7,8,11,12,13,15,16,19,20,21,23,24,27,28,29,31,32,35,36,37,39 ⋆ Numbers that are congruent to { 0, 3, 4, 5, 7 } mod 8. • a(n) = a(n - 1) + a(n - 5) - a(n - 6) for n > 6, a(n) = a(n - 5) + 8 for n > 5. • a(n) = (40 * n - 25 - 2 * (n mod 5) + 3 * ((n + 1) mod 5) + 3 * ((n + 2) mod 5) - 7 * ((n + 3) mod 5) + 3 * ((n + 4) mod 5)) / 25. • a(5k) = 8k - 1, a(5k - 1) = 8k - 3, a(5k - 2) = 8k - 4, a(5k - 3) = 8k - 5, a(5k - 4) = 8k - 8. (End) •

► [A154571] 0,3,4,5,7,8,12,15,16,17,19,20,24,27,28,29,31,32,36,39,40,41,43,44,48 ⋆ Numbers that are congruent to { 0, 3, 4, 5, 7, 8 } mod 12. • a(n) = a(n - 1) + a(n - 6) - a(n - 7) for n>7. • a(n) = (12 * n - 15 - cos(n * Pi) - 5 * cos(n * Pi / 3) - sqrt(3) * (2 * cos((1 - 4 * n) * Pi / 6) - 3 * sin(n * Pi / 3))) / 6. • a(6k) = 12k - 4, a(6k - 1) = 12k - 5, a(6k - 2) = 12k - 7, a(6k - 3) = 12k - 8, a(6k - 4) = 12k - 9, a(6k - 5) = 12k - 12. (End) •

► [A047251] 1,3,4,5,7,9,10,11,13,15,16,17,19,21,22,23,25,27,28,29,31,33,34,35,37 ⋆ Numbers that are congruent to { 1, 3, 4, 5 } (mod 6). • a(n) = 3 * n / 2 - 1 / 2 - cos(Pi * n / 2) / 2. • a(n) = (- 2 - (- i) ^ n - i ^ n + 6n) / 4, with i=sqrt(- 1). - _ Colin Barker _ , Oct 19 2015 • a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4) for n>4. •

► [A003159] 1,3,4,5,7,9,11,12,13,15,16,17,19,20,21,23,25,27,28,29,31,33,35,36,37 ⋆ Numbers n whose binary representation ends in an even number of zeros. • a(0) = 1; for n >= 0, a(n + 1) = a(n) + 1 if (a(n) + 1) / 2 is not already in the sequence, = a(n) + 2 otherwise. • a(1) = 1, a(2) = 3, and for n >= 2 we get a(n + 1) = 4 + a(n) + a(n - 1) - a(a(n) - n + 1) - a(a(n - 1) - n + 2). - _ Benoit Cloitre _ , Apr 08 2010 •

► [A141259] 1,3,4,5,7,9,11,12,13,15,16,17,19,21,23,24,25,27,28,29,31,33,35,36,37 ⋆ a(n) == { 0,1,3,4,5,7,9,11 } mod 12; n>0. • a(n) = { 0,1,3,4,5,7,9,11 } mod 12; n>0. • a(n) = (1 / 56) * Sum { k=0..n - 1 }{ 3 * (k mod 8) + 10 * [(k + 1) mod 8] + 3 * [(k + 2) mod 8] + 3 * [(k + 3) mod 8] - 4 * [(k + 4) mod 8] + 3 * [(k + 5) mod 8] + 10 * [(k + 6) mod 8] - 4 * [(k + 7) mod 8] } , with n>=1 [_ Paolo P. Lava _ , Feb 11 2009] •

► [A190941] 0,1,3,4,5,7,9,11,13,14,15,17,18,19,21,23,25,27,29,31,33,35,37,39,41 ⋆ Partial sums of A190592. • a(n) = Sum _{ i=0..n } (maximal digit in base - 3 expansion of i). • a(n) = 3n + O(n ^ 0.631). - _ Charles R Greathouse IV _ , Aug 21 2011 •

► [A128201] 1,3,4,5,7,9,11,13,15,16,17,19,21,23,25,27,29,31,33,35,36,37,39,41,43 ⋆ Union of positive squares and the odd numbers. • a(n) = f(n,1,1,2), where f(n,i,m,x) = if i=n then m; else if m + 1=x ^ 2 then f(n,i + 1,m + 1,x); else if m + 1 >x ^ 2 then f(n,i + 1,m + 1,x + 2); else f(n,i + 1,m + 2,x). •

► [A000702] 1,1,3,4,5,7,9,14,18,24,31,43,55,72,94,123,156,200,254,324,408,513,641,804,997 ⋆ a(n) is the number of conjugacy classes in the alternating group A _ n. ● a(n) = (p(n) + 3Q(n)) / 2 for n>1 where p(n) denotes the number of unrestricted partitions of n (A000041) and Q(n) the number of partitions of n into distinct odd parts (A000700). [Denes - Erdős - Turan] ● a(n) = 2p(n) + 3 * Sum _{ r>=1 } (- 1) ^ r * p(n - 2r ^ 2) for n>1. [Girse] ●

► [A047365] 0,3,4,5,7,10,11,12,14,17,18,19,21,24,25,26,28,31,32,33,35,38,39,40,42 ⋆ Numbers that are congruent to { 0, 3, 4, 5 } mod 7. ● a(1)=0, a(2)=3, a(3)=4, a(4)=5, a(5)=7, a(n)=a(n - 1) + a(n - 4) - a(n - 5) for n>5. - _ Harvey P. Dale _ , May 26 2012 ● a(n) = (14 * n - 11 + i ^ (2 * n) - (3 + i) * i ^ (- n) - (3 - i) * i ^ n) / 8 where i=sqrt(- 1). ●

► [A047499] 3,4,5,7,11,12,13,15,19,20,21,23,27,28,29,31,35,36,37,39,43,44,45,47,51 ⋆ Numbers that are congruent to { 3, 4, 5, 7 } mod 8. ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. ● a(n) = (8 * n - 1 - i ^ (2 * n) - (1 - 2 * i) * i ^ (- n) - (1 + 2 * i) * i ^ n) / 4 where i=sqrt(- 1). ●

► [A127427] 0,1,3,4,5,8,9,10,12,13,14,16,17,18,22,23,24,26,27,28,30,31,32,35,36 ⋆ a(n) = v _ 3((6n)!) - v _ 3((3n)!), where v _ 3(N) is the 3 - adic valuation A007949(N). ● a(n) - n = a([(n + 1) / 3]). ●

► [A047205] 0,3,4,5,8,9,10,13,14,15,18,19,20,23,24,25,28,29,30,33,34,35,38,39,40 ⋆ Numbers that are congruent to { 0, 3, 4 } mod 5. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. ● a(n) = (15 * n - 9 - 4 * sqrt(3) * sin(2 * n * Pi / 3)) / 9. ● a(3k) = 5k - 1, a(3k - 1) = 5k - 2, a(3k - 2) = 5k - 5. (End) ●

► [A283765] 3,4,5,8,9,10,14,15,19,20,24,25,26,29,30,31,35,36,40,41,45,46,47,50,51 ⋆ Numbers k such that L(k) is even, where L = A000201 = lower Wythoff sequence. ● a(n + 1) - a(n) is in { 1,3,4 } for every n. ●

► [A047601] 0,1,3,4,5,8,9,11,12,13,16,17,19,20,21,24,25,27,28,29,32,33,35,36,37 ⋆ Numbers that are congruent to { 0, 1, 3, 4, 5 } mod 8. ● a(n) = a(n - 1) + a(n - 5) - a(n - 6) for n>6. ●

► [A346456] 3,4,5,8,9,32,9283,9284,9285,9292,9293,9294,9295,9296,9343,9434,9437,9440,9479,9686,9689,9690,9697,9698,9699 ⋆ a(n) is the smallest number k such that Sum _{ j=1..k } (- 1) ^ omega(j) = - n, where omega(j) is the number of distinct primes dividing j. ● a(n) = min { k : Sum _{ j=1..k } mu(rad(j)) = - n } , where mu is the Moebius function and rad is the squarefree kernel. ●

► [A047366] 1,3,4,5,8,10,11,12,15,17,18,19,22,24,25,26,29,31,32,33,36,38,39,40,43 ⋆ Numbers that are congruent to { 1, 3, 4, 5 } mod 7. ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. ● a(n) = (14n - 9 - i ^ (2n) - (3 - i) * i ^ (- n) - (3 + i) * i ^ n) / 8 where i=sqrt(- 1). ●

► [A211533] 0,0,1,1,3,4,5,8,10,13,16,19,23,27,32,36,41,47,52,59,65,71,79,86,94 ⋆ Number of ordered triples (w,x,y) with all terms in { 1,...,n } and w=3x - 5y. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) + a(n - 5) - a(n - 6) - a(n - 8) + a(n - 9). ●

► [A228305] 3,4,5,8,10,16,20,32,40,64,80,128,160,256,320,512,640,1024,1280,2048,2560,4096,5120,8192,10240 ⋆ a(1) = 3; for n >= 1, a(2 * n) = 2 ^ (n + 1), a(2 * n + 1) = 5 * 2 ^ (n - 1). ● a(n) = ceiling((9 - (- 1) ^ n) * 2 ^ (floor(n / 2) - 2)). ● a(n) = n + 2 for n <= 3; a(n) = 2 * a(n - 2) for n > 3. ● a(n) = (16 - (8 - 5 * r) * (1 - (- 1) ^ n)) * r ^ (n - 6) for n>1, r=sqrt(2). (End) ●

► [A080726] 0,3,4,5,8,11,12,13,14,15,16,17,20,23,26,29,32,35,36,37,38,39,40,41,42 ⋆ a(0) = 0; for n>0, a(n) is taken to be the smallest positive integer greater than a(n - 1) which is consistent with the condition "n is a member of the sequence if and only if a(n) == 2 mod 3". ● a(a(n)) = 3 * n + 2, n >= 1. ●

► [A047599] 0,3,4,5,8,11,12,13,16,19,20,21,24,27,28,29,32,35,36,37,40,43,44,45,48 ⋆ Numbers that are congruent to { 0, 3, 4, 5 } mod 8. ● a(n) = 2 * n - 2 - cos(n * Pi / 2). (End) ● a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4) for n>4. ● a(n) = 2n - 2 - (i ^ (- n) + i ^ n) / 2 where i = sqrt(- 1). ●

► [A215082] 0,1,1,3,4,5,8,12,17,23,35,43,66,81,124,148,229,266,414,476,742,842,1318,1478,2320 ⋆ Related to Fibonacci numbers, see the Formula section. ● a(0) = 0, a(1) = 1, a(2) = 1, a(2n) + a(2n + 1) = (n + 1) * Fibonacci(n + 2), a(2n) = a(2n - 1) + a(2n - 3). ●

► [A132141] 1,3,4,5,9,10,11,12,13,14,15,16,17,27,28,29,30,31,32,33,34,35,36,37,38 ⋆ Numbers whose ternary representation begins with 1. ● a(n) = n + (3 ^ floor(log _ 3(2 * n)) - 1) / 2. - _ Kevin Ryde _ , Feb 19 2022 ●

► [A329781] 1,3,4,5,9,10,11,14,15,16,17,19,21,23,24,25,26,29,30,31,35,36,37,39,41 ⋆ Numbers that are congruent to {+- 1, +- 3, +- 4, +- 5, +- 9, +- 10, +- 11, +- 14, +- 15, +- 16, +- 17, +- 19 } (mod 40). ● a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - 2 * a(n - 4) + 2 * a(n - 5) - 2 * a(n - 6) + 2 * a(n - 7) - 2 * a(n - 8) + 2 * a(n - 9) - 2 * a(n - 10) + 2 * a(n - 11) - 2 * a(n - 12) + 2 * a(n - 13) - 2 * a(n - 14) + 2 * a(n - 15) - 2 * a(n - 16) + 2 * a(n - 17) - 2 * a(n - 18) + 2 * a(n - 19) - 2 * a(n - 20) + 2 * a(n - 21) - 2 * a(n - 22) + 2 * a(n - 23) - a(n - 24) for n>24. ●

► [A047249] 3,4,5,9,10,11,15,16,17,21,22,23,27,28,29,33,34,35,39,40,41,45,46,47,51 ⋆ Numbers that are congruent to { 3, 4, 5 } mod 6. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. ● a(n) = 2 * n - cos(2 * n * Pi / 3) + sin(2 * n * Pi / 3) / sqrt(3). ● a(3k) = 6k - 1, a(3k - 1) = 6k - 2, a(3k - 2) = 6k - 3. (End) ●

► [A295718] 1,3,4,5,9,10,19,21,40,45,85,98,183,217,400,489,889,1122,2011,2621,4632,6229,10861,15042,25903 ⋆ a(n) = a(n - 1) + 3 * a(n - 2) - 2 * a(n - 3) - 2 * a(n - 4), where a(0) = 1, a(1) = 3, a(2) = 4, a(3) = 5. ● a(n) = a(n - 1) + a(n - 3) + a(n - 4), where a(0) = 1, a(1) = 3, a(2) = 4, a(3) = 5. ●

► [A047600] 1,3,4,5,9,11,12,13,17,19,20,21,25,27,28,29,33,35,36,37,41,43,44,45,49 ⋆ Numbers that are congruent to { 1, 3, 4, 5 } mod 8. ● a(n) = 2 * n - 1 - (3 + (- 1) ^ n) * (1 + i ^ (n * (n + 1))) / 4, where i=sqrt(- 1). (End) ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. ●

► [A267755] 1,3,4,5,9,12,14,15,16,20,23,25,26,27,31,34,36,37,38,42,45,47,48,49,53 ⋆ Expansion of (1 + 2 * x + x ^ 2 + x ^ 3 + 4 * x ^ 4 + 2 * x ^ 5) / (1 - x - x ^ 5 + x ^ 6). ● a(n) = a(n - 1) + a(n - 5) - a(n - 6). ●

► [A237132] 3,4,5,9,12,23,31,60,81,157,212,411,555,1076,1453,2817,3804,7375,9959,19308,26073,50549,68260,132339,178707 ⋆ Values of x in the solutions to x ^ 2 - 3xy + y ^ 2 + 11 = 0, where 0 < x < y. ● a(n) = 3 * a(n - 2) - a(n - 4). ● a(n) = F(n + 2) + (- 1) ^ n * F(n - 3), n>1, with F the Fibonacci numbers (A000045). - _ Ralf Stephan _ , Feb 05 2014 ●

► [A099560] 0,0,0,1,1,1,3,4,5,9,13,18,28,41,59,88,129,188,277,406,594,872,1278,1872,2745 ⋆ a(n) = Sum _{ k=0..floor(n / 3) } C(n - 2k,k - 1). ● a(n) = a(n - 1) + 2 * a(n - 3) - a(n - 4) - a(n - 6). ●

► [A000692] 1,3,4,5,9,15,27,50,92,171,322,610,1161,2220,4260,8201,15828,30622,59362,115287,224260,436871,852161,1664196,3253531 ⋆ An approximation to population of x ^ 2 + y ^ 2 <= 2 ^ n. ● a(n) = (b * 2 ^ n / sqrt(n * log(2))) * (1 + c / (n * log(2))) where b=0.764223654... is the Landau - Ramanujan constant (A064533) and c=0.5819486593... is the second - order Landau - Ramanujan constant (A227158) given by c = (1 / 2) * (1 - log(Pi * e ^ gamma / (2 * L))) - (1 / 4) * D(1) where D(s) = (d / ds)(log(Product _{ p prime == 3 (mod 4) } 1 / (1 - p ^ (- 2 * s)))) and L is the Lemniscate constant (A064853) [see (12) in Shanks]. - _ Sean A. Irvine _ , Feb 25 2011 ●

► [A195971] 0,1,3,4,5,9,16,25,39,64,105,169,272,441,715,1156,1869,3025,4896,7921,12815,20736,33553,54289,87840 ⋆ Number of n X 1 0..4 arrays with each element x equal to the number its horizontal and vertical neighbors equal to 2,0,1,3,4 for x=0,1,2,3,4. ● a(n) = a(n - 1) + a(n - 3) + a(n - 4). ● a(n) = (Lucas(n + 3) - (- 1) ^ (floor(n / 2)) * (3 + (- 1) ^ n)) / 5. - _ G. C. Greubel _ , Apr 03 2019 ●

► [A047364] 3,4,5,10,11,12,17,18,19,24,25,26,31,32,33,38,39,40,45,46,47,52,53,54,59 ⋆ Numbers that are congruent to { 3, 4, 5 } mod 7. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. ● a(n) = (21 * n - 6 - 12 * cos(2 * n * Pi / 3) + 4 * sqrt(3) * sin(2 * n * Pi / 3)) / 9. ● a(3k) = 7k - 2, a(3k - 1) = 7k - 3, a(3k - 2) = 7k - 4. (End) ●

► [A079351] 3,4,5,10,15,16,17,18,19,20,21,22,23,24,25,30,35,40,45,50,55,60,65,70,75 ⋆ a(1)=3; for n > 1, a(n) is the smallest integer greater than a(n - 1) consistent with the condition "n is in the sequence if and only if a(n) is congruent to 0 (mod 5)". ● a(3 * 5 ^ k + j) = 5 ^ (k + 1) + 3j + 2|j|, k >= 0, - 2 * 5 ^ k <= j < 2 * 5 ^ k. ●

► [A170926] 0,0,1,3,4,5,10,17,20,21,25,30,33,40,58,77,84,85,89,94,97,104,121,138,145 ⋆ Total number of squares and rectangles at the n - th stage in the corner to othpick structure (see A152890, A153006). ● a(2 ^ k) = (4 ^ k - 4) / 3 for k >= 2. - _ N. J. A. Sloane _ , Feb 13 2010. ●

► [A297661] 3,4,5,10,17,26,37,54,83,132,211,336,535,856,1377,2222,3589,5798,9369,15146,24495,39624,64103,103708,167787 ⋆ a(n) = n + 2 * cos((n * Pi) / 3) + Lucas(n). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - 2 * a(n - 5) + a(n - 6). ●

► [A047598] 3,4,5,11,12,13,19,20,21,27,28,29,35,36,37,43,44,45,51,52,53,59,60,61,67 ⋆ Numbers that are congruent to { 3, 4, 5 } mod 8. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. ● a(n) = (24 * n - 12 - 15 * cos(2 * n * Pi / 3) + 5 * sqrt(3) * sin(2 * n * Pi / 3)) / 9. ● a(3k) = 8k - 3, a(3k - 1) = 8k - 4, a(3k - 2) = 8k - 5. (End) ●

► [A283773] 3,4,5,11,12,13,19,20,27,28,35,36,42,43,44,50,51,52,58,59,60,66,67,68,74 ⋆ Numbers k such that U(k) = 1 mod 3, where U = A001950 = upper Wythoff sequence. ● a(n + 1) - a(n) is in { 1,6,7 } for every n. ●

► [A052276] 3,4,5,11,24,30,61,67,122,128,213,219,340,346,509,515,726,732,997,1003,1328,1334,1725,1731,2194 ⋆ Nonnegative numbers of the form n ^ 3 (+/-) 3 , n >= 0. ● a(n) = a(n - 1) + 3 * a(n - 2) - 3 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) + a(n - 6) - a(n - 7) for n>8. - _ Colin Barker _ , Jul 09 2015 ● a(n) = ((2 * n + 1) * (n ^ 2 + n + 1) - (- 1) ^ n * (3 * n ^ 2 + 3 * n - 47)) / 16 for n >= 2. - _ Robert Israel _ , Jul 09 2015 ● a(n) = ceiling(n / 2) ^ 3 + 3 * (- 1) ^ n for all n > 1. - _ M. F. Hasler _ , Jan 10 2021 ●

► [A010752] 1,1,1,3,4,5,12,17,23,50,73,103,211,314,455,895,1350,1993,3805,5798,8679,16193,24872,37633,68940 ⋆ Sum along upward diagonal of Pascal triangle to center. ● a(n) = Sum _{ k=0..floor(n / 3) } binomial(n - k, k). - _ Sean A. Irvine _ , Jun 08 2018 ●

► [A049929] 1,3,4,5,12,20,41,83,168,254,550,1121,2250,4507,9015,18031,36064,54098,117212,238932,480121,961371,1923313,3846922,7693930 ⋆ a(n) = a(1) + a(2) + ... + a(n - 1) - a(m) for n >= 4, where m = 2 ^ (p + 1) + 2 - n and p is the unique integer such that 2 ^ p < n - 1 <= 2 ^ (p + 1), starting with a(1) = 1, a(2) = 3, and a(3) = 4. ● a(n) = (Sum _{ i=1..n - 1 } a(i)) - a(2 ^ ceiling(log _ 2(n - 1)) + 2 - n) for n > 3. - _ Iain Fox _ , Dec 06 2017 ●

► [A289121] 3,4,5,12,37,98,219,430,767,1272,1993,2984,4305,6022,8207,10938,14299,18380,23277,29092,35933,43914,53155,63782,75927 ⋆ a(n) = (8 - 2 * n + 11 * n ^ 2 - 6 * n ^ 3 + n ^ 4) / 4. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ●

► [A221173] 3,4,5,14,33,80,193,466,1125,2716,6557,15830,38217,92264,222745,537754,1298253,3134260,7566773,18267806,44102385,106472576,257047537,620567650,1498182837 ⋆ a(0)= - 3, a(1)=4; thereafter a(n) = 2 * a(n - 1) + a(n - 2). ● a(n) = (1 / 4) * (7 * sqrt(2) * ((1 + sqrt(2)) ^ n - (1 - sqrt(2)) ^ n) - 6 * ((1 + sqrt(2)) ^ n + (1 - sqrt(2)) ^ n)). - _ Paolo P. Lava _ , Jan 04 2013 ●

► [A254865] 1,1,3,4,5,30,42,56,504,720,990,11880,17160,24024,360360,524160,742560,13366080,19535040,27907200,586051200,859541760,1235591280,29654190720,43609104000 ⋆ a(n) = Product _{ k = 1 + n - floor(n / 3) .. n } k. ● a(n) = Product _{ k = 1 + n - floor(n / 3) .. n } k. ● a(3 * k) = 3 * k * a(3 * k - 1). ● a(3 * k + 1) = (3 * k + 1) * a(3 * k) / (2 * k + 1). ● a(3 * k + 2) = (3 * k + 2) * a(3 * k + 1) / (2 * k + 2). ●

► [A265283] 1,3,4,6,6,8,8,10,10,12,12,14,14,16,16,18,18,20,20,22,22,24,24,26,26 ⋆ Number of ON (black) cells in the n - th iteration of the "Rule 94" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = n + 2 for n >1 and even. ● a(n) = n + 3 for n>1 and odd. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n>2. ●

► [A080804] 1,3,4,6,7,8,9,11,12,13,14,15,16,17,18,20,21,22,23,24,25,26,27,28,29 ⋆ Least number of connected subgraphs of the binary cube GF(2) ^ n such that every vertex of GF(2) ^ n lies in at least one of the subgraphs and no two vertices lie in the same set of subgraphs (such a collection is called an identifying set) . ● a(n) = n + floor(log _ 2 n). ●

► [A164386] 1,3,4,6,7,8,9,11,12,13,14,15,16,18,19,20,21,22,23,24,25,27,28,29,30 ⋆ Numbers which are not 1 larger than a nonzero square. ● a(n) = n + floor(sqrt(n - 1) + 1 / 2). ●

▶ [A111909] 1,3,4,6,7,8,9,11,12,13,14,15,16,18,19,21,22,23,24,27,28,29,30,31,33 ⋆ Numbers that cannot be represented as a ^ 4 + b ^ 2 with a, b > 0. • a(n) = n + O(n ^ (3 / 4)). - _ Charles R Greathouse IV _ , Sep 01 2015 •
▶ [A184010] 1,3,4,6,7,8,9,11,12,13,14,15,17,18,19,20,21,22,23,25,26,27,28,29,30 ⋆ n + floor(sqrt(- 1 + 4n / 3)); complement of A001859 (except for initial zero). • a(n) = n + floor(sqrt(- 1 + 4n / 3)) •
▶ [A182835] 3,4,6,7,8,9,11,12,13,14,16,17,18,19,20,21,23,24,25,26,27,28,30,31,32 ⋆ n + floor(sqrt(2n + 3)), complement of A179207. • a(n)=n + floor(sqrt(2n + 3)). •
▶ [A047517] 0,1,3,4,6,7,8,9,11,12,14,15,16,17,19,20,22,23,24,25,27,28,30,31,32 ⋆ Numbers that are congruent to { 0, 1, 3, 4, 6, 7 } mod 8. • a(n) = a(n - 1) + a(n - 6) - a(n - 7), for n > 7. • a(n) = (24 * n - 21 - 3 * cos(n * Pi) + 2 * sqrt(3) * cos((1 + 4 * n) * Pi / 6) + 6 * sin((1 - 2 * n) * Pi / 6)) / 18. • a(6k) = 8k - 1, a(6k - 1) = 8k - 2, a(6k - 2) = 8k - 4, a(6k - 3) = 8k - 5, a(6k - 4) = 8k - 7, a(6k - 5) = 8k - 8. (End) •
▶ [A007401] 1,3,4,6,7,8,10,11,12,13,15,16,17,18,19,21,22,23,24,25,26,28,29,30,31 ⋆ Add n - 1 to n - th term of 'n appears n times' sequence (A002024). • a(n) = ((t + 2) ^ 2 + i - j) / 2 - 1, where •
▶ [A276218] 1,3,4,6,7,8,10,11,13,14,15,17,18,19,21,22,23,25,26,27,28,30,31,32,34 ⋆ Position of n ^ r in the joint ranking of { h ^ r } and { k ^ s } , where r = sqrt (3), s = sqrt(6), h > 1, k > 1. • a(n) = n + floor(n ^ (r / s)); the complement is given by n + floor(n ^ (s / r)). •
▶ [A047299] 0,1,3,4,6,7,8,10,11,13,14,15,17,18,20,21,22,24,25,27,28,29,31,32,34 ⋆ Numbers that are congruent to { 0, 1, 3, 4, 6 } mod 7. • a(n) = floor((7n - 5) / 5). - _ Lorenz H. Menke, Jr. _ , Jun 19 2013 •
▶ [A184578] 1,3,4,6,7,8,10,11,13,14,16,17,18,20,21,23,24,25,27,28,30,31,32,34,35 ⋆ a(n) = floor((n + 1 / 3) * sqrt(2)), complement of A184579. • a(n) = floor((n + 1 / 3) * sqrt(2)). •
▶ [A022846] 0,1,3,4,6,7,8,10,11,13,14,16,17,18,20,21,23,24,25,27,28,30,31,33,34 ⋆ Nearest integer to n * sqrt(2). • a(n + 1) - a(n) = 1 or 2. - _ Philippe Deléham _ , Mar 08 2013 •
▶ [A007378] 3,4,6,7,8,10,12,13,14,15,16,18,20,22,24,25,26,27,28,29,30,31,32,34,36 ⋆ a(n), for n >= 2, is smallest positive integer which is consistent with sequence being monotonically increasing and satisfying a(a(n)) = 2n. • a(2 ^ i + j) = 3 * 2 ^ (i - 1) + j, 0<=j<2 ^ (i - 1); a(3 * 2 ^ (i - 1) + j) = 2 ^ (i + 1) + 2 * j, 0 <=j<2 ^ (i - 1). • a(3 * 2 ^ k + j) = 4 * 2 ^ k + 3j / 2 + |j| / 2, k>=0, - 2 ^ k <= j < 2 ^ k. - _ N. J. A. Sloane _ , Feb 23 2003 •
▶ [A002191] 1,3,4,6,7,8,12,13,14,15,18,20,24,28,30,31,32,36,38,39,40,42,44,48,54 ⋆ Possible values for sum of divisors of n. • a(n) / n < log _ 10(n) + O(1) with O(1) <= 1 for all n. - _ M. F. Hasler _ , Nov 22 2019 •
▶ [A183860] 3,4,6,7,9,10,11,13,14,15,16,18,19,20,21,23,24,25,26,27,29,30,31,32,33 ⋆ a(n) = n + floor(sqrt(3n + 1)); complement of A183861. • a(n)=n + floor(sqrt(3n + 1)). •
▶ [A184746] 1,3,4,6,7,9,10,12,13,14,16,17,19,20,22,23,25,26,27,29,30,32,33,35,36 ⋆ floor(nr + h), where r=1 + 1 / sqrt(5), h=1 / 2; complement of A184747. • a(n)=floor(nr + h), where r=1 + 1 / sqrt(5), h=1 / 2. •
▶ [A258048] 1,3,4,6,7,9,10,12,13,14,16,17,19,20,22,23,25,26,28,29,31,32,34,35,36 ⋆ Nonhomogeneous Beatty sequence: ceiling((n + 1 / 2) * Pi / (Pi - 1)) • a(n) = ceiling((n + 1 / 2) * Pi / (Pi - 1)). •
▶ [A032766] 0,1,3,4,6,7,9,10,12,13,15,16,18,19,21,22,24,25,27,28,30,31,33,34,36 ⋆ Numbers that are congruent to 0 or 1 (mod 3). • a(n) = (6n - 1 + (- 1) ^ n) / 4. • a(n) = sqrt(2) * sqrt((6n - 1) (- 1) ^ n + 18n ^ 2 - 6n + 1) / 4. • a(n) = Sum _{ k=0..n } 3 / 2 - 2 * 0 ^ k + (- 1) ^ k / 2. (End) • a(n) = 1 + ceiling(3 * (n - 1) / 2). - Fung Cheok Yin (cheokyin _ restart(AT)yahoo.com.hk), Sep 22 2006 • a(n) = (cos(Pi * n) - 1) / 4 + 3 * n / 2. - Bart Snapp (snapp(AT)coastal.edu), Sep 18 2008 • a(n) = floor(n / 2) + n. - _ Gary Detlefs _ , Mar 19 2010 •
▶ [A329962] 1,3,4,6,7,9,10,12,13,15,16,18,19,21,22,24,26,27,29,30,32,33,35,36,38 ⋆ Beatty sequence for 2 + cos x, where x = least positive solution of 1 / (2 + sin x) + 1 / (2 + cos x) = 1. • a(n) = floor(n * (2 + cos x)), where x = 2.058943... is the constant in A329960. •
▶ [A059559] 1,3,4,6,7,9,10,12,13,15,17,18,20,21,23,24,26,27,29,30,32,34,35,37,38 ⋆ Beatty sequence for 1 + log(1 / gamma), (gamma is the Euler - Mascheroni constant A001620). • a(n) = floor(n * (1 + log(1 / Euler))). - _ Michel Marcus _ , Jan 05 2015 •
▶ [A329847] 1,3,4,6,7,9,10,12,13,15,17,18,20,21,23,24,26,27,29,31,32,34,35,37,38 ⋆ Beatty sequence for (3 + sqrt(89)) / 8. • a(n) = floor(n * r), where r = (3 + sqrt(89)) / 8. •
▶ [A330176] 1,3,4,6,7,9,10,12,13,16,18,19,21,22,24,25,27,28,31,33,34,36,37,39,40 ⋆ a(n) = n + floor(nr / t) + floor(ns / t), where r = sqrt(5) - 2, s = sqrt(5) - 1, t = sqrt(5). • a(n) = n + floor(nr / t) + floor(ns / t), where r = sqrt(5) - 2, s = sqrt(5) - 1, t = sqrt(5). •
▶ [A093610] 1,3,4,6,7,9,10,12,14,15,17,18,20,21,23,24,26,28,29,31,32,34,35,37,39 ⋆ Lower Beatty sequence for e ^ G, G = Euler's gamma constant. • a(n) = floor(n * (k + 1) / k)). Lower Beatty pair terms are the set of natural numbers not in the set of upper Beatty pair terms (the latter in A093609). •
▶ [A330113] 1,3,4,6,7,9,10,12,14,15,17,18,20,21,23,25,26,28,29,31,32,34,35,37,39 ⋆ Beatty sequence for cosh(x), where 1 / e ^ x + sech(x) = 1. • a(n) = floor(n cosh(x)), where x = 1.01859181977... is the constant in A330111. •
▶ [A187342] 1,3,4,6,7,9,10,12,14,15,17,18,20,21,23,25,26,28,29,31,32,34,36,37,39 ⋆ Floor(((15 + sqrt(5)) / 11)n); complement of A187341. • a(n)=floor(((15 + sqrt(5)) / 11)n). •
▶ [A243989] 1,3,4,6,7,9,11,12,14,15,17,18,20,21,23,25,26,28,29,31,32,34,36,37,39 ⋆ Rounded down ratio of a lune area and a unit circle one, the lune is bounded by two unit circles whose centers are separated by a distance 1 / n. • a(n) = floor(Pi / area) where area = 2 * d + k1 - k2, d = (1 / 4) * (c ^ 2 * (2 + c) * (2 - c)) ^ (1 / 2), k1 = arccos(- c ^ 2 / (2 * c)), k2 = arccos(c ^ 2 / (2 * c)). •
▶ [A182770] 1,3,4,6,7,9,11,12,14,15,17,19,20,22,23,25,26,28,30,31,33,34,36,38,39 ⋆ Beatty sequence for 3 - sqrt(2). • a(n) = floor(n * (3 - sqrt(2))). •
▶ [A047516] 1,3,4,6,7,9,11,12,14,15,17,19,20,22,23,25,27,28,30,31,33,35,36,38,39 ⋆ Numbers that are congruent to { 1, 3, 4, 6, 7 } mod 8. • a(n) = a(n - 1) + a(n - 5) - a(n - 6) for n > 6. •
▶ [A352178] 0,1,3,4,6,7,9,11,13,15,17,19,21,24,26,29,31,34 ⋆ Let S = { t _ 1, t _ 2, ..., t _ n } be a set of n distinct integers and consider the sums t _ i + t _ j (i<j); a(n) is the maximum number of such sums that are powers of 2, over all choices for S. • a(n) <= (p - 1) + (n - p) * k. k is the count of loose ends of the subgraphs of positive numbers. Subgraphs means here the biggest sets of positive numbers connected by sums which are equal to a power of two. There may be multiple such sets which are not interconnected directly. From observation it appears that a(n) <= (p - 1) + (n - p) * (k - 1) does hold in most cases. - _ Thomas Scheuerle _ , Sep 26 2022 •
▶ [A006855] 0,1,3,4,6,7,9,11,13,16,18,21,24,27,30,33,36,39,42,46,50,52,56,59,63 ⋆ Maximum number of edges in an n - node squarefree graph, or, in a graph containing no 4 - cycle, or no C _ 4. • a(n) <= n ^ (3 / 2) * (1 / 2 + o(1)) [Kovari, Sos, Turan]. But the upper bound mentioned in the Aigner - Ziegler reference (see above) is stronger. - _ N. J. A. Sloane _ , Mar 07 2022 •
▶ [A060832] 0,1,3,4,6,7,10,11,13,14,16,17,20,21,23,24,26,27,30,31,33,34,36,37,41 ⋆ a(n) = Sum _{ k>0 } floor(n / k!). • a(n) = (e - 1) * n + f(n) where f(n) < 0. - _ Benoit Cloitre _ , Jun 19 2002 •
▶ [A047297] 0,3,4,6,7,10,11,13,14,17,18,20,21,24,25,27,28,31,32,34,35,38,39,41,42 ⋆ Numbers that are congruent to { 0, 3, 4, 6 } mod 7. • a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. • a(n) = (14 * n - 9 + 3 * i ^ (2 * n) - (1 + i) * i ^ (- n) - (1 - i) * i ^ n) / 8 where i=sqrt(- 1). •
▶ [A330172] 1,3,4,6,7,10,12,13,15,16,18,21,22,24,25,27,28,31,33,34,36,37,39,42,43 ⋆ a(n) = n + floor(nr / t) + floor(ns / t), where r = sqrt(2) - 1, s = sqrt(2), t = sqrt(2) + 1. • a(n) = n + floor(ns / r) + floor(nt / r), where r = sqrt(2) - 1, s = sqrt(2), t = sqrt(2) + 1. •
▶ [A239438] 1,1,3,4,6,7,10,12,15,19,22,26,31,35,40,46,51,57,64,70,77,85,92,100,109 ⋆ Maximal number of points that can be placed on a triangular grid of side n so that there is no pair of adjacent points. • a(n) = ceiling(n(n + 1) / 6) for n > 5, see Geramita, Gregory, & Roberts theorem 5.4. - _ Charles R Greathouse IV _ , Dec 04 2014 •
▶ [A047514] 3,4,6,7,11,12,14,15,19,20,22,23,27,28,30,31,35,36,38,39,43,44,46,47,51 ⋆ Numbers that are congruent to { 3, 4, 6, 7 } mod 8. • a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. • a(n) = (1 + i) * (4 * n - 4 * n * i + (i - 1) * i ^ (2 * n) + i ^ (1 - n) - i ^ n) / 4 where i=sqrt(- 1). • a(n) = a(n - 4) + 8 for n > 4. • a(4 * k) = 8 * k - 1, a(4 * k - 1) = 8 * k - 2, a(4 * k - 2) = 8 * k - 4, a(4 * k - 3) = 8 * k - 5. (End) •
▶ [A199015] 1,3,4,6,8,8,11,13,13,15,17,19,20,22,22,24,28,28,30,30,31,35,37,37,39 ⋆ G.f.: 1 / (1 - x) * Product _{ n>=1 } (1 - x ^ (2 * n)) ^ 2 / (1 - x ^ (2 * n - 1)) ^ 2. • a(n) = Sum _{ k=0..n } Sum _{ d|4 * k + 1 } (- 1) ^ floor(d / 2). - _ Michael Somos _ [see A008441] •
▶ [A276214] 1,3,4,6,8,9,11,12,13,15,16,18,19,21,22,23,25,26,28,29,30,32,33,35,36 ⋆ Position of n ^ r in the joint ranking of { h ^ r } and { k ^ s } , where r = sqrt (3), s = sqrt(5), h > 1, k > 1. • a(n) = n + floor(n ^ (r / s)); the complement is given by n + floor(n ^ (s / r)). •
▶ [A066096] 0,1,3,4,6,8,9,11,12,14,16,17,19,21,22,24,25,27,29,30,32,33,35,37,38 ⋆ a(n) = floor(n * phi), where phi = (1 + sqrt(5)) / 2. • a(n) = floor(n * phi), where phi = (1 + sqrt(5)) / 2. - _ Peter Munn _ , Jan 12 2018 •
▶ [A000201] 1,3,4,6,8,9,11,12,14,16,17,19,21,22,24,25,27,29,30,32,33,35,37,38,40 ⋆ Lower Wythoff sequence (a Beatty sequence): a(n) = floor(n * phi), where phi = (1 + sqrt(5)) / 2 = A001622. • a(1) = 1; for n>0, a(n + 1) = a(n) + 1 if n is not in the sequence, a(n + 1) = a(n) + 2 if n is in the sequence. • a(0) = 0; a(n) = n + Max _{ k : a(k) < n } . - _ Vladeta Jovovic _ , Jun 11 2004 • a(Fibonacci(r - 1) + j) = Fibonacci(r) + a(j) for 0 < j <= Fibonacci(r - 2); 2 < r. - _ Paul Weisenhorn _ , Aug 18 2012 •
▶ [A000202] 1,3,4,6,8,9,11,12,14,16,17,19,21,22,24,25,27,29,30,32,34,35,37,38,40 ⋆ a(8i + j) = 13i + a(j), where 1<=j<=8. • a(n) = floor((13 * n - 1) / 8). - _ Jon E. Schoenfield _ , Aug 21 2022 • a(Fibonacci(n) - 1) = Fibonacci(n + 1) - 2, for n>=6 (Peters, 1981). - _ Amiram Eldar _ , Jan 27 2022 •
▶ [A182774] 1,3,4,6,8,9,11,13,14,16,17,19,21,22,24,26,27,29,30,32,34,35,37,39,40 ⋆ Beatty sequence for 1 + 2 ^ (- 2 / 3). • a(n) = floor(n * (1 + 2 ^ (- 2 / 3))). •
▶ [A182772] 1,3,4,6,8,9,11,13,14,16,17,19,21,22,24,26,27,29,31,32,34,35,37,39,40 ⋆ Beatty sequence for (5 - sqrt(3)) / 2. • a(n) = floor(n * (5 - sqrt(3)) / 2). •
▶ [A047206] 1,3,4,6,8,9,11,13,14,16,18,19,21,23,24,26,28,29,31,33,34,36,38,39,41 ⋆ Numbers that are congruent to { 1, 3, 4 } mod 5. • a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. • a(n) = 1 + (5 * n) / 3 - (i * sqrt(3) * (- 1 / 2 + (i * sqrt(3)) / 2) ^ n) / 9 + (i * sqrt(3) * (- 1 / 2 - (i * sqrt(3)) / 2) ^ n) / 9. - _ Stephen Crowley _ , Feb 11 2007 • a(n) = floor((5 * n - 1) / 3). - _ Gary Detlefs _ , May 14 2011 • a(n) = (15 * n - 6 - 3 * cos(2 * n * Pi / 3) - sqrt(3) * sin(2 * n * Pi / 3)) / 9. • a(3k) = 5k - 1, a(3k - 1) = 5k - 2, a(3k - 2) = 5k - 4. (End) •
▶ [A081031] 1,3,4,6,8,9,11,13,15,16,18,20,21,23,25,27,28,30,32,33,35,37,39,40,42 ⋆ Positions of white keys on piano keyboard, starting with A0 = the 1st key. • a(n) = floor((12n - 3) / 7). • a(n) = a(n - 1) + a(n - 7) - a(n - 8) for n > 8. •
▶ [A355200] 3,4,6,8,9,12,15,16,18,20,21,24,27,28,30,32,33,36,39,40,42,44,45,48,51 ⋆ Numbers k that can be written as the sum of 3 divisors of k (not necessarily distinct). • a(n + 6) = a(n) + 12. - _ David A. Corneth _ , Oct 08 2022 •
▶ [A189573] 1,3,4,6,8,10,11,13,15,16,18,20,21,23,25,27,28,30,32,33,35,37,39,40,42 ⋆ Positions of 0 in A189572; complement of A080652 (conjectured). • a(n) = floor(alpha * n + beta), with alpha = 1 + sqrt(2) / 2, and beta = 1 / 2 - sqrt(2) / 2 (from Lemma 1 in Bosma et al., exchanging 0 and 1 in (a(n))). - _ Michel Dekking _ , Nov 03 2018 •
▶ [A184006] 1,3,4,6,8,10,11,13,15,16,18,20,22,23,25,27,29,30,32,34,36,37,39,41,42 ⋆ floor(nr + h), where r=sqrt(3), h= - 1 / 3; complement of A184007. • a(n)=floor(nr + h), where r=sqrt(3), h= - 1 / 3 •
▶ [A047298] 1,3,4,6,8,10,11,13,15,17,18,20,22,24,25,27,29,31,32,34,36,38,39,41,43 ⋆ Numbers that are congruent to { 1, 3, 4, 6 } mod 7. • a(n) = ceiling(ceiling((7n + 2) / 2) / 2). • a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. • a(n) = i ^ (

- n) * (i - 1 - 7 * i ^ n + 14 * n * i ^ n - (1 + i) * i ^ (2n) + i ^ (- n)) / 8 where i=sqrt(- 1). ●

▶ [A184736] 1,3,4,6,8,10,12,14,15,17,19,21,23,25,26,28,30,32,34,36,37,39,41,43,45 ⋆ floor(nr + h), where r= - 1 + 2 ^ (3 / 2), h= - 1 / 2; complement of A184735 . ● a(n)=floor(nr + h), where r= - 1 + 2 ^ (3 / 2), h= - 1 / 2. ●

▶ [A058992] 0,1,3,4,6,8,10,12,14,16,18,20,22,24,26,28,30,32,34,36,38,40,42,44,46 ⋆ Gossip Problem: there are n people and each of them knows some item of gossi p not known to the others. They communicate by telephone and whenever one person calls another, they tell each other all that they know at that time. How many calls are required before each gossip knows everything? ● a(n) = 2n - 4 f or n >= 4. ●

▶ [A051755] 3,4,6,8,10,12,14,16,18,20,22,24,26,28,30,32,34,36,38,40,42,44,46,48,5 0 ⋆ Consider problem of placing N queens on an n X n board so that each quee n attacks precisely 2 others. Sequence gives maximal number of queens. ● a(2) = 3, a(n) = 2n - 2 for n >= 3. ● a(n) = 2 * a(n - 1) - a(n - 2) for n>4. - _ Coli n Barker _ , Nov 08 2014 ●

▶ [A025201] 0,0,1,3,4,6,8,10,12,15,17,19,22,25,27,30,33,36,39,42,45,48,51,54,58 ⋆ a(n) = floor(log(n!)). ● a(n) = floor(n * log(n) - n + log(2 * Pi * n) / 2) (Stirlin g's approximation) holds for all 1 < n < 10 ^ 6, but a counterexample might ex ist for some larger n. - _ M. F. Hasler _ , Dec 03 2018 ●

▶ [A092137] 1,3,4,6,8,10,12,15,17,20,23,26,29,32,36,39,43,46,50,54,58,62,66,70,75 ⋆ Lower bound for A005842(n). ● a(n) = ceiling(sqrt(Sum _{ k=1..n } k ^ 2)). ●

▶ [A024182] 0,1,3,4,6,8,10,13,15,18,22,25,29,33,37,42,46,51,57,62,68,74,80,87,93 ⋆ Integer part of ((4th elementary symmetric function of 2,3,...,n + 4) / (3rd ele mentary symmetric function of 2,3,...,n + 4)). ● a(n) = floor(1 / 120 n (15 n ^ 4 + 330 n ^ 3 + 2765 n ^ 2 + 10482 n + 15208) / (n + 6)(n ^ 2 + 11 n + 32)). - _ Ivan Neretin _ , May 20 2018 ● a(n) = floor(n * (n + 5) / 8) for all n in Z. - _ Michael Somos _ , Mar 23 2023 ●

▶ [A301752] 1,3,4,6,8,10,13,15,19,22,26,31,35,41,46,52,58,64,71,77,85,92,100,109,1 17 ⋆ Clique covering number of the n - triangular grid graph. ● a(n) = 2 * a(n - 1) - a(n - 3) - 2 * a(n - 4) + 2 * a(n - 5) + a(n - 6) - 2 * a(n - 8) + a(n - 9). - _ Eric W. Weisstein _ , Apr 18 2019 ●

▶ [A080728] 3,4,6,8,11,12,14,15,17,18,19,20,23,24,26,29,30,32,35,38,41,42,43,44,4 7 ⋆ a(0) = 3; for n>0, a(n) is taken to be the smallest positive integer greater t han a(n - 1) which is consistent with the condition "n is a member of the seque nce if and only if a(n) == 2 mod 3". ● a(a(n)) = 3 * n + 8, n >= 0. ●

▶ [A047414] 0,3,4,6,8,11,12,14,16,19,20,22,24,27,28,30,32,35,36,38,40,43,44,46,48 ⋆ Numbers that are congruent to { 0, 3, 4, 6 } mod 8. ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. ● a(n) = (8 * n - 7 + i ^ (2 * n) - i ^ (- n) - i ^ n) / 4 wh ere i=sqrt(- 1). ●

▶ [A060903] 0,0,1,3,4,6,8,11,13,16,19,22,25,28,31,35,38,42,46,50,54,58,62,67,71 ⋆ Floor(6 * n * sqrt(n) / Pi ^ 2). ● a(n) = floor(6 * n ^ (3 / 2) / Pi ^ 2). ●

▶ [A156040] 1,1,3,4,6,8,11,13,17,20,24,28,33,37,43,48,54,60,67,73,81,88,96,104,11 3 ⋆ Number of compositions (ordered partitions) of n into 3 parts (some of whic h may be zero), where the first is at least as great as each of the others. ● a(n) = a(n - 1) + a(n - 2) - a(n - 4) - a(n - 5) + a(n - 6), with a(0) = 1, a(1) = 1, a(2) = 3, a(3) = 4, a(4) = 6, a(5) = 8. - _ Harvey P. Dale _ , May 28 2015 ● a(n) = (n ^ 2 + 4 * n + 3) / 6 + IF(MOD(n, 2) = 0, 1 / 2) + IF(MOD(n, 3) = 1, - 1 / 3). - _ Heinrich Ludwig _ , Mar 21 2017 ● a(n) = 1 + floor((n ^ 2 + 4 * n) / 6). - _ Giovanni Resta _ , Mar 21 2017 ● a(n) = a(- 4 - n) for all n in Z. - _ Michael Somos _ , Mar 26 2017 ● a(n) = round((n + 1) * (n + 3) / 6). - _ Bill McEachen _ , Feb 16 2021 ●

▶ [A298805] 1,3,4,6,8,12,16,22,24,34,40,56,62,83,98,133,152,202,236,322,368,496,5 70,776,892 ⋆ Growth series for group with presentation < S, T : S ^ 2 = T ^ 3 = (S * T) ^ 7 = 1 >. ● a(n) = - a(n - 1) + a(n - 4) + 2 * a(n - 5) + a(n - 6) + a(n - 8) + a(n - 10) + 2 * a(n - 11) + a(n - 12) - a(n - 15) - a(n - 16) for n>18. - _ Colin Barker _ , Feb 06 2018 ●

▶ [A298810] 1,3,4,6,8,12,16,24,30,39,50,69,88,120,150,204,260,354,448,609,768,10 47,1328,1806,2284 ⋆ Growth series for group with presentation < S, T : S ^ 2 = T ^ 3 = (S * T) ^ 8 = 1 >. ● a(n) = a(n - 4) + 3 * a(n - 6) + a(n - 8) - a(n - 12) for n>12. - _ Colin Barker _ , Feb 06 2018 ●

▶ [A298811] 1,3,4,6,8,12,16,24,32,46,56,82,104,152,192,280,350,507,642,933,117 6,1708,2152,3122,3940 ⋆ Growth series for group with presentation < S, T : S ^ 2 = T ^ 3 = (S * T) ^ 9 = 1 >. ● a(n) = - a(n - 1) + a(n - 4) + a(n - 5) + 2 * a (n - 6) + 3 * a(n - 7) + 2 * a(n - 8) + a(n - 9) + 2 * a(n - 10) + a(n - 11) + 2 * a(n - 12) + a(n - 13) + 2 * a(n - 14) + 3 * a(n - 15) + 2 * a(n - 16) + a(n - 17) + a(n - 18) - a(n - 21) - a(n - 22) for n>24. - _ Colin Barker _ , Feb 06 2018 ●

▶ [A298812] 1,3,4,6,8,12,16,24,32,48,62,87,114,165,216,312,408,588,766,1104,144 4,2082,2720,3921,5122 ⋆ Growth series for group with presentation < S, T : S ^ 2 = T ^ 3 = (S * T) ^ 10 = 1 >. ● a(n) = a(n - 4) + 2 * a(n - 6) + 4 * a(n - 8) + 2 * a(n - 10) + a(n - 12) - a(n - 16) for n>16. - _ Colin Barker _ , Feb 06 20 18 ●

▶ [A299252] 1,3,4,6,8,12,16,24,32,48,64,94,120,178,232,344,448,664,864,1280,166 2,2459,3202,4741,6168 ⋆ Growth series for group with presentation < S, T : S ^ 2 = T ^ 3 = (S * T) ^ 11 = 1 >. ● a(n) = - a(n - 1) + a(n - 4) + a(n - 5) + 2 * a(n - 6) + 2 * a(n - 7) + 3 * a(n - 8) + 4 * a(n - 9) + 3 * a(n - 10) + 2 * a(n - 1 1) + 3 * a(n - 12) + 2 * a(n - 13) + 3 * a(n - 14) + 2 * a(n - 15) + 3 * a(n - 16) + 2 * a(n - 17) + 3 * a(n - 18) + 4 * a(n - 19) + 3 * a(n - 20) + 2 * a(n - 21) + 2 * a(n - 22) + a(n - 23) + a(n - 24) - a(n - 27) - a(n - 28) for n>30. - _ Colin Barker _ , Feb 06 2018 ●

▶ [A299253] 1,3,4,6,8,12,16,24,32,48,64,96,126,183,242,357,472,696,920,1356,179 2,2640,3486,5136,6788 ⋆ Growth series for group with presentation < S, T : S ^ 2 = T ^ 3 = (S * T) ^ 12 = 1 >. ● a(n) = a(n - 4) + 2 * a(n - 6) + 3 * a(n - 8) + 5 * a(n - 10) + 3 * a(n - 12) + 2 * a(n - 14) + a(n - 16) - a(n - 20) for n>20. - _ Colin Barker _ , Feb 06 2018 ●

▶ [A063759] 1,3,4,6,8,12,16,24,32,48,64,96,128,192,256,384,512,768,1024,1536,20 48,3072,4096,6144,8192 ⋆ Spherical growth series for modular group. ● a(n) = 2 * a(n - 2), n>2. - _ Harvey P. Dale _ , Oct 22 2011 ●

▶ [A163978] 3,4,6,8,12,16,24,32,48,64,96,128,192,256,384,512,768,1024,1536,204 8,3072,4096,6144,8192,12288 ⋆ a(n) = 2 * a(n - 2) for n > 2; a(1) = 3, a(2) = 4. ● a(n) = (1 / 2) * (5 - (- 1) ^ n) * 2 ^ ((2 * n - 1 + (- 1) ^ n) / 4). ●

▶ [A136483] 0,0,1,1,3,4,6,8,13,15,19,22,28,30,37,41,48,54,64,69,77,83,94,98,110 ⋆ Number of unit square lattice cells inside quadrant of origin - centered circle of diameter n. ● a(n) = Sum _{ k=1..floor(n / 2) } floor(sqrt((n / 2) ^ 2 - k ^ 2)) . ● a(n) = [x ^ (n ^ 2)] (theta _ 3(x ^ 4) - 1) ^ 2 / (4 * (1 - x)). - _ Ilya Gutko vskiy _ , Nov 23 2021 ●

▶ [A080710] 1,3,4,6,9,10,12,13,14,15,18,19,21,24,27,30,31,32,33,36,37,39,40,41,42 ⋆ a(0) = 1; for n>0, a(n) is taken to be the smallest positive integer greater tha n a(n - 1) which is consistent with the condition "n is a member of the sequence if and only if a(n) is a multiple of 3". ● a(a(n)) = 3 * (n + 1). ●

▶ [A047231] 0,3,4,6,9,10,12,15,16,18,21,22,24,27,28,30,33,34,36,39,40,42,45,46,48 ⋆ Numbers that are congruent to { 0, 3, 4 } mod 6. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. ● a(n) = (6 * n - 5 - cos(2 * n * Pi / 3) - sqrt(3) * sin(2 * n * Pi / 3)) / 3. ● a(3k) = 6k - 2, a(3k - 1) = 6k - 3, a(3k - 2) = 6k - 6. (End) ●

▶ [A299231] 1,3,4,6,9,10,13,15,17,19,21,23,25,27,29,31,33,35,37,39,41,43,45,47,49 ⋆ Ranks of { 2,3 }- power towers that start with 2; see Comments. ● a(n) = 2n - 1 for all n except 3, 4, and 6. ●

▶ [A047415] 1,3,4,6,9,11,12,14,17,19,20,22,25,27,28,30,33,35,36,38,41,43,44,46,49 ⋆ Numbers that are congruent to { 1, 3, 4, 6 } mod 8. ● a(n) = 2 * (n - 1) - (i ^ (n * (n + 1)) - 1) / 2, where i=sqrt(- 1). - _ Bruno Berselli _ , Dec 06 2011 ● a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4) for n>4. ● a(n) = (1 + i) * (4 * n - 4 * n * i + 3 * i - 3 + i ^ (1 - n) - i ^ n) / 4 where i=sqrt(- 1). ●

▶ [A087805] 0,1,3,4,6,9,11,12,14,17,19,22,26,29,31,32,34,37,39,42,46,49,51,54,58 ⋆ Partial sums of b(k) where { b(k) }_{ k>=0 } = lim _{ n - >oo } { A080578 (k) - 2k : k=2 ^ n,2 ^ n + 1,2 ^ n + 2,... } . ● a(n) seems to be asymptotic to c * n * log(n). Is c = log(2)? ●

▶ [A301654] 0,0,1,3,4,6,9,11,14,18,21,25,30,34,39,45,50,56,63,69,76,84,91,99,108 ⋆ Circumference of the n - triangular honeycomb acute knight graph. ● a(n) = (3 * n * (n + 1) - 14 - 4 * cos(2 * n * Pi / 3) + 4 * sqrt(3) * sin(2 * n * Pi / 3)) / 18. ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) - 2 * a(n - 4) + a(n - 5) for n > 5. ● a(n) = floor((n + 2) * (n - 1) / 6). - _ Stefanos Papanicolopulos _ , Dec 18 2 020 ●

▶ [A289233] 0,1,1,3,4,6,9,11,15,18,22,26,30,35,39,45,50,56,63,69,77,84,92,100,108 ⋆ Largest number of disjoint point triples that can be chosen from an n X n X n triangular point grid, each point triple forming a 2 X 2 X 2 triangle. ● a(n) = floor(n * (n + 1) / 6) except when n mod 12 is 3, 5, 6, or 8; in those cases, a(n) = floor(n * (n + 1) / 6) - 1. - _ Jon E. Schoenfield _ , Dec 25 2017 ●

▶ [A283777] 1,3,4,6,9,12,14,15,17,18,20,23,26,28,29,31,32,34,37,39,40,42,43,45,48 ⋆ Numbers k such that floor(k * e) is even. ● a(n + 1) - a(n) is in { 1,2,3 } for every n. ●

▶ [A182531] 0,1,3,4,6,9,12,16,20,25,30,36,42,49,56,64,72,81,90,100,110,121,132,14 4,156 ⋆ Extremal graph numbers for a triangle with an edge off it. ● a(n) = (- 1 + (- 1) ^ n + 2 * n ^ 2) / 8 for n>3. ● a(n) = n ^ 2 / 4 for n>3 and even. ● a(n) = (n ^ 2 - 1) / 4 for n>3 and odd. ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4) for n>4. ●

▶ [A097922] 1,1,3,4,6,9,12,16,21,26,32,39,46,54,63,72,82,93,104,116,129,142,156,1 71,186 ⋆ G.f.: (1 - x ^ 4) * (1 - x ^ 10) / ((1 - x) * (1 - x ^ 2) ^ 2 * (1 - x ^ 3) * (1 - x ^ 5)). ● a(n) = 2 + ceiling((n ^ 2 - n) / 3) for n >= 2. - _ Robert Israel _ , May 20 2014 ●

▶ [A152950] 3,4,6,9,13,18,24,31,39,48,58,69,81,94,108,123,139,156,174,193,213,23 4,256,279,303 ⋆ a(n) = 3 + n * (n - 1) / 2. ● a(n) = 3 + C(n,2), n>=1. - _ Zer invary Lajos _ , Mar 12 2009 ● a(n) = a(n - 1) + n - 1 (with a(1)=3). - _ Vinc enzo Librandi _ , Nov 27 2010 ●

▶ [A048577] 3,4,6,9,14,22,35,56,90,145,234,378,611,988,1598,2585,4182,6766,109 47,17712,28658,46369,75026,121394,196419 ⋆ Pisot sequence L(3,4). ● a(n) = Fi b(n + 3) + 1. a(n) = 2a(n - 1) - a(n - 3). ● a(n) = 1 + [1 / 2 + (1 / 2) * sqrt(5)] ^ n + (2 / 5) * [1 / 2 + (1 / 2) * sqrt(5)] ^ n * sqrt(5) - (2 / 5) * sqrt(5) * [1 / 2 - (1 / 2) * sqrt(5)] ^ n + [1 / 2 - (1 / 2) * sqrt(5)] ^ n, with n>0=0 - _ Pao lo P. Lava _ , Jun 10 2008 ●

▶ [A047296] 3,4,6,10,11,13,17,18,20,24,25,27,31,32,34,38,39,41,45,46,48,52,53,55,5 9 ⋆ Numbers that are congruent to { 3, 4, 6 } mod 7. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. ● a(n) = (21 * n - 3 - 6 * cos(2 * n * Pi / 3) + 4 * sqrt(3) * sin(2 * n * Pi / 3)) / 9. ● a(3k) = 7k - 1, a(3k - 1) = 7k - 3, a(3k - 2) = 7k - 4 . (End) ●

▶ [A004793] 1,3,4,6,10,12,13,15,28,30,31,33,37,39,40,42,82,84,85,87,91,93,94,96,1 09 ⋆ a(1)=1, a(2)=3; a(n) is least k such that no three terms of a(1), a(2), ..., a(n - 1), k form an arithmetic progression. ● a(n) = b(n - 1), with b(0)=1, b(2n) = 3b(n) - 2 - 3[n odd], b(2n + 1) = 3b(n) - 3[n odd]. ●

▶ [A355325] 1,3,4,6,10,16,25,41,66,106,172,278,449,727,1176,1902,3078,4980,805 7,13037,21094,34130,55224,89354,144577 ⋆ Upper midsequence of the Fibonacci numbers (1,2,3,5,8,...) and Lucas numbers (1,3,4,7,11,...); see Comments. ● a(n) = a(n - 1) + a(n - 2) + a(n - 3) - a(n - 4) - a(n - 5) for n >= 5. ● a(n) = (10 + 3 * ((5 - 4 * sqrt(5)) * (1 - sqrt(5)) ^ n + (1 + sqrt(5)) ^ n * (5 + 4 * sqrt(5))) / 2 ^ n - 10 * cos(2 * n * Pi / 3)) / 30. - _ Stefano Spezia _ , Jul 17 2022 ●

▶ [A068922] 3,4,6,10,16,26,42,68,110,178,288,466,754,1220,1974,3194,5168,8362,1 3530,21892,35422,57314,92736,150050,242786 ⋆ Number of ways to tile a 3 X 2n room with 1 X 2 Tatami mats. At most 3 Tatami mats may meet at a point. ● a(n) = (2 ^ (- n) * (- (1 - sqrt(5)) ^ (1 + n) + (1 + sqrt(5)) ^ (1 + n))) / sqrt (5) for n>1. ● a(n) = a(n - 1) + a(n - 2) for n>3. (End) ●

▶ [A052548] 3,4,6,10,18,34,66,130,258,514,1026,2050,4098,8194,16386,32770,6553 8,131074,262146,524290,1048578,2097154,4194306,8388610,16777218 ⋆ a(n) = 2 ^ n + 2. ● a(0)=3, a(1)=4, a(n) = 3 * a(n - 1) - 2 * a(n - 2). ● a(0)=3, a(n) = 2 * a(n - 1) - 2. - _ Vincenzo Librandi _ , Aug 06 2010 ●

▶ [A047413] 3,4,6,11,12,14,19,20,22,27,28,30,35,36,38,43,44,46,51,52,54,59,60,62,6 7 ⋆ Numbers that are congruent to { 3, 4, 6 } mod 8. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. ● a(n) = (24 * n - 9 - 9 * cos(2 * n * Pi / 3) + 5 * sqrt(3) * sin(2 * n * Pi / 3)) / 9. ● a(3k) = 8k - 2, a(3k - 1) = 8k - 4, a(3k - 2) = 8k - 5 . (End) ●

► [A093040] 1,1,1,3,4,6,11,17,27,45,72,116,189,305,493,799,1292,2090,3383,5473,8855,14329,23184,37512,60697 ⋆ Expansion of (1 + x) / ((1 + x + x ^ 2)(1 - x - x ^ 2)). • a(n) = a(n - 2) + 2 * a(n - 3) + a(n - 4). • a(n - 1) = Sum _{ k=0..floor(n / 2) } if(mod(n - k, 2)=1, binomial(n - k, k), 0). • a(n) = Sum _{ k=0..floor(n / 2) } binomial(2k + 1,n - 2k). - _ Paul Barry _ , May 31 2006 • a(n) = floor(Fibonacci(n + 3) / 2) - floor(Fibonacci(n + 1) / 2). - _ Gary Detlefs _ , Mar 13 2011 •

► [A192813] 1,1,1,3,4,6,11,18,31,53,91,158,274,477,832,1453,2541,4447,7788,13646,23919,41938,73547,129001,226295 ⋆ Coefficient of x in the reduction of the polynomial x ^ (2 * n) + x ^ n + 1 by x ^ 3 - > x + 1. • a(n) = 2 * a(n - 1) - a(n - 4) - a(n - 6). •

► [A294144] 1,3,4,6,12,14,15,17,28,41,44,48,64,67,68,70,89,93,116,122,149,157,163,169,199 ⋆ Sum of the smaller parts of the partitions of 2n into two parts with larger part squarefree. • a(n) = Sum _{ i=1..n } i * mu(2 * n - i) ^ 2, where mu is the Möbius function (A008683). •

► [A369735] 0,1,1,1,1,1,3,4,6,15,28,56,125,287,646,1540,3625,8484,21167,51458,126342,323126,811538,2052501,5339265 ⋆ Number of solutions to 1 ^ 3 * k _ 1 + 2 ^ 3 * k _ 2 + ... + n ^ 3 * k _ n = 1, where k _ i are from {- 1,0,1 } , i=1..n . • a(n) = [x ^ 1] Product _{ k=1..n } (x ^ (k ^ 3) + 1 + 1 / x ^ (k ^ 3)). •

► [A097044] 1,3,4,7,8,9,10,11,13,14,15,16,17,18,19,23,24,25,26,27,28,29,30,31,33 ⋆ a(n) = n + a(floor(sqrt(n))) for n > 1; a(1) = 1. • a(1)=1; a(n) = n + a(floor(sqrt(n))) for n > 1. •

► [A080722] 0,1,3,4,7,8,9,10,13,16,19,20,21,22,23,24,25,26,27,28,31,34,37,40,43 ⋆ a(0) = 0; for n > 0, a(n) is taken to be the smallest positive integer greater than a(n - 1) which is consistent with the condition "n is a term of the sequence if and only if a(n) == 1 (mod 3)". • a(a(n)) = 3 * n - 2, n >= 2. •

► [A092754] 1,3,4,7,8,9,10,15,16,17,18,19,20,21,22,31,32,33,34,35,36,37,38,39,40 ⋆ a(1)=1, a(2n)=2a(n) + 1, a(2n + 1)=2a(n) + 2. • a(n) = 2 ^ floor(log(n) / log(2)) + n - 1. •

► [A047545] 0,1,3,4,7,8,9,11,12,15,16,17,19,20,23,24,25,27,28,31,32,33,35,36,39 ⋆ Numbers that are congruent to { 0, 1, 3, 4, 7 } mod 8. • a(n) = a(n - 1) + a(n - 5) - a(n - 6) for n > 6. • a(n) = a(n - 5) + 8 for n > 5. • a(n) = (40 * n - 45 - 7 * (n mod 5) + 3 * ((n + 1) mod 5) - 2 * ((n + 2) mod 5) + 3 * ((n + 3) mod 5) + 3 * ((n + 4) mod 5)) / 25. • a(5k) = 8k - 1, a(5k - 1) = 8k - 4, a(5k - 2) = 8k - 5, a(5k - 3) = 8k - 7, a(5k - 4) = 8k - 8. (End) •

► [A004201] 1,3,4,7,8,9,13,14,15,16,21,22,23,24,25,31,32,33,34,35,36,43,44,45,46 ⋆ Accept one, reject one, accept two, reject two, ... • a(n) = n + t(t + 1) / 2, where t = floor((- 1 + sqrt(8 * n - 7)) / 2). - _ Boris Putievskiy _ , Dec 13 2012 • a(n) = (2 * n - r + r ^ 2) / 2, where r = round(sqrt(2 * n)). - _ Wesley Ivan Hurt _ , Sep 20 2021 •

► [A047344] 0,1,3,4,7,8,10,11,14,15,17,18,21,22,24,25,28,29,31,32,35,36,38,39,42 ⋆ Numbers that are congruent to { 0, 1, 3, 4 } mod 7. • a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. • a(n) = (14n - 19 - 3 * i ^ (2n) - (1 - i) * i ^ (- n) - (1 + i) * i ^ n) / 8 where i=sqrt(- 1). •

► [A005187] 0,1,3,4,7,8,10,11,15,16,18,19,22,23,25,26,31,32,34,35,38,39,41,42,46 ⋆ a(n) = a(floor(n / 2)) + n; also denominators in expansion of 1 / sqrt(1 - x) are 2 ^ a(n); also 2n - number of 1's in binary expansion of 2n. • a(n) <= 2n - 1; equality holds for powers of 2. • a(n) >= 2n - 1 - floor(log _ 2(n)); equality holds for n = 2 ^ m - 1, m > 0. • a(n) = log _ 2(denominator(binomial(- 1 / 2,n))). - _ Peter Luschny _ , Nov 25 2011 • a(2n + 1) = a(2n) + 1. - _ M. F. Hasler _ , Jan 24 2015 •

► [A184835] 1,3,4,7,8,10,11,15,16,18,19,22,23,25,27,31,32,34,35,38,39,41,43,46,47 ⋆ a(n) = n + floor(n / t) + floor(n / t ^ 2) + floor(n / t ^ 3) + floor(n / t ^ 4), where t is the pentanacci constant. • a(n) = n + floor(n * p / u) + floor(n * q / u) + floor(n * r / u) + floor(n * s / u), where p=t, q=t ^ 2, r=t ^ 3, s=t ^ 4, u=t ^ 5, and t is the pentanacci constant. •

► [A184823] 1,3,4,7,8,10,11,15,16,18,19,22,23,25,28,30,31,33,35,37,38,41,43,45,46 ⋆ a(n) = n + floor(n / t) + floor(n / t ^ 2) + floor(n / t ^ 3), where t is the tetranacci constant. • a(n) = n + floor(n * p / s) + floor(n * q / s) + floor(n * r / s), where p=t, q=t ^ 2, r=t ^ 3, s=t ^ 4, and t is the tetranacci constant. •

► [A184820] 1,3,4,7,8,10,12,14,15,17,19,21,23,25,27,28,31,32,34,35,38,39,41,44,45 ⋆ a(n) = n + floor(n / t) + floor(n / t ^ 2), where t is the tribonacci constant. • a(n) = n + floor(n * p / r) + floor(n * q / r), where p=t, q=t ^ 2, r=t ^ 3, and t is the tribonacci constant (see Clark Kimberling's formula in A184812). •

► [A014601] 0,3,4,7,8,11,12,15,16,19,20,23,24,27,28,31,32,35,36,39,40,43,44,47,48 ⋆ Numbers congruent to 0 or 3 mod 4. • a(n) = (n + 1) * 2 + 1 - n mod 2. - _ Reinhard Zumkeller _ , Apr 21 2003 • a(n) = Sum _{ k=1..n } (2 - (- 1) ^ k). - _ William A. Tedeschi _ , Mar 20 2008 • a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n > 2. G.f.: x * (3 + x) / ((1 + x) * (x - 1) ^ 2). - _ R. J. Mathar _ , Sep 25 2009 • a(n) = 2 * n + (n mod 2). - Paolo Valzasina (p.valzasina(AT)gmail.com), Nov 24 2009 • a(n) = (4 * n - (- 1) ^ n + 1) / 2. - _ Bruno Berselli _ , Oct 06 2010 • a(n) = 4 * n - a(n - 1) - 1 (with a(0) = 0). - _ Vincenzo Librandi _ , Dec 24 2010 •

► [A154708] 3,4,7,8,11,12,15,16,19,20,23,24,27,28,31,32,35,36,39,40,43,44,47,48,51 ⋆ Numbers a such that b and c exist with b <= a < c and a * (a + 1) + b ^ 2 = c ^ 2. • a(1)=4; thereafter a(2 * n) = a(2 * n - 1) + 3, a(2 * n + 1) = a(2 * n) + 1. • a(n) = 4 * n - a(n - 1) - 1 (with a(1)=3). [_ Vincenzo Librandi _ , Nov 26 2010] • a(n) = (1 - (- 1) ^ n + 4 * n) / 2. • a(n) = a(n - 1) + a(n - 2) - a(n - 3). •

► [A051201] 1,3,4,7,8,12,13,15,19,21,22,28,29,31,33,39,40,43,44,51,53,55,56,60,66 ⋆ Sum of elements of the set { [n / k] : 1 <= k <= n } . • a(n) = m * (m + 1) / 2 + Sum _{ k=1..floor(n / (m + 1)) } floor(n / k), where m is the largest number such that m * (m + 1) <= n, i.e., m=floor((sqrt(4 * n + 1) - 1) / 2). - _ Max Alekseyev _ , Feb 12 2012 •

► [A165157] 0,1,3,4,7,8,12,13,18,19,25,26,33,34,42,43,52,53,63,64,75,76,88,89,102 ⋆ Zero followed by partial sums of A133622. • a(0) = 0, a(2 * n) = a(2 * n - 1) + n + 1, a(2 * n + 1) = a(2 * n) + 1. • a(n) = (n ^ 2 + 10 * n) / 8 if n is even, a(n) = (n ^ 2 + 8 * n - 1) / 8 if n is odd. • a(n) = 2 * a(n - 2) - a(n - 4) + 1 for n > 3; a(0)=0, a(1)=1, a(2)=3, a(3)=4. - _ Klaus Brockhaus _ , Sep 06 2009 • a(n) = (2 * n * (n + 9) - 1 + (2 * n + 1) * (- 1) ^ n) / 16. - _ Klaus Brockhaus _ , Sep 06 2009 • a(n) = n + binomial(1 + floor(n / 2),2). - _ Mircea Merca _ , Feb 18 2012 • a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n > 4. (End) •

► [A129819] 0,0,1,1,3,4,7,8,12,14,19,21,27,30,37,40,48,52,61,65,75,80,91,96,108 ⋆ Antidiagonal sums of triangular array T: T(j,k) = (k + 1) / 2 for odd k, T(j,k) = 0 for k = 0, T(j,k) = j + 1 - k / 2 for even k > 0; 0 <= k <= j. • a(n) = a(n - 1) + a(n - 2) - a(n - 3) + a(n - 4) - a(n - 5) - a(n - 6) + a(n - 7) for n > 6, with a(0) = 0, a(1) = 0, a(2) = 1, a(3) = 1, a(4) = 3, a(5) = 4, a(6) = 7. • a(n) = (3 / 16) * (n + 2) * (n + 1) - (5 / 8) * (n + 1) + 7 / 32 + (3 / 32) * (- 1) ^ n + (1 / 16) * (n + 1) * (- 1) ^ n - (1 / 8) * cos(n * Pi / 2) + (1 / 8) * sin(n * Pi / 2). - _ Richard Choulet _ , Nov 27 2008 •

► [A023054] 1,1,3,4,7,8,13,14,20,22,29,31,40,42,52,55,66,69,82,85,99,103,118,122,139 ⋆ Simon Plouffe's conjectured extension of sequence A008368. • a(- 3 - n) = a(n). - _ Michael Somos _ , May 22 2014 •

► [A214096] 3,4,7,8,18,19,27,28,36,39,50,50,53,70,71,72,77,85,105,105,106,108,110,111,114 ⋆ Smallest m such that prime(i) + prime(i - 1) < prime(2 * i - n) for all i>=m. • a(n) is minimal such that prime(i) + prime(i - 1) < prime(2 * i - n) for i >= a(n). •

► [A330178] 1,3,4,7,9,10,12,15,16,18,19,22,24,25,27,30,31,33,36,37,39,40,43,45,46 ⋆ a(n) = n + floor(nr / t) + floor(ns / t), where r = e - 2, s = e - 1, t = e. • a(n) = n + floor(nr / t) + floor(ns / t), where r = e - 2, s = e - 1, t = e. •

► [A029739] 1,3,4,7,9,10,13,15,16,19,21,22,25,27,28,31,33,34,37,39,40,43,45,46,49 ⋆ Numbers that are congruent to { 1, 3, 4 } mod 6. • a(n) = - 2 + Sum _{ k=1..n } ((k mod 3) + ((k + 1) mod 3)), with n >= 1. - _ Paolo P. Lava _ , Sep 03 2010 • a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n > 4. • a(n) = 2 * (3 * n - 2 - cos(2 * n * Pi / 3)) / 3. • a(3k) = 6k - 2, a(3k - 1) = 6k - 3, a(3k - 2) = 6k - 5. (End) •

► [A047544] 1,3,4,7,9,11,12,15,17,19,20,23,25,27,28,31,33,35,36,39,41,43,44,47,49 ⋆ Numbers that are congruent to { 1, 3, 4, 7 } mod 8. • a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. • a(n) = (8 * n - 5 + i ^ (2 * n) + i ^ (1 - n) - i ^ (1 + n)) / 4 where i=sqrt(- 1). •

► [A245239] 0,3,4,7,9,11,13,16,17,19,21,24,25,28,29,32,33,36,37,40,42,45,46,48,50 ⋆ Maximum frustration of complete bipartite graph K(n,6). • a(n) = floor(66 / 32 * n) - 1 if n=6 or n == 5 mod 8 or n == 2,4,7,9 or 11 mod 16 or n == 10,15,16 or 24 mod 32; a(n) = floor(66 / 32 * n) - 2 if n == 1, 3, 17 or 19 mod 32, and floor(66 / 32 * n) otherwise. • a(n + 32) = a(n) + 66 except for n = 5. •

► [A070992] 1,3,4,7,9,12,13,17,20,25,27,32,35,39,40,45,49,56,59,67,72,79,81,88,93 ⋆ Partial sums of A002487. • a(2n) = a(n - 2) + 2a(n - 1) + 2, a(2n + 1) = 2a(n - 1) + a(n) + 2. - _ Ralf Stephan _ , Oct 08 2003 •

► [A369568] 3,4,7,9,12,15,19,22,28,31,38,42,49,54,62,67,77,82,93,99,110,117,129,136,150 ⋆ Minimum number of edges that force an n - vertex graph to be Hamiltonian according to Chvátal's condition on the degree sequence. • a(n) = floor((3 * n ^ 2 + 6 * n) / 16) if n is even, a(n) = floor((3 * n ^ 2 + 8 * n - 3) / 16) if n is odd. • a(n) = floor([x ^ n] ((x - 2) * x ^ 2 * (x + 1) - x) / (2 * (x + 1) ^ 2 * (x - 1) ^ 3)). •

► [A072441] 1,3,4,7,9,13,16,20,25,30,36,42,49,56,64,72,81,90,100,110,120,132,143,155,168 ⋆ Least k such that Sum(Sin(1 / Sqrt(i)) i=1..k) > n. • a(n) is asymptotic to n ^ 2 / 4. Does lim n - > infinity ABS(4 * a(n) - (n + 1) ^ 2) / n exist? - _ Benoit Cloitre _ , Aug 16 2002 •

► [A004652] 0,1,1,3,4,7,9,13,16,21,25,31,36,43,49,57,64,73,81,91,100,111,121,133,144 ⋆ Expansion of x * (1 + x ^ 2 + x ^ 4) / ((1 - x) * (1 - x ^ 2) * (1 - x ^ 3)). • a(n) = ceiling(n ^ 2 / 4). • a(- n) = a(n). • a(n) = a(n - 1) + a(n - 2) - a(n - 3) + 1. a(2 * n) = n ^ 2, a(2 * n - 1) = n ^ 2 - n + 1. - _ Michael Somos _ , Apr 21 2000 • a(n) = a(n - 2) + n - 1. - _ Paul Barry _ , Jul 14 2004 • a(n) = (3 / 8) * (- 1) ^ (n + 1) + 5 / 8 - (3 / 4) * (n + 1) + (1 / 4) * (n + 2) * (n + 1). - _ Richard Choulet _ , Nov 27 2008 • a(n) = n ^ 2 / 4 - 3 * ((- 1) ^ n - 1) / 8. - _ Omar E. Pol _ , Sep 28 2011 •

► [A146994] 1,3,4,7,9,13,16,22,25,32,36,44,49,59,64,75,81,93,100,114,121,136,144,160,169 ⋆ a(n) = (n + 1) ^ 2 / 4 + (floor((n + 5) / 6) - 1 / 4) * ((n + 1) mod 2). • a(2 * n - 1) = n ^ 2 for n >= 1. • a(2 * n) = n * (n + 1) + floor((2 * n + 5) / 6) for n >= 0. • a(n) = a(n - 1) + a(n - 2) - a(n - 3) + a(n - 6) - a(n - 7) - a(n - 8) + a(n - 9). •

► [A008763] 0,0,0,0,1,1,3,4,7,9,14,17,24,29,38,45,57,66,81,93,111,126,148,166,192 ⋆ Expansion of g.f.: x ^ 4 / ((1 - x) * (1 - x ^ 2) ^ 2 * (1 - x ^ 3)). • a(n) = (1 / 144) * (2 * n ^ 3 + 9 * n * ((- 1) ^ n - 1) - 16 * ((n is 2 mod 3) - (n is 1 mod 3))). • a(n) = (1 / 72) * (n + 3) * (n + 2) * (n + 1) - (1 / 12) * (n + 2) * (n + 1) + (5 / 144) * (n + 1) + (1 / 16) * (n + 1) * (- 1) ^ n + (1 / 16) * (- 1) ^ (n + 1) + (7 / 144) + (2 * sqrt(3) / 27) * sin(2 * Pi * n / 3). - _ Richard Choulet _ , Nov 27 2008 • a(n) = a(n - 1) + 2 * a(n - 2) - a(n - 3) - 2 * a(n - 4) - a(n - 5) + 2 * a(n - 6) + a(n - 7) - a(n - 8), n>7. - _ Harvey P. Dale _ , Mar 04 2012 • a(n) = floor((9 * (n + 1) * (- 1) ^ n + 2 * n ^ 3 - 9 * n + 65) / 144). - Tani Akinari, Nov 06 2012 • a(n) = - a(- n) for all n in Z. - _ Michael Somos _ , Jan 21 2015 •

► [A266769] 1,1,3,4,7,9,14,17,24,29,38,45,57,66,81,93,111,126,148,166,192,214,244,270,305 ⋆ Expansion of 1 / ((1 - x) * (1 - x ^ 2) ^ 2 * (1 - x ^ 3)). • a(n) = a(n - 1) + 2 * a(n - 2) - a(n - 3) - 2 * a(n - 4) - a(n - 5) + 2 * a(n - 6) + a(n - 7) - a(n - 8) for n>7. - _ Vincenzo Librandi _ , Jan 11 2016 • a(n) = - a(- 8 - n) for all n in Z. - _ Michael Somos _ , Jun 26 2017 •

► [A147953] 1,1,1,3,4,7,9,14,22,32,43,61,89,118,167,235,312,417,572,748,1006,1326,1744,2283,2982 ⋆ Expansion of Product _{ k > 0 } (1 + f(k) * x ^ k), where f(n) = A147952(n). • a(n) = [x ^ n] Product _{ k > 0 } (1 + f(k) * x ^ k), where f(1) = f(2) = 1, and for m >= 3, f(m) = f(f(m - 2)) + r(m), where r(m) = f(f(floor(m / 3)) when m == 0 or 1 (mod 3) and = f(m - f(floor(m / 3))) when m == 2 (mod 3). •

► [A047342] 0,3,4,7,10,11,14,17,18,21,24,25,28,31,32,35,38,39,42,45,46,49,52,53,56 ⋆ Numbers that are congruent to { 0, 3, 4 } mod 7. • a(n) = a(n - 1) + a(n - 3) - a(n - 4), n>4. - _ Vincenzo Librandi _ , Mar 24 2011 • a(n) = (21 * n - 21 - 6 * cos(2 * n * Pi / 3) - 2 * sqrt(3) * sin(2 * n * Pi / 3)) / 9. • a(3k) = 7k - 3, a(3k - 1) = 7k - 4, a(3k - 2) = 7k - 7. (End) •

► [A108579] 0,0,0,0,1,3,4,7,10,13,17,22,26,32,38,44,51,59,66,75,84,93,103,114,124 ⋆ Number of symmetry classes of 3 X 3 magic squares (with distinct positive en tries) having magic sum 3n. • a(n) = floor((1 / 4) * (n - 2) ^ 2) - floor((1 / 3) * (n - 1)). - _ Mircea Merca _ , Oct 08 2013 •
► [A304066] 0,1,3,4,7,10,14,15,17,21,26,29,35,40,45,46,53,56,64,68,74,80,89,92,95 ⋆ a(n) = Sum _{ k=1..n } k * floor(n / prime(k)). • a(p ^ k) = a(p ^ k - 1) + pi(p), where p is a prime and pi() = A000720. •
► [A105343] 1,3,4,7,10,15,20,27,34,43,52,63,74,87,100,115,130,147,164,183,202,22 3,244,267,290 ⋆ Elements of even index in the sequence gives A005893, points o n surface of tetrahedron: 2n ^ 2 + 2 for n > 1. • a(n) = (1 / 4) * (2 * n ^ 2 + 9 - (- 1) ^ n), n>1. - _ Ralf Stephan _ , Jun 01 2007 •
► [A134591] 3,4,7,10,17,20,27,30,37,48,51,62,69,72,79,90,101,104,115,122,125,13 6,143,154,169 ⋆ a(n) is n reflected in n - th prime: distance between a(n) and pr ime(n) equals distance between prime(n) and n. • a(n) - prime(n) = prime(n) - n => a(n) = 2 * prime(n) - n. •
► [A143607] 1,3,4,7,10,17,24,41,58,99,140,239,338,577,816,1393,1970,3363,4756,8 119,11482,19601,27720,47321,66922 ⋆ Numerators of principal and intermediate convergents to 2 ^ (1 / 2). • a(n) = 2 * a(n - 2) + a(n - 4) for n>5. •
► [A080591] 1,3,4,7,11,12,13,15,16,17,18,19,23,27,28,31,35,39,43,47,48,49,50,51,5 2 ⋆ a(n) is taken to be the smallest positive integer greater than a(n - 1) which i s consistent with the condition "n is a member of the sequence if and only if a(n) is congruent to 3 mod 4". • a(a(n)) = 4n + 3. a(2 ^ k - 1) = 2 ^ (k + 1) - 1. •
► [A047543] 3,4,7,11,12,15,19,20,23,27,28,31,35,36,39,43,44,47,51,52,55,59,60,63,6 7 ⋆ Numbers that are congruent to { 3, 4, 7 } mod 8. • a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. • a(n) = (24 * n - 6 - 3 * cos(2 * n * Pi / 3) + 5 * sqrt(3) * sin(2 * n * Pi / 3)) / 9. • a(3k) = 8k - 1, a(3k - 1) = 8k - 4, a(3k - 2) = 8k - 5 . (End) •
► [A060962] 1,1,3,4,7,11,17,25,36,50,69,93,125,163,213,272,346,435,543,671,825,1 005,1218,1466,1756 ⋆ Expansion of (1 + x ^ 2) * (1 + x ^ 5) / (Product _{ j= 1..7 } (1 - x ^ j)). • a(n) = 1 - 263117 * n / 1814400 + 109537 * n ^ 2 / 907200 + 97 * n ^ 3 / 4320 + 127 * n ^ 4 / 72576 + n ^ 5 / 14400 + n ^ 6 / 907200 + 4 / 7 * floor(n / 7) + 1 / 3 * floor(n / 6) + 2 / 25 * floor(n / 5) - 11 / 162 * flo or(n / 3) + (73 / 192 + 5 * n / 96) * floor(n / 2) + 1 / 7 * floor((1 + n) / 7) - 1 / 6 * floor((1 + n) / 6) + 4 / 25 * floor((1 + n) / 5) + (53 / 162 + n / 54) * f loor((1 + n) / 3) + 3 / 7 * floor((2 + n) / 7) - 4 / 25 * floor((2 + n) / 5) + 2 / 7 * floor((3 + n) / 7) + 8 / 25 * floor((3 + n) / 5) + 1 / 7 * floor((4 + n) / 7) + 3 / 7 * floor((5 + n) / 7). - _ Vaclav Kotesovec _ , Sep 29 2012 •
► [A000204] 1,3,4,7,11,18,29,47,76,123,199,322,521,843,1364,2207,3571,5778,934 9,15127,24476,39603,64079,103682,167761 ⋆ Lucas numbers (beginning with 1): L(n) = L(n - 1) + L(n - 2) with L(1) = 1, L(2) = 3. • a(n) = Sum _{ k=0..floo r((n + 1) / 2) } (n + 1) * binomial(n - k + 1, k) / (n - k + 1). - _ Paul Barry _ , Jan 30 2005 • a(n) = 2 * fibonacci(n - 1) + fibonacci(n), n >= 1. - _ Zerin vary Lajos _ , Oct 05 2007 • a(n) = phi ^ n + (1 - phi) ^ n = phi ^ n + (- phi) ^ (- n) = ((1 + sqrt(5)) ^ n + (1 - sqrt(5)) ^ n) / (2 ^ n) where phi is the gold en ratio (A001622). - _ Artur Jasinski _ , Oct 05 2008 • a(n) = ((1 + sqrt5) ^ n - (1 - sqrt5) ^ n) / (2 ^ n * sqrt5) + ((1 + sqrt5) ^ (n - 1) - (1 - sqrt5) ^ (n - 1)) / (2 ^ (n - 2) * sqrt5). - Al Hakanson (hawkuu(AT)gmail.com), Jan 12 2009 , Jan 14 2009 • a(n) = hypergeom([(1 - n) / 2, - n / 2], [1 - n], - 4) for n >= 3. - _ Peter Luschny _ , Sep 03 2019 •
► [A041209] 1,1,3,4,7,11,18,29,76,105,2176,2281,6738,9019,15757,24776,40533,65 309,171151,236460,4900351,5136811,15173973,20310784,35484757 ⋆ Denominato rs of continued fraction convergents to sqrt(115). • a(n) = 2252 * a(n - 10) - a(n - 20). - _ Vincenzo Librandi _ , Dec 13 2013 •
► [A293420] 0,1,1,3,4,7,11,18,30,48,78,126,204,330,533,863,1396,2258,3654,5913,9 567,15480,25047,40527,65574 ⋆ a(n) is the integer k that minimizes |k / Fibonac ci(n) - sqrt(2)|. • a(n) = floor(1 / 2 + Fibonacci(n) * sqrt(2)). •
► [A042593] 1,1,3,4,7,11,18,83,101,184,285,469,1223,1692,95975,97667,291309,38 8976,680285,1069261,1749546,8067445,9816991,17884436,27701427 ⋆ Denominat ors of continued fraction convergents to sqrt(825). • a(n) = 97198 * a(n - 14) - a(n - 28) for n>27. - _ Vincenzo Librandi _ , Jan 25 2014 •
► [A049863] 0,3,4,7,11,21,39,74,138,258,481,898,1676,3129,5841,10904,20355,379 98,70933,132415,247187,461439,861396,1608020,3001788 ⋆ a(n)=Sum { a(k): k= 0,1,2,...,n - 4,n - 2,n - 1 } ; a(n - 3) is not a summand; 3 initial terms required. • a(n)=2 * a(n - 1) - a(n - 3) + a(n - 4); 4 initial terms required. •
► [A042827] 1,1,3,4,7,11,29,69,236,541,1318,1859,3177,5036,13249,18285,111034 9,1128634,3367617,4496251,7863868,12360119,32584106,77528331,265169099 ⋆ D enominators of continued fraction convergents to sqrt(944). • a(n) = 1123598 * a(n - 16) - a(n - 32) for n>31. - _ Vincenzo Librandi _ , Jan 30 2014 •
► [A042655] 1,3,4,7,11,40,51,346,397,743,4855,5598,21649,27247,48896,76143,277 325,16160993,48760304,64921297,113681601,178602898,649490295,828093193,561 8049453 ⋆ Denominators of continued fraction convergents to sqrt(857). • a(n) = 16237136 * a(n - 17) + a(n - 34) for n>33. - _ Vincenzo Librandi _ , Jan 26 2014 •
► [A041901] 1,1,3,4,7,11,51,266,1115,1381,2496,3877,10250,14127,603584,61771 1,1839006,2456717,4295723,6752440,31305483,163279855,684424903,847704758,1 532129661 ⋆ Denominators of continued fraction convergents to sqrt(472). • a(n) = 613834 * a(n - 14) - a(n - 28) for n>27. - _ Vincenzo Librandi _ , Dec 26 2013 •
► [A041153] 1,3,4,7,11,95,106,201,307,1122,20503,62631,83134,145765,228899,19 76957,2205856,4182813,6388669,23348820,426667429,1303351107,1730018536,303 3369643,4763388179 ⋆ Denominators of continued fraction convergents to sqrt(86). • a(n) = 20810 * a(n - 10) - a(n - 20). - _ Vincenzo Librandi _ , Dec 12 20 13 •
► [A041781] 1,3,4,7,11,216,227,443,670,2453,98790,298823,397613,696436,109404 9,21483367,22577416,44060783,66638199,243975380,9825653399,29720935577,395 46588976,69267524553,108814113529 ⋆ Denominators of continued fraction conv ergents to sqrt(411). • a(n) = 99460 * a(n - 10) - a(n - 20) for n>19. - _ Vince nzo Librandi _ , Dec 24 2013 •
► [A042893] 1,3,4,7,11,337,348,685,1033,3784,235641,710707,946348,1657055,260 3403,79759145,82362548,162121693,244484241,895574416,55770098033,16820586 8515,223975966548,392181835063,616157801611 ⋆ Denominators of continued fr action convergents to sqrt(978). • a(n) = 236674 * a(n - 10) - a(n - 20) for n > 19. - _ Vincenzo Librandi _ , Feb 01 2014 •
► [A305185] 0,1,3,4,7,12,13,19,27,28,37,48,49,61,75,76,91,108,109,127,147,148,16 9,192,193 ⋆ a(n) minimizes the maximum norm of elements in a complete resid ue system of Eisenstein integers modulo n. • a(1) = 0; for n >= 2, a(n) = (n ^ 2 + 3 * (n - 2 * ceiling(n / 3)) ^ 2) / 4 = n ^ 2 - 3 * n * ceiling(n / 3) + 3 * ceil ing(n / 3) ^ 2. •
► [A117950] 3,4,7,12,19,28,39,52,67,84,103,124,147,172,199,228,259,292,327,364,4 03,444,487,532,579 ⋆ a(n) = n ^ 2 + 3. • a(n) = ((n - 3) ^ 2 + 3 * (n + 1) ^ 2) / 4. - _ Reinhard Zumkeller _ , Feb 13 2009 • a(n) = ceiling((n + 1 / n) ^ 2), n>0. - _ Vincenzo Librandi _ , Oct 19 2011 • a(n) = 2 * n + a(n - 1) - 1 (with a(0)=3). - _ Vincenzo Librandi _ , Nov 13 2010 •
► [A293642] 0,0,0,1,1,3,4,7,12,20,33,53,86,139,226,366,592,958,1550,2508,4059,65 67,10626,17194,27820 ⋆ a(n) is the greatest integer k such that k / Fibonacci(n) < 3 / 5. • a(n) = a(n - 1) + 2 a(n - 2) - a(n - 3) - 2 a(n - 4) + 2 a(n - 5) + a(n - 6) - 3 a(n - 7) - a(n - 8) + 3 a(n - 9) - 2 a(n - 11) + a(n - 12) + 2 a(n - 13) - a(n - 14) - a(n - 15) for n >= 16. • a(n) = floor(3 * Fibonacci(n) / 5). •
► [A049859] 0,1,3,4,7,12,23,43,81,151,282,526,982,1833,3422,6388,11925,22261,4 1556,77575,144814,270333,504647,942055,1758591 ⋆ a(n) = Sum _{ k=0,1,2,..., n - 4,n - 2,n - 1 } a(k); a(n - 3) is not a summand; 3 initial terms required. • a(n) = 2 * a(n - 1) - a(n - 3) + a(n - 4); 4 initial terms required. •
► [A116201] 0,1,1,1,3,4,7,13,21,37,64,109,189,325,559,964,1659,2857,4921,8473,1 4592,25129,43273,74521,128331 ⋆ a(n) = a(n - 1) + a(n - 2) + a(n - 3) - a(n - 4); a(0)=0, a(1)=1, a(2)=1, a(3)=1. • a(n) = (T(n,alpha) - T(n,beta)) / (alpha - beta), where alpha = (1 + sqrt(13)) / 4 and beta = (1 - sqrt(13)) / 4 and T(n,x) denotes the Chebyshev polynomial of the first kind. • a(n) = the bottom left entry of the 2 X 2 matrix T(n, M), where M is the 2 X 2 matrix [0, 3 / 4; 1, 1 / 2]. • a(n) = U(n - 1,(sqrt(3) + i) / 4) * U(n - 1,(sqrt(3) - i) / 4), where U(n,x) denotes the Chebyshev polynomial of the second kind. •
► [A254310] 3,4,7,13,85 ⋆ a(n) = 3[0]3[1]3...3[n - 1]3[n]3 where [n] is the n - th hyperoperator. • a(- 1) = 3, a(n) = 3[0]3[1]3...3[n - 1]3[n]3. •
► [A073728] 3,4,7,14,25,46,85,156,287,528,971,1786,3285,6042,11113,20440,3759 5,69148,127183,233926,430257,791366,1455549,2677172,4924087 ⋆ a(n) = Sum _{ k=0..n } S(k), where S(n) are the tribonacci generalized numbers A001644. • a(n) = a(n - 1) + a(n - 2) + a(n - 3), a(0)=3, a(1)=4, a(2)=7. • a(n) = 3 * T (n + 1) + T(n), where T(n) are the tribonacci numbers A000073. •
► [A132753] 3,4,7,14,29,60,123,250,505,1016,2039,4086,8181,16372,32755,65522,1 31057,262128,524271,1048558,2097133,4194284,8388587,16777194,33554409 ⋆ a(n) = 2 ^ (n + 1) - n + 1. • a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 2 * a(n - 3). •
► [A329666] 1,1,1,3,4,7,15,26,50,102,196,392,800,1609,3290,6786,13973,28998,60 469,126295,264945,557594,1176004,2487485,5274110 ⋆ Number of excursions of l ength n with Motzkin - steps avoiding the consecutive steps UU and HH. • a(0) = a(1) = a(2) = 1; a(n) = a(n - 2) + a(n - 3) + Sum _{ k=0..n - 3 } a(k) * a(n - k - 3). - _ Ilya Gutkovskiy _ , Nov 09 2021 •
► [A130755] 3,4,7,15,32,65,129,256,511,1023,2048,4097,8193,16384,32767,65535,1 31072,262145,524289,1048576,2097151,4194303,8388608,16777217,33554433 ⋆ Bi nomial transform of periodic sequence (3, 1, 2). • a(0) = 3; a(1) = 4; a(2) = 7; f or n > 2, a(n) = 3 * a(n - 1) - 3 * a(n - 2) + 2 * a(n - 3). •
► [A100455] 1,3,4,7,16,33,64,127,256,513,1024,2047,4096,8193,16384,32767,6553 6,131073,262144,524287,1048576,2097153,4194304,8388607,16777216 ⋆ a(n) = 2 ^ n + sin(n * Pi / 2). • a(n) = 2 * a(n - 1) - a(n - 2) + 2 * a(n - 3), with a(0)= 1, a(1)=3, a(2)=4. - _ Harvey P. Dale _ , Jan 17 2012 •
► [A291773] 1,1,3,4,7,16,43,124,367,1096,3283,9844,29527,88576,265723,797164,2 391487,7174456,21523363,64570084,193710247,581130736,1743392203,523017660 4,15690529807 ⋆ Domination number of the n - Apollonian network. • a(n) = (3 ^ (n - 3) + 5) / 2 for n > 2. - _ Andrew Howroyd _ , Sep 01 2017 • a(n) = 4 * a(n - 1) - 3 * a(n - 2) for n>4. •
► [A331115] 1,3,4,7,17,24,41,99,140,239,577,816,1393,3363,4756,8119,19601,2772 0,47321,114243,161564,275807,665857,941664,1607521 ⋆ Numerators of the best approximations for sqrt(2). • a(3n - 2) = 1 / 2 * S(2n - 1), a(3n - 1) = 1 / 2 * S (2n), a(3n) = w / 2 * D(2n), for n>0 with w = sqrt(2) and S(n) = (1 + w) ^ n + (1 - w) ^ n and D(n) = (1 + w) ^ n - (1 - w) ^ n. • a(n) = 6 * a(n - 3) - a(n - 6) for n>6. •
► [A042375] 1,1,3,4,7,18,25,43,111,154,8119,8273,24665,32938,57603,148144,2057 47,353891,913529,1267420,66819369,68086789,202992947,271079736,474072683 ⋆ Denominators of continued fraction convergents to sqrt(714). • a(n) = 8230 * a (n - 10) - a(n - 20). - _ Wesley Ivan Hurt _ , Sep 07 2022 •
► [A041593] 1,1,3,4,7,18,25,868,893,2654,3547,6201,15949,22150,769049,791199,2 351447,3142646,5494093,14130832,19624925,681378282,701003207,2083384696,27 84387903 ⋆ Denominators of continued fraction convergents to sqrt(314). • a(n) = 886 * a(n - 7) + a(n - 14) for n>13. - _ Vincenzo Librandi _ , Dec 21 2013 •
► [A041497] 1,3,4,7,18,43,61,104,373,12040,36493,48533,85026,218585,522196,74 0781,1262977,4529712,146213761,443170995,589384756,1032555751,2654496258,6 341548267,8996044525 ⋆ Denominators of continued fraction convergents to sqr t(265). • a(n) = 12144 * a(n - 9) + a(n - 18) for n>17, - _ Vincenzo Librandi _ , Dec 19 2013 •
► [A042173] 1,1,3,4,7,32,71,103,277,1211,1488,2699,6886,9585,466966,476551,142 0068,1896619,3316687,15163367,33643421,48806788,131256997,573834776,705091 773 ⋆ Denominators of continued fraction convergents to sqrt(611). • a(n) = 47 3852 * a(n - 14) - a(n - 28) for n > 27. - _ Vincenzo Librandi _ , Jan 16 2014 •
► [A041135] 1,1,3,4,7,39,163,854,1017,1871,4759,6630,110839,117469,345777,463 246,809023,4508361,18842467,98720696,117563163,216283859,550130881,7664147 40,12812766721 ⋆ Denominators of continued fraction convergents to sqrt(76). • a(n) = 115598 * a(n - 12) - a(n - 24). G.f.: - (x ^ 22 - x ^ 21 + 3 * x ^ 20 - 4 * x ^ 19 + 7 * x ^ 18 - 39 * x ^ 17 + 163 * x ^ 16 - 854 * x ^ 15 + 1017 * x ^ 1 4 - 1871 * x ^ 13 + 4759 * x ^ 12 - 6630 * x ^ 11 - 4759 * x ^ 10 - 1871 * x ^ 9 - 1017 * x ^ 8 - 854 * x ^ 7 - 163 * x ^ 6 - 39 * x ^ 5 - 7 * x ^ 4 - 4 * x ^ 3 - 3 * x ^ 2 - x - 1) / ((x ^ 12 - 340 * x ^ 6 + 1) * (x ^ 12 + 340 * x ^ 6 + 1)). [_ Coli n Barker _ , Jul 19 2012] •

► [A041379] 1,3,4,7,46,53,99,350,9899,30047,39946,69993,459904,529897,989801,3499300,98970201,300409903,399380104,699790007,4598120146,5297910153,9896030299,34986001050,989504059699 ⋆ Denominators of continued fraction convergents to sqrt(204). ● a(n) = 9998 * a(n - 8) - a(n - 16) for n>15. - _ Vincenzo Librandi _ , Dec 16 2013 ●
► [A041463] 1,1,3,4,7,67,74,733,807,1540,3887,5427,166697,172124,510945,683069,1194014,11429195,12623209,125038076,137661285,262699361,663060007,925759368,28435841047 ⋆ Denominators of continued fraction convergents to sqrt(247) . ● a(n) = 170584 * a(n - 12) - a(n - 24) for n>23. - _ Vincenzo Librandi _ , Dec 18 2013 ●
► [A041863] 1,3,4,7,74,1043,10504,11547,22051,77700,3285451,9934053,13219504,23153557,244755074,3449724593,34742001004,38191725597,72933726601,256992905400,10866635753401,32856900165603,43723535919004,76580436084607,809527896765074 ⋆ Denominators of continued fraction convergents to sqrt(453). ● a(n) = 3307502 * a(n - 10) - a(n - 20) for n>19. - _ Vincenzo Librandi _ , Dec 26 2013 ●
► [A042543] 1,3,4,7,95,102,197,693,39005,117708,156713,274421,3724186,3998607,7722793,27166986,1529074009,4614389013,6143463022,10757852035,145995539477,156753391512,302748930989,1065000184479,59942759261813 ⋆ Denominators of continued fraction convergents to sqrt(800). ● a(n) = 39202 * a(n - 8) - a(n - 16) for n>15. - _ Vincenzo Librandi _ , Jan 23 2014 ●
► [A349609] 0,0,1,1,3,4,8,8,13,15,20,22,28,31,39,43,52,54,64,69,79,83,96,102,112 ⋆ Number of solutions to x ^ 2 + y ^ 2 <= n ^ 2, where x, y are positive odd integers. ● a(n) = [x ^ (n ^ 2)] theta _ 2(x ^ 4) ^ 2 / (4 * (1 - x)). ●
► [A057549] 0,1,3,4,8,9,11,12,13,22,23,25,26,27,31,32,34,35,36,38,39,40,41,64,65 ⋆ The local ranks of each term of A057547. ● a(n) = CatalanRank(floor(binwidth(A057547[n]) / 2), A057547[n]) ●
► [A047460] 0,1,3,4,8,9,11,12,16,17,19,20,24,25,27,28,32,33,35,36,40,41,43,44,48 ⋆ Numbers that are congruent to { 0, 1, 3, 4 } mod 8. ● a(n) = (- 1 / 4 + i / 4) * ((6 + 6 * i) + (1 + i) * (- 1) ^ n + (- i) ^ n + i * i ^ n) + 2 * n where i=sqrt(- 1). ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. - _ Vincenzo Librandi _ , May 16 2012 ●
► [A006520] 1,3,4,8,9,11,12,20,21,23,24,28,29,31,32,48,49,51,52,56,57,59,60,68,69 ⋆ Partial sums of A006519. ● a(n) / (n * log(n)) is bounded. - _ Benoit Cloitre _ , Dec 17 2002 ● a(n) = b(n + 1), with b(2n) = 2b(n) + n, b(2n + 1) = 2b(n) + n + 1. - _ Ralf Stephan _ , Sep 07 2003 ●
► [A047204] 3,4,8,9,13,14,18,19,23,24,28,29,33,34,38,39,43,44,48,49,53,54,58,59,63 ⋆ Numbers that are congruent to { 3, 4 } mod 5. ● a(n) = 5 * n - a(n - 1) - 3 for n>1, a(1)=3. - _ Vincenzo Librandi _ , Nov 18 2010 ● a(n) = floor(5 * n / 2) - (- 1) ^ n. - _ Wesley Ivan Hurt _ , Sep 12 2017 ●
► [A355477] 0,0,1,3,4,8,9,14,16,23,25,33,36,46,49,60,64,77,81,96,100 ⋆ Maximum number of skew - tetrominoes that can be packed into an n X n square. ● a(n) < n ^ 2 / 4. ● a(2m + 1) = m ^ 2. ●
► [A341578] 1,3,4,8,9,14,16,24,25,33,36,45,49,60,64,80,81,95,100,117,121,138,144,165,169 ⋆ a(n) is the minimum number of total votes needed for one party to win if there are n ^ 2 voters divided into equal districts. ● a(n) is the minimum value of { (floor(d / 2) + 1) * (floor(n ^ 2 / (2 * d)) + 1) over all divisors d of n ^ 2 AND (n / 2 + 1) ^ 2 - 1, if n is even } . ●
► [A285440] 3,4,8,9,15,16,20,21,27,28,32,33,39,40,44,45,51,52,56,57,63,64,68,69,75 ⋆ Consider the sums of the numbers < n that share the same greatest common divisor with n. Sequence lists numbers that have only one of those sums equal to n. ● a(n) = 1 / 4 * Sum _{ k=0..n - 1 } (- 3 * (k mod 4) + 5 * ((k + 1) mod 4) - ((k + 2) mod 4) + 7 * ((k + 3) mod 4)) - 3. ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n > 5. ●
► [A135276] 0,1,3,4,8,9,15,16,24,25,35,36,48,49,63,64,80,81,99,100,120,121,143,144,168 ⋆ a(0)=0, a(1)=1; for n>1, a(n) = a(n - 1) + n ^ 0 if n odd, a(n) = a(n - 1) + n ^ 1 if n is even. ● a(n) = (n / 2 + 1) ^ 2 - 1 if n is even, ((n + 1) / 2) ^ 2 if n is odd. - _ M. F. Hasler _ , May 17 2008 ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). (End) ● a(n) = (2 * n ^ 2 + 6 * n + 1 + (2 * n - 1) * (- 1) ^ n) / 8. - _ Luce ETIENNE _ , Jul 08 2014 ● a(n) = (floor(n / 2) + 1) ^ 2 + (n mod 2) - 1. - _ Wesley Ivan Hurt _ , Mar 22 2016 ●
► [A319875] 0,1,3,4,8,9,15,18,20,21,31,34,46,48,51,56,72,77,95,100,104,107,129,136,142 ⋆ a(n) is the number of liberties of the group of n stones labeled 1 to n, by analogy to the game of go, in a pi(n) - dimensional board where a stone's coordinates are its label's p - adic valuations. ● a(1) = 0. ● a(p) = a(p - 1) + p - 1, for p a prime number. ● a(c) = a(c - 1) + pi(c) - pi(gpf(c)), for c a composite number, where gpf = A006530 denotes the "greatest prime factor of" function. ●
► [A254877] 1,1,3,4,8,9,16,18,28,31,45,49,68,73,97,104,134,142,179,189,233,245,297,311,372 ⋆ Expansion of (1 - x ^ 5) / ((1 - x) * (1 - x ^ 2) ^ 2 * (1 - x ^ 3) * (1 - x ^ 4)) in powers of x. ● a(n) = - a(- 7 - n) for all n in Z. ●
► [A047343] 1,3,4,8,10,11,15,17,18,22,24,25,29,31,32,36,38,39,43,45,46,50,52,53,57 ⋆ Numbers that are congruent to { 1, 3, 4 } mod 7. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. ● a(n) = (21 * n - 18 - 9 * cos(2 * n * Pi / 3) + sqrt(3) * sin(2 * n * Pi / 3)) / 9. ● a(3k) = 7k - 3, a(3k - 1) = 7k - 4, a(3k - 2) = 7k - 6. (End) ●
► [A268514] 0,1,3,4,8,10,12,13,21,25,29,31,35,37,39,40,56,64,72,76,84,88,92,94,102 ⋆ a(0)=0; thereafter a(2n + 1)=3 * a(n) + 1, a(2n)=2 * a(n) + a(n - 1) + 1. ● a(n) = Sum { i=1..n } 2 ^{ number of 0's in binary expansion of i } . ●
► [A080085] 1,1,3,4,8,10,15,16,19,25,26,34,38,39,42,49,54,56,64,67,70,74,79,85,94 ⋆ Number of factors of 2 in the factorial of the n - th prime, counted with multiplicity. ● a(n) = Sum _{ k=1..L } floor(p _ n / 2 ^ k), where L = log(p _ n) / log(2), where p _ n is the n - th prime. ●
► [A265611] 1,3,4,8,10,15,18,24,28,35,40,48,54,63,70,80,88,99,108,120,130,143,154,168,180 ⋆ a(n) = a(n - 1) + floor((n - 1) / 2) - (- 1) ^ n + 2 for n>=2, a(0)=1, a(1)=3. ● a(n + 1) - a(n) = floor(n / 2) + 2 + (- 1) ^ n - 0 ^ n. ● a(n) = a(- n - 6) = (2 * n * (n + 6) - 5 * (- 1) ^ n + 5) / 8 for n>0, a(0)=1. [_ Bruno Berselli _ , Dec 18 2015] ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4) for n>5. - _ R. H. Hardin _ , Dec 21 2015, proved by _ Susanne Wienand _ for the algorithm sent to the seqfan mailing list and used in the Sage script below. ● a(n) = (floor((n + 3) / 2) - 1) * (ceiling((n + 3) / 2) + 1) for n>0. - _ Wesley Ivan Hurt _ , Mar 30 2017 ●
► [A308844] 0,0,0,0,0,1,1,3,4,8,10,16,18,29,33,52,59,83,93,125,138,178,196,252,275 ⋆ Sum of the second largest parts in the partitions of n into 5 squarefree parts . ● a(n) = Sum _{ l=1..floor(n / 5) } Sum _{ k=l..floor((n - l) / 4) } Sum _{ j=k..floor((n - k - l) / 3) } Sum _{ i=j..floor((n - j - k - l) / 2) } mu(l) ^ 2 * mu(k) ^ 2 * mu(j) ^ 2 * mu(i) ^ 2 * mu(n - i - j - k - l) ^ 2 * i, where mu is the Möbius function (A008683). ●
► [A131355] 1,1,1,3,4,8,10,16,19,27,31,41,46,58,64,78,85,101,109,127,136,156,166,188,199 ⋆ Partial sums of A065423 plus one. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5), n > 5. (End) ● a(n) = (6 * n ^ 2 - 10 * n + 17 - (1 + 2n) * (- 1) ^ n) / 16. - _ Wesley Ivan Hurt _ , Jul 28 2015 ● a(n) = 1 + binomial(n,2) - binomial(floor(n / 2) + 1,2). - _ Juan B. Gil _ , Mar 10 2023 ●
► [A092534] 1,1,3,4,8,10,16,20,28,34,44,52,64,74,88,100,116,130,148,164,184,202,224,244,268 ⋆ Expansion of (1 - x + x ^ 2) * (1 + x ^ 4) / ((1 - x) ^ 2 * (1 - x ^ 2)). ● a(n) = (13 + 3 * (- 1) ^ n - 4 * n + 2 * n ^ 2) / 4 for n>2. ● a(n) = (n ^ 2 - 2 * n + 8) / 2 for n>2 and even. ● a(n) = (n ^ 2 - 2 * n + 5) / 2 for n>2 and odd. ● a(n) = a(n - 1) + a(n - 2) - a(n - 4) - a(n - 5) + a(n - 6) for n>6. ●
► [A005232] 1,1,3,4,8,10,16,20,29,35,47,56,72,84,104,120,145,165,195,220,256,286,328,364,413 ⋆ Expansion of (1 - x + x ^ 2) / ((1 - x) ^ 2 * (1 - x ^ 2) * (1 - x ^ 4)). ● a(n) = - a(- 6 - n) for all n in Z. - _ Michael Somos _ , Feb 05 2011 ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + 2 * a(n - 4) - 2 * a(n - 5) + 2 * a(n - 7) - a(n - 8) with a(0) = 1, a(1) = 1, a(2) = 3, a(3) = 4, a(4) = 8, a(5) = 10, a(6) = 16, a(7) = 20. - _ Harvey P. Dale _ , Oct 24 2012 ● a(n) = ((n + 3) * (2 * n ^ 2 + 12 * n + 19 + 9 * (- 1) ^ n) + 6 * (- 1) ^ ((2 * n - 1 + (- 1) ^ n) / 4) * (1 + (- 1) ^ n)) / 96. - _ Luce ETIENNE _ , Mar 16 2015 ●
► [A294085] 1,1,3,4,8,10,17,20,30,35,49,56,75,84,108,120,150,165,202,220,264,286,338,364,425 ⋆ a(n) is the number of self - symmetric anonymous and neutral equivalence classes of preference profiles with 3 alternatives and n agents (IANC model). ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) + a(n - 6) - a(n - 7) - 2 * a(n - 8) + 2 * a(n - 9) + a(n - 10) - a(n - 11) for n>10. ●
► [A115264] 1,1,3,4,8,10,17,21,32,39,55,66,89,105,136,159,200,231,284,325,392,445,528,595,697 ⋆ Diagonal sums of correlation triangle for floor((n + 2) / 2). ● a(n) = Sum _{ k=0..floor(n / 2) } Sum _{ j=0..n - k } [j<=k] * floor((k - j + 2) / 2) * [j<=n - 2k] * floor((n - 2k - j + 2) / 2). ●
► [A308910] 0,0,0,0,0,0,1,1,3,4,8,10,18,20,32,38,60,70,100,112,157,181,231,259,341 ⋆ Sum of the second largest parts in the partitions of n into 6 squarefree parts. ● a(n) = Sum _{ m=1..floor(n / 6) } Sum _{ l=m..floor((n - m) / 5) } Sum _{ k=l..floor((n - l - m) / 4) } Sum _{ j=k..floor((n - k - l - m) / 3) } Sum _{ i=j..floor((n - j - k - l - m) / 2) } mu(m) ^ 2 * mu(l) ^ 2 * mu(k) ^ 2 * mu(j) ^ 2 * mu(i) ^ 2 * mu(n - i - k - j - l - m) ^ 2 * i, where mu is the Möbius function (A008683). ●
► [A308959] 0,0,0,0,0,0,0,1,1,3,4,8,10,18,22,34,41,65,78,111,129,179,213,277,315 ⋆ Sum of the second largest parts in the partitions of n into 7 squarefree parts. ● a(n) = Sum _{ o=1..floor(n / 7) } Sum _{ m=o..floor((n - o) / 6) } Sum _{ l=m..floor((n - m - o) / 5) } Sum _{ k=l..floor((n - l - m - o) / 4) } Sum _{ j=k..floor((n - k - l - m - o) / 3 } Sum _{ i=j..floor((n - j - k - l - m - o) / 2) } mu(o) ^ 2 * mu(m) ^ 2 * mu(l) ^ 2 * mu(k) ^ 2 * mu(j) ^ 2 * mu(i) ^ 2 * mu(n - i - j - k - l - m - o) ^ 2 * i, where mu is the Möbius function (A008683). ●
► [A326451] 0,0,0,0,0,0,0,0,0,1,1,3,4,8,10,18,22,36,43,68,83,119,140,196,235,312 ⋆ Sum of the second largest parts of the partitions of n into 8 squarefree parts. ● a(n) = Sum _{ p=1..floor(n / 8) } Sum _{ o=p..floor((n - p) / 7) } Sum _{ m=o..floor((n - o - p) / 6) } Sum _{ l=m..floor((n - m - o - p) / 5) } Sum _{ k=l..floor((n - l - m - o - p) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p) / 2) } mu(p) ^ 2 * mu(o) ^ 2 * mu(m) ^ 2 * mu(l) ^ 2 * mu(k) ^ 2 * mu(j) ^ 2 * mu(i) ^ 2 * mu(n - i - j - k - l - m - o - p) ^ 2 * i, where mu is the Möbius function (A008683). ●
► [A326531] 0,0,0,0,0,0,0,0,0,0,1,1,3,4,8,10,18,22,36,45,70,86,124,148,207,252 ⋆ Sum of the second largest parts of the partitions of n into 9 squarefree parts. ● a(n) = Sum _{ q=1..floor(n / 9) } Sum _{ p=q..floor((n - q) / 8) } Sum _{ o=p..floor((n - p - q) / 7) } Sum _{ m=o..floor((n - o - p - q) / 6) } Sum _{ l=m..floor((n - m - o - p - q) / 5) } Sum _{ k=l..floor((n - l - m - o - p - q) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p - q) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p - q) / 2) } mu(q) ^ 2 * mu(p) ^ 2 * mu(o) ^ 2 * mu(m) ^ 2 * mu(l) ^ 2 * mu(k) ^ 2 * mu(j) ^ 2 * mu(i) ^ 2 * mu(n - i - j - k - l - m - o - p - q) ^ 2 * i , where mu is the Möbius function (A008683). ●
► [A326636] 0,0,0,0,0,0,0,0,0,0,1,1,3,4,8,10,18,22,36,45,72,88,127,153,215 ⋆ Sum of the second largest parts of the partitions of n into 10 squarefree parts. ● a(n) = Sum _{ r=1..floor(n / 10) } Sum _{ q=r..floor((n - r) / 9) } Sum _{ p=q..floor((n - q - r) / 8) } Sum _{ o=p..floor((n - p - q - r) / 7) } Sum _{ m=o..floor((n - o - p - q - r) / 6) } Sum _{ l=m..floor((n - m - o - p - q - r) / 5) } Sum _{ k=l..floor((n - l - m - o - p - q - r) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p - q - r) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p - q - r) / 2) } mu(r) ^ 2 * mu(q) ^ 2 * mu(p) ^ 2 * mu(o) ^ 2 * mu(m) ^ 2 * mu(l) ^ 2 * mu(k) ^ 2 * mu(j) ^ 2 * mu(i) ^ 2 * mu(n - i - j - k - l - m - o - p - q - r) ^ 2 * i, where mu is the Möbius function (A008683). ●
► [A047458] 0,3,4,8,11,12,16,19,20,24,27,28,32,35,36,40,43,44,48,51,52,56,59,60,64 ⋆ Numbers that are congruent to { 0, 3, 4 } mod 8. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. ● a(n) = 8 * n / 3 - 3 - cos(2 * n * Pi / 3) - sin(2 * n * Pi / 3) / (3 * sqrt(3)). ● a(3k) = 8k - 4, a(3k - 1) = 8k - 5, a(3k - 2) = 8k - 8. (End) ●
► [A236453] 1,3,4,8,11,17,22,30,37,47,56,68,79,93,106,122,137,155,172,192,211,233,254,278,301 ⋆ Number of length n strings on the alphabet { 0,1,2 } of the form 0 ^ i 1 ^ j 2 ^ k such that i,j,k>=0 and if i=1 then j=k. ● a(n) = (n ^ 2 + n + 3 - (- 1) ^ n) / 2. - _ Giovanni Resta _ , Jan 26 2014 ●
► [A208971] 1,3,4,8,11,18,24,35,45,61,76,98,119,148,176,213,249,295,340,396,451,518,584,663,741 ⋆ Number of 4 - bead necklaces labeled with numbers - n..n allowing reversal, with sum zero and first and second differences in - n..n. ● a(n) = (2 * n ^ 3 + 6 * n ^ 2 + 28 * n + 48) / 48 for n even. ● a(n) = (2 * n ^ 3 + 6 * n ^ 2 + 22 * n + 18) / 48 for n odd. ●

► [A271723] 3,4,8,11,19,24,36,43,59,68,88,99,123,136,164,179,211,228,264,283,323,344,388,411,459 ⋆ Numbers k such that 3 * k - 8 is a square. ● a(n) = (6 * (n - 1) * n - (2 * n - 1) * (- 1) ^ n + 23) / 8. (End) ●
► [A024786] 0,1,1,3,4,8,11,19,26,41,56,83,112,160,213,295,389,526,686,911,1176,1538,1968,2540,3223 ⋆ Number of 2's in all partitions of n. ● a(n) = Sum _{ k< n, k = n (mod 2) } P(k), P(k) = number of partitions of k as in A000041, P(0) = 1. - Jose Luis Arregui (arregui(AT)posta.unizar.es), Apr 05 2002 ●
► [A332681] 1,3,4,8,11,20,23,35,43,56,63,83,90,115,128,144,159,191,202,238,255,280,299,343,359 ⋆ a(n) = Sum _{ k=1..n } mu(k) * ceiling(n / k) ^ 2. ● a(n) = 2 + Sum _{ k=2..n } (2 * phi(k - 1) + mu(k)) for n > 1. ●
► [A109794] 1,1,3,4,8,11,21,29,55,76,144,199,377,521,987,1364,2584,3571,6765,9349,17711,24476,46368,64079,121393 ⋆ a(2n) = A001906(n + 1), a(2n + 1) = A002878(n). ● a(n) = ((3 / 20) * sqrt(5) + 3 / 4) * (1 / 2 + (1 / 2) * sqrt(5)) ^ n + (- (3 / 20) * sqrt(5) + 3 / 4) * (1 / 2 - (1 / 2) * sqrt(5)) ^ n + (- (3 / 20) * sqrt(5) - 1 / 4) * (- 1 / 2 + (1 / 2) * sqrt(5)) ^ n + ((3 / 20) * sqrt(5) - 1 / 4) * (- 1 / 2 - (1 / 2) * sqrt(5)) ^ n. ● a(n) = 3 * a(n - 2) - a(n - 4), n >= 4; a(0) = 1, a(1) = 1, a(2) = 3, a(3) = 4. - _ Daniel Forgues _ , May 07 2011 ●
► [A063227] 3,4,8,12,16,16,24,24,28,32,36,36,44,44,48,52,56,56,64,64,68,72,76,76,84 ⋆ Dimension of the space of weight 2n cuspidal newforms for Gamma _ 0(66). ● a(n) = a(n - 2) + a(n - 3) - a(n - 5) for n>6. G.f.: - x * (x ^ 5 - 4 * x ^ 4 - 5 * x ^ 3 - 5 * x ^ 2 - 4 * x - 3) / ((x - 1) ^ 2 * (x + 1) * (x ^ 2 + x + 1)). [_ Colin Barker _ , Sep 27 2012] ●
► [A293462] 0,1,3,4,8,12,16,19,21,23,25,27,31,37,43,48,54,61,69,77,85,93,101,109,117 ⋆ Let A _ n be a square n X n matrix with entries A _ n(i,j)=1 if i + j is a perfect power, and A _ n(i,j)=0 otherwise. Then a(n) counts the 1's in A _ n. ● a(n) = a(n - 1) + 2 * (i + n) is a perfect power for i=1..n, + 1 if 2n is a perfect power. - _ Robert G. Wilson v _ , Nov 23 2017 ●
► [A173534] 1,1,3,4,8,12,21,32,52,80,128,198,313,487,766,1194,1874,2926,4585,7165,11219,17540,27453,42933,67182 ⋆ a(n)=a(n - 1) + 2 * a(n - 2) - [a(n - 1) / 2] - [a(n - 4) / 2] - [a(n - 5) / 2]. ● a(n)=a(n - 1) + 2 * a(n - 2) - Floor[a(n - 1) / 2] - Floor[a(n - 4) / 2] - Floor[a(n - 5) / 2] ●
► [A074331] 0,1,1,3,4,8,12,21,33,55,88,144,232,377,609,987,1596,2584,4180,6765,10945,17711,28656,46368,75024 ⋆ a(n) = Fibonacci(n + 1) - (1 + (- 1) ^ n) / 2. ● a(n) = Sum _{ i=0..floor(n / 2) } Fibonacci(2 * i + e), where e = 2 * (n / 2 - floor(n / 2)). ● a(n) = a(n - 1) + 2 * a(n - 2) - a(n - 3) - a(n - 4) for n > 3, a(0)=0, a(1)=1, a(2)=1, a(3)=3. ● a(2 * n + 1) = Fibonacci(2 * n + 2). ● a(2 * n) = Fibonacci(2 * n + 1) - 1. ● a(n - 1) = Sum _{ k=0..floor(n / 2) } binomial(n - k, k - 1). - _ Paul Barry _ , Jul 07 2004 ● a(n) = Sum _{ k=0..floor((n - 1) / 2) } Fibonacci(n - 2 * k). - _ Paul Barry _ , Apr 16 2005 ●
► [A052952] 1,1,3,4,8,12,21,33,55,88,144,232,377,609,987,1596,2584,4180,6765,10945,17711,28656,46368,75024,121393 ⋆ a(n) = Fibonacci(n + 2) - (1 - (- 1) ^ n) / 2. ● a(n) = 2 * a(n - 2) + a(n - 3) + 1, with a(0)=1, a(1)=1, a(2)=3. ● a(n) = Sum _{ alpha=RootOf(- 1 + z + z ^ 2) } (3 + alpha) * alpha ^ (- 1 - n) / 3 - Sum _{ beta=RootOf(- 1 + z ^ 2) } beta ^ (- 1 - n) / 2. ● a(2 * k) = Sum _{ j=0..k } F(2 * j + 1) = F(2 * (k + 1)) for k >= 0; a(2 * k - 1) = Sum _{ j =0..k } F(2 * j) = F(2 * k + 1) - 1 for k >= 1 (F = A000045, Fibonacci numbers). ● a(n) = a(n - 1) + a(n - 2) + (1 + (- 1) ^ n) / 2. ● a(n) = Sum _{ k=0..floor(n / 2)) binomial(n - k + 1, k). - _ Paul Barry _ , Oct 23 2004 ● a(n) = floor(phi ^ (n + 2) / sqrt(5)), where phi is the golden ratio: phi = (1 + sqrt(5)) / 2. - _ Reinhard Zumkeller _ , Apr 19 2005 ●
► [A153339] 3,4,8,12,24,36,72,108,216,324,648,972,1944,2916,5832,8748,17496,26244,52488,78732,157464,236196,472392,708588,1417176 ⋆ Number of zig - zag paths from top to bottom of a rectangle of width 5 with n rows whose color is that of the top right corner ● a(2n) = 4 * 3 ^ (n - 1), a(2n + 1) = 8 * 3 ^ (n - 1) for n>0, a(1)=3. ● a(n) = 3 * a(n - 2) for n>3. G.f.: x * (3 + 4 * x - x ^ 2) / (1 - 3 * x ^ 2). [_ Colin Barker _ , May 10 2012] ●
► [A022308] 0,3,4,8,13,22,36,59,96,156,253,410,664,1075,1740,2816,4557,7374,11932,19307,31240,50548,81789,132338,214128 ⋆ a(n) = a(n - 1) + a(n - 2) + 1 for n>1, a(0)=0, a(1)=3. ● a(n) = 2 * a(n - 1) - a(n - 3) for n>=3. - _ Ron Knott _ , Aug 25 2006 ● a(n) = 4 * F(n) + F(n - 1) - 1, where F = A000045. - _ Bruno Berselli _ , Feb 20 2017 ● a(n) = (- 10 + (5 - 7 * sqrt(5)) * ((1 - sqrt(5)) / 2) ^ n + ((1 + sqrt(5)) / 2) ^ n * (5 + 7 * sqrt(5))) / 10. - _ Colin Barker _ , Feb 20 2017 ●
► [A278137] 1,3,4,8,13,22,37,61,101,166,272,445,726,1183,1925,3129,5082,8248,13379,21692,35157,56963,92271,149434,241970 ⋆ Maximum number of disjoint subgraphs of the Fibonacci cube Gamma(n) that are isomorphic to the hypercube of dimension k, summed over all k. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 4) - a(n - 5) for n>4. ●
► [A049866] 1,1,3,4,8,14,27,50,94,175,327,610,1139,2126,3969,7409,13831,25819,48198,89974,167960,313541,585306,1092626,2039671 ⋆ a(n) = Sum _{ a(k): k=0, 1,2,...,n - 4,n - 2,n - 1 } ; a(n - 3) is not a summand; 3 initial terms required. ● a(n) = 2 * a(n - 1) - a(n - 3) + a(n - 4); 4 initial terms required. ●
► [A007486] 1,3,4,8,15,27,50,92,169,311,572,1052,1935,3559,6546,12040,22145,40731,74916,137792,253439,466147,857378,1576964,2900489 ⋆ a(n) = a(n - 1) + a(n - 2) + a(n - 3). ● a(n) = 2 * a(n - 1) - a(n - 4), n>4. - _ Vincenzo Librandi _ , Jun 08 2011 ●
► [A227615] 3,4,8,16,31,61,122,244,487,973,1946,3892,7783,15565,31130,62259,124517,249033,498066,996131,1992262,3984524,7969047,15938093,31876185 ⋆ Number of bits necessary to represent u(n) in binary, where u is the Lucas - Lehmer sequence: u(0) = 100 (in binary); for n>0, u(n) = u(n - 1) ^ 2 - 2. ● a(n) = E(log _ 2(u(n))) + 1, where E(x) is the integer part of x and u is defined by: u(0) = 4 (or 100 in binary) and for n>0, u(n) = u(n - 1) ^ 2 - 2. ●
► [A198633] 3,4,8,16,32,64,128,256,512,1024,2048,4096,8192,16384,32768,65536,131072,262144,524288,1048576,2097152,4194304,8388608,16777216,33554432 ⋆ Total number of round trips, each of length 2 * n on the graph P _ 3 (o - o - o). ● a(n) = w(3,2 * n), n>=0, with w(3,l) the total number of closed walks on the graph P _ 3 (the simple path with 3 points (vertices) and 2 lines (or edges)). ●
► [A153057] 3,4,8,17,33,58,94,143,207,288,388,509,653,822,1018,1243,1499,1788,2112,2473,2873,3314,3798,4327,4903 ⋆ a(0)=3; a(n) = n ^ 2 + a(n - 1) for n>0. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Vincenzo Librandi _ , May 09 2017 ●
► [A254715] 3,4,8,18,55,137,415,941,2854,7743,21959,61545,175817,496688 ⋆ Number of n - digit semiprimes with semiprime digits (4, 6, 9). ● a(n) = number of n - digit terms in A107342. ●
► [A065034] 3,4,8,19,48,124,323,844,2208,5779,15128,39604,103683,271444,710648,1860499,4870848,12752044,33385283,87403804,228826128,599074579,1568397608,4106118244,10749957123 ⋆ a(n) = Lucas(2 * n) + 1. ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) + a(n - 3). ● a(n) = 1 + ((3 - sqrt(5)) / 2) ^ n + ((3 + sqrt(5)) / 2) ^ n. - _ Colin Barker _ , Nov 01 2016 ●
► [A073313] 3,4,8,22,64,184,524,1488,4224,11992,34048,96672,274480,779328,2212736,6282592,17838080,50647424,143802560,408296704,1159271424,3291504000,9345523712,26534621696,75339399936 ⋆ Binomial transform of generalized Lucas numbers S(n) = S(n - 1) + S(n - 2) + S(n - 3), S(0)=3, S(1)=1, S(2)=3. ● a(n) is the trace of the n - th power of 3 X 3 matrix: first row (2, 1, 0), second row (1, 1, 1), third row (1, 0, 1). It satisfies recurrence a(n) = 4 * a(n - 1) - 4 * a(n - 2) + 2 * a(n - 3), a(0)=3, a(1)=4, a(2)=8. ●
► [A155701] 3,4,8,24,88,344,1368,5464,21848,87384,349528,1398104,5592408,22369624,89478488,357913944,1431655768,5726623064,22906492248,91625968984,366503875928,1466015503704,5864062014808,23456248059224,93824992236888 ⋆ a(n) = (4 ^ n + 8) / 3. ● a(n) = 5 * a(n - 1) - 4 * a(n - 2) = 4 * a(n - 1) - 8. ●
► [A001695] 1,3,4,8,65536 ⋆ a(n) = H _ n(2,n) where H _ n is the n - th hyper operator. ● a(n)= f(n,n); ●
► [A341319] 1,3,4,9,9,14,16,25,25,33,36,45,49,60,64,81,81,95,100,117,121,138,144,165,169 ⋆ Minimum number of cells needed in an n X n grid to win a majority of districts when all districts are required to be the same size. ● a(n) is the minimum value of (floor(d / 2) + 1) * (floor(n ^ 2 / (2 * d)) + 1) over all divisors d of n ^ 2. ●
► [A134025] 0,1,3,4,9,10,11,12,13,27,28,29,30,31,32,33,34,35,36,37,38,39,40,81,82 ⋆ Numbers for which the balanced ternary representation is the same length as the ternary representation. ● a(n) = f(n,0,0) with f(n,m,k) = if n=0 then k else if k<(3 ^ (m + 1) - 1) / 2 then f(n - 1,m,k + 1) else f(n - 1,m + 1,3 ^ (m + 1)). ●
► [A005836] 0,1,3,4,9,10,12,13,27,28,30,31,36,37,39,40,81,82,84,85,90,91,93,94,108 ⋆ Numbers whose base - 3 representation contains no 2. ● a(n + 1) = Sum _{ k=0..m } b(k) * 3 ^ k and n = Sum(b(k) * 2 ^ k). ● a(2n + 1) = 3a(n + 1), a(2n + 2) = a(2n + 1) + 1, a(0) = 0. ● a(n + 1) = 3 * a(floor(n / 2)) + n - 2 * floor(n / 2). - _ Ralf Stephan _ , Apr 27 2003 ● a(2 ^ k + m) = a(m) + 3 ^ k with 1 <= m <= 2 ^ k and 1 <= k, a(1)=0, a(2)=1. - _ Paul Weisenhorn _ , Mar 22 2020 ●
► [A047230] 3,4,9,10,15,16,21,22,27,28,33,34,39,40,45,46,51,52,57,58,63,64,69,70,75 ⋆ Numbers that are congruent to { 3, 4 } mod 6. ● a(n) = 6 * n - a(n - 1) - 5 (with a(1)=3). - _ Vincenzo Librandi _ , Aug 05 2010 ● a(n) = 3 * n - 1 - (- 1) ^ n. ●
► [A126269] 3,4,9,10,21,22,45,46,93,94,189,190,381,382,765,766,1533,1534,3069,3070,6141,6142,12285,12286,24573 ⋆ Numbers n such that hcl(n,n) < hcl(n,n - 1) where hcl(n,i) is the Huffman code length; see comments. ● a(n) = 3 * a(n - 2) - 2 * a(n - 4) for n>6. ● a(n) = - 5 / 2 + (- 1) ^ n / 2 + 3 * 2 ^ ((1 / 2) * (n - 5)) * (2 - 2 * (- 1) ^ n + sqrt(2) + (- 1) ^ n * sqrt(2)) for n>2. ●
► [A047459] 1,3,4,9,11,12,17,19,20,25,27,28,33,35,36,41,43,44,49,51,52,57,59,60,65 ⋆ Numbers that are congruent to { 1, 3, 4 } mod 8. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. ● a(n) = 2 * (12 * n - 12 - 6 * cos(2 * n * Pi / 3) + sqrt(3) * sin(2 * n * Pi / 3)) / 9. ● a(3 * k) = 8 * k - 4, a(3 * k - 1) = 8 * k - 5, a(3 * k - 2) = 8 * k - 7. (End) ●
► [A091380] 1,1,3,4,9,11,14,17,18,27,28,35,38,41,42,51,57,59,65,76,81,86,92,99,100 ⋆ Largest quadratic "mixed" residue modulo the n - th prime (LQxR(p _ n)). ● a(1)=1; a(n>1)=max { r<p _ n | - (r / p _ n)=|p _ n| _ 4 } , where (r / p _ n) is the Legendre symbol and |x| _ m is the least absolute residue of x modulo m. ●
► [A062798] 1,3,4,9,11,26,36,79,130,265,463,956,1717,3470,6449,12949,24311,48772,92379,185027,352755,705897,1352079,2705182,5200311 ⋆ Inverse Moebius transform of central binomial coefficients f[x]=C(c,[x / 2])=A001405[x]. ● a(n)=Sum { C(d, [d / 2]) } , d|n and C(d, [d / 2])=A001405[d]. ●
► [A104479] 3,4,9,12,14,16,18,20,26,29,40,41,48,58,70,73,81,87,92,96,104,111,113,114,118 ⋆ Positive integers n such that n ^ 16 + 1 is semiprime (A001358). ● a(n) ^ 16 + 1 is semiprime (A001358). ●
► [A026476] 1,3,4,9,12,23,26,37,40,51,54,65,68,79,82,93,96,107,110,121,124,135,138,149,152 ⋆ For n>3, a(n) = 7 * n - 21 + 2 * (- 1) ^ n. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n>6. G.f.: x * (1 + 2 * x + 3 * x ^ 3 + 2 * x ^ 4 + 6 * x ^ 5) / ((1 - x) ^ 2 * (1 + x)). - _ Colin Barker _ , May 02 2012 ●
► [A002513] 1,1,3,4,9,12,23,31,54,73,118,159,246,329,489,651,940,1242,1751,2298,3177,4142,5630,7293,9776 ⋆ Number of "cubic partitions" of n: expansion of Product _{ k>0 } 1 / ((1 - x ^ (2k)) ^ 2 * (1 - x ^ (2k - 1))) in powers of x. ● a(3n + 2) = 0 (mod 3). ● a(25n + 22) = 0 (mod 5) (see Xiong). ● a(49n + 15) = a(49n + 29) = a(49n + 36) = a(49n + 43) = 0 (mod 7) (see Chen & Lin). ● a(297n + 62) = a(297n + 161) = 0 (mod 11) (see Chern & Dastidar). ●
► [A131326] 1,3,4,9,13,24,37,63,100,165,265,432,697,1131,1828,2961,4789,7752,12541,20295,32836,53133,85969,139104,225073 ⋆ Row sums of A131325. ● a(n) = 3 * Fibonacci(n + 1) - 2 if n even, a(n) = 3 * Fibonacci(n + 1) if n odd. - _ R. J. Mathar _ , Aug 12 2012 ● a(n) = (3 * 2 ^ (- n - 1) * ((1 + sqrt(5)) ^ (n + 1) - (1 - sqrt(5)) ^ (n + 1))) / sqrt(5) - 2 for n even. ● a(n) = (3 * 2 ^ (- n - 1) * ((1 + sqrt(5)) ^ (n + 1) - (1 - sqrt(5)) ^ (n + 1))) / sqrt(5) for n odd. ● a(n) = a(n - 1) + 2 * a(n - 2) - a(n - 3) - a(n - 4) for n>3. ●
► [A250111] 1,1,1,3,4,9,13,25,38,68,106,182,288,483,771,1275,2046,3355,5401,8811,14212,23112,37324,60580,97904 ⋆ Number of orbits of size 2 in vertices of Fibonacci cube Gamma _ n under the action of its automorphism group. ● a(n) = (1 / 2) * (F(n + 2) - F(floor((n - (- 1) ^ n) / 2) + 2)) for n >= 2, a(1)=1. - _ Joerg Arndt _ , Nov 22 2014 ● a(n) = a(n - 1) + 2 * a(n - 2) - a(n - 3) - a(n - 5) - a(n - 6) for n>7. - _ Colin Barker _ , Dec 01 2014 ● a(n) = [n=1] + Sum _{ k =0..floor((n - 1) / 2) } Fibonacci(k + 1) * Fibonacci(n - 2 * k - 1). ● a(2 * n) =

(1 / 2) * (Fibonacci(2 * n + 2) - Fibonacci(n + 1)), n >= 1. ● a(2 * n + 1) = (1 / 2) * (Fibonacci(2 * n + 3) - Fibonacci(n + 3) + 2 * [n=0]), n >= 0. (End) ●

▶ [A079284] 1,1,3,4,9,13,26,39,73,112,201,313,546,859,1469,2328,3925,6253,10434,16687,27633,44320,72977,117297,192322 ⋆ Diagonal sums of triangle A008949. ● a(n) = Sum _{ j=0..floor(n / 2) } Sum _{ i=0..j } binomial(n - j, i). ● a(n) = Fibonacci(n + 3) - 2 ^ floor((n + 1) / 2). - _ Vladeta Jovovic _ , Feb 12 2003 ●

▶ [A232801] 0,1,1,3,4,9,13,27,40,81,121,243,364,729,1093,2187,3280,6561,9841,19683,29524,59049,88573,177147,265720 ⋆ a(2n) = (3 ^ n - 1) / 2, a(2n + 1) = 3 ^ n. ● a(2n + 1) = (a(2n) + a(2n + 2) + 1) / 2, a(0) = 0. ● a(n) = 4 * a(n - 2) - 3 * a(n - 4) for n>3, a(0)=0, a(1)=1, a(2)=1, a(3)=3. - _ Philippe Deléham _ , Dec 12 2013 ● a(n) = (1 + (- 1) ^ n) * (3 ^ (n / 2) - 1) / 4 + (1 - (- 1) ^ n) * 3 ^ (n / 2 - 1 / 2) / 2. - _ Wesley Ivan Hurt _ , Aug 29 2015 ●

▶ [A006053] 0,0,1,1,3,4,9,14,28,47,89,155,286,507,924,1652,2993,5373,9707,17460,31501,56714,102256,184183,331981 ⋆ a(n) = a(n - 1) + 2 * a(n - 2) - a(n - 3), with a(0) = a(1) = 0, a(2) = 1. ● a(n) = c ^ (n - 2) - a(n - 1) * (c - 1) + (1 / c) * a(n - 2) for n > 3 where c = 2 * cos(Pi / 7). Example: a(7) = 14 = c ^ 5 - 9 * (c - 1) + 4 / c = 18.997607... - 7.21743962... + 2.219832528... - _ Gary W. Adamson _ , Jan 24 2010 ● a(n) = 2 ^ n * (c(1) ^ (n - 1) * (c(1) + c(2)) + c(3) ^ (n - 1) * (c(3) + c(6)) + c(5) ^ (n - 1) * (c(5) + c(4))) / 7, with c(j):=cos(Pi * j / 7). - _ Herbert Kociemba _ , Dec 18 2011 ● a(n + 1) * (- 1) ^ n * 49 ^ (1 / 3) = (c(1) / c(4)) ^ (1 / 3) * (2 * c(1)) ^ n + (c(2) / c(1)) ^ (1 / 3) * (2 * c(2)) ^ n + (c(4) / c(2)) ^ (1 / 3) * (2c(4)) ^ n = (c(2) / c(1)) ^ (1 / 3) * (2 * c(1)) ^ (n + 1) + (c(4) / c(2)) ^ (1 / 3) * (c(2)) ^ (n + 1) + (c(1) / c(4)) ^ (1 / 3) * (2 * c(4)) ^ (n + 1), where c(j) := cos(2Pi * j / 7); for the proof, see Witula et al.'s papers. - _ Roman Witula _ , Jul 21 2012 ● a(2n - 1) = 2 * a(n + 1) * a(n) - a(n) ^ 2 - a(n - 1) ^ 2. - _ Richard Peterson _ , May 25 2023 ●

▶ [A174783] 0,1,1,3,4,9,14,29,49,99,175,351,637,1275,2353,4707,8788,17577,33098,66197,125476,250953,478192,956385,1830270 ⋆ Expansion of (1 + 2x - sqrt(1 - 4x ^ 2)) / (2(1 - x ^ 2) * sqrt(1 - 4x ^ 2)). ● a(n) = Sum _{ i=1..(n + 1) / 2 } ((binomial(n - 2 * i + 1,floor((n - 2 * i + 1) / 2)))). - _ Vladimir Kruchinin _ , Mar 15 2016 ●

▶ [A253197] 0,1,3,4,9,15,24,41,67,108,177,287,464,753,1219,1972,3193,5167,8360,13529,21891,35420,57313,92735,150048 ⋆ a(n) = a(n - 1) + a(n - 2) + (1 - (- 1) ^ (a(n - 1) + a(n - 2))) with a(0) = 0, a(1) = 1. ● a(n) = a(n - 1) + a(n - 2) + (1 - (- 1) ^ (a(n - 1) + a(n - 2))), a(0) = 0, a(1) = 1. ● a(n) = a(n - 1) + a(n - 2) + a(n - 3) - a(n - 4) - a(n - 5) for n > 4. - _ Colin Barker _ , Mar 28 2015 ● a(n) = 2 * Fibonacci(n + 1) - (1 if n == 0 (mod 3)) - 1. - _ Nicolas Bělohoubek _ , Sep 29 2021 ●

▶ [A271785] 0,3,4,9,16,30,54,97,172,303,530,922,1596,2751,4724,8085,13796,23478,39858,67517,114140,192603,324454,545714,916536 ⋆ a(n) = Sum _{ k=0..(n - 1) / 2 } (n + 2 - k) * binomial(n - 1 - k,k). ● a(n) = (2 ^ (- 1 - n) * (- 24 * sqrt(5) * ((1 - sqrt(5)) ^ n - (1 + sqrt(5)) ^ n) + 5 * ((1 - sqrt(5)) ^ (1 + n) + (1 + sqrt(5)) ^ (1 + n)) * n)) / 25. ● a(n) = 2 * a(n - 1) + a(n - 2) - 2 * a(n - 3) - a(n - 4) for n>3. (End) ●

▶ [A219680] 3,4,9,19,35,60,98,154,234,345,495,693,949,1274,1680,2180,2788,3519,4389,5415,6615,8008,9614,11454,13550 ⋆ Number of n X 2 arrays of the minimum value of corresponding elements and their horizontal, vertical or antidiagonal neighbors in a random, but sorted with lexicographically nondecreasing rows and nonincreasing columns, 0..2 n X 2 array. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>7. ●

▶ [A038629] 3,4,9,24,70,216,693,2288,7722,26520,92378,325584,1158924,4160240,15043725,54747360,200360130,736928280,2722540590,10098646800,37594507860,140415097680,526024740930,1976023374624,7441754696100 ⋆ Convolution of Catalan numbers A000108 with Catalan numbers but C(0)=1 replaced by 3. ● a(n) = 6 * binomial(2 * n, n) / (n + 2) = C(n + 1) + 2 * C(n) where C(n) are Catalan numbers. ●

▶ [A292564] 0,3,4,10,11,12,21,22,23,24,36,37,38,39,40,55,56,57,58,59,60,78,79,80,81 ⋆ Take 1, skip 3 * 1 - 1, take 2, skip 3 * 2 - 1, take 3, skip 3 * 3 - 1, ... ● a(n) = n + floor((sqrt(8 * n + 1) - 1) / 2) * (3 * floor((sqrt(8 * n + 1) - 1) / 2) + 1) / 2. - _ Robert Israel _ , Sep 20 2017 ●

▶ [A047341] 3,4,10,11,17,18,24,25,31,32,38,39,45,46,52,53,59,60,66,67,73,74,80,81,87 ⋆ Numbers that are congruent to { 3, 4 } mod 7. ● a(n) = (14 * n - 5 * (- 1) ^ n - 7) / 4. - _ Paolo P. Lava _ , Feb 10 2009 ● a(n) = 7 * n - a(n - 1) - 7 for n > 1, a(1)=3. - _ Vincenzo Librandi _ , Aug 05 2010 ●

▶ [A131179] 0,1,3,4,10,11,21,22,36,37,55,56,78,79,105,106,136,137,171,172,210,211,253,254,300 ⋆ a(n) = if n mod 2 == 0 then n * (n + 1) / 2, otherwise (n - 1) * n / 2 + 1. ● a(n) = (n ^ 2 + 1 + (n - 1) * (- 1) ^ n) / 2. - _ Luce ETIENNE _ , Aug 19 2014 ●

▶ [A050187] 0,0,0,3,4,10,12,21,24,36,40,55,60,78,84,105,112,136,144,171,180,210,220,253,264 ⋆ a(n) = n * floor((n - 1) / 2). ● a(n) = n * floor((n - 1) / 2). ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). ● a(n) = binomial(n,2) - (n / 2) * ((n + 1) mod 2). - _ Wesley Ivan Hurt _ , Nov 23 2013 ●

▶ [A239632] 0,1,3,4,10,12,28,32,72,80,176,192,416,448,960,1024,2176,2304,4864,5120,10752,11264,23552,24576,51200 ⋆ Number of parts in all palindromic compositions of n. ● a(n) = 4 * a(n - 2) - 4 * a(n - 4) for n > 3. - _ Giovanni Resta _ , Mar 23 2014 ● a(2k) = (2k + 1) * 2 ^ (k - 1) for k>0, a(2k + 1) = (2k + 2) * 2 ^ (k - 1) for k>=0. - _ Gregory L. Simay _ , Dec 05 2022 ●

▶ [A302347] 0,0,1,1,3,4,10,13,25,34,59,80,127,172,260,349,505,673,946,1248,1711,2238,3010,3902,5162 ⋆ a(n) = Sum of (Y(2,p) ^ 2) over the partitions p of n, Y(2,p)= number of part sizes with multiplicity 2 or greater in p ● a(n) = Sum _{ p in P(n) } (H(2,p) ^ 2 + 2 * A024786 - 2 * A024788), where P(n) is the set of partitions of n, and H(2,p) is the hooks of length 2 in partition p. ●

▶ [A309478] 0,0,0,3,4,10,14,24,32,51,56,77,95,128,146,198,225,280,318,384,416,524,549,672,726 ⋆ Sum of the squarefree parts of the partitions of n into 3 parts. ● a(n) = Sum _{ j=1..floor(n / 3) } Sum _{ i=j..floor((n - j) / 2) } (i * mu(i) ^ 2 + j * mu(j) ^ 2 + (n - i - j) * mu(n - i - j) ^ 2), where mu is the Möbius function (A008683). ●

▶ [A106523] 1,1,3,4,10,14,33,49,109,170,362,586,1207,2011,4037,6878,13536,23464,45475,79891,153011,271612,515460,922372,1738101 ⋆ Diagonal sums of number triangle A106522. ● a(n) = 3 * a(n - 2) + a(n - 3) - a(n - 5). ● a(n) = (1 / 11) * (10 * T(n + 2) + 5 * T(n + 1) + 3 * T(n) + (- 1) ^ n * (F(n + 1) + 3 * F(n))), where T(n) = A000073, and F(n) = A000045. - _ G. C. Greubel _ , Aug 10 2021 ●

▶ [A121720] 0,1,1,1,3,4,10,14,34,48,116,164,396,560,1352,1912,4616,6528,15760,22288,53808,76096,183712,259808,627232,887040 ⋆ a(n)= 4 * a(n - 2) - 2 * a(n - 4) . ● a(n)=(1 / 4) * (2 - sqrt(2)) ^ (1 / 2 * n) * (2 - sqrt(2)) ^ (1 / 4 * (- 1) ^ n) * (2 - sqrt(2)) ^ (- 1 / 4) * (1 - sqrt(2) - (- 1) ^ n) + (1 / 4) * (2 + sqrt(2)) ^ (- 1 / 4) * (2 + sqrt(2)) ^ (1 / 2 * n) * (2 + sqrt(2)) ^ (1 / 4 * (- 1) ^ n) * (1 + sqrt(2) - (- 1) ^ n), with n>=0 [From _ Paolo P. Lava _ , Nov 02 2009] ●

▶ [A007068] 1,3,4,10,14,34,48,116,164,396,560,1352,1912,4616,6528,15760,22288,53808,76096,183712,259808,627232,887040,2141504,3028544 ⋆ a(n) = a(n - 1) + (3 + (- 1) ^ n) * a(n - 2) / 2. ● a(2n + 1)=a(2n) + a(2n - 1); a(2n)=a(2n - 1) + 2 * a(2n - 2); same recurrence (mod parity) as A001882) - _ Len Smiley _ , Feb 05 2001. ● a(n)=sum { k=0..n, sum { j=0..n, C(floor(n / 2), n - j) * C(floor(j / 2), j - k) }} - _ Paul Barry _ , Feb 14 2005 ● a(n)=(1 - 1 / 2 * (- 1) ^ n) * ((2 - sqrt(2)) ^ (1 / 4 * (2 * n + (- 1) ^ n - 1)) + (2 + sqrt(2)) ^ (1 / 4 * (2 * n + (- 1) ^ n - 1))) + (1 / 4 * sqrt(2) * (- 1) ^ n - 3 / 4 * sqrt(2)) * ((2 - sqrt(2)) ^ (1 / 4 * (2 * n + (- 1) ^ n - 1)) - (2 + sqrt(2)) ^ (1 / 4 * (2 * n + (- 1) ^ n - 1))). - Paolo P. Lava, Feb 13 2012 ●

▶ [A188022] 0,1,1,3,4,10,15,34,55,117,199,406,714,1417,2548,4965,9061,17443,32148,61390,113887,216318,403051,762841,1425471 ⋆ Expansion of x * (1 + x) / (1 - 3 * x ^ 2 - x ^ 3). ● a(n) = 3 * a(n - 2) + a(n - 3). ●

▶ [A051437] 1,3,4,10,16,36,64,136,256,528,1024,2080,4096,8256,16384,32896,65536,131328,262144,524800,1048576,2098176,4194304,8390656,16777216 ⋆ Number of undirected walks of length n + 1 on an oriented triangle, visiting n + 2 vertices, with n "corners"; the symmetry group is C3. Walks are not self - avoiding. ● a(n) = 2 ^ n + 2 ^ (n / 2) * (1 - (- 1) ^ n) / (2 * sqrt(2)). (End) ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 4 * a(n - 3); a(0)=1, a(1)=3, a(2)=4. - _ Harvey P. Dale _ , Jun 06 2011 ● a(n) = 2 * a(n - 2) + 2 ^ (n - 1), a(0)=1, a(1)=3. - _ Yuchun Ji _ , Aug 12 2020 ●

▶ [A172416] 1,1,3,4,10,17,37,70,144,283,571,1136,2278,4549,9105,18202,36412,72815,145639,291268,582546,1165081,2330173,4660334,9320680 ⋆ a(n) = 5 * 2 ^ n / 9 + 1 / 4 + (- 1) ^ n * (n / 6 + 7 / 36). ● a(n) = a(n - 1) + 3 * a(n - 2) - a(n - 3) - 2 * a(n - 4). ●

▶ [A171160] 3,4,10,18,38,74,150,298,598,1194,2390,4778,9558,19114,38230,76458,152918,305834,611670,1223338,2446678,4893354,9786710,19573418,39146838 ⋆ a(n) = a(n - 1) + 2 * a(n - 2) with a(0)=3, a(1)=4. ● a(n) = (1 / 3) * (2 * (- 1) ^ n + 7 * 2 ^ n), with n>=0. - _ Paolo P. Lava _ , Dec 14 2009 ●

▶ [A139797] 0,0,0,0,1,1,3,4,10,18,39,75,153,302,608,1212,2429,4853,9711,19416,38838,77670,155347,310687,621381 ⋆ Inverse binomial transform of [0, A133474]. ● a(n) = ((3 * n - 4) * (- 1) ^ n + 2 ^ n + 3 * ChebyshevU(n, 1 / 2) - 6 * ChebyshevU(n - 1, 1 / 2)) / 27. - _ G. C. Greubel _ , Mar 08 2021 ●

▶ [A306334] 1,3,4,10,18,42,84,192,409,926,2030,4577,10171,22889,51176,115070,257987,579868,1301664,2925209,6569992,14763529,33166848,74527233,167446566 ⋆ a(n) is the number of different linear hydrocarbon molecules with n carbon atoms. ● a(n) = (1 / 2) * (Sum _{ i,j = 1..3 } X _{ ij } + Sum _{ i,j = 1..3 } Y _{ ij } * min(j, 3 - (n & 1))), where M = [[0,0,1], [0,1,1], [1,1,1]], X = [X _{ ij } : i,j = 1..3] = M ^ (n - 2), and Y = [Y _{ ij } : i,j = 1..3] = M ^ (floor(n / 2) - 2)) for n >= 1 (with negative powers indicating matrix inverses). [Edited by _ Petros Hadjicostas _ , Nov 16 2019] ● a(n) = 2 * a(n - 1) + 3 * a(n - 2) - 5 * a(n - 3) - a(n - 4) - 2 * a(n - 6) + 3 * a(n - 7) + a(n - 8) - a(n - 9), for n >= 10. ●

▶ [A047457] 3,4,11,12,19,20,27,28,35,36,43,44,51,52,59,60,67,68,75,76,83,84,91,92,99 ⋆ Numbers that are congruent to { 3, 4 } mod 8. ● a(n) = 8 * n - a(n - 1) - 9 (with a(1) = 3). - _ Vincenzo Librandi _ , Aug 06 2010 ● a(n) = (- 5 - 3 * (- 1) ^ n + 8 * n) / 2. - _ Colin Barker _ , May 14 2012 ●

▶ [A041405] 1,1,3,4,11,15,26,249,1022,9447,10469,19916,50301,70217,190735,260952,7497391,7758343,23014077,30772420,84558917,115331337,199890254,1914343623,7857264746 ⋆ Denominators of continued fraction convergents to sqrt(217). ● a(n) = 7688126 * a(n - 16) - a(n - 32) for n>31. [_ Bruno Berselli _ , Dec 18 2013] ●

▶ [A042483] 1,1,3,4,11,15,26,457,483,5287,32205,37492,219665,696487,2309126,5314739,7623865,12938604,20562469,33501073,54063542,87564615,229192772,775142931,2554621565 ⋆ Denominators of continued fraction convergents to sqrt(769). ● a(n) = 32734748155099080 * a(n - 37) + a(n - 74) for n>73. - _ Vincenzo Librandi _ , Jan 23 2014 ●

▶ [A002530] 0,1,1,3,4,11,15,41,56,153,209,571,780,2131,2911,7953,10864,29681,40545,110771,151316,413403,564719,1542841,2107560 ⋆ a(n) = 4 * a(n - 2) - a(n - 4) for n > 1, a(n) = n for n = 0, 1. ● a(n) = 4 * a(n - 2) - a(n - 4). [Corrected by László Szalay, Feb 21 2014] ● a(n) = - (- 1) ^ n * a(- n) for all n in Z, would satisfy the same recurrence relation. - _ Michael Somos _ , Jun 05 2003 ● a(2 * n) = a(2 * n - 1) + a(2 * n - 2), a(2 * n + 1) = 2 * a(2 * n) + a(2 * n - 1). ● a(2 * n) = ((2 + sqrt(3)) ^ n - (2 - sqrt(3)) ^ n) / (2 * sqrt(3)). ● a(2 * n - 1) = ceiling((1 + 1 / sqrt(3)) / 2 * (2 + sqrt(3)) ^ n) = ((3 + sqrt(3)) ^ (2 * n - 1) + (3 - sqrt(3)) ^ (2 * n - 1)) / 6 ^ n. ● a(n + 1) = Sum _{ k=0..floor(n / 2) } binomial(n - k, k) * 2 ^ floor((n - 2 * k) / 2). - _ Paul Barry _ , Jul 13 2004 ●

▶ [A041527] 1,1,3,4,11,15,491,506,1503,2009,5521,7530,246481,254011,754503,1008514,2771531,3780045,123732971,127513016,378759003,506272019,1391303041,1897575060,62113704961 ⋆ Denominators of continued fraction convergents to sqrt(280). ● a(0)=1, a(1)=1, a(2)=3, a(3)=4, a(4)=11, a(5)=15, a(6)=491, a(7)=506, a(8)=1503, a(9)=2009, a(10)=5521, a(11)=7530, a(n)=502 * a(n - 6) - a(n - 12). - _ Harvey P. Dale _ , Aug 13 2012 ●

▶ [A290493] 1,3,4,11,16,24,43,75,130,218,375,644,1106,1893,3244,5563,9538,16350,28026,48046,82366,141199,242053,414948,711341 ⋆ Number of irredundant sets in the n - cycle graph. ● a(n) = a(n - 1) + a(n - 2) + a(n - 4) - a(n - 6). ●

▶ [A248825] 0,3,4,11,16,27,36,51,64,83,100,123,144,171,196,227,256,291,324,363,400,443,484,531,576 ⋆ a(n) = n ^ 2 + 1 - (- 1) ^ n. ● a(n) = a(- n) = 2 * a(n - 1) - 2 * (n - 3) + a(n - 4). ● a(n + 2) = a(n) + 4 * n. ●

▶ [A001641] 1,3,4,11,16,30,50,91,157,278,485,854,1496,2628,4609,8091,14196,24915,43720,76726,134642,236283,414645,727654,1276941 ⋆ A Fielder sequence: a(n

) = a(n - 1) + a(n - 2) + a(n - 4). ● a(n) = n * Sum _{ k=1..n } Sum _{ j=floor((4 * k - n) / 3)..floor((4 * k - n) / 2) } binomial(j,n - 4 * k + 3 * j) * binomial(k,j)) / k. - _ Vladimir Kruchinin _ , May 25 2011 ● a(n) = Trace(M ^ n), where M = [0, 0, 0, 1; 1, 0, 0, 0; 0, 1, 0, 1; 0, 0, 1, 1] is the companion matrix to the monic polynomial x ^ 4 - x ^ 3 - x ^ 2 - 1. It follows that the sequence satisfies the Gauss congruences: a(n * p ^ r) == a(n * p ^ (r - 1)) (mod p ^ r) for positive integers n and r and all primes p. See Zarelua. - _ Peter Bala _ , Dec 31 2022 ●

► [A007382] 0,0,3,4,11,16,32,49,87,137,231,369,608,978,1595,2574,4179,6754,10944,17699,28655,46355,75023,121379,196416 ⋆ Number of strict (- 1)st - order maximal independent sets in path graph. ● a(n) = Sum _{ i=1..floor((n - 1) / 2) } C(n - i + 1, i). - _ Wesley Ivan Hurt _ , Sep 19 2017 ●

► [A027306] 1,1,3,4,11,16,42,64,163,256,638,1024,2510,4096,9908,16384,39203,65536,155382,262144,616666,1048576,2449868,4194304,9740686 ⋆ a(n) = 2 ^ (n - 1) + ((1 + (- 1) ^ n) / 4) * binomial(n, n / 2). ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n,k). ● a(n) = [x ^ n](2 * x - 1 / (1 - x)) ^ n. ● a(n) = Sum _{ k=1..floor((n + 1) / 2) } binomial(n - 1,(2n + 1 - (- 1) ^ n) / 4 - k). - _ Anthony Browne _ , Jun 18 2016 ●

► [A239024] 1,3,4,11,16,43,64,171,256,683,1024,2731,4096,10923,16384,43691,65536,174763,262144,699051,1048576,2796203,4194304,11184811,16777216 ⋆ Number of n X 2 0..2 arrays with no element equal to the sum of elements to its left or one plus the sum of elements above it, modulo 3. ● a(n) = (2 + (- 2) ^ n + 2 * (- 1) ^ n + 7 * 2 ^ n) / 12. ●

► [A324552] 3,4,11,16,46,82,174,256,798,1300,2734,4354,10926,20518,51790,65536,174766,351118,699054,1110274,3100238,5048230,11184814,17041414,49012990 ⋆ a(n) = A324542(2 * prime(n)). ● a(n) = sigma(2 ^ n + 1) - 2, for n>1. - _ Ridouane Oudra _ , Jul 14 2023 ●

► [A049977] 1,3,4,11,20,50,93,185,368,920,1748,3453,6876,13743,27479,54957,109912,274780,522082,1030428,2053989,4104555,8207405,16413982,32827412 ⋆ a(n) = a(1) + a(2) + ... + a(n - 1) + a(m) for n >= 4, where m = 2 ^ (p + 1) + 2 - n and p is the unique integer such that 2 ^ p < n - 1 <= 2 ^ (p + 1), with a(1) = 1, a(2) = 3, and a(3) = 4. ● a(n) = a(2 ^ ceiling(log _ 2(n - 1)) + 2 - n) + Sum _{ i = 1..n - 1 } a(i) for n >= 4. ●

► [A247171] 1,1,3,4,11,21,48,106,235,535,1203,2751,6272,14392,33078,76224,176043,407253,943833,2190397,5090371,11843689,27586793,64320191,150102784 ⋆ G.f.: (2 * x ^ 2 + 4 * x + 3) / ((2 * x + 2) * sqrt(- 4 * x ^ 3 - 4 * x ^ 2 + 1)) - 1 / (2 * x + 2). ● a(n) = n * sum(k=1..n, (binomial(2 * k,n - k) * binomial(n - k - 1,k - 1)) / k, n>0, a(0)=1. ●

► [A219514] 3,4,11,22,42,74,124,199,307,457,659,924,1264,1692,2222,2869,3649,4579,5677,6962,8454,10174,12144,14387,16927 ⋆ Number of n X 3 arrays of the minimum value of corresponding elements and their horizontal, diagonal or antidiagonal neighbors in a random, but sorted with lexicographically nondecreasing rows and columns, 0..1 n X 3 array. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>8. ●

► [A208176] 1,3,4,11,25,66,169,443,1156,3027,7921,20738,54289,142131,372100,974171,2550409,6677058,17480761,45765227,119814916,313679523,821223649,2149991426,5628750625 ⋆ a(n) = F(n + 1) ^ 2, if n>=0 is even (F=A000045) and a(n) = (L(2n + 2) + 8) / 5, if n is odd (L=A000204). ● a(n) = F(n) ^ 2 + F(n) * F(n + 1) + 1. - _ Gary Detlefs _ , Apr 18 2012 ●

► [A042129] 1,3,4,11,26,401,427,1682,15565,32812,146813,179625,2122688,6547689,41408822,47956511,89365333,137321844,226687177,817383375,1861453927,6401745156,8263199083,14664944239,22928143322 ⋆ Denominators of continued fraction convergents to sqrt(589). ● a(n) = 82846332134072437502 * a(n - 40) - a(n - 80) for n>79. - _ Vincenzo Librandi _ , Jan 15 2014 ●

► [A084378] 3,4,11,30,67,128,219,346,515,732,1003,1334,1731,2200,2747,3378,4099,4916,5835,6862,8003,9264,10651,12170,13827 ⋆ a(n) = n ^ 3 + 3. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>3. - _ Vincenzo Librandi _ , Jun 10 2016 ●

► [A038559] 1,3,4,11,33,114,445,1923,9078,46369,254297,1487896,9239135,60615819,418583924,3032405831,22979752405,181697363626,1495586215841,12789423056183,113415288869750,1041244540823413,9881851825756365,96811870321650792,977851660102425867 ⋆ a(n) = 2 * A040027(n - 1) + Bell(n), where Bell = A000110. ● a(0) = 1, a(1) = 3; a(n) = Sum _{ k=1..n } binomial(n - 1,k - 1) * a(n - k). - _ Ilya Gutkovskiy _ , Jul 10 2020 ●

► [A179167] 3,4,11,37,134,496,1847,6889,25706,95932,358019,1336141,4986542,18610024,69453551,259204177,967363154,3610248436,13473630587,50284273909,187663465046,700369586272,2613814880039,9754889933881 ⋆ a(n) red and b(n) blue balls in an urn; draw 3 balls without replacement; Probability(3 red balls) = Probability(1 red and 2 blue balls); binomial(a(n),3) = binomial(a(n),1) * binomial(b(n),2). ● a(n + 2) = 4 * a(n + 1) - a(n) - 3; ● a(n + 3) = 5 * (a(n + 2) - a(n + 1)) + a(n); r=sqrt(3); ● a(n) = (6 + (1 + r) * (2 + r) ^ (n - 1) + (1 - r) * (2 - r) ^ (n - 1)) / 4; ● a(n) = ceiling((6 + (1 + r) * (2 + r) ^ (n - 1)) / 4). ● a(n) = 5 * a(n - 1) - 5 * a(n - 2) + a(n - 3) for n > 4. ●

► [A351510] 1,3,4,11,40,150,552,1971,6952,24818,90728,337246,1258784,4694284,17533904,65812931,248333624,940643162,3572280616,13595749994,51854273344,198197567924,759110304112,2912840355950,11195409484368 ⋆ G.f. A(x) = lim _{ n ->infinity } (1 - P(n,x)) / (- 2 * x) ^ n, where P(1,x) = 1 / sqrt(1 - 4 * x), and P(n + 1,x) = 1 / sqrt(1 - 4 * x + 4 * x * P(n,x)) for n >= 1. ● a(2 ^ n - 1) = 1 (mod 2) for n >= 0. ●

► [A041947] 1,3,4,11,48,59,107,273,653,1579,2232,3811,17476,38763,56239,207480,9185359,27763557,36948916,101661389,443594472,545255861,988850333,2522956527,6034763387 ⋆ Denominators of continued fraction convergents to sqrt(496). ● a(n) = 9241598 * a(n - 16) - a(n - 32) for n>31. - _ Vincenzo Librandi _ , Dec 27 2013 ●

► [A042079] 1,1,3,4,11,257,525,782,2089,2871,134155,137026,408207,545233,1498673,35014712,71528097,106542809,284613715,391156524,18277813819,18668970343,55615754505,74284724848,204185204201 ⋆ Denominators of continued fraction convergents to sqrt(563). ● a(n) = 136244 * a(n - 10) - a(n - 20) for n>19. - _ Vincenzo Librandi _ , Jan 14 2014 ●

► [A094025] 1,3,4,12,13,39,40,120,121,363,364,1092,1093,3279,3280,9840,9841,29523,29524,88572,88573,265719,265720,797160,797161 ⋆ Expansion of (1 + 3x) / ((1 - x ^ 2)(1 - 3x ^ 2)). ● a(n)=4a(n - 2) - 3a(n - 4); a(n)=3 * 3 ^ (n / 2)(1 / 4 + sqrt(3) / 4 + (1 / 4 - sqrt(3) / 4)(- 1) ^ n) + (- 1) ^ n / 2 - 1. ● a(n) = a(n - 1) * 3 if n odd; a(n) = a(n - 1) + 1 if n even. - _ Philippe Deléham _ , Apr 22 2013 ●

► [A360755] 1,3,4,12,16,46,64,160,268,592,1024,2292,4096,8640,16544,33824,65536,133856,262144,529576,1049920,2108416,4194304,8417408,16777296 ⋆ Expansion of (1 / 2) * Sum _{ k>0 } (2 * x * (1 + x ^ k)) ^ k. ● a(n) = Sum _{ d|n } 2 ^ (d - 1) * binomial(d,n / d - 1). ●

► [A084221] 1,3,4,12,16,48,64,192,256,768,1024,3072,4096,12288,16384,49152,65536,196608,262144,786432,1048576,3145728,4194304,12582912,16777216 ⋆ a(n + 2) = 4 * a(n), with a(0)=1, a(1)=3. ● a(n) = (5 * 2 ^ n - (- 2) ^ n) / 4. ● a(n + 1) - 2a(n) = A000079 signed. a(n) + a(n + 2)=5 * a(n). First differences give A135520. - _ Paul Curtz _ , Apr 22 2008 ● a(n + 3) = a(n + 2) * a(n + 1) / a(n). - _ Reinhard Zumkeller _ , Mar 04 2011 ●

► [A124817] 1,1,3,4,12,18,55,88,273,455,1428,2448,7752,13566,43263,76912,246675,444015,1430715,2601300,8414640,15426840,50067108,92431584,300830572 ⋆ Interpolation of A001764(n + 1) and A006629(n). ● a(n)=(1 / (2(n + 3))) * C(3n / 2 + 3,n / 2 + 1)(1 + (- 1) ^ n) + (2 / (n + 3)) * C(3(n + 1) / 2,(n - 1) / 2)(1 - (- 1) ^ n) ●

► [A005221] 0,0,1,1,3,4,12,22,61,128,335,756,1936,4580,11652,28402,72209,179460,457274,1151725,2945129,7489680,19228598,49256157,126958030 ⋆ Number of Dyck paths of knight moves. ● a(n) = Sum _{ m=2..n } (m * Sum _{ i=0..n - m } ((Sum _{ j=0..i + m } (binomial(i + m,j) * binomial(j,i - j))) * Sum _{ k=0..n - i - m } ((binomial(2 * k + i + m - 1,k) * Sum _{ l=0..k } (binomial(k,l) * binomial(k - l,n - 3 * l - k - i - m) * (- 1) ^ (n - l - k - m))) / (k + i + m)))). - _ Vladimir Kruchinin _ , Mar 06 2016 ●

► [A291023] 0,3,4,12,24,56,120,264,568,1224,2616,5576,11832,25032,52792,111048,233016,487880,1019448,2126280,4427320,9204168,19107384,39612872,82021944 ⋆ p - INVERT of (1,1,1,1,1,...), where p(S) = 1 - 3 S ^ 2 + 2 S ^ 3. ● a(n) = 3 * a(n - 1) - 4 * a(n - 3) for n >= 4. ● a(n) = (16 * ((- 1) ^ (1 + n) + 2 ^ n) + 3 * 2 ^ n * n) / 18. - _ Colin Barker _ , Aug 24 2017 ●

► [A287594] 3,4,12,28,72,184,480,1264,3360,8992,24192,65344,177024,480640,1307136,3559168,9699840,26452480,72173568,196989952,537802752,1468536832,4010582016,10954043392,29920862208 ⋆ Number of independent vertex sets in the n - helm graph. ● a(n) = 2 ^ n + (1 - sqrt(3)) ^ n + (1 + sqrt(3)) ^ n. ● a(n) = 4 * a(n - 1) - 2 * a(n - 2) - 4 * a(n - 3). ●

► [A109474] 1,3,4,13,14,23,24,33,34,43,44,53,54,63,64,73,74,83,84,93,94,103,104,113,114 ⋆ a(1)=1, a(2)=3; thereafter, a(n) = least positive integer > a(n - 1) and not equal to a(i) + a(j) + a(k) for 1<=i<=j<=k<=n - 1. ● a(n) = max { 1, 5 * n - 9 + 2 * (- 1) ^ n } . ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n>4. ●

► [A057570] 0,3,4,13,15,30,33,54,58,85,90,123,129,168,175,220,228,279,288,345,355,418,429,498,510 ⋆ Numbers of the form n * (7n +- 1) / 2. ● a(n) = + 1 * a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - 1 * a(n - 4) + 1 * a(n - 5). - _ Joerg Arndt _ , Jan 25 2011 ● a(n) = (14 * n * (n - 1) + 5 * (2 * n - 1) * (- 1) ^ n + 5) / 16. - _ Bruno Berselli _ , Jan 25 2011 ●

► [A023857] 3,4,13,16,34,40,70,80,125,140,203,224,308,336,444,480,615,660,825,880,1078,1144,1378,1456,1729 ⋆ a(n) = 1 * (n + 3 - 1) + 2 * (n + 3 - 2) + ... + k * (n + 3 - k), where k=floor((n + 1) / 2). ● a(n) = Sum _{ i=1..ceiling(n / 2) } i * (n - i + 3) = - ceiling(n / 2) * (ceiling(n / 2) + 1) * (2 * ceiling(n / 2) - 3 * n - 8) / 6. - _ Wesley Ivan Hurt _ , Sep 20 2013 ● a(n) = (4 * n ^ 3 + 27 * n ^ 2 + 50 * n + 21 - 3 * (n ^ 2 + 6 * n + 7) * (- 1) ^ n) / 48. - _ Luce ETIENNE _ , Nov 21 2014 ●

► [A291250] 1,3,4,13,17,52,69,203,272,781,1053,2976,4029,11267,15296,42469,57765,159596,217361,598499,815860,2241165,3057025,8383872,11440897 ⋆ p - INVERT of (0,1,0,1,0,1,...), where p(S) = 1 - S - 2 S ^ 2 + 2 S ^ 3. ● a(n) = a(n - 1) + 5 * a(n - 2) - 4 * a(n - 3) - 5 * a(n - 4) + a(n - 5) + a(n - 6) for n >= 7. ●

► [A302392] 3,4,13,18,33,40,61,72,99,112,145,162,201,220,265,288,339,364,421,450,513,544,613,648,723 ⋆ Number of odd parts in the partitions of 3n into 3 parts. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) + a(n - 4) - a(n - 5) - a(n - 6) + a(n - 7) for n>7. ●

► [A182691] 3,4,13,18,61,86,293,414,1413,1998,6821,9646,32933,46574,159013,224878,767781,1085806,3707173,5242734,17899813,25314158,86427941,122227566,417311013 ⋆ Composite Beatty sequence of sqrt(2). ● a(n) = floor(s * a(n - 1)) if n odd, a(n)=floor(r * a(n - 1)) if n even, where r=sqrt(2), s=2 + r, a(1)=floor(s). ●

► [A243764] 1,1,3,4,13,36,122,408,1453,5236,19374,72616,276194,1061416,4119060,16112944,63485565,251700308,1003515878,4020985608,16184539030,65409684984,265338949740,1080038134352,4409974794962 ⋆ Expansion of - ((2 * sqrt(1 - 4 * x) - 2) * x) / (sqrt(8 * x + 4 * sqrt(1 - 4 * x) - 3) - 1). ● a(n) = Sum _{ k=0..(n / 2) } 2 ^ k * binomial(2 * k - 1,k) * binomial(2 * n - 2 * k - 2,n - 2)) / (n - 1), n>1, a(0)= - 1, a(1)=1. ●

► [A280608] 1,3,4,14,17,57,65,225,257,897,1025,3585,4097,14337,16385,57345,65537,229377,262145,917505,1048577,3670017,4194305,14680065,16777217 ⋆ Decimal representation of the x - axis, from the left edge to the origin, of the n - th stage of growth of the two - dimensional cellular automaton defined by "Rule 294", based on the 5 - celled von Neumann neighborhood. ● a(n) = (8 - 3 * (- 2) ^ n + 11 * 2 ^ n) / 8 for n>3. ● a(n) = a(n - 1) + 4 * a(n - 2) - 4 * a(n - 3) for n >4. ●

► [A281216] 1,3,4,14,17,59,68,238,273,955,1092,3822,4369,15291,17476,61166,69905,244667,279620,978670,1118481,3914683,4473924,15658734,17895697 ⋆ Decimal representation of the x - axis, from the left edge to the origin, of the n - th stage of growth of the two - dimensional cellular automaton defined by "Rule 342", based on the 5 - celled von Neumann neighborhood. ● a(n) = 4 * a(n - 2) + a(n - 4) - 4 * a(n - 6) for n>5. ●

► [A080878] 1,1,3,4,14,20,72,104,376,544,1968,2848,10304,14912,53952,78080,282496,408832,1479168,2140672,7745024,11208704,40553472,58689536,212340736 ⋆ a(n) * a(n + 3) - a(n + 1) * a(n + 2) = 2 ^ n, given a(0)=1, a(1)=1, a(2)=3. ● a(n) = (1 / 20 * 10 ^ (1 / 2) + 1 / 4) * (sqrt(3 + sqrt(5))) ^ n + (1 / 20 * 10 ^

(1 / 2) + 1 / 4) * (sqrt(3 - sqrt(5))) ^ n + (- 1 / 20 * 10 ^ (1 / 2) + 1 / 4) * (- (sqrt(3 + sqrt(5)))) ^ n + (- 1 / 20 * 10 ^ (1 / 2) + 1 / 4) * (- (sqrt(3 - sqrt(5)))) ^ n. - _ Richard Choulet _ , Dec 07 2008 ●

► [A081714] 0,3,4,14,33,90,232,611,1596,4182,10945,28658,75024,196419,514228,1346270,3524577,9227466,24157816,63245987,165580140,433494438,1134903169,2971215074,7778742048 ⋆ a(n) = F(n) * L(n + 1) where F=Fibonacci and L=Lucas numbers. ● a(n) = (- (- 1) ^ n + (2 ^ (- 1 - n) * ((3 - sqrt(5)) ^ n * (- 1 + sqrt(5)) + (1 + sqrt(5)) * (3 + sqrt(5)) ^ n)) / sqrt(5)). - _ Colin Barker _ , Sep 28 2016 ●

► [A356463] 3,4,14,49,178,649,2369,8649,31578,115294,420949,1536924,5611453,20487939,74803379,273114124,997165178,3640743209,13292693534,48532865749,177198026253,646966545729,2362135290914 ⋆ Sum of powers of roots of x ^ 3 - 4 * x ^ 2 + x + 1. ● a(n) = 4 * a(n - 1) - a(n - 2) - a(n - 3). ● a(n) = round(c1 ^ n), c1 per the comment, n >= 3. - _ Bill McEachen _ , Sep 12 2022 ●

► [A248152] 3,4,14,72,462,3432,28314,252824,2401828,23984688,249554968,2687515040,29802622140,338931781200,3940081956450,46695460462200,562939717794300,6890720756158800,85507580292334200,1074244300649863200,13647785546892580200,175166360584464768480 ⋆ a(n) = 48 * 4 ^ n * (2 * n - 1)!! * (2 * n + 3)!! / ((n + 2)! * (n + 4)!). ● a(n) = C(n) * C(n + 3) - C(n + 1) * C(n + 2) for n>=0 where C() is the Catalan numbers A000108. ● a(n) = 24 * (2 * n)! * (2 * n + 3)! / (n! * (n + 1)! * (n + 2)! * (n + 4)!) for n>=0. ●

► [A173735] 3,4,14,114,1114,11114,111114,1111114,11111114,111111114,1111111114,11111111114,111111111114,1111111111114,11111111111114,111111111111114,1111111111111114,11111111111111114,111111111111111114 ⋆ a(n) = (10 ^ n + 26) / 9. ● a(n) = a(n - 1) + 10 ^ (n - 1) = 10 * a(n - 1) - 26, a(0)=3. ● a(n) = 11 * a(n - 1) - 10 * a(n - 2). - _ Vincenzo Librandi _ , Jul 05 2012 ●

► [A363561] 1,3,4,15,16,52,77,184,256,716,1045,2400,4320,9024,16524,35439,65536,135424,264928,534016,1048856,2124523,4196944,8435712,16792576 ⋆ G.f.: Sum _{ n= - oo.. + oo } x ^ n * (sqrt(2) + x ^ n) ^ (2 * n). ● a(2 ^ n) = 2 ^ (2 ^ n) for n > 0 (conjecture). ● a(p) = p * 2 ^ ((p - 1) / 2) + 2 ^ p for primes p > 3 (conjecture). ●

► [A285475] 1,3,4,15,16,63,64,255,256,1023,1024,4095,4096,16383,16384,65535,65536,262143,262144,1048575,1048576,4194303,4194304,16777215,16777216 ⋆ Decimal representation of the diagonal from the origin to the corner of the n - th stage of growth of the two - dimensional cellular automaton defined by "Rule 3", based on the 5 - celled von Neumann neighborhood. ● a(n) = (- 1 - (- 2) ^ n + (- 1) ^ n + 3 * 2 ^ n) / 2. ● a(n) = 5 * a(n - 2) - 4 * a(n - 4) for n>3. ●

► [A041435] 1,3,4,15,19,34,53,87,314,401,1517,45911,139250,185161,694733,879894,1574627,2454521,4029148,14541965,18571113,70255304,2126230233,6448946003,8575176236 ⋆ Denominators of continued fraction convergents to sqrt(233). ● a(n) = 46312 * a(n - 11) + a(n - 22) for n>21. - _ Vincenzo Librandi _ , Dec 17 2013 ●

► [A136210] 1,3,4,15,19,72,91,345,436,1653,2089,7920,10009,37947,47956,181815,229771,871128,1100899,4173825,5274724,19997997,25272721,95816160,121088881 ⋆ Numerators in continued fraction [0; 1, 3, 1, 3, 1, 3, ...]. ● a(0) = 0, a(1) = 1, a(2n) = 3 * a(2n - 1) + a(2n - 2); a(2n - 1) = a(2n - 2) + a(2n - 3). Given the 2 X 2 matrix [1, 3; 1, 4] = T, [a(2n - 1), a(2n)] = top row of T ^ n. ● a(n + 1) - a(n - 1) = a(n) * (2 - (- 1) ^ n) for all n in Z. - _ Michael Somos _ , May 15 2014 ●

► [A041819] 1,1,3,4,15,19,129,1051,6435,7486,28893,36379,101651,138030,5622851,5760881,17144613,22905494,85861095,108766589,738460629,6016451621,36837170355,42853621976,165398036283 ⋆ Denominators of continued fraction convergents to sqrt(430). ● a(n) = 5724502 * a(n - 14) - a(n - 28) for n>27. - _ Vincenzo Librandi _ , Dec 25 2013 ●

► [A272514] 3,4,15,21,63,92,255,385,1023,1585,4095,6475,16383,26332,65535,106761,262143,431909,1048575,1744435,4194303,7036529,16777215,28354131,67108863 ⋆ Number of set partitions of [n] into two blocks with distinct sizes. ● a(n) = n! * [x ^ n * y ^ 2] Product _{ n>=1 } (1 + y * x ^ n / n!). ● a(n) = Sum _{ i=1..floor((n - 1) / 2) } binomial(n,i). - _ Wesley Ivan Hurt _ , Nov 15 2017 ●

► [A065942] 1,1,3,4,15,21,84,120,495,715,3003,4368,18564,27132,116280,170544,735471,1081575,4686825,6906900,30045015,44352165,193536720,286097760,1251677700 ⋆ Central column of triangle A065941. ● a(n) = binomial(2n - floor((n + 1) / 2), floor(n / 2)). ● a(n + 1) = Sum _{ k=0..ceiling(n / 2) } binomial(n + k, k). - _ Benoit Cloitre _ , Mar 06 2004 ● a(n) = binomial(n + floor(n / 2), n). - _ Paul Barry _ , May 18 2004 ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n - 1 + k, k). - _ Paul Barry _ , Jul 06 2004 ● a(2n - 1) = binomial(3n - 3,n - 1); a(2n) = binomial(3n - 2,n - 1). - _ John Molokach _ , Jul 08 2013 ●

► [A036759] 1,1,3,4,15,23,94,155,661,1139,4983,8844,39362,71360,321561,592361,2694421,5025849,23029195,43388208,199990961,379900479,1759636142,3365582261,15652514944 ⋆ Number of mirror - symmetrical edge - rooted tree - like octagonal systems. ● a(n) = Sum _{ i = 0..floor((n - 1) / 2) } U(i) * a(n - 1 - 2 * i) for n even >= 2, and ● a(n) = U((n - 1) / 2) + Sum _{ i = 0..floor((n - 1) / 2) } U(i) * a(n - 1 - 2 * i) for n odd >= 3. ●

► [A081405] 1,1,3,4,15,24,105,192,945,1920,10395,23040,135135,322560,2027025,5160960,34459425,92897280,654729075,1857945600,13749310575,40874803200,316234143225,980995276800,7905853580625 ⋆ a(n) = (n + 1) * a(n - 2) with a(0) = a(1) = 1. ● a(n) = (n - 1) - st term of column 1 of the array at A249159, for n >= 0. - _ Clark Kimberling _ , Oct 23 2014 ●

► [A293047] 0,0,0,3,4,15,26,63,120,255,502,1023,2036,4095,8178,16383,32752,65535,131054,262143,524268,1048575,2097130,4194303,8388584 ⋆ Number of odd permutations on { 1,2,...,n } with exactly 2 weak excedances. ● a(n) = 2 ^ (n - 1) - 1 for odd n. ●

► [A041665] 1,1,3,4,15,34,83,200,683,883,2449,3332,122401,125733,373867,499600,1872667,4244934,10362535,24970004,85272547,110242551,305757649,416000200,15281764849 ⋆ Denominators of continued fraction convergents to sqrt(351). ● a(n) = 124850 * a(n - 12) - a(n - 24) for n>23. - _ Vincenzo Librandi _ , Dec 22 2013 ●

► [A042771] 1,3,4,15,49,64,113,1646,1759,3405,11974,39327,51301,193230,1164510 1,35128533,46773634,175449435,573121939,748571374,1321693313,19252277756,20573971069,39826248825,140052717544 ⋆ Denominators of continued fraction convergents to sqrt(916). ● a(n) = 11696402 * a(n - 14) - a(n - 28) for n>27. - _ Vincenzo Librandi _ , Jan 28 2014 ●

► [A115752] 0,0,3,4,15,81,168,540,2271,5365,16698,63229,159250,489048,1749933,4576140,13955895,48211389,129211818,392441049,1323741156,3609608838,10933915743,36252591813,100126350090 ⋆ Number of words of length n + 1 created with the letters a,b,c with more c's than b's and more b's than a's. ● a(n) = sum(sum(n! / (i!j!(n - i - j)!), j=i + 1..floor((n - i) / 2)), j=0..floor((n - 2) / 3)). - _ Dennis P. Walsh _ , Jun 19 2013 ●

► [A041325] 1,3,4,15,394,1197,1591,5970,156811,476403,633214,2376045,62410384,189607197,252017581,945659940,24839176021,75463188003,100302364024,376370280075,9885929645974,30034159217997,39920088863971,149794425809910,3934575159921631 ⋆ Denominators of continued fraction convergents to sqrt(176). ● a(n) = 398 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Dec 15 2013 ●

► [A330299] 0,0,0,0,0,0,3,4,16,20,50,60,120,140,245,280,448,504,756,840,1200,1320,1815,1980,2640 ⋆ a(n) is the number of subsets of { 1..n } that contain exactly 1 odd and 3 even numbers. ● a(n) = ceiling(n / 2) * binomial(floor(n / 2), 3). ● a(n) = a(n - 1) + 4 * a(n - 2) - 4 * a(n - 3) - 6 * a(n - 4) + 6 * a(n - 5) + 4 * a(n - 6) - 4 * a(n - 7) - a(n - 8) + a(n - 9) for n>8. ●

► [A047164] 0,0,0,0,0,3,4,16,20,50,60,135,161,392,476,1232,1512,3864,4740,11850,14520,36300,44572,112519,138567 ⋆ Number of nonempty subsets of { 1,2,...,n } in which exactly 3 / 4 of the elements are <= n / 2. ● a(n) = Sum _{ k>=1 } binomial(floor(n / 2), 3 * k) * binomial(ceiling(n / 2), k). - _ Andrew Howroyd _ , Apr 11 2021 ●

► [A032829] 3,4,18,19,23,24,93,94,98,99,118,119,123,124,468,469,473,474,493,494,498,499,593,594,598 ⋆ Numbers whose set of base - 5 digits is { 3,4 } . ● a(1)=3, a(2)=4; a(n) = 5 * a(floor(n / 2)) + 3 for n odd, otherwise a(n) = 5 * a(floor((n - 1) / 2)) + 4. - _ Bruno Berselli _ , May 30 2012 ●

► [A041703] 1,3,4,19,23,88,3367,10189,13556,64413,77969,298320,11414129,3454707,45954836,218360051,264314887,1011304712,38693893943,117092986541,155786880484,740240508477,896027388961,3428322675360,131172289052641 ⋆ Denominators of continued fraction convergents to sqrt(371). ● a(n) = 3390 * a(n - 6) - a(n - 12) for n>11. - _ Vincenzo Librandi _ , Dec 23 2013 ●

► [A041989] 1,1,3,4,19,61,202,465,4852,5317,79290,322477,4593968,4916445,53758418,112433281,391058261,1285608064,5533490517,6819098581,19171687679,25990786260,1162766283119,1188757069379,3540280421877 ⋆ Denominators of continued fraction convergents to sqrt(517). ● a(n) = 1181937970798 * a(n - 22) - a(n - 44) for n>43. [_ Bruno Berselli _ , Jan 11 2014] ●

► [A333320] 0,0,0,0,0,0,0,3,4,20,25,75,90,210,245,490,560,1008,1134,1890,2100,3300,3630,5445,5940 ⋆ a(n) is the number of subsets of { 1..n } that contain exactly 4 odd and 1 even numbers. ● a(n) = binomial(ceiling(n / 2),4) * floor(n / 2). ● a(n) = a(n - 1) + 5 * a(n - 2) - 5 * a(n - 3) - 10 * a(n - 4) + 10 * a(n - 5) + 10 * a(n - 6) - 10 * a(n - 7) - 5 * a(n - 8) + 5 * a(n - 9) + a(n - 10) - a(n - 11) for n >10. ●

► [A047165] 0,0,0,0,0,0,3,4,20,25,75,90,210,245,511,588,1260,1458,3510,4125,10725,12705,32835,38830,96382 ⋆ Number of nonempty subsets of { 1,2,...,n } in which exactly 1 / 5 of the elements are <= n / 2. ● a(n) = Sum _{ k>=1 } binomial(floor(n / 2), k) * binomial(ceiling(n / 2), 4 * k). - _ Andrew Howroyd _ , Apr 11 2021 ●

► [A262033] 1,1,1,3,4,20,30,210,336,3024,5040,55440,95040,1235520,2162160,32432400,57657600,980179200,1764322560,33522128640,60949324800,1279935820800,2346549004800,53970627110400,99638080819200 ⋆ Number of permutations of [n] beginning with at least floor(n / 2) ascents. ● a(n) = 2 * n * (n * (n - 1) * a(n - 2) - a(n - 1)) / ((n + 2) * (n - 1)) for n>1, a(0)=a(1)=1. ● a(n) = n! / ceiling((n + 1) / 2)!. ●

► [A062870] 1,1,1,3,4,20,36,252,576,5184,14400,158400,518400,6739200,25401600,381024000,1625702400,27636940800,131681894400,2501955993600,13168189440000,276531978240000,1593350922240000,36647071211520000,229442532802560000 ⋆ Number of permutations of degree n with greatest sum of distances. ● a(n) = (n / 2)! ^ 2 if n is even else n * ((n - 1) / 2)! ^ 2, cf. A092186. - Conjectured by _ Vladeta Jovovic _ , Aug 21 2007; proved (see the link) by _ Max Alekseyev _ , Aug 21 2007 ●

► [A081698] 1,3,4,21,56,282,984,4813,19280,93150,403672,1945954,8845360,42766292,200419504,974134461,4659558048,22785183670,110564976792,543935554390,2667398588272,13196971915628,65238895435792,324431740601618,1614044041864800 ⋆ Expansion of (1 - sqrt(1 - 4 * x * sqrt(1 + 4 * x))) / (2 * x). ● a(n) = sum(k=0..n, (binomial((k + 1) / 2,n - k) * binomial(2 * k,k) * 4 ^ (n - k)) / (k + 1)). [_ Vladimir Kruchinin _ , Mar 13 2013] ●

► [A042035] 1,3,4,23,27,239,505,2259,2764,7787,26125,33912,60037,694319,10474822,21643963,53762748,75406711,129169459,204576170,333745629,538321799,872067428,2282456655,5436980738 ⋆ Denominators of continued fraction convergents to sqrt(541). ● a(n) = 2723032632938454900 * a(n - 39) + a(n - 78) for n>77. - _ Vincenzo Librandi _ , Jan 12 2014 ●

► [A041861] 1,3,4,23,73,753,2332,12413,14745,56648,2393961,7238531,9632492,55400991,175835465,1813755641,5617102388,29899267581,35516369969,136448377488,5766348224465,17435493050883,23201841275348,133444699427623,423535939558217 ⋆ Denominators of continued fraction convergents to sqrt(452). ● a(n) = 2408706 * a(n - 10) - a(n - 20) for n>19. - _ Vincenzo Librandi _ , Dec 26 2013 ●

► [A189738] 3,4,24,88,360,1432,5736,22936,91752,367000,1468008,5872024,23488104,93952408,375809640,1503238552,6012954216,24051816856,96207267432,384829069720,1539316278888,6157265115544,24629060462184,98516241848728,394064967394920 ⋆ a(1)=3, a(2)=4, a(n)=3a(n - 1) + 4a(n - 2) ● a(n) = 8 / 5 * (- 1) ^ (n - 1) + 7 / 5 * 4 ^ (n - 1). - Paolo P. Lava, May 24 2011 ●

► [A157163] 1,3,4,27,48,156,576,2955,7168,27792,95232,352188,1290240,5105856,17743872,77010795,252641280,1000224768,3616800768,14484040464,52102692864,208963943424,764877471744,3025006038012,11258183024640 ⋆ Product _{ n >=1 } (1 + 2 * a(n) * x ^ n) = Sum _{ k>=0 } binomial(2 * k, k) * x ^ k = 1 / sqrt(1 - 4 * x), with the central binomial numbers A000984(n). ● a(n) = ((- 2 * a(1)) ^ n + Sum _{ d|n, 1<d<n } (d * (- 2 * a(d)) ^ (n / d) + B(n)) / (2

* n), with the o.g.f. x * (log(1 / sqrt(1 - 4 * x)))' = 2 * x / (1 - 4 * x) for the sequence { B(n) } ; hence B(n) = (1 / 2) * 4 ^ n. ●

► [A042653] 1,3,4,31,35,66,101,167,769,2474,3243,8960,57003,407981,2504889,5417759,7922648,29185703,124665460,153851163,278516623,432367786,710884409,5408558649,6119443058 ⋆ Denominators of continued fraction convergents to sqrt(856). ● a(n) = 1390718379850 * a(n - 26) - a(n - 52) for n>51. - _ Vincenzo Librandi _ , Jan 26 2014 ●

► [A032834] 3,4,33,34,43,44,333,334,343,344,433,434,443,444,3333,3334,3343,3344,3433,3434,3443,3444,4333,4334,4343 ⋆ Numbers with digits 3 and 4 only. ● a(2 * n + 1) = 10 * a(n) + 3. ● a(2 * n + 2) = 10 * a(n) + 4. ●

► [A042891] 1,3,4,35,179,214,393,1393,10144,11537,21681,163304,511593,674897,1186490,6607347,54045266,60652613,236003105,14692845123,44314538474,59007383597,516373607250,2640875419847,3157249027097 ⋆ Denominators of continued fraction convergents to sqrt(977). ● a(n) = 14753497736 * a(n - 19) - a(n - 38) for n > 37. - _ Vincenzo Librandi _ , Jan 31 2014 ●

► [A041055] 1,1,3,4,43,47,137,184,1977,2161,6299,8460,90899,99359,289617,388976,4179377,4568353,13316083,17884436,192160443,210044879,612250201,822295080,8835201001 ⋆ Denominators of continued fraction convergents to sqrt(33). ● a(n) = 46 * a(n - 4) - a(n - 8). G.f.: - (x ^ 2 - x - 1) * (x ^ 4 + 4 * x ^ 2 + 1) / (x ^ 8 - 46 * x ^ 4 + 1). [_ Colin Barker _ , Jul 16 2012] ●

► [A041105] 1,1,3,4,59,63,185,248,3657,3905,11467,15372,226675,242047,710769,952816,14050193,15003009,44056211,59059220,870885291,929944511,2730774313,3660718824,53980837849 ⋆ Denominators of continued fraction convergents to sqrt(60). ● a(n) = 62 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Dec 11 2013 ●

► [A274699] 1,1,3,4,65,126,637,21344,57465,330850,2023901,156312432,502733101,3464645380,21505493115,194182086016,28828634104193,108228186522378,842870098110349,5690185704481040,49492420589959221,521939648330427580,1518146759796203470 79,642254623640191155552,5633344428589261601425 ⋆ Number of varied unrooted labeled trees on n nodes, i.e., trees with unique vertex degree except for the leaves. ● a(n) = (n - 2)! Sum _{ k=1..n - 2 } C(n,k) k! [u ^ k][z ^{ n - 2 }] Product _{ q=1..n - 2 } (1 + u z ^ q / q!). ●

► [A041171] 1,1,3,4,75,79,233,312,5849,6161,18171,24332,456147,480479,1417105,1897584,35573617,37471201,110516019,147987220,2774285979,2922273199,86188832377,11541105576,216358732745 ⋆ Denominators of continued fraction convergents to sqrt(95). ● a(n) = 78 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Dec 12 2013 ●

► [A041253] 1,1,3,4,91,95,281,376,8553,8929,26411,35340,803891,839231,2482353,3321584,75557201,78878785,233314771,312193556,7101573003,7413766559,21929106121,29342872680,667472305081 ⋆ Denominators of continued fraction convergents to sqrt(138). ● a(n) = 94 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Dec 13 2013 ●

► [A041351] 1,1,3,4,107,111,329,440,11769,12209,36187,48396,1294483,1342879,3980241,5323120,142381361,147704481,437790323,585494804,15660655227,16246150031,48152955289,64399105320,1722529693609 ⋆ Denominators of continued fraction convergents to sqrt(189). ● a(n) = 110 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Dec 16 2013 ●

► [A041465] 1,1,3,4,123,127,377,504,15497,16001,47499,63500,1952499,2015999,5984497,8000496,245999377,253999873,753999123,1007998996,30993969003,32001967999,94997905001,126999873000,3904994095001 ⋆ Denominators of continued fraction convergents to sqrt(248). ● a(n) = 126 * a(n - 4) - a(n - 8) for n>7. - _ Vincenzo Librandi _ , Dec 18 2013 ●

► [A041595] 1,1,3,4,139,143,425,568,19737,20305,60347,80652,2802515,2883167,8568849,11452016,397937393,409389409,1216716211,1626105620,56504307291,58130412911,172765133113,230895546024,8023213697929 ⋆ Denominators of continued fraction convergents to sqrt(315). ● a(n) = 142 * a(n - 4) - a(n - 8) for n>7 , - _ Vincenzo Librandi _ , Dec 21 2013 ●

► [A041741] 1,1,3,4,155,159,473,632,24489,25121,74731,99852,3869107,3968959,11807025,15775984,611294417,627070401,1865435219,2492505620,96580648779,99073154399,294726957577,393800111976,15259131212665 ⋆ Denominators of continued fraction convergents to sqrt(390). ● a(n) = 158 * a(n - 4) - a(n - 8) for n >7. - _ Vincenzo Librandi _ , Dec 23 2013 ●

► [A041903] 1,1,3,4,171,175,521,696,29753,30449,90651,121100,5176851,5297951,15772753,21070704,900742321,921813025,2744368371,3666181396,156723987003,160390168399,477504323801,637894492200,27269072996201 ⋆ Denominators of continued fraction convergents to sqrt(473). ● a(n) = 174 * a(n - 4) - a(n - 8) for n>7. - _ Vincenzo Librandi _ , Dec 26 2013 ●

► [A042081] 1,1,3,4,187,191,569,760,35529,36289,108107,144396,6750323,6894719,20539761,27434480,1282525841,1309960321,3902446483,5212406804,243673159467,248885566271,741444292009,990329858280,46296617772889 ⋆ Denominators of continued fraction convergents to sqrt(564). ● a(n) = 190 * a(n - 4) - a(n - 8) for n>7. - _ Vincenzo Librandi _ , Jan 14 2014 ●

► [A042275] 1,1,3,4,203,207,617,824,41817,42641,127099,169740,8614099,8783839,26181777,34965616,1774462577,1809428193,5393318963,7202747156,365530676763,372733423919,1110997524601,1483730948520,75297544950601 ⋆ Denominators of continued fraction convergents to sqrt(663). ● a(n) = 206 * a(n - 4) - a(n - 8) for n>7. - _ Vincenzo Librandi _ , Jan 19 2014 ●

► [A042485] 1,1,3,4,219,223,665,888,48617,49505,147627,197132,10792755,10989887,32772529,43762416,2395942993,2439705409,7275353811,9715059220,531888551691,541603610911,1615095773513,2156699384424,118076862532409 ⋆ Denominators of continued fraction convergents to sqrt(770). ● a(n) = 222 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Dec 15 2013 ●

► [A042711] 1,1,3,4,235,239,713,952,55929,56881,169691,226572,13310867,13537439,40385745,53923184,3167930417,3221853601,9611637619,12833491220,753954128379,766787619599,2287529367577,3054316987176,179437914623785 ⋆ Denominators of continued fraction convergents to sqrt(885). ● a(n) = 238 * a(n - 4) - a(n - 8) for n>7. - _ Vincenzo Librandi _ , Dec 22 2013 ●

► [A168056] 1,1,3,5,5,7,9,9,11,13,13,15,17,17,19,21,21,23,25,25,27,29,29,31,33 ⋆ Expansion of (1 + 2 * x ^ 2 + x ^ 3) / ((1 - x) ^ 2 * (1 + x + x ^ 2)). ● a(n) = (12 * n + 3 + 6 * cos(2 * n * Pi / 3) - 2 * sqrt(3) * sin(2 * n * Pi / 3)) / 9. - _ Wesley Ivan Hurt _ , Sep 30 2017 ●

► [A069201] 1,3,5,5,7,11,13,13,13,17,19,19,21,25,29,29,31,31,33,33,37,41,43,43,43 ⋆ a(n) = Sum _{ k=1..n } mu(k) ^ 2 * 2 ^ omega(k) where omega(k) is the number of distinct primes in the factorization of k. ● a(n) = Sum _{ k=1..n } mu(k) ^ 2 * d(k), where d is the number of divisors function (A000005). - _ Ridouane Oudra _ , Jul 25 2019 ●

► [A266505] 1,1,3,5,5,11,13,27,31,65,75,157,181,379,437,915,1055,2209,2547,5333,6149,12875,14845,31083,35839 ⋆ a(n) = 2 * a(n - 2) + a(n - 4) with a(0) = - 1, a(1) = 1, a(2) = 3, a(3) = 5. ● a(n) = (- (1 + sqrt(2)) ^ floor(n / 2) * (- 1) ^ n - sqrt(8) * (1 - sqrt(2)) ^ floor(n / 2) - (1 - sqrt(2)) ^ floor(n / 2) * (- 1) ^ n + sqrt(8) * (1 + sqrt(2)) ^ floor(n / 2)) / 2. ● a(n) = 3 * (((1 + sqrt(2)) ^ floor(n / 2) - (1 - sqrt(2)) ^ floor(n / 2)) / sqrt(8)) - (- 1) ^ n * (((1 + sqrt(2)) ^ (floor(n / 2) - (- 1) ^ n) - (1 - sqrt(2)) ^ (floor(n / 2) - (- 1) ^ n)) / sqrt(8)). ●

► [A077859] 1,3,5,6,6,6,7,9,11,12,12,12,13,15,17,18,18,18,19,21,23,24,24,24,25 ⋆ Expansion of g.f. (1 - x) ^ (- 1) / (1 - 2 * x + 2 * x ^ 2 + x ^ 3). ● a(n) = Sum _{ k=0..n } (k + 1) * 2 * sin(Pi(n - k) / 3 + Pi / 3) / sqrt(3). - _ Paul Barry _ , May 18 2004 ● a(n) = Sum _{ k=0..n } binomial(n - 2k, n - k - 1). - _ Paul Barry _ , Jan 15 2005 ● a(n) = n + 2 + (- 1 + n - 3 * floor(n / 3)) * (- 1) ^ floor(n / 3). - _ Tani Akinari _ , Jun 27 2013 ● a(n) = n + 1 + a(n - 1) - a(n - 2), with a(- 1) = a(- 2) = 0. - _ Richard R. Forberg _ , Jul 11 2013 ● a(n) = 3 * a(n - 1) - 4 * a(n - 2) + 3 * a(n - 3) - 1 * a(n - 4). - _ Joerg Arndt _ , Jul 12 2013 ●

► [A244953] 0,3,5,6,6,9,11,12,12,15,17,18,18,21,23,24,24,27,29,30,30,33,35,36,36 ⋆ a(n) = Sum _{ i=0..n } (- i mod 4). ● a(n) = 1 + n + (2 * (1 + n) - (1 + (- 1) ^ n) * (1 + 2 * i ^ (n * (n + 1)))) / 4, where i = sqrt(- 1). ● a(n) = 6 + Sum _{ i=1..3 } ((4 - i) * floor((n - i) / 4)). (End) ● a(n) = a(n - 1) + a(n - 4) - a(n - 5). - _ Robert Israel _ , Jul 09 2014 ● a(n) = (3 * n + 4 - (n mod 4 - 2) ^ 2) / 2. - _ Thomas Klemm _ , Aug 21 2022 ●

► [A047585] 0,1,3,5,6,7,8,9,11,13,14,15,16,17,19,21,22,23,24,25,27,29,30,31,32 ⋆ Numbers that are congruent to { 0, 1, 3, 5, 6, 7 } mod 8. ● a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - 2 * a(n - 4) + 2 * a(n - 5) - a(n - 6). ● a(n) = (12 * n - 3 * sqrt(3) * sin(Pi * n / 3) + sqrt(3) * sin(2 * Pi * n / 3) - 9) / 9. - _ Ilya Gutkovskiy _ , Jun 11 2016 ● a(3k) = 8k - 1, a(3k - 1) = 8k - 2, a(3k - 2) = 8k - 3, a(3k - 3) = 8k - 5, a(3k - 4) = 8k - 7, a(3k - 5) = 8k - 8. - _ Wesley Ivan Hurt _ , Jun 16 2016 ●

► [A079253] 0,3,5,6,7,8,10,12,14,15,16,17,18,19,20,22,24,26,28,30,32,33,34,35,36 ⋆ a(n) is taken to be the smallest positive integer greater than a(n - 1) which is consistent with the condition "n is a member of the sequence if and only if a(n) is even". ● a(a(n)) = 2n + 4 for n >= 1. ●

► [A076054] 1,3,5,6,7,8,10,12,14,16,17,19,21,22,23,24,26,27,28,29,30,32,34,35,36 ⋆ a(n) = Sum _{ k=1..n } A006513(k). ● a(n) seems to be asymptotic to (3 / 2) * n. ●

► [A159559] 3,5,6,7,8,11,12,14,15,17,18,19,20,21,22,23,24,29,30,32,33,37,38,39,40 ⋆ Lexicographically first strictly increasing sequence starting a(2) = 3 with the property that a(n) is prime if and only if n is prime. ● a(n + 1) = min { m>a(n), m is prime } , if n + 1 is prime; otherwise, a(n + 1) = min { m>a(n), m is composite } . ●

► [A047583] 0,3,5,6,7,8,11,13,14,15,16,19,21,22,23,24,27,29,30,31,32,35,37,38,39 ⋆ Numbers that are congruent to { 0, 3, 5, 6, 7 } mod 8. ● a(n) = a(n - 1) + a(n - 5) - a(n - 6) for n>6. ●

► [A229858] 3,5,6,7,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29 ⋆ Consider all 120 - degree triangles with sides A < B < C. The sequence gives the values of A. ● a(n) = n + 4 for n>4. ● a(n) = 2 * a(n - 1) - a(n - 2) for n>6. ●

► [A057716] 0,3,5,6,7,9,10,11,12,13,14,15,17,18,19,20,21,22,23,24,25,26,27,28,29 ⋆ The nonpowers of 2. ● a(n) = n + [log _ 2(n + [log _ 2(n)])] gives this sequence with the exception of a(1) = 1. - _ David W. Wilson _ , Mar 29 2005 ● a(i - m) = i for 2 ^ m < i < 2 ^ (m + 1). ●

► [A370301] 3,5,6,7,9,10,11,12,13,14,16 ⋆ Least number of vertices of a universal graph for cycles up to length n, i.e., a graph containing induced cycles of lengths 3..n. ● a(n) <= a(n - 1) + 2. ●

► [A182834] 1,3,5,6,7,9,10,11,13,14,15,16,17,19,20,21,22,23,25,26,27,28,29,30,31 ⋆ Complement of A007590, except for initial zeros. ● a(n) = n + floor(sqrt(2n - 2)). ●

► [A186145] 1,3,5,6,7,9,10,11,13,14,15,17,18,19,21,22,23,24,26,27,28,29,31,32,33 ⋆ Rank of n ^ 2 when { i ^ 2: i>=1 } and { j ^ 3: j>=1 } are jointly ranked with i ^ 2 before j ^ 3 when i ^ 2=j ^ 3. Complement of A186146. ● a(n)=n + floor((n ^ 2 - 1 / 2) ^ (1 / 3)) (A186145). ●

► [A079905] 1,3,5,6,7,9,11,12,13,14,15,17,19,21,23,24,25,26,27,28,29,30,31,33,35 ⋆ a(1)=1; then a(n) is smallest positive integer which is consistent with sequence being monotonically increasing and satisfying a(a(n)) = 2n + 1 for n>1. ● a(1)=1, a(2)=3, then a(3 * 2 ^ k - 1 + j) = 4 * 2 ^ k - 1 + 3j / 2 + |j| / 2 for k >= 1, - 2 ^ k <= j < 2 ^ k. ●

► [A047273] 0,1,3,5,6,7,9,11,12,13,15,17,18,19,21,23,24,25,27,29,30,31,33,35,36 ⋆ Numbers that are congruent to { 0, 1, 3, 5 } mod 6. ● a(n) = 2 * (n - floor(n / 4)) - (3 - I ^ n - (- I) ^ n - (- 1) ^ n) / 4, with offset 0..a(0)=0. - _ Gary Detlefs _ , Mar 19 2010 ● a(n) = (3 * n - 3 + cos(Pi * n / 2)) / 2. - _ R. J. Mathar _ , Oct 08 2010 ● a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4) for n >4. ● a(n) = (6 * n - 6 + (- 1) ^ (n / 2) + (- 1) ^ (- n / 2)) / 4. (End) ●

► [A047584] 1,3,5,6,7,9,11,13,14,15,17,19,21,22,23,25,27,29,30,31,33,35,37,38,39 ⋆ Numbers that are congruent to { 1, 3, 5, 6, 7 } mod 8. ● a(n) = a(n - 1) + a(n - 5) - a(n - 6) for n > 6. ● a(n) = (40n - 10 + 3 * (n mod 5) + 3 * ((n + 1) mod 5) - 2 * ((n + 2) mod 5) - 2 * ((n + 3) mod 5) - 2 * ((n + 4) mod 5)) / 25. (End) ●

► [A028983] 3,5,6,7,10,11,12,13,14,15,17,19,20,21,22,23,24,26,27,28,29,30,31,33,34 ⋆ Numbers whose sum of divisors is even. ● a(n) = n + (1 + sqrt(2) / 2) * sqrt(n) + O(1). - _ Charles R Greathouse IV _ , Sep 01 2015 ●

► [A136806] 3,5,6,7,10,11,12,14,20,22,23,24,27,28,29,31,39,40,41,43,44,45,46,47,48 ⋆ Nonsquares mod 65537. ● a(n) + a(32769 - n) = 65537. ●

▶ [A047328] 0,3,5,6,7,10,12,13,14,17,19,20,21,24,26,27,28,31,33,34,35,38,40,41,42 ⋆ Numbers that are congruent to { 0, 3, 5, 6 } mod 7. • a(n) = (1 / 8) * (14 * n - 5 - (2 - (- 1) ^ n) * (1 + 2 * (- 1) ^ floor(n / 2))). - _ Bruno Berselli _ , Aug 01 2011 • a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. • a(n) = (14 * n - 7 + i ^ (2 * n) - (1 + 3 * i) * i ^ (- n) - (1 - 3 * i) * i ^ n) / 8 where i=sqrt(- 1). •
▶ [A136804] 3,5,6,7,10,12,14,19,20,24,27,28,33,37,38,39,40,41,43,45,47,48,51,53,54 ⋆ Nonsquares mod 257. • a(n) + a(129 - n) = 257. •
▶ [A047582] 3,5,6,7,11,13,14,15,19,21,22,23,27,29,30,31,35,37,38,39,43,45,46,47,51 ⋆ Numbers that are congruent to { 3, 5, 6, 7 } mod 8. • a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. • a(n) = (8 * n + 1 - i ^ (2 * n) - (2 - i) * i ^ (- n) - (2 + i) * i ^ n) / 4 where i=sqrt(- 1). •
▶ [A227026] 3,5,6,7,11,14,15,58,85,493,638,2871,16731,97513,568345,3312555,19306983,112529341,655869061,3822685023,22280241075,129858761425,756872327473,4411375203411,25711378892991 ⋆ Numbers n such that n! / m! is a triangular number for some m < n - 1. • a(n) = 7a(n - 1) - 7a(n - 2) + a(n - 3) for n > 14. - _ Charles R Greathouse IV _ , Jun 28 2013 •
▶ [A227722] 0,1,3,5,6,7,15,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,51,53,54 ⋆ Smallest Boolean functions from small equivalence classes (counted by A000231). • a(A000231 - 1) = a(2,6,45,4335...) = 3,15,255,65535... = A051179 • a(A000231) = a(3,7,46,4336...) = 5,17,257,65537... = A000215 •
▶ [A072134] 3,5,6,7,17,19,53,55,161,163,485,487,1457,1459,4373,4375,13121,13123,39365,39367,118097,118099,354293,354295,1062881 ⋆ Second generation sequence in which each number is skipped that can be written as sum of distinct previous entries. To make the first generation we start with all natural numbers: this gives the powers of 2 (A000079). For the second generation we start with the natural numbers from which are removed the numbers of the first generation. • a(n) = - (- 1) ^ n + 3 ^ ((n - 1) / 2) * (1 - (- 1) ^ n + sqrt(3) + (- 1) ^ n * sqrt(3)) for n>2. • a(n) = - a(n - 1) + 3 * a(n - 2) + 3 * a(n - 3) for n>5. •
▶ [A133043] 3,5,6,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29 ⋆ Number of segments needed to draw the spiral of equilateral triangles with side lengths which follow the Padovan sequence. • a(1)=3: a(2)=5: a(3)=6; for n >3, a(n)=n + 4. •
▶ [A080036] 1,3,5,6,8,9,10,12,13,14,15,17,18,19,20,21,23,24,25,26,27,28,30,31,32 ⋆ a(n) = n + round(sqrt(2 * n)) + 1. • a(n) = ceiling(n + 1 / 2 + sqrt(2 * (n - 1) + 9 / 4)). - _ Allan Bickle _ , Mar 29 2023 •
▶ [A026430] 0,1,3,5,6,8,9,10,12,14,15,16,18,19,21,23,24,26,27,28,30,31,33,35,36 ⋆ a(n) is the sum of first n terms of A001285 (Thue - Morse sequence). • a(0)=0, a(1)=1, a(2n) = 3n, a(2n + 1) = - a(n) + a(n + 1) + 3n. - _ Ralf Stephan _ , Oct 08 2003 •
▶ [A095117] 0,1,3,5,6,8,9,11,12,13,14,16,17,19,20,21,22,24,25,27,28,29,30,32,33 ⋆ a(n) = pi(n) + n, where pi(n) = A000720(n) is the number of primes <= n. • a(0) = 0; for n>0, a(n) = a(n - 1) + (if n is prime then 2, else 1). - _ Robert G. Wilson v _ , Apr 22 2007; corrected by _ David James Sycamore _ , Aug 16 2018 •
▶ [A184675] 3,5,6,8,9,11,12,13,15,16,17,19,20,21,22,24,25,26,27,29,30,31,32,33,35 ⋆ n + floor(sqrt(n) + sqrt(n + 1)); complement of A184674. • a(n) = n + floor(sqrt(n) + sqrt(n + 1)). • a(n) = n + floor(sqrt(4 * n + 1)). [_ Mircea Merca _ , Feb 05 2012] •
▶ [A121506] 3,5,6,8,9,11,12,14,15,17,18,20,21,22,24,25,27,28,30,31,32,34,35,37,38 ⋆ Minimal polygon values appearing in a certain polygon problem leading to an approximation of Pi. • a(m)=min(abs(F(n,m)),n=3..infinity), m>=3 (checked for n=3..3 + 500), with F(nm):= ((Fin(n) + Fout(m)) / 2 - Pi) / Pi), where Fin(n):=(n / 2) * sin(2 * Pi / n) and Fout(m):= m * tan(Pi / m). Fin(n) is the area of the regular n - gon inscribed in the unit circle. Fout(n) is the area of an regular n - gon circumscribing the unit circle. E(n,m) = (F(n,m) - pi) / pi is the relative error. •
▶ [A114119] 1,3,5,6,8,9,11,12,14,15,17,18,20,21,23,24,26,27,29,30,32,33,35,36,38 ⋆ Row sums of triangle A114118. • a(n) = 3 * floor((n + 1) / 2) + 2 * ((n + 1) mod 2) - 0 ^ n. • a(n) = Sum _{ k=0..n } Sum _{ j=0..n } binomial(floor((n + k + j) / 3), k) * binomial(k, floor((n + k + j) / 3)). •
▶ [A276210] 1,3,5,6,8,9,11,13,14,16,17,19,20,22,23,25,26,28,29,31,32,33,35,36,38 ⋆ Position of n ^ r in the joint ranking of { h ^ r } and { k ^ s } , where r = sqrt(2), s = sqrt(3), h > 1, k > 1. • a(n) = n + floor(n ^ (r / s)); the complement is given by n + floor(n ^ (s / r)). •
▶ [A047446] 0,1,3,5,6,8,9,11,13,14,16,17,19,21,22,24,25,27,29,30,32,33,35,37,38 ⋆ Numbers that are congruent to { 0, 1, 3, 5, 6 } mod 8. • a(n) = floor((8n - 7) / 5). [_ Gary Detlefs _ , Mar 07 2010] • a(n) = a(n - 1) + a(n - 5) - a(n - 6) for n > 6, a(n) = a(n - 5) + 8 for n > 5. • a(n) = (40 * n - 45 + 3 * (n mod 5) - 2 * ((n + 1) mod 5) - 2 * ((n + 2) mod 5) + 3 * ((n + 3) mod 5) - 2 * ((n + 4) mod 5)) / 25. • a(5k) = 8k - 2, a(5k - 1) = 8k - 3, a(5k - 2) = 8k - 5, a(5k - 3) = 8k - 7, a(5k - 4) = 8k - 8. (End) •
▶ [A058065] 0,1,3,5,6,8,9,11,13,14,16,18,19,21,22,24,26,27,29,30,32,34,35,37,39 ⋆ Complement of A057843. • a(n) = floor(tau * n + sqrt(5)) - 2 where tau is the Golden ratio = (1 + sqrt(5)) / 2. - _ Benoit Cloitre _ , Apr 14 2003 •
▶ [A184582] 1,3,5,6,8,10,11,13,14,16,18,19,21,22,24,26,27,29,31,32,34,35,37,39,40 ⋆ floor[(n + 1 / 5)r] where r=(1 + sqrt(5)) / 2; complement of A184583. • a(n) =floor[(n + 1 / 5)r] where r=(1 + sqrt(5)) / 2. •
▶ [A047220] 0,1,3,5,6,8,10,11,13,15,16,18,20,21,23,25,26,28,30,31,33,35,36,38,40 ⋆ Numbers that are congruent to { 0, 1, 3 } mod 5. • a(n) = floor(5 * (n - 1) / 3). - _ Gary Detlefs _ , Feb 20 2010 • a(n) = 2 * n - floor(n / 3) - (n ^ 2 mod 3), with offset 0. - _ Gary Detlefs _ , Mar 19 2010 • a(n) = n + floor(2 * (n - 1) / 3) - 1. - _ Arkadiusz Wesolowski _ , Sep 18 2012 • a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. • a(n) = 5 * n / 3 - 2 + 2 * sin(2 * n * Pi / 3) / (3 * sqrt(3)). • a(3 * k) = 5 * k - 2, a(3 * k - 1) = 5 * k - 4, a(3 * k - 2) = 5 * k - 5. (End) •
▶ [A329845] 1,3,5,6,8,10,11,13,15,16,18,20,21,23,25,26,28,30,31,33,35,36,38,40,41 ⋆ Beatty sequence for (3 + sqrt(29)) / 5. • a(n) = floor(n * r), where r = (3 + sqrt(29)) / 5. •
▶ [A059541] 1,3,5,6,8,10,11,13,15,16,18,20,22,23,25,27,28,30,32,33,35,37,38,40,42 ⋆ Beatty sequence for 1 + log(2). • a(n) = floor(n * (1 + log(2))). •
▶ [A325913] 1,3,5,6,8,10,11,13,15,17,18,20,22,23,25,27,29,30,32,34,35,37,39,41,42 ⋆ Integers m such that there are exactly two powers of 2 between 3 ^ m and 3 ^ (m + 1). • a(n) = floor(n / (log _ 2(3) - 1)). •
▶ [A082977] 0,1,3,5,6,8,10,12,13,15,17,18,20,22,24,25,27,29,30,32,34,36,37,39,41 ⋆ Numbers that are congruent to { 0, 1, 3, 5, 6, 8, 10 } mod 12. • a(n) = a(n - 1) + a(n - 7) - a(n - 8) for n > 8. • a(n) = (84 * n - 105 - 2 * (n mod 7) - 2 * ((n + 1) mod 7) + 5 * ((n + 2) mod 7) - 2 * ((n + 3) mod 7) - 2 * ((n + 4) mod 7) + 5 * ((n + 5) mod 7) - 2 * ((n + 6) mod 7)) / 49. • a(7k) = 12k - 2, a(7k - 1) = 12k - 4, a(7k - 2) = 12k - 6, a(7k - 3) = 12k - 7, a(7k - 4) = 12k - 9, a(7k - 5) = 12k - 11, a(7k - 6) = 12k - 12. (End) • a(n) = a(n - 7) + 12 for n > 7. - _ Jianing Song _ , Sep 22 2018 • a(n) = floor(12 * (n - 1) / 7). - _ Federico Provvedi _ , Oct 18 2018 •
▶ [A329829] 1,3,5,6,8,10,12,13,15,17,18,20,22,24,25,27,29,30,32,34,36,37,39,41,43 ⋆ Beatty sequence for (2 + sqrt(10)) / 3. • a(n) = floor(n * r), where r = (2 + sqrt(10)) / 3. •
▶ [A182760] 1,3,5,6,8,10,12,13,15,17,18,20,22,24,25,27,29,31,32,34,36,37,39,41,43 ⋆ Beatty sequence for (3 + 5 ^ (- 1 / 2)) / 2. • a(n) = floor(r * n), where r = (3 + 5 ^ (- 1 / 2)) / 2 = 1.72360... •
▶ [A022838] 1,3,5,6,8,10,12,13,15,17,19,20,22,24,25,27,29,31,32,34,36,38,39,41,43 ⋆ Beatty sequence for sqrt(3); complement of A054406. • a(n) = floor(n * sqrt(3)). - _ Reinhard Zumkeller _ , Jan 20 2010 • a(n) = 2 * floor(n * (sqrt(3) - 1)) + floor(n * (2 - sqrt(3))) + 1. - _ Miko Labalan _ , Dec 03 2016 •
▶ [A047329] 1,3,5,6,8,10,12,13,15,17,19,20,22,24,26,27,29,31,33,34,36,38,40,41,43 ⋆ Numbers that are congruent to { 1, 3, 5, 6 } mod 7. • a(n) = floor((7n - 1) / 4). - _ Gary Detlefs _ , Mar 07 2010 • a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. • a(n) = (14n - 5 - i ^ (2n) - (1 + i) * i ^ (- n) - (1 - i) * i ^ n) / 8 where i=sqrt(- 1). •
▶ [A047444] 0,3,5,6,8,11,13,14,16,19,21,22,24,27,29,30,32,35,37,38,40,43,45,46,48 ⋆ Numbers that are congruent to { 0, 3, 5, 6 } mod 8. • a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4) for n>4. • a(n) = (1 + i) * (4 * n - 4 * n * i + 3 * i - 3 - i ^ (- n) + i ^ (1 + n)) / 4 where i=sqrt(- 1). •
▶ [A001969] 0,3,5,6,9,10,12,15,17,18,20,23,24,27,29,30,33,34,36,39,40,43,45,46,48 ⋆ Evil numbers: nonnegative integers with an even number of 1's in their binary expansion. • a(1) = 0; for n > 1: a(n) = 3 * n - 3 - a(n / 2) if n even, a(n) = a((n + 1) / 2) + n - 1 if n odd. •
▶ [A281746] 0,3,5,6,9,10,12,15,18,20,21,24,25,27,30,33,35,36,39,40,42,45,48,50,51 ⋆ Nonnegative numbers k such that k == 0 (mod 3) or k == 0 (mod 5). • a(n) = a(n - 1) + a(n - 7) - a(n - 8) for n > 8. - _ Colin Barker _ , Feb 07 2017 •
▶ [A018900] 3,5,6,9,10,12,17,18,20,24,33,34,36,40,48,65,66,68,72,80,96,129,130,132,136 ⋆ Sums of two distinct powers of 2. • a(n) = b ^ i + b ^ j, where i = floor((sqrt(8n - 1) + 1) / 2), j = n - 1 - i * (i - 1) / 2 [for a Smalltalk implementation see Prog section, method distinctPowersOf: b (2 versions)]. • a(n + 1 + floor((sqrt(8n - 1) + 1) / 2)) = b * a(n). • a(n + 1 + floor(log _ b(a(n)))) = b * a(n). • a(n + 1) = b ^ 2 / (b + 1) * a(n) + 1, if n is a triangular number (s. A000217). • a(n + 1) = b * a(n) + (1 - b) * b ^ floor((sqrt(8n - 1) + 1) / 2), if n is not a triangular number. • a(n + 1) = b * m + (1 - b) * b ^ i, if floor(log _ b(m / (b + 1))) + 1 < i, •
▶ [A126590] 3,5,6,9,10,12,18,20,21,24,25,27,33,35,36,39,40,42,48,50,51,54,55,57,63 ⋆ Multiples of 3 or 5 but not both. • a(n) = a(n - 1) + a(n - 6) - a(n - 7). - _ Charles R Greathouse IV _ , Oct 11 2013 •
▶ [A122194] 3,5,6,9,10,15,17,25,28,41,46,67,75,109,122,177,198,287,321,465,520,753,842,1219,1363 ⋆ Numbers that are the sum of exactly two sets of Fibonacci numbers. • a(1)=3, a(2)=5, a(3)=6, a(4)=9, a(n) = a(n - 2) + a(n - 4) + 1, n > 4. •
▶ [A047271] 0,3,5,6,9,11,12,15,17,18,21,23,24,27,29,30,33,35,36,39,41,42,45,47,48 ⋆ Numbers that are congruent to { 0, 3, 5 } mod 6. • a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. (End) • a(n) = (6 * n - 4 + cos(2 * n * Pi / 3) - sqrt(3) * sin(2 * Pi * n / 3)) / 3. • a(3k) = 6k - 1, a(3k - 1) = 6k - 3, a(3k - 2) = 6k - 6. (End) •
▶ [A047445] 1,3,5,6,9,11,13,14,17,19,21,22,25,27,29,30,33,35,37,38,41,43,45,46,49 ⋆ Numbers that are congruent to { 1, 3, 5, 6 } mod 8. • a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. • a(n) = (8 * n - 5 - i ^ (2 * n) - i ^ (- n) - i ^ n) / 4 where i=sqrt(- 1). •
▶ [A236343] 1,1,3,5,6,9,12,14,18,22,25,30,35,39,45,51,56,63,70,76,84,92,99,108,117 ⋆ Expansion of (1 - x + 2 * x ^ 2 - x ^ 3) / ((1 - x) ^ 2 * (1 - x ^ 3)) in powers of x. • a(n) = 2 * a(n - 3) + a(n - 6) + 3 = 2 * a(n - 1) - a(n - 2) + a(n - 3) - 2 * a(n - 4) + a(n - 5). • a(3 * n) = (1 / 2) * (n + 1) * (3 * n + 2); • a(3 * n + 1) = (1 / 2) * (n + 1) * (3 * n + 4) - 1; • a(3 * n + 2) = (1 / 2) * (n + 1) * (3 * n + 6). (End) •
▶ [A047327] 3,5,6,10,12,13,17,19,20,24,26,27,31,33,34,38,40,41,45,47,48,52,54,55,59 ⋆ Numbers that are congruent to { 3, 5, 6 } mod 7. • a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. • a(n) = (21 * n - 9 * cos(2 * n * Pi / 3) + sqrt(3) * sin(2 * n * Pi / 3)) / 9. • a(3k) = 7k - 1, a(3k - 1) = 7k - 2, a(3k - 2) = 7k - 4. (End) •
▶ [A028927] 0,3,5,6,10,12,13,19,20,21,24,26,27,35,38,40,42,45,48,52,54,59,61,69,70 ⋆ Numbers represented by quadratic form with Gram matrix [3, 1; 1, 5]. • a(x _ i, x _ j) = 3 * x _ i ^ 2 + 2 * x _ i * x _ j + 5 * x _ j ^ 2, for all x _ i >= 0, x _ j any integer. •
▶ [A047443] 3,5,6,11,13,14,19,21,22,27,29,30,35,37,38,43,45,46,51,53,54,59,61,62,67 ⋆ Numbers that are congruent to { 3, 5, 6 } mod 8. • a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. • a(n) = 2 * (12 * n - 3 - 6 * cos(2 * n * Pi / 3) + sqrt(3) * sin(2 * Pi * n / 3)) / 9. • a(3k) = 8k - 2, a(3k - 1) = 8k - 3, a(3k - 2) = 8k - 5. (End) •
▶ [A173593] 3,5,6,11,13,22,27,45,54,91,109,182,219,365,438,731,877,1462,1755,2925,3510,5851,7021,11702,14043 ⋆ Numbers having in binary representation exactly two ones in three consecutive digits. • a(n) = 2 * a(n - 2) + a(n - 3) - 2 * a(n - 5). •
▶ [A276704] 3,5,6,21,45,77,117,165,221,285,357,437,525,621,725,837,957,1085,1221,1365,1517,1677,1845,2021,2205 ⋆ Records in A249859. • a(n) = 4 * n ^ 2 - 12 * n + 5 for n>3. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>6. •

► [A086674] 0,1,3,5,7,8,9,9,9,9,9,9,10,11,12,14,16,18,20,22,24,26,27,28,29 ⋆ Sum of signed indices from Euler's Pentagonal Theorem (see A000041). ● a(n)=sum { k _ i is a generalized pentagonal, (- 1) ^ (floor((i + 1) / 2)) * (n - k) } ●
► [A102890] 3,5,7,8,9,10,11,12,13,14,15,16,17,18,19,20,20,21,22,23,23,24,25,25,26 ⋆ A102889(n) is at least a(n). ● a(n) = ceiling(3 * n ^ (2 / 3)). ●
► [A167707] 0,1,3,5,7,8,9,10,11,13,14,15,16,17,19,20,21,22,24,25,26,27,28,29,31 ⋆ The non - single or nonisolated numbers. The union of non - single (or nonisolated or twin) primes and non - single (or nonisolated) nonprimes. ● a(n) = n + n / log n + O(n / (log n) ^ 2) by Brun's theorem. [_ Charles R Greathouse IV _ , Mar 15 2011] ●
► [A131903] 3,5,7,8,9,10,11,13,14,15,17,18,19,20,21,22,23,25,26,27,28,29,30,31,32 ⋆ Integers x such that d(k)=d(x) for some 0<k<x, where d=A000005 is the number of divisors. ● a(n) = n - th element of the set { x>0 : there exists a k with 0<k<x and d(k)=d(x) } , where d=A000005 is the number of divisors. ●
► [A336867] 3,5,7,8,9,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30 ⋆ Numbers k such that k! does not have distinct prime multiplicities. ● a(n) = 2 * a(n - 1) - a(n - 2) for n > 7. ●
► [A024352] 3,5,7,8,9,11,12,13,15,16,17,19,20,21,23,24,25,27,28,29,31,32,33,35,36 ⋆ Numbers which are the difference of two positive squares, c ^ 2 - b ^ 2 with 1 <= b < c. ● a(n) = a(n - 3) + 4, n > 4. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4), for n > 5. - _ Ant King _ , Oct 03 2011 ● a(n) = 4 + floor((4 * n - 3) / 3), n > 1. - _ Gary Detlefs _ , Jul 15 2014 ●
► [A346232] 3,5,7,8,9,11,12,14,15,17,18,19,21,22,24,25,27,28,29,31,32,34,35,36,38 ⋆ Maximum number of squares in a square grid whose interiors can be touched by a (possibly skew) line segment of length n. ● a(n) = i + j - 1 with i = ceiling (n / sqrt(2)) + 1, j = ceiling(sqrt(n ^ 2 - (i - 2) ^ 2)) + 1. ● a(n) = i + j - 1 with i = ceiling((sqrt(2 * n ^ 2 - 1) + 1) / 2) + 1, j = ceiling(sqrt(n ^ 2 - (i - 2) ^ 2)) + 1. ● a(n) = max { m with m integer such that m ^ 2 - 6 * m + 10 - m mod 2 < 2 * n ^ 2 } . ● a(n) = floor(sqrt(2 * n ^ 2 - 2)) + 3. - _ Alex Arkhipov _ , Jul 11 2021 ●
► [A047486] 0,1,3,5,7,8,9,11,13,15,16,17,19,21,23,24,25,27,29,31,32,33,35,37,39 ⋆ Numbers that are congruent to { 0, 1, 3, 5, 7 } mod 8. ● a(n) = a(n - 1) + a(n - 5) - a(n - 6) for n > 6. ● a(n) = (40 * n - 40 - 2 * (n mod 5) - 2 * ((n + 1) mod 5) - 2 * ((n + 2) mod 5) + 3 * ((n + 3) mod 5) + 3 * ((n + 4) mod 5)) / 25. (End) ●
► [A276224] 1,3,5,7,8,10,12,13,15,16,18,20,21,23,25,26,28,29,31,32,34,36,37,39,40 ⋆ Position of n ^ e in the joint ranking of { h ^ e } and { k ^ Pi } , h > 1, k > 1. ● a(n) = n + floor(n ^ (e / Pi)); the complement is given by n + floor(n ^ (Pi / e)). ●
► [A083034] 0,1,3,5,7,8,10,12,13,15,17,19,20,22,24,25,27,29,31,32,34,36,37,39,41 ⋆ Numbers that are congruent to { 0, 1, 3, 5, 7, 8, 10 } mod 12. ● a(n) = a(n - 1) + a(n - 7) - a(n - 8) for n > 8. ● a(n) = (84 * n - 98 - 2 * (n mod 7) + 5 * ((n + 1) mod 7) - 2 * ((n + 2) mod 7) - 2 * ((n + 3) mod 7) - 2 * ((n + 4) mod 7) + 5 * ((n + 5) mod 7) - 2 * ((n + 6) mod 7)) / 49. ● a(7k) = 12k - 2, a(7k - 1) = 12k - 4, a(7k - 2) = 12k - 5, a(7k - 3) = 12k - 7, a(7k - 4) = 12k - 9, a(7k - 5) = 12k - 11, a(7k - 6) = 12k - 12. (End) ● a(n) = a(n - 7) + 12 for n > 7. - _ Jianing Song _ , Sep 22 2018 ●
► [A186219] 1,3,5,7,8,10,12,13,15,17,19,20,22,24,25,27,29,31,32,34,36,37,39,41,43 ⋆ Adjusted joint rank sequence of (f(i)) and (g(j)) with f(i) before g(j) when f(i) =g(j), where f and g are the triangular numbers and squares. Complement of A186220. ● a(n) = n + floor(sqrt((n ^ 2 + n) / 2 - 1 / 4)), (A186219). ●
► [A184626] 1,3,5,7,8,10,12,14,15,17,19,21,22,24,26,27,29,31,33,34,36,38,40,41,43 ⋆ floor(nr + h), where r=sqrt(3), h=1 / 4; complement of A184627. ● a(n)=floor(nr + h), where r=sqrt(3), h=1 / 4. ●
► [A047392] 0,1,3,5,7,8,10,12,14,15,17,19,21,22,24,26,28,29,31,33,35,36,38,40,42 ⋆ Numbers that are congruent to { 0, 1, 3, 5 } mod 7. ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. ● a(n) = (14 * n - 17 - i ^ (2 * n) + (1 + i) * i ^ (- n) + (1 - i) * i ^ n) / 8. ● a(n) = n + floor(3 * n / 4 - 3 / 4) - 1. - _ Bruno Berselli _ , Jun 15 2016 ●
► [A292648] 1,3,5,7,8,10,12,14,15,17,19,21,22,24,26,28,29,31,33,35,36,38,40,42,43 ⋆ Rank of Pi * n when all the numbers Pi * j and (Pi + 1) * k, for j>=1, k>= 1, are jointly ranked. ● a(n) = k * n + O(1), where k = 2 - 1 / (Pi + 1) = 1.7585.... - _ Charles R Greathouse IV _ , Mar 13 2018 ●
► [A187330] 0,1,3,5,7,8,10,12,14,15,17,19,21,22,24,26,28,29,31,33,35,37,38,40,42 ⋆ a(n) = floor((4 - sqrt(5)) * n); complement of A187339. ● a(n)=floor((4 - sqrt(5))n). ●
► [A059546] 1,3,5,7,8,10,12,14,15,17,19,21,22,24,26,28,30,31,33,35,37,38,40,42,44 ⋆ Beatty sequence for log(10) / (log(10) - 1). ● a(n) = floor(n * log(10) / (log(1 0) - 1)). - _ Michel Marcus _ , Jan 04 2015 ●
► [A037086] 0,1,3,5,7,8,10,12,14,15,17,19,21,23,24,26,28,30,31,33,35,37,38,40,42 ⋆ Beatty sequence for sqrt(Pi). ● a(n) = floor(n * sqrt(Pi)). ●
► [A329825] 1,3,5,7,8,10,12,14,16,17,19,21,23,24,26,28,30,32,33,35,37,39,40,42,44 ⋆ Beatty sequence for (3 + sqrt(17)) / 4. ● a(n) = floor(r * n), where r = (3 + sqrt(17)) / 4. ●
► [A329999] 1,3,5,7,8,10,12,14,16,17,19,21,23,24,26,28,30,32,33,35,37,39,41,42,44 ⋆ Beatty sequence for sqrt(x - 1), where 1 / sqrt(x - 1) + 1 / sqrt(x + 1) = 1. ● a(n) = floor(n sqrt(x - 1)), where x = 4.18112544... is the constant in A329998. ●
► [A253301] 1,3,5,7,8,10,12,14,16,17,19,21,23,25,26,28,30,32,34,35,37,39,41,43,44 ⋆ Complement of the Beatty sequence for sqrt(Pi * phi), where phi is the golden ratio. ● a(n) = floor(n * sqrt(Pi * phi) / (sqrt(Pi * phi) - 1)), where phi is the golden ratio. ●
► [A190719] 0,1,3,5,7,8,11,12,13,15,17,19,20,23,24,25,27,29,31,32,35,36,37,39,41 ⋆ Numbers that are congruent to { 0, 1, 3, 5, 7, 8, 11 } mod 12. ● a(n) = a(n - 1) + a(n - 7) - a(n - 8) for n>8. ● a(n) = floor(12 * n / 7) - floor((n mod 7) / 6) - floor(((n + 3) mod 7) / 5). - _ Rolf Pleisch _ , Jun 12 2011 ● a(n) = a(n - 7) + 12 for n>7. ● a(n) = (84 * n - 91 - 9 * (n mod 7) + 5 * ((n + 1) mod 7) - 2 * ((n + 2) mod 7) - 2 * ((n + 3) mod 7) - 2 * ((n + 4) mod 7) + 5 * ((n + 5) mod 7) + 5 * ((n + 6) mod 7)) / 49. ● a(7k) = 12k - 1, a(7k - 1) = 12k - 4, a(7k - 2) = 12k - 5, a(7k - 3) = 12k - 7, a(7k - 4) = 12k - 9, a(7k - 5) = 12k - 11, a(7k - 6) = 12k - 12. (End) ●
► [A106252] 1,3,5,7,8,11,12,14,16,18,19,22,23,25,27,29,30,33,34,36,38,40,41,44,45 ⋆ Number of positive integer triples (x,y,z), with x<=y<=z<=n, such that each of x,y and z divides the sum of the other two. ● a(n) = n + floor(n / 2) + floor(n / 3). [_ Clark Kimberling _ , Apr 20 2012] ●
► [A047485] 0,3,5,7,8,11,13,15,16,19,21,23,24,27,29,31,32,35,37,39,40,43,45,47,48 ⋆ Numbers that are congruent to { 0, 3, 5, 7 } mod 8. ● a(n) = (- 5 + (- 1) ^ n - i * (- i) ^ n + i * i ^ n + 8 * n) / 4 where i=sqrt(- 1). (End) ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. ●
► [A007957] 1,3,5,7,9,10,11,12,13,14,15,16,17,18,19,21,23,25,27,29,30,31,32,33,34 ⋆ Numbers that contain an odd digit. ● a(n) = n + O(n ^ 0.69897...) where the constant is A153268. - _ Charles R Greathouse IV _ , Jul 25 2012 ●
► [A187318] 0,1,3,5,7,9,10,12,14,16,18,19,21,23,25,27,28,30,32,34,36,37,39,41,43 ⋆ a(n) = floor(9 * n / 5). ● a(n) = n + floor(4 * n / 5). ● a(n) = 2 * n - 1 - floor((n - 1) / 5). - _ Wesley Ivan Hurt _ , Jan 02 2017 ● a(n) = a(n - 1) + a(n - 5) - a(n - 6) for n > 5. ●
► [A184808] 1,3,5,7,9,10,12,14,16,18,19,21,23,25,27,29,30,32,34,36,38,39,41,43,45 ⋆ n + floor(r * n), where r = sqrt(2 / 3); complement of A184809. ● a(n) = n + floor(r * n), where r = sqrt(2 / 3). ●
► [A329837] 1,3,5,7,9,10,12,14,16,18,20,21,23,25,27,29,30,32,34,36,38,40,41,43,45 ⋆ Beatty sequence for (4 + sqrt(26)) / 5. ● a(n) = floor(n * r), where r = (4 + sqrt(26)) / 5. ●
► [A214315] 0,1,3,5,7,9,10,12,14,16,18,20,21,23,25,27,29,31,32,34,36,38,40,42,43 ⋆ Floor of the real part of the zeros of the complex Fibonacci function on the right half - plane. ● a(n) = floor(alpha * n), n>=0, with alpha = x _ 0(1) given in the comment section. ●
► [A054684] 1,3,5,7,9,10,12,14,16,18,21,23,25,27,29,30,32,34,36,38,41,43,45,47,49 ⋆ Numbers whose sum of digits is odd. ● a(n) = n * 2 - 1 for the first 5 numbers; a(n) = n * 2 for the second 5 numbers. ● a(n) = 2 * n - 2 if floor((n - 1) / 5) is in the sequence, 2 * n - 1 if not. ●
► [A191275] 0,1,3,5,7,9,11,12,13,15,17,19,21,23,24,25,27,29,31,33,35,36,37,39,41 ⋆ Numbers that are congruent to { 0, 1, 3, 5, 7, 9, 11 } mod 12. ● a(n) = a(n - 1) + a(n - 7) - a(n - 8) for n>8. ● a(n) = a(n - 7) + 12 for n>7. ● a(n) = (84 * n - 84 - 2 * (n mod 7) - 2 * ((n + 1) mod 7) - 2 * ((n + 2) mod 7) - 2 * ((n + 3) mod 7) - 2 * ((n + 4) mod 7) + 5 * ((n + 5) mod 7) + 5 * ((n + 6) mod 7)) / 49. ● a(7k) = 12k - 1, a(7k - 1) = 12k - 3, a(7k - 2) = 12k - 5, a(7k - 3) = 12k - 7, a(7k - 4) = 12k - 9, a(7k - 5) = 12k - 11, a(7k - 6) = 12k - 12. (End) ●
► [A158919] 0,1,3,5,7,9,11,12,14,16,18,20,22,23,25,27,29,31,33,34,36,38,40,42,44 ⋆ Beatty sequence for the tribonacci constant tau (A058265): a(n) = floor(n * tau). ● a(n) = floor(n * A058265). ●
► [A329827] 1,3,5,7,9,11,12,14,16,18,20,22,24,25,27,29,31,33,35,36,38,40,42,44,46 ⋆ Beatty sequence for (5 + sqrt(37)) / 6. ● a(n) = floor(n * r), where r = (5 + sqrt(37)) / 6. ●
► [A182765] 1,3,5,7,9,11,12,14,16,18,20,22,24,25,27,29,31,33,35,37,38,40,42,44,46 ⋆ Beatty sequence for (6 + sqrt(2)) / 4. ● a(n) = floor(r * n), where r = (6 + sqrt(2)) / 4. ● a(n) = 2 * n - 1 - floor(n / 7) for n < 41, but this fails for a(41) = 75 onwards. - _ M. F. Hasler _ , Jun 23 2016 ●
► [A321499] 3,5,7,9,11,13,15,16,17,19,21,23,24,25,27,29,31,32,33,35,37,39,40,41,43 ⋆ Numbers of the form (x - y)(x ^ 2 - y ^ 2) with x > y > 0. ● a(5k - 2) = 8k for all k > 1, a(n) = floor((n + 2) * 4 / 5) * 2 + 1 for all other n > 3. ● a(n + 5) = a(n) + 8 for n > 3. - _ David A. Corneth _ , Nov 23 2018 ●
► [A329831] 1,3,5,7,9,11,13,15,16,18,20,22,24,26,28,30,32,33,35,37,39,41,43,45,47 ⋆ Beatty sequence for (7 + sqrt(65)) / 8. ● a(n) = floor(n * r), where r = (7 + sqrt(65)) / 8. ●
► [A249123] 1,3,5,7,9,11,13,15,17,18,20,22,24,26,28,30,32,34,35,37,39,41,43,45,47 ⋆ Position of n ^ 6 in the ordered union of { h ^ 6, h >= 1 } and { 2 * k ^ 6, k >= 1 } . ● a(n) = n + floor(2 ^ (- 1 / 6) * n). - _ Robert Israel _ , Aug 12 2019 ●
► [A038124] 1,3,5,7,9,11,13,15,17,19,20,22,24,26,28,30,32,34,36,38,39,41,43,45,47 ⋆ Beatty sequence for Brun's constant. ● a(n)=floor(n * A065421). ●
► [A329835] 1,3,5,7,9,11,13,15,17,19,20,22,24,26,28,30,32,34,36,38,40,41,43,45,47 ⋆ Beatty sequence for (9 + sqrt(101)) / 10. ● a(n) = floor(n * r), where r = (9 + sqrt(101)) / 10. ●
► [A214657] 0,1,3,5,7,9,11,13,15,17,19,21,22,24,26,28,30,32,34,36,38,40,42,43,45 ⋆ Floor of the moduli of the zeros of the complex Fibonacci function. ● a(n) = floor(tau * n), n>=0, with tau = |z _ 0(1)| given in the comment section. ●
► [A059533] 1,3,5,7,9,11,13,15,17,19,21,22,24,26,28,30,32,34,36,38,40,42,44,45,47 ⋆ Beatty sequence for 1 + Catalan's constant. ● a(n) = floor(n * (1 + A006752)). - _ R. J. Mathar _ , May 22 2019 ●
► [A004273] 0,1,3,5,7,9,11,13,15,17,19,21,23,25,27,29,31,33,35,37,39,41,43,45,47 ⋆ 0 together with odd numbers. ● a(n) = 2 * n - ((n + 2) mod (n + 1)), n >= 0. - _ Paolo P. Lava _ , Aug 29 2007 ● a(n) = (4 * n - 1 - (- 1) ^ (2 ^ n)) / 2. - _ Luce ETIENNE _ , Jul 11 2015 ●
► [A060747] 1,1,3,5,7,9,11,13,15,17,19,21,23,25,27,29,31,33,35,37,39,41,43,45,47 ⋆ a(n) = 2 * n - 1. ● a(n) = 2 * a(n - 1) - a(n - 2); a(0)= - 1, a(1)=1. - _ Philippe Deléham _ , Nov 03 2008 ● a(n) = 4 * n - a(n - 1) - 4 for n>0, with a(0)= - 1. - _ Vincenzo Librandi _ , Aug 07 2010 ●
► [A005408] 1,3,5,7,9,11,13,15,17,19,21,23,25,27,29,31,33,35,37,39,41,43,45,47,49 ⋆ The odd numbers: a(n) = 2 * n + 1. ● a(n) = 2 * n + 1. a(- 1 - n) = - a(n). a(n + 1) = a(n) + 2. ● a(n) = L(n, - 2) * (- 1) ^ n, where L is defined as in A108299. - _ Reinhard Zumkeller _ , Jun 01 2005 ● a(n) = b(2 * n + 1) where b(n) = n if n is odd is multiplicative. [This seems to say that A000027 is multiplicative? - _ R. J. Mathar _ , Sep 23 2011] ● a(n) = (n + 1) ^ 2 - n ^ 2. ● a(0) = 1, a(1) = 3, a(n) = 2 * a(n - 1) - a(n - 2). - _ Jaume Oliver Lafont _ , May 07 2008 ● a(n) = (n - 1) + n (sum of two sequential integers). - _ Dominick Cancilla _ , Aug 09 2010 ●
► [A143452] 1,3,5,7,9,11,13,15,17,19,21,27,37,51,69,91,117,147,181,219,261,315,389,491,629 ⋆ Expansion of 1 / (x ^ k * (1 - x - 2 * x ^ (k + 1))) for k=9. ● a(n)

= 2n + 1 if n<=10, else a(n) = a(n - 1) + 2a(n - 10). - _ Milan Janjic _ , Mar 09 2015 ●
▶ [A074775] 1,3,5,7,9,11,13,15,17,19,23,25,27,29,31,35,37,39,41,43,47,49,51,53,55 ⋆ Numbers n such that tau(n) < tau(n + 1) where tau(x)=A000005(x). ● a(n) seems to be asymptotic to c * n with c=2.23... ●
▶ [A143451] 1,3,5,7,9,11,13,15,17,19,25,35,49,67,89,115,145,179,217,267,337,435,569,747,977 ⋆ Expansion of 1 / (x ^ k * (1 - x - 2 * x ^ (k + 1))) for k=8. ● a(n) = 2n + 1 if n<=9, else a(n) = a(n - 1) + 2a(n - 9). - _ Milan Janjic _ , Mar 09 2015 ●
▶ [A014261] 1,3,5,7,9,11,13,15,17,19,31,33,35,37,39,51,53,55,57,59,71,73,75,77,79 ⋆ Numbers that contain odd digits only. ● a(n + 1) = h(a(n)) with h(x) = 1 + (if x mod 10 < 9 then x + x mod 2 else 10 * h(floor(x / 10))); ● a(n) = f(n, 1) where f(n, x) = if n = 1 then x else f(n - 1, h(x)). (End) ● a(n) = Sum _{ j = 0..m - 1 } ((2 * b _ j(n) + 1) mod 10) * 10 ^ j, where b _ j(n)) = floor((4 * n + 1 - 5 ^ m) / (4 * 5 ^ j)), m = floor(log _ 5(4 * n + 1)). ● a(1 * (5 ^ n - 1) / 4) = 1 * (10 ^ n - 1) / 9. ● a(2 * (5 ^ n - 1) / 4) = 1 * (10 ^ n - 1) / 3. ● a(3 * (5 ^ n - 1) / 4) = 5 * (10 ^ n - 1) / 9. ●
▶ [A143450] 1,3,5,7,9,11,13,15,17,23,33,47,65,87,113,143,177,223,289,383,513,687,913,1199,1553 ⋆ Expansion of 1 / (x ^ k * (1 - x - 2 * x ^ (k + 1))) for k=7. ● a(n) = 2n + 1 if n<=8, else a(n) = a(n - 1) + 2a(n - 8). - _ Milan Janjic _ , Mar 09 2015 ●
▶ [A373512] 1,1,1,1,1,1,1,1,1,3,5,7,9,11,13,15,17,37,61,89,121,157,197,241,289 ⋆ Expansion of 1 / (1 - x / (1 - 16 * x ^ 8) ^ (1 / 8)). ● a(8 * n) = 17 ^ (n - 1) for n > 0. ● a(n) = Sum _{ k=0..floor(n / 8) } 16 ^ k * binomial(n / 8 - 1,k). ●
▶ [A204458] 1,3,5,7,9,11,13,15,19,21,23,25,27,29,31,33,35,37,39,41,43,45,47,49,53 ⋆ Odd numbers not divisible by 17. ● a(n) = 2 * n - 1 + 2 * floor((n + 7) / 16) = 2 * n + 1 + 2 * floor((n - 9) / 16), n>=1. Note that for n=0 this is - 1, but for the o.g.f. with start x ^ 0 one uses a(0)=0. ● a(n) = a(n - 1) + a(n - 16) - a(n - 17). - _ Wesley Ivan Hurt _ , Oct 20 2020 ●
▶ [A143449] 1,3,5,7,9,11,13,15,21,31,45,63,85,111,141,183,245,335,461,631,853,1135,1501,1991,2661 ⋆ Expansion of 1 / (x ^ k * (1 - x - 2 * x ^ (k + 1))) for k=6. ● a(n) = 2n + 1 if n<=7, else a(n) = a(n - 1) + 2a(n - 7). - _ Milan Janjic _ , Mar 09 2015 ●
▶ [A184591] 1,3,5,7,9,11,13,16,18,20,22,24,26,28,31,33,35,37,39,41,43,46,48,50,52 ⋆ a(n) = floor(n * (Pi - 1) - 1); complement of A184592. ● a(n) = floor(n * (Pi - 1) - 1). ●
▶ [A143448] 1,3,5,7,9,11,13,19,29,43,61,83,109,147,205,291,413,579,797,1091,1501,2083,2909,4067,5661 ⋆ Expansion of 1 / (x ^ k * (1 - x - 2 * x ^ (k + 1))) for k=5. ● a(n) = 2n + 1 if n<=6, else a(n) = a(n - 1) + 2a(n - 6). - _ Milan Janjic _ , Mar 09 2015 ●
▶ [A364668] 0,3,5,7,9,11,14,16,18,20,22,25,27,29,31,33,36,38,40,42,44,47,49,51,53 ⋆ Lower independence number of the n - Goldberg graph. ● a(n) = a(n - 1) + a(n - 5) - a(n - 6). ●
▶ [A174059] 0,1,3,5,7,9,11,14,17,20,23,26,30,33,37,41,45,49,53,58,62,67,71,76,81 ⋆ a(n) = ceiling(Sum _{ k=1..n } sqrt(k)). ● a(n) = 2 / 3 * n ^ (3 / 2) + 1 / 2 * n ^ (1 / 2) + O(1). It appears that the absolute value of the difference is always less than 1. - _ Robert Israel _ , May 06 2019 ●
▶ [A204457] 1,3,5,7,9,11,15,17,19,21,23,25,27,29,31,33,35,37,41,43,45,47,49,51,53 ⋆ Odd numbers not divisible by 13. ● a(n) = 2 * n - 1 + 2 * floor((n + 5) / 12) = 2 * n + 1 + 2 * floor((n - 7) / 12), n>=1. Note that this is - 1 for n=0, but the o.g.f. starting with x ^ 0 has a(0)=0. ●
▶ [A173601] 0,1,3,5,7,9,11,15,17,19,23,27,31,33,35,39,43,47,51,55,59,63,65,67,71 ⋆ Greatest inverse of A071542, i.e., a(n) = maximal i such that A071542(i) = n. ● a(n) / log _ 2(a(n)) < n < a(n) for n > 1. ●
▶ [A318777] 1,1,1,1,1,3,5,7,9,11,17,27,41,59,81,115,169,251,369,531,761,1099,1601,2339,3401 ⋆ Coefficients in expansion of 1 / (1 - x - 2 * x ^ 5). ● a(0)=1, a(n) = a(n - 1) + 2 * a(n - 5) for n = 0,1...; a(n)=0 for n < 0. ●
▶ [A143447] 1,3,5,7,9,11,17,27,41,59,81,115,169,251,369,531,761,1099,1601,2339,3401,4923,7121,10323,15001 ⋆ Expansion of 1 / (x ^ k * (1 - x - 2 * x ^ (k + 1))) for k=4. ● a(n) = 2n + 1 if n<=5, else a(n) = a(n - 1) + 2a(n - 5). - _ Milan Janjic _ , Mar 09 2015 ●
▶ [A061512] 1,3,5,7,9,11,33,55,77,99,1111,3333,5555,7777,9999,11111111,33333333,55555555,77777777,99999999,1111111111111111,3333333333333333,5555555555555555,7777777777777777,9999999999999999 ⋆ a(0) = 1; a(n) is obtained by incrementing each digit of a(n - 1) by 2. ● a(n) = (10 ^ 2 ^ floor(n / 5) - 1) / 9 * (n % 5 * 2 + 1), where n % 5 means the remainder (in { 0..4 }) of n divided by 5. - _ M. F. Hasler _ , Jun 24 2016 ●
▶ [A082767] 1,3,5,7,9,12,14,16,18,21,23,26,28,31,34,36,38,41,43,46,49,52,54,57,59 ⋆ Number of edges in the prime graph. ● a(n) = a(n - 1) + 1 + omega(n) if n > 1, with a(1) = 1, where omega(n) is the number of distinct prime factors of n. ● a(n) = Sum _{ p is 1 or a prime, p <= n } floor(n / p); e.g., a(12) = floor(12 / 1) + floor(12 / 2) + floor(12 / 30) + floor(12 / 5) + floor(12 / 7) + floor(12 / 11) = 12 + 6 + 4 + 2 + 1 + 1 = 26. - _ Amarnath Murthy _ , Jul 06 2005 ●
▶ [A047932] 0,1,3,5,7,9,12,14,16,19,21,24,26,29,31,34,36,39,42,44,47,49,52,55,57 ⋆ a(n) = floor(3 * n - sqrt(12 * n - 3)). ● a(n) = floor(3 * n - sqrt(12 * n - 3)). ●
▶ [A219087] 0,1,3,5,7,9,12,14,17,20,22,25,29,32,35,38,42,45,48,52,56,59,63,67,71 ⋆ a(n) = floor((n + 1 / 2) ^ (4 / 3)). ● a(n) = floor((n + 1 / 2) ^ (4 / 3)). ●
▶ [A072154] 1,3,5,7,9,12,15,17,19,21,24,27,29,31,33,36,39,41,43,45,48,51,53,55,57 ⋆ Coordination sequence for the planar net 4.6.12. ● a(n) = 2 * (6 * n + sqrt(1 + 2 / sqrt(5)) * sin(2 * n * Pi / 5) + sqrt(1 - 2 / sqrt(5)) * sin(4 * n * Pi / 5)) / 5 for n > 0. - _ Stefano Spezia _ , Jan 05 2023 ●
▶ [A258782] 0,0,1,3,5,7,9,12,15,18,22,25,29,33,36,40,44,48,53,57,61,65,70,74,79 ⋆ Nearest integer to log _ 2(n!). ● a(n) = round(log _ 2(n!)). ● a(n) = round(Sum _{ k=1..n } log _ 2(k)). - _ Tom Edgar _ , Jun 10 2015 ● a(n) is within 1 of n * (log(n) - 1) / log(2) + log(n) / (2 * log(2)) + log(sqrt(2 * Pi)) / log(2) for n >= 1. - _ Robert Israel _ , Jun 10 2015 ●
▶ [A349993] 1,1,1,3,5,7,9,12,15,19,22,26,30,34,39,44,49,54,59,64,70,76,82,88,94 ⋆ a(n) is the number of squares k ^ 2 with n ^ 2 <= k ^ 2 <= n ^ 3. ● a(n) = floor(sqrt(n ^ 3)) - n + 1. - _ Giorgos Kalogeropoulos _ , Dec 08 2021 ●
▶ [A118015] 0,0,0,1,3,5,7,9,12,16,20,24,28,33,39,45,51,57,64,72,80,88,96,105,115 ⋆ a(n) = floor(n ^ 2 / 5). ● a(5 * m + r) = m * (5 * m + 2 * r) + a(r), with m > = 0 and 0 <= r < 5. Example: for m=4 and r=3, a(5 * 4 + 3) = a(23) = 4 * (5 * 4 + 2 * 3) + a(3) = 104 + 1 = 105. - _ Bruno Berselli _ , Dec 12 2016 ●
▶ [A096231] 1,3,5,7,9,12,16,21,28,37,49,65,86,114,151,200,265,351,465,616,816,1081,1432,1897,2513 ⋆ Number of n - th generation triangles in the tiling of the hyperbolic plane by triangles with angles { Pi / 2, Pi / 3, 0 } . ● a(n) = a(n - 1) + a(n - 5) = a(n - 2) + a(n - 3), for n > 6. ●
▶ [A373706] 1,1,1,1,1,3,5,7,9,12,19,30,45,64,91,134,201,300,440,641,939,1386,2050,3021,4437 ⋆ Expansion of 1 / (1 - x * (1 + x ^ 4) ^ 2). ● a(n) = a(n - 1) + 2 * a(n - 5) + a(n - 9) for n > 8. ● a(n) = Sum _{ k=0..floor(2 * n / 9) } binomial(2 * n - 8 * k,k). ●
▶ [A204454] 1,3,5,7,9,13,15,17,19,21,23,25,27,29,31,35,37,39,41,43,45,47,49,51,53 ⋆ Odd numbers not divisible by 11. ● a(n) = 2 * n + 1 + 2 * floor((n - 6) / 10), n>=1. Note that this is - 1 for n=0, but the following o.g.f. uses a(0)=0. ● a(n) = n + sum(floor((n + 9 - k) / 10),k=1..4) + 3 * floor((n + 4) / 10) + sum(floor((n + 4 - k) / 10),k=1..5) = n + (n - 1) + 2 * floor((n + 4) / 10), n>=1. See the line m=5, p=11 of the array A204456, and the general formula given in a comment above. - _ Wolfdieter Lang _ , Jan 26 2012 ●
▶ [A064608] 1,3,5,7,9,13,15,17,19,23,25,29,31,35,39,41,43,47,49,53,57,61,63,67,69 ⋆ Partial sums of A034444: sum of number of unitary divisors from 1 to n. ● a(n) = n * log(n) / zeta(2) + O(n) where zeta(2) = Pi ^ 2 / 6. - _ Benoit Cloitre _ , Apr 16 2002 ● a(n) = Sum _{ k=1..n } mu(k) ^ 2 * floor(n / k). - _ Benoit Cloitre _ , Apr 16 2002 ●
▶ [A306069] 1,3,5,7,9,13,15,19,21,25,27,31,33,37,41,45,47,51,53,57,61,65,67,75,77 ⋆ Partial sums of A286324: Sum _{ k=1..n } bd(k) where bd(k) is the number of bi - unitary divisors of k. ● a(n) = A * n * (log(n) + 2 * gamma - 1 + B) + O(n ^ (1 / 2) * exp(- A * log(n) ^ (3 / 5) * log(log(n)) ^ (- 1 / 5))), where gamma = A001620, A = A306071 and B = A306072. ●
▶ [A200975] 1,3,5,7,9,13,17,21,25,31,37,43,49,57,65,73,81,91,101,111,121,133,145,157,169 ⋆ Numbers on the diagonals in Ulam's spiral. ● a(4n) = 4n ^ 2 + 2n + 1; a(4n + 1) = 4n ^ 2 + 4n + 1; a(4n + 2) = 4n ^ 2 + 6n + 3; a(4n + 3) = 4n ^ 2 + 8n + 5. [corrected by _ James Mitchell _ , Dec 31 2017] ● a(n) = floor _ (n * (n + 2) / 4) + floor _ (n(mod 4) / 3) + 1. - _ Bob Selcoe _ , Oct 27 2014 ●
▶ [A262602] 1,1,3,5,7,9,13,19,27,39,57,83,119,171,247,357,515,743,1073,1549,2235,3225,4655,6719,9697 ⋆ a(n) = a(n - 7) + a(n - 4) + a(n - 1) for n>1 and a(n)=1 for n<=1. ● a(n) = a(n - 7) + a(n - 4) + a(n - 1) for n>1 and a(n)=1 for n<=1. ●
▶ [A238257] 1,3,5,7,9,15,17,19,35,37,39,55,57,59,75,77,79,95,97,99,155,157,159,175,177 ⋆ Numbers n such that n and 2n + 1 use only odd decimal digits. ● a(5(3 ^ k - 1) / 2) = 10 ^ k - 1. - _ Giovanni Resta _ , Feb 22 2014 ●
▶ [A006995] 0,1,3,5,7,9,15,17,21,27,31,33,45,51,63,65,73,85,93,99,107,119,127,129,153 ⋆ Binary palindromes: numbers whose binary expansion is palindromic. ● a(1000) = 249903, ● a(10 ^ 4) = 24183069, ● a(10 ^ 5) = 2258634081, ● a(10 ^ 6) = 249410097687, ● a(10 ^ 7) = 24350854001805, ● a(10 ^ 8) = 2229543293296319, ●
▶ [A052942] 1,1,1,1,3,5,7,9,15,25,39,57,87,137,215,329,503,777,1207,1865,2871,4425,6839,10569,16311 ⋆ Expansion of 1 / ((1 + x) * (1 - 2 * x + 2 * x ^ 2 - 2 * x ^ 3)). ● a(n) = a(n - 1) + 2 * a(n - 4), with a(1)=1, a(0)=1, a(2)=1, a(3)=1. ● a(n) = Sum _{ alpha=RootOf(- 1 +_ Z + 2 *_ Z ^ 4) } (1 / 539) * (27 + 72 * alpha ^ 3 + 96 * alpha ^ 2 + 128 * alpha) * alpha ^ (- 1 - n)). ● a(n) = hypergeom([(1 - n) / 4,(2 - n) / 4,(3 - n) / 4, - n / 4],[(1 - n) / 3,(2 - n) / 3, - n / 3], - 512 / 27)) for n>=9. - _ Peter Luschny _ , Mar 09 2015 ●
▶ [A146556] 3,5,7,9,17,19,21,43,45,111,193,195,477,927,1777,1779,2973,4963,6397,6399,12961,14983,14985,40191,66993 ⋆ Natural growth of an aliquot sequence driven by a perfect number 2 ^ (p - 1) * ((2 ^ p) - 1). ● a(n) = a(n - 1) + 2 * (sigma(a(n - 1)) - a(n - 1)). - _ Roderick MacPhee _ , Aug 21 2012 ●
▶ [A220221] 1,3,5,7,9,17,23,33,65,129,257,513,1025,2049,4097,8193,16385,32769,65537,131073,262145,524289,1048577,2097153,4194305 ⋆ Odd positive integers k such that k ^ 2 has at most three nonzero binary digits. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>9. - _ Colin Barker _ , Nov 06 2014 ●
▶ [A373509] 1,1,1,1,1,3,5,7,9,21,37,57,81,169,301,485,729,1431,2549,4211,6561,12411,22045,36975,59049 ⋆ Expansion of 1 / (1 - x / (1 - 8 * x ^ 4) ^ (1 / 4)). ● a(4 * n) = 9 ^ (n - 1) for n > 0. ● a(n) = Sum _{ k=0..floor(n / 4) } 8 ^ k * binomial(n / 4 - 1,k). ●
▶ [A131668] 1,3,5,7,9,29,49,69,89,199,399,599,799,999,2999,4999,6999,8999,19999,39999,59999,79999,99999,299999,499999 ⋆ Smallest number whose sum of digits is 2n + 1. ● a(n) = h(n,10) * 10 ^ g(n,10) - 1, with f(n,k) = floor((n + 1) / (k - 1)) - floor(n / (k - 1)), g(n,k) = floor(2 * (n + 1) / (k - 1)) - f(n,k), h(n,k) = 2 * (n + 1) - (k - 1) * g(n,k). - _ Mikhail Kurkov _ , May 19 2019 ●
▶ [A206812] 1,3,5,7,10,11,14,16,17,20,21,24,26,28,30,32,34,36,38,40,43,44,46,49,50 ⋆ Position of 2 ^ n in joint ranking of { 2 ^ i } , { 3 ^ j } , { 5 ^ k } . ● a(n) = n + [n * log _ 3(2)] + [n * log _ 5(2)], ●
▶ [A225240] 1,3,5,7,10,12,14,16,17,19,21,23,26,28,30,32,33,35,37,39,42,44,46,48,49 ⋆ The squares on a chessboard that are white, counting from top left corner and down. ● a(1) = 1, a(n) = a(n - 1) + 2 + (mod(a(n - 1) + 1, 8) == 0) - (mod(a(n - 1), 8) == 0). ●
▶ [A184586] 1,3,5,7,10,12,14,16,19,21,23,25,27,30,32,34,36,39,41,43,45,48,50,52,54 ⋆ a(n) = floor((n - 1 / 2) * r), where r=sqrt(5); complement of A184587. ● a(n)=floor[(n - 1 / 2)r], where r=sqrt(5). ●
▶ [A033035] 1,3,5,7,10,12,14,16,28,30,32,34,46,48,50,52,64,66,68,70,91,93,95,97,109 ⋆ Numbers such that all base 9 digits are odd. ● a(4n + j) = 9 * a(n) + 2 * j - 1 for j=1..4. - _ Robert Israel _ , Jan 23 2019 ●
▶ [A047390] 0,3,5,7,10,12,14,17,19,21,24,26,28,31,33,35,38,40,42,45,47,49,52,54,56 ⋆ Numbers that are congruent to { 0, 3, 5 } mod 7. ● a(n) = 2 * n + floor(n / 3) + (n ^ 2 mod 3), with offset 0, a(0)=0. - _ Gary Detlefs _ , Mar 19 2010 ● a(n) = n + ceiling(4 * (n - 1) / 3) - 1. - _ Arkadiusz Wesolowski _ , Sep 18 2012 ● a(n) = 2 * (n - 1) + ceiling((n - 1) / 3). - _ Karl V. Keller, Jr. _ , Nov 01 2014 ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. ● a(n) = 7 * n / 3 - 2 - 2 *

sin(2 * n * Pi / 3) / (3 * sqrt(3)). ● a(3 * k) = 7 * k - 2, a(3 * k - 1) = 7 * k - 4 , a(3 * k - 2) = 7 * k - 7. (End) ●

▶ [A184741] 3,5,7,10,12,15,17,19,22,24,27,29,31,34,36,38,41,43,46,48,50,53,55,58,60 ★ floor(n * s + h - h * s), where s=(e - 1) / (e - 2) and h= - 1 / 2; complement of A184740. ● a(n)=floor(n * s + h - h * s), where s=(e - 1) / (e - 2) and h= - 1 / 2. ●

▶ [A175312] 1,3,5,7,10,12,15,17,20,22,25,28,31,33,36,39,42,44,47,50,53,55,58,61,64 ★ Maximum value on Lower Shuffle Part of Kimberling's Expulsion Array (A 035486). ● a(n) = 1 + 3(n - lambda(n)) - floor((n + 2) / 2 ^ lambda(n)), lambda(n) = floor(log _ 2((n + 2) / 3)). ●

▶ [A276498] 1,3,5,7,10,13,16,19,22,25,29,32,36,39,43,47,51,54,58,62,66,71,75,79,83 ★ Number of trials T of an event that occurs with probability 1 - 1 / n that must be repeated consecutively so that the probability that the event occurs on all T trials (i.e., (1 - 1 / n) ^ T) is minimally higher than 1 / n. ● a(n) = round(log(1 / n) / log(1 - 1 / n)). ● a(n) = n log n - (log n) / 2 + O(1). - _ Charles R Greathouse IV _ , Sep 06 2016 ●

▶ [A186148] 1,3,5,7,10,13,16,19,22,25,29,32,36,40,44,47,52,56,60,64,69,73,78,82,87 ★ Rank of (1 / 4)n ^ 3 when { (1 / 4)i ^ 3: i>=1 } and { j ^ 2>: j>=1 } are jointly ranked with (1 / 4)i ^ 3 before j ^ 2 when (1 / 4)i ^ 3=j ^ 2. Complement of A186149. ● a(n)=n + floor(((1 / 4)n ^ 3 - 1 / 8)) ^ (1 / 2)), A186148 . ●

▶ [A001768] 0,1,3,5,7,10,13,16,19,22,26,30,34,38,42,46,50,54,58,62,66,71,76,81,86 ★ Sorting numbers: number of comparisons for merge insertion sort of n elements. ● a(n) = Sum _{ k=1..n } ceiling(log _ 2 (3k / 4)). See also Problem 5.3.1 - 14 of Knuth. ● a(n) = n(z - 1) - [(2 ^ (z + 2) - 3z) / 6] where z = [log _ 2(3n + 3)]. - _ David W. Wilson _ , Feb 26 2006 ●

▶ [A184013] 1,3,5,7,10,13,17,21,25,30,35,41,47,53,60,67,75,83,91,100,109,119,129,139,150 ★ n - 1 + ceiling((4 + n ^ 2) / 5); complement of A184012. ● a(n) = n - 1 + ceiling((4 + n ^ 2) / 5). ● a(n) = + 2 a(n - 1) - a(n - 2) + a(n - 5) - 2 a(n - 6) + a(n - 7). - R. J. Mathar, Mar 11 2012 ●

▶ [A057672] 0,0,1,3,5,7,10,13,17,21,25,30,36,42,48,54,62,69,77,85,94,103,113,123,134 ★ a(n) equals floor(As(n) - Ac(n)), where As(n) is the area of the square with side length n and Ac(n) is the area of the circle of diameter n. ● a(n) = floor(n ^ 2 * (1 - Pi / 4)). ●

▶ [A212986] 1,1,3,5,7,10,14,17,22,27,32,38,45,51,59,67,75,84,94,103,114,125,136,148,161 ★ Number of (w,x,y) with all terms in { 0,...,n } and 2w = 3x + y. ● a(n) = a(n - 1) + a(n - 2) - a(n - 4) - a(n - 5) + a(n - 6). ●

▶ [A011848] 0,0,0,1,3,5,7,10,14,18,22,27,33,39,45,52,60,68,76,85,95,105,115,126,138 ★ a(n) = floor(binomial(n, 2) / 2). ● a(n) = + 3 * a(n - 1) - 4 * a(n - 2) + 4 * a(n - 3) - 3 * a(n - 4) + a(n - 5). - _ R. J. Mathar _ , Apr 15 2010 ● a(n) = floor((n / (1 + e ^ (1 / n))) ^ 2). - _ Richard R. Forberg _ , Jun 19 2013 ● a(n) = floor(n * (n - 1) / 4). - _ T. D. Noe _ , Jun 20 2013 ● a(n) = (1 / 4) * (n ^ 2 - n - 1 + (- 1) ^ floor(n / 2)). - _ Ralf Stephan _ , Aug 11 2013 ●

▶ [A131673] 1,3,5,7,10,14,19,25,31,38,46,55,65,76,88,101,115,129,144,160,177,195,214,234,255 ★ Size of the largest BDD of symmetric Boolean functions of n variables when the sink nodes are counted. ● a(0) = 1; for n>0, a(n) = 2 + sum _{ k=1..n } min(k,2 ^{ n + 2 - k }- 2). ●

▶ [A340247] 0,0,0,1,1,1,3,5,7,10,15,19,28,33,46,57,75,84,113,129,164,184,232,256,319 ★ Sum of the third largest parts r of the partitions of n into 4 parts q,r,s,t such that 1 <= q <= r <= s <= t and q + r + s > t. ● a(n) = Sum _{ k=1..floor(n / 4) } Sum _{ j=k..floor((n - k) / 3) } Sum _{ i=j..floor((n - j - k) / 2) } sign(floor((i + k + j) / (n - i - j - k + 1))) * j. ●

▶ [A088828] 3,5,7,11,13,15,17,19,21,23,27,29,31,33,35,37,39,41,43,45,47,51,53,55,57 ★ Nonsquare positive odd numbers. ● a(n) = 2 * n + s - ((s + 1) mod 2) where s = round(sqrt(2 * n - 1)). - _ Gerald Hillier _ , Apr 15 2009 ●

▶ [A056911] 1,3,5,7,11,13,15,17,19,21,23,29,31,33,35,37,39,41,43,47,51,53,55,57,59 ★ Odd squarefree numbers. ● a(n) = n * (3 / 2) * zeta(2) + O(n ^ (1 / 2)) = n * (Pi ^ 2 / 4) + O(n ^ (1 / 2)). - _ Daniel Forgues _ , May 27 2009 ●

▶ [A047484] 3,5,7,11,13,15,19,21,23,27,29,31,35,37,39,43,45,47,51,53,55,59,61,63,67 ★ Numbers that are congruent to { 3, 5, 7 } mod 8. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. - _ Vincenzo Librandi _ , May 17 2012 ● a(n) = (24 * n - 3 - 6 * cos(2 * n * Pi / 3) + 2 * sqrt(3) * sin(2 * n * Pi / 3)) / 9. ● a(3k) = 8k - 1, a(3k - 1) = 8k - 3, a(3k - 2) = 8k - 5. (End) ● a(n) = 3 * n - floor((n - 1) / 3) - ((n - 1) mod 3). - _ Wesley Ivan Hurt _ , Sep 26 2017 ● a(n) = 2 * (n + floor((n - 1) / 3)) + 1. - _ Wolfdieter Lang _ , Sep 11 2021 ●

▶ [A160656] 0,3,5,7,11,13,17,19,23,29,31,37,41,43,47,53,59,61,67,71,73,79,83,89,97 ★ The odd prime numbers together with 0: p - (- 1) ^ p - 1 where p = n - th prime. ● a(n) = p - (- 1) ^ p - 1 where p is the n - th prime. ● a(n) = p mod n ^ 2, where p is the n - th prime. - _ Gary Detlefs _ , Jan 14 2012 ●

▶ [A264754] 1,3,5,7,11,13,19,21,29,31,41,43,55,57,71,73,89,91,109,111,131,133,155,157,181 ★ Expansion of (1 + 2 * x - 2 * x ^ 3 + x ^ 4) / ((1 - x) ^ 3 * (1 + x) ^ 2). ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n > 4. ● a(n) = (2 * n * (n + (- 1) ^ n + 5) - 3 * (- 1) ^ n + 11) / 8. ●

▶ [A192869] 3,5,7,11,13,19,23,31,37,43,47,61,67,73,79,103,127,151,157,163,191,193,211,223,271 ★ Thin primes: odd primes p such that p + 1 is a prime (or 1) times a power of two. ● a(n) >> n (log n) ^ 2. ●

▶ [A169969] 1,3,5,7,11,13,21,27,43,53,85,107,171,213,341,427,683,853,1365,1707,2731,3413,5461,6827,10923 ★ Locations of row maxima in "crushed" version of Stern's diatomic array. ● a(2n + 1) + a(2n + 2) = 3 * 2 ^ (n + 1), n>0 . - _ Yosu Yurramendi _ , Jun 29 2016 ● a(2n + 3) = 3 * 2 ^ (n + 1) - a(n); a(2n + 4) = 3 * 2 ^ (n + 1) + a(n), n>=0, a(0)=0 (new term), a(1)=1, a(2)=3 . - _ Yosu Yurramendi _ , Jun 29 2016 ● a(2n) = a(2n - 7) + 3 * 2 ^ (n - 1); a(2n - 1) = a(2n - 7) - 3 * 2 ^ (n - 1), n>=5 . - _ Yosu Yurramendi _ , Jul 06 2016 ●

▶ [A238738] 1,3,5,7,11,15,18,24,30,34,42,50,55,65,75,81,93,105,112,126,140,148,164,180,189 ★ Expansion of (1 + 2 * x + 2 * x ^ 2) / (1 - x - 2 * x ^ 3 + 2 * x ^ 4 + x ^ 6 - x ^ 7). ● a(n) = a(n - 1) + 2 * a(n - 3) - 2 * a(n - 4) - a(n - 6) + a(n - 7), with n>6. ● a(3k) = k * (5 * k + 7) / 2 + 1 (A000566); ● a(3k + 1) = k * (5 * k + 11) / 2 + 3 (A005475); ● a(3k + 2) = k * (5 * k + 15) / 2 + 5 (A028895). ● a(n) = (floor(n / 3) + 1) * (4 * n - 7 * floor(n / 3) + 2) / 2. [_ Luce ETIENNE _ , Jun 14 2014] ●

▶ [A208994] 1,1,3,5,7,11,15,19,25,31,37,45,53,61,71,81,91,103,115,127,141,155,169,185,201 ★ Number of 3 - bead necklaces labeled with numbers - n..n not allowing reversal, with sum zero and first differences in - n..n. ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) - 2 * a(n - 4) + a(n - 5). ● a(n) = 1 + floor(n * (n + 1) / 3). ●

▶ [A194602] 0,1,3,5,7,11,15,21,23,27,31,43,47,55,63,85,87,91,95,111,119,127,171,175,183 ★ Integer partitions interpreted as binary numbers. ● a(A249543) = A 249544. - _ Tilman Piesk _ , Oct 31 2014 ●

▶ [A316936] 3,5,7,11,15,21,29,39,49,61,75,91,109,129,151,175,199,225,253,283,315,349,385,423,463 ★ a(n) is the maximum state complexity of the language C(w) of conjugates of w, over all length - n binary strings w. ● a(n) = n ^ 2 - (2i - 3) 2 ^ i - j(2i + 1) - 1 = 2 ^{ 2i } + (2j - 2i + 3)2 ^ i + j ^ 2 - (2i + 1)j - 1, if n = 2 ^ i + j with 0 <= j < 2 ^ i. ●

▶ [A373554] 1,3,5,7,11,16,24,36,53,80,118,177,263,392,585,870,1299,1933,2883,4295,6400,9540,14212,21185,31564 ★ Number of ternary length - 2 squarefree words of length n not containing the subwords 021 or 10. ● a(n) = 2 * a(n - 2) + a(n - 3) - a(n - 4). ●

▶ [A126116] 1,1,1,1,3,5,7,11,19,31,49,79,129,209,337,545,883,1429,2311,3739,6051,9791,15841,25631,41473 ★ a(n) = a(n - 1) + a(n - 3) + a(n - 4), with a(0)=a(1)=a(2)=a(3)=1. ● a(n) = F(n - 1) + F(floor((n - 4) / 2) + 1) * F(ceiling((n - 4) / 2) + 2). (End) ● a(n) = (1 / 5) * ((sqrt(5) - 1) * (1 / 2 * (1 + sqrt(5))) ^ n - (1 + sqrt(5)) * (1 / 2 * (1 - sqrt(5))) ^ n + sin((Pi * n) / 2) - 3 * cos((Pi * n) / 2)). - _ Harvey P. Dale _ , Nov 08 2011 ● a(n) ^ 2 + 3 * a(n - 2) ^ 2 + 6 * a(n - 5) ^ 2 + 3 * a(n - 7) ^ 2 = a(n - 8) ^ 2 + 3 * a(n - 6) ^ 2 + 6 * a(n - 3) ^ 2 + 3 * a(n - 1) ^ 2. - _ Greg Dresden _ , Jul 07 2021 ●

▶ [A373654] 1,1,1,1,3,5,7,12,21,34,55,92,153,251,414,686,1133,1869,3088,5103,8427,13917,22990,37975,62721 ★ a(n) = Sum _{ k=0..floor(n / 3) } binomial(2 * n - 5 * k - 1,k). ● a(n) = a(n - 1) + 2 * a(n - 3) - a(n - 6) for n > 6. ●

▶ [A063241] 3,5,7,13,15,17,23,25,27,33,35,37,43,45,47,53,55,57,63,65,67,73,75,77,83 ★ Dimension of the space of weight 2n cuspidal newforms for Gamma _ 0(90). ● a(n) = 2 * n + 4 * floor(n / 3 - 1 / 3) + 1. This formula follows from Mathar's generating function. - _ Bruno Berselli _ , Feb 16 2016 ●

▶ [A032911] 1,3,5,7,13,15,21,23,29,31,53,55,61,63,85,87,93,95,117,119,125,127,213,215,221 ★ Numbers whose set of base - 4 digits is a subset of { 1,3 } . ● a(2n) = 4a(n) + 1, a(2n + 1) = 4a(n) + 3. - _ Ralf Stephan _ , Nov 01 2003 ●

▶ [A247018] 3,5,7,13,17,27,33,47,55,73,83,105,117,143,157,187,203,237,255,293,313,355,377,423,447 ★ Numbers of the form 3 * z ^ 2 + z + 3 for some integer z. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n>5. (End) ●

▶ [A077133] 1,3,5,7,13,19,21,27,29,33,39,45,49,53,57,61,63,65,71,77,79,81,83,95,97 ★ a(n) is the difference between the sum of the first n even - indexed primes and the sum of the first n odd - indexed primes. ● a(n) = Sum _{ i=0..n - 1 } (prime(2 * i + 2) - prime(2 * i + 1)). ●

▶ [A100859] 3,5,7,13,19,29,31,37,43,53,59,61,67,73,79,89,103,109,127,137,139,149,151,157,163 ★ Beginning with 3, increasing primes such that no two adjacent terms are congruent mod 4. ● a(2n - 1)==3 (mod 4) and a(2n)==1 (mod 4). ●

▶ [A077949] 1,1,1,3,5,7,13,23,37,63,109,183,309,527,893,1511,2565,4351,7373,12503,21205,35951,60957,103367,175269 ★ Expansion of 1 / (1 - x - 2 * x ^ 3). ● a(n) = Sum _{ k=0..floor(n / 2) } C(n - 2k, k) * 2 ^ k. - _ Paul Barry _ , Nov 18 2003 ● a(n) = Sum _{ k=0..n } C(k, floor((n - k) / 2)) * 2 ^ ((n - k) / 2) * (1 + (- 1) ^ (n - k)) / 2. - _ Paul Barry _ , Jan 12 2006 ● a(n) = term (1,1) in the 3x3 matrix [1,1,0; 0,0,1; 2,0,0] ^ n. - _ Alois P. Heinz _ , Aug 16 2008 ●

▶ [A003229] 1,1,3,5,7,13,23,37,63,109,183,309,527,893,1511,2565,4351,7373,12503,21205,35951,60957,103367,175269,297183 ★ a(n) = a(n - 1) + 2 * a(n - 3) with a(0)=a(1)=1, a(2)=3. ● a(n) = hypergeom([- n / 3, - (1 + n) / 3,(1 - n) / 3],[- n / 2, - (1 + n) / 2], - 27 / 2)) for n>=3. - _ Peter Luschny _ , Mar 09 2015 ●

▶ [A275175] 1,1,1,1,1,1,3,5,7,13,23,83,147,215,423,771,2801,4971,7281,14351,26181,95133,168845,247317,487493 ★ a(n) = (2 * a(n - 3) + a(n - 1) * a(n - 5)) / a(n - 6), a(0) = a(1) = ... = a(5) = 1. ● a(n) = 35 * a(n - 5) - 35 * a(n - 10) + a(n - 15). - _ G. C. Greubel _ , Jul 20 2016 ●

▶ [A064268] 1,1,1,1,1,1,1,3,5,7,13,43,113,521,1241,3681,23657,177721,679505,4674203,27273277,275517767,3496390229,37043734803,226196947873 ★ a(n) = (a(n - 1) * a(n - 6) + 2 * a(n - 3) * a(n - 4)) / a(n - 7). a(1) = ... = a(7) = 1. Somos - 7 variation. ● a(8 - n) = a(n). ●

▶ [A295717] 1,3,5,7,14,19,37,52,97,141,254,379,665,1012,1741,2689,4558,7119,11933,18796,31241,49525,81790,130291,214129 ★ a(n) = a(n - 1) + 3 * a(n - 2) - 2 * a(n - 3) - 2 * a(n - 4), where a(0) = 1, a(1) = 3, a(2) = 5, a(3) = 7. ● a(n) = a(n - 1) + a(n - 3) + a(n - 4), where a(0) = 1, a(1) = 3, a(2) = 5, a(3) = 7. ●

▶ [A308591] 0,3,5,7,14,22,42,70,127,218,388,675,1191,2083,3663,6420,11275,19777,34716,60912,106904,187592,329213,577716,1013834 ★ Number of minimal total dominating sets in the (2n - 1) - triangular snake graph. ● a(n) = 2 * a(n - 2) + a(n - 3) + a(n - 4) + a(n - 5) for n > 7. ●

▶ [A163979] 1,3,5,7,15,23,31,45,59,73,93,113,133,159,185,211,243,275,307,345,383,421,465,509,553 ★ a(n) = n * (n - 1) + A144437(n + 2). ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) - 2 * a(n - 4) + a(n - 5). ●

▶ [A362057] 1,1,1,3,5,7,15,27,43,81,147,249,449,809,1409,2507,4485,7903,14015,24963,44187,78329,139203,246801,437601 ★ Number of compositions of n that are anti - palindromic modulo 3. ● a(n) = Sum _{ 3 * i + j + 2 * r + 2 * s + 3 * d = n } (- 1) ^ r * 2 ^ i * binomial(i + j,j) * binomial(i,r) * binomial(i + s - 1,s) * binomial(i + d - 1,d). ●

▶ [A217615] 1,1,1,3,5,7,15,29,49,95,187,345,659,1289,2465,4739,9237,17911,34715,67705,132063,257477,503309,984983,1927895 ★ G.f.: Sum _{ n>=0 } x ^ n * Sum _{ k=0..n } binomial(n,k) ^ 2 * x ^ k * (1 - x) ^ (n - k). ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(2 * k, k) * binomial(n - 2 * k, k). - _ Darij Grinberg _ , Oct 09 2019 ● a(n) = hypergeom([1 / 2,(1 - n) / 3,(2 - n) / 3, - n / 3], [1,(1 - n) / 2, - n / 2], - 27)) for n >= 4. - _ Peter Luschny _ , Oct 09 2019 ●

▶ [A291736] 0,1,1,3,5,7,16,22,47,73,137,235,410,734,1258,2255,3895,6904,12056,21184,37210,65172,114612,200765,352779 ★ p - INVERT of (1,0,1,0,0,0,0,...), where p(S) = 1 - S ^ 2 - S ^ 3. ● a(n) = a(n - 2) + a(n - 3) + 2 * a(n - 4) + 3 * a(n - 5) + a(n - 6) + 3 * a(n - 7) + a(n - 9) for n >= 10. ●

► [A291107] 3,5,7,16,26,42,72,125,216,367,629,1079,1852,3173,5438,9323,15984,27401,46971,80522,138039,236639,405665,695425,1192158 ⋆ Number of irredundant sets in the n - pan graph. ● a(n) = a(n - 1) + a(n - 2) + a(n - 4) - a(n - 6). ●
► [A062547] 1,3,5,7,17,19,53,55,161,163,485,487,1457,1459,4373,4375,13121,13123,39365,39367,118097,118099,354293,354295,1062881 ⋆ a(n) is least odd integer not a partial sum of 1, 3, ..., a(n - 1). ● a(n) = - a(n - 1) + 3 * a(n - 2) + 3 * a(n - 3) for n > 2. ● a(n) = 2 * 3 ^ ((2 * n + (- 1) ^ n - 1) / 4) - (- 1) ^ n. (End) ●
► [A112986] 0,0,0,3,5,7,18,22,26,45,51,57,84,92,100,135,145,155,198,210,222,273,287,301,360 ⋆ Crossing number of K _{ 4,n } on the real projective plane. ● a(n) = floor(n / 3) * (2 * n - 3(1 + floor(n / 3))). ●
► [A373292] 1,1,1,1,3,5,7,19,35,55,139,267,447,1077,2115,3689,8595,17101,30703,69797,140027,256873,573167,1156221,2156555 ⋆ Expansion of 1 / (1 - x / (1 - 8 * x ^ 3) ^ (1 / 4)). ● a(n) = Sum _{ k=0..floor(n / 3) } 8 ^ k * binomial((n + k) / 4 - 1,k). ●
► [A137864] 1,3,5,7,33,131,373,855,1697,3043,5061,7943,11905,17187,24053,32791,43713,57155,73477,93063,116321,143683,175605,212567,255073 ⋆ a(n) = n ^ 4 - 10n ^ 3 + 35n ^ 2 - 48n + 23. ● a(0)=1, a(1)=3, a(2)=5, a(3)=7, a(4)=33, a(n)=5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Harvey P. Dale _ , Aug 18 2011 ●
► [A106115] 3,5,7,37,43,47,53,59,67,73,79,83,89,97,337,347,349,353,359,367,373,379,383,389,397 ⋆ Primes with minimal digit > 2. ● a(n) >> n ^ k with k = log 10 / log 7 = 1.183.... - _ Charles R Greathouse IV _ , Jan 02 2013 ●
► [A047624] 0,1,3,5,8,9,11,13,16,17,19,21,24,25,27,29,32,33,35,37,40,41,43,45,48 ⋆ Numbers that are congruent to { 0, 1, 3, 5 } mod 8. ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. ● a(n) = (8 * n - 11 - i ^ (2 * n) + i ^ (1 - n) - i ^ (1 + n)) / 4 where i=sqrt(- 1). ●
► [A325168] 0,0,0,1,3,5,8,9,12,13,16,17,20,21,24,25,28,29,32,33,36,37,40,41,44 ⋆ Number of integer partitions of n with origin - to - boundary graph - distance equal to 2. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n>7. ● a(n) = 2 * n - 4 for n >4 and even. ● a(n) = 2 * n - 5 for n>4 and odd. ●
► [A211703] 1,3,5,8,9,12,13,16,18,20,21,25,26,28,30,33,34,37,38,41,43,45,46,50,51 ⋆ a(n) = n + [n / 2] + [n / 3] + [n / 4], where [] = floor. ● a(n) = a(n - 3) + a(n - 4) - a(n - 7) for n>=8. ●
► [A185456] 1,3,5,8,9,14,15,16,17,26,27,28,29,30,31,32,33,50,51,52,53,54,55,56,57 ⋆ Payphone packing sequence. ● a(n) is the index of the n - th record in A166079, which is given by the recurrence y(n) = y(m) + y(n - m + 1) - 1, with y(1) = y(2) = 1 and y(3) = 2, where m = ceiling(n / 2). - _ John W. Layman _ , Feb 05 2011 ● a(n) = a(n - 1) + n - 1 if n = 2 ^ k + 2 for some natural number k, a(n) = a(n - 1) + 1 otherwise, for n >= 3. ● a(n) = n + 2 ^ (1 + floor(log _ 2(n - 2))) for n >= 3. (End) ●
► [A282897] 1,3,5,8,10,11,14,16,17,18,20,21,23,25,28,29,32,33,35,36,37,40,41,44,46 ⋆ Indices n such that sign(Im(zetazero(n)) - 2 * Pi * e * exp(LambertW((n - 11 / 8) / e))) = - 1. ● a(n) = positions where A288640 = 0. ●
► [A184584] 1,3,5,8,10,12,14,17,19,21,23,26,28,30,32,35,37,39,41,43,46,48,50,52,55 ⋆ floor[(n - 1 / 3)r], where r=sqrt(5); complement of A184585. ● a(n)=floor[(n - 1 / 3)r], where r=sqrt(5). ●
► [A342871] 1,3,5,8,10,12,14,17,20,22,24,26,28,30,32,36,38,40,42,44,46,48,50,52,55 ⋆ a(n) = Sum _{ k=1..n } floor(n ^ (1 / k)), n >= 1. ● a(n) = 2 * n + sqrt(n) + O(n ^ (1 / 3)). ● a(n) = n + Sum _{ i=1..floor(log _ 2(n)) } floor(n ^ (1 / i) - 1). ●
► [A047391] 1,3,5,8,10,12,15,17,19,22,24,26,29,31,33,36,38,40,43,45,47,50,52,54,57 ⋆ Numbers that are congruent to { 1, 3, 5 } mod 7. ● a(n) = 7 * floor((n - 1) / 3) + 2 * (n - 1 mod 3) + 1. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. ● a(n) = (21 * n - 15 - 3 * cos(2 * n * Pi / 3) + sqrt(3) * sin(2 * Pi * n / 3)) / 9. ● a(3k) = 7k - 2, a(3k - 1) = 7k - 4, a(3k - 2) = 7k - 6. (End) ● a(n) = n - 1 + floor((4n - 1) / 3). - _ Wesley Ivan Hurt _ , Dec 27 2016 ●
► [A184655] 3,5,8,10,12,15,17,19,22,24,26,29,31,34,36,38,41,43,45,48,50,52,55,57,60 ⋆ floor(n * s + h - h * s), where s=(3 + sqrt(3)) / 2, h= - 2 / 3; complement of A184654. ● a(n)=floor(n * s + h - h * s), where s=(3 + sqrt(3)) / 2, h= - 2 / 3. ●
► [A211704] 1,3,5,8,10,13,14,17,19,22,23,27,28,30,33,36,37,40,41,45,47,49,50,54,56 ⋆ a(n) = n + [n / 2] + [n / 3] + [n / 4] + [n / 5], where []=floor. ● a(n) = - a(n - 1) - a(n - 2) + a(n - 4) + 2 * a(n - 5) + 2 * a(n - 6) + a(n - 7) - a(n - 9) - a(n - 10) - a(n - 11) for n>=12. ●
► [A080754] 3,5,8,10,13,15,17,20,22,25,27,29,32,34,37,39,42,44,46,49,51,54,56,58,61 ⋆ a(n) = ceiling(n * (1 + sqrt(2))). ● a(1) = 3; for n>1, a(n) = a(n - 1) + 3 if n is in sequence, a(n) = a(n - 1) + 2 if not. ●
► [A047218] 0,3,5,8,10,13,15,18,20,23,25,28,30,33,35,38,40,43,45,48,50,53,55,58,60 ⋆ Numbers that are congruent to { 0, 3 } mod 5. ● a(n) = 2 * n - 5 + ceiling(n / 2). - Jesus De Loera (deloera(AT)math.ucdavis.edu) ● a(n) = 5 * n - a(n - 1) - 7 for n>1, a(1)=0. - _ Vincenzo Librandi _ , Aug 05 2010 ● a(n) = (10 * n + (- 1) ^ n - 9) / 4. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3). (End) ● a(n) = n + ceiling(3 * (n - 1) / 2) - 1. - _ Arkadiusz Wesolowski _ , Sep 18 2012 ● a(n) = floor(5 * n / 2) - 2 = 3 * n - 3 - floor((n - 1) / 2). - _ Wesley Ivan Hurt _ , Oct 14 2013 ●
► [A029919] 0,3,5,8,10,13,15,18,20,23,25,28,30,33,36,38,41,43,46,48,51,53,56,58,61 ⋆ Convert n from inches (") to centimeters (cm). ● a(n)=round(2.54n). ●
► [A094227] 0,1,3,5,8,10,13,15,18,21,24,27,30,33,36,40,43,46,50,53,57,61,64,68,72 ⋆ A prime - power sequence based on Gaussian asymptotic function. ● a(n) = Floor[N[n * (n - 1) ^ s(n)]] with s(n)=(Log[g[n]] - Log[n]) / Log[n - 1] and g[n]=(n * Pi * Log[n] - Sqrt[n ^ 2 * Pi + 2 * Pi ^ 2 * n]) / Pi. ●
► [A085225] 1,3,5,8,10,13,15,18,22,24,27,29,32,36,38,41,43,46,50,52,55,59,64,66,69 ⋆ Row 1 of A085203. ● a(n) = A085203bi(n, 1). ●
► [A077472] 1,3,5,8,10,13,15,23,26,30,33,36,38,46,48,51,53,57,61,64,66,69,72,76,78 ⋆ Greedy powers of (5 / 8): sum _{ n=1..inf } (5 / 8) ^ a(n) = 1. ● a(n)=sum _{ k=1..n } floor(g _ k) where g _ 1=1, g _{ n + 1 } =log _ x(x ^ frac(g _ n) - x) (n>0) at x=(5 / 8) and frac(y) = y - floor(y). ● a(n) seems to be asymptotic to c * n with c around 3.4... - _ Benoit Cloitre _ ●
► [A184733] 3,5,8,10,13,16,18,21,23,26,29,31,34,37,39,42,44,47,50,52,55,58,60,63,65 ⋆ floor(n * s + h - h * s), where s=(3 + sqrt(5)) / 2, h= - 1 / 4; complement of A184732. ● a(n)=floor(n * s + h - h * s), where s=(3 + sqrt(5)) / 2, h= - 1 / 4. ●
► [A245314] 0,3,5,8,10,13,16,19,20,22,25,28,30,32,35,38,39,42,44,47,49,52,54,57,59 ⋆ Maximum frustration of complete bipartite graph K(n,7). ● a(n) = floor(154 / 64 * n) - 1 if n = 2, 14, 17, 18, 36 or 49. ● a(n) = floor(154 / 64 * n) - 2 if n = 1, 3, 5, 10 or 26. ● a(n + 64) = a(n) + 154 except for n = 1,2,3,5,10,14,17,18,26,36,49. ●
► [A050504] 0,1,3,5,8,10,13,16,19,23,26,29,33,36,40,44,48,52,55,59,63,68,72,76,80 ⋆ Integer part of n * log(n). ● a(n)=floor(n * log(n)). - _ Enrique Pérez Herrero _ , Jul 29 2009 ●
► [A330038] 1,3,5,8,10,13,16,20,22,25,28,32,35,39,43,48,50,53,56,60,63,67,71,76,79 ⋆ a(1) = 1, a(n) = [n / 2] + a([n / 2]) + a([(n + 1) / 2]) for n > 1, where [x] = floor(x). ● a(n) = (1 / 2) * Sum _{ i=1..k } (e[i] + 2 * i) * 2 ^ e[i], where binary expansion n = 2 ^ e[1] + ... + 2 ^ e[k] with descending exponents e[1] > e[2] > ... > e[k] (A272011). ●
► [A006218] 0,1,3,5,8,10,14,16,20,23,27,29,35,37,41,45,50,52,58,60,66,70,74,76,84 ⋆ a(n) = Sum _{ k=1..n } floor(n / k); also Sum _{ k=1..n } d(k), where d = number of divisors (A000005); also number of solutions to x * y = z with 1 <= x,y,z <= n. ● a(n) = n * (log(n) + 2 * gamma - 1) + O(sqrt(n)), where gamma is the Euler - Mascheroni number ~ 0.57721... (see A001620), Dirichlet, 1849. Again, a(n) = n * (log(n) + 2 * gamma - 1) + O(log(n) * n ^ (1 / 3)). The determination of the precise size of the error term is an unsolved problem (the so - called Dirichlet divisor problem) - see references, especially Huxley (2003). ● a(n) = 2 * (Sum _{ i=1..floor(sqrt(n)) } floor(n / i)) - floor(sqrt(n)) ^ 2. - _ Benoit Cloitre _ , May 12 2002 ● a(n) = n ^ 2 - Sum _{ i=1..n } Sum _{ j=1..n } floor(log(i * j) / log(n + 1)); ● a(n) = floor(sqrt(n)) + 2 * Sum _{ i=1..n } floor((sqrt(i ^ 2 + 4 * n) - i) / 2); ●
► [A295362] 1,3,5,8,10,14,19,25,34,49,71,106,162,253,398,632,1010,1621,2610,4208,6793,10975,17741,28688,46400 ⋆ Solution of the complementary equation a(n) = a(n - 1) + a(n - 2) + b(n - 1) - b(n - 2) - b(n - 3), where a(0) = 1, a(1) = 3, a(2) = 5, b(0) = 2, b(1) = 4, b(2) = 6, and (a(n)) and (b(n)) are increasing complementary sequences. ● a(n) / a(n - 1) - > (1 + sqrt(5)) / 2 = golden ratio (A001622). ●
► [A182082] 1,3,5,8,10,15,17,21,24,29,31,39,41,46,51,56,58,66,68,76,81,86,88,99,102 ⋆ Number of pairs, (x,y), with x >= y, whose LCM does not exceed n. ● a(n) = Sum _{ k=1..n } (d(k ^ 2) + 1) / 2, where d is the number of divisors function (A000005). - _ Charles R Greathouse IV _ , Apr 10 2012 ●
► [A212987] 1,1,3,5,8,10,16,18,25,29,37,41,52,56,68,74,87,93,109,115,132,140,158,166,187 ⋆ Number of (w,x,y) with all terms in { 0,...,n } and 3 * w = 2 * x + 2 * y. ● a(n) = 2 * a(n - 2) + a(n - 3) - a(n - 4) - 2 * a(n - 5) + a(n - 7). ●
► [A184659] 3,5,8,11,13,16,18,21,24,26,29,31,34,37,39,42,45,47,50,52,55,58,60,63,65 ⋆ floor(n * s + h - h * s), where s=(3 + sqrt(5)) / 2, h= - 1 / 3; complement of A184658. ● a(n)=floor(n * s + h - h * s), where s=(3 + sqrt(5)) / 2, h= - 1 / 3. ●
► [A026274] 3,5,8,11,13,16,18,21,24,26,29,32,34,37,39,42,45,47,50,52,55,58,60,63,66 ⋆ Greatest k such that s(k) = n, where s = A026272. ● a(n) = floor(r * r * (n + 2r - 3)), where r = (1 + sqrt(5)) / 2 = A001622. [Corrected by _ Tom Edgar _ , Jan 30 2015] ● a(n) = 3 * n - floor[(n + 1) / (1 + phi)], phi = (1 + sqrt(5)) / 2. - Joshua Tobin (tobinrj(AT)tcd.ie), May 31 2008 ●
► [A008576] 1,3,5,8,11,13,16,19,21,24,27,29,32,35,37,40,43,45,48,51,53,56,59,61,64 ⋆ Coordination sequence for planar net 4.8.8. ● a(0)=1, a(1)=3, a(2)=5, a(3)=8, a(4)=11, a(n) = a(n - 1) + a(n - 3) - a(n - 4). - _ Harvey P. Dale _ , Nov 24 2011 ● a(0)=1; thereafter a(3k)=8k, a(3k + 1)=8k + 3, a(3k + 2)=8k + 5. - _ N. J. A. Sloane _ , Dec 22 2015 ●
► [A047622] 0,3,5,8,11,13,16,19,21,24,27,29,32,35,37,40,43,45,48,51,53,56,59,61,64 ⋆ Numbers that are congruent to { 0, 3, 5 } mod 8. ● a(n) = floor((8n - 7) / 3). - _ Gary Detlefs _ , Mar 07 2010 ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. ● a(n) = (24 * n - 24 - 3 * cos(2 * n * Pi / 3) - sqrt(3) * sin(2 * n * Pi / 3)) / 9. ● a(3k) = 8k - 3, a(3k - 1) = 8k - 5, a(3k - 2) = 8k - 8. (End) ●
► [A180124] 3,5,8,11,14,16,19,22,24,27,30,33,35,38,41,44,46,49,52,55,57,60,63,65,68 ⋆ Third of three "least, sum, least" self - generating sequences. ● a(n) = least positive integer not yet used; ●
► [A076829] 0,1,3,5,8,11,14,17,20,23,27,30,34,37,41,45,49,53,57,61,65,69,73,77,81 ⋆ a(n) = floor(log(log(n ^ n ^ n)) (or 0 if not finite). ● a(n) = floor(n * log(n) + log(log(n))). ●
► [A001855] 0,1,3,5,8,11,14,17,21,25,29,33,37,41,45,49,54,59,64,69,74,79,84,89,94 ⋆ Sorting numbers: maximal number of comparisons for sorting n elements by binary insertion. ● a(n) = Sum _{ k=1..n } ceiling(log _ 2 k) = n * ceiling(log _ 2 n) - 2 ^ ceiling(log _ 2(n)) + 1. ● a(n) = a(floor(n / 2)) + a(ceiling(n / 2)) + n - 1. ● a(1)=0, for n>1, a(n) = ceiling(n * a(n - 1) / (n - 1) + 1). - _ Benoit Cloitre _ , Apr 26 2003 ● a(n) = n - 1 + min { a(k) + a(n - k) : 1 <= k <= n - 1 } , cf. A003314. - _ Vladeta Jovovic _ , Aug 15 2004 ●
► [A006591] 1,3,5,8,11,14,17,22,24,28,33,36,40,45,48,53,57,62,66,71,74,79,86,89,93 ⋆ a(n) = Sum _{ k=1..n } nearest integer to n / k (if n / k is midway between two numbers take the smaller). ● a(n) = n ^ 2 - Sum _{ k=1..n } Sum _{ i=n..2n - 1 } sign(i mod k). - _ Wesley Ivan Hurt _ , Feb 08 2022 ●
► [A310027] 1,3,5,8,11,14,18,21,23,25,28,32,34,35,39,44,47,48,50,55,58,58,61,66,69 ⋆ Coordination sequence Gal.5.41.2 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = a(n - 1) - a(n - 2) + a(n - 3) + a(n - 19) - a(n - 20) + a(n - 21) - a(n - 22) for n > 22. ●
► [A060432] 1,3,5,8,11,14,18,22,26,30,35,40,45,50,55,61,67,73,79,85,91,98,105,112,119 ⋆ Partial sums of A002024. ● a(n) is asymptotic to c * n ^ (3 / 2) with c =0.9428.... - _ Benoit Cloitre _ , Dec 18 2002 ● a(n) is asymptotic to c * n ^ (3 / 2) with c = (2 / 3) * sqrt(2) = .942809.... - _ Franklin T. Adams - Watters _ , Sep 07 2006 ●
► [A360628] 1,3,5,8,11,15,17,19,24,29,31,33,37,40,47,49,51,53,55,57,64,71,79,83,85 ⋆ Even bisection of A360613: a(n) = A360613(2 * n). ● a(n) < a(n + 1). ●
► [A081401] 0,1,3,5,8,11,15,18,22,26,31,35,41,46,51,55,62,67,75,80,86,92,101,106,112 ⋆ Pseudologarithm (A056239) of n!: a(n) = A056239(A000142(n)). ● a(n) =

Sum(k * e(k)) where k runs through indices of prime factors of n!, while e(k) is the exponent of the corresponding prime factor. ●

▶ [A002821] 0,1,3,5,8,11,15,19,23,27,32,36,42,47,52,58,64,70,76,83,89,96,103,110,118 ⋆ a(n) = nearest integer to n ^ (3 / 2). ● a(n) = floor(n ^ (3 / 2) + 1 / 2). - _ Ridouane Oudra _ , Nov 13 2019 ●

▶ [A046992] 0,1,3,5,8,11,15,19,23,27,32,37,43,49,55,61,68,75,83,91,99,107,116,125,134 ⋆ a(n) = Sum _{ k=1..n } pi(k) (cf. A000720). ● a(n) = Sum _{ p<=n, p is prime } (n - p + 1). ● a(n) = (n + 1) * pi(n) - Sum _ pi(n), where pi(n) = number of primes <=n and Sum _ pi(n) = sum of primes <=n. ●

▶ [A001463] 1,3,5,8,11,15,19,23,28,33,38,44,50,56,62,69,76,83,90,98,106,114,122,131,140 ⋆ Partial sums of A001462; also a(n) is the last occurrence of n in A001462. ● a(n) is asymptotic to tau ^ (1 - tau) * n ^ tau where tau is the golden ratio, tau=(1 + sqrt(5)) / 2. More precisely, a(n)= tau ^ (1 - tau) * n ^ tau + c * n ^ (1 / tau) + 0(n ^ (1 / tau)) where c is a constant around 0.6. Is there any known value for c? - _ Benoit Cloitre _ , Oct 29 2002 ●

▶ [A024169] 0,0,1,3,5,8,11,15,19,24,29,34,41,47,54,62,70,79,88,98,108,119,130,141,154 ⋆ Integer part of ((2nd elementary symmetric function of 1,2,...,n) / (1 + 2 + ... + n)). ● a(n) = floor((1 / 12) * (n - 1) * (3 * n + 2)). - _ Ivan Neretin _ , May 19 2018 ●

▶ [A024206] 0,1,3,5,8,11,15,19,24,29,35,41,48,55,63,71,80,89,99,109,120,131,143,155,168 ⋆ Expansion of x ^ 2 * (1 + x - x ^ 2) / ((1 - x ^ 2) * (1 - x) ^ 2). ● a(0)=0, a(n) = floor(a(n - 1) + sqrt(a(n - 1)) + 1) for n > 0. - _ Gerald McGarvey _ , Jul 30 2004 ● a(n) = floor((n + 1) ^ 2 / 4) - 1. - _ Franz Vrabec _ , Feb 22 2008 ● a(n) = a(n - 1) + [side length of the least square > a(n - 1)], that is a(n) = a(n - 1) + ceiling(sqrt(a(n - 1) + 1)). - _ Ctibor O. Zizka _ , Oct 06 2009 ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4); a(1)=0, a(2)=1, a(3)=3, a(4)=5. - _ Harvey P. Dale _ , Jun 14 2013 ● a(n) = floor((n - 1) * (n + 3) / 4). - _ Wesley Ivan Hurt _ , Jun 23 2013 ● a(n) = (2 * n ^ 2 + 4 * n - 7 - (- 1) ^ n) / 8. - _ Wesley Ivan Hurt _ , Jul 22 2014 ●

▶ [A014688] 3,5,8,11,16,19,24,27,32,39,42,49,54,57,62,69,76,79,86,91,94,101,106,113,122 ⋆ a(n) = n - th prime + n. ● a(n) = 2 * OR(p,n) - XOR(p,n), for n - th prime p. - _ Gary Detlefs _ , Oct 26 2013 ●

▶ [A281333] 1,1,3,5,8,11,16,20,26,32,39,46,55,63,73,83,94,105,118,130,144,158,173,188,205 ⋆ a(n) = 1 + floor(n / 2) + floor(n ^ 2 / 3). ● a(n) = a(n - 1) + a(n - 2) - a(n - 4) - a(n - 5) + a(n - 6). ● a(n) = 1 + floor(n / 2 + n ^ 2 / 3). ● a(n) = (12 * n ^ 2 + 18 * n + 4 * (- 1) ^ (2 * n / 3) + 4 * (- 1) ^ (- 2 * n / 3) + 9 * (- 1) ^ n + 19) / 36. ● a(n) - n = a(- n). ● a(6 * k + r) = 12 * k ^ 2 + (4 * r + 3) * k + a(r), where 0 <= r <= 5. Particular cases: ●

▶ [A371154] 1,3,5,8,11,16,21,26,33,40,47,56,65,74,85,96,107,120,133,146,161,176,191,208,225 ⋆ Maximum number of vertices for a given diameter n of a Cayley digraph on the cyclic group with generators s=1 and t>s. ● a(n) = ceiling((n + 2) ^ 2 / 3) - 1 for n<>1. ●

▶ [A308266] 0,0,1,1,3,5,8,11,18,22,31,40,51,62,80,93,114,135,159,183,217,244,282,320,362 ⋆ Sum of the middle parts in the partitions of n into 3 parts. ● a(n) = Sum _{ k=1..floor(n / 3) } Sum _{ i=k..floor((n - k) / 2) } i. ● a(n) = 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4) - 4 * a(n - 5) - a(n - 6) + 2 * a(n - 7) + 2 * a(n - 8) - a(n - 10) for n>10. ●

▶ [A236203] 0,0,3,5,8,12,15,21,24,32,35,45,48,60,63,77,80,96,99,117,120,140,143,165,168 ⋆ Interleave A005563(n), A028347(n). ● a(n) = 3 * a(n - 4) - 3 * a(n - 8) + a(n - 12). ● a(n + 4) - a(n - 4) = 0, 8, 8, ... = A168397. ● a(n) = (n ^ 2 - 4) / 4 for n even, a(n) = (n ^ 2 + 2 * n - 15) / 4 for n odd. ● a(n) = (2 * n ^ 2 + 2 * n - 19 - (2 * n - 11) * (- 1) ^ n) / 8. - _ Luce ETIENNE _ , Jul 26 2014 ●

▶ [A000212] 0,0,1,3,5,8,12,16,21,27,33,40,48,56,65,75,85,96,108,120,133,147,161,176,192 ⋆ a(n) = floor(n ^ 2 / 3). ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) + 2 for n >= 4. - _ Alexander Burstein _ , Nov 20 2011 ● a(n) = (n - 1) ^ 2 - a(n - 1) - a(n - 2) for n >= 2. - _ Richard R. Forberg _ , Jun 05 2013 ● a(n) = Sum _{ i = 1..n + 1 } (ceiling(i / 3) + floor(i / 3) - 1). - _ Wesley Ivan Hurt _ , Jun 06 2014 ● a(n) = Sum _{ j = 1..n } Sum _{ i=1..n } ceiling((i + j - n - 1) / 3). - _ Wesley Ivan Hurt _ , Mar 12 2015 ● a(n) = Sum _{ i = 1..n } floor(2 * i / 3). - _ Wesley Ivan Hurt _ , May 22 2017 ● a(- n) = a(n). - _ Paul Curtz _ , Jan 19 2020 ●

▶ [A183139] 0,1,3,5,8,12,16,21,27,34,41,49,58,67,77,88,100,112,125,139,153,168,184,200,217 ⋆ a(n) = [1 / r] + [2 / r] + ... + [n / r], where r=sqrt(2) and []=floor. ● a(n) = [1 / r] + [2 / r] + ... + [n / r], where r=sqrt(2) and []=floor. ●

▶ [A282513] 0,1,3,5,8,12,17,22,28,35,43,51,60,70,81,92,104,117,131,145,160,176,193,210,228 ⋆ a(n) = floor((3 * n + 2) ^ 2 / 24 + 1 / 3). ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 4) - 2 * a(n - 5) + a(n - 6) for n>5. ● a(n) = floor((3 * n + 2) ^ 2 / 24 + 2 / 3). ● a(n) = (6 * n ^ 2 + 8 * n + 3 + (- 1) ^ n - 2 * ((- 1) ^ ((2 * n - 1 + (- 1) ^ n) / 4) + (- 1) ^ ((2 * n + 1 - (- 1) ^ n) / 4))) / 16. Therefore: ● a(2 * k) = (6 * k ^ 2 + 4 * k + 1 - (- 1) ^ k) / 4, ● a(2 * k + 1) = (k + 1) * (3 * k + 2) / 2. ● a(n) = (6 * n ^ 2 + 8 * n + 3 + cos(n * Pi) - 4 * cos(n * Pi / 2)) / 16. ●

▶ [A131674] 0,1,3,5,8,12,17,23,29,36,44,53,63,74,86,99,113,127,142,158,175,193,212,232,253 ⋆ Size of the largest BDD of symmetric Boolean functions of n variables when the sink nodes are not counted. ● a(n) = sum _{ k=1..n } min(k,2 ^{ n + 2 - k }- 2). ●

▶ [A238531] 1,1,3,5,8,12,17,23,30,38,47,57,68,80,93,107,122,138,155,173,192,212,233,255,278 ⋆ Expansion of (1 - x + x ^ 2) ^ 2 / (1 - x) ^ 3 in powers of x. ● a(n) = p(- 1) where p(x) is the unique degree - n polynomial such that p(k) = a(k) for k = 0, 1, ..., n. ● a(n) = a(1 - n) for all n in Z. ●

▶ [A133263] 1,3,5,8,12,17,23,30,38,47,57,68,80,93,107,122,138,155,173,192,212,233,255,278,302 ⋆ Binomial transform of (1, 2, 0, 1, - 1, 1, - 1, 1, ...). ● a(n) = (n ^ 2 + n + 4) / 2 for n > 0. ● a(0)=1, a(1)=3; for n >= 2, a(n) = a(n - 1) + n. - Philippe Lallouet (philip.lallouet(AT)orange.fr), May 27 2008; corrected by _ Michel Marcus _ , Nov 03 2018 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3); a(0)=1, a(1)=3, a(2)=5, a(3)=8. - _ Harvey P. Dale _ , Feb 13 2012 ●

▶ [A167385] 1,3,5,8,12,17,24,33,45,61,82,110,147,196,261,347,461,612,812,1077,1428,1893,2509,3325,4406 ⋆ a(n)= sum _{ i=7..n + 6 } A000931(i). ● a(n + 1) / a(n) - > A060005 as n - >infinity. ●

▶ [A001973] 1,1,3,5,8,12,18,24,33,43,55,69,86,104,126,150,177,207,241,277,318,362,410,462,519 ⋆ Expansion of (1 + x ^ 3) / ((1 - x) * (1 - x ^ 2) ^ 2 * (1 - x ^ 3)). ● a(n) is the coefficient of x ^ (2 * n + 2) in the g.f. Product _{ s=1..4 } (x ^ s - x ^ (n + 1)) / (1 - x ^ s). - _ Paul Weisenhorn _ , Jun 01 2009 ● a(n) = 2 * a(n - 1) - a(n - 3) - a(n - 4) + 2 * a(n - 6) - a(n - 7). _ Vincenzo Librandi _ , Jun 11 2012 ●

▶ [A020745] 3,5,8,12,18,27,40,59,87,128,188,276,405,594,871,1277,1872,2744,4022,5895,8640,12663,18559,27200,39864 ⋆ Pisot sequence T(3,5). ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) - a(n - 4) (holds at least up to n = 1000 but is not known to hold in general). ●

▶ [A232896] 1,3,5,8,12,18,27,41,63,98,154,244,389,623,1001,1612,2600,4198,6783,10965,17731,28678,46390,75048,121417 ⋆ a(n) = 3 * a(n - 1) - 2 * a(n - 2) - a(n - 3) + a(n - 4), where a(1) = 1, a(2) = 3, a(3) = 5, a(4) = 8. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - a(n - 3) + a(n - 4), where a(1) = 1, a(2) = 3, a(3) = 5, a(4) = 8. ● a(n) = - 1 + (2 ^ (- 1 - n) * (- (1 - sqrt(5)) ^ (1 + n) + (1 + sqrt(5)) ^ (1 + n))) / sqrt(5) + n. - _ Colin Barker _ , Mar 11 2017 ●

▶ [A286311] 0,1,1,3,5,8,12,19,31,51,83,134,216,349,565,915,1481,2396,3876,6271,10147,16419,26567,42986,69552 ⋆ a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 4), n>3, a(0)=0, a(1)=a(2)=1, a(3)=3. ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 4). Valid for b(n). ●

▶ [A265046] 1,3,5,8,13,18,23,28,32,36,40,44,48,52,56,60,64,68,72,76,80,84,88,92,96 ⋆ Coordination sequence for a 4.6.6 point in the 3 - transitive tiling { 4.6.6, 6.6.6, 6.6.6.6 } of the plane by squares and dominoes (hexagons). ● a(n) = 2 * a(n - 1) - a(n - 2) for n>8. ● a(n) = 4 * n for n>6. ●

▶ [A104563] 0,1,3,5,8,13,19,25,32,41,51,61,72,85,99,113,128,145,163,181,200,221,243,265,288 ⋆ A floretion - generated sequence relating to centered square numbers. ● a(n) = (1 / 2) * (n ^ 2 + 1 - cos(n * Pi / 2)). - _ Ralf Stephan _ , May 20 2007 ● a(n) = (2 - (- i) ^ n - i ^ n + 2 * n ^ 2) / 4 where i=sqrt(- 1). ● a(n) = 3 * a(n - 1) - 4 * a(n - 2) + 4 * a(n - 3) - 3 * a(n - 4) + a(n - 5) for n>4. (End) ●

▶ [A265070] 1,3,5,8,13,21,33,51,80,126,198,311,488,766,1203,1889,2966,4657,7312,11481,18027,28305,44443,69782,109568 ⋆ Coordination sequence for (2,6,infinity) tiling of hyperbolic plane. ● a(n) = a(n - 1) + a(n - 3) + a(n - 5) for n>6. - _ Vincenzo Librandi _ , Dec 30 2015 ●

▶ [A071679] 1,3,5,8,13,21,34,55,89,144,233,377,610,987,1597,2584,4181,6765,10946,17711,28657,46368,75025,121393,196418 ⋆ Least k such that the maximum number of elements among the continued fractions for k / 1, k / 2, k / 3, k / 4, ..., k / k equals n. ● a(n) = Fibonacci(n + 2) for n > 1. - _ Charles R Greathouse IV _ , Jan 17 2012 ●

▶ [A020701] 3,5,8,13,21,34,55,89,144,233,377,610,987,1597,2584,4181,6765,10946,17711,28657,46368,75025,121393,196418,317811 ⋆ Pisot sequences E(3,5), P(3,5). ● a(n) = Fib(n + 4). a(n) = a(n - 1) + a(n - 2). ● a(n) = (2 ^ (- 1 - n) * ((1 - sqrt(5)) ^ n * (- 7 + 3 * sqrt(5)) + (1 + sqrt(5)) ^ n * (7 + 3 * sqrt(5)))) / sqrt(5). - _ Colin Barker _ , Jun 05 2016 ●

▶ [A289916] 1,3,5,8,13,22,39,69,120,206,353,607,1046,1803,3106,5348,9208,15856,27306,47025,80982,139457,240155,413566,712196 ⋆ Coefficients of 1 / (Sum _{ k>=0 } round((k + 1) * r)(- x) ^ k), where r = 9 / 7. ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) - a(n - 4) + 2 * a(n - 5) - a(n - 6) for n>5. ●

▶ [A259597] 3,5,8,13,45,82,127,209,717,1307,2024,3331,11427,20830,32257,53087,182115,331973,514088,846061,2902413,5290738,8193151,13483889,46256493 ⋆ Numerators of the other - side convergents to sqrt(7). ● a(n) = 16 * a(n - 4) - a(n - 8) for n>7. - _ Colin Barker _ , Jul 21 2015 ●

▶ [A374084] 3,5,8,14,17,27,30,44,47,65,68,90,93,119,122,152,155,189,192,230,233,275,278,324,327 ⋆ a(n) = (1 + (n + 1) ^ 2 + (n - 2) * (- 1) ^ n) / 2. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). ●

▶ [A159914] 0,0,0,0,1,3,5,8,14,22,30,40,55,73,91,112,140,172,204,240,285,335,385,440,506 ⋆ Half the number of (n - 3) - element subsets of { 1,...,n } whose elements sum up to an odd value. ● a(2k) = k(k - 1)(2k - 1) / 6. ●

▶ [A245968] 0,0,1,1,3,5,8,14,23,37,61,99,160,260,421,681,1103,1785,2888,4674,7563,12237,19801,32039,51840 ⋆ The edge independence number of the Lucas cube Lambda(n). ● a(n) = a(n - 1) + a(n - 2) + a(n - 3) - a(n - 4) - a(n - 5). - _ Colin Barker _ , Aug 31 2014 ●

▶ [A175378] 0,0,0,0,1,3,5,8,14,26,45,75,125,212,358,598,993,1651,2745,4552,7526,12426,20501,33787,55605 ⋆ G.f. x ^ 4 * (2 * x ^ 2 - 1) / ((x ^ 2 - 1) * (x ^ 2 + x - 1) * (2 * x ^ 3 - 2 * x ^ 2 + 2 * x - 1)). ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - a(n - 3) + 3 * a(n - 4) - 4 * a(n - 5) + 2 * a(n - 7). ●

▶ [A108301] 3,5,8,14,26,59,89,167,377,734,1376,2741,5624,11120,22166,44222,88262,176180,353042,707648,1419974,2836751,5679620,11365592,22723865 ⋆ Digital sum of the Fermat number 2 ^ (2 ^ n) + 1. ● a(n) = ~ 4.5 * A057755. - _ Robert G. Wilson v _ , Jul 02 2005 ●

▶ [A282390] 3,5,8,14,27,53,104,206,410,818,1635,3269,6536,13070,26139,52277,104552,209102,418202,836402,1672803,3345605,6691209,13382417,26764832 ⋆ Width of polyominoes in A282389. ● a(1) = 3, a(n) = 2 * a(n - 1) - k for n > 1, where k is the width of the central step in the "ladder", which is 1 or 2. ●

▶ [A076797] 1,3,5,8,15,17,20,25,28,30,32,35,43,54,58,65,67,70,73,76,82,86,89,94,97 ⋆ Greedy powers of (Pi / 5): Sum _{ n>=1 } (Pi / 5) ^ a(n) = 1. ● a(n) = Sum _{ k=1..n } floor(g _ k) where g _ 1=1, g _{ n + 1 } = log _ x(x ^ frac (g _ n) - x) (n > 0) at x = Pi / 5 and frac(y) = y - floor(y). ●

▶ [A193147] 1,1,1,3,5,8,15,26,45,80,140,245,431,756,1326,2328,4085,7168,12580,22076,38740,67985,119305,209365,367411 ⋆ G.f.: 1 / (1 - x - 2 * x ^ 3 - x ^ 5). ● a(n) = a(n - 1) + 2 * a(n - 3) + a(n - 5) with a(n) = 0 for n= - 4, - 3, - 2, - 1 and a(0) = 1. ● a(n) = Sum _{ m=floor((n + 1) / 2)..n } Sum _{ j=0..2 * m - n } C(j,3 * n - 5 * m + 2 * j) * C(2 * m - n,j) * 2 ^ (3 * n - 5 * m + 2 * j). - _ Vladimir Kruchinin _ , Mar 10 2013 ●

▶ [A052977] 1,1,1,3,5,8,15,27,47,84,150,266,473,842,1497,2662,4735,8421,14976,26635,47370,84246,149830,266470,473911 ⋆ Expansion of (1 - x)(1 + x) / (1 - x - x ^ 2 - x ^ 3 + x ^ 5). ● a(n) = Sum(- 1 / 7031 * (- 798 - 714 *_ alpha ^ 2 - 1887 *_ alpha + 410 *_ alpha ^ 4 + 986 *_ alpha ^ 3) *_ alpha ^ (- 1 - n), _ alpha=RootOf(1 -_ Z ^ 3 -_ Z -_ Z ^ 2 +_ Z ^ 5)). [in Maple notation] ●

► [A099846] 1,3,5,8,15,29,55,104,196,368,692,1304,2457,4627,8713,16408,30899,58189,109583,206368,388632,731872,1378264,2595552,4887953 ⋆ An Alexander sequence for the knot 8 _ 5. ● a(0)=1, a(1)=3, a(2)=5, a(3)=8, a(4)=15, a(5)=29, a(n)=3 * a(n - 1) - 4 * a(n - 2) + 5 * a(n - 3) - 4 * a(n - 4) + 3 * a(n - 5) - a(n - 6). - _ Harvey P. Dale _ , Sep 25 2011 ●

► [A141775] 1,3,5,8,15,31,64,129,257,512,1023,2047,4096,8193,16385,32768,65535,131071,262144,524289,1048577,2097152,4194303,8388607,16777216 ⋆ Binomial transform of (1, 2, 0, 1, 2, 0, 1, 2, 0, ...). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + 2 * a(n - 3). ● a(n) + a(n + 3) = 9 * 2 ^ n. ● a(n + 6) - a(n) = 63 * 2 ^ n. ● a(n) = 2 ^ n + (2 * sin((Pi * n) / 3)) / sqrt(3). - _ Colin Barker _ , Feb 10 2017 ●

► [A291223] 0,0,1,1,3,5,8,17,25,52,83,159,271,497,868,1572,2762,4984,8784,15799,27939,50089,88831,158880,282293 ⋆ p - INVERT of (0,1,0,1,0,1,...), where p(S) = 1 - S ^ 3 - S ^ 4. ● a(n) = 4 * a(n - 2) + a(n - 3) - 5 * a(n - 4) - a(n - 5) + 4 * a(n - 6) - a(n - 8) for n >= 9. ●

► [A292492] 1,3,5,8,22,100,444,1680,5496,16096,43936,117360,323056,946288,2930320,9287792,29222800,89856944,269619792,795460592,2334102160,6882700336,20508738256,61728245104,186833742864 ⋆ p - INVERT of the odd positive integers, where p(S) = 1 - S + S ^ 2 - S ^ 3. ● a(n) = 7 * a(n - 1) - 19 * a(n - 2) + 23 * a(n - 3) - 8 * a(n - 4) + 6 * a(n - 5) for n >= 7. ●

► [A195548] 0,3,5,8,39,105,136,715,1869,2448,12815,33553,43920,229971,602069,788120,4126647,10803705,14142232,74049691,193864605,253772064,1328767775,3478759201,4553754912 ⋆ Numerators b(n) of Pythagorean approximations b(n) / a(n) to 1 / 2. ● a(n) = (F(n + 1) ^ 2 - F(n) ^ 2) / (2 - ((n + 2) ^ 2 mod 3)), where F(n)=Fibonacci(n). [_ Gary Detlefs _ , Oct 15 2011] ●

► [A162699] 1,3,5,9,11,13,15,17,19,23,25,27,29,31,33,37,39,41,43,45,47,51,53,55,57 ⋆ Odd numbers not divisible by 7. ● a(n) = 2 * n + 1 + 2 * floor((2 * n - 7) / 12). ● a(n) = a(n - 1) + a(n - 6) - a(n - 7). G.f.: x * (x ^ 2 + 1) * (x ^ 4 + 2 * x ^ 3 + x ^ 2 + 2 * x + 1) / ((1 + x) * (1 + x + x ^ 2) * (x ^ 2 - x + 1) * (x - 1) ^ 2). - _ R. J. Mathar _ , Jul 31 2009 ●

► [A047623] 1,3,5,9,11,13,17,19,21,25,27,29,33,35,37,41,43,45,49,51,53,57,59,61,65 ⋆ Numbers that are congruent to { 1, 3, 5 } mod 8. ● a(n) = 2 * floor((n - 1) / 3) + 2 * n - 1. - _ Gary Detlefs _ , Mar 18 2010 ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. (End) ● a(n) = (24 * n - 21 - 6 * cos(2 * n * Pi / 3) + 2 * sqrt(3) * sin(2 * n * Pi / 3)) / 9. ● a(3k) = 8k - 3, a(3k - 1) = 8k - 5, a(3k - 2) = 8k - 7. (End) ●

► [A047270] 3,5,9,11,15,17,21,23,27,29,33,35,39,41,45,47,51,53,57,59,63,65,69,71,75 ⋆ Numbers that are congruent to { 3, 5 } mod 6. ● a(n) = sqrt(2) * sqrt((1 - 6 * n) * (- 1) ^ n + 18 * n ^ 2 - 6 * n + 1) / 2. - _ Paul Barry _ , May 11 2003 ● a(n) - a(n - 1) - a(n - 2) + a(n - 3) = 0, with n > 3. ● a(n) = (6 * n - (- 1) ^ n - 1) / 2. (End) ● a(n) = 6 * n - a(n - 1) - 4 with n > 1, a(1)=3. - _ Vincenzo Librandi _ , Aug 05 2010 ● a(n) = a(n - 2) + 6 for n > 2. ●

► [A078651] 1,3,5,9,11,15,17,23,27,31,33,40,42,46,50,59,61,68,70,77,81,85,87,97,101 ⋆ Number of geometric subsequences of [1,...,n] with integral successive - term ratio and length >= 1. ● a(n) = n + sum { r > 1, j > 0 } floor(n / r ^ j) ●

► [A268732] 1,3,5,9,11,15,17,23,27,31,33,41,43,47,51,60,62,70,72,80,84,88,90,102,106 ⋆ Sum of the numbers of divisors of gcd(x,y) with x * y <= n. ● a(n) = Sum _{ k=1..floor(sqrt(n)) } (2 * Sum _{ j=1..floor(sqrt(n / k ^ 2)) } floor(n / (j * k ^ 2)) - floor(sqrt(n / k ^ 2)) ^ 2). - _ Daniel Suteu _ , Jan 08 2019 ● a(n) = n * zeta(2) * (log(n) + 2 * gamma - 1 + 2 * zeta'(2) / zeta(2)) + O(sqrt(n) * log(n)), where gamma is the Euler - Mascheroni constant A001620. - _ Daniel Suteu _ , Jan 11 2019 ●

► [A101114] 1,3,5,9,11,15,17,23,27,31,33,41,43,47,51,61,63,71,73,81,85,89,91,103,107 ⋆ Let t(G) = number of unitary factors of the Abelian group G. Then a(n) = sum t(G) over all Abelian groups G of order <= n. ● a(n) = partial sums of A101113 ●

► [A069205] 1,3,5,9,11,15,17,25,29,33,35,43,45,49,53,69,71,79,81,89,93,97,99,115,119 ⋆ a(n) = Sum _{ k=1..n } 2 ^ bigomega(k). ● a(n) = Sum _{ k=1..n } 2 ^ (bigomega(k) - omega(k)) * floor(n / k). ● a(n) = 1 + Sum _{ k=1..floor(log _ 2(n)) } 2 ^ k * pi _ k(n), where pi _ k(n) is the number of k - almost primes <= n. (End) ●

► [A281505] 3,5,9,11,15,19,21,25,29,35,39,45,49,51,55,59,61,65,69,71,75,79,85,91,95 ⋆ Numbers of the form y ^ 2 - x ^ 2 such that x ^ 2 + y ^ 2 is a prime and 0 < x < y. ● a(n) = n(log n) ^ c / (log log n) ^ O(1), where c = 1 - (1 + log log 2) / log 2 = 0.086... Cf. A027424. - Conjectured by Carl Pomerance, Jan 25 2017 ●

► [A292918] 1,3,5,9,11,15,19,23,29,37,43,51,57,63,71,81,89,97,105,113,123,135,145,157,169 ⋆ Let A _ n be a square n X n matrix with entries A _ n(i,j)=1 if i + j is prime, and A _ n(i,j)=0 otherwise. Then a(n) counts the 1's in A _ n. ● a(n) = a(n - 1) + 2 * (pi(2 * n - 1) - pi(n)) for n > 1, a(1) = 1. ● a(n) = Sum _{ i=1..n } (pi(n + i) - pi(i)), where pi = A000720. - _ Ridouane Oudra _ , Aug 29 2019 ●

► [A006046] 0,1,3,5,9,11,15,19,27,29,33,37,45,49,57,65,81,83,87,91,99,103,111,119,135 ⋆ Total number of odd entries in first n rows of Pascal's triangle: a(0) = 0, a(1) = 1, a(2k) = 3 * a(k), a(2k + 1) = 2 * a(k) + a(k + 1). For n>0, a(n) = Sum _{ i=0..n - 1 } 2 ^ wt(i). ● a(n) = n ^ (log _ 2(3)) * G(log _ 2(n)) where G(x) is a function of period 1 defined by its Fourier series. - _ Benoit Cloitre _ , Aug 16 2002; formula modified by S. R. Finch, Dec 31 2007 ● a(1) = 1, a(n) = 2 * a(floor(n / 2)) + a(ceiling(n / 2)). ●

► [A120811] 3,5,9,11,17,27,29,35,39,41,59,65,71,101,107,125,137,149,179,191,197,227,237,239,269 ⋆ Positive integers n such that n + d + 1 is prime for all proper divisors d of n. Generalization of twin prime to all integers. ● a(n)=n - th number such that n + d + 1 is prime for all proper divisors d of n. ●

► [A339638] 1,3,5,9,11,21,23,31,35,45,47,91,93,103,113,129,131,175,177,221,231,241,243,427,431 ⋆ Number of nonempty sets of distinct positive integers that have a least common multiple <= n. ● a(n) = Sum _{ k=1..n } Sum _{ d|k } mu(k / d) * (2 ^ tau(d) - 1), where tau = A000005. ●

► [A120806] 1,3,5,9,11,29,35,39,41,65,125,179,191,239,281,419,431,641,659,749,755,809,905,935,989 ⋆ Positive integers n such that n + d + 1 is prime for all divisors d of n. ● a(n) = n - th number such that n + d + 1 is prime for all divisors d of n. ●

► [A091785] 3,5,9,12,15,17,20,23,27,29,33,36,39,43,45,48,51,53,57,60,63,65,68,71,75 ⋆ Evil numbers (see A001969) in A003159. ● a(n) is asymptotic to 3 * n. - _ Benoit Cloitre _ , Mar 22 2004 ●

► [A006282] 0,1,3,5,9,12,16,19,26,31,37,41,48,53,59,63,74,82,91,97,107,114,122,127,138 ⋆ Sorting numbers: number of comparisons in Batcher's parallel sort. ● a(1)=0, a(n) = a(ceiling(n / 2)) + a(floor(n / 2)) + C(ceiling(n / 2), floor(n / 2)), n > 1, where the C function is defined in Knuth by C(m,n) = m * n if m * n <= 1 and C(m,n) = C(ceiling(m / 2),ceiling(n / 2)) + C(floor(m / 2),floor(n / 2)) + floor((m + n - 1) / 2)) otherwise. ●

► [A259368] 1,3,5,9,12,16,20,25,29,34,39,44,49,54,59,65,70,76,81,87,93,99,105,111,117 ⋆ Number of digits in n ^ n when written in binary. ● a(n) = floor(n * log(n) / log(2)) + 1. ●

► [A060419] 0,1,3,5,9,12,17,21,27,32,38,44,51,58,65,73,81,89,97,106,115,124,134,143,154 ⋆ a(n) = floor(3 ^ log _ 2(n)). ● a(n) = floor(n ^ log _ 2(3)) where log _ 2(3) = 1.58496250... ●

► [A005766] 0,1,3,5,9,12,18,21,29,34,44,48,60,67,81,85,101,110,128,134,154,165,187,192,216 ⋆ a(n) = cost of minimal multiplication - cost addition chain for n. ● a(2n)=a(n) + n ^ 2, a(2n + 1)=a(n) + n(n + 2). - _ Ralf Stephan _ , May 04 2003 ●

► [A211538] 0,0,0,1,3,5,9,12,18,22,30,35,45,51,63,70,84,92,108,117,135,145,165,176,198 ⋆ Number of ordered triples (w,x,y) with all terms in { 1,...,n } and 2w=2n - 2x - y. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). ● a(n) = (6 * n ^ 2 - 26 * n + 25 - (2 * n - 7) * (- 1) ^ n) / 16, from _ Luce ETIENNE _ . [_ Bruno Berselli _ , Jun 03 2014] ● a(n) = Sum _{ i=ceiling((n - 3) / 2)..n - 3 } i. (End) ●

► [A059093] 1,3,5,9,12,21,23,25,29,31,33,35,39,41,43,45,49,51,53,55,59,61,63,65,69 ⋆ Numbers ending with the letter "e" (in English). ● a(n + 1)=a((n mod 37) + 1) + 100 * floor(n / 37) for n>=1. ●

► [A076052] 1,3,5,9,13,17,19,20,22,23,27,28,29,33,37,39,40,44,48,50,52,53,54,56,60 ⋆ Sum(k=1, n, A006460(k)). ● a(n) seems to be asymptotic to 7 / 3 * n ●

► [A063915] 1,3,5,9,13,17,21,29,37,45,53,61,69,77,85,101,117,133,149,165,181,197,213,229,245 ⋆ G.f.: (1 + Sum _{ i >= 0 } 2 ^ i * x ^ (2 ^ (i + 1) - 1)) / (1 - x) ^ 2. ● a(n) = b(n + 1), with b(2n) = 2 * b(n) + 2 * b(n - 1) + 1, b(2n + 1) = 4 * b(n) + 1. ●

► [A183859] 1,3,5,9,13,17,23,29,35,43,51,59,69,79,89,101,113,125,139,153,167,183,199,215,233 ⋆ a(n) = n - 1 + ceiling((n ^ 2) / 3); complement of A183858. ● a(n) = n - 1 + ceiling((n ^ 2) / 3). ●

► [A185170] 1,1,1,1,3,5,9,13,17,23,29,37,45,53,63,73,85,97,109,123,137,153,169,185,203 ⋆ a(n) = floor((2 * n ^ 2 - 6 * n + 9) / 5). ● a(n) = a(3 - n) for all n in Z. ● a(0)=1, a(1)=1, a(2)=1, a(3)=1, a(4)=3, a(5)=5, a(6)=9, a(n)=2 * a(n - 1) - a(n - 2) + a(n - 5) - 2 * a(n - 6) + a (n - 7). - _ Harvey P. Dale _ , Dec 28 2012 ●

► [A080075] 3,5,9,13,17,25,33,41,49,57,65,81,97,113,129,145,161,177,193,209,225,241,257,289,321 ⋆ Proth numbers: of the form k * 2 ^ m + 1 for k odd, m >= 1 and 2 ^ m > k. ● a(n + 1) = a(n) + 2 ^ round(L(n) / 2), where L(n) is the number of binary digits of a(n); equivalently, floor(log _ 2(a(n)) / 2 + 1) in the exponent. [Lemma 2.2 in Borsos et al.] - _ M. F. Hasler _ , Jul 07 2022 ●

► [A007664] 0,1,3,5,9,13,17,25,33,41,49,65,81,97,113,129,161,193,225,257,289,321,385,449,513 ⋆ Reve's puzzle: number of moves needed to solve the Towers of Hanoi puzzle with 4 pegs and n disks, according to the Frame - Stewart algorithm. ● a(n) = min { 2 a(k) + 2 ^ (n - k) - 1 ; k < n } , which is always odd. - _ M. F. Hasler _ , Feb 06 2008 ●

► [A265429] 1,3,5,9,13,18,23,30,37,45,53,63,73,84,95,108,121,135,149,165,181,198,215,234,253 ⋆ Total number of ON (black) cells after n iterations of the "Rule 188" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = (1 / 16) * (6 * n ^ 2 + 24 * n - 3 * (- 1) ^ n + 2 * (- i) ^ n + 2 * i ^ n + 15) where i = sqrt(- 1). ●

► [A122248] 0,1,3,5,9,13,18,23,31,39,48,57,68,79,91,103,119,135,152,169,188,207,227,247,270 ⋆ a(n) - a(n - 1) = A113474(n). ● a(n) = Sum _{ k=1..n } Sum _{ j=0..n } floor(k / 2 ^ j) - binomial(n,2). ●

► [A350660] 1,3,5,9,13,18,24,31,39,48,58,69,80,93,107,121,137,153,171,189,209,229,251,273,297 ⋆ a(n) is the average number of key comparisons, rounded to the nearest integer, required to sort n records with distinct keys using bubble sort (Algorithm B in Don Knuth's TAOCP Vol. 3). ● a(n) = round(b(n)). ● a(n) / n ^ 2 - > 1 / 2 for n - > infinity. ●

► [A071404] 1,3,5,9,13,18,25,31,39,46,55,66,76,86,99,112,125,142,157,172,187,206,225,244,264 ⋆ Which nonsquarefree number is a square number? a(n) - th nonsquarefree number equals n ^ 2, the n - th square. ● a(n) = kn ^ 2 + O(n), where k = 1 - 6 / Pi ^ 2. - _ Charles R Greathouse IV _ , Sep 13 2013 ●

► [A065802] 3,5,9,13,19,24,32,38,48,56,67,77,90,102,116,129,145,160,178,194,213,231,252,272,294 ⋆ How small is the squeezed n - gon? Let s0 be the side of a regular n - gon and s1 the side of the maximal n - gon which can be squeezed between the former and its circumcircle. The n - th entry in the sequence is floor(s0 / s1). ● a(n) = floor(4 * n ^ 2 / Pi ^ 2) - b(n) where b(n) is in { 0,1,2 } ; 0 occurs only for odd n, while 2 occurs only for even n. - _ Robert Israel _ , Oct 24 2017 ●

► [A245302] 3,5,9,13,19,25,32,39,48,57,67,78,90,103,116,130,145,161,178,195,213,232,252,273,294 ⋆ Circle curvature (rounded down) inscribed between a unit circle and a circumscribed regular n - gon. ● a(n) = floor(sin(Pi / (2 * n)) ^- 2 - 1) for n>2. - _ Michael Somos _ , Aug 05 2014 ●

► [A099392] 1,1,3,5,9,13,19,25,33,41,51,61,73,85,99,113,129,145,163,181,201,221,243,265,289 ⋆ a(n) = floor((n ^ 2 - 2 * n + 3) / 2). ● a(n) = ceiling(n ^ 2 / 2) - n + 1. - _ Paul Barry _ , Jul 16 2006; index shifted by _ R. J. Mathar _ , Jul 29 2007 ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4). ● a(n + 1) = (3 + 2 * n ^ 2 + (- 1) ^ n) / 4. (End) ● a(n) = (2 * n ^ 2 - 4 * n + 5 - (- 1) ^ n) / 4. ● a(n + 2) = a(n) + 2 * n for n > 0. ●

► [A080827] 1,3,5,9,13,19,25,33,41,51,61,73,85,99,113,129,145,163,181,201,221,243,265,289,313 ⋆ Rounded up staircase on natural numbers. ● a(n) = ceiling((n ^ 2 + 1) / 2). ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4), n > 4. ● a(n) = (n ^ 2 + 2 - (1 - (- 1) ^ n) / 2) / 2. ●

► [A267262] 0,1,3,5,9,13,20,24,35,39,54,58,77,81,104,108,135,139,170,174,209,213,252,256,299 ⋆ Total number of OFF (white) cells after n iterations of the "Rule 111" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = (n ^ 2 + (- 1) ^ n * (n - 4) + 2) / 2 for n>3. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n>8. ●

► [A106607] 1,1,3,5,9,13,20,28,39,51,67,85,107,131,160,192,229,269,315,365,421,481,548,620,699 ⋆ Expansion of (1 + t ^ 3) ^ 2 / ((1 - t) * (1 - t ^ 2) ^ 2 * (1 - t ^ 4)). ● a(n) = (4 * n ^ 3 + 18 * n ^ 2 + 56 * n + 3 * (9 * (- 1) ^ n + 2 * (1 - i) * (- i) ^ n + 2 * (1 + i) * i ^ n + 19)) / 96 where i is the imaginary unit. - _ Colin Barker _ , Feb 08 2016 ●

► [A058989] 1,3,5,9,13,21,25,33,39,45,57,65,73,89,99,105,117,131,151,173,189,199,215,233,257 ⋆ Largest number of consecutive integers such that each is divisible by a prime <= the n - th prime. ● a(n) >= (2e ^ gamma + o(1)) n log ^ 2 n log log log n / (log log n) ^ 2, see A048670. - _ Charles R Greathouse IV _ , Sep 08 2012 ●

► [A136252] 1,3,5,9,13,21,29,45,61,93,125,189,253,381,509,765,1021,1533,2045,3069,4093,6141,8189,12285,16381 ⋆ a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3). ● a(n) = 2 ^ ((1 / 2) * n - 1) * (4 + 4(- 1) ^ n + 3 * sqrt(2) * (1 - (- 1) ^ n)) - 3. - _ Emeric Deutsch _ , Mar 31 2008 ● a(n) = 2 * a(n - 2) + 3; first differences are powers of 2, occurring in pairs. - _ Toby Gottfried _ , Nov 29 2010 ● a(2n + 1) = (a(2n) + a(2n + 2)) / 2. - _ Richard R. Forberg _ , Nov 30 2013 ●

► [A248604] 1,3,5,9,13,21,37,69,133,261,517,1029,2053,4101,8197,16389,32773,65541,131077,262149,524293,1048581,2097157,4194309,8388613 ⋆ Numbers a(n) which are the minimum number of moves needed in a variation of the tower of Hanoi with 4 towers and n disks. ● a(1)=1; a(2)=3; a(3)=5; a(n) = 5 + 2 ^ (n - 2) for n > 3. ●

► [A153263] 3,5,9,13,23,35,59,93,153,245,399,643,1043,1685,2729,4413,7143,11555,18699,30253,48953,79205,128159,207363,335523 ⋆ a(n) = A014217(n + 3) - A014217(n). ● a(2n + 2) = a(2n + 1) + a(2n) + 1. a(2n + 3) = a(2n + 2) + a(2n + 1) - 1. ● a(n) = ((- 2) ^ n + (1 - sqrt(5)) ^ (1 + n) + (1 + sqrt(5)) ^ (1 + n)) / 2 ^ n. - _ Stefano Spezia _ , Dec 25 2021 ●

► [A082874] 1,3,5,9,14,18,26,34,41,52,64,72,87,102,113,131,150,162,184,206,221,246,272,288,317 ⋆ Independence number of king KG _ 4 on triangle board B _ n . ● a(n)= a(n - 1) + a(n - 3) - a(n - 4) + a(n - 6) - a(n - 7) - a(n - 9) + a(n - 10) , n>12. ●

► [A266250] 1,1,3,5,9,14,18,27,31,44,48,65,69,90,94,119,123,152,156,189,193,230,234,275,279 ⋆ Total number of ON (black) cells after n iterations of the "Rule 9" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = (n ^ 2 - (- 1) ^ n * (n - 4) + 2) / 2 for n>2. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n>7. ●

► [A081946] 0,1,3,5,9,14,19,26,34,43,52,63,75,87,101,116,132,148,166,185,204,225,247,269,293 ⋆ a(n) = Sum _{ i=1..n } floor(r * floor(i / r)), where r=sqrt(2). ● a(n) = n * (n + 1) / 2 - floor((1 - 1 / sqrt(2)) * n). ●

► [A053618] 0,0,0,1,1,3,5,9,14,21,30,42,55,72,91,114,140,170,204,243,285,333,385,443,506 ⋆ a(n) = ceiling(binomial(n,4) / n). ● a(n) = (2 * n ^ 3 - 12 * n ^ 2 + 22 * n - 3 + 9 * (- 1) ^ n + 3 * (1 + (- 1) ^ n) * (- 1) ^ (n * (n - 1) / 2) - 6 * (1 + (- 1) ^ n) * (- 1) ^ floor(n / 4)) / 48. - _ Luce ETIENNE _ , Jan 20 2015 ●

► [A267047] 1,3,5,9,14,22,27,39,44,60,65,85,90,114,119,147,152,184,189,225,230,270,275,319,324 ⋆ Total number of ON (black) cells after n iterations of the "Rule 91" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = (n ^ 2 + 4 * n - (- 1) ^ n * (n - 3) - 3) / 2 for n>1. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n>6. ●

► [A032801] 0,0,0,0,1,3,5,9,14,22,30,42,55,73,91,115,140,172,204,244,285,335,385,445,506 ⋆ Number of unordered sets a, b, c, d of distinct integers from 1..n such that a + b + c + d = 0 (mod n). ● a(n) = (- 6 * (4 + 2 * (- 1) ^ n + (- i) ^ n + i ^ n) + (25 + 3 * (- 1) ^ n) * n - 12 * n ^ 2 + 2 * n ^ 3) / 48, where i = sqrt(- 1). - _ Colin Barker _ , Oct 23 2016 ●

► [A033818] 3,5,9,14,22,34,53,83,131,208,332,532,855,1377,2221,3586,5794,9366,15145,24495,39623,64100,103704,167784,271467 ⋆ Convolution of natural numbers n >= 1 with Lucas numbers L(k) for k >= - 2. ● a(n) = L(1) * (F(n + 1) - 1) + L(0) * F(n) - L(- 1) * n, F(n): Fibonacci (A000045), L(n): Lucas (A000032) with L(- n) = (- 1) ^ n * L(n). ● a(n) = Lucas(n + 1) + n - 1. - _ G. C. Greubel _ , Jun 01 2019 ●

► [A061556] 1,1,3,5,9,14,23,43,79,149,263,461,823,1451,2549,4483,7879,13859,24247,42683,75037,131707,230773,405401,710569 ⋆ a(n) is the least k > 0 such that sigma(k!) >= n * k!. ● a(n) = Min { w | floor(sigma(w!) / w!) = n } . ●

► [A129771] 3,5,9,15,17,23,27,29,33,39,43,45,51,53,57,63,65,71,75,77,83,85,89,95,99 ⋆ Evil odd numbers. ● a(n) = 4n + O(1). - _ Charles R Greathouse IV _ , Mar 21 2013 ●

► [A027688] 3,5,9,15,23,33,45,59,75,93,113,135,159,185,213,243,275,309,345,383,423,465,509,555,603 ⋆ a(n) = n ^ 2 + n + 3. ● a(n) = 2 * n + a(n - 1) (with a(0) =3). - _ Vincenzo Librandi _ , Aug 05 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A135342] 1,3,5,9,15,25,37,55,77,105,137,179,225,283,347,419,499,595,697,817,945,1085,1235,1407,1587 ⋆ Number of distinct means of nonempty subsets of { 1, ...,n } . ● a(n) = 2 * a(n - 1) - a(n - 2) + phi(n - 1) for n>3. ●

► [A001595] 1,1,3,5,9,15,25,41,67,109,177,287,465,753,1219,1973,3193,5167,8361,13529,21891,35421,57313,92735,150049 ⋆ a(n) = a(n - 1) + a(n - 2) + 1, with a(0) = a(1) = 1. ● a(n) = (2 / sqrt(5)) * ((1 + sqrt(5)) / 2) ^ (n + 1) - 2 / sqrt(5) * ((1 - sqrt(5)) / 2) ^ (n + 1) - 1. ● a(n + 1) / a(n) is asymptotic to Phi = (1 + sqrt(5)) / 2. - _ Jonathan Vos Post _ , May 26 2005 ● a(n) = Fibonacci(n - 1) + Fibonacci(n + 2) - 1. - _ Zerinvary Lajos _ , Jan 31 2008, corrected by _ R. J. Mathar _ , Dec 17 2010 ● a(n) = 2 * a(n - 1) - a(n - 3); a(0)=1, a(1)=1, a(2)=3. - _ Harvey P. Dale _ , Aug 07 2012 ●

► [A083658] 1,1,3,5,9,15,27,45,81,135,243,405,729,1215,2187,3645,6561,10935,19683,32805,59049,98415,177147,295245,531441 ⋆ a(n) = a(n - 1) + a(n - 2) + gcd(a(n - 1), a(n - 2)) for n > 1; a(0)=1, a(1)=1. ● a(2n) = 3 ^ n, a(2n + 1) = 5 * 3 ^ (n - 1) for n>0; a(0)=1, a(1)=1. ●

► [A307677] 1,1,1,1,3,5,9,15,27,47,83,145,255,447,785,1377,2417,4241,7443,13061,22921,40223,70587,123871,217379 ⋆ a(0) = a(1) = a(2) = a(3) = 1; thereafter a(n) = a(n - 1) + a(n - 2) + a(n - 4). ● a(n) = a(n - 1) + a(n - 2) + a(n - 4) for n>3. ●

► [A188223] 1,1,3,5,9,16,29,53,96,174,315,571,1035,1876,3400,6162,11168,20241,36685,66488,120503,218400,395829,717402,1300222 ⋆ G.f.: (1 + x ^ 2 + x ^ 3) / (1 - x - x ^ 2 - x ^ 4 - x ^ 5) ● a(n) = a(n - 1) + a(n - 2) + a(n - 4) + a(n - 5). ●

► [A077879] 1,1,3,5,9,17,29,53,93,165,293,517,917,1621,2869,5077,8981,15893,28117,49749,88021,155733,275541,487509,862549 ⋆ Expansion of (1 - x) ^ (- 1) / (1 - 2 * x ^ 2 - 2 * x ^ 3). ● a(n) = sum(k=1..n, sum(j=floor((4 * k - n) / 3)..floor((4 * k - n) / 2), binomial(j,n - 4 * k + 3 * j) * (- 1) ^ (k - j) * binomial(k,j) * 2 ^ (n - 3 * k + 2 * j))), n>0, a(0)=1. - _ Vladimir Kruchinin _ , May 25 2011 ●

► [A078140] 1,3,5,9,17,30,52,90,154,262,446,758,1285,2176,3683,6230,10533,17803,30085,50831,85873,145063,245037,413891,699082 ⋆ Convolutory inverse of signed lower Wythoff sequence. ● a(n) = d * [w(n) * a(1) - w(n - 1) * a(2) + ... + d * w(2) * a(n - 1)], where d=(- 1) ^ n, with a(1)=1 and w=floor(n * tau), tau =(1 + sqrt(5)) / 2. ●

► [A289260] 1,3,5,9,17,30,52,90,154,262,446,758,1286,2182,3702,6278,10646,18054,30614,51910,88022,149254,253078,429126,727638 ⋆ Coefficients in the expansion of 1 / ([r] - [2r]x + [3r]x ^ 2 - ...); [ ]=floor, r=8 / 5. ● a(n) = 2 * a(n - 1) - a(n - 2) + 2 * a(n - 3) - 2 * a(n - 4) for n>3. ●

► [A066173] 1,3,5,9,17,31,55,99,176,313,557,990,1759,3125,5553,9866,17531,31149,55346,98339,174729,310457,551617,980109,1741450 ⋆ Self - reciprocating sequence: the integer part of powers of the reciprocal sum. ● a(n) = floor[S ^ n], where S=1.776791425488... = Sum 1 / a(k), k=1, 2, 3, ... The n - th term of the sequence is the integer part of the n - th power of the sum of the infinite series of reciprocal terms of this same sequence. ●

► [A114322] 1,3,5,9,17,31,56,99,177,316,562,999,1778,3162,5623,9999,17782,31622,56234,99999,177827,316227,562341,999999,1778279 ⋆ Largest number whose 4 th power has n digits. ● a(n) = ceiling((10 ^ n) ^ (1 / 4)) - 1. ●

► [A000213] 1,1,1,3,5,9,17,31,57,105,193,355,653,1201,2209,4063,7473,13745,25281,46499,85525,157305,289329,532159,978793 ⋆ Tribonacci numbers: a(n) = a(n - 1) + a(n - 2) + a(n - 3) with a(0)=a(1)=a(2)=1. ● a(n) = rightmost term of M ^ n * [1 1 1], where M is the 3 X 3 matrix [1 1 1 / 1 0 0 / 0 1 0]. M ^ n * [1 1 1] = [a(n + 2) a(n + 1) a(n)]. a(n) / a(n - 1) tends to the tribonacci constant, 1.839286755...; an eigenvalue of M and a root of x ^ 3 - x ^ 2 - x - 1 = 0. - _ Gary W. Adamson _ , Dec 17 2004 ● a(n) = 2 * a(n - 1) - a(n - 4), n > 3. - _ Gary Detlefs _ , Sep 13 2010 ● a(n) = Sum _{ m=0..n / 2 } Sum _{ i=0..m } binomial(n - 2 * m + 1,m - i) * binomial(n - 2 * m + i, n - 2 * m). - _ Vladimir Kruchinin _ , Dec 17 2011 ●

► [A127904] 0,1,3,5,9,17,33,65,129,257,513,1025,2049,4097,8193,16385,32769,65537,131073,262145,524289,1048577,2097153,4194305,8388609 ⋆ Smallest m such that A008687(m) = n. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n=2 and n>3. (End) ●

► [A083318] 1,3,5,9,17,33,65,129,257,513,1025,2049,4097,8193,16385,32769,65537,131073,262145,524289,1048577,2097153,4194305,8388609,16777217 ⋆ a(0) = 1; for n>0, a(n) = 2 ^ n + 1. ● a(n) = 2 ^ n + 1 ^ n - 0 ^ n. ● a(n) = Sum _{ k =0..n } 0 ^ (k * (n - k)) * 2 ^ (n - k). - _ Paul Barry _ , Feb 09 2005 ●

► [A048578] 3,5,9,17,33,65,129,257,513,1025,2049,4097,8193,16385,32769,65537,131073,262145,524289,1048577,2097153,4194305,8388609,16777217,33554433 ⋆ Pisot sequence L(3,5). ● a(n) = 2 ^ (n + 1) + 1. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2). ●

► [A006723] 1,1,1,1,1,1,1,3,5,9,17,41,137,769,1925,7203,34081,227321,1737001,14736001,63232441,702617001,8873580481,122337693603,1705473647525 ⋆ Somos - 7 sequence: a(n) = (a(n - 1) * a(n - 6) + a(n - 2) * a(n - 5) + a(n - 3) * a(n - 4)) / a(n - 7), a(0) = ... = a(6) = 1. ● a(6 - n) = a(n) for all n in Z. ● a(n) = ((8 - 2 * (- 1) ^ n) * a(n - 5) * a(n - 3) - a(n - 4) ^ 2) / a(n - 8). - _ Bruno Langlois _ , Aug 09 2016 ●

► [A092264] 1,1,1,1,1,1,3,5,9,17,65,117,227,449,1737,3137,6105,12097,46819,84565,164593,326161,1262361,2280101,4437891,8794241 ⋆ a(n) * a(n - 5) = a(n - 1) * a(n - 4) + a(n - 2) + a(n - 3), with initial terms a(1) = ... = a(5) = 1. ● a(1)= 1, a(2)=1, a(3)=1, a(4)=1, a(5)=1, a(6)=3, a(7)=5, a(8)=9, a(9)=17, a(10)=65, a(11)=117, a(12)=227, a(n)=28 * a(n - 4) - 28 * a(n - 8) + a(n - 12). - _ Harvey P. Dale _ , Aug 08 2013 ●

► [A289914] 1,3,5,9,18,35,66,124,234,441,830,1563,2944,5544,10440,19661,37026,69727,131310,247284,465686,876981,1651534,3110175,5857092 ⋆ Coefficients of 1 / (Sum _{ k>=0 } round((k + 1) * r)(- x) ^ k), where r = 7 / 5. ● a(n) = 2 * a(n - 1) - a(n - 2) + 2 * a(n - 3) - a(n - 4) for n>3. ●

► [A293332] 3,5,9,18,36,72,144,287,573,1145,2290,4580,9159,18318,36636,73272,146543,293086,586172,1172344,2344688,4689375,9378749,18757498,37514996 ⋆ Least integer k such that k / 2 ^ n > sqrt(5). ● a(n) = ceiling(r * 2 ^ n), where r = sqrt(5). ●

► [A291222] 0,1,1,3,5,9,19,30,66,106,223,379,753,1345,2565,4723,8816,16456,30480,57093,105677,197751,366697,684765,1272311 ⋆ p - INVERT of (0,1,0,1,0,1,...), where p(S) = 1 - S ^ 2 - S ^ 3. ● a(n) = 4 * a(n - 2) + a(n - 3) - 4 * a(n - 4) + a(n - 6) for n >= 7. ●

► [A291398] 0,1,3,5,9,19,39,76,150,301,600,1191,2370,4721,9396,18696,37212,74069,147417,293398,583956,1162257,2313237,4604037,9163443 ⋆ p - INVERT of (1,1,0,0,0,0,...), where p(S) = 1 - S ^ 2 - S ^ 3. ● a(n) = a(n - 2) + 3 * a(n - 3) + 4 * a(n - 4) + 3 * a(n - 5) + a(n - 6) for n >= 7. ●

► [A227234] 1,3,5,9,19,43,109,297,793,2059,5382,14319,38897,110525,335225,1067923,3449922,11058922,35087589,110642516,346605981,1072833978,3270252617,9869924183,29933522269 ⋆ G.f.: Sum _{ n>=1 } x ^ n * (1 + x) ^ prime(n). ● a(n) = Sum _{ k=1..n } binomial(prime(k), n - k). ●

► [A107028] 1,3,5,9,19,49,155,591,2651,13689,80009,522193,3762273,29629483,252966249,2325176147,22874076091,239615657133,2661015200515,31207545002577,385191232715737,4988767088734625,67615869255979521 ⋆ Row sums of number triangle A107027. ● a(n)=sum { k=0..n, (n - k - 1)C((n - k) * k, k) - (n - k - 2) * sum { j=0..k, C((n - k) * k, j) }} ●

► [A136401] 0,0,0,1,1,3,5,9,21,45,85,165,341,693,1365,2709,5461,10965,21845,43605,87381,174933,349525,698709,1398101,2796885 ⋆ a(n) = 3 * a(n - 1) - 4 * a(n - 2) + 6 * a(n - 3) - 4 * a(n - 4). ● a(n) = - 1 / 3 + (1 / 6) * 2 ^ n + (1 / 12) * (i * sqrt(2)) ^ n + (1 / 12) * (- i * sqrt(2)) ^ n, with i=sqrt(- 1). - _ Paolo P. Lava _ , Jun 09 2008 ●

► [A006722] 1,1,1,1,1,1,3,5,9,23,75,421,1103,5047,41783,281527,2534423,14161887,232663909,3988834875,45788778247,805144998681,14980361322965,620933643034787,16379818848380849 ⋆ Somos - 6 sequence: a(n) = (a(n - 1) * a(n - 5) + a(n - 2) * a(n - 4) + a(n - 3) ^ 2) / a(n - 6), a(0) = ... = a(5) = 1. ● a(n) = a(5 - n). ● a(n + 3) = A * B ^ n * C ^ (n ^ 2 - 1) * sigma(v _ 0 + n * v) / sigma(v) ^ (n ^ 2), ●

► [A047389] 3,5,10,12,17,19,24,26,31,33,38,40,45,47,52,54,59,61,66,68,73,75,80,82,87 ⋆ Numbers that are congruent to { 3, 5 } mod 7. ● a(n) = - 4 + (1 / 2) * Sum _{ k=0..n } (7 - 3 * (- 1) ^ n), with n >= 1. - _ Paolo P. Lava _ , Feb 29 2008 ● a(n) = 7 * n - a(n - 1) - 6, n > 1. - _ Vincenzo Librandi _ , Aug 05 2010 ● a(n) - a(n - 1) - a(n - 2) + a(n - 3) = 0 for n > 3. ● a(n) = (14 * n - 5 - 3 * (- 1) ^ n) / 4. (End) ●

► [A285679] 3,5,10,12,17,22,24,29,31,36,41,43,48,53,55,60,62,67,72,74,79,81,86,91,93 ⋆ Positions of 2 in A285677. ● a(n) = 3 * floor((n - 1) * phi) - n + 4 ●

► [A266663] 1,3,5,10,12,21,23,36,38,55,57,78,80,105,107,136,138,171,173,210,212,253,255,300,302 ⋆ Total number of ON (black) cells after n iterations of the " Rule 47" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = (n ^ 2 - (- 1) ^ n * n + 2 * n + (- 1) ^ n + 3) / 2 for n>0. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n>5. ●

► [A007557] 1,1,3,5,10,12,24,26,43,52,78,80,133,135,189,219,295,297,428,430,584,642,804,806,1100 ⋆ Shifts left when inverse Moebius transform applied twice. ● a(n + 1) = Sum _{ d divides n } tau(n / d) * a(d). - _ Vladeta Jovovic _ , Jan 24 2003 ●

► [A165718] 3,5,10,13,20,24,33,38,49,55,68,75,90,98,115,124,143,153,174,185,208,220,245,258,285 ⋆ Integers of the form k * (k + 7) / 6. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). - _ R. J. Mathar _ , Sep 25 2009 ● a(n) = Sum _{ i=1..n } numerator(i / 2) + denominator(i / 2). - _ Wesley Ivan Hurt _ , Feb 26 2017 ● a(n) = (3 * n ^ 2 + 14 * n) / 8 for n even. ● a(n) = (3 * n ^ 2 + 16 * n + 5) / 8 for n odd. ●

► [A340528] 0,1,3,5,10,13,20,25,34,41,52,61,74,85,100,113,130,145,164,181,202,221,244,265,290 ⋆ Radio number of the path graph P _ n. ● a(n) = 0 for n = 1, ●

► [A031878] 0,1,3,5,10,13,21,25,36,41,55,61,78,85,105,113,136,145,171,181,210,221,253,265,300 ⋆ Maximal number of edges in Hamiltonian path in complete graph on n nodes. ● a(n) = C(n, 2) if n odd, a(n) = C(n, 2) - n / 2 + 1 if n even. ● a(n) = (n * n + n - (n - 1) * (n mod 2)) / 2. [_ Frank Ellermann _] ●

► [A345890] 1,3,5,10,13,21,25,36,49,64,71,89,97,118,141,166,177,205,217,248,281,316,331,369,409 ⋆ a(n) = n + (n - 1) * (n - pi(n)). ● a(n) = Sum _{ k=1..n } n ^ c(n), where c(n) is the characteristic function of nonprimes (A005171). ●

► [A265282] 0,1,3,5,10,13,22,26,41,46,68,74,105,112,153,161,214,223,289,299,380,391,488,500,615 ⋆ Number of triangles in a certain geometric structure: see "Illustration of initial terms" link for precise definition. ● a(n) = (2 * n ^ 3 + 15 * n ^ 2 + 57 * n - 8 + (3 * n ^ 2 - n + 4) * (- 1) ^ n + 4 * (- 1) ^ ((2 * n - 1 + (- 1) ^ n) / 4)) / 64. ●

► [A160792] 0,1,3,5,10,13,23,27,44,49,77,83,124,131,189,197,274,283,383,393,522,533,693,705,902 ⋆ Vertex number of a rectangular spiral related to prime numbers. The distances between nearest edges of the spiral that are parallel to the initial edge are the prime numbers, while the distances between nearest edges perpendicular to the initial edge are all one. ● a(2n) = a(2n - 1) + Sum _{ j=1..n } prime(j); a(2n + 1) = a(2n) + n + 1 for n >= 1. - _ Nathaniel Johnston _ , Jun 16 2011 ●

► [A308759] 0,0,0,0,1,1,3,5,10,13,23,30,46,59,83,103,141,170,220,265,334,392,484,563,680 ⋆ Sum of the second largest parts of the partitions of n into 4 parts. ● a(n) = Sum _{ k=1..floor(n / 4) } Sum _{ j=k..floor((n - k) / 3) } Sum _{ i=j..floor((n - j - k) / 2) } i. ● a(n) = a(n - 2) + 2 * a(n - 3) + 2 * a(n - 4) - 2 * a(n - 5) - 3 * a(n - 6) - 4 * a(n - 7) + 4 * a(n - 9) + 3 * a(n - 10) + 2 * a(n - 11) - 2 * a(n - 12) - 2 * a(n - 13) - a(n - 14) + a(n - 16) for n>15. ●

► [A266793] 1,3,5,10,14,21,26,37,42,57,62,81,86,109,114,141,146,177,182,217,222,261,266,309,314 ⋆ Total number of ON (black) cells after n iterations of the " Rule 61" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = (1 + 7 * (- 1) ^ n - 2 * (- 3 + (- 1) ^ n) * n + 2 * n ^ 2) / 4 for n>3. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n>8. ●

► [A176222] 0,3,5,10,14,21,27,36,44,55,65,78,90,105,119,136,152,171,189,210,230,253,275,300,324 ⋆ a(n) = (n ^ 2 - 3 * n + 1 + (- 1) ^ n) / 2. ● a(n) = (n - t(n)) * (n - 3 + t(n)) / 2, where t(n) = 1 - (n mod 2). ● a(n) = 1 - 2 * n + floor(n / 2) + floor(n ^ 2 / 2). - _ Wesley Ivan Hurt _ , Jun 14 2013 ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4), n>4. ● a(n) = Sum _{ i=(- 1) ^ n..n - 2 } i. (End) ●

► [A008610] 1,1,3,5,10,14,22,30,43,55,73,91,116,140,172,204,245,285,335,385,446,506,578,650,735 ⋆ Molien series of 4 - dimensional representation of cyclic group of order 4 over GF(2) (not Cohen - Macaulay). ● a(n) = (1 / 48) * (2 * n ^ 3 + 3 * (- 1) ^ n * (n + 4) + 12 * n ^ 2 + 25 * n + 24 + 12 * cos(n * Pi / 2)). - _ Ralf Stephan _ , Apr 29 2014 ●

► [A308826] 0,0,0,0,0,1,1,3,5,10,15,25,35,54,74,105,138,189,242,317,400,509,628,783,950 ⋆ Sum of the second largest parts in the partitions of n into 5 parts. ● a(n) = Sum _{ l=1..floor(n / 5) } Sum _{ k=l..floor((n - l) / 4) } Sum _{ j=k..floor((n - k - l) / 3) } Sum _{ i=j..floor((n - j - k - l) / 2) } i. ●

► [A090491] 1,1,3,5,10,15,26,37,57,79,112,149,202,260,338,425,536,659,812,980,1184,1408,1673,1963,2302 ⋆ G.f.: (1 + x ^ 3 + x ^ 4 + x ^ 5 + x ^ 6 + x ^ 9) / (1 - x) * (1 - x ^ 2) ^ 2 * (1 - x ^ 3) * (1 - x ^ 4)). ● a(n)=2 * a(n - 1) - a(n - 3) - 2 * a(n - 5) + 2 * a(n - 6) + a(n - 8) - 2 * a(n - 10) + a(n - 11) for n>10. - _ Harvey P. Dale _ , Apr 10 2015 ●

► [A308872] 0,0,0,0,0,0,1,1,3,5,10,15,27,37,59,82,120,160,227,293,396,508,664,832,1068 ⋆ Sum of the second largest parts in the partitions of n into 6 parts. ● a(n) = Sum _{ m=1..floor(n / 6) } Sum _{ l=m..floor((n - m) / 5) } Sum _{ k=l..floor((n - l - m) / 4) } Sum _{ j=k..floor((n - k - l - m) / 3) } Sum _{ i=j..floor((n - j - k - l - m) / 2) } i. ●

► [A097513] 1,1,3,5,10,15,27,38,60,84,122,164,229,298,398,509,658,823,1041,1278,1582,1917,2331,2786,3343 ⋆ Number of ways to label the vertices of the octahedron (or faces of the cube) with nonnegative integers summing to n, where labelings that differ only by rotation or reflection are considered the same. ● a(n) is asymptotically equal to n ^ 5 / 5760. - Isabel C. Lugo (izzycat(AT)gmail.com), Aug 31 2004 ●

► [A308932] 0,0,0,0,0,0,0,1,1,3,5,10,15,27,39,61,87,128,175,249,331,450,590,779,998 ⋆ Sum of the second largest parts in the partitions of n into 7 parts. ● a(n) = Sum _{ o=1..floor(n / 7) } Sum _{ m=o..floor((n - o) / 6) } Sum _{ l=m..floor((n - m - o) / 5) } Sum _{ k=l..floor((n - l - m - o) / 4) } Sum _{ j=k..floor((n - k - l - m - o) / 3 } Sum _{ i=j..floor((n - j - k - l - m - o) / 2) } i. ●

► [A308997] 0,0,0,0,0,0,0,0,1,1,3,5,10,15,27,39,63,89,133,183,264,353,488,644,864 ⋆ Sum of the second largest parts in the partitions of n into 8 parts. ● a(n) = Sum _{ p=1..floor(n / 8) } Sum _{ o=p..floor((n - p) / 7) } Sum _{ m=o..floor((n - o - p) / 6) } Sum _{ l=m..floor((n - m - o - p) / 5) } Sum _{ k=l..floor((n - l - m - o - p) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p) / 2) } i. ●

► [A326472] 0,0,0,0,0,0,0,0,0,1,1,3,5,10,15,27,39,63,91,135,188,272,368,510,682 ⋆ Sum of the second largest parts of the partitions of n into 9 parts. ● a(n) = Sum _{ q=1..floor(n / 9) } Sum _{ p=q..floor((n - q) / 8) } Sum _{ o=p..floor((n - p - q) / 7) } Sum _{ m=o..floor((n - o - p - q) / 6) } Sum _{ l=m..floor((n - m - o - p - q) / 5) } Sum _{ k=l..floor((n - l - m - o - p - q) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p - q) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p - q) / 2) } i. ●

► [A326597] 0,0,0,0,0,0,0,0,0,0,1,1,3,5,10,15,27,39,63,91,137,190,277,376,525 ⋆ Sum of the second largest parts of the partitions of n into 10 parts. ● a(n) = Sum _{ r=1..floor(n / 10) } Sum _{ q=r..floor((n - r) / 9) } Sum _{ p=q..floor((n - q - r) / 8) } Sum _{ o=p..floor((n - p - q - r) / 7) } Sum _{ m=o..floor((n - o - p - q - r) / 6) } Sum _{ l=m..floor((n - m - o - p - q - r) / 5) } Sum _{ k=l..floor((n - l - m - o - p - q - r) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p - q - r) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p - q - r) / 2) } i. ●

► [A209008] 1,3,5,10,16,26,38,55,75,101,131,168,210,260,316,381,453,535,625,726,836,958,1090,1235,1391 ⋆ Number of 4 - bead necklaces labeled with numbers - n..n not allowing reversal, with sum zero and first and second differences in - n..n. ● a(n) = (4 * n ^ 3 + 6 * n ^ 2 + 20 * n + 48) / 48 for n even. ● a(n) = (4 * n ^ 3 + 6 * n ^ 2 + 20 * n + 18) / 48 for n odd. ●

► [A032279] 1,1,3,5,10,16,26,38,57,79,111,147,196,252,324,406,507,621,759,913,1096,1298,1534,1794,2093 ⋆ Number of bracelets (turnover necklaces) of n beads of 2 colors, 5 of them black. ● a(n) = (2 / 5) * s(n,0,5) + (n - 1) * (n - 3) * ((n - 2) * (n - 4) + 15) / 240, if n is odd >= 5; ● a(n) = (2 / 5) * s(n,0,5) + (n - 2) * (n - 4) * ((n - 1) * (n - 3) + 15) / 240, if n is even >= 5. (End) ● a(n + 5) = floor(n ^ 4 / 240 + n ^ 3 / 24 + 5 * n ^ 2 / 24 + 25 * n / 48 + 1 + (- 1) ^ n * n / 16). - _ Robert Israel _ , Jul 22 2015 ●

► [A301653] 0,1,3,5,10,16,28,45,75,121,198,320,520,841,1363,2205,3570,5776,9348,15125,24475,39601,64078,103680,167760 ⋆ Expansion of x * (1 + 2 * x) / ((1 - x) * (1 + x) * (1 - x - x ^ 2)). ● a(n) = a(n - 1) + 2 * a(n - 2) - a(n - 3) - a(n - 4). ● a(n) = Lucas(n + 1) - (3 - (- 1) ^ n) / 2. ● a(n) = floor(phi ^ (n + 1)) - 1, where phi = (1 + sqrt(5)) / 2 is the golden ratio (A001622). ●

► [A129361] 1,1,3,5,10,16,29,47,81,131,220,356,589,953,1563,2529,4126,6676,10857,17567,28513,46135,74792,121016,196041 ⋆ a(n) = Sum _{ k=floor((n + 1) / 2)..n } F(k + 1), F(k) = A000045(k). ● a(n) = a(n - 1) + 2 * a(n - 2) - a(n - 3) - a(n - 5) - a(n - 6). ● a(n) = Sum { k=0..n } F(k + 1) - F((k + 1) / 2) * (1 - (- 1) ^ k) / 2. ●

► [A062773] 3,5,10,16,31,40,62,73,100,147,163,220,264,284,330,410,488,520,610,676,706,812,887,1001,1164 ⋆ Index of the smallest prime which follows square of n - th prime. ● a(n) = PrimePi(nextprime(prime(n) ^ 2)). ●

► [A079934] 1,3,5,10,17,29,46,99,169,268,577,985,1562,3363,5741,9104,19601,33461,53062,114243,195025,309268,665857,1136689,1802546 ⋆ Greedy frac multiples of sqrt(2): a(1)=1, Sum _{ n>=0 } frac(a(n) * x)=1 at x=sqrt(2). ● a(3 * n + 4) = a(3 * n + 2) + a(3 * n + 3). ● a(3 * n) = ceiling((3 + 2 * sqrt(2)) ^ n * (2 + sqrt(2)) / 4). ● a(3 * n + 2) / a(3 * n + 1) - > 1 / sqrt(2). ● a(3 * n + 1) / a(3 * n) - > 3 - sqrt(2). ● a(3 * n) / a(3 * n - 1) - > (8 + 5 * sqrt(2)) / 7. ●

► [A215004] 1,1,3,5,10,17,30,50,84,138,227,370,603,979,1589,2575,4172,6755,10936,17700,28646,46356,75013,121380,196405 ⋆ a(0) = a(1) = 1; for n>1, a(n) = a(n - 1) + a(n - 2) + floor(n / 2). ● a(n) = 2 * a(n - 1) + a(n - 2) - 3 * a(n - 3) + a(n - 5) for n>4. ● a(n) = Fibonacci(n + 3) - floor((n + 3) / 2). - _ Nathan Fox _ , Jan 27 2017 ● a(n) = (- 3 / 4 + (- 1) ^ n / 4 + (2 ^ (- n) * ((1 - t) ^ n * (- 2 + t) + (1 + t) ^ n * (2 + t))) / t + (- 1 - n) / 2) where t=sqrt(5). - _ Colin Barker _ , Feb 09 2017 ●

► [A010049] 0,1,1,3,5,10,18,33,59,105,185,324,564,977,1685,2895,4957,8462,14406,24465,41455,70101,118321,199368,335400 ⋆ Second - order Fibonacci numbers. ● a(n) = F(n) + Sum _{ k=0..n - 1 } F(k) * F(n - 1 - k), where F = A000045. - _ Reinhard Zumkeller _ , Nov 01 2013 ● a(n) = Sum _{ k=0..n - 1 } (k + 1) * binomial(n - k - 1, k). - _ Peter Luschny _ , Nov 20 2013 ● a(n) = Sum _{ i=0..n - 1 } Sum _{ j=0..i } F(j - 1) * F(i - j - 1), where F = A000045. - _ Carlos A. Rico A. _ , Jul 14 2016 ●

► [A154949] 1,1,3,5,10,18,34,62,115,211,389,715,1316,2420,4452,8188,15061,27701,50951,93713,172366,317030,583110,1072506,1972647 ⋆ Diagonal sums of Riordan array A154948. ● a(n) = sum { k=0..floor(n / 2), sum { j=0..n - k + 1, C(n - k + 1 - j,k + 1)C(k - 1,j) }} . ●

► [A107232] 1,3,5,10,18,35,65,126,238,462,882,1716,3300,6435,12441,24310,47190,92378,179894,352716,688636,1352078,2645370,5200300,10192588 ⋆ Expansion of (1 + x * c(x ^ 2)) ^ 3 / sqrt(1 - 4 * x ^ 2), c(x) the g.f. of A000108. ● a(n)=sum { k=0..floor(n / 2), binomial(n, k) * binomial(3, n - 2k) } . ●

► [A134522] 1,3,5,10,18,35,67,132,260,517,1029,2054,4102,8199,16391,32776,65544,131081,262153,524298,1048586,2097163,4194315,8388620,16777228 ⋆ a(n) = 2 ^ n + ceiling(n / 2). ● a(n) = 3 * a(n - 1) - a(n - 2) - 3 * a(n - 3) + 2 * a(n - 4).

● a(n) = Sum _{ k=1..n + 1 } C(n + 1,k) ^ (k mod 2). - _ Wesley Ivan Hurt _ , Nov 20 2021 ●
► [A001445] 3,5,10,18,36,68,136,264,528,1040,2080,4128,8256,16448,32896,65664,131328,262400,524800,1049088,2098176,4195328,8390656,16779264,33558528 ★ a(n) = (2 ^ n + 2 ^ [n / 2]) / 2. ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 4 * a(n - 3) for n > 4. - _ Chai Wah Wu _ , Sep 10 2020 ●
► [A291735] 1,1,3,5,10,19,35,67,124,234,441,827,1558,2927,5503,10349,19453,36580,68774,129304,243119,457093,859415,1615837,3038024 ★ p - INVERT of (1,0,1,0,0,0,0,...), where p(S) = 1 - S - S ^ 3. ● a(n) = a(n - 1) + 2 * a(n - 3) + 3 * a(n - 5) + 3 * a(n - 7) + a(n - 9) for n >= 10. ●
► [A158943] 1,1,3,5,10,19,36,69,131,250,476,907,1728,3292,6272,11949,22765,43371,82629,157422,299915,571388,1088589,2073943,3951206 ★ INVERT transform of A027656: (1, 0, 2, 0, 3, 0, 4, 0, 5, ...). ● a(n) = a(n - 1) + 2 * a(n - 2) - a(n - 4). ●
► [A217925] 1,1,1,3,5,10,19,40,77,155,306,610,1207,2400,4760,9456,18765,37257,73955,146813,291434,578524,1148434,2279720,4525487 ★ G.f. A(x) satisfies A(x) = 1 + x * A(x) * A(x ^ 2) ^ 2. ● a(n) = T(4 * n + 1,1), where T(n,m) = Sum _{ k=1..(n - m) / 4 } C(m + k - 1,k) * T((n - m) / 2,2 * k). - _ Vladimir Kruchinin _ , Mar 25 2015 ●
► [A270737] 1,3,5,10,20,42,91,195,415,880,1864,3952,8385,17795,37765,80138,170044,360810,765595,1624515,3447071,7314368,15520400,32932800,69880225 ★ a(n) = ((n + 2) / 2) * Sum _{ k=0..n / 2 } (Sum _{ i=0..n - 2 * k } (binomial(k + 1,n - 2 * k - i) * binomial(k + i,k)) * F(k + 1) / (k + 1)), where F(k) is Fibonacci numbers. ● a(n) = 2 * a(n - 1) + 2 * a(n - 5) + a(n - 6). - _ G. C. Greubel _ , mar 25 2016 ●
► [A270724] 1,3,5,10,20,42,93,213,504,1221,3014,7553,19158,49087,126845,330174,864884,2278138,6030218,16031950,42790362,114616360,307996874,830084080,2243193198 ★ a(n) = ((n + 2) / 2) * Sum _{ k=0..n / 2 } (Sum _{ i=0..n - 2 * k } (binomial(k + 1,n - 2 * k - i) * binomial(k + i,k)) / (k + 1) * C(k)), where C(k) is Catalan numbers. ● a(n) = ((n + 2) / 2) * Sum _{ k=0..n / 2 } (Sum _{ i=0..n - 2 * k } (binomial(k + 1,n - 2 * k - i) * binomial(k + i,k)) * binomial(2 * k,k) / (k + 1) ^ 2). ●
► [A018104] 1,3,5,10,20,43,90,190,400,846,1789,3783,8000,16918,35778,75660,160000,338359,715542,1513187,3200000,6767177,14310836,30263732,64000000 ★ Powers of fourth root of 20 rounded up. ● a(n) = ceiling(20 ^ (n / 4)). - _ Wesley Ivan Hurt _ , Jun 22 2022 ●
► [A293321] 3,5,10,21,42,84,168,335,670,1340,2681,5362,10723,21447,42894,85788,171575,343151,686302,1372604,2745208,5490415,10980830,21961661,43923322 ★ The integer k that minimizes |k / 2 ^ n - tau ^ 2|, where tau = (1 + sqrt(5)) / 2 = golden ratio. ● a(n) = floor(1 / 2 + r * 2 ^ n), where r = (3 + sqrt(5)) / 2. ●
► [A080522] 1,3,5,10,22,49,107,228,476,979,1993,4030,8114,16293,32663,65416,130936,261991,524117,1048386,2096942,4194073,8388355,16776940,33554132 ★ Leading diagonal of triangle in A080521. ● a(n)=2 ^ n - (n - 1) * (n - 2) / 2 - n + 1 for n>1. - Lambert Herrgesell (zero815(AT)googlemail.com), Mar 14 2006 ● a(n)=5 * a(n - 1) - 9 * a(n - 2) + 7 * a(n - 3) - 2 * a(n - 4) for n>5. G.f.: - x * (2 * x ^ 4 - 5 * x ^ 3 + x ^ 2 + 2 * x - 1) / ((x - 1) ^ 3 * (2 * x - 1)). - _ Colin Barker _ , Dec 18 2012 ●
► [A243513] 3,5,10,24,65,187,552,1646,4927,14769,44294,132868,398589,1195751,3587236,10761690,32285051,96855133,290565378,871696112,2615088313,7845264915,23535794720,70607384134,211822152375 ★ Number of length n + 2 0..4 arrays with no three elements in a row with pattern aba or abb (with a!=b) and new values 0..4 introduced in 0..4 order. ● a(n) = (7 + 3 ^ n + 2 * n) / 4. ●
► [A002039] 1,3,5,10,25,64,160,390,940,2270,5515,13440,32735,79610,193480,470306,1143585,2781070,6762990,16445100,39987325,97232450,236432060,574915770,1397981470 ★ Convolution inverse of A143348. ● a(0) = 1; a(n) = Sum _{ k =1..n } (- 1) ^ (k + 1) * sigma(k + 1) * a(n - k). - _ Ilya Gutkovskiy _ , May 27 2020 ●
► [A243514] 3,5,10,25,76,263,978,3773,14824,58771,234046,934121,3732372,14921279,59668714,238642069,954502720,3817879787,15271256982,61084503617,244336965868,977345766295,3909378870850,15637507094765,62550011601816 ★ Number of length n + 2 0..5 arrays with no three elements in a row with pattern aba or abb (with a!=b) and new values 0..5 introduced in 0..5 order. ● a(n) = (26 + 9 * 2 ^ n + 4 ^ n + 6 * n) / 18. ●
► [A243515] 3,5,10,25,77,279,1134,4979,22981,109453,531458,2610933,12917685,64181627,319695982,1594859887,7963472189,39784944801,198827606706,993846943841,4968361974493,24839192686975,124188113975630 ★ Number of length n + 2 0..6 arrays with no three elements in a row with pattern aba or abb (with a!=b) and new values 0..6 introduced in 0..6 order. ● a(n) = (147 + 2 ^ (5 + n) + 4 * 3 ^ (1 + n) + 5 ^ n + 36 * n) / 96. ●
► [A243516] 3,5,10,25,77,280,1156,5267,25915,135214,736706,4139833,23767897,138468212,814675840,4824766303,28699128503,171207852154,1023332115838,6124430348357,36684624841813,219860794899520,1318179574171580 ★ Number of length n + 2 0..7 arrays with no three elements in a row with pattern aba or abb (with a!=b) and new values 0..7 introduced in 0..7 order. ● a(n) = (2722 + 675 * 2 ^ n + 25 * 2 ^ (1 + 2 * n) + 50 * 3 ^ (1 + n) + 2 ^ n * 3 ^ (1 + n) + 660 * n) / 1800. ●
► [A047621] 3,5,11,13,19,21,27,29,35,37,43,45,51,53,59,61,67,69,75,77,83,85,91,93,99 ★ Numbers that are congruent to { 3, 5 } mod 8. ● a(n) = 8 * n - a(n - 1) - 8 (with a(1) = 3). - _ Vincenzo Librandi _ , Aug 06 2010 ● a(n) = 8 * floor((n - 1) / 2) + 4 + (- 1) ^ n. - _ Gary Detlefs _ , Dec 03 2018 ● a(n) = 4 * n - 2 - (- 1) ^ n. ● a(n + 2) = a(n) + 8. - _ David A. Corneth _ , Dec 03 2018 ●
► [A266723] 1,3,5,11,13,23,25,39,41,59,61,83,85,111,113,143,145,179,181,219,221,263,265,311,313 ★ Total number of ON (black) cells after n iterations of the " Rule 59" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = (3 + (- 1) ^ n - 2 * (- 3 + (- 1) ^ n) * n + 2 * n ^ 2) / 4. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n>4. ●
► [A164053] 3,5,11,15,27,35,59,75,123,155,251,315,507,635,1019,1275,2043,2555,4091,5115,8187,10235,16379,20475,32763 ★ Partial sums of A162255. ● a(n) = 2 * a(n - 2) + 5 for n > 2; a(1) = 3, a(2) = 5. ● a(n) = (13 - 3 * (- 1) ^ n) * 2 ^ (1 / 4 * (2 * n - 1 + (- 1) ^ n)) / 2 - 5. ● a(1)=3, a(2)=5, a(3)=11, a(n)=a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3). - _ Harvey P. Dale _ , Aug 28 2012 ●
► [A211435] 1,3,5,11,17,25,35,45,59,73,89,107,125,147,169,193,219,245,275,305,337,371,405,443,481 ★ Number of ordered triples (w,x,y) with all terms in {- n,...,0,...,n } and w + 4x + 5y=0. ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 5) - 2 * a(n - 6) + a(n - 7) for n > 6. (End) ●
► [A286264] 3,5,11,17,27,37,51,65,83,101,123,145,171,197,227,257,291,325,363,401,443,485,531,577,627 ★ a(n) = 2 * (ceiling((n ^ 2) / 2) + 1) - 1. ● a(n) > n ^ 2. ● a(n) = 3 / 2 - (- 1) ^ n / 2 + n ^ 2. ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4) for n>4. ●
► [A347027] 1,3,5,11,17,27,37,59,81,115,149,203,257,331,405,523,641,803,965,1195,1425,1723,2021,2427,2833 ★ a(1) = 1; a(n) = a(n - 1) + 2 * a(floor(n / 2)). ● a(n) = 1 + 2 * Sum _{ k=2..n } a(floor(k / 2)). ●
► [A361275] 1,1,1,3,5,11,17,29,41,61,81,111,141,183,225,281,337,409,481,571,661,771,881,1013,1145 ★ Number of 1423 - avoiding even Grassmannian permutations of size n. ● a(n) = 1 - 5 * n / 24 + n ^ 3 / 12 - (- 1) ^ n * n / 8. - _ Robert Israel _ , Mar 10 2023 ●
► [A073022] 1,1,3,5,11,17,29,47,79,127,211,347,563,911,1481,2393,3877,6271,10151,16427,26591,43019,69623,112643,182279 ★ Each term is the smallest prime > the sum of the previous 2 terms. ● a(n + 1)=nextprime(a(n) + a(n - 1)) ●
► [A309438] 0,0,0,0,0,0,0,0,0,0,0,1,3,5,11,17,30,45,72,104,147,200,279,367,491,633 ★ Number of prime parts in the partitions of n into 9 parts. ● a(n) = Sum _{ q=1..floor(n / 9) } Sum _{ p=q..floor((n - q) / 8) } Sum _{ o=p..floor((n - p - q) / 7) } Sum _{ m=o..floor((n - o - p - q) / 6) } Sum _{ l=m..floor((n - m - o - p - q) / 5) } Sum _{ k=l..floor((n - l - m - o - p - q) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p - q) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p - q) / 2) } (c(q) + c(p) + c(o) + c(m) + c(l) + c(k) + c(j) + c(i) + c(n - i - j - k - l - m - o - p - q)), where c = A010051. ●
► [A006450] 3,5,11,17,31,41,59,67,83,109,127,157,179,191,211,241,277,283,331,353,367,401,431,461,509 ★ Prime - indexed primes: primes with prime subscripts. ● a(n) > n * (log(n)) ^ 2, as prime(n) > n * log(n) by Rosser's theorem. - _ Jonathan Sondow _ , Jul 11 2012 ● a(n) / log(a(n)) ~ prime(n). - _ Thomas Ordowski _ , Mar 30 2015 ●
► [A006171] 1,1,3,5,11,17,34,52,94,145,244,370,603,899,1410,2087,3186,4650,6959,10040,14750,21077,30479,43120,61574 ★ Number of factorization patterns of polynomials of degree n over integers. ● a(n) = 1 / n * Sum _{ k=1..n } a(n - k) * b(k), n>1, a(0)=1, b(k) = Sum _{ d|k } d * tau(d), cf. A060640. (End) ● a(n) = Sum _{ <b(i) ^ k(i)> partition of n } product p(k(i)), where p(n) is the partition function A000041. E.g., for the partition [4,2 ^ 3,1 ^ 4], the product is p(1) * p(3) * p(4) = 1 * 3 * 5 = 15. - _ Franklin T. Adams - Watters _ , Jun 19 2006 ●
► [A060647] 1,3,5,11,17,35,53,107,161,323,485,971,1457,2915,4373,8747,13121,26243,39365,78731,118097,236195,354293,708587,1062881 ★ Number of alpha - beta evaluations in a tree of depth n and branching factor b=3. ● a(2n) = 2 * (3 ^ n) - 1, a(2n + 1) = 3 ^ n + 3 ^ (n + 1) - 1. ● a(n) = (sqrt(3)) ^ n(1 + 2 / sqrt(3)) + (1 - 2 / sqrt(3))(- sqrt(3)) ^ n - 1. - _ Paul Barry _ , Apr 17 2004 ● a(2n + 1) = 3 * a(2n - 1) + 2; a(2n) = (a(2n - 1) + a(2n + 1)) / 2, with a(1)= 1. See A062318 for case where a(1)= 0. ● a(n) = (2 ^ ((1 + (- 1) ^ n) / 2)) * (b ^ ((2 * n - 1 + (- 1) ^ n) / 4)) + ((1 - (- 1) ^ n) / 2) * (b ^ ((2 * n + 1 - (- 1) ^ n) / 4)) - 1, with b=3. - _ Luce ETIENNE _ , Aug 30 2014 ●
► [A007455] 1,1,3,5,11,17,39,61,139,217,495,773,1763,2753,6279,9805,22363,34921,79647,124373,283667,442961,1010295,1577629,3598219 ★ Number of subsequences of [1,...,n] in which each odd number has an even neighbor. ● a(n) = 3 * a(n - 2) + 2 * a(n - 4). ●
► [A244473] 1,3,5,11,18,30,49,80,129,209,338,547,885,1432,2317,3749,6066,9815,15881,25696,41577,67273,108850,176123,284973 ★ 3rd - largest term in n - th row of Stern's diatomic triangle A002487. ● a(n) = a(n - 1) + a(n - 2) for n>9. - _ Colin Barker _ , Jul 10 2015 ●
► [A122516] 3,5,11,19,23,37,43,61,83,107,181,271,283,349,467,499,547,563,743,821,863,947,991,1013,1571 ★ Primes in A046992. ● a(n) = Prime[A122933[n]]. - _ Alexander Adamchuk _ , Sep 20 2006 ●
► [A329178] 1,3,5,11,19,34,62,107,191,335,587,1035,1812,3184,5589,9803,17213,30199,52999,93014,163214,286439,502655,882095,1547991 ★ Sum of the products of pairs of Padovan numbers which are two apart, starting from A000931(5). ● a(n) = 2 * a(n - 1) - 2 * a(n - 4) + 2 * a(n - 5) - 2 * a(n - 6) + a(n - 7) for n>6. ●
► [A303005] 3,5,11,19,35,65,119,219,403,741,1363,2507,4611,8481,15599,28691,52771,97061,178523,328355,603939,1110817,2043111,3757867,6911795 ★ Number of dominating sets in the n - pan graph. ● a(n) = a(n - 1) + a(n - 2) + a(n - 3). ●
► [A131887] 3,5,11,19,41,71,153,265,571,989,2131,3691,7953,13775,29681,51409,110771,191861,413403,716035,1542841,2672279,5757961,9973081,21489003 ★ Number of Khalimsky - continuous functions with a three - point codomain. ● a(2k) = a(2k - 1) + a(2k - 2) + a(2k - 3) and a(2k - 1) = a(2k - 2) + 2a(2k - 3). ●
► [A045691] 0,1,1,3,5,11,19,41,77,159,307,625,1231,2481,4921,9883,19689,39455,78751,157661,315015,630337,1260049,2520723,5040215 ★ Number of binary words of length n with autocorrelation function 2 ^ (n - 1) + 1. ● a(2 * n - 1) = 2 * a(2 * n - 2) - a(n) for n >= 2; a(2 * n) = 2 * a(2 * n - 1) + a(n) for n >= 2. ●
► [A293820] 1,1,3,5,11,19,43,75,155,287,567,1053,2063,3859,7455,14089,27083,51463,98855,188697,362675,695155,1338087,2573235,4962875 ★ Number of integer - sided polygons having perimeter n, modulo rotations but not reflections. ● a(n) = (Sum _{ d|n } phi(n / d) * 2 ^ d) / n - 1 - 2 ^ floor(n / 2). - _ Andrew Howroyd _ , Nov 21 2017 ●
► [A094588] 0,1,3,5,11,20,38,69,125,223,395,694,1212,2105,3639,6265,10747,18376,31330,53277,90385,153011,258523,436010,734136 ★ a(n) = n * F(n - 1) + F(n), where F = A000045. ● a(n) = (sin(c * n) * i - n * sin(c * (n - 1))) / (i ^ n * sqrt(5 / 4)) where c = arccos(i / 2). - _ Peter Luschny _ , May 16 2022 ●
► [A293948] 1,1,3,5,11,20,41,82,163,334,659,1350,2667,5430,10763,21782,43307,87254,173867,349270,697003,1397590,2791595,5591382,11174571 ★ Arises in a coin - weighing problem. ● a(n) = (2 ^ (n + 1) + 1) / 3 + (1 / 2 - n / 8) * 2 ^ (n

/ 2) if n>2 is even. ● a(n) = (2 ^ (n + 1) + 2) / 3 - 2 ^ ((n + 1) / 2) / 4 if n> 1 is odd. ●

▶ [A269112] 3,5,11,21,33,47,65,87,111,137,167,201,237,275,317,363,411,461,515,573,633,695,761,831,903 ⋆ a(n) = (3 * (n - 1) * n + (- 1) ^ ((n - 1) * n / 2) + 5) / 2. ● a(n) = (3 * n ^ 2 - 3 * n + cos(n * Pi / 2) + sin(n * Pi / 2) + 5) / 2. ● a(n) = 3 * (n - 1) ^ 2 - 3 * (n - 1) - a(n - 2) + 8 for n>2. ● a(n) = 3 * a(n - 1) - 4 * a(n - 2) + 4 * a(n - 3) - 3 * a(n - 4) + a(n - 5) for n>5. - _ Colin Barker _ , Feb 22 2016 ●

▶ [A093328] 3,5,11,21,35,53,75,101,131,165,203,245,291,341,395,453,515,581,651,725,803,885,971,1061,1155 ⋆ a(n) = 2 * n ^ 2 + 3. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). (End) ●

▶ [A045515] 0,1,3,5,11,21,35,63,97,153,229,351,474,714,957,1329,1760,2430,3061,4159,5176,6774,8413,10879,13075 ⋆ Number of conjugacy classes of elements of order n in 2.E _ 7(C). ● a(n) = Sum _{ d|n } mu(n / d) * [x ^ d * z ^ 0] b(x, z), n > 0, where b(x,z) = 1 / ((1 - x) * (1 - x ^ 2) ^ 2 * (1 - x ^ 3) * (1 - x ^ 4) * (1 - z * x) * (1 - z * x ^ 2) * (1 - z * x ^ 3)) with z ^ 2=1. - _ Sean A. Irvine _ , Mar 13 2021 ●

▶ [A192664] 1,1,3,5,11,21,41,80,155,303,593,1162,2280,4478,8806,17336,34158,67361,132938,262532,518776,1025694,2028969,4015445,7950176 ⋆ Floor - Sqrt transform of the binomial coefficients bin(2 * n + 1,n) (A001700). ● a(n) = floor(sqrt(binomial(2 * n + 1,n))). ●

▶ [A291219] 1,1,3,5,11,21,42,83,163,323,635,1255,2473,4880,9625,18985,37451,73869,145715,287421,566954,1118331,2205947,4351307,8583091 ⋆ p - INVERT of (0,1,0,1,0,1,...), where p(S) = 1 - S - S ^ 3. ● a(n) = a(n - 1) + 3 * a(n - 2) - a(n - 3) - 3 * a(n - 4) + a(n - 5) + a(n - 6) for n >= 7. ●

▶ [A283584] 1,3,5,11,21,43,69,219,261,795,1301,2923,5205,11691,20805,46811,83205,187163,333077,748395,1332309,2993579,5329221,11974363,21316869 ⋆ Decimal representation of the x - axis, from the origin to the right edge, of the n - th stage of growth of the two - dimensional cellular automaton defined by "Rule 646", based on the 5 - celled von Neumann neighborhood. ● a(n) = 4 * a(n - 2) + a(n - 8) - 4 * a(n - 10) for n>11. ●

▶ [A001045] 0,1,1,3,5,11,21,43,85,171,341,683,1365,2731,5461,10923,21845,43691,87381,174763,349525,699051,1398101,2796203,5592405 ⋆ Jacobsthal sequence (or Jacobsthal numbers): a(n) = a(n - 1) + 2 * a(n - 2), with a(0) = 0, a(1) = 1; also a(n) = nearest integer to 2 ^ n / 3. ● a(n) = 2 ^ (n - 1) - a(n - 1). a(n) = 2 * a(n - 1) - (- 1) ^ n = (2 ^ n - (- 1) ^ n) / 3. ● a(2 * n) = 2 * a(2 * n - 1) - 1 for n >= 1, a(2 * n + 1) = 2 * a(2 * n) + 1 for n >= 0. - _ Lee Hae - hwang _ , Oct 11 2002; corrected by Mario Catalani (mario.catalani(AT)unito.it), Dec 04 2002 ● a(n) = Sum _{ k=1..n } binomial(n, k) * (- 1) ^ (n + k) * 3 ^ (k - 1). - _ Paul Barry _ , Apr 02 2003 ● a(n) = U(n - 1, i / (2 * sqrt(2))) * (- i * sqrt(2)) ^ (n - 1) with i ^ 2= - 1. - _ Paul Barry _ , Nov 17 2003 ● a(n + 1) = Sum _{ k=0..ceiling(n / 2) } 2 ^ k * binomial(n - k, k). - _ Benoit Cloitre _ , Mar 06 2004 ● a(n) = round(2 ^ n / 3) = (2 ^ n + (- 1) ^ (n - 1)) / 3 so lim _{ n ->infinity } 2 ^ n / a(n) = 3. - _ Gerald McGarvey _ , Jul 21 2004 ●

▶ [A152046] 1,1,1,3,5,11,21,43,85,171,341,683,1365,2731,5461,10923,21845,43691,87381,174763,349525,699051,1398101,2796203,5592405 ⋆ a(n) = Product _{ k =1..floor((n - 1) / 2) } (1 + 8 * cos(k * Pi / n) ^ 2) for n >= 0. ● a(n) = a(n - 1) + 2 * a(n - 2) for n>2. ● a(n) = ((- 1) ^ (1 + n) + 2 ^ n) / 3 for n>0. (End) ●

▶ [A283642] 1,3,5,11,21,43,85,171,341,683,1365,2731,5461,10923,21845,43691,87381,174763,349525,699051,1398101,2796203,5592405,11184811,22369621 ⋆ Decimal representation of the x - axis, from the origin to the right edge, of the n - th stage of growth of the two - dimensional cellular automaton defined by "Rule 678", based on the 5 - celled von Neumann neighborhood. ● a(n) = (2 ^ (n + 2) - 1) / 3 for n even. ● a(n) = (2 ^ (n + 2) + 1) / 3 for n odd. ● a(n) = a(n - 1) + 2 * a(n - 2) for n>1. ● a(n) = floor((4 * 2 ^ n + 1) / 3). - _ Karl V. Keller, Jr. _ , Sep 03 2021 ●

▶ [A283647] 1,3,5,11,21,43,93,179,373,715,1501,2867,6005,11467,24029,46003,96117,184011,384477,736051,1537909,2944203,6151645,11776947,24606581 ⋆ Decimal representation of the x - axis, from the origin to the right edge, of the n - th stage of growth of the two - dimensional cellular automaton defined by "Rule 694", based on the 5 - celled von Neumann neighborhood. ● a(n) = 4 * a(n - 2) + a(n - 8) - 4 * a(n - 10) for n>11. ●

▶ [A283905] 1,3,5,11,21,43,93,179,381,763,1533,3059,6141,12283,24573,49139,98301,196603,393213,786419,1572861,3145723,6291453,12582899,25165821 ⋆ Decimal representation of the x - axis, from the origin to the right edge, of the n - th stage of growth of the two - dimensional cellular automaton defined by "Rule 758", based on the 5 - celled von Neumann neighborhood. ● a(n) = 2 * a(n - 1) + a(n - 4) - 2 * a(n - 5) for n>4. ●

▶ [A293338] 3,5,11,22,43,87,174,348,696,1392,2784,5567,11134,22268,44536,89073,178145,356291,712581,1425163,2850325,5700650,11401300,22802601,45605201 ⋆ The integer k that minimizes |k / 2 ^ n - e|. ● a(n) = floor(1 / 2 + e * 2 ^ n). ●

▶ [A007008] 0,1,1,3,5,11,22,47,93,193,386,793,1586,3238,6476,13167,26333,53381,106762,215955,431910,872218,1744436,3518265,7036530 ⋆ Chvatal conjecture for radius of graph of maximal intersecting sets. ● a(n)=round(2 ^ (n - 2) - binomial(n - 1,floor((n - 1) / 2)) / 2), cf. Thm. 14 in the Loeb - Meyerowitz paper. - _ M. F. Hasler _ , Jan 14 2014 ●

▶ [A347287] 1,3,5,11,23,39,75,151,279,559,1071,2127,4255,8351,16687,33327,66095,132191,263263,526511,1052847,2101423,4202847,8405695,16794303 ⋆ a(n) = Sum _{ k = 1..m } 2 ^ (e _ k - 1) where e _ k = floor(log _ p _ k(p _ (k - 1) ^ e _ (k - 1))) such that e _ k > 0. ● a(n) = row sum of 2 ^ (m - 1) where m are terms in row n of A347285. ●

▶ [A155753] 3,5,11,23,43,73,115,171,243,333,443,575,731,913,1123,1363,1635,1941,2283,2663,3083,3545,4051,4603,5203 ⋆ a(n) = (n ^ 3 - n + 9) / 3. ● a(n) = a(n - 1) + n * (n - 1), with a(1)=3 . ● a(n) - 4 * a(n - 1) + 6 * a(n - 2) - 4 * a(n - 3) + a(n - 4) = 0 with n>4. ●

▶ [A072828] 3,5,11,23,47,59,179,239,359,719,839,1259,5039,7559,10079,55439,110879,166319,665279,1081079,1441439,6486479,32432399,61261199,698377679 ⋆ Primes p such that p + 1 is a highly composite number. ● a(n) == 2 (mod 3) for n > 1 (because highly composite numbers > 4 are == 0 (mod 3); see A002182) . - _ Jonathan Sondow _ , Nov 05 2015 ●

▶ [A269964] 1,1,3,5,11,23,53,121,279,639,1465,3357,7699,17659,40509,92921,213143,488903,1121441,2572357,5900475,13534515,31045477,71212113,163346335 ⋆ Start with a square; at each stage add a square at each expandable vertex so that the ratio of the side of the squares at stage n + 1 and at stage n is the golden ratio phi=0.618...; a(n) is the number of squares in a portion of the n - th stage (see below). ● a(n) = 2 * a(n - 1) + a(n - 2) - 2 * a(n - 3) + 2 * a(n - 4) + 2 * a(n - 5) - 2. ● a(n) = 3 * a(n - 1) - a(n - 2) - 3 * a(n - 3) + 4 * a(n - 4) - 2 * a(n - 6). ●

▶ [A305412] 1,3,5,11,23,53,125,307,769,1959,5039,13049,33929,88451,230957,603667,1578823,4130829,10810469,28295411,74067401,193893263,507590495,1328842801,3478880593 ⋆ a(n) = F(n) * F(n + 1) + F(n + 2), where F = A000045 (Fibonacci numbers). ● a(n) = 3 * a(n - 1) + a(n - 2) - 5 * a(n - 3) - a(n - 4) + a(n - 5). ●

▶ [A104545] 1,1,1,3,5,11,25,55,129,303,721,1743,4241,10415,25761,64095,160385,403263,1018369,2581887,6569089,16767871,42927105,110194175,283574017 ⋆ Number of Motzkin paths of length n having no consecutive (1,0) steps. ● a(n + 1) = sum(binomial(2 * k,k) / (k + 1) * (binomial(2 * k,n - 2 * k + 1) + binomial(2 * k,n - 2 * k)),k,ceiling(n / 4),(n + 1) / 2), a(0)=1. - _ Vladimir Kruchinin _ , Mar 14 2012 ●

▶ [A109249] 0,1,3,5,11,25,63,203,627,1855,5745,17975,55377,170873,529837,1640141,5071723,15696101,48582587,150328439,465178711,1439575547,4454855557,13785596531,42660346149 ⋆ Expansion of x * (- 1 + 2 * x - x ^ 2 + 7 * x ^ 3 + 8 * x ^ 4 - 7 * x ^ 5 + 8 * x ^ 6) / ((4 * x ^ 3 - x ^ 2 + 3 * x - 1) * (2 * x ^ 4 - 2 * x ^ 3 + 3 * x ^ 2 + 1) * (x - 1) ^ 2). ● a(n) = 5 * a(n - 1) - 11 * a(n - 2) + 26 * a(n - 3) - 45 * a(n - 4) + 57 * a(n - 5) - 61 * a(n - 6) + 48 * a(n - 7) - 26 * a(n - 8) + 8 * a(n - 9) for n>8. - _ Colin Barker _ , May 13 2019 ●

▶ [A288828] 1,3,5,11,27,55,119,239,495,991,2015,4031,8127,16255,32639,65279,130815,261631,523775,1047551,2096127,4192255,8386559,16773119,33550335 ⋆ Decimal representation of the diagonal from the origin to the corner of the n - th stage of growth of the two - dimensional cellular automaton defined by "Rule 515", based on the 5 - celled von Neumann neighborhood. ● a(n) = 3 * a(n - 1) - 6 * a(n - 3) + 4 * a(n - 4) for n > 5 (conjectured). ●

▶ [A279674] 1,3,5,11,29,67,149,347,813,1875,4325,10027,23229,53731,124341,287867,666317,1542131,3569413,8261963,19123037,44261763,102448341,237127067,548852845 ⋆ The maximum number of coins that can be processed in n weighings that all are real except for one LHR - coin starting in the heavy state. ● a(n) = 2 * a(n - 1) - a(n - 2) + 4 * a(n - 3). ●

▶ [A168607] 3,5,11,29,83,245,731,2189,6563,19685,59051,177149,531443,1594325,4782971,14348909,43046723,129140165,387420491,1162261469,3486784403,10460353205,31381059611,94143178829,282429536483 ⋆ a(n) = 3 ^ n + 2. ● a(n) = 3 * a(n - 1) - 4, a(0) = 3. ● a(n) = 4 * a(n - 1) - 3 * a(n - 2), a(0)=3, a(1)=5. - _ Vincenzo Librandi _ , Feb 06 2013 ●

▶ [A144467] 3,5,11,41,919,3517,6691,13709,23669,52301,83101,146051,417959,777901,970231,1076401,1894117,2315069,2592269,2641469,2777111,2997227,3523343,3788843,4076257 ⋆ A038601 type numbers where Prime of Prime numbers: a(n)=Prime[A038601 (n)]. ● a(n)=Prime[A038601 (n)]. ●

▶ [A062530] 3,5,11,97,1847,5623,89753,3851587,1872852203,1999066711903,22790428875365903 ⋆ Smallest prime p such that there is a gap of 2 ^ n between p and previous prime. ● a(n) = A000230[2 ^ (n - 1)] + 2 ^ n = Min { p | p - prevprime(p)=2 ^ n } . - _ Amarnath Murthy _ , Feb 24 2002 ●

▶ [A101315] 3,5,11,431,1877,2081,3851,9437,10427,11351,12821,14561,20147,26861,30137,30851,37571,38711,38921,40637,46817,59357,73361,116687,120941 ⋆ Primes p such that p + 2, p ^ 2 - 2p + 2, and p ^ 2 - 2p + 4 are all prime. ● a(n) >> n log ^ 4 n. - _ Charles R Greathouse IV _ , Jan 14 2017 ●

▶ [A182537] 0,1,3,5,12,12,22,33,63,103,156,264,408,669,1075,1733,2792,4540,7350,11877,19207,31095,50312,81384,131704 ⋆ a(0)=0, a(1)=1, a(n) = a(n - 1) + (a(n - 2) XOR n). ● a(0)=0, a(1)=1, a(n) = a(n - 1) + (a(n - 2) XOR n), where XOR is the bitwise exclusive - or operator. ●

▶ [A057587] 0,1,3,5,12,15,30,34,60,65,105,111,168,175,252,260,360,369,495,505,660,671,858,870,1092 ⋆ Nonnegative numbers of form n * (n ^ 2 +- 1) / 2. ● a(n) = (2 * n ^ 3 + 9 * n ^ 2 + 15 * n + 5 + (3 * n ^ 2 + n - 5) * (- 1) ^ n) / 32. - _ Luce ETIENNE _ , Nov 18 2014 ● a(n) = a(n - 1) + 3 * a(n - 2) - 3 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) + a(n - 6) - a(n - 7). (End) ● a(2 * n + 1) + a(2 * n) = (a(2 * n + 1) - a(2 * n)) ^ 3. - _ Greg Dresden _ , Feb 10 2022 ●

▶ [A213036] 0,1,3,5,12,16,20,33,39,45,64,72,80,105,115,125,156,168,180,217,231,245,288,304,320 ⋆ n ^ 2 - [2n / 3] ^ 2, where [] = floor. ● a(n) = a(n - 1) + 2 * a(n - 3) - 2 * a(n - 4) - a(n - 6) + a(n - 7). ●

▶ [A032438] 0,0,3,5,12,16,27,33,48,56,75,85,108,120,147,161,192,208,243,261,300,320,363,385,432 ⋆ a(n) = n ^ 2 - floor((n + 1) / 2) ^ 2. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5), n > 4. - _ Harvey P. Dale _ , Nov 24 2011 ●

▶ [A305552] 1,1,3,5,12,17,47,65,170,277,655,1025,2739,4097,10281,17257,41364,65537,170047,262145,660296,1094457,2621965,4194305,10898799 ⋆ Number of uniform normal multiset partitions of weight n. ● a(n) = Sum _{ d|n } binomial(2 ^ (n / d - 1) + d - 1, d). ●

▶ [A295360] 1,3,5,12,18,27,41,63,98,155,247,392,628,1008,1624,2620,4228,6831,11041,17853,28874,46706,75559,122244,197778 ⋆ Solution of the complementary equation a(n) = a(n - 1) + a(n - 2) + b(n - 1) + b(n - 2) - 3 * b(n - 3), where a(0) = 1, a(1) = 3, a(2) = 5, b(0) = 2, b(1) = 4, b(2) = 6, and (a(n)) and (b(n)) are increasing complementary sequences. ● a(n) / a(n - 1) - > (1 + sqrt(5)) / 2 = golden ratio (A001622). ●

▶ [A024458] 1,1,3,5,12,19,40,65,130,210,404,654,1227,1985,3653,5911,10720,17345,31090,50305,89316,144516,254568,411900,720757 ⋆ a(n) = s(1) * s(n) + s(2) * s(n - 1) + ... + s(k) * s(n + 1 - k), where k = floor((n + 1) / 2), s = (Fibonacci numbers). ● a(2 * n) = (1 / 5) * (n * Lucas(2 * n + 1) + Fibonacci(2 * n)), n >= 1. ● a(2 * n + 1) = (1 / 5) * ((- 1) ^ n + (n + 1) * Lucas(2 * n + 2) + Fibonacci(2 * n + 1)), n >= 0. ● a(n) = Sum _{ j=0..floor((n - 1) / 2) } fibonacci(j + 1) * Fibonacci(n - j). (End) ●

► [A143643] 1,3,5,12,19,45,71,168,265,627,989,2340,3691,8733,13775,32592,51409,121635,191861,453948,716035,1694157,2672279,6322680,9973081 ⋆ Numerators of the lower principal convergents and the lower intermediate convergents to 3 ^ (1 / 2). ● a(n) = 4 * a(n - 2) - a(n - 4). G.f.: x * (1 + 3 * x + x ^ 2) / (1 - 4 * x ^ 2 + x ^ 4). - _ Colin Barker _ , Apr 28 2012 ●
► [A177143] 1,3,5,12,22,47,91,186,368,741,1477,2960,5914,11835,23663,47334,94660,189329,378649,757308,1514606,3029223,6058435,12116882,24233752 ⋆ Pasquale's sequence: a(n) = 2a(n - 1) + (- 1) ^ n * floor(n / 2), with a(1)=1. ● a(n) = (1 / 2) * 2 ^ n + 2 ^ n * Sum { k=1..n }{ floor(k / 2) * (- 1 / 2) ^ k } , n>=1. - _ Paolo P. Lava _ , May 28 2010 ● a(n) = 2 * a(n - 1) + n / 2 if n is even; a(n) = 2 * a(n - 1) - (n - 1) / 2 if n is odd, with a(1)=1. - _ Vincenzo Librandi _ , Sep 30 2010 ● a(n) = 13 * 2 ^ n / 18 - 1 / 4 + (- 1) ^ n * (n / 6 + 1 / 36) = a(n - 1) + 3 * a(n - 2) - a(n - 3) - 2 * a(n - 4). - _ R. J. Mathar _ , Nov 18 2010 ●
► [A191391] 0,1,1,3,5,12,22,49,93,200,386,814,1586,3304,6476,13381,26333,54096,106762,218386,431910,880616,1744436,3547658,7036530 ⋆ Number of horizontal segments in all dispersed Dyck paths of length n (i.e., in all Motzkin paths of length n with no (1,0) - steps at positive heights; a horizontal segment is a maximal sequence of consecutive (1,0) - steps). ● a(0)=0 and a(n)=2 ^ (n - 1) - C(n - 1,floor(n / 2) - 1) for n>=1. [_ Joerg Arndt _ , Aug 07 2012, aeb] ●
► [A161624] 3,5,12,22,56,76,132,162,240,390,441,637,783,855,1023,1311,1634,1738,2107,2366,2491,2929,3233,3729,4453 ⋆ Sum of all numbers from n to n - th prime. ● a(n) = Sum _{ k=n..prime(n) } k. ●
► [A215109] 1,3,5,12,23,43,81,148,266,476,842,1478,2581,4481,7743,13328,22857,39073,66605,113242,192084,325128,549252,926220,1559353 ⋆ a(n) = A215082(2 * n + 1). ● a(n) = a(n - 1) + 2 * a(n - 2) + a(n - 3) - 2 * a(n - 4) - 3 * a(n - 5) - a(n - 6), a(0) = 1, a(1) = 3, a(2) = 5, a(3) = 12, a(4) = 23, a(5) = 43. ●
► [A131322] 1,1,3,5,12,23,51,103,221,456,965,2009,4227,8833,18540,38803,81363,170399,357145,748176,1567849,3284833,6883059,14421533,30218028 ⋆ Row sums of triangle A131321. ● a(n) = a(n - 1) + 3 * a(n - 2) - a(n - 3) - a(n - 4), a(0)=1, a(1)=1, a(2)=3, a(3)=5. - _ Philippe Deléham _ , Jan 21 2012 ● a(n) = Sum _{ m=0..ceiling(n / 2) } binomial(n - m,n - 2 * m) * Fibonacci(n - 2 * m + 1). - _ Vladimir Kruchinin _ , Jan 26 2013 ●
► [A141685] 1,1,3,5,12,25,54,116,249,535,1149,2468,5301,11386,24456,52529,112827,242341,520524,1118033,2401422,5158012,11078889,23796335,51112125 ⋆ a(1) = 1, a(n) = Sum _{ k=1..n } (k mod 3) * a(n - k) for n >= 2. ● a(n) = Sum _{ k=1..n } (k mod 3) * a(n - k). ●
► [A161762] 1,1,3,5,12,26,63,153,385,979,2520,6524,16965,44225,115479,301833,789412,2065414,5405235,14147705,37033701,96946631,253795248,664421400,1739440297 ⋆ Sum of all numbers from and including Fibonacci(n - 1) to and including Fibonacci(n). ● a(n) = 3 * a(n - 1) + a(n - 2) - 5 * a(n - 3) - a(n - 4) + a(n - 5). ● a(n) = (Lucas(2 * n - 1) + 5 * Fibonacci(n + 1) - 4 * (- 1) ^ n) / 10. - _ Greg Dresden _ , Jan 01 2021 ●
► [A291035] 1,3,5,12,27,58,130,285,629,1389,3060,6753,14892,32844,72445,159775,352401,777244,1714259,3780930,8339090,18392449,40565829,89470733,197333940 ⋆ p - INVERT of (1,0,0,1,0,0,1,0,0,...), where p(S) = 1 - S - 2 S ^ 2. ● a(n) = a(n - 1) + 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4) - a(n - 6) for n >= 7. ●
► [A323270] 0,3,5,12,33,92,257,715,1988,5529,15377,42745,118775,330015,917059,2548644,7083187,19684909,54704928,152026360,422489498,1174129226,3262989670,9068054805,25200655379 ⋆ Expansion of x * (1 - x) * (3 - 13 * x + 24 * x ^ 2 - 17 * x ^ 3 - 18 * x ^ 4 + 35 * x ^ 5 - 3 * x ^ 6 - 14 * x ^ 7 + x ^ 9) / (1 - 7 * x + 20 * x ^ 2 - 30 * x ^ 3 + 16 * x ^ 4 + 20 * x ^ 5 - 32 * x ^ 6 + 6 * x ^ 7 + 11 * x ^ 8 - 2 * x ^ 9 - x ^ 10). ● a(n) = 7 * a(n - 1) - 20 * a(n - 2) + 30 * a(n - 3) - 16 * a(n - 4) - 20 * a(n - 5) + 32 * a(n - 6) - 6 * a(n - 7) - 11 * a(n - 8) + 2 * a(n - 9) + a(n - 10). - _ Colin Barker _ , Jan 10 2019 ●
► [A086769] 1,3,5,13,15,23,25,33,65,67,99,107,109,117,149,181,183,215,223,225,257,265,297,425,433 ⋆ a(n) = sum { 2 ^ (b(i) - 1): 1<=i<=n } , where b(n) is the differences between consecutive primes. ● a(n) = a(n - 1) + 2 ^ (p(n + 1) - p(n) - 1). ●
► [A307512] 3,5,13,17,41,67,197,257,523,1031,2069,4129,8243,16451,32911,65537,131479,262153,524591,1048601,2097229,4194389,8388791,16777441,33554501 ⋆ a(n) is the smallest k > 2 ^ n such that 2 ^ (k - 1) == 1 (mod (2 ^ n - 1) * k). ● a(n) == 1 (mod n). ●
► [A360801] 1,3,5,13,17,51,65,169,281,603,1025,2373,4097,8655,16685,33969,65537,134151,262145,530269,1050481,2108439,4194305,8420201,16778337 ⋆ Expansion of Sum _{ k>0 } (x / (1 - 2 * x ^ k)) ^ k. ● a(n) = Sum _{ d|n } 2 ^ (n / d - 1) * binomial(d + n / d - 2,d - 1). ●
► [A131020] 3,5,13,17,61,67,97,139,157,163,173,223,271,349,353,419,479,503,541,691,701,743,877,941,1013 ⋆ For all cyclic quadrilaterals with four consecutive primes as sides that have an area that is prime after rounding, the sequence gives the first of these four consecutive primes. ● a(n) = prime(k) for some k such that, where S = semiperimeter = (prime(k) + prime(k + 1) + prime(k + 2) + prime(k + 3)) / 2 is an element of A131019 and rounded area = round(sqrt((S - prime(k) * S - prime(k + 1) * S - prime(k + 2) * S - prime(k + 3)) is prime. ●
► [A081353] 3,5,13,19,31,41,57,71,91,109,133,155,183,209,241,271,307,341,381,419,463,505,553,599,651 ⋆ Diagonal of square maze arrangement of natural numbers A081349. ● a(n) = (n + 1) * (n + 2) + (- 1) ^ n = 2 * binomial(n + 2,2) + (- 1) ^ n. ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4), n>4. ● a(n) = n ^ 2 + 3n + 3 if n is even, otherwise n ^ 2 + 3n + 1. ●
► [A360884] 1,1,3,5,13,19,33,53,87,141,229,371,601,973,1575,2549,4125,6677,10803,17481,28287,45769,74057,119827,193885 ⋆ a(n) = a(n - 1) + a(n - 2) + gcd(a(n - 1), n), a(1) = a(2) = 1. ● a(n) = a(n - 1) + a(n - 2) + gcd(a(n - 1), n), a(1) = a(2) = 1. ●
► [A168388] 1,3,5,13,21,39,57,89,121,171,221,293,365,463,561,689,817,979,1141,1341,1541,1783,2025,2313,2601 ⋆ First number in the n - th row of A172002. ● a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + a(n - 4) + 2 * a(n - 5) - a(n - 6). ● a(n) = (12 + n + 3 * (- 1) ^ n * n + 2 * n ^ 3) / 12. ●
► [A283583] 1,3,5,13,21,53,81,219,321,867,1349,3437,5445,13677,20805,56173,82245,222061,345413,879981,1393989,3501421,5326149,14380397,21054789 ⋆ Decimal representation of the x - axis, from the left edge to the origin, of the n - th stage of growth of the two - dimensional cellular automaton defined by ”Rule 646”, based on the 5 - celled von Neumann neighborhood. ● a(n) = a(n - 2) + 256 * a(n - 8) - 256 * a(n - 10) for n>11. ●
► [A086893] 1,3,5,13,21,53,85,213,341,853,1365,3413,5461,13653,21845,54613,87381,218453,349525,873813,1398101,3495253,5592405,13981013,22369621 ⋆ a(n) is the index of F(n + 1) at the unique occurrence of the ordered pair of reversed consecutive terms (F(n + 1),F(n)) in Stern’s diatomic sequence A002487, where F(k) denotes the k - th term of the Fibonacci sequence A000045. ● a(n + 2) = 4 * a(n) + 1, a(1) = 1, a(2) = 3, n > 0. - _ Yosu Yurramendi _ , Mar 07 2017 ●
► [A283646] 1,3,5,13,21,53,93,205,349,845,1501,3277,5597,13517,24029,52685,89565,216525,384477,839117,1433053,3460557,6151645,13487565,22928861 ⋆ Decimal representation of the x - axis, from the left edge to the origin, of the n - th stage of growth of the two - dimensional cellular automaton defined by ”Rule 694”, based on the 5 - celled von Neumann neighborhood. ● a(n) = a(n - 2) + 256 * a(n - 8) - 256 * a(n - 10) for n>11. ●
► [A283752] 1,3,5,13,21,53,93,205,381,893,1533,3325,6141,14333,24573,53245,98301,229373,393213,851965,1572861,3670013,6291453,13631485,25165821 ⋆ Decimal representation of the x - axis, from the left edge to the origin, of the n - th stage of growth of the two - dimensional cellular automaton defined by ”Rule 758”, based on the 5 - celled von Neumann neighborhood. ● a(n) = a(n - 1) + 16 * a(n - 4) - 16 * a(n - 5) for n>4. ●
► [A014437] 1,1,3,5,13,21,55,89,233,377,987,1597,4181,6765,17711,28657,75025,121393,317811,514229,1346269,2178309,5702887,9227465,24157817 ⋆ Odd Fibonacci numbers. ● a(n) = Fibonacci(3 * floor((n + 1) / 2)) + (- 1) ^ n). - _ Antti Karttunen _ , Feb 05 2001 ● a(n) = ((cos(Pi * n / 2) - sqrt(phi) * sin(Pi * n / 2)) / phi ^ ((3 * n + 2) / 2) + (sqrt(phi) * cos(Pi * n / 2) ^ 2 + sin(Pi * n / 2) ^ 2) * phi ^ ((3 * n + 1) / 2)) / sqrt(5), where phi=(1 + sqrt(5)) / 2. ●
► [A005824] 0,1,1,3,5,13,23,59,105,269,479,1227,2185,5597,9967,25531,45465,116461,207391,531243,946025,2423293,4315343,11053979,19684665 ⋆ a(n) = 5a(n - 2) - 2a(n - 4). ● a(n) = (1 / 68) * (- 1) ^ n * [5 / 2 + (1 / 2) * sqrt(17)] ^ (- 1 / 4) * [5 / 2 + (1 / 2) * sqrt(17)] ^ [(1 / 4) * (- 1) ^ n] * [5 / 2 + (1 / 2) * sqrt(17)] ^ [(1 / 2) * n] * sqrt(17) - (1 / 68) * [5 / 2 - (1 / 2) * sqrt(17)] ^ (- 1 / 4) * (- 1) ^ n * sqrt(17) * [5 / 2 - (1 / 2) * sqrt(17)] ^ [(1 / 4) * (- 1) ^ n] * [5 / 2 - (1 / 2) * sqrt(17)] ^ [(1 / 2) * n] + ●
► [A336103] 1,1,1,3,5,13,24,56,108,236,464,976,1936,3984,7936,16128,32192,64960,129792,260864,521472,1045760,2091008,4188160,8375296 ⋆ Number of separable multisets of size n covering an initial interval of positive integers. ● a(n) = 2 ^ (n - 1) - (floor(n / 2) + 1) * 2 ^ (floor(n / 2) - 2) for n >= 2. - _ David A. Cornerth _ , Jul 09 2020 ● a(n) = 2 * a(n - 1) + 4 * a(n - 2) - 8 * a(n - 3) - 4 * a(n - 4) + 8 * a(n - 5) for n > 6. ●
► [A219699] 3,5,13,25,45,78,130,208,320,475,683,955,1303,1740,2280,2938,3730,4673,5785,7085,8593,10330,12318,14580,17140 ⋆ Number of n X 3 arrays of the minimum value of corresponding elements and their horizontal, vertical or antidiagonal neighbors in a random, but sorted with lexicographically nondecreasing rows and columns, 0..1 n X 3 array. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>6. ●
► [A159290] 3,5,13,25,53,105,213,425,853,1705,3413,6825,13653,27305,54613,109225,218453,436905,873813,1747625,3495253,6990505,13981013,27962025,55924053 ⋆ A generalized Jacobsthal sequence. ● a(n) = - 1 + (2 * (- 1) ^ n + 5 * 2 ^ (n + 1)) / 3. ●
► [A110494] 3,5,13,25,61,85,145,181,265,421,481,685,841,925,1105,1405,1741,1861,2245,2521,2665,3121,3445,3961,4705 ⋆ Least k such that prime(n) ^ 2 divides binomial(2k,k). ● a(n) = (prime(n) ^ 2 + 1) / 2 for n > 1. ●
► [A098615] 1,1,3,5,13,25,61,125,295,625,1447,3125,7151,15625,35491,78125,176597,390625,880125,1953125,4390901,9765625,21920913,48828125,109486993 ⋆ G.f. A(x) satisfies: A(x * G(x)) = G(x), where G(x) is the g.f. for A098614(n) = Fibonacci(n + 1) * Catalan(n). ● a(2 * n + 1) = 5 ^ n. ● a(n) = Sum _{ k=0..floor((n + 1) / 2) } (C(n,k) - C(n,k - 1)) * F(n - 2k + 1). - _ Paul Barry _ , Oct 01 2007 ● a(n) = Sum _{ k=0..n } binomial((n - 1) / 2,(n - k) / 2) * 2 ^ (n - k - 1) * ((- 1) ^ (n - k) + 1). - _ Vladimir Kruchinin _ , Apr 16 2011 ● a(n) is the upper left term in M ^ n, M = an infinite square production matrix as follows: ●
► [A026003] 1,1,3,5,13,25,63,129,321,681,1683,3653,8989,19825,48639,108545,265729,598417,1462563,3317445,8097453,18474633,45046719,103274625,251595969 ⋆ a(n) = T([n / 2],[(n + 1) / 2]), where T = Delannoy triangle (A008288). ● a(n) = Sum _{ k=0..floor(n / 2) } C(n - k, k) * C(n - 2k, floor((n - 2k) / 2)). - _ Paul Barry _ , Jul 30 2005 ●
► [A076156] 1,3,5,13,26,37,49,51,61,62,65,69,73,74,77,91,99,115,123,125,129,146,157,169,185 ⋆ Numbers n such that Omega(n + 1) = Omega(n) + 1, where Omega(m) (A001222) denotes the number of prime factors of m, counting multiplicity. ● a(n) seems to be asymptotic to c * n where c=7.6.... - _ Benoit Cloitre _ , Jan 15 2003 ●
► [A288827] 1,3,5,13,27,59,119,247,495,1007,2015,4063,8127,16319,32639,65407,130815,261887,523775,1048063,2096127,4193279,8386559,16775167,33550335 ⋆ Decimal representation of the diagonal from the corner to the origin of the n - th stage of growth of the two - dimensional cellular automaton defined by ”Rule 515”, based on the 5 - celled von Neumann neighborhood. ● a(n) = 3 * a(n - 1) - 6 * a(n - 3) + 4 * a(n - 4) for n > 5. ●
► [A084173] 1,3,5,13,27,59,121,249,503,1015,2037,4085,8179,16371,32753,65521,131055,262127,524269,1048557,2097131,4194283,8388585,16777193,33554407 ⋆ a(n) = 3 * a(n - 1) - a(n - 2) - 3 * a(n - 3) + 2 * a(n - 4). ● a(n) = 2 ^ (n + 1) - (2 * n + 1) / 2 - (- 1) ^ n / 2. ●
► [A026569] 1,1,3,5,13,27,67,153,375,893,2189,5319,13089,32155,79479,196573,487833,1212135,3018355,7525585,18792303,46980373,117589689,294613155,738844719 ⋆ a(n) = T(n,n), T given by A026568. Also a(n) = number of integer strings s(0),...,s(n) counted by T, such that s(n)=0. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(2 * k, k) * binomial(n - k, k). - _ Paul Barry _ , Sep 09 2004 ● a(n) = Sum _{ k=0..n } C(k, n - k) * C(2 * (n - k), n - k). - _ Paul Barry _ , Jul 30 2005 ●
► [A335562] 1,1,1,3,5,13,29,71,165,421,1029,2647,6593,17241,43801,115555,297513,791337,2062737,5516755,14497373,38994597,103269053,278921927,742950845 ⋆ Number of unlabelled unary - binary trees with n nodes such that every node w

ith two children has children of different subtree sizes. ● a(1) = 1, a(n) = a(n - 1) + Sum _{ k=1..n - 2 } (a(k) * a(n - k - 1) * [k != n - k - 1]). ●

▶ [A190667] 1,3,5,13,30,69,160,371,859,1990,4610,10679,24738,57306,132750,307517,712367,1650207,3822725,8855390,20513621,47520058,110080805,255003553,590718900 ⋆ Expansion of (1 + 2 * x) / (1 - x ^ 4 - 2 * x ^ 3 - 2 * x ^ 2 - x). ● a(n) = a(n - 1) + 2 * a(n - 2) + 2 * a(n - 3) + a(n - 4), a(0)=1, a(1)=3, a(2)=5, a(3)=13. ●

▶ [A135532] 1,3,5,13,31,75,181,437,1055,2547,6149,14845,35839,86523,208885,504293,1217471,2939235,7095941,17131117,41358175,99847467,241053109,581953685,1404960479 ⋆ a(n) = 2 * a(n - 1) + a(n - 2), with a(0)= - 1, a(1)= 3. ● a(n) = (1 / 2) * ((2 * sqrt(2) - 1) * (1 + sqrt(2)) ^ n - (1 + 2 * sqrt(2)) * (1 - sqrt(2)) ^ n), with n>=0. - _ Paolo P. Lava _ , Jun 09 2008 ● a(n) = ((3 + sqrt(2)) * (1 + sqrt(2)) ^ n + (3 - sqrt(2)) * (1 - sqrt(2)) ^ n) / 2 with offset 0. - Al Hakanson (hawkuu(AT)gmail.com), Jun 17 2009 ●

▶ [A304357] 0,1,1,3,5,13,32,94,297,1036,3911,15918,69350,321779,1582745,8220349,44925187,257563819,1544896976,9671289892,63051738167,427254561854,3003872526303,21876513464296,164790822258172 ⋆ Antidiagonal sums of the first quadrant of array A(k,m) = F _ k(m), F _ k(m) being the k - th Fibonacci polynomial evaluated at m. ● a(n) = Sum _{ j=0..n } F _ j(n - j). ● a(n + 1) = Sum _{ j = 0..n } Sum _{ i = j..floor((n + j) / 2) } binomial(i,j) * (n + j - 2 * i) ^ j (empirically). - _ Mathew Englander _ , Feb 28 2021 ●

▶ [A278024] 1,1,1,3,5,13,37,107,341,1141,4021,14831,57017,227617,941305,4020455,17705753,80215513,373370329,1782362219,8716939229,43615569829,223069903933,1164867074483,6206075782925 ⋆ Number of irreducible involutions of length n. ● a(n) = Sum _{ k=floor((n + 2) / 4)..floor(n / 2) } Sum _{ j=0..k } (- 1) ^ (k - j) * binomial(k - 1,k - j) * binomial(2 * j + 1,n - 2 * k) * (2 * j)! / (2 ^ j * j!). - _ Andrew Howroyd _ , May 08 2023 ●

▶ [A198636] 3,5,13,38,117,370,1186,3827,12389,40169,130338,423065,1373466,4459278,14478659,47011093,152642789,495626046,1609284589,5225309458,16966465802,55089756851,178875298901,580804419201,1885860059450 ⋆ One half of total number of round trips, each of length 2n, on the graph P _ 6 (o - o - o - o - o - o). ● a(n) = w(6,2 * n) / 2, n>=0, with w(6,l) the total number of closed walks on the graph P _ 6 (the simple path with 6 points (vertices) and 5 lines (or edges)). ● a(n) = 7 * (binomial(2n - 1,n - 1) + sum _{ k = 1..floor(n / 7) } binomial(2n,n - 7k)) - 2 ^ (2n - 1). - _ M. Lawrence Glasser _ , Feb 20 2013 ● a(n) = 5 * a(n - 1) - 6 * a(n - 2) + a(n - 3). - _ M. F. Hasler _ , Nov 05 2013 ●

▶ [A321358] 3,5,13,45,173,685,2733,10925,43693,174765,699053,2796205,11184813,44739245,178956973,715827885,2863311533,11453246125,45812984493,183251937965,733007751853,2932031007405,11728124029613,46912496118445,187649984473773 ⋆ a(n) = (2 * 4 ^ n + 7) / 3. ● a(n) = 5 * a(n - 1) - 4 * a(n - 2), a(0) = 3, a(1) = 5. ● a(n) = 4 * a(n - 1) - 7, a(0) = 3. ● a(n) = (2 / 3) * (4 ^ n - 1) / 3 + 3. ●

▶ [A074378] 0,3,5,14,18,33,39,60,68,95,105,138,150,189,203,248,264,315,333,390,410,473,495,564,588 ⋆ Even triangular numbers halved. ● a(n) = n * (n + 1) / 4 where n * (n + 1) / 2 is even. ● a(n) = (2 * n + 1) * floor((n + 1) / 2). ● a(2 * k) = k * (4 * k + 1); a(2 * k + 1) = (k + 1) * (4 * k + 3). (End) ● a(n) = (4 * n + 1 - (- 1) ^ n) * (4 * n + 3 - (- 1) ^ n) / 4 ^ 2. - _ Peter Bala _ , Jan 21 2019 ● a(n) = (2 * n + 1) * (n + 1) * (1 + (- 1) ^ (n + 1)) / 4 + (2 * n + 1) * (n) * (1 + (- 1) ^ n) / 4. - _ Eric Simon Jacob _ , Jan 16 2020 ●

▶ [A295359] 1,3,5,14,24,41,68,112,183,298,484,786,1275,2064,3342,5409,8754,14166,22923,37092,60019,97116,157138,254257,411398 ⋆ Solution of the complementary equation a(n) = a(n - 1) + a(n - 2) + b(n - 1) + b(n - 2) - 2 * b(n - 3), where a(0) = 1, a(1) = 3, a(2) = 5, b(0) = 2, b(1) = 4, b(2) = 6, and (a(n)) and (b(n)) are increasing complementary sequences. ● a(n) / a(n - 1) - > (1 + sqrt(5)) / 2 = golden ratio (A001622). ●

▶ [A363542] 1,3,5,14,38,114,360,1166,3872,13094,44961,156244,548636,1943333,6935817,24917586,90039163,327029681,1193258619,4371901789,16077606949,59325057056,219579151797,815017718383,3032959638204 ⋆ G.f. satisfies A(x) = exp(Sum _{ k>=1 } (- 1) ^ (k + 1) * (2 ^ k + A(x ^ k)) * x ^ k / k). ● a(0) = 1; a(n) = (- 1 / n) * Sum _{ k=1..n } ((- 2) ^ k + Sum _{ d|k } (- 1) ^ (k / d) * d * a(d - 1)) * a(n - k). ●

▶ [A230585] 3,5,14,42,132,429,1430,4862,16796,58786,208012,742900,2674440,9694845,35357670,129644790,477638700,1767263190,6564120420,24466267020,91482563640,343059613650,1289904147324,4861946401452,18367353072152 ⋆ First terms of first rows of zigzag matrices as defined in A088961. ● a(n) = binomial(2 * n,n) - binomial(2 * n,n + 2) + 0 ^ (n - 1). ●

▶ [A129326] 3,5,14,54,264,1560,10800,85680,766080,7620480,83462400,997920000,12933043200,180583603200,2702527027200,43153254144000,732297646080000,13160434839552000,249692574523392000,4987449116762112000,104614786351595520000,2299092397726924800000 ⋆ a(n) = (2 * n + 1) * (n - 1)!. ● a(n) = (n + 1)! * h(n + 1) - n * (n + 1) * (n - 1)! * h(n - 1), where h(n) = Sum _{ k=1..n } 1 / k. - _ Gary Detlefs _ , Jul 19 2011 ●

▶ [A103127] 1,3,5,15,17,19,21,31,33,35,37,47,49,51,53,63,65,67,69,79,81,83,85,95,97 ⋆ Numbers congruent to {- 1, 1, 3, 5 } mod 16. ● a(n) = a(n - 4) + 16. (End) ● a(n) = (1 + i) * i ^ n - (- 1) ^ n + 4 * n + (1 - i) * (- i) ^ n, with n>=0 and i=sqrt(- 1). - _ Paolo P. Lava _ , Nov 19 2008 ●

▶ [A001317] 1,3,5,15,17,51,85,255,257,771,1285,3855,4369,13107,21845,65535,65537,196611,327685,983055,1114129,3342387,5570645,16711935,16843009 ⋆ Sierpiński's triangle (Pascal's triangle mod 2) converted to decimal. ● a(n + 1) = a(n) XOR 2 * a(n), where XOR is binary exclusive OR operator. - _ Paul D. Hanna _ , Apr 27 2003 ● a(n) = Product _{ e(j, n) = 1 } (2 ^ (2 ^ j) + 1), where e(j, n) is the j - th least significant digit in the binary representation of n (Roberts: see Allouche & Shallit). - _ Benoit Cloitre _ , Jun 08 2004 ● a(2 * n + 1) = 3 * a(2 * n). Proof: Since a(n) = Product _{ k in K } (1 + 2 ^ (2 ^ k)), where K is the set of integers such that n = Sum _{ k in K } 2 ^ k, clearly K(2 * n + 1) = K(2 * n) union { 0 } , hence a(2 * n + 1) = (1 + 2 ^ (2 ^ 0)) * a(2 * n) = 3 * a(2 * n). - Emmanuel Ferrand and _ Ralf Stephan _ , Sep 28 2004 ● a(32 * n) = 3 ^ (32 * n * log(2) / log(3)) + 1. - _ Bret Mulvey _ , May 17 2008 ● a(2 ^ (n - 1) - 1) * a(2 ^ n * m + 2 ^ (n - 1)) = 3 * a(2 ^ (n - 1)) * a(2 ^ n * m + 2 ^ (n - 1) - 2). - _ Vladimir Shevelev _ , Nov 28 2010 ●

▶ [A054432] 1,1,3,5,15,17,63,85,219,325,1023,1105,4095,5397,13515,21845,65535,70737,262143,333125,890523,1397077,4194303,4527185,16236015 ⋆ a(n) = Sum _{ 1<=k<=n, gcd(k,n)=1 } 2 ^ (k - 1). ● a(4 * n) = (2 ^ (2 * n) + 1) * a(2 * n) [think how the reduced residue set of the numbers of the form 4n are formed]. ● a(n - 1) = Sum _{ k=1..n, gcd(n, k) = 1 } 2 ^ (k - 1). - _ Vladeta Jovovic _ , Aug 15 2002 ●

▶ [A284481] 1,3,5,15,23,63,95,239,383,1023,1535,3839,6143,16383,24575,61439,98303,262143,393215,983039,1572863,4194303,6291455,15728639,25165823 ⋆ Decimal representation of the x - axis, from the left edge to the origin, of the n - th stage of growth of the two - dimensional cellular automaton defined by "Rule 950", based on the 5 - celled von Neumann neighborhood. ● a(n) = a(n - 1) + 16 * a(n - 4) - 16 * a(n - 5) for n>5. ●

▶ [A290662] 1,3,5,15,23,63,95,255,383,1023,1535,4095,6143,16383,24575,65535,98303,262143,393215,1048575,1572863,4194303,6291455,16777215,25165823 ⋆ Decimal representation of the diagonal from the origin to the corner of the n - th stage of growth of the two - dimensional cellular automaton defined by "Rule 899", based on the 5 - celled von Neumann neighborhood. ● a(n) = a(n - 1) + 4 * a(n - 2) - 4 * a(n - 3) for n > 3. ●

▶ [A056487] 1,3,5,15,25,75,125,375,625,1875,3125,9375,15625,46875,78125,234375,390625,1171875,1953125,5859375,9765625,29296875,48828125,146484375,244140625 ⋆ a(n) = 5 ^ (n / 2) for n even, a(n) = 3 * 5 ^ ((n - 1) / 2) for n odd. ● a(n + 2) = 5 * a(n), a(0)=1, a(2)=3. ● a(n + 3) = a(n + 2) * a(n + 1) / a(n). - _ Reinhard Zumkeller _ , Mar 04 2011 ● a(n) = 3 ^ ((1 - (- 1) ^ n) / 2) * 5 ^ ((2 * n + (- 1) ^ n - 1) / 4). - _ Bruno Berselli _ , Mar 24 2011 ● a(n + 1) = (k ^ floor((n + 1) / 2) + k ^ ceiling((n + 1) / 2)) / 2, where k=5 is the number of possible colors. - _ Robert A. Russell _ , Sep 22 2018 ●

▶ [A163114] 3,5,15,25,75,125,375,625,1875,3125,9375,15625,46875,78125,234375,390625,1171875,1953125,5859375,9765625,29296875,48828125,146484375,244140625,732421875 ⋆ a(n) = 5 * a(n - 2) for n > 2; a(1) = 3, a(2) = 5. ● a(n) = (2 - (- 1) ^ n) * 5 ^ (1 / 4 * (2 * n - 1 + (- 1) ^ n)). ●

▶ [A274638] 0,0,3,5,15,27,63,119,255,495,1023,2015,4095,8127,16383,32639,65535,130815,262143,523775,1048575,2096127,4194303,8386559,16777215 ⋆ Main diagonal of A274637. ● a(n) = (- 1 + 2 ^ n + 2 ^ ((n - 3) / 2) * (- 1 + (- 1) ^ n)). ● a(n) = 2 ^ n - 1 for n even. ● a(n) = 2 ^ n - 1 - 2 ^ ((n - 1) / 2) for n odd. ● a(n) = 3 * a(n - 1) - 6 * a(n - 3) + 4 * a(n - 4) for n>3. ●

▶ [A340670] 1,1,1,3,5,15,29,47,101,199,413,847,1621,3255,6541,13087,26373,52423,104637,209711,419253,839511,1678317,3353919,6710629 ⋆ Number of complex base i - 1 points which can be represented within n bits and negated within those n bits. ● a(n) = a(n - 1) + 2 * a(n - 3) + 8 * a(n - 5). ● a(n) = (2 / 5) * 2 ^ n + (h / 15) * 2 ^ floor(n / 2) + (2 / 3) * Im((1 / 2 + i * sqrt(7) / 2) ^ (n + 1)) where h = 4, - 2, - 2,6, - 4,2,2, - 6 according as n == 0 to 7 (mod 8) respectively. ●

▶ [A118173] 1,3,5,15,29,55,93,247,477,887,1501,3959,7645,14199,24029,63351,122333,227191,384477,1013623,1957341,3635063,6151645,16217975,31317469 ⋆ Decimal representation of n - th iteration of the Rule 188 elementary cellular automaton starting with a single black cell. ● a(n) = (1 / 30) * (- 14 + 3 * i * (2 * i) ^ n + 55 * 2 ^ n) for n odd, ● a(n) = (1 / 15) * (- 13 + 3 * (2 * i) ^ n + 25 * 2 ^ n) for n even, where i = sqrt(- 1). ● a(n) = a(n - 2) + 16 * a(n - 4) - 16 * a(n - 6) for n>5. (End) ● a(n) = floor(28 * 4 ^ n / 15) + 2 ^ n - floor(28 * 2 ^ n / 15) * 2 ^ n. - _ Karl V. Keller, Jr. _ , Nov 11 2021 ●

▶ [A079450] 1,3,5,15,29,55,101,175,269,807,1397,2143,6429,11095,16901,50703,86573,259719,517013,1026751,2031677,3997879,7799333,15009391,28250957 ⋆ a(n) = 2 ^ (n - 1) * u(n) where u(1)=1 and u(n) = frac(3 / 2 * u(n - 1)) + 1. ● a(n + 1)<=3 * a(n). Conjecture : a(n + 1)=3 * a(n) if and only if n is a greedy power of (2 / 3) (i.e. n is in A077468) ●

▶ [A284482] 1,3,5,15,29,63,125,247,509,1023,2045,4087,8189,16383,32765,65527,131069,262143,524285,1048567,2097149,4194303,8388605,16777207,33554429 ⋆ Decimal representation of the x - axis, from the origin to the right edge, of the n - th stage of growth of the two - dimensional cellular automaton defined by "Rule 950", based on the 5 - celled von Neumann neighborhood. ● a(n) = 2 * a(n - 1) + a(n - 4) - 2 * a(n - 5) for n>5. ●

▶ [A126087] 1,1,3,5,15,29,87,181,543,1181,3543,7941,23823,54573,163719,381333,1143999,2699837,8099511,19319845,57959535,139480397,418441191,1014536117,3043608351 ⋆ Expansion of c(2 * x ^ 2) / (1 - x * c(2 * x ^ 2)), where c(x) = (1 - sqrt(1 - 4 * x)) / (2 * x) is the g.f. of the Catalan numbers (A000108). ● a(n) = Sum _ (k=1..n } (1 + (- 1) ^ (n - k)) * k * 2 ^ ((n - k) / 2 - 1) * C(n,(n + k) / 2) / n, n>0. - _ Vladimir Kruchinin _ , Feb 18 2011 ●

▶ [A292689] 1,3,5,15,31,45,119,231,325,975,2015,2925,8191,16383,23405,61431,118759,166725,499151,1030623,1495405,4186623,8372735,11960685,31392247 ⋆ Decimal values of the antidiagonals of the Sierpinski carpet considered as binary numbers. ● a(k + 1) = 2 * a(k) + 1 for all k in A003462 = (1, 4, 13, 40, 121, 364, ...). (Conjectured.) - _ R. J. Cano _ , Oct 25 2017 ●

▶ [A286521] 1,3,5,15,31,63,127,255,511,1023,2047,4095,8191,16383,32767,65535,131071,262143,524287,1048575,2097151,4194303,8388607,16777215,33554431 ⋆ Decimal representation of the diagonal from the origin to the corner (or of the corner to the origin) of the n - th stage of growth of the two - dimensional cellular automaton defined by "Rule 659", based on the 5 - celled von Neumann neighborhood. ● a(n) = 2 ^ (1 + n) - 1 for n>2. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>4. ●

▶ [A120748] 0,1,3,5,15,32,79,185,439,1041,2464,5841,13835,32781,77663,184000,435935,1032817,2446959,5797345,13735104,32541281,77096979,182658581,432755695 ⋆ Expansion of x ^ 2 * (1 + 2 * x - x ^ 2) / (1 - x - 3 * x ^ 2 - x ^ 3 + x ^ 4). ● a(n) = a(n - 1) + 3 * a(n - 2) + a(n - 3) - a(n - 4). ●

▶ [A182143] 1,3,5,15,33,83,197,479,1153,2787,6725,16239,39201,94643,228485,551615,1331713,3215043,7761797,18738639,45239073,109216787,263672645,636562079,1536796801 ⋆ Number of independent vertex sets in the Moebius ladder graph with 2n nodes (n >= 0). ● a(n) = a(n - 1) + 3 * a(n - 2) + a(n - 3) with a(0)=1, a(1)=3, a(2)=5. ● a(n) = Pell(n - 1) + Pell(n + 1) - (- 1) ^ n. ● a(n) = [x ^ n] ((1 + 2 * x + sqrt(1 + 8 * x + 8 * x ^ 2)) / 2) ^ n. ●

▶ [A262326] 3,5,15,33,99,261,783,2241,6723,19845,59535,177633,532899,1595781,4787343,14353281,43059843,129153285,387459855,1162300833,3486902499,10460471301,31381413903,94143533121,282430599363 ⋆ Number of (n + 1) X (2 + 1) 0..1 arrays with each row and column divisible by 3, read as a binary number with top and left being the most significant bits. ● a(n) = 2 * 3 ^ (n / 2 - 1) + 3 ^ (n - 1) for n even. ● a(n) = 2 * 3 ^ ((n - 3) / 2 + 1) + 3 ^ (n - 1) for n odd. ●

▶ [A279684] 1,3,5,15,37,87,205,495,1173,2759,6493,15263,35749,83575,195181,455247,1060533,2468391,5740925,13342975,30993349,71956951,166991501,387397551,898427605 ⋆ The maximum number of coins that can be processed in n weighings that all are real except for one LHR - coin starting in the heavy or real state. ● a(n) = 3a(n - 1) - a(n - 2) + a(n - 3) - 2a(n - 4) - 8a(n - 5). ●

▶ [A161703] 1,3,5,15,41,91,173,295,465,691,981,1343,1785,2315,2941,3671,4513,5475,6565,7791,9161,10683,12365,14215,16241 ⋆ a(n) = (4 * n ^ 3 - 12 * n ^ 2 + 14 * n + 3) / 3. ● a(n) = C(n,0) + 2 * C(n,1) + 8 * C(n,3). ●

▶ [A103425] 1,3,5,15,41,123,365,1095,3281,9843,29525,88575,265721,797163,2391485,7174455,21523361,64570083,193710245,581130735,1743392201,5230176603,15690529805,47071589415,141214768241 ⋆ a(n) = 3 * a(n - 1) + a(n - 2) - 3 * a(n - 3). ● a(n) = 1 + (3 ^ n - (- 1) ^ n) / 2. ●

▶ [A190733] 1,3,5,15,49,175,657,2559,10241,41855,173953,732927,3123457,13439743,58307841,254779391,1120247809,4952864767,22005184513,98196398079,439923990529,1977917169663,8921667641345,40361657696255,183092192411649 ⋆ Expansion of (4 * x + 2) / (1 + sqrt(1 - 4 * x - 4 * x ^ 2)). ● a(n) = (n + 1) * sum(k=1..n + 1,binomial(k,n - k + 1) * Catalan(k - 1) / k). ●

▶ [A080056] 1,3,5,16,22,24,28,34,37,43,45,49,51,54,57,59,65,68,70,74,80,88,94,97,100 ⋆ Greedy powers of (2 / Pi): sum _{ n=1..inf } (2 / Pi) ^ a(n) = 1. ● a(n) =sum _{ k=1..n } floor(g _ k) where g _ 1=1, g _{ n + 1 } =log _ x(x ^ frac(g _ n) - x) (n>0) at x=(2 / Pi) and frac(y) = y - floor(y). See A077468 for mathematica program by _ Robert G. Wilson v _ . ●

▶ [A295358] 1,3,5,16,30,55,95,161,268,442,724,1181,1921,3120,5061,8201,13283,21506,34812,56342,91179,147547,238753,386328,625110 ⋆ Solution of the complementary equation a(n) = a(n - 1) + a(n - 2) + b(n - 1) + b(n - 2) - b(n - 3), where a(0) = 1, a(1) = 3, a(2) = 5, b(0) = 2, b(1) = 4, b(2) = 6, and (a(n)) and (b(n)) are increasing complementary sequences. ● a(n) / a(n - 1) - > (1 + sqrt(5)) / 2 = golden ratio (A001622). ●

▶ [A106588] 3,5,16,33,96,133,240,297,448,741,840,1225,1512,1653,1984,2553,3192,3397,4128,4641,4888,5757,6360,7345,8784 ⋆ Difference between n - th prime squared and n - th perfect square. ● a(n) = prime(n) ^ 2 - n ^ 2. ●

▶ [A326653] 1,3,5,17,21,29,33,201,213,239,251,453,479,497,533,7157,7169,8013,8069,8351,8381,8561,8681,13469,13589 ⋆ Nested base shift convergence sequence (NBSC): gives the constant term of the convergence of a number n into a base sequence conversion nest: a(n) = ...FromDigits(IntegerDigits(FromDigits(IntegerDigits(n,2),3),4),5)..., until the result does not change for more iterations. ● a(n) = ...FromDigits(IntegerDigits(FromDigits(IntegerDigits(n,2),3),4),5)..., until the number no longer varies in the next iteration. ●

▶ [A211440] 1,3,5,17,23,29,53,63,73,109,123,137,185,203,221,281,303,325,397,423,449,533,563,593,689 ⋆ Number of ordered triples (w,x,y) with all terms in {- n,...,0,...,n } and 2w + 3x + 3y=0. ● a(n) = a(n - 1) + 2 * a(n - 3) - 2 * a(n - 4) - a(n - 6) + a(n - 7) for n>6. ● a(3 * j) = 10 * j ^ 2 + 6 * j + 1. ● a(3 * j + 1) = 10 * j ^ 2 + 10 * j + 3. ● a(3 * j + 2) = 10 * j ^ 2 + 14 * j + 5. ●

▶ [A024862] 3,5,17,23,50,62,110,130,205,235,343,385,532,588,780,852,1095,1185,1485,1595,1958,2090,2522,2678,3185 ⋆ a(n) = s(1) * t(n) + s(2) * t(n - 1) + ... + s(k) * t(n - k + 1), where k = floor(n / 2), s = natural numbers, t = odd natural numbers. ● a(n) = (8 * n ^ 3 + 6 * (- 1) ^ n * n ^ 2 + 12 * n ^ 2 + 6 * (- 1) ^ n * n - 2 * n + 3 * (- 1) ^ n - 3) / 48. ● a(n) = (4 * n ^ 3 + 9 * n ^ 2 + 2 * n) / 24 for n even. ● a(n) = (4 * n ^ 3 + 3 * n ^ 2 - 4 * n - 3) / 24 for n odd. (End) ●

▶ [A058580] 1,3,5,17,29,29,99,169,577,985,985,3363,5741,19601,33461,33461,114243,195025,195025,1136689,1136689,3880899,6625109,6625109,38613965 ⋆ a(n) is the least natural number m such that the fractional part of m * (2 ^ 0.5) is less than 2 ^ (- n). ● a(n) = min m such that m * (2 ^ 0.5) - floor(m * (2 ^ 0.5)) < 2 ^ (- n). ●

▶ [A079496] 1,1,3,5,17,29,99,169,577,985,3363,5741,19601,33461,114243,195025,665857,1136689,3880899,6625109,22619537,38613965,131836323,225058681,768398401 ⋆ a(0) = a(1) = 1; thereafter a(2 * n + 1) = 2 * a(2 * n) - a(2 * n - 1), a(2 * n) = 4 * a(2 * n - 1) - a(2 * n - 2). ● a(2n + 1) = ceiling((2 + sqrt(2)) / 4 * (3 + 2 * sqrt(2)) ^ n), a(2n) = ceiling(1 / 2 * (3 + 2 * sqrt(2)) ^ n). ● a(n) = 6 * a(n - 2) - a(n - 4). - _ R. J. Mathar _ , Apr 04 2008 ● a(n) = (sqrt(2) * sqrt(2 + (3 - 2 * sqrt(2)) ^ n + (3 + 2 * sqrt(2)) ^ n)) / (2 + sqrt(2) + (- 1) ^ n * (- 2 + sqrt(2))). - _ Gerry Martens _ , Jun 06 2015 ● a(n) = 2 ^ (n - 1) * H(n, n mod 2, 1 / 2) for n >= 3 where H(n, a, b) = hypergeom([a - n / 2, b - n / 2], [1 - n], - 1). - _ Peter Luschny _ , Sep 03 2019 ●

▶ [A371927] 1,1,1,3,5,17,33,113,237,803,1769,5915,13493,44547,104337,340527,814397,2630857,6399865,20486905,50548997,160507953,400834465,1263577141,3188428301 ⋆ Expansion of 1 / (1 - x / (1 - 8 * x ^ 2) ^ (1 / 4)). ● a(n) = Sum _{ k=0..floor(n / 2) } 8 ^ k * binomial((n + 2 * k) / 4 - 1,k). ●

▶ [A085749] 3,5,17,61,317,1951,13697,109597,986411,9864091,108505097,1302061337,16926797467,236975164793,3554627472059,56874039553189,966858672404659,17403456103284379,330665665962403997,6613313319248079991 ⋆ Largest prime p for which every solution of the congruence x ^ n + y ^ n == z ^ n (mod p) is such that p divides x * y * z. ● a(n) is the largest prime < n! * e + 1. ●

▶ [A114161] 3,5,17,91,667,6213,70233,933819,14277555,246772485,4757596065,101218975515,2355535057995,59520844736325,1622874515042025,47490277029572475,1484579154624005475,49374909670517201925 ⋆ E.g.f.: (3 - log(1 - 2 * x)) / (1 - 2 * x) ^ (1 / 2). ● a(n) = 2 ^ n * GAMMA(n + 1 / 2) / Pi ^ (1 / 2) * (3 + Psi(n + 1 / 2) + gamma + 2 * log(2)). - _ Vladeta Jovovic _ ●

▶ [A023394] 3,5,17,257,641,65537,114689,274177,319489,974849,2424833,6700417,13631489,26017793,45592577,63766529,167772161,825753601,1214251009,6487031809,70525124609,190274191361,646730219521,2710954639361,2748779069441 ⋆ Prime factors of Fermat numbers. ● a(n) >> n ^ 2 log ^ 2 n, see Křížek, Luca, & Somer. - _ Charles R Greathouse IV _ , Jul 16 2013 ●

▶ [A016045] 3,5,17,347,13901,128981,128981,113575727,2426256797,137168442221,4656625081181,101951758179851,484511389338941,221860944705726407 ⋆ a(n) is the smallest prime p(k) such that the gaps between the primes p(k), p(k + 1), p(k + 2), ..., p(k + n) are 2, 4, 6, ... 2n. ● a(n) = min { x : x = prime; { x + k + k ^ 2 } = primes following x for k=1, .., n } ●

▶ [A007516] 1,3,5,17,65537 ⋆ (2 ^ 2 ^ ... ^ 2) (n times) + 1. ● a(1) = 1, a(2) = 3, a(n + 1) = 2 ^ (a(n) - 1) + 1. - _ Stefan Steinerberger _ , Apr 14 2006 ●

▶ [A143546] 1,1,1,3,5,18,35,136,285,1155,2530,10530,23751,100688,231880,996336,2330445,10116873,23950355,104819165,250543370,1103722620,2658968130,11777187240,28558343775 ⋆ G.f. satisfies: A(x) = 1 + x * A(x) ^ 3 * A(- x) ^ 2. ● a(2n) = C(5n,n) / (4n + 1); a(2n + 1) = C(5n + 2,n) * 3 / (4n + 3). ●

▶ [A211439] 1,3,5,19,25,31,59,69,79,121,135,149,205,223,241,311,333,355,439,465,491,589,619,649,761 ⋆ Number of ordered triples (w,x,y) with all terms in {- n,...,0,...,n } and w + 3x + 3y=0. ● a(n) = a(n - 1) + 2 * a(n - 3) - 2 * a(n - 4) - a(n - 6) + a(n - 7) for n>6. ●

▶ [A228471] 3,5,19,31,117,191,721,1177,4443,7253,27379,44695,168717,275423,1039681,1697233,6406803,10458821,39480499,64450159,243289797,397159775,1499219281,2447408809,9238605483 ⋆ a(n) = 6 * a(n - 2) + a(n - 4), where a(0) = 3, a(1) = 5, a(2) = 19, a(3) = 31. ● a(n) = (2 - 1 / 2 * (- 1) ^ n) * ((3 - sqrt(10)) ^ (1 / 4 * ((- 1) ^ n - 1) + 1 / 2 * n) + (3 + sqrt(10)) ^ (1 / 4 * ((- 1) ^ n - 1) + 1 / 2 * n)) + (3 / 20 * (- 1) ^ n - 13 / 20) * sqrt(10) * ((3 - sqrt(10)) ^ (1 / 4 * ((- 1) ^ n - 1) + 1 / 2 * n) - (3 + sqrt(10)) ^ (1 / 4 * ((- 1) ^ n - 1) + 1 / 2 * n)). - _ Paolo P. Lava _ , Sep 11 2013 ●

▶ [A273020] 1,1,3,5,19,39,141,321,1107,2675,8953,22483,73789,190345,616227,1621413,5196627,13882947,44152809,119385663,377379369,1030434069,3241135527,8921880135,27948336381 ⋆ a(n) = Sum _{ k=0..n } C(n,k) * ((- 1) ^ n * (C(k,n - k) - C(k,n - k - 1)) + C(n - k,k + 1)). ● a(n) = JacobiP(n, 1, - n - 3 / 2, - 7) / (n + 1) + GegenbauerC(n - 1, - n, - 1 / 2), with a(0) = 1. ● a(n) = hypergeom([- n,1 / 2], [2], 4) + n * hypergeom([- n / 2 + 1, - n / 2 + 1 / 2], [2], 4). ●

▶ [A242818] 1,1,3,5,19,39,173,407,2025,5281,28787,81597,479851,1459015,9156093,29582303,196506001,669822849,4680247715,16737058997,122398824579,457140004519,3484655325197,13541735424615,107230543328761 ⋆ a(n) = 2 ^ floor(n / 2) n! [x ^ n] exp(x + x ^ 2 / 4), where [x ^ n] f(x) denotes the coefficient of x ^ n in the expansion of f(x). ● a(n) = Sum _{ k=0..n } (s(n,k) * (- 1) ^ n - k) * b(k) / 2 ^ (ceiling(n / 2) - k) where the s(n,k) are the (signless) Stirling numbers of the first kind, and the b(n) are the Bell numbers. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n,2 * k) * (- 1) ^ k * 2 ^ (floor(n / 2) - 2 * k) * ((2 * k)! / k!) * i(n - 2 * k), where the i(n) are the involution numbers A000085. ● a(n) = I ^ (- n) * 2 ^ floor(n / 2) * U(- n / 2,1 / 2, - 1), where U(a,b,x) is Kummer's hypergeometric function of the second kind. - _ Peter Luschny _ , May 24 2014 ● a(n) = numerator(a(n - 1) + (a(n - 2) / 2) * (n - 2)) for a(1)=0 and a(2)=1. - _ Terry D. Grant _ , May 04 2017 ●

▶ [A340737] 3,5,19,49,193,685,2721,12341,49171,271801,1084483,7073725,28245729,212385209,848456353,7226001865,28875761731,274743964621,1098127402131,11544775603241,46150226651233,531276670190245,2124008553358849,26573182030311229,106246577894593683 ⋆ Numerators of a sequence of fractions converging to e. ● a(1) = 3, a(2) = 5; for n > 2, a(n) = (n + 2) * a(n - 1) / 2 - a(n - 2) - (n - 2) * a(n - 3) / 2 if n is even, 2 * a(n - 1) + n * a(n - 2) otherwise. ●

▶ [A174132] 3,5,19,53,163,485,1459,4373,13123,39365,118099,354293,1062883,3188645,9565939,28697813,86093443,258280325,774840979,2324522933,6973568803,20920706405,62762119219,188286357653,564859072963 ⋆ 2 * 3 ^ (n - 1) - (- 1) ^ n. ● a(n) = 2 * sum[a(i), i=1..n - 1] - 2 * (- 1) ^ n + 1 for n>1. (End) ●

▶ [A055452] 1,3,5,19,75,305,1270,5390,23236,101480,448085,1997115,8973255,40602093,184853055,846206025,3892585325,17984308775,83417287855,388297304825,1813341109825,8493372326675,39889629750600 ⋆ T(n,n - 2), array T as in A055450. ● a(n) = 5 * hypergeometric([4 - n,7 / 2],[5], - 4), for n>3. - _ Peter Luschny _ , Aug 15 2012 ●

▶ [A261116] 0,1,3,5,20,29,119,169,696,985,4059,5741,23660,33461,137903,195025,803760,1136689,4684659,6625109,27304196,38613965,159140519,225058681,927538920 ⋆ Pairs of integers (a,b) such a ^ 2 + (a + 1) ^ 2 = b ^ 2. ● a(n) = 7 * a(n - 2) - 7 * a(n - 4) + a(n - 6) for n>6. ●

▶ [A295361] 1,3,5,20,40,76,134,230,386,640,1052,1720,2802,4554,7390,11980,19408,31429,50882,82357,133287,215694,349033,564781,913870 ⋆ Solution of the complementary equation a(n) = a(n - 1) + a(n - 2) + b(n - 1) + 2 * b(n - 2) - b(n - 3), where a(0) = 1, a(1) = 3, a(2) = 5, b(0) = 2, b(1) = 4, b(2) = 6, and (a(n)) and (b(n)) are increasing complementary sequences. ● a(n) / a(n - 1) - > (1 + sqrt(5)) / 2 = golden ratio (A001622). ●

▶ [A076149] 0,3,5,20,54,169,499,1506,4508,13535,40593,121792,365362,1096101,3288287,9864878,29594616,88783867,266351581,799054764,2397164270,7191492832,15754478475,64723435450,194170306324 ⋆ Expansion of x ^ 2(3 + 2x) / (1 - x - 5x ^ 2 - 3x ^ 3). ● a(1)=0; a(n + 1) = 3 * a(n) - (- 1) ^ n * (n + 2); a(n)=floor((11 / 48) * 3 ^ n + (- 1) ^ n * n / 4 + 1 / 2) ●

▶ [A256093] 1,3,5,20,101,572,3470,22040,144669,973356,6676186,46503080,328034226,2338460056,16819478972,121903180848,889396747869,6526715628492,48141140144546,356708675726088,2653863473928870,19816831149068360,148466651633265540,1115659552758534480 ⋆ G.f.: 2 - x * 2 / (1 - (1 - 8 * x) ^ (1 / 4)). ● a(n) = Sum _{ k=0..(n + 1) } binomial(2 * k - 2,k) * 2 ^ (n - k + 1) * binomial(2 * n - k,n - k + 1)) / n, a(0)=1. ●

▶ [A266203] 0,1,3,5,21,61,381,2045 ⋆ Number of steps k to make g _ k(n) converge to zero. ● a(n) = k such that g _ k(n)=0. ●

▶ [A216385] 1,3,5,21,78,403,2069,11856,70835 ⋆ Number of values of k for which phi(k) is a permutation of decimal digits of k, for k < 10 ^ n. ● a(n) = # { k in A115921 | k < 10 ^ n } . - _ M. F. Hasler _ , Feb 24 2014 ●

▶ [A084253] 1,3,5,21,108,660,4680,37800,342720,3447360,38102400,459043200,5987520000,84064780800,1264085222400,20268952704000,345226033152000,6224529991680000,118443913555968000,2372079457972224000 ⋆ a(n) is the denominator of the coefficient of z ^ (2n - 1) in the Maclaurin expansion of Sqrt[Pi]Erfi[z]. ● a(n) = (2 * n - 1) * (n - 1)! / 2 for n>2. ●

▶ [A025093] 3,5,22,30,66,82,161,191,342,394,680,768,1291,1437,2382,2622,4306,4698,7673,8311,13526,14562,23648,25328,41075 ⋆ a(n) = s(1)t(n) + s(2)t(n - 1) +

... + s(k)t(n - k + 1), where k = [n / 2], s = (Lucas numbers), t = (odd natural numbers). • a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + 3 * a(n - 4) - 2 * a(n - 5) - a(n - 6) + 4 * a(n - 7) - 3 * a(n - 8) + 2 * a(n - 9) - a(n - 10) for n>10. •

► [A025112] 3,5,22,30,73,91,172,204,335,385,578,650,917,1015,1368,1496,1947,2109,2670,2870,3553,3795,4612,4900,5863 ⋆ a(n) = s(1)s(n) + s(2)s(n - 1) + ... + s(k)s(n - k + 1), where k = floor(n / 2), s = (odd natural numbers). • a(n) = n * (4 * n ^ 2 - 3 * n + 2 + 3 * n * (- 1) ^ n) / 12. - _ Luce ETIENNE _ , Jan 07 2015 • a(n) = Sum _{ i=1..n - 1 } i * (2 * n - i) * (i mod 2). - _ Wesley Ivan Hurt _ , Apr 21 2020 •

► [A124423] 1,1,1,3,5,22,52,283,855,5451,19921,144074,614866,4941987,24040451,211648665,1152972925,10998989896,66200911138,678600959525,4465023867757,48850849177703,348383154017581,4045835816532096,31052765897026352 ⋆ Number of partitions of the set { 1,2,...,n } having no blocks that contain only even entries. • a(n) = Q[n](1,0,1), where the polynomials Q[n]=Q[n](t,s,x) are defined by Q[0]=1; Q[n]=t * dQ[n - 1] / dt + x * dQ[n - 1] / ds + x * dQ[n - 1] / dx + t * Q[n - 1] if n is odd and Q[n]=x * dQ[n - 1] / dt + s * dQ[n - 1] / ds + x * dQ[n - 1] / dx + s * Q[n - 1] if n is even. • a(n) = Sum _{ j=0..ceiling(n / 2) } Stirling2(ceiling(n / 2),j) * j ^ floor(n / 2). - _ Alois P. Heinz _ , Oct 23 2013 •

► [A199336] 1,3,5,23,39,181,307,1425,2417,11219,19029,88327,149815,695397,1179491,5474849,9286113,43103395,73109413,339352311,575589191,2671715093,4531604115,21034368433,35677243729 ⋆ x - values in the solution to 15 * x ^ 2 - 14 = y ^ 2. • a(n + 4) = 8 * a(n + 2) - a(n), a(1)=1, a(2)=3, a(3)=5, a(4)=23. •

► [A100302] 1,1,3,5,23,57,235,685,2559,8033,28499,92757,320743,1062793,3628731,12131069,41160911,138209457,467496739,1573172389,5313146295,17898525401,60403695755,203591898957,686821464991 ⋆ Expansion of (1 - x - 6 * x ^ 2) / ((1 - x) * (1 - x - 8 * x ^ 2)). • a(n) = 2 * a(n - 1) + 7 * a(n - 2) - 8 * a(n - 3). • a(n) = 3 / 4 + (1 / (4 * sqrt(33)) * (((1 + sqrt(33)) / 2) ^ (n + 1) - ((1 - sqrt(33)) / 2) ^ (n + 1)). •

► [A230080] 0,3,5,23,73,265,920,3245,11385,40018,140574,493911,1735243,6096533,21419128,75252674,264387942,928884046,3263482673,11465714843,40282921096,141527481021,497233748352,1746949771565,6137623429414 ⋆ Sequence needed for the nonpositive powers of rho(11) = 2 * cos(Pi / 11) in terms of the power basis of the degree 5 number field Q(rho(11)). Coefficients of the first power. • a(n) = 3 * a(n - 1) + 3 * a(n - 2) - 4 * a(n - 3) - a(n - 4) + a(n - 5) for n >= 0, with a(- 5)= - 3, a(- 4)=a(- 3)=a(- 2)=0, a(- 1)=1. •

► [A356274] 1,3,5,25,37,56,73,729,1001,1342,1741,2366,2941,3615,4369,83521,104977,130340,160021,194922,234741,280393,332377,406250,474553 ⋆ a(n) is the number whose base - (n + 1) expansion equals the binary expansion of n. • a(2 ^ n + 1) = 1 + (2 ^ n + 2) ^ n. • a(n) = (1 / n) * Sum _{ j>=1 } floor((n + 2 ^ (j - 1)) / 2 ^ j) * ((n - 1) * (n + 1) ^ (j - 1) + 1). •

► [A154143] 3,5,26,36,155,213,906,1244,5283,7253,30794,42276,179483,246405,1046106,1436156,6097155,8370533,35536826,48787044,207123803,284351733,1207205994,1657323356,7036112163 ⋆ Indices k such that 10 plus the k - th triangular number is a perfect square. • a(n) = a(n - 1) + 6 * a(n - 2) - 6 * a(n - 3) - a(n - 4) + a(n - 5). • a(1..4) = (3,5,26,36); a(n) = 6 * a(n - 2) - a(n - 4) + 2, for n > 4. - _ Ctibor O. Zizka _ , Nov 10 2009 •

► [A268409] 3,5,26,114,508,2260,10056,44744,199088,885840,3941536,17537824,78034368,347213120,1544921216,6874111104,30586286848,136093369600,605546052096,2694370947584,11988575894528,53343045473280,237349333682176,1056083425675264 ⋆ a(n) = 4 * a(n - 1) + 2 * a(n - 2) for n>1, a(0)=3, a(1)=5. • a(n) = ((18 + sqrt(6)) * (2 - sqrt(6)) ^ n - (sqrt(6) - 18) * (2 + sqrt(6)) ^ n) / 12. •

► [A162262] 3,5,30,78,155,267,420,620,873,1185,1562,2010,2535,3143,3840,4632,5525,6525,7638,8870,10227,11715,13340,15108,17025 ⋆ a(n) = (2 * n ^ 3 + 5 * n ^ 2 - 13 * n) / 2. • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). (End) •

► [A189739] 3,5,30,115,495,2060,8655,36265,152070,637535,2672955,11206540,46984395,196985885,825879630,3462568315,14517103095,60864150860,255177968055,1069854658465,4485453815670,18805634739335,78844173296355,330560693585740,1385902947238995 ⋆ a(1)=3, a(2)=5, a(n)=3a(n - 1) + 5a(n - 2) • a(n) = 3 / 2 * ((3 / 2 + 1 / 2 * sqrt(29)) ^ (n - 1) + (3 / 2 - 1 / 2 * sqrt(29)) ^ (n - 1)) + 1 / 58 * sqrt(29) * ((3 / 2 + 1 / 2 * sqrt(29)) ^ (n - 1) - (3 / 2 - 1 / 2 * sqrt(29)) ^ (n - 1)). - Paolo P. Lava, May 24 2011 •

► [A287474] 3,5,31,197,1123,6485,37567,217397,1258051,7280549,42133471,243831461,1411082659,8166108917,47258275711,273489449237,1582717053571,9159378096965,53006446688671,306754821216389,1775227849020643 ⋆ Number of dominating sets in the n - web graph. • a(n) = 5 * a(n - 1) + 3 * a(n - 2) + 9 * a(n - 3). •

► [A295364] 1,3,5,32,79,167,318,575,1003,1710,2869,4761,7840,12841,20953,34100,55395,89875,145690,236027,382223,618802,1001625,1621077,2623404 ⋆ Solution of the complementary equation a(n) = a(n - 1) + a(n - 2) + b(n - 1) * b(n - 2), where a(0) = 1, a(1) = 3, a[2] = 5, b(0) = 2, b(1) = 4, and (a(n)) and (b(n)) are increasing complementary sequences. • a(n) / a(n - 1) - > (1 + sqrt(5)) / 2 = golden ratio (A001622). •

► [A199774] 0,3,5,32,203,333,2112,13395,21973,139360,883867,1449885,9195648,58321827,95670437,606773408,3848356715,6312798957,40037849280,253933221363,416549060725,2641891279072,16755744253243,27485925208893,174324786569472 ⋆ x - values in the solution to 17 * x ^ 2 + 16 = y ^ 2. • a(n) = 66 * a(n - 3) - a(n - 6), a(1)=0, a(2)=3, a(3)=5, a(4)=32, a(5)=203, a(6)=333. •

► [A284379] 3,5,33,35,53,55,333,335,353,355,533,535,553,555,3333,3335,3353,3355,3533,3535,3553,3555,5333,5335,5353 ⋆ Numbers n with digits 3 and 5 only. • a(2n + 1) = 10 * a(n) + 3. • a(2n + 2) = 10 * a(n) + 5. •

► [A001790] 1,1,3,5,35,63,231,429,6435,12155,46189,88179,676039,1300075,5014575,9694845,300540195,583401555,2268783825,4418157975,34461632205,67282234305,263012370465,514589420475,8061900920775 ⋆ Numerators in expansion of 1 / sqrt(1 - x). • a(n) = numerator(L(n)), with rational L(n):=binomial(2 * n,n) / 2 ^ n. L(n) is the leading coefficient of the Legendre polynomial P _ n(x). •

► [A325582] 1,3,5,35,181,1135,8145,61839,509601,4463439,41334849,402989487,4117422337,43944607807,488583342657,5645234756671,67645819918849,839125267708479,10758054102964545,142339717159997439,1941001581534636545,27246049579466191103,393252398533473468673,5830129052356606111743,88696151815740778017537 ⋆ G.f. A(x) satisfies: 1 = Sum _{ n>=0 } x ^ n * ((1 + 2 * x) ^ n - A(x)) ^ (n + 1), where A(0) = 0. • a(n) = 1 (mod 2) for n >= 0. •

► [A155121] 3,5,57,237,677,1557,3105,5597,9357,14757,22217,32205,45237,61877,82737,108477,139805,177477,222297,275117,336837,408405,490817,585117,692397 ⋆ a(n) = 2 * n * (1 + n + n ^ 2 + n ^ 3) - 3. • a(n) = 2 * n * (1 + n + n ^ 2 + n ^ 3) - 3. •

► [A130187] 1,3,5,105,189,3465,19305,2027025,3828825,130945815,1249937325,105411381075,608142583125,30494006668125,412685556908625,19189878396251025,372509404162520625,2462701060852219687 5 ⋆ Numerators of rationals r(n) related to the z - sequence of the Sheffer matrix A060821 for Hermite polynomials. • a(n) = numerator(r(n)), n >= 0. r(n):= - 2 * z(2 * n + 1) (in lowest terms). The e.g.f. of z(n) is given above. •

► [A280427] 3,5,167,359,839,1367,1847,2207,3719,5039,7919,1295027,3442949,9393929,13997519,21253931,49430861,84604517,95443991,237176657,329939369,384240581,487443401,633839777,904231061 ⋆ a(n) is a prime, such that a(n) = p ^ d - 2 where p is a prime and d is the number of digits of p. • a(n) = p ^ d - 2, a(n) is prime, p is a prime and d is the number of digits of p. •

► [A130482] 0,1,3,6,6,7,9,12,12,13,15,18,18,19,21,24,24,25,27,30,30,31,33,36,36 ⋆ a(n) = Sum _{ k=0..n } (k mod 4) (Partial sums of A010873). • a(n) = (1 - (- 1) ^ n - (2 * i) * (- i) ^ n + (2 * i) * i ^ n + 6 * n) / 4 where i = sqrt(- 1). - _ Colin Barker _ , Oct 15 2015 • a(n) = 3 * n / 2 + (n mod 2) * ((n - 1) mod 4) - (n mod 2) / 2. - _ Ammar Khatab _ , Aug 27 2020 •

► [A333616] 0,1,3,6,6,10,10,15,15,21,21,28,28,36,36,45,45,55,55,66,66,78,78,91,91 ⋆ Expansion of x * (1 + 2 * x + x ^ 2 - 4 * x ^ 3 - x ^ 4 + 2 * x ^ 5) / ((1 - x) ^ 3 * (1 + x) ^ 2). • a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n > 2. •

► [A066779] 1,3,6,6,11,17,24,24,24,34,45,45,58,72,87,87,104,104,123,123,144,166,189,189,189 ⋆ Sum of squarefree numbers <= n. • a(n) = Sum _{ i=1..n } mu(i) ^ 2 * i. • a(n) = Sum _{ d=1..sqrt(n) } mu(d) * d ^ 2 * floor(n / d ^ 2) * floor(n / d ^ 2 + 1) / 2. - _ Charles R Greathouse IV _ , Apr 26 2012 •

► [A319867] 3,6,6,12,36,126,135,198,630,642,762,1950,1965,2160,4680,4698,4986,9576,9597,9996,17556,17580,18108,29700,29727 ⋆ a(n) = 3 * 2 * 1 + 6 * 5 * 4 + 9 * 8 * 7 + 12 * 11 * 10 + ... + (up to the n - th term). • a(n) = a(n - 1) + 4 * a(n - 3) - 4 * a(n - 4) - 6 * a(n - 6) + 6 * a(n - 7) + 4 * a(n - 9) - 4 * a(n - 10) - a(n - 12) + a(n - 13) for n>13. •

► [A152083] 1,3,6,7,7,8,10,13,14,14,15,17,20,21,21,22,24,27,28,28,29,31,34,35,35 ⋆ Number of occurrences of "I" in all Roman numerals of numbers from 1 to n • a(n + 5)=a(n) + 7 •

► [A047559] 0,1,3,6,7,8,9,11,14,15,16,17,19,22,23,24,25,27,30,31,32,33,35,38,39 ⋆ Numbers that are congruent to { 0, 1, 3, 6, 7 } mod 8. • a(0)=0, a(1)=1, a(2)=3, a(3)=6, a(4)=7, a(5)=8, a(n) = a(n - 1) + a(n - 5) - a(n - 6) for n>6. - _ Harvey P. Dale _ , Mar 04 2015 • a(n) = a(n - 5) + 8, for n>5. • a(n) = (40 * n - 35 + 3 * (n mod 5) - 7 * ((n + 1) mod 5) - 2 * ((n + 2) mod 5) + 3 * ((n + 3) mod 5) + 3 * ((n + 4) mod 5)) / 25. • a(5k) = 8k - 1, a(5k - 1) = 8k - 2, a(5k - 2) = 8k - 5, a(5k - 3) = 8k - 7, a(5k - 4) = 8k - 8. (End) •

► [A047283] 0,1,3,6,7,8,10,13,14,15,17,20,21,22,24,27,28,29,31,34,35,36,38,41,42 ⋆ Numbers that are congruent to { 0, 1, 3, 6 } mod 7. • a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. - _ Harvey P. Dale _ , Mar 09 2012 • a(n) = (14n - 15 + i ^ (2n) + (3 + i) * i ^ (- n) + (3 - i) * i ^ n) / 8 where i=sqrt(- 1). •

► [A047557] 0,3,6,7,8,11,14,15,16,19,22,23,24,27,30,31,32,35,38,39,40,43,46,47,48 ⋆ Numbers that are congruent to { 0, 3, 6, 7 } mod 8. • a(n) = 2 * n - 1 - sin(Pi * n / 2). (End) • a(n) = 2n - 1 - cos(Pi * (n - 1) / 2). - _ Wesley Ivan Hurt _ , Oct 22 2013 • a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4) for n>4. • a(n) = 2 * n - 2 - I ^ (1 - n) * (I ^ (n - 1) - 1) ^ 2 / 2 where I=sqrt(- 1). •

► [A005767] 3,6,7,9,11,12,13,14,15,17,18,19,21,22,23,24,25,26,27,28,29,30,31,33,34 ⋆ Solutions n to n ^ 2 = a ^ 2 + b ^ 2 + c ^ 2 (a,b,c > 0). • a(n) = n + 2 * log _ 2(n) + O(1). - _ Charles R Greathouse IV _ , Sep 01 2015 •

► [A186348] 3,6,7,9,11,12,14,16,17,18,20,21,23,24,25,27,28,30,31,32,33,35,36,37,39 ⋆ Adjusted joint rank sequence of (f(i)) and (g(j)) with f(i) after g(j) when f(i)=g(j), where f(i)=8i and g(j)=j ^ 2. Complement of A186349. • a(n) = n + floor(sqrt(8n)). •

► [A047558] 1,3,6,7,9,11,14,15,17,19,22,23,25,27,30,31,33,35,38,39,41,43,46,47,49 ⋆ Numbers that are congruent to { 1, 3, 6, 7 } mod 8. • a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. • a(n) = (8 * n - 3 - i ^ (2 * n) - i ^ (1 - n) + i ^ (1 + n)) / 4 where i=sqrt(- 1). •

► [A047242] 0,1,3,6,7,9,12,13,15,18,19,21,24,25,27,30,31,33,36,37,39,42,43,45,48 ⋆ Numbers that are congruent to { 0, 1, 3 } mod 6. • a(n) = a(n - 1) + a(n - 3) - a(n - 4), n>4. - _ Wesley Ivan Hurt _ , Dec 03 2014 • a(n) = n - 1 + floor((n - 1) / 3) + floor((2n - 2) / 3). - _ Wesley Ivan Hurt _ , Dec 03 2014 • a(n) = (6 * n - 8 - cos(2 * n * Pi / 3) + sqrt(3) * sin(2 * n * Pi / 3)) / 3. • a(3k) = 6k - 3, a(3k - 1) = 6k - 5, a(3k - 2) = 6k - 6. (End) • a(n) = 2 * n - 2 - sign((n - 1) mod 3). - _ Wesley Ivan Hurt _ , Sep 26 2017 •

► [A131392] 3,6,7,9,12,14,15,18,20,22,23,26,27,30,31,34,36,38,40,42,43,45,48,50,52 ⋆ Positions of negative integers in A131389, minus 1. • a(n) = - 1 + position of the n - th negative integer in the sequence A131389=(0,1,2, - 1,3,4, - 2, - 3,6, - 4,5,...) •

► [A131397] 3,6,7,9,12,14,15,18,20,22,23,26,28,29,32,33,36,38,40,42,44,45,47,50,52 ⋆ Positions of negative integers in A131394, minus 1. • a(n) = position of n - th negative integer in A131394, minus 1. •

► [A176409] 0,3,6,7,9,12,14,15,18,21,24,27,28,30,33,35,36,39,42,45,48,49,51,54,56 ⋆ Multiples of 3 or 7. • a(n + 9) = a(n) + 21. • a(n) = 21 * floor((n - 1) / 9) + 2 * ((n - 1) mod 9) + s(((n - 1) mod 9) - 1) + 1 - floor(((n - 2) mod 9) / 8), where s(n) = floor(n * sqrt(2)) - 2 * floor(n / sqrt(2)). - _ Gary Detlefs _ , Oct 07 2013 • a(n) = 7n / 3 + O(1). - _ Charles R Greathouse IV _ , Feb 13 2017 • a(n) = a(n - 1) + a(n - 9) - a(n - 10) for n>10. •

► [A330180] 1,3,6,7,10,12,15,16,19,21,24,25,28,30,31,34,36,39,40,43,45,48,49,52,54 ⋆ a(n) = n + floor(nr / t) + floor(ns / t), where r = e - 1, s = e, t = e + 1. • a(n) = n + floor(nr / t) + floor(ns / t), where r = e - 1, s = e, t = e + 1. •

► [A330184] 1,3,6,7,10,12,15,16,19,21,24,25,28,30,33,34,37,39,42,43,46,48,49,52,54 ⋆ a(n) = n + floor(nr / t) + floor(ns / t), where r = sqrt(2) - 1 / 2, s = sqrt(

2), t = sqrt(2) + 1 / 2. ● a(n) = n + floor(nr / t) + floor(ns / t), where r = sq rt(2) - 1 / 2, s = sqrt(2), t = sqrt(2) + 1 / 2. ●

▶ [A284625] 3,6,7,10,13,14,17,18,21,24,25,28,31,32,35,36,39,42,43,46,47,50,53,54,5 7 ★ Positions of 2 in A284749. ● a(n) = 2 * floor(n * phi) - n + 2 (Example 30 i n Allouche and Dekking). - _ Michel Dekking _ , Oct 08 2018 ●

▶ [A047281] 0,3,6,7,10,13,14,17,20,21,24,27,28,31,34,35,38,41,42,45,48,49,52,55,5 6 ★ Numbers that are congruent to { 0, 3, 6 } mod 7. ● a(n + 1) = 3 * n - 2 * f loor(n / 3). - _ Gary Detlefs _ , Mar 27 2010 ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. ● a(n) = (21 * n - 15 + 6 * cos(2 * n * Pi / 3) - 2 * sqrt(3) * sin(2 * n * Pi / 3)) / 9. ● a(3k) = 7k - 1, a(3k - 1) = 7k - 4, a(3k - 2) = 7k - 7. (End) ● a(n) = Sum _{ i=1..n - 1 } numerator(3 / i). - _ Wesley Ivan Hurt _ , Feb 26 2017 ●

▶ [A136272] 1,3,6,7,11,12,13,18,19,20,21,27,28,29,30,31,38,39,40,41,42,43,51,52,5 3 ★ Waterbird take - off sequence. Complement of A166021. ● a(0)=1; let t=1. Start on position t. Jump t positions right hand. Erase t positions. (* P *) Set t=t + 1. Start on the last erased position. Jump t positions right hand. Erase t positions. Repeat procedure (* P *). ●

▶ [A076644] 1,3,6,7,11,13,18,21,22,28,32,34,41,46,49,50,58,64,68,70,79,86,91,94,9 5 ★ a(1)=1; for n>1, a(n) = a(n - floor(sqrt(n))) + n. ● a(n) is asymptotic to 2 / 3 * n ^ (3 / 2). ●

▶ [A047556] 3,6,7,11,14,15,19,22,23,27,30,31,35,38,39,43,46,47,51,54,55,59,62,63,6 7 ★ Numbers that are congruent to { 3, 6, 7 } mod 8. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. ● a(n) = (24 * n - 9 * cos(2 * n * Pi / 3) - sqrt(3) * sin(2 * n * Pi / 3)) / 9. ● a(3k) = 8k - 1, a(3k - 1) = 8k - 2, a(3k - 2) = 8k - 5. (End) ●

▶ [A004760] 0,1,3,6,7,12,13,14,15,24,25,26,27,28,29,30,31,48,49,50,51,52,53,54,55 ★ List of numbers whose binary expansion does not begin 10. ● a(0) = 0, a(1) = 1, for n > 0: a(2n) = 2 * a(n) + 1, a(2n + 1) = 2 * a(n + 1). - _ Philippe Delé ham _ , Feb 29 2004 ● a(1)=0, a(2)=1, a(2 ^ m + k + 2) = 2 ^ (m + 1) + 2 ^ m + k, m >= 0, 0 <= k < 2 ^ m. - _ Yosu Yurramendi _ , Jul 30 2016 ●

▶ [A004755] 3,6,7,12,13,14,15,24,25,26,27,28,29,30,31,48,49,50,51,52,53,54,55,56,5 7 ★ Binary expansion starts 11. ● a(2n) = 2 * a(n), a(2n + 1) = 2 * a(n) + 1 + 2 * [n==0]. ● a(2 ^ m + k) = 2 ^ (m + 1) + 2 ^ m + k, m >= 0, 0 <= k < 2 ^ m. - _ Yosu Yurramendi _ , Aug 08 2016 ●

▶ [A325804] 0,1,3,6,7,12,14,15,24,25,28,29,30,31,48,50,51,56,57,58,60,61,62,63,96 ★ Positions of nonzero terms of Product _{ k=0..floor(log _ 2(n)) } (1 + A004 718(floor(n / (2 ^ k)))). ● a(n) - a(n - 1) belongs to A094373 (conjectured). - _ Mikhail Kurkov _ , Feb 20 2021 ●

▶ [A309839] 3,6,7,12,15,22,23,42,43,48,63,76,79,96,115,140,143,166,167,192,247,2 48,279,312,347 ★ a(n) = GAP _ n: first integer m that is not the dimension of a semisimple subalgebra of M _ n(k). ● a(n) > n ^ 2 - 4 * sqrt(n + 2). ●

▶ [A370900] 1,3,6,7,12,18,25,26,27,37,48,51,64,78,93,94,111,113,132,137,158,180,2 03,206,207 ★ Partial sums of the powerfree part function (A055231). ● a(n) = c * n ^ 2 / 2 + O(R(n)), where c = Product _{ p prime } (1 - (p ^ 2 + p - 1) / (p ^ 3 * (p + 1))) = 0.649606699337... (A191622), R(n) = x ^ (3 / 2) * exp(- c _ 1 * log(n) ^ (3 / 5) / log(log(n)) ^ (1 / 5)) unconditionally, or x ^ (7 / 5) * e xp(c _ 2 * log(n) / log(log(n))) assuming the Riemann hypothesis, and c _ 1 an d c _ 2 are positive constants (Tóth, 2017). ●

▶ [A069891] 0,1,3,6,7,12,18,25,27,28,38,49,52,65,79,94,95,112,114,133,138,159,18 1,204,210 ★ a(n) = Sum _{ k=1..n } A007913(k), the squarefree part of k. ● a(n) is asymptotic to r * n ^ 2, where r = Pi ^ 2 / 30 = 0.3289868... ●

▶ [A033053] 1,3,6,7,13,15,26,27,30,31,53,55,61,63,106,107,110,111,122,123,126,12 7,213,215,221 ★ Numbers whose base - 2 representation Sum _{ i=0..m } d(i) * 2 ^ i has d(i)=1 when i != m mod 2. ● a(2j + 2) = 4 a(j) + 3, ● a(2j + 1) = 4 a (j) + 2 if j <= 3 * 2 ^ (m - 1) - 2, ● a(2j + 1) = 4 a(j) + 1 otherwise, where m = floor(log _ 2(j + 1)). ●

▶ [A266615] 1,1,3,6,7,15,17,28,29,45,47,66,67,91,93,120,121,153,155,190,191,231,2 33,276,277 ★ Total number of ON (black) cells after n iterations of the "Rule 41 " elementary cellular automaton starting with a single ON (black) cell. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) + a(n - 4) - a(n - 5) - a(n - 6) + a(n - 7) for n>6. ●

▶ [A227723] 0,1,3,6,7,15,22,23,24,25,27,30,31,60,61,63,105,107,111,126,127,255,2 78,279,280 ★ Smallest Boolean functions from big equivalence classes (counted b y A000616). ● a(A000616 - 1) = a(2,5,21,401,...) = 3,15,255,65535,... = A0511 79 ●

▶ [A265227] 0,1,3,6,8,9,10,12,15,17,18,19,21,24,26,27,28,30,33,35,36,37,39,42,44 ★ Nonnegative m for which k * floor(m ^ 2 / 9) = floor(k * m ^ 2 / 9), with 2 < k < 9. ● a(n) = a(n - 1) + a(n - 5) - a(n - 6) for n>6. ●

▶ [A335155] 1,3,6,8,9,11,13,14,16,18,19,21,23,24,26,27,28,29,31,32,33,34,36,37,38 ★ Start with 1; if n is in the sequence, so are n + 5 and 3 * n. ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>17. ●

▶ [A047401] 0,1,3,6,8,9,11,14,16,17,19,22,24,25,27,30,32,33,35,38,40,41,43,46,48 ★ Numbers that are congruent to { 0, 1, 3, 6 } mod 8. ● a(n) = 2 * (n - 1) + (i ^ (n * (n - 1)) - 1) / 2, where i=sqrt(- 1). - _ Bruno Berselli _ , Dec 05 2011 ● a (n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4) for n>4. ●

▶ [A159061] 3,6,8,10,12,15,17,19,21,24,26,28,30,32,34,36,39,41,43,45,47,49,51,53,5 6 ★ Nearest integer to the expected number of tosses of a fair coin required to o btain at least n heads and n tails. ● a(n) is the nearest integer to 2 * n * (1 + b inomial(2 * n,n) / (2 ^ (2 * n))). ●

▶ [A047282] 1,3,6,8,10,13,15,17,20,22,24,27,29,31,34,36,38,41,43,45,48,50,52,55,5 7 ★ Numbers that are congruent to { 1, 3, 6 } mod 7. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. ● a(n) = (21 * n - 12 + 3 * cos(2 * n * Pi / 3) + sqrt(3) * sin(2 * n * Pi / 3)) / 9. ● a(3 * k) = 7 * k - 1, a(3 * k - 1) = 7 * k - 4, a(3 * k - 2) = 7 * k - 6. (End) ● a(n) = 2 * n - 1 + floor(n / 3). - _ Wesley Ivan Hurt _ , Dec 28 2016 ●

▶ [A064437] 1,3,6,8,10,13,15,18,20,23,25,27,30,32,35,37,39,42,44,47,49,51,54,56,5 9 ★ a(1)=1, a(n)=a(n - 1) + 3 if n is already in the sequence, a(n)=a(n - 1) + 2 otherwise. ● a(n) = ceiling((1 + sqrt(2)) * (n - 1) + C) where C = 1 / (2 + sqr t(2)) = .292893218813... ●

▶ [A187336] 0,0,3,6,8,10,15,15,18,21,23,25,30,30,33,36,38,40,45,45,48,51,53,55,60 ★ Sum { floor(kn / 6), k=1,2,3,4,5 } . ● a(n)=Sum { floor(kn / 6), k=1,2,3,4,5 } . ●

▶ [A118011] 3,6,8,11,13,15,18,20,22,24,27,29,31,33,35,38,40,42,44,46,48,51,53,55,5 7 ★ Complement of the Connell sequence (A001614); a(n) = 4 * n - A001614(n). ● a(n) = 2n + [(1 + sqrt(8n - 7)) / 2]. - _ Juri - Stepan Gerasimov _ Aug 25 2 009 ● a(n) = 2 * n + round(sqrt(2 * n)). - _ Gerald Hillier _ , Apr 16 2015 ●

▶ [A047219] 1,3,6,8,11,13,16,18,21,23,26,28,31,33,36,38,41,43,46,48,51,53,56,58,6 1 ★ Numbers that are congruent to { 1, 3 } mod 5. ● a(n) = floor((5 * n - 3) / 2). - _ Santi Spadaro _ , Jul 24 2001, corrected by _ Gary Detlefs _ , Oct 28 2 011 ● a(n) = 5 * n - a(n - 1) - 6 (with a(1)=1). - _ Vincenzo Librandi _ , Aug 05 2010 ● a(n) = (1 / 4) * (- 7 - (- 1) ^ n + 10 * n), with n >= 1. - _ Paolo P . Lava _ , Sep 03 2010 ● a(n) = 2 * n + floor((n - 1) / 2) - 1. - _ Arkadiusz W esolowski _ , Sep 19 2012 ●

▶ [A122437] 1,3,6,8,11,13,16,19,21,24,26,29,32,34,37,39,42,44,47,50,52,55,57,60,6 3 ★ Allowable values of the "dropping time" of the Collatz (3x + 1) iteration. ● a(n + 1) = floor(1 + n + n * log(3) / log(2)). - _ T. D. Noe _ , Sep 08 2006 ●

▶ [A184657] 3,6,8,11,13,16,19,21,24,26,29,32,34,37,40,42,45,47,50,53,55,58,61,63,6 6 ★ floor(n * s + h - h * s), where s=(3 + sqrt(5)) / 2, h= - 1 / 2; complement of A184656. ● a(n)=floor(n * s + h - h * s), where s=(3 + sqrt(5)) / 2, h= - 1 / 2. ●

▶ [A047399] 0,3,6,8,11,14,16,19,22,24,27,30,32,35,38,40,43,46,48,51,54,56,59,62,6 4 ★ Numbers that are congruent to { 0, 3, 6 } mod 8. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. ● a(n) = floor((8 * n - 6) / 3). [_ Gary Detlefs _ , Mar 07 2010] ● a(n) = 3 * n - floor(n / 3). [_ Gary Detlefs _ , Jul 09 2011] ● a(n) = (24 * n - 21 + 3 * cos(2 * n * Pi / 3) - sqrt(3) * sin(2 * n * Pi / 3)) / 9. ● a(3 k) = 8k - 2, a(3k - 1) = 8k - 5, a(3k - 2) = 8k - 8. (End) ●

▶ [A057349] 3,6,8,11,14,17,19,22,25,27,30,33,36,38,41,44,46,49,52,55,57,60,63,65,6 8 ★ Leap years in the Hebrew Calendar starting in year 1 (3761 BCE). The leap year has an extra - month. ● a(n) = floor((19 * n + 5) / 7). ●

▶ [A352211] 1,1,3,6,8,11,18,36,48 ★ Largest number of maximal node - induced cluster subgraphs of an n - node graph. ● a(m + n) >= a(m) * a(n). ●

▶ [A077024] 1,3,6,8,12,15,18,22,26,29,34,37,41,46,51,53,58,64,67,72,77,80,87,90,9 5 ★ a(n) = Sum _{ k=1..n } floor(n / k + 1 / 2). ● a(n) = n ^ 2 - Sum _{ k= 1..n } Sum _{ i=n + 1..2n } sign(i mod k). - _ Wesley Ivan Hurt _ , Feb 08 2 022 ●

▶ [A185549] 0,1,3,6,8,12,15,19,23,27,32,37,42,47,53,59,64,71,77,83,90,97,104,111,1 18 ★ a(n) = ceiling(n ^ (3 / 2)); complement of A185550. ● a(n) = ceiling(n ^ (3 / 2)). ●

▶ [A082873] 1,1,3,6,8,12,15,19,25,30,36,42,49,55,63,72,80,90,99,109,121,132,144,1 56,169 ★ Independence number of king KG _ 2 on triangle board B _ n. ● a(n) = floor((n + 1) ^ 2 / 4) if n == 0, 1, 4, 6, 9, 10, 11 (mod 12), a(n) = floor((n + 1) ^ 2 / 4) - 1 otherwise. ● a(n)= + 2 * a(n - 1) - a(n - 2) + a(n - 12) - 2 * a(n - 13) + a(n - 14). - _ R. J. Mathar _ , Aug 05 2014 ●

▶ [A220001] 0,1,3,6,8,12,15,20,22,26,30,36,39,44,49,56,58,62,66,72,76,82,88,96,99 ★ Benes network size for permutations of n. ● a(n) = 2 * floor(n / 2) + a(floor(n / 2)) + a(ceiling(n / 2)) for n > 2 and a(1)=0 and a(2)=1. ●

▶ [A212984] 1,1,3,6,8,12,17,21,27,34,40,48,57,65,75,86,96,108,121,133,147,162,17 6,192,209 ★ Number of (w,x,y) with all terms in { 0..n } and 3w = x + y. ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) - 2 * a(n - 4) + a(n - 5) for n>4. ● a(n) = 1 + floor(2 * n / 3) + floor(n ^ 2 / 3). - _ Wesley Ivan Hurt _ , Jul 25 2016 ●

▶ [A046670] 1,3,6,8,13,16,23,25,28,33,44,47,60,67,72,74,91,94,113,118,125,136,15 9,162,167 ★ Partial sums of A006530. ● a(n) = Pi ^ 2 / 12 * n ^ 2 / log n + O(n ^ 2 / log ^ 2 n). [See Mitrinovic et al.] - _ Charles R Greathouse IV _ , Feb 19 2014 ●

▶ [A337484] 0,0,0,1,3,6,8,13,17,22,28,35,41,50,58,67,77,88,98,111,123,136,150,16 5,179 ★ Number of ordered triples of positive integers summing to n that are ne ither strictly increasing nor strictly decreasing. ● a(n) = a(n - 1) + a(n - 2) - a(n - 4) - a(n - 5) + a(n - 6) for n>6. ●

▶ [A073355] 1,3,6,8,13,19,26,28,31,41,52,58,71,85,100,102,119,125,144,154,175,19 7,220,226,231 ★ Sum of squarefree kernels of numbers <= n. ● a(n) = (1 / 2) * C * n ^ 2 + O(n ^ (3 / 2)) where C=prod(1 - 1 / p / (p + 1))=0.7044... (see A 065463). - _ Benoit Cloitre _ , Jan 31 2003 ● a(n) = Sum _{ i=1..n } phi(i) * mu(i) ^ 2 * floor(n / i). - _ Ridouane Oudra _ , Oct 17 2019 ● a(n) = Sum _{ k=1..n } rad(k). - _ Wesley Ivan Hurt _ , Jun 12 2021 ●

▶ [A123208] 1,3,6,8,16,18,36,38,76,78,156,158,316,318,636,638,1276,1278,2556,25 58,5116,5118,10236,10238,20476 ★ Start with 1, then alternately add 2 or doubl e. ● a(2n) = 5 * 2 ^ n - 4; a(2n + 1) = 5 * 2 ^ n - 2 (n >= 0). - _ Emeric Deut sch _ , Oct 10 2006 ● a(n + 1) = (1 + (- 1) ^ n) * (a(n) + 2) / 2 + (1 - (- 1) ^ n) * a(n), with a(0)=1. - _ Paolo P. Lava _ , Nov 19 2008 ● a(n) = 3 * a(n - 2) - 2 * a(n - 4). - _ Colin Barker _ , Sep 10 2012 ●

▶ [A306157] 3,6,8,24,48,124,312,834,2184,5928,16104,44344,122640,341796,95657 6,2690844,7596480,21524412,61171656,174342192,498111952,1426419852,4093181 688,11767919284,33891544368 ★ Inverse Weigh transform of 3 ^ n. ● a(n) = 1 / n * (3 ^ n + Sum _{ d<n and d|n } (- 1) ^ (n / d) * d * a(d)). ●

▶ [A055264] 0,1,3,6,9,10,12,15,18,19,21,24,27,28,30,33,36,37,39,42,45,46,48,51,54 ★ Possible values of A055263; numbers equal to 0, 1, 3 or 6 modulo 9. ● a(n) = a(n - 4) + 9 = 9 * floor(n / 4) + (n mod 4) * (1 + (n mod 4)) / 2. ●

▶ [A000408] 3,6,9,11,12,14,17,18,19,21,22,24,26,27,29,30,33,34,35,36,38,41,42,43,4 4 ★ Numbers that are the sum of three nonzero squares. ● a(n) = 6n / 5 + O(n / sqrt(log n)). (Can the error term be improved?) - _ Charles R Greathouse I V _ , Mar 14 2014 ●

▶ [A230193] 3,6,9,11,12,15,18,21,22,24,27,30,33,36,39,42,44,45,48,51,54,55,57,60,6 3 ★ Numbers divisible by 3 or 11. ● a(n + 13) = a(n) + 33. ●

▶ [A047400] 1,3,6,9,11,14,17,19,22,25,27,30,33,35,38,41,43,46,49,51,54,57,59,62,6 5 ★ Numbers that are congruent to { 1, 3, 6 } mod 8. ● a(n) = (1 / 9) *{ 25 * (n mod 3) + [(n + 1) mod 3] + 4 * [(n + 2) mod 3] } + 8 * A002264. - _ Paolo P. Lava _ , Nov 05 2007 ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. ● a(n) = 2 * (12 * n - 9 + sqrt(3) * sin(2 * n * Pi / 3)) / 9. ● a(3k) = 8k - 2, a(3k - 1) = 8k - 5, a(3k - 2) = 8k - 7. (End) ●

▶ [A136616] 1,3,6,9,11,14,17,19,22,25,28,30,33,36,38,41,44,47,49,52,55,57,60,63,6 6 ★ a(n) = largest m with H(m) - H(n) <= 1, where H(i) = Sum _{ j=1 to i }

1 / j, the i - th harmonic number, H(0) = 0. • a(n) = floor(e * n + (e - 1) / 2 + (e - 1 / e) / (24 * (n + 1 / 2))), after a suggestion by David Cantrell. •
▶ [A310146] 1,3,6,9,11,14,17,20,24,26,28,32,34,37,41,43,46,49,51,54,58,61,63,66,69 ⋆ Coordination sequence Gal.5.39.2 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. • a(n) = a(n - 3) + a(n - 13) - a(n - 16) for n > 16. •
▶ [A242088] 0,0,1,3,6,9,12 ⋆ Number of edges in the convex hull of a rigorous solution to Thomson's problem for n points. • a(n) <= n(n - 1) / 2 = (n choose 2). •
▶ [A230215] 3,6,9,12,13,15,18,21,24,26,27,30,33,36,39,42,45,48,51,52,54,57,60,63,65 ⋆ Numbers divisible by 3 or 13. • a(n + 15) = a(n) + 39. •
▶ [A168045] 1,3,6,9,12,14,16,18,20,23,25,27,29,31,34,36,38,40,43,45,47,49,51,53,56 ⋆ a(n) = A167707(n) + n. • a(n) = 2n + n / log n + O(n / (log n) ^ 2). - _ Charles R Greathouse IV _ , May 25 2011 •
▶ [A342831] 3,6,9,12,15,18,21,24,26,29,32,35,38,41,44,47,50,52,55,58,61,64,67,70,73 ⋆ a(n) is the smallest positive integer k such that the n - dimensional cube [0, k] ^ n contains at least as many internal lattice points as external lattice points. • a(1) = 3 and a(n) = floor(2 ^ (1 / n + 1) / (2 ^ (1 / n) - 1)) for n > 1. •
▶ [A296515] 0,0,1,3,6,9,12,15,18,21,24,27,30,33,36,39,42,45,48,51,54,57,60,63,66 ⋆ Number of edges in a maximal planar graph with n vertices. • a(n) = floor(6 / 2 ^ n) + 3n - 6 (see comments section of A008486). •
▶ [A008486] 1,3,6,9,12,15,18,21,24,27,30,33,36,39,42,45,48,51,54,57,60,63,66,69,72 ⋆ Expansion of (1 + x + x ^ 2) / (1 - x) ^ 2. • a(n) = a(n - 1) + 3 for n >= 2. - _ Jaroslav Krizek _ , Nov 18 2009 • a(n) = 0 ^ n + 3 * n. - _ Vincenzo Librandi _ , Aug 21 2011 • a(n) = - a(- n) unless n = 0. - _ Michael Somos _ , May 05 2015 •
▶ [A329926] 3,6,9,12,15,18,21,24,27,30,33,36,40,43,46,49,52,55,58,61,64,67,70,73,77 ⋆ Beatty sequence for (9 + sqrt(41)) / 5. • a(n) = floor(n * s), where s = (9 + sqrt(41)) / 5. •
▶ [A059563] 3,6,9,12,15,18,21,24,27,30,33,37,40,43,46,49,52,55,58,61,64,67,70,74,77 ⋆ Beatty sequence for e + 1 / e. • a(n) = floor(n * (e + 1 / e)). - _ Michel Marcus _ , Jan 04 2015 •
▶ [A329844] 3,6,9,12,15,18,21,25,28,31,34,37,40,43,47,50,53,56,59,62,65,68,72,75,78 ⋆ Beatty sequence for (11 + sqrt(61)) / 6. • a(n) = floor(n * s), where s = (11 + sqrt(61)) / 6. •
▶ [A022844] 0,3,6,9,12,15,18,21,25,28,31,34,37,40,43,47,50,53,56,59,62,65,69,72,75 ⋆ a(n) = floor(n * Pi). • a(n) / n converges to Pi because |a(n) / n - Pi| = |a(n) - n * Pi| / n < 1 / n. - _ Hieronymus Fischer _ , Jan 22 2006 •
▶ [A127451] 3,6,9,12,15,18,21,25,28,31,34,37,40,43,47,50,53,56,59,62,65,69,72,75,78 ⋆ Beatty sequence for 1 / (1 - e ^ Pi + Pi ^ e), complement of A127450. • a(n) = floor(n / (1 - e ^ Pi + Pi ^ e)) •
▶ [A138252] 3,6,9,12,15,18,22,25,28,31,34,37,40,44,47,50,53,56,59,62,66,69,72,75,78 ⋆ Beatty sequence of the number t satisfying 1 / s + 1 / t = 1, where s is the positive root of x ^ 3 - x ^ 2 - 1. • a(n)=Floor(t * n). •
▶ [A248524] 3,6,9,12,15,18,22,25,28,31,34,37,40,44,47,50,53,56,59,63,66,69,72,75,78 ⋆ Beatty sequence for 1 / (1 - Pi ^ (- 1 / 3)). • a(n) = floor(n / (1 - Pi ^ (- 1 / 3))). •
▶ [A177102] 3,6,9,12,15,18,22,25,28,31,34,37,41,44,47,50,53,56,60,63,66,69,72,75,79 ⋆ Beatty sequence for sqrt(10). • a(n) = floor(n * sqrt(10)). •
▶ [A187337] 0,0,3,6,9,12,15,21,21,24,27,30,33,36,42,42,45,48,51,54,57,63,63,66,69 ⋆ Sum { floor(kn / 7), k=1,2,3,4,5,6 } . • a(n)=Sum { floor(kn / 7), k=1,2,3,4,5,6 } . •
▶ [A289761] 3,6,9,12,15,22,29,36,43,50,57,68,79,90,101,112,123,138,153,168,183,198,213,232,251 ⋆ Maximum length of a perfect Wichmann ruler with n segments. • a(n) = (n ^ 2 - (mod(n,6) - 3) ^ 2) / 3 + n. • a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 6) - 2 * a(n - 7) + a(n - 8) for n>9. •
▶ [A330115] 3,6,9,12,16,19,22,25,28,32,35,38,41,45,48,51,54,57,61,64,67,70,73,77,80 ⋆ Beatty sequence for e ^ x, where 1 / e ^ x + csch(x) = 1. • a(n) = floor(n e ^ x), where x = 1.1676157... is the constant in A330115. •
▶ [A194146] 3,6,9,12,16,19,22,25,29,32,35,38,41,45,48,51,54,58,61,64,67,70,74,77,80 ⋆ Beatty sequence for (4 + sqrt(6)) / 2; complement of A194145. • a(n) = floor(n * (4 + sqrt(6)) / 2). - _ Vincenzo Librandi _ , Oct 25 2011 •
▶ [A276854] 0,3,6,9,12,16,19,22,25,29,32,35,38,42,45,48,51,55,58,61,64,67,71,74,77 ⋆ Beatty sequence for 1 + sqrt(5). • a(n) = floor(n * (1 + sqrt(5))). •
▶ [A186156] 1,3,6,9,12,16,20,23,28,32,36,41,46,51,56,61,66,71,77,83,89,94,100,107,113 ⋆ Rank of n ^ 3 when { i ^ 3: i>=1 } and { 2j ^ 2: j>=1 } are jointly ranked with i ^ 3 before 2j ^ 2 when i ^ 3=2j ^ 2. Complement of A186157. • a(n)=n + floor(((n ^ 3 - 1 / 2) / 2) ^ (1 / 2)), A186156. •
▶ [A203016] 3,6,9,12,21,24,27,30,39,42,45,48,57,60,63,66,75,78,81,84,93,96,99,102,111 ⋆ Numbers congruent to { 1, 2, 3, 4 } mod 6, multiplied by 3. • a(n) = 3 * (6 * n - 5 - i ^ (2 * n) + (1 + i) * i ^ (1 - n) + (1 - i) * i ^ (n - 1)) / 4 where i =sqrt(- 1). • a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. •
▶ [A338763] 3,6,9,13,15,17,21,25,28,29,33,37,38,41,45,49,53,54,57,61,65,66,69,70,73 ⋆ Let L _ 1 = (1, 2, ...); for any n > 0, let M _ n = Min _{ k > 0 } L _ n(k) + L _ n(k + 1) and K _ n = Min _{ k | L _ n(k) + L _ n(k + 1) = M _ n } , L _{ n + 1 } is obtained by replacing the two terms L _ n(K _ n) and L _ n(K _ n + 1) by M _ n in L _ n; a(n) = M _ n. • a(n) <= a(n + 1). •
▶ [A171982] 3,6,9,13,16,19,23,26,29,33,36,39,43,46,49,53,56,59,63,66,69,72,76,79,82 ⋆ Beatty sequence for sqrt(11). • a(n) = floor(n * sqrt(11)). - _ Jon E. Schoenfield _ , Jun 18 2010 •
▶ [A066343] 3,6,9,13,16,19,23,26,29,33,36,39,43,46,49,53,56,59,63,66,69,73,76,79,83 ⋆ Beatty sequence for log _ 2(10). • a(n) = floor(n * log _ 2(10)). •
▶ [A006590] 1,3,6,9,13,16,21,24,29,33,38,41,48,51,56,61,67,70,77,80,87,92,97,100,109 ⋆ a(n) = Sum _{ k=1..n } ceiling(n / k). • a(n) = n + Sum _{ k=1..n - 1 } tau(k). - _ Vladeta Jovovic _ , Oct 17 2002 •
▶ [A004116] 1,3,6,9,13,17,22,27,33,39,46,53,61,69,78,87,97,107,118,129,141,153,166,179,193 ⋆ a(n) = floor((n ^ 2 + 6n - 3) / 4). • a(n) = floor((1 / 4) * n ^ 2 + (3 / 2) * n + 1 / 4) - 1. • a(n) = (1 / 8) * (- 1) ^ (n + 1) - 7 / 8 + (3 / 2) * n + (1 / 4) * n ^ 2. • a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4). •
▶ [A171662] 0,0,1,3,6,9,13,17,22,28,35,42,50,58,67,77,88,99,111,123,136,150,165,180,196 ⋆ a(n) = floor((2 * n ^ 2 + n) / 6). • a(n) = floor(n * (2 * n + 1) / 6). • a(n) = floor((n + 1) / (exp(3 / (n + 1)) - 1)). - _ Richard R. Forberg _ , Jun 22 2013 • a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 6) - 2 * a(n - 7) + a(n - 8); a(0)=0, a(1)=0, a(2)=1, a(3)=3, a(4)=6, a(5)=9, a(6)=13, a(7)=17. - _ Harvey P. Dale _ , Oct 15 2014 •
▶ [A143975] 1,3,6,9,13,18,23,29,36,43,51,60,69,79,90,101,113,126,139,153,168,183,199,216,233 ⋆ a(n) = floor(n * (n + 3) / 3). • a(n) = floor(n * (n + 3) / 3). • a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) - 2 * a(n - 4) + a(n - 5). •
▶ [A048202] 3,6,9,13,18,24,29,31,37,43,47,51,54,61,67,69,71,74,78,82,88,94,97,99,103 ⋆ a(n)=T(n,2), array T given by A048201. • a(n)=a002048(n) + a002048(n + 1) [From _ Gerald Hillier _ , Oct 04 2008] •
▶ [A033436] 0,0,1,3,6,9,13,18,24,30,37,45,54,63,73,84,96,108,121,135,150,165,181,198,216 ⋆ a(n) = ceiling((3 * n ^ 2 - 4) / 8). • a(n) = (1 / 16) { 6n ^ 2 - 5 + (- 1) ^ n + 2(- 1) ^ [n / 2] - 2(- 1) ^ [(n - 1) / 2] } . Therefore a(n) is asymptotic to 3 / 8 * n ^ 2. - _ Ralf Stephan _ , Jun 09 2005 • a(n) = Sum _{ i=0..n } { 1 / 8 * [(i mod 4) + ((i + 1) mod 4) - ((i + 2) mod 4) + 3 * ((i + 3) mod 4)] } + a(n - 1) - 1, with a(0)=0. - _ Paolo P. Lava _ , Jun 28 2007 • a(n + 1) = n + floor(n ^ 2 / 3). - _ Gary Detlefs _ , Mar 27 2010 • a(n) = floor(3 * n ^ 2 / 8). - _ Peter Bala _ , Aug 08 2013 • a(n) = Sum _{ i=1..n } floor(3 * i / 4). - _ Wesley Ivan Hurt _ , Sep 12 2017 •
▶ [A129728] 1,3,6,9,13,18,25,35,50,73,109,166,257,403,638,1017,1629,2618,4217,6803,10986,17753,28701,46414,75073 ⋆ a(n) = 2 * (n - 1) + Fibonacci(n). • a(n) = a(n - 1) + Fibonacci(n - 2) + 2. •
▶ [A027424] 1,3,6,9,14,18,25,30,36,42,53,59,72,80,89,97,114,123,142,152,164,176,199,209,225 ⋆ Number of distinct products ij with 1 <= i, j <= n (number of distinct terms in n X n multiplication table). • a(n) = Sum _{ L=1..n ^ 2 } Sum _{ d|L } moebius(L / d) * floor(m(d,n) * n / L), where m(d,n) is the maximum divisor of d not exceeding n. - _ Max Alekseyev _ , Jul 14 2011 • a(n) = Sum _{ m=1..n ^ 2 } sign(Sum _{ k=1..n ^ 2 } [k|m] * [m <= n * k] * [k <= n]), conjecture. •
▶ [A258087] 0,0,1,3,6,9,14,18,25,30,39,45,56,63,76,84,99,108,125,135,154,165,186,198,221 ⋆ Start with all terms set to 0. Then add n to the next n + 2 terms for n=0,1,2,... . • a(n) = (6 * n ^ 2 + 2 * n - 11 + (2 * n - 5) * (- 1) ^ n) / 16 + 0 ^ n. • a(n) = Sum _{ i=1..n - 1 } (3 * i + 2) / 4 + (2 - i) * (- 1) ^ i / 4. • a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n >= 6. (End) • a(n) = a(- n) for n odd, a(n) = a(- n) + n / 2 otherwise. • a(n) = (floor(n / 2) + 1) * (floor(n / 2) + 2 * floor((n - 1) / 2)) / 2 for n>0. Therefore, after 3, all terms of the sequence are composite. (End) • a(n) = Sum _{ i=floor((n - 1) / 2)..n - 1 } i, for n>0. - _ Wesley Ivan Hurt _ , Apr 11 2016 •
▶ [A228172] 1,3,6,9,14,19,24,31,39,48,56,65,77,88,101,113,127,141,157,174,189,208,226,244,266 ⋆ Number of integer pairs (x,y) such that 0<=y<=x, x>0, and x ^ 2 + y ^ 2<=n ^ 2. • a(n) = A211340 (n) + n . [_ Joerg Arndt _ , Aug 19 2013] •
▶ [A184015] 1,3,6,9,14,19,25,31,38,46,55,64,75,86,97,110,123,137,151,167,183,200,217,235,254 ⋆ n - 1 + ceiling(n ^ 2 / e); complement of A184014. • a(n) = n - 1 + ceiling(n ^ 2 / e) •
▶ [A082643] 0,1,3,6,9,14,20,27,34,43,53,64,75,88,102,117,132,149,167,186,205,226,248,271,294 ⋆ a(n) = ceiling(n * (n + 1 / 2) / 2). • a(n) = + 2 * a(n - 1) - a(n - 2) + a(n - 4) - 2 * a(n - 5) + a(n - 6). - _ R. J. Mathar _ , Mar 11 2012 • a(n) = n * (n + 1) / 2 - floor(n / 4). - _ Bruno Berselli _ , Mar 04 2021 •
▶ [A373447] 1,3,6,9,14,23,36,57,90,143,226,357,566,895,1416,2241,3546,5611,8878,14049,22230,35175,55660,88073,139362 ⋆ Number of ternary strings of length n avoiding the substrings 00, 11, 22, 121, 212, 202. • a(n) = a(n - 2) + 2 * a(n - 3) + a(n - 4) - a(n - 6). •
▶ [A031940] 1,3,6,9,15,19,28,33,45,51,66,73,91,99,120,129,153,163,190,201,231,243,276,289,325 ⋆ Length of longest legal domino snake using full set of dominoes up to [n:n]. • a(n) = ((- 1) ^ n * (2 - n) + (2 + n + 2 * n ^ 2)) / 4. - _ G. C. Greubel _ , Jun 15 2018 •
▶ [A070885] 1,3,6,9,15,24,36,54,81,123,186,279,420,630,945,1419,2130,3195,4794,7191,10788,16182,24273,36411,54618 ⋆ a(n) = (3 / 2) * a(n - 1) if a(n - 1) is even; (3 / 2) * (a(n - 1) + 1) if a(n - 1) is odd. • a(n) = 3 * ceiling(a(n - 1) / 2). - _ Benoit Cloitre _ , Apr 25 2003 •
▶ [A002597] 1,1,3,6,9,15,25,34,51,73,97,132,178,226,294,376,466,582,722,872,1062,1282,1522,1812,2147 ⋆ Number of partitions into one kind of 1's, two kinds of 2's, and three kinds of 3's. • a(n)=floor((160 * (n + 1) * (- 1) ^ (floor(n / 3 + 2 / 3) + n) + 80 * (n ^ 2 + 15 * n + 24) * (- 1) ^ (floor(n / 3 + 1 / 3) + n) + 80 * (n + 2) * (n + 11) * (- 1) ^ (floor(n / 3) + n) + 405 * (n + 1) * (- 1) ^ n + (n + 1) * (2 * n ^ 4 + 68 * n ^ 3 + 852 * n ^ 2 + 4748 * n + 10735)) / 25920 + 1 / 2). - _ Tani Akinari _ , Oct 12 2012 •
▶ [A057855] 1,3,6,9,16,21,30,36,46,61,68,86,99,110,126,146,168,184,205,223,242,270,292,321,360 ⋆ Greatest k such that (k - th prime) <= (n times n - th prime). • a(n) = pi(n * prime(n)). •
▶ [A182751] 1,3,6,9,18,27,54,81,162,243,486,729,1458,2187,4374,6561,13122,19683,39366,59049,118098,177147,354294,531441,1062882 ⋆ a(1)=1, a(2)=3, a(3)=6; a(n) = 3 * a(n - 2) for n > 3. • a(2 * k) = (3 / 2) * a(2 * k - 1) for k >= 2, a(2 * k + 1) = 2 * a(2 * k). •
▶ [A349597] 3,6,9,27,108,666,6327,88263,1692585,42219558,1318791681 ⋆ a(n) is the sum of digits of a(n - 1)! with a(1) = 3. • a(n) = sumdigits(a(n - 1)!) for n > 1. •
▶ [A305322] 0,3,6,9,33,66,99,111,222,333,444,555,666,777,888,999,3333,6666,9999,33333,66666,99999,111111,222222,333333 ⋆ Repdigit numbers that are divisible by 3. • a(n) = 1001 * a(n - 15) - 1000 * a(n - 30). (End) •
▶ [A133195] 0,3,6,9,39,69,99,399,699,999,3999,6999,9999,39999,69999,99999,399999,699999,999999,3999999,6999999,9999999,39999999,69999999,99999999 ⋆ Smallest number whose sum of digits is 3n. • a(n) = a(n - 1) + 10 * a(n - 3) - 10 * a(n - 4). G.f.: 3 * x * (x ^ 2 + x + 1) / ((x - 1) * (10 * x ^ 3 - 1)). [_ Colin Barker _ , Feb 01 2013] •
▶ [A130483] 0,1,3,6,10,10,11,13,16,20,20,21,23,26,30,30,31,33,36,40,40,41,43,46,50 ⋆ a(n) = Sum _{ k=0..n } (k mod 5) (Partial sums of A010874). • a(n) = a(

n - 5) - a(n - 6) for n>5; a(n) = a(n - 5) + 10 for n>4. • a(n) = 10 + Sum _{ k=1..4 } k * floor((n - k) / 5). (End) • a(n) = ((n mod 5) ^ 2 - 3 * (n mod 5) + 4 * n) / 2. - _ Ammar Khatab _ , Aug 13 2020 •

► [A073851] 0,1,3,6,10,11,12,13,14,15,17,19,21,23,25,28,31,34,37,40,44,48,52,56,60 ⋆ Cumulative sum of initial digits of (n base 5). • a(n) = Sum _{ i=1..n } floor(n / 5 ^ (floor(log _ 5(n)))). • a(n + 1) = a(n) + first - digit - of((n + 1) (base 5)). •

► [A319452] 0,3,6,10,12,15,18,22,24,27,30,34,36,39,42,46,48,51,54,58,60,63,66,70,72 ⋆ Numbers that are congruent to { 0, 3, 6, 10 } mod 12. • a(n) = a(n - 4) + 12 for n > 4. • a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n > 5. • a(n) = (12 * n - 11 + (- 1) ^ n + 2 * cos(Pi * n / 2)) / 4. •

► [A356469] 3,6,10,13,16,19,22,25,28,32,35,37,41,44,47,50,54,57,59,63,66,69,72,75,78 ⋆ a(n) = [(n + 1) / (1 - 1 / r)] - [n - n / r] where r = sqrt(2) and [] denotes the floor function. • a(n) = [(n + 1) / (1 - 1 / r) - [n - n / r]] with r and [] as in the name. •

► [A080667] 3,6,10,13,16,20,23,26,29,33,36,39,43,46,49,53,56,59,62,66,69,72,76,79,82 ⋆ a(1)=3; for n>1, a(n)=a(n - 1) + 4 if n is already in the sequence, a(n)= a(n - 1) + 3 otherwise. • a(n) = floor(n * r + 1 / (1 + r)) where r = (3 + sqrt(13)) / 2. •

► [A258834] 0,3,6,10,13,17,20,24,27,30,34,37,41,44,47,51,54,58,61,65,68,71,75,78,82 ⋆ Nonhomogeneous Beatty sequence: ceiling((n - 1 / 4) * (2 + sqrt(2)). • a(n) = ceiling((n - 1 / 4) * (2 + sqrt(2))) = floor((n - 1 / 4) * (2 + sqrt(2)) + 1). •

► [A329997] 3,6,10,13,17,20,24,27,30,34,37,41,44,48,51,54,58,61,65,68,72,75,78,82,85 ⋆ Beatty sequence for 3 ^ x, where 1 / x ^ 3 + 1 / 3 ^ x = 1. • a(n) = floor(n * 3 ^ x), where x = 1.12177497... is the constant in A329995. •

► [A194028] 3,6,10,13,17,20,24,27,31,34,38,41,45,48,51,55,58,62,65,69,72,76,79,83,86 ⋆ Beatty sequence for sqrt(12). • a(n) = floor(n * sqrt(12)). •

► [A047280] 3,6,10,13,17,20,24,27,31,34,38,41,45,48,52,55,59,62,66,69,73,76,80,83,87 ⋆ Numbers that are congruent to { 3, 6 } mod 7. • a(n) = 7 * n - a(n - 1) - 5 with n > 1, a(1)=3. - _ Vincenzo Librandi _ , Aug 05 2010 • a(n) = 3 * n + ceiling(n / 2) - 1. - _ Arkadiusz Wesolowski _ , Sep 20 2012 • a(n) = 4n - 1 - floor(n / 2). - _ Wesley Ivan Hurt _ , Oct 16 2013 •

► [A276219] 3,6,10,13,17,21,25,30,34,39,44,49,54,60,65,70,76,82,88,94,100,106,112,118,125 ⋆ Position of n ^ s in the joint ranking of { h } and { k ^ s } , where s = sqrt(2), h >= 1, k >= 2. • a(n) = n - 1 + floor(n ^ s), n >= 2; the complement is given by n + floor(n ^ (1 / s)), n >= 1. •

► [A113127] 1,3,6,10,14,18,22,26,30,34,38,42,46,50,54,58,62,66,70,74,78,82,86,90,94 ⋆ Expansion of (1 + x + x ^ 2 + x ^ 3) / (1 - x) ^ 2. • a(n) = 4 * n - 2 + 2 * binomial(0, n) + binomial(1, n); • a(n) = binomial(n + 1, n) + binomial(n, n - 1) + binomial(n - 1, n - 2) + binomial(n - 2, n - 3). • a(n) = 4 * (n + 2) - 10 for n >= 2. - _ Allan Bickle _ , Nov 14 2021 •

► [A310068] 1,3,6,10,14,19,23,26,29,31,35,39,43,48,51,55,58,60,64,67,72,77,80,84,86 ⋆ Coordination sequence Gal.4.25.1 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. • a(n) = a(n - 1) - a(n - 4) + 2 * a(n - 5) - a(n - 6) + a(n - 9) - a(n - 10) for n > 10. •

► [A036572] 3,6,10,14,19,24,30,36,43,50,58,66,75,84,94,104,115,126,138,150,163,176,190,204,219 ⋆ Number of tetrahedra in largest triangulation of polygonal prism with regular polygonal base. • a(n) = (- 31 - (- 1) ^ n + 12 * n + 2 * n ^ 2) / 8. • a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4). •

► [A033437] 0,0,1,3,6,10,14,19,25,32,40,48,57,67,78,90,102,115,129,144,160,176,193,211,230 ⋆ Number of edges in 5 - partite Turán graph of order n. • a(n) = floor(2n ^ 2 / 5). - _ Wesley Ivan Hurt _ , Jun 20 2013 • a(n) = Sum _{ i=1..n } floor(4 * i / 5). - _ Wesley Ivan Hurt _ , Sep 12 2017 •

► [A272058] 0,0,1,3,6,10,14,20,25,33,39,49,56,68,76,90,99,115,125,143,154,174,186,208,221 ⋆ Start with all terms set to 0. Then add n to the next n + 3 terms for n=0,1,2,... . • a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n > 6. • a(n) = (6 * n ^ 2 + 6 * n - 23 + (7 - 2 * n) * (- 1) ^ n) / 16 for n > 1. • a(n) = floor((n + 3) / 4) * floor((3 * n - 4) / 2) + (floor((n - 1) / 2) mod 2) * floor((3 * n - 3) / 4) for n > 1. •

► [A183863] 1,3,6,10,14,20,26,33,41,49,59,69,80,92,104,118,132,147,163,179,197,215,234,254,274 ⋆ n - 1 + ceiling((2 / 5)(- 1 / 2 + n ^ 2)); complement of A183862. • a(n)=n - 1 + ceiling((2 / 5)(- 1 / 2 + n ^ 2)). •

► [A109804] 0,1,3,6,10,15,16,17,18,19,20,21,23,25,27,29,31,33,36,39,42,45,48,51,55 ⋆ Cumulative sum of initial digits of (n base 6). • a(n) below is Sum _{ i=0..n } first - digit { (i base 6) } . • a(n) = Sum _{ i=1..n } floor(n / 6 ^ floor(log _ 6(n))) where log _ 6(n) is the logarithm to base 6. • a(n + 1) = a(n) + first - digit - of((n + 1) (base 6)). •

► [A194458] 1,3,6,10,15,17,21,27,35,45,48,54,63,75,90,94,102,114,130,150,155,165,180,200,225 ⋆ Total number of entries in rows 0,1,...,n of Pascal's triangle not divisible by 5. • a(n) = ((C(d0 + 1,2) * 15 ^ 0 * (d1 + 1) + C(d1 + 1,2) * 15 ^ 1) * (d1 + 1) + C(d1 + 1,2) * 15 ^ 1) * (d2 + 1) + C(d2 + 1,2) * 15 ^ 2 ..., where d _ k...d _ 1d _ 0 is the base 5 expansion of n + 1 and 15 = binomial(5 + 1,2). The formula generalizes to other prime bases p. •

► [A369801] 1,3,6,10,15,19,24,27,32,35,40,43,48,51,56,59,64,67,72,75,80,83,88,91,96 ⋆ Maximum number of segments between n points on a circle so that they can be colored in 2 colors so that each of them intersects (at an internal point) at most one other segment of the same color. • a(n) = n * (n - 1) / 2 for n<=6, a(2 * k + 1) = 8 * k - 5 if k>=3, a(2 * k) = 8 * k - 8 if k>=4. •

► [A347275] 1,3,6,10,15,19,25,29,35,40,46,50,58,62,68,74,81,85,93,97,105,111,117,121,131 ⋆ a(n) is the number of nonnegative ordered pairs (a,b) satisfying (a + b <= n) and (a * b <= n). • a(n) = Sum _{ a=0..n } Sum _{ b=0..n - a } [a * b<=n], where [] is the Iverson bracket. •

► [A357778] 0,1,3,6,10,15,20,25,30,35,40,45,50,55,60,65,70,75,80,85,90,95,100,105,110 ⋆ Maximum number of edges in a 5 - degenerate graph with n vertices. • a(n) = C(n,2) for n < 7. • a(n) = 5 * n - 15 for n > 4. •

► [A033438] 0,0,1,3,6,10,15,20,26,33,41,50,60,70,81,93,106,120,135,150,166,183,201,220,240 ⋆ Number of edges in 6 - partite Turán graph of order n. • a(n) = + 2 * a(n - 1) - a(n - 2) + a(n - 6) - 2 * a(n - 7) + a(n - 8). • a(n) = floor(5 * n ^ 2 / 12). - _ Peter Bala _ , Aug 12 2013 • a(n) = Sum _{ i=1..n } floor(5 * i / 6). - _ Wesley Ivan Hurt _ , Sep 12 2017 •

► [A115015] 1,3,6,10,15,21,21,29,38,48,59,71,84,84,99,115,132,150,169,189,189,211,234,258,283 ⋆ Sum _{ i=1..n } (gcd(7,i)=1) i. • a(- 1 - n) = a(n). - _ Michael Somos _ , Jul 12 2006 •

► [A357779] 0,1,3,6,10,15,21,27,33,39,45,51,57,63,69,75,81,87,93,99,105,111,117,123,129 ⋆ Maximum number of edges in a 6 - degenerate graph with n vertices. • a(n) = C(n,2) for n < 8. • a(n) = 6 * n - 21 for n > 5. •

► [A033439] 0,0,1,3,6,10,15,21,27,34,42,51,61,72,84,96,109,123,138,154,171,189,207,226,246 ⋆ Number of edges in 7 - partite Turán graph of order n. • a(n) = floor(3 * n ^ 2 / 7). - _ Peter Bala _ , Aug 12 2013 • a(0)=0, a(1)=0, a(2)=1, a(3)=3, a(4)=6, a(5)=10, a(6)=15, a(7)=21, a(8)=27, a(n)=2 * a(n - 1) - a(n - 2) + a(n - 7) - 2 * a(n - 8) + a(n - 9). - _ Harvey P. Dale _ , Mar 19 2015 • a(n) = Sum _{ i=1..n } floor(6 * i / 7). - _ Wesley Ivan Hurt _ , Sep 12 2017 •

► [A033440] 0,0,1,3,6,10,15,21,28,35,43,52,62,73,85,98,112,126,141,157,174,192,211,231,252 ⋆ Number of edges in 8 - partite Turán graph of order n. • a(n) = round((7 / 16) * n(n - 2)) + 0 or - 1 depending on n: if there is k such 8k + 4<=n<=8k + 6 then a(n) = floor((7 / 16) * n * (n - 2)) otherwise a(n) = round((7 / 16) * n(n - 2)). E.g. because 8 * 2 + 4<=21<=8 * 2 + 6 a(n) = floor((7 / 16) * 21 * 19) = floor(174, 5625)=174. - _ Benoit Cloitre _ , Jan 17 2002 • a(n) = Sum _{ i=1..n } floor(7 * i / 8). - _ Wesley Ivan Hurt _ , Sep 12 2017 •

► [A108923] 1,3,6,10,15,21,28,36,44,52,60,68,76,84,92,100,109,119,130,142,155,169,184,200,216 ⋆ Expansion of 1 / ((x ^ 8 + 1) * (1 - x) ^ 3). • a(0)=1, a(1)=3, a(2)=6, a(3)=10, a(4)=15, a(5)=21, a(6)=28, a(7)=36, a(8)=44, a(9)=52, a(10)=60, a(n)=3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) - a(n - 8) + 3 * a(n - 9) - 3 * a(n - 10) + a (n - 11). - _ Harvey P. Dale _ , Jan 28 2015 •

► [A033441] 0,0,1,3,6,10,15,21,28,36,44,53,63,74,86,99,113,128,144,160,177,195,214,234,255 ⋆ Number of edges in 9 - partite Turán graph of order n. • a(n) = Sum _{ i=1..n } floor(8 * i / 9). - _ Wesley Ivan Hurt _ , Sep 12 2017 •

► [A061076] 1,3,6,10,15,21,28,36,45,45,46,48,51,55,60,66,73,81,90,90,92,96,102,110,120 ⋆ a(n) is the sum of the products of the digits of all the numbers from 1 to n. • a(n) = Sum _{ k = 1..n } (product of the digits of k). • a(10 ^ k - 1) = (45 / 44) * (45 ^ k - 1). - _ Giovanni Resta _ , Oct 18 2012 •

► [A217627] 1,3,6,10,15,21,28,36,45,46,47,49,52,56,61,67,74,82,91,93,95,99,105,113,123 ⋆ a(n) is the sum of the products of the nonzero digits of the numbers from 1 to n. • a(10 ^ k) = 46 ^ k. •

► [A037123] 0,1,3,6,10,15,21,28,36,45,46,48,51,55,60,66,73,81,90,100,102,105,109,114,120 ⋆ a(n) = a(n - 1) + sum of digits of n. • a(n) = n * (n + 1) / 2 - 9 * Sum _{ k=1..n } Sum _{ i=1..ceiling(log _ 10(k)) } floor(k / 10 ^ i). - _ Benoit Cloitre _ , Aug 28 2003 • a(n) = (1 / 2) * ((n + 1) * (n - 18 * Sum _{ k>=1 } floor(n / 10 ^ k)) + 9 * Sum _{ k>=1 } (1 + floor(n / 10 ^ k)) * floor(n / 10 ^ k) * 10 ^ k). • a(10 ^ k - 1) = 10 * a(10 ^ (k - 1) - 1) + 45 * 10 ^ (k - 1) for k > 0. •

► [A033442] 0,0,1,3,6,10,15,21,28,36,45,54,64,75,87,100,114,129,145,162,180,198,217,237,258 ⋆ Number of edges in 10 - partite Turán graph of order n. • a(n) = Sum _{ i=1..n } floor(9 * i / 10). - _ Wesley Ivan Hurt _ , Sep 12 2017 •

► [A033443] 0,0,1,3,6,10,15,21,28,36,45,55,65,76,88,101,115,130,146,163,181,200,220,240,261 ⋆ Number of edges in 11 - partite Turán graph of order n. • a(n) = Sum _{ i=1..n } floor(10 * i / 11). - _ Wesley Ivan Hurt _ , Sep 12 2017 •

► [A033444] 0,0,1,3,6,10,15,21,28,36,45,55,66,77,89,102,116,131,147,164,182,201,221,242,264 ⋆ Number of edges in 12 - partite Turán graph of order n. • a(n) = Sum _{ i=1..n } floor(11 * i / 12). - _ Wesley Ivan Hurt _ , Sep 12 2017 •

► [A268291] 0,1,3,6,10,15,21,28,36,45,55,66,78,78,79,81,84,88,93,99,106,114,123,133,144 ⋆ a(n) = Sum _{ k = 0..n } (k mod 13). • a(n) = 12 * floor((n - 12) / 13) + 11 * floor((n - 11) / 13) + 10 * floor((n - 10) / 13) + 9 * floor((n - 9) / 13) + 8 * floor((n - 8) / 13) + 7 * floor((n - 7) / 13) + 6 * floor((n - 6) / 13) + 5 * floor((n - 5) / 13) + 4 * floor((n - 4) / 13) + 3 * floor((n - 3) / 13) + 2 * floor((n - 2) / 13) + floor((n - 1) / 13) + 78. •

► [A130910] 0,1,3,6,10,15,21,28,36,45,55,66,78,91,105,120,120,121,123,126,130,135,141,148,156 ⋆ Sum { 0<=k<=n, k mod 16 } (Partial sums of A130909). • a(n) = + a(n - 1) + a(n - 16) - a(n - 17). G.f. (x * (1 + 2 * x + 3 * x ^ 2 + 4 * x ^ 3 + 5 * x ^ 4 + 6 * x ^ 5 + 7 * x ^ 6 + 8 * x ^ 7 + 9 * x ^ 8 + 10 * x ^ 9 + 11 * x ^ 10 + 12 * x ^ 11 + 13 * x ^ 12 + 14 * x ^ 13 + 15 * x ^ 14)) / ((1 + x) * (1 + x ^ 2) * (1 + x ^ 4) * (1 + x ^ 8) * (x - 1) ^ 2). - R. J. Mathar, Nov 05 2011 •

► [A161680] 0,0,1,3,6,10,15,21,28,36,45,55,66,78,91,105,120,136,153,171,190,210,231,253,276 ⋆ a(n) = binomial(n,2): number of size - 2 subsets of { 0,1,...,n } that contain no consecutive integers. • a(n) = (n ^ 2 - n) / 2 = n * (n - 1) / 2. • a(n) = a(n - 1) + n - 1 (with a(0)=a(1)=0). - _ Vincenzo Librandi _ , Nov 30 2010 •

► [A000217] 0,1,3,6,10,15,21,28,36,45,55,66,78,91,105,120,136,153,171,190,210,231,253,276,300 ⋆ Triangular numbers: a(n) = binomial(n + 1,2) = n * (n + 1) / 2 = 0 + 1 + 2 + ... + n. • a(n) = a(- 1 - n). • a(n) + a(n - 1) * a(n + 1) = a(n) ^ 2. - _ Terrel Trotter, Jr. _ , Apr 08 2002 • a(n) = (- 1) ^ n * Sum _{ k=1..n } (- 1) ^ k * k ^ 2. - _ Benoit Cloitre _ , Aug 29 2002 • a(n + 1) = ((n + 2) / n) * a(n), Sum _{ n>=1 } 1 / a(n) = 2. - _ Jon Perry _ , Jul 13 2003 • a(n + 1) is the determinant of the n X n symmetric Pascal matrix M _ (i, j) = binomial(i + j + 1, i). - _ Benoit Cloitre _ , Aug 19 2003 • a(n) = ((n + 1) ^ 3 - n ^ 3 - 1) / 6. - Xavier Acloque, Oct 24 2003 •

► [A253145] 0,3,6,10,15,21,28,36,45,55,66,78,91,105,120,136,153,171,190,210,231,253,276,300,325 ⋆ Triangular numbers (A000217) omitting the term 1. • a(n) = (n + 1) * (n + 2) / 2 for n > 0. - _ Charles R Greathouse IV _ , Mar 23 2015 •

► [A109811] 0,1,3,6,10,15,21,28,36,45,55,66,78,91,105,120,136,153,171,190,210,231,253,300,378 ⋆ Triangular numbers (A000217) at Levenshtein distance 1 from another triangular number when considered as a decimal string. • a(n) is in this sequence iff a(n) is an element of A000217 and there exists another element T of A000217 such that LD(a(n), T) = 1, where LD(A, B) = Levenshtein distance from A to B as decimal strings. •

▶ [A025715] 1,3,6,10,15,21,28,36,45,56,68,81,95,110,126,143,161,180,201,223,246,270,295,321,348 ⋆ Index of 6 ^ n in A025622 (numbers of form 5 ^ i * 6 ^ j). ● a(n) >= binomial(n + 2, 2). - _ David A. Corneth _ , Jul 20 2017 ●
▶ [A361751] 1,3,6,10,15,21,28,36,45,65,87,111,137,165,195,227,261,297,335,375,417,461,507,555,605 ⋆ a(n) is the number of decimal digits in A098129(n) and A300517(n). ● a(n) = Sum _{ k=0..floor(log _ 10(n)) } (n * (n + 1) - 10 ^ k * (10 ^ k - 1)) / 2. - _ Andrew Howroyd _ , Mar 24 2023 ● a(n) = k * n * (n + 1) / 2 - ((100 ^ k - 1) / 99 - (10 ^ k - 1) / 9) / 2, where k = floor(log _ 10(n)) + 1 . - _ David Cleaver _ , Mar 25 2023 ●
▶ [A122056] 0,0,1,3,6,10,15,21,28,36,46,58,72,88,106,126,148,172,199,229,262,298,337,379,424 ⋆ Expansion of g.f. x ^ 2 / ((1 - x) ^ 4 * (1 + x) * (1 + x ^ 2) * (1 + x ^ 4)). ● a(n) = degree(p(n)) with p(n) = (x ^ (n - 1) * p(n - 1) * p(n - 8) + p(n - 4) * p(n - 5)) / p(n - 9). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 8) - 3 * a(n - 9) + 3 * a(n - 10) - a(n - 11) for n > 10. (End) ●
▶ [A175724] 0,0,0,0,1,3,6,10,15,21,29,39,51,65,81,99,120,144,171,201,234,270,310,354,402 ⋆ Partial sums of floor(n ^ 2 / 12). ● a(n) = round((2 * n ^ 3 + 3 * n ^ 2 - 18 * n) / 72). ● a(n) = a(n - 6) + (n - 2) * (n - 3) / 2, n>5. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 6) - 3 * a(n - 7) + 3 * a(n - 8) - a(n - 9), n>8. ●
▶ [A335184] 0,0,0,0,0,0,0,1,3,6,10,15,21,29,40,55,75,101,134,176,230,300,391,509,661 ⋆ a(n) is the number of subsets of { 1,2,...,n } with at least two elements and the difference between successive elements at least 6. ● a(n) = Sum _{ k=0..floor((n - 1) / 6) } binomial(n - 6 * k + k + 1, k + 2). - _ Andrew Howroyd _ , Aug 11 2020 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 6) - 2 * a(n - 7) + a(n - 8) for n>=8. ●
▶ [A101551] 0,0,0,0,1,3,6,10,15,21,29,42,66,111,192,330,554,906,1452,2303,3651,5826,9382,15225,24807 ⋆ C(n - 2,2) + C(n - 5,5) + ... + C(n - (3 * floor((n - 3) / 3) + 2),3 * floor((n - 3) / 3) + 2). ● a(n)=sum { k=0..n, if(mod(k + 1, 3)=0, C(n - k, k), 0) } . ● a(n + 2)=sum { k=0..floor(n / 6), binomial(n - 3k, 3k + 2) } . - _ Paul Barry _ , Jan 13 2005 ●
▶ [A227430] 0,0,1,3,6,10,15,21,29,45,90,220,561,1365,3095,6555,13110,25126,46971,87381,164921,320001,640002,1309528,2707629 ⋆ Expansion of x ^ 2 * (1 - x) ^ 3 / ((1 - 2 * x) * (1 - x + x ^ 2) * (1 - 3 * x + 3x ^ 2)). ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) for n>5, a(0)=a(1)=0, a(2)=1, a(3)=3, a(4)=6, a(5)=10. ● a(n) = Sum _{ k=0..floor(n / 6) } binomial(n,6 * k + 2). - _ Seiichi Manyama _ , Mar 23 2019 ●
▶ [A373934] 0,1,3,6,10,15,21,29,46,100,275,781,2080,5097,11562,24583,49725,97376,188480,368734,742811,1553192,3353332,7372536,16261025 ⋆ Number of compositions of 7 * n - 2 into parts 6 and 7. ● a(n) = Sum _{ k=0..floor(n / 6) } binomial(n + k,n - 2 - 6 * k). ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 6 * a(n - 6) + a(n - 7). ●
▶ [A346735] 1,1,1,1,1,3,6,10,15,21,34,63,120,220,381,642,1102,1968,3615,6658,12090,21675,38820,70200 ⋆ G.f. A(x) satisfies: A(x) = 1 + x + x ^ 2 + x ^ 3 + x ^ 4 + x ^ 5 * A(x) ^ 3. ● a(0) = ... = a(4) = 1; a(n) = Sum _{ i=0..n - 5 } Sum _{ j=0..n - i - 5 } a(i) * a(j) * a(n - i - j - 5). ●
▶ [A352212] 1,1,3,6,10,15,21,36,60 ⋆ Largest number of maximal triangle - free node - induced subgraphs of an n - node graph. ● a(m + n) >= a(m) * a(n). ●
▶ [A342212] 1,1,3,6,10,15,21,38,64 ⋆ Largest number of maximal bipartite node - induced subgraphs of an n - node graph. ● a(m + n) >= a(m) * a(n). ● a(n) <= n * 12 ^ (n / 4). (Byskov, Madsen, and Skjernaa (2005)) ●
▶ [A025723] 1,3,6,10,15,22,30,39,49,60,73,87,102,118,135,154,174,195,217,240,265,291,318,346,376 ⋆ Index of 7 ^ n within sequence of numbers of form 5 ^ i * 7 ^ j. ● a(n) = 1 + Sum _{ k=1..n } ceiling(k * log _ 5(7)). - _ Robert Israel _ , Nov 16 2016 ●
▶ [A173645] 0,0,0,0,1,3,6,10,15,22,31,42,55,70,87,107,130,156,185,217,253,293,337,385,437 ⋆ Partial sums of floor(n ^ 2 / 11). ● a(n) = round((2 * n ^ 3 + 3 * n ^ 2 - 23 * n - 12) / 66). ● a(n) = floor((2 * n ^ 3 + 3 * n ^ 2 - 23 * n + 18) / 66). ● a(n) = ceiling((2 * n ^ 3 + 3 * n ^ 2 - 23 * n - 42) / 66). ● a(n) = a(n - 11) + (n - 5) ^ 2 + 6, n > 10. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 11) - 3 * a(n - 12) + 3 * a(n - 13) - a(n - 14). ●
▶ [A122047] 0,0,1,3,6,10,15,22,31,42,55,70,88,109,133,160,190,224,262,304,350,400,455,515,580 ⋆ Degree of the polynomial P(n,x), defined by a Somos - 6 type sequence: P(n,x)=(x ^ (n - 1) * P(n - 1,x) * P(n - 5,x) + P(n - 2,x) * P(n - 4,x)) / P(n - 6,x), initialized with P(n,x)=1 at n<0. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 5) - 3 * a(n - 6) + 3 * a(n - 7) - a(n - 8); ● a(n) = floor((n ^ 3 + 6 * n ^ 2 + 5 * n) / 30). - _ Allan Bickle _ , Sep 15 2022 ●
▶ [A177100] 0,0,0,1,3,6,10,15,22,31,42,55,71,90,112,137,165,197,233,273,317,366,420,479,543 ⋆ Partial sums of round(n ^ 2 / 9). ● a(n) = round((n - 1) * (n + 2) * (2 * n + 1) / 54); ● a(n) = floor((n + 3) * (2 * n ^ 2 - 3 * n + 6) / 54); ● a(n) = ceiling((n - 2) * (2 * n ^ 2 + 7 * n + 11) / 54); ● a(n) = round((2 * n ^ 3 + 3 * n ^ 2 - 3 * n) / 54); ● a(n) = a(n - 9) + (n + 1) * (n - 9) + 31, n > 8. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 9) - 3 * a(n - 10) + 3 * a(n - 11) - a(n - 12). - _ R. J. Mathar _ , Mar 11 2012 ●
▶ [A265071] 1,3,6,10,15,22,31,44,62,87,122,171,240,336,471,660,925,1296,1816,2545,3566,4997,7002,9812,13749 ⋆ Coordination sequence for (3,3,4) tiling of hyperbolic plane. ● a(n) = a(n - 2) + a(n - 3) + a(n - 4) - a(n - 6) for n>6. - _ Vincenzo Librandi _ , Dec 30 2015 ●
▶ [A330910] 0,1,3,6,10,15,22,32,46,65,90,123,167,226,305,410,549,733,977,1301,1731,2301,3056,4056,5381 ⋆ a(n - 5) is the number of nonempty subsets of { 1,2,...,n } such that the difference of successive elements is at least 5. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 5) - 2 * a(n - 6) + a(n - 7) for n>6. ●
▶ [A137358] 0,0,1,3,6,10,15,22,34,57,101,181,319,549,928,1557,2617,4427,7536,12872,21992,37513,63862,108575,184524 ⋆ a(n) = Sum _{ k <= n / 2 } binomial(n - 2k, 3k + 2). ● a(0)=0, a(1)=0, a(2)=1, a(3)=3, a(4)=6, a(n)=3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 5). - _ Harvey P. Dale _ , Nov 06 2012 ●
▶ [A139714] 0,0,1,3,6,10,15,22,36,72,165,385,859,1807,3614,6995,13380,25773,50559,101118,204820,416405,843756,1698458,3396916 ⋆ a(n) = Sum _{ k>=0 } binomial(n,5 * k + 2). ● a(n) = round((2 / 5) * (2 ^ (n - 1) + phi ^ n * cos(Pi * (n - 4) / 5))), where phi is the golden ratio, round(x) is the integer nearest to x . - _ Vladimir Shevelev _ , Jun 18 2017 ● a(n + m) = a(n) * H _ 1(m) + H _ 2(m) * H _ 2(m) + H _ 1(n) * a(m) + H _ 5(n) * H _ 4(m) + H _ 4(n) * H _ 5(m), where H _ 1=A139398, H _ 2=A133476, H _ 4=A139748, H _ 5=A139761. - _ Vladimir Shevelev _ , Jun 18 2017 ●
▶ [A373962] 0,1,3,6,10,15,22,37,81,210,550,1354,3096,6646,13655,27490,55523,114516,242652,525221,1147796,2504932,5423381,11627959,24732634 ⋆ Number of compositions of 6 * n - 2 into parts 5 and 6. ● a(n) = Sum _{ k=0..floor(n / 5) } binomial(n + k,n - 2 - 5 * k). ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 7 * a(n - 5) - a(n - 6). ●
▶ [A342211] 1,1,3,6,10,15,22,38,64 ⋆ Largest number of maximal acyclic node - induced subgraphs of an n - node graph. ● a(m + n) >= a(m) * a(n). ●
▶ [A262927] 0,1,3,6,10,15,23,30,39,49,60,72,85,99,114,132,149,168,188,209,231,254,278,303,331 ⋆ a(n + 9) = a(n) + 10 * (n + 4) + 9. a(0)=0, a(1)=1, a(2)=3, a(3)=6, a(4)=10, a(5)=15, a(6)=23, a(7)=30, a(8)=39. ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 9) - 2 * a(n - 10) + a(n - 11), n>10. ● a(n) = (5n ^ 2 + 4n) / 9 + O(1), or more precisely (5n ^ 2 + 4n + 3) / 9 <= a(n) <= (5n ^ 2 + 4n - 10) / 9. - _ Charles R Greathouse IV _ , Oct 16 2015 ●
▶ [A360893] 1,1,1,1,1,3,6,10,15,24,51,109,214,389,747,1595,3497,7379,15065,31750,70504,159352,353748,777240,1742696 ⋆ G.f. satisfies A(x) = 1 + x / (1 - x ^ 4) ^ 2 * A(x / (1 - x ^ 4)). ● a(0) = 1; a(n) = Sum _{ k=0..floor((n - 1) / 4) } binomial(n - 3 * k,k) * a(n - 1 - 4 * k). ●
▶ [A346734] 1,1,1,1,1,3,6,10,15,27,55,111,210,388,741,1473,2956,5856,11514,22806,45756,92394,186459,375867,759519 ⋆ G.f. A(x) satisfies: A(x) = 1 + x + x ^ 2 + x ^ 3 + x ^ 4 * A(x) ^ 3. ● a(0) = ... = a(3) = 1; a(n) = Sum _{ i=0..n - 4 } Sum _{ j=0..n - i - 4 } a(i) * a(j) * a(n - i - j - 4). ●
▶ [A214282] 1,1,1,3,6,10,15,35,70,126,210,462,924,1716,3003,6435,12870,24310,43758,92378,184756,352716,646646,1352078,2704156 ⋆ Largest Euler characteristic of a downset on an n - dimensional cube. ● a(n) = binomial(n - 1, n / 2) when n is even, a(n) = binomial(n - 1, (n + 1) / 2) when n is 3 mod 4, and a(n) = binomial(n - 1, (n - 1) / 2) when n is 1 mod 4. ●
▶ [A260708] 0,1,3,6,10,16,21,29,36,46,55,68,78,93,105,122,136,156,171,193,210,234,253,280,300 ⋆ a(2n) = n * (2 * n + 1), a(2n + 7) = a(2n + 1) + 12 * n + 28, with a(1)=1, a(3)=6, a(5)=16. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) + a(n - 6) - a(n - 7) - a(n - 8) + a(n - 9) for n>8. (End) ● a(6 * k + 1) = 18 * k ^ 2 + 10 * k + 1, ● a(6 * k + 3) = 2 * (9 * k ^ 2 + 11 * k + 3), ● a(6 * k + 5) = 2 * (k + 1) * (9 * k + 8), that is A178574. ● a(n) = n * (n + 1) / 2 + (1 - (- 1) ^ n) * floor(n / 6 + 1 / 3) / 2. [_ Bruno Berselli _ , Nov 18 2015] ●
▶ [A264041] 1,3,6,10,16,21,29,36,46,55,68,78,93,105,122,136,156,171,193,210,234,253,280,300,329 ⋆ a(n) is the maximum number of diagonals that can be placed in an n X n grid made up of 1 X 1 unit squares when diagonals are placed in the unit squares in such a way that no two diagonals may cross or intersect at an endpoint. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) + a(n - 6) - a(n - 7) - a(n - 8) + a(n - 9) for n>9 (conjectured). - _ Colin Barker _ , Jan 31 2018 ●
▶ [A049697] 1,3,6,10,16,22,30,40,50,60,74,88,104,122,136,152,176,198,222,248,268,290,322,352,380 ⋆ a(n)=T(n,n + 1), array T as in A049695. ● a(n - 1)=sum _{ k=1...n } mu(k)floor(n / k)ceiling(n / k); a(n) is asymptotic to (6 / Pi ^ 2) * n ^ 2 - _ Benoit Cloitre _ , Jun 27 2005 ●
▶ [A293407] 0,1,3,6,10,16,23,31,40,51,62,75,89,105,122,140,159,179,201,224,248,273,300,327,356 ⋆ Least integer k such that k / n ^ 2 > (- 1 + sqrt(5)) / 2 (the golden ratio). ● a(n) = ceiling(r * n ^ 2), where r = (- 1 + sqrt(5)) / 2. ●
▶ [A330133] 0,1,3,6,10,16,23,31,40,51,63,76,90,106,123,141,160,181,203,226,250,276,303,331,360 ⋆ a(n) = (1 / 16) * (5 + (- 1) ^ (1 + n) - 4 * cos(n * Pi / 2) + 10 * n ^ 2). ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 4) - 2 * a(n - 5) + a(n - 6) for n > 5. ● a(4 * n) = 10 * n ^ 2. - _ Bernard Schott _ , Dec 06 2019 ●
▶ [A034198] 0,1,3,6,10,16,23,32,43,56,71,89,109,132,158,187,219,255,294,337,384,435,490,550,614 ⋆ Number of binary codes (not necessarily linear) of length n with 3 words. ● a(n) = floor(n * (2 * n ^ 2 + 21 * n - 6) / 72). ● a(1) = 0, a(2) = 1, a(3) = 3, a(4) = 6, a(5) = 10, a(6) = 16, a(7) = 23, and a(n) = 2 * a(n - 1) - a(n - 3) - a(n - 4) + 2 * a(n - 6) - a(n - 7) for n >= 8. [_ Harvey P. Dale _ , Dec 25 2011] ●
▶ [A121776] 1,1,3,6,10,16,23,36,52,76,118,181,271,427,675,1057,1686,2705,4318,6923,11142,17966,28999,46793,75522 ⋆ Antidiagonal sums of triangle A121775. ● a(n) = Sum _{ k=0..[n / 2] } Sum _{ d|(n - k) } phi((n - k) / d) * C(d,k) for n>0, with a(0)=1. ●
▶ [A259823] 0,1,3,6,10,16,24,33,45,61,79,103,130,162,198,246,300,364,436,517,613,721,849,993,1155 ⋆ a(0)=0, a(1)=1, a(n)=min { 3 a(k) + 2 ^ (n - k) - 1, k=0..(n - 1) } for n>=2. ● a(n) = min { 3 * a(k) + 2 ^ (n - k) - 1; k < n } . ●
▶ [A264847] 0,1,3,6,10,16,24,34,46,60,76,94,114,137,163,192,224,259,297,338,382,429,479,532,588 ⋆ Pluritriangular numbers: a(0) = 0; a(n + 1) = a(n) + the number of digits in terms a(0)..a(n). ● a(n + 1) = 2 * a(n) - a(n - 1) + floor(log _ 10(a(n))) + 1. - _ Danny Rorabaugh _ , Jan 20 2016 ●
▶ [A173653] 0,0,0,0,1,3,6,10,16,24,34,46,60,76,95,117,142,170,202,238,278,322,370,422,479 ⋆ Partial sums of floor(n ^ 2 / 10) (A056865) ● a(n) = sum(k=0..n,floor(k ^ 2 / 10)). ● a(n) = a(n - 10) + (n - 5) ^ 2 + n - 1 , n>9. ● a(n)= + 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 10) - 3 * a(n - 11) + 3 * a(n - 12) - a(n - 13). [R. J. Mathar, Nov 24 2010] ●
▶ [A122046] 0,0,0,1,3,6,10,16,24,34,46,61,79,100,124,152,184,220,260,305,355,410,470,536,608 ⋆ Partial sums of floor(n ^ 2 / 8). ● a(n) = Sum _ (k=0..n } floor(k ^ 2 / 8). ● a(n) = round((2 * n ^ 3 + 3 * n ^ 2 - 8 * n) / 48) = round((4 * n ^ 3 + 6 * n ^ 2 - 16 * n - 9) / 96) = floor((2 * n ^ 3 + 3 * n ^ 2 - 8 * n + 3) / 48) = ceiling((2 * n ^ 3 + 3 * n ^ 2 - 8 * n - 12) / 48). - _ Mircea Merca _ ● a(n) = a(n - 8) + (n - 4) ^ 2 + n, n > 8. - _ Mircea Merca _ ● a(n + 1) = cos((2 * n + 1) * Pi / 4) / (4 * sqrt(2)) + (2 * n + 3) * (2 * n ^ 2 + 6 * n - 5) / 96 + (- 1) ^ n / 32. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 4) - 3 * a(n - 5) + 3 * a(n - 6) - a(n - 7). (End) ● a(n) = (4 * n ^ 3 + 6 * n ^ 2 - 16 * n - 9 - 3 * (- 1) ^ n + 12 * (- 1) ^ ((2 * n - 1 + (- 1) ^ n) / 4)) / 96. - _ Luce ETIENNE _ , Mar 21 2014 ●
▶ [A173691] 0,0,1,3,6,10,16,24,35,49,66,86,110,138,171,209,252,300,354,414,481,555,636,724,820 ⋆ Partial sums of round(n ^ 2 / 6). ● a(n) = Sum _{ k=0..n } round(k ^ 2 / 6). ● a(n) = round((2 * n ^ 3 + 3 * n ^ 2 + 6 * n) / 36). ● a(n) = round((4 * n ^ 3 + 6 * n ^ 2 + 12 * n + 5) / 72). ● a(n) = floor((2 * n ^ 3 + 3

* n ^ 2 + 6 * n + 16) / 36). ● a(n) = ceiling((2 * n ^ 3 + 3 * n ^ 2 + 6 * n - 11) / 36). ● a(n) = a(n - 6) + n ^ 2 - 5 * n + 10, n > 5. ●

▶ [A011902] 0,0,0,0,1,3,6,10,16,25,36,49,66,85,109,136,168,204,244,290,342,399,462,531,607 ⋆ [n(n - 1)(n - 2) / 20]. ● a(n) = + 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 20) - 3 * a(n - 21) + 3 * a(n - 22) - a(n - 23). G.f.: x ^ 4 * (1 + x ^ 4 + x ^ 5 - x ^ 6 + 2 * x ^ 8 - 2 * x ^ 9 + 3 * x ^ 10 - 2 * x ^ 11 + 2 * x ^ 12 - x ^ 13 + 2 * x ^ 15 - x ^ 17 + x ^ 18) / ((- 1 + x) ^ 4 * (1 + x ^ 4 + x ^ 3 + x ^ 2 + x) * (1 + x) * (1 - x + x ^ 2 - x ^ 3 + x ^ 4) * (1 + x ^ 2) * (x ^ 8 - x ^ 6 + x ^ 4 - x ^ 2 + 1)). [From _ R. J. Mathar _ , Apr 15 2010] ●

▶ [A145131] 0,1,3,6,10,16,25,38,56,81,116,165,233,327,457,637,886,1230,1705,2361,3267,4518,6245,8629,11920 ⋆ Expansion of x / ((1 - x - x ^ 4) * (1 - x) ^ 2). ● a(n) = 3a(n - 1) - 3a(n - 2) + a(n - 3) + a(n - 4) - 2a(n - 5) + a(n - 6). ●

▶ [A265074] 1,3,6,10,16,26,42,67,106,167,264,418,662,1048,1658,2623,4150,6567,10392,16444,26020,41172,65148,103087,163120 ⋆ Coordination sequence for (3,3,7) tiling of hyperbolic plane. ● a(n) = a(n - 1) + a(n - 3) + a(n - 5) + a(n - 7) - a(n - 8) for n>8. - _ Vincenzo Librandi _ , Dec 30 2015 ●

▶ [A054886] 1,3,6,10,16,26,42,68,110,178,288,466,754,1220,1974,3194,5168,8362,13530,21892,35422,57314,92736,150050,242786 ⋆ Layer counting sequence for hyperbolic tessellation by cuspidal triangles of angles (Pi / 3,Pi / 3,0) (this is the classical modular tessellation). ● a(n) = 2 * F(n + 2) for n >= 2, with F(n) the n - th Fibonacci number (cf. A000045). ●

▶ [A038505] 0,0,1,3,6,10,16,28,56,120,256,528,1056,2080,4096,8128,16256,32640,65536,131328,262656,524800,1048576,2096128,4192256 ⋆ Sum of every 4th entry of row n in Pascal's triangle, starting at binomial(n,2). ● a(n; t, s) = a(n - 1; t, s) + a(n - 1; t + 1, s + t + 1) where t is the trace and s is the subtrace. ● a(n) = Sum _{ k=0..n } binomial(n, 2 + 4 * k), n >= 0. ● a(n) = Sum _{ k=0..n } (1 / 2) * C(n, k) * (- 1) ^ C(k + 3, 3) for n >= 1. - _ Paul Barry _ , Jul 07 2003 ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n, 2 * k) * (1 - (- 1) ^ k) / 2. (End) ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3), n > 3; sequence is identical to its fourth differences. - _ Paul Curtz _ , Dec 21 2007 ● a(n + m) = a(n) * H _ 1(m) + H _ 2(n) * H _ 2(m) + H _ 1(n) * a(m) + H _ 4(n) * H _ 4(m), ●

▶ [A369850] 0,1,3,6,10,16,29,64,156,376,860,1873,3965,8347,17751,38303,83488,182497,397978,864339,1871236,4046070,8751965,18952107,41080980 ⋆ Number of compositions of 5 * n - 2 into parts 4 and 5. ● a(n) = Sum _{ k=0..floor(n / 4) } binomial(n + k,n - 2 - 4 * k). ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 4 * a(n - 4) + a(n - 5). ●

▶ [A360889] 1,1,1,1,3,6,10,16,37,85,175,365,865,2090,4826,11447,28797,73086,183422,471462,1249792,3329832,8898534,24244771,67210802 ⋆ G.f. satisfies A(x) = 1 + x * (1 + x ^ 3) ^ 2 * A(x * (1 + x ^ 3)). ● a(0) = 1; a(n) = Sum _{ k=0..floor(n - 1) / 3 } binomial(n + 1 - 3 * k,k) * a(n - 1 - 3 * k). ●

▶ [A236326] 3,6,10,17,24,27,30,34,41,48,51,54,58,65,72,75,78,82,89,96,99,102,106,113,120 ⋆ a(n) * Pi is the total length of irregular spiral (center points: 1, 2, 3, 4, 5; pattern 1) after n rotations. ● a(n) = a(n - 1) + a(n - 5) - a(n - 6). ●

▶ [A189376] 1,3,6,10,17,27,40,56,78,106,140,180,230,290,360,440,535,645,770,910,1071,1253,1456,1680,1932 ⋆ Expansion of 1 / ((1 - x) ^ 5 * (x ^ 3 + x ^ 2 + x + 1) ^ 2). ● a(0)=1, a(1)=3, a(2)=6, a(3)=10, a(4)=17, a(5)=27, a(6)=40, a(7)=56, a(8)=78, a(9)=106, a(10)=140, a(n)=3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + 2 * a(n - 4) - 6 * a(n - 5) + 6 * a(n - 6) - 2 * a(n - 7) - a(n - 8) + 3 * a(n - 9) - 3 * a(n - 10) + a(n - 11). - _ Harvey P. Dale _ , Apr 12 2015 ●

▶ [A092263] 1,3,6,10,17,29,48,78,127,207,336,544,881,1427,2310,3738,6049,9789,15840,25630,41471,67103,108576,175680,284257 ⋆ a(1)=1, a(n + 1)=ceiling(phi * a(n)) + 1 if a(n) is odd, a(n + 1)=ceiling(phi * a(n)) if a(n) is even, where phi=(1 + sqrt(5)) / 2. ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) - a(n - 5) for n > 5. ●

▶ [A266617] 0,3,6,10,18,21,32,36,52,55,74,78,102,105,132,136,168,171,206,210,250,253,296,300,348 ⋆ Total number of OFF (white) cells after n iterations of the "Rule 41" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) + a(n - 4) - a(n - 5) - a(n - 6) + a(n - 7) for n>6. ●

▶ [A075111] 0,1,1,1,3,6,10,18,34,63,115,211,389,716,1316,2420,4452,8189,15061,27701,50951,93714,172366,317030,583110 ⋆ a(n)=Sum((- 1) ^ (i + Floor(n / 2)) T(2i + e),(i=0,..,Floor(n / 2))), where T(n) are tribonacci numbers (A000073) and e=(1 / 2)(1 - (- 1) ^ n). ● a(n)=a(n - 1) + 2a(n - 3) + a(n - 4) + a(n - 5), a(0)=0, a(1)=1, a(2)=1, a(3)=1, a(4)=3. G.f.: x / (1 - x - 2 * x ^ 3 - x ^ 4 - x ^ 5). ●

▶ [A360892] 1,1,1,1,3,6,10,18,42,94,193,428,1036,2470,5779,14192,36176,91649,233617,613978,1641492,4396393,11922501,32969768,92080274 ⋆ G.f. satisfies A(x) = 1 + x / (1 - x ^ 3) ^ 2 * A(x / (1 - x ^ 3)). ● a(0) = 1; a(n) = Sum _{ k=0..floor(n - 1) / 3) } binomial(n - 2 * k,k) * a(n - 1 - 3 * k). ●

▶ [A295719] 1,3,6,10,20,32,60,96,172,276,480,772,1316,2120,3564,5748,9568,15444,25524,41224,67772,109508,179328,289860,473284 ⋆ a(n) = a(n - 1) + 3 * a(n - 2) - 2 * a(n - 3) - 2 * a(n - 4), where a(0) = 1, a(1) = 3, a(2) = 6, a(3) = 10. ● a(n) = a(n - 1) + a(n - 3) + a(n - 4), where a(0) = 1, a(1) = 3, a(2) = 6, a(3) = 10. ●

▶ [A306357] 0,1,3,6,10,20,38,70,130,240,442,814,1498,2756,5070,9326,17154,31552,58034,106742,196330,361108,664182,1221622,2246914 ⋆ Number of nonempty subsets of { 1, ..., n } containing no three cyclically successive elements. ● a(n) = 2 * a(n - 1) - a(n - 4) for n > 6. ●

▶ [A343386] 0,0,1,3,6,10,20,56,168,456,1137,2827,7458,20670,57577,157691,427976,1170552,3248411,9096497,25505562,71436182,200338074,564083786,1595055520 ⋆ Number of odd Motzkin n - paths, i.e., Motzkin n - paths with an odd number of up steps. ● a(n) = ((n - 1) * n * hypergeom([1 / 2 - n / 4, 3 / 4 - n / 4, 1 - n / 4, 5 / 4 - n / 4], [3 / 2, 3 / 2, 2], 16)) / 2. - _ Peter Luschny _ , Sep 24 2021 ●

▶ [A299017] 1,3,6,10,21,36,55,78,105,136,171,210,253,300,351 ⋆ Intersection of A264041 and A000217. ● a(n) = 6 - 7 * n + 2 * n ^ 2 for n>3. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>3. ●

▶ [A027671] 1,3,6,10,21,39,92,198,498,1219,3210,8418,22913,62415,173088,481598,1351983,3808083,10781954,30615354,87230157,249144711,713387076,2046856566,5884491500 ⋆ Number of necklaces with n beads of 3 colors, allowing turning over. ● a(0) = 1; a(n) = (k ^ floor((n + 1) / 2) + k ^ ceiling((n + 1) / 2)) / 4 + (1 / (2 * n)) * Sum _{ i=1..n } k ^ gcd(n,i), where k=3 is the maximum number of colors. ●

▶ [A346733] 1,1,1,1,3,6,10,21,48,103,219,489,1114,2517,5712,13152,30492,70812,165165,387456,912378,2154250,5102343,12123027,28878384 ⋆ G.f. A(x) satisfies: A(x) = 1 + x + x ^ 2 + x ^ 3 * A(x) ^ 3. ● a(0) = a(1) = a(2) = 1; a(n) = Sum _{ i=0..n - 3 } Sum _{ j=0..n - i - 3 } a(i) * a(j) * a(n - i - j - 3). ●

▶ [A048006] 0,0,0,3,6,10,25,45,77,175,322,570,1245,2325,4213,9031,17061,31421,66547,126763,236203,496063,950818,1787346,3730293 ⋆ Number of nonempty subsets of { 1,2,...,n } in which exactly 1 / 3 of the elements are <= (n - 1) / 3. ● a(n) = Sum _{ k=1..floor(n / 3) } binomial(floor((n - 1) / 3), 3 * k) * binomial(ceiling(2 * (n - 1) / 3), 2 * k). - _ Robert Israel _ , Feb 05 2017 ●

▶ [A001465] 0,0,1,3,6,10,30,126,448,1296,4140,17380,76296,296088,1126216,4940040,23904000,110455936,489602448,2313783216,11960299360,61878663840,304644323296,1587272962528,8699800221696 ⋆ Number of degree - n odd permutations of order 2. ● a(n) = Sum _{ i=0..floor((n - 2) / 4) } C(n,4i + 2) * (4i + 2)! / (4i + 2)!!. - _ Ralf Stephan _ , May 08 2007 ●

▶ [A262242] 3,6,10,36,66,136,528,2080,8256,32896,131328,524800,2098176,8390656,33558528,134225920,536887296,2147516416,8590000128,34359869440,137439215616,549756338176,2199024304128,8796095119360,35184376283136 ⋆ Triangular numbers representable as 2 ^ x + 2 ^ y. ● a(n) = 2 ^ (n - 5) * (2 ^ n + 4) for n>5. ● a(n) = 6 * a(n - 1) - 8 * a(n - 2) for n>7. ●

▶ [A368173] 0,0,0,3,6,10,105,651,2968,26496,265905,2203795,22830456,288661308,3476579197,44960585775,671394654960,10329701480416,164573071219233,2865785889662019,52647629639499280,1000194250108913580,20125846165307543661,426789766980101676943 ⋆ Expansion of e.g.f. - log(1 - x ^ 2 / 2 * (exp(x) - 1)) . ● a(n) = n! * Sum _{ k=1..floor(n / 3) } (k - 1)! * Stirling2(n - 2 * k,k) / (2 ^ k * (n - 2 * k)!). ●

▶ [A355181] 0,0,0,3,6,10,195,1281,5908,90756,1098765,9605035,147947646,2496239538,33836915203,588360763095,12104789358600,223722576473896,4578806487368313,108875473376842467,2519418390663035170,60831875074927797750,1640260621340460494991 ⋆ Expansion of e.g.f. - LambertW(x ^ 2 / 2 * (1 - exp(x))). ● a(n) = n! * Sum _{ k=1..floor(n / 3) } k ^ (k - 1) * Stirling2(n - 2 * k,k) / (2 ^ k * (n - 2 * k)!). ●

▶ [A355179] 0,0,0,3,6,10,375,2541,11788,317556,4238685,37921015,909616026,18283276518,261259582675,6360432558585,164704011195480,3332419310132776,88606184592031353,2713050497589230763,71412977041725823750,2144089948615678382970 ⋆ Expansion of e.g.f. - LambertW(x ^ 2 * (1 - exp(x))) / 2. ● a(n) = (n! / 2) * Sum _{ k=1..floor(n / 3) } k ^ (k - 1) * Stirling2(n - 2 * k,k) / (n - 2 * k)!. ●

▶ [A074737] 1,1,3,6,11,14,15,24,27,36,39,41,42,51,54,56,57,66,69,74,77,87,93,96,107 ⋆ Let b(1)=b(2)=1, b(k + 2)=gcd(k!,b(k + 1) + b(k)); sequence gives values of n such that b(n)=1. ● a(n) seems to be asymptotic to c * n * log(n) with 1 <c<3 / 2 ●

▶ [A189380] 3,6,11,14,19,22,25,30,33,38,41,44,49,52,57,60,65,68,71,76,79,84,87,90,95 ⋆ a(n) = n + floor(n * s / r) + floor(n * t / r); r=1, s= - 1 + sqrt(2), t=1 + sqrt(2). ● a(n) = 5 * floor(n * (sqrt(2) - 1)) + 3 * floor(n * (2 - sqrt(2))) + 3 . - _ Miko Labalan _ , Dec 04 2016 ●

▶ [A047398] 3,6,11,14,19,22,27,30,35,38,43,46,51,54,59,62,67,70,75,78,83,86,91,94,99 ⋆ Numbers that are congruent to { 3, 6 } mod 8. ● a(n) = 8 * n - a(n - 1) - 7, n > 1. - _ Vincenzo Librandi _ , Aug 05 2010 ● a(n) = 4 * n - (3 + (- 1) ^ n) / 2. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3), n > 3. ● a(n) = 4 * n + (n mod 2) - 2. ●

▶ [A342954] 1,3,6,11,14,21,24,31,36,39,46,53,56,63,70,75,78,85,92,99,102,109,116,123,128 ⋆ Number of interior regions formed by drawing n unit circles whose centers (s,t) are the partitions of k into 2 parts, where 0 < s <= t and s + t = k, ordered by increasing values of s and where k = 2,3,... . ● a(1) = 1; a(n) = Sum _{ i=1..n - 1 } (7 - 4 * (floor(sqrt(i)) - floor(sqrt(i - 1)) + (floor(sqrt(i + 1) + 1 / 2) - floor(sqrt(i) + 1 / 2)) - 2 * (floor(sqrt(i + 1)) - floor(sqrt(i)))) for n > 1. ●

▶ [A350438] 0,0,1,1,3,6,11,14,23,39,71,118,195,317,537,906,1533,2550,4261,7119,11973,20073,33650,56277,94286 ⋆ a(n) is the number of integers that can be represented in a 7 - segment display by using only n segments (version A010371). ● a(n) = a(n - 2) + 2 * a(n - 4) + 3 * a(n - 5) + 3 * a(n - 6) + a(n - 7) for n > 13 . ●

▶ [A366471] 1,3,6,11,16,22,29,39,50,60,71,84,97,111,126,147,164,184,203,224,245,267,290,316,345 ⋆ Number of increasing geometric progressions in { 1,2,3,...,n } with rational ratio. ● a(n) = Sum _{ k=1 .. 1 + floor(log _ 2(n)) } Sum _{ p=2..floor(n ^ (1 / (k - 1))) } phi(p) * floor(n / p ^ (k - 1)) where phi is the Euler phi - function A000010. ●

▶ [A333709] 0,1,3,6,11,16,22,30,38,48,58,70,82,95,110,125,142,159,178,197,218,239,262,285,310 ⋆ a(n) is the number of iterations for x = x + 1 / x needed until x + 1 / x > n, starting with x = 1. ● a(n) < (1 / 2) * n ^ 2. - _ Peter Luschny _ , Apr 12 2020 ●

▶ [A266252] 0,3,6,11,16,22,31,37,50,56,73,79,100,106,131,137,166,172,205,211,248,254,295,301,346 ⋆ Total number of OFF (white) cells after n iterations of the "Rule 9" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = ((- 1) ^ n * (n - 4) + n * (n + 4)) / 2 for n>2. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n>7. ●

▶ [A267260] 1,3,6,11,16,23,29,40,46,61,67,86,92,115,121,148,154,185,191,226,232,271,277,320,326 ⋆ Total number of ON (black) cells after n iterations of the " Rule 111" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = (n ^ 2 - ((- 1) ^ n - 4) * n + 4 * (- 1) ^ n) / 2 for n>3. ●

▶ [A116940] 0,3,6,11,16,23,30,39,48,59,70,83,96,111,126,143,160,179,198,219,240,263,286,311,336 ⋆ Greatest m such that A116939(m) = n. ● a(0) = 0, a(n + 1) = a(n) + 2 * floor(n / 2) + 3. ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4). - _ Joerg Arndt _ , Apr 02 2011 ● a(n) = 2n + ceiling(n ^ 2 / 2). - _ Wesley Ivan Hurt _ , Jun 14 2013 ● a(n) = (2 * n * (n + 4) - (- 1) ^ n + 1) / 4. - _ Bruno Berselli _ , Jun 14 2013 ● a(n) = binomial(n + 2, 2) + floor((n - 1) / 2). ● a(2 * n) ^ 2 - a(2 * n - 1) * a(2 * n + 1) = 3, n > 0. ●

► [A087099] 1,3,6,11,16,24,31,42,51,65,76,93,106,126,141,164,181,207,226,255,276,308,331,366,391 ⋆ Partial sums of A063914. ● a(n) = 2 * a(n - 2) - a(n - 4) for n > 4. ●

► [A332410] 0,1,3,6,11,17,24,32,41,52,64,77,91,106,123,141,160,180,201,224,248,273,299,326,355 ⋆ a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 5) - 2 * a(n - 6) + a(n - 7) with a(0)=0, a(1)=1, a(2)=3, a(3)=6, a(4)=11, a(5)=17, a(6)=24. ● a(8 + n) - a(8 - n) = 20 * n. ●

► [A071619] 0,1,3,6,11,17,24,33,43,54,67,81,96,113,131,150,171,193,216,241,267,294,323,353,384 ⋆ a(n) = ceiling(2 * n ^ 2 / 3). ● a(n) = (2 / 3) * n ^ 2 if n mod 3 = 0, otherwise (2 / 3) * n ^ 2 + 1 / 3. ● a(n) = ceiling(2 * n ^ 2 / 3). - _ Wesley Ivan Hurt _ , Jun 20 2013 ● a(n) = Sum _{ j=1..n } Sum _{ i=1..n } ceiling((i + j - n) / 3). - _ Wesley Ivan Hurt _ , Mar 12 2015 ● a(n) = n ^ 2 - floor(n ^ 2 / 3) = (2 / 9) * (3 * n ^ 2 + 1 - cos(2 * Pi * n / 3)). - _ Bruno Berselli _ , Jan 18 2017 ●

► [A109413] 1,3,6,11,17,24,35,45,58,71,87,106,123,144,164,189,216,240,269,298,329,365,396,437,471 ⋆ a(n) equals the (n * (n + 1) / 2) - th partial sum of the self - convolution of A010054, which has the g.f.: Sum _{ n>=0 } x ^ (n * (n + 1) / 2). ● a(n) = [x ^ (n * (n + 1) / 2)] [Sum _{ k>=0 } x ^ (k * (k + 1) / 2)] ^ 2 / (1 - x). ●

► [A003022] 1,3,6,11,17,25,34,44,55,72,85,106,127,151,177,199,216,246,283,333,356,372,425,480,492 ⋆ Length of shortest (or optimal) Golomb ruler with n marks. ● a(n) >= n(n - 1) / 2, with strict inequality for n >= 5 (Golomb). - _ David W. Wilson _ , Aug 18 2007 ●

► [A022775] 1,3,6,11,17,25,34,44,56,69,84,100,117,136,156,178,201,226,252,279,308,338,370,403,437 ⋆ Place where n - th 1 occurs in A007336. ● a(n) = 1 + Sum _{ k=1..n - 1 } ceiling(sqrt(2) * k). - _ Benoit Cloitre _ , Jan 24 2009 ●

► [A263807] 1,3,6,11,17,25,34,45,57,71,86,103,121,141,162,185,209,235,262,291,321,353,386,421,457 ⋆ Total number of ON (black) cells after n iterations of the " Rule 157" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4) for n>3. ●

► [A281376] 0,0,0,1,3,6,11,17,25,35,47,60,77,95,115,138,164,191,222,254,290,329,370,412,460 ⋆ Total number of counts where floor(N / k) < floor((N + k) / n) for k = { 1, 2, ..., n - 1 } and N >= n. ● a(n) = Sum _{ d=1..ceiling((n - 3) / 3) } Sum _{ j=1..n - (2 * d + 1) } floor(j / d). - _ Jon E. Schoenfield _ , Jan 23 2017 ● a(n) = Sum _{ d=1..ceiling(n / 3) - 1 } ((j + 1) * (j * d / 2 + n mod d)), where j = floor(n / d) - 3. - _ Jon E. Schoenfield _ , Jan 24 2017 ●

► [A000603] 1,3,6,11,17,26,35,45,58,73,90,106,123,146,168,193,216,243,271,302,335,365,402,437,473 ⋆ Number of nonnegative solutions to x ^ 2 + y ^ 2 <= n ^ 2. ● a(n) = n ^ 2 * Pi / 4 + O(n). - _ Charles R Greathouse IV _ , Apr 03 2013 ● a(n) = [x ^ (n ^ 2)] (1 + theta _ 3(x)) ^ 2 / (4 * (1 - x)), where theta _ 3() is the Jacobi theta function. - _ Ilya Gutkovskiy _ , Apr 15 2018 ●

► [A003453] 1,3,6,11,17,26,36,50,65,85,106,133,161,196,232,276,321,375,430,495,561,638,716,806,897 ⋆ Number of nonequivalent dissections of an n - gon into 3 polygons by nonintersecting diagonals up to rotation and reflection. ● a(5)=1, a(6)=3, a(7)=6, a(8)=11, a(9)=17, a(10)=26, a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + a(n - 4) + 2 * a(n - 5) - a (n - 6). - _ Harvey P. Dale _ , Jan 28 2013 ● a(n) = (2 * n ^ 3 - 6 * n ^ 2 - 23 * n + 63 + 3 * (n - 5) * (- 1) ^ n) / 48, for n>=5. - _ Luce ETIENNE _ , Apr 07 2015 ● a(n) = (1 / 2) * Sum _{ i=1..n - 4 } floor((i + 1) * (n - i - 2) / 2). - _ Wesley Ivan Hurt _ , May 07 2016 ●

► [A011901] 0,0,0,0,1,3,6,11,17,26,37,52,69,90,114,143,176,214,257,306,360,420,486,559,639 ⋆ [n(n - 1)(n - 2) / 19]. ● a(n) = + 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 19) - 3 * a(n - 20) + 3 * a(n - 21) - a(n - 22). - _ R. J. Mathar _ , Apr 15 2010 ●

► [A279032] 0,1,3,6,11,17,27,42,65,100,152,231,349,527,792,1186,1771,2639,3923,5817,8609,12715,18747,27595,40557 ⋆ a(n) is the greatest integer such that binomial(a(n),n) * 2 ^ (1 - binomial(n,2)) < 1. ● a(n) is asymptotic to n * 2 ^ (n / 2) / (e * sqrt(2)). ●

► [A340648] 0,1,3,6,11,18,26,35,46,59,73,88,105,124,144,165,188,213,239,266,295,326,358,391,426 ⋆ a(n) is the maximum number of nonzero entries in an n X n sign - restricted matrix. ● a(n) = (3 * n ^ 2 - n) / 4 if (n==0) or (n==3) (mod 4); ● a(n) = (3 * n ^ 2 - n + 2) / 4 if (n==1) or (n==2) (mod 4). ● a(n) = 3 * a(n - 1) - 4 * a(n - 2) + 4 * a(n - 3) - 3 * a(n - 4) + a(n - 5) for n > 4. (End) ●

► [A224214] 1,3,6,11,18,26,37,50,63,80,96,115,136,159,186,210,239,268,301,336,368,407,444,487,526 ⋆ Number of nonnegative solutions to x ^ 3 + y ^ 3 <= n ^ 3. ● a(n) = [x ^ (n ^ 3)] (1 / (1 - x)) * (Sum _{ k>=0 } x ^ (k ^ 3)) ^ 2. - _ Ilya Gutkovskiy _ , Apr 20 2018 ●

► [A010000] 1,3,6,11,18,27,38,51,66,83,102,123,146,171,198,227,258,291,326,363,402,443,486,531,578 ⋆ a(0) = 1, a(n) = n ^ 2 + 2 for n > 0. ● a(n) = a(- n) for all n in Z. (End) ● a(n) = (2 * n / (n + 1)!) * Sum _{ j=0..n } (- 1) ^ (n - j) * binomial(n,j) * (j + 1 / n) ^ (n + 1), n > 0, a(0)=1. - _ Vladimir Kruchinin _ , Jun 03 2013 ●

► [A172046] 0,0,0,1,3,6,11,18,27,38,52,69,89,113,141,173,209,250,296,347,404,467,536,611,693 ⋆ Partial sums of floor(n ^ 2 / 7) (A056834). ● a(n) = Sum _{ k=0..n } floor(k ^ 2 / 7). ● a(n) = round((2 * n ^ 3 + 3 * n ^ 2 - 11 * n) / 42). ● a(n) = round((2 * n ^ 3 + 3 * n ^ 2 - 11 * n - 6) / 42). ● a(n) = floor((2 * n ^ 3 + 3 * n ^ 2 - 11 * n + 6) / 42). ● a(n) = ceiling((2 * n ^ 3 + 3 * n ^ 2 - 11 * n - 18) / 42). ● a(n) = a(n - 7) + (n - 2) * (n - 4) + 3, n > 6. ●

► [A014125] 1,3,6,11,18,27,39,54,72,94,120,150,185,225,270,321,378,441,511,588,672,764,864,972,1089 ⋆ Bisection of A001400. ● a(n) = - a(- 6 - n) = 3 * a(n - 1) - 3 * a(n - 2) + 2 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) - a(n - 6). ● a(n) = n ^ 3 / 18 + n ^ 2 / 2 + 4 * n / 3 + 1 + 2 / (9 * sqrt(3)) * sin(2 * Pi * n / 3). - _ Andrew Hone _ , Jul 29 2004 ● a(n) = n ^ 3 / 18 + n ^ 2 / 2 + 4 * n / 3 + 1 + (((n + 1) mod 3) - 1) / 9. - same formula, simplified by _ Gerald Hillier _ , Apr 14 2015 ● a(n) = round(((2 * n + 5) ^ 3 + 3 * (2 * n + 5) ^ 2 - 9 * (2 * n + 5)) / 144). - _ Giacomo Guglieri _ , Jun 28 2020 ● a(n) = floor(((n + 2) ^ 3 + 3 * (n + 2) ^ 2) / 18). - _ Allan Bickle _ , Aug 01 2020 ● a(n) = Sum _{ j=0..n } (n - j + 1) * floor((j + 3) / 3). - _ G. C. Greubel _ , Oct 18 2021 ●

► [A011849] 0,0,0,0,1,3,6,11,18,28,40,55,73,95,121,151,186,226,272,323,380,443,513,590,674 ⋆ a(n) = floor(binomial(n,3) / 3). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 3 * a(n - 3) + 3 * a(n - 4) - 6 * a(n - 5) + 3 * a(n - 6) + 3 * a(n - 7) - 6 * a(n - 8) + 4 * a(n - 9) - a(n - 10). ● a(n) = (1 / 54) * (n ^ 3 - 3 * n - 6 + [6,8,4, - 12,8,4, - 30,8,4](mod 9)). - _ Ralf Stephan _ , Aug 11 2013 ●

► [A173690] 0,0,1,3,6,11,18,28,41,57,77,101,130,164,203,248,299,357,422,494,574,662,759,865,980 ⋆ Partial sums of round(n ^ 2 / 5). ● a(n) = Sum _{ k=0..n } round(k ^ 2 / 5); ● a(n) = round((2 * n ^ 3 + 3 * n ^ 2 + n) / 30); ● a(n) = floor((2 * n ^ 3 + 3 * n ^ 2 + n + 6) / 30; ● a(n) = ceiling((2 * n ^ 3 + 3 * n ^ 2 + n - 6) / 30); ● a(n) = a(n - 5) + (n - 2) ^ 2 + 2, n > 4; ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 5) - 3 * a(n - 6) + 3 * a(n - 7) - a(n - 8), n > 7. ●

► [A014284] 1,3,6,11,18,29,42,59,78,101,130,161,198,239,282,329,382,441,502,569,640,713,792,875,964 ⋆ Partial sums of primes, if 1 is regarded as a prime (as it was until quite recently, see A008578). ● a(n) = a(n - 1) + prime(n - 1), with a(1)=1. - _ Vincenzo Librandi _ , Jul 27 2013 ●

► [A265075] 1,3,6,11,18,29,46,73,116,183,290,459,726,1149,1818,2877,4552,7203,11398,18035,28538,45157,71454,113065,178908 ⋆ Coordination sequence for (3,4,4) tiling of hyperbolic plane. ● a(n) = a(n - 1) + a(n - 3) + a(n - 5) + a(n - 7) - a(n - 8) for n>8. - _ Vincenzo Librandi _ , Dec 30 2015 ●

► [A279100] 1,3,6,11,18,30,48,78,125,202,325,525,847,1369,2212,3577,5784,9356,15134,24484,39611,64088,103691,167771,271453 ⋆ a(n) = Sum _{ k=0..n } ceiling(phi ^ k), where phi is the golden ratio (A001622). ● a(n) = 2 * a(n - 1) + a(n - 2) - 3 * a(n - 3) + a(n - 5). ● a(n) = (10 * n - 5 * (- 1) ^ n + 2 ^ (1 - n) * sqrt(5) * (5 + 3 * sqrt(5)) * (1 + sqrt(5)) ^ n + sqrt(5) * 2 ^ (1 - n) * (3 * sqrt(5) - 5) * (1 - sqrt(5)) ^ n - 35) / 20. ●

► [A003082] 1,1,3,6,11,18,32,48,75,111,160,224,313,420,562,738,956,1221,1550,1936,2405,2958,3609,4368,5260 ⋆ Number of multigraphs with 4 nodes and n edges. ● a(n) = 2 * a(n - 1) - 2 * a(n - 4) - 2 * a(n - 5) + 3 * a(n - 6) + 3 * a(n - 8) - 2 * a(n - 9) - 2 * a(n - 10) + 2 * a(n - 13) - a(n - 14). - _ Wesley Ivan Hurt _ , Apr 20 2021 ●

► [A058053] 1,1,3,6,11,18,33,49,78,117,171,242,346,469,640,855,1127,1463,1896,2405,3045,3813,4736,5831,7156 ⋆ Number of 3 - rowed binary matrices with n ones and no zero columns, up to row and column permutation. ● a(n)= coefficient of x ^ n * y ^ n in expansion of 1 / 3! * (1 / (1 - x) / (1 - x * y) ^ 3 / (1 - x * y ^ 2) ^ 3 / (1 - x * y ^ 3) + 3 / (1 - x) / (1 - x * y) / (1 - x * y ^ 2) / (1 - x * y ^ 3) / (1 - x ^ 2 * y ^ 2) / (1 - x ^ 2 * y ^ 4) + 2 / (1 - x) / (1 - x * y ^ 3) / (1 - x ^ 3 * y ^ 3) / (1 - x ^ 3 * y ^ 6)). ●

► [A050228] 1,3,6,11,19,31,49,76,116,175,262,390,578,854,1259,1853,2724,4001,5873,8617,12639,18534,27174,39837,58396 ⋆ a(n) is the number of subsequences { s(k) } of { 1,2,3,...n } such that s(k + 1) - s(k) is 1 or 3. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + 2 * a(n - 3) - 2 * a(n - 4) + a(n - 5). ● a(n - 1) = Sum _{ k=0..floor(n / 3) } binomial(n - 2 * k, k + 2). (End) ● a(n) = Sum _{ j=0..floor((n + 1) / 3) } binomial(n - 2 * j + 1, j + 2). ●

► [A116557] 1,3,6,11,19,32,52,85,139,225,365,592,958,1551,2511,4064,6577,10642,17220,27863,45084,72948,118033,190982,309016 ⋆ Backward iterated (limited) Fibonacci approximation: A000045. ● a(n) = Floor[a(n - 1) * (- 1 / 2 + Sqrt[5]) / 2] ●

► [A001911] 0,1,3,6,11,19,32,53,87,142,231,375,608,985,1595,2582,4179,6763,10944,17709,28655,46366,75023,121391,196416 ⋆ a(n) = Fibonacci(n + 3) - 2. ● a(n) = a(n - 1) + a(n - 2) + 2, a(0) = 0, a(1) = 1. - _ Michael Somos _ , Jun 09 1999 ● a(n) = term (1,1) in the 1 X 3 matrix [0, - 1,1].[1,1,0; 1,0,0; 2,0,1] ^ n. - _ Alois P. Heinz _ , Jul 24 2008 ● a(0) = 0, a(1) = 1, a(2) = 3, a(n) = 2 * a(n - 1) - a(n - 3). - _ Harvey P. Dale _ , Jun 06 2011 ● a(n) = (- 2 + (2 ^ (- n) * ((1 - sqrt(5)) ^ n * (- 2 + sqrt(5)) + (1 + sqrt(5)) ^ n * (2 + sqrt(5)))) / sqrt(5)). - _ Colin Barker _ , May 12 2016 ●

► [A020957] 3,6,11,19,32,54,89,147,240,392,637,1035,1678,2720,4405,7133,11546,18688,30243,48941,79194,128146,207351,335509,542872 ⋆ a(n) = Sum _{ k >= 1 } floor(2 * tau ^ (n - k)). ● a(n) = (1 / 4) * (8 * Lucas(n + 1) - 2n - 5 + (- 1) ^ n), n > 1. ●

► [A179006] 0,0,0,0,0,1,3,6,11,19,32,54,90,148,242,394,640,1039,1685,2730,4421,7157,11584,18748,30340 ⋆ Partial sums of floor(Fibonacci(n) / 4). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + 2 * a(n - 3) - 2 * a(n - 4) + 2 * a(n - 5) - a(n - 6) - a(n - 7) + a(n - 8). ● a(n) = round(Fibonacci(n + 2) / 4 - n / 3 - 3 / 8). ● a(n) = round(Fibonacci(n + 2) / 4 - n / 3 - 1 / 4). ● a(n) = floor(Fibonacci(n + 2) / 4 - n / 3 - 1 / 12). ● a(n) = ceiling(Fibonacci(n + 2) / 4 - n / 3 - 2 / 3). ● a(n) = a(n - 6) + Fibonacci(n - 1) - 2, n > 6. ●

► [A191696] 1,1,3,6,11,19,33,57,96,162,272,455,761,1271,2121,3539,5901,9839,16403,27342,45576,75965,126614,211029,351723 ⋆ a(n) = floor((5 ^ n) / (3 ^ n + 2 ^ n)). ● a(n) = (5 / 3) ^ n - (10 / 9) ^ n + O(1). - _ Charles R Greathouse IV _ , Mar 14 2022 ●

► [A180086] 1,3,6,11,20,33,54,87,142,226,360,571,907,1438,2278,3606,5708,9032,14293,22614,35778,56604,89550,141670,224122 ⋆ Sum of previous terms divided by their distance from n ● a(n) = n + floor(a(n - 1) / 1) + floor(a(n - 2) / 2) + ... + floor(a(1) / (n - 1)) ●

► [A297443] 1,3,6,11,20,33,60,101,182,303,546,911,1640,2733,4920,8201,14762,24603,44286,73811,132860,221433,398580,664301,1195742 ⋆ a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) + 3 * a(n - 4) - 3 * a(n - 5), where a(0) = 1, a(1) = 3, a(2) = 6, a(3) = 11, a(4) = 20, a(5) = 33. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) + 3 * a(n - 4) - 3 * a(n - 5), where a(0) = 1, a(1) = 3, a(2) = 6, a(3) = 11, a(4) = 20, a(5) = 33. ●

► [A055417] 1,3,6,11,20,36,63,106,171,265,396,573,806,1106,1485,1956,2533,3231,4066,5055,6216,7568,9131,10926,12975 ⋆ Number of points in N ^ n of norm <= 2. ● a(n) = (n ^ 3 - 3 * n ^ 2 + 14 * n + 24) * (n + 1) / 24. Proof: The coordinates of such a point are a permutation of one of the vectors (0, ..., 0), (0, ..., 0, 1), (0, ..., 0, 2), (0, ..., 0, 1, 1), (0, ..., 0, 1, 1, 1), or (0, ..., 0, 1, 1, 1, 1), so the number of points is 1 + n + n + binomial(n,2) + binomial(n,3) + binomial(n,4). - Formula conjectured by _ Frank Ellermann _ , Mar 16 2002 and explained by _ Michael Somos _ , Apr 25 2003 ●

► [A077855] 1,3,6,11,20,36,64,113,199,350,615,1080,1896,3328,5841,10251,17990,31571,55404,97228,170624,299425,525455,922110,1618191 ⋆ Expansion of (1 - x) ^ (- 1) / (1 - 2 * x + x ^ 2 - x ^ 3). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + 2 * a(n - 3) - a(n - 4). - _ Seiichi Manyama _ , Nov 25 2016 ● a(n) = Sum _{ i=1.

.(n + 3) } binomial((n + 3) - i, (n + 3) - 3 * i). - _ Wesley Ivan Hurt _ , Jul 07 2020 ●

▶ [A018918] 3,6,11,20,36,64,113,199,350,615,1080,1896,3328,5841,10251,17990,31571,55404,97228,170624,299425,525455,922110,1618191,2839728 ⋆ Define the generalized Pisot sequence T(a(0),a(1)) by: a(n + 2) is the greatest integer such that a(n + 2) / a(n + 1) < a(n + 1) / a(n). This is T(3,6). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + 2 * a(n - 3) - a(n - 4). ● a(n) = ceiling(a(n - 1) ^ 2 / a(n - 2) - 1), by definition. - _ Bruno Berselli _ , Feb 16 2016 ●

▶ [A119861] 1,1,3,6,11,20,36,64,117,209,381,699,1291,2387,4445,8317,15645,29494,55855,106021,201778,384941,735909,1409683,2705277 ⋆ Number of distinct prime factors of the odd Catalan numbers A038003(n). ● a(n) = Length[FactorInteger[Binomial[2 ^ (n + 1) - 2, 2 ^ n - 1] / (2 ^ n)]]. ●

▶ [A265077] 1,3,6,11,20,37,66,117,208,371,662,1179,2100,3741,6666,11877,21160,37699,67166,119667,213204,379853,676762,1205749,2148216 ⋆ Coordination sequence for (3,6,8) tiling of hyperbolic plane. ● a(n) = a(n - 1) + a(n - 2) + a(n - 4) + a(n - 5) - a(n - 6) for n>6. - _ Vincenzo Librandi _ , Dec 30 2015 ●

▶ [A006127] 1,3,6,11,20,37,70,135,264,521,1034,2059,4108,8205,16398,32783,65552,131089,262162,524307,1048596,2097173,4194326,8388631,16777240 ⋆ a(n) = 2 ^ n + n. ● a(n) = 2 * a(n - 1) - n + 2 (with a(0)=1). - _ Vincenzo Librandi _ , Dec 30 2010 ●

▶ [A291408] 1,3,6,11,21,39,70,126,224,394,690,1201,2079,3585,6158,10541,17991,30623,51996,88092,148944,251364,423492,712369,1196557 ⋆ p - INVERT of (1,1,0,0,0,0,...), where p(S) = (1 - S)(1 - S ^ 2). ● a(n) = a(n - 1) + 2 * a(n - 2) + a(n - 3) - 2 * a(n - 4) - 3 * a(n - 5) - a(n - 6) for n >= 7. ●

▶ [A202012] 1,1,3,6,11,21,39,72,133,245,451,830,1527,2809,5167,9504,17481,32153,59139,108774,200067,367981,676823,1244872,2289677 ⋆ Expansion of (1 - x + x ^ 2) / ((1 - x)(1 - x - x ^ 2 - x ^ 3)). ● a(n) = 2 * a(n - 1) - a(n - 4), n>3. ●

▶ [A251655] 0,1,1,1,3,6,11,21,41,79,152,293,565,1089,2099,4046,7799,15033,28977,55855,107664,207529,400025,771073,1486291 ⋆ 4 - step Fibonacci sequence starting with 0, 1, 1, 1. ● a(n + 4) = a(n) + a(n + 1) + a(n + 2) + a(n + 3). ●

▶ [A293320] 3,6,11,21,42,84,168,336,671,1341,2681,5362,10724,21447,42894,85788,171576,343151,686302,1372604,2745208,5490416,10980831,21961661,43923322 ⋆ Least integer k such that k / 2 ^ n > tau ^ 2, where tau = (1 + sqrt(5)) / 2 = golden ratio. ● a(n) = ceiling(r * 2 ^ n), where r = (3 + sqrt(5)) / 2. ●

▶ [A024495] 0,0,1,3,6,11,21,42,85,171,342,683,1365,2730,5461,10923,21846,43691,87381,174762,349525,699051,1398102,2796203,5592405 ⋆ a(n) = C(n,2) + C(n, 5) + ... + C(n, 3 * floor(n / 3) + 2). ● a(2) = 1, a(3) = 3, a(n + 2) = a(n + 1) - a(n) + 2 ^ n. - _ Benoit Cloitre _ , Sep 04 2002 ● a(n) = Sum _{ k=0..n } 2 ^ k * 2 * sin(Pi * (n - k) / 3 + Pi / 3) / sqrt(3) (offset 0). - _ Paul Barry _ , May 18 2004 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + 2 * a(n - 3). - _ Paul Curtz _ , Nov 18 2007 ● a(n) + a(n + 9) = 171 * 2 ^ n. ● a(n + 12) - a(n) = 1365 * 2 ^ n. (End) ● a(n) = 1 / 18 * (- 4 * (- 1) ^ floor((n - 1) / 3) - 6 * (- 1) ^ floor(n / 3) - 3 * (- 1) ^ floor((n + 1) / 3) + (- 1) ^ (1 + floor((n + 2) / 3)) + 3 * 2 ^ (n + 1)). - _ John M. Campbell _ , Dec 23 2016 ●

▶ [A360045] 1,3,6,11,21,42,86,180,387,852,1908,4329,9933,23013,53748,126386,298953,710847,1698086,4073181,9806565,23689555,57401322,139475190,339767545 ⋆ a(n) = Sum _{ k=0..floor(n / 3) } binomial(n + 2,3 * k + 2) * Catalan(k). ● a(n) = binomial(n + 2,2) + Sum _{ k=0..n - 3 } a(k) * a(n - k - 3). ●

▶ [A354695] 1,1,3,6,11,21,42,87,189,432,1018,2415,5694,13297,30768,70626,161011,364977,823536,1851706,4152972,9298653,20800758,46516437,104044590 ⋆ G.f. A(x) satisfies: A(x) = 1 + x * A(x ^ 3 / (1 - x) ^ 3) / (1 - x) ^ 3. ● a(0) = 1; a(n) = Sum _{ k=0..floor((n - 1) / 3) } binomial(n + 1,3 * k + 2) * a(k). ●

▶ [A293066] 1,3,6,11,21,44,101,247,626,1615,4201,10968,28681,75051,196446,514259,1346301,3524612,9227501,24157855,63246026,165580183,433494481,1134903216,2971215121 ⋆ Number of vertices at level n of the hyperbolic Pascal pyramid PP _ (4,5). ● a(n) = 5 * a(n - 1) - 8 * a(n - 2) + 5 * a(n - 3) - a(n - 4), n >= 5. ● a(n) = (2 ^ (- 1 - n) * (- (- 5 + sqrt(5)) * (3 + sqrt(5)) ^ n + (3 - sqrt(5)) ^ n * (5 + sqrt(5)) + 5 * 2 ^ (2 + n) * n)) / 5. ● a(n) = 2 * n + Fibonacci(2 * n - 1). - _ Ehren Metcalfe _ , Apr 18 2019 ●

▶ [A228206] 1,3,6,11,22,39,69,122,241,426,753,1331,2629,4647,8214,14519,28678,50691,89601,158378,312829,552954,977397,1727639,3412441 ⋆ y - values in the solution to x ^ 2 - 13y ^ 2 = 108. ● a(n) = 11 * a(n - 4) - a(n - 8). ●

▶ [A103322] 1,1,3,6,11,22,41,77,144,267,495,915,1689,3115,5740,10572,19464,35825,65926,121301,223166,410544,755211,1389186,2555292 ⋆ Expansion of 1 / ((1 - x - x ^ 2 - x ^ 3) * (1 - x ^ 2 - x ^ 3)). ● a(n) = a(n - 1) + 2 * a(n - 2) + a(n - 3) - 2 * a(n - 4) - 2 * a(n - 5) - a(n - 6). - _ G. C. Greubel _ , May 02 2017 ●

▶ [A293337] 3,6,11,22,44,87,174,348,696,1392,2784,5568,11135,22269,44537,89073,178146,356291,712582,1425163,2850326,5700651,11401301,22802601,45605202 ⋆ Least integer k such that k / 2 ^ n > e. ● a(n) = ceiling(e * 2 ^ n). ●

▶ [A293364] 1,1,3,6,11,22,44,89,177,355,710,1420,2839,5678,11357,22713,45426,90852,181704,363409,726817,1453635,2907270,5814540,11629080 ⋆ The integer k that minimizes |k / 2 ^ n - log 2|. ● a(n) = floor(1 / 2 + (log 2) * 2 ^ n). ●

▶ [A369848] 0,1,3,6,11,23,57,149,379,928,2227,5336,12872,31236,75949,184524,447702,1085401,2631240,6380241,15474230,37533077,91034937,220790480,535475968 ⋆ Number of compositions of 5 * n - 4 into parts 3 and 5. ● a(n) = Sum _{ k=0..floor(n / 3) } binomial(n + 2 * k,n - 2 - 3 * k). ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 11 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ●

▶ [A001867] 1,3,6,11,24,51,130,315,834,2195,5934,16107,44368,122643,341802,956635,2690844,7596483,21524542,61171659,174342216,498112275,1426419858,4093181691,11767920118 ⋆ Number of n - bead necklaces with 3 colors. ● a(n) = (1 / n) * Sum _{ d|n } phi(d) * 3 ^ (n / d), n>0. ● a(0) = 1; a(n) = (1 / n) * Sum _{ k=1..n } 3 ^ gcd(n,k). - _ Ilya Gutkovskiy _ , Apr 16 2021 ● a(0) = 1; a(n) = (1 / n) * Sum _{ k=1..n } 3 ^ (n / gcd(n,k)) * phi(gcd(n,k)) / phi(n / gcd(n,k)). - _ Richard L. Ollerton _ , May 07 2021 ●

▶ [A369691] 1,3,6,11,24,66,196,576,1692,5110,15933,50604,161988,521700,1693362,5541679,18260055,60487659,201272437,672550158,2256204327,7596059333,25655943417,86904524289,295154911774 ⋆ G.f. satisfies A(x) = 1 / (1 - x) ^ 3 + x ^ 3 * A(x) ^ 3. ● a(n) = Sum _{ k=0..floor(n / 3) } binomial(n + 3 * k + 2,n - 3 * k) * binomial(3 * k,k) / (2 * k + 1). ●

▶ [A360888] 1,1,1,3,6,11,29,71,179,505,1405,4128,12639,39268,127059,420281,1423787,4955200,17579398,63796635,236161396,890544028,3422553065,13377869976,53184706291 ⋆ G.f. satisfies A(x) = 1 + x * (1 + x ^ 2) ^ 2 * A(x * (1 + x ^ 2)). ● a(0) = 1; a(n) = Sum _{ k=0..floor(n - 1) / 2 } binomial(n + 1 - 2 * k,k) * a(n - 1 - 2 * k). ●

▶ [A119367] 0,0,1,3,6,11,30,126,519,1836,5877,18866,65472,242463,905425,3307371,11889414,42930441,157641714,586908936,2194106568,8189323686,30541703733,114219616809,429214875498 ⋆ Number of rooted planar n - trees whose number of leaves is equal to 2 modulo 3. ● a(n)=sum { k=0..n, if(mod(n - k,3)=2, (1 / n) * C(n,k) * C(n,k + 1), 0) } . ●

▶ [A180483] 3,6,11,38,87,354,839,3482,8283,34446,81971,340958,811407,3375114,8032079,33410162,79509363,330726486,787061531,3273854678,7791105927,32407820274,77123997719,320804348042,763448871243 ⋆ Expansion of (3 + 3 * x - 25 * x ^ 2 - 3 * x ^ 3 + 2 * x ^ 4) / ((1 - x) * (1 - 10 * x ^ 2 + x ^ 4)). ● a(n) = 11 * a(n - 2) - 11 * a(n - 4) + a(n - 6). ● a(n) = + a(n - 1) + 10 * a(n - 2) - 10 * a(n - 3) - a(n - 4) + a(n - 5). - _ R. J. Mathar _ , Feb 05 2011 ● a(n) = (1 / 2) * (5 + b(n) + 7 * b(n - 1) + 7 * b(n - 2) + b(n - 3)), where b(n) = (1 / 2) * (1 + (- 1) ^ n) * ChebyshevU(n / 2, 5). - _ G. C. Greubel _ , Apr 28 2022 ●

▶ [A102040] 3,6,12,14,18,26,32,34,38,46,52,54,58,66,72,74,78,86,92,94,98,106,112,114,118 ⋆ a(n) = a(n - 1) + last digit of a(n - 1), starting at 3. ● a(n) = - 5 - (1 / 2 + i) * (- i) ^ n - (1 / 2 - i) * i ^ n + 5 * n for n>1, where i = sqrt(- 1). ● a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4) for n>5. ● a(n) = a(n - 4) + 20 for n >= 6. ● a(4k) = 20 k - 6. ● a(4k + 1) = 20 k - 2 for k >= 1. ● a(4k + 2) = 20 k + 6. ●

▶ [A319451] 0,3,6,12,15,18,24,27,30,36,39,42,48,51,54,60,63,66,72,75,78,84,87,90,96 ⋆ Numbers that are congruent to { 0, 3, 6 } mod 12; a(n) = 3 * floor(4 * n / 3). ● a(n) = a(n - 3) + 12 for n > 2. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n > 3. ● a(n) = 4 * n - 1 + sin((Pi / 3) * (2 * n + 1)) / sin(Pi / 3). - _ Federico Provvedi _ , Oct 23 2018 ●

▶ [A016051] 3,6,12,15,21,24,30,33,39,42,48,51,57,60,66,69,75,78,84,87,93,96,102,105,111 ⋆ Numbers of the form 9 * k + 3 or 9 * k + 6. ● a(n + 1) = a(n) + its digital root in decimal base. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) = 9 * n / 2 - 9 / 4 - 3 * (- 1) ^ n / 4. ● a(n) = 9 * (n - 1) - a(n - 1) (with a(1)=3). - _ Vincenzo Librandi _ , Nov 19 2010 ●

▶ [A267353] 1,3,6,12,15,25,28,42,45,63,66,88,91,117,120,150,153,187,190,228,231,273,276,322,325 ⋆ Total number of ON (black) cells after n iterations of the " Rule 123" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = (n ^ 2 + (4 - (- 1) ^ n) * n + (- 1) ^ n + 1) / 2. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n>4. ●

▶ [A323645] 3,6,12,17,21,28,32,39,46,56,60,69,73,81,92,103,107,118,122 ⋆ a(n) is the number of visible faces in the perspective view of the stepped pyramid with n levels described in A245092. ● a(n) = a(n - 1) + 4 iff n is a prime > 3 (A215848). ●

▶ [A038046] 1,1,3,6,12,17,32,39,63,81,120,131,213,226,311,377,503,520,742,761,1031,1169,1442,1465,2008 ⋆ Shifts left under transform T where Ta is (identity) DCONV a. ● a(1) = 1; a(n > 1) = Sum _{ d|(n - 1) } d * a((n - 1) / d). - _ Gus Wiseman _ , Jul 31 2018 ●

▶ [A242477] 0,0,3,6,12,18,27,36,48,60,75,90,108,126,147,168,192,216,243,270,300,330,363,396,432 ⋆ a(n) = floor(3 * n ^ 2 / 4). ● a(n) = a(n - 2) + 3 * (n - 1) for n>1, a(0) = a(1) = 0. ●

▶ [A006156] 1,3,6,12,18,30,42,60,78,108,144,204,264,342,456,618,798,1044,1392,1830,2388,3180,4146,5418,7032 ⋆ Number of ternary squarefree words of length n . ● a(n) >= 2 ^ (n / 17), see Zeilberger. Let L = lim _{ n - >infinity } a(n) ^ (1 / n); then L exists and Grimm proves 1.109999 < L < 1.317278. - _ Charles R Greathouse IV _ , Nov 29 2013 ●

▶ [A061776] 1,3,6,12,18,30,42,66,90,138,186,282,378,570,762,1146,1530,2298,3066,4602,6138,9210,12282,18426,24570 ⋆ Start with a single triangle; at n - th generation add a triangle at each vertex, allowing triangles to overlap; sequence gives number of triangles in n - th generation. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) for n>3. G.f.: (1 + 2 * x) * (1 + x ^ 2) / ((1 - x) * (1 - 2 * x ^ 2)). - _ Colin Barker _ , May 08 2012 ●

▶ [A298029] 1,3,6,12,18,33,39,51,57,69,75,87,93,105,111,123,129,141,147,159,165,177,183,195,201 ⋆ Coordination sequence of Dual(3.4.6.4) tiling with respect to a trivalent node. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n>5. - _ Colin Barker _ , Jan 25 2018 ● a(n) = (3 / 2) * (6 * n - (- 1) ^ n - 9) for n>4. - _ Bruno Berselli _ , Jan 25 2018 ●

▶ [A263511] 1,3,6,12,19,29,40,54,69,87,106,128,151,177,204,234,265,299,334,372,411,453,496,542,589 ⋆ Total number of ON (black) cells after n iterations of the " Rule 155" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4) for n>3. - _ Vincenzo Librandi _ , Jan 18 2016 ●

▶ [A209489] 0,1,3,6,12,19,33,50,77,111,166,229,329,448,615,824,1120,1467,1956,2538,3313,4258,5512,6993,8944 ⋆ Number of partitions of 1 into rational parts a / b satisfying 0<a<b<=n. ● a(n)=a(n - 1) - 1 + (number of partitions of n into relatively prime parts). ●

▶ [A200067] 0,0,0,1,3,6,12,20,30,45,63,84,112,144,180,225,275,330,396,468,546,637,735,840,960 ⋆ Maximum sum of all products of absolute differences and distances between element pairs among the integer partitions of n. ● a(n) = max _{ k=0..n } (n - k - 1) * k * (k + 1) / 2. ●

▶ [A061061] 0,0,1,3,6,12,20,31,46,64,87,115,147,186,231,282,342,408,482,566,657,759,871,991,1126 ⋆ Maximal number of 132 patterns in a permutation of 1,2,...,n. ● a(n) = max(a(k) + k * C(n - k, 2): 1 <= k < n) ● a(n + 1) / a(n)=1 + 3 / n + O(1 / n ^ 2). n ^ 2 * (a(n + 1) / a(n) - 1 - 3 / n) is bounded but there is no limit; limit n - >infinity a(n) / n ^ 3 = C = 0.0773... - _ Benoit Cloitre _ , Jan 25 2003 ●

▶ [A361272] 1,1,1,3,6,12,20,32,47,67,91,121,156,198,246,302,365,437,517,607,706,816,936,1068,1211 ⋆ Number of 1243 - avoiding even Grassmannian permutations of size n. ● a(n) = (57 - 9 * (- 1) ^ n - 28 * n + 6 * n ^ 2 + 4 * n ^ 3) / 48. - _ Stefano Spezia _ , Mar 09 2023 ●

► [A006128] 0,1,3,6,12,20,35,54,86,128,192,275,399,556,780,1068,1463,1965,2644,3498,4630,6052,7899,10206,13174 ⋆ Total number of parts in all partitions of n . Also, sum of largest parts of all partitions of n. ● a(n) = Sum _{ m=1..n } of the number of divisors of m * number of partitions of n - m. ●

► [A079983] 1,1,1,1,3,6,12,20,35,60,114,207,375,671,1213,2180,3954,7139,12892,23250,41996,75793,136891,247133,446211 ⋆ Number of permutations satisfying - k<=p(i) - i<=r and p(i) - i not in I, i=1..n, with k=3, r=3, I= {- 2,1,2 } . ● a(n) = a(n - 1) + a(n - 2) + a(n - 3) - a(n - 5) + 4 * a(n - 6) - 4 * a(n - 7) - 3 * a(n - 8) - 3 * a(n - 9) + 3 * a(n - 10) + 3 * a(n - 11) - 5 * a(n - 12) + 4 * a(n - 13) + 4 * a(n - 14) + a(n - 15) - 2 * a(n - 16) - a(n - 17) + a(n - 18) - a(n - 19) - a(n - 20) ●

► [A038577] 1,3,6,12,20,36,58,100,160,268,430,708,1140,1860,3002,4876,7880,12772,20654,33444,54100,87564,141666,229252,370920 ⋆ Number of self - avoiding walks of length n from origin in strip Z X { 0,1 } . ● a(n) = - 2 + 2 * (- 1) ^ n - (8 * (1 / 2 - sqrt(5) / 2) ^ n) / sqrt(5) + (8 * (1 / 2 + sqrt(5) / 2) ^ n) / sqrt(5) - (1 / 2) * (1 + (- 1) ^ n) * n for n > 1. ● a(n) = a(n - 1) + 3 * a(n - 2) - 2 * a(n - 3) - 3 * a(n - 4) + a(n - 5) + a(n - 6) for n > 5. ●

► [A034738] 1,3,6,12,20,42,70,144,270,540,1034,2112,4108,8274,16440,32928,65552,131418,262162,524880,1048740,2098206,4194326,8391024,16777300 ⋆ Dirichlet convolution of b _ n = 2 ^ (n - 1) with phi(n). ● a(n) = (1 / 2) * Sum _{ d|n } phi(d) * 2 ^ (n / d), n >= 1. ● a(n) = Sum _{ k=1..n } 2 ^ (gcd(k, n) - 1). - _ Seiichi Manyama _ , Apr 17 2021 ● a(n) = Sum _{ k=1..n } 2 ^ (n / gcd(n, k) - 1) * phi(gcd(n,k)) / phi(n / gcd(n,k)). - _ Richard L. Ollerton _ , May 06 2021 ●

► [A053479] 0,0,3,6,12,21,30,42,54,69,90,102,129,150,174,198,225,258,288,327,354,396,435,471,522 ⋆ Circle numbers (version 6): a(n) = number of points (i + j / 2,j * sqrt(3) / 2), i,j integers (triangular grid) contained in a circle of diameter n, centered at (1 / 2, 1 / (2 * sqrt(3))). ● a(n) / (n / 2) ^ 2 - > Pi * 2 / sqrt(3). ●

► [A290768] 3,6,12,21,33,48,66,87,111,138,168,201,237,276,318,363,411,462,516,573,633,696,762,831,903 ⋆ a(n) = 3 / 2 * (n ^ 2 - n + 2). ● a(n) = 3 / 2 * (n ^ 2 - n + 2). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A070333] 1,3,6,12,21,33,50,72,99,133,174,222,279,345,420,506,603,711,832,966,1113,1275,1452,1644,1853 ⋆ Expansion of (1 + x) * (1 - x + x ^ 2) / ((1 - x) ^ 4 * (1 + x + x ^ 2)). ● a(n) = round((2 * n + 3) * (n ^ 2 + 3 * n + 6) / 18). ● a(n) = floor((n + 2) * (2 * n ^ 2 + 5 * n + 11) / 18). ● a(n) = ceiling((n + 1) * (2 * n ^ 2 + 7 * n + 14) / 18). ● a(n) = round((n + 1) * (2 * n ^ 2 + 7 * n + 14) / 18). ● a(n) = a(n - 3) + n ^ 2 + 2 for n > 2. (End) ●

► [A203292] 3,6,12,21,35,54,80,113,155,206,268,341,427,526,640,769,915,1078,1260,1461,1683,1926,2192,2481,2795 ⋆ Number of arrays of 4 nondecreasing integers in - n..n with sum zero and equal numbers greater than zero and less than zero. ● a(n) = (24 + 32 * n + 6 * n ^ 2 + 4 * n ^ 3) / 24 for n even. ● a(n) = (30 + 32 * n + 6 * n ^ 2 + 4 * n ^ 3) / 24 for n odd. ●

► [A215005] 0,1,3,6,12,21,37,62,104,171,281,458,746,1211,1965,3184,5158,8351,13519,21880,35410,57301,92723,150036,242772 ⋆ a(n) = a(n - 2) + a(n - 1) + floor(n / 2) + 1 for n > 1 and a(0)=0, a(1)=1. ● a(n) = 2 * F(n + 2) - n / 2 - 9 / 4 + (- 1) ^ n / 4, where F is Fibonacci number. - _ Vaclav Kotesovec _ , Aug 11 2012 ● a(n) = 2 * a(n - 1) + a(n - 2) - 3 * a(n - 3) + a(n - 5) for n>4. ●

► [A087503] 1,3,6,12,21,39,66,120,201,363,606,1092,1821,3279,5466,9840,16401,29523,49206,88572,147621,265719,442866,797160,1328601 ⋆ a(n) = 3(a(n - 2) + 1), with a(0) = 1, a(1) = 3. ● a(n) = (3 / 2) * (3 ^ ((n + 1) / 2) - 1) if n is odd, else a(n) = (3 / 2) * (5 * 3 ^ ((n - 2) / 2) - 1). ● a(n) = (3 / 2) * (3 ^ floor((n + 1) / 2) + 3 ^ floor(n / 2) - 3 ^ floor((n - 1) / 2) - 1). ● a(n) = 3 ^ floor((n + 1) / 2) + 3 ^ floor((n + 2) / 2) / 2 - 3 / 2. ●

► [A066982] 1,1,3,6,12,22,39,67,113,188,310,508,829,1349,2191,3554,5760,9330,15107,24455,39581,64056,103658,167736,271417 ⋆ a(n) = Lucas(n + 1) - (n + 1). ● a(1) = a(2) = 1, a(n + 2) = a(n + 1) + a(n) + n. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - a(n - 3) + a(n - 4). ●

► [A097939] 1,3,6,12,22,42,79,151,291,566,1106,2175,4293,8499,16864,33523,66727,132958,265137,529050,1056169,2109282,4213710,8419697,16827079 ⋆ Sum of the smallest parts of all compositions of n. ● a(n) = Sum _{ r=0..n - 1 } Sum _{ k=0..floor((n - r - 1) / (r + 1)) } binomial(n - r(k + 1) - 1, k). - _ Paul Barry _ , Oct 08 2004 ●

► [A055244] 1,1,3,6,12,23,43,79,143,256,454,799,1397,2429,4203,7242,12432,21271,36287,61739,104791,177476,299978,506111,852457 ⋆ Number of certain stackings of n + 1 squares on a double staircase. ● a(n) = (((n - 4) * n - 6) * a(n - 2) + ((n - 5) * n - 11) * a(n - 1)) / ((n - 6) * n - 1). - _ Jean - François Alcover _ , Mar 11 2014 ●

► [A089068] 0,0,1,3,6,12,23,43,80,148,273,503,926,1704,3135,5767,10608,19512,35889,66011,121414,223316,410743,755475,1389536 ⋆ a(n) = a(n - 1) + a(n - 2) + a(n - 3) + 2 with a(0)=0, a(1)=0 and a(2)=1. ● a(n) = 2 * a(n - 1) - a(n - 4), a(0)=0, a(1)=0, a(2)=1, a(3)=3. [_ Bruno Berselli _ , Sep 23 2010] ●

► [A341580] 0,1,3,6,12,23,44,82,153,284,528,979,1816,3366,6241,11568,21444,39747,73676,136562,253129,469188,869672,1611987,2987920 ⋆ Number of steps needed to reach position "YZ ^ (n - 1)" in the Towers of Hanoi exchanging disks puzzle with 3 pegs and n disks. ● a(n) = 2 * a(n - 1) - a(n - 3) + 2 * a(n - 4) - 2 * a(n - 5). ●

► [A038620] 1,3,6,12,24,35,48,69,86,108,138,161,192,231,260,300,348,383,432,489,530,588,654,701,768 ⋆ Growth function (or coordination sequence) of the infinite cubic graph corresponding to the srs net (a(n) = number of nodes at distance n from a fixed node). ● a(0)=1, a(1)=3, a(2)=6; for n>=3: if n == 0 (mod 3), a(n) = 4n ^ 2 / 3; if n == 1 (mod 3), a(n) = (4n ^ 2 + n + 4) / 3; if n == 2 (mod 3), a(n) = (4n ^ 2 - n + 10) / 3. ●

► [A363692] 3,6,12,24,36,48,72,144,168,288,336,420,840,1680,3360,6720,7560,15120,30240,60480,95760,120960,176400,191520,257040 ⋆ Terms of A363690 with a record number of divisors. ● a(n) <= 2 * a(n - 1) for n >= 2. - _ David A. Corneth _ , Jun 18 2023 ●

► [A330132] 1,3,6,12,24,36,54,78,114,168,246,360,528,774,1134,1662,2436,3570,5232,7668,11238,16470,24138,35376,51846 ⋆ Number of length - n ternary words containing no even palindromes of length > 0 and no odd palindromes of length > 3. ● a(n) = a(n - 1) + a(n - 3) for n >= 7. Furthermore, a(n) ~ C * alpha ^ n, where C ~ 5.37711043 and alpha ~ 1.465571231876768 is the largest real zero of X ^ 3 - X ^ 2 - 1. ●

► [A163314] 1,3,6,12,24,45,84,159,300,564,1062,2001,3768,7095,13362,25164,47388,89241,168060,316491,596016,1122420,2113746,3980613,7496304 ⋆ Number of reduced words of length n in Coxeter group on 3 generators S _ i with relations (S _ i) ^ 2 = (S _ i S _ j) ^ 5 = I. ● a(n) = 2 * a(n - 1) - a(n - 2) + 2 * a(n - 3) - a(n - 4). - _ Wesley Ivan Hurt _ , May 10 2021 ●

► [A196787] 1,1,1,3,6,12,24,46,87,163,303,561,1036,1910,3518,6476,11917,21925,40333,74191,136466,251008,461684,849178,1561891 ⋆ a(n) = 3 * a(n - 1) - 2 * a(n - 2) - a(n - 4) + a(n - 5) with initial terms 1, 1, 1, 3, 6. ● a(1)=1, a(2)=1, a(3)=1; a(n) = a(n - 1) + a(n - 2) + a(n - 3) + n - 4 for n >= 4. ●

► [A293341] 0,1,1,3,6,12,24,47,94,188,377,753,1507,3014,6027,12055,24109,48219,96437,192875,385750,771499,1542998,3085996,6171993 ⋆ The integer k that minimizes |k / 2 ^ n - 1 / e|. ● a(n) = floor(1 / 2 + (1 / e) * 2 ^ n). ●

► [A163876] 1,3,6,12,24,48,93,180,351,684,1332,2592,5046,9825,19128,37239,72498,141144,274788,534972,1041513,2027676,3947595,7685400,14962368 ⋆ Number of reduced words of length n in Coxeter group on 3 generators S _ i with relations (S _ i) ^ 2 = (S _ i S _ j) ^ 6 = I. ● a(n) = - a(n - 6) + Sum _{ k=1..5 } a(n - k). - _ Wesley Ivan Hurt _ , May 07 2021 ●

► [A164352] 1,3,6,12,24,48,96,189,372,735,1452,2868,5664,11184,22086,43617,86136,170103,335922,663384,1310064,2587140,5109132,10089609,19925148 ⋆ Number of reduced words of length n in Coxeter group on 3 generators S _ i with relations (S _ i) ^ 2 = (S _ i S _ j) ^ 7 = I. ● a(n) = 2 * a(n - 1) - a(n - 2) + 2 * a(n - 3) - a(n - 4) + 2 * a(n - 5) - a(n - 6). - _ Wesley Ivan Hurt _ , May 11 2021 ●

► [A122391] 1,1,1,3,6,12,24,48,96,192,384,768,1536,3072,6144,12288,24576,49152,98304,196608,393216,786432,1572864,3145728,6291456 ⋆ Dimension of 2 - variable non - commutative harmonics (Hausdorff derivative). The dimension of the space of non - commutative polynomials in 2 variables which are killed by all symmetric differential operators (where for a monomial w, d _{ xi } (w) = sum over all subwords of w deleting xi once). ● a(n) = 3 * 2 ^ (n - 3) = 2 ^ (n - 3) + 2 ^ (n - 2) for n >= 3. - _ Jaroslav Krizek _ , Aug 17 2009 ● a(n) = ceiling(2 ^ (n - 2)) + floor(2 ^ (n - 3)). - _ Martin Grymel _ , Oct 17 2012 ●

► [A003945] 1,3,6,12,24,48,96,192,384,768,1536,3072,6144,12288,24576,49152,98304,196608,393216,786432,1572864,3145728,6291456,12582912,25165824 ⋆ Expansion of g.f. (1 + x) / (1 - 2 * x). ● a(0) = 1; for n > 0, a(n) = 3 * 2 ^ (n - 1). ● a(n) = 2 * a(n - 1), n > 1; a(0)=1, a(1)=3. ● a(n) = Sum _{ k=0..n } (n + k) * binomial(n, k) / n. - _ Paul Barry _ , Jan 30 2005 ● a(0) = 1, a(n) = 2 + Sum _{ k=0..n - 1 } a(k) for n >= 1. - _ Joerg Arndt _ , Aug 15 2012 ● a(n) = 2 ^ n + floor(2 ^ (n - 1)). - _ Martin Grymel _ , Oct 17 2012 ●

► [A007283] 3,6,12,24,48,96,192,384,768,1536,3072,6144,12288,24576,49152,98304,196608,393216,786432,1572864,3145728,6291456,12582912,25165824,50331648 ⋆ a(n) = 3 * 2 ^ n. ● a(n) = 2 * a(n - 1), n > 0; a(0) = 3. ● a(n) = Sum _{ k = 0..n } (- 1) ^ (k reduced (mod 3)) * binomial(n, k). - _ Benoit Cloitre _ , Aug 20 2002 ● a(n) = b(n) + b(n + 3) for b = A001045, A078008, A154879. ● a(n) = 2 ^ n + 2 ^ (n + 1). - _ Jaroslav Krizek _ , Aug 17 2009 ●

► [A049942] 1,1,3,6,12,24,48,98,199,393,786,1574,3151,6308,12628,25280,50610,101123,202246,404494,808991,1617988,3235988,6472000,12944050 ⋆ a(n) = a(1) + a(2) + ... + a(n - 1) + a(m) for n >= 3, where m = n - 1 - 2 ^ p and p is the unique integer such that 2 ^ p < n - 1 <= 2 ^ (p + 1), starting with a(1) = a(2) = 1. ● a(n) = a(n - 1 - 2 ^ ceiling(- 1 + log _ 2(n - 1))) + Sum _{ i = 1..n - 1 } a(i) for n >= 3. ●

► [A278666] 1,3,6,12,24,50,102,196,388,804,1652,3156,6228,12884,26452,50516,99668,206164,423252,808276,1594708,3298644,6772052,12932436,25515348 ⋆ Decimal representation of the x - axis, from the left edge to the origin, of the n - th stage of growth of the two - dimensional cellular automaton defined by "Rule 62" , based on the 5 - celled von Neumann neighborhood. ● a(n) = a(n - 1) + 16 * a(n - 4) - 16 * a(n - 5) for n>7. ●

► [A077854] 1,3,6,12,25,51,102,204,409,819,1638,3276,6553,13107,26214,52428,104857,209715,419430,838860,1677721,3355443,6710886,13421772,26843545 ⋆ Expansion of 1 / ((1 - x) * (1 - 2 * x) * (1 + x ^ 2)). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + 3 * a(n - 3) - 2 * a(n - 4), with initial values a(0) = 1, a(1) = 3, a(2) = 6, a(3) = 12. ● a(n) = (1 / 10) * (2 ^ (n + 4) + (- 1) ^ floor(n / 2) - 2 * (- 1) ^ floor((n + 1) / 2) - 5). ● a(n) = floor(2 ^ (n + 3) / 5). - _ Gary Detlefs _ , Sep 06 2010 ● a(n) = round((2 ^ (n + 4) - 5) / 10) = floor((2 ^ (n + 3) - 1) / 5) = ceiling((2 ^ (n + 3) - 4) / 5) = round((2 ^ (n + 3) - 2) / 5); a(n) = a(n - 4) + 3 * 2 ^ (n - 1), n > 3. - _ Mircea Merca _ , Dec 27 2010 ● a(n) = 2 ^ (n + 1) - 1 - a(n - 2); a(n) = a(n - 1) / 2 for n == 2, 3 (mod 4); a(n) = (a(n - 1) - 1) / 2 for n == 0, 1 (mod 4). - _ Arie Bos _ , Apr 06 2013 ● a(n) = Sum _{ k=1..n + 3 } floor(1 + sin(k * Pi / 2 + 3 * Pi / 4)) * 2 ^ (n - k + 3). - _ Andres Cicuttin _ , Mar 28 2016 ●

► [A293313] 1,3,6,12,25,51,103,207,414,828,1656,3313,6627,13254,26509,53019,106039,212078,424157,848315,1696631,3393263,6786526,13573052,27146105 ⋆ Greatest integer k such that k / 2 ^ n < (1 + sqrt(5)) / 2 (the golden ratio). ● a(n) = floor(r * 2 ^ n), where r = (1 + sqrt(5)) / 2. ●

► [A267539] 1,3,6,12,25,51,103,207,415,831,1663,3327,6655,13311,26623,53247,106495,212991,425983,851967,1703935,3407871,6815743,13631487,27262975 ⋆ Decimal representation of the middle column of the "Rule 143" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n > 4. [n range correction by _ Karl V. Keller, Jr. _ , Apr 14 2022] ●

► [A099445] 1,3,6,12,25,54,117,252,542,1167,2514,5415,11662,25116,54093,116502,250913,540396,1163862,2506635,5398594,11627067,25041462,53932332,116155217 ⋆ An Alexander sequence for the Miller Institute knot. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + 3 * a(n - 3) - a(n - 4) for n>4. - _ Colin Barker _ , Feb 10 2014 ●

► [A088688] 0,1,3,6,12,27,63,141,297,594,1146,2169,4095,7827,15291,30582,62256,127791,262143,534129,1078101,2156202,4282878,8477181,16777215 ⋆ Binomial transform of A088689. ● a(n) = 2 ^ n - cos(Pi * n / 3) - 3 ^ (n / 2) * sin(Pi * n / 6) / sqrt(3). ●

► [A290997] 0,0,1,3,6,12,27,63,143,315,684,1479,3195,6903,14932,32361,70266,152775,332397,723330,1573829,3423444,7444722,16185939,35185779 ⋆ p - INVERT of (1,1,1,1,1,...), where p(S) = 1 - S ^ 3 - S ^ 6. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 21 * a(n - 3) - 18 * a(n - 4) + 9 * a(n - 5) - a(n - 6) for n >= 7. ●

► [A052103] 0,0,1,3,6,12,27,63,144,324,729,1647,3726,8424,19035,43011,97200,219672,496449,1121931,2535462,5729940,12949227,29264247,66134880 ⋆ The third of the three sequences associated with the polynomial x ^ 3 - 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + 3 * a(n - 3), n > 2. ● a(n) = Sum _{ 0..floor(n / 3) } , 2 ^ k * binomial(n, 3 * k + 2). - _ Ralf Stephan _ , Aug 30 2004 ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 6 * a(n - 3) - 3 * a(n - 4). ● a(n) is binomial transform of 0, 0, 1, 0, 0, 2, 0, 0, 4, 0, 0, 8, 0, 0, 16, 0, 0, 32 (see A077958). ● a(n) is a sequence identical to half its third differences. (End) ●

► [A292290] 0,0,3,6,12,27,66,168,435,1134,2964,7755,20298,53136,139107,364182,953436,2496123,6534930,17108664,44791059,117264510,307002468,803742891,2104226202 ⋆ Number of vertices of type A at level n of the hyperbolic Pascal pyramid. ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) + a(n - 3), n >= 4. ● a(n) = 3 * (1 + (2 ^ (- 1 - n) * ((7 - 3 * sqrt(5)) * (3 + sqrt(5)) ^ n - (3 - sqrt(5)) ^ n * (7 + 3 * sqrt(5)))) / sqrt(5)) for n>0. ● a(n) = 3 * (Fibonacci(2 * n - 4) + 1) for n > 0. - _ Ehren Metcalfe _ , Apr 18 2019 ●

► [A049941] 1,1,3,6,12,29,55,108,216,539,1025,2024,4031,8056,16109,32216,64432,161079,306051,604049,1204073,2406139,4811279,9622072,19243821 ⋆ a(n) = a(1) + a(2) + ... + a(n - 1) + a(m), where m = 2 ^ (p + 1) + 2 - n and p is the unique integer such that 2 ^ p < n - 1 <= 2 ^ (p + 1), starting with a(1) = a(2) = 1. ● a(n) = a(2 - n + 2 ^ ceiling(log _ 2(n - 1))) + Sum _{ i = 1..n - 1 } a(i) for n >= 3. ●

► [A252696] 0,3,6,12,30,78,222,636,1878,5556,16590,49548,148422,444630,1333254,3997884,11991774,35969766,107903742,323694636,971067318,2913152406,8739407670,26218074588,78654075342 ⋆ Number of strings of length n over a 3 - letter alphabet that do not begin with a nontrivial palindrome. ● a(2n) = k * a(2n - 1) - a(n) for n >= 1; a(2n + 1) = k * a(2n) - a(n + 1) for n >= 1. - _ Jeffrey Shallit _ , Jun 09 2019 ●

► [A208131] 1,3,6,12,36,72,144,432,864,1728,5184,10368,20736,62208,124416,248832,746496,1492992,2985984,8957952,17915904,35831808,107495424,214990848,429981696 ⋆ Partial products of A052901. ● a(n) = 12 ^ floor(n / 3) * (r + 1) * (r + 2) / 2 with r = n mod 3. G.f.: - (6 * x ^ 2 + 3 * x + 1) / (12 * x ^ 3 - 1). - _ Alois P. Heinz _ , Apr 05 2012 ●

► [A136484] 0,1,3,6,13,19,28,37,48,64,77,94,110,131,152,172,199,226,253,281,308,343,377,412,447 ⋆ Number of unit square lattice cells inside quadrant of origin centered circle of diameter 2n + 1. ● a(n) = Sum _{ k=1..n } floor(sqrt((n + 1 / 2) ^ 2 - k ^ 2)). ●

► [A259583] 3,6,13,19,34,55,84,120,174,231,310,399,510,634,786,948,1144,1359,1602,1863,2176,2496,2860,3256,3680 ⋆ Sum of numbers in the n - th antidiagonal of the reciprocity array of 3. ● a(n) = sum { sum { floor((n * k + x) / m), k=0..m - 1, m=1..n } , where x = 3. ●

► [A239987] 3,6,13,22,38,65,107,169,257,378,540,752,1024,1367,1793,2315,2947,3704,4602,5658,6890,8317,9959,11837,13973 ⋆ Number of 3 X n 0..3 arrays with no element equal to zero plus the sum of elements to its left or two plus the sum of the elements above it or one plus the sum of the elements diagonally to its northwest, modulo 4. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>8. ●

► [A048134] 0,3,6,13,22,40,55,88,118,163,205,280,334,436,517,625,733,901,1018,1225,1381,1591,1786,2083,2287 ⋆ Number of colors that can be mixed with up to n units of yellow, blue, red. ● a(n) = number of triples (i, j, k) with 1 <= i + j + k <= n and gcd(i, j, k) = 1. ●

► [A308747] 1,3,6,13,23,44,73,131,210,365,575,984,1537,2611,4062,6877,10679,18052,28009,47315,73386,123933,192191,324528,503233 ⋆ Number of achiral m - color cyclic compositions of n (that is, number of cyclic compositions of n with reflection symmetry where each part of size m can be colored with one of m colors). ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 6 * a(n - 3) + 2 * a(n - 4) + 2 * a(n - 5) - a(n - 6) for n >= 7 with a(1) = 1, a(2) = 3, a(3) = 6, a(4) = 13, a(5) = 23, and a(6) = 44. ● a(n) = 3 * a(n - 2) - a(n - 4) + 2 * (n - 2) for n >= 5 with a(1) = 1, a(2) = 3, a(3) = 6, and a(4) = 13. ●

► [A162426] 1,3,6,13,24,34,49,69,94,117,148,174,211,249,298,331,366,439,498,535,591,670,733,792,880 ⋆ Row 3 of table A162424. ● a(n) = Sum _{ m=n(n + 1) / 2..n(n + 1) / 2 + n } [x ^ m] S(x) ^ 3 for n>=0 where S(x) = Sum _{ n>=0 } x ^ ((n + 1)(n + 2) / 2 - 1). ●

► [A191782] 1,3,6,13,24,49,90,181,335,671,1253,2507,4718,9437,17874,35749,68067,136135,260337,520675,999361,1998723,3848221,7696443,14857999 ⋆ Sum of the lengths of the first ascents in all n - length left factors of Dyck paths. ● a(n) = binomial(n + 2, floor(n / 2) + 1) - binomial(n, floor(n / 2)) - 1. - _ Peter Luschny _ , Feb 10 2019 ●

► [A131913] 1,3,6,13,25,48,89,163,294,525,929,1632,2849,4947,8550,14717,25241,43152,73561,125075,212166,359133,606721,1023168,1722625 ⋆ Product of the square matrix in A065941 and the column vector (1, 2, 3, ...)'. ● a(n) = 2 * a(n - 1) + a(n - 2) - 2 * a(n - 3) - a(n - 4), a(0)=1, a(1)=3, a(2)=6, a(3)=13. ● a(n) = a(n - 1) + a(n - 2) + 2 * Fibonacci(n). (End) ●

► [A324129] 1,1,3,6,13,25,49,91,169,306,551,979,1729,3029,5279,9150,15793,27149,46513,79439,135301,229866,389643,659111,1112833 ⋆ a(n) = n * Fibonacci(n) + ((- 1) ^ n + 1) / 2. ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 4 * a(n - 3) - 2 * a(n - 4) + 2 * a(n - 5) + a(n - 6) for n > 5. ●

► [A072762] 0,1,3,6,13,26,53,106,212,424,849,1698,3397,6794,13588,27176,54353,108706,217413,434826,869652,1739304,3478609,6957218,13914436 ⋆ n coded as binary word of length=n with k - th bit set iff k is prime (1<=k<=n), decimal value. ● a(n) = (1 / 2) * (pi(n) + Sum _{ i=1..n } 2 ^ (n - i) * pi(i)), where pi = A000720. - _ Ridouane Oudra _ , Aug 26 2019 ● a(n) = floor(c * 2 ^ n), where c = A051006 is the prime constant. - _ Lorenzo Sauras Altuzarra _ , Jan 03 2023 ●

► [A081254] 1,3,6,13,26,53,106,213,426,853,1706,3413,6826,13653,27306,54613,109226,218453,436906,873813,1747626,3495253,6990506,13981013,27962026 ⋆ Numbers k such that A081252(m) / m ^ 2 has a local maximum for m = k. ● a(n) = floor(2 ^ (n - 1) * 5 / 3). [corrected by _ Michel Marcus _ , Sep 21 2018] ● a(n) = a(n - 2) + 5 * 2 ^ (n - 3) for n > 2; ● a(n) = 5 * 2 ^ (n - 1) / 3 + (- 1) ^ n / 6 - 1 / 2. a(n) = 2 * a(n - 1) + (1 + (- 1) ^ n) / 2, a(1)=1. - _ Paul Barry _ , Mar 24 2003 ● a(n) - a(n - 2) = 2 * (a(n - 1) - a(n - 3)), with a(0..2)=[1,3,6]. - _ Yuchun Ji _ , Mar 18 2020 ●

► [A125049] 1,3,6,13,26,53,106,213,427,855,1711,3423,6847,13695,27391,54783,109567,219134,438269,876539,1753079,3506159,7012318,14024637,28049275 ⋆ a(1) = 1. If a(n) is prime, a(n + 1) = 2 * a(n); otherwise, a(n + 1) = 2 * a(n) + 1. ● a(n) = floor(c * 2 ^ n), where c = 0.8359335658... - _ Lorenzo Sauras Altuzarra _ , Jan 01 2023 ●

► [A267581] 1,3,6,13,26,53,107,215,430,861,1723,3447,6895,13791,27583,55167,110334,220669,441339,882679,1765359,3530719,7061439,14122879,28245759 ⋆ Decimal representation of the middle column of the "Rule 167" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = floor(c * 2 ^ (n + 1)), where c = 0.841789245... - _ Lorenzo Sauras Altuzarra _ , Jan 03 2023 ●

► [A164991] 1,1,3,6,13,26,54,108,221,442,898,1796,3634,7268,14668,29336,59101,118202,237834,475668,956198,1912396,3841588,7683176,15425138 ⋆ Number of triangular involutions of n. A triangular involution is a square involution with at most three faces. ● a(n) = 2 ^ (n - 1) - binomial(n - 2, floor((n - 2) / 2)) for n >1, a(1)=1. ● a(2 * k + 1) = 4 * Sum _{ j = 0..(k - 2) } binomial(2 * k - 1,j) + 3 * binomial(2 * k - 1,k - 1), k >= 1. ● a(2 * k) = 4 * Sum _{ j = 0..(k - 2) } binomial(2 * (k - 1),j) + binomial(2 * (k - 1),k - 1), k >= 1. (End) ●

► [A213255] 1,3,6,13,26,54,110,225,456,922,1862,3755,7562,15214,30584,61441,123362,247581,496694,996148,1997288,4003654,8023886,16078166,32212255 ⋆ 2 ^ (n - 1) - floor((2 ^ (n - 1) - 1) / (n - 1)). ● a(n) = 2 ^ (n - 1) - floor((2 ^ (n - 1) - 1) / (n - 1)). ● a(n) = ceiling(2 ^ (n - 1) - (2 ^ (n - 1) - 1) / (n - 1)). ●

► [A291726] 3,6,13,27,51,94,171,303,527,906,1539,2586,4308,7122,11692,19077,30957,49986,80349,128628,205146,326058,516594,816076,1285674 ⋆ p - INVERT of (1,0,1,0,0,0,0,...), where p(S) = (1 - S) ^ 3. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + 4 * a(n - 3) - 6 * a(n - 4) + 3 * a(n - 5) - 3 * a(n - 6) + 3 * a(n - 7) + a(n - 9) for n >= 10. ●

► [A276129] 1,3,6,13,27,54,106,204,387,725,1344,2469,4500,8145,14652,26213,46665,82704,145982,256722,449937,786109,1369494,2379447,4123944 ⋆ a(n) is the number of ordered ways to tile a strip of length n + 2 with white tiles of odd lengths summing to length n and two red squares. ● a(n) = Sum _{ k=0..floor((n - 1) / 2) } binomial(n - 2 * k + 2, 2) * binomial(n - k - 1, k)) for n > 0. - _ Andrew Howroyd _ , Dec 26 2017 ●

► [A033129] 0,1,3,6,13,27,54,109,219,438,877,1755,3510,7021,14043,28086,56173,112347,224694,449389,898779,1797558,3595117,7190235,14380470 ⋆ Base - 2 digits are, in order, the first n terms of the periodic sequence with initial period [1,1,0]. ● a(n) = (6 / 7) * 2 ^ n - (4 / 21) * cos(2 * Pi * n / 3) - (2 / 21) * sqrt(3) * sin(2 * Pi * n / 3) - 2 / 3. (End) ● a(n) = a(n - 3) + 3 * 2 ^ (n - 3). - _ Martin von Gagern _ , May 26 2004 ● a(n + 1) = 2 * a(n) + 1 - 0 ^ ((a(n) + 1) mod 4). - _ Reinhard Zumkeller _ , Feb 22 2010 ● a(n) = floor(2 ^ (n + 1) * 3 / 7). - _ Jean - Marie Madiot _ , Oct 05 2012 ● a(n) = (1 / 14) * (- 9 - 2 * (- 1) ^ floor((2n) / 3) + (- 1) ^ (floor((2 * n + 7) / 3) + 1) + 3 * 2 ^ (n + 2)). - _ John M. Campbell _ , Dec 26 2016 ●

► [A079403] 3,6,13,27,54,109,219,439,879,1759,3518,7037,14075,28151,56303,112606,225212,450424,900848,1801696,3603393 ⋆ Let G(t) be the set of numbers between 2 ^ (t - 1) and 2 ^ t - 1, inclusive. There is a unique number a(t) in G(t) so that the denominator of the a(t) - th partial sum of the double harmonic series is divisible by smaller 2 - powers than its neighbors. ● a(n + 1) - 2 * a(n) = (a(n + 1) mod 2); ● a(n) = floor(c * 2 ^ n) where c = 1.718232... = 3 / 2 + Sum _{ k>=2 } (a(k + 1) - 2 * a(k)) / 2 ^ k. (End) ●

► [A371902] 1,3,6,13,27,55,110,221,443,886,1773,3547,7095,14190,28381,56763,113526,227053,454107,908215,1816430,3632861,7265723,14531446,29062893 ⋆ Positive integers whose binary form follows the periodic pattern 1101110: the concatenation of halftones 2 2 1 2 2 2 1, diminished by one, between successive pitches in the Ionian Major Scale. ● a(n) = floor((110 / 127) * 2 ^ n). ●

► [A267604] 1,3,6,13,27,55,111,223,447,895,1791,3583,7167,14335,28671,57343,114687,229375,458751,917503,1835007,3670015,7340031,14680063,29360127 ⋆ Decimal representation of the middle column of the "Rule 175" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>3. ● a(n) = ceiling((7 / 4) * 2 ^ n - 1). ●

► [A099036] 1,1,3,6,13,27,56,115,235,478,969,1959,3952,7959,16007,32158,64549,129475,259560,520107,1041811,2086206,4176593,8359951,16730848 ⋆ a(n) = 2 ^ n - Fibonacci(n). ● a(n) = 3 * a(n - 1) - a(n - 2) - 2 * a(n - 3). ● a(n) = sum(t _ 1 + 2 * t _ 2 + ... + n * t _ n=n, multinomial(1 + t _ 1 + t _ 2 + ... + t _ n, 1 + t _ 1, t _ 2, ..., t _ n). - _ Mircea Merca _ , Oct 09 2013 ●

► [A131246] 1,3,6,13,27,57,119,250,523,1097,2297,4815,10086,21137,44283,92793,194419,407378,853559,1788481,3747361,7851867,16451910,34471669,72228171 ⋆ Row sums of triangle A131245. ● a(0)=1, a(1)=3, a(2)=6, a(3)=13, a(n)=a(n - 1) + 3 * a(n - 2) - a(n - 3) - a(n - 4). - _ Harvey P. Dale _ , Sep 07 2013 ●

► [A371564] 0,0,1,3,6,13,28,56,113,231,464,930,1875,3766,7547,15151,30398,60917,122116,244786,490435,982544,1968413,3942649,7896116 ⋆ Number of binary strings of length n which have more 01 than 00 substrings. ● a(n) = (1 - 8 * (n - 4) * a(n - 5) + 4 * (3 * n - 10) * a(n - 4) + 2 * (8 - 3 * n) * a(n - 3) + (5 * n - 12) * a(n - 2) + (7 - 4 * n) * a(n - 1)) / (1 - n) for n>=5. ●

► [A106461] 1,3,6,13,28,58,116,229,456,924,1896,3898,7960,16084,32168,63845,126160,248968,491952,975388,1943536,3895336,7852688,15906874,32321264 ⋆ Binomial transform of the Tower of Hanoi sequence. ● a(2 ^ n - 1) = 2 * a(2 ^ n - 2) for n > 1. - _ A.H.M. Smeets _ , May 08 2019 ●

► [A095768] 3,6,13,28,59,122,249,504,1015,2038,4085,8180,16371,32754,65521,131056,262127,524270,1048557,2097132,4194283,8388586,16777193,33554408,67108839 ⋆ a(n) = 2 ^ (n + 1) - n. ● a(n) = 4a(n - 1) - 5a(n - 2) + 2a(n - 3). (End) ●

► [A002478] 1,1,3,6,13,28,60,129,277,595,1278,2745,5896,12664,27201,58425,125491,269542,578949,1243524,2670964,5736961,12322413,26467299,56849086 ⋆ Bisection of A000930. ● a(n) = a(n - 1) + 2 * a(n - 2) + a(n - 3). ● a(n) = Sum _{ k=0..n } binomial(2 * n - 2 * k, k). - _ Paul Barry _ , Nov 13 2004 ● a(n) = Sum _{ k=0..floor(n / 2) } Sum _{ j=0..n - k } C(j, n - k - j) * C(j, k). - _ Pau

l Barry _ , Nov 09 2005 ● a(n) = Sum _{ k=0..n } C(2 * k,n - k) = Sum _{ k =0..n } C(n,k) * C(3 * k,n) / C(3 * k,k). - _ Paul Barry _ , Feb 04 2006 ●

▶ [A052933] 1,1,3,6,13,29,62,137,297,650,1417,3093,6750,14729,32145,70146,153081,334061,729014,1590905,3471785,7576378,16533705,36081029,78738574 ⋆ Expansion of (1 - x ^ 2) / (1 - x - 3 * x ^ 2 + 2 * x ^ 4). ● a(n) = a(n - 1) + 3 * a(n - 2) - 2 * a(n - 4). ● a(n) = Sum _{ alpha=RootOf(1 - z - 3 * z ^ 2 + 2 * z ^ 4) } (1 / 397) * (51 + 148 * alpha - 27 * alpha ^ 2 - 82 * alpha ^ 3) * alpha ^ (- 1 - n). ●

▶ [A214260] 0,1,3,6,13,29,64,141,311,686,1513,3337,7360,16233,35803,78966,174165,384133,847232,1868629,4121391,9090014,20048657,44218705,97527424 ⋆ First differences of A052980. ● a(n + 1) = Sum _{ k=0..n } C(n - k, floor(k / 2)) * 2 ^ (n - k - floor(k / 2)). ●

▶ [A098075] 1,3,6,13,30,69,160,375,885,2102,5022,12060,29095,70485,171399,418220,1023663,2512761,6184253,15257262,37725972,93477778,232069116,577179078,1437926977 ⋆ Threefold convolution of A004148 (the RNA secondary structure numbers) with itself. ● a(n) = 3 * Sum _{ k=ceiling((n + 1) / 2)..n } binomial(k, n - k) * binomial(k + 2, 3 + n - k) / k, n >= 1, a(0)=1. ●

▶ [A201631] 1,3,6,13,30,70,167,405,992,2450,6090,15214,38165,96069,242530,613811,1556856,3956316,10070871,25674210,65541142,167517654,428635032,1097874434,2814611701 ⋆ a(n) is the number of Fibonacci meanders of length m * n and central angle 360 / m degrees where m = 2. ● a(n) = [x ^ n] (x ^ 2 - x + 1 - R) / ((x - 1) * (x ^ 2 - x - 1 + R) * R), where R = (((x - 3) * x + 1) * (x ^ 2 + x + 1)) ^ (1 / 2). (This is Theorem 21 in Baril et al.) - _ Peter Luschny _ , Mar 16 2023 ●

▶ [A162483] 3,6,13,31,78,201,523,1366,3573,9351,24478,64081,167763,439206,1149853,3010351,7881198,20633241,54018523,141422326,370248453,969323031,2537720638,6643838881,17393796003 ⋆ a(n) is the number of perfect matchings of an edge - labeled 2 X (2n + 1) Mobius grid graph. ● a(n) = Real((1 - I) * ((L(2 * n + 1) - F(2 * n + 1)) / 2 + F(2 * n + 2) + 2 * I)). ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) + a(n - 3). ● a(n) = 2 ^ (- 1 - n) * (2 ^ (2 + n) - (3 - sqrt(5)) ^ n * (- 1 + sqrt(5)) + (1 + sqrt(5)) * (3 + sqrt(5)) ^ n). - _ Colin Barker _ , Nov 03 2016 ●

▶ [A179928] 1,3,6,13,32,89,276,943,3514,14159,61242,282633,1384684,7170701,39105992,223867419,1341434134,8392364851,54696456734 ⋆ Row sums of A179927, the triangle of centered orthotopic numbers. ● a(n) = 1 + Sum _{ i = 1..n } (i + 1) * i ^ (n - i). ●

▶ [A264236] 1,3,6,13,36,138,736,4908,36351,280228,2190651,17206203,135357481,1065387963,8387050686,66029196613,519841755036,4092692363058,32221664474776,253680537891828,1997222414704551,15724098193422028,123795561597659331,974640390569138163 ⋆ Number of vertices at level n of the hyperbolic Pascal pyramid. ● a(n) = 12 * a(n - 1) - 37 * a(n - 2) + 37 * a(n - 3) - 12 * a(n - 4) + a(n - 5). ● a(n) = (- 3 / 2 + 9 * sqrt(5) / 10) * ((3 + sqrt(5)) / 2) ^ n + (- 3 / 2 - 9 * sqrt(5) / 10) * ((3 - sqrt(5)) / 2) ^ n + (7 / 12 - 3 * sqrt(15) / 20) * (4 + sqrt(15)) ^ n + (7 / 12 + 3 * sqrt(15) / 20) * (4 - sqrt(15)) ^ n + 17 / 6. (See Németh paper, page 9.) ●

▶ [A083356] 0,1,3,6,14,19,31,38,54,72,92,103,139,152,180,210,258,275,329,348,408,450,494,517,613 ⋆ Total area of all incongruent integer - sided rectangles of area <= n. ● a(n) = Sum _{ r=1..floor(sqrt(n)) } r * (r + floor(n / r)) * (floor(n / r) + 1 - r) / 2. ●

▶ [A291987] 1,1,3,6,14,20,45,69,135,210,378,576,1057,1561,2667,4110,6902,10220,17109,25485,41583,62250,99666,147960,238633 ⋆ Expansion of 1 / ((1 - x) * (1 - 2 * x ^ 2) * (1 - 3 * x ^ 3) * (1 - 4 * x ^ 4) * (1 - 5 * x ^ 5)). ● a(n) = a(n - 1) + 2 * a(n - 2) + a(n - 3) + a(n - 4) - 10 * a(n - 5) - 2 * a(n - 6) - 4 * a(n - 7) + 12 * a(n - 8) + 24 * a(n - 9) - 24 * a(n - 10) for n >= 11. - _ Muniru A Asiru _ , Sep 07 2017 ●

▶ [A166212] 1,3,6,14,25,39,66,99,138,201,274,357,479,616,768,977,1207,1458,1788,2146,2532,3022,3548,4110,4805 ⋆ Number of 4 X 4 X 4 triangular nonnegative integer arrays, symmetric under 120 degree rotation, with all sums of an element and its neighbors <= n. ● a(n) = 2 * a(n - 1) - a(n - 2) + 2 * a(n - 3) - 4 * a(n - 4) + 2 * a(n - 5) - 2 * a(n - 9) + 4 * a(n - 10) - 2 * a(n - 11) + a(n - 12) - 2 * a(n - 13) + a(n - 14) for n>13. ●

▶ [A291988] 1,1,3,6,14,25,50,84,165,280,503,826,1477,2386,4067,6625,11032,17605,29039,45820,74708,117410,187691,293155,467733 ⋆ Expansion of 1 / ((1 - x) * (1 - 2 * x ^ 2) * (1 - 3 * x ^ 3) * (1 - 4 * x ^ 4) * (1 - 5 * x ^ 5)). ● a(n) = a(n - 1) + 2 * a(n - 2) + a(n - 3) + a(n - 4) - 5 * a(n - 5) - 7 * a(n - 6) - 14 * a(n - 7) + 7 * a(n - 8) + 19 * a(n - 9) + 26 * a(n - 10) + 10 * a(n - 11) + 20 * a(n - 12) - 60 * a(n - 13) - 120 * a(n - 14) + 120 * a(n - 15) for n >= 16. - _ Muniru A Asiru _ , Sep 07 2017 ●

▶ [A120940] 0,1,3,6,14,26,52,95,177,318,572,1012,1784,3117,5423,9382,16170,27758,47500,81035,137885,234046,396408,670056,1130544 ⋆ Alternating sum of the Fibonacci numbers multiplied by their (combinatorial) indices. ● a(n) = Sum _{ k=0..n } (- 1) ^ (n - k) * k * f(k) also, when n >= 3, a(n) = nf(n - 1) + f(n - 3) + (- 1) ^ n where f(n) = F(n + 1). ● a(n) = a(n - 1) + 3 * a(n - 2) - a(n - 3) - 3 * a(n - 4) - a(n - 5) for n>4. ●

▶ [A277954] 1,3,6,14,26,58,106,234,426,938,1706,3754,6826,15018,27306,60074,109226,240298,436906,961194,1747626,3844778,6990506,15379114,27962026 ⋆ Decimal representation of the x - axis, from the left edge to the origin, of the n - th stage of growth of the two - dimensional cellular automaton defined by "Rule 14", based on the 5 - celled von Neumann neighborhood. ● a(n) = a(n - 1) + 4 * a(n - 2) - 4 * a(n - 3) for n>2. ● a(n) = (- 8 - (- 2) ^ n + 21 * 2 ^ n) / 12. (End) ●

▶ [A001970] 1,1,3,6,14,27,58,111,223,424,817,1527,2870,5279,9710,17622,31877,57100,101887,180406,318106,557453,972796,1688797,2920123 ⋆ Functional determinants; partitions of partitions; Euler transform applied twice to all 1's sequence. ● a(n) = (1 / n) * Sum _{ k = 1..n } a(n - k) * b(k), n > 1, a(0) = 1, b(k) = Sum _{ d|k } d * numbpart(d), where numbpart(d) = number of partitions of d, cf. A061259. - _ Vladeta Jovovic _ , Apr 21 2001 ●

▶ [A224840] 1,3,6,14,27,61,117,250,494,1012,2007,4088,8112,16357,32635,65493,130779,262115,523710,1048502,2096110,4194124,8386419,16777182,33550085 ⋆ Divisor sum of the arithmetic function A085945(n). ● a(n) = sum { d | n } sum _{ k <= d } mu(k) * (2 ^ floor(n / k) - 1) where mu is the Moebius function. ●

▶ [A354294] 1,1,3,6,14,28,60,120,248,496,1008,2016,4064,8128,16320,32640,65408,130816,261888,523776,1048064,2096128,4193280,8386560,16775168 ⋆ Number of palindromic compositions of 2n into parts <= n. ● a(n) = ceiling(2 ^ n - 2 ^ floor((n - 1) / 2)). ● a(n) = 2 ^ n - 2 ^ ((n - 5) / 2) * (2 + sqrt(2) + (- 1) ^ n * (sqrt(2) - 2)) for n > 0. - _ Stefano Spezia _ , May 24 2022 ●

▶ [A219768] 3,6,14,29,56,101,171,274,419,616,876,1211,1634,2159,2801,3576,4501,5594,6874,8361,10076,12041,14279,16814,19671 ⋆ Number of n X 3 arrays of the minimum value of corresponding elements and their horizontal or antidiagonal neighbors in a random, but sorted with lexicographically nondecreasing rows and columns, 0..1 n X 3 array. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>6. ●

▶ [A216714] 0,1,3,6,14,29,60,123,249,503,1012,2032,4075,8164,16347,32719,65471,130986,262030,524137,1048376,2096887,4193953,8388143,16776600 ⋆ a(n) = 2 ^ (n - 5) - A000931(n). ● a(n) = 2 * a(n - 1) + a(n - 2) - a(n - 3) - 2 * a(n - 4). - _ Vincenzo Librandi _ , Mar 11 2013 ●

▶ [A084174] 1,1,3,6,14,29,61,124,252,507,1019,2042,4090,8185,16377,32760,65528,131063,262135,524278,1048566,2097141,4194293,8388596,16777204 ⋆ a(n) = 3 * a(n - 1) - a(n - 2) - 3 * a(n - 3) + 2 * a(n - 4). ● a(n) = 2 ^ n + (- 1) ^ n / 4 - (2 * n + 1) / 4. ● a(n + 2) = a(n + 1) + 2 * a(n) + n, a(0)=1, a(1)=1. ● a(n) = floor(2 ^ n - n * (n + 1) / 2). - _ Zerinvary Lajos _ , Apr 29 2007 ●

▶ [A308580] 3,6,14,30,60,116,222,426,824,1608,3162,6254,12420,24732,49334,98514,196848,393488,786738,1573206,3146108,6291876,12583374,25166330,50332200 ⋆ a(n) = 3 * 2 ^ n + n ^ 2 - n. ● a(n) = 3 * 2 ^ n + n ^ 2 - n. ● a(n) = 5 * a(n - 1) - 9 * a(n - 2) + 7 * a(n - 3) - 2 * a(n - 4). ●

▶ [A192672] 1,1,1,3,6,14,30,65,144,321,720,1626,3694,8428,19305,44371,102291,236450,547868,1272148,2959613,6897450,16100184,37635909,88095027 ⋆ Floor - Sqrt transform of little Schroeder numbers (A001003). ● a(n) = floor(sqrt(littleSchroder(n))). ●

▶ [A175656] 1,3,6,14,30,66,142,306,654,1394,2958,6258,13198,27762,58254,121970,254862,531570,1106830,2301042,4776846,9903218,20505486,42409074,87614350 ⋆ Eight bishops and one elephant on a 3 X 3 chessboard. G.f.: (1 - 3 * x ^ 2) / (1 - 3 * x + 4 * x ^ 3). ● a(n) = 3 * a(n - 1) - 4 * a(n - 3) with a(0)=1, a(1)=3 and a(2)=6. ● a(n) = ((3 * n + 22) * 2 ^ n - 4 * (- 1) ^ n) / 18. ●

▶ [A218982] 3,6,14,31,70,156,349,780,1745,3901,8723,19505,43615,97526,218075,487630,1090374,2438150,5451870,12190751,27259348,60953755,136296740,304768775,681483699 ⋆ Power ceiling - floor sequence of sqrt(5). ● a(n) = floor(x * a(n - 1)) if n is odd, a(n) = ceiling(x * a(n - 1) if n is even, where x=sqrt(5) and a(0) = ceiling(x). ●

▶ [A106803] 0,1,1,3,6,14,31,70,157,353,793,1782,4004,8997,20216,45425,102069,229347,515338,1157954,2601899,5846414,13136773,29518061,66326481 ⋆ Expansion of x * (1 - x) / (1 - 2 * x - x ^ 2 + x ^ 3). ● a(n) = 2 * a(n - 1) + a(n - 2) - a(n - 3), a(0)=0, a(1)=a(2)=1. - _ G. C. Greubel _ , Aug 14 2015 ●

▶ [A077998] 1,1,3,6,14,31,70,157,353,793,1782,4004,8997,20216,45425,102069,229347,515338,1157954,2601899,5846414,13136773,29518061,66326481,149034250 ⋆ Expansion of (1 - x) / (1 - 2 * x - x ^ 2 + x ^ 3). ● a(0)=a(1)=1, a(2)=3, a(n + 1) = 2 * a(n) + a(n - 1) - a(n - 2) for n>=2. - _ Philippe Deléham _ , Sep 07 2006 ●

▶ [A006356] 1,3,6,14,31,70,157,353,793,1782,4004,8997,20216,45425,102069,229347,515338,1157954,2601899,5846414,13136773,29518061,66326481,149034250,334876920 ⋆ a(n) = 2 * a(n - 1) + a(n - 2) - a(n - 3) for n >= 3, starting with a(0) = 1, a(1) = 3, and a(2) = 6. ● a(n) is asymptotic to z(3) * w(3) ^ n where w(3) = (1 / 2) / cos(3 * Pi / 7) and z(3) is the root 1 < X < 2 of P(3, X) = 1 - 14 * X - 49 * X ^ 2 + 49 * X ^ 3. w(3) = 2.2469796.... z(3) = 1.220410935... ● a(n - 1) = Sum _{ k = 1..n } Sum _{ i = k..n } Sum _{ j = 0..k } binomial(j, - 3 * k + 2 * j + i) * (- 1) ^ (j - k) * binomial(k, j) * binomial(n + k - i - 1, k - 1). - _ Vladimir Kruchinin _ , May 05 2011 ●

▶ [A129954] 1,3,6,14,32,72,160,352,768,1664,3584,7680,16384,34816,73728,155648,327680,688128,1441792,3014656,6291456,13107200,27262976,56623104,117440512 ⋆ Second differences of A129952. ● a(0) = 1, a(1) = 3; for n > 1, a(n) = (n + 4) * 2 ^ (n - 2). ●

▶ [A272362] 1,3,6,14,32,74,171,396,917,2124,4920,11397,26401,61158,141673,328187,760249,1761126,4079670,9450606,21892446,50714123,117479896,272143639,630424122 ⋆ Expansion of (1 + x - x ^ 2 - x ^ 3 - x ^ 4) / ((1 - x) * (1 - x - 2 * x ^ 2 - 2 * x ^ 3 - x ^ 4)). ● a(n) = 2 * a(n - 1) + a(n - 2) - a(n - 4) - a(n - 5). ● a(n) = floor(phi * a(n - 1) + phi * a(n - 2)), a(0)=1, a(1)=3, where phi is the golden ratio (A001622). ●

▶ [A182905] 1,1,3,6,14,32,75,177,422,1013,2447,5942,14495,35501,87257,215144,531970,1318726,3276644,8158736,20354413,50870857,127348839,319288920,801657469 ⋆ Number of weighted lattice paths in F[n]. The members of F[n] are paths of weight n that start at (0,0), do not go below the horizontal axis, and whose steps are of the following four kinds: an (1,0) - step with weight 1, an (1,0) - step with weight 2, a (1,1) - step with weight 2, and a (1, - 1) - step with weight 1. The weight of a path is the sum of the weights of its steps. ● a(n) = Sum _{ k =0..n } (k + 1) * Sum _{ i=0..n - k + 1 } C(i + 1,n + 1 - i) * C(i + 1, - i + n - k)) / (i + 1). - _ Vladimir Kruchinin _ , Jan 25 2019 ●

▶ [A003477] 1,3,6,14,33,71,150,318,665,1375,2830,5798,11825,24039,48742,98606,199113,401455,808382,1626038,3267809,6562295,13169814,26416318,52962681 ⋆ Expansion of 1 / ((1 - 2x)(1 + x ^ 2)(1 - x - 2x ^ 3)). ● a(0) = 1; for n > 0, a(n) = 3 * a(n - 1) - 3 * a(n - 2) + 5 * a(n - 3) - 6 * a(n - 4) + 2 * a(n - 5) - 4 * a(n - 6) (where a(n)=0 for - 5 <= n <= - 1). - _ Jon E. Schoenfield _ , Apr 23 2010 ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - 4 * a(n - 4) + Re(i ^ (n - 4)), a(- 5)=a(- 4)=a(- 3)=a(- 2)=0 for all integers n element Z. ● a(n) = (1 / 2) * (BR * ROR ^- (n + 4) + BC * ROC ^- (n + 4) + conjugate(BC * ROC ^- (n + 4)) + (2 / 5) * (1 / 2) ^- (n + 4) + (3 / 10 + i * (1 / 10)) * i ^- (n + 4) + conjugate((3 / 10 + i * (1 / 10)) * i ^- (n + 4))). ●

▶ [A339600] 1,1,3,6,14,34,76,172,404,928,2112,4880,11256,25784,59288,136584,313800,721096,1659176,3815144,8769320,20166568,46375784,106621992,245160040 ⋆ a(0) = a(1) = 1, a(2) = 3, a(3) = 6, a(n) = a(n - 1) + 6 * a(n - 3) + 2 * a(n - 4) for n >= 4. ● a(n) = c1 * r1 ^ n + c2 * r2 ^ n + 2 * c3 * cos(c5 + c6 * n) * r3 ^ n where the coefficients and parameters are approximately: c1 = 0.57089...

, c2 = 0.51391..., c3 = 0.04403..., c5 = 2.86873..., c6 = 1.87329..., r1 = - 0.32569 ..., r2 = 2.29936..., r3 = 1.63419... ●

▶ [A275873] 1,1,1,3,6,14,34,81,193,461,1101,2631,6288,15029,35921,85856,205208,490477,1172311,2801993,6697170,16007210,38259559,91445908,218569015 ⋆ a(n) = floor(r * a(n - 1)) + floor(r * a(n - 2)) + floor(r * a(n - 3)), where r = 3 / 2, a(0) = a(1) = a(2) = 1. ● a(n) = floor(r * a(n - 1)) + floor(r * a(n - 2)) + floor(r * a(n - 3)), where r = 3 / 2, a(0) = a(1) = a(2) = 1. ●

▶ [A184785] 1,1,1,3,6,14,34,83,205,516,1317,3396,8848,23253,61570,164094,439860,1185086,3207477,8716726,23776459,65072379,178637758,491772915,1357288318 ⋆ Let A(x) satisfy: A(x) = 1 + x * A(x) ^ phi where phi = (sqrt(5) + 1) / 2, then this sequence equals the integer part of the coefficients of A(x). ● a(n) = floor(binomial(phi * n, n) / (n / phi + 1)) where phi = (sqrt(5) + 1) / 2. ●

▶ [A129703] 1,3,6,14,36,97,268,751,2124,6047,17304,49722,143366,414585,1201918,3492118,10165780,29643871,86574832,253188112,741365050,2173243129,6377181826,18730782253,55062586342 ⋆ Number of different walks generated by n steps that can only go in { east, southeast, southwest } directions on the 300 - degree wedge in a 60 - degree equilateral triangular lattice. ● a(n) = 1 + Sum _{ k=0..n } Sum _{ t=0..floor(k / 2) } binomial(n, 2 * t + n - k) * (binomial(2 * t + n - k, t) - binomial(2 * t + n - k, t - 1)), for n > 0. - _ Daniel Suteu _ , Feb 23 2018 ●

▶ [A001550] 3,6,14,36,98,276,794,2316,6818,20196,60074,179196,535538,1602516,4799354,14381676,43112258,129271236,387682634,1162785756,3487832978,10462450356,31385253914,94151567436,282446313698 ⋆ a(n) = 1 ^ n + 2 ^ n + 3 ^ n . ● a(n) = 5 * a(n - 1) - 6 * a(n - 2) + 2. (End) ● a(0)=3, a(1)=6, a(2)=14, a(n) = 6 * a(n - 1) - 11 * a(n - 2) + 6 * a(n - 3). - _ Harvey P. Dale _ , Apr 30 2011 ●

▶ [A079003] 3,6,14,38,110,326,974,2918,8750,26246,78734,236198,708590,2125766,6377294,19131878,57395630,172186886,516560654,1549681958,4649045870,13947137606,41841412814,125524238438,376572715310 ⋆ Least k >= 3 such that Fibonacci(k) == - 1 (mod 3 ^ n). ● a(1) = 3; for n > 1, a(n) = 3 * a(n - 1) - 4; a(n) = 4 * 3 ^ (n - 2) + 2. ● a(n) = 4 * a(n - 1) - 3 * a(n - 2) for n > 3. ●

▶ [A101162] 1,3,6,14,40,131,471,1829,7620,33902,160362,803065,4241457,23546969,137002658,833225728,5284731576,34881786097,239147833907,1700114999791,12512735023124,95205884573428,747892058653238,6058264178225451 ⋆ Row sums of a Chebyshev number triangle. ● a(n)=sum { k=0..n, if(n=k, 1, 2T(n - k , (k + 2) / 2)) } where T(n, k)=(n / 2)sum { j=0..floor(n / 2), C(n - j, j)(- 1) ^ j * (2k) ^ (n - 2j) } . ●

▶ [A060304] 0,0,3,6,15,19,37,47,69,82,113,139,180,216,244,300,381,423,486,553,638,726,820,887,1029 ⋆ Number of primes below n ^ 3 does not exceed n times the number of primes below n ^ 2. ● a(n) = n * pi(n * n) - pi(n * n * n). - _ Jonathan Sondow _ , Feb 17 2014 ●

▶ [A117748] 0,3,6,15,21,36,45,66,78,105,120,153,171,210,231,276,300,351,378,435,465,528,561,630,666 ⋆ Triangular numbers divisible by 3. ● a(n) = 3 * (1 - (- 1) ^ n + 2 * (- 3 + (- 1) ^ n) * n + 6 * n ^ 2) / 16. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n > 5. ●

▶ [A179805] 1,3,6,15,24,33,42,51,60,69,78,87,96,105,114,123,132,141,150,159,168,177,186,195,204 ⋆ a(0) = 1, a(1) = 3, a(2) = 6 and a(n) = 2 * a(n - 1) - a(n - 2) for n > 3. ● a(0) = 1, a(1) = 3, a(2) = 6 and a(n) = 2 * a(n - 1) - a(n - 2) for n > 3. ● a(n) = a(n - 1) + 9 for n > 2. ● a(n) = 9 * n - 12 for n > 1. ●

▶ [A272073] 3,6,15,24,57,90,213,336,795,1254,2967,4680,11073,17466,41325,65184,154227,243270,575583,907896,2148105,3388314,8016837,12645360,29919243 ⋆ Exponents of x in the numerator of cluster variables of rank 2 cluster algebras. ● a(n) = 4 * a(n - 2) - a(n - 4), with a(2)=3, a(3)=6, a(4)=15, a(5)=24. ●

▶ [A062878] 1,3,6,15,24,60,102,255,384,960,1632,4080,6168,15420,26214,65535,98304,245760,417792,1044480,1579008,3947520,6710784,16776960,25166208 ⋆ a(n) is the position of A050614(n) in A062877. ● a(2 ^ n - 1) = 2 ^ (2 ^ n) - 1. - _ Philippe Deléham _ , Apr 05 2007 ●

▶ [A227960] 1,3,6,15,24,60,105,255,384,960,1632,1680,4080,15555,27030,65535,98304,245760,417792,430080,1044480,1582080,3947520,3982080,6908160 ⋆ Big equivalence classes (A227723) related to subgroups of nimber addition (A190939). ● a(A076766 - 1) = A001146 - 1 = A051179. ● a(A076766) = A001146 * 3 / 2 (probably). ●

▶ [A282484] 1,3,6,15,24,62,99,254,387,1006,1595,4078,6203,16110,25531,65262,99259,257774,408507,1044206,1588155,4124398,6536123,16707310,25410491 ⋆ Decimal representation of the x - axis, from the left edge to the origin, of the n - th stage of growth of the two - dimensional cellular automaton defined by "Rule 478", based on the 5 - celled von Neumann neighborhood. ● a(n) = a(n - 2) + 16 * a(n - 4) - 16 * a(n - 6) for n>6. ●

▶ [A216304] 3,6,15,25,27,33,54,57,60,75,94,97,99,118,123,129,132,136,162,174,186,190,201,213,228 ⋆ Values of k such that 10 * k + 1 and 10 * k + 7 alone are prime between 10 * k and 10 * k + 9. ● a(n) >> n log ^ 2 n. - _ Charles R Greathouse IV _ , Sep 07 2012 ●

▶ [A020991] 0,3,6,15,26,27,30,63,106,107,110,111,122,123,126,255,426,427,430,431,442,443,446,447,490 ⋆ Largest value of k for which Golay - Rudin - Shapiro sequence A020986(k) = n. ● a(2 ^ n) = 2 ^ (2n) - 1. - _ Seiichi Manyama _ , Apr 23 2017 ●

▶ [A079825] 1,3,6,15,26,41,62,92,129,169,224,287,366,443,548,656,793,919,1090,1255,1466,1653,1906,2140,2441 ⋆ Sum of numbers in n - th upward diagonal of triangle in A079826. ● a(n) = ((2 * n + 1) * (7 * n ^ 2 + 7 * n + 12) - 3 * n * (n - 7) * (- 1) ^ n + 6 * (2 * n - 3 * (- 1) ^ n + 1) * i ^ (n * (n - 1))) / 96, where i=sqrt(- 1). - _ Bruno Berselli _ , Sep 05 2012 ●

▶ [A282123] 1,3,6,15,26,63,106,255,426,1023,1706,4095,6826,16383,27306,65535,109226,262143,436906,1048575,1747626,4194303,6990506,16777215,27962026 ⋆ Decimal representation of the x - axis, from the left edge to the origin, of the n - th stage of growth of the two - dimensional cellular automaton defined by "Rule 430", based on the 5 - celled von Neumann neighborhood. ● a(n) = (- 5 - (- 2) ^ n + (- 1) ^ n + 11 * 2 ^ n) / 6. ● a(n) = 5 * a(n - 2) - 4 * a(n - 4) for n>3. ●

▶ [A348378] 1,3,6,15,27,63,117,252,492,1008,1986,4059,8031,16182,32277,64791,129312,259188,517812,1036677,2072424,4146714,8291439,16587276,33170181 ⋆ Number of ways to reach n by starting with any positive integer, and repeatedly adding any positive integer or multiplying by any integer greater than 1. ● a(n) = 1 + (Sum _{ k=1..n - 1 } a(k)) + (Sum _{ d|n, d<n } a(d)). - _ Andrew Howroyd _ , Jan 25 2022 ●

▶ [A000740] 1,1,3,6,15,27,63,120,252,495,1023,2010,4095,8127,16365,32640,65535,130788,262143,523770,1048509,2096127,4194303,8386440,16777200 ⋆ Number of 2n - bead balanced binary necklaces of fundamental period 2n, equivalent to reversed complement; also Dirichlet convolution of b _ n=2 ^ (n - 1) with mu(n); also number of components of Mandelbrot set corresponding to Julia sets with an attractive n - cycle. ● a(n) = Sum _{ d|n } mu(n / d) * 2 ^ (d - 1), Mobius transform of A011782. Furthermore, Sum _{ d|n } a(d) = 2 ^ (n - 1). ●

▶ [A300761] 0,1,3,6,15,28,53,87,140,210,310,434,600,803,1061,1368,1747,2190,2723,3337,4060,4884,5840,6916,8148 ⋆ Number of non - equivalent ways (mod D _ 2) to select 4 points from n equidistant points on a straight line so that no selected point is equally distant from two other selected points. ● a(n) = (n ^ 4 - 12 * n ^ 3 + 54 * n ^ 2 - 88 * n) / 48 + (n == 1 (mod 2)) * (- 4 * n + 19) / 16 + (n == 5 (mod 6)) / 3 + (n == 2 (mod 6)) / 3 + (n == 2 (mod 4)) / 2. ● a(n) = (n ^ 4 - 12 * n ^ 3 + 54 * n ^ 2 - 88 * n) / 48 + b(n) + c(n), where ● a(n) = 2 * a(n - 1) - a(n - 3) - 2 * a(n - 5) + 2 * a(n - 6) + a(n - 8) - 2 * a(n - 10) + a(n - 11) for n>14. ●

▶ [A103529] 0,3,6,15,28,61,126,251,504,1017,2042,4095,8180,16373,32758,65523,131056,262129,524274,1048567,2097148,4194285,8388590,16777195,33554408 ⋆ Values of A102370 which are >= a new power of 2. ● a(n) = 2 ^ (n - 1) - (n - 1) + Sum _{ k >= 1, k == n - 1 mod 2 ^ k } 2 ^ k. ● a(0)=0, a(1)=3, for n>1, a(n)= a(n - 1) XOR (a(n - 1) + n), where XOR is the bitwise exclusive - or operator. - _ Alex Ratushnyak _ , Apr 21 2012 ●

▶ [A285543] 1,3,6,15,28,63,120,255,496,1023,2016,4095,8128,16383,32640,65535,130816,262143,523776,1048575,2096128,4194303,8386560,16777215,33550336 ⋆ Decimal representation of the diagonal from the origin to the corner of the n - th stage of growth of the two - dimensional cellular automaton defined by "Rule 35", based on the 5 - celled von Neumann neighborhood. ● a(n) = (- 1 + (- 1) ^ n + 2 ^ (2 + n) - 2 ^ (n / 2) * (1 + (- 1) ^ n)) / 2. ● a(n) = 2 * a(n - 1) + 3 * a(n - 2) - 6 * a(n - 3) - 2 * a(n - 4) + 4 * a(n - 5) for n>4. ●

▶ [A034953] 3,6,15,28,66,91,153,190,276,435,496,703,861,946,1128,1431,1770,1891,2278,2556,2701,3160,3486,4005,4753 ⋆ Triangular numbers (A000217) with prime indices. ● a(n) = Sum _{ k=1..prime(n) } k. - _ Wesley Ivan Hurt _ , Apr 27 2021 ●

▶ [A077449] 3,6,15,30,31,39,43,51,57,62,67,71,75,78,79,86,87,102,103,111,114,123,131,134,139 ⋆ Numbers k such that Sum _{ d|k } mu(phi(d)) = 0. ● a(n) seems to be asymptotic to c * n where c is around 5.47... ●

▶ [A242172] 1,3,6,15,30,70,140,315,630,1386,2772,6006,12012,25740,51480,109395,218790,461890,923780,1939938,3879876,8112468,16224936,33801950,67603900 ⋆ a(n) = 2 ^ n * binomial((n + 1 + (n mod 2)) / 2, 1 / 2). ● a(2 * n + 2) / 2 = a(2 * n + 1). ●

▶ [A256281] 1,3,6,15,30,78,170,423,991,2410,5742,13950,33462,80954,195060,471255,1136690,2745273,6625110,15996850,38614140,93228102,225058682,543354078,1311738151 ⋆ Inverse Moebius transform of Pell numbers. ● a(n) = Sum _{ d|n } Pell(d). ●

▶ [A367293] 0,3,6,15,32,60,118,212,398,733,1275,2296,4092,6998,12310,20905,36409,63092,106266,182888,306865,525175,896119,1496319,2542488 ⋆ Main diagonal of the extended Wythoff array (A287870). ● a(n) = n * Fibonacci(n - 1) + Fibonacci(n) * floor(((1 + sqrt(5)) * (1 + n)) / 2), for n > 0. ●

▶ [A323936] 1,1,3,6,15,32,74,160,356,768,1672,3584,7696,16384,34848,73728,155712,327680,688256,1441792,3014912,6291456,13107712,27262976,56624128 ⋆ Isomers of deoxyalditols. ● a(n) = 2 ^ max(n - 4, - 2)(n + 2) + 2 ^ ((n - 5) / 2)(n mod 2). ● a(2 ^ n - 2) = 2 ^ (2 ^ n + n - 6). ●

▶ [A289006] 0,1,3,6,15,33,66,155,333,666,1555,3333,6666,15555,33333,66666,155555,333333,666666,1555555,3333333,6666666,15555555,33333333,66666666 ⋆ Conversion to octal of the binary expansion given by the first n terms of the period - 3 sequence A011655 (repeat 0, 1, 1). ● a(3n) = floor(10 ^ n / 3) (= n times the digit '3'), a(3n + 1) = floor(10 ^ n / 3) * 2 (= n times the digit '6'), a(3n + 2) = floor(10 ^ (n + 1) / 6) - floor(10 ^ n / 9) (= digit '1' followed by n digits '5'). - _ M. F. Hasler _ , Jun 23 2017 ●

▶ [A105476] 1,1,3,6,15,33,78,177,411,942,2175,5001,11526,26529,61107,140694,324015,746097,1718142,3956433,9110859,20980158,48312735,111253209,256191414 ⋆ Number of compositions of n when each even part can be of two kinds. ● a(n) = a(n - 1) + 3 * a(n - 2) for n>=3. ● a(n) = ((2 + sqrt(13)) * (1 + sqrt(13)) ^ n - (2 - sqrt(13)) * (1 - sqrt(13)) ^ n) / (3 * 2 ^ n * sqrt(13)) for n>0. - _ Bruno Berselli _ , May 24 2011 ● a(n) = 3 ^ ((n - 1) / 2) * (2 * sqrt(3) * Fibonacci(n, 1 / sqrt(3)) + Fibonacci(n, 1 / sqrt(3))). - _ G. C. Greubel _ , Jan 15 2020 ●

▶ [A190525] 1,3,6,15,34,80,185,431,1001,2328,5411,12580,29244,67985,158045,367411,854126,1985603,4615966,10730820,24946129,57992715,134816705,313410816,728591751 ⋆ Number of n - step one - sided prudent walks, avoiding exactly two consecutive west steps (can have three or more west steps). ● a(n) = 2 * a(n - 1) + a(n - 2) - a(n - 3) + a(n - 4) with a(0) = 1, a(1) = 3, a(2) = 6 and a(3) = 15. ●

▶ [A113225] 1,1,3,6,15,35,85,204,493,1189,2871,6930,16731,40391,97513,235416,568345,1372105,3312555,7997214,19306983,46611179,112529341,271669860,655869061 ⋆ a(2n) = A011900(n), a(2n + 1) = A001109(n + 1). ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) + - a(n - 4). - _ Eric W. Weisstein _ , Aug 01 2023 ●

▶ [A291013] 0,3,6,15,36,85,198,456,1040,2352,5280,11776,26112,57600,126464,276480,602112,1306624,2826240,6094848,13107200,28114944,60162048,128450560,273678336 ⋆ p - INVERT of (1,1,1,1,1,...), where p(S) = (1 - S ^ 2) ^ 3. ● a(n) = 6 * a(n - 1) - 12 * a(n - 2) + 8 * a(n - 3) for n >= 7. ● a(n) = 2 ^ (n - 6) * (60 + 17 * n + n ^ 2) for n>2. - _ Colin Barker _ , Aug 23 2017 ●

▶ [A033192] 0,1,1,3,6,15,36,91,231,595,1540,4005,10440,27261,71253,186355,487578,1276003,3339820,8742471,22885995,59912931,156848616,410626153,1075018896 ⋆ a(n) = binomial(Fibonacci(n) + 1, 2). ● a(n) = ((Fibonacci(n) + Fibonacci(n) ^ 2) / 2). - _ Gary Detlefs _ , Dec 24 2010 ●

► [A342912] 1,1,3,6,15,36,91,232,603,1585,4213,11298,30537,83097,227475,625992,1730787,4805595,13393689,37458330,105089229,295673994,834086421,2358641376,6684761125 ★ a(n) = [x ^ n] (1 - 2 * x - sqrt((1 - 3 * x) / (1 + x))) / (2 * x ^ 3). ● a(n) = (- 1) ^ n * hypergeom([1 / 2, - 2 - n], [2], 4]. ●

► [A140824] 0,1,3,6,15,41,108,281,735,1926,5043,13201,34560,90481,236883,620166,1623615,4250681,11128428,29134601,76275375,199691526,522799203,1368706081,3583319040 ★ Expansion of (x - x ^ 3) / (1 - 3 * x + 2 * x ^ 2 - 3 * x ^ 3 + x ^ 4). ● a(0) = 0, a(1) = 1, a(2) = 3, a(3) = 6, a(n) - 3 a(n + 1) + 2 a(n + 2) - 3 a(n + 3) + a(n + 4) = 0. ● a(n) = 2 / 3 * (T(n,3 / 2) - T(n,0)), where T(n,x) is a Chebyshev polynomial of the first kind. ● a(n) = bottom left entry of the 2 X 2 matrix 2 * T(n, 1 / 2 * M), where M is the 2 X 2 matrix [0, 0; 1, 3]. ●

► [A067771] 3,6,15,42,123,366,1095,3282,9843,29526,88575,265722,797163,2391486,7174455,21523362,64570083,193710246,581130735,1743392202,5230176603,15690529806,47071589415,141214768242,423644304723 ★ Number of vertices in Sierpiński triangle of order n. ● a(n) = 3 + 3 ^ 1 + 3 ^ 2 + 3 ^ 3 + 3 ^ 4 + ... + 3 ^ n = 3 + Sum _{ k=1..n } 3 ^ n. ● a(0) = 3, a(n) = a(n - 1) + 3 ^ n. a(n) = (3 / 2) * (1 + 3 ^ n). - _ Zak Seidov _ , Mar 19 2007 ● a(n) = 4 * a(n - 1) - 3 * a(n - 2). ● a(n) = 3 * a(n - 1) - 3. - _ Zak Seidov _ , Oct 26 2014 ●

► [A028401] 3,6,15,45,153,561,2145,8385,33153,131841,525825,2100225,8394753,33566721,134242305,536920065,2147581953,8590131201,34360131585,137439739905,549757386753,2199026401281,8796099313665,35184384671745 ★ The (2 ^ n + 1) - th triangular number (cf. A000217). ● a(n) = (3 / 8) * 2 ^ n + (1 / 32) * 4 ^ n + 1. ● a(n) = (2 ^ n + 4) * (2 ^ n + 8) / 32. - Tamas Kalmar - Nagy (integers(AT)kalmarnagy.com), Aug 02 2007 ●

► [A212977] 0,3,6,16,25,46,64,100,130,185,230,308,371,476,560,696,804,975,1110,1320,1485,1738,1936,2236,2470 ★ Number of (w,x,y) with all terms in { 0,...,n } and n / 2 < w + x + y <= n. ● a(n)=a(n - 1) + 3 * a(n - 2) - 3 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) + a(n - 6) - a(n - 7). ● a(n) = (14 * n ^ 3 + 75 * n ^ 2 + 109 * n - 3 * ((n ^ 2 + 7 * n + 11) * (- 1) ^ n - 11)) / 96. - _ Luce ETIENNE _ , Mar 21 2014 ●

► [A032247] 3,6,16,29,56,90,150,222,336,474,672,908,1233,1612,2112,2693,3432,4282,5340,6542,8008,9666,11648,13874,16503 ★ "DHK[6]" (bracelet, identity, unlabeled, 6 parts) transform of 1,1,1,1,... ● a(n) = 2 * a(n - 1) - a(n - 3) - 2 * a(n - 5) + 3 * a(n - 6) - 2 * a(n - 7) + a(n - 8) + a(n - 9) - 2 * a(n - 10) + 3 * a(n - 11) - 2 * a(n - 12) - a(n - 14) + 2 * a(n - 16) - a(n - 17) for n > 25. ● a(n) = (1 / 12) * Sum _{ d|gcd(n, 6) } mu(d) * (binomial((n / d) - 1, (6 / d) - 1) - 6 * binomial(floor(b(n,d) / 2), floor(3 / d))) for n >= 6, where b(n,d) = n / d + ((- 1) ^ (6 / d) - 1) / 2. (Thus, b(n,d) = n / d for d = 1, 3, and b(n, d) = n / d - 1 for d = 2, 6.) (End) ●

► [A308401] 3,6,16,30,56,91,150,224,336,477,672,912,1233,1617,2112,2700,3432,4290,5340,6552,8008,9678,11648,13888,16503 ★ Number of bracelets (turnover necklaces) of length n that have no reflection symmetry and consist of 6 white beads and n - 6 black beads. ● a(n) = - (1 / 2) * binomial(floor(n / 2), 3) + (1 / 12) * Sum _{ d|gcd(n, 6) } phi(d) * binomial((n / d) - 1, (6 / d) - 1) for n >= 6. (This is a modification of formulas found in Gupta (1979) and Shevelev (2004).) ● a(n) = 2 * a(n - 1) + a(n - 2) - 3 * a(n - 3) - a(n - 4) + a(n - 5) + 4 * a(n - 6) - 3 * a(n - 7) - 3 * a(n - 8) + 4 * a(n - 9) + a(n - 10) - a(n - 11) - 3 * a(n - 12) + a(n - 13) + 2 * a(n - 14) - a(n - 15) for n > 23. (End) ●

► [A219810] 3,6,16,33,61,106,176,281,433,646,936,1321,1821,2458,3256,4241,5441,6886,8608,10641,13021,15786,18976,22633,26801 ★ Number of n X 2 arrays of the minimum value of corresponding elements and their horizontal, vertical or diagonal neighbors in a random, but sorted with lexicographically nondecreasing rows and nonincreasing columns, 0..2 n X 2 array. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>6. ●

► [A364319] 0,1,3,6,16,33,91,190,528,1105,3075,6438,17920,37521,104443,218686,608736,1274593,3547971,7428870,20679088,43298625,120526555,252362878,702480240 ★ a(n) = (A077446(n) + 1) / 2 for n >= 0. ● a(n) = 6 * a(n - 2) - a(n - 4) - 2, for n >= 0, with a(- 4) = - 32, a(- 3) = - 15, a(- 2) = - 5, a(- 1) = - 2. ●

► [A049311] 1,3,6,16,34,90,211,558,1430,3908,10725,30825,90156,273234,848355,2714399,8909057,30042866,103859678,368075596,1335537312,4958599228,18820993913,72980867400,288885080660 ★ Number of (0,1) matrices with n ones and no zero rows or columns, up to row and column permutations. ● a(n) is the coefficient of x ^ n in the cycle index Z(S _ n X S _ n; 1 + x, 1 + x ^ 2, ...), where S _ n X S _ n is Cartesian product of symmetric groups S _ n of degree n. ●

► [A130095] 1,3,6,16,35,97,234,626,1603,4218,10947,28767,75026,196654,514269,1346895,3524579,9229159,24157818,63250217,165580380,433505386,1134903171,2971244450,7778742084 ★ Inverse Möbius transform of odd - indexed Fibonacci numbers. ● a(n) = sum { d | n } Fibonacci(2 * d - 1). ●

► [A114410] 1,3,6,16,37,147,420,2290,7477,50487,200910,1534220,7099871,61765581,301088574,2870376944,15554495573,167142509403,940873745772,11097270672382,66032188454581,807449164097111,5147307668890832 ★ Cumulative sum of double primorials (A079078). ● a(n) = 0 ## + 1 ## + ... + n ## , where n ## = p(n) * (n - 2) ## , where p(n) is the n - th prime. ●

► [A279685] 1,1,3,6,16,39,91,216,499,1144,2651,6152,14227,32904,76187,176376,408179,944728,2186779,5061544,11715219,27116008,62762971,145270808,336242675 ★ The maximum number of coins that can be processed in n weighings of an adaptive strategy that all are real (and identical) except for one LHR - coin starting in an unknown state. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + 5 * a(n - 3) - 4 * a(n - 4) for n>9. ●

► [A046211] 1,1,3,6,16,39,104,270,729,1960,5368,14742,40880,113828,318864,896670,2532160,7174089,20390552,58112088,166037352,475467916,1364393896,3922625070,11297181456 ★ Number of ternary Lyndon words whose digits sum to 1 (or 2) mod 3; number of trace 1 (or 2) monic irreducible polynomials over GF(3). ● a(n) = 1 / (3 * n) * Sum _{ d divides n, gcd(d, 3)=1 } mu(d) * 3 ^{ n / d } . ●

► [A166536] 1,3,6,16,40,105,273,715,1870,4896,12816,33553,87841,229971,602070,1576240,4126648,10803705,28284465,74049691,193864606,507544128,1328767776,3478759201,9107509825 ★ A product of consecutive doubled Fibonacci numbers. ● a(n) = F(n + 1) * F(n + 2) + (1 - (- 1) ^ n) / 2, where F = A000045. ● a(n) = (F(n + 2) * (1 + (- 1) ^ n) / 2 + F(n) * (1 - (- 1) ^ n) / 2) * (F(n + 3) * (1 - (- 1) ^ n) / 2 + F(n + 1) * (1 + (- 1) ^ n) / 2). ● a(n) * a(n + 2) - a(n + 1) ^ 2 = (- 1) ^ n * (F(2 * n + 4) - 1). ● a(n) = 3 * a(n - 1) - 3 * a(n - 3) + a(n - 4). - _ G. C. Greubel _ , May 16 2016 ● a(n) = Sum _{ i=0..n + 1 } F(i + 1) * F(i - 1), where F(- 1) = 1. - _ Bruno Berselli _ , Feb 16 2017 ●

► [A128720] 1,1,3,6,16,40,109,297,836,2377,6869,20042,59071,175453,524881,1579752,4780656,14536878,44394980,136107872,418757483,1292505121,4001039563,12418772656,38641790001 ★ Number of paths in the first quadrant from (0,0) to (n,0) using steps U=(1,1), D=(1, - 1), h=(1,0) and H=(2,0). ● a(n) = a(n - 1) + a(n - 2) + Sum _{ j=0..n - 2 } a(j) * a(n - 2 - j), a(0) = a(1) = 1. ● a(n) = Sum _{ k=0..floor(n / 2) } (binomial(2 * k,k) / (k + 1)) * Sum _{ j=0..floor(n / 2) } binomial(n - j, 2 * k) * binomial(n - j - 2 * k, j). - _ Emanuele Munarini _ , May 05 2011 ●

► [A019497] 1,1,1,3,6,16,42,114,322,918,2673,7875,23457,70551,213846,652794,2004864,6190612,19207416,59850384,187217679,587689947,1850692506,5845013538,18509607753 ★ Number of ternary search trees on n keys. ● a(0)=a(1)=1 and for n>=2 a(n)= sum(i + j + k=n - 2, a(i) * a(j) * a(k)) (i, j, k>=0). - _ Benoit Cloitre _ , Jun 14 2004 ● a(n) = Sum _{ k=0..n - 1 } C(n - k,k) / (n - k) * C(3 * k,n - k - 1) for n>0 with a(0)=1. - _ Paul D. Hanna _ , Jun 16 2009 ●

► [A106361] 1,1,1,3,6,16,45,128,371,1106,3343,10230,31635,98714,310366,982437,3128051,10011848,32193840,103955571,336946034,1095873115,3575319049,11697938232,38374479841 ★ Number of rooted ordered trees where no branch is identical to its adjacent neighbor. ● a(n) = Sum _{ 1 <= s <= n - 1 } a(n - s) * b(s) for n>=2, where b(n) = Sum _{ m|n } (- 1) ^{ 1 + (n / m) } a(m), with a(1) = 1. ●

► [A367639] 1,3,6,16,52,184,688,2672,10672,43552,180800,761088,3241088,13937408,60435968,263962880,1160188672,5127762432,22775636992,101608357888,455105255424,2045751037952,9225923895296,41731062358016,189275050729472 ★ G.f. A(x) satisfies A(x) = (1 + x) ^ 2 + x * A(x) ^ 2 / (1 + x). ● a(n) = Sum _{ k=0..n } binomial(k + 2,n - k) * binomial(2 * k,k) / (k + 1). ●

► [A024315] 3,6,17,27,59,96,185,299,540,874,1518,2456,4163,6736,11239,18185,30029,48588,79685,128933,210490,340580,554332,896928,1456915 ★ a(n) = s(1)t(n) + s(2)t(n - 1) + ... + s(k)t(n - k + 1), where k = floor(n / 2), s = (natural numbers >= 3), t = (Fibonacci numbers). ● a(2 * n) = L(2 * n + 4) + F(2 * n + 3) - F(n + 5) - (n + 2) * F(n + 3), n >= 1. ●

► [A235088] 3,6,17,28,47,66,93,120,155,190,233,276,327,378,437,496,563,630,705,780,863,946,1037,1128,1227 ★ a(n) * Pi is the total length of irregular spiral (center points: 1, 2, 3, 4) after n rotations. ● a(n) = 2 * floor((n - 1) ^ 2 / 4) + 3 * ceiling(n ^ 2 / 2) (conjectured). - _ Ralf Stephan _ , Jan 13 2014 ●

► [A049943] 1,1,3,6,17,29,63,149,418,688,1381,2785,5690,11919,25935,61004,171093,281183,562371,1124765,2249650,4499839,9001775,18012684,36074453 ★ a(n) = a(1) + a(2) + ... + a(n - 1) + a(m) for n >= 3, where m = 2 * n - 2 - 2 ^ (p + 1) and p is the unique integer such that 2 ^ p < n - 1 <= 2 ^ (p + 1), starting with a(1) = a(2) = 1. ● a(n) = a(2 * n - 2 - 2 ^ ceiling(log _ 2(n - 1))) + Sum _{ i = 1..n - 1 } a(i) for n >= 3. ●

► [A291227] 1,3,6,17,37,96,221,551,1302,3189,7625,18528,44537,107835,259830,628105,1515053,3659808,8832085,21328159,51481638,124302381,300068689,724468416,1748959153 ★ p - INVERT of (0,1,0,1,0,1,...), where p(S) = 1 - S - 2 * S ^ 2. ● a(n) = a(n - 1) + 4 * a(n - 2) - a(n - 3) - a(n - 4) for n >= 5. ●

► [A129905] 1,3,6,17,43,114,297,779,2038,5337,13971,36578,95761,250707,656358,1718369,4498747,11777874,30834873,80726747,211345366,553309353,1448582691,3792438722,9928733473 ★ Expansion of g.f.: (1 - x) * (1 + 2 * x) / ((1 + x) * (1 - 3 * x + x ^ 2)). ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - a(n - 3). ● a(n) = ((4 - sqrt(5)) * ((1 + sqrt(5)) / 2) ^ (2 * n) + (4 + sqrt(5)) * ((1 - sqrt(5)) / 2) ^ (2 * n) + 2 * (- 1) ^ n) / 5. ● a(n) = (Fibonacci(n - 2) ^ 2 + Fibonacci(n + 2) ^ 2 + Fibonacci(2 * n)) / 2. - _ Gary Detlefs _ Dec 20 2010 ●

► [A237670] 1,3,6,17,43,140,430,1447,4868,16841,58787,208166,742901,2674872,9694893,35359117,129644791,477643702,1767263191,6564137275,24466267455,91482622429,343059613651,1289904356920,4861946401495 ★ Inverse Moebius transform of Catalan numbers. ● a(n) = Sum _{ d|n } binomial(2 * d,d) / (d + 1). ●

► [A354878] 0,1,3,6,17,51,98,193,387,719,1269,2394,4380,7895,14227,25381,44840,79416,140313,245792,428589,746256 ★ a(n) is the index of the Stieltjes constant at the beginning of the first set of exactly n successive constants of the same sign. ● a(n) = first occurrence n in A114524 after recounting index of A114524 on index of the first Stieltjes gamma in set. ●

► [A143093] 1,3,6,17,51,155,492 ★ Arises in counting relative Milnor rings in K - theory. ● a(n) = the number of nonisomorphic elementary types K _* (F) / S with |F ^ X / S| = 2 ^ n, if we view the K - structures as graded rings with distinguished element. ●

► [A117863] 3,6,18,30,78,126,318,510,1278,2046,5118,8190,20478,32766,81918,131070,327678,524286,1310718,2097150,5242878,8388606,20971518,33554430,83886078 ★ Number of palindromes (in base 4) below 4 ^ n. ● a(n) = 5 * 4 ^ ((n - 1) / 2) - 2 (n odd), 2 * 4 ^ (n / 2) - 2 (n even). ● a(1)=3, a(2)=6, a(3)=18, a(n)=a(n - 1) + 4 * a(n - 2) - 4 * a(n - 3). - _ Harvey P. Dale _ , May 09 2013 ●

► [A026532] 1,3,6,18,36,108,216,648,1296,3888,7776,23328,46656,139968,279936,839808,1679616,5038848,10077696,30233088,60466176,181398528,362797056,1088391168,2176782336 ★ Ratios of successive terms are 3, 2, 3, 2, 3, 2, 3, 2, ... ● a(n) = T(n, 0) + T(n, 1) + ... + T(n, 2n - 2), T given by A026519. ● a(n) = (1 / 2) * (5 + (- 1) ^ n) * a(n - 1) for n>1, a(1) = 1. ● a(n) = (1 / 4) * (3 - (- 1) ^ n) * 6 ^ floor(n / 2). (End) ● a(n + 2) = 6 * a(n). (End) ● a(n + 3) = a(n + 2) * a(n + 1) / a(n). - _ Reinhard Zumkeller _ , Mar 04 2011 ● a(n) = (1 / 2) * 6 ^ ((n - 2) / 2) * (3 * (1 + (- 1) ^ n) + sqrt(6) * (1 - (- 1) ^ n)). - _ G. C. Greubel _ , Dec 21 2021 ●

► [A120718] 0,3,6,18,45,120,312,819,2142,5610,14685,38448,100656,263523,689910,1806210,4728717,12379944,32411112,84853395,222149070,581593818,1522632381,3986303328,10436277600 ★ Expansion of 3 * x / (1 - 2 * x ^ 2 - 2 * x + x ^ 3). ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - a(n - 3) for n>2. ● a(n) = (3 / 2 ^ (n + 1)) * ((1 - sqrt(5)) * (3 - sqrt(5)) ^ n + (1 + sqrt(5)) * (3 + sqrt(5)) ^ n + (- 2) ^ (n + 1)) / 5. (End) ● a(n) = (3 / 5) * (Lucas(2 * n + 1) - (- 1) ^ n). - _ G. C. Greubel _ , Jul 21 2023 ●

► [A032120] 1,3,6,18,45,135,378,1134,3321,9963,29646,88938,266085,798255,2392578,7177734,21526641,64579923,193720086,581160258,1743421725,5230265175,15690618378,47071855134,141215033961 ⋆ Number of reversible strings with n beads of 3 colors. ● a(n) = (1 / 2) * ((2 - (- 1) ^ n) * 3 ^ floor(n / 2) + 3 ^ n). - _ Ralf Stephan _ , May 11 2004 ● a(n) = 3 * a(n - 1) + 3 * a(n - 2) - 9 * a(n - 3). ● a(n) = (1 / 2) * (3 ^ (ceiling(n / 2)) + 3 ^ n). - _ Andrew Howroyd _ , Oct 10 2017 ●

► [A083337] 0,3,6,18,48,132,360,984,2688,7344,20064,54816,149760,409152,1117824,3053952,8343552,22795008,62277120,170144256,464842752,1269974016,3469633536,9479215104,25897697280 ⋆ a(n) = 2 * a(n - 1) + 2 * a(n - 2); a(0)=0, a(1)=3. ● a(n) = lower left term of [1,1; 3,1] ^ n. - _ Gary W. Adamson _ , Mar 12 2008 ● a(n) = (1 / 2) * (1 + sqrt(3)) ^ n * sqrt(3) - (1 / 2) * sqrt(3) * (1 - sqrt(3)) ^ n, with n >= 0. - _ Paolo P. Lava _ , Jun 10 2008 ●

► [A019308] 1,3,6,18,48,144,414,1242,3678,11034,32958,98874,296208,888624,2664630,7993890,23977992,71933976,215790894,647372682,1942085088,5826255264,17478666918,52436000754,157307706054 ⋆ Number of "bifix - free" words of length n over a three - letter alphabet. ● a(2n + 1) = 3a(2n); a(2n) = 3a(2n - 1) - a(n). ●

► [A000932] 1,1,3,6,18,48,156,492,1740,6168,23568,91416,374232,1562640,6801888,30241488,139071696,653176992,3156467520,15566830368,78696180768,405599618496,2136915595392,11465706820800,62751681110208 ⋆ a(n) = a(n - 1) + n * a(n - 2); a(0) = a(1) = 1. ● a(n) / a(n - 1) = sqrt(n) + 1 / 2 + o(1) - _ Benoit Cloitre _ , Jul 02 2004 ● a(n) = - sqrt(Pi) / 2 * Sum[(- 1) ^ k * 2 ^ (k / 2) * Binomial[n,k] * (HypergeometricPFQRegularized[{ 1,k - n } , { 1 + (k - n) / 2,(1 / 2) * (1 + k - n) } , - (1 / 2)] + (- k + n) * HypergeometricPFQRegularized[{ 1,1 + k - n } , { 1 + (k - n) / 2,(1 / 2) * (3 + k - n) } , - (1 / 2)]) * HypergeometricU[1 - k / 2,3 / 2,1 / 2], { k,1,n }]. - _ Eric W. Weisstein _ , May 08 2013 ●

► [A152733] 0,0,3,6,18,57,168,504,1515,4542,13626,40881,122640,367920,1103763,3311286,9933858,29801577,89404728,268214184,804642555,2413927662,7241782986,21725348961,65176046880 ⋆ a(n) + a(n + 1) + a(n + 2) = 3 ^ n. ● a(n) = (1 / 13) * (3 ^ n + 12 * cos((2 * n * Pi) / 3) + 2 * sqrt(3) * sin((2 * n * Pi) / 3)), n=1,2,... - _ Zak Seidov _ , Dec 12 2008 ●

► [A215455] 3,6,18,57,186,621,2109,7251,25146,87726,307293,1079370,3798309,13382817,47191491,166501902,587670810,2074699233,7325660010,25869337773,91359785781,322660334739,1139593274178,4024976418198,14216179376325 ⋆ a(n) = 6 * a(n - 1) - 9 * a(n - 2) + a(n - 3), with a(0)=3, a(1)=6 and a(2)=18. ● a(n) = c(1) ^ (2 * n) + c(2) ^ (2 * n) + c(4) ^ (2 * n), where c(j) = 2 * cos(Pi * j / 9). ●

► [A178789] 3,6,18,66,258,1026,4098,16386,65538,262146,1048578,4194306,16777218,67108866,268435458,1073741826,4294967298,17179869186,68719476738,274877906946,1099511627778,4398046511106,17592186044418,70368744177666 ⋆ 4 ^ (n - 1) + 2: Number of acute angles after n iterations of the Koch snowflake construction. ● a(n) = 2 ^ (2 * (n - 1)) + 2. - _ Vincenzo Librandi _ , Feb 02 2013 ●

► [A076510] 3,6,18,72,144,432,1728,3456,10368,41472,82944,248832,995328,1990656,5971968,23887872,47775744,143327232,573308928,1146617856,3439853568,13759414272,27518828544,82556485632,330225942528 ⋆ Expansion of 3 * (1 + 2 * x + 6 x ^ 2) / (1 - 24 * x ^ 3). ● a(0)=3, a(1)=6, a(2)=18, a(n)=24 * a(n - 3). ●

► [A219286] 3,6,19,42,79,136,220,339,502,719,1001,1360,1809,2362,3034,3841,4800,5929,7247,8774,10531,12540,14824,17407,20314 ⋆ Number of n X 3 arrays of the minimum value of corresponding elements and their horizontal or vertical neighbors in a random, but sorted with lexicographically nondecreasing rows and columns, 0..1 n X 3 array. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>7. ●

► [A345244] 1,1,3,6,19,57,177,586,1950,6642,22990,80400,284346,1014237,3644841,13185810,47976382,175458798,644630064,2378084209,8805524949,32714828733,121917589291,455625246297,1707142362234 ⋆ G.f. A(x) satisfies: A(x) = x + x ^ 2 * exp(3 * Sum _{ k>=1 } (- 1) ^ (k + 1) * A(x ^ k) / k). ● a(n + 2) = (3 / n) * Sum _{ k=1..n } (Sum _{ d|k } (- 1) ^ (k / d + 1) * d * a(d)) * a(n - k + 2). ●

► [A052393] 1,1,3,6,19,57,258,1110,5475,27429,143379,764970,4173906,23140816,130205922,741650802,4270593219,24825326199,145535320383,859627488966,5112006997539,30586307211945,184023410798910,1112800162657902,6760426635625170 ⋆ Number of unlabeled ternary cacti having n triangles. ● a(n) = (1 / n) * (Sum _{ d|n } phi(n / d) * binomial(3 * d, d)) - 2 * binomial(3 * n, n) / (2 * n + 1) for n > 0. - _ Andrew Howroyd _ , May 02 2018 ●

► [A215817] 3,6,19,66,237,866,3202,11948,44917,169914,646134,2467988,9462498,36398004,140399901,542894726,2103745125,8167514346,31762430143,123704647562,482435457922,1883712663668,7363103647479,28809291337986,112820819490970 ⋆ a(n) is the rational part of A(n) = (6 - sqrt(7)) * A(n - 1) - (12 - 4 * sqrt(7)) * A(n - 2) + (8 - 3 * sqrt(7)) * A(n - 3) with A(0)=3, A(1)=6 - sqrt(7), A(2)=19 - 4 * sqrt(7). ● a(n) = rational part of c(1) ^ (2n) + c(2) ^ (2n) + c(4) ^ (2n) = (1 - s(1)) ^ n + (1 - s(2)) ^ n + (1 - s(4)) ^ n, where c(j) := 2 * cos((7 + 8 * j) / 28) and s(j) := sin(2 * Pi * j / 7). ●

► [A081181] 1,3,6,20,35,126,210,792,1287,5005,8008,31824,50388,203490,319770,1307504,2042975,8436285,13123110,54627300,84672315,354817320,548354040,2310789600,3562467300 ⋆ Staircase on Pascal's triangle. ● a(n) = binomial(floor((n + 1) / 2) + (n + 1), n). ●

► [A005558] 1,1,3,6,20,50,175,490,1764,5292,19404,60984,226512,736164,2760615,9202050,34763300,118195220,449141836,1551580888,5924217936,20734762776,79483257308,281248448936,1081724803600 ⋆ a(n) is the number of n - step walks on square lattice such that 0 <= y <= x at each step. ● a(n) = C(n + 1, ceiling(n / 2)) * C(n, floor(n / 2)) - C(n + 1, ceiling((n - 1) / 2)) * C(n, floor((n - 1) / 2)). - _ Paul D. Hanna _ , Apr 16 2004 ● a(n) = Sum _{ k=0..floor(n / 2) } n! / (k! * k! * (floor(n / 2) - k)! * (floor((n + 1) / 2) - k)! * (k + 1)) (conjectured). - _ Roger Ford _ , Aug 04 2017 ●

► [A185172] 3,6,20,60,204,670,2340,8160,29120,104754,381300,1397740,5162220,19172790,71582716,268431360,1010580540,3817733920,14467258260,54975528948,209430785460,799644629550,3059510616420,11728123327840,45035996273664 ⋆ Dimensions of primitive Lie algebras connected with the Mantaci - Reutenauer algebra MR ^ (3). ● a(1) = 3 and a(n) = (1 / n) * Sum _{ d|n } mu(d) * 4 ^ (n / d) for n > 1 (from Eq. (95) in Novelli and Thibon (2008) or Eq. (100) in Novelli and Thibon (2010)). ●

► [A162171] 1,3,6,20,75,336,1708,9792,62325,436480,3334386,27595776,245951615,2348666880,23923317720,258910994432,2966901358185,35886973648896,456927138333790,6108665873694720,85555744482868275,1252729007440396288,19140289332506060676 ⋆ Third column of A162170. ● a(n) = Sum _{ k=1..floor(n / 2) } (- 1) ^ (floor(n / 2) + k) * binomial(n + 1, 2 * k) * a(2 * k - 1) for n > 1. - _ Mike Tryczak _ , Jun 18 2015 ● a(n) is the number of ranked unlabeled binary tree shapes compatible with the binary perfect phylogeny (n,3). - _ Noah A Rosenberg _ , Jun 03 2022 ●

► [A368165] 0,0,0,3,6,20,180,1134,7980,78840,798840,8620920,107668440,1449377280,20755871136,323448048000,5398086002400,95487623038080,1796842848654720,35808112038746880,751616958775939200,16600116241063514880,384905905873078867200 ⋆ Expansion of e.g.f. - log(1 + x ^ 2 / 2 * log(1 - x)). ● a(n) = n! * Sum _{ k=1..floor(n / 3) } (k - 1)! * |Stirling1(n - 2 * k,k)| / (2 ^ k * (n - 2 * k)!). ●

► [A355994] 0,0,0,3,6,20,270,1764,12600,169560,1937880,22300740,349806600,5556245760,89073856872,1678920566400,33550354656000,687175528253760,15462823882213440,370285712520237360,9180722384533375200,242398467521711497600 ⋆ Expansion of e.g.f. - LambertW(x ^ 2 / 2 * log(1 - x)). ● a(n) = n! * Sum _{ k=1..floor(n / 3) } k ^ (k - 1) * |Stirling1(n - 2 * k,k)| / (2 ^ k * (n - 2 * k)!). ●

► [A355874] 0,0,0,3,6,20,450,3024,21840,449280,5690160,68579280,1491462720,27798076800,485405784864,11821894207200,285057334598400,6578025489584640,183420564173141760,5342163886869062400,152988752430721267200,4897735504358795965440 ⋆ Expansion of e.g.f. - LambertW(x ^ 2 * log(1 - x)) / 2. ● a(n) = (n! / 2) * Sum _{ k=1..floor(n / 3) } k ^ (k - 1) * |Stirling1(n - 2 * k,k)| / (n - 2 * k)!. ●

► [A056489] 0,0,0,3,6,21,36,93,150,345,540,1173,1806,3801,5796,11973,18150,37065,55980,113493,171006,345081,519156,1044453,1569750 ⋆ Number of periodic palindromes using exactly three different symbols. ● a(n) = (k! / 2) * (S2(floor((n + 1) / 2),k) + S2(ceiling((n + 1) / 2),k)), with k=3 different colors used and where S2(n,k) is the Stirling subset number A008277. - _ Robert A. Russell _ , Jun 05 2018 ●

► [A297189] 0,1,3,6,21,39,141,258,939,1713,6243,11382,41493,75639,275757,502674,1832619,3340641,12179139,22201062,80939541,147542727,537904077,980532258,3574776747 ⋆ Expansion of (x + 3 * x ^ 2 - 2 * x ^ 3 - 3 * x ^ 4) / (1 - 8 * x ^ 2 + 9 * x ^ 4). ● a(n) = 8 * a(n - 2) - 9 * a(n - 4). - _ Colin Barker _ , Jan 05 2018 ● a(2 * n) / a(2 * n - 1) ~ 2 * a(2 * n + 1) / a(2 * n) ~ 1 + sqrt(7). - _ Kyle MacLean Smith _ , Oct 11 2019 ●

► [A063683] 1,3,6,21,50,108,364,987,1938,6150,17622,34776,121160,306852,549000,2178309,5701290,11197764,39083988,93031050,191708244,697884066,1836283246,3605645232,11442062750 ⋆ Integers formed from the reduced residue sets of even numbers and Fibonacci numbers. ● a(n) = Sum _{ i | gcd(i, 2n)=1 } Fib(i) (where Fib(i) = A000045[i]) ●

► [A098511] 1,1,3,6,21,54,186,479,1938,5795,22888,70781,286443,861463,3592105,11492256,39274353,148852401,613876868,1917516257,8511689170,25445125513,100975365920,390096404027,1666653892303 ⋆ Diagonal sums of a matrix associated to the inverse of a Catalan scaled binomial matrix. ● a(n)=sum { k=0..floor(n / 2), denominator((n - k + 1)Binomial(n - k, k) / Binomial(2(n - k), n - k)) } ●

► [A112520] 1,1,1,3,6,21,54,195,573,2086,6646,24289,81540,299136,1040262,3832923,13660698,50572983,183450064,682447378,2507959846,9374078232,34791088014,130624080993,488542321116 ⋆ Expansion of 2 / (3 - sqrt(3 - 2 * sqrt(1 - 4x))) . ● a(n)=sum { k=0..n, sum { j=0..n, (k / n)(- 1) ^ (j - k)C(2n - j - 1, n - j)C(2j - k - 1, j - k) }} . ●

► [A151961] 3,6,21,78,291,1086,4053,15126,56451,210678,786261,2934366,10951203,40870446,152530581,569251878,2124476931,7928655846,29590146453,110431929966,412137573411,1538118363678,5740335881301,21423225161526,79952564764803 ⋆ Semiperimeter of the n - th Heronian triangle. ● a(n) = 4 * a(n - 1) - a(n - 2). ● a(n) = 3 * ((2 + sqrt(3)) * (2 - sqrt(3)) ^ n + (2 - sqrt(3)) * (2 + sqrt(3)) ^ n) / 2. - _ Colin Barker _ , Oct 12 2015 ●

► [A025229] 1,3,6,21,78,318,1356,5997,27222,126138,594132,2836290,13692300,66729180,327855768,1622216829,8076311142,40427919714,203353800324,1027318915254,5210182030308,26517609163812,135397544040744,693364054299474 ⋆ a(n) = a(1) * a(n - 1) + a(2) * a(n - 2) + ... + a(n - 1) * a(1) for n >= 3. ● a(n) = Sum _{ k=0..n } 2 ^ (n - k) * C(k) * C(k + 1, n - k) [offset 0]. - _ Paul Barry _ , Feb 22 2005 ●

► [A073951] 0,1,3,6,21,81,252,729,2187,6642,19845,59049,176904,531441,1594323,4780782,14344533,43046721,129146724,387420489,1162261467,3486843450,10460471301,31381059609,94143001680 ⋆ Number of strings over Z _ 3 of length n with trace 1 and subtrace 1. ● a(n; t, s) = a(n - 1; t, s) + a(n - 1; t + 2, s + 2t + 1) + a(n - 1; t + 1, s + t + 1) where t is the trace and s is the subtrace. ●

► [A049415] 3,6,22,68,217,683,2163,6837,21623,68377,216228,683772,2162278,6837722,21622777,68377223,216227767,683772233,2162277661,6837722339,21622776602,68377223398,216227766017,683772233983,2162277660169 ⋆ Number of squares (of positive integers) with n digits. ● a(n) = ceiling(sqrt(10 ^ n)) - ceiling(sqrt(10 ^ (n - 1))). ● a(2n) = floor(10 ^ n * (1 - 1 / sqrt(10))), so each even - indexed term a(2n) is given by the first n digits (after the decimal point) of 1 - 1 / sqrt(10) = 0.68377223398316...; ● a(2n - 1) = ceiling(10 ^ n * (1 / sqrt(10) - 1 / 10)), so each odd - indexed term a(2n - 1) is given by the first n digits (after the decimal point) of 1 / sqrt(10) - 1 / 10 = 0.21622776601683..., plus 1. (End) ●

► [A220167] 3,6,22,76,247,848,2892,9969,34455,119894,420582,1482874,5254954,18714432,66969859,240739417 ⋆ Number of simple squared rectangles of order n up to symmetry. ● a(n) = ((n ^ (- 5 / 2)) * (4 ^ n)) / (2 ^ 5 * sqrt(pi)), from 'A Census of Planar Maps', William Tutte gave an asymptotic formula for the number of perfect squared rectangles where n is the number of elements in the dissection (the order). ●

► [A341549] 3,6,23,50,131,294,687,1530,3419,7502,16391,35490,76467,163830,349535,742730,1572875,3320478,6990519,14680050,30758243,64312646,134217743,279620250,581610171 ⋆ a(n) = Sum _{ k=1..n } (- 1) ^ (n + k) * A087322(n,k). ● a(n) = ((n + 1) * 2 ^ (n + 2) - 3 + (4 * n + 1) * (- 1) ^ (n + 1)) / 6. ●

► [A106213] 0,3,6,24,33,42,45,54,60,66,69,78,87,93,102,108,111,120,129,144,153,162,165,174,183 ⋆ Positions n where A083349(n) = 1 (mod 3). ● a(n) = 0 (mod 3) for n>=0. ●

► [A330300] 0,0,0,0,0,0,3,6,24,40,100,150,300,420,735,980,1568,2016,3024,3780,5400,6600,9075,10890,14520 ⋆ a(n) is the number of subsets of { 1..n } that contain exactly 2 odd and 3 even numbers. ● a(n) = binomial(ceiling(n / 2), 2) * binomial(floor(n / 2), 3). ● a(n) = a(n - 1) + 5 * a(n - 2) - 5 * a(n - 3) - 10 * a(n - 4) + 10 * a(n - 5) + 10 * a(n - 6) - 10 * a(n - 7) - 5 * a(n - 8) + 5 * a(n - 9) + a(n - 10) - a(n - 11) for n>10. ●

► [A047167] 0,0,0,0,0,3,6,24,40,100,150,315,455,980,1470,3528,5544,13692,21630,51600,80520,186945,290400,675675,1056627 ⋆ Number of nonempty subsets of { 1,2,...,n } in which exactly 3 / 5 of the elements are <= n / 2. ● a(n) = Sum _{ k>=1 } binomial(floor(n / 2), 3 * k) * binomial(ceiling(n / 2), 2 * k). - _ Andrew Howroyd _ , Apr 11 2021 ●

► [A054718] 1,3,6,24,72,240,696,2184,6480,19656,58800,177144,530640,1594320,4780776,14348640,43040160,129140160,387400104,1162261464,3486725280,10460350992,31380882456,94143178824,282428998560 ⋆ Number of ternary sequences with primitive period n. ● a(n) = Sum _{ d|n } mu(d) * 3 ^ (n / d). ●

► [A132390] 3,6,24,76,288,1072,4224,16576,66048,262912,1050624,4197376,16785408,67121152,268468224,1073790976,4295098368,17180065792,68720001024,274878693376,1099513724928,4398049656832,17592194433024,70368756760576 ⋆ Number of binary pattern classes in the (2,n) - rectangular grid; two patterns are in same class if one of them can be obtained by reflection or rotation of the other one. ● a(n) = 2 ^ (- 3 + n) * (7 - (- 1) ^ n + 2 ^ (1 + n)) for n > 2. ● a(n) = 4 * a(n - 1) + 4 * a(n - 2) - 16 * a(n - 3), n >= 6. ●

► [A327643] 1,1,1,3,6,24,84,498,2220,15108,92328,773580,5636460,53563476,471562512,5270698716,52117937052,637276396764,7317811499736,100453675122444,1276319138168796,19048874583061716,270233458572751440,4442429353548965628,68384217440167826412 ⋆ Number of refinement sequences n - > ... - > { 1 }^ n, where in each step one part is replaced by a partition of itself into two smaller parts (in weakly decreasing order). ● a(n) = Sum _{ j=1..floor(n / 2) } C(n - 2,j - 1) a(j) * a(n - j) for n > 1, a(1) = 1. ●

► [A262349] 1,1,3,6,24,98,240,878,13104,34560,143840,1628640,4421376,27644438,291751956,1666163520,10523628456,216625138884,779556556800,5873176163328,107021765366544,633207380826720,6399554302310400,66975753492138600,594616643557427040 ⋆ Sum of the divisors of the n - th Bell number. ● a(n) = sigma _ 1(1 / e * Sum _{ k >=0 } k ^ n / (k!)). ●

► [A081072] 3,6,24,147,990,6768,46371,317814,2178312,14930355,102334158,701408736,4807526979,32951280102,225851433720,1548008755923,10610209857726,72723460248144,498454011879267,3416454622906710,23416728348467688 ⋆ Fibonacci(4n) + 3, or Fibonacci(2n + 2) * Lucas(2n - 2). ● a(n) = 8a(n - 1) - 8a(n - 2) + a(n - 3). ● a(n) = 3 + (1 / 5) * sqrt(5) *{ [(7 / 2) + (3 / 2) * sqrt(5)] ^ n - [(7 / 2) - (3 / 2) * sqrt(5)] ^ n } , with n>=0. - _ Paolo P. Lava _ , Dec 01 2008 ●

► [A083695] 0,3,6,27,84,303,1026,3567,12264,42363,146046,503907,1738044,5995623,20681466,71341047,246089424,848884083,2928215286,10100850987,34842778404,120189811743,414593515506,1430136089727,4933239756984 ⋆ a(n) = 2 * a(n - 1) + 5 * a(n - 2). ● a(n) = 3[(1 + sqrt(6)) ^ n - (1 - sqrt(6)) ^ n] / (2 * sqrt(6)). ●

► [A270889] 3,6,27,150,867,5046,29403,171366,998787,5821350,33929307,197754486,1152597603,6717831126,39154389147,228208503750,1330096633347,7752371296326,45184131144603,263352415571286,1534930362283107,8946229758127350,52142448186480987,303908459360758566,1771308307978070403 ⋆ Integers n such that the circular graph C _ n has a square size deficiency. ● a(n + 2) = 6 * a(n + 1) - a(n) - 6; a(0) = 3 , a(1) = 6. ● a(n) = 7 * a(n - 1) - 7 * a(n - 2) + a(n - 3) for n>2. - _ Colin Barker _ , Apr 03 2016 ● a(n) = 3 * (2 + (3 - 2 * sqrt(2)) ^ n + (3 + 2 * sqrt(2)) ^ n) / 4. - _ Colin Barker _ , Apr 03 2016 ●

► [A102428] 1,3,6,28,55,286,560,3060,5985,33649,65780,376740,736281,4272048,8347680,48903492,95548245,563921995,1101716330,6540715896,12777711870,76223753060,148902215280,891794789340,1742058970275 ⋆ Central column of triangle A102427. ● a(n) = binomial(floor((5 * n + 2) / 2), floor((n + 1) / 2)). - _ David Wasserman _ , Apr 04 2008 ●

► [A370668] 1,3,6,28,120,740,5040,40416,362898,3629400,39916800,479006070,6227020800,87178326480,1307674369200,20922790210656,355687428096000,6402373709004720,121645100408832000,2432902008212929224,51090942171709545840,1124000727778046764800 ⋆ Expansion of Sum _{ k>0 } k! * (x * (1 + x ^ k)) ^ k. ● a(n) = Sum _{ d|n } d! * binomial(d,n / d - 1). ●

► [A007228] 3,6,28,165,1092,7752,57684,444015,3506100,28242984,231180144,1917334783,16077354108,136074334200,1160946392760,9973891723635,86210635955220,749191930237608,6541908910355280,57369142749576660,505045163173167760,4461713825057817120 ⋆ a(n) = 3 * binomial(4 * n,n) / (n + 1). ● a(n) = C(4 * n,n) / (3 * n + 1) + 2 * C(4 * n + 1,n) / (3 * n + 2) + 3 * C(4 * n + 2,n) / (3 * n + 3). - _ Paul Barry _ , Nov 05 2006 ● a(n) = (1 / n) * Sum _{ k|gcd(n + 1,n) } phi(k) * binomial(4 * n / k, (n + 1) / k). ● a(n) = (1 / n) * binomial(4 * n, n + 1) for n >= 1. (End) ●

► [A125521] 3,6,30,60,300,600,3000,6000,30000,60000,300000,600000,3000000,6000000,30000000,60000000,300000000,600000000,3000000000,6000000000,30000000000,60000000000,300000000000,600000000000,3000000000000 ⋆ a(n) is the minimal difference between two distinct n - digit numbers with property that when one of them is typed into a calculator and rotated 180 degrees, the other one is seen. ● a(n) = 10 * a(n - 2) for n > 2. ●

► [A211168] 1,1,3,6,30,60,420,420,1260,2520,27720,27720,360360,360360,360360,360360,6126120,12252240,232792560,232792560,232792560,232792560,5354228880,5354228880,26771144400 ⋆ Exponent of alternating group An. ● a(n) = lcm { 1, ..., n - 1 } if n is even. ● a(n) = lcm { a(n - 1), n - 2 } if n is even. ●

► [A215294] 1,3,6,30,70,420,1050,6930,18018,126126,336336,2450448,6651216,49884120,137181330,1051723530,2921454250,22787343150,63804560820,504636071940,1422156202740,11377249621920,32235540595440,260363981732400 ⋆ Number of permutations of 0..floor((n * 3 - 2) / 2) on odd squares of an n X 3 array such that each row and column of odd squares is increasing. ● a(n) = e(n) if n even otherwise o(n), where e(n) = 6 * Gamma((3 * n) / 2)) / ((2 + n) * Gamma(1 + n / 2) ^ 2 * Gamma(n / 2)) and o(n) = ((1 + n) * Gamma(1 / 2 + (3 * n) / 2)) / (2 * Gamma((3 + n) / 2) ^ 3). - _ Peter Luschny _ , Sep 30 2018 ●

► [A090932] 1,1,1,3,6,30,90,630,2520,22680,113400,1247400,7484400,97297200,681080400,10216206000,81729648000,1389404016000,12504636144000,237588086736000,2375880867360000,49893498214560000 ⋆ a(n) = n! / 2 ^ floor(n / 2). ● a(n) = binomial(n - 1, 2) * a(n - 2). ●

► [A318431] 1,3,6,30,126,603,3084,16614,91998,520779,3004206,17594250,104308092,624801960,3775722348,22991162130,140928103134,868886416869,5384796884934,33525472069566,209592226792326,1315211209647435,8281053081282900,52301607644921262 ⋆ Number of n - element subsets of [3n] whose elements sum to a multiple of n. ● a(n) = (- 1) ^ n * (1 / n) * Sum _{ d|n } C(3d,d) * (- 1) ^ d * phi(n / d) for n>0, a(0)=1. ●

► [A157534] 1,3,6,30,135,441,1183,2871,6660,15070,33231,70863,145236,285390,537930,974746,1703043,2878101,4719220,7529340,11718861,17834223,26591841,38918025,55995550 ⋆ Half the number of length n integer sequences with sum zero and sum of squares 8. ● a(n) = n (n - 1)(n ^ 6 - 27 n ^ 5 + 295 n ^ 4 - 1473 n ^ 3 + 3376 n ^ 2 - 3036 n + 1008) / 1152. - _ Robert Israel _ , Apr 07 2014 ●

► [A088436] 0,1,3,6,30,225,1575,12180,109620,1100925,12110175,145259730,1888376490,26438216805,396573252075,6345155817000,107867648889000,1941617990136825,36890741812599675,737814829704702750 ⋆ Number of permutations in the symmetric group S _ n that have exactly one transposition in their cycle decomposition. ● a(n) = (n! / 2) * Sum _{ j=0..floor(n / 2) - 1 } (- 1) ^ j / (j! * 2 ^ j), n >= 1. ● a(n) = n! * Sum _{ j=k..floor(n / 2) } (- 1) ^ j / ((j - k)! * 2 ^ j * k!). ●

► [A282132] 0,1,3,6,30,300,2100,11760,105840,1421280,15634080,147692160,1919998080,33106993920,496604908800,6638004172800,112846070937600,2386916704972800,45351417394483200,785383247480832000,16493048197097472000,413938002507853824000 ⋆ Imaginary part of n! * Sum _{ k=1..n } i ^ (k - 1) / k, where i is sqrt(- 1). ● a(1) = 0, a(n + 1) = a(n) * (n + 1) + n! * sin(Pi * n / 2). ●

► [A297444] 1,3,6,33,60,303,546,2733,4920,24603,44286,221433,398580,1992903,3587226,17936133,32285040,161425203,290565366,1452826833,2615088300,13075441503,23535794706,117678973533,211822152360 ⋆ a(n) = a(n - 1) + 9 * a(n - 2) - 9 * a(n - 3), where a(0) = 1, a(1) = 3, a(2) = 6, a(3) = 33. ● a(n) = a(n - 1) + 9 * a(n - 2) - 9 * a(n - 3), where a(0) = 1, a(1) = 3, a(2) = 6, a(3) = 33. ● a(n) = - 3 / 4 - (- 3) ^ n / 4 + 3 ^ n for n>0. - _ Colin Barker _ , Jan 21 2018 ●

► [A298679] 0,3,6,33,102,423,1494,5745,21102,79431,295086,1103985,4114710,15367143,57329286,213999153,798569022,2980473543,11122931934,41512040625,154923657702,578185735911,2157812994486,8053078824945,30054477139470 ⋆ Start with the hexagonal tile of the Shield tiling and recursively apply the substitution rule. a(n) is the number of square tiles after n iterations. ● a(n) = (1 / 26) * (- 3 * (- 1) ^ n * 2 ^ (2 + n) + (6 - 5 * sqrt(3)) * (2 - sqrt(3)) ^ n + (2 + sqrt(3)) ^ n * (6 + 5 * sqrt(3))). ● a(n) = 2 * a(n - 1) + 7 * a(n - 2) - 2 * a(n - 3) for n>2. ●

► [A203715] 1,3,6,34,120,1096,5040,56848,362880,5451136,39916800,688876288,6227020800,130789805056,1307674368000,29497569445888,355687428096000,9746045395173376,121645100408832000,3451902721622867968,51090942171709440000,1686006043164464644096 ⋆ E.g.f.: Sum _{ n>=1 } log((1 + exp(2 * x ^ n)) / 2). ● a(2 * n - 1) = (2 * n - 1)!. ●

► [A228279] 3,6,35,133,587,2448,10414,44024,186414,789100,3340345,14140347,59858152,253389483,1072638232,4540650778,19221306410,81366888278,344439152622,1458066449898,6172230293325,26128045670722,110604228640954 ⋆ Number of n X 4 binary arrays with top left value 1 and no two ones adjacent horizontally, vertically or nw - se diagonally. ● a(n) = a(n - 1) + 10 * a(n - 2) + 15 * a(n - 3) + 4 * a(n - 4) - 6 * a(n - 5) - a(n - 6) + 3 * a(n - 7) - a(n - 8). ●

► [A205336] 0,3,6,35,138,689,3272,16522,83792,434749,2278888,12093271,64741330,349470487,1899418046,10387322922,57111322368,315523027610,1750681516380,9751416039535,54507046599094,305650440453943,1718956630038438 ⋆ Number of length n + 1 nonnegative integer arrays starting and ending with 0 with adjacent elements unequal but differing by no more than 3. ● a(n) = Sum _{ i=1..n } ((Sum _{ l=0..i } (binomial(i,l) * (Sum _{ j=0=(3 * (i - l)) / 7 } ((- 1) ^ j * binomial(i - l,j) * binomial(- l + 3 * (- l - 2 * j + i) - j + i - 1,3 * (- l - 2 * j + i) - j))) * (- 1) ^ l)) * a(n - i)) / n, a(0)=1. - _ Vladimir Kruchinin _ , Apr 07 2017 ●

► [A003674] 0,3,6,36,120,528,2016,8256,32640,131328,523776,2098176,8386560,33558528,134209536,536887296,2147450880,8590000128,34359607296,137439215616,549755289600,2199024304128,8796090925056 ⋆ a(n) = 2 ^ (n - 1) * (2 ^ n - (- 1) ^ n). ● a(n) = 2 * a(n - 1) + 8 * a(n - 2). ●

► [A048642] 1,1,3,6,6,36,252,1260,5040,60480,786240,11793600,165110400,1651104000,18162144000,163459296000,1307674368000,31384184832000,784604620800000,21184324761600000,550792443801600000,16523773314048000000 ⋆ Partial products of A003188 (Gray code). ● a(0) = 1, a(n) = product(XOR(j, floor(j / 2)), j=1..n). ●

► [A000222] 0,0,1,3,6,38,213,1479,11692,104364,1036809,11344859,135548466,1755739218,24504637741,366596136399,5852040379224,99283915922264,1783921946910417,33840669046326579,675849838112277598,14174636583759324798 ⋆ Coefficients of ménage hit polynomials. ● a(n) + 2 * a(n + p) + a(n + 2 * p) is divisible by p for any prime p. - _ Mark van Hoeij _ , Jun 13 2019 ●

► [A085696] 3,6,42,154,693,2871,12267,51794,219678,930126,3940797,16692319,70711683,299536446,1268861682,5374976354,22768778133,96450071031,408569091147,1730726388874,7331474722278,31056625155606,131557975542717,557288527006079,2360712084085443 ⋆ a(n) = L(n) * L(n + 1) * L(n + 2) / 2, where L(n) = Lucas number (A000032). ● a(n) = (6 * F(n + 1) ^ 3 + 11 * F(n + 1) ^ 2 * F(n) - 3 * F(n + 1) * F(n) ^ 2 - 2 * F(n) ^ 3) / 2 for all n in Z, where F(n) = Fibonacci number (A000045). ● a(n) = (2 * F(n + 1) - F(n)) * (3 * F(n + 1) + F

(n)) * (F(n + 1) + 2 * F(n)) / 2 for all n in Z. ● a(- 2 - n) = - (- 1) ^ n * a(n) for all n in Z. ● a(n) = - 1 + Sum _{ k=0..n } L(k) ^ 2 * L(k + 1). - _ Amiram Eldar _ , Jan 13 2022 ●

▶ [A153742] 3,6,44,201,2436,16768,284388,2610633,56926096,653221506,17409078576,239721136817,7550440414752,121296879540684,4408222329882272,80934331054201905,3333529520918540544,68853515512316939422 ⋆ Number of elements in wreath product C _ 3 wr S _ n that alternate up / not - up with respect to a weak product ordering. ● a(n) / n! ~ c / r ^ (n + 1) where r = 0.599741421027823943179725576 84 is the root of the equation 4 * r * tan(r) = (2 - r ^ 2), c = 4 * sqrt(4 + 12 * r ^ 2 + r ^ 4) / (12 + 16 * r ^ 2 + r ^ 4) = 1.083771926719711595897316758383814152038187267522555895447717 3... if n is even and c = (8 + 24 * r ^ 2 + 2 * r ^ 4) / (12 + 16 * r ^ 2 + r ^ 4) = 1.574796874239172551189266069683707274566749343427786813320559 9... if n is odd. - _ Vaclav Kotesovec _ , Aug 27 2016 ●

▶ [A058161] 1,1,1,3,6,60,120,1260,6720,90720,362880,9979200,39916800,1037836800,10897286400,163459296000,1307674368000,59281238016000,355687428096000,15205637551104000,202741834014720000,5109094217170944000,51090942171709440000 ⋆ Number of labeled cyclic groups with a fixed identity. ● a(n) = (n - 1)! / phi(n). ●

▶ [A145887] 0,0,3,6,60,390,3255,29652,300384,3337380,40382595,528644490,7445077068,112248853626,1803999434055,30788257006920,556112892188640,10598857474652712,212565974908314339,4475073155964510510 ⋆ Number of excedances in all even permutations of { 1,2,...,n } with no fixed points. ● a(n) = 1 / 4 * n * n! * Sum _{ k=2..n - 1 } (- 1) ^ k * (k + 2) * (k - 1) / (k + 1)!. - _ Vaclav Kotesovec _ , Oct 28 2012 ●

▶ [A215492] 0,3,6,63,147,1365,3528,29694,83643,648270,1964361,14199171,45789471,311933118,1060973088,6871121775,24463966674,151720368891,561841152579,3357375513429,12860706786396,74437773850062,293576471108319,1653218198356074,6686170310225133 ⋆ a(n) = 21 * a(n - 2) + 7 * a(n - 3), with a(0)=0, a(1)=3, and a(2)=6. ● a(n) = (1 / 7) * ((c(1) - c(4)) * (1 + 3 * c(1)) ^ n + (c(2) - c(1)) * (1 + 3 * c(2)) ^ n + (c(4) - c(2)) * (1 + 3 * c(4)) ^ n), where c(j):=2 * cos(2 * Pi * j / 7) (for the proof see Witula - Slota - Warzynski paper). ●

▶ [A125817] 0,3,6,63,228,1527,6930,39819,197448,1071819,5500254,29221431,151947180,800658687,4184419434,21980036547,115095203472,603851028243,3164320515510,16594108511151,86981665785972,456063176261511,2390814670884546,12534703338214779 ⋆ a(n) = ((1 + 3 * sqrt(2)) ^ n - (1 - 3 * sqrt(2)) ^ n) / (2 * sqrt(2)). ● a(n) = 2 * a(n - 1) + 17 * a(n - 2), with a(0)=0, a(1)=3. ●

▶ [A222010] 0,1,3,7 ⋆ Dimensions of spheres that admit continuous multiplications with unit element. ● a(n) = 2 ^ n - 1 for n = 0, 1, 2, 3. ●

▶ [A080457] 3,7,7,11,15,19,19,23,27,31,31,35,39,43,43,47,51,55,55,59,63,67,67,71,75 ⋆ a(1)=3; for n>1, a(n)=a(n - 1) if n is already in the sequence, a(n)=a(n - 1) + 4 otherwise. ● a(n) = 3 + 4 * (n - 2 - floor((n - 3) / 4)). ● a(n) = a(n - 1) + a(n - 4) - a(n - 5), n>5. ● a(n) = (6 * n - 1 + (- 1) ^ n - 2 * (- 1) ^ ((2 * n + 1 - (- 1) ^ n) / 4)) / 2. (End) ●

▶ [A118259] 1,3,7,7,13,17,27,27,27,33,47,47,63,73,85,85,107,107,131,131,147,165,195,195,195 ⋆ Numbers of strongly carefree couples (a,b) with a,b <= n. ● a(n) = Sum _{ i,j=1...n } mu(i * j) ^ 2. - _ Benoit Cloitre _ , Oct 10 2009 ●

▶ [A098581] 1,3,7,7,15,39,95,151,271,583,1343,2551,4719,9383,20127,40535,78287,153351,314367,638647,1264943,2491751,5006687,10115863,20235407 ⋆ Expansion of (1 + 2 * x + 4 * x ^ 2) / (1 - x - 8 * x ^ 4). ● a(n) = a(n - 1) + 8 * a(n - 4). ● a(n) = Sum _{ k=0..n } binomial(n - k, floor(k / 3)) * 2 ^ k. ●

▶ [A270307] 1,3,7,7,21,27,57,95,169,303,529,943,1665,2943,5217,9215,16321,28863,51073,90367,159873,282879,500481,885503,1566721 ⋆ Expansion of - (4 * x ^ 3 + 8 * x ^ 2 + 4 * x + 1) / (2 * x ^ 4 + 4 * x ^ 3 + 2 * x ^ 2 - x - 1). ● a(n) = (n + 1) * Sum _{ k=0..n } (Sum _{ l=0..n - k } (binomial(k + 1,l) * 2 ^ l * (- 1) ^ (n - l - k) * binomial(n - 2 * l,n - l - k)) / (k + 1)). ●

▶ [A004794] 3,7,7,28,45,189,799,2091,2091,8856,14329,60697,257115,673135,673135,2851444,4613733,19544085,82790071,216747219,216747219,918155952,1485607537,6293134513,26658145587 ⋆ Least positive integer k such that the fractional part of k * sqrt(5) has its n initial partial quotients all equal to 1. ● a(n) = (Fib(12[n / 6] + S _ (n mod 6)) + 1) / 2 where S = (2, 5, 7, 7, 10, 11). ●

▶ [A047530] 0,1,3,7,8,9,11,15,16,17,19,23,24,25,27,31,32,33,35,39,40,41,43,47,48 ⋆ Numbers that are congruent to { 0, 1, 3, 7 } mod 8. ● a(n) = ceiling(n / 4) + 2 * ceiling((n - 1) / 4) + 4 * ceiling((n - 2) / 4) + ceiling((n - 3) / 4). ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. ● a(n) = (8n - 9 + i ^ (2n) + (2 + i) * i ^ (- n) + (2 - i) * i ^ n) / 4, where i=sqrt(- 1). ●

▶ [A047357] 0,1,3,7,8,10,14,15,17,21,22,24,28,29,31,35,36,38,42,43,45,49,50,52,56 ⋆ Numbers that are congruent to { 0, 1, 3 } mod 7. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. ● a(n) = (21 * n - 30 - 6 * cos(2 * n * Pi / 3) + 4 * sqrt(3) * sin(2 * n * Pi / 3)) / 9. ● a(3k) = 7k - 4, a(3k - 1) = 7k - 6, a(3k - 2) = 7k - 7. (End) ●

▶ [A174871] 3,7,8,11,12,16,23,27,28,31,32,36,43,47,48,51,52,56,63,67,68,71,72,76,83 ⋆ Numbers k such that the k - th triangular number ends in 6 or 8. ● a(n) = a(n - 1) + a(n - 6) - a(n - 7). ●

▶ [A078466] 1,3,7,8,11,13,14,18,24,26,27,29,32,33,36,37,39,40,43,45,46,51,52,56,57 ⋆ First cycle is reached under a "Collatz - Fibonacci" transform (cf. comment). ● a(n) / n seems greater than 2 for n large enough and if limit a(n) / n exists, this limit should be > 2.5. Does a(n) / n = O(log(log(n))? ●

▶ [A047528] 0,3,7,8,11,15,16,19,23,24,27,31,32,35,39,40,43,47,48,51,55,56,59,63,64 ⋆ Numbers that are congruent to { 0, 3, 7 } mod 8. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. ● a(n) = 8 * n / 3 - 2 + cos(2 * n * Pi / 3) - sin(2 * n * Pi / 3) / (3 * sqrt(3)). ● a(3k) = 8k - 1, a(3k - 1) = 8k - 5, a(3k - 2) = 8k - 8. (End) ●

▶ [A007970] 3,7,8,11,15,19,23,24,27,31,32,35,40,43,47,48,51,59,63,67,71,75,79,80,83 ⋆ Rhombic numbers. ● a(n) is in the sequence if a(n) = D * E with positive integers D and E, such that E * U ^ 2 - D * T ^ 2 = 2 has an integer solution with U * T odd (without loss of generality one may take U and T positive). See the Conway link. D and E are given in A191856 and A191857, respectively. - _ Wolfdieter Lang _ , Oct 05 2015 ●

▶ [A182389] 1,3,7,9,9,11,23,25,41,59,79,81,81,83,111,113,145,179,215,249,281,315,327,329,377 ⋆ a(0)=1, a(n) = (a(n - 1) + n) XOR n. ● a(0)=1, a(n)=(a(n - 1) + n) XOR n, where XOR is the bitwise exclusive - OR operator. ●

▶ [A241662] 1,3,7,9,10,11,13,17,19,21,23,27,29,30,31,33,37,39,41,43,47,49,51,53,57 ⋆ Numbers of the form m * 10 ^ k where gcd(10, m) = 1 and k >= 0 and m > 0. ● a(n) = 9n / 4 + O(log n). - _ Charles R Greathouse IV _ , May 14 2014 ●

▶ [A045572] 1,3,7,9,11,13,17,19,21,23,27,29,31,33,37,39,41,43,47,49,51,53,57,59,61 ⋆ Numbers that are odd but not divisible by 5. ● a(n) = - 1 + Sum _{ k=0..n - 1 } ((1 / 12) * (5 * (k mod 4) + 11 * ((k + 1) mod 4) - ((k + 2) mod 4) + 5 * ((k + 3) mod 4))). - _ Paolo P. Lava _ , Dec 20 2007 ● a(n) = 10 * floor((n - 1) / 4) + 2 * floor((4 * ((n - 1) mod 4) + 1) / 3) + 1; a(n) = a(n - 1) + 2 + 2 * floor(((x + 6) mod 10) / 9). - _ Carl R. White _ , Feb 06 2008 ● a(n) = 2 * n + 2 * floor((n - 3) / 4) + 1. - Kenneth Hammond (weregoose(AT)gmail.com), Mar 07 2008 ● a(n) = - 1 + 2 * n + 2 * floor((n + 1) / 4). - Kenneth Hammond (weregoose(AT)gmail.com), Mar 25 2008 ● a(n) = a(n - 1) + a(n - 4) - a(n - 5). ● a(n) = (10 * n + 2 * (- 1) ^ (n * (n + 1) / 2) - (- 1) ^ n - 5) / 4. - _ Bruno Berselli _ , Nov 06 2011 ●

▶ [A158938] 3,7,9,11,13,23,25,27,61,71,73,75,77,87,89,91,125,135,137,139,141,151,153,155,189 ⋆ Numbers congruent to {- 3,7,9,11,13,23,25,27 } mod 64. ● a(n) = a(n - 8) + 64. ● a(n) = a(n - 1) + a(n - 8) - a(n - 9) for n>8. ●

▶ [A047529] 1,3,7,9,11,15,17,19,23,25,27,31,33,35,39,41,43,47,49,51,55,57,59,63,65 ⋆ Numbers that are congruent to { 1, 3, 7 } mod 8. ● a(n) = (24 * n + 2 * sqrt(3) * sin(2 * Pi * n / 3) + 6 * cos(2 * Pi * n / 3) - 15) / 9. - _ Fred Daniel Kline _ , Nov 12 2015 ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. ● a(n + 3) = a(n) + 8 for all n in Z. - _ Michael Somos _ , Nov 15 2015 ● a(3k) = 8k - 1, a(3k - 1) = 8k - 5, a(3k - 2) = 8k - 7. - _ Wesley Ivan Hurt _ , Jun 13 2016 ● a(n) = 8 * floor((n - 1) / 3) + 2 ^ (((n - 1) mod 3) + 1) - 1. - _ Fred Daniel Kline _ , Aug 09 2016 ● a(n) = 2 * (n + floor(n / 3)) - 1. - _ Wolfdieter Lang _ , Sep 10 2021 ●

▶ [A197504] 1,3,7,9,11,19,23,27,31,43,47,49,59,67,71,79,81,83,103,107,121,127,131,139,151 ⋆ 1 together with the odd numbers m >= 3 for which phi(2 * m) / 2 = phi(m) / 2 is odd, where phi = A000010 (Euler's totient). ● a(1) = 1, and for n >= 2 the set of all positive powers of each prime p == 3 (mod 4) (A002145), sorted increasingly. ●

▶ [A338712] 1,3,7,9,11,33,77,99,111,333,777,999,1111,3333,7777,9999,11111,33333,77777,99999,111111,333333,777777,999999,1111111 ⋆ Numbers with all digits equal and from the set { 1, 3, 7, 9 } . ● a(n) = 11 * a(n - 4) - 10 * a(n - 8) for n >8. ●

▶ [A047241] 1,3,7,9,13,15,19,21,25,27,31,33,37,39,43,45,49,51,55,57,61,63,67,69,73 ⋆ Numbers that are congruent to { 1, 3 } mod 6. ● a(n) = 3 * n - 5 / 2 - (- 1) ^ n / 2. (End) ● a(n) = 2 * floor((n - 1) / 2) + 2 * n - 1. - _ Gary Detlefs _ , Mar 18 2010 ● a(n) = 6 * n - a(n - 1) - 8 with n > 1, a(1)=1. - _ Vincenzo Librandi _ , Aug 05 2010 ● a(n) = 3 * n - 2 - ((n + 1) mod 2). - _ Wesley Ivan Hurt _ , Jun 29 2013 ● a(1)=1, a(2)=3, a(3)=7; for n>3, a(n) = a(n - 1) + a(n - 2) - a(n - 3). - _ Harvey P. Dale _ , Oct 01 2013 ●

▶ [A132222] 1,3,7,9,13,15,19,21,25,29,31,35,37,41,43,47,51,53,57,59,63,65,69,73,75 ⋆ Beatty sequence 1 + 2 * floor(n * Pi / 2), which contains infinitely many primes. ● a(n) = 1 + 2 * floor(n * Pi / 2). ●

▶ [A172367] 1,3,7,9,13,15,19,25,27,33,37,39,43,49,55,57,63,67,69,75,79,85,93,97,99 ⋆ Numbers k > 0 such that k + 4 is a prime. ● a(n) = prime(n + 2) - 4. ●

▶ [A258011] 1,3,7,9,13,15,21,25,27,31,33,37,43,45,49,51,55,57,63,67,69,73,75,79,85 ⋆ Numbers remaining after the third stage of Lucky sieve. ● a(n) = a(n - 12) + 42. ● a(n) = a(n - 1) + a(n - 12) - a(n - 13). ●

▶ [A063204] 0,3,7,9,13,16,19,22,26,28,32,35,38,41,45,47,51,54,57,60,64,66,70,73,76 ⋆ Dimension of the space of weight 2n cuspidal newforms for Gamma _ 0(25). ● a(n) = a(n - 2) + a(n - 3) - a(n - 5). G.f.: x ^ 2 * (3 + 7 * x + 6 * x ^ 2 + 3 * x ^ 3) / ((1 - x) ^ 2 * (1 + x) * (1 + x + x ^ 2)). [_ Colin Barker _ , Sep 27 2012] ●

▶ [A130568] 1,3,7,9,13,17,19,23,25,29,33,35,39,43,45,49,51,55,59,61,65,67,71,75,77 ⋆ Generalized Beatty sequence 1 + 2 * floor(n * phi), which contains infinitely many primes. ● a(n) = 1 + 2 * floor(n * phi), where phi = (1 + sqrt(5)) / 2. ●

▶ [A111223] 0,1,3,7,9,13,19,21,25,27,31,33,39,45,51,55,61,63,67,69,73,79,91,93,97 ⋆ Numbers n such that 5 * n + 2 is prime. ● a(n) = F(p - 2) / 5 mod p, where p is the n - th prime number such that p==2 (mod 5) and F(m) is m - th Fibonacci number. - _ Rigoberto Florez _ , Mar 02 2020 ●

▶ [A172407] 1,3,7,9,13,19,21,27,31,33,37,43,49,51,57,61,63,69,73,79,87,91,93,97,99 ⋆ Positive numbers n such that n + 10 is a prime. ● a(n) = prime(n + 4) - 10. ● a(n) = binomial(prime(n + 4) - 3,3) mod prime(n + 4), (Empirical). - _ Gary Detlefs _ , Jul 10 2014 ●

▶ [A178207] 1,3,7,9,15,17,21,23,31,33,37,39,45,47,51,53,63,65,69,71,77,79,83,85,93 ⋆ a(n) = 4 * n - 2 * A000120(n) + 1 where A000120(n) = number of nonzero digits in the binary representation of n. ● a(0) = 1; a(n) = 2n + a(floor(n / 2)). - _ Daniel Suteu _ , Jan 01 2016 ●

▶ [A064194] 1,3,7,9,17,21,25,27,43,51,59,63,71,75,79,81,113,129,145,153,169,177,185,189,205 ⋆ a(2n) = 3 * a(n), a(2n + 1) = 2 * a(n + 1) + a(n), with a(1) = 1. ● a(1) = 1, a(n) = a(floor(n / 2)) + 2 * a(ceiling(n / 2)), n > 1. ● a(n + 1) = Sum _{ 0<=i, j<=n } (binomial(i + j, i) mod 2). - _ Benoit Cloitre _ , Mar 07 2005 ●

▶ [A045797] 1,3,7,9,21,23,27,29,41,43,47,49,61,63,67,69,81,83,87,89,101,103,107,109,121 ⋆ Evenish numbers (prime to 10 and 10's digit is even). ● a(n) = 5n + O(1). - _ Charles R Greathouse IV _ , Jan 09 2023 ●

▶ [A099886] 1,3,7,9,21,63,107,189,273,819,1911,2457,5189,15567,28123,46701,65793,197379,460551,592137,1381653,4144959,7039851,12434877,17829905 ⋆ XOR binomial transform of A099885. ● a(n) = SumXOR _{ k=0..n } SumXOR _{ i =0..k \ 2 } (C(n, k)mod 2) * (C(k \ 2, i) mod 2) * 2 ^ ((k + 1) \ 2 + k \ 2 - i), where the SumXOR is the analog of summation under XOR and x \ y stands for floor(x / y) (see Pari program). ●

▶ [A128052] 1,3,7,9,47,123,161,843,2207,2889,15127,39603,51841,271443,710647,930249,4870847,12752043,16692641,87403803,228826127,299537289,1568397607,4106118243,5374978561 ⋆ a(n) = (F(2 * n - 1) + F(2 * n + 1)) * (5 / 6 - cos(2

* Pi * n / 3) / 3), where F(n) = Fibonacci(n). • a(n) = Lucas(2 * n) * (Fibonacci(n) mod 2 + 1) / 2, Lucas(n)=A000032, Fibonacci(n)=A000045. - _ Gary Detlefs _ , Jan 19 2001 • a(n) = 18 * a(n - 3) - a(n - 6). •

► [A115164] 3,7,9,55,201,823,3273,13111,52425,209719,838857,3355447,13421769,53687095,214748361,858993463,3435973833,13743895351,54975581385,219990225559,879609302217,3518437208887,14073748835529,56294995342135 ⋆ a(n) = 3 * a(n - 1) + 4 * a(n - 2), with a(0) = 3, a(1) = 7, a(3) = 9, for n > 2. • a(n) = (4 ^ (1 + n) - 19 * (- 1) ^ n) / 5 for n > 0. • a(n) = 3 * a(n - 1) + 4 * a(n - 2) for n > 2. •

► [A319279] 0,3,7,10,12,15,19,22,24,27,31,34,36,39,43,46,48,51,55,58,60,63,67,70,72 ⋆ Numbers that are congruent to { 0, 3, 7, 10 } mod 12. • a(n) = a(n - 4) + 12 for n > 4. • a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n > 5. • a(n) = (6 * n - 5 + sqrt(2) * cos(Pi * n / 2 + Pi / 4)) / 2. •

► [A013574] 3,7,10,12,15,19,22,24,27,31,34,36,39,43,46,48,51,55,58,60,63,67,70,72,75 ⋆ Minimal scope of an (n,2) difference triangle. • a(n) = 3n if n = { 0,1 } (mod 4). a(n) = 3n + 1 if n = { 2,3 } (mod 4). [Chee Theor. 2] - _ R. J. Mathar _ , Nov 28 2016 • a(n) = (- 1 / 4 - i / 4) * ((- 1 + i) + (- i) ^ n - i * i ^ n - (6 - 6 * i) * n). • a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4) for n >4. •

► [A226723] 3,7,10,13,16,20,23,26,30,32,36,40,42,46,49,52,55,59,62,65,69,72,75,79,82 ⋆ Positions of the numbers 3 ^ n, for n >= 1, in the joint ranking of all the numbers 2 ^ h, 3 ^ k, 5 ^ k, for h >= 0, k >= 1. • a(n) = 1 + n + floor(n * log _ 2(3)) + floor(n * log _ 5(3)). •

► [A081842] 0,3,7,10,13,16,20,23,26,30,33,36,40,43,46,50,53,56,59,63,66,69,73,76,79 ⋆ a(1)=0, a(n)=a(n - 1) + 4 if n is already in the sequence, a(n)=a(n - 1) + 3 otherwise. • a(n)=floor(r * n - (4 * r - 1) / (r + 1)) where r= (1 / 2) * (3 + sqrt(13)) •

► [A298786] 1,3,7,10,13,17,20,23,27,30,33,37,40,43,47,50,53,57,60,63,67,70,73,77,80 ⋆ Expansion of (x ^ 4 + 2 * x ^ 3 + 4 * x ^ 2 + 2 * x + 1) / ((1 - x) * (1 - x ^ 3)). • a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. - _ Colin Barker _ , Jan 27 2018 •

► [A047355] 0,3,7,10,14,17,21,24,28,31,35,38,42,45,49,52,56,59,63,66,70,73,77,80,84 ⋆ Numbers that are congruent to { 0, 3 } mod 7. • a(n) = a(n - 2) + 7 = a(n - 1) + a(n - 2) - a(n - 3). - _ Henry Bottomley _ , Jan 19 2001 • a(n) = (14 * n - (- 1) ^ n - 15) / 4. (End) • a(n) = 2 * n - 2 + floor((3 * n - 3) / 2). - _ Wesley Ivan Hurt _ , Jan 30 2014 •

► [A098005] 3,7,10,14,17,21,24,28,31,35,39,42,46,49,53,56,60,63,67,70,74,78,81,85,88 ⋆ Beatty sequence for 1 / (3 - e): a(n) = floor(n / (3 - e)). • a(n) = floor(n / (3 - e)). •

► [A171983] 3,7,10,14,18,21,25,28,32,36,39,43,46,50,54,57,61,64,68,72,75,79,82,86,90 ⋆ Beatty sequence for sqrt(13). • a(n) = floor(n * sqrt(13)). - _ Jon E. Schoenfield _ , Jun 18 2010 •

► [A190080] 3,7,10,14,18,22,25,29,33,37,40,44,48,52,55,59,63,67,71,74,78,82,86,89,93 ⋆ a(n) = n + [n * r / s] + [n * t / s]; r=1, s=cos(Pi / 5), t=sec(Pi / 5). • a(n) = n + [n * sec(Pi / 5)] + [n * (sec(Pi / 5)) ^ 2]. •

► [A184812] 3,7,10,14,18,22,26,29,34,37,41,44,48,53,56,60,63,68,72,75,79,82,87,90,94 ⋆ n + floor(ns / r) + floor(nt / r), where r=sqrt(2), s=sqrt(3), t=sqrt(5). • a(n)=n + floor(ns / r) + floor(nt / r), r=sqrt(2), s=sqrt(3), t=sqrt(5). •

► [A347638] 3,7,10,15,16,18,29,31,40,48,67,82,105,143,189,255,341,474,647,892,1236,1719,2393,3330,4656 ⋆ Number of minimal dominating sets in the n - dipyramidal graph (for n > 3). • a(n) = 2 * a(n - 1) - a(n - 3) - a(n - 5) + 2 * a(n - 7) - a(n - 8). •

► [A214066] 0,3,7,10,15,18,22,25,30,33,37,40,45,48,52,55,60,63,67,70,75,78,82,85,90 ⋆ a(n) = floor((3 / 2) * floor(5 * n / 2)). • a(n) = (30 * n + 2 * i ^ ((n - 1) * n) + 3 * (- 1) ^ n - 5) / 8, where i=sqrt(- 1). (End) • a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. - _ Wesley Ivan Hurt _ , Jun 04 2016 •

► [A114113] 1,3,7,10,16,21,29,36,46,55,67,78,92,105,121,136,154,171,191,210,232,253,277,300,326 ⋆ a(n) = sum { k=1 to n } (A114112(k)). (For n>=2, a(n) = sum { k=1 to n } (A014681(k)) =sum { k=1 to n } (A103889(k)).). • a(1)=1. a(2n) = n * (2n + 1). a(2n + 1) = 2n ^ 2 + 3n + 2. • a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4), n>5. (End) •

► [A100056] 1,3,7,10,16,22,27,37,47,57,67,75,91,107,123,139,155,171,187,200,226,252,278,304,330 ⋆ Sum of absolute differences of p(n) defined in A054065. • a(n) = sum, (abs. values) of difference row of p(n), A054065. •

► [A163714] 3,7,10,16,26,42,68,110,178,288,466,754,1220,1974,3194,5168,8362,13530,21892,35422,57314,92736,150050,242786,392836 ⋆ Number of n X 2 binary arrays with all 1s connected, a path of 1s from top row to bottom row, and no 1 having more than two 1s adjacent. • a(n) = (2 ^ (- n) * ((1 - sqrt(5)) ^ n * (- 3 + sqrt(5)) + (1 + sqrt(5)) ^ n * (3 + sqrt(5)))) / sqrt(5) for n>2. •

► [A345888] 1,3,7,10,17,21,31,36,41,46,61,67,85,92,99,106,129,137,163,172,181,190,221,231,241 ⋆ a(n) = n + (n - 1) * pi(n). • a(n) = Sum _{ k=1..n } n ^ c(k), where c(n) is the prime characteristic (A010051). •

► [A128223] 0,1,3,7,10,17,21,31,36,49,55,71,78,97,105,127,136,161,171,199,210,241,253,287,300 ⋆ a(n) = if n mod 2 = 0 then n * (n + 1) / 2 otherwise (n + 1) ^ 2 / 2 - 1. • a(n) = (- 1 + (- 1) ^ n - (- 3 + (- 1) ^ n) * n + 2 * n ^ 2) / 4. a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). G.f.: x * (x ^ 3 - 2 * x ^ 2 - 2 * x - 1) / ((x - 1) ^ 3 * (x + 1) ^ 2). - _ Colin Barker _ , Oct 16 2013 •

► [A217258] 1,3,7,10,17,21,31,39,49,55,71,79,97 ⋆ Threshold for the P(n) - avoidance edge - coloring game with two colors and fixed tree size restriction, where P(n) denotes the path on n edges (see the comments and reference for precise definition). • a(n) >= n + ceiling(n / 2) * (n - 1) for all n. • a(n) >= (8 / 15 + o(1)) * n ^ 2 as n tends to infinity (the term o(1) tends to 0). • a(n) <= (9 + 5 * sqrt(3)) / 6 * n ^ (2 * log _ 2(1 + sqrt(3))) = Theta(n ^ 2.899...). •

► [A022120] 3,7,10,17,27,44,71,115,186,301,487,788,1275,2063,3338,5401,8739,14140,22879,37019,59898,96917,156815,253732,410547 ⋆ Fibonacci sequence beginning 3, 7. • a(n) = 4 * Fibonacci(n + 2) - Fibonacci(n + 1). - _ Gary Detlefs _ , Dec 21 2010 • a(n) = round(((15 + 11 * sqrt(5)) / 10) * ((1 + sqrt(5)) / 2) ^ n + ((15 - 11 * sqrt(5)) / 10) * ((1 - sqrt(5)) / 2) ^ n). - _ Bogart B. Strauss _ , Oct 27 2013 • a(n) = Lucas(n + 3) - Fibonacci(n - 1). - _ Greg Dresden _ , Sam Neale, and Kyle Wood, Feb 18 2022 •

► [A041191] 1,3,7,10,17,27,44,115,389,7895,24074,56043,80117,136160,216277,352437,921151,3115890,63238951,192832743,448904437,641737180,1090641617,1732378797,2823020414 ⋆ Denominators of continued fraction convergents to sqrt(106). • a(n) = 8010 * a(n - 9) + a(n - 18). - _ Vincenzo Librandi _ , Dec 12 2013 •

► [A041251] 1,1,3,7,10,17,44,105,149,3383,3532,10447,24426,34873,59299,153471,366241,519712,11799905,12319617,36439139,85197895,121637034,206834929,535306892 ⋆ Denominators of continued fraction convergents to sqrt(137). • a(n) = 3488 * a(n - 9) + a(n - 18). - _ Vincenzo Librandi _ , Dec 13 2013 •

► [A265724] 0,3,7,10,18,21,33,36,52,55,75,78,102,105,133,136,168,171,207,210,250,253,297,300,348 ⋆ Total number of OFF (white) cells after n iterations of the "Rule 1" elementary cellular automaton starting with a single ON (black) cell. • a(n) = 1 / 2 * (n ^ 2 + (- 1) ^ n * n + 4 * n - (- 1) ^ n + 1). • a(n) = 1 / 2 * (n ^ 2 + 5 * n) for n even. • a(n) = 1 / 2 * (n ^ 2 + 3 * n + 2) for n odd. • a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n>4. •

► [A365931] 0,0,1,3,7,10,18,25,35,50,69,94,132,178,244,334,460,629,869,1201,1668,2314,3223,4493,6280 ⋆ a(n) = number of pairs { x,y } with (x,y > 1) such that x ^ y (= terms of A072103) has bit length <= n. • a(n) = Sum _{ y = 2..n } (ceiling(2 ^ (n / y)) - 2) • a(n) = Sum _{ y = 2..n } (floor((2 ^ n - 1) ^ (1 / y)) - 1) •

► [A366044] 0,1,3,7,10,19,35,67,120,221,407,751,1378,2535,4663,8579,15776,29017,53371,98167,180554,332091,610811,1123459,2066360 ⋆ Number of circular binary sequences of length n with an even number of 0's and no three consecutive 1's. • a(n) = a(n - 2) + 2 * a(n - 3) + 3 * a(n - 4) + 2 * a(n - 5) + a(n - 6), a(1)=0, a(2)=1, a(3)=3, a(4)=7, a(5)=10, a(6)=19. •

► [A041437] 1,3,7,10,27,37,101,340,10301,31243,72787,104030,280847,384877,1050601,3536680,107151001,324989683,757130367,1082120050,2921370467,4003490517,10928351501,36788545020,1114584702101 ⋆ Denominators of continued fraction convergents to sqrt(234). • a(n) = 10402 * a(n - 8) - a(n - 16) for n>15. - _ Vincenzo Librandi _ , Dec 17 2013 •

► [A041525] 1,1,3,7,10,27,64,91,2976,3067,9110,21287,30397,82081,194559,276640,9047039,9323679,27694397,64712473,92406870,249526213,591459296,840985509,27502995584 ⋆ Denominators of continued fraction convergents to sqrt(279). • a(n) = 3040 * a(n - 8) - a(n - 16) for n>15. - _ Vincenzo Librandi _ , Dec 19 2013 •

► [A041783] 1,3,7,10,37,47,225,722,1669,22419,225859,2958586,6143031,21387679,91693747,113081426,430938025,544019451,1518976927,5100950232,205556986207,621771908853,1449100803913,2070872712766,7661718942211 ⋆ Denominators of continued fraction convergents to sqrt(412). • a(n) = 207075963134 * a(n - 20) - a(n - 40) for n>39. - _ Vincenzo Librandi _ , Dec 24 2013 •

► [A041899] 1,1,3,7,10,37,158,2249,9154,29711,38865,107441,253747,361188,15423643,15784831,46993305,109771441,156764746,580065679,2477027462,35258450147,143510828050,465790934297,609301762347 ⋆ Denominators of continued fraction convergents to sqrt(471). • a(n) = 15677390 * a(n - 14) - a(n - 28) for n>27. - _ Vincenzo Librandi _ , Dec 26 2013 •

► [A042373] 1,1,3,7,10,47,292,631,4078,16943,21021,58985,138991,197976,10433743,10631719,31697181,74026081,105723262,496919129,3087238036,6671395201,43115609242,179133832169,222249441411 ⋆ Denominators of continued fraction convergents to sqrt(713). • a(n) = 10572734 * a(n - 14) - a(n - 28). - _ Wesley Ivan Hurt _ , Sep 07 2022 •

► [A276283] 1,3,7,11,13,15,19,23,25,27,31,35,37,39,43,47,49,51,55,59,61,63,67,71,73 ⋆ Expansion of (1 + x + 3 * x ^ 2 + x ^ 3) / ((1 - x) ^ 2 * (1 + x ^ 2)). • a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4). • a(n) = 3 * n - sin(Pi * n / 2) + 1. • a(n) = (6 * n - i * ((- i) ^ n - i ^ n + 2 * i)) / 2, where i is the imaginary unit. •

► [A343028] 0,3,7,11,14,18,22,25,29,33,36,40,44,47,51,55,58,62,66,69,73,77,80,84,88 ⋆ a(n) = floor(11 * n / 3). • a(n) = a(n - 1) + a(n - 3) - a(n - 4). • a(n) = (33 * n - 3 - sqrt(3) * (1 - 2 * cos(2 * Pi * (11 * n - 1) / 3)) * sin(2 * Pi * (11 * n - 1) / 3)) / 9. •

► [A260484] 3,7,11,14,18,22,25,29,33,36,40,44,47,51,55,58,62,66,69,73,77,80,84,88,91 ⋆ Complement of the Beatty sequence for e ^ (1 / Pi) = A179706. • a(n) = floor(n * e ^ (1 / Pi) / (e ^ (1 / Pi) - 1)). •

► [A003512] 3,7,11,14,18,22,26,29,33,37,41,44,48,52,55,59,63,67,70,74,78,82,85,89,93 ⋆ A Beatty sequence: floor(n * (sqrt(3) + 2)). • a(n) = floor(n * (sqrt(3) + 2)). - _ Michel Marcus _ , Jan 05 2015 •

► [A246170] 3,7,11,14,18,22,26,29,33,37,41,44,48,52,56,59,63,67,71,74,78,82,86,89,93 ⋆ Beatty sequence for sqrt(14). • a(n) = floor(n * sqrt(14)). •

► [A265045] 1,3,7,11,14,18,23,28,32,36,40,44,48,52,56,60,64,68,72,76,80,84,88,92,96 ⋆ Coordination sequence for a 6.6.6 point in the 3 - transitive tiling { 4.6.6, 6.6.6, 6.6.6.6 } of the plane by squares and dominoes (hexagons). • a(n) = 2 * a(n - 1) - a(n - 2) for n>8. • a(n) = 4 * n for n>6. •

► [A079710] 3,7,11,15,17,19,23,24,26,31,35,39,43,44,47,51,53,55,59,62,63,67,71,74,79 ⋆ Numbers m such that the squarefree kernel of m is larger than the squarefree kernel of m + 1. • a(n) is asymptotic to c * n where c=2.94... •

► [A322408] 3,7,11,15,18,22,26,30,34,38,42,45,49,53,57,61,65,68,72,76,80,84,88,92,95 ⋆ Compound sequence with a(n) = A319198(A278041(n)), for n >= 0. • a(n) = z(C(n)) = Sum _{ j=0..C(n) } t(j), n >= 0, with z = A319198, C = A278041 and t = A080843. • a(n) = 3 + Sum _{ k=1..n - 1 } d(k), where d is the tribonacci sequence on the alphabet (4,4,3 } . - _ Michel Dekking _ , Oct 05 2019 •

► [A059554] 3,7,11,15,19,22,26,30,34,38,42,45,49,53,57,61,65,68,72,76,80,84,87,91,95 ⋆ Beatty sequence for Gamma(2 / 3) / (Gamma(2 / 3) - 1). • a(n) = floor(n * gamma(2 / 3) / (gamma(2 / 3) - 1)). - _ Michel Marcus _ , Jan 05 2015 •

► [A329840] 3,7,11,15,19,23,26,30,34,38,42,46,50,53,57,61,65,69,73,77,80,84,88,92,96 ⋆ Beatty sequence for (9 + sqrt(41)) / 4. • a(n) = floor(n * s), where s = (9 + sqrt(41)) / 4. - corrected by _ Michael De Vlieger _ , Aug 27 2021 •

► [A329977] 3,7,11,15,19,23,27,30,34,38,42,46,50,54,57,61,65,69,73,77,81,84,88,92,96 ⋆ Beatty sequence for the number x satisfying 1 / x + 1 / (log x) = 1. ● a(n) = floor(n x), where x = 3.8573348... is the constant in A236229. ●
► [A246171] 3,7,11,15,19,23,27,30,34,38,42,46,50,54,58,61,65,69,73,77,81,85,89,92,96 ⋆ Beatty sequence for sqrt(15). ● a(n) = floor(n * sqrt(15)). ●
► [A131098] 1,3,7,11,15,19,23,27,31,35,39,43,47,51,55,59,63,67,71,75,79,83,87,91,95 ⋆ Partial sums of A151798. ● a(1) = 1, a(n) = 4 * n - 5 for n >= 2. - _ Jaroslav Krizek _ , Aug 15 2009 ●
► [A004767] 3,7,11,15,19,23,27,31,35,39,43,47,51,55,59,63,67,71,75,79,83,87,91,95,99 ⋆ a(n) = 4 * n + 3. ● a(n) = 2 * a(n - 1) - a(n - 2) for n > 1, a(0) = 3, a(1) = 7. - _ Philippe Deléham _ , Nov 03 2008 ● a(n) = 8 * n - a(n - 1) + 2 for n > 0, a(0) = 3. - _ Vincenzo Librandi _ , Nov 20 2010 ● a(n) = 4 * n - 1, with offset 1. - _ Wesley Ivan Hurt _ , Mar 12 2014 ●
► [A330213] 3,7,11,15,19,23,28,31,35,39,43,48,51,56,59,64,67,71,76,79,84,87,92,96,100 ⋆ a(n) = n + floor(ns / r) + floor(nt / r), where r = log(2), s = 1, t = log(3). ● a(n) = n + floor(ns / r) + floor(nt / r), where r = log(2), s = 1, t = log(3). ●
► [A082644] 0,0,1,3,7,11,16,22,30,38,47,57,69,81,94,108,124,140,157,175,195,215,236,258,282 ⋆ a(n) = floor(n * (n - 1 / 2) / 2). ● a(n) = floor(n ^ 3 / (2n + 1)). - _ Gary Detlefs _ , Feb 11 2010 ● a(n) = (4 * n! / (n - 2)! + 2 * n - 3 + (- 1) ^ n + (- 1) ^ (n / 2) - (- 1) ^ ((n + 1) / 2) + (- 1) ^ (- n / 2) - (- 1) ^ (- (n + 1) / 2)) / 8. - _ Wesley Ivan Hurt _ , May 19 2016 ●
► [A319258] 1,3,7,11,16,41,48,56,120,130,141,262,275,289,485,501,518,807,826,846,1246,1268,1291,1820,1845 ⋆ a(n) = 1 + 2 * 3 + 4 + 5 * 6 + 7 + 8 * 9 + 10 + 11 * 12 + ... + (up to n). ● a(n) = n * (1 + floor((n - 2) / 3) - floor(n / 3)) + 3 * floor(n / 3) ^ 2 * (1 + floor(n / 3)) + floor((n + 2) / 3) * (3 * floor((n + 2) / 3) - 1) / 2. ● a(n) = a(n - 1) + 3 * a(n - 3) - 3 * a(n - 4) - 3 * a(n - 6) + 3 * a(n - 7) + a(n - 9) - a(n - 10) for n>10. ●
► [A047838] 1,3,7,11,17,23,31,39,49,59,71,83,97,111,127,143,161,179,199,219,241,263,287,311,337 ⋆ a(n) = floor(n ^ 2 / 2) - 1. ● a(2)=1; for n > 2, a(n) = a(n - 1) + n - 1 + (n - 1 mod 2). - _ Benoit Cloitre _ , Jan 12 2003 ● a(n) = T(n - 1) + floor(n / 2) - 1 = T(n) - floor((n + 3) / 2), where T(n) is the n - th triangular number (A000217). - _ Robert G. Wilson v _ , Aug 31 2006 ● a(n) = floor((n ^ 2 + 4 * n + 2) / 2). - _ Gary Detlefs _ , Feb 10 2010 ● a(n) = (2 * n ^ 2 + (- 1) ^ n - 5) / 4. - _ Bruno Berselli _ , Sep 14 2011 ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4), n > 4. - _ Wesley Ivan Hurt _ , Aug 06 2015 ●
► [A331968] 1,3,7,11,17,24,33,42,53,64,77,92,107,123,142,162,182 ⋆ Maximum number of unit squares of a snake - like polyomino in an n X n square box. ● a(n) <= (2 * n * (n + 1) - 1) / 3. - _ Elijah Beregovsky _ , Nov 09 2020 ● a(n) = 2 * n ^ 2 / 3 + O(n) (Beluhov 2023). - _ Pontus von Brömssen _ , Jan 30 2023 ●
► [A194069] 1,3,7,11,17,25,33,43,55,67,81,97,113,131,151,171,193,217,241,267,295,323,353,385,417 ⋆ 1 + floor((2 / 3) * n ^ 2). ● a(n)=1 + floor(2 * n ^ 2 / 3). ●
► [A210977] 0,1,3,7,11,18,24,34,42,55,65,81,93,112,126,148,164,189,207,235,255,286,308,342,366 ⋆ A005475 and positive terms of A000566 interleaved. ● a(n) = (10 * n ^ 2 + 6 * n - 1 - (2 * n - 1) * (- 1) ^ n) / 16. - _ Luce ETIENNE _ , Oct 04 2014 ●
► [A018805] 1,3,7,11,19,23,35,43,55,63,83,91,115,127,143,159,191,203,239,255,279,299,343,359,399 ⋆ Number of elements in the set { (x,y): 1 <= x,y <= n, gcd(x,y)=1 } . ● a(n) = 2 * (Sum _{ j=1..n } phi(j)) - 1. ● a(n) = n ^ 2 - Sum _{ j=2..n } a(floor(n / j)). ● a(n) = Sum _{ k=1..n } mu(k) * floor(n / k) ^ 2. - _ Benoit Cloitre _ , May 11 2003 ●
► [A236632] 0,1,3,7,11,19,25,36,46,60,70,92,104,124,144,170,186,219,237,273,301,333,355,407,435 ⋆ Sum of all divisors of all positive integers <= n minus the total number of divisors of all positive integers <= n. ● a(n) = (1 / 2) * Sum _{ i=1..n } floor(n / i) * floor((n - i) / i). - _ Wesley Ivan Hurt _ , Jan 30 2016 ● a(n) = Sum _{ i=1..n } binomial(floor(n / i),2). - _ Wesley Ivan Hurt _ , May 08 2016 ● a(n) = Sum _{ k=1..n } (k - 1) * floor(n / k). - _ Wesley Ivan Hurt _ , Apr 02 2017 ●
► [A329482] 1,1,3,7,11,19,25,37,45,61,71,91,103,127,141,169,185,217,235,271,291,331,353,397,421 ⋆ Interleave 1 - n + 3 * n ^ 2, 1 + 3 * n * (1 + n) for n >= 0. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n > 4. ● a(n) = (5 + 3 * (- 1) ^ n - 2 * (1 + (- 1) ^ n) * n + 6 * n ^ 2) / 8. ● a(- n) = 1, 1, 5, 7, 15, 19, ... = interleave 1 + n + 3 * n ^ 2, 1 + 3 * n * (1 + n), both in the spiral. ●
► [A346912] 1,3,7,11,19,27,39,51,71,91,119,147,187,227,279,331,403,475,567,659,779,899,1047,1195,1383 ⋆ a(0) = 1; a(n) = a(n - 1) + a(floor(n / 2)) + 1. ● a(n) = n + 1 + Sum _{ k=1..n } a(floor(k / 2)). ● a(2n) = a(2n - 2) + a(n - 1) + a(n) + 2. ● a(2n) = 2 * (Sum _{ i=0..n } a(i)) - a(n) + 2n. (End) ●
► [A354902] 1,3,7,11,19,31,47,67,91,119,151,187,227,271,319,371,427,487,551,619,691,767,847,931,1019 ⋆ a(n) = 2 * n ^ 2 - 6 * n + 11 for n > 1 with a(0)=1 and a(1)=3. ● a(n) = a(n - 1) + 4 * (n - 2) for n >= 3. ●
► [A355288] 1,3,7,11,19,31,51,83,135,219,355,575,931,1507,2439,3947,6387,10335,16723,27059,43783,70843,114627,185471,300099 ⋆ a(0)=1, a(1)=3, a(2)=7; the reafter a(n) = a(n - 1) + a(n - 2) + 1. ● a(0)=1, a(1)=3, a(2)=7; thereafter a(n) = a(n - 1) + a(n - 2) + 1. ● a(n) = 2 * a(n - 1) - a(n - 3) for n > 3. ● a(n) = 2 ^ (1 - n) * ((1 + sqrt(5)) ^ (n + 1) - (1 - sqrt(5)) ^ (n + 1)) / sqrt(5) - 1 for n > 0. ●
► [A022406] 3,7,11,19,31,51,83,135,219,355,575,931,1507,2439,3947,6387,10335,16723,27059,43783,70843,114627,185471,300099,485571 ⋆ a(0)=3, a(1)=7; thereafter a(n) = a(n - 1) + a(n - 2) + 1. ● a(n) = (2 ^ (- n) * (- 5 * 2 ^ n + (10 - 6 * sqrt(5)) * (1 - sqrt(5)) ^ n + 2 * (1 + sqrt(5)) ^ n * (5 + 3 * sqrt(5)))) / 5. - _ Colin Barker _ , Mar 02 2018 ●
► [A282914] 1,3,7,11,19,55,111,219,435,887,1775,3547,7091,14199,28399,56795,113587,227191,454383,908763,1817523,3635063,7270127,14540251,29080499 ⋆ Decimal representation of the x - axis, from the origin to the right edge, of the n - th stage of growth of the two - dimensional cellular automaton defined by ”Rule 526”, based on the 5 - celled von Neumann neighborhood. ● a(n) = 2 * a(n - 1) + a(n - 4) - 2 * a(n - 5) for n>5. ●
► [A178881] 0,1,3,7,11,20,26,38,50,67,77,105,117,142,172,204,220,265,283,335,379,420,442,518,558 ⋆ Sum of all pairs of greater common divisors for (i,j) where 1 <= i < j <= n. ● a(n) = Sum _{ i=1..n - 1, j=i + 1..n } gcd(i,j). ●
► [A067498] 1,3,7,11,21,27,43,51,69,83,111,123,157,171,199,227,273 ⋆ Maximum number of reflections for a ray of light which reflects at n points (reflecting more than once at most or all points). ● a(n) <= n ^ 2 - n + 1. [Deventer eq (1)] ● a(n) <= n ^ 2 - 2 * n + 3 for even n [Deventer eq. (2)] ●
► [A028831] 1,3,7,11,22,43,83,159,307,592,1141,2199,4239,8171,15750,30359,58519,112799,217427,419104,807849,1557179,3001559,5785691,11152278 ⋆ Expansion of (1 + 2 * x + 3 * x ^ 2) / (1 - x - x ^ 2 - x ^ 3 - x ^ 4). ● a(0)=1, a(1)=3, a(2)=7, a(3)=11, a(n)=a(n - 1) + a(n - 2) + a(n - 3) + a(n - 4) [From Harvey P. Dale, Apr 18 2012] ●
► [A308576] 1,3,7,11,23,35,71,75,87,159,319,321,481,483,559,583,659,1143,1303,1625,1661,1669,3295,3367,3443 ⋆ a(n) = a(n - 1) + a(a(n - 1) mod n) + 1, a(0) = 1. ● a(n) = a(n - 1) + a(a(n - 1) mod n) + 1, a(0) = 1. ●
► [A116362] 0,1,3,7,11,23,39,79,143,287,543,1087,2111,4223,8319,16639,33023,66047,131583,263167,525311,1050623,2099199,4198399,8392703 ⋆ Smallest m such that A116361(m) = n. ● a(n) = 2 ^ (n - 1) + 2 ^ floor((n + 1) / 2) - 1 for n > 1. ● a(n) = 3 * a(n - 1) - 6 * a(n - 3) + 4 * a(n - 4) for n>5. G.f.: - x * (4 * x ^ 4 - 4 * x ^ 3 - 2 * x ^ 2 + 1) / ((x - 1) * (2 * x - 1) * (2 * x ^ 2 - 1)). - _ Colin Barker _ , Mar 29 2013 and Feb 09 2015 ●
► [A283588] 1,3,7,11,23,43,71,219,439,875,1735,3547,6839,13675,27335,54747,109495,218987,437959,875995,1751735,3503467,7006919,14013915,28027831 ⋆ Decimal representation of the x - axis, from the origin to the right edge, of the n - th stage of growth of the two - dimensional cellular automaton defined by ”Rule 654”, based on the 5 - celled von Neumann neighborhood. ● a(n) = 2 * a(n - 1) + a(n - 8) - 2 * a(n - 9) for n>12. ●
► [A284543] 1,3,7,11,23,43,71,219,503,1003,1991,4059,8183,16363,32711,65499,131063,262123,524231,1048539,2097143,4194283,8388551,16777179,33554423 ⋆ Decimal representation of the x - axis, from the origin to the right edge, of the n - th stage of growth of the two - dimensional cellular automaton defined by ”Rule 974”, based on the 5 - celled von Neumann neighborhood. ● a(n) = 2 * a(n - 1) + a(n - 4) - 2 * a(n - 5) for n>8. ●
► [A267052] 1,3,7,11,23,43,87,171,343,683,1367,2731,5463,10923,21847,43691,87383,174763,349527,699051,1398103,2796203,5592407,11184811,22369623 ⋆ Decimal representation of the n - th iteration of the ”Rule 92” elementary cellular automaton starting with a single ON (black) cell. ● a(n) = (3 + 2 * (- 1) ^ n + 2 ^ (2 + n)) / 3 for n>0. ● a(n) = 2 * a(n - 1) + a(n - 2) - 2 * a(n - 3) for n>3. ●
► [A139814] 0,1,3,7,11,23,47,95,187,375,751,1503,3003,6007,12015,24031,48059,96119,192239,384479,768955,1537911,3075823,6151647,12303291 ⋆ a(n)=a(n - 1) + a(n - 2) + a(n - 3) + 2a(n - 4); a(0)=0,a(1)=1,a(2)=3,a(3)=7. ● a(n)=(2 / 5 + 1 / 5 * I) * I ^ n + (1 / 3) * (- 1) ^ n + (11 / 30) * 2 ^ n + (2 / 5 - 1 / 5 * I) * (- I) ^ n, with n>=1 and I=(- 1) ^ (1 / 2) - _ Paolo P. Lava _ , Jun 03 2008 ●
► [A099902] 1,3,7,11,23,59,103,139,279,827,1895,2955,5655,14395,24679,32907,65815,197435,460647,723851,1512983,3881019,6774887,9142411,18219287 ⋆ Multiplies by 2 and shifts right under the XOR BINOMIAL transform (A099901). ● a(n) = SumXOR _{ k=0..n } (binomial(n - k + floor(k / 2), floor(k / 2)) mod 2) * 2 ^ k for n >= 0. ● a(n) = Sum _{ k=0..2n } (binomial(k, 2n - k) mod 2) * 2 ^ (2n - k); ● a(n) = Sum _{ k=0..n } (binomial(2n - k, k) mod 2) * 2 ^ k. (End) ●
► [A092284] 1,3,7,11,26,42,99,107,382,428,1156,1223,4525,4903,14811,14827,58022,61236,201420,201611 ⋆ Number of nonterminal symbols in a certain ”divide - and - conquer” context - free grammar in Chomsky normal form that generates all permutations of n symbols. ● a(n) = Sum _{ k=1..n } t(n, k), where t(n, k) is the n - th row of the Pascal - like triangle of A090349. ●
► [A001645] 1,3,7,11,26,45,85,163,304,578,1090,2057,3888,7339,13862,26179,49437,93366,176321,332986,628852,1187596,2242800,4235569,7998951 ⋆ A Fielder sequence. ● a(n) = trace(M ^ n), where M = [0, 0, 0, 0, 1; 1, 0, 0, 0, 0; 0, 1, 0, 0, 1; 0, 0, 1, 0, 1; 0, 0, 0, 1, 1] is the 5 x 5 companion matrix to the monic polynomial x ^ 5 - x ^ 4 - x ^ 3 - x ^ 2 - 1. It follows that the sequence satisfies the Gauss congruences: a(n * p ^ r) == a(n * p ^ (r - 1)) (mod p ^ r) for positive integers n and r and all primes p. See Zarelua. - _ Peter Bala _ , Jan 09 2023 ●
► [A093361] 1,3,7,11,27,33,69,77,141,151,251,263,407,421,617,633,889,907,1231,1251,1651,1673,2157,2181,2757 ⋆ Add / multiply sequence, see example. ● a(n) = (1 / 24) * (4 * n ^ 3 + 12 * n ^ 2 + 20 * n + 33 + (6 * n ^ 2 - 9) * (- 1) ^ n). - _ Ralf Stephan _ , Dec 02 2004 ●
► [A014447] 1,3,7,11,29,47,123,199,521,843,2207,3571,9349,15127,39603,64079,167761,271443,710647,1149851,3010349,4870847,12752043,20633239,54018521 ⋆ Odd Lucas numbers. ● a(n) = 4 * a(n - 2) + a(n - 4). - R. J. Mathar, Feb 10 2011 ●
► [A131588] 1,1,3,7,11,31,43,127,171,511,683,2047,2731,8191,10923,32767,43691,131071,174763,524287,699051,2097151,2796203,8388607,11184811 ⋆ Interlaces A007583 with A083420. ● a(n) = 5 * a(n - 2) - 4 * a(n - 4); a(n) = (5 * 2 ^ n + (- 2) ^ n - 8 * (- 1) ^ n - 4) / 12; g.f. (1 + x - 2 * x ^ 2 + 2 * x ^ 3) / ((x - 1) * (2 * x + 1) * (2 * x - 1) * (x + 1)) ●
► [A045134] 3,7,12,13,19,23,28,29,48,49,52,53,67,71,76,77,83,87,92,93,112,113,116,117,192 ⋆ Numbers whose base - 4 representation contains no 2’s and exactly one 3. ● a(m + (n + 1) * 2 ^ n) = a(m) + 4 ^ (n + 1) for 1 <= m <= (n + 1) * 2 ^ n. ●
► [A083031] 0,3,7,12,15,19,24,27,31,36,39,43,48,51,55,60,63,67,72,75,79,84,87,91,96 ⋆ Numbers that are congruent to { 0, 3, 7 } mod 12. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n > 4. ● a(n) = (12 * n - 14 - cos(2 * n * Pi / 3) + sqrt(3) * sin(2 * n * Pi / 3)) / 3. ● a(3k) = 12k - 5, a(3k - 1) = 12k - 9, a(3k - 2) = 12k - 12. (End) ● a(n) = a(n - 3) + 12 for n > 3. - _ Jianing Song _ , Sep 22 2018 ●
► [A336705] 1,3,7,12,16,20,24,28,32,36,40,44,48,52,56,60,64,68,72,76,80,84,88,92,96 ⋆ Coordination sequence for the half - Manhattan lattice. ● a(n) = 4 * n, n > = 3. ●
► [A330185] 3,7,12,16,21,25,30,34,39,42,46,51,55,60,64,69,73,78,81,85,90,94,99,103,108 ⋆ a(n) = n + floor(ns / r) + floor(nt / r), where r = tau - 1 / 2, s = tau, t = tau + 1 / 2, tau = golden ratio = (1 + sqrt(5)) / 2. ● a(n) = n + floor(ns / r) + floor(nt / r), where r = tau - 1 / 2, s = tau, t = tau + 1 / 2. ●

► [A330181] 3,7,12,16,21,25,30,34,39,43,48,52,57,61,66,69,73,78,82,87,91,96,100,105,109 ⋆ a(n) = n + floor(ns / r) + floor(nt / r), where r = Pi - 1, s = Pi, t = Pi + 1. ● a(n) = n + floor(ns / r) + floor(nt / r), where r = Pi - 1, s = Pi, t = Pi + 1. ●

► [A298022] 1,3,7,12,17,23,28,33,37,42,47,51,56,61,65,70,75,79,84,89,93,98,103,107,112 ⋆ Coordination sequence for Dual(3 ^ 3.4 ^ 2) tiling with respect to a trivalent node. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>5. ●

► [A027379] 1,3,7,12,18,25,33,42,52,63,75,88,102,117,133,150,168,187,207,228,250,273,297,322,348 ⋆ Expansion of (1 + x ^ 2 - x ^ 3) / (1 - x) ^ 3. ● a(n) = n + a(n - 1) + 2, n>1. - _ Vincenzo Librandi _ , Dec 06 2009 ●

► [A055998] 0,3,7,12,18,25,33,42,52,63,75,88,102,117,133,150,168,187,207,228,250,273,297,322,348 ⋆ a(n) = n * (n + 5) / 2. ● a(n) = a(n - 1) + n + 2 with a(0) =0. - _ Vincenzo Librandi _ , Aug 07 2010 ● a(n) = Sum _{ k=1..n } (k + 2). - _ Gary Detlefs _ , Aug 10 2010 ● a(n) = Sum _{ i=3..n + 2 } i. - _ Wesley Ivan Hurt _ , Jun 28 2013 ●

► [A005228] 1,3,7,12,18,26,35,45,56,69,83,98,114,131,150,170,191,213,236,260,285,312,340,369,399 ⋆ Sequence and first differences (A030124) together list all positive numbers exactly once. ● a(n) = a(n - 1) + c(n - 1) for n >= 2, where a(1)=1, a( ) increasing, c( ) = complement of a( ) (c is the sequence A030124). ● a(1) = 1, a(2) = 3; a( ) increasing; for n >= 3, if a(q) = a(n - 1) - a(n - 2) + 1 for some q < n then a(n) = a(n - 1) + (a(n - 1) - a(n - 2) + 2), otherwise a(n) = a(n - 1) + (a(n - 1) - a(n - 2) + 1). - Albert Neumueller (albert.neu(AT)gmail.com), Jul 29 2006 ● a(n) = n ^ 2 / 2 + n ^ (3 / 2) / (3 * sqrt(2)) + O(n ^ (5 / 4)) [proved in Jubin link]. - _ Benoit Jubin _ , May 13 2015 ●

► [A000969] 1,3,7,12,18,26,35,45,57,70,84,100,117,135,155,176,198,222,247,273,301,330,360,392,425 ⋆ Expansion of g.f. (1 + x + 2 * x ^ 2) / ((1 - x) ^ 2 * (1 - x ^ 3)). ● a(n) = floor((2 * n + 3) * (n + 1) / 3). Or, a(n) = (2 * n + 3) * (n + 1) / 3 but subtract 1 / 3 if n == 1 mod 3. - _ N. J. A. Sloane _ , May 05 2010 ● a(n) = Sum _{ i=0..n } floor(4 * i / 3). - _ Enrique Pérez Herrero _ , Apr 21 2012 ● a(n) = + 2 * a(n - 1) - 1 * a(n - 2) + 1 * a(n - 3) - 2 * a(n - 4) + 1 * a(n - 5). - _ Joerg Arndt _ , Apr 22 2012 ●

► [A122250] 0,1,3,7,12,18,26,35,45,58,72,87,104,122,141,162,184,207,233,260,288,318,349,381,415 ⋆ Partial sums of A004128. ● a(n) = Sum _{ j=0..n } (Sum _{ k=0..j } floor(j / 3 ^ k)). ●

► [A184534] 1,3,7,12,18,27,36,48,60,75,90,108,126,147,168,192,216,243,270,300,330,363,396,432,468 ⋆ a(n) = floor(1 /{ (4 + n ^ 3) ^ (1 / 3) }), where {} =fractional part. ● a(n) = floor[1 /{ (4 + n ^ 3) ^ (1 / 3) }], where {} =fractional part. ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4). ●

► [A171835] 3,7,12,18,29,41,54,68,87,107,128,150,177,205,234,264,299,335,372,410,453,497,542,588,639 ⋆ Partial sums of numbers congruent to { 3, 4, 5, 6 } mod 8 (A047425). ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 4) - 2 * a(n - 5) + a(n - 6) for n>6. ● a(n) = (4 * n ^ 2 + 2 * n + 5 - 2 * I ^ (- n) - 2 * I ^ n - I ^ (2 * n)) / 4 where I=sqrt(- 1). (End) ●

► [A212293] 0,0,3,7,12,19,26,34,43,53,63,74,85,97,110,122,136,150,164,179,194,210,226,242,259 ⋆ Integer part of n * log(n) ^ 2. ● a(n) = floor(n * log(n) ^ 2). ●

► [A194102] 1,3,7,12,19,27,36,47,59,73,88,104,122,141,162,184,208,233,259,287,316,347,379,412,447 ⋆ a(n) = Sum _{ j=1..n } floor(j * sqrt(2)); n - th partial sum of Beatty sequence for sqrt(2), A001951. ● a(n) = B * (B + 1) / 2 - C * (C + 1) - a(C) where B = floor(sqrt(2) * n) and C = floor(B / (sqrt(2) + 2)). - _ M. F. Hasler _ , Apr 23 2022 ●

► [A077043] 0,1,3,7,12,19,27,37,48,61,75,91,108,127,147,169,192,217,243,271,300,331,363,397,432 ⋆ "Three - quarter squares": a(n) = n ^ 2 - A002620(n). ● a(2k) = a(2k - 2) + 6k - 3, ● a(2k + 1) = a(2k - 1) + 6k, ● a(4n) = 12n ^ 2, ● a(4n + 1) = a(4n) + 6n + 1, ● a(4n + 2) = a(4n + 1) + 6n + 2, ● a(4n + 3) = a(4n + 2) + 6n + 4, ●

► [A024219] 0,3,7,12,19,28,38,49,62,77,93,110,129,150,172,195,220,247,275,304,335,368,402,437,474 ⋆ a(n) = floor((2nd elementary symmetric function of S(n)) / (first elementary symmetric function of S(n))), where S(n) = { first n + 1 positive integers congruent to 1 mod 3 } . ● a(n) = floor(n * (9 * n ^ 2 + 9 * n - 2) / (4 * (3 * n + 2))). ●

► [A122793] 1,3,7,12,19,28,38,50,64,80,97,116,137,160,185,211,239,269,301,335,371,408,447,488,531 ⋆ Connell sum sequence (partial sums of the Connell sequence). ● a(n) = (n - th triangular number) - n + (n - th partial sum of A122797). ● a(n) = n ^ 2 + n - R * ((6 * n + 1) - R ^ 2) / 6, where R = round(sqrt(2 * n)). - _ Gerald Hillier _ , Nov 29 2009 ●

► [A337300] 1,3,7,12,19,28,39,51,65,81,99,119,141,165,191,218,247,278,311,346,383,422,463,506,551 ⋆ Partial sums of the geometric Connell sequence A049039. ● a(n) = n ^ 2 - k * (n + 1) + 2 * (2 ^ k - 1) where k = floor(log _ 2(n)). ●

► [A036698] 0,1,3,7,12,20,28,37,49,63,79,94,110,132,153,177,199,225,252,282,314,343,379,413,448 ⋆ a(n) is the number of Gaussian integers z=a + bi satisfying |z|<=n, a>0, b>=0. ● a(n) = n ^ 2 * Pi / 4 + O(n). - _ Charles R Greathouse IV _ , Apr 03 2013 ●

► [A279169] 0,0,3,7,12,20,28,39,51,64,80,96,115,135,156,180,204,231,259,288,320,352,387,423,460 ⋆ a(n) = floor(4 * n ^ 2 / 5). ● a(n) = a(- n) = 2 * a(n - 1) - a(n - 2) + a(n - 5) - 2 * a(n - 6) + a(n - 7). ● a(5 * m + r) = 4 * m * (5 * m + 2 * r) + a(r), where m >= 0 and 0 <= r < 5. Example: for m=4 and r=3, a(5 * 4 + 3) = a(23) = 4 * 4 * (5 * 4 + 2 * 3) + a(3) = 416 + 7 = 423. ●

► [A374352] 1,3,7,12,20,28,40,52,66,82,102,122,146,170,202,228,260,288,324,364,412,452,496,544,588 ⋆ a(n) = [n>1] * a(n - 1) + Sum _{ d|n } phi(lcm(d,n / d)) where [] is an Iverson bracket. ● a(n) = Sum _{ j=1..n } Sum _{ d|j } phi(lcm(d,j / d)). ●

► [A130050] 3,7,12,20,29,39,50,63,77,92,108,126,145,166,188,211,235,260,286,313,341,371,402,435,469 ⋆ A bisection of A120049. ● a(n)=b(2n), for n>=1, where b=A130049. ●

► [A330285] 0,0,1,3,7,12,20,29,41,55,72,90,113,137,164,194,228,263,303,344,390,439,491,544,604 ⋆ The maximum number of arithmetic progressions in a sequence of length n. ● a(n) = Sum _{ i=1..n } Sum _{ j=1..i } floor((i - 1) / (j + 1)). ●

► [A356807] 3,7,12,24,46,89,171,330,636,1226,2363,4555,8780,16924,32622,62881,121207,233634,450344,868066,1673251,3225295,6216956,11983568,23099070 ⋆ Tetranacci sequence beginning with 3, 7, 12, 24. ● a(n) = a(n - 1) + a(n - 2) + a(n - 3) + a(n - 4). ● a(n) = L(n + 2) - F(n - 2) + Sum _{ k=0..n - 3 } a(k) * F(n - k - 1), for L(n) and F(n) the Lucas and Fibonacci numbers. ●

► [A280345] 3,7,12,25,48,97,192,385,768,1537,3072,6145,12288,24577,49152,98305,196608,393217,786432,1572865,3145728,6291457,12582912,25165825,50331648 ⋆ a(0) = 3, a(n + 1) = 2 * a(n) + periodic sequence of length 2: repeat [1, - 2]. ● a(2n) = 3 * 4 ^ n, a(2n + 1) = 6 * 4 ^ n + 1. ● a(n) = 2 * a(n - 1) + a(n - 2) - 2 * a(n - 3), n>2. ● a(n + 2) = a(n) + 9 * 2 ^ n. ● a(n) = 3 * 2 ^ n for n even. ● a(n) = 3 * 2 ^ n + 1 for n odd. ●

► [A290642] 3,7,13,14,15,18 ⋆ a(n) is the maximum diameter for an n - threaded binary program. In other words, a(n) is the maximal finite distance in the transition graph of an n - threaded binary program. ● a(n) >= 3 * n for all n >= 1. ● a(n) <= n ^{ 2 ^{ 13 }} for all n >= 2. ●

► [A056530] 1,3,7,13,15,19,25,27,31,37,39,43,49,51,55,61,63,67,73,75,79,85,87,91,97 ⋆ Sequence remaining after third round of Flavius Josephus sieve; remove every fourth term of A047241. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n > 4. ●

► [A080565] 3,7,13,15,25,27,29,31,49,51,53,55,57,59,61,63,97,99,101,103,105,107,109,111,113 ⋆ Binary expansion of n has form 11 ** ... * 1. ● a(n) = 2 ^ floor(log[2](4 * (n - 1))) + 2 * n - 1 for n>1, a(1)=3. - Antonio G. Astudillo (afg _ astudillo(AT)hotmail.com), Feb 22 2003 ●

► [A063226] 3,7,13,17,23,27,33,37,43,47,53,57,63,67,73,77,83,87,93,97,103,107,113,117,123 ⋆ Dimension of the space of weight 2n cuspidal newforms for Gamma _ 0(63). ● a(n) = 4 * floor(n / 2) + 6 * floor((n - 1) / 2) + 3. - _ Gary Detlefs _ , Jul 04 2014 ● a(n) = (1 / 2) * (10 * n - 5 - (- 1) ^ n). ●

► [A214696] 3,7,13,17,4919,73789919 ⋆ Sum of next a(n) > 1 positive triangular numbers is a triangular number. ● a(n) is the smallest integer k > 1 such that (4 * k ^ 3 + 12 * s * k ^ 2 + 4 * (3 * s ^ 2 - 1) * k) / 3 + 1 is a square, where s = 1 + a(1) + a(2) + ... + a(n - 1). - _ Max Alekseyev _ , Jan 30 2014 ●

► [A118667] 0,1,3,7,13,19,21,23,27,33,39,41,43,47,53,59,61,63,67,73,79,81,83,87,93 ⋆ a(n) = a(n - 1) + ((abs(2 ^ a(n - 1) * a(n - 1)) mod 10). ● a(n) = a(n - 1) + ((abs(2 ^ a(n - 1) * a(n - 1)) mod 10) being a(0) = 0 and a(1) = 1 ● a(n)=(2 / 5) * Sum { k=0..n - 1 }{ 3 * (k mod 5) + [(k + 1) mod 5] + [(k + 4) mod 5] }- 1 + [C(2 * n,n) mod 2], with n>=0 [From _ Paolo P. Lava _ , Oct 07 2008] ●

► [A056531] 1,3,7,13,19,25,27,31,39,43,49,51,61,63,67,73,79,85,87,91,99,103,109,111,121 ⋆ Sequence remaining after a fourth round of Flavius Josephus sieve; remove every fifth term of A056530. ● a(n) = a(n - 1) + a(n - 12) - a(n - 13) for n > 13. ●

► [A276215] 3,7,13,19,26,34,42,51,61,72,83,95,108,121,135,150,165,181,197,214,231,249,267,286,306 ⋆ Position of n ^ s in the joint ranking of { h ^ r } and { k ^ s } , where r = sqrt(2), s = sqrt(6), h > 1, k > 1. ● a(n) = n + floor(n ^ (s / r)); the complement is given by n + floor(n ^ (r / s)). ●

► [A099957] 1,3,7,13,19,29,41,49,65,83,95,117,137,155,183,213,233,257,293,317,357,399,423,469,511 ⋆ a(n) = Sum _{ k=0..n - 1 } phi(2k + 1). ● a(n + 1) - a(n) = phi(2n + 1) (A037225). ● a(n) = (8 / Pi ^ 2) * n ^ 2 + O(n ^ (3 / 2 + eps)) (Lemma 1 in Lv Chuan, 2004). - _ Amiram Eldar _ , Aug 02 2022, corrected by _ M. F. Hasler _ , Mar 26 2023 ●

► [A023205] 3,7,13,19,31,37,61,67,73,79,97,103,109,139,151,163,181,229,241,271,283,307,313,367,373 ⋆ Numbers m such that m and 2 * m + 5 are both prime. ● a(n) == 1 (mod 6) for n>=2. - _ John Cerkan _ , Sep 07 2016 ●

► [A023200] 3,7,13,19,37,43,67,79,97,103,109,127,163,193,223,229,277,307,313,349,379,397,439,457,463 ⋆ Primes p such that p + 4 is also prime. ● a(n) >> n log ^ 2 n via the Selberg sieve. - _ Charles R Greathouse IV _ , Nov 20 2016 ●

► [A330707] 0,1,3,7,13,20,28,38,50,63,77,93,111,130,150,172,196,221,247,275,305,336,368,402,438 ⋆ a(n) = (3 * n ^ 2 + n - 1 + (- 1) ^ floor(n / 2)) / 4. ● a(n) = 3 * a(n - 1) - 4 * a(n - 2) + 4 * a(n - 3) - 3 * a(n - 4) + a(n - 5) for n>4. ● a(n) = (3 * n ^ 2 + n - 1 + sqrt(2) * sin((2 * n + 1) * Pi / 4)) / 4 = (3 * n ^ 2 + n - 1 + (- 1) ^ floor(n / 2)) / 4. - _ G. C. Greubel _ , Dec 30 2019 ●

► [A033551] 1,3,7,13,20,28,38,50,64,79,95,113,133,154,177,201,227,254,284,314,346,380,415,452,491 ⋆ Closest integer to (Pi / 4) * n ^ 2. ● a(n) = round((Pi / 4) * n ^ 2). ●

► [A100531] 1,3,7,13,21,23,27,33,41,43,47,53,61,63,67,73,81,83,87,93,101,103,107,113,121 ⋆ a(n) = a(n - 1) + (2 * n - 1) mod 8 + 1 with a(0)=1. ● a(n) = a(n - 1) + a(n - 4) - a(n - 5), with a(0)=1, a(1)=3, a(2)=7, a(3)=13, a(4)=21. - _ Harvey P. Dale _ , Apr 09 2012 ● a(n) = 5 * n - (3 - (- 1) ^ n) / 2 + i ^ n + (- i) ^ n, where i=sqrt(- 1). - _ Colin Barker _ , Oct 16 2015 ●

► [A298267] 0,3,7,13,21,30,42,54,69,85,103,123,144,168,192,219,247,277,309,342,378,414,453,493,535 ⋆ a(n) is the maximum number of heptiamonds in a hexagon of order n. ● a(n) = floor((6 * n ^ 2) / 7). ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 7) - 2 * a(n - 8) + a(n - 9) for n>8. ●

► [A002061] 1,1,3,7,13,21,31,43,57,73,91,111,133,157,183,211,241,273,307,343,381,421,463,507,553 ⋆ Central polygonal numbers: a(n) = n ^ 2 - n + 1. ● a(n) = - (n - 5) * a(n - 1) + (n - 2) * a(n - 2). ● a(n) = Phi _ 6(n) = Phi _ 3(n - 1), where Phi _ k is the k - th cyclotomic polynomial. ● a(1 - n) = a(n). - _ Michael Somos _ , Sep 04 2006 ● a(n) = 2 * C(n, 2) + C(n - 1, 0). ● a(n) = ceiling((n - 1 / 2) ^ 2). - _ Benoit Cloitre _ , Apr 16 2003. [Hence the terms are about midway between successive squares and so (except for 1) are not squares. - _ N. J. A. Sloane _ , Nov 01 2005] ● a(n) = 1 + Sum _{ j=0..n - 1 } (2 * j). - Xavier Acloque, Oct 08 2003 ●

► [A171965] 0,0,0,1,3,7,13,21,31,44,60,80,104,132,164,201,243,291,345,405,471,544,624,712,808 ⋆ Partial sums of floor(n ^ 2 / 6) (A056827). ● a(n) = Sum _{ k=0..n } floor(k ^ 2 / 6). ● a(n) = round((2 * n ^ 3 + 3 * n ^ 2 - 12 * n - 6) / 36). ● a(n) = round((4 * n ^ 3 + 6 * n ^ 2 - 24 * n - 13) / 72). ● a(n) = floor((2 * n ^ 3 + 3 * n ^ 2 - 12 * n + 7) / 36). ● a(n) = ceiling((2 * n ^ 3 + 3 * n ^ 2 - 12 * n - 20) / 36). ● a(n) = a(n - 6) + n ^ 2 - 5 * n + 7, n > 5. ●

► [A011898] 0,0,0,0,1,3,7,13,21,31,45,61,82,107,136,170,210,255,306,363,427,498,577,664,759 ⋆ a(n) = floor(n * (n - 1) * (n - 2) / 16). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 16) - 3 * a(n - 17) + 3 * a(n - 18) - a(n - 19). ●

► [A098577] 1,1,1,1,1,3,7,13,21,31,47,77,133,231,391,645,1053,1727,2863,4781,7989,13303,22071,36565,60621 ⋆ a(n) = Sum _{ k=0..floor(n / 5) } C(n - 3 * k,2 * k) * 2 ^ k. ● a(n) = a(n - 1) - a(n - 2) + 2 * a(n - 5). ●

► [A098575] 1,1,1,1,3,7,13,21,35,63,117,213,379,671,1197,2149,3859,6911,12357,22101,39563,70847,126845,227045,406371 ⋆ a(n) = Sum _{ k=0..floor(n / 4) } C(n - 2 * k,2 * k) * 2 ^ k. ● a(n) = 2 * a(n - 1) - a(n - 2) + 2 * a(n - 4). ●

► [A098482] 1,1,1,1,3,7,13,21,37,73,147,283,531,1007,1953,3817,7423,14371,27877,54333,106189,207585,405743,793719,1554889 ⋆ Expansion of 1 / sqrt((1 - x) ^ 2 - 4 * x ^ 4). ● a(n) = sum(k=0..floor(n / 2), binomial(n - 2 * k, k) * binomial(n - 3 * k, k)). ●

► [A051336] 1,3,7,13,22,33,48,65,86,110,138,168,204,242,284,330,381,434,493,554,621,692,767,844,929 ⋆ Number of arithmetic progressions in { 1,2,3,...,n } , including trivial arithmetic progressions of lengths 1 and 2. ● a(n) = n + Sum _{ i=1..n - 1, j=1..floor(n / i) } (n - i * j). - Robert E. Sawyer (rs.1(AT)mindspring.com) ● a(n + 1) = a(n) + 1 + Sum _{ i=1..n } tau(i). ● a(n + 1) = (n + 1) * (1 + Sum _{ i=1..n } floor(n / i)) - Sum _{ i=1..n } i * tau(i). ●

► [A173196] 0,0,1,3,7,13,22,34,50,70,95,125,161,203,252,308,372,444,525,615,715,825,946,1078,1222 ⋆ Partial sums of A002620. ● a(n) = (4 * n ^ 3 + 6 * n ^ 2 - 4 * n - 3 + 3 * (- 1) ^ n) / 48. - _ Bruno Berselli _ , Jan 19 2011 ● a(n) = round((2 * n ^ 3 + 3 * n ^ 2 - 2 * n) / 24) = round((4 * n ^ 3 + 6 * n ^ 2 - 4 * n - 3) / 48) = floor((2 * n ^ 3 + 3 * n ^ 2 - 2 * n) / 24) = ceiling((2 * n ^ 3 + 3 * n ^ 2 - 2 * n - 3) / 24). - _ Mircea Merca _ , Nov 23 2010 ● a(n) = a(n - 2) + n * (n - 1) / 2, n > 1. - _ Mircea Merca _ , Nov 25 2010 ● a(n) = floor(n / 2) * (floor(n / 2) + 1) * (8 * ceiling(n / 2) - 2 * n - 1) / 6. - _ Alexander Evnin _ , Oct 12 2010 ● a(n) = - a(- 1 - n) for all n in Z. - _ Michael Somos _ , Jan 14 2021 ●

► [A002623] 1,3,7,13,22,34,50,70,95,125,161,203,252,308,372,444,525,615,715,825,946,1078,1222,1378,1547 ⋆ Expansion of 1 / ((1 - x) ^ 4 * (1 + x)). ● a(n + 1) = a(n) + { (k - 1) * k if n=2 * k } or { k * k if n=2 * k + 1 } . ● a(n) = Sum _{ k=0..n } (- 1) ^ (n - k) * C(k + 3,3). ● a(n) = (4 * n ^ 3 + 30 * n ^ 2 + 68 * n + 45) * (- 1) ^ n / 48 + 1 / 16. ● a(n) = Sum _{ k=0..n } floor((k + 2) ^ 2 / 4). ● a(n) = Sum _{ k=0..n } Sum _{ j=0..k } Sum _{ i=0..j } (1 + (- 1) ^ i) / 2. (End) ● a(n) = a(n - 2) + (n * (n - 1)) / 2, with n>2, a(1)=0, a(2)=1; a(n) = (4 * n ^ 3 + 6 * n ^ 2 - 4 * n + 3 * (- 1) ^ n - 3) / 48, with offset 2. - Cecilia Rossiter (cecilia(AT)noticingnumbers.net), Dec 14 2004 (formula simplified by _ Bruno Berselli _ , Aug 29 2013) ●

► [A081662] 1,3,7,13,22,35,54,82,124,188,287,442,687,1077,1701,2703,4316,6917,11116,17900,28866,46598,75277,121668,196717 ⋆ Partial sums of n + Fibonacci(n + 1). ● a(n) = (1 - 2 * sqrt(5) / 5) * (sqrt(5) / 2 - 1 / 2) ^ n * (- 1) ^ n + (sqrt(5) / 2 + 1 / 2) ^ n * (2 * sqrt(5) / 5 + 1) + (n ^ 2 + n - 2) / 2. ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + a(n - 3) + 2 * a(n - 4) - a(n - 5); a(0)=1, a(1)=3, a(2)=7, a(3)=13, a(4)=22. - _ Harvey P. Dale _ , Nov 19 2011 ●

► [A101301] 1,3,7,13,23,35,51,69,91,119,149,185,225,267,313,365,423,483,549,619,691,769,851,939,1035 ⋆ The sum of the first n primes, minus n. ● a(n)=sum _{ k=1..n } (prime(k) - 1) ●

► [A053599] 1,3,7,13,23,37,59,89,135,197,291,417,607,861,1243,1753,2519,3541,5075,7121,10191,14285,20427,28617,40903 ⋆ Number of nonempty subsequences { s(k) } of 1..n such that the difference sequence is palindromic. ● a(1)=1, a(2)=3 and, for n > 2, a(n) = 2 * a(n - 2) + 2 * n - 1. ● a(n) = 5 * 2 ^ ((n + 1) / 2) - 2 * n - 7 for odd n, 7 * 2 ^ (n / 2) - 2 * n - 7 for even n. - _ Andrew Woods _ , May 19 2012 ●

► [A122886] 0,0,1,1,1,1,3,7,13,23,39,61,123,231,385,739,1339,2185,4263,7819,12853,24935,45543,74677,145155 ⋆ Interlaced merger of A122883, A122884 and A122885. ● a(n)=4 * a(n - 3) + 11 * a(n - 6) - 2 * a(n - 9). G.f.: x ^ 2 * (1 - x) * (2 * x ^ 5 - x ^ 4 + 3 * x ^ 2 + 2 * x + 1) / ((2 * x ^ 3 + 1) * (1 - 6 * x ^ 3 + x ^ 6)). [From _ R. J. Mathar _ , Aug 12 2009] ●

► [A154691] 1,3,7,13,23,39,65,107,175,285,463,751,1217,1971,3191,5165,8359,13527,21889,35419,57311,92733,150047,242783,392833 ⋆ Expansion of (1 + x + x ^ 2) / ((1 - x - x ^ 2) * (1 - x)). ● a(n) = - 3 + (2 ^ (1 - n) * ((1 - r) ^ n * (- 2 + r) + (1 + r) ^ n * (2 + r))) / r where r=sqrt(5). ● a(n) = 2 * a(n - 1) - a(n - 3) for n>2. ● a(n) = 2 * Fibonacci(n + 3) - 3. - _ Greg Dresden _ , Oct 10 2020 ●

► [A227121] 3,7,13,23,40,68,112,178,273,405,583,817,1118,1498,1970,2548,3247,4083,5073,6235,7588,9152,10948,12998,15325 ⋆ Number of n X 2 0,1 arrays indicating 2 X 2 subblocks of some larger (n + 1) X 3 binary array having a sum of zero, with rows and columns of the latter in lexicographically nondecreasing order . ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

► [A317783] 1,1,1,3,7,13,23,41,75,139,257,473,869,1597,2937,5403,9939,18281,33623,61841,113743,209207,384793,707745,1301745 ⋆ Number of equivalence classes of binary words of length n for the set of subwords { 010, 101 } . ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) + a(n - 5) for n >= 5. ●

► [A049112] 1,1,3,7,13,23,45,87,167,321,619,1193,2299,4431,8541,16463,31733,61167,117903,227265,438067,844401,1627635,3137367,6047469 ⋆ 2 - ranks of difference sets constructed from Glynn type I hyperovals. ● a(n + 1) = a(n) + a(n - 1) + a(n - 2) + a(n - 3) - 1, n >= 5. ●

► [A100720] 3,7,13,23,47,97,193,383,767,1537,3073,6143,12287,24577,49153,98303,196607,393217,786433,1572863,3145727,6291457,12582913,25165823,50331647 ⋆ Expansion of g.f.: (3 + x + 2 * x ^ 2 - 2 * x ^ 3) / ((1 - 2 * x) * (1 + x ^ 2)). ● a(0)=3 and for n>1: a(n)= 3 * 2 ^ n + 1 if n(mod 4)=1 or 2; otherwise 3 * 2 ^ n - 1. - R. Piyo (nagoya314(AT)yahoo.com), Dec 12 2004 ● a(n) = [n=0] + 3 * 2 ^ n - (- 1) ^ floor((n + 1) / 2). ●

► [A360783] 1,1,1,1,3,7,13,24,55,133,301,678,1639,4120,10253,25591,65869,173551,459493,1225379,3325123,9162046,25451181,71296499,202144225 ⋆ Expansion of Sum _{ k>=0 } x ^ k / (1 - k * x ^ 3) ^ (k + 1). ● a(n) = Sum _{ k=0..floor(n / 3) } (n - 3 * k) ^ k * binomial(n - 2 * k,k). ●

► [A328652] 0,1,3,7,13,25,40,65,99,146,208,294,399,538,711,926,1188,1513,1896,2361,2910,3557,4312,5199,6214 ⋆ Number of unlabeled loopless multigraphs with n edges covering four vertices. ● a(n) = 2 * a(n - 1) - 2 * a(n - 4) - 2 * a(n - 5) + 3 * a(n - 6) + 3 * a(n - 8) - 2 * a(n - 9) - 2 * a(n - 10) + 2 * a(n - 13) - a(n - 14) for n > 14. ●

► [A363707] 0,1,3,7,13,25,43,75,125,207,343,561,915,1489,2417,3919,6353,10289,16659,26967,43645,70631,114299,184953,299275 ⋆ For n >= 2, a(n) = a(n - 1) + a(n - 2) + A051697(n), a(0)=0, a(1)=1. ● a(0)=0, a(1)=1, a(n) = a(n - 1) + a(n - 2) + p(n), where p(n) = min { p:p is prime and |p - n| is minimized, and the smaller prime when n is equidistant between primes } . ●

► [A341579] 0,1,3,7,13,25,47,89,165,307,569,1057,1959,3633,6733,12483,23137,42889,79495,147353,273125,506259,938377,1739345,3223975 ⋆ Number of steps needed to solve the Towers of Hanoi exchanging disks puzzle with 3 pegs and n disks. ● a(n) = a(n - 1) + a(n - 2) + 2 * a(n - 4) + 3 for n>=4. [Stockmeyer et al.] ● a(n) = 2 * a(n - 1) - a(n - 3) + 2 * a(n - 4) - 2 * a(n - 5). ●

► [A275788] 0,1,3,7,13,25,49,99,199,399,797,1593,3185,6371,12743,25487,50973,101945,203889,407779,815559,1631119,3262237,6524473,13048945 ⋆ a(0) = 0, a(n + 1) = 2 * a(n) + (- 1) ^ floor(n / 3). ● a(n) = 2 * a(n - 1) - a(n - 3) + 2 * a(n - 4) for n>3. ● a(n + 3) = 7 * 2 ^ n - a(n), a(0)=0, a(1)=1, a(2)=3. ●

► [A007909] 1,1,1,3,7,13,25,51,103,205,409,819,1639,3277,6553,13107,26215,52429,104857,209715,419431,838861,1677721,3355443,6710887 ⋆ Expansion of (1 - x) / (1 - 2 * x + x ^ 2 - 2 * x ^ 3). ● a(n) = (1 / 5) * (2 ^ (n + 1) + 3 * cos(n * Pi / 2) + sin(n * Pi / 2)). ● a(n) = Sum _{ k=0..floor((n - 1) / 3) } binomial(n - k - 1, 2 * k) * 2 ^ k. - _ Paul Barry _ , Sep 16 2004 ● a(n) = (1 / 5) * (2 ^ (n + 1) + (- 1) ^ [(n + 1) / 2] + 2 * (- 1) ^ [n / 2]). - _ Ralf Stephan _ , Jun 09 2005 ● a(n) = 2 * a(n - 1) - a(n - 2) + 2 * a(n - 3). Sequence is identical to its half second differences from the second term; a(n) + a(n + 2)=2 ^ (n + 1). - _ Paul Curtz _ , Dec 17 2007 ● a(n + 1) = (2 ^ n) * Sum _{ k=1..n } (- 1) ^ floor(k / 2) / 2 ^ k. - _ Yalcin Aktar _ , Jul 20 2008 ●

► [A282913] 1,3,7,13,25,59,123,219,411,955,1979,3515,6587,15291,31675,56251,105403,244667,506811,900027,1686459,3914683,8108987,14400443,26983355 ⋆ Decimal representation of the x - axis, from the left edge to the origin, of the n - th stage of growth of the two - dimensional cellular automaton defined by "Rule 526", based on the 5 - celled von Neumann neighborhood. ● a(n) = a(n - 1) + 16 * a(n - 4) - 16 * a(n - 5) for n>5. ●

► [A298360] 3,7,13,27,33,37,43,57,63,67,73,87,93,97,103,117,123,127,133,147,153,157,163,177,183 ⋆ Numbers congruent to { 3, 7, 13, 27 } mod 30. ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n > 5. ● a(n) = a(n - 4) + 30. ●

► [A098479] 1,1,1,3,7,13,27,61,133,287,633,1407,3121,6943,15517,34755,77959,175213,394499,889461,2007963,4538485,10269247,23258881,52726599 ⋆ Expansion of 1 / sqrt((1 - x) ^ 2 - 4 * x ^ 3). ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n - k, k) * binomial(n - 2 * k, k). ●

► [A283587] 1,3,7,13,29,53,113,219,475,859,1819,3515,7595,13739,29099,56235,121771,220075,465835,900011,1944491,3517355,7449515,14396331,31173547 ⋆ Decimal representation of the x - axis, from the left edge to the origin, of the n - th stage of growth of the two - dimensional cellular automaton defined by "Rule 654", based on the 5 - celled von Neumann neighborhood. ● a(n) = a(n - 1) + 256 * a(n - 8) - 256 * a(n - 9) for n>12. ●

► [A284542] 1,3,7,13,29,53,113,219,479,863,1823,3519,7679,13823,29183,56319,122879,221183,466943,901119,1966079,3538943,7471103,14417919,31457279 ⋆ Decimal representation of the x - axis, from the left edge to the origin, of the n - th stage of growth of the two - dimensional cellular automaton defined by "Rule 974", based on the 5 - celled von Neumann neighborhood. ● a(n) = a(n - 1) + 16 * a(n - 4) - 16 * a(n - 5) for n>8. ●

► [A283323] 1,3,7,13,29,53,117,213,469,853,1877,3413,7509,13653,30037,54613,120149,218453,480597,873813,1922389,3495253,7689557,13981013,30758229 ⋆ a(n) = 4 * a(n - 2) + 1 with initial terms 1,3,7. ● a(n) = (- 4 + (- 2) ^ n + 21 * 2 ^ n) / 12 for n>0. ● a(n) = a(n - 1) + 4 * a(n - 2) - 4 * a(n - 3) for n>3. ●

► [A091565] 0,1,1,1,3,7,13,29,71,163,377,913,2219,5375,13189,32677,81167,202523,508273,1280537,3236275,8207543,20880893,53263405,136205527 ⋆ Expansion of (1 - x - sqrt(1 - 2 * x + x ^ 2 - 8 * x ^ 3)) / (4 * x ^ 2) in powers of x. ● a(n) = a(n - 1) + 2 * (a(1) * a(n - 3) + a(2) * a(n - 4) + ... + a(n - 3) * a(1)) for n>1. ●

► [A110436] 1,3,7,13,31,63,105,255,511,869,2047,3963,7021,16383,32767,56141,125811,262143,449325,1048575,2097151,3459945,8388607,16645111,28760685 ⋆ A weighted sum of Jacobi function values. ● a(n)=sum { k=0..n, abs(Jacobi(n - k, 2k + 1))2 ^ k } ●

► [A112040] 1,3,7,13,33,47,132,458,777,853,3845,4395,4783,4983,6038,6487,6719,6957,11707,12030,12688,13025,13365,13709,14057 ⋆ Terms in A112039 that are divisible by 3, divided by 3. ● a(0)=1 / 2 a(n) = a(n - 1) + Prime[n] / 2 if a[2 * n] / 3 is an Integer then aout=a[2 * n] / 3 ●

► [A358560] 1,1,1,3,7,13,33,91,223,597,1753,4963,14391,44413,137137,427083,1382383,4534981,14981673,50719507,174494983,605276973,2135204161,7647369403,27643067007 ⋆ a(n) = Sum _{ k=0..floor(n / 3) } (n - k)! / (k! * (n - 3 * k)!). ● a(n) = (4 * a(n - 1) - a(n - 2) + 2 * (2 * n - 3) * a(n - 3)) / 3 for n > 2. ●

► [A358547] 1,1,1,3,7,13,45,151,403,1617,6793,23275,105951,522133,2159077,10964223,61134955,293587801,1641566913,10124731987,55014334903,335177088285,2251814156701,13587321392743,89436553249347 ⋆ a(n) = Sum _{ k=0..floor(n / 3) } (n - k)! / (n - 3 * k)!. ● a(n) = (3 * (2 * n - 1) * a(n - 1) - n * a(n - 2) + 2 * (n - 1) * n * (2 * n - 3) * a(n - 3) + 2 * (2 * n - 3)) / (9 * (n - 1)) for n > 2. ●

► [A228209] 3,7,13,57,253,487,2163,9607,18493,82137,364813,702247,3119043,13853287,26666893,118441497,526060093,1012639687,4497657843,19976430247,38453641213,170792556537,758578289293,1460225726407,6485619490563 ⋆ x - values in the solutions to x ^ 2 - 10y ^ 2 = 9. ● a(n) = 38 * a(n - 3) - a(n - 6). ●

► [A001843] 1,1,3,7,14,18,30,35,51,65,91,105,140,157,198,228,285,315,385,419,498,550,650,702,819 ⋆ The coding - theoretic function A(n,4,4). ● a(n)= + a(n - 1) + a(n - 2) - a(n - 3) + a(n - 6) - a(n - 7) - a(n - 8) + a(n - 9) + a(n - 12) - a(n - 13) - a(n - 14) + a(n - 15) - a(n - 18) + a(n - 19) + a(n - 20) - a(n - 21). - _ R. J. Mathar _ , Oct 01 2021 ●

► [A156859] 0,3,7,14,22,33,45,60,76,95,115,138,162,189,217,248,280,315,351,390,430,473,517,564,612 ⋆ The main column of a version of the square spiral. ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4). (End) ● a(n) = - n - 1 + Sum _{ j=0..n } Sum _{ k=0..j } (2 + (- 1) ^ k). - _ Paolo P. Lava _ , Mar 05 2009 ● a(n - 1) = floor(n / (e ^ (1 / n) - 1)). - _ Richard R. Forberg _ , Jun 19 2013 ●

► [A173209] 1,3,7,14,22,33,46,60,76,95,116,138,163,189,217,248,280,315,352,390,431,473,517,564,613 ⋆ Partial sums of A000069. ● a(n) = n ^ 2 - n / 2 + O(1). - _ Charles R Greathouse IV _ , Mar 22 2013 ●

► [A140462] 0,0,0,1,3,7,14,23,36,54,75,102,136,174,220,275,335,405,486,573,672,784,903,1036,1184 ⋆ Turan's upper bound on the number of triangles of a simplicial complex of dimension two for which every minimal non - face has three vertices. • a(n) = (5 / 2) * (k ^ 3) - (3 / 2) * (k ^ 2) if n = 3 * k; (5 / 2) * (k ^ 3) + (k ^ 2) - (1 / 2) * k if n = 3 * k + 1; (5 / 2) * (k ^ 3) + (7 / 2) * (k ^ 2) + k if n = 3 * k + 2. •

► [A060999] 0,1,3,7,14,24,38,57,81,111,148,192,244,305,375,455,546,648,762,889,1029,1183,1352,1536,1736 ⋆ Nearest integer to (n + 1) ^ 3 / 9. • a(- 2 - n) = - a(n). - _ Michael Somos _ , Aug 12 2009 •

► [A316319] 1,3,7,14,25,38,51,63,75,87,99,111,123,135,147,159,171,183,195,207,219,231,243,255,267 ⋆ Coordination sequence for a trivalent node in a chamfered version of the 3 ^ 6 triangular tiling of the plane. • a(n) = 2 * a(n - 1) - a(n - 2) for n>7. •

► [A179178] 1,3,7,14,25,40,57,77,100,126,155,187,222,260,301,345,392,442,495,551,610,672,737,805,876 ⋆ The number of equal - sized equilateral triangles visible (when viewed from above) in successive Genealodrons formed from 2 ^ n - 1 same size equilateral triangles. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n >5. • a(n) = (2 - 5 * n + 3 * n ^ 2) / 2 for n>5. •

► [A171973] 0,0,3,7,14,25,40,60,85,117,156,203,258,323,397,482,579,687,808,942,1091,1254,1433,1629,1841 ⋆ Integer part of the volume of a regular tetrahedron with edge length n. • a(n) = floor(n ^ 3 * sqrt(2) / 12). •

► [A253895] 1,3,7,14,25,41,63,90,120,154,192,233,278,328,382,439,500,566,636,709,786,868,954,1043,1136 ⋆ Total number of octagons in two variants of an octagon expansion after n iterations: either "side - to - side" or "vertex - to - vertex", respectively. • a(n) = (- 4 - i * (- i) ^ n + i * i ^ n - 18 * n + 8 * n ^ 2) / 4 for n>8, where i=sqrt(- 1). •

► [A004006] 0,1,3,7,14,25,41,63,92,129,175,231,298,377,469,575,696,833,987,1159,1350,1561,1793,2047,2324 ⋆ a(n) = C(n,1) + C(n,2) + C(n,3), or n * (n ^ 2 + 5) / 6. • a(- n) = - a(n). • a(n) = binomial(n + 2,n - 1) - binomial(n,n - 2). - _ Zerinvary Lajos _ , May 11 2006 • a(n) = a(n - 1) + n ^ 2 / 2 - n / 2 + 1, with a(0)=0. - _ Paolo P. Lava _ , Apr 12 2007 • a(0)=0, a(1)=1, a(2)=3, a(3)=7, a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Harvey P. Dale _ , Aug 21 2011 • a(n) = 2 * a(n - 1) + (n - 1) - a(n - 2) with a(0) = 0, a(1) = 1. - _ Richard R. Forberg _ , Jan 23 2014 • a(n) = Sum _{ i=1..n } binomial(n - 2i,2). - _ Wesley Ivan Hurt _ , Nov 18 2017 •

► [A057524] 1,3,7,14,25,41,64,95,136,189,256,339,441,564,711,885,1089,1326,1600,1914,2272,2678,3136,3650,4225 ⋆ Number of 3 x n binary matrices without unit columns up to row and column permutations. • a(n) = Sum _{ m=0..n } (n - m + 1) * floor(((m + 3) ^ 2 + 3) / 12). [_ Renzo Benedetti _ , Sep 30 2009] • a(n) = floor(((n + 2) * (n + 6) / 12) ^ 2) = round(((n + 2) * (n + 6) / 12) ^ 2). [_ Renzo Benedetti _ , Jul 25 2012] •

► [A011795] 0,0,0,0,0,1,3,7,14,25,42,66,99,143,200,273,364,476,612,775,969,1197,1463,1771,2125 ⋆ a(n) = floor(C(n,4) / 5). • a(n) = floor(binomial(n + 1,5) / (n + 1)). - _ Gary Detlefs _ , Nov 23 2011 •

► [A051170] 0,1,3,7,14,25,42,66,99,143,200,273,364,476,612,775,969,1197,1463,1771,2125,2530,2990,3510,4095 ⋆ T(n,5), array T as in A051168; a count of Lyndon words; aperiodic necklaces with 5 black beads and n - 5 white beads. • a(n) = floor(C(n,5) / n). - _ Alois P. Heinz _ , Jun 05 2013 •

► [A193911] 1,3,7,14,25,43,69,110,167,255,375,558,805,1179,1681,2438,3451,4975,7011,10070,14153,20283,28461,40734,57103 ⋆ Sums of the diagonals of the matrix formed by listing the h - Stohr sequences in increasing order. • a(n + 4) = - 2 * a(n) + 3 * a(n + 2) + n + 5. - _ Alexander R. Povolotsky _ , Aug 09 2011 • a(n) = 1 / 8 * (2 ^ (n / 2 + 2) * ((10 - 7 * sqrt(2)) * (- 1) ^ n + 10 + 7 * sqrt(2)) - (- 1) ^ n - 2 * n * (n + 12) - 79). - _ Alexander R. Povolotsky, Aug 09 2011 •

► [A206417] 0,3,7,14,25,43,72,119,195,318,517,839,1360,2203,3567,5774,9345,15123,24472,39599,64075,103678,167757,271439,439200 ⋆ (5 * F(n) + 3 * L(n) - 8) / 2. • a(n) = 2 * a(n - 1) - a(n - 3). G.f.: x ^ 2 * (x + 3) / ((x - 1) * (x ^ 2 + x - 1)). - _ Colin Barker _ , Oct 28 2014 •

► [A008646] 1,1,3,7,14,26,42,66,99,143,201,273,364,476,612,776,969,1197,1463,1771,2126,2530,2990,3510,4095 ⋆ Molien series for cyclic group of order 5. • a(- 5 - n) = a(n) for all integers. • a(n) = ceiling(binomial(n + 5, 5) / (n + 5)). • a(n) = (n ^ 4 + 10 * n ^ 3 + 35 * n ^ 2 + 50 * n + 24 * (3 - 2 * (- 1) ^ (2 ^ (n - 5 * floor(n / 5))))) / 120. - _ Luce ETIENNE _ , Oct 31 2015 •

► [A036830] 3,7,14,26,44,70,105,152,213,291,388,508,654,829,1037,1281,1566,1896,2276,2710,3203,3761,4388,5091,5875 ⋆ Schoenheim bound L _ 1(n,n - 4,n - 5). • a(6)=3; a(n) = ceiling(n / (n - 4) * a(n - 1)). - _ Benoit Cloitre _ , May 31 2003 •

► [A001924] 0,1,3,7,14,26,46,79,133,221,364,596,972,1581,2567,4163,6746,10926,17690,28635,46345,75001,121368,196392,317784 ⋆ Apply partial sum operator twice to Fibonacci numbers. • a(n) = Fibonacci(n + 4) - (3 + n). (End) • a(n) = Sum _{ k=0..n } Sum _{ i=0..k } Fibonacci(i). - _ Benoit Cloitre _ , Jan 26 2003 • a(n) = (sqrt(5) / 2 + 1 / 2) ^ n * (7 * sqrt(5) / 10 + 3 / 2) + (3 / 2 - 7 * sqrt(5) / 10) * (sqrt(5) / 2 - 1 / 2) ^ n * (- 1) ^ n - n - 3. - _ Paul Barry _ , Mar 26 2003 • a(n) = Sum _{ k=0..n } Fibonacci(k) * (n - k). - _ Benoit Cloitre _ , Jun 07 2004 • a(n) = Sum _{ k=1..n } C(n - k + 2,k + 1). - _ Paolo P. Lava _ , Apr 16 2008 • a(n) = Sum _{ k=0..n } Sum _{ i=0..n } i * C(n - k,k - i). - _ Wesley Ivan Hurt _ , Sep 21 2017 •

► [A079921] 3,7,14,26,46,79,133,221,364,596,972,1581,2567,4163,6746,10926,17690,28635,46345,75001,121368,196392,317784,514201,832011 ⋆ Solution to the Dancing School Problem with n girls and n + 2 boys: f(n,2). • a(n) = a(n - 1) + a(n - 2) + n + 1, a(1)=3, a(2)=7. • a(n) = 3 * a(n - 1) - 2 * a(n - 2) - a(n - 3) + a(n - 4). - _ Wesley Ivan Hurt _ , Dec 03 2021 •

► [A132109] 1,3,7,14,26,47,85,156,292,557,1079,2114,4174,8283,16489,32888,65672,131225,262315,524478,1048786,2097383,4194557,8388884,16777516 ⋆ a(n) = (2 ^ (n + 1) + n ^ 2 + n) / 2. • a(n) = (2 ^ (n + 1) + n ^ 2 + n) / 2. - _ Eric W. Weisstein _ , Aug 09 2017 • a(n) = 5 * a(n - 1) - 9 * a(n - 2) + 7 * a(n - 3) - 2 * a(n - 4). - _ Eric W. Weisstein _ , Aug 09 2017 •

► [A018084] 1,1,3,7,14,27,52,101,196,379,733,1418,2744,5307,10267,19860,38416,74309,143739,278040,537824,1040332,2012353,3892567,7529536 ⋆ Powers of fourth root of 14 rounded down. • a(n) = floor(A011011 ^ n). •

► [A088209] 1,3,7,14,28,53,99,181,327,584,1034,1817,3173,5511,9527,16402,28136,48109,82023,139481,236631,400588,676822,1141489,1921993 ⋆ Numerators of convergents of the continued fraction with the n + 1 partial quotients: [1;1,1,...(n 1's)...,1,n + 1], starting with [1], [1;2], [1;1,3], [1;1,1,4], ... • a(n) = Fibonacci(n) + (n + 1) * Fibonacci(n + 1). - _ Paul Barry _ , Apr 20 2004 • a(n) = a(n - 1) + a(n - 2) + Lucas(n). - _ Yuchun Ji _ , Apr 23 2023 •

► [A089074] 0,1,3,7,14,28,55,107,207,400,772,1489,2871,5535,10670,20568,39647,76423,147311,283952,547336,1055025,2033627,3919943,7555934 ⋆ Expansion of x * (1 + x + x ^ 2) / (1 - 2 * x + x ^ 5). • a(n) = 2 * a(n - 1) - a(n - 5) for n >= 6. (End) •

► [A125176] 1,3,7,14,28,56,112,224,448,896,1792,3584,7168,14336,28672,57344,114688,229376,458752,917504,1835008,3670016,7340032,14680064,29360128 ⋆ Row sums of A125175. • a(1) = 1, a(2) = 3, a(n) = 7 * 2 ^ (n - 3) for n>=3. • a(n) = 2 * a(n - 1) for n>3. •

► [A153234] 0,0,0,0,1,3,7,14,28,56,113,227,455,910,1820,3640,7281,14563,29127,58254,116508,233016,466033,932067,1864135 ⋆ a(n) = floor(2 ^ n / 9). • a(n) = round((2 * 2 ^ n - 9) / 18) = floor((2 ^ n - 1) / 9) = ceiling((2 ^ n - 8) / 9). • a(n) = a(n - 6) + 7 * 2 ^ (n - 6), n > 5. (End) • a(n) = 3 * a(n - 1) - 2 * a(n - 2) - a(n - 3) + 3 * a(n - 4) - 2 * a(n - 5). •

► [A293334] 0,0,1,3,7,14,28,57,114,228,457,915,1831,3663,7327,14654,29308,58617,117234,234468,468937,937874,1875749,3751499,7502999 ⋆ Greatest integer k such that k / 2 ^ n < sqrt(1 / 5). • a(n) = floor(r * 2 ^ n), where r = sqrt(1 / 5). •

► [A151754] 1,3,7,14,28,57,115,230,460,921,1843,3686,7372,14745,29491,58982,117964,235929,471859,943718,1887436,3774873,7549747,15099494,30198988 ⋆ Number of n - digit numbers that are divisible by 5 ^ n. • a(n) = [(9 / 10) * 2 ^ n]. - _ David W. Wilson _ , Jun 18 2009 •

► [A266791] 1,3,7,14,29,58,117,234,468,937,1875,3751,7502,15005,30010,60021,120042,240085,480170,960341,1920682,3841365,7682730,15365461,30730922 ⋆ Decimal representation of the middle column of the "Rule 61" elementary cellular automaton starting with a single ON (black) cell. • a(n) = (- (- 1) ^ n + 5627 * 2 ^ (n - 9) - 3) / 6 for n>9. •

► [A052997] 1,3,7,14,29,58,117,234,469,938,1877,3754,7509,15018,30037,60074,120149,240298,480597,961194,1922389,3844778,7689557,15379114,30758229 ⋆ Expansion of (1 + x - x ^ 3) / ((1 - 2 * x) * (1 - x ^ 2)). • a(n) = 2 * a(n - 1) + 1 for even n, otherwise a(n) = 2 * a(n - 1), with a(0)=1, a(1)=3. [_ Bruno Berselli _ , Jun 19 2014] •

► [A267210] 1,3,7,14,29,59,118,237,475,950,1901,3803,7606,15213,30427,60854,121709,243419,486838,973677,1947355,3894710,7789421,15578843,31157686 ⋆ Decimal representation of the middle column of the "Rule 109" elementary cellular automaton starting with a single ON (black) cell. • a(n) = 2 * a(n - 1) + a(n - 3) - 2 * a(n - 4) for n>3. •

► [A074988] 1,3,7,14,29,59,119,238,476,953,1907,3814,7629,15259,30519,61038,122077,244154,488309,976618,1953237,3906475,7812951,15625902,31251804 ⋆ Numbers n such that the k - th binary digit of n equals mu(k) ^ 2 for k=1 up to A029837(n + 1). • a(n + 1)=2 * a(n) + mu(n + 1) ^ 2 a(n)=sum(i=1, n, mu(i) ^ 2 * 2 ^ (n - i)) • a(n)=sum { k=0..n, abs(mu(n - k + 1)) * 2 ^ k } ; - _ Paul Barry _ , Jul 20 2005 •

► [A265381] 1,3,7,14,29,59,119,238,477,955,1911,3822,7645,15291,30583,61166,122333,244667,489335,978670,1957341,3914683,7829367,15658734,31317469 ⋆ Decimal representation of the middle column of the "Rule 158" elementary cellular automaton starting with a single ON (black) cell. • a(n) = (- 45 + 5 * (- 1) ^ n - (6 - i * 3) * (- i) ^ n - (6 + 3 * i) * i ^ n + 7 * 2 ^ (4 + n)) / 60 where i = sqrt(- 1). • a(n) = 2 * a(n - 1) + a(n - 4) - 2 * a(n - 5) for n>4. • a(n) = floor(7 * 2 ^ (n + 2) / 15) for n>=0. - _ Karl V. Keller, Jr. _ , Oct 01 2020 •

► [A173010] 0,0,1,3,7,14,30,62,126,253,509,1021,2045,4092,8188,16380,32764,65531,131067,262139,524283,1048570,2097146,4194298,8388602 ⋆ a(n) = round((2 ^ n - n - 1) / 4). • a(n) = round((2 ^ n - n - 1) / 4). •

► [A098582] 1,3,7,15,15,31,79,191,431,671,1167,2431,5487,12383,23119,41791,80687,168479,366607,736511,1405167,2696159,5391823,11257535,23041711 ⋆ Expansion of (1 + 2 * x + 4 * x ^ 2 + 8 * x ^ 3) / (1 - x - 16 * x ^ 5). • a(n) = a(n - 1) + 16 * a(n - 5). • a(n) = Sum _{ k=0..n } binomial(n - k, floor(k / 4)) * 2 ^ k. •

► [A075694] 1,3,7,15,19,27,31,43,51,55,63,71,75,83,95,99,103,111,115,139,159,167,179,183,199 ⋆ a(1)=1, then "jump over next prime": a(n) = 2 nextprime(a(n - 1)) - a(n - 1). • a(1)=1, a(n) = 2 nextprime(a(n - 1)) - a(n - 1). •

► [A235699] 0,1,3,7,15,21,23,27,35,41,43,47,55,61,63,67,75,81,83,87,95,101,103,107,115 ⋆ a(n + 1) = a(n) + (a(n) mod 10) + 1, a(0) = 0. • a(n) = 5 * n - 6 + cos(n * Pi / 2) + 2 * sin(n * Pi / 2), for n>0. - _ Giovanni Resta _ , Jan 15 2014 • a(n) = - 6 + (1 / 2 + i) * (- i) ^ n + (1 / 2 - i) * i ^ n + 5 * n for n>0 where i=sqrt(- 1). • a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4) for n>4. •

► [A182247] 0,1,3,7,15,21,31,39,47,57,75,95,111,125,143,159,191,209,243,279,319,341,383,407,447 ⋆ a(0)=0, a(n) = (a(n - 1) + n) OR n. • a(0)=0, a(n)=(a(n - 1) + n) OR n, where OR is the bitwise logical inclusive - OR operator. •

► [A229527] 1,3,7,15,22,27,37,48,61,69,85,99,118,129,142,150,157,171,181,192,205,213,220,225,235 ⋆ Start with 1, skip (sum of digits of n) numbers, accept next number. • a(n + 1) = a(n) + (sum of digits of a(n)) + 1. •

► [A181106] 1,3,7,15,23,35,47,63,79,99,119,143,167,195,223,255,287,323,359,399,439,483,527,575,623 ⋆ Largest odd number strictly less than a square. • a(n) = n ^ 2 - 1 for n even; a(n) = n ^ 2 - 2 for n odd. • a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4). •

► [A011890] 0,0,0,0,3,7,15,26,42,63,90,123,165,214,273,341,420,510,612,726,855,997,1155,1328,1518 ⋆ [n(n - 1)(n - 2) / 8]. • a(n) = + 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 8) - 3 * a(n - 9) + 3 * a(n - 10) - a(n - 11). G.f.: x ^ 4 * (3 - 2 * x + 3 * x ^ 2 - x ^ 3 + 2 * x ^ 4 + x ^ 6) / ((- 1 + x) ^ 4 * (1 + x) * (1 + x ^ 2) * (1 + x ^ 4)). [From _ R. J. Mathar _ , Apr 15 2010] •

► [A001648] 1,3,7,15,26,51,99,191,367,708,1365,2631,5071,9775,18842,36319,70007,134943,260111,501380,966441,1862875,3590807,6921503,13341626 ⋆ Tetranacci

numbers A073817 without the leading term 4. ● a(n) = trace of M ^ n, where M = the 4 X 4 matrix [0 1 0 0 / 0 0 1 0 / 0 0 0 1 / 1 1 1 1]. E.g., the trace (sum of diagonal terms) of M ^ 12 = a(12) = 2631 = (108 + 316 + 717 + 1490). - _ Gary W. Adamson _ , Feb 22 2004 ● a(n) = n * Sum _{ k=ceiling(n / 5)..n } Sum _{ i=0..(n - k) / 4 } (- 1) ^ i * binomial(k,k - i) * binomial(n - i * 4 - 1, k - 1)) / k), n>0. - _ Vladimir Kruchinin _ , Jan 20 2012 ●

▶ [A051054] 0,1,3,7,15,26,54,85,159,292,513,804,1844,2965,5169,10679,20107,34120,72498,126028,245966,498852,913872,1644570,3600916 ⋆ a(n) = Sum _{ k=1..n } C(n, floor(n / k)). ● a(n) is asymptotic to 2 ^ n / sqrt(n * Pi / 2). - _ Benoit Cloitre _ , Jan 11 2003 ●

▶ [A097080] 3,7,15,27,43,63,87,115,147,183,223,267,315,367,423,483,547,615,687,763,843,927,1015,1107,1203 ⋆ a(n) = 2 * n ^ 2 - 2 * n + 3. ● a(n) = 4 * (n - 1) + a(n - 1) for n>1, a(1)=3. - _ Vincenzo Librandi _ , Nov 16 2010 ●

▶ [A147595] 1,3,7,15,27,51,99,195,387,771,1539,3075,6147,12291,24579,49155,98307,196611,393219,786435,1572867,3145731,6291459,12582915,25165827 ⋆ a(n) is the number whose binary representation is A138144(n). ● a(n + 4) = 3 * (2 ^ (n + 2) + 1), n >= 0. - _ Brad Clardy _ , Apr 03 2013 ● a(n) = 3 * (4 + 2 ^ n) / 4 for n>3. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2). ●

▶ [A139806] 1,3,7,15,27,55,111,223,443,887,1775,3551,7099,14199,28399,56799,113595,227191,454383,908767,1817531,3635063,7270127,14540255,29080507 ⋆ a(n) =a(n - 1) + a(n - 2) + a(n - 3) + 2a(n - 4), a(0)=1, a(1)=3, a(2)=7, a(3)=15. ● a(n)= - (1 / 5 - 2 / 5 * I) * I ^ n - (1 / 3) * (- 1) ^ n + (26 / 15) * 2 ^ n - (1 / 5 + 2 / 5 * I) * (- I) ^ n, with n>=0 and I=(- 1) ^ (1 / 2). - _ Paolo P. Lava _ , Jun 03 2008 ●

▶ [A343440] 1,1,3,7,15,27,63,127,255,495,1023,2037,4095,8127,16365,32767,65535,130815,262143,524265,1048509,2096127,4194303,8388477,16777215 ⋆ a(n) = Sum _{ d|n, gcd(d, n / d) = 1 } (- 1) ^ omega(n / d) * 2 ^ (d - 1). ● a(n) = 2 ^ (n - 1) - Sum _{ d|n, gcd(d, n / d) = 1, d < n } a(d). ●

▶ [A027965] 3,7,15,28,47,73,107,150,203,267,343,432,535,653,787,938,1107,1295,1503,1732,1983,2257,2555,2878,3227 ⋆ T(n, 2 * n - 3), T given by A027960. ● a(n) = (18 - 10 * n + 3 * n ^ 2 + n ^ 3) / 6. ●

▶ [A023552] 3,7,15,28,50,86,145,241,397,650,1060,1724,2799,4539,7355,11912,19286,31218,50525,81765,132313,214102,346440,560568,907035 ⋆ Convolution of natural numbers >= 3 and Fibonacci numbers. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - a(n - 3) + a(n - 4) for n>4. ● a(n) = - 5 + (2 ^ (- 1 - n) * ((1 - sqrt(5)) ^ n * (- 13 + 5 * sqrt(5)) + (1 + sqrt(5)) ^ n * (13 + 5 * sqrt(5)))) / sqrt(5) - n. (End) ● a(n) = Fibonacci(n + 4) + 2 * Fibonacci(n + 2) - (n + 5). - _ G. C. Greubel _ , Jul 08 2019 ●

▶ [A322108] 1,3,7,15,29,50,79,118,169,233,311,405,517,648,799,972,1169,1391,1639,1915,2221,2558,2927,3330,3769 ⋆ Distance of n - th iteration in an alternating rectangular spiral. ● a(n) = (2 - (- i) ^ n - i ^ n + 6 * n - 2 * n ^ 2 + 2 * n ^ 3) / 8 where i=sqrt(- 1). ●

▶ [A182640] 0,1,3,7,15,29,52,91,155,259,429,705,1152,1876,3049,4948,8022,12996,21045,34070,55146,89249,144429,233714,378181 ⋆ a(n)=n + floor(r * a(n - 1)), where r = golden ratio = (1 + sqrt(5)) / 2, a(0)=0, a(1)=1. ● a(n)=n + floor(r * a(n - 1)), r=(1 + sqrt(5)) / 2, a(0)=0, a(1)=1. ●

▶ [A192960] 1,3,7,15,29,53,93,159,267,443,729,1193,1945,3163,5135,8327,13493,21853,35381,57271,92691,150003,242737,392785,635569 ⋆ Constant term of the reduction by x ^ 2 - > x + 1 of the polynomial p(n,x) defined at Comments. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - a(n - 3) + a(n - 4). ● a(n) = 2 * Fibonacci(n + 4) - (2 * n + 5). - _ G. C. Greubel _ , Jul 12 2019 ●

▶ [A344743] 0,0,1,3,7,15,29,54,96,165,275,449,716,1123,1732,2635,3955,5871,8620,12536,18065,25821,36617,51560,72105 ⋆ Number of integer partitions of 2n with reverse - alternating sum < 0. ● a(n) = sum of left half of even - indexed rows of A344612. ●

▶ [A080011] 1,1,1,3,7,15,29,59,126,262,542,1121,2328,4839,10039,20827,43220,89704,186172,386345,801768,1663916,3453137,7166272,14872078 ⋆ Number of permutations satisfying - k<=p(i) - i<=r and p(i) - i not in I, i=1..n, with k=2, r =3, I= {- 1 } . ● a(n) = a(n - 1) + a(n - 2) + a(n - 3) + 2 * a(n - 4) + 3 * a(n - 5) - a(n - 6) + a(n - 8) - a(n - 9) - a(n - 10). ●

▶ [A055795] 0,1,3,7,15,30,56,98,162,255,385,561,793,1092,1470,1940,2516,3213,4047,5035,6195,7546,9108,10902,12950 ⋆ a(n) = binomial(n,4) + binomial(n,2). ● a(n + 1) = C(n, 1) + C(n, 2) + C(n, 3) + C(n, 4). - _ James A. Sellers _ , Mar 16 2002 ● a(n) = n * (n ^ 3 - 6 * n ^ 2 + 23 * n - 18) / 24. - _ Gary Detlefs _ , Dec 08 2011 ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5); a(1)=0, a(2)=1, a(3)=3, a(4)=7, a(5)=15. - _ Harvey P. Dale _ , Dec 07 2015 ●

▶ [A023610] 1,3,7,15,30,58,109,201,365,655,1164,2052,3593,6255,10835,18687,32106,54974,93845,159765,271321,459743,777432,1312200,2211025 ⋆ Convolution of Fibonacci numbers and { F(2), F(3), F(4), ... } . ● a(n) = Sum _{ k=0..n + 1 } (n - k + 1) * binomial(n - k + 1, k). - _ Paul Barry _ , Nov 05 2005 ● a(n) = 2 * a(n - 1) + a(n - 2) - 2 * a(n - 3) - a(n - 4), n >= 4. - _ L. Edson Jeffery _ , Mar 29 2013 ●

▶ [A062544] 0,1,3,7,15,30,58,110,206,383,709,1309,2413,4444,8180,15052,27692,50941,93703,172355,317019,583098,1072494,1972634,3628250 ⋆ a(n) = n plus sum of previous three terms. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - 1 * a(n - 4) + 1 * a(n - 5). - _ Joerg Arndt _ , Apr 02 2011 ●

▶ [A224520] 0,1,3,7,15,30,60,120,240,481,963,1927,3855,7710,15420,30840,61680,123361,246723,493447,986895,1973790,3947580,7895160,15790320 ⋆ Numbers a(n) with property a(n) + a(n + 4) = 2 ^ (n + 4) - 1 = A000225(n + 4). ● a(n) + a(n + 4) = 2 ^ (n + 4) - 1. ● a(n) = + 3 * a(n - 1) - 2 * a(n - 2) - 1 * a(n - 4) + 3 * a(n - 5) - 2 * a(n - 6). (End) ● a(n) = floor(2 ^ (n + 4) / 17). - _ Karl V. Keller, Jr. _ , Jun 30 2021 ●

▶ [A336685] 1,3,7,15,30,63,127,190,511,990,1183,3582,8190,16383,18590,47806,131070,247967,298911,854686,1453502,2423967,8362495,10366142,31738014 ⋆ Sum of 2 ^ k for residue k in among Lucas numbers mod n. ● a(3 ^ j) = 2 ^ (3 ^ j + 1) - 1 for all j. ●

▶ [A098583] 1,3,7,15,31,31,63,159,383,863,1855,2847,4863,9951,22207,49823,109183,200287,355903,674335,1384959,2979295,6473151,12882335,24271231 ⋆ Expansion of (1 + 2 * x + 4 * x ^ 2 + 8 * x ^ 3 + 16 * x ^ 4) / (1 - x - 32 * x ^ 6). ● a(n) = a(n - 1) + 32 * a(n - 6). ● a(n) = Sum _{ k=0..n } binomial(n - k, floor(k / 5)) * 2 ^ k. ●

▶ [A023424] 1,3,7,15,31,57,113,223,439,863,1695,3333,6553,12883,25327,49791,97887,192441,378329,743775,1462223,2874655,5651423,11110405,21842481 ⋆ Expansion of (1 + 2 * x + 3 * x ^ 2 + 4 * x ^ 3 + 5 * x ^ 4) / (1 - x - x ^ 2 - x ^ 3 - x ^ 4 - x ^ 5). ● a(n) = n * Sum _{ k=1..n } (1 / k) * Sum _{ r=0..k } binomial (k,r) * Sum _{ m=0..r } binomial(r,m) * Sum _{ j=0..m } binomial(m,j) * binomial(j,n - m - k - j - r), n>0. - _ Vladimir Kruchinin _ , Feb 22 2011 ●

▶ [A276647] 1,3,7,15,31,59,107,183,303,483,755,1151,1735,2571,3787,5511,7999,11507,16547,23631,33783,48027,68411,96983,137839 ⋆ Number of squares after the n - th generation in a symmetric (with 45 - degree angles) non - overlapping Pythagoras tree. ● a(n) = 3 * a(n - 1) - a(n - 2) - 5 * a(n - 3) + 6 * a(n - 4) - 2 * a(n - 5) for n>4. ● a(n) = (- 25 + 2 ^ ((n - 1) / 2) * (24 - 24 * (- 1) ^ n + 17 * sqrt(2) + 17 * (- 1) ^ n * sqrt(2)) - 4 * (1 + n) - 2 * (1 + n) * (2 + n)). Therefore: ● a(n) = 17 * 2 ^ (n / 2 + 1) - 2 * n ^ 2 - 10 * n - 33 for n even. ● a(n) = 3 * 2 ^ ((n + 7) / 2) - 2 * n ^ 2 - 10 * n - 33 for n odd. (End) ●

▶ [A007574] 1,3,7,15,31,60,113,207,373,663,1167,2038,3537,6107,10499,17983,30703,52272,88769,150407,254321,429223,723167,1216490,2043361 ⋆ Patterns in a dual ring. ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) - 2 * a(n - 3) + 4 * a(n - 4) - a(n - 6). G.f.: - x * (- 1 + x + x ^ 2 - x ^ 3 - x ^ 4 + 2 * x ^ 5) / ((x - 1) ^ 2 * (x ^ 2 + x - 1) ^ 2). [_ R. J. Mathar _ , Feb 06 2010] ●

▶ [A057703] 0,1,3,7,15,31,62,119,218,381,637,1023,1585,2379,3472,4943,6884,9401,12615,16663,21699,27895,35442,44551,55454 ⋆ a(n) = n * (94 + 5 * n + 25 * n ^ 2 - 5 * n ^ 3 + n ^ 4) / 120. ● a(n) = n * (94 + 5 * n + 25 * n ^ 2 - 5 * n ^ 3 + n ^ 4) / 120. ● a(n) = Sum _{ j=1..5 } binomial(n, j). - _ Labos Elemer _ ●

▶ [A224521] 0,1,3,7,15,31,62,124,248,496,992,1985,3971,7943,15887,31775,63550,127100,254200,508400,1016800,2033601,4067203,8134407,16268815 ⋆ Numbers a(n) with property a(n) + a(n + 5) = 2 ^ (n + 5) - 1 = A000225(n + 5). ● a(n) + a(n + 5) = 2 ^ (n + 5) - 1. ● a(n) = + 3 * a(n - 1) - 2 * a(n - 2) - 1 * a(n - 5) + 3 * a(n - 6) - 2 * a(n - 7). (End) ● a(n) = floor(2 ^ (n + 5) / 33). - _ Karl V. Keller, Jr. _ , Jul 03 2021 ●

▶ [A147596] 1,3,7,15,31,63,119,231,455,903,1799,3591,7175,14343,28679,57351,114695,229383,458759,917511,1835015,3670023,7340039,14680071,29360135 ⋆ a(n) is the number whose binary representation is A138145(n). ● a(n) = 7 * (2 ^ (n - 3) + 1) if n >= 6. - _ Hagen von Eitzen _ , Jun 02 2009 ● a(n) = 3 * a(n - 1) - 2 * a(n - 2), for n >= 8. ●

▶ [A115567] 0,1,3,7,15,31,63,126,246,465,847,1485,2509,4095,6475,9948,14892,21777,31179,43795,60459,82159,110055,145498,190050 ⋆ a(n) = C(n,6) + C(n,5) + C(n,4) + C(n,3) + C(n,2) + C(n,1). ● a(n) = C(n,6) + C(n,5) + C(n,4) + C(n,3) + C(n,2) + C(n,1). ● a(n) = n * (n + 1) * (n ^ 4 - 10 * n ^ 3 + 65 * n ^ 2 - 140 * n + 444) / 720. ●

▶ [A336683] 1,3,7,15,31,63,127,175,511,1023,1327,4031,7471,16383,32767,43951,127807,238895,502063,1048575,1319215,2719023,7798639,10692015,33554431 ⋆ Sum of 2 ^ k for all residues k found in the Fibonacci sequence mod n. ● a(n) = Sum(2 ^ k) for all k in row n of A189768. ● a(n) = 2 ^ (n + 1) - 1 for n in A079002. ●

▶ [A283091] 3,7,15,31,63,127,217,511,1023,2047,3255,8001,11811,32767,63457,131071,262143,520065,1048575,2097151,4194303,8388607,16766977,33554431,67074049 ⋆ Maximal order of the trinomials of degree n over GF(2). ● a(n) <= 2 ^ n - 1, with equality if and only if n is a term of A073726. ●

▶ [A116082] 0,1,3,7,15,31,63,127,254,501,967,1815,3301,5811,9907,16383,26332,41225,63003,94183,137979,198439,280599,390655,536154 ⋆ a(n) = C(n,7) + C(n,6) + C(n,5) + C(n,4) + C(n,3) + C(n,2) + C(n,1). ● a(n) = n * (n ^ 6 - 14 * n ^ 5 + 112 * n ^ 4 - 350 * n ^ 3 + 1099 * n ^ 2 + 364 * n + 3828) / 5040. - _ Emeric Deutsch _ , Apr 14 2006 ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8), with a(0)=0, a(1)=1, a(2)=3, a(3)=7, a(4)=15, a(5)=31, a(6)=63, a(7)=127. - _ Harvey P. Dale _ , Aug 05 2011 ●

▶ [A105754] 1,3,7,15,31,63,127,255,502,1003,2003,3999,7983,15935,31807,63487,126719,252936,504869,1007735,2011471,4014959,8013983,15996159,31928831 ⋆ Lucas 8 - step numbers. ● a(n) = Sum _{ k=1..8 } a(n - k) for n > 0, a(0)=8, a(n)= - 1 for n= - 7.. - 1. ●

▶ [A116690] 0,1,3,7,15,31,63,127,255,510,1012,1980,3796,7098,12910,22818,39202,65535,106761,169765,263949,401929,600369,880969,1271625 ⋆ a(n) = C(n,8) + C(n,7) + C(n,6) + C(n,5) + C(n,4) + C(n,3) + C(n,2) + C(n,1). ● a(n) = n * (n + 1) * (25584 - 9604 * n + 5264 * n ^ 2 - 1295 * n ^ 3 + 231 * n ^ 4 - 21 * n ^ 5 + n ^ 6) / 40320. - _ G. C. Greubel _ , Nov 25 2017 ●

▶ [A267258] 1,3,7,15,31,63,127,255,510,1021,2042,4085,8170,16341,32682,65365,130730,261461,522922,1045845,2091690,4183381,8366762,16733525,33467050 ⋆ Decimal representation of the middle column of the "Rule 111" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = (383 * 2 ^ n - 32 * ((- 1) ^ n + 3)) / 192 for n>5. ●

▶ [A105755] 1,3,7,15,31,63,127,255,511,1013,2025,4047,8087,16159,32287,64511,128895,257535,514559,1028105,2054185,4104323,8200559,16384959,32737631 ⋆ Lucas 9 - step numbers. ● a(n) = Sum _{ k=1..9 } a(n - k) for n > 0, a(0)=9, a(n)= - 1 for n= - 8.. - 1 ● a(n) = n * Sum _{ k=1..n } Sum _{ i=0..floor((n - k) / 9) } (- 1) ^ i * binomial(k, k - i) * binomial(n - 9 * i - 1, k - 1)) / k. - _ Vladimir Kruchinin _ , Aug 10 2011 ●

▶ [A000225] 0,1,3,7,15,31,63,127,255,511,1023,2047,4095,8191,16383,32767,65535,131071,262143,524287,1048575,2097151,4194303,8388607,16777215 ⋆ a(n) = 2 ^ n - 1. (Sometimes called Mersenne numbers, although that name is usually reserved for A001348.) ● a(n) = Sum _{ k=0..n - 1 } 2 ^ k. - _ Paul Barry _ , May 26 2003 ● a(n) = a(n - 1) + 2 * a(n - 2) + 2, a(0)=0, a(1)=1. - _ Paul Barry _ , Jun 06 2003 ● a(n + 1) = 2 * a(n) + 1, a(0) = 0. ● a(n) = Sum _{ k=1..n } binomial(n, k). ● a(n) = n + Sum _{ i=0..n - 1 } a(i); a(0) = 0. - _ Rick L. Shepherd _ , Aug 04 2004 ● a(n + 1) = (n + 1) * Sum _{ k=0..n } binomial(n, k) / (k + 1). - _ Paul Barry _ , Aug 06 2004 ●

▶ [A126646] 1,3,7,15,31,63,127,255,511,1023,2047,4095,8191,16383,32767,65535,131071,262143,524287,1048575,2097151,4194303,8388607,16777215,33554431 ⋆ a(n) = 2 ^ (n + 1) - 1. ● a(n - 1) ^ 2 + a(n) = a(2n) + 1, a square. - _ Vincenzo

Librandi _ and _ Ralf Stephan _ , Nov 23 2010 ● a(n) = 3 * a(n - 1) - 2 * a(n - 2), n > 1. - _ Wesley Ivan Hurt _ , Aug 21 2015 ●

▶ [A123121] 1,3,7,15,31,63,127,255,511,1024,2050,4102,8206,16414,32830,65662,131326,262654,525310,1050622,2101246,4202494,8404990,16809982,33619966 ★ Length of the n - th Zimin word (A082215(n)). ● a(n) = 2 * a(n - 1) + ceiling(log _ 10(n + 1)). ●

▶ [A178460] 0,0,0,0,0,0,1,3,7,15,31,63,127,256,514,1030,2062,4126,8254,16510,33023,66049,132101,264205,528413 ★ Partial sums of floor(2 ^ n / 127). ● a(n) = round((14 * 2 ^ n - 127 * n + 75) / 889). ● a(n) = floor((14 * 2 ^ n - 127 * n + 284) / 889). ● a(n) = ceiling((14 * 2 ^ n - 127 * n - 134) / 889). ● a(n) = round((14 * 2 ^ n - 127 * n - 14) / 889). ● a(n) = a(n - 7) + 2 ^ (n - 6) - 1, n > 6. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) + a(n - 7) - 3 * a(n - 8) + 2 * a(n - 9), n > 9. ●

▶ [A351755] 1,1,1,1,1,1,1,3,7,15,31,63,127,257,535,1187,2891,7751,22331,66997,204473,626917,1922395,5899579,18192715 ★ G.f. A(x) satisfies: A(x) = 1 + x + x ^ 2 + x ^ 3 + x ^ 4 + x ^ 5 + x ^ 6 * A(x / (1 - x)) / (1 - x) ^ 2. ● a(0) = ... = a(5) = 1; a(n) = Sum _{ k=0..n - 6 } binomial(n - 5,k + 1) * a(k). ●

▶ [A351754] 1,1,1,1,1,1,3,7,15,31,63,129,277,651,1703,4859,14581,44711,138053,427709,1334461,4226501,13724063,46110643,161210421 ★ G.f. A(x) satisfies: A(x) = 1 + x + x ^ 2 + x ^ 3 + x ^ 4 + x ^ 5 * A(x / (1 - x)) / (1 - x) ^ 2. ● a(0) = ... = a(4) = 1; a(n) = Sum _{ k=0..n - 5 } binomial(n - 4,k + 1) * a(k). ●

▶ [A178459] 0,0,0,0,1,3,7,15,31,64,130,262,526,1054,2111,4225,8453,16909,33821,67646,135296,270596,541196,1082396,2164797 ★ Partial sums of floor(2 ^ n / 31). ● a(n) = round((10 * 2 ^ n - 31 * n - 7) / 155). ● a(n) = floor((10 * 2 ^ n - 31 * n + 22) / 155). ● a(n) = ceiling((10 * 2 ^ n - 31 * n - 36) / 155). ● a(n) = round((10 * 2 ^ n - 31 * n - 10) / 155). ● a(n) = a(n - 5) + 2 ^ (n - 4) - 1, n > 4, ●

▶ [A351707] 1,1,1,1,1,3,7,15,31,65,147,373,1051,3157,9761,30573,96965,313999,1049719,3654303,13284783,50268837,196638987,789611161,3238765671 ★ G.f. A(x) satisfies: A(x) = 1 + x + x ^ 2 + x ^ 3 + x ^ 4 * A(x / (1 - x)) / (1 - x) ^ 2. ● a(0) = ... = a(3) = 1; a(n) = Sum _{ k=0..n - 4 } binomial(n - 3,k + 1) * a(k). ●

▶ [A368346] 0,0,0,0,1,3,7,15,32,66,134,270,543,1089,2181,4365,8734,17472,34948,69900,139805,279615,559235,1118475,2236956 ★ a(n) = Sum _{ k=0..n } 2 ^ (n - k) * floor(k / 4). ● a(n) = a(n - 4) + 2 ^ (n - 3) - 1. ● a(n) = Sum _{ k=0..n } floor(2 ^ k / 15). ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) + a(n - 4) - 3 * a(n - 5) + 2 * a(n - 6). ● a(n) = floor(2 ^ (n + 1) / 15) - floor((n + 1) / 4). ●

▶ [A099444] 1,3,7,15,32,69,149,321,691,1488,3205,6903,14867,32019,68960,148521,319873,688917,1483735,3195552,6882329,14822619,31923791,68754951,148079008 ★ A Chebyshev transform of Fib(2n + 2). ● a(n) = sum { k=0..floor(n / 2), binomial(n - k, k)(- 1) ^ k * Fib(2(n - 2k) + 2) } ; ● a(n) = sum { k=0..n, binomial((n + k) / 2, k)(- 1) ^ ((n - k) / 2)(1 + (- 1) ^ (n + k))Fib(2k + 2) / 2 } ; ●

▶ [A132402] 1,3,7,15,32,70,156,348,768,1672,3600,7696,16384,34784,73664,155584,327680,688256,1442048,3014912,6291456,13106688,27261952,56622080,117440512 ★ Binomial transform of A004524 starting at 1. ● a(n + 1) - 2a(n) = 1, 1, 1, 2, 6, 16, 36, 72, 136, 256 = essentially A038503. ●

▶ [A137166] 1,3,7,15,32,70,156,349,778,1728,3833,8505,18884,41943,93160,206897,459459,1020311,2265815,5031792,11174374,24815508,55108933,122382762,271780816 ★ Sequence equals its 4th differences shifted by one index. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 5 * a(n - 3) - a(n - 4). - _ R. J. Mathar _ , Apr 09 2008 ●

▶ [A101890] 0,0,1,3,7,15,32,70,157,357,815,1859,4232,9620,21853,49635,112747,256139,581944,1322210,3004145,6825557,15507867,35234183,80052656 ★ Sum C(n ,2k)F(k), k=0..floor(n / 2). ● a(n)=4a(n - 1) - 5a(n - 2) + 2a(n - 3) + a(n - 4); ● a(n)=sum { k=0..n, binomial(n, k)(F(k / 2)(1 + (- 1) ^ k) / 2 } . ●

▶ [A249512] 1,1,3,7,15,33,75,169,375,835,1875,4203,9375,20931,46875,104919,234375,523737,1171875,2621545,5859375,13098001,29296875,65523597,146484375 ★ Expansion of 1 / (1 - x * sqrt(4 * x ^ 2 + 1) - 2 * x ^ 2). ● a(n) = sum(k = 1..n , k * 4 ^ (n - k) * binomial(n / 2,n - k)) / n, a(0)=1. ● a(n) = 3 * 5 ^ (n / 2 - 1) if n is even and n>0 else a(n) = ((4 ^ (n - 1) * binomial(n / 2, n - 1) * hypergeometric([2, 1 - n],[2 - n / 2], - 1 / 4)) / n). - _ Peter Luschny _ , Oct 31 2014 ●

▶ [A136029] 1,1,1,3,7,15,33,75,171,391,899,2077,4815,11195,26097,60975,142751,334791,786419,1849905,4357121,10274313,24252923,57305241,135521807 ★ a(n) is the number of central ideals of a garland of order 2n, i.e., a(n) = g(2n,n), where g(n,k) is the number of ideals of size k in a garland (or double fence) of order n (see A137278). ● a(n) = 1 + sum(k=1..floor((n - 1) / 2), sum(i=1..min(n - 2 * k,k), C(n - 2 * k + 1,i) * C(k - 1,k - i) * C(n - k - i,k))). - _ Shanzhen Gao _ , May 13 2011 ●

▶ [A351660] 1,1,1,1,3,7,15,33,81,225,679,2139,6931,23185,80809,295141,1128487,4492363,18506923,78584193,343414489,1544535129,7151822771,34086446307,167058478355 ★ G.f. A(x) satisfies: A(x) = 1 + x + x ^ 2 + x ^ 3 * A(x / (1 - x)) / (1 - x) ^ 2. ● a(0) = a(1) = a(2) = 1; a(n) = Sum _{ k=0..n - 3 } binomial(n - 2,k + 1) * a(k). ●

▶ [A199882] 1,1,1,1,3,7,15,33,93,309,1071,3699,13947,58293,260337,1202121,5797035,29682639,161252631,915546969,5401610901,33227826669,213648580503,1430820925083,9936454523427 ★ E.g.f. A(x) satisfies differential equation A'''(x)=A(x) + A(x) ^ 2, A(0)=0, A'(0)=1, A''(0)=1, A'''(0)=1. ● a(n)=n! * b(n), b(n)= 1 / (n * (n - 1) * (n - 2)) * (i=1..n - 4, b(n - 3) + sum(b(i) * b(n - 3 - i))), n>3, b(1)=1, b(2)=1 / 2, b(3)=1 / 6. ●

▶ [A077946] 1,1,3,7,15,35,79,179,407,923,2095,4755,10791,24491,55583,126147,286295,649755,1474639,3346739,7595527,17238283,39122815,88790435,201512631 ★ Expansion of 1 / (1 - x - 2 * x ^ 2 - 2 * x ^ 3). ● a(n) = leftmost term in M ^ n * [1 0 0], where M = the 3X3 matrix [1 1 1 / 2 0 0 / 0 1 0]. a(n) = a(n - 1) + 2 * a(n - 2) + 2 * a(n - 3). a(n) / a(n - 1) tends to 2.26953084..., an eigenvalue of M and a root of the characteristic polynomial x ^ 3 - x ^ 2 - 2x - 2. a(6) = 79 = 35 + 2 * 15 + 2 * 7 = a(5) + 2 * a(4) + 2 * a(3). - _ Gary W. Adamson _ , Dec 21 2004 ●

▶ [A124696] 1,3,7,15,35,83,199,479,1155,2787,6727,16239,39203,94643,228487,551615,1331715,3215043,7761799,18738639,45239075,109216787,263672647,636562079,1536796803 ★ Number of base - 3 circular n - digit numbers with adjacent digits differing by 1 or less. ● a(n) = T(n,3) for n > 0, where T(n,k) = Sum _{ j =1..k } (1 + 2 * cos(j * Pi / (k + 1))) ^ n. - _ Peter Luschny _ , Aug 13 2012 ● a(n) = 1 + (1 - sqrt(2)) ^ n + (1 + sqrt(2)) ^ n for n > 0. ● a(n) = 3 * a(n - 1) - a(n - 2) - a(n - 3) for n > 3. ●

▶ [A007576] 1,1,1,3,7,15,35,87,217,547,1417,3735,9911,26513,71581,194681,532481,1464029,4045117,11225159,31268577,87404465,245101771,689323849,1943817227 ★ Number of solutions to k _ 1 + 2 * k _ 2 + ... + n * k _ n = 0, where k _ i are from {- 1,0,1 } , i=1..n. ● a(n) = 1 / (2 * Pi) * Integral _{ t=0..2 * Pi } (Product _{ k=1..n } (1 + 2 * cos(k * t))) dt. - _ Ovidiu Bagdasar _ , Aug 08 2018 ●

▶ [A167539] 1,3,7,15,36,87,211,519,1285,3198,7998,20079,50571,127725,323367,820407,2085306,5309169,13537045,34561890,88347091,226079208,579110262,1484766015,3809948461 ★ a(n) = Sum _{ k=0..[n / 2] } C(n - k,k) ^ 2 * n / (n - k), n>=1. ● a(n) = Sum _{ k=0..n - 1 } Sum _{ j=0..k } C(n - k + j,n - k) * n / (n - k + j) * C(n - k,k - j) * C(k - j,j). ●

▶ [A097111] 1,3,7,15,43,75,247,375,1363,1875,7327,9375,38683,46875,201607,234375,1040803,1171875,5335087,5859375,27199723,29296875,138095767,146484375,698867443 ★ Expansion of (1 + 3x - 2x ^ 2 - 12x ^ 3) / (1 - 9x ^ 2 + 20x ^ 4). ● a(n) = 9 * a(n - 2) - 20 * a(n - 4); ● a(n) = (3 / 2 + 3 * sqrt(5) / 10) * (sqrt(5)) ^ n + (3 / 2 - 3 * sqrt(5) / 10) * (- sqrt(5)) ^ n - 2 ^ (n + 1) * (1 + (- 1) ^ n) / 2; ● a(n) = Sum _{ k=0..n } binomial(floor(n / 2), floor(k / 2)) * 2 ^ k. ●

▶ [A371914] 1,1,3,7,15,43,168,626,2005,6245,22266,87365,328727,1154975,4086410,15464587,60368094,229327457,847539610,3174058754,12277874065,47912709420,184171945435,701491726600,2700878181660 ★ G.f. A(x) satisfies A(x) = 1 - x / A(x) ^ 3 * (1 - A(x) - A(x) ^ 5). ● a(n) = (1 / n) * Sum _{ k=0..n } binomial(n,k) * binomial(2 * n - 5 * k,n - k - 1) for n > 0. ●

▶ [A290470] 3,7,15,59,143,367,1039,2755,7395,20007,53727,144635,389535,1048159,2821535,7595267,20443523,55029319,148125295,398712379,1073232175,2888862159,7776059055,20931132355,56341155043 ★ Number of minimal edge covers in the n - Moebius ladder. ● a(n) = a(n - 1) + 2 * a(n - 2) + 6 * a(n - 3) + 2 * a(n - 4) + 2 * a(n - 5) - 2 * a(n - 6) - 2 * a(n - 7) - a(n - 8) + a(n - 9) for n > 9. ●

▶ [A036666] 0,3,7,16,24,39,51,72,88,115,135,168,192,231,259,304,336,387,423,480,520,583,627,696,744 ★ Numbers k such that 5 * k + 1 is a square. ● a(n) has the form ((5 * m + 1) ^ 2 - 1) / 5 if n is odd; a(n) has the form ((5 * m + 4) ^ 2 - 1) / 5 if n is even. ● a(2 * k) = k * (5 * k + 2), a(2 * k + 1) = 5 * k ^ 2 + 8 * k + 3. - _ Mohamed Bouhamida _ , Nov 06 2007 ● a(n) = n ^ 2 + n + ceiling(n / 2) ^ 2, (with offset 0). - _ Gary Detlefs _ , Feb 23 2010 ● a(n) = (10 * n * (n - 1) + (2 * n - 1) * (- 1) ^ n + 1) / 8. ●

▶ [A211379] 0,0,0,3,7,16,27,45,66,96,130,175,225,288,357,441,532,640,756,891,1035,1200,1375,1573,1782 ★ Number of pairs of parallel diagonals in a regular n - gon. ● a(n) = (1 / 2) * n * (binomial(n / 2 - 1,2) + binomial(n / 2 - 2,2)) = (1 / 8) * n * (n - 4) ^ 2 for n even; ● a(n) = n * binomial((n - 3) / 2,2) = (1 / 8) * n * (n - 3) * (n - 5) for n odd. ●

▶ [A179904] 1,3,7,16,32,57,93,142,206,287,387,508,652,821,1017,1242,1498,1787,2111,2472,2872,3313,3797,4326,4902 ★ a(n) = A056520(n) + 1 for n>0, a(0)=1. ● a(n) = (1 / 6) * (2 * n ^ 3 + 3 * n ^ 2 + n + 12) for n>0, a(0)=1. (End) ●

▶ [A084631] 1,3,7,16,33,61,107,178,286,442,663,969,1384,1938,2664,3605,4807,6325,8222,10571,13455,16965,21206,26295,32364 ★ a(n) = floor(C(n + 8,8) / C(n + 2,2)). ● a(n) = 1 + floor(n * (n + 11) * (n ^ 4 + 22 * n ^ 3 + 203 * n ^ 2 + 902 * n + 2232) / 20160). ●

▶ [A219846] 3,7,16,33,62,108,177,276,413,597,838,1147,1536,2018,2607,3318,4167,5171,6348,7717,9298,11112,13181,15528,18177 ★ Number of n X 2 arrays of the minimum value of corresponding elements and their horizontal or antidiagonal neighbors in a random, but sorted with lexicographically nondecreasing rows and nonincreasing columns, 0..2 n X 2 array. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

▶ [A192968] 0,1,1,3,7,16,33,64,118,210,364,619,1038,1723,2839,4653,7597,12370,20103,32626,52900,85716,138826,224773,363852 ★ Coefficient of x in the reduction by x ^ 2 - > x + 1 of the polynomial p(n,x) defined at Comments. ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + a(n - 3) + 2 * a(n - 4) - a(n - 5). ● a(n) = 3 * Fibonacci(n + 2) - (n ^ 2 + 3 * n + 6) / 2. - _ G. C. Greubel _ , Jul 11 2019 ●

▶ [A014668] 1,1,3,7,16,33,71,143,295,594,1206,2413,4871,9743,19559,39138,78428,156857,314047,628095,1256809,2513693,5028594,10057189,20116979 ★ a(1) = 1 , a(n) = Sum _{ k=1..n - 1 } Sum _{ d|k } a(d). ● a(n) is asymptotic to c * 2 ^ n where c = 0.599607313614500338969 34... ● a(n + 1) = Sum _{ k=1..n } a(k) * floor(n / k). - _ Franklin T. Adams - Watters _ , Mar 21 2017 ●

▶ [A182615] 3,7,16,34,66,125,232,422,760,1352,2388,4185,7294,12644,21824,37518,64278,109781,186980,317666,538472,910868,1537896,2592049,4361786 ★ Greatest k such that floor(k / r ^ n)=n, where r = golden mean = (1 + sqrt(5)) / 2. ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 4 * a(n - 3) - 2 * a(n - 4) + 2 * a(n - 5) + a(n - 6) for n > 8. ●

▶ [A178455] 0,0,0,1,3,7,16,34,70,143,289,581,1166,2336,4676,9357,18719,37443,74892,149790,299586,599179,1198365,2396737,4793482 ★ Partial sums of floor(2 ^ n / 7). ● a(n) = round((12 * 2 ^ n - 14 * n - 15) / 42). ● a(n) = round((6 * 2 ^ n - 7 * n - 5) / 21). ● a(n) = round((6 * 2 ^ n - 7 * n - 10) / 21). ● a(n) = round((6 * 2 ^ n - 7 * n - 6) / 21). ● a(n) = a(n - 3) + 2 ^ (n - 2) - 1, n > 2. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) + a(n - 3) - 3 * a(n - 4) + 2 * a(n - 5), n > 4. ●

▶ [A238089] 0,0,0,1,3,7,16,34,73,152,318,657,1356,2784,5703,11647,23740,48290,98073,198887,402837,815032,1647424,3327112,6714352 ★ Number of compositions of n such that the minimum part is equal to 1 and the first 1 occurs before any maximum part in the composition. ● a(n) = Sum _{ i>=2 } x ^ (i + 1) / (1 - Sum _{ j=2..i - 1 } x ^ j) / (1 - Sum { k=1..i - 1 } x ^ k) / (1 - Sum _{ m=1..i } x ^ m). ●

▶ [A133124] 1,3,7,16,35,74,153,312,631,1270,2549,5108,10227,20466,40945,81904,163823,327662,655341,1310700,2621419,5242858,10485737,20971496,41943015 ★ A007318 * [1, 2, 2, 3, 2, 3, 2, 3, 2, ...]. ● a(n) = 5 * 2 ^ (n - 1) - (n + 1), for n >= 1. ●

▶ [A104004] 1,3,7,16,35,75,158,329,679,1392,2839,5767,11678,23589,47555,95720,192427,386451,775486,1555153,3117071,6245088,12507887,25044431,50135230 ★ Expansion of (1 - x)(1 + x) / ((2x - 1)(x ^ 2 + x - 1)). ● a(n) = 3 * 2 ^ n - Fibonacci(n + 3). - _ Ralf Stephan _ , May 20 2007 ● a(n) = (3 * 2 ^ n - (2 ^ (-

n) * ((1 - sqrt(5)) ^ n * (- 2 + sqrt(5)) + (1 + sqrt(5)) ^ n * (2 + sqrt(5)))) / sqrt(5)). - _ Colin Barker _ , Aug 18 2017 ●
► [A101509] 1,3,7,16,35,75,159,334,696,1442,2976,6123,12562,25706,52492,107014,217877,443061,899957,1826078,3701783,7498261,15178255,30706320,62085915 ⋆ Binomial transform of tau(n) (see A000005). ● a(n) = Sum _{ k=0..n, Sum _{ i=0..n, if(mod(i + 1, k + 1)=0, binomial(n, i), 0) }} . ●
► [A099325] 1,3,7,16,35,76,162,344,723,1516,3158,6568,13598,28120,57956,119344,245123,503116,1030542,2109704,4311786,8808328,17969372,36644176,74640430 ⋆ Expansion of (sqrt(1 + 2x) + sqrt(1 - 2x)) / (2 * (1 - 2x) ^ (3 / 2)). ● a(n) = Sum _{ k=0..n } (k + 1) * binomial(n, (n - k) / 2) * binomial(k + 2, 2) * (1 + (- 1) ^ (n - k)) / (n + k + 2). ● a(n) = 2 ^ n + Sum _{ k=0..floor((n - 1) / 2) } (2 * n - 4 * k - 1) * binomial(n, k). - _ Nathaniel Johnston _ , Apr 20 2011 ● a(n) = M ^ n * V topmost term. M = an infinite tridiagonal matrix with all 1's in the super and subdiagonals, [1,0,0,0,...] as the main diagonal; and the rest zeros. V = the vector [1,2,3,...]. - _ Gary W. Adamson _ , Jan 30 2012 ●
► [A173514] 1,1,3,7,16,36,79,172,373,806,1742,3762,8123,17538,37864,81745,176480,381003,822545,1775788,3833737,8276627,17868350,38575848,83281109 ⋆ a(n) = 2 * a(n - 1) + a(n - 2) - [a(n - 2) / 2] - [a(n - 4) / 2] - [a(n - 5) / 2]. ● a(n) = 2 * a(n - 1) + a(n - 2) - Floor[a(n - 2) / 2] - Floor[a) n - 4] / 2] - Floor[a(n - 5) / 2]. ●
► [A045891] 1,1,3,7,16,36,80,176,384,832,1792,3840,8192,17408,36864,77824,163840,344064,720896,1507328,3145728,6553600,13631488,28311552,58720256 ⋆ First differences of A045623. ● a(n) = Sum _{ k=0..n - 2 } (k + 3) * binomial(n - 2, k) for n >= 2. - _ N. J. A. Sloane _ , Jan 30 2008 ● a(n) = (n + 4) * 2 ^ (n - 3), n >= 2, with a(0) = a(1) = 1. ● a(n) = ((n + 4) * 2 ^ (n - 1) + 3 * C(0, n) - C(1, n)) / 4; ● a(n) = Sum _{ k=0..floor(n / 2) } C(n, 2 * k) * (k + 1). (End) ● a(n) = Sum _{ k=0..n } (k + 1) * C(n - 2,n - k). _ Peter Luschny _ , Apr 20 2015 ●
► [A077852] 1,3,7,16,36,80,177,391,863,1904,4200,9264,20433,45067,99399,219232,483532,1066464,2352161,5187855,11442175,25236512,55660880,122763936,270764385 ⋆ Expansion of (1 - x) ^ (- 1) / (1 - 2 * x - x ^ 3). ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) + a(n - 3) - a(n - 4). ● a(n) = 2 * a(n - 1) + a(n - 3) + 1. - _ Greg Dresden _ , Apr 04 2021 ●
► [A019489] 3,7,16,36,80,177,391,863,1904,4200,9264,20433,45067,99399,219232,483532,1066464,2352161,5187855,11442175,25236512,55660880,122763936,270764385,597189651 ⋆ Define the sequence T(a(0),a(1)) by a(n + 2) is the greatest integer such that a(n + 2) / a(n + 1) < a(n + 1) / a(n) for n >= 0. This is T(3,7). ● a(n + 1) = ceiling(a(n) ^ 2 / a(n - 1)) - 1 for n>0. - _ Bruno Berselli _ , Feb 15 2016 ●
► [A218983] 3,7,16,36,81,182,407,911,2038,4558,10192,22791,50963,113957,254816,569786,1274081,2848932,6370406,14244661,31852031,71223307,159260157,356116538,796300787 ⋆ Power ceiling sequence of sqrt(5). ● a(n) = ceiling(x * a(n - 1)), where x=sqrt(5), a(0) = ceiling(x). ●
► [A033303] 1,3,7,16,36,81,182,409,919,2065,4640,10426,23427,52640,118281,265775,597191,1341876,3015168,6775021,15223334,34206521,76861355,172705897,388066628 ⋆ Expansion of (1 + x) / (1 - 2 * x - x ^ 2 + x ^ 3). ● a(0)=1, a(1)=h(n), and a(n) = h(n) + h(n - 1) for n >= 2, where h(n) = Sum _{ k=1..n } Sum _{ j=0..k } binomial(k, j) * binomial(j, n - 3 * k + 2 * j) * 2 ^ (3 * k - n - j) * (- 1) ^ (k - j). - _ Vladimir Kruchinin _ , Sep 09 2010 ● a(0)=1, a(1)=3, a(2)=7, a(n) = 2 * a(n - 1) + a(n - 2) - a(n - 3). - _ Harvey P. Dale _ , Oct 31 2013 ●
► [A124671] 1,3,7,16,37,85,191,418,893,1871,3863,7892,16005,32297,64959,130374,261309,523299,1047415,2095800,4192741,8386813,16775167,33552106,67106237 ⋆ Row sums of A126277 = binomial transform of (1, 2, 2, 3, 4, 4, 4, ...) ● a(n) = 6 * a(n - 1) - 14 * a(n - 2) + 16 * a(n - 3) - 9 * a(n - 4) + 2 * a(n - 5) for n > 4. - _ Vincenzo Librandi _ , Mar 15 2014 ● a(n) = - 2 + 2 ^ (1 + n) - (5 * n) / 6 - n ^ 3 / 6. - _ Colin Barker _ , Jul 21 2017 ●
► [A188626] 1,3,7,16,37,86,199,456,1033,2314,5131,11276,24589,53262,114703,245776,524305,1114130,2359315,4980756,10485781,22020118,46137367,96469016,201326617 ⋆ a(n) = n + (n - 1) * 2 ^ (n - 2). ● a(n) = n + (n - 1) * 2 ^ (n - 2). ●
► [A123392] 0,0,0,1,1,3,7,16,37,86,199,461,1068,2474,5731,13276,30754,71242,165033,382301,885605,2051515,4752360,11008901,25502256 ⋆ a(- 3) = a(- 2) = a(- 1) = 0, a(0) = 1, a(n) = a(n - 1) + 2 * a(n - 2) + 2 * a(n - 3) + a(n - 4), for n >0. ● a(n) = Sum _{ k=0..n } C(n - k,k) * F(n - k + 1). - _ Paul Barry _ , Mar 01 2010 ●
► [A095263] 1,3,7,16,37,86,200,465,1081,2513,5842,13581,31572,73396,170625,396655,922111,2143648,4983377,11584946,26931732,62608681,145547525,338356945,786584466 ⋆ a(n + 3) = 3 * a(n + 2) - 2 * a(n + 1) + a(n). ● a(n) / a(n - 1) tends to 2.3247179572..., an eigenvalue of M and a root of the characteristic polynomial. [Is that constant equal to 1 + A060006? - _ Michel Marcus _ , Oct 11 2014] [Yes, the limit is the root of the equation - 1 + 2 * x - 3 * x ^ 2 + x ^ 3 = 0, after substitution x = y + 1 we have the equation for y: - 1 - y + y ^ 3 = 0, y = A060006. - _ Vaclav Kotesovec _ , Jan 27 2015] ● a(n) = Sum _{ k=0..floor((n + 1) / 2) } binomial(n + k, n - 2 * k + 1). ● a(n) = Sum _{ k=0..floor((n + 1) / 2) } binomial(n + k, 3 * k - 1). (End) ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n + k + 2,3 * k + 2). ● a(n) = Sum _{ k=0..n } binomial(n,k) * Sum _{ j=0..floor((k + 4) / 2) } binomial(j,k - 2j + 4). (End) ●
► [A010912] 3,7,16,37,86,200,465,1081,2513,5842,13581,31572,73396,170625,396655,922111,2143648,4983377,11584946,26931732,62608681,145547525,338356945,786584466,1828587033 ⋆ Pisot sequences E(3,7), P(3,7). ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) + a(n - 3) (holds at least up to n = 1000 but is not known to hold in general). ●
► [A192665] 1,1,1,3,7,16,37,88,207,496,1196,2900,7075,17344,42693,105473,261397,649638,1618527,4041401,10111385,25343883,63627940,159982510,402802976 ⋆ Floor - Sqrt transform of the numbers bin(3 * n,n) / (2 * n + 1) (A001764). ● a(n) = floor(sqrt(binomial(3 * n,n) / (2 * n + 1))). ●
► [A052967] 1,1,3,7,16,38,89,209,491,1153,2708,6360,14937,35081,82391,193503,454460,1067342,2506753,5887345,13826983,32473969,76268168,179122960,420687105 ⋆ Expansion of (1 - x) / (1 - 2 * x - x ^ 2 + x ^ 4). ● a(n) = Sum _{ k=0..n } (Sum _{ m=0..k } (binomial(k,m) * Sum _{ i=0..n - k - m } (binomial(m,i) * binomial(n - i - 2 * m - 1,n - k - i - m)))). - _ Vladimir Kruchinin _ , Mar 16 2016 ●
► [A323225] 0,1,3,7,16,38,92,220,512,1160,2576,5648,12288,26592,57280,122816,262144,557184,1179904,2490624,5242880,11009536,23067648,48233472,100663296 ⋆ a(n) = ((2 ^ n * n + i * (1 - i) ^ n - i * (1 + i) ^ n)) / 4, where i is the imaginary unit. ● a(n) = [x ^ n] (x * (3 * x ^ 2 - 3 * x + 1)) / ((2 * x - 1) ^ 2 * (2 * x ^ 2 - 2 * x + 1)). ● a(n) = n! [x ^ n] (exp(2 * x) * x + exp(x) * sin(x)) / 2. ● a(n) = (4 * n * a(n - 3) + (2 - 6 * n) * a(n - 2) + (4 * n - 2) * a(n - 1)) / (n - 1) for n >= 3. ●
► [A293065] 0,0,0,1,3,7,16,38,94,239,617,1605,4190,10956,28668,75037,196431,514243,1346284,3524594,9227482,24157835,63246005,165580161,433494458 ⋆ Number of vertices of type D at level n of the hyperbolic Pascal pyramid PP _ (4,5) . ● a(n) = 5 * a(n - 1) - 8 * a(n - 2) + 5 * a(n - 3) - a(n - 4), n >= 5. ●
► [A364625] 1,3,7,16,38,95,249,678,1901,5451,15906,47066,140868,425657,1296665,3977684,12276617,38094013,118768915,371875752,1168843808,3686549845,11664123048,37011249678,117750111763 ⋆ G.f. satisfies A(x) = 1 / (1 - x) ^ 3 + x ^ 2 * A(x) ^ 2. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n + k + 2,3 * k + 2) * binomial(2 * k,k) / (k + 1). ●
► [A227235] 1,3,7,16,38,96,262,767,2346,7315,22954,72239,228484,730470,2379669,7960733,27453387,97418566,353442491,1300699953,4821108695,17903653177,66375491706,245111697148,900578294735 ⋆ G.f.: Sum _{ n>=1 } x ^ n / (1 - x) ^ prime(n). ● a(n) = Sum _{ k=1..n } binomial(prime(k) + n - k - 1, n - k). ●
► [A152090] 1,1,1,3,7,16,39,91,217,513,1216,2881,6825,16171,38311,90768,215047,509491,1207089,2859841,6775552,16052673,38032081,90105811,213479175 ⋆ a(n) = 2 ^ n * Product _{ k=1..floor((n - 1) / 2) } (1 + 2 * cos(k * Pi / n) ^ 2 + 4 * cos(k * Pi / n) ^ 4). ● a(n) = a(n - 1) + 3 * a(n - 2) + a(n - 3) - a(n - 4) for n>4. ● a(n) = (T(n,alpha) - T(n,beta)) / (alpha - beta), n >= 1, where alpha = 1 / 4 * (1 + sqrt(21)), beta = 1 / 4 * (1 - sqrt(21)) and where T(n,x) denotes the Chebyshev polynomial of the first kind. ● a(n) = U(n - 1,1 / 4 * (1 + sqrt(- 3))) * U(n - 1,1 / 4 * (1 - sqrt(- 3))) for n >= 1, where U(n,x) denotes the Chebyshev polynomial of the second kind. ● a(n) = the bottom left entry of the 2 X 2 matrix T(n, M), where M is the 2 X 2 matrix [0, 5 / 4; 1, 1 / 2]. See the remarks in A100047 for the general connection between Chebyshev polynomials of the first kind and 4th - order linear divisibility sequences. (End) ●
► [A190528] 1,3,7,16,39,92,219,521,1238,2944,6999,16640,39562,94058,223623,531663,1264027,3005221,7144904,16986989,40386518,96018831,228284497,542745740,1290376448 ⋆ Number of n - step one - sided prudent walks avoiding exactly three consecutive West steps. ● a(0)=1, a(1)=3, a(2)=7, a(3)=16, a(4)=39, a(n) =2 * a(n - 1) + a(n - 2) - a(n - 4) + a(n - 5) [From Harvey P. Dale, Sep 20 2011] ●
► [A203611] 1,1,1,3,7,16,39,95,233,577,1436,3590,9011,22691,57299,145043,367931,935078,2380405,6068745,15492702,39598631,101323446,259522398,665332007 ⋆ Sum _{ k=0..n } C(k - 1,2 * k - 1 - n) * C(k,2 * k - n). ● a(n) = hypergeom([- n / 2, 1 - n / 2, (1 - n) / 2, (1 - n) / 2], [1, - n, 1 - n], 16). - _ Peter Luschny _ , Mar 24 2023 ●
► [A014140] 1,3,7,16,39,104,301,927,2983,9901,33615,116115,406627,1440039,5147891,18550588,67310955,245716112,901759969,3325067016,12312494483,45766188970,170702447097,638698318874,2396598337975 ⋆ Apply partial sum operator twice to Catalan numbers. ● a(n) = Sum _{ m=0..n } Sum _{ k=0..m } (2k)! / (k! * (k + 1)!). ● a(n) = Sum _{ k=0..n } (n + 1 - k) * (2k)! / (k! * (k + 1)!). (End) ● a(n) = Sum _{ k=0..n } binomial(n + 2,k + 2) * r(k), where r(k) are the Riordan numbers A005043. - _ Vladimir Kruchinin _ , Oct 14 2016 ●
► [A103439] 0,1,3,7,16,39,105,315,1048,3829,15207,65071,297840,1449755,7468541,40555747,231335960,1381989881,8623700811,56078446615,379233142800,2662013133295,19362917622001,145719550012299,1133023004941272 ⋆ a(n) = Sum _{ i=0..n - 1 } Sum _{ j=0..i } (i - j + 1) ^ j. ● a(n + 1) = Sum _{ k=0..n } ((k + 2) ^ (n - k) + k) / (k + 1). - _ Paul Barry _ , Oct 01 2006 ●
► [A036567] 3,7,16,41,101,247,613,1529,3821,9539,23843,59611,149015,372539,931327,2328307,5820767,14551919,36379789,90949471,227373677,568434193,1421085473,3552713687,8881784201 ⋆ Basic numbers used in Sedgewick - Incerpi upper bound for shell sort. ● a(n) is the smallest number >= 2.5 ^ n that is relatively prime to all previous terms in the sequence. ●
► [A360782] 1,1,1,3,7,16,45,125,363,1127,3561,11696,39727,138113,494213,1811075,6784115,25985928,101520833,404305549,1640002039,6767576175,28395916893,121048681024,523902418555 ⋆ Expansion of Sum _{ k>=0 } x ^ k / (1 - k * x ^ 2) ^ (k + 1). ● a(n) = Sum _{ k=0..floor(n / 2) } (n - 2 * k) ^ k * binomial(n - k,k). ●
► [A143817] 0,0,1,3,7,16,46,203,1178,7242,43786,259634,1540540,9414639,61061613,428890726,3266930298,26581123093,226393705465,1986997358251,17827284972818,163278469610570,1531115974317975,14771302315885372,147267150734530892 ⋆ Let A(0) = 1, B(0) = 0 and C(0) = 0. Let B(n + 1) = Sum _{ k = 0..n } binomial(n,k) * A(k), C(n + 1) = Sum _{ k = 0..n } binomial(n,k) * B(k) and A(n + 1) = Sum _{ k = 0..n } binomial(n,k) * C(k). This entry gives the sequence C(n). ● a(n) = Sum _{ k = 0..floor((n - 2) / 3) } Stirling2(n,3k + 2). ● a(n) = (Bell _ n(1) + w * Bell _ n(w) + w ^ 2 * Bell _ n(w ^ 2)) / 3, where Bell _ n(x) is n - th Bell polynomial and w = exp(2 * Pi * i / 3). - _ Seiichi Manyama _ , Oct 13 2022 ●
► [A364646] 1,3,7,16,55,235,856,2664,9055,37417,151431,533452,1825972,7141860,29778280,113688592,400940751,1499506693,6185139781,24862774872,91529003839,334939413067,1338383383444,5510330536000,21217042841668 ⋆ G.f. satisfies A(x) = 1 / (1 - 4 * x) - x * A(x) ^ 3. ● a(n) = Sum _{ k=0..n } (- 1) ^ k * 4 ^ (n - k) * binomial(n + k,2 * k) * binomial(3 * k,k) / (2 * k + 1). ●
► [A041077] 1,1,3,7,17,24,305,329,963,2255,5473,7728,98209,105937,310083,726103,1762289,2488392,31622993,34111385,99845763,233802911,567451585,801254496,10182505537 ⋆ Denominators of continued fraction convergents to sqrt(45). ● a(n) = 322 * a(n - 6) - a(n - 12). G.f.: - (x ^ 10 - x ^ 9 + 3 * x ^ 8 - 7 * x ^ 7 + 17 * x ^ 6 - 24 * x ^ 5 - 17 * x ^ 4 - 7 * x ^ 3 - 3 * x ^ 2 - x - 1) / ((x ^ 2 - 3 * x + 1) * (x ^ 2 + 3 * x + 1) * (x ^ 4 - 3 * x ^ 3 + 8 * x ^ 2 - 3 * x + 1) * (x ^ 4 + 3 * x ^ 3 + 8 * x ^ 2 + 3 * x + 1)). [_ Colin Barker _ , Jul 18 2012] ●

► [A219293] 1,3,7,17,35,62,103,165,257,390,577,833,1175,1622,2195,2917,3813,4910,6237,7825,9707,11918,14495,17477,20905,24822 ⋆ Number of n X 2 arrays of the minimum value of corresponding elements and their horizontal, vertical or antidiagonal neighbors in a random, but sorted with lexicographically nondecreasing rows and columns, 0..2 n X 2 array. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n > 7. ●

► [A178521] 0,0,3,7,17,35,70,134,251,461,835,1495,2652,4668,8163,14195,24565,42331,72674,124354,212155,360985,612743,1037807,1754232 ⋆ The cost of all leaves in the Fibonacci tree of order n. ● a(n) = (n - 1) * F(n) + n * F(n - 1). - _ Bruno Berselli _ , Dec 06 2013 ● a(n) = 2 * a(n - 1) + a(n - 2) - 2 * a(n - 3) - a(n - 4). - _ Wesley Ivan Hurt _ , Dec 14 2016 ● a(n) = (n + 1) * F(n + 1) - F(n + 2). - _ Bruno Berselli _ , Jul 26 2017 ● a(n) = (2 ^ (- 1 - n) * (2 * sqrt(5) * ((1 - sqrt(5)) ^ n - (1 + sqrt(5)) ^ n) + (- (1 - sqrt(5)) ^ n * (- 5 + sqrt(5)) + (1 + sqrt(5)) ^ n * (5 + sqrt(5))) * n)) / 5. - _ Colin Barker _ , Jul 26 2017 ● a(n) = (- n * sin(c * (- n - 1)) - sin(c * n) * i) / ((- i) ^ (- n) * sqrt(5 / 4)) where c = arccos(i / 2). - _ Peter Luschny _ , May 16 2022 ●

► [A295146] 1,3,7,17,36,76,156,317,639,1284,2574,5155,10317,20642,41292,82594,165197,330405,660820,1321652,2643315,5286643,10573298,21146610,42293233 ⋆ Solution of the complementary equation a(n) = a(n - 1) + 2 * a(n - 2) + b(n - 2), where a(0) = 1, a(1) = 3, b(0) = 2, b(1) = 4, and (a(n)) and (b(n)) are increasing complementary sequences. ● a(n + 1) / a(n) - > 2. ●

► [A014314] 0,1,3,7,17,36,82,169,373,760,1646,3334,7130,14392,30500,61429,129293,260016,544342,1093546,2279470,4575736,9504188,19067162,39486402 ⋆ Number of up steps in all length n left factors of Dyck paths. ● a(n) = 2 ^ (n - 1) + (n - 1) * binomial(n, (n - 1) / 2) / 2 if n is odd. (End) ●

► [A089116] 0,1,3,7,17,37,77,158,314,611,1174,2222,4156,7703,14149,25790,46703,84059,150476,268076,475460,839873,1478140,2592620,4533157 ⋆ Convoluted convolved Fibonacci numbers G _ j ^ (3). ● a(n) = + 3 * a(n - 1) - 4 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) + 7 * a(n - 6) - 3 * a(n - 7) - 3 * a(n - 8) + 4 * a(n - 9) - 3 * a(n - 11) - a(n - 12). - _ R. J. Mathar _ , Jan 25 2011 ●

► [A026396] 3,7,17,37,87,187,437,937,2187,4687,10937,23437,54687,117187,273437,585937,1367187,2929687,6835937,14648437,34179687,73242187,170898437,366210937,854492187 ⋆ Sum _{ T(i,j) } , 0<=j<=i, 0<=i<=n, where T is the array in A026386. ● a(n) = (7 * 5 ^ (n / 2) - 1) / 2 for n even. ● a(n) = (6 * 5 ^ ((n + 1) / 2) - 2) / 4 for n odd. ● a(n) = a(n - 1) + 5 * a(n - 2) - 5 * a(n - 3) for n>2. ● a(n) = (3 - (- 1) ^ n - (13 + (- 1) ^ n) * 5 ^ ((1 - (- 1) ^ n + 2 * n) / 4)) / (2 * (- 1) ^ n - 6). - _ Wesley Ivan Hurt _ , Oct 02 2021 ●

► [A119587] 0,1,1,3,7,17,39,87,189,403,847,1761,3631,7439,15165,30795,62343,125905,253783,510759,1026685,2061731,4136991,8295873,16627167 ⋆ 2 ^ n + 1 - 2 * Fibonacci(n + 1). ● a(n)=1 + 2 ^ n - [1 / 2 + (1 / 2) * sqrt(5)] ^ n - (1 / 5) * [1 / 2 + (1 / 2) * sqrt(5)] ^ n * sqrt(5) + (1 / 5) * sqrt(5) * [1 / 2 - (1 / 2) * sqrt(5)] ^ n - [1 / 2 - (1 / 2) * sqrt(5)] ^ n, with n>=0 [From _ Paolo P. Lava _ , Oct 07 2008] ●

► [A127984] 1,3,7,17,39,89,199,441,967,2105,4551,9785,20935,44601,94663,200249,422343,888377,1864135,3903033,8155591,17010233,35418567,73633337,152859079 ⋆ a(n) = (n / 3 + 7 / 9) * 2 ^ (n - 1) + (- 1) ^ n / 9. ● a(n) = (n / 3 + 7 / 9) * 2 ^ (n - 1) + (- 1) ^ n / 9. ● a(n) = 3 * a(n - 1) - 4 * a(n - 3). (End) ● a(n) = f(n + 1) * 2 ^ (n - 1), where f(n) is a rational Fibonacci type sequence based on fuse(a,b) = (a + b + 1) / 2 with f(0) = 0, f(1) = 1 and f(n) = fuse(f(n - 1), f(n - 2)), for n >= 2. For fuse(a,b) see the _ Jeff Erickson _ link under A188545. Proof: f(n) = (3 * n + 4 - (- 1) ^ n / 2 ^ (n - 2)) / 9, n >= 0, by induction. ● a(n) = a(n - 1) + a(n - 2) + 2 ^ (n - 2), n >= 1, with inputs a(- 1) = 0, a(0) = 1 / 2. ●

► [A298371] 0,0,1,3,7,17,40,90,198,430,922,1956,4115,8597,17853,36883,75856,155396,317228,645580,1310132,2652072,5356277,10795351,21716195 ⋆ a(n) = Sum _{ m=0..n } Sum _{ i=0..m } i * C(m - i,i) * C(m - i,n - m - i). ● a(n) = 2 * a(n - 1) + a(n - 2) - a(n - 4) - 4 * a(n - 5) - 3 * a(n - 6) - 2 * a(n - 7) - a(n - 8) for n>7. - _ Colin Barker _ , Jan 18 2018 ●

► [A367396] 0,0,0,1,3,7,17,40,90,199,435,939,2007,4258,8976,18817,39263,81595,168969,348820,718134,1474863,3022407,6181687,12621135 ⋆ Number of subsets of { 1..n } whose cardinality is the sum of two distinct elements. ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 4 * a(n - 3) - 5 * a(n - 4) + 2 * a(n - 5) for n > 4. ●

► [A106472] 1,3,7,17,40,92,208,464,1024,2240,4864,10496,22528,48128,102400,217088,458752,966656,2031616,4259840,8912896,18612224,38797312,80740352,167772160 ⋆ Expansion of g.f. (1 - x) ^ 2 * (1 + x) / (1 - 2 * x) ^ 2. ● a(0)=1, a(1)=3, and a(n) = (3 * n + 8) * 2 ^ (n - 3), for n>=2. [simplified by _ Ralf Stephan _ , Nov 16 2010] ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) for n > 3. - _ Colin Barker _ , Dec 16 2017 ●

► [A249753] 1,3,7,17,40,99,246,642,1690,4554,12436,34132,95230,263934,744956,2075132,5892430,16456014,46871196,131068572,373897870,1046231694,2986898716,8360588572,23878057870 ⋆ Number of triangles in the complex obtained by starting with an isosceles right triangle, and dividing each cell into two similar isosceles right triangles n times. ● a(0) = 1; ● a(1) = 3; ● a(2) = 7; ● a(2k + 1) = (140 2 ^ (3k) + 318 2 ^ (2k) + 60 2 ^ (k) - 48 + 16 (- 1) ^ (k)) / 144, for k > 0; ● a(2k) = (50 2 ^ (3k) + 147 2 ^ (2k) + 60 2 ^ (k) - 48 + 16 (- 1) ^ (k)) / 144, for k > 1. ●

► [A192674] 1,1,3,7,17,41,94,220,515,1209,2845,6711,15861,37549,89015,211287,502051,1194083,2842413,6771220,16141369,38501639,91888052,219411132,524154756 ⋆ Floor - Sqrt transform of large central Delannoy numbers (A001850). ● a(n) = floor(sqrt(centralDelannoy(n))). ●

► [A089737] 1,3,7,17,41,98,235,565,1362,3294,7992,19450,47475,116204,285178,701585,1730003,4275162,10586164,26263365,65273566,162499838,405185762,1011815774,2530219435 ⋆ Number of (1,1) steps starting at level zero in all peakless Motzkin paths of length n + 3. ● a(n) = Sum _{ k=ceiling(n / 2 + 1)..n + 1 } (5k - 2n - 2) * binomial(k,n + 1 - k) * binomial(k + 1,n + 3 - k) / (k * (n + 4 - k)). ●

► [A001333] 1,1,3,7,17,41,99,239,577,1393,3363,8119,19601,47321,114243,275807,665857,1607521,3880899,9369319,22619537,54608393,131836323,318281039,768398401 ⋆ Numerators of continued fraction convergents to sqrt(2). ● a(n) = 2a(n - 1) + a(n - 2); ● a(n) = ((1 - sqrt(2)) ^ n + (1 + sqrt(2)) ^ n) / 2. ● a(n) = (- i) ^ n * T(n, i), with T(n, x) Chebyshev's polynomials of the first kind A053120 and i ^ 2 = - 1. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n, 2k)2 ^ k. - _ Paul Barry _ , May 13 2003 ● a(n) = upper left and lower right terms of [1,1; 2,1] ^ n. - _ Gary W. Adamson _ , Mar 12 2008 ● a(- n) = (- 1) ^ n * a(n). - _ Michael Somos _ , Sep 02 2012 ●

► [A078057] 1,3,7,17,41,99,239,577,1393,3363,8119,19601,47321,114243,275807,665857,1607521,3880899,9369319,22619537,54608393,131836323,318281039,768398401,1855077841 ⋆ Expansion of (1 + x) / (1 - 2 * x - x ^ 2). ● a(n) = 2 * a(n - 1) + a(n - 2); a(0)=1; a(1)=3. - _ Wayne VanWeerthuizen _ , May 02 2004 ● a(n) = 2 * a(n - 1) + a(n - 2); lim _{ n - >oo } a(n + 1) / a(n) = 1 + sqrt(2) (i.e., the silver ratio). - Shiva Samieinia (shiva(AT)math.su.se), Oct 08 2007 ● a(n) = (1 / 2) * (1 + sqrt(2)) ^ n - (1 / 2) * sqrt(2) * (1 - sqrt(2)) ^ n + (1 / 2) * (1 - sqrt(2)) ^ n + (1 / 2) * (1 + sqrt(2)) ^ n * sqrt(2). - _ Paolo P. Lava _ , Nov 20 2008 ● a(n) = T(n + 1, i) / i ^ (n + 1), where T(n, x) denotes the Chebyshev polynomial of the first kind. - _ Michael Somos _ , Jul 28 2018 ●

► [A089742] 1,3,7,17,41,99,242,596,1477,3681,9215,23155,58368,147530,373768,948882,2413264,6147414,15682008,40056238,102434119,262228051,671945055,1723350315,4423518544 ⋆ Number of subwords UHH...HD in all peakless Motzkin paths of length n + 3, where U=(1,1), D=(1, - 1) and H=(1,0). ● a(n) = Sum _{ m=0..n + 2 } (Sum _{ j=1..m / 2 } (j * Sum _{ i=0..m / 2 - j } ((binomial(2 * j + 2 * i,i) * Sum _{ k=0..m - 2 * j - 2 * i } (binomial(k,m - k - 2 * j - 2 * i) * binomial(k + 2 * j + 2 * i - 1,k) * (- 1) ^ (k - m))) / (j + i)))). - _ Vladimir Kruchinin _ , Mar 07 2016 ●

► [A003440] 1,1,3,7,17,42,104,259,648,1627,4098,10350,26202,66471,168939,430071,1096451,2799072,7154189,18305485,46885179,120195301,308393558,791882862,2034836222 ⋆ Number of binary vectors with restricted repetitions. ● a(n) = Sum _{ k=0..n } (C(k, n - k) + C(k + 1, n - k - 1)) ^ 2 / 2 for n>0, with a(0)=1. - _ Paul D. Hanna _ , Mar 06 2005 ●

► [A102071] 1,3,7,17,42,106,272,708,1865,4963,13323,36037,98123,268737,739833,2046207,5682915,15842505,44315637,124348275,349911204,987212856,2791964574,7913642086,22477090679 ⋆ Pairwise sums of general ballot numbers (A002026). ● a(n) = (1 / n) * Sum _{ j=0..n } ((binomial(j,n - 1 - j) + 4 * binomial(j,n - 2 - j) + 3 * binomial(j,n - 3 - j)) * binomial(n,j)). - _ Vladimir Kruchinin _ , Mar 08 2016 ●

► [A178778] 1,3,7,17,42,112,308,882,2563,7565,22449,66979,200204,599514,1796350,5385764,16150725,48442327,145307291,435892341,1307617966,3922765316,11768118792,35304090646,105911740487 ⋆ Partial sums of walks of length n + 1 on a tetrahedron A001998. ● a(n) = Sum _{ i=0..n } (if i mod 2 = 0 then ((3 ^ ((i - 2) / 2) + 1) / 2) ^ 2 else 3 ^ ((i - 3) / 2) + (1 / 4) * (3 ^ (i - 2) + 1)). ● a(n) = (- 7 + 3 ^ (1 + n) + 3 ^ (1 / 2 * (- 1 + n)) * (9 - 9 * (- 1) ^ n + 5 * sqrt(3) + 5 * (- 1) ^ n * sqrt(3)) + 2 * (1 + n)) / 8. ● a(n) = (2 * n + 10 * 3 ^ (n / 2) + 3 ^ (n + 1) - 5) / 8 for n even. ● a(n) = (2 * n + 3 ^ (n + 1) + 2 * 3 ^ ((n + 3) / 2) - 5) / 8 for n odd. ● a(n) = 5 * a(n - 1) - 4 * a(n - 2) - 12 * a(n - 3) + 21 * a(n - 4) - 9 * a(n - 5) for n>4. ●

► [A142975] 1,1,3,7,17,43,109,281,727,1891,4929,12871,33641,87985,230203,602447,1576849,4127635,10805301,28287049,74053871,193871371,507555073,1328785487,3478787857 ⋆ n - th term of the Fibonacci - type sequence x(1)=1, x(2)=Fibonacci(n), x(k + 1)=x(k) + x(k - 1) for k>1. ● a(n) = fib(1,fib(1,1,n),n). ●

► [A192908] 1,1,3,7,17,43,111,289,755,1975,5169,13531,35423,92737,242787,635623,1664081,4356619,11405775,29860705,78176339,204668311,535828593,1402817467,3672623807 ⋆ Constant term in the reduction by (x ^ 2 - > x + 1) of the polynomial p(n,x) defined below at Comments. ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) + a(n - 3) for n>3. ● a(n) = 2 * Fibonacci(2 * n - 2) + 1 for n>0, a(0)=1. - _ Bruno Berselli _ , Dec 27 2016 ● a(n) = - 1 + 3 * a(n - 1) - a(n - 2) with a(1) = 1 and a(2) = 3. Cf. A055588 and A097136. - _ Peter Bala _ , Nov 12 2017 ●

► [A085279] 1,3,7,17,43,113,307,857,2443,7073,20707,61097,181243,539633,1610707,4815737,14414443,43177793,129402307,387944777,1163310043,3488881553,10464547507,31389448217,94159956043 ⋆ Expansion of (1 - 2 * x - 2 * x ^ 2) / ((1 - 2 * x) * (1 - 3 * x)). ● a(n) = (3 * 2 ^ n + 3 ^ n - 0 ^ n) / 3. ● a(n) = 2 ^ n + 3 ^ (n - 1) for n >= 1. ● a(n) = 5 * a(n - 1) - 6 * a(n - 2) for n > 1. - _ Vincenzo Librandi _ , Sep 12 2014 ●

► [A294129] 0,1,3,7,17,43,119,351,1115,3735,13231,48927,189079,757583,3148063,13497599,59704335,271503647,1268817471,6078518911,29837183007,149789875903,768674514815,4026518397439,21518708975039 ⋆ Numbers n for which exactly one length minimal language exists having exactly n nonempty words over a countably infinite alphabet such that within each prefix of a word every letter of the alphabet is at least as frequent as the subsequent alphabet letter. ● a(n) = 2 * a(n - 1) + (n - 3) * a(n - 2) - (n - 2) * a(n - 3) for n>= 4, a(n) = n * (n - 1) / 2 for n<4. ●

► [A308589] 0,3,7,17,44,112,285,726,1849,4709,11993,30544,77790,198117,504568,1285043,3272771,8335153,21228120,54064164,137691601,350675486,893106737,2274580561,5792943345 ⋆ Number of minimal edge covers in the (2n - 1) - triangular snake graph. ● a(n) = 2 * a(n - 1) + a(n - 2) + a(n - 3). ●

► [A233656] 1,3,7,17,45,127,371,1101,3289,9851,29535,88585,265733,797175,2391499,7174469,21523377,64570099,193710263,581130753,1743392221,5230176623,15690529827,47071589437,141214768265 ⋆ a(n) = 3 * a(n - 1) - 2 * (n - 1), with a(0) = 1. ● a(n) = 3 * a(n - 1) - 2 * (n - 1), with a(0) = 1. ● a(n) = (1 + 3 ^ n + 2 * n) / 2. ● a(n) = 5 * a(n - 1) - 7 * a(n - 2) + 3 * a(n - 3). ●

► [A151265] 1,1,3,7,17,47,125,333,939,2597,7183,20505,57859,163201,469795,1341775,3830529,11092823,31940165,91927379,267406401,774447755,2242022721,6544458687,19036737381 ⋆ Number of walks within N ^ 2 (the first quadrant of Z ^ 2) starting at (0,0) and consisting of n steps taken from { (- 1, 0), (0, - 1), (1, 1) } . ● a(n) == 1 (mod 2). - _ Alois P. Heinz _ , Jul 12 2021 ●

► [A351437] 1,1,1,3,7,17,47,145,481,1691,6295,24805,103095,449805,2052081,9762699,48334855,248568321,1325297879,7312927481,41694974649,245288605059,1487041552343,9279329735685,59537092965663 ⋆ G.f. A(x) satisfies: A(x) = 1 + x + x ^ 2 * A(x / (1 - x)) / (1 - x) ^ 2. ● a(0) = a(1) = 1; a(n) = Sum _{ k=0..n - 2 } binomial(n - 1,k + 1) * a(k). ●

► [A014144] 0,1,3,7,17,51,205,1079,6993,53227,462341,4500255,48454969,571411283,7321388397,101249656711,1502852293025,23827244817339,40183906543765

3,7182224591785967,135607710526966281,2696935204638786595,56349204870460046909,1234002202313888987223 ⋆ Apply partial sum operator twice to factorials. ● a(n) = (n - 1) * !n - n! + 1, !n = Sum _{ k=0..n - 1 } k!. - Joe Keane (jgk(AT)jgk.org) ● a(n) = convolution(A000142, A001477). - _ Peter Luschny _ , Jan 21 2012 ●

▶ [A321139] 1,1,1,3,7,17,52,144,480,1732,5902,21078,78434,289107,1079949,4094643,15574377,59667023,230318968,892694240,3477119540,13606993083,53438614380,210622413188,832922044686 ⋆ a(n) = [x ^ (n ^ 2)] Product _{ k=1..n } Sum _{ m>=0 } x ^ (k * m ^ 2). ● a(n) = [x ^ (n ^ 2)] Product _{ k=1..n } (theta _ 3(x ^ k) + 1) / 2, where theta _ 3() is the Jacobi theta function. ●

▶ [A357784] 0,0,1,3,7,17,61,343,2231,14301,88561,542011,3397483,22638993,164336085,1299899087,10991061663,97070035205,881323166809,8173386231395,77489746906355,754631383660729,7590899551399869,79174328607339767,856889470005396071 ⋆ a(n) = Sum _{ k=0..floor((n - 2) / 3) } 2 ^ k * Stirling2(n,3 * k + 2). ● a(n) = (Bell _ n(2 ^ (1 / 3)) + w * Bell _ n(2 ^ (1 / 3) * w) + w ^ 2 * Bell _ n(2 ^ (1 / 3) * w ^ 2)) / (3 * 2 ^ (2 / 3)), where Bell _ n(x) is n - th Bell polynomial. ●

▶ [A042077] 1,1,3,7,17,75,92,535,627,14329,14956,89109,104065,505369,1114803,2734975,6584753,9319728,435292241,444611969,1324516179,3093644327,7511804833,33140863659,40652668492 ⋆ Denominators of continued fraction convergents to sqrt(562). ● a(n) = 441876994 * a(n - 18) - a(n - 36) for n>35. - _ Vincenzo Librandi _ , Jan 14 2014 ●

▶ [A041949] 1,3,7,17,92,569,2937,6443,15823,53912,2387951,7217765,16823481,40864727,221147116,1367747423,7059884231,15487515885,38034916001,129592263888,5740094527073,17349875845107,40439846217287,98229568279681,531587687615692 ⋆ Denominators of continued fraction convergents to sqrt(497). ● a(n) = 2403774 * a(n - 10) - a(n - 20) for n>19. - _ Vincenzo Librandi _ , Dec 27 2013 ●

▶ [A006124] 3,7,18,36,61,93,132,178,231,291,358,432,513,601,696,798,907,1023,1146,1276,1413,1557,1708,1866,2031 ⋆ a(n) = 3 + n / 2 + 7 * n ^ 2 / 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Jul 07 2012 ●

▶ [A074587] 1,3,7,18,37,85,171,364,736,1513,3027,6168,12337,24849,49743,99872,199745,400322,800645,1602862,3205903,6414837,12829675,25665996,51332030 ⋆ Sum of the coefficients of the n - th Moebius polynomial, M(n,x), where M(n, - 1) = mu(n), the Moebius function of n. ● a(1)=1 a(n)=1 + sum(i=1, n - 1, floor(n / i) * a(i)). - _ Benoit Cloitre _ , Dec 04 2002 ●

▶ [A129921] 1,1,3,7,18,43,108,263,651,1599,3942,9698,23890,58805,144806,356512,877820,2161285,5321485,13102246,32259890,79428762,195566238,481514453,1185564348 ⋆ Number of generalized compositions of n: words b _ 1 ^{ i _ 1 } b _ 2 ^{ i _ 2 } ...b _ k ^{ i _ k } such that b _ j's and j _ i's are positive integers and sum b _ j * i _ j = n. ● a(n) = Sum _{ k=0..n - 1 } tau(n - k) * a(k) for n>0 with a(0) = 1. - _ Ridouane Oudra _ , Mar 13 2020 ●

▶ [A027967] 3,7,18,44,98,199,373,654,1085,1719,2620,3864,5540,7751,10615,14266,18855,24551,31542,40036,50262,62471,76937,93958,113857 ⋆ T(n, 2 * n - 5), T given by A027960. ● a(n) = (840 - 736 * n + 300 * n ^ 2 - 45 * n ^ 3 + n ^ 5) / 120. ●

▶ [A181306] 1,1,3,7,18,44,110,272,676,1676,4160,10320,25608,63536,157648,391152,970528,2408064,5974880,14824832,36783296,91266496,226449920,561866240,1394099328 ⋆ Number of 2 - compositions of n having no increasing columns. A 2 - composition of n is a nonnegative matrix with two rows, such that each column has at least one nonzero entry and whose entries sum up to n. ● a(0)=1, a(1)=1, a(2)=3, a(3)=7, a(n)=2 * a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) [From Harvey P. Dale, Mar 07 2012] ●

▶ [A291734] 3,7,18,45,108,258,615,1459,3453,8164,19287,45540,107496,253695,598659,1412587,3332970,7863853,18553752,43774722,103279023,243668295,574890057,1356344056,3200033343 ⋆ p - INVERT of (1,0,1,0,0,0,0,...), where p(S) = (1 - S)(1 - 2 S). ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) + 3 * a(n - 3) - 4 * a(n - 4) - 2 * a(n - 6) for n >= 7. ●

▶ [A291229] 3,7,18,45,111,272,663,1611,3906,9457,22875,55296,133611,322751,779490,1882341,4545159,10974256,26496255,63970947,154444914,372871721,900206067,2173312512,5246877459 ⋆ p - INVERT of (0,1,0,1,0,1,...), where p(S) = (1 - S)(1 - 2 S). ● a(n) = 3 * a(n - 1) - 2 * a(n - 3) - a(n - 4) for n >= 5. ●

▶ [A116413] 1,3,7,18,46,117,298,759,1933,4923,12538,31932,81325,207120,527497,1343439,3421495,8713926,22192786,56520993,143948698,366611175,933692041,2377943955,6056191126 ⋆ Expansion of (1 + x) / (1 - 2x - x ^ 2 - x ^ 3). ● a(n)=2a(n - 1) + a(n - 2) + a(n - 3); a(n)=sum { k=0..floor(n / 2), sum { j=0..n - k, C(k + 1,j)C(n - k - j,k)2 ^ (n - 2k - j) }} . ●

▶ [A052960] 1,1,3,7,18,46,118,303,778,1998,5131,13177,33840,86905,223182,573157,1471933,3780093,9707713,24930522,64024444,164422126,422254905,1084399096,2784861432 ⋆ Expansion of (1 - x - x ^ 2) / (1 - 2 * x - 2 * x ^ 2 + x ^ 3 + x ^ 4). ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - a(n - 3) - a(n - 4). ● a(n) = Sum _{ alpha=RootOf(1 - 2 * z - 2 * z ^ 2 + z ^ 3 + z ^ 4) } (1 / 331) * (25 + 75 * alpha - 6 * alpha ^ 2 - 5 * alpha ^ 3) * alpha ^ (- 1 - n). ● a(n) = Sum _{ i=0..n } Sum _{ k=0..n / 2 } binomial(i + 2 * k, 2 * k) * binomial(i + k, n - i - 2 * k). - _ Emanuele Munarini _ , May 10 2011 ●

▶ [A059512] 0,1,1,3,7,18,46,119,309,805,2101,5490,14356,37557,98281,257231,673323,1762594,4614226,12079707,31624285,82792161,216750601,567457058,1485616392 ⋆ For n>=2, the number of (s(0), s(1), ..., s(n - 1)) such that 0 < s(i) < 5 and |s(i) - s(i - 1)| <= 1 for i = 1,2,....,n - 1, s(0) = 2, s(n - 1) = 2. ● a(n) = 2a(n - 1) + Sum { m<n - 1 } a(m) - F(n - 3) where F(n) is the n - th Fibonacci number (A000045). ● a(n + 1)=sum { k=0..floor(n / 2), C(n,2k) * F(2k + 1) } . [From _ Paul Barry _ , Oct 14 2009] ●

▶ [A094297] 1,3,7,18,46,120,316,840,2248,6048,16336,44256,120160,326784,889792,2424960,6613120,18043392,49247488,134450688,367134208,1002645504,2738510848,7480215552,20433258496 ⋆ Number of (s(0), s(1), ..., s(n)) such that 0 < s(i) < 6 and |s(i) - s(i - 1)| <= 1 for i = 1,2,...,n, s(0) = 2, s(n) = 2. ● a(n) = (1 / 3) * Sum _{ k=1..5 } sin(Pi * k / 3) ^ 2 * (1 + 2 * cos(Pi * k / 6)) ^ n or a(n) = (2 ^ n + (1 - sqrt(3)) ^ n + (1 + sqrt(3)) ^ n) / 4. ●

▶ [A027969] 3,7,18,47,120,291,661,1404,2801,5283,9484,16305,26990,43215,67191,101782,150639,218351,310614,434419,598260,812363,1088937,1442448,1889917 ⋆ a(n) = T(n, 2 * n - 7), T given by A027960. ● a(n) = (90720 - 85548 * n + 38822 * n ^ 2 - 10136 * n ^ 3 + 1505 * n ^ 4 - 77 * n ^ 5 - 7 * n ^ 6 + n ^ 7) / 5040. ●

▶ [A027971] 3,7,18,47,123,319,806,1954,4506,9859,20495,40615,77040,140455,247085,420906,696509,1122751,1767344,2722551,4112177,6100063,8900312,12789498,18121132 ⋆ T(n, 2n - 9), T given by A027960. ● a(n) = (17055360 - 16329024 * n + 7697736 * n ^ 2 - 2299060 * n ^ 3 + 462798 * n ^ 4 - 60207 * n ^ 5 + 4284 * n ^ 6 - 30 * n ^ 7 - 18 * n ^ 8 + n ^ 9) / 362880. - _ Colin Barker _ , Nov 25 2014 ●

▶ [A267799] 3,7,18,49,138,397,1158,3409,10098,30037,89598,267769,801258,2399677,7190838,21556129,64635618,193841317,581392878,1743916489,5231225178,15692626957,47075783718,141223156849,423661081938 ⋆ a(n) = (1 + 2 ^ n + 3 ^ n) / 2. ● a(n) = 6 * a(n - 1) - 11 * a(n - 2) + 6 * a(n - 3) for n>3. ●

▶ [A103177] 3,7,18,50,145,429,1280,3832,11487,34451,103342,310014,930029,2790073,8370204,25110596,75331771,225995295,677985866,2033957578,6101872713,18305618117,54916854328,164750562960,494251688855 ⋆ (7 * 3 ^ n + 2n + 5) / 4. ● a(n) = 5 * a(n - 1) - 7 * a(n - 2) + 3 * a(n - 3). G.f.: (3 - 2 * x) * (1 - 2 * x) / ((1 - x) ^ 2 * (1 - 3 * x)). [_ Colin Barker _ , Aug 28 2012] ●

▶ [A369842] 1,3,7,18,52,154,450,1301,3753,10838,31327,90568,261813,756786,2187496,6323023,18277014,52830706,152709940,441415867,1275934888,3688154521,10660798289,30815580241,89074003241 ⋆ Number of compositions of 5 * n - 1 into parts 2 and 5. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n + 1 + 3 * k,n - 1 - 2 * k). ● a(n) = 5 * a(n - 1) - 9 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ●

▶ [A256873] 3,7,18,52,168,592,2208,8512,33408,132352,526848,2102272,8398848,33574912,134258688,536952832,2147647488,8590262272,34360393728,137440264192,549758435328,2199028498432,8796103507968,35184393060352,140737530298368 ⋆ a(n) = 2 ^ (n - 1) * (2 ^ n + 5). ● a(n) = 6 * a(n - 1) - 8 * a(n - 2). - _ Colin Barker _ , Apr 26 2015 ●

▶ [A134045] 1,3,7,18,61,258,1177,5358,23821,103338,439297,1838598,7605781,31191618,127100617,515462238,2083142941,8396683098,33779525137,135697396278,544529307301,2183340065778,8749036112857,35043186680718,140313902770861 ⋆ Let P(A) be the power set of an n - element set A. Then a(n) = the number of pairs of elements { x,y } of P(A) for which either 0) x and y are disjoint and for which either x is a subset of y or y is a subset of x, or 1) x and y are intersecting but for which x is not a subset of y and y is not a subset of x, or 2) x = y. ● a(n) = (1 / 2)(4 ^ n - 3 ^ (n + 1) + 7 * 2 ^ n - 3) = 3 * StirlingS2(n + 1,4) + 2 * StirlingS2(n + 1,2) + 1. ●

▶ [A361087] 1,1,3,7,19 ⋆ Maximum squared inverse distance from the origin to the hyperplane defined by hypercube points. ● a(n) = max _ (m in M _ n) || m ^ (- 1) e|| ^ 2, where M _ n is the set of n X n nonsingular matrices with - 1 /+ 1 elements and e is the vector of all 1's. ●

▶ [A164097] 3,7,19,27,47,59,87,103,139,159,203,227,279,307,367,399,467,503,579,619,703,747,839,887,987 ⋆ Numbers k such that 6 * k + 7 is a perfect square. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). ●

▶ [A298125] 1,3,7,19,37,61,91,127,169,217,271,331,397,469,547,631,721,817,919,1027,1141,1261,1387,1519,1657 ⋆ The hex numbers (A003215) together with 3. ● a(n) = 7 - 9 * n + 3 * n ^ 2 for n>2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>5. ●

▶ [A222465] 3,7,19,39,67,103,147,199,259,327,403,487,579,679,787,903,1027,1159,1299,1447,1603,1767,1939,2119,2307 ⋆ a(n) = 4 * n ^ 2 + 3. ● a(n) = 4 * n ^ 2 + 3, n >= 0. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>2, a(0) = 3, a(1) = 7, a(2) = 19. - _ Philippe Deléham _ , Mar 05 2013 ●

▶ [A055622] 1,3,7,19,43,99,235,535,1239,2879,6619,15323,35451,81823,189263,437543,1011059,2337731,5403987,12491223,28877687,66755519,154315883,356738411,824668747 ⋆ Minimum solution for tri - color tower of Hanoi, restricted so like colors can't be together. ● a(n) = a(n - 1) + 2 a(n - 2) + 7 a(n - 3) - 5 a(n - 4) - 8 a(n - 5) - 14 a(n - 6) + 2 a(n - 7) + 4 a(n - 8) + 4 a(n - 9) + 8 a(n - 10). ●

▶ [A075900] 1,1,3,7,19,43,115,259,659,1523,3731,8531,20883,47379,113043,259219,609683,1385363,3245459,7344531,17028499,38579603,88585619,199845267,457864595 ⋆ G.f.: Product _{ n>0 } 1 / (1 - 2 ^ (n - 1) * x ^ n). ● a(n) = Sum _{ partitions n = c _ 1 + ... + c _ k } 2 ^ (n - k). If p(n, m) = number of partitions of n into m parts, a(n) = Sum _{ m=1..n } p(n, m) * 2 ^ (n - m). ● a(n) = s(1,n), a(0)=1, where s(m,n)=sum(k=m..n / 2, 2 ^ (k - 1) * s(k,n - k)) + 2 ^ (n - 1), s(n,n) = 2 ^ (n - 1), s(m,n)=0, m>. - _ Vladimir Kruchinin _ , Sep 06 2014 ●

▶ [A029855] 1,1,3,7,19,46,124,320,858,2282,6161,16647,45352,123861,340000,936098,2586518,7166394,19911638,55456892,154814055,433081632,1213901668,3408659401,9587879987 ⋆ Number of rooted trees where root has degree 4. ● a(n)= Sum _ (P) { Prod _ (1 ^ a1 2 ^ a2 3 ^ a3 ...) { binomial(f(i) + a _ i - 1, a _ i) } } , where P is the set of the partitions of n with four parts, and f = A000081. - _ Washington Bomfim _ , Jul 10 2012 ●

▶ [A026581] 1,3,7,19,47,123,311,803,2047,5259,13447,34483,88271,226203,579287,1484099,3801247,9737643,24942631,63893203,163663727,419236539,1073891447,2750837603,7046403391 ⋆ Expansion of (1 + 2 * x) / (1 - x - 4 * x ^ 2). ● a(n) = a(n - 1) + 4 * a(n - 2), n>1. ● a(n) = (2 ^ (- 1 - n) * ((1 - sqrt(17)) ^ n * (- 5 + sqrt(17)) + (1 + sqrt(17)) ^ n * (5 + sqrt(17)))) / sqrt(17). - _ Colin Barker _ , Dec 22 2016 ●

▶ [A061646] 1,1,1,3,7,19,49,129,337,883,2311,6051,15841,41473,108577,284259,744199,1948339,5100817,13354113,34961521,91530451,239629831,627359043,1642447297 ⋆ a(n) = 2 * a(n - 1) + 2 * a(n - 2) - a(n - 3) with a(- 1) = 1, a(0) = 1, a(1) = 1. ● a(n) = (2 * Fibonacci(n) * Fibonacci(n + 1) * (Fibonacci(n + 2) + phi * Fibonacci(n + 1)) + (1 / phi) ^ n) / (Fibonacci(n) * phi + Fibonacci(n + 1)). - _ Thomas Baruchel _ , Nov 19 2004 ● a(n) = F(2 * n - 1) + F(n - 1) * F(n), with F(- 3):=2, F(- 2):= - 1 and F(- 1):=1 (corrected eq. (1.3) of the Atanassov et al. reference) with F(n):=A000045 (Fibonacci). - _ Wolfdieter Lang _ , Jul 22 2005 ● a(n) = (1 / 5) * Sum _{ k=1..5) ((w _ k) ^ 2 - 1) ^ n, w _ k = 2 * cos((2 * k - 1) * Pi / 10), n >= 0, recalling that the sequence offset is - 1. - _ L. Edson Jeffery _ , Apr 20 2011 ● a(n) = ((- 2) ^ n + 2 * (3 - sqrt(5)) ^ n + 2 * (3 + sqrt(5)) ^ n) / (5 * 2 ^ n). - _ L. Edson Jeffery _ , Apr 21 2011 ● a(n)

= L(2 * n - 2) + F(n - 3) * F(n - 2) for n >= 3, where L=A000032 are Lucas n umbers. - _ J. M. Bergot _ , Aug 08 2012 ● a(n) = (F(n - 1) ^ 2 + F(n) ^ 2 + F(n + 1) ^ 2) / 2. ●

▶ [A151266] 1,1,3,7,19,49,139,379,1079,3011,8681,24641,71303,204359,594749,1717871,5012591,14552407,42601285,124209955,364300377,1065449397,3131483367,9182889013,27027421303 ⋆ Number of walks within N ^ 2 (the first quadrant of Z ^ 2) starting at (0,0) and consisting of n steps taken from { (- 1, 0), (1, - 1), (1, 1) } . ● a(n) = Sum _{ j=0..[n / 2] } Sum _{ i=max(j,[(n + 1) / 2] - j).. n - j } (i - j + 1) * (2 * (i + j) - n + 1) / (i + j + 1) * n! / (i + 1)! / j! / (n - i - j)!. - _ Max Alekseyev _ , Mar 06 2018 ●

▶ [A341703] 1,1,3,7,19,51,121,253,477,829,1351,2091,3103,4447,6189,8401,11161,14553,18667,23599,29451,36331,44353,53637,64309 ⋆ a(n) = 6 * binomial(n,4) + 2 * binomial(n,2) + 1. ● a(n) = (4 - 10 * n + 15 * n ^ 2 - 6 * n ^ 3 + n ^ 4) / 4. (End) ●

▶ [A052948] 1,1,3,7,19,51,139,379,1035,2827,7723,21099,57643,157483,430251,1175467,3211435,8773803,23970475,65488555,178918059,488813227,1335462571,3648551595,9968028331 ⋆ Expansion of g.f.: (1 - 2 * x) / (1 - 3 * x + 2 * x ^ 3). ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 1. ● a(n) = Sum _{ alpha=RootOf(1 - 3 * z + 2 * z ^ 3) } alpha ^ (- n) / 3. ● a(n) = (1 + (1 + sqrt(3)) ^ n + (1 - sqrt(3)) ^ n) / 3. Binomial transform of A025192 (with interpolated zeros). - _ Paul Barry _ , Sep 16 2003 ● a(n) = (1 / 3) * Sum _{ k=1..5 } sin(Pi * k / 2) ^ 2 * (1 + 2 * cos(Pi * k / 6)) ^ n. - _ Herbert Kociemba _ , Jun 02 2004 ● a(0)=1, a(1)=1, a(2)=3, a(n) = 3 * a(n - 1) - 2 * a(n - 3). - _ Harvey P. Dale _ , Aug 22 2012 ●

▶ [A002426] 1,1,3,7,19,51,141,393,1107,3139,8953,25653,73789,212941,616227,1787607,5196627,15134931,44152809,128996853,377379369,1105350729,3241135527,9513228123,27948336381 ⋆ Central trinomial coefficients: largest coefficient of (1 + x + x ^ 2) ^ n. ● a(n) is asymptotic to d * 3 ^ n / sqrt(n) with d around 0 .5.. - _ Benoit Cloitre _ , Nov 02 2002, d = sqrt(3 / Pi) / 2 = 0.4886025119... - Alec Mihailovs (alec(AT)mihailovs.com), Feb 24 2005 ● a(n) = Sum _{ k=0.. n } binomial(n, k) * binomial(k, k / 2) * (1 + (- 1) ^ k) / 2; a(n) = Sum _{ k =0..n } (- 1) ^ (n - k) * binomial(n, k) * binomial(2 * k, k). - _ Paul Barry _ , Jul 01 2003 ● a(n) = Sum _{ k>=0 } binomial(n, 2 * k) * binomial(2 * k, k). - _ Philippe Deléham _ , Dec 31 2003 ● a(n) = Sum _{ i + j=n, 0<=j<=i<=n } binomial(n, i) * binomial(i, j). - _ Benoit Cloitre _ , Jun 06 2004 ● a(n) = Su m _{ k=0..n } binomial(n, k) * binomial(k, n - k). - _ Paul Barry _ , Apr 23 2 005 ● a(n) = (- 1 / 4) ^ n * Sum _{ k=0..n } binomial(2 * k, k) * binomial(2 * n - 2 * k, n - k) * (- 3) ^ k. - _ Philippe Deléham _ , Aug 17 2005 ●

▶ [A011769] 1,3,7,19,51,141,393,1107,3139,8955,25675,73945,213825,620595,1807263,5279283,15465139,45420261,133708777,394446691,1165855131,3451793403,10235554347,30392965809,90357645121 ⋆ a(0) = 1, a(n + 1) = 3 * a(n) - F(n) * (F (n) + 1), where F(n) = A000045(n) is n - th Fibonacci number. ● a(n) = + 6 * a(n - 1) - 8 * a(n - 2) - 8 * a(n - 3) + 14 * a(n - 4) + 4 * a(n - 5) - 3 * a(n - 6). [_ R. J. Mathar _ , Sep 04 2010] ● a(n + 1) = (1 / 10) * (3 ^ n + 2 * Lucas(2n) + Lucas(n) + (- 1) ^ n). - _ Ralf Stephan _ , Aug 10 2013 ● a(k) = 3 ^ (k + 1) * x ^ k / 10 + (- 1) ^ (k + 1) * x ^ k / 10 + p ^ (k + 1) * x ^ k / 5 + (- q) ^ (k + 1) * x ^ k / 5 + p ^ (2 * k + 2) * x ^ k / 5 + q ^ (2 * k + 2) * x ^ k / 5 ; p=(sqrt(5) + 1) / 2 , q=(sqrt(5) - 1) / 2 . - _ Sergei N. Gladkovskii _ , Dec 1 7 2011 ●

▶ [A087432] 1,1,3,7,19,51,143,407,1179,3451,10183,30207,89939,268451,802623,2402407,7196299,21567051,64657463,193885007,581480259,1744091251,5231574703,15693326007,47077181819 ⋆ Expansion of 1 + x * (1 - x - 4 * x ^ 2) / ((1 + x) * (1 - 2 * x) * (1 - 3 * x)). ● a(n) = (- 1) ^ n / 6 + 2 ^ n / 3 + 3 ^ n / 6, n>0. ●

▶ [A059506] 3,7,19,53,148,412,1143,3161,8717,23977,65798,180182,492459,1343563,3659623,9953117,27031768,73320496,198632607,537507677,1452978593,3923762257,10586222474,28536313898,76859031123 ⋆ Transform of A059502 applied to sequence 3,4,5,... ● a(n) = 6 * a(n - 1) - 11 * a(n - 2) + 6 * a(n - 3) - a(n - 4). ● a(n) = ((3 - n) * Fibonacci(2 * n) + (10 + 3 * n) * Fibonacci(2 * n - 1)) / 5. - _ G. C. Greubel _ , Sep 10 2017 ●

▶ [A183124] 0,1,3,7,19,53,153,451,1339,4001,11981,35919,107727,323149,969409,2908187,8724515,26173497,78520437,235561255,706683703 ⋆ Magnetic Tower of Hanoi, number of moves of disk number n, generated by a certain algorithm, yielding a ”forward moving” non - optimal solution of the [NEUTRAL ; NEUT RAL ; NEUTRAL] pre - colored puzzle. ● a(n)= + 4 * a(n - 1) - 2 * a(n - 2) - 4 * a(n - 3) + 3 * a(n - 4), n>=9. ● a(n) = 3 * a(n - 1) - 4 * n + 18 ; n even ; n >= 5 ● a(n) = 3 * a(n - 1) - 4 * n + 20 ; n odd ; n >= 6 ● a(n) = P64(n - 1) + P64(n - 2) + P75(n - 3) + 8 * 3 ^ (n - 4) ; n >= 4 ● a(n) = (197 / 324) * 3 ^ (n - 1) + 2 * n - 27 / 4; n even; n >= 6 ● a(n) = (197 / 324) * 3 ^ (n - 1) + 2 * n - 25 / 4; n odd; n >= 5 ●

▶ [A078481] 0,1,1,3,7,19,53,153,453,1367,4191,13015,40857,129441,413337,1328971,4298727,13978971,45673981,149867513,493638797,1631616239,5410015615,17990076527,59981630321 ⋆ Expansion of (1 - x - x ^ 2 - sqrt(1 - 2 * x - 5 * x ^ 2 - 2 * x ^ 3 + x ^ 4)) / (2 * x + 2 * x ^ 2). ● a(n) = sum(k=0..n, ((sum(i=0..n - k , binomial(k + 1,n - k - i) * binomial(k + i,k))) * binomial(n - k - 2,k)) / (k + 1)), n>0, a(0)=0. - _ Vladimir Kruchinin _ , Nov 22 2014. ●

▶ [A183122] 0,1,3,7,19,53,153,455,1359,4073,12213,36635,109899,329693,989073,2967215,8901639,26704913,80114733,240344195,721032579,2163097733,6489293193,19467879575,58403638719 ⋆ Magnetic Tower of Hanoi, number of moves of disk number k, generated by a certain algorithm, yielding a ”forward moving” n on - optimal solution of the [NEUTRAL ; NEUTRAL ; NEUTRAL] pre - colore d puzzle. ● a(n)= + 3 * a(n - 1) + a(n - 2) - 3 * a(n - 3) for n>6. ● a(n) = 3 * a(n - 1) - 6; n even; n >= 6 ● a(n) = 3 * a(n - 1) - 4; n odd; n >= 5 ● a(n) = P 67(n - 1) + P67(n - 2) + P75(n - 3) + 8 * 3 ^ (n - 4) ; n >= 4 ● a(n) = (67 / 1 08) * 3 ^ (n - 1) + 9 / 4; n even; n >= 4 ● a(n) = (67 / 108) * 3 ^ (n - 1) + 11 / 4; n odd; n >= 5 ●

▶ [A104522] 1,3,7,19,53,155,459,1371,4105,12307,36911,110723,332157,996459,2989363,8968075,26904209,80712611,242137815,726413427,2179240261,6537720763,19613162267,58839486779,176518460313 ⋆ Expansion of (- 1 + x + 3 * x ^ 2 - x ^ 3) / ((x + 1)(3 * x - 1)(x - 1) ^ 2). ● a(n) = (1 / 8) * (5 * 3 ^ n + 4 * (n + 1) - (- 1) ^ n). - _ Ralf Stephan _ , Nov 13 2010. ● a(n) = 4 * a(n - 1) - 2 * a(n - 2) - 4 * a(n - 3) + 3 * a(n - 4). - _ Wesley Ivan Hurt _ , Sep 12 2014 ●

▶ [A183120] 0,1,3,7,19,55,159,471,1403,4199,12583,37735,113187,339543,1018607,3055799,9167371,27502087,82506231,247518663,742555955,2227667831,6683003455,20049010327,60147030939 ⋆ Magnetic Tower of Hanoi, number of moves of disk number k, generated by a certain algorithm, yielding a ”forward moving” non - optimal solution of the [RED ; NEUTRAL ; NEUTRAL] or [NEUTRAL ; NEUTRAL ; BLUE] pre - colored puzzle. ● a(n) = 3 * a(n - 1) - 2 * n + 6; n ev en; n >= 4 ● a(n) = 3 * a(n - 1) - 2 * n + 8; n odd; n >= 5 ● a(n) = a(n - 1) + 2 * P75(n - 3) + 10 * 3 ^ (n - 4); n >= 4 ● a(n) = (23 / 36) * 3 ^ (n - 1) + n - 9 / 4; n even; n >= 4 ● a(n) = (23 / 36) * 3 ^ (n - 1) + n - 7 / 4; n odd; n >= 3 ● a(0)=0, a(1)=1, a(2)=3, a(3)=7, a(4)=19, a(5)=55, a(6)=159, a(n)= 4 * a(n - 1) - 2 * a(n - 2) - 4 * a(n - 3) + 3 * a(n - 4) [From Harvey P. Dale, May 04 20 12] ●

▶ [A100702] 1,3,7,19,55,163,487,1459,4375,13123,39367,118099,354295,1062883,3188647,9565939,28697815,86093443,258280327,774840979,2324522935,6973568803,20920706407,62762119219,188286357655 ⋆ Number of layers of dough separat ed by butter in successive foldings of croissant dough. ● a(n) = 1 + 2 * 3 ^ (n - 1), n > 0. ● a(n) = 4 * a(n - 1) - 3 * a(n - 2), n > 2. ●

▶ [A147586] 1,1,3,7,19,56,138,407,999,2851,7113,19702,49954,135461,347553,929567,2403759,6374236,16564458,43697227,113896339,299525051,782121453,2053027082,5366641794 ⋆ a(n) = A142710(n) / 2. ● a(n) = (1 / 2) * ((- 1) ^ n * Luca sL(n) + LucasL(2 * n) - (1 + (- 1) ^ n) * 2 ^ (n - 1) - [n=0]). ● a(n) = 2 * a(n - 1) + 7 * a(n - 2) - 12 * a(n - 3) - 11 * a(n - 4) + 16 * a(n - 5) - 4 * a(n - 6), n >= 7. ●

▶ [A201169] 1,1,1,3,7,19,59,179,615,2141,7853,30179,118663,487581,2050325,8890743,39593811,180367655,842738375,4018170415,19578229355,97275623919,492406520567,2538806377419,13312298342703 ⋆ G.f. A(x) satisfies A(x) = 1 + x / s qrt(1 - 4 * x ^ 2) * A(x / sqrt(1 - 4 * x ^ 2)). ● a(n) = sum(m=0..(n - 1) / 2, a(n - 2 * m - 1) * binomial(n / 2 - 1,m) * 2 ^ (2 * m)), n>0, a(0)=1. ●

▶ [A364626] 1,3,7,19,63,231,895,3615,15055,64111,277791,1220767,5427775,24371199,110350335,503289727,2309992959,10661634303,49452179455,230391918591,1077644520703,5058766156543,23824929459711,112541456498175,533063457631231 ⋆ G.f. satisfies A(x) = 1 / (1 - x) ^ 3 + x ^ 2 * A(x) ^ 3. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n + 4 * k + 2,6 * k + 2) * binomial(3 * k,k) / (2 * k + 1). ●

▶ [A160128] 3,7,19,63,235,919,3651,14575,58267,233031,932083,3728287,14913099,59652343,238609315,954437199,3817748731,15270994855,61083979347,244335917311,977343669163,3909374676567,15637498706179 ⋆ a(n) = number of grid po ints that are covered after (2 ^ n)th stage of A139250. ● a(n) = (1 / 9) * (2 ^ (2 * n + 3) + 12 * n + 19). [_ Nathaniel Johnston _ , Mar 29 2011] ● a(n) = 6 * a(n - 1) - 9 * a(n - 2) + 4 * a(n - 3). - _ Paul Curtz _ , May 07 2020 ●

▶ [A271894] 1,3,7,20,50,138,356,964,2524,6768,17848,47624,126032,335472,888328,2364352,6273184,16667808,44242240,117516608,311995328,828603648,2200088960,5842620544,15513975040 ⋆ Expansion of (1 + x - 3 * x ^ 2) / (1 - 2 * x - 4 * x ^ 2 + 6 * x ^ 3). ● a(n) >= 2 ^ n. ●

▶ [A109220] 1,3,7,20,53,143,385,1036,2789,7507,20207,54392,146409,394095,1060801,2855400,7685993,20688691,55688567,149899116,403489373,1086088287,2923466753,7869210964,21181866061 ⋆ Expansion of (1 + x - x ^ 2) / (1 - 2x - 2x ^ 2 + x ^ 4). ● a(n)=2a(n - 1) + 2a(n - 2) - a(n - 4); a(n)=a(n)=sum { k=0..n, bin omial(floor((n + k + 1) / 2) + k, floor((n + k) / 2) - k) * 2 ^ k } . ●

▶ [A327993] 1,3,7,20,55,151,414,1133,3099,8472,23155,63275,172894,472393,1290663,3526256,9634071,26321031,71910814,196464677,536752579,1466437096,4006383531,10945648019,29904074046 ⋆ a(n) = [x ^ n] ((x - 1) * (x + 1) * (2 * x ^ 2 - 1)) / (2 * x ^ 4 + 4 * x ^ 3 - x ^ 2 - 3 * x + 1). ● a(n) = 3 * a(n - 1) + a(n - 2) - 4 * a(n - 3) - 2 * a(n - 4) for n >= 4. ●

▶ [A030238] 1,1,3,7,20,59,184,593,1964,6642,22845,79667,281037,1001092,3595865,13009673,47366251,173415176,638044203,2357941142,8748646386,32576869203,121701491701,456012458965,1713339737086 ⋆ Backwards shallow diagonal su ms of Catalan triangle A009766. ● a(n) = Sum _{ k=0..floor(n / 2) } (k + 1) * binomial(2 * n - 3 * k + 1, n - k + 1) / (2 * n - 3 * k + 1) } . Diagonal sums of A033184. - _ Paul Barry _ , Jun 22 2004 ● a(n) = Sum _{ k=0..floor(n / 2) } (k + 1) * binomial(2 * n - 3 * k, n - k) / (n - k + 1). - _ Paul Barry _ , Feb 02 2005 ●

▶ [A110490] 1,1,3,7,20,59,185,600,2003,6833,23727,83606,298313,1076155,3920823,14416987,53482012,200151737,755894009,2882782933,11115015138,43400057683,172016505877,694208585423,2863726993748 ⋆ Diagonal sums of a triangle base d on the Catalan numbers. ● a(n) = Sum _{ k=0..floor(n / 2) } Sum _{ j=0..(n - 2 * k) } 2 * (j + 1) * (k - 1) ^ j * C(2 * (n - 2 * k) + 1, n - 2 * k - j) / (n - 2 * k + j + 2). ●

▶ [A132868] 1,3,7,20,60,182,547,1641,4921,14762,44286,132860,398581,1195743,3587227,10761680,32285040,96855122,290565367,871696101,2615088301,7845264902,23535794706,70607384120,211822152361 ⋆ a(n) = 3 * a(n - 1) - a(n - 3) + 3 * a(n - 4), n > 3. ● a(n) = (1 / 12) * (3 ^ (n + 2) - 4 * cos((n + 1) * Pi / 3) + co s((n + 1) * Pi) + 4 * sqrt(3) * sin(((n + 1) * Pi) / 3) + I * sin((n + 1) * Pi)). [_ Harvey P. Dale _ , Jan 21 2012] ●

▶ [A176697] 1,1,3,7,20,63,208,711,2496,8944,32578,120263,448938,1691776,6427130,24589043,94653498,366344216,1424750506,5565002716,21821377624,85867522754,338974659036,1342074448663,5327845401606 ⋆ G.f. satisfies: A(x) = 1 + x ^ 2 + x * A(x) ^ 2. ● a(n) = Sum _{ i=1..n } a(i - 1) * a(n - i) for n>2; a(0) = a(1) = 1, a(2) = 3. - _ Alois P. Heinz _ , May 24 2012 ● a(n) = sum(m=0..n / 2, binomial(n - 2 * m + 1,m) * binomial(2 * (n - 2 * m),n - 2 * m) / (n + 1 - 2 * m)). - _ Vladimir Kruchinin _ , Nov 21 2014 ●

▶ [A071688] 0,1,3,7,20,66,217,715,2424,8398,29414,104006,371384,1337220,4847637,17678835,64821680,238819350,883634026,3282060210,12233125112,45741281820,171529836218,644952073662,2430973096720 ⋆ Number of plane trees with ev en number of leaves. ● a(2n) = (1 / (4 * n + 2)) * binomial(4 * n, 2 * n), a(2n + 1) = (1 / (4 * n + 4)) * binomial(4 * n + 2, 2 * n + 1) + (- 1) ^ (n + 1) * (1 / (2 * n + 2)) * binomial(2 * n, n). ● a(0)=1, a(n) = Sum _{ k=0..floor(n / 2) } (1 / n) * C(n,2k - 1) * C(n,2k), n>0. - _ Paul Barry _ , Jan 25 2007 ● a(n)

= 0 ^ n + Sum _{ k=1..n } (1 / n) * C(n,k) * C(n,k - 1) * (1 + (- 1) ^ k) / 2. - _ Paul Barry _ , Dec 16 2008 ● a(n) = Sum _{ k=0..n } (Sum _{ j=0..n - k } ((- 1) ^ j * (C(n,2k) * C(n,2k + j) - C(n,2k - 1) * C(n,2k + j + 1))). - _ Paul Barry _ , Sep 13 2010 ●

▶ [A110149] 1,3,7,20,81,404,2425,16974,135793,1222136,12221361,134434970,1613219641,20971855332,293605974649,4404089619734,70465433915745,1197912376567664,21562422778217953,409686032786141106,8193720655722822121,17206813370179264540 ⋆ a(0) = 1, a(1) = 3; for n>1, a(n) = n * a(n - 1) + (- 1) ^ n. ● a(n) = 3 * n! + floor((n! + 1) / e) for n>0. - _ Gary Detlefs _ , Apr 11 2010 ●

▶ [A097162] 1,3,7,21,37,123,187,681,937,3663,4687,19341,23437,100803,117187,520401,585937,2667543,2929687,13599861,14648437,69047883,73242187,349433721,366210937 ⋆ Sum(k=0..n, C(floor((n + 1) / 2),floor((k + 1) / 2)) * 2 ^ k). ● a(n) = (3 / 4 - 3 * sqrt(5) / 4) * (- sqrt(5)) ^ n + (3 / 4 + 3 * sqrt(5) / 4) * (sqrt(5)) ^ n - (2 ^ n - (- 2) ^ n) - 1 / 2. ● a(n + 5) = 20 * a(n) - 20 * a(n + 1) - 9 * a(n + 2) + 9 * a(n + 3) + a(n + 4). - _ Robert Israel _ , Sep 18 2014 ●

▶ [A119959] 3,7,21,43,111,157,273,343,507,813,931,1333,1641,1807,2163,2757,3423,3661,4423,4971,5257,6163,6807,7833,9313 ⋆ p ^ 2 - p + 1 central polygonal numbers with prime indices A002061(prime(n)). ● a(n) = prime(n) ^ 2 - prime(n) + 1. ●

▶ [A329114] 0,0,1,3,7,21,43,129,259,777,1555,4665,9331,27993,55987,167961,335923,1007769,2015539,6046617,12093235,36279705,72559411,217678233,435356467 ⋆ a(n) = floor(A026532(n) / 5). ● a(n + 1) = 3 * a(n) if n is odd, a(n + 1) = 2 * a(n) + 1 if n is even. ● a(n) = f(3 ^ f(n / 2) * 2 ^ f((n - 1) / 2) / 5), where f = floor. ● a(n) = 7 * a(n - 2) - 6 * a(n - 4). ●

▶ [A027151] 1,3,7,21,45,135,291,873,1881,5643,12159,36477,78597,235791,508059,1524177,3284145,9852435,21229047,63687141,137226717,411680151,887047443,2661142329,5733964809 ⋆ a(n) = T(n,0) + T(n,1) + ... + T(n,n), T given by A027144. ● a(n) = 6 * a(n - 2) + 3 * a(n - 4) for n>3. - _ Colin Barker _ , Jan 18 2018 ●

▶ [A219589] 3,7,21,46,87,151,247,386,581,847,1201,1662,2251,2991,3907,5026,6377,7991,9901,12142,14751,17767,21231,25186,29677 ⋆ Number of n X 2 arrays of the minimum value of corresponding elements and their horizontal or vertical neighbors in a random, but sorted with lexicographically nondecreasing rows and nonincreasing columns, 0..2 n X 2 array. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>6. ●

▶ [A036569] 1,3,7,21,48,112,336,861,1968,4592,13776,33936,86961,198768,463792,1391376,3402672,8382192,21479367,49095696,114556624,343669872,852913488,2085837936,5138283696 ⋆ Increments used in Sedgewick - Incerpi upper bound for shell sort. ● a(0)=1, then a(s)=a(s - r) * b(r) for r such that C(r, 2)<s<=C(r + 1, 2), where b() is A036567. ●

▶ [A161707] 1,3,7,21,53,111,203,337,521,763,1071,1453,1917,2471,3123,3881,4753,5747,6871,8133,9541,11103,12827,14721,16793 ⋆ a(n) = (4 * n ^ 3 - 9 * n ^ 2 + 11 * n + 3) / 3. ● a(n) = C(n,0) + 2 * C(n,1) + 2 * C(n,2) + 8 * C(n,3). ●

▶ [A192068] 0,3,7,21,54,144,376,987,2583,6765,17710,46368,121392,317811,832039,2178309,5702886,14930352,39088168,102334155,267914295,701408733,1836311902,4807526976,12586269024 ⋆ a(n) = Fibonacci(2 * n) - (n mod 2). ● a(n) = Fibonacci(2 * n) - (n mod 2). - _ Peter Luschny _ , Mar 10 2015 ●

▶ [A091650] 1,3,7,21,59,171,491,1415,4073,11729,33771,97241,279993,806209,2321385,6684163,19246279,55417453,159568195,459458307,1322957467,3809304207,10968454313,31582405473,90937912211 ⋆ Let M = the 4 X 4 matrix [0 1 0 0 / 0 0 1 0 / 0 0 0 1 / - 1 - 1 3 2]. Set seed vector = [1 1 1 1] = first row, then take M * [1 1 1 1] = [1 1 1 3] then M * [1 1 1 3], etc. Sequence gives terms in rightmost column. ● a(1)=1, a(2)=3, a(3)=7, a(4)=21, a(n)=2 * a(n - 1) + 3 * a(n - 2) - a(n - 3) - a(n - 4) [From Harvey P. Dale, Feb 17 2012] ●

▶ [A122983] 1,1,3,7,21,61,183,547,1641,4921,14763,44287,132861,398581,1195743,3587227,10761681,32285041,96855123,290565367,871696101,2615088301,7845264903,23535794707,70607384121 ⋆ a(n) = (2 + (- 1) ^ n + 3 ^ n) / 4. ● a(n) = 3 ^ n / 4 + (- 1) ^ n / 4 + 1 / 2; ● a(n) = 3 * a(n - 1) + a(n - 2) - 3 * a(n - 3); a(0)=1, a(1)=1, a(2)=3. - _ Harvey P. Dale _ , Sep 03 2013 ● a(2 * n) = 3 * a(2 * n - 1); a(2 * n + 1) = 3 * a(2 * n) - 2. - _ Philippe Deléham _ , Aug 23 2020 ●

▶ [A182399] 1,1,1,3,7,21,61,187,583,1837,5885,19027,62167,204917,680621,2275211,7648519,25852573,87812093,299349795,1023570647,3515918501,12140103149,41894710427,143835281351 ⋆ G.f. A(x) satisfies: A(A(x)) - A(A(x)) ^ 2 = x + x ^ 2. ● a(n) = T(n,1), with T(n, m) = (sum((binomial(k + m,n - k - m) * binomial(2 * k + m - 1,k + m - 1)) / (k + m),k,0,n - m) * m - sum(T(n, i) * T(i, m), i, m + 1, n - 1)) / 2, n>m, T(n,n) = 1. - _ Vladimir Kruchinin _ , Apr 28 2012 ●

▶ [A025235] 1,1,3,7,21,61,191,603,1961,6457,21595,72975,249085,857013,2970007,10356323,36311633,127937649,452738867,1608426647,5734534629,20511509549,73583105007,264687136235,954482676217 ⋆ a(n) = (1 / 2) * s(n + 2), where s = A014431. ● a(n) = Sum _{ k=0..n } 2 ^ (k - 1) * binomial(n + 1, k) * binomial(n - k + 1, k - 1) / (n + 1). - _ Len Smiley _ ● a(n) is the leftmost term in the top row of M ^ n, M is an infinite square production matrix as follows: ● a(n) = hypergeom([- n / 2, (1 - n) / 2], [2], 8). - _ Peter Luschny _ , May 28 2014 ●

▶ [A270049] 1,1,3,7,21,61,199,659,2345,8569,32971,130527,538045,2279733,9987727,44897131,207693905,983926001,4780294291,23740460215,120595843941,625175300653,3308054119767,17837452131139,98006292402553 ⋆ Number of 123 avoiding set partitions of [n]. ● a(n) = Sum _{ i=0..n / 2 } binomial(n,2 * i) * (2 * i)!!. ● a(n) - 2 * a(n - 1) - (n - 1) * a(n - 2) + (n - 2) * a(n - 3) = 0. ●

▶ [A141495] 1,3,7,21,63,189,567,1701,5103,15309,45927,137781,413343,1240029,3720087,11160261,33480783,100442349,301327047,903981141,2711943423,8135830269,24407490807,73222472421,219667417263 ⋆ a(n) = 3 * a(n - 1) for n>2; a(0)=1, a(1)=3, a(2)=7. ● a(n) = 7 * 3 ^ (n - 2) for n>1. a(n)=3 * a(n - 1) for n>2. G.f.: (2 * x ^ 2 - 1) / (3 * x - 1). - _ Colin Barker _ , Jan 09 2014 ●

▶ [A052805] 1,1,1,3,7,21,64,204,666,2236,7625,26419,92644,328370,1174234,4231898,15354424,56042372,205626906,758021598,2806143522,10427671924,38882984840,145443260702,545598228056 ⋆ If B is a collection in which there are C(n - 1) [Catalan numbers, A000108] things with n points, a(n) is the number of subsets without repetition of B with a total of n points. ● a(n)=(1 / n) * Sum _{ k=1..n } a(n - k) * b(k), n>0, a(0)=1, b(k)=Sum _{ d|k } (- 1) ^ (k / d + 1) * binomial(2 * d - 2, d - 1). - _ Vladeta Jovovic _ , Jan 17 2002 ●

▶ [A105864] 1,1,3,7,21,65,215,735,2585,9281,33883,125383,469229,1772801,6752623,25902975,99978865,388001025,1513077235,5926139207,23301146501,91942524481,363957103303,1444966207967,5752187960841 ⋆ Expansion of (1 / (1 - x ^ 2)) * c(x / (1 - x ^ 2)), where c(x) is the g.f. of A000108. ● a(n) = Sum _{ k=0..floor(n / 2) } C(n - k, k) * C(n - 2 * k) } . ●

▶ [A240506] 1,3,7,21,67,213,667,2061,6307,19173,58027,175101,527347,1586133,4766587,14316141,42981187,129009093,387158347,1161737181,3485735827,10458256053,31376865307,94134790221,282412759267 ⋆ Number of length - n gap - free words on { 1,2,3 } . ● a(n) = 2 - 2 ^ n + 3 ^ n for n>0. ● a(n) = 6 * a(n - 1) - 11 * a(n - 2) + 6 * a(n - 3) for n>3. ●

▶ [A001576] 3,7,21,73,273,1057,4161,16513,65793,262657,1049601,4196353,16781313,67117057,268451841,1073774593,4295032833,17180000257,68719738881,274878431233,1099512676353,4398048608257,17592190238721,70368752566273,281474993487873 ⋆ a(n) = 1 ^ n + 2 ^ n + 4 ^ n. ● a(n) = 6 * a(n - 1) - 8 * a(n - 2) + 3. ●

▶ [A080882] 1,3,7,22,52,164,388,1224,2896,9136,21616,68192,161344,508992,1204288,3799168,8988928,28357376,67094272,211662336,500798464,1579869184,3738010624,11792304128,27900891136 ⋆ a(n) * a(n + 3) - a(n + 1) * a(n + 2) = 2 ^ n, given a(0)=1, a(1)=3, a(2)=7. ● a(n + 4) = 8 * a(n + 2) - 4 * a(n). - _ Richard Choulet _ , Dec 06 2008 ● a(n) = (7 / 24 * 3 ^ (1 / 2) + 1 / 2) * ((1 + sqrt(3))) ^ n + (- 7 / 24 * 3 ^ (1 / 2) + 1 / 2) * ((1 - sqrt(3))) ^ n + (- 1 / 24 * 3 ^ (1 / 2)) * (- (1 + sqrt(3))) ^ n + (1 / 24 * 3 ^ (1 / 2)) * (- ((1 - sqrt(3)))) ^ n. - _ Richard Choulet _ , Dec 06 2008 ●

▶ [A166135] 1,1,3,7,22,65,213,693,2352,8034,28014,98505,350548,1256827,4542395,16517631,60417708,222087320,820099720,3040555978,11314532376,42243332130,158196980682,594075563613,2236627194858 ⋆ Number of possible paths to each node that lies along the edge of a cut 4 - nomial tree, that is rooted one unit from the cut. ● a(n) = (1 / n) * Sum _{ k=0..n } binomial(n,k) * binomial(n,2 * n - 3 * k - 1). - _ David Nguyen _ , Dec 31 2016 ●

▶ [A365452] 1,3,7,22,67,213,853,3413,13653,66406,332031,1660156,8734003,52404019,314424115,1886544691,12193514915,85354604406,597482230843,4182375615902,31414617936457,251316943491657,2010535547933257,16084284383466057,135502101309790873 ⋆ Largest number whose digits, in some base, sum to n and include no zeros. ● a(n) = max _{ i=1..n } ((i + 1) ^ (n - i) * (1 / i + i) - 1 / i). - _ Alois P. Heinz _ , Sep 09 2023 ●

▶ [A242566] 0,1,1,3,7,22,67,225,765,2704,9710,35558,131859,494892,1874901,7162807,27558511,106695148,415346144,1624780952,6383671910,25179642120,99670897534,395810459602,1576464630375 ⋆ Expansion of (1 - sqrt(1 - (2 * (1 - sqrt(1 - 4 * x ^ 2))) / x)) / 2. ● a(n) = sum(i=0..(n - 1) / 2, binomial(2 * n - 4 * i - 2, n - 2 * i - 1) * binomial(n,i)) / n, n>0, a(0)=0. ●

▶ [A360887] 1,1,3,7,22,76,290,1225,5616,27758,147050,829926,4966258,31382572,208676004,1455540594,10620614461,80869622604,641177678068,5282866462839,45152445030267,399673570426188,3658433105500600,34582526451125235,337165886689229224 ⋆ G.f. satisfies A(x) = 1 + x * (1 + x) ^ 2 * A(x * (1 + x)). ● a(0) = 1; a(n) = Sum _{ k=0..n - 1 } binomial(n + 1 - k,k) * a(n - 1 - k). ●

▶ [A233005] 1,1,3,7,22,78,315,1417,7087,38981,233887,1520268,10641881,79814109,638512875,5427359437,48846234937,464039231906,4648392319062,48724119350156,535965312851718,6163601097794765,73963213173537187,924540164669214843,1201902214069979296 8 ⋆ a(n) = floor(Pt(n) / n!), where Pt(n) is product of first n positive triangular numbers (A000217). ● a(n) = floor((n + 1)! / 2 ^ n). - _ Yifan Xie _ , Mar 05 2023 ●

▶ [A364627] 1,3,7,22,97,469,2339,12148,65295,358979,2006977,11380702,65311575,378574425,2213092750,13032826536,77244242937,460413902079,2758088752351,16596379614234,100269075879881,607996092039949,3698873710967989,22570809986322440 ⋆ G.f. satisfies A(x) = 1 / (1 - x) ^ 3 + x ^ 2 * A(x) ^ 4. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n + 7 * k + 2,9 * k + 2) * binomial(4 * k, k) / (3 * k + 1). ●

▶ [A069505] 1,3,7,22,111,1111,11111,111111,1111111,11111111,111111111,1111111111,11111111111,111111111111,1111111111111,11111111111111,111111111111111,1111111111111111,11111111111111111,111111111111111111,1111111111111111111,11111111111111111111 ⋆ a(1) = 1; a(n) = smallest palindromic number of the form k * a(n - 1) + 1 with k > 1. ● a(n) = (10 ^ (n - 2) - 1) / 9 for n > 4. ●

▶ [A054270] 3,7,23,47,113,167,283,359,523,839,953,1367,1669,1847,2207,2803,3469,3719,4483,5039,5323,6229,6883,7919,9403 ⋆ Largest prime below prime(n) ^ 2 (A001248). ● a(n) = Max[prime q: q < prime(n) ^ 2]. ●

▶ [A219167] 3,7,23,53,103,182,302,478,728,1073,1537,2147,2933,3928,5168,6692,8542,10763,13403,16513,20147,24362,29218,34778,41108 ⋆ Number of n X 2 arrays of the minimum value of corresponding elements and their horizontal or vertical neighbors in a random, but sorted with lexicographically nondecreasing rows and columns, 0..2 n X 2 array. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>6. ●

▶ [A001275] 3,7,23,61,127,199,337,479,677,937,1193,1511,1871,2267,2707,3251,3769,4349,5009,5711,6451,7321,8231,9173,10151 ⋆ Smallest prime p such that the product of q / (q - 1) over the primes from prime(n) to p is greater than 2. ● a(n) = prime(n) ^ 2 + O(n ^ 2 / exp((log n) ^ (4 / 7 - e))) for any e > 0. ●

▶ [A096019] 3,7,23,67,203,607,1823,5467,16403,49207,147623,442867,1328603,3985807,11957423,35872267,107616803,322850407,968551223,2905653667,8716961003,26150883007,78452649023,235357947067,706073841203 ⋆ a(0)=3, a(n) = 3 * a(n - 1) + 2 * (- 1) ^ n. ● a(n) = 3 ^ (n + 1) - (3 ^ n - (- 1) ^ n) / 2. ● a(n) = 2 * a(n - 1) + 3 * a(n - 2). G.f.: (3 + x) / ((1 + x) * (1 - 3 * x)). [_ Colin Barker _ , Mar 26 2012] ●

▶ [A045723] 1,1,3,7,23,71,252,890,3299,12283,46508,176870,677294,2602198,10034104,38787572,150289699,583434323,2268861516,8836447022,34461940538,134564992898,526025965864,2058359779052,8061905791118 ⋆ Number of configurations, excluding reflections and black - white interchanges, of n black and n white beads on a string. ● a(n) = (1 / 4) * (2 ^ n + C(2 * n, n) + 2 * C(n - 1, (1 / 2) * (n - 2)) * ((n + 1) mod 2)). ●

► [A169650] 1,3,7,23,79,263,847,2663,8239,25223,76687,232103,700399,2109383,6344527,19066343,57264559,171924743,516036367,1548633383,4646948719,13942943303,41833024207,125507461223,376539160879,1129651037063 ★ a(1) = 3; there after a(n) = 3 * a(n - 1) + 2 ^ n - 6. ● a(n) = 4 * 3 ^ (n - 1) - 2 ^ (n + 1) + 3. - _ Todd Silvestri _ , Dec 15 2014 ●

► [A346771] 1,1,1,3,7,23,81,325,1429,6851,35443,196507,1160633,7266561,48022313,333776331,2432140759,18528143535,147201596073,1216952016245,10448533393869,92999784076875,856739848236627,8156691628658019,80147320081510673 ★ G.f. A(x) satisfies: A(x) = 1 + x * A(x / (1 - x)) / (1 - x ^ 2). ● a(0) = a(1) = 1; a(n) = Sum _{ k=1..n - 1 } binomial(n - 1,k) * a(n - k - 1). ●

► [A080355] 1,3,7,23,87,1111,5207,70743,332887,4527191,272962647,1346704471,70066181207,1169577808983,5567624320087,75936368497751,457953599586827,2928099121475799991,14457314167544269 67,752327077115926334 31,1255824328429003936855,5978190811298649150551 ★ a(1)=1; thereafter, a(n + 1) = a(n) + 2 ^ (prime(n) - 1). ● a(n) = 1 + Sum _{ k=1..n - 1 } 2 ^ (prime(k) - 1). ●

► [A366694] 1,3,7,23,88,363,1576,7091,32768,154588,741442,3604495,17721394,87960004,440165522,2218289051,11248850578,57354875692,293860786178,1512169500356,7811933144432,40499933496818,210643657689644,1098802033533295,5747266778089846 ★ G.f. satisfies A(x) = (1 + x) ^ 2 + x * A(x) ^ 2. ● a(n) = Sum _{ k=0..n } binomial(2 * (k + 1),n - k) * binomial(2 * k,k) / (k + 1). ●

► [A145542] 1,3,7,24,55,189,433,1488,3409,11715,26839,92232,211303,726141,1663585,5716896,13097377,45009027,103115431,354355320,811826071,2789833533,6391493137,21964312944,50320119025 ★ Numerators in continued fraction expansion of sqrt(3 / 5). ● a(2 * n + 1) = Product _{ k=1..n } (6 + 4 * cos ^ 2(k * Pi / (2 * n + 1)); ● a(2 * n) = 3 * Product _{ k=1..n - 1 } (6 + 4 * cos ^ 2(k * Pi / (2 * n)). ●

► [A225826] 1,3,7,24,76,288,1072,4224,16576,66048,262912,1050624,4197376,16785408,67121152,268468224,1073790976,4295098368,17180065792,68720001024,274878693376,1099513724928,4398049656832,17592194433024,70368756760576 ★ Number of binary pattern classes in the (2,n) - rectangular grid: two patterns are in same class if one of them can be obtained by a reflection or 180 - degree rotation of the other. ● a(n) = 4 * a(n - 1) + 4 * a(n - 2) - 16 * a(n - 3) with n>2, a(0)=1, a(1)=3, a(2)=7 (communicated by _ Jon E. Schoenfield _). ● a(n) = 2 ^ (n - 3) * (2 ^ (n + 1) - (- 1) ^ n + 7). ●

► [A176606] 1,3,7,24,91,376,1635,7377,34197,161876,779125,3801307,18757219,93444662,469349303,2374206202,12084696935,61848753886,318082531211,1643009103729,8520055528453,44338931718570,231488012768833 ★ Sequence defined by the recurrence formula a(n + 1)=sum(a(p) * a(n - p) + k,p=0..n) + l for n>=1, with here a(0)=1, a(1)=3, k=0 and l=1. ● a(n) = Sum _{ k=0..n } (C(k) * Sum _{ j=0..n - k } (binomial(k + 1,n - k - j) * binomial(- n + 2 * k + 2 * j,j))). - _ Vladimir Kruchinin _ , Apr 15 2016 ●

► [A229039] 1,3,7,24,108,600,3960,30240,262080,2540160,27216000,319334400,4071513600,56043187200,828193766400,13076743680000,219689293824000,3912561709056000,73627297615872000,1459741204905984000,30411275102208000000,664182248232222720000 ★ G.f.: Sum _{ n>=0 } (n + 2) ^ n * x ^ n / (1 + (n + 2) * x) ^ n. ● a(n) = (n + 5) * n! / 2 for n>0 with a(0)=1. ●

► [A041045] 1,3,7,24,247,765,1777,6096,62737,194307,451351,1548360,15934951,49353213,114641377,393277344,4047414817,12535521795,29118458407,99890897016,1028027428567,3183973182717,7395973794001 ★ Denominators of continued fraction convergents to sqrt(28). ● a(n) = 254 * a(n - 4) - a(n - 8). G.f.: - (x ^ 2 - 3 * x - 1) * (x ^ 4 + 8 * x ^ 2 + 1) / ((x ^ 4 - 16 * x ^ 2 + 1) * (x ^ 4 + 16 * x ^ 2 + 1)). [_ Colin Barker _ , Jul 16 2012] ●

► [A041563] 1,3,7,24,823,2493,5809,19920,683089,2069187,4821463,16533576,566963047,1717422717,4001808481,13722848160,470578645921,1425458785923,3321496217767,11389947439224,390579709151383,1183129074893373,27568378589381 2,9453642651707760 ★ Denominators of continued fraction convergents to sqrt(299). ● a(n) = 830 * a(n - 4) - a(n - 8) for n>7. - _ Vincenzo Librandi _ , Dec 20 2013 ●

► [A332508] 1,3,7,25,71,280,925,3561,12916,49346,184757,710255,2704157,10427747,40119781,155288897,601080391,2334714319,9075135301,35352181116,137846759282,538302226628,2104098963721,8233718962365,32247603703576 ★ a(n) = Sum _{ d|n } binomial(n + d - 2, n - 1). ● a(n) = [x ^ n] Sum _{ k>=1 } x ^ k / (1 - x ^ k) ^ n. ●

► [A309911] 1,3,7,25,71,360,1310,7195,35740,213318,1132154,8409475,50344672,366939569,2728237607,21375289293,159969524749,1462761108082,11896122581676,107011124829787,1031744001100166,9684995830526129,91735916202054984,1010641832989185386,10131466944871497886 ★ a(n) = Sum _{ k=1..n } Stirling2(n,k) * floor(n / k). ● a(n) = [x ^ n] (1 / (1 - x)) * Sum _{ k=1..n } Stirling2(n,k) * x ^ k / (1 - x ^ k). ● a(n) = Sum _{ k=1..n } Sum _{ d|k } Stirling2(n,d). ●

► [A047974] 1,1,3,7,25,81,331,1303,5937,26785,133651,669351,3609673,19674097,113525595,664400311,4070168161,25330978113,163716695587,1075631907655,7296866339961,50322142646161,356790528924523,2570964805355607,18983329135883665 ★ a(n) = a(n - 1) + 2 * (n - 1) * a(n - 2). ● a(n) = Sum _{ k=0..n } C(k,n - k) * n! / k!. - _ Paul Barry _ , Mar 29 2007 ● a(n) = Sum _{ k=0..floor(n / 2) } C(n,2k) * (2k)! / k!; - _ Paul Barry _ , Feb 11 2008 ● a(n) = D ^ n(exp(x)) evaluated at x = 0, where D is the operator sqrt(1 + 4 * x) * d / dx. Cf. A000085 and A115329. - _ Peter Bala _ , Dec 07 2011 ● a(n) = i ^ (- n) * H _{ n } (i / 2) with i the imaginary unit and H _{ n } the Hermite polynomial of degree n. - _ Alyssa Byrnes _ and C. Vignat, Jan 31 2013 ● a(n) = Sum _{ k=0..floor(n / 2) } 2 ^ k * B(n, k), where B are the Bessel numbers A100861. - _ Peter Luschny _ , Jun 04 2021 ●

► [A259595] 3,7,27,71,267,703,2643,6959,26163,68887,258987,681911,2563707,6750223,25378083,66820319,251217123,661452967,2486793147,6547709351,24616714347,64815640543,243680350323,641608696079,2412186788883 ★ Numerators of the other - side convergents to sqrt(6). ● a(n) = 10 * a(n - 2) - a(n - 4) for n>3. - _ Colin Barker _ , Jul 21 2015 ●

► [A098465] 1,1,3,7,27,91,373,1457,6163,25795,111897,486421,2153429,9584901,43121211,195082479,888861555,4069956979,18732710281,86579713685,401776434017,1870946532705,8740907398527,40956105551603 ★ Expansion of (sqrt(1 + 3 * x) - sqrt(1 - 5 * x)) / (4 * x * sqrt(1 - x)). ● a(n) = sum { k=0..n } binomial(n, k) * C(k) * (1 + (- 1) ^ k) / 2. ●

► [A246313] 1,3,7,27,95,339,1207,4299,15311,54531,194215,691707,2463551,8774067,31249303,111296043,396386735,1411752291,5028030343,17907595611,63778847519,227151733779,809012896375,2881342156683,10262052262799 ★ G.f.: (- 1 + 6 * x) / (1 - 3 * x - 2 * x ^ 2). ● a(n) = 3 * a(n - 1) + 2 * a(n - 2) with a(0)= - 1, a(1)=3. ● a(n) = - (17 + 9 * sqrt(17)) / 34 * (3 / 2 - sqrt(17) / 2) ^ n + (- 17 + 9 * sqrt(17)) / 34 * (3 / 2 + sqrt(17) / 2) ^ n. For n >= 3, a(n) = round(- 17 + 9 * sqrt(17)) / 34 * (3 / 2 + sqrt(17) / 2) ^ n). - _ Robert Israel _ , Aug 27 2014 ●

► [A242328] 3,7,27,127,627,3127,15627,78127,390627,1953127,9765627,48828127,244140627,1220703127,6103515627,30517578127,152587890627,762939453127,3814697265627,19073486328127,95367431640627,476837158203127,2384185791015627,11920928955078127 ★ 5 ^ n + 2. ● a(n) = 6 * a(n - 1) - 5 * a(n - 2) for n>1. ●

► [A136580] 1,1,3,7,27,127,747,5167,41067,368047,3669867,40284847,482671467,6267305647,87660962667,1313941673647,21010450850667,357001369769647,6423384156578667,122002101778601647,2439325392333218667 ★ Row sums of triangle A136579. ● a(n) = (- 1) ^ n * exp(1) * Gamma(0, 1) / 2 - Re(Gamma(0, - 1)) * exp(- 1) / 2 + (n + 2)! * ((- 1) ^ n * Re(Gamma(- n - 2, - 1)) * exp(- 1) - Gamma(- n - 2, 1) * exp(1)) / 2, where Gamma(a, x) is the upper incomplete Gamma function. ●

► [A361360] 1,1,1,3,7,28,104,448,1886,8212,35556,155124,675897,2950074,12872294,56188904,245253691,1070581703,4673231521,20399699635,89048927767,388718917440,1696845506274,7407120344070,32333775400516 ★ Number of nonequivalent noncrossing caterpillars with n edges up to rotation and relection. ● a(n) = 5 * a(n - 1) + 4 * a(n - 2) - 34 * a(n - 3) + 7 * a(n - 4) + 63 * a(n - 5) - 30 * a(n - 6) - 46 * a(n - 7) + 31 * a(n - 8) + 13 * a(n - 9) - 14 * a(n - 10) + 3 * a(n - 12) - a(n - 13) for n >= 13. ●

► [A321719] 1,1,3,7,28,121,746,5041,40608,362936,3635017,39916801,479206146,6227020801,87187426839,1307674521272,20923334906117,355687428096001,6402415241245577,121645100408832001,2432905938909013343,51090942176372298027,1124001180562929946213 ★ Number of non - normal semi - magic squares with sum of entries equal to n. ● a(p) = p! + 1 for p prime and a(n) >= n! + 1 for n > 1 (see comment above). - _ Chai Wah Wu _ , Jan 13 2019 ●

► [A080806] 1,3,7,29,69,287,683,2841,6761,28123,66927,278389,662509,2755767,6558163,27279281,64919121,270037043,642633047,2673091149,6361411349,26460874447,62971480443,261935653321,623353393081 ★ Positive integer values of n such that 6n ^ 2 - 5 is a square. ● a(n) = 10 * a(n - 2) - a(n - 4). ● a(2 * n + 1) = ((6 + r) * (5 + 2 * r) ^ n + (6 - r) * (5 + 2 * r) ^ n) / 12, a(2 * n + 2) = ((18 + 7 * r) * (5 + 2 * r) ^ n + (18 - 7 * r) * (5 - 2 * r) ^ n) / 12, where r=sqrt(6) and n>=0. - _ Paul Weisenhorn _ , Sep 01 2012 ●

► [A321191] 1,1,3,7,29,71,336,932,4593,13690,69708,222718,1163734,3902016,20825927,73229397,397806717,1452193925,8016518379,30328368519,169781766056,662143701506,3755514158949,15071604241851,86496856963200 ★ a(n) = [x ^ n] Product _{ k>=1 } 1 / (1 - x ^ k) ^ tau _ n(k), where tau _ n(k) = number of ordered n - factorizations of k. ● a(n) = [x ^ n] Product _{ k _ 1>=1, k _ 2>=1, ..., k _ n>=1 } 1 / (1 - x ^ (k _ 1 * k _ 2 * ... * k _ n)). ●

► [A363666] 1,3,7,29,71,355,925,4425,13276,60111,184757,856357,2704157,12137147,40367461,176999505,601080391,2616894901,9075135301,38884056181,138014377810,583674491643,2104098963721,8823912454489,32247616479976 ★ a(n) = Sum _{ d|n } (n / d) ^ (d - 1) * binomial(d + n - 2,n - 1). ● a(n) = [x ^ n] Sum _{ k>0 } x ^ k / (1 - k * x ^ k) ^ n. ●

► [A171180] 1,3,7,29,96,463,1905,10233,49159,287891,1557744,9814741,58451849,392539575,2532516511,17999936497,124360077816,930257069563,6822980957489,53470578301581,413527226164711,3382254701784223,27432377661111360,233410016529114601 ★ a(n) = (4 * n + 1) ^ (1 / 2) / (4 * n + 1) * ((1 - p) * q ^ n - (1 - q) * p ^ n), where p = (1 - (4 * n + 1) ^ (1 / 2)) / 2 and q = (1 + (4 * n + 1) ^ (1 / 2)) / 2. ● a(n) = [x ^ n] 1 / (1 - x - n * x ^ 2). - _ Paul D. Hanna _ , Dec 27 2012 ●

► [A173280] 1,1,3,7,29,129,757,5185,41155,368351,3671635,40295943,482758111,6268066531,87668492115,1314023850727,21011431917453,357014074280785,6423561495057421,122004755658629081,2439367774898883497,51213663674167659301,1126452985959434543237 ★ First column of the matrix power A173279(.,.) ^ j in the limit j - >infinity. ● a(n) = (A173279 ^ j)(n,0). ● a(n) = Sum _{ t=0..n, n - t even } t! * a _{ (n - t) / 2 } . - _ R. J. Mathar _ , Feb 22 2010 ●

► [A110505] 0,1,3,7,30,144,876,6084,48816,438624,4389120,48263040,579242880,7529552640,105417365760,1581231456000,25299906508800,430096581734400,7741753102540800,147093162635059200,2941864569520128000 ★ Numerators of unsigned columns of triangle A110504: a(n) = n! * A110504(n,0) = (- 1) ^ k * n! * A110504(n + k,k) for all k >= 0. ● a(2 * n + 1) = (2 * n + 1)! * (1 + Sum _{ k=1..n } (1 / binomial(2 * k + 1, k)) / (k + 1)). ● a(2 * n + 2) = (2 * n + 2)! * (1 + 1 / 2 - Sum _{ k=1..n } 1 / binomial(2 * k + 2, k) / k) = n! * (1 + 1 / 2 - 1 / 3 + 1 / 12 - 1 / 20 + 1 / 60 - 1 / 105 + 1 / 280 -+ ...). ●

► [A042131] 1,3,7,31,69,238,11493,34717,80927,358425,797777,2751756,132882065,401397951,935677967,4144109819,9223897605,31815802634,1536382424037,4640963074745,10818308573527,47914197368853,106646703311233,367854307302552,17763653453833729 ★ Denominators of continued fraction convergents to sqrt(590). ● a(n) = 11562 * a(n - 6) - a(n - 12) for n>11. - _ Vincenzo Librandi _ , Jan 15 2014 ●

► [A072881] 1,1,1,3,7,31,85,393,1093,5071,14119,65523,182449,846721,2357713,10941843,30467815,141397231,393723877,1827222153,5087942581,23612490751,65749529671,305135157603,849655943137 ★ a(1)=a(2)=a(3)=1; for n>3, a(n)=(a(n - 1) * a(n - 2) + a(n - 1) + a(n - 2)) / a(n - 3). ● a(2 * n - 1) = ceiling((1 / 11) * sqrt(1002 / 5 - 78 * sqrt(33 / 5)) * (sqrt(15) / 2 + sqrt(11) / 2) ^ (2 * n - 1)). ● a(2 * n) = ceiling((1 / 11) * (13 - sqrt(165)) * (sqrt(15) / 2 + sqrt(11) / 2) ^ (2 * n)). ● a(n) = (4 - (- 1) ^ n) * a(n - 1) - a(n - 2) - 1. - _ Bruno Langlois _ , Aug 21 2016 ●

► [A358341] 0,1,3,7,31,96,314,1072,3693,12556,41800,136236,435923,1374088,4280358,13211704,40492633,123440724,374774660,1134346228,3425446335,10326139

696,31088511778,93507747360,281053811141 ⋆ Expansion of e.g.f. (exp(x) - 1) * (exp(x) - x) * (exp(x) - x ^ 2 / 2). ● a(n) = 3 ^ n - 2 ^ n - n * (2 ^ (n - 1) - 1) - binomial(n,2) * (2 ^ (n - 2) - 1) + 3 * binomial(n,3) except at n=3. ●

▶ [A061095] 1,3,7,31,121,831,5041,42911,364561,3742453,39916801,486891175,6227020801,87859375033,1307843292757,21004582611871,355687428096001,6415015584161757,121645100408832001,2435278206317164781,51091124681475552961,1124549556257968545433 ⋆ Number of ways of dividing n labeled items into labeled boxes with an equal number of items in each box. ● a(n) = Sum _{ d|n } n! / (n / d)! ^ d. ●

▶ [A357296] 1,3,7,31,121,851,5041,43261,369601,3748249,39916801,490801081,6227020801,87861842641,1310800947457,21018206008801,355687428096001,6419518510204801,121645100408832001,2435836129700029057,51102829650622464001,1124549558817839481601 ⋆ Expansion of e.g.f. Sum _{ k>0 } x ^ k / (k! * (1 - x ^ k / k)). ● a(n) = n! * Sum _{ d|n } 1 / (d ^ (n / d - 1) * d!). ●

▶ [A042271] 1,1,3,7,31,131,2127,2258,22449,47156,69605,882416,4481685,5364101,9845786,15209887,40265560,55475447,206691901,262167348,468859249,1668745095,2137604344,5943953783,8081558127 ⋆ Denominators of continued fraction convergents to sqrt(661). ● a(n) = 5730908870845166436 * a(n - 39) + a(n - 78) for n>77. - _ Vincenzo Librandi _ , Jan 19 2014 ●

▶ [A141385] 3,7,31,157,827,4407,23563,126105,675075,3614143,19349431,103593805,554625899,2969386479,15897666067,85113810057,455687062275,2439682811479,13061709929935,69930511268509,374397872321627 ⋆ a(n) = 7 * a(n - 1) - 9 * a(n - 2) + a(n - 3) with a(0)=3, a(1)=7, a(2)=31. ● a(n + 3) = 7 * a(n + 2) - 9 * a(n + 1) + a(n). ● a(n) = A ^ n + B ^ n + C ^ n, where, putting u = atan(sqrt(5319) / 73), we have: ●

▶ [A238314] 1,1,3,7,33,91,388,1163,4231,13297,44694,136621,444535,1335335,4149785,12327698,37154245,108185961,318923590,913506701,2633793550,7443298426,21073435606,58715695683,163805615535 ⋆ Binomial transform of the squared rows of the table A072233 (A008284). ● a(n) = sum(binomial(n,k) * p(n,k) ^ 2, k=0..n), where p(n,k) is the number of partitions of n into k positive parts (A072233, A008284). ●

▶ [A051256] 1,3,7,33,121,843,5167,46233,362881,3991683,40279687,522910113,6227383801,93409304523,1313941673647,22324392524313,355687428096001,6758061133824003,122000787836928007,2561305169719296033 ⋆ Numbers formed from binomial coefficients (mod 2) interpreted as digits in factorial base. ● a(n) = Sum _{ k=0..n } (k + 1)!(C(n, k) mod 2). ●

▶ [A081890] 1,3,7,33,643,11073,151867,1816713,19996963,208630833,2099398027,20597485593,198424412083,1885822419393,17740469253787,165580566245673,1535948935336003,14178113530908753,130361707324735147 ⋆ A sum of decreasing powers. ● a(n)=9 ^ n - 8 ^ n - 7 ^ n - 6 ^ n + 3 * 5 ^ n. ●

▶ [A215575] 3,7,35,175,931,5047,27587,151263,830403,4560871,25054435,137642127,756187747,4154438295,22824258947,125395430335,688917131651,3784882096583,20793986742179,114241312597615,627637106311971,3448212648805239,18944339609269571 ⋆ a(n) = 7 * (a(n - 1) - a(n - 2) - a(n - 3)), with a(0)=3, a(1)=7, a(2)=35. ● a(n) = (sqrt(7) ^ n) * (cot(2 * Pi / 7) ^ n + cot(4 * Pi / 7) ^ n + cot(8 * Pi / 7) ^ n) = (3 + 4 * cos(2 * Pi / 7)) ^ n + (3 + 4 * cos(4 * Pi / 7)) ^ n + (3 + 4 * cos(8 * Pi / 7)) ^ n = (- tan(2 * Pi / 7) * tan(4 * Pi / 7)) ^ n + (- tan(2 * Pi / 7) * tan(8 * Pi / 7)) ^ n + (- tan(4 * Pi / 7) * tan(8 * Pi / 7)) ^ n. ● a(n) = x1 ^ n + x2 ^ n + x3 ^ n, where x1, x2, x3 are the roots of the polynomial x ^ 3 - 7 * x ^ 2 + 7 * x + 7, that is, x1 = sqrt(7) / tan(Pi / 7), x2 = sqrt(7) / tan(2 * Pi / 7), x3 = sqrt(7) / tan(4 * Pi / 7). - _ Kai Wang _ , Jul 19 2016 ●

▶ [A081555] 3,7,35,199,1155,6727,39203,228487,1331715,7761799,45239075,263672647,1536796803,8957108167,52205852195,304278004999,1773462177795,10336495061767,60245508192803,351136554095047,2046573816377475,11928306344169799,69523264248641315 ⋆ a(n) = 6 * a(n - 1) - a(n - 2) - 4, a(0)=3, a(1)=7. ● a(n) = (3 + 2 * sqrt(2)) ^ n + (3 - 2 * sqrt(2)) ^ n + 1. ●

▶ [A081010] 3,7,36,235,1599,10948,75027,514231,3524580,24157819,165580143,1134903172,7778742051,53316291175,365435296164,2504730781963,17167680177567,117669030460996,806515533049395,5527939700884759,37889062373143908,259695496911122587 ⋆ a(n) = Fibonacci(4n + 1) + 2, or Fibonacci(2n - 1) * Lucas(2n + 2). ● a(n) = 8 * a(n - 1) - 8 * a(n - 2) + a(n - 3). ● a(n) = 2 + (1 / 2) *{ [(7 / 2) - (3 / 2) * sqrt(5)] ^ n + [(7 / 2) + (3 / 2) * sqrt(5)] ^ n }+ (1 / 10) * sqrt(5) *{ [(7 / 2) + (3 / 2) * sqrt(5)] ^ n - [(7 / 2) - (3 / 2) * sqrt(5)] ^ n } , with n>=0. - _ Paolo P. Lava _ , Dec 01 2008 ●

▶ [A281093] 3,7,37,43,47,73,79,97,337,347,349,373,379,397,433,439,443,449,479,499,733,739,743,773,797 ⋆ Primes that only use digits that survived in the movie 9: { 3, 4, 7, 9 } . ● a(n) >> n ^ k, where k = log(10) / log(4) = 1.660964.... - _ Charles R Greathouse IV _ , Jan 24 2017 ●

▶ [A356668] 1,1,3,7,37,121,1141,5041,60761,378001,5444461,39916801,729041545,6227020801,130767460825,1321314894901,31388220966961,355687428096001,9636906872926477,121645100408832001,3649432697160095561,51223991519836175041,1686001091666419279753 ⋆ Expansion of e.g.f. Sum _{ k>=0 } x ^ k / (k! - k * x ^ k). ● a(n) = n! * Sum _{ d|n } 1 / (d * (d - 1)! ^ (n / d)) for n > 0. ● a(p) = 1 + p! for prime p. ●

▶ [A087208] 1,1,3,7,37,141,1111,5923,62217,426457,5599531,46910271,739138093,7318002277,134523132927,1536780478171,32285551902481,418004290062513,9879378882159187,142957467201379447,3754163975220491061,60042136224579367741,1734423756551866870183 ⋆ Expansion of e.g.f.: exp(x) / (1 - x ^ 2). ● a(n) = Sum _{ k=0..floor(n / 2) } n! / (n - 2 * k)!. ● a(n) = n * (n - 1) * a(n - 2) + 1. - _ Vladeta Jovovic _ , Aug 24 2004 ● a(n) = Sum _{ k=0..n } binomial(n, k) * (1 + (- 1) ^ k)k! / 2. Binomial transform of A010050 (with interpolated zeros). - _ Paul Barry _ , Sep 14 2004 ● a(n) = Sum _{ k=0..n } P(n, k)[1, 0, 1, 0, 1, 0, ...](k). - _ Ross La Haye _ , Aug 29 2005 ● a(n) = (1 / (2 * exp(1))) * (Integral _{ t=0..2 } t ^ n * exp(1 - abs(1 - t)) dt + Integral _{ t=0..oo } ((2 + t) ^ n + (- t) ^ n) * exp(- t) dt). - _ Groux Roland _ , Jan 15 2011 ●

▶ [A042895] 1,3,7,38,45,218,263,1533,3329,11520,717569,2164227,5046023,27394342,32440365,157155802,189596167,1105136637,2399869441,8304744960,51729405696 1,1560186915843,3637667888647,19748526359078,23386194247725 ⋆ Denominators of continued fraction convergents to sqrt(979). ● a(n) = 720898 * a(n - 10) - a(n - 20) for n > 19. - _ Vincenzo Librandi _ , Feb 01 2014 ●

▶ [A074582] 3,7,39,241,1499,9327,58035,361109,2246915,13980895,86992799,541292033,3368061131,20956960551,130399710235,811381230021,5048627019523,31413882696791,195465425009943,1216237188605169,7567747077883259 ⋆ a(n) = S(3n), where S(n) is the generalized tribonacci sequence A001644. ● a(n) = 7 * a(n - 1) - 5 * a(n - 2) + a(n - 3), a(0)=3, a(1)=7, a(2)=39. ●

▶ [A041349] 1,1,3,7,45,97,239,336,8975,9311,27597,64505,414627,893759,2202145,3095904,82695649,85791553,254278755,594349063,3820373133,8235095329,20290563791,28525659120,761957700911 ⋆ Denominators of continued fraction convergents to sqrt(188). ● a(n) = 9214 * a(n - 8) - a(n - 16) for n>15. - _ Vincenzo Librandi _ , Dec 16 2013 ●

▶ [A351354] 1,3,7,45,117,799,2091,14329,37513,257115,673135,4613733,12078909,82790071,216747219,1485607537,3889371025,26658145587,69791931223,478361013021,1252365390981,8583840088783,22472785106427,154030760585065,403257766524697 ⋆ Numbers k such that the k - th centered 40 - gonal numbers (A195317) is a square. ● a(1)=1, a(2)=3, a(3)=7, a(4)=45, a(5)=117 and a(n) = a(n - 1) + 18 * a(n - 2) - 18 * a(n - 3) - a(n - 4) + a(n - 5). ●

▶ [A003758] 0,3,7,46,193,963,4470,21367,100909,478924,2268405,10753173,50957032,241508575,1144553203,5424374574,25707458901,121834519567,577405414054,2736475971043,12968875078785,61462896633780 ⋆ Number of 2 - factors in D _ 4 X P _ n. ● a(n) = 3a(n - 1) + 9a(n - 2) - 3a(n - 3) - 3a(n - 4) + a(n - 5), n>5. ●

▶ [A263806] 1,3,7,47,95,703,1407,11007,22015,175103,350207,2797567,5595135,44744703,89489407,715849727,1431699455,11453333503,22906667007,183252287487,366504574975,2932032405503,5864064811007,46912501710847,93825003421695 ⋆ Decimal representation of the n - th iteration of the "Rule 157" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = 3 * a(n - 1) + 14 * a(n - 2) - 48 * a(n - 3) + 32 * a(n - 4) for n>4. ●

▶ [A330020] 1,3,7,49,121,2161,5041,127681,725761,12852001,39916801,2917918081,6227020801,392423391361,4740319584001,122053759027201,3556874280960001,57808258040332801,121645100408832001,1885499726779468800 1,2897991775406407680 01,7306005040298918553601 ⋆ Expansion of e.g.f. Sum _{ k>=1 } x ^ k / (k! * (1 - x ^ k) ^ k). ● a(n) = n! * Sum _{ d|n } (d + n / d - 2)! / (d! * (d - 1)! * (n / d - 1)!). ●

▶ [A190444] 1,1,3,7,49,201,1411,7183,68097,453169,4523491,34273911,403454833,3618761017,45157828899,445900023871,6206361667201,69111310499553,1017103374816067,12237616620289639,195222691795726641,2575612811875082281,43240905591424459843,608870179599833137647 ⋆ E.g.f. exp(x + x ^ 2 + x ^ 4). ● a(n)=n! * sum(k=1..n, sum(j=floor((4 * k - n) / 3)..floor((4 * k - n) / 2), binomial(j,n - 4 * k + 3 * j) * binomial(k,j)) / k!), n>0, a(0)=1. ●

▶ [A118393] 1,1,3,7,49,201,1411,7183,108417,816049,9966691,80843511,1381416433,14049020857,216003063459,2309595457471,72927332784001,1046829280528353,23403341433961027,329565129021010279,9695176730057249841,160632514329660035881 ⋆ Eigenvector of triangle A059344. E.g.f.: exp(Sum _{ n>=0 } x ^ (2 ^ n)). ● a(n) = Sum _{ k=0..[n / 2] } n! / k! / (n - 2 * k)! * a(k) for n>=0, with a(0)=1. ●

▶ [A113775] 1,1,3,7,49,321,2131,19783,195777,2101249,25721731,340358151,4902173233,75688032577,1253701725459,22347046050631,418439924732161,8318748086461953,175769214730290307,3871849719998940679,89734800330818444721,2187944831367633226561 ⋆ Number of sets of lists (cf. A000262) whose list sizes are not a multiple of 3. ● a(n) = a(n - 1) + 2 * (n - 1) * a(n - 2) + 2 * (n - 3) * (n - 2) * (n - 1) * a(n - 3) + 2 * (n - 3) * (n - 2) * (n - 1) * a(n - 4) + (n - 4) * (n - 3) * (n - 2) * (n - 1) * a(n - 5) - (n - 6) * (n - 5) * (n - 4) * (n - 3) * (n - 2) * (n - 1) * a(n - 6). - _ Vaclav Kotesovec _ , Sep 25 2013 ●

▶ [A046859] 1,3,7,61 ⋆ Simplified Ackermann function (main diagonal of Ackermann - Péter function). ● a(n) = A(n,n). ● a(n) = 2[n](n + 3) - 3 = H _ n(2,n + 3) - 3. (End) ●

▶ [A113841] 1,3,7,71,199,455,4551,12743,29127,291271,815559,1864135,18641351,52195783,119304647,1193046471,3340530119,7635497415,76354974151,213793927623,488671834567,4886718345671,13682811367879,31274997412295 ⋆ a(n) = a(n - 1) + 2 ^ A047240(n) for n>1, a(1)=1. ● a(1)=1, a(2)=3, a(3)=7, a(4)=71, a(n)=a(n - 1) + 64 * a(n - 3) - 64 * a(n - 4). - _ Harvey P. Dale _ , Nov 18 2013 ●

▶ [A041705] 1,3,7,87,181,630,24121,72993,170107,2114277,4398661,15310260,586188541,1773875883,4133940307,51381159567,106896259441,372069937890,14245553899261,43108731635673,100463017170607,1248664937682957,2597792892536521,9042043615292520 ⋆ Denominators of continued fraction convergents to sqrt(372). ● a(n) = 24302 * a(n - 6) - a(n - 12) for n>11. - _ Vincenzo Librandi _ , Dec 23 2013 ●

▶ [A015884] 3,7,113,4739,46804,134370,614063,1669512,15474115,18858140,19180902,41486462,492988666,1794101482,34644610027,48670872793,97414216753,138669015304,195575194804,543142431219,3173502039447,4968328076747 ⋆ A modified Pierce - type expansion for Pi: Pi = a(0) + Sum _{ n>=1 } (- 1) ^ floor(n / 2) / (Product _{ i=1..n } a(i)). ● a(0) = floor(Pi); A(1) = Pi - a(0); a(2 * n - 1) = floor(1 / A(2 * n - 1)); A(2 * n) = 1 - a(2 * n - 1) * A(2 * n - 1); a(2 * n) = ceiling(1 / A(2 * n)) and A(2 * n + 1) = a(2 * n) * A(2 * n) - 1 for n >= 1. ●

▶ [A104051] 3,7,399,759,971,52947,133663,144027,7011591,18280739,24294831,926780523,2486418967,3842160243,122290016319,336572174651,583349245479,16110885760707,45370056714703,86112795218187,2119413836354871 ⋆ Integers where 3 ^ n and 5 ^ m are nearly the same gives a difference sequence. ● a(q) = if 3 ^ n>5 ^ m and Floor[3 ^ n / 5 ^ m]<2 then a[q]=Abs[3 ^ n - 5 ^ m] ●

▶ [A168209] 3,8,8,13,13,18,18,23,23,28,28,33,33,38,38,43,43,48,48,53,53,58,58,63,63 ⋆ a(n) = 5 * n - a(n - 1) + 1 with n>1, a(1)=3. ● a(n) = (10 * n + 7 + 5 * (- 1) ^ n) / 4. - _ Jon E. Schoenfield _ , Jun 24 2010 ●

▶ [A047472] 0,1,3,8,9,11,16,17,19,24,25,27,32,33,35,40,41,43,48,49,51,56,57,59,64 ⋆ Numbers that are congruent to { 0, 1, 3 } (mod 8). ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. (End) ● a(n) = 8 * n / 3 - 4 - cos(2 * n * Pi / 3) + 5 * sin(2 * n * Pi / 3) / (3 * sqrt(3)). ● a(3k) = 8k - 5, a(3k - 1) = 8k - 7, a(3k - 2) = 8k - 8. (End) ●

► [A084747] 1,3,8,9,14,17,24,29,32,33,42,47,54,57,58,63,72,79,84,87,88,91,108,113,114 ⋆ Leading diagonal of triangle shown below in which the n - th row contains the n smallest numbers > 0 such that when they are incremented by n yield a prime. ● a(n) = prime(primepi(n) + n) - n. - _ Richard R. Forberg _ , Mar 22 2021 ●

► [A191487] 0,1,3,8,9,22,24,26,27,62,66,70,72,76,78,80,81,178,186,194,198,206,210,214,216 ⋆ The row sums of the Sierpinski - Stern triangle A191372. ● a(2 * n) = 3 * a(n) ●

► [A099256] 3,8,9,23,24,61,63,160,165,419,432,1097,1131,2872,2961,7519,7752,19685,20295,51536,53133,134923,139104,353233,364179 ⋆ G.f.: (3 - x)(1 + 3x + x ^ 2) / ((1 - x - x ^ 2)(1 + x - x ^ 2)). ● a(2n + 2) - a(2n + 1) = F(2n - 1). ● a(0) = 3, a(1) = 8, a(2) = 9, a(3) = 23, a(n + 4) = 3a(n + 2) - a(n). ●

► [A350667] 1,3,8,10,12,17,19,21,26,28,30,35,37,39,44,46,48,53,55,57,62,64,66,71,73 ⋆ Numbers congruent to 1, 3, and 8 modulo 9: positions of 1 in A159955. ● a(n) = 1 + 3 * n - 2 * sin(2 * n * Pi / 3) / sqrt(3). - _ Stefano Spezia _ , Jan 30 2022 ● a(n) = 1 + 3 * n - S(n - 1, - 1), with S(- 1, x) = 0, with the Chebyshev S polynomials from A049310. From the g.f., or from the previous formula (see also Spezia's formula in A350666). ●

► [A212966] 1,1,3,8,10,12,23,25,29,44,48,52,73,77,83,108,114,120,151,157,165,200,208,216,257 ⋆ Number of (w,x,y) with all terms in { 0,...,n } and 2 * w=range { w,x,y } . ● a(n) = a(n - 2) + 2 * a(n - 3) - 2 * a(n - 5) - a(n - 6) + a(n - 8). ●

► [A047356] 1,3,8,10,15,17,22,24,29,31,36,38,43,45,50,52,57,59,64,66,71,73,78,80,85 ⋆ Numbers that are congruent to { 1, 3 } mod 7. ● a(n) = 7 * n - a(n - 1) - 10 with n > 1, a(1)=1. - _ Vincenzo Librandi _ , Aug 05 2010 ● a(n) = 7 * n / 2 - 13 / 4 - 3 * (- 1) ^ n / 4. ●

► [A131725] 0,1,3,8,10,19,19,28,36,41,49,50,50,51,53,58,60,69,69,78,86,91,99,100,100 ⋆ Partial sums of A131711. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) - a(n - 4) + a(n - 5) + a(n - 6) - a(n - 7) - a(n - 8) + a(n - 9) + a(n - 10) - a(n - 11) for n > 10. - _ Chai Wah Wu _ , Jan 09 2021 ●

► [A346370] 3,8,10,19,22,34,38,54,59,78,84,107,114,140,148,178,187,220,230,267,278,318,330,374,387 ⋆ Upper bound for the number of solutions of the TRINTUM cube puzzle n X 1 X 1 (cuboid formed by 4n + 2 parts) different by the set of parts, which are distinguished by the amount of surface area they contribute to the assembled cuboid. ● a(n) = (n + 2) * (floor(n / 2) + 1) + floor(floor(n / 2) ^ 2 / 4). ●

► [A213033] 0,0,0,3,8,10,36,42,64,108,150,165,288,312,392,525,640,680,972,1026,1200,1470,1694,1771,2304 ⋆ n * [n / 2] * [n / 3], where [] = floor. ● a(n) = a(n - 2) + a(n - 3) - a(n - 5) + 2 * a(n - 6) - 2 * a(n - 8) + 2 * a(n - 11) - a(n - 12) + a(n - 14) + a(n - 15) - a(n - 17). ●

► [A108752] 0,3,8,11,12,15,20,23,24,27,32,35,36,39,44,47,48,51,56,59,60,63,68,71,72 ⋆ Numbers k such that 12 divides k * (k + 1). ● a(n) = 3 * n - 2 - (- 1) ^ ((2 * n - 3 - (- 1) ^ n) / 4). - _ Luce ETIENNE _ , Apr 04 2015 ●

► [A047470] 0,3,8,11,16,19,24,27,32,35,40,43,48,51,56,59,64,67,72,75,80,83,88,91,96 ⋆ Numbers that are congruent to { 0, 3 } mod 8. ● a(n) = a(n - 1) + 4 + (- 1) ^ n. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3). ● a(n) = 8 * n - a(n - 1) - 13 (with a(1)=0). - _ Vincenzo Librandi _ , Aug 06 2010 ● a(n) = 4 * n - (9 + (- 1) ^ n) / 2. - _ Arkadiusz Wesolowski _ , Sep 18 2012 ●

► [A022121] 3,8,11,19,30,49,79,128,207,335,542,877,1419,2296,3715,6011,9726,15737,25463,41200,66663,107863,174526,282389,456915 ⋆ Fibonacci sequence beginning 3, 8. ● a(n) = F(n + 2) + 2 * L(n + 1), where F(n) and L(n) are the n - th Fibonacci and Lucas number, respectively. - _ Rigoberto Florez _ , Jan 29 2020 ● a(n) = Lucas(n + 3) + Fibonacci(n - 2). - _ Greg Dresden _ and Steve Warren, Feb 28 2022 ●

► [A296368] 1,3,8,12,15,20,25,28,31,36,41,44,47,52,57,60,63,68,73,76,79,84,89,92,95 ⋆ Coordination sequence for the Cairo or dual - 3.3.4.3.4 tiling with respect to a trivalent point. ● a(n + 4) = a(n) + 16 for any n >= 3. - _ Rémy Sigrist _ , Dec 23 2017 (See the CGS - NJAS link for a proof. - _ N. J. A. Sloane _ , Dec 30 2017) ● a(n) = (8 * n - (- i) ^ n - i ^ n) / 2 for n>2, where i=sqrt(- 1). ● a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4) for n>6. ●

► [A014255] 1,3,8,12,21,27,40,48,65,75,96,108,133,147,176,192,225,243,280,300,341,363,408,432,481 ⋆ Expansion of (1 + 2 * x + 3 * x ^ 2) / ((1 - x) * (1 - x ^ 2) ^ 2). ● a(n) = (n + 1) ^ 2 - floor((n + 1) / 2) ^ 2. - _ Franklin T. Adams - Watters _ , May 26 2006 ● a(n) = (6 * n ^ 2 + 14 * n + 7 + (- 1) ^ n * (2 * n + 1)) / 8. - _ R. J. Mathar _ , Mar 22 2011 ● a(n) = (k + 1) * (3 * k + 1) if n = 2 * k, 3 * (k + 1) ^ 2 if n = 2 * k + 1. - _ Michael Somos _ , Feb 27 2014 ●

► [A022407] 3,8,12,21,34,56,91,148,240,389,630,1020,1651,2672,4324,6997,11322,18320,29643,47964,77608,125573,203182,328756,531939 ⋆ a(n) = a(n - 1) + a(n - 2) + 1, with a(0)=3, a(1)=8. ● a(n) = Fibonacci(n - 2) + Fibonacci(n + 5) - 1. - _ Zerinvary Lajos _ , Feb 01 2008 ● a(n) = - 1 - B * (2 / (- 1 - sqrt(5))) ^ n - C * (2 / (- 1 + sqrt(5))) ^ n, with B=(- 8 - 6 * sqrt(5)) / (5 + 3 * sqrt(5)), C=(- 8 + 6 * sqrt(5)) / (5 - 3 * sqrt(5)). (End) ●

► [A209934] 1,3,8,12,23,26,32,66,68,78,83,106,116,169,181,201,210,216,234,273,282,296,427,436,501 ⋆ a(n) is the first value to occur consecutively in the sequence b _ n defined by p _ 2k(b _ n(k)) = p _ k(n) ^ 2, k=1,2,3,..., where p _ k(n) is the n - th k - almost prime. ● a(n) = b _ n(min { k : b _ n(k) = b _ n(k + 1) }). ●

► [A016885] 3,8,13,18,23,28,33,38,43,48,53,58,63,68,73,78,83,88,93,98,103,108,113,118,123 ⋆ a(n) = 5 * n + 3. ● a(n) = floor((15 * n + 10) / 3). - _ Gary Detlefs _ , Mar 07 2010 ● a(n) = 2 * a(n - 1) - a(n - 2). - _ Wesley Ivan Hurt _ , Apr 22 2021 ●

► [A184739] 3,8,13,18,24,29,34,39,45,50,55,60,65,71,76,81,86,92,97,102,107,113,118,123,128 ⋆ floor(n * s + h - h * s), where s=3 + sqrt(5), h=1 / 2; complement of A184738. ● a(n)=floor(n * s + h - h * s), where s=3 + sqrt(5), h=1 / 2. ●

► [A120883] 0,1,3,8,13,20,28,39,52,64,79,96,112,135,154,179,203,228,255,281,316,349,382,416,451 ⋆ (1 / 4) * number of lattice points with odd indices in a square lattice inside a circle around the origin with radius 2 * n. ● a(n) = Sum _{ i =1..n } ceiling(sqrt(n ^ 2 - (i - 1 / 2) ^ 2) - 1 / 2). Proof outline: consider an integer grid (i,j), e.g., a pixel image. A positive half circle hull's boundary of radius n contains all points ('pixels') where (i - 1 / 2) ^ 2 + (j - 1 / 2) ^ 2 = n ^ 2 => j = f(j) = sqrt(n ^ 2 - (i - 1 / 2) ^ 2) + 1 / 2. To obtain the number of elements of the hull's closure without nonpositive points, count by upper Riemann sums with interval length 1: (n) = A(n) = Sum _{ i=1..n } (ceiling(f(i)) - 1). ('i=1' discards the (0,j) points and ' - 1' cancels the (i,0) points.) - _ Johannes Hoentsch _ , Feb 26 2019 ●

► [A322598] 1,3,8,13,20,29,39,50,64,78,94,112,131,151,174,197,222,249,277,306,338,370,404,440,477 ⋆ a(n) is the number of unlabeled rank - 3 graded lattices with 3 coatoms and n atoms. ● a(n) = floor((3 / 4)n ^ 2 + (1 / 3)n + 1 / 4). ● a(n) = a(n - 1) + a(n - 2) - a(n - 4) - a(n - 5) + a(n - 6) for n>6. ● a(6 * m) = 27 * m ^ 2 + 2 * m. ● a(6 * m + 1) = 27 * m ^ 2 + 11 * m + 1. ● a(6 * m + 2) = 27 * m ^ 2 + 20 * m + 3. ● a(6 * m + 3) = 27 * m ^ 2 + 29 * m + 8. ●

► [A351355] 0,1,3,8,13,21,31,42,55,71,87,107,128,150,174,203,231,260,294,328,364,404,442,486,530 ⋆ Number of ways the numbers from 1..n do not divide numbers from n + 1..2n. ● a(n) = Sum _{ k=1..n } Sum _{ i=n + 1..2n } sign(i mod k). ●

► [A337504] 1,1,3,8,13,33,112,286,769,2288,6695,18745,54654,160888,467402,1362378,4016517,11807966,34708018,102451390,302870005,895207191,2650590597,7859253320,23316653154 ⋆ Number of compositions of 2 * n with n maximal anti - runs. ● a(n) = [x ^ (2 * n) * y ^ n] 1 - y + y * (y - 1) / (y - 1 - Sum _{ d>=1 } (y - 1) ^ d * x ^ d / (1 - x ^ d)). - _ Andrew Howroyd _ , Feb 02 2021 ●

► [A184517] 3,8,14,19,24,29,35,40,45,50,55,61,66,71,76,82,87,92,97,103,108,113,118,124,129 ⋆ Upper s - Wythoff sequence, where s=4n - 2. Complement of A184516. ● a(n) = ceiling((2 * n - 1) * phi ^ 2), where phi = A001622. - _ Jon Maiga _ , Nov 15 2018 ●

► [A299647] 3,8,14,19,25,30,36,41,47,52,58,63,69,74,80,85,91,96,102,107,113,118,124,129,135 ⋆ Positive solutions to x ^ 2 == - 2 (mod 11). ● a(n) = - a(- n + 1) = a(n - 1) + a(n - 2) - a(n - 3). ● a(n) = 5 * n - 2 + (2 * n - (- 1) ^ n - 3) / 4. ● a(n) = 4 * n - 1 + floor((n - 1) / 2) + floor((3 * n - 1) / 3). ● a(n + k) - a(n) = 11 * k / 2 + (1 - (- 1) ^ k) * (- 1) ^ n / 4. ● a(n + k) + a(n) = 11 * (2 * n + k - 1) / 2 - (1 + (- 1) ^ k) * (- 1) ^ n / 4. ●

► [A014848] 0,1,3,8,14,23,33,46,60,77,95,116,138,163,189,218,248,281,315,352,390,431,473,518,564 ⋆ a(n) = n ^ 2 - floor(n / 2). ● a(n) = (2 * n * (2 * n - 1) - (- 1) ^ n + 1) / 4. - _ Bruno Berselli _ , Feb 17 2011 ● a(n) = round(n / (exp(1 / n) - 1)), n > 0. - _ Richard R. Forberg _ , Nov 14 2014 ●

► [A321047] 0,1,3,8,14,26,38,57,77,103,130,170,206,251,300,355,412,481,548,628,709,794,886,993,1097 ⋆ a(n) = Sum _{ 1<=i<j<=n } floor(n * (1 / i - 1 / j)). ● a(n) = Sum _{ 1<=i<j<=n } floor(n * (1 / i - 1 / j)). ● a(n) = Sum _{ k=0..n - 1 } T(n,k) * k, where T is A321368 in bivariate form. ●

► [A123329] 0,1,3,8,14,26,39,59,83,115,148,197,247,307,376,460,545,651,758,887,1027,1181,1336,1527,1724 ⋆ Let M be the matrix defined in A111490. Sequence gives M(2,1) - M(1,2), M(2,1) + M(3,1) + M(3,2) - M(1,2) - M(1,3) - M(2,3), etc. ● a(n) = Sum _{ i=2..(n + 2) } Sum _{ j=1..i - 1 } (M(i,j) - M(j,i)). - _ Michael S. Branicky _ , Jan 20 2021 ●

► [A340627] 3,8,14,30,58,118,234,470,938,1878,3754,7510,15018,30038,60074,120150,240298,480598,961194,1922390,3844778,7689558,15379114,30758230,61516458 ⋆ a(n) = (11 * 2 ^ n - 2 * (- 1) ^ n) / 3 for n >= 0. ● a(0)=3, a(2 * n + 1) = 2 * a(2 * n) + 2, a(2 * n + 2) = 2 * a(2 * n + 1) - 2, n>=0. ● a(n + 1) = 11 * 2 ^ n - a(n) for n>=0. ● a(n + 3) = 33 * 2 ^ n - a(n) for n>=0. ● a(n + 5) = 121 * 2 ^ n - a(n) for n>=0. ● a(n + 2) = a(n) + 11 * 2 ^ n for n>=0. ● a(n + 4) = a(n) + 55 * 2 ^ n for n>=0. ●

► [A331943] 1,3,8,15,23,34,47,61,78,97,117,140,165,191,220,251,283,318,355,393,434,477,521,568,617 ⋆ a(n) = n ^ 2 + 1 - ceiling((n + 2) / 3). ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) - 2 * a(n - 4) + a(n - 5) for n>5. ●

► [A083656] 1,3,8,15,24,35,47,62,78,97,118,140,165,191,220,251,284,319,355,394,435,478,523,569,618 ⋆ a(n) = Sum _{ i=1..n } floor(r * floor(r * i)), where r=sqrt(2). ● a(n) = n * (n - 1 + 1 / sqrt(2)) + O(1). ●

► [A005563] 0,3,8,15,24,35,48,63,80,99,120,143,168,195,224,255,288,323,360,399,440,483,528,575,624 ⋆ a(n) = n * (n + 2) = (n + 1) ^ 2 - 1. ● a(n) = Real((n + 1 + i) ^ 2). - _ Gerald Hillier _ , Oct 12 2008 ● a(n) = (n! + (n + 1)!) / (n - 1)!, n>0. - _ Gary Detlefs _ , Aug 10 2009 ● a(n) = floor(n ^ 5 / (n ^ 3 + 1)) with offset 1 (a(1)=0). - _ Gary Detlefs _ , Feb 11 2010 ● a(n) = a(n - 1) + 2 * n + 1 (with a(0)=0). - _ Vincenzo Librandi _ , Nov 18 2010 ● a(n) = 2 / (Integral _{ x=0..Pi / 2 } (sin(x)) ^ (n - 1) * (cos(x)) ^ 3), for n>0. - _ Francesco Daddi _ , Aug 02 2011 ● a(n) = 15 * C(n + 4,3) * C(n + 4,5) / (C(n + 4,2) * C(n + 4,4)). - _ Gary Detlefs _ , Aug 05 2013 ●

► [A238806] 3,8,15,25,39,58,83,115,155,204,263,333,415,510,619,743,883,1040,1215,1409,1623,1858,2115,2395,2699 ⋆ Number of n X 2 0..2 arrays with no element equal to one plus the sum of elements to its left or one plus the sum of the sum of elements above it, modulo 3. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>4. ●

► [A071399] 0,0,1,3,8,15,25,40,60,86,118,157,204,259,323,398,483,579,687,808,943,1091,1255,1434,1629 ⋆ Rounded volume of a regular tetrahedron with edge length n. ● a(n) = round(n ^ 3 * sqrt(2) / 12) ●

► [A159465] 3,8,15,26,39,54,71,90,111,134,161,190,221,254,289,326,365,406,449,494,541,592,645,700,757 ⋆ Sums of odd numbers, omitting squares. ● a(n) = (n + S) ^ 2 - (4 * S ^ 3 - S) / 3 where S = ceiling(round(sqrt(2 * n - 1)) / 2). ●

► [A172296] 3,8,15,26,39,56,75,98,129,172,233,312,413,540,707,898,1097,1410,1757,2458,4167,6784,10323,16130,26631 ⋆ Partial sums of Wagstaff numbers A000978. ● a(n) = SUM[i=1..n] { integers i such that (2 ^ i + 1) / 3 is prime } . ●

► [A034828] 0,0,1,3,8,15,27,42,64,90,125,165,216,273,343,420,512,612,729,855,1000,1155,1331,1518,1728 ⋆ a(n) = floor(n ^ 2 / 4) * (n / 2). ● a(n) = (n ^ 2 - 1) * n / 8 if n is odd, otherwise n ^ 3 / 8. ● a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + a(n - 4) + 2 * a(n - 5) - a(n - 6). ● a(n) = (2 * n ^ 3 + 12 * n ^ 2 + 23 * n + 14) / 16 + (n + 2) * (- 1) ^ n / 16. ● a(n) = Sum _{ k=0..floor((n + 2) / 2) } ((n + 2) / (n + 2 - k))(- 1) ^ k * C(n + 2 - k, k) * C(n - 2 * k + 2, 2) * C(n - 2 * k, floor((n - 2 * k) / 2)). [Typo corrected by _ R. J. Mathar _ , Aug 18 2008] (End) ● a(n) = (2 * n ^ 2 - 1 + (- 1) ^ n) * n / 16. - _ Michael Somos _ , Sep 06 2008 ● a(- n) = - a(n). - _ Michael Somos _ , Sep 06 2008 ●

► [A109900] 0,1,3,8,15,27,42,64,90,125,165,216,273,343,420,512,612,729,855,1000,1155,1331,1518,1728,1950 ⋆ The (n,r) - th term of the following triangle is T(n) - T(r) for r = 0 to n. The n - th row contains n + 1 terms. T(n) = the n - th

triangular number = n(n + 1) / 2. Sequence contains the sum of terms at a 45 - degree angle. ● a(2n + 1) = (n + 1) ^ 3; a(2n) = (2n + 1) * T(n) = (2n + 1) * (n + 1) * n / 2, where T=A000217. - _ R. J. Mathar _ , Feb 11 2008 ● a(n) = (2 * n ^ 3 + 6 * n ^ 2 + 5 * n + 1 - (n + 1) * (- 1) ^ n) / 16. - _ Luce ETIENNE _ , May 12 2015 ●

► [A081276] 0,0,1,3,8,15,27,42,64,91,125,166,216,274,343,421,512,614,729,857,1000,1157,1331,1520,1728 ⋆ Floor(n ^ 3 / 8). ● a(n) = floor(n ^ 3 / 8). ● a(0)=0, a(1)=0, a(2)=1, a(3)=3, a(4)=8, a(5)=15, a(6)=27, a(7)=42, a(8)=64, a(9)=91, a(10)=125, a(n)=3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 8) - 3 * a(n - 9) + 3 * a(n - 10) - a (n - 11). - _ Harvey P. Dale _ , Jan 27 2012 ●

► [A135350] 0,1,3,8,15,29,56,113,227,456,911,1821,3640,7281,14563,29128,58255,116509,233016,466033,932067,1864136,3728271,7456541,14913080 ⋆ a(n) = 2 * a(n - 1) - a(n - 3) + 2 * a(n - 4). ● a(n) = - (1 / 3) * (1 / 2 - (1 / 2) * i * sqrt(3)) ^ n - (2 / 9) * (- 1) ^ n - (1 / 3) * (1 / 2 + (1 / 2) * i * sqrt(3)) ^ n + (8 / 9) * 2 ^ n - (2 / 9) * i * (1 / 2 - (1 / 2) * i * sqrt(3)) ^ n * sqrt(3) + (2 / 9) * i * (1 / 2 + (1 / 2) * i * sqrt(3)) ^ n * sqrt(3), with n>=0 and i=sqrt(- 1). - _ Paolo P. Lava _ , Jun 09 2008 ●

► [A196087] 0,1,3,8,15,31,51,90,142,228,341,525,757,1110,1572,2233,3084,4286,5812,7910,10580,14145,18659,24626,32099 ⋆ Sum of all parts minus the total numbers of parts of all partitions of n. ● a(n) = Sum _{ k=1..n - 1 } p(n + j,j), where p(n,j) is the number of partitions of j having exactly j parts. E.g., a(4) = p(5, 1) + p(6,2) + p(7,3) = 1 + 3 + 4 = 8. - _ Gregory L. Simay _ , Aug 19 2022 ●

► [A065500] 1,1,3,8,15,64,65,426,847,2528,2529,27730,27731,360372,360373,360374,720735,12252256,12252257,232792578,232792579,232792580,232792581,5354228902,5354228903 ⋆ Number of distinct functions from a set with n ^ n elements to itself that can be defined naturally (in n) by typed lambda - calculus expressions. ● a(n) = lcm(seq(i, i=1..n)) + n - 1, except at n=0 (where the lcm is infinite). ●

► [A188012] 3,8,16,21,29,37,42,50,55,63,71,76,84,92,97,105,110,118,126,131,139,144,152,160,165 ⋆ Positions of 0 in A188011; complement of A188013. ● a(n + 1) = 3 * floor(n * phi) + 2 * n + 3 for n>=0, where phi = (1 + sqrt(5)) / 2 (see A188011). - _ Michel Dekking _ , Sep 28 2017 ●

► [A122794] 1,3,8,16,25,37,52,70,91,113,138,166,197,231,268,308,349,393,440,490,543,599,658,720,785 ⋆ Connell (3,2) - sum sequence (partial sums of the (3,2) - Connell sequence). ● a(n) = (n - th triangular number) - n + (n - th partial sum of A122800). ●

► [A115006] 0,3,8,16,26,39,54,72,92,115,140,168,198,231,266,304,344,387,432,480,530,583,638,696,756 ⋆ Row 2 of array in A114999. ● a(n) = Floor((n + 1) ^ 2 / 4) + n * (n + 1). ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4). ● a(n) = (10 * n ^ 2 + 12 * n + 1 - (- 1) ^ n) / 8. ● a(n) = sum _{ i=1..n + 1 } (10 * i + (- 1) ^ i - 9) / 4. (End) ●

► [A211480] 0,3,8,16,27,40,56,75,96,120,147,176,208,243,280,320,363,408,456,507,560,616,675,736,800 ⋆ Number of ordered triples (w,x,y) with all terms in {- n,...,0,...,n } and w + 2x + 3y = 1. ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) - 2 * a(n - 4) + a(n - 5) for n>=5. ●

► [A122796] 1,3,8,16,27,41,58,76,97,121,148,178,211,247,286,328,373,421,470,522,577,635,696,760,827 ⋆ Connell (3,5) - sum sequence (partial sums of the (3,5) - Connell sequence) ● a(n) = (n - th triangular number) - n + (n - th partial sum of A122799). ●

► [A104249] 1,3,8,16,27,41,58,78,101,127,156,188,223,261,302,346,393,443,496,552,611,673,738,806,877 ⋆ a(n) = (3 * n ^ 2 + n + 2) / 2. ● a(0) = 1, a(n) = a(n - 1) + 3 * n - 1 for n > 0; ●

► [A254875] 1,3,8,16,28,45,68,97,134,179,233,297,372,458,557,669,795,936,1093,1266,1457,1666,1894,2142,2411 ⋆ a(n) = floor((10 * n ^ 3 + 57 * n ^ 2 + 102 * n + 72) / 72). ● a(n) - 2 * a(n + 1) + 2 * a(n + 3) - a(n + 4) = - 1 if n == 0 (mod 3) else - 2 for all n in Z. ●

► [A131941] 0,1,3,8,16,29,47,72,104,145,195,256,328,413,511,624,752,897,1059,1240,1440,1661,1903,2168,2456 ⋆ Partial sums of ceiling(n ^ 2 / 2) (A000982). ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - 2 * a(n - 3) + 3 * a(n - 4) - a(n - 5). (End) ● a(n) = round((2 * n ^ 3 + 3 * n ^ 2 + 4 * n) / 12) = round((2 * n + 1) * (2 * n ^ 2 + 3 * n + 3) / 24) = floor((n + 1) * (2 * n ^ 2 + n + 3) / 12) = ceiling((2 * n ^ 3 + 3 * n ^ 2 + 4 * n) / 12). ● a(n) = a(n - 2) + n ^ 2 - n + 1, n > 1. (End) ● a(n) = (2 * n * (2 * n ^ 2 + 3 * n + 4) - 3 * (- 1) ^ n + 3) / 24. - _ Bruno Berselli _ , Dec 07 2010 ●

► [A167616] 0,3,8,16,29,50,84,139,228,372,605,982,1592,2579,4176,6760,10941,17706,28652,46363,75020,121388,196413,317806,514224 ⋆ a(n) = Fibonacci(n) - 5. ● a(n) = a(n - 1) + a(n - 2) + 5. - _ Zak Seidov _ , Jun 27 2010 ● a(5)=0, a(6)=3, a(7)=8, a(n) = 2 * a(n - 1) - a(n - 3). - _ Harvey P. Dale _ , Dec 31 2011 ●

► [A002624] 1,3,8,16,30,50,80,120,175,245,336,448,588,756,960,1200,1485,1815,2200,2640,3146,3718,4368,5096,5915 ⋆ Expansion of (1 - x) ^ (- 3) * (1 - x ^ 2) ^ (- 2). ● a(n - 1) = (n ^ 4 + 10 * n ^ 3 + 32 * n ^ 2 + 32 * n + (6 * n + 15) * (n mod 2)) / 96. ● a(n) = C(n + 2, 2) + 2 * C(n, 2) + 3 * C(n - 2, 2) + 4 * C(n - 4, 2) + ... ● a(n) = Sum _{ i = 1..z } i * C(n + 4 - 2i, 2) where z = (2 * n + 3 + (- 1) ^ n) / 4. ● a(n) = (3 * (2 * n + 7) * (- 1) ^ n + 2 * n ^ 4 + 28 * n ^ 3 + 136 * n ^ 2 + 266 * n + 171) / 192. ●

► [A227265] 3,8,16,30,54,93,153,241,365,534,758,1048,1416,1875,2439,3123,3943,4916,6060,7394,8938,10713,12741,15045,17649 ⋆ Number of n X 2 0,1 arrays indicating 2 X 2 subblocks of some larger (n + 1) X 3 binary array having a sum of three or less, with rows and columns of the latter in lexicographically nondecreasing order. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

► [A081661] 1,3,8,16,31,57,106,198,377,727,1420,2796,5539,11013,21950,43810,87517,174915,349696,699240,1398311,2796433,5592658,11185086,22369921 ⋆ Partial sums of A081660. ● a(n) = 2 ^ (n + 2) / 3 + (n ^ 2 + n - 1) / 2 + (- 1) ^ n / 6. ●

► [A173283] 1,3,8,16,32,56,96,152,240,360,536,768,1096,1520,2096,2824,3792,5000,6568,8496,10960,13960,17728,22264,27896 ⋆ A(x) satisfies A005408(x) = A(x) / A(x ^ 2), A005408 = odd numbers. ● a(n) = Sum _{ t=0..n / 2 } (2 * n - 4 * t + 1) * a(t). - _ R. J. Mathar _ , Apr 01 2010 ●

► [A171497] 3,8,16,32,64,128,256,512,1024,2048,4096,8192,16384,32768,65536,131072,262144,524288,1048576,2097152,4194304,8388608,16777216,33554432,67108864 ⋆ a(n) = 2 * a(n - 1) for n > 1; a(0) = 3, a(1) = 8. ● a(n) = 4 * 2 ^ n for n > 0; a(0) = 3. ●

► [A227017] 1,3,8,17,28,43,60,81,104,131,160,193,228,267,308,353,400,451,504,561,620,683,748,817,888 ⋆ Floor(M(g(n - 1) + 1,..,g(n))), where M = harmonic mean and g(n) = n(3n - 1) / 2 = A000326(n). ● a(n) = (1 / 4) * (1 - (- 1) ^ n + 4 * n + 6 * n ^ 2) (conjectured). ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4) for n > 1 (conjectured). ●

► [A033816] 3,8,17,30,47,68,93,122,155,192,233,278,327,380,437,498,563,632,705,782,863,948,1037,1130,1227 ⋆ a(n) = 2 * n ^ 2 + 3 * n + 3. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A011889] 0,0,0,0,3,8,17,30,48,72,102,141,188,245,312,390,480,582,699,830,977,1140,1320,1518,1734 ⋆ a(n) = floor(n * (n - 1) * (n - 2) / 7). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 7) - 3 * a(n - 8) + 3 * a(n - 9) - a(n - 10). ●

► [A105163] 1,1,3,8,17,31,51,78,113,157,211,276,353,443,547,666,801,953,1123,1312,1521,1751,2003,2278,2577 ⋆ a(n) = (n ^ 3 - 7 * n + 12) / 6. ● a(n) = C(n + 1,n - 2) - n + 2. - _ Zerinvary Lajos _ , Mar 21 2008 ● a(n) = 2 * a(n - 1) - a(n - 2) + n - 1, for all n in Z. - _ Gionata Neri _ , Jul 28 2016 ●

► [A011850] 0,0,0,0,0,1,3,8,17,31,52,82,123,178,250,341,455,595,765,969,1211,1496,1828,2213,2656 ⋆ a(n) = floor(binomial(n,4) / 4). ● a(n) = + 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 6 * a(n - 4) + 6 * a(n - 5) - 10 * a(n - 6) + 10 * a(n - 7) - 6 * a(n - 8) + 6 * a(n - 9) - 10 * a(n - 10) + 10 * a(n - 11) - 6 * a(n - 12) + 6 * a(n - 13) - 10 * a(n - 14) + 10 * a(n - 15) - 5 * a(n - 16) + a(n - 17). [_ R. J. Mathar _ , Apr 15 2010] ●

► [A360848] 3,8,17,32,66,130,262,522,1046,2090,4182,8362,16726,33450,66902,133802,267606,535210,1070422,2140842,4281686,8563370,17126742,34253482,68506966 ⋆ Number of dominating induced trees in the n - ladder graph P _ 2 _ X P _ n. ● a(n) = a(n - 1) + 2 * a(n - 2) for n > 4. ●

► [A002625] 1,3,8,17,33,58,97,153,233,342,489,681,930,1245,1641,2130,2730,3456,4330,5370,6602,8048,9738,11698,13963 ⋆ Expansion of 1 / ((1 - x) ^ 3 * (1 - x ^ 2) ^ 2 * (1 - x ^ 3)). ● a(n) = floor((n + 1) * (135 * (- 1) ^ n + 6 * n ^ 4 + 144 * n ^ 3 + 1256 * n ^ 2 + 4744 * n + 6785) / 8640 + 1 / 2). - _ Tani Akinari _ , Oct 07 2012 ●

► [A027181] 1,3,8,17,33,60,105,179,300,497,817,1336,2177,3539,5744,9313,15089,24436,39561,64035,103636,167713,271393,439152,710593 ⋆ a(n) = Lucas(n + 4) - 2 * (n + 3). ● a(n) = - 4 + (2 ^ (- 1 - n) * ((1 - sqrt(5)) ^ n * (- 15 + 7 * sqrt(5)) + (1 + sqrt(5)) ^ n * (15 + 7 * sqrt(5)))) / sqrt(5) - 2 * (1 + n). ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - a(n - 3) + a(n - 4) for n>3. ●

► [A281166] 1,1,3,8,17,33,64,127,255,512,1025,2049,4096,8191,16383,32768,65537,131073,262144,524287,1048575,2097152,4194305,8388609,16777216 ⋆ a(n) = 3 * a(n - 1) - 3 * a(n - 2) + 2 * a(n - 3) for n>2, a(0)=a(1)=1, a(2)=3. ● a(n + 3) = - a(n) + 9 * 2 ^ n. ● a(n) = 2 ^ n - periodic 6: repeat [0, 1, 1, 0, - 1, - 1, 0]. ● a(n + 6) = a(n) + 63 * 2 ^ n. ● a(n + 1) = 2 * a(n) - period 6: repeat [1, - 1, - 2, - 1, 1, 2]. ● a(n) = 2 ^ n - 2 * sin(Pi * n / 3) / sqrt(3). - _ Jean - François Alcover _ and _ Colin Barker _ , Jan 16 2017 ● a(n)= 2 ^ n - (1 / 3) * i * sqrt(3) * ((1 / 2 - (1 / 2) * i * sqrt(3)) ^ n - (1 / 2 + (1 / 2) * i * sqrt(3)) ^ n), where i=sqrt(- 1). - _ Paolo P. Lava _ , Jan 25 2017 ●

► [A130750] 1,3,8,17,33,64,127,255,512,1025,2049,4096,8191,16383,32768,65537,131073,262144,524287,1048575,2097152,4194305,8388609,16777216,33554431 ⋆ Binomial transform of A010882. ● a(0) = 1; a(1) = 3; a(2) = 8; for n > 2, a(n) = 3 * a(n - 1) - 3 * a(n - 2) + 2 * a(n - 3). ●

► [A002626] 1,3,8,17,34,61,105,170,267,403,594,851,1197,1648,2235,2981,3927,5104,6565,8351,10529,13152,16303,20049,24492 ⋆ Expansion of 1 / ((1 - x) ^ 3 (1 - x ^ 2) ^ 2 (1 - x ^ 3) (1 - x ^ 4)). ● a(n) = floor((n + 1) * (n + 13) * (135 * (- 1) ^ n + 2 * n ^ 4 + 56 * n ^ 3 + 570 * n ^ 2 + 2492 * n + 4175) / 69120 + 1 / 2). - _ Tani Akinari _ , Nov 07 2012 ●

► [A344004] 0,0,1,3,8,17,34,63,113,196,334,560,930,1532,2511,4099,6674,10845,17600,28535,46235,74880,121236,196248,317628 ⋆ Number of ordered subsequences of { 1,...,n } containing at least three elements and such that the differences contain only odd numbers. ● a(n) = Fibonacci(n + 3) - (1 / 8)(15 + 8 * n + 2 * n ^ 2 + (- 1) ^ n). - _ Greg Dresden _ , Jun 20 2021 ●

► [A163312] 1,3,8,17,34,64,114,195,325,529,840,1303,1977,2940 ⋆ Row sums of triangle A163311 ● a(n) = sum of n - th row terms, triangle A163311 ●

► [A131253] 1,3,8,17,34,64,117,209,368,641,1108,1904,3257,5551,9432,15985,27030,45616,76845,129245,217056,364033,609768,1020192,1705009 ⋆ Row sums of triangle A131252. ● a(n) = Sum _{ k=0..n } (k + 1) * (Sum _{ i=0..k } binomial(n - k, k - i)). ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) - 2 * a(n - 3) + 4 * a(n - 4) - a(n - 6). ●

► [A145071] 3,8,17,34,67,132,261,518,1031,2056,4105,8202,16395,32780,65549,131086,262159,524304,1048593,2097170,4194323,8388628,16777237,33554454,67108887 ⋆ Partial sums of A000051, starting at n=1. ● a(1) = 3; a(n) = a(n - 1) + 2 ^ n + 1 for n > 1. ● a(n) = 2 ^ (n + 1) + n - 2. - _ Franklin T. Adams - Watters _ , Jul 06 2009 ●

► [A239844] 3,8,17,35,64,109,176,272,405,584,819,1121,1502,1975,2554,3254,4091,5082,6245,7599,9164,10961,13012,15340,17969 ⋆ Number of n X 2 0..3 arrays with no element equal to one plus the sum of elements to its left or one plus the sum of elements above it or two plus the sum of the elements diagonally to its northwest, modulo 4. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>7. ●

► [A052996] 1,3,8,17,35,71,143,287,575,1151,2303,4607,9215,18431,36863,73727,147455,294911,589823,1179647,2359295,4718591,9437183,18874367,37748735 ⋆ G.f.: (1 + x ^ 2 - x ^ 3) / ((1 - x)(1 - 2 * x)). ● a(n) = 9 * 2 ^ (n - 2) - 1 for n > 1. - _ Brad Clardy _ , Sep 23 2011 ●

► [A369734] 0,1,1,1,1,3,8,17,35,79,177,409,995,2475,6336,16078,41401,107304,279550,736032,1950000,5199850,13950852,37576658,101670863 ⋆ Number of solutions to 1 ^ 2 * k _ 1 + 2 ^ 2 * k _ 2 + ... + n ^ 2 * k _ n = 1, where k _ i are from {- 1,0,1 } , i=1..n. ● a(n) = [x ^ 1] Product _{ k=1..n } (x ^ (k ^ 2) + 1 + 1 / x ^ (k ^ 2)). ●

► [A046994] 1,3,8,17,38,78,164,332,680,1368,2768,5552,11168,22368,44864,89792,179840,359808,720128,1440512,2882048,5764608,11531264,23063552,46131200 ⋆ Number of Greek - key tours on a 3 X n board; i.e., self - avoiding walks on a 3 X n grid starting in the top left corner. • a(1) = 1; a(2m) = Sum _{ i = 2...2 m - 1 } a(i) + 3 * 2 ^ (m - 1); a(2m + 1) = Sum _{ i = 2...2m } a(i) + 5 * 2 ^ (m - 1). • a(n) = 11 * 2 ^ (n - 3) - (4 + (- 1) ^ n) * (2 ^ ((1 / 4) * (2n - 7 - (- 1) ^ n))), n >= 2. - _ Nathaniel Johnston _ , Feb 03 2006 • a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 4 * a(n - 3) for n>4. G.f.: x * (1 + x - x ^ 3) / (1 - 2 * x - 2 * x ^ 2 + 4 * x ^ 3). - _ Colin Barker _ , Jul 19 2012 •

► [A058811] 1,1,3,8,17,41,92,215,487,1126,2583,5981,13698,31647,72678,167474,385021,887133,2041375,4700526,10817997,24908164,57334111,131995229 ⋆ Number of terms on the n - th level of the Inverse - Totient - Tree (ITT). The 0th, 1st, 2nd and 3rd levels are { 1 } , { 2 } , { 3, 4, 6 } , { 5, 7, 8, 9, 10, 12, 14, 18 } with 1, 1, 3, 8 entries resp. The (n + 1) - st level is obtained from the n - th level as the union of the inverse phi sets of the terms occurring earlier on the n - th level. • a(n) = Cardinality[Floor(n)], where Floor(0)= { 1 } , Floor(n + 1)= Union[invphi(t(i, n)), i=1..a(n))], where t(i, n) is the i - th integer in Floor(n), ordered by size or lexicographically. •

► [A101822] 1,1,3,8,17,42,100,235,561,1331,3158,7503,17812,42292,100425,238445,566171,1344336,3192013,7579198,17996232,42730667,101460725,240910755,572024206 ⋆ Expansion of 1 / (1 - x - 2 * x ^ 2 - 3 * x ^ 3). • a(n) = a(n - 1) + 2 * a(n - 2) + 3 * a(n - 3), a(0) = a(1) = 1, a(2) = 3. • a(n) = left term in M ^ n * [1, 0, 0], where M = the 3X3 matrix([1, 1, 1], [2, 0, 0], [0, 3 / 2, 0]). •

► [A004210] 1,3,8,18,30,43,67,90,122,161,202,260,305,388,416,450,555,624,730,750,983,1059,1159,1330,1528 ⋆ "Magic" integers: a(n + 1) is the smallest integer m such that there is no overlap between the sets { m, m - a(i), m + a(i): 1 <= i <= n } and { a(i), a(i) - a(j), a(i) + a(j): 1 <= j < i <= n } . • a(n + 1) = min { k | k and k +- a(i) are not equal to a(i) or a(i) - a(j) or a(i) + a(j) for any n + 1 > i > j > 0 } . [Corrected by _ T. D. Noe _ , Sep 08 2008] •

► [A184636] 3,8,18,32,50,72,98,128,162,200,242,288,338,392,450,512,578,648,722,800,882,968,1058,1152,1250 ⋆ a(n) = floor(1 /{ (n ^ 4 + 2 * n) ^ (1 / 4) }), where {} =fractional part. • a(n)=floor(1 /{ (n ^ 4 + 2 * n) ^ (1 / 4) }), where {} =fractional part. •

► [A319006] 1,3,8,18,34,57,89,132,187,255,338,438,556,693,851,1032,1237,1467,1724,2010,2326,2673,3053,3468,3919 ⋆ Sum of the next n positive integers repeated (A008619). • a(n) = - a(- n) = 4 * a(n - 1) - 7 * a(n - 2) + 8 * a(n - 3) - 7 * a(n - 4) + 4 * a(n - 5) - a(n - 6). • a(n) = (2 * n * (n ^ 2 + 2) + (1 - (- 1) ^ n) * (- 1) ^ ((n - 1) / 2)) / 8. •

► [A081489] 1,3,8,18,35,61,98,148,213,295,396,518,663,833,1030,1256,1513,1803,2128,2490,2891,3333,3818,4348,4925 ⋆ a(n) = n * (2 * n ^ 2 - 3 * n + 7) / 6 = C(n, 1) + C(n, 2) + 2 * C(n, 3). • a(n) = n * (2 * n ^ 2 - 3 * n + 7) / 6 = C(n, 1) + C(n, 2) + 2 * C(n, 3). - _ Paul Barry _ , Jul 03 2003 • a(n) = 2 * n + Sum _{ i=1..n } (i ^ 2 - 2 * i). - _ Wesley Ivan Hurt _ , Feb 25 2014 •

► [A136376] 1,3,8,18,37,73,139,259,474,856,1529,2707,4757,8307,14428,24942,42941,73661,125951,214739,365166,619508,1048753,1771943,2988457 ⋆ a(n) = n * F(n) + (n - 1) * F(n - 1). • a(n) = n * F(n) + (n - 1) * F(n - 1). Equals the matrix product A128064 (unsigned) * A000045. • a(n) = 2 * a(n - 1) + a(n - 2) - 2 * a(n - 3) - a(n - 4). • a(n) = ((n + 1) * F(n) + (n - 1) * L(n)) / 2, where L(n) are Lucas numbers (A000032). •

► [A099845] 1,3,8,18,37,75,152,309,631,1290,2636,5385,10999,22464,45881,93711,191404,390942,798497,1630923,3331144,6803829,13896755,28383990,57974032 ⋆ A Chebyshev transform of A090400 related to the knot 8 _ 2. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + 3 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) - a(n - 6). - _ Wesley Ivan Hurt _ , Oct 10 2021 •

► [A078409] 1,3,8,18,38,76,142,256,448,760,1260,2048,3264,5120,7917,12076,18200,27130,40026,58499,84756,121792,173682,245920,345856 ⋆ Number of ways to partition 4 * n + 1 into distinct positive integers. • a(n) = t(4 * n + 1, 0), t as defined in A079211. •

► [A006478] 0,0,0,1,3,8,18,38,76,147,277,512,932,1676,2984,5269,9239,16104,27926,48210,82900,142055,242665,413376,702408 ⋆ a(n) = a(n - 1) + a(n - 2) + F(n) - 1, a(0) = a(1) = 0, where F() = Fibonacci numbers A000045. • a(n) = 1 + ((n - 5) * F(n - 1) + (3 * n - 8) * F(n)) / 5. • a(n) = Sum _{ k=0..n - 1 } Sum _{ i=0..k } F(i) * F(k - i). - _ Benoit Cloitre _ , Jan 26 2003 • a(n) = 3 * a(n - 1) - a(n - 2) - 3 * a(n - 3) + a(n - 4) + a(n - 5). - _ Eric W. Weisstein _ , Sep 05 2017 •

► [A104187] 1,3,8,18,38,76,147,279,523,973,1802,3328,6136,11302,20805,38285,70437,129575,238348,438414,806394,1483216,2728087,5017763,9229135 ⋆ G.f. - (1 + x ^ 2 + x ^ 4) / ((x ^ 3 + x ^ 2 + x - 1) * (x - 1) ^ 2). • a(0)=1, a(1)=3, a(2)=8, a(3)=18, a(4)=38, a(n) = 3 * a(n - 1) - 2 * a(n - 2) - a(n - 4) + a(n - 5). - _ Harvey P. Dale _ , Jun 14 2011 •

► [A131051] 1,3,8,18,38,78,158,318,638,1278,2558,5118,10238,20478,40958,81918,163838,327678,655358,1310718,2621438,5242878,10485758,20971518,41943038 ⋆ Row sums of triangle A133805. • a(n) = 5 * 2 ^ (n - 2) - 2, n>1. - _ Gary Detlefs _ , Jun 22 2010 • a(n) = 2(n - 1) + Sum _{ i=1..n - 1 } a(i). - _ Jon Perry _ , Nov 19 2012 •

► [A051633] 3,8,18,38,78,158,318,638,1278,2558,5118,10238,20478,40958,81918,163838,327678,655358,1310718,2621438,5242878,10485758,20971518,41943038,83886078 ⋆ a(n) = 5 * 2 ^ n - 2. • a(n) = 2 * (a(n - 1) + 1) with a(0)=3. - _ Vincenzo Librandi _ , Aug 06 2010 •

► [A258272] 1,3,8,18,38,88,188,388,588,788,988,1188,1388,1588,1788,1988,2188,2388,2588,2788,2988,3188,3388,3588,3788 ⋆ The smallest amount which cannot be made with fewer than n British coins. • a(n) = 200 * n - 1222 for n >= 7. •

► [A117727] 1,3,8,18,38,88,188,388,888,1888,3888,8888,18888,38888,88888,188888,388888,888888,1888888,3888888,8888888,18888888,38888888,88888888,188888888 ⋆ Partial sums of A051109. • a(n) = (1 / 9) * (- 8 + 17 * b(n) + 35 * b(n - 1) + 80 * b(n - 2)), where b(n) = 10 ^ floor(n / 3) * floor((n - 1 mod 3) / 2). • a(n) = a(n - 1) + 10 * a(n - 3) - 10 * a(n - 4). •

► [A238361] 0,0,0,1,3,8,18,39,81,164,326,639,1239,2382,4548,8635,16319,30722,57650,107885,201425,375322,698162,1296801,2405707 ⋆ Number of length n binary words that contain 111 but do not contain 000 (as contiguous subwords). • a(n) = 2 * a(n - 1) + a(n - 2) - a(n - 3) - 2 * a(n - 4) - a(n - 5) for n>5. - _ Colin Barker _ , Nov 22 2019 •

► [A178420] 0,1,3,8,18,39,81,166,336,677,1359,2724,5454,10915,21837,43682,87372,174753,349515,699040,1398090,2796191,5592393,11184798,22369608 ⋆ Partial sums of floor(2 ^ n / 3). • a(n) = round((8 * 2 ^ n - 6 * n - 9) / 12). • a(n) = floor((4 * 2 ^ n - 3 * n - 4) / 6). • a(n) = ceiling((4 * 2 ^ n - 3 * n - 5) / 6). • a(n) = round((4 * 2 ^ n - 3 * n - 4) / 6). • a(n) = a(n - 2) + 2 ^ (n - 1) - 1, n > 2. • a(n) = (8 * 2 ^ n - 6 * n - 9 + (- 1) ^ n) / 12. •

► [A011377] 1,3,8,18,39,81,166,336,677,1359,2724,5454,10915,21837,43682,87372,174753,349515,699040,1398090,2796191,5592393,11184798,22369608,44739229 ⋆ Expansion of 1 / ((1 - x) * (1 - 2 * x) * (1 - x ^ 2)). • a(n) = Sum _{ k=0..n + 2 } floor((n - k + 2) / 2) * 2 ^ k; • a(n) = Sum _{ k=0..n + 2 } floor(k / 2) * 2 ^ (n - k + 2). (End) • a(n) = Sum _{ k=0..floor((n + 2) / 2) } binomial(n - k + 2, k + 2) * 2 ^ k. - _ Paul Barry _ , Oct 25 2004 • a(n) = floor((2 ^ (n + 4) - 3 * n - 6) / 6). - _ David W. Wilson _ , Feb 26 2006 • a(n) = (2 ^ (n + 5) - 6 * n - 21 + (- 1) ^ n) / 12. - _ Hieronymus Fischer _ , Dec 02 2006 • a(n) = 3 * a(n - 1) - a(n - 2) - 3 * a(n - 3) + 2 * a(n - 4). - _ Paul Curtz _ , Jul 29 2008 •

► [A369733] 0,0,1,1,3,8,18,39,95,233,565,1440,3640,9409,24957,66699,177931,475584,1292985,3517163,9636135,26675682,73847316,205379443,571621138 ⋆ Number of solutions to 2 * k _ 1 + 3 * k _ 2 + ... + prime(n) * k _ n = 1, where k _ i are from {- 1,0,1 } , i=1..n. • a(n) = [x ^ 1] Product _{ k=1..n } (x ^ prime(k) + 1 + 1 / x ^ prime(k)). •

► [A026635] 1,3,8,18,40,84,174,354,716,1440,2890,5790,11592,23196,46406,92826,185668,371352,742722,1485462,2970944,5941908,11883838,23767698,47535420 ⋆ Sum { T(i,j) } , 0<=i<=n, 0<=j<=n, T given by A026626. • a(n) = (- 9 + (- 1) ^ n + 17 * 2 ^ n - 6 * n) / 6 for n>0. • a(n) = 3 * a(n - 1) - a(n - 2) - 3 * a(n - 3) + 2 * a(n - 4) for n>4. •

► [A135094] 0,1,3,8,18,40,84,176,360,736,1488,3008,6048,12160,24384,48896,97920,196096,392448,785408,1571328,3143680,6288384,12578816,25159680 ⋆ a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 4 * a(n - 3) with n>2, a(0)=0, a(1)=1, a(2)=3. • a(n) = 3 * 2 ^ (n - 1) - 3 * 2 ^ (n / 2 - 1) for n even. • a(n) = 3 * 2 ^ (n - 1) - 2 ^ ((n + 1) / 2) for n odd. (End) •

► [A117080] 1,3,8,18,40,89,197,435,960,2118,4672,10305,22729,50131,110568,243866,537864,1186297,2616461,5770787,12727872,28072206,61915200,136558273,301188753 ⋆ a(n) = 2a(n - 1) + a(n - 3) + 1 with a(1)=1, a(2)=3, a(3)=8. • a(n) =3 * a(n - 1) - 2 * a(n - 2) + a(n - 3) - a(n - 4). G.f.: x * (- 1 - x ^ 2 + x ^ 3) / ((1 - x) * (x ^ 3 + 2 * x - 1)). [From _ R. J. Mathar _ , May 25 2009] •

► [A066425] 1,3,8,18,41,84,181,364,751,1512,3037,6107,12216,24547,49117,98236,196544,393178,786407,1573201,3146426,6292969,12586763,25173709,50347996 ⋆ a(1) = 1; thereafter a(n) is the smallest number > a(n - 1) such that a(n) minus any sum of distinct earlier terms is not already in the sequence. • a(1)=1, a(n) the smallest integer > a(n - 1) so that a(n) - a(k _ 1) - a(k _ 2) - ... - a(k _ m) is not in the sequence for any nonempty subset { k _ 1, ..., k _ m } of { 1, .., n - 1 } •

► [A341583] 0,1,3,8,18,42,94,208,450,966,2052,4330,9074,18920,39266,81182,167268,343634,704122,1439496,2936906,5981174,12161332,24691514,50066690 ⋆ Geometric length of the solution to the Towers of Hanoi exchanging disks puzzle with 3 pegs and n disks. • a(n) = 3 * a(n - 1) - a(n - 2) - 2 * a(n - 3) + 2 * a(n - 4) - 4 * a(n - 5). •

► [A026384] 1,3,8,18,43,93,218,468,1093,2343,5468,11718,27343,58593,136718,292968,683593,1464843,3417968,7324218,17089843,36621093,85449218,183105468,427246093 ⋆ a(n) = Sum _{ j=0..i, i=0..n } T(i,j), where T is the array in A026374. • a(n) = (7 * 5 ^ (n / 2) - 3) / 4 for n even. • a(n) = 3 * (5 ^ ((n + 1) / 2) - 1) / 4 for n odd. • a(n) = a(n - 1) + 5 * a(n - 2) - 5 * a(n - 3) for n>2. •

► [A032100] 1,3,8,18,54,152,472,1410,4310,12952,39144,117554,353590,1061208,3186488,9560866,28691286,86078168,258260680,774795090,2324463926,6973431064,20920529304,62761705922,188285826262 ⋆ "BHK" (reversible, identity, unlabeled) transform of 1,3,5,7... • a(n) = 5 * a(n - 1) - 4 * a(n - 2) - 12 * a(n - 3) + 21 * a(n - 4) - 9 * a(n - 5) for n > 7. - _ Andrew Howroyd _ , Aug 31 2018 •

► [A219391] 0,3,8,19,23,40,55,80,88,119,144,183,195,240,275,328,344,403,448,515,535,608,663,744,768 ⋆ Numbers k such that 21 * k + 1 is a square. • a(n) = a(- n + 1) = (42 * n * (n - 1) + 2 * i ^ (n * (n + 1)) * (6 * n + (- 1) ^ n - 3) + 7 * (- 1) ^ n * (2 * n - 1) + 11) / 32, where i=sqrt(- 1). •

► [A067332] 3,8,19,40,80,154,289,532,965,1730,3072,5412,9471,16480,28535,49196,84496,144638,246845,420140,713353,1208518,2043264,3448200,5809275 ⋆ Convolution of Fibonacci F(n + 1), n>=0, with F(n + 4), n>=0. • a(0)=3, a(1)=8, a(2)=19, a(3)=40, a(n)=2 * a(n - 1) + a(n - 2) - 2 * a(n - 3) - a(n - 4). - _ Harvey P. Dale _ , Aug 25 2014 •

► [A178457] 0,0,0,0,0,1,3,8,19,41,85,174,352,708,1420,2844,5693,11391,22788,45583,91173,182353,364714,729436,1458880 ⋆ Partial sums of floor(2 ^ n / 23). • a(n) = round((22 * 2 ^ n - 92 * n - 24) / 253). • a(n) = floor((22 * 2 ^ n - 92 * n + 100) / 253). • a(n) = ceiling((22 * 2 ^ n - 92 * n - 148) / 253). • a(n) = round((22 * 2 ^ n - 92 * n - 22) / 253). • a(n) = a(n - 11) + 89 * 2 ^ (n - 10) - 4, n > 10. •

► [A095681] 1,3,8,19,42,89,183,368,728,1422,2750,5276,10057,19069,35998,67707,126954,237423,443029,825116,1534224,2848736,5283100,9787452,18115705 ⋆ Expansion of 1 / ((1 - x)(1 - x - x ^ 2)(1 - x - x ^ 2 - x ^ 3)). • a(n) = 3 * a(n - 1) - a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) + a(n - 6). - _ Wesley Ivan Hurt _ , May 08 2023 •

► [A079583] 1,3,8,19,42,89,184,375,758,1525,3060,6131,12274,24561,49136,98287,196590,393197,786412,1572843,3145706,6291433,12582888,25165799,50331622 ⋆ a(n) = 3 * 2 ^ n - n - 2. • a(0)=1, a(n) = 2 * a(n - 1) + n; •

► [A357291] 0,0,0,0,0,0,1,3,8,19,42,89,185,378,766,1544,3102,6220,12459,24939,49902,99831,199692,399417,798871 ⋆ a(n) = number of subsets S of { 1,2,...,n } having more than 2 elements such that (sum of least two elements of S) < difference between greatest two elements of S. • a(n) = 3 * a(n - 1) - a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) + 3 * a(n - 6) - 2 * a(n - 7). • a(n) = 2 ^ n / 21 - n ^ 2 / 12 + n / 6 + O(1). Conjecture: a(n) = round(2 ^ n / 21 - n ^ 2 / 12 + n / 6). - _ Charles R Greathouse IV _ , Oct 11 2022 •

► [A099050] 1,1,3,8,19,42,92,194,398,808,1638,3334,6686,13392,26842,53708,107450,214952,430148,860340,1720826,3441688,6883446,13766950,27533998 ⋆ a(1)=1; for n>=2, a(n)=sum(1<=i<=j<=n - 1, gcd(a(i),a(j))). • a(n) is asymptotic to c * 2 ^ n where c=0.820579730540401538956 1... •
► [A008466] 0,0,1,3,8,19,43,94,201,423,880,1815,3719,7582,15397,31171,62952,126891,255379,513342,1030865,2068495,4147936,8313583,16655823 ⋆ a(n) = 2 ^ n - Fibonacci(n + 2). • a(1)=0, a(2)=1, a(3)=3, a(n)=3 * a(n - 1) - a(n - 2) - 2 * a(n - 3). - _ Miklos Kristof _ , Nov 24 2003 • a(n) = a(n - 1) + a(n - 2) + 2 ^ (n - 2). - Jon Stadler (jstadler(AT)capital.edu), Aug 21 2006 • a(n) = 2 * a(n - 1) + Fibonacci(n - 1). - _ Thomas M. Green _ , Aug 21 2007 • a(n) = term (1,3) in the 3 X 3 matrix [3,1,0; - 1,0,1; - 2,0,0] ^ n. - _ Alois P. Heinz _ , Jul 18 2008 • a(n) = 2 * a(n - 1) - a(n - 3) + 2 ^ (n - 3). - _ Carmine Suriano _ , Mar 08 2011 •
► [A189391] 0,1,3,8,19,44,98,216,467,1004,2134,4520,9502,19928,41572,86576,179587,372044,768398,1585416,3263210,6711176,13775068,28255568,57863214 ⋆ The minimum possible value for the apex of a triangle of numbers whose base consists of a permutation of the numbers 0 to n, and each number in a higher row is the sum of the two numbers directly below it. • a(n) = Sum _{ k=0..floor((n - 1) / 2) } (2 * n - 4 * k - 1) * binomial(n,k). •
► [A097550] 1,3,8,19,44,102,237,551,1281,2978,6923,16094,37414,86977,202197,470051,1092736,2540303,5905488,13728594,31915109,74193627,172479257,400965626,932131991 ⋆ Number of positive words of length n in the monoid Br _ 3 of positive braids on 4 strands. • a(n) = term (1,1) in the 1 X 3 matrix [1,1,2].[3,1, 0; - 2,0,1; 1,0,0] ^ n. - _ Alois P. Heinz _ , Jul 24 2008 •
► [A143785] 3,8,20,36,63,96,144,200,275,360,468,588,735,896,1088,1296,1539,1800,2100,2420,2783,3168,3600,4056,4563 ⋆ Antidiagonal sums of the triangle A120070. • a(n) = (n + 2) * (2 * n ^ 2 + 4 * n - (- 1) ^ n + 1) / 8. - _ Ilya Gutkovskiy _ , May 07 2016 • a(n) = (n ^ 3 + 4 * n ^ 2 + 4 * n) / 4 for n even. • a(n) = (n ^ 3 + 4 * n ^ 2 + 5 * n + 2) / 4 for n odd. • a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + a(n - 4) + 2 * a(n - 5) - a(n - 6) for n > 6. (End) • a(n) = Sum _{ k=1..n + 1 } floor((n + 1) * k / 2). - _ Wesley Ivan Hurt _ , Apr 01 2017 •
► [A139488] 1,3,8,20,43,81,138,218,325,463,636,848,1103,1405,1758,2166,2633,3163,3760,4428,5171,5993,6898,7890,8973 ⋆ Binomial transform of [1, 2, 3, 4, 0, 0, 0, ...]. • a(n) = (4n ^ 3 - 3n ^ 2 + 11n + 6) / 6. - _ Emeric Deutsch _ , Apr 30 2008 •
► [A028307] 1,3,8,20,43,98,212,465,1000,2144,4497,9504,19872,41455,85356,178630,363467,757085,1541998,3183600,6515066,13357593,27432649,55914902,114683858 ⋆ Form a triangle with n numbers in top row; all other numbers are the sum of their parents. E.g.: 4 1 2 7; 5 3 9; 8 12; 20. The numbers must be positive and distinct and the final number is to be minimized. Sequence gives final number. • a(n) > 2 * a(n - 1). Proof: Let x, y be the numbers in the second last row, then x >= a(n - 1), y >= a(n - 1) and x != y, so a(n) = x + y > 2 * a(n - 1). •
► [A192982] 0,1,1,3,8,20,44,89,169,307,540,928,1568,2617,4329,7115,11640,18980,30876,50145,81345,131851,213596,345888,559968 ⋆ Coefficient of x in the reduction by x ^ 2 - > x + 1 of the polynomial p(n,x) defined at Comments. • a(n) = 4 * a(n - 1) - 5 * a(n - 2) + a(n - 3) + 2 * a(n - 4) - a(n - 5). • a(n) = Lucas(n + 3) + Fibonacci(n + 2) - (n ^ 2 + 2 * n + 5). - _ G. C. Greubel _ , Jul 25 2019 •
► [A134393] 1,3,8,20,45,91,168,288,465,715,1056,1508,2093,2835,3760,4896,6273,7923,9880,12180,14861,17963,21528,25600,30225 ⋆ Row sums of triangle A134392. • a(n) = binomial(n + 3,4) - 2 * binomial(n + 2,4) + 3 * binomial(n + 1,4). - _ Johannes W. Meijer _ , Apr 29 2011, corrected by _ Eric Rowland _ , Aug 16 2017 • a(n) = n * (n + 1) * (n ^ 2 - 3 * n + 8) / 12. - _ Johannes W. Meijer _ , Apr 29 2011, corrected by _ Eric Rowland _ , Aug 16 2017 •
► [A014628] 3,8,20,45,91,168,288,465,715,1056,1508,2093,2835,3760,4896,6273,7923,9880,12180,14861,17963,21528,25600,30225,35451 ⋆ Number of segments (and sides) created by diagonals of an n - gon in general position. • a(n) = (n ^ 4 - 6 * n ^ 3 + 17 * n ^ 2 - 24 * n) / 12 + n; or equally n * (n - 1) * (n ^ 2 - 5 * n + 12) / 12. • a(n) = C(n,2) + 2 * C(n,4). - _ Gary Detlefs _ , Jun 06 2010 •
► [A140481] 1,3,8,20,46,96,204,420,864,1752,3520,7068,14160,28360,56736,113508,227040,454176,908424,1816944,3633908,7267828,14535662,29071328,58142704 ⋆ a(1) = 1; for n >= 1, a(n + 1) is obtained by adding to a(n) the a(n) - th smallest number not dividing a(n). • a(n + 1) = 2 * a(n) + tau(a(n)) (cf. A000005). - Hans Havermann and Franklin T. Adams - Watters, Jun 25 2008. Using a(n + 1) = a(n) + tau(a(n)) would give A064491. •
► [A027928] 1,3,8,20,46,97,189,344,591,967,1518,2300,3380,4837,6763,9264,12461,16491,21508,27684,35210,44297,55177,68104,83355 ⋆ a(n) = T(n, 2 * n - 5), T given by A027926. • a(n) = (n - 2) * (n ^ 4 - 8 * n ^ 3 + 39 * n ^ 2 - 92 * n + 180) / 120. • a(n) = C(n,n - 1) + C(n + 1,n - 2) + C(n + 2,n - 3) with offset 1. - _ Zerinvary Lajos _ , May 29 2007 •
► [A048492] 1,3,8,20,47,105,226,474,977,1991,4028,8112,16291,32661,65414,130934,261989,524115,1048384,2096940,4194071,8388353,16776938,33554130,67108537 ⋆ a(n) = (8 * (2 ^ n) - n ^ 2 - 3 * n - 6) / 2. • a(0) = 1; a(n) = a(n - 1) + 2 ^ (n + 1) - (n + 1) for n > 0. - _ Klaus Brockhaus _ , Oct 13 2008 • a(n) = (- 2 + 2 ^ (2 + n) - 1 / 2 * (1 + n) * (2 + n)). • a(n) = 5 * a(n - 1) - 9 * a(n - 2) + 7 * a(n - 3) - 2 * a(n - 4). •
► [A291097] 3,8,20,47,106,233,504,1079,2294,4853,10228,21491,45042,94193,196592,409583,851950,1769453,3669996,7602155,15728618,32505833,67108840,138412007,285212646 ⋆ a(n) = 2 ^ n * (n / 8 + 1) - n. • a(n) = 2 ^ n * (n / 8 + 1) - n. • a(n) = 6 * a(n - 1) - 13 * a(n - 2) + 12 * a(n - 3) - 4 * a(n - 4). •
► [A050231] 0,0,1,3,8,20,47,107,238,520,1121,2391,5056,10616,22159,46023,95182,196132,402873,825259,1686408,3438828,6999071,14221459,28853662 ⋆ a(n) is the number of n - tosses having a run of 3 or more heads for a fair coin (i.e., probability is a(n) / 2 ^ n). • a(n) = 2 ^ n - tribonacci(n + 3), see A000073. - _ Vladeta Jovovic _ , Feb 23 2003 • a(n) = 2 * a(n - 1) + 2 ^ (n - 4) - a(n - 4) since we can add T or H to a sequence of n - 1 flips which has HHH, and H to one which ends in THH and does not have HHH among the first (n - 4) flips. - _ Toby Gottfried _ , Nov 20 2010 • a(n) = 3 * a(n - 1) - a(n - 2) - a(n - 3) - 2 * a(n - 4), a(0)=0, a(1)=0, a(2)=1, a(3)=3. - _ David Nacin _ , Mar 07 2012 •
► [A136305] 3,8,20,47,109,253,588,1367,3178,7388,17175,39927,92819,215778,501623,1166132,2710928,6302143,14650705,34058757,79177004,184064203,427897358,994740672,2312491503 ⋆ Expansion of g.f. (3 - x + 2 * x ^ 2) / (1 - 3 * x + 2 * x ^ 2 - x ^ 3). • a(n + 3) = 3 * a(n + 2) - 2 * a(n + 1) + a(n) (n>=0). - _ Richard Choulet _ , Apr 07 2009 •
► [A050232] 0,0,0,1,3,8,20,48,111,251,558,1224,2656,5713,12199,25888,54648,114832,240335,501239,1042126,2160676,4468664,9221281,18989899 ⋆ a(n) is the number of n - tosses having a run of 4 or more heads for a fair coin (i.e., probability is a(n) / 2 ^ n). • a(n) = 2 ^ n - tetranacci(n + 4), see A000078. - _ Vladeta Jovovic _ , Feb 23 2003 • a(n) = 3 * a(n - 1) - a(n - 2) - a(n - 3) - a(n - 4) - 2 * a(n - 5). - _ Wesley Ivan Hurt _ , Apr 23 2021 •
► [A050233] 0,0,0,0,1,3,8,20,48,112,255,571,1262,2760,5984,12880,27553,58631,124192,262008,550800,1154256,2412031,5027575,10455246 ⋆ a(n) is the number of n - tosses having a run of 5 or more heads for a fair coin (i.e., probability is a(n) / 2 ^ n). • a(n) = 2 ^ (n + 1) - pentanacci(n + 6), cf. A001591. - _ Vladeta Jovovic _ , Feb 23 2003 • a(n) = 3 * a(n - 1) - a(n - 2) - a(n - 3) - a(n - 4) - a(n - 5) - 2 * a(n - 6). - _ Wesley Ivan Hurt _ , Jan 03 2021 •
► [A001792] 1,3,8,20,48,112,256,576,1280,2816,6144,13312,28672,61440,131072,278528,589824,1245184,2621440,5505024,11534336,24117248,50331648,104857600,218103808 ⋆ a(n) = (n + 2) * 2 ^ (n - 1). • a(n) = (n + 2) * 2 ^ (n - 1). • a(n) = 4 * a(n - 1) - 4 * a(n - 2). • a(n) = Sum _{ k=0..n + 2 } binomial(n + 2, 2k) * k. - _ Paul Barry _ , Mar 06 2003 • a(n) = Sum _{ k=0..n } binomial(n, k) * (k + 1). - _ Lekraj Beedassy _ , Jun 24 2004 • a(n) = (n + 1) * 2 ^ n - n * 2 ^ (n - 1). Equals A128064 * A000079. - _ Gary W. Adamson _ , Dec 28 2007 • a(n) = 1 + Sum _{ k=1..n } (n - k + 4)2 ^ (n - k - 1). This follows from the result that the number of parts equal to k in all compositions of n is (n - k + 3)2 ^ (n - k - 2) for 0 < k < n. - _ Geoffrey Critzer _ , Sep 21 2008 •
► [A360263] 1,3,8,20,48,115,273,648,1536,3640,8625,20435,48416,114708,271768,643875,1525473,3614160,8562688,20286768,48063521,113872355,269787000,639180820,1514350656 ⋆ Determinant of the pentadiagonal symmetric nXn Toeplitz Matrix with a=3, b=c=1. • a(n)= 2 * a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - 2 * a(n - 4) + a(n - 5). •
► [A048739] 1,3,8,20,49,119,288,696,1681,4059,9800,23660,57121,137903,332928,803760,1940449,4684659,11309768,27304196,65918161,159140519,384199200,927538920,2239277041 ⋆ Expansion of 1 / ((1 - x) * (1 - 2 * x - x ^ 2)). • a(n) = 2 * a(n - 1) + a(n - 2) + 1 with n > 1, a(0)=1, a(1)=3. • a(n) = ((2 + (3 * sqrt(2)) / 2) * (1 + sqrt(2)) ^ n - (2 - (3 * sqrt(2)) / 2) * (1 - sqrt(2)) ^ n) / (2 * sqrt(2)) - 1 / 2. • a(0)=1, a(n + 1) = ceiling(x * a(n)) for n > 0, where x = 1 + sqrt(2). - _ Paul D. Hanna _ , Apr 22 2003 • a(n) = 3 * a(n - 1) - a(n - 2) - a(n - 3). With two leading zeros, e.g.f. is exp(x)(cosh(sqrt(2)x) - 1) / 2. a(n) = Sum _{ k=0..floor((n + 2) / 2) } binomial(n + 2, 2k + 2)2 ^ k. - _ Paul Barry _ , Aug 16 2003 • a(n) = floor((1 + sqrt(2)) ^ (n + 2) / 4). - _ Bruno Berselli _ , Feb 06 2013 • a(n) = (((1 - sqrt(2)) ^ (n + 2) + (1 + sqrt(2)) ^ (n + 2) - 2) / 4). - _ Altug Alkan _ , Mar 16 2016 •
► [A332846] 1,1,3,8,20,50,121,297,716,1739,4198,10157,24513,59246,143006,345381,833792,2013272,4860337,11734717,28329772,68396030,165121957,398644144,962410246 ⋆ a(1) = 1; a(n + 1) = Sum _{ k=1..n } a(k) * ceiling(n / k). • a(1) = 1; a(n) = a(n - 1) + Sum _{ k=1..n - 2 } (a(k) + Sum _{ d|k } a(d)). •
► [A122595] 1,3,8,20,50,125,313,784,1964,4920,12325,30875,77344,193752,485362,1215865,3045825,7630000,19113672,47881056,119945321,300471235,752701000,1885567500,4723475586 ⋆ Expansion of x / (1 - 3 * x + x ^ 2 + x ^ 3 - x ^ 4). • a(n) = 3 * a(n - 1) - a(n - 2) - a(n - 3) + a(n - 4) for n>4. - _ Wesley Ivan Hurt _ , Sep 18 2015 •
► [A187003] 1,1,3,8,20,50,126,317,798,2008,5053,12716,32000,80528,202649,509967,1283334,3229515,8127087,20451846,51467150,129517283,325930746,820205989,2064051559 ⋆ Expansion of 1 / (1 - x - 2 * x ^ 2 - 3 * x ^ 3 - 3 * x ^ 4 - 2 * x ^ 5 - x ^ 6). • a(n):=sum(m=1..n, sum(k=m..n, binomial(m,k - m) * sum(j=0..k, binomial(k,j) * binomial(j,n - 3 * k + 2 * j)))), a(0)=1. •
► [A101893] 0,0,1,3,8,20,50,126,320,816,2084,5324,13600,34736,88712,226552,578560,1477504,3773200,9635888,24607872,62842944,160486688,409846752,1046656000 ⋆ a(n) = sum _{ k=0..floor(n / 2) } C(n,2k) * Pell(k). • a(n) = 4 * a(n - 1) - 4 * a(n - 2) + 2 * a(n - 4). •
► [A140662] 1,3,8,20,50,126,322,834,2187,5797,15510,41834,113633,310571,853466,2356778,6536381,18199283,50852018,142547558,400763222,1129760414,3192727796,9043402500,25669818475 ⋆ Number of possible column states for self - avoiding polygons in a slit of width n. • a(n) = Sum _{ m=1..[(n + 1) / 2] } (n + 1)! / ((n + 1 - 2m)!m!(m + 1)!). •
► [A077997] 1,1,3,8,20,51,130,331,843,2147,5468,13926,35467,90328,230049,585893,1492163,3800268,9678592,24649615,62778090,159884387,407196479,1037055435,2641191736 ⋆ Expansion of (1 - x) / (1 - 2 * x - x ^ 2 - x ^ 3). • a(n) = 2 * a(n - 1) + a(n - 2) + a(n - 3), n>2, with a(0)=1, a(1)=1, a(2)=3. - _ Philippe Deléham _ , Nov 20 2008 • a(n) = Sum _{ m=1..n } Sum _{ i=0..n - m } binomial(m + i - 1,m - 1) * Sum _{ j=0..m } binomial(j,n - 3 * m + 2 * j - i) * binomial(m,j), n>0, a(0)=1. - _ Vladimir Kruchinin _ , May 12 2011 •
► [A027319] 1,3,8,20,120,432,1512,5184,17496,58320,192456,629856,2047032,6613488,21257640,68024448,216827928,688747536,2181033864,6887475360,21695547384,68186006064,213856109928,669462604992,2092070640600 ⋆ a(n) = Sum _{ k=0..m } (k + 1) * A026082(n, k), where 0 <= k <= m, m=n for n=0,1,2,3; m =2n for n >= 4. • a(n) = 6 * a(n - 1) - 9 * a(n - 2) for n>5. •
► [A172243] 3,8,21,38,79,176,289,482,723,980,1333,1782,2359,3000,3673,4442,5371,6524,7741,9150,10751,12864,15553,18306,21443 ⋆ Partial sums of Proth primes A080076. • a(n) = SUM[i=1..n] A080076 (i) = SUM[i=1..n] { Proth numbers p such that p is prime, i.e., a number of the form N=k * 2 ^ n + 1 for odd k, n a positive integer, and 2 ^ n>k } . •
► [A179903] 1,3,8,21,46,87,148,233,346,491,672,893,1158,1471,1836,2257,2738,3283,3896,4581,5342,6183,7108,8121,9226 ⋆ (1, 3, 5, 7, 9, ...) convolved with (1, 0, 3, 5, 7, 9, ...). • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Vincenzo Librandi _ , Jul 04 2012 •

► [A193045] 0,1,1,3,8,21,49,105,210,399,729,1293,2242,3821,6427,10703,17690,29073,47579,77621,126340,205291,333171,540233,875428 ⋆ Coefficient of x in the r eduction by x ^ 2 - >x + 1 of the polynomial p(n,x) defined at Comments. • a(n)=5 * a(n - 1) - 9 * a(n - 2) + 6 * a(n - 3) + a(n - 4) - 3 * a(n - 5) + a(n - 6). •
► [A259714] 1,1,3,8,21,50,129,327,827,2089,5290,13386,33868,85693,216836,548660,1388269,3512737,8888292,22490049,56906580,143990771,364339983,921889753,2332658401 ⋆ a(n) = Sum _{ k=1..n - 1 } ((k mod 5) * a(n - k)), a(1) = 1. • a(n) = a(n - 1) + 2 * a(n - 2) + 3 * a(n - 3) + 4 * a(n - 4) + a(n - 5) for n>6. •
► [A096770] 1,1,3,8,21,51,127,303,734,1751,4200,10004,23918,56981,135958,323996,772530,1840993,4388456,10458354,24926754,59405383,141581236,337417607,804153140 ⋆ a(1) = 1; for n >= 1, replace each part, with repetitions, of every p art k in each partition of n with a(k), then take the sum to get a(n + 1). • a(n + 1) = sum { k=1 to n } (sum { j|k } a(j)) * p(n - k), where p(k) is the numbe r of partitions of k (A000041). •
► [A267946] 1,3,8,21,53,132,323,783,1880,4485,10637,25116,59075,138519,323936,755877,1760453,4093620,9506051,22049055,51091496,118287237,273658877,632714892,1462080131 ⋆ Number of n X 1 0..2 arrays with every repeated value in every row and column one larger mod 3 than the previous repeated value, and upper left element zero. • a(n) = 2 ^ (- n) * (- 39 * 4 ^ n + (26 - 7 * sqrt(13)) * (1 - sqrt(13)) ^ n + (1 + sqrt(13)) ^ n * (26 + 7 * sqrt(13))) / 39. •
► [A186812] 1,1,3,8,21,53,135,346,886,2266,5796,14828,37935,97047,248269,635134,1624833,4156729,10633949,27204296,69595384,178042372,455476844,1165223500,2980932677 ⋆ Expansion of 1 / (1 - x ^ 6 - 3 * x ^ 5 - 4 * x ^ 4 - 3 * x ^ 3 - 2 * x ^ 2 - x). • a(n + 1) = sum(m=1..n, sum(k=m..n, binomial(k,n - k) * sum(j =0..m, binomial(m,j) * binomial(j,k - 3 * m + 2 * j)))). •
► [A027930] 1,3,8,21,54,133,309,674,1383,2683,4950,8735,14820,24285,38587,59652,89981,132771,192052,272841,381314,524997,712977,956134,1267395 ⋆ a(n) = T(n, 2 * n - 7), T given by A027926. • a(n) = Sum _{ k=0..3 } binomial(n - k, 7 - 2k). - _ Len Smiley _ , Oct 20 2001 • a(n) = C(n - 3,n - 4) + C(n - 2,n - 5) + C(n - 1,n - 6) + C(n,n - 7). - _ Zerinvary Lajos _ , May 29 2007 • a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8). • a(n) = binomial(n - 1, n - 7) + (n - 3) * ((n - 3) ^ 4 + 15 * (n - 3) ^ 2 + 104) / 120. •
► [A291039] 1,3,8,21,54,136,337,825,2000,4809,11484,27264,64401,151455,354808,828349,1927986,4475080,10361441,23936565,55183904,126983569,291698040,669004352,1532095329 ⋆ a(n) = (1 / 4) * A291038(n). • a(n) = 4 * a(n - 1) - 4 * a (n - 2) + 2 * a(n - 3) - 4 * a(n - 4) - a(n - 6) for n >= 7. •
► [A094723] 1,3,8,21,54,137,344,857,2122,5229,12836,31413,76686,186833,454448,1103921,2678674,6494037,15732284,38089677,92173782,222961529,539145416,1303349513,3150038746 ⋆ a(n) = Pell(n + 2) - 2 ^ n. • a(n) = ((1 + sqrt(2)) ^ n * (3 * sqrt(2) / 4 + 1) - (3 * sqrt(2) / 4 - 1) * (1 - sqrt(2)) ^ n) - 2 ^ n. • a(n) = 4 * a(n - 1) - 3 * a(n - 2) - 2 * a(n - 3). - _ Vincenzo Librandi _ , Jun 24 2012 •
► [A127358] 1,3,8,21,54,138,350,885,2230,5610,14088,35346,88596,221952,555738,1391061,3480870,8708610,21783680,54483510,136254964,340729788,852000828,2130354786,5326563004 ⋆ a(n) = Sum _{ k=0..n } binomial(n, floor(k / 2)) * 2 ^ (n - k). • a(n) is the sum of top row terms of M ^ n, M is an infinite square production matrix as follows: •
► [A190139] 1,1,3,8,21,54,140,363,941,2439,6322,16387,42476,110100,285385,739733,1917427,4970072,12882689,33392610,86555408,224356187,581543081,1507390367,3907235410 ⋆ a(n) = 2 * a(n - 1) + a(n - 2) + a(n - 3) + a(n - 4), a(- 2)=0, a(- 1)=0, a(0)=1, a(1)=1. • a(n) = Sum _{ k=1..n } (Sum _{ t=k..n } (Sum _{ j=0..k } C(k,j) * Sum _{ i=j..t - k + j } C(j,i - j) * C(k - j,t - 3 * (k - j) - i) * C(- t + n + k - 1,k - 1))), n>0, a(0)=1. •
► [A335807] 3,8,21,54,140,365,954,2496,6533,17102,44772,117213,306866,803384,2103285,5506470,14416124,37741901,98809578,258686832,677250917,1773065918,4641946836,12152774589,31816376930 ⋆ Number of vertices in the n - th simp lex graph of the complete graph on three vertices (K _ 3). • a(n) = 4 * a(n - 1) - 4 * a(n - 2) + a(n - 3) for n>3. • a(n) = (10 + (5 - 11 * sqrt(5)) * (1 / 2 * (3 - sqrt(5))) ^ n + (1 / 2 * (3 + sqrt(5))) ^ n * (5 + 11 * sqrt(5))) / 10 for n > 0. - _ Stefano Spezia _ , Aug 15 2020 • a(n) = 3 * a(n - 1) - a(n - 2) - 1 for n >= 3. - _ James Turbett _ , Aug 18 2020 •
► [A027932] 1,3,8,21,55,143,364,894,2098,4685,9955,20175,39130,72905,130965,227612,383911,630191,1009242,1580345,2424289,3649547,5399802,7863034,11282400 ⋆ T(n, 2n - 9), T given by A027926. • a(n) = Sum _{ k=0..4 } binomial(n - k, 9 - 2 * k). - _ Len Smiley _ , Oct 20 2001 • a(n) = C(n,n - 1) + C(n + 1,n - 2) + C(n + 2,n - 3) + C(n + 3,n - 4) + C(n + 4,n - 5), n>=1 . - _ Zerinvary L ajos _ , May 29 2007 •
► [A084625] 1,3,8,21,55,143,366,919,2265,5491,13125,31000,72485,168042,386709,884161,2009742,4543830,10222264,22891099,51041560,113359224,250839510,553173006,1216070081 ⋆ Binomial transform of A084624. • a(n) = Sum _{ k=0.. n } C(n, k) * floor(C(k + 5, 5) / C(k + 2, 2)). • a(n) = 2 ^ n + Sum _{ k=0.. n } binomial(n,k) * floor(k * (k ^ 2 + 12 * k + 47) / 60). - _ G. C. Greubel _ , Mar 24 2023 •
► [A001906] 0,1,3,8,21,55,144,377,987,2584,6765,17711,46368,121393,317811,832040,2178309,5702887,14930352,39088169,102334155,267914296,701408733,1836311903,4807526976 ⋆ F(2n) = bisection of Fibonacci sequence: a(n) = 3 * a(n - 1) - a(n - 2). • a(n) = - a(- n). • a(n) = (ap ^ n - am ^ n) / (ap - am), with ap := (3 + sqrt(5)) / 2, am := (3 - sqrt(5)) / 2. • a(n) = S(n - 1, 3) with S(n, x) = U (n, x / 2) Chebyshev's polynomials of the 2nd kind, see A049310. • a(n) = Sum _{ k=0..n } binomial(n, k) * F(k). - _ Benoit Cloitre _ , Sep 03 2002 • a(0)=0 , a(1)=1, a(2)=3, a(n) * a(n - 2) + 1 = a(n - 1) ^ 2. - _ Benoit Cloitre _ , Dec 06 2002 • a(n) = Sum _{ k=1..n } binomial(n + k - 1, n - k). - _ Vladeta Jovo vic _ , Mar 23 2003 •
► [A088305] 1,1,3,8,21,55,144,377,987,2584,6765,17711,46368,121393,317811,832040,2178309,5702887,14930352,39088169,102334155,267914296,701408733,1836311903,4807526976 ⋆ a(0) = 1, a(n) = Fibonacci(2 * n). It has the property that a (n) = 1 * a(n - 1) + 2 * a(n - 2) + 3 * a(n - 3) + 4 * a(n - 4) + ... • a(n) = 1 * a(n - 1) + 2 * a(n - 2) + 3 * a(n - 3) + 4 * a(n - 4) + ... • a(0) = 1, a(n) = (h ^ (2 * n) - h ^ (- 2 * n)) / sqrt(5), where h = (1 + sqrt(5)) / 2. • a(n) = Sum _{ k=1..n + 1 } binomial(n + k - 1, n - k), with a(0) = 1. - _ Paolo P. Lava _ , Apr 13 2007 • a(0) = 1, a(1) = 1, a(2) = 3, a(n + 1) = 3 * a(n) - a(n - 1) for n >= 2. - _ Philippe Deléham _ , Nov 21 2007 • a(n) = (((3 + sqrt(5)) / 2) ^ n - ((3 - sqrt(5)) / 2) ^ n) / sqrt(5). - _ Geoffrey Critzer _ , Sep 23 2008 • a(n) = H(2 * n, 1, 1 / 2) for n > 0 where H(n, a, b) = hypergeom([a - n / 2, b - n / 2], [1 - n], - 4). - _ Peter Luschny _ , Sep 03 2019 •
► [A243633] 1,1,3,8,21,56,152,417,1149,3169,8738,24083,66356,182806,503597,1387317,3821839,10528644,29005093,79905508,220130016,606431481,1670644817,4602422317,12679110454 ⋆ Expansion of (4 * x ^ 3 - 6 * x ^ 2 + 4 * x - 1) / (5 * x ^ 3 - 8 * x ^ 2 + 5 * x - 1). • a(n) = sum(m=0..n, sum(k=0..n / 2, binomial(m + k - 1,k) * binomial(n + m - 1,n - 4 * k - m))). •
► [A094374] 1,3,8,21,56,153,428,1221,3536,10353,30548,90621,269816,805353,2407868,7207221,21588896,64701153,193972388,581655021,1744440776,5232273753,15694724108,47079978021,141231545456 ⋆ a(n) = (3 ^ n - 1) / 2 + 2 ^ n. • a(n) = 6 * a(n - 1) - 11 * a(n - 2) + 6 * a(n - 3). • a(n) = Sum _{ k=0..n } C(n,k) + 2 ^ k * C(n,k + 1). - _ Paul Barry _ , Dec 04 2007 • a(n) = StirlingS2(n + 1,3) + 2 * StirlingS2(n + 1,2) + 1. - _ Ross La Haye _ , Jan 11 2008 •
► [A014318] 1,3,8,21,56,154,440,1309,4048,12958,42712,144210,496432,1735764,6145968,21986781,79331232,288307254,1054253208,3875769606,14315659632,53097586284,197677736208,738415086066 ⋆ Convolution of Catalan numbers and po wers of 2. • a(n) = Sum _{ j=0..n } (2 ^ (n - j) * binomial(2 * j,j) / (j + 1)). (End) •
► [A349186] 1,1,3,8,21,57,157,438,1237,3530,10165,29505,86243,253654,750157,2229469,6655369,19946979,60000443,181076982,548125929,1663786344,5063133335,15444046031,47211447131 ⋆ G.f. A(x) satisfies: A(x) = (1 - x) / (1 - 2 * x - x ^ 2 - x ^ 3 * A(x)). • a(0) = a(1) = 1; a(n) = 2 * a(n - 1) + a(n - 2) + Sum _{ k=0..n - 3 } a(k) * a(n - k - 3). •
► [A273720] 1,3,8,21,57,162,479,1458,4528,14259,45349,145289,468121,1515128,4922145,16040310,52411294,171646085,563266323,1851661113,6096654978,20101681834,66362538332,219336702948,725692113292 ⋆ Number of horizontal steps in the peaks of all bargraphs having semiperimeter n (n>=2). • a(n) = ((2 * (3 * n - 7)) * (2 * n - 9) * a(n - 1) - (254 - 155 * n + 22 * n ^ 2) * a(n - 2) + (2 * (101 - 58 * n + 8 * n ^ 2)) * a(n - 3) - (86 - 47 * n + 6 * n ^ 2) * a(n - 4) + (2 * (n - 6)) * (2 * n - 5) * a(n - 5) - (n - 6) * (2 * n - 5) * a(n - 6)) / ((n - 2) * (2 * n - 9)) for n>=6. - _ Alois P. Heinz _ , Jun 01 2016 •
► [A371891] 1,1,3,8,21,61,203,724,2600,9291,33525,123537,463796,1759184,6706976,25696524,99069838,384429159,1499778661,5875513183,23099489574,91123553946,360649997698,1431724692900,5699142280127 ⋆ G.f. A(x) satisfies A(x) = 1 - x / A(x) ^ 2 * (1 - A(x) - A(x) ^ 4). • a(n) = (1 / n) * Sum _{ k=0..n } binomial(n,k) * binomial(2 * n - 4 * k,n - k - 1) for n > 0. •
► [A178525] 0,0,3,8,22,49,104,208,403,760,1406,2561,4608,8208,14499,25432,44342,76913,132808,228416,391475,668840,1139518,1936513,3283392 ⋆ The sum of th e costs of all nodes in the Fibonacci tree of order n. • a(n) = a(n - 1) + a(n - 2) + 2 * F(n + 1) + 2 * F(n - 1) - 3 (n>=2), F(0)=0, F(1)=0. •
► [A328002] 1,3,8,22,50,130,280,700,1470,3570,7392,17556,36036,84084,171600,394680,802230,1823250,3695120,8314020,16812796,37505468,75716368,167657672,338019500 ⋆ a(n) = 2 ^ n * Sum _{ k=0..n } Product _{ j=1..k } (2 / j) ^ ((- 1) ^ j). • a(n) = sqrt(2 / Pi) * Sum _{ k=0..n } s(k) * s(n - k - 1 / 2) where s(n) = 2 ^ n * (Gamma(n / 2 + 1 / 2) / Gamma(n / 2 + 1)) ^ cos(n * Pi). • a(n) = [x ^ n] (4 * x ^ 2 - x - 1) / ((1 - 4 * x ^ 2) ^ (3 / 2) * (2 * x - 1)). •
► [A271893] 1,3,8,22,58,156,412,1100,2912,7752,20552,54640,144976,385200,1022464,2715872,7210400,19149504,50845376,135026368,358537216,952107648,2528205952,6713619200,17827416320 ⋆ Expansion of (2 * x + 1) * (1 - x) / (1 - 2 * x - 4 * x ^ 2 + 6 * x ^ 3). • a(n) >= 2 ^ n. •
► [A291399] 1,3,8,22,59,156,412,1093,2903,7707,20453,54275,144035,382255,1014469,2692284,7144989,18961928,50322686,133550412,354426839,940606403,2496256771,6624766692,17581338025 ⋆ p - INVERT of (1,1,0,0,0,0,...), where p(S) = 1 - S - S ^ 2 - S ^ 3 - S ^ 4. • a(n) = a(n - 1) + 2 * a(n - 2) + 3 * a(n - 3) + 5 * a (n - 4) + 7 * a(n - 5) + 7 * a(n - 6) + 4 * a(n - 7) + a(n - 8) for n >= 9. •
► [A077848] 1,3,8,22,59,157,418,1112,2957,7863,20908,55594,147823,393057,1045126,2778956,7389153,19647515,52242096,138910014,369357155,982108517,2611394218,6943611264,18462833781 ⋆ Expansion of (1 - x) ^ (- 1) / (1 - 2 * x - x ^ 2 - 2 * x ^ 3). • a(0)=1, a(1)=3, a(2)=8, a(3)=22, a(n)=3 * a(n - 1) - a(n - 2) + a (n - 3) - 2 * a(n - 4). - _ Harvey P. Dale _ , Oct 12 2012 •
► [A278612] 3,8,22,60,162,436,1174,3164,8530,22996,61990,167100,450434,1214196,3273014,8822812,23782962,64109844,172815814,465845884,1255743842,3385009204,9124701142,24596733916,66303466770 ⋆ Sum of terms in level n of TRIP - Stern sequence associated with permutation triple (e, e, e). • a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 4 * a(n - 3) for n>2. •
► [A331028] 1,3,8,22,60,163,443,1204,3273,8897,24184,65739,178698,485751,1320408,3589241,9756569,26521104,72091835,195965925,532690613,1448003214,3936080824,10699376979,29083922018 ⋆ Partition the terms of the harmonic series in to groups sequentially so that the sum of each group is equal to or minimally gr eater than 1; then a(n) is the number of terms in the n - th group. • a(n) = mi n(p): Sum _{ b=r + 1..p + r } 1 / b >= 1, r = Sum _{ k=1..n - 1 } a(k), a(1) = 1. •
► [A155020] 1,1,3,8,22,60,164,448,1224,3344,9136,24960,68192,186304,508992,1390592,3799168,10379520,28357376,77473792,211662336,578272256,1579869184,4316282880,11792304128 ⋆ a(n) = 2 * a(n - 1) + 2 * a(n - 2) for n>2, a(0)=1, a(1)=1, a(2)=3. • a(n) = (1 / 3) * sqrt(3) * ((1 + sqrt(3)) ^ (n - 1) - (1 - sqrt(3)) ^ (n - 1)) + (1 / 2) * ((1 + sqrt(3)) ^ (n - 1) + (1 - sqrt(3)) ^ (n - 1)) + (1 / 2) * [binomial(2 * n,n) mod 2], with n>=0. - _ Paolo P. Lava _ , Jan 26 2009 • a(n) = Sum _{ k=0..floor(n / 2) } (binomial(n - k,k) * 2 ^ (n - k - 1)) for n > 0. - _ Emanuele Munarini _ , Feb 04 2014 • a(n) = (1 / 2) * [n=0] - (sqrt(2) * i) ^ (n - 2) * ChebyshevU(n, - sqrt(2) * i / 2). - _ G. C. Greubel _ , Mar 2 5 2021 •
► [A028859] 1,3,8,22,60,164,448,1224,3344,9136,24960,68192,186304,508992,1390592,3799168,10379520,28357376,77473792,211662336,578272256,1579869184,4316282880,11792304128,32217174016 ⋆ a(n + 2) = 2 * a(n + 1) + 2 * a(n); a(0) = 1, a(1) = 3. • a(n) = [(1 + sqrt(3)) ^ (n + 2) - (1 - sqrt(3)) ^ (n + 2)] / (4 * sq rt(3)). - _ Emeric Deutsch _ , Feb 01 2005 •

► [A048503] 1,3,8,22,61,165,430,1080,2627,6223,14428,32874,73849,163977,360602,786604,1704127,3670227,7864552,16777470,35651861,75497773,159383878,335544672,704643451 ⋆ G.f.: (1 - 4 * x + 6 * x ^ 2 - 2 * x ^ 3) / ((1 - x) ^ 3 * (1 - 2 * x) ^ 2). ● a(n) = (14 + 7 * n + n ^ 2 + (n - 3) * 2 ^ (n + 2)) / 2. - _ T. D. Noe _ , Dec 11 2006 ●

► [A121449] 1,1,3,8,22,61,170,475,1329,3721,10422,29196,81797,229178,642125,1799169,5041123,14124860,39576902,110891905,310712054,870595599,2439354329,6834918465,19151015274 ⋆ Expansion of (1 - 3 * x + 2 * x ^ 2) / (1 - 4 * x + 3 * x ^ 2 + x ^ 3). ● a(0)=a(1)=1, a(2)=3, a(n + 1) = 4 * a(n) - 3 * a(n - 1) - a(n - 2) for n>=2. ●

► [A025566] 1,1,1,3,8,22,61,171,483,1373,3923,11257,32418,93644,271219,787333,2290200,6673662,19478091,56930961,166613280,488176938,1431878079,4203938697,12353600427 ⋆ a(n) = number of (s(0), s(1), ..., s(n)) such that every s(i) is a nonnegative integer, s(0) = 0, s(1) = 1, |s(i) - s(i - 1)| <= 1 for i >= 2. Also a(n) = sum of numbers in row n + 1 of the array T defined in A026105. Also a(n) = T(n,n), where T is the array defined in A025564. ● a(n) is the sum of the (n - 2) - th row of triangle A131816. - _ Gary W. Adamson _ , Sep 01 2007 ●

► [A073357] 0,1,3,8,22,62,176,500,1420,4032,11448,32504,92288,262032,743984,2112384,5997664,17029088,48350464,137280832,389779648,1106696192,3142227840,8921685888 ⋆ Binomial transform of tribonacci numbers. ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) + 2 * a(n - 3), a(0)=0, a(1)=1, a(2)=3. ●

► [A188464] 1,3,8,22,62,178,519,1533,4578,13800,41937,128345,395232,1223792,3807903,11900549,37339043,117574429,371429284,1176876762,3739129185,11909686261,38022182028,121648373964,389979453010 ⋆ Diagonal sums of triangle A188463. ● a(n) = Sum _{ m=1..(n + 2) / 2 } C(2 * m,m) / (m + 1) * C(n + m + 1,3 * m - 1)). - _ Vladimir Kruchinin _ , Jan 24 2022 ●

► [A047926] 1,3,8,22,63,185,550,1644,4925,14767,44292,132866,398587,1195749,3587234,10761688,32285049,96855131,290565376,871696110,2615088311,7845264913,23535794718,70607384132,211822152373 ⋆ a(n) = (3 ^ (n + 1) + 2 * n + 1) / 4. ● a(n) = Sum _{ k=0..n } (3 ^ k + 1) / 2. Partial sums of A007051. ● a(n + 1) = 3 * a(n) - n. - _ Franklin T. Adams - Watters _ , Jul 05 2014 ●

► [A014138] 0,1,3,8,22,64,196,625,2055,6917,23713,82499,290511,1033411,3707851,13402696,48760366,178405156,656043856,2423307046,8987427466,33453694486,124936258126,467995871776,1757900019100 ⋆ Partial sums of (Catalan numbers starting 1, 2, 5, ...). ● a(n) = Sum _{ i + j<n } C(i) * C(j), where C = A000108. - _ Yuchun Ji _ , Jan 10 2019 ●

► [A290898] 1,3,8,22,65,203,647,2053,6423,19811,60490,183750,557551,1693921,5157224,15731043,48041589,146785994,448475954,1369853581,4182850121,12769287055,38976737437,118967979141,363132913719 ⋆ p - INVERT of the positive integers, where p(S) = 1 - S - S ^ 4. ● a(n) = 9 * a(n - 1) - 34 * a(n - 2) + 71 * a(n - 3) - 89 * a(n - 4) + 71 * a(n - 5) - 34 * a(n - 6) + 9 * a(n - 7) - a(n - 8). ●

► [A003101] 0,1,3,8,22,65,209,732,2780,11377,49863,232768,1151914,6018785,33087205,190780212,1150653920,7241710929,47454745803,323154696184,2282779990494,16700904488705,126356632390297,987303454928972,7957133905608836 ⋆ a(n) = Sum _{ k = 1..n } (n - k + 1) ^ k. ● a(n) = n ^ 1 + (n - 1) ^ 2 + (n - 2) ^ 3 + ... + 3 ^ (n - 2) + 2 ^ (n - 1) + 1 ^ n. - _ Bernard Schott _ , Jan 07 2019 ●

► [A233449] 1,3,8,22,68,256,1232,7504,55328,473536,4575872,49068544,577138688,7381298176,101940887552,1511556143104,23945902174208,403579232444416,7209532170616832,136064164750065664,2705030337676771328,56501002847062982656,1237002733471733645312 ⋆ a(n) = Sum _{ k=0..n } k! * 2 ^ (n - k). ● a(n) = (n + 2) * a(n - 1) - 2 * n * a(n - 2). ●

► [A340493] 1,3,8,23,49,125,241,540,1020,2064,3710,7231,12457,22883,39053,68596,113751,194865,315910,526019,840939,1363524,2144528,3419185,5291079 ⋆ Sequence whose partial sums give A340492. ● a(1) = 1. ●

► [A071618] 0,1,3,8,23,61,160,421,1103,2888,7563,19801,51840,135721,355323,930248,2435423,6376021,16692640,43701901,114413063,299537288,784198803,2053059121,5374978560 ⋆ a(n + 1) - 3 * a(n) + a(n - 1) = (2 / 3)(1 + w ^ (n + 1) + w ^ (2n + 2)), where w = exp(2 Pi I / 3). ● a(n) = floor (phi ^ 2n / 2) = floor ((Lucas(2n) - 1) / 2). - _ Thomas Baruchel _ , Aug 31 2004 ● a(- n) = a(n). a(n) = 2 * a(n - 1) + a(n - 2) + 2 * a(n - 3) - a(n - 4) + 2. - _ Michael Somos _ , Mar 08 2007 ● a(0)=0, a(1)=1, a(2)=3, a(3)=8, a(4)=23, a(n) = 3 * a(n - 1) - a(n - 2) + a(n - 3) - 3 * a(n - 4) + a(n - 5). - _ Harvey P. Dale _ , Dec 18 2011 ●

► [A331321] 1,3,8,23,64,175,472,1259,3328,8731,22760,59007,152256,391239,1001656,2556115,6503936,16505651,41788616,105571303,266181440,669923039,1683255448,4222878651,10579130112 ⋆ a(n) = [x ^ n] ((x ^ 2 - 1) * (x ^ 2 + x - 1)) / (x ^ 2 + 2 * x - 1) ^ 2. ● a(n) = n! * [x ^ n](h(sqrt(2)) + h(- sqrt(2)) + 1). ● a(n) = 4 * a(n - 1) - 2 * a(n - 2) - 4 * a(n - 3) - a(n - 4) for n>4. ● a(n) = (- 5 * sqrt(2) * ((1 - sqrt(2)) ^ n - (1 + sqrt(2)) ^ n) + 2 * ((1 - sqrt(2)) ^ n + (1 + sqrt(2)) ^ n) * n) / 8 for n>0. ●

► [A176880] 1,3,8,23,65,182,511,1435,4028,11307,31741,89102,250123,702135,1971004,5532919,15531777,43600150,122392503,343575075,964469468,2707418035,7600149781,21334820094,59890207635 ⋆ Expansion of 1 / (1 - 3 * x + x ^ 2 - 2 * x ^ 3 + 2 * x ^ 4). ● a(n) = + 3 * a(n - 1) - a(n - 2) + 2 * a(n - 3) - 2 * a(n - 4). ●

► [A291037] 1,3,8,23,66,188,537,1533,4376,12493,35664,101812,290649,829731,2368680,6762003,19303866,55107824,157319377,449108397,1282094784,3660067465,10448598672,29828197224,85152217777 ⋆ a(n) = (1 / 2) * A291036(n). ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) + 2 * a(n - 3) - 2 * a(n - 4) - a(n - 6) for n >= 7. ●

► [A147704] 1,1,3,8,23,66,190,547,1575,4535,13058,37599,108262,311728,897585,2584493,7441751,21427668,61698511,177653782,511533678,1472902523,4241053787,12211627683,35161980526 ⋆ Diagonal sums of Riordan array ((1 - 2x) / (1 - 3x + x ^ 2),x(1 - x) / (1 - 3x + x ^ 2)). ● a(n) = 3 * a(n - 1) - a(n - 3), n>2 ; a(0)=1, a(1)=1, a(2)=3. - _ Philippe Deléham _ , Dec 15 2008 ●

► [A116410] 1,1,3,8,23,66,192,561,1647,4850,14318,42351,125468,372191,1105275,3285288,9772767,29090826,86646486,258208671,769820418,2296067565,6850744365,20447143866,61045757604 ⋆ Expansion of (1 - x - 2x ^ 2 + sqrt(1 - 2x - 3x ^ 2)) / (2 * (1 - 2x - 3x ^ 2)). ● a(n) = ((3 ^ n + 2 * 0 ^ n) / 3 + Sum _{ k=0..floor(n / 2) } C(n,2k)C(2k,k)) / 2. ● a(n) = (4 * 3 ^ n + 3 * (- 1) ^ n * y1(n + 1) + 3 ^ (n + 2) * y2(n + 1)) / 24, n>0. ●

► [A057198] 3,8,23,68,203,608,1823,5468,16403,49208,147623,442868,1328603,3985808,11957423,35872268,107616803,322850408,968551223,2905653668,8716961003,26150883008,78452649023,235357947068,706073841203 ⋆ a(n) = (5 * 3 ^ (n - 1) + 1) / 2. ● a(n + 1) = 3 * a(n) - 1 for n > 1. - _ Reinhard Zumkeller _ , Jan 22 2011 ●

► [A025262] 1,1,1,3,8,23,68,207,644,2040,6558,21343,70186,232864,778550,2620459,8872074,30195288,103246502,354508628,1221846856,4225644866,14659644348,51002664023,177909901566 ⋆ a(n) = a(1) * a(n - 1) + a(2) * a(n - 2) + ... + a(n - 1) * a(1) for n >= 4. ● a(n) = Sum _{ m=0..floor((n - 1) / 2) } C(n - 2 * m - 1) * binomial(n - 2 * m,m) * (- 1) ^ m, where C = A000108 are the Catalan numbers. - _ Vladimir Kruchinin _ , Jan 26 2013 ●

► [A056010] 1,1,3,8,23,68,207,644,2040,6558,21343,70186,232864,778550,2620459,8872074,30195288,103246502,354508628,1221846856,4225644866,14659644348,51002664023,177909901566,622093882290 ⋆ Number of words of length n in a simple grammar. ● a(n) = 2 * a(n - 1) + a(0) * a(n - 2) + ... + a(n - 2) * a(0) for n>1. ●

► [A192679] 1,1,1,3,8,23,68,217,738,2662,10111,40281,167605,725850,3262107,15175084,72908536,361068922,1839982245,9633358049,51746379547,284824200163,1604632175859,9243292234736,54390064543757 ⋆ Floor - Sqrt transform of ordered Bell numbers (A000670). ● a(n) = floor(sqrt(orderedBell(n))). ●

► [A193418] 1,3,8,23,69,206,616,1846,5537,16609,49824,149469,448405,1345212,4035632,12106892,36320673,108962015,326886040,980658115,2941974341,8825923018,26477769048,79433307138,238299921409 ⋆ Expansion of x * (x ^ 2 + x - 1) / (3 * x ^ 6 - 4 * x ^ 5 + x ^ 4 - 3 * x ^ 2 + 4 * x - 1). ● a(n) = b(n + 1,3) - b(n + 1,4) with b(n,c) = sum(floor(3 ^ m / 2 ^ c), m=1..n). ● a(n) = (9 * 3 ^ n + 4 * n + 1 - (1 + (- 1) ^ n) * (1 + 4 * i ^ n)) / 32, where i=sqrt(- 1). - _ Bruno Berselli _ , Jul 30 2011 ●

► [A000782] 1,3,8,23,70,222,726,2431,8294,28730,100776,357238,1277788,4605980,16715250,61020495,223931910,825632610,3056887680,11360977650,42368413620,158498860260,594636663660,2236748680998,8433988655580 ⋆ a(n) = 2 * Catalan(n) - Catalan(n - 1). ● a(n) = leftmost column term of M ^ (n - 1) * V, where M is a tridiagonal matrix with 1's in the super - and subdiagonals, (1, 2, 2, 2, ...) in the main diagonal, and the rest zeros; and V is the vector [1, 2, 0, 0, 0, ...]. - _ Gary W. Adamson _ , Jun 16 2011 ●

► [A176605] 1,1,3,8,23,72,239,825,2929,10624,39193,146587,554535,2118042,8156595,31635298,123462515,484483902,1910465543,7566438417,30084771297,120044573286,480550302501,1929362833770,7767140703837 ⋆ Sequence defined by the recurrence formula a(n + 1)=sum(a(p) * a(n - p) + k,p=0..n) + l for n>=1, with here a(0)=1, a(1)=1, k=0 and l=1. ● a(n) = Sum _{ k=0..n } ((C(k) * Sum _{ j=0..(n - k) / 2 } (binomial(k + 1,j) * binomial(n - k - j - 1,n - k - 2 * j)))), where C(n) is Catalan numbers (A000108). - _ Vladimir Kruchinin _ , Apr 15 2016 ●

► [A080410] 0,1,3,8,23,72,279,1236,6313,36133,230119,1611138,12308693,101865629,907900133,8669791288,88309821406,955736037556,10951928988000,132472073263683,1686686835102650,22549341913109430,315817852408881670 ⋆ Boustrophedon transform of the continued fraction of the Euler - Mascheroni constant, gamma (A001620). ● a(n) appears to be asymptotic to C * n! * (2 / Pi) ^ n where C=5.79838940503783299259552225238077705314049166104773668246015... which almost satisfies the polynomial equation 94487 - 16249C ^ 2 - 8C ^ 2=0 - _ Benoit Cloitre _ and Mark Hudson (mrmarkhudson(AT)hotmail.com) ●

► [A101495] 1,1,3,8,23,73,253,948,3817,16433,75295,365600,1874083,10108025,57194585,338615084,2092609701,13470059649,90137761867,625940219896,4503468629391,33520255302185,257764170849941,2045255722438180 ⋆ Column 1 of triangle A101494. ● a(n) = Sum _{ k=0..n } (k + 1) * (n - k) ^ k. ●

► [A099265] 1,3,8,23,75,277,1132,4977,22979,109451,531456,2610931,12917683,64181625,319695980,1594859885,7963472187,39784944799,198827606704,993846943839,4968361974491,24839192686973,124188113975628 ⋆ Partial sums of A056272. ● a(5,n) = (1 / 96) * 5 ^ n + (1 / 8) * 3 ^ n + (1 / 3) * 2 ^ n + (3 / 8) * n - 15 / 32. ●

► [A343176] 3,8,23,77,281,1073,4193,16577,65921,262913,1050113,4197377,16783361,67121153,268460033,1073790977,4295065601,17180065793,68719869953,274878693377,1099513200641,4398049656833,17592192335873,70368756760577,281475001876481 ⋆ a(0)=3; for n > 0, a(n) = 2 ^ (2 * n) + 3 * 2 ^ (n - 1) + 1. ● a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3) for n > 3. ●

► [A084920] 3,8,24,48,120,168,288,360,528,840,960,1368,1680,1848,2208,2808,3480,3720,4488,5040,5328,6240,6888,7920,9408 ⋆ a(n) = (prime(n) - 1) * (prime(n) + 1). ● a(n) = (1 / 2) * Sum _{ |k|<=2 * sqrt(p) } k ^ 2 * H(4 * p - k ^ 2) where H() is the Hurwitz class number and p is n - th prime. - _ Seiichi Manyama _ , Dec 31 2017 ●

► [A080097] 0,3,8,24,63,168,440,1155,3024,7920,20735,54288,142128,372099,974168,2550408,6677055,17480760,45765224,119814915,313679520,821223648,2149991423,5628750624,14736260448 ⋆ a(n) = Fibonacci(n + 2) ^ 2 - 1. ● a(n) = (Lucas(2 * n + 4) - 2 * (- 1) ^ n - 5) / 5. ●

► [A096886] 1,3,8,24,64,192,512,1536,4096,12288,32768,98304,262144,786432,2097152,6291456,16777216,50331648,134217728,402653184,1073741824,3221225472,8589934592,25769803776,68719476736 ⋆ Expansion of (1 + 3 * x) / (1 - 8 * x ^ 2). ● a(n) = (1 + (- 1) ^ n) * 8 ^ floor((n + 1) / 2) / 2 + 3 * (1 - (- 1) ^ n) * 8 ^ floor(n / 2) / 2. ● a(n) = 2 ^ (3 * n / 2) * (3 * sqrt(2) / 8 + 1 / 2 - (3 * sqrt(2) / 8 - 1 / 2) * (- 1) ^ n). ● a(2n + 1) = 2 * a(2n) + 2 * a(2n - 1) + 2 * a(2n - 2). ● a(2n) = 2 * a(2n - 1) + 2 * a(2n - 2). ● a(n + 3) = a(n + 2) * a(n + 1) / a(n). - _ Reinhard Zumkeller _ , Mar 04 2011 ●

► [A095125] 1,3,8,24,69,202,587,1711,4981,14508,42248,123039,358314,1043497,3038897,8849971,25773136,75057288,218584013,636566754,1853828259,5398772767,15722463557,45787417156,133343452216 ⋆ Expansion of - x * (- 1 - x + x ^ 2) / (1 - 2 * x - 3 * x ^ 2 + x ^ 3). ● a(n + 3) = 2 * a(n + 2) + 3 * a(n + 1) - a(n), with a(1) = 1, a(2) = 3, a(3) = 8. ●

► [A291243] 3,8,24,71,210,621,1836,5428,16047,47440,140247,414612,1225716,3623579,10712370,31668929,93622704,276776352,818232603,2418937120,7151092203,21140739568,62498266944,184763326671,546214936050 ⋆ p - INVERT of (0,1,0

,1,0,1,...), where p(S) = 1 - 3 S + S ^ 2. ● a(n) = 3 * a(n - 1) + a(n - 2) - 3 * a(n - 3) - a(n - 4) for n >= 5. ●

▶ [A153774] 1,3,8,24,71,213,638,1914,5741,17223,51668,155004,465011,1395033,4185098,12555294,37665881,112997643,338992928,1016978784,3050936351,9152809053,27458427158,82375281474,247125844421 ⋆ a(2 * n) = 3 * a(2 * n - 1), a(2 * n + 1) = 3 * a(2 * n) - 1, with a(1) = 1. ● a(n) = (7 * 3 ^ (n - 1) + 2 + (- 1) ^ n) / 8. ● a(n) = 3 * a(n - 1) + a(n - 2) - 3 * a(n - 3). ●

▶ [A080923] 1,3,8,24,72,216,648,1944,5832,17496,52488,157464,472392,1417176,4251528,12754584,38263752,114791256,344373768,1033121304,3099363912,9298091736,27894275208,83682825624,251048476872 ⋆ First differences of A003946. ● a(n) = 2 ^ 3 * 3 ^ (n - 2), n >= 2, a(0) = 1, a(1) = 3. - _ Wolfdieter Lang _ , Jan 18 2013 ●

▶ [A178543] 0,1,3,8,24,73,219,656,1968,5905,17715,53144,159432,478297,1434891,4304672,12914016,38742049,116226147,348678440,1046035320,3138105961,9414317883,28242953648,84728860944 ⋆ Partial sums of round(3 ^ n / 5). ● a(n) = round(3 ^ (n + 1) / 10). ● a(n) = floor((3 * 3 ^ n + 3) / 10). ● a(n) = ceiling((3 * 3 ^ n - 3) / 10). ● a(n) = a(n - 4) + 8 * 3 ^ (n - 3), n > 3. ● a(n) = 3 * a(n - 1) - a(n - 2) + 3 * a(n - 3), n > 2. ●

▶ [A275856] 1,1,3,8,24,74,231,723,2265,7098,22246,69724,218533,684941,2146791,6728628,21089356,66099798,207174811,649342415,2035216397,6378923798,19993288618,62664424664,196407414185 ⋆ a(n) = floor(c * s * a(n - 1)) + floor(d * r * a(n - 2)), where r = (1 + sqrt(5)) / 2, s = r / (r - 1), c = 1, d = 1, a(0) = 1, a(1) = 1. ● a(n) = floor(s * a(n - 1)) + floor(r * a(n - 2)), where r = (1 + sqrt(5)) / 2, s = r / (r - 1). ●

▶ [A238977] 0,0,1,1,3,8,24,74,246,848,3088,11644,45844,186336,784928,3403128,15212744,69802944,328988096,1587831568,7848954928,39651793024,204691645824,1078028406176,5790745961568 ⋆ Number of ballot sequences of length n with exactly 2 fixed points. ● a(n) = (1 / 3) * Sum _{ k = 0..floor(n / 2) } (1 - binomial(n - 2 * k,3) / binomial(n,3)) * binomial(n,2 * k) * (2 * k)! / (2 ^ k * k!) for n >= 3. ●

▶ [A047087] 1,3,8,24,75,237,755,2421,7804,25264,82081,267487,873970,2862038,9391137,30869167,101627704,335049772,1106003560,3655124296,12092095945,40042017815,132712302538,440207294382,1461259979347 ⋆ a(n) = A047080(2 * n, n + 1). ● a(n + 4) = ((4 * n ^ 5 + 61 * n ^ 4 + 374 * n ^ 3 + 1146 * n ^ 2 + 1743 * n + 1046) * a(n + 3) - (2 * n ^ 5 + 27 * n ^ 4 + 146 * n ^ 3 + 380 * n ^ 2 + 467 * n + 220) * a(n + 2) + (n + 4) * (n ^ 3 + 10 * n ^ 2 + 44 * n + 53) * a(n + 1) - (n - 2) * (n + 3) * (n + 4) * (n ^ 2 + 8 * n + 18) * a(n)) / ((n + 2) * (n + 3) * (n + 5) * (n ^ 2 + 6 * n + 11)). - _ G. C. Greubel _ , Oct 30 2022 ●

▶ [A000958] 1,1,3,8,24,75,243,808,2742,9458,33062,116868,417022,1500159,5434563,19808976,72596742,267343374,988779258,3671302176,13679542632,51134644014,191703766638,720629997168,2715610275804 ⋆ Number of ordered rooted trees with n edges having root of odd degree. ● a(n) = (- 1 / 2) ^ n * (- 2 - 5 * Sum _{ k=1..n - 1 } (- 8) ^ k * Gamma(1 / 2 + k) * (4 / 5 + k) / (sqrt(Pi) * Gamma(k + 3))). - Mark van Hoeij, Nov 11 2009 ● a(n) = sum of top row terms in M ^ (n - 1), where M = the following infinite square production matrix: ● a(n) = Catalan(n - 1) * h(n - 1) for n>=2 where h(n) = hypergeom([1,3 / 2, - n / 2,(1 - n) / 2],[1 / 2, - n, - n + 1 / 2], 1). - _ Peter Luschny _ , Apr 25 2016 ●

▶ [A215576] 1,1,3,8,24,80,278,997,3670,13782,52588,203314,794726,3135540,12470444,49942305,201233170,815205699,3318291966,13565162636,55669063762,229257178198,947142023262,3924380904498,16303716754884 ⋆ G.f. satisfies A(x) = (1 + x ^ 2) * (1 + x * A(x) ^ 2). ● a(n) = Sum _{ i=0..floor(n / 2) } C(2 * n - 4 * i + 1,i) * C(2 * n - 4 * i + 1,n - 2 * i) / (2 * n - 4 * i + 1). - _ Vladimir Kruchinin _ , Oct 11 2018 ●

▶ [A134165] 1,3,8,24,86,348,1478,6324,26846,112668,467798,1925124,7867406,31980588,129475718,522603924,2104600766,8461122108,33972973238,136278002724,546271650926 ⋆ Let P(A) be the power set of an n - element set A. Then a(n) = the number of pairs of elements { x,y } of P(A) for which either 0) x and y are disjoint and for which either x is a subset of y or y is a subset of x, or 1) x and y are disjoint and for which x is not a subset of y and y is not a subset of x, or 2) x and y are intersecting but for which x is not a subset of y and y is not a subset of x, or 3) x = y. ● a(n) = (1 / 2)(4 ^ n - 2 * 3 ^ n + 5 * 2 ^ n - 2) = 3 * StirlingS2(n + 1,4) + StirlingS2(n + 1,3) + 2 * StirlingS2(n + 1,2) + 1. ●

▶ [A174662] 1,3,8,24,88,400,2212,14500,110116,951076,9205156,98646436,1159016356,14808626596,204358994596,3028436306596,47955883346596,8079903348025 96,144306913293625 96,2723028016837945 96,54128619685819705 96 ⋆ Partial sums of A003149. ● a(n) = Sum _{ i=0..n } Sum _{ k=0..i } k! * (i - k)!. ●

▶ [A002104] 0,1,3,8,24,89,415,2372,16072,125673,1112083,10976184,119481296,1421542641,18348340127,255323504932,3809950977008,60683990530225,1027542662934915,18430998766219336,349096664728623336 ⋆ Logarithmic numbers. ● a(n) = Sum _{ k=1..n } Sum _{ i=0..n - k } (n - k)! / i!. ● a(n) = sum { k=0..n - 1, binomial(n, k) * (n - k - 1)! } , row sums of A111492. - _ Paul Barry _ , Aug 26 2004 ● a(n) = n * 3F1((1,1,1 - n); (2); - 1). - _ Jean - François Alcover _ , Mar 29 2011 ● a(n) = n * a(n - 1) - (n - 1) * a(n - 2) + 1, a(0) = 0, a(1) = 1. - _ Richard R. Forberg _ , Dec 15 2014 ●

▶ [A076049] 0,3,8,25,54,153,322,899,1884,5247,10988,30589,64050,178293,373318,1039175,2175864,6056763,12681872,35301409,73915374,205751697,430810378,1199208779,2510946900 ⋆ Numbers k such that the sum of the k - th triangular number and (k + 2) - nd triangular number is a triangular number. ● a(2n + 2) = 2 * a(2n + 1) - a(2n) + 2 * b(n + 1); ● a(2n + 3) = 2 * a(2n + 2) - a(2n + 1) + 2 * b(n + 2). ● a(n) = - 3 + (1 / 8) * (- 1 ^ n)((7 + 5 * sqrt(2)) * (- 1 - sqrt(2)) ^ n + (7 - 5 * sqrt(2)) * (- 1 + sqrt(2)) ^ n - (1 + sqrt(2)) ^ n - (1 - sqrt(2)) ^ n). ●

▶ [A026970] 1,3,8,25,60,147,336,765,1700,3751,8184,17745,38220,81915,174752,371365,786420,1660239,3495240,7340025,15379100,32156323,67108848,139810125,290805060 ⋆ a(n) = Sum _{ k=0..n } (k + 1) * A026637(n,k). ● a(n) = - ((- 1) ^ n - 2 ^ (n + 2) + 3) * (n + 2) / 6 for n>0. ● a(n) = 4 * a(n - 1) - 2 * a(n - 2) - 8 * a(n - 3) + 7 * a(n - 4) + 4 * a(n - 5) - 4 * a(n - 6) for n>6. ●

▶ [A192905] 0,1,3,8,25,79,248,777,2435,7632,23921,74975,234992,736529,2308483,7235416,22677769,71078319,222778856,698249753,2188505347,6859373216,21499148257,67384199871,211200478176 ⋆ Coefficient of x in the reduction by (x ^ 2 - > x + 1) of the polynomial p(n,x) defined below at Comments. ● a(n) = 3 * a(n - 1) + a(n - 3) + a(n - 4). ●

▶ [A101490] 0,1,1,3,8,25,80,267,911,3170,11192,39993,144320,525124,1924196,7093603,26288928,97878831,365918064,1372982706,5168555770,19514482964,73876936272,280363191353,1066357904128 ⋆ G.f. satisfies A(x) = x * (1 + A ^ 2) ^ 2 / (1 - A + A ^ 2). ● a(n) = T(2 * n - 1,n) / n, where T(n,k)=T(n - 1,k) - T(n - 2,k) + T(n - 1,k - 1) + 2 * T(n - 3,k - 1) + T(n - 5,k - 1). - _ Vladimir Kruchin in _ , Sep 29 2014 ●

▶ [A161634] 1,1,3,8,25,81,274,953,3389,12265,45025,167256,627540,2374672,9052447,34731401,134010573,519683813,2024370167,7917605996,31080085431,122407860927,483558273368,1915535953655,7607408410408 ⋆ G.f. satisfies A(x) = 1 / (1 - x * (1 + x * A(x)) ^ 2). ● a(n) = Sum _{ k=0..n } C(n + 1,k) / (n + 1) * C(2 * k,n - k). ● a(n,m) = Sum _{ k=0..n } C(n + m,k) * m / (n + m) * C(2 * k,n - k). ●

▶ [A143330] 1,1,3,8,25,83,289,1041,3847,14504,55569,215727,846761,3354858,13398965,53888063,218053915,887107888,3626373205,14887942624,61358959587,253771944529,1052917272543,4381374717994,18280470530047 ⋆ G.f. satisfies: A(x) = (1 + x * A(x) ^ 2) / (1 - x ^ 2). ● a(n) = CatalanNumber(n) * hypergeom([- n / 2, - n / 2, - n / 2 - 1 / 2, - n / 2 + 1 / 2], [- (2 * n) / 3, - (2 * n) / 3 + 1 / 3, - (2 * n) / 3 + 2 / 3], - 16 / 27). ● a(n) = ((5 - n) * a(n - 4) + (2 * n - 4) * a(n - 2) + (4 * n - 2) * a(n - 1)) / (n + 1) for n >= 4. (End) ●

▶ [A038665] 3,8,25,84,294,1056,3861,14300,53482,201552,764218,2912168,11143500,42791040,164812365,636438060,2463251010,9552774000,37112526990,144410649240,562724141460,2195581527360,8576490341250,33537507830424 ⋆ Convolution of A007054 (super ballot numbers) with A000984 (central binomial coefficients). ● a(n) = (n + 3) * C(n + 1) with C(n) the Catalan numbers A000108. ●

▶ [A045900] 1,1,3,8,25,85,318,1234,4884,19458,77727,310761,1242853,4971151,19884270,79536639,318145993,1272583241,5090332042,20361326983,81445306447,325781223902,1303124893253,5212499570050,20849998276525 ⋆ Hypothetical numbers of terms in general expressions for coefficients of Lovelock Lagrangians. ● a(n + 3) = 3 * a(n + 2) - 3 * a(n + 1) + a(n) + p(n + 3) - 3 * p(n + 2) + 3 * p(n + 1) - p(n) + 2 ^ (2 * n + 1); a(n + 4) = 7 * a(n + 3) - 15 * a(n + 2) + 13 * a(n + 1) - 4 * a(n) + p(n + 4) - 7 * p(n + 3) + 15 * p(n + 2) - 13 * p(n + 1) + 4 * p(n); where p(n) is the partition function (i.e. number of partitions of n, A000041) and where p(0) = 1. ●

▶ [A130522] 1,1,3,8,25,89,349,1496,6962,34861,186678,1063591,6418167,40860485,273513831,1919284246,14080876273,107750778177,858195666410,7100543662976,60922480229704,541193416875432,4970306167860426 ⋆ Diagonal immediately below the main diagonal of triangle A130521. ● a(n) = Sum _{ k=0..[n / 2] + 1 } [C(n - k,k) + C(n - k + 1,k - 1)] * a(n - k - 1) for n>=2, with a(0)=a(1)=1. ●

▶ [A353406] 3,8,25,91,376,1715,8471,44838,252903,1514213,9590874,64056173,449804453,3312346950,25521479277,205300781275,1720450321356,14986361037495,135393159641569,1266006310597506,12228936468908781,121823473948915769,1249794986354577736 ⋆ Stirling transform of odd primes. ● a(n) = Sum _{ k=1..n } Stirling2(n,k) * prime(k + 1). ●

▶ [A357591] 0,0,1,3,8,25,99,476,2643,16575,116002,895719,7554311,69051034,679913073,7174562327,80765185416,966076987581,12235992073975,163590477924708,2302288709067167,34021599945907915,526690307104399482,8524372522971447683,143963947160570293851 ⋆ Expansion of e.g.f. (exp(x) - 1) * tan((exp(x) - 1) / 2). ● a(n) = 2 * Sum _{ k=0..floor(n / 2) } (- 1) ^ k * Stirling2(n,2 * k) * (1 - 4 ^ k) * Bernoulli(2 * k). ●

▶ [A343553] 1,3,8,26,74,287,930,3572,12966,49379,184766,710712,2704168,10427822,40123208,155289768,601080406,2334740919,9075135318,35352194658,137846990678,538302226835,2104098963742,8233721100024,32247603765020 ⋆ a(n) = Sum _{ 1 <= x _ 1 <= x _ 2 <= ... <= x _ n = n } gcd(x _ 1, x _ 2, ... , x _ n). ● a(n) = Sum _{ d|n } phi(n / d) * binomial(d + n - 2, n - 1). ● a(n) = [x ^ n] Sum _{ k >= 1 } phi(k) * x ^ k / (1 - x ^ k) ^ n. ●

▶ [A331320] 1,3,8,26,80,244,736,2200,6528,19248,56448,164768,478976,1387328,4005376,11530624,33107968,94839552,271091712,773380608,2202374144,6261404672,17774206976,50384312320,142636515328 ⋆ a(n) = [x ^ n] ((x + 1) * (2 * x - 1) * (2 * x ^ 2 - 1)) / (2 * x ^ 2 + 2 * x - 1) ^ 2. ● a(n) = (12 * (n - 3) * a(n - 3) + (14 * n - 6) * a(n - 2) + (70 - 4 * n) * a(n - 1)) / (n + 19). ● a(n) = n! * [x ^ n](h(sqrt(3)) + h(- sqrt(3)) + 1). ● a(n) = 4 * a(n - 1) - 8 * a(n - 3) - 4 * a(n - 4) for n>4. ● a(n) = (- 8 * sqrt(3) * ((1 - sqrt(3)) ^ n - (1 + sqrt(3)) ^ n) + 3 * ((1 - sqrt(3)) ^ n + (1 + sqrt(3)) ^ n) * n) / 18 for n>0. ●

▶ [A369618] 1,1,3,8,26,87,308,1122,4196,15995,61953,243091,964307,3860820,15581231,63318119,258874412,1064093055,4394851631,18229191263,75904152261,317161817092,1329465389854,5589012748902,23558679647629 ⋆ Expansion of (1 / x) * Series _ Reversion(x / (1 / (1 - x) + x ^ 2)). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 2) } binomial(n + 1,k) * binomial(2 * n - 3 * k,n - 2 * k). ●

▶ [A161938] 3,8,26,88,300,1024,3496,11936,40752,139136,475040,1621888,5537472,18906112,64549504,220385792,752444160,2569005056,8771131904,29946517504,102243806208,349082189824,1191841146880,4069200207872 ⋆ a(n) = ((3 + sqrt(2)) * (2 + sqrt(2)) ^ n + (3 - sqrt(2)) * (2 - sqrt(2)) ^ n) / 2. ● a(n) = 4 * a(n - 1) - 2 * a(n - 2) for n>1; a(0) = 3; a(1) = 8. ●

▶ [A189177] 1,1,3,8,26,88,311,1125,4139,15411,57901,219070,833509,3185834,12223298,47048989,181596815,702589992,2723964698,10580344863,41163089721,160380285133,625698670720 ⋆ Diagonal sums of the Riordan matrix (1 + x / sqrt(1 - 4 * x),(1 - sqrt(1 - 4 * x)) / 2) (A189175). ● a(n) = sum(binomial(2 * n - 3 * k,n - k) * (n ^ 2 - n * k - k ^ 2 - k) / ((2 * n - 3 * k) * (2 * n - 3 * k - 1)),k=0..floor(n / 2))), for n>=3. ●

▶ [A028270] 1,3,8,26,90,322,1176,4356,16302,61490,233376,890188,3409588,13104756,50517200,195234120,756197910,2934686610,11408741520,44420399100,173191792620,676104403260,2642356838160,10337529691320,40481034410700 ⋆ Central elements in 3 - Pascal triangle A028262 (by row). ● a(n) = (n + 1) * C(n) + n * C(n - 1), C = Catalan number (A000108). - _ Gary W. Adamson _ , Dec 28 2007 ●

▶ [A074506] 3,8,26,92,338,1268,4826,18572,72098,281828,1107626,4371452,17308658,68703188,273218426,1088090732,4338014018,17309009348,69106897226,276040168412,1102998412178,4408506864308,17623567104026 ⋆ a(n) = 1 ^ n + 3 ^ n

+ 4 ^ n. ● a(n) = 7 * a(n - 1) - 12 * a(n - 2) + 6 with a(0)=3, a(1)=8. - _ Vincenzo Librandi _ , Jul 19 2010 ● a(n) = 8 * a(n - 1) - 19 * a(n - 2) + 12 * a(n - 3). - _ R. J. Mathar _ , Jul 18 2010 ●

▶ [A242537] 1,3,8,27,82,255,794,2463,7654,23775,73850,229407,712606,2213583,6876098,21359343,66348934,206100927,640215146,1988712255,6177573934,19189513071,59608742162,185163746895,575177598550 ★ Number of n - length words on { 1,2,3,4,5 } such that the maximal runs of identical odd integers are of odd length and the maximal runs of identical even integers are of even length. ● a(n) = 2 * a(n - 1) + 3 * a(n - 2) + 2 * a(n - 3) - 2 * a(n - 4). - _ Fung Lam _ , May 18 2014 ●

▶ [A210680] 0,1,3,8,27,89,272,873,2859,8936,25491,67665,228192,752241,2167859,6833896,18464907,52758345,142005584,440498361,1186119547,3461957320,9357060899,26968655777,72945663424 ★ a(n) = (3 * a(n - 1)) XOR a(n - 2). ● a(n) = (3 * a(n - 1)) XOR a(n - 2), a(0)=0, a(1)=1. ●

▶ [A102318] 1,1,3,8,27,97,373,1493,6163,26027,111897,488006,2153429,9596199,43121211,195165576,888861555,4070582971,18732710281,86584519280,401776434017,1870983991035,8740907398527,40956401225597 ★ A mean binomial transform of the Catalan numbers. ● a(n)=sum { k=0..floor(n / 2), binomial(n, 2k)C(n - 2k) } ; ● a(n)=sum { k=0..n, binomial(n, k)C(k)(1 + (- 1) ^ (n - k)) / 2 } . ●

▶ [A102206] 3,8,27,98,363,1352,5043,18818,70227,262088,978123,3650402,13623483,50843528,189750627,708158978,2642885283,9863382152,36810643323,137379191138,512706121227,1913445293768,7141075053843,26650854921602,99462344632563 ★ a(0) = 3, a(1) = 8, a(n + 2) = 4 * a(n + 1) - a(n) - 2. ● a(0)=3, a(1)=8, a(2)=27, a(n) = 5 * a(n - 1) - 5 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Jul 25 2012 ● a(n) = (2 + (2 - sqrt(3)) ^ (1 + n) + (2 + sqrt(3)) ^ (1 + n)) / 2. - _ Colin Barker _ , Nov 03 2016 ●

▶ [A110886] 1,1,3,8,27,104,436,1930,8871,41916,202300,992942,4940912,24867870,126371426,647494746,3341341155,17350565376,90593056624,475333630402,2504959102224,13252904123786,70366654738470,374824160997086 ★ Number of signed weighted Euler trees with total weight n (associated to even switching classes of matrices of order 2n). ● a(n) = 2 + Sum _{ k=1..n - 1 } a(n - k) * a(k). - _ Benoit Cloitre _ , Jul 27 2008 ● a(n) = Sum _{ k=1..n } (binomial(2 * k - 2, k - 1) * Sum _{ i=0..n - k } binomial(k, n - k - i) * binomial(k + i - 1, k - 1) / k), n > 0, a(0)=1. - _ Vladimir Kruchinin _ , Jan 24 2013 ● a(n + 1) starting (1, 3, ...) = (first n terms) dot product (first n difference terms), added to a(n). - _ Gary W. Adamson _ , May 20 2013 ●

▶ [A294197] 3,8,27,120,650,4117,30380,255000,2402333,25086428 ★ Floor of log base n! of product of all primes between n! + 1 and (n + 1)!. ● a(n) = Sum _ (log(p _ i), i=primepi(n!) + 1..primepi((n + 1)!)) / log(n!). ●

▶ [A030495] 1,3,8,27,124,725,5046,40327,362888,3628809,39916810,479001611,6227020812,87178291213,1307674368014,20922789888015,355687428096016,6402373705728017,121645100408832018,2432902008176640019 ★ a(n) = (n + 1)! + n. ● a(n) = n + Sum _{ k * k!: k=1, 2, ..., n - 1 } . ●

▶ [A074271] 1,3,8,27,130,863,7554,84385,1165814,19408513,381328184,8690396907,226500350374,6671888768963,219904832427160,8040978338951561,323784549401655250,14264968083112608087 ★ Previous term + prime(previous term). ● a(1)=1; a(n)=a(n - 1) + prime(a(n - 1)). ●

▶ [A163062] 3,8,28,88,288,928,3008,9728,31488,101888,329728,1067008,3452928,11173888,36159488,117014528,378667008,1225392128,3965452288,12832473088,41526755328,134383403008,434873827328,1407281266688 ★ a(n) = ((3 + sqrt(5)) * (1 + sqrt(5)) ^ n + (3 - sqrt(5)) * (1 - sqrt(5)) ^ n) / 2. ● a(n) = 2 * a(n - 1) + 4 * a(n - 2) for n > 1; a(0) = 3, a(1) = 8. ●

▶ [A093356] 3,8,28,104,400,1568,6208,24704,98560,393728,1573888,6293504,25169920,100671488,402669568,1610645504,6442516480,25769934848,103079477248,412317384704,1649268490240,6597071863808,26388283260928 ★ Number of occurrences of pattern 1 - 2 after n iterations of morphism A007413. ● a(n) = (3 * 4 ^ (n - 1) + 2 ^ n) / 2, a(1) = 3. ● a(n) = 6 * a(n - 1) - 8 * a(n - 2); a(1)=3, a(2)=8, a(3)=28. -_ Harvey P. Dale _ , Oct 02 2011 ●

▶ [A224271] 1,1,3,8,28,107,459,2151,10931,59700,348146,2155925,14112377,97266301,703484851,5323515156,42040470092,345670438963,2953171501547,26166317121747,240047041176843,2276607815242880,22290187889601330,225018607554567149,2339331996135377345 ★ Number of set partitions of { 1,2,...,n } such that the element 1 is in an odd - sized block. ● a(n) = Sum _{ k=0..floor((n - 1) / 2) } binomial(n - 1,2 * k) * Bell(n - 2 * k - 1). - _ Ilya Gutkovskiy _ , Apr 10 2022 ●

▶ [A135583] 3,8,28,108,428,1708,6828,27308,109228,436908,1747628,6990508,27962028,111848108,447392428,1789569708,7158278828,28633115308,114532461228,458129844908,1832519379628,7330077518508,29320310074028 ★ a(n) = 4 * a(n - 1) - 4 for n>0, a(0)=3. ● a(n) = (4 + 5 * 4 ^ n) / 3. ● a(n) = (13 * 4 ^ n - 4) / 3. - _ Paolo P. Lava _ , Jun 06 2008 ● a(0)=3, a(1)=8; for n>1, a(n) = 5 * a(n - 1) - 4 * a(n - 2). - _ Harvey P. Dale _ , Feb 27 2013 ●

▶ [A000776] 1,3,8,28,124,668,4248,31176,259488,2416032,24886080,281004480,3451887360,45832538880,654109585920,9986000371200,162391354675200,2802498609254400,51156349822771200,984775394044108800,19938798081699840000,423580563732049920000 ★ a(n) = n! * (1 + 2 * Sum _{ k=1..n } 1 / k). ● a(0)=1, a(n + 1) = (n + 1) * a(n) + 2 * n!, n > 0. - _ Sean A. Irvine _ , Jun 14 2011 ●

▶ [A327030] 0,1,3,8,28,124,732,5046,40352,362898,3628932,39916810,479002388,6227020812,87178296258,1307674368272,20922789928384,355687428096016,6402373706092350,121645100408832018,2432902008180269152,51090942171709450128,1124000727777647596830 ★ a(n) = Sum _{ d|n } phi(d) * (n / d)! for n > 0, a(0) = 0. ● a(n) = Sum _{ i=1..n } gcd(n,i)!. - _ Ridouane Oudra _ , Nov 13 2019 ●

▶ [A080874] 1,1,3,8,29,79,287,782,2841,7741,28123,76628,278389,758539,2755767,7508762,27279281,74329081,270037043,735782048,2673091149,7283491399,26460874447,72099131942,261935653321 ★ a(n) * a(n + 3) - a(n + 1) * a(n + 2) = 5, given a(0)=a(1)=1, a(2)=3. ● a(n) = (- 1 / 24 * 3 ^ (1 / 2) * 2 ^ (1 / 2) + 1 / 4 - 1 / 16 * 2 ^ (1 / 2) + 1 / 8 * 3 ^ (1 / 2)) * (sqrt(3) + sqrt(2)) ^ n + (1 / 24 * 3 ^ (1 / 2) * 2 ^ (1 / 2) + 1 / 4 + 1 / 16 * 2 ^ (1 / 2) + 1 / 8 * 3 ^ (1 / 2)) * (sqrt(3) - sqrt(2)) ^ n + (- 1 / 24 * 3 ^ (1 / 2) * 2 ^ (1 / 2) - 1 / 8 * 3 ^ (1 / 2) + 1 / 16 * 2 ^ (1 / 2) + 1 / 4) * (- sqrt(3) - sqrt(2)) ^ n + (- 1 / 16 * 2 ^ (1 / 2) + 1 / 4 + 1 / 24 * 3 ^ (1 / 2) * 2 ^ (1 / 2) - 1 / 8 * 3 ^ (1 / 2)) * (- sqrt(3) + sqrt(2)) ^ n [From _ Richard Choulet _ , Dec 04 2008] ●

▶ [A360991] 1,1,3,8,30,117,533,2599,13919,79620,487810,3167265,21744187,157020697,1189321019,9417789650,77774264012,668233623419,5961395449795,55117233908411,527263186773227,5210880621612366,53130216638022540,558176360466846439 ★ Expansion of e.g.f. exp(exp(x) - 1 + x ^ 2 / 2). ● a(0) = a(1) = 1; a(n) = (n - 1) * a(n - 2) + Sum _{ k=1..n } binomial(n - 1,k - 1) * a(n - k). ●

▶ [A162560] 3,8,30,132,612,2880,13608,64368,304560,1441152,6819552,32270400,152705088,722608128,3419418240,16180860672,76568654592,362326763520,1714548653568,8113331340288,38392696120320,181676188680192 ★ a(n) = (4 + sqrt(3)) * (3 + sqrt(3)) ^ n + (4 - sqrt(3)) * (3 - sqrt(3)) ^ n. ● a(n) = 6 * a(n - 1) - 6 * a(n - 2) for n > 0; a(- 1) = 3, a(0) = 8. ● a(n) = 6 * (a(n - 1) - a(n - 2)), with a(0)=3 and a(1)=8. - _ Paolo P. Lava _ , Jul 15 2009 ●

▶ [A074501] 3,8,30,134,642,3158,15690,78254,390882,1953638,9766650,48830174,244144722,1220711318,6103532010,30517610894,152587956162,762939584198,3814697527770,19073486852414,95367432689202,476837160300278 ★ a(n) = 1 ^ n + 2 ^ n + 5 ^ n. ● a(n) = 7 * a(n - 1) - 10 * a(n - 2) + 4 with a(0)=3, a(1)=8. - _ Vincenzo Librandi _ , Jul 21 2010 ●

▶ [A059171] 1,1,3,8,30,144,840,5760,45360,403200,3991680,43545600,518918400,6706022400,93405312000,1394852659200,22230464256000,376610217984000,6758061133824000,120847474114560000,2554547108585472000,53523844179886080000,1175091669949317120000 ★ Size of largest conjugacy class in S _ n, the symmetric group on n symbols. ● a(1) = a(2) = 1; a(n) = n * (n - 2)! = (n!) / (n - 1) for n > 2. This is the number of (n - 1) - cycles in S _ n. ●

▶ [A078619] 1,1,3,8,30,145,844,5779,45457,403791,3995883,43579692,519229008,6709162022,93440175754,1395274532769,22235989448253,376688084797128,6759236101851595,128066374705591015,2554869984086726681 ★ Floor(average of first n factorials). ● a(n) = Floor((1 / n)(Sum _{ i=1, ..., n } i!) ●

▶ [A352624] 1,1,3,8,31,122,579,2886,16139,95358,611111,4128830,29709695,224400022,1785322699,14841968646,129015458195,1167021383902,10979895178511,107113768171950,1082508179141031,11308614423992102,121995294474174963,1356835055606851286,15542964081299602811 ★ Expansion of e.g.f. exp(exp(x) + cosh(x) - 2). ● a(0) = 1; a(n) = (1 / 2) * Sum _{ k=1..n } binomial(n - 1,k - 1) * (3 + (- 1) ^ k) * a(n - k). ●

▶ [A003470] 1,1,3,8,31,147,853,5824,45741,405845,4012711,43733976,520795003,6726601063,93651619881,1398047697152,22275111534553,377278848390249,6768744159489931,128228860181918440,2557808459478878871,53585748788874537851,1176328664895760953853 ★ a(n) = n * a(n - 1) - a(n - 2) + 1 + (- 1) ^ n. ● a(n) = Sum _{ k=0..floor(n / 2) } C(n - k,k) * (n - 2k)!. - _ Paul Barry _ Dec 15 2010 ● a(2m) = hypergeom([1, - m,m + 1],[], - 1). ● a(2m + 1) = hypergeom([1, - m,m + 2],[], - 1) * (m + 1). ● a(2m - 1) + a(2m + 1) = (2m + 1) a(2m). (End) ● a(n) = Sum _{ k=0..n } (- 1) ^ k * hypergeom([k + 1, k - n], [], - 1). - _ Peter Luschny _ , Oct 05 2017 ●

▶ [A001120] 1,1,3,8,33,164,985,6894,55153,496376,4963761,54601370,655216441,8517813732,119249392249,1788740883734,28619854139745,486537520375664,8757675366761953,166395831968477106,3327916639369542121,69886249426760384540,1537497487388728459881 ★ a(0) = a(1) = 1; for n > 1, a(n) = n * a(n - 1) + (- 1) ^ n. ● a(n) = n! * (1 + Sum _{ k=0..n } (- 1) ^ k / k!, n>=1. - _ Paolo P. Lava _ , Nov 21 2008 ● a(n) = (n - 1) * (a(n - 1) + a(n - 2)), n>2. - _ Gary Detlefs _ , Apr 11 2010 ●

▶ [A024419] 1,1,3,8,34,156,924,6144,48096,420480,4134240,44720640,530444160,6824805120,94787884800,1412038656000,22464536371200,380017225728000,6811416338227200,128936055177216000,2570286167543808000,53818546503794688000,1180914445357903872000 ★ a(n) = n! (1 / C(n,0) + 1 / C(n,1) + ... + 1 / C(n,[n / 2])). ● a(n) = Sum _{ k=0..floor(n / 2) } k! * (n - k)!. - _ Vladimir Reshetnikov _ , Oct 05 2016 ●

▶ [A077291] 0,3,8,35,84,351,836,3479,8280,34443,81968,340955,811404,3375111,8032076,33410159,79509360,330726483,787061528,3273854675,7791105924,32407820271,77123997716,320804348039,763448871240 ★ Second member of Diophantine pair (m,k) that satisfies 6 * (m ^ 2 + m) = k ^ 2 + k: a(n) = k. ● a(n) = 10 * a(n - 2) - a(n - 4) + 4 with a(- 2)= - 4, a(- 1)= - 1, a(0)=0, a(1)=3. ● a(n) = a(n - 1) + 10 * a(n - 2) - 10 * a(n - 3) - a(n - 4) + a(n - 5). (End) ●

▶ [A304726] 3,8,35,120,323,728,1443,2600,4355,6888,10403,15128,21315,29240,39203,51528,66563,84680,106275,131768,161603,196248,236195,281960,334083 ★ a(n) = n ^ 4 + 4 * n ^ 2 + 3. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ●

▶ [A295103] 1,1,3,8,36,159,932,5627,40016,302364,2510712,22623490,213486864,2227719948,23388469400,277570328040,3182959484736,42530335589088,523078873327872,7846745537655360,101370634558327680,1717052148685665792,22657314273376353408 ★ a(n) = (1 / n) times the n - th derivative of the third tetration of x (power tower of order 3) x ^^ 3 at x=1. ● a(n) = 1 / n * [(d / dx) ^ n x ^^ 3] _{ x=1 } . ● a(n) = (n - 1)! * [x ^ n] (x + 1) ^^ 3. ●

▶ [A367640] 1,3,8,36,200,1220,7896,53220,369528,2624772,18981864,139287588,1034475624,7761249476,58735359032,447827171556,3436759851672,26526255859716,205782644595912,1603655203428900,12548225647402248,98548826076070596,776552629964300952 ★ G.f. A(x) satisfies A(x) = (1 + x) ^ 2 + x * A(x) ^ 3 / (1 + x) ^ 2. ● a(n) = Sum _{ k=0..n } binomial(2 * k + 2,n - k) * binomial(3 * k,k) / (2 * k + 1). ●

▶ [A024039] 1,3,8,37,192,899,3880,16041,65024,261415,1047576,4192973,16775488,67106667,268432712,1073738449,4294963200,17179864271,68719470904,274877900085,1099511619776,4398046501843,17592186033768,70368744165497,281474976696832 ★ a(n) = 4 ^ n - n ^ 3. ● a(n) = 8 * a(n - 1) - 22 * a(n - 2) + 28 * a(n - 3) - 17 * a(n - 4) + 4 * a(n - 5); a(0)=1, a(1)=3, a(2)=8, a(3)=37, a(4)=192. - _ Harvey P. Dale _ , Jul 26 2011 ●

▶ [A065914] 1,3,8,38,294,2922,38949,604764,11635147,287020007,7721129740,250811981714 ★ Number of primes in the interval [1 / 2 * q(n), 3 / 2 * q(n) - 1] where q(n) is prime(n) # , the n - th primorial. ● a(n) = pi(3 * q(n) / 2 - 1) - pi(q(n) / 2 - 1). ●

▶ [A108262] 3,8,39,220,1275,7424,43263,252148,1469619,8565560,49923735,290976844,1695937323,9884647088,57611945199,335787024100,1957110199395,11406

74172264,66484134834183,387497934832828,2258503474162779,13163522910143840,76722633986700255 ⋆ Second order recursive series having the property that the product of any two adjacent terms equals 4 times a triangular number. Tha t is a(n) * a(n + 1)= 4 * T(c) = 2c(c + 1), where c = the term a(n + 1) of rela ted series A108261. ● a(n) = 6 * a(n - 1) - a(n - 2) - 6. ●

► [A107991] 1,1,1,3,8,40,180,1260,8064,72576,604800,6652800,68428800,889574400,10897286400,163459296000,2324754432000,39520825344000,640237370572800,12164510040883200,221172909834240000,4644631106519040000,93666727314800640000 ⋆ Complexity (number of maximal spanning trees) in an unoriented si mple graph with nodes { 1,2,...,n } and edges { i,j } if i + j > n. ● a(n) = (n - 1)! / floor((n + 1) / 2). ● a(n + 1) = n! / floor(n / 2 + 1). - _ M. F. Hasler _ , Apr 21 2015 ●

► [A038048] 1,3,8,42,144,1440,5760,75600,524160,6531840,43545600,1117670400,6706022400,149448499200,2092278988800,40537905408000,376610217984000,13871809695744000,128047474114560000,5109094217170944000 ⋆ a(n) = (n - 1)! * sigma(n). ● a(n) = Sum _{ d|n } n! / d. - _ Amarnath Murthy _ , Jul 24 2005 ● a(p) = (p + 1) * (p - 1)! if p is a prime. - _ Amarnath Murthy _ , Jul 24 2005 ●

► [A210373] 0,3,8,48,84,243,360,768,1040,1875,2400,3888,4788,7203,8624,12288,14400,19683,22680,30000,34100,43923,49368,62208,69264 ⋆ Number of 2 X 2 mat rices with all elements in { 0,1,...,n } and positive odd determinant. ● a(n) = (2 * n + 1 - (- 1) ^ n) ^ 2 * (6 * n + 5 - (- 1) ^ n) * (2 * n + 3 + (- 1) ^ n) / 2 56 ● a(n) = a(n - 1) + 4 * a(n - 2) - 4 * a(n - 3) - 6 * a(n - 4) + 6 * a(n - 5) + 4 * a(n - 6) - 4 * a(n - 7) - a(n - 8) + a(n - 9) for n > 8. ●

► [A309578] 1,3,8,48,144,329,2584,15456,104005,832040,1866294,34111385,267914296,1602508992,10783446409,193501094490,1548008755920,3472236254411,166151337293088,498454011879264,1118049290473933,5350021460545569 6,360008399296352015,2460986135945634432 ⋆ Multiplicative inverse of Fibonacci(prime(n)) modulo Fibonacci(prime(n + 1)). ● a(n) = invmod(Fibonacci(prime(n)), Fibo nacci(prime(n + 1)). ●

► [A005444] 1,1,3,8,50,214,2086,11976,162816,1143576,20472504,165910128,3785092032,33908109936,967508478192,9252123203712,327062428940160,3236057604910080,141403298973955840,1404243298160352000,7616895591683102976 0,735206146073008508160 ⋆ From a Fibonacci - like differential equation. ● a(n) = Su m _{ k=0..n } k! * Fibonacci(k + 1) * Stirling1(n, k). ●

► [A121567] 1,1,3,8,55,144,987,2584,17711,317811,832040,14930352,102334155,267914296,1836311903,32951280099,591286729879,1548008755920,2777789003528,190392490709135,498454011879264,8944394323791464 ⋆ Fibonacci[(p - 1)], w here p = Prime[n]. ● a(n) = Fibonacci[Prime[n] - 1]. ●

► [A233175] 3,8,80,800,8576,92672,1009664,11018240,120356864,1315045376,14370209792,157036838912,1716116258816,18754008252416,204947383648256,2239705722650624,24475955615498240,267478202279002112 ⋆ Number of 2 X n 0..5 a rrays with no element x(i,j) adjacent to itself or value 5 - x(i,j) horizontally, dia gonally or antidiagonally, top left element zero, and 1 appearing before 2 3 and 4, and 2 appearing before 3 in row major order (unlabelled 6 - colorings with no clashing color pairs). ● a(n) = 2 ^ (2 * n - 3) + (1 / 32) * sqrt(3) * (- (4 - 4 * s qrt(3)) ^ n + (4 * (1 + sqrt(3))) ^ n) for n>1. ●

► [A233163] 3,8,96,1280,18432,278528,4325376,68157440,1082130432,17246978048,275414777856,4402341478400,70403103916032,1126174784749568,18016597532737536,288247968337756160,4611826755915743232 ⋆ Number of n X 3 0..7 arr ays with no element x(i,j) adjacent to itself or value 7 - x(i,j) horizontally, diago nally, antidiagonally or vertically, top left element zero, and 1 appearing before 2 3 4 5 and 6, 2 appearing before 3 4 and 5, and 3 appearing before 4 in row ma jor order (unlabelled 8 - colorings with no clashing color pairs). ● a(n) = 8 ^ (n - 2) * (2 ^ n + 4) for n>1. ●

► [A004669] 1,3,9,10,30,90,100,300,900,1000,3000,9000,10000,30000,90000,100000,300000,900000,1000000,3000000,9000000,10000000,30000000,90000000,100000000 ⋆ Powers of 3 written in base 27. ● a(n) = 3 ^ (n mod 3) * 10 ^ floor(n / 3). - _ M. F. Hasler _ , Jun 22 2018 ● a(n) = 10 * a(n - 3) for n > 2. ●

► [A047471] 1,3,9,11,17,19,25,27,33,35,41,43,49,51,57,59,65,67,73,75,81,83,89,91,97 ⋆ Numbers that are congruent to { 1, 3 } mod 8. ● a(n) = 4 * (n - 1) - (- 1) ^ n. - _ Rolf Pleisch _ , Aug 04 2009 ● a(n) = 8 * n - a(n - 1) - 12, with a(1)= 1. - _ Vincenzo Librandi _ , Aug 06 2010 ●

► [A225771] 1,3,9,11,17,19,27,33,41,43,51,57,59,67,73,81,83,89,97,99,107,113,121,123,129 ⋆ Numbers that are positive integer divisors of 1 + 2 * x ^ 2 where x is a positive integer. ● a(n) integers whose prime divisors are congruent to 1 or 3 (mod 8). - _ Carmine Suriano _ , Jan 09 2015; corrected by _ Frank M Jack son _ , May 23 2017 ●

► [A144181] 1,1,3,9,11,17,35,57,91,161,275,457,779,1329,2243,3801,6459,10945,18547,31465,53355,90449,153379,260089,440987 ⋆ INVERT transform of A118434 , = row sums of triangle A144182. ● a(n) = a(n - 1) + 2 * a(n - 3) for n>3. ●

► [A179867] 3,9,11,21,22,41,42,43,44,81,82,83,84,85,86,87,88,161,162,163,164,165,166,167,168 ⋆ "Recurrence function" for Thue - Morse infinite word A010060. ● a(1)=3, a(2)=9; thereafter define k by 2 ^ k + 2 <= n <= 2 ^ (k + 1) + 1 a nd set a(n) = 9 * 2 ^ k + n - 1. ●

► [A145812] 1,3,9,11,33,35,41,43,129,131,137,139,161,163,169,171,513,515,521,523,545,547,553,555,641 ⋆ Odd positive integers a(n) such that for every odd integ er m > 1 there exists a unique representation of m as a sum of the form a(l) + 2a(s). ● a(2n - 1) = 4 * a(n) - 3. ● a(2n) = 4 * a(n) - 1. ●

► [A220944] 1,3,9,11,33,35,105,107,321,323,969,971,2913,2915,8745,8747,26241,26243,78729,78731,236193,236195,708585,708587,2125761 ⋆ Expansion of (1 + 3 * x + 5 * x ^ 2 - x ^ 3) / ((1 - x ^ 2) * (1 - 3 * x ^ 2). ● a(n) = a(n - 1) + 2 if n o dd. ● a(n) = a(n - 1) * 3 if n even. ● a(n) = 4 * a(n - 2) - 3 * a(n - 4) with a(0) =1, a(1)=3, a(2)=9, a(3)=11. ●

► [A249647] 1,3,9,11,33,99,111,333,999,1111,3333,9999,11111,33333,99999,111111,142857,333333,999999,1111111,3333333,9999999,11111111,33333333,99999999 ⋆ Numbers n that divide the concatenation of n + 1 and n - 1. ● a(n) = 1000001 * a(n - 19) + 1000000 * a(n - 38). - _ Robert Israel _ , Jan 06 2016 ●

► [A135365] 1,3,9,11,33,99,313,939,2817,8435,25305,75915,227761,683283,2049849,6149531,18448593,55345779,166037353,498112059,1494336177,4483008515,13449025545,40347076635,121041229921 ⋆ a(n) = 3 * a(n - 1) - a(n - 3) + 3 * a(n - 4) for n>3. ● a(n) = (1 / 7) * 3 ^ (n + 1) + (4 / 3) * (- 1) ^ n - (16 / 21) * cos(Pi * n / 3) + (16 * sqrt(3) / 7) * sin(Pi * n / 3). ● a(n) = (1 / 7) * 3 ^ (n + 1) + (1 / 7) * [4; 12; 36; - 4; - 12; - 36] for n>=0. (End) ● a(n) = (3 / 7) * 3 ^ n + (4 / 3) * (- 1) ^ n - (8 / 21) * (((1 - i * sqrt(3)) / 2) ^ n + ((1 + i * sqrt(3)) / 2) ^ n) + (8 / 7) * i * sqrt(3) * (((1 - i * sqrt(3)) / 2) ^ n - ((1 + i * sqrt(3)) / 2) ^ n), with n>=0. - _ Paolo P. Lava _ , Jan 09 2009 ●

► [A069871] 3,9,11,33,111,333,1111,3333,11111,33333,111111,142857,333333,1111111,3333333,11111111,33333333,111111111,333333333,1111111111,3333333333,11111111111,33333333333,111111111111,142857142857 ⋆ Numbers n that divide t he concatenation of n - 1 and n + 1. ● a(1 + 2 * j + 13 * k) = (10 ^ (1 + j + 6 * k) - 1) / 9, j=0..5, k >= 0 (except for j=k=0). ● a(2 * j + 13 * k) = (10 ^ (j + 6 * k) - 1) / 3, j=0..5, k >= 0 (except for j=k=0 and j=1,k=0). ● a(13 * k - 1) = (10 ^ (6 * k) - 1) / 7, k >= 1. ●

► [A077468] 1,3,9,12,15,17,27,34,39,46,49,52,54,66,70,73,81,84,90,95,102,106,110,116,119 ⋆ Greedy powers of (2 / 3): sum _{ n=1..inf } (2 / 3) ^ a(n) = 1. ● a(n)=sum _{ k=1..n } floor(g _ k) where g _ 1=1, g _{ n + 1 } =log _ x(x ^ frac(g _ n) - x) (n>0) at x=(2 / 3) and frac(y) = y - floor(y). ●

► [A136290] 1,3,9,12,15,21,24,27,33,36,39,45,48,51,57,60,63,69,72,75,81,84,87,93,96 ⋆ a(0)=1, a(1)=3, a(2)=9, a(3)=12, a(4)=15; thereafter a(n) = a(n - 1) + a(n - 3) - a(n - 4). ● a(n) = [n=0] + 4 * n - ChebyshevU(n - 1, - 1 / 2). - _ G. C. G reubel _ , Apr 13 2021 ●

► [A261953] 1,3,9,12,18,21,27,30,36,39,45,48,54,57,63,66,72,75,81,84,90,93,99,102,108 ⋆ Start with a single equilateral triangle for n=0; for the odd n - th gene ration add a triangle at each expandable side of the triangles of the (n - 1) - th generation (this is the "side to side" version); for the even n - th generation us e the "vertex to vertex" version; a(n) is the number of triangles added in the n - th generation. ● a(0)=1, a(1)=3; for n >= 2, a(n) = a(n - 1) + 6, if mod(n,2) = 0, otherwise a(n) = a(n - 1) + 3. ● a(n) = (3 * (- 1 + (- 1) ^ n + 6 * n)) / 4 . ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n>3. ● a(0)=1; for n >= 1, a(n) = 9n / 2 for even n, a(n) = (9n - 3) / 2 for odd n. - _ Manfred Boergens _ , Sep 21 2021 ●

► [A022379] 3,9,12,21,33,54,87,141,228,369,597,966,1563,2529,4092,6621,10713,17334,28047,45381,73428,118809,192237,311046,503283 ⋆ Fibonacci sequence begi nning 3, 9. ● a(n + 2) = 3 * L(n + 3) = L(n) + 4 * L(n + 1) + 2 * L(n + 2), w here L=A000032. - _ J. M. Bergot _ , Oct 21 2012 ● a(n) = Fibonacci(n + 4) - Fibonacci(n - 4), where n>0 and Fibonacci(- 3.. - 1) = 2, - 1,1. - _ Bruno Bers elli _ , May 22 2015 ● a(n) = L(n + 4) + L(n - 4) - 4 * L(n) for n>0. - _ Brun o Berselli _ , Dec 29 2016 ●

► [A344720] 1,3,9,12,22,30,44,48,71,83,105,115,141,157,201,206,240,266,304,318,378,402,448,460,519 ⋆ a(n) = Sum _{ k=1..n } (- 1) ^ (k + 1) * floor(n / k) ^ 2 . ● a(n) = Sum _{ k=1,..n } Sum _{ d|k } (- 1) ^ (k / d + 1) * (2 * d - 1). ●

► [A268044] 3,9,13,19,23,29,33,39,43,49,53,59,63,69,73,79,83,89,93,99,103,109,113,119,123 ⋆ The odd numbers congruent to { 3, 4 } mod 5. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3). ● a(n) = 5 * n - (3 - (- 1) ^ n) / 2. ●

► [A075318] 3,9,13,19,25,29,35,39,45,51,55,61,67,71,77,81,87,93,97,103,107,113,119,123,129 ⋆ Pair the odd numbers such that the k - th pair is (r, r + 2k) wher e r is the smallest odd number not included earlier: (1,3),(5,9),(7,13),(11,19),(15,25),(17,29),(21,35),(23,39),(27,45),... This is the sequence of the second membe r of pairs. ● a(n) = 2 * floor(n * phi ^ 2) - 1, where phi=(1 + sqrt(5)) / 2. - _ Michel Dekking _ , Sep 08 2016 ●

► [A135370] 1,3,9,13,23,29,43,51,69,79,101,113,139,153,183,199,233,251,289,309,351,373,419,443,493 ⋆ a(1)=1; then if n even a(n) = n + a(n - 1), if n odd a(n) = 2 * n + a(n - 1). ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). ● a(n) = - 7 / 8 + 3 * n * (n + 1) / 4 - (- 1) ^ n * (1 + 2 * n) / 8. (End) ● a(n) = (lcm(f(n), f(n) + 3) - 1) / 3, where f(n) = floor((3 * n - 1) / 2). - _ Gar y Detlefs _ , May 14 2011 ●

► [A285900] 1,3,9,13,23,35,49,57,84,104,126,150,176,204,264,280,314,368,406,446,530,574,620,668,743 ⋆ Sum of all parts of all partitions of all positive integers <= n into consecutive parts. ● a(n) = Sum _{ k=1..floor((n + 1) / 2) } (2 * k - 1) / 2 * floor(n / (2 * k - 1)) * floor(1 + n / (2 * k - 1)). - _ Daniel Suteu _ , Nov 06 2018 ●

► [A022408] 3,9,13,23,37,61,99,161,261,423,685,1109,1795,2905,4701,7607,12309,19917,32227,52145,84373,136519,220893,357413,578307 ⋆ a(n) = a(n - 1) + a(n - 2) + 1, with a(0)=3, a(1)=9. ● a(n) = 2 * Lucas(n + 1) + 2 * Fibonacci(n + 2) - 1. - _ Greg Dresden _ , Oct 10 2020 ●

► [A092476] 1,3,9,14,16,22,27,29,35,40,42,48,53,55,61,66,68,74,79,81,87,92,94,100,105 ⋆ Numbers that are congruent to { 1, 3, 9 } mod 13. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. ● a(n) = a(n - 3) + 13 for n>3. (End) ● a(n) = (39 * n - 39 + 3 * cos(2 * n * Pi / 3) + 7 * sqrt(3) * sin(2 * n * Pi / 3)) / 9. ● a(3k) = 13k - 4, a(3k - 1) = 13k - 10, a(3k - 2) = 13k - 12. (End) ●

► [A001968] 3,9,14,19,24,30,35,40,45,51,56,61,66,71,77,82,87,92,98,103,108,113,119,124,129 ⋆ v - pile positions of the 4 - Wythoff game with i=3. ● a(n) = floor((n + 3 / 4) * (3 + sqrt 5)). - _ R. J. Mathar _ , Feb 14 2011 ●

► [A259754] 3,9,15,18,21,27,33,39,42,45,51,57,63,66,69,75,81,87,90,93,99,105,111,114,117 ⋆ Numbers that are congruent to { 3,9,15,18,21 } mod 24. ● a(n) = a (n - 1) + a(n - 5) - a(n - 6) for n>6. ●

► [A277569] 3,9,15,18,21,27,33,39,45,51,54,57,63,69,75,81,87,90,93,99,105,108,111,117,123 ⋆ Numbers n such that n / 6 ^ m == 3 (mod 6), where 6 ^ m is the g reatest power of 6 that divides n. ● a(n) = 5n + O(log n). - _ Charles R Great house IV _ , Nov 03 2016 ●

► [A016945] 3,9,15,21,27,33,39,45,51,57,63,69,75,81,87,93,99,105,111,117,123,129,135,141,147 ⋆ a(n) = 6 * n + 3. ● a(n) = 12 * n - a(n - 1) for n>0, a(0)=3. - _ Vincenzo Librandi _ , Nov 20 2010 ●

► [A085046] 1,3,9,15,25,35,49,63,81,99,121,143,169,195,225,255,289,323,361,399,441,483,529,575,625 ⋆ a(n) = n ^ 2 - (1 + (- 1) ^ n) / 2. ● a(1) = 1, a(2) = 3, th en a(2n) = (a(2n - 1) * a(2n + 1)) ^ 1 / 2 and a(2n + 1) = { a(2n) + a(2n + 2) }/ 2. Even - indexed terms are the geometric mean, and odd - indexed terms a re the arithmetic mean, of their neighbors. ● a(2n + 1) = (2n + 1) ^ 2 and a(2 n) = 4n ^ 2 - 1. ● a(n) = n ^ 2 - (1 + (- 1) ^ n) / 2. (End) ● a(1)=1, a(2)=3, a

(3)=9, a(4)=15, a(n) = 2 * a(n - 1) + 0 * a(n - 2) - 2 * a(n - 3) + a(n - 4). - _ Harvey P. Dale _ , Oct 25 2015 ●

▶ [A138495] 0,1,1,1,3,9,15,25,55,121,231,441,903,1849,3655,7225,14535,29241,58311,116281,232903,466489,932295,1863225,3727815 ⋆ First differences of A138477. ● a(n) = a(n - 1) + 2 * a(n - 3) + 4 * a(n - 4). (End) ●

▶ [A316261] 1,3,9,15,26,37,55,73,100,127,165,203,254,305,371,437,520,603,705,807,930,1053,1199,1345,1516 ⋆ The number of ways to induce a single pinch on a compact 2 - manifold with n handles. (Note: The manifold is embedded in Euclidean 2 - space, and each pinch partitions it into at most two submanifolds.) ● a(n) = (2 * n ^ 3 + 12 * n ^ 2 + 73 * n + 3 * (n + 2) * (- 1) ^ n - 6) / 24 + (((- 1) ^ (2 ^ n - 1) + 1) / 2. ● a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + a(n - 4) + 2 * a(n - 5) - a(n - 6) for n>6. ●

▶ [A247643] 1,3,9,15,27,37,55,69,93,111,141,163,199,225,267,297,345,379,433,471,531,573,639,685,757 ⋆ a(n) = (10 * n * (n + 1) + (2 * n + 1) * (- 1) ^ n + 7) / 8. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). - _ Colin Barker _ , Sep 25 2014 ●

▶ [A048701] 0,3,9,15,33,45,51,63,129,153,165,189,195,219,231,255,513,561,585,633,645,693,717,765,771 ⋆ List of binary palindromes of even length (written in base 10). ● a(n) = (2 ^ (floor _ log _ 2(n) + 1)) * n + Sum _{ i=0..floor _ log _ 2(n) } '(bit _ i(n, i) * (2 ^ (floor _ log _ 2(n) - i)))'. ●

▶ [A058039] 1,3,9,15,33,51,81,111,177,243,345,447,609,771,993,1215,1569,1923,2409,2895,3585,4275,5169,6063,7281 ⋆ a(n) = a(n - 1) + 2 * a(floor(n / 2)) if n > 0, otherwise 1. ● a(n) = 1 + 2 * Sum _{ k=1..n } a(floor(k / 2)). - _ Ilya Gutkovskiy _ , Aug 15 2021 ●

▶ [A065917] 1,3,9,15,45,75,105,315,525,735,945,1155,3465,5775,8085,10395,12705,15015,45045,75075,105105,135135,165165,195195,225225 ⋆ Boundaries of primorial intervals [1,3]; [3,9],[9,15]; [15,45], etc. ● a(n + 1)= a(n) + q(j) for primorial q(j) < a(n + 1) <= q(j + 1) / 2. ●

▶ [A120403] 3,9,15,45,225,639,1275,4005,675405,2203959,3075159,6195234165,77989711185,4566262987329 ⋆ a(1)=3; a(n)=first odd number greater than a(n - 1) such that 2 * a(n) - 1 is prime and a(i) + a(n) - 1 is prime for all 1<=i<=n - 1. ● a(1)=3; a(n) = s where s is the first odd number s>a(n - 1) such that 2 * s - 1 is prime and s + a(i) - 1 is prime, 1<=i<=n - 1. ●

▶ [A323679] 1,3,9,15,79,657,2789,9679,50187,122379,911783,7942511,71320919,292307479,1254424307,5649367163,25471489371,151196109585,513167692755,4381764642655,29243835423341,209688880294187,1635709191538759,905028928330279 5,40510463137400579 ⋆ a(n) equals the coefficient of x ^ (n * (n + 1)) in Sum _{ m>=0 } x ^ m * (1 + x ^ m) ^ m / (1 + x ^ (m + 1)) ^ (m + 1) for n >= 0. ● a(n) = [x ^ (n * (n + 1))] Sum _{ k>=0 } x ^ k * (1 + x ^ k) ^ k / (1 + x ^ (k + 1)) ^ (k + 1). ● a(n) = [x ^ (n * (n + 1))] Sum _{ k>=0 } (- x) ^ k * (1 - x ^ k) ^ k / (1 - x ^ (k + 1)) ^ (k + 1). ● a(n) = [x ^ (n * (n + 1))] Sum _{ m>=0 } x ^ m * Sum _{ k=0..m } binomial(m,k) * (x ^ m - x ^ k) ^ (m - k). ● a(n) = [x ^ (n * (n + 1))] Sum _{ m>=0 } x ^ m * Sum _{ k=0..m } binomial(m,k) * (- 1) ^ k * (x ^ m + x ^ k) ^ (m - k). ● a(n) = [x ^ (n * (n + 1))] Sum _{ m>=0 } x ^ m * Sum _{ k=0..m } binomial(m,k) * (- 1) ^ k * Sum _{ j=0..m - k } binomial(m - k,j) * x ^ ((m - k) * (m - j)). ●

▶ [A338020] 3,9,16,22,28,35,40,48,53,60,66,72,78,85,91,98,103,110,117,122,129,135,141,148,154 ⋆ a(n) is the number of circles of positive integer area with radii less than n and greater than n - 1. ● a(n) = #{ floor(sqrt(k / Pi)) < n: n > 0, k > 0 } . ●

▶ [A253547] 0,0,0,1,3,9,16,23,33,43,56,69,85,101,120,139,161,183,208,233,261,289,320,351,385 ⋆ The total number of star - shaped dodecagons appearing in a variant of hexagon expansion after n iterations. ● a(n) = (27 - 3 * (- 1) ^ n - 28 * n + 6 * n ^ 2) / 8 for n>5. ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4) for n >6. ●

▶ [A334563] 0,0,0,0,3,9,16,24,33,43,54,66,79,93,108,124,141,159,178,198,219,241,264,288,313 ⋆ a(n) is the maximum number of 4 - cycles possible in an n - vertex planar graph. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n > 6. ● a(n) = (n ^ 2 + 3 * n - 22) / 2 for n > 3 and 0 otherwise (see Theorem 2 in Hakimi and Schmeichel). ● a(n) = a(n - 1) + n + 1 for n > 4. ●

▶ [A109340] 0,0,1,3,9,16,24,36,49,63,81,100,120,144,169,195,225,256,288,324,361,399,441,484,528 ⋆ Expansion of x ^ 2 * (1 + x + 4 * x ^ 2) / ((1 + x + x ^ 2) * (1 - x) ^ 3). ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) - 2 * a(n - 4) + a(n - 5); a(0)=0, a(1)=0, a(2)=1, a(3)=3, a(4)=9. - _ Harvey P. Dale _ , Jun 24 2013 ● a(n) = (n - 1) ^ 2 - ((n + 1) mod 3) mod 2, n >= 1. - _ Gerhard Kirchner _ , Jan 20 2017 ●

▶ [A212566] 0,0,0,1,3,9,16,26,44,63,87,123,160,204,264,325,395,485,576,678,804,931,1071,1239,1408 ⋆ Number of (w,x,y,z) with all terms in { 1,...,n } and w + x =3y + 3z. ● a(n) = 2 a(n - 1) - a(n - 2) + 2 * a(n - 3) - 4 * a(n - 4) + 2 * a(n - 5) - a(n - 6) + 2 * a(n - 7) - a(n - 8). ●

▶ [A306447] 3,9,16,29,56,110,225,469,991,2110,4511,9666,20736,44511,95575,205253,440828,946817,2033628,4367986,9381949,20151433,43283195,92967882,199685571 ⋆ Number of (undirected) Hamiltonian cycles in the n - antiprism graph. ● a(n) = 3 * a(n - 1) - a(n - 2) - 2 * a(n - 3) + a(n - 5) for n>5. ●

▶ [A014209] 1,3,9,17,27,39,53,69,87,107,129,153,179,207,237,269,303,339,377,417,459,503,549,597,647 ⋆ a(n) = n ^ 2 + 3 * n - 1. ● a(n) = a(n - 1) + 2 * n + 2, with n>0, a(0)= - 1. - _ Vincenzo Librandi _ , Nov 20 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A035107] 3,9,17,29,44,64,88,118,153,195,243,299,362,434,514,604,703,813,933,1065,1208,1364,1532,1714,1909 ⋆ First differences give (essentially) A028242. ● a(n) = (4 * n ^ 3 + 54 * n ^ 2 + 212 * n + 153 - 9 * (- 1) ^ n) / 48. ●

▶ [A049778] 1,3,9,17,32,50,78,110,155,205,271,343,434,532,652,780,933,1095,1285,1485,1716,1958,2234,2522,2847 ⋆ a(n) = Sum _{ k=1..floor((n + 1) / 2) } T(n,2k - 1), array T as in A049777. ● a(n) = Sum _{ k=1..n } k * ceiling(k / 2). - _ Vladeta Jovovic _ , Apr 29 2006 ● a(n) = (3 + 10 * n + 18 * n ^ 2 + 8 * n ^ 3 - 3 * (- 1) ^ n * (1 + 2 * n)) / 48. - _ R. J. Mathar _ , Mar 03 2011 ● a(n) = m * (3 * (n - 1) * (n + 2) - (m + 1) * (4 * m - 7)) / 6, where m = floor((n + 1) / 2). ●

▶ [A239206] 1,1,3,9,17,35,73,147,295,591,1181,2363,4729,9459,18917,37837,75673,151347,302697,605395,1210791,2421581,4843163,9686329,19372659 ⋆ a(n) is the total number of rows of circles of radius r packing into a circle of radius R, where r = R / 2 ^ n. ● a(n) = 2 * floor((1 - r) / (2 * r * cos(Pi / 6))) + 1, where r = 1 / 2 ^ n. ● a(n) = 2 * floor(sqrt((2 ^ n - 1) ^ 2 / 3)) + 1. - _ Andrew Howroyd _ , May 27 2018 ●

▶ [A261952] 1,3,9,18,18,24,27,33,36,42,45,51,54,60,63,69,72,78,81,87,90,96,99,105,108 ⋆ Start with a single equilateral triangle for n=0; for the odd n - th generation add a triangle at each expandable vertex of the triangles of the (n - 1) - th generation (this is the "vertex to vertex" version); for the even n - th generation use the "side to side" version; a(n) is the number of triangles added in the n - th generation. ● a(n) = 3 * (1 - (- 1) ^ n + 6 * n) / 4 for n>3. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n>6. ●

▶ [A360365] 3,9,18,20,25,33,35,43,57,57,66,84,111,119,139,171,176,196,231,231,249,285,339,353,388 ⋆ a(n) = sum of the products of the digits of the first n positive multiples of 3. ● a((10 ^ n - 1) / 3) = (1 / 836) * (15 * (19 * 45 ^ n - 63) + 44 * 3 ^ ((3 * n) / 2) * (sqrt(3) * sin((Pi * n) / 6) + 15 * cos((Pi * n) / 6))). ● a((10 ^ n - 1) / 3) = 55 * a((10 ^ (n - 1) - 1) / 3) - 486 * a((10 ^ (n - 2) - 1) / 3) + 1647 * a((10 ^ (n - 3) - 1) / 3) - 1215 * a((10 ^ (n - 4) - 1) / 3) for n > 4. ●

▶ [A045943] 0,3,9,18,30,45,63,84,108,135,165,198,234,273,315,360,408,459,513,570,630,693,759,828,900 ⋆ Triangular matchstick numbers: a(n) = 3 * n * (n + 1) / 2. ● a(n) is the sum of n + 1 integers starting from n, i.e., 1 + 2, 2 + 3 + 4, 3 + 4 + 5 + 6, 4 + 5 + 6 + 7 + 8, etc. - _ Jon Perry _ , Jan 15 2004 ● a(n) = a(n - 1) + 3 * n, n>0. - _ Vincenzo Librandi _ , Nov 18 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>2. - _ Wesley Ivan Hurt _ , Nov 24 2015 ●

▶ [A134479] 1,3,9,18,30,45,63,84,108,135,165,198,234,273,315,360,408,459,513,570,630,693,759,828,900 ⋆ Row sums of triangle A134478. ● a(n) = 3 * n * (1 + n) / 2 for n>0. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>3. (End) ●

▶ [A184969] 3,9,18,30,45,63,84,109,137,168,202,239,279,322,369,419,472,528,587,649,714,783,855,930,1008 ⋆ a(n) = [Pi] + [2 * Pi] + ... + [n * Pi], where []=floor. ● a(n) / n ^ 2 ~ Pi / 2. ● a(n) = Pi / 2 * n ^ 2 + e(n) * n, where Pi / 2 - 1 < e(n) < Pi / 2. [_ Charles R Greathouse IV _ , May 27 2011] ●

▶ [A330010] 1,3,9,18,30,48,78,126,204,330,534,864,1398,2262,3660,5922,9582,15504,25086,40590,65676,106266,171942,278208,450150 ⋆ Number of length - n ternary strings x with the property that if w is a subword of x and |w| >= 3, then w reversed is not a subword of x. ● a(n) = 6 * F(n + 1) for n >= 3, where F(n) is the n - th Fibonacci number. ● a(n) = a(n - 1) + a(n - 2) for n>4. ●

▶ [A132920] 1,3,9,18,35,63,112,196,342,595,1034,1794,3107,5369,9255,15912,27285,46665,79610,135490,230076,389873,659364,1113108,1875925 ⋆ a(n) = n * Fibonacci(n) + binomial(n, 2). ● a(n) = 5 * a(n - 1) - 8 * a(n - 2) + 2 * a(n - 3) + 6 * a(n - 4) - 4 * a(n - 5) - a(n - 6) + a(n - 7). ●

▶ [A028723] 0,0,0,0,0,1,3,9,18,36,60,100,150,225,315,441,588,784,1008,1296,1620,2025,2475,3025,3630 ⋆ a(n) = (1 / 4) * floor(n / 2) * floor((n - 1) / 2) * floor((n - 2) / 2) * floor((n - 3) / 2). ● a(n) = (n ^ 4 - 8 * n ^ 3 + 18 * n ^ 2 - 12 * n + 2 * n * (n - 2) * ((1 + (- 1) ^ n) / 2) + (2 * n - 3) ^ 2 * ((1 - (- 1) ^ n) / 2)) / 64. - _ Luce ETIENNE _ , Mar 22 2014 ● a(n) = a(4 - n) for all n in Z. - _ Michael Somos _ , Nov 02 2014 ● a(n + 1) ^ 2 - a(n) * a(n + 2) = binomial(n / 2, 2) ^ 3 for all even n in Z (= 0 if n odd). - _ Michael Somos _ , Nov 02 2014 ● a(n) * (a(n + 1) + a(n + 2)) + a(n + 1) * (- 3 * a(n + 1) + a(n + 2)) = 0 for all even n in Z (= k ^ 4 * (k ^ 2 - 1) / 4 if n = 2 * k + 1). - _ Michael Somos _ , Nov 02 2014 ● a(n) = binomial(n / 2,2) ^ 2, n even; a(n) = binomial((n - 1) / 2,2) * binomial((n + 1) / 2,2), n odd. - _ Enrique Navarrete _ , Dec 22 2019 ●

▶ [A291143] 0,0,3,9,18,36,81,189,430,954,2097,4602,10080,21996,47796,103473,223308,480584,1031571,2208807,4718610,10058580,21398715,45438270,96313626 ⋆ p - INVERT of (1,1,1,1,1,...), where p(S) = (1 - S ^ 3) ^ 3. ● a(n) = 9 * a(n - 1) - 36 a(n - 2) + 87 * a(n - 3) - 144 * a(n - 4) + 171 * a(n - 5) - 147 * a(n - 6) + 90 * a(n - 7) - 36 * a(n - 8) + 8 * a(n - 9) for n >= 10. ●

▶ [A062882] 3,9,18,45,108,270,675,1701,4293,10854,27459,69498,175932,445419,1127763,2855493,7230222,18307377,46355652,117376290,297206739,752553261,1905530913,4824972522,12217257783 ⋆ a(n) = (1 - 2 * cos(Pi / 9)) ^ n + (1 + 2 * cos(Pi * 2 / 9)) ^ n + (1 + 2 * cos(Pi * 4 / 9)) ^ n. ● a(n) = 3 * (a(n - 1) - a(n - 3)) for n >= 4 - _ Roman Witula _ , Sep 29 2012 ●

▶ [A026565] 1,3,9,18,54,108,324,648,1944,3888,11664,23328,69984,139968,419904,839808,2519424,5038848,15116544,30233088,90699264,181398528,544195584,1088391168,3265173504 ⋆ a(n) = 6 * a(n - 2), starting with 1, 3, 9. ● a(0)=1, a(1)=3; a(n) = 3 * a(n - 1) if n is even, a(n) = 2 * a(n - 1) if n is odd. - _ Vincenzo Librandi _ , Nov 19 2010 ● a(n) = (1 / 4) * 6 ^ (n / 2) * (3 * (1 + (- 1) ^ n) + sqrt(6) * (1 - (- 1) ^ n)) - (1 / 2) * [n=0]. - _ G. C. Greubel _ , Dec 17 2021 ●

▶ [A253219] 3,9,19,19,268,1249,3140,5986,9792,14558,20284,26970,34616,43222,52788,63314,74800,87246,100652,115018,130344,146630,163876,182082,201248 ⋆ Number of n X 4 nonnegative integer arrays with upper left 0 and lower right its king - move distance away minus 2 and every value within 2 of its king move distance from the upper left and every value increasing by 0 or 1 with every step right, diagonally se or down. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n >9. ●

▶ [A058331] 1,3,9,19,33,51,73,99,129,163,201,243,289,339,393,451,513,579,649,723,801,883,969,1059,1153 ⋆ a(n) = 2 * n ^ 2 + 1. ● a(n) = M ^ n * [1 1 1], leftmost term, where M = the 3 X 3 matrix [1 1 1 / 0 1 4 / 0 0 1]. a(0) = 1, a(1) = 3; a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). E.g., a(4) = 33 since M ^ 4 * [1 1 1] = [33 17 1]. - _ Gary W. Adamson _ , Nov 11 2004 ● a(n) = cosh(2 * arccosh(n)). - _ Artur Jasinski _ , Feb 10 2010 ● a(n) = 4 * n + a(n - 1) - 2 for n > 0, a(0) = 1. - _ Vincenzo Librandi _ , Aug 07 2010 ● a(n) = (((n - 1) ^ 2 + n ^ 2)) / 2 + (n ^ 2 + (n + 1) ^ 2) / 2. - _ J. M. Bergot _ , May 31 2012 ●

▶ [A062748] 3,9,19,34,55,83,119,164,219,285,363,454,559,679,815,968,1139,1329,1539,1770,2023,2299,2599,2924,3275 ⋆ Fourth column (r=3) of FS(3) staircase array A062745. ● a(n - 3) = ((n ^ 3 - n) / 6) - 1, n >= 3. - _ Zerinvary Lajos _ , May 05 2007 ● a(n) = sum of n successive triangular numbers A000217 starting from n=2. ● a(n) = Sum[i(i + 1) / 2, { i=2..n }]. (End) ●

▶ [A339495] 1,3,9,19,37,73,144,283,556,1093,2149,4225,8306,16329,32102,63111,124073,243921,479536,942743,1853384,3643657,7163241,14082561,27685586 ⋆ Row sums of A339494. ● a(n) = [x ^ n] - x * (x * (x + 1) * (x * (x * (x * (x * (x + 2) + 2) + 3) + 3) + 2) + 1) / (x ^ 5 + x ^ 4 + x ^ 3 + x ^ 2 + x - 1). ●

► [A300445] 0,0,0,1,3,9,19,38,64,106,162,243,343,479,645,860,1110,1424,1790,2237,2743,3349,4035,4842,5734 ⋆ a(n) is the maximum value of the quartet index of a bifurcating rooted tree with n leaves. ● a(n) = a(floor(n / 2)) + a(ceiling(n / 2)) + binomial(floor(n / 2),2) * binomial(ceiling(n / 2),2) for n>3; with a(1)=a(2)=a(3)=0. ●
► [A005994] 1,3,9,19,38,66,110,170,255,365,511,693,924,1204,1548,1956,2445,3015,3685,4455,5346,6358,7514,8814,10283 ⋆ Alkane (or paraffin) numbers l(7,n). ● a(- 5 - n)=a(n). - _ Michael Somos _ , Mar 08 2007 ● a(n) = 3a(n - 1) - a(n - 2) - 5a(n - 3) + 5a(n - 4) + a(n - 5) - 3a(n - 6) + a(n - 7), with a(0)=1, a(1)=3, a(2)=9, a(4)=19, a(5)=38, a(6)=66, a(7)=110. - _ Harvey P. Dale _ , May 02 2011 ● a(n) = (1 / 48) * (n + 1) * (n + 3) * ((n + 2) * (n + 4) + 3) + 1 / 32 * (2 * n + 5) * (1 + (- 1) ^ n). - _ Yosu Yurramendi _ , Jun 20 2013 ●
► [A038163] 1,3,9,19,39,69,119,189,294,434,630,882,1218,1638,2178,2838,3663,4653,5863,7293,9009,11011,13377,16107,19292 ⋆ G.f.: 1 / ((1 - x) * (1 - x ^ 2)) ^ 3. ● a(n) = (1 / 3840) * (4 * n ^ 5 + 90 * n ^ 4 + 760 * n ^ 3 + 2970 * n ^ 2 + 5266 * n + 3285 + (- 1) ^ n * (30 * n ^ 2 + 270 * n + 555)). Recurrence: a(n) = 3 * a(n - 1) - 8 * a(n - 3) + 6 * a(n - 4) + 6 * a(n - 5) - 8 * a(n - 6) + 3 * a(n - 8) - a(n - 9). - _ Vladeta Jovovic _ , Apr 24 2002 ●
► [A160704] 1,3,9,19,41,87,181,363,729,1463,2933,5871,11753,23523,47061,94123,188249,376503,753013,1506031,3012073 ⋆ Jacobsthal sequence A001045 convolved with A139251 (first differences of toothpick numbers). ● a(n) = 2 * a(n - 1) + A160552, where A160552 begins with offset 1: (1, 1, 3, 1, 3, 5, 7, 1, 3, 5, 7, 5,...). ●
► [A279673] 1,3,9,19,41,99,233,531,1225,2851,6601,15251,35305,81763,189225,437907,1013641,2346275,5430537,12569363,29093289,67339363,155862889,360759571,835013705 ⋆ The maximum number of coins that can be processed in n weighings where all coins are real except for one LHR - coin starting in the light state. ● a(n) = 2a(n - 1) - a(n - 2) + 4a(n - 3). ●
► [A028377] 1,1,3,9,19,46,100,218,460,965,1975,3993,7975,15712,30650,59150,113093,214300,402812,751165,1390714,2557004,4670770,8479232,15302657 ⋆ Expansion of Product _{ m>0 } (1 + q ^ m) ^ (m(m + 1) / 2). ● a(0) = 1 and a(n) = (1 / (2 * n)) * Sum _{ k=1..n } b(k) * a(n - k) where b(n) = Sum _{ d|n } d ^ 2 * (d + 1) * (- 1) ^ (1 + n / d). - _ Seiichi Manyama _ , Nov 14 2017 ●
► [A279682] 1,3,9,19,49,123,297,707,1697,4043,9561,22547,53073,124571,291721,682083,1592577,3713643,8650425,20132275,46818225,108804923,252718825,586701827,1361496929 ⋆ The maximum number of coins that can be processed in n weighings where all coins are real except for one LHR - coin. ● a(n) = 3 * a(n - 1) - a(n - 2) + a(n - 3) - 2 * a(n - 4) - 8 * a(n - 5). ●
► [A102001] 1,3,9,19,49,123,297,739,1825,4491,11097,27379,67537,166683,411273,1014787,2504065,6178731,15246009,37619731,92826673,229050171,565182441,1394589475,3441155041 ⋆ A weighted tribonacci, (1,2,4). ● a(n) = a(n - 1) + 2 * a(n - 2) + 4 * a(n - 3), n>3. a(n) = left term in M ^ n * [1 0 0], where M = the 3 X 3 matrix [1 1 1 / 2 0 0 / 0 2 0]. ● a(n) = Sum { k=0..n } T(n - k, k)2 ^ k, T(n, k) = trinomial coefficients (A027907). - _ Paul Barry _ , Feb 15 2005 ●
► [A077442] 1,3,9,19,53,111,309,647,1801,3771,10497,21979,61181,128103,356589,746639,2078353,4351731,12113529,25363747,70602821,147830751,411503397,861620759,2398417561 ⋆ 2 * a(n) ^ 2 + 7 is a square. ● a(n) = 6 * a(n - 2) - a(n - 4) with a(1)=1, a(2)=3, a(3)=9, a(4)=19. - _ Sture Sjöstedt _ , Oct 08 2012 ● a(n) = ((- (- 1 - sqrt(2)) ^ n * (- 2 + sqrt(2)) - (- 1 + sqrt(2)) ^ n * (2 + sqrt(2)) + (1 - sqrt(2)) ^ n * (- 4 + 3 * sqrt(2)) + (1 + sqrt(2)) ^ n * (4 + 3 * sqrt(2)))) / (4 * sqrt(2)). - _ Colin Barker _ , Mar 27 2016 ●
► [A202349] 1,3,9,20,39,75,148,297,597,1196,2391,4779,9556,19113,38229,76460,152919,305835,611668,1223337,2446677,4893356,9786711,19573419,39146836 ⋆ Lexicographically first sequence such that the sequence and its first and second differences share no terms, and the 3rd differences are equal to the original sequence. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + 2 * a(n - 3) for n>2. ●
► [A192951] 0,1,3,9,20,40,74,131,225,379,630,1038,1700,2773,4511,7325,11880,19252,31182,50487,81725,132271,214058,346394,560520 ⋆ Coefficient of x in the reduction by x ^ 2 - > x + 1 of the polynomial p(n,x) defined at Comments. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - a(n - 3) + a(n - 4). ● a(n) = Fibonacci(n + 4) + 2 * Fibonacci(n + 2) - (3 * n + 5). - _ G. C. Greubel _ , Jul 12 2019 ●
► [A145070] 3,9,20,40,77,147,282,546,1067,2101,4160,8268,16473,32871,65654,131206,262295,524457,1048764,2097360,4194533,8388859,16777490,33554730,67109187 ⋆ Partial sums of A006127, starting at n=1. ● a(1) = 3; a(n) = a(n - 1) + 2 ^ n + n for n > 1. ● a(n) = (- 4 + 2 ^ (2 + n) + n + n ^ 2) / 2. ● a(n) = 5 * a(n - 1) - 9 * a(n - 2) + 7 * a(n - 3) - 2 * a(n - 4). ●
► [A011796] 1,3,9,20,42,75,132,212,333,497,728,1026,1428,1932,2583,3384,4389,5598,7084,8844,10962,13442,16380,19776,23751 ⋆ Number of irreducible alternating Euler sums of depth 6 and weight 6 + 2n. ● a(n) = T(n,6), array T as in A051168. ●
► [A164680] 1,3,9,20,42,78,139,231,372,573,861,1254,1791,2499,3432,4629,6162,8085,10492,13455,17094,21503,26832,33201,40795 ⋆ Expansion of x / ((1 - x) ^ 3 * (1 - x ^ 2) ^ 3 * (1 - x ^ 3)). ● a(n) = round(- (- 1) ^ n * (n + 3) * (n + 7) / 256 + (6 * n ^ 6 + 180 * n ^ 5 + 2070 * n ^ 4 + 11400 * n ^ 3 + 30429 * n ^ 2 + 34290 * n + 9785) / 103680) - _ R. J. Mathar _ , Mar 19 2012 ●
► [A295148] 1,3,9,20,44,91,187,379,764,1534,3075,6157,12322,24652,49313,98635,197280,394571,789153,1578318,3156648,6313309,12626631,25253276,50506566 ⋆ Solution of the complementary equation a(n) = a(n - 1) + 2 * a(n - 2) + b(n - 1), where a(0) = 1, a(1) = 3, b(0) = 2, b(1) = 4, and (a(n)) and (b(n)) are increasing complementary sequences. ● a(n + 1) / a(n) - > 2. ●
► [A191527] 0,0,1,3,9,20,50,105,245,504,1134,2310,5082,10296,22308,45045,96525,194480,413270,831402,1755182,3527160,7407036,14872858,31097794 ⋆ Number of turns in all left factors of Dyck paths of length n. ● a(n) = Sum _{ k=0..n } k * binomial(floor((n - 1) / 2), floor(k / 2)) * binomial(ceiling((n - 1) / 2), ceiling(k / 2)). ●
► [A128127] 1,3,9,21,37,59 ⋆ The number of regular pentagons found by constructing n equally - spaced points on each side of the pentagon and drawing lines parallel to the pentagon side. ● a(n) = (10 * n ^ 2 - 4 * n + 5 - (- 1) ^ n) / 4 (conjectural). ●
► [A007518] 0,3,9,21,39,66,102,150,210,285,375,483,609,756,924,1116,1332,1575,1845,2145,2475,2838,3234,3666,4134 ⋆ a(n) = floor(n * (n + 2) * (2 * n - 1) / 8). ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - 2 * a(n - 3) + 3 * a(n - 4) - a(n - 5) with a(1)=0, a(2)=3, a(3)=9, a(4)=21, a(5)=39. - _ Harvey P. Dale _ , Oct 06 2014 ●
► [A064999] 1,3,9,21,41,71,113,169,241,331,441,573,729,911,1121,1361,1633,1939,2281,2661,3081,3543,4049,4601,5201 ⋆ Partial sums of sequence (essentially A002378): 1, 2, 6, 12, 20, 30, 42, 56, 72, 90, ... ● a(0) = 1, a(n) = n * (n + 1) + a(n - 1) for n > 1. - _ Gerald McGarvey _ , Sep 26 2004 ●
► [A100135] 1,1,1,1,1,1,3,9,21,41,71,113,173,269,443,777,1413,2577,4615,8065,13813,23413,39691,67801,116973 ⋆ a(n) = Sum _{ k=0..floor(n / 6) } C(n - 3k,3k) * 2 ^ k. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + 2 * a(n - 6). ●
► [A024173] 0,0,0,3,9,21,41,72,119,185,275,395,549,744,987,1285,1645,2076,2586,3185,3882,4688,5612,6667,7863 ⋆ Integer part of ((4th elementary symmetric function of 1,2,...,n) / (2nd elementary symmetric function of 1,2,...,n)). ● a(n) = floor((1 / 240) * (n - 3) * (n - 2) * (15 * n ^ 3 + 15 * n ^ 2 - 10 * n - 8) / (2 + 3 * n)). - _ Ivan Neretin _ , May 19 2018 ●
► [A097119] 1,1,1,1,3,9,21,41,75,141,281,577,1179,2369,4709,9353,18659,37365,74889,149937,299827,599289,1198101,2396137,4793051 ⋆ Expansion of (1 - x) ^ 2 / ((1 - x) ^ 3 - 2x ^ 4). ● a(n) = 3a(n - 1) - 3a(n - 2) + a(n - 3) + 2a(n - 4). ● a(n) = Sum _{ k=0..floor(n / 3) } binomial(n - k,3k) * 2 ^ k. ●
► [A213396] 0,3,9,21,42,72,114,171,243,333,444,576,732,915,1125,1365,1638,1944,2286,2667,3087,3549,4056,4608,5208 ⋆ Number of (w,x,y) with all terms in { 0,...,n } and 2 * w < |x + y - w|. ● a(n) = (n + 2) * (n + 1) * n / 3 + floor((n - 1) / 3) + 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + 2 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) - a(n - 6). ●
► [A011843] 0,0,0,0,0,0,1,3,9,21,42,77,132,214,333,500,728,1031,1428,1938,2584,3391,4389,5608,7084 ⋆ a(n) = floor(binomial(n,5) / 6). ● a(n) = + 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) + a(n - 18) - 5 * a(n - 19) + 10 * a(n - 20) - 10 * a(n - 21) + 5 * a(n - 22) - a(n - 23) - a(n - 36) + 5 * a(n - 37) - 10 * a(n - 38) + 10 * a(n - 39) - 5 * a(n - 40) + a(n - 41) + a(n - 54) - 5 * a(n - 55) + 10 * a(n - 56) - 10 * a(n - 57) + 5 * a(n - 58) - a(n - 59). [_ R. J. Mathar _ , Apr 15 2010] ● a(n) = floor(binomial(n + 1,6) / (n + 1)). [_ Gary Detlefs _ , Nov 23 2011] ●
► [A175006] 1,3,9,21,44,81,139,222,339,495,701,963,1294,1701,2199,2796,3509,4347,5329,6465,7776,9273,10979,12906,15079 ⋆ Row sums of triangle A175009. ● a(n) = n + Sum { k=1..n } (n - k + 1) * (binomial(k + 1, 2) - binomial(floor(k / 2) + 1, 2) - 1). ● a(n) = 3 * a(n - 1) - a(n - 2) - 5 * a(n - 3) + 5 * a(n - 4) + a(n - 5) - 3 * a(n - 6) + a(n - 7) for n > 7. ●
► [A084569] 1,3,9,21,44,82,142,230,355,525,751,1043,1414,1876,2444,3132,3957,4935,6085,7425,8976,10758,12794,15106,17719 ⋆ Partial sums of A084570. ● a(n) =(- 1) ^ n / 8 + (n ^ 4 + 6n ^ 3 + 17n ^ 2 + 30n + 21) / 24; a(n)=sum(sum(sum(i + (- 1) ^ i, i, 0, j), j, 0, k), k, 0, n). ●
► [A192970] 0,1,3,9,21,44,85,156,276,476,806,1347,2230,3667,6001,9787,15923,25862,41955,68006,110170,178406,288828,467509,756636 ⋆ Coefficient of x in the reduction by x ^ 2 - > x + 1 of the polynomial p(n,x) defined at Comments. ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + a(n - 3) + 2 * a(n - 4) - a(n - 5). ● a(n) = Fibonacci(n + 4) + Lucas(n + 3) - (n ^ 2 + 7 * n + 14) / 2. - _ Ehren Metcalfe _ , Jul 13 2019 ●
► [A068156] 1,3,9,21,45,93,189,381,765,1533,3069,6141,12285,24573,49149,98301,196605,393213,786429,1572861,3145725,6291453,12582909,25165821,50331645 ⋆ G.f.: (x + 2) * (x + 1) / ((x - 1) * (x - 2)) = Sum _{ n>=0 } a(n) * (x / 2) ^ n. ● a(n) = 3 * 2 ^ n + 0 ^ n - 3. - _ Paul Barry _ , Sep 04 2003 ● a(n) = 3 * a(n - 1) - 2 * a(n - 2), n > 1. - _ Vincenzo Librandi _ , Nov 11 2011 ● a(n) = a(n - 1) + 3 * 2 ^ (n - 1); a(1)=3. - _ Ctibor O. Zizka _ , Apr 17 2008 ●
► [A052101] 1,1,1,3,9,21,45,99,225,513,1161,2619,5913,13365,30213,68283,154305,348705,788049,1780947,4024809,9095733,20555613,46454067,104982561 ⋆ One of the three sequences associated with the polynomial x ^ 3 - 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + 3 * a(n - 3). ● a(n) / a(n - 1) tends to 2.259921049... = 1 + 2 ^ (1 / 3) (a real root to (x - 1) ^ 3 = 2 or x ^ 3 - 3x ^ 2 + 3x - 3 = 0). A 3 X 3 matrix corresponding to the latter polynomial is [0 1 0 / 0 0 1 / 3 - 3 3]. Let the matrix = M. Then a(n) = the center term in M ^ n * [1, 1, 1]. M ^ [1, 1, 1] = [9, 21, 45], center term = a(4) - _ Gary W. Adamson _ , Mar 28 2004 ● a(n) = Sum _{ 0..floor(n / 3) } , 2 ^ k * binomial(n, 3 * k). - _ Ralf Stephan _ , Aug 30 2004 ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 6 * a(n - 3) - 3 * a(n - 4). ●
► [A063830] 1,3,9,21,45,117,297,585,1521,3105,6993,14553,43653,90885,185925,397125,847125,1813125,3238725,7556829,17253789,36910365,94571997,220301277,475043037 ⋆ a(n + 1) is the smallest odd m whose cototient equals a(n). ● a(n) = Min { x, odd : A051953[a(n - 1)]=a(n) } ; a(1)=1; a(2)=3, least odd prime; a(n) = Min[Select[Range[a, b], Equal[#- EulerPhi[#], a(n - 1)] &]]. ●
► [A014286] 0,1,3,9,21,46,94,185,353,659,1209,2188,3916,6945,12223,21373,37165,64314,110826,190265,325565,555431,945073,1604184,2717016 ⋆ a(n) = Sum _{ j=0..n } j * Fibonacci(j). ● a(n) = n * F(n + 2) - F(n + 3) + 2. ●
► [A267226] 3,9,21,47,103,223,479,1023,2175,4607,9727,20479,43007,90111,188415,393215,819199,1703935,3538943,7340031,15204351,31457279,65011711,134217727,276824063 ⋆ Number of length - n 0..2 arrays with no following elements greater than or equal to the first repeated value. ● a(n) = 2 ^ (n + 1) + 2 ^ (n - 2) * n - 1 for n>1. ●
► [A274230] 0,0,1,3,9,21,49,105,225,465,961,1953,3969,8001,16129,32385,65025,130305,261121,522753,1046529,2094081,4190209,8382465,16769025 ⋆ Number of holes in a sheet of paper when you fold it n times and cut off the four corners. ● a(n) = (2 ^ ceiling(n / 2) - 1) * (2 ^ floor(n / 2) - 1). ● a(n) = (2 ^ (n / 2) - 1) ^ 2 for n even, a(n) = 2 ^ n + 1 - 3 * 2 ^ ((n - 1) / 2) for n odd. ● a(n) = 3 * a(n - 1) - 6 * a(n - 3) + 4 * a(n - 4) for n>3. ● a(n) = (1 + 2 ^ n - 2 ^ ((n - 3) / 2) * (3 - 3 * (- 1) ^ n + 2 * sqrt(2) + 2 * (- 1) ^ n * sqrt(2))). (End) ●
► [A119917] 1,3,9,21,51,105,231,471,975,1965,4011,8031,16221,32475,65205,130485,261555,523131,1047417,2094957,4191975,8384229,16772835,33545715,67100115 ⋆ Number of rationals in [0, 1) consisting just of repeating bits of period at most n. ● a(n) = sum _{ i=1..n } sum _{ d|i } (2 ^ d - 1) * mu(i / d) ●
► [A111209] 0,1,3,9,21,51,111,237,489,995,2017,4059,8151,16341,32721,65483,131013,262083,524221,1048505,2097079,4194225,8388525,16777127,33554335 ⋆ Diffe

rence between the powers of two and the primes. • a(n) = 2 ^ n - prime(n). •
► [A372375] 1,1,1,3,9,21,54,161,470,1347,4007,12199,37141,113802,352905,1101969,3455220,10891968,34515825,109814395,350616323,1123368287,3610647348,11637410625,37605280548 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 + x) / (1 + x + x ^ 3) ^ 2). • a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 3) } binomial(2 * n + 2,k) * binomial(n - k + 1,n - 3 * k). •
► [A026551] 3,9,21,57,129,345,777,2073,4665,12441,27993,74649,167961,447897,1007769,2687385,6046617,16124313,36279705,96745881,217678233,580475289,1306069401,3482851737,7836416409 ⋆ Expansion of 3 * (1 + 2 * x - 2 * x ^ 2) / ((1 - x) * (1 - 6 * x ^ 2)). • a(n) = (3 / 5) * (- 1 + 3 * 6 ^ (n / 2) * (1 + (- 1) ^ n) + 8 * 6 ^ ((n - 1) / 2) * (1 - (- 1) ^ n)). • a(2 * n) = (3 / 5) * (6 ^ (n + 1) - 1). • a(2 * n + 1) = (3 / 5) * (16 * 6 ^ n - 1). • a(n) = a(n - 1) + 6 * a(n - 2) - a(n - 3). (End) •
► [A260185] 1,3,9,21,63,111,333,693,1521,2577,7731,13491,40473,67833,119241,239481,718443,1340523,4021569,7494849,13356657,22271409,66814227,130266387,268286823 ⋆ a(n) is the number of ways to select an ordered pair of subsets of { 2,...,n } such that each pair of elements from different subsets are relatively prime. • a(p) = 3 * a(p - 1) for p prime. - _ Alois P. Heinz _ , Jul 19 2015 •
► [A307105] 1,1,3,9,21,63,117,351,621,1161,2043,6129,8631,25893,45135,71685,102285,306855,420309,1260927,1755513,2671299,4571073,13713219,17156853 ⋆ Number of rational numbers which can be constructed from the set of integers between 1 and n, through a combination of multiplication and division. • a(p) = 3 * a(p - 1), for p prime. - _ Giovanni Resta _ , Jul 07 2019 •
► [A073947] 1,1,3,9,21,63,225,729,2187,6561,19845,59535,177633,531441,1594323,4782969,14344533,43033599,129127041,387420489,1162261467,3486784401,10460471301,31381413903,94143533121 ⋆ Number of strings over Z _ 3 of length n with trace 0 and subtrace 0. • a(n; t, s) = a(n - 1; t, s) + a(n - 1; t + 2, s + 2t + 1) + a(n - 1; t + 1, s + t + 1) where t is the trace and s is the subtrace. •
► [A001470] 1,1,1,3,9,21,81,351,1233,5769,31041,142011,776601,4874013,27027729,168369111,1191911841,7678566801,53474964993,418199988339,3044269834281,23364756531621,199008751634001,1605461415071823 ⋆ Number of degree - n permutations of order dividing 3. • a(n) = Sum _{ j=0..floor(n / 3) } n! / (j! * (n - 3j)! * (3 ^ j)) (the latter formula from _ Roger Cuculière _). • a(n) = n! * Sum _{ k=floor(n / 3), n } (if mod(n - k,2)=0 then binomial(k,(3 * k - n) / 2) * (1 / 3) ^ ((n - k) / 2) / k! else 0). - _ Vladimir Kruchinin _ , Sep 07 2010 •
► [A118932] 1,1,1,3,9,21,81,351,1233,10249,75841,388411,3733401,33702813,215375889,1984583511,19181083041,141963117201,1797976123393,22534941675379,202605151063081,2992764505338021,43182110678814801,445326641624332623 ⋆ E.g.f.: A(x) = exp(Sum _{ n>=0 } x ^ (3 ^ n) / 3 ^ ((3 ^ n - 1) / 2)). • a(n) = Sum _{ k=0..floor(n / 3) } (n! / (k! * (n - 3 * k)! * 3 ^ k)) * a(k), with a(0) =1. •
► [A191998] 1,3,9,21,231,847,2541,16093,33649,43263,447051,1043119,13560547,83300503,170222767,222599003,13133341177,774867129443,4719645242971,335094812250941 ⋆ Numerators of partial products of a Hardy - Littlewood constant. • a(n) = numerator(r(n)) with •
► [A131477] 0,1,3,9,22,42,72,115,171,243,334,444,576,733,915,1125,1366,1638,1944,2287,2667,3087,3550,4056,4608 ⋆ a(n) = ceiling(n ^ 3 / 3). • a(n) = floor(n ^ 3 / 3 + 2 / 3). - _ Bruno Berselli _ , Dec 21 2017 •
► [A064808] 1,3,9,22,45,81,133,204,297,415,561,738,949,1197,1485,1816,2193,2619,3097,3630,4221,4873,5589,6372,7225 ⋆ a(n) is the (n + 1)st (n + 2) - gonal number. • a(n) = (n + 1) * (n ^ 2 + 2) / 2. • a(n) = Sum _{ k=0..n } Sum _{ j=0..n } (k - (k - 1) * C(0, j - k)). • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Wesley Ivan Hurt _ , Feb 21 2015 •
► [A192389] 0,1,3,9,22,48,96,181,327,573,982,1656,2760,4561,7491,12249,19966,32472,52728,85525,138615,224541,363598,588624,952752 ⋆ Coefficient of x in the reduction by x ^ 2 - > x + 1 of the polynomial p(n,x) defined at Comments. • a(n) = 4 * a(n - 1) - 5 * a(n - 2) + a(n - 3) + 2 * a(n - 4) - a(n - 5). • a(n) = 3 * Fibonacci(n + 4) - n * (n + 4) - 9. - _ Ehren Metcalfe _ , Jul 13 2019 •
► [A000716] 1,3,9,22,51,108,221,429,810,1479,2640,4599,7868,13209,21843,35581,57222,90882,142769,221910,341649,521196,788460,1183221,1762462 ⋆ Number of partitions of n into parts of 3 kinds. • a(0)=1, a(n) = 1 / n * Sum _{ k=0..n - 1 } 3 * a(k) * sigma _ 1(n - k). - _ Joerg Arndt _ , Feb 05 2011 •
► [A001628] 1,3,9,22,51,111,233,474,942,1836,3522,6666,12473,23109,42447,77378,140109,252177,451441,804228,1426380,2519640,4434420,7777860,13599505 ⋆ Convolved Fibonacci numbers. • a(n) = ((5 * n + 16) * (n + 1) * F(n + 2) + (5 * n + 17) * (n + 2) * F(n + 1)) / 50, F=A000045. -_ Wolfdieter Lang _ , Apr 12 2000 (This formula coincides with eq. (32.14) of the Koshy reference, p. 375, if there n - > n + 3. - _ Wolfdieter Lang _ , Aug 03 2012) • a(n) = F''(n + 2, 1) / 2, i.e. 1 / 2 times the 2nd derivative of the (n + 2)th Fibonacci polynomial evaluated at 1. - _ T. D. Noe _ , Jan 18 2006 • a(n) = Sum _{ k=0..n } C(k,n - k) * C(k + 2,2). - _ Paul Barry _ , Apr 13 2008 • a(n) = 3 * a(n - 1) - 5 * a(n - 3) + 3 * a(n - 5) + a(n - 6). - _ Eric W. Weisstein _ , Sep 05 2017 •
► [A054442] 1,3,9,22,54,123,281,618,1362,2934,6330,13452,28620,60243,126921,265282,554874,1153506,2399390,4966740,10286196,21219038,43790154,90076452,185353204 ⋆ Second convolution of A001405 (central binomial numbers). • a(2 * k)= - 3 * 2 ^ (2 * k + 1) + binomial(2 * (k + 1), k + 1) * (4 * k + 7) / 2, a(2 * k + 1)= - 3 * 4 ^ (k + 1) + binomial(2 * (k + 2), k + 2) * (2 * k + 5) / 2, k > = 0. •
► [A192663] 1,1,3,9,22,54,136,340,857,2164,5481,13911,35379,90124,229913,587254,1501615,3843314,9845118,25238541,64744455,166190960,426829202,1096784835,2819620836 ⋆ Floor - Sqrt transform of the binomial coefficients bin(3 * n,n) (A005809). • a(n) = floor(sqrt(binomial(3 * n,n))). •
► [A114697] 1,3,9,22,55,133,323,780,1885,4551,10989,26530,64051,154633,373319,901272,2175865,5253003,12681873,30616750,73915375,178447501,430810379,1040068260,2510946901 ⋆ Expansion of (1 + x + x ^ 2) / ((1 - x ^ 2) * (1 - 2 * x - x ^ 2)); a Pellian - related sequence. • a(n) = (2 * (- 3 + (- 1) ^ n) + (6 - 5 * sqrt(2)) * (1 - sqrt(2)) ^ n + (1 + sqrt(2)) ^ n * (6 + 5 * sqrt(2))) / 8. • a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) for n>3. (End) •
► [A326007] 1,3,9,22,81,285,1339,6264,33567,186811,1116105,7001244,46150265,318158826,2286494076,17088720336,132492477111,1063527470481,8822541504319,75512660179788,665878308902676,6041491458457319,56330651731617333,539160888285121116,5292067580412471801 ⋆ G.f.: Sum _{ n>=0 } (n + 1) * (n + 2) / 2 * x ^ n * ((1 + x) ^ n + 1) ^ n / (1 + x * (1 + x) ^ n) ^ (n + 3). • a(n) = Sum _{ i=0..n } (n - i + 1) * (n - i + 2) / 2 * Sum _{ j=0..n - i } Sum _{ k =0..n - i - j } (- 1) ^ k * binomial(n - i,j) * binomial(n - i - j,k) * binomial((n - i - j) * (n - i - k),i). • a(n) = Sum _{ i=0..n } (n - i + 1) * (n - i + 2) / 2 * Sum _{ j=0..n - i } Sum _{ k=0..n - i - j } binomial((n - i - j) * (n - i - k),i) * (- 1) ^ j * (n - i)! / ((n - i - j - k)! * j! * k!). •
► [A227259] 3,9,23,50,96,168,274,423,625,891,1233,1664,2198,2850,3636,4573,5679,6973,8475,10206,12188,14444,16998,19875,23101 ⋆ Number of n X 2 0,1 arrays indicating 2 X 2 subblocks of some larger (n + 1) X 3 binary array having a sum of two or less, with rows and columns of the latter in lexicographically nondecreasing order. • a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. •
► [A064551] 1,1,1,1,3,9,23,51,103,195,353,619,1061,1789,2981,4925,8087,13221,21547,35039,56891,92271,149541,242231,392233 ⋆ Ado [Simone Caramel]'s Fibonacci function: define the Fibonacci sequence by f(0) = 1, f(1) = 1, f(n) = f(n - 1) + f(n - 2); then a(0) = 1, a(n) = a(n - 1) + 2 * (f(n) - n), n > 0. • a(n) = 4 * a(n - 1) - 5 * a(n - 2) + a(n - 3) + 2 * a(n - 4) - a(n - 5). - _ T. D. Noe _ , Oct 12 2007 • a(n) = (1 / 5) * 2 ^ (- n) * (- 15 * 2 ^ n + (10 - 4 * sqrt(5)) * (1 - sqrt(5)) ^ n + (1 + sqrt(5)) ^ n * (10 + 4 * sqrt(5))) - n - n ^ 2. - _ Jean - Françoise Alcover _ , May 28 2013 •
► [A005783] 1,3,9,23,51,103,196,348,590,960,1506,2290,3393,4905,6945,9651,13185,17739,23542,30846,39954,51206,64986,81730,101935 ⋆ Number of 3 - covers of an unlabeled n - set. • a(n) = n ^ 6 / 4320 + 7 * n ^ 5 / 1440 + 79 * n ^ 4 / 1728 + 35 * n ^ 3 / 144 + 2939 * n ^ 2 / 4320 + 8863 * n / 8640 + 1 + (n / 16 + 7 / 32) * floor(n / 2) + (n / 9 + 11 / 27) * floor(n / 3) + floor((n + 1) / 3) / 27. - _ Vaclav Kotesovec _ , Aug 09 2022 •
► [A183155] 1,1,3,9,23,53,115,241,495,1005,2027,4073,8167,16357,32739,65505,131039,262109,524251,1048537,2097111,4194261,8388563,16777169,33554383 ⋆ The number of order - preserving partial isometries (of an n - chain) of fix zero (fix of alpha = 0). Equivalently, the number of order - preserving partial derangement isometries (of an n - chain). • a(n) = 2 ^ (n + 1) - (2 * n + 1). • a(0)=1; for n>0, a(n) = 2 * a(n - 1) + 2 * n - 3. - _ Vincenzo Librandi _ , Feb 05 2011 •
► [A305168] 1,3,9,23,54,118,246,489,940,1751,3177,5630,9776,16659,27922,46092,75039,120615,191611,301086,468342,721638,1102113,1669226,2508429 ⋆ Number of non - isomorphic graphs on 4n vertices whose edges are the union of two n - edge matchings. • a(n) = [x ^ 2n] (Product _{ i>=1 } 1 / (1 - x ^ i)) * (Product _{ j>=1 } 1 / (1 - x ^ (2j))). • a(n) = Sum _{ i=0..n } b(2i) * b(n - i) where b(n) is the number of partitions of n (A000041). •
► [A341029] 0,1,3,9,23,56,121,258,539,1118,2273,4614,9323,18806,37761,75798,151979,304598,609793,1220694,2442923,4888406,9779201,19562838,39131819 ⋆ Twice the area of the convex hull around dragon curve expansion level n. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + 3 * a(n - 3) + 2 * a(n - 4) - 12 * a(n - 5) + 12 * a(n - 6) - 12 * a(n - 7) + 8 * a(n - 8) for n>=10. •
► [A045883] 0,1,3,9,23,57,135,313,711,1593,3527,7737,16839,36409,78279,167481,356807,757305,1601991,3378745,7107015,14913081,31224263,65244729,136081863 ⋆ a(n) = ((3 * n + 1) * 2 ^ n - (- 1) ^ n) / 9. • a(n) = 3 * a(n - 1) - 4 * a(n - 3). • a(n) = f(n) * 2 ^ n, where f(n) is a rational Fibonacci type sequence based on fuse(a,b) = (a + b + 1) / 2 with f(0) = 0, f(1) = 1 / 2 and f(n) = fuse(f(n - 1), f(n - 2)), for n >= 2. For fuse(a,b) see the Jeff Erickson link under A188545. Proof with f(n) = (3 * n + 1 - (- 1) ^ n / 2 ^ n) / 9, n >= 0, by induction. • a(n) = a(n - 1) + 2 * a(n - 2) + 2 ^ (n - 1), n >= 0, with input a(- 2) = 1 / 4 and a(- 1) = 0. See also A127984. (End) •
► [A292329] 0,0,1,3,9,23,57,138,332,798,1920,4626,11157,26925,64997,156921,378861,914692,2208324,5331444,12871324,31074180,75019701,181113471,437246349 ⋆ p - INVERT of the Fibonacci sequence (A000045), where p(S) = 1 - S ^ 3. • a(n) = 3 * a(n - 1) - 4 * a(n - 3) + 3 * a(n - 5) + a(n - 6) for n >= 7. •
► [A133654] 1,3,9,23,57,139,337,815,1969,4755,11481,27719,66921,161563,390049,941663,2273377,5488419,13250217,31988855,77227929,186444715,450117361,1086679439,2623476241 ⋆ a(n) = 2 * A000129(n) - 1. • a(n) = - 1 + (- (1 - sqrt(2)) ^ n + (1 + sqrt(2)) ^ n) / sqrt(2). - _ Colin Barker _ , Mar 16 2016 •
► [A045650] 3,9,23,58,153,409,1103,2988,8112,22036,59885,162766,442426,1202618,3269032,8886126,24154969,65659987,178482319,485165215,1318815755,3584912868,9744803469,26489122153,72004899362 ⋆ Numbers that cannot be expressed as k + floor(log(k)) where k is an integer. • a(n) = floor(e ^ n) + n. - Nurdin N. Takenov (greanvert(AT)gmail.com), Mar 10 2007 •
► [A077847] 1,3,9,23,59,147,367,911,2263,5615,13935,34575,85791,212863,528159,1310463,3251519,8067647,20017407,49667071,123233663,305766655,758666495,1882398975,4670597631 ⋆ Expansion of (1 - x) ^ (- 1) / (1 - 2 * x - 2 * x ^ 2 + 2 * x ^ 3). • a(0)=1, a(1)=3, a(2)=9, a(3)=23, a(n)=3 * a(n - 1) - 4 * a(n - 3) + 2 * a(n - 4). - _ Harvey P. Dale _ , Apr 02 2013 •
► [A180488] 0,1,3,9,23,60,152,388,984,2501,6347,16117,40911,103864,263664,669352,1699216,4313673,10950739,27799745,70572839,179157364,454811656,1154592108,2931065640 ⋆ Partial sums of A006864. • a(n)= + 3 * a(n - 1) - 4 * a(n - 3) + 3 * a(n - 4) - a(n - 5). G.f.: x ^ 2 / ((x - 1) * (x ^ 4 - 2 * x ^ 3 + 2 * x ^ 2 + 2 * x - 1)). [From _ R. J. Mathar _ , Sep 19 2010] •
► [A026599] 1,3,9,23,61,155,401,1023,2629,6723,17241,44135,113101,289643,742049,1900623,4868821,12471315,31946601,81831863,209618269,536945723,1375418801,3523201695,9024876901 ⋆ a(n) = Sum _{ j=0..2 * i, i=0..n } A026584(i,j). • a(n) = 2 * a(n - 1) + 3 * a(n - 2) - 4 * a(n - 3). • a(n) = 2 ^ n * (Fibonacci(n + 2, 1 / 2) + Fibonacci(n + 1, 1 / 2)) - 1 / 2. - _ G. C. Greubel _ , Dec 15 2021 •
► [A061647] 1,3,9,23,61,159,417,1091,2857,7479,19581,51263,134209,351363,919881,2408279,6304957,16506591,43214817,113137859,296198761,775458423,2030176509,5315071103,13915036801 ⋆ Beginning at the well for the topograph of a positive definite quadratic form with values 1, 1, 1 at a superbase (i.e., 1, 1 and 1 are the vonorms of the superbase), these numbers indicate the labels of the edges of the topograph on a path of greatest ascent. • a(n) = 2 * a(n - 1) + 2 * a(n - 2) - a(n - 3) for n > 3, with a(1)=1, a(2)=3, a(3)=9. • a(n) = Fibonacci(n) ^ 2 + Fibonacci(n - 1) ^ 2 + 2 * Fibonacci(n) * Fibonacci(n + 1) + 3 * Fibonacci(n

- 1) * Fibonacci(n), with offset 0. - _ Paul Barry _ , Sep 22 2004 ● a(n) = Fibonacci(n + 1) ^ 2 - Fibonacci(n - 2) ^ 2 - (- 1) ^ n. - _ Thomas Baruchel _ , Jul 29 2005 ● a(n) = F(n - 2) * F(n - 1) + F(n - 1) * F(n) + F(n) * F(n + 1), where F=A000045. ● a(n) = (L(2 * n + 1) + L(2 * n - 1) + L(2 * n - 3) - (- 1) ^ n) / 5, where L=A000032. [Corrected by _ Ehren Metcalfe _ , Mar 26 2016] ● a(n) = 4 * Fibonacci(n - 1) * Fibonacci(n) - (- 1) ^ n. - _ Bruno Berselli _ , Oct 30 2015 ●

► [A077996] 1,1,3,9,23,61,163,433,1151,3061,8139,21641,57543,153005,406835,1081761,2876367,7648165,20336219,54073337,143779223,382304221,1016534339,2702931345,7187005471 ⋆ Expansion of (1 - x) / (1 - 2 * x - x ^ 2 - 2 * x ^ 3). ● a(n) = Sum _{ k=1..n } Sum _{ i=k..n } Sum _{ j=0..k } binomial(j, - 3 * k + 2 * j + i) * 2 ^ (k - j) * binomial(k,j) * binomial(n + k - i - 1,k - 1). - _ Vladimir Kruchinin _ , May 05 2011 ●

► [A108488] 1,1,3,9,23,69,203,601,1815,5493,16731,51225,157367,485093,1499499,4646233,14427095,44880981,139849979,436419737,1363713015,4266417221,13362194571,41891406681,131452430999 ⋆ Expansion of 1 / sqrt(1 - 2 * x - 3 * x ^ 2 - 4 * x ^ 3 + 4 * x ^ 4). ● a(n) = Sum _{ k=0..n } C(n - k, k) ^ 2 * 2 ^ k. ●

► [A024314] 3,9,24,37,81,133,256,413,746,1208,2098,3394,5753,9309,15532,25131,41499,67147,110122,178181,290890,470670,766068,1239524,2013407 ⋆ a(n) = s(1) * t(n) + s(2) * t(n - 1) + ... + s(k) * t(n + 1 - k), where k = floor((n + 1) / 2)), s = (natural numbers >= 3), t = A023532. ● a(2 * n) = 6 * F(2 * n + 3) + F(2 * n + 1) - (n + 6) * F(n + 3) - (n + 1) * F(n + 1). ●

► [A244504] 3,9,24,51,102,177,294,459,690,987,1380,1875,2508,3279,4212,5319,6648,8199,10026,12141,14580,17343,20496,24051,28068 ⋆ Number of distinct lines passing through at least two points in a triangular grid of side n. ● a(n) = 3 * sum(j = 1..n - 1, euler _ phi(j) * (g(n - j) - g(n - 2 * j))), where g(i) = i * (i + 1) / 2 if i > 0, otherwise 0, after _ Jon E. Schoenfield _ . ●

► [A291706] 3,9,24,56,136,328,792,1912,4616,11144,26904,64952,156808,378568,913944,2206456,5326856,12860168,31047192,74954552,180956296,436867144,1054690584,2546248312,6147187208 ⋆ Number of connected dominating sets in the n - ladder graph. ● a(n) = 4 lucas(n - 1, 2) for n > 2. ● a(n) = 2 * a(n - 1) + a(n - 2) for n > 4. ●

► [A089830] 1,3,9,24,57,122,239,435,745,1213,1893,2850,4161,5916,8219,11189,14961,19687,25537,32700,41385,51822,64263,78983,96281 ⋆ Expansion of (1 - 3 * x + 6 * x ^ 2 - 5 * x ^ 3 + 3 * x ^ 4 - x ^ 5) / (1 - x) ^ 6. ● a(0)=1, a(1)=3, a(2)=9, a(3)=24, a(4)=57, a(5)=122, a(n)=6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). -_ Harvey P. Dale _ , Jul 18 2012 ● a(n) = 13 * n / 15 + 1 + n ^ 3 / 8 + 11 * n ^ 2 / 12 + n ^ 5 / 120 + n ^ 4 / 12. - _ R. J. Mathar _ , Sep 27 2014 ●

► [A360197] 0,3,9,24,58,125,251,490,948,1823,3485,6636,12614,23961,45495,86350,163856,310899,589873,1119144,2123266,4028261,7642379,14499018,27507300 ⋆ Number of induced cycles in the 4 X n grid graph. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 5 * a(n - 3) - 2 * a(n - 4) - a(n - 5) + a(n - 6) for n > 6. ●

► [A084858] 1,3,9,24,60,144,336,768,1728,3840,8448,18432,39936,86016,184320,393216,835584,1769472,3735552,7864320,16515072,34603008,72351744,150994944,314572800 ⋆ Binomial transform of A001651. ● a(n) = 3 * (0 ^ n / 3 + 2 ^ n + n * 2 ^ n) / 4. ● a(n) = 4 * a(n - 1) - 4 * a(n - 2). - _ Vincenzo Librandi _ , Jun 24 2012 ●

► [A003262] 1,3,9,24,61,145,333,732,1565,3247,6583,13047,25379,48477,91159,168883,308736,557335,994638,1755909,3068960,5313318,9118049,15516710,26198568 ⋆ Let y=f(x) satisfy F(x,y)=0. The sequence a(n) is the number of terms in the expansion of (d ^ n / dx ^ n) y in terms of the partial derivatives of F. ● a(n) = coefficient of t ^ n * u ^ (n - 1) in Product _{ i,j>=0,(i,j)<>(0,1) } (1 - t ^ i * u ^ (i + j - 1)) ^ (- 1). - Tom Wilde (tom(AT)beech84.fsnet.co.uk), Jan 19 2008 ●

► [A079282] 1,3,9,24,61,149,354,823,1881,4240,9449,20857,45666,99291,214589,461336,987221,2103917,4467394,9454895,19951601,41989408,88155409,184670769,386072386 ⋆ Diagonal sums of triangle A055249. ● a(n) = sum(sum((k + 1)binomial(n - j, n - 2j - k), k, 0, n - 2j), j, 0, floor(n / 2)) ●

► [A117585] 1,3,9,24,61,151,369,896,2169,5243,12665,30584,73845,178287,430433,1039168,2508785,6056755,14622313,35301400,85225133,205751687,496728529,1199208768,2895146089 ⋆ a(n) = 2 * a(n - 1) + a(n - 2) + n. ● a(n) / a(n - 1) tends to 1 + sqrt(2) = 2.414213562...(a(14) / a(13) = 430433 / 178287 = 2.4142702...). ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) + a(n - 4). ●

► [A006684] 0,0,1,3,9,24,62,156,387,951,2323,5652,13716,33228,80405,194415,469845,1135092,2741626,6620928,15987663,38603019,93204647,225030024,543293352 ⋆ Convolve Fibonacci and Pell numbers. ● a(n) = Pell(n) - Fibonacci(n). ● a(n) = 3 * a(n - 1) - 3 * a(n - 3) - a(n - 4) with a(0) = a(1) = 0, a(2) = 1, a(3) = 3. - _ Taras Goy _ , Mar 12 2019 ●

► [A267465] 3,9,24,62,160,418,1112,3018,8352,23522,67240,194554,568304,1672146,4946808,14692970,43767616,130647490,390566216,1168815066,3500415888,10488664754,31439779864,94264813642,282681194720 ⋆ Number of length - n 0..2 arrays with no following elements larger than the first repeated value. ● a(n) = 2 ^ n + 3 ^ (n - 1) + 2 ^ (n - 2) * (n + 1) - 1. ●

► [A267960] 3,9,24,63,159,394,957,2292,5419,12678,29385,67560,154215,349770,788741,1769388,3950499,8782094,19445313,42898032,94315743,206709714,451711869,984397108,2139750939 ⋆ Number of n X 1 0..2 arrays with every repeated value in every row and column greater than the previous repeated value. ● a(n) = (96 * n + 2 ^ n * (9 * n * (n * (n + 44) + 445) + 7622) + 640) / 7776 for n even. ● a(n) = (2 ^ n * (9 * n * (n * (n + 44) + 445) + 7622) - 32 * (3 * n + 20)) / 7776 for n odd. ●

► [A090400] 1,3,9,24,63,162,414,1053,2673,6777,17172,43497,110160,278964,706401,1788723,4529277,11468628,29039715,73531314,186188058,471445029,1193741145,3022659261,7653642696 ⋆ Expansion of 1 / (1 - 3x + 3x ^ 3) in powers of x. ● a(n)=3a(n - 1) - 3a(n - 3); a(n)=sum { k=0..floor(n / 2), comb(n - 2k, k) (- 1) ^ k 3 ^ (n - 2k) } . ●

► [A097134] 1,3,9,24,63,165,432,1131,2961,7752,20295,53133,139104,364179,953433,2496120,6534927,17108661,44791056,117264507,307002465,803742888,2104226199,5508935709,14422580928 ⋆ a(n) = 3 * Fibonacci(2 * n) + 0 ^ n. ● a(n) = 3 * a(n - 1) - a(n - 2) for n > 2. ● a(n) = Sum _{ k=0..n } binomial(n, k) * (3 * Fibonacci(k) + (- 1) ^ k). ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n - k - 1,k) * (- 1) ^ k * 3 ^ (n - 2 * k). - _ Paul Barry _ , Jan 16 2005 ● a(n) = Fibonacci(n + 2) ^ 2 - Fibonacci(n - 2) ^ 2. - _ Gary Detlefs _ , Dec 03 2010 ● a(n) = Fibonacci(6 * n) - 5 * Fibonacci(2 * n) ^ 3 for n > 0. - _ Gary Detlefs _ , Oct 18 2011 ●

► [A064831] 0,1,3,9,24,64,168,441,1155,3025,7920,20736,54288,142129,372099,974169,2550408,6677056,17480760,45765225,119814915,313679521,821223648,2149991424,5628750624 ⋆ Partial sums of A001654, or sum of the areas of the first n Fibonacci rectangles. ● a(n) = F(n + 1) ^ 2 - 1 if n is even, or F(n + 1) ^ 2 if n is odd. ● a(n) = Sum _{ k=0..floor(n / 2)) U(n - 2k - 1, 3 / 2). - _ Paul Barry _ , Nov 15 2003 ● a(n) = floor(phi ^ (2 * n + 2) / 5), where phi =(1 + sqrt(5)) / 2. - _ Gary Detlefs _ Mar 12 2011 ● a(n) = Sum _{ i=0..n } (n + 1 - i) * Fibonacci(i) ^ 2. - _ Bruno Berselli _ , Feb 20 2017 ●

► [A269461] 3,9,24,66,174,462,1206,3150,8166,21150,54582,140718,362118,931134,2391894,6141006,15757734,40420062,103647606,265721070,681097926,1745555070,4473092502,11461604238,29366557158 ⋆ Number of length - n 0..2 arrays with no repeated value equal to the previous repeated value. ● a(n) = 2 ^ (- 4 - n) * (- 51 * 4 ^ (1 + n) + (255 - 57 * sqrt(17)) * (1 - sqrt(17)) ^ n + 3 * (1 + sqrt(17)) ^ n * (85 + 19 * sqrt(17))) / 17. ●

► [A121907] 1,3,9,24,66,180,492,1344,3672,10032,27408,74880,204576,558912,1526976,4171776,11397504,31138560,85072128,232421376,634987008,1734816768,4739607552,12948848640,35376912384 ⋆ Expansion of g.f.: (1 + x + x ^ 2) / (1 - 2 * x - 2 * x ^ 2). ● a(0)=1, a(1)=3, a(2)=9; a(n) = 2 * a(n - 1) + 2 * a(n - 2) for n>=3. - _ Philippe Deléham _ , Sep 19 2009 ●

► [A346295] 3,9,24,69,222,783,2928,11313,44466,176307,702132,2802357,11197110,44763831,179006136,715926201,2863508154,11453639355,45813770940,183253510845,733010897598,2932037298879,11728136612544,46912521284289,187650034805442 ⋆ a(n) = Sum _{ k=0..n } (2 ^ k + 1) * (2 ^ k + 2) / 2. ● a(n) = (2 ^ (n + 1) + 4) * (2 ^ (n + 1) + 5) / 6 - 4 + n. ● a(n) = 8 * a(n - 1) - 21 * a(n - 2) + 22 * a(n - 3) - 8 * a(n - 4) for n > 3. ●

► [A351937] 1,1,1,3,9,24,99,418,1769,9320,49541,278912,1764825,11319784,77850287,570610472,4290387409,34316005632,285335249065,2455224885440,22165590003849,206191758121856,1989511661589435,19903718061574144,204795484665487865 ⋆ Expansion of e.g.f. exp((sinh(x) + x * cosh(x)) / 2). ● a(0) = 1; a(n) = Sum _{ k=0..floor((n - 1) / 2) } binomial(n - 1,2 * k) * (k + 1) * a(n - 2 * k - 1). ●

► [A005262] 1,3,9,25,59,131,277,573,1167,2359,4745,9521,19075,38187,76413,152869,305783,611615,1223281,2446617,4893291,9786643,19573349,39146765,78293599 ⋆ a(n) = floor((7 * 2 ^ (n + 1) - 9 * n - 10) / 3). ● a(n) = (28 * 2 ^ n - 18 * n - (- 1) ^ n - 21) / 6 = (7 * 2 ^ (n + 1) - 9 * n - 10) / 3 - ((- 1) ^ n + 1) / 6. - _ Bruno Berselli _ , Jan 12 2012 ●

► [A101357] 0,1,3,9,25,60,126,238,414,675,1045,1551,2223,3094,4200,5580,7276,9333,11799,14725,18165,22176,26818,32154,38250 ⋆ Partial sums of A060354. ● a(n) = Sum _{ i=0..n } (i(i - 2) ^ 2 + i ^ 2) / 2. ● a(n) = binomial(n + 3,4) - 2 * binomial(n + 2,4) + 4 * binomial(n + 1,4). ● a(n) = (n ^ 4 - 2 * n ^ 3 + 3 * n ^ 2 + 6 * n) / 8. - _ Johannes W. Meijer _ , Apr 29 2011 ●

► [A292326] 3,9,25,63,153,359,819,1830,4018,8694,18582,39298,82350,171186,353338,724719,1478061,2999175,6057687,12183945,24411935,48740193,96998325,192459996,380812692 ⋆ p - INVERT of (1,1,1,0,0,0,0,0,0,0,...), where p(S) = (1 - S) ^ 3. ● a(n) = 3 * a(n - 1) - 2 * a(n - 3) - 6 * a(n - 4) + 4 * a(n - 6) + 6 * a(n - 7) + 3 * a(n - 8) + a(n - 9) for n >= 10. ●

► [A295142] 1,3,9,25,64,159,389,945,2289,5534,13369,32285,77953,188206,454381,1096985,2648369,6393742,15435873,37265509,89966913,217199358,524365653,1265930690 ⋆ Solution of the complementary equation a(n) = 2 * a(n - 1) + a(n - 2) + b(n - 2), where a(0) = 1, a(1) = 3, b(0) = 2, b(1) = 4, and (a(n)) and (b(n)) are increasing complementary sequences. ● a(n + 1) / a(n) - > 1 + sqrt(2). ●

► [A002064] 1,3,9,25,65,161,385,897,2049,4609,10241,22529,49153,106497,229377,491521,1048577,2228225,4718593,9961473,20971521,44040193,92274689,192937985,402653185 ⋆ Cullen numbers: a(n) = n * 2 ^ n + 1. ● a(n) = 4a(n - 1) - 4a(n - 2) + 1. - _ Paul Barry _ , Jun 12 2003 ● a(n) = sum of row (n + 1) of triangle A130197. Example: a(3) = 25 = (12 + 8 + 4 + 1), row 4 of A130197. - _ Gary W. Adamson _ , May 16 2007 ● a(0)=1, a(1)=3, a(2)=9, a(n) = 5 * a(n - 1) - 8 * a(n - 2) + 4 * a(n - 3). - _ Harvey P. Dale _ , Oct 13 2011 ●

► [A129589] 1,3,9,25,65,163,401,977,2369,5731,13849,33449,80769,195011,470817,1136673,2744193,6625091,15994409,38613945,93222337,225058659,543339697,1311738097,3166815937 ⋆ a(n) = 2 * A000129(n) + A000129(n - 1) - n. ● a(n) = (- (1 - sqrt(2)) ^ (1 + n) + (1 + sqrt(2)) ^ (1 + n)) / (2 * sqrt(2)) - n. ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) + a(n - 4) for n>4. ●

► [A058396] 1,3,9,25,66,168,416,1008,2400,5632,13056,29952,68096,153600,344064,765952,1695744,3735552,8192000,17891328,38928384,84410368,182452224,393216000,845152256 ⋆ Expansion of ((1 - x) / (1 - 2 * x)) ^ 3. ● a(n) = (n + 2) * (n + 7) * 2 ^ (n - 4) for n > 0. ● a(n) = Sum _{ k=0..floor((n + 2) / 2) } C(n + 2, 2k) * k(k + 1) / 2. - _ Paul Barry _ , May 15 2003 ● a(n) = Sum _{ k=0..n } C(n, k) * floor((k + 2) ^ 2 / 4). - _ Paul Barry _ , May 27 2003 ● a(n) = 6 * a(n - 1) - 12 * a(n - 2) + 8 * a(n - 3), n > 3. - _ Harvey P. Dale _ , Oct 17 2011 ●

► [A081663] 1,3,9,25,66,169,425,1058,2621,6485,16066,39921,99601,249666,628917,1592029,4048866,10341577,26517113,68226722,176065901,455514533,1181040514,3067684065,7980068641 ⋆ F(2n + 1) + n * 2 ^ (n - 1). ● a(n) = 7 * a(n - 1) - 17 * a(n - 2) + 16 * a(n - 3) - 4 * a(n - 4). G.f.: - (3 * x ^ 3 - 5 * x ^ 2 + 4 * x - 1) / ((2 * x - 1) ^ 2 * (x ^ 2 - 3 * x + 1)). - _ Colin Barker _ , Jun 04 2013 ●

► [A106514] 1,3,9,25,67,175,449,1137,2851,7095,17553,43225,106051,259423,633089,1541985,3749827,9107175,22095249,53559817,129739171,314086735,760009793,1838300625,4444999651 ⋆ Expansion of (1 - x) / ((1 - 2 * x) * (1 - 2 * x - x ^ 2)). ● a(n) = Sum _{ k=0..n } 2 ^ (n - k - 1) * ((1 - sqrt(2)) ^ k + (1 + sqrt(2)) ^ k). ● a(n) = Sum _{ k=0..n } Sum _{ j=0..floor((n + 1) / 2) } binomial(n + 1, 2 * j + k + 1) * 2 ^ j. ●

► [A069403] 1,3,9,25,67,177,465,1219,3193,8361,21891,57313,150049,392835,1028457,2692537,7049155,18454929,48315633,126491971,331160281,866988873,2269806339,5942430145,15557484097 ⋆ a(n) = 2 * Fibonacci(2 * n + 1) - 1. ● a(0) = 1,

a(1) = 3, a(2) = 9, a(3) = 25; a(n) = 3 * a(n - 1) - 3 * a(n - 3) + a(n - 4). ● a(n) = 3 * a(n - 1) - a(n - 2) + 1 for n>1, a(1) = 3, a(0) = 0. - _ Reinhard Zumkeller _ , May 02 2006 ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) + a(n - 3). ● a(n) = (2 ^ (- n) * (- 5 * 2 ^ n - (3 - sqrt(5)) ^ n * (- 5 + sqrt(5)) + (3 + sqrt(5)) ^ n * (5 + sqrt(5)))) / 5. - _ Colin Barker _ , Nov 02 2016 ●

▶ [A291021] 1,3,9,25,67,178,472,1249,3297,8685,22843,60014,157540,413289,1083693,2840521,7443331,19500394,51079696,133782385,350354841,917456901,2402365387,6290338310,16470047644 ⋆ p - INVERT of (1,1,1,1,1,...), where p(S) = 1 - S - S ^ 2 - S ^ 3 + S ^ 4 + S ^ 5. ● a(n) = 6 * a(n - 1) - 13 * a(n - 2) + 14 * a(n - 3) - 9 * a(n - 4) + 2 * a(n - 5) for n >= 5. ●

▶ [A094292] 0,0,1,3,9,25,68,182,483,1275,3355,8811,23112,60580,158717,415715,1088661,2850645,7463884,19541994,51163695,133951675,350695511,918141623,2403740304 ⋆ Number of (s(0), s(1), ..., s(n)) such that 0 < s(i) < 5 and |s(i) - s(i - 1)| <= 1 for i = 1,2,...,n, s(0) = 2, s(n) = 4. ● a(n) = (2 / 5) * Sum _{ k=1..4 } sin(2 * Pi * k / 5) * sin(4 * Pi * k / 5) * (1 + 2 * cos(Pi * k / 5)) ^ n. ● a(n) = 4 * a(n - 1) - 3 * a(n - 2) - 2 * a(n - 3) + a(n - 4). ● a(n) = (Fibonacci(2 * n) - Fibonacci(n)) / 2. - _ Vladeta Jovovic _ , Jul 17 2004 ● a(n + 1) = Sum _{ k=0..floor(n / 2) } binomial(n - k, k) * (- 1) ^ k * F(3n - 3k) / F(3). - _ Paul Barry _ , Nov 17 2004 ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n, 2k) * Fibonacci(2k). - _ Paul Barry _ , Jun 10 2005 ● a(n) = Sum _{ k=0..n - 1 } Fibonacci(n + k - 1) / 2. - _ Gary Detlefs _ , Feb 22 2011 ●

▶ [A291019] 1,3,9,25,68,185,504,1373,3739,10180,27714,75445,205376,559064,1521840,4142609,11276581,30695881,83556891,227449066,619135745,1685339900,4587637263,12487934387,33993205996 ⋆ p - INVERT of (1,1,1,1,1,...), where p(S) = 1 - S - S ^ 2 - S ^ 3 + S ^ 4. ● a(n) = 5 * a(n - 1) - 8 * a(n - 2) + 6 * a(n - 3) - 3 * a(n - 4) for n >= 5. ●

▶ [A201533] 3,9,25,69,175,410,899,1859,3649,6840,12311,21378,35964,58819,93800,146222,223292,334639,492954,714755,1021293,1439616,2003809,2756429,3750155 ⋆ Number of n X 2 0..2 arrays with rows and columns lexicographically nondecreasing and every element equal to at least one horizontal or vertical neighbor. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>12. ●

▶ [A077846] 1,3,9,25,69,189,517,1413,3861,10549,28821,78741,215125,587733,1605717,4386901,11985237,32744277,89459029,244406613,667731285,1824275797,4984014165,13616579925,37201188181 ⋆ Expansion of 1 / (1 - 3 * x + 2 * x ^ 3). ● a(0)=1; for n >= 1, a(n) = ceiling((1 + sqrt(3)) * a(n - 1)). - _ Benoit Cloitre _ , Jun 19 2004 ● a(n) = Sum _{ i=0..n } Sum _{ j=0..n } 2 ^ j * binomial(j, i - j))). - _ Benoit Cloitre _ , Oct 23 2004 ● a(n) = 2 * (a(n - 1) + a(n - 2)) + 1, n > 1. - _ Gary Detlefs _ , Jun 20 2010 ● a(n) = floor((1 + sqrt(3)) ^ (n + 2) / 6). - _ Bruno Berselli _ , Feb 05 2013 ● a(n) = (- 2 + (1 - sqrt(3)) ^ (n + 2) + (1 + sqrt(3)) ^ (n + 2)) / 6. - _ Alexander R. Povolotsky _ , Feb 13 2016 ●

▶ [A005322] 1,3,9,25,69,189,518,1422,3915,10813,29964,83304,232323,649845,1822824,5126520,14453451,40843521,115668105,328233969,933206967,2657946907,7583013474,21668135850,62007732605 ⋆ Column of Motzkin triangle. ● a(n) = number of (s(0), s(1), ..., s(n)) such that s(i) is a nonnegative integer and |s(i) - s(i - 1)| <= 1 for i = 1, 2, ..., n, s(0) = 0, s(n) = 2. ● a(n) = - sqrt(- 3) * (- 1) ^ n * (3 * n * (13 * n + 27) * hypergeom([1 / 2, n],[1],4 / 3) - hypergeom([1 / 2, n + 1],[1],4 / 3) * (41 * n ^ 2 + 115 * n + 60)) / (2 * (n + 3) * (n + 5) * (n + 6)). - _ Mark van Hoeij _ , Nov 12 2009 ● a(n) = sum(k=1..n + 2, (k - 2) * k * sum(j=k..n + 2, C(- k + 2 * j - 1,j - 1) * (- 1) ^ (n + 2 - j) * C(n + 2,j))) / (n + 2). - _ Vladimir Kruchinin _ , Sep, 26 2011 ●

▶ [A103780] 1,1,3,9,25,69,189,519,1428,3930,10812,29742,81816,225070,619156,1703262,4685565,12889687,35458707,97544655,268339161,738183999,2030697309,5586319365,15367609920 ⋆ Row sums of square of trinomial triangle A071675. ● a(n) = a(n - 1) + 2a(n - 2) + 4a(n - 3) + 6a(n - 4) + 8a(n - 5) + 8a(n - 6) + 6a(n - 7) + 3a(n - 8) + a(n - 9). ●

▶ [A098182] 1,1,3,9,25,69,191,529,1465,4057,11235,31113,86161,238605,660767,1829857,5067409,14033137,38861859,107619849,298030825,825334485,2285592479,6329473777,17528163337 ⋆ a(n) = 3 * a(n - 1) - a(n - 2) + a(n - 3), a(0)=1,a(1)=1,a(2)=3. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n + k, 3 * k) * 2 ^ k. ●

▶ [A007046] 1,3,9,25,70,194,537,1485,4104,11338,31318,86498,238885,659713,1821843,5031071,13893316,38366206,105947374,292570493,807923428,2231050832,6160961041,17013250192,46981405457 ⋆ Number of irreducible positions of size n in Montreal solitaire. ● a(n) = d(n, 2) where d(n, k) = 0 if n < k * (k + 1) / 2, d(n, k) = 1 if n = k * (k + 1) / 2, and d(n, k) = d(n, k + 1) + Sum _{ r=1..k } binomial(k + 1, r) * d(n - k * (k + 1) / 2 + r * (r - 1) / 2, r) if n > k * (k + 1) / 2 [From Cannings and Haigh]. - _ Sean A. Irvine _ , Sep 25 2017 ●

▶ [A097861] 0,0,1,3,9,25,70,196,553,1569,4476,12826,36894,106470,308113,893803,2598313,7567465,22076404,64498426,188689684,552675364,1620567763,4756614061,13974168190 ⋆ Number of humps in all Motzkin paths of length n. (A hump is an upstep followed by 0 or more flatsteps followed by a downstep.) ● a(n) = Sum _{ j=1..n } C(n, j) * C(n - j, j) / 2. - _ Zerinvary Lajos _ , Sep 24 2006 ● a(n) = (1 / 2) * (hypergeom([1 / 2 - n / 2, - n / 2], [1], 4) - 1). ● a(n) = (1 / 2) * 2 ^ (- n) * n! * [x ^ n] Exp(2 * x, 1) * (Exp(2 * x, 2) - 1), where Exp(x, m) = Sum _{ k>=0 } (x ^ k / k!) ^ m. Cf. A344559. (End) ●

▶ [A101197] 1,3,9,25,71,199,561,1577,4439,12487,35137,98857,278151,782599,2201937,6195369,17431351,49044935,137993185,388258473,1092406631,3073602311,8647907569,24331808809,68460135703 ⋆ Lengths of successive words (starting with a) under the substitution: { a - > aab, b - > aac, c - > b } . ● a(n) = 2 * a(n - 1) + 3 * a(n - 2) - 2 * a(n - 3). ●

▶ [A101168] 1,3,9,25,71,201,569,1611,4561,12913,36559,103505,293041,829651,2348889,6650121,18827671,53304473,150914409,427265435,1209664161,3424773601,9696140959,27451493281,77720042081 ⋆ Lengths of successive words (starting with a) under the substitution: { a - > aab, b - > aac, c - > a } . ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) + a(n - 3). ● a(n - 1) = sum(k=1..n, sum(m=0..n - k, (sum(j=0..k, binomial(j, n - m - 3 * k + 2 * j) * binomial(k, j))) * sum(i=ceiling(m / 2)..m, binomial(i, m - i) * binomial(k + i - 1, k - 1)))). - _ Vladimir Kruchinin _ , May 05 2011 ●

▶ [A138574] 0,1,3,9,25,73,211,609,1761,5089,14707,42505,122841,355017,1026019,2965249,8569729,24766977,71577891,206863945,597847897,1727812489,4993470771,14431398369,41707515361 ⋆ a(n) = 2 * a(n - 1) + 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4); a(0)=0, a(1)=1, a(2)=3, a(3)=9, a(4)=25. ● a(n) = round(w ^ n * (1 + 1 / sqrt(5)) / 4) where w = (1 + r) / (1 - r) = 2.89005363826396... and r = sqrt(sqrt(5) - 2) = 0.485868271756... . ●

▶ [A183111] 0,1,3,9,25,75,223,665,1993,5971,17903,53697,161065,483163,1449439,4348233,13044585,39133571,117400431,352200881,1056601993,3169805003,9509413535,28528238329,85584711561 ⋆ Magnetic Tower of Hanoi, number of moves of disk number k, optimally solving the [RED ; BLUE ; NEUTRAL] or [NEUTRAL ; RED ; BLUE] pre - colored puzzle. ● a(n) = a(n - 2) + a(n - 3) + 2 * 3 ^ (n - 2) + 2 * 3 ^ (n - 4) ; n >= 4 ● a(n) = (10 / 11) * 3 ^ (n - 1) + AP * 1 ^ (n - 1) + BP * 2 ^ (n - 1) + CP * 3 ^ (n - 1) ●

▶ [A191354] 1,1,3,9,25,75,227,693,2139,6645,20757,65139,205189,648427,2054775,6526841,20775357,66251247,211617131,676930325,2168252571,6953348149,22322825865,71735559255,230735316795 ⋆ Number of lattice paths from (0,0) to (n, n) using steps (1,0), (1,1), (1,2), and (2,1). ● a(n) = Sum _{ k=0..n } (binomial(2 * k,k) * Sum _{ j=0..k } (binomial(j,n - k - j) * binomial(k,j) * 2 ^ (j - k) * 3 ^ (- n + k + 2 * j) * 4 ^ (n - k - 2 * j))). - _ Vladimir Kruchinin _ , Feb 27 2016 ●

▶ [A001189] 0,1,3,9,25,75,231,763,2619,9495,35695,140151,568503,2390479,10349535,46206735,211799311,997313823,4809701439,23758664095,119952692895,618884638911,3257843882623,17492190577599,95680443760575 ⋆ Number of degree - n permutations of order exactly 2. ● a(n) = b(n, 2), where b(n, d)=Sum _{ k=1..n } (n - 1)! / (n - k)! * Sum _{ l:lcm { k, l } =d } b(n - k, l), b(0, 1)=1 is the number of degree - n permutations of order exactly d. ● a(n) = a(n - 1) + (1 + a(n - 2)) * (n - 1). ● a(n) = Sum _{ j=1..floor(n / 2) } n! / (j! * (n - 2 * j)! * (2 ^ j)). (End) ●

▶ [A101786] 1,1,1,3,9,25,77,247,801,2657,8969,30635,105785,368745,1295493,4582767,16309953,58357313,209798289,757461011,2745281705,9984464761,36428252541,133293594343,489028250465 ⋆ G.f. satisfies: A(x) = 1 + x * A(x) / (1 - 2 * x ^ 2 * A(x) ^ 2). ● a(n) = Sum _{ k=0..[(n - 1) / 2] } C(n - k - 1, k) * C(n, 2 * k) * 2 ^ k / (2 * k + 1) for n>0, with a(0)=1. ●

▶ [A246653] 1,1,3,9,25,87,287,993,3519,12525,45369,165519,608569,2253307,8386575,31370297,117834837,444258387,1680516731,6375706325,24253227159,92481509389,353417696625,1353280137975,5191349266275 ⋆ G.f.: Sum _{ n>=0 } x ^ n / (1 - x ^ 2) ^ (2 * n + 1) * [Sum _{ k=0..n } C(n,k) ^ 2 * x ^ k] * [Sum _{ k=0..n } C(n,k) ^ 2 * x ^ (2 * k)]. ● a(n) = Sum _{ k=0..[n / 2] } binomial(2 * k, k) * binomial(n - k, k) ^ 2. ●

▶ [A351891] 1,1,1,3,9,25,105,443,1969,10609,57265,338547,2190969,14498185,104277849,784965803,6150938593,51229928929,440694547681,3967606065891,37247506348905,361022009762809,3645855348771273,38001754007842715,409302848055407761 ⋆ Expansion of e.g.f. exp(sinh(sqrt(2) * x) / sqrt(2)). ● a(0) = 1; a(n) = Sum _{ k=0..floor((n - 1) / 2) } binomial(n - 1,2 * k) * 2 ^ k * a(n - 2 * k - 1). ●

▶ [A178061] 0,0,1,3,9,25,120,546,4438,28134,308115,2440405,33237831,314699463,5119097074,56345113020,1065268609980,13359512435356,287786703606453,4049825314169079,97903924694681365,1527478596708475845,40946200336523631996,701409698806896677158 ⋆ Number of distinct cycles without repeated edges on the multigraph consisting of two vertices joined by n edges. ● a(n) = n * (n - 1) / 2 + Sum _{ k=4..n:2 divides k } (n! / ((n - k)! * 2 * k)). ●

▶ [A291410] 1,3,9,26,69,186,511,1401,3824,10438,28521,77938,212928,581700,1589231,4341911,11862339,32408429,88541424,241899801,660882666,1805564823,4932894579,13476918898,36819627664 ⋆ p - INVERT of (1,1,0,0,0,0,...), where p(S) = 1 - S - S ^ 2 - 2 S ^ 3. ● a(n) = a(n - 1) + 2 * a(n - 2) + 4 * a(n - 3) + 7 * a(n - 4) + 6 * a(n - 5) + 2 * a(n - 6) for n >= 7. ●

▶ [A072863] 1,3,9,26,72,192,496,1248,3072,7424,17664,41472,96256,221184,503808,1138688,2555904,5701632,12648448,27918336,61341696,134217728,292552704,635437056,1375731712 ⋆ a(n) = 2 ^ (n - 3) * (n ^ 2 + 3 * n + 8). ● a(n) = 2 ^ (n - 3) * (n ^ 2 + 3n + 8). (End) ● a(n) = Sum _{ k=0..2 } binomial(n,k) * 2 ^ (n - k). (End) ●

▶ [A054963] 1,3,9,26,72,194,515,1357,3563,9340,24466,64068,167749,439191,1149837,3010334,7881180,20633222,54018503,141422305,370248431,969323008,2537720614,6643838856,17393795977 ⋆ Number of cells in the first column of all directed column - convex polyominoes of area n + 1. ● a(n) = 5 * a(n - 1) - 8 * a(n - 2) + 5 * a(n - 3) - a(n - 4) for n >= 4. - _ Jinyuan Wang _ , Mar 10 2020 ●

▶ [A291733] 1,3,9,26,72,195,520,1368,3560,9184,23520,59860,151536,381840,958256,2396192,5972736,14845040,36801792,91021056,224642304,553347072,1360598016,3340024384,8186748160 ⋆ a(n) = (1 / 4) * A291732(n). ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) + 4 * a(n - 3) - 8 * a(n - 4) - 4 * a(n - 6) for n >= 7. ●

▶ [A084787] 1,3,9,26,73,199,542,1475,4011,10903,29640,80571,219017,595350,1618331,4399082,11957946,32505069,88357939,240181783,652881776,1774716669,4824180073,13113481032,35646137200 ⋆ Least integer such that e ^ n / (ceiling(e ^ n) + a(n)) monotonically decreases. ● a(0)=1, a(n + 1) = ceiling(e * a(n) + e * ceiling(e ^ n) - ceiling(e ^ (n + 1))), e=2.71828... ●

▶ [A054447] 1,3,9,26,73,201,545,1460,3873,10191,26633,69198,178889,460437,1180545,3016552,7684481,19522203,49473097,125093506,315654537,795016545,1998999985,5017895196,12578040097 ⋆ Row sums of triangle A054446 (partial row sums triangle of Fibonacci convolution triangle). ● a(n) = Sum _ (k * Sum _ (binomial(i,n - k - i) * binomial(k + i - 1,k - 1),i,ceiling((n - k) / 2),n - k),k,1,n), n >0. - _ Vladimir Kruchinin _ , Sep 06 2010 ● a(n) = 4 * a(n - 1) - 2 * a(n - 2) - 4 * a(n - 3) - a(n - 4), a(0)=1, a(1)=3, a(2)=9, a(3)=26. - _ Philippe Deléham _ , Jan 22 2014 ●

▶ [A061667] 1,3,9,26,73,201,546,1469,3925,10434,27633,72977,192322,506037,1329885,3491810,9161929,24026745,62983842,165055853,432445861,1132806018,2967020769,7770353441,20348233858 ⋆ a(n) = Fibonacci(2 * n + 1) - 2 ^ (n - 1). ● a(n) = Sum _{ k=0..n + 1 } C(n + 1, k) * sum { j=0..floor(k / 2), Fibonacci(k - 2j) } . - _ Paul Barry _ , Apr 17 2005 ● a(n) = 2 ^ (- 1 - n) * (- 5 * 4 ^ n - (3 - sqrt(5)) ^ n * (- 5 + sqrt(5)) + (3 + sqrt(5)) ^ n * (5 + sqrt(5))) / 5. ● a(n) = 5 * a(n - 1) - 7 * a(n - 2) + 2 * a(n - 3) for n>3. ●

► [A268093] 1,3,9,26,74,208,580,1608,4440,12224,33584,92128,252448,691200,1891392,5173376,14145920,38671360,105700096,288873984,789410304,2157092864,5894054912,16104392704,44001089536 ⋆ Number of 1 X n 0..2 arrays with every repeated value in every row not one larger and in every column one larger mod 3 than the previous repeated value, and upper left element zero. ● a(n) = (- 3 * 2 ^ n + (3 - 2 * sqrt(3)) * (1 - sqrt(3)) ^ n + (1 + sqrt(3)) ^ n * (3 + 2 * sqrt(3))) / 12. ●

► [A116423] 0,1,3,9,26,74,209,588,1651,4631,12983,36388,101972,285741,800660,2243445,6286059,17613241,49351342,138279586,387451077,1085614208,3041824015,8523002359,23880923183 ⋆ Binomial transform of A006053. ● a(n) = 4 * a(n - 1) - 3 * a(n - 2) - a(n - 3). (End) ●

► [A077845] 1,3,9,26,74,210,595,1685,4771,13508,38244,108276,306549,867895,2457165,6956670,19695566,55761638,157871079,446961001,1265425799,3582644680,10143101960,28716919080,81302686761 ⋆ Expansion of (1 - x) ^ (- 1) / (1 - 2 * x - 2 * x ^ 2 - x ^ 3). ● a(n) = 3 * a(n - 1) - a(n - 3) - a(n - 4). - _ Wesley Ivan Hurt _ , Mar 10 2015 ●

► [A291000] 1,3,9,26,74,210,596,1692,4804,13640,38728,109960,312208,886448,2516880,7146144,20289952,57608992,163568448,464417728,1318615104,3743926400,10630080640,30181847168,85694918912 ⋆ p - INVERT of (1,1,1,1,1,...), where p(S) = 1 - S - S ^ 2 - S ^ 3. ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) + 2 * a(n - 3) for n >= 4. ●

► [A289806] 1,3,9,26,74,211,600,1708,4860,13832,39364,112029,318827,907366,2582312,7349121,20915193,59523497,169400608,482104856,1372044007,3904762096,11112739032,31626246588,90006565434 ⋆ p - INVERT of (1,1,2,2,3,3,...) (A008619), where p(S) = 1 - S - S ^ 2. ● a(n) = 3 * a(n - 1) + a(n - 2) - 5 * a(n - 3) + 2 * a(n - 4) + 2 * a(n - 5) - a(n - 6). ●

► [A303976] 1,3,9,26,75,207,565,1518,4044,10703,28234,74277,195103,511902,1342147,3517239,9214412,24134528,63204417,165505811,433361425,1134664831,2970787794,7777975396,20363634815 ⋆ Number of different aperiodic multisets that fit within some normal multiset of size n. ● a(n) = Sum _{ k=1..n } Sum _{ d |k } mu(k / d) * Sum _{ i=1..d } binomial(d - 1, i - 1) * binomial(n - k + i, i). - _ Andrew Howroyd _ , Sep 18 2018 ●

► [A123941] 0,1,3,9,26,75,216,622,1791,5157,14849,42756,123111,354484,1020696,2938977,8462447,24366645,70160958,202020427,581694636,1674922950,4822748423,13886550633,39984728949 ⋆ The (1,2) - entry in the 3 X 3 matrix M ^ n, where M = {{ 2, 1, 1 } , { 1, 1, 0 } , { 1, 0, 0 }} . ● a(n) = 3 * a(n - 1) - a(n - 3), a(0)=0, a(1)=1, a(2)=3 (follows from the minimal polynomial x ^ 3 - 3x ^ 2 + 1 of the matrix M). ●

► [A076264] 1,3,9,26,75,216,622,1791,5157,14849,42756,123111,354484,1020696,2938977,8462447,24366645,70160958,202020427,581694636,1674922950,4822748423,13886550633,39984728949,115131438424 ⋆ Number of ternary (0,1,2) sequences without a consecutive '012'. ● a(n) is asymptotic to g * c ^ n where c = cos(Pi / 18) / cos(7 * Pi / 18) and g is the largest real root of 81 * x ^ 3 - 81 * x ^ 2 - 9 * x + 1 = 0. - _ Benoit Cloitre _ , Nov 06 2002 ● a(n) = 3 * a(n - 1) - a(n - 3), n > 0. ● a(n) = Sum _{ k=0..floor(n / 3) } binomial(n - 2k, k)(- 1) ^ k * 3 ^ (n - 3k). - _ Paul Barry _ , Oct 20 2004 ●

► [A005774] 0,1,3,9,26,75,216,623,1800,5211,15115,43923,127854,372749,1088283,3181545,9312312,27287091,80038449,234988827,690513030,2030695569,5976418602,17601021837,51869858544 ⋆ Number of directed animals of size n (k=1 column of A038622); number of (s(0), s(1), ..., s(n)) such that s(i) is a nonnegative integer and |s(i) - s(i - 1)| <= 1 for i = 1,2,...,n, where s(0) = 2; also sum of row n + 1 of array T in A026323. ● a(n) * (2 + n) = (4 + 4 * n) * a(n - 1) - n * a(n - 2) + (12 - 6 * n) * a(n - 3). - _ Simon Plouffe _ , Feb 09 2012 ● a(n) = GegenbauerC(n - 2, - n, - 1 / 2) + GegenbauerC(n - 1, - n, - 1 / 2). - _ Peter Luschny _ , May 12 2016 ●

► [A101169] 1,3,9,26,76,221,644,1875,5461,15903,46314,134876,392791,1143896,3331289,9701475,28252921,82278978,239615244,697814501,2032195756,5918219771,17235212309,50192888175,146173193506 ⋆ Lengths of successive words (starting with a) under the substitution: { a - > aab, b - > aac, c - > ab } . ● a(n) = 2 * a(n - 1) + 3 * a(n - 2) - a(n - 3). ●

► [A119826] 1,3,9,26,76,222,648,1892,5524,16128,47088,137480,401392,1171920,3421584,9989792,29166592,85155936,248624640,725894336,2119349824,6187737600,18065963520,52746101888,153999606016 ⋆ Number of ternary words of length n with no 000's. ● a(n - 1) = Sum _{ m=1..n } Sum _{ k=m..n } C(k - 1, m - 1) * Sum _{ j=0..k } C(j, n - 3 * k + 2 * j) * C(k, j). - _ Vladimir Kruchinin _ , Apr 25 2011 ● a(n) = round((3 / 2) * ((r + s + 2) / 3) ^ (n + 3) / (r ^ 2 + s ^ 2 + 10)), where r=(53 + 3 * sqrt(201)) ^ (1 / 3), s=(53 - 3 * sqrt(201)) ^ (1 / 3); r and s are the real roots of the polynomial x ^ 6 - 106 * x ^ 3 + 1000. - _ Anton Nikonov _ , Jul 11 2013 ●

► [A133405] 0,0,0,1,3,9,26,78,234,703,2109,6327,18980,56940,170820,512461,1537383,4612149,13836446,41509338,124528014,373584043,1120752129,3362256387,10086769160 ⋆ a(n) = 3 * a(n - 1) - a(n - 3) + 3 * a(n - 4). ● a(n) = (1 / 42) * (1 / 2 - (1 / 2) * i * sqrt(3)) ^ n + (1 / 28) * 3 ^ n - (1 / 12) * (- 1) ^ n + (1 / 42) * (1 / 2 + (1 / 2) * i * sqrt(3)) ^ n - (1 / 14) * i * (1 / 2 - (1 / 2) * i * sqrt(3)) ^ n * sqrt(3) + (1 / 14) * i * (1 / 2 + (1 / 2) * I * sqrt(3)) ^ n * sqrt(3), with n>=0 and i=sqrt(- 1). - _ Paolo P. Lava _ , Jun 09 2008 ●

► [A368088] 1,3,9,26,82,259,817,2583,8166,25821,81650,258200,816497,2581990,8164966,25819890,81649659,258198890,816496582,2581988898,8164965810,25819888975,81649658093,258198889748,816496580928 ⋆ Index of smallest pentagonal number with n digits. ● a(n) = ceiling((sqrt(24 * 10 ^ (n - 1) + 1) + 1) / 6). ●

► [A248959] 1,3,9,27,36,72,132,240,444,816,1500,2760,5076,9336,17172,31584,58092,106848,196524,361464,664836,1222824,2249124,4136784,7608732 ⋆ Number of ternary words of length n in which all digits 0..2 occur in every subword of 4 consecutive digits. ● a(n) = a(n - 1) + a(n - 2) + a(n - 3). ●

► [A337948] 3,9,27,41,93,189,297,481,1161,1809,3105,6449,10689,20673,44577,73217,144129,299457,553473,1107201,2243457,4299777,8529921,17203969,34030593 ⋆ L.g.f.: - log(Sum _{ n= - oo.. + oo } (- p) ^ n * (p * x) ^ (n ^ 2)) = Sum _{ n>=1 } a(n) * x ^ n / n, where p = sqrt(2). ● a(2 * n + k) = 0 (mod 3) for n >= 0, and k = 1,2,3 (conjecture). ●

► [A097803] 3,9,27,57,99,153,219,297,387,489,603,729,867,1017,1179,1353,1539,1737,1947,2169,2403,2649,2907,3177,3459 ⋆ a(n) = 3 * (2 * n ^ 2 + 1). ● a(0)=3, a(1)=9, a(2)=27, a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Dec 29 2011 ●

► [A161712] 1,3,9,27,65,131,233,379,577,835,1161,1563,2049,2627,3305,4091,4993,6019,7177,8475,9921,11523,13289,15227,17345 ⋆ a(n) = (4 * n ^ 3 - 6 * n ^ 2 + 8 * n + 3) / 3. ● a(n) = C(n,0) + 2 * C(n,1) + 4 * C(n,2) + 8 * C(n,3). ●

► [A137368] 3,9,27,66,144,253,424,651,977,1392,1866,2479,3169,3981,4978,6137,7420,8829,10477,12279,14295,16613,19124,21906,24904 ⋆ a(n) = least m such that sum of m reciprocal primes starting with n - th prime is >1. ● a(n)=m: sum(1 / prime(i), i=n,n + m - 1))>1, while sum(1 / prime(i), i=n,n + m - 2))<1. ●

► [A191007] 3,9,27,69,171,405,939,2133,4779,10581,23211,50517,109227,234837,502443,1070421,2271915,4805973,10136235,21321045,44739243,93672789,195734187,408245589,850045611 ⋆ a(n) = n * 2 ^ (n + 1) + (2 ^ (n + 3) + (- 1) ^ n) / 3. ● a(n) = n * 2 ^ (n + 1) + (2 ^ (n + 3) + (- 1) ^ n) / 3. ●

► [A206604] 1,1,3,9,27,73,189,465,1115,2601,5973,13489,30149,66641,146233,318369,689403,1484137,3181797,6790641,14445101,30617841,64724553,136426849,286926757 ⋆ Number of integers in the smallest interval containing both minimal and maximal possible apex values of an addition triangle whose base is a permutation of n + 1 consecutive integers. ● a(n) = 1 + Sum _{ k=0..n } C(n,floor(k / 2)) * (2 * k - n). ●

► [A084707] 1,3,9,27,73,195,513,1347,3529,9243,24201,63363,165889,434307,1137033,2976795,7793353,20403267,53416449,139846083,366121801,958519323,2509436169,6569789187,17199931393 ⋆ a(n) = 3 * a(n - 1) - 3 * a(n - 3) + a(n - 4) for n > 3, with a(0) = 1, a(1) = 3, a(2) = 9, a(3) = 27. ● a(n) = (8 / 5) * (((3 + sqrt(5)) / 2) ^ n + ((3 - sqrt(5)) / 2) ^ n) - (10 + (- 1) ^ n) / 5 with n>=0. - _ Paolo P. Lava _ , Aug 01 2008 ● a(n) = (8 * LucasL(2 * n) - (- 1) ^ n - 10) / 5. - _ G. C. Greubel _ , Apr 15 2023 ●

► [A289658] 1,3,9,27,75,186,414,840,1578,2784,4662,7476,11556,17313,25245,35955,50157,68697,92559,122889,161001,208404,266808,338154,424620 ⋆ Number of 2 - Abelian equivalence classes of words of length n over an alphabet of size 3. ● a(n) = (2 * n ^ 6 + 42 * n ^ 5 + 335 * n ^ 4 - 1140 * n ^ 3 + 5828 * n ^ 2 - 4752 * n + 5760) / 1920 for n>0 and even. ● a(n) = (2 * n ^ 6 + 42 * n ^ 5 + 335 * n ^ 4 - 1140 * n ^ 3 + 5828 * n ^ 2 - 4662 * n + 5355) / 1920 for n odd. ●

► [A289693] 0,0,1,3,9,27,75,197,503,1263,3132,7695,18784,45649,110585,267276,644907,1554208,3742321,9005265,21659603,52078400,125186565,300870586,723010749 ⋆ The number of partitions of [n] with exactly 3 blocks without peaks. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 24 * a(n - 3) - 29 * a(n - 4) + 25 * a(n - 5) - 17 * a(n - 6) + 9 * a(n - 7) - 3 * a(n - 8) + a(n - 9) for n>9. ●

► [A269684] 3,9,27,75,201,525,1347,3411,8553,21285,52659,129675,318153,778269,1899267,4625955,11249481,27321525,66285747,160679451,389217513,942260205,2280029379,5514901875,13334998953 ⋆ Number of length - n 0..2 arrays with no repeated value differing from the previous repeated value by plus or minus one modulo 2 + 1. ● a(n) = 3 * (- 2 ^ (1 + n) + (1 - sqrt(2)) ^ (1 + n) + (1 + sqrt(2)) ^ (1 + n)) / 2. ●

► [A048481] 1,3,9,27,77,207,529,1299,3093,7191,16409,36891,81949,180255,393249,852003,1835045,3932199,8388649,17825835,37748781,79691823,167772209,352321587,738197557 ⋆ a(n) = T(0,n) + T(1,n - 1) + ... + T(n,0), array T given by A048472. ● a(n) = 6 * a(n - 1) - 13 * a(n - 2) + 12 * a(n - 3) - 4 * a(n - 4). - _ Colin Barker _ , Dec 04 2014 ●

► [A241574] 1,3,9,27,78,222,618,1686,4512,11856,30624,77856,195072,482304,1178112,2846208,6807552,16134144,37920768,88449024,204865536,471465984,1078591488,2454061056,5555355648 ⋆ Number of ternary words of length n avoiding the pattern 11 - 11. ● a(n) = 3 * 2 ^ (n - 7) * (16 + 36 * n - n ^ 2 + n ^ 3) for n > 3. - _ Colin Barker _ , Jun 06 2015 ● a(n) = 8 * a(n - 1) - 24 * a(n - 2) + 32 * a(n - 3) - 16 * a(n - 4) for n > 7. - _ Colin Barker _ , Jun 06 2015 ●

► [A269613] 3,9,27,78,222,624,1740,4824,13320,36672,100752,276384,757344,2073600,5674176,15520128,42437760,116014080,317100288,866621952,2368230912,6471278592,17682164736,48313178112,132003268608 ⋆ Number of length - n 0..2 arrays with no repeated value differing from the previous repeated value by other than plus two, zero or minus 1. ● a(n) = (- 3 * 2 ^ n + (3 - 2 * sqrt(3)) * (1 - sqrt(3)) ^ n + (1 + sqrt(3)) ^ n * (3 + 2 * sqrt(3))) / 4. ●

► [A090401] 1,3,9,27,78,225,648,1863,5355,15390,44226,127089,365202,1049436,3015630,8665623,24901263,71555481,205619553,590861790,1697881581,4878978300,14020076241,40287643353,115769285316 ⋆ Expansion of 1 / (1 - 3x + 3x ^ 4). ● a(n)=3a(n - 1) - 3a(n - 4); a(n)=sum { k=0..floor(n / 2), comb(n - 3k, k)3 ^ (n - 3k) } . ●

► [A181137] 1,3,9,27,78,228,666,1944,5676,16572,48384,141264,412440,1204176,3515760,10264752,29969376,87499776,255467808,745873920,2177683008,6358049472,18563212800,54197890560,158238305664 ⋆ The number of ways to color n balls in a row with 3 colors with no color runs having lengths greater than 3. ● a(n + 3) = 2(a(n) + a(n + 1) + a(n + 2)), a(0)=1, a(1)=3, a(2)=9, a(3)=27. ●

► [A266497] 1,3,9,27,79,225,627,1717,4633,12341,32501,84737,218959,561263,1428287,3610671,9072367,22668285,56345835,139382713,343242533,841713531,2055944117,5003148987,12132552115 ⋆ Binomial transform of A015128. ● a(n) = [x ^ n] (1 + x) ^ n / theta _ 4(x), where theta _ 4() is the Jacobi theta function. - _ Ilya Gutkovskiy _ , Apr 20 2018 ●

► [A291020] 1,3,9,27,79,228,656,1889,5445,15701,45275,130544,376388,1085199,3128841,9021083,26009635,74991112,216214692,623391005,1797363157,5182163781,14941232871,43078615236,124204414928 ⋆ p - INVERT of (1,1,1,1,1,...), where p(S) = 1 - S - S ^ 2 - S ^ 3 - S ^ 4 + S ^ 5. ● a(n) = 6 * a(n - 1) - 13 * a(n - 2) + 14 * a(n - 3) - 7 * a(n - 4) for n >= 6. ●

► [A282087] 1,3,9,27,79,229,657,1871,5295,14909,41801,116783,325287,903741,2505377,6932479,19151519,52833853,145578265,400705135,1101936119,3027902045,8314284721,22816209855,62579270191 ⋆ Number of length - n ternary strings that do not contain both "00" and "11". ● a(n) = 4 * a(n - 1) - a(n - 2) - 6 * a(n - 3) - 2 * a(n - 4) for n >= 4 (derived in the math.stackexchange.com link). ● a(n) = - (1 - u) ^ (1 + n) / 2 - (1 + u) ^ (1 + n) / 2 + (1 - v) ^ n - (2 * (1 - v) ^ n) / v + (1 + v) ^ n + (2 * (1 + v) ^ n) / v where u=sqrt(2) and v=sqrt(3). ●

▶ [A287898] 1,3,9,27,79,233,687,2025,5969,17595,51865,152883,450655,1328401,3915743,11542481,34023905,100292659,295633833,871443275,2568763439,7571973753,22319994767,65792907193,193938514865 ⋆ Number of ways to go up and down n stairs, with fewer than 4 stairs at a time, stepping on each stair at least once. ● a(n + 4) = 2 * a(n + 3) + 2 * a(n + 2) + 2 * a(n + 1) + a(n). ●

▶ [A134396] 1,3,9,27,80,232,656,1808,4864,12800,33024,83712,208896,514048,1249280,3002368,7143424,16842752,39387136,91422720,210763776,482869248,1099956224,2492465152,5620367360 ⋆ A007318 * A000125. ● a(n) = 8 * a(n - 1) - 24 * a(n - 2) + 32 * a(n - 3) - 16 * a(n - 4) for n>3. ● a(n) = (2 ^ (n - 4) * (48 + 20 * n + 3 * n ^ 2 + n ^ 3)) / 3. ●

▶ [A291006] 1,3,9,27,80,235,688,2013,5891,17244,50482,147791,432672,1266680,3708288,10856241,31782309,93044665,272394011,797450348,2334585333,6834643282,20008841823,58577124509,171488162320 ⋆ p - INVERT of (1,1,1,1,1,...), where p(S) = 1 - S - S ^ 2 - S ^ 3 - S ^ 4. ● a(n) = 5 * a(n - 1) - 8 * a(n - 2) + 6 * a(n - 3) - a(n - 4) for n >= 4. ●

▶ [A289781] 1,3,9,27,80,237,701,2073,6129,18120,53569,158367,468181,1384083,4091760,12096453,35760689,105719157,312537041,923951760,2731474161,8075043963,23872213729,70573310907,208635540400 ⋆ p - INVERT of the positive Fibonacci numbers (A000045), where p(S) = 1 - S - S ^ 2. ● a(n) = 3 * a(n - 1) + a(n - 2) - 3 * a(n - 3) - a(n - 4). ●

▶ [A209239] 1,3,9,27,80,238,708,2106,6264,18632,55420,164844,490320,1458432,4338032,12903256,38380080,114159600,339561936,1010009744,3004222720,8935908000,26579404800,79059090528,235157252096 ⋆ Number of length n words on { 0,1,2 } with no four consecutive 0's. ● a(n) = 2 * (a(n - 1) + a(n - 2) + a(n - 3) + a(n - 4)) for n>=4, with a(0) = 1, a(1) = 3, a(2) = 9, a(3) = 27. - _ Taras Goy _ , Aug 04 2019 ●

▶ [A248960] 1,3,9,27,81,150,366,870,2022,4686,10974,25614,59742,139398,325350,759198,1771590,4134126,9647262,22512342,52533750,122590422,286071414,667563054,1557794622 ⋆ Number of ternary words of length n in which all digits 0..2 occur in every 5 consecutive digits. ● a(n) = a(n - 1) + 2 * a(n - 2) + 2 * a(n - 3) + 2 * a(n - 4) - a(n - 5) - a(n - 6). ●

▶ [A181140] 3,9,27,81,240,714,2124,6318,18792,55896,166260,494532,1470960,4375296,13014096,38709768,115140240,342478800,1018685808,3030029232,9012668160,26807724000,79738214400,237177271584,705471756288 ⋆ The number of ways to color n balls in a row with 3 colors with no color runs having lengths greater than 4. This sequence is a special case of the general problem for coloring n balls in a row with p colors where each color has a given maximum run - length. In this example, the bounds are uniformly 4. It can be phrased in terms of tossing a p - faced die n times, requiring each face to have no runs longer than b. ● a(n + 4) = 2(a(n) + a(n + 1) + a(n + 2) + a(n + 3)); a(1)=3, a(2)=9, a(3)=27, a(4)=81. ●

▶ [A291007] 1,3,9,27,81,242,720,2137,6337,18789,55715,165232,490058,1453493,4311025,12786359,37923789,112480082,333610072,989469949,2934716101,8704215281,25816251319,76569665176,227101665034 ⋆ p - INVERT of (1,1,1,1,1,...), where p(S) = 1 - S - S ^ 2 - S ^ 3 - S ^ 4 - S ^ 5. ● a(n) = 6 * a(n - 1) - 13 * a(n - 2) + 14 * a(n - 3) - 7 * a(n - 4) + 2 * a(n - 5) for n >= 6. ●

▶ [A249019] 1,3,9,27,81,243,540,1440,3804,9960,25908,67344,175884,458832,1196364,3119304,8134164,21212832,55316892,144249168,376159644,980918904,2557958964,6670420704,17394543180 ⋆ Number of ternary words of length n in which all digits 0..2 occur in every 6 consecutive digits. ● a(n) = a(n - 1) + 2 * a(n - 2) + 3 * a(n - 3) + 5 * a(n - 4) + 6 * a(n - 5) - a(n - 6) - a(n - 7) - a(n - 9) - a(n - 10), for n>=16. ●

▶ [A133494] 1,1,3,9,27,81,243,729,2187,6561,19683,59049,177147,531441,1594323,4782969,14348907,43046721,129140163,387420489,1162261467,3486784401,10460353203,31381059609,94143178827 ⋆ Diagonal of the array of iterated differences of A047848. ● a(n) = ceiling(3 ^ (n - 1)). - _ Alois P. Heinz _ , Jul 26 2020 ●

▶ [A000244] 1,3,9,27,81,243,729,2187,6561,19683,59049,177147,531441,1594323,4782969,14348907,43046721,129140163,387420489,1162261467,3486784401,10460353203,31381059609,94143178827,282429536481 ⋆ Powers of 3: a(n) = 3 ^ n. ● a(n) = 3 ^ n. ● a(0) = 1; a(n) = 3 * a(n - 1). ● a(n) = n! * Sum _{ i + j + k = n, i, j, k >= 0 } 1 / (i! * j! * k!). - _ Benoit Cloitre _ , Nov 01 2002 ● a(n) = Sum _{ k = 0..n } 2 ^ k * binomial(n, k), binomial transform of A000079. ● a(n) = 2 * StirlingS2(n + 1,3) + StirlingS2(n + 2,2) = 2 * (StirlingS2(n + 1,3) + StirlingS2(n + 1,2)) + 1. - _ Ross La Haye _ , Jun 26 2008 ● a(n) = 2 * Stirling S2(n + 1, 3) + StirlingS2(n + 2, 2) = 2 * (StirlingS2(n + 1, 3) + StirlingS2(n + 1, 2)) + 1. - _ Ross La Haye _ , Jun 09 2008 ●

▶ [A351345] 1,1,1,1,1,1,1,3,9,27,81,243,729,2189,6601,20141,63009,205989,718905,2720543,11183601,49321367,228895201,1097860903,5371546897 ⋆ G.f. A(x) satisfies: A(x) = 1 + x + x ^ 2 + x ^ 3 + x ^ 4 + x ^ 5 + x ^ 6 * A(x / (1 - 2 * x)) / (1 - 2 * x). ● a(0) = ... = a(5) = 1; a(n) = Sum _{ k=0..n - 6 } binomial(n - 6,k) * 2 ^ k * a(n - k - 6). ●

▶ [A351344] 1,1,1,1,1,1,3,9,27,81,243,731,2223,6939,22727,79971,306929,1282815,5744361,26984415,130656409,644739377,3224303841,16318576681,83717193681 ⋆ G.f. A(x) satisfies: A(x) = 1 + x + x ^ 2 + x ^ 3 + x ^ 4 + x ^ 5 * A(x / (1 - 2 * x)) / (1 - 2 * x). ● a(0) = ... = a(4) = 1; a(n) = Sum _{ k=0..n - 5 } binomial(n - 5,k) * 2 ^ k * a(n - k - 5). ●

▶ [A351343] 1,1,1,1,1,3,9,27,81,245,761,2493,8849,34519,147057,670327,3198561,15732905,79174929,407127897,2145061729,11635963499,65309080185,380583443187,2304629301041 ⋆ G.f. A(x) satisfies: A(x) = 1 + x + x ^ 2 + x ^ 3 + x ^ 4 * A(x / (1 - 2 * x)) / (1 - 2 * x). ● a(0) = ... = a(3) = 1; a(n) = Sum _{ k=0..n - 4 } binomial(n - 4,k) * 2 ^ k * a(n - k - 4). ●

▶ [A052917] 1,3,9,27,82,249,756,2295,6967,21150,64206,194913,591706,1796268,5453010,16553943,50253535,152556873,463123629,1405924830,4268028025,12956640948,39333046473,119405064249,362483220772 ⋆ Expansion of 1 / (1 - 3 * x - x ^ 4). ● a(n) = 3 * a(n - 1) + a(n - 4), with a(0)=1, a(1)=3, a(2)=9, a(3)=27. ● a(n) = Sum _{ alpha=RootOf(- 1 + 3 * z + z ^ 4) } (1 / 2443) * (729 + 64 * alpha + 144 * alpha ^ 2 + 324 * alpha ^ 3) * alpha ^ (- 1 - n). ●

▶ [A099786] 1,3,9,27,82,255,819,2727,9397,33312,120537,441855,1631017,6036879,22345074,82589247,304612975,1120960983,4116353265,15088372416,55224373105,201895801851,737506551321,2692518758163,9826402960882 ⋆ a(n) = Sum _{ k=0..floor(n / 4) } C(n - k,3 * k) * 3 ^ (n - 4 * k). ● a(n) = 9 * a(n - 1) - 27 * a(n - 2) + 27 * a(n - 3) + a(n - 4). ●

▶ [A192909] 1,1,3,9,27,83,259,811,2541,7963,24957,78221,245165,768413,2408415,7548629,23659463,74155215,232422687,728476151,2283243129,7156307287,22429820697,70301181369,220343094521 ⋆ Constant term in the reduction by (x ^ 2 - > x + 1) of the polynomial p(n,x) defined below at Comments. ● a(n) = 4 * a(n - 1) - 3 * a(n - 2) + a(n - 3) - a(n - 5). ●

▶ [A171155] 1,1,3,9,27,83,259,817,2599,8323,26797,86659,281287,915907,2990383,9786369,32092959,105435607,346950321,1143342603,3772698725,12463525229,41218894577,136451431723,452116980643 ⋆ For two strings of length n, this is the number of pairwise alignments that do not have an insertion adjacent to a deletion. ● a(n) = ((4 * n - 3) * a(n - 1) - (2 * n - 5) * a(n - 2) + a(n - 3) - (n - 3) * a(n - 4)) / n. - _ Alois P. Heinz _ , Jan 22 2013 ●

▶ [A131428] 1,1,3,9,27,83,263,857,2859,9723,33591,117571,416023,1485799,5348879,19389689,70715339,259289579,955277399,3534526379,13128240839,48932534039,182965127279,686119227299,2579808294647 ⋆ a(n) = 2 * C(n) - 1, where C(n) = A000108(n) are the Catalan numbers. ● a(n) = 2 * binomial(2 * n,n) / (n + 1) - 1. ●

▶ [A099787] 1,3,9,27,83,267,909,3267,12235,46983,182529,711099,2764619,10704147,41257341,158371011,605932099,2312728095,8812918161,33549513579,127652354627,485608571547,1847326271949,7028217617859,26742885359131 ⋆ a(n) = Sum _{ k=0..floor(n / 4) } C(n - k,3 * k) * 2 ^ k * 3 ^ (n - 4 * k). ● a(n) = 9 * a(n - 1) - 27 * a(n - 2) + 27 * a(n - 3) + 2 * a(n - 4). ●

▶ [A351342] 1,1,1,1,1,3,9,27,83,271,971,3865,16879,78985,388385,1987201,10561385,58443891,337724057,2040085491,12862712499,84357800063,573182197539,4021203303593,29062345301487,216129411635057 ⋆ G.f. A(x) satisfies: A(x) = 1 + x + x ^ 2 + x ^ 3 * A(x / (1 - 2 * x)) / (1 - 2 * x). ● a(0) = a(1) = a(2) = 1; a(n) = Sum _{ k=0..n - 3 } binomial(n - 3,k) * 2 ^ k * a(n - k - 3). ●

▶ [A176826] 1,1,3,9,27,85,283,985,3539,13013,48707,184921,710347,2755669,10780139,42477977,168439619,671641685,2691362195,10832277401,43771088315,177504638933,722178443963,2946919157081,12057932335283 ⋆ a(n + 1) = Sum _{ p=0..n } (a(p) * a(n - p) + k) + l for n>=1, where a(0)=1, a(1)=1, k=1 and l=- 1. ● a(n) = Sum _{ k=0..n } C(k) * Sum _{ i=0..(n - k) / 2 } binomial(k + 1,i) * binomial(n - k - 1,n - k - 2 * i), where C(k) is the k - th Catalan number (A000108). - _ Vladimir Kruchinin _ , May 09 2018 ●

▶ [A325047] 1,3,9,27,99,657,4109,14423,53475,134523,1686983,13421711,85848955,325004679,1482972731,6258674687,43509358107,310036393025,1197637196163,5063711906615,29684695980709,237651736873787,1908882337833375,13472425062258959,63600578042733379 ⋆ Odd coefficients in Sum _{ n>=0 } x ^ n * (1 + x ^ n) ^ n / (1 - x ^ (n + 1)) ^ (n + 1). ● a(n) = [x ^ (n * (n + 1))] Sum _{ k>=0 } x ^ k * (1 + x ^ k) ^ k / (1 - x ^ (k + 1)) ^ (k + 1). ● a(n) = [x ^ (n * (n + 1))] Sum _{ m>=0 } x ^ m * Sum _{ k=0..m } binomial(m,k) * (x ^ m + x ^ k) ^ (m - k). ● a(n) = [x ^ (n * (n + 1))] Sum _{ m>=0 } x ^ m * Sum _{ k=0..m } binomial(m,k) * Sum _{ j=0..m - k } binomial(m - k,j) * x ^ ((m - k) * (m - j)). ●

▶ [A202907] 1,3,9,27,211,633,1899,5697,52297,156891,470673,1412019,12675403,38026209,114078627,342235881,3081171505,9243514515,27730543545,83191630635,748691121283,2246073363849,6738220091547 ⋆ Expand 1 / (1 - (3 / 2) * x + (2 / 3) * x ^ 4 - x ^ 5) in powers of x, then multiply coefficient of x ^ n by 3 ^ floor(n / 4) * 2 ^ n to get integers. ● a(n) = 211 * a(n - 4) + 7776 * a(n - 8) for n > 7. ●

▶ [A032092] 3,9,28,60,126,226,396,636,1001,1491,2184,3080,4284,5796,7752,10152,13167,16797,21252,26532,32890,40326,49140,59332,71253 ⋆ Number of reversible strings with n - 1 beads of 2 colors. 5 beads are black. String is not palindromic. ● a(n) = (2 * n ^ 5 - 30 * n ^ 4 + 170 * n ^ 3 - 480 * n ^ 2 + 728 * n - 480) / 480 if n is even. ● a(n) = (2 * n ^ 5 - 30 * n ^ 4 + 170 * n ^ 3 - 450 * n ^ 2 + 548 * n - 240) / 480 if n is odd. ● a(n) = (1 / 2) * (binomial(n - 1, n - 6) - binomial((n / 2) - 1, (n - 6) / 2)) if n is even. ● a(n) = (1 / 2) * binomial(n - 1, n - 6) if n is odd. ●

▶ [A282081] 1,3,9,28,66,126,226,396,651,1001,1491,2184,3108,4284,5796,7752,10197,13167,16797,21252,26598,32890,40326,49140,59423 ⋆ Number of n - element subsets of [n + 5] having an even sum. ● a(n) = (1 + n) * (2 + n) * (3 + n) * (4 + n) * (5 + n) / 240 + ((- i) ^ n + i ^ n) * (8 + 6 * n + n ^ 2) / 32 where i=sqrt(- 1). - _ Colin Barker _ , Feb 06 2017 ●

▶ [A373445] 0,0,0,0,0,0,1,3,9,28,75,195,498,1229,2978,7115,16756,39031,90089,206228,468795,1059197,2380257,5323610,11856514 ⋆ Triple convolution of the three tribonacci - like sequences A000073(n), A077947(n - 2), and A103143(n). ● a(n) = 3 * a(n - 1) + a(n - 3) - 12 * a(n - 4) - 3 * a(n - 5) + 2 * a(n - 6) + 17 * a(n - 7) + 11 * a(n - 8) + 6 * a(n - 9). ●

▶ [A292328] 3,9,28,84,246,707,2001,5592,15461,42357,115122,310716,833472,2223471,5902415,15598896,41058423,107673601,281416248,733229412,1904957434,4936026747,12758472189,32901998472,84667043769 ⋆ p - INVERT of the Fibonacci sequence (A000045), where p(S) = (1 - S) ^ 3. ● a(n) = 6 * a(n - 1) - 9 * a(n - 2) - 4 * a(n - 3) + 9 * a(n - 4) + 6 * a(n - 5) + a(n - 6) for n >= 7. ●

▶ [A291731] 1,3,9,28,84,255,772,2340,7088,21476,65064,197126,597228,1809420,5481980,16608712,50319264,152451844,461882016,1399359936,4239628608,12844765920,38915675520,117902483528,357208128400 ⋆ a(n) = (1 / 2) * A291730(n). ● a(n) = 4 * a(n - 1) + 2 * a(n - 2) - 4 * a(n - 3) - 2 * a(n - 4) for n >= 5. ●

▶ [A291257] 1,3,9,28,85,261,797,2440,7461,22827,69821,213588,653345,1998573,6113529,18701072,57205769,174990195,535287793,1637423756,5008812525,15321754293,46868623381,143369215128,438560602669 ⋆ a(n) = (1 / 2) * A291228(n). ● a(n) = 2 * a(n - 1) + 4 * a(n - 2) - 2 * a(n - 3) - a(n - 4) for n >= 5. ●

▶ [A052541] 1,3,9,28,87,270,838,2601,8073,25057,77772,241389,749224,2325444,7217721,22402387,69532605,215815536,669848995,2079079590,6453054306,20029011913,62166115329,192951400293,598883212792 ⋆ Expansion of 1 / (1 - 3 * x - x ^ 3). ● a(n) = 3 * a(n - 1) + a(n - 3), with a(0)=1, a(1)=3. ● a(n) = Sum _{ alpha = RootOf(- 1 + 3 * x + x ^ 3) } (1 / 15) * (4 + alpha + 2 * alpha ^ 2) * alpha ^ (- n - 1). ● a(n) = Sum _{ k=0..floor(n / 3) } binomial(n - 2 * k, k) * 3 ^ (n - 3 * k). - _ Paul Barry _ , Oct 20 2004 ●

► [A052939] 1,3,9,28,87,271,844,2629,8189,25508,79455,247495,770924,2401357,7480005,23299524,72575863,226067103,704178124,2193449749,6832393165,21282272996,66292312655,206494424631,643211040556 ★ Expansion of (1 - x) * (1 + x) / (1 - 3 * x - x ^ 2 + 2 * x ^ 3). ● a(n) = 3 * a(n - 1) + a(n - 2) - 2 * a(n - 3). ● a(n) = Sum _{ alpha=RootOf(1 - 3 * z - z ^ 2 + 2 * z ^ 3) } (1 / 229) * (66 + 15 * alpha - 28 * alpha ^ 2) * alpha ^ (- 1 - n). ●

► [A124820] 1,3,9,28,88,277,872,2745,8641,27201,85626,269542,848491,2670964,8407925,26467299,83316385,262271568,825604416,2598919345,8181135700,25753389181,81069068969,255197244033,803335158406 ★ Expansion of (1 - x) / (1 - 4 * x + 3 * x ^ 2 - x ^ 3). ● a(n) = sum(k=0..n, C(n + 2k + 1, 3k + 1)). ●

► [A195675] 0,1,3,9,28,88,278,873,2742,8616,27067,85032,267137,839237,2636540,8282934,26021606,81749286,256822958,806833117,2534740992,7963123679,25016890851,78592880513,246906816043 ★ Round(Pi ^ (n + 1) / (Pi ^ 2 + 1)). ● a(n) = round(Pi ^ (n + 1) / (Pi ^ 2 + 1)). ●

► [A358092] 1,1,3,9,28,88,279,889,2843,9115,29279,94183,303294,977522,3152709,10173671,32844544,106073200,342671109,1107278239,3578704532,11568322736,37400611581,120931966547,391065616195 ★ Row sums of the convolution triangle of the Motzkin numbers (A202710). ● a(n) = [x ^ n] (sqrt(x + 1) * (1 - 2 * x) + sqrt(1 - 3 * x)) / (sqrt(x + 1) * (1 - 4 * x) + sqrt(1 - 3 * x)). ● a(n) = ((36 - 12 * n) * a(n - 4) + (30 - 14 * n) * a(n - 3) + (3 * n - 3) * a(n - 2) + (4 * n - 3) * a(n - 1)) / n for n >= 5. ●

► [A049220] 0,0,1,3,9,28,89,285,914,2931,9397,30124,96565,309545,992266,3180775,10196193,32684604,104772769,335856389,1076610978,3451151243,11062904925,35462909836,113678819677 ★ Number of horizontally convex n - ominoes in which the top row has at least 2 squares and the rightmost square in the top row is above the leftmost square in the second row. ● a(n) = 5a(n - 1) - 7a(n - 2) + 4a(n - 3) for n >= 6. ●

► [A094790] 1,3,9,28,89,286,924,2993,9707,31501,102256,331981,1077870,3499720,11363361,36896355,119801329,388991876,1263047761,4101088878,13316149700,43237262993,140390505643,455845099957,1480119728920 ★ Number of (s(0), s(1), ..., s(2n)) such that 0 < s(i) < 7 and |s(i) - s(i - 1)| = 1 for i = 1,2,...,2 * n, s(0) = 1, s(2n) = 3. ● a(n) = (2 / 7) * Sum _{ k=1..6 } sin(Pi * k / 7) * sin(3 * Pi * k / 7) * (2 * cos(Pi * k / 7)) ^ (2n). ● a(n) = 5 * a(n - 1) - 6 * a(n - 2) + a(n - 3). ● a(n) = rightmost term in M ^ n * [1,0,0] where M = the 3 X 3 matrix [2,1,1; 1,2,0; 1,0,1]. E.g., M ^ 3 * [1,0,0] = [19,14,9]; right term = 9 = a(3). - _ Gary W. Adamson _ , Apr 04 2006 ●

► [A094803] 1,3,9,28,90,296,988,3328,11272,38304,130416,444544,1516320,5174144,17659840,60282880,205795456,702583296,2398676736,8189409280,27960021504,95460743168,325921881088,1112763940864,3799207806976 ★ Number of (s(0), s(1), ..., s(2n)) such that 0 < s(i) < 8 and |s(i) - s(i - 1)| = 1 for i = 1,2,...,2n, s(0) = 1, s(2n) = 3. ● a(n) = (1 / 4) * Sum _{ k=1..7 } sin(Pi * k / 8) * sin(3 * Pi * k / 8) * (2 * cos(Pi * k / 8)) ^ (2n). ● a(n) = 6 * a(n - 1) - 10 * a(n - 2) + 4 * a(n - 3). ●

► [A094826] 1,3,9,28,90,297,1000,3417,11799,41041,143472,503262,1769365,6230304,21960801,77461435,273351705,964918116,3406804786,12029917377,42483179304,150036624217,529901048943,1871559855009,6610286313784 ★ Number of (s(0), s(1), ..., s(2n)) such that 0 < s(i) < 9 and |s(i) - s(i - 1)| = 1 for i = 1,2,...,2n, s(0) = 1, s(2n) = 3. ● a(n) = (2 / 9) * Sum _{ r=1..8 } sin(r * Pi / 9) * sin(3 * r * Pi / 9) * (2 * cos(r * Pi / 9)) ^ (2n). ● a(n) = 6 * a(n - 1) - 9 * a(n - 2) + a(n - 3) = 7 * a(n - 1) - 15 * a(n - 2) + 10 * a(n - 3) - a(n - 4). ●

► [A033190] 0,1,3,9,28,90,297,1001,3431,11917,41820,147918,526309,1881009,6744843,24244145,87300092,314765506,1135980801,4102551897,14823628015,53581222773,193724727804,700551945014,2533702591613 ★ a(n) = Sum _{ k=0..n } binomial(n,k) * binomial(Fibonacci(k) + 1,2). ● a(n) = (1 / 5) * Sum _{ r=1..9 } sin(r * Pi / 10) * sin(3 * r * Pi / 10) * (2 * cos(r * Pi / 10)) ^ (2 * n), n >= 1. ● a(n) = 8 * a(n - 1) - 21 * a(n - 2) + 20 * a(n - 3) - 5 * a(n - 4), n >= 5. (End) ● a(2n) = (5 * Fibonacci(4 * n) + (5 ^ n) * Lucas(2 * n)) / 10 for n > 0. ● a(2n + 1) = (Fibonacci(4 * n + 2) + (5 ^ n) * Fibonacci(2 * n + 1)) / 2 for n >= 0. ●

► [A370074] 1,3,9,28,90,297,1001,3432,11933,41971,149017,533141,1919215,6942950,25215181,91858456,335449202,1227312350,4496994689,16496266812,60566602692,222524531559,817997639090,3008175954887,11066005530460 ★ Expansion of (1 - 2 * x) * (1 - 4 * x + 2 * x ^ 2) / (1 - 9 * x + 28 * x ^ 2 - 35 * x ^ 3 + 15 * x ^ 4 - x ^ 5). ● a(n) = 9 * a(n - 1) - 28 * a(n - 2) + 35 * a(n - 3) - 15 * a(n - 4) + a(n - 5) for n >= 5. ●

► [A000245] 0,1,3,9,28,90,297,1001,3432,11934,41990,149226,534888,1931540,7020405,25662825,94287120,347993910,1289624490,4796857230,17902146600,67016296620,251577050010,946844533674,3572042254128 ★ a(n) = 3 * (2 * n)! / ((n + 2)! * (n - 1)!). ● a(n + 1) = Sum _{ i + j + k=n } C(i)C(j)C(k) with i, j, k > = 0 and where C(k) denotes the k - th Catalan number. - _ Benoit Cloitre _ , Nov 09 2003 ● a(n) = Sum _{ k=0..n } binomial(n,k) * 2 ^ (n - k) * (- 1) ^ (k + 1) * binomial(k, floor((k - 1) / 2)). - _ Paul Barry _ , Feb 16 2006 ● a(n) = (1 / Pi) * Integral _{ x=0..4 } x ^ n * (x - 1) * sqrt(x * (4 - x)) / (2 * x). - _ Paul Barry _ , Feb 08 2008 ● a(n) = sum of top row terms of M ^ (n - 1), M = an infinite square production matrix as follows: ● a(n) = - binomial(2 * n,n) / (n + 1) * hypergeom([- 1,n + 1 / 2],[n + 2],4). - _ Peter Luschny _ , Aug 15 2012 ● a(n) = Sum _{ i=0..n - 1 } C(i) * C(n - i), where C(i) denotes the i - th Catalan number. - _ Dmitry Kruchinin _ , Mar 02 2013 ●

► [A071724] 1,1,3,9,28,90,297,1001,3432,11934,41990,149226,534888,1931540,7020405,25662825,94287120,347993910,1289624490,4796857230,17902146600,67016296620,251577050010,946844533674,3572042254128 ★ a(n) = 3 * binomial(2n, n - 1) / (n + 2), n > 0, with a(0)=1. ● a(n) is the n - th moment of the function defined on the segment (0, 4) of x axis: a(n) = Integral _{ x=0..4 } x ^ n * (- x ^ (1 / 2) * cos(3 * arcsin((1 / 2) * x ^ (1 / 2))) / Pi) dx, n=0, 1... . - _ Karol A. Penson _ , Sep 29 2004 ●

► [A215007] 1,3,9,28,91,308,1078,3871,14161,52479,196196,737793,2785160,10540390,39955041,151615947,575723785,2187128524,8311078307,31587815308,120069510526,456434707519,1735184512425,6596692255391,25079305566420 ★ a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 7 * a(n - 3), a(0)=1, a(1)=3, a(2)=9. ● a(n) = (1 / sqrt(7)) * (cot(8 * Pi / 7) * (s(1)) ^ 2n + cot(4 * Pi / 7) * (s(4)) ^ 2n + cot(2 * Pi / 7) * (s(2)) ^ 2n), where s(j) := 2 * sin(2Pi * j / 7). ●

► [A243156] 1,1,3,9,28,92,319,1154,4302,16382,63391,248499,984867,3940121,15891386,64545971,263783729,1083883910,4475194635,18557356409,77251869363,322723617687,1352518263334,5684939482522,23959266771808 ★ G.f. satisfies: x = A(x) * (1 - A(x)) / (1 - A(x) - A(x) ^ 3) such that A(0) = 1. ● a(n) = floor(((6 ^ (2 * n) * (6 ^ (- n) + 1) ^ 3 + 6 ^ n) / (6 * (1 + 6 ^ n))) ^ n - 6 ^ n * floor(((6 ^ (2 * n) * (6 ^ (- n) + 1) ^ 3 + 6 ^ n) / (36 * (1 + 6 ^ n))) ^ n))) / n, for n>0. - _ Tani Akinari _ , May 20 2018 ●

► [A345241] 1,1,3,9,28,93,315,1109,3969,14505,53726,201588,764001,2921730,11257881,43669590,170383933,668236581,2632898016,10416893159,41368099791,164841324837,658883345595,2641064296638,10613953319448 ★ G.f. A(x) satisfies: A(x) = x + x ^ 2 * exp(3 * Sum _{ k>=1 } A(x ^ k) / k). ● a(n + 2) = (3 / n) * Sum _{ k=1..n } (Sum _{ d|k } d * a(d)) * a(n - k + 2). ●

► [A081914] 1,3,9,28,93,333,1269,5022,20169,80919,321489,1259712,4861701,18482337,69264477,256154562,935867601,3381559083,12096128601,42874534116,150706570221,525729603573,1821263718789,6269238352998,21454184419353 ★ a(n) = 3 ^ n * (n ^ 3 - 3n ^ 2 + 2n + 162) / 162. ● a(n) = 3 ^ n * (n ^ 3 - 3n ^ 2 + 2n + 162) / 162. ●

► [A120985] 1,3,9,28,93,333,1272,5085,20925,87735,372879,1602450,6953824,30438138,134255403,596154495,2662813341,11955684591,53927330037,244250703252,1110401393067,5065143385647,23176155530394,106344639962973 ★ Number of ternary trees with n edges and having no vertices of degree 2. A ternary tree is a rooted tree in which each vertex has at most three children and each child of a vertex is designated as its left or middle or right child. ● a(n)=(1 / (n + 1)) * sum(3 ^ (n - 3j) * binomial(n + 1,2j + 1) * binomial(n - 2j,j), j=0..n / 2). G.f.= G(z) satisfies G=1 + 3zG + z ^ 3 * G ^ 3. ●

► [A098589] 1,3,9,29,93,297,949,3033,9693,30977,98997,316377,1011085,3231249,10326501,33001673,105467517,337055553,1077170005,3442445049,11001446253,35158678769,112360926405,359085671721,1147574372701 ★ a(n) = 3 * a(n - 1) + 2 * a(n - 3), with a(0)=1, a(1)=3. ● a(n) = Sum _{ k=0..floor(n / 2) } Sum _{ i=0..n } Sum _{ j=0..i } C(n - 2 * k,i) * C(i,j) * C(j, k) * 2 ^ k. ●

► [A061534] 1,3,9,29,93,299,961,3089,9929,31915,102585,329741,1059893,3406835,10950657,35198913,113140561,363669939,1168951465,3757383773,12077432845,38820730843,124782241601,401090022801,1289231579161 ★ Expansion of (1 - x ^ 2) / (1 - 3 * x - x ^ 2 + x ^ 3). ● a(n) = 3 * a(n - 1) + a(n - 2) - a(n - 3) for n >3. - _ Colin Barker _ , Sep 13 2014 ●

► [A036550] 1,3,9,29,95,307,973,3033,9339,28511,86537,261637,788983,2375115,7141701,21457841,64439027,193448119,580606465,1742343645,5228079471,15686335523,47063200829,141197991049,423610750315 ★ a(n) = T(0,n) + T(1,n - 1) + ... + T(n,0), array T given by A048471. ● a(n) = (1 / 2) * (3 ^ (n + 1) - 2 ^ (n + 2) + 2n + 3). - _ Ralf Stephan _ , Feb 17 2004 ●

► [A290897] 1,3,9,29,95,307,976,3073,9645,30283,95207,299625,943363,2970320,9351621,29439359,92671625,291715157,918275995,2890621063,9099375792,28643956245,90168412937,283841284899,893503898503 ★ p - INVERT of the positive integers, where p(S) = 1 - S - S ^ 3. ● a(n) = 7 * a(n - 1) - 19 * a(n - 2) + 27 * a(n - 3) - 19 * a(n - 4) + 7 * a(n - 5) - a(n - 6). ●

► [A289804] 1,3,9,29,96,321,1077,3617,12149,40802,137009,459991,1544169,5183201,17396800,58387097,195950657,657602545,2206838633,7405775266,24852220929,83398067755,279861976377,939138581941,3151475258656 ★ p - INVERT of the even bisection (A001519) of the Fibonacci numbers, where p(S) = 1 - S - S ^ 2. ● a(n) = 7 * a(n - 1) - 15 * a(n - 2) + 9 * a(n - 3) + a(n - 4). ●

► [A082306] 1,3,9,29,97,327,1097,3649,12033,39371,127945,413349,1328609,4251535,13551753,43046729,136314625,430467219,1355971721,4261625389,13366006881,41841412823,130754415049,407953774929,1270932914177 ★ Expansion of e.g.f. (1 + x) * exp(2 * x) * cosh(x). ● a(n) = (n + 1 + 3 ^ (n - 1) * (n + 3)) / 2. ●

► [A081696] 1,1,3,9,29,97,333,1165,4135,14845,53791,196417,721887,2667941,9907851,36950465,138320021,519515209,1957091277,7392602917,27992976565,106236268337,404005515873,1539293204549,5875059106769 ★ Expansion of 1 / (x + sqrt(1 - 4x)). ● a(n) = Sum _{ k=0..n } binomial(2n - k,n + k) * (3k + 1) / (n + k + 1). - _ Emanuele Munarini _ , Apr 02 2011 ● a(n) = Sum { k=0..n } (k / (2n - k))binomial(2n - k, n - k)F(k + 1). (End) ● a(n) = the upper left term in M ^ n, M = an infinite square production matrix in which a column of (1,2,2,2,...) is prepended to an infinite lower triangular matrix of all 1's and the rest zeros: ●

► [A247172] 0,1,1,3,9,29,97,335,1185,4273,15649,58051,217673,823709,3141697,12065087,46613121,181049025,706549185,2769069091,10894034633,43008192637,170327978401,676511841743,2694115428769 ★ Expansion of - 1 - (sqrt(x ^ 4 + 4 * x ^ 3 - 2 * x ^ 2 - 4 * x + 1) - x ^ 2 - 2 * x - 1) / (4 * x). ● a(n) = sum(k=1..n, (binomial(n - k,k - 1) * sum(i=0..n - k, 2 ^ i * binomial(k,n - k - i) * binomial(k + i - 1,k - 1) * (- 1) ^ (n - k - i))) / k). ●

► [A346158] 0,1,3,9,29,98,341,1210,4356,15860,58276,215748,803779,3010514,11327360,42789497,162200621,616735888,2351425517,8987222524,34425268864,132128622038,508050009119,1956763431726,7548022312030 ★ Total number of weak left - to - right maxima in Dyck paths of semilength n. ● a(n) = Sum _{ r=1..n } (d(r + 2) - d(r)) * (binomial(2 * n - 1,n - r) - binomial(2 * n - 1, n - r - 1)) where d is A000005 and binomial is A007318. ●

► [A077587] 1,3,9,29,98,342,1221,4433,16302,60554,226746,854658,3239044,12332140,47137005,180780345,695367510,2681600130,10364759790,40142121030,155748675420,605274171060,2355676013730,9180275261274,35819645937228 ★ a(n) = C(n + 1) + n * C(n) where C = A000108 (Catalan numbers). ● a(n) = binomial(2n + 1, n + 1) - binomial(2n, n + 2). ● a(n) = (3 * (3 * n + 2) * a(n - 1) - 2 * (11 * n - 7) * a(n - 2) + 4 * (2 * n - 5) * a(n - 3)) / (n + 2), n>2. ●

► [A001893] 1,3,9,29,98,343,1230,4489,16599,61997,233389,884170,3366951,12876702,49424984,190297064,734644291,2842707951,11022366544,42815701060,166583279325,649063995030,2532267577126,9891097066760,38676401680776 ★ Number of permutations of (1,...,n) having n - 3 inversions (n>=3). ● a(n) = 2 ^ (2 * n - 4) / sqrt(Pi * n) * Q * (1 + O(n ^{- 1 })), where Q is a digital search tree constant, Q = 0.2887880951... (see A048651). - corrected by _ Vaclav Kotesovec _ , Mar 16 2014 ●

► [A099780] 1,3,9,29,99,351,1273,4677,17307,64295,239361,892125,3327091,12412143,46313289,172824629,644952459,2406919671,8982595153,33523198797,125109675747,466914455615,1742546049561,6503265548325,24270507755131 ⋆ a(n) = Sum _{ k=0..floor(n / 3) } C(n - k, 2 * k) * 2 ^ k * 3 ^ (n - 3 * k). ● a(n) = 6 * a(n - 1) - 9 * a(n - 2) + 2 * a(n - 3). ● a(n) = (2 ^ (2 + n) - (2 - sqrt(3)) ^ n * (- 1 + sqrt(3)) + (1 + sqrt(3)) * (2 + sqrt(3)) ^ n) / 6. - _ Colin Barker _ , Feb 05 2017 ●

► [A006134] 1,3,9,29,99,351,1275,4707,17577,66197,250953,956385,3660541,14061141,54177741,209295261,810375651,3143981871,12219117171,47564380971,185410909791,723668784231,2827767747951,11061198475551,43308802158651 ⋆ a(n) = Sum _{ k=0..n } binomial(2 * k,k). ● a(n) = Sum _{ k=0..n } (2k)! / (k!) ^ 2. ● a(n) = C(2n,n) * Sum _{ k=0..2n } (- 1) ^ k * trinomial(n,k) / C(2n,k) where trinomial(n,k) = [x ^ k] (1 + x + x ^ 2) ^ n. E.g. a(2) = C(4,2) * (1 / 1 - 2 / 4 + 3 / 6 - 2 / 4 + 1 / 1) = 6 * (3 / 2) = 9 ; a(3) = C(6,3) * (1 / 1 - 3 / 6 + 6 / 15 - 7 / 20 + 6 / 15 - 3 / 6 + 1 / 1) = 20 * (29 / 20) = 29. - _ Paul D. Hanna _ , Aug 21 2007 ● a(n) = Sum _{ k=0..n } b(k) * binomial(n + k,k), where b(k)=0 for n - k == 2 (mod 3), b(k)=1 for n - k == 0 or 1 (mod 6), and b(k)= - 1 for n - k== 3 or 4 (mod 6). ● a(n) = Sum _{ k=0..n - 1 } c(k) * binomial(2n,k) + binomial(2n,n), where c(k)=0 for n - k == 0 (mod 3), c(k)=1 for n - k== 1 (mod 3), and c(k)= - 1 for n - k==2 (mod 3). (End) ● a(n) = - binomial (2 * (n + 1),n + 1) * hypergeom([1,n + 3 / 2],[n + 2], 4) - i / sqrt(3). - _ Peter Luschny _ , Oct 29 2015 ● a(n) = binomial(2 * n, n) * hypergeom([1, - n], [1 / 2 - n], 1 / 4). - _ Peter Luschny _ , Mar 16 2016 ●

► [A238803] 1,1,3,9,29,99,357,1351,5343,21993,93923,414969,1892277,8887291,42912261,212676951,1080355463,5617772049,29868493827,162204146857,898874710797,5078665886931,29232738375653,171294038649639,1021117638212079 ⋆ Number of ballot sequences of length 2n with exactly n fixed points. ● a(n) = ((2 * n - 1) * a(n - 1) + n * (n - 2) * a(n - 2)) / (n - 1) for n>1, a(0) = a(1) = 1. ●

► [A079319] 1,3,9,29,101,373,1429,5589,22101,87893,350549,1400149,5596501,22377813,89494869,357946709,1431721301,5726754133,22906754389,91626493269,366504924501,1466017600853,5864066209109,23456256447829 ⋆ a(0) = 1; for n >= 1, a(n) = 4 * a(n - 1) - (2 ^ n - 1). ● a(n) = 2 ^ n + (4 ^ n - 1) / 3, n>=0. ●

► [A112532] 1,1,3,9,29,101,379,1525,6549,29889,144419,736241,3947725,22201549,130624587,802180701,5131183301,34121977865,235486915507,1683925343929,12458499203901,95237603403381,751291094637083,6108883628141189,51144808472958709 ⋆ First differences of [0, A047970]. ● a(n) = n + Sum _{ i = 0..n } (n - i - 1) ^ 2 * (n - i) ^ i. (End) ●

► [A293070] 1,3,9,29,103,399,1641,6989,30319,132735,583665,2571821,11343223,50052495,220904217,975041453,4303886431,18997962879,83860441185,370176644813,1634036256295,7212979975503,31839623961801,140546879747981,620403902366671 ⋆ Sum of values of vertices at level n of the hyperbolic Pascal pyramid PP _ (4,5). ● a(n) = 8 * a(n - 1) - 19 * a(n - 2) + 14 * a(n - 3), n >= 3. ● a(n) = (2 ^ (2 + n) - (3 - sqrt(2)) ^ n * (1 + sqrt(2)) + (- 1 + sqrt(2)) * (3 + sqrt(2)) ^ n) / 2. ●

► [A060719] 1,3,9,29,103,405,1753,8279,42293,231949,1357139,8427193,55288873,381798643,2765917089,20960284293,165729739607,1364153612317,11665484410113,103448316470743,949739632313501,9013431476894645,88304011710168691 ⋆ a(0) = 1; a(n + 1) = a(n) + Sum _{ i=0..n } binomial(n,i) * (a(i) + 1). ● a(n) = 2 * Bell(n + 1) - 1. - _ Vladeta Jovovic _ , Feb 11 2003 ●

► [A154147] 3,9,30,60,179,353,1046,2060,6099,12009,35550,69996,207203,407969,1207670,2377820,7038819,13858953,41025246,80775900,239112659,470796449,1393650710,2744002796,8122791603 ⋆ Indices k such that 19 plus the k - th triangular number is a perfect square. ● a(n)= + a(n - 1) + 6 * a(n - 2) - 6 * a(n - 3) - a(n - 4) + a(n - 5). ●

► [A179545] 3,9,30,63,165,234,408,513,759,1218,1395,1998,2460,2709,3243,4134,5133,5490,6633,7455,7884,9243,10209,11748,13968 ⋆ The sum of the elements within a jump in a Sieve of Eratosthenes table. ● a(n) = sum(p + 1 .. 2p - 1) = 3p (p - 1) / 2 where p is the n - th prime. (End) ●

► [A089978] 1,3,9,30,99,324,1062,3483,11421,37449,122796,402651,1320300,4329288,14195817,46548351,152632917,500486202,1641103659,5381209728,17645087790,57858574347,189719352225,622093320045,2039855683176 ⋆ Expansion of 1 / (1 - 3x - 3x ^ 3). ● a(n) = Sum _{ k=0..floor(n / 2) } C(n - 2 * k, k)3 ^ (n - 2 * k). ● a(0)=1, a(1)=3, a(2)=9, a(n)=3 * a(n - 1) + 3 * a(n - 3). - _ Harvey P. Dale _ , Jul 22 2015 ●

► [A052906] 1,3,9,30,99,327,1080,3567,11781,38910,128511,424443,1401840,4629963,15291729,50505150,166807179,550926687,1819587240,6009688407,19848652461,65555645790,216515589831,715102415283,2361822835680 ⋆ Expansion of (1 - x ^ 2) / (1 - 3 * x - x ^ 2). ● a(n) + 3 * a(n + 1) - a(n + 2)=0, with a(0)=1, a(1)=3, a(2)=9. ● a(n) = Sum _{ alpha=RootOf(- 1 + 3 *_ Z +_ Z ^ 2) } (- 3 / 13) * (3 * alpha - 2) * alpha ^ (- 1 - n). ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n - k - 1, k) * 3 ^ (n - 2 * k). - _ Paul Barry _ , Jan 16 2005 ● a(n) = 3 * (((3 + sqrt(13)) / 2) ^ n - ((3 - sqrt(13)) / 2) ^ n) / sqrt(13), for n>=1. - _ Bogart B. Strauss _ , Jul 19 2013 ● a(n) = 3 * Fibonacci(n, 3) for n > 0, where Fibonacci(n, x) are the Fibonacci polynomials. - _ G. C. Greubel _ , Oct 14 2019 ●

► [A102898] 1,3,9,30,99,330,1098,3660,12195,40650,135486,451620,1505358,5017860,16726068,55753560,185844771,619482570,2064940470,6883134900,22943778138,76479260460,254930851404,849769504680,2832564956814 ⋆ A Catalan - related transform of 3 ^ n. ● a(n) = Sum _{ k=0..n } k * binomial(n - 1, (n - k) / 2) * (1 + (- 1) ^ (n - k)) * 3 ^ k / (n + k), n > 0, with a(0) = 1. ●

► [A050181] 0,1,3,9,30,99,333,1144,3978,13995,49742,178296,643842,2340135,8554275,31429026,115997970,429874830,1598952366,5967382200,22338765540,83859016527,315614844558,1190680751376,4501802223090 ⋆ T(2n + 3, n), array T as in A051168; a count of Lyndon words. ● a(n) = (1 / (2 * n + 3)) * Sum _{ d|gcd(n,3) } mu(d) * binomial((2 * n + 3) / d, n / d). (This is a special case of A. Howroyd's formula for double array A051168.) ● a(n) = (1 / (2 * n + 3)) * (binomial(2 * n + 3, n) - binomial((2 * n / 3) + 1, n / 3)) if 3|n; = (1 / (2 * n + 3)) * binomial(2 * n + 3, n) otherwise. ●

► [A089931] 1,3,9,30,100,330,1089,3597,11881,39240,129600,428040,1413721,4669203,15421329,50933190,168220900,555595890,1835008569,6060621597,20016873361,66111241680,218350598400,721163036880,2381839709041 ⋆ a(n) = 3 * a(n - 1) + 3 * a(n - 3) + a(n - 4). ● a(n) = ((3 + sqrt(13) ^ n(11 + 3 * sqrt(13)) / 13 + (3 - sqrt(13) ^ n(11 - 3 * sqrt(13)) / 13) * 2 ^ (- 1 - n) + 2(- 1) ^ n / 13; ● a(n) = (- i) ^ n * Sum _{ k=0..floor(n / 2) } U(n - 2k, 3i / 2) where i = sqrt(- 1). ●

► [A096222] 1,3,9,30,100,360,1296,4896,18496,71808,278784,1098240,4326400,17172480,68161536,271589376,1082146816,4320165888,17247043584,68920934400,275415040000,1101122764800,4402342526976,17605073043456,70403108110336 ⋆ Number of different rectangles when a piece of paper is folded n times in alternate directions. ● a(n) = a b (a + 1) (b + 1) / 4, where a=2 ^ floor(n / 2) and b =2 ^ ceiling(n / 2). ● a(n) (mod 10 ^ k) is cyclic. For (mod 10) the cycle is 0, 0, 0, 6, 6, 6, 8, 4. - _ Robert G. Wilson v _ , Jul 31 2004 ● a(n) = 6 * a(n - 1) - 48 * a(n - 3) + 64 * a(n - 4) for n>3. ●

► [A228339] 3,9,30,102,352,1230,4344,15483,55626,201246,732564,2681223,9861342,36428320,135100620,502841295,1877678370,7032454470,26410804020,99437742720,375260126904,1419223506516,5378236459328,20419260060462,77659985060772 ⋆ Fourth differences of Catalan numbers (A000108). ● a(n) = 9 * (9 * n ^ 4 + 54 * n ^ 3 + 135 * n ^ 2 + 122 * n + 40) * n! * binomial(2 * n, n) / (n + 5)!. ●

► [A317875] 1,1,3,9,30,102,369,1362,5181,20064,79035,315366,1272789,5185080,21296196,88083993,366584253,1533953100,6449904138,27238006971,115475933202,491293053093,2096930378415,8976370298886,38528771056425 ⋆ Number of achiral free pure multifunctions with n unlabeled leaves. ● a(1) = 1; a(n > 1) = Sum _{ 0 < k < n } a(n - k) * Sum _{ d|k } a(d). ●

► [A360715] 1,3,9,30,105,369,1281,4380,14769,49215,162393,531450,1727193,5580141,17936145,57395640,182948577,581130747,1840247337,5811307350,18305618121,57531942633,180441092769,564859072980,1765184603025 ⋆ Number of self - avoiding paths with nodes chosen among n given points on a circle; one - node paths are allowed. ● a(n) = (n / 4) * (3 ^ (n - 1) + 3). ●

► [A029651] 1,3,9,30,105,378,1386,5148,19305,72930,277134,1058148,4056234,15600900,60174900,232676280,901620585,3500409330,13612702950,53017895700,206769793230,807386811660,3156148445580,12350146091400,48371405524650 ⋆ Central elements of the (1,2) - Pascal triangle A029635. ● a(n) = 3 * binomial(2n - 1, n) (n>0). - _ Len Smiley _ , Nov 03 2001 ● a(n) = (3 / 2) * 4 ^ n * Gamma(1 / 2 + n) / (sqrt(Pi) * Gamma(1 + n)) - 0 ^ n / 2. - _ Peter Luschny _ , Dec 16 2015 ● a(n) = 2 ^ (1 - n) * Sum _{ k=0..n } (binomial(k + n,k) * binomial(2 * n - 1,n - k))), n>0, a(0)=1. - _ Vladimir Kruchinin _ , Nov 23 2016 ●

► [A003409] 3,9,30,105,378,1386,5148,19305,72930,277134,1058148,4056234,15600900,60174900,232676280,901620585,3500409330,13612702950,53017895700,206769793230,807386811660,3156148445580,12350146091400,48371405524650,189615909656628 ⋆ a(n) = 3 * binomial(2n - 1,n). ● a(n) = (3 / 2) * 4 ^ n * Gamma(1 / 2 + n) / (sqrt(Pi) * Gamma(1 + n)). - _ Peter Luschny _ , Dec 14 2015 ●

► [A369440] 1,1,3,9,30,107,396,1513,5915,23554,95202,389555,1610588,6717816,28234064,119452553,508330809,2174393331,9343913933,40319400738,174630125428,758916134002,3308320668768,14462616815619,63388694309005 ⋆ Expansion of (1 / x) * Series _ Reversion(x / ((1 + x) * (1 + x ^ 2) ^ 2)). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 2) } binomial(2 * n + 2,k) * binomial(n + 1,n - 2 * k). ●

► [A128725] 1,1,3,9,30,107,399,1537,6069,24434,99924,413943,1733394,7325471,31203159,133825441,577418430,2504681465,10916208453,47778816718,209923718880,925537620996,4093530000888,18157477014599,80753894026905 ⋆ Number of skew Dyck paths of semilength n having no LL's. ● a(n) = (1 / n) * Sum _{ j=0..n + 1 } C(n,j) * Sum _{ i=0..n - j + 1 } C(i,n - j - i + 1) * C(j + i - 1,i), a(0) =1. - _ Vladimir Kruchinin _ , Apr 02 2019 ●

► [A099783] 1,3,9,30,108,405,1548,5967,23085,89451,346842,1345248,5218263,20242872,78528609,304640595,1181814705,4584708702,17785841652,68998115709,267670245492,1038395956527,4028337876861,15627474388899,60624993311226 ⋆ a(n) = Sum _{ k=0..floor(n / 3) } C(n - k,2 * k) * 3 ^ (n - 2 * k). ● a(n) = 6 * a(n - 1) - 9 * a(n - 2) + 3 * a(n - 3). ●

► [A200074] 1,1,3,9,30,108,406,1577,6280,25499,105169,439388,1855636,7908909,33975250,146954693,639460707,2797384235,12295494109,54272825103,240480529815,1069257987503,4769306203838,21334400243252,95687482105807 ⋆ G.f. satisfies A(x) = (1 + x * A(x) ^ 2) * (1 + x ^ 2 * A(x)). ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(2 * n - 3 * k + 1,k) * binomial(2 * n - 3 * k + 1,n - 2 * k) / (2 * n - 3 * k + 1). - _ Seiichi Manyama _ , Jul 18 2023 ●

► [A032125] 3,9,30,108,408,1584,6240,24768,98688,393984,1574400,6294528,25171968,100675584,402677760,1610661888,6442549248,25770000384,103079608320,412317646848,1649269014528,6597072912384,26388285358080,105553128849408 ⋆ "BIK" (reversible, indistinct, unlabeled) transform of 3,3,3,3... ● a(n) = 3 * 2 ^ (n - 2) * (2 ^ (n - 1) + 1). - _ Vladeta Jovovic _ , Dec 22 2002 ● a(1)=3, a(2)=9, a(n) = 6 * a(n - 1) - 8 * a(n - 2). [_ Harvey P. Dale _ , Jan 01 2012] ●

► [A246472] 1,3,9,30,109,418,1650,6604,26589,107274,432934,1746484,7040626,28362324,114175812,459344920,1847008989,7423262554,29822432862,119766845860,480833598054,1929896415484,7744047734652,31067665113640,124613703290994 ⋆ Number of order - preserving (monotone) functions from the power set of 1 = { 0 } to the power set of n = { 0, ..., n - 1 } . ● a(n) = sum _{ i=0..n } (binomial(n,i) * (1 + sum _{ j=i + 1..n } binomial(n,j)). ● a(n) = 2 ^ (2 * n - 1) + 2 ^ n - binomial(2 * n, n) / 2. - _ Vaclav Kotesovec _ , Aug 28 2014 ●

► [A107379] 1,1,1,3,9,30,110,436,1801,7657,33401,148847,674585,3100410,14422567,67792847,321546251,1537241148,7400926549,35854579015,174677578889,855312650751,4207291811538,20782253017825,103048079556241 ⋆ Number of ways to write n ^ 2 as the sum of n odd numbers, disregarding order. ● a(n) = [x ^ (n * (n - 1) / 2)] Product _{ k=1..n } 1 / (1 - x ^ k). - _ Paul D. Hanna _ , Feb 05 2012 ●

► [A134168] 1,3,9,30,111,438,1779,7290,29871,121998,496299,2011650,8129031,32769558,131850819,529745610,2126058591,8525561118,34166421339,136858609170,548013994551,2193796224678,8780408783859,35137313082330,140596298752911 ⋆ Let P(A) be the power set of an n - element set A. Then a(n) = the number of pairs of elements { x,y } of P(A) for which either 0) x and y are disjoint and for which either x is a subset of y or y is a subset of x, or 1) x and y are inter

secting but for which x is not a subset of y and y is not a subset of x, or 2) x and y are intersecting and for which either x is a proper subset of y or y is a proper subset of x, or 3) x = y. • a(n) = (1 / 2) * (4 ^ n - 3 ^ n + 3 * 2 ^ n - 1). • a(n) = 3 * StirlingS2(n + 1,4) + 2 * StirlingS2(n + 1,3) + 2 * StirlingS2(n + 1, 2) + 1. •

▶ [A124427] 0,1,3,9,30,112,463,2095,10279,54267,306298,1838320,11677867,78207601,550277003,4055549053,31224520322,250547144156,2090779592827,18110124715919,162546260131455,1509352980864191,14478981877739094,143299752100925452,1461455003961745247 ⋆ Sum of the sizes of the blocks containing the element 1 in all set partitions of { 1,2,...,n } . • a(n) = (n - 1) * B(n - 1) + B(n). - _ Vladeta Jovovic _ , Nov 10 2006 •

▶ [A308554] 1,3,9,30,113,472,2145,10514,55428,313255,1886888,12029741,80701715,567541878,4175795147,32104799401,257561662496,2151841672173,18676002357864,167951667633495,1561420657033927,14980472336450530,148140814019762129,1508776236781766431 ⋆ Expansion of e.g.f. Sum _{ k>=1 } tau(k) * (exp(x) - 1) ^ k / k!, where tau = number of divisors (A000005). • a(n) = Sum _{ k=1..n } Stirling2(n,k) * tau(k). •

▶ [A354120] 1,3,9,30,114,492,2388,12912,77016,503112,3570552,27399600,225729360,1991996640,18690559200,186620451840,1963991600640,21914748541440,255336518292480,3155705206364160,40209018105116160,547746803311864320,7525926332189130240 ⋆ Expansion of e.g.f. 1 / (1 - log(1 + x)) ^ 3. • a(n) = (1 / 2) * Sum _{ k=0..n } (k + 2)! * Stirling1(n,k). •

▶ [A306526] 3,9,31,50,107,147,257,406,701,1091,1731,2213,2782,3434,4188,5042,6001,7082,8276,18543,21383,24521,27932,46917,52924 ⋆ a(n) = greatest integer N such that (number of primes <= N) >= (number of numbers <= N that contain a zero in base n). • a(n) = max(k | pi(k) >= numOfZeroNum _ n(k)). Because of d = d(n) < 1, numOfZeroNum _ n(k) = k * (1 + O(k ^ (d - 1)), pi(k) = k / log(k) * (1 + o(1)), and pi(3) = 2 >= 2 = numOfZeroNum _ n(3) this maximum always exists (for n > 2). The case n = 2 is obvious. See A324160 regarding general formulas for numOfZeroNum _ n(k). • a(n) < e ^ alpha * (1 + c1 / c2 * (1 + sqrt(1 + c2 * c3 / c1 ^ 2))) ^ (1 / (1 - d)), • a(n) < e ^ alpha * (1 + (1 + sqrt(1 + 4 * (n - 2) ^ 2 / (n * log(n)))) / (1 + (n - 2) * (2 - 1 / sqrt(n * log(n))))) ^ ((n - 1 / 2) * log(n)). • a(n) = O(sqrt(n) * e ^ sqrt(n * log(n))). •

▶ [A001672] 1,3,9,31,97,306,961,3020,9488,29809,93648,294204,924269,2903677,9122171,28658145,90032220,282844563,888582403,2791563949,8769956796,27551631842,86556004191,271923706893,854273519913 ⋆ a(n) = floor(Pi ^ n). • a(n) ^ (1 / n) converges to Pi because |1 - a(n) / Pi ^ n| = |Pi ^ n - a(n)| / Pi ^ n < 1 / Pi ^ n and so a(n) ^ (1 / n) = (Pi ^ n * (1 + o(1))) ^ (1 / n) = Pi * (1 + o(1)). - _ Hieronymus Fischer _ , Jan 22 2006 •

▶ [A049416] 3,9,31,99,316,999,3162,9999,31622,99999,316227,999999,3162277,9999999,31622776,99999999,316227766,999999999,3162277660,9999999999,31622776601,99999999999,316227766016,999999999999,3162277660168 ⋆ Largest number whose square has n digits. • a(n) = ceiling(sqrt(10 ^ n)) - 1. •

▶ [A127927] 1,1,3,9,31,108,391,1431,5319,19926,75252,285750,1090491,4177774,16060401,61916977,239307063,926929746,3597296770,13984508500,54448030092,212282062488,828673761978,3238495227846,12669206034339 ⋆ G.f. A(x) satisfies: [x ^ (2n)] A(x) / Catalan(x) ^ n = A001764(n) = C(3n,n) / (2n + 1) and [x ^ (2n + 1)] A(x) / Catalan(x) ^ n = A001764(n + 1) for n>=0, where Catalan(x) is the g.f. of A000108. • a(n) = C(2 * n,n) - (- 1) ^ (n - 1) * Sum _{ i=0..[(n - 1) / 2] } C(3 * i,i) * C(i - n - 1,n - 1 - 2 * i) / (2 * i + 1). •

▶ [A123222] 1,3,9,31,109,391,1397,4995,17833,63675,227313,811543,2897269,10343647,36928061,131837979,470678161,1680380979,5999172633,21417807055,76464283837,272987183095,974598829637,3479441311347,12422046335161 ⋆ Expansion of - x * (x - 1) * (3 * x ^ 2 - 1) / (9 * x ^ 4 - 8 * x ^ 3 + 4 * x - 1). • a(n) = 4 * a(n - 1) - 8 * a(n - 3) + 9 * a(n - 4). •

▶ [A120305] 1,1,3,9,31,111,407,1513,5679,21471,81643,311895,1196131,4602235,17757183,68680169,266200111,1033703055,4020716123,15662273839,61092127491,238582873475,932758045123,3650336341239,14298633670931 ⋆ a(n) = Sum _{ i=0..n } Sum _{ j=0..n } (- 1) ^ (i + j) * (i + j)! / (i!j!). • a(n) = Sum _{ j=0..n } Sum _{ i=0..n } (- 1) ^ (i + j) * (i + j)! / (i!j!). •

▶ [A052709] 0,1,1,3,9,31,113,431,1697,6847,28161,117631,497665,2128127,9183489,39940863,174897665,770452479,3411959809,15181264895,67833868289,304256253951,1369404661761,6182858317823,27995941060609 ⋆ Expansion of (1 - sqrt(1 - 4 * x - 4 * x ^ 2)) / (2 * (1 + x)). • a(n) = Sum _{ k=0..floor((n - 1) / 2) } (2 * n - 2 - 2 * k)! / (k! * (n - k)! * (n - 1 - 2 * k)!). - _ Emeric Deutsch _ , Nov 14 2001 • a(n + 1) = Sum _{ k=0..n } Catalan(k) * binomial(k, n - k). - _ Paul Barry _ , Feb 22 2005 • a(n + 1) = (1 / (2 * Pi)) * Integral _{ x=2 - 2 * sqrt(2)..2 + 2 * sqrt(2) } x ^ n * (4 + 4x - x ^ 2) / (2 * (1 + x)). - _ Paul Barry _ , Apr 01 2007 •

▶ [A110136] 1,3,9,31,115,447,1803,7499,32069,140795,633981,2925671,13826405,66861107,330544409,1669024071,8598951451,45160258503,241540648011,1314519420803,7273377034547,40886211572271,233344325395327 ⋆ Sums of antidiagonals of number square A110135. • a(n) = Sum _{ j=0..floor((n - k) / 2) } binomial(n - k,j) * binomial(2(n - k - j),n - k) * k ^ j. •

▶ [A371724] 1,3,9,31,117,468,1949,8361,36693,163956,743388,3411576,15816609,73967637,348517539,1652896367,7884305829,37800279504,182055056428,880410972156,4273376488956,20811901707192,101666716335912,498035242836144,2446003588237193 ⋆ G.f. satisfies A(x) = (1 + x * A(x) ^ (1 / 3) * (1 + A(x))) ^ (3 / 2). • a(n) = Sum _{ k=0..n } binomial(n,k) * binomial(n / 2 + 3 * k / 2 + 3 / 2,n) / (n / 3 + k + 1). •

▶ [A086616] 1,3,9,31,121,515,2321,10879,52465,258563,1296281,6589727,33887465,175966211,921353249,4858956287,25786112993,137604139011,737922992937,3974647310111,21493266631001,116642921832963,635074797251889,3467998148181631,18989465797056721 ⋆ Partial sums of the large Schroeder numbers (A006318). • a(1) = 1 and a(n) = n + Sum _{ i=1..n - 1 } a(i) * a(n - i) for n >= 2. - _ Benoit Cloitre _ , Mar 16 2004 •

▶ [A040027] 1,1,3,9,31,121,523,2469,12611,69161,404663,2512769,16485691,113842301,824723643,6249805129,49416246911,406754704841,3478340425563,30845565317189,283187362333331,2687568043654521,26329932233283223,265946395403810289,2766211109503317451 ⋆ The Gould numbers. • a(n) = b(n - 2), n>1, b(n) = Sum _{ k = 1..n } binomial(n, k - 1) * b(n - k), b(0) = 1. - _ Vladeta Jovovic _ , Apr 28 2001 • a(n) = Sum _{ k = 0..n } (Sum _{ j = k..n } Stirling2(j,k) * k ^ (n - j)). •

▶ [A090595] 1,1,3,9,31,126,606,3428,22572,170856,1467432,14123808,150644448,1763377344,22466496960,309371685120,4577183527680,72390548206080,1218507923427840,21746087150745600,410094720409651200 ⋆ Fourth column (k=3) of triangle A084938. • a(n) = (n + 2)! * Sum _{ k=0..n } Sum _{ j=0..n } B(k + 2, n - k + 1) * B(j + 1,k - j + 1), where B(x,y) is the Beta function. • a(n) = Sum _{ k=0..n } Sum _{ j=0..k } n! / (binomial(n,k) * binomial(k,j)). (End) •

▶ [A027040] 1,3,9,31,129,531,2129,8351,32177,122211,458801,1706015,6293169,23057651,83992313,304424639,1098525761,3948727555,14145206209,50515602111,179904080257,639103899411,2265253438745,8012421964063 ⋆ a(n) = self - convolution of row n of array T given by A027023. • a(n) = Sum _{ k=0..2 * n } T(n,k) * T(n,2 * n - k), where T = A027023. - _ G. C. Greubel _ , Nov 05 2019 •

▶ [A111063] 1,1,3,9,31,129,651,3913,27399,219201,1972819,19728201,217010223,2604122689,33853594971,473950329609,7109254944151,113748079106433,1933717344809379,34806912206568841,661331331924807999,13226626638496160001,277759159408419360043 ⋆ a(0) = 1; a(n) = (n - 1) * a(n - 1) + n. • a(n + 1) = Sum _{ k=0..2 * n } C(n,floor(k / 2))(n - floor(k / 2))!. - _ Paul Barry _ , May 04 2007 • a(n) = 2 * floor(e * n!) - 1, n>1. - _ Gary Detlefs _ , Jun 10 2010 • a(n) = 2 * exp(1) * GAMMA(n, 1) - 1 for n>=1. - _ Peter Luschny _ , Nov 21 2017 •

▶ [A063020] 0,1,1,3,9,32,119,466,1881,7788,32868,140907,611871,2685732,11896906,53115412,238767737,1079780412,4909067468,22424085244,102865595140,473678981820,2188774576575,10145798119530,47165267330415 ⋆ Reversion of y - y ^ 2 - y ^ 3 + y ^ 4. • a(n) = (1 / n) * Sum _{ k=0..n - 1 } binomial(n + k - 1,n - 1) * Sum _{ j=0..k } binomial(j,n - 3 * k + 2 * j - 1) * (- 1) ^ (j - k) * binomial(k,j). - _ Vladimir Kruchinin, _ Oct 11 2011 • a(n) = (1 / n) * Sum _{ i=0..n - 1 } (- 1) ^ (i) * binomial(n + i - 1,i) * binomial(3 * n - i - 2,n - i - 1), n > 0. - _ Vladimir Kruchinin _ , Feb 13 2014 •

▶ [A104184] 1,1,3,9,32,120,473,1925,8034,34188,147787,647141,2864508,12796238,57615322,261197436,1191268350,5462080688,25162978925,116414836445,540648963645,2519574506595,11779011525030,55225888341334,259612579655392 ⋆ a(n) is the number of paths from (0,0) to (n,0) using steps of the form (1,2),(1,1),(1,0),(1, - 1) or (1, - 2) and staying above the x - axis. Also, a(n) is the number of possible combinations of balls on the lawn after n turns, using a Motzkin variation of the (4,2) - case of the tennis ball problem considered by D. Merlini, R. Sprugnoli and M. C. Verri. • a(n) = ((Sum _{ l=1..n + 1 } (C(n + 1,l) * Sum _{ i=0..n - 1 } (C(i,2 * l - 1) * Sum _{ j=0..n - l + 1 } (C(j,n - j - i - 1) * C(n - l + 1,j))))) + Sum _{ j=0..n + 1 } (C(j,n - j) * C(n + 1,j))) / (n + 1). - _ Vladimir Kruchinin _ , Jun 26 2015 •

▶ [A194530] 0,1,3,9,32,132,623,3314,19628,128126,914005,7074517,59050739,528741491,5055414317,51406084221,553946196892,6305737560455,75610546284387,952559077043183,12579235034203780,173759983171005721,2505757177457313815,37657189917162605826 ⋆ Number of unlabeled rigid interval posets with n non - maximal and 2 maximal elements. • a(n) = [y ^ n z ^ 2] W(y,z); W(y,z) = z + z * (W(y,y + z + yz) - W(y,z)). •

▶ [A334642] 0,3,9,32,139,669,3430,18360,101403,573551,3305445,19340100,114579348,685962172,4143459504,25220816752,154545611355,952583230899,5902090839715,36738469359480,229636903762035,1440759023752125,9070230371741490,57278432955350880 ⋆ a(n) is the total number of down steps between the first and second up steps in all 2 _ 1 - Dyck paths of length 3 * n. A 2 _ 1 - Dyck path is a lattice path with steps (1, 2), (1, - 1) that starts and ends at y = 0 and stays above the line y = - 1. • a(0) = 0 and a(n) = 2 * binomial(3 * n, n) / (n + 1) - binomial(3 * n + 1, n) / (n + 1) + 4 * binomial(3 * (n - 1), n - 1) / n - 2 * [n =1] for n > 0, where [ ] is the Iverson bracket. •

▶ [A273596] 1,3,9,32,139,729,4515,32336,263205,2401183,24275037,269426592,3257394143,42615550453,599875100487,9040742057760,145251748024649,2478320458476795,44755020000606961,852823700470009056,17101229029400788083,359978633317886558801,7936631162022905081707 ⋆ For n >= 2, a(n) is the number of slim rectangular diagrams of length n. • a(n) = Sum _{ 1<=r,s; r + s<=n } binomial(n - r - 1, s - 1) * binomial(n - s - 1, r - 1) * (n - r - s)!. • a(n) = Sum _{ k=0..n } hypergeom([k + 1, k - n], [], - 1). - _ Peter Luschny _ , Oct 05 2017 • a(n) = Sum _{ k = 0..n - 2 } k! * binomial(n + k - 1, 2 * k + 1). • a(n) = (n - 2) * a(n - 1) + a(n - 2) + 2, with a(2) = 1, a(3) = 3. •

▶ [A219557] 1,3,9,33,96,273,749,1953,4916,12023,28642,66575,151544,338294,741880,1601048,3403936,7137386,14774713,30219025,61115184,122300146,242312186,475589389,925158391 ⋆ Sum of numbers of bipartite partitions of (n,k) into distinct pairs for 0<=k<=n. • a(n) = Sum _{ k=0..n } [x ^ n * y ^ k] 1 / 2 * Product _{ i,j>=0 } (1 + x ^ i * y ^ j). •

▶ [A082841] 3,9,33,123,459,1713,6393,23859,89043,332313,1240209,4628523,17273883,64467009,240594153,897909603,3351044259,12506267433,46674025473,174189834459,650085312363,2426151414993,9054520347609,33791929975443 ⋆ a(n) = 4 * a(n - 1) - a(n - 2) for n>1, a(0)=3, a(1)=9. • a(n) = sqrt(3 / 2) * (a ^ (n + 1 / 2) + b ^ (n + 1 / 2)), with a=2 + sqrt(3) and b=2 - sqrt(3). • a(n) == 3 (mod 6). •

▶ [A087289] 3,9,33,129,513,2049,8193,32769,131073,524289,2097153,8388609,33554433,134217729,536870913,2147483649,8589934593,34359738369,137438953473,549755813889,2199023255553 ⋆ a(n) = 2 ^ (2 * n + 1) + 1. • a(n) = 4 * a(n - 1) - 3. - _ Lekraj Beedassy _ , Apr 29 2005 • a(n) = 2 ^ (2 * n + 1) * a(- 1 - n) for all n in Z. - _ Michael Somos _ , Jan 11 2017 •

▶ [A084508] 0,1,3,9,33,129,513,2049,8193,32769,131073,524289,2097153,8388609,33554433,134217729,536870913,2147483649,8589934593,34359738369,137438953473,549755813889,2199023255553,8796093022209,35184372088833 ⋆ Partial sums of A084509. Positions of ones in the first differences of A084506. • a(n) = 5 * a(n - 1) - 4 * a(n - 2) for n > 3. •

▶ [A247195] 0,1,1,3,9,33,129,531,2265,9921,44361,201651,929073,4328865,20362137,96562659,461169873,2216134401,10707788721,51988771107,253515373305,1241069449377,6097106216529,30050252046195,148541591990505 ⋆ Expansion of - (

sqrt(x ^ 4 - 4 * x ^ 3 - 6 * x ^ 2 - 4 * x + 1) + x ^ 2 - 2 * x - 1) / 4. ● a(n) = Sum _{ k=1..n - 1 } (Sum _{ i=0..n - k - 1 } 2 ^ i * binomial(k,n - k - i - 1) * binomial(k + i - 1,k - 1)) * binomial(n - k - 1,k - 1)) / k, n>1, a(0)=0, a(1)=1. ●

► [A238113] 1,3,9,33,135,591,2709,12837,62379,309147,1556577,7940169,40946607,213118119,1118080557,5906404557,31390735059,167727039027,900478280889,4855086475761,26277928981335,142724482802943,777647813128389,4249385026394613,23282201473312635 ★ Expansion of (3 - 5 * x - 3 * sqrt(x ^ 2 - 6 * x + 1)) / (4 * x). ● a(n) = - 3 / 4 * GegenbauerC(n + 1, - 1 / 2,3), n>0. - _ Benedict W. J. Irwin _ , Sep 26 2016 ●

► [A049425] 1,1,3,9,33,141,651,3333,18369,108153,678771,4495041,31324833,228803589,1744475643,13852095741,114235118721,976176336753,8627940414819,78726234866553,740440277799201,7168107030092541,71331617341611243,728811735008913909,7637128289949856833 ★ Row sums of triangle A049404. ● a(n) = n! * sum(k=0..n, sum(j=0..k, binomial(3 * j,n) * (- 1) ^ (k - j) / (3 ^ k * (k - j)! * j!))). [_ Vladimir Kruchinin _ , Feb 07 2011] ●

► [A007489] 0,1,3,9,33,153,873,5913,46233,409113,4037913,43954713,522956313,6749977113,93928268313,1401602636313,22324392524313,378011820620313,6780385526348313,128425485935180313,2561327494111820313,53652269665821260313,1177652997443428940313 ★ a(n) = Sum _{ k=1..n } k!. ● a(n) = Sum _{ k=1..n } P(n, k) / C(n, k). - _ Ross La Haye _ , Sep 21 2004 ● a(n) = a(n - 1) + n! for n >= 1. - _ Jaroslav Krizek _ , Jun 16 2009 ● a(0)=0, a(1)=1, a(n) = (n + 1) * a(n - 1) - n * a(n - 2). - _ Sergei N. Gladkovskii _ , Jul 05 2012 ● a(n) = sqrt(a(n - 1) * a(n + 1) - a(n - 2) * n * n!), n >= 2. - _ Gary Detlefs _ , Oct 26 2020 ●

► [A264237] 1,3,9,33,165,1137,9837,95193,962541,9884889,102049197,1055383929,10921055661,113032307769,1169952636525,12109971475065,125349031354029,1297477519769145,13430093334225645,139013932289379321,1438923355509080877,14894194022848480185 ★ Sum of values of vertices at level n of the hyperbolic Pascal pyramid. ● a(n) = 18 * a(n - 1) - 99 * a(n - 2) + 226 * a(n - 3) - 224 * a(n - 4) + 92 * a(n - 5) - 12 * a(n - 6), for n >= 7. ●

► [A137953] 1,1,3,9,34,132,546,2327,10191,45534,206788,951723,4429182,20808186,98550468,470038119,2255684699,10883852112,52769785320,256960840946,1256147650818,6162349332204,30328107189312,149698391878458 ★ G.f. satisfies A(x) = 1 + x * (1 + x * A(x) ^ 2) ^ 3. ● a(n) = Sum _{ k=0..n - 1 } C(3 * (n - k),k) / (n - k) * C(2 * k,n - k - 1) for n>0 with a(0)=1. - _ Paul D. Hanna _ , Jun 16 2009 ●

► [A371542] 1,3,9,34,141,621,2849,13467,65127,320686,1602294,8103087,41397186,213331026,1107604764,5788249329,30422897664,160717169622,852894534042,4544635033164,24305345593290,130423538829518,701994030831654,3788979493701069,20503322609731348 ★ G.f. A(x) satisfies A(x) = (1 + x * A(x) / (1 + x)) ^ 3. ● a(n) = Sum _{ k=0..n } (- 1) ^ (n - k) * binomial(n - 1,n - k) * binomial(3 * k + 3,k) / (k + 1). ●

► [A292292] 0,0,0,1,3,9,34,174,1128,8251,63315,494175,3879370,30512736,24014908 8,1890487729,14883249459,117174190329,922506823618,7262871367566,57180440473320,450180590519275,3544264121625315,27903931958216271,219687190433359498 ★ Number of vertices of type C at level n of the hyperbolic Pascal pyramid. ● a(n) = 12 * a(n - 1) - 37 * a(n - 2) + 37 * a(n - 3) - 12 * a(n - 4) + a(n - 5), n >= 6. ●

► [A102865] 1,3,9,35,137,547,2185,8739,34953,139811,559241,2236963,8947849,35791395,143165577,572662307,2290649225,9162596899,36650387593,146601550371,586406201481,2345624805923,9382499223689,37529996894755,150119987579017 ★ Base - 4 digits are, in order, the first n terms of the sequence (1, 3, 21, 203, 2021, 20203, 202021, 2020203, 20202021, 202020203, ...). ● a(n) = 4 * a(n - 1) + a(n - 2) - 4 * a(n - 3). - _ Harvey P. Dale _ , Mar 23 2012 ●

► [A074507] 3,9,35,153,707,3369,16355,80313,397187,1972809,9824675,49005273,244672067,1222297449,6108298595,30531927033,152630937347,763068593289,3815084686115,19074648589593,95370918425027,476847618556329 ★ a(n) = 1 ^ n + 3 ^ n + 5 ^ n. ● a(n) = 8 * a(n - 1) - 15 * a(n - 2) + 8. ●

► [A217924] 1,1,3,9,35,153,755,4105,24323,155513,1064851,7760745,59895203,487397849,4166564147,37298443977,348667014723,3395240969785,34365336725715,360837080222761,3923531021460707,44108832866004121,511948390801374835,6126363766802713481 ★ Row sums of triangle A217537. ● a(n) = Sum _{ k=0..n } Sum _{ j=0..k } binomial(n,k - j) * 2 ^ j * (- 1) ^ (k - j) * Stirling2(n - k + j,j). - _ Vladimir Kruchinin _ , Feb 28 2015 ● a(n) = exp(- 2) * Sum _{ k>=0 } 2 ^ k * (k - 1) ^ n / k!. - _ Ilya Gutkovskiy _ , Jun 27 2020 ●

► [A097277] 1,1,1,3,9,35,155,791,2590,6756,59091,414986,3520583,31103150,168701533,701447397,9487636929,99912639989,1238924779043,15635917876565,118729653870976,678787849773474,12421571493668547,174412390122722852 ★ a(n) = number of permutations <p(1), p(2), ..., p(n)> of <1, 2, ..., n>, such that p(k) > p(k - 1) when k is composite and p(k) < p(k - 1) when k is prime. ● a(n) = n - th row sum of A097278. ●

► [A101880] 1,1,3,9,35,161,913,6103,47319,416235,4092155,44424095,527511445,6798907249,94504286703,1408973416617,22426222745159,379522092608177,6804315177704869,128828842646944135,2568533750228603835,53788282243854336411,1180357162840624656959 ★ Number of arrangements of the partitions of n (e.g., 111 counts for 6). ● a(n) = Sum _{ i=1..n } P(n,i) * i!, where P(n,i) is the number of partitions of n into i parts. ●

► [A155858] 1,1,3,9,35,168,967,6538,50831,446919,4383861,47451921,561715093,7217604520,100031995789,1487319385140,23613262336093,398673670050021,7132188802005991,134766129577134553,2681929390235577831 ★ Diagonal sums of triangle A155856. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(2 * n - 3 * k,k) * (n - 2 * k)!. ●

► [A000834] 1,3,9,35,177,1123,8569,76355,777697,8911683,113466729,1589173475,24280777617,401898209443,7163977596889,136821894075395,2787312733887937,60331585563062403,1382698089425999049 ★ Expansion of exp(x) * (1 + tan(x)) / (1 - tan(x)). ● a(n) := - 1 + Sum _{ i=0...n } ((- 1) ^ (i(i - 1) / 2) 4 ^ i C(n,i)(E _{ i } (1 / 2) + E _{ i } (1))), where E _{ n } (x) are Euler polynomials. - _ Peter Luschny _ , Nov 25 2010 ●

► [A106435] 0,3,9,36,135,513,1944,7371,27945,105948,401679,1522881,5773680,21889683,82990089,314639316,1192888215,4522582593,17146412424,6500698505 1,246460192425,934401532428,3542585174559,13430960120961 ★ a(n) = 3 * a(n - 1) + 3 * a(n - 2), a(0)=0, a(1)=3. ● a(n) = (1 / 7) * (((3 + sqrt(21)) / 2) ^ n * sqrt(21) - sqrt(21) * ((3 - sqrt(21)) / 2) ^ n), with n >= 0. - _ Paolo P. Lava _ , Aug 01 2008 ● a(n) = 3 ^ ((n + 1) / 2) * Fibonacci(n, sqrt(3)), where F(n, x) is the Fibonacci polynomial. ● a(n) = 3 ^ ((n + 1) / 2) * i ^ (1 - n) * ChebyshevU(n - 1, i * sqrt(3) / 2). (End) ●

► [A276368] 1,3,9,36,135,567,2268,9720,40095,173745,729729,3184272,13533156,59337684,254304360,1118939184,4825425231,21288640725,92250776475,407845538100,1774128090735,7856852973255,34284449337840,152044079672160,6651928485657 00 ★ G.f. A(x) satisfies: A(x - 3 * x ^ 3) = 1 / (1 - 3 * x). ● a(2 * n) = 3 ^ n * binomial(3 * n, n). ● a(2 * n + 1) = 3 ^ (n + 1) * binomial(3 * n + 1, n). ●

► [A352645] 1,3,9,36,189,1068,6669,47568,363897,2976048,26422929,248498880,2464625205,25922981568,285884886933,3296418423552,39795656126193,499998631895808,6526830528863001,88493793850020864,1241919513823360941,18020032474632956928 ★ Expansion of e.g.f. exp(3 * x * cosh(x)). ● a(0) = 1; a(n) = 3 * Sum _{ k=0..floor((n - 1) / 2) } (2 * k + 1) * binomial(n - 1,2 * k) * a(n - 2 * k - 1). ●

► [A006229] 1,1,1,3,9,37,177,959,6097,41641,325249,2693691,24807321,241586893,2558036145,28607094455,342232522657,4315903789009,57569080467073,807258131578995,11879685810739497,183184249105857781,2948163649552594737,49548882107764546223 ★ Expansion of exp(tan x). ● a(n) = sum(if oddp(n + k) then n 0 else (- 1) ^ ((n + k) / 2) * sum(j! / k! * stirling2(n,j) * 2 ^ (n - j) * (- 1) ^ (n + j - k) * binomial(j - 1,k - 1),j,k,n),k,1,n), n>0. - _ Vladimir Kruchinin _ , Aug 05 2010 ● a(n) = sum(i=0..(n - 1) / 2, binomial(n - 1,2 * i) * z(i) * a(n - 2 * i - 1)), a(0)=1, where z(n) is tangent (or "zag") numbers (A000182). - _ Vladimir Kruchinin _ , Mar 04 2015 ●

► [A346056] 1,1,3,9,38,168,915,5225,34228,236622,1805297,14498751,125907798,1146476984,11129874215,112934907867,1209762361679,13499714095281,157931096158594,1918777335806274,24309294470496502,318987321135326838,4346474397776153974 ★ Expansion of e.g.f. Product _{ k>=1 } B(x ^ k / k!) where B(x) = exp(exp(x) - 1) = e.g.f. of Bell numbers. ● a(n) = (n - 1)! * Sum _{ k=1..n } k * (Sum _{ d|k } 1 / (d! * (k / d)! ^ d)) * a(n - k) / (n - k)! for n > 0. ●

► [A133222] 1,3,9,38,182,1112,7685,61892,556113,5580548,61438617 ★ Row sums of triangle in A133644. ● a(n) = SUM[k=1..n] T(n,k) (n >= 1, 1 <= k <= n) = largest permanent of any n X n (0,1) matrix with k 1's in each row and column. ●

► [A372829] 1,1,3,9,38,190,1146,8022,64200,577800,5778120,63559320,762712560,9915263280,138813690960,2082205364400,33315285870720,566359859802240,10194477476803200,193695072059260800,3873901441188844800,81351930264965740800,1789742465829286214400 ★ a(n) = n! * Sum _{ k=0..floor(n / 2) } k! / (2 * k)!. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n,2 * k) * k! * (n - 2 * k)!. ●

► [A296102] 3,9,39,121,443,1521,5071,17161,58035,196249,664183,2247001,7601259,25715041,86992799,294294025,995591267,3368061225,11394069191,38545861561,130399710235,441139057489,1492362749807,5048627017225,17079382868243 ★ Number of total dominating sets in the n - prism graph. ● a(n) = 3 * a(n - 1) + 4 * a(n - 3) - 2 * a(n - 4) + 10 * a(n - 5) + 4 * a(n - 6) - a(n - 8) - a(n - 9) for n > 9. (End) ●

► [A330795] 1,3,9,39,153,615,2457,9831,39321,157287,629145,2516583,10066329,40265319,161061273,644245095,2576980377,10307921511,41231686041,164926744167,659706976665,2638827906663,10555311626649,42221246506599,168884986026393 ★ Evaluation of the polynomials given by the Riordan square of the Fibonacci sequence with a(0) = 1 (A193737) at 1 / 2 and normalized with 2 ^ n. ● a(n) = [x ^ n] (4 * x ^ 2 - 1) / (x * (4 * x + 3) - 1). ● a(n) = n! [x ^ n] (3 / 5) * exp(- x) * (exp(5 * x) - 1) + 1. ● a(n) = 4 * a(n - 2) + 3 * a(n - 1). ●

► [A121101] 1,1,3,9,39,169,819,3969,19719,97969,489219,2442969,12211719,61042969,305199219,1525917969,7629511719,38147167969,190735449219,953675292969,4768374511719,23841862792969,119209304199219,596046472167969,2980232312011719 ★ Catapolyoctagons (see Cyvin et al. for precise definition). ● a(r) = (1 / 4) * (1 + 5 ^ (r - 2) + 2 * (2 - (- 1) ^ r) * 5 ^ (floor(r / 2) - 1)) for r >= 2. - _ Petros Hadjicostas _ , Jul 24 2019 ●

► [A360876] 3,9,39,177,783,3369,14199,58977,242463,989529,4017159,16245777,65514543,263652489,1059392919,4251920577,17050729023,68332056249,273715645479,1096024843377,4387586157903,17560804984809,70274600998839,281192547174177,1125052618233183 ★ Number of connected dominating sets in the 2 X n rook graph. ● a(n) = 8 * a(n - 1) - 19 * a(n - 2) + 12 * a(n - 3) for n > 3. ●

► [A287063] 3,9,39,183,833,3629,15291,63051,256605,1036401,4167815,16720031,66986169,268173525,1073185011,4293787923,17177379125,68714234201,274866897279,1099488559527,4397998277073,17592085381629,70368534463019,281474540503643,1125899000873613 ★ Number of dominating sets in the n - crown graph (for n > 1). ● a(n) = 4 ^ n - 2 ^ n * (n + 2) + n ^ 2 + n + 3. ● a(n) = 11 * a(n - 1) - 47 * a(n - 2) + 101 * a(n - 3) - 116 * a(n - 4) + 68 * a(n - 5) - 16 * a(n - 6) for n>6. ●

► [A080635] 1,1,1,3,9,39,189,1107,7281,54351,448821,4085883,40533129,435847959,5045745069,62594829027,828229153761,11644113200031,173331882039141,2735497315016 3,45047085512477049,782326996336904679,14233537708408467549,270733989894887810547 ★ Number of permutations on n letters without double falls and without initial falls. ● a(n) = n! * Sum _{ k= - oo..oo } (sqrt(3) / (2 * Pi * (k + 1 / 3))) ^ (n + 1) for n >= 1. - _ Richard Ehrenborg _ , Dec 09 2013 ● a(n) = Sum _{ k=1..n } (- 3) ^ ((n - k) / 2) * ((- 1) ^ (n - k) + 1) * Sum _{ j=0..n - k } C(j + k - 1,j) * (j + k)! * 2 ^ (- j - k) * (- 1) ^ j * Stirling2(n,j + k),n>0, a(0)=1. - _ Vladimir Kruchinin _ , Feb 13 2019 ●

► [A090012] 3,9,39,213,1395,10617,91911,890901,9552387,112203465,1432413063,19743404469,292164206259,4619383947513,77708277841575,1385712098571957,26108441941918851,518231790473609481,10808479322484810087 ★ Permanent of (0,1) - matrix of size n X (n + d) with d=2 and n - 1 zeros not on a line. ● a(n) = (n + 1) * a(n - 1) + (n - 2) * a(n - 2), a(1)=3, a(2)=9. ●

► [A346753] 0,0,1,3,9,40,225,1491,11578,102852,1026945,11394955,139091106,1852061718,26716291693,415033647315,6908006807640,122645325067576,2313546 7

34841633,46209268921868595,974228913850588750,21620679147700290210,50381 0188866302511501 ⋆ E.g.f.: - log(1 - x ^ 2 * exp(x) / 2). ● a(0) = 0; a(n) = bi nomial(n,2) + (1 / n) * Sum _{ k=1..n - 1 } binomial(n,k) * binomial(n - k,2) * k * a(k). ●

► [A179088] 3,9,41,59,123,153,249,291,419,473,633,699,891,969,1193,1283,1539,1 641,1929,2043,2363,2489,2841,2979,3363 ⋆ Positive integers of the form (2 * m ^ 2 + 1) / 11. ● a(n) = (22 * n * (n - 1) - 5 * (2 * n - 1) * (- 1) ^ n + 7) / 4. ● a (n) = a(- n + 1) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). ●

► [A228478] 3,9,41,172,728,3084,13050,55252,233875,990055,4191028,17741339,7 5101906,317918500,1345800258,5696989354,24116274286,102088075950,43215528 0235,1829382955772,7744072911728,32781908823977,138771103836595 ⋆ Numbe r of n X 4 binary arrays with top left value 1 and no two ones adjacent horizont ally, vertically or antidiagonally. ● a(n) = a(n - 1) + 10 * a(n - 2) + 15 * a(n - 3) + 4 * a(n - 4) - 6 * a(n - 5) - a(n - 6) + 3 * a(n - 7) - a(n - 8). ●

► [A346037] 1,1,3,9,41,183,1145,6835,52043,398441,3577291,32395905,34287581 3,3603992759,42817702673,518311440987,6897155535843,93092680608025,137687 9589495555,2056132959547471 3,333009853668160757,5480574201430489831,9632 2698607644959065 ⋆ Expansion of e.g.f. Product _{ k>=1 } B(x ^ k) ^ (1 / k!) where B(x) = exp(exp(x) - 1) = e.g.f. of Bell numbers. ● a(n) = (n - 1)! * Su m _{ k=1..n } k * (Sum _{ d|k } 1 / (d! * (k / d)!)) * a(n - k) / (n - k)! for n > 0. ●

► [A074502] 3,9,41,225,1313,7809,46721,280065,1679873,10078209,60467201,362 799105,2176786433,13060702209,78364180481,470185017345,2821109972993,1692 6659575809,101559956930561,609359740534785,3656158441111553 ⋆ a(n) = 1 ^ n + 2 ^ n + 6 ^ n. ● a(n) = 8 * a(n - 1) - 12 * a(n - 2) + 5, n> 1. [_ Gary De tlefs _ , Jun 21 2010] ●

► [A081681] 1,3,9,42,399,4578,49299,490542,4602159,41440938,362614539,31088 79942,26262187719,219426920898,1818214750179,14970201491742,122642764106 079,1000774210138458,8140442567772219,66044479587885942,5346910552420212 39 ⋆ A sum of decreasing powers. ● a(n)=(8 ^ n - 7 ^ n - 6 ^ n - 5 ^ n + 4 * 4 ^ n) / 2. ●

► [A001902] 1,1,3,9,45,75,175,1225,11025,19845,43659,160083,693693,1288287,27 60615,41409225,703956825,1329696225,2807136475,10667118605,44801898141,85 530896451,178837328943,1371086188563,11425718238025 ⋆ Successive denomina tors of Wallis's approximation to Pi / 2 (reduced). ● a(n) = denominator(W(n)), for n >= 0, with W(n) = Product _{ k=0..n } N(k) / D(k) (reduced), with N(k) = 2 * floor((k + 1) / 2) for k >= 1 and N(0) = 1, and D(k) = 2 * floor(k / 2) + 1, for k >= 0. (End) ●

► [A000246] 1,1,1,3,9,45,225,1575,11025,99225,893025,9823275,108056025,14047 28325,18261468225,273922023375,4108830350625,69850115960625,118745197133 0625,22561587455281875,428670161650355625,9002073394657468125,1890435412 87806830625 ⋆ Number of permutations in the symmetric group S _ n that hav e odd order. ● a(2 * k) = (2 * k - 1) * a(2 * k - 1), a(2 * k + 1) = (2 * k + 1) * a(2 * k), for k >= 0, with a(0) = 1. ● a(n) = Sum _{ k=0..floor((n - 1) / 2) } (2k)! * C(n - 1, 2k) * a(n - 2k - 1) for n > 0. - Noam Katz (noamkj(AT)hotmail .com), Feb 27 2001 ● a(n) is asymptotic to (n - 1)! * sqrt(2 * n / Pi). - _ Benoi t Cloitre _ , Jan 19 2004 ● a(n) = n! * binomial(n - 1, floor((n - 1) / 2)) / 2 ^ (n - 1), n > 0. - _ Ralf Stephan _ , Mar 22 2004 ●

► [A027616] 0,0,1,3,9,45,285,1995,15855,142695,1427895,15706845,188471745,24 50132685,34301992725,514529890875,8232476226975,139952095858575,25191377 59913775,47863617438361725,957272348112505425,20102719310362613925,44225 9824841726816925,1017197597135971678927 5 ⋆ Number of permutations of n el ements containing a 2 - cycle. ● a(n) = n! * (1 - Sum _{ k=0..floor(n / 2) } (- 1) ^ k / (2 ^ k * k!)). ●

► [A370426] 0,0,0,0,1,3,9,48,306,2190,17810,162480,1642635,18231465,22042017 9,2883693792,40592133316,611765693532,9828843229764,167702100599520,30284 66654021205,577085685270024 15,1157199837194069405,24358905149602459920,5 37053113128448187766 ⋆ Number of permutations of [n] having exactly two adj acent 2 - cycles. ● a(n) = (1 / 2) * Sum _{ k=0..floor(n / 2) - 2 } (- 1) ^ k * (n - k - 2)! / k!. ●

► [A190009] 1,1,3,9,49,237,1739,11557,105313,886201,9596211,97408641,1218112 465,14446293669,204461028347,2769624924637,43702453433281,66485816452708 9,1156036763038205 1,1949547934550325 69,3700614762669466993,6846259546623 9603165,1407869708935659210155 ⋆ E.g.f.: exp(tan(x) + tan(x) ^ 2). ● a(n) = S um _{ m=1..n } (Sum _{ k=m..n } ((1 + (- 1) ^ (n - k)) * Sum _{ j=k..n } (j! * stirling2(n,j) * 2 ^ (n - j - 1) * (- 1) ^ ((n + k) / 2 + j) * binomial(j - 1,k - 1)) * binomial(m,k - m)) / m!), n>0, a(0)=1. ●

► [A323232] 1,3,9,51,225,1083,5049,23811,111825,525963,2472489,11625171,5465 5425,256967643,1208146329,5680180131,26705711025,125558574123,59032141056 9,2775432824691,13048869758625,61350071873403,288441173689209,1356124096 054851,6375901677678225 ⋆ a(n) = 2 ^ n * J(n, 1 / 2) where J(n, x) are the Jac obsthal polynomials as defined in A322942. ● a(n) = 3 * a(n - 1) + 8 * a(n - 2) for n >= 3. ● a(n) is an odd integer and 3 | a(n) if n > 0. ● a(n) = [x ^ n] (8 * x ^ 2 - 1) / (8 * x ^ 2 + 3 * x - 1). ● a(n) = (3 / s) * 16 ^ n * (v ^ n - u ^ n) fo r n >= 1. ● a(n) = n! [x ^ n](1 + (6 * exp(3 * x / 2) * sinh(s * x / 2)) / s). ● a(n) = n! [x ^ n](1 + (3 / s) * (exp((3 + s) * x / 2) - exp((3 - s) * x / 2))). ●

► [A106329] 3,9,51,297,1731,10089,58803,342729,1997571,11642697,67858611,39 5508969,2305195203,13435662249,78308778291,456417007497,2660193266691,155 04742592649,90368262289203,526704831142569,3069860724566211,178924595162 54697,104284896372961971 ⋆ Numbers k such that k ^ 2 = 8 * j ^ 2 + 9. ● a(1) =3, a(2)=9 then a(n) = 6 * a(n - 1) - a(n - 2). ● a(n) = 3 * ((3 - 2 * sqrt(2)) ^ (n - 1) + (3 + 2 * sqrt(2)) ^ (n - 1)) / 2. - _ Colin Barker _ , Oct 13 2015 ●

► [A175596] 1,3,9,54,162,1458,4374,43740,262440,2361960,7085880,127545840,3 82637520,3443737680,30993639120,464904586800,1394713760400,2510484768720 0,75314543061600,1355661775108800,12200955975979200,109808603783812800,3 2942581135143840 0,98827743405431520 00,5929664604325891 2000 ⋆ Partial prod ucts of A007425. ● a(n) = Product _{ prime p<=n } Product _{ k=1..floor(l og _ p(n)) } (1 + 2 / k) ^ floor(n / p ^ k). - _ Ridouane Oudra _ , Mar 23 20 21 ●

► [A261397] 0,3,9,54,243,1215,5832,28431,137781,669222,3247695,15766083,7652 7504,371477259,1803179313,8752833270,42487113627,206236840311,10010945435 76,4859415193527,23588096472765,114499026160038,555789946734999,26978610 75645339,13095692747551008 ⋆ a(n) = 3 ^ n * Fibonacci(n). ● a(n) = 3 * a(n - 1) + 9 * a(n - 2), a(0)=0, a(1)=3. - _ G. C. Greubel _ , Aug 21 2015 ●

► [A363442] 1,3,9,54,270,1620,9828,61884,397062,2597508,17232831,115722918,7 84996434,5371325217,37029240315,256948639344,1793271890988,1257946653818 7,88645665923244,627235978623318,4454619888380355,31743030458459169,2268 9010267467 1245 ⋆ G.f. satisfies A(x) = exp(Sum _{ k>=1 } (- 1) ^ (k + 1) * A(x ^ k) * (3 * x) ^ k / k). ● a(0) = 1; a(n) = (- 1 / n) * Sum _{ k=1..n } (Sum _{ d|k } d * (- 3) ^ (k / d) * a(d - 1)) * a(n - k). ●

► [A212418] 1,1,1,3,9,54,285,2160,15825,151200,1411095,16329600,185067855,25 14758400,33530101605,523069747200,8020402655265,141228831744000,24479664 14868975,480178027929600 00,9283441872961005 75,2007144156745728000 0,42819 0753438433910925 ⋆ Size of the equivalence class of S _ n containing the identit y permutation under transformations of positionally adjacent elements of the fo rm abc < − > acb < − > cba where a<b<c. ● a(n) = 1 for n<3, otherwise: a(2k + 1) = (3 / 2) * k * (k + 1) * (2k - 1)!, a(2k) = (3 / 2) * k * (k - 1 / 3) * (2 k - 2)! - (2k - 3)!!. ●

► [A025226] 3,9,54,405,3402,30618,288684,2814669,28146690,287096238,2975361 012,31241290626,331638315876,3553267670100,38375290837080,41733128785324 5,4566095267100210 ⋆ a(n) = a(1) * a(n - 1) + a(2) * a(n - 2) + ... + a(n - 1) * a(1) for n >= 2. Also a(n) = 3 ^ n * C(n - 1), where C = A000108 (Catalan nu mbers). ● a(n) = Sum _{ j=1..n - 1 } a(j) * a(n - j), with a(1) = 3. ● a(n) = 3 ^ n / (4 * n - 2) * binomial(2 * n,n). - _ Vaclav Kotesovec _ , Oct 11 2013 ●

► [A085435] 3,9,63,225,1023,3969,16383,65025,262143,1046529,4194303,1676902 5,67108863,268402689,1073741823,4294836225,17179869183,68718952449,274877 906943,1099509530625,4398046511103,17592177655809,70368744177663,2814749 43156225,1125899906842623 ⋆ Resultant of the polynomial x ^ n - 1 and the Ch ebyshev polynomial of the second kind U _ 2(x). ● a(n) = 4 ^ n - 2 ^ n - (- 2) ^ n + (- 1) ^ n. Proof: Resultant(p, q) = (Leading Coefficient of q) ^ (Degree of p) * Product(p(i):i roots of q). - Luke Pebody, Oct 12 2004 ●

► [A121696] 0,1,3,9,63,297,2583,17577,184023,1630377,20142423,219358377,3133 652823,40455492777,656970836823,9804424107177,178500684884823,3022686167 979177,61001050889300823,1155449953199019177 ⋆ Number of even - length fir st columns in all deco polyominoes of height n. A deco polyomino is a directed c olumn - convex polyomino in which the height, measured along the diagonal, is attained only in the last column. ● a(n)=a(n - 2) + n(n - 2)! * floor((n - 1) / 2) for n>=3; a(1)=0, a(2)=1. ●

► [A321541] 1,3,9,72,621,8631,98532,996552,9986652,99996552,999986652,99999 96552,99999986652,999999996552,9999999986652,99999999996552,999999999986 652,9999999999996552,99999999999986652,999999999999996552,99999999999999 86652,9999999999999996552,99999999999999986652 ⋆ a(0)=1; thereafter a(n) = 3 * a(n - 1) with digits rearranged into nonincreasing order. ● a(n) = 10 * a(n - 1) + a(n - 2) - 10 * a(n - 3) for n > 9. ●

► [A067623] 1,3,9,81,243,729,6561,19683,59049,1594323,4782969,14348907,12914 0163,387420489,1162261467,10460353203,31381059609,94143178827,25418658283 29,7625597484987,22876792454961,205891132094649,617673396283947 ⋆ Consid er the power series (x + 1) ^ (1 / 3)=1 + x / 3 - x ^ 2 / 9 + 5x ^ 3 / 81 + ...; s equence gives denominators of coefficients. ● a(n) = 3 ^ n * a(floor(n / 3)). - _ Vladeta Jovovic _ , Mar 01 2004 ● a(n) = denominator(binomial(1 / 3, n)). - _ Peter Luschny _ , Apr 07 2016 ●

► [A055156] 3,9,81,243,2187,6561,59049,177147,1594323,4782969,43046721,1291 40163,1162261467,3486784401,31381059609,94143178827,847288609443,25418658 28329,22876792454961,68630377364883,617673396283947 ⋆ Powers of 3 which a re not powers of 3 ^ 3. ● a(2n) = 3 ^ (3n + 1), a(2n + 1) = 3 ^ (3n + 2). ●

► [A007663] 1,3,9,93,315,3855,13797,182361,9256395,34636833,1857283155,2681 7356775,102280151421,1497207322929,84973577874915,4885260612740877,18900 352534538475,1101298153654301589,16628050996019877513,64689951820132126 215,3825714619033636628817 ⋆ Fermat quotients: (2 ^ (p - 1) - 1) / p, where p =prime(n). ● a(n) = Sum _{ i=0..(p - 3) / 2 } (2 ^ i * (p - i - 2)! / ((i + 1)! * (p - 2 * (i + 1))!) where p = prime(n), for n >= 2. - _ Vladimir Pletser _ , Ja n 26 2023 ●

► [A135989] 3,9,105,201,207,303,309,405,501,507,603,609,705,801,807,903,909,10 05,1101,1107,1203,1209,1305,1401,1407 ⋆ a(n) = 6 * n + 3 + 90 * floor((6 * n + 3) / 10). ● a(n) = a(n - 1) + a(n - 5) - a(n - 6). - _ Colin Barker _ , Feb 02 20 13 ●

► [A091409] 1,3,9,220 ⋆ a(n) is the smallest m such that A090822(m) = n. ● a(n) is about 2 ^ (2 ^ (3 ^ (4 ^ (5 ^ ... ^ (n - 1))))). ●

► [A283770] 1,3,10,12,14,16,23,25,27,29,34,36,38,40,42,47,49,51,53,55,60,62,64,6 6,73 ⋆ Numbers k such that L(k) = 1 mod 3, where L = A000201 = lower Wyt hoff sequence. ● a(n + 1) - a(n) is in { 2,5,7 } for every n. ●

► [A088338] 0,3,10,12,14,17,20,24,25,27,29,30,32,37,38,40,41,42,44,45,48,50,51,5 2,55 ⋆ Numbers n such that frac(x ^ n)=frac(x * frac(x ^ (n - 1))) where x=3 / 2 and frac(x) denotes the fractional part of x. ● a(n) appears to be asymptotic t o 2 * n and a(n)>2n ●

► [A022122] 3,10,13,23,36,59,95,154,249,403,652,1055,1707,2762,4469,7231,1170 0,18931,30631,49562,80193,129755,209948,339703,549651 ⋆ Fibonacci sequence b eginning 3, 10. ● a(n) = 3 * Lucas(n + 1) + Fibonacci(n). ● a(n) = 3 * Fibonac ci(n + 1) + 7 * Fibonacci(n). ● a(n) = a(n - 1) + a(n - 2). (End) ●

► [A042897] 1,3,10,13,23,59,82,141,505,1656,103177,311187,1036738,1347925,238 4663,6117251,8501914,14619165,52359409,171697392,10697597713,32264490531,1 07491069306,139755559837,247246629143 ⋆ Denominators of continued fraction convergents to sqrt(980). ● a(n) = 103682 * a(n - 10) - a(n - 20) for n > 19. - _ Vincenzo Librandi _ , Feb 01 2014 ●

► [A042331] 1,3,10,13,36,49,85,1069,1154,2223,5600,7823,29069,95030,4970629,1 5006917,49991380,64998297,179987974,244986271,424974245,5344677211,576965 1456,11114328667,27998308790 ⋆ Denominators of continued fraction convergen ts to sqrt(692). ● a(n) = 4999698 * a(n - 14) - a(n - 28) for n>27. - _ Vincenzo Librandi _ , Jan 20 2014 ●

► [A082975] 1,1,3,10,13,36,121,157,435,1462,1897,5256,17665,22921,63507,213442,276949,767340,2578969,3346309,9271587,31161070,40432657,112026384,376511809 ⋆ Denominators of continued fraction convergents to (sqrt(37) - 4) / 3. ● a(n + 3) = 12 * a(n) + a(n - 3), a(n + 1) = a(n - 1) + (1 + mod(n, 3)) * a(n) for all n in Z. ●

► [A041121] 1,3,10,13,62,75,287,936,15263,46725,155438,202163,964090,1166253,4462849,14554800,237339649,726573747,2417060890,3143634637,14991599438,18135234075,69397301663,226327139064,3690631526687 ⋆ Denominators of continued fraction convergents to sqrt(69). ● a(n) = 15550 * a(n - 8) - a(n - 16). - _ Vincenzo Librandi _ , Dec 11 2013 ●

► [A041865] 1,3,10,13,179,371,1292,2955,4247,7202,33055,205532,238587,1875641,2114228,3989869,6104097,126071809,132175906,258247715,390423621,2991213062,3381636683,23281033160,96505769323 ⋆ Denominators of continued fraction convergents to sqrt(454). ● a(n) = 33832080168351370 * a(n - 34) - a(n - 68) for n>67. - _ Vincenzo Librandi _ , Dec 26 2013 ●

► [A283867] 1,3,10,14,18,38,62,73,116,118,143,183,221,232,242,330,333,413,430,455,470,496,507,533,538 ⋆ Numbers n such that 30 * n ^ 2 - 1 and 30 * n ^ 2 + 1 are (twin) primes. ● a(n) >> n log ^ 2 n. - _ Charles R Greathouse IV _ , Mar 17 2017 ●

► [A022409] 3,10,14,25,40,66,107,174,282,457,740,1198,1939,3138,5078,8217,13296,21514,34811,56326,91138,147465,238604,386070,624675 ⋆ a(n) = a(n - 1) + a(n - 2) + 1, with a(0)=3, a(1)=10. ● a(n) = 3 * Lucas(n + 1) + Fibonacci(n + 2) - 1. - _ Greg Dresden _ , Oct 10 2020 ●

► [A245524] 1,3,10,14,27,33,52,60,85,95,126,138,175,189,232,248,297,315,370,390,451,473,540,564,637 ⋆ a(n) = n ^ 2 - floor(n / 2) * (- 1) ^ n. ● a(n) = (4 * n ^ 2 - 1 - (2 * n - 1) * (- 1) ^ n) / 4. ● a(n) = (2 * n - 1) * (n - floor(n / 2)). - _ Wesley Ivan Hurt _ , Jan 10 2017 ● a(n) = n ^ 2 + Sum _{ k=1..n - 1 } (- 1) ^ k * k for n>1. Example: for n=5, a(5) = 5 ^ 2 + (4 - 3 + 2 - 1) = 27. - _ Bruno Berselli _ , May 23 2018 ●

► [A328987] 3,10,15,20,27,32,39,44,51,56,61,68,73,80,85,90,97,102,109,114,119,126,131,138,143 ⋆ The sequence C(n) defined in the comments (A and B smallest missing numbers, offset 0). ● a(n) = a(n - 1) + a(n - 12) - a(n - 13) for n>21. ●

► [A186575] 1,3,10,15,31,66,127,255,514,1023,2047,4098,8191,16383,32770,65535,131071,262146,524287,1048575,2097154,4194303,8388607,16777218,33554431 ⋆ Expansion of (1 + 2 * x + 6 * x ^ 2) / (1 - x - x ^ 2 - 2 * x ^ 3) in powers of x. ● a(n + 1) = n * Sum _{ k=1..n } Sum _{ j=n - 3 * k..k } 2 ^ (k - j) * binomial(j,n - 3 * k + 2 * j) * binomial(k,j) / k. ● a(n) = a(n - 1) + a(n - 2) + 2 * a(n - 3) for n>2. - _ Colin Barker _ , May 03 2019 ●

► [A020330] 3,10,15,36,45,54,63,136,153,170,187,204,221,238,255,528,561,594,627,660,693,726,759,792,825 ⋆ Numbers whose base - 2 representation is the juxta position of two identical strings. ● a(n) = n + 2 * n * 2 ^ floor(log _ 2(n)). - _ Ralf Stephan _ , Dec 07 2004 ●

► [A217278] 0,0,1,3,10,15,45,120,351,528,1540,4095,11935,17955,52326,139128,405450,609960,1777555,4726275,13773376,20720703,60384555,160554240,467889345 ⋆ Sequences A124174 and A006454 interlaced. ● a(n) = 35 * (a(n - 4) - a(n - 8)) + a(n - 12). ● a(2 * n + 1) = 1 / 64 * (((4 + sqrt(2)) * (1 - (- 1) ^ (n + 1) * sqrt(2)) ^ (2 * floor((n + 1) / 2)) + (4 - sqrt(2)) * (1 + (- 1) ^ (n + 1) * sqrt(2)) ^ (2 * floor((n + 1) / 2)))) ^ 2 - 1. ● a(2 * n + 2) = 1 / 2 * (3 * (a(2 * n + 1)) + sqrt((a(2 * n + 1)) + 1) * sqrt(8 * (a(2 * n + 1)) + 1) + 1). ●

► [A182334] 0,1,3,10,15,120,325,528,4095,11026,17955,139128,374545,609960,4726275,12723490,20720703,160554240,432224101,703893960,5454117903,14682895930,23911673955,185279454480,498786237505 ⋆ Triangular numbers that differ from a square by 1. ● a(n) = 35 * a(n - 3) - 35 * a(n - 6) + a(n - 9). - _ Charles R Greathouse IV _ , Apr 25 2012 ●

► [A278041] 3,10,16,23,27,34,40,47,54,60,67,71,78,84,91,97,104,108,115,121,128,135,141,148,152 ⋆ The tribonacci representation of a(n) is obtained by appending 0,1,1 to the tribonacci representation of n (cf. A278038). ● a(n) - 1 = B2(n), where B2 - numbers are B - numbers from A278039 followed by a C - number from A278041. See a comment and example in A319968. ●

► [A063109] 3,10,16,24,30,38,44,52,58,66,72,80,86,94,100,108,114,122,128,136,142,150,156,164,170 ⋆ Dimension of the space of weight 2n cusp forms for Gamma _ 0(41). ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n>4. ● a(n) = ((- 1) ^ n + 14 * n - 9) / 2 for n>1. ●

► [A366395] 1,3,10,16,32,49,78,100,152,194,261,318,410,489,631,717,871,1014,1205,1351,1617,1806,2083,2300,2641 ⋆ a(n) = Sum _{ k=1..n } (- 1) ^ (k - 1) * binomial(floor(n / k) + 2,3). ● a(n) = Sum _{ k=1..n } binomial(k + 1,2) * (floor(n / k) mod 2). ●

► [A297665] 3,10,17,26,37,54,83,132,211,336,535,856,1377,2222,3589,5798,9369,15146,24495,39624,64103,103708,167787,271468,439229 ⋆ Number of chordless cycles in the n - web graph. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - 2 * a(n - 5) + a(n - 6) for n >= 10. ●

► [A063234] 3,10,18,22,30,38,42,50,58,62,70,78,82,90,98,102,110,118,122,130,138,142,150,158,162 ⋆ Dimension of the space of weight 2n cuspidal newforms for Gamma _ 0(82). ● a(n) = a(n - 1) + a(n - 3) - a(n - 4). - _ Wesley Ivan Hurt _ , Mar 08 2022 ●

► [A063111] 3,10,18,24,32,40,46,54,62,68,76,84,90,98,106,112,120,128,134,142,150,156,164,172,178 ⋆ Dimension of the space of weight 2n cusp forms for Gamma _ 0(43). ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>5. ●

► [A051938] 3,10,18,27,37,48,60,73,87,102,118,135,153,172,192,213,235,258,282,307,333,360,388,417,447 ⋆ Truncated triangular numbers: a(n) = n * (n + 1) / 2 - 18. ● a(n) = n + a(n - 1) (with a(6)=3). - _ Vincenzo Librandi _ , Aug 06 2010 ●

► [A171834] 1,3,10,18,27,37,52,68,85,103,126,150,175,201,232,264,297,331,370,410,451,493,540,588,637 ⋆ Partial sums of numbers congruent to { 0, 1, 2, 7 } mod 8 (A047527). ● a(n) = (4 * n ^ 2 + 2 * n - 3 + 2 * (1 + (- 1) ^ n) * I ^ n - (- 1) ^ n) / 4, where I = sqrt(- 1). ●

► [A298976] 3,10,18,60,80,108,360,480,648,2160,2880,3888,12960,17280,23328,77760,103680,139968,466560,622080,839808,2799360,3732480,5038848,16796160 ⋆ Base - 6 complementary numbers: n equals the product of the 6 complement (6 - d) of its base - 6 digits d. ● a(n + 3) = 6 a(n) for all n >= 2. ●

► [A028878] 3,10,19,30,43,58,75,94,115,138,163,190,219,250,283,318,355,394,435,478,523,570,619,670,723 ⋆ a(n) = (n + 3) ^ 2 - 6. ● a(n) = a(n - 1) + 2 * n + 5 (with a(0)=3). - _ Vincenzo Librandi _ , Aug 05 2010 ● a(n) = a(- n - 6). ● a(n) mod (n + 1) = n - 1. (End) ●

► [A089693] 1,3,10,20,30,40,60,80,120,160,240,320,480,640,960,1280,1920,2560,3840,5120,7680,10240,15360,20480,30720 ⋆ Numbers n such that phi(n) = 2 ^ big omega(n). ● a(n) = 2 * a(n - 2) for n>5. [_ Harvey P. Dale _ , Mar 01 2012] ●

► [A005997] 1,3,10,20,39,63,100,144,205,275,366,468,595,735,904,1088,1305,1539,1810,2100,2431,2783,3180,3600,4069 ⋆ Number of paraffins. ● a(n) = 1 + floor((n - 1) / 2) + 2 * (C(n + 1,3) - C(floor((n + 1) / 2),3) - C(ceiling((n + 1) / 2),3). - _ Enrique Pérez Herrero _ , Apr 22 2012 ● a(n) = (n + 1)(2n ^ 2 - (- 1) ^ n + 1) / 8. - _ Bruno Berselli _ , Apr 22 2012 ●

► [A213850] 1,3,10,20,42,70,120,180,275,385,546,728,980,1260,1632,2040,2565,3135,3850,4620,5566,6578,7800,9100,10647 ⋆ Antidiagonal sums of the convolution array A213849. ● a(n) = (n + 1) * (n + 2) * (3 - 3 * (- 1) ^ n + 8 * n + 2 * n ^ 2) / 96. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ●

► [A336529] 1,3,10,20,43,75,132,208,325,475,686,948,1295,1715,2248,2880,3657,4563,5650,6900,8371,10043,11980,14160,16653 ⋆ a(n) = (n ^ 3 + 5 * n + 3) / 3 + 2 * floor(n / 2) + a(n - 2), with a(0)=1 and a(1)=3. ● a(n) = 3 * a(n - 1) - a(n - 2) - 5 * a(n - 3) + 5 * a(n - 4) + a(n - 5) - 3 * a(n - 6) + a(n - 7). - _ Wesley Ivan Hurt _ , Nov 04 2020 ●

► [A081205] 1,3,10,20,70,126,462,792,3003,5005,19448,31824,125970,203490,817190,1307504,5311735,8436285,34597290,54627300,225792840,354817320,1476337800,2310789600,9669554100 ⋆ Staircase on Pascal's triangle. ● a(n) = binomial(ceiling((n + 1) / 2) + (n + 1), n). ●

► [A014105] 0,3,10,21,36,55,78,105,136,171,210,253,300,351,406,465,528,595,666,741,820,903,990,1081,1176 ⋆ Second hexagonal numbers: a(n) = n * (2 * n + 1). ● a(n) = 3 * Sum _{ k=1..n } tan ^ 2(k * Pi / (2 * (n + 1))). - _ Ignacio Larrosa Cañestro _ , Apr 17 2001 ● a(n) ^ 2 = n * (a(n) + 1 + a(n) + 2 + ... + a(n) + 2 * n); e.g., 10 ^ 2 = 2 * (11 + 12 + 13 + 14). - _ Charlie Marion _ , Jun 15 2003 ● a(n) = a(n - 1) + 4 * n - 1 (with a(0) = 0). - _ Vincenzo Librandi _ , Dec 24 2010 ● a(n) = Sum _{ k=0.2 * n } (- 1) ^ k * k ^ 2. - _ Bruno Berselli _ , Aug 29 2013 ● a(n) = Sum _{ k=0..2 } C(n - 2 + k, n - 2) * C(n + 2 - k, n), for n > 1. - _ J. M. Bergot _ , Jun 14 2014 ● a(n) = floor(Sum _{ j=(n ^ 2 + 1)..((n + 1) ^ 2 - 1) } sqrt(j)). Fractional portion of each sum converges to 1 / 6 as n - > infinity. See A247112 for a similar summation sequence on j ^ (3 / 2) and references to other such sequences. - _ Richard R. Forberg _ , Dec 02 2014 ●

► [A354329] 0,1,3,10,21,36,55,78,120,171,210,276,351,465,561,666,820,990,1128,1326,1540,1770,2016,2278,2628 ⋆ Triangular number nearest to the sum of the first n positive triangular numbers. ● a(n) = (t ^ 2 + t) / 2, where t = floor(sqrt(n * (n + 1) * (n + 2) / 3)). ●

► [A117495] 0,3,10,21,44,65,102,133,184,261,310,407,492,559,658,795,944,1037,1206,1349,1460,1659,1826,2047,2328 ⋆ Product of a prime number p and the number of primes smaller than p. ● a(n) = (n - 1) * prime(n). - _ Zak Seidov _ , Aug 15 2010 ●

► [A192033] 0,1,3,10,21,46,93,190,381,766,1533,3070,6141,12286,24573,49150,98301,196606,393213,786430,1572861,3145726,6291453,12582910,25165821 ⋆ Expansion of x * (3 * x ^ 2 + x + 1) / ((x - 1) * (2 * x - 1) * (x + 1)). ● a(n) = 3 * 2 ^ (n - 1) - 3 + (n mod 2) for n>0, a(0) = 0. ●

► [A008837] 1,3,10,21,55,78,136,171,253,406,465,666,820,903,1081,1378,1711,1830,2211,2485,2628,3081,3403,3916,4656 ⋆ a(n) = p * (p - 1) / 2 for p = prime(n). ● a(n) = (phi(prime(n)) ^ 2 + phi(prime(n))) / 2, where phi(n) is Euler's totient function, A000010. - _ Alonso del Arte _ , Aug 22 2014 ●

► [A120109] 1,3,10,21,106,107,750,1501,4504,4505,49556,49557,644242,644243,644244,1288489,21904314,21904315,416181986,416181987,416181988,416181989,9572185748,9572185749,47860928746 ⋆ Row sums of number triangle A120108. ● a(n) = Sum _{ k=0..n } lcm(1,...,n + 1) / lcm(1,...,k + 1). ●

► [A068082] 1,3,10,21,190,1711,15400,138601,1247410,11226691,101040220,909361981,8184257830,73658320471,662924884240,5966323958161,53696915623450,483272240611051,4349450165499460,39145051489495141,352305463405456270 ⋆ a(1) = 1, a(n) = smallest triangular number of the form k * a(n - 1) + 1 for some positive integer k. ● a(n) = (169 * 9 ^ (n - 3) - 1) / 8 for n>2. ● a(n) = 10 * a(n - 1) - 9 * a(n - 2) for n>4. ●

► [A190092] 3,10,22,36,50,66,82,100,120,142,164,188,212,238,264,292,320,350,380,412,444,478,512,548,584 ⋆ Number of rhombuses on a (n + 1) X 4 grid. ● a(n) = (n ^ 2 + 24 * n - 56) / 2 for n>7 and even. ● a(n) = (n ^ 2 + 24 * n - 57) / 2 for n>7 and odd. ●

► [A346166] 1,3,10,22,38,59,84,114,149,188,231,280,333,390,452,519,591,667,747,832,922,1017,1116,1219,1327 ⋆ a(n) is the smallest integer k >= 0 such that cosh(k) > 10 ^ (n ^ 2). ● a(n) = 1 + floor(arccosh(10 ^ (n ^ 2))). - _ Jon E. Schoenfield _ , Jul 08 2021 ●

► [A122795] 1,3,10,22,39,57,80,108,141,179,222,270,319,373,432,496,565,639,718,802,891,985,1080,1180,1285 ⋆ Connell (5,3) - sum sequence (partial sums of the (5,3) - Connell sequence) ● a(n) = (n - th triangular number) - n + (n - th partial sum of A122798). ●

► [A140066] 1,3,10,22,39,61,88,120,157,199,246,298,355,417,484,556,633,715,802,894,991,1093,1200,1312,1429 ⋆ a(n) = (5 * n ^ 2 - 11 * n + 8) / 2. ● a(n) = (8 - 11 * n + 5 * n ^ 2) / 2. - _ Emeric Deutsch _ , May 07 2008 ● a(n) = a(n - 1) + 5 * n - 8 (with a(1)=1). - _ Vincenzo Librandi _ , Nov 24 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3); a(1)=1, a(2)=3, a(3)=10. - _ Harvey P. Dale _ , Jan 28 2012 ●

► [A006503] 0,3,10,22,40,65,98,140,192,255,330,418,520,637,770,920,1088,1275,1482,1710,1960,2233,2530,2852,3200 ⋆ a(n) = n * (n + 1) * (n + 8) / 6. ● a(n) = n * (n + 1) * (n + 8) / 6. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) with a(0)=0, a(1)=3, a(2)=10, a(3)=22. - _ Harvey P. Dale _ , Jan 27 2016 ●

► [A248851] 0,3,10,22,41,68,105,153,214,289,380,488,615,762,931,1123,1340,1583,1854,2154,2485,2848,3245,3677,4146 ⋆ a(n) = (2 * n * (2 * n ^ 2 + 9 * n + 14

) + (- 1) ^ n - 1) / 16. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - 2 * a(n - 3) + 3 * a (n - 4) - a(n - 5). - _ Colin Barker _ , Mar 03 2015 ●

► [A023554] 3,10,22,43,78,136,231,386,638,1047,1710,2784,4523,7338,11894,19267,31198,50504,81743,132290,214078,346415,560542,907008,1467603 ★ Convolution of natural numbers >= 3 and (Fib(2), Fib(3), Fib(4), ...). ● a(n) = - 7 + (2 ^ (- 1 - n) * ((1 - t) ^ n * (- 19 + 9 * t) + (1 + t) ^ n * (19 + 9 * t))) / t - 2 * (1 + n) where t=sqrt(5). ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - a(n - 3) + a(n - 4) for n>4. (End) ● a(n) = Fibonacci(n + 5) + 2 * Fibonacci(n + 3) - (2 * n + 9). - _ G. C. Greubel _ , Jul 08 2019 ● a(n) = a(n - 1) + a(n - 2) + 2 * n + 3 for n >2. - _ Lechoslaw Ratajczak _ , Nov 07 2020 ●

► [A299336] 1,3,10,22,49,91,168,280,462,714,1092,1596,2310,3234,4488,6072,8151,10725,14014,18018,23023,29029,36400,45136,55692 ★ Expansion of 1 / ((1 - x) ^ 7 * (1 + x) ^ 4). ● a(n) = (2 * n ^ 6 + 66 * n ^ 5 + 860 * n ^ 4 + 5640 * n ^ 3 + 19568 * n ^ 2 + 33984 * n + 23040) / 23040 for n even. ● a(n) = (2 * n ^ 6 + 66 * n ^ 5 + 860 * n ^ 4 + 5580 * n ^ 3 + 18578 * n ^ 2 + 28914 * n + 15120) / 23040 for n odd. ● a(n) = 3 * a(n - 1) + a(n - 2) - 11 * a(n - 3) + 6 * a(n - 4) + 14 * a(n - 5) - 14 * a(n - 6) - 6 * a(n - 7) + 11 * a(n - 8) - a(n - 9) - 3 * a(n - 10) + a(n - 11) for n>10. ●

► [A041403] 1,1,3,10,23,33,947,980,2907,9701,22309,32010,918589,950599,2819787,9409960,21639707,31049667,891030383,922080050,2735190483,9127651499,20990493481,30118144980,864298552921 ★ Denominators of continued fraction convergents to sqrt(216). ● a(n) = 970 * a(n - 6) - a(n - 12) for n>11. - _ Vincenzo Librandi _ , Dec 17 2013 ●

► [A227347] 0,3,10,23,43,73,113,166,233,316,416,536,676,839,1026,1239,1479,1749,2049,2382,2749,3152,3592,4072,4592 ★ Number of lattice points in the closed region bounded by the graphs of y = (5 / 6) * x ^ 2, x = n, and y = 0, excluding points on the x - axis. ● a(n) = Sum _{ x=1..n } floor((5 / 6) * x ^ 2). ● a(n) = 2 * a(n - 1) - a(n - 3) - a(n - 4) + 2 * a(n - 6) - a(n - 7). ● a(n) = (24 * floor(n / 3) + 9 * (- 1) ^ n - 9 + (- 32 + (30 + 20 * n) * n) * n) / 72. - _ Bruno Berselli _ , Jul 09 2013 ●

► [A145069] 0,3,10,23,44,75,118,175,248,339,450,583,740,923,1134,1375,1648,1955,2298,2679,3100,3563,4070,4623,5224 ★ a(n) = n * (n ^ 2 + 3 * n + 5) / 3. ● a(n) = a(n - 1) + n ^ 2 + n + 1 for n > 0, with a(0) = 0. ● a(n) = n * (n ^ 2 + 3 * n + 5) / 3. - _ Bruno Berselli _ , Apr 01 2011 ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Vincenzo Librandi _ , Jun 30 2012 ● a(n) = S um _{ i=1..n } 3i + (n - i) ^ 2. - _ Wesley Ivan Hurt _ , Aug 21 2014 ●

► [A192973] 1,3,10,23,47,88,157,271,458,763,1259,2064,3369,5483,8906,14447,23415,37928,61413,99415,160906,260403,421395,681888,1103377 ★ Constant term of the reduction by x ^ 2 - > x + 1 of the polynomial p(n,x) defined at Comments . ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - a(n - 3) + a(n - 4). ● a(n) = Lucas(n + 4) - Fibonacci(n - 1) - 2 * (2 * n + 3). - _ Ehren Metcalfe _ , Jul 13 2019 ●

► [A080204] 1,3,10,23,51,114,253,559,1234,2723,6007,13250,29225,64459,142170,313567,691595,1525362,3364293,7420183,16365730,36095755,79611695,175589122,387274001 ★ Number of fixed points under n - fold inflation for the substitution rule a - >abc, b - >ab, c - >b that underlies the Kolakoski (3,1) sequence. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) + a(n - 3) - a(n - 4). ● a(n) = n * Sum _{ m= 1..n } Sum _{ i=0..(n - m) / 2 } binomial(m,i) * binomial(n - 2 * i - 1,m - 1) / m. - _ Vladimir Kruchinin _ , Mar 10 2015 ● a(n) = 2 * a(n - 1) + a(n - 3) + 2 . - _ Greg Dresden _ , Feb 08 2020 ● a(n) = w1 ^ n + w2 ^ n + w3 ^ n - 1, for w1, w2, w3 roots of x ^ 3 - 2x ^ 2 - 1=0. - _ Greg Dresden _ , Feb 18 2020 ●

► [A185828] 1,3,10,23,61,162,421,1103,2890,7563,19801,51842,135721,355323,930250,2435423,6376021,16692642,43701901,114413063,299537290,784198803,2053059121,5374978562,14071876561 ★ Half the number of n X 2 binary arrays with every element equal to exactly one or two of its horizontal and vertical neighbors. ● a(n) = n * Sum _{ k=0..n - 1 } C(2n - 2k, 2k) / (n - k). - _ Paul D. Hanna _ , Mar 19 2011 ●

► [A134438] 1,1,3,10,23,62,170,441,1173,3127,8266,21937,58234,154390,409573,1086567,2882021,7645046,20279829,53794224,142696606,378522507,1004078871,2663452699,7065162260 ★ Number of tilings of a 3 X n rectangle with n trominoes . ● a(n) = a(n - 1) + 2 * a(n - 2) + 6 * a(n - 3) + a(n - 4) - a(n - 6). ●

► [A092255] 1,1,3,10,23,66,222,561,1647,5410,14318,42351,137018,372191,1105275,3537540,9772767,29090826,92364198,258208671,769820418,2429091885,6850744365,20447143866,64200928194 ★ a(0) = 1; for n > 0, a(n) = b(n) - n * b(n - 1), b() = A076177(). ● a(n) = n! * sum(i + j + k=n, 1 / (i! * j! * k!)) (0<=k<=j <=i<=n). - _ Benoit Cloitre _ , Mar 22 2004 ●

► [A105861] 1,3,10,23,76,102,442,695,1792,2828,11254,13334,53236,65418,155110,347319,1114096,1259328,4980718,6223148,15033700,27548678,96468970,108761942,352992576 ★ a(n) = (n / 2) * Sum _{ k=0..n } binomial(n,k) / gcd(n,k). ● a(n) = (n / 2) * Sum _{ k=0..n } binomial(n, k) / gcd(n, k). ●

► [A041327] 1,3,10,23,194,411,1427,4692,123419,374949,1248266,2871481,24220114,51311709,178155241,585777432,15408368473,46810882851,155841017026,358492916903,3023784352250,6406061621403,22241969216459,73131969270780,192367317025673 9 ★ Denominators of continued fraction convergents to sqrt(177). ● a(n) = 124846 * a(n - 8) - a(n - 16). - _ Vincenzo Librandi _ , Dec 15 2013 ●

► [A259443] 1,3,10,24,25,27,43,45,55,58,62,79,80,100,107,113,124,134,147,150,152,161,171,186,197 ★ The position of the first occurrence in the decimal expansion of Pi of n identical digits. ● a(10) = 58, a(100) = 882, a(1000) = 9619, a(10000) = 98564, a(100000) = 996482. ●

► [A293405] 0,3,10,24,42,65,94,128,168,212,262,317,377,442,513,589,670,757,848,945,1047,1155,1267,1385,1508 ★ The integer k that minimizes |k / n ^ 2 - tau ^ 2|, where tau = (1 + sqrt(5)) / 2 (golden ratio). ● a(n) = floor(1 / 2 + tau * n ^ 2). ●

► [A033811] 3,10,24,49,92,164,283,478,796,1313,2152,3512,5715,9282,15056,24401,39524,63996,103595,167670,271348,439105,710544,1149744,1860387 ★ Convolution of natural numbers n >= 1 with Lucas numbers L(k)(A000032) for k >= 2. ● a(n)=L(5) * (F(n + 1) - 1) + L(4) * F(n) - L(3) * n, F(n): Fibonacci (A000045). G.F. x * (3 + x) / ((1 - x - x ^ 2) * (1 - x) ^ 2) ●

► [A053208] 0,3,10,24,52,108,220,444,892,1788,3580,7164,14332,28668,57340,114684,229372,458748,917500,1835004,3670012,7340028,14680060,29360124,58720252 ★ Row sums of A053207. ● a(0) = 0, a(1) = 3, a(n + 1) = 2 * a(n) + 4, for n >= 1. ● a(n) = 7 * 2 ^ (n - 1) - 4, n >= 1. ●

► [A179608] 1,3,10,24,64,144,352,768,1792,3840,8704,18432,40960,86016,188416,393216,851968,1769472,3801088,7864320,16777216,34603008,73400320,150994944,318767104 ★ a(n) = (7 + (- 1) ^ n + 6 * n) * 2 ^ (n - 3). ● a(n) = 2 * a(n - 1) + 4 * a(n - 2) - 8 * a(n - 3) with a(1)=1, a(2)=3 and a(3)=10. ● a(n) = (7 + (- 1) ^ n + 6 * n) * 2 ^ (n - 3). ●

► [A212068] 0,0,3,10,25,49,86,137,206,294,405,540,703,895,1120,1379,1676,2012,2391,2814,3285,3805,4378,5005,5690 ★ Number of (w,x,y,z) with all terms in { 1,. ..,n } and 2w=x + y + z. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - 2 * a(n - 3) + 3 * a(n - 4) - a(n - 5). ● a(n) = n * (10 * n ^ 2 - 3 * n + 2) / 24 for n even. ● a(n) = (n - 1) * (10 * n ^ 2 + 7 * n + 9) / 24 for n odd. ●

► [A047667] 3,10,25,52,95,158,245,360,507,690,913,1180,1495,1862,2285,2768,3315,3930,4617,5380,6223,7150,8165,9272,10475 ★ Row 3 of array in A047666. ● a(n) = (n / 3) * (2n ^ 2 + 7). ●

► [A192963] 0,1,3,10,25,55,110,207,373,652,1115,1877,3124,5157,8463,13830,22533,36635,59474,96451,156305,253176,409943,663625,1074120 ★ Coefficient of x in the reduction by x ^ 2 - > x + 1 of the polynomial p(n,x) defined at Comments . ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + a(n - 3) + 2 * a(n - 4) - a(n - 5). ● a(n) = 3 * Fibonacci(n + 3) + 4 * Fibonacci(n + 2) - (n ^ 2 + 5 * n + 10). - _ G. C . Greubel _ , Jul 12 2019 ●

► [A000247] 0,3,10,25,56,119,246,501,1012,2035,4082,8177,16368,32751,65518,131053,262124,524267,1048554,2097129,4194280,8388583,16777190,33554405,67108836 ★ a(n) = 2 ^ n - n - 2. ● a(2)=0, a(3)=3, a(4)=10, a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 2 * a(n - 3). - _ Harvey P. Dale _ , Aug 23 2011 ● a(n) = (Sum _{ k=2..floor(n / 2) } binomial(n + 1,k)) + if(n odd, binomial(n + 1,(n + 1) / 2) / 2, 0). ● a(n) = Sum _{ k=0..n - 3 } Sum _{ i=0..n - 1 } C(i,k). - _ Wesley Ivan Hurt _ , Sep 20 2017 ●

► [A130783] 0,1,3,10,25,66,154,372,837,1930,4246,9516,20618,45332,97140,210664,447661,960858,2028478,4319100,9070110,19188796,40122028,84438360,175913250 ★ Maximum value of the n - th difference of a permutation of 0..n. ● a(n) = (n + 1) * (2 ^ (n - 1) - binomial(n - 1,n / 2)) if n is even else ((n + 1) / 2) * (2 ^ n - binomial(n,(n + 1) / 2)). - _ Vladeta Jovovic _ , Aug 23 2007 ● a(n) = (n + 1) * (2 ^ n - binomial(n,[n / 2])) / 2, where [x] is floor. - _ Graeme McRae _ , Jan 30 2012 ●

► [A026975] 1,3,10,25,66,154,392,882,2180,4796,11640,25220,60424,129480,307264,652936,1538064,3247024,7604000,15968400,37217312,77818016,180652416,376359200,870795328 ★ a(n) = Sum _{ k=0..n } (k + 1) * A026648(n,k). ● a(n) = 8 * a(n - 2) - 12 * a(n - 4) - 16 * a(n - 6) - 4 * a(n - 8) for n>7. ●

► [A212967] 0,3,10,26,50,89,140,212,300,415,550,718,910,1141,1400,1704,2040,2427,2850,3330,3850,4433,5060,5756,6500 ★ Number of (w,x,y) with all terms in { 0,...,n } and w < range { w,x,y } . ● a(n) = (n + 1) * (10 * n * (n + 2) - 3 * (- 1) ^ n + 3) / 24. ● a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + a(n - 4) + 2 * a(n - 5) - a(n - 6). ●

► [A333897] 1,3,10,26,61,128,254,467,821,1376,2224,3470,5269,7785,11254,15930,22149,30276,40786,54177,71089,92198,118336,150386,189425 ★ Number of unlabeled loopless multigraphs with 4 nodes of degree n or less. ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 4 * a(n - 3) - 4 * a(n - 4) + 2 * a(n - 5) + 9 * a(n - 6) - 9 * a(n - 8) - 2 * a(n - 9) + 4 * a(n - 10) + 4 * a(n - 11) - 2 * a(n - 12) - 2 * a(n - 13) + a(n - 14) for n>13. ●

► [A316937] 3,10,26,62,140,306,654,1376,2862,5902,12092,24650,50054,101328,204630,412454,830076,1668514,3350558,6723008,13481438,27020190,54133116,108416282,217075350 ★ a(n) = 3 * a(n - 1) - a(n - 2) - 2 * a(n - 3) for n > 2, a(0)=3, a(1)=10, a(2)=26. ● a(n) = 13 * 2 ^ n - 2 * Fibonacci(n + 5) for n>0. ● a(n) = (2 ^ (- n) * (65 * 4 ^ n + (1 - sqrt(5)) ^ n * (- 25 + 11 * sqrt(5)) - (1 + sqrt(5)) ^ n * (25 + 11 * sqrt(5)))) / 5. - _ Colin Barker _ , Jul 22 2018 ●

► [A269965] 1,3,10,26,63,145,332,760,1745,4007,9198,21102,48403,111021,254656,584132,1339893,3073459,7049906,16171066,37093175,85084313,195166404,447672720,1026871705 ★ Start with a square; at each stage add a square at each expandable vertex so that the ratio of the side of the squares at stage n + 1 and at stage n is the golden ratio phi=0.618...; a(n) is the number of squares in a portion of the n - th stage (see below) ● a(n) = 2 * a(n - 1) + a(n - 2) - 2 * a(n - 3) + 2 * a(n - 4) + 2 * a(n - 5) + 5. ● a(n) = 3 * a(n - 1) - a(n - 2) - 3 * a(n - 3) + 4 * a(n - 4) - 2 * a(n - 6). ●

► [A110158] 0,0,0,0,1,3,10,26,69,173,436,1084,2699,6699,16634,41274,102425,254137,630584,1564600,3882103,9632247,23899510,59299318,147133173 ★ Expansion of x ^ 4 / ((x + 1) * (2 * x ^ 3 - 2 * x ^ 2 - 2 * x + 1) * (x - 1) ^ 2). ● a(n) = 3 * a(n - 1) + a(n - 2) - 7 * a(n - 3) + 2 * a(n - 4) + 4 * a(n - 5) - 2 * a(n - 6) for n>5. - _ Colin Barker _ , May 16 2019 ●

► [A271357] 3,10,27,71,186,487,1275,3338,8739,22879,59898,156815,410547,1074826,2813931,7366967,19286970,50493943,132194859,346090634,906077043,2372140495,6210344442,16258892831,42566334051 ★ a(n) = k * Fibonacci(2 * n + 1) + (k + 1) * Fibonacci(2 * n), where k=3. ● a(n) = 3 * a(n - 1) - a(n - 2) for n>1. ● a(n) = (2 ^ (- 2 - n) * ((9 - sqrt(5)) * (3 + sqrt(5)) ^ (n + 1) - (9 + sqrt(5)) * (3 - sqrt(5)) ^ (n + 1))) / sqrt(5). ● a(n) = 4 * Fibonacci(2 * n + 2) - Fibonacci(2 * n + 1). ●

► [A000471] 0,1,3,10,27,74,201,548,1490,4051,11013,29937,81377,221206,601302,1634508,4443055,12077476,32829984,89241150,242582597,659407867,1792456423,4872401723,13244561064 ★ a(n) = floor(sinh(n)). ● a(n) = floor(e ^ n / 2). - _ Bruno Berselli _ , Mar 04 2016 ●

► [A059193] 3,10,28,54,88,130,180,238,304,378,460,550,648,754,868,990,1120,1258,1404,1558,1720,1890,2068,2254,2448 ★ Engel expansion of 1 / e = 0.367879... . ● a(n) = 2 * (2 * n + 1) * (n - 1) (for n>1) follows from 1 / e = sum ((1 / (2 * n)! - 1 / (2 * n + 1)!). - Helena Verrill (verrill(AT)math.lsu.edu), Jan 19 2004 ● a(1)=3, a(2)=10, a(1)=28, a(2)=54, a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , May 10 2012 ●

► [A267707] 1,3,10,28,66,136,253,435,703,1081,1596,2278,3160,4278,5671,7381,9453,11935,14878,18336,22366,27028,32385,38503,45451 ★ a(n) = A000217(A000217(n) + 1). ● a(n) = (n ^ 4 + 2n ^ 3 + 7n ^ 2 + 6n + 8) / 8 = (n ^ 2 + n + 2)(

n ^ 2 + n + 4) / 8. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Vincenzo Librandi _ , Jan 22 2016 ●

► [A128135] 1,3,10,28,72,176,416,960,2176,4864,10752,23552,51200,110592,237568,507904,1081344,2293760,4849664,10223616,21495808,45088768,94371840,197132288,411041792 ★ Row sums of A128134. ● a(n) = 2 * a(n - 1) + 2 ^ (n - 1) for n >= 2. - Philipp Zumstein (zuphilip(AT)inf.ethz.ch), Oct 05 2009 ● a(n) = 2 ^ (n - 2) * (2 * n - 1) for n > 1. ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) for n > 3. ●

► [A191797] 0,0,0,1,3,10,28,78,210,561,1485,3916,10296,27028,70876,185745,486591,1274406,3337236,8738290,22879230,59901985,156830905,410597496,1074972528 ★ a(n) = binomial(F(n), 2) where F(n) = A000045(n). ● a(n) = + 3 * a(n - 1) + 1 * a(n - 2) - 5 * a(n - 3) - 1 * a(n - 4) + 1 * a(n - 5). ● a(n) = (2 ^ (- 1 - n) * (- (- 1) ^ n * 2 ^ (1 + n) + sqrt(5) * (1 - sqrt(5)) ^ n + (3 - sqrt(5)) ^ n - sqrt(5) * (1 + sqrt(5)) ^ n + (3 + sqrt(5)) ^ n)) / 5. - _ Colin Barker _ , Mar 26 2017 ●

► [A246974] 1,1,3,10,28,93,317,1090,3876,13995,51182,189606,709218,2675230,10166639,38883721,149559230,578153160,2245017535,8752828951,34250020397,134465596581,529509173245,2090920335200,8277633788511 ★ Number of 3 - ary plane multitrees with n edges. ● a(n) = Sum _{ k=1..n + 1 } Sum _{ i=1..k - 1 } Sum _{ j=0..floor((n - i) / 3) } (- 1) ^ j * binomial(k, i) * binomial(i, j) * binomial(n - i, k - i - 1) * binomial(n - 3 * j - 1, i - 1) / k for n > 0. - _ Andrew Howroyd _ , Feb 24 2020 ●

► [A130218] 1,3,10,29,70,146,273,470,759,1165,1716,2443,3380,4564,6035,7836,10013,12615,15694,19305,23506,28358,33925,40274,47475 ★ Partial sums of A100119. Sum of first n of the n - th centered n - gonal numbers. ● a(n) = (n * (26 - 3 * n - 2 * n ^ 2 + 3 * n ^ 3)) / 24. G.f.: x * (x ^ 3 - 5 * x ^ 2 + 2 * x - 1) / (x - 1) ^ 5. - _ Colin Barker _ , Apr 29 2013 ●

► [A114958] 3,10,29,72,163,350,729,1492,3023,6090,12229,24512,49083,98230,196529,393132,786343,1572770,3145629,6291352,12582803,25165710,50331529,100663172,201326463 ★ a(n) = 6 * 2 ^ (n + 1) - 5 * (n + 1) - 4. ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 2 * a(n - 3) for n>2. ●

► [A048493] 1,3,10,29,76,187,442,1017,2296,5111,11254,24565,53236,114675,245746,524273,1114096,2359279,4980718,10485741,22020076,46137323,96468970,201326569,419430376 ★ a(n) = (n + 1) * 2 ^ n - n. ● a(n) = (n + 1) * 2 ^ n - n. - _ Vladeta Jovovic _ , Feb 28 2003 ● a(n) = 5 * a(n - 1) - 7 * a(n - 2) - a(n - 3) + 8 * a(n - 4) - 4 * a(n - 5). - _ Colin Barker _ , Nov 26 2014 ●

► [A096140] 0,1,3,10,29,81,220,589,1563,4126,10857,28513,74792,196041,513619,1345282,3522981,9224881,24153636,63239221,165569195,433476726,1134874513,2971168705,7778667024 ★ a(n) = sum of n Fibonacci numbers starting from F(n). ● a(n) = Fibonacci(2 * n + 1) - Fibonacci(n + 1). - _ Vladeta Jovovic _ , Jul 17 2004 ●

► [A291393] 3,10,29,83,232,643,1771,4862,13321,36455,99696,272535,744839,2035358,5561381,15195075,41515496,113425323,309888403,846638398,2313071313,6319448079,17265085152,47169141487,128868574671 ★ p - INVERT of (1,1,0,0,0,0, ...), where p(S) = (1 - S)(1 - 2 S). ● a(n) = 3 * a(n - 1) + a(n - 2) - 4 * a(n - 3) - 2 * a(n - 4) for n >= 5. ●

► [A244615] 1,3,10,29,88,259,771,2284,6786,20191,60189,179654,536925,1606221,4808601,14403804,43163793,129388755,387946445,1163370778,3489117566,10465248174,31391306504,94164586011,282474177151 ★ G.f.: Sum _{ n>=0 } (2 + x ^ n) ^ n * x ^ n / (1 - x) ^ (n + 1). ● a(n) - 3 ^ n ~ n / 9 * 2 ^ n. - _ Vaclav Kotesovec _ , Jul 02 2014 ●

► [A006484] 0,1,3,10,30,75,161,308,540,885,1375,2046,2938,4095,5565,7400,9656,12393,15675,19570,24150,29491,35673,42780,50900 ★ a(n) = n * (n + 1) * (n ^ 2 - 3 * n + 5) / 6. ● a(n) = (1 / 6) * (n ^ 4 - 2 * n ^ 3 + 2 * n ^ 2 + 5 * n). - James A. Record (james.record(AT)gmail.com), Nov 07 2004 ● a(n) = binomial(n + 3,4) - 2 * binomial(n + 2,4) + 5 * binomial(n + 1,4). - _ Johannes W. Meijer _ , Apr 29 2011 ●

► [A026960] 1,3,10,30,78,189,440,999,2230,4917,10740,23283,50162,107505,229360,487407,1032174,2179053,4587500,9633771,20185066,42205161,88080360,183500775,381681638 ★ a(n) = Sum _{ k=0..n } (k + 1) * A026615(n,k). ● a(n) = 6 * a(n - 1) - 13 * a(n - 2) + 12 * a(n - 3) - 4 * a(n - 4) for n>5 ●

► [A280523] 1,3,10,30,84,227,603,1589,4172,10936,28646,75013,196405,514215,1346254,3524562,9227448,24157799,63245967,165580121,433494416,1134903148,2971215050,7778742025,20365011049 ★ a(n) = Fibonacci(2n + 1) - n. ● a(n) = 5 * a(n - 1) - 8 * a(n - 2) + 5 * a(n - 3) - a(n - 4). - _ Wesley Ivan Hurt _ , Apr 26 2021 ●

► [A026937] 1,3,10,30,87,245,676,1836,4925,13079,34446,90090,234227,605865,1560200,4002072,10230201,26069995,66251090,167941494,424753615,1072057117,2700704172,6791746500,17052595573 ★ a(n) = Sum _{ k=0..n } (k + 1) * T(n, n - k), where T is given by A008288. ● a(n) = 4 * a(n - 1) - 2 * a(n - 2) - 4 * a(n - 3) - a(n - 4). - _ Vincenzo Librandi _ , Jun 20 2012 ● a(n) = ((n + 2) / 8) * ((sqrt(2) + 2) * (1 + sqrt(2)) ^ n - (sqrt(2) - 2) * (1 - sqrt(2)) ^ n). - _ Peter Luschny _ , Jul 31 2023 ●

► [A094306] 1,3,10,30,88,252,712,1992,5536,15312,42208,116064,318592,873408,2392192,6547584,17912320,48985344,133926400,366085632,1000548352,2734316544,7471826944,20416481280,55785005056 ★ Number of (s(0), s(1), ..., s(n)) such that 0 < s(i) < 6 and |s(i) - s(i - 1)| <= 1 for i = 1,2,...,n, s(0) = 2, s(n) = 4. ● a(n) = ((1 - sqrt(3)) ^ n + (1 + sqrt(3)) ^ n - 2 ^ n) / 4. ● a(n) = (1 / 3) * Sum _{ k=1..5 } Sin(Pi * k / 3) * Sin(2 * Pi * k / 3) * (1 + 2 * cos(Pi * k / 6)) ^ n. ● a(n) = 4 * a(n - 1) - 2 * a(n - 2) - 4 * a(n - 3) for n>4. ●

► [A014531] 1,3,10,30,90,266,784,2304,6765,19855,58278,171106,502593,1477035,4343160,12778152,37616427,110797569,326527350,962803170,2840372304,8383467708,24755608584,73133433800,216143407675 ★ Form array in which n - th row is obtained by expanding (1 + x + x ^ 2) ^ n and taking the 2nd column from the center. ● a(n) = sum { k=0..n + 1, C(n + 1,k) * C(n - k + 1,k + 2) } - _ Paul Barry _ , Sep 20 2004 ● a(n) = n * (n + 1) * hypergeom([(1 - n) / 2, 1 - n / 2], [3], 4) / 2. - _ Peter Luschny _ , Nov 23 2014 ● a(n) = GegenbauerC(n - 1, - n - 1, - 1 / 2). - _ Peter Luschny _ , May 09 2016 ●

► [A062107] 0,1,3,10,30,90,270,810,2430,7290,21870,65610,196830,590490,1771470,5314410,15943230,47829690,143489070,430467210,1291401630,3874204890,11622614670,34867844010,104603532030 ★ Diagonal of table A062104. ● a(n) = 10 * 3 ^ (n - 4) for n >= 4. ● a(n) = Sum _{ k=0..n - 2 } 3 ^ (n - k - 2)binomial(1, k / 2)(1 + (- 1) ^ k) / 2. ●

► [A033113] 1,3,10,30,91,273,820,2460,7381,22143,66430,199290,597871,1793613,5380840,16142520,48427561,145282683,435848050,1307544150,3922632451,11767897353,35303692060,105911076180,317733228541 ★ Base - 3 digits are, in order, the first n terms of the periodic sequence with initial period 1,0. ● a(n) = 3 * a(n - 1) + a(n - 2) - 3 * a(n - 3). - _ R. J. Mathar _ , Jun 28 2010 ● a(n) = 2 * a(n - 1) + 3 * a(n - 2) + 1. ● a(n) = Sum _{ k=0..floor(n / 2) } C(n + 2, 2k + 2) * 4 ^ k. - _ Paul Barry _ , Aug 24 2003 ● a(n) = Sum _{ k=0..floor(n / 2) } 3 ^ (n - 2 * k); a(n) = Sum _{ k=0..n } Sum _{ j=0..k } (- 1) ^ (j + k) * 3 ^ j. - _ Paul Barry _ , Nov 12 2003 ● a(n) = (1 / 8) * (3 ^ (n + 1) - (- 1) ^ n - 2), with n >= 1. - _ Paolo P. Lava _ , Jan 19 2009, simplified by _ M. F. Hasler _ , Oct 06 2018 ● a(n) = round(3 ^ (n + 1) / 8) = floor((3 ^ (n + 1) - 1) / 8) = ceiling((3 ^ (n + 1) - 3) / 8) = round((3 ^ (n + 1) - 3) / 8). a(n) = a(n - 2) + 3 ^ (n - 1), n > 2. - _ Mircea Merca _ , Dec 27 2010 ●

► [A290718] 3,10,30,94,318,1150,4350,16894,66558,264190,1052670,4202494,16793598,67141630,268500990,1073872894,4295229438,17180393470,68720525310,274880004094,1099515822078,4398054899710,17592202821630,70368777732094,281475043819518 ★ a(n) = 2 ^ (n + 1) + 4 ^ (n - 1) - 2. ● a(n) = 2 ^ (n + 1) + 4 ^ (n - 1) - 2. ● a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3). ●

► [A003441] 1,1,3,10,30,99,335,1144,3978,14000,49742,178296,643856,2340135,8554275,31429068,115997970,429874830,1598952498,5967382200,22338765540,83859016956,315614844558,1190680751376,4501802224520 ★ Number of nonequivalent dissections of a polygon into n triangles by nonintersecting diagonals rooted at a cell up to rotation. ● a(n) = number of necklaces of n - 1 white beads and n + 2 black beads. a(n) = binomial(2n + 1, n - 1) / (2n + 1) + (2 / 3) * C((n - 1) / 3) where C is the Catalan number A000108 (assumed to be 0 for nonintegral argument). G.f.: (((1 - sqrt(1 - 4x)) / 2) ^ 3 + (1 - sqrt(1 - 4x ^ 3))) / (3x ^ 2). ●

► [A004663] 1,3,10,30,100,300,1000,3000,10000,30000,100000,300000,1000000,3000000,10000000,30000000,100000000,300000000,1000000000,3000000000,10000000000,30000000000,100000000000,300000000000,1000000000000 ★ Powers of 3 written in base 9. ● a(n) = 2 * a(n - 1) + 3 * a(n - 2) + 10 ^ floor((n - 2) / 2); ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(floor(n / 2), k) * 3 ^ (n - 2 * k). (End) ● a(n) = 3 * a(n - 1) + ((1 + (- 1) ^ n) / 2) * a(n - 2) with a(0)=1, a(1)=3. - _ Taras Goy _ , Mar 20 2019 ●

► [A215287] 1,3,10,30,140,420,2310,6930,42042,126126,816816,2450448,16628040,49884120,350574510,1051723530,7595781050,22787343150,168212023980,504636071940,3792416540640,11377249621920,86787993910800,260363981732400,2011383287449200 ★ Number of permutations of 0..floor((n * 3 - 1) / 2) on even squares of an n X 3 array such that each row and column of even squares is increasing. ● a(n) = (n - f + 1) * (2 * n - f)! / ((n - f + 1)! ^ 2 * f!) where f = floor(n / 2). - _ Peter Luschny _ , Sep 30 2018 ●

► [A290061] 3,10,31,77,162,303,520,836,1277,1872,2653,3655,4916,6477,8382,10678,13415,16646,20427,24817,29878,35675,42276,49752,58177 ★ a(n) = (1 / 24) * (n + 3) * (3 * n ^ 3 + 5 * n ^ 2 - 6 * n + 16). ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n > 4. ●

► [A212031] 0,3,10,31,78,166,313,540,871,1333,1956,2773,3820,5136,6763,8746,11133,13975,17326,21243,25786,31018,37005,43816,51523 ★ Number of lower triangular n X n arrays colored with integers 0 upwards introduced in row major order, with no element equal to any element at a city block distance of two, and containing the value n(n + 1) / 2 - 2. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>6. ●

► [A033121] 1,3,10,31,93,280,841,2523,7570,22711,68133,204400,613201,1839603,5518810,16556431,49669293,149007880,447023641,1341070923,4023212770,12069638311,36208914933,108626744800,325880234401 ★ Base - 3 digits are, in order, the first n terms of the periodic sequence with initial period 1,0,1. ● a(n) = 3 * a(n - 1) + a(n - 3) - 3 * a(n - 4). ●

► [A237930] 3,10,31,94,283,850,2551,7654,22963,68890,206671,620014,1860043,5580130,16740391,50221174,150663523,451990570,1355971711,4067915134,12203745403,36611236210,109833708631,329501125894,988503377683 ★ a(n) = 3 ^ (n + 1) + (3 ^ n - 1) / 2. ● a(n) = 3 * a(n - 1) + 1 for n>0, a(0)=3. (Note that if a(0) were 1 in this recurrence we would get A003462, if it were 2 we would get A060816. - _ N. J. A. Sloane _ , Dec 06 2019) ● a(n) = 4 * a(n - 1) - 3 * a(n - 2) for n>1, a(0)=3, a(1)=10. ● a(n) = 2 * a(n - 1) + 3 * a(n - 2) + 2 for n>1. ● a(n) = (7 * 3 ^ n - 1) / 2. - _ Eric W. Weisstein _ , Mar 13 2018 ●

► [A106517] 1,3,10,31,95,288,869,2615,7858,23595,70819,212512,637625,1913019,5739290,17218247,51655351,154967040,464902717,1394710735,4184136386,12552415923,37657258715,112971793856,338915410225 ★ Convolution of Fibonacci(n - 1) and 3 ^ n. ● a(n) = Sum _{ k=0..n } Fibonacci(n - k - 1) * 3 ^ k. ● a(n) = (1 / 5) * (6 * 3 ^ n - Lucas(n + 1)). - _ Ralf Stephan _ , Nov 16 2010 ●

► [A055217] 1,3,10,31,96,294,897,2727,8272,25048,75747,228826,690691,2083371,6280650,18925047,57002616,171633840,516632307,1554702516,4677501237,14069962041,42314975352,127240600050,382555886571 ★ a(n) = sum of the first n coefficients of (1 + x + x ^ 2) ^ n. ● a(n) = sum(sum(binomial(n,j) * binomial(j,2 * j - n - k),j,ceiling((n + k) / 2),n),k,1,n), n>0. (End) ● a(n) = 3 ^ n * 3 / 2 + O(3 ^ n / sqrt(n)). - _ Charles R Greathouse IV _ , Dec 02 2015 ● a(n) = (3 ^ (n + 1) - hypergeom([- (n + 1) / 2, - n / 2], [1], 4)) / 2. ● a(n) = (3 ^ (n + 1) - GegenbauerC(n + 1, - n - 1, - 1 / 2)) / 2. (End) ●

► [A097472] 1,3,10,31,96,296,912,2809,8651,26642,82047,252672,778128,2396320,7379697,22726483,69988378,215535903,663763424,2044122936,6295072048,19386276329,59701891739,183857684514,566207320575 ★ Number of different candle trees having a total of m edges. ● a(n) = Sum _{ s, d, k>=0 with s + d + k= m } binomial(s + 2d + 1, s) * binomial(s, k); ● a(n) = 3 * a(n - 1) + a(n - 2) - 2 * a(n - 3) - a(n - 4); ● a(n) = 1 + Sum _{ m=1..n } Sum _{ k=1..n - m + 1 } binomial(k, n - m - k + 1) * binomial(k + 2 * m - 1,2 * m - 1). - _ Vladimir Kruchinin _ , May 12 2011 ●

► [A114487] 1,1,1,3,10,31,98,321,1078,3686,12789,44919,159407,570704,2058817,7476621,27310345,100275628,369886451,1370066394,5093778398,19002602171,71109895075,266855940177,1004045604976 ★ Number of Dyck paths of semilengt

h n having no UUDD's starting at level 0. • a(n) = Sum _{ k=0..n / 2 } (- 1) ^ k * (k + 1) / (2 * n - 3 * k + 1) * binomial(2 * n - 3 * k + 1, n - 2 * k). - _ Ira M. Gessel _ , Jun 16 2018 •

▶ [A017934] 1,3,10,31,100,316,1000,3162,10000,31622,100000,316227,1000000,3162277,10000000,31622776,100000000,316227766,1000000000,3162277660,10000000000,31622776601,100000000000 ⋆ Powers of sqrt(10) rounded down. • a(n)=floor(sqrt(10 ^ n)). - _ Zak Seidov _ •

▶ [A005725] 1,1,3,10,31,101,336,1128,3823,13051,44803,154518,534964,1858156,6472168,22597760,79067375,277164295,973184313,3422117190,12049586631,42478745781,149915252028,529606271560,1872653175556 ⋆ Quadrinomial coefficients. • a(n) = sum(i + j + k=n, 0<=k<=j<=i<=n, C(n,i) * C(i,j) * C(j,k)). - _ Benoit Cloitre _ , Jun 06 2004 • a(n) = hypergeom([1 / 2 - n / 2, - n, - n / 2], [1 / 2, 1], - 1). - _ Vladimir Reshetnikov _ , Oct 04 2016 • a(n) = Sum _{ k = 0..floor(n / 4) } (- 1) ^ k * C(n,k) * C(2 * n - 4 * k - 1,n - 4 * k). • a(p) == 1 (mod p ^ 2) for any prime p >= 3. More generally, we may have a(p ^ k) == a (p ^ (k - 1)) (mod p ^ (2 * k)) for k >= 2 and any prime p >= 3. • a(n) = Sum _{ k = 0.. floor(n / 2) } binomial(n,k) * binomial(n,2 * k). - _ Peter Bala _ , Mar 16 2023 •

▶ [A286444] 0,3,10,32,70,143,252,424,660,995,1430,2008,2730,3647,4760,6128,7752,9699,11970,14640,17710,21263,25300,29912,35100 ⋆ Number of non - equivalent ways to tile an n X n X n triangular area with two 2 X 2 X 2 triangular tiles and an appropriate number (= n ^ 2 - 8) of 1 X 1 X 1 tiles. • a(n) = (n ^ 4 - 6 * n ^ 3 + 11 * n ^ 2 - 12) / 12 + IF(MOD(n, 2) = 1, - n + 2) / 2. •

▶ [A080406] 3,10,32,73,457,1994,6407,29489,148253,852592,5420543,37975111,290066507,2400720769,21396506651,204322668174,2081209926313,22523982873141,258105780607144,3121989826825492,39750408190737416 ⋆ Boustrophedon transform of the continued fraction of Pi (cf. A001203). • a(n) appears to be asymptotic to C * n! * (2 / Pi) ^ n where C=136.651536367325329682973604897976758877614262731284965133228708820... - _ Benoit Cloitre _ and Mark Hudson (mrmarkhudson(AT)hotmail.com) •

▶ [A036682] 3,10,32,84,207,478,1060,2272,4744,9692,19446,38420,74909,144378,275464,520864,977005,1819426,3366182,6191056,11325040,20613800,37350060,67389320,121113335 ⋆ T(n + 3,3) with T as in A036355. • a(0)=3, a(1)=10, a(2)=32, a(3)=84, a(4)=207, a(5)=478, a(6)=1060, a(7)=2272, a(n)=4 * a(n - 1) - 2 * a(n - 2) - 8 * a(n - 3) + 5 * a(n - 4) + 8 * a(n - 5) - 2 * a(n - 6) - 4 * a(n - 7) - a (n - 8) [From Harvey P. Dale, May 06 2012] •

▶ [A038731] 1,3,10,32,99,299,887,2595,7508,21526,61251,173173,486925,1362627,3797374,10543724,29180067,80521055,221610563,608468451,1667040776,4558234018,12441155715,33900136297,92230468249 ⋆ Number of columns in all directed column - convex polyominoes of area n + 1. • a(n) = Sum _{ k=1..n + 1 } k * binomial(n + k - 1, 2k - 2). - _ Emeric Deutsch _ , Jun 11 2003 • a(n) = Sum _{ k=0..n } binomial(n + k, 2k) * (k + 1). (End) • a(n) = 6 * a(n - 1) - 11 * a(n - 2) + 6 * a(n - 3) - a(n - 4). - _ R. J. Mathar _ , Feb 06 2010 • a(n) = Sum _{ k=0..n } (F(2k) + 0 ^ k) * F(2n - 2k + 1). - _ Paul Barry _ , Jun 23 2010 •

▶ [A244762] 1,3,10,32,99,301,908,2730,8197,24599,73806,221428,664295,1992897,5978704,17936126,53808393,161425195,484275602,1452826824,4358480491,13075441493,39226324500,117678973522,353036920589 ⋆ a(n) = (5 * 3 ^ n - 2 * n - 1) / 4. • a(n + 1) = 3 * a(n) + n. •

▶ [A053581] 1,3,10,32,100,308,940,2852,8620,25988,78220,235172,706540,2121668,6369100,19115492,57362860,172121348,516429580,1549419812,4648521580,13946089028,41839315660,125520044132 ⋆ First differences of the Poly - Bernoulli numbers B _ n ^ (k) with k= - 2 (A027649). • a(n) = 5 * a(n - 1) - 6 * a(n - 2) + C(2,2 - n), n>1, with a(0)=1, a(1)=3, where C(2, 2 - n)=1 for n=2 and =0 for n>2. • a(n) = 4 * 3 ^ n / 3 + 0 ^ n / 6 - 2 ^ n / 2. (End) •

▶ [A017935] 1,3,10,32,100,316,1000,3162,10000,31623,100000,316228,1000000,3162278,10000000,31622777,100000000,316227766,1000000000,3162277660,10000000000,31622776602,100000000000,316227766017,1000000000000 ⋆ Powers of sqrt(10) rounded to nearest integer. • a(n) = round(10 ^ (n / 2)). •

▶ [A077826] 1,3,10,32,101,319,1006,3172,10001,31531,99410,313416,988125,3115319,9821846,30965900,97627977,307797347,970410426,3059468848,9645763669,30410754735,95877738174,302279267892,953013259777 ⋆ Expansion of (1 - x) ^ (- 1) / (1 - 2 * x - 3 * x ^ 2 - 2 * x ^ 3). • a(n) = 3 * a(n - 1) + a(n - 2) - a(n - 3) - 2 * a(n - 4). (End) •

▶ [A292398] 1,3,10,32,102,323,1021,3224,10177,32121,101378,319960,1009830,3187145,10059029,31747584,100199485,316242607,998102878,3150142840,9942261690,31379074783,99036453193,312571964808,986517893269 ⋆ p - INVERT of A010892, where p(S) = 1 - S - S ^ 2 - S ^ 3. • a(n) = 4 * a(n - 1) - a(n - 2) - 6 * a(n - 3) + a(n - 4) + 4 * a(n - 5) + a(n - 6) for n >= 7. •

▶ [A033505] 1,3,10,32,103,331,1064,3420,10993,35335,113578,365076,1173471,3771911,12124128,38970824,125264689,402640763,1294216154,4160024536,13371648999,42980755379,138153890600,444070778180,1427385469761 ⋆ Expansion of 1 / (1 - 3 * x - x ^ 2 + x ^ 3). • a(n) = 3 * a(n - 1) + a(n - 2) - a(n - 3). - _ Greg Dresden _ , Aug 16 2018 •

▶ [A063782] 1,3,10,32,104,336,1088,3520,11392,36864,119296,386048,1249280,4042752,13082624,42336256,137003008,443351040,1434714112,4642832384,15024521216,48620371968,157338828800,509159145472,1647673606144 ⋆ a(0) = 1, a(1) = 3; for n > 1, a(n) = 2 * a(n - 1) + 4 * a(n - 2). • a(n) = (1 / 2) * (1 + sqrt(5)) ^ n + (1 / 5) * (1 + sqrt(5)) ^ n * sqrt(5) - (1 / 5) * sqrt(5) * (1 - sqrt(5)) ^ n + (1 / 2) * (1 - sqrt(5)) ^ n. - _ Alexander R. Povolotsky _ , Aug 15 2010 • a(n) = M ^ n(1, 1), with the matrix M= [[3, 1], [1, - 1]]. Proof by Cayley - Hamilton, using S(n, - I) = (- I) ^ n * F(n + 1), and S = A049310 and F = A000045. Motivated by A319053. - _ Wolfdieter Lang _ , Oct 08 2018 •

▶ [A306295] 1,3,10,32,107,359,1234,4274,15032,53242,190588,686272,2490399,9081375,33312770,122692130,453999656,1685601038,6282014804,23478897364,88026769844,330831420218,1246635155180,4707414286652,17815452662152 ⋆ Maximal number of coalescent histories among non - matching pairs consisting of a caterpillar gene tree and a caterpillar species tree with n + 2 leaves. • a(n) = C(n + 1) - C(floor((n + 1) / 2)) * C(ceiling((n + 1) / 2)), where C(n) is the n - th term in the Catalan sequence A000108. •

▶ [A042039] 1,3,10,33,43,635,678,2669,8685,28724,1329989,4018691,13386062,44176877,57562939,850058023,907620962,3572920909,11626383689,38452071976,178042169458 5,5379717155731,17919573161778,59138436641065,77058009802843 ⋆ Denominators of continued fraction convergents to sqrt(543). • a(n) = 1338674 * a(n - 10) - a(n - 20). - _ Wesley Ivan Hurt _ , Sep 05 2022 •

▶ [A027989] 1,3,10,33,105,324,977,2895,8462,24465,70101,199368,563425,1583643,4430290,12342849,34262337,94800780,261545777,719697255,1975722326,5412138033,14796520365,40380240528,110016825025 ⋆ a(n) = self - convolution of row n of array T given by A027926. • a(n) = Sum _{ k=0..n } binomial(2 * n - k, k) * (k + 1). • a(n) = 6 * a(n - 1) - 11 * a(n - 2) + 6 * a(n - 3) - a(n - 4). (End) •

▶ [A093043] 0,0,1,3,10,33,105,344,1105,3591,11594,37565,121485,393264,1272413,4117971,13325450,43123017,139547457,451587592,1461364025,4729080015,15303613546,49523551333,160261550085 ⋆ Jacobsthal(n) * Fibonacci(n - 1). • a(n) := (2 ^ n / 3 - (- 1) ^ n / 3)(((1 + sqrt(5)) / 2) ^ (n - 1) / sqrt(5) - ((1 - sqrt(5)) / 2) ^ (n - 1) / sqrt(5)). •

▶ [A053156] 1,3,10,33,106,333,1030,3153,9586,29013,87550,263673,793066,2383293,7158070,21490593,64504546,193579173,580868590,1742867913,5229128026,15688432653,47067395110,141206379633,423627527506 ⋆ Number of 2 - element intersecting families (with not necessarily distinct sets) whose union is an n - element set. • a(n) = (3 ^ n - 2 ^ n + 1) / 2. • a(n) = StirlingS2(n + 2,3) + StirlingS2(n + 1,2) + 1. - _ Ross La Haye _ , Jan 12 2008 • a(n) = 6 * a(n - 1) - 11 * a(n - 2) + 6 * a(n - 3) for n > 3. •

▶ [A049219] 1,1,3,10,33,107,344,1103,3535,11330,36317,116415,373176,1196243,3834643,12292218,39403561,126310851,404898200,1297929287,4160602439,13337099986,42753000005,137047709879,439315949304 ⋆ Number of horizontally convex n - ominoes in which the top row has exactly 1 square. • a(n) = 5a(n - 1) - 7a (n - 2) + 4a(n - 3) for n >= 5. •

▶ [A126184] 1,3,10,33,108,351,1134,3645,11664,37179,118098,373977,1180980,3720087,11691702,36669429,114791256,358722675,1119214746,3486784401,10847773692,33705582543,104603532030,324270949293,1004193907488 ⋆ Number of hex trees with n edges and having no nonroot nodes of outdegree 2. • a(n) = (n + 8) * 3 ^ (n - 2) for n >= 1; a(0)=1. •

▶ [A292397] 1,3,10,33,108,352,1144,3714,12050,39084,126752,411041,1332923,4322363,14016392,45451793,147389276,477948252,1549872500,5025868667,16297700769,52849583211,171378684824,555740504324,1802134907175 ⋆ p - INVERT of the tribonacci numbers (A000073(k), k>=2), where p(S) = 1 - S - S ^ 2 - S ^ 3. • a(n) = 4 * a(n - 1) - a(n - 2) - 3 * a(n - 3) - 7 * a(n - 4) + 2 * a(n - 5) + 6 * a(n - 6) + 7 * a(n - 7) + 3 * a(n - 8) + a(n - 9) for n >= 10. •

▶ [A060557] 1,3,10,33,108,352,1145,3721,12087,39254,127469,413908,1343980,4363921,14169633,46008619,149389218,485064009,1574993356,5113971944,16604963593,53915979657,175064088671 ⋆ Row sums of triangle A060556. • a(n) = 5a(n - 1) - 6a(n - 2) + a(n - 3). - _ Floor van Lamoen _ , Nov 02 2005 •

▶ [A018920] 3,10,33,108,353,1153,3766,12300,40172,131202,428506,1399501,4570771,14928140,48755311,159234864,520061125,1698519827,5547366384,18117700664,59172417076,193257136076,631177877968,2061427183105,6732621943159 ⋆ Pisot sequence T(3,10), a(n) = floor(a(n - 1) ^ 2 / a(n - 2)). • a(n) = 3 * a(n - 1) + a(n - 2) - a(n - 4) - a(n - 5) - a(n - 6) (holds at least up to n = 1000 but is not known to hold in general). •

▶ [A255116] 1,3,10,33,108,354,1161,3807,12483,40932,134217,440100,1443096,4731939,15516117,50877639,166828734,547034553,1793736576,5881695930,19286191449,63239784075,207364440015,679951894392,2229575035401 ⋆ Number of n - length words on { 0,1,2,3 } in which 0 appears only in runs of length 2. • a(n + 3) = 3 * a(n + 2) + 3 * a(n) with n>1, a(0) = 1, a(1) = 3, a(2) = 10. •

▶ [A006190] 0,1,3,10,33,109,360,1189,3927,12970,42837,141481,467280,1543321,5097243,16835050,55602393,183642229,606529080,2003229469,6616217487,21851881930,72171863277,238367471761,787274278560 ⋆ a(n) = 3 * a(n - 1) + a(n - 2), with a(0)=0, a(1)=1. • a(n) = U(n - 1, (3 / 2)i)(- i) ^ (n - 1), i ^ 2 = - 1. - _ Paul Barry _ , Nov 19 2003 • a(n) = Sum _{ k=0..n - 1 } binomial(n - k - 1,k) * 3 ^ (n - 2 * k - 1). - _ Paul Barry _ , Oct 02 2004 • a(n) = F(n, 3), the n - th Fibonacci polynomial evaluated at x=3. • a(n + 1) = Sum _{ k=0..n } Sum _{ j=0..n - k } C(k,j) * C(n - j,k) * 2 ^ (k - j). • a(n) = Sum _{ k=0..n } Sum _{ j=0..n - k } C(k,j) * C(n - j,k) * 2 ^ (n - j - k). • a(n + 1) = Sum _{ k=0..floor(n / 2) } C(n - k,k) * 3 ^ (n - 2 * k). •

▶ [A020704] 3,10,33,109,360,1189,3927,12970,42837,141481,467280,1543321,5097243,16835050,55602393,183642229,606529080,2003229469,6616217487,21851881930,72171863277,238367471761,787274278560,2600190307441,8587845200883 ⋆ Pisot sequences E(3,10), P(3,10). • a(n) = 3 * a(n - 1) + a(n - 2) (holds at least up to n = 1000 but is not known to hold in general). • a(n) = (2 ^ (- 1 - n) * ((3 - sqrt(13)) ^ n * (- 11 + 3 * sqrt(13)) + (3 + sqrt(13)) ^ n * (11 + 3 * sqrt(13)))) / sqrt(13). •

▶ [A113299] 1,3,10,33,110,366,1219,4059,13518,45018,149924,499290,1662787,5537577,18441799,61416729,204536183,681166986,2268490929,7554756990,25159612832,83789077212,279042826065,929296530558,3094836925438 ⋆ Expansion of solution to an algebraic functional equation. • a(2 * n) == 0 (mod 3). •

▶ [A257178] 1,3,10,33,110,369,1247,4245,14558,50295,175029,613467,2165100,7692345,27504600,98941185,357952580,1301960925,4759282415,17478557925,64468072820,238736987535,887359113700,3309489922743,12381998910700 ⋆ Number of 3 - Motzkin paths of length n with no level steps at odd level. • a(n)= Sum _{ i=0..floor(n / 2) } 3 ^ (n - 2i) * C(i) * binomial(n - i,i), where C(n) is the n - th Catalan number A000108. •

▶ [A041633] 1,3,10,33,1198,3627,12079,39864,1447183,4381413,14591422,48155679,1748195866,5292743277,17626425697,58172020368,2111819158945,6393629497203,21292707650554,70271752448865,2551075795809694,7723499139877947,25725173215445535 ⋆ Denominators of continued fraction convergents to sqrt(335). • a(n) = 1208 * a(n - 4) - a(n - 8) for n>7. - _ Vincenzo Librandi _ , Dec 22 2013 •

▶ [A083580] 0,1,3,10,34,114,374,1202,3798,11842,36550,111954,340982,1034210,3127206,9434866,28419286,85503618,257035142,772219538,2319017910,6962034466,20896589158,62711787570,188181500054 ⋆ Binomial transform of A083579. • a(n)=2 * 3 ^ n / 3 - 5 * 0 ^ n / 12 - (n + 1)2 ^ (n - 2). •

► [A255631] 1,3,10,34,114,382,1282,4302,14434,48430,162498,545230,1829410,6138222,20595586,69104398,231866082,777980590,2610359362,8758542414,29387549602,98604086254,330846428418,1110089483662,3724684796002 ⋆ Number of n - length words on { 0,1,2,3 } avoiding runs of zeros of length 1 (mod 3). ● a(n + 3) = 3 * a(n + 2) + 4 * a(n) with n > 0, a(0) = 1, a(1) = 3, a(2) = 10. ●

► [A291337] 1,3,10,34,115,387,1300,4366,14665,49263,165490,555934,1867555,6273687,21075220,70798066,237832225,798950763,2683918570,9016098634,30287816995,101745987387,341795711140,1148195728966,3857138603785 ⋆ p - INVERT of (1,1,1,1,1,...), where p(S) = 1 - 2 S - 2 S ^ 3. ● a(n) = 5 * a(n - 1) - 7 * a(n - 2) + 5 * a(n - 3) for n >= 4. ●

► [A255813] 1,3,10,34,115,388,1309,4417,14905,50296,169720,572707,1932556,6521263,22005505,74255899,250570870,845532298,2853184279,9627852832,32488455385,109629815881,369937455865,1248325741972,4212380047936 ⋆ Numbers of words on { 0,1,2,3 } having no isolated zeros. ● a(n + 3) = 4 * a(n + 2) - 3 * a(n + 1) + 3 * a(n) with n>=0, a(0) = 1, a(1) = 3, a(2) = 10. ●

► [A113300] 0,1,3,10,34,115,389,1316,4452,15061,50951,172366,583110,1972647,6673417,22576008,76374088,258371689,874065163,2956941266,10003260650,33840788379,114482567053,387291750188,1310198605996 ⋆ Sum of even - indexed terms of tribonacci numbers. ● a(n) = 3 * a(n - 1) + a(n - 2) + a(n - 3). (End) ●

► [A007052] 1,3,10,34,116,396,1352,4616,15760,53808,183712,627232,2141504,7311552,24963200,85229696,290992384,993510144,3392055808,11581202944,39540700160,135000394752,460920178688,1573679925248 ⋆ Number of order - consecutive partitions of n. ● a(n + 1) = 4a(n) - 2a(n - 1). ● a(n) = ((2 - sqrt(2)) ^ (n + 1) + (2 + sqrt(2)) ^ (n + 1)) / 4. - _ Herbert Kociemba _ , Jun 12 2004 ● a(n - 1) = Sum _{ k= - floor(n / 4)..floor(n / 4) } (- 1) ^ k * binomial(2 * n,n + 4 * k) / 2. - _ Mircea Merca _ , Jan 28 2012 ● a(n) = 3 * a(n - 1) + a(n - 2) + a(n - 3) + a(n - 4) + ... + a(0). - _ Gary W. Adamson _ , Aug 12 2013 ● a(n) = a(- 2 - n) * 2 ^ (n + 1) for all n in Z. - _ Michael Somos _ , Jan 25 2017 ●

► [A048580] 3,10,34,116,396,1352,4616,15760,53808,183712,627232,2141504,7311552,24963200,85229696,290992384,993510144,3392055808,11581202944,39540700160,135000394752,460920178688,1573679925248,5372879343616,18344157523968 ⋆ Pisot sequence L(3,10). ● a(n) = 4 * a(n - 1) - 2 * a(n - 2) (holds at least up to n = 1000 but is not known to hold in general). ●

► [A291292] 1,1,1,3,10,34,116,396,1353,4631,15895,54757,189465,658835,2303381,8098783,28642314,101894922,364614216,1312191768,4748561094,17275277322,63163858146,232041604038,856219298484 ⋆ Necklace Catalan numbers. ● a(n) = 3 ^ (n - 2) + (Sum _{ i=0..n - 4 } 3 ^ i * (2 * (n - i - 3)) / ((n - i - 1) * (n - i)) * binomial(2 * (n - i - 2), n - i - 2)), for n >= 4. Initial terms are a(1)=a(2)=1, a(3)=3. ● a(n) = (3 ^ (n - 2) + (- 4) ^ n * binomial(3 / 2, n) * ((4 / 3) * n - 2 + hypergeom([1, - n], [5 / 2 - n], 3 / 4))) / 2) for n >= 3. ● a(n) = [x ^ n] (3 / 2) + (x - sqrt(1 - 4 * x)) * (2 * x - 1) / (6 * x - 2). (End) ●

► [A094832] 1,3,10,34,117,406,1417,4965,17443,61390,216318,762841,2691574,9500193,33539833,118428835,418214706,1476968554,5216307805,18423344550,65070265609,229827800509,811757757123,2867166603766,10127007608998 ⋆ Number of (s(0), s(1), ..., s(2n + 1)) such that 0 < s(i) < 9 and |s(i) - s(i - 1)| = 1 for i = 1,2,...,2n + 1, s(0) = 3, s(2n + 1) = 4. ● a(n) = (2 / 9) * Sum _{ r=1..8 } sin(r * Pi / 3) * sin(4 * r * Pi / 9) * (2 * cos(r * Pi / 9)) ^ (2n). ● a(n) = 6a(n - 1) - 9a(n - 2) + a(n - 3). ●

► [A217778] 1,3,10,34,117,407,1429,5055,17986,64278,230473,828391,2982825,10754459,38811802,140165322,506449789,1830590295,6618524221,23933966743,86562282258,313102489406,1132598701585,4097213146599,14822370816337 ⋆ Expansion of (1 - x) ^ 2 * (1 - 3 * x) / ((1 - 3 * x + x ^ 2) * (1 - 5 * x + 5 * x ^ 2)). ● a(n) = 8 * a(n - 1) - 21 * a(n - 2) + 20 * a(n - 3) - 5 * a(n - 4) for n>3, a(0)=1, a(1)=3, a(2)=10, a(3)=34. ● a(n) = ((3 + r) * (5 + r) ^ n - (3 - r) * (5 - r) ^ n + (1 + r) * (3 + r) ^ n - (1 - r) * (3 - r) ^ n) / (4 * r * 2 ^ n), where r=sqrt(5). [_ Bruno Berselli _ , Mar 28 2013] ●

► [A071725] 1,1,3,10,34,117,407,1430,5070,18122,65246,236436,861764,3157325,11622015,42961470,159419670,593636670,2217608250,8308432140,31212003420,117544456770,443690433654,1678353186780,6361322162444 ⋆ Expansion of (1 + x ^ 2 * C ^ 4) * C, where C = (1 - sqrt(1 - 4 * x)) / (2 * x) is g.f. for Catalan numbers, A000108. ● a(n) = Sum _{ k=0..n } ((- 1) ^ k * 2 ^ (n - k) * binomial(n,k) * binomial(k + 1,floor(k / 2))). (End) ● a(n) = C(n + 2) - 3 * C(n + 1) + 2 * C(n), where C(n) are the Catalan numbers. ● a(n) = 6 * ((n ^ 2 + 1) / ((n + 2) * (n + 3))) * C(n). (End) ●

► [A026016] 1,3,10,34,117,407,1430,5070,18122,65246,236436,861764,3157325,11622015,42961470,159419670,593636670,2217608250,8308432140,31212003420,117544456770,443690433654,1678353186780,6361322162444,24155384502452 ⋆ a(n) = binomial(2 * n - 1, n) - binomial(2 * n - 1, n + 3). ● a(n) = C(n) + Sum _{ j =0..n - 2 } C(n - j - 2) * (C(j + 3) - 2 * C(j + 2)), where C(n) are the Catalan numbers. (End) ● a(n) = C(n + 2) - 3 * C(n + 1) + 2 * C(n) = 6 * ((n ^ 2 + 1) / ((n + 2) * (n + 3))) * C(n). - _ G. C. Greubel _ , Mar 22 2021 ●

► [A371819] 1,3,10,34,118,417,1497,5447,20047,74493,279054,1052467,3992204,15216662,58239175,223688159,861769598,3328779906,12887832493,49998248601,194315972151,756406944446,2948649839743,11509316352548,44976030493706 ⋆ a(n) = Sum _{ k=0..floor(n / 3) } (- 1) ^ k * binomial(2 * n - k + 1,n - 3 * k). ● a(n) = [x ^ n] 1 / (((1 - x) ^ 2 + x ^ 3) * (1 - x) ^ n). ● a(n) = binomial(1 + 2 * n, n) * hypergeom([1, (1 - n) / 3, (2 - n) / 3, - n / 3], [- 1 - 2 * n, 1 + n / 2, (3 + n) / 2], - 27 / 4). - _ Stefano Spezia _ , Apr 07 2024 ●

► [A178578] 1,3,10,34,118,417,1497,5448,20063,74649,280252,1060439,4040413,15488981,59701236,231236830,899559100,3513314664,13770811198,54152480421,213585706927,844723104691,3349274471386,13310603555085,53012829376985 ⋆ Diagonal sums of second binomial transform of the Narayana triangle A001263. ● a(n) = Sum { k=0..floor(n / 2) } Sum { j=0..n - k } C(n - k,j) * C(j,k) * C(j + 1,k) * 2 ^ (n - k - j) / (k + 1) }} . ●

► [A026616] 1,3,10,34,120,434,1596,5940,22308,84370,320892,1226108,4702880,18097044,69832600,270118440,1047043260,4066132050,15816664380,61615392300,240347793840,938669220060,3669940053000 ⋆ T(2n,n), T given by A026615. ● a(n) = (1 / 2) * ((7 * n - 4) / (2 * n - 1)) * binomial(2 * n, n), n>0. G.f.: (2 - x) / sqrt(1 - 4 * x) - 1. - _ Vladeta Jovovic _ , Jan 08 2004 ●

► [A362389] 1,3,10,34,122,450,1723,6758,27135,110913,460395,1935233,8222504,35255000,152353021,662892684,2901595559,12768195617,56450822365,250637657015,1117060889815,4995815027658,22413020866875,100842092305575,454912716037387 ⋆ G.f. satisfies A(x) = exp(Sum _{ k>=1 } (2 ^ k + A(x ^ k)) * x ^ k / k). ● a(0) = 1; a(n) = (1 / n) * Sum _{ k=1..n } (2 ^ k + Sum _{ d|k } d * a(d - 1)) * a(n - k). ●

► [A330050] 0,3,10,35,100,288,780,2115,5610,14883,39160,103040,270280,708963,1857450,4866435,12744060,33373728,87382900,228795875,599019850,1568318403,4105974960,10749749760,28143378000 ⋆ a(n) = 2 * ((- 1) ^ n - 1) * (F(n) - 1) - (3 * (- 1) ^ n + 7) / 2 * F(n + 1) + 5 * F(n + 1) ^ 2. ● a(n) = 2 + L(2 * n + 2) - F(n + 4) - (L(- n + 2) + F(n + 1)) / 2 where F=A000045, L=A000032. ● a(n) + b(n) * sqrt(5) = F(2 * n + 2) * Product _{ k=2..n } 1 / (1 - q ^ k / (1 - q ^ (2 * k))) where q = (sqrt(5) - 1) / 2 and b=A330051. ● a(n) = a(- 2 - n) for all n in Z. ●

► [A159309] 1,3,10,35,116,606,2990,11203,65368,567558,3229942,12730946,78628616,666394746,3968286590,21143707843,160244432497,1602468019110,20852615681805,320475672814590,4102188681702086,36438823274699332 ⋆ L.g.f.: Sum _{ n>=1 } a(n) * x ^ n / n = Sum _{ n>=1 } (1 + sigma(n) * x) ^ n * x ^ n / n . ● a(n) = n * Sum _{ k=0..[n / 2] } C(n - k,k) * sigma(n - k) ^ k / (n - k) for n>=1. ●

► [A187925] 1,1,3,10,35,121,426,1520,5475,19855,72403,265233,975338,3598180,13311000,49360405,183424355,682870587,2546441085,9509714340,35561166195,133138728845,499005557515,1872137642125,7030166054250 ⋆ Coefficient of x ^ n in (1 + x + x ^ 2 + x ^ 3 + x ^ 4) ^ n. ● a(n) = sum(r=0..n, binomial(n,r) * sum(m=0..r, (sum(j=0..m, binomial(j, - r + n - m - j) * binomial(m,j))) * binomial(r,m))). [_ Vladimir Kruchinin _ , Feb 03 2013] ● a(n) = Sum _{ i=0..n / 5 } (- 1) ^ i * C(n,i) * C(2 * n - 5 * i - 1,n - 5 * i). - _ Vladimir Kruchinin _ , Mar 28 2019 ● a(p) == 1 (mod p ^ 2) for any prime p > 5 (follows from Kruchin in's formula above). Cf. A002426. More generally, we may have a(p ^ k) == a(p ^ (k - 1)) (mod p ^ (2 * k)) for k >= 2 and any prime p. ●

► [A372852] 1,3,10,35,123,427,1460,4923,16405,54131,177150,575731,1860047,5978715,19131880,60982859,193710249,613415779,1937102450,6101872707,19177314211,60147030923,188286357660,588394867675,1835791987133 ⋆ a(n) is the total number of runs of ascents over all flattened Catalan words of length n. ● a(n) = (3 ^ (n - 1) + 1) * (n + 1) / 4. (End) ●

► [A094855] 1,3,10,35,124,440,1560,5525,19551,69142,244419,863788,3052100,10782928,38092457,134560491,475313762,1678930611,5930320300,20946860064,73987208296,261331829501,923052962407,3260318517230,11515766271219 ⋆ Number of (s(0), s(1), ..., s(2n + 1)) such that 0 < s(i) < 9 and |s(i) - s(i - 1)| = 1 for i = 1,2,...,2n + 1, s(0) = 4, s(2n + 1) = 5. ● a(n) = (2 / 9) * Sum _{ r=1..8 } sin(4 * r * Pi / 9) * sin(5 * r * Pi / 9) * (2 * cos(r * Pi / 9)) ^ (2n + 1). ● a(n) = 7 * a(n - 1) - 15 * a(n - 2) + 10 * a(n - 3) - a(n - 4). ●

► [A243871] 1,3,10,35,124,454,1684,6305,23781,90209,343809,1315499,5050144,19442366,75034354,290203076,1124511549,4364693311,16966567970,66041815437,257378634365,1004167036295,3921726323436,15330264382726,59977821022143 ⋆ Number of Dyck paths of semilength n having exactly 1 occurrence of the consecutive steps UDUUUDDDUD (with U=(1,1), D=(1, - 1)). ● a(n) = (2 * (2 * n - 17) * (2 * n - 19) * (2 * n - 9) * a(n - 1) - (2 * n - 19) * (6 * n ^ 2 - 75 * n + 208) * a(n - 4) + 2 * (2 * n - 17) * (10 * n ^ 2 - 136 * n + 387) * a(n - 5) - (2 * n - 19) * (6 * n ^ 2 - 75 * n + 212) * a(n - 8) + (32 * n ^ 3 - 704 * n ^ 2 + 4940 * n - 10850) * a(n - 9) - (2 * n - 17) * (2 * n - 9) * (n - 14) * a(n - 10) - (2 * n - 19) * (n - 8) * (2 * n - 9) * a(n - 12) + 2 * (2 * n - 9) * (2 * n ^ 2 - 36 * n + 161) * a(n - 13) - (n - 10) * (2 * n - 17) * (2 * n - 9) * a(n - 14)) / ((2 * n - 17) * (2 * n - 19) * (n - 4)). ●

► [A081567] 1,3,10,35,125,450,1625,5875,21250,76875,278125,1006250,3640625,13171875,47656250,172421875,623828125,2257031250,8166015625,29544921875,106894531250,386748046875,1399267578125,5062597656250 ⋆ Second binomial transform of F(n + 1). ● a(n) = 5 * a(n - 1) - 5 * a(n - 2) for n >= 2, with a(0) = 1 and a(1) = 3. ● a(n) = (1 / 2 - sqrt(5) / 10) * (5 / 2 - sqrt(5) / 2) ^ n + (sqrt(5) / 10 + 1 / 2) * (sqrt(5) / 2 + 5 / 2) ^ n. ● a(n - 1) = Sum _{ k=1..n } binomial(n, k) * F(k) ^ 2. - _ Benoit Cloitre _ , Oct 26 2003 ● a(n) = Sum _{ k= 0..n } Sum _{ j=0..n } binomial(n, j) * binomial(j + k, 2k); ● a(n) = Sum _{ k=0..n } Sum _{ j=0..n } binomial(n, k + j) * binomial(k, k - j)2 ^ (n - k - j); ● a(n) = Sum _{ k=0..n } Sum _{ j=0..n - k } binomial(n + k - j, n - k - j) * binomial(k, j)(- 1) ^ j * 2 ^ (n - k - j). (End) ●

► [A224509] 1,3,10,35,125,451,1637,5965,21794,79781,292468,1073296,3941950,14486721,53264010,195909180,720769621,2652351034,9761957789,35933354194,132282020709,487008295675,1793068462212,6602016250702,24309222706566 ⋆ Expansion of (1 - x) * (1 - 2 * x) * (1 - 3 * x) / (1 - 9 * x + 28 * x ^ 2 - 35 * x ^ 3 + 15 * x ^ 4 - x ^ 5). ● a(n) = 9 * a(n - 1) - 28 * a(n - 2) + 35 * a(n - 3) - 15 * a(n - 4) + a(n - 5) with a(0) = 1, a(1) = 3, a(2) = 10, a(3) = 35, a(4) = 125. ●

► [A318113] 1,1,3,10,35,126,456,1667,6147,22825,85228,319683,1203632,4546270,17218995,65372310,248705155,947926359,3618884895,13836004764,52968655260,203022926480,779008308235,2992051471500,11502445734096 ⋆ Number of compositions of n into exactly n nonnegative parts <= five. ● a(n) = [x ^ n] ((x ^ 6 - 1) / (x - 1)) ^ n. ● a(n) = Sum _{ k=0..floor(n / 6) } (- 1) ^ k * binomial(n, k) * binomial(2 * n - 6 * k - 1,n - 6 * k). - _ Ilya Gutkovskiy _ , Nov 03 2021 ●

► [A216710] 1,3,10,35,126,460,1690,6225,22950,84626,312019,1150208,4239225,15621426,57556155,212037241,781074572,2877011660,10596599460,39027676220,143735627861,529352597361,1949472483601,7179308057596,26438877143476 ⋆ Expansion of (1 - 3 * x + x ^ 2) ^ 2 / (1 - 9 * x + 28 * x ^ 2 - 35 * x ^ 3 + 15 * x ^ 4 - x ^ 5). ● a(n) = 9 * a(n - 1) - 28 * a(n - 2) + 35 * a(n - 3) - 15 * a(n - 4) + a(n - 5) with a(0) = 1, a(1) = 3, a(2) = 10, a(3) = 35, a(4) = 126. ●

► [A087946] 1,3,10,35,126,461,1702,6315,23494,87533,326382,1217483,4542526,16950573,63255670,236063915,880983606,3287837741,12270301822,45793238475,170902389934,637815796973,2380359749382,8883621103403 ⋆ Expansion of (1 - 3 x + x ^ 2) / ((1 - 2x)(1 - 4x + x ^ 2)). ● a(0)=1, a(1)=3, a(2)=10, a(n)=6a(n - 1) - 9a(n - 2) + 2a(n - 3), n>2. ● a(n) = 2 ^ n / 3 + (2 + sqrt(3))(2 + sqrt(3)) ^ n / 6 + (2 - sqrt(3))(2 - sqrt(3)) ^ n / 6. ●

► [A318114] 1,1,3,10,35,126,462,1709,6371,23905,90178,341705,1299662,4958968,18973111,72763785,279636451,1076635399,4151948115,16035014604,62009441410,240083933750,930547077155,3610295962089,14019766334990 ⋆ Number of compositions of n into exactly n nonnegative parts <= six. ● a(n) = [x ^ n] ((x ^ 7 - 1) / (x - 1)) ^ n. ● a(n) = Sum _{ i=0..n / 7 } (- 1) ^ i * C(n,i) * C(2 * n - 7 * i - 1,n - 7 * i). ● a(p) == 1 (mod p ^ 2) for any prime p > 7. ●

► [A122068] 1,3,10,35,126,462,1715,6419,24157,91238,345401,1309574,4970070,18874261,71705865,272491891,1035680954,3936821259,14965658694,56893879910,216295686467,822315097387,3126323230541,11885921055638 ⋆ Expansion of x * (1 - 3 * x) * (1 - x) / (1 - 7 * x + 14 * x ^ 2 - 7 * x ^ 3). ● a(n) = (1 / 2) * Sum _{ k=0..2 } (1 - 1 / sqrt(7) * cot(2 ^ k * alpha)) * (2 * sin(2 ^ k * alpha)) ^ (2n), where alpha := 2 * Pi / 7. ● a(n) = binomial(2 * n - 1, n - 1) + Sum _{ k =1..n } (- 1) ^ k * binomial(2 * n, n + 7 * k). - _ Greg Dresden _ , Jan 28 2023 ●

► [A318115] 1,1,3,10,35,126,462,1716,6427,24229,91828,349570,1335698,5119856,19678452,75814560,292695291,1132074847,4385740683,17015510820,66102536360,257103599280,1001078753370,3901733646660,15220908863866 ⋆ Number of compositions of n into exactly n nonnegative parts <= seven. ● a(n) = [x ^ n] ((x ^ 8 - 1) / (x - 1)) ^ n. ● a(n) = Sum _{ k=0..floor(n / 8) } (- 1) ^ k * binomial(n,k) * binomial(2 * n - 8 * k - 1,n - 8 * k). - _ Ilya Gutkovskiy _ , Nov 03 2021 ●

► [A318116] 1,1,3,10,35,126,462,1716,6435,24301,92278,351990,1347710,5176640,19938348,76977360,297811491,1154300103,4481325903,17423296059,67830758310,264387659490,1031636761290,4029420952890,15752622069630 ⋆ Number of compositions of n into exactly n nonnegative parts <= eight. ● a(n) = [x ^ n] ((x ^ 9 - 1) / (x - 1)) ^ n. ● a(n) = Sum _{ k=0..floor(n / 9) } (- 1) ^ k * binomial(n,k) * binomial(2 * n - 9 * k - 1,n - 9 * k). - _ Ilya Gutkovskiy _ , Nov 03 2021 ●

► [A167403] 1,3,10,35,126,462,1716,6435,24310,92368,352595,1351142,5194385,20024980,77384340,299671971,1162635441,4518099300,17583582225,68522664400,267350823015,1044243559263,4082760176300,15977236602150,62576817828876 ⋆ Number of decimal numbers having n or fewer digits and having the sum of their digits equal to n. ● a(n) = [x ^ n] ((x ^ 10 - 1) / (x - 1)) ^ n. ●

► [A318117] 1,1,3,10,35,126,462,1716,6435,24310,92378,352705,1351934,5199117,20050460,77512860,300292131,1165534689,4531337778,17642948675,68785126410,268497991905,1049210943531,4104103226699,16068342973950 ⋆ Number of compositions of n into exactly n nonnegative parts <= ten. ● a(n) = [x ^ n] ((x ^ 11 - 1) / (x - 1)) ^ n. ● a(n) = Sum _{ k=0..floor(n / 11) } (- 1) ^ k * binomial(n,k) * binomial(2 * n - 11 * k - 1,n - 11 * k). - _ Ilya Gutkovskiy _ , Nov 03 2021 ●

► [A088218] 1,1,3,10,35,126,462,1716,6435,24310,92378,352716,1352078,5200300,20058300,77558760,300540195,1166803110,4537567650,17672631900,68923264410,269128937220,1052049481860,4116715363800,16123801841550 ⋆ Total number of leaves in all rooted ordered trees with n edges. ● a(n) = binomial(2 * n - 1, n). ● a(n) = (0 ^ n + C(2n, n)) / 2. - _ Paul Barry _ , May 21 2004 ● a(n) is the coefficient of x ^ n in 1 / (1 - x) ^ n and also the sum of the first n coefficients of 1 / (1 - x) ^ n. Given B(x) with the property that the coefficient of x ^ n in B(x) ^ n equals the sum of the first n coefficients of B(x) ^ n, then B(x) = B(0) / (1 - x). ● a(n) = Sum _{ k=0..n } binomial(2n, k)cos((n - k) * Pi) } ; ● a(n) = Sum _{ k=0..n } binomial(n, (n - k) / 2)(1 + (- 1) ^ (n - k))cos(k * Pi / 2) / 2 } (with interpolated zeros); ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n, k)cos((n - 2k)Pi / 2) } (with interpolated zeros); (End) ●

► [A001700] 1,3,10,35,126,462,1716,6435,24310,92378,352716,1352078,5200300,20058300,77558760,300540195,1166803110,4537567650,17672631900,68923264410,269128937220,1052049481860,4116715363800,16123801841550,63205303218876 ⋆ a(n) = binomial(2 * n + 1, n + 1): number of ways to put n + 1 indistinguishable balls into n + 1 distinguishable boxes = number of (n + 1) - st degree monomials in n + 1 variables = number of monotone maps from 1..n + 1 to 1..n + 1. ● a(n - 1) = binomial(2 * n, n) / 2 = (2 * n)! / (2 * n! * n!). ● a(n) = Sum _{ k=0..n } C(n + k, k). - _ Benoit Cloitre _ , Aug 20 2002 ● a(n) = Sum _{ k=0..n } C(n, k) * C(n + 1, k + 1). - _ Benoit Cloitre _ , Oct 19 2002 ● a(n) = Sum _{ k = 0..n + 1 } binomial(2 * n + 2, k) * cos((n - k + 1) * Pi). - _ Paul Barry _ , Nov 02 2004 ● a(n) = 4 ^ n * binomial(n + 1 / 2, n) / (n + 1). - _ Paul Barry _ , May 10 2005 ● a(n - 1) = (n + 1) * (n + 2) * ... * (2 * n - 1) / (n - 1)! (product of n - 1 consecutive integers, divided by (n - 1)!). - _ Jonathan Vos Post _ , Apr 09 2007; [Corrected and shortened by _ Giovanni Ciriani _ , Mar 26 2019] ●

► [A072266] 1,1,3,10,35,126,462,1717,6451,24463,93518,360031,1394582,5430530,21242341,83411715,328589491,1297937234,5138431851,20380608990,80960325670,322016144629,1282138331587,5109310929719,20374764059254 ⋆ Number of words of length 2n generated by the two letters s and t that reduce to the identity 1 using the relations ssssssss=1, tt=1 and stst=1. The generators s and t along with the three relations generate the 14 - element dihedral group D7. ● a(n) = 9 * a(n - 1) - 26 * a(n - 2) + 25 * a(n - 3) - 4 * a(n - 4) for n>4. - _ Colin Barker _ , Apr 26 2019 ●

► [A085282] 1,3,10,35,126,463,1730,6555,25126,97223,379050,1486675,5858126,23166783,91869970,365088395,1453179126,5791193143,23100202490,92207099715,368247268126,1471245680303,5879752544610,23503319648635 ⋆ Expansion of (1 - 5 * x + 5 * x ^ 2) / ((1 - x) * (1 - 3 * x) * (1 - 4 * x)). ● a(n) = 4 ^ n / 3 + 3 ^ n / 2 + 1 / 6. ● a(n) = Sum _{ k= - floor(n / 6)..floor(n / 6) } binomial(2 * n, n + 6 * k) / 2. - _ Mircea Merca _ , Jan 28 2012 ● a(n) = 8 * a(n - 1) - 19 * a(n - 2) + 12 * a(n - 3) for n>2. - _ Colin Barker _ , Feb 07 2020 ●

► [A114196] 1,3,10,35,127,472,1781,6783,25978,99823,384331,1481424,5714073,22048715,85098282,328485899,1268080423,4895497064,18899853101,72967061671,281708048154,1087611942455,4199040207827,16211637659168 ⋆ Expansion of (1 - 3x) / (1 - 6x + 8x ^ 2 + x ^ 3). ● a(n)=6a(n - 1) - 8a(n - 2) - a(n - 3); a(n)=sum { k=0..floor(n / 2), sum { j=0..n - k, C(n - k, j)C(j + k, 2k)2 ^ (j - k) }} . ●

► [A078789] 1,3,10,35,127,474,1807,6995,27370,107883,427351,1698458,6765175,26985675,107746282,430470899,1720537327,6878624730,27505271455,109996928003,439924466026,1759532283963,7037695641415,28149647662490,112595619434887 ⋆ Expansion of (1 - 4 * x + 2 * x ^ 2) / (1 - 7 * x + 13 * x ^ 2 - 4 * x ^ 3). ● a(n) = [4 ^ (n + 1) + (sqrt(5) + 3) * phi ^ (2n) - (sqrt(5) - 3) * phi ^ (- 2n)] / 10, where phi is the golden ratio (1 + sqrt(5)) / 2. ● a(n) = 7a(n - 1) - 13a(n - 2) + 4a(n - 3). (End) ● a(n) = Sum _{ k= - floor(n / 5)..floor(n / 5) } binomial(2 * n,n + 5 * k) / 2 = ((3 + sqrt(5)) ^ n + (3 - sqrt(5)) ^ n + 2 ^ (3 * n - 1)) / (5 * 2 ^ n). - _ Mircea Merca _ , Jan 28 2012 ● a(n) = (Lucas(2 * n + 2) + 2 ^ (2 * n + 1)) / 5. - _ Greg Dresden _ , Jan 26 2023 ●

► [A299443] 1,3,10,35,127,474,1807,6999,27436,108541,432493,1733174,6977777,28200413,114338320,464857475,1894420045,7736238420,31649963275,129693294945,532216500532,2186868151211,8996351889535,37048736568870,152722557174139 ⋆ Expansion of (x ^ 4 + 2 * x ^ 3 + 7 * x ^ 2 - 6 * x + 1) ^ (- 1 / 2). ● a(n) = Sum _{ k=0..n } 2 ^ k * binomial(n, k) * hypergeom([- k, k - n, k - n], [1, - n], 1 / 2). ●

► [A296164] 1,1,3,10,35,131,498,1919,7459,29170,114653,452552,1792754,7124040,28386081,113372690,453743907,1819317153,7306575042,29386858821,118348662525,477188876405,1926137365804,7782398551661,31472648050930 ⋆ a(n) = [x ^ n] Product _{ k>=1 } ((1 + x ^ k) / (1 + x ^ (3 * k))) ^ n. ● a(n) = [x ^ n] Product _{ k>=1 } 1 / ((1 - x ^ (6 * k - 1)) * (1 - x ^ (6 * k - 5))) ^ n. ●

► [A084781] 1,1,3,10,35,132,519,2105,8746,37033,159229,693343,3051290,13550083,60642857,273248824,1238567263,5643738611,25837579578,118785766683,548182891007,2538522337214,11792272546723,54936210525388 ⋆ G.f. A(x) satisfies A(x) = 1 + x * (1 + x + x ^ 2) * A(x) ^ 2. ● a(0)=1; for n > 0, a(n) = Sum _{ j=n - 3..n - 1 } Sum _{ i=0..j } a(i) * a(j - i). - Mario Catalani (mario.catalani(AT)unito.it), Jun 19 2003 ● a(n) = Sum _{ m=1..n } (Sum _{ k=m..n } ((Sum _{ j=0..k } binomial(j,n - 3 * k + 2 * j) * binomial(k,j))) * binomial(- m + 2 * k - 1,k - 1)) / k)) * m). - _ Vladimir Kruchinin _ , May 28 2011 ●

► [A184175] 1,1,1,3,10,35,139,611,2925,15128,83903,495929,3108129,20565721,143134606,1044489265,7968879387,63407648443,525016067171,4514661402304,40245681692885,371319303282381,3540506731807277,34840411462506887,353394158240095874 ⋆ Number of set partitions of { 1,2,...,n } having no blocks of the form { i, i + 1 } . ● a(n) = Sum((- 1) ^ j * binomial(n - j,j) * bell(n - 2j,j), j=0..floor(n / 2)). ●

► [A246975] 1,1,3,10,36,121,447,1699,6589,25914,103633,419421,1714463,7068285,29361629,122764876,516245009,2181957489,9264275600,39495666700,169000837410,725574719515,3124648750706,13493792787415,58422790497226 ⋆ Number of 4 - ary plane multitrees with n edges. ● a(n) = Sum _{ k=1..n + 1 } Sum _{ i=1..k - 1 } Sum _{ j=0..floor((n - i) / 4) } (- 1) ^ j * binomial(k, i) * binomial(i, j) * binomial(n - i, k - i - 1) * binomial(n - 4 * j - 1, i - 1) / k for n > 0. - _ Andrew Howroyd _ , Feb 24 2020 ●

► [A102871] 1,3,10,36,133,495,1846,6888,25705,95931,358018,1336140,4986541,18610023,69453550,259204176,967363153,3610248435,13473630586,50284273908,187663465045,700369586271,2613814880038 ⋆ a(n) = a(n - 3) - 5 * a(n - 2) + 5 * a(n - 1), a(0) = 1, a(1) = 3, a(2) = 10. ● a(j + 3) - 3 * a(j + 2) - 3 * a(j + 1) + a(j) = - 2 for all j. ● a(n + 1) = 2 * a(n) - 0.5 + 0.5 * (12 * a(n) ^ 2 - 12 * a(n) + 9) ^ 0.5. - _ Richard Choulet _ , Oct 09 2007 ● a(n) = 1 / 2 - (1 / 4) * sqrt(3) * (2 - sqrt(3)) ^ n + (1 / 4) * sqrt(3) * (2 + sqrt(3)) ^ n + (1 / 4) * (2 - sqrt(3)) ^ n + (1 / 4) * (2 + sqrt(3)) ^ n, with n >= 0. - _ Paolo P. Lava _ , Oct 03 2008 ●

► [A371842] 1,3,10,36,133,498,1882,7161,27391,105210,405499,1567332,6072724,23578221,91712089,357301827,1393986898,5445422340,21296030401,83370591273,326688422203,1281227165640,5028742763407,19751799462378,77632592859316 ⋆ a(n) = Sum _{ k=0..floor(n / 3) } binomial(2 * n - 2 * k + 1,n - 3 * k). ● a(n) = [x ^ n] 1 / (((1 - x - x ^ 3) * (1 - x) ^ (n + 1)). ●

► [A277287] 1,3,10,36,133,499,1891,7217,27690,106680,412368,1598358,6209542,24171004,94246202,368022472,1438965885,5632870627,22072920103,86575738469,339860843589,1335186464195,5249164967309,20650056413491,81285516680103 ⋆ a(n) = binomial(2 * n,n) + Sum _{ k=1..n } binomial(2 * n - k,n - k) * Fibonacci(k). ● a(n) = binomial(2 * n - 1, n - 1) * ((hypergeom([1, 1 - n], [1 - 2 * n], 1 - phi) / phi + hypergeom([1, 1 - n], [1 - 2 * n], phi) * phi) / sqrt(5) + 2), where phi=(1 + sqrt(5)) / 2. ●

► [A371773] 1,3,10,36,134,507,1937,7449,28783,111623,434130,1692387,6610292,25861384,101319095,397428091,1560588454,6133768656,24128550045,94986663925,374188128311,1474980414870,5817387549611,22955930045826,90629404431826 ⋆ a(n) = Sum _{ k=0..floor(n / 3) } binomial(2 * n - k + 1,n - 3 * k). ● a(n) = [x ^ n] 1 / (((1 - x) ^ 2 - x ^ 3) * (1 - x) ^ (n + 1)). ●

► [A081909] 1,3,10,36,135,513,1944,7290,26973,98415,354294,1259712,4428675,15411789,53144100,181752822,617003001,2080591515,6973568802,23245229340,77096677311,254535261273,836828256240,2740612539186 ⋆ a(n) = 3 ^ n(n ^ 2 - n + 18) / 18. ● a(n) = 3 ^ n * (n ^ 2 - n + 18) / 18. ●

► [A371873] 1,3,10,36,135,517,2003,7815,30634,120480,475002,1876294,7422676,29400192,116567356,462561572,1836843591,7298613997,29016050831,115408159467,459209330821,1827849895817,7277945888781,28986847296997,115479393316211 ⋆ a(n) = Sum _{ k=0..floor(n / 3) } binomial(2 * n + 1,n - 3 * k). ● a(n) = [x ^ n] 1 / (((1 - x) ^ 3 - x ^ 3) * (1 - x) ^ (n - 1)). ●

► [A007582] 1,3,10,36,136,528,2080,8256,32896,131328,524800,2098176,8390656,33558528,134225920,536887296,2147516416,8590000128,34359869440,137439215616,549756338176,2199024304128,8796095119360,35184376283136 ⋆ a(n) = 2 ^ (n - 1) * (1 + 2 ^ n). ● a(n) = Sum _{ k=0..floor(n / 2) } C(n, 2 * k) * 3 ^ (n - 2 * k). - _ Paul Barry _ , May 08 2003 ● a(n) = 6 * a(n - 1) - 8 * a(n - 2). - _ Emeric Deutsch _ , Apr 01 2004 ● a(n) = StirlingS2(2 ^ n + 1,2 ^ n) = 1 + 2 * StirlingS2(n + 1,2) + 3 * StirlingS2(n + 1,3) + 3 * StirlingS2(n + 1,4) = StirlingS2(n + 2,2) + 3(StirlingS2(n + 1,3) + StirlingS2(n + 1,4)). - _ Ross La Haye _ , Mar 01 2008 ● a(n) = StirlingS2(2 ^ n + 1,2 ^ n) = 1 + 2 * StirlingS2(n + 1,2) + 3 * StirlingS2(n + 1,3) + 3 * StirlingS2(n + 1,4) = StirlingS2(n + 2, 2) + 3(StirlingS2(n + 1,3) + StirlingS2(n + 1,4)). - _ Ross La Haye _ , Apr 02 2008 ● a(n) = Sum _{ k= - floor(n / 4)..floor(n / 4) } binomial(2 * n,n + 4 * k) / 2. - _ Mircea Merca _ , Jan 28 2012 ● a(n) = Sum _{ k=1..2 ^ n } k. - _ Joerg Arndt _ , Sep 01 2013 ●

► [A171753] 1,3,10,36,137,543,2218,9264,39329,168939,731770,3188364,13948745,61196775,269007994,1184076216,5216618369,22996827795,101421591466,44742

2614068,1974197123657,8712062181999,38449506441994 ⋆ Expansion of 1 / (1 - 3x - x ^ 2 / (1 - 3x - x ^ 2 / (1 - 3x))). ● a(n)=(3 - sqrt(2)) ^ n / 4 + (3 + sqrt(2)) ^ n / 4 + 3 ^ n / 2. ●

▶ [A002212] 1,1,3,10,36,137,543,2219,9285,39587,171369,751236,3328218,14878455,67030785,304036170,1387247580,6363044315,29323149825,135700543190,630375241380,2938391049395,13739779184085,64430797069375,302934667061301 ⋆ Number of restricted hexagonal polyominoes with n cells. ● a(0)=1, for n > 0: a(n) = Sum _{ j=0..n - 1 } Sum _{ i=0..j } a(i) * a(j - i). G.f.: A(x) = 1 + x * A(x) ^ 2 / (1 - x). - Mario Catalani (mario.catalani(AT)unito.it), Jun 19 2003 ● a(n) = Sum _{ i=ceiling((n - 1) / 2)..n - 1 } (3 ^ (2i + 1 - n) * binomial(n, i) * binomial(i, n - i - 1)) / n. - _ Emeric Deutsch _ , Jul 23 2002 ● a(n) = Sum _{ k=1..n } binomial(2k, k) * binomial(n - 1, k - 1) / (k + 1), i.e., binomial transform of the Catalan numbers 1, 2, 5, 14, 42, ... (A000108). a(n) = Sum _{ k=0..floor((n - 1) / 2) } 3 ^ (n - 1 - 2 * k) * binomial(2k, k) * binomial(n - 1, 2k) / (k + 1). - _ Emeric Deutsch _ , Aug 05 2002 ● a(n) is asymptotic to c * 5 ^ n / n ^ (3 / 2) with c=0.63.... - _ Benoit Cloitre _ , Jun 23 2003 ● a(n) = - 5 ^ (1 / 2) / (10 * (n + 1)) * (5 * hypergeom([1 / 2, n], [1], 4 / 5) - 3 * hypergeom([1 / 2, n + 1], [1], 4 / 5)) (for n>0). - _ Mark van Hoeij _ , Nov 12 2009 ● a(n + 1) = [x ^ n](1 - x ^ 2)(1 + 3 * x + x ^ 2) ^ n. - _ Emanuele Munarini _ , May 18 2011 ●

▶ [A202834] 1,3,10,36,138,558,2364,10440,47868,227124,1112184,5607792,29057400,154465704,841143312,4685949792,26674999056,155000193840,918475565472,5545430185536,34087326300576,213170582612448,1355345600149440,8755789617922176,57440317657203648 ⋆ E.g.f.: exp(3 * x + x ^ 2 / 2). ● a(n) = Sum _{ k=0..[n / 2] } 3 ^ (n - 2 * k) / 2 ^ k * n! / ((n - 2 * k)! * k!). ●

▶ [A129247] 1,1,3,10,36,138,560,2402,10898,52392,267394,1450790,8371220,51327178,333759746,2295276480,16639104002,126718172670,1010487248556,8411744415418,72899055533482,656136245454232,6120474697035762 ⋆ Invert transform of the Bell numbers. ● a(n) = Sum _{ i=1..n } Bell(i) * a(n - i). ●

▶ [A162162] 1,1,3,10,36,139,560,2328,9914,43027,189619,846267,3817105,17373048,79687447,367991891,1709477714,7983062151,37454903501,176470241003,834601583199,3960757007408,18855383609076,90019104197240 ⋆ G.f. satisfies: A(x) = Catalan(x + x ^ 2 + x ^ 3 * A(x)) where Catalan(x) = (1 - sqrt(1 - 4 * x)) / (2x) is the g.f. of A000108. ● a(n) = Sum _{ k=0..n } Sum _{ j=0..k } C(2 * n - 2 * k + j + 1,n - k) / (2 * n - 2 * k + j + m) * C(n - k,k - j) * C(k - j,j). ● a(n,m) = Sum _{ k=0..n } Sum _{ j=0..k } C(2 * n - 2 * k + j + m,n - k) * m / (2 * n - 2 * k + j + m) * C(n - k,k - j) * C(k - j,j). ●

▶ [A081921] 1,3,10,36,144,648,3384,20520,145728,1181952,10917504,111601152,1265777280,15544566144,208320719616,2980582728192,46020833427456,751100760576000,13121167636058112,240473024248393728,4687531209011183616,95293672221284794368 ⋆ Expansion of exp(3x) / sqrt(1 - x ^ 2). ● a(n) = 3 ^ n * n! * Sum _{ k=0..floor(n / 2) } binomial(2 * k, k) / (n - 2 * k)! / 36 ^ k. - _ Vladeta Jovovic _ , Oct 11 2003 ●

▶ [A165792] 1,3,10,36,152,770,4632,32438,259520,2335698,23357000,256927022,3083124288,40080615770,561128620808,8416929312150,134670868994432,2289404772905378,41209285912296840,782976432333639998,15659528646672800000,328850101580128800042 ⋆ a(0)=1, a(n) = n * (a(n - 1) + 2). ● a(n) = n! + 2 * floor(e * n!) - 2, n>0. - _ Gary Detlefs _ , Jun 06 2010 ●

▶ [A010373] 1,1,3,10,36,153,780,4005,22366,128778,766941,4674153,29180980,185117661,1193918545,7800816871,51584238201,344632209090,2324190638055,15804057614995,108277583483391,746878494484128,5183852459907628 ⋆ Number of unrooted quartic trees with 2n (unlabeled) nodes and possessing a bicentroid; number of 2n - carbon alkanes C(2n)H(4n + 2) with a bicentroid, ignoring stereo isomers. ● a(n) = b(n) * (b(n) + 1) / 2, where b(n) = A000598[n]. ●

▶ [A360586] 0,1,3,10,37,136,479,1618,5289,16876,52915,163846,502781,1532896,4651911,14070394,42456913,127894996,384799067,1156756462,3475250085,10436235976,31330727983,94038321250,282211432697 ⋆ Expansion of e.g.f.: exp(x) * (exp(x) - 1) * (exp(x) - x). ● a(n) = 3 ^ n - 2 ^ n - n * 2 ^ (n - 1) + n. ●

▶ [A242725] 1,1,3,10,37,137,511,1906,7113,26545,99067,369722,1379821,5149561,19218423,71724130,267678097,998988257,3728274931,13914111466,51928170933,193798572265,723266118127,2699265900242,10073797482841 ⋆ Sequence with all (x, y) = (a(2m), a(2m +- 1)) satisfying x|y ^ 2 + y + 1 and y|x ^ 2 + 1. ● a(n + 1) = 4 * a(n) - a(n - 1) - p _ n (n>0), where p _ n = 0 if n is odd and p _ n = 1 if n is even. ● a(n) = 4 * a(n - 1) - 4 * a(n - 3) + a(n - 4) for n>3. [_ Bruno Berselli _ , May 22 2014] ● a(n) = (3 + (- 1) ^ n + (4 + sqrt(3)) * (2 - sqrt(3)) ^ n + (4 - sqrt(3)) * (2 + sqrt(3)) ^ n) / 12. [_ Bruno Berselli _ , May 25 2014] ●

▶ [A195350] 1,1,3,10,37,141,541,2080,8001,30781,118423,455610,1752877,6743881,25945881,99822160,384048001,1477556361,5684635243,21870622810,84143330517,323726495221,1245480100021,4791763116240,18435456144001 ⋆ Expansion of (1 - 3 * x - x ^ 2) / (1 - 4 * x + 2 * x ^ 3 + x ^ 4). ● a(n) = 4 * a(n - 1) - 2 * a(n - 3) - a(n - 4). ●

▶ [A164044] 1,3,10,37,144,571,2278,9105,36412,145639,582546,2330173,9320680,37282707,149130814,596523241,2386092948,9544371775,38177487082,152709948309,610839793216,2443359172843,9773436691350,39093746765377 ⋆ a(n + 1) = 4 * a(n) - n. ● a(0)=1; a(n + 1) = 4 * a(n) - n. ● a(n) = (5 * 4 ^ n + 3 * n + 4) / 9. ● a(n) = 6 * a(n - 1) - 9 * a(n - 2) + 4 * a(n - 3). ●

▶ [A299501] 1,3,10,37,145,588,2437,10251,43582,186785,805585,3492064,15200753,66399763,290910490,1277803957,5625184321,24811849020,109631120869,485153695995,2149941422590,9539307910561,42374000475457,188421560848512,838633172823745 ⋆ Expansion of (1 - 6 * x + 7 * x ^ 2 - 2 * x ^ 3 + x ^ 4) ^ (- 1 / 2). ● a(n) = Sum _{ k=0..n } 2 ^ (n - k) * binomial(n, k) * hypergeom([- k, k - n, k - n], [1, - n], 1 / 2). ●

▶ [A109081] 1,1,3,10,37,146,602,2563,11181,49720,224540,1027038,4748042,22150519,104146733,493012682,2347796965,11239697816,54061835288,261130778516,1266125122956,6160158505040,30065608532008,147161532388934 ⋆ Reversion of x * (1 - x) * (1 - x ^ 2) * (1 - x ^ 3) / (1 - x ^ 6) = x * (1 - x) ^ 2 / (1 - x + x ^ 2). ● a(n) = Sum _{ k=0..n } C(n,k) / (n - k + 1) * C(n + k - 1,n - k). (End) ● a(n) is the upper left term in M ^ (n - 1), M = an infinite square matrix as follows: ●

▶ [A046632] 1,3,10,37,147,586,2341,9363,37450,149797,599187,2396746,9586981,38347923,153391690,613566757,2454267027,9817068106,39268272421,157073089683,628292358730,2513169434917,10052677739667,40210710958666 ⋆ Number of cubic residues mod 4 ^ n. ● a(n) = 4 * a(n - 1) + a(n - 3) - 4 * a(n - 4). - _ Vincenzo Librandi _ , Jun 22 2012 ●

▶ [A199874] 1,1,3,10,37,147,611,2625,11564,51953,237123,1096420,5125063,24178427,114974387,550511901,2651896733,12843003108,62494595022,305400429548,1498184696271,7375179807191,36421312544431,180383163330765,895756907248150 ⋆ G.f. satisfies A(x) = (1 + x * A(x) ^ 2) * (1 + x ^ 2 * A(x) ^ 2). ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(2 * n - 2 * k + 1,k) * binomial(2 * n - 2 * k + 1,n - 2 * k) / (2 * n - 2 * k + 1). - _ Seiichi Manyama _ , Jul 18 2023 ●

▶ [A192240] 1,3,10,37,149,636,2813,12695,57922,265809,1223521,5640748,26026505,120137307,554669594,2561176781,11826871933,54615158940,252210521317,1164706900879,5378632571666,24838652091993,114705606355625,529714071477452 ⋆ Constant term in the reduction of the polynomial (x + 3) ^ n by x ^ 2 - > x + 1. ● a(n) = Sum _{ i=0..n } (- 1) ^ i * Fibonacci(i + 1) * binomial(n,i) * 4 ^ (n - i) (conjecture). - _ Rigoberto Florez _ , Mar 25 2020 ●

▶ [A086444] 1,3,10,37,150,653,2990,14157,68470,335533,1657470,8227277,40957190,204250413,1019649550,5093448397,25452860310,127221189293,635976675230,3179495693517,15896315681830,79478090576173,397379990430510 ⋆ Sequence associated with palindromic structures. ● a(n) = 2 ^ n / 3 + 3 ^ n / 2 + 5 ^ n / 6. ●

▶ [A064613] 1,3,10,37,150,654,3012,14445,71398,361114,1859628,9716194,51373180,274352316,1477635912,8016865533,43773564294,240356635170,1326359740956,7351846397334,40913414754324,228508350629892 ⋆ Second binomial transform of the Catalan numbers. ● a(n) = Sum _{ k=0..n } binomial(n, k) * binomial(2 * k, k) * 2 ^ (n - k) / (k + 1). ● a(n) = 2 ^ n * hypergeom([1 / 2, - n], [2], - 2). ● a(n) = the upper left term in M ^ n, M = an infinite square production matrix as follows: ●

▶ [A005493] 1,3,10,37,151,674,3263,17007,94828,562595,3535027,23430840,163254885,1192059223,9097183602,72384727657,599211936355,5150665398898,45891416030315,423145657921379,4031845922290572,39645290116637023,401806863439720943,4192631462935194064 ⋆ 2 - Bell numbers: a(n) = number of partitions of [n + 1] with a distinguished block. ● a(n - 1) = Sum _{ k=1..n } k * Stirling2(n, k) for n>=1. ● a(n) = exp(- 1) * Sum _{ k>=0 } ((k + 2) ^ n) / k!. - _ Gerald McGarvey _ , Jun 03 2004 ● a(n) = B(n + 2) - B(n + 1), where B(n) are Bell numbers (A000110). - _ Franklin T. Adams - Watters _ , Jul 13 2006 ● a(n) = D ^ (n + 1)(x * exp(x)) evaluated at x = 0, where D is the operator (1 + x) * d / dx. Cf. A003128, A052852 and A009737. - _ Peter Bala _ , Nov 25 2011 ● a(0) = 1; a(n) = 2 * a(n - 1) + Sum _{ k=0..n - 1 } binomial(n - 1,k) * a(k). - _ Ilya Gutkovskiy _ , Jul 02 2020 ●

▶ [A250307] 1,3,10,37,152,690,3422,18257,103144,608730,3713524,23235490,148281656,961255200,6311395814,41878914665,280365966232,1891270498050,12842102343820,87703053156406,601999871121200,4150859861430252,28736613316786220,199671324115916570 ⋆ Number of 2 - colored Schroeder paths of semilength n in which there are no (2,0) - steps at level 1. ● a(n) = Sum _{ k=0..n } ((k + 1) * (Sum _{ j=0..k } (2 ^ j * (- 1) ^ (- k + j) * binomial(k - j,j))) * Sum _{ j=0..n + 1 } (binomial(j, - n - k + 2 * j - 2) * 4 ^ (- n - k + 2 * j - 2) * 3 ^ (n - j + 1) * binomial(n + 1,j))) / (n + 1). - _ Vladimir Kruchinin _ , Mar 08 2016 ●

▶ [A123636] 1,1,3,10,37,176,979,6658,50873,451180,4376911,47740694,560586613,7248848608,99837660875,1492197903466,23571796088689,399706304138708,7121101849585543,135049981967575870,2678257990821099821 ⋆ a(n) = 1 + 1 * n + 1 * n * 2 + 1 * n * 2 * (n - 1) + 1 * n * 2 * (n - 1) * 3 + 1 * n * 2 * (n - 1) * 3 * (n - 2) + ... + n!. ● a(n) = 1 + Sum _{ k=1..n } (floor((k + 1) / 2)! * n!) / ((n - floor(k / 2))!)). - _ G. C. Greubel _ , Oct 26 2017 ●

▶ [A308124] 3,10,38,150,598,2390,9558,38230,152918,611670,2446678,9786710,39146838,156587350,626349398,2505397590,10021590358,40086361430,160345445718,641381782870,2565527131478,10262108525910,41048434103638,164193736414550,656774945658198 ⋆ a(n) = (2 + 7 * 4 ^ n) / 3. ● a(n) = 4 * a(n - 1) - 2 for n=1,2,... , a(0) = 3. ● a(n) = 5 * a(n - 1) - 4 * a(n - 2) for n>1. ●

▶ [A109085] 1,1,3,10,38,153,646,2816,12585,57343,265401,1244256,5896512,28200365,135935424,659754072,3221354296,15812501100,77985955410,386254209762,1920391362054,9580985321554,47951223856445,240680464689600 ⋆ G.f. A(x) satisfies: A(x) = P(x * A(x)) where P(x) = A(x / P(x)) is the g.f. of the partition numbers A000041. ● a(n) = ([x ^ n] 1 / ((x; x) _ inf) ^ (n + 1)) / (n + 1), where (a; q) _ inf is the q - Pochhammer symbol. - _ Vladimir Reshetnikov _ , Nov 20 2016 ●

▶ [A001002] 1,1,3,10,38,154,654,2871,12925,59345,276835,1308320,6250832,30142360,146510216,717061938,3530808798,17478955570,86941210950,434299921440,2177832612120,10959042823020,55322023332420,280080119609550,1421744205767418 ⋆ Number of dissections of a convex (n + 2) - gon into triangles and quadrilaterals by nonintersecting diagonals. ● a(n) = (1 / (n + 1)) * Sum _{ k=ceiling(n / 2)..n } binomial(n + k, k) * binomial(k, n - k). - _ Len Smiley _ ● a(n) = Sum _{ k=0..floor(n / 2) } C(2 * n - k, n + k) * C(n + k, k) / (n + 1). - _ Paul D. Hanna _ , Mar 30 2005 ● a(n) = Catalan(n) * hypergeom([1 / 2 - n / 2, - n / 2], [- 2 * n], - 4) for n>0. - _ Peter Luschny _ , Oct 03 2014 ● a(n) = [x ^ n] 1 / (1 - x - x ^ 2) ^ (n + 1) / (n + 1). - _ Ilya Gutkovskiy _ , Mar 29 2018 ●

▶ [A000902] 1,1,3,10,38,156,692,3256,16200,84496,460592,2611104,15355232,93376960,585989952,3786534784,25152768128,171474649344,1198143415040,8569374206464,62668198184448,468111364627456,3568287053001728 ⋆ Expansion of e.g.f. (1 / 2) * (exp(2 * x + x ^ 2) + 1). ● a(n) = 2 * a(n - 1) + (2n - 2) * a(n - 2) for n >= 3. - _ N. J. A. Sloane _ , Sep 23 2006 ● a(n) = 1 + n! / (2e) * [x ^ n] Sum[l>=0, 1 / l! * { (1 + x) ^ l - 1 }^ 2]. ● a(n) = (i / 2) ^ (1 - n) * KummerU((1 - n) / 2, 3 / 2, - 1)) for n>=1. - _ Peter Luschny _ , Nov 29 2017 ● a(n) = Sum _{ r=0..floor(n / 2) } 2 ^ (n - 2r - 1) * { (n!) / (r!(n - 2r)!) } . - _ Aram Bingham _ , Feb 08 2020 ●

▶ [A010842] 1,3,10,38,168,872,5296,37200,297856,2681216,26813184,294947072,3539368960,46011804672,644165281792,9662479259648,154599668219904,2628194359869440,47307498477912064,898842471080853504,17976849421618118656,377513837853982588928 ⋆ Expansion of e.g.f.: exp(2 * x) / (1 - x). ● a(n) = row su

ms of A090802. - _ Ross La Haye _ , Aug 18 2006 ● a(n) = n * a(n - 1) + 2 ^ n = (n + 2) * a(n - 1) - (2 * n - 2) * a(n - 2) = n! * Sum _{ j=0..n } floor(2 ^ j / j!). - _ Henry Bottomley _ , Jul 12 2001 ● a(n) = Sum _{ k=0..n } k! * binomial(n, k) * 2 ^ (n - k). - _ Paul Barry _ , Apr 22 2005 ● a(n) is the number of ways to split the set { 1,2,...,n } into two disjoint subsets S,T with S union T = { 1,2,...,n } and linearly order S and then choose a subset of T. - _ Geoffrey Critzer _ , Mar 10 2009 ● a(n) = n! * e ^ 2 - Sum _{ k >= 0 } 2 ^ (n + k + 1) / ((n + 1) * ... * (n + k + 1)). ● a(n) = 2 ^ (n + 1) * U(1, n + 2, 2), where U is the Bessel U function. - _ Peter Luschny _ , Nov 26 2014 ●

► [A140710] 1,3,10,38,172,944,6208,47696,417952,4101824,44491648,528068096,6804155392,94559581184,1409615239168,22434345998336,379633330204672,6805952938041344,128854632579186688,2568966172926181376 ★ Number of maximal initial consecutive columns ending at the same level, summed over all deco polyominoes of height n. ● a(n) = 2 ^ (n - 1) * (1 + Sum _{ j=1..n - 1 } j * j! / 2 ^ j). ● a(n) = (n - 1)! * (n - 1) + 2 * a(n - 1) with a(1) = 1. ●

► [A005750] 1,1,3,10,39,160,702,3177,14830,70678,342860,1686486,8393681,42187148,213828802,1091711076,5609297942,28982708389,150496728594,784952565145,4110491658233,21602884608167,113907912618599,602414753753310,3194684310627727 ★ Number of planted matched trees with n nodes. ● a(n + 1) is Euler transform of A000151. ●

► [A253194] 1,3,10,39,162,707,3190,14766,69719,334481,1625846,7989908,39631204,198151579,997623275,5053274850,25734158411,131680565544,676693557574,3490897656337,18071699948492,93851485181749,488815126122166 ★ Number of ways to place non - intersecting diagonals in a convex (n + 2) - gon so as to create no pentagons. ● a(n) = (1 / (n + 1)) * Sum _{ i=0..floor(n / 3) } Sum _{ k =i + 1..n - 2 * i } (- 1) ^ i * binomial(n + k,k) * binomial(k,i) * binomial(n - 3 * i - 1,k - i - 1), n !== 0 (mod 3), ● a(n) = ((- 1) ^ (n / 3) / (n + 1)) * binomial(4 * n / 3,n / 3) + (1 / (n + 1)) * Sum _{ i=0..(n / 3) - 1 } Sum _{ k=i + 1 ..n - 2 * i } (- 1) ^ i * binomial(n + k,k) * binomial(k,i) * binomial(n - 3 * i - 1, k - i - 1), n == 0 (mod 3). ●

► [A083862] 0,1,3,10,39,171,819,4229,23247,135088,824163,5255361,34876647,240130801,1710323667,12572548582,95183606559,740843916471,5918533467075,48463830575837,406239439253175,3481899731310196 ★ Main diagonal of array A083857. ● a(n) = (((3 + sqrt(4 * n + 1)) / 2) ^ n - ((3 - sqrt(4 * n + 1)) / 2) ^ n) / sqrt(4 * n + 1). ●

► [A305560] 1,1,3,10,39,176,893,4985,30229,197452,1379655,10250087,80558195,666916238,5795111845,52691973136,499969246647,4938724595994,50679201983653,539209298355565,5938139329609621,67582179415195986,793755139140445707,9608367683839952732,119730171975510540577 ★ Expansion of Sum _{ k>=0 } binomial(k,floor(k / 2)) * x ^ k / Product _{ j=1..k } (1 - j * x). ● a(n) = Sum _{ k=0..n } Stirling2(n,k) * binomial(k,floor(k / 2)). ●

► [A087860] 0,1,3,10,39,176,905,5244,34111,250480,2108529,20751380,241315151,3282366504,50786289385,865850559196,15856276032255,306665879765984,6199863566817761,130237717066988580,2832527601333186319 ★ Expansion of e.g.f.: (1 - exp(x / (x - 1))) / (1 - x). ● a(n) = n! * (1 - LaguerreL(n, 1)). ● a(n) = 3 * (n - 1) * a(n - 1) - (n - 1) * (3 * n - 5) * a(n - 2) + (n - 2) ^ 2 * (n - 1) * a(n - 3). - _ Vaclav Kotesovec _ , Nov 13 2017 ● a(n) = n * n! * hypergeom([1 - n, 1], [2, 2], 1). - _ Peter Luschny _ , May 10 2021 ●

► [A258973] 1,3,10,40,181,884,4539,24142,131821,734577,4160626,23881695,138610418,812104884,4796598619,28529555072,170733683579,1027293807083,6211002743144,37713907549066,229894166951757,1406310771154682,8630254073158599,53117142215866687,327800429456036588 ★ The number of plain lambda terms presented by de Bruijn indices, see Bendkowski et al. where zeros have no weight. ● a(n) = 1 + a(n - 1) + Sum _{ i=0..n - 1 } a(i) * a(n - 1 - i). - _ Vladimir Kruchinin _ , May 03 2018 ● a(n) = Sum _{ i=0..n } Sum _{ k=1..n - i } binomial(k + i - 1,k - 1) * binomial(2 * k + i - 2,k + i - 1) * binomial(n - i - 1,n - k - i) / k. - Vladimir Kruchinin _ , May 03 2018 ● a(n) = Sum _{ i=0..n - 1 } hypergeom([(i + 1) / 2, i / 2 + 1, i - n + 1], [1, 2], - 4). - _ Peter Luschny _ , May 03 2018 ●

► [A136128] 1,3,10,40,192,1092,7248,55296,478080,4625280,49524480,581368320,7422589440,102372076800,1516402944000,24004657152000,404347023360000,7220327288832000,136227009945600000,2707657158721536000,56546150835879936000,1237826569587277824000 ★ Number of components in all permutations of [1,2,...,n]. ● a(n) = Sum _{ i=0..n - 1 } i! * (n - i)!. ● a(n) = (n + 1)! * (1 + Sum _{ j=1..n - 1 } 2 ^ j / (j + 1)) / 2 ^ n. ● a(n) = (n + 1)! * Re(- LerchPhi(2, 1, n + 1)). - _ Peter Luschny _ , Jan 04 2018 ● a(n) = 2 * Sum _{ k=0..floor((n + 1) / 2) } (4 ^ k - 1) * |Stirling1(n + 1,2 * k)| * Bernoulli(2 * k). - _ Seichi Manyama _ , Oct 05 2022 ●

► [A089902] 1,3,10,40,193,1107,7412,56960,495055,4805327,51540462,605360184,7726837413,106484488843,1575591323104,24910186990320,419042540060243,7472730215908551,140804433625595626,2795108750920323336 ★ Antidiagonal sums of array A089900. ● a(n) = sum _{ k=0..n } sum _{ i=0..k } (n - k) ^ (k - i) * binomial(k, i) * (i + 1)! ●

► [A216386] 1,1,3,10,40,215,1224,6587,3387628,50507498 ★ Number of values of k for which sigma(k) - k is a permutation of decimal digits of k, for 10 ^ (n - 1) < k < 10 ^ n. ● a(n) = # { k in A085844 | 10 ^ (n - 1) < k < 10 ^ n } . - _ M. F. Hasler _ , Feb 24 2014 ●

► [A163843] 1,3,10,41,116,427,1240,4181,12472,40091,121364,380701,1160186,3593969,10979532,33785469,103258800,316532947,966976444,2957131673,9026437602,27558146133,84043120308,256263107177,780817641926 ★ Row sums of triangle A163840. ● a(n) = Sum _{ k=0..n } Sum _{ i=k..n } binomial(n - k,n - i) * i $ where i $ denotes the swinging factorial of i (A056040). ●

► [A260772] 1,3,10,41,190,946,4940,26693,147990,837102,4811860,28027210,165057100,981177060,5879570200,35478788269,215398416870,1314794380374,8064119033220,49673222082782,307163049317540,1906066361809148,11865666767361960,74081851132379426 ★ Certain directed lattice paths. ● a(n) = (1 / n) * Sum _{ j=0..(n + 1) / 4 } (- 1) ^ j * C(n,j) * C(3 * n - 4 * j,n - 4 * j + 1), a(0)=1. - _ Vladimir Kruchinin _ , Apr 04 2019 ●

► [A325059] 1,3,10,41,190,973,5413,32351,205966,1387807,9845083,73215780,568757151,4601092084,38660287934,336623442207,3031260737552,28178974826871,269995107206317,2662508737568260,26987695641386128,280844928307623929,2997258604356945337,32772404387384205040,366794262989293809151 ★ G.f.: Sum _{ n>=0 } x ^ n * (1 + (1 + x) ^ n) ^ n / (1 - x * (1 + x) ^ n) ^ (n + 1). ● a(n) = Sum _{ i=0..n } Sum _{ j=0..n - i } Sum _{ k=0..n - i - j } binomial(n - i,j) * binomial(n - i - j,k) * binomial((n - i - j) * (n - i - k),i). ● a(n) = Sum _{ i =0..n } Sum _{ j=0..n - i } Sum _{ k=0..n - i - j } binomial((n - i - j) * (n - i - k),i) * (n - i)! / ((n - i - j - k)! * j! * k!). ●

► [A000248] 1,1,3,10,41,196,1057,6322,41393,293608,2237921,18210094,157329097,1436630092,13810863809,139305550066,1469959371233,16184586405328,185504221191745,2208841954063318,27272621155678841,348586218389733556,4605223387997411873 ★ Expansion of e.g.f. exp(x * exp(x)). ● a(n) = Sum _{ k=0..n } C(n,k) * (n - k) ^ k. - _ Paul D. Hanna _ , Jun 26 2009 ●

► [A305405] 1,1,3,10,41,201,1126,7043,48603,366298,2987189,26163501,244654150,2430411335,25539609327,282834656434,3290175964577,40089424302657,510340938343270,6772086558823547,93481666812344979,1339885322519303434,19907413622297965373,306126204811557339045 ★ Expansion of Sum _{ k>=0 } k!! * x ^ k / Product _{ j=1..k } (1 - j * x). ● a(n) = Sum _{ k=0..n } Stirling2(n,k) * k!!. ●

► [A002627] 0,1,3,10,41,206,1237,8660,69281,623530,6235301,68588312,823059745,10699776686,149796873605,2246953104076,35951249665217,611171244308690,11001082397556421,209020565553572000,4180411311071440001,87788637532500240022 ★ a(n) = n * a(n - 1) + 1, a(0) = 0. ● a(n) = n! * Sum _{ k=1..n } 1 / k!. ● a(n) = floor(n! * (e - 1)), n >= 1. - _ Amarnath Murthy _ , Mar 08 2002 ● a(n) = Sum _{ j=1..n } (n - j)! * binomial(n,j). - _ Zerinvary Lajos _ , Jul 31 2006 ● a(n) = 1 + Sum _{ k=0..n - 1 } k * a(k). - _ Benoit Cloitre _ , Jul 26 2008 ● a(m) = int(((1 + s) ^ m - s ^ m) * exp(- s), s=0..infinity) = GAMMA(m + 1,1) * exp(1) - GAMMA(m + 1). - _ Stephen Crowley _ , Jul 24 2009 ● a(n + 1) = a(n) + n! + Sum _{ k=1..n } (n! / k!) * a(k). The above conjectured recurrence can be obtained from the original recurrence or from the differential equation satisfied by f(x). - _ Emanuele Munarini _ , Jun 20 2014 ●

► [A074511] 3,10,42,190,882,4150,19722,94510,456162,2215270,10814202,53022430,260917842,1287811990,6371951082,31591319950,156882857922,780119322310,3883416742362,19348364235070,96466943268402,481235204714230,2401777977060042,11991297699255790 ★ a(n) = 1 ^ n + 4 ^ n + 5 ^ n. ● a(n) = 9 * a(n - 1) - 20 * a(n - 2) + 12 with a(0)=3, a(1)=10. - _ Vincenzo Librandi _ , Jul 21 2010 ●

► [A094195] 1,3,10,42,199,981,4888,24420,122077,610359,3051766,15258798,76293955,381469737,1907348644,9536743176,47683715833,238418579115,1192092895522,5960464477554,29802322387711,149011611938493,745058059692400,3725290298461932,18626451492309589 ★ Expansion of g.f.: (1 - 4 * x) / ((1 - 5 * x) * (1 - x) ^ 2). ● a(n) = (5 ^ (n + 1) + 12 * n + 11) / 16. ● a(n) = 7 * a(n - 1) - 11 * a(n - 2) + 5 * a(n - 3), with a(0)=1, a(1)=3, a(2)=10. - _ Harvey P. Dale _ , Dec 31 2011 ●

► [A125274] 1,1,3,10,42,210,1199,7670,54224,418744,3499781,31425207,301324035,3069644790,33078375153,375634524357,4480492554993,55971845014528,730438139266281,9935106417137098,140553930403702487 ★ Eigensequence of triangle A078812: a(n) = Sum _{ k=0..n - 1 } A078812(n - 1,k) * a(k) for n > 0 with a(0)=1. ● a(n) = Sum _{ k=0..n - 1 } binomial(n + k, n - k - 1) * a(k) for n > 0 with a(0)=1. ●

► [A263823] 1,1,3,10,42,213,1283,8989,71925,647346,6473494,71208489,854501957,11108525585,155519358423,2332790376722,37324646028162,634518982479741,11421341684636935,217005492008104349,4340109840162091161,91142306643403921146,2005130746154886276158 ★ a(n) = n! * Sum _{ k=0..n } Fibonacci(k - 1) / k!, where Fibonacci(- 1) = 1, Fibonacci(n) = A000045(n) for n>=0. ● a(n) = (Gamma(n + 1, 1 - phi) * exp(1 - phi) * phi + Gamma(n + 1, phi) * exp(phi) / phi) / sqrt(5), where Gamma(a, x) is the upper incomplete Gamma function, phi=(1 + sqrt(5)) / 2. ● a(n) = (phi ^ (n - 1) * hypergeom([1, - n], [], 1 - phi] - (- phi) ^ (1 - n) * hypergeom([1, - n], [], phi)) / sqrt(5). ●

► [A082936] 1,1,3,10,43,201,1038,5538,30667,173593,1001603,5864750,34769374,208267320,1258579654,7663720710,46976034379,289628805623,1794932468571,11175157356522,69864075597643,438403736549145,2760351032959050,17433869214973754,110420300879752990 ★ a(n) = (1 / (3 * n)) * Sum _{ d|n, d even } phi(2 * n / d) * binomial(3d / 2,d). ● a(n) = sum(d divides n, phi(n / d) * C(3 * d,d)) / (3 * n) for n>=1, a(0)=1. ● a(n) = sum(d divides n, phi(n / d) * C(3 * d - 1,d)) / (2 * n) for n>=1, a(0)=1. ●

► [A132428] 1,1,3,10,43,216,1241,7988,56763,440254,3693728,33281359,320112326,3270177860,35329070470,402128329243,4806784533967,60166803598106,786622663286330,10717555856584617,151864784070048105 ★ Central terms of triangle A132427. ● a(n)=sum(k=1..n, sum(i=k..n, binomial(i - 1,k - 1) * binomial(i,n - i)) * a(k - 1)), n>0,a(0)=1. [_ Vladimir Kruchinin _ , May 02 2012] ●

► [A157313] 1,1,3,10,43,216,1326,9283,74667,672085,6730098,74031079,888657130,11552542691,161747905609,2426218982400,38820193151115,659943283568956,11879029341157575,225701557481993926,4514035666639844778,94794749015757064732,2085484976583065409751 ★ G.f.: exp(Sum _{ n>=1 } a(n) * x ^ n / n) = Product _{ n>=1 } 1 / (1 - a(n - 1) * x ^ n). ● a(n) = Sum _{ d divides n, 1<=d<=n } d * a(d - 1) ^ (n / d) for n>0 with a(0)=1. ●

► [A248687] 1,3,10,43,221,1371,9696,78751,712447,7173853,79106413,952587175,12397677007,173864946685,2609479384942,41786786069887,710577455524223,12795789975272877,243154034699436147,4864103085730989101,102153340062463300261,2247608818115460466681 ★ Sum of the numbers in row n of the triangular array at A248686. ● a(n) = sum { n! / (n(1)! * n(2)! * ... * n(k)!), k = 1..n, where n(i) = floor((n + i - 1) / k) for i = 1..k. ●

► [A001040] 0,1,1,3,10,43,225,1393,9976,81201,740785,7489051,83120346,1004933203,13147251985,185066460993,2789144166880,44811373131073,764582487395121,13807296146243251,263103209266016890,5275871481466581051,1110564043200064218961,24485167665228793981 93 ★ a(n + 1) = n * a(n) + a(n - 1) with a(0)=0, a(1)=1. ● a(- n) = a(n) for all n in Z. - _ Michael Somos _ , Sep 25 2005 ● a(n) = 2 * (BesselI(0,2) * BesselK(n,2) - BesselI(n, - 2) * BesselK(0,2)). - _ Vaclav Kotesovec _ , Jan 05 2013 ● a(n) = (n - 1)! * hypergeometric([1 - n / 2, 1 / 2 - n / 2],[1,1 - n,1 - n], 4) for n >= 2. - _ Peter Luschny _ , Sep 10 2014 ●

► [A041737] 1,1,3,10,43,526,569,5078,5647,72842,297015,963887,2224789,3188676,123394477,126583153,376560783,1256265502,5401622791,66075738994,71477361785,637894633274,709371995059,9150358573982,37310806290987 ⋆ Denominators of continued fraction convergents to sqrt(388). ● a(n) = 125619266 * a(n - 14) - a(n - 28) for n>27. - _ Vincenzo Librandi _ , Dec 23 2013 ●

► [A113059] 1,1,3,10,44,231,1427,10151,81923,740732,7425042,81773715,9818648971276787641,178774288331,2681781213130,42909715480460,72947442723958713130613291110603,249482261007109579,4989650444408388515,1047827058324681972520,2305219956684224457858 ⋆ a(n) = n! * Sum _{ k=0..n } A000296(k) / k!, n=0,1,... . ● a(n) = (- 1) ^ n * n! * Sum _{ k >=0 } LaguerreL(n, - n - 1, k - 1) / k! / exp(1), n>=0. ●

► [A240172] 1,1,3,10,44,234,1470,10656,87624,806280,8211000,91707120,1114793280,14653936080,207138844080,3133376225280,50508380361600,864341342363520,1565052218630208 0,2989486576810944 00,6007868689030387200,12671941050028268800,27990044854441750080 00,64613640777996615782400 ⋆ O.g.f.: Sum _{ n>=0 } n! * x ^ n * (1 + x) ^ n. ● a(n) = Sum _{ k=0..[n / 2] } binomial(n - k, k) * (n - k)!. ●

► [A096752] 1,1,3,10,45,216,1197,7134,46209,319555,2350183,18254380,149117618,1275857233,11396595255 ⋆ Number of n - dimensional partitions of n. ● a(n) = n - th row sums of A096651 ^ n, with a(0)=1. ●

► [A293554] 1,1,3,10,45,216,1232,7624,52215,385495,3056680,25825669,231503636,2191866327,21835650219,228089127908,2490775088645,28362322146780,336015253520857,4133561828779865,52705520063966840,695406327616587268,9480212057583970983 ⋆ a(n) = [x ^ n] exp(Sum _{ k>=1 } x ^ k / (k * (1 - x ^ k) ^ n)). ● a(n) = [x ^ n] Product _{ k>=1 } 1 / (1 - x ^ k) ^ binomial(n + k - 2,n - 1). ●

► [A134018] 0,1,3,10,45,226,1113,5230,23565,102826,438273,1836550,7601685,31183426,127084233,515429470,2083077405,8396552026,33779262993,135696871990,544528258725,2183337968626,8749031918553,35043178292110,140313885993645 ⋆ Let P(A) be the power set of an n - element set A. Then a(n) = the number of pairs of elements { x,y } of P(A) for which either 0) x and y are disjoint and for which either x is a subset of y or y is a subset of x, or 1) x and y are intersecting but for which x is not a subset of y and y is not a subset of x. ● a(n) = (1 / 2)(4 ^ n - 3 ^ (n + 1) + 5 * 2 ^ n - 3) = 3 * StirlingS2(n + 1,4) + StirlingS2(n + 1,2). ●

► [A184947] 1,1,3,10,45,241,1525,11096,91441,842185,8577871,95768454,1163339221,15278140593,215739927481,3259925357716,52489756856993,897249441166993,16228613753092315,309660835748163394,6216734677256575581,130994769191324727697 ⋆ Expansion of e.g.f. exp(x) * (1 - x) ^ (- x). ● a(n) = sum(k=0..n, C(n,k) * sum(j=0..k, C(k,j) * abs(Stirling1(n - k,j)) * j!)). ●

► [A099237] 1,1,3,10,45,251,1624,11908,97545,880660,8664546,92096731,1050304775,12778138842,165033693175,2253204163256,32401745953105,489207829112931,7733130368443057,127664099576228184,2196149923000824756 ⋆ a(n) = Sum _{ k=0..n } binomial(n * (n - k), k). ● a(n) ^ (1 / n) ~ n ^ (n / w) * (n + 1 - w) ^ (1 - (n + 1) / w) * (w - 1) ^ (1 / w - 1), where w = LambertW(exp(1) * n), ● a(n) ^ (1 / n) ~ n / log(n), but the convergence is too slow. (End) ●

► [A356572] 0,1,3,10,45,307,2718,26371,265359,2778976,30916863,372113623,4873075056,68908186765,1037694932823,16438615126282,271972422548361,4687666317874495,84181305836224422,1576083180118379527,30757003280682603699,624671260245315540568 ⋆ Expansion of e.g.f. sinh((exp(3 * x) - 1) / 3). ● a(n) = Sum _{ k=0..floor((n - 1) / 2) } 3 ^ (n - 1 - 2 * k) * Stirling2(n,2 * k + 1). ●

► [A121138] 1,1,3,10,46,192,840,3584,15392,65536,278656,1179648,4981248,20971520,88082432,369098752,1543512064,6442450944,26843578368,111669149696,463856599040,1924145348608,7971459825664,32985348833280,136339443941376 ⋆ Numbers of isomers of unbranched a - 4 - catapolyheptagons - see Brunvoll reference for precise definition. ● a(n) = 4 ^ (n - 4) * (n + 6) for n>3 and even. ● a(n) = 2 ^ (n - 8) * (2 ^ n * (n + 6) + 16) for n>3 and odd. ● a(n) = 8 * a(n - 1) - 12 * a(n - 2) - 32 * a(n - 3) + 64 * a(n - 4) for n>7. ●

► [A074508] 3,10,46,244,1378,8020,47386,282124,1686178,10097380,60525226,362974204,2177313778,13062288340,78368947066,470199333484,2821152954178,16926788584900,101560344088906,609360902271964 ⋆ a(n) = 1 ^ n + 3 ^ n + 6 ^ n. ● a(n) = 9 * a(n - 1) - 18 * a(n - 2) + 10, n>1. [_ Gary Detlefs _ , Jun 21 2010] ●

► [A005651] 1,1,3,10,47,246,1602,11481,95503,871030,8879558,98329551,1191578522,15543026747,218668538441,3285749117475,52700813279423,896697825211142,16160442591627990,307183340680888755,6147451460222703502,129125045333789172825,2841626597871149750951 ⋆ Sum of multinomial coefficients (n _ 1 + n _ 2 + ...)! / (n _ 1! * n _ 2! * ...) where (n _ 1, n _ 2, ...) runs over all integer partitions of n. ● a(n) = Sum _{ k=1..n } (n - 1)! / (n - k)! * b(k) * a(n - k), where b(k) = Sum _{ d divides k } d * d! ^ (- k / d). - _ Vladeta Jovovic _ , Oct 14 2002 ● a(n) = S(n,1), where S(n,m) = sum(k=m..n / 2 , binomial(n, k) * S(n - k,k)) + 1, S(n,n)=1, S(n,m)=0 for n<m. - _ Vladimir Kruchinin _ , Sep 06 2014 ●

► [A346055] 1,1,3,10,47,246,1617,11586,97463,891610,9189623,102024396,1250714445,16351489116,232261545869,3499469551402,56582677946675,964734301550142,17509882651329087,333381717125596692,6710286637806825557,141167551783524139468 ⋆ Expansion of e.g.f. Product _{ k>=1 } B(x ^ k / k) where B(x) = exp(exp(x) - 1) = e.g.f. of Bell numbers. ● a(n) = (n - 1)! * Sum _{ k=1..n } k * (Sum _{ d|k } 1 / (d! * (k / d) ^ d)) * a(n - k) / (n - k)! for n > 0. ●

► [A220362] 0,3,10,48,195,840,3536,15015,63546,269280,1140535,4831632,20466720,86699067,367262090,1555748880,6590255259,27916773720,118257343984,500946159615,2122041966330,8989114051008,38078498128175,161303106631968,683290924545600 ⋆ a(n) = Fibonacci(n - 1) * Fibonacci(n) * Fibonacci(n + 2). ● a(n) = 3 * a(n - 1) + 6 * a(n - 2) - 3 * a(n - 3) - a(n - 4); g.f.: (3x + x ^ 2) / (1 - 3x - 6x ^ 2 + 3x ^ 2 + x ^ 4) = x(3 + x) / ((x ^ 2 - x - 1)(x ^ 2 + 4x - 1)). [_ Ron Knott _ , Jun 27 2013] ● a(n) = 2 * (- 1) ^ n * Lucas(n - 3) / 25 + 3 * (- 1) ^ n * Lucas(n + 1) / 25 + Fibonacci(3 * n + 1) / 5 = (1 / 5) * (- (- 1) ^ n * Fibonacci(n - 1) + 3 * (- 1) ^ n * Fibonacci(n) + Fibonacci(3 * n + 1)). - _ Ehren Metcalfe _ , Mar 26 2016 ●

► [A367754] 1,1,3,10,49,276,1921,14533,127905,1214524,12923641,146976501,1828895113,24160939960,343798990809,5162735472196,82578544952641,1387325644153368,24621686929968625,457066782857330929,8906813110169504841,180902690843146001416 ⋆ E.g.f. satisfies A(x) = exp(x * (1 + x) * A(x ^ 2 / 2)). ● a(0) = 1; a(n) = (n - 1)! * Sum _{ k=0..n - 1 } (k + 1) * a(floor(k / 2)) * a(n - 1 - k) / (2 ^ floor(k / 2) * floor(k / 2)! * (n - 1 - k)!). ●

► [A276028] 1,3,10,50,259,1540,9594,62649,422598,2960716,21030711,152470357,1129502128,8434189996,63674017174,488573782216,3762932025753,29178861276815,229208503750838,1803350026315019,14248236439629534,113825380196996557,909507867095014380 ⋆ Number of ways to transform a sequence of n zeros and n ones to a single number by continually removing two numbers and replacing them with their sum modulo 3. ● a(n) = f(n, n, 0) where f(a, b, c) is the number of ways to reach one number beginning with a zeros, b ones, and c twos. ●

► [A192482] 1,3,10,51,286,1710,10740,69763,464822,3159450,21821516,152708078,1080452972,7716009724,55545950568,402649640163,2936600795174,21532660592418,158645924209500,1173875395710458,8719519396134596,64995349923442628,486020221692290392 ⋆ a(n) = 2 ^ n * C(n - 1) - y(n), where y(n) = Sum _{ i =1..n - 1 } (2 ^ i * C(i - 1) - y(i)) * (2 ^ (n - i) * C(n - i - 1) - y(n - i)), y(0)=0, y(1)=1 and where C(i) is the i - th Catalan number. ● a(n) = 2 ^ n * C(n - 1) - y(n), where y(n) = Sum _{ i=1..n - 1 } (2 ^ i * C(i - 1) - y(i)) * (2 ^ (n - i) * C(n - i - 1) - y(n - i)), y(0)=0, y(1)=1 and C(i) is the i - th Catalan number. ●

► [A309910] 1,3,10,53,266,2093,14512,134705,1317724,14339429,156052942,2243410945,28893239818,421448538895,6810085942104,117497037128065,1980909279322608,38790292385240321,730946685781179418,15916872348230275385,346942995035062132634,7767365425379382284307 ⋆ a(n) = Sum _{ k=1..n } (- 1) ^ (n - k) * Stirling1(n,k) * floor(n / k). ● a(n) = [x ^ n] (1 / (1 - x)) * Sum _{ k=1..n } (- 1) ^ (n - k) * Stirling1(n,k) * x ^ k / (1 - x ^ k). ● a(n) = Sum _{ k=1..n } Sum _{ d|k } (- 1) ^ (n - d) * Stirling1(n,d). ●

► [A189815] 1,1,3,10,53,304,2303,18768,185033,1954176,23756667,308077056,4457821821,68513332224,1150764459063,20443736745984,391167511473681,7884821722497024,169370797497060339,3818539009013907456,91013260219635394629,2269047587255097753600,59435772666287730632559 ⋆ Expansion of e.g.f. log(1 / (1 - arcsin(x))). ● a(n) = (n - 1)! * Sum _{ m=1..(n - 1) } ((1 + (- 1) ^ (n - m)) / 2) * Sum _{ k=1..(n - m) } (Sum _{ j=1..k } binomial(k,j) * 2 ^ (1 - j) * Sum _{ i=0..floor(j / 2) } (- 1) ^ ((n - m) / 2 - i - j) * binomial(j,i) * (j - 2 * i) ^ (n - m + j) / (n - m + j)!) * binomial(k + n - 1,n - 1)) + (n - 1)!. ●

► [A074503] 3,10,54,352,2418,16840,117714,823672,5765058,40354120,282476274,1977328792,13841291298,96889018600,678223089234,4747561542712,33232930635138,232630514118280,1628413598172594,11398895185897432 ⋆ a(n) = 1 ^ n + 2 ^ n + 7 ^ n. ● a(n) = 9 * a(n - 1) - 14 * a(n - 2) + 6 with a(0)=3, a(1)=10. - _ Vincenzo Librandi _ , Jul 21 2010 ●

► [A307906] 1,1,3,10,57,301,2251,15583,138209,1153603,11592451,111381348,1235739385,13276480803,159935056555,1884023828326,24356065951617,310189106485419,4266048524240323,58124516559463590,844705360693479801,12213285476055278959,186543178982826381387 ⋆ Coefficient of x ^ n in 1 / (n + 1) * (1 + x + n * x ^ 2) ^ (n + 1). ● a(n) = [x ^ n] (1 - x - sqrt(1 - 2 * x + (1 - 4 * n) * x ^ 2)) / (2 * n * x ^ 2). ●

► [A366696] 1,3,10,57,378,2730,20853,165592,1353297,11307168,96148149,829336122,7238765532,63816716547,567425771478,5082596905629,45820260590481,415423374916503,3785371205061825,34647928319586375,318419608552433190,2937021429784279707 ⋆ G.f. satisfies A(x) = (1 + x) ^ 2 + x * A(x) ^ 3. ● a(n) = Sum _{ k=0..n } binomial(2 * (2 * k + 1),n - k) * binomial(3 * k,k) / (2 * k + 1). ●

► [A018932] 0,3,10,60,408,3120,26640,252000,2620800,29756160,366508800,4869849600,69455232000,1058593536000,17174123366400,295534407168000,5377157001216000,103149354147840000,2080771454361600000 ⋆ The number of permutations of n cards in which 4 will be the next hit after 2. ● a(n) = (n - 2)! - 3 * (n - 3)! + 2 * (n - 4)! if n > 5. - _ R. J. Mathar _ , Oct 02 2008 ●

► [A042705] 1,1,3,10,63,199,461,660,38741,39401,117543,392030,2469723,7801199,18072121,25873320,1518724681,1544598001,4607920683,15368360050,96818080983,305822602999,708463286981,1014285889980,59537044905821 ⋆ Denominators of continued fraction convergents to sqrt(882). ● a(n) = 39202 * a(n - 8) - a(n - 16) for n>15. - _ Vincenzo Librandi _ , Dec 22 2013 ●

► [A367641] 1,3,10,64,504,4368,40208,385728,3813888,38590208,397648384,4158436864,44020882944,470804670464,5079479547904,55217003536384,604200374845440,6649658071007232,73560096496779264,817467602640830464,9121818467786162176 ⋆ G.f. A(x) satisfies A(x) = (1 + x) ^ 2 + x * A(x) ^ 4 / (1 + x) ^ 3. ● a(n) = Sum _{ k=0..n } binomial(3 * k + 2,n - k) * binomial(4 * k,k) / (3 * k + 1). ●

► [A233257] 3,10,104,1184,13952,166400,1992704,23896064,286687232,3439984640,41278767104,495341010944,5944075354112,71328837140480,855945777250304,10271348253261824,123256174744174592,1479074079750225920 ⋆ Number of 2 X n 0..5 arrays with no element x(i,j) adjacent to itself or value 5 - x(i,j) horizontally or antidiagonally, top left element zero, and 1 appearing before 2 3 and 4, and 2 appearing before 3 in row major order (unlabelled 6 - colorings with no clashing color pairs). ● a(n) = 2 ^ (2 * n - 3) * (4 * 3 ^ n + 9) / 9 for n>1. ●

► [A290557] 0,3,10,108,2166,4567,38181,155830,1802916,24862120,266983762,1961835256,5916488742,19757775943,116646786350,116646786350,9611769806236,42844700375837,275475214363044,6789129606004840,75182500718243698,154974767015855699 ⋆ One of the two successive approximations up to 7 ^ n for the 7 - adic integer sqrt(2). These are the numbers congruent to 3 mod 7 (except for the initial 0). ● a(0) = 0 and a(1) = 3, a(n) = a(n - 1) + (a(n - 1) ^ 2 - 2) mod 7 ^ n for n > 1. ● a(n) == 2 * T(7 ^ n, 3 / 2) (mod 7 ^ n) == ((3 + sqrt(5)) / 2) ^ (7 ^ n) + ((3 - sqrt(5)) / 2) ^ (7 ^ n) (mod 7 ^ n), where T(n,x) denotes the n - th Chebyshev polynomial of the first kind. - _ Peter Bala _ , Dec 03 2022 ●

► [A055046] 3,11,12,19,27,35,43,44,48,51,59,67,75,76,83,91,99,107,108,115,123,131,139,140,147 ⋆ Numbers of the form 4 ^ i * (8 * j + 3). ● a(n) = 6n + O(log n). - _ Charles R Greathouse IV _ , Dec 19 2013 ●

► [A305859] 1,3,11,13,15,23,25,27,35,37,39,47,49,51,59,61,63,71,73,75,83,85,87,95,97 ⋆ Numbers that are congruent to { 1, 3, 11 } mod 12. ● a(n) = a(n - 1) +

a(n - 3) - a(n - 4) for n>12. • a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - 2 * a(n - 4) + 2 * a(n - 5) - a(n - 6) for n>6. • a(n) = 2 * n + 6 * floor(n / 3) - 1. - _ Bruno Berselli _ , Jun 13 2018 •

► [A270543] 1,3,11,13,25,27,39,41,57,59,71,73,93,95,107,109,129,131,147,149,169,171,183,185,213 ⋆ Number of ordered pairs (i,j) of integers with |i|, |j| <= n, |i * j| <= n, and i even. • a(n) = 1 + 2 * n + 2 * floor(n / 2) + 4 * Sum _{ k =1..floor(n / 2) } floor(n / (2k)). •

► [A023248] 3,11,13,31,41,43,53,101,113,211,223,263,283,431,433,491,521,563,571,601,631,641,673,743,811 ⋆ Primes that remain prime through 2 iterations of fu nction f(x) = 3x + 8. • a(n) == 1 or 3 (mod 10) for n >= 2. - _ John Cerkan _ , Sep 13 2016 •

► [A186078] 3,11,14,16,17,21,25,26,27,29,32,33,34,35,38,39,42,43,48,49,50,52,56,57,58 ⋆ Index of Fibonacci numbers having last digit greater than corresponding tribonacci number. • a(n) = a(n - 864) + 1860. - _ Charles R Greathouse IV _ , Jul 18 2013 •

► [A143029] 3,11,14,19,27,32,35,43,51,59,67,68,75,76,78,83,86,91,99,107,115,122,123,131,139 ⋆ A sequence of asymptotic density zeta(3) - 1, where zeta is the Rie mann zeta function. • a(n) = 2 * a(n - 1) + 3. [Obviously wrong, _ R. J. Math ar _ , Jul 14 2016] •

► [A022123] 3,11,14,25,39,64,103,167,270,437,707,1144,1851,2995,4846,7841,12687,20528,33215,53743,86958,140701,227659,368360,596019 ⋆ Fibonacci sequence b eginning 3, 11. • a(n) = 8 * Fibonacci(n) + 3 * Fibonacci(n + 1). - _ Lechosla w Ratajczak _ , Mar 14 2020 • a(n) = a(n - 1) + a(n - 2). - _ Wesley Ivan Hur t _ , Jun 17 2021 •

► [A022410] 3,11,15,27,43,71,115,187,303,491,795,1287,2083,3371,5455,8827,14283,23111,37395,60507,97903,158411,256315,414727,671043 ⋆ a(n) = a(n - 1) + a(n - 2) + 1 for n>1, a(0)=3, a(1)=11. • a(n) = 2 ^ (- n) * (- 2 ^ n + 2 * (1 - s qrt(5)) ^ (1 + n) + 2 * (1 + sqrt(5)) ^ (1 + n)). • a(n) = 2 * a(n - 1) - a(n - 3) for n>2. •

► [A035337] 3,11,16,24,32,37,45,50,58,66,71,79,87,92,100,105,113,121,126,134,139,147,155,160,168 ⋆ Third column of Wythoff array. • a(n) = F(4)A(n) + F(3)(n - 1) = 3A(n) + 2n - 2, where A = A000201 and F = A000045. - _ Michel De kking _ , Aug 31 2017 •

► [A322171] 3,11,17,19,23,31,37,39,43,51,57,59,63,71,77,79,83,91,97,99,103,111,117,119,123 ⋆ Expansion of x * (3 + 5 * x + x ^ 2 + x ^ 3) / ((1 - x) ^ 2 * (1 + x ^ 2)). • a(n) = (1 / 2) * (10 * n - (1 + 2 * i) * (- i) ^ n - (1 - 2 * i) * i ^ n), where i is the imaginary unity. • a(n) = 5 * n - 2 * sin(Pi * n / 2) - cos(Pi * n / 2). •

► [A191375] 3,11,17,19,43,59,137,179,347,443,449,467,491,509,569,619,883,907,1051,1229,1601,2753,3203,3467,3491 ⋆ Primes that are the sum of squares of thre e positive Fibonacci numbers. • a(n) > exp(n ^ (1 / 3) * log(phi + 1)) / 5. - _ Charles R Greathouse IV _ , Feb 24 2023 •

► [A113803] 3,11,17,25,31,39,45,53,59,67,73,81,87,95,101,109,115,123,129,137,143,151,157,165,171 ⋆ Numbers that are congruent to { 3, 11 } mod 14. • a(n) = 14 * n - a(n - 1) - 14 (with a(1) = 3). - _ Vincenzo Librandi _ , Nov 13 2010 • a(n) = 7 * n - (7 - (- 1) ^ n) / 2. •

► [A186424] 1,3,11,17,33,43,67,81,113,131,171,193,241,267,323,353,417,451,523,561,641,683,771,817,913 ⋆ Odd terms in A186423. • a(n) = 3 * (1 + 2 * n + 2 * n ^ 2) / 4 + (- 1) ^ n * (1 + 2 * n) / 4. - _ R. J. Mathar _ , Feb 28 2011 •

► [A023865] 1,3,11,17,38,50,90,110,175,205,301,343,476,532,708,780,1005,1095,1375,1485,1826,1958,2366,2522,3003 ⋆ a(n) = 1 * t(n) + 2 * t(n - 1) + ... + k * t (n + 1 - k), where k=floor((n + 1) / 2) and t(n)=2 * n + 1 (odd numbers). • a (n) = (8 * n ^ 3 + 24 * n ^ 2 + 10 * n - 3 - 3 * (2 * n ^ 2 + 2 * n - 1) * (- 1) ^ n) / 48. - _ Luce ETIENNE _ , Nov 21 2014 •

► [A203162] 1,3,11,17,40,132,168,372,1188,1404,3024,9504,10800,22896,71280,79056,165888,513216,559872,1166400,3592512,3872448,8024832,24634368,26313984 ⋆ (n - 1) - st elementary symmetric function of the first n terms of (1,2,3,1,2,3,1,2,3,...). • a(n) = 12 * a(n - 3) - 36 * a(n - 6). - _ Clark Kimberling _ , Aug 18 2012 •

► [A228470] 3,11,18,68,111,419,684,2582,4215,15911,25974,98048,160059,604199,986328,3723242,6078027,22943651,37454490,141385148,230804967,871254539,1422284292,5368912382,8764510719 ⋆ a(n) = 6 * a(n - 2) + a(n - 4), where a(0) = 3, a(1) = 11, a(2) = 18, a(3) = 68. • a(n) = (3 + sqrt(10)) ^ (1 / 4 * ((- 1) ^ n - 1) + 1 / 2 * n) * (7 / 2 + sqrt(10) * (11 / 10 - 13 / 20 * (- 1) ^ n) - 2 * (- 1) ^ n) + (3 - sqrt(10)) ^ (1 / 4 * ((- 1) ^ n - 1) + 1 / 2 * n) * (7 / 2 - sqrt(10) * (11 / 10 - 13 / 20 * (- 1) ^ n) - 2 * (- 1) ^ n). - _ Paolo P. Lava _ , Sep 12 2013 •

► [A246453] 3,11,18,123,843,5778,39603,271443,1860498,12752043,87403803,599074578,4106118243,28143753123,192900153618,1322157322203,9062201101803,62113250390418,425730551631123,2918000611027443,20000273725560978,137083915467899403,939587134549734843 ⋆ Lucas numbers (A000204) of the form n ^ 2 + 2. • a(n) = (2 ^ (- n) * ((7 + 3 * sqrt(5)) ^ n * (- 20 + 9 * sqrt(5)) + (7 - 3 * sqrt(5)) ^ n * (20 + 9 * sqrt(5)))) / sqrt(5) for n>2. • a(n) = 7 * a(n - 1) - a(n - 2) for n>4. (End) •

► [A017101] 3,11,19,27,35,43,51,59,67,75,83,91,99,107,115,123,131,139,147,155,163,171,179,187,195 ⋆ a(n) = 8n + 3. • a(n) = 2 * a(n - 1) - a(n - 2) for n>1. - _ Vincenzo Librandi _ , May 28 2011 •

► [A289840] 0,1,3,11,19,27,35,67,83,99,115,163,179,195,211,275,323,355,387,467,483,499,515,579,627 ⋆ Complex cross sequence (see Comments lines for definition). • a(n) = a(n - 1) + a(n - 8) - a(n - 9) for n>19. •

► [A322595] 3,11,21,35,55,83,121,171,235,315,413,531,671,835,1025,1243,1491,1771,2085,2435,2823,3251,3721,4235,4795 ⋆ a(n) = (n ^ 3 + 9 * n + 14 * n + 9) / 3. • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4), n >= 4. • a(n) = 2 * binomial(n + 1, 3) + 6 * binomial(n + 1, 2) + 2 * binomial(n + 1, 1) + 1. •

► [A317298] 1,3,11,21,37,55,79,105,137,171,211,253,301,351,407,465,529,595,667,741,821,903,991,1081,1177 ⋆ a(n) = (1 / 2) * (1 + (- 1) ^ n + 2 * n + 4 * n ^ 2). • a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4) for n > 3. • a(n) = 1 + 2 * (n ^ 2 + floor(n / 2)). - _ Stefano Spezia _ , Dec 08 2021 •

► [A139593] 0,3,11,22,38,57,81,108,140,175,215,258,306,357,413,472,536,603,675,750,830,913,1001,1092,1188 ⋆ A139276(n) followed by A139272(n + 1). • a(n) = (- 1 + (- 1) ^ n + 6 * n + 8 * n ^ 2) / 4. • a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4). •

► [A121471] 1,3,11,22,39,59,85,114,149,187,231,278,331,387,449,514,585,659,739,822,911,1003,1101,1202,1309 ⋆ a(n) = 9 * n ^ 2 / 4 - 4 * n + 19 / 8 - 3 * (- 1) ^ n / 8. • a(n)= 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4). •

► [A178946] 1,3,11,22,45,73,119,172,249,335,451,578,741,917,1135,1368,1649,1947,2299,2670,3101,3553,4071,4612,5225 ⋆ a(n) = n * (n + 1) * (2 * n + 1) / 6 - n * floor(n / 2). • a(n) = + 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + a(n - 4) + 2 * a(n - 5) - a(n - 6). G.f.: x * (1 + x + 4 * x ^ 2 + x ^ 4 + x ^ 3) / ((1 + x) ^ 2 * (x - 1) ^ 4). - _ R. J. Mathar _ , Jan 03 2011 •

► [A132209] 0,3,11,23,39,59,83,111,143,179,219,263,311,363,419,479,543,611,683,759,839,923,1011,1103,1199 ⋆ a(0) = 0 and a(n) = 2 * n ^ 2 + 2 * n - 1, for n >=1. • a(n) = 2 * n ^ 2 + 2 * n - 1 for n>=1. •

► [A142463] 1,3,11,23,39,59,83,111,143,179,219,263,311,363,419,479,543,611,683,759,839,923,1011,1103,1199 ⋆ a(n) = 2 * n ^ 2 + 2 * n - 1. • a(n) = a(n - 1) + 4 * n. • a(n) = 4 * C(n + 1,2) - 1. (End) • a(n) = 3 * (Sum _{ k=1..n } k ^ 5) / (Sum _{ k=1..n } k ^ 3), n>0. - _ Gary Detlefs _ , Oct 18 2011 • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Wesley Ivan Hurt _ , Dec 03 2021 •

► [A121509] 1,3,11,23,41,63,91,123,161,203,251,303,361,423,491,563,641,723,811,903,1001,1103,1211,1323,1441 ⋆ a(n) = 5 * n ^ 2 / 2 - 5 * n + 13 / 4 - (- 1) ^ n / 4. • a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4). • a(n) = 1 + 2 * (n - 1) ^ 2 + floor((n - 1) ^ 2 / 2). - _ Wesley Ivan Hurt _ , Jun 14 2013 •

► [A173078] 1,3,11,23,51,103,211,423,851,1703,3411,6823,13651,27303,54611,109223,218451,436903,873811,1747623,3495251,6990503,13981011,27962023,55924051 ⋆ a(n) = (5 * 2 ^ n - 2 * (- 1) ^ n - 9) / 3. • a(n) = 2 * a(n - 1) + a(n - 2) - 2 * a(n - 3). •

► [A120088] 3,11,23,179,365,1439,2911,46147,93009,369605,743409,5917879,11887761,47365319,95064943,3032383331,6082445497,24264959593,48649328861,388310999293,778263028691,3106935548009,6225306416473 ⋆ Numerators of partial sums of a series for sqrt(2). • a(n) = numerator(r(n)), with the rationals define d above. •

► [A005475] 0,3,11,24,42,65,93,126,164,207,255,308,366,429,497,570,648,731,819,912,1010,1113,1221,1334,1452 ⋆ a(n) = n * (5 * n + 1) / 2. • a(n) = a(n - 1) + 5 * n - 2 for n>0, a(0)=0. - _ Vincenzo Librandi _ , Nov 18 2010 •

► [A293404] 0,3,11,24,42,66,95,129,168,213,262,317,377,443,514,590,671,757,849,946,1048,1155,1268,1385,1508 ⋆ Least integer k such that k / n ^ 2 > (3 + sqr t(5)) / 2 (the golden ratio). • a(n) = ceiling(r * n ^ 2), where r = (3 + sqrt(5)) / 2. •

► [A293414] 0,3,11,24,43,68,98,133,174,220,272,329,391,459,533,612,696,786,881,981,1087,1199,1316,1438,1566 ⋆ The integer k that minimizes |k / n ^ 2 - e|. • a(n) = floor(1 / 2 + (n ^ 2) * e). •

► [A212252] 0,0,0,3,11,24,45,76,117,171,240,324,426,548,690,855,1045,1260,1503,1776,2079,2415,2786,3192,3636 ⋆ Number of (w,x,y,z) with all terms in { 1,..., n } and 3w=x + y + z + n + 2. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + 2 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) - a(n - 6). • a(n)=2 / 9 - n / 2 - n ^ 2 / 3 + 5 * n ^ 3 / 18 - 2 / 9 * cos(2 * n * Pi / 3) + 4 * sin(2 * n * Pi / 3) / (9 * sqrt(3)). •

► [A295622] 3,11,24,46,75,117,168,236,315,415,528,666,819,1001,1200,1432,1683,1971,2280,2630,3003,3421,3864,4356,4875 ⋆ Number of nonequivalent dissectio ns of an n - gon into 3 polygons by nonintersecting diagonals rooted at a cell up to rotation. • a(n) = (n - 4) * (- 5 + (- 1) ^ n - 4 * n + 2 * n ^ 2) / 8 for n>4 . • a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + a(n - 4) + 2 * a(n - 5) - a(n - 6) for n>10. • a(n) = Sum _{ k=0..n - 5 } f(k), where f(n) = Sum _{ k=0..n } 3 + lcm(k, 2)) (conjecture). - _ Jon Maiga _ , Nov 28 2018 •

► [A293413] 0,3,11,25,44,68,98,134,174,221,272,329,392,460,533,612,696,786,881,982,1088,1199,1316,1438,1566 ⋆ Least integer k such that k / n ^ 2 > e. • a(n) = ceiling(e * n ^ 2). •

► [A056106] 1,3,11,25,45,71,103,141,185,235,291,353,421,495,575,661,753,851,955,1065,1181,1303,1431,1565,1705 ⋆ Second spoke of a hexagonal spiral. • a(n) = 3 * n ^ 2 - n + 1. • a(n) = a(n - 1) + 6 * n - 4 = 2 * a(n - 1) - a(n - 2) + 6. • a (n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). •

► [A320035] 0,3,11,25,46,77,117,169,232,308,401,508,631,771,929,1108,1308,1527,1767,2029,2315,2626,2961,3325,3719 ⋆ Indices (starting at 0) of integers in the increasing sequence S of nonnegative numbers that are representable in base 3 / 2 with digits { 0, H=1 / 2, 1 } . • a(n) = number of positive numbers less th an n that are representable in base 3 / 2 with digits { 0, H=1 / 2, 1 } . - _ Ma x Alekseyev _ , Oct 12 2018 •

► [A212971] 0,0,3,11,25,48,82,128,189,267,363,480,620,784,975,1195,1445,1728,2046,2400,2793,3227,3703,4224,4792 ⋆ Number of (w,x,y) with all terms in { 0,..., n } and w<floor((x + y) / 3)). • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + 2 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) - a(n - 6). •

► [A258440] 3,11,25,49,84,132,196,278,379,503,651,825,1028,1262,1528,1830,2169,2547,2967,3431,3940,4498,5106,5766,6481 ⋆ Number of squares of all sizes in 3 * n * (n + 1) / 2 - ominoes in form of three - quarters of Aztec diamonds. • a(n) = (1 / 8) * (Sum _{ i=0..(n - 1 - floor(n / 3) } (4 * n + 1 - 6 * i - (- 1) ^ i) * (4 * n + 3 - 6 * i + (- 1) ^ i) - Sum _{ j=0..(2 * n - 1 + (- 1) ^ n) } (2 * n + 1 + (- 1) ^ n - 4 * j) * (2 * n + 1 - (- 1) ^ n - 4 * j)). • a(n) = (52 * n ^ 3 + 186 * n ^ 2 + 212 * n - 3 * (32 * floor(n / 3) + 3 * (1 - (- 1) ^ n))) / 144. • a(n) = 2 * a(n - 1) - a(n - 3) - a(n - 4) + 2 * a(n - 6) - a(n - 7) for n>7. - _ Colin Ba rker _ , Jun 01 2015 •

► [A184634] 1,3,11,25,50,86,137,204,291,400,532,691,878,1097,1350,1638,1965,2332,2743,3200,3704,4259,4866,5529,6250 ⋆ a(n) = floor(1 /{ (10 + n ^ 4) ^ (1 / 4) }), where {} =fractional part. • a(n)=floor(1 /{ (10 + n ^ 4) ^ (1 / 4) }), where {} =fractional part. • a(5 * k + 1) = 50 * k ^ 3 + 30 * k ^ 2 + 6 * k for k >= 1, • a(5 * k + 2) = 50 * k ^ 3 + 60 * k ^ 2 + 24 * k + 3, • a(5 * k + 3) = 50 * k ^ 3 + 90 * k ^ 2 + 54 * k + 10 for k >= 1, • a(5 * k + 4) = 50 * k ^ 3 + 120 * k ^ 2 + 96 * k + 25. •

► [A164303] 3,11,25,61,147,355,857,2069,4995,12059,29113,70285,169683,409651,988985,2387621,5764227,13916075,33596377,81108829,195814035,472736899,1141287833,2755312565,6651912963 ⋆ a(n) = 2 * a(n - 1) + a(n - 2) for n > 1; a(0) = 3, a(1) = 11. • a(n) = 2 * a(n - 1) + a(n - 2) for n > 1; a(0) = 3, a(1) = 11

. ● a(n) = ((3 + 4 * sqrt(2)) * (1 + sqrt(2)) ^ n + (3 - 4 * sqrt(2)) * (1 - sqrt(2)) ^ n) / 2. ●

▶ [A025529] 1,3,11,25,137,147,1089,2283,7129,7381,83711,86021,1145993,1171733,1195757,2436559,42142223,42822903,825887397,837527025,848612385,859193865,19994251455,20217344325,102157567401 ⋆ a(n) = (1 / 1 + 1 / 2 + ... + 1 / n) * lcm { 1,2,...,n } . ● a(n) = Sum _{ k=1..n } lcm(1,2,...,n) / k. - _ Thomas Ordowski _ , Aug 07 2019 ●

▶ [A051925] 0,0,3,11,26,50,85,133,196,276,375,495,638,806,1001,1225,1480,1768,2091,2451,2850,3290,3773,4301,4876 ⋆ a(n) = n * (2 * n + 5) * (n - 1) / 6. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Vincenzo Librandi _ , Apr 27 2012 ●

▶ [A011942] 0,0,0,0,0,3,11,26,52,94,157,247,371,536,750,1023,1365,1785,2295,2907,3633,4488,5486,6641,7969 ⋆ [n(n - 1)(n - 2)(n - 3) / 32]. ● a(n) = + 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 6 * a(n - 4) + 6 * a(n - 5) - 10 * a(n - 6) + 10 * a(n - 7) - 6 * a(n - 8) + 6 * a(n - 9) - 10 * a(n - 10) + 10 * a(n - 11) - 6 * a(n - 12) + 6 * a(n - 13) - 10 * a(n - 14) + 10 * a(n - 15) - 5 * a(n - 16) + a(n - 17). G.f.: x ^ 5 * (x ^ 2 - x + 1) * (3 * x ^ 8 - x ^ 7 - 3 * x ^ 6 + 5 * x ^ 4 - 3 * x ^ 2 - x + 3) / ((1 - x) ^ 5 * (x ^ 4 + 1) * (x ^ 8 + 1)). [From _ R. J. Mathar _ , Apr 15 2010] ●

▶ [A220147] 3,11,26,52,95,163,266,416,627,915,1298,1796,2431,3227,4210,5408,6851,8571,10602,12980,15743,18931,22586,26752,31475 ⋆ Number of n X 2 arrays of the minimum value of corresponding elements and their horizontal or diagonal neighbors in a random, but sorted with lexicographically nondecreasing rows and nonincreasing columns, 0..2 n X 2 array. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

▶ [A290513] 3,11,26,79,224,640,1828,5225,14928,42654,121873,348232,995003,2843014,8123337,23210809,66320216,189496620,541448364,1547079580,4420468031,12630596045,36089381477,103118131368,294639269914 ⋆ Number of irredundant sets in the n - ladder graph. ● a(n) = 2 * a(n - 1) + a(n - 2) + 3 * a(n - 3) + 5 * a(n - 4) - 2 * a(n - 5) - 6 * a(n - 6) - 5 * a(n - 7) - 4 * a(n - 8) - 4 * a(n - 9) - 3 * a(n - 10) - 2 * a(n - 11) - 2 * a(n - 12). ●

▶ [A164897] 3,11,27,51,83,123,171,227,291,363,443,531,627,731,843,963,1091,1227,1371,1523,1683,1851,2027,2211,2403 ⋆ a(n) = 4 * n * (n + 1) + 3. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3), n>2. ●

▶ [A212982] 0,3,11,27,53,92,146,218,310,425,565,733,931,1162,1428,1732,2076,2463,2895,3375,3905,4488,5126,5822,6578 ⋆ Number of (w,x,y) with all terms in { 0,...,n } and w<x + y and x<=y. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - 2 * a(n - 3) + 3 * a(n - 4) - a(n - 5). ● a(n) = (20 * n ^ 3 + 66 * n ^ 2 + 52 * n - 3 * (- 1) ^ n + 3) / 48. ● a(n) = (10 * n ^ 3 + 33 * n ^ 2 + 26 * n) / 24 for n even. ● a(n) = (10 * n ^ 3 + 33 * n ^ 2 + 26 * n + 3) / 24 for n odd. ●

▶ [A164845] 3,11,27,54,95,153,231,332,459,615,803,1026,1287,1589,1935,2328,2771,3267,3819,4430,5103,5841,6647,7524,8475 ⋆ a(n) = (6 + 10 * n + 5 * n ^ 2 + n ^ 3) / 2. ● a(n) = 2 * a(n - 1) - a(n - 2) + 3 * n + 5, n>1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + 3, n>2. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4), n>3. ●

▶ [A219621] 3,11,27,56,105,183,301,472,711,1035,1463,2016,2717,3591,4665,5968,7531,9387,11571,14120,17073,20471,24357,28776,33775 ⋆ Number of n X 2 arrays of the minimum value of corresponding elements and their horizontal or antidiagonal neighbors in a random, but sorted with lexicographically nondecreasing rows and columns, 0..2 n X 2 array. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

▶ [A033960] 3,11,27,56,106,190,329,557,929,1534,2516,4108,6687,10863,17623,28564,46270,74922,121285,196305,317693,514106,831912,1346136,2178171 ⋆ Convolution of natural numbers n >= 1 with Fibonacci numbers F(k), k >= 4. ● a(n) = Fibonacci(n + 8) - (18 + 5 * n). ●

▶ [A250271] 3,11,27,79,255,843,2763,8903,28215,88195,272739,836607,2550735,7742267,23423355,70695991,213005415,640982259,1927141011,5790335855,17389881855,52209491371,156712360107,470313240999,1411308821655 ⋆ Number of length n + 1 0..2 arrays with the sum of the squares of adjacent differences multiplied by some arrangement of +- 1 equal to zero. ● a(n) = 5 * 3 ^ (n - 1) - (2 ^ n - 2) * n for n>1. ●

▶ [A289842] 1,3,11,27,83,195,515,1155,2899,6387,15219,32883,76275,163059,368883,780531,1738259,3653715,8022355,16759635,36428371,75765843,163217491,338120787,723384915 ⋆ Sum of products of terms in all partitions of 2 * n into powers of 2. ● a(n) = [x ^ (2 * n)] Product _{ k>=0 } 1 / (1 - 2 ^ k * x ^ (2 ^ k)). - _ Ilya Gutkovskiy _ , Sep 10 2018 ●

▶ [A036571] 0,1,3,11,27,91,347,859,2907,11099,43867,109403,371547,1420123,5614427,22391643,55946075,190163803,727034715,2874518363,11464452955,45824191323,114543668059,389421575003 ⋆ Binary packing of Connell sequence (shifted once right). ● a(0)=0, a(n) = a(n - 1) + 2 ^ ((2 * n - floor((1 / 2) * (1 + sqrt(8 * n - 7)))) - 1). ●

▶ [A182260] 0,3,11,28,56,99,159,240,344,475,635,828,1056,1323,1631,1984,2384,2835,3339,3900,4520,5203,5951,6768,7656 ⋆ Number of ordered triples (w,x,y) with all terms in { 1,...,n } and 2w<x + y. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - 2 * a(n - 3) + 3 * a(n - 4) - a(n - 5). ● a(n) = (- 1 + (- 1) ^ n - 2 * n ^ 2 + 4 * n ^ 3) / 8. G.f.: x ^ 2 * (3 + 2 * x + x ^ 2) / ((1 - x) ^ 4 * (1 + x)). [_ Colin Barker _ , May 06 2012] ●

▶ [A272000] 3,11,29,47,79,111,161,211,283,355,453,551,679,807,969,1131,1331,1531,1773,2015,2303,2591,2929,3267,3659 ⋆ Coinage sequence: a(n) = A018227(n) - 7. ● a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + a(n - 4) + 2 * a(n - 5) - a(n - 6) for n>6. ● a(n) = (n ^ 3 + 9 * n ^ 2 + 26 * n - 30) / 6 for n even. ● a(n) = (n ^ 3 + 9 * n ^ 2 + 29 * n - 21) / 6 for n odd. (End) ●

▶ [A259594] 1,3,11,29,109,287,1079,2841,10681,28123,105731,278389,1046629,2755767,10360559,27279281,102558961,270037043,1015229051,2673091149,10049731549,26460874447,99482086439,261935653321,984771132841 ⋆ Denominators of the other - side convergents to sqrt(6). ● a(n) = 10 * a(n - 2) - a(n - 4) for n>3. - _ Colin Barker _ , Jul 21 2015 ●

▶ [A295144] 1,3,11,30,77,191,467,1134,2745,6636,16030,38710,93465,225656,544794,1315262,3175337,7665956,18507270,44680518,107868329,260417200,628702754 ⋆ Solution of the complementary equation a(n) = 2 * a(n - 1) + a(n - 2) + b(n - 1), where a(0) = 1, a(1) = 3, b(0) = 2, b(1) = 4, and (a(n)) and (b(n)) are increasing complementary sequences. ● a(n + 1) / a(n) - > 1 + sqrt(2). ●

▶ [A167375] 1,3,11,30,79,207,542,1419,3715,9726,25463,66663,174526,456915,1196219,3131742,8199007,21465279,56196830,147125211,385178803,1008411198,2640054791,6911753175,18095204734 ⋆ a(n)=3 * a(n - 1) - a(n - 2) with a(0)=1, a(1)=3, a(2)=11. ● a(n) = 3 * L(2n + 1) - F(2n), where F(n) is the n - th Fibonacci number and L(n) is the n - th Lucas number. - _ Rigoberto Florez _ , Dec 24 2018 ●

▶ [A071568] 1,3,11,31,69,131,223,351,521,739,1011,1343,1741,2211,2759,3391,4113,4931,5851,6879,8021,9283,10671,12191,13849 ⋆ Smallest k>n such that n ^ 3 + 1 divides k * n ^ 2 + 1. ● a(n) = n ^ 3 + n + 1. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Wesley Ivan Hurt _ , May 04 2021 ●

▶ [A097081] 1,1,1,1,3,11,31,71,145,289,601,1321,2979,6683,14743,32111,69697,151777,332113,728689,1598883,3503627,7668079,16774775,36704017 ⋆ a(n) = Sum _{ k=0..n } C(n,4k) * 2 ^ k. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n,4 * k) * 2 ^ k; ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) + a(n - 4). ●

▶ [A093406] 1,3,11,31,71,145,289,601,1321,2979,6683,14743,32111,69697,151777,332113,728689,1598883,3503627,7668079,16774775,36704017,80343361,175916521,385196761 ⋆ a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) + a(n - 4). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) + a(n - 4). G.f.: - x * (x ^ 3 + 5 * x ^ 2 - x + 1) / (x ^ 4 + 4 * x ^ 3 - 6 * x ^ 2 + 4 * x - 1). [_ Colin Barker _ , Oct 21 2012] ●

▶ [A107587] 1,1,1,1,3,11,31,71,155,379,1051,2971,8053,21165,56057,152881,425491,1186227,3287971,9102787,25346457,71111377,200425149,565676629,1597672277 ⋆ Number of Motzkin n - paths with an even number of up steps. ● a(n) = hypergeom([1 / 4 - n / 4, 1 / 2 - n / 4, 3 / 4 - n / 4, - n / 4], [1 / 2, 1, 3 / 2], 16). - _ Vaclav Kotesovec _ , Feb 07 2021 ●

▶ [A190590] 1,1,1,1,3,11,31,71,157,397,1141,3301,9087,24311,66067,185771,532121,1520889,4316233,12255913,35079739,101232419,293236615,849895311,2465119669 ⋆ Expansion of series reversion of x / (1 + x + 2 * x ^ 4). ● a(n) = Sum _{ j=floor((3 * n + 1) / 4)..n } binomial(j, - 3 * n + 4 * j - 1) * 2 ^ (n - j) * binomial(n,j)) / n. ●

▶ [A087323] 0,3,11,31,79,191,447,1023,2303,5119,11263,24575,53247,114687,245759,524287,1114111,2359295,4980735,10485759,22020095,46137343,96468991,201326591,419430399 ⋆ a(n) = (n + 1) * 2 ^ n - 1. ● a(n) = (n + 1) * 2 ^ n - 1 = 2 ^ n * n + 2 ^ n - 1. ● a(n) = 5 * a(n - 1) - 8 * a(n - 2) + 4 * a(n - 3). G.f.: x * (3 - 4 * x) / ((1 - x) * (1 - 2 * x) ^ 2). - _ Colin Barker _ , Mar 23 2012 ●

▶ [A054343] 1,3,11,31,84,198,440,904,1766,3266,5802,9906,16384,26284,41104,62752,93831,137589,198309,281249,393148,542154,738480,994320,1324668 ⋆ Number of nonnegative integer 3 X 3 matrices with sum of elements equal to n, under action of dihedral group of the square D _ 4. ● a(n) = 5 * a(n - 1) - 8 * a(n - 2) + 16 * a(n - 4) - 24 * a(n - 5) + 16 * a(n - 6) + 8 * a(n - 7) - 34 * a(n - 8) + 34 * a(n - 9) - 8 * a(n - 10) - 16 * a(n - 11) + 24 * a(n - 12) - 16 * a(n - 13) + 8 * a(n - 15) - 5 * a(n - 16) + a(n - 17) for n>16. - _ Colin Barker _ , Apr 26 2019 ●

▶ [A369442] 1,1,1,3,11,31,84,261,865,2815,9131,30339,102681,349376,1193993,4111947,14263137,49720513,174040102,611770893,2158954383,7645030641,27153898487,96719683491,345414958227 ⋆ Expansion of (1 / x) * Series _ Reversion(x / ((1 + x) * (1 + x ^ 3) ^ 2)). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 3) } binomial(2 * n + 2,k) * binomial(n + 1,n - 3 * k). ●

▶ [A369399] 1,1,1,3,11,31,86,277,937,3095,10275,35091,121662,423286,1481648,5232315,18601843,66436069,238327939,858805613,3106856141,11277393837,41062303214,149948280259,549027748390 ⋆ Expansion of (1 / x) * Series _ Reversion(x / (1 + x) * (1 - x ^ 3) ^ 2). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 3) } binomial(2 * n + k + 1,k) * binomial(n + 1,n - 3 * k). ●

▶ [A108898] 1,1,3,11,31,87,239,655,1791,4895,13375,36543,99839,272767,745215,2035967,5562367,15196671,41518079,113429503,309895167,846649343,2313089023,6319476735,17265131519 ⋆ a(n + 3) = 3 * a(n + 2) - 2 * a(n), a(0) = - 1, a(1) = 1, a(2) = 3. ● a(n) = (- 1 + (- (1 - sqrt(3)) ^ n + (1 + sqrt(3)) ^ n) / sqrt(3)). ● a(n) = 3 * a(n - 1) - 2 * a(n - 3) for n>2. ●

▶ [A119901] 3,11,31,93,281,841,2525,7575,22727,68183,204551,613655,1840965,5522897,16568691,49706071,149118215,447354647,1342063941,4026191825,12078575475,36235726425,108707179277,326121537829,978364613487 ⋆ Difference between two consecutive squares enclosing 3 ^ (2n + 1). ● a(n) = 2 * Floor(3 ^ ((2n + 1) / 2)) + 1. ●

▶ [A144335] 1,3,11,32,76,156,288,491,787,1201,1761,2498,3446,4642,6126,7941,10133,12751,15847,19476,23696,28568,34156,40527,47751 ⋆ Row sums of triangle A144334, binomial transform of [1, 2, 6, 7, 3, 0, 0, 0, ...]. ● a(n) = 1 - (5 / 12) * n + (3 / 8) * n ^ 2 - (1 / 12) * n ^ 3 + (1 / 8) * n ^ 4. - _ R. J. Mathar _ , Sep 18 2008 ●

▶ [A079996] 1,1,1,3,11,33,82,198,516,1389,3690,9642,25143,65867,173092,454578,1192227,3125940,8198836,21509532,56429115,148023671,388279519,1018515853,2671777153 ⋆ Number of permutations satisfying - k<=p(i) - i<=r and p(i) - i not in I, i=1..n, with k=3, r=3, I= { 1 } . ● a(n) = a(n - 1) + 2 * a(n - 2) + 3 * a(n - 3) + 4 * a(n - 4) + 9 * a(n - 5) + 9 * a(n - 6) - 15 * a(n - 7) - 12 * a(n - 8) + 7 * a(n - 10) - 6 * a(n - 11) - 6 * a(n - 12) + 5 * a(n - 13) + 5 * a(n - 14) + 3 * a(n - 15) - 2 * a(n - 16) - a(n - 17) + 2 * a(n - 18) - a(n - 19) - a(n - 20). ●

▶ [A288038] 3,11,33,89,225,545,1281,2945,6657,14849,32769,71681,155649,335873,720897,1540097,3276801,6946817,14680065,30932993,65011713,136314881,285212673,595591169,1241513985 ⋆ Number of independent vertex sets in the n - Andrasfai graph. ● a(n) = 1 + (3 * n - 1) * 2 ^ (n - 1). ● a(n) = 5 * a(n - 1) - 8 * a(n - 2) + 4 * a(n - 3) for n>3. ●

▶ [A171270] 3,11,33,95,273,791,2313,6815,20193,60071,179193,535535,1602513,4799351,14381673,43112255,129271233,387682631,1162785753,3487832975,10462450353,31385253911,94151567433,282446313695,847322163873 ⋆ a(n) is the only number m such that m = pi(1 ^ (1 / n)) + pi(2 ^ (1 / n)) + ... + pi(m ^ (1 / n)). ● a(n) = 3 ^ n + 2 ^ n - 2. ●

▶ [A182879] 0,1,3,11,33,96,278,787,2205,6133,16941,46554,127390,347331,944121,2559607,6923529,18690138,50364988,135506485,364063815,976880631,2618206923,7009868646,18749876418 ⋆ The sum of the lengths of all weighted lattice paths in L _ n. ● a(n) = Sum _{ k=0..n } k * binomial(k,n - k) ^ 2. ●

► [A081250] 1,3,11,33,101,303,911,2733,8201,24603,73811,221433,664301,1992903,5978711,17936133,53808401,161425203,484275611,1452826833,4358480501,13075441503,39226324511,117678973533,353036920601 ⋆ Numbers k such that A081249(m) / m ^ 2 has a local minimum for m = k. ● a(n) = floor(3 ^ n * 5 / 4). ● a(n) = 3 * a(n - 1) + 1 * a(n - 2) - 3 * a(n - 3). ● a(n) = (5 * 3 ^ n + (- 1) ^ n - 2) / 4. - _ Paul Barry _ , May 19 2003 ● a(n) = a(n - 2) + 10 * 3 ^ (n - 2) for n > 1. ● a(n) = 2 * a(n - 1) + 3 * a(n - 2) + 2, a(0)=1, a(1)=3. - _ Zerinvary Lajos _ , Apr 28 2008 ●

► [A135247] 0,0,1,3,11,33,103,309,935,2805,8431,25293,75911,227733,683263,2049789,6149495,18448485,55345711,166037133,498111911,1494335733,4483008223,13449024669,40347076055 ⋆ a(n) = 3 * a(n - 1) + 2 * a(n - 2) - 6 * a(n - 3). ● a(n) = - 14 * (- sqrt(2)) ^ n * (- 56 - 84 * sqrt(2)) ^ (- 1) + 22 * 2 ^ (1 / 2 * n) * (- 56 - 84 * sqrt(2)) ^ (- 1) + 12 * 2 ^ (1 / 2 * n) * sqrt(2) * (- 56 - 84 * sqrt(2)) ^ (- 1) - 12 * 3 ^ n * sqrt(2) * (- 56 - 84 * sqrt(2)) ^ (- 1) - 8 * 3 ^ n * (- 56 - 84 * sqrt(2)) ^ (- 1), with n>=0 - _ Paolo P. Lava _ , Jun 09 2008 ●

► [A036542] 1,3,11,34,93,236,571,1338,3065,6904,15351,33782,73717,159732,344051,737266,1572849,3342320,7077871,14942190,31457261,66060268,138412011,289406954,603979753 ⋆ a(n) = T(n, n), array T given by A047858. ● a(n) = 3 * n * 2 ^ (n - 1) - n + 1. ● a(n) = 6 * a(n - 1) - 13 * a(n - 2) + 12 * a(n - 3) - 4 * a(n - 4) for n>3. ●

► [A084266] 1,3,11,34,96,256,656,1632,3968,9472,22272,51712,118784,270336,610304,1368064,3047424,6750208,14876672,32636928,71303168,155189248,336592896,727711744,1568669696 ⋆ Binomial transform of A084265. ● a(n) = Sum _{ k=0..n - 1 } a(k) + (n + 2) * 2 ^ (n - 1) - 1. - _ Philippe Deléham _ , Jul 12 2007 ● a(n) = (Sum _{ k=0..n + 1 } binomial(n + 1,k) * k ^ 4) / ((n + 1) * (n + 2)), n > 0. - _ Gary Detlefs _ , Nov 26 2011 ●

► [A037496] 1,3,11,34,102,308,925,2775,8327,24982,74946,224840,674521,2023563,6070691,18212074,54636222,163908668,491726005,1475178015,4425534047,13276602142,39829806426,119489419280,358468257841 ⋆ Base - 3 digits are, in order, the first n terms of the periodic sequence with initial period 1,0,2. ● a(n) = 3 * a(n - 1) + a(n - 3) - 3 * a(n - 4). ● a(n) = round((11 * 3 ^ n - 13) / 26) = (11 * 3 ^ n - 13) / 26 + ((3 - 7 * i * sqrt(3)) * (- 1 + i * sqrt(3)) ^ n + (3 + 7 * i * sqrt(3)) * (- 1 - i * sqrt(3)) ^ n) / (78 * 2 ^ n) where i is the imaginary unit. (End) ●

► [A134326] 3,11,34,112,359,1167,3764,12191,39391,127434,411973,1332290,4307638,13928919,45036841,145621921,470842799,1522389829,4922341763,15915370482,51458800352,166380151440,537950254595,1739329494378 ⋆ The sum of the elements in the first, middle and last row of the n - th power of the 9 - by - 9 matrix defined in the formula. ● a(n)= 4 * a(n - 1) + 5 * a(n - 2) - 23 * a(n - 3) - 19 * a(n - 4) + 37 * a(n - 5) + 42 * a(n - 6) - 8 * a(n - 7) - 5 * a(n - 8). G.f.: - x * (- 3 + x + 25 * x ^ 2 + 10 * x ^ 3 - 51 * x ^ 4 - 51 * x ^ 5 + 10 * x ^ 6 + 11 * x ^ 7) / (1 - 4 * x - 5 * x ^ 2 + 23 * x ^ 3 + 19 * x ^ 4 - 37 * x ^ 5 - 42 * x ^ 6 + 8 * x ^ 7 + 5 * x ^ 8). [From _ R. J. Mathar _ , Aug 12 2009] ●

► [A088578] 1,3,11,35,99,259,643,1539,3587,8195,18435,40963,90115,196611,425987,917507,1966083,4194307,8912899,18874371,39845891,83886083,176160771,369098755,771751939 ⋆ a(n) = n * x ^ n + (n - 1) * x ^ (n - 1) + . . . + x + 1 for x=2. ● a(n) = (n - 1) * 2 ^ (n + 1) + 3. ● a(n) = 5 * a(n - 1) - 8 * a(n - 2) + 4 * a(n - 3). - _ Colin Barker _ , Apr 02 2012 ●

► [A171498] 3,11,35,107,323,971,2915,8747,26243,78731,236195,708587,2125763,6377291,19131875,57395627,172186883,516560651,1549681955,4649045867,13947137603,41841412811,125524238435,376572715307,1129718145923 ⋆ 4 * 3 ^ n - 1. ● a(n) = 3 * a(n - 1) + 2 for n > 0; a(0) = 3. ●

► [A004054] 1,3,11,35,111,343,1051,3195,9671,29183,87891,264355,794431,2386023,7163531,21501515,64526391,193622863,580955971,1743042675,5229477551,15689131703,47068793211,141209175835 ⋆ Expansion of (1 - x) / ((1 + x) * (1 - 2 * x) * (1 - 3 * x)). ● a(n) = 3 ^ n / 6 + (- 1) ^ n / 6 - 0 ^ n / 6 - 2 ^ n / 6. (End) ● a(n) = 3 ^ n - 2 ^ n - (- 1 ^ (n - 1)). ●

► [A068995] 1,3,11,35,111,351,1111,3513,11111,35136,111111,351364,1111111,3513641,11111111,35136418,111111111,351364184,1111111111,3513641844,11111111111,35136418446,111111111111,351364184463,1111111111111 ⋆ Integer parts of the square roots of the schizophrenic numbers (A014824). ● a(2n - 2) = floor(a(2n - 1) / sqrt(10)), for n>=2. (End) ●

► [A320087] 1,3,11,35,115,347,1075,3235,9787,29387,88435,265315,796755,2390347,7173227,21519947,64566667,193700035,581120523,1743362283,5230145947,15690440099,47071499707,141214499227,423644035627 ⋆ Number of primitive (=aperiodic) ternary words with length less than or equal to n which are earlier in lexicographic order than any other word derived by cyclic shifts of the alphabet. ● a(n) = Sum _{ j=1..n } Sum _{ d|j } 3 ^ (d - 1) * mu(j / d). ●

► [A014335] 0,0,1,3,11,35,115,371,1203,3891,12595,40755,131891,426803,1381171,4469555,14463795,46805811,151466803,490156851,1586180915,5132989235,16610702131,53753361203,173949530931 ⋆ Exponential convolution of Fibonacci numbers with themselves (divided by 2). ● a(n) = 2 * a(n - 1) + 4 * a(n - 2) + 1, a(0)=0; a(1)=0. - _ Zerinvary Lajos _ , Dec 14 2008 ●

► [A291413] 3,11,36,117,375,1197,3810,12112,38478,122198,388008,1231911,3911097,12416751,39419610,125145175,397296363,1261288403,4004182620,12711979296,40356397332,128118414852,406734209280,1291248512101,4099293000471 ⋆ p - INVERT of (1,1,0,0,0,0,...), where p(S) = 1 - 3 S + S ^ 2 + S ^ 3. ● a(n) = 3 * a(n - 1) + 2 * a(n - 2) - 3 * a(n - 3) - 4 * a(n - 4) - 3 * a(n - 5) - a(n - 6) for n >= 7. ●

► [A017937] 1,3,11,36,121,401,1331,4414,14641,48558,161051,534145,1771561,5875603,19487171,64631634,214358881,710947978,2357947691,7820427766,25937424601,86024705429,285311670611 ⋆ Powers of sqrt(11) rounded down. ● a(n) = floor(sqrt(11 ^ n)). - _ Vincenzo Librandi _ , Jun 24 2011 ●

► [A333760] 1,3,11,36,122,408,1371,4599,15437,51804,173860,583476,1958173,6571695,22054863,74016936,248403622,833651844,2797766831,9389410251,31511212505,105752809368,354910389192,1191092559048,3997351239929 ⋆ Number of self - avoiding closed paths in the 4 X n grid graph which pass through all vertices on four (left, right, upper, lower) sides of the graph. ● a(n) = 3 * a(n - 1) + 2 * a(n - 2) - 3 * (a - 3) + a(n - 4) for n > 5. ●

► [A100068] 1,3,11,36,123,408,1370,4560,15235,50760,169326,564336,1881582,6271632,20907156,69689376,232304355,774343560,2581169510,8603882160,28679699578,95598937008,318663476076,1062211351776,3540705857998 ⋆ a(n) = Sum _{ k=0..floor(n / 2) } binomial(n,k) * 3 ^ (n - 2 * k). ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n, k) * 3 ^ (n - k). ● a(n) = Sum _{ k=0..n } binomial(n, (n - k) / 2) * (1 + (- 1) ^ (n - k) * 3 ^ k / 2. ●

► [A084171] 1,3,11,37,119,373,1151,3517,10679,32293,97391,293197,881639,2649013,7955231,23882077,71678999,215102533,645438671,1936578157,5810258759,17431824853,52297571711,156896909437,470699116919 ⋆ Binomial transform of generalized Jacobsthal numbers A084170. ● a(n) = 5 * 3 ^ n / 3 + 0 ^ n / 3 - 2 ^ n. ● a(n) = 5 * a(n - 1) - 6 * a(n - 2). - _ Wesley Ivan Hurt _ , May 09 2022 ●

► [A192875] 0,1,3,11,37,119,391,1257,4087,13195,42757,138271,447615,1448249,4687071,15166963,49082501,158832391,513995543,1663319433,5382623015,17418520571,56367538373,182409150671,590288468367 ⋆ Coefficient of x in the reduction by (x ^ 2 - > x + 1) of the polynomial p(n,x) given in Comments. ● a(n) = 2 * a(n - 1) + 6 * a(n - 2) - 5 * a(n - 3) - 6 * a(n - 4) + 4 * a(n - 5). ●

► [A134757] 1,3,11,37,123,401,1293,4131,13107,41353,129873,406319,1267093,3940431,12224579,37845117,116944371,360771417,1111332129,3418840431,10504903809,32242682787,98863833159,302863592073,927025884477 ⋆ A007318 * A100071. ● a(n) = (n - 1)! * [x ^ (n - 1)] exp(x) * ((1 + 2 * x) * BesselI(0, 2 * x) + 2 * x * BesselI(1, 2 * x)) for n>0, a(0) = 0. - _ Peter Luschny _ , Aug 26 2012 ●

► [A291415] 3,11,37,126,427,1448,4909,16643,56424,191292,648529,2198680,7454090,25271280,85676131,290464093,984747891,3338548317,11318536416,38372746007,130093466328,441050269849,1495273713773,5069362002354,17186439428582 ⋆ p - INVERT of (1,1,0,0,0,0,...), where p(S) = 1 - 3 S + S ^ 2. ● a(n) = 3 * a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) for n >= 5. ●

► [A214996] 3,11,37,127,433,1479,5049,17239,58857,200951,686089,2342455,7997641,27305655,93227337,318298039,1086737481,3710353847,12667940425,43251054007,147668335177,504171232695,1721348260425,5877050576311,20065505784393 ⋆ Power floor - ceiling sequence of 2 + sqrt(2). ● a(n) = ceiling(x * a(n - 1)) if n is odd, a(n) = floor(x * a(n - 1) if n is even, where x = 2 + sqrt(2) and a(0) = floor(x). ● a(n) = 3 * a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3). ● a(n) = (1 / 7) * ((- 1) ^ (1 + n) + (11 - 8 * sqrt(2)) * (2 - sqrt(2)) ^ n + (2 + sqrt(2)) ^ n * (11 + 8 * sqrt(2))). - _ Colin Barker _ , Nov 13 2017 ●

► [A180168] 1,3,11,37,129,443,1531,5277,18209,62803,216651,747317,2577889,8892363,30674171,105810157,364991169,1259033123,4343022091,14981209797,51677530049,178261109083,614909868411,2121125282237,7316799906529 ⋆ a(n) = 2 * a(n - 1) + 5 * a(n - 2), a(0) = 1, a(1) = 3. ● a(n) = (1 / 6) * (- (1 - sqrt(6)) ^ n * sqrt(6) + sqrt(6) * (1 + sqrt(6)) ^ n + 3 * (1 - sqrt(6)) ^ n + 3 * (1 + sqrt(6)) ^ n). - _ Alexander R. Povolotsky _ , Aug 15 2010 ●

► [A109000] 1,1,3,11,37,133,479,1719,6121,21609,75675,263171,909899,3130963,10730891,36639987,124528283,420319907,1403656123,4615627555,14868713515,46702912307,142489152555,421113970835,1203581558011 ⋆ Antidiagonal sums of square array A108998, in which row n equals the coordination sequence of B _ n lattice. ● a(n) = Sum _{ k=0..n } Sum _{ j=0..k } C(n - j - 1, k - j) * (C(2 * n - 2 * k + 1, 2 * j) - 2 * (n - k) * C(n - k - 1, j - 1)). ●

► [A006189] 1,1,3,11,38,126,415,1369,4521,14933,49322,162900,538021,1776961,5868903,19383671,64019918,211443426,698350195,2306494009,7617832221,25159990673,83097804242,274453403400,906458014441 ⋆ Number of self - avoiding walks of any length from NW to SW corners of a grid or lattice with n rows and 3 columns. ● a(n) = 4 * a(n - 1) - 3 * a(n - 2) + 2 * a(n - 3) + a(n - 4) for n > 3. - _ Giovanni Resta _ , Mar 13 2013 ● a(n) = (1 / 2) * (ChebyshevU(n, 1 / 2) - ChebyshevU(n - 1, 1 / 2) + i ^ n * (ChebyshevU(n, - 3 * i / 2) + i * ChebyshevU(n - 1, - 3 * i / 2))). - _ G. C. Greubel _ , May 24 2021 ●

► [A273526] 1,1,3,11,38,127,423,1423,4854,16787,58776,208001,742888,2674427,9694831,35357655,129644774,477638683,1767263172,6564120401,24466267000,91482563619,343059613628,1289904147301,4861946401428 ⋆ Number of 123 - avoiding indecomposable permutations. ● a(n) = C(n) - n + 1, where C(n) is the Catalan number. ●

► [A227638] 3,11,39,127,377,1014,2518,5844,12790,26582,52769,100547,184661,328068,565582,948764,1552366,2482688,3888261,5973327,9014649,13382250,19564750,28200044,40112142 ⋆ Number of n X 3 0,1 arrays indicating 2 X 2 subblocks of some larger (n + 1) X 4 binary array having determinant equal to one, with rows and columns of the latter in nondecreasing lexicographic order. ● a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10) for n>13. ●

► [A166336] 1,3,11,39,131,421,1309,3971,11823,34691,100611,289033,823801,2332419,6566291,18394911,51310979,142587181,394905493,1090444931,3002921271,8249479163,22612505091,61857842449,168903452401 ⋆ Expansion of (1 - 4 * x + 7 * x ^ 2 - 4 * x ^ 3 + x ^ 4) / (1 - 7 * x + 17 * x ^ 2 - 17 * x ^ 3 + 7 * x ^ 4 - x ^ 5). ● a(0) = 1, a(1) = 3, a(2) = 11, a(3) = 39, a(4) = 131, and a(n) = - 17 * a(n - 1) + 17 * a(n - 2) - 7 * a(n - 3) + a(n - 4) for n >= 4. - _ Harvey P. Dale _ , Jul 05 2014 ●

► [A289834] 1,1,3,11,39,134,456,1557,5364,18674,65680,233182,834796,3010712,10929245,39904623,146451871,539972534,1999185777,7429623640,27705320423,103636336176,388775988319,1462261313876,5513152229901 ⋆ Number of perfect matchings on n edges which represent RNA secondary folding structures characterized by the Lyngso and Pedersen (L & P) family and the Cao and Chen (C & C) family. ● a(n) = Sum _{ i=0..n - 2 } C _ i * (Sum _{ j=1..n - i } C _ j - (n - i)) + C _ n where C is A000108. ●

► [A007482] 1,3,11,39,139,495,1763,6279,22363,79647,283667,1010295,3598219,12815247,45642179,162557031,578955451,2061980415,7343852147,26155517271,93154256107,331773802863,1181629920803,4208437368135 ⋆ a(n) is the number of subsequences of [1, ..., 2n] in which each odd number has an even neighbor. ● a(n) = 3 * a(n - 1) + 2 * a(n - 2). ● a(n) = (ap ^ (n + 1) - am ^ (n + 1)) / (ap - am), where ap = (3 + sqrt(17)) / 2 and am = (3 - sqrt(17)) / 2. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n - k, k)2 ^ k * 3 ^ (n - 2k). - _ Paul Barry _ , Apr 23 2005 ● a(n) = - a(- 2 - n) * (- 2) ^ (n + 1) for all n in Z. - _ Michael Somos _ , Jun 03 2015 ● a(n) = 3 ^ n * hypergeom([(1 - n) / 2, - n / 2], [- n, - 8 / 9)) for n>=1. - _ Peter Luschny _ , Jun 28 2017 ● a(n) = round(((sqrt(

17) + 3) / 2) ^ (n + 1) / sqrt(17)). The distance of the argument from the near est integer is about 1 / 2 ^ (n + 3). - _ M. F. Hasler _ , Jun 16 2019 ●
► [A371758] 1,1,3,11,39,141,519,1933,7263,27479,104543,399543,1532779,5899167,22766607,88073091,341425551,1326019653,5158412943,20096457549,78396460299,306190920837,1197181197567,4685523856881,18354865147011 ⋆ a(n) = Sum _{ k=0..floor(n / 3) } binomial(2 * n - 3 * k - 1,n - 3 * k). ● a(n) = [x ^ n] 1 / ((1 - x ^ 3) * (1 - x) ^ n). ●
► [A281482] 3,11,39,143,543,2111,8319,33023,131583,525311,2099199,8392703,33562623,134234111,536903679,2147549183,8590065663,34360000511,137439477759,549756862463,2199025352703,8796097216511,35184380477439,140737505132543,562949986975743 ⋆ a(n) = 2 ^ (n + 1) * (2 ^ n + 1) - 1. ● a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3) for n>2. ●
► [A132889] 1,3,11,39,144,530,1987,7455,28268,107334,410354,1570954,6042984,23273172,89948835,348000975,1350028020,5241881150,20396787070,79426533758,309829067496,1209384071532,4727454837846,18490127530394 ⋆ Sum of the le ngths of the longest increasing subsequence over all 321 - avoiding permutations of [n]. ● a(n) = Sum _{ k=floor((n + 1) / 2)..n } k * (2 * k - n + 1) ^ 2 * bino mial(n + 1,n - k) ^ 2 / (n + 1) ^ 2. ●
► [A136775] 1,3,11,40,145,525,1900,6875,24875,90000,325625,1178125,4262500,15421875,55796875,201875000,730390625,2642578125,9560937500,34591796875,125154296875,452812500000,1638291015625,5927392578125,21445507812500 ⋆ Nu mber of multiplex juggling sequences of length n, base state <1,1> and hand c apacity 2. ● a(n) = 5 * a(n - 1) - 5 * a(n - 2) for n>3. - _ Colin Barker _ , Au g 31 2016 ●
► [A108153] 0,1,3,11,40,145,526,1908,6921,25105,91065,330326,1198213,4346356,15765820,57188385,207443151,752472043,2729490816,9900859685,35914032730,130273308376,472548850273,1714107200301,6217692609825 ⋆ a(n) = 3 * a(n - 1) + 2 * a(n - 2) + a(n - 3). ● a(n) = 11 * a(n - 2) + 7 * a(n - 3) + 3 * a(n - 4). [_ Gary Detlefs _ , Sep 13 2010] ●
► [A052941] 1,3,11,40,146,533,1946,7105,25941,94713,345806,1262570,4609761,16830668,61450341,224360935,819162731,2990839648,10919834926,39869337325,145566674726,531477526653,1940474094561,7084852176865 ⋆ Expansion of (1 - x) / (1 - 4 * x + x ^ 2 + x ^ 3). ● a(n) = 4 * a(n - 1) - a(n - 2) - a(n - 3). ● a(n) = Sum _{ alpha=RootOf(1 - 4 * z + z ^ 2 + z ^ 3) } (3 - alpha ^ 2) * alpha ^ (- 1 - n) / 13. ●
► [A371872] 1,1,3,11,40,147,547,2055,7777,29602,113204,434591,1673821,6464539,25026534,97087873,377329971,1468856383,5726159811,22351657810,873501370 71,341726039806,1338173763288,5244830032639,20573285744475 ⋆ a(n) = Sum _{ k=0..floor(n / 3) } binomial(2 * n - 2 * k - 1,n - 3 * k). ● a(n) = [x ^ n] 1 / ((1 - x - x ^ 3) * (1 - x) ^ (n - 1)). ●
► [A014301] 0,1,3,11,40,148,553,2083,7896,30086,115126,442118,1703052,6577474,25461493,98759971,383751472,1493506534,5820778858,22714926826,887453729 92,347087585824,1358789148058,5324148664846,20878676356240 ⋆ Number of in ternal nodes of even outdegree in all ordered rooted trees with n edges. ● a(n) = (1 / 2) * Sum _{ k=0..n } (- 1) ^ (n - k) * binomial(n + k - 1, k). - _ Vlade ta Jovovic _ , Aug 28 2002 ● a(n) = (1 / 2) * Sum _{ j=0..floor(n / 2) } bino mial(2n - 2j - 2, n - 2). ● a(n) = Sum _{ k=0..n } (- 1) ^ (n - k) * C(n + k,k - 1). - _ Paul Barry _ , Jul 18 2006 ●
► [A218348] 3,11,41,149,547,2007,7361,27001,99043,363299,1332617,4888173,17930307,65770159,241251521,884934705,3246028995,11906758971,43675182633,160204937605,587647732323,2155550649479,7906775346689,29002842683433 ⋆ Hillt op maps: number of n X 2 binary arrays indicating the locations of correspondi ng elements not exceeded by any horizontal or vertical neighbor in a random 0. .1 nX2 array. ● a(n) = 3 * a(n - 1) + 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4) - a(n - 5). ●
► [A320827] 1,1,1,3,11,41,151,549,1977,7075,25229,89831,319881,1140523,4075321,14603243,52501659,189440937,686181711,2495243373,9109701699,33388293177,122840931891,453622854873,1681057537359 ⋆ G.f.: - sqrt(1 - 4 * x) * (2 * x - 1) / (3 * x - 1). ● a(n) = (- 4) ^ n * binomial(3 / 2, n) * ((4 / 3) * n - 2 + hyp ergeom([1, - n], [5 / 2 - n], 3 / 4)). ●
► [A335793] 1,1,3,11,41,151,553,2023,7401 ⋆ Number of hare pop - stack sortab le Cayley permutations. ● a(n) = 5 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) for n >3. ●
► [A001835] 1,1,3,11,41,153,571,2131,7953,29681,110771,413403,1542841,5757961,21489003,80198051,299303201,1117014753,4168755811,15558008491,58063278153,216695104121,808717138331,3018173449203,11263976658481 ⋆ a(n) = 4 * a(n - 1) - a(n - 2), with a(0) = 1, a(1) = 1. ● a(1 - n) = a(n). ● a(n) = ((3 + sqrt(3)) ^ (2 * n - 1) + (3 - sqrt(3)) ^ (2 * n - 1)) / 6 ^ n. - _ Dean Hickerson _ , Dec 01 2002 ● a(n) = (8 + a(n - 1) * a(n - 2)) / a(n - 3). - _ Michael Somos _ , Au g 01 2001 ● a(n + 1) = Sum _{ k=0..n } (2 ^ k * binomial(n + k, n - k), n >= 0. - _ Len Smiley _ , Dec 09 2001 ● a(n + 1) = Sum _{ k=0..n } ((- 1) ^ k) * ((2 * n + 1) / (2 * n + 1 - k)) * binomial(2 * n + 1 - k, k) * 6 ^ (n - k) (from st andard T(n,x) / x, n >= 1, Chebyshev sum formula). The Smiley and Cloitre s um representation is that of the S(2 * n, i * sqrt(2)) * (- 1) ^ n Chebyshev pol ynomial. - _ Wolfdieter Lang _ , Nov 29 2002 ● a(n) = (1 / 6) * (3 * (2 - sqrt(3)) ^ n + sqrt(3) * (2 - sqrt(3)) ^ n + 3 * (2 + sqrt(3)) ^ n - sqrt(3) * (2 + sqrt (3)) ^ n) (Mathematica's solution to the recurrence relation). - _ Sarah - Marie Belcastro _ , Jul 04 2009 ●
► [A079935] 1,3,11,41,153,571,2131,7953,29681,110771,413403,1542841,5757961,21489003,80198051,299303201,1117014753,4168755811,15558008491,58063278153,216695104121,808717138331,3018173449203,11263976658481 ⋆ a(n) = 4 * a(n - 1) - a(n - 2) with a(1) = 1, a(2) = 3. ● a(n) = ((3 + sqrt(3)) * (2 + sqrt(3)) ^ n + (3 - sqrt(3)) * (2 - sqrt(3)) ^ n) / 6 (offset 0). (End) ● a(n) = Sum _{ k= 0..n } binomial(2 * n - k, k) * 2 ^ (n - k). - _ Paul Barry _ , Jan 22 2005 [offse t 0] ● a(n) = (- 1) ^ n * U(2 * n, i * sqrt(2) / 2), U(n, x) Chebyshev polynomia l of second kind, i=sqrt(- 1). - _ Paul Barry _ , Mar 13 2005 [offset 0] ● a(n) = Jacobi _ P(n, - 1 / 2,1 / 2,2) / Jacobi _ P(n, - 1 / 2,1 / 2,1). - _ Paul Barry _ , Feb 03 2006 [offset 0] ● a(n) = sqrt(2 + (2 - sqrt(3)) ^ (2 * n - 1) + (2 + sq rt(3)) ^ (2 * n - 1)) / sqrt(6). - _ Gerry Martens _ , Jun 05 2015 ● a(n) = (1 / 2 + sqrt(3) / 6) * (2 - sqrt(3)) ^ n + (1 / 2 - sqrt(3) / 6) * (2 + sqrt(3)) ^ n. - _ Robert Israel _ , Jun 05 2015 ●
► [A281593] 1,1,3,11,41,153,573,2157,8163,31043,118559,454479,1747771,6740059,26055459,100939779,391785129,1523230569,5931153429,23126146629,902821478 49,352846964649,1380430179489,5405662979649,21186405207549 ⋆ a(n) = b(n) - Sum _{ j=0..n - 1 } b(n) with b(n) = binomial(2 * n, n). ● a(n) = [x ^ n] (2 * x - 1) / (sqrt(1 - 4 * x) * (x - 1)). ● a(n) = binomial(2 * n,n) * (1 + hypergeom([1,n + 1 / 2],[n + 1],4)) + I / sqrt(3). ● a(n + 1) = a(n) + 2 * n * Catalan(n). ●
► [A113437] 1,3,11,41,154,581,2197,8317,31501,119338,452141,1713111,6490879,24593701,93184802,353074657,1337790401,5068852073,19205744921,72770053106,275723780329,1044710007771,3958378188707,14998188734897 ⋆ Second row o f A113435. ● a(n) = 7 * a(n - 1) - 15 * a(n - 2) + 11 * a(n - 3) - a(n - 4). ●
► [A076540] 1,3,11,41,154,582,2211,8437,32318,124202,478686,1849498,7161556,27784460,107980515,420300045,1638238710,6393535170,24980504010,97704407790,382509199020,1498824792660,5877754713870,23067328421826,90590960500524 ⋆ Number of branches in all ordered trees with n edges. ● a(n) = (3 * n ^ 2 - 2 * n + 1) * binomial(2 * n, n) / (2 * (n + 1) * (2 * n - 1)). ● a(n) = binomial (2n - 1, n - 2) + binomial(2n - 2, n - 1). - _ David Callan _ , Nov 06 2003 ● a(n + 1) = [x ^ n](1 + x + x ^ 2) * (1 + x) ^ (2 * n) = binomial(2 * n,n) + binomi al(2 * n,n - 1) + binomial(2 * n,n - 2). - _ Peter Bala _ , Jun 15 2015 ●
► [A176085] 0,1,3,11,41,155,591,2267,8735,33775,130965,509015,1982269,7732659,30208749,118167055,462760369,1814091011,7118044023,27952660883,109853552255,432021606103,1700093447847,6694137523051,26372544576331 ⋆ a(n) = A136431(n,n). ● a(n) = 4 * a(n - 1) + a(n - 2) - binomial(2 * n - 4,n - 2) for n>=2. - _ Hrishikesh Venkataraman _ , Jul 02 2021 ●
► [A129637] 1,3,11,41,157,607,2367,9277,36505,144059,569779,2257521,8957109,35579351,141460391,562871557,2241129905,8928207987,35584894299,141886838329,565938926669 ⋆ Number of n - step paths that can go { west, southeast, so uthwest, northwest } on a 240 - degree wedge on the equilateral triangular latti ce. ● a(n) = Sum _{ k=0..n + 1 } (binomial(n + 1,k) * Sum _{ i=0..n } (2 ^ (i + k - 1) * binomial(k,i) * (- 1) ^ (n - i) * binomial(n - i - 1,k - i - 1))) / (n + 1). - _ Vladimir Kruchinin _ , Feb 28 2016 ●
► [A102417] 0,1,3,11,41,191,1055,6959,53159,462239,4499999,48454559,571409999,7321386239,101249648639,1502852279039,23827244757119,401839065331199,7182224591270400,135607710526041600,2696935204633823744 ⋆ In the lexicograp hically ordered table of permutations of [n], there are two entries that give the greatest sum of pairwise products and they are reversals of each other. The ite ms in this sequence are the indices of the earlier of the two. ● a(n) = Sum _{ k=1..n } (n + 1 - k) * d2(k) where d2(k) = k! if k is odd, k! - (k / 2)! otherwis e [with thanks to _ Max Alekseyev _]. ●
► [A099489] 1,3,11,42,157,585,2183,8148,30409,113487,423539,1580670,5899141,22015893,82164431,306641832,1144402897,4270969755,15939476123,5948693478 38,222008262829,828546116577,3092176203479,11540158697340 ⋆ Expansion of (1 - x + x ^ 2) / ((1 + x ^ 2)(1 - 4x + x ^ 2)). ● a(n) = 4 * a(n - 1) - 2 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - corrected by _ Matthew House _ , Oct 22 2016 ● a (n) = sum { k=0..floor(n / 2), binomial(n - k, k) * (- 1) ^ k * (3 * 4 ^ (n - 2 * k) + 0 ^ (n - 2 * k) / 4 } . ● a(n) = sum { k=0..n, (0 ^ k - sin(Pi * k / 2)) * ((2 + sqrt(3)) ^ (n - k + 1) - (2 - sqrt(3)) ^ (n - k + 1)) / (2 * sqrt(3)) } . ●
► [A319512] 1,3,11,42,161,616,2352,8967,34153,129997,494606,1881355,7154980,27208132,103456689,393367835,1495638123,5686513994,21620239081,82199944512,312521862408,1188195487255,4517461948657,17175149855885,65298950120782 ⋆ a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 7 * a(n - 3), a(0) = 1, a(1) = 3, a(2) = 11. ● a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 7 * a(n - 3), a(0) = 1, a(1) = 3, a(2) = 11. ●
► [A301483] 1,3,11,42,161,619,2381,9160,35241,135583,521631,2006882,7721121,29705639,114287161,439699520,1691665681,6508382763,25039844851,96336348522,370636962881,1425959779059,5486126574341,21106896023080,81205027571321 ⋆ a(n) = floor(a(n - 1) / (2 ^ (1 / 3) - 1) with a(1)=1. ● a(n) = 4 * a(n - 1) - 2 * a(n - 3) - a(n - 4) for n>4. ●
► [A344191] 1,1,3,11,42,162,627,2431,9438,36686,142766,556206,2169268,8469060,33096195,129454695,506793270,1985612310,7785510810,30548406570,119944382220,471241577820,1852521913710,7286586193926,28675561428972 ⋆ a(n) = Cat alan(n) * (n ^ 2 + 2) / (n + 2). ● a(n) = Catalan(n) + (1 / (n + 2)) * Sum _{ k=2..n } ((2 ^ (n - k) * (n - k + 4) / (k - 2)!) * Product _{ i=2..k - 1 } (n + i)). ● a(n) = [x ^ n] ((2 * x + sqrt(1 - 4 * x) - 1) * (3 * x - 1)) / (2 * sqrt(1 - 4 * x) * x ^ 2). ● a(n) = n! * [x ^ n] exp(2 * x) * (BesselI(0, 2 * x) - BesselI(1, 2 * x) + BesselI(2, 2 * x)). ● a(n) = a(n - 1) * (2 * (2 * n - 1) * (n ^ 2 + 2)) / ((n + 2) * (n ^ 2 - 2 * n + 3)) for n >= 1. ●
► [A032443] 1,3,11,42,163,638,2510,9908,39203,155382,616666,2449868,9740686,38754732,154276028,614429672,2448023843,9756737702,38897306018,155111585372,618679078298,2468152192772,9848142504068,39301087452632,156861290196878 ⋆ a(n) = Sum _{ i=0..n } binomial(2 * n, i). ● a(n) = (4 ^ n + binomial(2 * n, n)) / 2. - _ David W. Wilson _ ● a(n) = Sum _{ 0 <= i _ 1 <= i _ 2 <= n } binomial(n, i _ 2) * binomial(n, i _ 1 + i _ 2). - _ Benoit Cloitre _ , Oct 14 2004 ● a(n) = Sum _{ k=0..n } C(n + k - 1, k) * 2 ^ (n - k). - _ Paul Barry _ , Sep 28 2007 ● a(n) = coefficient of x ^ n in (4 * x + 1 / (1 + x)) ^ n. - _ Michael Somos _ , Jan 25 2014 ● a(n) = [x ^ n] 1 / ((1 - x) ^ n * (1 - 2 * x)). - _ Ilya Gutkovskiy _ , Oct 12 2017 ●
► [A143464] 0,1,3,11,42,164,649,2591,10408,41998,170050,690370,2808714,11446642,46715469,190876527,780679200,3195628806,13090353594,53655587034,220045073988,902842397664,3705876933930,15216954519222,62503485455208 ⋆ Catala n transform of the Pell sequence. ● a(n) = Sum _{ j=0..n } (j / (2 * n - j)) * b inomial(2 * n - j, n) * Pell(j), with a(0) = 0. ● a(n) = (1 / (2 * sqrt(2))) * Catal an(n - 1) * Sum _{ j=0..1 } ((- 1) ^ j + sqrt(2)) * Hypergeometric2F1([2,1 - n] , [2 * (1 - n)], 1 + (- 1) ^ j * sqrt(2)) - [n=0] / 2. - _ G. C. Greubel _ , May 3 1 2022 ●
► [A270561] 1,3,11,42,164,649,2592,10423,42140,171133,697641,2853587,11707542,48166629,198677283,821495226,3404577572,14140959469,58859315929,245493952745,1025954717376,4295887639272,18021572480109,75740267331717 ⋆ Binomi al transform(2) of Motzkin numbers. ● a(n) = Sum _{ i=0..n } ((Sum _{ k=0

..i } ((binomial(i,2 * k) * binomial(2 * k,k)) / (k + 1))) * binomial(2 * n - i,n - i)). ● a(n) = Sum _{ k=0,n } (T(n,k) * m(k)), where m(k) is Motzkin numbers (A001006), T(n,k) = binomial(2 * n - k,n) (triangle A092392). ● a(n) = [x ^ n] (1 - x - sqrt(1 - 2 * x - 3 * x ^ 2)) / (2 * x ^ 2 * (1 - x) ^ (n + 1)). - _ Ilya Gutkovskiy _ , Oct 30 2017 ●

▶ [A259858] 1,1,3,11,42,165,654,2605,10398,41550,166116,664299,2656866,10626810,42505932,170021123,680079282,2720306730,10881206124,43524782946,174099048684,696396028620,2785583782248,11142334464693,44569336530174 ★ A bisection of A002083. ● a(0)=a(1)=1; a(2)=3; a(n) = 4 * a(n - 1) + ((- 1) ^ (n - 1) - 3) / 2 * a(floor((n - 1) / 2)). - _ Carl R. White _ , Oct 06 2017 ●

▶ [A084782] 1,1,3,11,42,168,696,2965,12915,57276,257787,1174597,5407854,25119663,117579351,554053049,2626184688,12513029640,59898952650,287931365692,1389297316104,6726449251539,32668497856323,159114598216251 ★ G.f.: A(x) = 1 + x * A(x) ^ 2 / (1 - x - x ^ 2). ● a(0) = a(1) = 1; for n>1, a(n) = Sum _{ j=0..n - 1 } Fibonacci(n - j) * (Sum _{ i=0..j } a(i) * a(j - i)). - Mario Catalani (mario.catalani(AT)unito.it), Jun 18 2003 ● a(n) = Sum _{ k=1..n } (Sum _{ i=ceiling((n - k) / 2)..n - k } binomial(i,n - k - i) * binomial(k + i - 1,k - 1) * C(k)), C(k) - Catalan numbers A000108. - _ Vladimir Kruchinin _ , Sep 15 2010 ●

▶ [A352684] 1,1,3,11,42,176,808,4015,21423,122035,738424,4725200,31854056,225472729,1670849235,12929089547,104227219082,873524820380,7596906788456,68442869865191,637789899261963,6138617062823371,60945644655192264,623410514987315252,6562725963582441936 ★ a(n) = A352682(n, n). ● a(n) = (n - 1) * Gould(n - 1) + Bell(n) for n >= 1. ●

▶ [A007583] 1,3,11,43,171,683,2731,10923,43691,174763,699051,2796203,11184811,44739243,178956971,715827883,2863311531,11453246123,45812984491,183251937963,733007751851,2932031007403,11728124029611,46912496118443,187649984473771 ★ a(n) = (2 ^ (2 * n + 1) + 1) / 3. ● a(n) = Sum _{ k = 0..n } binomial(n + k, 2 * k) / 2 ^ (k - n). ● a(n) = 4 * a(n - 1) - 1, n > 0. ● a(n) = 1 + 2 * Sum _{ k = 0..n - 1 } 4 ^ k; ● a(0) = 1; a(n + 1) = a(n) * 4 - 1. - Regis Decamps (decamps(AT)users.sf.net), Feb 04 2004 (correction to lead index by _ K. Sprage _ , Aug 20 2014) ● a(n) = Sum _{ i + j + k = n; 0 <= i, j, k <= n } (n + k)! / i! / j! / (2 * k)!. - _ Benoit Cloitre _ , Mar 25 2004 ● a(n) = 5 * a(n - 1) - 4 * a(n - 2). - _ Emeric Deutsch _ , Apr 01 2004 ●

▶ [A026671] 1,3,11,43,173,707,2917,12111,50503,211263,885831,3720995,15652239,65913927,277822147,1171853635,4945846997,20884526283,88224662549,372827899079,1576001732485,6663706588179,28181895551161,119208323665543,504329070986033 ★ Number of lattice paths from (0,0) to (n,n) with steps (0,1), (1,0) and, when on the diagonal, (1,1). ● a(n) = Sum _{ i=1..n } a(i - 1) * binomial(2 * (n - i), n - i) + binomial(2 * n, n), n >= 1, a(0)=1. (End) ● a(0) = 1, a(n) = Sum _{ k=0..n } (k / (2n - k)) * C(2n - k,n - k) * F(2k + 2). (End) ● a(n) = the upper left term in M ^ n, M = the infinite square production matrix: ●

▶ [A270447] 1,3,11,43,174,721,3044,13059,56837,250690,1119612,5059561,23119628,106753404,497762380,2342096579,11113027686,53138757319,255892224332,1240217043450,6046131132030,29631889507380,145923474439800,721733515299225,3583733352377724 ★ Binomial transform(2) of Catalan numbers. ● a(n) = Sum _{ k=0..n } (T(n,k) * C(k)), where C(k) is Catalan numbers (A000108), T(n,k) - triangle of A092392. ● a(n) = Sum _{ k=0..n } ((binomial(2 * k,k) / (k + 1) * binomial(2 * n - k,n))). ● a(n) = [x ^ n] (1 - sqrt(1 - 4 * x)) / (2 * x * (1 - x) ^ (n + 1)). - _ Ilya Gutkovskiy _ , Nov 01 2017 ●

▶ [A059278] 1,1,3,11,43,175,735,3167,13935,62383,283311,1302271,6047679,28332991,133752191,635618431,3038326911,14599154431,70474889471,341624867071,1662254107391,8115717976831,39747223425791,195219110182911,961330824858623 ★ G.f. is G(x * (1 - x) / (1 - 2 * x)) where G(x) is g.f. for Catalan numbers A000108. ● a(n) = Sum _{ k=0..n } ((C(k) * Sum _{ i=0..n - k } (2 ^ i * binomial(k,n - k - i) * binomial(k + i - 1,i) * (- 1) ^ (n - k - i))))), where C(k) is Catalan numbers. - _ Vladimir Kruchinin _ , Mar 04 2016 ●

▶ [A103821] 1,3,11,43,179,771,3395,15171,68515,311907,1428835,6578531,30414435,141105251,656588899,3063038051,14321092195,67088405091,314825048675,1479654425187,6963888239203,32815960756835,154813864252003 ★ A Whitney transform of the central binomial coefficients A000984. ● a(n)=sum { k=0..n, sum { i=0..n, C(k, i - k) }* C(2k, k) } . ●

▶ [A277220] 0,1,3,11,43,180,790,3590,16745,79705,385615,1890747,9375216,46931897,236873261,1204089630,6159064015,31678706490,163739008070,850051218980,4430529313065,23175017046351,121617754070653,640122809255716,3378402106118508 ★ Exponential convolution of Fibonacci (A000045) and Catalan (A000108) numbers. ● a(n) = (phi ^ n * hypergeom([1 / 2, - n], [2], - 4 / phi) - (- phi) ^ (- n) * hypergeom([1 / 2, - n], [2], 4 * phi)) / sqrt(5), where phi = (1 + sqrt(5)) / 2 = A001622. ●

▶ [A110052] 0,1,3,11,43,187,859,4059,19419,93403,450267,2172635,10487515,50632411,244463323,1180350171,5699188443,27518023387,132868585179,641545909979,3097656932059,14956809271003,72217860617947,348698671167195 ★ Expansion of x * (- 1 + 4 * x) / ((x - 1) * (2 * x - 1) * (4 * x ^ 2 + 4 * x - 1)). ● a(n) = (- 3 / 7 + 2 ^ (- 1 + n) - ((- 4 + sqrt(2)) * (2 * (1 + sqrt(2))) ^ n + (2 - 2 * sqrt(2)) ^ n * (4 + sqrt(2))) / (28 * sqrt(2))). ● a(n) = 7 * a(n - 1) - 10 * a(n - 2) - 4 * a(n - 3) + 8 * a(n - 4) for n>3. ●

▶ [A051257] 1,3,11,43,231,1337,9739,76209,706109,6914977,78150249,920172983,12216376453,168531536319,2571960399839,40581616143967,701349512411763,12460393480873445,240094506439569631,4749510978132662277 ★ Numbers formed from binomial coefficients (mod 2 + k) interpreted as digits in factorial base. ● a(n) = Sum (k + 1)!(C(n, k) mod (2 + k)), k=0..n ●

▶ [A200613] 1,3,11,44,183,774,3294,14034,59711,253430,1072506,4525168,19036726,79861404,334155036,1394789214,5808981711,24143440374,100156051746,414762312504,1714844273586,7079573497524,29187378344676,120180109515204,494264431607718 ★ Number of quasi - abelian ideals in the affine Lie algebra sl _n ^{ hat } . ● a(n) = ((n + 4) / 4) * binomial(2 * n,n) - 3 * 2 ^ (2 * n - 3). [_ Volodymyr Mazorchuk _ , Sep 14 2012] ●

▶ [A059714] 1,3,11,44,184,789,3435,15100,66806,296870,1323318,5911972,26455294,118528793,531540891,2385375732,10710619014,48112492938,216195753066,971744791032,4368674392104,19643610378738,88339070102046,397313118498744,1787115246076764 ★ Number of stacked directed animals on the triangular lattice. ● a(n) = 3 ^ (2 * n - 2) / 2 ^ n * (2 - Sum _{ k=1..n - 1 } (k + 8) * C(2 * k, k) * 2 ^ k / ((k + 1) * (k + 2) * 3 ^ (2 * k))), for n>1. - _ Vaclav Kotesovec _ , Oct 28 2012 ● a(n) = Sum _{ k=1..n - 1 } (k + 1) * 2 ^ (k - 1) * binomial(2 * n,n - k - 1) / n + binomial(2 * n,n - 1) / n. - _ Vladimir Kruchinin _ , Jun 08 2016 ●

▶ [A127632] 1,1,3,11,44,185,804,3579,16229,74690,347984,1638169,7780876,37245028,179503340,870374211,4243141332,20786340271,102275718924,505235129250,2504876652190,12459922302900,62167152967680,311040862133625 ★ Expansion of c(x * c(x)), where c(x) is the g.f. for A000108. ● a(n) = (Sum _{ m=1..n } (m * Sum _{ k=m..n } binomial(2 * k - m - 1, k - 1) * binomial(2 * n - k - 1, n - 1))) / n, a(0)=1. - _ Vladimir Kruchinin _ , Oct 08 2011 ● a(n) = Catalan(n - 1) * hypergeom([3 / 2, 2, 1 - n], [3, 2 - 2 * n], 4) for n >= 1. ●

▶ [A061706] 0,0,1,3,11,44,185,805,3552,15671,68827,301108,1314553,5735237,25024104,109216135,476775195,2081568940,9088283129,39679791093,173240442512,756351086215,3302134987931,14416689863220,62941426366169 ★ G.f.: x ^ 2 * (x - 1) ^ 8 / (4 * x ^ 9 + x ^ 8 - 79 * x ^ 7 + 166 * x ^ 6 - 225 * x ^ 5 + 206 * x ^ 4 - 129 * x ^ 3 + 50 * x ^ 2 - 11 * x + 1). ● a(n) = 11 * a(n - 1) - 50 * a(n - 2) + 129 * a(n - 3) - 206 * a(n - 4) + 225 * a(n - 5) - 166 * a(n - 6) + 79 * a(n - 7) - a(n - 8) - 4 * a(n - 9) for n >= 11. ●

▶ [A063018] 0,1,1,3,11,44,189,850,3951,18832,91542,452075,2261753,11439372,58394014,300455892,1556636807,8113709916,42518000652,223868503324,1183764310960,6283573101960,33470346433605,178850415320010 ★ Reversion of x - x ^ 2 - x ^ 3 - x ^ 4. ● a(n) = Sum(k=1..n - 1, (Sum(j=0..k, binomial(j,n - 3 * k + 2 * j - 1) * binomial(k,j))) * binomial(n + k - 1,n - 1)) / n, n>1, a(1)=1, a(0)=0. - _ Vladimir Kruchinin _ , May 28 2011 ●

▶ [A293468] 1,3,11,44,189,880,4542,26712,182793,1461368,13477650,140564536,1627370146,20621925504,283161372284,4182215376240,66065933347425,1111053154779720,19814069772086730,373435157945506680,7415765258637418950,154751460071567005920,3385387828167428482020 ★ a(n) = Sum _{ k=0..n } k! * binomial(2 * n - k, n). ● a(n) = [x ^ n] 1 / ((1 - x) ^ (n + 1) * (1 - x / (1 - x / (1 - 2 * x / (1 - 2 * x / (1 - 3 * x / (1 - 3 * x / (1 - ...))))))), a continued fraction. ● a(n) = Gamma(n + 1 / 2) * 4 ^ n * hypergeom([1,1, - n],[- 2n],1) / (sqrt(Pi) * n!). - _ Robert Israel _ , Oct 09 2017 ●

▶ [A256752] 1,3,11,44,190,850,4015,19248,94117,467575,2353443,11975568,61505088,318406927,1659801852,8704865907,45898065978,243163198928,1293769867676,6910165762943,37036898772008,199140325574519,1073849938338566 ★ Number of ways to place non - intersecting diagonals in a convex (n + 2) - gon so as to create no hexagons. ● a(n) = (1 / (n + 1)) * Sum _{ i=0..floor(n / 4) } Sum _{ k=i + 1..n - 3 * i } (- 1) ^ i * binomial(n + k,k) * binomial(k,i) * binomial(n - 4 * i - 1,k - i - 1), n !== 0 (mod 4), ● a(n) = ((- 1) ^ (n / 4) / (n + 1)) * binomial(5 * n / 4,n / 4) + (1 / (n + 1)) * Sum _{ i=0..(n / 4) - 1 } Sum _{ k=i + 1..n - 3 * i } (- 1) ^ i * binomial(n + k,k) * binomial(k,i) * binomial(n - 4 * i - 1,k - i - 1), n == 0 (mod 4). ●

▶ [A234627] 1,3,11,44,198,1036,6346,45019,364039,3306553,33328389,369132782,4456043300,58230679722,818965960156,12334276322245,198059886271741,3377876368962559,60978094460613103,1161619710523459392 ★ Numbers of undirected cycles in the n - sun graph. ● a(n) = (1 / 2) * (2 - binomial(n + 1, 2) + Sum _{ k=1..n } (k - 1)! * (binomial(n, k) + Sum _{ j=1..k } Sum _{ i=0..n - j - k } n * (2 ^ j) * binomial(n - j - i - 1, j - 1) * binomial(i + j - 1, i) * binomial(n - 2 * j - i, k - j) / j)). - _ Andrew Howroyd _ , Mar 05 2016 ●

▶ [A073590] 1,3,11,44,229,1339,9603,75200,690009,6779803,75792507,896040188,11811267389,163229695459,2478388484947,39203092296480,673698509829233,12002969025435603,230288108992819819,4563243145806294636 ★ Expansion of e.g.f. exp(x) * log(1 + x) / (1 - x). ● a(n) = Sum _{ k=1..n } k! * binomial(n,k) * Sum _{ j=1..k } (- 1) ^ (j + 1) / j. - _ Seiichi Manyama _ , Feb 20 2022 ●

▶ [A369839] 1,3,11,45,185,756,3084,12580,51320,209365,854126,3484490,14215310,57992715,236586825,965178576,3937538296,16063564001,65532845396,267347509271,1090669728772,4449491452173,18152125855049,74053333195325,302107654008601 ★ Number of compositions of 5 * n - 4 into parts 1 and 5. ● a(n) = Sum _{ k=0..n } binomial(n + 4 * k,n - 1 - k). ● a(n) = 6 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ●

▶ [A292278] 1,3,11,45,189,799,3383,14329,60697,257115,1089155,4613733,19544085,82790071,350704367,1485607537,6293134513,26658145587,112925716859,478361013021,2026369768941,8583840088783,36361730124071,154030760585065,652484772464329 ★ a(n) = (Fibonacci(3 * n - 1) + 1) / 2 for n >= 1. ● a(n) = 5 * a(n - 1) - 3 * a(n - 2) - a(n - 3). ●

▶ [A083324] 1,3,11,45,191,813,3431,14325,59231,242973,990551,4019205,16249871,65522733,263668871,1059425685,4251986111,17050860093,68332318391,273716169765,1096025891951,4387588255053,17560809179111,70274609387445 ★ An alternating sum of decreasing powers. ● a(n) = 4 ^ n - 3 ^ n + 2 ^ n ● a(n) = 9 * a(n - 1) - 26 * a(n - 2) + 24 * a(n - 3). - _ Geoffrey Critzer _ , Dec 01 2013 ●

▶ [A238578] 0,1,3,11,45,191,833,3695,16593,75199,343233,1575551,7265921,33637631,156234497,727681791,3397475585,15896054783,74512968705,349859309567,1645121398785,7746058698751,36516283891713,172332643868671,814108326764545 ★ Expansion of - (- 4 * x ^ 4 + sqrt(- 4 * x ^ 2 - 4 * x + 1) * (2 * x ^ 3 + x ^ 2 - 2 * x) - 12 * x ^ 3 - 7 * x ^ 2 + 2 * x) / (sqrt(- 4 * x ^ 2 - 4 * x + 1) * (4 * x ^ 3 + 8 * x ^ 2 + 3 * x - 1) - 4 * x ^ 3 - 8 * x ^ 2 - 3 * x + 1). ● a(n) = Sum _{ k=1..n } (Sum _{ i=0..(n - k) } C(k,n - k - i) * C(k + i - 1,k - 1))) * C(n - 1,k - 1)). ●

▶ [A083878] 1,3,11,45,193,843,3707,16341,72097,318195,1404491,6199581,27366049,120799227,533233019,2353803525,10390190017,45864515427,202455762443,893682966669,3944907462913,17413664010795,76867631824379 ★ a(0)=1, a(1)=3, a(n) = 6 * a(n - 1) - 7 * a(n - 2), n >= 2. ● a(n) = ((3 - sqrt(2)) ^ n + (3 + sqrt(2)) ^ n) / 2; ● a(n) = Sum _{ k=0..n } C(n, 2k) * 3 ^ (n - 2k) * 2 ^ k; ● a(n) = Sum _{ k=0..n } C(n, k) * 2 ^ ((n - k) / 2)(1 + (- 1) ^ (n - k)) * 3 ^ k / 2. - _ Paul Barry _ , Jan 22 2005 ●

▶ [A026375] 1,3,11,45,195,873,3989,18483,86515,408105,1936881,9238023,44241261,212601015,1024642875,4950790605,23973456915,116312293305,565280386625,2751474553575,13411044301945,65448142561035,319756851757695 ★ a(n) = Su

m _{ k=0..n } binomial(n,k) * binomial(2 * k,k). ● a(n) = [t ^ n](1 + 3 * t + t ^ 2) ^ n; ● a(n) = Sum _{ j=ceiling(n / 2)..n } 3 ^ (2 * j - n) * binomial(n, j) * binomial(j, n - j). (End) ● a(n) = sum of squared coefficients of (1 + x - x ^ 2) ^ n - see triangle A084610. - _ Paul D. Hanna _ , Jul 18 2009 ● a(n) = sum of squares of coefficients of (1 - x - x ^ 2) ^ n. - _ Joerg Arndt _ , Jul 06 2011 ● a(n) = (1 / Pi) * Integral _{ x= - 2..2 } ((3 + x) ^ n / sqrt((2 - x) * (2 + x))) d x. - _ Peter Luschny _ , Sep 12 2011 ● a(n) = GegenbauerC(n, - n, - 3 / 2). - _ Peter Luschny _ , May 09 2016 ●

► [A063024] 0,1,1,3,11,45,196,894,4215,20377,100463,503191,2553291,13097469,67808104,353851124,1859313324,9828998946,52237988523,278952216129,1495976545546,8053571710250,43507491045810,235784617161780 ⋆ Reversion of y - y ^ 2 - y ^ 3 - y ^ 4 - y ^ 5. ● a(n)=sum(k=1..n - 1, (sum(j=0..k, binomial(k,j) * sum (i=j..n - k + j - 1, binomial(j,i - j) * binomial(k - j,n - 3 * (k - j) - i - 1)))) * binomial(n + k - 1,n - 1) / n, n>1. a(1)=1. [_ Vladimir Kruchinin _ , May 10 2011] ●

► [A191243] 1,1,3,11,45,197,902,4269,20717,102531,515521,2625909,13521776,70274194,368131940,1941801115,10304601189,54976677289,294708283729,1586565791533,8574185062861,46498569928775,252966168370110,1380203261726925,7550534790990360 ⋆ Reversion of x - x ^ 2 - x ^ 3 - x ^ 4 - x ^ 5 - x ^ 6. ● a(n)=sum(k=1..n - 1, binomial(n + k - 1,n - 1) * sum(r=0..k, binomial(k,r) * sum(m=0..r,(sum(j=0..m, binomial(j, - r + n - m - k - j - 1) * binomial(m,j)))) * binomial(r,m)))) / n, n>1, a(1)=1. ●

► [A146086] 3,11,45,197,903,4271,20625,100937,498123,2470931,12295605,61300877,305972943,1528270391,7636568985,38168496017,190799433363,953868026651,4768952712765,23843601302357,119214519727383,596062138283711,2980279310358945,14901302408615897 ⋆ Number of n - digit numbers with each digit odd where the digits 1 and 3 occur an even number of times. ● a(n) = (5 ^ n + 2 * 3 ^ n + 1) / 4. ● a(n) = 9 * a(n - 1) - 23 * a(n - 2) + 15 * a(n - 3). ●

► [A001003] 1,1,3,11,45,197,903,4279,20793,103049,518859,2646723,13648869,71039373,372693519,1968801519,10463578353,55909013009,300159426963,1618362158587,8759309660445,47574827600981,259215937709463,1416461675464871 ⋆ Schroeder's second problem (generalized parentheses); also called super - Catalan numbers or little Schroeder numbers. ● a(n + 1) = - a(n) + 2 * Sum _{ k=1..n } a(k) * a(n + 1 - k). - _ Philippe Deléham _ , Jan 27 2004 ● a(n - 2) = (1 / (n - 1)) * Sum _{ k=0..n - 3 } binomial(n - 1,k + 1) * binomial(n - 3,k) * 2 ^ (n - 3 - k) for n >= 3 [G. Polya, Elemente de Math., 12 (1957), p. 115.] - _ N. J. A. Sloane _ , Jun 13 2015 ● a(n + 1) = Sum _{ k=0..floor((n - 1) / 2) } 2 ^ k * 3 ^ (n - 1 - 2k) * binomial(n - 1, 2k) * Catalan(k). This formula counts colored Dyck paths by the same parameter by which Touchard's identity counts ordinary Dyck paths: number of DDUs (U=up step, D=down step). See also Gouyou - Beauchamps reference. - _ David Callan _ , Mar 14 2004 ● a(n - 1) = (d ^ (n - 1) / dx ^ (n - 1))((1 - x) / (1 - 2 * x)) ^ n / n!| _{ x=0 } . (For a proof see the comment on the unsigned row sums of triangle A111785.) ● a(n) = (1 / n) * Sum _{ k=1..n } binomial(n, k) * binomial(n + k, k - 1) = hypergeom([1 - n, n + 2], [2], - 1), n>=1. - _ Wolfdieter Lang _ , Sep 12 2005 ● a(n) = hypergeom([1 - n, - n], [2], 2) for n>=0. - _ Peter Luschny _ , Sep 22 2014 ●

► [A200075] 1,1,3,11,45,198,914,4367,21414,107155,544987,2808978,14640073,77025373,408544815,2182206259,11727989593,63373962690,344109933186,1876562458845,10273572074493,56443282489240,311097732946200,1719707775782826,9531914043637385 ⋆ G.f. satisfies A(x) = (1 + x * A(x) ^ 2) * (1 + x ^ 2 * A(x) ^ 3). ● a(n) = [x ^ n] G(x) ^ (n + 1) / (n + 1), where 1 + x * G(x) is the g.f. of A004148. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(2 * n - k + 1,k) * binomial(2 * n - k + 1,n - 2 * k) / (2 * n - k + 1). - _ Seiichi Manyama _ , Jul 18 2023 ●

► [A187764] 1,1,3,11,45,198,919,4445,22215,114000,597790,3191070,17289023,94845796,525838005,2941748627,16585870501,94147448172,537592229784,3085816136840,17795391949590,103051160368120,598997937352830,3493575551891610,20438727738501275 ⋆ Number of uud - avoiding rooted non - crossing trees of n + 1 vertices with the root 1. ● a(n) = Sum _ (k=1..n, (C(2 * k - 2,k - 1) * Sum _ (i=k..n, i * C(i - 1,k - 1) * C(2 * n - i - 1,n - 1))) / k) / n, n>0, a(0)=1. - _ Vladimir Kruchinin _ , Jan 23 2013 ● a(n) = Sum _{ k=1..n } binomial(2 * k - 2, k - 1) * binomial(2 * n,n - k) / n, a(0)=1. - _ Vladimir Kruchinin _ , Apr 28 2016 ● a(n) = Catalan(n) * hypergeom([1 / 2, 1 - n], [n + 2], - 4) for n>=1. - _ Peter Luschny _ , Apr 28 2016 ●

► [A083886] 1,3,11,45,201,963,4899,26253,147345,862083,5238459,32957037,214117209,1433320515,9867008979,69734001357,505212273441,3747124863747,28418591888235,220152270759597,1740363304031721,14027180742479043,115176800996769411,962726355659386125,8186311912829551281 ⋆ Expansion of e.g.f. exp(3 * x) * exp(x ^ 2). ● a(n) = Sum _{ k=0..floor(n / 2) } C(n,2k) * (2k)! * 3 ^ (n - 2k) / k!. (End) ● a(n) = i ^ n * Hermite _ H(n, - 3i / 2), i=sqrt(- 1). - _ Paul Barry _ , Jun 15 2009 ● a(0) = 1; a(1) = 3; a(n) = 3 * a(n - 1) + 2 * (n - 1) * a(n - 2) for n >= 2. - _ Justin M. Troyka _ , Aug 05 2011 ●

► [A006605] 1,1,3,11,46,207,979,4797,24138,123998,647615,3428493,18356714,99229015,540807165,2968468275,16395456762,91053897066,508151297602,2848290555562,16028132445156,90516256568235,512831902620465,2914112388802779,16604034506299314 ⋆ Number of modes of connections of 2n points. ● a(n) = (1 / (2 * n + 1)) * Sum _{ j=0...2 * n + 1 } binomial(j,2 * j - 2 - 3 * n) * binomial(2 * n + 1,j). - _ Vladimir Kruchinin _ , Dec 24 2010 ●

► [A371428] 1,3,11,46,209,1003,5002,25665,134605,718371,3888633,21298962,117823660,657344600,3694378463,20896495211,118865999117,679545095167,3902327585407,22499738052954,130200110475407,755927955655813,4402088019958400,25706104810367515 ⋆ Expansion of (1 / x) * Series _ Reversion(x / ((1 + x) ^ 3 - x ^ 2)). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 2) } (- 1) ^ k * binomial(n + 1,k) * binomial(3 * n - 3 * k + 3,n - 2 * k). ●

► [A233389] 1,1,3,11,46,209,1006,5053,26227,139726,760398,4211959,23681987,134869448,776657383,4516117107,26486641078,156532100029,931426814462,5576590927886,33574649282538,203169756237944,1235156720288767,754109902883226 1,462222138214316 46 ⋆ Naturally embedded ternary trees having no internal node of label greater than 1. ● a(n) = (2 / (n + 1)) * binomial(3 * n,n) + Sum _{ k=0..n } (- 1) ^ (k + 1) * Fibonacci(k + 1) * binomial(3 * n,n - k) * (n * (1 * k + 5) - 2 * k(k + 1)) / (n * (2 * n + k + 1)) for n >= 1. See Kuba, Corollary 1, p. 6. ●

► [A086521] 1,1,3,11,46,210,1021,5202,27477,149324,830357,4705386,27087106,158019030,932390694,5555902302,33391080001,202196156448,1232550473918,7558030268270,46592437224093,288599067239678,1795348952256896 ⋆ Number of tandem duplication trees on n duplicated gene segments. ● a(n) = b(n + 1, n - 1), where b(n, 0) = b(n - 1, 0) + b(n - 1, 1); b(n, k) = b(n - 1, k + 1) + b(n, k - 1), for k = 1, ..., n - 2; with initial values b(2, 0) = 1, b(3, 0) = 0, b(3, 1) = 1. ●

► [A129579] 1,1,3,11,46,213,1075,5854,34141,211974,1394115,9670976,70501776,538393812,4294921858,35702077464,308575560999,2767618399029,25713383197122,247072773486828,2451716229465559,25090920235275889 ⋆ Main diagonal of triangle A129577. ● a(n) = Sum _{ k=0..n - 1 } a(k) * C(2 * n - k - 1,n - k - 1) * (k + 2) / (n + 1) for n>0, with a(0)=1; eigensequence of triangle A033184 when the first column is omitted. - _ Paul D. Hanna _ , Aug 12 2008 ●

► [A264416] 1,1,3,11,46,234,1269,7609,48501,328831,2347655,17551462,136902440,1109043889,9308756773,80704240807,721319484280,6632169860334,62631220229804,606525577239266,6015393685594488,61024457251302195,632560831051022660,6693134988051996106,72226722923184020925 ⋆ G.f.: Sum _{ n>=0 } x ^ n * (d / dx) ^ (n ^ 2) x ^ (n ^ 2) * (1 + x) ^ n / (n ^ 2)!, where (d / dx) ^ k denotes the k - th derivative operator. ● a(n) = Sum _{ k=0..[n / 2] } binomial(n - k, k) * binomial((n - k) ^ 2 + k, k). ●

► [A163063] 3,11,47,199,843,3571,15127,64079,271443,1149851,4870847,20633239,87403803,370248451,1568397607,6643838879,28143753123,119218851371,505019158607,2139295485799,9062201101803,38388099893011 ⋆ Lucas(3n + 2) = Fibonacci(3n + 1) + Fibonacci(3n + 3). ● a(n) = 4 * a(n - 1) + a(n - 2) for n > 1; a(0) = 3, a(1) = 11. ● a(n) = ((3 + sqrt(5)) * (2 + sqrt(5)) ^ n + (3 - sqrt(5)) * (2 - sqrt(5)) ^ n) / 2. ●

► [A247313] 1,3,11,47,219,1063,5251,26127,130379,651383,3255891,16277407,81382939,406906503,2034516131,10172547887,50862673899,254313238423,1271565929971,6357829125567,31789144579259,158945720799143,794728599801411,3973642990618447 ⋆ a(n) = 5 * a(n - 1) - 2 ^ n for n>0, a(0)=1. ● a(n) = (2 ^ (n + 1) + 5 ^ n) / 3. ● a(n) = 7 * a(n - 1) - 10 * a(n - 2) for n>1. ●

► [A216947] 1,1,3,11,47,225,1173,6529,38265,233795,1478265,9619065,64135965,436693431,3028075677,21335364345,152466207953,1103356966359,8075335006933,59706844371261,445545262970505,3352776605782479,25424338834654587 ⋆ Number of 2 - colored non - crossing set partitions of [n]. ● a(n) = (2 * (5 * n ^ 2 + 6 * n - 2) * a(n - 1) - 9 * (n - 2) * (n + 1) * a(n - 2)) / ((n + 2) * (n + 3)) for n >= 2. - _ Andrew Howroyd _ , Dec 26 2019, after Marberg theorem 1.7. ● a(n) = Sum _{ j=0..n } Sum _{ k=0..j } C(n - 1,j) * C(j + 2,k) * C(j + 2,k + 1) * C(j + 2,k + 2)) / (C(j + 2,1) * C(j + 2,2)). - _ Michael D. Weiner _ , Jan 21 2020 ●

► [A035009] 1,1,3,11,47,227,1215,7107,44959,305091,2206399,16913987,136823263,1163490499,10366252031,96491364675,935976996127,9440144423875,98800604237119,1071092025420867,12008090971866207,139014305916844739,1659578039401022079,20405708646650507075 ⋆ STIRLING transform of [1,1,2,4,8,16,32,...]. ● a(n + 1) = 1 + 2 * Sum _{ j=1..n } binomial(n, j) * a(j). - _ Jon Perry _ , Apr 25 2005 ●

► [A051296] 1,1,3,11,47,231,1303,8431,62391,524495,4960775,52223775,605595319,7664578639,105046841127,1548880173119,24434511267863,410503693136559,7315133279097607,137787834979031839,2734998201208351479,57053644562104430735,1247772806059088954855 ⋆ INVERT transform of factorial numbers. ● a(0) = 1; a(n) = Sum _{ k=1..n } a(n - k) * k! for n>0. ● a(n) is the upper left term of M ^ n, M = an infinite square production matrix as follows: ●

► [A020543] 1,1,3,11,47,239,1439,10079,80639,725759,7257599,79833599,958003199,12454041599,174356582399,2615348735999,41845579775999,711374856199199,12804747411455999,243290200817663999,4865804016353279999 ⋆ a(0) = 1, a(1) = 1, a(n + 1) = (n + 1) * a(n) + n. ● a(n) = 2 * n! - 1. - _ Gary W. Adamson _ , Jan 07 2008 ● a(0) = a(1) = 1, a(n) = a(n - 1) * n + (n - 1) for n >= 2. - _ Jaroslav Krizek _ , Jan 23 2010 ●

► [A111139] 0,1,3,11,47,240,1448,10149,81213,730951,7309565,80405304,964863792,12543229529,175605213783,2634078207355,42145251318667,716469272418936,12896446903543432,245032491167329389,4900649823346594545 ⋆ a(n) = n! * Sum _{ k=0..n } Fibonacci(k) / k!. ● a(n) = (phi ^ n * hypergeom([1, - n], [], 1 - phi) - (1 - phi) ^ n * hypergeom([1, - n], [], phi)) / sqrt(5). ● a(n) = (exp(phi) * Gamma(n + 1, phi) - exp ^ (1 - phi) * Gamma(n + 1, 1 - phi)) / sqrt(5), where Gamma(a, x) is the upper incomplete Gamma function. ●

► [A181278] 0,3,11,48,188,768,3056,12288,49088,196608,786176,3145728,12581888,50331648,201322496,805306368,3221209088,12884901888,51539542016,206158430208,824633458688,3298534883328,13194138484736,52776558133248 ⋆ Number of 2 X n binary matrices M with rows in strictly increasing order and rows of M * Mtranspose (mod 2) in strictly decreasing order. ● a(n) = 4 * a(n - 1) + 4 * a(n - 2) - 16 * a(n - 3) for n>3. ●

► [A362741] 1,1,3,11,48,232,1207,6631,37998,225182,1371560,8546760,54294880,350658336,2297296991,15239785151,102218278626,692361482818,4730891905450,32581995322522,226000929559056,1577824515023456,11080975421752488,78244477268207656 ⋆ Number of parking functions of size n avoiding the pattern 123. ● a(n) mod 2 = 1 <=> n in { A075427 } U { 0 } . - _ Alois P. Heinz _ , May 01 2023 ●

► [A233162] 1,1,3,11,48,236,1248,6896,39168,226496,1325568,7821056,46399488,276294656,1649369088,9862639616,59041579008,353712521216,2120127479808,12712174616576,76238687305728,457294683570176,2743218342985728 ⋆ Number of n X 1 0..7 arrays with no element x(i,j) adjacent to itself or value 7 - x(i,j) horizontally, diagonally, antidiagonally or vertically, top left element zero, and 1 appearing before 2 3 4 5 and 6, 2 appearing before 3 4 and 5, and 3 appearing before 4 in row major order (unlabelled 8 - colorings with no clashing color pairs). ● a(n) = (2 ^ (n - 6) * (90 + 9 * 2 ^ n + 2 * 3 ^ n)) / 9 for n>1. ●

► [A186185] 1,1,3,11,48,239,1306,7612,46436,292875,1894365,12496864,83753165,568628232,3902600850,27031069848,188709211952,1326456525471,9379857716098,66680723764051,476269444919163,3416178576731504 ⋆ Expansion of 1 / (1 - x * A001764(x / (1 - x)) / (1 - x)). ● a(n) = Sum _{ m=1..n } Sum _{ k=m..n

} binomial(n - 1,k - 1) * m / (2 * k - m) * binomial(3 * k - 2 * m - 1,k - m), n> 0, a(0)=1. ●

► [A367874] 1,3,11,48,241,1358,8445,57256,419233,3290202,27507349,243731084,2278919697,22402234390,230781192301,2484462888312,27880896280513,325432611292082,3943062342781605,49504837209940612,642982531293731761,8626753575445207278 ⋆ Expansion of e.g.f. exp(x * (2 + exp(x))). ● a(n) = Sum _{ k= 0..n } (k + 2) ^ (n - k) * binomial(n,k). ●

► [A113060] 1,3,11,48,244,1423,9415,70045,581507,5349538,54173950,600127047,7229169001,94170096335,1319764307235,19806944750672,316993980880556,5389579751775611,97018268274166055 ⋆ a(n) = n! * Sum _{ k=0..n } bell(k + 1) / k!, n=0,1..., where bell(n) are the Bell numbers, cf. A000110. ● a(n) = (- 1) ^ n * n! * Sum _{ p >=1 } LaguerreL(n, - n - 1, p) / (p - 1)! / exp(1), n>=0. ●

► [A333514] 1,3,11,49,229,1081,5123,24323,115567,549253,2610697,12409597,58988239,280398495,1332867179,6335755801,30116890013,143160058769,680508623307,3234784886251,15376488953815,73091850448509,347440733910081,1651552982759797,7850625988903223 ⋆ Number of self - avoiding closed paths on an n X 4 grid which pass through four corners ((0,0), (0,3), (n - 1,3), (n - 1,0)). ● a(n) = 7 * a(n - 1) - 12 * a(n - 2) + 7 * a(n - 3) - 3 * a(n - 4) - 2 * a(n - 5) for n > 6. ●

► [A268414] 1,3,11,49,237,1175,5863,29301,146489,732427,3662115,18310553,91552741,457763679,2288818367,11444091805,57220458993,286102294931,1430511474619,7152557373057,35762786865245,178813934326183,894069671630871,4470348358154309 ⋆ a(n) = 5 * a(n - 1) - 2 * n for n>0, a(0) = 1. ● a(n) = (4 * n + 3 * 5 ^ n + 5) / 8. ●

► [A074528] 3,11,49,251,1393,8051,47449,282251,1686433,10097891,60526249,362976251,2177317873,13062296531,78368963449,470199366251,2821153019713,16926788715971,101560344351049,609360902796251 ⋆ a(n) = 2 ^ n + 3 ^ n + 6 ^ n . ● a(n) = 11 * a(n - 1) - 36 * a(n - 2) + 36 * a(n - 3). - _ Wesley Ivan Hurt _ , Aug 21 2020 ●

► [A246985] 1,3,11,49,251,1393,8051,47449,282251,1686433,10097891,60526249,362976251,2177317873,13062296531,78368963449,470199366251,2821153019713,16926788715971,101560344351049,609360902796251,3656161927895953,21936961102828211,131621735227521049,789730317205170251 ⋆ Expansion of (1 - 8 * x + 14 * x ^ 2) / ((1 - 2 * x) * (1 - 3 * x) * (1 - 6 * x)). ● a(n) = 11 * a(n - 1) - 36 * a(n - 2) + 36 * a(n - 3) for n>2. [_ Bruno Berselli _ , Mar 25 2015] ● a(n) = 2 ^ (n - 1) + 3 ^ (n - 1) + 6 ^ (n - 1). - _ Álvar Ibeas _ , Mar 25 2015 ●

► [A004211] 1,1,3,11,49,257,1539,10299,75905,609441,5284451,49134923,487026929,5120905441,56878092067,664920021819,8155340557697,104652541401025,1401572711758403,19546873773314571,283314887789276721,4259997696504874817,66341623494636864963 ⋆ Shifts one place left under 2nd - order binomial transform. ● a(n) = Sum _{ k=0..n } 2 ^ (n - k) * Stirling2(n, k). - _ Emeric Deutsch _ , Feb 11 2002 ● a(n) = upper left term in M ^ n, M = an infinite square production matrix with an appended diagonal of (2,2,2,...) to the right of Pascal's triangle: ● a(n) = D ^ n(exp(x)) evaluated at x = 0, where D is the operator (1 + 2 * x) * d / dx. Cf. A000110. - _ Peter Bala _ , Nov 25 2011 ● a(n) = B _ n(2 ^ 0, ..., 2 ^ (n - 1)), where B _ n(x _ 1, ..., x _ n) is the n - th complete Bell polynomial. - _ Lorenzo Sauras Altuzarra _ , Jun 17 2022 ●

► [A001339] 1,3,11,49,261,1631,11743,95901,876809,8877691,98641011,1193556233,15624736141,220048367319,3317652307271,53319412081141,909984632851473,16436597430879731,313262209859119579,6282647653285676001 ⋆ a(n) = Sum _{ k=0..n } (k + 1)! binomial(n,k). ● a(n) = round(evalf(exp(1) * (n - 1) * (n - 1)!)) (n>1). ● a(n) = floor(n * n! * e) + 1. - Melvin J. Knight (knightmj(AT)juno.com), May 30 2001 ● a(n) = { e * n * n! } for n > 0, where { x } denotes the nearest integer part. Proposed by _ Simon Plouffe _ , March 1993. ● a(n) = Sum _{ k=0..n } P(n, k) * (k + 1). - _ Ross La Haye _ , Aug 28 2005 ● a(n) = n! * n * (3 - Sum _{ j=2..n } 1 / (j * (j - 1) * j!) for n>=1. - _ Emeric Deutsch _ , Apr 12 2008 ● a(n) = (a(n - 1) ^ 2 + 2 * a(n - 2) ^ 2 + a(n - 2) * a(n - 3) - 4 * a(n - 1) * a(n - 3)) / (a(n - 2) - a(n - 3)) if n>1. - _ Michael Somos _ , Oct 20 2011 ●

► [A346762] 1,3,11,50,271,1655,10900,75388,539295,3954593,29557251,224308078,1723659436,13384272660,104855628776,827760536528,6578127170319,52581460222645,422478996770305,3410174204693310,27640220748529799,224864685110361767,1835589569664256976 ⋆ G.f. A(x) satisfies: A(x) = 1 / (1 - 2 * x) + x * (1 - 2 * x) * A(x) ^ 3. ● a(n) = Sum _{ k=0..n } binomial(n,k) * binomial(3 * k,k) * 2 ^ (n - k) / (2 * k + 1). ●

► [A000254] 0,1,3,11,50,274,1764,13068,109584,1026576,10628640,120543840,1486442880,19802759040,283465647360,4339163001600,70734282393600,1223405590579200,22376988058521600,431565146817638400,8752948036761600000,186244810780170240000 ⋆ Unsigned Stirling numbers of first kind, s(n + 1,2): a(n + 1) = (n + 1) * a(n) + n!. ● a(n) is the coefficient of x ^ (n + 2) in (- log(1 - x)) ^ 2, multiplied by (n + 2)! / 2. ● a(n) = n! * Sum _{ k=1..n } (- 1) ^ (k + 1) * binomial(n, k) / k. - _ Vladeta Jovovic _ , Jan 29 2005 ● a(n + 1) = Sum _{ i =1..floor((n - 1) / 2) } n! / ((n - i) * i) + Sum _{ i=ceiling(n / 2)..floor(n / 2) } n! / (2 * (n - i) * i). - _ Shanzhen Gao _ , Sep 14 2010 ● a(n) = (a(n - 1) * (n ^ 2 - 2 * n + 1) + (n + 1)!) / (n - 1) for n > 2. ● a(n) = Integral _{ x=0..oo } (x ^ n - n!) * log(x) * exp(- x) dx. - _ Groux Roland _ , Mar 28 2011 ● a(n) = 3 * n! / 2 + 2 * (n - 2)! * Sum _{ k=0..n - 3 } binomial(k + 2,2) / (n - 2 - k) for n >= 2. - _ Gary Detlefs _ , Sep 02 2011 ●

► [A256126] 1,1,3,11,50,278,1860,14793,138166,1494034,18422609,255359957,3929301362,66412322717,1222216175058,24314268876147,519701698551031,11874016816562299,288722141589331161,7442890569982739838,202733505298293899570,5817564888930184685708 ⋆ Coefficients in asymptotic expansion of sequence A179327. ● a(k) ~ (k - 1)! / (log(2)) ^ k. ●

► [A284702] 3,11,51,183,663,2435,8935,32775,120219,440971,1617531,5933271,21763823,79831875,292831311,1074134535,3940032883,14452434635,53012975555,194456895863,713287340551,2616409296963,9597250953527,35203676264199,129130605057163 ⋆ Number of dominating sets in the n - prism graph. ● a(n) = 3 * a(n - 1) + a(n - 2) + 5 * a(n - 3) + a(n - 4) + a(n - 5) - a(n - 6) - a(n - 7). ●

► [A191341] 3,11,51,227,963,3971,16131,65027,261123,1046531,4190211,16769027,67092483,268402691,1073676291,4294836227,17179607043,68718952451,274876858371,1099509530627,4398042316803,17592177655811,70368727400451,281474943156227,1125899839733763 ⋆ a(n) = 4 ^ n - 2 * 2 ^ n + 3. ● a(n) = 4 ^ n - 2 ^ (n + 1) + 3. - _ Nathaniel Johnston _ , May 30 2011 ● a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3). - _ Eric W. Weisstein _ , Jun 29 2017 ●

► [A199212] 3,11,51,251,1251,6251,31251,156251,781251,3906251,19531251,97656251,488281251,2441406251,12207031251,61035156251,305175781251,1525878906251,7629394531251,38146972656251,190734863281251,953674316406251 ⋆ a(n) = 2 * 5 ^ n + 1. ● a(n) = 5 * a(n - 1) - 4. ● a(n) = 6 * a(n - 1) - 5 * a(n - 2). ●

► [A112696] 1,3,11,51,275,1619,10067,64979,431059,2920403,20119507,140513235,992530387,7078367187,50896392147,368577073107,2685777334227,19678579249107,144888698621907,1071443581980627,7954422715502547 ⋆ Partial sum of Catalan numbers A000108 multiplied by powers of 2. ● a(n) = Sum _{ j=0..n } binomial(2 * j,j) * 2 ^ j / (j + 1). - _ Zerinvary Lajos _ , Oct 26 2006 ●

► [A357830] 0,0,1,3,11,51,289,1939,15029,132069,1296771,14063721,166897059,2150579067,29895590361,445871456667,7100686041813,120249378265653,2157637558311963,40887284144179473,815949872494416387,17103401793743095467,375692072337527815233 ⋆ a(n) = Sum _{ k=0..floor((n - 2) / 3) } |Stirling1(n,3 * k + 2)|. ● a(n) = ((1) _ n + w * (w) _ n + w ^ 2 * (w ^ 2) _ n) / 3, where (x) _ n is the Pochhammer symbol. ●

► [A056199] 0,1,3,11,51,291,1971,15411,136371,1345971,14651571,174318771,2249992371,31309422771,467200878771,7441464174771,126003940206771,2260128508782771,42808495311726771,853775831370606771,17884089888607086771,392550999147809646771 ⋆ a(n) = n * a(n - 1) - Sum _{ k=1..n - 2 } a(k) with a(1) = 0 and a(2) = 1. ● a(1)=0, a(n) = (1 / 3) * Sum _{ k=1..n } k! for n > 1. - _ Benoit Cloitre _ , Nov 12 2005 ● a(n) = (n + 1) * a(n - 1) - n * a(n - 2) for n >= 4, a(n) = n * (n - 1) / 2 for n < 4. - _ Alois P. Heinz _ , Aug 11 2019 ●

► [A230008] 1,1,3,11,51,295,2055,16715,155355,1624255,18868575,241112675,3361168275,50760093175,825541973175,14385306834875,267379330468875,5280383597275375,110414649582951375,2437075699774353875,56622329782817431875,1381324610464997374375,35302637257323023454375 ⋆ E.g.f. A(x) satisfies: A'(x) = - 1 + A(x) + A(x) ^ 2. ● a(0) = a(1) = 1; a(n) = a(n - 1) + Sum _{ k=0..n - 1 } binomial(n - 1,k) * a(k) * a(n - k - 1). - _ Ilya Gutkovskiy _ , Jul 05 2020 ●

► [A367046] 1,1,3,11,52,258,1344,7260,40290,228363,1316414,7694154,45491247,271594897,1635068538,9914851401,60503259435,371269891422,2289545742174,14181772631025,88194284530464,550444913949048,3446737067467311,21647081264988312 ⋆ G.f. satisfies A(x) = 1 - x ^ 3 + x * A(x) ^ 3. ● a(n) = Sum _{ k =0..floor(n / 3) } (- 1) ^ k * binomial(2 * (n - 3 * k) + 1,k) * binomial(3 * (n - 3 * k),n - 3 * k) / (2 * (n - 3 * k) + 1). ●

► [A058799] 1,3,11,52,301,2055,16139,143196,1415821,15430835,183754199,2373373752,33043478329,493278801183,7859417340599,133116815989000,2388243270461401,45243505322777619,902481863185090979 ⋆ Column 2 of A007754. ● a(n) = Sum _{ k = 0..floor(n / 2) } (- 1) ^ k * (n - 2 * k)! * binomial(n - k,k) * binomial(n - k + 2,k + 2). Cf. A058798. - _ Peter Bala _ , Aug 01 2013 ●

► [A357833] 0,0,1,3,11,52,304,2114,16992,154626,1568706,17535108,213965520,2828584824,40259041188,613656673476,9971942784132,172071391424832,3141974627361216,60523400730707208,1226519845766281008,26084378634267048984,580854626450078463000 ⋆ a(n) = Sum _{ k=0..floor((n - 2) / 3) } 2 ^ k * |Stirling1(n,3 * k + 2)|. ● a(n) = ((2 ^ (1 / 3)) _ n + w * (2 ^ (1 / 3) * w) _ n + w ^ 2 * (2 ^ (1 / 3) * w ^ 2) _ n) / (3 * 2 ^ (2 / 3)), where (x) _ n is the Pochhammer symbol. ●

► [A054362] 1,1,1,3,11,52,307,1936,13207,93496,683988,5127163,39230669,305299420,2410624122,19273255184,155780437711,1271253542364,10462650241996,86765190816362,724450039738076,6086167189623746,51416796881915019 ⋆ Number of unlabeled 4 - gonal cacti having n polygons. ● a(n) = ((Sum _{ d|n } phi(n / d) * binomial(4 * d, d)) + (Sum _{ d|gcd(n - 1, 4) } phi(d) * binomial(4 * n / d, (n - 1) / d))) / (4 * n) - binomial(4 * n, n) / (3 * n + 1) for n > 0. - _ Andrew Howroyd _ , Apr 30 2018 ●

► [A129833] 1,3,11,52,309,2221,18703,180216,1952457,23466223,309577971,4444537868,68948023741,1148825560377,20455144724407,387479309532976,7778881684953873,164942847995071611,3682885668837002587,86359724102207331876,2121535102985378053061,54482075844410029721893,1459677302947807284662751 ⋆ a(n) = Sum _{ k = 0..n } binomial(n + 1, k + 1) * binomial(n, k) * k!. ● a(n) = Sum _{ k=0..n } binomial(n,k) ^ 2 * ((n + 1) * k! / (k + 1)). ● a(n) = (n + 1) * Hypergeometric3F1([- n, - n, 1], [2], 1). (End) ●

► [A039302] 1,3,11,53,261,1303,6511,32553,162761,813803,4069011,20345053,101725261,508626303,2543131511,12715657553,63578287761,317891438803,1589457194011,7947285970053,39736429850261,198682149251303,993410746256511 ⋆ Number of distinct quadratic residues mod 5 ^ n. ● a(n) = floor((5 ^ n + 3) * 5 / 12). ● a(n) = 5 * a(n - 1) + a(n - 2) - 5 * a(n - 3). _ Vincenzo Librandi _ , Apr 21 2012 ●

► [A074512] 3,11,53,281,1553,8801,50753,296321,1745153,10339841,61514753,366991361,2193559553,13127802881,78632599553,471258726401,2825404874753,16943839313921,101628676145153,609634617917441 ⋆ a(n) = 1 ^ n + 4 ^ n + 6 ^ n . ● a(n) = 10 * a(n - 1) - 24 * a(n - 2) + 15 with a(0)=3, a(1)=11. - _ Vincenzo Librandi _ , Jul 21 2010 ●

► [A000255] 1,1,3,11,53,309,2119,16687,148329,1468457,16019531,190899411,2467007773,34361893981,513137616783,8178130767479,138547156531409,2486151753313617,47106033220679059,939765362752547227,19690321886243846661,432292066866171724421 ⋆ a(n) = n * a(n - 1) + (n - 1) * a(n - 2), a(0) = 1, a(1) = 1. ● a(n) = Sum _{ k=0..n } (- 1) ^ k * (n - k + 1) * n! / k!. - _ Len Smiley _ ● a(n) = floor((1 / e) * n! * (n + 2) + 1 / 2). - _ Benoit Cloitre _ , Jan 15 2004 ● a(n) = (n * (n + 2) * a(n - 1) + (- 1) ^ n) / (n + 1) for n >= 1, a(0)=1. See the Charalambides reference. ● a(n) = GAMMA(n + 3, - 1) * exp(- 1) / (n + 1) (incomplete Gamma function). - _ Mark van Hoeij _ , Nov 11 2009 ● a(n) = hypergeometric([2, - n],[],1) * (- 1) ^ n = KummerU(2,3 + n, - 1) * (- 1) ^ n. See the Abramowitz - Stegun handbook (for the reference see e.g. A103921) p. 504, 13.1.10, and for the recurrence p. 507, 13.4.16. - _ Wolfdieter Lang _ , May 20 2010 ● a(n) = 1 / (n + 1) * floor(((n + 1)! + 1) / e). - _ Gary Detlefs _ , Jul 11 2010 ●

► [A121580] 1,3,11,53,317,2237,18077,164237,1656077,18348557,221561357,2895986957,40737113357,613623026957,9854521894157,168083120422157,3034505335

078157,57810369261862157,1159018646647078157 ⋆ Number of cells in column 1 of all deco polyominoes of height n. A deco polyomino is a directed column - co nvex polyomino in which the height, measured along the diagonal, is attained o nly in the last column. • a(1)=1, a(n)=a(n - 1) + (n - 1)! * ([1 + n(n - 1) / 2] f or n>=2. • a(n)=(1 / 2)Sum(j!,j=0..n + 1) - n!. - _ Emeric Deutsch _ , Apr 0 6 2008 •

► [A224345] 1,3,11,53,323,2359,19877,188591,1981963,22795849,284285351,3815 293199,54762206985,836280215979,13527449608779,230894574439485,414474114 3359355,78017419806432567,1535903379571939981,31550210953904250759 ⋆ Nu mber of closed normal forms of size n in lambda calculus with size 0 for the vari ables. • a(n) = F(n,0) where F(0,m) = m, F(n + 1,m) = F(n,m + 1) + G(n + 1,m), and G(0,m) = m, G(n + 1,m) = sum(k=0..n, G(n - k,m) * F(k,m) * d(n,0)) where d(0,i) = [i = 1], d(n + 1,i) = sum(j=i..n + 1, binomial(j,i) * d(n,j) + g(n + 1,j)) and g(0,i) = [i = 1], g(n + 1,i) = sum(j=0..i, sum(k=0..n, g(k,j) * d (n - k,i - j))). •

► [A081367] 1,3,11,53,345,2947,31411,400437,5927921,99816515,1882741659,393 10397557,899919305929,22410922177347,603120939234755,17441737474345973,5 39390080299331809,17762381612118471043 ⋆ E.g.f.: exp(2 * x) / sqrt(1 - 2 * x). • a(n) = U(1 / 2,3 / 2 + n,1) * 2 ^ n, where U is the confluent hypergeometric Kummer function U. - _ John M. Campbell _ , May 04 2011 • a(n) = 2 ^ n * hypergeom([1 / 2, - n],[], - 1). •

► [A302760] 3,11,54,179,648,2414,8809,32195,117945,431696,1579955,5783294,21 168592,77482521,283608249,1038086883,3799689944,13907938601,50906985592,1 86333942984,682034858839,2496440225499,9137676323347,33446476209566,1224 23549667123 ⋆ Number of total dominating sets in the n - antiprism graph. • a (n) = 3 * a(n - 1) + a(n - 2) + 6 * a(n - 3) - 3 * a(n - 4) + a(n - 7) for n > 7. •

► [A094259] 1,3,11,55,315,1871,11203,67191,403115,2418655,14511891,8707130 3,522427771,3134566575,18807399395,112844396311,677066377803,406239826675 1,24374389600435,146246337602535,877478025615131,5264868153690703,315892 08922144131,189535253532864695 ⋆ Expansion of g.f.: (1 - 5 * x) / ((1 - 6 * x) * (1 - x) ^ 2). • a(n) = (6 ^ (n + 1) + 20 * n + 19) / 25. •

► [A007841] 1,1,3,11,56,324,2324,18332,167544,1674264,18615432,223686792,293 7715296,41233157952,623159583552,10008728738304,171213653641344,30926534 20877952,59086024678203264,1185657912197967744,25015435198774723584,5521 30504313534175744 ⋆ Number of factorizations of permutations of n letters into cycles in nondecreasing length order. • a(n) = Sum _{ k=1..n } (n - 1)! / (n - k)! * b(k) * a(n - k), where b(k) = Sum _{ d divides k } d ^ (1 - k / d) and a(0) = 1. - _ Vladeta Jovovic _ , Oct 14 2002 • a(n) = R(n,1), R(n,m) = R(n,m + 1) + binomial(n,m) * (m - 1)! * R(n - m,m), R(n,n)=(n - 1)!, R(n,m)=0 for n<m. - _ Vladimir Kruchinin _ , Sep 09 2014 •

► [A001586] 1,1,3,11,57,361,2763,24611,250737,2873041,36581523,512343611,782 8053417,129570724921,2309644635483,44110959165011,898621108880097,194507 18635716001,4457776360634606 43,1078405256112570481 1,2746136435715686827 77,7342627959965776406281 ⋆ Generalized Euler numbers, or Springer numbers . • a(n) = numerator of abs(Euler(n,1 / 4)). - _ N. J. A. Sloane _ , Nov 07 20 09 • a(n) = (- 1) ^ floor(n / 2) Sum _{ k=0..n } 2 ^ k C(n,k) Euler(k). - _ Pe ter Luschny _ , Jul 08 2009 • a(n) = | 2 * 4 ^ n * lerchphi(- 1, - n, 1 / 4) |. - _ Peter Luschny _ , Apr 27 2013 • a(n) = (- 1) ^ C(n + 1,2) * 2 ^ (3 * n + 1) * (Zeta(- n,1 / 8) - Zeta(- n,5 / 8)), where Zeta(a,z) is the generalized Rieman n zeta function. - _ Peter Luschny _ , Mar 11 2015 •

► [A028342] 1,1,3,11,59,339,2629,20677,202089,2066201,24322931,296746251,419 3572723,59806188571,954679763829,15845349818789,285841314451409,52932038 21406897,106976406006818659,2201383054398314251 ⋆ Expansion of Product _{ i>=1 } (1 - x ^ i) ^ (- 1 / i); also of exp(Sum _{ n>=1 } (d(n) * x ^ n / n)) where d is number of divisors function. • a(n) = (n - 1)! * Sum _{ i=0..n - 1 } d(i + 1) * a(n - i - 1) / (n - i - 1)!, a(0)=1, where d(i) is number of divisors func tion. - _ Vladimir Kruchinin _ , Feb 27 2015 • a(n) / n! ~ (w(n) / n) ^ (1 - ga mma) / sqrt(2 * Pi * abs(log(w(n) / n))) * exp(c + w(n) + (log(w(n) / n)) ^ 2 / 2), where w(n) = W(e ^ gamma * n), W is the Lambert W function, gamma i s the Euler - Mascheroni constant, c = Pi ^ 2 / 12 - gamma ^ 2 / 2 - 2 * gamma (1), and gamma(1) is the 1st Stieltjes number. •

► [A074509] 3,11,59,371,2483,17051,118379,825731,5771363,40373291,28253429 9,1977503891,13841818643,96890604731,678227855819,4747575858851,332329736 16323,232630643127371,1628413985330939,11398896347634611 ⋆ a(n) = 1 ^ n + 3 ^ n + 7 ^ n. • a(n) = 10 * a(n - 1) - 21 * a(n - 2) + 12 with a(0)=3, a(1)=11. - _ Vincenzo Librandi _ , Jul 21 2010 •

► [A228204] 3,11,61,213,4107,14339,79189,276477,5330883,18612011,102787261,3 58866933,6919482027,24158375939,133417785589,465809002557,8981482340163,3 1357553356811,173176182907261,604619726452053,11657957158049547,40702080 098764739 ⋆ y - values in the solution to x ^ 2 - 13y ^ 2 = 27. • a(n) = 1298 * a(n - 4) - a(n - 8). •

► [A095237] 1,3,11,61,379,2731,22301,203897,2064455,22938391,277554529,3633 441109,51170962283,771500662115,12399117783989,211611610180081,382223470 8877711,72847296804492847,1460990308134550985 ⋆ a(1)=1; then for n even, a(n)=(sum of previous terms times n) plus 1, for n odd, a(n)=(sum of previous te rms times n) minus 1. • a(n) = (n + 1)! - floor(((n + 1)! + 1) / e) - n! + floor ((n! + 1) / e), n > 1. - _ Gary Detlefs _ , Nov 07 2010 •

► [A233099] 3,11,65,386,2315,13886,83315,499886,2999315,17995886,107975315,6 47851886,3887111315,23322667886,139936007315,839616043886,5037696263315,3 0226177579886,181357065479315,1088142392875886 ⋆ Number of 2 X n 0..3 arr ays with no element x(i,j) adjacent to value 3 - x(i,j) horizontally, diagonally or antidiagonally, top left element zero, and 1 appearing before 2 in row major ord er. • a(n) = (24 + 25 * 6 ^ n) / 84 for n even. • a(n) = (60 + 25 * 6 ^ n) / 84 for n>1 and odd. •

► [A074504] 3,11,69,521,4113,32801,262209,2097281,16777473,134218241,107374 2849,8589936641,68719480833,549755822081,4398046527489,35184372121601,281 474976776193,2251799813816321,18014398509744129,144115188076380161 ⋆ a(n) = 1 ^ n + 2 ^ n + 8 ^ n. • a(n) = 10 * a(n - 1) - 16 * a(n - 2) + 7 with a(0)= 3, a(1)=11. - _ Vincenzo Librandi _ , Jul 21 2010 •

► [A241587] 1,3,11,107,759,6039,47403,381051,3088487,25298123,208803891,173 5293647,14504709959,121852053543,1028165819931,8709157908891,74025669921 687,631136066733099,5395888228066083,46247311947563667,39727733483015847 9,341977940103953670 3,2949331540354669997 1 ⋆ Coefficients in an expansion of the trace of the log of the adjacency operator on the infinite grid Z x Z. • a(n) = Sum _{ k=0..n } n * (- 3) ^ (n - k) * (n + k) ^ (- 1) * binomial(n + k, 2 * k) * binomial(2 * k, k) ^ 2). - _ Michel Marcus _ , Nov 23 2018 •

► [A088075] 3,11,131,1429,77141,1456729,117048931,10326137821,111081980737 1,140734085123059,11639258217451019 ⋆ Smallest number sandwiched between two numbers having exactly n prime divisors. • a(n)=Min { x; A001221[x - 1]= A001221[x + 1]=n } •

► [A372101] 0,1,3,11,1114111 ⋆ Number of steps required to kill a hydra compo sed of a linear graph with n edges where, after removing the rightmost head at step s, s new heads grow to the right of the head's grandparent node (see comm ents). • a(3) = (2 + 1) * 2 ^ 2 - 1 = (2 * a(1) + 1) * (2 ^ (a(1) + 1)) - 1 = 11. • a(4) = (2 ^ 2 ^ 2 + 1) * 2 ^ 2 ^ 2 ^ 2 - 1 = (2 ^^ a(2) + 1) * (2 ^^ (a(2) + 1)) - 1 = 1114111, where ^^ is Knuth's double arrow notation (tetration). •

► [A022380] 3,12,15,27,42,69,111,180,291,471,762,1233,1995,3228,5223,8451,1367 4,22125,35799,57924,93723,151647,245370,397017,642387 ⋆ Fibonacci sequence b eginning 3, 12. • a(n) = ((2 ^ (- n - 1) / 5) * ((15 + 21 * sqrt(5)) * (1 + sqrt(5)) ^ n + (15 - 21 * sqrt(5)) * (1 - sqrt(5)) ^ n). - _ Bogart B. Strauss _ , Oct 2 7 2013 •

► [A290593] 3,12,15,31,49,92,156,279,484,855,1495,2629,4608,8092,14195,24916,4 3719,76727,134641,236284,414644,727655,1276940,2240879,3932463 ⋆ Number of maximal independent vertex sets (and minimal vertex covers) in the n - antipri sm graph. • a(n) = a(n - 1) + a(n - 2) + a(n - 4). •

► [A001196] 0,3,12,15,48,51,60,63,192,195,204,207,240,243,252,255,768,771,780,7 83,816,819,828,831,960 ⋆ Double - bitters: only even length runs in binary expa nsion. • a(2n) = 4 * a(n), a(2n + 1) = 4 * a(n) + 3. •

► [A224924] 0,1,3,12,16,33,63,112,120,153,211,300,408,553,735,960,976,1041,115 5,1324,1536,1809,2143,2544,2952 ⋆ Sum _{ i=0..n } Sum _{ j=0..n } (i AND j), where AND is the binary logical AND operator. • a(2 ^ n) = a(2 ^ n - 1) + 2 ^ n. •

► [A136047] 1,3,12,16,41,47,96,104,185,195,316,328,497,511,736,752,1041,1059,1 420,1440,1881,1903,2432,2456,3081 ⋆ a(1)=1, a(n)=a(n - 1) + n if n even, a(n)= a(n - 1) + n ^ 2 if n is odd. • a(n) = (1 / 12)(1 + n)(2n ^ 2 + 7n - 3) if n is odd , a(n)=(1 / 12)n(2n ^ 2 + 3n + 4) if n is even. • a(n) = (- 3 + 3 * (- 1) ^ n + 8 * n + 12 * n ^ 2 - 6 * (- 1) ^ n * n ^ 2 + 4 * n ^ 3) / 24. • a(1)=1 then a(n) = a(n - 1) + n ^ (if n is even then 1 else 2), • a(n) = a(n - 1) + 3a(n - 2) - 3a(n - 3) - 3a(n - 4) + 3a(n - 5) + a(n - 6) - a(n - 7). G.f.: x * (1 + 2 * x + 6 * x ^ 2 - 2 * x ^ 3 + x ^ 4) / ((1 + x) ^ 3 * (x - 1) ^ 4). [_ R. J. Mathar _ , Feb 22 2 009] •

► [A234904] 3,12,18,21,30,36,39,48,54,57,66,72,75,84,90,93,102,108,111,120,126,1 29,138,144,147 ⋆ a(n) * Pi is the total length of irregular spiral (center points: 2 , 1, 3) after n rotations. • a(n) = a(n - 1) + a(n - 3) - a(n - 4). •

► [A134965] 3,12,19,28,35,44,51,60,67,76,83,92,99,108,115,124,131,140,147,156,1 63,172,179,188,195 ⋆ a(1)=3, a(n) = a(n - 1) + 7 + 2 * mod(n - 1, 2) for n>=2. • a(n) = 8 * n - 4 for n even. • a(n) = 8 * n - 5 for n odd. • a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n>3. •

► [A063102] 3,12,20,30,38,48,56,66,74,84,92,102,110,120,128,138,146,156,164,17 4,182,192,200,210,218 ⋆ Dimension of the space of weight 2n cusp forms for Ga mma _ 0(34). • a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n>4. • a(n) = ((- 1) ^ n + 18 * n - 13) / 2 for n>1. •

► [A212760] 1,3,12,20,45,63,112,144,225,275,396,468,637,735,960,1088,1377,153 9,1900,2100,2541,2783,3312,3600,4225 ⋆ Number of (w,x,y,z) with all terms in { 0,...,n } , w even, and x = y + z. • a(n) = a(n - 1) + 3 * a(n - 2) - 3 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) + a(n - 6) - a(n - 7). • a(n) = (n + 1) * (n + 2) * (2 * n + 3 + (- 1) ^ n) / 8. - _ Wesley Ivan Hurt _ , Jul 22 2014 • a(n) = Sum _{ i=1..n + 1 } numerator(i ^ 2 / 2). - _ Wesley Ivan Hurt _ , Feb 26 2017 •

► [A017197] 3,12,21,30,39,48,57,66,75,84,93,102,111,120,129,138,147,156,165,17 4,183,192,201,210,219 ⋆ a(n) = 9 * n + 3. • a(n) = a(n - 1) + 9. • a(n) = 3 * (6 * n - 1) - a(n - 1) with a(0)=3. - _ Vincenzo Librandi _ , Nov 20 2010 •

► [A051656] 0,1,3,12,21,77,168,609,987,3572,7755,28059,47376,171409,372099,13 46268,2178309,7881197,17108664,61899729,104512485,378129724,820851717,2969 869413,4809706272 ⋆ Sum _{ i=0..n } (C(n,i) mod 2) * Fibonacci(2 * i). • a(n) = sum _{ i=0..n } (C(2n, 2i) mod 2) * F(2 * i) = FL(n)product _{ i=0..inf } L(2 ^ i) ^ bit(n, i) where L is n - th Lucas number (A000032) and FL is defined as in A048757: FL(n) = n - th fibonacci number if n even, n - th Lucas number if n odd. •

► [A063107] 3,12,22,30,40,50,58,68,78,86,96,106,114,124,134,142,152,162,170,18 0,190,198,208,218,226 ⋆ Dimension of the space of weight 2n cusp forms for Ga mma _ 0(39). • a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>5. •

► [A154138] 1,3,12,22,73,131,428,766,2497,4467,14556,26038,84841,151763,49449 2,884542,2882113,5155491,16798188,30048406,97907017,175134947,570643916,10 20761278,3325956481 ⋆ Indices k such that 3 plus the k - th triangular number i s a perfect square. • a(n) = + a(n - 1) + 6 * a(n - 2) - 6 * a(n - 3) - a(n - 4) + a(n - 5); • a(1..4)=(1,3,12,22); a(n>4)=6 * a(n - 2) - a(n - 4) + 2. [_ Zak Seid ov _ , Oct 21 2009] •

► [A332349] 1,3,12,22,79,194,537,1519,4011,11258,30506,83661,229754,627171,17 21547,4710045,12901630,35342272,96764537,265067580,725878627,1988023833,54 44771405,14911382924,40839083772 ⋆ Number of maximal independent sets in t he 4 X n king graph. • a(n) = a(n - 1) + 4 * a(n - 2) + 3 * a(n - 3) - 4 * a(n - 4) + 6 * a(n - 5) - 3 * a(n - 6) - 6 * a(n - 7) for n >= 7. •

► [A297675] 3,12,24,39,57,78,102,129,159,192,228,267,309,354,402,453,507,564,6 24,687,753,822,894,969,1047 ⋆ a(n) = 3 * (n ^ 2 + n - 4) / 2. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 1). •

► [A028725] 0,0,0,0,0,0,1,3,12,24,60,100,200,300,525,735,1176,1568,2352,3024,43 20,5400,7425,9075,12100 ⋆ a(n) = floor(n / 2) * floor((n - 1) / 2) * floor((n - 2) / 2) * floor((n - 3) / 2) * floor((n - 4) / 2) / 12. • a(n) = a(n - 1) + 5 * a(n - 2) - 5 * a(n - 3) - 10 * a(n - 4) + 10 * a(n - 5) + 10 * a(n - 6) - 10 * a(n - 7) - 5 * a

(n - 8) + 5 * a(n - 9) + a(n - 10) - a(n - 11), with a(0)=0, a(1)=0, a(2)=0, a(3)=0, a(4)=0, a(5)=0, a(6)=1, a(7)=3, a(8)=12, a(9)=24, a(10)=60. - _ Harvey P. Dale _ , Jun 26 2012 ● a(n) = (1 / 768) * ((- 1) ^ n * (45 - 65 * n + 38 * n ^ 2 - 10 * n ^ 3 + n ^ 4) - 45 + 193 * n - 230 * n ^ 2 + 114 * n ^ 3 - 25 * n ^ 4 + 2 * n ^ 5). ●

► [A047166] 0,0,0,0,1,3,12,24,60,100,205,315,630,980,2156,3528,8260,13692,31620,51600,115995,186945,418825,675675,1535391 ⋆ Number of nonempty subsets of { 1,2,...,n } in which exactly 2 / 5 of the elements are <= n / 2. ● a(n) = Sum _{ k>=1 } binomial(floor(n / 2), 2 * k) * binomial(ceiling(n / 2), 3 * k). - _ Andrew Howroyd _ , Apr 11 2021 ●

► [A206917] 0,1,3,12,24,96,192,768,1536,6144,12288,49152,98304,393216,786432,3145728,6291456,25165824,50331648,201326592,402653184,1610612736,3221225472,12884901888,25769803776 ⋆ Sum of binary palindromes in the half - open interval [2 ^ (n - 1), 2 ^ n). ● a(n) = (3 / 8) * 2 ^ (n + floor((n + 1) / 2)). ● a(n) = 8 * a(n - 2) for n>3. G.f.: - x * (4 * x ^ 2 + 3 * x + 1) / (8 * x ^ 2 - 1). - _ Colin Barker _ , May 31 2013 ●

► [A071355] 3,12,25,42,63,88,117,150,187,228,273,322,375,432,493,558,627,700,777,858,943,1032,1125,1222,1323 ⋆ a(n) = 2 * n ^ 2 + 11 * n + 12. ● a(n) = (n + 4) * (2 * n + 3). - _ Reinhard Zumkeller _ , Nov 18 2004 ● a(n) = 3 * a(n - 1) - 3 * a(n - 1) + a(n - 2). ●

► [A033428] 0,3,12,27,48,75,108,147,192,243,300,363,432,507,588,675,768,867,972,1083,1200,1323,1452,1587,1728 ⋆ a(n) = 3 * n ^ 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>2. ● a(n) = a(n - 1) + 6 * n - 3, with a(0)=0. - _ Jean - Bernard François _ , Oct 04 2013 ●

► [A213486] 0,3,12,27,48,78,120,174,240,321,420,537,672,828,1008,1212,1440,1695,1980,2295,2640,3018,3432,3882,4368 ⋆ Number of (w,x,y) with all terms in { 0,...,n } and |w - x| + |x - y| + |y - w| > w + x + y. ● a(n) = 4 * a(n - 1) - 7 * a(n - 2) + 8 * a(n - 3) - 7 * a(n - 4) + 4 * a(n - 5) - a(n - 6). ●

► [A058034] 1,3,12,27,49,75,108,147,193,243,300,363,433,507,588,675,769,867,972,1083,1201,1323,1452,1587,1729 ⋆ Number of numbers whose cube root rounds to n. ● a(n) = 3n ^ 2 + 1 if n == 0 (mod 4), 3n ^ 2 otherwise. ● a(n) = (1 + (- 1) ^ n + (- i) ^ n + i ^ n + 12 * n ^ 2) / 4 where i=sqrt(- 1). - _ Colin Barker _ , Jul 04 2014 ●

► [A187273] 0,3,12,27,72,135,324,567,1296,2187,4860,8019,17496,28431,61236,98415,209952,334611,708588,1121931,2361960,3720087,7794468,12223143,25509168 ⋆ a(n) = (n / 4) * 3 ^ (n / 2) * ((1 + sqrt(3)) ^ 2 + (- 1) ^ n * (1 - sqrt(3)) ^ 2). ● a(n) = 6 * a(n - 2) - 9 * a(n - 4). ● a(2 * n) = 4 * n * 3 ^ n, a(2 * n + 1) = (2 * n + 1) * 3 ^ (n + 1). - _ Andrew Howroyd _ , Mar 28 2016 ●

► [A133647] 1,3,12,27,108,243,972,2187,8748,19683,78732,177147,708588,1594323,6377292,14348907,57395628,129140163,516560652,1162261467,4649045868,10460353203,41841412812,94143178827,376572715308 ⋆ A133566 * A000244. ● a(n + 2) = 9 * a(n), a(0) = 1, a(1) = 3, a(2) = 12. - _ Philippe Deléham _ , Apr 06 2012 ●

► [A066643] 0,3,12,28,50,78,113,153,201,254,314,380,452,530,615,706,804,907,1017,1134,1256,1385,1520,1661,1809 ⋆ a(n) = floor(Pi * n ^ 2). ● a(n) = floor(Pi * n ^ 2). ●

► [A140065] 1,3,12,28,51,81,118,162,213,271,336,408,487,573,666,766,873,987,1108,1236,1371,1513,1662,1818,1981 ⋆ a(n) = (7 * n ^ 2 - 17 * n + 12) / 2. ● a(n) = 7 * n + a(n - 1) - 12 for n>1, a(1)=1. - _ Vincenzo Librandi _ , Jul 08 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3), n >= 4. - _ Klaus Purath _ , Oct 21 2021 ●

► [A005995] 1,3,12,28,66,126,236,396,651,1001,1512,2184,3108,4284,5832,7752,10197,13167,16852,21252,26598,32890,40404,49140,59423 ⋆ Alkane (or paraffin) numbers l(8,n). ● a(2n - 1) = n(n + 1)(n + 2)(2n + 1)(2n + 3) / 30, a(2n) = (n + 1)(n + 2)(n + 3)(4n ^ 2 + 6n + 5) / 30. [_ M. F. Hasler _ , May 01 2009] ● a(n) = (1 / 240) * (n + 1) * (n + 2) * (n + 3) * (n + 4) * (n + 5) + (1 / 16) * (n + 2) * (n + 4) * (1 / 2) * (1 + (- 1) ^ n). [_ Yosu Yurramendi _ , Jun 20 2013] ●

► [A124052] 1,3,12,28,168,168,1344,2880,9360,9360,112320,112320,1572480,1572480,1572480,3249792,58496256,58496256,1169925120,1169925120,1169925120,1169925120,28078202880,28078202880,145070714880 ⋆ a(n) = sigma(lcm(1,2,...,n)) = A000203(A003418(n)). ● a(n) = a(n - 1) * (1 + n * (P - 1) / (n - 1)) if n is the power of any prime (P); a(n) = a(n - 1) if n is not the power of any prime. - _ Ridouane Oudra _ , Aug 28 2019 ●

► [A164013] 3,12,30,57,93,138,192,255,327,408,498,597,705,822,948,1083,1227,1380,1542,1713,1893,2082,2280,2487,2703 ⋆ 3 times centered triangular numbers: 9 * n * (n + 1) / 2 + 3. ● a(n) = a(n - 1) + 9 * n (with a(0)=3). - _ Vincenzo Librandi _ , Nov 30 2010 ● a(0)=3, a(1)=12, a(2)=30, a(n)=3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Mar 26 2015 ●

► [A057671] 0,3,12,30,59,102,163,243,347,476,634,823,1046,1307,1607,1951,2340,2778,3267,3811,4411,5072,5796,6585,7443 ⋆ a(n) equals floor(Vc(n) - Vs(n)), where Vc(n) is the volume of the cube with side length n and Vs(n) is the volume of the sphere of diameter n. ● a(n) = floor(n ^ 3 * (1 - Pi / 6)). ●

► [A027480] 0,3,12,30,60,105,168,252,360,495,660,858,1092,1365,1680,2040,2448,2907,3420,3990,4620,5313,6072,6900,7800 ⋆ a(n) = n * (n + 1) * (n + 2) / 2. ● a(n) = n * binomial(2 + n, 2). - _ Zerinvary Lajos _ , Jan 10 2006 ● a(n) = numbperm(n,3) / 2, n >= 2 [where numbperm(n, k) = n! / (n - k)!]. - _ Zerinvary Lajos _ , Apr 26 2007 ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). (End) ● a(n) = Sum _{ i=0..n } n * (n - i) + 2 * i. - _ Bruno Berselli _ , Jan 13 2016 ● a(n - 1) = binomial(n ^ 2,2) / n for n > 0. - _ Jonathan Sondow _ , Jan 07 2018 ●

► [A073952] 0,0,3,12,30,81,252,756,2187,6480,19602,59049,176904,530712,1594323,4785156,14351094,43046721,129146724,387440172,1162261467,3486725352,10460294154,31381059609,94143001680 ⋆ Number of strings over Z _ 3 of length n with trace 1 and subtrace 2. ● a(n; t, s) = a(n - 1; t, s) + a(n - 1; t + 2, s + 2t + 1) + a(n - 1; t + 1, s + t + 1) where t is the trace and s is the subtrace. ●

► [A293656] 1,3,12,30,120,315,1344,3780,17280,51975,253440,810810,4193280,14189175,77414400,275675400,1579253760,5892561675,35300966400,137493105750,858370867200,3478575575475,22562891366400,94870242967500,637646929920000 ⋆ a(n) = binomial(n + 1,2) * n! / n!!. ● a(n) = ((n * (n + 1)) / 2) / (Product _{ i=0..floor((n - 1) / 2),n - 2 * i }/ Product _{ i=1..n }). ● a(n) = n * (n + 1)!! / 2. ● a(n) / a(n - 1) = ((n + 1)!! / n!!) * (n / (n - 1)) = n / b * (n - 1) if n is even and n * Pi / (2 * b * (n - 1)) if n is odd where b = int _{ x=0..(Pi / 2) } sin ^ (n + 1) * x dx. ●

► [A037237] 3,12,31,64,115,188,287,416,579,780,1023,1312,1651,2044,2495,3008,3587,4236,4959,5760,6643,7612,8671,9824,11075 ⋆ Expansion of (3 + x ^ 2) / (1 - x) ^ 4. ● a(n) = Sum _{ k=0..n } (2 * (k + 1) ^ 2 + 1). - _ Mike Warburton _ , Jul 07 2007, Sep 07 2007 ● a(n) = (n + 1) * (2 * n ^ 2 + 7 * n + 9) / 3. - _ R. J. Mathar _ , Mar 29 2010 ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Vincenzo Librandi _ , Jun 21 2012 ●

► [A005718] 3,12,31,65,120,203,322,486,705,990,1353,1807,2366,3045,3860,4828,5967,7296,8835,10605,12628,14927,17526,20450,23725 ⋆ Quadrinomial coefficients: C(2 + n,n) + C(3 + n,n) + C(4 + n,n). ● a(n) = binomial(n, 2) * (n ^ 2 + 7 * n + 18) / 12, n >= 2. ● a(n) = 3 * C(n + 2,2) + 3 * C(n + 2,3) + C(n + 2,4) (see comment in A071675). - _ Vladimir Shevelev _ and _ Peter J. C. Moses _ , Jun 22 2012 ●

► [A098500] 1,3,12,32,59,91,130,176,229,289,356,430,511,599,694,796,905,1021,1144,1274,1411,1555,1706,1864,2029 ⋆ Number of squares on infinite quarter chessboard at <=n knight moves from the corner. ● a(n) = (1 / 2) * (7 * n ^ 2 + n + 2), for n>3. ●

► [A037236] 3,12,32,68,125,208,322,472,663,900,1188,1532,1937,2408,2950,3568,4267,5052,5928,6900,7973,9152,10442,11848,13375 ⋆ Expansion of (3 + 2 * x ^ 2) / (1 - x) ^ 4. ● a(n)= (n + 1) * (5 * n ^ 2 + 13 * n + 18) / 6. a(n)= 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ R. J. Mathar _ , Feb 12 2010 ●

► [A268768] 3,12,32,100,248,620,1456,3380,7656,17148,37920,83140,180824,390796,839824,1796180,3825352,8116764,17165568,36195300,76118840,159694252,334301552,698429300,1456510888 ⋆ Number of n X 2 0..2 arrays with some element plus some horizontally, vertically, diagonally or antidiagonally adjacent neighbor totalling two exactly once. ● a(n) = (4 / 27) * (7 * ((- 1) ^ n - 2 ^ n) + 3 * ((- 1) ^ n + 2 ^ (2 + n)) * n) for n>1. ●

► [A054602] 0,3,12,33,72,135,228,357,528,747,1020,1353,1752,2223,2772,3405,4128,4947,5868,6897,8040,9303,10692,12213,13872 ⋆ a(n) = Sum _{ d|3 } phi(d) * n ^ (3 / d). ● a(n) = ((n - 1) ^ 3 + n ^ 3 + (n + 1) ^ 3) / 3. - _ David Morales Marciel _ , Aug 28 2015 ●

► [A192972] 0,1,3,12,33,77,160,309,567,1004,1733,2937,4912,8137,13387,21916,35753,58181,94512,153341,248575,402716,652173,1055857,1709088 ⋆ Coefficient of x in the reduction by x ^ 2 - > x + 1 of the polynomial p(n,x) defined at Comments. ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + a(n - 3) + 2 * a(n - 4) - a(n - 5). ● a(n) = 4 * Fibonacci(n + 4) + Lucas(n + 3) - 2 * (n ^ 2 + 4 * n + 8). - _ G. C. Greubel _ , Jul 24 2019 ●

► [A054610] 0,3,12,33,96,255,780,2205,6672,19755,59340,177177,532416,1594359,4785228,14349525,43053504,129140211,387441756,1162261521,3486844320,10460357775,31381236876,94143178893,282430082832 ⋆ a(n) = Sum _{ d|n } phi(d) * 3 ^ (n / d). ● a(n) = Sum _{ k=1..n } 3 ^ gcd(n,k). - _ Ilya Gutkovskiy _ , Apr 16 2021 ● a(n) = Sum _{ k=1..n } 3 ^ (n / gcd(n,k)) * phi(gcd(n,k)) / phi(n / gcd(n,k)). - _ Richard L. Ollerton _ , May 07 2021 ●

► [A081423] 1,3,12,34,75,141,238,372,549,775,1056,1398,1807,2289,2850,3496,4233,5067,6004,7050,8211,9493,10902,12444,14125 ⋆ Subdiagonal of array of n - gonal numbers A081422. ● a(n) = (2 * n ^ 3 + n ^ 2 + n + 2) / 2. ●

► [A257890] 3,12,34,80,166,314,553,920,1461,2232,3300,4744,6656,9142,12323,16336,21335,27492,34998,44064,54922,67826,83053,100904,121705 ⋆ Expansion of the g.f. (x ^ 2 - x + 1) * (x ^ 2 - 3 * x + 3) / (x - 1) ^ 6. ● a(n) = (n + 1) * (n ^ 4 + 14 * n ^ 3 + 91 * n ^ 2 + 254 * n + 360) / 120. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. - _ Wesley Ivan Hurt _ , Jan 27 2016 ●

► [A060298] 3,12,34,94,263,768,2333,7167,22291,69751,219081,689736,2174856,6864354,21679391,68497906,216485583,684323923,2163459803,6840258025,21628220224,68388917596,216252901472,683826283482,2162393925204 ⋆ Number of powers x ^ y (x,y > 1) with n digits. ● a(n) = Sum _{ y=2..floor(n * log _ 2(10)) } (ceiling(10 ^ (n / y)) - ceiling(10 ^ ((n - 1) / y))) for n >= 2. - _ Robert Israel _ , Apr 29 2020 ●

► [A226546] 0,3,12,34,98,256,654,1625,3964,9533,22662,53373,124728,289572,668514,1535869,3513614,8008090,18191184,41200568,93064834,209710139,471520566,1058065647,2369890254 ⋆ Number of squares in all tilings of a 3 X n rectangle using integer - sided square tiles. ● a(n) = 2 * a(n - 1) + 3 * a(n - 2) - 2 * a(n - 3) - 6 * a(n - 4) - 4 * a(n - 5) - a(n - 6) for n>5. - _ Colin Barker _ , Jun 07 2020 ●

► [A073372] 1,3,12,34,99,261,678,1692,4149,9959,23568,55014,127031,290457,658602,1482240,3314025,7365915,16285300,35832810,78500811,171293293,372412782,806963364,1743173469 ⋆ Second convolution of A001045(n + 1) (generalized (1,2) - Fibonacci), n>=0, with itself. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n - k + 2, 2) * binomial(n - k, k) * 2 ^ k. ●

► [A295363] 1,3,12,35,77,154,287,513,890,1513,2546,4241,6997,11478,18747,30531,49620,80531,130571,211564,342641,554757,897998,1453405,2352105 ⋆ Solution of the complementary equation a(n) = a(n - 1) + a(n - 2) + b(n - 1) * b(n - 2), where a(0) = 1, a(1) = 3, b(0) = 2, b(1) = 4, and (a(n)) and (b(n)) are increasing complementary sequences. ● a(n) / a(n - 1) - > (1 + sqrt(5)) / 2 = golden ratio (A001622). ●

► [A260006] 0,3,12,35,90,217,504,1143,2550,5621,12276,26611,57330,122865,262128,557039,1179630,2490349,5242860,11010027,23068650,48234473,100663272,209715175,436207590 ⋆ a(n) = f(1,n,n), where f is the Sudan function defined in A260002. ● a(n) = (2 ^ n - 1) * (n + 2). ● a(n) = 6 * a(n - 1) - 13 * a(n - 2) + 12 * a(n - 3) - 4 * a(n - 4) for n>3. - _ Colin Barker _ , Jul 29 2015 ● a(n - 2) = Sum _{ j=2..n / 2 } binomial(n,j) * j, n even > 2. ● a(n - 2) = (Sum _{ j=2..floor(n / 2) } binomial(n,j) * j) + (1 / 2) * binomial(n, ceiling(n / 2)) * ceiling(n / 2), n odd > 1. (End) ●

► [A305542] 0,0,1,3,12,35,111,318,934,2634,7503,21071,59472,167229,472133,1333263,3777600,10721837,30516447,87035631,248820816,712751271,2045784183,5882388956,16942974060 ⋆ Number of chiral pairs of color loops of length n with exactly 3 different colors. ● a(n) = - (k! / 4) * (S2(floor((n + 1) / 2),k) + S2(ceili

ng((n + 1) / 2),k)) + (k! / (2n)) * Sum _{ d|n } phi(d) * S2(n / d,k), with k= 3 different colors used and where S2(n,k) is the Stirling subset number A008277 . ●

▶ [A167667] 1,3,12,36,96,240,576,1344,3072,6912,15360,33792,73728,159744,344064,737280,1572864,3342336,7077888,14942208,31457280,66060288,138412032,289406976,603979776 ⋆ Expansion of (1 - x + 4 * x ^ 2) / (1 - 2 * x) ^ 2. ● a(0)=1, a(n) = 3 * n * 2 ^ (n - 1) for n>0. ● a(0)=1, a(1)=3, a(2)=12, a(n) = 4 * a(n - 1) - 4 * a(n - 2) for n>2. ● a(0)=1, a(n) = Sum _{ i=0..n } binomial(n,i) * (2n - i). - _ Wesley Ivan Hurt _ , Mar 20 2015 ●

▶ [A292291] 0,0,0,3,12,36,99,264,696,1827,4788,12540,32835,85968,225072,589251,1542684,4038804,10573731,27682392,72473448,189737955,496740420,1300483308,3404709507 ⋆ Number of vertices of type B at level n of the hyperbolic Pascal pyramid. ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) + a(n - 3), n >= 4. ● a(n) = 3 * Fibonacci(2 * n - 3) - 3 for n > 0. - _ Ehren Metcalfe _ , Apr 18 2019 ●

▶ [A290927] 0,3,12,36,108,331,1008,3027,8992,26502,77592,225806,653544,1882224,5396776,15411399,43847688,124331457,351448620,990586686,2784612380,7808372811,21845061504,60983031772,169897677504 ⋆ p - INVERT of the positive integers, where p(S) = (1 - S ^ 2) ^ 3. ● a(n) = 12 * a(n - 1) - 63 * a(n - 2) + 196 * a(n - 3) - 414 * a(n - 4) + 636 * a(n - 5) - 731 * a(n - 6) + 636 * a(n - 7) - 414 * a(n - 8) + 196 * a(n - 9) - 63 * a(n - 10) + 12 * a(n - 11) - a(n - 12). ●

▶ [A167993] 0,0,1,3,12,36,117,351,1080,3240,9801,29403,88452,265356,796797,2390391,7173360,21520080,64566801,193700403,581120892,1743362676,5230147077,15690441231,47071500840 ⋆ Expansion of x ^ 2 / ((3 * x - 1) * (3 * x ^ 2 - 1)). ● a(2 * n + 1) = 3 * a(2 * n). ● a(n) = 3 * a(n - 1) + 3 * a(n - 4) - 9 * a(n - 3). ● a(n) = 3 ^ (n - 1) / 2 - 3 ^ (n / 2 - 1) / 2 for n even. ● a(n) = 3 ^ (n - 1) / 2 - 3 ^ (n / 2 - 1 / 2) / 2 for n odd. ●

▶ [A282022] 1,3,12,36,144,432,1728,5184,20736,62208,248832,746496,2985984,8957952,35831808,107495424,429981696,1289945088,5159780352,15479341056,61917364224,185752092672,743008370688,2229025112064,8916100448256 ⋆ Start with 1; multiply alternately by 3 and 4. ● a(n) = 2 ^ n * 3 ^ (n / 2) for n even. ● a(n) = 2 ^ (n - 1) * 3 ^ ((n + 1) / 2) for n odd. ● a(n) = 12 * a(n - 2) for n>1. ●

▶ [A064028] 1,3,12,36,216,1020,8160,61920,507744,4383392,52600704,624249600,8739494400,109190390400,1583122968000,25318378008000,455730804144000,8193040840252800,163860816805056000,3256371347261760000,67204676251838361600,1366492477414792734720 ⋆ Sum of the unitary divisors of n!. ● a(n) / n! <= 2 (while usigma(n) / n and sigma(n!) / n! are unbounded; Wall, 1984). - _ Amiram Eldar _ , Feb 08 2022 ●

▶ [A211958] 0,3,12,37,90,186,343,582,927,1405,2046,2883,3952,5292,6945,8956,11373,14247,17632,21585,26166,31438,37467,44322,52075 ⋆ Number of lower triangular n X n arrays colored with integers 0 upwards introduced in row major order, with no element equal to any diagonal or antidiagonal neighbor, and containing the value n(n + 1) / 2 - 2. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>6. ●

▶ [A290930] 0,3,12,37,116,372,1188,3763,11860,37261,116760,365056,1139224,3549635,11045804,34335421,106633804,330916268,1026277180,3181108619,9855901108,30524529485,94506627952,292521594048,905220237168 ⋆ p - INVERT of the positive integers, where p(S) = (1 - S ^ 2)(1 - 2 * S ^ 2). ● a(n) = 8 * a(n - 1) - 25 * a(n - 2) + 44 * a(n - 3) - 54 * a(n - 4) + 44 * a(n - 5) - 25 * a(n - 6) + 8 * a(n - 7) - a(n - 8). ●

▶ [A350787] 0,0,1,3,12,38,122,372,1119,3301,9624,27756,79380,225384,636061,1785639,4990116,13889618,38524238,106514652,293668923,807608137,2215854384,6066935640,16579195560 ⋆ Convolution of A001654 and A007598. ● a(n) = Sum _{ i=0..n } F(i) * F(i + 1) * F(n - i) ^ 2. ● a(n) = ((n + 2) / 5) * F(n) * F(n + 1) - (3 / 25) * (F(2 * n + 2) + (n + 1) * (- 1) ^ (n + 1)). ● a(n) = 4 * a(n - 1) - 10 * a(n - 3) + 4 * a(n - 5) - a(n - 6) for n > 5. - _ Amiram Eldar _ , Jan 17 2022 ●

▶ [A029858] 0,3,12,39,120,363,1092,3279,9840,29523,88572,265719,797160,2391483,7174452,21523359,64570080,193710243,581130732,1743392199,5230176600,15690529803,47071589412,141214768239 ⋆ a(n) = (3 ^ n - 3) / 2. ● a(n) = 3 * a(n - 1) + 3. - _ Alexandre Wajnberg _ , Apr 25 2005 ● a(n) = 3 ^ (n - 1) + a(n - 1) (with a(1)=0). - _ Vincenzo Librandi _ , Nov 18 2010 ●

▶ [A123109] 1,3,12,39,120,363,1092,3279,9840,29523,88572,265719,797160,2391483,7174452,21523359,64570080,193710243,581130732,1743392199,5230176600,15690529803,47071589412,141214768239,423644304720 ⋆ a(0) = 1, a(1) = 3, a(n) = 3 * a(n - 1) + 3 for n > 1. ● a(n) = - (3 / 2) * (3 ^ n - 1) + (binomial(2 * n,n) mod 2), for n >= 0. - _ Paolo P. Lava _ , Nov 19 2008 ● a(n + 1) - a(n) = 3 ^ n, n >= 2. - _ R. J. Mathar _ , Aug 18 2011 ●

▶ [A240806] 1,3,12,39,126,381,1169,3528,10611,31869,95742,287235,861753,2585646,7757199,23270967,69814035,209444148,628329001,1884986319,5654972973,16964909958,50894701155,152684163435,458052522680 ⋆ Coefficients in expansion of graph zeta function of graph obtained by adding 4 vertices to each edge of K _ 5. ● a(n) = 3 * a(n - 1) + 3 * a(n - 2) - 6 * a(n - 3) - 9 * a(n - 4) - 15 * a(n - 5) + 35 * a(n - 6) + 60 * a(n - 7) - 75 * a(n - 8) - 75 * a(n - 9) + 81 * a(n - 10) + 42 * a(n - 11) - 43 * a(n - 12) - 9 * a(n - 13) + 9 * a(n - 14) for n > 13. - _ Chai Wah Wu _ , Jan 19 2020 ●

▶ [A242587] 1,3,12,39,129,399,1245,3783,11514,34734,104754,314922,946623,2842077,8532147,25603788,76830033,230513439,691598901,2074870002,6224790639,18674600664,56024355396,168073769199,504222998115 ⋆ The number of conjugacy classes of n X n matrices over F _ 3. ● a(n) = S(n,1), where S(n,m) = sum(k =m..n / 2, 3 * S(n - k,k)) + 3, S(n,n)=3, S(0,m)=1, S(n,m)=0 for n<m. - _ Vladimir Kruchinin _ , Sep 07 2014 ●

▶ [A373629] 1,3,12,39,131,426,1389,4503,14596,47259,152991,495162,1602521,5186067,16782828,54310911,175754731,568755690,1840534485,5956098495,19274345876,62373103443,201843619047,653179698234,2113733947681 ⋆ a(n) = sum of all numbers whose binary expansion is n bits long, starts and ends with a 1 bit, and contains no 00 bit pairs. ● a(n) = a(n - 1) + a(n - 2) + F(n) * 2 ^ (n - 1). ● a(n) = 3 * a(n - 1) + 3 * a(n - 2) - 6 * a(n - 3) - 4 * a(n - 4). ● a(n) = F(n) * (2 ^ n - 1) - Sum _{ i=1..n - 1 } F(i) * F(n - i - 1) * 2 ^ (n - i - 1). ●

▶ [A290906] 0,3,12,39,132,456,1572,5409,18612,64053,220440,758640,2610840,8985147,30922188,106418031,366235308,1260390744,4337606988,14927778921,51373622388,176801189997,608457401520,2093992746720,7206429919920 ⋆ p - INVERT of the positive integers, where p(S) = 1 - 3 * S ^ 2. ● a(n) = 4 * a(n - 1) - 3 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ●

▶ [A122994] 1,3,12,39,147,498,1821,6303,22692,79419,283647,998418,3551241,12537003,44498172,157331199,557814747,1973795538,6994128261,24758288103,87705442452,310530035379,1099879017447,3894649335858,13793560492881 ⋆ a(n) = a(n - 1) + 9 * a(n - 2) initialized with a(0)=1, a(1)=3. ● a(n) = (1 / 2 + 5 * sqrt(37) / 74) * (1 / 2 + sqrt(37) / 2) ^ (n - 1) + (1 / 2 - 5 * sqrt(37) / 74) * (1 / 2 - sqrt(37) / 2) ^ (n - 1). [_ Antonio Alberto Olivares _ , Jun 07 2011] ●

▶ [A032093] 3,12,40,100,226,452,848,1484,2485,3976,6160,9240,13524,19320,27072,37224,50391,67188,88440,114972,147862,188188,237328,296660,367913 ⋆ Number of reversible strings with n - 1 beads of 2 colors. 6 beads are black. Strings are not palindromic. ● a(n) = (1 / 2) * (binomial(n - 1, n - 7) - binomial(floor((n - 1) / 2), floor((n - 7) / 2))) for n >= 8. ●

▶ [A007993] 3,12,40,102,219,419,738,1221,1923,2910,4260,6064,8427,11469,15326,20151,26115,33408,42240,52842,65467,80391,97914,118361,142083 ⋆ Poincaré series [or Poincare series] of Lie algebra associated with a certain braid group. ● a(n) = 3 + 9(n - 1) + 19(n - 1)(n - 2) / 2 + 15(n - 1)(n - 2)(n - 3) / 6 + 6(n - 1)(n - 2)(n - 3)(n - 4) / 24 + (n - 1)(n - 2)(n - 3)(n - 4)(n - 5) / 120. - _ John W. Layman _ , May 12 1999 ● a(n - 1) = (1 / 120)(n ^ 5 + 10n ^ 4 + 35n ^ 3 - 10n ^ 2 - 396n + 720) with n>1. - _ Ralf Stephan _ , Jun 11 2005 ●

▶ [A327319] 0,0,1,3,12,40,105,231,448,792,1305,2035,3036,4368,6097,8295,11040,14416,18513,23427,29260,36120,44121,53383,64032 ⋆ a(n) = binomial(n, 2) + 6 * binomial(n, 4). ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>4. ● a(n) = (n * (- 8 + 13 * n - 6 * n ^ 2 + n ^ 3)) / 4. ●

▶ [A080929] 1,3,12,40,120,336,896,2304,5760,14080,33792,79872,186368,430080,983040,2228224,5013504,11206656,24903680,55050240,121110528,265289728,578813952,1258291200,2726297600 ⋆ Sequence associated with a(n) = 2 * a(n - 1) + k * (k + 2) * a(n - 2). ● a(n) = Sum _{ k=0..n } Sum _{ i=0..n } (k + 1) * binomial(n - 1,i). - _ Wesley Ivan Hurt _ , Sep 20 2017 ●

▶ [A052482] 3,12,40,120,336,896,2304,5760,14080,33792,79872,186368,430080,983040,2228224,5013504,11206656,24903680,55050240,121110528,265289728,578813952,1258291200,2726297600,5888802816 ⋆ a(n) = 2 ^ (n - 2) * binomial(n + 1,2). ● a(n) = (1 / 2) * Sum _{ k=0..n - 1 } Sum _{ i=0..n - 1 } (k + 1) * C(n - 1,i). - _ Wesley Ivan Hurt _ , Sep 20 2017 ● a(n) = 2 ^ (n - 3) * n * (1 + n). ● a(n) = 6 * a(n - 1) - 12 * a(n - 2) + 8 * a(n - 3) for n>4. ●

▶ [A102839] 0,1,3,12,40,135,441,1428,4572,14535,45925,144408,452244,1411501,4392675,13636080,42237792,130580451,403009209,1241912580,3821849640,11746816389,36064532427,110610649548,338928124500 ⋆ a(0) = 0, a(1) = 1, and a(n) = ((2 * n - 1) * a(n - 1) + 3 * n * a(n - 2)) / (n - 1) for n >= 2. ● a(n) is asymptotic to c * sqrt(n) * 3 ^ n where c = 0.2443012(5).... ● a(n) = 4 ^ (n - 1) * JacobiP[n - 1, - n - 1 / 2, - n - 1 / 2, - 1 / 2]. - _ Peter Luschny _ , May 13 2016 ●

▶ [A050182] 0,1,3,12,40,143,497,1768,6288,22610,81686,297160,1086384,3991995,14732005,54587280,202995232,757398510,2834502346,10637507400,40023606896,150946230006,570534474698,2160865067312,8199711007200 ⋆ a(n) = T(2 * n + 4, n), array T as in A051168 (a count of Lyndon words). ● a(n) = binomial(2 * n + 4, n) / (2 * n + 4), if n is odd, and a(n) = (binomial(2 * n + 4, n) - binomial(n + 2, n / 2)) / (2 * n + 4), if n is even. - _ Petros Hadjicostas _ , Jul 27 2020 ●

▶ [A126725] 0,1,3,12,40,195,861,5488,31032,247005,1706815,16302396,133131648,1483518127,13978823145,178022175360,1901119947856,27237392830233,325091511083547,5175104637744460,68269217327545080,1195449171318970491 ⋆ a(1)=0, a(2)=1; for n>2, a(n) = C(n,2) * (1 + a(n - 2)). ● a(n) = Sum _{ k=1..floor(n / 2) } 2 ^ k * Pochhammer(- n / 2,k) * Pochhammer(1 / 2 - n / 2,k). - _ Theodore M. Mishura _ , Mar 16 2015 ●

▶ [A263102] 0,0,1,3,12,40,225,1071,8848,56232,616185,4880755,66475596,629398848,10238194057,112690225935,2130537219840,26719024870576,575573407212753,8099650628337987,195807849389362540,3054957193416951480,81892400673047263761,1402819397613793354063,41294565798306731368272 ⋆ Number of distinct cycles without repeated edges on the multigraph with 2 vertices connected by n edges. ● a(n) = n * (n - 1) / 2 + Sum _{ k=4..n:2 divides k } (n! / ((n - k)! * k)). ●

▶ [A336337] 0,3,12,41,132,413,1272,3881,11772,35573,107232,322721,970212,2914733,8752392,26273561,78853452,236625893,710008752,2130288401,6391389492,19175217053,57527748312,172587439241,517770706332 ⋆ Total number of records over all length n ternary words (words on alphabet { 0,1,2 }). ● a(n) = 11 / 2 * 3 ^ (n - 1) - 2 ^ n - 1 / 2, n>0. - _ R. J. Mathar _ , Aug 19 2022 ●

▶ [A017940] 1,3,12,41,144,498,1728,5985,20736,71831,248832,861979,2985984,10343751,35831808,124125023,429981696,1489500287,5159780352,17874003451,61917364224,214488041413,743008370688 ⋆ Powers of sqrt(12) rounded down. ● a(n) = floor(sqrt(12 ^ n)). - _ Vincenzo Librandi _ , Jun 24 2011 ●

▶ [A038342] 1,3,12,41,146,511,1798,6314,22187,77946,273856,962142,3380337,11876254,41725295,146595013,515037713,1809501081,6357387289,22335644540,78472648463,275700866485,968630080476,3403123989780 ⋆ G.f.: 1 / (1 - 3 x - 3 x ^ 2 + 4 x ^ 3 + x ^ 4 - x ^ 5). ● a(n) = 3a(n - 1) + 3a(n - 2) - 4a(n - 3) - a(n - 4) + a(n - 5). Also a(n) = b(4n + 2) with b(n) as in 5 - wave sequence A038201. ●

▶ [A135264] 3,12,42,123,366,1092,3279,9840,29526,88575,265722,797160,2391483,7174452,21523362,64570083,193710246,581130732,1743392199,5230176600,15690529806,47071589415,141214768242,423644304720,1270932914163 ⋆ a(n) = 3 * A132357(n). ● a(n) = 3 * a(n - 1) - a(n - 3) + 3 * a(n - 4). ●

▶ [A290918] 3,12,43,147,486,1566,4944,15351,47009,142278,426315,1266300,3732705,10928910,31806583,92069229,265215756,760621914,2172669846,6183333681,17538237677,49590486888,139817553417,393157465848,1102792703055 ⋆ p - INVERT of the positive integers, where p(S) = (1 - S) ^ 3. ● a(n) = 9 * a(n - 1) - 30 * a(n - 2) + 45 * a(n - 3) - 30 * a(n - 4) + 9 * a(n - 5) - a(n - 6). ●

▶ [A190051] 1,3,12,44,150,482,1476,4344,12368,34240,92544,244992,636928,1629696,4111360,10242048,25227264,61505536,148570112,355860480,845807616,1996095488,4680056832,10906763264,25275924480 ⋆ Expansion of (1 - x) * (10 * x ^ 4 - 20 * x ^ 3 + 16 * x ^ 2 - 6 * x + 1) / (1 - 2 * x) ^ 5 ● a(n) = (264 + 214 * n + 14 * n ^ 3 + 83 * n ^ 2 + n ^ 4) * 2 ^ (n - 7) / 3 for n >=1 with a(0)=1. ●

► [A331473] 1,3,12,44,166,626,2377,9063,34695,133265,513381,1982763,7674937,29767223,115655452,450067268,1753894162,6843602438,26734398172,104548010228,409243597192,1603372802888,6286998311062,24670701224714,96877958811586 ★ Alternating sum of (n + 1) * A000108(n + 1). • a(n) = Sum _{ k=0..n } (- 1) ^ (n - k) * binomial(2 * k + 2,k). • a(n) = binomial(2 * n + 4, n + 1) * hypergeom ([1, n + 5 / 2, n + 3], [n + 2, n + 4], - 4) + (- 1) ^ n * (3 * sqrt(5) - 5) / 10. - _ Peter Luschny _ , Jan 18 2020 •

► [A005656] 0,0,1,3,12,44,170,651,2520,9752,37854,147070,572264,2229096,8692788,33933459,132594480,518584880,2029976630,7952706234,31179618184,122331419080,480283635468,1886828198398 ★ Number of bracelets (turn over necklaces) with n red, 1 pink and n - 3 blue beads; also reversible strings with n red and n - 3 blue beads. • a(n) = (1 / 2) * (binomial(2 * n - 3, n - 3) + binomial(n - 2, floor((n - 3) / 2))). - _ Michael Somos _ •

► [A064017] 1,3,12,45,162,567,1944,6561,21870,72171,236196,767637,2480058,7971615,25509168,81310473,258280326,817887699,2582803260,8135830269,25569752274,80196041223,251048476872,784526490225,2447722649502 ★ Number of tern ary trees (A001764) with n nodes and maximal diameter. • a(n) = 3 * a(n - 1) + 3 ^ (n - 2). • a(n) = (n + 1) * 3 ^ (n - 2), for n > 1. • a(n) = (n + 2)3 ^ (n - 1) + 0 ^ n / 3 (offset 0). • a(n) = 6 * a(n - 1) - 9 * a(n - 2), with a(1)=1, a(2) =3, a(3)=12. - _ Harvey P. Dale _ , Feb 07 2012 •

► [A005320] 0,3,12,45,168,627,2340,8733,32592,121635,453948,1694157,6322680,23596563,88063572,328657725,1226567328,4577611587,17083879020,63757904493,237947738952,888033051315,3314184466308,12368704813917,46160634789360 ★ a(n) = 4 * a(n - 1) - a(n - 2), with a(0) = 0, a(1) = 3. • a(n) = (sqrt(3) / 2) * ((2 + sqrt(3)) ^ n - (2 - sqrt(3)) ^ n). - _ Antonio Alberto Olivares _ , Jan 17 2004 •

► [A128593] 1,3,12,45,170,644,2451,9365,35908,138104,532589,2058782,7975216,30951921,120326060,468473348,1826415556,7129330988,27860219331,108984557708,426730087879,1672310507262,6558840830680,25742937514814,101108341344396 ★ Column 1 of triangle A128592; a(n) = coefficient of q ^ (n + 2) in the q - analog of the odd double factorials (2n + 3)!! for n>=0. • a(n) = [q ^ (n + 2)] Product _{ j=1..n + 2 } (1 - q ^ (2j - 1)) / (1 - q) for n>=0. •

► [A030195] 0,1,3,12,45,171,648,2457,9315,35316,133893,507627,1924560,7296561,27663363,104879772,397629405,1507527531,5715470808,21668995017,82153397475,311467177476,1180861724853,4476986706987,16973545295520 ★ a(n) = 3 * a (n - 1) + 3 * a(n - 2), a(0)=0, a(1)=1. • a(n + 1) = (- I * sqrt(3)) ^ n * U(n, I * sqrt(3) / 2). • a(n + 1) = Sum _{ k=0..floor(n / 2) } 3 ^ (n - k) * binomial(n - k, k). - _ Emeric Deutsch _ , Nov 14 2001 • a(n) = (p ^ n - q ^ n) / sqrt(2 1); p = (3 + sqrt 21) / 2, q = (3 - sqrt 21) / 2. - _ Gary W. Adamson _ , Jul 0 2 2003 •

► [A114515] 0,0,1,3,12,45,171,651,2488,9540,36690,141482,546864,2118207,8219967,31952115,124389552,484908408,1892657934,7395597354,28928182440,113260606074,443827115886,1740592240638,6831289801872 ★ Number of peaks in all hil l - free Dyck paths of semilength n (a Dyck path is hill - free if it has no peaks a t level 1). • a(n) = Sum _{ k=1..n } (k * (- 1) ^ (k + 1) * binomial(2 * n - k, n - k - 1)). - _ Vladimir Kruchinin _ , Oct 22 2016 •

► [A151162] 1,3,12,45,180,702,2808,11097,44388,176418,705672,2812482,11249928,44903484,179613936,717517521,2870070084,11470898106,45883592424,183438670950,733754683800,2934026948196,11736107792784,46934017407594,187736069630376 ★ Number of walks within N ^ 3 (the first octant of Z ^ 3) starting at (0 ,0,0) and consisting of n steps taken from { (- 1, 0, 0), (1, 0, 0), (1, 0, 1), (1, 1, 0) } • a(n) = (4 * (n + 1) * a(n - 1) + 12 * (n - 2) * a(n - 2) - 48 * (n - 2) * a(n - 3)) / (n + 1). - _ G. C. Greubel _ , Nov 09 2022 •

► [A094547] 1,3,12,45,180,708,2832,11283,45132,180348,721392,2884860,11539440,46154928,184619712,738467565,2953870260,11815435908,47261743632,189046794180,756187176720,3024747985488,12098991941952,48395964882948 ★ A019309 (n) / 4 for n >= 1. • a(2n + 1) = 4 * a(2n); a(2n) = 4 * a(2n - 1) - a(n). - _ D avid Wasserman _ , May 22 2007 •

► [A370478] 1,3,12,46,174,654,2451,9177,34368,128826,483531,1817673,6844294,25815660,97539435,369154485,1399419360,5313440610,20205330660,76946898744,293443125804,1120565939780,4284550682478,16402204879386,62864294076480 ★ G.f. satisfies A(x) = (1 + x * (A(x) ^ (1 / 3) / (1 - x)) ^ (3 / 2)) ^ 3. • a(n) = 3 * Sum _{ k=0..n } binomial(3 * k / 2 + 3,k) * binomial(n + k / 2 - 1,n - k) / (3 * k / 2 + 3). •

► [A344684] 1,3,12,46,181,705,2757,10765,42058,164280,641739,2506789,9792253,38251227,149420064,583676434,2280003517,8906330973,34790619369,135901886149,530870766310 ★ Sum of two consecutive products of Fibonacci and Pell nu mbers: F(n) * P(n) + F(n + 1) * P(n + 1). • a(n) = 2 * a(n - 1) + 7 * a(n - 2) + 2 * a(n - 3) - a(n - 4). •

► [A088132] 1,3,12,47,185,728,2865,11275,44372,174623,687217,2704496,10643361,41886227,164840412,648718287,2552986921,10047107272,39539710801,155605856283,612376317860,2409965560639,9484256386273,37324649227232 ★ a(n) equa ls the square of the n - th partial sum added to twice the n - th partial sum of t he squares, divided by a(n - 1), for all n>1, with a(0)=1, a(1)=3. • a(n) = 4 * a(n - 1) - a(n - 3) for n>3. •

► [A077828] 1,3,12,48,189,747,2952,11664,46089,182115,719604,2843424,11235429,44395371,175422672,693160416,2738935377,10822555395,42763953564,168976333008,667688525901,2638286437419,10424853888984,41192486556912,162766880649945 ★ Expansion of 1 / (1 - 3 * x - 3 * x ^ 2 - 3 * x ^ 3). • a(n)=sum { k=0. .n, T(n - k, k)3 ^ (n - k) } , T(n, k) = trinomial coefficients (A027907). - _ Pau l Barry _ , Feb 15 2005 • a(n)=sum { k=0..n, sum { i=0..floor((n - k) / 2), C(n - k - i, i)C(k, n - k - i) }* 3 ^ k } ; - _ Paul Barry _ , Apr 26 2005 •

► [A164346] 3,12,48,192,768,3072,12288,49152,196608,786432,3145728,12582912,50331648,201326592,805306368,3221225472,12884901888,51539607552,206158430208,824633720832,3298534883328,13194139533312,52776558133248 ★ a(n) = 3 * 4 ^ n. • a(n) = 4 * a(n - 1) for n > 1; a(0) = 3. •

► [A002001] 1,3,12,48,192,768,3072,12288,49152,196608,786432,3145728,12582912,50331648,201326592,805306368,3221225472,12884901888,51539607552,206158430208,824633720832,3298534883328,13194139533312,52776558133248,211106232532992 ★ a(n) = 3 * 4 ^ (n - 1), n>0; a(0)=1. • a(n) = (3 * 4 ^ n + 0 ^ n) / 4 (with 0 ^ 0=1). • a(n) = Sum _{ j=0..1 } Sum _{ k=0..n } C(2n + j, 2k). - _ Paul Barry _ , Nov 29 2003 • a(n) = 3 * Sum _{ k=0..n - 1 } a(k). - _ Adi D ani _ , Jun 24 2011 • a(n) = 4 * a(n - 1), a(0)=1, a(1)=3. - _ Vincenzo Libran di _ , Dec 31 2010 • a(n) = ceiling(3 * 4 ^ (n - 1)). - _ Wesley Ivan Hurt _ , Dec 17 2013 •

► [A323261] 0,1,3,12,48,195,791,3211,13031,52884,214614,870949,3534489,14343685,58209627,236226664,958656488,3890425619,15788149015,64071562799,260015607607,1055196927408,4282206617710,17378077058869,70523818494625 ★ A323 260(n) / 2. • a(n) = 5 * a(n - 1) - 3 * a(n - 2) - 5 * a(n - 3) + 7 * a(n - 4) - a(n - 5) for n>5. •

► [A226443] 1,1,1,3,12,48,288,1356,10848,70896,588480 ★ Number of distinct sh adow transforms for sequences of length n. • a(p + 1) = (p + 1)a(p) where p is prime. • a(n - 1) <= a(n) <= n * a(n - 1). •

► [A178872] 0,1,3,12,49,195,780,3121,12483,49932,199729,798915,3195660,12782641,51130563,204522252,818089009,3272356035,13089424140,52357696561,209430786243,837723144972,3350892579889,13403570319555,53614281278220 ★ Partia l sums of round(4 ^ n / 7). • a(n) = round((8 * 4 ^ n + 1) / 42) = round((4 * 4 ^ n - 4) / 21). • a(n) = floor((4 * 4 ^ n + 5) / 21). • a(n) = ceiling((4 * 4 ^ n - 4) / 21). • a(n) = 3 * a(n - 1) + 3 * a(n - 2) + 4 * a(n - 3) for n > 2. •

► [A344136] 1,3,12,49,198,792,3146,12441,49062,193154,759696,2986458,11737820,46134090,181350630,713046345,2804421510,11033453970,43424181240,170965500030,673354218420,2652994345560,10456457024052,41227321016394 ★ Number of linear intervals in the Tamari lattices. • a(n) = (3 / 2) * binomial(2 * n, n) * (n ^ 2 - n + 2) / (n + 2) / (n + 1). • a(n) = binomial(2 * n, n) / (n + 1) + bin omial(2 * n - 1, n - 2) + 2 * binomial(2 * n - 1, n - 3). • a(n) = a(n - 1) * 2 * (2 * n - 1) * (n ^ 2 - n + 2) / ((n + 2) * (n ^ 2 - 3 * n + 4)) for n > 1. - _ Chai Wah Wu _ , May 13 2021 •

► [A012772] 1,3,12,49,200,816,3329,13581,55405,226030,922111,3761840,15346786,62608681,255418101,1042002567,4250949112,17342153393,70748973084,288627200960,1177482265857,4803651498529,19596955630177 ★ Take every 5th term o f Padovan sequence A000931, beginning with the sixth term. • a(n + 3) = 5 * a(n + 2) - 4 * a(n + 1) + a(n). •

► [A012864] 1,1,3,12,49,200,816,3329,13581,55405,226030,922111,3761840,15346786,62608681,255418101,1042002567,4250949112,17342153393,70748973084,288627200960,1177482265857,4803651498529,19596955630177 ★ Take every 5th term of Padovan sequence A000931, beginning with the first term. • a(n + 3) = 5 * a(n + 2) - 4 * a(n + 1) + a(n). •

► [A045890] 1,3,12,49,204,864,3714,16170,71178,316303,1417248,6396273,29051856,132700725,609200640,2809373915,13008512040,60457182345,281919911460,1318666411635,6185356518660,29088241615910,137121834221346,647821223533044,3066862717614234 ★ Catafusenes (see reference for precise definition). • a(n) = (3 / n) * Sum _{ j=1..n } binomial(n, j) * binomial(2j + 2, j - 1) for n >= 1. - _ Emeric Deutsch _ , Mar 25 2004 •

► [A049673] 0,1,3,12,49,205,864,3653,15463,65484,277365,1174889,4976832,21082073,89304891,378301260,1602509321,6788337557,28755857952,121811766781,516002920895,2185823443596,9259296684333,39223010163217,166151337308544 ★ a (n) = (F(3n) + F(n)) / 3, where F = A000045 (the Fibonacci sequence). • a(n) = 5 * a(n - 1) - 2 * a(n - 2) - 5 * a(n - 3) - a(n - 4) for n>3. - _ Wesley Ivan H urt _ , Jun 01 2016 • a(n) = ((- (1 / 2 * (1 - sqrt(5))) ^ n - (2 - sqrt(5)) ^ n + (1 / 2 * (1 + sqrt(5))) ^ n + (2 + sqrt(5)) ^ n)) / (3 * sqrt(5)). - _ Colin Bark er _ , Jun 02 2016 •

► [A037765] 3,12,50,201,807,3228,12914,51657,206631,826524,3306098,13224393,52897575,211590300,846361202,3385444809,13541779239,54167116956,216668467826,866673871305,3466695485223,13866781940892,55467127763570 ★ Base 4 d igits are, in order, the first n terms of the periodic sequence with initial period 3,0,2,1. • a(n) = 4 * a(n - 1) + a(n - 4) - 4 * a(n - 5). - _ Wesley Ivan Hurt _ , Apr 25 2023 •

► [A108080] 1,3,12,50,211,895,3805,16193,68940,293526,1249622,5318976,22634700,96296410,409573584,1741574006,7403616923,31466106703,133704121665,568008916093,2412570019447,10245302874071,43500597657111,184670002546295,783850164628721 ★ Sum _{ i=0..n } C(2n + i,n - i). • a(n) = Sum _{ k=0..n } S um _{ j=0..n } C(n + k,j - k) * C(n,j). (End) • a(n) = Sum _{ k=0..n } C(2n ,n - k) * F(k + 1) = Sum _{ k=0..n } C(2n,k) * F(n - k + 1). •

► [A113441] 1,3,12,50,212,905,3872,16576,70968,303832,1300737,5568473,23838453,102051167,436874885,1870233780,8006350999,34274673894,146727674181,628131735844,2688991567300,11511399994065,49279563214531 ★ Second row of A11 3439. • a(n) = 9 * a(n - 1) - 28 * a(n - 2) + 38 * a(n - 3) - 20 * a(n - 4) + a(n - 5). •

► [A119976] 1,3,12,50,216,952,4256,19224,87520,400928,1845888,8533824,39590656,184216320,859354112,4017738112,18820855296,88317817344,415075665920,1953473141760,9205135036416,43425512132608,205072796270592 ★ E.g.f. exp(2x) * (Bessel _ I(0,2 * sqrt(2)x) + Bessel _ I(1,2 * sqrt(2)x) / sqrt(2)). • a(n) = S um _{ k=0..n } 2 ^ (n - k) * C(n,k) * C(k,floor(k / 2))2 ^ floor(k / 2). •

► [A074547] 3,12,50,216,962,4392,20450,96696,462722,2234952,10873250,53199576,261449282,1289406312,6376734050,31605668856,156925904642,780248462472,3883804162850,19349526496536,96470430052802,481245665067432 ★ a(n) = 3 ^ n + 4 ^ n + 5 ^ n. • a(n) = 12 * a(n - 1) - 47 * a(n - 2) + 60 * a(n - 3). •

► [A191242] 1,1,3,12,50,224,1054,5121,25509,129591,668811,3496740,18481512,98585788,530068840,2869725800,15630429306,85589391884,470905310206,2601941245750,14432082902820,80328808797750,448527122885700,2511672193514250 ★ Reversion of x - x ^ 2 - x ^ 3 - 2 * x ^ 4 • a(n) = sum(k=1..n - 1, (sum(j=0..k, binomial(j,n - 3 * k + 2 * j - 1) * 2 ^ (k - j) * binomial(k,j))) * binomial(n + k - 1,n - 1)) / n, n>1, a(1)=1. •

► [A105479] 0,0,1,3,12,50,225,1092,5684,31572,186300,1163085,7654350,52928460,383437327,2902665885,22907918640,188082362120,1603461748491,14169892736484,129594593170210,1224875863061970,11948280552370932 ★ a(n) = C(n,2) * Bell(n - 2) (cf. A000217, A000110). • a(n) = binomial(n - 1, 2) * Bell(n - 3), th e case r = 2 of the general case of r pairs: c(n, r) = binomial(n - 1, r) * Bell(n - r - 1). •

► [A043291] 3,12,51,204,819,3276,13107,52428,209715,838860,3355443,13421772,53687091,214748364,858993459,3435973836,13743895347,54975581388,219902325555,879609302220,3518437208883,14073748835532,56294995342131,225179981368524,900719925474099 ⋆ Every run length in base 2 is 2. ● a(n) = 4 * a(n - 1) + a(n - 2) - 4 * a(n - 3), n>3. - _ John W. Layman _ , Feb 01 2000 ● a(n) = (1 / 10) * [3 * (- 1) ^ n + 32 * 4 ^ n - 5], with n>=0. - _ Paolo P. Lava _ , Feb 10 2009 ● a(n) = floor(4 ^ (n + 1) / 5). - _ Mircea Merca _ , Dec 26 2010 ●
► [A135343] 1,3,12,51,205,820,3277,13107,52428,209715,838861,3355444,13421773,53687091,214748364,858993459,3435973837,13743895348,54975581389,219902325555,879609302220,3518437208883,14073748835533,56294995342132,225179981368525 ⋆ a(n) = 3 * a(n - 1) + 4 * a(n - 2) - a(n - 3) + 3 * a(n - 4) + 4 * a(n - 5). ● a(n + 1) - 4 * a(n) = hexaperiodic - 1, 0, 3, 1, 0, - 3. ● a(n) = (1 / 15) * (3 * 4 ^ (n + 1) - 2 * (- 1) ^ n + 5 * cos(Pi * n / 3) - 5 * sqrt(3) * cos(Pi * n / 3)). - _ Richard Choulet _ , Jan 04 2008 ●
► [A083314] 1,3,12,51,216,903,3732,15291,62256,252303,1019052,4105731,16511496,66311703,266043972,1066567371,4273443936,17115299103,68525766492,274296776211,1097768235576,4392816334503,17576495514612,70321672588251 ⋆ (2 * 4 ^ n - (3 ^ n - 1)) / 2. ● a(n)=(2 * 4 ^ n - (3 ^ n - 1)) / 2 ●
► [A155179] 1,3,12,51,216,915,3876,16419,69552,294627,1248060,5286867,22395528,94868979,401871444,1702354755,7211290464,30547516611,129401356908,548152944243,2322013133880,9836205479763,41666835052932 ⋆ a(n)=4 * a(n - 1) + a(n - 2), n>2; a(0)=1, a(1)=3, a(2)=12. ● a(n) = (3 / 2) * ((2 - sqrt(5)) ^ (n - 1) + (2 + sqrt(5)) ^ (n - 1)) + (3 / 5) * sqrt(5) * ((2 + sqrt(5)) ^ (n - 1) - (2 - sqrt(5)) ^ (n - 1)) + (C(2 * n,n) mod 2). - _ Paolo P. Lava _ , Jan 26 2009 ●
► [A081704] 1,3,12,51,219,942,4053,17439,75036,322863,1389207,5977446,25719609,110665707,476169708,2048851419,8815747971,37932185598,163213684077,702271863591,3021718265724,13001775737847,55943723892063,240713292246774,1035735289557681 ⋆ Let f(0)=1, f(1)=t, f(n + 1) = (f(n) ^ 2 + t ^ n) / f(n - 1). f(t) is a polynomial with integer coefficients. Then a(n) = f(n) when t=3. ● a(n + 1) = (a(n) ^ 2 + 3 ^ n) / a(n - 1). ● a(n) = (2 ^ (- 1 - n) * ((5 - sqrt(13)) ^ n * (- 1 + sqrt(13)) + (1 + sqrt(13)) * (5 + sqrt(13)) ^ n)) / sqrt(13). - _ Colin Barker _ , Nov 26 2016 ●
► [A166482] 1,3,12,51,221,965,4227,18540,81363,357145,1567849,6883059,30218028,132664227,582428789,2557009709,11225925267,49284687948,216372426339,949930508209,4170438905425,18309298027683,80382521554380 ⋆ a(n) = Sum _{ k=0..n } binomial(n + k,2k) * Fibonacci(2k + 1). ● a(n) = Sum _{ k=0..n } binomial(n + k,2k) * Sum _{ j=0..k } binomial(k + j,2j). ●
► [A007854] 1,3,12,51,222,978,4338,19323,86310,386250,1730832,7763550,34847796,156503064,703149438,3160160811,14206181382,63874779714,287242041528,1291872728826,5810776384932,26138647551564,117587214581508 ⋆ G.f.: 1 / (1 - 3 * x * C(x)), where C(x) = (1 - sqrt(1 - 4 * x)) / (2 * x) = g.f. for the Catalan numbers A000108. ● a(n) = Sum _{ k = 0..n } C(2n,n - k)(2k + 1)2 ^ k / (n + k + 1). - _ Paul Barry _ , Jan 20 2007 ● a(n) = Sum _{ k = 1..n } C(2 * n - k,n - k) * (k * 3 ^ k) / (2 * n - k), for n>0. ● a(n) = (1 / 4) * (9 / 2) ^ n - 3 * Sum _{ k=0..n } C(2 * k,k) / (2k - 1) * (9 / 2) ^ (n - k). ● a(n) = upper left term in M ^ n, M = the infinite square production matrix: ●
► [A110167] 1,3,12,51,226,1026,4733,22083,103914,492228,2344035,11211210,53817063,259135299,1251074772,6053946531,29354128498,142584834924,693691007267,3379680991356,16486985580693,80521218046569,393674826425462 ⋆ Diagonal sums of Riordan array A110165. ● a(n) = sum { k=0..floor(n / 2), sum { j=0..n - k, C(n - k, j) * C(2 * j, j + k) }} . ●
► [A195255] 1,3,12,51,234,1179,6624,41931,300078,2420307,21841812,218595267,2405079378,28862546859,375217892136,5253064838811,78796015628886,1260736379202339,21432518833860252,385785340171746003,7329921466749958458,146598429345459522363 ⋆ O.g.f.: Sum _{ n>=0 } 3 * (n + 3) ^ (n - 1) * x ^ n / (1 + n * x) ^ n. ● a(n) = (n - 1)! * Sum _{ k=1..n } 3 ^ k / (k - 1)! for n>0, with a(0)=1. ●
► [A125187] 1,1,3,12,52,232,1049,4777,21845,100159,460023,2115350,9735205,44829766,206526972,951759621,4387156587,20226421380,93264500832,430091815527,1983549213861,9148582037193,42197572190160,194643215702835 ⋆ Number of Dumont permutations of the first kind of length 2n avoiding the patterns 1423 and 4132. ● a(n) = upper left term in M ^ n, where M is an infinite square production matrix in which two columns of (1,2,3,...) are prepended to an infinite lower triangular matrix of all 1's and the rest zeros, as follows: ●
► [A268208] 1,3,12,52,236,1108,5340,26276,131484,667108,3424108,17748564,92776716,488527284,2588907708,13797337668,73901315644,397609958596,2147904635340,11645489540468,63349140877356,345651184335892,1891209255293852 ⋆ Number of paths from (0,0) to (n,n) using only steps North, Northeast and East (i.e., steps E(1,0), D(1,1), and N(0,1)) that do not cross y=x "vertically". ● a(n) = Sum _{ m=0..n } C(2 * m + 2,m) * C(m + n,n - m) / (m + 1). - _ Vladimir Kruchinin _ Jan 20 2021 ● a(n) = hypergeom([3 / 2, - n, n + 1], [1 / 2, 3], - 1). - _ Peter Luschny _ , Jan 20 2021 ●
► [A007856] 1,3,12,52,236,1109,5366,26639,135300,701269,3700400,19834973,107784622,592705377,3292970302,18458954896,104276682820,593056996445,3392898090908,19512100041995,112729617387020,653965783541960,3807766434556940 ⋆ Subtrees in rooted plane trees on n nodes. ● a(n) = ((n - 1) / 2) * CatalanNumber(n - 1) * (1 - hypergeom([- 1 / 2, - n], [n - 1], - 4)). - _ Peter Luschny _ , Aug 04 2019 ●
► [A010736] 1,3,12,52,237,1119,5424,26832,134913,687443,3541932,18421524,96585597,509960223,2709067968,14469453632,77655751329,418567792899,2264867271852,12298297439892,66993811842477,366009125766463 ⋆ Let S(x,y) = number of lattice paths from (0,0) to (x,y) that use the step set { (0,1), (1,0), (2,0), (3,0), ... } and never pass below y = x. Sequence gives S(n - 2,n). ● a(n) = (3 / n) * sum(binomial(n, k) * binomial(n + k + 2, k - 1), k=1..n) = 3 * hypergeom([1 - n, n + 4], [2], - 1), n>=1, a(0)=1. ●
► [A348479] 1,1,3,12,52,240,1160,5795,29681,155025,822563,4421458,24025518,131759106,728330062,4053823980,22699853940,127790656040,722835069984,4106096464006,23414579166050,133984343279790,769124367124594,4427878983496972,25559244203741228 ⋆ Number of interval posets of permutations with n minimal elements. ● a(n) = (1 / n) * Sum _{ i=1..(n - 1) } Sum _{ k=0..Min(i,(n - i - 1) / 2) } binomial(n + i - 1,i) * binomial(i,k) * binomial(n - 2k - 2,i - 1) if n >1. Proved in M. Bouvel, L. Cioni, B. Izart (Theorem 18). ●
► [A138269] 1,3,12,53,231,1000,4329,18747,81188,351597,1522639,6594000,28556241,123666803,535556412,2319302053,10044062391,43497219000,188370799289,815766130347,3532789487188,15299239691997 ⋆ a(n + 1) is the Hankel transform of C(n) + C(n + 2), where C(n) = A000108(n). ● a(n) = Re(P(2n,i) * CONJ(P(2n + 1,i))) where i=sqrt(- 1) and P(n,x) = Sum _{ k=0..floor(n / 2) } binomial(n - k,k) x ^ k. ● a(n) = 5 * a(n - 1) - 4 * a(n - 2) + 5 * a(n - 3) - a(n - 4). - _ Wesley Ivan Hurt _ , Mar 07 2022 ●
► [A262442] 1,1,3,12,53,244,1152,5531,26875,131760,650492,3229368,16105344,80624935,404913225,2039146908,10293657125,52071019600,263888886528,1339540863092,6809667715812,34663102092960,176655038497000,901269559693104 ⋆ a(n) = Sum _{ k=0..n } (binomial(n - 1,n - k) * binomial(n + k - 1,n - k)). ● a(n) = n * hypergeom([1 - n, 1 - n, n + 1], [1, 3 / 2], 1 / 4) for n >= 1. - _ Peter Luschny _ , Mar 07 2022 ●
► [A060460] 3,12,53,254,1255,6256,31257,156258,781259,3906260,19531261,97656262,488281263,2441406264,12207031265,61035156266,305175781267,1525878906268,7629394531269,38146972656270,190734863281271 ⋆ Consider the final n decimal digits of 2 ^ j for all values of j. They are periodic. Sequence gives position (or phase) of the maximal value seen in these n digits. ● a(1) = 3, a(n) = 5 * a(n - 1) - (3 + 4 * (n - 2)). ● a(n) = a(n) = 2 * 5 ^ (n - 1) + n. ●
► [A293131] 1,3,12,53,291,1878,13975,117949,1113390,11623335,132966129,1654043412,22229656253,320987000444,4955905924999,81473034355102,1420855869195491,26199991898769875,509316957086997352,10410226994717110400,223190941584248205202,5008311999035018587226,117392752432115751942460,2869030095761224977541954,72986933627698300236793754 ⋆ a(n) = floor(Product _{ k=0..n - 1 } (k + t)), where t = Sum _{ n>=1 } 1 / a(n) is given by A293130. ● a(n) = floor(gamma(n + t) / gamma(t)) for n>=1. ●
► [A370821] 3,12,54,210,798,2850,10038,34410,116406,388362,1283430,4203786,13675038,44211570,142202574,455299242,1451997726,4614253122,14617620726,46177325994,145505603694,457437342546,1435074324006,4493508791754,14045385985902 ⋆ Number of minimal deterministic Mealy automata with n states outputting ternary strings ● a(n) = psi(3, n) + Sum _{ i=1..n - 1 } (3 - 1) * 3 ^ (i - 1) * psi(3, n - i), where psi(k,n) is the number of primitive words of length n on a k - letter alphabet (Cf. A143324). ●
► [A329056] 1,3,12,54,218,790,2614,7989,22756,60950,154631,373880,866019,1930121,4154593,8664718,17557769,34651632,66747915,125725045,231949573,419750808,746081780,1304039046,2243705012 ⋆ a(n) is the integer nearest to the result of raising n to the power of the fraction that is the natural logarithm of n over the natural logarithm of the golden ratio. ● a(n) = round(n ^ (log(n) / log(phi))). ●
► [A083881] 1,3,12,54,252,1188,5616,26568,125712,594864,2814912,13320288,63032256,298271808,1411437312,6678993024,31605334272,149558047488,707716279296,3348949390848,15847398669312,74990695670784,354859782008832 ⋆ a(n) = 6 * a(n - 1) - 6 * a(n - 2), with a(0)=1, a(1)=3. ● a(n) = ((3 - sqrt(3)) ^ n + (3 + sqrt(3)) ^ n) / 2. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n, 2 * k) * 3 ^ (n - k). ●
► [A055835] 1,3,12,54,255,1239,6132,30744,155628,793650,4071210,20984340,108590118,563816526,2935798680,15324533448,80164934919,420151515255,2205762626010,11597513662350,61060181223195,321870918101535 ⋆ T(2n + 1,n), where T is the array in A055830. ● a(n) = Sum _{ k=0..n } Sum _{ i=k..n } binomial(i,k) * binomial(i + 1,n - i) * binomial(n,k). - _ Vladimir Kruchinin _ , Mar 01 2014 ●
► [A366118] 1,3,12,54,259,1292,6616,34507,182395,973691,5236794,28323936,153842660,838210232,4577088300,25029752243,136984351418,749861003157,4103514165744,22437771907824,122529735856669,670928556599614,3632677249330084,19701490439727844 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 + x + x ^ 3) / (1 + x) ^ 4). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 3) } (- 1) ^ k * binomial(n + k,k) * binomial(3 * n - k + 3,n - 3 * k). ●
► [A158826] 1,3,12,54,260,1310,6824,36478,199094,1105478,6227712,35520498,204773400,1191572004,6990859416,41313818217,245735825082,1470125583756,8840948601024,53417237877396,324123222435804,1974317194619712 ⋆ Third iteration of x * C(x) where C(x) is the Catalan function (A000108). ● a(n) = (1 / n) * Sum _{ k=1..n } [binomial(2 * k - 2,k - 1) * Sum _{ i=k..n } (binomial(- k + 2 * i - 1,i - 1) * binomial(2 * n - i - 1,n - 1))]. - _ Vladimir Kruchinin _ , Jan 24 2013 ●
► [A107264] 1,3,12,54,261,1323,6939,37341,205011,1143801,6466230,36960300,213243435,1240219269,7263473148,42799541886,253556163243,1509356586897,9023497273548,54154973176074,326154592965879,1970575690572297 ⋆ Expansion of (1 - 3 * x - sqrt((1 - 3 * x) ^ 2 - 4 * 3 * x ^ 2)) / (2 * 3 * x ^ 2). ● a(n) = Sum _{ k=0..n } (1 / (k + 1)) * C(k + 1, n - k + 1) * C(n, k)3 ^ k. ● a(n) = Sum _{ k=0..floor(n / 2) } C(n, 2k) * C(k) * 3 ^ (n - k). - _ Paul Barry _ , May 18 2005 ● a(n) = (1 / Pi) * Integral _{ x=3 - 2 * sqrt(3)..3 + 2 * sqrt(3) } x ^ n * sqrt(- x ^ 2 + 6 * x + 3) / 6. - _ Paul Barry _ , Sep 16 2006 ●
► [A186241] 1,1,3,12,54,262,1337,7072,38426,213197,1202795,6879160,39794416,232429030,1368806610,8118934656,48458809586,290832756606,1754059333738,10625545472716,64620970743082,394409682103262,2415084675723048,14832185219521152,91339478577683664 ⋆ G.f. satisfies A(x) = 1 + x * A(x) ^ 2 + x ^ 2 * A(x) ^ 4 + x ^ 3 * A(x) ^ 6. ● a(n) = 1 / (2 * n - 1) * Sum _{ j=0..2 * n - 1 } binomial(2 * n - 1,j) * Sum _{ i=j..n + j - 1 } binomial(j,i - j) * binomial(2 * n - j - 1,3 * j - 3 * n - i + 1))), n>0. ● a(n) = 1 / (2 * n + 1) * Sum _{ k = 0..floor(n / 2) } binomial(2 * n + 1,k) * binomial(2 * n + 1,n - 2 * k). ●
► [A266083] 1,1,3,12,54,280,1695,11886,95116,856080,8560845,94169350,1130032266,14690419536,205665873595,3084988104030,49359809664600,839116764298336,15104101757370201,286977933390033990,5739558667800679990,120530732023814280000,2651676104523914160231 ⋆ a(n) = Sum _{ k = 0..n - 1 } (a(n - 1) + k) for n>0, a(0) = 1. ● a(n) = (2 * n! + exp(1) * n * (n - 1) * Gamma(n - 1, 1)) / 2, where Gamma(a, x) is the incomplete gamma function. ● a(n) = n * a(n - 1) + binomial(n,2). - _ G. C. Greubel _ , Dec 22 2015 ●

► [A245374] 1,3,12,54,288,1782,12474,96714,819882,7536402,74610234,790692354,8921660922,106687646802,1346863560714,17890362862434,249297686894682,363475666583602,5531750666209463 4,876911386062810114,14451743847813157242,247171758180997987602,4380263376360686471754 ★ G.f.: Sum _{ n>=0 } x ^ n / ((1 + x) ^ (n + 1) * (1 - 3 * (n + 1) * x)). ● a(n) = Sum _{ k=0..floor(n / 2) } Sum _{ i=0..k } (- 1) ^ i * binomial(k,i) * 3 ^ (n - k) * (k - i + 1) ^ (n - k). ●

► [A370937] 1,1,1,3,12,54,432,2862,29880,311688,3530952,52947432,694960560,12339656640,208855024128,3885592056624,84031138091520,1688108258868480,41851910546369280,986544325475656 96,25610732492679696384,720669291974958124800,19681263432530494848000 ★ Expansion of e.g.f. (1 / x) * Series _ Reversion(x * (1 - log(1 + 3 * x) / 3)). ● a(n) = (1 / (n + 1)!) * Sum _{ k=0..n } 3 ^ (n - k) * (n + k)! * Stirling1(n,k). ●

► [A373960] 1,3,12,55,251,1133,5103,22990,103598,466852,2103796,9480387,42721676,192517665,867546829,3909446467,17617229520,79388930909,357752184782,1612146986543,7264855441424,32737786954481,147527050375071,664804576516400,2995824317191471 ★ Number of compositions of 6 * n - 5 into parts 1 and 6. ● a(n) = Sum _{ k=0..n } binomial(n + 5 * k,n - 1 - k). ● a(n) = 7 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). ●

► [A371429] 1,3,12,55,272,1413,7599,41933,236053,1350093,7822620,45817390,270815730,1613300978,9676131942,58380176644,354081959367,2157570900137,13201923181308,81084900544971,499711105642851,3089163236655363,19150916212748940,119031956868317285 ★ Expansion of (1 / x) * Series _ Reversion(x / ((1 + x) ^ 3 - x ^ 4)). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 4) } (- 1) ^ k * binomial(n + 1,k) * binomial(3 * n - 3 * k + 3,n - 4 * k). ●

► [A361356] 1,1,3,12,55,273,1372,6824,33489,162405,779801,3713436,17560803,82553597,386105790,1797803248,8338313697,38539754649,177581276639,815982230060,3740047627071,17103604731961,78054858200448,355541644914072,1616688603539025 ★ Number of noncrossing caterpillars with n edges. ● a(n) = 12 * a(n - 1) - 52 * a(n - 2) + 104 * a(n - 3) - 114 * a(n - 4) + 76 * a(n - 5) - 32 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n >= 8. ●

► [A001764] 1,1,3,12,55,273,1428,7752,43263,246675,1430715,8414640,50067108,300830572,1822766520,11124755664,68328754959,422030545335,2619631042665,16332922290300,102240109897695,642312451217745,4048514844039120,25594403741131680,162250238001816900 ★ a(n) = binomial(3 * n,n) / (2 * n + 1) (enumerates ternary trees and also noncrossing trees). ● a(n) = n - th coefficient in expansion of power series P(n), where P(0) = 1, P(k + 1) = 1 / (1 - x * P(k) ^ 2). ● a(n) = upper left term in M ^ n. Top row terms of M ^ n = (n + 1) - th row of triangle A143603, with top row sums generating A006013: (1, 2, 7, 30, 143, 728, ...). (End) ●

► [A369159] 1,3,12,55,274,1443,7905,44593,257305,1511553,9010170,54361486,331336454,2037132958,12619056108,78682008194,493427982703,3110202012353,196993920616872,1252140618312 51,799059649687239,5116372686471627,32860439054510610 ★ Expansion of (1 / x) * Series _ Reversion(x / ((1 + x) ^ 3 + x ^ 4)). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 4) } binomial(n + 1,k) * binomial(3 * n - 3 * k + 3,n - 4 * k). ●

► [A366100] 1,3,12,55,274,1445,7942,45034,261630,1549624,9323622,56830524,350196414,2178046705,13654823106,86201572046,547500090374,3496124015860,22431949180480,144546815784357,935033560101416,6069666981214316,39526168501877736 ★ Expansion of (1 / x) * Series _ Reversion(x * (1 + x - x ^ 4) / (1 + x) ^ 4). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 4) } binomial(n + k,k) * binomial(3 * n - k + 3,n - 4 * k). ●

► [A362085] 1,3,12,55,315,2106,15946,134730,1253637,12702961,138955146,1629581955,20371061009,270124999977,3783651174906,55780472480036,862795543656489,13963065117796548,235845816764772718,4148499020022749151,75814424406989195136 ★ a(n) = Sum _{ k=0..n } (- 1) ^ k * binomial(- 3,k) * binomial(n * k,n - k). ● a(n) = Sum _{ k=0..n } binomial(k + 2,k) * binomial(n * k,n - k). ● a(n) = [x ^ n] 1 / (1 - x * (1 + x) ^ n) ^ 3. ●

► [A176281] 1,3,12,56,280,1440,7488,39104,204544,1070592,5604864,29345792,153653248,804532224,4212572160,22057287680,115493404672,604731211776,3166413520896,16579556016128,86811681488896,454551863820288 ★ Hankel transform of A176280. ● a(n) = 2 ^ (n - 1) + (3 - sqrt(5)) ^ n * ((5 - sqrt(5)) / 20) + (3 + sqrt(5)) ^ n * ((5 + sqrt(5)) / 20). ● a(0)=1, a(1)=3, a(2)=12, a(n) = 8 * a(n - 1) - 16 * a(n - 2) + 8 * a(n - 3). - _ Harvey P. Dale _ , Aug 14 2013 ● a(n) = 2 ^ (n - 1) * (Fibonacci(2 * n + 1) + 1). - _ G. C. Greubel _ , Nov 24 2019 ●

► [A050147] 1,3,12,56,280,1452,7700,41456,225648,1238420,6840988,37986984,211842696,1185635388,6655993380,37463920608,211350457824,1194706644516,6765300359468,38370431711000,217931108199672 ★ a(n) = T(n,n - 1), array T as in A050143. Also T(2n + 1,n), array T as in A055807. ● a(n) = C(2 * n - 3,n - 2) + Sum(i=0..n - 2 } C(n,i + 1) * C(n + i - 2,n - 2). - _ Vladimir Kruchinin _ , Nov 25 2014 ●

► [A192132] 1,1,3,12,56,285,1533,8571,49311,290019,1735845,10538550,64741482,401708635,2513837901,15847466748,100547969532,641570954283,4114313131809,26503231512588,171416266008912,1112726163448431,7247066415484731 ★ G.f. satisfies: A(x) = 1 + x * A(x) ^ 3 + x * (A(x) - 1) ^ 3. ● a(n)=sum(i=0..n - 1, 2 ^ i * binomial(n,i) * sum(j=0..n, binomial(j, - n + 2 * j - i - 1) * binomial(n,j))) / n, n>0, a(0)=1. ●

► [A369482] 1,3,12,56,287,1564,8895,52195,313655,1920489,11938271,75143016,477948051,3067190311,19835032603,129129612163,845603794947,5566269982581,36810651063798,244448822313138,1629413356387998,10898124891668031,73116947514706451 ★ Expansion of (1 / x) * Series _ Reversion(x / ((1 + x) ^ 2 * (1 + x + x ^ 3))). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 3) } binomial(n + 1,k) * binomial(3 * n - k + 3,n - 3 * k). ●

► [A366097] 1,3,12,56,287,1564,8896,52217,313955,1923775,11970066,75427608,480365740,3086989128,19992893796,130363352003,855099212950,5638480905533,37354602517624,248515024509486,1659620048332369,11121368629141886,74759777174598964 ★ Expansion of (1 / x) * Series _ Reversion(x * (1 + x - x ^ 3) / (1 + x) ^ 4). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 3) } binomial(n + k,k) * binomial(3 * n - k + 3,n - 3 * k). ●

► [A000257] 1,1,3,12,56,288,1584,9152,54912,339456,2149888,13891584,91287552,608583680,4107939840,28030648320,193100021760,1341536993280,9390758952960,66182491668480,469294031831040,3346270487838720,23981605162844160,172667557172477952 ★ Number of rooted bicubic maps: a(n) = (8 * n - 4) * a(n - 1) / (n + 2) for n >= 2, a(0) = a(1) = 1. ● a(0) = 1 and a(n) = 3 * 2 ^ (n - 1) * C(n) / (n + 2) for n>=1, where C = Catalan (A000108). ●

► [A369600] 1,3,12,56,291,1638,9780,60948,391821,2577575,17256918,117150228,804343302,5575177026,38957753136,274143594685,1941037464402,13818185220783,98848503602394,710185896393792,5122358166219855,37076879861508830,269235792063692580 ★ Expansion of (1 / x) * Series _ Reversion(x * (1 / (1 + x) ^ 3 - x ^ 3)). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 3) } binomial(n + k,k) * binomial(3 * n + 3 * k + 3,n - 3 * k). ●

► [A027390] 1,3,12,56,294,1698,10624,71256,508188,3829652,30340464,251647872,2177440648,19596586584,182967013056,1768251873632,17653554391056,181748836240944,1926542292294592,20996051677557888,234959167687868256,2696726674789023008 ★ Number of labeled servers of dimension 3. ● a(n) = 3 * a(n - 1) + 3 * (n - 1) * a(n - 2) + (n - 1) * (n - 2) * a(n - 3). - _ Vaclav Kotesovec _ , Dec 29 2012 [unless n=0, _ Michael Somos _ , May 31 2014] ●

► [A106570] 0,3,12,57,264,1227,5700,26481,123024,571539,2655228,12335529,57307800,266237787,1236874548,5746211553,26695469856,124020514083,576168465900,2676735405849,12435447021096,57771994301931,268394318271012 ★ a(n) = 4 * a(n - 1) + 3 * a(n - 2), with a(0)=0, a(1)=3. ● a(n) = 4 * a(n - 1) + 3 * a(n - 2), a(0)=0, a(1)=3. ● a(n) = 3 * (p ^ n - q ^ n) / (p - q), where p = 2 + sqrt(7) and q = 2 - sqrt(7). - _ Paolo P. Lava _ , Oct 07 2008 ●

► [A165310] 1,3,12,57,291,1524,8049,42627,225948,1197993,6352419,33684996,178623201,947197443,5022773292,26634636057,141237492771,748950724884,3971517639249,21060066950787,111676809902268,592197066758793 ★ a(0)=1, a(1)=3, a(n) = 7 * a(n - 1) - 9 * a(n - 2) for n > 1. ● a(n) = ((13 - sqrt(13)) * (7 + sqrt(13)) ^ n + (13 + sqrt(13)) * (7 - sqrt(13)) ^ n) / (26 * 2 ^ n). - _ Klaus Brockhaus _ , Sep 26 2009 ●

► [A361844] 1,3,12,57,297,1629,9216,53217,311796,1846818,11032416,66356712,401364531,2439135585,14882263002,91116281565,559528781697,3445002647847,21260140172244,131474746842345,814564464082263,5055177167348463,31420067723814780 ★ Expansion of 1 / (1 - 9 * x * (1 - x) ^ 2) ^ (1 / 3). ● a(n) = (- 1) ^ n * Sum _{ k=0..n } 9 ^ k * binomial(- 1 / 3,k) * binomial(2 * k,n - k). ● a(n) = (- 9) ^ n * binomial(- 1 / 3, n) * hypergeom([1 / 3 - n * 2 / 3, 2 / 3 - n * 2 / 3, - n * 2 / 3], [1 / 2 - n, 2 / 3 - n], 3 / 4). - _ Peter Luschny _ , Mar 27 2023 ●

► [A047891] 1,3,12,57,300,1686,9912,60213,374988,2381322,15361896,100389306,663180024,4421490924,29712558576,201046204173,1368578002188,9366084668802,64403308499592,444739795023054,3082969991029800 ★ Number of planar rooted trees with n nodes and tricolored end nodes. ● a(1)=1, a(n) = 2 * a(n - 1) + Sum _{ i=1..(n - 1) } a(i) * a(n - i). - _ Benoit Cloitre _ , Mar 16 2004 ● a(n + 1) = (Sum _{ k=0..n } binomial(n,k) * binomial(2 * n - k + 1,n + 1) * (2 * n ^ 2 - 6 * (k - 1) * n + 3 * k ^ 2 - 9 * k + 4) / ((n - k + 2) * (n - k + 1)) * 2 ^ k) / 2. ● a(n) = 2 ^ (n - 1) * (LegendreP _ n(2) - LegendreP _{ n - 2 } (2)) / (2n - 1). ● a(n) = 3 * hypergeom([1 - n,2 - n], [2], 3) - 2 * 0 ^ (n - 1). (End) ● a(n) = 2 ^ (n - 1) * hypergeom([1 - n, n], [2], - 1 / 2). - _ Peter Luschny _ , Nov 25 2020 ●

► [A243521] 1,3,12,57,300,1701,10206,63825,411096,2702349,17992506,120543561,808224372,5400815829,35868103734,236354531841,1544182760496,10001335837725,64233753928722,409298268016761,2589206145139596 ★ The number of states in a Tower of Hanoi puzzle with three pegs and n discs, where a larger disc can be placed directly on top of a smaller one at most once per peg. ● a(n) = Sum _{ i + j + k=n, i >= 0, j >= 0, k>= 0 } { n choose i, j, k } (2 ^ i - i)(2 ^ j - j)(2 ^ k - k). ● a(n) = 6 ^ n - 3 * n * 5 ^{ n - 1 }+ 3 * n * (n - 1) * 4 ^{ n - 2 }- n * (n - 1) * (n - 2)3 ^{ n - 3 } . ● a(n) = 40 * a(n - 1) - 715 * a(n - 2) + 7522 * a(n - 3) - 51583 * a(n - 4) + 240964 * a(n - 5) - 776637 * a(n - 6) + 1705554 * a(n - 7) - 2442744 * a(n - 8) + 2060640 * a(n - 9) - 777600 * a(n - 10) for n>9. ●

► [A369484] 1,3,12,57,301,1700,10045,61303,383335,2443113,15811317,103627692,686402602,4587643765,30900426417,209539509967,1429344492215,9801262309209,67523359213569,467136798336153,3243948604314619,22604271635042853,158001453530915361 ★ Expansion of (1 / x) * Series _ Reversion(x / ((1 + x) * (1 + x + x ^ 3) ^ 2)). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 3) } binomial(2 * n + 2,k) * binomial(3 * n - k + 3,n - 3 * k). ●

► [A027710] 1,3,12,57,309,1866,12351,88563,681870,5597643,48718569,447428856,4318854429,43666895343,461101962108,5072054649573,57986312752497,687610920335610,8442056059773267,107135148331162767,1403300026585387686,18946012544520590991 ★ Number of ways of placing n labeled balls into n unlabeled (but 3 - colored) boxes. ● a(n) = exp(- 3) * Sum _{ k>=0 } 3 ^ k * k ^ n / k!. - _ Benoit Cloitre _ , Sep 25 2003 ●

► [A307495] 1,1,3,12,57,312,1950,13848,111069,998064,9957186,109305240,1309637274,17006109072,237888664572,3566114897520,57030565449765,969154436550240,17439499379433690,331268545604793240,6624013560942038670,139080391965533653200,3059323407592802838180,70355685298375014175440 ★ Expansion of Sum _{ k>=0 } k! * ((1 - sqrt(1 - 4 * x)) / 2) ^ k. ● a(n) = (1 / n) * Sum _{ k=1..n } binomial(2 * n - k - 1,n - k) * k * k! for n > 0. ●

► [A370528] 0,0,0,0,0,0,1,3,12,57,348,2460,19806,178950,1794420,19778210,237696420,3093642300,43350548655,650733622665,10417925247240,177191430300339,3190747212651432,60645032890871688,1213255040678034508 ★ Number of permutations of [n] having exactly two adjacent 3 - cycles. ● a(n) = (1 / 2) * Sum _{ k=0..floor(n / 3) - 2 } (- 1) ^ k * (n - 2 * k - 4)! / k!. ●

► [A369616] 1,3,12,58,314,1824,11107,69955,451918,2977834,19936332,135225006,927267595,6417580459,44770275705,314489676679,2222549047262,15791353483602,112734135824404,808247711066688,5817056710700424,42012120642574732,304384379305912686 ★ Expansion of (1 / x) * Series _ Reversion(x / (1 / (1 - x) ^ 2 + x)). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..n } binomial(n + 1,k) * binomial(3 * n - 3 * k + 1,n - k). ●

► [A372378] 1,3,12,58,315,1836,11202,70587,455715,2998687,20037408,135597168,927403927,6400393314,44516211906,311719939251,2195772726315,15548558852085,110617749092928,790281473092740,5667380226502698,40782402908527488,2

94388014805470744 ⋆ Expansion of (1 / x) * Series _ Reversion(x / (1 + x + x ^ 3) ^ 3). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 3) } binomial(3 * n + 3,k) * binomial(3 * n - k + 3,n - 3 * k). ●

▶ [A369594] 1,3,12,58,318,1887,11772,75969,502554,3389056,23211312,161015058,1128976523,7988381001,56968671948,409046328954,2954644519365,21455293440345,156534285598068,1146881543952792,8434926025730955,62250461094154372,460859182211975184 ⋆ Expansion of (1 / x) * Series _ Reversion(x / ((1 + x) ^ 3 * (1 + x ^ 3) ^ 3)). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 3) } binomial(3 * n + 3,k) * binomial(3 * n + 3,n - 3 * k). ●

▶ [A369403] 1,3,12,58,318,1887,11775,76041,503607,3401326,23337339,162214074,1139835938,8083530360,57783277608,415904602938,3011669994078,21924967877547,160374157346266,1178091991206162,8687419007293458,64285383562018856,477208235856114384 ⋆ Expansion of (1 / x) * Series _ Reversion(x / (1 + x) ^ 3 * (1 - x ^ 3) ^ 3). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 3) } binomial(3 * n + k + 2,k) * binomial(3 * n + 3,n - 3 * k). ●

▶ [A125276] 1,1,3,12,58,325,2060,14514,112170,941128,8502393,82160481,844532873,9191329357,105491177081,1272418794619,16080824798705,212370154398094,2923859710010527,41877072960374478,622763691600244335 ⋆ Eigensequence of triangle A039598: a(n) = Sum _{ k=0..n - 1 } A039598(n - 1,k) * a(k) for n>0 with a(0)=1. ● a(n) = Sum _{ k=0..n - 1 } a(k) * C(2 * n,n - k - 1) * (k + 1) / n for n>0 with a(0)=1. ●

▶ [A080337] 1,3,12,59,339,2210,16033,127643,1103372,10269643,102225363,1082190554,12126858113,143268057587,1778283994284,23120054355195,314017850216371,4444972514600178,65435496909148513,999907522895563403,15832873029742458796,259377550023571768075 ⋆ Bisection of A080107. ● a(n) = Sum _{ k=1..2n - 1 } Aodd[n,k]. (End) ●

▶ [A101054] 1,3,12,59,343,2302,17537,149711,1417444,14755947,167664955,2066153410,27460121377,391670868279,5969233120520,96827494235555,1665874346755107,30302732222472482,581141491978752769,11719848107849221435,247960209086201040552,5491993051193586857235 ⋆ E.g.f.: exp(exp(x) - 1) / (1 - x) ^ 2. ● a(n) = ((- 1) ^ n * n! / e) * Sum _{ k>=0 } L(n, - n - 2,k) / k!, where L is a generalized Laguerre polynomial. ● a(n) = Sum _{ k=0..n } binomial(n,k) * (k + 1)! * Bell(n - k), where Bell() = A000110. - _ Ilya Gutkovskiy _ , May 24 2018 ●

▶ [A253171] 3,12,60,240,756,1988,4572,9495,18205,32736,55848,91182,143430,218520,323816,468333,662967,920740,1257060,1689996,2240568,2933052,3795300,4859075,6160401 ⋆ a(n) = number of permutations of (1,2,...,n) producible by an ordered triple of distinct transpositions. ● a(n) = n * (n ^ 5 - 7 * n ^ 4 + 17 * n ^ 3 - 17 * n ^ 2 + 30 * n - 24) / 48 for n>=3. ● a(n) = C(n,2) * (C(n - 2,2) * C(n - 4,2) / 6 + 1) + 2 * C(n,3) * C(n - 3,2) + 6 * C(n,4) for n>=3. ●

▶ [A073996] 0,1,3,12,60,256,1008,4032,16320,65536,261888,1047552,4193280,16777216,67104768,268419072,1073725440,4294967296,17179803648,68719214592,274877644800,1099511627776,4398045462528,17592181850112,70368739983360 ⋆ Number of strings of length n over GF(4) with trace 0 and subtrace 1. ● a(n; t, s) = a(n - 1; t, s) + a(n - 1; t - 1, s - (t - 1)) + a(n - 1; t - 2, s - 2(t - 2)) + a(n - 1; t - 3, s - 3(t - 3)) where t is the trace and s is the subtrace. Note that all operations involving operands t or s are carried out over GF(4). ●

▶ [A003483] 1,1,1,3,12,60,270,1890,14280,128520,1096200,12058200,139043520,1807565760,22642139520,339632092800,5237183952000,89032127184000,1475427973219200,28033131491164800,543494606861606400,11413386744093734400,235075995738558374400,5406747901986842611200,126214560713084056012800 ⋆ Number of square permutations of n elements. ● a(2 * n + 1) = (2 * n + 1) * a(2 * n). ●

▶ [A092803] 1,3,12,60,336,1968,11712,70080,420096,2519808,15117312,90700800,544198656,3265179648,19591053312,117546270720,705277526016,4231664959488,25389989363712,152339935395840,914039610802176 ⋆ Expansion of (1 - 5 * x) / ((1 - 2 * x) * (1 - 6 * x)). ● a(n) = 2 ^ (n - 2) * (3 ^ n + 3) = (6 ^ n + 3 * 2 ^ n) / 4. ●

▶ [A140097] 1,1,3,12,60,346,2218,15444,115075,908155,7535185,65374018,590579575,5537249212,53742567000,538801229874,5570060420573,59288164937748,648934780013375,7295904025820975,84174136470742517,995682428049720830 ⋆ G.f. satisfies: A(x) = Series _ Reversion(x / (1 + A(x) + A(x) ^ 2)). ● a(n)=T(n,1), T(n,j)= - sum(m=j..n - 1, T(m,j) * sum(i=1..n - m, (sum(k=1..i, (- 1) ^ k * binomial(k,i - k) * binomial(m + k - 1,m - 1))) * T(n - m,i))), n>j, T(n,n)=1. [_ Vladimir Kruchinin _ , May 04 2012] ●

▶ [A370652] 0,0,0,0,0,0,0,0,1,3,12,60,357,2508,20100,181080,1811886,19938270,239319540,3111697260,43569197270,653597773860,10458282340380,177800134878240,3200533135400175 ⋆ Number of permutations of [n] having exactly two adjacent 4 - cycles. ● a(n) = (1 / 2) * Sum _{ k=0..floor(n / 4) - 2 } (- 1) ^ k * (n - 3 * k - 6)! / k!. ●

▶ [A000258] 1,1,3,12,60,358,2471,19302,167894,1606137,16733779,188378402,2276423485,29367807524,402577243425,5840190914957,89345001017415,1436904211547895,24227076487779802,427187837301557598,7859930038606521508,150601795280158255827 ⋆ Expansion of e.g.f. exp(exp(exp(x) - 1) - 1). ● a(n) = Sum _{ k=0..n } Stirling2(n, k) * Bell(k). - Detlef Pauly (dettodet(AT)yahoo.de), Jun 06 2002 ●

▶ [A062569] 1,1,3,12,60,360,2418,19344,159120,1481040,15334088,184009056,2217441408,31044179712,442487616480,6686252969760,107004539285280,1926081707135040,34683832925921088,693676658518421760,13891399238731734720,292460416142501376000 ⋆ a(n) = sigma(n!). ● a(p) = (p + 1) * a(p - 1) for p prime. - _ Altug Alkan _ , Jul 18 2016 ●

▶ [A001710] 1,1,1,3,12,60,360,2520,20160,181440,1814400,19958400,239500800,3113510400,43589145600,653837184000,10461394944000,177843714048000,3201186852864000,60822550204416000,1216451004088320000,25545471085854720000,5620003638888038400 00 ⋆ Order of alternating group A _ n, or number of even permutations of n letters. ● a(0) = 0, a(1) = 1; a(n) = Sum _{ k=1..n - 1 } k * a(k). - _ Amarnath Murthy _ , Oct 29 2002 ● a(n) = 0 ^ n + Sum _{ k=0..n } (- 1) ^ (n - k - 1) * T(n - 1, k) * cos(Pi * (n - k - 1) / 2) ^ 2. ● a(n) = n! / 2 for n>=2 (proof from the e.g.f). - _ Wolfdieter Lang _ , Apr 30 2010 ● a(n) = (n - 2)! * t(n - 1), n>1, where t(n) is the n - th triangular number (A000217). - _ Gary Detlefs _ , May 21 2010 ● a(n) = if n < 2 then 1, otherwise Pochhammer(n,n) / binomial(2 * n,n). - _ Peter Luschny _ , Nov 07 2011 ● a(n) = Sum _{ k=0..floor(n / 2) } s(n,n - 2 * k) where s(n,k) are Stirling number of the first kind, A048994. - _ Mircea Merca _ , Apr 07 2012 ●

▶ [A357594] 0,0,1,3,12,60,362,2562,20820,191088,1955020,22061380,272197160,3645227040,52656804440,816114251400,13508168448400,237805776169600,4436759277524400,87445191383773200,1815460566861236000,39600109151685600000,905416958295793788000 ⋆ Expansion of e.g.f. log(1 - x) * tan(log(1 - x) / 2). ● a(n) = 2 * Sum _{ k=0..floor(n / 2) } (- 1) ^ k * (1 - 4 ^ k) * |Stirling1(n,2 * k)| * Bernoulli(2 * k). ●

▶ [A192479] 1,3,12,61,344,2074,13080,85229,569264,3876766,26817304,187908802,1330934032,9513485076,68539442800,497178707325,3628198048352,26617955242806,196205766112536,1452410901340598,10792613273706320 ⋆ a(n) = 2 ^ n * C(n - 1) - A186997(n - 1), where C(n) are the Catalan numbers (A000108). ● a(n + 1) = Sum _{ k=1..n + 1 } (binomial(k,n - k + 1) * binomial(n + 2 * k - 1,k)) / (n + k), a(1)=1. - _ Vladimir Kruchinin _ , May 15 2014 ●

▶ [A161799] 1,3,12,61,345,2085,13182,86106,576543,3936029,27294390,191722887,1361291244,9754412169,70447946556,512278417176,3747570671685,27561220671408,203657352324178,1511270129552163,11257532921742528 ⋆ G.f. satisfies: A(x) = 1 / (1 - x / (1 - x * A(x)) ^ 2) ^ 3. ● a(n) = Sum _{ k=0..n } C(3 * n - 2 * k + 2,k) / (n - k + 1) * C(n + k - 1,n - k). ● a(n,m) = Sum _{ k=0..n } C(3 * n - 2 * k + 3 * m - 1,k) * m / (n - k + m) * C(n + k - 1,n - k). ●

▶ [A121694] 1,3,12,61,377,2734,22671,211035,2175754,24592551,302295925,4014475756,57277225309,873819665135,14195291340656,244657733062761,4459137940238245,85694418205589534,1731893273528613811 ⋆ Sum of the vertical heights (i.e., number of rows) of all deco polyominoes of height n. ● a(n) = Sum _{ k=1..n } k * T(n,k), where T(n,k) (A121692) is defined by T(n,1)=1; T(n,n)=1; T(n,k) = k * T(n - 1,k) + 2 * T(n - 1,k - 1) + Sum _{ j=1..k - 2 } T(n - 1,j) for k <= n; T(n,k)=0 for k > n. ●

▶ [A074516] 3,12,62,342,1922,10902,62282,358062,2070242,12030822,70231802,411625182,2420922962,14281397142,84467679722,500702562702,2973697798082,17689598897862,105374653934042,628433226338622 ⋆ a(n) = 1 ^ n + 5 ^ n + 6 ^ n. ● a(n) = 11 * a(n - 1) - 30 * a(n - 2) + 20, n>1. [_ Gary Detlefs _ , Jun 21 2010] ●

▶ [A143916] 1,1,1,3,12,62,385,2781,22848,210176,2139336,23872450,289825228,3803859030,53676739157,810508456373,13041332257860,222776899815744,4026846590787586,76792054455516582,1540845309830989064 ⋆ G.f. A(x) satisfies: A(x) = 1 + x + x ^ 2 * A(x) * A'(x). ● a(0) = 1, a(1) = 1, a(n) = Sum _{ 0 < k < n } k * a(k) * a(n - k - 1). - _ Vladimir Reshetnikov _ , May 17 2016 ●

▶ [A323630] 1,1,3,12,62,390,2884,24472,234086,2490030,29139306,371878056,5138306700,76398336924,1215973642584,20624305367520,371309259462972,7071037633297116,141997246553420052,2998654325698019280,66426777891686458728,1540117294435707244488,37296711627004301923056 ⋆ Expansion of e.g.f. exp(log(1 - x) ^ 2 / 2) / (1 - x). This is also the transform of the involution numbers given by the signless Stirling cycle numbers. ● a(n) = Sum _{ k=0..n / 2 } |Stirling1(n + 1,2 * k + 1)| * binomial(2 * k,k) * k! / 2 ^ k. ● a(n + 1) = (n + 1) * a(n) - Sum _{ k=1..n } binomial(n,k) * (k - 1)! * a(n - k). (End) ●

▶ [A121123] 1,3,12,63,342,1998,11772,70308,420552,2521368,15120432,90710928,544218912,3265243488,19591180992,117546666048,705278316672,4231663808528,25389994205952,152339950119168,914039640248832,5484237750793728,32905426141965312,197432556307596288 ⋆ Unbranched a - 4 - catapolynonagons (see Brunvoll reference for precise definition). ● a(n) = 6 * a(n - 1) + 6 * a(n - 2) - 36 * a(n - 3) for n>5. ●

▶ [A361882] 1,3,12,63,357,2112,12834,79446,498504,3160566,20202882,129998400,841084065,5466859635,35672889180,233564188167,1533744021741,10097724827904,66633102118296,440600483618184,2918753549183712,19367330685385032,128704927930928088 ⋆ Expansion of 1 / (1 - 9 * x / (1 + x) ^ 2) ^ (1 / 3). ● a(n) = (- 1) ^ n * Sum _{ k=0..n } 9 ^ k * binomial(- 1 / 3,k) * binomial(n + k - 1,n - k). ● a(0) = 1; a(n) = (3 / n) * Sum _{ k=0..n - 1 } (- 1) ^ (n - 1 - k) * (n + 2 * k) * (n - k) * a(k). ● a(n) = (- 1) ^ (n - 1) * 3 * n * hypergeom([1 - n, 1 + n, 4 / 3], [3 / 2, 2], 9 / 4) for n >= 1. - _ Peter Luschny _ , Mar 30 2023 ●

▶ [A186186] 1,1,3,12,63,403,2919,22833,187799,1599718,13984383,124717327,1130144932,10375309228,96290993853,901915801437,8514822062757,80939662475426,774025387921462,7441380898249458,71879194326339456,697253570563306939,6789448668631285664,66340474776507262638 ⋆ Expansion of 1 / (1 - x / (1 - x) * A(x / (1 - x))) where A(x) is the g.f. of A002293. ● a(n) = Sum _{ m=1..n } Sum _{ k=m..n } binomial(n - 1,k - 1) * m / (3 * k - 2 * m) * binomial(4 * k - 3 * m - 1,k - m), n>0, a(0)=1. ●

▶ [A355164] 1,3,12,63,405,3024,25515,239355,2465478,27600669,333051669,4303119330,59202612693,863285928327,13288589222508,215177742933579,3654114236490393,64902307993517160,1202782377224829015,23207417212751493327,465302639045308247262,9677171073270491712513,208434297638273958963225 ⋆ a(n) = exp(- 1 / 3) * Sum _{ k>=0 } (3 * k + 2) ^ n / (3 ^ k * k!). ● a(0) = 1; a(n) = 2 * a(n - 1) + Sum _{ k=1..n } binomial(n - 1,k - 1) * 3 ^ (k - 1) * a(n - k). ●

▶ [A373770] 1,1,3,12,63,405,3075,26880,265545,2922885,35447895,469396620,6736095135,104102463465,1723322736135,30416726340000,570089983287825,1130615639852025,23651432371314247 5,520412235198325470 0,12013952027329810057,290321611594608826732 5 ⋆ Expansion of e.g.f. exp(x ^ 2 / (2 * (1 - x))) / (1 - x). ● a(n) = n! * Sum _{ k=0..floor(n / 2) } binomial(n - k,n - 2 * k) / (2 ^ k * k!). ●

▶ [A206226] 1,1,3,12,64,377,2432,16475,116263,845105,6292069,47759392,3683790062879998966,22777018771,181938716422,1465972415692,11902724768574,97299665768397,800212617435074,6617003142869419,54985826573015541,4589621084857972 08,38465269974333007 5 ⋆ Number of partitions of n ^ 2 into parts not greater than n. ● a(n) = [x ^ (n ^ 2)] Product _{ k=1..n } 1 / (1 - x ^ k). ●

▶ [A371495] 1,3,12,64,381,2430,16227,112008,792717,5721165,41945373,311529831,2338909219,17722127580,135346614906,1040779011412,8051611785006,62620659604659,489339248275242,3840135625895886,30251386980891657,239138782521553659,1896380840948325606 ⋆ G.f. A(x) satisfies A(x) = 1 / (1 - x * A(x) / (1

+ x)) ^ 3. ● a(n) = Sum _{ k=0..n } (- 1) ^ (n - k) * binomial(n - 1,n - k) * binomial(4 * k + 2,k) / (k + 1). ●

► [A111262] 3,12,65,403,2652,17889,121859,833260,5706081,39096531,267936188,1836369217,12586419075,86267964108,591287758337,4052742230419,27777897084444,190392509164065,1304969593244291,8944394450283436 ★ a(n) = (1 / n) * Sum _{ k=1..n } F(4 * k) * B(2 * n - 2 * k) * binomial(2 * n,2 * k)), where F are Fibonacci numbers and B are Bernoulli numbers. ● a(n) = F(4 * n - 2) + 2 * F(2 * n - 1). ●

► [A256124] 1,1,3,12,65,443,3626,34811,384479,4806098,67109281,1035627571,17505788792,321689532755,6385033369589,136124555962844,3102031758758001,75238874818446123,1935053096953675800,52595740530868430967,1506344153813275882667 ★ Coefficients in asymptotic expansion of sequence A107894. ● a(k) ~ k! / (4 * (log(2)) ^ (k + 1)). ●

► [A082987] 0,3,12,66,309,1524,7356,35787,173568,842790,4090485,19856568,96384072,467861331,2271040644,11023873914,53510987541,259747827852,1260842371428,6120257564955,29708354037720,144207380197758 ★ a(n)=sum(k=0,n,3 ^ k * F(k)) where F(k) is the k - th Fibonacci number. ● a(0)=0, a(1)=3, a(2)=12, a(n)=4a(n - 1) + 6a(n - 2) - 9a(n - 3). ●

► [A086836] 3,12,66,378,1890,7560,22680,45360,45360 ★ On a 3 X 3 board, number of distinct positions of n digits (modulo rotation / reflection)). ● a(n) = 1 / 8 * ([9] _ n + 4 * [3] _ n + 3 * [1] _ n) = 3 / 8 * (967680 - 1145424 * n + 705596 * n ^ 2 - 256796 * n ^ 3 + 59649 * n ^ 4 - 8936 * n ^ 5 + 834 * n ^ 6 - 44 * n ^ 7 + n ^ 8) / GAMMA(10 - n), where [m] _ n=m * (m - 1) * ... * (m - n + 1) is falling factorial. - _ Vladeta Jovovic _ , Aug 10 2003 ●

► [A074513] 3,12,66,408,2658,17832,121746,839928,5830338,40615752,283523826,1981521048,13858064418,96956119272,678491508306,4748635251768,33237225536898,232647693856392,1628482317387186,11399170063280088 ★ a(n) = 1 ^ n + 4 ^ n + 7 ^ n. ● a(n) = 11 * a(n - 1) - 28 * a(n - 2) + 18 with a(0)=3, a(1)=12. - _ Vincenzo Librandi _ , Jul 21 2010 ● a(0)=3, a(1)=12, a(2)=66, a(n) = 12 * a(n - 1) - 39 * a(n - 2) + 28 * a(n - 3). - _ Harvey P. Dale _ , Mar 06 2013 ●

► [A199746] 1,1,3,12,66,449,3678,35111,383192,4704300,64172052,962908056,15762088585,279514500434,5338014558032,109224066408835,2383887010044728,55281768382909480,1357381019671809552,35180557115610914376,959798458208463538416,27494554196938752676656 ★ E.g.f.: 1 / (1 + Sum _{ n>=1 } (- 1) ^ n * x ^ (n * (3 * n - 1) / 2) / (n * (3 * n - 1) / 2)! + (- 1) ^ n * x ^ (n * (3 * n + 1) / 2) / (n * (3 * n + 1) / 2)!). ● a(n) is odd iff n is a generalized pentagonal number (A001318). ●

► [A248871] 1,1,3,12,66,450,3679,35260,388511,4844584,67502450,1039929756,17556193609,322321551868,6393505020803,136245752898586,3103879644045050,75268872986970840,1935571325829192247,52605265683008056660,1506530437404419817467 ★ Coefficients in asymptotic expansion of sequence A107895. ● a(k) ~ k! / (4 * (log(2)) ^ (k + 1)). ●

► [A080599] 1,1,3,12,66,450,3690,35280,385560,4740120,64751400,972972000,15949256400,283232149200,5416632421200,110988861984000,2425817682288000,56333385828720000,1385151050307024000,35950878932544576000,982196278209226080000,28175806418228108640000 ★ Expansion of e.g.f.: 2 / (2 - 2 * x - x ^ 2). ● a(n) = n * a(n - 1) + (n * (n - 1) / 2) * a(n - 2). - _ Vladeta Jovovic _ , Aug 22 2003 ● a(n) = n! * ((1 + sqrt(3)) ^ (n + 1) - (1 - sqrt(3)) ^ (n + 1)) / (2 ^ (n + 1) * sqrt(3)). - _ Vladimir Reshetnikov _ , Oct 31 2015 ●

► [A349581] 1,3,12,66,460,3681,31848,289176,2714044,26103468,255876048,2546717454,25666830724,261407935366,2686191839232,27815564456544,289960011573212,3040424427011492,32046741183678288,339345854532800136,3608307717155678256,38511520730570169033 ★ G.f. A(x) satisfies: A(x) = 1 / (1 - 2 * x) + x * (1 - 2 * x) ^ 2 * A(x) ^ 4. ● a(n) = Sum _{ k=0..n } binomial(n,k) * binomial(4 * k,k) * 2 ^ (n - k) / (3 * k + 1). ● a(n) = 2 ^ n * F([1 / 4, 1 / 2, 3 / 4, - n], [2 / 3, 1, 4 / 3], - 2 ^ 7 / 3 ^ 3), where F is the generalized hypergeometric function. - _ Stefano Spezia _ , Nov 22 2021 ●

► [A364620] 1,3,12,67,449,3315,25963,211685,1777410,15263446,133427406,1183336278,10620959908,96292118665,880540044576,8112042293581,75218203558241,701439747294225,6574348389693202,61897799517155325,585138783209680944,5551797662571097495 ★ G.f. satisfies A(x) = 1 / (1 - x) ^ 2 + x * A(x) ^ 3. ● a(n) = Sum _{ k=0..n } binomial(n + 3 * k + 1,4 * k + 1) * binomial(3 * k,k) / (2 * k + 1). ●

► [A256125] 1,1,3,12,67,457,3734,35741,392875,4886114,67924417,1044531625,17609980356,322993544751,6402464186243,136373115537072,3105809328600351,75300018326324541,1936106590359322126,52615058519875702993,1506721174739412743551 ★ Coefficients in asymptotic expansion of sequence A077365. ● a(k) ~ k! / (4 * (log(2)) ^ (k + 1)). ●

► [A337059] 1,1,3,12,67,461,3823,36933,407963,5068909,69982083,1062784273,17607354955,316012688213,6108011298847,126490611884013,2794122884322635,65578524701197341,1629676370022564219,42748628870263418761,1180373377691425730235 ★ E.g.f.: 1 / (2 + x ^ 3 / 6 - exp(x)). ● a(0) = a(1) = 1; a(n) = n * (a(n - 1) + (n - 1) * a(n - 2) / 2) + Sum _{ k=4..n } binomial(n,k) * a(n - k). ●

► [A074510] 3,12,74,540,4178,33012,262874,2099340,16783778,134237412,1073800874,8590111740,68720008178,549757408212,4398051294074,35184386437740,281475019757378,2251799942825412,18014398896902474,144115189238117340 ★ a(n) = 1 ^ n + 3 ^ n + 8 ^ n. ● a(n) = 11 * a(n - 1) - 24 * a(n - 2) + 14 with a(0)=3, a(1)=12. - _ Vincenzo Librandi _ , Jul 21 2010 ●

► [A238630] 1,3,12,75,588,5043,44652,399675,3590508,32294883,290594892,2615176875,23536060428,211822949523,1906401762732,17157601515675,154418370594348,1389765206208963,12507886468460172,112570977053880075,1013138789998136268,9118249099522873203 ★ Number of partitions of 3 ^ n into parts that are at most 3. ● a(n) = [x ^ (3 ^ n)] Product _{ j=1..3 } 1 / (1 - x ^ j). ●

► [A357665] 0,1,3,12,81,765,7938,85239,963819,11801862,158533443,2320621569,36425289816,604576791405,10532817901791,192197187209484,3673078679995677,73486862051182425,1536507360834633666,33482575797899354235,758209049155176114807 ★ Expansion of e.g.f. sinh((exp(3 * x) - 1) / sqrt(3)) / sqrt(3). ● a(n) = Sum _{ k=0..floor((n - 1) / 2) } 3 ^ (n - 1 - k) * Stirling2(n,2 * k + 1). ●

► [A328778] 1,3,12,84,588,4116,28812,201684,1411788,9882516,69177612,484243284,3389702988,23727920916,166095446412,1162668124884,8138676874188,56970738119316,398795166835212,2791566167846484,19540963174925388 ★ Number of indecomposable closed walks of length 2n along the edges of a cube based at a vertex. ● a(n) = 7 * a(n - 1) for n>2. ● a(n) = 12 * 7 ^ (n - 2) for n>1. ●

► [A074505] 3,12,86,738,6578,59082,531506,4783098,43046978,387421002,3486785426,31381061658,282429540578,2541865836522,22876792471346,205891132127418,1853020188917378,16677181699797642,150094635297261266 ★ a(n) = 1 ^ n + 2 ^ n + 9 ^ n. ● a(n) = 11 * a(n - 1) - 18 * a(n - 2) + 8 with a(0)=3, a(1)=12. - _ Vincenzo Librandi _ , Jul 21 2010 ●

► [A039305] 1,3,12,87,684,5463,43692,349527,2796204,22369623,178956972,1431655767,11453246124,91625968983,733007751852,5864062014807,46912496118444,375299968947543,3002399751580332,24019198012642647,192153584101141164 ★ Number of distinct quadratic residues mod 8 ^ n. ● a(n) = floor((8 ^ n + 10) / 6). ● a(n) = 8 * a(n - 1) + a(n - 2) - 8 * a(n - 3) for n>0, a(0)=1. _ Vincenzo Librandi _ , Apr 22 2012 ●

► [A124191] 0,3,12,90,528,3372,20880,130728,815232,5091120,31777728,198386592,1238434560,7731150528,48262685952,301286851200,1880825008128,11741315949312,73296813911040,457565678934528,2856418110492672,17831591947054080,111316221335113728 ★ a(n) = ((2 + 3 * sqrt(2)) ^ n - (2 - 3 * sqrt(2)) ^ n) / (2 * sqrt(2)). ● a(n) = 4 * a(n - 1) + 14 * a(n - 2) for n >= 2; a(0)=0, a(1)=3. ●

► [A065087] 0,0,3,12,90,660,5565,51912,533988,6007320,73422855,969181620,13744757598,208462156812,3367465610145,57727981888080,1046800738237320,20020064118788592,402756584036805963,8502638996332570140,187953072550509445410,4341715975916768188740 ★ a(n) = A000166(n) * binomial(n + 1,2). ● a(n) = n * (n + 1) * (a(n - 1) / (n - 1) + (- 1) ^ n / 2) for n > 1 - _ Seiichi Manyama _ , Jun 24 2018 ●

► [A293126] 3,12,108,1092,11208,115272,1185888,12200592,125522208,1291399392,13286195328,136691243712,1406309006208,14468410468992,148854128491008,1531443389475072,15755820002738688,162099275536276992,1667712319943927808,17157784159685102592 ★ Number of matchings in the 2n - crossed prism graph. ● a(n) = 12 * a(n - 1) - 18 * a(n - 2) + 4 * a(n - 3). ●

► [A073987] 0,1,3,12,126,1296,9072,52488,297432,1700352,9843120,58576608,356638464,2176782336,13162730688,78940272384,471877757568,2821109907456,16894457846784,101361597378048,608764662139392,3656220357427200,21947909832446976,131685972252346368 ★ Number of strings of length n over Z _ 6 with trace 2 and subtrace 4. ● a(n; t, s) = a(n - 1; t, s) + a(n - 1; t + 5, s + 5t + 1) + a(n - 1; t + 4, s + 4t + 4) + a(n - 1; t + 3, s + 3t + 3) + a(n - 1; t + 2, s + 2t + 2) + a(n - 1; t + 1, s + t + 1) where t is the trace and s is the subtrace. ●

► [A369186] 1,3,12,260,5720,314248,17255072 ★ The denominators of a series that converges to the Dottie Number (A003957). ● a(1)=1; ●

► [A168437] 3,13,13,23,23,33,33,43,43,53,53,63,63,73,73,83,83,93,93,103,103,113,113,123,123 ★ a(n) = 3 + 10 * floor(n / 2). ● a(n) = 10 * n - a(n - 1) - 4, with n >1, a(1) = 3. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3). - _ Vincenzo Librandi _ , Sep 19 2013 ● a(n) = (1 + 5 * (- 1) ^ n + 10 * n) / 2. - _ Bruno Berselli _ , Sep 19 2013 ●

► [A146512] 1,3,13,15,25,27,37,39,49,51,61,63,73,75,85,87,97,99,109,111,121,123,133,135,145 ★ Numbers congruent to { 1, 3 } mod 12. ● a(2k - 1) = 12 * (k - 1) + 1, a(2k) = 12 * (k - 1) + 3, where k>0. ● a(n) = 12 * n - a(n - 1) - 20 (with a(1)=1). - _ Vincenzo Librandi _ , Nov 26 2010 ● a(n) = a(n - 1) + a(n - 2) - a(n - 3). - _ Wesley Ivan Hurt _ , May 03 2021 ●

► [A273678] 3,13,16,23,29,35,41,47,53,59,65,71,77,83,89,95,101,107,113,119,125,131,137,143,149 ★ First differences of number of active (ON,black) cells in n - th stage of growth of two - dimensional cellular automaton defined by ”Rule 833”, based on the 5 - celled von Neumann neighborhood. ● a(n) = 5 + 6 * n for n>2. ● a(n) = 2 * a(n - 1) - a(n - 2) for n>4. ●

► [A022124] 3,13,16,29,45,74,119,193,312,505,817,1322,2139,3461,5600,9061,14661,23722,38383,62105,100488,162593,263081,425674,688755 ★ Fibonacci sequence beginning 3, 13. ● a(n) = 5 * Lucas(n + 1) - 2 * Fibonacci(n + 1). - _ Lechoslaw Ratajczak _ , Apr 04 2021 ●

► [A042133] 1,3,13,16,29,219,248,467,2116,6815,329236,994523,4307328,5301851,9609179,72566104,82175283,154741387,701140831,2258163880,109093007071,329537185093,1427241747443,1756778932536,3184020679979 ★ Denominators of continued fraction convergents to sqrt(591). ● a(n) = 331352 * a(n - 10) - a(n - 20) for n>19. - _ Vincenzo Librandi _ , Jan 15 2014 ●

► [A041297] 1,1,3,13,16,45,61,289,639,928,22911,23839,70589,306195,376784,1059763,1436547,6805951,15048449,21854400,539554049,561408449,1662370947,7210892237,8873263184 ★ Denominators of continued fraction convergents to sqrt(161). ● a(n) = 23550 * a(n - 10) - a(n - 20). - _ Vincenzo Librandi _ , Dec 15 2013 ●

► [A041815] 1,1,3,13,16,93,946,4823,5769,27899,61567,89466,3640207,3729673,11099553,48127885,59227438,344265075,3501878188,17853656015,21355534203,103275792827,227907119857,331182912684,13475223627217 ★ Denominators of continued fraction convergents to sqrt(428). ● a(n) = 3701774 * a(n - 12) - a(n - 24) for n>23. - _ Vincenzo Librandi _ , Dec 25 2013 ●

► [A023239] 3,13,19,31,61,67,79,97,109,127,163,199,223,229,241,277,283,313,367,379,421,433,439,463,487 ★ Primes p such that 10 * p + 7 is also prime. ● a(n) == 1 (mod 6), for n > 1. - _ John Cerkan _ , Sep 12 2016 ●

► [A299645] 0,3,13,22,42,57,87,108,148,175,225,258,318,357,427,472,552,603,693,750,850,913,1023,1092,1212 ★ Numbers of the form m * (8 * m + 5), where m is an integer. ● a(n) = a(- n + 1) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). ● a(n) = (8 * n * (n - 1) - (2 * n - 1) * (- 1) ^ n - 1) / 4 = (2 * n + (- 1) ^ n - 1) * (4 * n - 3 * (- 1) ^ n - 2) / 4. Therefore, 3 and 13 are the only prime numbers in this sequence. ● a(n) + a(n + 1) = 4 * n ^ 2 for even n, otherwise a(n) + a(n + 1) = 4 * n ^ 2 - 1. ●

► [A273312] 3,13,23,33,39,49,55,65,71,81,87,97,103,113,119,129,135,145,151,161,167,177,183,193,199 ★ First differences of number of active (ON,black) cells in n - th stage of growth of two - dimensional cellular automaton defined by ”Rule 641”, based on the 5 - celled von Neumann neighborhood. ● a(n) = 8 - (- 1) ^ n + 8 * n for n>1. ● a(n) = 8 * n + 7 for n>1 and even. ● a(n) = 8 * n + 9 for n>1 and odd. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n>2. ●

► [A017305] 3,13,23,33,43,53,63,73,83,93,103,113,123,133,143,153,163,173,183,193,203,213,223,233,243 ⋆ a(n) = 10n + 3. ● a(n) = 2 * a(n - 1) - a(n - 2). - _ Vincenzo Librandi _ , May 28 2011 ●

► [A178825] 1,3,13,23,41,59,137,263,313,587,709,2207,2417,2767,4289,4547,5857,8543,9413,9631,18593,20611,45953,50147,52253 ⋆ a(1) = 1, a(n + 1) = least prime p > a(n) such that a(n) + p is a square. ● a(1) = 1, a(n + 1) = MIN { p in A000040 >= a(n) such that a(n) + p is in A000290 } . ●

► [A052454] 1,3,13,25,111,493,949,4215,18721,36037,160059,710905,1368457,6078027,26995669,51965329,230804967,1025124517,1973314045,8764510719,38927735977,74933968381,332820602355,1478228842609,2845517484433 ⋆ Positive integer values of n such that 10n ^ 2 - 9 is a square. ● a(n) = 38 * a(n - 3) - a(n - 6). ●

► [A335747] 1,3,13,26,66,154,380,904,2204,5286,12818,30854,74636,179948,434820,1049122,2533818,6115538,14766868,35646080,86064196,207766110,501609946,1210964110,2923573588 ⋆ Number of ways to tile vertically - fault - free 3 X n strip with squares and dominoes. ● a(n) = a(n - 1) + 4 * a(n - 2) - a(n - 3) - a(n - 4) for n >= 7. ●

► [A041035] 1,1,3,13,29,42,365,407,1179,5123,11425,16548,143809,160357,464523,2018449,4501421,6519870,56660381,63180251,183020883,795263783,1773548449,2568812232,22324046305 ⋆ Denominators of continued fraction convergents to sqrt(22). ● a(n) = 394 * a(n - 6) - a(n - 12). ●

► [A042269] 1,1,3,13,29,42,2129,2171,6471,28055,62581,90636,4594381,4685017,13964415,60542677,135049769,195592446,9914672069,10110264515,30135201099,130651068911,291437338921,422088407832,21395857730521 ⋆ Denominators of continued fraction convergents to sqrt(660). ● a(n) = 2158 * a(n - 6) - a(n - 12) for n>11. - _ Vincenzo Librandi _ , Jan 19 2014 ●

► [A144391] 3,13,29,51,79,113,153,199,251,309,373,443,519,601,689,783,883,989,1101,1219,1343,1473,1609,1751,1899 ⋆ a(n) = 3 * n ^ 2 + n - 1. ● a(n) = 1 + Sum _{ i = n - 1..2 * n - 1 } 2 * i. - _ Bruno Berselli _ , Feb 16 2018 ●

► [A227541] 0,3,13,29,52,81,117,159,208,263,325,393,468,549,637,731,832,939,1053,1173,1300,1433,1573,1719,1872 ⋆ a(n) = floor(13 * n ^ 2 / 4). ● a(n) = 13 * n ^ 2 / 4 + ((- 1) ^ n - 1) / 8, n >= 0 (use even or odd n to prove it). ● a(2 * k) = k ^ 2 * 13, k >= 0. ● a(2 * k + 1) = 3 + k * (k + 1) * 13, k >= 0. ● a(n) = a(- n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4). - _ Bruno Berselli _ , Aug 08 2013 ● a(n) = Sum _{ j=1..n } Sum _{ i=1..n } ceiling((i + j - n + 5) / 2). - _ Wesley Ivan Hurt _ , Mar 12 2015 ●

► [A330451] 0,3,13,30,53,83,120,163,213,270,333,403,480,563,653,750,853,963,1080,1203,1333,1470,1613,1763,1920 ⋆ a(n) = a(n - 3) + 20 * n - 30 for n > 2, with a(0)=0, a(1)=3, a(2)=13. ● a(n) = a(- n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) - 2 * a(n - 4) + a(n - 5). ● a(n) = (2 / 9) * (- 1 + 15 * n ^ 2 + cos(2 * n * Pi / 3)). - _ Stefano Spezia _ , Mar 02 2020 ● a(3 * n) = 30 * n ^ 2. ●

► [A022264] 0,3,13,30,54,85,123,168,220,279,345,418,498,585,679,780,888,1003,1125,1254,1390,1533,1683,1840,2004 ⋆ a(n) = n * (7 * n - 1) / 2. ● a(n) = C(7 * n,2) / 7, n >= 0. - _ Zerinvary Lajos _ , Jan 02 2007 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n > 2, a(0)=0, a(1)=3 and a(2)=13. - _ Paolo P. Lava _ , Jul 29 2009 ● a(n) = 7 * n + a(n - 1) - 4 for n > 0, a(0)=0. - _ Vincenzo Librandi _ , Aug 04 2010 ● a(n) = (1 / 5) * Sum _{ i=n..(6 * n - 1) } i. - _ Wesley Ivan Hurt _ , Dec 04 2016 ●

► [A273337] 3,13,31,32,40,48,56,64,72,80,88,96,104,112,120,128,136,144,152,160,168,176,184,192,200 ⋆ First differences of number of active (ON,black) cells in n - th stage of growth of two - dimensional cellular automaton defined by ”Rule 657”, based on the 5 - celled von Neumann neighborhood. ● a(n) = 8 * (1 + n) for n>2. ● a(n) = 2 * a(n - 1) - a(n - 2) for n>4. ●

► [A273769] 3,13,31,33,40,48,56,64,72,80,88,96,104,112,120,128,136,144,152,160,168,176,184,192,200 ⋆ First differences of number of active (ON,black) cells in n - th stage of growth of two - dimensional cellular automaton defined by ”Rule 913”, based on the 5 - celled von Neumann neighborhood. ● a(n) = 8 * (1 + n) for n>3. ● a(n) = 2 * a(n - 1) - a(n - 2) for n>5. ●

► [A054554] 1,3,13,31,57,91,133,183,241,307,381,463,553,651,757,871,993,1123,1261,1407,1561,1723,1893,2071,2257 ⋆ a(n) = 4n ^ 2 - 10n + 7. ● a(n) = 8 * n + a(n - 1) - 14 with n > 1, a(1)=1. - _ Vincenzo Librandi _ , Aug 07 2010 ● a(k + 1) = 4k ^ 2 - 2k + 1 in the Numberphile video. - _ Frank Ellermann _ , Mar 11 2020 ●

► [A051939] 3,13,31,58,95,143,203,276,363,465,583,718,871,1043,1235,1448,1683,1941,2223,2530,2863,3223,3611,4028,4475 ⋆ Truncated triangular pyramid numbers: a(n) = (n - 5) * (n ^ 2 + 8 * n - 66) / 6. ● a(n) = Sum _{ k=6..n } (k * (k + 1) / 2 - 18). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4); a(6)=3, a(7)=13, a(8)=31, a(9)=58. - _ Harvey P. Dale _ , Oct 22 2011 ●

► [A034050] 3,13,31,113,131,311,1113,1131,1311,3111,11113,11131,11311,13111,31111,111113,111131,111311,113111,131111,311111,1111113,1111131,1111311,1113111,1131111,3111111 ⋆ Numbers with multiplicative digital root value 3. ● a(m * (m - 1) / 2 + j + 1) = (10 ^ m - 1) / 9 + 2 * 10 ^ j for 0 <= j < m. - _ Robert Israel _ , Sep 27 2016 ●

► [A301926] 0,3,13,32,59,93,136,187,245,312,387,469,560,659,765,880,1003,1133,1272,1419,1573,1736,1907,2085,2272 ⋆ a(n + 3) = a(n) + 24 * n + 32, a(0)=0, a(1)=3, a(2)=13. ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) - 2 * a(n - 4) + a(n - 5). ● a(n + 15) = a(n) + 40 * (22 + 3 * n). ●

► [A166805] 3,13,33,68,124,208,328,493,713,999,1363,1818,2378,3058,3874,4843,5983,7313,8853,10624,12648,14948,17548,20473,23749 ⋆ Number of n X 4 1..2 arrays containing at least one of each value, all equal values connected, rows considered as a single number in nondecreasing order, and columns considered as a single number in nondecreasing order. ● a(n) = (n ^ 4 + 10 * n ^ 3 + 35 * n ^ 2 + 50 * n - 24) / 24. ● a(n) = (n ^ 2 + 5 * n - 2) * (n ^ 2 + 5 * n + 12) / 24. ● a(n) = (1 / 24) * (n + 1) * (n + 2) * (n + 3) * (n + 4) - 2. - _ Joerg Arndt _ , Apr 14 2011 ●

► [A252979] 3,13,33,68,1247,8487,27905,62977,114433,182273,266497,367105,484097,617473,767233,933377,1115905,1314817,1530113,1761793,2009857,2274305,2555137,2852353,3165953 ⋆ Number of n X 4 nonnegative integer arrays with upper left 0 and lower right its king - move distance away minus 2 and every value increasing by 0 or 1 with every step right, diagonally se or down. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>9. ●

► [A016061] 0,3,13,34,70,125,203,308,444,615,825,1078,1378,1729,2135,2600,3128,3723,4389,5130,5950,6853,7843,8924,10100 ⋆ a(n) = n * (n + 1) * (4 * n + 5) / 6. ● a(n) = Sum _{ i=0..n - 1 } 2 * i ^ 2 + i. - Jani Nurminen (slinky(AT)iki.fi), May 14 2006 ● a(n) = 2 * n ^ 3 / 3 + 3 * n ^ 2 / 2 + 5 * n / 6. - _ Jonathan Vos Post _ , Dec 14 2013 ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Bobby Milazzo _ , Mar 10 2013 ●

► [A154154] 3,13,34,84,203,493,1186,2876,6915,16765,40306,97716,234923,569533,1369234,3319484,7980483,19347373,46513666 ⋆ Numbers k such that 30 plus the k - th triangular number is a perfect square. ● a(n) = + a(n - 1) + 6 * a(n - 2) - 6 * a(n - 3) - a(n - 4) + a(n - 5). ●

► [A095661] 3,13,35,75,140,238,378,570,825,1155,1573,2093,2730,3500,4420,5508,6783,8265,9975,11935,14168,16698,19550,22750,26325 ⋆ Fifth column (m=4) of (1,3) - Pascal triangle A095660. ● a(n)= (n + 12) * binomial(n + 3, 3) / 4 = 3 * b(n) - 2 * b(n - 1), with b(n):=binomial(n + 4, 4); cf. A000332. ● a(n) = sum _{ k=1..n } (sum _{ i=1..k } i * (n - k + 3)), with offset 1. - _ Wesley Ivan Hurt _ , Sep 25 2013 ●

► [A108480] 1,1,3,13,35,117,379,1197,3859,12357,39563,126845,406371,1302101,4172443,13369293,42838835,137266917,439837739,1409354397,4515934339,14470215157,46366299963,148569565165,476055153491 ⋆ Expansion of (1 - x - 2x ^ 2) / (1 - 2x - 3x ^ 2 - 4x ^ 3 + 4x ^ 4). ● a(n)=2a(n - 1) + 3a(n - 2) + 4a(n - 3) - 4a(n - 4); a(n)=sum { k=0..floor(n / 2), C(2(n - k), 2k)2 ^ k } . ●

► [A098547] 1,3,13,37,81,151,253,393,577,811,1101,1453,1873,2367,2941,3601,4353,5203,6157,7221,8401,9703,11133,12697,14401 ⋆ a(n) = n ^ 3 + n ^ 2 + 1. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Colin Barker _ , Aug 29 2014 ●

► [A076800] 1,3,13,38,41,54,57,60,63,67,73,75,88,91,95,98,101,109,116,122,125,129,131,142,145 ⋆ Greedy powers of (e / 4): sum _{ n=1..inf } (e / 4) ^ a(n) = 1. ● a(n)=sum _{ k=1..n } floor(g _ k) where g _ 1=1, g _{ n + 1 } =log _ x(x ^ frac(g _ n) - x) (n>0) at x=(e / 4) and frac(y) = y - floor(y). ●

► [A277411] 0,3,13,38,94,213,459,960,1972,4007,8089,16266,32634,65385,130903,261956,524080,1048347,2096901,4194030,8388310,16776893,33554083,67108488,134217324 ⋆ Column 1 of triangle A277410. ● a(n) = 5 * a(n - 1) - 9 * a(n - 2) + 7 * a(n - 3) - 2 * a(n - 4) for n>4. ● a(n) = (8 * (2 ^ n - 1) - n * (n + 7)) / 2. (End) ●

► [A166911] 3,13,39,89,171,293,463,689,979,1341,1783,2313,2939,3669,4511,5473,6563,7789,9159,10681,12363,14213,16239,18449,20851 ⋆ a(n) = (9 + 14 * n + 12 * n ^ 2 + 4 * n ^ 3) / 3. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ●

► [A320661] 1,3,13,39,97,219,469,975,1993,4035,8125,16311,32689,65451,130981,262047,524185,1048467,2097037,4194183,8388481,16777083,33554293,67108719,134217577 ⋆ a(n) = 2 ^ (n + 3) - 6 * n - 7. ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 2 * a(n - 3). ● a(2 * n) mod 9 = period 3: repeat [1, 4, 7]. ● a(2 * n + 1) mod 9 = 3. ● a(n) mod 9 = period 6: repeat [1, 3, 4, 3, 7, 3]. ● a(n) mod 10 = period 20: repeat [1, 3, 3, 9, 7, 9, 9, 5, 3, 5, 5, 1, 9, 1, 1, 7, 5, 7, 7, 3] = Im(n). Im(n - 1) = [3, 1, 3, 3, 9, 7, 9, 9, 5, 3, 5, 5, 1, 9, 1, 1, 7, 5, 7, 7]. Disordered [1, 1, 1, 1, 3, 3, 3, 3, 5, 5, 5, 5, 7, 7, 7, 7, 9, 9, 9, 9]. ● a(n + 1) - a(n) = 2 ^ (n + 3) - 6. ●

► [A167910] 0,0,1,3,13,39,133,399,1261,3783,11605,34815,105469,316407,953317,2859951,8596237,25788711,77431669,232295007,697147165,2091441495,6275373061,18826119183,56482551853 ⋆ a(n) = (4 * 3 ^ n - 5 * 2 ^ n + (- 2) ^ n) / 20. ● a(2 * n + 1) = 3 * a(2 * n). ● a(n) = 3 * a(n - 1) + 4 * a(n - 2) - 12 * a(n - 3). ●

► [A059020] 0,3,13,40,108,275,681,1664,4040,9779,23637,57096,137876,332899,803729,1940416,4684624,11309731,27304157,65918120,159140476,384199155,927538873,2239276992,5406092952 ⋆ Number of 2 X n checkerboards (with at least one red square) in which the set of red squares is edge connected. ● a(n) = 2 * a(n - 1) + a(n - 2) + 4 * n - 1. ● a(n) = - 7 / 2 + (7 / 4) * (1 + sqrt(2)) ^ n - 2 * n - (5 / 4) * sqrt(2) * (1 - sqrt(2)) ^ n + (7 / 4) * (1 - sqrt(2)) ^ n + (5 / 4) * (1 + sqrt(2)) ^ n * sqrt(2), with n >= 0. - _ Paolo P. Lava _ , Jun 10 2008 ● a(n) = 3 * a(n - 1) - a(n - 2) - a(n - 3) + 4; ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) + a(n - 4). (End) ●

► [A290720] 3,13,40,127,430,1525,5572,20779,78682,301537,1166704,4548631,17840134,70297549,278001436,1102439683,4381060786,17438149561,69494317768,277202429935,1106485196638,4418967217573,17654948163700,70557030535387,282039835783690 ⋆ a(n) = 2 * 3 ^ n + 4 ^ n + 3 * n. ● a(n) = 9 * a(n - 1) - 27 * a(n - 2) + 31 * a(n - 3) - 12 * a(n - 4). ●

► [A360787] 1,1,1,3,13,40,177,965,4733,28103,184065,1191888,8713549,67005689,528870257,4526024267,40051790333,368513578472,3583302492545,35868588067501,373781214260749,4052932682659599,45218033687522481,523234757502985824,6245693941097387773 ⋆ Expansion of Sum _{ k>=0 } x ^ k / (1 - (k * x) ^ 2) ^ (k + 1). ● a(n) = Sum _{ k=0..floor(n / 2) } (n - 2 * k) ^ (2 * k) * binomial(n - k,k). ●

► [A041499] 1,3,13,42,1357,4113,17809,57540,1859089,5634807,24398317,78829758,2546950573,7719681477,33425676481,107996710920,3489320425921,10575957988683,45793152380653,147955415130642,4780366436561197,14489054724814233,62736585335818129 ⋆ Denominators of continued fraction convergents to sqrt(266). ● a(n) = 1370 * a(n - 4) - a(n - 8) for n>7. - _ Vincenzo Librandi _ , Dec 19 2013 ●

► [A247584] 1,1,1,1,1,3,13,43,113,253,509,969,1849,3719,8009,18027,40897,91257,198697,423777,894081,1886011,4007301,8594411,18560081 ⋆ a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + 3 * a(n - 5) with a(0) = a(1) = a(2) = a(3) = a(4) = 1. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + 3 * a(n - 5). ● a(n) = Sum _{ k=0...floor(n / 5) } (2 ^ k * binomial(n,5 * k)). - _ Alexander Samokrutov _ , Jul 11 2015 ●

► [A208060] 1,3,13,43,233,611,4405,10515,64145,218755,1215821,2689083,28162105,61179795,307475813,1236997051,8042542625,17101581699,146671231501,309740445795,2415132010441,8877053064643,40919003272005,85564885298027,1068638260341937 ⋆ a(n) = 1 + 2 * n + 2 ^ 2 * n * [n / 2] + 2 ^ 3 * n * [n / 2] * [n /

3] + 2 ^ 4 * n * [n / 2] * [n / 3] * [n / 4] + ... where [x]=floor(x). • a(n) = 1 + Sum _{ m=1..n } Product _{ k=1..m } 2 ^ k * floor(n / k). •

► [A193041] 1,1,3,13,44,122,292,631,1267,2411,4408,7820,13560,23109,38867,64721,106964,175782,287660,469275,763795,1241071,2014128,3265848,5292144 ⋆ Coefficient of x in the reduction by x ^ 2 - >x + 1 of the polynomial p(n,x) defined at Comments. • a(n)=5 * a(n - 1) - 9 * a(n - 2) + 6 * a(n - 3) + a(n - 4) - 3 * a(n - 5) + a(n - 6). •

► [A136520] 1,1,3,13,44,146,530,1975,7314,27262,102802,390138,1486064,5682756,21812436,83976075,324115550,1253795510,4859960402,18871869302,73398851448,285882923196,1114943553308,4353426835238,17016813133124 ⋆ a(n) = Sum _{ k=1..n } A001263(n,k) * A027656(k). • a(n) = Sum _{ j=0..floor((n - 1) / 2) } ((j + 1) / (2 * j + 1)) * binomial(n, 2 * j) * binomial(n - 1, 2 * j). - _ G. C. Greubel _ , Jul 27 2023 •

► [A308087] 1,1,1,3,13,45,153,515,1767,6167,21697,76661,271973,968561,3460677,12399661,44534647,160285049,577949447,2087375443,7550053527,27344761057,99155777619,359943568005,1307923066305 ⋆ Number of lattice paths from (0, 0) to (n,n) using Euclid's orchard as a step - set. • a(n) mod 2 = 1. - _ Alois P. Heinz _ , May 13 2019 •

► [A239592] 1,3,13,46,129,301,613,1128,1921,3079,4701,6898,9793,13521,18229,24076,31233,39883,50221,62454,76801,93493,112773,134896,160129 ⋆ a(n) = (n ^ 4 - n ^ 3 + 4 * n ^ 2 + 2) / 2. • a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5), a(0) = 1, a(1) = 3, a(2) = 13, a(3) = 46, a(4) = 129. •

► [A017943] 1,3,13,46,169,609,2197,7921,28561,102978,371293,1338715,4826809,17403307,62748517,226242995,815730721,2941158941,10604499373,38235066239,137858491849,497055861119,1792160394037,6461726194556 ⋆ Powers of sqrt(13) rounded down. • a(n) = floor(sqrt(13 ^ n)). - _ Vincenzo Librandi _ , Jun 24 2011 •

► [A084519] 1,1,3,13,47,173,639,2357,8695,32077,118335,436549,1610471,5941181,21917583,80856053,298285687,1100404333,4059496479,14975869477,55247410055,203812962077,751885445295,2773777080149,10232728055191 ⋆ Number of indecomposable ground - state 3 - ball juggling sequences of period n. • a(n) seems to satisfy the recurrence: a(1) = a(2) = 1, a(3) = 3 and a(n) = 3 * a(n - 1) + 2 * a(n - 2) + 2 * a(n - 3). If so, a(n) = floor(A * B ^ n + 1 / 2) where B = 3.6890953... is the real positive root of x ^ 3 - 3x ^ 2 - 2x - 2 = 0 and A = 0.0687059... is the real positive root of 118 * x ^ 3 + 118 * x ^ 2 + 35 * x - 3 = 0. - _ Benoit Cloitre _ , Jun 14 2003 [This conjecture is established in the Chung - Graham paper.] •

► [A304628] 1,1,3,13,47,181,729,2948,12031,49540,205153,853546,3565505,14943839,62810786,264650683,1117486463,4727486583,20032950744,85017558081,361289789377,1537198394570,6547611493822,27917246924099,119141276756545 ⋆ a(n) = [x ^ n] Product _{ k>=1 } ((1 + x ^ k) / (1 + x ^ (4 * k))) ^ n. • a(n) = [x ^ n] Product _{ k>=1 } ((1 - x ^ (8 * k - 4)) / (1 - x ^ (2 * k - 1))) ^ n. •

► [A265920] 1,3,13,47,185,723,2821,11127,43825,173147,685181,2713919,10762793,42715619,169654133,674238983,2680944545,10665068907,42443750893,168973210575,672913173913,2680539263219,10680581419493,42566341729431,169678604019217 ⋆ Numerator of the probability that Alice wins the following game: Alice and Bob take turn (Alice starts first) to gain 1 or 2 chips randomly and independently with 1 / 2 chance, and the first player that collects at least n chips is the winner. • a(n) = (4 ^ n + Sum _ (k=1..n) 4 ^ (n - k) * (binomial(k, n - k) + binomial(k - 1, n - k)) ^ 2) / 8. •

► [A048482] 1,3,13,49,161,481,1345,3585,9217,23041,56321,135169,319489,745473,1720321,3932161,8912897,20054017,44826625,99614721,220200961,484442113,1061158913,2315255809,5033164801 ⋆ a(n) = T(n,n), array T given by A048472. • a(n) = (n ^ 2 + n) * 2 ^ (n - 1) + 1. - _ Ralf Stephan _ , Sep 02 2003 • a(0)=1, a(1)=3, a(2)=13, a(3)=49, a(n)=7 * a(n - 1) - 18 * a(n - 2) + 20 * a(n - 3) - 8 * a(n - 4). - _ Harvey P. Dale _ , Feb 02 2015 •

► [A251743] 3,13,49,185,713,2793,11049,43945,175273,700073,2798249,11188905,44747433,178973353,715860649,2863377065,11453377193,45813246633,183252462249,733008800425,2932033104553,11728128223913,46912504507049,187650001250985,750599971449513 ⋆ Pairs of nodes in a complete binary tree that are at an absolute height difference of less than 2 from each other. • a(n) = (3 * 2 ^ n + 2 ^ (1 + 2 * n) - 5) / 3. • a(n) = 6 * a(n - 1) - 7 * a(n - 2) - 6 * a(n - 3) + 8 * a(n - 4). •

► [A178934] 1,3,13,49,186,711,2749,10705,41946,165159,652765,2587441,10278906,40903047,162974461,649984657,2594199066,10359577575,41386654237,165391648753,661101690426,2643012047943,10567864050493,42258903778129 ⋆ a(n) = floor((3 * 4 ^ n + 2 * 3 ^ n) / 5). • a(n) = 7 * a(n - 1) - 12 * a(n - 2) + a(n - 4) - 7 * a(n - 5) + 12 * a(n - 6); initial terms are 1, 3, 13, 49, 186, 711. • a(n) = 6 * a(n - 1) - 6 * a(n - 2) - 6 * a(n - 3) - 5 * a(n - 4) - 12 * a(n - 5) - 6; initial terms are 1, 3, 13, 49, 186. •

► [A118589] 1,1,3,13,49,261,1531,9073,63393,465769,3566611,29998101,262167313,2394499693,23249961099,233439305401,2439472944961,26649502709073,300078056044963,3498896317045789,42244252226263281,524289088799352661 ⋆ E.g.f.: A(x) = exp(x + x ^ 2 + x ^ 3). • a(n) = n! * sum(sum(binomial(j,n - 3 * k + 2 * j) * binomial(k,j),j,0,k) / k!,k,1,n), n>0. [_ Vladimir Kruchinin _ , Sep 01 2010] •

► [A026529] 1,3,13,50,205,833,3437,14232,59301,248050,1041469,4385888,18519306,78376403,332370925,1412000824,6008104249,25601113893,109229104313,466577280830,1995120743749,8539562784258,36583756253885,156854365793800,673028595199000 ⋆ a(n) = T(2 * n - 1, n - 2), where T is given by A026519. • a(n) = Sum _{ i=0..floor(n / 2) } C(n - 1, i - 1) * Sum _{ j=0..n } C(j, n - j + 2 * i) * C(n, j). - _ Vladimir Kruchinin _ , Jan 16 2015 •

► [A286182] 3,13,51,167,503,1441,4007,10923,29355,78037,205659,538127,1399583,3621289,9327695,23931603,61186131,155949085,396369795,1004904695,2541896519,6416348209,16165610999,40657256571,102090514683 ⋆ Number of connected induced (non - null) subgraphs of the prism graph with 2n nodes. • a(n) = 6 * a(n - 1) - 11 * a(n - 2) + 4 * a(n - 3) + 5 * a(n - 4) - 2 * a(n - 5) - a(n - 6), for n > 6 (conjectured). •

► [A101052] 1,1,3,13,51,181,603,1933,6051,18661,57003,173053,523251,1577941,4750203,14283373,42915651,128878021,386896203,1161212893,3484687251,10456158901,31372671003,94126401613,282395982051 ⋆ Number of preferential arrangements of n labeled elements when only k <= 3 ranks are allowed. • a(n) = 3 ^ n + 2 - 2 * 2 ^ n; recurrence: a(n + 3) - 6 * a(n + 2) + 11 * a(n + 1) - 6 * a(n), a(0) = 1, a(1) = 1, a(2) = 3. •

► [A016064] 1,3,13,51,193,723,2701,10083,37633,140451,524173,1956243,7300801,27246963,101687053,379501251,1416317953,5285770563,19726764301,73621286643,274758382273,1025412242451,3826890587533,14282150107683,53301709843201 ⋆ Smallest side lengths of almost - equilateral Heronian triangles (sides are consecutive positive integers, area is a nonnegative integer). • a(n) = 3 + floor((2 + sqrt(3)) * a(n - 1)), n >= 3. - _ Rick L. Shepherd _ , Sep 04 2005 • a(n) = 4 * a(n - 1) - a(n - 2) + 2. • a(n) = (2 + sqrt(3)) ^ n + (2 - sqrt(3)) ^ n - 1. • a(n) = [x ^ n] (1 + 2 * x + sqrt(1 + 2 * x + 3 * x ^ 2)) ^ n. - _ Peter Bala _ , Jun 23 2015 • a(n) = a(- n) for all integer n. - _ Michael Somos _ , May 11 2019 •

► [A163774] 1,3,13,51,201,783,3039,11763,45481,175803,679779,2630367,10187659,39500373,153329913,595883763,2318471289,9030982491,35216266947,137469149451,537152523711,2100857828193,8223917499477,32219655346719,126328429601451 ⋆ Row sums of the central coefficients triangle (A163771). • a(n) = Sum _{ k=0..n } Sum _{ i=k..n } (- 1) ^ (n - i) * binomial(n - k,n - i) * (2i) $, where i $ denotes the swinging factorial of i (A056040). •

► [A370246] 1,1,3,13,51,201,813,3333,13779,57361,240153,1010109,4264989,18066777,76745763,326796213,1394494803,5961639969,25528971369,109482236013,470145451401,2021360463849,8700225608583,37484437325157,161647475666301 ⋆ Coefficient of x ^ n in the expansion of (1 / (1 - x) * (1 + x ^ 3)) ^ n. • a(n) = Sum _{ k=0..floor(n / 3) } binomial(n,k) * binomial(2 * n - 3 * k - 1,n - 3 * k). •

► [A370272] 1,1,3,13,51,201,819,3382,14067,58927,248303,1051128,4466787,19043766,81418746,348936288,1498601459,6448162221,27791057997,119954739879,518451715551,2243481128020,9718784202240,42143960004750,182917942802595 ⋆ Coefficient of x ^ n in the expansion of 1 / ((1 - x) * (1 - x ^ 3)) ^ n. • a(n) = Sum _{ k=0..floor(n / 3) } binomial(n + k - 1,k) * binomial(2 * n - 3 * k - 1,n - 3 * k). •

► [A304629] 1,1,3,13,51,201,819,3389,14131,59341,250703,1064207,4535091,19390229,83139955,357354213,1539272499,6642769925,28714955571,124312591469,538895612751,2338948779320,10162837993377,44202371860240,192431323820851 ⋆ a(n) = [x ^ n] Product _{ k>=1 } ((1 + x ^ k) / (1 + x ^ (5 * k))) ^ n. • a(n) = [x ^ n] Product _{ k>=1 } 1 / (1 - x ^ k + x ^ (2 * k) - x ^ (3 * k) + x ^ (4 * k)) ^ n. •

► [A371837] 1,1,3,13,51,201,834,3529,15075,65431,288278,1285263,5799470,26492103,122432628,572291385,2705760291,12937116213,62542367166,305668511259,1510080076410,7539381024297,38034307340076,193835252945487,997724306958606 ⋆ a(n) = Sum _{ k=0..floor(n / 3) } n ^ k * binomial(2 * n - 3 * k - 1,n - 3 * k). • a(n) = [x ^ n] 1 / ((1 - n * x ^ 3) * (1 - x) ^ n). •

► [A015521] 0,1,3,13,51,205,819,3277,13107,52429,209715,838861,3355443,13421773,53687091,214748365,858993459,3435973837,13743895347,54975581389,219902325555,879609302221,3518437208883,14073748835533 ⋆ a(n) = 3 * a(n - 1) + 4 * a(n - 2), a(0) = 0, a(1) = 1. • a(n) = (4 ^ n - (- 1) ^ n) / 5. • a(n) = Sum _{ k=1..n } binomial(n, k) * (- 1) ^ (n + k) * 5 ^ (k - 1). - _ Paul Barry _ , May 13 2003 • a(2 * n) = 4 * a(2 * n - 1) - 1, a(2 * n + 1) = 4 * a(2 * n) + 1. In general this is true for all sequences of the type a(n) + a(n + 1) = q ^ (n): i.e., a(2 * n) = q * a(2n - 1) - 1 and a(2 * n + 1) = q * a(2 * n) + 1. - _ Amarnath Murthy _ , Jul 15 2003 • a(n) = 4 ^ (n - 1) - a(n - 1). • a(n + 1) = Sum _{ k=0..floor(n / 2) } binomial(n - k, k) * 3 ^ (n - 2k) * 4 ^ k. - _ Paul Barry _ , Jul 29 2004 • a(n) = 4 * a(n - 1) - (- 1) ^ n, n > 0, a(0)=0. - _ Paul Barry _ , Aug 25 2004 •

► [A360874] 3,13,51,205,843,3493,14451,59485,243483,991573,4021251,16253965,65530923,263685253,1059458451,4252051645,17050991163,68332580533,273716694051,1096026940525,4387590352203,17560813373413,70274617776051,281192580728605,1125052685342043 ⋆ Number of (non - null) connected induced subgraphs in the 2 X n rook graph. • a(n) = 10 * a(n - 1) - 35 * a(n - 2) + 50 * a(n - 3) - 24 * a(n - 4) for n > 4. •

► [A323266] 0,1,3,13,51,208,842,3419,13873,56303,228487,927252,3762976,15270937,61972603,251497601,1020629091,4141923220,16808778106,68213486019,276824385713,1123410413427,4559031003423,18501487472296,75082849498048 ⋆ A323265(n) / 2. • a(n) = 5 * a(n - 1) - 3 * a(n - 2) - 5 * a(n - 3) + 7 * a(n - 4) - a(n - 5) for n>5. •

► [A098619] 1,3,13,51,213,867,3589,14739,60853,250563,1033605,4259571,17565909,72412707,298586661,1231016019,5075753589,20927272323,86286346693,355763629491,1466857936405,6047981701347,24936516122469,102815688922899,423920292507061 ⋆ G.f. A(x) satisfies: A(x * G098618(x)) = G098618(x), where G098618 is the g.f. for A098618(n) = A007482(n) * Catalan(n). • a(2 * n + 1) = 3 * 17 ^ n. •

► [A291182] 3,13,52,203,781,2976,11267,42469,159596,598499,2241165,8383872,31340691,117100285,437378260,1633244795,6097779229,22763575008,84971451155,317161317781,1183776154124,4418211213011,16489770106653,61542705525504,229685859522339 ⋆ p - INVERT of the positive integers, where p(S) = 1 - 3 * S + 2 * S ^ 2. • a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 7 * a(n - 3) - a(n - 4). •

► [A037660] 3,13,52,211,845,3380,13523,54093,216372,865491,3461965,13847860,55391443,221565773,886263092,3545052371,14180209485,56720837940,226883351763,907533407053,3630133628212,14520534512851,58082138051405 ⋆ Base 4 digits are, in order, the first n terms of the periodic sequence with initial period 3,1,0. • a(n) = 4 * a(n - 1) + a(n - 3) - 4 * a(n - 4). - _ Wesley Ivan Hurt _ , May 02 2023 •

► [A072197] 3,13,53,213,853,3413,13653,54613,218453,873813,3495253,13981013,55924053,223696213,894784853,3579139413,14316557653,57266230613,229064922453,916259689813,3665038759253,14660155037013,58640620148053,234562480592213,938249922368853 ⋆ a(n) = 4 * a(n - 1) + 1 with a(0) = 3. • a(n) = 5 * a(n - 1) - 4 * a(n - 2), n > 1. - _ Vincenzo Librandi _ , Oct 31 2011 • a(n) = (5 * 2 ^ (2 * n + 1) - 1) / 3. - _ Bob Selcoe _ , Apr 03 2015 • a(n) = a(n - 1) + 5

* 2 ^ (2 * n - 1), for n >= 1, with a(0) = 3. - _ Wolfdieter Lang _ , Aug 16 2021 ●

▶ [A367755] 1,1,3,13,53,301,1951,13203,105673,919873,8472491,86799241,9480333373,10924180853,135880443063,1780842778471,24496224075921,357483642165313,5454904465819603,86909842633518373,1453042115780967941,25262405474642837341 ★ E.g.f. satisfies A(x) = exp(x * (1 + x + x ^ 2) * A(x ^ 3 / 6)). ● a(0) = 1; a(n) = (n - 1)! * Sum _{ k=0..n - 1 } (k + 1) * a(floor(k / 3)) * a(n - 1 - k) / (6 ^ floor(k / 3) * floor(k / 3)! * (n - 1 - k)!). ●

▶ [A121240] 1,3,13,53,849,3397,54353,217413,3478609,222630977,890523909,56993530177,911896482833,3647585931333,58361374901329,3735127993685057,23904819159584364 9,956192766383374597,61196337048535974209 ★ Numerator of sum _{ k=1..n } 1 / 2 ^ prime(k). ● a(n) = Numerator[Sum[1 / 2 ^ Prime[k], { k,1,n }]]. a(n) = A072762[Prime[n]]. ●

▶ [A305655] 1,1,3,13,54,290,1674,10857,76398,580230,4706734,40598349,370694845,3569027696,36100349833,382360758863,4228730647420,48716663849192,583403253712747,7248883337962522,93291181556742684,1241632098163126324,1706477729270903496 8,24187482148278413220 4 ★ a(n) = [x ^ n] exp(Sum _{ k>=1 } (- 1) ^ (k + 1) * x ^ k * (1 + x ^ k) / (k * (1 - x ^ k) ^ n)). ● a(n) = [x ^ n] Product _{ k>=1 } (1 + x ^ k) ^ (2 * binomial(n + k - 2,n - 1) - binomial(n + k - 3,n - 2)). ●

▶ [A037583] 3,13,55,221,887,3549,14199,56797,227191,908765,3635063,14540253,58161015,232644061,930576247,3722304989,14889219959,59556879837,238227519351,952910077405,3811640309623,15246561238493,60986244953975 ★ Base 4 digits are, in order, the first n terms of the periodic sequence with initial period 3,1. ● a(n) = floor(13 * 4 ^ n / 15). - _ Karl V. Keller, Jr. _ , Aug 04 2021 ●

▶ [A302757] 1,3,13,55,225,907,3637,14559,58249,233011,932061,3728263,14913073,59652315,238609285,954437167,3817748697,15270994819,61083979309,244335917271,977343669121,3909374676523,15637498706133,62549994824575,250199979298345 ★ a(n) is the smallest number whose greedy representation as a sum of terms of A126684 uses n terms. ● a(n) = 4 * a(n - 1) + 2 * n - 5. ● a(n) = (7 + 2 ^ (1 + 2 * n) - 6 * n) / 9. ● a(n) = 6 * a(n - 1) - 9 * a(n - 2) + 4 * a(n - 3) for n>3. ●

▶ [A093834] 1,3,13,55,229,943,3853,15655,63349,255583,1028893,4135255,16600069,66577423,266841133,1068958855,4280618389,17136822463,68590336573,274490486455,1098349366309,4394559726703,17581725691213,70337363118055 ★ Expansion of (1 - 2x) ^ 2 / ((1 - 3x)(1 - 4x)). ● a(n)=4 ^ n - 3 ^ n / 3 - 0 ^ n / 3. a(n + 1)=4 ^ (n + 1) - 3 ^ n, n>0. ● a(0)=1, a(1)=3, a(2)=13, a(n)=7 * a(n - 1) - 12 * a(n - 2) [From _ Harvey P. Dale _ , Dec 27 2011] ●

▶ [A372414] 1,1,3,13,55,231,981,4215,18271,79735,349843,1541783,6820045,30263689,134658681,600578373,2684116863,12017803439,53895617379,242054324055,1088530440315,4900978877115,22089865194543,99662269990363,450049706481181 ★ Coefficient of x ^ n in the expansion of ((1 - x + x ^ 3) / (1 - x) ^ 2) ^ n . ● a(n) = Sum _{ k=0..floor(n / 3) } binomial(n,k) * binomial(2 * n - 2 * k - 1,n - 3 * k). ●

▶ [A296045] 1,1,3,13,55,231,981,4222,18351,80320,353453,1562364,6932185,30856541,137725710,616190583,2762605791,12408541299,55825435656,251523510045,1134741006825,5125453110196,23175983361270,104899547541255,475228898015025 ★ a(n) = [x ^ n] Product _{ k>=1 } ((1 + x ^ (2 * k - 1)) / (1 - x ^ (2 * k))) ^ n. ● a(n) = [x ^ n] Product _{ k>=1 } ((1 + x ^ k) / (1 - x ^ (4 * k))) ^ n. ●

▶ [A370624] 1,1,3,13,55,231,987,4278,18711,82390,364793,1622556,7244419,32449158,145747290,656199048,2960596359,13382107227,60587421882,274712295550,1247233045905,5669390005950,25798654040580,117513750346200,535766200488675 ★ Coefficient of x ^ n in the expansion of 1 / (1 - x - x ^ 3) ^ n. ● a(n) = Sum _{ k=0..floor(n / 3) } binomial(n + k - 1,k) * binomial(2 * n - 2 * k - 1,n - 3 * k). ●

▶ [A286191] 3,13,55,233,971,3981,16143,65041,261139,1046549,4190231,16769049,67092507,268402717,1073676319,4294836257,17179607075,68718952485,2748768584 07,1099509530665,4398042316843,17592177655853,70368727400495,281474943156273,1125899839733811 ★ a(n) = (2 ^ n - 1) ^ 2 + 2 * n. ● a(n) = (2 ^ n - 1) ^ 2 + 2 * n. ● a(n) = 8 * a(n - 1) - 21 * a(n - 2) + 22 * a(n - 3) - 8 * a(n - 4) for n>4. ●

▶ [A033887] 1,3,13,55,233,987,4181,17711,75025,317811,1346269,5702887,24157817,102334155,433494437,1836311903,7778742049,32951280099,139583862445,591286729879,2504730781961,10610209857723,44945570212853,190392490709135,806515533049393 ★ a(n) = Fibonacci(3 * n + 1). ● a(n) = 4 * a(n - 1) + a(n - 2) for n>1, a(0)=1, a(1)=3; ● a(n) = ((1 + sqrt(5)) * (2 + sqrt(5)) ^ n - (1 - sqrt(5)) * (2 - sqrt(5)) ^ n) / (2 * sqrt(5)). ● a(n) = Sum _{ k=0..n } Sum _{ j=0..n - k } C(n,j) * C(n - j,k) * F(n - j + 1). - _ Paul Barry _ , May 19 2006 ● a(n) = Sum _{ k=0..n } C(n,k) * F(n + k + 1). - _ Paul Barry _ , Apr 19 2010 ● a(n) = F(2 * n) * L(n + 1) + F(n - 1) * (- 1) ^ n for n > 0. - _ J. M. Bergot _ , Feb 09 2016 ● a(n) = Sum _{ k=0..n } binomial(n,k) * 5 ^ floor(k / 2) * 2 ^ (n - k). - _ Tony Foster III _ , Sep 03 2017 ●

▶ [A117376] 1,3,13,55,240,1057,4688,20879,93250,417272,1869725,8386137,37640961,169042436,759470361,3413223919,15343588991,68988110756,310233741889,1395268187372,6275807975664,28230370862051,126996552221811 ★ Expansion of 1 / ((1 - 3x * c(x))(1 - x ^ 2 * c(x))), c(x) the g.f. of A000108. ● a(n)=sum { k=0..floor(n / 2), [k<=n - k] * sum { j=0..n - k, (j / (n - k - j)) * C(2n - k - j,n - k - j)[k<=j] * 3 ^ (j - k) }} ●

▶ [A264037] 0,1,1,3,13,55,241,1171,6357,37567,236521,1574331,11068333,82110535,640794337,5239439011,44723250501,397481121295,3671081354137,35176098791115,349120380267421,3583273413146647,37975511840454673,415004245048757299,4670891190907818165 ★ Stirling transform of A077957 (aerated powers of 2) with 0 prepended [0, 1, 0, 2, 0, 4, 0, 8, ...]. ● a(n) = Sum _{ k=0..floor(n / 2) } 2 ^ k * Stirling2(n,2 * k + 1). ● a(n) = (Bell _ n(sqrt(2)) - Bell _ n(- sqrt(2))) / (2 * sqrt(2)), where Bell _ n(x) is n - th Bell polynomial. ●

▶ [A010903] 3,13,56,241,1037,4462,19199,82609,355448,1529413,6580721,28315366,121834667,524227237,2255632184,9705479209,41760499493,179686059838,773148800711,3326685824041,14313982718072,61589856118237,265007332436969,1140267093830134 ★ Pisot sequence E(3,13): a(n) = floor(a(n - 1) ^ 2 / a(n - 2) + 1 / 2). ● a(n) = (2 ^ (- 1 - n) * ((5 - sqrt(13)) ^ n * (- 11 + 3 * sqrt(13)) + (5 + sqrt(13)) ^ n * (11 + 3 * sqrt(13)))) / sqrt(13). - _ Colin Barker _ , Nov 26 2016 ●

▶ [A095934] 1,3,13,56,241,1037,4462,19199,82609,355448,1529413,6580721,28315366,121834667,524227237,2255632184,9705479209,41760499493,179686059838,7731488007 11,3326685824041,14313982718072,61589856118237,265007332436969,1140267093830134 ★ Expansion of (1 - x) ^ 2 / (1 - 5 * x + 3 * x ^ 2). ● a(n + 2) = 5a(n + 1) - 3a(n) (n >= 1); a(0) = 1, a(1) = 3, a(2) = 13. ●

▶ [A049086] 1,3,13,57,249,1087,4745,20713,90417,394691,1722917,7520929,32830585,143313055,625594449,2730863665,11920848033,52037243619,227154537661,991581805481,4328482658041,18894822411423,82480245888473,360045244866137,1571680309076689 ★ Number of tilings of 4 X 3n rectangle by 1 X 3 rectangles. Rotations and reflections are considered distinct tilings. ● a(n) = 5 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ● a(n) / a(n - 1) tends to 4.3652300134..., an eigenvalue of the matrix M and an inverse root of the polynomial x ^ 3 - 3x ^ 2 + 5x - 1. [a(n - 2), a(n - 1), a(n)] = M ^ n * [1 1 1], where M = the 3 X 3 matrix [5 - 3 1 / 1 0 0 / 0 1 0]. E.g., a(3), a(4), a(5) = 57, 249, 1087. M ^ 5 * [1 1 1] = [57, 249, 1087] - _ Gary W. Adamson _ , Apr 25 2004 ● a(n) = hypergeom([(n + 1) / 2, n / 2 + 1, - n], [1 / 3, 2 / 3], - 8 / 27). - _ Peter Luschny _ , Dec 09 2020 ●

▶ [A275634] 3,13,57,250,1097,4814,21126,92711,406861,1785505,7835670,34386757,150905930,662249126,2906273499,12754151453,55971462889,245630191042,1077945575073,4730553104614,20759983799798,91104976064543,399813253409277,1754576363517905,7699940382577342 ★ Expansion of (3 - 2 * x - 2 * x ^ 2) / (1 - 5 * x + 2 * x ^ 2 + 3 * x ^ 3). ● a(n) = 5 * a(n - 1) - 2 * a(n - 2) - 3 * a(n - 3) for n>2. - _ Colin Barker _ , Aug 10 2016 ●

▶ [A163606] 3,13,57,251,1107,4885,21561,95171,420099,1854397,8185689,36133355,159500307,704068357,3107907993,13718969459,60558460803,267317978605,1179998646009,5208766025819,22992605632851,101494271616373 ★ a(n) = ((3 + 2 * sqrt(2)) * (3 + sqrt(2)) ^ n + (3 - 2 * sqrt(2)) * (3 - sqrt(2)) ^ n) / 2. ● a(n) = 6 * a(n - 1) - 7 * a(n - 2) for n > 1; a(0) = 3, a(1) = 13. ●

▶ [A005827] 1,3,13,57,259,1177,5367,24473,111631,509193,2322703,10595097,48330079,220460137,1005640527,4587282233,20925130111,95451085833,435405168943,1986123672537,9059808024799,41326792777897,188514347839887,859918153641593,3922562072528191 ★ Worst case of a Jacobi symbol algorithm. ● a(n)=5a(n - 1) - 10a(n - 3) + 4a(n - 4) by definition [_ R. J. Mathar _ , Mar 11 2009] ●

▶ [A296771] 1,3,13,58,257,1126,4882,20980,89497,379438,1600406,6720748,28117498,117254268,487589572,2022568168,8371423177,34581780478,142605399982,587138954428,2413944555742,9911778919348,40650232625212,166534680737368,681576405563722 ★ Row sums of A050157. ● a(n) = Sum _{ k=0..n } (binomial(2 * n, n) - binomial(2 * n, n + k + 1)). ● a(n) = 2 ^ (2 * n - 1) * (((n - 1 / 2)! * (2 * n + 3)) / (sqrt(Pi) * n!) - 1). ● a(n) = (n + 3 / 2) * binomial(2 * n,n) - 2 ^ (2 * n - 1). ●

▶ [A366676] 1,1,3,13,58,288,1512,8250,46296,265491,1548976,9165156,54865737,331694167,2022232068,12419023617,76755164643,477049187268,2979758649996,18695276174079,117766227611046,744527923478730,4722464911515423,30044091589750350 ★ G.f. satisfies A(x) = 1 + x ^ 3 + x * A(x) ^ 3. ● a(n) = Sum _{ k=0..floor(n / 3) } binomial(2 * (n - 3 * k) + 1,k) * binomial(3 * (n - 3 * k),n - 3 * k) / (2 * (n - 3 * k) + 1). ●

▶ [A052984] 1,3,13,59,269,1227,5597,25531,116461,531243,2423293,11053979,50423309,230008587,1049196317,4785964411,21831429421,99585218283,454263232573,2072145726299,9452202166349,43116719379147,196679192563037 ★ a(n) = 5 * a(n - 1) - 2 * a(n - 2) for n>1, with a(0) = 1, a(1) = 3. ● a(n) = Sum _{ alpha =RootOf(1 - 5 * z + 2 * z ^ 2) } (1 + 6 * alpha) * alpha ^ (- 1 - n) / 17. ● a(n) = [M ^ (n + 1)] _ 2,2, where M is the 3 X 3 matrix defined as follows: M = [2,1,2; 1,1,1; 2,1,2]. - _ Simone Severini _ , Jun 12 2006 ● a(n) = (a(n - 1) ^ 2 + 2 ^ n) / a(n - 2). - _ Irene Sermon _ , Oct 29 2013 ●

▶ [A262664] 1,1,3,13,59,271,1257,5881,27715,131395,626033,2995147,14380181,69249337,334345091,1617924973,7844900339,38105139907,185380469961,903147125143,4405621159969,21515837558557,105188202097091,514747668977263 ★ Expansion of (1 - 2 * x) / ((2 - x) * sqrt(5 * x ^ 2 - 6 * x + 1)) + 1 / (2 - x). ● a(n) = Sum _{ k=0..n } (binomial(n,k) * Sum _{ i=0..n - k } (2 ^ i * binomial(k,n - k - i) * binomial(k + i - 1,i) * (- 1) ^ (n - k - i))). ●

▶ [A333472] 1,1,3,13,59,276,1317,6371,31131,153292,759428,3780888,18900389,94805959,476945913,2405454213,12158471195,61574325840,312365992620,1587052145492,8074474510884,41131551386120,209760563456920,1070822078321520,5471643738383781 ★ a(n) = [x ^ n] (c (x / (1 + x))) ^ n, where c(x) = (1 - sqrt(1 - 4 * x)) / (2 * x) is the o.g.f. of the Catalan numbers A000108. ● a(n) = [x ^ n] ((1 + x - sqrt(1 - 2 * x - 3 * x ^ 2)) / (2 * x)) ^ n. ●

▶ [A299502] 1,3,13,59,277,1347,6685,33675,171493,880531,4550125,23633627,123272117,645247715,3387538621,17830213931,94058445445,497152260915,2632288649869,13958805204603,74124967884373,394115410904195,2097849420888925,11178238250228427 ★ Expansion of (1 - 6 * x + x ^ 2 + 8 * x ^ 3 + 16 * x ^ 4) ^ (- 1 / 2). ● a(n) = Sum _{ k=0..n } 2 ^ k * binomial(n,k) * hypergeom([- k,k - n,k - n], [1, - n], 2). ●

▶ [A330799] 1,3,13,59,285,1419,7245,37659,198589,1059371,5705517,30976571,169338781,931239243,5147825421,28587660123,159406327677,892113040491,5009160335085,28210229053563,159304938535773,901845743050635,5117144607546573,29096321095698843,165765778648482621 ★ Evaluation of the Motzkin polynomials at 1 / 2 and normalized with 2 ^ n. ● a(n) = (- 84 * (n - 2) * a(n - 3) - 2 * (8 * n + 5) * a(n - 2) + (11 * n + 5) * a(n - 1)) / (n + 1). ● a(n) = [x ^ n] 2 / (1 - 4 * x + sqrt((1 - 6 * x) * (2 * x + 1))). ● a(n) = [x ^ n] reverse((x ^ 2 + x) / (7 * x ^ 2 + 4 * x + 1)) / x. ●

▶ [A367057] 1,1,3,13,59,294,1549,8477,47715,274468,1606284,9533595,57247969,347169053,2123148153,13079296531,81087402683,505543820304,3167578950478,19935616736595,125971005957924,798883392476824,5083047458454395,32439034490697090 ★ G.f. satisfies A(x) = 1 + x * A(x) ^ 3 + x ^ 3 * A(x). ● a(n) = Sum _{ k=0..floor(n / 3) } binomial(2 * n - 5 * k + 1,k) * binomial(3 * n - 8 * k,n - 3 * k) / (2 * n - 5 * k + 1). ●

▶ [A367058] 1,1,3,13,60,301,1595,8774,49631,286870,1686876,10059301,60689041,369762262,2271892435,14060917955,87579290486,548558815484,3453077437 53

2,21833406999880,138603490377008,883075187803622,5644796991703781,36191055027026410 ⋆ G.f. satisfies A(x) = 1 + x * A(x) ^ 3 + x ^ 3 * A(x) ^ 2. ● a(n) = Sum _{ k=0..floor(n / 3) } binomial(2 * n - 4 * k + 1,k) * binomial(3 * n - 7 * k,n - 3 * k) / (2 * n - 4 * k + 1). ●

▶ [A101368] 1,1,3,13,61,291,1393,6673,31971,153181,733933,3516483,16848481,80725921,386781123,1853179693,8879117341,42542407011,203832917713,976622181553,4679277990051,22419767768701,107419560853453,514678036498563,2465970621639361 ⋆ The sequence solves the following problem: find all the pairs (i,j) such that i divides 1 + j + j ^ 2 and j divides 1 + i + i ^ 2. In fact, the pairs (a(n),a(n + 1)), n>0, are all the solutions. ● a(n) = 6a(n - 1) - 6a(n - 2) + a(n - 3), a(n) = 5a(n - 1) - a(n - 2) - 1. - _ Floor van Lamoen _ , Aug 01 2006 ● a(n) = (4 / 3 - (2 / 7) * sqrt(21)) * ((5 + sqrt(21)) / 2) ^ n + (4 / 3 + (2 / 7) * sqrt(21)) * ((5 - sqrt(21)) / 2) ^ n + 1 / 3. - _ Floor van Lamoen _ , Aug 04 2006 ●

▶ [A046748] 1,3,13,61,295,1447,7151,35491,176597,880125,4390901,21920913,109486993,547018941,2733608905,13662695645,68294088535,341399727335,1706739347095,8532741458075,42660172763995,213287735579135,1066389745361635,5331765761680895 ⋆ Row sums of triangle A046521. ● a(n) = binomial(2 * n, n) * Sum _{ k=0..n } binomial(n, k) / binomial(2 * k, k). ● a(n) = (3 * (3 * n - 2) / n) * a(n - 1) - (10 * (2 * n - 3) / n) * a(n - 2), n >= 1, a(- 1) := 0, a(0)=1 (homogeneous recursion). ● a(n) = binomial(2 * n,n) * hypergeom([- n,1],[1 / 2], - 1 / 4) (hypergeometric 2F1 form). ●

▶ [A074548] 3,13,61,307,1633,9043,51481,298507,1751713,10359523,61573801,367168507,2194090993,13129397203,78637382521,471273075307,2825447921473,16943968454083,101629063565641,609635780178907 ⋆ a(n) = 3 ^ n + 4 ^ n + 6 ^ n. ● a(n) = 13 * a(n - 1) - 54 * a(n - 2) + 72 * a(n - 3). ●

▶ [A367059] 1,1,3,13,61,309,1651,9153,52161,303681,1798459,10800237,65614237,402544597,2490398139,15519350593,97326638145,613786324353,3890080513395,24764386415821,158281551244029,1015314894877237,6534249237530115,42178452056044929 ⋆ G.f. satisfies A(x) = 1 + x * A(x) ^ 3 + x ^ 3 * A(x) ^ 3. ● a(n) = Sum _{ k=0..floor(n / 3) } binomial(2 * n - 3 * k + 1,k) * binomial(3 * n - 6 * k,n - 3 * k) / (2 * n - 3 * k + 1). ●

▶ [A243014] 1,1,3,13,61,321,1951,13693,109593,986401,9864091,108505101,1302061333,16926797473,236975164791,3554627472061,56874039553201,966858672404673,17403456103284403,330665665962403981,6613313319248079981,138879579704209680001 ⋆ Number of acyclic digraphs (DAGS) on n labeled nodes, where the indegree and outdegree of each node is at most 1. ● a(n) = (n! * Sum(1 / k!)) + 1, k=0..n - 2. ● a(n) = (n * (a(n - 1) + n - 2)) + 1, for n>1, a(1)=1. ●

▶ [A373683] 1,1,3,13,61,441,3031,28813,267513,3088081,36278731,491262861,6962025973,108395586313,1791145742751,31601369155021,594291393830641,11740929829286433,246910933786777363,5406641472165854221,125497950720670828461,3018786042678264770521 ⋆ Expansion of e.g.f. exp(x / (1 - x ^ 2)) / (1 - x ^ 2). ● a(n) = n! * Sum _{ k=0..floor(n / 2) } binomial(n - k,k) / (n - 2 * k)!. ● a(n) == 1 (mod 2). ●

▶ [A186242] 1,1,3,13,62,317,1707,9529,54634,319838,1903895,11488985,70122538,432126645,2685003765,16802798157,105811579002,670008272170,4263402119458,27248174904238,174836857576628,1125847862614733,7273384212430489,47128196689500189 ⋆ G.f. A(x) given by A(x) = 1 + x * A(x) ^ 2 + x ^ 2 * A(x) ^ 4 + 2 * x ^ 3 * A(x) ^ 6. ● a(n) = 1 / (2 * n - 1) * sum(j=0..2 * n - 1, binomial(i=j..n + j - 1, 2 * n - 1,j) * sum(binomial(j,i - j) * binomial(2 * n - j - 1,3 * j - 3 * n - i + 1) * 2 ^ (3 * j - 3 * n - i + 1))), n>0. ●

▶ [A367060] 1,1,3,13,62,318,1718,9627,55437,326070,1950630,11831706,72597453,449804148,2810260317,17685019893,111997074910,713223954540,4564502770117,29341499243806,189364923816282,1226535071582818,7970416067268898,51949175133236526 ⋆ G.f. satisfies A(x) = 1 + x * A(x) ^ 3 + x ^ 3 * A(x) ^ 4. ● a(n) = Sum _{ k=0..floor(n / 3) } binomial(2 * n - 2 * k + 1,k) * binomial(3 * n - 5 * k,n - 3 * k) / (2 * n - 2 * k + 1). ●

▶ [A092467] 1,3,13,63,309,1511,7373,35951,175269,854455,4165565,20307647,99002389,482649479,2352978861,11471077391,55922991237,272631840855,1329115610269,6479611111519,31588945184245,154000207833639 ⋆ a(n) = Sum _{ i + j + k=n, 0<=i,j,k<=n } (n + 2k)! / (i! * j! * (3 * k)!). ● a(n) = Sum _{ k=0..n } C(n + 2k,3k) * 2 ^ (n - k). - _ Paul Barry _ , Aug 23 2007 ●

▶ [A034478] 1,3,13,63,313,1563,7813,39063,195313,976563,4882813,24414063,122070313,610351563,3051757813,15258789063,76293945313,381469726563,1907348632813,9536743164063,47683715820313,238418579101563 ⋆ a(n) = (5 ^ n + 1) / 2. ● a(n) = Sum _{ k=0..n } Sum _{ j=0..k } binomial(n, k) * binomial(2 * k, 2 * j). - _ Paul Barry _ , Jan 13 2005 ● a(n) = 6 * a(n - 1) - 5 * a(n - 2) for n>1, a(0)=1, a(1)=3. - _ Philippe Deléham _ , Jul 11 2005 ● a(n) = 5 * a(n - 1) - 2 for n>0, a(0)=1. - _ Vincenzo Librandi _ , Aug 01 2010 ●

▶ [A001850] 1,3,13,63,321,1683,8989,48639,265729,1462563,8097453,45046719,251595969,1409933619,7923848253,44642381823,252055236609,1425834724419,8079317057869,45849429914943,260543813797441,1482376214227923,8443414161166173,48141245001931263 ⋆ Central Delannoy numbers: a(n) = Sum _{ k=0..n } C(n,k) * C(n + k,k). ● a(n) = P _ n(3), where P _ n is n - th Legendre polynomial. ● a(n) = Sum _{ k=0..n } C(n + k, n - k) * C(2 * k, k). - _ Benoit Cloitre _ , Feb 13 2003 ● a(n) = Sum _{ k=0..n } C(n, k) ^ 2 * 2 ^ k. - _ Michael Somos _ , Oct 08 2003 ● a(n) = Sum _{ k=0..n } C(2 * n - k, n) * C(n, k). - _ Paul Barry _ , Apr 23 2005 ● a(n) = Sum _{ k>=n } binomial(k, n) ^ 2 / 2 ^ (k + 1). - _ Vladeta Jovovic _ , Aug 25 2006 ● a(n) = a(- 1 - n) for all n in Z. - _ Michael Somos _ , Sep 23 2006 ●

▶ [A362744] 1,1,3,13,63,324,1736,9589,54223,312369,1826847,10818156,64737684,390877456,2378312780,14568360645,89766137967,556008951667,3459976045201,21621154097573,135619427912599,853590782088272,5389272616262656,34123058549079788,216621704634708868 ⋆ Number of parking functions of size n avoiding the patterns 312 and 321. ● a(n) = Sum _{ d in D(n) } Product _{ i=1..|w(d)| - 1 } (w(d) _ i + 1). ●

▶ [A243280] 1,3,13,63,325,1748,9685,54841,315605,1838610,10811788,64041706,381525253,2283436938,13718099275,82672421423,499546587317,3025336228390,18357852413062,111587292429820,679306584310220 ⋆ Expansion of log'(1 / 2 - sqrt((5 * x + 2 * sqrt(1 - 4 * x) - 2) / x) / 2). ● a(n) = sum(k=0..n, binomial(2 * k - 1,k) * binomial(2 * n,n - k)). ●

▶ [A000259] 1,3,13,63,326,1761,9808,55895,324301,1908878,11369744,68395917,414927215,2535523154,15592255913,96419104103,599176447614,3739845108057,2343500776460 6,147374772979438,929790132901804,5883377105975922,37328490926964481,237427707464042693 ⋆ Number of certain rooted planar maps. ● a(n) = Sum _{ k = 1..n } (- 1) ^ (k - 1) * C(3n, n - k) * k / n * F(k - 2) where F(k) is the k - th Fibonacci number (A000045) and F(- 1) = 1. - _ Michael D. Weiner _ , Aug 03 2017 ●

▶ [A367061] 1,1,3,13,63,328,1797,10210,59607,355409,2155166,13250055,82402013,517453773,3276534510,20897024350,134118458191,865574280977,5613879001983,36571135386965,239187418784442,1569994174618799,10338925554033967,68288387553861826 ⋆ G.f. satisfies A(x) = 1 + x * A(x) ^ 3 + x ^ 3 * A(x) ^ 5. ● a(n) = Sum _{ k=0..floor(n / 3) } binomial(2 * n - k + 1,k) * binomial(3 * n - 4 * k,n - 3 * k) / (2 * n - k + 1). ●

▶ [A202837] 1,3,13,63,345,2043,13029,88119,629169,4707315,36772029,298608687,2513795337,21874602987,196341166485,1814001266727,17222473789281,167763502438371,1674418724986221,17102228350521375,178562508150516921,1903865792493260763 ⋆ E.g.f.: exp(3 * x + 2 * x ^ 2). ● a(n) = Sum _{ k=0..[n / 2] } 3 ^ (n - 2 * k) * 2 ^ k * n! / ((n - 2 * k)! * k!). ●

▶ [A367062] 1,1,3,13,64,339,1889,10917,64836,393292,2426335,15176847,96029114,613540477,3952727925,25649572693,167494312692,1099850119488,7257905610260,48106858236044,320131295055690,2138010763838375,14325505944147495,96273042489762471 ⋆ G.f. satisfies A(x) = 1 + x * A(x) ^ 3 + x ^ 3 * A(x) ^ 6. ● a(n) = (1 / (2 * n + 1)) * Sum _{ k=0..floor(n / 3) } binomial(2 * n + 1,k) * binomial(3 * n - 3 * k,n - 3 * k). ●

▶ [A200719] 1,1,3,13,64,340,1903,11053,65993,402527,2497439,15712220,100001459,642719263,4165537744,27193644061,178654643151,1180282875483,7836312619243,52259258911091,349902441457427,2351240866736891,15851508780927739,107187240225206884,727684821098903319 ⋆ G.f. satisfies A(x) = (1 + x * A(x) ^ 2) * (1 + x ^ 2 * A(x) ^ 5). ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(2 * n + k + 1,k) * binomial(2 * n + k + 1,n - 2 * k) / (2 * n + k + 1). - _ Seiichi Manyama _ , Jul 18 2023 ●

▶ [A065065] 1,3,13,64,341,1913,11132,66573,406653,2526351,15913347,101396034,652378120,4232439734,27657380019,181872596607,1202641671293,7991878198287,53343146808137,357464739709920,2404073823950915 ⋆ Number of noncrossing connected graphs with nodes on a circle having n edges. ● a(n) = Sum _{ k=ceiling((n + 3) / 2)..n + 1 } binomial(3 * k - 3,n + k) * binomial(n - 1,n - k + 1) / (k - 1). ●

▶ [A368973] 1,3,13,65,351,1989,11650,69903,427225,2649229,16622079,105310673,672687322,4327037010,28002409452,182179075689,1190778886791,7815755146095,51491064226095,340374137775879,2256891800364421,15006481967365535,100037043223408890 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 - x) * (1 - x + x ^ 2) ^ 2). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 2) } (- 1) ^ k * binomial(2 * n + k + 1,k) * binomial(4 * n - k + 2,n - 2 * k). ●

▶ [A364473] 1,1,3,13,65,353,2024,12057,73890,462851,2950261,19073921,124776881,824409052,5493384031,36874564529,249114808794,1692489908494,11556616157589,79265016880139,545860966841247,3772800724433931,26162662010039826,181974370638420829 ⋆ G.f. satisfies A(x) = 1 + x * A(x) ^ 2 + x ^ 2 * A(x) ^ 6. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(2 * n + 2 * k,k) * binomial(2 * n + k,n - 2 * k) / (n + 3 * k + 1). ●

▶ [A080227] 0,0,1,3,13,65,391,2737,21897,197073,1970731,21678041,260136493,3381774409,47344841727,710172625905,11362762014481,193166954246177,3477005176431187,66063098352192553,1321261967043851061,27746501307920872281,610423028774259190183 ⋆ a(n) = n * a(n - 1) + (1 / 2) * (1 + (- 1) ^ n), a(0)=0. ● a(n) = floor((cosh(1) - 1) * n!). - _ Benoit Cloitre _ , Feb 14 2003 ● a(n) = (n - 1) * (a(n - 1) + a(n - 2)) + 1 for n > 1. - _ Gary Detlefs _ , Jun 22 2010 ● a(n) = (1 / 2) * (exp(- 1) * Gamma(n + 1, - 1) + exp(1) * Gamma(n + 1,1)) - Gamma(n + 1,0). - _ Martin Clever _ , Mar 26 2023 ●

▶ [A373932] 1,3,13,66,330,1624,7973,39173,192539,946375,4651541,22862658,112371609,552314945,2714670141,13342810843,65580931949,322335276473,1584302440665,7786967198052,38273537040452,188117350476413,924611109563490,4544534046237850 ⋆ Number of compositions of 7 * n - 6 into parts 1 and 7. ● a(n) = Sum _{ k=0..n } binomial(n + 6 * k,n - 1 - k). ● a(n) = 8 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). ● a(n) = n * hypergeom([1 - n,(1 + n) / 6,(2 + n) / 6, (3 + n) / 6, (4 + n) / 6, (5 + n) / 6, 1 + n / 6], [2 / 7, 3 / 7, 4 / 7, 5 / 7, 6 / 7, 8 / 7], - 6 ^ 6 / 7 ^ 7). - _ Stefano Spezia _ , Jun 23 2024 ●

▶ [A219537] 1,1,3,13,66,366,2148,13115,82449,530095,3469401,23037642,154820262,1050999343,7196493255,49644745965,344704716018,2407157839593,16895247295947,119121868831235,843306880720218,5992060655349521,42718501097385207,305476181765843358 ⋆ G.f. satisfies A(x) = 1 + x * (A(x) ^ 2 - A(x) ^ 3 + A(x) ^ 4). ● a(n) = (1 / n) * Sum _{ k=0..n - 1 } binomial(n,k) * binomial(2 * n + k,n - 1 - k) for n > 0. - _ Seiichi Manyama _ , Aug 05 2023 ● a(n) = (1 / n) * Sum _{ k=0..n - 1 } (- 1) ^ k * binomial(n,k) * binomial(4 * n - 2 * k,n - 1 - k) for n > 0. - _ Seiichi Manyama _ , Aug 06 2023 ●

▶ [A045743] 1,3,13,66,367,2164,13293,84157,545270,3598244,24100375,163416748,1119592052,7738412716,53894849437,377851866954,2664570714233,18887568709788,134501247038230,961774761388430,6903072966224220 ⋆ Number of noncrossing connected graphs on n nodes on a circle having no triangular faces. ● a(n) = Sum _{ i=0..floor((n - 2) / 2) } binomial(n - 2 + i, i) * binomial(3 * n - 3 - i, n - 2 - 2 * i) / (n - 1). ●

▶ [A142979] 1,3,13,66,406,2868,23220,210192,2116656,23375520,281792160,3673814400,51599514240,775673176320,12440524320000,211848037632000,3820318338816000,72685037892096000,1455838255452672000 ⋆ a(1) = 1, a(2) = 3, a(n + 2) = 3 * a(n + 1) + (n + 1) ^ 2 * a(n). ● a(n) = n! * p(n) * Sum _{ k = 1..n } (- 1) ^ (k + 1) / (k * p(k - 1) * p(k)), where p(n) = 2 * n + 1. Recurrence: a(1) = 1, a(2) = 3, a(n + 2) = 3 * a(n + 1) + (n + 1) ^ 2 * a(n). The sequence b(n) := n! * p(n) satisfies the same recurrence with b(1) = 3, b(2) = 10. Hence we obtain the finite continued fraction expansion a(n) / b(n) = 1 / (3 + 1 ^ 2 / (3 + 2 ^ 2 / (3 + 3 ^ 2 / (3 + ... + (n - 1) ^ 2 / 3)))), for n >= 2. Lim _{ n - > infinity } a(n) / b(n) = 1 / (3 + 1 ^ 2 / (3 + 2 ^ 2 / (3 + 3 ^ 2 / (3 + ... + (n -

1) ^ 2 / (3 + ...))))) = Sum _{ k>=1 } (- 1) ^ (k + 1) / (k * (4k ^ 2 - 1)) = 1 - log(2). Thus a(n) ~ c * n * n! as n - > infinity, where c = 2 * (1 - log(2)). ●

► [A298611] 1,3,13,67,349,1875,10285,57123,320317,1809587,10283149,58714627,336579101,1935878419,11166265837,64566715363,374148669949,2172215118963,12632572359757,73575490895043,429102329027293,2505638311638739,14647279574704045,85710562407867555 ⋆ Expansion of (1 - 6 * x + x ^ 2 - 8 * x ^ 3 + 16 * x ^ 4) ^ (- 1 / 2). ● a(n) = Sum _{ k=0..n } 2 ^ (n - k) * binomial(n,k) * hypergeom([- k, k - n, k - n], [1, - n], 2). ●

► [A136784] 1,3,13,67,369,2083,11869,67875,388705,2227267,12764973,73165315,419377873,2403873891,13779078781,78982269667,452730133185,2595071559811,14875080747085,85264715699139,488741675881009,2801492102959267,16058295037221021,92046962959297699 ⋆ Number of primitive multiplex juggling sequences of length n, base state <3> and hand capacity 3. ● a(n) = (13 + (4 - sqrt(3)) ^ n * (4 + sqrt(3)) - (- 4 + sqrt(3)) * (4 + sqrt(3)) ^ n) / 39. ● a(n) = 9 * a(n - 1) - 21 * a(n - 2) + 13 * a(n - 3) for n>3. ●

► [A027277] 1,3,13,67,375,2189,13089,79479,487833,3018355,18792303,117589689,738844719,4658460165,29458662005,186761788579,1186655988771,7554520173441,48176764031385,307706150625855,1968040844127793,12602972755261195,80798365998084795,518536437750443773 ⋆ a(n) = Sum _{ k=0..n } binomial(2 * k,k) * binomial(2 * n - k,k). ● a(n) = hypergeom([1 / 2, - n, 1 / 2 - n], [1, - 2 * n], - 16) for n>=1. ● a(n) = (2 * n * (4 * n - 5) * (- 9 + 4 * n) * (- 7 + 4 * n) * a(n - 3) - (4 * n - 5) * (50 * n ^ 3 - 175 * n ^ 2 + 152 * n - 9) * a(n - 2) + (80 * n ^ 3 - 260 * n ^ 2 + 198 * n - 27) * (n - 1) * a(n - 1)) / (n * (n - 1) * (- 9 + 4 * n) * (- 1 + 2 * n)) for n>=3. (End) ●

► [A242798] 0,1,3,13,67,376,2211,13378,82499,515659,3255628,20714354,132611491,853226921,5512508382,35739673513,232405291587,1515159860388,9900216370689,64816750480666,425097621975692,2792332673312356,18367642416256334,120972943783673953 ⋆ Expansion of - x * d(log((1 - x * (2 / sqrt(3 * x)) * sin((1 / 3) * arcsin(sqrt(27 * x / 4)))))) / dx. ● a(n) = n * Sum _{ k=1..n } binomial(3 * n - 2 * k - 1,n - k) / (2 * n - k). ● a(n) = (n / (2 * n - 1)) * C(3 * n - 3, n - 1) * (3F2)([1, 1 - 2 * n, 1 - n], [3 / 2 - 3 * n / 2, 2 - 3 * n / 2], 1 / 4). ● a(n) = [x ^ n] (2 / (1 + sqrt(1 - 4 * x))) ^ n * (x / (1 - x)). (End) ●

► [A239198] 1,3,13,67,377,2235,13701,85947,548209,3540851,23093885,151793203,1004023273,6675725867,44581355765,298829626795,2009477057761,13550281076451,91594501130989,620471833255971,4211165312423001 ⋆ Expansion of - (3 * x ^ 5 + sqrt(- 7 * x ^ 2 - 6 * x + 1) * (3 * x ^ 4 + 5 * x ^ 3 - 11 * x ^ 2 - 7 * x + 2) - 24 * x ^ 4 - 34 * x ^ 3 + 10 * x ^ 2 + 15 * x - 2) / (7 * x ^ 5 + sqrt(- 7 * x ^ 2 - 6 * x + 1) * (3 * x ^ 4 + 6 * x ^ 3 - 2 * x ^ 2 + 6 * x - 5) - 15 * x ^ 4 - 12 * x ^ 3 - 12 * x ^ 2 - 19 * x + 3). ● a(n) = sum(m=1..n, (sum(k=m..n, (binomial(k,n - k) * binomial(- m + 2 * k - 1,k - m)) / k)) * m * binomial(n - 1,n - m)). ●

► [A365250] 1,1,3,13,67,379,2271,14158,90875,596506,3985661,27018149,185356123,1284502886,8978432666,63225825415,448131632123,3194452061366,228868823 17758,164718040282975,1190311371951321,8633251770618136,6282546789430744 7 ⋆ G.f. satisfies A(x) = 1 + x * A(x) ^ 3 / (1 - x ^ 2 * A(x) ^ 6). ● a(n) = (1 / (3 * n + 1)) * Sum _{ k=0..floor(n / 2) } binomial(n - k - 1,k) * binomial(3 * n + 1,n - 2 * k). ●

► [A062992] 1,3,13,67,381,2307,14589,95235,636925,4341763,30056445,210731011,1493303293,10678370307,76957679613,558403682307,4075996839933,299096069 89827,220510631755773,1632599134961667,12133359132082173 ⋆ Row sums of unsigned triangle A062991. ● a(n) = 1 / (n + 1) * Sum { k = 0..n } binomial(2 * n + 2, n - k) * binomial(n + k, k). - _ Paul Barry _ , May 11 2005 ● a(n) = hypergeometric([- n, n + 1], [- n - 1], 2). - _ Peter Luschny _ , Nov 30 2014 ●

► [A064062] 1,1,3,13,67,381,2307,14589,95235,636925,4341763,30056445,210731011,1493303293,10678370307,76957679613,558403682307,4075996839933,299096069 89827,220510631755773,1632599134961667,12133359132082173 ⋆ Generalized Catalan numbers C(2; n). ● a(n) = (32 / Pi) * Integral _{ x = 0..1 } (8 * x) ^ (n - 1) * sqrt(x * (1 - x)) / (8 * x + 1). - _ Groux Roland _ , Dec 12 2010 ● a(n + 2) = 8 ^ (n + 2) * (c(n + 2) - c(1) * c(n + 1) - Sum _{ i=0..n - 1 } 8 ^ (- i - 2) * c(n - i) * a(i + 2)) with c(n) = Catalan(n + 2) / 2 ^ (2 * n + 1). - _ Groux Roland _ , Dec 12 2010 ● a(n) = the upper left term in M ^ n, M = the production matrix: ● a(n) = hypergeometric([1 - n, n], [- n], 2) for n > 0. - _ Peter Luschny _ , Nov 30 2014 ●

► [A367919] 1,3,13,67,397,2627,19085,150339,1272205,11481155,109852813,1109011779,11765211021,130707706435,1516160466573,18314760232771,229865470694797,2991427959247939,40292570823959693,560791503840522563,8053114165521427341,119158887402348541507 ⋆ Expansion of e.g.f. exp(4 * (exp(x) - 1) - x). ● a(n) = exp(- 4) * Sum _{ k>=0 } 4 ^ k * (k - 1) ^ n / k!. ● a(0) = 1; a(n) = - a(n - 1) + 4 * Sum _{ k=1..n } binomial(n - 1,k - 1) * a(n - k). ●

► [A028418] 1,3,13,67,411,2911,23563,213543,2149927,23759791,286370151,3734929903,52455166063,788704078527,12648867695311,215433088624351,3884791172487903,73919882720901823,1480542628345939807,31128584449987511871,685635398619169059391 ⋆ Sum over all n! permutations of n letters of maximum cycle length. ● a(n) = f(n, 0, n, n!) where f(L, r, n, m) = m * r if r >= l, otherwise Sum _{ k=0..L - 1 } (f(k, max(L - k,r), n - 1, m / n) + (n - L) * f(L, r, n - 1, m / n)). - _ Thomas Dybdahl Ahle _ , Aug 15 2011 ●

► [A180191] 0,1,3,13,67,411,2921,23633,214551,2160343,23897269,288102189,3760013027,52816397219,794536751217,12744659120521,217140271564591,3916221952414383,74539067188152941,1493136645424092773,31400620285465593339,691708660911435955579 ⋆ Number of permutations of [n] having at least one succession. A succession of a permutation p is a position i such that p(i + 1) - p(i) = 1. ● a(n) = (n - 1)! [x ^ (n - 1)] (1 - exp(- x)) / (1 - x) ^ 2. - _ Alois P. Heinz _ , Feb 23 2019 ●

► [A042659] 1,3,13,68,81,149,230,609,1448,4953,11354,220679,1997465,2218144,6433753,8651897,15085650,68994497,84080147,321234938,3617664465,7556563868,48957047673,1427310946385,8612822725983 ⋆ Denominators of continued fraction convergents to sqrt(859). ● a(n) = 411768954395928612024802 0 * a(n - 46) - a(n - 92) for n>91. - _ Vincenzo Librandi _ , Jan 26 2014 ●

► [A200757] 1,3,13,68,395,2450,15892,106489,731379,5121392,36425796,262425982,1911063188,14044679173,104030937139,775856119012,5821085551579,4390662 7941144,33274227468510 4,25323587649299 16,19346427410500788,148312939031577504,1140578980645677208 ⋆ Noncrossing forests in the regular (n + 1) - polygon obtained by a grafting procedure. ● a(n) = sum(i=0..n - 1, C(3 * n - i - 2,2 * n - 1) * sum(j=0..n, C(j, - 2 * n + 2 * j + i) * (- 1) ^ (n - j) * C(n,j))) / n, n>0. - _ Vladimir Kruchinin _ , Nov 25 2011 ● a(n) = Sum _{ k=0..n - 1 } (C(n - 1,k) * C(n + 2 * k,n + k - 1)) / (n + k). - _ Vladimir Kruchinin _ , Mar 02 2013 ●

► [A000260] 1,1,3,13,68,399,2530,16965,118668,857956,6369883,48336171,373537388,2931682810,23317105140,187606350645,1524813969276,12504654858828,103367824774012,860593023907540,7211115497448720,60776550501588855 ⋆ Number of rooted simplicial 3 - polytopes with n + 3 nodes; or rooted 3 - connected triangulations with 2n + 2 faces; or rooted 3 - connected trivalent maps with 2n + 2 vertices. ● a(n) = 2 * (4 * n + 1)! / ((n + 1)! * (3 * n + 2)!) = binomial(4 * n + 1, n + 1) - 9 * binomial(4 * n + 1, n - 1). ● a(n) = binomial(4 * n + 2, n + 1) / ((2 * n + 1) * (3 * n + 2)). - _ Michael Somos _ , Mar 28 2012 ● a(n) = Integral _{ x=0...256 / 27 } x ^ n * W(x), where ● a(n) = (1 / 27 ^ n) * Product _{ 1 <= i <= j <= 3 * n } (3 * i + j + 3) / (3 * i + j - 1). Cf. A006013. - _ Peter Bala _ , Feb 21 2023 ●

► [A186371] 0,1,3,13,68,420,3000,24360,221760,2237760,24796800,299376000,3911846400,55005350400,828193766400,13294689408000,226663557120000,4090405423104000,77895546753024000,1561112121913344000,32844177110384640000,723788347325504000 0 ⋆ Number of up - down runs in all permutations of { 1,2,..., n } . ● a(n) = n! * (4n + 1) / 6 for n>=2. ●

► [A058307] 0,1,3,13,68,421,3015,24541,223884,2263381,25121075,303716281,3973432728,55931774473,842950049823,13543132571641,231076203767720,4172914800390601,79516457411189139,1594502063024173381,33564059780918830140,740003817243238436461,17053651856375402868743 ⋆ a(n) = (n + 1) * a(n - 1) + a(n - 2), with a(0)=0, a(1)=1. ● a(2 * r + 1) = Sum _{ j=0..r } (binomial(r + j, r - j) * (r + j)! / (r - j)! - binomial(r + j, r - j - 1) * (r + j + 1)! / (r - j)!) and ● a(2 * r) = Sum _{ j=0..r } (binomial(r + j + 1, r - j) * (r + j + 1)! / (r - j)! - binomial(r + j, r - j) * (r + j + 1)! / (r - j + 1)! + binomial(r + j + 1, r - j) * (r + j + 1)! / (r - j)!). (End) ● a(n) = Sum _{ k = 0..floor((n - 1) / 2) } (n - 2 * k - 1)! * binomial(n - k - 1,k) * binomial(n - k + 1,k + 2). Cf. A058798. - _ Peter Bala _ , Aug 01 2013 ● a(n) = (n + 1)! * hypergeometric([1 / 2 - n / 2,1 - n / 2],[3, - 1 - n,1 - n],4) / 2 for n >= 2. - _ Peter Luschny _ , Sep 10 2014 ●

► [A128079] 1,3,13,69,411,2633,17739,124029,892327,6567285,49235715,374841195,2890994445,22545855855,177524073021,1409591810133,11275693221519,90792020672429,735367765159347,5987665336600683,48987680485918149 ⋆ a(n) = Sum _{ k=0..n } A000984(k) * A001263(n + 1,k + 1), where A000984 is the central binomial coefficients and A001263 is the Narayana triangle. ● a(n) = Sum _{ k=0..n } C(2k,k) * C(n,k) * C(n + 1,k) / (k + 1). ●

► [A153395] 1,1,3,13,69,417,2754,19373,142732,1088875,8533278,68308641,556242792,4593529882,38380159009,323860968709,2756019889146,23625552635184,203823793118268,1768357487401595,15418860927887232,135042445950316514 ⋆ G.f.: A(x) = F(x * G(x)) where F(x) = G(x / F(x) ^ 2) = 1 + x * F(x) ^ 2 is the g.f. of A000108 (Catalan) and G(x) = F(x * G(x) ^ 2) = 1 + x * G(x) ^ 4 is the g.f. of A002293. ● a(n) = Sum _{ k=0..n } C(2k + 1,k) / (2k + 1) * C(4n - 3k,n - k) * k / (4n - 3k) for n>0 with a(0)=1. ●

► [A368708] 1,1,3,13,69,417,2763,19609,146793,1146833,9278595,77292261,659973933,5756169681,51137399979,461691066417,4228199347281,39216540096993,367890444302787,3486697883136957,33353178454762389,321754445379041601,3127955713554766923,30624486778208481993,301790556354721667769 ⋆ a(n) = hypergeom([- 1 - n, - n, 1 - n], [2, 3], - 2). ● a(n) = (1 / 2) * B(n, 2) where B(n, x) are the Baxter polynomials with coefficients A359363, for n > 0. - _ Peter Luschny _ , Jan 04 2024 ●

► [A088714] 1,1,3,13,69,419,2809,20353,157199,1281993,10963825,97828031,907177801,8716049417,86553001779,886573220093,9351927111901,101447092428243,1130357986741545,12923637003161409,151479552582252239 ⋆ G.f. satisfies A(x) = 1 + x * A(x) ^ 2 * A(x * A(x)). ● a(n,m) = Sum _{ k=0..n } m * C(n + k + m,k) / (n + k + m) * a(n - k,k). ●

► [A007808] 1,1,3,13,69,431,3103,25341,231689,2345851,26065011,315386633,4128697741,58145826519,876660153671,14089181041141,240455356435473,4343224875615731,82776756452911579,1660133837750060001,34950186057896000021,770651602576606800463 ⋆ Number of directed column - convex polyominoes of height n: a(k + 1)=(k + 1) * a(k) + (a(1) + ... + a(k)). ● a(n) = (a(n - 1) ^ 2 - 2 * a(n - 2) ^ 2 + a(n - 2) * a(n - 3) - 4 * a(n - 1) * a(n - 3)) / (a(n - 2) - a(n - 3)) if n>3. - _ Michael Somos _ , Oct 20 2011 ● a(n) = (n ^ 2 * a(n - 1) - 1) / (n - 1). - _ Vladeta Jovovic _ , Apr 26 2003 ● a(n) = n! * n * [1 - Sum(1 / (j * (j + 1) * (j + 1)!), j=1..n - 1)). - _ Emeric Deutsch _ , Aug 07 2006 ● a(n) = n! + n! * sum(j=1..n - 1, (n - j) / (j + 1)!). - _ Walden Freedman _ , Aug 21 2014 ●

► [A121586] 1,1,3,13,70,446,3276,27252,253296,2602224,29288160,358457760,4740577920,67375532160,1024208720640,16583626886400,284953145702400,5178968115148800,99268112350310400,2001336861359001600,42337994134947840000,937755916997437440000 ⋆ Number of columns in all deco polyominoes of height n. A deco polyomino is a directed column - convex polyomino in which the height, measured along the diagonal, is attained only in the last column. ● a(n) = (n + 1)! - |s(n + 1,2)|, where s(n,k) are the signed Stirling numbers of the first kind (A008275). ● a(n) = (n - 1)! * (n ^ 2 + n - 1 - n * H(n - 1)) for n >= 1, where H(j) = 1 / 1 + 1 / 2 + ... + 1 / j. ● a(n) = n! * ((n + 1) - h(n)), where h(n) = Sum _{ k=1..n } 1 / k. ●

► [A182189] 1,3,13,71,409,2379,13861,80783,470833,2744211,15994429,93222359,543339721,3166815963,18457556053,107578520351,627013566049,3654502875939,21300003689581,124145519261543,723573111879673 ⋆ a(n) = 6 * a(n - 1) - a(n - 2) - 4 with n > 1, a(0)=1, a(1)=3. ● a(n) = 1 + (1 / 4) * sqrt(2) * ((3 + 2 * sqrt(2)) ^ n - (3 - 2 * sqrt(2)) ^ n). - _ Paolo P. Lava _ , May 10 2012 ●

► [A198447] 3,13,71,433,2763,17941,117263,768313,5038611,33054493,216872663,1422982081,9336876123,61264171813,401987528351,2637661006153,17307148601763,113561761317421,745141474228583,4889285086978513 ⋆ Number of 2n X 20..2 arrays with values 0..2 introduced in row major order and each element unequal to exactly two horizontal and vertical neighbors. ● a(n) = 1 / 4 + (2 ^ (-

3 - n) * ((9 + sqrt(17)) ^ n * (- 5 + 3 * sqrt(17)) + (9 - sqrt(17)) ^ n * (5 + 3 * sqrt(17)))) / sqrt(17). ●

▶ [A162326] 1,1,3,13,71,441,2955,20805,151695,1135345,8671763,67320573,529626839,4213228969,33833367963,273892683573,2232832964895,18314495896545,151037687326755,1251606057754605,10416531069771111,87029307323766681 ⋆ Let a(0) = a(1) = 1, and n * a(n) = 2 * (- 7 + 5 * n) * a(n - 1) + 9 * (2 - n) * a(n - 2) for n >= 2. ● a(n) = 2F1(1 / 2,1 - n;2; - 8), where 2F1 is the Gauss hypergeometric series. ● a(n) = Sum _{ k=0..n } (binomial(n,k) * 2 ^ (n - k - 1) * binomial(2 * n - 2 * k - 2,n - k - 1)) / n, n>0, a(0)=1. - _ Vladimir Kruchinin _ , Mar 13 2016 ● a(n + 1) = Sum _{ k = 0..n } 2 ^ k * C(n,k) * Catalan(k). ● a(n + 1) = (2 / Pi) * Integral _{ x = - 1..1 } (1 + 8 * x ^ 2) ^ n * sqrt(1 - x ^ 2) dx. ●

▶ [A126390] 1,3,13,71,457,3355,27509,248127,2434129,25741939,291397789,3510328695,44782460313,602513988107,8518757813637,126179029108463,1952609274344353,31492811964616163,528249539951292461,9197240228562763687,165923214676585626729 ⋆ a(n) = Sum _{ i=0..n } 2 ^ i * B(i) * binomial(n,i) where B(n) = Bell numbers A000110(n). ● a(n) = e ^ (- 1) * 2 ^ n * Sum _{ k>=0 } (k + 1 / 2) ^ n / k!. This is a Dobinski - type formula. - _ Karol A. Penson _ and _ Olivier Gérard _ , Oct 22 2007 ● a(0) = 1; a(n) = a(n - 1) + Sum _{ k=1..n } binomial(n - 1,k - 1) * 2 ^ k * a(n - k). - _ Ilya Gutkovskiy _ , Jun 21 2022 ●

▶ [A233824] 0,1,3,13,71,461,3447,29093,273343,2829325,31998903,392743957,5201061455,73943424413,1123596277863,18176728317413,311951144828863,5661698774848621,108355864447215063,2181096921557783605 ⋆ A recurrent sequence in Panaitopol's formula for pi(x), where pi(x) is the number of primes <= x. ● a(n) = n * n! - Sum _{ k=1..n - 1 } k! * a(n - k). ●

▶ [A003319] 1,1,1,3,13,71,461,3447,29093,273343,2829325,31998903,392743957,5201061455,73943424413,1123596277863,18176728317413,311951144828863,5661698774848621,108355864447215063,2181096921557783605,46066653228356351631,1018705098450570562877 ⋆ Number of connected permutations of [1..n] (those not fixing [1..j] for 0 < j < n). Also called indecomposable permutations, or irreducible permutations. ● a(n) = (- 1) ^ (n - 1) * det { | 1! 2! ... n! | 1 1! ... (n - 1)! | 0 1 1! ... (n - 2)! | ... | 0 ... 0 1 1! | } . ● a(n) = upper left term in M ^ (n - 1), M = triangle A128175 as an infinite square production matrix (deleting the first "1"); as follows: ● a(n) = R _ 1(n - 2, 0) for n > 1 with a(0) = a(1) = 1 where R _ 1(n, q) = (q + 2) * R _ 1(n - 1, q + 1) + Sum _{ j=0..q } R _ 1(n - 1, j) for n > 0, q >= 0 with R _ 1(0, q) = 1 for q >= 0. ● a(n) = R _ 2(n - 2, 0) for n > 1 with a(0) = a(1) = 1 where R _ 2(n, q) = Sum _{ j=0..q + 1 } binomial(q + 2, j + 1) * R _ 2(n - 1, j) for n > 0, q >= 0 with R _ 2(0, q) = 1 for q >= 0. ●

▶ [A192936] 1,1,3,13,71,463,3497,29975,287265,3042545,35284315,444617525,6048575335,88347242335,1378930649745,22903345844335,403342641729665,75068430949938 25,147226845692229875,3034786640911840925,65592491119118514375 ⋆ Constant term of the reduction by x ^ 2 - > x + 1 of the polynomial p(n,x) = Product _{ k=1..n } (x + k). ● a(n) = 1 / 10 * (5 - sqrt(5)) * Gamma(n + 3 / 2 + 1 / 2 * sqrt(5)) / Gamma(3 / 2 + 1 / 2 * sqrt(5)) - 1 / 10 * (5 + sqrt(5)) * Gamma(1 / 2 * sqrt(5) - 1 / 2) * sin(1 / 2 * Pi * (5 + sqrt(5))) * Gamma(n + 3 / 2 - 1 / 2 * sqrt(5)) / Pi. - _ Vaclav Kotesovec _ , Oct 26 2012 ● a(n) = (- 1) ^ n * Sum _{ k=0..n + 2 } Stirling1(n + 2,k) * Fibonacci(k + 1). - _ G. C. Greubel _ , Feb 16 2019 ●

▶ [A000261] 0,1,3,13,71,465,3539,30637,296967,3184129,37401155,477471021,6581134823,97388068753,1539794649171,25902759280525,461904032857319,8702813980639617,172743930157869827,3602826440828270029,78768746000235327495,1801366114380914335441 ⋆ a(n) = n * a(n - 1) + (n - 3) * a(n - 2), with a(1) = 0, a(2) = 1. ● a(n + 1) = round(GAMMA(n) * (n ^ 3 + 6 * n ^ 2 + 8 * n + 1) * exp(- 1) / 6) for n>0. - _ Mark van Hoeij _ , Nov 11 2009 ● a(n) = hypergeometric([4, - n + 2],[],1) * (- 1) ^ n for n>=2. - _ Peter Luschny _ , Sep 20 2014 ●

▶ [A307005] 1,1,3,13,71,486,3982,38081,416145,5116222,69888746,1050168417,17214678241,305703953660,5846391071172,119794781201881,2618283427770737,60802908515558346,1495049717728972990,38803241993010963977,1060124286228724147641,30411290829335509535632 ⋆ Expansion of e.g.f. (2 * exp(x) - 2 * x - x ^ 2) / (2 - 2 * x - x ^ 2). ● a(n) = Sum _{ i=0..n } (n! / (n + 1 - i)!) * ((sqrt(3) / 3) * ((1 + sqrt(3)) / 2) ^ i - (sqrt(3) / 3) * ((1 - sqrt(3)) / 2) ^ i). ●

▶ [A086662] 1,1,3,13,72,481,3745,33209,329868,3624270,43608474,570008803,8039735704,121673027607,1966231022067,33786076421499,615043147866660,11822938288619344,239298079351004608,5086498410027323134,113278368771499790136,2637549737582063583274,64082443707327038140602,1621782672366231029685407 ⋆ Stirling transform of Catalan numbers: Sum _{ k=0..n } |Stirling1(n,k)| * C(2 * k,k) / (k + 1). ● a(n)=(1 / (2 * pi)) * int(product(x + k,k,0,n - 1) * sqrt((4 - x) / x),x,0,4) (moment representation). [_ Paul Barry _ , Jul 26 2010] ●

▶ [A067764] 1,1,3,13,73,167,4051,37633,43817,4596553,58941091,274691047,12470162233,202976401213,1178339174801,65573803186921,99264170666917,994319127823939,5886334683154038 43,1356437369358855817 3,10923264262869521814 7,7528320945241690660 31 ⋆ Numerators of the coefficients in exp(x / (1 - x)) power series. ● a(n) is the numerator of Sum _{ i=1..n } binomial(n - 1, i - 1) / i!. ● a(n) = numerator(hypergeom([1 - n], [2], - 1)) for n > 0. - _ Peter Luschny _ , Feb 02 2019 ●

▶ [A193930] 1,1,3,13,73,381,2611,19993,165873,1436473,14004451,145099461,1584090553,18196817653,223416271443,2865429498961,38330181602401,535448870264433,7823019065848003,118402856414023933,1856545825152993961,30160691907215561581 ⋆ E.g.f.: exp(x + x ^ 2 + x ^ 3 + x ^ 4). ● a(n) = n! * sum(k=1..n, sum(i=0..(n - k) / 4, (- 1) ^ i * binomial(k,k - i) * binomial(n - 4 * i - 1,k - 1)) / k!), n>0, a(0)=1. ● a(n) = a(n - 1) + 2 * (n - 1) * a(n - 2) + 3 * (n - 1)(n - 2) * a(n - 3) + 4 * (n - 1) * (n - 2) * (n - 3) * a(n - 4). - _ Geoffrey Critzer _ , Oct 11 2014 ●

▶ [A367756] 1,1,3,13,73,386,2671,20728,175393,1553968,15520861,165541806,1869485773,22249874518,284029764383,3804116563276,53328350650081,782331158754088,12051288543702313,193028133988081918,3212490296905001781,55543932173668760221 ⋆ E.g.f. satisfies A(x) = exp(x * (1 + x + x ^ 2 + x ^ 3) * A(x ^ 4 / 24)). ● a(0) = 1; a(n) = (n - 1)! * Sum _{ k=0..n - 1 } (k + 1) * a(floor(k / 4)) * a(n - 1 - k) / (24 ^ floor(k / 4) * floor(k / 4)! * (n - 1 - k)!). ●

▶ [A199317] 3,13,73,433,2593,15553,93313,559873,3359233,20155393,120932353,725594113,4353564673,26121388033,156728328193,940369969153,5642219814913,33853318889473,203119913336833,1218719480020993,7312316880125953,43873901280755713 ⋆ a(n) = 2 * 6 ^ n + 1. ● a(n) = 6 * a(n - 1) - 5. ● a(n) = 7 * a(n - 1) - 6 * a(n - 2). ●

▶ [A193931] 1,1,3,13,73,501,3331,27553,253233,2540233,27340291,309811701,3843476473,50560182973,701098196163,10205952248521,155809733115361,2506135027165713,42013633806350083,732584456250306013,13270900741926553641,249625454740770286818 61 ⋆ E.g.f. A(x) = exp(x + x ^ 2 + x ^ 3 + x ^ 4 + x ^ 5). ● a(n)=n! * sum(k=1..n, sum(i=0..(n - k) / 5, (- 1) ^ i * binomial(k,k - i) * binomial(n - 5 * i - 1,k - 1)) / k!), n>0, a(0)=1. ●

▶ [A367757] 1,1,3,13,73,501,3337,27637,254409,2557369,27603631,313768731,3905502745,51573777841,718307494269,10507900625251,161239887204721,2608009648536417,43989477103304155,772109936171046001,14085074476090366761,266890182641557777093 ⋆ E.g.f. satisfies A(x) = exp(x * (1 + x + x ^ 2 + x ^ 3 + x ^ 4) * A(x ^ 5 / 120)). ● a(0) = 1; a(n) = (n - 1)! * Sum _{ k=0..n - 1 } (k + 1) * a(floor(k / 5)) * a(n - 1 - k) / (120 ^ floor(k / 5) * floor(k / 5)! * (n - 1 - k)!). ●

▶ [A193932] 1,1,3,13,73,501,4051,32593,313713,3326473,38377891,476464341,6299024953,87715975933,1314012177843,20776583119321,345267365639521,6009277853650833,109262845394221123,2073062512187103133,41084832105634595241,845645768972241105541 ⋆ E.g.f. A(x) = exp(x + x ^ 2 + x ^ 3 + x ^ 4 + x ^ 5 + x ^ 6). ● a(n)=n! * sum(k=1..n, sum(i=0..(n - k) / 6, (- 1) ^ i * binomial(k,k - i) * binomial(n - 6 * i - 1,k - 1)) / k!), n>0, a(0)=1. ●

▶ [A193933] 1,1,3,13,73,501,4051,37633,354033,3870793,46240291,597877941,8299856633,122751616573,1921371570483,31604885804521,552755907700321,10156326950561553,195421314725788483,3926668816722630493,82199760488718697641,1789438454541407131141 ⋆ E.g.f. A(x) = exp(x + x ^ 2 + x ^ 3 + x ^ 4 + x ^ 5 + x ^ 6 + x ^ 7). ● a(n) = n! * sum(k=1..n, sum(i=0..(n - k) / 7, (- 1) ^ i * binomial(k,k - i) * binomial(n - 7 * i - 1,k - 1)) / k!), n>0, a(0)=1. ●

▶ [A306623] 1,1,3,13,73,501,4051,37633,394353,4233673,51683491,684364341,9755819833,148749428413,2411870539443,41369113878121,746931540551521,14128241450715153,281805888597349443,5880463849670410333,128050607992266208 41,2903233047048502113541 ⋆ Expansion of e.g.f. exp(Sum _{ k=1..8 } x ^ k). ● a(0) = 1 and a(n) = (n - 1)! * Sum _{ k=1..min(8,n) } k * a(n - k) / (n - k)! for n > 0. ●

▶ [A306624] 1,1,3,13,73,501,4051,37633,394353,4596553,55312291,744239541,10793656633,167689950013,2775839905203,48726598412521,903159189729121,17607070923233553,359702718305842243,7673827033741108573,171586828999546057641,3999150173195168500741 ⋆ Expansion of e.g.f. exp(Sum _{ k=1..9 } x ^ k). ● a(0) = 1 and a(n) = (n - 1)! * Sum _{ k=1..min(9,n) } k * a(n - k) / (n - k)! for n > 0. ●

▶ [A000262] 1,1,3,13,73,501,4051,37633,394353,4596553,58941091,824073141,12470162233,202976401213,3535017524403,65573803186921,1290434218669921,26846616451246353,588633468315403843,13564373693588558173,327697927886085654441,8281153039765859726341 ⋆ Number of "sets of lists": number of partitions of { 1,...,n } into any number of lists, where a list means an ordered subset. ● a(n) = (n - 1)! * LaguerreL(n - 1,1, - 1) for n >= 1. - _ Vladeta Jovovic _ , May 10 2003 ● a(n) = n! Sum _{ j=0..n - 1 } binomial(n - 1, j) / (j + 1)!, for n > 0. - Herbert S. Wilf, Jun 14 2005 ● a(n) = exp(- 1) * Sum _{ m>=0 } [m] ^ n / m!, where [m] ^ n = m * (m + 1) * ... * (m + n - 1) is the rising factorial. - _ Vladeta Jovovic _ , Sep 20 2006 ● a(n) = (n - 1)! * Sum _{ k=1..n } (a(n - k) * k!) / ((n - k)! * (k - 1)!), where a(0)=1. - _ Thomas Wieder _ , Sep 10 2008 ● a(n) = D ^ n(exp(x)) evaluated at x = 0, where D is the operator (1 + x) ^ 2 * d / dx. Cf. A000110, A049118, A049119 and A049120. - _ Peter Bala _ , Nov 25 2011 ● a(n) = n! * hypergeom([1 - n],[2], - 1) for n >= 1. - _ Peter Luschny _ , Jun 05 2014 ●

▶ [A367751] 1,1,3,13,73,501,4051,37633,394353,4596553,58941091,844031541,12949163833,213873687613,3782022682803,71267635330921,1439160383457121,30612704101371153,686728250047551043,16198763975779425373,400727742254252310441 ⋆ E.g.f. satisfies A(x) = exp(x * (1 + x + x ^ 2 + x ^ 3 + x ^ 4) * A(x ^ 5)). ● a(0) = 1; a(n) = (n - 1)! * Sum _{ k=0..n - 1 } (k + 1) * a(floor(k / 5)) * a(n - 1 - k) / (floor(k / 5)! * (n - 1 - k)!). ●

▶ [A367749] 1,1,3,13,73,501,4051,37633,394353,4777993,62569891,893927541,13827333433,234241234813,4212828738483,80727388033321,1641227208417121,35581993575319953,810641581182744643,19416795485684156893,487647253209539939241 ⋆ E.g.f. satisfies A(x) = exp(x * (1 + x + x ^ 2 + x ^ 3) * A(x ^ 4)). ● a(0) = 1; a(n) = (n - 1)! * Sum _{ k=0..n - 1 } (k + 1) * a(floor(k / 4)) * a(n - 1 - k) / (floor(k / 4)! * (n - 1 - k)!). ●

▶ [A367748] 1,1,3,13,73,501,4051,40153,434673,5231593,71641891,1051099941,16673401273,289579557853,5336892479283,104679769486321,2199654959898721,48682858073000913,1135029742772833603,27968526823231736893,721419709386600131241 ⋆ E.g.f. satisfies A(x) = exp(x * (1 + x + x ^ 2) * A(x ^ 3)). ● a(0) = 1; a(n) = (n - 1)! * Sum _{ k=0..n - 1 } (k + 1) * a(floor(k / 3)) * a(n - 1 - k) / (floor(k / 3)! * (n - 1 - k)!). ●

▶ [A318617] 1,1,3,13,73,503,4107,38773,415589,4986715,66238503,965102769,15306905817,262567910999,4844199561787,95660129298709,2013392566243565,44997370759528091,1064283567185090791,26560710262784693097,697529916604465424553 ⋆ a(n) is the number of rooted labeled forests on n nodes that avoid the patterns 213, 231, and 312. ● a(n) = Sum _{ k=1..n } Sum _{ r=1..k } binomial(n - 1,k - 1) * (r - 1)! * a(n - k) * a(k - r) for n>0, a(0)=1. ●

▶ [A205572] 1,1,3,13,73,521,4443,44213,502993,6436561,91520883,1431459613,24424457113,451474855001,8987248462923,191682800678213,4360821252342433,105410131831623841,2697863748098734563,72885101748061044013,2072687894252786558953 ⋆ E.g.f.: 1 / (cos(x) - sinh(x)). ● a(2 ^ n + k) == a(k) (mod 2 ^ n) for k>=0, n>=1 (conjecture). ●

▶ [A367747] 1,1,3,13,73,561,4771,49813,562353,7340833,102829411,1627648221,27294311353,502042022353,9759264753603,205434011254501,4544894700204001,1

0734678835750227 3,2657668122191037763,6970176267702649873 3,1909106308252976007081 ⋆ E.g.f. satisfies A(x) = exp(x * (1 + x) * A(x ^ 2)). ● a(0) = 1; a(n) = (n - 1)! * Sum _{ k=0..n - 1 } (k + 1) * a(floor(k / 2)) * a(n - 1 - k) / (floor(k / 2)! * (n - 1 - k)!). ●

▶ [A162161] 1,1,3,13,73,561,5251,57583,739089,10794241,176570371,3209512791,64116701353,1396247370961,32941566738627,836962322583871,22785381648804001,661810614930630273,20428823103775758595 ⋆ E.g.f. satisfies: A(x) = exp(x + x ^ 2 + x ^ 3 * A(x)). ● a(n) = n! * Sum _{ k=0..n } Sum(j=0..k } (j + 1) ^ (n - k - 1) / (n - k)! * C(n - k,k - j) * C(k - j,j). ● a(n) = n! * Sum _{ k=0..n } Sum(j=0..k } m * (j + m) ^ (n - k - 1) / (n - k)! * C(n - k,k - j) * C(k - j,j). ●

▶ [A334785] 0,3,13,74,480,3363,24794,189540,1488744,11941820,97412601,805602850,6738919408,56918898330,484750343700,4158094853640,35891774969112,311529010178628,2717299393716836,23806014817182600,209389427777770240,1848322153489635 5 ⋆ a(n) is the total number of down steps before the first up step in all 3 _ 2 - Dyck paths of length 4 * n. A 3 _ 2 - Dyck path is a lattice path with steps (1, 3), (1, - 1) that starts and ends at y = 0 and stays above the line y = - 2. ● a(0) = 0 and a(n) = 3 * binomial(4 * n, n) / (n + 1) - binomial(4 * n + 2, n) / (n + 1) for n > 0. ●

▶ [A349533] 1,3,13,74,499,3719,29494,243888,2078431,18122369,160885449,1449268478,13213370392,121696581804,1130565483472,10581614352704,99685591788687,944490400760597,8994266558594671,86040075341770806,826423263373259923,7967095415955791687 ⋆ G.f. A(x) satisfies A(x) = 1 / ((1 - 2 * x) * (1 - x * A(x) ^ 2)). ● a(n) = 2 ^ n + Sum _{ i=0..n - 1 } Sum _{ j=0..n - i - 1 } a(i) * a(j) * a(n - i - j - 1). ● a(n) = Sum _{ k=0..n } binomial(n + k,2 * k) * binomial(3 * k,k) * 2 ^ (n - k) / (2 * k + 1). ● a(n) = 2 ^ n * F([1 / 3, 2 / 3, - n, 1 + n], [1 / 2, 1, 3 / 2], - 3 ^ 3 / 2 ^ 5), where F is the generalized hypergeometric function. - _ Stefano Spezia _ , Nov 21 2021 ●

▶ [A189886] 1,1,3,13,74,530,4550,45570,521640,6717480,96117000,1512819000,25975395600,483169486800,9678799930800,207733600074000,4755768505488000,115681418156304000,2979408725813520000,80998627977002736000,2317937034142810080000,69649003197501567840000,2192459412316607834400000,72152830779716793506400000,2477756318984329979756160000 ⋆ a(n) is the number of compositions of the set { 1, 2, ..., n } into blocks, each of size 1, 2 or 3 (n >= 0). ● a(n) = sum(m=0..n, sum(j=0..3 * m - n, n! / (2 ^ (n + j - 2 * m) * 3 ^ (m - j)) * C(m,j) * C(j,n + 2 * j - 3 * m))) where C(n,k) is the binomial coefficient. ● a(n) = n * a(n - 1) + n * (n - 1) / 2 * a(n - 2) + n * (n - 1) * (n - 2) / 6 * a(n - 3). - _ Istvan Mezo _ , Jun 06 2013 ●

▶ [A038762] 3,13,75,437,2547,14845,86523,504293,2939235,17131117,99847467,581953685,3391874643,19769294173,115223890395,671574048197,3914220398787,22813748344525,132968269668363,774995869665653 ⋆ a(n) = 6 * a(n - 1) - a(n - 2) for n >= 2, with a(0)=3, a(1)=13. ● a(n) = { 13 * ([3 + 2 * sqrt(2)] ^ n - [3 - 2 * sqrt(2)] ^ n) - 3 * ([3 + 2 * sqrt(2)] ^ (n - 1) - [3 - 2 * sqrt(2)] ^ (n - 1)) }/ (4 * sqrt(2)). ● a(n) = 7 * a(n - 1) - 7 * a(n - 2) + a(n - 3); a(n) = (1 / 2) * (3 + sqrt(2)) * (3 + 2 * sqrt(2)) ^ (n - 1) + (1 / 2) * (3 - sqrt(2)) * (3 - 2 * sqrt(2)) ^ (n - 1). - _ Antonio Alberto Olivares _ , Apr 20 2008 ● a(n) = rational part of z(n) = (3 + sqrt(2)) * (3 + 2 * sqrt(2)) ^ n, n >= 0. z(n) gives only one part of the positive solutions to the Pell equation x ^ 2 - 2 * y ^ 2 = 7. See the Nagell reference on how to find z(n), and a comment above. - _ Wolfdieter Lang _ , Feb 05 2015 ●

▶ [A074517] 3,13,75,469,3027,19933,133275,901669,6155427,42306733,292240875,2026154869,14085427827,98109713533,684326588475,4778079088069,33385518460227,233393453440333,1632228295176075,11417968671701269 ⋆ a(n) = 1 ^ n + 5 ^ n + 7 ^ n. ● a(n) = 12 * a(n - 1) - 35 * a(n - 2) + 24 with a(0)=3, a(1)=13. - _ Vincenzo Librandi _ , Jul 21 2010 ● a(0)=3, a(1)=13, a(2)=75, a(n) = 13 * a(n - 1) - 47 * a(n - 2) + 35 * a(n - 3). - _ Harvey P. Dale _ , Apr 15 2015 ●

▶ [A007178] 1,1,3,13,75,525,4347,41245,441675,5259885,68958747,986533053,15292855019,255321427725,4567457001915,87156877087069,1767115200924299,37936303950503853,859663073472084315,20505904049009202685,513593410566661282347,13476082013068430626893 ⋆ Number of ways to write 1 as ordered sum of n powers of 1 / 2, allowing repeats. ● a(n) = coefficient of z ^ (2 ^ n) in (z + z ^ 2 + z ^ 4 + ... + z ^ (2 ^ n)) ^ n. - _ Don Knuth _ . ● a(n) == 4 + (- 1) ^ n (mod 8) for n > 2 (see References: "Representation of a 2 - power as sum of k 2 - powers: a recursive formula"). (End) ●

▶ [A000670] 1,1,3,13,75,541,4683,47293,545835,7087261,102247563,1622632573,28091567595,526858348381,10641342970443,230283190977853,5315654681981355,130370767029135901,3385534663256845323,92801587319328411133,2677687796244384203115 ⋆ Fubini numbers: number of preferential arrangements of n labeled elements; or number of weak orders on n labeled elements; or number of ordered partitions of [n]. ● a(n) = Sum _{ k=1..n } binomial(n, k) * a(n - k), a(0) = 1. ● a(n) is asymptotic to (1 / 2) * n! * log _ 2(e) ^ (n + 1), where log _ 2(e) = 1.442695... [Barthelemy80, Wilf90]. ● a(n) = ((x * d / dx) ^ n)(1 / (2 - x)) evaluated at x=1. - _ Karol A. Penson _ , Sep 24 2001 ● a(n) = Sum _{ k=0..n } (- 1) ^ k * k! * Stirling2(n + 1, k + 1) * (1 + (- 1) ^ k) / 2. - _ Paul Barry _ , Apr 20 2005 ● a(n) = Sum _{ k=0..n } k! * (Stirling2(n + 2, k + 2) - Stirling2(n + 1, k + 2)). - Micha Hofri (hofri(AT)wpi.edu), Jul 01 2006 ● a(n) = (- 1) ^ n * n! * Laguerre(n,P((.),2)), umbrally, where P(j,t) are the polynomials in A131758. - _ Tom Copeland _ , Sep 27 2007 ●

▶ [A032036] 1,1,1,1,3,13,75,543,4719,47871,555177,7245015,105069249,1676322369,29178875913,550266979833,11176051287627,243213176948013,5645877335588331,139257558038636847,3636985088689068231,100266394939348499127,2909740575643004791953,88664517647380019280375 ⋆ Shifts left 3 places under "AIJ" (ordered, indistinct, labeled) transform. ● a(n) = sum(k=0..n - 4, binomial(n - 3,k) * a(k + 3) * a(n - k - 3)), a(1)=a(2)=a(3)=1. - _ Vladimir Kruchinin _ , May 10 2011 ●

▶ [A162435] 1,3,13,76,535,3921,31767,283574,2679558,26954099,285775908,3183625080,37069123612,449410859046,5658593670526,73786800505502,994254712074330,13815743636007248,197629567539080448,2905687475271339406 ⋆ Main diagonal of table A162430. ● a(n) = Sum _{ m=n(n + 1) / 2..n(n + 1) / 2 + n } [x ^ m] S(x) ^ (n + 1) for n>=0 where S(x) = Sum _{ n>=0 } x ^ (n(n + 1) / 2). ●

▶ [A189239] 1,1,3,13,77,521,4237,38879,402537,4605697,57796601,787755255,11583272461,182651526513,3072748617317,54914056549231,1038486405418449,20713226786502529,434426374539131761,9555736871169618407,219912659890141260661,5283756963089094382705 ⋆ E.g.f. exp(x / cos(x) * exp(x / cos(x))) ● a(n) = n! * sum(r=1..n, ((sum(k=r..n - 1, (((- 1) ^ (n - k) + 1) * (sum(m=1..n - k, binomial(m + k - 1,k - 1) * sum(j=1..m, ((sum(i=0..floor((j - 1) / 2, (j - 2 * i) ^ (n - k) * binomial(j,i)))) * binomial(m,j) * (- 1) ^ ((n - k) / 2 - j)) / 2 ^ j))) * r ^ (k - r)) / ((n - k)! * (k - r)!))) + r ^ (n - r) / (n - r)!) / r!); ●

▶ [A032035] 1,1,1,3,13,77,573,5143,54025,650121,8817001,133049339,2210979381,40118485237,789221836741,16730904387183,380227386482641,9221550336940241,237724953543108753,6491255423787076915,187156557809878784797,5681772224922980536413 ⋆ Number of increasing rooted 2,3 cacti (triangular cacti with bridges) with n - 1 nodes. ● a(1) = a(2) = 1; a(n) = Sum _{ k=1..n - 2 } binomial(n - 2,k) * a(k) * a(n - k). - _ Ilya Gutkovskiy _ , Aug 28 2020 ●

▶ [A215915] 1,1,3,13,79,579,5209,53347,628257,8223481,119473291,1893056781,32677209103,606930554923,12109058077809,257638964244739,5830359141736129,139638723615395697,3531794326401241747,93977250969358226701,2625647922067519041231,76809884197769914248211 ⋆ E.g.f.: exp(Sum _{ n>=1 } A000041(n) * x ^ n / n), where A000041(n) is the number of partitions of n. ● a(n) = (n - 1)! * sum(p(i + 1) * a(n - i - 1) / (n - i - 1)!,i,0,n - 1), a(0)=1, where p(i) is the number of partitions of n. - _ Vladimir Kruchinin _ , Feb 27 2015 ●

▶ [A366179] 1,3,13,80,582,4627,38906,340138,3060404,28151835,263546436,2502686416,24048985907,233410500126,2284790496700,22530585455108,223610524426654,2231886642819974,22389017726854323,225604735477075272,2282518274913713101 ⋆ G.f. A(x) satisfies A(x) = 1 / (1 - x) ^ 2 + x * A(x) ^ 3 / (1 - x). ● a(n) = Sum _{ k=0..n } binomial(n + 4 * k + 1,n - k) * binomial(3 * k,k) / (2 * k + 1). ●

▶ [A074514] 3,13,81,577,4353,33793,266241,2113537,16842753,134479873,1074790401,8594128897,68736253953,549822922753,4398314946561,35185445830657,281479271677953,2251816993554433,18014467228958721,144115462953762817 ⋆ 1 ^ n + 4 ^ n + 8 ^ n. ● a(n)=12 * a(n - 1) - 32 * a(n - 2) + 21 with a(0)=3, a(1)=13. - _ Vincenzo Librandi _ , Jul 21 2010 ● a(0)=3, a(1)=13, a(2)=81, a(n)=13 * a(n - 1) - 44 * a(n - 2) + 32 * a(n - 3). - _ Harvey P. Dale _ , Jun 30 2011 ●

▶ [A000904] 0,3,13,83,592,4821,43979,444613,4934720,59661255,780531033,10987095719,165586966816,2660378564777,45392022568023,819716784789193,15620010933562688,313219935456042955,6593238655510464741 ⋆ a(n) = (n + 1) * a(n - 1) + (n + 2) * a(n - 2) + a(n - 3); a(1)=0, a(2)=3, a(3)=13. ● a(n - 1) = (n + 1) * a(n - 2) + a(n - 3) - 2 * (- 1) ^ n. Summing this with (i), we see that (i) defines A000904); ● a(n) = Sum _{ i=0..n + 2 } (- 1) ^ i * binomial(2 * n - i + 5, i }* (n + 2 - i)! (*) ● a(n + 1) = Sum _{ j=0..n + 3 } (- 1) ^ j * binomial(2 * n - j + 6,j) * (n - j + 3)! + Sum _{ j=1..n + 3 } (- 1) ^ j * binomial(2 * n - j + 6, j - 1 }* (n + 3 - j)! ● a(n + 1) = Sum _{ j=0..n + 3 }} (- 1) ^ j * binomial(2 * n - j + 7, j }* (n + 3 - j)! = Sum _{ j=0..n + 3 } (- 1) ^ j * binomial(2 * (n + 1) - j + 5,j) * ((n + 1) + 2 - j)! ●

▶ [A121679] 1,1,3,13,85,706,7042,81887,1081257,15911488,257476901,4533396418,86110501919,1752312402881,37982176570353,872648321081531,21162807249523025,539772371783003416,14433746294326451095 ⋆ a(n) = A121678(n) / (n + 1) = [x ^ n] (1 + x * (1 + x) ^ n) ^ (n + 1) / (n + 1). ● a(n) = Sum _{ k=0..n + 1 } C(n + 1,k) * C(n * k,n - k) / (n + 1). ●

▶ [A349582] 1,3,13,85,733,7292,78267,880250,10226237,121713373,1476272394,18180126906,226704989103,2856790765238,36321840773980,465362291912648,6002272018481901,77873186277771107,1015583616140910999,13306207249869273003,175064043975233981626 ⋆ G.f. A(x) satisfies: A(x) = 1 / (1 - 2 * x) + x * (1 - 2 * x) ^ 3 * A(x) ^ 5. ● a(n) = Sum _{ k=0..n } binomial(n,k) * binomial(5 * k,k) * 2 ^ (n - k) / (4 * k + 1). ● a(n) = 2 ^ n * F([1 / 5, 2 / 5, 3 / 5, 4 / 5, - n], [1 / 2, 3 / 4, 1, 5 / 4], - 5 ^ 5 / 2 ^ 9), where F is the generalized hypergeometric function. - _ Stefano Spezia _ , Nov 22 2021 ●

▶ [A054420] 1,3,13,87,585,3899,25973,173039,1152849,7680691,51171485,340922567,2271346969,15132518507,100818201477,671686589663,4475014115745,29814130048611,198632300941357,1323358787022391,8816685256575721 ⋆ Number of connectable 3 X n binary matrices. ● a(n) = 7 * a(n - 1) - 3 * a(n - 2) + 5 * a(n - 3). ●

▶ [A034513] 3,13,91,757,6643,59293,532171,4785157,43053283,387440173,3486843451,31381236757,282430067923,2541867422653,22876797237931,205891146443557,1853020231898563,16677181828806733,150094635684419611 ⋆ a(n) = 1 ^ n + 3 ^ n + 9 ^ n. ● a(n) = 13 * a(n - 1) - 39 * a(n - 2) + 27 * a(n - 3), a(0)=3, a(1)=13, a(2)=91. - _ Harvey P. Dale _ , Apr 13 2012 ●

▶ [A277492] 3,13,96,780,6684,58812,523932,4693884,42158940,379086396,3410401308,30688106748,276170940636,2485450385340,22368701146524,201316901032572,1811846472148572,16306595700758844,146759271112516380,1320833079235394556 ⋆ Number of vertices in the metrically regular triangulation of the n - th approximation of the Koch snowflake fractal. ● a(n + 1) = (1 / 5) * (44 * 9 ^ n + 21 * 4 ^ n) for all n > - 1. ● a(0)=3, a(1)=13, a(2)=96, a(n) = 13 * a(n - 1) - 36 * a(n - 2) for n > 2. ●

▶ [A366698] 1,3,13,106,1000,10315,112732,1282262,15021212,179994093,2195807684,27179964798,340514877488,4309512389582,55014793453124,707582318505678,9160219144520568,119268621622902920,1560830776582842660,20519083242145870778,270851956372499374728 ⋆ G.f. satisfies A(x) = (1 + x) ^ 2 + x * A(x) ^ 4. ● a(n) = Sum _{ k=0..n } binomial(2 * (3 * k + 1),n - k) * binomial(4 * k,k) / (3 * k + 1). ●

▶ [A041591] 1,1,3,13,146,159,305,1074,2453,5980,20393,26373,46766,540799,2209962,4960723,7170685,248764013,255934698,760633409,3298468334,37043785083,40342253417,77386038500,272500368917 ⋆ Denominators of continued fraction convergents to sqrt(313). ● a(n) = 253724736 * a(n - 17) + a(n - 34) for n>33. [_ Bruno Berselli _ , Dec 22 2013] ●

▶ [A045748] 3,13,313,313,40313,940313,940313,20940313,420940313,420940313,20420940313,920420940313,8920420940313,28920420940313,528920420940313,6528920420940313,36528920420940313,336528920420940313,2336528920420940313,42336528920420940313 ⋆ a(n) is the number consisting of the last n digits (although any leading 0's among those last n digits are omitted) of Sum _{ j=1..k } j

! for all sufficiently large k. • a(n) = (Sum _{ k>=1 } k!) mod 10 ^ n. - _ Se an A. Irvine _ , Mar 19 2021 •

▶ [A016104] 1,3,13,16381 ⋆ 2 ^ 2 ^ 2 ^ ... 2 ^ w (with n 2's), where w = 1.9287 8..... • a(0) = 1, a(n) = the greatest prime less than 2 ^ (a(n - 1) + 1). - _ Cha rles R Greathouse IV _ , Oct 25 2006 •

▶ [A048756] 3,13,305175781 ⋆ Prime repunits in ascending prime bases (writte n in decimal). • a(p)=((p ^ a(p - 1)) - 1) / (p - 1); a(p)=111...111 in base p wit h a(p - 1) 1's; p runs through the primes. •

▶ [A022125] 3,14,17,31,48,79,127,206,333,539,872,1411,2283,3694,5977,9671,1564 8,25319,40967,66286,107253,173539,280792,454331,735123 ⋆ Fibonacci sequence beginning 3, 14. • a(n) = h * Fibonacci(n + k) + Fibonacci(n + k - h) with h= 6, k=2. - _ Bruno Berselli _ , Feb 20 2017 • a(n) = (2 ^ (- 1 - n) * ((1 - sqrt(5)) ^ n * (- 25 + 3 * sqrt(5)) + (1 + sqrt(5)) ^ n * (25 + 3 * sqrt(5)))) / sqrt(5) . • a(n) = a(n - 1) + a(n - 2) for n>1. • a(n) = Lucas(n + 4) + Lucas(n - 3). - _ Greg Dresden _ and Kathleen Wilson, Feb 28 2022 •

▶ [A024598] 1,3,14,22,55,73,140,172,285,335,506,578,819,917,1240,1368,1785,194 7,2470,2670,3311,3553,4324,4612,5525 ⋆ a(n) = s(1) * s(n) + s(2) * s(n - 1) + ... + s(k) * s(n + 1 - k), where k = floor((n + 1) / 2), s = (odd natural numbers). • a(n) = (4 * n ^ 3 + 3 * n ^ 2 + 2 * n - 3 * n ^ 2 * (- 1) ^ n) / 12. - _ Luce E TIENNE _ , Jan 17 2015 • a(n) = Sum _{ i=1..n } i * (2 * n - i) * (i mod 2). - _ Wesley Ivan Hurt _ , Apr 21 2020 •

▶ [A302758] 0,1,3,14,25,66,98,200,270,475,605,966,1183,1764,2100,2976,3468,472 5,5415,7150,8085,10406,11638,14664,16250 ⋆ a(n) = n ^ 2 * (n * (4 * n + 3) + 3 * n * (- 1) ^ n - 4) / 96. • a(n) = (n / 2) * Sum _{ i=1..floor(n / 2) } i * (n - i). • a(n) = n * floor(n / 2) * (1 + floor(n / 2)) * (3 * n - 1 - 2 * floor(n / 2)) / 12. • a(n) = n ^ 2 * (n * (4 * n + 3) + 3 * n * (- 1) ^ n - 4) / 96. Therefore: • a(n) = n ^ 2 * (2 * n - 1) * (n + 2) / 48 for n even; otherwise: • a(n) = n ^ 2 * (n - 1) * (n + 1) / 24. •

▶ [A063098] 3,14,26,38,50,62,74,86,98,110,122,134,146,158,170,182,194,206,218,2 30,242,254,266,278,290 ⋆ Dimension of the space of weight 2n cusp forms for Ga mma _ 0(30). • a(n) = 2 * a(n - 1) - a(n - 2) for n>3. • a(n) = 2 * (6 * n - 5) for n>1. •

▶ [A057870] 0,1,3,14,28,57,93,154,216,321,425,576,732,949,1155,1450,1728,2097,2 457,2926,3360,3941,4477,5160,5808 ⋆ Number of singular points on n - th order Chmutov surface. • a(n) = 2 * a(n - 2) + a(n - 3) - a(n - 4) - 2 * a(n - 5) + a(n - 6) + a(n - 7) - 2 * a(n - 8) - a(n - 9) + a(n - 10) + 2 * a(n - 11) - a(n - 13) for n>13. •

▶ [A071396] 0,3,14,31,55,87,125,170,222,281,346,419,499,585,679,779,887,1001,1 122,1251,1386,1528,1677,1833,1995 ⋆ Rounded total surface area of a regular oc tahedron with edge length n. • a(n) = round(2 * n ^ 2 * sqrt(3)). •

▶ [A032525] 0,3,14,31,56,87,126,171,224,283,350,423,504,591,686,787,896,1011,1 134,1263,1400,1543,1694,1851,2016 ⋆ Floor(7 * n ^ 2 / 2). • a(n) = (- 1 + (- 1) ^ n + 14 * n ^ 2) / 4. a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4). G.f.: - x * (3 * x ^ 2 + 8 * x + 3) / ((x - 1) ^ 3 * (x + 1)). - _ Colin Barker _ , Aug 03 2 013 •

▶ [A033991] 0,3,14,33,60,95,138,189,248,315,390,473,564,663,770,885,1008,1139,1 278,1425,1580,1743,1914,2093,2280 ⋆ a(n) = n * (4 * n - 1). • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n > 2. - _ Harvey P. Dale _ , Oct 10 2011 • a(n) = Sum _{ i=n..3n - 1 } i. - _ Wesley Ivan Hurt _ , Dec 04 2016 • a(n) = bino mial(2 * n, 2) + 2 * n ^ 2. •

▶ [A140064] 1,3,14,34,63,101,148,204,269,343,426,518,619,729,848,976,1113,125 9,1414,1578,1751,1933,2124,2324,2533 ⋆ a(n) = (9 * n ^ 2 - 23 * n + 16) / 2. • a(n) = a(n - 1) + 9 * n - 16, a(1)=1. - _ Vincenzo Librandi _ , Nov 24 2010 • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3); a(1)=1, a(2)=3, a(3)=14. - _ Harve y P. Dale _ , Oct 01 2011 •

▶ [A064226] 3,14,34,63,101,148,204,269,343,426,518,619,729,848,976,1113,1259,1 414,1578,1751,1933,2124,2324,2533,2751 ⋆ a(n) = (9 * n ^ 2 + 13 * n + 6) / 2. • a(n) = 3 * C(n, 0) + 11 * C(n, 1) + 9 * C(n, 2); binomial transform of (3, 11, 9, 0, 0, 0, ...). G.f.:(3 + 5 * x + x ^ 2) / (1 - x) ^ 3. - _ Paul Barry _ , Mar 1 5 2003 • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Wesley Ivan Hurt _ , Apr 16 2023 •

▶ [A077288] 0,1,3,14,34,143,341,1420,3380,14061,33463,139194,331254,1377883,3 279081,13639640,32459560,135018521,321316523,1336545574,3180705674,132304 37223,31485740221,130967826660,311676696540 ⋆ First member of the Diophan tine pair (m,k) that satisfies 6(m ^ 2 + m) = k ^ 2 + k: a(n) = m. • a(n) = a(- 1 - n) for all n in Z. - _ Michael Somos _ , Jul 15 2018 • a(n) = 10 * a(n - 2) - a(n - 4) + 4, n > 4. - _ Vladimir Pletser _ , Feb 29 2020 • a(n) = a(n - 1) + 1 0 * a(n - 2) - 10 * a(n - 3) - a(n - 4) + a(n - 5). - _ Wesley Ivan Hurt _ , Jul 24 2020 •

▶ [A094627] 1,3,14,34,144,344,1444,3444,14444,34444,144444,344444,1444444,34 44444,14444444,34444444,144444444,344444444,1444444444,3444444444,1444444 4444,34444444444,144444444444,344444444444,1444444444444 ⋆ Expansion of (1 + x) ^ 2 / ((1 - x) * (1 - 10 * x ^ 2)). • a(n) = 10 ^ (n / 2) * (31 * sqrt(10) / 1 80 + 13 / 18 - (31 * sqrt(10) / 180 - 13 / 18) * (- 1) ^ n) - 4 / 9. • a(n) = (13 * b(n) + 31 * b(n - 1) - 4) / 9 with b(n) = 1,0,10,0,100,0,1000,.. (aerated A0115 57) [_ R. J. Mathar _ , Nov 26 2010] •

▶ [A179132] 1,3,14,36,47,246,644,843,4414,11556,15127,79206,207364,271443,142 1294,3720996,4870847,25504086,66770564,87403803,457652254,1198149156,15683 97607,8212236486,21499914244 ⋆ Denominators of A178381(4 * n + 1) / A1783 81(4 * n) • a(n) = 18 * a(n - 3) - a(n - 6) for n>6. G.f.: - (3 * x ^ 6 + 6 * x ^ 5 + 7 * x ^ 4 - 18 * x ^ 3 - 14 * x ^ 2 - 3 * x - 1) / ((x ^ 2 - 3 * x + 1) * (x ^ 4 + 3 * x ^ 3 + 8 * x ^ 2 + 3 * x + 1)). - _ Colin Barker _ , Jun 27 2013 •

▶ [A143941] 3,14,37,76,135,218,329,472,651,870,1133,1444,1807,2226,2705,3248,3 859,4542,5301,6140,7063,8074,9177,10376,11675 ⋆ The Wiener index of a chain o f n triangles (i.e., joined like VVV..VV; here V is a triangle!). • a(n) = n * (1 + 6 * n + 2 * n ^ 2) / 3. • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Wesley Ivan Hurt _ , Apr 08 2015 •

▶ [A162147] 0,3,14,38,80,145,238,364,528,735,990,1298,1664,2093,2590,3160,380 8,4539,5358,6270,7280,8393,9614,10948,12400 ⋆ a(n) = n * (n + 1) * (5 * n + 4) / 6. • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) • a(n) = Sum _{ i=0..n } i * (n + 1 + i). - _ Bruno Berselli _ , Mar 17 2016 •

▶ [A027444] 0,3,14,39,84,155,258,399,584,819,1110,1463,1884,2379,2954,3615,436 8,5219,6174,7239,8420,9723,11154,12719,14424 ⋆ a(n) = n ^ 3 + n ^ 2 + n. • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>3. - _ Wesley Iva n Hurt _ , Apr 05 2016 •

▶ [A050297] 0,1,3,14,40,90,175,308,504,780,1155,1650,2288,3094,4095,5320,680 0,8568,10659,13110,15960,19250,23023,27324,32200 ⋆ Number of scalars which c an be constructed from the Riemann tensor and metric tensor in n dimensions. • a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n > 7. •

▶ [A005701] 3,14,40,90,175,308,504,780,1155,1650,2288,3094,4095,5320,6800,856 8,10659,13110,15960,19250,23023,27324,32200,37700,43875 ⋆ Number of exterior points formed by extending diagonals of n - gon in general position. • a(n) = (n + 1) * (n + 2) * (n + 3) * (n + 6) / 12. •

▶ [A213482] 0,3,14,41,87,161,265,409,594,831,1120,1473,1889,2381,2947,3601,434 0,5179,6114,7161,8315,9593,10989,12521,14182 ⋆ Number of (w,x,y) with all ter ms in { 0,...,n } and |w - x| + |x - y| > w + x + y. • a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + a(n - 4) + 2 * a(n - 5) - a(n - 6). • a(n) = (23 * n ^ 3 + 39 * n ^ 2 + n + 9 - (3 * n + 9) * ((n + 1) mod 2)) / 24. (End) •

▶ [A367985] 0,0,0,3,14,42,99,200,363,609,962,1449,2100,2948,4029,5382,7049,907 5,11508,14399,17802,21774,26375,31668,37719 ⋆ Number of 4 - cycles in the n - cycle complement and (n + 1) - wheel complement graph. • a(n) = (n - 5) * n * (n ^ 2 - 9 * n + 22) / 8 for n >= 5. • a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n >= 5. •

▶ [A115005] 0,3,14,43,100,209,374,641,1020,1553,2246,3197,4372,5911,7778,1003 7,12728,16043,19862,24467,29728,35777,42626,50625,59520 ⋆ a(n) = (A114043(n) - 1) / 2. • a(n) = (n - 1) * (2n - 1) + Sum _{ i=2..n - 1 } (n - i) * (2n - i) * p hi(i). - _ Chai Wah Wu _ , Aug 15 2021 •

▶ [A058389] 1,3,14,44,129,316,714,1452,2775,4963,8478,13838,21827,33306,4950 4,71754,101871,141807,194128,261570,347633,456026,591384,758596,963657 ⋆ N umber of 3 X 3 matrices with nonnegative integer entries and all row sums equ al to n, up to row and column permutation. • a(n) = (1 / 6) * (C(C(n + 2, 2) + 2, 3) + 3 / 2 * floor((n + 2) / 2) * (C(n + 2, 2) - floor((n + 2) / 2)) + 3 * C(floor((n + 2) / 2) + 2, 3) + 2 * floor(C(n + 2, 2) / 3) + 2 * C(C(n + 2, 2) - 3 * floor(C(n + 2, 2) / 3) + 2, 3)). •

▶ [A261481] 1,3,14,44,138,458,1397,4219,12974,39270,118004,355924,1071425,32 17011,9662070,29016280,87083486,261322358,784185253,2352907211,705928800 6,21179391714,63541238088,190628647440,571896993217 ⋆ Number of set partit ions of [n] into exactly five parts such that no part contains two elements with a circular distance less than three. • a(n) = 2 * a(n - 1) + a(n - 2) + 12 * a(n - 3) - 6 * a(n - 4) - 18 * a(n - 5) - 47 * a(n - 6) - 32 * a(n - 7) + 17 * a(n - 8) + 36 * a(n - 9) + 36 * a(n - 10). - _ Wesley Ivan Hurt _ , Apr 16 2023 •

▶ [A059672] 0,3,14,45,124,315,762,1785,4088,9207,20470,45045,98292,212979,458 738,983025,2097136,4456431,9437166,19922925,41943020,88080363,184549354,38 5875945,805306344 ⋆ Sum of binary numbers with n 1's and one (possibly leadi ng) 0. • a(n) = Sum _{ k=0..n } Sum _{ i=0..n } C(n + 1,i) - C(k,i). - _ We sley Ivan Hurt _ , Sep 21 2017 •

▶ [A027953] 1,3,14,46,133,364,972,2567,6746,17690,46345,121368,317784,83201 1,2178278,5702854,14930317,39088132,102334116,267914255,701408690,18363118 58,4807526929,12586268976,32951280048 ⋆ a(0)=1, a(n) = Fibonacci(2n + 4) - (2n + 3). • a(n) = T(2n + 1, n + 1), T given by A027948. • a(n) = Sum _{ j= 0..n } binomial(2 * n - j + 1, j + 2), with a(0)=1. - _ G. C. Greubel _ , Sep 29 2019 •

▶ [A104196] 1,3,14,46,206,694,2610,9420,35038,130784,484136,1827996,689181 6,26121822,99232238,379021972,1450654796,5564804616,21406426134,824574568 08 ⋆ Sum of CarmichaelLambda[n] between successive powers of 2. • a(n)=Sum [CarmichaelLambda[i], { i, 2 ^ n, 2 ^ (n + 1) - 1 }] •

▶ [A287426] 3,14,47,164,577,2046,7275,25896,92213,328402,1169599,4165564,148 35849,52838630,188187539,670239824,2387094493,8501763066,30279478119,1078 41960420,384084837425,1367938433038,4871984973883,17351831787640,6179946 5310597 ⋆ Number of connected induced subgraphs in the n - sun graph. • a(n) = - 1 + n + ((3 - sqrt(17)) / 2) ^ n + ((3 + sqrt(17)) / 2) ^ n. • a(n) = 5 * a(n - 1) - 5 * a(n - 2) - a(n - 3) + 2 * a(n - 4) for n>4. (End) •

▶ [A212505] 0,0,3,14,48,114,243,444,768,1220,1875,2730,3888,5334,7203,9464,122 88,15624,19683,24390,30000,36410,43923,52404,62208 ⋆ Number of (w,x,y,z) wit h all terms in { 1,...,n } and w<2x and y>=2z. • a(n) = 2a(n - 1) + 2a(n - 2) - 6a(n - 3) + 6a(n - 5) - 2a(n - 6) - 2a(n - 7) + a(n - 8). •

▶ [A176027] 0,3,14,48,144,400,1056,2688,6656,16128,38400,90112,208896,47923 2,1089536,2457600,5505024,12255232,27131904,59768832,131072000,286261248,6 22854144,1350565888,2919235584 ⋆ Binomial transform of A005563. • a(n) = 2 ^ (n - 2) * n * (5 + n). - _ R. J. Mathar _ , Dec 11 2010 • a(n) = Sum _{ k= 0..n - 1 } Sum _{ i=0..n - 1 } (k + 3) * C(n - 1,i). - _ Wesley Ivan Hurt _ , S ep 20 2017 •

▶ [A164304] 3,14,50,172,588,2008,6856,23408,79920,272864,931616,3180736,1085 9712,37077376,126590080,432205568,1475642112,5038157312,17201345024,58729 065472,200513571840,684596156416,2337357481984,7980237615104 ⋆ a(n) = 4 * a(n - 1) - 2 * a(n - 2) for n > 1; a(0) = 3, a(1) = 14. • a(n) = 4 * a(n - 1) - 2 * a(n - 2) for n > 1; a(0) = 3, a(1) = 14. • a(n) = ((3 + 4 * sqrt(2)) * (2 + sqrt(2)) ^ n + (3 - 4 * sqrt(2)) * (2 - sqrt(2)) ^ n) / 2. •

▶ [A098521] 0,0,1,3,14,50,195,721,2716,10116,37845,141295,528330,1975766,7395 479,27698685,103821240,389410568,1461605481,5489516955,20630539910,775791 18330,291893775019,1098848179561,4138773239892 ⋆ E.g.f. exp(x) * BesselI(2,2 * sqrt(2) * x) / 2. • a(n) = Sum _{ k=0..floor(n / 2) } binomial(n, k) * binomi al(n - k, k + 2) * 2 ^ k. •

▶ [A084150] 0,0,1,3,14,50,199,749,2892,11028,42301,161799,619706,2372006,9081 955,34767953,133109592,509594856,1950956857,7469077707,28594853414,109473 250778,419110475455,1604533706357,6142840740900 ⋆ A Pell related sequence. • a(n) = ((1 + sqrt(8)) ^ n + (1 - sqrt(8)) ^ n - 2) / 16. •

► [A192882] 0,1,3,14,51,205,792,3107,12117,47362,184965,722591,2822544,11025793,43069611,168242270,657200859,2567211037,10028243016,39173122739,153021167805,597743469778,2334953116653,9120979734623,35629097057568 ⋆ Coefficient of x in the reduction by (x ^ 2 - > x + 1) of the polynomial p(n,x) given in Comments. ● a(n) = 2 * a(n - 1) + 7 * a(n - 2) + 2 * a(n - 3) - a(n - 4). ●
► [A017946] 1,3,14,52,196,733,2744,10267,38416,143739,537824,2012353,7529536,28172943,105413504,394421215,1475789056,5521897022,20661046784,77306558317,289254654976,1082291816449,4049565169664 ⋆ Powers of sqrt(14) rounded down. ● a(n) = floor(sqrt(14 ^ n)). - _ Vincenzo Librandi _ , Jun 24 2011 ●
► [A083424] 1,3,14,52,216,848,3424,13632,54656,218368,873984,3494912,13981696,55922688,223698944,894779392,3579150336,14316535808,57266274304,229064835072,916259864576,3665038409728,14660155736064,58640618749952 ⋆ a(n) = (5 * 4 ^ n + (- 2) ^ n) / 6. ● a(n) = 2 * a(n - 1) + 8 * a(n - 2). - _ N. J. A. Sloane _ , Jul 16 2014 ●
► [A099487] 1,1,3,14,53,195,727,2716,10137,37829,141179,526890,1966381,7338631,27388143,102213944,381467633,1423656585,5313158707,19828978246,74002754277,276182038859,1030725401159,3846719565780,14356152861961 ⋆ Expansion of (1 - 3x + x ^ 2) / ((1 + x ^ 2)(1 - 4x + x ^ 2)). ● a(n)=4a(n - 1) - 2a(n - 2) + 4a(n - 3); a(n)=sum { k=0..floor(n / 2), C(n - k, k)(- 1) ^ n * (4 ^ (n - 2k) + 3 * 0 ^ (n - 2k)) / 4 } . ●
► [A179610] 1,3,14,53,217,860,3453,13791,55198,220737,883037,3532004,14128249,56512619,226051086,904203357,3616815025,14467257516,57869034245,231476130215,925904531806,3703618109513,14814472466709,59257889820468 ⋆ Eight white kings and one red king on a 3 X 3 chessboard. G.f.: 1 / (1 - 3 * x - 5 * x ^ 2 + 4 * x ^ 3). ● a(n) = 3 * a(n - 1) + 5 * a(n - 2) - 4 * a(n - 3) with a(1)=1, a(2)=3 and a(3)=14. ● a(n) = (1 / 95) * (5 * 2 ^ (2 * n + 4) - (11 - 2 * phi) * phi ^ (- n - 1) - (9 + 2 * phi) * (1 - phi) ^ (- n - 1)) with phi = (1 + sqrt(5)) / 2, with A001622 = phi. ● a(n) = (- 1) ^ n * sum((- 4) ^ m * F(n + 1 - m),m=0..n). ●
► [A343543] 0,3,14,54,188,615,1932,5901,17656,52002,151270,435633,1244184,3528759,9949058,27907470,77933552,216784731,600935076,1660672257,4576522540,12580566138,34504747354,94440719589,257998970928 ⋆ a(n) = n * Lucas(2 * n). ● a(n) = 6 * a(n - 1) - 11 * a(n - 2) + 6 * a(n - 3) - a(n - 4). - _ Wesley Ivan Hurt _ , Apr 19 2021 ●
► [A104191] 1,3,14,54,236,920,3730,14862,59776,238856,956110,3823410,15299542,61193632,244779854,979111158,3916558030,15666093384,62664665094,250658276292,1002634426882,4010536846838,16042149531756,64168594080686,256674403929154 ⋆ Sum of Euler totient function between successive powers of two. ● a(n) = phi(2 ^ n) + phi(2 ^ n + 1) + ... + phi(2 ^ (n + 1) - 2) + phi(2 ^ (n + 1) - 1). ●
► [A363964] 3,14,55,195,644,2016,6048,17520,49280,135168,362752,955136,2472960,6307840,15876096,39481344,97124352,236584960,571146240,1367539712,3249799168,7669284864,17983078400,41916825600,97165246464 ⋆ Number of unordered pairs of non - intersecting non - self - intersecting paths, singletons included, with nodes that cover all vertices of a convex labeled n - gon. ● a(n) = n * (n - 1) * (n ^ 2 + n + 36) * 2 ^ (n - 8) / 3. ●
► [A322938] 0,3,14,55,209,791,3002,11439,43757,167959,646645,2496143,9657699,37442159,145422674,565722719,2203961429,8597496599,33578000609,131282408399,513791607419,2012616400079,7890371113949,30957699535775,121548660036299 ⋆ a(n) = binomial(2 * n + 2, n + 2) - 1. ● a(n) = Sum _{ k = 0..n + 1 } binomial(n + k,k + 1). ● a(n) = Sum _{ k = 0..n - 1 } binomial(n + k + 2,k + 1). ●
► [A353095] 3,14,57,228,911,3642,14565,58256,233019,932070,3728273,14913084,59652327,238609298,954437181,3817748712,15270994835,61083979326,244335917289,977343669140,3909374676543,15637498706154,62549994824597,250199979298368,1000799917193451 ⋆ a(1) = 3; for n > 1, a(n) = 4 * a(n - 1) + 4 - n. ● a(n) = 6 * a(n - 1) - 9 * a(n - 2) + 4 * a(n - 3). ● a(n) = (2 * 4 ^ (n + 1) + 3 * n - 8) / 9. ● a(n) = Sum _{ k=0..n - 1 } (4 - n + k) * 4 ^ k. ●
► [A037793] 3,14,57,228,915,3662,14649,58596,234387,937550,3750201,15000804,60003219,240012878,960051513,3840206052,15360824211,61443296846,245773187385,983092749540,3932370998163,15729483992654,62917935970617,251671743882468,1006686975529875 ⋆ Base - 4 digits are, in order, the first n terms of the periodic sequence with initial period 3,2,1,0. ● a(n) = 4 * a(n - 1) + a(n - 4) - 4 * a(n - 5); a(1)=3, a(2)=14, a(3)=57, a(4)=228, a(5)=915. - _ Harvey P. Dale _ , Jun 01 2014 ●
► [A015523] 0,1,3,14,57,241,1008,4229,17727,74326,311613,1306469,5477472,22964761,96281643,403668734,1692414417,7095586921,29748832848,124724433149,522917463687,2192374556806,9191710988853,38537005750589 ⋆ a(n) = 3 * a(n - 1) + 5 * a(n - 2), with a(0)=0, a(1)=1. ● a(n) = 3 * a(n - 1) + 5 * a(n - 2). ● a(n) = ((3 / 2 + sqrt(29) / 2) ^ n - (3 / 2 - sqrt(29) / 2) ^ n) / sqrt(29). ● a(n) = Sum _{ k=0..floor((n - 1) / 2) } binomial(n - k - 1,k) * 5 ^ k * 3 ^ (n - 2 * k - 1). (End) ●
► [A110526] 0,1,3,14,58,247,1045,4428,18756,79453,336567,1425722,6039454,25583539,108373609,459077976,1944685512,8237820025,34895965611,147821682470,626182695490,2652552464431,11236392553213,47598122677284 ⋆ a(n + 3) = 3 * a(n + 2) + 5 * a(n + 1) + a(n), a(0) = 0, a(1) = 1, a(2) = 3. ● a(n) = (1 / 8) * [2 - sqrt(5)] ^ n - (1 / 4) * (- 1) ^ n + (1 / 8) * [2 + sqrt(5)] ^ n + (1 / 40) * [2 + sqrt(5)] ^ n * sqrt(5) - (1 / 40) * [2 - sqrt(5)] ^ n * sqrt(5), with n>=0. - _ Paolo P. Lava _ , Oct 02 2008 ● a(n) = (- 1) ^ n / 2 * Sum _{ k=0..n } (- 1) ^ k * Fibonacci(3 * k). - _ Gary Detlefs _ , Jan 03 2013 ●
► [A319857] 0,3,14,58,250,994,4066,16174,65326,261934,1048366,4191994,16774906,67078834,268405426,1073711794,4294937266,17179358674,68718966226,274868207254,1099501928086,4398036811414,17592176344726,70368521084794,281474753617786 ⋆ Difference between 4 ^ n and the product of primes less than or equal to n. ● a(n) = 4 ^ n - n # , where n # is the product of primes less than or equal to n (see A034386). ●
► [A038679] 3,14,59,242,982,3964,15955,64106,257282,1031780,4135518,16569204,66365964,265761016,1064046979,4259609626,17050224394,68241838036,273110643754,1092947507356,4373580244084,17500703480776 ⋆ Convolution of A007054 (Super ballot numbers) with A000302 (powers of 4). ● a(n) = 4 ^ (n + 1) - C(n + 1), C(n): Catalan numbers A000108; G.f. c(x) * (4 - c(x)) / (1 - 4 * x), where c(x) = g.f. for Catalan numbers. ●
► [A171499] 3,14,60,248,1008,4064,16320,65408,261888,1048064,4193280,16775168,67104768,268427264,1073725440,4294934528,17179803648,68719345664,274877644800,1099511103488,4398045462528,17592183947264,70368739983360 ⋆ a(n) = 6 * a(n - 1) - 8 * a(n - 2) for n > 1; a(0) = 3, a(1) = 14. ● a(n) = 4 * 4 ^ n - 2 ^ n = 2 ^ n * (2 ^ (n + 2) - 1). ● a(n) = 4 * a(n - 1) + 2 ^ n for n > 0. - _ Vincenzo Librandi _ , Jul 18 2011 ●
► [A024037] 1,3,14,61,252,1019,4090,16377,65528,262135,1048566,4194293,16777204,67108851,268435442,1073741809,4294967280,17179869167,68719476718,274877906925,1099511627756 ⋆ a(n) = 4 ^ n - n. ● a(n) = 6 * a(n - 1) - 9 * a(n - 2) + 4 * a(n - 3). - _ Vincenzo Librandi _ , Jun 16 2013 ●
► [A307268] 3,14,61,260,1103,4674,19801,83880,355323,1505174,6376021,27009260,114413063,484661514,2053059121,8696898000,36840651123,156059502494,661078661101,2800374146900,11862575248703,50250675141714,212865275815561,901711778403960,3819712389431403 ⋆ Partial sums of the Lucas numbers of the form L(3n + 2) (A163063). ● a(n) = (L(3 * n + 4) - 1) / 2. ● a(n) = (- 2 + (7 - 3 * sqrt(5)) * (2 - sqrt(5)) ^ n + (2 + sqrt(5)) ^ n * (7 + 3 * sqrt(5))) / 4. ● a(n) = 5 * a(n - 1) - 3 * a(n - 2) - a(n - 3) for n > 2. ●
► [A100295] 1,3,14,61,269,1184,5213,22951,101046,444873,1958633,8623232,37965321,167149115,735903870,3239948389,14264452181,62801801632,276496162501,1217323801087,5359485727718,23596094350545,103886025056529,457376803199488,2013683168560465 ⋆ Simple recursive sequence generated from a symmetric matrix. ● a(n) = rightmost term in M ^ n * [1, 0, 0], where M = [{ 3, 2, 1 } , { 2, 1, 0 } , { 1, 0, 0 }]. ● a(n) = 4 * a(n - 1) + 2 * a(n - 2) - a(n - 3). ●
► [A291025] 3,14,62,273,1200,5271,23146,101626,446181,1958880,8600043,37756502,165760934,727733433,3194937360,14026596927,61580365906,270353629378,1186921889997,5210892012480,22877154557139,100436585338334,440942410323894,1935850452749409 ⋆ p - INVERT of the positive integers, where p(S) = 1 - 3 * S + S ^ 2. ● a(n) = 7 * a(n - 1) - 13 * a(n - 2) + 7 * a(n - 3) - a(n - 4). ●
► [A091701] 1,3,14,63,287,1306,5945,27061,123180,560707,2552301,11617904,52883925,240724103,1095760078,4987826867,22704255571,103348258626,470434387405,2141385987489,9747446339348,44369726286423,201968037801353 ⋆ Row sums of triangle A091700. ● a(0)=1, a(1)=3, a(2)=14, a(3)=63, a(n)=4 * a(n - 1) + 3 * a(n - 2) - 2 * a(n - 3) - a(n - 4). - _ Harvey P. Dale _ , Nov 26 2013 ●
► [A026243] 0,3,14,63,324,1955,13698,109599,986408,9864099,108505110,1302061343,16926797484,236975164803,3554627472074,56874039553215,966858672404688,17403456103284419,330665665962403998,6613313319248079999,138879579704209680020,3055350753492612960483 ⋆ a(n) = A000522(n) - 2. ● a(n) = n * (a(n - 1) + 2) - 1 for n>1, a(1) = 0. - _ Alois P. Heinz _ , May 25 2012 ● a(n) = floor(e * n!) - 2. - _ Bernard Schott _ , Apr 21 2019 ●
► [A060801] 1,3,14,64,292,1332,6076,27716,126428,576708,2630684,12000004,54738652,249693252,1138988956,5195558276,23699813468,108107950788,493140127004,2249484733444,10261143413212,46806747599172,213511451169436 ⋆ Invert transform of odd numbers: a(n) = Sum _{ k=1..n } (2 * k + 1) * a(n - k), a(0)= 1. ● a(n) = 5 * a(n - 1) - 2 * a(n - 2) with a(1) = 3, a(2) = 14, for n >= 3. - _ Taras Goy _ , Mar 19 2019 ● a(n) = (2 ^ (- 2 - n) * ((5 - sqrt(17)) ^ n * (- 7 + sqrt(17)) + (5 + sqrt(17)) ^ n * (7 + sqrt(17)))) / sqrt(17) for n > 0. - _ Colin Barker _ , Mar 19 2019 ●
► [A247978] 1,1,1,3,14,64,426,2790,24024,229080,2399760,25022880,312273360,3884393520,56255149440,869007242880,14266826784000,233845982899200,4309095479673600,79300508301907200,1620482929875532800,34699018357638835200,777011144137311283200 ⋆ Number of permutations of [n] that have no prime fixed points. ● a(n) = Sum _{ j=0..pi(n) } (- 1) ^ (j) * C(pi(n),j) * (n - j)!, with pi = A000720. ●
► [A034275] 1,3,14,65,294,1302,5676,24453,104390,442442,1864356,7818538,32657884,135950700,564306840,2336457645,9652643910,39800950530,163830074100,673327275390,2763494696820,11327881630260,46381659765480,189711966348450,775232392541724 ⋆ a(n)=f(n,n - 2) where f is given in A034261. ● a(n) = binomial(2 * n - 2,n - 1) / n * (n ^ 2 - n + 1). ● a(n) = binomial(2 * n - 2,n - 1) + (n - 1) * binomial(2 * n - 2,n). ●
► [A002320] 1,3,14,67,321,1538,7369,35307,169166,810523,3883449,18606722,89150161,427144083,2046570254,9805707187,46981965681,225104121218,1078538640409,5167589080827,24759406763726,118629444737803 ⋆ a(n) = 5 * a(n - 1) - a(n - 2). ● a(n) = - (1 / 42) * sqrt(21) * (5 / 2 - (1 / 2) * sqrt(21)) ^ n + (1 / 42) * (5 / 2 + (1 / 2) * sqrt(21)) ^ n * sqrt(21) + (1 / 2) * (5 / 2 + (1 / 2) * sqrt(21)) ^ n + (1 / 2) * (5 / 2 - (1 / 2) * sqrt(21)) ^ n, with n >= 0. - _ Paolo P. Lava _ , Nov 21 2008 ●
► [A241478] 1,3,14,68,326,1532,7068,32104,143942,638444,2806196,12239768,53035804,228504408,979640696,4181649360,17780949574,75348050252,318312780122,1341015321784,5635404667700,23628002057736,98861122208008,412853709749168,1721097463947036 ⋆ a(n) = 4 ^ n * (n / 4 + binomial(n - 1 / 2, - 1 / 2)). ● a(n) = 4 ^ n * (n / 4 + Gamma(n + 1 / 2) / (sqrt(Pi) * Gamma(n + 1))). ●
► [A113140] 1,3,14,68,347,1819,9712,52532,286905,1578679,8738278,48601968,271406347,1520725095,8545396208,48138689272,271768537793,1537212749339,8709732836238,49423440297324,280835252080651,1597731101233763 ⋆ Diagonal sums of a Delannoy related triangle. ● a(n)=sum { k=0..floor(n / 2), sum { j=0..n - k, C(n - 2k, j)C(n - k + j, k + j) }} . ●
► [A199314] 3,14,69,344,1719,8594,42969,214844,1074219,5371094,26855469,134277344,671386719,3356933594,16784667969,83923339844,419616699219,2098083496094,10490417480469,52452087402344,262260437011719,1311302185058594 ⋆ (11 * 5 ^ n + 1) / 4. ● a(n) = 5 * a(n - 1) - 1. ● a(n) = 6 * a(n - 1) - 5 * a(n - 2). ●
► [A190725] 1,3,14,69,355,1872,10037,54459,298138,1643565,9111191,50739120,283635481,1590648819,8945090870,50423423685,284831065723,1611918320688,9137141645645,51869777201595,294843392318146,1677980087882013,9559901907126959 ⋆ Diagonal sums of Riordan matrix A118384. ● a(n) = (3 * sum((- 1) ^ k * F(2k + 1) * d(n - k),k=0..n) - (- 1) ^ n * F(2n + 2)) / 2, where d(n) = central Delannoy number (A001850) and F(n) = Fibonacci number (A000045). ●

► [A261207] 0,1,3,14,70,363,1925,10364,56412,309605,1710247,9496746,5296067 4,296408847,1663998345,9365980152,52837614456,298676661129,169132508986 7,9592607927750,54482777049918,30983775493784 3,1764046900535053,10054065 679046004,57357471874390100 ⋆ Expansion of (x - 1) / 8 - (x ^ 2 - 4 * x - 1) / (8 * sqrt(x ^ 2 - 6 * x + 1)). • a(n) = Sum _{ i=0..n - 1 } (2 ^ i * (- 1) ^ (n - i - 1) * C(n + 1,n - i - 1) * C(n + i,n)). • a(n) = (- 1) ^ (n + 1) * (n * (n + 1) / 2) * hypergeom([1 - n, 1 + n], [3], 2)). - _ Peter Luschny _ , Aug 12 2015 •

► [A161939] 3,14,70,364,1932,10360,55832,301616,1631280,8827616,47783008,25 8677440,1400457408,7582175104,41050997120,222257525504,1203346244352,6515 164597760,35274469361152,190983450520576,1034025033108480 ⋆ a(n) = ((3 + sqrt(2)) * (4 + sqrt(2)) ^ n + (3 - sqrt(2)) * (4 - sqrt(2)) ^ n) / 2. • a(n) = 8 * a(n - 1) - 14 * a(n - 2) for n > 1; a(0) = 3; a(1) = 14. •

► [A327871] 1,1,3,14,70,369,2002,11076,62127,352070,2010998,11559030,6678015 5,387444085,2255875650,13174629240,77143234950,452738296890,266235941015 8,1568399676946 0,92540962166016,546799192200261,3235027635603828,1916163 1961190036,113617798289197650 ⋆ Number of self - avoiding planar walks starti ng at (0,0), ending at (n,n), remaining in the first quadrant and using steps (0,1), (- 1,1), and (1, - 1) with the restriction that (- 1,1) and (1, - 1) are always i mmediately followed by (0,1). • a(n) = Sum _{ j=0..floor((n - 1) / 2) } C(2 * n - 1, 2 * j + n) * (C(2 * j + n, j) - C(2 * j + n, j - 1)). • a(n) = binomial(2 * n - 1, n - 1) * hypergeom([(2 - n) / 2, (1 - n) / 2], [n + 2], 4). (End) •

► [A186765] 1,1,1,3,14,70,419,2933,23421,210789,2108144,23189584,278279165,3 617629145,50646737049,759701055735,12155215581362,206638664883154,371949 6008830391,70670424167777429,141340848444329 5197,2968157817330919 9137,65 299471976913428468 ⋆ Number of permutations of { 1,2,...,n } having no incre asing even cycles. A cycle (b(1), b(2), ...) is said to be increasing if, when writt en with its smallest element in the first position, it satisfies b(1)<b(2)<b(3)<.. . . A cycle is said to be even if it has an even number of entries. • a(n)=((sum(m=1..n,sum(k=1..m,((- 1) ^ k * sum(j=0..k,((sum(i=0..j,(j - 2 * i) ^ m * binom ial(j, i))) * (- 1) ^ (j - k) * binomial(k, j)) / 2 ^ j)) / k!) / m!)) + 1) * n! [Fro m _ Vladimir Kruchinin _ , Apr 25 2011] •

► [A109792] 1,3,14,70,444,3108,25584,230256,2342880,25771680,312888960,4067 556480,57424792320,861371884800,13869128448000,235775183616000,426487609 4976000,810326458045440 00,1627055289796608000,3416816108572876 8000,75413 2445894209536000,173450462555668193280 00 ⋆ Expansion of e.g.f. log(1 + x) / (1 - x) ^ 2. • a(n) = n! * Sum _{ k=1..n } Sum _{ i=1..k } (- 1) ^ (i + 1) / i . • a(n) = n! * ((- 1) ^ n * (n + 1) * LerchPhi(- 1, 1, n + 2) + log(2) * (n + 1) + ((- 1) ^ (n + 1) - 1) / 2). - _ Peter Luschny _ , Jun 22 2022 •

► [A098648] 1,3,14,72,376,1968,10304,53952,282496,1479168,7745024,40553472,2 12340736,1111830528,5821620224,30482399232,159607914496,835717890048,4375 875682304,22912382533632,1199707924725 76,628175224700928,328916817831526 4,17222308171087872 ⋆ Expansion of (1 - 3 * x) / (1 - 6 * x + 4 * x ^ 2). • a(n) = ((3 - sqrt(5)) ^ n + (3 + sqrt(5)) ^ n) / 2. • a(n) = 2 * (3 * a(n - 1) - 2 * a(n - 2)). - _ Lekraj Beedassy _ , Oct 22 2004 • a(n) = 2 ^ (n - 1) * Lucas(2 * n). - _ Eric W. Weisstein _ , Mar 31 2017 •

► [A118650] 1,3,14,72,388,2150,12134,69370,400398,2328162,13616892,8002261 2,472133638,2794893246,16592160944,98743919468,588913687966,351896810098 2,21062444053040,126256612255260,757853797478188 ⋆ Center column a(2n,n) o f A106597. • a(n) = Sum _{ k=0..n } binomial(2 * k,k) * (- 1) ^ (n - k) * Sum _{ j=0..k } binomial(k,j) * binomial(k + 1,n - k - j) * 2 ^ (k - j). •

► [A295104] 1,1,3,14,72,489,3722,33641,334520,3761688,45898272,615641806,886 3726704,137786878644,2279658872696,40229212948404,750433323448128,148014 57167223872,3068698936474 0896,6683254543551623904,1522812190797261830 4 0,3626445842114839589952 ⋆ a(n) = (1 / n) times the n - th derivative of the fo urth tetration of x (power tower of order 4) x ^^ 4 at x=1. • a(n) = 1 / n * [(d / dx) ^ n x ^^ 4] _{ x=1 } . • a(n) = (n - 1)! * [x ^ n] (x + 1) ^^ 4. •

► [A306455] 0,1,3,14,73,454,3253,26480,241505,2440538,27075301,327197452,427 8799105,60205974230,907025841317,14567520651224,248474458923073,44857659 86251570,85454391074596165,171313489353661 7348,360527271331181512 01,7946 97884305583064302 ⋆ Total number of covered falling diagonals in all n X n per mutation matrices. • a(n) = ((2 * n ^ 2 - 5 * n + 1) * a(n - 1) - (n - 1) * (n ^ 2 - 4 * n + 2) * a(n - 2) - (n - 2) * (n - 1) ^ 2 * a(n - 3)) / (n - 2) for n > 2, a(n) = n * (n + 1) / 2 for n < 3. •

► [A074549] 3,14,74,434,2738,18074,122474,842114,5836898,40635434,28358287 4,1981698194,13858595858,96957713594,678496291274,4748649600674,332372685 83618,232647822996554,1628482704807674,11399171225541554 ⋆ a(n) = 3 ^ n + 4 ^ n + 7 ^ n. • a(n) = 14 * a(n - 1) - 61 * a(n - 2) + 84 * a(n - 3). •

► [A026004] 1,3,14,75,429,2548,15504,95931,600875,3798795,24192090,15496962 0,997490844,6446369400,41802112192,271861216539,1772528290407,11582393855 305,75831424919250,497337483739635,3266814940064445 ⋆ a(n) = T(3n + 1,n), where T = Catalan triangle (A008315). • a(n) = (n + 2) / (2 * n + 2) * C(3 * n + 1, n). - _ Ralf Stephan _ , Apr 30 2004 • a(n) = sum(k=0..n, (k + 1) * bi nomial(n,k) * binomial(2 * (n + 1),n - k)) / (n + 1). - _ Vladimir Kruchinin _ , Mar 01 2014 • a(n) = [x ^ n] ((1 - sqrt(1 - 4 * x)) / (2 * x)) ^ (n + 2). - _ Ily a Gutkovskiy _ , Nov 01 2017 •

► [A200718] 1,1,3,14,75,433,2636,16668,108399,720431,4871555,33409042,231817 448,1624503716,11480658056,81731416480,585579734959,4219179476875,3055206 7317233,222225174139730,1622894404239115,1189499107996072 1,8747226025249 9560,645183802300787356,4771926560361458884 ⋆ G.f. satisfies A(x) = (1 + x * A(x) ^ 2) * (1 + x ^ 2 * A(x) ^ 6). • a(n) = Sum _{ k=0..floor(n / 2) } ((bino mial(2 * n + 2 * k + 1,k) * binomial(2 * n + 2 * k + 1,n - 2 * k)) / (2 * n + 2 * k + 1)). - _ Vladimir Kruchinin _ , Mar 11 2016 •

► [A246455] 1,3,14,75,439,2718,17483,115575,779716,5342937,37065029,2596943 34,1834494025,13048232853,93352065596,671245767795,4847769647701,35145881 098272,255674861620439,1865618971630305,1365035802412080 4,10012348552207 5447,736036670999528711 ⋆ G.f.: Sum _{ n>=0 } x ^ n / (1 - 2 * x) ^ (2 * n + 1) * [Sum _{ k=0..n } C(n,k) ^ 2 * x ^ k] * [Sum _{ k=0..n } C(n,k) ^ 2 * 2 ^ k * x ^ k]. • a(n) = Sum _{ k=0..[n / 2] } Sum _{ j=0..n - 2 * k } C(n - k, k + j) ^ 2 * C(k + j, k) ^ 2 * 2 ^ j. •

► [A371785] 1,3,14,76,441,2652,16303,101727,641630,4080154,26112384,1679786 15,1085182436,7035477777,45750406205,298279844724,1949096816505,12761551 428024,83701819019155,549850618355886,3617119500327536,2382481681165290 5,157106267803712709 ⋆ a(n) = Sum _{ k=0..floor(n / 2) } (- 1) ^ k * binomia l(3 * n - k,n - 2 * k). • a(n) = [x ^ n] 1 / ((1 - x + x ^ 2) * (1 - x) ^ (2 * n)). •

► [A364477] 1,1,3,14,76,448,2791,18078,120516,821435,5698422,40101623,285583 775,2054272430,14903954415,108932920861,801350333186,5928653489398,440840 56075057,329279673851792,2469493161891742,18588339309502760,140383789476 473354 ⋆ G.f. satisfies A(x) = 1 + x * A(x) ^ 2 + x ^ 2 * A(x) ^ 7. • a(n) = Su m _{ k=0..floor(n / 2) } binomial(2 * n + 3 * k,k) * binomial(2 * n + 2 * k,n - 2 * k) / (n + 4 * k + 1). •

► [A364758] 1,1,3,14,76,450,2818,18352,123028,843345,5884227,41650479,298352 365,2158751879,15754446893,115830820439,857147952469,6379136387303,477159 01304501,358529599468636,2704884469806606,2048161594732508 9,155605509972 859999 ⋆ G.f. satisfies A(x) = 1 + x * A(x) ^ 4 / (1 + x * A(x)). • a(n) = (1 / n) * Sum _{ k=0..n - 1 } (- 1) ^ k * binomial(n,k) * binomial(4 * n - 3 * k,n - 1 - k) for n > 0. •

► [A048779] 1,3,14,77,462,2926,19228,129789,894102,6258714,44379972,3180564 66,2299792908,16755634044,122874649656,906200541213,6716545187814,5000094 7509282,373691291911476,2802684689336070,21086865757861860,1591099870820 48580,120370164140332040 ⋆ Coefficients of power series for (1 - (1 - 8 * x) ^ (1 / 4)) / 2. • a(n) = 2 ^ (n - 1) * 3 * 7 * 11 * ... * (4n - 5) / n! = 2 * a(n - 1) * (32 * a(n - 2) + a(n - 1)) / (18 * a(n - 2) - a(n - 1)). • a(n) = 8 ^ (n - 1) * bino mial(n - 5 / 4, - 1 / 4) / n. •

► [A369477] 1,3,14,77,464,2964,19717,135131,947549,6765642,49022225,3595457 50,2664127354,19913283809,149968276974,1136856855549,8668000962927,664284 74900907,511414514214628,3953420853213504,3067478355585276,238808419235 022293,1864869207177530320 ⋆ Expansion of (1 / x) * Series _ Reversion(x / ((1 + x) * (1 + x + x ^ 2) ^ 2)). • a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 2) } binomial(2 * n + 2,k) * binomial(3 * n - k + 3,n - 2 * k). •

► [A074538] 3,14,78,476,3042,19964,133338,901796,6155682,42307244,29224189 8,2026156916,14085431922,98109721724,684326604858,4778079120836,333855185 25762,233393453571404,1632228295438218,1141796867222556,798876337303012 02,559022701243584284 ⋆ a(n) = 2 ^ n + 5 ^ n + 7 ^ n. • a(n) = 14 * a(n - 1) - 59 * a(n - 2) + 70 * a(n - 3) for n > 2. - _ Wesley Ivan Hurt _ , Oct 06 2017 •

► [A364739] 1,1,3,14,78,477,3094,20905,145547,1036891,7522335,55382045,41274 0298,3107671807,23604165913,180641336755,1391555475647,10781886600707,839 68131035849,656931982467460,5160714860765430,40692065290732340,321937030 883130021 ⋆ G.f. satisfies A(x) = 1 + x * A(x) ^ 2 / (1 - x * A(x) ^ 4). • a(n) = (1 / n) * Sum _{ k=0..n - 1 } binomial(n,k) * binomial(2 * n + 2 * k,n - 1 - k) for n > 0. •

► [A366083] 1,3,14,78,478,3109,21063,146997,1049302,7624330,56198481,419155 136,3157356819,23984387314,183519131353,1413099475142,10941294442694,8513 2006090350,665294548097852,5219591907202092,41095469624286421,3245957837 90966343 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 - x) ^ 4 / (1 - x - x ^ 2)). • a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 2) } (- 1) ^ k * binom ial(n + 1,k) * binomial(4 * n - k + 2,n - 2 * k). •

► [A368938] 1,3,14,78,479,3129,21332,150057,1081118,7937589,59174752,446744 610,3408616155,26242751046,203615759472,1590550846398,12498584431503,9873 1454253945,783581338236326,6245066800130298,49961547869830135,4010761296 27216180,3229808459696023980 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 - x) ^ 2 * (1 - x + x ^ 2)). • a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 2) } (- 1) ^ k * binomial(n + k,k) * binomial(4 * n - k + 2,n - 2 * k). •

► [A277132] 1,3,14,78,508,3796,32048,301872,3139680,35746080,442258560,5909 028480,84802072320,1301090515200,21253339699200,368281038182400,67476211 63315200,1303389266715648 00,26473269002342400000,5640483224097792000 ⋆ T he first subdiagonal of triangle A196842. • a(n) + (- 2 * n - 1) * a(n - 1) + n ^ 2 * a(n - 2) = 0. •

► [A003169] 1,3,14,79,494,3294,22952,165127,1217270,9146746,69799476,539464 358,4214095612,33218794236,263908187100,2110912146295,16985386737830,1373 94914285538,1116622717709012,9113225693455362,74659999210200292 ⋆ Numbe r of 2 - line arrays; or number of P - graphs with 2n edges. • a(n) = (1 / n) * S um _{ i=0..n - 1 } binomial(n,i) * binomial(3 * n - i - 2,n - i - 1). - _ Vladeta J ovovic _ , Sep 13 2006 • a(n) = (1 / n) * Sum _{ k = 0..n - 1 } binomial(n,k + 1) * binomial(2 * n + k - 1,k) (Carlitz, equation 3.19). •

► [A086621] 1,3,14,79,504,3514,26172,204831,1664696,13930840,119312544,1041 227642,9228614836,82867255956,752405060536,6897376441167,63760133568096,5 93763928313128,5565678569009328,52475976165495960,4973766573833745 60,473 6680863568248480,4530417489688935744 0 ⋆ Main diagonal of square table A086 620 of coefficients, T(n,k), of x ^ n * y ^ k in f(x,y) that satisfies f(x,y) = 1 / (1 - x - y) + xy * f(x,y) ^ 2. • a(n) = Sum _{ j=0..n } binomial(n,j) * binomial(2 * n - j,n) * binomial(2 * j,j) / (j + 1). - _ Andrew Howroyd _ , Apr 11 2021 •

► [A353079] 1,3,14,79,521,3876,31935,287225,2791122,29066589,322292257,3784 650052,46857941291,609360372095,8296220760974,117914344818807,1745211622 467633,26838798853062516,428009369349905497,7065576909286562195,12054506 7517808693300,212239393189133823732 5,385123447464205919057 71 ⋆ Exponent ial transform of odd primes. • a(0) = 1; a(n) = Sum _{ k=1..n } binomial(n - 1,k - 1) * prime(k + 1) * a(n - k). •

► [A121873] 1,3,14,80,510,3479,24848,183465,1389090,10726452,84150858,66882 5768,5373971036,43580383095,356234802952,2932097981824,24279982680870,202 134854855973,1690839212784240,14204198452365180,11978470791364459 8,10136 75671656956976 ⋆ Number of non - crossing plants in the (n + 1) - sided regula r polygon (contains non - crossing trees). • a(n) = sum(j=0..n - 1, (sum(i=0..n - j - 1, binomial(i + n - 1,n - 1) * binomial(i + n,n - j - i - 1))) * binomial(n,j)) / n, n>0, a(0)=0. - _ Vladimir Kruchinin _ , Oct 12 2011 •

► [A355291] 1,3,14,81,551,4266,36803,348543,3583484,39652659,468970211,5894 584812,78366374813,1097537989671,16136598952718,248309032411485,39884684 87017379,667159703265611 70,11597127307633639 91,20909709414253764819,3903 7480622307114808 4,753492938373682673600 7 ⋆ Expansion of e.g.f. exp(exp(x) * (exp(x) + 1) - 2). • a(n) = Sum _{ k=0..n } binomial(n,k) * 2 ^ k * Bell(k) *

Bell(n - k). ● a(0) = 1; a(n) = Sum _{ k=1..n } (1 + 2 ^ k) * binomial(n - 1,k - 1) * a(n - k). - _ Seiichi Manyama _ , Jul 01 2022 ●

▶ [A367972] 1,3,14,82,568,4504,40016,392368,4198784,48616320,604921600,8043848960,113785080832,1705669278720,27007064393728,450422751508480,7893590619881472,145052304752934912,2789743827826573312,56063169473909817344 ★ Expansion of e.g.f. exp(exp(2 * x) - 1) / (1 - x). ● a(0) = 1; a(n) = Sum _{ k=1..n } ((k - 1)! + 2 ^ k) * binomial(n - 1,k - 1) * a(n - k). ● a(n) = n! * Sum _{ k=0..n } 2 ^ k * Bell(k) / k!, where Bell() is A000110. ●

▶ [A215661] 1,3,14,83,554,3966,29756,230915,1838162,14926346,123157572,1029590062,8702171620,74238432924,638408311800,5528154378467,48161687414498,421848099386322,3712675503776372,32815429463428794,291169073934720940,2592569269501484836 ★ G.f. satisfies: A(x) = (1 + 2 * x * A(x)) * (1 + x * A(x) ^ 2). ● a(n) = [x ^ n] ((1 + 2 * x) / (1 - x - 2 * x ^ 2)) ^ (n + 1) / (n + 1). ●

▶ [A121687] 1,1,3,14,83,574,4432,37244,335153,3194510,32001596,335019839,3649450270,41227610316,481724831132,5809341783543,72177761136925,922539273876404,12115001489115910,163284755614174305 ★ G.f. satisfies A(x) = 1 + x * A(x) * A(x * A(x)) ^ 2. ● a(n,m) = Sum _{ k=0..n } m * C(n + m,k) / (n + m) * a(n - k,2k). - _ Paul D. Hanna _ , Dec 15 2010 ●

▶ [A005700] 1,1,3,14,84,594,4719,40898,379236,3711916,37975756,403127256,4415203280,49671036900,571947380775,6721316278650,80419959684900,977737404590100,12058761323277900,150656212896017400,1904342169333848400,24328661192286773400,313839729380499376860 ★ a(n) = C(n) * C(n + 2) - C(n + 1) ^ 2 where C() are the Catalan numbers A000108. ● a(n) = 6 * (2 * n)! * (2 * n + 2)! / (n! * (n + 1)! * (n + 2)! * (n + 3)!) (Mihailovs). ● a(n) = Det[Table[binomial[i + 1, j - i + 2], { i, 1, n } , { j, 1, n }]]. - _ David Callan _ , Jul 20 2005 ● a(n) = b(n)b(n + 1) / 6 where b(n) is the superballot number A007054. - _ David Callan _ , Feb 01 2007 ● a(n) = 12 * 4 ^ n * (2 * n - 1)!! * (2 * n + 1)!! / ((n + 2)! * (n + 3)!). ● a(n) = (12 * (2 * n - 1) / ((n + 1)(n + 2)(n + 3))) * Catalan(n - 1) * Catalan(n + 1) for n >= 1. ● a(n) = Product _{ 1 <= i <= j <= n - 1 } (i + j + 4) / (i + j). ●

▶ [A088717] 1,1,3,14,84,596,4785,42349,406287,4176971,45640572,526788153,6392402793,81247489335,1078331283648,14907041720241,214187010762831,3192620516380376,49287883925072010,786925082232918304,12976244331714379149,220728563512663520510 ★ G.f. satisfies: A(x) = 1 + x * A(x) ^ 2 * A(x * A(x) ^ 2). ● a(n) = coefficient of x ^ n in (1 + x * A(x)) ^ (2 * n + 1) / (2 * n + 1) where A(x) = Sum _{ n=0 } a(n) * x ^ n. ● a(n,m) = Sum _{ k=0..n } m * C(2n + m,k) / (2n + m) * a(n - k,k). [_ Paul D. Hanna _ , Dec 16 2010] ●

▶ [A088716] 1,1,3,14,85,621,5236,49680,521721,5994155,74701055,1003125282,14437634276,221727608284,3619710743580,62605324014816,1143782167355649,22014467470369143,445296254367273457,9444925598142843970 ★ G.f. satisfies: A(x) = 1 + x * A(x) * d / dx[x * A(x)] = 1 + x * A(x) ^ 2 + x ^ 2 * A(x) * A'(x). ● a(n) = Sum _{ k=1..n } k * a(k - 1) * a(n - k) for n>=1 with a(0)=1. ●

▶ [A317060] 1,1,3,14,85,642,5782,60484,720495,9627210,142583430,2318126196,41042117558,786002475244,16189215818220,356847596226840,8381418010559225,208967274455769810,5511890008010697306 ★ a(n) is the number of time - dependent assembly trees satisfying the edge gluing rule for a cycle on n vertices. ● a(n) = Sum _{ j=1..floor(n / 2) } (binomial(n - j, n - 2j) + binomial(n - j - 1,n - 2j)) * a(n - j), a(1)=a(2)=1. ●

▶ [A074520] 3,14,86,560,3698,24584,164306,1103480,7444418,50431304,342941426,2340123800,16018069538,109949704424,756587236946,5217746494520,36054040477058,249557173431944,1729973554578866,12008254925383640 ★ 1 ^ n + 6 ^ n + 7 ^ n. ● a(n) = 13 * a(n - 1) - 42 * a(n - 2) + 30, n>1. [_ Gary Detlefs _ , Jun 21 2010] ●

▶ [A127715] 1,1,3,14,86,645,5662,56632,633545,7820115,105401961,1538517351,24157841308,405778641302,7256711524298,137607733327779,2757147167433326,58188668578629283,1289965088962987961 ★ Rightmost border of triangle A127714: a(n) = A127714(n, (n + 1) * (n + 2) / 2 - 1). ● a(n) = upper left term of M ^ n, M is an infinite square production matrix in which nonzero terms = A033184 with the first "1" deleted, as follows: M = ●

▶ [A367973] 1,3,14,89,727,7322,88067,1233815,19745180,355434387,7108803715,156394360300,3753468860797,97590218025159,2732526295603774,81975790251071765,2623225298514438627,89189660232355783122 ★ Expansion of e.g.f. exp(exp(x) - 1) / (1 - 2 * x). ● a(0) = 1; a(n) = Sum _{ k=1..n } (2 ^ k * (k - 1)! + 1) * binomial(n - 1,k - 1) * a(n - k). ● a(n) = n! * Sum _{ k=0..n } 2 ^ (n - k) * Bell(k) / k!, where Bell() is A000110. ●

▶ [A081005] 3,14,90,611,4182,28658,196419,1346270,9227466,63245987,433494438,2971215074,20365011075,139583862446,956722026042,6557470319843,44945570212854,308061521170130,2111485077978051,14472334024676222,99194853094755498,679891637638612259 ★ a(n) = Fibonacci(4n + 3) + 1, or Fibonacci(2n + 1) * Lucas(2n + 2). ● a(n) = 8 * a(n - 1) - 8 * a(n - 2) + a(n - 3). ● a(n) = 1 + [(7 / 2) - (3 / 2) * sqrt(5)] ^ n + [(7 / 2) + (3 / 2) * sqrt(5)] ^ n + (2 / 5) * sqrt(5) *{ [(7 / 2) + (3 / 2) * sqrt(5)] ^ n - [(7 / 2) - (3 / 2) * sqrt(5)] ^ n } , with n >=0. - _ Paolo P. Lava _ , Dec 01 2008 ●

▶ [A074518] 3,14,90,638,4722,35894,277770,2175278,17167842,136170854,1083507450,8638762718,68963617362,550976517014,4404150026730,35214889666958,281627564601282,2252562753138374,18018213206747610,144134261562183998 ★ a(n) = 1 ^ n + 5 ^ n + 8 ^ n. ● a(n) = 13 * a(n - 1) - 40 * a(n - 2) + 28 with a(0)=3, a(1)=14. - _ Vincenzo Librandi _ , Jul 21 2010 ● a(0)=3, a(1)=14, a(2)=90, a(n) = 14 * a(n - 1) - 53 * a(n - 2) + 40 * a(n - 3). - _ Harvey P. Dale _ , Sep 24 2013 ●

▶ [A364629] 1,3,14,94,735,6239,55888,520028,4977321,48689260,484623552,4892304686,49971163021,515496741918,5363023614620,56204877993184,592811175777029,6287909183751105,67029933733468729,717749621979800340,7716543390041275964 ★ G.f. satisfies A(x) = (1 + x * A(x) ^ 3) / (1 - x) ^ 2. ● a(n) = Sum _{ k=0..n } binomial(n + 5 * k + 1,6 * k + 1) * binomial(3 * k,k) / (2 * k + 1). ●

▶ [A233083] 3,14,95,662,4631,32414,226895,1588262,11117831,77824814,544773695,3813415862,26693911031,186857377214,1308001640495,9156011483462,64092080384231,448644562689614,3140511938827295,21983583571791062 ★ Number of 2 X n 0..3 arrays with no element x(i,j) adjacent to value 3 - x(i,j) horizontally or antidiagonally, top left element zero, and 1 appearing before 2 in row major order. ● a(n) = (49 + 27 * 7 ^ n) / 98 for n>1. ●

▶ [A113181] 1,3,14,95,859,9130,106039,1297295,16428300,213388961,2827645453,38086408002,520062618300,7184570776213,100256059855188,1411319038583375,20021022607979629,285965560309310708,4109498933510809561,59380204746202961953,862266486434574492404 ★ Number of unrooted two - vertex (or, dually, two - face) regular planar maps of even valency 2n considered up to orientation n - preserving homeomorphism. ● a(n) = binomial(2n,n) / 4 + 1 / (4n) Sum _{ k|2n } phi(k) binomial((2n / k) - 1),floor(n / k)) ^ 2 where phi(k) is the Euler function A000010. ●

▶ [A074515] 3,14,98,794,6818,60074,535538,4799354,43112258,387682634,3487832978,31385253914,282446313698,2541932937194,22877060890418,205892205836474,1853024483819138,16677198879535754,150094704016475858 ★ a(n) = 1 ^ n + 4 ^ n + 9 ^ n. ● a(n) = 13 * a(n - 1) - 36 * a(n - 2) + 24 with a(0)=3, a(1)=14. - _ Vincenzo Librandi _ , Jul 21 2010 ●

▶ [A076015] 1,3,14,100,979,12201,184820,3297456,67731333,1574304985,40851766526,1170684360924,36720042483591,1251308658130545,46034015337733480,1818399978159990976,76762718946972480009 ★ Sum of the (n - 1) - th powers of the first n integers. ● a(n) = Sum _{ m=1..n } m ^ (n - 1), n>=1. ●

▶ [A126933] 1,3,14,132,691,1908,16579,47352,414301,1183713,5474669,27151397,135646011,678174568,6442602909,18480090517,85533990571,424236721848,4026815626549,11550150977337,53458791308981,265147974756053,1324666882885839,6622797918981982,62916043734881616 ★ Quotients arising from sequence A053312. ● a(n) < 0.3 * 5 ^ n. - _ David A. Corneth _ , Jun 11 2020 ●

▶ [A073550] 3,14,134,1334,13334,133334,1333334,13333334,133333334,1333333334,13333333334,133333333334,1333333333334,13333333333334,133333333333334,1333333333333334,13333333333333334,133333333333333334 ★ Number of Fibonacci numbers F(k), k <= 10 ^ n, which end in 1. ● a(n) = ceiling((10 ^ n - 1) / 60) + ceiling((10 ^ n - 2) / 60) + ceiling((10 ^ n - 8) / 60) + ceiling((10 ^ n - 19) / 60) + ceiling((10 ^ n - 22) / 60) + ceiling((10 ^ n - 28) / 60) + ceiling((10 ^ n - 41) / 60) + ceiling((10 ^ n - 59) / 60). ● a(n) = ceiling(40 / 3 * 10 ^ (n - 1)) for n>1. - _ Benoit Cloitre _ , Aug 27 2002; [Edited by _ Felix Fröhlich _ , Jun 08 2019] ●

▶ [A090897] 3,14,159,2653,58979,323846,2643383,27950288,419716939,9375105820,97494459230,781640628620,8998628034825,34211706798214,808651328230664,7093844609550582,23172535940812848,111745028410270193,852110555964462294,9549303819644288109 7 ★ Next n digits of Pi. ● a(n) = floor(Pi * 10 ^ (n * (n + 1) / 2 - 1)) mod (10 ^ n). - _ Carl R. White _ , Aug 13 2010 ●

▶ [A133227] 1,3,15,15,105,105 ★ The number of ways of selecting an ordered pair of permutations { P _ 1,P _ 2 } out of S= { 1,2..,n } (i)each of length floor function { n / 2 } (ii)each element of P _ 1 is less than corresponding element of P _ 2 (iii) There are no common elements between P _ 1 and P _ 2. ● a(2n + 2)= (1 + 2n) * a(2n) a(2n + 1)= (1 + 2n) * a(2n) with a(2)=1,a(3)=3 ●

▶ [A120467] 1,3,15,15,165,2145,2145,40755,937365,937365,29058315,1075157655,1075157655,46231779165,2172893620755,2172893620755,128200723624545,7820244141097245,7820244141097245,555237334017904395 ★ a(n) = Product _{ i=0..n } prime(i + 1) ^ (Fibonacci(i) mod 2). ● a(n) = Product _{ i=0..n } prime(i + 1) ^ (Fibonacci(i) mod 2). ●

▶ [A014493] 1,3,15,21,45,55,91,105,153,171,231,253,325,351,435,465,561,595,703,741,861,903,1035,1081,1225 ★ Odd triangular numbers. ● a(n) = (2 * n - 1) * (2 * n - 1 - (- 1) ^ n) / 2. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). (End) ●

▶ [A057780] 0,3,15,24,48,63,99,120,168,195,255,288,360,399,483,528,624,675,783,840,960,1023,1155,1224,1368 ★ Multiples of 3 that are one less than a perfect square. ● a(n) = 3 / 8 * (6 * n ^ 2 - 2 * ((- 1) ^ n + 3) * n + (- 1) ^ n - 1). ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n>5. ●

▶ [A017557] 3,15,27,39,51,63,75,87,99,111,123,135,147,159,171,183,195,207,219,231,243,255,267,279,291 ★ a(n) = 12 * n + 3. ● a(n) = 2 * a(n - 1) - a(n - 2). - _ Vincenzo Librandi _ , Jun 07 2011 ●

▶ [A347536] 3,15,27,48,75,108,147,192,243,300,363,432,507,588,675,768,867,972,1083,1200,1323,1452,1587,1728,1875 ★ Number of minimum dominating sets in the complete tripartite graph K _ n,n,n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n > 5. (End) ●

▶ [A308385] 1,3,15,29,61,87,139,177,249,299,391,453,565,639,771,857,1009,1107,1279,1389,1581,1703,1915,2049,2281 ★ a(n) is the last square visited by fers moves on a spirally numbered (2n - 1) X (2n - 1) board, moving to the lowest available unvisited square at each step. ● a(n) = (4n ^ 2 - 9n + 6) * [n is odd] + (4n ^ 2 - 11n + 9) * [n is even] where [] is the Iverson bracket. ● a(n) = (3 / 2) * (5 + (- 1) ^ n) - (10 + (- 1) ^ n) * n + 4 * n ^ 2. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n>4. ●

▶ [A290325] 3,15,30,51,78,111,150,195,246,303,366,435,510,591,678,771,870,975,1086,1203,1326,1455,1590,1731,1878 ★ Number of minimal dominating sets (and maximal irredundant sets) in the complete tripartite graph K _{ n,n,n } . ● a(n) = 3 * n ^ 2 + 3 for n > 1. - _ Andrew Howroyd _ , Jul 27 2017 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n > 4. (End) ●

▶ [A152813] 3,15,31,51,75,103,135,171,211,255,303,355,411,471,535,603,675,751,831,915,1003,1095,1191,1291,1395 ★ a(n) = 2 * n ^ 2 + 10 * n + 3. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Feb 22 2012 ● a(n - 1) = 2 * n ^ 2 + 2 * n - 9. - _ Avi Friedlich _ , Mar 27 2015 ●

▶ [A211441] 0,3,15,33,57,87,123,165,213,267,327,393,465,543,627,717,813,915,1023,1137,1257,1383,1515,1653,1797 ★ Number of ordered triples (w,x,y) with all terms in {- n,...,0,...,n } and w + x + y = 2. ● a(n) = 3 * (n ^ 2 + n - 1) for n > 0. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n > 3. ● a(n) + a(n + 1) + a(n + 2) + a(n + 3) = 3 * (2 * n + 4) ^ 2 = 12 * (n + 2) ^ 2 for n > 0. ●

▶ [A324303] 1,3,15,33,323,1753,8991,58495,268541,1462761,8097455,13837475,251595971,1409934009,9674895101,46242140669,252055236611,1426069096367,8079317057871,45129781821155,260949012214457,1482376214228889,8443414161166175,28159474726319741,274738209468977925 ★ a(n) = [x ^ (n * (n + 2))] Sum _{ m>=0 } x ^ m * (x ^ (m + 1) + i) ^ m / (1 + i * x ^ (m + 1)) ^ (m + 1), for n >= 0. ● a(n) = [x ^ (n * (n + 2))] Sum _{ n>=0 } x ^ n * (x ^ (n + 1) + i) ^

n / (1 + i * x ^ (n + 1)) ^ (n + 1). ● a(n) = [x ^ (n * (n + 2))] Sum _{ n>=0 } x ^ n * (x ^ (n + 1) - i) ^ n / (1 - i * x ^ (n + 1)) ^ (n + 1). ● a(n) = [x ^ (n * (n + 2))] Sum _{ n>=0 } (i * x) ^ n * (1 - i * x ^ (n + 1)) ^ (2 * n + 1) / (1 + x ^ (2 * n + 2)) ^ (n + 1). ● a(n) = [x ^ (n * (n + 2))] Sum _{ n>=0 } (- i * x) ^ n * (1 + i * x ^ (n + 1)) ^ (2 * n + 1) / (1 + x ^ (2 * n + 2)) ^ (n + 1). ●

► [A000466] 1,3,15,35,63,99,143,195,255,323,399,483,575,675,783,899,1023,1155,1295,1443,1599,1763,1935,2115,2303 ⋆ a(n) = 4 * n ^ 2 - 1. ● a(n) = a(n - 1) + 8 * n - 4 for n > 0, a(0)= - 1. - _ Vincenzo Librandi _ , Dec 17 2010 ● a(n) = 3 * Pochhammer(5 / 2,n - 1) / Pochhammer(1 / 2,n - 1). Hence, the e.g.f. for a(n + 1), i.e., dropping the first term, is 3 * 1F1(5 / 2;1 / 2;x), with 1F1 being the confluent hypergeometric function (also known as Kummer's). - _ Stanislav Sykora _ , May 26 2016 ●

► [A001803] 1,3,15,35,315,693,3003,6435,109395,230945,969969,2028117,16900975,35102025,145422675,300540195,9917826435,20419054425,83945001525,172308161025,1412926920405,2893136075115,11835556670925 ⋆ Numerators in expansion of (1 - x) ^ (- 3 / 2). ● a(n) is the numerator of (2 * n + 1) * binomial(2 * n, n) / (4 ^ n). ●

► [A161738] 1,1,3,15,35,315,693,9009,19305,328185,692835,14549535,30421755,760543875,1579591125,45808142625,94670161425,3124115327025,6432002143875,237984079323375,488493636505875,20028239096740875 ⋆ Sequence related to the column sums of the BG2 matrix ● a(n) = product((2 * n - 3 - 2 * k), k=0..floor(n / 2 - 1)). ●

► [A062741] 0,3,15,36,66,105,153,210,276,351,435,528,630,741,861,990,1128,1275,1431,1596,1770,1953,2145,2346,2556 ⋆ 3 times pentagonal numbers: 3 * n * (3 * n - 1) / 2. ● a(n) = binomial(3 * n, 2). - _ Zerinvary Lajos _ , Jan 02 2007 ● a(n) = 9 * n + a(n - 1) - 6, with n > 0, a(0)=0. - _ Vincenzo Librandi _ , Aug 07 2010 ●

► [A185541] 1,3,15,36,66,105,171,253,378,496,666,861,1081,1378,1711,2080,2485,2926,3403,4005,4656,5356,6105,6903,7875 ⋆ a(n) = m * (m + 1) / 2, where m = floor(n ^ (3 / 2)). ● a(n) = (1 / 2) * floor(n ^ 3 / 2) * floor(1 + n ^ 3 / 2). ●

► [A117561] 3,15,38,73,124,194,286,403,548,724,934,1181,1468,1798,2174,2599,3076,3608,4198,4849,5564,6346,7198,8123,9124 ⋆ a(n) = floor(n * (n ^ 3 - n - 3) / (2 * (n - 1))). ● a(n) = floor(n * (n ^ 3 - n - 3) / (2 * (n - 1))). ●

► [A014309] 1,3,15,40,84,154,258,405,605,869,1209,1638,2170,2820,3604,4539,5643,6935,8435,10164,12144,14398,16950,19825,23049 ⋆ a(n) = (n + 2) * (n + 1) * (n ^ 2 + 7 * n - 12) / 24. ● a(n) = binomial(n + 2,4) + 2 * binomial(n + 2,3) - binomial(n + 2,2). - _ Étienne Tétreault _ , Sep 02 2020 ●

► [A059270] 0,3,15,42,90,165,273,420,612,855,1155,1518,1950,2457,3045,3720,4488,5355,6327,7410,8610,9933,11385,12972,14700 ⋆ a(n) is both the sum of n + 1 consecutive integers and the sum of the n immediately higher consecutive integers. ● a(n) = n * (n + 1) * (2 * n + 1) / 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + 6 = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Ant King _ , Jan 03 2011 ●

► [A219085] 0,3,15,42,91,166,274,421,614,857,1157,1520,1953,2460,3048,3723,4492,5359,6331,7414,8615,9938,11390,12977,14706 ⋆ a(n) = floor((n + 1 / 2) ^ 3). ● a(n) = floor((n + 1 / 2) ^ 3). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 4) - 3 * a(n - 5) + 3 * a(n - 6) - a(n - 7). ● a(n) = (n + 1 / 2) ^ 3 + (2 * i ^ (n * (n - 1)) + (- 1) ^ n - 4) / 8, where i=sqrt(- 1). - _ Bruno Berselli _ , Dec 21 2012 ●

► [A101165] 0,3,15,43,94,175,293,455,668,939,1275,1683,2170,2743,3409,4175,5048,6035,7143,8379,9750,11263,12925,14743,16724 ⋆ a(n) = (7 * n ^ 3 + 6 * n ^ 2 + 5 * n) / 6. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ●

► [A127407] 3,15,44,100,195,343,560,864,1275,1815,2508,3380,4459,5775,7360,9248,11475,14079,17100,20580,24563,29095,34224,40000,46475 ⋆ Negative value of coefficient of x ^ (n - 2) in the characteristic polynomial of a certain n X n integer circulant matrix. ● a(n + 1) = n * (n + 1) ^ 2 * (n + 8) / (2 * 3!) for n>=1. ● a(n) = ((n - 1) ^ 4 + 10 * (n - 1) ^ 3 + 17 * (n - 1) ^ 2 + 8 * (n - 1)) / (2 * 3!) for n>=2. ● a(n) = (n ^ 2 * (- 7 + 6 * n + n ^ 2)) / 12. G.f.: x ^ 2 * (3 - x ^ 2) / (1 - x) ^ 5. [_ Colin Barker _ , May 13 2012] ●

► [A050534] 0,0,0,3,15,45,105,210,378,630,990,1485,2145,3003,4095,5460,7140,9180,11628,14535,17955,21945,26565,31878,37950 ⋆ Tritriangular numbers: a(n) = binomial(binomial(n,2),2) = n * (n + 1) * (n - 1) * (n - 2) / 8. ● a(n + 1) = T(T(n)) - T(n); a(n + 2) = T(T(n) + n) where T is A000217. - _ Jon Perry _ , Jun 11 2003 ● a(n + 1) = T(n) ^ 2 - T(T(n)) where T is A000217. - _ Jon Perry _ , Jul 23 2003 ● a(n) = T(T(n - 1) - 1) where T is A000217. - _ Jon E. Schoenfield _ , Dec 14 2014 ● a(n) = 3 * C(n, 4) + 3 * C(n, 3), for n>3. ● a(n) = (1 / 2) * Sum _{ k=1..n } k * (k - 1) * (k - 2). ● a(n) = C(n - 1,2) * C(n + 1,2) / 2, n>2. (End) ●

► [A048099] 0,0,0,3,15,45,105,315,1323,5355,18315,63855,272415,1264263,5409495,22302735,101343375,507711375,2495918223,11798364735,58074029055,309240315615,1670570920095,8792390355903,46886941456575 ⋆ Number of degree - n even permutations of order exactly 2. ● a(n) = Sum _{ i=1..floor(n / 4) } binomial(n,4i)(4i)! / (2 ^ (2i)(2i)!). - _ Luis Manuel Rivera Martínez _ , May 16 2018 ●

► [A030505] 3,15,45,106,213,384,643,1014,1526,2210,3100,4236,5658,7411,9541,12101,15144,18727,22910,27758,33337,39717,46971,55175,64410 ⋆ Graham - Sloane - type lower bound on the size of a ternary (n,3,5) constant - weight code. ● a(n) = ceiling(binomial(n, w) * 2 ^ w / (2 * n + 1)) with w=5. ●

► [A005560] 1,3,15,45,189,588,2352,7560,29700,98010,382239,1288287,5010005,17177160,66745536,232092432,901995588,3173688180,12342120700,43861998180,170724392916,611947174608,2384209771200,8609646396000,33577620944400 ⋆ Number of walks on square lattice. ● a(n) = C(n + 3, ceiling(n / 2)) * C(n + 2, floor(n / 2)) - C(n + 3, ceiling((n - 1) / 2)) * C(n + 2, floor((n - 1) / 2)). - _ Paul D. Hanna _ , Apr 16 2004 ●

► [A100747] 1,3,15,45,225,675,3375,10125,50625,151875,759375,2278125,11390625,34171875,170859375,512578125,2562890625,7688671875,38443359375,115330078125,576650390625,1729951171875,8649755859375,25949267578125 ⋆ A modular recurrence. ● a(n) = b(2 * n) where b(0)=1, b(1)=0, b(n) = (5 - 2 * (n / 2 mod 2))b(n - 2). ● a(2 * n) = 15 ^ n, a(2 * n + 1) = 3 * 15 ^ n. - _ Ralf Stephan _ , May 16 2007 ●

► [A178669] 0,3,15,45,315,3150,28350,274050,3014550,36330525,472296825,6609317715,99139765725,1586293008300,26966981141100,485404420000500,9222683980009500,184453709062998375 ⋆ The number of permutations of [n] with 2 cycles of length 2 ● a(n)=n! * sum _{ j=k.. [n / 2] } (- 1) ^ j / ((j - k)! * 2 ^ j * k !). E.g.f. = exp(- z ^ 2 / 2) * z ^ (2 * k) / ((1 - z) * 2 ^ k * k!), where k is the number of cycles of length 2. ●

► [A331505] 1,1,3,15,45,455,1330,20475,58905,1221759,3478761,90858768,256851595,8093990190,22760723700,840261910995,2353351951665,99615373765775,278110855548955,13278694407181203,36976937738226486 ⋆ Number of labeled graphs with n nodes and floor(n / 2) edges. ● a(n) = C(C(n,2), floor(n / 2)). ●

► [A163383] 1,3,15,47,127,319,767,1791,4095,9215,20479,45055,98303,212991,458751,983039,2097151,4456447,9437183,19922943,41943039,88080383,184549375,385875967,805306367 ⋆ a(n) = (n - 1) * 2 ^ n - 1. ● a(n) = 5 * a(n - 1) - 8 * a(n - 2) + 4 * a(n - 3). ●

► [A061316] 0,3,15,48,120,255,483,840,1368,2115,3135,4488,6240,8463,11235,14640,18768,23715,29583,36480,44520,53823,64515,76728,90600 ⋆ a(n) = n * (n + 1) * (n ^ 2 + n + 4) / 4. ● a(n) = n * (n + 1) * (n ^ 2 + n + 4) / 4. ● a(0)=0, a(1)=3, a(2)=15, a(3)=48, a(4)=120, a(n) = 5a(n - 1) - 10a(n - 2) + 10a(n - 3) - 5a(n - 4) + a(n - 5). ●

► [A124161] 0,0,3,15,48,121,261,504,896,1494,2367,3597,5280,7527,10465,14238,19008,24956,32283,41211,51984,64869,80157,98164,119232 ⋆ a(n) = n * (n - 1) * (n ^ 3 + 21 * n ^ 2 - 4 * n + 96) / 120. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>5. - _ Colin Barker _ , Jan 16 2017 ●

► [A248122] 0,0,3,15,51,165,507,1551,4683,14127,42459,127599,383019,1149693,3449715,10351023,31054947,93170397,279516747,838566831,2515717083,7547200797,22641651939,67925104239,203775461139 ⋆ Number of strings of length n over a three - letter alphabet that begin with a nontrivial palindrome. ● a(0) = 0; a(1) = 0; a(n) = 3 * a(n - 1) + 3 ^ ceiling(n / 2) - a(ceiling(n / 2)), for n >= 2. ●

► [A282464] 0,1,3,15,51,176,560,1743,5271,15675,45925,133056,381888,1087645,3077451,8658951,24245655,67602608,187789616,519924075,1435228575,3951341811,10852291273,29740435200,81340229376 ⋆ a(n) = Sum _{ i=0..n } i * Fibonacci(i) ^ 2. ● a(n) = 5 * a(n - 1) - 4 * a(n - 2) - 10 * a(n - 3) + 10 * a(n - 4) + 4 * a(n - 5) - 5 * a(n - 6) + a(n - 7). ● a(n) = ((n - 1) * Fibonacci(n) + n * Fibonacci(n - 1)) * Fibonacci(n) + (1 - (- 1) ^ n) / 2. ●

► [A284663] 3,15,51,179,663,2439,8935,32771,120219,440975,1617531,5933267,21763823,79831879,292831311,1074134531,3940032883,14452434639,53012975555,194456895859,713287340551,2616409296967,9597250953527,35203676264195,129130605057163 ⋆ Number of dominating sets in the Moebius ladder M _ n. ● a(n) = 3 * a(n - 1) + a(n - 2) + 5 * a(n - 3) + a(n - 4) + a(n - 5) - a(n - 6) - a(n - 7) for n>7. ●

► [A192742] 3,15,51,191,708,2631,9775,36319,134943,501380,1862875,6921503,25716811,95550687,355018116,1319068095,4900991135,18209608887,67657713855,251381908996,934008268531,3470303209839,12893894812259,47907203888767,177998984624708 ⋆ Number of matchings in the n - antiprism graph. ● a(n) = 3 * a(n - 1) + 3 * a(n - 2) - a(n - 3) - a(n - 4). ●

► [A290764] 3,15,54,174,537,1629,4908,14748,44271,132843,398562,1195722,3587205,10761657,32285016,96855096,290565339,871696071,2615088270,7845264870,23535794673,70607384085,211822152324,635466457044,1906399371207 ⋆ Number of (non - null) connected induced subgraphs in the 2 X n king graph. ● a(n) = 3 / 4 * (3 ^ (n + 1) - 2 * n - 3). ● a(n) = 5 * a(n - 1) - 7 * a(n - 2) + 3 * a(n - 3). ●

► [A286986] 3,15,54,175,543,1642,4875,14271,41310,118487,337263,953810,2682579,7508655,20929158,58121407,160877055,443993146,1222110555,3355879647,9195143598,25144855655,68635721679,187035899810,508896450723 ⋆ Number of connected dominating sets in the n - antiprism graph. ● a(n) = 6 * a(n - 1) - 11 * a(n - 2) + 6 * a(n - 3) - a(n - 4). ●

► [A085480] 0,3,15,54,207,783,2970,11259,42687,161838,613575,2326239,8819442,33437043,126769455,480619494,1822166847,6908359023,26191577610,99299809899,376474162527,1427321917278,5411388239415,20516130470079 ⋆ Expansion of 3 * x * (1 + 2 * x) / (1 - 3 * x - 3 * x ^ 2). ● a(n) = p ^ n + q ^ n, where p = (3 + sqrt(21)) / 2, q = (3 - sqrt 21) / 2. ● a(n) = 3 * a(n - 1) + 3 * a(n - 2), a(1)=3, a(2)=15. - _ Philippe Deléham _ , Nov 19 2008 ●

► [A099581] 0,0,1,3,15,54,216,810,3105,11745,44631,169128,641520,2431944,9221121,34959195,132543135,502506990,1905156936,7222991778,27384465825,103822372809,393620574951,1492328843280,5657848431840 ⋆ a(n) = Sum _{ k=0..floor(n / 2) } binomial(n - k,k - 1) * 3 ^ (n - k - 1). ● a(n) = 3 * a(n - 1) + 6 * a(n - 2) - 9 * a(n - 3) - 9 * a(n - 4). ● a(n) = (2 * (- i * sqrt(3)) ^ (n - 1) * ChebyshevU(n - 1, i * sqrt(3) / 2) - (1 - (- 1) ^ n) * 3 ^ ((n - 1) / 2)) / 6. ●

► [A286185] 3,15,55,173,511,1451,4019,10937,29371,78055,205679,538149,1399607,3621315,9327723,23931633,61186163,155949119,396369831,1004904733,2541896559,6416348251,16165611043,40657256617,102090514731 ⋆ Number of connected induced (non - null) subgraphs of the Möbius ladder graph with 2n nodes. ● a(n) = 6 * a(n - 1) - 11 * a(n - 2) + 4 * a(n - 3) + 5 * a(n - 4) - 2 * a(n - 5) - a(n - 6), for n>6 (conjectured). ● a(n) = 1 / 4 * ((1 - sqrt(2)) ^ n * (4 - 3 * sqrt(2) * n) + (1 + sqrt(2)) ^ n * (4 + 3 * sqrt(2) * n)) - 1 - n (conjectured). - _ Eric W. Weisstein _ , May 08 2017 ●

► [A015249] 1,3,15,55,231,903,3655,14535,58311,232903,932295,3727815,14913991,59650503,238612935,954429895,3817763271,15270965703,61084037575,244335800775,977343902151,3909374210503,15637499638215 ⋆ Gaussian binomial coefficient [n,2] for q = - 2. ● a(n) = 5 * a(n - 1) - 4 * a(n - 2) + (- 1) ^ n * 2 ^ (n - 2), n >= 4. - _ Vincenzo Librandi _ , Mar 20 2011 ● a(n) = 3 * a(n - 1) + 6 * a(n - 2) - 8 * a(n - 3), n >= 3. - _ Vincenzo Librandi _ , Mar 20 2011 ● a(n) = (1 / 18) * (4 ^ n - 2 + (- 1) ^ n * 2 ^ n). - _ R. J. Mathar _ , Mar 21 2011 ●

► [A084152] 0,0,1,3,15,55,231,903,3655,14535,58311,232903,932295,3727815,14913991,59650503,238612935,954429895,3817763271,15270965703,61084037575,244335800775,977343902151,3909374210503,15637499638215 ⋆ Exponential self - convolution of Jacobsthal numbers (divided by 2). ● a(n) = (4 ^ n - 2 + (- 2) ^ n) / 18. ● a(n) = 3 * a(n - 1) + 6 * a(n - 2) - 8 * a(n - 3). ● a(n) = floor(2 ^ n / 3)ceiling(2 ^ n / 3) / 2. - _ Paul Barry _ , Apr 28 2004 ●

► [A084175] 1,1,3,15,55,231,903,3655,14535,58311,232903,932295,3727815,14913991,59650503,238612935,954429895,3817763271,15270965703,61084037575,244335800775,977343902151,3909374210503,15637499638215,62549992960455 ★ Jacobs thal oblong numbers. • a(n) = (2 * 4 ^ n - (- 2) ^ n - 1) / 9; • a(n) = 3 * a(n - 1) + 6 * a(n - 2) - 8 * a(n - 3), a(0)=0, a(1)=1, a(2)=3. • a(n) = round(2 ^ n / 3) * round(2 ^ (n + 1) / 3). - _ Gary Detlefs _ , Feb 10 2010 •

► [A284699] 3,15,57,223,863,3333,12883,49791,192441,743775,2874655,11110405,42941187,165965647,641449337,2479171199,9581878847,37033506309,143132741651,553201243263,2138096511097,8263641389887,31938581194175,123441098248197,477093977471363 ★ Number of dominating sets in the n - antiprism graph. • a(n) = 3 * a(n - 1) + 3 * a(n - 2) + a(n - 3) + a(n - 4) + a(n - 5) for n>5. •

► [A123007] 1,3,15,57,249,1011,4263,17625,73617,305859,1274271,5301273,22070985,91853427,382345719,1591372281,6623856033,27570062595,114754829487,477640222329,1988073910041,8274909821043,34442484832455 ★ Expansion of x * (1 + x) / (1 - 2 * x - 9 * x ^ 2). • a(n) = 2 * a(n - 1) + 9 * a(n - 2) for n > 2. • a(n) = (3 * i) ^ (n - 2) * (3 * i * chebyshev _ U(n - 1, - i / 3) + chebyshev _ U(n - 2, - i / 3)). - _ G. C. Greubel _ , Jul 12 2021 •

► [A121695] 1,1,3,15,57,423,2457,22743,178857,1998423,19774377,259643223,3093367977,46722798423,650703531177,11118365780823,177186743211177,3379687537748823,60644049519531177,1277452054977620823 ★ Number of odd - length first columns in all deco polyominoes of height n. A deco polyomino is a directed column - convex polyomino in which the height, measured along the diagonal, is attained only in the last column. • a(n)=a(n - 2) + (n - 2)!(n * floor(n / 2) - 1) for n>=3; a(1)=a(2)=1. •

► [A343994] 3,15,58,156,339,643,1110,1788,2731,3999,5658,7780,10443,13731,17734,22548,28275,35023,42906,52044,62563,74595,88278,103756,121179 ★ Number of nodes in graph BC(n,2) when the internal nodes are counted with multiplicity. • a(n) = (n ^ 4 + 10 * n ^ 3 + 25 * n ^ 2 + 12 * n + 12) / 4. •

► [A017949] 1,3,15,58,225,871,3375,13071,50625,196069,759375,2941046,11390625,44115700,170859375,661735513,2562890625,9926032708,38443359375,148890490631,576650390625,2233357359474,8649755859375 ★ Powers of sqrt(15) rounded down. • a(n) = floor(sqrt(15 ^ n)). - _ Vincenzo Librandi _ , Jun 24 2011 •

► [A069009] 1,3,15,59,250,1030,4283,17752,73658,305513,1267344,5257031,21806850,90457205,375227042,1556484658,6456477531,26782210229,111095686086,460837670465,1911607611040,7929568022610,32892759309540 ★ Let M denote the 6 X 6 matrix with rows / 1,1,1,1,1,1 / 1,1,1,1,1,0 / 1,1,1,1,0,0 / 1,1,1,0,0,0 / 1,1,0,0,0,0 / 1,0,0,0,0,0 / and A(n) the vector (x(n),y(n),z(n),t(n),u(n),v(n)) = M ^ n * A where A is the vector (1,1,1,1,1,1); then a(n) = t(n). • a(n - 2) = T(n,3) with T(n,k) = sum(T(n - 1,k1), k1=7 - k..6), T(1,1) = T(1,2) = T(1,3) = T(1,4) = T(1,5) = 0 and T(1,6) = 1, n>=1 and 1 <= k <= 6. [Steinbach] •

► [A179604] 1,3,15,59,259,1079,4607,19443,82507,349215,1479879,6267707,26552755,112474631,476459471,2018296131,8549676763,36216937647,153417558423,649886909195,2752965719491,11661748738583,49399962770975 ★ Eight white kings and one red king on a 3 X 3 chessboard. G.f.: (1 + x) / (1 - 2 * x - 9 * x ^ 2 - 2 * x ^ 3). • a(n) = 2 * a(n - 1) + 9 * a(n - 2) + 2 * a(n - 3) with a(0)=1, a(1)=3 and a(2)=15. • a(n) = (20 * (- 1 / 2) ^ (- n) + (5 + 7 * sqrt(5)) * A ^ (- n - 1) + (5 - 7 * sqrt(5)) * B ^ (- n - 1)) / 110 with A = (- 2 + sqrt(5)) and B:= (- 2 - sqrt(5)). •

► [A286183] 3,15,60,207,663,2038,6107,17983,52272,150407,429223,1216490,3427635,9609327,26821668,74576703,206650167,570877918,1572754187,4322192287,11851474968,32430381815,88576465735,241511251922,657457204323 ★ Number of connected induced (non - null) subgraphs of the antiprism graph with 2n nodes. • a(n) = 8 * a(n - 1) - 24 * a(n - 2) + 34 * a(n - 3) - 24 * a(n - 4) + 8 * a(n - 5) - a(n - 6), for n > 6 (conjectured). •

► [A001655] 1,3,15,60,260,1092,4641,19635,83215,352440,1493064,6324552,26791505,113490195,480752895,2036500788,8626757644,36543528780,154800876945,655747029795,2777789007071,11766903040368,49845401197200,211148507782800,894439432403425 ★ Fibonomial coefficients: a(n) = F(n + 1) * F(n + 2) * F(n + 3) / 2, where F() = Fibonacci numbers A000045. • a(n) = 4 * a(n - 1) + a(n - 2) + ((- 1) ^ n) * F(n + 1), n >= 2; a(0)=1, a(1)=3. • a(n) = (F(n + 3) ^ 3 - F(n + 2) ^ 3 - F(n + 1) ^ 3) / 6. - _ Gary Detlefs _ , Dec 24 2010 • a(n - 1) = Sum _{ k=0..n } F(k + 1) * F(k) ^ 2, n >= 1. - _ Wolfdieter Lang _ , Aug 01 2012 • a(n - 1) * (- 1) ^ n = Sum _{ k=0..n } (- 1) ^ k * F(k + 1) ^ 2 * F(k), n >= 1. See the link under A215037, eq. (25). • a(n) = (F(3 * (n + 2)) + 2 * (- 1) ^ n * F(n + 2)) / 10, n >= 0. See the same link, eq. (32). (End) • a(n) = - a(- 4 - n) * (- 1) ^ n for all n in Z. - _ Michael Somos _ , Sep 19 2014 •

► [A292483] 3,15,61,240,912,3376,12240,43632,153360,532656,1831248,6240240,21100176,70858800,236510928,785115504,2593432080,8528565168,27932538960,91144257264,296391022992,960802812720,3105562639824,10010945435760,32189993590032 ★ p - INVERT of the odd positive integers, where p(S) = (1 - S) ^ 3. • a(n) = 9 * a(n - 1) - 27 * a(n - 2) + 27 * a(n - 3) for n >= 6. • a(n) = 16 * 3 ^ (n - 5) * (51 + 22 * n + 2 * n ^ 2) for n>2. - _ Colin Barker _ , Oct 03 2017 •

► [A229277] 0,3,15,63,243,891,3159,10935,37179,124659,413343,1358127,4428675,14348907,46235367,148272039,473513931,1506635235,4778186031,15109399071,47652720147,149931729243,470715894135,1474909801623,4613015762523 ★ Number of ascending runs in { 1,...,3 }^n. • a(n) = 3 ^ (n - 1) * (2 * n + 1) for n >0, a(0) = 0. •

► [A103454] 1,3,15,63,255,1023,4095,16383,65535,262143,1048575,4194303,16777215,67108863,268435455,1073741823,4294967295,17179869183,68719476735,274877906943,1099511627775,4398046511103,17592186044415,70368744177663 ★ a(n) = 0 ^ n + 4 ^ n - 1. • a(n) = Sum _{ k=0..n } (2 * 0 ^ (n - k) - 1) * 0 ^ (k * (n - k))4 ^ k. • a(n) = 5 * a(n - 1) - 4 * a(n - 2). - _ Wesley Ivan Hurt _ , Mar 17 2023 •

► [A024036] 0,3,15,63,255,1023,4095,16383,65535,262143,1048575,4194303,16777215,67108863,268435455,1073741823,4294967295,17179869183,68719476735,274877906943,1099511627775,4398046511103,17592186044415,70368744177663,281474976710655 ★ a(n) = 4 ^ n - 1. • a(n) = 4 * a(n - 1) + 3, with a(0)=0. - _ Vincenzo Librandi _ , Aug 01 2010 • a(n) = n * E(2 * n - 1,1) / B(2 * n,1), for n>0, where E(n,x) denotes the Euler polynomials and B(n,x) the Bernoulli polynomials. - _ Peter Luschny _ , Apr 04 2014 •

► [A083858] 0,1,3,15,63,279,1215,5319,23247,101655,444447,1943271,8496495,37149111,162426303,710173575,3105078543,13576277079,59359302495,259535569959,1134762524847,4961500994295,21693078131967,94848240361671 ★ Expansion of x / (1 - 3 * x - 6 * x ^ 2). • a(n) = 3 * a(n - 1) + 6 * a(n - 2), a(0)=0, a(1)=1. • a(n) = (3 * sqrt(33) / 2 + 21 / 2) ^ (n / 2) / sqrt(33) - (21 / 2 - 3 * sqrt(33) / 2) ^ (n / 2) * (- 1) ^ n / sqrt(33). • a(n) = B(n, k + 2 ^ (n - 1)) - B(n,k) where B(n,k) is formed by the family of recursions b(n) = 3 * (b(n - 1) + b(n - 2)) / 2, with b(0) = 1 and b(1) = k, as explained further in A249861. - _ Richard R. Forberg _ , Nov 04 2014 •

► [A001447] 1,3,15,65,325,1575,7875,39125,195625,976875,4884375,24415625,122078125,610359375,3051796875,15258828125,76294140625,381469921875,1907349609375,9536744140625,47683720703125 ★ a(n) = (5 ^ n + 5 ^ floor(n / 2)) / 2. • a(n) = 5 * a(n - 1) + 5 * a(n - 2) - 25 * a(n - 3); a(0)=1, a(1)=3, a(2)=15. - _ Harvey P. Dale _ , May 05 2011 •

► [A122558] 1,3,15,69,321,1491,6927,32181,149505,694563,3226767,14990757,69643329,323545587,1503112335,6983086101,32441681409,150715983939,700188979983,3252903871749,15112182426945,70207441323027,326166312572943 ★ a(0)=1, a(1)=3, a(n) = 4 * a(n - 1) + 3 * a(n - 2) for n > 1. • a(n) = - (1 / 14) * (2 - sqrt(7)) ^ n * sqrt(7) + (1 / 14) * sqrt(7) * (2 + sqrt(7)) ^ n + (1 / 2) * (2 - sqrt(7)) ^ n + (1 / 2) * (2 + sqrt(7)) ^ n. - _ Paolo P. Lava _ , Nov 19 2008 • a(n) = ((7 + sqrt(7)) / 14) * (2 + sqrt(7)) ^ n + ((7 - sqrt(7)) / 14) * (2 - sqrt(7)) ^ n. - _ Richard Choulet _ , Nov 20 2008 •

► [A033876] 3,15,70,315,1386,6006,25740,109395,461890,1939938,8112468,33801950,140408100,581690700,2404321560,9917826435,40838108850,167890003050,689232644100,2825853840810,11572544300460,47342226683700,193485622098600,790066290235950,3223470464162676 ★ Expansion of 1 / (2 * x) * (1 / (1 - 4 * x) ^ (3 / 2) - 1). • a(n) = (2 * n + 3) * binomial(2 * n + 1, n). - _ Paul Boddington _ , Nov 03 2003 • a(n) = 2 ^ (2 * n + 1) * binomial(n + 3 / 2, 1 / 2). - _ Peter Luschny _ , May 06 2014 • a(n - 2) = n * binomial(2 * n, n) / 4 for n > 1. - _ Eric W. Weisstein _ , Nov 30 2017 •

► [A291031] 3,15,70,321,1461,6624,29967,135399,611318,2758881,12447753,56154744,253306119,1142572767,5153589754,23244956169,104843981505,472885383744,2132882300571,9620044596687,43389716584682,195702453488433,882684641446989,3981207177094608 ★ p - INVERT of the positive integers, where p(S) = 1 - 3 * S + 2 * S ^ 3. • a(n) = 9 * a(n - 1) - 27 * a(n - 2) + 36 * a(n - 3) - 27 * a(n - 4) + 90 * a(n - 5) - a(n - 6). •

► [A359405] 3,15,70,330,1596,7840,38592,188640,911680,4350720,20507136,95560192,440724480,2014003200,9128476672,41074384896,183618256896,816062464000,3607813816320,15874289958912,69544309424128,303465643376640,1319414897049600,5717462509158400,24699433622962176 ★ Number of unordered pairs of self - avoiding paths with nodes that cover all vertices of a convex n - gon; one - node paths are allowed. • a(n) = n * (n - 1) * 2 ^ (n - 6) * (2 ^ (n - 3) + 3). • a(n) = 18 * a(n - 1) - 132 * a(n - 2) + 504 * a(n - 3) - 1056 * a(n - 4) + 1152 * a(n - 5) - 512 * a(n - 6) for n > 8. (End) •

► [A123942] 0,1,3,15,71,340,1626,7778,37205,177966,851280,4072001,19477953,93170570,445670811,2131815570,10197297001,48777608903,233322137235,1116069871981,5338593130960,25536552265626,122151189577128,584296304368075,2794914830384226 ★ The (1,4) - entry in the 4 X 4 matrix M ^ n, where M= {{ 3, 2, 1, 1 } , { 2, 1, 1, 0 } , { 1, 1, 0, 0 } , { 1, 0, 0, 0 }} (n>=0). • a(n) = 4 * a(n - 1) + 4 * a(n - 2) - a(n - 3) - a(n - 4) for n>=4 (follows from the minimal polynomial of the matrix M). •

► [A290902] 3,15,72,345,1653,7920,37947,181815,871128,4173825,19997997,95816160,459082803,2199597855,10538906472,50494934505,241935766053,1159183895760,5553983712747,26610734667975,127499689627128,610887713467665,2926938877711197,14023806675088320 ★ p - INVERT of the positive integers, where p(S) = 1 - 3 * S. • a(n) = 5 * a(n - 1) - a(n - 2). •

► [A155117] 1,3,15,72,348,1680,8112,39168,189120,913152,4409088,21288960,102792192,496324608,2396467200,11571167232,55870537728,269766819840,1302549430272,6289265000448,30367257722880,146626090893312 ★ a(n) = 4 * a(n - 1) + 4 * a(n - 2), n>2, a(0)=1, a(1)=3, a(2)=15. • a(n) = (3 / 2) * ((2 + 2 * sqrt(2)) ^ (n - 1) + (2 - 2 * sqrt(2)) ^ (n - 1)) + (9 / 8) * sqrt(2) * ((2 + 2 * sqrt(2)) ^ (n - 1) - (2 - 2 * sqrt(2)) ^ (n - 1)) + (1 / 4) * [binomial(2 * n,n) mod 2], with n>=0. - _ Paolo P. Lava _ , Jan 26 2009 • a(n) = (1 / 4) * [n=0] - 3 * (2 * i) ^ (n - 2) * ChebyshevU(n, - i). •

► [A137638] 1,3,15,72,361,1840,9505,49578,260540,1377328,7316373,39020372,208809544,1120621368,6029023185,32507001876,175604614108,950233307930,5149691511432,27946158749572,151843410356906,825949622559366 ★ Antidiagonal sums of square array A137634. • a(n) = Sum _{ k=0..n } Sum _{ j=0..k } C(n - k + 2 * j,j) * C(n - k + 2 * j,k - j). •

► [A145839] 1,3,15,73,354,1716,8318,40320,195444,947380,4592256,22260144,107902088,523036176,2535324816,12289536016,59571339552,288761470848,1399719859808,6784893012864,32888561860032,159421452802624,772767131681280,3745851196992000 ★ Number of 3 - compositions of n. • a(n + 3) = 6 * a(n + 2) - 6 * a(n + 1) + 2 * a(n). • a(n) = Sum _{ k>=0 } C(n + 3 * k - 1,n) / 2 ^ (k + 1). - _ Vaclav Kotesovec _ , Dec 31 2013 • a(n) = Sum _{ j=0..n - 1 } binomial(n - j + 2, 2) * a(j) with a(0) = 1. - _ G. C. Greubel _ , Mar 07 2021 •

► [A370480] 1,3,15,73,360,1800,9112,46632,240936,1255336,6589080,34811784,184990568,988156872,5303039256,28579068520,154605138984,839272725864,4570409517848,24961191298248,136688674353000,750355591919240,4128471397725336,22762905189252264 ★ G.f. satisfies A(x) = (1 + x * (A(x) ^ (1 / 3) / (1 - x)) ^ 2) ^ 3. • a(n) = 3 * Sum _{ k=0..n } binomial(2 * k + 3,k) * binomial(n + k - 1,n - k) / (2 * k + 3). •

► [A007142] 1,3,15,73,387,2106,11998,69999,418104,2540368,15660843,97692822,615559931,3911866377,25044058215,161369414590,1045681767924,6810222330303,44552627690401,292642818035352,1929238465836366,12760620159195044 ★ E - trees with at most 3 colors. • a(n) = E(3, n) where E(c, n) is defined in A007141. - _ Sean A. Irvine _ , Oct 29 2017 •

► [A190010] 1,1,3,15,73,537,3899,35623,345553,3767185,44993331,575013087,8040614041,118459611753,1883371991531,31449522256183,558550869727393,1041015682976476 9,2040934187535322 59,4191381846930998319,8988910385658843492 1

⋆ E.g.f. exp(tan(x) + tan(x) ^ 2 + tan(x) ^ 3). ● a(n) = Sum _{ m=1..n } (Sum _{ k=m..n } ((1 + (- 1) ^ (n - k)) * Sum _{ j=k..n } (j! * stirling2(n,j) * 2 ^ (n - j - 1) * (- 1) ^ ((n + k) / 2 + j) * binomial(j - 1,k - 1)) * Sum _{ j=0..m } binomial(j, - 3 * m + k + 2 * j) * binomial(m,j))) / m!), n>0, a(0)=1. ●

▶ [A236579] 1,3,15,75,371,1833,9057,44753,221137,1092699,5399327,26679563,131831075,651413681,3218814561,15905050017,78591236385,388340962771,1918899743823,9481812581835,46852249642771 ⋆ The number of tilings of a 5 X (4n) flo or with 1 X 4 tetrominoes. ● a(n) = hypergeom([(n + 1) / 3, (n + 2) / 3, n / 3 + 1, - n], [1 / 4, 1 / 2, 3 / 4], - 27 / 128). - _ Peter Luschny _ , Nov 02 2017 ●

▶ [A005053] 1,3,15,75,375,1875,9375,46875,234375,1171875,5859375,29296875,146484375,732421875,3662109375,18310546875,91552734375,457763671875,2288818359375,11444091796875,57220458984375 ⋆ Expand (1 - 2 * x) / (1 - 5 * x). ● a(0) = 1, a(n) = 3 * 5 ^ (n - 1) for n >= 1. - _ Philippe Deléham _ , Oct 19 2006 ●

▶ [A136778] 1,3,15,75,381,1947,9975,51159,262497,1347123,6913911,35485779,182133885,934823451,4798101855,24626900271,126400914849,648769995939,3329901037119,17091174551835,87722802540957,450249343708827,2310966659437671,11861354115061383 ⋆ Number of primitive multiplex juggling sequences of lengt h n, base state <2,1> and hand capacity 2. ● a(n) = 7 * a(n - 1) - 9 * a(n - 2) - 3 * a(n - 3) for n>3. - _ Colin Barker _ , Aug 31 2016 ●

▶ [A000266] 1,1,1,3,15,75,435,3045,24465,220185,2200905,24209955,290529855,3776888115,52876298475,793144477125,12690313661025,215735332237425,3883235945814225,73781482970470275,1475629660064134575,30988222861346826075,681740902935880863075 ⋆ Expansion of e.g.f. exp(- x ^ 2 / 2) / (1 - x). ● a(n) = n! * Sum _{ i=0..floor(n / 2) } (- 1) ^ i / (i! * 2 ^ i); a(n) / n! ~ Sum _{ i>=0 } (- 1) ^ i / (i! * 2 ^ i) = e ^ (- 1 / 2); a(n) ~ e ^ (- 1 / 2) * n!; a(n) ~ e ^ (- 1 / 2) * (n / e) ^ n * sqrt(2 * Pi * n). - Avi Peretz (njk(AT)netvision.net.il), Apr 21 2001 ● a(n) = n! * floor((floor(n / 2)! * 2 ^ floor(n / 2) / exp(1 / 2) + 1 / 2)) / (floor(n / 2)! * 2 ^ floor(n / 2)), n >= 0. - _ Simon Plouffe _ from old notes, 1993 ●

▶ [A059838] 0,0,1,3,15,75,495,3465,29295,263655,2735775,30093525,370945575,4822292475,68916822975,1033752344625,16813959537375,285837312135375,5214921734397375,99083512953550125,2004231846526284375,42088868777051971875,934957186489800849375 ⋆ Number of permutations in the symmetric group S _ n that have even order. ● a(2n) = (2n - 1)! + (2n - 1)a(2n - 1), a(2n + 1) = (2n + 1)a(2n). ●

▶ [A027911] 1,3,15,77,414,2277,12727,71955,410346,2355962,13599915,78855339,458917850,2679183405,15683407785,92022516525,541050073146,3186886397310,18801598011274,111083331666918,657153430251396,3892199032434105,23077435617920925,136963282273730613,813597690808666386 ⋆ a(n) = T(2 * n + 1,n), with T given by A027907. ● a(n) = GegenbauerPoly(n, - 2 * n - 1, - 1 / 2). - _ Emanuele Munarini _ , Oct 20 2016 ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(2 * n + 1,k) * binomial(2 * n + 1 - k,n - 2 * k). - _ Emanuele Munarini _ , Oct 20 2016 ●

▶ [A104530] 1,3,15,78,411,2178,11574,61596,328083,1748346,9319650,49688004,264943902,1412826132,7534329804,40180417848,214285867011,1142822599722,6094924220394,32505784870068,173362418710506,924593002335612,4931138212856244,26299312319336328,140262655976846766 ⋆ Expansion of (1 + sqrt(1 - 4x)) / (4sqrt(1 - 4x) - 2). ● a(n)=0 ^ n + sum { k=0..n, 3 ^ (k + 1) * C(2n - 1, n - k - 1) * 2 * (k + 1) / (n + k + 1); ●

▶ [A337284] 0,1,3,15,79,324,1338,5370,20858,79907,301917,1127753,4175945,15347222,56045572,203563012,735880196,2649245173,9502874215,33976624115,121128306995,430701953720,1527852568478,5408197139806,19106052817630 ⋆ a(n) = Sum _{ i=1..n } (i - 1) * T(i) ^ 2, where T(i) = A000073(i) is the i - th tribona cci number. ● a(n) = 5 * a(n - 1) - 2 * a(n - 2) - 2 * a(n - 3) - 35 * a(n - 4) + 3 * a(n - 5) + 48 * a(n - 7) - 11 * a(n - 8) + 7 * a(n - 9) - 14 * a(n - 10) + 2 * a(n - 11) - a(n - 12) + a(n - 13) for n>13. ●

▶ [A137957] 1,1,3,15,79,468,2895,18670,123765,838860,5785503,40473729,286504086,2048388112,14770313397,107290913232,784380664232,5766985753620,42614014459911,316304429143995,2357275139670183,17631888703154172 ⋆ G.f. satisfies A(x) = 1 + x * (1 + x * A(x) ^ 4) ^ 3. ● a(n) = Sum _{ k=0..n - 1 } C(3 * (n - k),k) / (n - k) * C(4 * k,n - k - 1) for n>0 with a(0)=1. - _ Paul D. Hanna _ , Jun 16 2009 ●

▶ [A002514] 0,0,0,0,1,3,15,79,474,3207,24087,198923,1791902,17484377,183707380,2067904033,24827519376,316694549817,4277112686513,60971132411393,914869422343564,14413525170009350,237888443951757586,4104608160094692304 ⋆ Coefficients in the asymptotic expansions of modified Hankel functions h _ 1(z) and h _ 2(z), rounded to nearest integer. ● a(n) = round((Product _{ k=1..n } (9 * (2 * k - 1) ^ 2 - 4)) / (2 ^ (4 * n) * 3 ^ n * n!)). - _ Sean A. Irvine _ , Oct 18 2015 ● a(n) = round(Gamma(n + 5 / 6) * Gamma(n + 1 / 6) * 3 ^ n / (2 ^ (2 * n + 1) * Pi * n!)). - _ Robert Israel _ , Oct 19 2015 ●

▶ [A198628] 1,3,15,81,435,2313,12195,63801,331395,1710153,8775075,44808921,227890755,1155180393,5839846755,29458152441,148335904515,745888593033,3746364947235,18799770158361,94271405748675,472449569948073,2366624981836515,11850654345690681,59323452211439235 ⋆ Alternating sums of powers for 1,2,3,4 and 5. ● a(n) = sum(((- 1) ^ (j + 1)) * j ^ n,j=1..5) = 1 - 2 ^ n + 3 ^ n - 4 ^ n + 5 ^ n. ●

▶ [A084120] 1,3,15,81,441,2403,13095,71361,388881,2119203,11548575,62933841,342957321,1868942403,10184782455,55501867521,302456857761,1648235544003,8982042690735,48947549512401,266739169002201 ⋆ a(n) = 6 * a(n - 1) - 3 * a(n - 2), a(0)=1, a(1)=3. ● a(n) = ((3 + sqrt(6)) ^ n + (3 - sqrt(6)) ^ n) / 2. ● a(n) = 3 ^ n * Sum _{ k=0..floor(n / 2) } C(n, 2 * k) * (2 / 3) ^ k. - _ Paul Barry _ , Sep 10 2005 ●

▶ [A163470] 3,15,81,453,2571,14679,84009,481245,2757843,15806559,90600513,519318837,2976744027,17062807335,97804786329,560621795277,3213512139939,18420013780911,105584452428081,605215440272805 ⋆ a(n) = 8 * a(n - 1) - 13 * a(n - 2) for n > 1; a(0) = 3, a(1) = 15. ● a(n) = ((3 + sqrt(3)) * (4 + sqrt(3)) ^ n + (3 - sqrt(3)) * (4 - sqrt(3)) ^ n) / 2. ●

▶ [A122868] 1,3,15,81,459,2673,15849,95175,576963,3523257,21640365,133549155,827418645,5143397535,32063180535,200367960201,1254816463923,7873205412825,49482344889261,311457546052659,1963051327342449,12387750763156227,7825873100316943 5 ⋆ Expansion of 1 / sqrt(1 - 6x - 3x ^ 2). ● a(n) = Sum _{ k=0..floor(n / 2) } C(n,2k) * C(2k,k) * 3 ^ (n - k). ● a(n) = (- 3) ^ (n / 2) * LegendreP(n, - (- 3) ^ (1 / 2)). - _ Mark van Hoeij _ , Nov 13 2022 ●

▶ [A371516] 1,3,15,82,477,2901,18235,117555,773085,5166478,34987170,239570655,1655933060,11538839130,80971109712,571702698185,4058556404958,28951715755830,207424064434502,1491898838023884,10768487956456506,77977009814421534,566310026687320290 ⋆ G.f. A(x) satisfies A(x) = (1 + x * A(x) / (1 - x)) ^ 3. ● a(n) = 3 * Sum _{ k=0..n } binomial(n - 1,n - k) * binomial(3 * k + 2,k) / (2 * k + 3). ●

▶ [A006964] 1,3,15,82,495,3144,20875,142773,1000131,7136812,51702231,379234623,2810874950,21020047557,158398829121,1201617201230,9169060501023,70329406653879,541949364313821,4193569906262874,32571403998781956,253842927519362734,1984442128649393178 ⋆ Number of directed rooted trees with n nodes. ● a(n + 1) has g.f.: Product _{ n>=1 } (1 - x ^ 3 * a(n)) ^- 1. ●

▶ [A371616] 1,1,3,15,82,495,3147,20812,141621,985287,6976369,50108232,364202415,2673756449,19797659586,147677816532,1108711280376,8371222635096,63525564996093,484243596619753,3706268752629237,28470703720193010,219432896755734137 ⋆ G.f. satisfies A(x) = 1 + x / (1 - x * A(x) ^ 3) ^ 3. ● a(n) = Sum _{ k=0..n } binomial(3 * (n - k) + 1,k) * binomial(n + 2 * k - 1,n - k) / (3 * (n - k) + 1). ●

▶ [A192662] 1,1,3,15,82,518,3652,28123,233733,2075597,19542826,193908574,2017519282,21921326573,247882099197,2908534759303,35322473621014,443010881207381,5726889928765906,76175517383629544,1040964231177762308,14594191539892866665 ⋆ Floor - Sqrt transform of (signless) central Stirling numbers of the first kind (A187646). ● a(n) = floor(sqrt(|stirling1(2 * n,n)|)). ●

▶ [A074552] 3,15,83,495,3107,20175,134003,903855,6161987,42326415,292299923,2026332015,14085959267,98111307855,684331371443,4778093436975,33385561506947,233393582580495,1632228682596563,11417969833962735 ⋆ a(n) = 3 ^ n + 5 ^ n + 7 ^ n. ● a(n) = 15 * a(n - 1) - 71 * a(n - 2) + 105 * a(n - 3). ●

▶ [A106569] 0,3,15,84,465,2577,14280,79131,438495,2429868,13464825,74613729,413463120,2291156787,12696173295,70354336836,389860204065,2160364030833,11971400766360,66338095924299,367604681920575 ⋆ a(n) = 5 * a(n - 1) + 3 * a(n - 2), where a(0) = 0, a(1) = 3. ● a(n) = 5 * a(n - 1) + 3 * a(n - 2), a(0) = 0, a(1) = 3. ● a(n) = 3 * (p ^ n - q ^ n) / (p - q), where 2 * p = 5 + sqrt(37), and 2 * q = 5 - sqrt(37), with n>=0. - _ Paolo P. Lava _ , Oct 07 2008 ●

▶ [A005809] 1,3,15,84,495,3003,18564,116280,735471,4686825,30045015,193536720,1251677700,8122425444,52860229080,344867425584,2254848913647,14771069086725,96926348578605,636983969321700,4191844505805495,27619435402363035 ⋆ a(n) = binomial(3n,n). ● a(n) = Sum _{ k=0..n } C(n, k) * C(2n, k). - _ Paul Barry _ , May 15 2003 ● a(n) = Sum _{ i _ 1=0..n, i _ 2=0..n } binomial(n, i _ 1) * binomial(n, i _ 2) * binomial(n, i _ 1 + i _ 2). - _ Benoit Cloitre _ , Oct 14 2004 ● a(n) = Sum _{ k=0..n } binomial(2 * n + k - 1,k)). - _ Arkadiusz Wesolowski _ , Apr 02 2012 ● a(n) = C(3 * n - 1,n - 1) * C(9 * n ^ 2,2) / (3 * n * C(3 * n + 1,3)), n>0. - _ Gary Detlefs _ , Jan 02 2014 ● a(n) = [x ^ n] 1 / (1 - x) ^ (2 * n + 1). - _ Ilya Gutkovskiy _ , Oct 03 2017 ● a(n) = hypergeom([- 2 * n, - n], [1], 1). - _ Peter Luschny _ , Mar 19 2018 ●

▶ [A011900] 1,3,15,85,493,2871,16731,97513,568345,3312555,19306983,112529341,655869061,3822685023,22280241075,129858761425,756872327473,4411375203411,25711378892991,149856898154533,873430010034205,5090723162050695,29670908962269963 ⋆ a(n) = 6 * a(n - 1) - a(n - 2) - 2 with a(0) = 1, a(1) = 3. ● a(n) = (((1 + sqrt(2)) ^ (2 * n - 1) - (1 - sqrt(2)) ^ (2 * n - 1)) / sqrt(8) + 1) / 2. ● a(n) = 7 * (a(n - 1) - a(n - 2)) + a(n - 3); a(1) = 1, a(2) = 3, a(3) = 15. Also a(n) = 1 / 2 + ((1 - sqrt(2)) / (- 4 * sqrt(2))) * (3 - 2 * sqrt(2)) ^ n + ((1 + sqrt(2)) / (4 * sqrt(2))) * (3 + 2 * sqrt(2)) ^ n. - _ Antonio Alberto Olivares _ , Dec 23 2003 ● a(n + 1) = 3 * a(n) - 1 + sqrt(8 * a(n) ^ 2 - 8 * a(n) + 1), a(1)= 1. - _ Richard Choulet _ , Sep 18 2007 ● a(n + 1) = a(n) * (a(n) + 2) / a(n - 1) for n>=1 with a(0)=1 and a(1)=3. - _ Paul D. Hanna _ , Apr 08 2012 ● a(n) = a(- 1 - n) for all n in Z. - _ Michael Somos _ , Feb 23 2019 ●

▶ [A371754] 1,3,15,85,505,3081,19125,120173,761995,4865697,31244029,201544551,1305039209,8477521051,55221311565,360559717807,2359123470971,15463951609491,101530816122729,667587477393509,4395294402200983,28972295880583861,191181607835416543 ⋆ a(n) = Sum _{ k=0..floor(n / 3) } binomial(3 * n - 2 * k,n - 3 * k). ● a(n) = [x ^ n] 1 / ((1 - x - x ^ 3) * (1 - x) ^ (2 * n)). ●

▶ [A182016] 1,3,15,85,531,3545,24833,180251,1344163,10237001,79287469,622596063,4945078477,39658283943,320689293119,2611817435525,21405148148051,176396318594937,1460795339822349,12150467810552223,101463416752305385,850306144532133787 ⋆ Central coefficients of triangle A182013. ● a(n) = sum(M(i),i=n..2 * n), where the M(n)'s are the Motzkin numbers. ●

▶ [A180677] 1,3,15,87,503,2871,16311,92599,525751,2985399,16952759,96267703,546663863,3104271799,17627835831,100100959671,568430652855,3227875241399,18329726840247,104086701305271,591063984860599 ⋆ The Gi4 sums of the Pell - Jacobsthal triangle A013609. ● a(n) = 9 * a(n - 1) - 24 * a(n - 2) + 32 * a(n - 3) - 16 * a(n - 4) with a(0)=1, a(1)=3, a(2)= 15 and a(3)= 87. ●

▶ [A075841] 3,15,87,507,2955,17223,100383,585075,3410067,19875327,115841895,675176043,3935214363,22936110135,133681446447,779152568547,4541233964835,26468251220463,154268273357943,899141388927195 ⋆ Numbers k such that 2 * k ^ 2 - 9 is a square. ● a(n) = 3 * sqrt(2) / 4 * ((1 + sqrt(2)) ^ (2 * n - 1) - (1 - sqrt(2)) ^ (2 * n - 1)) = 6 * a(n - 1) - a(n - 2). ●

▶ [A152596] 1,3,15,87,519,3111,18663,111975,671847,4031079,24186471,145118823,870712935,5224277607,31345665639,188073993831,1128443962983,6770663777895,40623982667367,243743896004199,1462463376025191 ⋆ a(n) = 7 * a(n - 1) - 6 * a(n - 2), n>1; a(0)=1, a(1)=3. ● a(n) = (1 / 5) * (3 + 2 * 6 ^ n), with n>=0. - _ Paolo P. Lava _ , Dec 12 2008 ●

▶ [A370287] 1,3,15,87,531,3333,21309,138015,902547,5946153,39406005,262404585,1754316045,11767931451,79165530375,533883963567,3608242091091,24432635451465,165721028062605,1125743155558677,7657535953619721,52151890274636463,355576809975214095 ⋆ Coefficient of x ^ n in the expansion of ((1 + x) ^ 3 + x ^ 3) ^ n. ● a(n) = Sum _{ k=0..floor(n / 3) } binomial(n,k) * binomial(3 * n - 3 * k,n - 3 * k). ●

► [A370184] 1,3,15,87,539,3458,22659,150594,1011131,6841779,46577430,318654900,2188931699,15087882943,104301302218,722840860787,5020500381131,34937184351049,243539967641271,1700255814753027,11886457488148674,832007181547 10607,583026777685802256 ⋆ Coefficient of x ^ n in the expansion of ((1 + x) ^ 2 * (1 + x + x ^ 3)) ^ n. ● a(n) = Sum _{ k=0..floor(n / 3) } binomial(n,k) * binomial(3 * n - k,n - 3 * k). ●

► [A089022] 1,3,15,87,543,3543,23823,163719,1143999,8099511,57959535,418441191,3043608351,22280372247,164008329423,1213166815047,9012417249663,67208553680247,502920171632943,3775020828459687,28415858155984863,214444848602732247,1622146752543427983 ⋆ Number of walks of length 2n on the 3 - regular tree beginning and ending at some fixed vertex. ● a(n) = 2 ^ x * binomial(2 * x,x) - 3 ^ (x - 1) * Sum _{ j=0..x - 1 } (2 / 3) ^ j * binomial(x + j,x). - Tobias Friedrich (tfried(AT)mpi - inf.mpg.de), Jun 12 2007 ● a(n) is the (2 * n) - th moment of a positive function W(x)=(3 / Pi) * sqrt(8 - x ^ 2) / (9 - x ^ 2), on the segment x=(0,2 * sqrt(2)), in Maple notation: a(n)=int(x ^ (2 * n) * W(x), x=0..2 * sqrt(2)); ● a(n) is the special value of hypergeometric function 2F1, in Maple notation: a(n)=2 * 8 ^ n * GAMMA(n + 1 / 2) * hypergeom([1,n + 1 / 2],[n + 2],8 / 9) / (3 * sqrt(Pi) * (n + 1)!). (End) ●

► [A246538] 1,3,15,87,559,3807,26919,195399,1445967,10859967,82527687,633165255,4896345487,38117454303,298435452135,2348094847047,18554434810831,147171478237695,1171272947140359,9349653181797063,74834845484454927,600441007306747167,4828337830880795943,38904633251921442375 ⋆ G.f.: Sum _{ n>= 0 } 2 ^ n * x ^ n / (1 - x) ^ (2 * n + 1) * [Sum _{ k=0..n } C(n,k) ^ 2 * x ^ k] ^ 2. ● a(n) = Sum _{ k=0..[n / 2] } 2 ^ k * Sum _{ j=0..n - 2 * k } C(n - k, k + j) ^ 2 * C(k + j, j) ^ 2 * 2 ^ j. ●

► [A192989] 1,3,15,87,585,4383,35919,318195,3015441,30354075,322626159,3603292047,42120047385,513557128503,6512375759535,85673471945067,1166675225150241,16413589529042355,238151194659626319,3558129109803374535 ⋆ Expansion of e.g.f.: exp((1 + x) ^ 3 - 1). ● a(n) = Sum _{ k=0..n } Stirling1(n, k) * Bell(k) * 3 ^ k. ●

► [A368972] 1,3,15,88,564,3819,26851,194025,1431498,10735548,81580008,626697786,4858272450,37954323885,298487957670,2361025981335,18770449480056,149897172319290,1201831832357041,9670416882346848,78062823843714528,631988009034161246 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 - x + x ^ 3) ^ 3). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 3) } (- 1) ^ k * binomial(3 * n + k + 2,k) * binomial(4 * n - 2 * k + 2,n - 3 * k). ●

► [A368974] 1,3,15,89,580,4009,28857,213967,1622869,12531090,98171544,778364379,6233789872,50355710215,409790010350,3356429972859,27647745771339,228890532343859,1903475080613014,15893483726218904,133190665385526309,1119863488613216952 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 - x) * (1 - x + x ^ 3) ^ 2). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 3) } (- 1) ^ k * binomial(2 * n + k + 1,k) * binomial(4 * n - 2 * k + 2,n - 3 * k). ●

► [A074550] 3,15,89,603,4433,34035,266969,2115723,16849313,134499555,1074849449,8594306043,68736785393,549824517075,4398319729529,35185460179563,281479314724673,2251817122694595,18014467616379209,144115464116024283 ⋆ a(n) = 3 ^ n + 4 ^ n + 8 ^ n. ● a(n) = 15 * a(n - 1) - 68 * a(n - 2) + 96 * a(n - 3). ●

► [A255688] 1,3,15,90,579,3858,26262,181380,1265955,8906706,63058530,448716876,3206387790,22992276180,165364807308,1192393813320,8617219956003,62397513984210,452607991376490,3288138397237884,23921128800374874 ⋆ G.f.: (2 * x + 1) / (2 * sqrt(4 * x ^ 2 - 8 * x + 1)) + 1 / 2. ● a(n) = Sum _{ i=0..n } 2 ^ (n - i) * binomial(n,i) * binomial(n + i - 1,i)). ● a(n) = 2 ^ n * hypergeom([- n, n], [1], - 1 / 2). - _ Peter Luschny _ , Mar 15 2015 ● a(n) = (- 2) ^ n * (P _ n(- 2) - P _{ n - 1 } (- 2)) / 2 if n>0 where P _ n(x) is Legendre polynomial. - _ Michael Somos _ , May 26 2022 ● a(n) = [x ^ n] ((1 + 2 * x) / (1 - x)) ^ n. ●

► [A370186] 1,3,15,90,583,3913,26790,185839,1301575,9183681,65181645,464858661,3328503814,23913207750,172295708971,1244484142765,9008351053031,65332552755149,474622993450725,3453219378684621,25158758123093013,183521479226172667,1340195580366321837 ⋆ Coefficient of x ^ n in the expansion of ((1 + x) * (1 + x + x ^ 3) ^ 2) ^ n. ● a(n) = Sum _{ k=0..floor(n / 3) } binomial(2 * n,k) * binomial(3 * n - k,n - 3 * k). ●

► [A361843] 1,3,15,90,585,3969,27657,196290,1411965,10261485,75183147,554480316,4111617510,30628393110,229048769790,1718666596692,12933847045701,97584913269675,737953856289675,5591915004100950,42450848142844995,322796964495941235 ⋆ Expansion of 1 / (1 - 9 * x * (1 - x)) ^ (1 / 3). ● a(n) = (- 1) ^ n * Sum _{ k=0..n } 9 ^ k * binomial(- 1 / 3,k) * binomial(k,n - k). ●

► [A097188] 1,3,15,90,594,4158,30294,227205,1741905,13586859,107459703,859677624,6943550040,56540336040,463630755528,3824953733106,31724616256938,264371802141150,2212374554760150,18583946259985260,156636118477018620 ⋆ G.f. A(x) satisfies A057083(x * A(x)) = A(x) and so equals the ratio of the g.f.s of any two adjacent diagonals of triangle A097186. ● a(n) = 1 / (n + 1) * Sum _{ k=1..n } binomial(k,n - k) * 3 ^ (k) * (- 1) ^ (n - k) * binomial(n + k,n), if n>0; a(0)=1. - _ Vladimir Kruchinin _ , Feb 07 2011 ● a(n) = 9 ^ n * Gamma(n + 2 / 3) / ((n + 1) * Gamma(2 / 3) * Gamma(n + 1)). - _ Vaclav Kotesovec _ , Feb 09 2014 ●

► [A366085] 1,3,15,90,596,4199,30869,234091,1817720,14380288,115492518,939163680,7717237661,63979604459,534498370665,4495171005567,38026764744348,323358790454352,2762410748226232,23697028402783512,204044822552956179,1762917281476448944 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 - x) ^ 4 / (1 - x - x ^ 3)). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 3) } (- 1) ^ k * binomial(n + 1,k) * binomial(4 * n - 2 * k + 2,n - 3 * k). ●

► [A355501] 1,3,15,90,633,5028,44217,424434,4399953,48858984,577372809,7221983838,95192539641,1317190650636,19071213218745,288112248054882,4530217559806497,73976635012027344,1252091246140278153,21926952634345281030,396671314081806278601 ⋆ Expansion of e.g.f. exp(3 * x * exp(x)). ● a(0) = 1; a(n) = 3 * Sum _{ k=1..n } k * binomial(n - 1,k - 1) * a(n - k). ● a(n) = Sum _{ k =0..n } 3 ^ k * k ^ (n - k) * binomial(n,k). ●

► [A347319] 1,3,15,91,333,891,1963,3795,6681,10963,17031,25323,36325,50571,68643,91171,118833,152355,192511,240123,296061,361243,436635,523251,622153 ⋆ a(n) = (2 * n + 1) * (n ^ 3 - 2 * n ^ 2 + n + 1). ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n > 4. ●

► [A371490] 1,1,3,15,91,601,4155,29553,214303,1575931,11712599,87776507,662224819,5023611579,38284084575,292892970967,2248271735299,17307950940833,133580448494227,1033263820897777,8008342899292167,62179343789159945,483553052098053915 ⋆ Expansion of 1 / (1 - x / (1 - 8 * x) ^ (1 / 4)). ● a(n) = Sum _{ k=0..n } 8 ^ k * binomial((n + 3 * k) / 4 - 1,k). ●

► [A099251] 1,1,3,15,91,603,4213,30537,227475,1730787,13393689,105089229,834086421,6684761125,54022715451,439742222071,3602118427251,29671013856627,245611376802185,2042162142208813,17047255430494497,142816973618414817 ⋆ Bisection of Motzkin sums (A005043). ● a(n) = Sum _{ j=0..2 * n + 1 } (C(2 * j,j) * (- 1) ^ (j) * C(2 * n + 1,j + 1)) / (2 * n + 1). - _ Vladimir Kruchinin _ , Apr 02 2017 ● a(n) = hypergeom([1 / 2, - 2 * n], [2], 4). - _ Peter Luschny _ , Jul 25 2020 ●

► [A364740] 1,1,3,15,91,607,4298,31720,241321,1879097,14903013,119965086,977623639,8049579047,66864689674,559650696185,4715304229460,39960204165865,340395043021399,2912963919210012,25031055321749916,215894227588453950,1868403327770467149 ⋆ G.f. satisfies A(x) = 1 + x * A(x) ^ 2 / (1 - x * A(x) ^ 5). ● a(n) = (1 / n) * Sum _{ k=0..n - 1 } binomial(n,k) * binomial(2 * n + 3 * k, n - 1 - k) for n > 0. ●

► [A371435] 1,3,15,91,611,4368,32590,250821,1976441,15865465,129275835,1066438399,8888818659,74743312480,633272709348,5400983817990,46330852036920,399479717666693,3460229824525809,30095179524446946,262722158090170570,2301201197665717770 ⋆ Expansion of (1 / x) * Series _ Reversion(x * ((1 - x) ^ 3 + x ^ 4)). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 4) } (- 1) ^ k * binomial(n + k,k) * binomial(4 * n - k + 2,n - 4 * k). ●

► [A366090] 1,3,15,91,611,4370,32637,251550,1985895,15976676,130508070,1079562159,9024791689,76124252326,647089873598,5537663661590,47670889706375,412524981860848,3586502483999720,31311765471265548,274398528604427286 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 - x) ^ 4 / (1 - x - x ^ 4)). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 4) } (- 1) ^ k * binomial(n + 1,k) * binomial(4 * n - 3 * k + 2,n - 4 * k). ●

► [A006632] 1,3,15,91,612,4389,32890,254475,2017356,16301164,133767543,1111731933,9338434700,79155435870,676196049060,5815796869995,50318860986108,437662920058980,3824609516638444,33563127932394060,295655735395397520,2613391671568320765 ⋆ a(n) = 3 * binomial(4 * n - 1,n - 1) / (4 * n - 1). ● a(n) = binomial(4 * n - 1, n) / (4 * n - 1) = 3 * binomial(4 * n - 2, n - 1) - binomial(4 * n - 2, n). - _ David Callan _ , Sep 15 2004 ● a(n) = (3 / 4) * binomial(4 * n,n) / (4 * n - 1). - _ Bruno Berselli _ , Jan 17 2014 ●

► [A366056] 1,3,15,91,613,4408,33143,257400,2048825,16625940,137033316,1144010387,9653706723,82208879366,705587243802,6097408839400,53007770199641,463269048213536,4067950092964440,35871913838983980,317533385082542404,2820492092598807887 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 - x) ^ 4 / (1 - x + x ^ 4)). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 4) } binomial(n + 1,k) * binomial(4 * n - 3 * k + 2,n - 4 * k). ●

► [A369161] 1,3,15,91,613,4410,33190,258129,2058281,16737259,138268611,1157197639,9790774861,83606543660,719638883748,6237175439640,54386540912490,476782443732437,4199713449255749,37151346765537606,329914740292813170,2939975733035070000 ⋆ Expansion of (1 / x) * Series _ Reversion(x * ((1 - x) ^ 3 - x ^ 4)). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 4) } binomial(n + k, k) * binomial(4 * n - k + 2,n - 4 * k). ●

► [A369623] 1,3,15,92,624,4509,34033,265164,2116560,17219068,142252608,1190173956,10064038469,85873044573,738446318232,6393218956733,55680130965252,487488352916496,4288083926110045,37878037865662422,335859658273133335,2988274511990407436 ⋆ Expansion of (1 / x) * Series _ Reversion(x / (1 / (1 - x) ^ 3 + x ^ 3)). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 3) } binomial(n + 1,k) * binomial(4 * n - 6 * k + 2,n - 3 * k). ●

► [A366053] 1,3,15,92,628,4579,34917,275041,2220472,18275896,152780718,1293657534,11072033677,95629771059,832460471465,7296161486583,64331378963164,570228657335744,5078345448484216,45418278349485960,407749837317844851,3673300856466182388 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 - x) ^ 4 / (1 - x + x ^ 3)). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 3) } binomial(n + 1,k) * binomial(4 * n - 2 * k + 2,n - 3 * k). ●

► [A369114] 1,3,15,92,630,4620,35494,282015,2298417,19108265,161418543,1381606044,11955789440,104427062460,919430773992,8151530382264,72711166411422,652075100808960,5875868463764446,53175058170610530,483082193418731280,4404057834071995110 ⋆ Expansion of (1 / x) * Series _ Reversion(x * ((1 - x) ^ 3 - x ^ 3)). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 3) } binomial(n + k,k) * binomial(4 * n + 2,n - 3 * k). ●

► [A361881] 1,3,15,93,618,4278,30390,219810,1611105,11929395,89045079,669018837,5053759440,38350056072,292147584072,2233020788184,17117923408746,131560216858110,1013413369611606,7822237588031586,60487791859818348,468511159492134516 ⋆ Expansion of 1 / (1 - 9 * x / (1 + x)) ^ (1 / 3). ● a(n) = (- 1) ^ n * Sum _{ k=0..n } 9 ^ k * binomial(- 1 / 3,k) * binomial(n - 1,n - k). ● a(0) = 1; a(n) = (3 / n) * Sum _{ k=0..n - 1 } (- 1) ^ (n - 1 - k) * (n + 2 * k) * a(k). ● a(n) = (- 1) ^ (1 - n) * 3 * hypergeom([1 - n, 4 / 3], [2], 9) for n >= 1. - _ Peter Luschny _ , Mar 30 2023 ●

► [A372374] 1,3,15,93,627,4368,30957,222015,1606803,11713260,85884660,632726988,4679850525,34729198260,258460942671,1928258130018,14416834880067,107993546227875,810319315565760,6089298408130707,45821042464807512,345217506895648767 ⋆ Coefficient of x ^ n in the expansion of (1 + x + x ^ 3) ^ (3 * n). ● a(n) = Sum _{ k=0..floor(n / 3) } binomial(3 * n,k) * binomial(3 * n - k,n - 3 * k). ●

► [A370218] 1,3,15,93,639,4578,33423,246816,1838367,13788399,104011140,788315124,5998380543,45794787678,350619595614,2691082393818,20699166876831,159515321712480,1231354153215123,9519556856284218,73694926944160164,571201080979318470 ⋆ Coefficient of x ^ n in the expansion of ((1 + x) ^ 3 / (1 - x ^ 3) ^ 3) ^ n. ● a(n) = Sum _{ k=0..floor(n / 3) } binomial(3 * n + k - 1,k) * binomial(3 * n,n - 3 * k). ●

► [A002893] 1,3,15,93,639,4653,35169,272835,2157759,17319837,140668065,1153462995,9533639025,79326566595,663835030335,5582724468093,47152425626559,399769750195965,3400775573443089,29016970072920387,248256043372999089 ⋆ a(n) = Sum _{ k=0..n } binomial(n,k) ^ 2 * binomial(2 * k,k). ● a(n) = Sum _{ p + q + r=n } (n! / (p! * q! * r!)) ^ 2 with p, q, r >= 0. - _ Michael Somos _ , Jul 25 2007 ● a(n) = hypergeom([1 / 2, - n, - n], [1, 1], 4). - _ Mark van Hoeij _ , Jun 02 2010 ● a(n) = [x ^ (2n)] 1 / agm(sqrt((1 - 3 * x) * (1 + x) ^ 3), sqrt((1 + 3 * x) * (1 - x) ^ 3)). - _ Gheorghe Coserea _ , Aug 17 2016 ●

► [A258313] 1,3,15,93,641,4719,36335,289017,2356321,19586283,165364799,1414193205,12224831937,106645825047,937685498271,8301129707121,73929906605249,661919872559763,5954449287679919,53791836313371405,487807821246726273,4438980860105747967,40521481906592540175 ⋆ G.f. A(x) satisfies: A(x) = B(x) * C(x) where B(x) = 1 + x * A(x) * C(x) and C(x) = 1 + 2 * x * A(x) * B(x). ● a(n) = Sum _{ k=0..n } 2 ^ k * (2 * n + 1) / ((2 * n - 2 * k + 1) * (2 * k + 1)) * binomial(2 * n - k, k) * binomial(n + k, n - k). - _ Paul D. Hanna _ , Dec 08 2016 ●

► [A368966] 1,3,15,93,644,4769,36953,295867,2428373,20322566,172759032,1487632887,12948891408,113748663495,1007117650350,8978151790011,80519598139947,725976573163011,6576546244337046,59829384514916820,546375444906314661,5006934930385254672 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 - x) * (1 - x - x ^ 3) ^ 2). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 3) } binomial(2 * n + k + 1,k) * binomial(4 * n - 2 * k + 2,n - 3 * k). ●

► [A103210] 1,3,15,93,645,4791,37275,299865,2474025,20819307,178003815,1541918901,13503125805,119352115551,1063366539315,9539785668657,86104685123025,781343125570515,7124072211203775,65233526296899981,599633539433039445,5531156299278726663 ⋆ a(n) = (1 / n) * Sum _{ i=0..n - 1 } C(n,i) * C(n,i + 1) * 2 ^ i * 3 ^ (n - i), a(0)=1. ● a(n) = Sum _{ k=0..n } C(n + k, 2k) * 2 ^ k * C(k), C(n) given by A000108. - _ Paul Barry _ , May 21 2005 ● a(0) = 1, a(n) = a(n - 1) + 2 * Sum _{ k=0..n - 1 } a(k) * a(n - 1 - k). - _ Philippe Deléham _ , Oct 23 2007 ● a(n) = Hypergeometric2F1(- n,n + 1;2; - 2) = Sum _{ k=0..n } C(n + k,k) * C(n,k) * 2 ^ k / (k + 1). - _ Paul Barry _ , Feb 08 2011 ●

► [A369270] 1,3,15,94,657,4902,38233,307953,2541831,21386810,182754162,1581699162,13836248406,122139271098,1086638457429,9733419373534,87707244737511,794505072627735,7231017033165776,66089527981542462,606340568510978940,5582088822346925210 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 - x) ^ 3 / (1 + x ^ 3) ^ 3). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 3) } binomial(3 * n + 3,k) * binomial(4 * n - 3 * k + 2,n - 3 * k). ●

► [A369301] 1,3,15,94,657,4902,38236,308025,2542965,21401780,182934144,1583745114,13858675065,122379042879,1089156646584,9759520978270,87975115569873,797233088237190,7258632128721117,66367727370376632,609133233247578454 8,5610015849998778144 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 - x) ^ 3 * (1 - x ^ 3) ^ 3). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 3) } binomial(3 * n + k + 2,k) * binomial(4 * n - 3 * k + 2,n - 3 * k). ●

► [A368964] 1,3,15,94,660,4959,38995,316875,2639754,22423292,193484208,1691190228,14942632450,133242614565,1197520200870,10836727044255,98656011543816,902936341411170,8303218554134769,76679352910367832,710839322080978272,6612557820697157410 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 - x - x ^ 3) ^ 3). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 3) } binomial(3 * n + k + 2,k) * binomial(4 * n - 2 * k + 2,n - 3 * k). ●

► [A076301] 1,1,3,15,96,720,6120,57960,604800,6894720,85276800,1137628800,16286054400,249080832000,4053790540800,69960578688000,1276290183168000,24542432538624000,496183962193920000,10522301185363968000 ⋆ Related to number of labeled partially ordered sets. ● a(n) = (4 - n + n ^ 2) * n! / 4. - _ G. C. Greubel _ , May 04 2018 ●

► [A108442] 1,1,3,15,97,721,5827,49759,441729,4035937,37702723,358474735,3457592161,33748593841,332730216579,3308635650495,33145196426753,334193815799233,3388807714823043,34537227997917391,353578650475659617,3634495706671023505,37496621681376849219,388135791657414454815 ⋆ Number of paths from (0,0) to (3n,0) that stay in the first quadrant (but may touch the horizontal axis), consisting of steps u=(2,1), U=(1,2), or d=(1, - 1) and having only u steps among the steps leading to the first d step. ● a(n) = Sum _{ k=1..n } (k * (Sum _{ i=0..n - k } binomial(2 * n - k, i) * binomial(3 * n - 2 * k - i - 1, 2 * n - k - 1)) / (2 * n - k)), n > 0, a(0)=1. - _ Vladimir Kruchinin _ , Oct 23 2011 ●

► [A331325] 1,1,3,15,97,745,6571,65359,723969,8842257,118091251,1712261551,26786070433,449634481465,8059974923547,153634497337455,3102367733191681,66145005096272929,1484586887025099619,34983117545622446287,863397428225495045601,22269844592814969946761 ⋆ a(n) = n! * [x ^ n] cosh(x / (1 - x)) / (1 - x). ● a(n) = Sum _{ k=0..n } binomial(n, 2 * k) * n! / (2 * k)!. ● a(n) = n! * hypergeom([1 / 2 - n / 2, - n / 2], [1 / 2, 1 / 2, 1], 1 / 4). ●

► [A186264] 1,3,15,98,756,6534,61347,613470,6447012,70526404,797490876,9271926888,110380082000,1341117996300,16586474042475,208360804638150,2653858669601700,34220809160653500,446174168961282300,5875592302944678600,78078028942687784400 ⋆ Expansion of 3F2(1, 3 / 2, 3 / 2; 3, 4;16 x). ● a(n) = 3 / ((n + 3) * (n + 2) ^ 2) * (2 * n + 2)! ^ 2 / (n + 1)! ^ 4 = 3 / (n + 3) * Catalan(n + 1) ^ 2. - _ Peter Bala _ , Mar 28 2018 ●

► [A199416] 3,15,99,687,4803,33615,235299,1647087,11529603,80707215,564950499,3954653487,27682574403,193778020815,1356446145699,9495123019887,66465861139203,465261027974415,3256827195820899,22797790370746287 ⋆ 2 * 7 ^ n + 1. ● a(n) = 7 * a(n - 1) - 6. ● a(n) = 8 * a(n - 1) - 7 * a(n - 2). ●

► [A046635] 1,3,15,99,689,4817,33713,235987,1651903,11563315,80943201,566602401,3966216801,27763517603,194344623215,1360412362499,9522886537489,66660205762417,466621440336913,3266350082358387,22864450576508703 ⋆ Number of cubic residues mod 7 ^ n. ● a(n)= + 7 * a(n - 1) + a(n - 3) - 7 * a(n - 4) with g.f. (1 - 4 * x - 6 * x ^ 2 - 7 * x ^ 3) / ((x - 1) * (7 * x - 1) * (1 + x + x ^ 2)). - _ R. J. Mathar _ , Feb 27 2011 ●

► [A208426] 1,3,15,99,711,5373,42099,338355,2771127,23028813,193610385,1643215005,14056350075,121040308665,1048212778635,9122168556819,79727173530327,699443806767525,6156776010386481,54356715121718349,481194980656865721,4270165015550478003 ⋆ G.f.: Sum _{ n>=0 } (3 * n)! / n! ^ 3 * x ^ (2 * n) / (1 - 3 * x) ^ (3 * n + 1). ● a(n) = Sum _{ k=0..floor(n / 2) } (n + k)! / (k! ^ 3 * (n - 2 * k)!) * 3 ^ (n - 2 * k). ●

► [A111546] 1,3,15,99,783,7083,71415,789939,9485343,122721723,1701224775,25156450179,395362560303,6583219735563,115817825451735,2147443419579219,41868118883289663,856527397513863003 ⋆ Column 2 of triangle A111544. ● a(n + 1) = (1 / 2) * ((n + 4)! - 3 * (n + 3)! - Sum _{ k=0..n - 1 } (n + 2 - k)! * a(k + 1). ● a(n + 1) is the moment of order n for the measure of density: 2 * x ^ 2 * exp(- x) / ((x ^ 2 * exp(- x) * Ei(x) - x - 1) ^ 2 + Pi ^ 2 * x ^ 4 * exp(- 2 * x)), on the interval 0..infinity. [_ Groux Roland _ , Dec 10 2010] ●

► [A147664] 1,1,3,15,100,801,7296,73174,791751,9116613,110640310,1405349658,18585016509,254855278565,3612425924919,52793266545585,793851646358364,12261570084250926,194260753173421656,3153098224666860712 ⋆ G.f. satisfies: A(x / A(x)) = 1 + x * A(x) ^ 2. ● a(n) = [x ^ (n - 1)] 3 * A(x) ^ (n + 2) / (n + 2) for n>=1 with a(0)=1; i.e., a(n) equals the coefficient of x ^ (n - 1) in 3 * A(x) ^ (n + 2) / (n + 2) for n>=1 (see comment). ●

► [A074521] 3,15,101,729,5393,40545,308801,2377089,18456833,144295425,1134208001,8952731649,70896259073,562816507905,4476410675201,35654557073409,284296086618113,2268726473129985,18115958466150401,144724547815866369 ⋆ a(n) = 1 ^ n + 6 ^ n + 8 ^ n. ● a(n) = 14 * a(n - 1) - 48 * a(n - 2) + 35 with a(0)=3, a(1)=15. - _ Vincenzo Librandi _ , Jul 21 2010 ●

► [A348793] 1,3,15,102,807,6951,63240,597864,5815167,57815553,584919951,6002197914,62321630100,653553174756,6912106219176,73642451396160,789642274208271,8515008918555573,92281921130853213,1004600177464845450,10980406558088695599,120454756647900759543 ⋆ G.f. A(x) satisfies A(x) = (1 + x * A(x) ^ 3) / (1 - 2 * x). ● a(0) = 1; a(n) = 2 * a(n - 1) + Sum _{ i=0..n - 1 } Sum _{ j=0..n - i - 1 } a(i) * a(j) * a(n - i - j - 1). ● a(n) = Sum _{ k=0..n } 2 ^ (n - k) * binomial(n,k) * binomial(n + 2 * k + 1,n) / (n + 2 * k + 1). - _ Seiichi Manyama _ , Jul 24 2023 ●

► [A174493] 1,3,15,102,861,8598,98547,1270160,18138601,283754826,4818884319,88186786020,1728395865021,36091833338174,799408841413051,18708996086926272,461095012437724881,11931573394008790290 ⋆ a(n) = coefficient of x ^ n / (n - 1)! in the 3 - fold iteration of x * exp(x). ● a(n) = Sum _{ k=0..n, j=0..n - k } C(n,k) * C(n - k,j) * (k + 1) ^ j * (k + 1 + j) ^ (n - k - j). ●

► [A079486] 3,15,103,879,8787,99061,1227369,16409937,233588249,3504149013,54963273921,895797910129 ⋆ Number of different solutions to a variant of the 3 - ball tennis ball problem. ● a(n) is the number of 2 X n matrices of positive integers, with the numbers in each row and column increasing, the numbers in column k less than or equal to 3k and no number used more than once. ●

► [A136092] 1,1,3,15,104,909,9449,112398,1489410,21562086,336086022,5577242292,97671172836,1792348213025,34268124834495,679376016769260,13911118850603610,293220749128031010 ⋆ Bisection of A138540. ● a(n) = Sum _{ j=0..n + 1 } 180 * (2n)! * (2j + 2)! * (2n - 3j + 2) / (j! * (j + 1)! * (j + 2)! * (j + 4)! * (n - j + 1)! * (n - j + 3)!) (conjectured). - _ Michael D. Weiner _ , May 11 2016 ●

► [A352395] 1,3,15,105,315,3465,45045,45045,765765,14549535,14549535,334639305,1673196525,5019589575,145568097675,4512611027925,4512611027925,4512611027925,166966608033225,166966608033225,6845630929362225,294362129962575675,294362129962575675,1383502010824105672 5 ⋆ Denominator of Sum _{ k=0..n } (- 1) ^ k / (2 * k + 1). ● a(n) = denominator((Psi(n + 3 / 2) - Psi((2 * n - (- 1) ^ n) / 4 + 1) - log(2) + Pi / 2) / 2), for n >= 0, with the Digamma function. See the above comment. ● a(n) = denominator(Pi / 4 + (- 1) ^ n * (Psi((n + 5 / 2) / 2) - Psi((n + 3 / 2) / 2)) / 4). - _ Vaclav Kotesovec _ , May 16 2022 ●

► [A350670] 1,3,15,105,315,3465,45045,45045,765765,14549535,14549535,334639305,1673196525,5019589575,145568097675,4512611027925,4512611027925,4512611027925,166966608033225,166966608033225,6845630929362225,294362129962575675,294362129962575675,1383502010824105672 5,968451407576873970 75 ⋆ Denominators of Sum _{ j=0..n } 1 / (2 * j + 1), for n >= 0. ● a(n) = denominator((Psi(n + 3 / 2) + gamma + 2 * log(2)) / 2), with the Digamma function Psi(z), and the Euler - Mascheroni constant gamma = A001620. See Abramowitz - Stegun, p. 258, 6.3.4. ● a(n) = denominator of (2 * H _{ 2 * n + 2 } - H _{ n + 1 }), where H _{ n } is the n - th Harmonic number. - _ G. C. Greubel _ , Jul 24 2023 ●

► [A267840] 0,0,0,3,15,105,525,3255,17703,112455,669735,4485195,29023995,205768563,1432735395,10728177915,79665069435,627587657595,4933313794683,40724759240235,336819780949995,2902978545030795,25135723046974155,225455477000793963 ⋆ Number of symmetric difference - closed 4 - sets consisting of the empty set and sets consisting of pairwise disjoint 2 - subsets of { 1,2,...,n } . ● a(n) = n! * sum(sum(sum((2 ^ (k - i - j)) / (k!) / (i - k)! / (j - k)! / (n - 2i - 2j + 2k)! / (delta(i, j) + delta(i, 2k) + 1)!, k=max(ceiling(i / 2), i + j - [n / 2])..min(j, [1 / 4 * (2i + 2j - 1)])), j=1..i), i=1..[n / 2]), where delta denotes the Kronecker delta function. ●

► [A074519] 3,15,107,855,7187,62175,547067,4861095,43437347,389373615,3496550027,31429887735,282673677107,2543086531455,22882895970587,205921649672775,1853172776742467,16677944639119695,150098449994264747 ⋆ a(n) = 1 ^ n + 5 ^ n + 9 ^ n. ● a(n) = 14 * a(n - 1) - 45 * a(n - 2) + 32 with a(0)=3, a(1)=15. - _ Vincenzo Librandi _ , Jul 21 2010 ●

► [A366180] 1,3,15,109,909,8184,77626,764226,7735878,80011063,841875232,8983175079,96977392945,1057262750608,11623867926024,128730566729686,1434752590885174,16080839356274157,181135636330594960,2049430159361529977,23280997677471432102 ⋆ G.f. A(x) satisfies A(x) = 1 / (1 - x) ^ 2 + x * A(x) ^ 3 / (1 - x) ^ 3. ● a(n) = Sum _{ k=0..n } binomial(n + 6 * k + 1,n - k) * binomial(3 * k,k) / (2 * k + 1). ●

► [A217061] 1,1,3,15,109,1053,12767,186763,3204313,63128665,1404963387,34867190823,954800951749,28600649870133,930325531322519,32658109219519843,1230609634110271921,49545182501048868145 ⋆ E.g.f. exp(A006351(x)). ● a(n) = sum(m=1..n, (sum(k=0..n - m, (n + k - 1)! * sum(j=0..k, 1 / (k - j)! * sum(l=0..j, (2 ^ (j - l) * (- 1) ^ (l + j) * stirling1(n - m - l + j,j - l)) / (l! * (n - m - l + j)!))))) / (m - 1)!), n>0, a(0)=1. ●

► [A109498] 1,3,15,111,951,8463,75975,683391,6149751,55346223,498112935,4483010271,40347080151,363123696783,3268113221895,29413018898751,264717169892151,2382454528636143,21442090756938855 ★ Number of closed walks of length 2n on the Heawood graph from a given node. ● a(n) = (9 ^ n + 6 * 2 ^ n) / 7. ●

► [A364621] 1,3,15,118,1125,11805,131431,1524090,18208749,222570985,27701296 27,34985756752,447243818573,5775955923428,75245253495035,987627627396792,13048147674230169,173382031819242855,2315662483861709467,31068798980975635130,418552735866147739185 ★ G.f. satisfies A(x) = 1 / (1 - x) ^ 2 + x * A(x) ^ 4. ● a(n) = Sum _{ k=0..n } binomial(n + 5 * k + 1,6 * k + 1) * binomial(4 * k,k) / (3 * k + 1). ●

► [A006454] 0,3,15,120,528,4095,17955,139128,609960,4726275,20720703,160554240,703893960,5454117903,23911673955,185279454480,812293020528,6294047334435,27594051024015,213812329916328,937385441796000,7263325169820735,31843510970040003,246739243443988680 ★ Solution to a Diophantine equation: each term is a triangular number and each term + 1 is a square. ● a(n) = 35 * (a(n - 2) - a(n - 4)) + a(n - 6). - _ Raphie Frank _ , Sep 28 2012 ● a(n) = (1 / 64) * (((4 + sqrt(2)) * (1 - (- 1) ^ (n + 1) * sqrt(2)) ^ (2 * floor((n + 1) / 2)) + (4 - sqrt(2)) * (1 + (- 1) ^ (n + 1) * sqrt(2)) ^ (2 * floor((n + 1) / 2)))) ^ 2 - 1. - _ Raphie Frank _ , Dec 20 2015 ● a(n) = ((8 * sqrt((b(n - 2) * (b(n - 2) + 1) / 2) + 1) + b(n - 4)) * (8 * sqrt((b(n - 2) * (b(n - 2) + 1) / 2) + 1) + b(n - 4) + 1) / 2). (End) ● a(n) = a(n - 1) + 34 * a(n - 2) - 34 * a(n - 3) - a(n - 4) + a(n - 5) for n > 4. ●

► [A229673] 1,3,15,126,1667,31966,828678,27535826,1128945382,55473589278,3193471420236,211517309562652 ★ The number of subsets of nonzero integers of cardinality n, produced as the steps in a computation starting with 1 and using the operations of multiplication, addition, or subtraction. ● a(n) >= 2 ^ (n - 1) * (n - 1)!. ●

► [A222390] 0,3,15,132,588,5031,22347,191064,848616,7255419,32225079,275514876,1223704404,10462309887,46468542291,397292260848,1764580902672,15086643602355,67007605759263,572895164628660,2544524437949340,21754929612286743,96624921036315675 ★ Nonnegative integers m such that 10 * m * (m + 1) + 1 is a square. ● a(n) = a(- n + 1) = a(n - 1) + 38 * a(n - 2) - 38 * a(n - 3) - a(n - 4) + a(n - 5). ● a(n) = - 1 / 2 + ((5 + t * (- 1) ^ n) * (3 - t) ^ (2 * floor(n / 2)) + (5 - t * (- 1) ^ n) * (3 + t) ^ (2 * floor(n / 2))) / 20, where t=sqrt(10). ●

► [A102556] 3,15,159,867,19239,107985,1222563,6965835,319153335,1835486085,21185534577,122622340677,2846090375067,16550504577861,192854402926251,1125503935556763,10525269398091387 9,615999836125850637,7219077361263238917,42347454581722163361,994637701798929524937 ★ Numerator of the probability that 2n - dimensional Gaussian random triangle has an obtuse angle. ● a(n) is the numerator of p(n) = Sum _{ k=n..2n - 1 } binomial(2n - 1,k) 3 ^ (2n - k) / 4 ^ (2n - 1). ●

► [A145272] 1,3,15,210,26565,358999410,64449908117864115 ★ First differences of successive iterated triangular numbers. ● a(n)=T(x(n - 1)) - x(n - 1) where x(n)=T(x(n - 1)) and T(x)=x * (x + 1) / 2. ●

► [A004002] 1,3,15,3814279 ★ Benford numbers: a(n)=e ^ e ^ ... ^ e (n times) rounded to nearest integer. ● a(n) = round(e ^ e ^ ... ^ e), where e occurs n times, a(0) = 1 (= e ^ 0). - _ Melissa O'Neill _ , Jul 04 2015 ●

► [A022126] 3,16,19,35,54,89,143,232,375,607,982,1589,2571,4160,6731,10891,17622,28513,46135,74648,120783,195431,316214,511645,827859 ★ Fibonacci sequence beginning 3, 16. ● a(0) = 3, a(1) = 16, a(n) = a(n - 2) + a(n - 1). ● a(n) = (2 ^ (- 1 - n) * ((1 - sqrt(5)) ^ n * (- 29 + 3 * sqrt(5)) + (1 + sqrt(5)) ^ n * (29 + 3 * sqrt(5)))) / sqrt(5). ● a(n) = a(n - 1) + a(n - 2) for n > 1. ● a(n) = Fibonacci(n + 6) - Fibonacci(n - 5). - _ Greg Dresden _ , Austen Sharrett, and Aoife Chow, Mar 03 2022 ●

► [A042075] 1,1,3,16,19,35,89,213,515,728,1243,6943,15129,22072,1030441,1052513,3135467,16729848,19865315,36595163,93055641,222706445,538468531,761174976,1299643507 ★ Denominators of continued fraction convergents to sqrt(561). ● a(n) = 1045570 * a(n - 14) - a(n - 28)for n>27. - _ Vincenzo Librandi _ , Jan 14 2014 ●

► [A041461] 1,1,3,16,19,282,301,1787,3875,5662,173735,179397,532529,2842042,3374571,50086036,53460607,317389071,688238749,1005627820,30857073349,31862701169,94582475687,504775079604,599357555291 ★ Denominators of continued fraction convergents to sqrt(246). ● a(n) = 177610 * a(n - 10) - a(n - 20) for n>19. - _ Vincenzo Librandi _ , Dec 18 2013 ●

► [A322413] 3,16,27,40,47,60,71,84,97,108,121,128,141,152,165,176,189,196,209,220,233,246,257,270,277 ★ Compound tribonacci sequence with a(n) = A278041(A278039(n)), for n >= 0. ● a(n) = C(B(n)) = C(B(n) + 1) - 7 = 2 * (A(n) + B(n)) + n + 1, for n >= 0, where A = A278040, B = A278039 and C = A278041. For a proof see the W. Lang link in A278040, Proposition 9, eq. (55). ●

► [A258717] 0,3,16,27,48,67,96,123,160,195,240,283,336,387,448,507,576,643,720,795,880,963,1056,1147,1248 ★ If n even then 2 * n ^ 2 - 4 * n else 2 * n ^ 2 - 4 * n - 3. ● a(n) = - a(n - 1) - 12 * n + 3 + 4 * n ^ 2, n>=3. - _ R. J. Mathar _ , Nov 07 2015 ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4) for n>5. ●

► [A339634] 3,16,30,72,178,444,1114,2808,7098,17984,45656,116106,295718,754226,1926060,4924188,12602416,32284214,82777240,212415744,545495716,1401849594,3604921774,9275890122,23881602058 ★ Number of final Tic - Tac - Toe positions on a (2 * n + 1) X 3 board that result in a tie. ● a(n) = [x ^ (2 * n + 1) * t ^ ceiling(3 * (2 * n + 1) / 2)] (4 * t ^ 17 * x ^ 11 + 4 * t ^ 16 * x ^ 11 + 8 * t ^ 16 * x ^ 10 + 12 * t ^ 15 * x ^ 10 + 6 * t ^ 15 * x ^ 9 + 8 * t ^ 14 * x ^ 10 + 8 * t ^ 14 * x ^ 9 + 8 * t ^ 13 * x ^ 9 - 2 * t ^ 13 * x ^ 8 + 6 * t ^ 12 * x ^ 9 - 16 * t ^ 12 * x ^ 8 - 2 * t ^ 11 * x ^ 8 - 26 * t ^ 11 * x ^ 7 - 26 * t ^ 10 * x ^ 7 - 19 * t ^ 10 * x ^ 6 - 38 * t ^ 9 * x ^ 6 - 7 * t ^ 9 * x ^ 5 - 19 * t ^ 8 * x ^ 6 - 13 * t ^ 8 * x ^ 5 - 13 * t ^ 7 * x ^ 5 - t ^ 7 * x ^ 4 - 7 * t ^ 6 * x ^ 5 + 10 * t ^ 6 * x ^ 4 - t ^ 5 * x ^ 4 + 16 * t ^ 5 * x ^ 3 + 16 * t ^ 4 * x ^ 3 + 9 * t ^ 4 * x ^ 2 + 18 * t ^ 3 * x ^ 2 + 9 * t ^ 2 * x ^ 2) / (t ^ 12 * x ^ 8 + t ^ 11 * x ^ 7 + t ^ 10 * x ^ 7 + t ^ 9 * x ^ 6 - 2 * t ^ 6 * x ^ 4 - t ^ 5 * x ^ 3 - t ^ 4 * x ^ 3 - t ^ 3 * x ^ 2 + 1) for n >= 1. ●

► [A081270] 3,16,38,69,109,158,216,283,359,444,538,641,753,874,1004,1143,1291,1448,1614,1789,1973,2166,2368,2579,2799 ★ Diagonal of triangular spiral in A051682. ● a(n) = 3C(n, 0) + 13C(n, 1) + 9C(n, 2); binomial transform of (3, 13, 9, 0, 0, 0, ...). ● a(n) = (9n ^ 2 + 17n + 6) / 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Jul 08 2012 ●

► [A147874] 0,3,16,39,72,115,168,231,304,387,480,583,696,819,952,1095,1248,1411,1584,1767,1960,2163,2376,2599,2832 ★ a(n) = (5 * n - 7) * (n - 1). ● a(n) = 10 * (n - 2) + 3 + a(n - 1). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A255211] 0,3,16,46,100,185,308,476,696,975,1320,1738,2236,2821,3500,4280,5168,6171,7296,8550,9940,11473,13156,14996,17000 ★ a(n) = n * (n + 1) * (7 * n + 2) / 6. ● a(n) = Sum _{ j=0..n - 1 } (n - j) * (3 * n - 2 * j) = Sum _{ j=1..n } j * (n + 2 * j) for n>0. ●

► [A172482] 3,16,47,104,195,328,511,752,1059,1440,1903,2456,3107,3864,4735,5728,6851,8112,9519,11080,12803,14696,16767,19024,21475 ★ a(n) = (1 + n) * (9 + 11 * n + 4 * n ^ 2) / 3. ● a(n) = 4 * a(n) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ● a(n) mod 10 = 3, 6, 7, 4, 5, 8, 1, 2, 9, 0 (and repeat periodically). ●

► [A362007] 0,0,3,16,48,107,203,347,551,828,1192,1658,2242,2961,3833,4877,6113,7562,9246,11188,13412,15943,18807,22031,25643 ★ Fourth Lie - Betti number of a path graph on n vertices. ● a(1) = a(2) = 0, a(3) = 3, a(n) = (n ^ 4 + 18 * n ^ 3 - 97 * n ^ 2 + 174 * n - 168) / 24 for n >= 4. ●

► [A212564] 0,0,0,3,16,48,114,229,416,696,1100,1655,2400,3368,4606,6153,8064,10384,13176,16491,20400,24960,30250,36333,43296 ★ Number of (w,x,y,z) with all terms in { 1,...,n } and w + x > 2y + 2z. ● a(n) = 3 * a(n - 1) - a(n - 2) - 5 * a(n - 3) + 5 * a(n - 4) + a(n - 5) - 3 * a(n - 6) + a(n - 7). ● a(n) = (1 / 96) * (2 * n * (3 * ((- 1) ^ n - 1) + (n - 2) * n * (7 * n - 4)) - 9 * (- 1) ^ n + 9). ●

► [A004320] 0,3,16,50,120,245,448,756,1200,1815,2640,3718,5096,6825,8960,11560,14688,18411,22800,27930,33880,40733,48576,57500,67600 ★ a(n) = n * (n + 1) * (n + 2) ^ 2 / 6. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Wesley Ivan Hurt _ , Oct 28 2014 ●

► [A000574] 3,16,51,126,266,504,882,1452,2277,3432,5005,7098,9828,13328,17748,23256,30039,38304,48279,60214,74382,91080,110630,133380,159705 ★ Coefficient of x ^ 5 in expansion of (1 + x + x ^ 2) ^ n. ● a(n) = 3 * binomial(n + 2,5) - 2 * binomial(n + 1,5). ● a(n) = binomial(n + 1, 4) * (n + 12) / 5 = 3 * b(n - 3) - 2 * b(n - 4), with b(n)=binomial(n + 5, 5); cf. A000389. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). - _ Vincenzo Librandi _ , Jun 10 2012 ● a(n) = 3 * binomial(n, 3) + 4 * binomial(n, 4) + binomial(n, 5). - _ Vladimir Shevelev _ and _ Peter J. C. Moses _ , Jun 22 2012 ● a(n) = GegenbauerC(N, - n, - 1 / 2) where N = 5 if 5<n else 2 * n - 5. - _ Peter Luschny _ , May 10 2016 ●

► [A041233] 1,3,16,51,1138,3465,18463,58854,1313251,3998607,21306286,67917465,1515490516,4614389013,24587435581,78376695756,1748874742213,5325000922395,28373879354188,90446638984959,2018199937023286,6145046450054817,32743432187297371 ★ Denominators of continued fraction convergents to sqrt(128). ● a(n) = 1154 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Dec 13 2013 ●

► [A027540] 3,16,55,156,399,960,2223,5020,11143,24432,53079,114492,245535,524032,1113823,2358972,4980375,10485360,22019655,46136860,96468463,201326016,419429775,872414556,1811938599 ★ Second diagonal of A027537. ● a(n) = (n + 1) * (2 ^ n - n - 1). - _ Vladeta Jovovic _ , Aug 18 2002 ● a(n) = Sum _{ k=0..n } Sum _{ i=0..n } (i - k) * C(n - k,i - 2). - _ Wesley Ivan Hurt _ , Sep 19 2017 ●

► [A073999] 0,0,3,16,60,240,1008,4096,16320,65280,261888,1048576,4193280,16773120,67104768,268435456,1073725440,4294901760,17179803648,68719476736,274877644800,1099510579200,4398045462528,17592186044416,70368739983360 ★ Number of strings of length n over GF(4) with trace 1 and subtrace x where x = RootOf(z ^ 2 + z + 1). ● a(n; t, s) = a(n - 1; t, s) + a(n - 1; t - 1, s - (t - 1)) + a(n - 1; t - 2, s - 2(t - 2)) + a(n - 1; t - 3, s - 3(t - 3)) where t is the trace and s is the subtrace. Note that all operations involving operands t or s are carried out over GF(4). ● a(n) = - 2 ^ (n - 3) + ((- 2i) ^ n + (2i) ^ n + 4 ^ n) / 16 with i=sqrt(- 1). - _ R. J. Mathar _ , Nov 18 2011 ●

► [A155160] 3,16,60,384,1680,12288,60480,491520,2661120,23592960,138378240,1321205760,8302694400,84557168640,564583219200,6088116142080,42908324659200,487049291366400,3604299271372800,42860337640243200 ★ a(n) = 2 ^ n * (n + 3)!!. ● a(n) = 2 ^ n * (n + 3)!!. ● a(2 * n) = 2 ^ (n - 1) * (2 * n + 3)! / (n + 1)!. ● a(2 * n + 1) = 2 ^ (4 * n + 3) * (n + 2)!. (End) ●

► [A355645] 1,3,16,61,206,659,2052,6297,19162,58015,175088,527333,1586118,4766571,14316124,42981169,129009074,387158327,1161737160,3485735805,10458256030,31376865283,94134790196,282412759241,847255054986 ★ The number of regions in the G - Shi arrangement when G is the cycle graph C _ n. ● a(n) = 3 ^ n - 2 ^ n - n for n >= 2. ●

► [A323941] 1,3,16,62,275,1121,4584,18012,69573,262495,974704,3562714,12859127,45881213,162093320,567579192,1971791241,6801382203,23309839120,79421200630,269160513115,907726206233,3047449980392,10188384020372,33930772031565 ★ Total number of isomers (nonisomorphic systems) of unbranched tri - 4 - catafusenes as a function of the number of hexagons (see Cyvin et al. (1996) for precise definition). ● a(n) = I(r = n, k = 3) in the formula above in the comments (for n >= 3). - _ Petros Hadjicostas _ , May 26 2019 ●

► [A267036] 1,3,16,63,256,1023,4096,16383,65536,262143,1048576,4194303,16777216,67108863,268435456,1073741823,4294967296,17179869183,68719476736,274877906943,1099511627776,4398046511103,17592186044416,70368744177663,281474976710656 ★ Decimal representation of the n - th iteration of the "Rule 85" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = ((- 1) ^ n - 1) / 2 + 4 ^ n. ● a(n) = 4 * a(n - 1) + a(n - 2) - 4 * a(n - 3) for n>2. ●

► [A037451] 0,1,3,16,63,275,1152,4901,20727,87856,372075,1576279,6676992,28284569,119814747,507544400,2149990983,9107510539,38580029568,163427634589,692290558575,2932589884016,12422650070163,52623190204271,222915410823168 ★ a(n) = Fibonacci(n) * Fibonacci(2 * n). ● a(n + 4) = 3 * a(n + 3) + 6 * a(n + 2) - 3 * a(n + 1) - a(n). ● a(n) = (1 / 5) * (Lucas(3 * n) - (- 1) ^ n * Lucas(n)) = (1 / 5) * (Lucas(3 * n) - Lucas(- n)). In general, for r = s (mod 2) the sequence Lucas(r * n) - Lucas(s * n) is a divisibility sequence. Cf. A273622. - _ Peter Bala _ , May 27 2016 ● a(n) = (- (1 / 2 * (- 1 - sqrt(5))) ^ n + (2 - sqrt(5)) ^ n - (1 / 2 * (- 1 + sqrt(5))) ^ n + (2 + sqrt(5)) ^ n) / 5. - _ Colin Barker _ , Jun 03 2016 ●

► [A293579] 3,16,66,248,892,3136,10888,37536,128880,441472,1510176,5161856,17635264,60233728,205697152,702386688,2398283520,8188622848,27958448640,9545759744 0,325915589632,1112751357952,3799182641152,12971244625920,44286646775808 ⋆ Number of compositions of n where each part i is marked with a word of length i over a binary alphabet whose letters appear in alphabetical order and both letters occur at least once in the composition. ● a(n) = 6 * a(n - 1) - 10 * a(n - 2) + 4 * a(n - 3). ● a(n) = 2 ^ (n / 2 - 2) * ((sqrt(2) + 1) ^ (n + 1) - (sqrt(2) - 1) ^ (n + 1)) - 2 ^ n. ●

► [A179600] 1,3,16,66,304,1332,5968,26472,117952,524496,2334400,10385568,46213120,205619520,914912512,4070872704,18113348608,80595074304,358607125504,1595618388480,7099688329216,31589989045248,140559334936576 ⋆ Eight white kings and one red king on a 3 X 3 chessboard. G.f.: (1 + x) / (1 - 2 * x - 10 * x ^ 2 - 4 * x ^ 3). ● a(n) = 2 * a(n - 1) + 10 * a(n - 2) + 4 * a(n - 3) with a(0)=1, a(1)=3 and a(2)=16. ● a(n) = (4 * (- 1 / 2) ^ (- n) + (1 + sqrt(6)) * A ^ (- n - 1) + (1 - sqrt(6)) * B ^ (- n - 1)) / 20 with A = (- 1 + sqrt(6) / 2) and B = (- 1 - sqrt(6) / 2). ●

► [A370248] 1,1,3,16,67,276,1200,5293,23427,104425,468428,2110725,9546256,43315546,197088195,898910916,4108495491,18812770011,86285313327,396332663094,1822878714492,8394131895424,38696042930251,178561943852670,824720550229584 ⋆ Coefficient of x ^ n in the expansion of (1 / (1 - x) * (1 + x ^ 3) ^ 2) ^ n. ● a(n) = Sum _{ k=0..floor(n / 3) } binomial(2 * n,k) * binomial(2 * n - 3 * k - 1,n - 3 * k). ●

► [A370274] 1,1,3,16,67,276,1212,5391,24003,107719,486728,2208735,10059868,45970367,210657177,967636566,4454109123,20540731356,94882599285,438931979661,2033217678792,9429562243530,43779688919145,203463271733010,946445226206940 ⋆ Coefficient of x ^ n in the expansion of 1 / ((1 - x) * (1 - x ^ 3) ^ 2) ^ n. ● a(n) = Sum _{ k=0..floor(n / 3) } binomial(2 * n + k - 1,k) * binomial(2 * n - 3 * k - 1,n - 3 * k). ●

► [A015524] 0,1,3,16,69,319,1440,6553,29739,135088,613437,2785927,12651840,57457009,260933907,1185000784,5381539701,24439624591,110989651680,504046327177,2289066543291,10395523920112,47210037563373 ⋆ a(n) = 3 * a(n - 1) + 7 * a(n - 2). ● a(n) = 14 ^ n * (1 / A ^ n - (- 1) ^ n / B ^ n) / sqrt(37), where A = sqrt(37) - 3 = A010491 - 3 and B = sqrt(37) + 3 = A010491 + 3. (End) ● a(n) = (7 * (111 + 23 * sqrt(37)) * (1 / 2 * (3 + sqrt(37))) ^ n + (2553 + 431 * sqrt(37)) * (1 / 2 (3 - sqrt(37))) ^ n) / (518 * (45 + 8 * sqrt(37))). - _ Harvey P. Dale _ , Jul 04 2011 ●

► [A038602] 3,16,73,316,1334,5552,22901,93892,383290,1559680,6331098,25649976,103758828,419195552,1691825933,6822051092,27488564498,110691186272,445487285678,1792047789512,7205785665908,28963557761312 ⋆ One half of convolution of central binomial coefficients A000984(n) with A000984(n + 2), n >= 0. ● a(n) = 2 ^ (2 * n + 3) - (3 * n + 5) * C(n + 1), C(n): Catalan numbers A000108. ●

► [A221829] 0,3,16,73,333,1519,6929,31607,144177,657671,3000001,13684663,62423313,284747239,1298889569,5924953367,27026987697,123285031751,562371183361,2565285853303,11701686899793,53377862792359,243485940162209 ⋆ Number of 2 X n arrays of occupancy after each element moves to some horizontal, vertical or antidiagonal neighbor, without 2 - loops or left turns. ● a(n) = (2 ^ (- 4 - n) * ((5 - sqrt(17)) ^ n * (- 7 + sqrt(17)) + (5 + sqrt(17)) ^ n * (7 + sqrt(17))) / sqrt(17) for n>2. ●

► [A207836] 0,3,16,75,336,1463,6240,26199,108640,445995,1815792,7341347,29505840,117982815,469672384,1862393775,7359403968,28991540051,113892526800,446305331451,1744950085648,6808253393415,26513475730464,103072540115975,400058834841120 ⋆ a(n) = n * A052530(n) / 2. ● a(n) = 8 * a(n - 1) - 18 * a(n - 2) + 8 * a(n - 3) - a(n - 4) for n>5. - _ Colin Barker _ , Jun 08 2015 ●

► [A372417] 1,1,3,16,75,336,1536,7155,33627,158974,755508,3606648,17281776,83068766,400368741,1934204661,9363509531,45411373098,220593832062,1073127878085,5227288727580,25492636911240,124457166046832,608207193661734,2974913417047440 ⋆ Coefficient of x ^ n in the expansion of ((1 - x + x ^ 3) ^ 2 / (1 - x) ^ 3) ^ n. ● a(n) = Sum _{ k=0..floor(n / 3) } binomial(2 * n,k) * binomial(2 * n - 2 * k - 1,n - 3 * k). ●

► [A003769] 3,16,75,361,1728,8281,39675,190096,910803,4363921,20908800,100180081,479991603,2299777936,11018898075,52794712441,252954664128,1211978608201,5806938376875,27822713276176,133306628004003,638710426743841,3060245505715200 ⋆ Number of perfect matchings (or domino tilings) in K _ 4 X P _ n. ● a(n) = 4a(n - 1) + 4a(n - 2) - a(n - 3), n>3. ● a(n) = 2 ^ (- 1 - n) * ((- 1) ^ n * 2 ^ (2 + n) + (5 - sqrt(21)) ^ (1 + n) + (5 + sqrt(21)) ^ (1 + n)) / 7. - _ Colin Barker _ , Dec 16 2017 ●

► [A005386] 1,3,16,75,361,1728,8281,39675,190096,910803,4363921,20908800,100180081,479991603,2299777936,11018898075,52794712441,252954664128,1211978608201,5806938376875,27822713276176,133306628004003,638710426743841,3060245505715200 ⋆ Area of n - th triple of squares around a triangle. ● a(n) = 4 * a(n - 1) + 4 * a(n - 2) - a(n - 3), a(1)=1, a(2)=3, a(3)=16. ● a(n) = |U(n - 1, sqrt(3) * i / 2)| ^ 2, where U(n,x) denotes the Chebyshev polynomial of the second kind. ● a(n) = the bottom left entry of the 2 X 2 matrix T(n, M), where M is the 2 X 2 matrix [0, 5 / 2; 1, 3 / 2] and T(n,x) denotes the Chebyshev polynomial of the first kind. ●

► [A371350] 0,0,0,1,3,16,78,397,2037,10820,58349,320824,1790189,10125858,57938771,334941363,1953830203,11489589280,68053757016,405714603234,2433001205088,14668531344984,88869454457853,540834122500464 ⋆ Number of chiral pairs of polyominoes composed of n tetrahedral cells of the hyperbolic regular tiling with Schläfli symbol { 3,3,oo } . ● a(n) = h(3,n) - H(3,n) in Table 8 of Hering link. ●

► [A055842] 1,3,16,80,400,2000,10000,50000,250000,1250000,6250000,31250000,156250000,781250000,3906250000,19531250000,97656250000,488281250000,2441406250000,12207031250000,61035156250000,305175781250000,1525878906250000,7629394531250000 ⋆ Expansion of (1 - x) ^ 2 / (1 - 5 * x). ● a(n) = 16 * 5 ^ (n - 2), a(0)=1, a(1)=3. ● a(n) = 5 * a(n - 1) + (- 1) ^ n * binomial(2,2 - n). ●

► [A037661] 3,16,80,403,2016,10080,50403,252016,1260080,6300403,31502016,157510080,787550403,3937752016,19688760080,98443800403,492219002016,2461095010080,12305475050403,61527375252016,307636876260080 ⋆ Base 5 digits are, in order, the first n terms of the periodic sequence with initial period 3,1,0. ● a(n) = 5 * a(n - 1) + a(n - 3) - 5 * a(n - 4). - _ Wesley Ivan Hurt _ , Sep 05 2022 ●

► [A372324] 0,0,1,3,16,80,544,3808,32768,294912,3096576,34062336,423493632,5505417216,79199207424,1187988111360,19423989596160,330207823134720,6050282848911360,114955374129315840,2333627101111910400,49006169123350118400,1091943568123940044800 ⋆ Expansion of e.g.f. arcsin(x) ^ 2 / (2 * (1 - x)). ● a(2 * n + 1) = (2 * n + 1) * a(2 * n). ● a(2 * n) = (2 * n) * (2 * n - 1) * a(2 * n - 2) + ((2 * n - 2)!!) ^ 2. ● a(n) = (n!) * Sum _{ k=0..(n - 2) / 2 } ((2 * k)!!) / (((2 * k + 1)!!) * (2 * k + 2)). ●

► [A290587] 3,16,81,265,729,1786,4060,8833,18786,39586,83273,175463,370615,784290,1661122,3517669,7441936,15720066,33145015,69744491,146458013,306933394,642004440,1340415817,2793811726 ⋆ Number of irredundant sets in the n - Andrasfai graph. ● a(n) = (- 45 * (8 + 3 * 2 ^ n) + (1772 + 405 * 2 ^ n) n - 1010 * n ^ 2 + 25 * n ^ 3 + 50 * n ^ 4 + 3 * n ^ 5) / 120 for n > 3. ● a(n) = 10 * a(n - 1) - 43 * a(n - 2) + 104 * a(n - 3) - 155 * a(n - 4) + 146 * a(n - 5) - 85 * a(n - 6) + 28 * a(n - 7) - 4 * a(n - 8) for n > 11. ●

► [A020871] 0,3,16,81,392,1815,8112,35301,150544,632043,2620880,10759353,43804824,177105279,711809392,2846259405,11330543648,44929049811,177540878736,699402223137,2747583822760,10766828545767,42095796462896,164244726238389,639620518118448 ⋆ Number of spanning trees in a Moebius ladder M _ n with 2n vertices. ● a(n) = (n / 2) * (2 + (2 + sqrt(3)) ^ n + (2 - sqrt(3)) ^ n). ●

► [A041707] 1,3,16,83,265,10153,30724,163773,849589,2712540,103926109,314490867,1676380444,8696393087,27765559705,1063787661877,3219128545336,17159430388557,89016280488121,284208271852920,1088893061089908 1,32951000104550163,175643931133649896 ⋆ Denominators of continued fraction convergents to sqrt(373). ● a(n) = 10236 * a(n - 5) + a(n - 10) for n>9. - _ Vincenzo Librandi _ , Dec 23 2013 ●

► [A030983] 0,3,16,83,442,2420,13566,77539,450340,2650635,15777450,94815732,574518536,3506232184,21533144486,132980242755,825304177544,5144743785545,32199189658020,202252227085755,1274578959894450,8056409137803600,51063344718826440 ⋆ Number of rooted noncrossing trees with n nodes such that root has degree 1 and the child of the root has degree at least 2. ● a(n) = (19 * n - 31) * binomial(3 * n - 8, n - 4) / (n - 1) / (2 * n - 3). ● a(n) = binomial(3 * n - 5, 2 * n - 3) / (n - 1) - 2 * binomial(3 * n - 8, 2 * n - 5) / (n - 2), n > 2. ● a(n) = Sum _{ i=1..n - 3 } binomial(3 * i - 2, 2 * i - 1) * binomial(3 * (n - i - 2), 2 * (n - i - 2) - 1) / (i * (n - i - 2)). (End) ●

► [A373277] 1,3,16,84,480,2792,16807,102900,640528,4035120,25679568,164775800,1064714400,6920635197,45214871360,296722542900,1954878268800,12923917122536,85705978837392,569944757250960,3799631728452112,25388448354582216,169992219503608176 ⋆ Number of monic irreducible polynomials over GF(7) with fixed nonzero trace. ● a(n) = 1 / (7 * n) * Sum _{ d|n, gcd(d,7)=1 } mu(d) * 7 ^ (n / d). ●

► [A278681] 3,16,85,451,2392,12686,67280,356818,1892376,10036172,53226604,282286052,1497097488,7939821584,42108658448,223322287224,1184384537744,6281355751296,33313023614352,176674843181968,936990907061504,4969309405367264,26354616443092800,139771093164846816,741272730213321216 ⋆ Pisot sequence T(3,16). ● a(n) = floor(a(n - 1) ^ 2 / a(n - 2)), a(0) = 3, a(1) = 16. ● a(n) = 6 * a(n - 1) - 4 * a(n - 2) + 2 * a(n - 3) - 2 * a(n - 4). (End) ●

► [A163604] 3,16,86,464,2508,13568,73432,397504,2151984,11650816,63078752,341518592,1849046208,10011109376,54202228096,293462293504,1588867154688,8602465128448,46575580861952,252170135097344,1365302948711424,7392041698328576,40022092304668672 ⋆ a(n) = ((3 + 2 * sqrt(2)) * (4 + sqrt(2)) ^ n + (3 - 2 * sqrt(2)) * (4 - sqrt(2)) ^ n) / 2. ● a(n) = 8 * a(n - 1) - 14 * a(n - 2) for n > 1; a(0) = 3, a(1) = 16. ●

► [A146963] 1,3,16,90,508,2868,16192,91416,516112,2913840,16450816,92877216,524361664,2960415552,16713769984,94361788800,532743192832,3007735579392,16980927090688,95870091385344,541258694130688 ⋆ a(n) = ((3 + sqrt(7)) ^ n + (3 - sqrt(7)) ^ n) / 2. ● a(n) = 6 * a(n - 1) - 2 * a(n - 2) with a(0)=1, a(1)=3. ●

► [A130744] 0,3,16,90,576,4200,34560,317520,3225600,35925120,435456000,5708102400,80472268800,1214269056000,19527937228800,333456963840000,6025763487744000,114887039275008000,2304854534062080000 ⋆ a(n) = n * (n + 2) * n!. ● a(n) = (n + 2)! - (n + 1)! - n! [from Orlovsky's Mathematica - code]. ●

► [A221764] 0,3,16,92,536,3125,18216,106174,618832,3606823,21022112,122525856,714133032,4162272345,24259501048,141394733954,824108902688,4803258682187,27995443190448,163169400460516,951020959572664 ⋆ Number of n X 3 arrays of occupancy after each element moves to some horizontal or vertical neighbor, without 2 - loops or left turns. ● a(n) = (40 + sqrt(2) * ((81 - 56 * sqrt(2)) * (3 + 2 * sqrt(2)) ^ n - (3 - 2 * sqrt(2)) ^ n * (81 + 56 * sqrt(2))) - 8 * (1 + n)) / 32. ●

► [A371742] 1,3,16,92,551,3380,21065,132771,843944,5399802,34731776,224361283,1454557294,9458829681,61670895633,403003997300,2638776935215,17308508054848,113709379928689,748069400432262,4927608724973776,32495826854732633,214521754579553129 ⋆ a(n) = Sum _{ k=0..floor(n / 2) } binomial(3 * n - k, n - 2 * k). ● a(n) = [x ^ n] 1 / ((1 - x - x ^ 2) * (1 - x) ^ (2 * n)). ●

► [A137644] 1,3,16,95,591,3780,24620,162423,1081780,7258053,48982176,332140328,2261099491,15444137880,105789736896,726426836103,4998885106599,34464824536500,238017084356680,1646234203000485,11401464090042224,79060352485691272,548829398923188036 ⋆ a(n) = Sum _{ k=0..n } C(n + k,k) * C(n + k,n - k). ● a(n) = 3F2({- n, n + 1, n + 1 } ; { 1 / 2, 1 })(- (1 / 4)). - _ Olivier Gérard _ , Apr 23 2009 ●

► [A181067] 1,3,16,95,606,4032,27616,193167,1372930,9881498,71846160,526764680,3889340560,28888634400,215680108416,1617467908751,12177754012458,92004463332486,697263463622080,5298985086555090,40371796982444356 ⋆ a(n) = Sum _{ k=0..n - 1 } binomial(n - 1,k) ^ 2 * binomial(n,k). ● a(n) = 3F2([1 - n, 1 - n, - n], [1, 1], - 1). - _ Pierre - Louis Giscard _ , Jul 20 2013 ● a(n) = n * hypergeometric([- n + 1, - n + 1, - n + 1], [1,2], - 1) for n > 0. - _ Emanuele Munarini _ , Sep 27 2016 ● a(n) = Sum _{ k=0..n - 1 } ((n - k) / n) ^ 2 * binomial(n,k) ^ 3. - _ G. C. Greubel _ , Apr 05 2021 ●

► [A006347] 1,0,1,3,16,95,666,5327,47944,479439,5273830,63285959,822717468,11518044551,172770668266,2764330692255,46993621768336,845885191830047,16071818644770894,321436372895417879,6750163830803775460 ★ a(n) = (n + 1) a(n - 1) + (- 1) ^ n. ● a(n) = round((1 / 2 - exp(- 1)) * (n + 1)!). - _ Benoit Cloitre _ , Sep 24 2006 ● a(n) = n(a(n - 1) + a(n - 2)), n > 2. - _ Gary Detlefs _ , Apr 10 2010 ● a(n) = 1 / 2 * (n + 1)! - floor(((n + 1)! + 1) / e). - _ Gary Detlefs _ , Apr 16 2010 ●

► [A074553] 3,16,98,664,4802,36136,278498,2177464,17174402,136190536,1083566498,8638939864,68964148802,550978111336,4404154809698,35214904015864,281627607648002,2252562882278536,18018213594168098,144134262724445464 ★ a(n) = 3 ^ n + 5 ^ n + 8 ^ n. ● a(n) = 16 * a(n - 1) - 79 * a(n - 2) + 120 * a(n - 3). ●

► [A246056] 1,3,16,99,681,4950,37303,288399,2272318,18167553,146950227,1199921310,9875193549,81811617237,681621711306,5706874227051,47985527200311,405002888376840,3429714479025247,29130993220171449,248095567594494634,2118053534177686959,18122259456592141785 ★ G.f.: Sum _{ n>=0 } x ^ n / (1 - 2 * x) ^ (2 * n + 1) * [Sum _{ k=0..n } C(n,k) ^ 2 * 2 ^ k * x ^ k] * [Sum _{ k=0..n } C(n,k) ^ 2 * 3 ^ k * x ^ k]. ● a(n) = Sum _{ k=0..[n / 2] } 3 ^ k * Sum _{ j=0..n - 2 * k } C(n - k, k + j) ^ 2 * C(k + j, j) ^ 2 * 2 ^ j. ●

► [A360638] 1,3,16,100,593,3497,20316,116378,658214,3679450,20350028,111459648,605060633,3257784589,17408647968,92378535290,487031130699,25521974857,13298890952222,68930923717598,355507581655752,1824924721216084,9326440815314046,47464093855706540 ★ Number of sets of nonempty words over binary alphabet where each letter occurs n times. ● a(n) mod 2 = 1 <=> n in { A080277 } U { 0 } . ●

► [A369620] 1,3,16,100,692,5099,39240,311700,2536490,21037102,177176745,1511211409,13027296723,113319727772,993422328313,8768003882546,77848008692270,694828468698510,6230785015298952,56109079416527835,507188912618646021,4600432953729579585 ★ Expansion of (1 / x) * Series _ Reversion(x / (1 / (1 - x) ^ 3 + x ^ 2)). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 2) } binomial(n + 1,k) * binomial(4 * n - 5 * k + 2,n - 2 * k). ●

► [A000949] 1,1,3,16,101,756,6607,65794,733833,9046648,121961051,1782690174,28055070397,472594822324,8479144213191,161340195463066,3243707386310033,68679247688467056,1526976223741111987,35557878951515668726,865217354118762060241 ★ Number of forests with n nodes and height at most 2. ● a(n) = n! * sum(m=1..n - 1, sum(k=1..n - m, (k ^ (n - m - k) * m ^ k) / (k! * (n - m - k)!)) / m!) + 1. - _ Vladimir Kruchinin _ , May 28 2011 ●

► [A278429] 1,3,16,102,699,4973,36194,267480,1998565,15057255,114179652,870351386,6662847871,51189449457,394476780694,3047878296556,23602623675273,183142111511819,1423578146798168,11082963785614926,86405502413568259 ★ a(n) = Sum _{ k=0..n } binomial(k + n - 2,k) * binomial(2 * n + 1,k + n + 1). ● a(n) = binomial(2n + 1, n + 1) * 2F1(n - 1, - n; n + 2; - 1). - _ Jean - François Alcover _ , Nov 22 2016 ●

► [A365752] 1,3,16,103,735,5592,44452,364815,3067558,26290517,228819168,2016953848,17968790029,161536295244,1463535347928,13349907110367,122499957767130,1130001670577730,10472708110616136,97468774074103041,910582642690819351 ★ Expansion of (1 / x) * Series _ Reversion(x * (1 + x) * (1 - x) ^ 4). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..n } (- 1) ^ k * binomial(n + k,k) * binomial(5 * n - k + 3,n - k). ●

► [A074542] 3,16,104,736,5408,40576,308864,2377216,18457088,144295936,1134209024,8952733696,70896263168,562816516096,4476410691584,35654557106176,284296086683648,2268726473261056,18115958466412544,144724547816390656 ★ a(n) = 2 ^ n + 6 ^ n + 8 ^ n. ● a(n) = 16 * a(n - 1) - 76 * a(n - 2) + 96 * a(n - 3). - _ Wesley Ivan Hurt _ , Jun 26 2022 ●

► [A366050] 1,3,16,104,750,5769,46373,384885,3273118,28372354,249762585,2226782078,20065651123,182457467898,1672073116401,15427427247088,143191280370438,1336062703751262,12524930325385008,117910257665608080,1114233543986585741 ★ Expansion of (1 / x) * Series _ Reversion(x * (1 - x) ^ 4 / (1 - x + x ^ 2)). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 2) } binomial(n + 1,k) * binomial(4 * n - k + 2,n - 2 * k). ●

► [A368934] 1,3,16,104,751,5789,46656,388377,3313304,28816513,254548840,2277498340,20596833817,187974816142,1729033498416,16012809644088,149186508912927,1397300099214753,13149137686976324,124262625068365924,1178796712807563025 ★ Expansion of (1 / x) * Series _ Reversion(x * (1 - x) ^ 2 * (1 - x - x ^ 2)). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 2) } binomial(n + k,k) * binomial(4 * n - k + 2,n - 2 * k). ●

► [A344216] 1,3,16,104,768,6336,57888,581472,6379200,75977280,977045760,13499930880,199537067520,3142504512000,52546707763200,929908914278400,17366044153651200,341336836618444800,7044417438363648000 ★ a(n) = n! * ((n + 1) / 2 + 2 * Sum _{ k=2..n - 1 } (n - k) / (k + 1)). ● a(n) = n! * [x ^ n] (3 - 8 * x - 4 * log(1 - x)) / (2 * (x - 1) ^ 2). ● a(n) = ((2 * n ^ 2 - 5 * n - 1) * a(n - 1) - (n ^ 3 - 3 * n ^ 2 + 2 * n) * a(n - 2)) / (n - 3) for n >= 4. (End) ●

► [A110903] 0,0,0,3,16,105,672,4935,39936,361935,3624960,39906405,478955520,6226885665,87177646080,1307672340975,20922779566080,355687393636575,6402373519933440,121645099754102925,2432902004460748800,51090942157960129425,1124000727695858073600 ★ Difference between the factorial of n and the double factorial of n. ● a(n) = n! - n!!. ●

► [A206351] 1,3,16,105,715,4896,33553,229971,1576240,10803705,74049691,507544128,3478759201,23843770275,163427632720,1120149658761,7677619978603,52623190191456,360684711361585,2472169789339635 ★ a(n) = 7 * a(n - 1) - a(n - 2) - 4 with a(1)=1, a(2)=3. ● a(n) = 4 / 5 + 1 / 10 * ((7 / 2 - 3 / 2 * sqrt(5)) ^ (n - 1) + (7 / 2 + 3 / 2 * sqrt(5)) ^ (n - 1)) + 1 / 10 * sqrt(5) * ((7 / 2 + 3 / 2 * sqrt(5)) ^ (n - 1) - (7 / 2 - 3 / 2 * sqrt(5)) ^ (n - 1)). - _ Paolo P. Lava _ , Feb 07 2012 ● a(n) = (Fibonacci(2 * n - 2) + 1 / Lucas(2 * n - 2)) * (Fibonacci(2 * n - 1) + 1 / Lucas(2 * n - 1)). - _ Peter Bala _ , Sep 03 2022 ●

► [A085614] 1,3,16,105,768,6006,49152,415701,3604480,31870410,286261248,2604681690,23957864448,222399744300,2080911654912,19604537460045,185813170126848,1770558814528770,16951376923852800,162984598242674670 ★ Number of elementary arches of size n. ● a(n) = 2 ^ n * (3 * n)!! / ((n + 1)! * n!!). - Max im Krikun (krikun(AT)iecn.u - nancy.fr), May 25 2007 ● a(n) = 4 ^ n Gamma((3 * n + 2) / 2) / (Gamma((n + 2) / 2) * (n + 1)!). ● a(n) = (4 ^ n * ((n + 2) / 2) _ n) / (n + 1)!, where (x) _ k is the Pochhammer symbol. (End) ●

► [A215931] 1,3,16,105,770,6048,49764,423423,3695120,32891430,297473956,2725789248,25251200716,236101791900,2225241057600,21118368117105,201640796593290,1935642349666080,18670022226540300,180851385211254450,1758621701183524320,17160853351737885660 ★ Product of Fibonacci and Catalan numbers: a(n) = A000045(2 * n + 2) * A000108(n). ● a(n) = Fibonacci(2 * n + 2) * binomial(2 * n,n) / (n + 1). ●

► [A271777] 0,1,3,16,105,771,6083,50464,434493,3849715,34895685,322239204,3021922137,28710585099,275827551795,2675584398912,26173225402437,257940602058051,2558852771578817,25534696636443160,256164209036422239,2582189471692118101,26142642319644094293 ★ a(n) = Sum _{ k=1..n } ((- 1) ^ (n - k) * k / ((n + 1) ^ 2 + (k - 1) * (n + 1))) * binomial(n + 1, k + 1) * binomial(n + k, k) ^ 2. ● a(n) = Sum _{ k=1..n } binomial(2 * n - 1 - k, n - k) * Narayana(n,k). ● a(n) = Sum _{ k=1..n } (- 1) ^ (n - k) * binomial(n + k, 2 * k) * binomial(n + k - 1, k - 1) * CatalanNumber(k) where CatalanNumber is A000108. (End) ● a(n) = (- 1) ^ (n + 1) * binomial(n + 1, 2) * hypergeom([1 - n, n + 1, n + 2], [2, 3], 1). - _ Peter Luschny _ , Feb 18 2022 ●

► [A369694] 1,3,16,106,786,6244,51964,447201,3947306,35538668,325098696,3013060258,28232408848,267003169668,2545341982728,24433290332007,235967943943224,2291147902820524,22352525061549604,219006814853751540,2154083325737401740 ★ Expansion of (1 / x) * Series _ Reversion(x * ((1 - x) ^ 3 - x ^ 2)). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 2) } binomial(n + k,k) * binomial(4 * n + k + 2,n - 2 * k). ●

► [A074551] 3,16,106,820,6898,60316,536266,4801540,43118818,387702316,3487892026,31385431060,282446845138,2541934531516,22877065673386,205892220185380,1853024526865858,16677199008675916,150094704403896346 ★ a(n) = 3 ^ n + 4 ^ n + 9 ^ n. ● a(n) = 16 * a(n - 1) - 75 * a(n - 2) + 108 * a(n - 3). ●

► [A292752] 1,1,3,16,108,811,6513,54706,472818,4157701,36931023,329937796,2957233128,26554062991,238681391133,2146606641286,19311830377038,173768326420681,1563724202922843,14072564151989176,126648308996320548,1139810939108974771,10258179242691222153,92323017137773245466 ★ Dimensions of centralizer algebras of groups associated with Z _ 4 - codes. ● a(n) = 15 * a(n - 1) - 59 * a(n - 2) + 45 * a(n - 3) for n>3. ●

► [A074540] 3,16,110,862,7202,62206,547130,4861222,43437602,389374126,3496551050,31429889782,282673681202,2543086539646,22882895986970,205921649705542,1853172776808002,16677944639250766,150098449994526890,1350870791159844502,12157760826489618002 ★ a(n) = 2 ^ n + 5 ^ n + 9 ^ n. ● a(n) = 16 * a(n - 1) - 73 * a(n - 2) + 90 * a(n - 3) for n > 2. - _ Wesley Ivan Hurt _ , Oct 06 2017 ●

► [A074523] 3,16,114,856,6498,49576,379794,2920696,22542018,174571336,1356217074,10567261336,82560763938,646644824296,5076269583954,39931933598776,314707907280258,2484430327672456,19642812107392434,155514083261229016 ★ a(n) = 1 ^ n + 7 ^ n + 8 ^ n. ● a(n) = 15 * a(n - 1) - 56 * a(n - 2) + 42 with a(0)=3, a(1)=16. - _ Vincenzo Librandi _ , Jul 21 2010 ●

► [A042437] 1,3,16,115,131,246,377,623,1000,1623,12361,63428,202645,11006258,33221419,177113353,1273014890,1450128243,2723143133,4173271376,6896414509,11069685885,17966100394,136832388643,702128043609 ★ Denominators of continued fraction convergents to sqrt(746). ● a(n) = 11069686 * a(n - 13) + a(n - 26) for n>25. - _ Vincenzo Librandi _ , Jan 22 2014 ●

► [A334786] 0,3,16,115,950,8510,80388,788392,7950930,81935425,859005840,9132977490,98240702586,1067197649840,11691092372000,129011823098160,1432744619523530,16000911127589355,179590878292003200,2024687100104286525,22917687021180660940 ★ a(n) is the total number of down steps before the first up step in all 4 _ 2 - Dyck paths of length 5 * n. A 4 _ 2 - Dyck path is a lattice path with steps (1, 4), (1, - 1) that starts and ends at y = 0 and stays above the line y = - 2. ● a(0) = 0 and a(n) = 4 * binomial(5 * n, n) / (n + 1) - 2 * binomial(5 * n + 2, n) / (n + 1) for n > 0. ●

► [A074522] 3,16,118,946,7858,66826,578098,5062906,44726338,397498186,3547250578,31743856666,284606318818,2554926522346,22955156619058,206361317079226,1855841298759298,16694108359111306,150196195253667538 ★ a(n) = 1 ^ n + 6 ^ n + 9 ^ n. ● a(n) = 15 * a(n - 1) - 54 * a(n - 2) + 40 with a(0)=3, a(1)=16. - _ Vincenzo Librandi _ , Jul 21 2010 ●

► [A003692] 1,1,3,16,120,1170,14070,201600,3356640,63730800,1359666000,32212857600,839350512000,23860289653200,734964075846000,24388126963200000,867393811956672000,32919980214689568000 ★ Number of trees on n labeled vertices with degree at most 3. ● a(n + 1) = (- a(n - 1) * a(n) - (- 3 * a(n) ^ 2 + (2 / 3) * a(n - 2) * a(n) * n + (- 4 / 3) * a(n - 1) * a(n) * n + (- 4 / 3) * a(n) ^ 2 * n + (- 1 / 3) * a(n - 2) * a(n) * n ^ 2 + (- 2 / 3) * a(n - 1) * a(n) * n ^ 2)) / (a(n - 1) + (- 1 / 3) * a(n) - 2 * a(n - 2) * n + 2 * a(n - 1) * n + a(n - 2) * n ^ 2). (End) ● a(n) = Sum _{ q=0..floor((n - 2) / 2) } C(n,q) * C(n - q,n - 2 - 2q) * (n - 2)! / 2 ^ q, a(n) = (n - 2)! / 2 ^ n * Sum _{ q=0..n } C(n,q) C(2q,n - 2), a(n) = (n - 2)! / 2 ^ n [v ^{ n - 2 }] (2 + 2v + v ^ 2) ^ n. - _ Marko Riedel _ , Jun 10 2016 ●

► [A121673] 1,1,3,16,131,1306,15257,203967,3047907,50115310,896746169,17308420306,357767229778,7872926416538,183537476164902,4513828442107368,116688468769638435,3160881019508153238,89471871451166037425 ★ a(n) = [x ^ n] (1 + x * (1 + x) ^ (n - 1)) ^ n. ● a(n) = Sum _{ k=0..n } C(n,k) * C((n - 1) * k, n - k). ●

► [A273420] 3,17,20,31,41,47,57,63,73,79,89,95,105,111,121,127,137,143,153,159,169,175,185,191,201 ★ First differences of number of active (ON,black) cells in n - th stage of growth of two - dimensional cellular automaton defined by "Rule 705", based on the 5 - celled von Neumann neighborhood. ● a(n) = 8 + (- 1) ^ n + 8 * n for n>2. ● a(n) = 8 * n + 9 for n>2 and even. ● a(n) = 8 * n + 7 for n>2 and odd. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n>5. ●

► [A022127] 3,17,20,37,57,94,151,245,396,641,1037,1678,2715,4393,7108,11501,18609,30110,48719,78829,127548,206377,333925,540302,874227 ★ Fibonacci sequence beginning 3, 17. ● a(n) = 2 ^ (- 1 - n) * ((1 - sqrt(5)) ^ n * (- 31 + 3 * sqrt(5)) + (1 + sqrt(5)) ^ n * (31 + 3 * sqrt(5))) / sqrt(5). ● a(n) = a(n - 1) + a(n - 2) for n>1. ●

► [A273448] 3,17,20,39,40,48,56,64,72,80,88,96,104,112,120,128,136,144,152,160,168,176,184,192,200 ⋆ First differences of number of active (ON,black) cells in n - th stage of growth of two - dimensional cellular automaton defined by "Rule 721", based on the 5 - celled von Neumann neighborhood. ● a(n) = 8 * (1 + n) for n>3. ● a(n) = 2 * a(n - 1) - a(n - 2) for n>5. ●

► [A273407] 3,17,23,33,39,49,55,65,71,81,87,97,103,113,119,129,135,145,151,161,167,177,183,193,199 ⋆ First differences of number of active (ON,black) cells in n - th stage of growth of two - dimensional cellular automaton defined by "Rule 673", based on the 5 - celled von Neumann neighborhood. ● a(n) = 8 - (- 1) ^ n + 8 * n for n>0. ● a(n) = 8 * n + 7 for n>0 and even. ● a(n) = 8 * n + 9 for n>0 and odd. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n>3. ●

► [A322490] 3,17,23,37,43,57,63,77,83,97,103,117,123,137,143,157,163,177,183,197,203,217,223,237,243 ⋆ Numbers k such that k ^ k ends with 7. ● a(n) = - a(- n + 1) = a(n - 1) + a(n - 2) - a(n - 3). ● a(n) = 10 * n + 2 * (- 1) ^ n - 5. Therefore: ● a(n) = 10 * n - 7 for odd n; ● a(n) = 10 * n - 3 for even n. ● a(n + 2 * k) = a(n) + 20 * k. ●

► [A273834] 3,17,24,31,41,47,57,63,73,79,89,95,105,111,121,127,137,143,153,159,169,175,185,191,201 ⋆ First differences of number of active (ON,black) cells in n - th stage of growth of two - dimensional cellular automaton defined by "Rule 961", based on the 5 - celled von Neumann neighborhood. ● a(n) = 8 + (- 1) ^ n + 8 * n for n>2. ● a(n) = 9 + 8 * n for n>2 and even. ● a(n) = 7 + 8 * n for n>2 and odd. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n>5. ●

► [A273850] 3,17,24,31,45,48,56,64,72,80,88,96,104,112,120,128,136,144,152,160,168,176,184,192,200 ⋆ First differences of number of active (ON,black) cells in n - th stage of growth of two - dimensional cellular automaton defined by "Rule 969", based on the 5 - celled von Neumann neighborhood. ● a(n) = 8 * (1 + n) for n>4. ● a(n) = 2 * a(n - 1) - a(n - 2) for n>6. ●

► [A273782] 3,17,27,33,40,48,56,64,72,80,88,96,104,112,120,128,136,144,152,160,168,176,184,192,200 ⋆ First differences of number of active (ON,black) cells in n - th stage of growth of two - dimensional cellular automaton defined by "Rule 929", based on the 5 - celled von Neumann neighborhood. ● a(n) = 8 * (1 + n) for n>3. ● a(n) = 2 * a(n - 1) - a(n - 2) for n>5. ●

► [A179783] 1,3,17,39,81,139,225,335,481,659,881,1143,1457,1819,2241,2719,3265,3875,4561,5319,6161,7083,8097,9199,10401 ⋆ a(n) = 2 * n * (n + 1) * (n + 2) / 3 + (- 1) ^ n. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - 2 * a(n - 3) + 3 * a(n - 4) - a(n - 5) for n>4. ●

► [A087908] 1,3,17,47,99,179,293,447,647,899,1209,1583,2027,2547,3149,3839,4623,5507,6497,7599,8819,10163,11637,13247,14999 ⋆ Largest integer not expressible as a nonnegative linear combination of n and n ^ 2 + 1. ● a(n) = n ^ 3 - n ^ 2 - 1. [This follows from the well - known fact that the largest integer not expressible as a nonnegative linear combination of a and b is the number ab - a - b. - Matthias Beck (beck(AT)math.sfsu.edu), Sep 22 2005] ● a(1)= - 1, a(2)=3, a(3)=17, a(4)=47; for n>4, a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Harvey P. Dale _ , Jul 19 2011 ●

► [A144640] 3,17,48,102,185,303,462,668,927,1245,1628,2082,2613,3227,3930,4728,5627,6633,7752,8990,10353,11847,13478,15252,17175 ⋆ Row sums from A144562. ● a(n) = n * (2 * n ^ 2 + 5 * n - 1) / 2. - _ Jon E. Schoenfield _ , Jun 24 2010 ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Vincenzo Librandi _ , Jul 06 2012 ●

► [A084069] 1,3,17,48,271,765,4319,12192,68833,194307,1097009,3096720,17483311,49353213,278635967,786554688,4440692161,12535521795,70772438609,199781794032,1127918325583,3183973182717,17975920770719,50743789129440 ⋆ Numbers k such that 7 * k ^ 2 = floor(k * sqrt(7) * ceiling(k * sqrt(7))). ● a(1)=1, a(2)=3, a(2n) = 6 * a(2n - 1) - a(2n - 2); a(2n + 1) = 3 * a(2n) - a(2n - 1). ● a(n) * a(n + 3) = - 3 + a(n + 1) * a(n + 2). ● a(n) = 16 * a(n - 2) - a(n - 4), n > 4. - _ Harvey P. Dale _ , Oct 31 2011 ● a(n) = U _ n(sqrt(18),1) = (alpha ^ n - beta ^ n) / (alpha - beta) for n odd and a(n) = 3 * U _ n(sqrt(18),1) = (sqrt(2) / 2) * (alpha ^ n - beta ^ n) / (alpha - beta) for n even, where U _ n(sqrt(R),Q) denotes the Lehmer sequence with parameters R and Q and alpha = (sqrt(3) + sqrt(14)) / 2 and beta = (sqrt(3) - sqrt(14)) / 2. - _ Peter Bala _ , Sep 01 2019 ●

► [A011917] 0,0,0,0,3,17,51,120,240,432,720,1131,1697,2451,3432,4680,6240,8160,10491,13289,16611,20520,25080,30360,36432 ⋆ [n(n - 1)(n - 2)(n - 3) / 7]. ● a(n) = + 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) + a(n - 7) - 4 * a(n - 8) + 6 * a(n - 9) - 4 * a(n - 10) + a(n - 11). G.f.: x ^ 4 * (3 + 5 * x + x ^ 2 + 6 * x ^ 3 + x ^ 4 + 5 * x ^ 5 + 3 * x ^ 6) / ((1 - x) ^ 5 * (1 + x + x ^ 2 + x ^ 3 + x ^ 4 + x ^ 5 + x ^ 6)). - _ R. J. Mathar _ , Apr 15 2010 ●

► [A332869] 1,3,17,51,417,1251,7089,21267,206657,619971,3513169,10539507,86175969,258527907,1464991473,4394974419,44854599297,134563797891,762528188049,2287584564147,18704367906849,56113103720547,317974254416433,953922763249299,9269516926920129 ⋆ Number of fixed - point free involutions in a fixed Sylow 2 - subgroup of the symmetric group of degree 4n. ● a(n) = big - Theta(C ^ n) for C = 4.63233857..., i.e., A * C ^ n < a(n) < B * C ^ n for constants A, B (but it's not the case that a(n) ~ C ^ n as lim inf a(n) / C ^ n and lim sup a(n) / C ^ n differ). ●

► [A163943] 0,3,17,52,121,240,428,707,1102,1641,2355,3278,4447,5902,7686,9845,12428,15487,19077,23256,28085,33628,39952,47127,55226 ⋆ Third left hand column of triangle A163940. ● a(n)= (2 * n + 45 * n ^ 2 + 22 * n ^ 3 + 3 * n ^ 4) / 24. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ●

► [A212415] 0,0,3,17,55,135,280,518,882,1410,2145,3135,4433,6097,8190,10780,13940,17748,22287,27645,33915,41195,49588,59202,70150 ⋆ Number of (w,x,y,z) with all terms in { 1,...,n } and w<x>=y<=z. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ● a(n) = (n - 1) * n * (n + 1) * (5 * n + 2) / 24. (End) ●

► [A152457] 0,3,17,56,140,295,553,952,1536,2355,3465,4928,6812,9191,12145,15760,20128,25347,31521,38760,47180,56903,68057,80776,95200 ⋆ Partial sums of A027444. ● a(n) = n(n + 1)(3n ^ 2 + 7n + 8) / 12. - _ Giovanni Resta _ , Jun 15 2013 ● a(0)=0, a(1)=3, a(2)=17, a(3)=56, a(4)=140, a(n)=5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Harvey P. Dale _ , Dec 13 2013 ●

► [A168547] 1,3,17,59,145,291,513,827,1249,1795,2481,3323,4337,5539,6945,8571,10433,12547,14929,17595,20561,23843,27457,31419,35745 ⋆ a(n) = 1 - 2 * n ^ 2 + 4 * n * (1 + 2 * n ^ 2) / 3. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ●

► [A061982] 0,0,3,17,66,222,701,2151,6516,19628,58983,177069,531350,1594218,4782849,14348771,43046568,129139992,387420299,1162261257,3486784170,10460352950,31381059333,94143178527,282429536156 ⋆ a(n) = 3 ^ n - (n + 1) * (n + 2) / 2. ● a(n) = 3 ^ n - binomial(n + 2, 2). ●

► [A101562] 1,3,17,67,257,1011,4097,16451,65553,261891,1048577,4195379,16777217,67104771,268435729,1073758275,4294967297,17179804659,68719476737,274878168899,1099511631889,4398045462531,17592186044417,70368748389427 ⋆ a(n) =(- 1) ^ n * coefficient of x ^ n in sum { k>=1,x ^ (k - 1) / (1 + 4x ^ k) } . ● a(n)=sum { k=0..n, (- 1) ^ (n - k) * if(mod(n + 1, k + 1)=0, 1, 0) * 4 ^ k } ●

► [A265919] 0,1,3,17,71,301,1275,5257,21711,88997,363395,1480385,6014423,24393245,98781323,399502841,1614022751,6514800277,26275725843,105904696369,426598453863,1717507247885,6911604624923,27802402448233,111796372691439 ⋆ Numerator of the probability that Bob wins the following game: Alice and Bob take turn (Alice starts first) to gain 1 or 2 chips randomly and independently with 1 / 2 chance, and the first player that collects at least n chips is the winner. ● a(n) = (4 ^ n - Sum _ (k=1..n) 4 ^ (n - k) * (binomial(k, n - k) + binomial(k - 1, n - k)) ^ 2) / 8. ●

► [A248917] 1,3,17,73,257,801,2305,6273,16385,41473,102401,247809,589825,1384449,3211265,7372801,16777217,37879809,84934657,189267969,419430401,924844033,2030043137,4437573633,9663676417 ⋆ a(n) = 2 ^ n * n ^ 2 + 1. ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) + 2 ^ (n + 1) + 1. ● a(n) = 7 * a(n - 1) - 18 * a(n - 2) + 20 * a(n - 3) - 8 * a(n - 4). - _ Jean - François Alcover _ , Oct 22 2014 ●

► [A179596] 1,3,17,73,351,1607,7513,34809,161903,751783,3493353,16227737,75393055,350251335,1627192697,7559508409,35119644495,163157037671,757987215241,3521419711833,16359641017343,76002822156295,353090213774361 ⋆ Eight white kings and one red king on a 3 X 3 chessboard. G.f.: (1 + x) / (1 - 2 * x - 11 * x ^ 2 - 6 * x ^ 3). ● a(n) = 2 * a(n - 1) + 11 * a(n - 2) + 6 * a(n - 3) with a(0)=1, a(1)=3 and a(2)=17. ● a(n) = (- 1) ^ (- n) * 2 ^ (n + 1) / 9 + ((49 + 17 * sqrt(7)) * A ^ (- n) + (49 - 17 * sqrt(7)) * B ^ (- n)) / 126 with A = (- 2 + sqrt(7)) / 3 and B = (- 2 - sqrt(7)) / 3. ●

► [A100233] 1,3,17,75,321,1363,5777,24475,103681,439203,1860497,7881195,33385281,141422323,599074577,2537720635,10749957121,45537549123,192900153617,817138163595,3461452808001,14662949395603,62113250390417,263115950957275,1114577054219521 ⋆ a(n) = Lucas(3 * n) - 1. ● a(n) = 4 * a(n - 1) + a(n - 2) + 4 for n>1, with a(0)=1, a(1)=3. ● a(n) = [x ^ n] (1 + 2 * x + sqrt(1 + 2 * x + 5 * x ^ 2)) ^ n. Cf. A016064. - _ Peter Bala _ , Jun 23 2015 ● a(n) = - 1 + (2 - sqrt(5)) ^ n + (2 + sqrt(5)) ^ n. ● a(n) = 5 * a(n - 1) - 3 * a(n - 2) - a(n - 3) for n>2. ●

► [A015525] 0,1,3,17,75,361,1683,7937,37275,175321,824163,3875057,18218475,85655881,402715443,1893393377,8901903675,41852858041,196773803523,925144274897,4349623252875,20450023957801,96147057896403 ⋆ Expansion of x / (1 - 3 * x - 8 * x ^ 2). ● a(n) = 3 * a(n - 1) + 8 * a(n - 2). ● a(n) = - 16 ^ n * (A ^ n - B ^ n) / sqrt(41) where A = - 1 / (3 + sqrt(41)) and B = 1 / (sqrt(41) - 3). - _ R. J. Mathar _ , Apr 29 2008 ● a(n) = - (- 8) ^ n * a(- n) for all n in Z. - _ Michael Somos _ , Mar 05 2020 ●

► [A164305] 3,17,81,367,1635,7241,32001,141319,623907,2754209,12157905,53667967,236902467,1045739033,4616116929,20376528343,89946351555,397042410929,1752630004689,7736483151631,34150488876963,150747551200361,665431885063425,2937358451978023 ⋆ a(n) = 6 * a(n - 1) - 7 * a(n - 2) for n > 1; a(0) = 3, a(1) = 17. ● a(n) = 6 * a(n - 1) - 7 * a(n - 2) for n > 1; a(0) = 3, a(1) = 17. ● a(n) = ((3 + 4 * sqrt(2)) * (3 + sqrt(2)) ^ n + (3 - 4 * sqrt(2)) * (3 - sqrt(2)) ^ n) / 2. ●

► [A362390] 1,1,1,3,17,81,441,3641,33825,318753,3505521,45095601,616484001,9013086369,145909533225,2556431401161,47388760825281,937507626246081,19840711661183457,443937299529447009,10456231167451597761,259738234024404363201 ⋆ E.g.f. satisfies A(x) = exp(x + x ^ 3 / 3 * A(x)). ● a(n) = n! * Sum _{ k=0..floor(n / 3) } (1 / 3) ^ k * (k + 1) ^ (n - 2 * k - 1) / (k! * (n - 3 * k)!). ●

► [A083217] 1,3,17,83,417,2083,10417,52083,260417,1302083,6510417,32552083,162760417,813802083,4069010417,20345052083,101725260417,508626302083,2543131510417,12715657552083,63578287760417,317891438802083 ⋆ a(n) = (2 * 5 ^ n + (- 1) ^ n) / 3. ● a(n) = (2 * 5 ^ n + (- 1) ^ n) / 3. ● a(0)=1, a(n) = 5 * a(n - 1) - 2 if n is odd, and a(n) = 5 * a(n) + 2 if n is even. - _ Vincenzo Librandi _ , Nov 18 2010 ●

► [A318769] 1,1,3,17,83,639,5749,53227,561273,7216577,94292531,1352253561,21657812923,359338829407,6460367397093,126124578755939,2527688612931569,54137820027005697,1236730462664172643,29137619131277727457,725282418459957414051,18981526480933601454911 ⋆ Expansion of e.g.f. Product _{ k>=1 } (1 + x ^ k) ^ (sigma(k) / k), where sigma(k) is the sum of the divisors of k. ● a(n) / n! ~ c * exp(sqrt(n / 2) * Pi ^ 2 / 3) / n ^ (3 / 4 + log(2) / 4), where c = 0.156536456784974135380570766672188053021549650611940801 37... - _ Vaclav Kotesovec _ , Sep 05 2018 ●

► [A344228] 3,17,84,393,1778,7866,34254,147433,628914,2663934,11219728,47033322,196393044,817338580,3391858530,14040986985,57998364690,239112756630,984126777480,4044255577230,16597080112860,68027923573740 ⋆ a(n) = binomial(2 * n,n) * (2 * n + 1) / 2 + n * binomial(2 * n - 2,n) + (n - 1) * binomial(2 * n - 2,n + 1). ● a(n) = 3 * (2 * n ^ 3 + n - 1) * 2 ^ (2 * n - 2) * binomial(n - 3 / 2, - 1 / 2) / ((n + 1) * n). ● a(n) = [x ^ n] (15 * x - 24 * x ^ 2 + 8 * x ^ 3 - 2 + (1 - 4 * x) ^ (3 / 2) * (2 - 3 * x)) / (2 * (1 - 4 * x) ^ (3 / 2) * x). ● a(n) = a(n - 1) * 2 * (2 * n - 3) * (2 * n ^ 3 + n - 1) / ((n + 1) * (2 * n ^ 3 - 6 * n ^ 2 + 7 * n - 4)) for n > 1. - _ Chai Wah Wu _ , May 13 2021 ●

► [A037787] 3,17,85,426,2133,10667,53335,266676,1333383,6666917,33334585,166672926,833364633,4166823167,20834115835,104170579176,520852895883,2604264479417,13021322397085,65106611985426,325533059927133 ⋆ Base 5 digits are, in order, the first n terms of the periodic sequence with initial period 3,2,0,1. ●

a(n) = 6 * a(n - 1) - 6 * a(n - 2) + 6 * a(n - 3) - 5 * a(n - 4). - _ Wesley Ivan Hurt _ , Mar 22 2023 ●

► [A198766] 3,17,87,437,2187,10937,54687,273437,1367187,6835937,34179687,170898437,854492187,4272460937,21362304687,106811523437,534057617187,2670288085937,13351440429687,66757202148437,333786010742187,1668930053710937 ★ (7 * 5 ^ n - 1) / 2. ● a(n) = 5 * a(n - 1) + 2. ● a(n) = 6 * a(n - 1) - 5 * a(n - 2), n>1. ●

► [A204092] 1,3,17,91,449,2123,9841,45211,206881,945003,4313297,19680571,89784449,409577483,1868351281,8522666971,38876763361,177338745003,8089407225 77,3690027171451,16832256509249,76781232397643,350241657358321,1597645838773531,7287745912705441 ★ The number of 1 by n Haunted Mirror Maze puzzles with a unique solution. ● a(n) = 8 * a(n - 1) - 19 * a(n - 2) + 16 * a(n - 3) - 4 * a(n - 4), a(0) = 1, a(1) = 3, a(2) = 17, a(3) = 91. ●

► [A221731] 3,17,91,489,2627,14113,75819,407321,2188243,11755857,63155771,339290569,1822764387,9792403073,52607544139,282622526841,1518327722483,8156883666097,43821073775451,235419136209449,1264737828598147 ★ Number of n X 2 arrays of occupancy after each element stays put or moves to some horizontal or antidiagonal neighbor, without move - in move - out left turns. ● a(n) = (2 ^ (- 1 - n) * ((5 - sqrt(33)) ^ n * (- 1 + sqrt(33)) + (1 + sqrt(33)) * (5 + sqrt(33)) ^ n)) / sqrt(33). ●

► [A290925] 3,17,92,495,2661,14304,76891,413329,2221860,11943663,64203453,345127232,1855239875,9972887313,53609499612,288179176047,1549114207525,8327301302176,44763611772699,240627889663761,1293501104827044,6953246818258415,37377348295412093 ★ p - INVERT of the positive integers, where p(S) = 1 - 3 * S - 2 * S ^ 2. ● a(n) = 7 * a(n - 1) - 10 * a(n - 2) + 7 * a(n - 3) - a(n - 4). ●

► [A370570] 1,1,1,3,17,95,594,4280,35018,320636,3249951,36140133,437572800,5731086422,80745062993,1217782176949,19576722067015,334183547442139,6037316140379389,115082343658784617,2308352556410956084,48602560606056962112 8,1071794851776260190000 ★ Number of permutations of [n] having no adjacent 2 - cycles and no adjacent 3 - cycles. ● a(n) = Sum _{ i, j>=0 and 2 * i + 3 * j <=n } (- 1) ^ (i + j) * (n - i - 2 * j)! / (i! * j!). ●

► [A010913] 3,17,96,542,3060,17276,97536,550664,3108912,17552144,99095040,559465952,3158605632,17832701888,100679000064,568408596608,3209093579520,18117744283904,102288278544384,577494182698496,3260388539102208,18407342869216256,103923280137093120 ★ Pisot sequence E(3,17), a(n) = floor(a(n - 1) ^ 2 / a(n - 2) + 1 / 2). ● a(n) = (((3 - sqrt(7)) ^ n * (- 8 + 3 * sqrt(7)) + (3 + sqrt(7)) ^ n * (8 + 3 * sqrt(7)))) / (2 * sqrt(7)). ● a(n) = 6 * a(n - 1) - 2 * a(n - 2) for n>1. ●

► [A142988] 1,3,17,96,696,5448,49752,492480,5457600,65128320,850296960,11864240640,178442611200,2848854758400,48517709184000,872011090944000,16589133517824000,331426982928384000,6966369015201792000 ★ a(1) = 1, a(2) = 3, a(n + 2) = 3 * a(n + 1) + (n + 1) * (n + 3) * a(n). ● a(n) = (n + 2)! * Sum _{ k = 1..n } (- 1) ^ (k + 1) / (k * (k + 1) * (k + 2)). ●

► [A155610] 1,3,17,99,545,2883,14897,75939,384065,1933443,9706577,48650979,243609185,1219108803,6098732657,30503229219,152544843905,762810312963,3814309845137,19072324066659,95363944856225,476826697849923 ★ 5 ^ n - 3 ^ n + 1. ● a(n) = 8 * a(n - 1) - 15 * a(n - 2) + 8 with a(0)=1, a(1)=3. - _ Vincenzo Librandi _ , Jul 21 2010 ● a(0)=1, a(1)=3, a(2)=17, a(n)=9 * a(n - 1) - 23 * a(n - 2) + 15 * a(n - 3). - _ Harvey P. Dale _ , Jan 06 2012 ●

► [A001541] 1,3,17,99,577,3363,19601,114243,665857,3880899,22619537,131836323,768398401,4478554083,26102926097,152139002499,886731088897,5168247530883,30122754096401,175568277047523,1023286908188737,5964153172084899,34761632124320657 ★ a(0) = 1, a(1) = 3; for n > 1, a(n) = 6 * a(n - 1) - a(n - 2). ● a(n) = T(n, 3), with Chebyshev's T - polynomials A053120. (End) ● a(n) = ((3 + 2 * sqrt(2)) ^ n + (3 - 2 * sqrt(2)) ^ n) / 2. ● a(n) = cosh(2 * n * arcsinh(1)). - _ Herbert Kociemba _ , Apr 24 2008 ● a(n) = ((- 1 + sqrt(2)) ^ n + (1 + sqrt(2)) ^ n + (1 - sqrt(2)) ^ n + (- 1 - sqrt(2)) ^ n) / 4 (with interpolated zeros). ● a(n) = cos(n * arccos(3)) = cosh(n * log(3 + 2 * sqrt(2))). - _ Daniel Suteu _ , Jul 28 2016 ● a(2 * n + 1) = 2 * a(n) * a(n + 1) - 3. - _ Timothy L. Tiffin _ , Oct 12 2016 ●

► [A322242] 1,3,17,99,609,3843,24689,160611,1054657,6975747,46406097,310171491,2081258529,14011445763,94594402353,640188979299,4341874207617,29502747778563,200803974858641,1368767759442531,9342637825548769,63846282803069187,436797192815981553,2991302112253485411,20504081077963103041 ★ G.f.: 1 / sqrt(1 - 6 * x - 7 * x ^ 2). ● a(n) = Sum _{ k=0..n } (- 1) ^ (n - k) * 2 ^ k * binomial(n,k) * binomial(2 * k,k). ● a(n) = Sum _{ k=0..n } 7 ^ (n - k) * (- 2) ^ k * binomial(n,k) * binomial(2 * k,k). ● a(n) equals the (central) coefficient of x ^ n in (1 + 3 * x + 4 * x ^ 2) ^ n. ● a(n) = 7 ^ n * 2F1([1 / 2, - n], [1], 8 / 7), where 2F1 is the hypergeometric function. - _ Stefano Spezia _ , Feb 02 2021 ●

► [A161940] 3,17,101,619,3867,24433,155389,991931,6345363,40639217,260448821,1669786219,10707539307,68670310033,440429696269,2824879831931,18118915305123,116216916916817,745434117150341,4781352082416619 ★ a(n) = ((3 + sqrt(2)) * (5 + sqrt(2)) ^ n + (3 - sqrt(2)) * (5 - sqrt(2)) ^ n) / 2. ● a(n) = 10 * a(n - 1) - 23 * a(n - 2) for n > 1; a(0) = 3, a(1) = 17. ●

► [A074565] 3,17,101,623,3953,25607,168401,1119863,7509953,50693447,343990001,2344318103,16034846753,110016813287,756855672401,5218820236343,36058335444353,249574353301127,1730042274055601,12008529803290583 ★ a(n) = 4 ^ n + 6 ^ n + 7 ^ n. ● a(n) = 17 * a(n - 1) - 94 * a(n - 2) + 168 * a(n - 3); a(0)=3, a(1)=17, a(2)=101. - _ Harvey P. Dale _ , Jun 22 2013 ●

► [A339565] 1,3,17,101,627,3999,25955,170571,1131433,7559301,50795985,342935689,2324278669,15804931797,107775401349,736723618773,5046774983235,34636814325087,238114193665451,1639378334244867,11301978856210543,78010917772099207,539055832175992119 ★ Number of lattice paths from (0,0) to (n,n) using steps (0,1), (1,0), (1,1), (1,2), (2,1). ● a(n) = [(x * y) ^ n] 1 / (1 - x - y - x * y - x * y ^ 2 - x ^ 2 * y). - _ Alois P. Heinz _ , Dec 09 2020 ●

► [A370286] 1,3,17,102,645,4193,27764,186231,1261213,8604759,59053167,407217396,2819252544,19583729766,136426565999,952743556907,6667916884701,46755146944959,328398159653117,2310073990369926,16271915501598595,114757849228310355 ★ Coefficient of x ^ n in the expansion of ((1 + x) ^ 3 + x ^ 2) ^ n. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n,k) * binomial(3 * n - 3 * k,n - 2 * k). ●

► [A054365] 1,1,1,3,17,102,811,6626,58385,532251,5011934,48344880,475982471,4766639628,48434621610,498363430232,5184274255789,54451326151253,576810990484823,6156943228387305,66170786572330174,715564777086617766 ★ Number of unlabeled 5 - gonal cacti having n polygons. ● a(n) = ((Sum _{ d|n } phi(n / d) * binomial(5 * d, d)) + (Sum _{ d|gcd(n - 1, 5) } phi(d) * binomial(5 * n / d, (n - 1) / d))) / (5 * n) - binomial(5 * n, n) / (4 * n + 1) for n > 0. - _ Andrew Howroyd _ , May 04 2018 ●

► [A163064] 3,17,103,637,3963,24697,153983,960197,5987763,37339937,232854103,1452093517,9055353003,56469795337,352149479663,2196028088597,13694580432483,85400334485297,532562291125063,3321094649662237 ★ a(n) = ((3 + sqrt(5)) * (4 + sqrt(5)) ^ n + (3 - sqrt(5)) * (4 - sqrt(5)) ^ n) / 2. ● a(n) = 8 * a(n - 1) - 11 * a(n - 2) for n > 1; a(0) = 3, a(1) = 17. ●

► [A036551] 1,3,17,105,641,3873,23297,139905,839681,5038593,30232577,181397505,1088389121,6530342913,39182073857,235092475905,1410554920961,8463329656833,50779978203137,304679869743105,1828079219507201,10968475319140353,65810851919036417 ★ a(n) = 2 ^ (n - 1) * (3 ^ n - 1) + 1. ● a(n) = T(n, n), array T given by A048471. ● a(n) = 9 * a(n - 1) - 20 * a(n - 2) + 12 * a(n - 3) for n>2. ●

► [A372462] 1,3,17,105,673,4403,29183,195170,1313889,8889963,60392717,411615867,2813115487,19270525316,132273530462,909530996780,6263834506593,43198661550219,298296958413785,2062180461738075,14271253423675773,98859742466265935 ★ Coefficient of x ^ n in the expansion of 1 / ((1 - x) * (1 - x + x ^ 2) ^ 2) ^ n. ● a(n) = Sum _{ k=0..floor(n / 2) } (- 1) ^ k * binomial(2 * n + k - 1,k) * binomial(4 * n - k - 1,n - 2 * k). ●

► [A074556] 3,17,109,755,5473,40787,309529,2379275,18463393,144315107,1134267049,8952908795,70896790513,562818102227,4476415458169,35654571422315,284296129664833,2268726602270147,18115958853570889,144724548978127835 ★ a(n) = 3 ^ n + 6 ^ n + 8 ^ n. ● a(n) = 17 * a(n - 1) - 90 * a(n - 2) + 144 * a(n - 3); a(0)=3, a(1)=17, a(2)=109. - _ Harvey P. Dale _ , May 19 2011 ●

► [A368639] 1,3,17,111,757,5321,38131,276913,2031075,15011373,111618559,834026649,6257264575,47105424671,355648865425,2691925368489,20420008516447,155197818599687,1181563534890855,9009291052956319,68788955737056469,525876413869285467 ★ Number of lattice paths from (0,0) to (n,n) using steps (i,j) with i,j>=0 and gcd(i,j)=1. ● a(n) mod 2 = 1. ●

► [A119259] 1,3,17,111,769,5503,40193,297727,2228225,16807935,127574017,973168639,7454392321,57298911231,441739706369,3414246490111,26447737520129,205272288591871,1595964714385409,12427568655368191,96905907580960769,756583504975757311,5913649000782757889 ★ Central terms of the triangle in A119258. ● a(n) = Sum _{ k=0..n } C(2 * n,k) * C(2 * n - k - 1,n - k). - _ Paul Barry _ , Sep 28 2007 ● a(n) = Sum _{ k=0..n } C(n + k - 1,k) * 2 ^ k. - _ Paul Barry _ , Sep 28 2007 ● a(n) = (- 1) ^ n - 2 ^ (n + 1) * binomial(2 * n,n - 1) * hyper2F1([1,2 * n + 1],[n + 2],2). - _ Peter Luschny _ , Jul 25 2014 ● a(n) = [x ^ n] ((1 + x) ^ 2 / (1 - x)) ^ n. Exp(Sum _{ n >= 1 } a(n) * x ^ n / n) = 1 + 3 * x + 13 * x ^ 2 + 67 * x ^ 3 + ... is essentially the o.g.f. for A064062. - _ Peter Bala _ , Oct 01 2015 ● a(p) == 3 (mod p ^ 3) for prime p >= 5. Cf. A002003, A103885 and A156894. ●

► [A249921] 1,3,17,111,805,6147,48641,394863,3266629,27421395,232867889,1996302447,17248208485,150013649955,1312111499105,11532737017839,101799869875717,901975446062451,8018470050567953,71496291428776815,639204721160345509,5728606469731066947,51453397357702434497 ★ G.f.: Sum _{ n>=0 } x ^ n / (1 - 2 * x) ^ (2 * n + 1) * [Sum _{ k=0..n } C(n,k) ^ 2 * 2 ^ k * x ^ k] * [Sum _{ k=0..n } C(n,k) ^ 2 * 4 ^ k * x ^ k]. ● a(n) = Sum _{ k=0..[n / 2] } 4 ^ k * Sum _{ j=0..n - 2 * k } C(n - k, k + j) ^ 2 * C(k + j, j) ^ 2 * 2 ^ j. ●

► [A365856] 1,3,17,115,863,6903,57687,497683,4398980,39630305,362562226,3359252039,31457036708,297247495745,2830725974514,27140465365203,261786867979800,2538061348959000,24724191398850125,241862002342417585,2374978445599884762 ★ Expansion of (1 / x) * Series _ Reversion(x * (1 + x) ^ 2 * (1 - x) ^ 5). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..n } (- 1) ^ k * binomial(2 * n + k + 1,k) * binomial(6 * n - k + 4,n - k). ●

► [A074554] 3,17,115,881,7267,62417,547795,4863281,43443907,389393297,3496609075,31430064881,282674208547,2543088125777,22882900753555,205921664021681,1853172819789187,16677944768259857,150098450381685235 ★ a(n) = 3 ^ n + 5 ^ n + 9 ^ n. ● a(n) = 17 * a(n - 1) - 87 * a(n - 2) + 135 * a(n - 3). ●

► [A074544] 3,17,117,863,6513,49607,379857,2920823,22542273,174571847,1356218097,10567263383,82560768033,646644832487,5076269600337,39931933631543,314707907345793,2484430327803527,19642812107654577,155514083261753303 ★ a(n) = 2 ^ n + 7 ^ n + 8 ^ n. ● a(n) = 17 * a(n - 1) - 86 * a(n - 2) + 112 * a(n - 3). ●

► [A368965] 1,3,17,117,895,7309,62410,550431,4975297,45846977,429095387,4067760593,38977419018,376901628882,3673226867356,36043590216621,355800292078095,3530878133357175,35205183620396571,352505713454687599,3543078943592291301 ★ Expansion of (1 / x) * Series _ Reversion(x * (1 - x) * (1 - x - x ^ 2) ^ 2). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 2) } binomial(2 * n + k + 1,k) * binomial(4 * n - k + 2,n - 2 * k). ●

► [A344553] 1,3,17,119,929,7755,67745,611567,5660033,53415251,512072241,4972855783,48817414177,483649249179,4829637141825,48559914920927,491195898610241,4995080271452067,51037379418765905,523695644006188887,5394266374440159649,55756104288043890667 ★ Number of lattice paths from (0,0) to (2n - 1, n) using steps E=(1,0), N=(0,1), and D=(1,1) which stay weakly above the line through (0,0) and (2n - 1,n). ● a(n) = Sum _{ i>=0 } (1 / n) * binomial(2 * n - 2,i) * binomial(3 * n - 2 - i,2 * n - 1). ● a(n) = binomial(3 * n - 2, 2 * n - 1) * hypergeom([2 - 2 * n, 1 - n], [2 - 3 * n], - 1) / n. - _ Peter Luschny _ , Jun 14 2021 ●

► [A340993] 1,3,17,120,885,6713,51932,407214,3224845,25733325,206584437,1666561042,13498994796,109713432390,894291885000,7307812510970,59847327807597,491062976039618,4036174402666925,33224883837921930,273873806179142545,2260338391869532332 ★ a(n) is the (2n) - th term of the n - fold self - convolu

tion of the sum of divisors function sigma. • a(n) = [x ^ (2n)] (Sum _{ j>=1 } sigma(j) * x ^ j) ^ n. •

► [A249924] 1,3,17,120,948,8022,71106,651717,6126175,58736535,572178165,5647102500,56345894052,567444190680,5760259701864,58879552102416,6055082784 30348,62604135417386 10,650366075536435 50,678530086525374930,7106457298203380370,74688269331406258260,787463653336202248380 ⋆ G.f. A(x) satisfies: x = A(x) - 3 * A(x) ^ 2 + A(x) ^ 3. • a(n) = Sum _{ k=0..n - 1 } binomial(n + k - 1,k) * binomial(3 * n + k - 2,n - k - 1)) / n. - _ Vladimir Kruchinin _ , Mar 11 2015 • a(n) = binomial(3 * n - 2,n - 1) * hypergeom([1 - n,3 * n - 1],[n + 1 / 2], - 1 / 4) / n. - _ Peter Luschny _ , Mar 11 2015 •

► [A074543] 3,17,121,953,7873,66857,578161,5063033,44726593,397498697,3547251601,31743858713,284606322913,2554926530537,22955156635441,206361317111993,1855841298824833,16694108359242377,150196195253929681 ⋆ a(n) = 2 ^ n + 6 ^ n + 9 ^ n. • a(n) = 17 * a(n - 1) - 84 * a(n - 2) + 108 * a(n - 3); a(0)=3, a(1)=17, a(2)=121. - _ Harvey P. Dale _ , Feb 20 2015 •

► [A216314] 1,3,17,121,965,8247,73841,683713,6493145,62898859,619079889,6173490857,62239144525,633323532783,6496052173665,67093423506049,697181754821297,7283521984427283,76455801614169809,806004056649062937,8529783421905380629,90584730265930813607 ⋆ G.f. satisfies: A(x) = (1 + x * A(x)) * (1 + 2 * x * A(x) ^ 2). • a(n) = [x ^ n] ((1 + x) / (1 - 2 * x - 2 * x ^ 2)) ^ (n + 1) / (n + 1). •

► [A179300] 1,3,17,128,1131,11070,116317,1287480,14829188,176250143,2148687567,26750057584,338939419026,4359422270652,56799490825125,748414965684808,9959308633462092,133694287642377756,1808762770097970724,24642635223262953600,337856475305856870275 ⋆ a(n) is the number of corner - rooted hexangulations of girth 6 with n inner faces. • a(1) = 1, and a(n) = (6 * (2 * (- 2 + n)! / ((- 2 + n)! * n!)) * 2F1(- 5 * n, 2 - n, 2 * (2 - n); - 1) for n >= 2, where 2 F1(a, b, c; z) is the hypergeometric function. - _ Franck Maminirina Ramaharo _ , Jan 27 2019 •

► [A199493] 3,17,129,1025,8193,65537,524289,4194305,33554433,268435457,2147483649,17179869185,137438953473,1099511627777,8796093022209,70368744177665,562949953421313,4503599627370497,36028797018963969 ⋆ 2 * 8 ^ n + 1. • a(n) = 8 * a(n - 1) - 7. • a(n) = 9 * a(n - 1) - 8 * a(n - 2). •

► [A074524] 3,17,131,1073,8963,75857,649091,5606513,48811523,427774097,3769259651,33358386353,296270823683,2638754838737,23555015527811,210638693604593,1886253119421443,16909812213653777,151723048894909571 ⋆ a(n) = 1 ^ n + 7 ^ n + 9 ^ n. • a(n) = 16 * a(n - 1) - 63 * a(n - 2) + 48 with a(0)=3, a(1)=17. - _ Vincenzo Librandi _ , Jul 21 2010 •

► [A212280] 1,1,3,17,131,1177,11531,119201,1276771,14015401,156585211,1772626673,20275611347,233912585849,2718842818923,31816917837377,374657837729987,4436890509548617 ⋆ G.f. A(x)=1 / (1 - F(x)), where F(F(x)) = (1 - sqrt(1 - 16 * x)) / 8. • a(n) = sum(m=1..n, T(n,m)) for n>0, where T(n,m)= 1 if n=m, otherwise = (m * 4 ^ (n - m) * binomial(2 * n - m - 1,n - 1) / n - sum _{ i=m + 1..n - 1 } T(n,i) * T(i,m)) / 2. •

► [A136727] 1,1,3,17,139,1481,19443,303297,5480219,112549881,2589274883,65957355377,1842897053099,56038776055081,1842278768795923,65109900167188257,246173542251737477 9,99148196540813749081 ⋆ E.g.f.: A(x) = [exp(x) / (3 - 2 * exp(x))] ^ (1 / 3). • a(n) = 1 + 2 * Sum _{ k=1..n - 1 } (binomial(n,k) - 1) * a(k). - _ Ilya Gutkovskiy _ , Jul 09 2020 •

► [A290806] 0,3,17,311,997,3398,20205,608450,2255536,25314740,25314740,307789989,8217096961,77423532966,368090564187,4437429001281,4437429001281,4437429001281,4437429001281,3261264624822179,3261264624822179,3261264624822179,1120352992791390193 ⋆ One of the two successive approximations up to 7 ^ n for the 7 - adic integer sqrt(- 5). These are the numbers congruent to 3 mod 7 (except for the initial 0). • a(0) = 0 and a(1) = 3, a(n) = a(n - 1) + (a(n - 1) ^ 2 + 5) mod 7 ^ n for n > 1. •

► [A103715] 0,0,1,3,18,22,119,285,1516,1844,9797,23407,124334,151226,803275,1919129,10193912,12398728,65858793,157345211,835776490,1016544510,5399617791,12900388213,68523478308 ⋆ Define a(1)=0, a(2)=0, a(3)=1, a(4)=3, a(5)=18, a(6)=22, a(7)=119, a(8)=285 such that from i=1 to 8: 420 * a(i) ^ 2 + 420 * a(i) + 1 = j(i) ^ 2, j(1)=1, j(2)=1, j(3)=29, j(4)=71, j(5)=379, j(6)=461, j(7)=2449, j(8)=5841. Then a(n) = a(n - 8) + 4 * sqrt(420 * a(n - 4) ^ 2 + 420 * a(n - 4) + 1). • a(n) = a(n - 1) + 82 * a(n - 4) - 82 * a(n - 5) - a(n - 8) + a(n - 9). •

► [A306279] 3,18,25,40,47,62,69,84,91,106,113,128,135,150,157,172,179,194,201,216,223,238,245,260,267 ⋆ Numbers congruent to 3 or 18 mod 22. • a(n) = 11 * n - 6 + 2 * (- 1) ^ n. • a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n > 3. (End) •

► [A169598] 3,18,26,41,49,64,72,87,95,110,118,133,141,156,164,179,187,202,210,225,233,248,256,271,279 ⋆ Numbers that are congruent to { 3,18 } mod 23. • a(n) = (46 * n + 7 * (- 1) ^ n - 27) / 4. - _ Vincenzo Librandi _ , Jan 06 2013, modified Jul 07 2015 • a(n) = a(n - 1) + a(n - 2) - a(n - 3). - _ Vincenzo Librandi _ , Jan 06 2013 •

► [A063116] 3,18,34,50,66,82,98,114,130,146,162,178,194,210,226,242,258,274,290,306,322,338,354,370,386 ⋆ Dimension of the space of weight 2n cusp forms for Gamma _ 0(48). • a(n) = 2 * a(n - 1) - a(n - 2) for n>3. • a(n) = 2 * (8 * n - 7) for n>1. •

► [A365442] 3,18,42,84,126,189,249,333,426,546,642,768,882,1068,1200,1368,1539,1749,1965,2175,2361,2616,2820,3156,3378 ⋆ Partial sums of A365412. • a(n) = (5 * Pi ^ 2 / 9) * n ^ 2 + O(n * log(n)). - _ Amiram Eldar _ , Sep 08 2023 •

► [A094159] 0,3,18,45,84,135,198,273,360,459,570,693,828,975,1134,1305,1488,1683,1890,2109,2340,2583,2838,3105,3384 ⋆ 3 times hexagonal numbers: a(n) = 3 * n * (2 * n - 1). • a(n) = 12 * n + a(n - 1) - 9 with n > 0, a(0)=0. - _ Vincenzo Librandi _ , Nov 16 2010 •

► [A085789] 3,18,54,120,225,378,588,864,1215,1650,2178,2808,3549,4410,5400,6528,7803,9234,10830,12600,14553,16698,19044,21600,24375 ⋆ Partial sums of n 3 - spaced triangular numbers beginning with t(2), e.g., a(2) = t(2) + t(5) = 3 + 15 = 18. • a(n) = 3 / 2 * n ^ 2 * (n + 1). •

► [A130505] 1,3,18,54,324,972,5832,17496,104976,314928,1889568,5668704,34012224,102036672,612220032,1836660096,11019960576,33059881728,198359290368,595077871104,3570467226624,10711401679872,64268410079232,192805230237696 ⋆ a(n) = 3 * a(n - 1) if n is odd, otherwise 6 * a(n - 1). • a(0) = 1; a(n), n>0 = 3 * a(n - 1) if n is odd. a(n), n even = 6 * a(n - 1). Upper left term in M ^ n where M = the 2 X 2 matrix [3, 3; 3, - 3]. • a(n) = 18 * a(n - 2). - _ Charles R Greathouse IV _ , Jan 10 2013 • a(n) = (3 + 3 * i) ^ n / (s(n + 2) + s(n) * i), where s(n)= round(sin(Pi * n / 4)). - _ Gary Detlefs _ , Aug 04 2013 • a(2 * k) = 18 ^ k, a(2 * k + 1) = 3 * 18 ^ k, k>=0. (From the partial fraction decomposition of the o.g.f.) (End) •

► [A061317] 0,3,18,57,132,255,438,693,1032,1467,2010,2673,3468,4407,5502,6765,8208,9843,11682,13737,16020,18543,21318,24357,27672 ⋆ Split positive integers into extending even groups and sum: 1 + 2, 3 + 4 + 5 + 6, 7 + 8 + 9 + 10 + 11 + 12, 13 + 14 + 15 + 16 + 17 + 18 + 19 + 20, ... • a(n) = 2 * n ^ 3 + n. •

► [A006011] 0,0,3,18,60,150,315,588,1008,1620,2475,3630,5148,7098,9555,12600,16320,20808,26163,32490,39900,48510,58443,69828,82800 ⋆ a(n) = n ^ 2 * (n ^ 2 - 1) / 4. • a(n) = Sum _{ i=1..n - 1 } i * (i ^ 2 + n) for n > 1 (see Example section). - _ Bruno Berselli _ , Aug 29 2014 •

► [A235988] 3,18,63,144,285,486,777,1152,1647,2250,3003,3888,4953,6174,7605,9216,11067,13122,15447,18000,20853,23958,27393,31104,35175 ⋆ Sum of the partition parts of 3n into 3 parts. • a(n) = 3 * n ^ 3 - 3 * n * floor(n ^ 2 / 4). • a(n) = (3 * n * (1 - (- 1) ^ n + 6 * n ^ 2)) / 8. • a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + a(n - 4) + 2 * a(n - 5) - a(n - 6) for n > 6. - _ Wesley Ivan Hurt _ , Nov 15 2015 •

► [A253942] 3,18,63,168,378,756,1386,2376,3861,6006,9009,13104,18564,25704,34884,46512,61047,79002,100947,127512,159390,197340,242190,294840,356265 ⋆ a(n) = 3 * binomial(n + 1, 5). • a(n) = (n - 3) * (n - 2) * (n - 1) * n * (1 + n) / 40. - _ Colin Barker _ , Jan 20 2015 •

► [A317404] 0,3,18,63,180,465,1134,2667,6120,13797,30690,67551,147420,319449,688086,1474515,3145680,6684621,14155722,29884359,62914500,132120513,276823998,578813883,1207959480 ⋆ a(n) = 3 * n * (2 ^ n - 1). • a(n) = 6 * a(n - 1) - 13 * a(n - 2) + 12 * a(n - 3) - 4 * a(n - 4). •

► [A048899] 0,3,18,68,443,1068,1068,32318,110443,1672943,3626068,23157318,120813568,1097376068,1097376068,19407922943,49925501068,355101282318,355101282318,15613890344818,15613890344818,110981321985443 ⋆ One of the two successive approximations up to 5 ^ n for 5 - adic integer sqrt(- 1). • a(n) = 3 ^ (5 ^ (n - 1)) (mod 5 ^ n), n>=1. Compare with the above given formula involving A066601. • a(n) * a(n - 1) + 1 == 0 (mod 5 ^ (n - 1)), n>=1. • a(n) == L(5 ^ n,3) (mod 5 ^ n), where L(n,x) denotes the n - th Lucas polynomial of A114525. - _ Peter Bala _ , Nov 20 2022 •

► [A337142] 0,0,0,0,3,18,69,216,597,1518,3633,8304,18306,39192,81906,167736,337623,669522,1310559,2536224,4858719,9224262,17370693,32472816,60302340 ⋆ a(n) is the number of words of length n over the alphabet { 0,1,2 } with at least two 1's and exactly one occurrence of the subword 22. • a(n) = (((1 + sqrt(5)) / 2) ^ n) * (- 3 * sqrt(5) / 125 + ((135 + 13 * sqrt(5)) / 500) * n + ((- 45 - 9 * sqrt(5)) / 250) * n ^ 2 + ((3 + sqrt(5)) / 100) * n ^ 3) + (((1 - sqrt(5)) / 2) ^ n) * (3 * sqrt(5) / 125 + ((135 - 13 * sqrt(5)) / 500) * n + ((- 45 + 9 * sqrt(5)) / 250) * n ^ 2 + ((3 - sqrt(5)) / 100) * n ^ 3). • a(n) = (n - 3) * ((n ^ 2 + 3 * n + 2) * F(n) + 3 * (n - 3) * n * F(n + 1)) / 50, where F(n) is the n - th Fibonacci number. - _ Vaclav Kotesovec _ , Sep 16 2020 •

► [A373065] 0,0,1,3,18,70,315,1281,5124,19692,73845,270655,974358,3454386,12090351,41851005,143489160,487862872,1646537193,5520742011,18402473370,61018727070,201361799331,661617340153,2165293113228 ⋆ Expansion of e.g.f. (1 / 2) * (x ^ 2 * exp(x)) * (cosh(x)) ^ 2. • a(n) = binomial(n,2) * (3 ^ (n - 2) + (- 1) ^ n + 2) / 4. •

► [A374487] 1,3,18,70,315,1281,5348,21708,88245,355135,1425270,5692050,22666735,89986365,356400840,1408459928,5555679849,21877337979,86020384730,337769595870,1324677499299,5189411915897,20308936981932,79406140870500,310206869770525 ⋆ Expansion of 1 / (1 - 2 * x - 7 * x ^ 2) ^ (3 / 2). • a(0) = 1, a(1) = 3; a(n) = ((2 * n + 1) * a(n - 1) + 7 * (n + 1) * a(n - 2)) / n. •

► [A098522] 0,0,1,3,18,70,330,1386,6160,26496,115965,502975,2194302,9553050,41687737,181908195,794770200,3474159304,15199740171,66541189473,291507681070,1277822445690,5604712643376,24596642511628,108001447419048 ⋆ E.g.f. exp(x) * BesselI(2,2 * sqrt(3) * x) / 3. • a(n) = Sum _{ k=0..floor(n / 2) } binomial(n, k) * binomial(n - k, k + 2) * 3 ^ k. •

► [A174764] 0,1,3,18,70,330,1386,6328,28008,130140,603460,2895816,14024088,69786808,352043160,1817317440,9525774016,50958843408,276906491568,1532719442080,8615750596320,49260355141536,285887468809888 ⋆ Sum of the numerators for computing the second moment of the probability mass function (PMF) of the number of 2 - cycles in the involutions on n elements (A000085) assuming the involutions are all equally likely. • a(n) = Sum _{ k=0..[n / 2] } k ^ 2 * n! / ((n - 2 * k)! * 2 ^ k * k!). •

► [A305623] 0,0,3,18,72,267,885,2880,9000,27915,85233,259308,783972,2366007,7122405,21422160,64364400,193307955,580316313,1741791348,5226945372,15684152847,47058746925,141189342840,423593188200 ⋆ Number of chiral pairs of rows of n colors with exactly 3 different colors. • a(n) = (k! / 2) * (S2(n,k) - S2(ceiling(n / 2),k)), with k=3 colors used and where S2(n,k) is the Stirling subset number A008277. •

► [A152897] 0,3,18,73,256,844,2709,8596,27146,85560,269464,848400,2670859,8407805,26467163,83316232,262271397,825604226,2598919135,8181135469,25753388928,81069068693,255197243733,803335158081,2528817970143 ⋆ Partial sums of A152896. • a(1)=0, a(2)=3, a(3)=18, a(4)=73, a(5)=256, a(6)=844, a(n)=7 * a(n - 1) - 18 * a(n - 2) + 23 * a(n - 3) - 16 * a(n - 4) + 6 * a(n - 5) - a (n - 6). - _ Harvey P. Dale _ , Feb 07 2015 •

► [A094033] 0,0,0,3,18,75,270,903,2898,9075,27990,85503,259578,784875,2366910,7125303,21425058,64373475,193317030,580344303,1741819338,5227030875,15684238350,47059006503,141189602418 ⋆ Number of connected 2 - element antichains on a labeled n - set. • a(n) = (3 ^ n - 3 * 2 ^ n + 3) / 2. • a(n) = 6 * a(n - 1) - 11 * a(n - 2) + 6 * a(n - 3). •

► [A245580] 3,18,76,322,1364,5778,24476,103682,439204,1860498,7881196,33385282,141422324,599074578,2537720636,10749957122,45537549124,192900153618,817138163596,3461452808002,14662949395604,62113250390418,263115950957276,1114577054219522 ⋆ Smallest Lucas number L(m) > L(n) that is divisible by the

n - th Lucas number L(n) = A000204(n). • a(n) = (2 - sqrt(5)) ^ n + (2 + sqrt(5)) ^ n for n>1. • a(n) = 4 * a(n - 1) + a(n - 2) for n>3. •

► [A086346] 1,3,18,80,400,1904,9248,44544,215296,1039104,5018112,24227840,116985856,564850688,2727354368,13168803840,63584665600,307013812224,1482394042368,7157631156224 ⋆ On a 3 X 3 board, the number of n - move paths for a chess king ending in a given corner square. • a(n) = (1 / 32) * (2 * (- 2) ^ (n + 2) + (2 + sqrt(8)) ^ (n + 2) + (2 - sqrt(8)) ^ (n + 2)). • a(n) = 2 * a(n - 1) + 12 * a(n - 2) + 8 * a(n - 3). •

► [A036290] 0,3,18,81,324,1215,4374,15309,52488,177147,590490,1948617,6377292,20726199,66961566,215233605,688747536,2195382771,6973568802,22082967873,69735688020,219667417263,690383311398,2165293113021,6778308875544 ⋆ a(n) = n * 3 ^ n. • a(n) = Sum _{ i=0..n } Sum _{ j=0..n } (2 * n - 2 * i - j) * n! / (i! * j! * (n - i - j)!). (End) • a(n) = Sum _{ k=0..2 * n } T(n, k) * k, where T(n, k) is given by A027907. • a(n) = Sum _{ k=0..n } Sum _{ j=0..n } C(n, j) * C(j, k) * (j + k). (End) • a(n) = 6 * a(n - 1) - 9 * a(n - 2). - _ Wesley Ivan Hurt _ , Apr 26 2021 •

► [A078904] 0,3,18,81,336,1359,5454,21837,87372,349515,1398090,5592393,22369608,89478471,357913926,1431655749,5726623044,22906492227,91625968962,366503875905,1466015503680,5864062014783,23456248059198,93824992236861 ⋆ a(n) = 4a(n - 1) + 3n with a(0) = 0. • a(n) = (1 / 3) * (4 ^ (n + 1) - 3 * n - 4). •

► [A099012] 0,1,3,18,81,405,1944,9477,45927,223074,1082565,5255361,25509168,123825753,601059771,2917611090,14162371209,68745613437,333698181192,1619805064509,7862698824255,38166342053346,185263315578333 ⋆ a(n) = 3 ^ (n - 1) * Fibonacci(n). • a(n) = 3 * a(n - 1) + 9 * a(n - 2). • a(n) = sqrt(5)(3 / 2 + 3 * sqrt(5) / 2) ^ n / 15 - sqrt(5) * (3 / 2 - 3 * sqrt(5) / 2) ^ n / 15. •

► [A122069] 1,3,18,81,405,1944,9477,45927,223074,1082565,5255361,25509168,123825753,601059771,2917611090,14162371209,68745613437,333698181192,1619805064509,7862698824255,38166342053346,185263315578333 ⋆ a(n) = 3 * a(n - 1) + 9 * a(n - 2) for n > 1, with a(0)=1, a(1)=3. • a(n + 1) / a(n) - > 3 * ((1 + sqrt(5)) / 2 if n - >infinity. • a(n) = (1 / 2) * ((3 / 2) + (3 / 2) * sqrt(5)) ^ n + (1 / 10) * ((3 / 2) + (3 / 2) * sqrt(5)) ^ n * sqrt(5) - (1 / 10) * sqrt(5) * ((3 / 2) - (3 / 2) * sqrt(5)) ^ n + (1 / 2) * ((3 / 2) - (3 / 2) * sqrt(5)) ^ n, with n >= 0. - _ Paolo P. Lava _ , Nov 19 2008 •

► [A124811] 3,18,89,405,1701,6801,26244,98415,360846,1299078,4605822,16120350,55801305,191318760,650483703,2195382771,7360989291,24536630727,81358302690,268482398877,882156452724,2887057484028,9414317882700,30596533116588,99132767304831 ⋆ Number of 4 - ary Lyndon words of length n with exactly three 1s. • a(n) = (1 / 3) * Sum _{ d|3, d|n } mu(d) C(n / d - 1,(n - 3) / d) * 3 ^ ((n - 3) / d). • a(n) = 3 ^ (n / 3 - 2) * (binomial(n - 1, 2) * 3 ^ (2 * n / 3 - 2) - 1 + (n ^ 2 mod 3)). •

► [A147518] 1,3,18,90,468,2412,12456,64296,331920,1713456,8845344,45662112,235720512,1216854720,6281741952,32428096128,167402836224,864179921664,4461136704000,23029626345984,118885325607936,613719060507648 ⋆ Expansion of (1 - x) / (1 - 4 * x - 6 * x ^ 2). • a(n) = 4 * a(n - 1) + 6 * a(n - 2) with a(0)=1, a(1)=3. • a(n) = (r ^ n + s ^ n) / 2 + (r ^ n - s ^ n) / (r - s), where r = 2 + sqrt(10) and s = 2 - sqrt(10). - _ Paolo P. Lava _ , Nov 18 2008 • a(n) = ((10 + sqrt(10)) / 20) * (2 + sqrt(10)) ^ n + ((10 - sqrt(10)) / 20) * (2 - sqrt(10)) ^ n. - _ Richard Choulet _ , Nov 20 2008 •

► [A133594] 1,3,18,90,486,2538,13446,70794,373734,1970730,10396998,54839754,289283238,1525926762,8049179142,42458658570,223966125414,1181402279082,6231800342214,32872228375626,173398289233446,914661608207850 ⋆ a(n)=3 * a(n - 1) + 12 * a(n - 2) for n>=3, a(0)=1, a(1)=3, a(2)=18 . • a(n)=(3 / 2) * [(3 / 2) - (1 / 2) * sqrt(57)] ^ (n - 1) + (3 / 2) * [(3 / 2) + (1 / 2) * sqrt(57)] ^ (n - 1) + (9 / 38) * sqrt(57) * [(3 / 2) + (1 / 2) * sqrt(57)] ^ (n - 1) - (9 / 38) * sqrt(57) * [(3 / 2) - (1 / 2) * sqrt(57)] ^ (n - 1),100) + (1 / 4) * [C(2 * n,n) mod 2], with n>=0 [From _ Paolo P. Lava _ , Nov 18 2008] •

► [A092691] 0,0,1,3,18,90,660,4620,42000,378000,4142880,45571680,586776960,7628100480,113020427520,1695306412800,28432576972800,483353808537600,9056055981772800,172065063653683200,3562946373482496000,74821873843132416000,1697172166720622592000 ⋆ a(n) = n! * Sum _{ k=1..floor(n / 2) } 1 / (2k). • a(2n + 1) = (2n + 1) * a(2n). • a(n) = n! * (Psi(floor(n / 2) + 1) + gamma) / 2. • a(n) = n! / 2 * h(floor(n / 2)), where h(n) = Sum _{ k=1..n } 1 / k. - _ Gary Detlefs _ , Jul 19 2011 •

► [A064671] 0,3,18,91,420,1829,7686,31623,128520,518665,2084874,8361995,33497100,134094861,536608782,2146926607,8588754960,34357248017,137433710610,549744803859,2199000186900,8796044787733,35184271425558,140737278640151,562949517213720 ⋆ Number of n - digit base 4 biquanimous numbers (with leading 0's allowed, but not all - 0 string). • a(n) = (2 ^ n - 2) * (1 + 2 ^ n - n) / 2. • a(n) = 10 * a(n - 1) - 37 * a(n - 2) + 64 * a(n - 3) - 52 * a(n - 4) + 16 * a(n - 5) for n>5. •

► [A125833] 0,3,18,93,468,2343,11718,58593,292968,1464843,7324218,36621093,183105468,915527343,4577636718,22888183593,114440917968,572204589843,2861022949218,14305114746093,71525573730468,357627868652343 ⋆ Numbers whose base - 5 representation is 333333.....3. • a(n) = 3 * (5 ^ n - 1) / 4. • a(n) = 5 * a(n - 1) + 3 for n > 0, a(0)=0. - _ Vincenzo Librandi _ , Sep 30 2010 •

► [A129547] 0,1,3,18,94,611,4381,35834,326662,3301193,36611767,442379438,5784595282,81393560783,1226280162097,19696507698878,335990910075202,6066382761193373,115578717461844067,2317323290060066858 ⋆ a(n)= n! - (n - 1)!! - a(n - 1), with a(1)=1! - 0!!=0. • a(n)= n! - (n - 1)!! - a(n - 1), with a(1)=1! - 0!!=0. a(n)=abs { sum { i=1..n,[(n - i + 1)! - (n - i)!!] * (- 1) ^ i }} •

► [A180036] 1,3,18,99,549,3042,16857,93411,517626,2868363,15894693,88078554,488076849,2704619907,14987330082,83050510131,460214540901,2550224234898,14131764797193,78309496690659,433942777844874 ⋆ Eight white queens and one red queen on a 3 X 3 chessboard. G.f.: (1 - 2 * x) / (1 - 5 * x - 3 * x ^ 2). • a(n) = 5 * a(n - 1) + 3 * a(n - 2) with a(0) = 1 and a(1) = 3. • a(n) = ((1 + 16 * A) * A ^ (- n - 1) + (1 + 16 * B) * B ^ (- n - 1)) / 37 with A = (- 5 + sqrt(37)) / 6 and B = (- 5 - sqrt(37)) / 6. •

► [A136779] 1,3,18,105,606,3483,19986,114609,657054,3766515,21590418,123758649,709393758,4066287627,23308182162,133603718145,765823377054,4389738680547,25162205542674,144231041494281,826739659899486,4738913739770235,27163694339468562 ⋆ Number of multiplex juggling sequences of length n, base state <1,1,1> and hand capacity 2. • a(n) = 8 * a(n - 1) - 13 * a(n - 2) for n>3. • a(n) = ((9 - 14 * sqrt(3)) * (4 - sqrt(3)) ^ n + (4 + sqrt(3)) ^ n * (9 + 14 * sqrt(3))) / 338 for n>1. •

► [A106328] 0,3,18,105,612,3567,20790,121173,706248,4116315,23991642,139833537,815009580,4750223943,27686334078,161367780525,940520349072,5481754313907,31950005534370,186218278892313,1085359667819508,6325939728024735,36870278700328902,214895732473948677 ⋆ Numbers j such that 8 * (j ^ 2) + 9 = k ^ 2 for some positive number k. • a(1)=0, a(2)=3 then a(n) = 6 * a(n - 1) - a(n - 2). • a(n) = ((3 + 2 * sqrt(2)) ^ (n - 1) - (3 - 2 * sqrt(2)) ^ (n - 1)) * 3 / 4 / sqrt(2). - _ Max Alekseyev _ , Jan 11 2007 •

► [A137962] 1,1,3,18,106,720,5085,37493,284331,2204973,17404720,139369905,1129411314,9244823986,76326154857,634847759955,5314684735045,44746683774474,378652035541761,3218705637379698,27471657413667780 ⋆ G.f. satisfies A(x) = 1 + x * (1 + x * A(x) ^ 5) ^ 3. • a(n) = Sum _{ k=0..n - 1 } C(3 * (n - k),k) / (n - k) * C(5 * k,n - k - 1) for n>0 with a(0)=1. - _ Paul D. Hanna _ , Jun 16 2009 •

► [A169604] 3,18,108,648,3888,23328,139968,839808,5038848,30233088,181398528,1088391168,6530347008,39182082048,235092492288,1410554953728,8463329722368,50779978334208,304679870005248,1828079220031488 ⋆ a(n) = 3 * 6 ^ n. • a(n) = 6 * a(n - 1) for n > 0; a(0) = 3. •

► [A081341] 1,3,18,108,648,3888,23328,139968,839808,5038848,30233088,181398528,1088391168,6530347008,39182082048,235092492288,1410554953728,8463329722368,50779978334208,304679870005248,1828079220031488,10968475320188928,65810851921133568 ⋆ Expansion of exp(3 * x) * cosh(3 * x). • a(0)=1, a(n) = 6 ^ n / 2, n > 0. • a(n) = ((3 + sqrt(9)) ^ n + (3 - sqrt(9)) ^ n / 2. - Al Hakanson (hawkuu(AT)gmail.com), Dec 08 2008 • a(n) = ((8 * n - 4) * a(n - 1) - 12 * (n - 2) * a(n - 2)) / n, a(0)=1, a(1)=3. •

► [A363439] 1,3,18,108,702,4698,32913,236844,1747170,13131639,100239444,774932832,6055105590,47742847875,379381851684,3035174325246,24426965179593,197622494260479,1606332527049645,13111628672610153,107428845309125157 ⋆ G.f. satisfies A(x) = exp(Sum _{ k>=1 } A(x ^ k) * (3 * x) ^ k / k). • a(0) = 1; a(n) = (1 / n) * Sum _{ k=1..n } (Sum _{ d|k } d * 3 ^ (k / d) * a(d - 1)) * a(n - k). •

► [A132900] 1,3,18,108,729,5103,37179,277749,2119203,16435305,129199212,1027098306,8243181351,66698502705,543507899346,4456368744804,36738955831707,304354824214977,2532328310730798,21152326520189628,177310026608555619,1491097815365481477 ⋆ Colored Motzkin paths where each of the steps has three possible colors. • a(n) = (1 / (2 * Pi)) * Integral _{ x= - 3..9 } x ^ n * sqrt(27 + 6x - x ^ 2) / 9. •

► [A050623] 3,18,108,1053,10206,100602,1001646,10005525,100009323,1000053864,10000125297,100000190088,1000000837998,10000002002688,100000000895004,1000000037647854,10000000032104772,100000000321047720 ⋆ Smallest n - digit number divisible by 3 ^ n. • a(n) = 3 ^ n * ceiling(10 ^ (n - 1) / 3 ^ n). - _ Vladeta Jovovic _ , Feb 14 2003 •

► [A134092] 1,3,18,110,780,6167,53494,504030,5112090,55411697,638154165,7770348170,99618149267,1339889000543,18848892749144,276573551651632,4222814264496510,66947348027905977,1099955438013660173 ⋆ Column 2 of triangle A134090. • a(n) = [x ^ n] Sum _{ k=0..n + 2 } C(n + 2,k) * x ^ k / (1 - k * x) ^ 2 / [Product _{ i=1..k } (1 - i * x)]. •

► [A000274] 0,0,1,3,18,110,795,6489,59332,600732,6674805,80765135,1057289046,14890154058,224497707343,3607998868005,61576514013960,1112225784377144,21197714949305577,425131949816628507,8950146311929021210 ⋆ Number of permutations of length n with 2 consecutive ascending pairs. • a(n) = (1 + n) a(n - 1) + (3 + n) a(n - 2) + (3 - n) a(n - 3) + (2 - n) a(n - 4). • a(n) = (n - 1) ^ 2 / (n - 2) * a(n - 1) - (- 1) ^ n * (n - 1) / 2, n>2, a(2)=0. - _ Vladeta Jovovic _ , Aug 31 2003 • a(n) = (1 / 2) { [n! / e] - [(n - 1)! / e] } (conjectured). • a(n) = (n - 1) * GAMMA(n, - 1) * exp(- 1) / 2 where GAMMA = incomplete Gamma function. [_ Mark van Hoeij _ , Nov 11 2009] •

► [A367045] 1,1,3,18,112,755,5348,39302,296916,2291861,17997052,143319918,1154728056,9395809374,77099733884,637298480966,5301568498768,44351526986704,372890978840156,3149155955471690,26702387443603200,227238745573918511,1940201017862028108 ⋆ G.f. satisfies A(x) = 1 - x ^ 2 + x * A(x) ^ 4. • a(n) = Sum _{ k=0..floor(n / 2) } (- 1) ^ k * binomial(3 * (n - 2 * k) + 1,k) * binomial(4 * (n - 2 * k),n - 2 * k) / (3 * (n - 2 * k) + 1). •

► [A163471] 3,18,114,744,4932,32952,221016,1485216,9989808,67223328,452457504,3045661824,20502553152,138020971392,929153544576,6255074075136,42109362770688,283481998053888,1908413999583744,12847536038651904 ⋆ a(n) = 10 * a(n - 1) - 22 * a(n - 2) for n > 1; a(0) = 3, a(1) = 18. • a(n) = ((3 + sqrt(3)) * (5 + sqrt(3)) ^ n + (3 - sqrt(3)) * (5 - sqrt(3)) ^ n) / 2. •

► [A201695] 3,18,116,395,989,2068,3838,6541,10455,15894,23208,32783,45041,60440,79474,102673,130603,163866,203100,248979,302213,363548,433766,513685,604159 ⋆ Number of n X 3 0..2 arrays with rows and columns lexicographically nondecreasing read forwards and nonincreasing read backwards. • a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. •

► [A153394] 1,3,18,118,813,5799,42470,317637,2416671,18649874,145655292,1149199212,9146686605,73354982763,592217363334,4809250320023,39258457746099,321964620209940,2651536017682988,21919266484180533,181820251665093357 ⋆ G.f.: A(x) = F(x * G(x) ^ 2) ^ 3 where F(x) = G(x * F(x)) = 1 + x * F(x) ^ 3 is the g.f. of A001764 and G(x) = F(x / G(x)) = 1 + x * G(x) ^ 2 is the g.f. of A000108 (Catalan). • a(n) = Sum _{ k=0..n } C(3k + 3,k) / (k + 1) * C(2n, n - k) * k / n for n>0 with a(0)=1. •

► [A334682] 0,3,18,118,829,6115,46736,366912,2941528,23981628,198224910,1657364566,13992405626,119118427610,1021399476720,8813544248100,76475285228304,666865500290884,5840843616021192,51361847992315320,453282040123194425,4013440075484640675 ⋆ a(n) is the total number of down - steps after the final up - step in all 3 - Dyck paths of length 4 * n (n up - steps and 3 * n down - steps). • a(n) = binomial(4 * (n + 1) + 1, n + 1) / (4 * (n + 1) + 1) - binomial(4 * n + 1, n) / (4 * n + 1). •

► [A342710] 3,18,123,843,5778,39603,271443,1860498,12752043,87403803,599074578,4106118243,28143753123,192900153618,1322157322203,9062201101803,62113250390418,425730551631123,2918000611027443,20000273725560978,137083915467899403,939587134549734843 ★ Solutions x to the Pell - Fermat equation x ^ 2 - 5 * y ^ 2 = 4. ● a(n) = 7 * a(n - 1) - a(n - 2). ● a(n) = 2 * T(2 * n + 1, 3 / 2), where T(n,x) denotes the n - th Chebyshev polynomial of the first kind. - _ Peter Bala _ , Jul 02 2022 ●

► [A199421] 3,18,123,858,6003,42018,294123,2058858,14412003,100884018,706188123,4943316858,34603218003,242222526018,1695557682123,11868903774858,83082326424003,581576284968018,4071033994776123,28497237963432858 ★ (5 * 7 ^ n + 1) / 2. ● a(n) = 7 * a(n - 1) - 3. ● a(n) = 8 * a(n - 1) - 7 * a(n - 2). ●

► [A371483] 1,3,18,124,933,7446,61943,531348,4666425,41751325,379230711,3487769871,32414437521,303950138604,2872137458010,27322233357964,261446381792670,2514851398148595,24303030755342128,235841264063844258,2297278004837062317 ★ G.f. A(x) satisfies A(x) = 1 / (1 - x * A(x) / (1 - x)) ^ 3. ● a(n) = Sum _{ k=0..n } binomial(n - 1,n - k) * binomial(4 * k + 2,k) / (k + 1). ●

► [A176277] 0,1,3,18,125,1020,9667,104790,1281177,17457840,262493231,4318429962,77178551749,1489209086820,30859393432155,683549418431934,16118484827641841,403156528379483160,10661349675027656839 ★ Sum over the odd entries of the rows in the triangle Worpitzky(n, k) * Harmonic(k) (A176276). ● a(n) = Sum _{ k=0..n } (k mod 2) abs(Stirling1(k + 1, 2) * Stirling2(n + 1, k + 1)) . ●

► [A004987] 1,3,18,126,945,7371,58968,480168,3961386,33011550,277297020,2344420260,19927572210,170150808870,1458435504600,12542545339560,108179453553705,935434098376155,8107095192600 10,70403724246205350,612512400941986545,5337608065351597035,46582761297613937760 ★ a(n) = (3 ^ n / n!) * Product _{ k=0..n - 1 } (3 * k + 1). ● a(n) = (- 9) ^ n * binomial(- 1 / 3,n). - _ Peter Luschny _ , Mar 23 2014 ●

► [A073971] 1,1,3,18,126,1008,8100,52488,297432,1679616,9843120,59058720,358108128,2176782336,13162730688,78976384128,471877757568,2820249944064,16891882995456,101361597378048,608764662139392,3656158440062976,21947909832446976,131687458994681856 ★ Number of strings of length n over Z _ 6 with trace 0 and subtrace 0. ● a(n; t, s) = a(n - 1; t, s) + a(n - 1; t + 5, s + 5t + 1) + a(n - 1; t + 4, s + 4t + 4) + a(n - 1; t + 3, s + 3t + 3) + a(n - 1; t + 2, s + 2t + 2) + a(n - 1; t + 1, s + t + 1) where t is the trace and s is the subtrace. ●

► [A369264] 1,3,18,127,993,8268,71888,645087,5929527,55544315,528319662,5088941628,49539243900,486606281496,4816930145376,48005470976271,481262635723491,4850084768085465,49107197378659262,499298960719688343,5095861705240094097 ★ Expansion of (1 / x) * Series _ Reversion(x * (1 - x) ^ 3 / (1 + x ^ 2) ^ 3). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 2) } binomial(3 * n + 3,k) * binomial(4 * n - 2 * k + 2,n - 2 * k). ●

► [A368079] 1,3,18,127,996,8322,72644,654615,6043455,56866028,543368586,5258196762,51426990112,507537393600,5048033356128,50549237164615,509197913456922,5156339940802941,52460340305220466,535976129228082972,5496745175387480976 ★ Expansion of (1 / x) * Series _ Reversion(x * (1 - x) ^ 3 * (1 - x ^ 2) ^ 3). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 2) } binomial(3 * n + k + 2,k) * binomial(4 * n - 2 * k + 2,n - 2 * k). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..n } (- 1) ^ k * binomial(3 * n + k + 2,k) * binomial(7 * n - k + 5,n - k). ●

► [A185113] 1,3,18,130,1020,8379,70840,610740,5340060,47187580,420412278,3770221338,33991902308,307826695050,2798052616800,25514463687720,233296537299228,2138295980859588,19639886707062280,180724535020583400 ★ Number of dissections of a convex (3n + 3) - sided polygon into n pentagons and one triangle (up to equivalence) ● a(n) = binomial(4 * n + 1,n - 1) * (n + 2) / n = binomial(4 * n + 1,n) * (n + 2) / (3 * n + 2). ●

► [A368963] 1,3,18,130,1044,8949,80201,742365,7042215,68103156,668913195,6654654240,66916523202,679039933050,6944796387690,71512538784330,740800257667236,7714659988543299,80719544259082000,848155028673449400,8945940728543188656 ★ Expansion of (1 / x) * Series _ Reversion(x * (1 - x - x ^ 2) ^ 3). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 2) } binomial(3 * n + k + 2,k) * binomial(4 * n - k + 2,n - 2 * k). ●

► [A369012] 1,3,18,133,1095,9636,88718,843993,8230671,81841987,826641816,8457710604,87472494564,912995025912,9604763388534,101736967518497,1084125909550959,1161415979556648 9,1250117462705246 90,13513126268718716 61,1466295022477228047 ★ Expansion of (1 / x) * Series _ Reversion(x * (1 - x / (1 - x)) ^ 3). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..n } binomial(3 * n + k + 2,k) * binomial(n - 1,n - k). ●

► [A074545] 3,18,134,1080,8978,75888,649154,5606640,48811778,427774608,37692606 74,33358388400,296270827778,2638754846928,23555015544194,210638693637360,1886253119486978,16909812213784848,151723048895171714 ★ a(n) = 2 ^ n + 7 ^ n + 9 ^ n. ● a(n) = 18 * a(n - 1) - 95 * a(n - 2) + 126 * a(n - 3). ●

► [A005159] 1,3,18,135,1134,10206,96228,938223,9382230,95698746,991787004,10413763542,110546105292,1184422556700,12791763612360,139110429284415,1522031755700070,16742349312700770,185047018719324300,2054021907784499730 ★ a(n) = 3 ^ n * Catalan(n). ● a(n) is the upper left term in M ^ n, M = the infinite square production matrix: ●

► [A371416] 1,3,18,136,1152,10458,99472,978453,9871686,101590654,1062271704,11253818628,120535386692,1303045817184,14199323523912,155805565801803,1720024043803542,19090440094335912,212897898182054224,2384431948345110510,26808516659219953680 ★ Expansion of (1 / x) * Series _ Reversion(x * (1 - 3 * x - x ^ 3)). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 2) } 3 ^ k * binomial(n + k,k) * binomial(4 * n + k + 2,n - 2 * k). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 3) } 3 ^ (n - 3 * k) * binomial(n + k,k) * binomial(2 * n - 2 * k,n - 3 * k). ●

► [A003122] 1,3,18,136,1170,10962,109158,1138032,12298392,136803060,1558392462,18110005704,214056200904,2567339253864,31186302919290,383088799324192,4752646170647124,59485067001886392,750454803914305388,9535654298173667520,121954511767711578480,1568979034333191541588,20295073846979967634038 ★ Number of Hamiltonian rooted triangulations with n internal nodes and 3 external nodes. ● a(n) = f(n, 3). - _ Sean A. Irvine _ , Feb 02 2015 ●

► [A107708] 1,3,18,144,1323,13176,138348,1507977,16900650,193536864,2254630788,26635735440,318350663748,3842488208997,46770206742342,573435609537600,7075551692662875,87794803094586336,1094807464312435344 ★ Number of paths from (0,0) to (3n,0) that stay in the first quadrant (x,y >= 0) and where each step is (3,0), (2,1), (1,2), or (1, - 1). ● a(n) = (1 / n) * Sum(3 ^ j * binomial(n, j) * binomial(n + j, 2n + 1 - j), j=ceiling((n + 1) / 2)..n) for n >= 1; a(0)=1. ●

► [A224992] 1,3,18,144,1368,14400,160992,1861632,21919104,260508672,3110985216,37241118720,446349219840,5352925446144,64215514275840,770468624990208,9244918222258176,110934787001942016,1331192054033547264,15974152308466384896,191688913661984243712 ★ Non - crossing, non - nesting, 3 - colored permutations on { 1,2,...,n } . ● a(n) = 9 * 2 ^ n / 20 + 6 ^ n / 4 + 12 ^ n / 20, n >0. - _ R. J. Mathar _ , Jun 11 2019 ●

► [A074525] 3,18,146,1242,10658,91818,793586,6880122,59823938,521638218,4560526226,39970994202,351149013218,3091621642218,27274838966066,241075504183482,2134495165562498,18928981513351818,168109033806481106 ★ a(n) = 1 ^ n + 8 ^ n + 9 ^ n. ● a(n) = 17 * a(n - 1) - 72 * a(n - 2) + 56 with a(0)=3, a(1)=18. - _ Vincenzo Librandi _ , Jul 21 2010 ● a(0)=3, a(1)=18, a(2)=146, a(n) = 18 * a(n - 1) - 89 * a(n - 2) + 72 * a(n - 3). - _ Harvey P. Dale _ , Mar 23 2012 ●

► [A371538] 1,3,18,151,1440,14835,160793,1806849,20859129,245905348,2947869600,35825319390,440372147956,5465555197818,68396554601013,862066323857486,10933638171672105,139439595024315675,1787056241039876890,23003636498360053905,297283046361025602900 ★ G.f. A(x) satisfies A(x) = (1 + x * A(x) ^ 2 / (1 + x)) ^ 3. ● a(n) = 3 * Sum _{ k=0..n } (- 1) ^ (n - k) * binomial(n - 1,n - k) * binomial(6 * k + 3,k) / (6 * k + 3). ●

► [A084879] 1,3,18,189,2106,22113,220158,2114829,19853586,183662073,1683014598,15327998469,139038783066,1257874611633,11360039237838,102475402586109,923689049088546,8321664384098793,74945758272961878,674816500839877749 ★ Number of (k,m,n) - multiantichains of multisets with k=3 and m=2. ● a(n) = (9 ^ n - 2 * 6 ^ n + 3 * 3 ^ n) / 2. ●

► [A137223] 3,18,234,1110,15018,70998,961194,4543830,61516458,290805078,3937053354,18611524950,251971414698,1191137596758,16126170540714,76232806192470,1032074914605738,4878899596318038,66052794534767274,312249574164354390 ★ a(n) = A135574(3 * n) + A135574(3 * n + 1) + A135574(3 * n + 2). ● a(n) = - a(n - 1) + 64 * a(n - 2) + 64 * a(n - 3). ● a(n) = (- 8 * (- 1) ^ n + 35 * 8 ^ n + 9 * (- 8) ^ n) / 12. ●

► [A041381] 1,3,19,22,107,129,881,2772,78497,238263,1508075,1746338,8493427,10239765,69932017,220035816,6230934865,18912840411,119707977331,138620817742,674191248299,8128120660 41,5551063644545,17466002999676,49459914763 5473 ★ Denominators of continued fraction convergents to sqrt(205). ● a(n) = 79378 * a(n - 8) - a(n - 16) for n>15. - _ Vincenzo Librandi _ , Dec 16 2013 ●

► [A273367] 1,3,19,25,57,67,115,129,193,211,291,313,409,435,547,577,705,739,883,921,1081,1123,1299,1345,1537 ★ Numbers k such that 10 * k + 6 is a perfect square. ● a(2n) = 10 * n ^ 2 - 8 * n + 1. ● a(2n + 1) = 10 * n ^ 2 + 8 * n + 1. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). - _ G. C. Greubel _ , May 20 2016 ●

► [A187828] 3,19,37,53,71,109,149,211,251,277,307,359,397,449,479,521,593,641,709,769,823,859,919,1009,1033 ★ Partition the sequence of consecutive primes into groups so that the absolute value of the alternating sum (- 1) ^ n (An) with n = 0,....m in each group is prime. ● a(x) = Sum _{ (- 1) ^ n (An) with n = (0, 1, 2..m) } . ●

► [A103145] 3,19,43,76,119,173,239,318,411,519,643,784,943,1121,1319,1538,1779,2043,2331,2644,2983,3349,3743,4166,4619 ★ a(n) = (1 / 6) * (n ^ 3 + 21 * n ^ 2 + 74 * n + 18). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Vincenzo Librandi _ , Jun 26 2012 ●

► [A112627] 1,3,19,51,307,819,4915,13107,78643,209715,1258291,3355443,20132659,53687091,322122547,858993459,5153960755,13743895347,82463372083,219902325555,1319413953331,3518437208883,21110623253299,56294995342131,337769972052787 ★ Decimal equivalent of number defined by last k bits of the infinite binary string ...0011001100110011 (numbers with leading zeros omitted). ● a(n) = 4 ^ (n - 1) - (4 + (- 4) ^ n) / 20. - _ Robert Israel _ , Sep 02 2014 ● a(n) = a(n - 1) + 16 * a(n - 2) - 16 * a(n - 3) for n>3. - _ Colin Barker _ , May 19 2016 ●

► [A114250] 0,0,0,0,3,19,63,175,501,1230,3086,7469,18402,44748,109787,269289,668521,1675317,4236270 ★ Number of Fermat pseudoprimes to bases 2, 3, 5 and 7 less than 10 ^ n. ● a(n) = card { m in A083739, m<10 ^ n } . - _ R. J. Mathar _ , Feb 07 2008 ●

► [A249994] 1,3,19,63,307,1095,4843,18111,76483,294327,1213147,4747119,19308979,76282599,308006731,1223430687,4919576995,19600876311,78636062395,313847102415,1257480899731,5023648225863,20113423216939,80397210315903,321758305696387 ★ Expansion of 1 / ((1 - 2 * x) * (1 + 3 * x) * (1 - 4 * x)). ● a(n) = (5 * 2 ^ (2 * n + 3) - 7 * 2 ^ (n + 1) + (- 1) ^ n * 3 ^ (n + 2)) / 35. - _ Colin Barker _ , Dec 29 2014 ● a(n) = 3 * a(n - 1) + 10 * a(n - 2) - 24 * a(n - 3). - _ Colin Barker _ , Dec 29 2014 ●

► [A178747] 1,3,19,65,295,1129,4663,18441,74359,296585,1188727,4751497,19015543,76048521,304232311,1216874633,4867651447,19470387337,77882161015,311527770249,1246113527671,4984450615433,19937812248439,79751235012745,319004979197815 ★ Sum of terms in 'rows' of A178746. ● a(n) = (17 * 4 ^ n + 5 * (2 * (- 1) ^ n - 1) * 2 ^ n - 7 * (- 1) ^ n) / 15. ●

► [A071245] 0,0,3,19,66,170,365,693,1204,1956,3015,4455,6358,8814,11921,15785,20520,26248,33099,41211,50730,61810,74613,89309,106076 ★ a(n) = n * (n - 1) * (2 * n ^ 2 + 1) / 6. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5), n>4, a(0)=0, a(1)=0, a(2)=3, a(3)=19, a(4)=66. - _ Yosu Yurramendi _ , Sep 03 2013 ●

► [A351859] 1,1,3,19,67,251,1137,4803,20035,87013,377753,1634469,7134385,31261114,137121113,603206144,2660097603,11749336328,51981371895,230336544210,1021976441817,4539784391763,20188837618799,89871081815631,400427435522737 ★ a(n) = [x ^ n] (1 + x + x ^ 2 + x ^ 3) ^ (4 * n) / (1 + x + x ^ 2) ^ (3 * n). ● a(n) = Sum _{ i = 0..n } Sum _{ j = 0..n } Sum _{ k = 0..j } (- 1) ^ j * C(4n,n - 2 * i - j - k) * C(4n,i) * C(3n + j - 1,j) * C(j,k). ●

► [A064056] 3,19,68,185,426,875,1652,2922,4905,7887,12232,18395,26936,38535,54008,74324,100623,134235,176700,229789,295526,376211,474444,593150,735605 ⋆ Seventh column of quintinomial coefficients. ● a(n) = 3 * C(n + 2,2) + 10 * C(n + 2,3) + 10 * C(n + 2,4) + 5 * C(n + 2,5) + C(n + 2,6) (see comment in A213887). - _ Vladimir Shevelev _ and _ Peter J. C. Moses _ , Jun 22 2012 ●

► [A059599] 3,19,69,189,434,882,1638,2838,4653,7293,11011,16107,22932,31892,43452,58140,76551,99351,127281,161161,201894,250470,307970,375570,454545 ⋆ Expansion of (3 + x) / (1 - x) ^ 6. ● a(n) = binomial(n + 4, 4) * (15 + 4 * n) / 5 . ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). - _ Wesley Ivan Hurt _ , Apr 16 2023 ●

► [A095662] 3,19,70,196,462,966,1848,3300,5577,9009,14014,21112,30940,44268,62016,85272,115311,153615,201894,262108,336490,427570,538200,671580,831285 ⋆ Seventh column (m=6) of (1,3) - Pascal triangle A095660. ● a(n)= binomial(n + 5, 5) * (n + 18) / 6 = 3 * b(n) - 2 * b(n - 1), with b(n):=binomial(n + 6, 6); cf. A000579. ● a(0)=3, a(1)=19, a(2)=70, a(3)=196, a(4)=462, a(5)=966, a(6)=1848, a(n)=7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). - _ Harvey P. Dale _ , Mar 30 2014 ●

► [A243142] 0,3,19,75,218,542,1178,2350,4340,7585,12605,20153,31094,46620,68068,97212,136008,186975,252855,337095,443410,576378,740894,942890,1188668 ⋆ Number of inequivalent (mod D _ 3) ways to place 3 points on a triangular grid of side n so that they are not vertices of an equilateral triangle of any orientation. ● a(n) = (n ^ 6 + 3 * n ^ 5 - 5 * n ^ 4 + 6 * n ^ 3 - 68 * n ^ 2 + 72 * n + IF(MOD(n, 2) = 1) * (27 * n ^ 2 - 81 * n + 45)) / 288. ●

► [A061171] 3,19,79,283,940,2982,9171,27581,81557,237995,687158,1966764,5588259,15780103,44323195,123920827,345062176,957403026,2647935987,7302634865,20087869313,55128445259,150971982314 ⋆ One half of second column of Lucas bisection triangle (odd part). ● a(n) = 6 * a(n - 1) - 11 * a(n - 2) + 6 * a(n - 3) - a(n - 4), with a(0)=3, a(1)=19, a(2)=79, a(3)=283. - _ Harvey P. Dale _ , Oct 11 2012 ● a(n) = Fibonacci(2 * n + 4) + n * Lucas(2 * n + 3). - _ Lechoslaw Ratajczak _ , May 06 2020 ●

► [A373681] 1,1,3,19,85,861,6391,74383,822249,10724185,156044971,2331428331,40840033213,706624333429,14138302767135,281981427966631,6273491346471121,142296558637593393,3475950835899954259,88235303457193306435,2351639524607386287141 ⋆ Expansion of e.g.f. exp(x / (1 - x ^ 2) ^ 2) / (1 - x ^ 2). ● a(n) = n! * Sum _{ k=0..floor(n / 2) } binomial(2 * n - 3 * k,k) / (n - 2 * k)!. ● a (n) == 1 (mod 2). ●

► [A015528] 0,1,3,19,87,451,2223,11179,55767,279091,1394943,6975739,34876647,174387331,871928463,4359658699,21798260727,108991369171,544956714783,2724783836059,13623918656007,68119594328611,340597969545903 ⋆ a(n) = 3 * a(n - 1) + 10 * a(n - 2). ● a(n) = 3 * a(n - 1) + 10 * a(n - 2). ● a(n) = (5 ^ n - (- 2) ^ n) / 7. Binomial transform is A015540. - _ Paul Barry _ , Feb 07 2004 ●

► [A074361] 0,0,0,3,19,93,407,1674,6618,25455,95953,356151,1305887,4741092,17072484,61055787,217074895,767882865,2704365719,9487509102,33170122494,115614094071,401864286637,1393378817259,4820368210175 ⋆ Coefficient of q ^ 1 in nu(n), where nu(0)=1, nu(1)=b and, for n>=2, nu(n)=b * nu(n - 1) + lambda * (1 + q + q ^ 2 + ... + q ^ (n - 2)) * nu(n - 2) with (b,lambda)=(3,1). ● a(0) =0, a(1)=0, a(2)=0, a(3)=3, a(4)=19, a(n)=6 * a(n - 1) - 7 * a(n - 2) - 6 * a(n - 3) - a(n - 4). - _ Harvey P. Dale _ , Jan 16 2012 ●

► [A294251] 1,1,3,19,97,681,5971,50443,512289,5821777,67968451,880345731,12230425153,177123301369,2759869352787,45321758937211,776008738668481,14020831026652833,264488668445049859,5187662544182915827,106241960755765408161,2257484540053386011721 ⋆ E.g.f.: exp((1 + x) * (1 + x ^ 2) * (1 + x ^ 3) - 1). ● a(n) = a(n - 1) + 2 * (n - 1) * a(n - 2) + 6 * (n - 2) * (n - 1) * a(n - 3) + 4 * (n - 3) * (n - 2) * (n - 1) * a(n - 4) + 5 * (n - 4) * (n - 3) * (n - 2) * (n - 1) * a (n - 5) + 6 * (n - 5) * (n - 4) * (n - 3) * (n - 2) * (n - 1) * a(n - 6). - _ Vaclav Kotesovec _ , Dec 02 2021 ●

► [A198763] 3,19,99,499,2499,12499,62499,312499,1562499,7812499,39062499,195312499,976562499,4882812499,24414062499,122070312499,610351562499,3051757812499,15258789062499,76293945312499,381469726562499,1907348632812499 ⋆ a(n) = 4 * 5 ^ n - 1. ● a(n) = 5 * a(n - 1) + 4. ● a(n) = 6 * a(n - 1) - 5 * a(n - 2), n>1. ●

► [A089164] 3,19,107,591,3259,18019,99987,556831,3111347,17436915,97981179,551871087,3114878571,17613879747,99768824355,565962587199,3214923140707,18284737574611,104110467624075,593397580894351 ⋆ Number of steps in all Schroeder paths (i.e., consisting of steps U=(1,1), D=(1, - 1),H=(2,0) and never going below the x - axis) from (0,0) to (2n,0). ● a(n) = (1 / n) * Sum _{ k=n..2 * n } k * C(n, k - n) * C(k, n - 1). ●

► [A334976] 0,0,3,19,108,609,3468,20007,116886,690690,4122495,24823188,150629248,920274804,5656456104,34954487967,217044280458,1353539406660,8474029162305,53241343026795,335592121524660,2121577490385885,13448859209014320,85467026778421860 ⋆ a(n) is the total number of down steps between the (n - 1) - th and n - th up steps in all 2 - Dyck paths of length 3 * n. A 2 - Dyck path is a nonnegative path with steps (1, 2), (1, - 1) that starts and ends at y = 0. ● a(0) = 0 and a(n) = binomial(3 * n + 4, n + 1) / (3 * n + 4) - 3 * binomial(3 * n + 1, n) / (3 * n + 1) for n > 0. ●

► [A253811] 3,19,111,647,3771,21979,128103,746639,4351731,25363747,147830751,861620759,5021893803,29269742059,170596558551,994309609247,5795261096931,33777256972339,196868280737103,1147432427450279,6687726283964571,38978925276337147 ⋆ Part of the y solutions of the Pell equation x ^ 2 - 2 * y ^ 2 = + 7. ● a(n) = irrational part of z(n), where z(n) = (5 + 3 * sqrt(2)) * (3 + 2 * sqrt(2)) ^ n), n >= 0, the general positive solutions of the second class of proper solutions. ● a(n) = 6 * a(n - 1) - a(n - 2). ●

► [A267802] 1,3,19,115,499,2035,8179,32755,131059,524275,2097139,8388595,33554419,134217715,536870899,2147483635,8589934579,34359738355,137438953459,549755813875,2199023255539,8796093022195,35184372088819,140737488355315,562949953421299 ⋆ Decimal representation of the n - th iteration of the "Rule 213" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = 5 * a(n - 1) - 4 * a(n - 2) for n>3. ●

► [A309183] 1,3,19,115,776,5601,42288,328755,2615104,21191128,174303163,1451430673,12211799224,103655906784,886568153744,7633233556275,661051703150584,5754456898848458,50323809429453224,441914517882476403,8951469901301224 2,3444925385161998521 ⋆ (1 / 4) times the number of n - member subsets of [4 n] whose elements sum to a multiple of n. ● a(n) = 1 / (4n) * Sum _{ d|n } binomial(4d,d) * (- 1) ^ (n + d) * phi(n / d). ●

► [A005667] 1,3,19,117,721,4443,27379,168717,1039681,6406803,39480499,243289797,1499219281,9238605483,56930852179,350823718557,2161873163521,13322062699683,82094249361619,505887558869397,3117419602578001,19210405174337403,118379850648602419 ⋆ Numerators of continued fraction convergents to sqrt(10). ● a(n) = 6 * a(n - 1) + a(n - 2). ● a(n) = ((- i) ^ n) * T(n, 3 * i) with T(n , x) Chebyshev's polynomials of the first kind (see A053120) and i ^ 2= - 1. ● a (n) = ((3 + sqrt(10)) ^ n + (3 - sqrt(10)) ^ n) / 2. ● a(n) = Sum _{ k=0..floor (n / 2) } C(n, 2 * k) * 10 ^ k * 3 ^ (n - 2 * k). (End) ● a(n) = (- 1) ^ n * a(- n) for all n in Z. - _ Michael Somos _ , Jul 14 2018 [This refers to the sequence extended to negative indices according to the recurrence relation, but not to the sequence as it is currently defined. - _ M. F. Hasler _ , Nov 02 2019] ● a(n) = Lucas(n,6) / 2, Lucas polynomial, L(n,x), evaluated at x = 6. - _ G. C. Greubel _ , Jun 06 2019 ●

► [A290477] 3,19,118,709,4259,25557,153343,920062,5520373,33122243,198733461,1192400767,7154404606,42926427637,257558565827,1545351394965,9272108369791,55632650218750,333795901312501,2002775407875011,12016652447250069,72099914683500415 ⋆ Base 6 digits are, in order, the first n terms of the periodic sequence with initial period 3,1,4,1,5 (the first five digits of Pi). ● a(n) = 6 * a(n - 1) + a(n - 5) - 6 * a(n - 6) for n>6. ●

► [A321002] 3,19,118,716,4312,25904,155488,933056,5598592,33592064,201553408,1209322496,7255939072,43535642624,261213872128,1567283265536,9403699658752,56422198083584,338533188763648,2031199133106176,12187194799685632,73123168800210944,438739012805459968,2632434076841148416 ⋆ a(0)=3; thereafter a(n) = 20 * 6 ^ (n - 1) - 2 ^ (n - 1). ● a(n) = 8 * a(n - 1) - 12 * a(n - 2) for n >2. ●

► [A138977] 3,19,121,771,4913,31307,199497,1271251,8100769,51620379,328939577,2096095523,13356910353,85113990379,542370291241,3456136077171,22023471375233,140339755317947,894284401724697,5698631790801091,36313284928708849,231398467337757579 ⋆ Number of 2 X n matrices containing a 1 in the top left entry, all entries are integer values and adjacent entries differ by at most 1. ● a(n)=b(n) + c(n), where b(1)=2, c(1)=1, b(n + 1)=4 * b(n) + 4 * c(n), c(n + 1)=2 * b(n) + 3 * c(n). ● a(n + 2) = 7 * a(n + 1) - 4 * a(n) for n >= 2. - _ Robert Israel _ , Sep 02 2014 ● a(n) = (2 ^ (- 2 - n) * ((7 - sqrt(33)) ^ n * (- 5 + sqrt(33)) + (5 + sqrt(33)) * (7 + sqrt(33)) ^ n)) / sqrt(33). - _ Colin Barker _ , Jan 31 2018 ●

► [A163605] 3,19,121,773,4947,31691,203129,1302397,8352003,53564899,343552921,2203536533,14133648147,90655141211,581477504729,3729706799437,23923085385603,153447597468979,984245010820921,6313155366422693 ⋆ a(n) = ((3 + 2 * sqrt(2)) * (5 + sqrt(2)) ^ n + (3 - 2 * sqrt(2)) * (5 - sqrt(2)) ^ n) / 2. ● a(n) = 10 * a(n - 1) - 23 * a(n - 2) for n > 1; a(0) = 3, a(1) = 19. ●

► [A294252] 1,1,3,19,121,921,8491,89083,1004529,12855601,180798931,2688972771,43446800233,753263746249,13821916933371,268513532534731,5515341294313441,119063602254649953,2692597826408668579,63786073308011409331,1576811081112158751321 ⋆ E.g.f.: exp((1 + x) * (1 + x ^ 2) * (1 + x ^ 3) * (1 + x ^ 4) - 1). ● a(n) = a(n - 1) + 2 * (n - 1) * a(n - 2) + 6 * (n - 2) * (n - 1) * a(n - 3) + 8 * (n - 3) * (n - 2) * (n - 1) * a(n - 4) + 10 * (n - 4) * (n - 3) * (n - 2) * (n - 1) * a(n - 5) + 12 * (n - 5) * (n - 4) * (n - 3) * (n - 2) * (n - 1) * a(n - 6) + 14 * (n - 6) * (n - 5) * (n - 4) * (n - 3) * (n - 2) * (n - 1) * a(n - 7) + 8 * (n - 7) * (n - 6) * (n - 5) * (n - 4) * (n - 3) * (n - 2) * (n - 1) * a(n - 8) + 9 * (n - 8) * (n - 7) * (n - 6) * (n - 5) * (n - 4) * (n - 3) * (n - 2) * (n - 1) * a(n - 9) + 10 * (n - 9) * (n - 8) * (n - 7) * (n - 6) * (n - 5) * (n - 4) * (n - 3) * (n - 2) * (n - 1) * a(n - 10). - _ Vaclav Kotesovec _ , Dec 02 2021 ●

► [A074572] 3,19,125,853,6017,43669,324425,2455213,18847457,146248549,1143973625,9001559773,71140399697,564037211029,4482514190825,35685074651533,284448674508737,2269489412583109,18119773163416025,144743621302194493 ⋆ a(n) = 5 ^ n + 6 ^ n + 8 ^ n. ● a(n) = 19 * a(n - 1) - 118 * a(n - 2) + 240 * a(n - 3). - _ Wesley Ivan Hurt _ , Apr 26 2021 ●

► [A074568] 3,19,129,919,6753,50599,383889,2937079,22607553,174833479,1357265649,10571455639,82577541153,646711933159,5076538019409,39933007340599,314712202247553,2484447507541639,19642880826869169,155514358139135959 ⋆ a (n) = 4 ^ n + 7 ^ n + 8 ^ n. ● a(n) = 19 * a(n - 1) - 116 * a(n - 2) + 224 * a(n - 3). - _ Wesley Ivan Hurt _ , Apr 19 2021 ●

► [A199484] 3,19,131,915,6403,44819,313731,2196115,15372803,107609619,753267331,5272871315,36910099203,258370694419,1808594860931,12660164026515,88621148185603,620348037299219,4342436261094531,30397053827661715 ⋆ (8 * 7 ^ n + 1) / 3. ● a(n) = 7 * a(n - 1) - 2. ● a(n) = 8 * a(n - 1) - 7 * a(n - 2). ●

► [A256092] 1,3,19,132,955,7068,53074,402552,3075747,23632620,182384774,1412575112,10972566670,85442073304,666717107460,5211833678832,40805272682787,319915465833804,2511182586525886,19732752016481000,155208152657919130,1221848390114284680 ⋆ G.f.: (2 * x) / ((1 - (1 - 8 * x) ^ (1 / 4)) * (1 - 8 * x) ^ (3 / 4)). ● a(n) = Sum _{ k=0..n } binomial(2 * k - 1,k) * 2 ^ (n - k) * binomial(2 * n - k - 1,n - k)). ● a(n) = 2 ^ (n - 1) * binomial(2 * n - 1,n) * (1 + hypergeom([1 / 2, - n],[1 - 2 * n],2)) for n>=2. - _ Peter Luschny _ , Mar 15 2015 ●

► [A370159] 1,3,19,132,963,7228,55264,428067,3347843,26378079,209065644,1664967747,13312423056,106798422942,859244421187,6930167382832,56015610380931,453628706358333,3679805451367471,29895358350622638,243204082036270588,1980931117038586824 ⋆ Coefficient of x ^ n in the expansion of ((1 + x) * (1 + x + x ^ 2) ^ 2) ^ n. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(2 * n,k) * binomial(3 * n - k,n - 2 * k). ●

► [A091346] 0,1,3,19,135,1171,11823,136459,1771815,25561891,405658143,7022891899,131714587095,2660335742611,57570797744463,1328913670495339,32592691757283975,846383665814211331,23200396829832102783 ⋆ Binomial convolution of A069321(n), where A069321(0)=0, with the sequence of all 1's alternating in sign. ● a(n) = Sum _{ k=0..n } (C(n, k) * (- 1) ^ (n - k) * Sum _{ i=1..k } (i ! * i * Stirling2(k, i))). ● a(n) = (1 / 2) * (- 1) ^ n * Phi(2, - n - 1, 2), where Phi(z, s, a) is the Lerch transcendantal function. - _ Federico Provvedi _ , Sep 0

4 2020 ● a(n) = (- 1) ^ n * (PolyLog(- 1 - n, 2) - 2) / 8. - _ Peter Luschny _ , Nov 09 2020 ●

▶ [A138513] 1,3,19,137,1001,7323,53579,392017,2868241,20985843,153545539,1123435097,8219753081,60140849163,440028027899,3219519977377,23556019679521,172350557549283,1261024361996659,9226442108226857 ★ a(n) = 8 * a(n - 1) - 5 * a(n - 2). ● a(n) = 8 * a(n - 1) - 5 * a(n - 2), n> 2; given a(1) = 1, a(2) = 3. ● a(n) = upper left term of the 2 X 2 matrix [1,2; 1,7] ^ n * [1,0]. ● a(n) = ((3 * sqrt(11) / 22 + 1 / 2) * (4 - sqrt(11)) ^ n + ((- 3 * sqrt(11) / 22 + 1 / 2) * (4 + sqrt(11)) ^ n. - _ Emeric Deutsch _ , Apr 02 2008 ●

▶ [A115750] 1,3,19,138,1051,8228,65602,529840,4320507,35492475,293285544,2435133110,20299183738,169780446228,1424093337728,11974638998288,100907444665595,851939678134229,7204872937244995,61023558185533392 ★ a(n) = Sum _{ k=0..2 * n } binomial(2 * n, k) * binomial(3 * n, 2 * n + 2 * k). ● a(n) = binomial(3 * n, 2 * n) * hypergeometric([1 / 2 - n / 2, - 2 * n, - n / 2], [n + 1 / 2, n + 1], - 1). - _ Peter Luschny _ , Jun 09 2020 ●

▶ [A156894] 1,3,19,138,1059,8378,67582,552576,4563235,37972290,317894394,2674398268,22590697614,191475925332,1627653567916,13870754053388,118464647799075,1013709715774130,8689197042438274,74594573994750972,641252293546113434,551933926847624967 6,4755893066421647062 8 ★ a(n) = Sum _{ k=0..n } binomial(n,k) * binomial(2 * n + k - 1,k). ● a(n) = [x ^ n] ((1 + x) / (1 - x) ^ 2) ^ n. ● a(n) = Hypergeometric2F1([- n, 2 * n], [1], - 1). - _ Peter Luschny _ , Aug 02 2014 ● a(p) == 3 (mod p ^ 3) for prime p >= 5. Cf. A002003, A103885 and A119259. ●

▶ [A221374] 3,19,139,1035,7723,57643,430251,3211435,23970475,178918059,1335462571,9968028331,74402376363,555346897579,4145165675179,30939937811115,230938839788203,1723750967061163,12866252377336491,96035015150447275 ★ Number of n X 2 arrays of occupancy after each element stays put or moves to some horizontal, vertical or antidiagonal neighbor, with no occupancy greater than 2. ● a(n) = (1 + (4 - 2 * sqrt(3)) ^ n + (2 * (2 + sqrt(3))) ^ n) / 3. ●

▶ [A074559] 3,19,139,1099,9043,76099,649819,5608699,48818083,427793779,3769318699,33358563499,296271355123,2638756433059,23555020310779,210638707953499,1886253162468163,16909812342793939,151723049282330059 ★ a(n) = 3 ^ n + 7 ^ n + 9 ^ n. ● a(n) = 19 * a(n - 1) - 111 * a(n - 2) + 189 * a(n - 3). - _ Wesley Ivan Hurt _ , Apr 11 2023 ●

▶ [A082758] 1,3,19,141,1107,8953,73789,616227,5196627,44152809,377379369,3241135527,27948336381,241813226151,2098240353907,18252025766941,159114492071763,1389754816243449,12159131877715993,106542797484006471 ★ Sum of the squares of the trinomial coefficients (A027907). ● a(n) = Sum _{ k=0..2n } T(n, k) ^ 2, where T(n, k) are trinomial coefficients (A027907). ● a(n) = Sum _{ k=0..n } binomial(2 * n - k, k) * binomial(2 * n, k). - _ Benoit Cloitre _ , Jul 30 2003 ● a(n) = Sum _{ k=0..n } binomial(2 * n,2 * k) * binomial(2 * k,k) = Sum _{ k=0..n } binomial(n + k,2k) * binomial(2 * n,n + k). - _ Paul Barry _ , Dec 16 2008 ● a(n) = Sum _{ k=0..n } binomial(n,k) ^ 2 * binomial(2 * n, n) / binomial(2 * k,k). - _ Paul D. Hanna _ , Sep 29 2012 ● a(n) = Gegenbauer C(2 * n, - 2 * n, - 1 / 2). - _ Peter Luschny _ , May 07 2016 ● a(n) = ((9 - 9 * n) * (4 * n - 1) * (2 * n - 3) * a(n - 2) + (4 * n - 3) * (20 * n ^ 2 - 30 * n + 7) * a(n - 1)) / (n * (2 * n - 1) * (4 * n - 5)) for n>=2. ●

▶ [A333094] 1,3,19,144,1171,9878,85216,746371,6609043,59008563,530279894,4790262348,43458522976,395683988547,3613641184739,33088666355144,303670285138067,2792497004892302,25724693177503987,237350917999324431,2193027397174233046,20288470364637624223 ★ a(n) is the n - th order Taylor polynomial (centered at 0) of c(x) ^ (2 * n) evaluated at x = 1, where c(x) = (1 - sqrt(1 - 4 * x)) / (2 * x) is the o.g.f. of the Catalan numbers A000108. ● a(n) = Sum _{ k = 0..n } 2 * n / (2 * n + k) * binomial(2 * n + 2 * k - 1,k) for n >= 1. ● a(n) = [x ^ n] ((1 + x) * c ^ 2(x / (1 + x))) ^ n. ●

▶ [A005258] 1,3,19,147,1251,11253,104959,1004307,9793891,96918753,970336269,9807518757,99912156111,1024622952993,10567623342519,109527728400147,1140076177397091,11911997404064793,124879633548031009,1313106114867738897,13844511065506477501 ★ Apéry numbers: a(n) = Sum _{ k=0..n } binomial(n,k) ^ 2 * binomial(n + k,k). ● a(n) = hypergeom([n + 1, - n, - n], [1, 1], 1). - _ Vladeta Jovovic _ , Apr 24 2003 ● a(- 1 - n) = (- 1) ^ n * a(n) if n>=0. a(- 1 - n) = - (- 1) ^ n * a(n) if n<0. - _ Michael Somos _ , Sep 18 2013 ● a(n) = binomial(2 * n, n) * hypergeom([- n, - n, - n],[1, - 2 * n], 1). - _ Peter Luschny _ , Feb 10 2018 ● a(n) = Sum _{ k = 0..n } (- 1) ^ (n - k) * binomial(n,k) * binomial(n + k,k) ^ 2. - _ Peter Bala _ , Feb 10 2018 ● a(n) = Sum _{ 0 <= j, k <= n } (- 1) ^ (j + k) * C(n,k) * C(n + k,k) ^ 2 * C(n,j) * C(n + k + j,k + j). ● a(n) = Sum _{ 0 <= j, k <= n } (- 1) ^ (n + j) * C(n,k) ^ 2 * C(n + k,k) * C(n,j) * C(n + k + j,k + j). ●

▶ [A074546] 3,19,149,1249,10673,91849,793649,6880249,59824193,521638729,4560527249,39970996249,351149017313,3091621650409,27274838982449,2410755042164 9,2134495165628033,18928981513482889,168109033806743249 ★ a(n) = 2 ^ n + 8 ^ n + 9 ^ n. ● a(n) = 19 * a(n - 1) - 106 * a(n - 2) + 144 * a(n - 3). ●

▶ [A199559] 3,19,163,1459,13123,118099,1062883,9565939,86093443,774840979,6973568803,62762119219,564859072963,5083731656659,45753584909923,411782264189299,3706040377703683,33354363399333139,300189270593998243 ★ 2 * 9 ^ n + 1. ● a(n) = 9 * a(n - 1) - 8. ● a(n) = 10 * a(n - 1) - 9 * a(n - 2). ●

▶ [A080835] 1,1,3,19,169,1761,22171,325123,5416209,101177569,2093489011,47501861331,1172566502713,31276078199809,896253254128779,27456289993445251,895308888305467681,30958452403586027073 ★ E.g.f.: exp(x / (1 - x - x ^ 2 - x ^ 3)). ● a(n) = (2 * n - 1) * a(n - 1) + (n - 2) * (n - 1) * a(n - 2) + (n - 2) * (n - 1) * a(n - 3) - (n - 3) * (n - 2) * (n - 1) * (3 * n - 14) * a(n - 4) - 2 * (n - 5) * (n - 4) * (n - 3) * (n - 2) * (n - 1) * a(n - 5) - (n - 6) * (n - 5) * (n - 4) * (n - 3) * (n - 2) * (n - 1) * a(n - 6). - _ Vaclav Kotesovec _ , Oct 02 2013 ●

▶ [A256493] 1,3,19,171,1675,16683,166699,1666731,16666795,166666923,1666667179,16666667691,166666668715,1666666670763,16666666674859,166666666683051,1666666666699435,16666666666732203,166666666666797739,1666666666666928811,16666666666667190955 ★ Number of factorizations of m ^ 3 into at most 3 factors, where m is a product of exactly n distinct primes. ● a(n) = (10 ^ n + 3 * 2 ^ n + 2) / 6. ●

▶ [A229832] 3,19,349,2909,15377,128983,1319411,17797519,94097539,6927837559,48486712787,968068681519,1472840004019,129001208165719 ★ First term of smallest sequence of n consecutive weak primes. ● a(n) = min { p(i): 2 * p(i + j) < p(i + j - 1) + p(i + j + 1), j = 0,1,..,n - 1 } . ●

▶ [A041951] 1,3,19,421,2545,8056,357009,1079083,6831507,151372237,915064929,2896567024,128364013985,387988608979,2456295667859,54426493301877,329015255479121,1041472259739240,4615379468400568 1,1395028563117562 83,8831709325545433 79 ★ Denominators of continued fraction convergents to sqrt(498). ● a(n) = 359554 * a(n - 6) - a(n - 12) for n>11. - _ Vincenzo Librandi _ , Dec 27 2013 ●

▶ [A267055] 1,3,20,47,336,703,5440,11007,87296,175103,1397760,2797567,22368256,44744703,357908480,715849727,5726601216,11453333503,91625881600,183252287487,1466015154176,2932032405503,23456246661120,46912501710847,375299963355136 ★ Decimal representation of the n - th iteration of the "Rule 93" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = 21 * a(n - 2) - 84 * a(n - 4) + 64 * a(n - 6) for n>5. ●

▶ [A211068] 0,3,20,48,144,243,528,768,1400,1875,3060,3888,5880,7203,10304,12288,16848,19683,26100,30000,38720,43923,55440,62208,77064 ★ Number of 2 X 2 matrices having all terms in { 1,...,n } and positive odd determinant. ● a(n) = (2 * n + 1 - (- 1) ^ n) ^ 2 * (6 * n + 1 - (- 1) ^ n) * (2 * n - 1 + (- 1) ^ n) / 256. ● a(n) = a(n - 1) + 4 * a(n - 2) - 4 * a(n - 3) - 6 * a(n - 4) + 6 * a(n - 5) + 4 * a(n - 6) - 4 * a(n - 7) - a(n - 8) + a(n - 9) for n > 9. ●

▶ [A360417] 3,20,53,102,167,248,345,458,587,732,893,1070,1263,1472,1697,1938,2195,2468,2757,3062,3383,3720,4073,4442,4827 ★ a(n) = 8 * n ^ 2 - 7 * n + 2. ● a(n) = 8 * n ^ 2 - 7 * n + 2. ●

▶ [A099721] 0,3,20,63,144,275,468,735,1088,1539,2100,2783,3600,4563,5684,6975,8448,10115,11988,14079,16400,18963,21780,24863,28224 ★ a(n) = n ^ 2 * (2 * n + 1). ● a(n) = ceiling(Sum _{ i=n ^ 2 - (n - 1)..n ^ 2 + (n - 1) } s(i)), for n > 0 and integer i, where s(i) are the real solutions to x = i + sqrt(x), and the summation range excludes the integer solutions which occur where i is an oblong number (A002378). The fractional portion of the summation converges to 2 / 3 for large n. If s(i) is replaced with i, then the summation equals n ^ 2 * (2 * n - 1) = A015237. - _ Richard R. Forberg _ , Oct 15 2014 ●

▶ [A006411] 3,20,75,210,490,1008,1890,3300,5445,8580,13013,19110,27300,38080,52020,69768,92055,119700,153615,194810,244398,303600,373750,456300,552825 ★ Number of nonseparable tree - rooted planar maps with n + 2 edges and 3 vertices. ● a(n) = n * (n + 1) * (n + 2) ^ 2 * (n + 3) / 24. - _ Bruno Berselli _ , May 17 2011] ● a(n) = binomial(n + 2,n) * binomial(n + 2,n - 1) - binomial(n + 2,n + 1) * binomial(n + 2,n - 2). - _ J. M. Bergot _ , Apr 07 2013 ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) . - _ Harvey P. Dale _ , Dec 24 2013 ●

▶ [A243208] 0,3,20,77,223,552,1196,2380,4388,7657,12710,20301,31297,46892,68426,97674,136596,187713,253770,338217,444773,578018,742852,945210,1191398 ★ Number of inequivalent (mod D _ 3) ways to place 3 points on a triangular grid of side n so that they are not vertices of an equilateral triangle with sides parallel to the grid. ● a(n) = (n ^ 6 + 3 * n ^ 5 - 3 * n ^ 4 - 2 * n ^ 3 - 48 * n ^ 2 + 48 * n) / 288 + IF(MOD(n, 2) = 1) * (3 * n ^ 2 - 9 * n - 1) / 32 + IF(MOD(n, 3) = 1) * 2 / 9. ● a(n) = 3 * a(n - 1) - 7 * a(n - 3) + 3 * a(n - 4) + 6 * a(n - 5) - 6 * a(n - 7) - 3 * a(n - 8) + 7 * a(n - 9) - 3 * a(n - 11) + a(n - 12). - _ Vaclav Kotesovec _ , Jun 02 2014 ●

▶ [A129549] 1,3,20,78,352,1365,5232,18271,60598,187296,548020,1515265,3991204,10035401,24210308,56188768,125904351,273044682,574635828,1176027747,2345376048,4565886531,8691118644,16198834634,29602895824 ★ Dimension of space of measures of entanglement that are homogeneous of degree 2n, for the case of four qubits. ● a(n) = [q ^ (2n)] (P(q) + q ^ 54 * P(1 / q)) / ((1 - q ^ 2) ^ 3 * (1 - q ^ 4) ^ 11 * (1 - q ^ 6) ^ 6) where P(q) = 1 + 3 * q ^ 4 + 20 * q ^ 6 + 76 * q ^ 8 + 219 * q ^ 10 + 654 * q ^ 12 + 1539 * q ^ 14 + 3119 * q ^ 16 + 5660 * q ^ 18 + 9157 * q ^ 20 + 12876 * q ^ 22 + 16177 * q ^ 24 + 18275 * q ^ 26. ●

▶ [A363603] 3,20,90,343,1197,3966,12720,39941,123651,379132,1154790,3501219,10581465,31908218,96068700,288926977,868288239,2608010424,7830584850,23505386015,70544469573,211692128950,635198021640,1905845723133,5718057263067 ★ Expansion of e.g.f. (1 / 4) * (exp(x) - x - 1) * (exp(x) - 1) ^ 2. ● a(n) = (3 ^ n - 3 * (2 ^ n - 1)) / 4 - (n / 2) * (2 ^ (n - 2) - 1), n>=4. ●

▶ [A015529] 0,1,3,20,93,499,2520,13049,66867,344140,1767957,9089411,46715760,240130801,1234265763,6344236100,32609631693,167615492179,861552425160,4428427689449,22762359745107,116999783819260,601385308653957,3091153547973731 ★ Expansion of x / (1 - 3 * x - 11 * x ^ 2). ● a(n) = 3 * a(n - 1) + 11 * a(n - 2). ● a(n) = - 22 ^ n * (A ^ n - B ^ n) / sqrt(53) where A = - 1 / (3 + sqrt(53)) and B = 1 / (sqrt(53) - 3). - _ R. J. Mathar _ , Apr 29 2008 ●

▶ [A278319] 0,3,20,94,395,1492,4991,14848,39832,97835,223015,477126,966849,1869504,3470210,6214384,10780448,18178763,29884150,48010910,75541039,116618372,176923705,264148560,388588200 ★ Number of n X 2 0..1 arrays with rows and columns in lexicographic nondecreasing order but with exactly two mistakes. ● a(n) = 12 * a(n - 1) - 66 * a(n - 2) + 220 * a(n - 3) - 495 * a(n - 4) + 792 * a(n - 5) - 924 * a(n - 6) + 792 * a(n - 7) - 495 * a(n - 8) + 220 * a(n - 9) - 66 * a(n - 10) + 12 * a(n - 11) - a(n - 12) for n>12. ●

▶ [A178711] 0,3,20,109,555,2787,13947,69750,348767,1743856,8719302,43596534,217982694,1089913497,5449567514,27247837603,136239188049,681195940281,3405979701441,17029898507244,85149492536261,425747462681350,2128737313406796,10643686567034028,53218432835170188 ★ Partial sums of floor(5 ^ n / 7). ● a(n) = round((5 * 5 ^ n - 14 * n - 14) / 28). ● a(n) = floor((5 * 5 ^ n - 14 * n - 5) / 28). ● a(n) = ceiling((5 * 5 ^ n - 14 * n - 23) / 28). ● a(n) = a(n - 6) + 558 * 5 ^ (n - 5) - 3, n > 6. ●

▶ [A275796] 3,20,117,682,3975,23168,135033,787030,4587147,26735852,155827965,908231938,5293563663,30853150040,179825336577,1048098869422,6108767879955,35604508410308,207518282581893,1209505187081050,7049512839904407 ★ One half of the y members of the positive proper solutions (x = x2(n), y = y2(n)) of the second class for the Pell equation x ^ 2 - 2 * y ^ 2 = + 7 ^ 2. ● a(n) = 6 * a(n - 1) - a(n - 2) for n >= 1, with a(- 1) = - 2 and a(0) = 3. ● a(n) = (((3 -

2 * sqrt(2)) ^ n * (- 11 + 6 * sqrt(2)) + (3 + 2 * sqrt(2)) ^ n * (11 + 6 * sqrt(2)))) / (4 * sqrt(2)). - _ Colin Barker _ , Sep 28 2016 ●

► [A164535] 3,20,118,664,3660,19984,108632,589280,3193392,17297216,93670240,507200896,2746223808,14868977920,80504690048,435871829504,2359908975360,12777066189824,69177803863552,374543504250880 ⋆ a(n) = 8 * a(n - 1) - 14 * a(n - 2) for n > 1; a(0) = 3, a(1) = 20. ● a(n) = 8 * a(n - 1) - 14 * a(n - 2) for n > 1; a(0) = 3, a(1) = 20. ● a(n) = ((3 + 4 * sqrt(2)) * (4 + sqrt(2)) ^ n + (3 - 4 * sqrt(2)) * (4 - sqrt(2)) ^ n) / 2. ●

► [A001652] 0,3,20,119,696,4059,23660,137903,803760,4684659,27304196,159140519,927538920,5406093003,31509019100,183648021599,1070379110496,6238626641379,36361380737780,211929657785303,1235216565974040 ⋆ a(n) = 6 * a(n - 1) - a(n - 2) + 2 with a(0) = 0, a(1) = 3. ● a(n) = 7 * a(n - 1) - 7 * a(n - 2) + a(n - 3). a _{ n } = - 1 / 2 + ((1 - 2 ^{ 1 / 2 }) / 4) * (3 - 2 ^{ 3 / 2 }) ^ n + ((1 + 2 ^{ 1 / 2 }) / 4) * (3 + 2 ^{ 3 / 2 }) ^ n. - _ Antonio Alberto Olivares _ , Oct 13 2003 ● a(n) = a(n - 2) + 4 * sqrt(2 * (a(n - 1) ^ 2) + 2 * a(n - 1) + 1). - _ Pierre CAMI _ , Mar 30 2005 ● a(n) = (sinh((2 * n + 1) * log(1 + sqrt(2))) - 1) / 2 = (sqrt(1 + 8 * A029549) - 1) / 2. - _ Bill Gosper _ , Feb 07 2010 ● a(n) = 5 * (a(n - 1) + a(n - 2)) - a(n - 3) + 4. - _ Mohamed Bouhamida _ , Sep 02 2006 ● a(n + 1) = 3 * a(n) + sqrt(8 * a(n) ^ 2 + 8 * a(n) + 4) + 1, a(1) =0. - _ Richard Choulet _ , Sep 18 2007 ● a(n) = ((a(n - 1) + 1) * (a(n - 1) - 3)) / a(n - 2) for n > 2. - _ Vladimir Pletser _ , Apr 08 2020 ●

► [A128910] 0,3,20,119,715,4523,30509,213343,1530983,11203550,83064263,620498643,4643259527,34592032908,254639722327,1832740718223,12680919388801,81678704122892,452951221016511,1574800035301944,8395299939524712,2822408130128972 82,4457697545906326118,58106920364272792945,693274802905577773210 2 ⋆ Similar to A057835 except using K * X / log(X), K=1.022. ● a(n) = abs(round(1.022 * 10 ^ n / log(10 ^ n)) - pi(10 ^ n)). - _ Charles R Greathouse IV _ , Mar 22 2015 ●

► [A187442] 1,3,20,126,924,6435,48620,352716,2704156,20058300,155117520,1166803110,9075135300,68923264410,538257874440,4116715363800,32247603683100,247959266474052,1946939425648112,15033633249770520,118264581564861424 ⋆ A trisection of A001405 (central binomial coefficients: binomial(3 * n,floor(3 * n / 2)), n>=0. ● a(n) = binomial(3 * n,floor(3 * n / 2)), n>=0. ●

► [A056298] 0,0,0,0,1,3,20,136,773,4281,22430,115100,577577,2863227,14051164,68515514,332514803,1608800691,7767857090,37460388596,180536313547,869901397479,4192038616700,20208367895980 ⋆ Number of n - bead necklace structures using exactly five different colored beads. ● a(n) = (1 / n) * Sum _{ d|n } phi(d) * ([d==0 mod 60] * (S2(n / d + 4,5) - ●

► [A114479] 3,20,136,928,6336,43264,295424,2017280,13774848,94060544,642285568,4385800192,29948116992,204498534400,1396403339264,9535238438912,65110680797184,444603538866176,3035942864551936,20730714605486080 ⋆ Kekulé numbers for certain benzenoids. ● a(n) = ((4 + sqrt(8)) ^ (n + 1) + (4 - sqrt(8)) ^ (n + 1)) / 16. ● a(n) = 8 * a(n - 1) - 8 * a(n - 2). - _ Colin Barker _ , Aug 30 2013 ●

► [A163065] 3,20,140,1000,7200,52000,376000,2720000,19680000,142400000,1030400000,7456000000,53952000000,390400000000,2824960000000,20441600000000,147916800000000,1070336000000000,7745024000000000,56043520000000000 ⋆ a(n) = ((3 + sqrt(5)) * (5 + sqrt(5)) ^ n + (3 - sqrt(5)) * (5 - sqrt(5)) ^ n) / 2. ● a(n) = 10 * a(n - 1) - 20 * a(n - 2) for n > 1; a(0) = 3, a(1) = 20. ●

► [A082143] 1,3,20,140,1008,7392,54912,411840,3111680,23648768,180590592,1384527872,10650214400,82158796800,635361361920,4924050554880,38233804308480,297374033510400,2316387208396800,18067820225495040 ⋆ First subdiagonal of number array A082137. ● a(n) = (2 ^ (n - 1) + 0 ^ n / 2)C(2n + 1, n). ●

► [A371411] 1,1,3,20,140,1134,9702,87516,817245,7852130,77135630,771742608,7839348244,80661853300,839138980500,8813312133840,93339369441540,995827949882370,10694044418599350,115515073043785800,1254354063204682440,13685749828961247180 ⋆ Number of Dyck paths of semilength 2n having exactly n (possibly overlapping) occurrences of the consecutive step pattern UDU, where U = (1,1) and D = (1, - 1). ● a(n) mod 2 = 1 <=> n in { round(2 ^ (2 * k - 3)) : k >= 0 } = { A081294 } U { 0 } . ●

► [A068571] 1,3,20,143,1442,14377,143071,1418854,14255667,145674808,1492609148,15091199357,149121303586,1443278000870,13770853279685,130660965862333,1245219117260664,12024696404768025,118226055080025491,1183229962059381238,12005034444292997294 ⋆ Number of happy numbers <= 10 ^ n. ● a(n) is the sum of all h(n, 0 < x <= 81 * n), where x is a happy number, plus 1 for 10 ^ n. (End) ●

► [A154627] 1,3,20,148,1104,8240,61504,459072,3426560,25576192,190903296,1424921600,10635759616,79386390528,592548085760,4422839123968,33012520648704,246408808693760,1839220386955264,13728127860867072 ⋆ Expansion of (1 - 5 x) / (1 - 8x + 4x ^ 2). ● a(n) = 8 * a(n - 1) - 4 * a(n - 2), n > 1; a(0)=1, a(1)= 3. [_ Philippe Deléham _ , Feb 02 2009] ● a(n) = (1 / 2) * ((4 - 2 * sqrt(3)) ^ n + (4 + 2 * sqrt(3)) ^ n) + (1 / 12) * sqrt(3) * ((4 - 2 * sqrt(3)) ^ n - (4 + 2 * sqrt(3)) ^ n), with n >= 0. [_ Paolo P. Lava _ , Feb 13 2009] ●

► [A126596] 1,3,20,154,1260,10659,92092,807300,7152444,63882940,574221648,5188082354,47073334100,428634152730,3914819231400,35848190542920,329007937216860,3025582795190340,27872496751392496,257172019222240200,2376196095585231920,21983235825545286435 ⋆ a(n) = binomial(4 * n,n) * (2 * n + 1) / (3 * n + 1). ● a(n) = [x ^ n] ((1 - sqrt(1 - 4 * x)) / (2 * x)) ^ (2 * n + 1). - _ Ilya Gutkovskiy _ , Nov 01 2017 ●

► [A074560] 3,20,154,1268,10738,92060,794314,6882308,59830498,521657900,4560585274,39971171348,351149544658,3091623236540,27274843749034,241075518532388,2134495208609218,18928981642491980,168109034193901594,1494966906911109428,13310586967150560178 ⋆ a(n) = 3 ^ n + 8 ^ n + 9 ^ n. ● a(n) = 20 * a(n - 1) - 123 * a(n - 2) + 216 * a(n - 3) for n>2. - _ Wesley Ivan Hurt _ , Aug 15 2016 ●

► [A371815] 1,3,20,156,1288,10963,95132,836650,7430956,66501696,598720080,5416612336,49201807276,448442474938,4099103160424,37562606691526,344959939645980,3174051631201636,29254814741949680,270047153053464712,2496167217049673468 ⋆ a(n) = Sum _{ k=0..floor(n / 2) } (- 1) ^ k * binomial(4 * n - 2 * k - 1,n - 2 * k). ● a(n) = [x ^ n] 1 / ((1 + x ^ 2) * (1 - x) ^ (3 * n)). ● a(n) = binomial(4 * n - 1, n) * hypergeom([1, (1 - n) / 2, - n / 2], [1 / 2 - 2 * n, 1 - 2 * n], - 1). - _ Stefano Spezia _ , Apr 07 2024 ●

► [A063017] 1,3,20,165,1484,13986,135960,1352637,13707980,141061206,1470489800,15500280978,164967244792,1770548369700,19143828730800,208347968093085,2280730450967820,25096531231958670,277445318198433000 ⋆ a(n) = Catalan(n) * (3 ^ (n + 1) - 2 ^ (n + 1) + 1) / 2. ● a(n) = Catalan(n) * (3 ^ (n + 1) - 2 ^ (n + 1) + 1) / 2; ●

► [A000891] 1,3,20,175,1764,19404,226512,2760615,34763300,449141836,5924217936,79483257308,1081724803600,14901311070000,207426250094400,2913690606794775,41255439318353700,588272005095043500 ⋆ a(n) = (2 * n)! * (2 * n + 1)! / (n! * (n + 1)!) ^ 2. ● a(n) = det(M(n)) where M(n) is the n X n matrix with m(i,j) = binomial(n + j + 1,i + 1). - _ Benoit Cloitre _ , Oct 22 2022 ●

► [A273481] 3,21,24,32,40,48,56,64,72,80,88,96,104,112,120,128,136,144,152,160,168,176,184,192,200 ⋆ First differences of number of active (ON,black) cells in n - th stage of growth of two - dimensional cellular automaton defined by ”Rule 737”, based on the 5 - celled von Neumann neighborhood. ● a(n) = 2 * a(n - 1) - a(n - 2) for n>3. ●

► [A045802] 3,21,29,47,103,121,129,147,203,221,229,247,303,321,329,347,403,421,429,447,503,521,529,547,603 ⋆ 2 - ish numbers (end in 03, 21, 29, 47). ● a(n) = (50 * n - 24 * i ^ (n * (n + 1)) - 7 * (- 1) ^ n - 75) / 2, where i=sqrt(- 1). - _ Bruno Berselli _ , Feb 23 2012 ● a(1)=3, a(2)=21, a(3)=29, a(4)=47, a(5)=103, a(n)=a(n - 1) + a(n - 4) - a(n - 5) .[_ Harvey P. Dale _ , May 05 2012] ●

► [A298035] 1,3,21,39,57,75,93,111,129,147,165,183,201,219,237,255,273,291,309,327,345,363,381,399,417 ⋆ Coordination sequence of Dual(3.12.12) tiling with respect to a trivalent node. ● a(n) = 2 * a(n - 1) - a(n - 2) for n>2. ●

► [A303834] 3,21,48,161,473,1476,4553,14241,44688,141081,447153,1422596,4539473,14522361,46556048,149508801,480810153,1548053316,4988972313,16090635281,51928966928,167675418921,541639730273,1750245266436,5657268819873 ⋆ Number of total dominating sets in the n - gear graph. ● a(n) = 4 * a(n - 1) + 2 * a(n - 2) - 13 * a(n - 3) - 6 * a(n - 4) + 4 * a(n - 5). ●

► [A152773] 0,3,21,54,102,165,243,336,444,567,705,858,1026,1209,1407,1620,1848,2091,2349,2622,2910,3213,3531,3864,4212 ⋆ 3 times heptagonal numbers: a(n) = 3n(5n - 3) / 2. ● a(n) = a(n - 1) + 15 * n - 12 with n>0, a(0)=0. - _ Vincenzo Librandi _ , Nov 26 2010 ● a(0)=0, a(1)=3, a(2)=21, a(n)=3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , May 08 2012 ●

► [A033567] 1,3,21,55,105,171,253,351,465,595,741,903,1081,1275,1485,1711,1953,2211,2485,2775,3081,3403,3741,4095,4465 ⋆ a(n) = (2 * n - 1) * (4 * n - 1). ● a(n) = a(n - 1) + 16 * n - 14 (with a(0)=1). - _ Vincenzo Librandi _ , Nov 17 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 2). ●

► [A117984] 1,3,21,63,189,1323,4161,12483,87381,262143,786429,5505003,16515009,49545027,346815189,1090777023,3272331069,22906317483,68719738881,206159216643,1443114516501,4329343549503,12988030648509,90916214539563 ⋆ A modified Legendre - binomial transform of 4 ^ n for p=3. ● a(n)=sum { k=0..n, (- 1) ^ (n - k) * L(C(n,k) / 3) * 4 ^ k } where L(j / p) is the Legendre symbol of j and p. ●

► [A188667] 0,0,3,21,72,180,375,693,1176,1872,2835,4125,5808,7956,10647,13965,18000,22848,28611,35397,43320,52500,63063,75141,88872 ⋆ Ordered (2,2) - selections from the multiset { 1,1,2,2,3,3,...,n,n } . ● a(n) = n * (n + 4) * (n - 1) ^ 2 / 4. ●

► [A083564] 3,21,72,329,1353,5796,24447,103729,439128,1860621,7880997,33385604,141421803,599075421,2537719272,10749959329,45537545553,192900159396,817138154247,3461452823129,14662949371128,62113250430021 ⋆ a(n) = L(n) * L(2n), where L(n) are the Lucas numbers (A000204). ● a(n) = 3 * a(n - 1) + 6 * a(n - 2) - 3 * a(n - 3) - a(n - 4); ● a(n) = Lucas(3 * n) + (- 1) ^ n * Lucas(n). ● a(n) = 2 * (2 - sqrt(5)) ^ n - (1 / 2) * (- 1 / 2 - (1 / 2) * sqrt(5)) ^ n - (1 / 2) * (- 1 / 2 - (1 / 2) * sqrt(5)) ^ n * sqrt(5) + 2 * (2 + sqrt(5)) ^ n + (1 / 2) * sqrt(5) * (- 1 / 2 + (1 / 2) * sqrt(5)) ^ n - (1 / 2) * (- 1 / 2 + (1 / 2) * sqrt(5)) ^ n + (2 + sqrt(5)) ^ n * sqrt(5) - (2 - sqrt(5)) ^ n * sqrt(5), with n>=0. - _ Paolo P. Lava _ , Jun 12 2008 ● a(n) = (1 + phi) ^ n + (- phi) ^ n + (2 * phi + 1) ^ n + (3 - 2 * phi) ^ n, phi = (1 + sqrt(5)) / 2. - _ Gary Detlefs _ , Dec 09 2012 ●

► [A228317] 0,0,3,21,75,195,420,798,1386,2250,3465,5115,7293,10101,13650,18060,23460,29988,37791,47025,57855,70455,85008,101706,120750 ⋆ The hyper - Wiener index of the triangular graph T(n) (n >= 1). ● a(n) = n * (n - 1) * (n - 2) * (3 * n - 5) / 8. ●

► [A110450] 0,3,21,78,210,465,903,1596,2628,4095,6105,8778,12246,16653,22155,28920,37128,46971,58653,72390,88410,106953,128271,152628,180300 ⋆ a(n) = n * (n + 1) * (n ^ 2 + n + 1) / 2. ● a(n) = Sum _{ i=1..n * (n + 1) } i. - _ Wesley Ivan Hurt _ , Sep 27 2013 ● a(n) = Sum _{ i=0..n } i * (2 * i ^ 2 + 1), and these are the partial sums of A061317. - _ Bruno Berselli _ , Feb 09 2017 ●

► [A176646] 0,0,3,21,78,216,498,1014,1884,3264,5349,8379,12642,18480,26292,36540,49752,66528,87543,113553,145398,184008,230406,285714,351156 ⋆ a(n) is the number of convex pentagons in an n - triangular net. ● a(n) = (1 / 320) * (12 * n ^ 5 - 10 * n ^ 4 - 60 * n ^ 3 + 40 * n ^ 2 + 48 * n - 15 + 15 * (- 1) ^ n). ● a(2 * n + 1) = n * (n + 1) * (12 * n ^ 3 + 13 * n ^ 2 - 8 * n - 2) / 10. ● a(2 * n) = n * (4 * n - 3) * (3 * n + 1) * (n - 1) * (n + 1) / 10. ●

► [A112851] 0,0,3,21,81,231,546,1134,2142,3762,6237,9867,15015,22113,31668,44268,60588,81396,107559,140049,179949,228459,286902,356730,439530 ⋆ a(n) = (n - 1) * n * (n + 1) * (n + 2) * (2 * n + 1) / 40. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>5. - _ Harvey P. Dale _ , Oct 28 2014 ● a(n) = (1 / 2) * Sum _{ k=0..n } C(k ^ 2,2). - _ Wesley Ivan Hurt _ , Sep 23 2017 ●

► [A083231] 1,3,21,87,489,2283,11901,58047,294609,1459923,7338981,36576807,183238329,915128763,4578832461,22884596367,114451679649,572172304803,2861119804341,14304824180727,71526445426569,357625253564043 ⋆ a(n) = (3 * 5 ^ n + (- 3) ^ n) / 4. ● a(n) = (3 * 5 ^ n + (- 3) ^ n) / 4. ●

► [A059826] 1,3,21,91,273,651,1333,2451,4161,6643,10101,14763,20881,28731,38613,50851,65793,83811,105301,130683,160401,194923,234741,280371,332353 ⋆ a(n) = (n ^ 2 - n + 1) * (n ^ 2 + n + 1). ● a(n) = n ^ 4 + n ^ 2 + 1. - _ Paul Barry _ , Apr 02 2003 ● a(n + 2) = (n ^ 2 + 3n + 3) * (n ^ 2 + 5n + 7) = (t(n)

+ t(n + 2)) * (t(n + 1) + t(n + 3)), where t=A000217 are triangular numbers. For n>=1, a(n + 2) = t(2 * t(n + 2) + t(n)) - t(t(n) - 1). - _ J. M. Bergot _ , Nov 29 2012 ●

► [A069017] 1,3,21,91,703,3081,23871,104653,810901,3555111,27546753,120769111,935778691,4102594653,31788928731,139367449081,1079887798153,4734390674091,36684396208461,160829915470003,1246189583289511,5463482735306001,42333761435634903 ⋆ Triangular numbers of the form k ^ 2 + k + 1. ● a(n) = 34 * a(n - 2) - a(n - 4) - 11. ●

► [A289399] 0,3,21,102,426,1641,6015,21324,73812,250959,841449,2790066,9167358,29893557,96855123,312088728,1000836264,3196219035,10169787837,32252755710,101988443730,321655860993,1012039172391,3177332285412,9955641160956 ⋆ Total path length of the complete ternary tree of height n. ● a(n) = 3 * (1 - 3 ^ n + 2 * 3 ^ n * n) / 4. ● a(n) = 7 * a(n - 1) - 15 * a(n - 2) + 9 * a(n - 3) for n>2. ●

► [A134057] 0,0,3,21,105,465,1953,8001,32385,130305,522753,2094081,8382465,33542145,134193153,536821761,2147385345,8589737985,34359345153,137438167041,549754241025,2199020109825,8796086730753,35184359505921 ⋆ a(n) = binomial(2 ^ n - 1,2). ● a(n) = (1 / 2) * (4 ^ n - 3 * 2 ^ n + 2) = 3 * (Stirling2(n + 1, 4) + Stirling2(n + 1,3)). ● a(n) = (2 ^ n - 1) * (2 ^ (n - 1) - 1). - _ Alex Ratushnyak _ , Jun 02 2013 ● a(n) = Stirling2(2 ^ n - 1,2 ^ n - 2). ● a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3). - _ Wesley Ivan Hurt _ , May 17 2021 ●

► [A054147] 0,3,21,108,492,2100,8604,34272,133728,513648,1948560,7318080,27256896,100815936,370684608,1355996160,4938304512,17914202880,64760732928,233390693376,838784916480,3006980379648,10755352869888 ⋆ a(n) = T(2n,n), array T as in A054144. ● a(n) = 8 * a(n - 1) - 20 * a(n - 2) + 16 * a(n - 3) - 4 * a(n - 4) for n>3. ● a(n) = 3 * ((- (2 - sqrt(2)) ^ n * (- 1 + sqrt(2)) + (1 + sqrt(2)) * (2 + sqrt(2)) ^ n) * n) / 8. ●

► [A122120] 1,3,21,111,633,3531,19821,111063,622641,3490131,19564293,109668351,614752041,3446023323,19316861661,108281656551,606978381153,3402448433571,19072599164661,106912432560783,599303122725081 ⋆ a(n) = 4 * a(n - 1) + 9 * a(n - 2), for n>1, with a(0)=1, a(1)=3. ● a(n) = - (1 / 26) * sqrt(13) * (2 - sqrt(13)) ^ n + (1 / 2) * (2 + sqrt(13)) ^ n + (1 / 26) * (2 + sqrt(13)) ^ n * sqrt(13) + (1 / 2) * (2 - sqrt(13)) ^ n, with n>=0. - _ Paolo P. Lava _ , Nov 19 2008 ●

► [A080952] 3,21,112,504,2016,7392,25344,82368,256256,768768,2236416,6336512,17547264,47628288,127008768,333398016,862912512,2205220864,5571084288,13927710720,34487664640,84651540480,206108098560,498094571520 ⋆ a(n) = 2 ^ (n - 4) * (n + 2) * (n + 3) * (n + 4) * (n + 5) * (n + 6) / 15. ● a(n) = 12 * a(n - 1) - 60 * a(n - 2) + 160 * a(n - 3) - 240 * a(n - 4) + 192 * a(n - 5) - 64 * a(n - 6), n>=6. - _ Harvey P. Dale _ , Jun 11 2011 ●

► [A005057] 0,3,21,117,609,3093,15561,77997,390369,1952613,9764601,48826077,244136529,1220694933,6103499241,30517545357,152587825089,762939322053,3814697003481,19073485803837,95367430592049,476837156105973,2384185786821321,11920928946689517 ⋆ a(n) = 5 ^ n - 2 ^ n. ● a(n) = 7 * a(n - 1) - 10 * a(n - 2), a(0)=0, a(1)=3. - _ Vincenzo Librandi _ , Dec 30 2010 ●

► [A084159] 1,3,21,119,697,4059,23661,137903,803761,4684659,27304197,159140519,927538921,5406093003,31509019101,183648021599,1070379110497,6238626641379,36361380737781,211929657785303,1235216565974041 ⋆ Pell oblongs. ● a(n) = ((sqrt(2) + 1) ^ (2 * n + 1) - (sqrt(2) - 1) ^ (2 * n + 1) + 2 * (- 1) ^ n) / 4. ● a(n) = 5 * a(n - 1) + 5 * a(n - 2) - a(n - 3). - _ Paul Curtz _ , May 17 2008 ● a(n) = (- 1) ^ n * R(n, - 4), where R(n,x) is the n - th row polynomial of A211955. ● a(n) = (- 1) ^ n * 1 / u * T(n,u) * T(n + 1,u) with u = sqrt(- 1) and T(n,x) the Chebyshev polynomial of the first kind. ● a(n) = (- 1) ^ n + 4 * Sum _{ k = 1..n } (- 1) ^ (n - k) * 8 ^ (k - 1) * binomial(n + k,2 * k). ●

► [A046727] 0,3,21,119,697,4059,23661,137903,803761,4684659,27304197,159140519,927538921,5406093003,31509019101,183648021599,1070379110497,6238626641379,36361380737781,211929657785303,1235216565974041,7199369738058939,41961001862379597 ⋆ Related to Pythagorean triples: alternate terms of A001652 and A046090. ● a(n) = 6 * a(n - 1) - a(n - 2) - 4 * (- 1) ^ n. - _ Ron Knott _ , Jul 01 2013 ● a(n) = (2 * (- 1) ^ n + (1 + sqrt(2)) ^ (2 * n + 1) + (1 - sqrt(2)) ^ (2 * n + 1)) / 4 for n > 0. ● a(n) = 5 * a(n - 1) + 5 * a(n - 2) - a(n - 3) for n > 3. (End) ●

► [A322185] 3,21,120,525,2268,12936,41184,199485,948090,3879876,12697776,8112468 0,218412600,1123264800,5584230720,18934032285,63007367940,412918656150,1060357914000,6203093796900,25836377973120,88372156476240,296403506193600,1999351428352200,5878093199355468 ⋆ a(n) = sigma(2 * n) * binomial(2 * n,n) / 2, for n >= 1. ● a(n) is the coefficient of x ^ n * y ^ n / n in log(Product _{ n>=1 } 1 / (1 - (x + y) ^ n)), for n >= 1. ●

► [A356889] 3,21,125,693,3669,18773,93525,456021,2184533,10310997,48059733,221599061,1012225365,4585772373,20624790869,92162839893,409453548885,1809612887381,7960006055253,34863681197397,152099108509013,661172992169301,2864594294232405,12373170851239253 ⋆ a(n) = (n ^ 2 + 3 * n + 10 / 3) * 4 ^ (n - 3) - 1 / 3. ● a(n) = (4 ^ n * (10 + 3 * n * (3 + n)) - 64) / 192. ● a(n) = 13 * a(n - 1) - 60 * a(n - 2) + 112 * a(n - 3) - 64 * a(n - 4) for n > 5. (End) ●

► [A121447] 3,21,127,747,4386,25897,154077,923910,5581485,33949836,207787668,1278900412,7911394686,49165322241,306809507561,1921849861260,12079999018605,76170034283805,481680300300255,3054157623774495 ⋆ Level of the first leaf (in preorder traversal) of a ternary tree, summed over all ternary trees with n edges. A ternary tree is a rooted tree in which each vertex has at most three children and each child of a vertex is designated as its left or middle or right child. ● a(n)=3n(23n ^ 2 + 78n + 67)binomial(3n + 2,n + 2) / [4(n + 3)(2n + 1)(2n + 3)(2n + 5)]. ●

► [A125682] 3,21,129,777,4665,27993,167961,1007769,6046617,36279705,217678233,1306069401,7836416409,47018498457,282110990745,1692665944473,10155995666841,60935974001049,365615844006297,2193695064037785,13162170384226713,78973022305360281 ⋆ a(n) = (6 ^ n - 1) * 3 / 5. ● a(n) = 7 * a(n - 1) - 6 * a(n - 2). - _ Wesley Ivan Hurt _ , Dec 25 2021 ●

► [A357783] 0,1,1,1,3,21,131,705,3515,17389,91739,547889,3746227,28241373,224124083,1821051233,15023818091,126366334125,1094358852075,9858890038513,92983173940419,918408372280477,9454438841355395,100728532687727329,1103649166937235259 ⋆ a(n) = Sum _{ k=0..floor((n - 1) / 3) } 2 ^ k * Stirling2(n,3 * k + 1). ● a(n) = (Bell _ n(2 ^ (1 / 3)) + w ^ 2 * Bell _ n(2 ^ (1 / 3) * w) + w * Bell _ n(2 ^ (1 / 3) * w ^ 2)) / (3 * 2 ^ (1 / 3)), where Bell _ n(x) is n - th Bell polynomial. ●

► [A360626] 1,3,21,131,830,5066,30456,179256,1038593,5928071,33402561,186021335,1025162709,5596047683,30282832593,162573152651,866385400935,4585861723905,24120596727003,126124094912499,655868112470175,3393060517486981,17468543071082489 ⋆ Number of multisets of nonempty words over binary alphabet where each letter occurs n times. ● a(n) = [x ^ (2n) * y ^ n] Product _{ i>=1 } Product _{ j=0..i } 1 / (1 - x ^ i * y ^ j) ^ binomial(i,j). ●

► [A124812] 3,21,135,702,3402,15282,65610,270540,1082565,4221639,16120377,60450138,223205220,813100356,2927177028,10428053400,36804946455,128817263385,447470664795,1543773631158,5292938720718,18044108743734,61193066237550 ⋆ Number of 4 - ary Lyndon words of length n with exactly four 1s. ● a(n) = (1 / 4) * Sum _{ d|4,d|n } mu(d) * C(n / d - 1, (n - 4) / d) * 3 ^ ((n - 4) / d). ● a(n) = (1 / 4) * C(n - 1, 3) * 3 ^ (n - 4) if n is odd, a(n) = (1 / 4) * (C(n - 1, 3) * 3 ^ (n - 4) - (n / 2 - 1) * 3 ^ ((n - 4) / 2)) if n is even. ●

► [A141041] 1,3,21,135,873,5643,36477,235791,1524177,9852435,63687141,411680151,2661142329,17201894427,111194793549,718774444575,4646231048097,30033709622307,194140950878133,1254946834135719,8112103857448713 ⋆ a(n) = ((3 + 2 * sqrt(3)) ^ n + (3 - 2 * sqrt(3)) ^ n) / 2. ● a(n) = 6 * a(n - 1) + 3 * a(n - 2), a(0) = 1, a(1) = 3. - _ Philippe Deléham _ , Mar 03 2012 ● a(n) = (- i * sqrt(3)) ^ n * ChebyshevT(n, i * sqrt(3)). - _ G. C. Greubel _ , Oct 10 2022 ●

► [A137969] 1,1,3,21,136,1032,8139,66975,567417,4915386,43350639,387889254,3512655498,32133132074,296496163113,2756279003712,25790064341592,242699145598212,2295564345035100,21811226043019788,208084639385653938 ⋆ G.f. satisfies A(x) = 1 + x * (1 + x * A(x) ^ 6) ^ 3. ● a(n) = Sum _{ k=0..n - 1 } C(3 * (n - k),k) / (n - k) * C(6 * k,n - k - 1) for n>0 with a(0)=1. - _ Paul D. Hanna _ , Jun 16 2009 ●

► [A054419] 3,21,143,953,6347,42285,281719,1876913,12504659,83310469,555043871,3697898985,24636713627,164138517789,1093548978567,7285610864737,48539321706403,323386164243445,2154513238908591,14354130788161817 ⋆ Number of connected 3 X n binary matrices (divided by 2). ● a(n) = 7 * a(n - 1) - 3 * a(n - 2) + 5 * a(n - 3). ●

► [A033888] 0,3,21,144,987,6765,46368,317811,2178309,14930352,102334155,701408733,4807526976,32951280099,225851433717,1548008755920,10610209857723,72723460248141,498454011879264,3416454622906707,23416728348467685,160500643816367088,1100087778366101931,7540113804746346429 ⋆ a(n) = Fibonacci(4n). ● a(n) = 7 * a(n - 1) - a(n - 2). ● a(n) = ((7 + 3 * sqrt(5)) ^ (n - 1) - (7 - 3 * sqrt(5)) ^ (n - 1)) / ((2 ^ (n - 1)) * sqrt(5)). - _ Gregory V. Richardson _ , Oct 13 2002 ● a(n) = Sum _{ k=0..n } F(3n - k) * binomial(n, k). - _ Benoit Cloitre _ , Jun 07 2004 ● a(n) = Lucas(2n) * Lucas(n) * Fibonacci(n). - _ Ralf Stephan _ , Sep 25 2004 ● a(n) = Fibonacci[(4 * n + 2)] modulo Fibonacci[(4 * n + 1)]. - _ Artur Jasinski _ , Nov 15 2011 (corrected by _ Iain Fox _ , Dec 18 2017) ● a(n) = Sum _{ k>=0 } Fibonacci(2 * n * k) / Lucas(2 * n) ^ k (Filipponi and Bucci, 1994). - _ Amiram Eldar _ , Jan 17 2022 ●

► [A141492] 3,21,144,1085,8685,72381,620420,5428680,48254941,434294481,3948131653,36191206824,334072678386,3102103442165,28952965460216,271434051189531,2554673422960304,24127471216847323,228576043106974645,2171472409516259137,20680689614440563220 ⋆ a(n) is the floor of the reciprocal of the difference between the 10 ^ n - th root of 10 ^ n and 1. ● a(n) = floor(1 / ((10 ^ n) ^ (1 / 10 ^ n) - 1)). ●

► [A169634] 3,21,147,1029,7203,50421,352947,2470629,17294403,121060821,847425747,5931980229,41523861603,290667031221,2034669218547,14242684529829,99698791708803,697891541961621,4885240793731347,34196685556119429 ⋆ a(n) = 3 * 7 ^ n. ● a(n) = 7 * a(n - 1) for n > 0; a(0) = 3. ●

► [A037761] 3,21,148,1038,7269,50883,356182,2493276,17452935,122170545,855193816,5986356714,41904497001,293331479007,2053320353050,14373242471352,100612697299467,704288881096269,4930022167673884 ⋆ Base - 7 digits are, in order, the first n terms of the periodic sequence with initial period 3,0,1,2. ● a(n) = (- 100 - 25 * (- 1) ^ n - (24 - i * 32) * (- i) ^ n - (24 + 32 * i) * i ^ n + 173 * 7 ^ n) / 400, where i=sqrt(- 1). ● a(n) = 7 * a(n - 1) + a(n - 4) - 7 * a(n - 5). ●

► [A037649] 3,21,148,1039,7273,50912,356387,2494709,17462964,122240751,855685257,5989796800,41928577603,293500043221,2054500302548,14381502117839,100670514824873,704693603774112,4932855226418787 ⋆ Base 7 digits are, in order, the first n terms of the periodic sequence with initial period 3,0,1. ● a(n) = 7 * a(n - 1) + a(n - 3) - 7 * a(n - 4). G.f.: x * (x ^ 2 + 3) / ((x - 1) * (7 * x - 1) * (x ^ 2 + x + 1)). - _ Colin Barker _ , Aug 09 2014 ●

► [A037768] 3,21,149,1044,7311,51177,358241,2507688,17553819,122876733,860137133,6020959932,42146719527,295027036689,2065189256825,14456324797776,101194273584435,708359915091045,4958519405637317 ⋆ Base 7 digits are, in order, the first n terms of the periodic sequence with initial period 3,0,2,1. ● a(n) = 7a(n - 1) + a(n - 4) - 7a(n - 5). ●

► [A074577] 3,21,149,1071,7793,57351,426449,3200631,24221633,184649031,1416683249,10930058391,84737546273,659705518311,5154633748049,40402118583351,317529017187713,2501356987117191,19744372064060849,156123443001239511 ⋆ a(n) = 6 ^ n + 7 ^ n + 8 ^ n. ● a(n) = 21 * a(n - 1) - 146 * a(n - 2) + 336 * a(n - 3); a(0)=3, a(1)=21, a(2)=149. - _ Harvey P. Dale _ , Dec 25 2011 ●

► [A155627] 1,3,21,153,1041,6753,42561,263553,1614081,9815553,59417601,358602753,2160005121,12993585153,78095728641,469111242753,2816814940161,16909479575553,101491237191681,609084862103553,3655058928435201 ⋆ a(n) = 6 ^ n - 4 ^ n + 1. ● a(n) = 10 * a(n - 1) - 24 * a(n - 2) + 15 with a(0)=1, a(1)=3 - _ Vincenzo Librandi _ , Jul 21 2010 ●

► [A163472] 3,21,153,1143,8667,66285,509409,3925503,30295539,234004869,1808305641,13977507015,108055998027,835414244829,6459123003057,49940805957327,386138612387043,2985616752052725,23084826815860281,178492568972583447 ⋆ a(n) = 12 * a(n - 1) - 33 * a(n - 2) for n > 1; a(0) = 3, a(1) = 21. ● a(n) = ((3 + sqrt(3)) * (6 + sqrt(3)) ^ n + (3 - sqrt(3)) * (6 - sqrt(3)) ^ n) / 2. ●

► [A370170] 1,3,21,156,1221,9828,80580,669294,5612805,47419905,402993396,3441242544,29502452868,253778827695,2189249293266,18932541179706,164081616

775173,1424741956592535,12392093363519415,107946143556797700,94158012304
6540596 ⋆ Coefficient of x ^ n in the expansion of (1 + x + x ^ 2) ^ (3 * n). ● a
(n) = Sum _{ k=0..floor(n / 2) } binomial(3 * n,k) * binomial(3 * n - k,n - 2 *
k). ●
▶ [A192364] 1,3,21,157,1239,10047,82951,693603,5854581,49778997,425712429,3
657968097,31555053921,273109567797,2370474720369,20625186298269,17984147
3895447,1571088267426447,13747953837604959,120482775658910763,1057293764
707074027,9289536349244758791,81709329486947791419 ⋆ Number of lattice pa
ths from (0,0) to (n,n) using steps (0,1),(0,2),(1,0),(2,0),(1,1). ● a(n) = [x ^ n *
y ^ n] 1 / (1 - x - y - x ^ 2 - x * y - y ^ 2) for n >= 0. - _ Paul D. Hanna _ , D
ec 11 2018 ●
▶ [A372463] 1,3,21,159,1261,10268,85065,713345,6036381,51438741,440780736,3
794261496,32784723361,284184613586,2470101750095,21520640950334,18788521
5032925,1643315666085399,14396340879235851,126302446713155886,1109524512
806397656 ⋆ Coefficient of x ^ n in the expansion of 1 / ((1 - x) * (1 - x + x ^
3) ^ 2) ^ n. ● a(n) = Sum _{ k=0..floor(n / 3) } (- 1) ^ k * binomial(2 * n +
k - 1,k) * binomial(4 * n - 2 * k - 1,n - 3 * k). ●
▶ [A136781] 1,3,21,162,1305,10719,88830,739179,6162669,51425010,429299217,3
584510631,29932216686,249957514899,2087382613509,17431787135682,14557393
7119305,1215699423313455,10152411188679774,84783702198390651,70803649371
7628253,591287843108847506 ⋆ Number of multiplex juggling sequences of len
gth n, base state <2,2> and hand capacity 2. ● a(n) = 14 * a(n - 1) - 54 * a(n -
2) + 57 * a(n - 3) for n>4. - _ Colin Barker _ , Aug 31 2016 ●
▶ [A225439] 1,3,21,162,1305,10773,90342,765936,6546177,56293380,486451251,4
220183916,36731240910,320571837810,2804298945840,24580601689752,21583264
3307217,1898042178972285,16714070686567620,147360883148636850,1300623629
653125855 ⋆ Expansion of 3 * x / ((1 - (1 - 9 * x) ^ (1 / 3)) * (1 - 9 * x) ^ (2 /
3)). ● a(n) = Sum _{ k = 0..n } C(k,n - k) * 3 ^ (k) * (- 1) ^ (n - k) * C(n +
k - 1,n - 1), n>0, a(0)=1. ● a(n) = (Gamma(n + 2 / 3) / Gamma(2 / 3) + Ga
mma(n + 1 / 3) / (Gamma(1 / 3))) * 3 ^ (2 * n - 1) / Gamma(n + 1)) for n >
0. - _ Peter Luschny _ , Jul 05 2013 ●
▶ [A180400] 1,3,21,162,1341,11529,101619,911466,8281737,76002381,703017549,6
544803564,61254970686,575885086182,5434948357146,51462813578148,48870509
1057981,4652700300002475,44395945025504625,424479488258350350 ⋆ Coefficie
nts of Maclaurin series for (1 - 9x - 9x ^ 2) ^ (- 1 / 3). ● a(n) = Sum _{ k=0..
n } (- 9) ^ k * binomial(- 1 / 3,k) * binomial(k,n - k). - _ Seiichi Manyama _
, Mar 27 2023 ●
▶ [A371817] 1,3,21,164,1353,11508,99808,877425,7790745,69704921,627438606,5
675535000,51546958296,469764721533,4293594852225,39341599326304,36127134
5551257,3323924166943410,30634431485945569,282767849049333909,2613630939
017216898 ⋆ a(n) = Sum _{ k=0..floor(n / 3) } (- 1) ^ k * binomial(4 * n - 3 *
k - 1,n - 3 * k). ● a(n) = [x ^ n] 1 / ((1 + x ^ 3) * (1 - x) ^ (3 * n)). ● a(n) = b
inomial(4 * n - 1, n) * hypergeom([1, (1 - n) / 3, (2 - n) / 3, - n / 3], [(1 - 4 * n)
/ 3, (2 - 4 * n) / 3, 1 - 4 * n / 3], - 1). - _ Stefano Spezia _ , Apr 07 2024 ●
▶ [A262977] 1,3,21,165,1365,11628,100947,888030,7888725,70607460,635745396,5
752004349,52251400851,476260169700,4353548972850,39895566894540,36639520
2809685,3371363686069236,31074067324187580,286845713747883300,2651487106
659130740,24539426037817994160 ⋆ a(n) = binomial(4 * n - 1,n). ● a(n) = Sum
_{ k=0..n } (binomial(n - 1,n - k) * binomial(3 * n,k)). ● a(n) = [x ^ n] 1 / (1 -
x) ^ (3 * n). - _ Ilya Gutkovskiy _ , Oct 03 2017 ●
▶ [A361375] 1,3,21,165,1380,11982,106626,965442,8854725,82022115,765787773,7
195638909,67973370618,644991134880,6143707229880,58714212503784,56274179
3028282,5407273475087934,52074626299010130,502513862912425650,4857975310
180620720 ⋆ Expansion of 1 / (1 - 9 * x / (1 - x)) ^ (1 / 3). ● a(n) = Sum _{ k
=0..n } (- 9) ^ k * binomial(- 1 / 3,k) * binomial(n - 1,n - k). ● a(0) = 1; a(n)
= (3 / n) * Sum _{ k=0..n - 1 } (n + 2 * k) * a(k). ● a(n) = 3 * hypergeom([1
- n, 4 / 3], [2], - 9) for n >= 1. - _ Peter Luschny _ , Mar 30 2023 ●
▶ [A371771] 1,3,21,166,1377,11748,102088,898677,7987305,71517307,644134026,5
829345492,52964836184,482846377185,4414405051413,40458397722306,37160542
6607673,3419639400458316,31521758873514301,291000881055737811,2690082750
919841442 ⋆ a(n) = Sum _{ k=0..floor(n / 3) } binomial(4 * n - 3 * k - 1,n - 3
* k). ● a(n) = [x ^ n] 1 / ((1 - x ^ 3) * (1 - x) ^ (3 * n)). ●
▶ [A370284] 1,3,21,168,1425,12483,111594,1011636,9264753,85510590,79408715
1,7410887718,69446624910,653019755430,6158495001960,58226492157048,551725
482707505,5238008159399163,49814314319342424,474467729545936650,45253873
65179378775 ⋆ Coefficient of x ^ n in the expansion of 1 / ((1 - x) ^ 3 - x ^ 3)
^ n. ● a(n) = Sum _{ k=0..floor(n / 3) } binomial(n + k - 1,k) * binomial(4 *
n - 1,n - 3 * k). ●
▶ [A132805] 0,3,21,171,1365,10923,87381,699051,5592405,44739243,357913941,2
863311531,22906492245,183251937963,1466015503701,11728124029611,93824992
236885,750599937895083,6004799503160661,48038396025285291,38430716820228
2325,3074457345618258603 ⋆ A trisection of A024495. ● a(n + 1) = 7 * a(n) +
8 * a(n - 1) for n >= 1, a(0)=0, a(1)=3. (End) ● a(n) = - (1 / 3) * (- 1) ^ n +
(1 / 3) * 8 ^ n. - _ Paolo P. Lava _ , Jul 08 2008 ●
▶ [A372459] 1,3,21,171,1469,12988,116985,1067545,9836541,91313469,85270125
6,8001080244,75375985841,712487600698,6754115819535,64185511063246,611287
650124125,5832863405199183,55750924705841643,533676328608473118,51155562
11638071944 ⋆ Coefficient of x ^ n in the expansion of 1 / ((1 - x) * (1 - x - x ^
3) ^ 2) ^ n. ● a(n) = Sum _{ k=0..floor(n / 3) } binomial(2 * n + k - 1,k) * bi
nomial(4 * n - 2 * k - 1,n - 3 * k). ●
▶ [A331328] 1,3,21,171,1509,13995,134277,1320651,13237221,134682219,1387100
229,14430764043,151415596197,1600364733867,17022016484613,18205571988564
3,1956671540189541,21121180251536619,228880429935661509,2488986535173458
571,27152943714786745893 ⋆ Evaluation of the Little - Schröder polynomials at
1 / 2 and normalized with 2 ^ n. ● a(n) = [x ^ n] (1 + 6 * x - 3 * (4 * x ^ 2 - 12
* x + 1) ^ (1 / 2)) / (30 * x - 2). ● a(n) = (60 * (n - 3) * a(n - 3) + (282 - 184
* n) * a(n - 2) + (27 * n - 18) * a(n - 1)) / n. ●
▶ [A372089] 1,3,21,171,1512,14040,134775,1325457,13279329,135014931,1389328
200,14440275000,151366896639,1598281697205,16983592285797,18147806604873
9,1948770301135167,21018820972926429,227600123488744275,2473358642698093
245,26965560597470251857 ⋆ G.f. A(x) satisfies A(x) = 1 / (1 - 9 * x * (1 + x
* A(x))) ^ (1 / 3). ● a(n) = Sum _{ k=0..n } 9 ^ k * binomial(n / 3 + 2 * k /
3 - 2 / 3,k) * binomial(k,n - k) / (n - k + 1). ●
▶ [A206178] 1,3,21,171,1521,14283,138909,1385163,14072193,145039923,1512191
781,15914734443,168802010001,1802247516891,19350710547021,20878318971953
1,2262263134211073,24604815145831011,268499713118585781,2938736789722114
731,32250788066104022961 ⋆ a(n) = Sum _{ k=0..n } binomial(n,k) ^ 3 * 2 ^ k
. ● a(2 * 3 ^ n) == 3 (mod 9) for n>=0; a(n) == 0 (mod 9) if n / 2 > 1 is not
a power of 3. ● a(n) = hypergeom([- n, - n, - n],[1,1], - 2). - _ Peter Luschny
_ , Sep 23 2014 ●
▶ [A257675] 1,3,21,174,1509,13473,122580,1129999,10518477,98644395,93060732
1,8821717743,83960385396,801783097911,7678690148647,73721697254874,709323
064431597,6837868454315828,66028546945097793,638555320797561440,61837870
02091288969,599573998999553193063 ⋆ a(n) = A257673(2n,n). ● a(n) = [x ^ (2 *
n)] (- 1 + Product _{ k>=1 } 1 / (1 - x ^ k) ^ k) ^ n. - _ Ilya Gutkovskiy _
, Feb 13 2021 ●
▶ [A372108] 1,3,21,174,1569,14898,146541,1479198,15231207,159338433,1688597
850,18089117742,195559863960,2130853276767,23377139412366,25800573597935
7,2862644731044960,31912076884938312,357256970492137149,4014802252108301
061,45274175730663116394 ⋆ G.f. A(x) satisfies A(x) = 1 / (1 - 9 * x / (1 - x *
A(x))) ^ (1 / 3). ● a(n) = Sum _{ k=0..n } 9 ^ k * binomial(n / 3 + 2 * k / 3
- 2 / 3,k) * binomial(n - 1,n - k) / (n - k + 1). ●
▶ [A054879] 1,3,21,183,1641,14763,132861,1195743,10761681,96855123,87169610
1,7845264903,70607384121,635466457083,5719198113741,51472783023663,463255
047212961,4169295424916643,37523658824249781,337712929418248023,30394163
64764232201,273547472828780898 03,2461927255459028082 21 ⋆ Closed walks of l
ength 2n along the edges of a cube based at a vertex. ● a(n) = (3 ^ (2 * n) + 3)
/ 4. ● a(n) = (1 / 2 ^ 3) * Sum _{ j = 0..3 } binomial(3,j) * (3 - 2 * j) ^ (2 * n
). See Reyzin link. - _ Peter Bala _ , Jun 03 2019 ● a(n) = 9 * a(n - 1) - 6. - _
Klaus Purath _ , Mar 13 2021 ●
▶ [A333090] 1,3,21,183,1729,17003,171237,1752047,18130433,189218451,1987916
021,20996253479,222730436161,2371369720827,25325636818629,27118988404118
3,2910628489408513,31302328583021091,337241582882175189,3639109029230457
751,39324814984207649729 ⋆ a(n) is the n - th order Taylor polynomial (center
ed at 0) of S(x) ^ n evaluated at x = 1, where S(x) = (1 - x - sqrt(1 - 6 * x + x
^ 2)) / (2 * x) is the o.g.f. of the Schröder numbers A006318. ● a(n) = [x ^ n] (
(1 + x) * S(x / (1 + x))) ^ n. ●
▶ [A131763] 1,3,21,183,1785,18651,204141,2310447,26819121,317530227,3819724
293,46553474919,573608632233,7133530172619,89423593269213,11287658463378
87,143347210793854 41,1830216156468315 87,2347944226115977461,302503093549
02101271,391241497991342192985 ⋆ Series reversion of x * (1 - 4x) / (1 - x) is x
* A(x) where A(x) is the generating function. ● a(n) = - a(n - 1) + 4 * Sum _{
i=0..n - 1 } a(i) * a(n - i - 1)), a(0)=1. - _ Vladimir Kruchinin _ , Mar 30 2015
● a(n) = (- 1) ^ n * hypergeom([- n, n + 1], [2], 4). - _ Peter Luschny _ , Jan
08 2018 ●
▶ [A212072] 1,3,21,190,1950,21576,250971,3025308,37456650,473498025,6085977
381,79296104784,1044955576496,13903071489300,186507160795350,25198576583
31576,342582705575552 82,4683227226284142 90,6433538749783033350,887678996
53496377050,1229626632793564911906 ⋆ G.f. satisfies: A(x) = (1 + x * A(x) ^
2) ^ 3. ● a(n) = 3 * binomial(6 * n + 3,n) / (6 * n + 3). ●
▶ [A199682] 3,21,201,2001,20001,200001,2000001,20000001,200000001,200000000
1,20000000001,200000000001,2000000000001,20000000000001,200000000000001,2
000000000000001,20000000000000001,200000000000000001,2000000000000000
1 ⋆ 2 * 10 ^ n + 1. ● a(n) = 10 * a(n - 1) - 9. ● a(n) = 11 * a(n - 1) - 10 * a(n -
2). ●
▶ [A120972] 1,1,3,21,217,2814,42510,718647,13270944,263532276,5567092665,12
4143735663,2905528740060,71058906460091,1809695198254281,478611022784281
98,1311488806252697283,37164457324943708739 ⋆ G.f. satisfies: A(x / A(x) ^ 3
) = 1 + x ; thus A(x) = 1 + series _ reversion(x / A(x) ^ 3). ● a(n) = [x ^ (n -
1)] A(x) ^ (3 * n) / n for n>=1 with a(0)=1; i.e., a(n) equals the coefficient of
x ^ (n - 1) in A(x) ^ (3 * n) / n for n>=1 (see comment). ●
▶ [A108716] 3,21,371,7077,135779,2606261,50028755,960335173,18434276035,35
3858266965,6792546291251,130387472704741,2502874814474531,48044357383337
973,922243598852422035,17703083191185355397 ⋆ a(n) = tan(Pi / 14) ^ (- 2n)
+ tan(3 * Pi / 14) ^ (- 2n) + tan(5 * Pi / 14) ^ (- 2n). ● a(n) = 7 ^ n * A(2n)
, where A(n) := A(n - 1) + A(n - 2) + A(n - 3) / 7, with A(0)=3, A(1)=1, and
A(2)=3. - see Witula - Slota's (Section 6) and Witula's (Remark 11) papers for
the proofs and details. In these papers A(n) denotes the value of the big omega
function with index n for the argument 2 * i / sqrt(7) (see also A215512). - _ R
oman Witula _ , Aug 23 2012 ● a(n) = (tan(1 * Pi / 7)) ^ (2 * n) + (tan(2 * Pi
/ 7)) ^ (2 * n) + (tan(3 * Pi / 7)) ^ (2 * n). - _ Bernard Schott _ , Apr 22 202
2 ●
▶ [A288568] 1,1,1,3,21,984,609423 ⋆ Number of non - isomorphic connected arr
angements of n pseudo - circles on a sphere, in the sense that the union of the p
seudo - circles is a connected set, reduced for mirror symmetry. ● a(n) = 2 ^ (
\ Theta(n ^ 2)). (cf. Arrangements of Pseudocircles: On Circularizability) ●
▶ [A042547] 1,3,22,25,97,607,17093,103165,326588,429753,3334859,10434330,587
657339,1773406347,13001501768,14774908115,57326226113,358732264793,10101
829640317,60969710106695,193010959960402,253980670067097,197087565043008
1,6166607621357340 ⋆ Denominators of continued fraction convergents to sqrt(
802). ● a(n) = 590992198 * a(n - 12) - a(n - 24) for n>23. - _ Vincenzo Libran
di _ , Jan 24 2014 ●
▶ [A041103] 1,1,3,22,47,69,1013,1082,3177,23321,49819,73140,1073779,1146919,3
367617,24720238,52808093,77528331,1138204727,1215733058,3569670843,262034
28959,55976528761,82179957720 ⋆ Denominators of continued fraction converge
nts to sqrt(59). ● a(n) = 1060 * a(n - 6) - a(n - 12). G.f.: - (x ^ 10 - x ^ 9 + 3 *
x ^ 8 - 22 * x ^ 7 + 47 * x ^ 6 - 69 * x ^ 5 - 47 * x ^ 4 - 22 * x ^ 3 - 3 * x ^ 2 -
x - 1) / (x ^ 12 - 1060 * x ^ 6 + 1). [_ Colin Barker _ , Jul 18 2012] ●
▶ [A139272] 0,3,22,57,108,175,258,357,472,603,750,913,1092,1287,1498,1725,196
8,2227,2502,2793,3100,3423,3762,4117,4488 ⋆ a(n) = n * (8 * n - 5). ● a(n) = 8

* n ^ 2 - 5 * n. • a(n) = 16 * n + a(n - 1) - 13 with n>0, a(0)=0. - _ Vincenzo Librandi _ , Aug 03 2010 • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). •

► [A005288] 3,22,71,169,343,628,1068,1717,2640,3914,5629,7889,10813,14536,19210,25005,32110,40734,51107,63481,78131,95356,115480,138853,165852 ⋆ a(n) = C(n,5) + C(n,4) - C(n,3) + 1, n >= 7. • a(n) = C(n + 3, 5) - C(n + 2, 3) + C(n, 0). • a(n) = (n + 4) * (n - 3) * (n ^ 3 - 6 * n ^ 2 + 3 * n - 10) / 120, n >= 7 . - _ R. J. Mathar _ , May 19 2013 •

► [A143166] 0,3,22,73,172,335,578,917,1368,1947,2670,3553,4612,5863,7322,9005,10928,13107,15558,18297,21340,24703,28402,32453,36872 ⋆ a(n) = n * (8 * n ^ 2 + 1) / 3. • a(n) = (1 / 4) * (S(n) - S(n - 1)), with a(0)=0 and S(n):=sum(sum(p ^ 2 + q ^ 2,p= - n.. + n),q= - n.. + n) = 2 * sum(sum((p ^ 2,p= - n.. + n), q= - n.. + n) = 2 * sum(p ^ 2,p= - n.. + n) * sum(1,q= - n..n) = 2 * 2 * (n * (n + 1) * (2 * n + 1)) / 6) * (2 * n + 1) = (2 / 3) * n * (n + 1) * (2 * n + 1) ^ 2. • a(n) = n * (8 * n ^ 2 + 1) / 3. •

► [A106150] 0,0,0,0,3,22,82,218,476,914,1603,2628,4089,6102,8800,12334,16874,22610,29753,38536,49215,62070,77406,95554,116872 ⋆ 6th diagonal of triangle in A059317. • a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n > 8. •

► [A135836] 3,22,82,254,677,1692,3972,9052,19975,43394,92534,195546,408489,848584,1749544,3594104,7345547,14976366,30424986,61706038,124829101,252226676,508704716,1025115156,2062984719 ⋆ Column three of the triangular matrix l isted by rows in A135835. • a(n) = (1 / 4) * (110 + 26 * n + 2 ^ (n + 8) - (1 - (- 1) ^ n) * 106 * 3 ^ ((n + 1) / 2) - (1 + (- 1) ^ n) * 61 * 3 ^ (1 + n / 2)). • a(2 * n) = (1 / 2) * (55 + 26 * n + 2 ^ (2 * n + 7) - 61 * 3 ^ (n + 1)). • a(2 * n + 1) = (1 / 2) * (68 + 26 * n + 4 ^ (n + 4) - 106 * 3 ^ (n + 1)). •

► [A004305] 3,22,85,254,644,1448,2967,5645,10109,17214,28093,44212,67430,100064,144959,205563,286007,391190,526869,699754,917608,1189352,1525175,1936649,2436849 ⋆ Simple triangulations of a disk: column 4 of square array in A210664. • a(n) = (n ^ 6 + 15 * n ^ 5 + 103 * n ^ 4 + 405 * n ^ 3 + 976 * n ^ 2 + 1236 * n + 432) / 144. •

► [A277228] 0,0,3,22,88,258,623,1316,2520,4476,7491,11946,18304,27118,39039,54824,75344,101592,134691,175902,226632,288442,363055,452364,558440 ⋆ Convolution of the even - indexed triangular numbers (A014105) and the squares (A000290). • a(n) = binomial(n + 1, 3) * (4 * n ^ 2 + 5 * n + 4) / 10 = (n - 1) * n * (n + 1) * (4 * n ^ 2 + 5 * n + 4) / 60. • a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>5. - _ Colin Barker _ , Oct 21 2016 •

► [A095663] 3,22,92,288,750,1716,3564,6864,12441,21450,35464,56576,87516,131784,193800,279072,394383,547998,749892,1012000,1348490,1776060,2314260,2985840,3817125 ⋆ Eighth column (m=7) of (1,3) - Pascal triangle A095660. • a(n) = binomial(n + 6, 6) * (n + 21) / 7 = 3 * b(n) - 2 * b(n - 1), with b(n):=binomial(n + 7, 7); cf. A000580. •

► [A254332] 1,3,22,96,817,3627,31006,137712,1177393,5229411,44709910,198579888,1697799169,7540806315,64471658494,286352060064,2448225223585,10873837476099,92968086837718,412919472031680,3530339074609681,15680066099727723,134059916748330142 ⋆ Indices of centered pentagonal numbers (A005891) which are also squares (A000290). • a(n) = a(n - 1) + 38 * a(n - 2) - 38 * a(n - 3) - a(n - 4) + a(n - 5). •

► [A221543] 3,22,103,303,716,1455,2658,4487,7128,10791,15710,22143,30372,40703,53466,69015,87728,110007,136278,166991,202620,243663,290642,344103,404616 ⋆ Number of 0..n arrays of length 5 with each element differing from at least one neighbor by something other than 1, starting with 0. • a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>8. •

► [A309000] 3,22,105,416,1491,5034,16365,51892,161799,498686,1524705,4635528,14037627,42391378,127763925,384536924,1156232175,3474201510,10434138825,31326533680,94029932643,282194655482,846802070205,2540859195396,7623517110231 ⋆ Number of strings of length n from a 3 - symbol alphabet (A,B,C, say) containing at least one "A" and at least two "B"s. • a(n) = 3 ^ n - 2 ^ (n + 1) - n * 2 ^ (n - 1) + n + 1. • a(n) = 9 * a(n - 1) - 31 * a(n - 2) + 51 * a(n - 3) - 40 * a(n - 4) + 12 * a(n - 5) for n > 7. - _ Stefano Spezia _ , Jul 05 2019 •

► [A100511] 0,3,22,126,652,3190,15060,69356,313624,1398438,6166660,26948548,116888232,503811516,2159864392,9216445080,39168381488,165864540934,700151508324,2947120122068,12373581565960,51831196048212,216659135089496,903925011410536 ⋆ a(n) = Sum _{ j=0..n } Sum _{ k=0..n } binomial(n,j) * binomial(n,k) * max(j,k). • a(n) = n * 2 ^ (2 * n - 1) + (n / 2) * binomial(2 * n, n). [Typo corrected by _ Ognjen Dragoljevic _ , Dec 26 2017] •

► [A321003] 3,22,140,856,5168,31072,186560,1119616,6718208,40310272,241863680,1451186176,8707125248,52242767872,313456640000,1880739905536,11284439564288,67706637647872,406239826411520,2437438959517696,14624637592033288,87747802559414272 ⋆ a(n) = 2 ^ n * (4 * 3 ^ n - 1). • a(n) = 8 * a(n - 1) - 12 * a(n - 2) for n>1. •

► [A121723] 0,3,22,150,1096,8820,78408,767088,8212608,95657760,1205438400,16350871680,237633108480,3685053415680,60748282022400,1061014235904000,19574489449267200,380408796994867200,7768172642717491200 ⋆ a(n) = A098916(n + 2) + (1 - n) * A067318(n). • a(n) = n! * (n - 1) * Sum _{ i=1..n } (1 / i). •

► [A037775] 3,22,154,1080,7563,52942,370594,2594160,18159123,127113862,889797034,6228579240,43600054683,305200382782,2136402679474,14954818756320,104683731294243,732786119059702,5129502833417914 ⋆ Base 7 digits are, in order, the first n terms of the periodic sequence with initial period 3,1,0,2. • a(n) = 8a(n - 1) - 8a(n - 2) + 8a(n - 3) - 7a(n - 4) •

► [A037782] 3,22,156,1092,7647,53530,374712,2622984,18360891,128526238,899683668,6297785676,44084499735,308591498146,2160140487024,15120983409168,105846883864179,740928187049254,5186497309344780 ⋆ Base 7 digits are, in order, the first n terms of the periodic sequence with initial period 3,1,2,0. • a(n) = 7a(n - 1) + a(n - 4) - 7a(n - 5). •

► [A041661] 1,1,3,22,157,336,493,18084,18577,55238,405243,2891939,6189121,9081060,333107281,342188341,1017483963,7464576082,53269516537,11400360915 6,167273125693,6135836134104,6303109259797,18742054653698,13749749183568 3 ⋆ Denominators of continued fraction convergents to sqrt(349). • a(n) = 18420 * a(n - 7) + a(n - 14) for n>13. - _ Vincenzo Librandi _ , Dec 22 2013 •

► [A037586] 3,22,157,1100,7703,53922,377457,2642200,18495403,129467822,906274757,6343923300,44407463103,310852241722,2175965692057,15231759844400,106622318910803,746356232375622,5224493626629357 ⋆ Base 7 digits are, in order, the first n terms of the periodic sequence with initial period 3,1. • a(n) = 7 * a(n - 1) + a(n - 2) - 7 * a(n - 3). - _ Wesley Ivan Hurt _ , Jul 11 2023 •

► [A164021] 3,22,162,1196,8844,65464,484872,3592688,26626608,197367904,1463110176,10846813376,80416014528,596200519552,4420261740672,32772323223296,242978979496704,1801488764368384,13356579869532672,99028340445867008 ⋆ a(n) = 12 * a(n - 1) - 34 * a(n - 2) for n > 1; a(0) = 3, a(1) = 22. • a(n) = ((3 + 2 * sqrt(2)) * (6 + sqrt(2)) ^ n + (3 - 2 * sqrt(2)) * (6 - sqrt(2)) ^ n) / 2. •

► [A077244] 3,22,173,1362,10723,84422,664653,5232802,41197763,324349302,2553596653,20104423922,158281794723,1246149933862,9810917676173,77241191475522,608118614128003,4787707721548502,37693543158260013,296760637544531602,2336391557197992803 ⋆ Bisection (odd part) of Chebyshev sequence with Diophantine property. • a(n) = (((4 - sqrt(15)) ^ n * (- 10 + 3 * sqrt(15)) + (4 + sqrt(15)) ^ n * (10 + 3 * sqrt(15)))) / (2 * sqrt(15)). • a(n) = 8 * a(n - 1) - a(n - 2). •

► [A147855] 1,3,22,174,1444,12323,107104,942952,8381596,75053100,676017962,6118171326,55591175956,506805088026,4633571685968,42468065811884,390071875757852,3589637747968964,33089300640166360,305476314574338648,2823932709938708824,26137341654281261347 ⋆ G.f.: 1 / (1 + 4 * x * G(x) ^ 2 - 7 * x * G(x) ^ 3) where G(x) = 1 + x * G(x) ^ 4 is the g.f. of A002293. • a(n) = Sum _{ k=0..n } C(k, n - k) * C(4 * n - k, k). • a(n) = Sum _{ k=0..n } C(n + k, n - k) * C(3 * n - k, k). • a(n) = Sum _{ k=0..n } C(2 * n + k, n - k) * C(2 * n - k, k). • a(n) = Sum _{ k=0..n } C(3 * n + k, n - k) * C(n - k, k). • a(n) = Sum _{ k=0..n } C(4 * n + k, n - k) * C(- k, k). •

► [A132595] 1,3,22,188,1712,16098,154352,1499858,14717692,145509218,1447187732,14462966928,145120265472,1461040916988,14751839744412,149316973768398,1514654852648052,15393833895932658,156716528008129892,1597861126366223768 ⋆ Number of ways to move a chess queen from the lower left corner to square (n,n), with the queen moving only up, right, or diagonally up - right. • a(1)=1; a(2)=3; a(3)=22; a(4)=188; a(n) = ((29 * n - 47) * a(n - 1) + (- 95 * n + 238) * a(n - 2) + (116 * n - 418) * a(n - 3) + (- 48 * n + 240) * a(n - 4)) / (2 * n - 2), n >= 5. - Martin J. Erickson (erickson(AT)truman.edu), Nov 20 2007 •

► [A079489] 1,3,22,211,2306,27230,338444,4362627,57788170,781825066,10757497972,150073096238,2117778107732,30176799215196,433586825237912,6274885068167651,91383942213277530,1338275570267001458 ⋆ Series reversion of x(1 - x ^ 2) / (1 + x ^ 2) ^ 2 expanded in odd powers of x. • a(n) = ((2 ^ (4n + 2)) / Gamma(1 / 2)) * ((Gamma(n + 1 / 2) / (2 * Gamma(n + 2))) - Gamma(2n + 3 / 2) / Gamma(2n + 3)). [David Dickson (dcmd(AT)unimelb.edu.au), Nov 10 2009] • a(n) = 2 ^ (2 * n + 1) * Catalan(n) - Catalan(2 * n + 1) (see Regev). It follows that the 2 - adic valuations of a(n) and Catalan(n) are equal. In particular, a(n) is odd iff n is of the form 2 ^ m - 1. - _ Peter Bala _ , Aug 02 2016 •

► [A073530] 1,3,22,225,2706,35861,507060,7510005,115175530,1815002145,29231242206,479251119815,7975209124260,134398986236625,2289535943534920,39370761619959165,682603570436824602,11921040322642855193 ⋆ a(n) = (1 / n) * Sum _{ k=0..n } binomial(n, k) * binomial(n + k, k + 1) * binomial(n + k, k) with a(0) = 1. • a(n) = hypergeometric3F2([n + 1, n + 1, - n], [1, 2], - 1). •

► [A232327] 3,23,27,89,137,9190,25731,80457,125859,270815,609977,959612,1034186,1491489,2975032,264484387,1092196976,1194228023,1424193547,4523998315,13583506006,380693793416,1097951708621,1486580651232 ⋆ A generalized Engel expansion of 1 / Pi. • a(n) = ceiling(1 / g ^ (n)(1 / Pi)), where g(x) = - x * ceiling(- 1 / x) - 1. •

► [A370601] 0,1,3,23,37,156,371,1207,2826,8738,14839,60738,80177,148702,466545,1673039,2077633,4771287,10665251,26790730,72170979,212182718,248771227,1074691776,1488526850 ⋆ a(n) is the number of integer values of the function F _ 2n(x) = Product _{ i=0..2n - 1 } (x + i) / Sum _{ i=0..2n - 1 } (x + i). • a(n) = tau(d / gcd(d, n)) - n, where d = ((2 * n - 1)!!) ^ 2 and tau(k) is the number of divisors of the positive integer k. •

► [A254626] 1,3,23,61,421,1103,7563,19801,135721,355323,2435423,6376021,43701901,114413063,784198803,2053059121,14071876561,36840651123,252509579303,661078661101,4531100550901,11862575248703,81307300336923,212865275815561,1459000305513721 ⋆ Indices of triangular numbers (A000217) that are also centered pentagonal numbers (A005891). • a(n) = a(n - 1) + 18 * a(n - 2) - 18 * a(n - 3) - a(n - 4) + a(n - 5). • a(n) = (- 2 + (2 - r) ^ n - (- 2 - r) ^ n * (- 2 + r) + 2 * (- 2 + r) ^ n + r * (- 2 + r) ^ n + (2 + r) ^ n) / 4 where r = sqrt(5). - _ Colin Barker _ , Nov 25 2016 •

► [A362540] 3,23,63,127,273,583,1287,2975,6993,16535,39525,95071,229029,552199,1332375,3215807,7762611,18739607,45240309,109217983,263673699,636563527,1536798717,3710157407,8957109801 ⋆ Number of chordless cycles of length >= 4 in the n - flower graph. • a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 4 * a(n - 3) - 2 * a(n - 4) - 4 * a(n - 5) + 7 * a(n - 6) - 8 * a(n - 7) + 6 * a(n - 8) + 4 * a(n - 9) - 6 * a(n - 10) + a(n - 12). •

► [A126335] 3,23,72,162,305,513,798,1172,1647,2235,2948,3798,4797,5957,7290,8808,10523,12447,14592,16970,19593,22473,25622,29052,32775 ⋆ a(n) = n * (4 * n ^ 2 + 5 * n - 3) / 2. • a(1)=3, a(2)=23, a(3)=72, a(4)=162; for n>4, a(n)=4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). •

► [A024196] 3,23,86,230,505,973,1708,2796,4335,6435,9218,12818,17381,23065,30040,38488,48603,60591,74670,91070,110033,131813,156676,184900,216775 ⋆ a(n) = 2nd elementary symmetric function of the first n + 1 odd positive integers. • a(n) = n * (n + 1) * (3 * n ^ 2 + 5 * n + 1) / 6. • a(n) = Sum _{ i=1..n } (n + 1 - i) * ((n + 1) ^ 2 - i). • a(n) = Sum _{ i=1..n } ((2 * i - 1) * Sum _{ j=i..n } (2 * j + 1)) = 1 * (3 + 5 + ...2 * n + 1) + 3 * (5 + 7 + ... + 2 * n + 1) + ... + (2 * n - 1) * (2 * n + 1). - _ J. M. Bergot _ , Apr 21 2017 •

► [A213846] 3,23,90,250,565,1113,1988,3300,5175,7755,11198,15678,21385,28525,37320,48008,60843,76095,94050,115010,139293,167233,199180,235500,276575 ⋆ Antidiagonal sums of the convolution array A213844. • a(n) = n * (1 + n) * (1

- 2 * n + 4 * n ^ 2) / 6. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ●

▶ [A112459] 3,23,98,308,798,1806,3696,6996,12441,21021,34034,53144,80444,118524,170544,240312,332367,452067 ⋆ Absolute value of coefficient of term [x ^ (n - 3)] in characteristic polynomial of maximum matrix A of size n X n, where n >= 3. Maximum matrix A(i,j) is MAX(i,j), where indices i and j run from 1 to n. ● a(n) = n * (n ^ 2 - 4) * (n ^ 2 - 1) * (5 * n + 3) / 6!. ●

▶ [A267816] 1,3,23,111,479,1983,8063,32511,130559,523263,2095103,8384511,33546239,134201343,536838143,2147418111,8589803519,34359476223,137438429183,549754765311,2199021158399,8796088827903,35184363700223,140737471578111,562949919866879 ⋆ Decimal representation of the n - th iteration of the "Rule 221" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3) for n>3. ● a(n) = 2 ^ (n + 1) * (2 ^ n - 1) - 1, for n > 0. - _ Jaroslav Krizek _ , Jan 22 2017 ●

▶ [A122883] 1,3,23,123,739,4263,24935,145155,846379,4932351,28749263,167560155,976617811,5692134423,33176213303,193365096243,1127014462459,6568721481903,38285314822175,223143166664715,1300573686738979,7580298950623431,44181220023293063 ⋆ The (1,3) - entry in the 3 X 3 matrix M ^ n, where M = [1, 1,1 / 4,2,1 / 9,3,1]. ● a(n) = 4 * a(n - 1) + 11 * a(n - 2) - 2 * a(n - 3) (derived from the minimal polynomial of the matrix M). ● a(n) = (- 3 * (- 1) ^ n * 2 ^ (2 + n) - (3 - 2 * sqrt(2)) ^ n * (- 6 + sqrt(2)) + (6 + sqrt(2)) * (3 + 2 * sqrt(2)) ^ n) / 68. - _ Colin Barker _ , Mar 02 2017 ●

▶ [A091055] 0,1,3,23,127,783,4655,28015,167919,1007855,6046447,36280047,217677551,1306070767,7836413679,47018503919,282110979823,1692665966319,10155995623151,60935974088431,365615843831535,2193695064387311 ⋆ Expansion of x * (1 - 2 * x) / ((1 - x) * (1 + 2 * x) * (1 - 6 * x)). ● a(n) = (3 * 6 ^ n - 5 * (- 2) ^ n + 2) / 30. ●

▶ [A031970] 0,3,23,131,664,3166,14545,65187,287060,1247690,5368670,22917198,97195968,410030812,1722027973,7204620067,30044212828,124932768082,518215690018,2144815618522,8859729437488,36533517261412,150410878895818,618371102344846,2538971850705064 ⋆ Tennis ball problem: Balls 1 and 2 are thrown into a room; you throw one on lawn; then balls 3 and 4 are thrown in and you throw any of the 3 balls onto the lawn; then balls 5 and 6 are thrown in and you throw one of the 4 balls onto the lawn; after n turns, consider all possible collections on lawn and add all the values. ● a(n) = (2 * n ^ 2 + 5 * n + 4) * binomial(2 * n + 1, n) / (n + 2) - 2 ^ (2 * n + 1). - _ Colin Mallows _ . ●

▶ [A196881] 1,1,3,23,132,729,3987,18687,82350,342383,1295579,4634280,15873501,51143461,156932559,463212189,1309275981,3576241449,9484669665,24306269493,60475548510,146630200929,345755185335,796397380425,1797676089003 ⋆ Number of partitions of n ^ 3 into powers of 3. ● a(n) = [x ^ (n ^ 3)] 1 / Product _{ j>=0 } (1 - x ^ (3 ^ j)). ●

▶ [A089950] 0,3,23,142,838,4897,28557,166460,970220,5654879,32959075,192099594,1119638514,6525731517,38034750617,221682772216,1292061882712,7530688524091,43892069261871,255821727047174,1491038293021214,8690408031080153,50651409893459749 ⋆ Partial sums of A001652. ● a(n) = (- 6 + (3 - 2 * sqrt(2)) ^ (1 + n) + 3 * (3 + 2 * sqrt(2)) ^ n + 2 * sqrt(2) * (3 + 2 * sqrt(2)) ^ n - 4 * n) / 8. - _ Colin Barker _ , Aug 10 2018 ●

▶ [A198797] 3,23,143,863,5183,31103,186623,1119743,6718463,40310783,241864703,1451188223,8707129343,52242776063,313456656383,1880739938303,11284439629823,67706637778943,406239826673663,2437438960041983,14624633760251903 ⋆ 4 * 6 ^ n - 1. ● a(n) = 6 * a(n - 1) + 5. a(n) = 7 * a(n - 1) - 6 * a(n - 2), n>1. ●

▶ [A079755] 0,3,23,148,1054,8453,76109,761126,8372436,100469287,1306100803,18285411320,274281169898,4388498718473,74604478214169,1342880607855178,25514731549248544,510294630984971051 ⋆ Operation count to create all permutations of n distinct elements using the "streamlined" version of Knuth's Algorithm L (lexicographic permutation generation). ● a(3) = 0, a(n) = n * a(n - 1) + (n - 1) * floor((n - 1) / 2) for n >= 4. ● a(n) = floor(c * n! - (n - 1) / 2) for n > 4, where c = lim n - > infinity a(n) / n! = 0.209747301481910445... - _ Benoit Cloitre _ , Jan 19 2003 ●

▶ [A006184] 0,0,0,0,0,3,23,153,1077,8490,75234,742710,8084990,96192405,1241588865,17277139383,257810397243,4106342523108,69531388662932,1247182219179900,23622547999002444,471129863595453495,9868783491120925755,216617163296681315685,4971829898824570284305 ⋆ Number of cycles in the complement of a path. ● a(n) = (1 / 2) * Sum _{ k=3..n } Sum _{ i=1..k } Sum _{ j=0..k - i } (- 1) ^ (k - i) * (i - 1)! * 2 ^ j * binomial(n + i - k, i) * binomial(i, j) * binomial(k - i - 1, k - i - j). - _ Andrew Howroyd _ , Apr 21 2018 ●

▶ [A164536] 3,23,161,1081,7107,46207,298609,1923329,12365283,79416263,509761121,3271037161,20985865827,134624803567,863573121649,5539360734449,35531425546563,227908958573303,1461866798162081,9376761934434841 ⋆ a(n) = 10 * a(n - 1) - 23 * a(n - 2) for n > 1; a(0) = 3, a(1) = 23. ● a(n) = 10 * a(n - 1) - 23 * a(n - 2) for n > 1; a(0) = 3, a(1) = 23. ● a(n) = ((3 + 4 * sqrt(2)) * (5 + sqrt(2)) ^ n + (3 - 4 * sqrt(2)) * (5 - sqrt(2)) ^ n) / 2. ●

▶ [A037789] 3,23,161,1128,7899,55295,387065,2709456,18966195,132763367,929343569,6505404984,45537834891,318764844239,2231353909673,15619477367712,109336341573987,765354391017911,5357480737125377 ⋆ Base 7 digits are, in order, the first n terms of the periodic sequence with initial period 3,2,0,1. ● a(n) = 8a(n - 1) - 8a(n - 2) + 8a(n - 3) - 7a(n - 4). ●

▶ [A037670] 3,23,161,1130,7912,55384,387691,2713839,18996873,132978114,930846800,6515927600,45611493203,319280452423,2234963166961,15644742168730,109513195181112,766592366267784,5366146563874491 ⋆ Base 7 digits are, in order, the first n terms of the periodic sequence with initial period 3,2,0. ● a(1)=3, a(2)=23, a(3)=161, a(4)=1130, a(n)=7 * a(n - 1) + a(n - 3) - 7 * a(n - 4) [From Harvey P. Dale, Oct 15 2011] ●

▶ [A037796] 3,23,162,1134,7941,55589,389124,2723868,19067079,133469555,934286886,6540008202,45780057417,320460401921,2243222813448,15702559694136,109917917858955,769425425012687,5385977975088810 ⋆ Base 7 digits are, in order, the first n terms of the periodic sequence with initial period 3,2,1,0. ● a(n) = 7 * a(n - 1) + a(n - 4) - 7 * a(n - 5). ●

▶ [A212395] 0,0,3,23,164,1252,10512,97344,990432,11010528,132966720,1734793920,24330205440,365150833920,5840673108480,99204809356800,1783428104908800,33833306484633600,675513065777356800,14160039606855475200,310935875030323200000 ⋆ Number of move operations required to sort all permutations of [n] by insertion sort. ● a(n) = a(n - 1) * n + (n - 1)! * (n - 1) * (n + 4) / 2 for n >0, a(0) = 0. ● a(n) = ((2 * n ^ 3 + 3 * n ^ 2 - 13 * n + 4) * a(n - 1) - (n + 4) * (n - 1) ^ 3 * a(n - 2)) / ((n - 2) * (3 + n)) for n>2. ●

▶ [A144479] 1,3,23,181,1425,11219,88327,695397,5474849,43103395,339352311,2671715093,21034368433,165603232371,1303791490535,10264728691909,80814038044737,636247575665987,5009166567283159,39437084962599285,310487513133511121,2444463020105489683 ⋆ a(0)=1, a(1)=3, a(n) = 8 * a(n - 1) - a(n - 2). ● a(n) = (((4 - sqrt(15)) ^ n * (1 + sqrt(15)) + (- 1 + sqrt(15)) * (4 + sqrt(15)) ^ n)) / (2 * sqrt(15)). - _ Colin Barker _ , Oct 12 2015 ●

▶ [A074579] 3,23,181,1457,11953,99593,840241,7160057,61503553,531715913,4620992401,40333791257,353325795553,3104682336233,27353203130161,241545689168057,2137316275469953,18945908172796553,168210593763149521 ⋆ a(n) = 6 ^ n + 8 ^ n + 9 ^ n. ● a(n) = 23 * a(n - 1) - 174 * a(n - 2) + 432 * a(n - 3). - _ Wesley Ivan Hurt _ , Apr 17 2022 ●

▶ [A370105] 1,3,23,192,1687,15253,140504,1311292,12357015,117318162,1120436273,10752242592,103596191608,1001494496863,9709576926716,94369011385192,919175964169623,8970063281146830,87685232945278010,858446087522807784,8415669293820893937 ⋆ a(n) = Sum _{ k=0..n } (- 1) ^ k * binomial(n + k - 1,k) * binomial(5 * n - k - 1,n - k). ● a(n) = [x ^ n] 1 / ((1 + x) * (1 - x) ^ 4) ^ n. ●

▶ [A372506] 1,3,23,198,1795,16758,159446,1537308,14967843,146833830,1449054178,14369723316,143072565454,1429331585724,14320668653580,143838879376248,1447883909314851,14602334949928710,147518977428892010,1492559101878005700,15121898521185194970 ⋆ Coefficient of x ^ n in the expansion of 1 / ((1 - x) * (1 - 2 * x)) ^ n. ● a(n) = Sum _{ k=0..n } binomial(n + k - 1,k) * binomial(3 * n - 1,n - k). ●

▶ [A135423] 3,23,203,1823,16403,147623,1328603,11957423,107616803,968551223,8716961003,78452649023,706073841203,6354664570823,57191981137403,514727830236623,4632550472129603,41692954249166423,375236588242497803 ⋆ a(n) = (5 * 9 ^ n + 1) / 2. ● a(n) = 9 * a(n - 1) - 4 for n>0, a(0)=3. ● a(n) = 10 * a(n - 1) - 9 * a(n - 2). - _ Vincenzo Librandi _ , Nov 08 2011 ●

▶ [A093135] 1,3,23,223,2223,22223,222223,2222223,22222223,222222223,2222222223,22222222223,222222222223,2222222222223,22222222222223,222222222222223,2222222222222223,22222222222222223,222222222222222223,2222222222222222223,22222222222222222223,222222222222222222223,2222222222222222222223,22222222222222222222223,222222222222222222222223 ⋆ Expansion of (1 - 8 * x) / ((1 - x) * (1 - 10 * x)). ● a(n) = 2 * 10 ^ n / 9 + 7 / 9. ● a(n) = 10 * a(n - 1) - 7 (with a(0)=1). - _ Vincenzo Librandi _ , Aug 02 2010 ●

▶ [A122009] 1,1,3,23,233,2457,26035,276031,2926761,31032737,329043491,3488884359,36993025417,392241126601,4158975906675,44098080031919,467576804036105,4957768399767825,52567764896736163,557381806372388791 ⋆ G.f. x * (1 - 1 * x + 6 * x ^ 2) / (1 - 12 * x + 15 * x ^ 2 - 2 * x ^ 3). ● a(n)= 12 * a(n - 1) - 15 * a(n - 2) + 2 * a(n - 3). ●

▶ [A199750] 3,23,243,2663,29283,322103,3543123,38974343,428717763,4715895383,51874849203,570623341223,6276856753443,69045424287863,759499667166483,8354496338831303,91899459727144323,1010894056998587543,11119834626984462963 ⋆ 2 * 11 ^ n + 1. ● a(n) = 11 * a(n - 1) - 10. ● a(n) = 12 * a(n - 1) - 11 * a(n - 2). ●

▶ [A233218] 3,23,376,7222,147019,3054973,63927526,1340889772,28147567369,591021089923,12410898114676,260625046992322,5473099292927719,114934898294104873,2413631556174561826,50686253523654314872 ⋆ Number of 2 X n 0..5 arrays with no element x(i,j) adjacent to value 5 - x(i,j) horizontally or antidiagonally, top left element zero, and 1 appearing before 2 3 and 4, and 2 appearing before 3 in row major order. ● a(n) = (2205 + 486 * 7 ^ n + 125 * 21 ^ n) / 3528 for n>1. ●

▶ [A264929] 3,23,25165823 ⋆ a(n)= ackb(n,3) where ackb is the Ackermann - Burnell function. ● a(n) = ackb(x,3) = (3 / 2) ie3(sqrt(8), x, 8 / 3) - 1 where ie3(a, b, c) = a ^ (a ^ (... a ^ c))) (with b copies of a). ●

▶ [A106217] 0,3,24,30,48,57,63,72,81,99,105,114,120,129,132,135,141,147,156,159,168,177,180,195,198 ⋆ Positions of 1's in A106216. ● a(n) = 0 (mod 3) for all n. ●

▶ [A267274] 1,3,24,31,384,511,6144,8191,98304,131071,1572864,2097151,25165824,33554431,402653184,536870911,6442450944,8589934591,103079215104,137438953471,1649267441664,2199023255551,26388279066624,35184372088831,422212465065984 ⋆ Decimal representation of the n - th iteration of the "Rule 117" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = ((- 4) ^ n + (- 1) ^ n + 2 ^ (2 * n + 1) - 1) / 2 for n>1. ● a(n) = 17 * a(n - 2) - 16 * a(n - 4) for n>5. ●

▶ [A211034] 0,3,24,52,164,384,592,1131,1944,2628,4128,6144,7744,10955,15000,18100,23988,31104,36432,46179,57624,66052,81056,98304,110848 ⋆ Number of 2 X 2 matrices having all elements in { 0,1,...,n } and determinant = 1 (mod 3). ● a(n) = a(n - 1) + 4 * a(n - 3) - 4 * a(n - 4) - 6 * a(n - 6) + 6 * a(n - 7) + 4 * a(n - 9) - 4 * a(n - 10) - a(n - 12) + a(n - 13) for n > 12. ● a(n) = r ^ 2 * s ^ 2 + 2 * r ^ 2 * s * t + r ^ 2 * t ^ 2 + 2 * r * s ^ 3 + 6 * r * s ^ 2 * t + 6 * r * s * t ^ 2 + 2 * r * t ^ 3 + 2 * s ^ 3 * t + 2 * s * t ^ 3. ●

▶ [A070734] 3,24,60,720,2520,40320,181440,3628800,19958400,479001600,3113510400,87178291200,653837184000,20922789888000,177843714048000,6402373705728000,60822550204416000,2432902008176640000 ⋆ Order of the subgroup of the symmetric group S _ n generated by the cycles (1,2,3) and (1,2,3,...,n). ● a(n) = (1 / 4) * (3 + (- 1) ^ n) * n! - _ Benoit Cloitre _ , May 18 2002 ●

▶ [A152751] 0,3,24,63,120,195,288,399,528,675,840,1023,1224,1443,1680,1935,2208,2499,2808,3135,3480,3843,4224,4623,5040 ⋆ 3 times octagonal numbers: 3 * n * (3 * n - 2). ● a(n) = a(n - 1) + 18 * n - 15 with n>0, a(0)=0. - _ Vincenzo Librandi _ , Nov 26 2010 ●

▶ [A117642] 0,3,24,81,192,375,648,1029,1536,2187,3000,3993,5184,6591,8232,10125,12288,14739,17496,20577,24000,27783,31944,36501,41472 ⋆ a(n) = 3 * n ^ 3. ● a(n + 1) = a(n) + 9 * n ^ 2 + 9 * n + 3 with a(0) = 0. - _ Jean - Bernard François _ , Oct 04 2013 ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Wesley Ivan Hurt _ , May 27 2021 ●

► [A211618] 0,3,24,89,218,439,772,1245,1878,2699,3728,4993,6514,8319,10428,12869,15662,18835,22408,26409,30858,35783,41204,47149,53638 ⋆ Number of ordered triples (w,x,y) with all terms in {- n,... - 1,1,...,n } and 2w + x + y>1. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - 2 * a(n - 3) + 3 * a(n - 4) - a(n - 5) for n>5. ● a(n) = 4 * n ^ 3 - 3 * n ^ 2 + 3 * n - 2 for n>0 and even. ● a(n) = 4 * n ^ 3 - 3 * n ^ 2 + 3 * n - 1 for n odd. ●

► [A004282] 0,3,24,100,300,735,1568,3024,5400,9075,14520,22308,33124,47775,67200,92480,124848,165699,216600,279300,355740,448063,558624,690000,845000 ⋆ a(n) = n * (n + 1) ^ 2 * (n + 2) ^ 2 / 12. ● a(n - 1) = Sum _{ 1 <= x _ 1, x _ 2 <= n } x _ 1 * (det V(x _ 1,x _ 2)) ^ 2 = Sum _{ 1 <= i,j <= n } i * (i - j) ^ 2, where V(x _ 1,x _ 2) is the Vandermonde matrix of order 2. - _ Peter Bala _ , Sep 21 2007 ● a(n) = Sum _{ k=0..n } Sum _{ i=0..n } (n - i + 1) * C(k + 1,k - 1). - _ Wesley Ivan Hurt _ , Sep 21 2017 ●

► [A374488] 1,3,24,100,555,2541,12628,59004,281655,1315765,6171132,28692456,133315273,616780815,2848833120,13124483344,60364983987,277142478921,1270586298520,5817063737100,26600252408961,121501917998263,554429553154044,2527595449990500 ⋆ Expansion of 1 / (1 - 2 * x - 11 * x ^ 2) ^ (3 / 2). ● a(0) = 1, a(1) = 3; a(n) = ((2 * n + 1) * a(n - 1) + 11 * (n + 1) * a(n - 2)) / n. ●

► [A164938] 0,3,24,102,312,777,1680,3276,5904,9999,16104,24882,37128,53781,75936,104856,141984,188955,247608,319998,408408,515361,643632,796260,976560 ⋆ a(n) = (n ^ 5 - n) / 10, which is always an integer. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n > 6. - _ Harvey P. Dale _ , Jan 14 2012 ●

► [A342112] 0,0,3,24,102,312,777,1680,3276,5904,10000,16105,24883,37129,53782,75937,104857,141985,188956,247609,320000,408410,515363,643634,796262 ⋆ Drop the final digit of n ^ 5. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) + a(n - 10) - 5 * a(n - 11) + 10 * a(n - 12) - 10 * a(n - 13) + 5 * a(n - 14) - a(n - 15) for n > 14. ● a(n) = floor(n ^ 5 / 10). ●

► [A253944] 3,24,108,360,990,2376,5148,10296,19305,34320,58344,95472,151164,232560,348840,511632,735471,1038312,1442100,1973400,2664090,3552120,4682340,6107400,7888725 ⋆ a(n) = 3 * binomial(n + 1,7). ● a(n) = 3 * C(n + 1,7) = (n ^ 7 - 14n ^ 6 + 70n ^ 5 - 140n ^ 4 + 49n ^ 3 + 154n ^ 2 - 120n) / 1680. ●

► [A065692] 0,3,24,117,417,1140,2583,7311,39840,251613,1329969,5738172,20838447,67344735,216818808,812592261,3660235905,17401156548,78077421639,318790895727,1197423287952,4316735957805,15912781695633 ⋆ Braided power sequence: this is b(n + 1)=3b(n) + 2d(n) - c(n), A065693 is c(n + 1)=3c(n) + 2b(n) - d(n) and A065694 is d(n + 1)=3d(n) + 2c(n) - b(n), starting with b(0)=0, c(0)=1 and d(0)=2. ● a(n) = 9 * a(n - 1) - 33 * a(n - 2) + 52 * a(n - 3) for n>2. ●

► [A268633] 3,24,120,504,1944,7128,25272,87480,297432,997272,3306744,10865016,35429400,114791256,369882936,1186176312,3788111448,12053081880,38225488248,120875192568,381221761176,1199453833944,3765727153080 ⋆ Number of n X 2 0..2 arrays with some element plus some horizontally or vertically adjacent neighbor totalling two exactly once. ● a(n) = 8 * 3 ^ (n - 2) * (2 * n - 1) for n >1. ●

► [A305543] 0,0,0,3,24,124,588,2487,10240,40488,158220,609078,2333520,8895204,33864364,128793627,490027200,1865625340,7110959340,27138210888,103717720000,396965694444,1521562700988,5840509760582,22450188684288 ⋆ Number of chiral pairs of color loops of length n with exactly 4 different colors. ● a(n) = -(k! / 4) * (S2(floor((n + 1) / 2),k) + S2(ceiling((n + 1) / 2),k)) + (k! / (2n)) * Sum _{ d|n } phi(d) * S2(n / d,k), with k=4 different colors used and where S2(n,k) is the Stirling subset number A008277. ●

► [A183900] 3,24,130,364,771,1386,2281,3534,5236,7492,10422,14162,18865,24702,31863,40558,51018,63496,78268,95634,115919,139474,166677,197934,233680 ⋆ Number of nondecreasing arrangements of n + 3 numbers in 0..5 with each number being the sum mod 6 of three others. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>10. ●

► [A359884] 1,3,24,133,839,5056,30969,188603,1150952,7018621,42811231,261110416,1592592465,9713598835,59245780536,361354997685,2203996629559,13442737199456,81990685695721,500082110459883,3050128402768520,18603511408241453,113467563119685583 ⋆ Number of 3 - dimensional tilings of a 2 X 2 X n box using 2 X 2 X 1 plates and 1 X 2 X 1 dominos. ● a(n) = 3 * a(n - 1) + c(n - 1) + 7 * a(n - 2) where c(n) = 8 * a(n - 1) + 2 * c(n - 1) with a(n),c(n) <= 0 for n <= 0 except for a(0)=1. ● a(n) = 5 * a(n - 1) + 9 * a(n - 2) - 14 * a(n - 3) for n >= 3. ●

► [A069515] 0,3,24,135,648,2835,11664,45927,174960,649539,2361960,8444007,29760696,103630995,357128352,1219657095,4132485216,13904090883,46490458680,154580775111,511395045480,1684116865683,5523066491184 ⋆ Number of transpositions (interchanges of adjacent digits, sometimes called inversions) needed to change all n - digit base 3 numbers into nondecreasing order. ● a(n) = 3a(n - 1) + (2n - 1)3 ^ (n - 2). ● a(n) = (n - 1)(n + 1)3 ^ (n - 2). - _ Ralf Stephan _ , Sep 02 2003 ●

► [A206949] 0,0,0,3,24,135,657,2961,12744,53244,218025,880308,3518721,13961727,55097091,216546048,848476296,3316800555,12942852624,50437433079,196347606849,763752142233,2969021213928,11536374392820,44809232564673 ⋆ Number of nonisomorphic graded posets with 0 and non - uniform Hasse graph of rank n, with no 3 - element antichain. ● a(n) = 9 * a(n - 1) - 27 * a(n - 2) + 30 * a(n - 3) - 9 * a(n - 4), a(1)=0, a(2)=0, a(3)=3, a(4)=24. ●

► [A056344] 0,0,0,3,24,136,612,2619,10480,41388,159780,614058,2341920,8919816,33905188,128907279,490213680,1866127840,7111777860,27140369148,103721218000,396974781456,1521577377012,5840547488954 ⋆ Number of bracelets of length n using exactly four different colored beads. ● a(n) = (k! / 4) * (S2(floor((n + 1) / 2),k) + S2(ceiling((n + 1) / 2),k)) + (k! / 2n) * Sum _{ d|n } phi(d) * S2(n / d,k), where k=4 is the number of colors and S2 is the Stirling subset number A008277. ●

► [A212698] 3,24,144,768,3840,18432,86016,393216,1769472,7864320,34603008,150994944,654311424,2818572288,12079595520,51539607552,219043332096,927712935936,3917010173952,16492674416640,69269232549888,290271069732864,1213860837064704 ⋆ Main transitions in systems of n particles with spin 3 / 2. ● a(n) = n * (b - 1) * b ^ (n - 1). For this sequence, set b=4. ● a(n) = 3 * n * 4 ^ (n - 1). ● a(n) = Sum _{ i>=0 } binomial(n,i) * i * 3 ^ i. - _ Geoffrey Critzer _ , Aug 08 2013 ●

► [A226511] 0,3,24,147,816,4323,22344,113907,576096,2900163,14559864,72976467,365413776,1828663203,9148098984,45754843827,228817265856,1144215469443,5721464767704,28608486099987,143045917284336,715240046774883,3576231614934024,17881252217848947,89406543518781216 ⋆ 3 * (5 ^ n - 3 ^ n) / 2. ● a(n) = 8 * a(n - 1) - 15 * a(n - 2) for n>1, a(0)=0, a(1)=3. - _ Vincenzo Librandi _ , Jun 12 2013 ●

► [A367119] 3,24,153,588,1635,3708,7329,13128,21843,34320,51513,74484,104403,142548,190305,249168,320739,406728,508953,629340,769923,932844,1120353,1334808,1578675 ⋆ Number of edges in a triangle when placing n points in general position on each of the three sides and connecting these and the three corner points to all other points by straight lines. ● a(n) = A367117 (n) + A367118 (n) - 1 by Euler's formula. ●

► [A240916] 0,0,3,24,158,978,5930,35706,214490,1287450,7725722,46356378,278142362,1668862362,10013190554,60079176090,360475122074,2162850863514,12977105443226,77862633183642,467175800150426,2803054802999706,16818328822192538 ⋆ a(n) = 6 * a(n - 1) + 2 * 2 ^ (n - 1) - 2 for n > 2, a(0) = a(1) = 0, a(2) = 3. ● a(n) = (72 - 45 * 2 ^ (1 + n) + 23 * 6 ^ n) / 180 for n>1. ● a(n) = 9 * a(n - 1) - 20 * a(n - 2) + 12 * a(n - 3) for n>4. ●

► [A067370] 0,1,3,24,160,1290,11046,106848,1117152,12849840,159089040,2132602560,30554297280,468754715520,7634862748800,132058767052800,2410986506342400,46443330717235200,939668036761036800,19955747250238464000,443271664862659584000,10290986066890045440000 ⋆ The weight of the periphery of the alternating group, denoted v(P _ N). ● a(n) = (1 / 2) * ((- 1) ^ n * (n - 2)! + n * n! - abs(Stirling1(n + 1, 2))), n > 1. ●

► [A289795] 3,24,162,1083,7260,48681,326406,2188536,14674041,98388840,659693103,4423214952,29657473194,198852130383,1333295304660,8939689838877,59940250397646,401896898269128,2694702070258437,18067865859946320,121144292846335179,812267469938047224 ⋆ p - INVERT of (3n), where p(S) = 1 - S - S ^ 2. ● a(n) = 7 * a(n - 1) - 3 * a(n - 2) + 7 * a(n - 3) - a(n - 4). ●

► [A058038] 0,3,24,168,1155,7920,54288,372099,2550408,17480760,119814915,821223648,5628750624,38580030723,264431464440,1812440220360,12422650078083,85146110326224,583600122205488,4000054745112195,27416783093579880,187917426909946968 ⋆ a(n) = Fibonacci(2 * n) * Fibonacci(2 * n + 2). ● a(n) = - 3 / 5 + (1 / 5 * sqrt(5) + 3 / 5) * (2 * 1 / (7 + 3 * sqrt(5))) ^ n / (7 + 3 * sqrt(5)) + (1 / 5 * sqrt(5) - 3 / 5) * (- 2 * 1 / (- 7 + 3 * sqrt(5))) ^ n / (- 7 + 3 * sqrt(5)). Recurrence: a(n) = 8 * a(n - 1) - 8 * a(n - 2) + a(n - 3). G.f.: 3 * x / (1 - 7 * x + x ^ 2) / (1 - x). - _ Vladeta Jovovic _ , Jun 09 2002 ● a(n) is the next integer from ((3 + sqrt(5)) * ((7 + 3 * sqrt(5)) / 2) ^ (n - 1) - 6) / 10. - _ Paul Weisenhorn _ , May 17 2009 ● a(n) = 7 * a(n - 1) - a(n - 2) + 3, n>1. - _ Gary Detlefs _ , Dec 07 2010 ● a(n) = sum _{ k=0..n } Fibonacci(4k). - _ Gary Detlefs _ , Dec 07 2010 ● a(n) = (1 / 5) * (Fibonacci(4n + 4) - Fibonacci(4n) - 3). - _ Gary Detlefs _ , Dec 08 2010 ● a(0)=0, a(1)=3, a(2)=24, a(n) = 8 * a(n - 1) - 8 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Jul 25 2013 ●

► [A120741] 0,3,24,171,1200,8403,58824,411771,2882400,20176803,141237624,988663371,6920643600,48444505203,339111536424,2373780754971,16616465284800,116315256993603,814206798955224,5699447592686571,39896133148806000 ⋆ a(n) = (7 ^ n - 1) / 2. ● a(n) = 8 * a(n - 1) - 7 * a(n - 2), n >= 2. ● a(n) = right term in M ^ n * [1,0], where M is the 2 X 2 matrix [4,3; 3,4]. ●

► [A292293] 0,0,0,0,3,24,177,1347,10467,82029,644808,5073915,39939900,3144279602,475438408,19488960504,153435934587,1207997701872,9510543548457,74876345104299,589500202673403,4641125238026805,36539501601385200,287674887310843395,2264859596198883588 ⋆ Number of vertices of type D at level n of the hyperbolic Pascal pyramid. ● a(n) = 12 * a(n - 1) - 37 * a(n - 2) + 37 * a(n - 3) - 12 * a(n - 4) + a(n - 5), n >= 6. ●

► [A073985] 0,0,3,24,180,1296,9072,54432,297432,1658880,9722592,58576608,356638464,2173796352,13162730688,79012495872,472093588224,2821109907456,16894457846784,101366747080704,608764662139392,3656096522698752,21947538146863104,131685972252346368 ⋆ Number of strings of length n over Z _ 6 with trace 2 and subtrace 2. ● a(n; t, s) = a(n - 1; t, s) + a(n - 1; t + 5, s + 5t + 1) + a(n - 1; t + 4, s + 4t + 4) + a(n - 1; t + 3, s + 3t + 3) + a(n - 1; t + 2, s + 2t + 2) + a(n - 1; t + 1, s + t + 1) where t is the trace and s is the subtrace. ●

► [A197209] 3,24,180,1320,9660,70896,522648,3871440,28809990,215318400,1615579680,12165491520,91905439080,696359055840,5290416835440,40291036122528,307537305284574,2352216447006480,18024996856976760 ⋆ Row sums of A197208. ● a(n) = (1 / (n + 2)) * ((7 * n ^ 2 - 7 * n - 2) * a(n - 1) / (n - 2) + 8 * n * a(n - 2)) for n > 3. - _ Seiichi Manyama _ , Jan 09 2021 ●

► [A317527] 0,0,3,24,180,1440,12600,120960,1270080,14515200,179625600,2395008000,34248614400,523069747200,8499883392000,146459529216000,2667655710720000,51218989645824000,1033983353475072000,21896118073589760000,485363950631239680000,11240007277776076800000 ⋆ Number of edges in the n - alternating group graph. ● a(n) = n! * (n - 2) / 2 for n > 1. ●

► [A144087] 0,0,1,3,24,180,1620,16380,184800,2298240,31222800,459874800,7296791040,124047443520,2248897210560,43301275617600,882304501478400,18964350332928000,428768570841811200,10170992126597702400,252555415474602240000,6550785133563775104000,177151172210521513804800 ⋆ a(n) is the number of partial bijections (or subpermutations) of an n - element set with exactly 2 fixed points. ● a(n) = (n! / 2) * Sum _{ m=0..n - 2 } (- 1 ^ m / m!) * Sum _{ j=0..n - m } C(n - m,j) / j!; ●

► [A136325] 0,3,24,189,1488,11715,92232,726141,5716896,45009027,354355320,2789833533,21964312944,172924670019,1361433047208,10718539707645,84386884613952,664376537203971,5230625413017816,41180626766938557 ⋆ a(n) = 8 * a(n - 1) - a(n - 2) with a(0)=0 and a(1)=3. ● a(n) = (sqrt(3 / 5) * (- (4 - sqrt(15)) ^ n + (4 + sqrt(15)) ^ n)) / 2. ●

► [A103333] 1,3,24,192,1536,12288,98304,786432,6291456,50331648,402653184,3221225472,25769803776,206158430208,1649267441664,13194139533312,105553116266496,844424930131968,6755399441055744,54043195528445952,432345564227567616 ⋆ Number of closed walks on the graph of the (7,4) Hamming code. ● a(n

) = (3 * 8 ^ n + 5 * 0 ^ n) / 8. ● a(n) = 8 * a(n - 1) for n > 0. - _ Harvey P. Dale _ , Mar 02 2012 ●

▶ [A163473] 3,24,198,1668,14244,122688,1062408,9230064,80350128,700318848,6108357984,53302344768,465248359488,4061569173504,35460543892608,309615432515328,2703431036154624,23605724610459648,206122316883322368 ★ a(n) = 14 * a(n - 1) - 46 * a(n - 2) for n > 1; a(0) = 3, a(1) = 24. ● a(n) = ((3 + sqrt(3)) * (7 + sqrt(3)) ^ n + (3 - sqrt(3)) * (7 - sqrt(3)) ^ n) / 2. ●

▶ [A370375] 1,3,24,201,1710,14649,125934,1084716,9353574,80711625,696756420,6016526145,51962422464,448833782556,3877191573720,33494487646632,289365173239302,2499947731531305,21598513018825920,186604716462810075,1612224571249844910 ★ Number of compositions of n where there are A005809(k) sorts of part k. ● a(0) = 1; a(n) = Sum _{ k=1..n } binomial(3 * k,k) * a(n - k). ●

▶ [A361841] 1,3,24,201,1809,16893,161676,1574289,15527052,154662930,1552725504,15688410264,159355067283,1625899880673,16652520666414,171119405299005,1763475423260049,18219685282559559,188664151412242368,1957539823296458841,20347733657193596127 ★ Expansion of 1 / (1 - 9 * x * (1 + x) ^ 2) ^ (1 / 3). ● a(n) = Sum _{ k=0..n } (- 9) ^ k * binomial(- 1 / 3,k) * binomial(2 * k,n - k). ● a(n) = (- 9) ^ n * binomial(- 1 / 3, n) * hypergeom([1 / 3 - n * 2 / 3, 2 / 3 - n * 2 / 3, - n * 2 / 3], [1 / 2 - n, 2 / 3 - n], - 3 / 4). - _ Peter Luschny _ , Mar 27 2023 ●

▶ [A361880] 1,3,24,207,1893,17952,174402,1723494,17250000,174354822,1776119970,18208500000,187659221409,1942674634371,20187543581880,210472842939975,2200677521078253,23068297001178240,242353695578011416,2551260130246575048,26905595698893121728 ★ Expansion of 1 / (1 - 9 * x / (1 - x) ^ 2) ^ (1 / 3). ● a(n) = Sum _{ k=0..n } (- 9) ^ k * binomial(- 1 / 3,k) * binomial(n + k - 1, n - k). ● a(0) = 1; a(n) = (3 / n) * Sum _{ k=0..n - 1 } (n + 2 * k) * (n - k) * a(k). ●

▶ [A073978] 0,0,3,24,210,1620,9072,46656,262440,1594080,9843120,60466176,367960320,2210794560,13162730688,78328332288,468205557120,2810089946880,16894457846784,101559956668416,609954817881600,3659790885120000,21947909832446976,131621703842267136 ★ Number of strings of length n over Z _ 6 with trace 1 and subtrace 1. ● a(n; t, s) = a(n - 1; t, s) + a(n - 1; t + 5, s + 5t + 1) + a(n - 1; t + 4, s + 4t + 4) + a(n - 1; t + 3, s + 3t + 3) + a(n - 1; t + 2, s + 2t + 2) + a(n - 1; t + 1, s + t + 1) where t is the trace and s is the subtrace. ●

▶ [A000279] 3,24,216,1824,15150,124416,1014888,8241792,66724398,538990800,4346692680,35009591040,281699380560,2264868936960,18198009147600,146142982814208,1173123636533454,9413509300965936,75513633110271264,605598295606296000,4855626127979443908,38924245740546950784 ★ Card matching: coefficients B[n,1] of t in the reduced hit polynomial A[n,n,n](t). ● a(n) = 3n * sum(C(n, k + 1) * C(n, k) * C(n - 1, k), k=0..n - 1). ●

▶ [A225107] 3,24,228,2256,22512,225024,2250048,22500096,225000192,2250000384,22500000768,225000001536,2250000003072,22500000006144,225000000012288,225000000024576,225000000000049152,225000000000098304,2250000000000196608,22500000000000393216 ★ Number of (4n - 3) - digit 4th powers in carryless arithmetic mod 10. ● a(k) = (1 / 4) *{ 9 * 10 ^ (k - 1) - 2 ^ (k - 1) } + 2 ^ (k - 1). ● a(n) = 12 * a(n - 1) - 20 * a(n - 2). G.f.: - 3 * x * (4 * x - 1) / ((2 * x - 1) * (10 * x - 1)). - _ Colin Barker _ , May 11 2013 ●

▶ [A041897] 1,1,3,25,53,78,3329,3407,10143,84551,179245,263796,11258677,11522473,34303623,285951457,606206537,892157994,38076842285,38969000279,116014842843,967087743023,2050190328889,3017278071912,128775869349193 ★ Denominators of continued fraction convergents to sqrt(470). ● a(n) = 3382 * a(n - 6) - a(n - 12) for n>11. - _ Vincenzo Librandi _ , Dec 26 2013 ●

▶ [A006222] 3,25,69,135,223,333,465,619,795,993,1213,1455,1719,2005,2313,2643,2995,3369,3765,4183,4623,5085,5569,6075,6603 ★ 11 * n ^ 2 + 11 * n + 3. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Jul 07 2012 ●

▶ [A083222] 1,3,25,75,625,1875,15625,46875,390625,1171875,9765625,29296875,244140625,732421875,6103515625,18310546875,152587890625,457763671875,3814697265625,11444091796875,95367431640625,286102294921875 ★ a(n) = (4 * 5 ^ n + (- 5) ^ n) / 5. ● a(n) = (4 * 5 ^ n + (- 5) ^ n) / 5. ●

▶ [A041565] 1,3,25,78,2677,8109,67549,210756,7233253,21910515,182517373,569462634,19544246929,59202203421,493161874297,1538687826312,52808547968905,159964331733027,1332523201833121,4157533937232390,142688677067734381,432223565140435533 ★ Denominators of continued fraction convergents to sqrt(300). ● a(n) = 2702 * a(n - 4) - a(n - 8) for n>7. - _ Vincenzo Librandi _ , Dec 20 2013 ●

▶ [A114378] 3,25,84,201,392,678,1077,1608,2290,3141,4181,5428,6902,8620,10602,12867,15434,18321,21548,25132,29094,33451,38223,43429,49087 ★ Area of annuli of consecutive integer thickness. ● a(n) = floor(Pi * n ^ 3). - _ Robert Israel _ , Nov 24 2014 ●

▶ [A180324] 0,3,25,98,270,605,1183,2100,3468,5415,8085,11638,16250,22113,29435,38440,49368,62475,78033,96330,117670,142373,170775,203228,240100 ★ Vassiliev invariant of fourth order for the torus knots ● a(n) = (n * (n + 1) * (2 * n + 1) ^ 2) / 6. ● a(n) = C(2 * n + 2,4) + C(2 * n + 2,3) / 2. ●

▶ [A360788] 1,1,1,1,3,25,109,324,1135,8803,64189,337854,1707319,13421410,121248893,894378619,6082868725,53046554917,543432115477,4989423130739,42565774604131,421544374075072,4781440892689533,51342685464272591,522295380717090265 ★ Expansion of Sum _{ k>=0 } x ^ k / (1 - (k * x) ^ 3) ^ (k + 1). ● a(n) = Sum _{ k=0..floor(n / 3) } (n - 3 * k) ^ (3 * k) * binomial(n - 2 * k,k). ●

▶ [A095664] 3,25,117,405,1155,2871,6435,13299,25740,47190,82654,139230,226746,358530,552330,831402,1225785,1773783,2523675,3535675,4884165,6660225,8974485,11960325,15777450 ★ Ninth column (m=8) of (1,3) - Pascal triangle A095660. ● a(n)= binomial(n + 7, 7) * (n + 24) / 8 = 3 * b(n) - 2 * b(n - 1), with b(n):=binomial(n + 8, 8); cf. A000581. ●

▶ [A215773] 0,3,25,120,420,1190,2898,6300,12540,23265,40755,68068,109200,169260,254660,373320,534888,750975,1035405,1404480,1877260,2475858,3225750,4156100,5300100 ★ Number of undirected labeled graphs on n + 3 nodes with exactly n cycle graphs as connected components. ● a(n) = n * (n + 1) * (n + 2) * (n + 3) * (n ^ 2 + n + 4) / 48. ●

▶ [A099868] 3,25,122,585,2803,13430,64347,308305,1477178,7077585,33910747,162476150,778470003,3729873865,17870899322,85624622745,410252214403,1965636449270,9417930031947,45124013710465,216202138520378,1035886678891425,4963231255936747 ★ a(n) = 5 * a(n - 1) - a(n - 2), a(0) = 3, a(1) = 25. ● a(n) = (2 ^ (- 1 - n) * ((5 - sqrt(21)) ^ n * (- 35 + 3 * sqrt(21)) + (5 + sqrt(21)) ^ n * (35 + 3 * sqrt(21)))) / sqrt(21). - _ Colin Barker _ , Mar 28 2017 ●

▶ [A112495] 3,25,130,546,2037,7071,23436,75328,237127,735813,2260518,6896046,20933673,63325051,191088976,575625900,1731858075,5206059585,15640198410,46966732090,140996664733,423191320215,1269993390420 ★ Third column of triangle A112493 used for e.g.f.s of Stirling2 diagonals. ● a(n) = 3 * a(n - 1) + (n + 3) * (2 ^ (n + 2) - (n + 3)), n>=1, a(0)=3. ● a(n) = 3 ^ (n + 4) / 2 - (n + 6) * 2 ^ (n + 3) + n ^ 2 / 2 + 9 * n / 2 + 21 / 2. - _ Vaclav Kotesovec _ , Jul 23 2021 ●

▶ [A303602] 0,3,25,154,837,4246,20618,97140,447661,2028478,9070110,40122028,175913250,765561564,3310623412,14238676712,60949133949,259809601870,1103420316566,4670886541308,19714134528598,82985455688276,348481959315660,1460179866076504,6106070639175122 ★ a(n) = Sum _{ k = 0..n } k * binomial(2 * n + 1, k). ● a(n) = (2 * n + 1) * (4 ^ n - binomial(2 * n, n)) / 2. ●

▶ [A356200] 3,25,162,969,5613,32062,181989,1030017,5821902,32886505,185714829,1048619646,5920559661,33426829321,188721717102,1065481514817,6015458406741,33961820796094,191740095366885,1082517159435249,6111623364952302,34504707439240921 ★ Number of edge covers in the n - gear graph. ● a(n) = (3 - sqrt(7)) ^ n + (sqrt(7) + 3) ^ n - Lucas(2 * n). ● a(n) = 9 * a(n - 1) - 21 * a(n - 2) + 12 * a(n - 3) - 2 * a(n - 4). ●

▶ [A222052] 1,3,25,210,1881,17303,162214,1540710,14776281,142774455,1387743525,13553773500,132906406950,1307654814222,12902933709922,127632756058610,1265251299930585,12566655467547195,125025126985317013,1245750306517239978,12429515281592007781 ★ a(n) = A222051(n) / binomial(2 * n,n), the central terms in rows of triangle A220178 divided by the central binomial coefficients. ● a(n) = [x ^ n] 1 / sqrt(1 - 2 * x - 3 * x ^ 2)) ^ (2 * n + 1). ●

▶ [A155640] 1,3,25,219,1777,13683,102025,745419,5374177,38400483,272709625,1928498619,13597146577,95668307283,672119557225,4717043931819,33080342678977,231867574534083,1624598900644825,11379821699045019,79696898865971377,558069026925080883 ★ a(n) = 7 ^ n - 5 ^ n + 1 ^ n. ● a(n) = 12 * a(n - 1) - 35 * a(n - 2) + 24 with a(0)=1, a(1)=3. - _ Vincenzo Librandi _ , Jul 21 2010 ●

▶ [A370104] 1,3,25,219,2025,19253,186469,1829565,18124521,180886260,1815946275,18318160358,185518492965,1885157971596,19211066004995,196258973605094,2009302383218409,20610411795602760,211768072490024440,2179156980022097775,22454554231950998275 ★ a(n) = Sum _{ k=0..n } (- 1) ^ k * binomial(2 * n + k - 1,k) * binomial(6 * n - k - 1,n - k). ● a(n) = [x ^ n] 1 / ((1 + x) ^ 2 * (1 - x) ^ 5) ^ n. ●

▶ [A199679] 3,25,223,2005,18043,162385,1461463,13153165,118378483,1065406345,9588657103,86297913925,776681225323,6990131027905,62911179251143,566200613260285,5095805519342563,45862249674083065,412760247066747583 ★ (11 * 9 ^ n + 1) / 4. ● a(n) = 9 * a(n - 1) - 2. ● a(n) = 10 * a(n - 1) - 9 * a(n - 2). ●

▶ [A372458] 1,3,25,225,2129,20723,205471,2063890,20931585,213864939,2198044805,22699471171,235354244255,2448409104820,25544033624414,267158874185420,2800191197529633,29405702263792875,309320021637262225,3258658594126096867,34376186441559365709 ★ Coefficient of x ^ n in the expansion of 1 / ((1 - x) * (1 - x - x ^ 2) ^ 2) ^ n. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(2 * n + k - 1,k) * binomial(4 * n - k - 1,n - 2 * k). ●

▶ [A370280] 1,3,25,234,2305,23373,241486,2527920,26720529,284555700,3048323135,32812937820,354619072990,3845377105794,41817926091120,455893204069944,4980851709418353,54521955043418925,597823622561048020,6564929893462467450,72189820135528858455 ★ Coefficient of x ^ n in the expansion of 1 / ((1 - x) ^ 2 - x) ^ n. ● a(n) = Sum _{ k=0..n } binomial(n + k - 1,k) * binomial(3 * n + k - 1,n - k). ●

▶ [A171640] 1,3,25,243,2401,23763,235225,2328483,23049601,228167523,2258625625,22358088723,221322261601,2190864527283,21687323011225,214682365584963,2125136332838401,21036680962799043,208241673295152025,2061380051988721203,20405558846592060001 ★ a(n) = 10 * a(n - 1) - a(n - 2) - 4 with a(1)=1 and a(2)=3. ● a(n + 1) = [(sqrt(3) - sqrt(2)) ^ n + (sqrt(3) + sqrt(2)) ^ n] ^ 2 / 4. ● a(n) = 11 * a(n - 1) - 11 * a(n - 2) + a(n - 3) for n>3. ●

▶ [A191590] 0,0,3,26,50,133,196,375,806,1001,1768,2451,2850,3773,5500,7686,8526,11408,13651,14875,18981,22100,27391,35673,40376 ★ a(n) is the genus of the modular curve associated to the principal congruence subgroup of level p(n), where p(n) is the n - th prime number. ● a(n) = (prime(n) + 2) * (prime(n) - 3) * (prime(n) - 5) / 24. ●

▶ [A269342] 3,26,85,196,375,638,1001,1480,2091,2850,3773,4876,6175,7686,9425,11408,13651,16170,18981,22100,25543,29326,33465,37976,42875 ★ a(n) = (n + 1) * (2 * n + 1) * (4 * n + 9) / 3. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ● a(n) = Sum _{ k=0..n } (8 * k ^ 2 + 12 * k + 3). ●

▶ [A292001] 3,26,93,260,615,1278,2401,4168,6795,10530,15653,22476,31343,42630,56745,74128,95251,120618,150765,186260,227703,275726,330993,394200,466075 ★ Number of (undirected) paths in the n - helm graph. ● a(n) = n * (- 21 + 38 * n - 12 * n ^ 2 + 4 * n ^ 3) / 3. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ●

▶ [A211622] 0,3,26,94,229,457,800,1284,1931,2767,3814,5098,6641,8469,10604,13072,15895,19099,22706,26742,31229,36193,41656,47644,54179 ★ Number of ordered triples (w,x,y) with all terms in {- n,... - 1,1,...,n } and w + 2x + 3y>1. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - 2 * a(n - 3) + 3 * a(n - 4) - a(n - 5) for n>5. ● a(n) = (8 * n ^ 3 - 4 * n ^ 2 + 3 * n - 2) / 2 for n>0 and even. ● a(n) = (16 * n ^ 3 - 8 * n ^ 2 + 6 * n - 2) / 4 for n odd. ●

▶ [A062124] 3,26,94,234,473,838,1356,2054,2959,4098,5498,7186,9189,11534,14248,17358,20891,24874,29334,34298,39793,45846,52484,59734,67623 ★ Fourth column of A046741. ● a(n) = (6 + 19 * n + 18 * n ^ 2 + 9 * n ^ 3) / 2. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ●

▶ [A169832] 0,3,26,99,282,695,1578,3411,7154,14727,29970,60563,121866,244599,490202,981555,1964418,3930311,7862274,15726387,31454810,62911863,125826186,251655059,503313042 ★ a(n) = 15 * 2 ^ (n + 1) - (5 * n ^ 2 + 22 * n + 30).

● a(n) - 5 * a(n - 1) + 9 * a(n - 2) - 7 * a(n - 3) + 2 * a(n - 4) = 0, with n>3. (End) ●

▶ [A100606] 0,3,26,111,324,755,1518,2751,4616,7299,11010,15983,22476,30771,41174,54015,69648,88451,110826,137199,168020,203763,244926,292031,345624 ⋆ a(n) = n ^ 4 + n ^ 3 + n. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5); a(0)=0, a(1)=3, a(2)=26, a(3)=111, a(4)=324. - _ Harvey P. Dale _ , Apr 25 2015 ●

▶ [A307918] 3,26,111,396,1235,3414,8463,19064,39555,76530,139535,241860,401427,641774,993135,1493616,2190467,3141450,4416303,6098300,8285907,11094534,14658383,19132392,24694275 ⋆ Number of (undirected) paths in the n - dipyramidal graph. ● a(n) = n * (- 135 + 293 * n - 180 * n ^ 2 + 80 * n ^ 3 - 15 * n ^ 4 + 2 * n ^ 5) / 15. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). ●

▶ [A038697] 3,26,163,894,4558,22196,104739,483062,2189530,9789900,43295118,189749676,825364668,3567219688,15332925731,65591312550,279415474594,1185903736412,5016725589402,21159849864964,89012979703940 ⋆ Convolution of A000917 with A000984 (central binomial coefficients). ● a(n) = n * 4 ^ (n + 1) + binomial(2 * n + 3, n + 1). ●

▶ [A037671] 3,26,208,1667,13338,106704,853635,6829082,54632656,437061251,3496490010,27971920080,223775360643,1790202885146,14321623081168,114572984649347,916583877194778,7332671017558224,58661368140465795,46929094512372 6362 ⋆ Base 8 digits are, in order, the first n terms of the periodic sequence with initial period 3,2,0. ● a(n) = 8 * a(n - 1) + a(n - 3) - 8 * a(n - 4). - _ Colin Barker _ , Dec 07 2014 ●

▶ [A152759] 0,3,27,72,138,225,333,462,612,783,975,1188,1422,1677,1953,2250,2568,2907,3267,3648,4050,4473,4917,5382,5868 ⋆ 3 times 9 - gonal (or nonagonal) numbers: 3n(7n - 5) / 2. ● a(n) = a(n - 1) + 21 * n - 18 with n>0, a(0)=0. - _ Vincenzo Librandi _ , Nov 26 2010 ●

▶ [A297662] 0,3,27,108,300,675,1323,2352,3888,6075,9075,13068,18252,24843,33075,43200,55488,70227,87723,108300,132300,160083,192027,228528,270000 ⋆ Number of chordless cycles in the complete tripartite graph K _ n,n,n. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ●

▶ [A127210] 3,27,108,567,2673,13122,63423,308367,1495908,7263027,35252253,171124002,830642283,4032042867,19571909148,95004113247,461159522073,2238515585442,10865982454983,52744587633927,256027604996628,1242784103695227,6032600756055333,29282859201423042 ⋆ a(n) = 3 ^ n * Lucas(n), where Lucas = A000204. ● a(n) = Trace of matrix [({ 3,3 } , { 3,0 }) ^ n] = 3 ^ n * Trace of matrix [({ 1,1 } , { 1,0 }) ^ n]. ● a(n) = 3 * a(n - 1) + 9 * a(n - 2). ●

▶ [A267924] 1,3,27,123,507,2043,8187,32763,131067,524283,2097147,8388603,33554427,134217723,536870907,2147483643,8589934587,34359738363,137438953467,549755813883,2199023255547,8796093022203,35184372088827,140737488355323,562949953421307 ⋆ Decimal representation of the n - th iteration of the "Rule 245" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = 5 * a(n - 1) - 4 * a(n - 2) for n>2. ●

▶ [A063263] 3,27,125,420,1161,2807,6147,12465,23760,43032,74646,124787,202020,317970,488138,732870,1078497,1558665,2215875,3103254,4286579,5846577,7881525,10510175,13875030 ⋆ Ninth column (k=8) of sextinomial array A063260. ● a(n) = 3 * C(n + 2,2) + 18 * C(n + 2,3) + 35 * C(n + 2,4) + 35 * C(n + 2,5) + 21 * C(n + 2,6) + 7 * C(n + 2,7) + C(n + 2,8) (see comment in A213888). - _ Vladimir Shevelev _ and _ Peter J. C. Moses _ , Jun 22 2012 ●

▶ [A367967] 0,0,3,27,126,462,1521,4761,14556,44028,132543,398199,1195290,3586698,10761069,32284341,96854328,290564472,871695099,2615087187,7845263670,23535793350,70607382633,211822150737,635466455316 ⋆ a(n) = 3 / 4 * (3 ^ (n + 1) - 2 * n - 4 * n ^ 2 - 3). ● a(n) = 3 / 4 * (3 ^ (n + 1) - 2 * n - 4 * n ^ 2 - 3). ● a(n) = 6 * a(n - 1) - 12 * a(n - 2) + 10 * a(n - 3) - 3 * a(n - 4). ●

▶ [A306442] 3,27,131,679,7809,34211,274511,4793487,20327615,222222219,5187484917,31896823991,298693399003,8722140365427,70433726283479,600479950316063,21047228319925113,252325338960485915,3284805263774079161,68985263157894736839 ⋆ Greatest integer N such that the number of base - n - zero containing numbers [<= N] <= the number of base - n - zerofree numbers [<= N]. ● a(n) = max(k | numOfZeroNum _ n(k) <= numOfZerofreeNum _ n(k)). ● a(n) = max(k > 1 | numOfZeroNum _ n(k) = (n + 1) / 2). ● a(n) = max(k > 1 | numOfZerofreeNum _ n(k) = (n + 1) / 2). ● a(n) < (2 * (n - 1) / (n - 2)) ^ (1 / (1 - d)) - 1, ● a(n) < (2 * (n - 1) / (n - 2)) ^ ((n - 1 / 2) * log(n)), n > 2, ● a(n) < n * 2 ^ (n * log(n)), n > 1. ●

▶ [A080424] 0,1,3,27,135,891,5103,31347,185895,1121931,6711903,40330467,241805655,1451365371,8706597903,52244370387,313451873415,1880754287211,11284396583103,67706766919107,406239439253175,2437440122303451 ⋆ a(n) = 3 * a(n - 1) + 18 * a(n - 2), a(0)=0, a(1)=1. ● a(n) = (6 ^ n - (- 3) ^ n) / 9. ● a(n + 1) = 6 * a(n) + (- 3) ^ n. - _ Paul Curtz _ , Jun 07 2011 ●

▶ [A285008] 1,3,27,135,2835,15309,168399,938223,42220035,239246865,2727414261,15620645313,359274842199,2072739474225,23984556773175,139110429284415,1293726992345059 5,753405719071534 65,8789733389167904 25,5135054769461249325,1201602816053932342 05 ⋆ Numerator of (3 / 4) ^ n * binomial(2 * n,n). ● a(n) = numerator of (- 3) ^ n * sqrt(Pi) / (Gamma(1 / 2 - n) * Gamma(1 + n)). ●

▶ [A127509] 3,27,147,675,2883,11907,48387,195075,783363,3139587,12570627,50307075,201277443,805208067,3221028867,12884508675,51538821123,206156857347,824630575107,3298528591875,13194126950403,52776532967427 ⋆ Number of n - tuples where each entry is chosen from the subsets of { 1,2,3 } such that the intersection of all n entries contains exactly one element. ● a(n) = 3 * (2 ^ n - 1) ^ 2. ●

▶ [A129530] 0,0,3,27,162,810,3645,15309,61236,236196,885735,3247695,11691702,41452398,145083393,502211745,1721868840,5854354056,19758444939,66248903619,220829678730,732224724210,2416341589893,7939408081077 ⋆ a(n) = (1 / 2) * n * (n - 1) * 3 ^ (n - 1). ● a(0)=0, a(1)=0, a(2)=3, a(n)=9 * a(n - 1) - 27 * a(n - 2) + 27 * a(n - 3). - _ Harvey P. Dale _ , Dec 18 2013 ●

▶ [A297670] 0,0,3,27,177,1137,7962,62730,555894,5487894,59740389,710770989,9174169647,127661751951,1904975487876,30341995264356,513771331466556,9215499383108604,174548332364310423,3481204991988350223,72920994840931900 13,1600596371590399670013 ⋆ Number of chordless cycles in the n - triangular graph. ● a(n) = Sum _{ k=4..n } n! / (2 * k * (n - k)!). - _ Andrew Howroyd _ , Jan 04 2018 ● a(n) = n * ((3 - 2 * n) * n + 6 * Hypergeometric3F1[1, 1, 1 - n; 2; - 1] - 7) / 12. - _ Eric W. Weisstein _ , Jan 05 2018 ●

▶ [A241271] 0,0,0,3,27,183,1143,6951,41895,251751,1511271,9069159,54418023,326514279,1959097959,11754612327,70527723111,423166436967,2538998818407,15233993303655,91403960608359,548423765223015,3290542594483815,19743255573194343,118459533451748967 ⋆ a(n) = 6 * a(n - 1) + 3 * (2 ^ (n - 2) - 1) for n > 2, a(0)=a(1)=a(2)=0. ● a(n) = (24 - 15 * 2 ^ n + 6 ^ n) / 40 for n>0. G.f.: - 3 * x ^ 3 / ((x - 1) * (2 * x - 1) * (6 * x - 1)). - _ Colin Barker _ , Apr 18 2014 ●

▶ [A127215] 3,27,189,891,5103,28431,155277,859491,4743603,26158707,144374805,796630059,4395548511,24254435799,133832255589,738466498755,4074759563139,22483948079115,124063275771981,684563868232731,3777327684782127,20842766314284447 ⋆ a(n) = 3 ^ n * tribonacci(n) or (3 ^ n) * A001644(n + 1). ● a(n) = Trace of matrix [({ 3,3,3 } , { 3,0,0 } , { 0,3,0) ^ n]. ● a(n) = 3 ^ n * Trace of matrix [({ 1,1,1 } , { 1,0,0 } ,0,1,0) ^ n]. ● a(n) = 3 * a(n - 1) + 9 * a(n - 2) + 27 * a(n - 3). ●

▶ [A124813] 3,27,189,1134,6123,30618,144342,649539,2814669,11821608,48361131,193444524,758897748,2927177028,11123272701,41712272649,154580775111,566796175407,2058365058057,7410114208989,26464693603590,93829368230910 ⋆ Number of 4 - ary Lyndon words of length n with exactly five 1s. ● a(n) = (1 / 5) * Sum _{ d|5, d|n } mu(d) C(n / d - 1, (n - 5) / d) * 3 ^ ((n - 5) / d). ● a(n) = (1 / 5) * C(n - 1, 4) * 3 ^ (n - 5) if n=1,2,3,4 mod 5. ● a(n) = (1 / 5) * C(n - 1, 4) * 3 ^ (n - 5) - (1 / 5) * 3 ^ ((n - 5) / 5) if n=0 mod 5. ●

▶ [A127220] 3,27,189,1215,6318,37179,216513,1253151,7223661,41806692,241805655,1398221271,8084811933,46753521975,270362105694,1563413859999,9040715391141,52279683047127,302316992442837,1748203962973380,10109314209860523,58458991419115875 ⋆ a(n) = 3 ^ n * tetranacci(n) or (2 ^ n) * A001648(n). ● a(n) = Trace of matrix [({{ 3,3,3,3 } , { 3,0,0,0 } , { 0,3,0,0), { 0,0,3,0 }}) ^ n]. ● a(n) = 3 ^ n * Trace of matrix [({{ 1,1,1,1 } , { 1,0,0,0 } , { 0,1,0,0 } , { 0,0,1,0 }) ^ n]. ● a(n) = 3 * a(n - 1) + 9 * a(n - 2) + 27 * a(n - 3) + 81 * a(n - 4). ●

▶ [A127222] 3,27,189,1215,7533,41553,247131,1463103,8640837,50959287,300264165,1771292853,10447598619,61618989627,363414767589,2143339285311,12641143135581,74555586323649,439717218548643,2593383067853775,15295369041550269,90209719910309895 ⋆ a(n) = 3 ^ n * pentanacci(n) or (3 ^ n) * A023424(n - 1). ● a(n) = Trace of matrix [({{ 3,3,3,3,0 } , { 3,0,0,0,0 } , { 0,3,0,0,0), { 0,0,3,0,0 } , { 0,0,0,3,0 }) ^ n]. ● a(n) = 3 ^ n * Trace of matrix [({{ 1,1,1,1,1 } , { 1,0,0,0,0 } , { 0,1,0,0,0 } , { 0,0,1,0,0 } , { 0,0,0,1,0) ^ n]. ● a(n) = 3 * a(n - 1) + 9 * a(n - 2) + 27 * a(n - 3) + 81 * a(n - 4) + 243 * a(n - 5). - _ Colin Barker _ , Sep 02 2013 ●

▶ [A248225] 0,3,27,189,1215,7533,45927,277749,1673055,10058013,60407127,362619909,2176250895,13059099693,78359381127,470170635669,2821066860735,16926530304573,101559569247927,609358577749029,3656154953278575,21936940180024653 ⋆ a(n) = 6 ^ n - 3 ^ n. ● a(n) = 9 * a(n - 1) - 18 * a(n - 2). ●

▶ [A198686] 3,27,195,1371,9603,67227,470595,3294171,23059203,161414427,1129900995,7909306971,55365148803,387556041627,2712892291395,18990246039771,132931722278403,930522055948827,6513654391641795,45595580741492571 ⋆ 4 * 7 ^ n - 1. ● a(n) = 7 * a(n - 1) + 6. a(n) = 8 * a(n - 1) - 7 * a(n - 2), n>1. ●

▶ [A087426] 0,3,27,216,1701,13365,104976,824499,6475707,50860872,399466485,3137450517,24641856288,193539651939,1520080160859,11938864580280,93769059774789,736471756750581,5784324272782128,45430672644283923 ⋆ a(n) = S(n,4) where S(n,m) = sum(k=0,n,binomial(n,k) * Fibonacci(m * k)). ● a(n) = 9 * a(n - 1) - 9 * a(n - 2); a(n)=1 / sqrt(5) * ((9 + 3 * sqrt(5)) / 2) ^ n) - 1 / sqrt(5) * ((9 - 3 * sqrt(5)) / 2) ^ n. ● a(n) = 3 ^ n * F(2n) - _ Benoit Cloitre _ , Sep 13 2005 ●

▶ [A145608] 0,3,27,216,1704,13419,105651,831792,6548688,51557715,405913035,3195746568,25160059512,198084729531,1559517776739,12278057484384,96664942098336,761041479302307,5991666892320123,47172293659258680,371386682381749320,2923921165394735883,23019982640776137747 ⋆ Numbers a(n)=k such that (1 / 3) * (5 * (2k + 1) ^ 2 - 2) is A057080(n) ^ 2. ● a(n + 2) = 8 * a(n + 1) - a(n) + 3. ● a(n) = - 1 / 2 + (1 / 4) * ((4 - sqrt(15)) ^ n + (4 + sqrt(15)) ^ n) - (1 / 20) * sqrt(15) * ((4 - sqrt(15)) ^ n - (4 + sqrt(15)) ^ n), with n >= 0. - _ Paolo P. Lava _ , Nov 25 2008 ● a(n) = 9 * a(n - 1) - 9 * a(n - 2) + a(n - 3); a(0)=0, a(1)=3, a(2)=27. - _ Harvey P. Dale _ , May 06 2013 ●

▶ [A083713] 0,3,27,219,1755,14043,112347,898779,7190235,57521883,460175067,3681400539,29451204315,235609634523,1884877076187,15079016609499,120632132875995,965057063007963,7720456504063707,61763652032509659 ⋆ a(n) = (8 ^ n - 1) * 3 / 7. ● a(n) = 8 * a(n - 1) + 3 (with a(0)=0). - _ Vincenzo Librandi _ , Aug 08 2010 ● a(0)=0, a(1)=3, a(n) = 9 * a(n - 1) - 8 * a(n - 2). - _ Harvey P. Dale _ , Jun 06 2013 ●

▶ [A230179] 3,27,231,1971,16815,143451,1223799,10440387,89068287,759853035,6482404167,55302225363,471790411599,4024904802939,34336981580055,292933215008739,2499051008758431,21319726218790923,181881331934084583 ⋆ Number of n X 3 0..2 arrays x(i,j) with each element horizontally or antidiagonally next to at least one element with value 2 - x(i,j). ● a(n) = ((- 3) * (2 ^ (- n) * ((9 - sqrt(65)) ^ n - (9 + sqrt(65)) ^ n))) / sqrt(65). ●

▶ [A065100] 3,27,240,2133,18957,168480,1497363,13307787,118272720,1051146693,9342047517,83027280960,737903481123,6558104049147,58285032961200,518007192601653,4603779700453677,40916010111481440,363640311302879283 ⋆ a(n + 2) = 9 * a(n + 1) - a(n), a(0) = 3, a(1) = 27. ● a(n) = 9 * a(n - 1) - a(n - 2) (with a(0)=3, a(1)=27). - _ Vincenzo Librandi _ , Aug 07 2010 ●

▶ [A013708] 3,27,243,2187,19683,177147,1594323,14348907,129140163,1162261467,10460353203,94143178827,847288609443,7625597484987,68630377364883,617673396283947,5559060566555523,50031545098999707 ⋆ a(n) = 3 ^ (2n + 1). ● a(n) = 9 * a(n - 1), n > 0; a(0)=3. ●

▶ [A361842] 1,3,27,243,2352,23607,242757,2539431,26904492,287858421,3104029755,33684914907,367483636746,4026930734223,44295829667055,488855016668727,5410588668898995,60035381850523284,667643481187840206,7439651232903588528,83050643822779921347 ⋆ Expansion of 1 / (1 - 9 * x * (1 + x) ^ 3) ^ (1 / 3)

. ● a(n) = Sum _{ k=0..n } (- 9) ^ k * binomial(- 1 / 3,k) * binomial(3 * k,n - k). ●

▶ [A370271] 1,3,27,246,2379,23628,239058,2450052,25351755,264270765,2771024652,29194911342,308813298690,3277454178144,34883317836240,37219554617649 6,3979793738688075,42635773396647054,457529396858568837,4917191231017846902,52917857164300253004 ⋆ Coefficient of x ^ n in the expansion of 1 / ((1 - x) ^ 3 * (1 - x ^ 2) ^ 3) ^ n. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(3 * n + k - 1,k) * binomial(4 * n - 2 * k - 1,n - 2 * k). ●

▶ [A163474] 3,27,249,2337,22203,212691,2048673,19804617,191904819,1862395467,18092133513,175868012721,1710268059243,16636340171907,161855091136689,1574864707700697,15324674763873123,149128049052227451 ⋆ a(n) = 16 * a(n - 1) - 61 * a(n - 2) for n > 1; a(0) = 3, a(1) = 27. ● a(n) = ((3 + sqrt(3)) * (8 + sqrt(3)) ^ n + (3 - sqrt(3)) * (8 - sqrt(3)) ^ n) / 2. ●

▶ [A361895] 1,3,27,252,2487,25434,266364,2837082,30601233,333302931,3658565127,40413860334,448778693844,5005642415907,56044616215041,629552293867800,7092072533703567,80095810435943526,906605837653876254,10282430320166723448,116829834042508121682 ⋆ Expansion of 1 / (1 - 9 * x / (1 - x) ^ 3) ^ (1 / 3). ● a(n) = Sum _{ k=0..n } (- 9) ^ k * binomial(- 1 / 3,k) * binomial(n + 2 * k - 1,n - k). ● a(0) = 1; a(n) = (3 / n) * Sum _{ k=0..n - 1 } (n + 2 * k) * binomial(n + 1 - k,2) * a(k). ●

▶ [A370620] 1,3,27,255,2535,25908,269667,2843214,30264975,324543495,3500669172,37940361660,412830243735,4507040972190,49345845670470,541602648192480,5957253066586815,65650003858745514,724693081872783375,8011727857439155500,88692087094226151300 ⋆ Coefficient of x ^ n in the expansion of 1 / (1 - x - x ^ 2) ^ (3 * n). ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(3 * n + k - 1,k) * binomial(4 * n - k - 1,n - 2 * k). ●

▶ [A199688] 3,27,267,2667,26667,266667,2666667,26666667,266666667,2666666677,26666666667,266666666667,2666666666667,26666666666667,266666666666667,2666666666666667,26666666666666667,266666666666666667 ⋆ (8 * 10 ^ n + 1) / 3. ● a(n) = 10 * a(n - 1) - 3. ● a(n) = 11 * a(n - 1) - 10 * a(n - 2). ●

▶ [A201696] 3,27,395,4998,35390,167625,607919,1826778,4775228,11211034,2416730 6,48600665,92261185,166831642,289389192,484248471,785251265,1238574341,1906133765,2869671064,4235613920,6140811719,8759254221,12309889872 ⋆ Number of n X 4 0..2 arrays with rows and columns lexicographically nondecreasing read forwards and nonincreasing read backwards. ● a(n) = 11 * a(n - 1) - 55 * a(n - 2) + 165 * a(n - 3) - 330 * a(n - 4) + 462 * a(n - 5) - 462 * a(n - 6) + 330 * a(n - 7) - 165 * a(n - 8) + 55 * a(n - 9) - 11 * a(n - 10) + a(n - 11) for n>11. ●

▶ [A014222] 0,1,3,27,7625597484987 ⋆ a(0) = 0; thereafter a(n + 1) = 3 ^ a(n). ● a(n + 1) = H _ 4(3,n) = 3 ^^ n; ● a(0) = 0, a(1) = 1, a(n + 1) = 3 ^ 3 ^ ... ^ 3 (n times). ●

▶ [A041785] 1,3,28,31,152,183,1799,5580,224999,680577,6350192,7030769,34473268,41504037,408009601,1265532840,51029323201,154353502443,1440210845188,1594564347631,7818468235712,9413032583343,92535761485799,28702031704074 0,11573348443115399 ⋆ Denominators of continued fraction convergents to sqrt(413). ● a(n) = 226798 * a(n - 8) - a(n - 16) for n>15. - _ Vincenzo Librandi _ , Dec 24 2013 ●

▶ [A267360] 1,3,28,47,496,575,8000,9215,128000,147455,2048000,2359295,32768000,37748735,524288000,603979775,8388608000,9663676415,134217728000,154618822655,2147483648000,2473901162495,34359738368000,39582418599935,549755813888000 ⋆ Decimal representation of the n - th iteration of the "Rule 125" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = 17 * a(n - 2) - 16 * a(n - 4) for n>8. ●

▶ [A053132] 3,28,126,396,1001,2184,4284,7752,13167,21252,32890,49140,71253,100688,139128,188496,250971,329004,425334,543004,685377,856152,1059380,1299480,1581255 ⋆ One half of binomial coefficients C(2 * n - 4,5). ● a(n) = binomial(2 * n - 4, 5) / 2 if n >= 5 else 0. ●

▶ [A095665] 3,28,145,550,1705,4576,11011,24310,50050,97240,179894,319124,545870,904400,1456730,2288132,3513917,5287700,7811375,11347050,16231215,22891440,31865925,43826250,59603700 ⋆ Tenth column (m=9) of (1,3) - Pascal triangle A095660. ● a(n)= binomial(n + 8, 8) * (n + 27) / 9 = 3 * b(n) - 2 * b(n - 1), with b(n):=binomial(n + 9, 9); cf. A000582. ●

▶ [A081019] 3,28,198,1363,9348,64078,439203,3010348,20633238,141422323,969323028,6643838878,45537549123,312119004988,2139295485798,14662949395603,100501350283428,688846502588398,4721424167835363,32361122672259148 ⋆ a(n) = Lucas(4n + 3) - 1, or Lucas(2n + 1) * Lucas(2n + 2). ● a(n) = 8 * a(n - 1) - 8 * a(n - 2) + a(n - 3). ● a(n) = - 1 + 2 * (((7 / 2) - (3 / 2) * sqrt(5)) ^ n + ((7 / 2) + (3 / 2) * sqrt(5)) ^ n) + sqrt(5) * (((7 / 2) + (3 / 2) * sqrt(5)) ^ n - ((7 / 2) - (3 / 2) * sqrt(5)) ^ n). - _ Paolo P. Lava _ , Dec 01 2008 ●

▶ [A045737] 0,0,3,28,210,1470,9996,67032,446292,2960100,19594575,129585456,856703848,5663913528,37454912040,247778648880,1639890119016,10858731869160,71939098633185,476841658085100,3162310375905450 ⋆ Number of nonroot branch nodes in all noncrossing rooted trees on n nodes on a circle. ● a(n) = 7 * (n - 1) * binomial(3n - 6, n - 4) / (2n - 1). ●

▶ [A003466] 0,3,28,210,1506,10871,80592,618939,4942070,41076508,355372524,3198027157,29905143464,290243182755,2920041395248,30414515081650,327567816748638,3643600859114439,41809197852127240,494367554679088923,6017481714095327410 ⋆ Number of minimal covers of an n - set that have exactly one point which appears in more than one set in the cover. ● a(n) = n * sum((2 ^ k - k - 1) * S2(n - 1,k), k=1..n - 1) where S2(n,k) are the Stirling numbers of the second kind. - _ Sean A. Irvine _ , May 20 2015 ●

▶ [A172241] 0,3,28,227,1820,14563,116508,932067,7456540,59652323,477218588,3817748707,30541989660,244335917283,1954687338268,15637498706147,125099989649180,1000799917193443,8006399337547548,64051194700380387 ⋆ a(n) = (1 / 18) * (8 ^ n - (- 1) ^ n - 9). ● a(2 * k) = 8 * a(2 * k - 1) + 3 and a(2 * k + 1) = 8 * a(2 * k) + 4 for k>0, a(1)=0. - _ Yosu Yurramendi _ , Dec 30 2016 ●

▶ [A037588] 3,28,255,2296,20667,186004,1674039,15066352,135597171,1220374540,10983370863,98850337768,889653039915,8006877359236,72061896233127,648557066098144,5837013594883299 ⋆ Base 9 digits are, in order, the first n terms of the periodic sequence with initial period 3,1. ● a(n) = 7 * 9 ^ n / 20 - 1 / 4 + (- 1) ^ (n + 1) / 10. - _ R. J. Mathar _ , Apr 27 2015 ●

▶ [A181069] 1,3,28,275,3126,37632,475056,6192531,82754650,1127504378,15603575208,218727171104,3099183987004,44315462038200,638663235342528,9267264584278419,135279095477748642,1985221072388231742 ⋆ Expansion of l.g.f.: Sum _{ n>=1 } [Sum _{ k>=0 } C(n + k - 1,k) ^ 4 * x ^ k] * x ^ n / n. ● a(n) = Sum _{ k=0..n - 1 } binomial(n - 1,k) ^ 3 * binomial(n,k). ●

▶ [A239297] 3,28,282,2827,28274,282743,2827433,28274333,282743338,2827433388,28274333882,282743338823,2827433388230,28274333882308,282743338823081,2827433388230813,28274333882308139,282743338823081391,2827433388230813914 ⋆ Floor of first differences of Pi * 10 ^ n. ● a(0)=3, a(n)=floor(Pi * 10 ^ n - Pi * 10 ^ (n - 1)) for n>0. ●

▶ [A199754] 3,28,303,3328,36603,402628,4428903,48717928,535897203,5894869228,64843561503,713279176528,7846070941803,86306780359828,949374583958103,10443120423539128,114874324658930403,1263617571248234428 ⋆ (5 * 11 ^ n + 1) / 2. ● a(n) = 11 * a(n - 1) - 5. ● a(n) = 12 * a(n - 1) - 11 * a(n - 2). ●

▶ [A176335] 1,3,28,315,3876,50358,678112,9365499,131809060,1882294128,27193657008,396600597198,5829739893264,86262567856650,1283677784658528,19196304797150715,288295493121264420,4346056823245242420 ⋆ Central coefficients T(2n,n) of number triangle A176331. ● a(n) = Sum _{ k=0..2n } C(k,n) ^ 2 * (- 1) ^ k. ●

▶ [A119951] 1,3,29,65,281,595,9949,20613,84883,173965,1421113,2894229,11762641,23859587,773201629,1564082093,6321150767,12761711209,102977321267,207595672639,836499257311,1684433835077,27122471168057,54567418372945,219485160092143 ⋆ Numerators of partial sums of a convergent series with value 4, involving scaled Catalan numbers A000108. ● a(n) = numerator of Sum _{ k=1..n } C(k) / 2 ^ (2 * (k - 1)). ● a(n - 1) = numerator of (1 / 4 ^ n) * Sum _{ i=0..n - 1 } (binomial(2 * (i + 1), i + 1) * binomial(2 * (n - i), n - i)), for n>=1. - _ Johannes W. Meijer _ , May 24 2009 ● a(n) = (2 ^ n - (2 * n + 2)! / (2 ^ (n + 1) * (n + 1)! ^ 2)) * gcd((n + 1)!,2 ^ (n + 1)). - _ Gary Detlefs _ , Nov 06 2020 ●

▶ [A288918] 0,3,29,79,153,251,373,519,689,883,1101,1343,1609,1899,2213,2551,2913,3299,3709,4143,4601,5083,5589,6119,6673 ⋆ Number of 4 - cycles in the n X n king graph. ● a(n) = 12 * n ^ 2 - 34 * n + 23 for n > 1. - _ Andrew Howroyd _ , Jun 19 2017 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n > 4. (End) ●

▶ [A211621] 0,3,29,103,247,484,843,1342,2008,2866,3938,5247,6822,8681,10851,13357,16221,19466,23121,27204,31742,36760,42280,48325,54924 ⋆ Number of ordered triples (w,x,y) with all terms in {- n,... - 1,1,...,n } and w + 2x + 3y>0. ● a(n) = 2 * a(n - 1) - a(n - 3) - a(n - 4) + 2 * a(n - 6) - a(n - 7) for n>6. ●

▶ [A024386] 3,29,114,310,685,1323,2324,3804,5895,8745,12518,17394,23569,31255,40680,52088,65739,81909,100890,122990,148533,177859,211324,249300,292175 ⋆ [(3rd elementary symmetric function of S(n)) / (first elementary symmetric function of S(n))], where S(n) = { first n + 2 positive integers congruent to 1 mod 4 } . ● a(n) = n(n + 1)(4n ^ 2 + 8n - 3) / 6. ●

▶ [A112498] 3,29,164,726,2805,9975,33630,109424,347519,1085313,3349848,10253994,31203945,94561643,285716018,861472836,2593592883,7800176565,23441423340,70410252350,211411111133,634610819679,1904620987014 ⋆ Third column of second - order Eulerian triangle A008517 divided by 2. ● a(n) = 3 * a(n - 1) + (2 * n - 3) * (2 ^ (n - 1) - n), n>3, with a(3)=3. ●

▶ [A135163] 0,3,29,237,1841,13893,102689,747477,5380481,38419653,272767649,1928673717,13597673921,95669893413,672124323809,4717058247957,33080385660161,231867703543173,1624599287803169,11379822860782197,79696902351707201,558069037383336933,3907436894168837729 ⋆ a(n) = 7 ^ n - 5 ^ n + 3 ^ n - 2 ^ n. ● a(n) = 7 ^ n - 5 ^ n + 3 ^ n - 2 ^ n. ● a(n) = 17 * a(n - 1) - 101 * a(n - 2) + 247 * a(n - 3) - 210 * a(n - 4) for n>3. (End) ●

▶ [A140780] 1,3,29,287,2841,28123,278389,2755767,27279281,270037043,2673091149,26460874447,261935653321,2592895658763,25667020934309,254077313684327,2515106115908961,24896983845405283,246454732338143869,2439650339536033407,24150048663022190201 ⋆ a(n) = 10 * a(n - 1) - a(n - 2) for n >= 2 with a(0) = 1 and a(1) = 3. ● a(n) = (- 1 / 12) * (5 + 2 * sqrt(6)) ^ n * sqrt(6) + (1 / 12) * sqrt(6) * (5 - 2 * sqrt(6)) ^ n + (1 / 2) * (5 + 2 * sqrt(6)) ^ n + (1 / 2) * (5 - 2 * sqrt(6)) ^ n, with n >= 0. - _ Paolo P. Lava _ , Jun 06 2008 ●

▶ [A268493] 3,29,289,321,3209,32089,106963,356543,3565429,11884763,118847629,132052921,440176403,4401764029,4890848921,48908489209,163028297363,1630282973629,5434276578763,18114255262543,60380850875143,201269502917143,670898343057143 ⋆ Orbit of 3 under the map A268488: n - > least number k of the form k = n * (last digit of k) + (k without its last digit). ● a(n) = 10 * a(n - 1) - 1 unless divisible by 3 or 9, then a(n) = (10 * a(n - 1) - 1) /{ 3,9 } , respectively. - _ Bob Selcoe _ , Feb 17 2016 ●

▶ [A340990] 1,3,29,291,3121,34123,379853,4280251,48681569,557686227,6425630909,74384480019,864461820049,10079577033243,117859582680813,1381492094548651,16227770995740865,190979248798795427,2251327736286726749,26579050506578504195,314212180691846338801 ⋆ a(n) is the (2n) - th term of the n - fold self - convolution of the primes. ● a(n) = [x ^ (2n)] (Sum _{ j>=1 } prime(j) * x ^ j) ^ n. ●

▶ [A155651] 1,3,29,297,2801,24993,215489,1817217,15097601,124140033,1013275649,8227137537,66542694401,536695119873,4319682347009,34714187104257,278653866803201,2234873154240513,17912838552813569,143505828335845377 ⋆ 8 ^ n - 6 ^ n + 1 ^ n ● a(n)=14 * a(n - 1) - 48 * a(n - 2) + 35 with a(0)=1, a(1)=3 - _ Vincenzo Librandi _ , Jul 21 2010 ●

▶ [A255597] 1,1,3,29,1667,3254781,10650037396483 ⋆ Upper bound on the number of different Euler diagrams for n classes. ● a(n) = Sum _{ k>=1 } e(n,k), where k is the number of zones, and the elements e(n,k) are defined recursively as: e(0,1) = 1; e(n,k) = Sum _{ c=1..k - 1} binomial(c,k - c) * e(n - 1,c). ●

▶ [A217395] 3,30,31,32,33,34,35,36,37,38,39,300,301,302,303,304,305,306,307,308,309,310,311,312,313 ⋆ Numbers starting with 3. ● a(n) = n + (26 * 10 ^ floor(log _ 10(9 * n - 8)) - 8) / 9. - _ Alan Michael Gómez Calderón _ , May 16 2023 ●

▶ [A140153] 1,3,30,34,159,165,508,516,1245,1255,2586,2598,4795,4809,8184,8200,13113,13131,19990,20010,29271,29293,41460,41484,57109 ⋆ a(1)=1, a(n) = a(n

- 1) + n ^ 3 if n odd, a(n) = a(n - 1) + n ^ 1 if n is even. ● a(n) = a(n - 1) + { [1 - (- 1) ^ n] / 2 }* n ^ 3 + { [1 + (- 1) ^ n] / 2 }* n, with a(1)=1. ● a(n) = (- 3 / 16) + (1 / 4) * (- 1) ^ n * n + (3 / 16) * (- 1) ^ n - (1 / 4) * (- 1) ^ n * n ^ 3 + (1 / 4) * n ^ 3 - (3 / 8) * (- 1) ^ n * n ^ 2 + (3 / 8) * n ^ 2 + (1 / 4) * n + (1 / 8) * n ^ 4, with n>=1. - _ Paolo P. Lava _ , Jun 06 2008 ● a(n) = a(n - 1) + 4 * a(n - 2) - 4 * a(n - 3) - 6 * a(n - 4) + 6 * a(n - 5) + 4 * a(n - 6) - 4 * a(n - 7) - a(n - 8) + a(n - 9). ●

► [A152767] 0,3,30,81,156,255,378,525,696,891,1110,1353,1620,1911,2226,2565,2928,3315,3726,4161,4620,5103,5610,6141,6696 ⋆ 3 times 10 - gonal (or decagonal) numbers: 3n(4n - 3). ● a(n) = a(n - 1) + 24 * n - 21, n>0. - _ Vincenzo Librandi _ , Nov 26 2010 ● a(0)=0, a(1)=3, a(2)=30, a(n)=3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , May 26 2012 ●

► [A195029] 3,30,85,168,279,418,585,780,1003,1254,1533,1840,2175,2538,2929,3348,3795,4270,4773,5304,5863,6450,7065,7708,8379 ⋆ a(n) = n * (14 * n + 13) + 3. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). (End) ●

► [A211617] 0,3,30,101,244,479,834,1329,1992,2843,3910,5213,6780,8631,10794,13289,16144,19379,23022,27093,31620,36623,42130,48161,54744 ⋆ Number of ordered triples (w,x,y) with all terms in {- n,... - 1,1,...,n } and 2w + x + y>0. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - 2 * a(n - 3) + 3 * a(n - 4) - a(n - 5) for n>4. ● a(n) = 4 * n ^ 3 - n ^ 2 + n for n even. ● a(n) = 4 * n ^ 3 - n ^ 2 + n - 1 for n odd. ●

► [A225018] 3,30,127,301,647,1100,1851,2715,4027,5434,7463,9545,12447,15336,19267,23095,28211,33110,39567,45669,53623,61060,70667,79571,90987 ⋆ Number of cusps in a class of degree - 3n complex algebraic surfaces. ● a(n) = (1 / 2) * (12 * n ^ 3 - 9 * n ^ 2 + 4 * n - 1) if n is odd; a(n) = (1 / 2) * (12 * n ^ 3 - 12 * n ^ 2 + 7 * n - 2) if n is even. ● a(n) = (24 * n ^ 3 - 21 * n ^ 2 + 11 * n - (3 * n ^ 2 - 3 * n + 1) * (- 1) ^ n - 3) / 4. [_ Bruno Berselli _ , Apr 24 2013] ●

► [A221516] 0,3,30,130,381,884,1765,3174,5285,8296,12429,17930,25069,34140,45461,59374,76245,96464,120445,148626,181469,219460,263109,312950,369541 ⋆ Number of 0..n arrays of length 5 with each element differing from at least one neighbor by 2 or more, starting with 0. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>8. ●

► [A174774] 0,1,3,30,130,780,3696,19768,97560,510660,2603260,13754136,72333768,390339040,2116922640,11722194240,65521880896,372897624528,2146502657520,12558129505120,74371827119520,447090649997376 ⋆ Sum of the numerators for computing the third moment of the probability mass function for probability of k pairs among the involutions on n elements (A000085) assuming equal likelihood. ● a(n)=Sum _{ k=0..[n / 2] } k ^ 3 * n! / ((n - 2 * k)! * 2 ^ k * k!). ●

► [A020874] 0,3,30,135,452,1295,3378,8295,19560,44847,100790,223223,488940,1061775,2289882,4910535,10480208,22275695,47178270,99605847,209704980,440390223,922733570,1929364775,4026514872 ⋆ Number of paths in Moebius ladder M _ n. ● a(n) = 10 * n * 2 ^ n - n ^ 3 - 5 * n ^ 2 - 11 * n. ●

► [A003689] 3,30,144,588,2160,7440,24576,78912,248448,771456,2371968,7241856,21998976,66586752,201025920,605781120,1823094144,5481472128,16470172032,49464779904,148508372352,445764192384,1337792747904 ⋆ Number of Hamiltonian paths in K _ 3 X P _ n. ● a(n) = 7 * a(n - 1) - 16 * a(n - 2) + 12 * a(n - 3), n>5. ● a(n) = 128 * 3 ^ (n - 2) - (21 * n + 57) * 2 ^ (n - 2), n>2. - _ Ralf Stephan _ , Sep 26 2004 ●

► [A344564] 3,30,180,840,3360,12096,40320,126720,380160,1098240,3075072,8386560,22364160,58490880,150405120,381026304,952565760,2353397760,5752750080,13927710720,33426505728,79586918400,188114534400,441660211200,1030540492800 ⋆ a(n) = [x ^ n] - 3 / (2 * x - 1) ^ 5. ● a(n) = 2 * (n + 4) * a(n - 1) / n for n >= 2. ● a(n) = 2 ^ (n - 3) * (n + 1) * (n + 2) * (n + 3) * (n + 4). ● a(n) = n! * [x ^ n] (2 * x ^ 4 + 16 * x ^ 3 + 36 * x ^ 2 + 24 * x + 3) * exp(2 * x). ●

► [A344907] 0,3,30,189,684,1815,3978,7665,13464,22059,34230,50853,72900,101439,137634,182745,238128,305235,385614,480909,592860,723303,874170,1047489,1245384 ⋆ Number of polygon edges formed when every pair of vertices of a regular (2n - 1) - gon are joined by an infinite line. ● a(n) = 4 * n ^ 4 - 22 * n ^ 3 + 44 * n ^ 2 - 35 * n + 9 (see Sidorenko link in A344857 for proof). ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n > 5. (End) ●

► [A003771] 3,30,198,1326,8886,59550,399078,2674446,17922966,120111870,804937158,5394336366,36150480246,242264688990,1623551862438,10880333659086,72915231888726,488645955902910,3274691227542918,21945546680994606,147069444311876406,985595016821145630 ⋆ Number of Hamiltonian cycles in K _ 4 X P _ n. ● a(n) = 7a(n - 1) - 2a(n - 2), n>3. ●

► [A332426] 0,3,30,210,1260,6944,36288,182880,897600,4316928,20427264,953738240,4402944000,20130201600,91262484480,410693713920,1836070502400,8160375600320,36077587660800,158741688483840,695440441344000,3034650645626880 ⋆ Number of unordered pairs of non - selfintersecting paths with nodes that cover all vertices of a convex n - gon. ● a(n) = n * (n - 1) * 2 ^ (n - 6) * (2 ^ (n - 3) - 1). ● a(n) = 18 * a(n - 1) - 132 * a(n - 2) + 504 * a(n - 3) - 1056 * a(n - 4) + 1152 * a(n - 5) - 512 * a(n - 6) for n > 8. ●

► [A120689] 0,3,30,252,2040,16368,131040,1048512,8388480,67108608,536870400,4294966272,34359736320,274877902848,2199023247360,17592186028032,140737488322560,1125899906777088,9007199254609920,72057594037665792 ⋆ a(n) = 10 * a(n - 1) - 16 * a(n - 2), with a(0) = 0 and a(1) = 3. ● a(n) = 2 ^ (n - 1) * (4 ^ n - 1). - _ Artur Jasinski _ , Aug 04 2007 ●

► [A299866] 3,30,297,2972,29727,297268,2972675,29726757,297267568,2972675675,29726756750,297267567507,2972675675068,29726756750675,297267567506755,2972675675067545,29726756750675457,297267567506754568,2972675675067545675,29726756750675456754,297267567506754567542 ⋆ The sum of the first n terms of the sequence is the concatenation of the first n digits of the sequence, a(1) = 3. ● a(n) = c(n) - c(n - 1), where c(n) = concatenation of the first n digits, c(n) ~ 0.33 * 10 ^ n, a(n) ~ 0.297 * 10 ^ n. See A300000 for the proof. - _ M. F. Hasler _ , Feb 22 2018 ●

► [A093138] 1,3,30,300,3000,30000,300000,3000000,30000000,300000000,3000000000,30000000000,300000000000,3000000000000,30000000000000,300000000000000,3000000000000000,30000000000000000,300000000000000000 ⋆ Expansion of (1 - 7x) / (1 - 10x). ● a(n) = 3 * 10 ^ n / 10 + 7 * 0 ^ n / 10. ● a(n) = 3 * 10 ^ (n - 1) with a(0)=1. - _ Vincenzo Librandi _ , Aug 02 2010 ●

► [A361896] 1,3,30,300,3165,34584,386880,4400928,50692266,589584042,6910397886,81507086634,966408021984,11509174498254,137584249375308,1650109151463594,19847075122106145,239316542492974317,2892135259684291248,35021199836282568456,424837125616822551264 ⋆ Expansion of 1 / (1 - 9 * x / (1 - x) ^ 4) ^ (1 / 3). ● a(n) = Sum _{ k=0..n } (- 9) ^ k * binomial(- 1 / 3,k) * binomial (n + 3 * k - 1,n - k). ● a(0) = 1; a(n) = (3 / n) * Sum _{ k=0..n - 1 } (n + 2 * k) * binomial(n + 2 - k,3) * a(k). ●

► [A037764] 3,30,301,3012,30123,301230,3012301,30123012,301230123,3012301230,30123012301,301230123012,3012301230123,30123012301230,301230123012301,3012301230123012 ⋆ Decimal expansion of a(n) is given by the first n terms of the periodic sequence with initial period 3,0,1,2. ● a(n) = 10 * a(n - 1) + ((n + 2) mod 4), with a(0)=0. - _ Paolo P. Lava _ , Jul 30 2009 ●

► [A037652] 3,30,301,3013,30130,301301,3013013,30130130,301301301,3013013013,30130130130,301301301301,3013013013013,30130130130130,301301301301301,3013013013013013 ⋆ Decimal expansion of a(n) is given by the first n terms of the periodic sequence with initial period 3,0,1. ● a(n) = 10 * a(n - 1) + (1 / 9) * ((n mod 3) + 13 * ((n + 1) mod 3) - 2 * ((n + 2) mod 3)), with a(0)=0. - _ Paolo P. Lava _ , Jul 30 2009 ●

► [A037771] 3,30,302,3021,30213,302130,3021302,30213021,302130213,3021302130,30213021302,302130213021,3021302130213,30213021302130,302130213021302,3021302130213021 ⋆ Decimal expansion of a(n) is given by the first n terms of the periodic sequence with initial period 3,0,2,1. ● a(n) = 10 * a(n - 1) + (1 / 4) * (2 * (n mod 4) - ((n + 1) mod 4) + 4 * ((n + 2) mod 4) - ((n + 3) mod 4)), with a(0)=0. - _ Paolo P. Lava _ , Jul 30 2009 ●

► [A037659] 3,30,302,3023,30230,302302,3023023,30230230,302302302,3023023023,30230230230,302302302302,3023023023023,30230230230230,302302302302302,3023023023023023 ⋆ Decimal expansion of a(n) is given by the first n terms of the periodic sequence with initial period 3,0,2. ● a(n) = 10 * a(n - 1) + (1 / 9) * (- (n mod 3) + 14 * ((n + 1) mod 3) + 2 * ((n + 2) mod 3)), with a(0)=0. - _ Paolo P. Lava _ , Jul 30 2009 ●

► [A163475] 3,30,306,3168,33156,349704,3708504,39476160,421307568,4504395744,48217133088,516565527552,5537243115072,59378264922240,636903805624704,6832763837309952,73311252232852224,786646960881163776 ⋆ a(n) = 18 * a(n - 1) - 78 * a(n - 2) for n > 1; a(0) = 3, a(1) = 30. ● a(n) = ((3 + sqrt(3)) * (9 + sqrt(3)) ^ n + (3 - sqrt(3)) * (9 - sqrt(3)) ^ n) / 2. ●

► [A341928] 3,31,58,175,435,1162,3019,7927,20730,54295,142123,372106,974163,2550415,6677050,17480767,45765219,119814922,313679515,821223655,2149991418,5628750631,14736260443,38580030730,101003831715 ⋆ a(n) = F(n + 4) * F(n + 2) + 7 * (- 1) ^ n where F(n) = A000045(n) are the Fibonacci numbers. ● a(n) = F(n + 4) * F(n + 2) + 7 * (- 1) ^ n. ●

► [A041207] 1,1,3,31,65,96,1985,2081,6147,63551,133249,196800,4069249,4266049,12601347,130279519,273160385,403439904,8341958465,8745398369,25832755203,267072950399,559978656001,827051606400 ⋆ Denominators of continued fraction convergents to sqrt(114). ● a(n) = 2050 * a(n - 6) - a(n - 12). G.f.: - (x ^ 10 - x ^ 9 + 3 * x ^ 8 - 31 * x ^ 7 + 65 * x ^ 6 - 96 * x ^ 5 - 65 * x ^ 4 - 31 * x ^ 3 - 3 * x ^ 2 - x - 1) / (x ^ 12 - 2050 * x ^ 6 + 1). [_ Colin Barker _ , Jul 19 2012] ●

► [A133203] 0,1,3,31,67,111,163,223,291,367,451,543,643,751,867,991,1123,1263,1411,1567,1731,1903,2083,2271,2467 ⋆ a(n) = a(n - 1) + 8 * n + 4, n > 2. ● a(n) = 4n ^ 2 + 8n - 29, n > 1. (End) ●

► [A152417] 0,1,3,31,78,781,1953,19531,48828,488281,1220703,12207031,30517578,305175781,762939453,7629394531,19073486328,190734863281,476837158203,4768371582031,11920928955078,119209289550781,298023223876953,2980232238769531,7450580596923828 ⋆ a(n) = (5 ^ n - 1) / (2 ^ (3 - (n mod 2))). ● a(n) = (5 ^ n - 1) / (2 ^ (3 - (n mod 2))). ● a(n) = (5 ^ n - 1) / 8 for n even. ● a(n) = (5 ^ n - 1) / 4 for n odd. ● a(n) = 26 * a(n - 2) - 25 * a(n - 4) for n>3. ●

► [A294973] 1,3,31,96,223,765,7873,24384,56641,194307,1999711,6193440,14386591,49353213,507918721,1573109376,3654137473,12535521795,129009355423,399563588064,928136531551,3183973182717,32767868358721,101487578258880,235743024876481 ⋆ Denominators of the continued fraction convergents to sqrt(7) / 2. ● a(n) = 254 * a(n - 4) - a(n - 8) for n > 7. ●

► [A267941] 1,3,31,127,511,2047,8191,32767,131071,524287,2097151,8388607,33554431,134217727,536870911,2147483647,8589934591,34359738367,137438953471,549755813887,2199023255551,8796093022207,35184372088831,140737488355327,562949953421311 ⋆ Decimal representation of the n - th iteration of the "Rule 253" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = 5 * a(n - 1) - 4 * a(n - 2) for n>3. ●

► [A064055] 3,31,155,546,1554,3823,8451,17205,32802,59268,102388,170261,273975,428418,653242,973998,1423461,2043165,2885169,4014076,5509328,7467801,10006725,13266955,17416620 ⋆ Ninth column of quadrinomial coefficients. ● a(n) = 3 * C(n + 3,3) + 19 * C(n + 3,4) + 30 * C(n + 3,5) + 21 * C(n + 3,6) + 7 * C(n + 3,7) + C(n + 3,8) (see comment in A071675). - _ Vladimir Shevelev _ and _ Peter J. C. Moses _ , Jun 22 2012 ●

► [A203242] 3,31,196,1002,4593,19833,82818,339340,1375639,5543331,22263216,89249214,357422541,1430607325,5724394990,22901773824,91616007699,366482904615,1465971463740,5863969740370,23456055121513,93824589584001 ⋆ Second elementary symmetric function of the first n terms of (1, 3, 7, 15, 31, ...). ● a(n) = 4 ^ (n + 1) / 3 - (2 * n + 2) * 2 ^ n + (n ^ 2 + 3 * n) / 2 + 2 / 3. (End) ●

► [A342260] 3,31,217,268,8399,29110,711243,4676815,31622764,376863606,126388263 43,38121744938,1511790122972,8648472039419,243625577528103 ⋆ a(n) ^ 2 is the least square that, when written in base n, has exactly n digits n - 1. ● a(n) <= n ^ (n + 1) - 1. - _ Bert Dobbelaere _ , Apr 20 2021 ●

► [A334980] 0,3,31,248,1941,15334,122915,999456,8231740,68562887,576661761,4891506968,41801697070,359574305580,3111012673755,27055673506128,236387476114548,2073957836402524,18264689865840284,161403223665821280,1430768729986730685,12719497076318052990 ⋆ a(n) is the total number of down steps between the (n - 1) - th and n - th up steps in all 3 _ 2 - Dyck paths of length 4 * n. A 3 _ 2 - Dyck path is a lattice path with steps (1, 3), (1, - 1) that starts and ends at y = 0 and stays above the line y = - 2. ● a(0) = 0 and a(n) = 3 * bin

omial(4 * n + 7, n + 1) / (4 * n + 7) - 12 * binomial(4 * n + 3, n) / (4 * n + 3) for n > 0. ●

▶ [A111400] 0,3,31,251,1485,6665,24073,73486,196626,473595,1047255,2157793,4189991,7736001,13676705,23285020,38354788,61359171,95642751,145651815,217207585,317827433,457099401,647115626,902970550 ⋆ P(P(n)) - P(P(n - 1)), where P(n) = (n + 1) * (n + 2) * (n + 3) / 6 (see A000292). ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9). ●

▶ [A198852] 3,31,255,2047,16383,131071,1048575,8388607,67108863,536870911,4294967295,34359738367,274877906943,2199023255551,17592186044415,140737488355327,1125899906842623,9007199254740991,72057594037927935 ⋆ a(n) = 4 * 8 ^ n - 1. ● a(n) = 8 * a(n - 1) + 7. ● a(n) = 9 * a(n - 1) - 8 * a(n - 2) for n > 1. ●

▶ [A114849] 0,3,31,257,1950,14164,100464,702919,4878575,33695365,232040622,1595043816,10952137040,75149854091,515435467055,3534332855753,24230970910510,166108203507452,1138635489987488,7804802111777935 ⋆ F(4n + 4) / F(4) - F(3n + 3) / F(3) where F(n)=A000045(n). ● a(n) = F(4n + 4) / F(4) - F(3n + 3) / F(3) = (2 * F(4n + 4) - 3 * F(3n + 3)) / 6, where F=A000045. ●

▶ [A198964] 3,31,283,2551,22963,206671,1860043,16740391,150663523,1355971711,12203745403,109833708631,988503377683,8896530399151,80068773592363,720618962331271,6485570660981443,58370135948832991,525331223539496923 ⋆ (7 * 9 ^ n - 1) / 2. ● a(n) = 9 * a(n - 1) + 4. ● a(n) = 10 * a(n - 1) - 9 * a(n - 2), n >1. ●

▶ [A037778] 3,31,310,3102,31023,310231,3102310,31023102,310231023,3102310231,31023102310,310231023102,3102310231023,31023102310231,310231023102310,3102310231023102,31023102310231023,310231023102310231,3102310231023102310,31023102310231023102 ⋆ Decimal expansion of a(n) is given by the first n terms of the periodic sequence with initial period 3,1,0,2. ● a(n) = 10 * a(n - 1) + (1 / 4) * (- (n mod 4) + 2 * ((n + 1) mod 4) + 3 * ((n + 2) mod 4)), with a(0)=0. - _ Paolo P. Lava _ , Jul 30 2009 ●

▶ [A037666] 3,31,310,3103,31031,310310,3103103,31031031,310310310,3103103103,31031031031,310310310310,3103103103103 ⋆ Decimal expansion of a(n) is given by the first n terms of the periodic sequence with initial period 3,1,0. ● a(n) = 10 * a(n - 1) + (1 / 9) * (7 * (n mod 3) + 10 * ((n + 1) mod 3) - 5 * ((n + 2) mod 3)), with a(0)=0. - _ Paolo P. Lava _ , Jul 30 2009 ●

▶ [A108430] 3,31,311,3151,32299,334335,3488239,36627487,386618387,4098713631,43611791783,465496885231,4981942135611,53443871159551,574500093677535,6186886528903231,66735614131858723,720897596248427295 ⋆ Number of d steps in all paths from (0,0) to (3n,0) that stay in the first quadrant (but may touch the horizontal axis), consisting of steps u=(2,1), U=(1,2), or d=(1, - 1). ● a(n) = (1 / n) * sum(k * binomial(n,2n - k) * binomial(n + k,n - 1), k=n..2n). ●

▶ [A037785] 3,31,312,3120,31203,312031,3120312,31203120,312031203,3120312031,31203120312,312031203120,3120312031203,31203120312031,312031203120312,3120312031203120 ⋆ Decimal expansion of a(n) is given by the first n terms of the periodic sequence with initial period 3,1,2,0. ● a(n) = 10 * a(n - 1) + (1 / 4) * (3 * (n mod 4) + 3 * ((n + 2) mod 4) - 2 * ((n + 3) mod 4)), with a(0)=0. - _ Paolo P. Lava _ , Jul 30 2009 ●

▶ [A037589] 3,31,313,3131,31313,313131,3131313,31313131,313131313,3131313131,31313131313,313131313131,3131313131313,31313131313131,313131313131313,3131313131313131 ⋆ Decimal expansion of a(n) is given by the first n terms of the periodic sequence with initial period 3,1. ● a(n)=10 * a(n - 1) + 2 - (- 1) ^ n, with a(0)=0. Closed form: a(n)= - (2 / 9) - (1 / 11) * (- 1) ^ n + (31 / 99) * 10 ^ n, with n>=1. - _ Paolo P. Lava _ , Mar 31 2009 ●

▶ [A011545] 3,31,314,3141,31415,314159,3141592,31415926,314159265,3141592653,31415926535,314159265358,3141592653589,31415926535897,314159265358979,3141592653589793,31415926535897932,314159265358979323,3141592653589793238,31415926535897932384 ⋆ Decimal expansion of Pi truncated to n places. ● a(n) = floor(Pi * 10 ^ n). ●

▶ [A011546] 3,31,314,3142,31416,314159,3141593,31415927,314159265,3141592654,31415926536,314159265359,3141592653590,31415926535898,314159265358979,3141592653589793,31415926535897932,314159265358979324,3141592653589793238,31415926535897932385 ⋆ Decimal expansion of Pi rounded to n places. ● a(n) = floor(10 ^ n * Pi + 0.5). ●

▶ [A361612] 3,31,316,3162,31622,316227,3162277,31622776,316227766,3162277660,31622776601,316227766016,3162277660168,31622776601683,316227766016837,3162277660168379,31622776601683793,316227766016837933,3162277660168379331,31622776601683793319 ⋆ Decimal expansion of sqrt(10) truncated to n places (after the decimal point). ● a(n) = floor(sqrt(10) * 10 ^ n). ●

▶ [A210852] 0,3,31,325,1354,1354,34968,740862,2387948,25447152,146507973,1276408969,9185715941,78392151946,272170172760,950393245609,1044551626549,5,43678446835096,974200502783924,10744682090246618,22143577275619761 ⋆ Approximations up to 7 ^ n for one of the three 7 - adic integers (- 1) ^ (1 / 3). ● a(n) == 3 ^ (7 ^ (n - 1)) (mod 7 ^ n) == 3 (mod 7), n >= 1. ●

▶ [A213845] 3,32,119,296,595,1048,1687,2544,3651,5040,6743,8792,11219,14056,17335,21088,25347,30144,35511,41480,48083,55352,63319,72016,81475 ⋆ Principal diagonal of the convolution array A213844. ● a(n) = (2 * n - 9 * n ^ 2 + 16 * n ^ 3) / 3. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ●

▶ [A221464] 3,32,135,384,875,1728,3087,5120,8019,12000,17303,24192,32955,43904,57375,73728,93347,116640,144039,176000,213003,255552,304175,359424,421875 ⋆ Number of 0..n arrays of length 5 with each element unequal to at least one neighbor, starting with 0. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>5. ●

▶ [A004256] 0,3,32,150,480,1225,2688,5292,9600,16335,26400,40898,61152,88725,125440,173400,235008,312987,410400,530670,677600,855393,1068672,1322500,1622400 ⋆ a(n) = n ^ 2 * (n + 1) * (n + 2) ^ 2 / 6. ● a(0)=0, a(1)=3, a(2)=32, a(3)=150, a(4)=480, a(5)=1225, a(n)=6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). - _ Harvey P. Dale _ , May 26 2015 ●

▶ [A002059] 3,32,225,1320,7007,34944,167076,775200,3517470,15690048,69052555,300638520,1297398375,5557977600,23663585880,100222246080,422559514170,1774647576000,7427639542050,30994292561232,128989359164358 ⋆ Number of partitions of an n - gon into (n - 4) parts. ● a(n) = (n - 3) * binomial(2n - 6,n). - _ Gill Barequet _ , Nov 09 2011 ●

▶ [A028447] 1,3,32,229,1845,14320,112485,880163,6895792,54003765,422983905,3312866080,25947198337,203223953179,1591695681488,12466511517581,97640484615909,764741896529104,5989627994067061,46912093390144139,367425909133064576,2877761124002870925 ⋆ Number of perfect matchings in graph P _{ 2 } X P _{ 3 } X P _{ n } . ● a(n) = 6a(n - 1) + 21a(n - 2) - 42a(n - 3) - 89a(n - 4) + 68a(n - 5) + 89a(n - 6) - 42a(n - 7) - 21a(n - 8) + 6a(n - 9) + a(n - 10). - _ Emeric Deutsch _ , Oct 14 2006 ●

▶ [A081012] 3,32,231,1595,10944,75023,514227,3524576,24157815,165580139,1134903168,7778742047,53316291171,365435296160,2504730781959,17167680177563,117669030460992,806515533049391,5527939700884755,37889062373143904 ⋆ a(n) = Fibonacci(4n + 1) - 2, or Fibonacci(2n + 2) * Lucas(2n - 1). ● a(n) = 8 * a(n - 1) - 8 * a(n - 2) + a(n - 3). ● a(n) = - 2 + (5 / 2) *{ [(7 / 2) - (3 / 2) * sqrt(5)] ^ n + [(7 / 2) + (3 / 2) * sqrt(5)] ^ n + (11 / 10) * sqrt(5) *{ [(7 / 2) + (3 / 2) * sqrt(5)] ^ n - [(7 / 2) - (3 / 2) * sqrt(5)] ^ n } , with n >= 0. - _ Paolo P. Lava _ , Dec 01 2008 ● a(n) = 7 * a(n - 1) - a(n - 2) + 10, n>=3. - _ R. J. Mathar _ , Nov 07 2015 ●

▶ [A037792] 3,32,320,3201,32013,320132,3201320,32013201,320132013,3201320132,32013201320,320132013201,3201320132013,32013201320132,320132013201320,3201320132013201 ⋆ Decimal expansion of a(n) is given by the first n terms of the periodic sequence with initial period 3,2,0,1. ● a(n) = 10 * a(n - 1) + (1 / 4) * (3 * ((n + 1) mod 4) + 2 * ((n + 2) mod 4) - ((n + 3) mod 4)), with a(0)=0. - _ Paolo P. Lava _ , Jul 30 2009 ●

▶ [A037673] 3,32,320,3203,32032,320320,3203203,32032032,320320320,3203203203,32032032032,320320320320,3203203203203 ⋆ Decimal expansion of a(n) is given by the first n terms of the periodic sequence with initial period 3,2,0. ● a(n) = 10 * a(n - 1) + (1 / 9) * (11 * (n mod 3) + 8 * ((n + 1) mod 3) - 4 * ((n + 2) mod 3)), with a(0)=0. - _ Paolo P. Lava _ , Jul 30 2009 ●

▶ [A037799] 3,32,321,3210,32103,321032,3210321,32103210,321032103,3210321032,32103210321,321032103210,3210321032103,32103210321032,321032103210321,3210321032103210 ⋆ Decimal expansion of a(n) is given by the first n terms of the periodic sequence with initial period 3,2,1,0. ● a(n) = 10 * a(n - 1) + (1 / 2) * ((n mod 4) + ((n + 1) mod 4) + ((n + 2) mod 4) - ((n + 3) mod 4)), with a(0)=0. - _ Paolo P. Lava _ , Jul 30 2009 ●

▶ [A123336] 0,3,32,405,5488,75867,1054560,14680173,204438752,2847353715,39658107808,552364642437,7693441239120,107155791629643,1492487562920672,20787669795714525,289534888481556928 ⋆ Values X satisfying the equation 3(X - Y) ^ 4 - 16XY=0, where X>=Y. ● a(n) = c(n) * (1 + d(n)) with c(0)=0,c(1)=1 and c(n) = 4 * c(n - 1) - c(n - 2) d(0)=1,d(1)=2 and d(n) = 4 * d(n - 1) - d(n - 2). ● a(n) = (((2 + sqrt(3)) ^ n - (2 - sqrt(3)) ^ n) * (2 + (2 - sqrt(3)) ^ n + (2 + sqrt(3)) ^ n)) / (4 * sqrt(3)). - _ Gerry Martens _ , Jun 06 2015 ●

▶ [A139222] 3,33,63,93,123,153,183,213,243,273,303,333,363,393,423,453,483,513,543,573,603,633,663,693,723 ⋆ a(n) = 30 * n - 27. ● a(n) = a(n - 1) + 30. ● a(n) = 30 * n - 27. - _ Paolo P. Lava _ , Sep 06 2010 ●

▶ [A153783] 0,3,33,90,174,285,423,588,780,999,1245,1518,1818,2145,2499,2880,3288,3723,4185,4674,5190,5733,6303,6900,7524 ⋆ 3 times 11 - gonal (or hendecagonal) numbers: 3 * n * (9 * n - 7) / 2. ● a(n) = 27 * n + a(n - 1) - 24, with n>0, a(0)=0. - _ Vincenzo Librandi _ , Aug 03 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A048911] 1,3,33,91,989,2727,29637,81719,888121,2448843,26613993,73383571,797531669,2199058287,23899336077,65898365039,716182550641,1974751892883,21461577183153,59176658421451,643131132943949,1773325000750647,19272472411135317,53140573364097959 ⋆ Indices of square numbers which are also 9 - gonal. ● a(n) = 30 * a(n - 2) - a(n - 4). ● a(n) = 1 / 112 * ((p + q * (- 1) ^ n) * (2 * sqrt(2) + sqrt(7)) ^ n - (p - q * (- 1) ^ n) * (2 * sqrt(2) - sqrt(7)) ^ (n - 1)). ● a(n) = floor (1 / 112 * (p + q * (- 1) ^ n) * (2 * sqrt(2) + sqrt(7)) ^ n). ●

▶ [A206950] 0,0,0,3,33,259,1762,11093,66592,387264,2202053,12314587,67995221,371697914,2015659707,10859379024,58190011080,310409500291,1649579166385,8738000970251,46158910515154,243260704208613,1279386591175904,6716811592446952,35209193397256085 ⋆ Number of nonisomorphic graded posets with 0 and non - uniform Hasse graph of rank n, with no 3 - element antichain. ● a(n) = 13 * a(n - 1) - 59 * a(n - 2) + 115 * a(n - 3) - 109 * a(n - 4) + 51 * a(n - 5) - 9 * a(n - 6), a(1)=0, a(2)=0, a(3)=3, a(4)=33, a(5)=259, a(6)=1762. ●

▶ [A003129] 0,3,33,270,2025,14868,109851,827508,6397665,50932233,418175274,3542883864,30972408558,279287247333,2596195945977,24862074701208,245091667488207,2485294443056496,25903024863885465,277278282774462210 ⋆ Number of transfer impedances of an n - terminal network. ● a(n) = Sum _{ k=0..n } Stirling2(n,k) * binomial(binomial(k,2),2). ●

▶ [A190542] 0,3,33,279,2145,15783,113553,807159,5699265,40091463,281426673,1973132439,13824509985,96821901543,677954637393,4746487768119,33228635602305,232613334118023,1628344878433713,11398620307466199 ⋆ 7 ^ n - 4 ^ n. ● a(n) = 11 * a(n - 1) - 28 * a(n - 2). ●

▶ [A180416] 3,33,298,2649,23711,215341,1982296,18447847,173197435,1637524156,15570196516,148735628858,1426303768587,13722207893214,132387231596281,1280309591127436 ⋆ Number of positive integers below 10 ^ n, excluding perfect squares, which have a representation as a sum of 2 positive squares. ● a(n) = | { 0<k<10 ^ n : k in { A000415 } } |. ● a(n) = | { 0<k<10 ^ n : k in ({ A000404 } \ { A000290 }) } |. ●

▶ [A226508] 3,33,315,2889,26163,235953,2125035,19129689,172180323,1549662273,13947078555,125524061289,1129717614483,10167461718993,91507165036875,823564514029689,7412080712360643,66708726669526113,600378540800575995,5403406869529706889 ⋆ a(n) = Sum _{ i=3 ^ n..3 ^ (n + 1) - 1 } i. ● a(n) = 3 ^ (n - 1) * (4 * 3 ^ (n + 1) - 3). [_ Bruno Berselli _ , Jun 11 2013] ● a(0)=3, a(1)=33, a(n)=12 * a(n - 1) - 27 * a(n - 2). - _ Harvey P. Dale _ , Jun 19 2013 ●

▶ [A002277] 0,3,33,333,3333,33333,333333,3333333,33333333,333333333,3333333333,33333333333,333333333333,3333333333333,33333333333333,333333333333333

3,3333333333333333,33333333333333333 ⋆ a(n) = 3 * (10 ^ n - 1) / 9. ● a(n) = 10 * a(n - 1) + 3, with a(0)=0. - _ Paolo P. Lava _ , Jan 23 2009 ● a(n) = a(n - 1) + 3 * 10 ^ (n - 1) with a(0)=0; ● a(n) = 11 * a(n - 1) - 10 * a(n - 2) with a(0)=0, a(1)=3. (End) ●

▶ [A075835] 0,3,33,360,3927,42837,467280,5097243,55602393,606529080,661621787,72171863277,787274278560,8587845200883,93679022931153,1021881407041800,1114701645452864 7,121595299592773317 ⋆ Numbers n such that 13 * n ^ 2 + 4 is a square. ● a(n) = ((11 + 3 * sqrt(13)) ^ n - (11 - 3 * sqrt(13)) ^ n) / ((2 ^ n) * sqrt(13)). ● a(n) = 11 * a(n - 1) - a(n - 2) with a(1)=0 and a(2)=3. ●

▶ [A163476] 3,33,369,4179,47787,550377,6372201,74057451,863045523,100773377 13,117831338529,1379125012419,16152860411067,189282082016697,2218814180460441,26015921653589211,305093457567121443 ⋆ a(n) = 20 * a(n - 1) - 97 * a(n - 2) for n > 1; a(0) = 3, a(1) = 33. ● a(n) = ((3 + sqrt(3)) * (10 + sqrt(3)) ^ n + (3 - sqrt(3)) * (10 - sqrt(3)) ^ n) / 2. ●

▶ [A155660] 1,3,33,387,4161,42243,413793,3959427,37281921,347066883,3204309153,29403732867,268588249281,2444976817923,22198569382113,201143570584707,1819787258282241,16444551185679363,148466221699088673 ⋆ 9 ^ n - 7 ^ n + 1. ● a(n)=16 * a(n - 1) - 63 * a(n - 2) + 48 with a(0)=1, a(1)=3 - _ Vincenzo Librandi _ , Jul 21 2010 ●

▶ [A042821] 1,1,3,34,37,552,1141,2834,3975,6809,17593,41995,605523,647518,7728221,16103960,23832181,1446034820,1469867001,4385768822,49713324043,54099092865,807100624153,1668300341171,4143701306495 ⋆ Denominators of continued fraction convergents to sqrt(941). ● a(n) = 1462138780 * a(n - 17) + a(n - 34) for n>33. - _ Vincenzo Librandi _ , Jan 30 2014 ●

▶ [A195021] 0,3,34,93,180,295,438,609,808,1035,1290,1573,1884,2223,2590,2985,3408,3859,4338,4845,5380,5943,6534,7153,7800 ⋆ a(n) = n * (14 * n - 11). ● a(n) = 14 * n ^ 2 - 11 * n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A042041] 1,3,34,105,4864,14697,166531,514290,23823871,71985903,815668804,2518992315,116689315294,352586938197,3995145635461,12338023844580,5715442424861 41,1726970751303003,19568222506819174,60431638271760525,2799423583007803324 ⋆ Denominators of continued fraction convergents to sqrt(544). ● a(n) = 4898 * a(n - 4) - a(n - 8). - _ Wesley Ivan Hurt _ , Sep 05 2022 ●

▶ [A266696] 3,34,260,1721,10808,67376,427449,2798432,19042144,135083103,999573770,7709458472,61890269371,516304085366,4468459583648,40058286666913,371420337948828,3556972620397996,35138563919933649,357654826207771292,3746672499505598556,40354065576745998303 ⋆ a(n) = Sum _{ k=3..n } k * Stirling S2(n + 1, k + 1). ● a(n) = Sum _{ k=3..n } k * StirlingS2(n + 1, k + 1). ● a(n) = B(n + 2) - 2 * B(n + 1) - 3 ^ n + 2 ^ n, where B(n) is the n - th Bell number. - _ Ross La Haye _ , Feb 16 2017 ●

▶ [A001539] 3,35,99,195,323,483,675,899,1155,1443,1763,2115,2499,2915,3363,3843,4355,4899,5475,6083,6723,7395,8099,8835,9603 ⋆ a(n) = (4 * n + 1) * (4 * n + 3). ● a(n) = 32 * n + a(n - 1) for n>0, a(0)=3. - _ Vincenzo Librandi _ , Nov 12 2010 ● a(n) = a(m) + 16 * (n - m) * (n + m + 1). The previous formula is obtained for m = n - 1. - _ Bruno Berselli _ , Sep 29 2017 ●

▶ [A133710] 0,3,35,131,347,767,1511,2744,4686,7623,11919,18029,26513,38051,53459,73706,99932,133467,175851,228855,294503,375095,473231,591836,734186 ⋆ Column l=3 of irregular triangle in A133709. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

▶ [A271209] 1,3,35,247,1029,3131,7783,16815,32777,59059,100011,161063,248845,371307,537839,759391,1048593,1419875,1889587,2476119,3200021,4084123,5153655,6436367,7962649 ⋆ a(n) = n ^ 5 + n + 1. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6), n>5. (End) ●

▶ [A198961] 3,35,323,2915,26243,236195,2125763,19131875,172186883,1549681955,13947137603,125524238435,1129718145923,10167463313315,91507169819843,823564528378595,7412080755407363,66708726798666275,600378541187996483 ⋆ 4 * 9 ^ n - 1. ● a(n) = 9 * a(n - 1) + 8. a(n) = 10 * a(n - 1) - 9 * a(n - 2), n>1. ●

▶ [A065929] 3,35,416,4956,59055,703703,8385380,99920856,1190664891,14188057835,169066029128,2014604291700,24006185471271,286059621363551,3408709270891340,40618451629332528,484012710281098995,5767534071743855411,68726396150645165936 ⋆ (x,y) = (a(n),a(n + 1)) are the solutions of (t(x) + t(y)) / (1 + xy)) = t(3) = 6, where t(n) denotes the n - th triangular number t(n) = n(n + 1) / 2. ● a(n) = 2 * t(m) * a(n - 1) - a(n - 2) - 1, a(0) = m, a(1) = m ^ 3 + m ^ 2 - 1 with m = 3. ● a(0)=3, a(1)=35, a(2)=416, a(n) = 13 * a(n - 1) - 13 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Mar 23 2012 ● a(n) = (2 + (29 - 5 * sqrt(35)) * (6 - sqrt(35)) ^ n + (6 + sqrt(35)) ^ n * (29 + 5 * sqrt(35))) / 20. - _ Colin Barker _ , Mar 05 2016 ●

▶ [A161495] 3,35,432,5405,67773,850080,10663107,133755235,1677792528,21045816925,263993558397,3311470367040,41538271098243,521045872287395,6535871471114352,81984366749625245,1028391763981932093 ⋆ Expansion of x * (3 * x - 1) * (x - 3) / (1 - 15 * x + 32 * x ^ 2 - 15 * x ^ 3 + x ^ 4). ● a(n) = 15 * a(n - 1) - 32 * a(n - 2) + 15 * a(n - 3) - a(n - 4). ●

▶ [A179135] 3,35,450,5875,76875,1006250,13171875,172421875,2257031250,29544921875,386748046875,5062597656250,66270263671875,867489013671875,11355578613281250,148646453857421875,1945807342529296875 ⋆ a(n) = (3 - sqrt(5)) * ((3 + sqrt(5)) / 10) ^ (- n) / 2 + (3 + sqrt(5)) * ((3 - sqrt(5)) / 10) ^ (- n) / 2. ● a(n) = 5 ^ n * Lucas(2 * (n + 1)). - _ Ehren Metcalfe _ , Apr 22 2018 ●

▶ [A100033] 3,35,462,6435,92378,1352078,20058300,300540195,4537567650,68923264410,1052049481860,16123801841550,247959266474052,3824345300380220,59132290782430712,916312070471295267,14226520737620288370 ⋆ Bisection of A001700. ● a(n) = binomial(4n + 3, 2n + 2). - _ Emeric Deutsch _ , Dec 09 2004 ● a(n) = (1 / 2) * Sum _{ k = 0..2 * n + 2 } binomial(2 * n + 2,k) ^ 2. ● a(n) = (1 / 2) * hypergeom([- 2 - 2 * n, - 2 - 2 * n], [1], 1). ● a(n) = 2 * (4 * n + 1) * (4 * n + 3) / ((n + 1) * (2 * n + 1)) * a(n - 1). (End) ● a(n) = (1 / (2 * n + 2)) * Sum _{ k = 0..2 * n + 2 } k * binomial(2 * n + 2,k) ^ 2. ● a(n) = 2 * (n + 1) * hypergeom([- 1 - 2 * n, - 1 - 2 * n], [2], 1). (End) ●

▶ [A259557] 1,3,35,462,6435,92378,1352078,20058300,300540195,4537567650,68923264410,1052049481860,16123801841550,247959266474052,3824345300380220,59132290782430712,916312070471295267,14226520737620288370 ⋆ a(n) = binomial(4 * n - 1, 2 * n). ● a(n) = [x ^ (2 * n)] 1 / (1 - x) ^ (2 * n). - _ Ilya Gutkovskiy _ , Oct 10 2017 ● a(n) = (1 / 2) * [x ^ n] ((1 + x) ^ 2 / (1 - x)) ^ (2 * n) for n >= 1. ●

▶ [A072682] 3,36,54,57,63,96,114,117,123,156,174,177,183,216,234,237,243,276,294,297,303,336,354,357,363 ⋆ Numbers congruent to { 3, 36, 54, 57 } mod 60. ● a(n) = (1 / 4) * (22 * (n mod 4) + 7 * ((n + 1) mod 4) - 8 * ((n + 2) mod 4) + 79 * ((n + 3) mod 4)) + 60 * A002265. - _ Paolo P. Lava _ , Nov 05 2007 ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. ● a(n) = 15 * n + 3 * (1 + i) * ((1 - i) * i ^ (2 * n) - (5 + 2 * i) * i ^ (- n) + (2 + 5 * i) * i ^ n) / 4 where i=sqrt(- 1). (End) ●

▶ [A153448] 0,3,36,99,192,315,468,651,864,1107,1380,1683,2016,2379,2772,3195,3648,4131,4644,5187,5760,6363,6996,7659,8352 ⋆ 3 times 12 - gonal (or dodecagonal) numbers: 3 * n * (5 * n - 4). ● a(n) = 30 * n + a(n - 1) - 27 with n>0, a(0)=0. - _ Vincenzo Librandi _ , Aug 03 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3); a(0)=0, a(1)=3, a(2)=36. - _ Harvey P. Dale _ , Jun 18 2014 ● a(n) = (4 * n - 2) ^ 2 - (n - 2) ^ 2. In general, if P(k,n) is the k - th n - gonal number, then (2 * k + 1) * P(8 * k + 4,n) = ((3k + 1) * n - 2 * k) ^ 2 - (k * n - 2 * k)) ^ 2. - _ Charlie Marion _ , Jul 29 2021 ●

▶ [A140958] 3,36,108,420,684,1008,1332,1668,2076,2772,2952,3168,3576,4236,4776,5148,5532,5892,6312,6696,7008,7776,8064,8640,8964 ⋆ A090801(2n - 1) + A090801(2n). ● a(n) == 0 (mod 6), n>1. ●

▶ [A213848] 3,36,131,320,635,1108,1771,2656,3795,5220,6963,9056,11531,14420,17755,21568,25891,30756,36195,42240,48923,56276,64331,73120,82675 ⋆ Principal diagonal of the convolution array A213847. ● a(n) = (- 4 * n - 3 * n ^ 2 + 16 * n ^ 3) / 3. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ●

▶ [A006428] 0,3,36,135,360,798,1568,2826,4770,7645,11748,17433,25116,35280,48480,65348,86598,113031,145540,185115,232848,289938,357696,437550,531050 ⋆ Number of loopless tree - rooted planar maps with 3 vertices and n faces and no isthmuses. ● a(n) seems to be divisible by n + 1. - _ Ralf Stephan _ , Sep 01 2003 ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n > 7. ●

▶ [A073992] 0,0,3,36,210,1260,8100,46656,262440,1574640,9843120,60963840,369476640,2210794560,13162730688,78364164096,468205557120,2809233342720,16891882995456,101559956668416,609954817881600,3659728907289600,21947909832446976,131623189859008512 ⋆ Number of strings of length n over Z _ 6 with trace 3 and subtrace 3. ● a(n; t, s) = a(n - 1; t, s) + a(n - 1; t + 5, s + 5t + 1) + a(n - 1; t + 4, s + 4t + 4) + a(n - 1; t + 3, s + 3t + 3) + a(n - 1; t + 2, s + 2t + 2) + a(n - 1; t + 1, s + t + 1) where t is the trace and s is the subtrace. ●

▶ [A268898] 3,36,240,1344,6912,33792,159744,737280,3342336,14942208,66060288,289406976,1258291200,5435817984,23353884672,99857989632,425201762304,1803886264320,7627861917696,32160715112448,135239930216448 ⋆ Number of n X 2 0..2 arrays with some element plus some horizontally or antidiagonally adjacent neighbor totalling two exactly once. ● a(n) = 4 ^ (n - 1) * (6 * n - 3). ●

▶ [A127960] 0,3,36,243,1296,6075,26244,107163,419904,1594323,5904900,21434787,76527504,269440587,937461924,3228504075,11019960576,37321507107,125524238436,419576389587,1394713760400,4613015762523,15188432850756 ⋆ a(n) = n ^ 2 * 3 ^ n. ● a(n) = 9 * a(n - 1) - 27 * a(n - 2) + 27 * a(n - 3). - _ Vincenzo Librandi _ , Feb 07 2013 ●

▶ [A056299] 0,0,0,0,0,1,3,36,296,2303,16317,110462,717024,4532105,28046285,170938814,1029749994,6149327905,36477979041,215304158916,1265984738264,7422971231829,43433472086235,253759842223290 ⋆ Number of n - bead necklace structures using exactly six different colored beads. ● a(n) = (1 / n) * Sum _{ d|n } phi(d) * ([d==0 mod 60] * (S2(n / d + 5,6) - ●

▶ [A073980] 0,0,3,36,300,1620,8100,44928,262440,1574640,9722592,60466176,369476640,2213827200,13162730688,78364164096,468419708160,2810089946880,16891882995456,101554796888064,609954817881600,3659728907289600,21947538146863104,131621703842267136 ⋆ Number of strings of length n over Z _ 6 with trace 1 and subtrace 3. ● a(n; t, s) = a(n - 1; t, s) + a(n - 1; t + 5, s + 5t + 1) + a(n - 1; t + 4, s + 4t + 4) + a(n - 1; t + 3, s + 3t + 3) + a(n - 1; t + 2, s + 2t + 2) + a(n - 1; t + 1, s + t + 1) where t is the trace and s is the subtrace. ●

▶ [A003691] 3,36,324,2880,25632,228096,2029824,18063360,160745472,1430470656,12729729024,113281597440,1008090611712,8970977673216,79832546279424,710428191621120 ⋆ Number of spanning trees with degrees 1 and 3 in K _ 3 X P _ 2n. ● a(n) = 8 * a(n - 1) + 8 * a(n - 2), n>3. ●

▶ [A026121] 0,3,36,351,3240,29403,265356,2390391,21520080,193700403,1743362676,15690441231,141214502520,1270932117003,11438393835996,102945558872871,926510072902560,8338590785263203,75047317454789316,675425858255365311 ⋆ a(n) = 3 ^ n * (3 ^ n - 1) / 2. ● a(n) = C(3 ^ n,2), n>=0. - _ Zerinvary Lajos _ , Jan 07 2008 ● a(0) = 0, a(1)=3, a(n)=12 * a(n - 1) - 27 * a(n - 2). - _ Harvey P. Dale _ , Oct 07 2012 ●

▶ [A099670] 3,36,369,3702,37035,370368,3703701,37037034,370370367,3703703700,37037037033,370370370366,3703703703699,37037037037032,370370370370365,3703703703703698,37037037037037031,370370370370370364 ⋆ Partial sums of repdigits of A002277. ● a(n) = (3 / 81) * (10 ^ (n + 1) - 9 * n - 10). - R. Piyo (nagoya314(AT)yahoo.com), Dec 10 2004 ●

▶ [A233196] 1,3,36,528,8256,131328,2098176,33558528,536887296,8590000128,137439215616,2199024304128,35184376283136,562949970198528,9007199321849856,144115188344291328,2305843010287435776 ⋆ Number of n X 2 0..7 arrays with no element x(i,j) adjacent to itself or value 7 - x(i,j) horizontally, antidiagonally or vertically, top left element zero, and 1 appearing before 2 3 4 5 and 6, 2 appearing before 3 4 and 5, and 3 appearing before 4 in row major order (unlabelled 8 - colorings with no clashing color pairs). ● a(n) = 2 ^ (2 * n - 7) * (4 ^ n + 8) for n>1. ●

▶ [A342300] 0,1,3,36,9801,40755,121771,297045,631125,1212751,2158695,3617601,5773825,8851275,13117251,18886285,26523981,36450855,49146175,65151801,85076025,109597411,139468635,175520325,218664901 ⋆ Least nonnegative number greater than the previous number which is simultaneously an n - gonal and (n + 1) - gonal number. ● a(n) = 32n ^ 5 - 112n ^ 4 + 70n ^ 3 + 93n ^ 2 - 57n - 35 for n > 3; a(0) = 0, a(1) = 1, a(2) = 3, a(3) = 36. ●

▶ [A073236] 1,3,36,1340164183006357435 ⋆ Pi ^ Pi ^ ... ^ Pi (n times) rounded to nearest integer. ● a(n) = round(Pi ^ Pi ^ ... ^ Pi), where Pi occurs n times,

a(0) = 1 (=Pi ^ 0). ●

► [A041067] 1,3,37,114,1405,4329,53353,164388,2026009,6242415,76934989,237047382,2921503573,9001558101,110940200785,341822160456,4212806126257,129802405392 27,159975692596981,492907318330170,6074863512559021,18717497856007233,230684837784645817 ⋆ Denominators of continued fraction convergents to sqrt(40). ● a(n) = 38 * a(n - 2) - a(n - 4). - _ Vincenzo Librandi _ , Dec 10 2013 ●

► [A155667] 1,3,37,489,5905,67233,737857,7902849,83222785,865782273,89262581 77,91410065409,931280523265,9450244186113,95601953488897,96481562791116 9,9718525023289345,97748200186314753,981985601490518017 ⋆ a(n) = 10 ^ n - 8 ^ n + 1. ● a(n) = 18 * a(n - 1) - 80 * a(n - 2) + 63 with a(0)=1, a(1)=3. - _ Vincenzo Librandi _ , Jul 21 2010 ● a(n) = 19 * a(n - 1) - 98 * a(n - 2) + 80 * a(n - 3). - _ Wesley Ivan Hurt _ , Apr 18 2023 ●

► [A199025] 3,38,423,4658,51243,563678,6200463,68205098,750256083,8252816918,90780986103,998590847138,10984499318523,120829492503758,1329124417541343,14620368592954778,160824054522502563,1769064599747528198 ⋆ (7 * 11 ^ n - 1) / 2. ● a(n) = 11 * a(n - 1) + 5. ● a(n) = 12 * a(n - 1) - 11 * a(n - 2), n>1. ●

► [A153875] 0,3,39,108,210,345,513,714,948,1215,1515,1848,2214,2613,3045,3510,4008,4539,5103,5700,6330,6993,7689,8418,9180 ⋆ 3 times 13 - gonal (or trideca gonal) numbers: 3 * n * (11 * n - 9) / 2. ● a(n) = a(n - 1) + 33 * n - 30, with n >0, a(0)=0. - _ Vincenzo Librandi _ , Dec 14 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A292542] 3,39,156,624,2496,9984,39936,159744,638976,2555904,10223616,40894464,163577856,654311424,2617245696,10468982784,41875931136,167503724544,670014898176,2680059592704,10720238370816,42880953483264,171523813933056,686095255732224 ⋆ Number of 4 - cycles in the n - Sierpinski tetrahedron graph. ● a(n) = 39 * 4 ^ (n - 2) for n > 1. ● a(n) = 4 * a(n - 1) for n > 2. ●

► [A292294] 0,0,0,0,3,39,357,2952,23622,186984,1474773,11617815,91485075,720308160,5671099008,44648794944,351520074867,2767513935927,21788596994037,171541276628904,1350541654293318,10632792057873480,83711795070905925,659061569195852295 ⋆ Number of vertices of type E at level n of the hyperbolic Pascal pyramid. ● a(n) = 12 * a(n - 1) - 37 * a(n - 2) + 37 * a(n - 3) - 12 * a(n - 4) + a(n - 5), n >= 6. ●

► [A191468] 0,3,39,387,3471,29643,246519,2019027,16386591,132264603,1063976199,8541106467,68475336111,548535110763,4391942995479,35153854510707,281322388820031,2251036874232123,18010583812216359,144096114589527747,1152826137175206351 ⋆ 8 ^ n - 5 ^ n. ● a(n) = 13 * a(n - 1) - 40 * a(n - 2). ●

► [A203243] 3,39,390,3630,33033,298389,2688780,24208860,217909263,1961271939,17651713170,158866215690,1429798332693,12868192168689,115813751041560,1042323823944120,9380914609207323,84428232063996639,759854090319361950 ⋆ Second elementary symmetric function of the first n terms of (1,3,9,27,81,...). ● a(n) = (3 - 4 * 3 ^ n + 9 ^ n) / 16. ● a(n) = 13 * a(n - 1) - 39 * a(n - 2) + 27 * a(n - 3). ●

► [A198970] 3,39,399,3999,39999,399999,3999999,39999999,399999999,3999999999,39999999999,399999999999,3999999999999,39999999999999,399999999999999,3999999999999999,39999999999999999,399999999999999999 ⋆ a(n) = 4 * 10 ^ n - 1. ● a(n) = 10 * a(n - 1) + 9, n>0. ● a(n) = 11 * a(n - 1) - 10 * a(n - 2), n>1. ●

► [A041347] 1,1,3,40,83,123,3281,3404,10089,134561,279211,413772,11037283,11451055,33939393,452663164,939265721,1391928885,37129416731,38521345616,1141721079 63,1522758749135,3159689606233,4682448355368,124903346845801 ⋆ Denominators of continued fraction convergents to sqrt(187). ● a(n) = 3364 * a(n - 6) - a(n - 12) for n>11. - _ Vincenzo Librandi _ , Dec 16 2013 ●

► [A283115] 0,0,0,0,0,3,40,242,1038,3504,9998,25158,57410,121023,239148,447552,799764,1373400,2278290,3666036,5742396,8781111,13141326,19287246,27811906 ⋆ Number of nonequivalent ways (mod D _ 3) to place 4 points on an n X n X n triangular grid so that no two of them are on the same row, column or diagonal. ● a(n) = (5 * n ^ 8 - 100 * n ^ 7 + 810 * n ^ 6 - 3336 * n ^ 5 + 6940 * n ^ 4 - 5120 * n ^ 3 - 4080 * n ^ 2 + 6336 * n) / 11520 + IF(MOD(n, 2) = 1, 4 * n ^ 3 - 38 * n ^ 2 + 144 * n - 207) / 768 + IF(MOD(n, 3) = 1, n ^ 2 - 6 * n + 8) / 18 + IF(MOD(n, 6) = 1, - 1) / 6. ●

► [A165386] 3,40,305,1622,6868,25036,82224,250208,718536,1972132,5220384,13417184,33652952,82699012,199729888,475260768,1116459752,2593550148,5965976992,13605076608,30787314104,69191005796,154539160288,343241755840 ⋆ Number of slanted 3 X n (i=1..3) X (j=i..n + i - 1) 1..4 arrays with all 1s connected, all 2s connected, all 3s connected, all 4s connected, 1 in the upper left corner, 2 in the upper right corner, 3 in the lower left corner, and 4 in the lower right corner. ● a(n) = (- 314880 + 315315 * 2 ^ n - (139264 + 79785 * 2 ^ n) * n + 5 * (- 5248 + 1323 * 2 ^ n) * n ^ 2 - 3280 * n ^ 3 - 160 * n ^ 4 - 16 * n ^ 5) / 240 for n>3. ●

► [A002700] 3,40,336,2304,14080,79872,430080,2228224,11206656,55050240,265289728,1258291200,5888802816,27246198784,124822487040,566935683072,2555505541120,11441792876544,50921132261376,225399883694080,992858999881728,4354066045992960 ⋆ Coefficients of Chebyshev polynomials: n * (2 * n + 1) * 4 ^ (n - 1). ● a(n) = 12 * a(n - 1) - 48 * a(n - 2) + 64 * a(n - 3). - _ Colin Barker _ , Jun 15 2015 ● a(n) = 1 / 2 * Sum _{ k = 0..2 * n } k ^ 2 * binomial(2 * n,k). Cf. A002699. - _ Peter Bala _ , Apr 09 2017 ●

► [A322244] 1,3,41,315,3345,31923,328889,3337323,34600225,359225955,3760299081,39497556123,416692693041,4409256847635,46791791441625,497734241873355,5305782027097665,56663444325365955,606142658305541225,6493612892317230075,69658589316520324945,748141936546712050035,8043908203413946807545,8657301524706106085047 5,932597459464760512144225 ⋆ G.f.: 1 / sqrt(1 - 6 * x - 55 * x ^ 2). ● a(n) = Sum _{ k=0..n } 11 ^ (n - k) * (- 4) ^ k * binomial(n,k) * binomial(2 * k,k). ● a(n) = Sum _{ k=0..n } (- 5) ^ (n - k) * 4 ^ k * binomial(n,k) * binomial(2 * k,k). ● a(n) equals the (central) coefficient of x ^ n in (1 + 3 * x + 16 * x ^ 2) ^ n. ●

► [A155672] 1,3,41,603,8081,102003,1240121,14704203,171312161,1970527203,22450640201,253930611003,2855998840241,31980846315603,356873041128281,3971357037321003,44096709674720321,488769846799627203 ⋆ 11 ^ n - 9 ^ n + 1 ^ n ● a(n)=20 * a(n - 1) - 99 * a(n - 2) + 80 with a(0)=1, a(1)=3 [From _ Vincenzo Librandi _ , Jul 21 2010] ●

► [A350901] 0,1,3,42,399,4655,50568,565149,6248991,69380842,769112355,8530996299,94604226192,1049202243593,11635724020011,129042610760010,1431102560300007,15871178746661911,176014035001069464,1952025706821035013,21648296204009443815,240083286518079466826 ⋆ a(n) = F(n) * (2 * F(n - 1) ^ 2 + (- 1) ^ (n - 1)) * (2 * F(n) ^ 2 + (- 1) ^ n), where F(n) is the n - th Fibonacci number. ● a(n) = 8 * a(n - 1) + 40 * a(n - 2) - 60 * a(n - 3) - 40 * a(n - 4) + 8 * a(n - 5) + a(n - 6), for n > 5. ●

► [A160873] 0,3,42,420,3720,31248,256032,2072640,16679040,133824768,1072169472,8583644160,68694312960,549655154688,4397643866112,35182761492480,281468534292480,2251774043947008,18014295430397952,144114775759257600 ⋆ Number of isomorphism classes of connected (D _ 4) - fold coverings of a connected graph with circuit rank n. ● a(n) = 2 ^ (n - 2) * (2 ^ n - 1) * (2 ^ (n - 1) - 1) = 8 ^ (n - 1) - 6 * 4 ^ (n - 2) + 2 ^ (n - 2) [Kwak, Chun, and Lee]. - _ Álvar Ibeas _ , Oct 30 2015 ● a(n) = 2 ^ (- 3 + n) * (2 - 3 * 2 ^ n + 4 ^ n). ● a(n) = 14 * a(n - 1) - 56 * a(n - 2) + 64 * a(n - 3) for n>3. ●

► [A003770] 3,42,474,5514,63942,741786,8605014,99822138,1157982198,13433121114,155830324182,1807702748538,20970175374006,243263587212186,2821968429343638,32736119315989434 ⋆ Number of 2 - factors in K _ 4 X P _ n. ● a(n) = 11a(n - 1) + 8a(n - 2) - 12a(n - 3), n>3. ●

► [A097068] 0,3,42,576,7896,108240,1483776,20339904,278823552,3822170112,52395087360,718242542592,9845815246848,134968443285504,1850174945009664,25362575456993280,347675356617867264 ⋆ a(n)=Sum(C(n,2k + 1)5 ^ k 3 ^ (2k + 1) 7 ^ (n - 2k - 1), k=0,..,Floor[(n - 1) / 2]). ● a(n)=2 ^ (n - 1)F(4n), where F(n) are Fibonacci numbers A000045 ● a(n)= 14 * a(n - 1) - 4 * a(n - 2). G.f.: 3 * x / (1 - 14 * x + 4 * x ^ 2). [From _ R. J. Mathar _ , Feb 06 2010] ●

► [A281503] 1,3,43,137,1977,6299,90899,289617,4179377,13316083,192160443,612250201,8835201001,28150193163,406227085603,1294296635297,18677610736737,59509495030499,858763866804299,2736142474767657,39484460262261017,125803044344281723 ⋆ Solutions x to the negative Pell equation y ^ 2 = 33 * x ^ 2 - 8 with x,y >= 0. ● a(n) = 46 * a(n - 2) - a(n - 4) for n>4. ●

► [A060559] 3,43,311,1551,6061,19877,57057,147433,349778,773058,1609322,3182842,6021366,10956806,19264366,32851038,54506573,88232485,139667385,216629985,329804475,493596675,727193415,1055862015 ⋆ One half of sixth column (m =5) of triangle A060556. ● a(n) = (8 * n ^ 2 + 72 * n + 135) * binomial(n + 8, 8) / 45. ●

► [A173770] 3,43,443,4443,44443,444443,4444443,44444443,444444443,4444444443,44444444443,444444444443,4444444444443,44444444444443,444444444444443,4444444444444443,44444444444444443 ⋆ a(n)=(4 * 10 ^ n - 13) / 9. ● a(n)=10 * a(n - 1) + 13 (with a(1)=3). ●

► [A199020] 3,43,483,5323,58563,644203,7086243,77948683,857435523,9431790763,103749698403,1141246682443,12553713506883,138090848575723,1518999334332963,16708992677662603,183798919454288643,2021788113997175083 ⋆ 4 * 11 ^ n - 1. ● a(n) = 11 * a(n - 1) + 10. ● a(n) = 12 * a(n - 1) - 11 * a(n - 2), n>1. ●

► [A141060] 3,43,683,10923,174763,2796203,44739243,715827883,11453246123,183251937963,2932031007403,46912496118443,750599937895083,12009599006321323,192153584101141163,3074457345618258603,49191317529892137643 ⋆ Fourth quadrisection of Jacobsthal numbers A001045: a(n)=16a(n - 1) - 5. ● a(n)= (1 + 8 * 16 ^ n) / 3. [From _ Paolo P. Lava _ , Aug 04 2008] ● a(0)=3, a(1)=43, a(n)=17 * a(n - 1) - 16 * a(n - 2). - _ Harvey P. Dale _ , Mar 16 2015 ●

► [A133073] 0,3,44,279,1104,3275,8028,17199,33344,59859,101100,162503,250704,373659,540764,762975,1052928,1425059,1895724,2483319,3208400,4093803,5164764,6449039,7977024 ⋆ a(n) = n ^ 5 + n ^ 3 + n ^ 2. ● a(n) = n ^ 2 * (n ^ 3 + n + 1). - _ Wesley Ivan Hurt _ , Mar 02 2023 ●

► [A353878] 1,3,44,369,3633,34002,323293,3058623,28982628,274494621,2600148629,24628666626,233286962601,2209723174731,20930806288252,198259418947833,1877940242218857,17788105074906162,168491350295593637,1595972975308532199,15117273008425964916 ⋆ Number of tilings of a 3 X n rectangle using right trominoes, dominoes and 1 X 1 tiles. ● a(n) = 6 * a(n - 1) + 33 * a(n - 2) + 3 * a(n - 3) - 40 * a(n - 4) + 15 * a(n - 5). ●

► [A011916] 0,3,44,615,8568,119339,1662180,23151183,322454384,4491210195,62554488348,871271626679,12135248285160,169022204365563,2354175612832724,32789436375292575,456697933641263328,6360981634602394019 ⋆ a(n) = ((b(n) - 1) + sqrt(3 * b(n) ^ 2 - 4 * b(n) + 1)) / 2, where b(n) is A011922(n). ● a(n) = + 15 * a(n - 1) - 15 * a(n - 2) + a(n - 3). ● a(n) = (- 2 - (7 - 4 * sqrt(3)) ^ n * (- 1 + sqrt(3)) + (1 + sqrt(3)) * (7 + 4 * sqrt(3)) ^ n) / 12. - _ Colin Barker _ , Mar 05 2016 ●

► [A062346] 3,45,210,630,1485,3003,5460,9180,14535,21945,31878,44850,61425,82215,107880,139128,176715,221445,274170,335790,407253,489555,583740,690900,812175 ⋆ Consider 2n tennis players; a(n) is the number of matches needed to let every possible pair play each other. ● a(n) = n * (4 * n ^ 3 - 12 * n ^ 2 + 11 * n - 3) / 2. - Swapnil P. Bhatia (sbhatia(AT)cs.unh.edu), Jul 20 2006 ● a(n + 1) = (2 * n + 2) * (2 * n + 1) * (2 * n) * (2 * n - 1) / 8. - _ James Mahoney _ , Oct 19 2011 ● a(n) = binomial(2 * n ^ 2 - 3 * n + 1, 2). - _ Wesley Ivan Hurt _ , Oct 14 2013 ●

► [A309453] 0,3,45,339,1368,8571,42185,630430,4748145,27807349,27807349,1722658843,13586619301,41269193703,235047214517,2269716433064,3075508549272 2,230152668910328,928044210871949,2556457808782398,36753143364901827,196337675960125829,2430521132293261857 ⋆ The successive approximations up to 7 ^ n for 7 - adic integer 5 ^ (1 / 5). ● a(0) = 0 and a(1) = 3, a(n) = a(n - 1) + (a(n - 1) ^ 5 - 5) mod 7 ^ n for n > 1. ●

► [A360716] 0,0,0,3,45,435,3465,24794,165942,1061730,6578550,39796053,236309931,1382504669,7989938775,45704622660,259155482652,1458298435572,8151155034300,45290328792695,250308998693145,1376766613411959,7539656755416885,41126122248463038,223513887538508850 ⋆ Number of unordered pairs of self - avoiding paths whose sets of nodes are disjoint subsets of a set of n points on a circle; one - node paths are not allowed. ● a(n) = n * (n - 1) * 2 ^ (- 5) * (5 ^ (n - 2) - 2 * 3 ^ (n - 2) + 1). ● a(n) = 27 * a(n - 1) - 312 * a(n - 2) + 2016 * a(n -

3) - 7986 * a(n - 4) + 19998 * a(n - 5) - 31472 * a(n - 6) + 29880 * a(n - 7) - 15525 * a(n - 8) + 3375 * a(n - 9) for n > 9. ●

► [A352756] 3,46,197,528,1111,2018,3321,5092,7403,10326,13933,18296,23487,29578,36641,44748,53971,64382,76053,89056,103463,119346,136777,155828,176571 ⋆ Positive numbers k such that the centered cube number k ^ 3 + (k + 1) ^ 3 is equal to the difference of two positive cubes and to A352755(n). ● a(n) = ((2 * n - 1) * (3 * (2 * n - 1) ^ 2 + 4) - 1) / 2. ● a(n) can be extended for negative n such that a(- n) = - a(n + 1) - 1. ●

► [A059624] 3,46,357,1908,7969,27846,84903,232336,582114,1355172,2964494,6147336,12168702,23125508,42389874,75240912,129747485,217979970,357647355,574277340,904081815,1397678490,2124871905,3180733920,4693265460 ⋆ Expansion of (3 + 10 * x + 3 * x ^ 2) / (1 - x) ^ 12. ● a(n)= binomial(n + 9, 9) * (8 * n ^ 2 + 80 * n + 165) / (11 * 5). ●

► [A277388] 3,47,306,1270,4005,10493,24052,49836,95415,171435,292358,477282,750841,1144185,1696040,2453848,3474987,4828071,6594330,8869070,11763213,15404917,19941276,25540100,32391775 ⋆ Number of nonnegative solutions of a certain system of linear Diophantine equations depending on an odd parameter. ● a(n) = n * (- 1 + n) * (3 - 2 * n + n ^ 2 - n ^ 3 + 2 * n ^ 4) / 18. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>8. ●

► [A199106] 3,47,575,6911,82943,995327,11943935,143327231,1719926783,20639121407,247669456895,2972033482751,35664401793023,427972821516287,5135673858195455,61628086298345471,739537035580145663,8874444426961747967 ⋆ a(n) = 4 * 12 ^ n - 1. ● a(n) = 12 * a(n - 1) + 11. ● a(n) = 13 * a(n - 1) - 12 * a(n - 2). ●

► [A219056] 0,3,48,243,768,1875,3888,7203,12288,19683,30000,43923,62208,85683,115248,151875,196608,250563,314928,390963,480000,583443,702768,839523,995328 ⋆ a(n) = 3 * n ^ 4. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n > 4. ●

► [A230962] 3,48,296,721,10072,213785,1958709,7613760,21165597,894454032,12278087704,59926173839,62518379032,3374316625735,58552907681096,416603004343680,1261259807092797,10231862403603888,255781764375436389,2697529798981443601,11543491568219853608 ⋆ Values of x such that x ^ 2 + y ^ 2 = 73 ^ n with x and y coprime and 0 < x < y. ● a(n) = min(abs(Re((3 + 8i) ^ n)), abs(Im((3 + 8i) ^ n))). ● a(n) = abs(Re(3 + 8i) ^ n) if and only if 1 / 4 < frac(n * arctan(8 / 3) / Pi) < 3 / 4. ●

► [A073982] 0,0,3,48,300,1620,9072,48384,262440,1555200,9722592,60466176,367960320,2207761920,13162730688,78399995904,468419708160,2810089946880,16894457846784,101565116448768,609954817881600,3659666929459200,21947538146863104,131621703842267136 ⋆ Number of strings of length n over Z _ 6 with trace 1 and subtrace 5. ● a(n; t, s) = a(n - 1; t, s) + a(n - 1; t + 5, s + 5t + 1) + a(n - 1; t + 4, s + 4t + 4) + a(n - 1; t + 3, s + 3t + 3) + a(n - 1; t + 2, s + 2t + 2) + a(n - 1; t + 1, s + t + 1) where t is the trace and s is the subtrace. ●

► [A356644] 0,0,3,48,360,2057,10276,47552,209871,898168,3765080,15560725,63681228,258826128,1046920155,4220390592,16973219016,68148598817,273305155276,1095189435488,4386195036135,17559755662600,70280167711928,281233465458733,1125242449638300 ⋆ Number of vertex cuts in the n - antiprism graph. ● a(n) = 4 ^ n + 2 * n - LucasL(2 * n) - 2 * n * Fibonacci(2 n) - 1. - _ Eric W. Weisstein _ , Aug 30 2022 ● a(n) = 12 * a(n - 1) - 56 * a(n - 2) + 130 * a(n - 3) - 160 * a(n - 4) + 104 * a(n - 5) - 33 * a(n - 6) + 4 * a(n - 7). - _ Eric W. Weisstein _ , Aug 30 2022 ●

► [A354132] 1,3,48,405,4185,40320,397755,3892293,38193444,374425263,3671810235,36003770640,353046480345,3461866214283,33946152068808,332866572321933,3263999126947497,32005882711563552,313840950402409011,3077438640586986141,30176522977460549436 ⋆ Number of tilings of a 3 X n rectangle using 2 X 2 and 1 X 1 tiles, right trominoes and dominoes. ● a(n) = 6 * a(n - 1) + 38 * a(n - 2) - 68 * a(n - 4) + 24 * a(n - 5) - 3 * a(n - 6). ●

► [A041523] 1,1,3,49,101,150,4901,5051,15003,245099,505201,750300,24514801,25265101,75045003,1225985149,2527015301,3753000450,122623029701,126376030151,375375090003,6132377470199,12640130030401,18772507500600,613360370049601 ⋆ Denominators of continued fraction convergents to sqrt(278). ● a(n) = 5002 * a(n - 6) - a(n - 12) for n>11. - _ Vincenzo Librandi _ , Dec 19 2013 ●

► [A359886] 1,1,3,49,231,789,4771,27225,122799,607469,3255979,16253649,80098519,409480005,2079921395,10411734921,52523676351,266059774429,1341128940795,6758479842689,34138205819239,172324729379509,869131661400259,4386075013348025,22138673661637327 ⋆ Number of 3 - dimensional tilings of a 2 X 2 X n box using 2 X 2 X 1 plates and trominos (three 1 X 1 X 1 cubes). ● a(n) = a(n - 1) + 3 * c(n - 2) + 2 * a(n - 2) + 4 * c(n - 3) + 8 * a(n - 3), ● a(n) = 2 * a(n - 1) + a(n - 2) + 58 * a(n - 3) + 72 * a(n - 4) + 32 * a(n - 5) - 128 * a(n - 6) for n >= 6. ●

► [A167601] 1,3,49,459,3913,39507,363169,3421083,32375353,303697827,2862955537,26952847467,253686746665,2388861601779,22489001385601,211729323587643,1993409453728537,18767289570726723,176690276990149105 ⋆ G.f.: 1 / (1 - 3 * x - 40 * x ^ 2 - 192 * x ^ 3). ● a(n) = 3 * a(n - 1) + 40 * a(n - 2) + 192 * a(n - 3). - _ G. C. Greubel _ , Jun 17 2016 ●

► [A248341] 0,3,51,657,7599,83193,882351,9176457,94235199,959646393,9717524751,98022673257,986158712799,9903110989593,99321776927151,995252438490057,996676706943039 9,997673694860127 93,9983715864020895 51,9988601104814626857 ⋆ 10 ^ n - 7 ^ n. ● a(n) = 17 * a(n - 1) - 70 * a(n - 2). ●

► [A075869] 3,51,915,16419,294627,5286867,94868979,1702354755,30547516611,548152944243,9836205479763,176503545691491,3167227616967075,56833593559715859,1019837456457918387,18300240622682815107 ⋆ Numbers k such that 5 * k ^ 2 - 9 is a square. ● a(n) = 3 * sqrt(5) / 10 * ((2 + sqrt(5)) ^ (2 * n - 1) - (2 - sqrt(5)) ^ (2 * n - 1)) = 18 * a(n - 1) - a(n - 2). ●

► [A202654] 0,0,3,52,370,1620,5285,14168,33012,69240,133815,242220,415558,681772,1076985,1646960,2448680,3552048,5041707,7018980,9603930,12937540,17184013,22533192,29203100 ⋆ Number of ways to place 3 nonattacking semi - queens on an n X n board. ● a(n) = 1 / 6 * (n - 2) * (n - 1) * n * (n ^ 3 - 5 * n ^ 2 + 8 * n - 3). ●

► [A173802] 3,53,553,5553,55553,555553,5555553,55555553,555555553,5555555553,55555555553,555555555553,5555555555553,55555555555553,555555555555553,5555555555555553,55555555555555553,555555555555555553 ⋆ a(n)=(5 * 10 ^ n - 23) / 9. ● a(n)=10 * a(n - 1) + 23, n>1. ●

► [A068380] 3,54,180,378,648,990,1404,1890,2448,3078,3780,4554,5400,6318,7308,8370,9504,10710,11988,13338,14760,16254,17820,19458,21168 ⋆ Engel expansion of sinh(1 / 3). ● a(1) = 3, a(n) = 18 * (n * (2 * n - 3) + 1 for n>1. - _ Ralf Stephan _ , Sep 03 2003 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>4. G.f.: 3 * x * (x ^ 3 - 9 * x ^ 2 - 15 * x - 1) / (x - 1) ^ 3. - _ Colin Barker _ , Apr 13 2012 ●

► [A174782] 0,1,3,54,250,1950,10206,64288,350064,2065500,11509300,66905256,380767608,2226036904,12949377000,76842172800,457297336576,2766381692688,16849247813424,104116268476000,649043824951200 ⋆ Sum of the numerators for computing the fourth moment of the probability mass function for the number of involutions with k 2 - cycles in n elements (A000085) assuming equal likelihood. ● a(n)=Sum _{ k=0..[n / 2] } k ^ 4 * n! / ((n - 2 * k)! * 2 ^ k * k!). ●

► [A003776] 3,54,1140,24360,521064,11146656,238452456,5101047216,109123156248,2334395822496,49938107061384,1068291209653392,22853211220567416,488882861126970624 ⋆ Number of 2 - factors in P _ 5 X P _ 2n. ● a(n) = 24a(n - 1) - 57a(n - 2) + 26a(n - 3), n>3. ● a(n)=(2 / 3) * sqrt(3) * [11 + 6 * sqrt(3)] ^ n - (2 / 3) * sqrt(3) * [11 - 6 * sqrt(3)] ^ n + (1 / 3) * 2 ^ n + (4 / 3) * [11 - 6 * sqrt(3)] ^ n + (4 / 3) * [11 + 6 * sqrt(3)] ^ n, with n>=0 - _ Paolo P. Lava _ , Jun 17 2008 ●

► [A041155] 1,3,55,168,3079,9405,172369,526512,9649585,29475267,540204391,1650088440,30241796311,92375477373,1693000389025,5171376644448,94777779989089,289504716611715,5305862678999959,16207092753611592,297033532244008615,907307689485637437 ⋆ Denominators of continued fraction convergents to sqrt(87). ● a(n) = 56 * a(n - 2) - a(n - 4). - _ Vincenzo Librandi _ , Dec 12 2013 ●

► [A131466] 1,3,57,319,1065,2691,5713,10767,18609,30115,46281,68223,97177,134499,181665,240271,312033,398787,502489,625215,769161,936643,1130097,1352079,1605265 ⋆ a(n) = 5n ^ 4 - 4n ^ 3 + 3n ^ 2 - 2n + 1. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n > 4. ●

► [A060483] 3,57,717,7845,81333,825237,8300757,83202645,832809813,8331237717,83324947797,833329785045,8333199127893,83333796486997,833331185898837,833332474349704 5,83333298973791573,833333195894773077,833333278357830587 7,83333331134311650645 ⋆ Number of 5 - block tricoverings of an n - set. ● a(n) = (1 / 5!) * (10 ^ n - 15 * 4 ^ n + 45 * 2 ^ n - 40). ●

► [A139746] 0,3,57,819,10545,128283,1509417,17390019,197581665,2223729963,24863682777,276721736019,3069708899985,33972956330043,375351787072137,4142063797326819,45668254886861505,503195228685608523,5541902914982749497,6101497526033869041 9 ⋆ a(n) = 11 ^ n - 8 ^ n. ● a(n) = 19 * a(n - 1) - 88 * a(n - 2). - _ Vincenzo Librandi _ , Jun 02 2011 ●

► [A041735] 1,1,3,58,119,177,6845,7022,20889,403913,828715,1232628,47668579,48901207,145470993,2812850074,5771171141,8584021215,331963977311,340547998526,1013059974363,19588687511423,40190434997209,59779122508632,2311797090325225 ⋆ Denominators of continued fraction convergents to sqrt(387). ● a(n) = 6964 * a(n - 6) - a(n - 12) for n>11. - _ Vincenzo Librandi _ , Dec 23 2013 ●

► [A254653] 1,3,58,276,6325,30303,695638,3333000,76513801,366599643,8415822418,40322627676,925663952125,4435122444663,101814618911278,487823146285200,11198682416288401,53656110968927283,1231753251172812778,5901684383435715876,135481658946593117125 ⋆ Indices of centered heptagonal numbers (A069099) which are also pentagonal numbers (A000326). ● a(n) = a(n - 1) + 110 * a(n - 2) - 110 * a(n - 3) - a(n - 4) + a(n - 5). ●

► [A049661] 0,3,58,1045,18756,336567,6039454,108373609,1944685512,34895965611,626182695490,11236392553213,201628883262348,3618083506169055,64923874227780646,1165011652593882577,20905285872462105744 ⋆ a(n) = (Fibonacci(6 * n + 1) - 1) / 4. ● a(n) = 19 * a(n - 1) - 19 * a(n - 2) + a(n - 3). (End) ● a(n) = (- 1 / 4 + 1 / 40 * (9 + 4 * sqrt(5)) ^ (- n) * (5 - sqrt(5) + (5 + sqrt(5)) * (9 + 4 * sqrt(5)) ^ (2 * n))). - _ Colin Barker _ , Mar 03 2016 ●

► [A046024] 1,3,59,361139,43922730588128390 ⋆ a(n) = smallest k such that Sum _{ i = 1..k } 1 / prime(i) exceeds n. ● a(n) = e ^ (e ^ (n + O(1))), see comment in A223037. - _ Jonathan Sondow _ , Apr 17 2013; corrected by _ Charles R Greathouse IV _ , Aug 22 2013 ●

► [A229749] 0,3,60,422,1840,6456,20032,57440,155904,406400,1027072,2532864,6123520,14563328,34160640,79192064,181731328,413368320,932970496,2091253760,4658823168,10321657856,22754099200,49935286272,109135790080 ⋆ Number of defective 4 - colorings of an n X 2 0..3 array connected horizontally, vertically, diagonally and antidiagonally with exactly two mistakes, and colors introduced in row - major 0..3 order. ● a(n) = 2 ^ (n - 3) * (195 - 192 * n + 49 * n ^ 2) for n>2. ●

► [A002738] 3,60,630,5040,34650,216216,1261260,7001280,37413090,193993800,981608628,4867480800,23728968900,114011377200,540972351000,2538963567360,11802213457650,54396360988200,248812984520100,1130341536324000,5103492036502860,22913637714910800 ⋆ Coefficients for extrapolation. ● a(n) = 3 * binomial(2 * n + 3,n) * binomial(n + 3,n). ● a(n) = binomial(2 * n + 3,n) * (n ^ 3 + 6 * n ^ 2 + 11 * n + 6) / 2. - _ Charles R Greathouse IV _ , May 02 2011 ●

► [A006432] 0,3,60,650,5352,37681,239752,1421226,7996160,43219990,226309800,1154900708,5769562736,28312118565,136830224464,652656300122,3077631550512,14367512295274,66478236840680,305161336656876,1390869368495728,6298727501142218,28358908010334960 ⋆ Number of tree - rooted planar maps with 3 vertices and n faces and no isthmuses. ● a(n) seems to be divisible by n + 1. - _ Ralf Stephan _ , Sep 01 2003 ●

► [A115490] 3,60,1008,16320,261888,4193280,67104768,1073725440,17179803648,274877644800,4398045462528,70368739983360,1125899890065408,18014398442373120,288230375883276288,4611686017353646080 ⋆ Number of monic irreducible polynomials of degree 4 in GF(2 ^ n)[x]. ● a(0)=0, a(1)=3; for n>1, a(n) = 20 * a(n - 1) - 64 * a(n - 2). - _ T. D. Noe _ , Nov 30 2006 ● a(n + 1) = 4 * 16

^ n - 4 ^ n, with n>=0. - _ Paolo P. Lava _ , Jun 16 2008 ● a(n) = (16 ^ n - 4 ^ n) / 4. - _ Vincenzo Librandi _ , Jul 25 2014 ●

▶ [A081854] 3,60,2093,13398,47415,123728,268065,512298,894443,1458660,2255253,3340670,4777503,6634488,8986505,11914578,15505875,19853708,25057533,31222950,38461703,46891680,56636913,67827578,80599995 ⋆ (8 * n - 3) * (4 * n - 1) * (8 * n ^ 2 - 5 * n + 1). ● a(0)=3, a(1)=60, a(2)=2093, a(3)=13398, a(4)=47415, a(n)=5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Harvey P. Dale _ , Mar 20 2015 ●

▶ [A239576] 0,3,62,683,4015,16989,56196,158271,391917,882683,1836106,3587103,6638267,11747613,19985680,32879339,52490521,81638211,124000342,184440963,269135111,386033453,545007772,758491143,1041639045 ⋆ Number of non - equivalent (mod D _ 4) binary n X n matrices with 4 pairwise nonadjacent 1's. ● a(n) = (n ^ 8 - 30 * n ^ 6 + 24 * n ^ 5 + 352 * n ^ 4 - 576 * n ^ 3 - 1280 * n ^ 2 + 3360 * n - 1536 + IF(n==1 mod 2) * (14 * n ^ 4 - 72 * n ^ 3 + 226 * n ^ 2 - 624 * n + 717)) / 192; n>=3. ●

▶ [A046181] 1,3,63,261,6141,25543,601723,2502921,58962681,245260683,5777740983,24033043981,566159653621,2354993049423,55477868313843,230765285799441,5436264935102961,22612643015295763,532698485771776303,2215808250213185301,52199015340698974701 ⋆ Indices of octagonal numbers which are also triangular. ● a(n) = a(n - 1) + 98 * a(n - 2) - 98 * a(n - 3) - a(n - 4) + a(n - 5). ● a(n) = 98 * a(n - 2) - a(n - 4) - 32. ● a(n) = (1 / 24) * sqrt(2)((sqrt(6) - (- 1) ^ n) * (sqrt(3) + sqrt(2)) ^ (2 * n - 1) + (sqrt(6) + (- 1) ^ n) * (sqrt(3) - sqrt(2)) ^ (2 * n - 1) + 4 * sqrt(2)). ● a(n) = ceiling((1 / 24) * sqrt(2) * (sqrt(6) - (- 1) ^ n) * (sqrt(3) + sqrt(2)) ^ (2 * n - 1)). ●

▶ [A238471] 3,66,364,1197,2990,6293,11781,20254,32637,49980,73458,104371,144144,194327,256595,332748,424711,534534,664392,816585,993538,1197801,1432049,1699082,2001825 ⋆ a(n) = binomial(5n + 6, 4) / 5 for n >= 0. ● a(n) = binomial(5 * n + 6, 4) / 5 = (5 * n + 6) * (5 * n + 3) * (5 * n + 4) * (n + 1) / 4! for n >= 0. ●

▶ [A041983] 1,1,3,67,137,204,9113,9317,27747,619751,1267249,1887000,84295249,86182249,256659747,5732696683,11722053113,17454749796,779731044137,797185793933,2374102632003,53027443697999,108428990028001,161456433726000,7212512073972001 ⋆ Denominators of continued fraction convergents to sqrt(514). ● a(n) = 9250 * a(n - 6) - a(n - 12). - _ Wesley Ivan Hurt _ , Apr 18 2023 ●

▶ [A232326] 3,69,310,1017,36745,214369,966652,11159821,74039764,550021544,4481549430,16543857917,87205978613,476981856953,30989048525367,2037864584 94160,711639924282497,3174772986229899,29814569078896025,100158574806804154 ⋆ Pierce expansion of 1 to the base Pi. ● a(n) = ceiling(Pi / f ^ (n)(- 1)), where f ^ (n)(x) denotes the n - th iterate of the map f(x) = x / Pi * ceiling(Pi / x) - 1, with the convention that f ^ (0)(x) = x. ●

▶ [A270869] 3,69,345,1203,3351,7953,16749,32175,57483,96861,155553,239979,357855,518313,732021,1011303,1370259,1824885,2393193,3095331,3953703,4993089,6240765,7726623,9483291 ⋆ a(n) = n ^ 5 + 4 * n ^ 4 + 13 * n ^ 3 + 23 * n ^ 2 + 25 * n + 3. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). ●

▶ [A086223] 0,1,3,69,694,6944,69444,694444,6944444,69444444,694444444,6944444444,69444444444,694444444444,6944444444444,69444444444444,694444444444444,6944444444444444,69444444444444444 ⋆ Every integer can be represented uniquely as m = k * 2 ^ (j + 1) + 2 ^ j - 1. Sequence gives values of k for m = repunit(n). ● a(n) = (125 * 10 ^ (n - 3) - 8) / 18 for n >= 4. - _ Robert Israel _ , Apr 29 2015 ● a(n) = 11 * a(n - 1) - 10 * a(n - 2) for n >5. ●

▶ [A248042] 1,3,72,894348,1703358734191174242 ⋆ Denominators of approximation to 2 ^ (1 / 3) by Newton's method after n iterations. ● a(n) = y(n) / gcd(x(n),y(n)) ●

▶ [A259848] 3,73,173,6173,66173,366173,2366173,12366173,912366173,2912366173,72912366173,372912366173,8372912366173,18372912366173,818372912366173,4818372912366173 ⋆ Suffixes of 4818372912366173 (all primes). ● a(n) = 4818372912366173 mod 10 ^ n. ●

▶ [A041279] 1,3,73,222,5401,16425,399601,1215228,29565073,89910447,2187415801,6652157850,161839204201,492169770453,11973913695073,36413910855672,885907774231201,2694137233549275,65545201379413801,199329741371790678,4849458994302390073 ⋆ Denominators of continued fraction convergents to sqrt(152). ● a(n) = 74 * a(n - 2) - a(n - 4). - _ Vincenzo Librandi _ , Dec 14 2013 ●

▶ [A173807] 3,73,773,7773,77773,777773,7777773,77777773,777777773,7777777773,77777777773,777777777773,7777777777773,77777777777773,777777777777773,7777777777777773,77777777777777773 ⋆ (7 * 10 ^ n - 43) / 9 for n>0. ● a(n) = 10 * a(n - 1) + 43 with n>0, a(0)= - 4. ● a(n) = 11 * a(n - 1) - 10 * a(n - 2). - _ Vincenzo Librandi _ , Jul 05 2012 ●

▶ [A229852] 3,75,147,363,507,867,1083,1587,1875,2523,2883,3675,4107,5043,5547,6627,7203,8427,9075,10443,11163,12675,13467,15123,15987 ⋆ 3 * h ^ 2, where h is an odd integer not divisible by 3. ● a(n) = 3 * (18 * n ^ 2 + 6 * (- 1) ^ n * n - 18 * n - 3 * (- 1) ^ n + 5) / 2. ● a(n) = 27 * n ^ 2 - 18 * n + 3 for n even. ● a(n) = 27 * n ^ 2 - 36 * n + 12 for n odd. ●

▶ [A189805] 0,1,3,75,245,6615,22869,1288287,4601025,265939245,969738055,28510298817,105468168351,3138933581875,11734782467625,1409850293610375,5313200518272825,64289726271011825,243823265269656187 5,7417645558981318237 5,28276287957921265762 5 ⋆ Numerators of coefficients in the series expansion of ((2 - m) EllipticK(m) - 2 EllipticE(m)) / (Pi * m). ● a(n) is the numerator of the fraction ((2n - 1)!!) ^ 2 / (2 ^ (2n + 1) * (n - 1)! * (n + 1)!). ●

▶ [A343808] 0,3,75,804,5988,36363,193827,943968,4303200,18652107,77701107,313483764,1231813812,4734541443,17859008379,66286569504,242605938720,877071559539,3136507851387,11108459253540,39002734461540,135876065474523,470021588191155,1615461644979264 ⋆ Partial sums of A062074. ● a(n) = Sum _{ k =0..n } 3 ^ k * k ^ 3. ● a(n) = ((4 * n ^ 3 - 6 * n ^ 2 + 12 * n - 11) * 3 ^ (n + 1) + 33) / 8. - _ Kevin Ryde _ , May 01 2021 ● a(n) = 13 * a(n - 1) - 66 * a(n - 2) + 162 * a(n - 3) - 189 * a(n - 4) + 81 * a(n - 5). - _ Wesley Ivan Hurt _ , Apr 16 2023 ●

▶ [A367249] 0,3,79,1323,18175,223323,2555119,27828363,292407775,2990349243,29943991759,294872615403,2864776362175,27525734996763,262061152909999,2475899571994443,23240879960425375,216963121865909883,2015960236625789839,18656492902684557483,172056837889322101375 ⋆ a(n) is the number of n - digit numbers whose difference between the largest and smallest digits is equal to 8. ● a(n) = 17 * 9 ^ (n - 1) - 31 * 8 ^ (n - 1) + 2 * 7 ^ n. ● a(n) = 24 * a(n - 1) - 191 * a(n - 2) + 504 * a(n - 3) for n > 3. ●

▶ [A123656] 3,81,811,4353,16251,47953,120051,266241,538003,1010001,1786203,3006721,4855371,7567953,11441251,16842753,24221091,34117201,47176203,64160001,85960603,113614161,148315731,191434753,244531251 ⋆ a(n) = 1 + n ^ 4 + n ^ 6. ● a(n) = 1 + n ^ 4 + n ^ 6. ●

▶ [A173811] 3,83,883,8883,88883,888883,8888883,88888883,888888883,8888888883,88888888883,888888888883,8888888888883,88888888888883,888888888888883,8888888888888883,88888888888888883 ⋆ (8 * 10 ^ n - 53) / 9 for n>0. ● a(n) = 10 * a(n - 1) + 53 for n>0, a(0)= - 5. ● a(n) = 11 * a(n - 1) - 10 * a(n - 2). - _ Vincenzo Librandi _ , Jul 05 2012 ●

▶ [A140158] 1,3,84,88,713,719,3120,3128,9689,9699,24340,24352,52913,52927,103552,103568,187089,187107,317428,317448,511929,511951,791792,791816,1182441 ⋆ a(1)=1, a(n) = a(n - 1) + n ^ 4 if n odd, a(n) = a(n - 1) + n ^ 1 if n is even. ● a(n) = a(n - 1) + ((1 - (- 1) ^ n) / 2) * n ^ 4 + ((1 + (- 1) ^ n) / 2) * n, with a(1)=1. ● a(n) = - 1 / 8 + (1 / 2) * (- 1) ^ n * n + (1 / 8) * (- 1) ^ n - (1 / 2) * (- 1) ^ n * n ^ 3 + (1 / 6) * n ^ 3 + (1 / 4) * n ^ 2 + (7 / 30) * n + (1 / 10) * n ^ 5 - (1 / 4) * (- 1) ^ n * n ^ 4 + (1 / 4) * n ^ 4, with n >= 1. (End) ●

▶ [A042587] 1,1,3,85,173,258,14621,14879,44379,1257491,2559361,3816852,216303073,220119925,656542923,18603321769,37863186461,56466508230,319998764341,3256454155571,9712895958483,275217540993095,560147977944673,835365518937768 ⋆ Denominators of continued fraction convergents to sqrt(822). ● a(n) = 14794 * a(n - 6) - a(n - 12). - _ Wesley Ivan Hurt _ , Apr 17 2022 ●

▶ [A073861] 3,89,887,9551,31397,492113,4652353,47326693,436273009,4302407359,42652618343,738832927927,7177162611713,90874329411493,218209405436543,1693182318746371,80873624627234849,804218230686677669 ⋆ Smaller of pair of successive n - digit primes with maximal difference. ● a(n) = max { p in A002386 | nextprime(p) < 10 ^ n } (under the assumption given in the comment). - _ M. F. Hasler _ , Apr 28 2014 ●

▶ [A041439] 1,3,91,276,8371,25389,770041,2335512,70835401,214841715,6516086851,19763102268,599409154891,1817990566941,55139126163121,167235369056304,5072200197852241,15388385962613027,466587279076243051,1415145673191342180,4292095747481650845 1 ⋆ Denominators of continued fraction convergents to sqrt(235). ● a(n) = 92 * a(n - 2) - a(n - 4). - _ Vincenzo Librandi _ , Dec 17 2013 ●

▶ [A142887] 1,3,94,239,8452,22082,814456,2039996,70397968,188494088,7204148704,17411854064,564493160512,1609094722592,66749699364736,148601207638976,4059354394263808,13738060802150528,679354561023860224 ⋆ Expansion of x * (5510 * x ^ 5 - 395 * x ^ 3 - 146 * x ^ 2 - 3 * x - 1) / (13340 * x ^ 4 - 52 * x ^ 2 - 1). ● a(n) = - 52 * a(n - 2) + 13340 * a(n - 4). - _ Joerg Arndt _ , Mar 17 2013 ●

▶ [A094085] 3,96,768,6144,49152,393216,3145728,25165824,201326592,1610612736,12884901888,103079215104,824633720832,6597069766656,52776558133248,422212465065984,3377699720527872,27021597764222976,216172782113783808 ⋆ Denominator of (3 * 2 ^ (n - 1) - 1) * integral _{ x=0 to 1 / (4 ^ n) } 1 - sqrt x dx. ● a(n) = 12 * 8 ^ (n - 1) = 12 * A001018 for n>1. ●

▶ [A167582] 3,98,1080,7568,40976,187488,761600,2830848,9821952,32254464,101263360,306229248,897175552,2558058496,7123894272,19434569728,52063567872,137236709376,356550967296,914355126272,2317328842752 ⋆ The third left hand column of triangle A167580. ● a(n) = 2 ^ n * (14 * n ^ 5 - 95 * n ^ 4 + 240 * n ^ 3 - 280 * n ^ 2 + 151 * n - 30) / 240. ● a(n) = 12 * a(n - 1) - 60 * a(n - 2) + 160 * a(n - 3) - 240 * a(n - 4) + 192 * a(n - 5) - 64 * a(n - 6). ● a(n) - 11 * a(n - 1) + 50 * a(n - 2) - 120 * a(n - 3) + 160 * a(n - 4) - 112 * a(n - 5) + 32 * a(n - 6) = 7 * 2 ^ (n - 1). ●

▶ [A290027] 0,0,3,102,900,5160,23520,92736,330624,1094400,3421440,10222080,29432832,82188288,223641600,595230720,1554186240,3990749184,10097197056,25214976000,62234296320,151993712640,367691563008,881823055872,2098200576000 ⋆ Number of 4 - cycles in the n - halved cube graph. ● a(n) = 3 * 2 ^ (n - 5) * binomial(n,3) * (13 * n - 35). ● a(n) = 10 * a(n - 1) - 40 * a(n - 2) + 80 * a(n - 3) - 80 * a(n - 4) + 32 * a(n - 5). ●

▶ [A094200] 3,107,699,2547,6803,15003,29067,51299,84387,131403,195803,281427,392499,533627,709803,926403,1189187,1504299,1878267,2318003,2830803,3424347,4106699,4886307,5772003 ⋆ a(n) = 16 * n ^ 4 + 32 * n ^ 3 + 36 * n ^ 2 + 20 * n + 3. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n >= 5. - _ Harvey P. Dale _ , Jul 23 2013 ●

▶ [A041635] 1,3,109,330,11989,36297,1318681,3992340,145042921,439121103,15953402629,48299328990,1754729246269,5312487067797,193004263686961,584325278128680,21228714276319441,64270468107087003,2334965566131451549,7069167166501441650 ⋆ Denominators of continued fraction convergents to sqrt(336). ● a(n) = 110 * a(n - 2) - a(n - 4) for n>3. - _ Vincenzo Librandi _ , Dec 22 2013 ●

▶ [A089904] 0,3,109,2055,30501,404947,5049393,60493839,704938285,8049382731,90493827177,1004938271623,11049382716069,120493827160515,1304938271604961,14049382716049407,150493827160493853 ⋆ Sum of digits of numbers between n 0 and (2 / 9) * (10 ^ n - 1). ● a(n) = s(2, n - 1) where s(a, k)=a * (k + 1) + a ^ 2 * sum(i=0, k, i * 10 ^ (k - i)) + sum(i=0, k, 5 * a * (9 * (k - i) + a - 1) * 10 ^ (k - i - 1)). ● a(n) = (- 77 * (- 1 + 10 ^ n) + 9 * (14 + 9 * 10 ^ n) * n) / 81. G.f.: x * (80 * x ^ 2 + 43 * x + 3) / ((x - 1) ^ 2 * (10 * x - 1) ^ 2). - _ Colin Barker _ , Jun 14 2013 ●

▶ [A243464] 0,0,3,110,657,2172,5375,11178,20685,35192,56187,85350,124553,175860,241527,324002,425925,550128,699635,877662,1087617,1333100,1617903,1946010,2321597 ⋆ Number of ways 2 domicules can be placed on an n X n square. ● a(n) = - 43 + 63 * n - 4 * n ^ 2 - 24 * n ^ 3 + 8 * n ^ 4 for n>0, a(0) = 0. ●

▶ [A249164] 1,3,113,331,11121,32483,1089793,3183051,106788641,311906563,10464197073,30563660171,1025384524561,2994926790243,100477219209953,293472261783691,9845742098050881,28757286728011523,964782248389776433,2817920627083345611,94538814600100039601 ⋆ Numbers n such that the triangular numb

er T(n) is equal to the sum of the pentagonal numbers P(m) and P(m + 1) for s ome m. ● a(n) = a(n - 1) + 98 * a(n - 2) - 98 * a(n - 3) - a(n - 4) + a(n - 5). ●

► [A240441] 0,0,3,114,969,4773,17415,52125,135375,315675,676200,1352085,2553558,4595934,7937874,13229118,21369330,33579450,51487425,77229900,113571975,164046795,233117313,326362179,450688329 ⋆ Number of ways to place 4 point s on a triangular grid of side n so that no three of these points are vertices of a n equilateral triangle of any orientation. ● a(n) = (n ^ 8 + 4 * n ^ 7 - 14 * n ^ 6 - 56 * n ^ 5 + 61 * n ^ 4 + 220 * n ^ 3 - 84 * n ^ 2 - 240 * n) / 384 + IF(MOD(n, 2) = 1) * (6 * n + 3) / 32. ●

► [A156001] 0,0,3,122,776,2704,6987,15206,29224,51680,85339,134114,201792,293776,414995,572558,772656,1024320,1335123,1716234,2176728,2730128,3387131,4163830,5072664 ⋆ Number of cycles of length 4 in the queen's graph associat ed with an n X n chessboard ● a(n) = n * (n - 1) * (21 * n ^ 3 + 526 * n ^ 2 - 1709 * n + 996) / 60 - (3 * n ^ 2 - 12 * n + 4) * floor(n / 2). ●

► [A041867] 1,3,127,384,16255,49149,2080513,6290688,266289409,805158915,34082963839,103054050432,4362353081983,13190113296381,558347111529985,1688231447886336,71464067922756097,216080435216154627,9146842347001250431,27656607476219905920 ⋆ Denominators of continued fraction convergents to sqrt(45). ● a(n) = 128 * a(n - 2) - a(n - 4) for n>3. - _ Vincenzo Librandi _ , Dec 26 2013 ●

► [A243213] 3,128,1062,5160,18591,55113,142005,329045,701160,1395975,2626953,4713723,8120322,13503350,21770766,34153758,52292385,78337890,115072320,166048850,235753353,329791143,455099307,620189115,835418766 ⋆ Number of w ays to place 4 points on a triangular grid of side length n so that no three of the m are vertices of an equilateral triangle with sides parallel to the grid. ● a(n) = (n ^ 8 + 4 * n ^ 7 - 6 * n ^ 6 - 80 * n ^ 5 - 15 * n ^ 4 + 532 * n ^ 3 - 244 * n ^ 2 - 432 * n) / 384 + IF(MOD(n, 2) = 1) * (- n ^ 2 - n + 12) / 16. ●

► [A005175] 0,0,3,131,1830,16990,127953,851361,5231460,30459980,170761503,931484191,4979773890,26223530970,136522672653,704553794621,3611494269120,18415268221960,93516225653403,473366777478651,2390054857197150,12043393363764950,60590148885015753 ⋆ Number of trees of subsets of an n - set. ● a(n) = (125 / 24) * 5 ^ n - (64 / 3) * 4 ^ n + (135 / 4) * 3 ^ n - (76 / 3) * 2 ^ n + 209 / 24 proven in McMorris and Zaslavsky, matches Layman's formula with an offset of 1. - _ Sean A. Irvine _ , Apr 12 2016 ●

► [A051376] 0,0,3,134,1935,20830,198303,1776894,15402495,130890110,1098087903,9130126654,75412301055,619706950590,5071742430303,41369422556414,336511166127615,2730929153686270,22119108433729503,178853777028618174 ⋆ Numb er of Boolean functions of n variables and rank 4 from Post class F(5,inf). ● a(n) = (8 ^ n - 7 ^ n - 6 * 4 ^ n + 6 * 3 ^ n + 11 * 2 ^ n - 17) / 6. ● a(n) = Sum _{ j=1..n } (- 1) ^ (j + 1) * C(n, j) * C(2 ^ (n - j) - 1, k - 1), where k=4. ●

► [A053527] 0,0,0,0,3,140,1125,5355,19075,56133,143955,332475,706860,1404975,2640638,4733820,8149050,13543390,21825450,34227018,52388985,78463350,115233195,166252625,236008773 ⋆ Number of bipartite graphs with 4 edges on nod es { 1..n } . ● a(n) = (n - 3) * (n - 2) * (n - 1) * n * (n + 2) * (n ^ 3 - 5 * n - 36) / 384. ●

► [A042135] 1,3,145,438,21169,63945,3090529,9335532,451196065,1362923727,65871534961,198977528610,9616792908241,29049356253333,1403985893068225,4241007035458008,204972323595052609,619157977820615835,29924555258984612689,90392823754774453902 ⋆ Denominators of continued fraction convergents to s qrt(592). ● a(n) = 146 * a(n - 2) - a(n - 4) for n>3. - _ Vincenzo Librandi _ , Jan 15 2014 ●

► [A157440] 3,162,563,1206,2091,3218,4587,6198,8051,10146,12483,15062,17883,20946,24251,27798,31587,35618,39891,44406,49163,54162,59403,64886,70611 ⋆ a(n) = 121 * n ^ 2 - 204 * n + 86. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Jan 29 2012 ●

► [A202109] 3,192,3000,24000,128625,526848,1778112,5184000,13476375,31944000,70180968,144685632,282589125,526848000,943296000,1630015488,2729559627,4444632000,7057911000,10956792000,16663911033,24874409472,36501000000,52728000000,75075609375 ⋆ n ^ 3 * (n + 1) ^ 3 * (n + 2) ^ 3 / 72. ● a(n) = 3 * sum (k * (k + 1) / 2,k=1..n) ^ 3. ●

► [A023310] 3,199,233,709,1361,1367,2137,2879,5519,5987,7283,9719,11699,14983,16417,17881,20939,24481,30467,31663,31741,35107,35863,46811,47869 ⋆ Prime s that remain prime through 4 iterations of function f(x) = 3x + 10. ● a(n) == 3 or 9 (mod 14). - _ John Cerkan _ , Oct 04 2016 ●

► [A140163] 1,3,246,250,3375,3381,20188,20196,79245,79255,240306,240318,611611,611625,1371000,1371016,2790873,2790891,5266990,5267010,9351111,9351133,15787476,15787500,25553125 ⋆ a(1)=1, a(n) = a(n - 1) + n ^ 5 if n odd, a(n) = a(n - 1) + n if n is even. ● a(n) = a(n - 1) + ((1 - (- 1) ^ n) / 2) * n ^ 5 + ((1 + (- 1) ^ n) / 2) * n, with a(1) = 1. - _ Paolo P. Lava _ , Jun 06 2008 ● a(n) = (1 / 24) * (n + n ^ 2) * (6 * (1 + (- 1) ^ n) - (1 - 9 * (- 1) ^ n) * n + (1 - 9 * (- 1) ^ n) * n ^ 2 + (4 - 6 * (- 1) ^ n) * n ^ 3 + 2 * n ^ 4). - _ G. C. Greubel _ , Jul 05 2018 ●

► [A319587] 3,261,110912,17895697067018274 ⋆ The number of distinct solid ne ts of the six convex regular 4D - polytopes in the order of their 3D - cell count. ● a(1) = 3; ● a(2) = (82944 + 12 * 16 + 24 * 8 + 4 * 2304 + 6 * 128 + 12 * 96 + 12 * 192 + 12 * 288) / (2 ^ 7 * 3) = 261; ● a(3) = 2 ^ 5 * (2 ^ 7 * 3 ^ 3 + 1 + 3 ^ 2) = 110912; ● a(4) = 6 * (2 ^ 19 * 5688888889 + 347) = 1789569706708274; ● a(5) = 2 ^ 7 * 5 ^ 2 * 7 ^ 3 * (2 ^ 114 * 3 ^ 78 * 5 ^ 20 * 7 ^ 33 + 2 ^ 47 * 3 ^ 18 * 5 ^ 2 * 7 ^ 12 * 53 ^ 5 * 2311 ^ 3 + 239 ^ 2 * 3931 ^ 2); ● a(6) = 2 ^ 188 * 3 ^ 102 * 5 ^ 20 * 7 ^ 36 * 11 ^ 48 * 23 ^ 48 * 29 ^ 30. ●

► [A068250] 3,280,5265,47040,271250,1170288,4105710,12334080,32837805,79365000,177200023,370319040,731732820,1377981920,2488927500,4334174208,7307669895,11972250360,19116135885,29823640000,45562619718,68291480400,100588847450,145809331200 ⋆ 1 / 24 the number of colorings of a 3 X 3 octagonal array with n colors. ● a(n) = (n ^ 9 - 20 * n ^ 8 + 174 * n ^ 7 - 859 * n ^ 6 + 2627 * n ^ 5 - 5082 * n ^ 4 + 6048 * n ^ 3 - 4023 * n ^ 2 + 1134 * n) / 24. (End) ●

► [A074327] 3,311,1619,3671,1742537,148948139,2777105129,16149760533341,10082409897709157 ⋆ Smaller of twin primes arising in A074326. ● a(n) = prime(m) where m=2 ^ x and prime(m + 1) - prime(m) = 2. ●

► [A355753] 3,360,2805,10794,29511,65868,128505,227790,375819,586416,875133,1259250,1757775,2391444,3182721,4155798,5336595,6752760,8433669,10410426,12715863,15384540,18452745,21958494,25941531 ⋆ a(n) = 3 * (2 * n - 1) * (3 * (2 * n - 1) ^ 3 - 1) / 2 for n > 0. ● a(n) = 3 * (2 * n - 1) * (3 * (2 * n - 1) ^ 3 - 1) / 2 for n > 0. ● a(n) can be extended for negative n such that a(- n) = a (n + 1) + (2n + 1). ●

► [A140870] 3,443,8483,44283,141443,347003,721443,1338683,2286083,3664443,5588003,8184443,11594883,15973883,21489443,28323003,36669443,46737083,58747683,72936443,89552003,108856443,131125283,156647483,185725443 ⋆ 8 * P _ 4(2n), 8 times the Legendre Polynomial of order 4 at 2n. ● a(n) = 560 * n ^ 4 - 120 * n ^ 2 + 3. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) + 13440 for n > 3; a(0)=3, a(1)=443, a(2)=8483, a(3)=44283. ●

► [A091261] 1,3,635,2049219,7372235460687 ⋆ Number of orthogonal mates for the cyclic Latin squares of odd order. ● a(n) grows at least exponentially in n [Cavenagh, Wanless]. - _ Ian Wanless _ , Jul 30 2010 ●

► [A119264] 3,739,2986129,11390851,191103553,387421219,1291469059,2176783633,8303767651,24794914213,34296450499,646990192099,782757798913,2194972636933,3462826006819,14412774469393,27752076894853 ⋆ Primes of the form k ^ 6 + k ^ 2 + 1. ● a(n) = A000040 INTERSECTION { n ^ 6 + n ^ 2 + 1 } . ●

► [A140744] 4,4,4,4,5,5,6,6,7,8,9,10,11,13,14,16,19,22,26,30,36,43,52,63,77 ⋆ Aris es in enumerating iterated point - line configurations. ● a(n) = Floor(4 ^ (1.048 8 ^ n)). ●

► [A309767] 0,0,0,4,4,4,4,68,196,196,708,1732,3780,7876,7876,7876,40644,106180,237252,499396,1023684,1023684,3120836,7315140,15703748 ⋆ Approximation o f the 2 - adic integer arctanh(4) up to 2 ^ n. ● a(n) = (Sum _{ i=0..floor((n - 3) / 4) } 4 ^ (2 * i + 1) / (2 * i + 1)) mod 2 ^ n. ●

► [A102126] 1,4,4,4,6,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25 ⋆ M inimum number of pieces needed to dissect a square into n smaller squares (not necessarily of the same size). ● a(n) = n for n > 5 ●

► [A098525] 1,1,4,4,4,13,22,58,94,130,247,445,967,1813,2983,5206,9211,17914,34231,61078,107932,190831,352057,660136,1209838 ⋆ Expansion of (1 + 3x ^ 2) / (1 - x - 9x ^ 5). ● a(n)=a(n - 1) + 9a(n - 5); a(n)=sum { k=0..floor(n / 2), binomial(n - 2k, floor(k / 2))3 ^ k } . ●

► [A357414] 0,1,1,4,4,5,5,8,12,13,13,20,20,21,21,30,30,59,59,62,62,63,63,94,104 ⋆ Number of nonempty subsets of { 1..n } whose elements have an even geometri c mean. ● a(p) = a(p - 1) for prime p > 2. - _ Michael S. Branicky _ , Sep 30 2022 ●

► [A232172] 0,0,0,4,4,5,5,21,26,27,27,59,59,65,77,157,157,167,167,211,218,219,219,267,274 ⋆ Partial sums of second arithmetic derivative of natural numbers. ● a(n) = sum(i", i=1..n), where i" is the second arithmetic derivative of i (A068346). ●

► [A243427] 4,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27 ⋆ Floored (rational) values of sqrt(xy) such that sqrt(x) + sqrt(y) = sqrt(xy). ● a (n) = floor((n + 1) ^ 2 / n). ● a(n) = n + 2 for n>1. ●

► [A019527] 4,4,5,6,8,11,15,21,30,43,62,90,131,191,279,408,597,874,1280,1875,2747,4025,5898,8643,12666 ⋆ Poincaré series [or Poincare series] for depths of root s in a certain root system. ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) - a(n - 4), f or n>5. ● a(n) = a(n - 1) + a(n - 3) - 2, for n>4. - _ Greg Dresden _ , Feb 09 2020 ●

► [A170934] 4,4,5,7,9,12,17,24,34,49,71,103,150,219,320,468,685,1003,1469,2152,3153,4620,6770,9921,14539 ⋆ a(n) = b(n) + b(n + 1) + 2, where b() = A000930( ). ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) - a(n - 4). ● a(n) = a(n - 1) + a(n - 3) - 2, for n > 2. - _ Greg Dresden _ , Feb 09 2020 ●

► [A107851] 0,1,1,4,4,5,9,10,18,29,41,68,100,149,233,346,530,813,1225,1876,2852,4325,6601,10026,15250 ⋆ G.f. x * (- 1 - x - 3 * x ^ 2 - x ^ 3 + 2 * x ^ 5) / ((2 * x ^ 3 + x ^ 2 - 1) * (x ^ 4 + 1)). ● a(0)=0, a(1)=1, a(2)=1, a(3)=4, a(4)=4, a (5)=5, a(6)=9, a(n)= a(n - 2) + 2 * a(n - 3) - a(n - 4) + a(n - 6) + 2 * a(n - 7). - _ Harvey P. Dale _ , Jul 19 2011 ●

► [A098821] 4,4,5,9,21,53,133,325,773,1797,4101,9221,20485,45061,98309,212997,458757,983045,2097157,4456453,9437189,19922949,41943045,88080389,184549381 ⋆ a(n) = (n - 2) * 2 ^ (n - 1) + 5. ● a(n)=5 * a(n - 1) - 8 * a(n - 2) + 4 * a(n - 3). (End) ●

► [A273308] 0,4,4,6,8,8,10,12,12,14,16,16,18,20,20,22,24,24,26,28,28,30,32,32,34 ⋆ Maximum population of a 2 X n still life in Conway's Game of Life. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>5. ●

► [A105790] 1,4,4,6,8,9,11,13,14,16,17,19,21,23,25,26,27,30,31,33,34,36,38,40,41 ⋆ Number of bisections to an inscribed triangle to approximate Pi (A000796) to n decimal digits of accuracy. ● a(n) = 3 * 2 ^ n * sqrt(2 - sqrt(2 + sqrt(2 + ... sq rt(2 + sqrt(3))...))). ●

► [A168233] 1,4,4,7,7,10,10,13,13,16,16,19,19,22,22,25,25,28,28,31,31,34,34,37,37 ⋆ a(n) = 3 * n - a(n - 1) - 1 for n>0, a(1)=1. ● a(n) = (6 * n + 3 * (- 1) ^ n + 1) / 4. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3), for n>3. ●

► [A238391] 1,1,1,1,1,4,4,7,7,10,19,22,40,43,70,100,136,220,265,430,565,838,1225,1633,2515 ⋆ Expansion of (1 + x) / (1 - x ^ 2 - 3 * x ^ 5). ● a(0)=1, a(1)=1, a (2)=1, a(3)=1, a(4)=1; a(n) = 3 * a(n - 5) + a(n - 2) for n>4. ● a(2n) = Sum _{ j=0..n / 5 } binomial(n - 3j,2j) * 3 ^ (2j) + Sum _{ j=0..(n - 3) / 5 } binomial(n - 2 - 3j,2j + 1) * 3 ^ (2j + 1). ● a(2n + 1) = Sum _{ j=0..n / 5 } binomial(n - 3j,2j) * 3 ^{ 2j } + Sum _{ j=0..(n - 2) / 5 } binomial(n - 1 - 3j,2j + 1) * 3 ^ (2j + 1). ●

► [A185670] 0,0,0,1,1,4,4,7,9,14,14,21,21,28,34,41,41,52,52,63,71,82,82,97,101 ⋆ N umber of pairs (x,y) with 1 <= x < y <= n with at least one common factor. ● a(n) = n * (n - 1) / 2 + 1 - Sum _{ i=1..n } phi(i). ●

► [A109544] 1,1,1,1,1,4,4,7,10,16,25,37,58,88,136,208,319,490,751,1153,1768,2713,4162,6385,9796 ⋆ Expansion of (1 + x - x ^ 3 - 2 * x ^ 4) / (1 - x ^ 2 - x ^ 3 - x ^ 4 - x ^ 5). ● a(n) = a(n - 2) + a(n - 3) + a(n - 4) + a(n - 5). ●

► [A187893] 1,4,4,7,10,16,25,40,64,103,166,268,433,700,1132,1831,2962,4792,7753,12544,20296,32839,53134,85972,139105 ⋆ a(0)=1, a(1)=4, a(n) = a(n - 1) + a(n - 2) - 1. ● a(n)=1 + 3 / 5 * sqrt(5) * ((1 / 2 + 1 / 2 * sqrt(5)) ^ n - (1 / 2 - 1 / 2 * sqrt(5)) ^ n). - _ Paolo P. Lava _ , Jun 06 2011 ●

► [A293678] 0,4,4,7,10,16,26,41,66,107,173,280,453,732,1185,1917,3101,5018,8118,13135,21253,34388,55641,90029,145670 ⋆ a(n) is the least integer k such that k / Fibonacci(n) > Pi. ● a(n) = ceiling(Pi * Fibonacci(n)). ●

► [A238389] 1,1,1,4,4,7,16,19,37,67,94,178,295,460,829,1345,2209,3832,6244,10459,17740,29191,49117,82411,136690 ⋆ Expansion of (1 + x) / (1 - x ^ 2 - 3 * x ^ 3). ● a(0)=1, a(1)=1, a(2)=1; for n>2, a(n) = a(n - 2) + 3 * a(n - 3). ● a(2n) = Sum _{ j=0 }^{ n / 3 } binomial(n - j,2j) * 3 ^ (2j) + Sum _{ j=0 }^{ (n - 2) / 3 } binomial(n - 1 - j,2j + 1) * 3 ^ (2j + 1). ● a(2n + 1) = Sum _{ j=0 }^{ n / 3 } binomial(n - j,2j) * 3 ^ (2j) + Sum _{ j=0 }^{ (n - 1) / 3 } binomial(n - j,2j + 1) * 3 ^ (2j + 1). ●

► [A173324] 4,4,7,19,73,361,2161,15121,120961,1088641,10886401,119750401,1437004801,18681062401,261534873601,3923023104001,62768369664001,1067062284288001,19207121117184001,364935301226496001,7298706024529920001,153272826515128320001 ⋆ 3 * n! + 1. ● a(0) = 4, a(n) = n * a(n - 1) - n + 1 for n>0. - _ Sergei N. Gladkovskii _ , Jul 04 2012 ●

► [A168273] 0,4,4,8,8,12,12,16,16,20,20,24,24,28,28,32,32,36,36,40,40,44,44,48,48 ⋆ a(n) = 2 * n + (- 1) ^ n - 1. ● a(n) = 2 * n - 2 * (n mod 2). - _ Wesley Ivan Hurt _ , Jun 30 2013 ●

► [A014687] 4,4,8,10,14,16,20,22,30,30,38,40,44,46,54,58,62,66,72,72,80,82,90,96,102 ⋆ In sequence of odd primes add 1 to first prime, 3rd prime, 5th prime, ... then subtract 1 from 2nd prime, fourth prime, sixth prime and so on. ● a(n) = prime(n + 1) + (- 1) ^ (n + 1). - _ Juri - Stepan Gerasimov _ , Sep 10 2009 ● a(n) = odd prime(n) - (- 1) ^ n. - _ Juri - Stepan Gerasimov _ , Sep 10 2009 ● a(n) + a(n - 1) = prime(n) + prime(n + 1), i.e., a(n) = prime(n) + prime(n + 1) - a(n - 1) generates sequence with initial value a(1)=4. - _ Labos Elemer _ , Apr 24 2003; corrected by _ Dean Hickerson _ , Apr 27 2003 ●

► [A152967] 0,0,0,1,1,4,4,8,10,15,15,26,26,33,39,50,50,66,66,83,91,102,102,131,135 ⋆ Partial sums of A152770. ● a(n) = Sum _{ i=1..n } (i - 1) * floor((n - i) / i). - _ Wesley Ivan Hurt _ , Sep 13 2017 ●

► [A309456] 0,0,0,0,4,4,8,11,19,22,32,38,51,59,75,86,108,123,147,167,197,218,254,281,322 ⋆ Number of squarefree parts in the partitions of n into 4 parts. ● a(n) = Sum _{ k=1..floor(n / 4) } Sum _{ j=k..floor((n - k) / 3) } Sum _{ i=j..floor((n - j - k) / 2) } (mu(i) ^ 2 + mu(j) ^ 2 + mu(k) ^ 2 + mu(n - i - j - k) ^ 2), where mu is the Möbius function (A008683). ●

► [A086663] 1,4,4,8,12,12,16,20,24,28,32,36,40,44,48,52,56,60,64,68,72,76,80,84,88 ⋆ Number of non - attacking knights on an n X n board with all non - perimeteral squares removed. ● a(n)=4 * (n - 3) for n>5. ●

► [A022087] 0,4,4,8,12,20,32,52,84,136,220,356,576,932,1508,2440,3948,6388,10336,16724,27060,43784,70844,114628,185472 ⋆ Fibonacci sequence beginning 0, 4. ● a(n) = 4 * F(n) = F(n - 2) + F(n) + F(n + 2), where F = A000045. ● a(n) = round(phi ^ n * (8 * phi - 4) / 5) for n>2. - _ Thomas Baruchel _ , Sep 08 2004 ● a(n) = F(n + 9) - 17 * F(n + 3), where F=A000045. - _ Manuel Valdivia _ , Dec 15 2009 ● a(n) = Fibonacci(n + 3) - Fibonacci(n - 3), where Fibonacci(- 3.. - 1) = 2, - 1,1. [_ Bruno Berselli _ , May 22 2015] ●

► [A261212] 1,4,4,8,16,20,25,36,41,48,64,72,81,100,109,120,144,156,173,196,213,228,256,272,300 ⋆ Maximum number of 1's in an fully symmetrical n X n binary matrix with no three 1's adjacent in a line along a row, column or diagonally. ● a(3k + 2) >= 4 * (k + 1) ^ 2. ●

► [A226096] 1,4,4,9,16,25,36,36,49,64,81,100,100,121,144,169,196,196,225,256,289,324,324,361,400 ⋆ Squares with doubled (4 * n + 2) ^ 2. ● a(n) = 3 * a(n - 5) - 3 * a(n - 10) + a(n - 15). ● a(n) = a(n - 1) + 2 * a(n - 5) - 2 * a(n - 6) - a(n - 10) + a(n - 11). [_ Bruno Berselli _ , May 30 2013] ● a(n) = (24 * (16 * floor(n / 5) ^ 2 + 8 * floor(n / 5) + 1) - (11 + 24 * floor(n / 5)) * (n - 5 * floor(n / 5)) ^ 4 + 2 * (49 + 104 * floor(n / 5)) * (n - 5 * floor(n / 5)) ^ 3 - 23 * (11 + 24 * floor(n / 5)) * (n - 5 * floor(n / 5)) ^ 2 + 2 * (119 + 280 * floor(n / 5)) * (n - 5 * floor(n / 5))) / 24. - _ Luce ETIENNE _ , May 08 2017 ●

► [A263727] 0,1,1,1,1,4,4,9,16,25,49,81,144,225,361,576,961,1521,2500,4096,6724,10816,17689,28561,46225 ⋆ Largest square number less than or equal to the n - th Fibonacci number. ● a(n) = floor(sqrt(Fibonacci(n))) ^ 2. ●

► [A173317] 4,4,9,29,119,599,3599,25199,201599,1814399,18143999,199583999,2395007999,31135103999,435891455999,6538371839999,104613949439999,1778437140479999,320118685286399999,6082255020441599999 ⋆ 5 * n! - 1. ● a(0)=4, a(n) = n * a(n - 1) + n - 1. - _ Vincenzo Librandi _ , Sep 30 2013 ●

► [A180964] 1,4,4,10,13,13,19,22,22,28,31,31,37,40,40,46,49,49,55,58,58,64,67,67,73 ⋆ a(0)=1; for n>0, a(n) = 1 + 3 * A117571(n - 1). ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>3. ● a(n) = (n - 1) * (n mod 3) + (n + 1) * (n + 1 mod 3) + n * (n + 2 mod 3). ● a(n) = 3 * n + sqrt(3) * cos((4 * n - 3) * Pi / 6) - sin((4 * n - 3) * Pi / 6). ● a(n) = 3 * n + ChebyshevU(n, - 1 / 2) + 2 * ChebyshevU(n - 1, - 1 / 2). (End) ●

► [A201618] 0,4,4,10,16,26,40,59,84,116,156,205,264,334,416,511,620,744,884,1041,1216,1410,1624,1859,2116 ⋆ Number of n X 1 0..3 arrays with rows and columns lexicographically nondecreasing and every element equal to at least one horizontal or vertical neighbor. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>8. ●

► [A219803] 4,4,10,21,39,68,114,186,297,465,714,1075,1587,2298,3266,4560,6261,8463,11274,14817,19231,24672,31314,39350,48993 ⋆ Number of 2 X n arrays of the minimum value of corresponding elements and their horizontal, vertical, diagonal or antidiagonal neighbors in a random, but sorted with lexicographically nondecreasing rows and nonincreasing columns, 0..3 2 X n array. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>8. ●

► [A117881] 4,4,10,33,106,309,965,3022,9489,29813,93649,294209,924271,2903678,9122173,28658147,90032221,282844574,888582413,2791563955,8769956797,27551631845,86556004193,271923706897,854273519921 ⋆ First semiprime after Pi ^ n. ● a(n) = min { s in A001358 and s > Pi ^ n } . ●

► [A136485] 0,0,4,4,12,16,24,32,52,60,76,88,112,120,148,164,192,216,256,276,308,332,376,392,440 ⋆ Number of unit square lattice cells enclosed by origin centered circle of diameter n. ● a(n) = 4 * Sum _{ k=1..floor(n / 2) } floor(sqrt((n / 2) ^ 2 - k ^ 2)). ● a(n) = [x ^ (n ^ 2)] (theta _ 3(x ^ 4) - 1) ^ 2 / (1 - x). - _ Ilya Gutkovskiy _ , Nov 24 2021 ●

► [A053415] 0,0,4,4,12,16,32,32,52,60,80,88,112,124,156,172,208,216,256,276,316,332,384,408,448 ⋆ Circle numbers (version 3): a(n) = number of points (i,j), i, j integers, contained in a circle of diameter n, centered at (1 / 2, 1 / 2). ● a(n) / (n / 2) ^ 2 - > Pi. ● a(n) = [x ^ (n ^ 2)] theta _ 2(x ^ 4) ^ 2 / (1 - x). - _ Ilya Gutkovskiy _ , Nov 23 2021 ●

► [A106232] 4,4,12,24,40,60,84,112,144,180,220,264,312,364,420,480,544,612,684,760,840,924,1012,1104,1200 ⋆ Least k > 0 such that (4 * n ^ 2 + 2) * (k ^ 2) + (4 * n ^ 2 + 2) * k + 1 = j ^ 2. ● a(1) = 4, a(n) = 2 * n ^ 2 - 2 * n for n > 1, j sequence = A106231. ●

► [A099924] 4,4,13,22,45,82,152,274,491,870,1531,2676,4652,8048,13865,23798,40713,69446,118144,200510,339559,573894,968183,1630632,2742100 ⋆ Self - convolution of Lucas numbers. ● a(n) = (n + 1) * L(n) + 2F(n + 1) = Sum _{ k=0..n } L(k) * L(n - k). ● a(n) = 2 * a(n - 1) + a(n - 2) - 2 * a(n - 3) - a(n - 4), a(0)=4, a(1)=4, a(2)=13, a(3)=22. - _ Harvey P. Dale _ , Mar 06 2012 ●

► [A219454] 4,4,13,26,57,116,231,450,859,1604,2928,5228,9139,15653,26282,43275,69900,110803,172457,263715,396482,586522,854417,1226696,1737153 ⋆ Number of n X 2 arrays of the minimum value of corresponding elements and their horizontal, vertical, diagonal or antidiagonal neighbors in a random, but sorted with lexicographically nondecreasing rows and columns, 0..3 n X 2 array. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>14. ●

► [A198313] 0,0,0,1,1,1,4,4,15,23,162,540,18958,389417,50314520,2942196930,1698517018988 ⋆ Number of, not necessarily connected, regular simple graphs on n vertices with girth exactly 3. ● a(n) is the sum of the n - th row of A185643. ●

► [A219350] 4,4,15,35,81,174,364,740,1459,2778,5105,9069,15615,26129,42600,67827,105680,161425,242124,357122,518634,742446,1048745,1463094,2017569 ⋆ Number of n X 4 arrays of the minimum value of corresponding elements and their horizontal, vertical, diagonal or antidiagonal neighbors in a random, but sorted with lexicographically nondecreasing rows and columns, 0..1 n X 4 array. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>16. ●

► [A056450] 1,4,4,16,16,64,64,256,256,1024,1024,4096,4096,16384,16384,65536,65536,262144,262144,1048576,1048576,4194304,4194304,16777216,16777216 ⋆ a(n) = (3 * 2 ^ n - (- 2) ^ n) / 2. ● a(n) = 4 ^ floor((n + 1) / 2). ● a(n) = 4 * a(n - 2) for n > 1; a(0) = 1, a(1) = 4. ● a(n + 3) = a(n + 2) * a(n + 1) / a(n). - _ Reinhard Zumkeller _ , Mar 04 2011 ●

► [A156232] 0,4,4,16,24,64,112,256,480,1024,1984,4096,8064,16384,32512,65536,130560,262144,523264,1048576,2095104,4194304,8384512,16777216,33546240 ⋆ a(n) is the number of induced subgraphs with odd number of edges in the cycle graph C(n). ● a(n) = 2 ^ (n - 1) - 2 ^ (n / 2) if n is even, 2 ^ (n - 1) otherwise. ●

► [A038788] 1,4,4,16,64,400,900,8836,355216,1201216,53523856,690217984,2494003600,33255899044,1666350520384,85680866908816,3202965956362 24,1693917555745744,2409370759988696 59,9109645097402736 64,4967644199151639 5584,7191706244512731 14176 ⋆ Non - Cayley - isomorphic circulant self - complementary directed p ^ 2 - graphs, indexed by odd primes p. ● a(p ^ 2) = ((1 / (p - 1)) * Sum _{ r|p - 1 and r even } phi(r) * 2 ^ ((p - 1) / r)) ^ 2. - _ Sean A. Irvine _ , Feb 14 2021 ●

► [A294245] 0,0,4,4,17,17,29,29,37,46,66,66,103,130,158,158,174,174,192,192,212,212,301,301,374 ⋆ Sum of the larger parts of the partitions of 2n into two parts with larger part nonsquarefree. ● a(n) = Sum _{ i=1..n } (2 * n - i) * (1 - mu(2 * n - i) ^ 2), where mu is the Möbius function (A008683). ●

► [A231884] 0,4,4,20,32,80,180,408,940,2072,4824,10792,24660,55748,126760,287584,652280,1481184,3359900,7627296,17305472,39277688,89131928,202276640,459045772 ⋆ Number of maximal 2 - independent sets in the 3 - dimensional (2, 2, n) grid graph. ● a(n) = 3 * a(n - 2) + 4 * a(n - 3) + 4 * a(n - 4) - 9 * a(n - 6) - 3 * a(n - 7) for n>7. ●

► [A014433] 1,4,4,20,52,228,804,3444,13780,59588,253252,1113556,4892276,21860260,98055780,444148020,2021194260,9257373060,42583930500,196811777940,913015265460,4251135572580,19856669967780,93027410579700,436999575464532 ⋆ a(n) = Sum _{ i=0..n - 1 } a(i) * a(n - i), with a(0) = 1 and a(1) = 4. ● a(n) = (- 3) ^ n * (hypergeom([1 / 2, n + 1],[1],8 / 5) - 5 * hypergeom([1 / 2, n],[1],8 / 5)) * (- 15) ^ (1 / 2) / (10 * (n + 1)) for n>0. - _ Mark van Hoeij _ , Jul 02 2010 ● a(n) = (- 2) ^ (n + 1) * C(2 * n,n - 1) * hypergeom([- n - 1, - n + 1],[- n + 1 / 2],5 / 8) / n for n>=1. - _ Peter Luschny _ , May 08 2016 ● a(n) = 2 ^ (n + 1) * GegenbauerC(n - 1, - n, - 1 / 4) / n for n>=1. - _ Peter Luschny _ , May 08 2016 ●

► [A216164] 4,4,20,100,500,5000,50000,500000,5000000,50000000,500000000,5000000000,50000000000,500000000000,5000000000000,50000000000000,500000000000000,5000000000000000,50000000000000000 ⋆ Period of powers of 7 mod 10 ^ n. ● a(n) = 4 * 5 ^ (n - 2), 1 < n < 6. ● a(n) = 5 * 10 ^ (n - 3), n >= 6. ● a(n) = 2 ^ (n - 3) * 5 ^ (n - 2) for n>4. a(n) = 10 * a(n - 1) for n>5. G.f.: 4 * x * (125 * x ^ 4 + 25 * x ^ 3 + 5 * x ^ 2 + 9 * x - 1) / (10 * x - 1). - _ Colin Barker _ , Sep 22 2013 ●

► [A298681] 0,4,4,32,80,372,1236,4912,17728,67364,248996,934080,3476400,12993364,48453364,180907472,675001760,2519449092,9402095556,35090331232,130956433168,488740993844,1823996357396,6807266805360,25405026124800 ⋆ Start with the square tile of the Shield tiling and recursively apply the substitution rule. a(n) is the number of triangles with 6 markings after n iterations. ● a(n) = (1 / 39) * (26 + (- 1) ^ (1 + n) * 2 ^ (5 + n) + (3 - 9 * sqrt(3)) * (2 - sqrt(3)) ^ n + (2 + sqrt(3)) ^ n * (3 + 9 * sqrt(3))). ● a(n) = 3 * a(n - 1) + 5 * a(n - 2) - 9 * a(n - 3) + 2 * a(n - 4) for n>3. ●

► [A189743] 4,4,32,144,704,3392,16384,79104,381952,1844224,8904704,42995712,207601664,1002389504,4839964672,23369416704,112837525504,544827768832,2630661177344,12701955784704,61330467848192,296129694531584,1429840649519104,6903881376202752 ⋆ a(1)=4, a(2)=4, a(n)=4 * a(n - 1) + 4 * a(n - 2) ● a(n) = 2 * ((2 + 2 * sqrt(2)) ^ (n - 1) + (2 - 2 * sqrt(2)) ^ (n - 1)) + 1 / 2 * sqrt(2) * ((2 - 2 * sqrt(2)) ^ (n - 1) - (2 + 2 * sqrt(2)) ^ (n - 1)). - Paolo P. Lava, May 24 2011 ●

► [A271945] 0,0,4,4,40,72,428,1036,4816,13712,56020,174612,665080,2180568,7991676,26951708,96696224,331269920,1174584228,4059317284,14299305416,496585

76744,174293008204,606920893484,2125899390576 ⋆ Expansion of 4 * x ^ 2 / (1 - x - 9 * x ^ 2 + x ^ 3). • a(n) = a(n - 1) + 9 * a(n - 2) - a(n - 3). •

▶ [A327303] 0,4,4,79,79,79,3204,18829,331329,1112579,1112579,20643829,118300079,850721954,3292128204,27706190704,149776503204,302364393829,1065303846954,8694698378204,46841671034454,332943965956329,332943965956329,5101315547987579,28943173458143829 ⋆ One of the two successive approximations up to 5 ^ n for the 5 - adic integer sqrt(- 9). This is the 4 (mod 5) case (except for n = 0). • a(1) = 4; for n >= 2, a(n) is the unique number k in { a(n - 1) + m * 5 ^ (n - 1) : m = 0, 1, 2, 3, 4 } such that k ^ 2 + 9 is divisible by 5 ^ n. •

▶ [A088202] 1,4,5,5,5,7,7,9,10,11,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25 ⋆ Chromatic number of the n X n queen graph. • a(n) = n if n == 1 or 5 (mod 6). • a(n) <= p := nextprime(n), since we can simply take a solution for p and remove the last n - p rows and columns. •

▶ [A238187] 4,5,5,5,9,25,65,145,289,545,1025,1985,3969,8065,16385,33025,66049,131585,262145,523265,1046529,2095105,4194305,8392705,16785409 ⋆ Gaussian norm of 1 + (1 + i) ^ n. • a(n) = 2 ^ n + (1 + i) ^ n + (1 - i) ^ n + 1. [_ Bruno Berselli _ , Feb 20 2014] •

▶ [A075129] 4,5,5,5,13,50,155,390,861,1805,3850,8640,20167,47520,110780,254450,579149,1316485,3003095,6878765,15790278,36245235,83101760,190322935,435678591 ⋆ Binomial transform of reflected tetranacci numbers A074058: a(n)=Sum((- 1) ^ k Binomial(n,k) * A074058(k),(k=0,..,n)). • a(n)=5a(n - 1) - 10a(n - 2) + 10a(n - 3) - 3a(n - 4), a(0)=4, a(1)=5, a(2)=5, a(3)=5. G.f.: (4 - 15 * z + 20 * z ^ 2 - 10 * z ^ 3) / (1 - 5 * z + 10 * z ^ 2 - 10 * z ^ 3 + 3 * z ^ 4). •

▶ [A157727] 4,5,5,6,7,9,12,17,25,38,59,93,148,237,381,614,991,1601,2588,4185,6769,10950,17715,28661,46372 ⋆ a(n) = Fibonacci(n) + 4. • a(0) = 4, a(1) = 5, a(n) = a(n - 2) + a(n - 1) - 4. - _ Reinhard Zumkeller _ , Jul 30 2013 •

▶ [A171526] 1,1,1,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25 ⋆ Denominator of (n - th noncomposite / n). • a(1) = a(2) = a(3) = 1, a(n) = n for n >= 4. •

▶ [A171463] 1,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27 ⋆ The natural numbers excluding 2 and 3. • a(n) = n + [n>1] * 2. •

▶ [A020705] 4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28 ⋆ a(n) = n + 4. • a(n) = 2 * a(n - 1) - a(n - 2). •

▶ [A016069] 4,5,6,7,8,9,10,11,12,15,20,21,22,26,30,38,88,100,109,173,200,212,235,264,300 ⋆ Numbers k such that k ^ 2 contains exactly 2 distinct digits. • a(n) = ((n - 1) mod 3 + 1) * 10 ^ (ceiling(n / 3) - 7) for n >= 34 (conjectured). - _ Chai Wah Wu _ , Dec 17 2021 •

▶ [A294237] 0,0,0,0,0,0,0,4,5,6,7,8,9,10,11,20,22,33,36,39,42,45,48,63,67 ⋆ Sum of the larger parts of the partitions of n into two parts with smaller part nonsquarefree. • a(n) = Sum _{ i=1..floor(n / 2) } (n - i) * (1 - mu(i) ^ 2), where mu is the Möbius function (A008683). •

▶ [A321025] 4,5,6,7,8,9,11,13,15,17,20,24,28,32,37,44,52,60,69,81,96,112,129,150,177 ⋆ a(n) = sum of a(n - 4) and a(n - 5), with the lowest possible initial values that will generate a sequence where a(n) is always > a(n - 1): 4, 5, 6, 7 and 8. • a(n) = a(n - 4) + a(n - 5) with a(1) = 4, a(2) = 5, a(3) = 6, a(4) = 7 and a(5) = 8. •

▶ [A047569] 0,1,4,5,6,7,8,9,12,13,14,15,16,17,20,21,22,23,24,25,28,29,30,31,32 ⋆ Numbers that are congruent to { 0, 1, 4, 5, 6, 7 } mod 8. • a(n) = a(n - 1) + a(n - 6) - a(n - 7) for n>7. • a(n) = (24 * n - 15 - 3 * cos(n * Pi) + 4 * sqrt(3) * cos((1 - 4 * n) * Pi / 6) - 12 * sin((1 + 2 * n) * Pi / 6)) / 18. • a(6k) = 8k - 1, a(6k - 1) = 8k - 2, a(6k - 2) = 8k - 3, a(6k - 3) = 8k - 4, a(6k - 4) = 8k - 7, a(6k - 5) = 8k - 8. (End) •

▶ [A343916] 4,5,6,7,8,10,11,14,16,19,23,26,31,36,41,47,54,61,68,76,85,94,103,113,124 ⋆ a(n) is the minimal total number of faces of a polyhedron with at least one i - gonal face for every i in 3..n. • a(n) = 3 * a(n - 1) - 4 * a(n - 2) + 4 * a(n - 3) - 3 * a(n - 4) + a(n - 5) for n > 18. - _ Stefano Spezia _ , May 05 2021 • a(n) = 3 * a(n - 4) - 3 * a(n - 8) + a(n - 12) for n >= 26. (End) •

▶ [A047567] 0,4,5,6,7,8,12,13,14,15,16,20,21,22,23,24,28,29,30,31,32,36,37,38,39 ⋆ Numbers that are congruent to { 0, 4, 5, 6, 7 } mod 8. • a(n) = a(n - 1) + a(n - 5) - a(n - 6) for n > 6. • a(n) = a(n - 5) + 8 for n > 5. • a(n) = n + 2 + 3 * floor((n - 2) / 5). • a(n) = (8 * n + 4 - 3 * ((n + 3) mod 5)) / 5. • a(5k) = 8k - 1, a(5k - 1) = 8k - 2, a(5k - 2) = 8k - 3, a(5k - 3) = 8k - 4, a(5k - 4) = 8k - 8. (End) •

▶ [A329782] 1,4,5,6,7,9,10,11,13,15,16,19,21,24,25,27,29,30,31,33,34,35,36,39,41 ⋆ Numbers that are congruent to {+- 1, +- 4, +- 5, +- 6, +- 7, +- 9, +- 10, +- 11, +- 13, +- 15, +- 16, +- 19 } (mod 40). • a(n) = a(n - 1) + a(n - 24) - a(n - 25) for n>25. •

▶ [A075862] 4,5,6,7,9,10,13,14,15,19,21,22,26,31,33,34,38,39,43,46,51,57,58,61,62 ⋆ Numbers m such that the least k such that (m - k) divides (m + k) is prime. • a(n) seems to be asymptotic to n * log(n) and a(n)<prime(n) for n>3. •

▶ [A036668] 1,4,5,6,7,9,11,13,16,17,19,20,23,24,25,28,29,30,31,35,36,37,41,42,43 ⋆ Hati numbers: of form 2 ^ i * 3 ^ j * k, i + j even, (k,6)=1. • a(n) = 12 / 7 * n + O(log ^ 2 n). - _ Charles R Greathouse IV _ , Sep 10 2015 •

▶ [A047568] 1,4,5,6,7,9,12,13,14,15,17,20,21,22,23,25,28,29,30,31,33,36,37,38,39 ⋆ Numbers that are congruent to { 1, 4, 5, 6, 7 } mod 8. • a(n) = a(n - 1) + a(n - 5) - a(n - 6) for n > 6. • a(n) = a(n - 5) + 8 for n>5. • a(n) = (40 * n - 5 + 3 * (n mod 5) + 3 * ((n + 1) mod 5) + 3 * ((n + 2) mod 5) - 7 * ((n + 3) mod 5) - 2 * ((n + 4) mod 5)) / 25. • a(5k) = 8k - 1, a(5k - 1) = 8k - 2, a(5k - 2) = 8k - 3, a(5k - 3) = 8k - 4, a(5k - 4) = 8k - 7. (End) •

▶ [A047260] 0,1,4,5,6,7,10,11,12,13,16,17,18,19,22,23,24,25,28,29,30,31,34,35,36 ⋆ Numbers that are congruent to { 0, 1, 4, 5 } mod 6. • a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. • a(n) = (6 * n - 5 - i ^ (2 * n) + (1 - i) * i ^ (- n) + (1 + i) * i ^ n) / 4 where i=sqrt(- 1). • a(n) = (6 * n - 5 - (- 1) ^ n + 2 * (- 1) ^ (n * (n + 1) / 2)) / 4. • a(n) = a(n - 4) + 6, a(1)=0, a(2)=1, a(3)=4, a(4)=5, for n > 4. •

▶ [A080723] 1,4,5,6,7,10,13,16,17,18,19,20,21,22,23,24,25,28,31,34,37,40,43,46,49 ⋆ a(0) = 1; for n>0, a(n) is taken to be the smallest positive integer greater than a(n - 1) which is consistent with the condition "n is a member of the sequence if and only if a(n) == 1 mod 3". • a(a(n)) = 3 * n + 4, n >= 0. •

▶ [A047312] 0,4,5,6,7,11,12,13,14,18,19,20,21,25,26,27,28,32,33,34,35,39,40,41,42 ⋆ Numbers that are congruent to { 0, 4, 5, 6 } mod 7. • a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. • a(n) = (14 * n - 5 + 3 * i ^ (2 * n) - (3 + 3 * i) * i ^ (- n) - (3 - 3 * i) * i ^ n) / 8 where i=sqrt(- 1). •

▶ [A047566] 4,5,6,7,12,13,14,15,20,21,22,23,28,29,30,31,36,37,38,39,44,45,46,47,52 ⋆ Numbers that are congruent to { 4, 5, 6, 7 } mod 8. • a(n) = (1 / 3) *{ 5 * (n mod 4) + 2 * [(n + 1) mod 4] + 2 * [(n + 2) mod 4] + 2 * [(n + 3) mod 4] } + 8 * A002265. - _ Paolo P. Lava _ , Feb 15 2008 • a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. • a(n) = (4 * n + 1 - (- 1) ^ n - (- 1) ^ ((n + 1) / 2) - (- 1) ^ (n / 2) - (- 1) ^ (- (n + 1) / 2) - (- 1) ^ (- n / 2)) / 2. (End) •

▶ [A283775] 4,5,6,7,12,13,14,19,20,21,22,27,28,29,34,35,36,37,42,43,44,49,50,51,52 ⋆ Numbers k such that floor(k * sqrt(3)) is even. • a(n + 1) - a(n) is in { 1,4, 5 } for every n. •

▶ [A233035] 0,0,0,4,5,6,7,16,18,20,22,36,39,42,45,64,68,72,76,100,105,110,115,144,150 ⋆ a(n) = n * floor(n / 4). • a(n) = (n ^ 2 - n * (n mod 4)) / 4. •

▶ [A010754] 1,1,1,1,4,5,6,7,23,30,38,47,141,188,245,313,888,1201,1594,2080,5676,7756,10429,13817,36622 ⋆ Sum along upward diagonal of Pascal triangle to halfway point. • a(n) = Sum _{ k=0..floor(n / 4) } binomial(n - k, k). - _ Sean A. Irvine _ , Jun 08 2018 •

▶ [A088720] 4,5,6,8,9,10,11,12,14,16,17,18,19,20,21,22,23,24,26,28,30,32,33,34,35 ⋆ Unique monotone sequence satisfying a(a(a(n))) = 2n. • a(2n) = 2 * a(n). • a(4n + 1) = a(2n + 1) + 2 * a(n). • a(4n + 3) = 3 * a(2n + 1) - 2 * a(n). •

▶ [A047432] 0,1,4,5,6,8,9,12,13,14,16,17,20,21,22,24,25,28,29,30,32,33,36,37,38 ⋆ Numbers that are congruent to { 0, 1, 4, 5, 6 } mod 8. • a(n) = a(n - 1) + a(n - 5) - a(n - 6) for n > 6, a(n) = a(n - 5) + 8 for n > 5. • a(n) = (40 * n - 40 + 3 * (n mod 5) + 3 * ((n + 1) mod 5) - 7 * ((n + 2) mod 5) + 3 * ((n + 3) mod 5) - 2 * ((n + 4) mod 5)) / 25. • a(5k) = 8k - 2, a(5k - 1) = 8k - 3, a(5k - 2) = 8k - 4, a(5k - 3) = 8k - 7, a(5k - 4) = 8k - 8. (End) •

▶ [A144043] 4,5,6,8,10,12,14,18,22,24,26,30,34,36,38,42,46,52,58,60,62,68,74,78,82 ⋆ a(2n - 1) = 2 * prime(n), a(2n) = prime(n) + prime(n + 1). • a(2n - 1) = 2 prime(n), a(2n) = prime(n) + prime(n + 1), n = 1,2,... - _ Zak Seidov _ , Jan 15 2014 •

▶ [A209722] 4,5,6,8,10,14,18,26,34,50,66,98,130,194,258,386,514,770,1026,1538,2050,3074,4098,6146,8194 ⋆ 1 / 4 the number of (n + 1) X 4 0..2 arrays with every 2 X 2 subblock having distinct clockwise edge differences. • a(n) = 3 * 2 ^ (n / 2 - 1) + 2 for n even. • a(n) = 2 ^ ((n + 1) / 2) + 2 for n odd. •

▶ [A047313] 1,4,5,6,8,11,12,13,15,18,19,20,22,25,26,27,29,32,33,34,36,39,40,41,43 ⋆ Numbers that are congruent to { 1, 4, 5, 6 } mod 7. • a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. • a(n) = (14n - 3 + i ^ (2n) - (3 + i) * i ^ (- n) - (3 - i) * i ^ n) / 8 where i=sqrt(- 1). •

▶ [A047430] 0,4,5,6,8,12,13,14,16,20,21,22,24,28,29,30,32,36,37,38,40,44,45,46,48 ⋆ Numbers that are congruent to { 0, 4, 5, 6 } mod 8. • a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. • a(n) = (8 * n - 5 + i ^ (2 * n) - (2 + i) * i ^ (- n) - (2 - i) * i ^ n) / 4 where i=sqrt(- 1). •

▶ [A104626] 4,5,6,8,19,48,124,323,844,2208,5779,15128,39604,103683,271444,710648,1860499,4870848,12752044,33385283,87403804,228826128,599074579,1568397608,4106118244 ⋆ Numbers having three 1's in their base - phi representation. • a(n) = Lucas(2 * n - 4) + 1, for n>3. - _ Ralf Stephan _ , Nov 13 2010 •

▶ [A008854] 0,1,4,5,6,9,10,11,14,15,16,19,20,21,24,25,26,29,30,31,34,35,36,39,40 ⋆ Numbers that are congruent to { 0, 1, 4 } mod 5. • a(n) = - 1 + Sum _{ k=1..n } (- (k mod 3) + 5 * ((k + 1) mod 3) + 11 * ((k + 2) mod 3)) / 9. - _ Paolo P. Lava _ , Sep 03 2010 • a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. • a(n) = (15 * n - 15 + 6 * cos(2 * n * Pi / 3) + 2 * sqrt(3) * sin(2 * n * Pi / 3)) / 9. • a(3k) = 5k - 1, a(3k - 1) = 5k - 4, a(3k - 2) = 5k - 5. (End) • a(n) = 5 * n / 3 - 2 * (n mod 3) / 3 - 1. - _ Ammar Khatab _ , Aug 26 2020 • a(n) = a(floor(n / 2)) + a(1 + ceiling(n / 2)) for n >= 4 with a(1) = 0, a(2) = 1 and a(3) = 4. •

▶ [A047431] 1,4,5,6,9,12,13,14,17,20,21,22,25,28,29,30,33,36,37,38,41,44,45,46,49 ⋆ Numbers that are congruent to { 1, 4, 5, 6 } mod 8. • a(n) = (- 2 - (- i) ^ n - i ^ n + 4n) / 2 where i=sqrt(- 1). - _ Colin Barker _ , Jun 06 2012 • a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4) for n>4. •

▶ [A182719] 4,5,6,9,12,14,17,19,24,26,28,29,33,34,39,40,44,47,49,50,54,59,61,64,68 ⋆ Numbers of the form 5k + 4, 7k + 5, or 11k + 6. • a(n) = a(n - 145) + 385 = a(n - 1) + a(n - 145) - a(n - 146). •

▶ [A047258] 0,4,5,6,10,11,12,16,17,18,22,23,24,28,29,30,34,35,36,40,41,42,46,47,48 ⋆ Numbers that are congruent to { 0, 4, 5 } mod 6. • a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. • a(n) = 2n - 2 + ((2n - 2) mod 3). (End) • a(n) = 2 * n - 1 - 2 * sin(2 * n * Pi / 3) / sqrt(3). • a(3k) = 6k - 1, a(3k - 1) = 6k - 2, a(3k - 2) = 6k - 6. (End) •

▶ [A001609] 1,1,4,5,6,10,15,21,31,46,67,98,144,211,309,453,664,973,1426,2090,3063,4489,6579,9642,14131 ⋆ a(1) = a(2) = 1, a(3) = 4; thereafter a(n) = a(n - 1) + a(n - 3). • a(n) = trace of successive powers of matrix ({{ 0,0,1 } , { 1,0,0 } , { 0,1,1 }}) ^ n. - _ Artur Jasinski _ , Jan 10 2007 • a(n) = w1 ^ n + w2 ^ n + w3 ^ n, where w1,w2,w3 are the roots of the cubic: (- 1 - x ^ 2 + x ^ 3), see A092526. - _ Gerry Martens _ , Jun 27 2015 •

▶ [A007606] 1,4,5,6,11,12,13,14,15,22,23,24,25,26,27,28,37,38,39,40,41,42,43,44,45 ⋆ Take 1, skip 2, take 3, etc. • a(n) = n + m * (m + 1) where m = floor(sqrt(n - 1)). - _ Klaus Brockhaus _ , Mar 26 2004 • a(n + 1) = a(n) + if n=k ^ 2 then 2 * k + 1 else 1; a(1) = 1. - _ Reinhard Zumkeller _ , May 13 2009 •

▶ [A047311] 4,5,6,11,12,13,18,19,20,25,26,27,32,33,34,39,40,41,46,47,48,53,54,55,60 ⋆ Numbers that are congruent to { 4, 5, 6 } mod 7. • a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. • a(n) = (21 * n + 3 - 12 * cos(2 * n * Pi / 3) + 4 * sqrt(3) * sin(2 * n * Pi / 3)) / 9. • a(3k) = 7k - 1, a(3k - 1) = 7k - 2, a(3k - 2) = 7k - 3. (End) •

▶ [A047429] 4,5,6,12,13,14,20,21,22,28,29,30,36,37,38,44,45,46,52,53,54,60,61,62,68 ⋆ Numbers that are congruent to { 4, 5, 6 } mod 8. • a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. • a(n) = (24 * n - 3 - 15 * cos(2 * n * Pi / 3) + 5 * sqrt(3) * sin(2 * n * Pi / 3)) / 9. • a(3k) = 8k - 2, a(3k - 1) = 8k - 3, a(3k - 2) = 8k - 4. (End) •

▶ [A260107] 1,4,5,6,13,16,19,20,21,22,23,24,25,40,41,42,49,50,51,58,61,64,67,70,73 ⋆ Lexicographically first increasing sequence of positive integers such that the

re are exactly a(k) terms less than or equal to 3 * a(k), for each k. • a(n) <= 3 n - 2, and there are infinitely many indices (namely, all those of the form n = a (k) + 1 for some k) for which equality holds. •

▶ [A010753] 0,1,1,1,4,5,6,17,23,30,73,103,141,314,455,643,1350,1993,2881,5798,8 679,12761,24872,37633,56070 ⋆ Sum along upward diagonal of Pascal triangle u p to (but not including) center. • a(n) = Sum _{ k=0..floor((n - 1) / 3) } bino mial(n - k, k). - _ Seiichi Manyama _ , Feb 10 2022 •

▶ [A221174] 4,5,6,17,40,97,234,565,1364,3293,7950,19193,46336,111865,270066,6 51997,1574060,3800117,9174294,22148705,53471704,129092113,311655930,752403 973,1816463876 ⋆ a(0)= - 4, a(1)=5; thereafter a(n) = 2 * a(n - 1) + a(n - 2). • a(n) = (1 / 4) * (9 * sqrt(2) * ((1 + sqrt(2)) ^ n - (1 - sqrt(2)) ^ n) - 8 * ((1 + sqrt(2)) ^ n + (1 - sqrt(2)) ^ n)). - _ Paolo P. Lava _ , Jan 04 2013 • a(n) is t he numerator of the continued fraction [4, 2, ..., 2, 4] with n - 3 2's in the middl e. For denominators, see A048654. - _ Greg Dresden _ and _ Tongjia Rao _ , Sep 02 2021 •

▶ [A257542] 1,4,5,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28 ⋆ Square - sum pairs: Numbers n such that 0,1, ..., 2n - 1 can be partitioned into n pairs, where each pair adds up to a perfect square. • a(n) = 2 * a(n - 1) - a(n - 2) for n > 5. •

▶ [A164515] 1,4,5,7,8,9,10,12,13,14,15,16,17,19,20,21,22,23,24,25,26,28,29,30,31 ⋆ Positive numbers not of the form n ^ 2 + 2. • a(n) = n + 1 + floor(sqrt(n - 1) + 1 / 2), for n >= 2. •

▶ [A047494] 0,1,4,5,7,8,9,12,13,15,16,17,20,21,23,24,25,28,29,31,32,33,36,37,39 ⋆ Numbers that are congruent to { 0, 1, 4, 5, 7 } mod 8. • a(n) = a(n - 1) + a(n - 5) - a(n - 6) for n > 6, a(n) = a(n - 5) + 8 for n > 5. • a(n) = (40 * n - 35 - 2 * (n mod 5) + 3 * ((n + 1) mod 5) - 7 * ((n + 2) mod 5) + 3 * ((n + 3) mod 5) + 3 * ((n + 4) mod 5)) / 25. • a(5k) = 8k - 1, a(5k - 1) = 8k - 3, a(5k - 2) = 8k - 4, a(5k - 3) = 8k - 7, a(5k - 4) = 8k - 8. (End) •

▶ [A080712] 4,5,7,8,9,12,13,15,18,21,22,23,24,27,28,30,31,32,33,34,35,36,39,42,45 ⋆ a(0) = 4; for n>0, a(n) is taken to be the smallest positive integer greater tha n a(n - 1) which is consistent with the condition "n is a member of the sequence if and only if a(n) is a multiple of 3". • a(a(n)) = 3 * (n + 3). •

▶ [A276705] 4,5,7,8,9,20,55,91,187,247,391,475,667,775,1015,1147,1435,1591,192 7,2107,2491,2695,3127,3355,3835 ⋆ Records in A249860. • a(n) = (347 + 27 * (- 1) ^ n) / 2 - 3 * (27 + (- 1) ^ n) * n + 9 * n ^ 2 for n>6. • a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n>11. •

▶ [A159698] 4,5,7,8,11,12,13,14,15,16,17,18,19,20,21,22,23,24,29,30,32,33,37,38,3 9 ⋆ Minimal increasing sequence beginning with 4 such that n and a(n) are eith er both prime or both nonprime. • a(1) = 4; for n>1, a(n) = min { m > a(n - 1) : m is prime iff n is prime } . •

▶ [A191276] 0,1,4,5,7,8,11,12,13,16,17,19,20,23,24,25,28,29,31,32,35,36,37,40,41 ⋆ Numbers that are congruent to { 0, 1, 4, 5, 7, 9, 11 } mod 12. • a(n) = a(n - 1) + a(n - 7) - a(n - 8) for n>8. •

▶ [A047377] 0,1,4,5,7,8,11,12,14,15,18,19,21,22,25,26,28,29,32,33,35,36,39,40,42 ⋆ Numbers that are congruent to { 0, 1, 4, 5 } mod 7. • a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. • a(n) = (14 * n - 15 - 3 * i ^ (2 * n) + (1 - i) * i ^ (- n) + (1 + i) * i ^ n) / 8, where i=sqrt(- 1). •

▶ [A047492] 0,4,5,7,8,12,13,15,16,20,21,23,24,28,29,31,32,36,37,39,40,44,45,47,48 ⋆ Numbers that are congruent to { 0, 4, 5, 7 } mod 8. • a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. • a(n) = 2 * n + (1 + i) * (2 * i - 2 + (1 - i) * i ^ (2 * n) - i ^ (- n) + i ^ (1 + n)) / 4 where i=sqrt(- 1). •

▶ [A080596] 1,4,5,7,9,10,11,12,13,15,17,19,21,22,23,24,25,26,27,28,29,31,33,35,37 ⋆ a(1)=1; for n >= 2, a(n) is smallest positive integer which is consistent with sequence being monotonically increasing and satisfying a(a(n)) = 2n + 3. • a(1) = 1; then a(6 * 2 ^ k - 3 + j) = 8 * 2 ^ k - 3 + 3j / 2 + |j| / 2 for k >= 0, - 2 ^ (k + 1) <= j < 2 ^ (k + 1). •

▶ [A267027] 1,4,5,7,9,10,13,16,17,19,21,22,25,28,29,31,33,34,37,40,41,43,45,46,49 ⋆ "Polyrhythmic sequence" P(3,4): numbers congruent to 1 mod 3 (A016777) o r 1 mod 4 (A016813). • a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - 2 * a(n - 4) + 2 * a(n - 5) - a(n - 6) for n>6. • a(n) = (12 * n - 6 - 3 * cos(n * Pi / 3) - 3 * cos(2 * n * Pi / 3) + sqrt(3) * sin(n * Pi / 3) - sqrt(3) * sin(2 * n * Pi / 3)) / 6. • a(6k) = 12k - 2, a(6k - 1) = 12k - 3, a(6k - 2) = 12k - 5, a(6k - 3) = 12k - 7, a(6k - 4) = 12k - 8, a(6k - 5) = 12k - 11. (End) •

▶ [A047493] 1,4,5,7,9,12,13,15,17,20,21,23,25,28,29,31,33,36,37,39,41,44,45,47,49 ⋆ Numbers that are congruent to { 1, 4, 5, 7 } mod 8. • a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. • a(n) = (8 * n - 3 + i ^ (2 * n) - i ^ (- n) - i ^ n) / 4 wh ere i=sqrt(- 1). •

▶ [A047259] 1,4,5,7,10,11,13,16,17,19,22,23,25,28,29,31,34,35,37,40,41,43,46,47,4 9 ⋆ Numbers that are congruent to { 1, 4, 5 } mod 6. • a(n) = a(n - 3) + 6. (E nd) • a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4, with a(1)=1, a(2)=4, a(3)=5 , a(4)=7. - _ Harvey P. Dale _ , Feb 16 2015 • a(n) = (6 * n - 2 - cos(2 * n * Pi / 3) - sqrt(3) * sin(2 * n * Pi / 3)) / 3. • a(3k) = 6k - 1, a(3k - 1) = 6k - 2, a (3k - 2) = 6k - 5. (End) •

▶ [A145018] 4,5,7,10,14,19,25,32,40,49,59,70,82,95,109,124,140,157,175,194,214,2 35,257,280,304 ⋆ a(n) = (n ^ 2 - n + 8) / 2. • a(n) = (n ^ 2 - n + 8) / 2. - _ B enoit Cloitre _ . • a(n) = a(n - 1) + n - 1. • a(n) = 4 + C(n,2), n>=1. - _ Ze rinvary Lajos _ , Mar 12 2009 •

▶ [A018910] 4,5,7,10,15,23,36,57,91,146,235,379,612,989,1599,2586,4183,6767,10 948,17713,28659,46370,75027,121395,196420 ⋆ Pisot sequence L(4,5). • a(n)=2 + ((5 + 2r5) / 5)((1 + r5) / 2) ^ n + ((5 - 2r5) / 5)((1 - r5) / 2) ^ n, where r5 = sqrt(5). •

▶ [A047375] 0,4,5,7,11,12,14,18,19,21,25,26,28,32,33,35,39,40,42,46,47,49,53,54,5 6 ⋆ Numbers that are congruent to { 0, 4, 5 } mod 7. • a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. • a(n) = (21 * n - 15 - 3 * cos(2 * n * Pi / 3) - 5 * sqrt(3) * sin(2 * n * Pi / 3)) / 9. • a(3k) = 7k - 2, a(3k - 1) = 7k - 3, a(3k - 2) = 7k - 7 . (End) •

▶ [A237133] 4,5,7,11,17,28,44,73,115,191,301,500,788,1309,2063,3427,5401,8972,1 4140,23489,37019,61495,96917,160996,253732 ⋆ Values of x in the solutions to x ^ 2 - 3xy + y ^ 2 + 19 = 0, where 0 < x < y. • a(n) = 3 * a(n - 2) - a(n - 4). • a(n) = (1 / 2) * (F(n + 4) + (- 1) ^ n * F(n - 5)), n>4, with F the Fibonacci numbers (A000045). - _ Ralf Stephan _ , Feb 05 2014 •

▶ [A047491] 4,5,7,12,13,15,20,21,23,28,29,31,36,37,39,44,45,47,52,53,55,60,61,63,6 8 ⋆ Numbers that are congruent to { 4, 5, 7 } mod 8. • a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. • a(n) = (24 * n - 9 * cos(2 * n * Pi / 3) + 5 * sqrt(3) * s in(2 * n * Pi / 3)) / 9. • a(3k) = 8k - 1, a(3k - 1) = 8k - 3, a(3k - 2) = 8k - 4. (End) •

▶ [A353246] 4,5,7,15,2075 ⋆ Integer part of e[n]e, where [n] indicates hyper - n and e = 2.718281828... (using H. Kneser's proposal for n > 3). • a(n) = floor(e [n]e). •

▶ [A292321] 0,1,1,1,4,5,7,17,23,38,75,109,190,339,524,917,1563,2519,4360,7305,1 2056,20621,34407,57452,97423 ⋆ p - INVERT of (1,0,0,1,0,0,1,0,0,...), where p(S) = 1 - S ^ 2 - S ^ 3. • a(n) = a(n - 2) + 4 * a(n - 3) - a(n - 5) - 3 * a(n - 6) + a (n - 9) for n >= 10. •

▶ [A042948] 0,1,4,5,8,9,12,13,16,17,20,21,24,25,28,29,32,33,36,37,40,41,44,45,48 ⋆ Numbers congruent to 0 or 1 (mod 4). • a(n) = a(n - 1) + 2 + (- 1) ^ n. (End) • a(n) = - 1 / 2 + (1 / 2) * (- 1) ^ n + 2 * n. - _ Paolo P. Lava _ , Oct 03 2 008 • a(n) = 4 * n - a(n - 1) - 3 with a(0) = 0. - _ Vincenzo Librandi _ , Nov 1 7 2010 • a(n) = floor((4 / 3) * floor(3 * n / 2)). - _ Clark Kimberling _ , Jul 0 4 2012 • a(n) = n + 2 * floor(n / 2) = 2 * n - (n mod 2). - _ Bruno Berselli _ , Apr 30 2016 •

▶ [A321333] 1,4,5,8,9,12,13,16,19,20,23,24,27,28,31,32,35,36,39,40,43,46,47,50,51 ⋆ Compound sequence with a(n) = A319198(A278040(n)), for n >= 0. • a(n) = z(A(n)) = Sum _{ j=0..A(n) } t(j), n >= 0, with z = A319198, A = A278040 and t = A080843. • a(n)= 1 + Sum _{ k=1..n - 1 } d(k), where d is the tribon acci sequence on the alphabet { 3,1,1 } . - _ Michel Dekking _ , Oct 08 2019 •

▶ [A267489] 0,1,4,5,8,9,12,17,24,29,36,41,48,57,68,77,88,97,108,121,136,149,164,1 77,192 ⋆ a(n) = n ^ 2 - 4 * floor(n ^ 2 / 6). • a(n) = n ^ 2 - 4 * floor(n ^ 2 / 6) for n >= 0. • a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 6) - 2 * a(n - 7) + a(n - 8) f or n>7. •

▶ [A346457] 1,4,5,8,9,32,77,88,93,94,95,96,99,100,119,124,147,148,161,162,189,20 6,207,208,209 ⋆ a(n) is the smallest number k such that |Sum _{ j=1..k } (- 1) ^ omega(j)| = n, where omega(j) is the number of distinct primes dividing j. • a(n) = min { k : |Sum _{ j=1..k } mu(rad(j))| = n } , where mu is the Moebiu s function and rad is the squarefree kernel. •

▶ [A174396] 1,4,5,8,10,13,14,17,19,22,23,26,28,31,32,35,37,40,41,44,46,49,50,53,5 5 ⋆ Numbers congruent to { 1,4,5,8 } mod 9. • a(n) = 3 * (n - 1 - floor((n - 1) / 4)) + (- 1) ^ floor((n - 1) / 2). • a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5 . • a(n) = (18 * n - 9 + 3 * (- 1) ^ n - 2 * (- 1) ^ ((2 * n + 1 - (- 1) ^ n) / 4)) / 8. (End) •

▶ [A190394] 1,4,5,8,10,16,17,20,21,24,26,32,33,36,39,42,45,48,51,54,58,64,65,66,6 8 ⋆ Maximum number of nonattacking nightriders on an n X n board. • a(n) > = 24 * floor((n + 4) / 10) - 8, for n>=6. - _ Vaclav Kotesovec _ , Apr 01 201 2 •

▶ [A050140] 1,4,5,8,11,12,15,16,19,22,23,26,29,30,33,34,37,40,41,44,45,48,51,52,5 5 ⋆ a(n) = 2 * floor(n * phi) - n, where phi = (1 + sqrt(5)) / 2. • a(n) = floor(n * phi) + floor(n * sigma) where phi = (sqrt(5) + 1) / 2 and sigma = (sqrt(5) - 1) / 2. • a(n) = last number in repeating block in continued fraction for n * p hi. •

▶ [A047376] 1,4,5,8,11,12,15,18,19,22,25,26,29,32,33,36,39,40,43,46,47,50,53,54,5 7 ⋆ Numbers that are congruent to { 1, 4, 5 } mod 7. • a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. • a(n) = (21 * n - 12 - 6 * cos(2 * n * Pi / 3) - 2 * sqrt(3) * sin(2 * n * Pi / 3)) / 9. • a(3k) = 7k - 2, a(3k - 1) = 7k - 3, a(3k - 2) = 7k - 6 . (End) •

▶ [A353044] 1,4,5,8,11,14,17,22,25,28,33,38,41,46,51,56,61,66,71,76,81,88,93,98,1 03 ⋆ a(n) is the minimal sum of squares over partitions of n with a nonnegative rank. • a(n) = Theta(n ^ (4 / 3)). •

▶ [A117573] 1,1,4,5,8,11,15,18,24,28,34,40,47,53,62,69,78,87,97,106,118,128,140,1 52,165 ⋆ Expansion of (1 + 2x ^ 2) / ((1 - x)(1 - x ^ 2)(1 - x ^ 3)). • a(n) = a(n - 1) + a(n - 2) - a(n - 4) - a(n - 5) + a(n - 6). • a(n) = sqrt(3) * cos(2 * Pi * n / 3 + Pi / 6) / 9 - sin(2 * Pi * n / 3 + Pi / 6) / 3 + 3 * cos(Pi * n) / 8 + (6n ^ 2 + 20n + 15) / 24. • a(n) = floor((9 * (- 1) ^ n + 6 * n ^ 2 + 20 * n + 23) / 24). - _ Tani Akinari _ , Nov 09 2012 • a(n) = 1 - n / 4 + n ^ 2 / 4 + 3 / 2 * flo or(n / 2) + floor((n + 1) / 3). - _ Vaclav Kotesovec _ , Jun 15 2014 •

▶ [A256535] 0,0,1,4,5,8,11,16,19,24,29,36,41,48,55,64,71,80,89,100,109,120,131,14 4,155 ⋆ The largest number of T - tetrominoes that fit within an n X n square. • a(4m) = 4m ^ 2; • a(4m + 1) = 4m ^ 2 + 2m - 1; • a(4m + 2) = 4m ^ 2 + 4 m; • a(4m + 3) = 4m ^ 2 + 6m + 1. • a(n) = (- 7 + 3 * (- 1) ^ n + 2 * (- i) ^ n + 2 * i ^ n + 2 * n ^ 2) / 8 for n>1, where i=sqrt(- 1). • a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 4) - 2 * a(n - 5) + a(n - 6) for n>7. •

▶ [A249669] 4,5,8,11,17,19,25,27,32,40,42,49,54,56,60,67,74,76,83,87,89,96,100,10 7,116 ⋆ a(n) = floor(prime(n) ^ (1 + 1 / n)). • a(n) = prime(n) + (log(prime(n))) ^ 2 - log(prime(n)) + O(1), see arXiv:1506.03042, Theorem 5. - _ Alexei Ko urbatov _ , Nov 26 2015 •

▶ [A130814] 1,4,5,8,11,20,25,32,39,52,61,72,83,96,113,128,141,164,181,200,219,24 0,267,288,311 ⋆ Row sums of A130795. • a(n) =Sum[A130795[n,m], { i, 0, n - 1 }] •

▶ [A047609] 0,4,5,8,12,13,16,20,21,24,28,29,32,36,37,40,44,45,48,52,53,56,60,61,6 4 ⋆ Numbers that are congruent to { 0, 4, 5 } mod 8. • a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. • a(n) = (24 * n - 21 - 6 * cos(2 * n * Pi / 3) - 4 * sqrt(3) * sin(2 * n * Pi / 3)) / 9. • a(3k) = 8k - 3, a(3k - 1) = 8k - 4, a(3k - 2) = 8k - 8 . (End) •

▶ [A027975] 1,1,4,5,8,12,16,23,31,42,57,76,102,136,181,241,320,425,564,748,992,1 315,1743,2310,3061 ⋆ a(n) is the n - th diagonal sum of left justified array T giv en by A027960. • a(n) = a(n - 2) + a(n - 3) + 3. - _ Greg Dresden _ , May 18 2020 •

▶ [A174398] 1,4,5,8,13,16,17,20,25,28,29,32,37,40,41,44,49,52,53,56,61,64,65,68,7 3 ⋆ Numbers that are congruent to { 1, 4, 5, 8 } mod 12. • a(n) = 3 * n - 3 + (- 1) ^ floor((n - 1) / 2). • a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - a(n -

4) for n>4. • a(n) = (1 + i) * (3 * (n - n * i + i - 1) + i ^ (1 - n) - i ^ n) / 2, where i=sqrt(- 1). •
► [A341420] 1,4,5,8,13,17,20,25,29,37,40,41,52,53,61,65,68,73,85,89,97,100,101,104,109 ⋆ The positive integer numbers k represented properly by the binary quadratic form x ^ 2 + 4 * y ^ 2. • a(n) = x(n) ^ 2 + (2 * y(n)) ^ 2, with gcd(x(n), y(n)) = 1, for n >= 1. •
► [A030978] 0,1,4,5,8,13,18,25,32,41,50,61,72,85,98,113,128,145,162,181,200,221,242,265,288 ⋆ Maximal number of non - attacking knights on an n X n board. • a(n) = 4 if n = 2, n ^ 2 / 2 if n even > 2, (n ^ 2 + 1) / 2 if n odd > 1. • a(n) = 4 if n = 2, (1 + (- 1) ^ (1 + n) + 2 n ^ 2) / 4 otherwise. •
► [A348484] 1,4,5,8,13,20,25,32,41,52 ⋆ Maximum number of squares on an n X n chessboard such that no two are two steps apart horizontally or vertically. • a(n) = n ^ 2 / 2 for n == 0 (mod 4). • a(n) = (n ^ 2 + 1) / 2 for n == 1 or 3 (mod 4). • a(n) = n ^ 2 / 2 + 2 for n == 2 (mod 4). •
► [A087475] 4,5,8,13,20,29,40,53,68,85,104,125,148,173,200,229,260,293,328,365,404,445,488,533,580 ⋆ a(n) = n ^ 2 + 4. • a(n) = a(n - 1) + 2 * n - 1 (with a(0) =4). - _ Vincenzo Librandi _ , Nov 22 2010 •
► [A019526] 4,5,8,13,24,44,83,158,303,582,1120,2157,4156,8009,15436,29752,57347,110538,213067,410698,791644,1525941,2941344,5669621,10928544 ⋆ Poincaré series [or Poincare series] for depths of roots in a certain root system. • a(n) = 2a(n - 1) - a(n - 5). •
► [A258935] 4,5,8,16,32,64,128,256,512,1024,2048,4096,8192,16384,32768,65536,131072,262144,524288,1048576,2097152,4194304,8388608,16777216,33554432 ⋆ Independence number of Keller graphs. • a(n) = 2 ^ n except a(1) = 4 and a(2) = 5. •
► [A352396] 4,5,8,23,37149801960 ⋆ Integer part of e[n]Pi, where [n] indicates hyper - n, e = 2.718281828459045..., and Pi = 3.141592653589793... (using H. Kneser's proposal for n > 3). • a(n) = floor(e[n]Pi). •
► [A047208] 0,4,5,9,10,14,15,19,20,24,25,29,30,34,35,39,40,44,45,49,50,54,55,59,60 ⋆ Numbers that are congruent to { 0, 4 } mod 5. • a(n) = a(n - 2) + 5. (End) • a(n) = (1 / 4) * (3 - 3 * (- 1) ^ n + 10 * n), with n>=0. - _ Paolo P. Lava _ , Feb 10 2009 • a(n) = 5 * n - 6 - a(n - 1) (with a(1)=0). - _ Vincenzo Librandi _ , Nov 18 2010 • a(n) = ceiling((5 / 3) * ceiling(3 * n / 2)). - _ Clark Kimberling _ , Jul 04 2012 •
► [A189889] 1,1,1,4,5,9,10,16,18,25,27,36,39,49,52,64,68,81,85,100,105,121,126,144,150 ⋆ Maximum number of nonattacking kings on an n X n toroidal board. • a(n) = a(n - 1) + a(n - 2) - a(n - 3) + a(n - 4) - a(n - 5) - a(n - 6) + a(n - 7). •
► [A329451] 0,0,0,1,1,4,5,9,10,16,19,25,28,36,41,49,54,64,71,81,88,100,109,121,130 ⋆ Maximum number of pieces that can be captured during one move on an n X n board according to the international draughts capture rules. • a(0) = a(2) = 0; a(4) = 1. • a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 4) - 2 * a(n - 5) + a(n - 6) for n>10. •
► [A162698] 4,5,9,11,14,17,19,23,24,29,34,35,39,41,44,47,49,53,54,59,64,65,69,71,74 ⋆ Numbers n such that the incidence matrix of the grid n X n has - 1 as eigenvalue. • a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - 2 * a(n - 4) + 2 * a(n - 5) - 2 * a(n - 6) + 2 * a(n - 7) - 2 * a(n - 8) + 2 * a(n - 9) - a(n - 10) for n>10. •
► [A047610] 1,4,5,9,12,13,17,20,21,25,28,29,33,36,37,41,44,45,49,52,53,57,60,61,65 ⋆ Positive integers that are congruent to { 1, 4, 5 } mod 8. • a(n) = a(n - 3) + 8, n > 3, with initial conditions a(1) = 1, a(2) = 4, a(3) = 5. - _ L. Edson Jeffery _ , May 04 2015 •
► [A120740] 0,4,5,9,14,18,23,27,32,36,41,45,50,54,59,63,68,72,77,81,86,90,95,99,104 ⋆ Numbers n such that n = Sum _ digits[k * abs(n - k)] for some k>=0. • a(n)=9 / 2 * (n - 1) + 4 *{ 1 - [(n + 2) mod (n + 1)] + [n! ^ 2 mod (n + 1)] * [(n + 1)! ^ 2 mod (n + 2)] }+ Sum { j=0..n }{ (- 1) ^ j / 2 } . •
► [A347553] 1,4,5,9,14,20,27,35,44,54,65,77,90,104,119,135,152,170,189,209,230,252,275,299,324 ⋆ Number of minimum dominating sets in the n - cycle complement graph. • a(n) = n * (n - 3) / 2 for n > 4. • a(n) = 3 * a(n - 1) - 3 * a(n - 3) + a(n - 3) for n > 4. (End) •
► [A000285] 1,4,5,9,14,23,37,60,97,157,254,411,665,1076,1741,2817,4558,7375,11933,19308,31241,50549,81790,132339,214129 ⋆ a(0) = 1, a(1) = 4, and a(n) = a(n - 1) + a(n - 2) for n >= 2. • a(n) = 2 * Fibonacci(n) + Fibonacci(n + 2). - _ Zerinvary Lajos _ , Oct 05 2007 • a(n) = ((1 + sqrt(5)) ^ n - (1 - sqrt(5)) ^ n) / (2 ^ n * sqrt(5)) + (3 / 2) * ((1 + sqrt(5)) ^ (n - 1) - (1 - sqrt(5)) ^ (n - 1)) / (2 ^ (n - 2) * sqrt(5)). Offset 1. a(3)=5. - Al Hakanson (hawkuu(AT)gmail.com), Jan 14 2009 • a(n) = 3 * Fibonacci(n + 2) - 2 * Fibonacci(n + 1). - _ Gary Detlefs _ , Dec 21 2010 • a(n) = Fibonacci(n) + Lucas(n + 1), see Mathematica field. (End) • a(n) = (9 * F(n) + F(n - 3)) / 2. - _ J. M. Bergot _ , Jul 15 2017 •
► [A042031] 1,4,5,9,14,23,37,171,7903,31783,39686,71469,111155,182624,293779,1357740,62749819,252357016,315106835,567463851,882570686,1450034537,2332605223,10780455429,498233554957 ⋆ Denominators of continued fraction convergents to sqrt(539). • a(n) = 7940 * a(n - 8) - a(n - 16). - _ Wesley Ivan Hurt _ , Sep 05 2022 •
► [A042765] 1,4,5,9,14,37,51,88,579,4141,8861,21863,424258,446121,1316500,1762621,8366984,10129605,28626194,38755799,764986375,1568728549,3902443473,28885832860,177217440633 ⋆ Denominators of continued fraction convergents to sqrt(913). • a(n) = 1031468486160814 * a(n - 32) - a(n - 64) for n>63. - _ Vincenzo Librandi _ , Jan 28 2014 •
► [A041823] 1,1,4,5,9,14,51,65,2651,2716,10799,13515,24314,37829,137801,175630,7163001,7338631,29178894,36517525,65696419,102213944,372338251,474552195,19354426051 ⋆ Denominators of continued fraction convergents to sqrt(432). • a(n) = 2702 * a(n - 8) - a(n - 16) for n>15. - _ Vincenzo Librandi _ , Dec 25 2013 •
► [A042489] 1,1,4,5,9,14,79,93,172,1297,2766,4063,6829,120156,126985,1643976,1770961,31750313,33521274,65271587,164064448,1213722723,1377787171,2591509894,14335336641 ⋆ Denominators of continued fraction convergents to sqrt(772). • a(n) = 12448646853698 * a(n - 30) - a(n - 60) for n>59. - _ Vincenzo Librandi _ , Jan 23 2014 •
► [A049860] 0,1,4,5,9,15,29,54,102,190,355,662,1236,2307,4307,8040,15009,28018,52303,97637,182265,340245,635156,1185684,2213388 ⋆ a(n)=Sum { a(k): k=0, 1,2,...,n - 4,n - 2,n - 1 } ; a(n - 3) is not a summand; 3 initial terms required. • a(n)=2 * a(n - 1) - a(n - 3) + a(n - 4); 4 initial terms required. •
► [A255978] 0,1,1,4,5,9,16,25,41,68,109,177,288,465,753,1220,1973,3193,5168,8361,13529,21892,35421,57313,92736 ⋆ a(n) = a(n - 1) + a(n - 2) + (1 + (- 1) ^ (a(n - 1) + a(n - 2))) with a(0)=0, a(1)=1. • a(n) = a(n - 1) + a(n - 2) + (1 + (- 1) ^ (a(n - 1) + a(n - 2))), a(0)=0, a(1)=1. • a(n) = a(n - 1) + a(n - 2) + a(n - 3) - a(n - 4) - a(n - 5) for n>4. - _ Colin Barker _ , Mar 28 2015 • a(n) = 2 * Fibonacci(n) - (1 if n != 0 (mod 3)). - _ Nicolas Bělohoubek _ , Sep 29 2021 •
► [A240926] 4,5,9,20,49,125,324,845,2209,5780,15129,39605,103684,271445,710649,1860500,4870849,12752045,33385284,87403805,228826129,599074580,1568397609,4106118245,10749957124 ⋆ a(n) = 2 + L(2 * n) = 2 + A005248(n), n >= 0, with the Lucas numbers (A000032). • a(n) = (2 + ((1 / 2) * (3 - sqrt(5))) ^ n + ((1 / 2) * (3 + sqrt(5))) ^ n). • a(n) = 4 * a(n - 1) - 4 * a(n - 2) + a(n - 3). • a(n) = 2 + S(n, 3) - S(n - 2, 3) = 2 + 2 * S(n, 3) - 3 * S(n - 1, 3). • a(n) = 3 * a(n - 1) - a(n - 2) - 2, n >= 1, with a(- 1)= 5 and a(0) = 4 (from the S(n, 3) recurrence or from A005248). • a(n) = (phi ^ n + phi ^ (- n)) ^ 2, where phi = A001622 = (1 + sqrt(5)) / 2. - _ Diego Rattaggi _ , Jun 10 2020 •
► [A041032] 4,5,9,23,32,55,472,527,999,2525,3524,6049,51916,57965,109881,277727,387608,665335,5710288,6375623,12085911,30547445,42633356,73180801,628079764 ⋆ Numerators of continued fraction convergents to sqrt(21). • a(n) = 110 * a(n - 6) - a(n - 12). G.f.: - (x ^ 11 - 4 * x ^ 10 + 5 * x ^ 9 - 9 * x ^ 8 + 23 * x ^ 7 - 32 * x ^ 6 - 55 * x ^ 5 - 32 * x ^ 4 - 23 * x ^ 3 - 9 * x ^ 2 - 5 * x - 4) / ((x ^ 4 - 5 * x ^ 2 + 1) * (x ^ 8 + 5 * x ^ 6 + 24 * x ^ 4 + 5 * x ^ 2 + 1)). - _ Colin Barker _ , Jul 16 2012 •
► [A075116] 4,5,9,23,69,210,627,1846,5405,15809,46254,135382,396327,1160294,3396892,9944688,29113741,85232259,249522603,730492701,2138562494,6260774221,18328804756,53658712275,157089206159 ⋆ Binomial transform of A073817: a(n)=Sum(Binomial(n,k) * A073817(k),(k=0,..,n)). • a(n)=5a(n - 1) - 8a(n - 2) + 6a(n - 3) - a(n - 4), a(0)=4, a(1)=5, a(2)=9, a(3)=23. G.f.: (4 - 15 * z + 16 * z ^ 2 - 6 * z ^ 3) / (1 - 5 * z + 8 * z ^ 2 - 6 * z ^ 3 + z ^ 4). •
► [A041079] 1,1,4,5,9,23,147,317,464,781,2807,3588,45863,49451,194216,243667,437883,1119433,7154481,15428395,22582876,38011271,136616689,174627960,2232152209 ⋆ Denominators of continued fraction convergents to sqrt(46). • a(n) = 48670 * a(n - 12) - a(n - 24). G.f.: - (x ^ 22 - x ^ 21 + 4 * x ^ 20 - 5 * x ^ 19 + 9 * x ^ 18 - 23 * x ^ 17 + 147 * x ^ 16 - 317 * x ^ 15 + 464 * x ^ 14 - 781 * x ^ 13 + 2807 * x ^ 12 - 3588 * x ^ 11 - 2807 * x ^ 10 - 781 * x ^ 9 - 464 * x ^ 8 - 317 * x ^ 7 - 147 * x ^ 6 - 23 * x ^ 5 - 9 * x ^ 4 - 5 * x ^ 3 - 4 * x ^ 2 - x - 1) / (x ^ 24 - 48670 * x ^ 12 + 1). [_ Colin Barker _ , Jul 19 2012] •
► [A042715] 1,1,4,5,9,23,676,1375,2051,3426,12329,15755,926119,941874,3751741,4693615,8445356,21584327,634390839,1290366005,1924756844,3215122849,11570125391,14785248240,869114523311 ⋆ Denominators of continued fraction convergents to sqrt(887). • a(n) = 938448 * a(n - 12) - a(n - 24). - _ Wesley Ivan Hurt _ , Apr 11 2022 •
► [A163868] 4,5,9,25,89,345,1369,5465,21849,87385,349529,1398105,5592409,22369625,89478489,357913945,1431655769,5726623065,22906492249,91625968985,366503875929,1466015503705,5864062014809,23456248059225,93824992236889 ⋆ a(n) = (4 ^ n + 11) / 3. • a(n)= 5 * a(n - 1) - 4 * a(n - 2). •
► [A042221] 1,4,5,9,32,105,1292,3981,13235,17216,30451,139020,6981451,28064824,35046275,63111099,224379572,736249815,9059377352,27914381871,928025229265,120716904836,213519427801,974794616040,48953250229801 ⋆ Denominators of continued fraction convergents to sqrt(636). • a(n) = 7011902 * a(n - 12) - a(n - 24) for n>23. - _ Vincenzo Librandi _ , Jan 17 2014 •
► [A041151] 1,4,5,9,41,747,3029,3776,6805,30996,564733,2289928,2854661,5144589,23433017,426938895,1731188597,2158127492,3889316089,17715391848,322766369353,1308780869260,1631547238613,2940328107873,13392859670105 ⋆ Denominators of continued fraction convergents to sqrt(85). • a(n) = 756 * a(n - 5) + a(n - 10). - _ Vincenzo Librandi _ , Dec 12 2013 •
► [A041467] 1,1,4,5,9,50,59,227,2329,7214,9543,54929,64472,119401,422675,542076,16684955,17227031,68366048,85593079,153959127,855388714,1009347841,3883432237,39843670211 ⋆ Denominators of continued fraction convergents to sqrt(249). • a(n) = 17107630 * a(n - 16) - a(n - 32) for n>31. - _ Vincenzo Librandi _ , Dec 18 2013 •
► [A041627] 1,4,5,9,77,86,163,738,26731,107662,134393,242055,2070833,2312888,4383721,19847772,718903513,2895461824,3614365337,6509827161,55692982625,62202809786,117895792411,533785979430,19334191051891 ⋆ Denominators of continued fraction convergents to sqrt(332). • a(n) = 26894 * a(n - 8) - a(n - 16) for n>15. - _ Vincenzo Librandi _ , Dec 22 2013 •
► [A042427] 1,4,5,9,122,2205,28787,30992,59779,270108,14645611,58852552,73498163,132350715,1794057458,32425384959,423324061925,455749446884,879073508809,3972043482120,215369421543289,865449729655276,1080819151198565,1946268880853841 ⋆ Denominators of continued fraction convergents to sqrt(741). • a(n) = 14705390 * a(n - 10) - a(n - 20) for n>19. - _ Vincenzo Librandi _ , Jan 22 2014 •
► [A047257] 4,5,10,11,16,17,22,23,28,29,34,35,40,41,46,47,52,53,58,59,64,65,70,71,76 ⋆ Numbers that are congruent to { 4, 5 } mod 6. • a(n) = 4 + 6 * floor(n / 2) + n mod 2. • a(n) = 6 * n - a(n - 1) - 3, with a(1)=4. - _ Vincenzo Librandi _ , Aug 05 2010 • a(n) = 3 * n - (- 1) ^ n. - _ Wesley Ivan Hurt _ , Mar 20 2015 •
► [A217571] 1,4,5,10,11,18,19,28,29,40,41,54,55,70,71,88,89,108,109,130,131,154,155,180,181 ⋆ a(n) = (2 * n * (n + 5) + (2 * n + 1) * (- 1) ^ n - 1) / 8. • a(n) = a(n - 1) + 1 for n odd. • a(n) = a(n - 1) + n + 1 for n even. •
► [A236283] 1,4,5,10,13,20,25,34,41,52,61,74,85,100,113,130,145,164,181,202,221,244,265,290,313 ⋆ The number of orbits of triples of { 1,2,...,n } under the action of the dihedral group of order 2n. • a(n) = (5 + 3 * (- 1) ^ n + 2 * n ^ 2) / 4. • a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4). • a(n) = (n - 2) * (n + 2) / 2 + 4 for even n. • a(n) = (n - 1) * (n + 1) / 2 + 1 for odd n. •
► [A116930] 1,1,4,5,10,14,22,31,44,61,82,111,145,191,245,316,399,506,631,788,973,1200,1468,1792,2174 ⋆ Sum of parts, counted without multiplicities, in all partitions of n into odd parts. • a(n) = Sum _{ parts k in all partitions of n into di

stinct parts } phi(k), where phi(k) is the Euler totient function (see A000010). An example is given below. - _ Peter Bala _ , Dec 26 2013 ●

▶ [A131780] 1,4,5,10,15,26,41,68,109,178,287,466,753,1220,1973,3194,5167,8362,13529,21892,35421,57314,92735,150050,242785 ★ Row sums of triangle A131779. ● a(n) = 2 * Fibonacci(n + 1) - (1 - (- 1) ^ n) / 2. ● a(n) = a(n - 1) + 2 * a(n - 2) - a(n - 3) - a(n - 4) for n > 4. ●

▶ [A022309] 0,4,5,10,16,27,44,72,117,190,308,499,808,1308,2117,3426,5544,8971,14516,23488,38005,61494,99500,160995,260496 ★ a(n) = a(n - 1) + a(n - 2) + 1 for n>1, a(0)=0, a(1)=4. ● a(n) = - 1 + (2 ^ (- 1 - n) * ((1 - t) ^ n * (- 9 + t) + (1 + t) ^ n * (9 + t))) / t, where t=sqrt(5). ● a(n) = 2 * a(n - 1) - a(n - 3) for n>2. (End) ● a(n) = 5 * F(n) + F(n - 1) - 1, where F = A000045. - _ Bruno Berselli _ , Feb 20 2017 ●

▶ [A049867] 1,1,4,5,10,17,33,61,115,214,400,746,1393,2600,4854,9061,16915,31576,58945,110036,205411,383453,715815,1336255,2494468 ★ a(n) = Sum { a(k): k =0,1,2,...,n - 4,n - 2,n - 1 } ; a(n - 3) is not a summand; 3 initial terms required. ● a(n) = 2 * a(n - 1) - a(n - 3) + a(n - 4) for n >= 4. ●

▶ [A047374] 4,5,11,12,18,19,25,26,32,33,39,40,46,47,53,54,60,61,67,68,74,75,81,82,88 ★ Numbers that are congruent to { 4, 5 } mod 7. ● a(n) = - (5 / 4) * (- 1) ^ n + 7 * (n - 1) / 2 + 11 / 4. - _ Viet Quoc Le Tran _ , Jun 14 2014 ● a(n) = (14 * n - 5 * (- 1) ^ n - 3) / 4. - _ David Lovler _ , Sep 15 2022 ●

▶ [A053307] 1,1,4,5,11,14,24,30,45,55,76,91,119,140,176,204,249,285,340,385,451,506,584,650,741 ★ Number of nonnegative integer 2 X 2 matrices with sum of elements equal to n, under row and column permutations. ● a(n) = (n + 2) * (2 * n ^ 2 + 8 * n + 15 + 9 * (- 1) ^ n) / 48. - _ Vaclav Kotesovec _ , Mar 16 2014 ●

▶ [A066898] 0,1,1,4,5,11,15,28,38,62,85,131,177,258,346,489,648,890,1168,1572,2042,2699,3475,4532,5783 ★ Total number of even parts in all partitions of n. ● a(n) = Sum _{ k=1..floor { n / 2) } tau(k) * numbpart(n - 2 * k). - _ Vladeta Jovovic _ , Jan 26 2002 ●

▶ [A001350] 0,1,1,4,5,11,16,29,45,76,121,199,320,521,841,1364,2205,3571,5776,9349,15125,24476,39601,64079,103680 ★ Associated Mersenne numbers. ● a(n) = a(n - 1) + a(n - 2) + 1 - (- 1) ^ n. a(- n) = (- 1) ^ n * a(n). ● a(n) = - (1 - ((1 + sqrt(5)) / 2) ^ n - (- (1 + sqrt(5)) / 2) ^ (- n) + (- 1) ^ n). - _ Roger L. Bagula _ and _ Gary W. Adamson _ , Nov 26 2008 ● a(n) = n * Sum _{ k=1..n } (Sum _{ i=ceiling((n - k) / 2)..(n - k) } (binomial(i,n - k - i) * binomial(k + i - 1,k - 1)) / k * (- 1) ^ (k + 1)), n>0. - _ Vladimir Kruchinin _ , Sep 03 2010 ● a(n) = a(n - 1) + 2 * a(n - 2) - a(n - 3) - a(n - 4). - _ Colin Barker _ , Apr 11 2014 ● a(12n + 6) / a(4n + 2) = (a(6n + 3) / a(2n + 1)) ^ 2. - _ Bob Selcoe _ , Jun 01 2014 ● a(n) = Sum _{ k=0..n - 1 } binomial(k - 1, 2 * k - n) * n / (n - k). - _ Peter Luschny _ , Sep 26 2014 ●

▶ [A077238] 4,5,11,16,40,59,149,220,556,821,2075,3064,7744,11435,28901,42676,107860,159269,402539,594400,1502296,2218331,5606645,8278924,20924284 ★ Combined Diophantine Chebyshev sequences A077236 and A077235. ● a(n) = 4 * a(n - 2) - a(n - 4). - _ Colin Barker _ , Feb 06 2014 ●

▶ [A259821] 4,5,11,29,83,245,731,2189,6563,19685,59051,177149,531443,1594325,4782971,14348909,43046723,129140165,387420491,1162261469,3486784403,10460353205,31381059611,94143178829,282429536483 ★ a(n) = floor((3 ^ n + 1) ^ 2 / 3 ^ n). ● a(n) = 3 ^ n + 2 for n>0. ● a(n) = 4 * a(n - 1) - 3 * a(n - 2) for n >2. ●

▶ [A080277] 1,4,5,12,13,16,17,32,33,36,37,44,45,48,49,80,81,84,85,92,93,96,97,112,113 ★ Partial sums of A038712. ● a(n) is conjectured to be asymptotic to n * log(n) / log(2). - _ Klaus Brockhaus _ , Mar 23 2003 [See Bannister et al., 2013. - _ N. J. A. Sloane _ , Nov 26 2013] ● a(n) = Sum _{ k=0..log _2(n) } 2 ^ k * floor(n / 2 ^ k). ● a(2 ^ k) = (k + 1) * 2 ^ k. ● a(n) = n + 2 * a(floor(n / 2)). - _ Vladeta Jovovic _ , Aug 06 2003 ● a(1) = 1, a(2 * n) = 2 * a(n) + 2 * n, a(2 * n + 1) = 2 * a(n) + 2 * n + 1. ●

▶ [A047608] 4,5,12,13,20,21,28,29,36,37,44,45,52,53,60,61,68,69,76,77,84,85,92,93,100 ★ Numbers that are congruent to { 4, 5 } mod 8. ● a(n) = 4n - 3 * (1 + (- 1) ^ n) / 2 or a(n) = 4n - 3 * ((n - 1) mod 2). - _ Heinz Ebert _ , Jul 12 2021 ●

▶ [A266725] 0,1,4,5,12,13,24,25,40,41,60,61,84,85,112,113,144,145,180,181,220,221,264,265,312 ★ Total number of OFF (white) cells after n iterations of the "Rule 59" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = (2 * n * (n + (- 1) ^ n + 1) - (- 1) ^ n + 1) / 4. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n>4. ●

▶ [A115375] 1,1,4,5,12,15,30,37,65,80,128,156,234,282,402,480,657,777,1030,1207,1558,1811,2286,2637,3267 ★ <h[d,d],s[d,d] * s[d,d] * s[d,d]> where h[d,d] is a homogeneous symmetric function, s[d,d] is a Schur function indexed by two parts, * represents the Kronecker product and <, > is the standard scalar product on symmetric functions. ● a(n) = a(n - 1) + 4 * a(n - 2) - 3 * a(n - 3) - 7 * a(n - 4) + 2 * a(n - 5) + 8 * a(n - 6) + 2 * a(n - 7) - 7 * a(n - 8) - 3 * a(n - 9) + 4 * a(n - 10) + a(n - 11) - a(n - 12) for n>11. - _ Colin Barker _ , May 10 2019 ●

▶ [A352215] 1,1,1,4,5,12,16,32,54 ★ Largest number of maximal C _ 4 - free node - induced subgraphs of an n - node graph. ● a(m + n) >= a(m) * a(n). ●

▶ [A342324] 1,1,1,4,5,12,16,36,81 ★ Largest number of maximal chordal node - induced subgraphs of an n - node graph. ● a(m + n) >= a(m) * a(n). ●

▶ [A131328] 1,4,5,12,17,32,49,84,133,220,353,576,929,1508,2437,3948,6385,10336,16721,27060,43781,70844,114625,185472,300097 ★ Row sums of triangle A131327. ● a(n) = (2 ^ (1 - n) * ((1 + sqrt(5)) ^ (n + 1) - (1 - sqrt(5)) ^ (n + 1))) / sqrt(5) - 3 for n even. ● a(n) = (2 ^ (1 - n) * ((1 + sqrt(5)) ^ (n + 1) - (1 - sqrt(5)) ^ (n + 1))) / sqrt(5) for n odd. ● a(n) = a(n - 1) + 2 * a(n - 2) - a(n - 3) - a(n - 4) for n>3. ●

▶ [A054451] 1,1,4,5,12,17,33,50,88,138,232,370,609,979,1596,2575,4180,6755,10945,17700,28656,46356,75024,121380,196417 ★ Third column of triangle A054450 (partial row sums of unsigned Chebyshev triangle A049310). ● a(n - 2) = Fibonacci(n + 1) - binomial(n - floor(n / 2), floor(n / 2)), or a(n - 2) = Sum _{ i=0..floor(n / 2) - 1 } binomial(n - i, i). - _ Jon Perry _ , Mar 18 2004 ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n - k + 2, k). - _ Paul Barry _ , Oct 23 2004 ●

▶ [A309479] 0,0,0,0,4,5,12,17,36,46,74,93,135,169,232,278,384,462,587,702,881,1009,1250,1432,1728 ★ Sum of the squarefree parts of the partitions of n into 4 parts. ● a(n) = Sum _{ k=1..floor(n / 4) } Sum _{ j=k..floor((n - k) / 3) } Sum _{ i=j..floor((n - j - k) / 2) } (i * mu(i) ^ 2 + j * mu(j) ^ 2 + k * mu(k) ^ 2 + (n - i - j - k) * mu(n - i - j - k) ^ 2), where mu is the Möbius function (A008683). ●

▶ [A308775] 0,0,0,0,4,5,12,21,40,54,90,121,180,234,322,405,544,663,846,1026,1280,1512,1848,2162,2592 ★ Sum of all the parts in the partitions of n into 4 parts. ● a(n) = a(n - 2) + 2 * a(n - 3) + 2 * a(n - 4) - 2 * a(n - 5) - 3 * a(n - 6) - 4 * a(n - 7) + 4 * a(n - 9) + 3 * a(n - 10) + 2 * a(n - 11) - 2 * a(n - 12) - 2 * a(n - 13) - a(n - 14) + a(n - 16) for n>15. ●

▶ [A274077] 4,5,12,31,68,129,220,347,516,733,1004,1335,1732,2201,2748,3379,4100,4917,5836,6863,8004,9265,10652,12171,13828 ★ a(n) = n ^ 3 + 4. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ●

▶ [A156638] 4,5,13,14,22,23,31,32,40,41,49,50,58,59,67,68,76,77,85,86,94,95,103,104,112 ★ Numbers k such that k ^ 2 + 2 == 0 (mod 9). ● a(n) = a(n - 1) + a(n - 2) - a(n - 3), n>3. ● a(n) = 9 * n / 2 - 9 / 4 - 7 * (- 1) ^ n / 4. ● a(n) = - a(- n + 1). - _ Bruno Berselli _ , Jan 08 2012 ●

▶ [A338544] 0,0,0,4,5,13,15,27,30,46,50,70,75,99,105,133,140,172,180,216,225,265,275,319,330 ★ a(n) = (5 * floor((n - 1) / 2) ^ 2 + (4 + (- 1) ^ n) * floor((n - 1) / 2)) / 2. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n > 4. (End) ●

▶ [A258281] 1,1,4,5,13,18,37,56,103,154,279,398,682,1027,1664,2433,3977,5755,8957,13173,19980,29002,43894,62562,92531 ★ Number of partitions of 3 copies of n into distinct parts. ● a(n) = 1 / 6 * [(x * y * z) ^ n] Product _{ j>0 } (1 + x ^ j + y ^ j + z ^ j). ●

▶ [A005672] 0,0,0,1,1,4,5,13,18,39,57,112,169,313,482,859,1341,2328,3669,6253,9922,16687,26609,44320,70929 ★ a(n) = Fibonacci(n + 1) - 2 ^ floor(n / 2). ● a(n) = Fibonacci(n - 1) + 2 * a(n - 2), a(- 1)=0, a(1)=0, a(2)=1. - _ Zerinvary Lajos _ , Mar 17 2008 ●

▶ [A041669] 1,1,4,5,14,19,33,52,85,137,222,581,803,2990,3793,139538,143331,569531,712862,1995255,2708117,4703372,7411489,12114861,19526350 ★ Denominators of continued fraction convergents to sqrt(353). ● a(n) = 142528 * a(n - 15) + a(n - 30) for n>29. - _ Vincenzo Librandi _ , Dec 22 2013 ●

▶ [A129720] 0,1,1,4,5,14,19,46,65,145,210,444,654,1331,1985,3926,5911,11434,17345,32960,50305,94211,144516,267384,411900 ★ Number of 0's in odd position in all Fibonacci binary words of length n. A Fibonacci binary word is a binary word having no 00 subword. ● a(2n) = a(2n - 1) + a(2n - 2) (n >= 1). ●

▶ [A041089] 1,4,5,14,19,90,1279,5206,6485,18176,24661,116820,1660141,6757384,8417525,23592434,32009959,151632270,2154861739,8771079226,10925940965,30622961156,41548902121,196818569640,2797008877081 ★ Denominators of continued fraction convergents to sqrt(52). ● a(n) = 1298 * a(n - 6) - a(n - 12). G.f.: - (x ^ 10 - 4 * x ^ 9 + 5 * x ^ 8 - 14 * x ^ 7 + 19 * x ^ 6 - 90 * x ^ 5 - 19 * x ^ 4 - 14 * x ^ 3 - 5 * x ^ 2 - 4 * x - 1) / ((x ^ 2 - 3 * x - 1) * (x ^ 2 + 3 * x - 1) * (x ^ 4 - 3 * x ^ 3 + 10 * x ^ 2 + 3 * x + 1) * (x ^ 4 + 3 * x ^ 3 + 10 * x ^ 2 - 3 * x + 1)). [_ Colin Barker _ , Jul 18 2012] ●

▶ [A042321] 1,4,5,14,19,318,337,992,1329,6308,329345,1323688,1653033,4629754,6282787,105154346,111437133,328028612,439465745,2085891592,10890582852,9437709205708,546615034237,1530939274182,2077554308419 ★ Denominators of continued fraction convergents to sqrt(687). ● a(n) = 330674 * a(n - 10) - a(n - 20). - _ Wesley Ivan Hurt _ , Jun 26 2022 ●

▶ [A188021] 0,0,1,1,4,5,14,20,48,75,165,274,571,988,1988,3536,6953,12597,24396,44745,85786,158632,302104,561683,1064945 ★ Expansion of (x ^ 2) / [(1 - x) * (1 - 3 * x ^ 2 - x ^ 3)]. ● a(n)=a(n - 1) + 3 * a(n - 2) - 2 * a(n - 3) - a(n - 4), for n>=4, with { a(k) } = { 0,0,1,1 } , k=0,1,2,3. ●

▶ [A191790] 0,0,1,1,4,5,14,20,49,76,175,286,637,1078,2353,4081,8788,15521,33098,59279,125476,227239,478192,873885,1830270 ★ Number of base pyramids in all length n left factors of Dyck paths. ● a(n) = Sum _{ k=0..n / 2 } ((Sum _{ j =ceiling(n / 2) - k + 1..2 * (n - 2 * k) } (((2 * j + 2 * k - n)) * binomial(n - 2 * k - 1,n - 2 * k - j) / j))). - _ Vladimir Kruchinin _ , Mar 04 2016 ●

▶ [A041375] 1,4,5,14,33,47,221,6235,25161,31396,87953,207302,295255,1388322,39168271,158061406,197229677,552520760,1302271197,1854791957,8721439025,246055084657,992941777653,1238996862310,3470935502273 ★ Denominators of continued fraction convergents to sqrt(202). ● a(n) = 6282 * a(n - 7) + a(n - 14). - _ Vincenzo Librandi _ , Dec 16 2013 ●

▶ [A352683] 1,4,5,14,42,145,566,2446,11547,58980,323458,1892559,11751904,77101510,532426225,3857129474,29229557534,231113610537,1902340920682,16267763481746,144260854186939,1324431903156744,12569419869410886,123145802554934015,1243798055506236156 ★ a(n) = A352682(4, n). ● a(n) = 3 * Gould(n - 1) + Bell(n) for n >= 1. ● a(n) = Sum _{ k=1..n } binomial(n - 1, k - 1) * a(n - k) for n >= 2. ●

▶ [A182252] 4,5,14,45,180,905,5466,38297,306376,2757393,27574030,303314341,3639772188,47317038457,662438538482,9936578077425,158985249238800,2702749237059617,48649486267073430,924340239074395189,18486804781487903780 ★ a(0)=4, a(n) = (a(n - 1) OR n) * n. ● a(0)=4, a(n)=(a(n - 1) OR n) * n, where OR is the bitwise logical inclusive - OR operator ●

▶ [A041857] 1,4,5,14,61,136,197,924,39005,156944,195949,548842,2391317,5331476,7722793,36222648,1529074009,6152518684,7681592693,21515704070,937444089973,209004522016,302748930989,1420000245972,5994275926181 3 ★ Denominators of continued fraction convergents to sqrt(450). ● a(n) = 39202 * a(n - 8) - a(n - 16) for n>15. - _ Vincenzo Librandi _ , Dec 26 2013 ●

▶ [A041034] 4,5,14,61,136,197,1712,1909,5530,24029,53588,77617,674524,752141,2178806,9467365,21113536,30580901,265760744,296341645,858444034,3730117781,8318679596,12048797377,104709058612 ★ Numerators of continued fraction convergents to sqrt(22). ● a(n) = 394 * a(n - 6) - a(n - 12). G.f.: - (x ^ 11 - 4 * x ^ 10 + 5 * x ^ 9 - 14 * x ^ 8 + 61 * x ^ 7 - 136 * x ^ 6 - 197 * x ^ 5 - 136 * x ^ 4 - 61 * x ^ 3 - 14 * x ^ 2 - 5 * x - 4) / (x ^ 12 - 394 * x ^ 6 + 1). [_ Colin Barker _ , Jul 16 2012] ●

▶ [A007390] 0,0,0,4,5,15,21,44,66,120,187,319,507,840,1348,2204,3553,5775,9329,15124,24454,39600,64055,103679,167735 ★ Number of strict (- 1)st - order maximal independent sets in cycle graph. ● a(n) = a(n - 1) + 3 * a(n - 2) - 2 * a(n - 3) - 3 * a(n - 4) + a(n - 5) + a(n - 6) for n>7. ●

► [A037955] 0,0,1,1,4,5,15,21,56,84,210,330,792,1287,3003,5005,11440,19448,43758,75582,167960,293930,646646,1144066,2496144 ⋆ a(n) = binomial(n, floor(n / 2) - 1). ● a(n) = binomial(n, (n - 2) / 2), n even; a(n) = binomial(n, (n - 3) / 2), n odd. - _ Enrique Navarrete _ , Dec 20 2019 ●
► [A000695] 0,1,4,5,16,17,20,21,64,65,68,69,80,81,84,85,256,257,260,261,272,273,276,277,320 ⋆ Moser - de Bruijn sequence: sums of distinct powers of 4. ● a(n + 1) = (a(n) + 1 / 3) & - 1 / 3, where & is bitwise AND, - 1 / 3 is represented as the infinite dyadic ...010101 (just as - 1 is ...111111 in two's complement) and + 1 / 3 is ...101011. - _ Marc LeBrun _ , Sep 30 2010 ●
► [A081345] 1,4,5,16,17,36,37,64,65,100,101,144,145,196,197,256,257,324,325,400,401,484,485,576,577 ⋆ First row in maze arrangement of natural numbers A081344. ● a(n) = n ^ 2 + n + 1 - n * (- 1) ^ n = n ^ 2 + n + 1 + n * (- 1) ^ (n + 1). ●
► [A024854] 4,5,16,19,40,46,80,90,140,155,224,245,336,364,480,516,660,705,880,935,1144,1210,1456,1534,1820 ⋆ a(n) = s(1) * t(n) + s(2) * t(n - 1) + ... + s(k) * t(n - k + 1), where k = floor(n / 2), s = (natural numbers), t = (natural numbers >= 3). ● a(n) = Sum _{ i=1..floor(n / 2) } i * (n - i + 3) = - floor(n / 2) * (floor(n / 2) + 1) * (2 * floor(n / 2) - 3n - 8) / 6. - _ Wesley Ivan Hurt _ , Sep 20 2013 ● a(n) = (4 * n ^ 3 + 21 * n ^ 2 + 14 * n - 9 + 3 * (n ^ 2 + 6 * n + 3) * (- 1) ^ n) / 48. - _ Luce ETIENNE _ , Nov 14 2014 ●
► [A092809] 1,1,4,5,16,21,64,85,256,341,1024,1365,4096,5461,16384,21845,65536,87381,262144,349525,1048576,1398101,4194304,5592405,16777216 ⋆ Expansion of (1 + x - x ^ 2) / ((1 - x ^ 2) * (1 - 4 * x ^ 2)). ● a(n) = 5 * 2 ^ n / 6 + (- 2) ^ n / 6 + (- 1) ^ n / 6 - 1 / 6. ● a(n) = 5 * a(n - 2) - 4 * a(n - 4) for n>3. ●
► [A369780] 0,0,1,4,5,16,22,64,93,130,176,562,794,2380,3473,4944,6885,21778,31180,94184,137980,198440,280600,880970,1271626 ⋆ a(n) = number of subsets of { 1,2,...,n } that contain more primes than nonprimes. ● a(n) = Sum _{ i=1..pi(n) } Sum _{ j=0..i - 1 } binomial(pi(n),i) * binomial(n - pi(n),j). - _ Alois P. Heinz _ , Feb 03 2024 ●
► [A058622] 0,1,1,4,5,16,22,64,93,256,386,1024,1586,4096,6476,16384,26333,65536,106762,262144,431910,1048576,1744436,4194304,7036530 ⋆ a(n) = 2 ^ (n - 1) - ((1 + (- 1) ^ n) / 4) * binomial(n, n / 2). ● a(n) = 2 ^ (n - 1) - ((1 + (- 1) ^ n) / 4) * binomial(n, n / 2). ● a(n) = Sum _{ i=0..floor((n - 1) / 2) } binomial(n, i). ●
► [A007837] 1,1,1,4,5,16,82,169,541,2272,17966,44419,201830,802751,4897453,52275409,166257661,840363296,4321172134,24358246735,183351656650,2762567051857,10112898715063,62269802986835,343651382271526 ⋆ Number of partitions of n - set with distinct block sizes. ● a(n) = Sum _{ k=1..n } (n - 1)! / (n - k)! * b(k) * a(n - k), where b(k) = Sum _{ d divides k } (- d) * (- d!) ^ (- k / d) and a(0) = 1. - _ Vladeta Jovovic _ , Oct 13 2002 ●
► [A119997] 1,1,4,5,17,32,97,225,628,1573,4225,10880,28769,74849,196708,513765,1347025,3523360,9229441,24154625,63251156,165571781,433507969,1134881280,2971250497 ⋆ Sum of all matrix elements of n X n matrix M[i,j] = (- 1) ^ (i + j) * Fibonacci[i + j - 1]. ● a(n) = Sum[Sum[(- 1) ^ (i + j) * Fibonacci[i + j - 1], { i,1,n }], { j,1,n }]. ● a(n) = 3 * a(n - 1) + a(n - 2) - 7 * a(n - 3) + 5 * a(n - 4) - a(n - 5) for n>5. - _ Colin Barker _ , Mar 26 2015 ●
► [A042885] 1,4,5,19,24,43,67,780,847,5015,15892,132151,148043,280194,428237,708431,21681167,22389598,44070765,66460363,110531128,950709387,2962659289,15764005832,18726665121 ⋆ Denominators of continued fraction convergents to sqrt(974). ● a(n) = 977651490470430 * a(n - 32) - a(n - 64) for n > 63. - _ Vincenzo Librandi _ , Jan 31 2014 ●
► [A042085] 1,1,4,5,19,24,43,368,411,9410,9821,87978,97799,185777,655130,840907,3177851,4018758,188040719,192059477,764219150,956278627,3633055031,4589333658,8222388689 ⋆ Denominators of continued fraction convergents to sqrt(566). ● a(n) = 191218570 * a(n - 18) - a(n - 36) for n>35. - _ Vincenzo Librandi _ , Jan 14 2014 ●
► [A041699] 1,4,5,19,43,320,1323,9581,20485,71036,91521,437120,16702081,67245444,83947525,319088019,722123563,5373952960,22217935403,160899500781,344016936965,1192950311676,1536967248641,7340819306240,280488100885761 ⋆ Denominators of continued fraction convergents to sqrt(369). ● a(n) = 16793602 * a(n - 12) - a(n - 24) for n>23. - _ Vincenzo Librandi _ , Dec 23 2013 ●
► [A041255] 1,1,4,5,19,138,157,295,747,8512,17771,26283,44054,334661,1048037,1382698,5196131,6578829,149930369,156509198,619457963,775967161,2947359446,21407483283,24354842729 ⋆ Denominators of continued fraction convergents to sqrt(139). ● a(n) = 155126500 * a(n - 18) - a(n - 36) for n>35. [_ Bruno Berselli _ , Dec 14 2013] ●
► [A050251] 0,4,5,20,20,113,113,781,781,5953,5953,47995,47995,401696,401696,3438339,3438339,30483565,30483565,269577430,269577430,2427668363,2427668363,22170468927,22170468927 ⋆ Number of palindromic primes less than 10 ^ n. ● a(2n) = a(2n - 1) for n > 1. - _ Chai Wah Wu _ , Nov 21 2021 ●
► [A080610] 0,1,4,5,20,21,84,85,340,341,1364,1365,5460,5461,21844,21845,87380,87381,349524,349525,1398100,1398101,5592404,5592405,22369620 ⋆ Partial sums of Jacobsthal gap sequence. ● a(n) = 2 ^ n + (- 2) ^ n / 3 - (- 1) ^ n / 2 - 5 / 6. - _ Paul Barry _ , Apr 22 2004 ● a(n) = a(n - 1) * 4 if n even; a(n) = a(n - 1) + 1 if n odd. - _ Philippe Deléham _ , Apr 22 2013 ●
► [A133632] 1,4,5,20,25,100,125,500,625,2500,3125,12500,15625,62500,78125,312500,390625,1562500,1953125,7812500,9765625,39062500,48828125,195312500,244140625 ⋆ a(1)=1, a(n) = (p - 1) * a(n - 1), if n is even, otherwise a(n) = p * a(n - 2), where p = 5. ● a(n) = p ^ floor((n - 1) / 2) * (p + (p - 2) * (- 1) ^ n) / 2. ● a(n + 3) = a(n + 2) * a(n + 1) / a(n). - _ Reinhard Zumkeller _ , Mar 04 2011 ●
► [A163141] 4,5,20,25,100,125,500,625,2500,3125,12500,15625,62500,78125,312500,390625,1562500,1953125,7812500,9765625,39062500,48828125,195312500,244140625,976562500 ⋆ a(n) = 5 * a(n - 2) for n > 2; a(1) = 4, a(2) = 5. ● a(n) = (5 - 3 * (- 1) ^ n) * 5 ^ (1 / 4 * (2 * n - 1 + (- 1) ^ n)) / 2. ●
► [A027958] 1,1,4,5,20,32,95,169,424,793,1816,3488,7583,14789,31172,61357,126892,251200,513343,1019921,2068496,4119281,8313584,16580800,33358015 ⋆ a(n) = T(n,m) + T(n,m + 1) + ... + T(n,n), where m = floor((n + 2) / 2), T given by A027948. ● a(n) = (3 + (- 1) ^ n + 2 ^ (n + 1) - (- 1) ^ n * Fibonacci(n + 1) - Fibonacci(n + 4)) / 2. - _ G. C. Greubel _ , Sep 30 2019 ●
► [A057781] 4,5,20,85,260,629,1300,2405,4100,6565,10004,14645,20740,28565,38420,50629,65540,83525,104980,130325,160004,194485,234260,279845,331780 ⋆ a(n) = n ^ 4 + 4 = (n ^ 2 - 2 * n + 2) * (n ^ 2 + 2 * n + 2) = ((n - 1) ^ 2 + 1) * ((n + 1) ^ 2 + 1). ● a(n) = (n ^ 2) ^ 2 + 2 ^ 2 = (n ^ 2 - 2) ^ 2 + (2 * n) ^ 2. - _ Thomas Ordowski _ , Sep 15 2015 ●
► [A099578] 1,1,4,5,21,28,120,165,715,1001,4368,6188,27132,38760,170544,245157,1081575,1562275,6906900,10015005,44352165,64512240,286097760,417225900,1852482996 ⋆ a(n) = binomial(floor((3n + 2) / 2), floor(n / 2)). ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n + k, k). ●
► [A109452] 1,1,4,5,21,31,113,177,766,1271,4687,7999,34412,60166,225891,401201,1702653,3064183,11646431,21171246,88894429,162966750,624746839,1153324813,4805206256 ⋆ Maximum of min(primeimplicants(f),primeimplicants(NOT f)) over all symmetric Boolean functions of n variables. ● a(n) = aux(ceiling(n / 2) - 1, n), where aux(m, n) = trinomial(n, ceiling(m / 2), floor(m / 2), n - m) + binomial(n, ceiling(m / 2 - 1)) + aux(ceiling(m / 2) - 2, n). ●
► [A129346] 4,5,22,29,128,169,746,985,4348,5741,25342,33461,147704,195025,860882,1136689,5017588,6625109,29244646,38613965,170450288,225058681,993457082,1311738121,5790292204 ⋆ a(2n) = A100525(n), a(2n + 1) = A001653(n + 1); a Pellian - related sequence. ● a(n) = (- (- 1 - sqrt(2)) ^ (1 + n) + (- 1 + sqrt(2)) ^ (1 + n) + (1 - sqrt(2)) ^ n * (- 4 + 3 * sqrt(2)) + (1 + sqrt(2)) ^ n * (4 + 3 * sqrt(2))) / (2 * sqrt(2)). ● a(n) = 6 * a(n - 2) - a(n - 4) for n>3. (End) ●
► [A042123] 1,4,5,24,29,53,135,188,511,3765,4276,12317,28910,41227,317499,676225,993724,2663673,3657397,6321070,28941677,35262747,169992665,819491067,32949635333 ⋆ Denominators of continued fraction convergents to sqrt(586). ● a(n) = 8230173414 * a(n - 23) + a(n - 46) for n>45. - _ Vincenzo Librandi _ , Jan 15 2014 ●
► [A041531] 1,1,4,5,24,29,111,140,4591,4731,18784,23515,112844,136359,521921,658280,21586881,22245161,88322364,110567525,530592464,641159989,2454072431,3095232420,101501509871 ⋆ Denominators of continued fraction convergents to sqrt(282). ● a(n) = 4702 * a(n - 8) - a(n - 16) for n>15. - _ Vincenzo Librandi _ , Dec 19 2013 ●
► [A089499] 0,1,4,5,24,29,140,169,816,985,4756,5741,27720,33461,161564,195025,941664,1136689,5488420,6625109,31988856,38613965,186444716,225058681,1086679440 ⋆ a(0)=0; a(1)=1; a(2n) = 4 * Sum _{ k=0..n } a(2k - 1); a(2n + 1) = a(2n) + a(2n - 1). ● a(1) = 1, a(2n) = 4 * a(2n - 1) + a(2n - 2); a(2n - 1) = a(2n - 2) + a(2n - 3). Given the 2 X 2 matrix X = [1, 4; 1, 5], [a(2n - 1), a(2n)] = top row of X ^ n. The sequence starting (1, 4, 5, 24, 29, ...) = numerators in continued fraction [0; 1, 4, 1, 4, 1, 4, ...] = (sqrt(8) - 2) = 0.828427124... E.g., X ^ 3 = [29, 140; 35, 169], where 29 / 35, 140 / 169 are convergents to (sqrt(8) - 2). - _ Gary W. Adamson _ , Dec 22 2007 ● a(n) = 6 * a(n - 2) - a(n - 4). ● a(n) = Product _{ j = 1..floor(n / 2) } (4 + 4 * cos ^ 2(j * Pi / n)) for n >= 1. (End) ●
► [A249060] 1,4,5,24,35,192,315,1920,3465,23040,45045,322560,675675,5160960,11486475,92897280,218243025,1857945600,4583103525,40874803200,105411381075,980995276800,2635284526875,25505877196800,71152682225625 ⋆ Column 1 of the triangular array at A249057. ● a(2 * n) = (2 * n + 3) * (2 * n + 1)!! / 3, for n > 0. ● a(2 * n + 1) = (n + 2)! * 2 ^ (n + 1), for n > 0. ● a(n) = gcd _ 2((n + 3)!,(n + 3)!!), where gcd _ 2(b,c) denotes the second - largest common divisor of non - coprime integers b and c, as defined in A309491. - _ Lechoslaw Ratajczak _ , Apr 15 2021 ●
► [A219515] 4,5,24,68,187,465,1090,2430,5181,10575,20714,39046,71023,124990,213360,354136,572847,904971,1398924,2119700,3153253,4611718,6639574,9420858,13187545 ⋆ Number of n X 4 arrays of the minimum value of corresponding elements and their horizontal, diagonal or antidiagonal neighbors in a random, but sorted with lexicographically nondecreasing rows and columns, 0..1 n X 4 array. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>15. ●
► [A333321] 0,0,0,0,0,0,0,0,4,5,25,30,90,105,245,280,560,630,1134,1260,2100,2310,3630,3960,5940 ⋆ a(n) is the number of subsets of { 1..n } that contain exactly 1 odd and 4 even numbers. ● a(n) = ceiling(n / 2) * binomial(floor(n / 2), 4). ● a(n) = a(n - 1) + 5 * a(n - 2) - 5 * a(n - 3) - 10 * a(n - 4) + 10 * a(n - 5) + 10 * a(n - 6) - 10 * a(n - 7) - 5 * a(n - 8) + 5 * a(n - 9) + a(n - 10) - a(n - 11) for n >10. ●
► [A047168] 0,0,0,0,0,0,0,0,4,5,25,30,90,105,245,280,588,666,1458,1665,4125,4785,12705,14850,38830,45331 ⋆ Number of nonempty subsets of { 1,2,...,n } in which exactly 4 / 5 of the elements are <= n / 2. ● a(n) = Sum _{ k>=1 } binomial(floor(n / 2), 4 * k) * binomial(ceiling(n / 2), k). - _ Andrew Howroyd _ , Apr 11 2021 ●
► [A002352] 1,4,5,29,34,63,286,349,635,5429,6064,90325,96389,1054215,2204819,3259034,15240955,186150494,387541943,1348776323,3085094589,4433870912,16386707325,69980700212,86367407537 ⋆ Numerators of convergents to cube root of 2. ● a(n + 1) = c(n) * a(n) + a(n - 1), ●
► [A041273] 1,4,5,29,92,305,1617,1922,9305,225242,910273,1135515,6587848,20899059,69285025,367324184,436609209,2113761020,51166873689,206781255776,257948129465,1496521903101,4747513838768,15739063419405,83442830935793 ⋆ Denominators of continued fraction convergents to sqrt(149). ● a(n) = 227164 * a(n - 9) + a(n - 18). - _ Vincenzo Librandi _ , Dec 14 2013 ●
► [A047169] 0,0,0,0,0,0,0,0,4,5,30,36,126,147,392,448,1008,1134,2304,2565,5115,5687,12342,13860,34320 ⋆ Number of nonempty subsets of { 1,2,...,n } in which exactly 1 / 6 of the elements are <= n / 2. ● a(n) = Sum _{ k>=1 } binomial(floor(n / 2), k) * binomial(ceiling(n / 2), 5 * k). - _ Andrew Howroyd _ , Apr 11 2021 ●
► [A041907] 1,1,4,5,34,73,472,545,2107,2652,113491,116143,461920,578063,3930298,8438659,54562252,63000911,243564985,306565896,1311933617,13425898513,53397028156,66822926669,454334588170 ⋆ Denominators of continued fraction convergents to sqrt(475). ● a(n) = 115598 * a(n - 10) - a(n - 20) for n>19. - _ Vincenzo Librandi _ , Dec 27 2013 ●
► [A152291] 1,1,1,4,5,36,49,512,729,10000,14641,248832,371293,7529536,11390625,268435456,410338673,11019960576,16983563041,512000000000,794280046581,26559922791424,41426511213649,1521681143169024,2384185791015625 ⋆ a(n) = (

n + 1) ^ floor((n - 1) / 2). • a(n) = denominator((- 3 + (- 1) ^ n) * ((1 - sqrt(1 + n + 1 / (1 + n))) ^ n - (1 + sqrt(1 + n + 1 / (1 + n))) ^ n) / (8 * sqrt(1 + n + 1 / (1 + n)))). - _ Gerry Martens _ , May 31 2015 •

▶ [A041557] 1,4,5,39,44,215,7354,29631,36985,288526,325511,1590570,54404891,219210134,273615025,2134515309,2408130334,11767036645,402487376264,1621716541701,2024203917965,15791143967456,17815347885421,87052535509140,2977601555196181 ⋆ Denominators of continued fraction convergents to sqrt(296). • a(n) = 7398 * a(n - 6) - a(n - 12) for n>11. - _ Vincenzo Librandi _ , Dec 20 2013 •

▶ [A189744] 4,5,40,185,940,4685,23440,117185,585940,2929685,14648440,73242185,366210940,1831054685,9155273440,45776367185,228881835940,1144409179685,5722045898440,28610229492185,143051147460940,715255737304685,3576278686523440,17881393432617185 ⋆ a(1)=4, a(2)=5, a(n) = 4 * a(n - 1) + 5 * a(n - 2) . • a(n) = (5 / 2) * (- 1) ^ (n - 1) + (3 / 2) * 5 ^ (n - 1). - _ Paolo P. Lava _ , May 24 2011 •

▶ [A317139] 1,1,1,4,5,43,61,906,1385,31493,50521,1629248,2702765,117248463,199360981,11190963430,19391512145,1367267690953,2404879675441,208031951035452,370371188237525,38563334673062963,69348874393137901,8554779137299629314,15514534163557086905 ⋆ Number of permutations of [n] with exactly floor(n / 2) increasing runs of length two. • a(n) is even <=> n == 3 (mod 4). •

▶ [A123304] 4,5,43,263,1699,10895,69943,448943,2881699,18497135,118730023,762108143,4891844659,31399932335,201550911703,1293721577903,8304182337859,53303156937455,342144045482503,2196165379031663,14096818096762579,90485116626705455,580808823292457143 ⋆ Number of edge covers for the circular ladder (n - prism graph) C _ n X K _ 2. • a(n) = 5 * a(n - 1) + 9 * a(n - 2) + a (n - 3) - 2 * a(n - 4). •

▶ [A220534] 4,5,55,322,1802,9888,54152,296677,1626316,8921034,48940217,268458544,1472546593,8077208658,44305328871,243025038817,1333048565463,7312079889715,40108451658226,220004139643941,1206773599084364 ⋆ Equals one maps: number of nX3 binary arrays indicating the locations of corresponding elements equal to exactly one of their horizontal, diagonal and antidiagonal neighbors in a random 0..1 nX3 array • a(n + 1) / a(n) tends to 5.4852313675984312... - _ Vaclav Kotesovec _ , Dec 16 2012 •

▶ [A041173] 1,1,4,5,94,99,391,490,9211,9701,38314,48015,902584,950599,3754381,4704980,88444021,93149001,367891024,461040025,8666611474,9127651499,36049565971,45177217470,849239480431 ⋆ Denominators of continued fraction convergents to sqrt(96). • a(n) = 98 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Dec 12 2013 •

▶ [A041409] 1,1,4,5,144,149,591,740,21311,22051,87464,109515,3153884,3263399,12944081,16207480,466753521,482961001,1915636524,2398597525,69076367224,71474964749,283501261471,354976226220,10222835595631 ⋆ Denominators of continued fraction convergents to sqrt(219). • a(n) = 148 * a(n - 4) - a(n - 8) for n>7. - _ Vincenzo Librandi _ , Dec 17 2013 •

▶ [A041745] 1,1,4,5,194,199,791,990,38411,39401,156614,196015,7605184,7801199,31008781,38809980,1505788021,1544598001,6139582024,7684180025,298138422974,305822602999,1215606231971,1521428834970,59029901960831 ⋆ Denominators of continued fraction convergents to sqrt(392). • a(n) = 198 * a(n - 4) - a(n - 8) for n>7. - _ Vincenzo Librandi _ , Dec 23 2013 •

▶ [A042181] 1,1,4,5,244,249,991,1240,60511,61751,245764,307515,15006484,15313999,60948481,76262480,3721547521,3797810001,15114977524,18912787525,922928778724,941841566249,3748453477471,4690295043720,228882615576031 ⋆ Denominators of continued fraction convergents to sqrt(615). • a(n) = 248 * a(n - 4) - a(n - 8) for n > 7. - _ Vincenzo Librandi _ , Jan 16 2014 •

▶ [A006185] 1,4,6,7,7,12,12,19,21,26,26,35,35,46,48,57,57,70,70,85,87,100,100,117,117 ⋆ Number of pair - coverings with largest block size 3. • a(n) = n * (n - 1) / 6 if n == 1 or 3 (mod 6), a(n) = n * (n + 1) / 6 if n == 0 or 2 (mod 6), a(n) = (n ^ 2 + n + 4) / 6 if n == 4 (mod 6), and a(n) = (n ^ 2 - n + 16) / 6 if n == 5 (mod 6). [From Grannell et al.] - _ Sean A. Irvine _ , Jan 17 2017 •

▶ [A079000] 1,4,6,7,8,9,11,13,15,16,17,18,19,20,21,23,25,27,29,31,33,34,35,36,37 ⋆ a(n) is taken to be the smallest positive integer greater than a(n - 1) which is consistent with the condition "n is a member of the sequence if and only if a(n) is odd". • a(1) = 1, a(2) = 4, then a(9 * 2 ^ k - 3 + j) = 12 * 2 ^ k - 3 + 3 * j / 2 + |j| / 2 for k>=0, - 3 * 2 ^ k <= j <= 3 * 2 ^ k. Also a(3n) = 3 * b(n / 3), a(3n + 1) = 2 * b(n) + b(n + 1), a(3n + 2) = b(n) + 2 * b(n + 1) for n>=2, where b = A079905. - _ N. J. A. Sloane _ and _ Benoit Cloitre _ , Feb 20 2003 • a(n + 1) - 2 * a(n) + a(n - 1) = 1 for n = 9 * 2 ^ k - 3, k>=0, = - 1 for n = 2 and 3 * 2 ^ k - 3, k>=1 and = 0 otherwise. •

▶ [A047509] 0,1,4,6,7,8,9,12,14,15,16,17,20,22,23,24,25,28,30,31,32,33,36,38,39 ⋆ Numbers that are congruent to { 0, 1, 4, 6, 7 } mod 8. • a(n) = a(n - 1) + a(n - 5) - a(n - 6), for n > 6. •

▶ [A047291] 0,1,4,6,7,8,11,13,14,15,18,20,21,22,25,27,28,29,32,34,35,36,39,41,42 ⋆ Numbers that are congruent to { 0, 1, 4, 6 } mod 7. • a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. • a(n) = (- 13 - (- 1) ^ n + (3 - i) * (- i) ^ n + (3 + i) * i ^ n + 14 * n) / 8 where i=sqrt(- 1). - _ Colin Barker _ , May 14 2012 •

▶ [A047507] 0,4,6,7,8,12,14,15,16,20,22,23,24,28,30,31,32,36,38,39,40,44,46,47,48 ⋆ Numbers that are congruent to { 0, 4, 6, 7 } mod 8. • a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. • a(n) = (8 * n - 3 + i ^ (2 * n) - (1 + 2 * i) * i ^ (- n) - (1 - 2 * i) * i ^ n) / 4 where i=sqrt(- 1). •

▶ [A001690] 4,6,7,9,10,11,12,14,15,16,17,18,19,20,22,23,24,25,26,27,28,29,30,31,32 ⋆ Non - Fibonacci numbers. • a(n - 1) = floor(n + lgg(sqrt(5) * (lgg(sqrt(5) * n) + n) - 5 + 3 / n) - 2) where lgg(x) = log(x) / log((sqrt(5) + 1) / 2), given by Farhi. - _ Jonathan Vos Post _ , May 05 2011 • a(n) = floor(1 / 2 - Lambert W(- 1, - log(phi) / (sqrt(5) * phi ^ (n - 3 / 2))) / log(phi)) with phi = (1 + sqrt(5)) / 2 [Nicolas Normand (Nantes)]. - _ Simon Plouffe _ , Nov 29 2017 [abs removed by _ Peter Luschny _ , Nov 30 2017] •

▶ [A144222] 4,6,7,9,10,11,13,14,15,17,18,19,21,22,23,24 ⋆ Floor of the volumes of the first sixteen Lobell polyhedra. • a(n) = Floor[vol(L(n))]. •

▶ [A069909] 1,4,6,7,9,10,12,15,17,20,22,23,25,26,28,31,33,36,38,39,41,42,44,47,49 ⋆ Numbers congruent to +- 1, +- 4, +- 6, +- 7 mod 16. • a(0)=1, a(1)=4, a(2) =6, a(3)=7, a(4)=9, a(5)=10, a(n)=2 * a(n - 1) - a(n - 2) - a(n - 4) + 2 * a(n - 5) - a(n - 6). - _ Harvey P. Dale _ , Sep 09 2012 •

▶ [A183870] 1,4,6,7,9,11,12,13,15,16,18,19,20,22,23,24,25,27,28,29,31,32,33,34,35 ⋆ n + floor(sqrt(5n - 5)); complement of A183871. • a(n)=n + floor(sqrt(5n - 5)). •

▶ [A047508] 1,4,6,7,9,12,14,15,17,20,22,23,25,28,30,31,33,36,38,39,41,44,46,47,49 ⋆ Numbers that are congruent to { 1, 4, 6, 7 } mod 8. • a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4) for n>4. • a(n) = (1 + i) * (4 * n - 4 * n * i + i - 1 - i ^ (- n) + i ^ (1 + n)) / 4 where i=sqrt(- 1). •

▶ [A086170] 1,4,6,7,10,11,12,15,17,18,19,20,23,25,26,29,30,31,32,33,36,38,39,42,43 ⋆ a(1)=1; a(n)=a(n - 1) + 1 if n is in the sequence; a(n)=a(n - 1) + 2 if n and (n - 1) are not in the sequence; a(n)=a(n - 1) + 3 if n is not in the sequence but (n - 1) is in the sequence. • a(n)=phi * n + O(1) where phi=(1 + sqrt(5)) / 2 •

▶ [A026147] 1,4,6,7,10,11,13,16,18,19,21,24,25,28,30,31,34,35,37,40,41,44,46,47,49 ⋆ a(n) = position of n - th 1 in A001285 or A010059 (Thue - Morse sequence). • a(n) = Sum _{ k=0..2n } mod(- 2 + Sum _{ j=0..k } floor(C(k, j) / 2) } , 3). - _ Paul Barry _ , Dec 24 2004 •

▶ [A340161] 1,4,6,7,10,11,13,18,19,21,25,34,35,37,41,49,66,67,69,73,81,97,130,131,133 ⋆ a(n) is the smallest number k for which the set { k + 1, k + 2, ..., k + k } contains exactly n elements with exactly three 1 - bits (A014311). • a(m * (m - 1) / 2 + 1) = 2 ^ m + 2 for m >= 2. • a(m * (m - 1) / 2 + 2) = 2 ^ m + 3 for m >= 2. •

▶ [A047234] 0,1,4,6,7,10,12,13,16,18,19,22,24,25,28,30,31,34,36,37,40,42,43,46,48 ⋆ Numbers that are congruent to { 0, 1, 4 } mod 6. • a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. • a(n) = (6 * n - 7 + cos(2 * n * Pi / 3) + sqrt(3) * sin(2 * n * Pi / 3)) / 3. • a(3k) = 6k - 2, a(3k - 1) = 6k - 5, a(3k - 2) = 6k - 6. (End) •

▶ [A366506] 4,6,7,10,14,21,32,50,79,126,202,325,524,846,1367,2210,3574,5781,9352,15130,24479,39606,64082,103685,167764 ⋆ a(n) = Lucas(n) + 3. • a(n) = 2 * a(n - 1) - a(n - 3). •

▶ [A047289] 0,4,6,7,11,13,14,18,20,21,25,27,28,32,34,35,39,41,42,46,48,49,53,55,56 ⋆ Numbers that are congruent to { 0, 4, 6 } mod 7. • a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. (End) • a(n) = Sum _{ i=1..n } 2 ^ (- i mod 3). - _ Wesley Ivan Hurt _ , Jul 08 2014 • a(n) = (21 * n - 12 + 3 * cos(2 * n * Pi / 3) - 5 * sqrt(3) * sin(2 * n * Pi / 3)) / 9. • a(3k) = 7k - 1, a(3k - 1) = 7k - 3, a(3k - 2) = 7k - 7. (End) •

▶ [A364725] 4,6,7,11,69,176404 ⋆ Starting with a plane on which two parallel lines and two additional lines have been drawn such that the four lines form two noncongruent isosceles triangles, a(n) is the total number of lines on the plane after the n - th step, where each step consists of drawing lines that connect every intersection of two lines. • a(n + 1) <= (a(n) ^ 4 - a(n) ^ 2) / 8 + (a(n) - a(n) ^ 3) / 4 which is equivalent to • a(n + 1) <= binomial(binomial(a(n),2),2) (proven). • a(n) >= 4 + 61 * floor(n / 5) + 2 * [n>=1 (mod 6)] + [n>=2 (mod 6)] + 4 * [n>=3 (mod 5)] + 50 * [n==4 (mod 5)] (proven). •

▶ [A047506] 4,6,7,12,14,15,20,22,23,28,30,31,36,38,39,44,46,47,52,54,55,60,62,63,68 ⋆ Numbers that are congruent to { 4, 6, 7 } mod 8. • a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. • a(n) = (24 * n + 3 - 12 * cos(2 * n * Pi / 3) + 2 * sqrt(3) * sin(2 * n * Pi / 3)) / 9. • a(3k) = 8k - 1, a(3k - 1) = 8k - 2, a(3k - 2) = 8k - 4. (End) •

▶ [A213034] 0,0,0,4,6,7,18,21,24,40,45,49,72,78,84,112,120,127,162,171,180,220,231,241,288 ⋆ [3n / 2] * [n / 3], where [] = floor. • a(n) = a(n - 1) + a(n - 3) - a(n - 4) + a(n - 6) - a(n - 7) - a(n - 9) + a(n - 10). •

▶ [A084984] 0,1,4,6,8,9,10,11,14,16,18,19,40,41,44,46,48,49,60,61,64,66,68,69,80 ⋆ Numbers containing no prime digits. • a(n) >> n ^ 1.285. - _ Charles R Greathouse IV _ , Feb 20 2012 • a(n) = ((2 * b _ m(n) + 1) mod 10 + floor((b _ m(n) + 4) / 5) - floor((b _ m(n) + 1) / 5)) * 10 ^ m + sum _{ j=0..m - 1 } ((2 * b _ j(n))) mod 12 + floor(b _ j(n) / 6) - floor((b _ j(n) + 1) / 6) + floor((b _ j(n) + 4) / 6) - floor((b _ j(n) + 5) / 6))) * 10 ^ j, where n>1, b _ j(n)) = floor((n - 1 - 6 ^ m) / 6 ^ j), m = floor(log _ 6(n - 1)). • a(1 * 6 ^ n + 1) = 1 * 10 ^ n. • a(2 * 6 ^ n + 1) = 4 * 10 ^ n. • a(3 * 6 ^ n + 1) = 6 * 10 ^ n. • a(4 * 6 ^ n + 1) = 8 * 10 ^ n. •

▶ [A002808] 4,6,8,9,10,12,14,15,16,18,20,21,22,24,25,26,27,28,30,32,33,34,35,36,38 ⋆ The composite numbers: numbers n of the form x * y for x > 1 and y > 1. • a(n) = pi(a(n)) + 1 + n, where pi is the prime counting function. • a(n) = 1 + a(n - 1) + f(n) for n > 1 with a(1) = 4 where f(n) = 1 if n belongs to A014689, 0 otherwise. - _ Mikhail Kurkov _ , Dec 21 2021 •

▶ [A060679] 4,6,8,9,10,12,14,16,18,20,21,22,24,25,26,27,28,30,32,34,36,38,39,40,42 ⋆ Orders of non - cyclic groups. • a(n) = n + O(n / log log log n). - _ Charles R Greathouse IV _ , Apr 16 2012 •

▶ [A062115] 0,1,4,6,8,9,10,14,16,18,40,44,46,48,49,60,64,66,68,69,80,81,84,86,88 ⋆ Numbers with no prime substring in their decimal expansion. • a(n) = O(n ^ (log _ 4 10)) = O(n ^ 1.661) because numbers containing only 0,4,6,8 are in this sequence. • a(n) = Omega(n ^ (log _ 13637 1000000)) = Omega(n ^ 1.451) for similar reasons; this bound can be increased by considering longer sequences of digits. (End) •

▶ [A180638] 4,6,8,9,11,12,14,15,17,18,20,21,23,24,25,27,28,30,31,32,34,35,36,38,39 ⋆ Phan Thành Nam's upper bound on the number of non - relativistic electrons bound to a nucleus of charge n. • a(n) = floor(1.22 * n + 3.1 * n ^ (1 / 3)). •

▶ [A366451] 4,6,8,9,11,13,15,16,18,20,21,23,25,27,28,30,32,34,35,37,39,40,42,44,46 ⋆ The sum s > n which has the greatest probability of occurring when summing rolls of an n - sided die. • a(n) = floor(((n + 1) * (n + 1) ^ n - n ^ (n + 1)) / n ^ n). •

▶ [A202268] 1,4,6,8,9,11,14,16,18,19,41,44,46,48,49,61,64,66,68,69,81,84,86,88,89 ⋆ Numbers in which all digits are nonprimes (1, 4, 6, 8, 9). • a(n) = Sum _{ j =0..m - 1 } ((2 * b _ j(n) + 1) mod 10 + floor((b _ j(n) + 4) / 5) - floor((b _ j (n) + 1) / 5)) * 10 ^ j, where b _ j(n))=floor((4 * n + 1 - 5 ^ m) / (4 * 5 ^ j)), m=floor(log _ 5(4 * n + 1)). • a(1 * (5 ^ n - 1) / 4) = 1 * (10 ^ n - 1) / 9. • a(2 * (5 ^ n - 1) / 4) = 4 * (10 ^ n - 1) / 9. • a(3 * (5 ^ n - 1) / 4) = 6 * (10 ^ n - 1) / 9. • a(4 * (5 ^ n - 1) / 4) = 8 * (10 ^ n - 1) / 9. • a(5 * (5 ^ n - 1) / 4) = 10 ^ n - 1. •

► [A047409] 0,1,4,6,8,9,12,14,16,17,20,22,24,25,28,30,32,33,36,38,40,41,44,46,48 ⋆ Numbers that are congruent to { 0, 1, 4, 6 } mod 8. ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n > 5. ● a(n) = (8 * n - 9 - i ^ (2n) + i ^ (- n) + i ^ n) / 4 where i=sqrt(- 1). ●
► [A079142] 4,6,8,9,12,15,25,30,35,49,56,63,121,132,143,169,182,195,289,306,323,361,380,399,529 ⋆ Numbers divisible by prime integer parts of their square roots. ● a(n) = prime(floor(n / 3 + 1)) * (prime(floor(n / 3 + 1)) + (n mod 3)) ●
► [A262389] 4,6,8,9,14,16,18,19,24,26,28,29,34,36,38,39,44,46,48,49,54,56,58,59,64 ⋆ Numbers whose last digit is composite. ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. ● a(n) = (5 * n + 1 - (- 1) ^ n + (3 + (- 1) ^ n) * (- 1) ^ ((2 * n - 3 - (- 1) ^ n) / 4) / 2) / 2. ●
► [A162738] 4,6,8,9,20,24,28,30,32,36,40,42,44,48,50,78,81,84,90,96,99,102,105,108,114 ⋆ a(n) is the smallest positive multiple of { the n - th composite } that is greater than the n - th prime. ● a(n) = ceiling(p(n) / c(n)) * c(n), where c(n) is the n - th composite, and p(n) is the n - th prime. ●
► [A001744] 0,4,6,8,9,40,44,46,48,49,60,64,66,68,69,80,84,86,88,89,90,94,96,98,99 ⋆ Numbers n such that every digit contains a loop (version 2). ● a(n) = ((2 * b _ m(n)) mod 8 + 4 + floor(b _ m(n) / 4) - floor((b _ m(n) + 1) / 4)) * 10 ^ m + sum _{ j=0..m - 1 } ((2 * b _ j(n))) mod 10 + 2 * floor((b _ j(n) + 4) / 5) - floor((b _ j(n) + 1) / 5) - floor(b _ j(n) / 5))) * 10 ^ j, where n>1, b _ j(n)) = floor((n - 1 - 5 ^ m) / 5 ^ j), m = floor(log _ 5(n - 1)). ● a(1 * 5 ^ n + 1) = 4 * 10 ^ n. ● a(2 * 5 ^ n + 1) = 6 * 10 ^ n. ● a(3 * 5 ^ n + 1) = 8 * 10 ^ n. ● a(4 * 5 ^ n + 1) = 9 * 10 ^ n. ● a(n) = 4 * 10 ^ log _ 5(n - 1) for n=5 ^ k + 1, ●
► [A029581] 4,6,8,9,44,46,48,49,64,66,68,69,84,86,88,89,94,96,98,99,444,446,448,449,464 ⋆ All digits are composite. ● a(n) = Sum _{ j=0..m - 1 } (2 * b(j) mod 8 + 4 + floor(b(j) / 4) - floor((b(j) + 1) / 4)) * 10 ^ j, where m = floor(log _ 4(3 * n + 1)), b(j) = floor((3 * n + 1 - 4 ^ m) / (3 * 4 ^ j)). ● a(1 * (4 ^ n - 1) / 3) = 4 * (10 ^ n - 1) / 9. ● a(2 * (4 ^ n - 1) / 3) = 2 * (10 ^ n - 1) / 3. ● a(3 * (4 ^ n - 1) / 3) = 8 * (10 ^ n - 1) / 9. ● a(4 * (4 ^ n - 1) / 3) = 10 ^ n - 1. ● a(n) < 4 * (10 ^ log _ 4(3 * n + 1) - 1) / 9, equality holds for n=(4 ^ k - 1) / 3, k > 0. ●
► [A349707] 0,1,4,6,8,10,11,12,13,16,18,20,22,23,24,25,28,30,32,34,35,36,37,40,42 ⋆ Numbers that are congruent to { 0, 1, 4, 6, 8, 10, 11 } (mod 12). ● a(n) = a(n - 7) + 12 for n >= 8. - _ Michael S. Branicky _ , Dec 02 2021 ●
► [A184016] 4,6,8,10,11,13,14,16,18,19,20,22,23,25,26,28,29,30,32,33,34,36,37,38,40 ⋆ n + floor(3 * sqrt(n)); complement of A184017. ● a(n)=n + floor(3 * sqrt(n)). ●
► [A103517] 1,4,6,8,10,12,14,16,18,20,22,24,26,28,30,32,34,36,38,40,42,44,46,48,50 ⋆ Expansion of (1 + 2 * x - x ^ 2) / (1 - x) ^ 2. ● a(n) = 2 * n + 2 - 0 ^ n. ● a(n) = Sum _{ k=0..n } 0 ^ (k(n - k)) * (n + 1). ● a(n) = 2 * a(n - 1) - a(n - 2) for n > 2. - _ Eric W. Weisstein _ , Sep 14 2017 ●
► [A163300] 0,4,6,8,10,12,14,16,18,20,22,24,26,28,30,32,34,36,38,40,42,44,46,48,50 ⋆ Zero together with the even nonprimes. ● a(n) = 2 *{ n - 1 + [(n + 1) mod n] } , with n>=1. - _ Paolo P. Lava _ , Nov 06 2009 ●
► [A167179] 4,6,8,10,12,15,20,25,30,35,40,45,50,55,60,65,70,75,80,85,90,95,100,105,110 ⋆ The number of additional armies one receives in Parker Brothers' (now part of Hasbro) game of Risk for turning in the n - th set of three different or a like cards. ● a(n) = 2 * (n + 1) for n<=5, otherwise a(n) = 5 * (n - 3). ●
► [A074827] 4,6,8,10,12,16,18,20,22,24,28,30,32,36,40,42,45,46,48,50,52,54,56,58,60 ⋆ Numbers n such that tau(n) > tau(n + 1) where tau(x) = A000005(x). ● a(n) seems to be asymptotic to d * n with d=2.2... - _ Benoit Cloitre _ , Sep 07 2002 ●
► [A090169] 0,1,4,6,8,10,13,14,17,19,21,23,26,27,30,32,34,36,39,40,43,45,47,49,52 ⋆ a(n) = floor(3 * n / 2) + floor(2 * n / 3). ● a(n) = 2 * n - 1 + floor(n / 2) - floor((n - 1) / 3). - _ Bruno Berselli _ , Jun 15 2016 ●
► [A294243] 0,0,0,4,6,8,10,20,33,39,45,63,71,79,87,111,121,149,161,193,207,221,235,273,314 ⋆ Sum of the larger parts of the partitions of 2n into two parts with smaller part nonsquarefree. ● a(n) = Sum _{ i=1..n } (2 * n - i) * (1 - mu(i) ^ 2), where mu is the Möbius function (A008683). ●
► [A295287] 0,0,0,4,6,8,10,28,34,40,46,88,100,112,124,200,220,240,260,380,410,440,470,644,686 ⋆ Sum of the products of the smaller and larger parts of the partitions of n into two parts with the smaller part even. ● a(n) = Sum _{ i=1..floor(n / 2) } i * (n - i) * ((i + 1) mod 2). ● a(n) = a(n - 1) + 3 * a(n - 4) - 3 * a(n - 5) - 3 * a(n - 8) + 3 * a(n - 9) + a(n - 12) - a(n - 13) for n > 13. ● a(n) = (1 / 96) * (3 * n ^ 2 * (1 + (- 1) ^ n) - 16 * n + 4 * n ^ 3 + 3 * I ^ n * (1 + I) * (- 1) ^ (- (- 1) ^ n / 4) * ((1 + 2 * n ^ 2) * (- 1) ^ n - 1) / sqrt(2)) where I=sqrt(- 1). - _ Wesley Ivan Hurt _ , Dec 02 2017 ●
► [A047290] 1,4,6,8,11,13,15,18,20,22,25,27,29,32,34,36,39,41,43,46,48,50,53,55,57 ⋆ Numbers that are congruent to { 1, 4, 6 } mod 7. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. (End) ● a(n) = (21 * n - 9 - 2 * sqrt(3) * sin(2 * n * Pi / 3)) / 9. ● a(3k) = 7k - 1, a(3k - 1) = 7k - 3, a(3k - 2) = 7k - 6. (End) ●
► [A086377] 1,4,6,8,11,13,16,18,21,23,25,28,30,33,35,37,40,42,45,47,49,52,54,57,59 ⋆ a(1)=1; a(n)=a(n - 1) + 2 if n is in the sequence; a(n)=a(n - 1) + 2 if n and (n - 1) are not in the sequence; a(n)=a(n - 1) + 3 if n is not in the sequence but (n - 1) is in the sequence. ● a(n) = floor((1 + sqrt(2)) * n - 1 / sqrt(2)). ●
► [A003662] 1,4,6,8,11,13,16,18,23,25,28,30,35,37,40,42,47,49,52,54,59,61,64,66,71 ⋆ a(n) is smallest number != a(j) + a(k), j < k and a(1) = 1, a(2) = 4. ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n > 7. - _ Colin Barker _ , Feb 27 2015 ●
► [A343946] 4,6,8,11,14,18,21,25,30,34,39,45,50,56,62,69,76,83,91,99,107,115,124,133,142 ⋆ Surface area of a right prism whose base is a regular n - gon with unit side length and unit height (rounded to the nearest integer). ● a(n) = round(n + n * cot(Pi / n) / 2). ●
► [A047407] 0,4,6,8,12,14,16,20,22,24,28,30,32,36,38,40,44,46,48,52,54,56,60,62,64 ⋆ Numbers that are congruent to { 0, 4, 6 } mod 8. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. ● a(n) = 2 * (12 * n - 9 - 2 * sqrt(3) * sin(2 * n * Pi / 3)) / 9. ● a(3k) = 8k - 2, a(3k - 1) = 8k - 4, a(3k - 2) = 8k - 8. (End) ● a(n) = 2 * (n - 1 + floor((n + 1) / 3)). - _ Wolfdieter Lang _ , Sep 11 2021 ●
► [A271346] 4,6,8,12,14,16,24,26,28,32,34,36,44,46,48,52,54,56,64,66,68,72,74,76,84 ⋆ Numbers k such that the final digit of k ^ k is 6. ● a(n) = a(n - 1) + a(n - 6) - a(n - 7) for n > 7. - _ Wesley Ivan Hurt _ , Oct 08 2017 ●
► [A334468] 4,6,8,12,15,16,18,24,27,30,32,36,40,45,48,54,60,63,64,70,72,75,80,81,90 ⋆ List of distinct values of n + A217287(n). ● a(n) > n + 2 for all n. ● a(m) = m + 2 for m = 2 ^ k - 2 and k > 1, since m is even and 2 ^ k only has the distinct prime divisor 2. Therefore 2 ^ k for k > 1 is in this sequence. ●
► [A157932] 0,4,6,8,12,16,18,20,24,28,30,32,36,40,42,44,48,52,54,56,60,64,66,68,72 ⋆ Numbers k such that (3 ^ (35 * k) + 5 ^ (21 * k) + 7 ^ (15 * k)) mod 105 is prime. ● a(n) = (- 6 - (- i) ^ n - i ^ n + 6 * n) / 2, where i = sqrt(- 1). ●
► [A113709] 4,6,8,12,16,18,20,24,30,36,40,42,44,48,54,60,66,68,72,78,80,84,96,100,102 ⋆ a(n) is the composite between p(n) and p(n + 1), where p(n) is the n - th prime, which is divisible by (p(n + 1) - p(n)). ● a(n)=p(n + 1) - (p(n) (mod p(n + 1) - p(n))). ●
► [A233036] 0,0,0,4,6,8,12,16,20,24,30,36,42,48,56,64,72,80,90,100,110,120,132,144,156 ⋆ The maximum number of I - tetrominoes that can be packed into an n X n array of squares when rotation is allowed. ● a(4 * k) = 4 * k ^ 2. ● a(2 * k + 1) = k * (k + 1) for k >= 2. ● a(4 * k + 2) = 4 * k * (k + 1). ●
► [A090989] 4,6,8,12,16,24,32,48,64,96,128,192,256,384,512,768,1024,1536,2048,3072,4096,6144,8192,12288,16384 ⋆ Number of meaningful differential operations of the n - th order on the space R ^ 4. ● a(k + 2) = 2 * a(k). ● a(n)= gcdConv(0, { A000079 })[n + 3]. - _ Tilman Neumann _ , Jan 11 2009 ●
► [A136254] 4,6,8,12,20,34,56,88,132,190,264,356,468,602,760,944,1156,1398,1672,1980,2324,2706,3128,3592,4100 ⋆ Generator for the finite sequence A053016. ● a(n) = n ^ 3 / 3 - n ^ 2 + 8n / 3 + 4. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). (End) ●
► [A176777] 1,4,6,8,12,22,46,100,216,458,954,1960,3988,8062,16230,32588,65328,130834,261874,523984,1048236,2096774,4193886,8388148,16776712 ⋆ 2 ^ n - n * (n - 3). ● a(n)= + 5 * a(n - 1) - 9 * a(n - 2) + 7 * a(n - 3) - 2 * a(n - 4). G.f.: (1 - x - 5 * x ^ 2 + 7 * x ^ 3) / ((2 * x - 1) * (x - 1) ^ 3). ●
► [A256137] 1,4,6,8,14,18,26,32,42,50,62,72,86,98,114,128,146,162,182,200,222,242,266,288,314 ⋆ a(2) = 1; a(3) = 4; for n >= 4, a(n) = 2 + Sum _{ i=4..n } d(i), where d(i) = i for even i, d(i) = i - 3 for odd i. ● a(2) = 1; a(3) = 4; for n >= 4, a(n) = 2 + Sum _{ i=4..n } d(i), where d(i) = i for even i, d(i) = i - 3 for odd i. ● a(n) = (5 + 3 * (- 1) ^ n - 4 * n + 2 * n ^ 2) / 4 for n>3. ● a(n) = (n ^ 2 - 2 * n + 4) / 2 for n even and n>3. ● a(n) = (n ^ 2 - 2 * n + 1) / 2 for n odd and n>3. ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4) for n>6. ●
► [A055397] 0,4,6,8,16,18,28,36,43,54,64,76,90,104,119,136,152,171,190,210,232,253,276,301,326 ⋆ Maximum population of an n X n stable pattern in Conway's Game of Life. ● a(n) = (n ^ 2) / 2 + O(n). ●
► [A191697] 0,4,6,8,20,28,56,96,168,304,528,944,1664,2944,5216,9216,16320,28864,51072,90368,159872,282880,500480,885504,1566720 ⋆ a(n) = r1 ^ n + r2 ^ n + r3 ^ n where r1, r2, r3 are the three roots of x ^ 3 - 2 * x - 2 = 0. ● a(n) = hat { F _ 3 ^ n } (0), the Fourier transform evaluated at 0 of the Boolean function F _ 3 ^ n defined by F _ 3 ^ n(x _ 0, ..., x _{ n - 1 }) = Sum _{ 0<i<=n - 1 } x _ i x _{ i + 1(mod n) } x _{ i + 2(mod n) } . - _ Michael Somos _ , Aug 04 2012 ● a(n + 3) = 2 * a(n + 1) + 2 * a(n). (End) ●
► [A106366] 4,6,8,24,48,130,312,834,2192,5934,16104,44368,122640,341802,956632,2690844,7596480,21524542,61171656,174342216,498112272,1426419858,4093181688,11767920118,33891544416 ⋆ Necklaces with n beads of 4 colors, no 2 adjacent beads the same color. ● a(n) = (1 / n) * Sum _{ d | n } totient(n / d) * (3 * (- 1) ^ d + 3 ^ d) for n > 1. - _ Andrew Howroyd _ , Mar 12 2017 ●
► [A094115] 0,1,1,4,6,9,9,10,10,19,27,36,42,49,55,64,72,81,81,82,82,85,87,90,90 ⋆ Partial sums of A093347. ● a(3 ^ k)=(9 ^ k - 1) / 8 ●
► [A051679] 0,0,1,1,4,6,9,9,16,22,29,33,42,48,55,55,70,84,99,111,128,142,157,165,186 ⋆ Total number of even entries in first n rows of Pascal's triangle (the zeroth and first rows being 1; 1,1). ● a(0)=a(1)=0, a(2n) = 3a(n) + n(n - 1) / 2, a(2n + 1) = 2a(n) + a(n + 1) + n(n + 1) / 2. - _ Ralf Stephan _ , Oct 10 2003 ●
► [A214068] 0,1,4,6,9,10,13,15,18,19,22,24,27,28,31,33,36,37,40,42,45,46,49,51,54 ⋆ a(n) = floor((3 / 2) * floor((3 / 2) * n)). ● a(n) = (18 * n - 5 + 3 * (- 1) ^ n + (1 - i) * (- i) ^ n + (1 + i) * i ^ n) / 8, where i = sqrt(- 1). ● a(n) = a(n - 1) + a(n - 4) - a(n - 5). ●
► [A330182] 1,4,6,9,10,13,15,18,19,22,24,27,28,31,33,36,37,40,42,45,46,49,51,54,55 ⋆ a(n) = n + floor(nr / t) + floor(ns / t), where r = Pi - 1, s = Pi, t = Pi + 1. ● a(n) = n + floor(nr / t) + floor(ns / t), where r = Pi - 1, s = Pi, t = Pi + 1. ●
► [A330186] 1,4,6,9,10,13,15,18,19,22,24,27,28,31,33,36,37,40,43,45,48,49,52,54,57 ⋆ a(n) = n + floor(nr / t) + floor(ns / t), where r = tau - 1 / 2, s = tau, t = tau + 1 / 2, tau = golden ratio = (1 + sqrt(5)) / 2. ● a(n) = n + floor(nr / t) + floor(ns / t), where r = tau - 1 / 2, s = tau, t = tau + 1 / 2. ●
► [A133234] 4,6,9,10,15,22,25,33,39,49,55,58,82,86,87,93,111,118,121,122,134,145,185,194,201 ⋆ a(n) is least semiprime (not already in list) such that no 3 - term subset forms an arithmetic progression. ● a(1) = 4, a(2) = 6, a(n) = smallest semiprime such that there is no i < j < n with a(n) - a(j) = a(j) - a(i). ●
► [A060106] 1,4,6,9,11,13,16,18,21,23,25,28,30,33,35,37,40,42,45,47,49,52,54,57,59 ⋆ Numbers that are congruent to { 1, 4, 6, 9, 11 } mod 12. The ebony keys on a piano, starting with A0 = the 0th key. ● a(n) = a(n - 5) + 12. ● a(n) = a(n - 1) + a(n - 5) - a(n - 6) for n > 6. ●
► [A189756] 1,4,6,9,11,14,15,18,20,23,25,28,30,32,35,37,40,42,44,46,49,51,54,56,59 ⋆ n + [ns / r] + [nt / r]; r=1, s=sin(1), t=cos(1). ● a(n)=n + [n * sin(1)] + [n * cos(1)]. ●
► [A329784] 1,4,6,9,11,14,16,19,21,22,24,26,29,31,33,34,36,39,41,44,46,49,51,54,56 ⋆ Numbers that are either +- 1 (mod 5) or +- 22 (mod 55). ● a(n) = a(n - 1) + a(n - 24) - a(n - 25) for n>25. ●
► [A047209] 1,4,6,9,11,14,16,19,21,24,26,29,31,34,36,39,41,44,46,49,51,54,56,59,61 ⋆ Numbers that are congruent to { 1, 4 } mod 5. ● a(n) = floor((5n - 2) / 2). [corrected by _ Reinhard Zumkeller _ , Jul 19 2013] ● a(1) = 1, a(n) = 5(n - 1) - a(n - 1). - _ Benoit Cloitre _ , Apr 12 2003 ● a(n) = (10 * n + (- 1) ^ n - 5) / 4. ● a(n) - a(n - 1) - a(n - 2) + a(n - 3) = 0 for n > 3. ● a(n) = a(n - 2) + 5 for n > 2. ● a(n) = 5 * floor(n / 2) + (- 1) ^ (n + 1). - _ Gary Detlefs _ , Dec 29 2011 ●
► [A138812] 1,1,4,6,9,11,14,16,19,22,24,27,31,33,36,38,42,44,48,51,54,56,60,62,67 ⋆ a(0)=1, a(n) = sum { k=0 to n - 1 } floor(n / a(k)). ● a(2) = 4, a(n) / n=2.

0000, a(n) / (n * sqrt(log(n)))=2.4022 ● a(4)= 9, a(n) / n=2.2500, a(n) / (n * sqrt(log(n)))=1.9110 ● a(8)= 19, a(n) / n=2.3750, a(n) / (n * sqrt(log(n)))=1.6470 ● a(16)= 42, a(n) / n=2.6250, a(n) / (n * sqrt(log(n)))=1.5765 ● a(32)= 91, a(n) / n=2.8438, a(n) / (n * sqrt(log(n)))=1.5275 ● a(64)= 196, a(n) / n=3.0625, a(n) / (n * sqrt(log(n)))=1.5017 ●

► [A190081] 1,4,6,9,12,13,16,19,21,24,26,28,31,34,36,38,41,43,46,49,50,53,56,58,61 ⋆ n + [n * r / t] + [n * s / t]; r=1, s=cos(Pi / 5), t=sec(Pi / 5). ● a(n) = n + [n * cos(Pi / 5)] + [n * (cos(Pi / 5)) ^ 2]. ●

► [A003622] 1,4,6,9,12,14,17,19,22,25,27,30,33,35,38,40,43,46,48,51,53,56,59,61,64 ⋆ The Wythoff compound sequence AA: a(n) = floor(n * phi ^ 2) - 1, where phi = (1 + sqrt(5)) / 2. ● a(n) = floor(n * phi) + n - 1. [Corrected by _ Jianing Song _ , Aug 18 2022] ●

► [A330215] 1,4,6,9,12,14,17,20,22,25,27,29,32,34,37,40,42,45,47,50,53,55,57,60,62 ⋆ a(n) = n + floor(nr / t) + floor(ns / t), where r = log(2), s = 1, t = log(3). ● a(n) = n + floor(nr / t) + floor(ns / t), where r = log(2), s = 1, t = log(3). ●

► [A047408] 1,4,6,9,12,14,17,20,22,25,28,30,33,36,38,41,44,46,49,52,54,57,60,62,65 ⋆ Numbers that are congruent to { 1, 4, 6 } mod 8. ● a(n) = 3n - 2 - floor(n / 3). - _ Wesley Ivan Hurt _ , Nov 07 2013 ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. ● a(n) = (24 * n - 15 - 3 * cos(2 * n * Pi / 3) - sqrt(3) * sin(2 * n * Pi / 3)) / 9. ● a(3k) = 8k - 2, a(3k - 1) = 8k - 4, a(3k - 1) = 8k - 7. (End) ●

► [A165897] 4,6,9,12,18,27,36,54,81,108,162,243,324,486,729,972,1458,2187,2916,4374,6561,8748,13122,19683,26244 ⋆ a(n) = a(n - 1) + largest proper divisor of a(n - 1), a(1)=4. ● a(1)=4, a(2)=6, a(3)=9, a(n) = 3 * a(n - 3) for n>3. ●

► [A010737] 4,6,9,13,19,27,39,55,79,111,159,223,319,447,639,895,1279,1791,2559,3583,5119,7167,10239,14335,20479 ⋆ a(n) = 2 * a(n - 2) + 1. ● a(2n)=5 * 2 ^ n - 1 and a(2n + 1)=7 * 2 ^ n - 1 or a(n)=(6 - (- 1) ^ n) * 2 ^ floor(n / 2) - 1 - _ Benoit Cloitre _ , May 04 2003 ●

► [A048625] 4,6,9,13,19,28,41,60,88,129,189,277,406,595,872,1278,1873,2745,4023,5896,8641,12664,18560,27201,39865 ⋆ Pisot sequence P(4,6). ● a(n) = a(n - 1) + a(n - 3) (Checked up to n = 48000). ●

► [A257559] 4,6,9,14,21,33,46,62,82,106,133,161,194,235,278,323,371,422,478,535,597,662,731,802,878 ⋆ The slowest increasing sequence of semiprimes with strictly increasing difference of successive terms. ● a(n) >> n ^ 2. - _ Charles R Greathouse IV _ , Apr 30 2015 ●

► [A226271] 1,4,6,9,14,22,35,56,90,145,234,378,611,988,1598,2585,4182,6766,10947,17712,28658,46369,75026,121394,196419 ⋆ Index of 1 / n in the Fibonacci (or rabbit) ordering of the positive rationals. ● a(n) = 2 * a(n - 1) - a(n - 3) for n>4. G.f.: - x * (2 * x ^ 3 + 2 * x ^ 2 - 2 * x - 1) / ((x - 1) * (x ^ 2 + x - 1)). - _ Colin Barker _ , Jun 03 2013 ● a(n) = 1 + (2 ^ (- 1 - n) * ((1 - sqrt(5)) ^ n * (- 3 + sqrt(5)) + (1 + sqrt(5)) ^ n * (3 + sqrt(5)))) / sqrt(5) for n>1. - _ Colin Barker _ , May 11 2016 ●

► [A020706] 4,6,9,14,22,35,56,90,145,234,378,611,988,1598,2585,4182,6766,10947,17712,28658,46369,75026,121394,196419,317812 ⋆ Pisot sequences L(4,6), E(4,6). ● a(n) = 2a(n - 1) - a(n - 3). ● a(n) = 1 + (3 / 2) * (1 / 2 + (1 / 2) * sqrt(5)) ^ n + (7 / 10) * (1 / 2 + (1 / 2) * sqrt(5)) ^ n * sqrt(5) - (7 / 10) * sqrt(5) * (1 / 2 - (1 / 2) * sqrt(5)) ^ n + (3 / 2) * (1 / 2 - (1 / 2) * sqrt(5)) ^ n. - _ Paolo P. Lava _ , Jun 10 2008 ●

► [A065856] 4,6,9,15,26,48,88,168,323,627,1225,2406,4736,9351,18504,36655,72730,144450,287147,571208,1136971,2264215,4510963,8990492,17923944 ⋆ The (2 ^ n) - th composite number. ● a(n) - pi(a(n)) - 1 = 2 ^ n. ●

► [A181018] 1,4,6,9,16,20,26,36,42,52,64,74,86,100,114,130 ⋆ Maximum number of 1's in an n X n binary matrix with no three 1's adjacent in a line along a row, column or diagonally. ● a(n) >= ceiling(n ^ 2 / 2). - _ Juhani Heino _ , Aug 11 2015 ●

► [A371843] 1,4,6,9,16,24,41,64,106,169,276,444,721,1164,1886,3049,4936,7984,12921,20904,33826,54729,88556,143284,231841 ⋆ a(n) = 5 * Fibonacci(n) + (- 1) ^ n. ● a(n) = 2 * a(n - 2) + a(n - 3). ●

► [A032817] 1,4,6,9,21,24,31,34,46,49,106,109,121,124,156,159,171,174,231,234,246,249,531,534,546 ⋆ Numbers whose set of base - 5 digits is { 1,4 } . ● a(1)=1, a(2)=4; a(n) = 5 * a(floor(n / 2)) + 1 for n odd, otherwise a(n) = 5 * a(floor((n - 1) / 2)) + 4. - _ Bruno Berselli _ , May 28 2012 ●

► [A190300] 4,6,9,25,49,169,289,361,529,841,961,1369,1681,1849,2209,2809,3481,3721,4489,5041,5329,6241,6889,7921,9409 ⋆ Composite numbers that are not Brazilian. ● a(1) = 2 ^ 2 = p _ 1 ^ 2, a(2) = 2 * 3 = p _ 1 * p _ 2, a(3) = 3 ^ 2 = p _ 2 ^ 2, a(4) = 5 ^ 2 = p _ 3 ^ 2, a(5) = 7 ^ 2 = p _ 4 ^ 2, a(6) = 13 ^ 2 = p _ 6 ^ 2, ..., for n >= 6, a(n) = p _ n ^ 2, where p _ k is the k - th prime number. - _ Bernard Schott _ , Dec 04 2012 ●

► [A081614] 1,4,6,9,31,70,105,355,799,1798,2697,9103,20482,30723,69127,155536,233304,349956,524934,787401,2657479,5979328,8968992,13453488,20180232 ⋆ Subsequence of A005428 with state = 1. ● a(n) = [(n + 1) - th even number of A061419] / 2. - _ John - Vincent Saddic _ , May 29 2021 ●

► [A187331] 0,1,4,6,10,11,14,16,20,21,24,26,30,31,34,36,40,41,44,46,50,51,54,56,60 ⋆ a(n) = Sum _{ k=1..4 } floor(k * n / 4). ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n > 4. ●

► [A134333] 4,6,10,12,14,18,22,26,27,30,34,38,42,45,46,58,62,63,66,74,75,78,80,82,86 ⋆ Numbers n whose number of prime factors (counted with multiplicity) is a prime factor of n. ● a(n) << n log n / (log log n) ^ k for any fixed k. - _ Charles R Greathouse IV _ , Sep 14 2015 ●

► [A166986] 4,6,10,12,16,18,20,24,26,30,32,36,38,42,44,46,50,52,56,58,62,64,68,70,72 ⋆ a(n) = 2 * floor((n + 2) / log(2)) - 4. ● a(n) = 2 * floor((n + 2) / log(2)) - 4. ●

► [A047233] 0,4,6,10,12,16,18,22,24,28,30,34,36,40,42,46,48,52,54,58,60,64,66,70,72 ⋆ Numbers that are congruent to { 0, 4 } mod 6. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n>3. ● a(n) = (6 * n + (- 1) ^ n - 5) / 2. (End) ● a(n) = 6 * n - a(n - 1) - 8 for n>1, a(1)=0. - _ Vincenzo Librandi _ , Aug 05 2010 ●

► [A292794] 0,4,6,10,12,16,22,24,30,36,40,42,46,52,54,64,66,70,72,82,84,90,94,96,100 ⋆ Numbers not congruent to A000045(k) mod A000045(k + 1) for all k > 1. ● a(10 ^ 7) = 45721410, a(10 ^ 8) = 457214230, a(10 ^ 9) = 4572142416. - _ Jacques Tramu _ , Feb 26 2018 ●

► [A073161] 1,4,6,10,12,20,21,26,28,36,38,46,50,56,57,64,69,80,81,87,92,99,104,112,116 ⋆ Nested floor product of n and fractions (p _ k + 1) / p _ k where p _ k is k - th prime. ● a(n)=[...[[[[n(1 + 1 / 2)](1 + 1 / 3)](1 + 1 / 5)]...(1 + 1 / p _ k)]..., where [x] = floor of x and p _ k is the k - th prime; this infinite nested floor product will eventually level - off at a(n). Alternatively, for n>=1, let b(0, n)=n and b(k, n) = floor(b(k - 1, n) * (1 + 1 / p _ k)), for k=1..m, then a(n)=b(m, n) where m is smallest integer such that p _ m > a(n). ●

► [A079524] 0,1,4,6,10,13,18,22,28,33,40,46,54,61,70,78,88,97,108,118,130,141,154,166,180 ⋆ Expansion of (x + b * x ^ 2 - b * x ^ 3) / ((1 - x ^ 2) * (1 - x) ^ 2) with b=2. ● a(n) = a(n - 2) + n (mod a(n - 1) + n) with n>=2 and initial values (1, 1). ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4), a(0)=0, a(1)=1, a(2)=4, a(3)=6. - _ Harvey P. Dale _ , Apr 20 2015 ● a(n) = (2 * n * (n + 6) - 3 * (1 - (- 1) ^ n)) / 8. - _ Luce ETIENNE _ , Jun 05 2015 ●

► [A298784] 1,4,6,10,14,16,20,24,26,30,34,36,40,44,46,50,54,56,60,64,66,70,74,76,80 ⋆ Expansion of (1 + x ^ 2) * (1 + 3 * x + x ^ 2) / ((1 - x) * (1 - x ^ 3)). ● a(0)=1; thereafter, a(3 * k) = 10 * k, a(3 * k + 1) = 10 * k + 4, a(3 * k + 2) = 10 * k + 6. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. - _ Colin Barker _ , Jan 27 2018 ●

► [A027689] 4,6,10,16,24,34,46,60,76,94,114,136,160,186,214,244,276,310,346,384,424,466,510,556,604 ⋆ a(n) = n ^ 2 + n + 4. ● a(n) = 2 * n + a(n - 1) - 2 (with a(1)=4). - _ Vincenzo Librandi _ , Aug 05 2010 ●

► [A078642] 4,6,10,16,26,42,68,110,178,288,466,754,1220,1974,3194,5168,8362,13530,21892,35422,57314,92736,150050,242786,392836 ⋆ Numbers with two representations as the sum of two Fibonacci numbers. ● a(n) = 2F(n + 2), where F(n) is the n - th Fibonacci number. ● a(n) = a(n - 1) + a(n - 2), n > 2 ; a(1) = 4, a(2) = 6 . G.f.: 2x * (2 + x) / (1 - x - x ^ 2). - _ Philippe Deléham _ , Nov 19 2008 ● a(n) = 2F(n + 2) = F(n) + F(n + 3), where F(1) = F(2) = 1. - _ Alonso del Arte _ , Jul 07 2013 ● a(n) = (2 ^ (- n) * ((1 - r) ^ n * (- 3 + r) + (1 + r) ^ n * (3 + r))) / r where r=sqrt(5). - _ Colin Barker _ , Jan 29 2017 ●

► [A027976] 1,1,4,6,10,18,29,47,78,126,204,332,537,869,1408,2278,3686,5966,9653,15619,25274,40894,66168,107064,173233 ⋆ n - th diagonal sum of right justified array T given by A027960. ● a(n) = (Fibonacci(n + 1) + Lucas(n + 2) - 2 * sin(2 * Pi * n / 3) / sqrt(3) - 2) / 2. (End) ●

► [A220033] 4,6,10,19,30,42,55,69,84,100,117,135,154,174,195,217,240,264,289,315,342,370,399,429,460 ⋆ Number of 3 X n arrays of the minimum value of corresponding elements and their horizontal or diagonal neighbors in a random, but sorted with lexicographically nondecreasing rows and nonincreasing columns, 0..1 3 X n array. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>6. ●

► [A274991] 4,6,10,64 ⋆ a(n) = 2[n](n + 3). ● a(n) = A046859 + 3. ●

► [A180713] 0,4,6,11,12,16,18,23,24,28,30,35,36,40,42,47,48,52,54,59,60,64,66,71,72 ⋆ If n is even then a(n) = 3n, if n == 1 mod 4 then a(n) = 3n + 1, if n == 3 mod 4 then a(n) = 3n + 2. ● a(n) = (12 * n + i * (i ^ n - (- i) ^ n) - 3 * (- 1) ^ n + 3) / 4, where i is the imaginary unit. ● a(n) = + 1 * a(n - 1) + 1 * a(n - 4) - 1 * a(n - 5) for n>=5. [_ Joerg Arndt _ , Jan 25 2011] ●

► [A047288] 4,6,11,13,18,20,25,27,32,34,39,41,46,48,53,55,60,62,67,69,74,76,81,83,88 ⋆ Numbers that are congruent to { 4, 6 } mod 7. ● a(n) = 7 * n - a(n - 1) - 4 with n > 1, a(1)=4. - _ Vincenzo Librandi _ , Aug 05 2010 ● a(n) = a(n - 1) + a(n - 2) - a(n - 3). ● a(n) = (- 1 - 3 * (- 1) ^ n + 14 * n) / 4. - _ Colin Barker _ , May 14 2012 ● a(n) = floor(7 * n / 2) - (- 1) ^ n. - _ Wesley Ivan Hurt _ , Sep 12 2017 ●

► [A144065] 0,1,4,6,11,14,21,25,34,39,50,56,69,76,91,99,116,125,144,154,175,186,209,221,246 ⋆ Values of k such that the expression sqrt(4! * (k + 1) + 1) yields an integer. ● a(n) = 3 * a(n - 2) - 3 * a(n - 4) + a(n - 6). - _ Jaume Oliver Lafont _ , Jan 21 2009 ● a(n) = (- 3 + 2 * (- 1) ^ n * n + 3 * (- 1) ^ n + 6 * n ^ 2 + 18 * n) / 16. - _ Alexander R. Povolotsky _ , Jan 27 2009 ● a(n) = Sum _{ i=1..n + 3 } numerator(i / 2) - denominator(i / 2). - _ Wesley Ivan Hurt _ , Feb 26 2017 ●

► [A343098] 1,4,6,11,14,22,27,40,49,71,87,124,151,211,254,347,412,550,644,841,972,1244,1421,1786,2019 ⋆ Number of palindromes < 10 ^ n whose squares are also palindromes. ● a(n) = a(n - 1) + 4 * a(n - 2) - 4 * a(n - 3) - 6 * a(n - 4) + 6 * a(n - 5) + 4 * a(n - 6) - 4 * a(n - 7) - a(n - 8) + a(n - 9) for n > 9. ● a(n) = 1491 + 904 * n + 510 * n ^ 2 - 52 * n ^ 3 + 6 * n ^ 4 + (- 1) ^ n * (45 - 296 * n + 42 * n ^ 2 - 4 * n ^ 3) for n>0. - _ Greg Dresden _ , Jun 20 2021 ●

► [A084263] 1,1,4,6,11,15,22,28,37,45,56,66,79,91,106,120,137,153,172,190,211,231,254,276,301 ⋆ a(n) = (- 1) ^ n / 2 + (n ^ 2 + n + 1) / 2. ● a(n) = Sum _{ k=0..n } k + (- 1) ^ k. ● a(0) = 1, a(n) = n ^ 2 - a(n - 1) + 1 for n >= 1. - _ Richard R. Forberg _ , Jun 05 2013 ● a(n) = 1 + floor(n / 2) + floor(n ^ 2 / 2). - _ Wesley Ivan Hurt _ , Jun 15 2013 ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4). - _ Wesley Ivan Hurt _ , Dec 23 2021 ●

► [A266795] 0,1,4,6,11,15,23,27,39,43,59,63,83,87,111,115,143,147,179,183,219,223,263,267,311 ⋆ Total number of OFF (white) cells after n iterations of the "Rule 61" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = (2 * n * (n + (- 1) ^ n + 1) - 7 * (- 1) ^ n + 3) / 4 for n>3. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n>8. ●

► [A355759] 1,4,6,11,15,24,32,45,57,76,94,119,143,176,208,249,289,340,390,451,511,584,656,741,825 ⋆ Sums of the first ceiling((n + 1) / 2) entries on the diagonals of a square spiral with a starting value of 1 in the center, where the diagonal and the antidiagonal are used alternately. ● a(n) = (24 + 20 * n + 6 * n ^ 2 + n ^ 3) / 24 for n even. ● a(n) = (12 + 17 * n + 6 * n ^ 2 + n ^ 3) / 24 for n odd and n (mod 4) == 3. ● a(n) = (17 * n + 6 * n ^ 2 + n ^ 3) / 24 for n odd and n (mod 4) == 1. ●

► [A060577] 1,1,4,6,11,17,24,32,41,51,62,74,87,101,116,132,149,167,186,206,227,249,272,296,321 ⋆ Number of homeomorphically irreducible general graphs on 2 labeled nodes and with n edges. ● a(n) = ceiling((1 / 2) * (3 * n ^ 2 - 10 * n + 9) / (n - 2)) + floor((3 / 2) * (n - 1) ^ 2) - n ^ 2 + 3 * n - 3 with n > 2, a(0) = a(1) = 1, a(2) = 4. ● a(n) = n * (n + 3) / 2 - 3 for n > 2. ●

► [A197985] 4,6,11,18,27,38,51,66,83,102,123,146,171,198,227,258,291,326,363,402,443,486,531,578,627 ⋆ Round((n + 1 / n) ^ 2) ● a(n) = n ^ 2 + 2, n>1; a(n) = 2 * n + a(n - 1) - 1, n>2. ●

▶ [A022318] 1,4,6,11,18,30,49,80,130,211,342,554,897,1452,2350,3803,6154,9958,16113,26072,42186,68259,110446,178706,289153 ⋆ a(n) = a(n - 1) + a(n - 2) + 1, with a(0) = 1 and a(1) = 4. ● a(0)=1, a(1)=4, a(2)=6, a(n) = 2 * a(n - 1) - a(n - 3). (End) ●

▶ [A291916] 4,6,11,19,34,60,106,186,325,565,978,1686,2896,4958,8463,14407,24466,41456,70102,118322,199369,335401,563426,945194,1583644 ⋆ Number of (not necessarily maximal) cliques in the n - Fibonacci cube graph. ● a(n) = 3 * a(n - 1) - a(n - 2) - 3 * a(n - 3) + a(n - 4) + a(n - 5). ● a(n) = (n * Lucas(n + 1) + Lucas(n + 4) - Fibonacci(n - 3)) / 5 + 1. - _ Ehren Metcalfe _ , Oct 16 2017 ●

▶ [A154145] 1,4,6,11,20,33,43,70,121,196,254,411,708,1145,1483,2398,4129,6676,8646,13979,24068,38913,50395,81478,140281 ⋆ Indices k such that 15 plus the k - th triangular number is a perfect square. ● a(n)= + a(n - 1) + 6 * a(n - 4) - 6 * a(n - 5) - a(n - 8) + a(n - 9). ● a(1..4) = (1,4,6,11); a(n) = 6 * a(n - 2) - a(n - 4) + 2, for n>4. - _ Ctibor O. Zizka _ , Nov 13 2009 ●

▶ [A219520] 4,6,11,24,43,70,111,172,260,383,550,771,1057,1420,1873,2430,3106,3917,4880,6013,7335,8866,10627,12640,14928 ⋆ Number of 3 X n arrays of the minimum value of corresponding elements and their horizontal, diagonal or antidiagonal neighbors in a random, but sorted with lexicographically nondecreasing rows and columns, 0..1 3 X n array. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>6. ●

▶ [A290651] 4,6,11,26,73,220,675,2070,6317,19184,58039,175114,527361,1586148,4766603,14316158,42981205,129009112,387158367,1161737202,3485735849,10458256076,31376865331,94134790246,282412759293 ⋆ a(n) = 5 - 2 ^ (n - 1) + 3 ^ (n - 1) + n - 2. ● a(n) = 7 * a(n - 1) - 17 * (n - 2) + 17 * a(n - 3) - 6 * a(n - 4). ●

▶ [A047406] 4,6,12,14,20,22,28,30,36,38,44,46,52,54,60,62,68,70,76,78,84,86,92,94,100 ⋆ Numbers that are congruent to { 4, 6 } mod 8. ● a(n) = (4 * n - 1 - (- 1) ^ n). - _ Jon E. Schoenfield _ , Jul 05 2010 ● a(n) = 8 * n - a(n - 1) - 6 (with a(1)=4). - _ Vincenzo Librandi _ , Aug 05 2010 ● a(n) = (8 * ceiling(n / 2) - 4) * (n mod 2) + (8 * ceiling(n / 2) - 2) * (n + 1 mod 2). ● a(n) = 8 * ceiling(n / 2) - 3 + (- 1) ^ n. (End) ●

▶ [A265225] 1,4,6,12,15,24,28,40,45,60,66,84,91,112,120,144,153,180,190,220,231,264,276,312,325 ⋆ Total number of ON (black) cells after n iterations of the "Rule 54" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = (n + 1) * (2 * n - (- 1) ^ n + 5) / 4. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n>4. ● a(n) = n + 1 + (n + 1) * floor((n + 1) / 2), conjectured. - _ Wesley Ivan Hurt _ , Dec 25 2016 ●

▶ [A274221] 0,0,1,4,6,12,16,25,30,42,49,64,72,90,100,121,132,156,169,196,210,240,256,289,306 ⋆ List of quadruples: 3 * n * (3 * n - 1), 3 * n * (3 * n + 1), (3 * n + 1) ^ 2, (3 * n + 2) ^ 2. ● a(n) = (18 * n ^ 2 - 18 * n + 1 - 3 * (2 * n - 1) * (- 1) ^ n - 4 * (- 1) ^ ((2 * n - 1 + (- 1) ^ n) / 4)) / 32. Therefore: a(2k) = (18 * k ^ 2 - 12 * k + 1 - (- 1) ^ k) / 8, a(2k + 1) = (18 * k ^ 2 + 12 * k + 1 - (- 1) ^ k) / 8. ●

▶ [A327479] 0,0,0,4,6,12,16,28,32,44,52,68,76,92,104,124,136,156,172,196,212,236,256,284,304 ⋆ a(n) is the minimum number of squares of unit area that must be removed from an n X n square to obtain a connected figure without holes and of the longest perimeter. ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 4) - 2 * a(n - 5) + a(n - 6) for n > 10. ● a(n) = (1 / 4) * (- 25 + 2 * n * (2 + n) - 7 * cos(n * Pi) - 4 * sin(n * Pi / 2)) for n > 4, a(0) = 0, a(1) = 0, a(2) = 0, a(3) = 4, a(4) = 6. ●

▶ [A048641] 0,1,4,6,12,19,24,28,40,53,68,82,92,103,112,120,144,169,196,222,252,283,312,340,360 ⋆ Partial sums of A003188 (Gray code). ● a(n) = Sum _{ j=0..n } XORnos(j, floor(j / 2)). ● a(n) = b(n - 1), with b(2n) = 2 * (b(n) + b(n - 1) + ceiling(n / 2)), b(2n + 1) = 4 * b(n) + n + 1. - _ Ralf Stephan _ , Sep 13 2003 ●

▶ [A168674] 0,4,6,12,20,34,56,92,150,244,396,642,1040,1684,2726,4412,7140,11554,18696,30252,48950,79204,128156,207362,335520 ⋆ a(n) = 2 * A001610(n). ● a(n) = 2 * a(n - 1) - a(n - 3). [Dec 03 2009] ●

▶ [A128034] 1,1,4,6,12,20,36,63,104,171,280,462,744,1209,1960,3180,5152,8347,13500,21850,35360,57225,92598,149845,242448 ⋆ a(0)=a(1)=1. a(n) = the multiple of n which is > a(n - 1) + a(n - 2) and is <= a(n - 1) + a(n - 2) + n. ● a(n) = n * (1 + floor[(a(n - 1) + a(n - 2)) / n]). ●

▶ [A255843] 4,6,12,22,36,54,76,102,132,166,204,246,292,342,396,454,516,582,652,726,804,886,972,1062,1156 ⋆ a(n) = 2 * n ^ 2 + 4. ● a(n) = a(- n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ● a(n) = a(n - 1) + 4n - 2. - _ Bob Selcoe _ , Mar 25 2020 ●

▶ [A263656] 0,0,4,6,12,30,70,168,412,1014,2514,6270,15702,39468,99516,251586,637500,1618638,4117102,10488684,26758762,68354250,174810354,447533586,1146836662 ⋆ Number of length - 2n central circular binary strings without zigzags (see reference for precise definition). ● a(n) = (1 / n) * (3 * (n - 1) * a(n - 1) - 4 * (n - 4) * a(n - 2) + (7 * n - 27) * a(n - 3) - 6 * a(n - 4) + (7 * n - 37) * a(n - 5) - 3 * (n - 6) * a(n - 6)) for n >= 6. - _ Andrew Howroyd _ , Feb 26 2017 ●

▶ [A178674] 4,6,12,30,84,246,732,2190,6564,19686,59052,177150,531444,1594326,4782972,14348910,43046724,129140166,387420492,1162261470,3486784404,10460353206,31381059612,94143178830,282429536484 ⋆ a(n) = 3 ^ n + 3. ● a(n) = 3 * (a(n - 1) - 2), a(0)=4. ● a(n) = 4 * a(n - 1) - 3 * a(n - 2) for n>1. - _ Vincenzo Librandi _ , May 13 2014 ●

▶ [A062624] 1,1,1,4,6,12,40,240,480,1920,6912,20736,76032,253440,608256,4257792,7983360,26611200,88704000,319334400,1277337600,5109350400,19508428800,73156608000,336520396800 ⋆ Number of integers less than A000108(n) relatively prime to A000108(n). ● a(n) = phi(binomial(2n, n) / (n + 1)). ●

▶ [A137821] 1,4,6,13,15,18,19,40,42,45,46,54,55,58,60,121,123,126,127,135,136,139,141,162,163 ⋆ Numbers k such that Sum _{ j=1..2k } Catalan(j) == 0 (mod 3). ● a(2 ^ j) = 2 a(2 ^ j - 1) + 1 (resp. + 2) for j even (resp. odd). ●

▶ [A266665] 0,1,4,6,13,15,26,28,43,45,64,66,89,91,118,120,151,153,188,190,229,231,274,276,323 ⋆ Total number of OFF (white) cells after n iterations of the "Rule 47" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = (n ^ 2 + 2 * n + (- 1) ^ n * (n - 1) - 1) / 2 for n>0. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n>5. ●

▶ [A247284] 4,6,13,18,38,63,113,188,338,563,1013,1688,3038,5063,9113,15188,27338,45563,82013,136688,246038,410063,738113,1230188,2214338 ⋆ Subrecords in A048673: maximum value between two consecutive records in A048673. ● a(n) = a(n - 1) + 3 * a(n - 2) - 3 * a(n - 3) for n > 7. ●

▶ [A069061] 4,6,13,18,48,84,176,258,800,1302,2736,4356,10928,20520,51792,65538,174768,351120,699056,1110276,3100240,5048232,11184816,17041416,49012992 ⋆ Sum of divisors of 2 ^ n + 1. ● a(n) = sigma(2 ^ n + 1). ●

▶ [A136391] 1,1,4,6,13,23,43,77,138,244,429,749,1301,2249,3872,6642,11357,19363,32927,55861,94566,159776,269469,453721,762793 ⋆ a(n) = n * F(n) - (n - 1) * F(n - 1), where the F(j)'s are the Fibonacci numbers (F(0)=0, F(1)=1). ● a(n) = F(n - 1) + n * F(n - 2). - _ Bruno Berselli _ , Jul 26 2017 ●

▶ [A160805] 4,6,13,27,50,84,131,193,272,370,489,631,798,992,1215,1469,1756,2078,2437,2835,3274,3756,4283,4857,5480 ⋆ a(n) = (2 * n ^ 3 + 9 * n ^ 2 + n + 24) / 6. ● a(n) = (2 * n ^ 3 + 9 * n ^ 2 + n + 24) / 6. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4), n>3. (End) ●

▶ [A296910] 1,4,6,14,14,22,22,30,30,38,38,46,46,54,54,62,62,70,70,78,78,86,86,94,94 ⋆ a(0)=1, a(1)=4; thereafter a(n) = 4 * n - 2 * (- 1) ^ n. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n>4. ●

▶ [A090773] 4,6,14,16,24,26,34,36,44,46,54,56,64,66,74,76,84,86,94,96,104,106,114,116,124 ⋆ Numbers that are congruent to { 4, 6 } mod 10. ● a(n) = 10 * n - a(n - 1) - 10 (with a(1)=4). - _ Vincenzo Librandi _ , Nov 16 2010 ●

▶ [A310640] 1,4,6,14,17,21,28,28,36,36,44,47,51,58,58,66,66,74,77,81,88,88,96,96,104 ⋆ Coordination sequence Gal.6.527.2 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = a(n - 1) + a(n - 7) - a(n - 8) for n > 9. ●

▶ [A310648] 1,4,6,14,20,20,28,28,36,42,42,50,50,58,64,64,72,72,80,86,86,94,94,102,108 ⋆ Coordination sequence Gal.5.253.2 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = a(n - 1) + a(n - 5) - a(n - 6) for n > 7. ●

▶ [A310650] 1,4,6,14,20,26,26,34,34,42,48,54,54,62,62,70,76,82,82,90,90,98,104,110,110 ⋆ Coordination sequence Gal.6.547.2 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = a(n - 1) + a(n - 6) - a(n - 7) for n > 8. ●

▶ [A192782] 0,0,1,1,4,6,14,26,52,103,201,400,784,1552,3056,6032,11897,23465,46292,91302,180110,355258,700772,1382287,2726609 ⋆ Coefficient of x in the reduction of the n - th Fibonacci polynomial by x ^ 3 - >x ^ 2 + 1. ● a(n)=a(n - 1) + 3 * a(n - 2) - a(n - 3) - 3 * a(n - 4) + a(n - 5) + a(n - 6). ●

▶ [A084214] 1,1,4,6,14,26,54,106,214,426,854,1706,3414,6826,13654,27306,54614,109226,218454,436906,873814,1747626,3495254,6990506,13981014 ⋆ Inverse binomial transform of a math magic problem. ● a(n) = (5 * 2 ^ n - 3 * 0 ^ n + 4 * (- 1) ^ n) / 6. ● a(n) = a(n - 1) + 2 * a(n - 2) for n > 2. - _ Klaus Brockhaus _ , Dec 01 2009 ● a(n + 1) = Sum _{ i=0..n } a(i) + 1 - (- 1) ^ n, a(0)=1. ●

▶ [A106526] 4,6,14,30,40,84,176,234,490,1026,1364,2856,5980,7950,16646,34854,46336,97020,203144,270066,565474,1184010,1574060,3295824,6900916 ⋆ Values of y in x ^ 2 - 49 = 2 * y ^ 2. ● a(n) = 6 * a(n - 3) - a(n - 6), with initial terms 4, 6, 14, 30, 40, 84. - _ T. D. Noe _ , Nov 04 2013 ●

▶ [A373567] 1,4,6,14,31,70,157,353,793,1782,4004,8997,20216,45425,102069,229347,515338,1157954,2601899,5846414,13136773,29518061,66326481,149034250,334876920 ⋆ Expansion of x + 1 / (- x - 1 / (- x - 1 / (- x + 1))). ● a(n) = [x ^ n] (x ^ 4 - x ^ 3 - 3 * x ^ 2 + 2 * x + 1) / (x ^ 3 - x ^ 2 - 2 * x + 1). ●

▶ [A219774] 4,6,14,33,65,114,189,298,450,655,924,1269,1703,2240,2895,3684,4624,5733,7030,8535,10269,12254,14513,17070,19950 ⋆ Number of 3 X n arrays of the minimum value of corresponding elements and their horizontal or antidiagonal neighbors in a random, but sorted with lexicographically nondecreasing rows and columns, 0..1 3 X n array. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>9. ●

▶ [A106387] 4,6,15,17,26,28,37,39,48,50,59,61,70,72,81,83,92,94,103,105,114,116,125,127,136 ⋆ Numbers j such that 6j ^ 2 + 6j + 1 = 11k. ● a(n) = 11 * n - a(n - 1) - 12 (with a(1)=4). - _ Vincenzo Librandi _ , Nov 13 2010 ● a(2k - 1) = 11k - 7, a(2k) = 11k - 5. - _ Ralf Stephan _ , Nov 15 2010 ● a(n) = (22 * n - 7 * (- 1) ^ n - 13) / 4. ● a(n) - a(n - 1) - a(n - 2) + a(n - 3) = 0 for n > 3. ● a(n) - a(n - 2) = 11 for n > 2. ● a(n) - 2 * a(n - 1) + a(n - 2) = - 7 * (- 1) ^ n for n > 2. (End) ●

▶ [A294457] 0,0,4,6,15,19,33,38,57,64,87,97,124,135,168,181,218,232,274,291,337,355,407,427,482 ⋆ Sum of all the diagonals of the distinct rectangles that can be made with positive integer sides such that L + W = n, W < L. The sums are then rounded to the nearest integer. ● a(n) = round(2 * Sum _{ i=1..floor((n - 1) / 2) } sqrt(i ^ 2 + (n - i) ^ 2)). ●

▶ [A266883] 1,4,6,15,19,34,40,61,69,96,106,139,151,190,204,249,265,316,334,391,411,474,496,565,589 ⋆ Numbers of the form m * (4 * m + 1) + 1, where m = 0, - 1,1, - 2,2, - 3,3,... ● a(n) = a(- n - 1) = n * (n + 1) + 1 - ((2 * n + 1) * (- 1) ^ n - 1) / 4 = (2 * n + 1) * floor((n + 1) / 2) + 1. ●

▶ [A128620] 1,1,4,6,15,24,52,84,170,275,534,864,1631,2639,4880,7896,14373,23256,41810,67650,120406,194821,343884,556416,975325 ⋆ Row sums of A128619. ● a(n) = floor((n + 2) / 2) * Fibonacci(n + 1). - _ Philippe Deléham _ , Dec 01 2013 ●

▶ [A034299] 1,1,4,6,15,27,58,112,229,453,912,1818,3643,7279,14566,29124,58257,116505,233020,466030,932071,1864131,3728274,7456536,14913085 ⋆ Alternating sum transform (PSumSIGN) of A000975. ● a(n) = (2 ^ (n + 5) + (6n + 13)(- 1) ^ n - 9) / 36. - _ Bruno Berselli _ , Apr 04 2012 ● a(n) = a(n - 1) + 2 * a(n - 2) + (1 + (- 1) ^ n) / 2. - _ Michael Somos _ , Jan 23 2014 ●

▶ [A294070] 4,6,15,40,96,204,391,690,1140,1786,2679,3876,5440,7440,9951,13054,16836,21390,26815,33216,40704,49396,59415,70890,83956 ⋆ a(n) = (1 / 4) * (n ^ 2 - 2 * n) ^ 2 + (9 / 4) * (n ^ 2 - 2 * n) + 6. ● a(n) = (n ^ 2 - 3 * n + 6) * (n ^ 2 - n + 4) / 4. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n > 5. ● a(n) = (24 - 18 * n + 13 * n ^ 2 - 4 * n ^ 3 + n ^ 4) / 4. (End) ●

▶ [A238411] 0,4,6,16,20,36,42,64,72,100,110,144,156,196,210,256,272,324,342,400,420,484,506,576,600 ⋆ a(n) = 2 * n * floor(n / 2). ● a(n) = n * (2 * n + (- 1) ^ n - 1) / 2. ●

▶ [A112576] 0,1,1,4,6,16,29,67,132,288,588,1253,2597,5480,11430,24020,50233,105383,220632,462528,968808,2030377,4253641,8913436,18675174 ⋆ A Chebyshev -

related transform of the Fibonacci numbers. • a(n) = Sum _{ k=0..floor(n / 2) } C(n - k, k) * F(n - 2 * k). • a(n) = Sum _{ k=0..n } C((n + k) / 2, k) * (1 + (- 1) ^ (n - k)) * F(k) / 2. • a(n) = (Fibonacci(n + 1, (1 + sqrt(5)) / 2) - Fibonacci(n + 1, (1 - sqrt(5)) / 2)) / sqrt(5), where Fibonacci(n,x) is the Fibonacci polynomial (see A011973). - _ G. C. Greubel _ , Jul 29 2019 •

► [A162485] 4,6,16,34,84,198,480,1154,2788,6726,16240,39202,94644,228486,551616,1331714,3215044,7761798,18738640,45239074,109216788,263672646,636562080,1536796802,3710155684 ⋆ a(1)=4, a(2)=6; for n > 2, a(n) = 2 * a(n - 1) + a(n - 2) - 4 * ((n - 1) mod 2). • a(n) = 1 - (- 1) ^ n + (1 - sqrt(2)) ^ n + (1 + sqrt(2)) ^ n. •

► [A072279] 1,4,6,16,45,144,440,1440,4680,15600,52344,177840,608160,2095920,7262640,25300032,88517520,310927680,1095923400,3874804560,13737892896,48829153920,173949483240,620963048160,2220904271040 ⋆ Dimension of n - th graded section of a certain Lie algebra. • a(n) = (1 / n) * Sum _{ k|n } moebius(n / k) (t1 ^ k + t2 ^ k), where t1, t2 are the roots of x ^ 2 - 4x + 1. •

► [A343758] 0,0,0,4,6,17,22,27,32,62,72,82,92,151,168,185,202,219,236,253,270,408,436,464,492 ⋆ Total area of all p X r rectangles, where n = p + r, p <= r, p is prime and r is a positive integer. • a(n) = Sum _{ k=1..floor(n / 2) } k * (n - k) * c(k), where c is the prime characteristic (A010051). •

► [A024305] 4,6,17,22,43,52,86,100,150,170,239,266,357,392,508,552,696,750,925,990,1199,1276,1522,1612,1898 ⋆ a(n) = 2 * (n + 1) + 3 * n + ... + (k + 1) * (n + 2 - k), where k = floor((n + 1) / 2). • a(n) = (1 / 48) * (4 * n ^ 3 + (3 * (- 1) ^ (n + 1) + 39) * n ^ 2 + (18 * (- 1) ^ (n + 1) + 74) * n + 27 * (- 1) ^ (n + 1) + 27). • a(n) = a(n - 1) + 3 * a(n - 2) - 3 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) + a(n - 6) - a(n - 7). • a(n) = Sum _{ i=1..ceiling(n / 2) } (i + 1) * (n - i + 2) = ceiling(n / 2) * (- 2 * ceiling(n / 2) ^ 2 + 3n * ceiling(n / 2) + 9 * n + 14) / 6. - _ Wesley Ivan Hurt _ , Sep 20 2013 •

► [A219190] 0,4,6,18,22,42,48,76,84,120,130,174,186,238,252,312,328,396,414,490,510,594,616,708,732 ⋆ Numbers of the form k * (5 * k + 1), where k = 0, - 1,1, - 2,2, - 3,3,... • a(n) = a(- n + 1) = (10 * n * (n - 1) + 3 * (- 1) ^ n * (2 * n - 1) + 3) / 8. • a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). - _ Harvey P. Dale _ , Jan 21 2015 •

► [A156096] 1,1,4,6,18,32,84,164,400,824,1928,4096,9360,20240,45632,99680,223008,489984,1091392,2405952,5345536,11806592,26194048,57917440,128389376 ⋆ Inverse binomial transform of A030186. • a(n) = A007318 ^ (- 1) * A030186 • a(n) = 4 * a(n - 2) + 2 * a(n - 3). •

► [A051253] 1,4,6,18,36,80,172,360,760,1576,3264,6720,13776,28160,57376,116640,236608,479104,968640,1955712,3944064,7945856,15993856,32168448,64656640 ⋆ Weights of rotation - symmetric functions in n variables. • a(n + 3) = 2 * a(n + 1) + 2 * a(n) + 2 ^ n. • a(3)=1, a(4)=4, a(5)=6, a(6)=18, a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - 4 * a(n - 4). - _ Harvey P. Dale _ , Mar 15 2015 •

► [A196570] 0,4,6,18,48,118,314,806,2082,5402,13946,36102,93378,241518,624810,1616142,4180594,10814158,27973298,72359966,187176434,484177358,1252442706,3239746862,8380393330 ⋆ LAN party numbers. • a(1) = 0; a(2) = 4; a(3) = 6; a(4) = 18. • a(n) = 2 * a(i - 2) + x(n - 2) + m(n). •

► [A116383] 1,1,4,6,19,33,93,175,460,910,2286,4676,11388,23842,56808,120926,283611,611065,1416625,3079635,7078263,15490553,35374519,77805481,176813809 ⋆ Row sums of number triangle A116382. • a(n) = Sum _{ k=0..n } Sum _{ j=0..n } (- 1) ^ (n - j) * C(n,j) * Sum _{ i=0..j } C(j,i - k) * C(i,j - i). •

► [A110391] 1,4,6,19,46,124,321,844,2206,5779,15126,39604,103681,271444,710646,1860499,4870846,12752044,33385281,87403804,228826126,599074579,1568397606,4106118244,10749957121 ⋆ a(n) = L(3 * n) / L(n), where L(n) = Lucas number. • a(n) = + 2 * a(n - 1) + 2 * a(n - 2) - a(n - 3). • a(n) = 2 ^ (- n) * (- (- 2) ^ n + (3 - sqrt(5)) ^ n + (3 + sqrt(5)) ^ n). - _ Colin Barker _ , Jun 03 2016 •

► [A001683] 1,1,1,1,4,6,19,49,150,442,1424,4522,14924,49536,167367,570285,1965058,6823410,23884366,84155478,298377508,1063750740,3811803164,13722384546,49611801980 ⋆ Number of one - sided triangulations of the disk; or flexagons of order n; or unlabeled plane trivalent trees (n - 2 internal vertices, all of degree 3 and hence n leaves). • a(n) = C(n - 2) / n + C(n / 2 - 1) / 2 + (2 / 3) * C(n / 3 - 1), where C(n) = Catalan(n) (A000108) and terms are omitted if their subscripts are not integers. •

► [A227959] 1,1,4,6,20,38,104,220,556,1244,3024,6944,16576,38536,91216,213280,502864,1178928,2774592,6512864,15315072,35969952,84550912,198634048,466825152 ⋆ Number of tilings using monominoes and L - trominoes in 2 X n chessboard, such that three monominoes cannot occur together in shape of L - tromino. • a(n) = 4 * a(n - 2) + 2 * a(n - 3) + 2 * a(n - 4) + 4 * a(n - 5), with a(0)=1, a(1)=1, a(2)=4, a(3)=6, and a(4)=20. •

► [A027377] 1,4,6,20,60,204,670,2340,8160,29120,104754,381300,1397740,5162220,19172790,71582716,268431360,1010580540,3817733920,14467258260,54975528948,209430785460,799644629550,3059510616420 ⋆ Number of irreducible polynomials of degree n over GF(4); dimensions of free Lie algebras. • a(n) = Sum _{ d|n } mu(d) * 4 ^ (n / d) / n. •

► [A323845] 1,4,6,21,45,144,378,1161,3321,10044,29646,89181,266085,798984,2392578,7179921,21526641,64586484,193720086,581179941,1743421725,5230324224,15690618378,47072032281,141215033961 ⋆ Number of inequivalent height 1 degree n polynomials with nonzero constant term. • a(2k + 1) = 3 ^ k * (3 ^ k + 1) / 2, and a(2k + 2) = 3 ^ k * (3 ^ (k + 1) + 5) / 2. •

► [A062940] 4,6,22,68,217,683,2163,6837,21623,68377,216228,683772,2162278,6837722,21622777,68377223,216227767,683772233,2162277661,6837722339,21622776602,68377223398,216227766017,683772233983,2162277660169 ⋆ Number of squares (including 0) with n digits. • a(n) = ceiling(sqrt(10 ^ n)) - ceiling(sqrt(10 ^ (n - 1))), n > 1. •

► [A305381] 4,6,24,36,112,184,440,848,1792,3680,7392,15264,30464,62272,124800,252416,507264,1019904,2050048,4111872,8255488,16544256,33173504,66454528,133126144 ⋆ Number of 1's in truth table for Boolean function x1 x2 x4 + x2 x3 x5 + ... + x { n - 3 } x { n - 2 } xn + x { n - 2 } x { n - 1 } x1 + x { n - 1 } xn x2 + xn x1 x3. • a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 4 * a(n - 3) + 4 * a(n - 5) - 8 * a(n - 6). •

► [A164532] 1,4,6,24,36,144,216,864,1296,5184,7776,31104,46656,186624,279936,1119744,1679616,6718464,10077696,40310784,60466176,241864704,362797056,1451188224,2176782336 ⋆ a(n) = 6 * a(n - 2) for n > 2; a(1) = 1, a(2) = 4. • a(n) = (5 - (- 1) ^ n) * 6 ^ (1 / 4 * (2 * n - 5 + (- 1) ^ n)). • a(n + 3) = a(n + 2) * a(n + 1) / a(n). - _ Reinhard Zumkeller _ , Mar 04 2011 • a(n) = ((1 - (- 1) ^ n) * sqrt(6) / 2 + 2 * (1 + (- 1) ^ n)) * 6 ^ (n / 2 - 1). - _ G. C. Greubel _ , Jul 16 2021 •

► [A098660] 1,1,4,6,24,40,160,280,1120,2016,8064,14784,59136,109824,439296,823680,3294720,6223360,24893440,47297536,189190144,361181184,1444724736,2769055744,11076222976 ⋆ E.g.f. BesselI(0,2 * sqrt(2) * x) + BesselI(1,2 * sqrt(2) * x) / sqrt(2). • a(n) = binomial(n, floor(n / 2))2 ^ floor(n / 2). • a(n + 1) = (1 / Pi) * int(x ^ n * (x + 4) / sqrt(8 - x ^ 2),x, - 2 * sqrt(2),2 * sqrt(2)) if n is odd [corrected by _ Vaclav Kotesovec _ , Nov 13 2017]. •

► [A032087] 4,6,24,120,480,2016,8064,32640,130560,523776,2095104,8386560,33546240,134209536,536838144,2147450880,8589803520,34359607296,137438429184,549755289600,2199021158400,8796090925056,35184363700224,140737479966720,562949919866880 ⋆ Number of reversible strings with n beads of 4 colors. If more than 1 bead, not palindromic. • a(2 * n + 1) = 2 ^ (4 * n + 1) - 2 ^ (2 * n + 1), a(2 * n) = 2 ^ (4 * n - 1) - 2 ^ (2 * n) + 2 ^ (2 * n - 1), a(1)=4. • a(n) = 4 * a(n - 1) + 4 * a(n - 2) - 16 * a(n - 3) for n > 4. • a(n) = 2 ^ (n - 1) * (2 ^ n - 1) for n > 1 and even. • a(n) = 2 ^ (2 * n - 1) - 2 ^ n for n > 1 and odd. •

► [A182333] 1,4,6,25,104,484,2136,11664,71136,451584,3006720,21902400,176774400,1456185600,12758860800,117456998400,1181072793600,12023694950400,130072449024000,1451792885760000,17487355576320000,212389727477760000,2729844680048640000 ⋆ Number of arrangements of n bishops such that every square of the board is controlled by at least one bishop. • a(n) = (((2 * floor(n / 4))!) ^ 2 / 128) * (n ^ 5 + 3 * n ^ 4 + n ^ 3 + 35 * n ^ 2 + 38 * n + 2 - (n ^ 5 - n ^ 4 - 7 * n ^ 3 - n ^ 2 - 10 * n - 30) * (- 1) ^ n - 4 * (n ^ 3 + 2 * n ^ 2 + n - 4) * n * cos(Pi * n / 2) - 2 * (n ^ 5 + n ^ 4 - 11 * n ^ 3 - 7 * n ^ 2 - 2 * n + 2) * sin (Pi * n / 2)), for n > 1. •

► [A370061] 1,1,4,6,26,45,204,380,1771,3450,16380,32886,158224,324632,1577532,3290040,16112057,34034715,167710664,357919100,1772645420,3815041230,18974357220,41124015036,205263418941 ⋆ Number of achiral dissections of a polygon into n hexagons by nonintersecting diagonals rooted at a cell. • a(2 * n) = 6 * binomial(5 * n + 1, n - 1) / (5 * n + 1); a(2 * n + 1) = 4 * binomial(5 * n + 4, n) / (5 * n + 4). •

► [A159557] 4,6,26,80,246,810,2704,9252,32066,112720,400024,1432860,5170604,18784170,68635478,252088496,930138522,3446167860,12815663844,47820447028,178987624514,671825133648,2528212128776,9536895064400 ⋆ Number of elements in the mutation class of a quiver of type D _ n. • a(n) = 6 if n = 4; otherwise a(n) = SUM[d|n] (phi(n / d))C(2d,d) / (2n) where phi is the Euler function, when n>4. •

► [A087299] 1,1,4,6,32,60,384,840,6144,15120,122880,332640,2949120,8648640,82575360,259459200,2642411520,8821612800,95126814720,335221286400,3805072588800,14079294028800,167423193907200,647647525324800 ⋆ Ratio of volume of n - dimensional ball to circumscribing n - cube is Pi ^ floor(n / 2) divided by a(n). • a(n) = 2 ^ n * gamma(n / 2 + 1) * Pi ^ floor(n / 2) / Pi ^ (n / 2), n >= 0. - _ Wolfdieter Lang _ , Jul 17 2013 • a(n) = 2 * n * a(n - 2) if n>=2. - _ Michael Somos _ , Jan 24 2014 •

► [A074061] 1,4,6,39,59,386,584,3821,5781,37824,57226,374419,566479,3706366,5607564,36689241,55509161,363186044,549484046,3595171199,5439331299,35588525946,53843828944,352290088261,532998958141 ⋆ Positive integers k such that 24 * k ^ 2 - 23 is a square. • a(n) = 10 * a(n - 2) - a(n - 4) = a(- 1 - n). • a(2n - 1) = round((1 / 2) * (1 - (1 / 2) / sqrt(6)) * (sqrt(2) + sqrt(3)) ^ (2n)); a(2n) =round(c * (sqrt(2) + sqrt(3)) ^ (2n + 1)) with c = 0.191357750597... - _ Benoit Cloitre _ , Aug 22 2002 •

► [A363861] 4,6,64,100,1296,2058,32768,52488,1000000,1610510,35831808,57921708,1475789056,2392031250,68719476736,111612119056,3570467226624,5808378560022,204800000000000,333597619564020,12855002631049216,20961814674106394,87648833846535782 4,1430511474609375000,6450997470329715097 6 ⋆ Sequence related to chains in type D noncrossing partitions. • a(n) = (n - 2) * (n - 1) ^ (n / 2 - 1) if n is even else a(n) = (n - 1) ^ ((n + 1) / 2). •

► [A189790] 1,4,6,64,120,2304,5040,147456,362880,14745600,39916800,2123366400,6227020800,416179814400,1307674368000,106542032486400,355687428096000,3451961852559360 0,1216451004088320000,1380784741023744000 ⋆ Number of ways to place n nonattacking bishops on an n X n toroidal board. • a(n) = 2 ^ n * ((n / 2)!) ^ 2 if n is even and a(n) = n! if n is odd. • a(n) = n * (2 * n - 3) * a(n - 2) - (n - 3) * n * (n - 2) ^ 2 * a(n - 4). [_ Vaclav Kotesovec _ , Sep 26 2012] •

► [A105037] 0,4,6,98,142,2162,3128,47476,68684,1042320,1507930,22883574,33105786,502396318,726819372,11029835432,15956920408,242153983196,350325429614,5316357794890,7691202531110,116717717504394,168856130254816 ⋆ a(n) = 22 * a(n - 2) - a(n - 4) + 10, for n > 3, with a(0) = 0, a(1) = 4, a(2) = 6, a(3) = 98. • a(n) = 22 * a(n - 2) - a(n - 4) + 10, for n > 3. • a(n) = - 1 / 2 + (5 * (6 + sqrt(30)) / 24 - (- 1) ^ n * (5 + sqrt(30)) / 5) * p ^ ((2 * n - 1 + (- 1) ^ n) / 4) + ((6 - sqrt(30)) / 24 - (- 1) ^ n * (5 - sqrt(30)) / 5) * q ^ ((2 * n - 1 + (- 1) ^ n) / 4), where p = (11 + 2 * sqrt(30)) and q = (11 - 2 * sqrt(30)). - _ Paolo P. Lava _ , Aug 28 2009 [simplified by _ G. C. Greubel _ , Mar 14 2023] •

► [A061891] 1,1,4,7,7,10,13,13,16,19,19,22,25,25,28,31,31,34,37,37,40,43,43,46,49 ⋆ a(0) = 1; for n>0, a(n) = a(n - 1) if n is already in the sequence, a(n) = a(n - 1) + 3 otherwise. • a(n) = 2 * n - 1 if n == 1 (mod 3), 2 * n if n == 2 (mod 3), 2 * n + 1 if n == 0 (mod 3). • a(n) = Sum { k=0..n } ((1 / 3) * (2 * (n mod 3) - ((n + 1) mod 3) + 5 * ((n + 2) mod 3))) - 2. - _ Paolo P. Lava _ , Jun 25 2007 • a(n) = a(n - 1) + a(n - 3) - a(n - 4). •

► [A253472] 4,7,8,9,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32 ⋆ Square Pairs: Numbers n such that 1, 2, ..., 2n can be partitioned into n pairs, where each pair adds up to a perfect square. • a(n) = 2 * a(n - 1) - a(n - 2) for n > 6. •

► [A047538] 0,1,4,7,8,9,12,15,16,17,20,23,24,25,28,31,32,33,36,39,40,41,44,47,48 ⋆ Numbers that are congruent to { 0, 1, 4, 7 } mod 8. • a(n) = 2 * n - 2 - sin(Pi * (n - 1) / 2). • a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4) for n> 4. (End) • a(n) = 2 * n - 2 - (1 + (- 1) ^ n) * (- 1) ^ ((2 * n - 3) / 4 - (- 1) ^

n / 4) / 2. - _ Wesley Ivan Hurt _ , Sep 22 2015 ● a(n) = (- 4 + (- i) ^ n + i ^ n + 4 * n) / 2, where i = sqrt(- 1). - _ Colin Barker _ , Oct 18 2015 ●

▶ [A074231] 1,4,7,8,9,12,15,16,17,20,23,24,25,28,31,32,33,36,39,40,41,44,47,48,49 ⋆ Numbers n such that Kronecker(8,n) = mu(gcd(8,n)). ● a(n) = 2n + 2 - cos(Pi * n / 2); ● a(n) = Sum _{ k=0..n } (0 ^ k + 4 ^ k) * cos(Pi * (n - k) / 2); ● a(n) = Sum _{ k=0..floor(n / 2) } C(n - k, k) * (- 1) ^ k(2 * 2 ^ (n - 2k) - 0 ^ (n - 2k)); ● a(n) = 2a(n - 1) - 2a(n - 2) + 2a(n - 3) - a(n - 4). (End) ●

▶ [A283767] 1,4,7,8,10,11,13,14,17,20,21,23,24,26,27,30,33,36,37,39,40,43,46,49,50 ⋆ Numbers k such that U(k) is even, where U = A001950 = upper Wythoff sequence. ● a(n + 1) - a(n) is in { 1,2,3 } for every n. ●

▶ [A080578] 1,4,7,8,11,14,15,16,19,22,23,26,29,30,31,32,35,38,39,42,45,46,47,50,53 ⋆ a(1)=1; for n > 1, a(n) = a(n - 1) + 1 if n is already in the sequence, a(n) = a(n - 1) + 3 otherwise. ● a(n) = 2n + O(1); a(2 ^ n) = 2 ^ (n + 1). - _ Benoit Cloitre _ , Oct 12 2003 ●

▶ [A047347] 0,1,4,7,8,11,14,15,18,21,22,25,28,29,32,35,36,39,42,43,46,49,50,53,56 ⋆ Numbers that are congruent to { 0, 1, 4 } mod 7. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. ● a(n) = 7 * n / 3 - 3 + 4 * sin(2 * n * Pi / 3) / (3 * sqrt(3)). ● a(3k) = 7k - 3, a(3k - 1) = 7k - 6, a(3k - 2) = 7k - 7. (End) ●

▶ [A188376] 1,4,7,8,11,14,15,18,21,24,25,28,31,32,35,38,41,42,45,48,49,52,55,56,59 ⋆ Positions of 1 in A188374; complement of A188375. ● a(n) = 2[nr] + n, where r = 1 / sqrt(2). - _ Michel Dekking _ , Feb 27 2018 ●

▶ [A215458] 0,1,4,7,8,11,28,71,144,259,484,991,2072,4187,8236,16247,32544,65587,131572,262543,523688,1047179,2096956,4196903,8391600 ⋆ a(n) = 4 * a(n - 1) - 7 * a(n - 2) + 8 * a(n - 3) - 4 * a(n - 4) starting 0, 1, 4, 7. ● a(n) = (2 ^ n - (1 / 2 - (i * sqrt(7)) / 2) ^ n - (1 / 2 + (i * sqrt(7)) / 2) ^ n + 1) / 2 where i = sqrt(- 1). - _ Paul S. Vanderveen _ , Jul 08 2017 ● a(n) = 2 ^ (n - 1) - 2 ^ (n / 2) * cos(n * arctan(sqrt(7))) + 1 / 2. - _ Peter Luschny _ , Jul 26 2017 ●

▶ [A047536] 0,4,7,8,12,15,16,20,23,24,28,31,32,36,39,40,44,47,48,52,55,56,60,63,64 ⋆ Numbers that are congruent to { 0, 4, 7 } mod 8. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. ● a(n) = (24 * n - 15 + 6 * cos(2 * n * Pi / 3) - 4 * sqrt(3) * sin(2 * n * Pi / 3)) / 9. ● a(3k) = 8k - 1, a(3k - 1) = 8k - 4, a(3k - 2) = 8k - 8. (End) ●

▶ [A291402] 0,0,1,4,7,8,12,31,71,125,201,367,749,1471,2679,4814,9014,17304,32739,60683,112444,210938,397800,746347,1392898 ⋆ p - INVERT of (1,1,0,0,0,0,...), where p(S) = 1 - S ^ 3 - S ^ 4. ● a(n) = a(n - 3) + 4 * a(n - 4) + 7 * a(n - 5) + 7 * a(n - 6) + 4 * a(n - 7) + a(n - 8) for n >= 9. ●

▶ [A358348] 1,4,7,9,10,13,16,17,18,19,22,25,27,28,31,34,35,36,37,40,43,45,46,49,52 ⋆ Numbers k such that k == k ^ k (mod 9). ● a(n) = 2 * (n + 1) - b(n) where b(n>=0) = 2,3,2,1,1,2,1,0,1,2,3,2,... has period 9. - _ Kevin Ryde _ , Mar 26 2023 ●

▶ [A242660] 0,1,4,7,9,10,13,16,18,19,22,25,27,28,31,34,36,37,40,43,45,46,49,52,54 ⋆ Nonnegative numbers of the form x ^ 2 + xy - 2y ^ 2. ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. ●

▶ [A056991] 1,4,7,9,10,13,16,18,19,22,25,27,28,31,34,36,37,40,43,45,46,49,52,54,55 ⋆ Numbers with digital root 1, 4, 7 or 9. ● a(n) = a(n - 4) + 9. (End) ● a(n) = Sum _{ k=0..n } (1 / 8) * (5 * (k mod 4) + 5 * ((k + 1) mod 4) + 3 * ((k + 2) mod 4) - ((k + 3) mod 4)), with n >= 0. - _ Paolo P. Lava _ , Feb 15 2008 ● a(n) = 3 * (n - floor(n / 4)) - (3 - i ^ n - (- i) ^ n - (- 1) ^ n) / 2, where i = sqrt(- 1). - _ Gary Detlefs _ , Mar 19 2010 ● a(n) = a(n - 1) + a(n - 4) - a(n - 5). - _ Wesley Ivan Hurt _ , May 27 2021 ●

▶ [A055047] 1,4,7,9,10,13,16,19,22,25,28,31,34,36,37,40,43,46,49,52,55,58,61,63,64 ⋆ Numbers of the form 9 ^ i * (3 * j + 1). ● a(n) = 8n / 3 + O(log n). - _ Charles R Greathouse IV _ , Dec 19 2013 ●

▶ [A267873] 1,1,4,7,9,11,13,15,17,19,21,23,25,27,29,31,33,35,37,39,41,43,45,47,49 ⋆ Number of ON (black) cells in the n - th iteration of the "Rule 235" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = 2 * a(n - 1) - a(n - 2) for n>2. ●

▶ [A007064] 1,4,7,9,12,14,17,20,22,25,27,30,33,35,38,41,43,46,48,51,54,56,59,62,64 ⋆ Numbers not of form "nearest integer to n * tau", tau = (1 + sqrt(5)) / 2. ● a(n) = floor[n * (1 + tau) - tau / 2] =floor[n * 2.6180... - 0.8090...]. - _ Henry Bottomley _ , Sep 03 2001 ●

▶ [A279054] 1,4,7,9,12,14,17,20,22,25,28,30,33,35,38,41,43,46,49,51,54,56,59,62,64 ⋆ Largest integer m for which binomial(m,n - 1) > binomial(m - 1,n). ● a(n) = (3n - 1 + sqrt(5n ^ 2 - 2n + 1)) / 2 - 1 if 5n ^ 2 - 2n + 1 is a perfect square, else a(n) = floor((3n - 1 + sqrt(5n ^ 2 - 2n + 1)) / 2). ● a(n) = ceiling((3 * n - 3 + sqrt(5 * n ^ 2 - 2 * n + 1)) / 2). - _ Robert Israel _ , Dec 05 2016 ●

▶ [A086824] 1,1,4,7,9,12,14,17,20,22,25,28,30,33,36,38,41,44,47,49,52,55,57,60,63 ⋆ Least positive k such that k! >= n ^ k. ● a(n) = e * n + O(log(n)); a(n + 1) - a(n) = 2 or 3. ●

▶ [A007066] 1,4,7,9,12,15,17,20,22,25,28,30,33,36,38,41,43,46,49,51,54,56,59,62,64 ⋆ a(n) = 1 + ceiling((n - 1) * phi ^ 2), phi = (1 + sqrt(5)) / 2. ● a(n) = floor (1 + phi * floor(phi * (n - 1) + 1)), phi=(1 + sqrt(5)) / 2, n >= 2. ● a(1)=1; for n>1, a(n)=a(n - 1) + 2 if n is already in the sequence, a(n)=a(n - 1) + 3 otherwise. - _ Benoit Cloitre _ , Mar 06 2003 ● a(n + 1) = floor(n * phi ^ 2) + 2, n>=1. - _ Michel Dekking _ , Aug 26 2019 ●

▶ [A047537] 1,4,7,9,12,15,17,20,23,25,28,31,33,36,39,41,44,47,49,52,55,57,60,63,65 ⋆ Numbers that are congruent to { 1, 4, 7 } mod 8. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. ● a(n) = (24 * n - 12 + 3 * cos(2 * n * Pi / 3) - sqrt(3) * sin(2 * n * Pi / 3)) / 9. ● a(3k) = 8k - 1, a(3k - 1) = 8k - 4, a(3k - 2) = 8k - 7. (End) ●

▶ [A184589] 1,4,7,9,12,15,18,20,23,26,28,31,34,37,39,42,45,47,50,53,56,58,61,64,66 ⋆ floor(n * e - 1); complement of A184590. ● a(n)=floor(n * e - 1). ●

▶ [A180122] 1,4,7,9,12,15,18,20,23,26,29,31,34,37,39,42,45,48,50,53,56,59,61,64,67 ⋆ First of three "least, sum, least" self - generating sequences. ● a(n) = least positive integer not yet used; ●

▶ [A035510] 4,7,9,14,17,22,27,30,35,41,43,48,51,56,62,64,69,75,77,82,85,90,96,98,103 ⋆ 2nd column of Inverse Stolarsky array. ● a(n) = round(n * tau) + 1 + floor((round(n * tau) + 1 / 2) * tau) for n > 0 with a(0)=4. - C. Ronaldo (aga _ new _ ac(AT)hotmail.com), Jan 01 2005 ●

▶ [A022541] 0,0,0,1,1,1,4,7,9,21,41,73,147,288,557,1111,2193,4343,8728,17483,35063,70828,143267,290193,589705 ⋆ Related to number of irreducible stick - cutting problems. ● a(n) = [x ^ (n * (n + 1) / 2] Product _{ k=n + 1..2 * n - 2 } 1 / (1 - x ^ k). - _ Sean A. Irvine _ , May 18 2019 ●

▶ [A309688] 0,0,0,1,1,1,1,4,7,10,10,15,20,25,30,42,49,56,63,79,95,111,120,140,160 ⋆ Sum of the odd parts appearing among the second largest parts of the partitions of n into 3 parts. ● a(n) = Sum _{ j=1..floor(n / 3) } Sum _{ i=j..floor((n - j) / 2) } i * (i mod 2). ● a(n) = 2 * a(n - 1) - 3 * a(n - 2) + 4 * a(n - 3) - 3 * a(n - 4) + 2 * a(n - 5) + a(n - 6) - 4 * a(n - 7) + 6 * a(n - 8) - 8 * a(n - 9) + 6 * a(n - 10) - 4 * a(n - 11) + a(n - 12) + 2 * a(n - 13) - 3 * a(n - 14) + 4 * a(n - 15) - 3 * a(n - 16) + 2 * a(n - 17) - a(n - 18) for n>17. ●

▶ [A000414] 4,7,10,12,13,15,16,18,19,20,21,22,23,25,26,27,28,30,31,33,34,35,36,37,38 ⋆ Numbers that are the sum of 4 nonzero squares. ● a(n) = n + O(log n). - _ Charles R Greathouse IV _ , Sep 03 2014 ●

▶ [A083032] 0,4,7,10,12,16,19,22,24,28,31,34,36,40,43,46,48,52,55,58,60,64,67,70,72 ⋆ Numbers that are congruent to { 0, 4, 7, 10 } mod 12. ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n > 5. ● a(n) = (12 * n - 9 + (- 1) ^ n + (- 1) ^ ((n + 1) / 2) + (- 1) ^ (- (n + 1) / 2)) / 4. (End) ● a(n) = (12 * n - 9 + (- 1) ^ n - 2 * sin(n * Pi / 2)) / 4. ● a(n) = a(n - 4) + 12 for n > 4. (End) ●

▶ [A020965] 1,4,7,10,12,17,18,23,26,29,30,37,39,41,44,50,54,56,58,63,64,67,73,77,79 ⋆ a(n) = Sum _{ k >= 1 } floor(n * sqrt(2) ^ (1 - k)). ● a(n) = kn + O(log n) where k = 2 + sqrt(2) = 3.414213562.... - _ Charles R Greathouse IV _ , Feb 27 2017 ●

▶ [A244713] 1,4,7,10,13,16,18,19,22,25,27,28,31,34,37,40,43,45,46,49,52,54,55,58,61 ⋆ Positive numbers primitively represented by the binary quadratic form (1, 1, - 2). ● a(n) = a(n - 1) + a(n - 11) - a(n - 12) for n>12. ●

▶ [A016777] 1,4,7,10,13,16,19,22,25,28,31,34,37,40,43,46,49,52,55,58,61,64,67,70,73 ⋆ a(n) = 3 * n + 1. ● a(n) = 3 + a(n - 1). ● a(n) = 2 * a(n - 1) - a(n - 2); a(0)=1, a(1)=4. - _ Philippe Deléham _ , Nov 03 2008 ● a(n) = 6 * n - a(n - 1) - 1 (with a(0) = 1). - _ Vincenzo Librandi _ , Nov 20 2010 ●

▶ [A143458] 1,4,7,10,13,16,19,22,25,37,58,88,127,175,232,298,373,484,658,922,1303,1828,2524,3418,4537 ⋆ Expansion of 1 / (x ^ k * (1 - x - 3 * x ^ (k + 1))) for k=7. ● a(0)=1, a(1)=4, a(2)=7, a(3)=10, a(4)=13, a(5)=16, a(6)=19, a(7)=22, a(n)=a(n - 1) + 3 * a(n - 8). - _ Harvey P. Dale _ , Jul 22 2013 ●

▶ [A004084] 1,4,7,10,13,16,19,22,26,29,32,35,38,41,44,48,51,54,57,60,63,66,70,73,76 ⋆ a(n) = n - th positive integer k such that tan(k - 1) <= 0 and tan(k) > 0. ● a(n) = ceiling(Pi * (n - 1)) for n>1. - _ Benoit Cloitre _ , Feb 14 2004 ●

▶ [A069212] 1,4,7,10,13,22,25,28,31,40,43,52,55,64,73,76,79,88,91,100,109,118,121,130,133 ⋆ a(n) = Sum _{ k=1..n } 3 ^ omega(k). ● a(n) = Sum _{ i=1..n } Sum _{ j=1..n } mu(i * j) ^ 2 * floor(n / (i * j)); ● a(n) = Sum _{ i=1..n } mu(i) ^ 2 * tau(i) * floor(n / i); ● a(n) = Sum _{ i=1..n } 2 ^ Omega(i) * mu(i) ^ 2 * floor(n / i), where Omega = A001222. (End) ●

▶ [A318774] 1,1,1,1,4,7,10,13,25,46,76,115,190,328,556,901,1471,2455,4123,6826,11239,18604,30973,51451,85168 ⋆ Coefficients in expansion of 1 / (1 - x - 3 * x ^ 4). ● a(n) = a(n - 1) + 3 * a(n - 4) for n >= 0, a(n)=0 for n < 0, with a(0) = a(1) = a(2) = a(3) = 1. ●

▶ [A143454] 1,4,7,10,13,25,46,76,115,190,328,556,901,1471,2455,4123,6826,11239,18604,30973,51451,85168,140980,233899,388252 ⋆ Expansion of 1 / (x ^ k * (1 - x - 3 * x ^ (k + 1))) for k=3. ● a(n) = Sum _{ j=0..(n + 3) / 3 } 3 ^ j * C(n - 3 * j + 3,j). - _ Vladimir Kruchinin _ , May 24 2011 ●

▶ [A191402] 1,4,7,10,14,17,20,23,26,30,33,36,40,43,46,49,52,56,59,62,65,68,72,75,78 ⋆ a(n) = A000201(n) + A000201(n + 1). ● a(n) = [nr] + [nr + r], where r=(1 + sqrt(5)) / 2 and [ ]=floor. ●

▶ [A067497] 0,4,7,10,14,17,20,24,27,30,34,37,40,44,47,50,54,57,60,64,67,70,74,77,80 ⋆ Smallest power of 2 with n + 1 digits (n>=0). Also numbers k such that 1 is the first digit of 2 ^ k. ● a(n) = ceiling(n * log _ 2(10)). - _ Vladeta Jovovic _ , Jun 20 2002 ●

▶ [A123384] 1,4,7,10,14,17,20,24,27,30,34,37,40,44,47,50,54,57,60,64,67,70,74,77,80 ⋆ Number of bits in binary expansion of 10 ^ n. ● a(n) = 1 + floor(n / A007524) = 1 + floor(n / log _ 10(2)). - _ R. J. Mathar _ , Nov 12 2006 ●

▶ [A138813] 1,1,4,7,10,14,17,20,24,28,31,35,38,42,45,50,53,57,61,64,67,73,77,80,83 ⋆ a(0) = 1; thereafter, a(n) = Sum _{ k=0..n - 1 } ceiling(n / a(k)). ● a(2)= 4, a(n) / n=2.0000, a(n) / (n * sqrt(log(n)))=2.4022 ● a(4)= 10, a(n) / n=2.5000, a(n) / (n * sqrt(log(n)))=2.1233 ● a(8)= 24, a(n) / n=3.0000, a(n) / (n * sqrt(log(n)))=2.0804 ● a(16)= 53, a(n) / n=3.3125, a(n) / (n * sqrt(log(n)))=1.9894 ● a(32)= 115, a(n) / n=3.5938, a(n) / (n * sqrt(log(n)))=1.9304 ● a(64) = 244, a(n) / n=3.8125, a(n) / (n * sqrt(log(n)))=1.8695 ●

▶ [A184625] 4,7,10,14,17,21,24,27,31,34,38,41,44,48,51,55,58,62,65,68,72,75,79,82,85 ⋆ a(n) = floor((n - h) * s + h), where s=2 + sqrt(2) and h= - 1 / 4; complement of A184624. ● a(n) = floor[(n - h) * s + h], where s=2 + sqrt(2) and h= - 1 / 4. ●

▶ [A300306] 1,4,7,10,14,18,22,26,31,35,40,45,49,54,59,64,69,74,79,85,90,95,101,106,112 ⋆ Expected rounded number of draws until two persons simultaneously drawing cards with replacement from two separate decks of n cards, both obtain complete collections. ● a(n) = round(1 - Sum _{ j=0..n } Sum _{ k=0..n } ((- 1) ^ (2 * n - j - k) * binomial(n,j) * binomial(n,k) * j * k / (n ^ 2 - j * k))) excluding term with j=k=n in summation. ●

▶ [A187334] 0,1,4,7,10,15,16,19,22,25,30,31,34,37,40,45,46,49,52,55,60,61,64,67,70 ⋆ Sum { floor(kn / 5), k=1,2,3,4,5 } ; complement of A187335. ● a(n)=sum { floor(kn / 5), k=1,2,3,4,5 } . ●

▶ [A064368] 1,4,7,10,15,18,21,24,29,36,39,42,47,50,53,56,65,68,75,78,83,86,89,92,97 ⋆ Number of 2 X 2 symmetric singular matrices with entries from { 0,...,n } . ● a(n) = n + 1 + 2 * Sum _{ k=1..n } Sum _{ d ^ 2|k } phi(d), where phi = Euler totient function A000010. ●

▶ [A071408] 0,1,4,7,10,15,20,25,32,39,46,55,64,73,84,95,106,119,132,145,160,175,190,207,224 ⋆ a(n + 1) - 2 * a(n) + a(n - 1) = (2 / 3) * (1 + w ^ (n + 1) + w ^ (2 * n + 2)) with a(1)=0, a(2)=1, and where w is the imaginary cubic root of unity. ● a(n) = floor((n - 1) * (n + 1) * (n + 3) / (3 * n + 3)). - _ Gary Detlefs _ , Jul 13 2010 ● a(n) = n + floor(n * (n - 1) / 3) - 1. - _ Bruno Berselli _ , Mar 02 2017 ●

► [A168565] 4,7,10,16,19,25,28,34,43,46,55,61,64,70,79,88,91,100,106,109,118,124,133,145,151 ⋆ Let p = prime(n); then a(n) = p + (p - 1) / 2. ● a(n) = (3 * prime(n) - 1) / 2. ●

► [A213484] 1,4,7,10,16,25,34,43,55,70,85,100,118,139,160,181,205,232,259,286,316,349,382,415,451 ⋆ Number of (w,x,y) with all terms in { 0,...,n } and |w - x| + |x - y| + |y - w| >= w + x + y. ● a(n) = 3 * a(n - 1) - 4 * a(n - 2) + 4 * a(n - 3) - 3 * a(n - 4) + a(n - 5). ● a(n) = (3 * n ^ 2 + 3 * n + 4 + 3 * ((n + 1) mod 4 - (n + 1) mod 2)) / 4. (End) ●

► [A003461] 4,7,10,16,28,52,100,196,388,772,1540,3076,6148,12292,24580,49156,98308,196612,393220,786436,1572868,3145732,6291460,12582916,25165828 ⋆ Bode numbers multiplied by 10: 4 + 3 * floor(2 ^ (n - 1)). ● a(n) = 2 * a(n - 1) - 4, n > 1. ●

► [A373655] 1,1,1,1,4,7,10,19,37,64,110,201,364,641,1140,2050,3662,6516,11638,20811,37140,66268,118356,211368,377308 ⋆ a(n) = Sum _{ k=0..floor(n / 3) } binomial(3 * n - 8 * k - 1,k). ● a(n) = a(n - 1) + 3 * a(n - 3) - 3 * a(n - 6) + a(n - 9) for n > 9. ●

► [A084386] 1,1,1,4,7,10,22,43,73,139,268,487,904,1708,3169,5881,11005,20512,38155,71170,132706,247171,460681,858799,1600312 ⋆ Number of pairs of rabbits when there are 3 pairs per litter and offspring reach parenthood after 3 gestation periods; a(n) = a(n - 1) + 3 * a(n - 3), with a(0) = a(1) = a(2) = 1. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n - 2 * k, k) * 3 ^ k. - _ Paul Barry _ , Nov 18 2003 ● a(m + n) = a(m) * a(n) + 3 * a(m - 1) * a(n - 2) + 3 * a(m - 2) * a(n - 1). - _ Michael Tulskikh _ , Jun 23 2020 ●

► [A275176] 1,1,1,1,1,1,4,7,10,22,43,202,370,547,1264,2521,11881,21781,32221,74521,148681,700744,1284667,1900450,4395442 ⋆ a(n) = (3 * a(n - 3) + a(n - 1) * a(n - 5)) / a(n - 6), a(0) = a(1) = ... = a(5) = 1. ● a(n) = 60 * a(n - 5) - 60 * a(n - 10) + a(n - 15). ●

► [A032818] 1,4,7,10,25,28,43,46,61,64,151,154,169,172,259,262,277,280,367,370,385,388,907,910,925 ⋆ Numbers whose set of base - 6 digits is { 1,4 } . ● a(1)=1, a(2)=4; a(n) = 6 * a(floor(n / 2)) + 1 for n odd, otherwise a(n) = 6 * a(floor((n - 1) / 2)) + 4. - _ Bruno Berselli _ , May 28 2012 ●

► [A371458] 1,1,1,1,4,7,10,31,61,100,274,565,1000,2551,5380,10000,24376,52018,100000,236389,507706,1000000,2313346,4986178,10000000 ⋆ Expansion of 1 / (1 - x / (1 - 9 * x ^ 3) ^ (1 / 3)). ● a(3 * n) = 10 ^ (n - 1) for n > 0. ● a(n) = Sum _{ k=0..floor(n / 3) } 9 ^ k * binomial(n / 3 - 1,k). ●

► [A135262] 1,4,7,10,40,70,100,400,700,1000,4000,7000,10000,40000,70000,100000,400000,700000,1000000,4000000,7000000,10000000,40000000,70000000,100000000 ⋆ a(3n)=10 ^ n. a(3n + 1)=4 * 10 ^ n. a(3n + 2)=7 * 10 ^ n. ● a(n) = (1 / 3) *{ 10 * (n mod 3) + [(n + 1) mod 3] + [(n + 2) mod 3] }* 10 ^ A002264. - _ Paolo P. Lava _ , Dec 18 2007 ● a(n) = 10 * a(n - 3). ●

► [A319280] 0,4,7,11,12,16,19,23,24,28,31,35,36,40,43,47,48,52,55,59,60,64,67,71,72 ⋆ Numbers that are congruent to { 0, 4, 7, 11 } mod 12. ● a(n) = a(n - 4) + 12 for n > 4. ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n > 5. ● a(n) = (6 * n - 4 + (- 1) ^ n + sqrt(2) * cos(Pi * n / 2 + Pi / 4)) / 2. ●

► [A091855] 1,4,7,11,13,16,19,21,25,28,31,35,37,41,44,47,49,52,55,59,61,64,67,69,73 ⋆ Odious numbers (see A000069) in A003159. ● a(n) is asymptotic to 3 * n - _ Benoit Cloitre _ , Mar 22 2004 ●

► [A308199] 0,4,7,11,13,17,20,24,28,31,35,37,41,44,48,51,55,57,61,64,68,72,75,79,81 ⋆ The tribonacci representation of a(n) is obtained by appending 0,0 to the tribonacci representation of n (cf. A278038). ● a(n) = Sum _{ k=1..n - 1 } d(k), where d is the tribonacci word on the alphabet { 4,3,2 } . ●

► [A081834] 1,4,7,11,14,17,21,24,27,30,34,37,40,44,47,50,54,57,60,63,67,70,73,77,80 ⋆ a(1)=1, a(n)=a(n - 1) + 4 if n is already in the sequence, a(n)=a(n - 1) + 3 otherwise. ● a(n)=floor(rn - (3r - 1) / (r + 1)) where r= (1 / 2) * (3 + sqrt(13)) ●

► [A078309] 1,4,7,11,14,17,21,24,27,31,34,37,41,44,47,51,54,57,61,64,67,71,74,77,81 ⋆ Numbers that are congruent to { 1, 4, 7 } mod 10. ● a(n) = 1 + 3 * mod(n - 1, 3) + 10 * floor((n - 1) / 3). ● a(n) = a(n - 3) + 10 for n>4. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. ● a(n) = 3 * n + floor((n - 1) / 3) - 2. ● a(n) = (30 * n - 24 - 3 * cos(2 * n * Pi / 3) + sqrt(3) * sin(2 * n * Pi / 3)) / 9. ● a(3k) = 10k - 3, a(3k - 1) = 10k - 6, a(3k - 2) = 10k - 9. (End) ●

► [A184623] 4,7,11,14,17,21,24,28,31,34,38,41,45,48,52,55,58,62,65,69,72,75,79,82,86 ⋆ a(n) = floor((n - h) * s + h), where s=2 + sqrt(2) and h= - 1 / 3; complement of A184622. ● a(n) = floor((n - h) * s + h), where s=2 + sqrt(2) and h= - 1 / 3. ●

► [A083051] 1,4,7,11,14,18,21,24,28,31,35,38,41,45,48,52,55,59,62,65,69,72,76,79,82 ⋆ First column of table A083050. ● a(n)=floor(n * x / (x - 1)) + 1, x=sqrt(2). ●

► [A047345] 0,4,7,11,14,18,21,25,28,32,35,39,42,46,49,53,56,60,63,67,70,74,77,81,84 ⋆ Numbers that are congruent to { 0, 4 } mod 7. ● a(n) = ceiling(7 * (n - 1) / 2). ● a(n) = 7 * n - a(n - 1) - 10 for n>1, a(1)=0. - _ Vincenzo Librandi _ , Aug 05 2010 ● a(n) = 7 * n / 2 - 13 / 4 + (- 1) ^ n / 4. ● a(n) = 4 * (n - 1) - floor((n - 1) / 2). - _ Wesley Ivan Hurt _ , Jun 14 2013 ● a(n) = 2 * (n - 1) + floor((3 * n - 2 - (n mod 2)) / 2). - _ Wesley Ivan Hurt _ , Mar 31 2014 ●

► [A368649] 4,7,11,14,18,22,25,29,33,36,40,43,47,51,54,58,62,65,69,72,76,80,83,87,90 ⋆ a(n) = round(n * rho), where rho = (5 + sqrt(5)) / 2. ● a(n) = floor(n * (5 + sqrt(5)) / 2 + 1 / 2). ●

► [A267049] 0,1,4,7,11,14,22,25,37,40,56,59,79,82,106,109,137,140,172,175,211,214,254,257,301 ⋆ Total number of OFF (white) cells after n iterations of the "Rule 91" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = (n ^ 2 + (- 1) ^ n * (n - 3) + 5) / 2 for n>1. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n>6. ●

► [A236771] 0,1,4,7,11,15,21,26,33,40,48,56,66,75,86,97,109,121,135,148,163,178,194,210,228 ⋆ a(n) = n + floor(n / 2 + n ^ 2 / 3). ● a(n) = a(n - 1) + a(n - 2) - a(n - 4) - a(n - 5) + a(n - 6). ● a(n) = (2 * n * (2 * n + 9) - 2 * (- 1) ^ floor(2 * (n - 1) / 3) + 3 * (- 1) ^ n - 5) / 12. ●

► [A269132] 0,1,4,7,11,16,21,28,35,43,52,61,72,83,95,108,121,136,151,167,184,201,220,239,259 ⋆ a(n) = n + floor(n * (2 * n + 1) / 5). ● a(n) = ceiling(((n * (n + 2) + (n + 1) * ceiling(n)) * (n - 1)) / (2 * ceiling(n) + ceiling(ceiling(n) + n) + n) + n) for n>0. ●

► [A231603] 0,1,4,7,11,16,22,28,35,43,52,61,70,81,92,103,115,128,141,155,170,185,200,216,233 ⋆ Floor of the arithmetic - geometric mean of n + n and n * n. ● a(n) = floor(agm(n + n,n * n)). ●

► [A134869] 1,4,7,11,16,22,29,37,46,56,67,79,92,106,121,137,154,172,191,211,232,254,277,301,326 ⋆ Row sums of triangle A134868. ● a(n) = 1, then for n>1, a(n) = T(n) + 1, where A000217 = (1, 3, 6, 10, 15, ...). ●

► [A171452] 0,0,1,4,7,11,17,23,30,39,48,58,70,82,95,110,125,141,159,177,196,217,238,260,284 ⋆ a(n) = C(n,2) + floor(n / 3). ● a(n)=(3n ^ 2 - n - 2) / 6 + sqrt(3) * cos(2 * pi * n / 3 + pi / 6) / 9 + sin(2 * pi * n / 3 + pi / 6) / 3. ●

► [A133257] 4,7,11,17,25,37,53,77,109,157,221,317,445,637,893,1277,1789,2557,3581,5117,7165,10237,14333,20477,28669 ⋆ The number of edges on a piece of paper that has been folded n times (see comments for more precise definition). ● a(n) = 2 * a(n - 2) + 3 for n >= 2. ● a(n) = 2 ^ ((n - 2) / 2) * ((7 + 5 * sqrt(2)) + (7 - 5 * sqrt(2)) * (- 1) ^ n) - 3. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3). G.f.: - (4 * x ^ 2 - 3 * x - 4) / ((x - 1) * (2 * x ^ 2 - 1)). - _ Colin Barker _ , Jul 07 2014 ●

► [A130625] 1,4,7,11,20,41,85,172,343,683,1364,2729,5461,10924,21847,43691,87380,174761,349525,699052,1398103,2796203,5592404,11184809,22369621 ⋆ First differences of A130624. ● a(n) = 3a(n - 1) - 3a(n - 2) + 2a(n - 3). Sequence is identical to its third differences. Binomial transform of 1, 3, 0. - _ Paul Curtz _ , Nov 23 2007 ● a(n) = - (1 / 6) * (1 / 2 - (1 / 2) * i * sqrt(3)) ^ n - (1 / 6) * (1 / 2 + (1 / 2) * i * sqrt(3)) ^ n + (4 / 3) * 2 ^ n + (1 / 2) * i * (1 / 2 - (1 / 2) * i * sqrt(3)) ^ n * sqrt(3) - (1 / 2) * i * (1 / 2 + (1 / 2) * i * sqrt(3)) ^ n * sqrt(3), with n >= 0 and i = sqrt(- 1). - _ Paolo P. Lava _ , Jun 12 2008 ●

► [A352216] 1,1,1,4,7,11,21,36,62 ⋆ Largest number of maximal diamond - free node - induced subgraphs of an n - node graph. ● a(m + n) >= a(m) * a(n). ●

► [A352214] 1,1,1,4,7,11,23,44,71 ⋆ Largest number of maximal claw - free node - induced subgraphs of an n - node graph. ● a(m + n) >= a(m) * a(n). ●

► [A244590] 0,0,4,7,12,14,18,21,28,28,32,35,40,42,46,49,56,56,60,63,68,70,74,77,84 ⋆ a(n) = sum(floor(k * n / 8), k=1..7). ● a(n) = sum(floor(k * n / 8), k=1..7). ● a(n) = (gcd(n,8) - (n + 8) + n * 8) / 2. ●

► [A047535] 4,7,12,15,20,23,28,31,36,39,44,47,52,55,60,63,68,71,76,79,84,87,92,95,100 ⋆ Numbers that are congruent to { 4, 7 } mod 8. ● a(n) = 8 * n - a(n - 1) - 5 (with a(1)=4). - _ Vincenzo Librandi _ , Aug 06 2010 ● a(n) = 4 * n - (1 + (- 1) ^ n) / 2. - _ Arkadiusz Wesolowski _ , Sep 18 2012 ●

► [A061503] 1,4,7,12,15,24,27,34,39,48,51,66,69,78,87,96,99,114,117,132,141,150,153,174,179 ⋆ a(n) = Sum _{ k=1..n } tau(k ^ 2), where tau is the number of divisors function A000005. ● a(n) = Sum _{ i=1..n } 2 ^ omega(i) * floor(n / i). - _ Enrique Pérez Herrero _ , Sep 15 2012 ●

► [A076295] 4,7,12,15,28,55,72,147,304,403,840,1755,2332,4879,10212,13575,28420,59503,79104,165627,346792,461035,965328,2021235,2687092 ⋆ Consider all Pythagorean triples (Y - 7,Y,Z); sequence gives Y values. ● a(0)=4, a(1)=7, a(2)=12, a(3)=15, a(4)=28, a(5)=55, a(6)=72, a(n)= a(n - 1) + 6 * a(n - 3) - 6 * a(n - 4) - a(n - 6) + a (n - 7). - _ Harvey P. Dale _ , Feb 02 2012 ●

► [A083030] 0,4,7,12,16,19,24,28,31,36,40,43,48,52,55,60,64,67,72,76,79,84,88,91,96 ⋆ Numbers that are congruent to { 0, 4, 7 } mod 12. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n > 4. ● a(n) = 4 * n - (13 + 2 * cos(2 * n * Pi / 3)) / 3. ● a(3k) = 12k - 5, a(3k - 1) = 12k - 8, a(3k - 2) = 12k - 12. (End) ● a(n) = a(n - 3) + 12 for n > 3. - _ Jianing Song _ , Sep 22 2018 ●

► [A232424] 0,1,4,7,12,16,22,27,34,40,47,54,62,70,78,87,96,105,114,124,134,144,155,165,176 ⋆ Floor of the half derivative of x ^ 2 at n. ● a(n) = floor(8n ^ (3 / 2) / (3 * sqrt(Pi))). ●

► [A005005] 1,4,7,12,16,23,28,35,40,47,52,59,64,71,76,83,88,95,100,107,112,119,124,131,136 ⋆ Davenport - Schinzel numbers of degree n on 4 symbols. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n > 7. ●

► [A276222] 4,7,12,17,23,29,35,42,50,58,66,75,84,93,103,113,124,135,146,157,169,181,194,206,219 ⋆ Position of n ^ s in the joint ranking of { h } and { k ^ s } , h >= 1, k >= 2, s = golden ratio = (1 + sqrt(5)) / 2. ● a(n) = n + floor(n ^ s), n >= 2; the complement is given by n + floor(n ^ (1 / s)), n >= 1. ●

► [A074148] 1,4,7,12,17,24,31,40,49,60,71,84,97,112,127,144,161,180,199,220,241,264,287,312,337 ⋆ a(n) = n + floor(n ^ 2 / 2). ● a(n) = (2 * n ^ 2 + 4 * n + (- 1) ^ n - 1) / 4. - _ Vladeta Jovovic _ , Apr 06 2003 ● a(n) = + 2 * a(n - 1) - 2 * a(n - 3) + 1 * a(n - 4). - _ Joerg Arndt _ , Apr 02 2011 ● a(n) = a(n - 2) + 2 * n, a(0) = 0, a(1) = 1. - _ Paul Barry _ , Jul 17 2004 ● a(n) = floor(n ^ 4 / (2n ^ 2 + 1)) with offset 2..a(2) = 1. - _ Gary Detlefs _ , Feb 11 2010 ● a(n) = n + floor(n ^ 2 / 2). - _ Wesley Ivan Hurt _ , Jun 14 2013 ●

► [A265431] 0,1,4,7,12,18,26,34,44,55,68,81,96,112,130,148,168,189,212,235,260,286,314,342,372 ⋆ Total number of OFF (white) cells after n iterations of the "Rule 188" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = 1 / 16 * (10 * n ^ 2 + 8 * n + 3 * (- 1) ^ n - 2 * (- i) ^ n - 2 * i ^ n + 1) where i = sqrt(- 1). ●

► [A132297] 4,7,12,18,26,35,46,58,72,87,104,122,142,163,186,210,236,263,292 ⋆ Number of distinct Markov type classes of order 2 possible in binary strings of length n. ● a(n) = (15 + (- 1) ^ n - 4 * n + 6 * n ^ 2) / 8. ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4). ●

► [A007333] 0,0,0,0,0,0,0,0,4,7,12,18,37,53,75,100,152,198,256,320,430,530,650,780,980 ⋆ An upper bound on the biplanar crossing number of the complete graph on n nodes. ● a(4 * k) = k * (k - 1) * (k - 2) * (7 * k - 3) / 6, a(4 * k + 1) = k * (k - 1) * (7 * k ^ 2 - 10 * k + 4) / 6, a(4 * k + 2) = k * (k - 1) * (7 * k ^ 2 - 3 * k - 1) / 6, a(4 * k + 3) = k ^ 2 * (k - 1) * (7 * k + 4) / 6 [from Owens]. - _ Sean A. Irvine _ , Dec 30 2019; [typo corrected by _ Colin Barker _ , Feb 01 2020] ● a(n) = 2 * a(n - 1) - a(n - 2) + 3 * a(n - 4) - 6 * a(n - 5) + 3 * a(n - 6) - 3 * a(n - 8) + 6 * a(n - 9) - 3 * a(n - 10) + a(n - 12) - 2 * a(n - 13) + a(n - 14) for n>14. ●

► [A020732] 4,7,12,20,33,54,88,143,232,376,609,986,1596,2583,4180,6764,10945,17710,28656,46367,75024,121392,196417,317810,514228 ⋆ Pisot sequence T(4,7). ● a(n) = Fibonacci(n + 5) - 1. ● a(n) = 2 * a(n - 1) - a(n - 3). ● a(n) = (- 1 + (2 ^ (- 1 - n) * ((1 - sqrt(5)) ^ n * (- 11 + 5 * sqrt(5)) + (1 + sqrt(5)) ^ n * (11 + 5 * sqrt(5)))) / sqrt(5)). ●

▶ [A228879] 4,7,12,21,36,63,108,189,324,567,972,1701,2916,5103,8748,15309,26244,45927,78732,137781,236196,413343,708588,1240029,2125764 ⋆ a(n + 2) = 3 * a(n), starting 4,7. ● a(n) = sqrt(3 * a(n - 1) ^ 2 + (- 3) ^ (n - 1)), a(0) = 4. ● a(n) = 3 ^ ((n - 1) / 2) * (4 * sqrt(3) + 7 + (- 1) ^ n * (4 * sqrt(3) - 7)) / 2. ●

▶ [A010901] 4,7,12,21,37,65,114,200,351,616,1081,1897,3329,5842,10252,17991,31572,55405,97229,170625,299426,525456,922111,1618192,2839729 ⋆ Pisot sequences E(4,7), P(4,7). ● a(n) = 2a(n - 1) - a(n - 2) + a(n - 3) for n>=3. (Proved using the PtoRv program of Ekhad - Sloane - Zeilberger.) - _ N. J. A. Sloane _ , Sep 09 2016 ●

▶ [A123194] 4,7,12,23,43,81,150,275,498,893,1587,2799,4904,8543,14808,25555,43931,75261,128538,218923,371934,630457,1066467,1800603,3034828 ⋆ a(n) = (n + 1) * Fibonacci(n + 2) + 3. ● a(n) = 3 - 2 ^ (- 1 - n) * ((1 - sqrt(5)) ^ n * (- 5 + 3 * sqrt(5)) - (1 + sqrt(5)) ^ n * (5 + 3 * sqrt(5))) / 5 * (1 + n). ● a(n) = 3 * a(n - 1) - a(n - 2) - 3 * a(n - 3) + a(n - 4) + a(n - 5) for n>4. ●

▶ [A243860] 1,4,7,12,23,48,103,220,463,960,1967,3996,8071,16240,32599,65340,130847,261888,523999,1048252,2096791,4193904,8388167,16776732,33553903 ⋆ a(n) = 2 ^ (n + 1) - (n - 1) ^ 2. ● a(n) = 5 * a(n - 1) - 9 * a(n - 2) + 7 * a(n - 3) - 2 * a(n - 4). - _ Colin Barker _ , Jun 12 2014 ●

▶ [A299900] 1,4,7,12,24,38,50,68,94,122,153,187,223,260,293,331,382,438,500,569,628,678,737,800,870 ⋆ Coordination sequence for "ftu" 3D tiling with respect to second type of node. ● a(0) = 1, a(1) = 4, a(2) = 7, a(3) = 12, a(4) = 24, a(5) = 38, a(6) = 50, a(7) = 68, a(8) = 94, a(9) = 122, a(10) = 153, a(11) = 187, a(12) = 223, a(13) = 260, a(14) = 293, a(15) = 331, a(16) = 382, a(17) = 438, a(18) = 500, a(19) =569, a(20) = 628, a(21) = 678, a(22) = 737, a(23) = 800, a(24) = 870, ● a(25) = 958, a(26) = 1051, a(27) = 1141, a(28) = 1227, a(29) = 1303, a(30) = 1382, a(31) = 1475, a(32) = 1568, a(33) = 1672, a(34) = 1797, a(35) = 1914, a(36) = 2023, a(37) = 2135, a(38) = 2236, a(39) = 2343, a(40) = 2471, a(41) = 2597, a(42) = 2731, ● a(43) = 2885, a(44) = 3026, a(45) = 3156, a(46) = 3296, a(47) = 3429, a(48) = 3564, a(49) = 3722, a(50) = 3883, a(51) = 4048, a(52) = 4222, a(53) = 4381, a(54) = 4542, a(55) = 4718, a(56) = 4877, a(57) = 5041 } . ●

▶ [A125758] 4,7,13,16,22,25,31,34,40,43,49,52,58,61,67,70,76,79,85,88,94,97,103,106,112 ⋆ Numbers congruent to 4 or 7 (mod 9). ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) = a(n - 2) + 9. ●

▶ [A309794] 0,0,0,0,1,1,1,1,4,7,13,16,24,29,39,49,71,88,112,131,166,196,242,281,340 ⋆ Sum of the odd parts appearing among the second largest parts of the partitions of n into 4 parts. ● a(n) = Sum _{ k=1..floor(n / 4) } Sum _{ j=k..floor((n - k) / 3) } Sum _{ i=j..floor((n - j - k) / 2) } i * (i mod 2). ● a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - 2 * a(n - 4) + 2 * a(n - 5) - 2 * a(n - 7) + 4 * a(n - 8) - 6 * a(n - 9) + 6 * a(n - 10) - 6 * a(n - 11) + 5 * a(n - 12) - 4 * a(n - 13) + 4 * a(n - 15) - 5 * a(n - 16) + 6 * a(n - 17) - 6 * a(n - 18) + 6 * a(n - 19) - 4 * a(n - 20) + 2 * a(n - 21) - 2 * a(n - 23) + 2 * a(n - 24) - 2 * a(n - 25) + 2 * a(n - 26) - 2 * a(n - 27) + a(n - 28) for n > 27. ●

▶ [A061201] 1,4,7,13,16,25,28,38,44,53,56,74,77,86,95,110,113,131,134,152,161,170,173,203,209 ⋆ Partial sums of A007425: (tau<=) _ 3(n). ● a(n) = n * (log(n) ^ 2 / 2 + (3 * g - 1) * log(n) + 3 * g ^ 2 - 3 * g - 3 * g1 + 1) + O(sqrt(n)), where g is the Euler - Mascheroni number ~ 0.57721... (see A001620), and g1 is the first Stieltjes constant ~ - 0.072816 (see A082633). The determination of the precise size of the error term is an unsolved problem - see references. - _ Andrew Lelechenko _ , Apr 15 2011 [corrected by _ Vaclav Kotesovec _ , Sep 09 2018] ● a(n) = Sum _{ k=1..n } Sum _{ i=1..n } floor(n / (i * k)). - _ Wesley Ivan Hurt _ , Sep 14 2017 ●

▶ [A266811] 1,4,7,13,18,26,35,45,55,69,82,97,113,131,149,170,190,213,237,262,287,316,344,374,405 ⋆ Total number of ON (black) cells after n iterations of the "Rule 62" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = a(n - 1) + a(n - 3) - a(n - 5) - a(n - 7) + a(n - 8) for n>7. ●

▶ [A085787] 0,1,4,7,13,18,27,34,46,55,70,81,99,112,133,148,172,189,216,235,265,286,319,342,378 ⋆ Generalized heptagonal numbers: m * (5 * m - 3) / 2, m = 0, +- 1, +- 2 +- 3, ... ● a(n) = 5 * n * (n + 1) / 8 - 1 / 16 + (- 1) ^ n * (2 * n + 1) / 16. - _ R. J. Mathar _ , Jun 29 2009 ●

▶ [A111710] 1,4,7,13,18,27,34,46,55,70,81,99,112,133,148,172,189,216,235,265,286,319,342,378,403 ⋆ Consider the triangle shown below in which the n - th row contains the n smallest numbers greater than those in the previous row such that the arithmetic mean is an integer. Sequence contains the leading diagonal. ● a(1)=1, a(2n) = a(2n - 1) + 3n, a(2n + 1)=a(2n) + 2n + 1. - _ Franklin T. Adams - Watters _ , May 01 2006 ● a(n) = (10 * n ^ 2 + 2 * (- 1) ^ n * n + 10 * n + (- 1) ^ n - 1) / 16. ● a(n) = (5 * n ^ 2 + 6 * n) / 8 for n even. ● a(n) = (5 * n ^ 2 + 4 * n - 1) / 8 for n odd. (End) ●

▶ [A194073] 1,4,7,13,19,28,37,49,61,76,91,109,127,148,169,193,217,244,271,301,331,364,397,433,469 ⋆ a(n) = 1 + floor((3 / 4) * n ^ 2). ● a(n) = 1 + floor((3 / 4) * n ^ 2). ●

▶ [A111314] 1,1,4,7,13,22,37,61,100,163,265,430,697,1129,1828,2959,4789,7750,12541,20293,32836,53131,85969,139102,225073 ⋆ a(n) = a(n - 1) + a(n - 2) + 2 where a(0) = a(1) = 1. ● a(n) = 2 * Fib(n + 1) - Fib(n + 2) + Fib(n + 3) - 2. - _ Robert G. Wilson v _ , Nov 10 2005 ● a(n) = F(n - 1) + F(n + 3) - 2, where F(n) is the n - th Fibonacci number. - _ Zerinvary Lajos _ , Jan 31 2008 ● a(n) = 3 * Fib(n + 1) - 2. - _ Olivier Pirson _ , Jun 30 2015 ●

▶ [A038391] 1,4,7,13,23,33,48,69,90,118,154,190,235,290,345,411,489,567,658,763,868,988,1124,1260,1413 ⋆ Expansion of (x ^ 3 + 2 * x + 1) / ((x - 1) ^ 4 * (x ^ 2 + x + 1) ^ 2). ● a(n) = 2 * a(n - 1) - a(n - 2) + 2 * a(n - 3) - 4 * a(n - 4) + 2 * a(n - 5) - a(n - 6) + 2 * a(n - 7) - a(n - 8). ● a(n) = Sum _{ i=1..n + 1 } (1 + floor((n + i + 1) / 3)) * (1 + floor((n - i + 1) / 3)). (End) ●

▶ [A229439] 4,7,13,25,47,84,142,228,350,517,739,1027,1393,1850,2412,3094,3912,4883,6025,7357,8899,10672,12698,15000,17602 ⋆ Number of n X 2 0..2 arrays with horizontal differences mod 3 never 1, vertical differences mod 3 never - 1, and rows and columns lexicographically nondecreasing. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

▶ [A000288] 1,1,1,1,4,7,13,25,49,94,181,349,673,1297,2500,4819,9289,17905,34513,66526,128233,247177,476449,918385,1770244 ⋆ Tetranacci numbers: a(n) = a(n - 1) + a(n - 2) + a(n - 3) + a(n - 4) with a(0) = a(1) = a(2) = a(3) = 1. ● a(0) = a(1) = a(2) = a(3) = 1, a(4) = 4, a(n) = 2 * a(n - 1) - a(n - 5). - _ Vincenzo Librandi _ , Dec 21 2010 ●

▶ [A118334] 1,1,1,1,1,1,1,1,4,7,13,25,49,94,463,3691,51649,1342825,67140874,6378379789,2959568174113,10926725697533971,56436538227563803725,7578445088222251885989584694,50882343436271211095738004051924943 ⋆ a(n - 1) * a(n - 6) + a(n - 2) * a(n - 7) + a(n - 3) * a(n - 8) + a(n - 4) * a(n - 9), with a(k<8) = 1. ● a(0) = a(1) = a(2) = a(3) = a(4) = a(5) = a(6) = a(7) = 1; for n>7: a(n) = a(n - 1) * a(n - 6) + a(n - 2) * a(n - 7) + a(n - 3) * a(n - 8) + a(n - 4) * a(n - 9). ●

▶ [A004119] 1,4,7,13,25,49,97,193,385,769,1537,3073,6145,12289,24577,49153,98305,196609,393217,786433,1572865,3145729,6291457,12582913,25165825 ⋆ a(0) = 1; thereafter a(n) = 3 * 2 ^ (n - 1) + 1. ● a(n) = 3a(n - 1) - 2a(n - 2). ●

▶ [A181565] 4,7,13,25,49,97,193,385,769,1537,3073,6145,12289,24577,49153,98305,196609,393217,786433,1572865,3145729,6291457,12582913,25165825,50331649 ⋆ a(n) = 3 * 2 ^ n + 1. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2). (End) ● a(n) = 2 * a(n - 1) - 1. - _ Miquel Cerda _ , Aug 16 2016 ●

▶ [A293342] 4,7,13,26,51,101,202,403,805,1609,3217,6434,12868,25736,51472,102944,205888,411775,823550,1647100,3294199,6588398,13176795,26353590,52707179 ⋆ Least integer k such that k / 2 ^ n > Pi. ● a(n) = ceiling(Pi * 2 ^ n). ●

▶ [A373718] 1,1,1,4,7,13,28,53,105,211,413,819,1624,3206,6349,12565,24851,49183,97315,192539,380989,753836,1491567,2951330,5839638 ⋆ Expansion of 1 / (1 - x * (1 + x ^ 2) ^ 3). ● a(n) = a(n - 1) + 3 * a(n - 3) + 3 * a(n - 5) + a(n - 7). ● a(n) = Sum _{ k=0..floor(3 * n / 7) } binomial(3 * n - 6 * k,k). ●

▶ [A122552] 1,1,1,4,7,13,28,55,109,220,439,877,1756,3511,7021,14044,28087,56173,112348,224695,449389,898780,1797559,3595117,7190236 ⋆ a(0)=a(1)=a(2)=1, a(n) = a(n - 1) + a(n - 2) + 2 * a(n - 3) for n > 2. ● a(3 * n) = 2 * a(3 * n - 1) + 2, a(3 * n + 1) = 2 * a(3 * n) - 1, a(3 * n + 2) = 2 * a(3 * n + 1) - 1, a(0)=1. ● a(n) = (3 / 7) * 2 ^ n - (1 / 7) * i * sqrt(3) * ((- 1 / 2) + (1 / 2) * i * sqrt(3)) ^ n + (2 / 7) * ((- 1 / 2) - (1 / 2) * i * sqrt(3)) ^ n + (2 / 7) * ((- 1 / 2) + (1 / 2) * i * sqrt(3)) ^ n + (1 / 7) * i * sqrt(3) * ((- 1 / 2) - (1 / 2) * i * sqrt(3)) ^ n, with n >= 0 and i=sqrt(- 1). - _ Paolo P. Lava _ , Nov 19 2008 ● a(n + 1) - 2a(n) = period 3: repeat - 1, - 1,2 = - A061347. ● a(n) - a(n - 1) = 0,0,3,3,6,15,27,54,111,... = 3 * A077947. ● a(n) - a(n - 2) = 0,3,6,9,21,42,81,.... ● a(n) - a(n - 3) = 3,6,12,24,... = A007283 = 3 * A000079. ●

▶ [A048241] 1,4,7,14,23,41,56,89,119,164,206,281,335,437,518,626,734,902,1019,1226,1382,1592,1787,2084,2288 ⋆ Number of colors that can be mixed with n >= 0 units of yellow, blue, red. ● a(n) = number of triples (i, j, k) with 0 <= i + j + k <= n and gcd(i, j, k) = 1. ●

▶ [A094968] 1,4,7,14,25,48,91,178,349,692,1375,2742,5473,10936,21859,43706,87397,174780,349543,699070,1398121,2796224,5592427,11184834,22369645 ⋆ Indices of Fibonacci numbers in Stern's diatomic series A049456 regarded as a single linear sequence. ● a(n) = 2 ^ n + n + Jacobsthal(n). ● a(n) = ((- 1) ^ (1 + n) + 2 ^ (2 + n) + 3 * n) / 3. ● a(n) = 3 * a(n - 1) - a(n - 2) - 3 * a(n - 3) + 2 * a(n - 4) for n>3. ●

▶ [A199628] 1,4,7,14,32,50,71,122,185,238,319,430,528,626,752,884,1000,1116,1249,1384,1503,1620,1753,1888,2007 ⋆ G.f.: (1 + x) ^ (2 * g) * (1 + x ^ 3) ^ (3 * g) / ((1 - x ^ 2) * (1 - x ^ 4)) - x ^ (2 * g) * (1 + x) ^ 4 / ((1 - x ^ 2) * (1 - x ^ 4)) for g=2. ● a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4) for n>20. ●

▶ [A049945] 1,1,4,7,14,34,65,127,254,634,1206,2381,4742,9477,18951,37899,75798,189494,360040,710606,1416477,2830593,5660011,11319450,22638520 ⋆ a(n) = a(1) + a(2) + ... + a(n - 1) + a(m) for n >= 4, where m = 2 ^ (p + 1) + 2 - n and p is the unique integer such that 2 ^ p < n - 1 <= 2 ^ (p + 1), starting with a(1) = a(2) = 1 and a(3) = 4. ● a(n) = a(2 ^ ceiling(log _ 2(n - 1)) + 2 - n) + Sum _{ i = 1..n - 1 } a(i) for n >= 4. ●

▶ [A234576] 4,7,14,34,73,156,345,754,1640,3585,7832,17091,37318,81490,177913,388448,848149,1851826,4043232,8827953,19274812,42084287,91886190,200622866,438036729 ⋆ Number of Weyl group elements, not containing s _ 1 or s _ 2, which contribute nonzero terms to Kostant's weight multiplicity formula when computing the multiplicity of the zero - weight in the adjoint representation for the Lie algebra of type D and rank n. ● a(n) = a(n - 1) + a(n - 2) + 3 * a(n - 3) + a(n - 4). ●

▶ [A281445] 4,7,15,18,26,29,37,40,48,51,59,62,70,73,81,84,92,95,103,106,114,117,125,128,136 ⋆ Nonnegative k for which (2 * k ^ 2 + 1) / 11 is an integer. ● a(n) = - a(- n + 1) = a(n - 1) + a(n - 2) - a(n - 3). ● a(n) = (22 * n - 5 * (- 1) ^ n - 11) / 4. Therefore: a(2 * h) = 11 * h - 4, a(2 * h + 1) = 11 * h + 4. ●

▶ [A356714] 0,0,0,0,0,4,7,15,21,25,29,33,37,41,45,49,53,57,61,65,69,73,77,81,85 ⋆ Cardinality of the set { a _ 1 + a _ 2 + a _ 3 + a _ 4: - floor((n - 1) / 2) <= a _ 1,a _ 2,a _ 3,a _ 4 <= floor(n / 2), and a _ 1 ^ 2,a _ 2 ^ 2,a _ 3 ^ 2,a _ 4 ^ 2 are pairwise distinct } . ● a(n) = 2 * a(n - 1) - a(n - 2) for n > 10. ●

▶ [A109622] 1,1,4,7,15,23,38,53,77,101,136,171,219,267,330,393,473,553,652,751,871,991,1134,1277,1445 ⋆ Number of different isotemporal classes of diasters with n peripheral edges. ● a(n=2k) = 1 + sum _{ i=1 }^{ (n / 2) - 1 } (n * i - i ^ 2 + n + 1) + (1 / 2)((n / 2) ^ 2 + 3(n / 2) + 2) a(n=2k + 1)= 1 + sum _{ i= 1 }^{ (n - 1) / 2 } ((n * i - i ^ 2 + n + 1). [Corrected by Sean A. Irvine after private communication with Benjamin de Bivort, Feb 13 2012] ●

▶ [A116969] 4,7,15,27,53,101,199,391,777,1545,3083,6155,12301,24589,49167,98319,196625,393233,786451,1572883,3145749,6291477,12582935,25165847,50331673 ⋆ If n mod 2 = 0 then 3 * 2 ^ (n - 1) + n - 1 else 3 * 2 ^ (n - 1) + n. ● a(n) = 3 * a(n - 1) - a(n - 2) - 3 * a(n - 3) + 2 * a(n - 4). G.f.: - x * (x ^ 3 - 2 * x ^ 2 - 5 * x + 4) / ((x - 1) ^ 2 * (x + 1) * (2 * x - 1)). - _ Colin Barker _ , Jul 18 2013 ●

▶ [A131935] 4,7,15,31,65,136,285,597,1251,2621,5492,11507,24111,50519,105853 ⋆ a(n) is the number of Khalimsky - continuous functions with four - point codomain and an n - point range. ● a(n) = a(n - 1) + 3 * a(n - 2) - a(n - 3) - a(n - 4) for n>4. ●

▶ [A173657] 4,7,15,37,99,277,795,2317,6819,20197,60075,179197,535539,1602517,4799355,14381677,43112259,129271237,387682635,1162785757,3487832979,10462450357,31385253915,94151567437,282446313699 ⋆ 2 + 2 ^ n + 3 ^ n. ● a(n)= 6 * a(n - 1) - 11 * a(n - 2) + 6 * a(n - 3). ●

▶ [A130665] 1,4,7,16,19,28,37,64,67,76,85,112,121,148,175,256,259,268,277,304,313,340,367,448,457 ⋆ a(n) = Sum _{ k=0..n } 3 ^ wt(k), where wt() = A00012

0(). • a(2n + 1) = 4 * a(n) and a(2n) = 3 * a(n - 1) + a(n). •
▶ [A236305] 1,4,7,16,19,28,43,64,67,76,91,112,139,172,211,256,259,268,283,304,331,364,403,448,499 ⋆ The number of P - positions in the game of Nim with up to 3 piles, allowing for piles of zero, such that the number of objects in each pile does not exceed n. • a(n) = 4 ^ floor(log(n) / log(2)) + 3 * (n mod 2 ^ floor(log(n) / log(2))) ^ 2 (conjectured). - _ Thomas Baruchel _ , May 15 2018 •
▶ [A353259] 1,4,7,16,19,36,39,64,67,100 ⋆ Solution to Snake Numbers Problems for Snakes from 1 to n for an n X n square grid (see Comments). • a(n) = n ^ 2 for even n. •
▶ [A325657] 0,1,4,7,16,21,36,43,64,73,100,111,144,157,196,211,256,273,324,343,400,421,484,507,576 ⋆ a(n) = (1 / 2) * (- 1 + (- 1) ^ n) * (n - 1) + n ^ 2. • a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n > 4 • a(n) = n ^ 2 if n is even. • a(n) = n ^ 2 - n + 1 if n is odd. •
▶ [A285998] 1,4,7,16,22,40,50,80,95,140,161,224,252,336,372,480,525,660,715,880,946,1144,1222,1456,1547 ⋆ a(n) = Sum _{ k=0..floor(n / 2) } (n - k) * (k + 1). • a(n) = 1 / 16 + 13 * n / 24 + 7 * n ^ 2 / 16 + n ^ 3 / 12 + (- 1) ^ n * (- 1 / 16 + n / 8 + n ^ 2 / 16). - _ Vaclav Kotesovec _ , Jun 25 2017 •
▶ [A259653] 0,1,4,7,16,25,34,61,88,115,142,223,304,385,466,547,790,1033,1276,1519,1762,2005,2734,3463,4192 ⋆ a(0)=0, a(1)=1, a(n) = min { 3 a(k) + (3 ^ (n - k) - 1) / 2, k=0..(n - 1) } for n>=2. • a(n) = min { 3 * a(k) + (3 ^ (n - k) - 1) / 2 ; k < n } . •
▶ [A164123] 1,4,7,16,25,52,79,160,241,484,727,1456,2185,4372,6559,13120,19681,39364,59047,118096,177145,354292,531439,1062880,1594321 ⋆ Partial sums of A162436. • a(n) = 3 * a(n - 2) + 4 for n > 2; a(1) = 1, a(2) = 4. • a(n) = (5 - (- 1) ^ n) * 3 ^ (1 / 4 * (2 * n - 1 + (- 1) ^ n)) / 2 - 2. •
▶ [A133600] 1,4,7,16,28,64,112,256,448,1024,1792,4096,7168,16384,28672,65536,114688,262144,458752,1048576,1835008,4194304,7340032,16777216,29360128 ⋆ Row sums of triangle A133599. • a(n) = 4 * a(n - 2) for n > 3; a(1) = 1, a(2) = 4, a(3) = 7. - _ Klaus Brockhaus _ , Nov 26 2009 •
▶ [A051049] 1,1,4,7,16,31,64,127,256,511,1024,2047,4096,8191,16384,32767,65536,131071,262144,524287,1048576,2097151,4194304,8388607,16777216 ⋆ Number of moves needed to solve an (n + 1) - ring baguenaudier if two simultaneous moves of the two end rings are counted as one. • a(n) = (2 ^ (n + 1) - (1 + (- 1) ^ (n + 1))) / 2. - _ Paul Barry _ , Apr 24 2003 • a(n + 2) = a(n + 1) + 2 * a(n) + 1, a(0)=a(1)=1. - _ Paul Barry _ , May 01 2003 • a(n) = Sum _{ k=0..floor(n / 2) } binomial(n + 1, 2 * k). - _ Paul Barry _ , May 27 2003 • a(n) = (Sum _{ k=0..n } binomial(n,k) + (- 1) ^ (n - k)) - 1. - _ Paul Barry _ , Jul 21 2003 • a(n) = Sum _{ k=0..n } Sum _{ j=0..n - k, (j - k) mod 2 = 0 } binomial(n - k, j). - _ Paul Barry _ , Jan 25 2005 • a(n) = 2 * a(n - 1) + a(n - 2) - 2 * a(n - 3), a(0) = a(1) = 1, a(2) = 4. Observed by G. Detlefs. See the W. Lang link. - _ Wolfdieter Lang _ , Oct 18 2010 •
▶ [A373653] 1,1,1,4,7,16,34,71,153,322,686,1455,3088,6558,13917,29548,62721,133146,282646,599998,1273690,2703794,5739647,12184181,25864698 ⋆ a(n) = Sum _{ k=0..floor(n / 2) } binomial(3 * n - 5 * k - 1,k). • a(n) = a(n - 1) + 3 * a(n - 2) - 3 * a(n - 4) + a(n - 6) for n > 6. •
▶ [A108122] 1,1,1,4,7,16,34,73,157,337,724,1555,3340,7174,15409,33097,71089,152692,327967,704440,1513066,3249913,6980485,14993377,32204260 ⋆ G.f.: (1 - 2 * x ^ 2) / (1 - x - 2 * x ^ 2 - x ^ 3). • a(n) = a(n - 1) + 2 * a(n - 2) + a(n - 3), starting 1,1,1. • a(n) = sum(m=0..n / 2, sum(i=0..m, 2 ^ i * binomial(n - 2 * m + 1,m - i) * binomial(n - 2 * m + i,n - 2 * m))). - _ Vladimir Kruchinin _ , Dec 17 2011 •
▶ [A192800] 0,0,1,1,4,7,16,35,73,162,344,748,1612,3478,7517,16213,35020,75585,163184,352295,760517,1641880,3544484,7652008,16519388 ⋆ Coefficient of x ^ 2 in the reduction of the n - th Fibonacci polynomial by x ^ 3 - >x ^ 2 + 2. • a(n) = a(n - 1) + 3 * a(n - 2) - 3 * a(n - 4) + a(n - 5) + a(n - 6). •
▶ [A027609] 4,7,16,35,87,217,549,1412,3678,9621,25296,66736,176536,467997,1242483,3302289,8784053,23380493,62260291,165852147,441922282,1177759339,3139292093,8368647138,22310795824 ⋆ Least non - partition into positive n - th powers. • a(n) = (partition of 4 ^ n into n - th powers) - 1 •
▶ [A289521] 4,7,16,43,124,367,1096,3283,9844,29527,88576,265723,797164,2391487,7174456,21523363,64570084,193710247,581130736,1743392203,5230176604,15690529807,47071589416,141214768243,423644304724 ⋆ Number of vertices in a planar Apollonian graph at iteration n. • a(n) = (5 + 3 ^ n) / 2. • a(n) = 4 * a(n - 1) - 3 * a(n - 2) for n>2. • a(n) = a(n - 1) + 3 ^ (n - 1) for n>1. - _ Andrew D. Walker _ , Jul 07 2017 •
▶ [A349610] 0,0,1,1,4,7,17,20,35,45,69,84,114,136,184,217,272,314,389,443,528,597,702,784,901 ⋆ Number of solutions to x ^ 2 + y ^ 2 + z ^ 2 <= n ^ 2, where x, y, z are positive odd integers. • a(n) = [x ^ (n ^ 2)] theta _ 2(x ^ 4) ^ 3 / (8 * (1 - x)). •
▶ [A049944] 1,1,4,7,17,31,65,143,334,604,1211,2435,4918,10105,21087,45881,107931,194776,389555,779123,1558294,3116857,6234591,12472889,24961947 ⋆ a(n) = a(1) + a(2) + ... + a(n - 1) + a(m) for n >= 4, where m = 2 * n - 3 - 2 ^ (p + 1) and p is the unique integer such that 2 ^ p < n - 1 <= 2 ^ (p + 1), with a(1) = a(2) = 1 and a(3) = 4. • a(n) = a(2 * n - 3 - 2 ^ ceiling(log _ 2(n - 1))) + Sum _{ i = 1..n - 1 } a(i) for n >= 4. •
▶ [A219498] 4,7,18,35,58,88,126,173,230,298,378,471,578,700,838,993,1166,1358,1570,1803,2058,2336,2638,2965,3318 ⋆ Number of n X 4 arrays of the minimum value of corresponding elements and their horizontal or vertical neighbors in a random, but sorted with lexicographically nondecreasing rows and nonincreasing columns, 0..1 n X 4 array. • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>6. •
▶ [A219754] 0,0,0,0,1,1,4,7,18,37,84,179,390,833,1784,3791,8042,16989,35804,75243,157774,330105,689344,1436935,2990386 ⋆ Expansion of x ^ 4 * (1 - x - x ^ 2) / ((1 + x) * (1 - 2 * x) * (1 - x - 2 * x ^ 2)). • a(n) = (2 ^ (n - 4) * (3 * n + 5) + (3 * n - 2) * (- 1) ^ n) / 27 for n=1 and n>2, a(0)=a(1)=a(2)=0. [_ Bruno Berselli _ , Nov 29 2012] •
▶ [A289975] 0,1,1,4,7,18,37,85,183,407,888,1956,4284,9409,20630,45270,99289,217819,477776,1048053,2298912,5042783,11061455,24263687,53223023 ⋆ p - INVERT of the Fibonacci numbers (A000045, including 0), where p(S) = 1 - S - S ^ 2. • a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 3 * a(n - 3) - a(n - 4). •
▶ [A100828] 1,4,7,18,41,100,239,578,1393,3364,8119,19602,47321,114244,277587,665858,1607521,3880900,9369319,22619538,54608393,131836324,318281039,768398402,1855077841 ⋆ Expansion of (1 + 2 * x - 2 * x ^ 3 - 3 * x ^ 2) / ((x - 1) * (x + 1) * (x ^ 2 + 2 * x - 1)). • a(n) = (u ^ (n + 1) + 1) * (v ^ (n + 1) + 1) / 2 with u = 1 + sqrt(2), v = 1 - sqrt(2). - _ Vladeta Jovovic _ , May 30 2007 • a(n) = (1 + (- 1) ^ (1 + n) + (1 - sqrt(2)) ^ (1 + n) + (1 + sqrt(2)) ^ (1 + n)) / 2. • a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) for n>3. •
▶ [A164265] 4,7,19,28,64,91,199,280,604,847,1819,2548,5464,7651,16399,22960,49204,68887,147619,206668,442864,620011,1328599,1860040,3985804 ⋆ Partial sums of A162766. • a(n) = 3 * a(n - 2) + 7 for n > 2; a(1) = 4, a(2) = 7. • a(n) = (11 - 4 * (- 1) ^ n) * 3 ^ (1 / 4 * (2 * n - 1 + (- 1) ^ n)) / 2 - 7 / 2. •
▶ [A006130] 1,1,4,7,19,40,97,217,508,1159,2683,6160,14209,32689,75316,173383,399331,919480,2117473,4875913,11228332,25856071,59541067,137109280,315732481 ⋆ a(n) = a(n - 1) + 3 * a(n - 2) for n > 1, a(0) = a(1) = 1. • a(n) = (((1 + sqrt(13)) / 2) ^ (n + 1) - ((1 - sqrt(13)) / 2) ^ (n + 1)) / sqrt(13). • a(n) = Sum _{ k = 0..ceiling(n / 2) } 3 ^ k * C(n - k, k)). - _ Benoit Cloitre _ , _ Philippe Deléham _ , Mar 07 2004 • a(0) = 1; a(1) = 1; for n >= 1, a(n + 1) = (a(n) ^ 2 - (- 3) ^ n) / a(n - 1). - _ Philippe Deléham _ , Mar 07 2004 • a(n) = lower right term in the 2 X 2 matrix [0,3; 1,1] ^ n. - _ Gary W. Adamson _ , Mar 02 2008 • a(n) = Product _{ k = 1..floor((n - 1) / 2) } (1 + 12 * cos(k * Pi / n) ^ 2). - _ Roger L. Bagula _ and _ Gary W. Adamson _ , Nov 21 2008 • a(n) = (Sum _{ 1 <= k <= n + 1, k odd } C(n + 1,k) * 13 ^ ((k - 1) / 2)) / 2 ^ n. - _ Vladimir Shevelev _ , Feb 05 2014 •
▶ [A220011] 4,7,19,43,85,154,263,431,685,1062,1611,2395,3493,5002,7039,9743,13277,17830,23619,30891,39925,51034,64567,80911,100493 ⋆ Number of 2 X n arrays of the minimum value of corresponding elements and their horizontal, vertical or antidiagonal neighbors in a random, but sorted with lexicographically nondecreasing rows and nonincreasing columns, 0..3 2 X n array. • a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>8. •
▶ [A133264] 1,4,7,19,49,79,199,499,799,1999,4999,7999,19999,49999,79999,199999,499999,799999,1999999,4999999,7999999,19999999,49999999,79999999,199999999 ⋆ Smallest number whose sum of digits is 3n + 1. • a(n) = a(n - 1) + 10 * a(n - 3) - 10 * a(n - 4). - _ Chai Wah Wu _ , May 25 2016 •
▶ [A253208] 4,7,19,67,259,1027,4099,16387,65539,262147,1048579,4194307,16777219,67108867,268435459,1073741827,4294967299,17179869187,68719476739,274877906947,1099511627779,4398046511107,17592186044419,70368744177667,281474976710659 ⋆ a(n) = 4 ^ n + 3. • a(n) = 5 * a(n - 1) - 4 * a(n - 2) for n>1. •
▶ [A296663] 1,1,4,7,20,38,96,187,444,874,2000,3958,8840,17548,38528,76627,166124,330818,710256,1415650,3016056,6015316,12736064,25413342,53530840 ⋆ Row sums of A296664. • a(n) = 2 ^ n * (2 * h(n) / sqrt(Pi) - 1) where h(n) = (n / 2 + 1) * Gamma((n + 1) / 2) / Gamma((n + 2) / 2) if n mod 2 = 0 else Gamma((n + 4) / 2) / Gamma((n + 3) / 2). • a(n) = 2 ^ n * ((n + 2 + (n mod 2)) * binomial((n - 1 + 3 * (n mod 2)) / 2, - 1 / 2) - 1). •
▶ [A066345] 1,1,4,7,20,39,96,191,432,863,1856,3711,7744,15487,31744,63487,128768,257535,519168,1038335,2085888,4171775,8364032,16728063,33501184 ⋆ Winning binary "same game" templates of length n as defined below. • a(2 * n - 1)= 2 ^ (2 * n - 1) - n * 2 ^ (n - 1), a(2 * n)= 2 * a(2 * n - 1) - 1. •
▶ [A111955] 0,1,4,7,20,45,112,267,648,1561,3772,9103,21980,53061,128104,309267,746640,1802545,4351732,10506007,25363748,61233501,147830752,356895003,861620760 ⋆ a(n) = A078343(n) + (- 1) ^ n. • a(n) = a(n - 1) + 3 * a(n - 2) + a(n - 3), n >= 3; a(n) = (- 1 / 4 * sqrt(2) + 1) * (1 - sqrt(2)) ^ n + (1 / 4 * sqrt(2) + 1) * (1 + sqrt(2)) ^ n - (- 1) ^ n; •
▶ [A220004] 4,7,20,58,141,308,637,1271,2460,4624,8444,14989,25888,43557,71492,114640,179861,276495,417049,618020,900871,1293178,1829967,2555261,3523858 ⋆ Number of n X 2 arrays of the minimum value of corresponding elements and their horizontal, vertical or antidiagonal neighbors in a random, but sorted with lexicographically nondecreasing rows and nonincreasing columns, 0..3 n X 2 array. • a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>12. •
▶ [A039959] 1,1,4,7,21,37,85,151,292,490,848,1346,2157,3260,4925,7148,10327,14477,20177,27483,37194,49431,65277,84945,109873 ⋆ Number of ways of numbering the vertices of a cube so sum of the 8 numbers is n. • a(n) = - a(- 8 - n) for all n in Z. - _ Michael Somos _ , Oct 17 2015 •
▶ [A100098] 1,1,4,7,22,46,130,295,790,1870,4864,11782,30148,73984,187534,463687,1168870,2902870,7293640,18161170,45541492,113576596,284470564,710118262,1777323772 ⋆ An inverse Chebyshev transform of (1 - x) / (1 - 2x). • a(n) = Sum _{ k=0..floor(n / 2) } binomial(n, k) * (2 ^ (n - 2k) + 0 ^ (n - 2k)) / 2. •
▶ [A128533] 0,4,7,22,54,145,376,988,2583,6766,17710,46369,121392,317812,832039,2178310,5702886,14930353,39088168,102334156,267914295,701408734,1836311902,4807526977,12586269024 ⋆ a(n) = F(n) * L(n + 2) where F=Fibonacci and L =Lucas numbers. • a(n) = F(2 * (n + 1)) + (- 1) ^ (n + 1), assuming F(0) = 0 and L(0) = 2. • a(n) = 2 * a(n - 1) + 2 * a(n - 2) - a(n - 3). •
▶ [A162559] 4,7,22,58,160,436,1192,3256,8896,24304,66400,181408,495616,1354048,3699328,10106752,27612160,75437824,206099968,563075584,1538351104,4202853376,11482408960,31370524672,85705867264 ⋆ a(n) = ((4 + sqrt(3)) * (1 + sqrt(3)) ^ n + (4 - sqrt(3)) * (1 - sqrt(3)) ^ n) / 2. • a(n) = 2 * a(n - 1) + 2 * a(n - 2) for n > 1; a(0) = 4, a(1) = 7. •
▶ [A027946] 0,0,0,4,7,23,42,106,200,456,879,1903,3718,7814,15396,31780,62951,128487,255378,517522,1030864,2079440,4147935,8342239,16655822 ⋆ a(n) is the sum of the non - Fibonacci numbers in row n of array T given by A027935, computed as T(n,m) + T(n,m + 1) + ... + T(n,n - 1), where m = floor((n + 2) / 2). • a(n) = (2 ^ (n + 1) - 2 - Fibonacci(n + 3) - (- 1) ^ n * Fibonacci(n)) / 2, n > 0. • a(2 * n) = 4 ^ n - 1 - Fibonacci(2 * n + 2), n > 0. • a(2 * n + 1) = 2 ^ (2 * n + 1) - 1 - Fibonacci(2 * n + 2). (End) •
▶ [A363543] 1,4,7,23,69,234,826,3000,11168,42313,162829,634052,2495051,9903761,39612048,159481988,645833656,2628829700,10749777653,44139474552,181916530895,752288709592,3120574260606,12981015704961,54138655342763 ⋆ G.f. satisfies A(x) = exp(Sum _{ k>=1 } (- 1) ^ (k + 1) * (3 ^ k + A(x ^ k)) * x ^ k / k). • a(0) = 1; a(n) = (- 1 / n) * Sum _{ k=1..n } ((- 3) ^ k + Sum _{ d|k } (- 1) ^ (k / d) * d * a(d - 1)) * a(n - k). •

► [A143608] 0,1,4,7,24,41,140,239,816,1393,4756,8119,27720,47321,161564,275807,941664,1607521,5488420,9369319,31988856,54608393,186444716,318281039,1086679440 ⋆ A005319 and A002315 interleaved. • a(2 * n) = (a(2 * n - 1) + a(2 * n + 1)) / 2. • a(2 * n + 1) = (a(2 * n) + a(2 * n + 2)) / 4. • a(n) = 6 * a(n - 2) - a(n - 4). • a(n) = (((- 2 - sqrt(2) + (- 1) ^ n * (- 2 + sqrt(2))) * ((- 1 + sqrt(2)) ^ n - (1 + sqrt(2)) ^ n))) / (4 * sqrt(2)). - _ Colin Barker _ , Mar 27 2016 •

► [A276288] 0,1,1,4,7,25,46,163,301,1066,1969,6973,12880,45613,84253,298372,551131,1951765,3605158,12767239,23582713,83515378,154263517,546305929,1009096480 ⋆ a(n) = a(n - 1) + 3 * a(n - 2) if n is even, otherwise a(n) = 3 * a(n - 1) + a(n - 2), a(0)=0, a(1)=1. • a(n) = 7 * a(n - 2) - 3 * a(n - 4). • a(n) = (2 - (- 1) ^ n) * a(n - 1) + (2 + (- 1) ^ n) * a(n - 2) for n > 1, a(0)=0, a(1)=1. •

► [A219700] 4,7,25,64,158,374,841,1789,3619,7008,13059,23510,41018,69536,114803,184969,291379,449542,680313,1011318,1478654,2128898,3021461,4231325,5852203 ⋆ Number of n X 4 arrays of the minimum value of corresponding elements and their horizontal, vertical or antidiagonal neighbors in a random, but sorted with lexicographically nondecreasing rows and columns, 0..1 n X 4 array. • a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>13. •

► [A359067] 0,1,4,7,28,49,199,351,1436,2561,10499,18943,77617,141569,579149,1066495,4354780,8085505,32954635,61616127,250713893,471556097,1915928117,3621830655,14696701553 ⋆ a(2 * n) = Sum _{ k=0..n - 1 } binomial(2 * n,k) binomial(2 * n - 1 - k, n - 1 - k). a(2 * n + 1) = (Sum _{ k=0..n } binomial(2 * n + 1,k) binomial(2 * n - k, n - k)) - binomial(2 * n - 1, n). • a(2 * n) = Sum _{ k=0..n - 1 } binomial(2 * n,k) binomial(2 * n - 1 - k, n - 1 - k). • a(2 * n + 1) = (Sum _{ k=0..n } binomial(2 * n + 1,k) binomial(2 * n - k, n - k)) - binomial(2 * n - 1, n). •

► [A371456] 1,1,1,4,7,28,58,223,505,1876,4498,16255,40576,143422,368965,1280830,3373225,11536309,30958240,104559082,284934754,952183048,2628211291,8703329266,24283705558 ⋆ Expansion of 1 / (1 - x / (1 - 9 * x ^ 2) ^ (1 / 3)). • a(n) = Sum _{ k=0..floor(n / 2) } 9 ^ k * binomial((n + k) / 3 - 1,k). •

► [A128386] 1,1,4,7,28,58,232,523,2092,4966,19864,48838,195352,492724,1970896,5068915,20275660,52955950,211823800,560198962,2240795848,5987822380,23951289520,64563867454,258255469816 ⋆ Expansion of c(3 * x ^ 2) / (1 - x * c(3 * x ^ 2)), c(x) the g.f. of A000108. • a(n) = (1 / (n + 1)) * Sum _{ k=0..n + 1 } Sum _{ j=0..k } C(n,k) * C(k,j) * C(2 * n - 2 * k + j, n - 2 * k + j) * (- 1) ^ (n + j) * 2 ^ (2 * k - j). • a(n) = Sum _{ k=0..floor(n / 2) } C(n,n - k) * (n - 2 * k + 1) * 3 ^ k / (n - k + 1); •

► [A366314] 0,1,4,7,28,85,232,739,2200,6505,19756,59071,176884,531901,1594192,4781851,14351536,43044817,129136084,387434359,1162245964,3486773797,10460420920,31380955987,94143182920 ⋆ a(n) = a(n - 1) + 3 * a(n - 2) + 9 * a(n - 3) with a(0)=0, a(1)=1, a(2)=4. • a(n) = (4 * 3 ^ n + (- 2 - sqrt(2) * i) * (- 1 - sqrt(2) * i) ^ n + i * (- 1 + sqrt(2) * i) ^ n * (2 * i + sqrt(2))) / 12, where i denotes the imaginary unit. (End) •

► [A117977] 1,4,7,28,112,196,703,2812,4921,19684,78736,137788,551152,2204608,3858064,13837852,55351408,96864964,387400807,1549603228,2711805649,10847222596,43388890384,75930558172,272342767321 ⋆ Legendre - binomial transform of 3 ^ n for p=3. • a(n)=sum { k=0..n, L(C(n,k) / 3) * 3 ^ k } where L(j / p) is the Legendre symbol of j and p. •

► [A080871] 1,1,4,7,31,55,244,433,1921,3409,15124,26839,119071,211303,937444,1663585,7380481,13097377,58106404,103115431,457470751,811826071,3601659604,6391493137,28355806081 ⋆ a(n) * a(n + 3) - a(n + 1) * a(n + 2) = 3, given a(0)=a(1)=1, a(2)=4. • a(n) = (3 + a(n - 1) * a(n - 2)) / a(n - 3) for n>2. • a(n + 4) = 8 * a(n + 2) - a(n). [_ Richard Choulet _ , Dec 04 2008] • a(n) = (0.25 + sqrt(10) / 20) * (sqrt(4 + sqrt(15))) ^ n + (0.25 + sqrt(10) / 20) * (sqrt(4 - sqrt(15))) ^ n + (- 1 / 20 * 10 ^ (1 / 2) + 1 / 4) * (- sqrt(4 + sqrt(15))) ^ n + (- 1 / 20 * 10 ^ (1 / 2) + 1 / 4) * (- (sqrt(4 - sqrt(15)))) ^ n. [_ Richard Choulet _ , Dec 06 2008] •

► [A143547] 1,1,1,4,7,34,70,368,819,4495,10472,59052,141778,814506,1997688,11633440,28989675,170574723,430321633,2552698720,6503352856,38832808586,99726673130,598724403680,1547847846090 ⋆ G.f. satisfies: A(x) = 1 + x * A(x) ^ 4 * A(- x) ^ 3. • a(2n) = C(7 * n,n) / (6 * n + 1); a(2n + 1) = C(7 * n + 3,n) * 4 / (6 * n + 4). •

► [A212500] 1,4,7,36,65,340,615,3220,5825,30500,55175,288900,522625,2736500,4950375,25920500,46890625,245522500,444154375,2325622500,4207090625,22028612500,39850134375,208658012500,377465890625 ⋆ a(n) is the difference between multiples of 5 with even and odd digit sum in base 4 in interval [0,4 ^ n). • a(n) = 0.4 * ((5 + 2 * sqrt(5)) ^ (n / 2) + (5 - 2 * sqrt(5)) ^ (n / 2)) , if n is even, and • a(n) = 0.1 * ((5 + 2 * sqrt(5)) ^ ((n - 1) / 2) * sqrt(30 + 10 * sqrt(5)) + (5 - 2 * sqrt(5)) ^ ((n - 1) / 2) * sqrt(30 - 10 * sqrt(5))), if n is odd. •

► [A199404] 1,4,7,43,76,469,829,5116,9043,55807,98644,608761,1076041,6640564,11737807,72437443,128039836,790171309,1396700389,8619446956,15235664443,94023745207,166195608484,1025641750321,1812916028881 ⋆ x - values in the solution to 13 * x ^ 2 - 12 = y ^ 2. • a(n + 4) = 11 * a(n + 2) - a(n) with a(1)=1, a(2)=4, a(3)=7, a(4)=43. •

► [A316316] 1,4,8,8,12,20,20,20,28,32,32,36,40,44,48,48,52,60,60,60,68,72,72,76,80 ⋆ Coordination sequence for tetravalent node in chamfered version of square grid. • a(n) = a(n - 1) - a(n - 2) + 2 * a(n - 3) - a(n - 4) + a(n - 5) - a(n - 6) for n>6. •

► [A094906] 1,4,8,9,10,14,16,25,28,32,33,36,40,49,56,57,64,65,71,72,74,78,81,90,100 ⋆ Numbers m such that m ^ 3 - k ^ 3 is a square for some k<m. • a(n) seems to be asymptotic to c * n ^ (3 / 2) where c = 0.49.... •

► [A229004] 4,8,9,11,17,21,22,24,30,34,35,37,43,47,48,50,56,60,61,63,69,73,74,76,82 ⋆ Indices of Bell numbers divisible by 3. • a(n) = a(n - 1) + a(n - 4) - a(n - 5). •

► [A078137] 4,8,9,12,13,16,17,18,20,21,22,24,25,26,27,28,29,30,31,32,33,34,35,36,37 ⋆ Numbers which can be written as sum of squares>1. • a(n)=n + 12 for n >= 12. - _ Hieronymus Fischer _ , Nov 11 2007 •

► [A047462] 0,1,4,8,9,12,16,17,20,24,25,28,32,33,36,40,41,44,48,49,52,56,57,60,64 ⋆ Numbers that are congruent to { 0, 1, 4 } mod 8. • a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. • a(n) = (24 * n - 33 - 3 * cos(2 * n * Pi / 3) + 5 * sqrt(3) * sin(2 * n * Pi / 3)) / 9. • a(3k) = 8k - 4, a(3k - 1) = 8k - 7, a(3k - 2) = 8k - 8. (End) •

► [A140282] 0,4,8,9,13,17,18,22,26,27,31,35,36,40,44,45,49,53,54,58,62,63,67,71,72 ⋆ Numbers k such that A000330(k) is multiple of 3. • a(n) = 3 * (n - floor(n / 3)) + n. - _ Gary Detlefs _ , Mar 27 2010 •

► [A004756] 4,8,9,16,17,18,19,32,33,34,35,36,37,38,39,64,65,66,67,68,69,70,71,72,73 ⋆ Binary expansion starts 100. • a(2n) = 2a(n), a(2n + 1) = 2a(n) + 1 + 3 * [n==0]. • a(2 ^ m + k) = 2 ^ (m + 2) + k, m >= 0, 0 <= k < 2 ^ m. - _ Yosu Yurramendi _ , Aug 07 2016 •

► [A090779] 1,4,8,9,16,18,25,27,32,36,49,50,54,64,72,81,98,100,108,121,125,128,144,147,162 ⋆ Numbers k that divide phi(k) ^ 2. • a(n) seems to be asymptotic to c * n ^ 2 with c = 0.1.... •

► [A003624] 4,8,9,16,21,25,27,32,35,36,39,49,50,55,57,63,64,65,75,77,81,85,93,98,100 ⋆ Duffinian numbers: composite numbers k relatively prime to sigma(k). • a(n) >> n log log log n, see Luca. (Clearly excluding the primes only makes the n - th term larger.) - _ Charles R Greathouse IV _ , Feb 17 2014 •

► [A001597] 1,4,8,9,16,25,27,32,36,49,64,81,100,121,125,128,144,169,196,216,225,243,256,289,324 ⋆ Perfect powers: m ^ k where m > 0 and k >= 2. • a(n) = n ^ 2 - 2 * n ^ (5 / 3) - 2 * n ^ (7 / 5) + (13 / 3) * n ^ (4 / 3) - 2 * n ^ (9 / 7) + 2 * n ^ (6 / 5) - 2 * n ^ (13 / 11) + o(n ^ (13 / 11)) (Jakimczuk, 2012). - _ Amiram Eldar _ , Jun 30 2023 •

► [A067252] 4,8,9,16,25,32,36,50,81,121,128,225,256,324,529,576,625,729,841,1058,1089,1296,1681,1682,2025 ⋆ Composite n such that sigma(n) - phi(n) is prime. • a(n) > n ^ 2 / 2. - _ Charles R Greathouse IV _ , Nov 21 2013 •

► [A350014] 1,4,8,9,25,27,32,36,49,64,72,100,108,121,125,169,196,200,216,225,243,256,288,289,343 ⋆ Numbers whose square has a number of divisors coprime to 6. • a(n) = { m : gcd(d(m ^ 2), 6) = 1 } . •

► [A074776] 4,8,10,11,12,16,18,20,22,24,28,30,32,33,36,40,44,48,50,52,54,55,56,58,60 ⋆ Numbers k such that 2 ^ k - 1 and F(k) are not relatively prime, where F(k) denotes the k - th Fibonacci number. • a(n) seems to be asymptotic to c * n with c=2.2... •

► [A063087] 1,4,8,10,14,18,20,24,28,30,34,38,40,44,48,50,54,58,60,64,68,70,74,78,80 ⋆ Dimension of the space of weight 2n cusp forms for Gamma _ 0(19). • a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>5. •

► [A310999] 1,4,8,10,15,20,23,30,32,34,40,44,50,52,55,60,63,70,72,74,80,84,90,92,95 ⋆ Coordination sequence Gal.4.7.3 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. • a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - 2 * a(n - 4) + 2 * a(n - 5) - 2 * a(n - 6) + 2 * a(n - 7) - 2 * a(n - 8) + 2 * a(n - 9) - a(n - 10) for n > 13. •

► [A311007] 1,4,8,10,16,22,24,30,34,38,42,44,52,56,58,62,66,74,76,78,84,88,94,96,100 ⋆ Coordination sequence Gal.4.19.3 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. • a(n) = a(n - 1) - a(n - 2) + a(n - 3) + a(n - 5) - a(n - 6) + a(n - 7) - a(n - 8) for n > 11. •

► [A272299] 0,1,4,8,11,12,18,19,22,26,29,30,36,37,40,44,47,48,54,55,58,62,65,66,72 ⋆ a(n) = n + 2 * floor(n / 2) + 3 * floor(n / 3). • a(n) = a(n - 2) + a(n - 3) - a(n - 5). • a(n) = 3 * n - (n mod 2) - (n mod 3). More generally, it is easy to see that Sum _{ i=1 }^ k i * floor(n / i) = k * n - Sum _{ i=1 }^ k (n mod i). • a(3 * m + r) = 9 * m + r ^ 2 - (1 - (- 1) ^ m) * (- 1) ^ r / 2, with r = 0, 1 or 2. Therefore: for even m, a(3 * m + r) = 9 * m + r ^ 2; otherwise, a(3 * m + r) = 9 * m + r ^ 2 - (- 1) ^ r. •

► [A297464] 1,4,8,11,14,18,21,24,28,31,34,38,41,44,48,51,54,58,61,64,68,71,74,78,81 ⋆ Solution (a(n)) of the system of 4 complementary equations in Comments. • a(n) = a(n - 1) + a(n - 3) - a(n - 4) (conjectured). •

► [A047346] 1,4,8,11,15,18,22,25,29,32,36,39,43,46,50,53,57,60,64,67,71,74,78,81,85 ⋆ Numbers that are congruent to { 1, 4 } mod 7. • a(n) = floor((7n - 5) / 2). - _ Santi Spadaro _ , Jul 24 2001 • a(n) = 4n - 3 - floor(n / 2). - _ Wesley Ivan Hurt _ , Oct 16 2013 •

► [A081840] 0,4,8,11,15,19,23,26,30,34,37,41,45,49,52,56,60,64,67,71,75,79,82,86,90 ⋆ a(1)=0, a(n)=a(n - 1) + 3 if n is already in the sequence, a(n)=a(n - 1) + 4 otherwise. • a(n) = floor(r * n - (2 * r + 1) / (r - 1)) where r = 2 + sqrt(3). •

► [A080055] 1,4,8,11,15,20,23,30,38,43,49,54,60,65,72,78,85,90,93,100,104,108,111,115,118 ⋆ Greedy powers of log(2): sum _{ n>=1 } (log(2)) ^ a(n) = 1. • a(n) = sum _{ k=1..n } floor(g _ k) where g _ 1=1, g _{ n + 1 } = log _ x(x ^ frac(g _ n) - x) (n>0) at x=log(2) and frac(y) = y - floor(y). See A077468 for Mathematica program by _ Robert G. Wilson v _ . •

► [A267534] 4,8,11,16,20,21,23,28,32,35,40,44,45,47,52,56,59,64,68,69,71,76,80,83,88 ⋆ Indices of Lucas numbers that are not of the form x ^ 2 + y ^ 2 + z ^ 2 where x, y and z are integers. • a(n) = a(n - 1) + a(n - 7) - a(n - 8) for n>8. •

► [A311075] 1,4,8,11,18,19,27,29,33,38,43,47,50,55,59,64,68,72,75,83,84,89,94,96,104 ⋆ Coordination sequence Gal.6.72.4 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. • a(n) = a(n - 5) + a(n - 9) - a(n - 14) for n > 15. •

► [A220753] 1,4,8,11,22,25,50,53,106,109,218,221,442,445,890,893,1786,1789,3578,3581,7162,7165,14330,14333,28666 ⋆ Expansion of (1 + 4 * x + 5 * x ^ 2 - x ^ 3) / ((1 - x) * (1 + x) * (1 - 2 * x ^ 2)). • a(n) = a(n - 1) * 2 if n even. • a(n) = a(n - 1) + 3 if n odd. • a(n) = 3 * a(n - 2) - 2 * a(n - 4) with a(0)=1, a(1)=4, a(2)=8, a(3)=11. • a(n) = 7 * 2 ^ floor(n / 2) - (3 / 2) * (3 + (- 1) ^ n). •

► [A032819] 1,4,8,11,29,32,57,60,78,81,204,207,225,228,400,403,421,424,547,550,568,571,1429,1432,1450 ⋆ Numbers whose set of base - 7 digits is { 1,4 } . • a(1)=1, a(2)=4; a(n) = 7 * a(floor(n / 2)) + 1 for n odd, otherwise a(n) = 7 * a(floor((n - 1) / 2)) + 4. - _ Bruno Berselli _ , May 28 2012 •

► [A080458] 4,8,12,12,16,20,24,24,28,32,36,36,40,44,48,48,52,56,60,60,64,68,72,72,76 ⋆ a(1)=4; for n>1, a(n)=a(n - 1) if n is already in the sequence, a(n)=a(n - 1) + 4 otherwise. • a(n) = 4 + 4 * (n - 2 - floor((n - 4) / 4)). • a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n > 5. • a(n) = (6 * n - (- 1) ^ n - 2 * sqrt(2) * sin(Pi * n / 2 + Pi / 4) + 3) / 2. (End) •

► [A311088] 1,4,8,12,15,17,20,24,29,34,37,40,43,46,50,53,57,62,66,70,72,74,78,82,87 ⋆ Coordination sequence Gal.4.25.4 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = a(n - 1) - a(n - 4) + 2 * a(n - 5) - a(n - 6) + a(n - 9) - a(n - 10) for n > 10. ●

► [A311101] 1,4,8,12,15,19,23,28,33,37,40,43,47,52,57,61,64,67,71,76,81,85,88,91,95 ⋆ Coordination sequence Gal.3.47.1 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = 3 * a(n - 1) - 4 * a(n - 2) + 3 * a(n - 3) - a(n - 4) for n > 8. ●

► [A367086] 1,4,8,12,16,20,23,27,31,35,39,43,46,50,54,58,62,65,69,73,77,81,85,88,92 ⋆ Exponents k > 0 such that the interval [4 ^ (k - 1), 4 ^ k] contains two powers of 3. ● a(n) = 1 + floor(n / log _ 3(4 / 3)) = 1 + floor(n / (log _ 3(4) - 1)). ●

► [A008574] 1,4,8,12,16,20,24,28,32,36,40,44,48,52,56,60,64,68,72,76,80,84,88,92,96 ⋆ a(0) = 1, thereafter a(n) = 4n. ● a(- n) = - a(n) unless n = 0. - _ Michael Somos _ , Apr 16 2007 ● a(n) = a(n - 1) + 4, n > 1. - _ Vincenzo Librandi _ , Dec 31 2010 ● a(n) = 4 * n, n >= 1. - _ Tom Karzes _ , Apr 01 2020 ●

► [A329975] 4,8,12,16,20,24,28,32,36,40,44,48,53,57,61,65,69,73,77,81,85,89,93,97,101 ⋆ Beatty sequence for 1 + x + x ^ 2, where x is the real solution of 1 / x + 1 / (1 + x + x ^ 2) = 1. ● a(n) = floor(n (1 + x + x ^ 2)), where x = 1.324717... is the constant in A060006. ●

► [A352674] 4,8,12,16,20,24,28,32,36,40,45,49,53,57,61,65,69,73,77,81,86,90,94,98,102 ⋆ Beatty sequence for (3 / 2)(1 + sqrt(3)). ● a(n) = floor((3 / 2) * (1 + sqrt(3)) * n). ●

► [A171984] 4,8,12,16,20,24,28,32,37,41,45,49,53,57,61,65,70,74,78,82,86,90,94,98,103 ⋆ Beatty sequence for sqrt(17). ● a(n) = floor(n * sqrt(17)). - _ Jon E. Schoenfield _ , Jun 18 2010 ●

► [A187385] 4,8,12,16,20,24,29,33,37,41,45,49,53,58,62,66,70,74,78,82,87,91,95,99,103 ⋆ a(n) = floor(r * n), where r=1 + sqrt(3) + sqrt(2); complement of A187386. ● a(n) = floor(r * n), where r=1 + sqrt(3) + sqrt(2). ●

► [A164086] 4,8,12,16,20,25,29,33,37,41,46,50,54,58,62,67,71,75,79,83,87,92,96,100,104 ⋆ Beatty sequence for 4 * Pi / 3 = 4.1887902... . ● a(n) = floor(4 * n * Pi / 3). ●

► [A357357] 0,4,8,12,16,20,32,40,50,62,76,90,104,120,140,160,180 ⋆ Length of the longest induced cycle in the n X n grid graph. ● a(n) = 2 * n ^ 2 / 3 + O(n) (Beluhov 2023). - _ Pontus von Brömssen _ , Jan 30 2023 ●

► [A004976] 0,4,8,12,16,21,25,29,33,38,42,46,50,55,59,63,67,72,76,80,84,88,93,97,101 ⋆ a(n) = floor(n * phi ^ 3), where phi=(1 + sqrt(5)) / 2. ● a(n) = n + floor(2 * n * phi). [Formula corrected by _ Clark Kimberling _ , Mar 22 2008] ●

► [A311285] 1,4,8,12,16,21,26,30,34,37,40,45,50,55,60,63,66,70,74,79,84,88,92,96,100 ⋆ Coordination sequence Gal.4.70.2 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - 3 * a(n - 4) + 4 * a(n - 5) - 3 * a(n - 6) + 2 * a(n - 7) - 2 * a(n - 8) + 2 * a(n - 9) - a(n - 10) for n > 10. ●

► [A190952] 4,8,12,16,21,26,30,35,40,45,51,56,61,67,72,78,84,89,95,101,107,113,119,125,131 ⋆ Largest integer k for which exp(k) < k ^ n, n>=3. ● a(n) = floor(- n * LambertW(- 1, - 1 / n)). - _ Vaclav Kotesovec _ , Jun 29 2016 ●

► [A311332] 1,4,8,12,16,21,27,33,38,42,46,50,54,58,62,66,70,75,81,87,92,96,100,104,108 ⋆ Coordination sequence Gal.6.120.1 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = 3 * a(n - 1) - 4 * a(n - 2) + 3 * a(n - 3) - a(n - 4) - a(n - 6) + 3 * a(n - 7) - 4 * a(n - 8) + 3 * a(n - 9) - a(n - 10) for n > 10. ●

► [A311343] 1,4,8,12,16,22,26,30,34,36,40,46,52,56,60,62,64,70,76,82,86,88,90,94,100 ⋆ Coordination sequence Gal.4.60.1 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = a(n - 1) - a(n - 2) + a(n - 3) - a(n - 4) + a(n - 5) + a(n - 7) - a(n - 8) + a(n - 9) - a(n - 10) + a(n - 11) - a(n - 12) for n > 12. ●

► [A311385] 1,4,8,12,16,22,28,34,38,42,46,50,54,58,62,66,72,78,84,88,92,96,100,104,108 ⋆ Coordination sequence Gal.6.221.1 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = a(n - 1) + a(n - 11) - a(n - 12) for n > 12. ●

► [A061085] 4,8,12,16,170,204,238,272,306,340,374,408,442,476,510,544,578,612,646,680,714,748,782,816,850 ⋆ a(n) = A019550(n) / 3. ● a(n) = one - third of the number obtained by concatenating n with 2n. ●

► [A001956] 4,8,12,17,21,25,30,34,38,43,47,51,55,60,64,68,73,77,81,86,90,94,98,103,107 ⋆ Beatty sequence of (5 + sqrt(13)) / 2. ● a(n) = floor(n * beta) with beta = (5 + sqrt(13)) / 2 = 3 + (sqrt(13) - 1) / 2 = 4.30277563773199... ●

► [A033156] 1,4,8,12,17,22,27,32,38,44,50,56,62,68,74,80,87,94,101,108,115,122,129,136,143 ⋆ a(1) = 1; for m >= 2, a(n) = a(n - 1) + floor(a(n - 1) / (n - 1)) + 2. ● a(n) = n * (floor(log _ 2 n) + 3) - 2 ^ ((floor (log _ 2 n)) + 1). ●

► [A036573] 4,8,12,17,22,28,34,41,48,56,64,73,82,92,102,113,124,136,148,161,174,188,202,217,232 ⋆ Size of maximal triangulation of an n - antiprism with regular polygonal base. ● a(n) = floor((n ^ 2 + 8n - 16) / 4). - _ Ralf Stephan _ , Oct 13 2003 ● a(n) = (- 33 + (- 1) ^ n + 16 * n + 2 * n ^ 2) / 8. a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4). G.f.: - x ^ 3 * (x ^ 3 - 4 * x ^ 2 + 4) / ((x - 1) ^ 3 * (x + 1)). - _ Colin Barker _ , Sep 06 2013 ●

► [A311553] 1,4,8,12,17,23,29,35,40,44,48,52,56,60,64,69,75,81,87,92,96,100,104,108,112 ⋆ Coordination sequence Gal.6.133.1 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = a(n - 1) + a(n - 11) - a(n - 12) for n > 12. ●

► [A340266] 4,8,12,17,23,30,38,47,57,68,80,93,107,122,138,155,173,192,212,233,255,278,302,327,353 ⋆ The number of degrees of freedom in a quadrilateral cell for a serendipity finite element space of order n. ● a(1) = 4, a(n) = n * (n + 3) / 2 + 3 (if n > 1). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n > 4. (End) ●

► [A194274] 0,1,4,8,12,17,24,32,40,49,60,72,84,97,112,128,144,161,180,200,220,241,264,288,312 ⋆ Concentric square numbers (see Comments lines for definition). ● a(n) = n ^ 2 - a(n - 2), with a(0)=0, a(1)=1. - _ Alex Ratushnyak _ , Aug 03 2012 ● a(n) = a(- n - 2) = (2 * n * (n + 2) + (1 - (- 1) ^ n) * i ^ (n + 1)) / 4, where i=sqrt(- 1). - _ Bruno Berselli _ , Sep 22 2011 ● a(n) = floor(3 * n / 4) + floor((n * (n + 2) + 1) / 2) - floor((3 * n + 1) / 4). - _ Arkadiusz Wesolowski _ , Nov 08 2011 ● a(0)=0, a(1)=1, a(2)=4, a(3)=8, a(4)=12, a(n)=3 * a(n - 1) - 4 * a(n - 2) + 4 * a(n - 3) - 3 * a(n - 4) + a(n - 5). - _ Harvey P. Dale _ , Sep 11 2013 ●

► [A311593] 1,4,8,12,18,22,26,30,36,40,44,48,52,56,60,66,70,74,78,84,88,92,96,100,104 ⋆ Coordination sequence Gal.6.192.6 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = a(n - 1) + a(n - 11) - a(n - 12) for n > 12. ●

► [A311601] 1,4,8,12,18,22,26,32,36,40,44,48,52,56,62,66,70,76,80,84,88,92,96,100,106 ⋆ Coordination sequence Gal.6.230.1 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - 2 * a(n - 4) + 2 * a(n - 5) - 2 * a(n - 6) + 2 * a(n - 7) - 2 * a(n - 8) + 2 * a(n - 9) - a(n - 10) for n > 10. ●

► [A111201] 1,4,8,12,18,25,33,41,51,62,74,86,100,115,131,148,166,184,204,225,247,270,294,319,344 ⋆ a(1)=1 then a(n)=a(n - 1) + n if n is already in the sequence, a(n)=a(n - 1) + n + 1 otherwise. ● a(n)=(1 / 2) * (n ^ 2 + 3 * n - sqrt(3n) - sqrt(n)) + o(n ^ (1 / 2)) ●

► [A311647] 1,4,8,12,19,22,25,32,35,39,45,48,52,58,62,65,71,75,78,85,88,91,98,101,105 ⋆ Coordination sequence Gal.4.85.1 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = a(n - 3) + a(n - 5) - a(n - 8) for n > 10. ●

► [A026042] 4,8,12,19,28,40,56,74,97,124,156,194,236,285,340,402,472,548,633,726,828,940,1060,1191,1332 ⋆ a(n) = (d(n) - r(n)) / 5, where d = A026040 and r is the periodic sequence with fundamental period (4,0,4,3,4). ● a(n)=(n + 4) * (n ^ 2 + 5 * n + 18) / 15 - 3 / 5 - (1 / 2 - 3 / 10 * 5 ^ (1 / 2)) / 5 * cos(2 * n * Pi / 5) + (1 / 10 * (4 * (5 + 5 ^ (1 / 2)) ^ (1 / 2) - (5 - 5 ^ (1 / 2)) ^ (1 / 2)) * 2 ^ (1 / 2)) / 5 * sin(2 * n * Pi / 5) - (3 / 10 * 5 ^ (1 / 2) + 1 / 2) / 5 * cos(4 * n * Pi / 5) + (1 / 10 * ((5 + 5 ^ (1 / 2)) ^ (1 / 2) + 4 * (5 - 5 ^ (1 / 2)) ^ (1 / 2)) * 2 ^ (1 / 2)) / 5 * sin(4 * n * Pi / 5) [From _ Richard Choulet _ , Dec 14 2008] ●

► [A033691] 4,8,12,20,24,32,40,52,60,72,84,100,112,128,144,164,180,200,220,244,264,288,312,340,364 ⋆ Minimal number of vertices in 1 - 1 deficient regular graph where minimal degree is 1 and maximal degree is n. ● a(2 * i) = 2 * i * (i + 1) i=1, 2, 3, ...; a(4 * i + 3) = 2 * (i + 1) * (4 * i + 4) i=0, 1, 2, ...; a(4 * i + 5) = 4 * (2 * i ^ 2 + 6 * i + 5) i=1, 2, 3, ... ●

► [A297555] 1,4,8,12,76,140,204,1228,2252,3276,19660,36044,52428,314572,576716,838860,5033164,9227468,13421772,80530636,147639500,214748364,1288490188,2362232012,3435973836 ⋆ a(n) = a(n - 1) + 16 * a(n - 3) - 16 * a(n - 4), where a(0) = 1, a(1) = 4, a(2) = 8, a(3) = 12, a(4) = 76. ● a(n) = a(n - 1) + 16 * a(n - 3) - 16 * a(n - 4), where a(0) = 1, a(1) = 4, a(2) = 8, a(3) = 12, a(4) = 76. ●

► [A311686] 1,4,8,13,16,20,25,29,33,38,42,46,49,53,58,61,66,71,75,79,83,87,91,94,99 ⋆ Coordination sequence Gal.5.182.1 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = a(n - 1) - a(n - 4) + a(n - 5) + a(n - 11) - a(n - 12) + a(n - 15) - a(n - 16) for n > 16. ●

► [A311714] 1,4,8,13,16,21,26,29,33,37,41,44,48,53,57,62,67,71,75,79,83,86,89,94,98 ⋆ Coordination sequence Gal.6.435.5 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = 2 * a(n - 1) - 3 * a(n - 2) + 4 * a(n - 3) - 5 * a(n - 4) + 6 * a(n - 5) - 7 * a(n - 6) + 8 * a(n - 7) - 9 * a(n - 8) + 10 * a(n - 9) - 10 * a(n - 10) + 10 * a(n - 11) - 10 * a(n - 12) + 10 * a(n - 13) - 9 * a(n - 14) + 8 * a(n - 15) - 7 * a(n - 16) + 6 * a(n - 17) - 5 * a(n - 18) + 4 * a(n - 19) - 3 * a(n - 20) + 2 * a(n - 21) - a(n - 22) for n > 22. ●

► [A081843] 0,4,8,13,17,21,25,30,34,38,42,46,51,55,59,63,68,72,76,80,85,89,93,97,102 ⋆ a(1)=0, a(n)=a(n - 1) + 5 if n is already in the sequence, a(n)=a(n - 1) + 4 otherwise. ● a(n) = floor(r * n - (5 * r - 1) / (r + 1)) where r=2 + sqrt(5). ●

► [A311861] 1,4,8,13,17,21,26,31,35,39,44,48,52,56,60,65,69,73,78,83,87,91,96,100,104 ⋆ Coordination sequence Gal.6.130.2 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) - a(n - 6) + a(n - 7) + a(n - 9) - a(n - 10) for n > 10. ●

► [A127264] 4,8,13,17,22,26,31,36,40,45,49,54,59,63,68,72,77,82,86,91,95,100,105,109,114 ⋆ Nearest integer to 2 * (Sum _{ i=1..10 ^ n / 2 } 1 / i) - 1. ● a(n) = round(2 * (log(m) + Gamma) + 1 / m - ...) - 1 where m = 10 ^ n / 2 and Gamma = 0.57721566490153286... (the Euler - Mascheroni constant A001620). - _ Jon E. Schoenfield _ , Aug 05 2008 ●

► [A311993] 1,4,8,13,17,23,27,32,36,40,44,48,53,57,63,67,72,76,80,84,88,93,97,103,107 ⋆ Coordination sequence Gal.5.98.2 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = a(n - 1) + a(n - 9) - a(n - 10) for n > 10. ●

► [A312006] 1,4,8,13,18,20,26,30,35,37,43,48,51,55,60,65,68,72,78,81,86,89,95,98,103 ⋆ Coordination sequence Gal.4.23.2 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = a(n - 4) + a(n - 7) - a(n - 11) for n > 11. ●

► [A312210] 1,4,8,13,19,25,31,37,43,49,54,58,62,66,70,75,81,87,93,99,105,111,116,120,124 ⋆ Coordination sequence Gal.6.159.1 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - 2 * a(n - 4) + 2 * a(n - 5) - 2 * a(n - 6) + 2 * a(n - 7) - 2 * a(n - 8) + 2 * a(n - 9) - 2 * a(n - 10) + 2 * a(n - 11) - a(n - 12) for n > 12. ●

► [A034856] 1,4,8,13,19,26,34,43,53,64,76,89,103,118,134,151,169,188,208,229,251,274,298,323,349 ⋆ a(n) = binomial(n + 1, 2) + n - 1 = n * (n + 3) / 2 - 1. ● a(n) = binomial(n + 2, 2) - 2. - _ Paul Barry _ , Feb 27 2003 ● a(n) = a(n - 1) + n + 1 for n >= 1. ● a(n) = n * (n - 1) / 2 + 2 * n - 1. ● a(n) = Hyper2F1([- 2, n - 1], [1], - 1). - _ Peter Luschny _ , Aug 02 2014 ● a(n) = floor[1 / (- 1 + Sum _{ m >= n + 1 } 1 / S2(m,n + 1))], where S2 is A008277. - _ Richard R. Forberg _ , Jan 17 2015 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n >3. - _ David Neil McGrath _ , May 23 2015 ●

► [A362290] 4,8,13,19,27,35,44,54,64,76,88,100,113,127,141,155,171,187,203,219,236,254,272,290,308 ⋆ a(n) is the number of parts into which the inner region of the parabola y = x ^ 2 is divided by n squares inscribed in the parabola as described in the comments. ● a(n) = 2 * (Sum _{ k=1..n } floor(sqrt(4 * k - 3))) + 2 - floor((sqrt(4 * n - 3) - 1) / 2). - _ Oleg Sorokin _ , Apr 22 2023 ●
► [A183865] 1,4,8,13,19,27,36,46,57,69,83,98,114,131,149,169,190,212,235,259,285,312,340,369,399 ⋆ n - 1 + ceiling(3(n + 2) / 5); complement of A183864. ● a(n)=n - 1 + ceiling(3(n + 2) / 5). ● a(n) = 2 a(n - 1) - a(n - 2) + a(n - 5) - 2 a(n - 6) + a(n - 7). - R. J. Mathar, Mar 11 2012 ●
► [A265382] 1,4,8,13,20,27,37,46,59,70,86,99,118,133,155,172,197,216,244,265,296,319,353,378,415 ⋆ Total number of ON (black) cells after n iterations of the " Rule 158" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = 1 / 16 * (10 * n ^ 2 + 2 * (- 1) ^ n * n + 34 * n - 3 * (- 1) ^ n + 19). ● a(n) = 1 / 16 * (10 * n ^ 2 + 36 * n + 16) for n even. ● a(n) = 1 / 16 * (10 * n ^ 2 + 32 * n + 22) for n odd. ● a(n) = 2 * a(n - 1) - 2 * a(n - 2) - a(n - 3) + a(n - 4) for n>4. ●
► [A056738] 1,4,8,13,20,28,37,47,59,72,86,101,117,135,154,174,195,217,240,264,290,317,345,374,404 ⋆ Positions where 2's occur in A056731. ● a(n + 1) = a(n) + (n + 1) + the number of a(k)'s <= n, 1 <= k <= n and a(1) = 1. ●
► [A143978] 1,4,8,13,20,28,37,48,60,73,88,104,121,140,160,181,204,228,253,280,308,337,368,400,433 ⋆ a(n) = floor(2 * n * (n + 1) / 3). ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) - 2 * a(n - 4) + a(n - 5). (End) ● a(n) = (ChebyshevU(n, - 1 / 2) - ChebyshevU(n - 1, - 1 / 2) + (6 * n ^ 2 + 6 * n - 1)) / 9. ● a(n) = (Jacobi Symbol(n + 1, 3) - JacobiSymbol(n, 3) + (6 * n ^ 2 + 6 * n - 1)) / 9. ●
► [A157130] 1,4,8,13,20,29,40,53,68,84,101,120,141,164,189,216,245,276,309,344,380,417,456,497,540 ⋆ Partial sums of A128201. ● a(n) = (n - r) ^ 2 + (4 * r ^ 3 + 6 * r ^ 2 + 2 * r) / 3 where r = floor((sqrt(1 + 8 * n) - 1) / 4). - Simplified by _ Gerald Hillier _ , Apr 14 2015 ●
► [A114997] 0,0,1,1,1,4,8,13,31,71,144,318,729,1611,3604,8249,18803,42907,98858,228474,528735,1228800,2865180,6693712,15676941 ⋆ Number of ordered trees with n edges and no unary or binary nodes. ● a(n) = Sum _{ (n + 3) / 2 <= k <= n } (1 / (n + 1) * binomial(n + 1, k) * binomial(2 * k - n - 3, n - k)). ●
► [A312402] 1,4,8,14,18,20,24,28,32,38,44,48,50,52,56,62,68,72,76,80,82,86,92,96,100 ⋆ Coordination sequence Gal.4.70.4 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = 2 * a(n - 1) - 3 * a(n - 2) + 4 * a(n - 3) - 5 * a(n - 4) + 6 * a(n - 5) - 6 * a(n - 6) + 6 * a(n - 7) - 5 * a(n - 8) + 4 * a(n - 9) - 3 * a(n - 10) + 2 * a(n - 11) - a(n - 12) for n > 12. ●
► [A312484] 1,4,8,14,18,22,26,32,36,40,44,48,54,58,62,66,72,76,80,84,88,94,98,102,106 ⋆ Coordination sequence Gal.5.81.5 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = a(n - 1) + a(n - 9) - a(n - 10) for n > 10. ●
► [A312549] 1,4,8,14,18,24,28,32,36,40,46,50,56,60,64,68,72,78,82,88,92,96,100,104,110 ⋆ Coordination sequence Gal.4.61.1 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = a(n - 1) + a(n - 7) - a(n - 8) for n > 8. ●
► [A067699] 0,4,8,14,18,24,30,38,42,48,54,62,68,76,84,94,98,104,110,118,124,132,140,150,156 ⋆ Number of comparisons made in a version of the sorting algorithm QuickSort for an array of size n with n identical elements. ● a(n) = 2 * ceiling((n + 1) / 2) + a(ceiling(n / 2)) + a(floor(n / 2)) with a(1) = 0, a(2) = 4 and a(3) = 8. ● a(n) = b(n - 1) for n >= 1, where b(0) = 0, b(2 * n) = b(n) + b(n - 1) + 2 * n + 2, b(2 * n + 1) = 2 * b(n) + 2 * n + 4. ●
► [A276221] 4,8,14,20,27,35,43,52,62,73,84,96,109,122,136,151,166,182,198,215,232,250,268,287,307 ⋆ Position of n ^ s in the joint ranking of { h } and { k ^ s } , s = sqrt(3), h >= 1, k >= 2. ● a(n) = n + floor(n ^ s), n >= 2; the complement is given by n + floor(n ^ (1 / s)), n >= 1. ●
► [A265284] 1,4,8,14,20,28,36,46,56,68,80,94,108,124,140,158,176,196,216,238,260,284,308,334,360 ⋆ Total number of ON (black) cells after n iterations of the " Rule 94" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = (2 * n ^ 2 + 12 * n - (- 1) ^ n + 1) / 4 for n>0. ● a(n) = (n ^ 2 + 6 * n) / 2 for n>1 and even. ● a(n) = (n ^ 2 + 6 * n + 1) / 2 for n odd. ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4) for n>4. ●
► [A121896] 1,4,8,14,20,30,37,51,61,76,89,111,120,146,165,187,205,239,255,293,312,344,375,421,434 ⋆ Let M be the matrix defined in A111490. Sequence gives M(1,1), M(1,2) + M(1,2) + M(2,2), M(1,3) + M(2,3) + M(3,1) + M(3,2) + M(3,3), etc. ● a(n) = - M(n,n) + Sum _{ i=1..n } (M(i,n) + M(n,i)). ●
► [A173290] 1,4,8,14,20,32,40,52,64,82,94,118,132,156,180,204,222,258,278,314,346,382,406,454,484 ⋆ Partial sums of A001615. ● a(n) = 15 * n ^ 2 / (2 * Pi ^ 2) + O(n * log(n)). - _ Enrique Pérez Herrero _ , Jan 14 2012 ● a(n) = (1 / 2) * Sum _{ k=1..n } mu(k) ^ 2 * floor(n / k) * floor(1 + n / k), where mu(k) is the Moebius function. - _ Daniel Suteu _ , Nov 19 2018 ●
► [A183857] 1,4,8,14,21,29,39,50,62,76,91,107,125,144,164,186,209,233,259,286,314,344,375,407,441 ⋆ a(n) = n - 1 + ceiling((2 / 3) * n ^ 2); complement of A183874. ● a(n) = n - 1 + ceiling((2 / 3)n ^ 2). ●
► [A027924] 1,4,8,14,21,30,40,51,64,78,93,110,129,148,170,192,216,242,269,297,327,358,390,424,460 ⋆ a(n) = least k such that 1 + 2 + ... + k >= 1 ^ 3 + 2 ^ 3 + ... + n ^ 3. ● a(n)=round(sqrt(1 / 2) * n * (n + 1)). - _ Ralf Stephan _ , Jan 24 2003 ●
► [A006578] 0,1,4,8,14,21,30,40,52,65,80,96,114,133,154,176,200,225,252,280,310,341,374,408,444 ⋆ Triangular numbers plus quarter squares: n * (n + 1) / 2 + floor(n ^ 2 / 4) (i.e., A000217(n) + A002620(n)). ● a(n) = (6 * n ^ 2 + 4 * n - 1 + (- 1) ^ n) / 8. - _ Paul Barry _ , May 30 2003 ● a(n) = (3 * n ^ 2 + 2 * n - (n mod 2)) / 4. - _ Ctibor O. Zizka _ , Mar 11 2012 ● a(n) = Sum _{ i=1..n } floor(3 * i / 2) = Sum _{ i=0..n } (i + floor(i / 2)). - _ Enrique Pérez Herrero _ , Apr 21 2012 ● a(n) = Sum _{ i=1..n } (n - i + 1) * 2 ^ ((i + 1) mod 2) . - _ Wesley Ivan Hurt _ , Mar 30 2014 ● a(n) = Sum _{ k=1..n } floor((n + k + 1) / 2). - _ Wesley Ivan Hurt _ , Mar 31 2017 ●
► [A024398] 0,1,4,8,14,22,31,41,53,67,82,98,116,136,157,179,203,229,256,284,314,346,379,413,449 ⋆ a(n) = [(2nd elementary symmetric function of S(n)) / (first elementary symmetric function of S(n))], where S(n) = { first n + 1 positive integers congruent to 2 mod 3 } . ● a(n) = (1 / 4) * (3 * (n ^ 2 - n - 1) - (- 1) ^ floor(n / 2)), n > 1. - _ Ralf Stephan _ , Jun 09 2005 ●
► [A054347] 0,1,4,8,14,22,31,42,54,68,84,101,120,141,163,187,212,239,268,298,330,363,398,435,473 ⋆ Partial sums of A000201. ● a(n) = floor(n * (n + 1) / 2 * phi - n / 2) + 0 or + 1. - _ Benoit Cloitre _ , Oct 03 2003 ● a(n) = floor(n * (n + 1) / 2 * phi - n / 2) + 0, + 1, or - 1 (n = 7920, 18762, 18851, ...), or + 2 (n = 12815, 15841, 30358, 30382, ...) if n < 2000000. - _ Birkas Gyorgy _ , May 06 2011 ●
► [A351362] 0,1,4,8,14,22,32,42,57,72,88,108,129,151,177,203,232,262,295,329,367,405,443,487,532 ⋆ Number of ways the numbers from 1..n do not divide the numbers from n..2n - 1. ● a(n) = Sum _{ k=1..n } Sum _{ i=n..2n - 1 } sign(i mod k). ●
► [A003682] 1,4,8,14,22,32,44,58,74,92,112,134,158,184,212,242,274,308,344,382,422,464,508,554,602 ⋆ Number of (undirected) Hamiltonian paths in the n - ladder graph K _ 2 X P _ n. ● a(n) = floor((n ^ 3 + 2 * n) / (n + 1)). - _ Gary Detlefs _ , Feb 20 2010 ● a(0)=1, a(1)=4, a(2)=8, a(3)=14, a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Jun 14 2011 ●
► [A011897] 0,0,0,0,1,4,8,14,22,33,48,66,88,114,145,182,224,272,326,387,456,532,616,708,809 ⋆ a(n) = floor(n * (n - 1) * (n - 2) / 15). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 5) - 3 * a(n - 6) + 3 * a(n - 7) - a(n - 8). ●
► [A063757] 1,4,8,14,22,34,50,74,106,154,218,314,442,634,890,1274,1786,2554,3578,5114,7162,10234,14330,20474,28666 ⋆ G.f.: (1 + 3 * x + 2 * x ^ 2) / ((1 - x) * (1 - 2 * x ^ 2)). ● a(0)=1, a(1)=4, a(2)=8, a(n)=a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) From _ Harvey P. Dale _ , Jun 05 2012 ● a(n)=2 ^ ((n - 3) / 2) * ((5 * Sqrt[2] - 7) * (- 1) ^ n + 7 + 5 * Sqrt[2]) - 6 From _ Harvey P. Dale _ , Jun 05 2012 ●
► [A100314] 1,4,8,14,24,42,76,142,272,530,1044,2070,4120,8218,16412,32798,65568,131106,262180,524326,1048616,2097194,4194348,8388654,16777264 ⋆ Number of 2 X n 0 - 1 matrices avoiding simultaneously the right angled numbered polyomino patterns (ranpp) (00;1), (01;0), (10;0) and (01;1). ● a(n) = 2 ^ n + 2 * n. ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 2 * a(n - 3). ●
► [A024916] 1,4,8,15,21,33,41,56,69,87,99,127,141,165,189,220,238,277,297,339,371,407,431,491,522 ⋆ a(n) = Sum _{ k=1..n } k * floor(n / k); also Sum _{ k=1..n } sigma(k) where sigma(n) = sum of divisors of n (A000203). ● a(n) = Sum _{ m=1..n } (n - (n mod m)). - _ Roger L. Bagula _ and _ Gary W. Adamson _ , Oct 06 2006 ● a(n) = n ^ 2 * Pi ^ 2 / 12 + O(n * log(n) ^ (2 / 3)) [Walfisz]. - _ Charles R Greathouse IV _ , Jun 19 2012 ●
► [A001182] 0,1,4,8,15,22,30,41,54,69,83,98,119,139,162,183,208,234,263,294,322,357,390,424,465 ⋆ Number of cells of square lattice of edge 1 / n inside quadrant of unit circle centered at 0. ● a(n) = Sum _{ k=1..n - 1 } floor(sqrt(n ^ 2 - k ^ 2)). - Horst Kraemer (horst.kraemer(AT)epost.de) Apr 07 2004 ● a(n) = [x ^ (n ^ 2)] (theta _ 3(x) - 1) ^ 2 / (4 * (1 - x)), where theta _ 3() is the Jacobi theta function. - _ Ilya Gutkovskiy _ , Apr 17 2018 ●
► [A122247] 0,1,4,8,15,23,33,44,59,75,93,112,134,157,182,208,239,271,305,340,378,417,458,500,546 ⋆ Partial sums of A005187. ● a(n) = Sum _{ k=1..n } Sum _{ j=0..n } floor(k / 2 ^ j). ●
► [A267682] 1,1,4,8,15,23,34,46,61,77,96,116,139,163,190,218,249,281,316,352,391,431,474,518,565 ⋆ a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4) for n > 3, with initial terms 1, 1, 4, 8. ● a(n) = n * (n - 1) + floor(n / 2) + 1. - _ Karl V. Keller, Jr. _ , Jul 14 2021 ●
► [A213035] 0,1,4,8,15,24,32,45,60,72,91,112,128,153,180,200,231,264,288,325,364,392,435,480,512 ⋆ n ^ 2 - [n / 3] ^ 2, where [] = floor. ● a(n) = a(n - 1) + 2 * a(n - 3) - 2 * a(n - 4) - a(n - 6) + a(n - 7). ●
► [A027961] 1,4,8,15,26,44,73,120,196,319,518,840,1361,2204,3568,5775,9346,15124,24473,39600,64076,103679,167758,271440,439201 ⋆ a(n) = Lucas(n + 2) - 3. ● a(0) = 0, a(1) = 1, a(n) = a(n - 1) + a(n - 2) + 3. ● a(n) = F(n) + F(n + 2) - 3 , n >= 2, where F(n) is the n - th Fibonacci number. - _ Zerinvary Lajos _ , Jan 31 2008 ● a(n) = Sum _{ k=1..n } ((- 1 / phi) ^ k + (phi) ^ k) where phi = 1 / 2 + 1 / 2 * sqrt(5). - _ Dimitri Papadopoulos _ , Jan 07 2016 ● a(n) = 2 * a(n - 1) - a(n - 3) for n>3. - _ Wesley Ivan Hurt _ , Jan 07 2016 ●
► [A349201] 0,1,4,8,15,27,40,64,85,125,156,216,259,343,400,512,585,729,820,1000,1111,1331,1464,1728,1885 ⋆ a(n) = [x ^ n] ((x ^ 2 * (1 + 3 * x + x ^ 2 - 2 * x ^ 3 + 3 * x ^ 4 + x ^ 5 - x ^ 6)) / ((- 1 + x) ^ 4 * (1 + x) ^ 3)). ● a(n) = ((5 + 3 * n - n ^ 2) * (1 - (- 1) ^ n) + 2 * n ^ 3) / 16 for n > 1. ● a(n) = a(n - 1) + 3 * a(n - 2) - 3 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) + a(n - 6) - a(n - 7) for n > 8. (End) ●
► [A018921] 4,8,15,28,52,96,177,326,600,1104,2031,3736,6872,12640,23249,42762,78652,144664,266079,489396,900140,1655616,3045153,5600910,10301680 ⋆ Define the generalized Pisot sequence T(a(0),a(1)) by: a(n + 2) is the greatest integer such that a(n + 2) / a(n + 1) < a(n + 1) / a(n). This is T(4,8). ● a(n) = 2 * a(n - 1) - a(n - 4). ●
► [A103536] 4,8,15,33,67,152,340,791,1845,4411,10557,25600,62332,152780,375859,928841,2302191,5724425,14269196,35655157,89277769,223982893,562912585,1417014038,3572323492 ⋆ Number of geometrically distinct edge - unfoldings of a regular n - gonal pyramid. ● a(n) = - 1 + (1 / 2) * F(n) + (1 / (2 * n)) * Sum _{ j=1..n } (F(2 * gcd(j,n) - 1) + F(2 * gcd(j,n) + 1)), where F(n) is the usual n - th Fibonacci number. Simplified from link. - _ Rick Mabry _ , Apr 10 2023 ●
► [A123535] 4,8,16,17,26,32,33,43,58,59,61,73,74,90,101,102,105,124,125,127,145,146,158,170,171 ⋆ Recurrence from values at floor of a third and two - thirds. ● a(0) = 1, for n>1: a(floor(n / 3)) + a(floor(2n / 3)) + n + 1. ●
► [A092259] 4,8,16,20,28,32,40,44,52,56,64,68,76,80,88,92,100,104,112,116,124,128,136,140,148 ⋆ Numbers that are congruent to { 4, 8 } mod 12. ● a(n) = 12 * (n - 1) - a(n - 1) (with a(1)=4). - _ Vincenzo Librandi _ , Nov 16 2010 ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n>3. ● a(n) = 6n - 3 - (- 1) ^ n. ●
► [A237990] 4,8,16,20,40,44,56,64,72,80,92,96,108,116,120,124,132,136,140,144,148,152,156,164,176 ⋆ Numbers m such that the numbers of primes, even positive integers and odd positive integers less than or equal to m are all even. ● a(n) == 0 (mod 4) ●

► [A137932] 0,0,0,4,8,16,24,36,48,64,80,100,120,144,168,196,224,256,288,324,360,400,440,484,528 ⋆ Terms in an n X n spiral that do not lie on its principal diagonals. ● a(n) = (n - 1) ^ 2 when n is odd; a(n) = (n - 1) ^ 2 - 1 when n is even. ●
► [A022560] 0,1,4,8,16,25,36,48,68,89,112,136,164,193,224,256,304,353,404,456,512,569,628,688,756 ⋆ a(0)=0, a(2 * n) = 2 * a(n) + 2 * a(n - 1) + n ^ 2 + n, a(2 * n + 1) = 4 * a(n) + (n + 1) ^ 2. ● a(0)=0, a(2n) = 2 * a(n) + 2 * a(n - 1) + n ^ 2 + n, a(2n + 1) = 4a(n) + (n + 1) ^ 2. - _ Ralf Stephan _ , Sep 13 2003 ●
► [A003451] 1,4,8,16,25,40,56,80,105,140,176,224,273,336,400,480,561,660,760,880,1001,1144,1288,1456,1625 ⋆ Number of nonequivalent dissections of an n - gon into 3 polygons by nonintersecting diagonals up to rotation. ● a(n) = (n - 4) * (2 * n ^ 2 - 4 * n - 3 * (1 - (- 1) ^ n)) / 24, for n>=5. - _ Luce ETIENNE _ , Apr 04 2015 ●
► [A180861] 1,4,8,16,26,42,61,88,119,160,206,264,328,406,491,592,701,828,964,1120,1286,1474,1673,1896,2131 ⋆ Wiener index of the n - pan graph. ● a(n) = (1 / 8) * n * (n ^ 2 + 2 * n + 8) if n is even; a(n) = (1 / 8) * (n ^ 3 + 2 * n ^ 2 + 7 * n - 2) if n is odd. ● a(n) = + 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + a(n - 4) + 2 * a(n - 5) - a(n - 6). ● a(n) = (- 2 + 15 * n + 4 * n ^ 2 + 2 * n ^ 3 + (- 1) ^ n * (2 + n)) / 16. - _ Eric W. Weisstein _ , Sep 08 2017 ●
► [A299894] 1,4,8,16,27,35,48,66,83,113,146,174,203,231,267,311,365,418,466,509,556,617,691,768,833 ⋆ Coordination sequence for "bar" 3D tiling with respect to first type of node. ● a(n + 1)=2 * a(n + 2) - 2 * a(n + 3) + a(n + 4) - a(n + 7) + 3 * a(n + 8) - 4 * a(n + 9) + 4 * a(n + 10) - 2 * a(n + 11) + 2 * a(n + 14) - 4 * a(n + 15) + 4 * a(n + 16) - 3 * a(n + 17) + a(n + 18) - a(n + 21) + 2 * a(n + 22) - 2 * a(n + 23) + a(n + 24), ●
► [A339026] 0,1,4,8,16,27,40,58,80,105,128,158,198,237,278,336,382,435,502,574,632,699,798,868,968 ⋆ Number of pairs (x,y): 1 <= x < y <= n * n, such that x * y is a square. ● a(n) = Sum _{ j=2..n } phi(j) * floor(n ^ 2 / j ^ 2). ●
► [A030119] 1,1,4,8,16,29,51,87,146,242,398,651,1061,1725,2800,4540,7356,11913,19287,31219,50526,81766,132314,214103,346441 ⋆ a(n) = a(n - 1) + a(n - 2) + n, a(0) = a(1) = 1. ● a(n) = Lucas(n + 2) + Fibonacci(n + 1) - (n + 3). ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - a(n - 3) + a(n - 4); a(0)=1, a(1)=1, a(2)=4, a(3)=8. - _ Harvey P. Dale _ , Nov 06 2011 ● a(n) = - 3 + (2 ^ (- n) * ((1 - sqrt(5)) ^ n * (- 3 + 2 * sqrt(5)) + (1 + sqrt(5)) ^ n * (3 + 2 * sqrt(5)))) / sqrt(5) - n. - _ Colin Barker _ , Mar 11 2017 ●
► [A298803] 1,4,8,16,30,50,88,150,260,448,768,1328,2284,3930,6776,11662,20082,34592,59560,102570,176642,304180,523830,902084,1553452 ⋆ Growth series for group with presentation < S, T : S ^ 3 = T ^ 3 = (S * T) ^ 4 = 1 >. ● a(n) = a(n - 2) + 3 * a(n - 3) + a(n - 4) - a(n - 6) for n>7. - _ Colin Barker _ , Feb 04 2018 ●
► [A320947] 1,4,8,16,30,56,102,184,328,580,1018,1776,3082,5324,9160,15704,26838,45736,77742,131840,223112,376844,635378,1069536,1797650 ⋆ a(n) is the number of dominoes, among all domino tilings of the 2 X n rectangle, sharing a length - 2 side with the boundary of the rectangle. ● a(n) = a(n - 1) + a(n - 2) + 2 * Fibonacci(n - 1) for n > 3. ● a(n) = 2 * a(n - 1) + a(n - 2) - 2 * a(n - 3) - a(n - 4) for n>5. ● a(n) = 2 ^ (1 - n) * (- 4 * sqrt(5) * ((1 - sqrt(5)) ^ n - (1 + sqrt(5)) ^ n) + 5 * ((1 - sqrt(5)) ^ n + (1 + sqrt(5)) ^ n) * n) / 25 for n>1. ●
► [A121986] 1,1,1,4,8,16,32,61,115,215,399,738,1362,2510,4622,8507,15653,28797,52973,97440,179228,329660,606348,1115257,2051287 ⋆ Expansion of x * (- 1 + 2 * x - 3 * x ^ 3 + x ^ 4) / ((x ^ 3 + x ^ 2 + x - 1) * (x - 1) ^ 2). ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - a(n - 4) + a(n - 5). ●
► [A196875] 1,1,1,1,4,8,16,32,64,125,243,471,911,1759,3394,6546,12622,24334,46910,90427,174309,335997,647661,1248413,2406400 ⋆ a(n) = a(n - 4) + a(n - 3) + a(n - 2) + a(n - 1) + (n - 5). ● a(n) = + 3 * a(n - 1) - 2 * a(n - 2) - a(n - 5) + a(n - 6). ●
► [A298807] 1,4,8,16,32,64,126,242,472,920,1792,3486,6788,13216,25730,50092,97518,189860,369628,719612,1400980,2727504,5310068,10337932,20126468 ⋆ Growth series for group with presentation < S, T : S ^ 3 = T ^ 3 = (S * T) ^ 6 = 1 >. ● a(n) = a(n - 2) + 2 * a(n - 3) + 3 * a(n - 4) + 5 * a(n - 5) + 3 * a(n - 6) + 2 * a(n - 7) + a(n - 8) - a(n - 10) for n>11. - _ Colin Barker _ , Feb 06 2018 ●
► [A151821] 1,4,8,16,32,64,128,256,512,1024,2048,4096,8192,16384,32768,65536,131072,262144,524288,1048576,2097152,4194304,8388608,16777216,33554432 ⋆ Powers of 2, omitting 2 itself. ● a(1) = 1 and a(n) = 3 + Sum _{ k=1..n - 1 } a(k) for n>=2. - _ Joerg Arndt _ , Aug 15 2012 ●
► [A020707] 4,8,16,32,64,128,256,512,1024,2048,4096,8192,16384,32768,65536,131072,262144,524288,1048576,2097152,4194304,8388608,16777216,33554432,67108864 ⋆ Pisot sequences E(4,8), L(4,8), P(4,8), T(4,8). ● a(n) = 2 ^ (n + 2). ● a(n) = 2 * a(n - 1). ●
► [A089890] 0,0,0,4,8,16,32,64,192,384,768,1536,3072,6144,12288,24576,49152,98304,196608,393216,786432,1572864,3145728,6291456,10485760 ⋆ Number of subsets of { 1,.., n } containing exactly two squares. ● a(n) = (n ^ (1 / 2) * (n ^ (1 / 2) - 1) * 2 ^ (n - n ^ (1 / 2))) / 2. ●
► [A301773] 0,4,8,16,48,124,320,844,2208,5776,15128,39604,103680,271444,710648,1860496,4870848,12752044,33385280,87403804,228826128,599074576,1568397608,4106118244,10749957120 ⋆ Number of odd chordless cycles in the 2n - Moebius ladder graph. ● a(n) = 2 * a(n - 1) + a(n - 2) + 2 * a(n - 3) - a(n - 4). ●
► [A038110] 1,1,1,4,8,16,192,3072,55296,110592,442368,13271040,477757440,19110297600,802632499200,16052649984 00,6421059993600,128421199872 00,770527199232000,5085479514931 2000,3559835660451840000 ⋆ Numerator of frequency of integers with smallest divisor prime(n). ● a(n) = numerator of phi(e ^ (psi(p _ n - 1))) / e ^ (psi(p _ n)), where psi(.) is the second Chebyshev function and phi(.) is Euler's totient function. - _ Fred Daniel Kline _ , Jul 17 2014 ●
► [A026393] 1,4,8,17,24,39,49,70,83,110,126,159,178,217,239,284,309,360,388,445,476,539,573,642,679 ⋆ a(n) = T(n,n - 2), where T is the array in A026386. ● a(n) = (18 * n ^ 2 - 46 * n + (- 1) ^ n * (13 - 6 * n) + 35) / 16. ● a(n) = (9 * n ^ 2 - 26 * n + 24) / 8 for n even. ● a(n) = (9 * n ^ 2 - 20 * n + 11) / 8 for n odd. ●
► [A298950] 1,4,8,17,25,40,52,73,89,116,136,169,193,232,260,305,337,388,424,481,521,584,628,697,745 ⋆ Numbers k such that 5 * k - 4 is a square. ● a(n) = a(1 - n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). ● a(n) = (10 * n * (n - 1) + (2 * n - 1) * (- 1) ^ n + 9) / 8. ●
► [A213494] 0,0,0,0,0,0,1,4,8,17,25,40,57,81,105,141,177,225,274,337,401,482,562,661,762 ⋆ a(n) = A213493(n) / 12. ● a(n) = a(n - 1) + a(n - 2) - 2 * a(n - 5) + a(n - 8) + a(n - 9) - a(n - 10). ●
► [A215108] 0,1,4,8,17,35,66,124,229,414,742,1318,2320,4059,7062,12224,21071,36185,61930,105678,179847,305326,517212,874380,1475472 ⋆ a(n) = A215082(2 * n) ● a(n) = a(n - 1) + 2 * a(n - 2) + a(n - 3) - 2 * a(n - 4) - 3 * a(n - 5) - a(n - 6), a(0) = 0, a(1) = 1, a(2) = 4, a(3) = 8, a(4) = 17, a(5) = 35 . ●
► [A335274] 0,1,4,8,17,38,84,185,408,900,1985,4378,9656,21297,46972,103600,228497,503966,1111532,2451561,5407088,11925708,26302977,58013042,127951792 ⋆ a(n) = 2 * a(n - 1) + a(n - 3), where a(0) = 0, a(1) = 1, a(2) = 4. ● a(n) = 2 * a(n - 1) + a(n - 3). ●
► [A077474] 1,4,8,18,21,28,31,36,41,44,55,58,71,76,79,84,88,108,125,135,141,148,155,158,164 ⋆ Greedy powers of (7 / 10): sum _{ n=1..inf } (7 / 10) ^ a(n) = 1. ● a(n)=sum _{ k=1..n } floor(g _ k) where g _ 1=1, g _{ n + 1 } =log _ x(x ^ frac(g _ n) - x) (n>0) at x=(7 / 10) and frac(y) = y - floor(y). ● a(n) seems to be asymptotic to c * n with c around 6... - _ Benoit Cloitre _ ●
► [A008085] 1,4,8,18,32,52,74,100,128,162,204,244,286,340,396,450,512,580,650,724,800,882,972,1060,1150 ⋆ Coordination sequence T2 for Zeolite Code EDI. ● a(12 * m + k) = 288 * m ^ 2 + 48 * k * m + [- 2, 4, 12, 18, 32, 52, 74, 100, 128, 162, 204, 244], 0<=k<12. - _ N. J. A. Sloane _ ●
► [A001977] 1,1,4,8,18,32,58,94,151,227,338,480,676,920,1242,1636,2137,2739,3486,4370,5444,6698,8196,9926,11963 ⋆ Number of partitions of 3n into n parts from the set { 0, 1, ..., 6 } (repetitions admissible). ● a(n) is the coefficient of x ^ (3 * n + 3) from the g.f. Product _{ s=1..6 } (x ^ s - x ^ (n + 1)) / (1 - x ^ s). - _ Paul Weisenhorn _ , Jun 01 2009 ●
► [A008240] 1,4,8,18,34,50,68,100,130,160,204,246,286,338,392,448,514,580,648,726,802,878,968,1060,1150 ⋆ Coordination sequence T3 for Zeolite Code THO. ● a(24 * m + k) = 1152 * m ^ 2 + 96 * k * m + one of 24 numbers depending on k, 0<=k<24. - _ N. J. A. Sloane _ ●
► [A056309] 0,1,4,8,18,34,70,134,270,526,1054,2078,4158,8254,16510,32894,65790,131326,262654,524798,1049598,2098174,4196350,8390654,16781310 ⋆ Number of reversible strings with n beads using exactly two different colors. ● a(1)=0, a(2)=1, a(3)=4, a(4)=8, a(n) = 3 * a(n - 1) - 6 * a(n - 3) + 4 * a(n - 4). - _ Harvey P. Dale _ , Feb 18 2012 ● a(n) = 2 ^ (n / 2 - 1) + 2 ^ (n - 1) - 2 for n even. ● a(n) = 2 ^ ((n - 1) / 2) + 2 ^ (n - 1) - 2 for n odd. (End) ● a(n) = k! (S2(n, k) + S2(ceiling(n / 2),k)) / 2, where k=2 is the number of colors and S2 is the Stirling subset number. - _ Robert A. Russell _ , Sep 25 2018 ●
► [A190062] 0,1,1,4,8,18,36,71,135,252,462,836,1496,2653,4669,8164,14196,24566,42332,72675,124355,212156,360986,612744,1037808 ⋆ a(n) = n * Fibonacci(n) - Sum _{ i=0..n - 1 } Fibonacci(i). ● a(n) = (n - 1) * Fibonacci(n) - Fibonacci(n - 1) + 1. ● a(n) = (((2 * n - 1) * r - 5) * (1 + r) ^ n - ((2 * n - 1) * r + 5) * (1 - r) ^ n) / (10 * 2 ^ n) + 1, where r=sqrt(5). ●
► [A228231] 4,8,18,36,88,176,470,940,2784,5568,18564,37128,140496,280992,1205406,2410812,11625040,23250080,124582172,249164344,1467151632,2934303264,18808816988,37617633976,260504960128 ⋆ Number of equivalence classes in S _ n under the { 123, 321 } { 132, 231 }- equivalence. ● a(n) = sum(k=1..l, k! * binomial(n - k - 1,h - 1)) + sum(k=1..h, k! * binomial(n - k - 1,l - 1)) where l = floor(n / 2) and h = ceiling(n / 2). ●
► [A175657] 1,4,8,18,38,80,166,342,700,1426,2894,5856,11822,23822,47932,96330,193414,388048,778070,1559334,3123836,6256034,12525598,25073088,50181598 ⋆ Eight bishops and one elephant on a 3 X 3 chessboard: a(n) = 3 * 2 ^ n - 2 * F(n + 1), with F(n) = A000045(n). ● a(n) = 3 * a(n - 1) - a(n - 2) - 2 * a(n - 3) with a(0)=1, a(1)=4 and a(2)=8. ●
► [A049933] 1,1,1,4,8,19,35,70,140,349,663,1310,2609,5214,10425,20850,41700,104249,198073,390935,779265,1557231,3113815,6227316,12454423 ⋆ a(n) = a(1) + a(2) + ... + a(n - 1) + a(m) for n >= 4, where m = 2 ^ (p + 1) + 2 - n and p is the unique integer such that 2 ^ p < n - 1 <= 2 ^ (p + 1), starting with a(1) = a(2) = a(3) = 1. ● a(n) = a(2 ^ ceiling(log _ 2(n - 1)) + 2 - n) + Sum _{ i = 1..n - 1 } a(i) for n >= 4. ●
► [A129362] 1,1,4,8,19,37,80,160,331,661,1344,2688,5419,10837,21760,43520,87211,174421,349184,698368,1397419,2794837,5591040,11182080,22366891 ⋆ a(n) = Sum _{ k=floor((n + 1) / 2)..n } J(k + 1), J(k) = A001045(k). ● a(n) = a(n - 1) + 3 * a(n - 2) - a(n - 3) - 2 * a(n - 5) - 4 * a(n - 6). ● a(n) = Sum _{ k=0..n } J(k + 1) - J((k + 1) / 2) * (1 - (- 1) ^ k) / 2. ●
► [A083579] 0,1,1,4,8,19,39,82,166,337,677,1360,2724,5455,10915,21838,43682,87373,174753,349516,699040,1398091,2796191,5592394,11184798 ⋆ Generalized Jacobsthal numbers. ● a(n) = (2 ^ (n + 3) - 5 * (- 1) ^ n - 3 * (2 * n + 1)) / 12. ● a(n + 2) = a(n + 1) + 2 * a(n) + n, a(0)=0, a(1)=1. ●
► [A062717] 0,4,8,20,28,48,60,88,104,140,160,204,228,280,308,368,400,468,504,580,620,704,748,840,888 ⋆ Numbers m such that 6 * m + 1 is a perfect square. ● a(2 * k) = k * (6 * k + 2), a(2 * k + 1) = 6 * k ^ 2 + 10 * k + 4. - _ Mohamed Bouhamida _ , Nov 06 2007 ● a(n) = n ^ 2 - n + 2 * ceiling((n - 1) / 2) ^ 2. - _ Gary Detlefs _ , Feb 23 2010 ● a(n) = (6 * n * (n - 1) + (2 * n - 1) * (- 1) ^ n + 1) / 4. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). - _ Wesley Ivan Hurt _ , Apr 21 2021 ●
► [A301896] 0,1,4,8,20,35,54,72,117,165,221,280,352,425,504,576,726,875,1036,1200,1386,1575,1776,1976,2214 ⋆ a(n) = product of total number of 0's and total number of 1's in binary expansions of 0, ..., n. ● a(2 ^ k - 1) = 2 ^ (k - 2) * (2 ^ k * (k - 2) + 4) * k. ●
► [A097164] 1,4,8,20,36,84,148,340,596,1364,2388,5460,9556,21844,38228,87380,152916,349524,611668,1398100,2446676,5592404,9786708,22369620,39146836 ⋆ Expansion of (1 + 3x) / ((1 - x)(1 - 4x ^ 2)). ● a(n) = 5 * 2 ^ n / 2 - (- 2) ^ n / 6 - 4 / 3; ● a(n) = a(n - 1) + 4a(n - 2) - 4a(n - 3). ●
► [A032280] 1,1,4,8,20,38,76,133,232,375,600,912,1368,1980,2829,3936,5412,7293,9724,12760,16588,21287,27092,34112,42640 ⋆ Number of bracelets (turnover necklaces) of n beads of 2 colors, 7 of them black. ● a(n) = (3 / 7) * s(n,0,7) + (48 * C(n - 1,6) + 7 * (n - 2) * (n - 4) * (n - 6)) / 672, if n is even; ● a(n) = (3 /

7) * s(n,0,7) + (48 * C(n - 1,6) + 7 * (n - 1) * (n - 3) * (n - 5)) / 672, if n is odd . (End) ●

▶ [A156303] 1,1,4,8,20,38,88,162,336,624,1211,2195,4109,7295,13190,23072,40618,69838,120486,204006,345595,577387,962961,1588483,2613930 ⋆ G.f.: A(x) = exp(Sum _{ n>=1 } sigma(n ^ 2) * x ^ n / n), a power series in x with integer coefficients. ● a(n) = (1 / n) * Sum _{ k=1..n } sigma(k ^ 2) * a(n - k) for n> 0, with a(0)=1. ●

▶ [A047196] 0,0,0,1,4,8,20,41,63,126,252,392,844,1780,2800,5995,12545,19595,41951,88634,138866,299411,636524,997640,2154104 ⋆ Number of nonempty subsets of { 1,2,...,n } in which exactly 1 / 4 of the elements are <= n / 3. ● a(n) = Sum _{ 1<=j<=n / 4 } binomial(floor(n / 3),j) * binomial(n - floor(n / 3),3 * j). - _ Robert Israel _ , Dec 15 2020 ●

▶ [A334706] 4,8,20,44,84,140,224,332,472,648,864,1120,1428,1784,2196,2668,3204,3804,4480,5228,6056,6968,7968,9056,10244 ⋆ Number of collinear triples in a 4 X n rectangular grid. ● a(n) = 2 * a(n - 1) - a(n - 3) - a(n - 4) + 2 * a(n - 6) - a(n - 7) for n > 7. (End) ●

▶ [A357287] 0,0,0,0,0,0,4,8,20,48,92,168,340,576,1004,1816,3012,4976,8732,14024,22900,38944,62156,99704,167972 ⋆ a(n) = number of subsets S of { 1,2,...,n } having more than 2 elements such that (sum of least three elements of S) = max(S). ● a(n) = 2 * a(n - 1) + a(n - 2) - 6 * a(n - 4) - 4 * a(n - 5) + 16 * a(n - 6) - 8 * a(n - 7). ●

▶ [A115099] 4,8,20,56,164,488,1460,4376,13124,39368,118100,354296,1062884,3188648,9565940,28697816,86093444,258280328,774840980,2324522936,6973568804,20920706408,62762119220,188286357656,564859072964 ⋆ a(0)=4, a(n) = 3 * a(n - 1) - 4. ● a(n) = 2 * 3 ^ n + 2. ● a(n) = 4 * a(n - 1) - 3 * a(n - 2) for n>1. ●

▶ [A060919] 4,8,20,60,204,748,2860,11180,44204,175788,701100,2800300,11193004,44755628,178989740,715893420,2863442604,11453508268,45813508780,183252986540,733009849004,2932035201708,11728132418220,46912512895660 ⋆ Number of corners in a 4 - sided fractal. ● a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3). G.f.: - 4 * x * (5 * x ^ 2 - 5 * x + 1) / ((x - 1) * (2 * x - 1) * (4 * x - 1)). [_ Colin Barker _ , Nov 28 2012] ●

▶ [A097076] 0,1,1,4,8,21,49,120,288,697,1681,4060,9800,23661,57121,137904,332928,803761,1940449,4684660,11309768,27304197,65918161,159140520,384199200 ⋆ Expansion of x / (1 - x - 3 * x ^ 2 - x ^ 3). ● a(n) = ((1 + sqrt(2)) ^ n + (1 - sqrt(2)) ^ n - 2 * (- 1) ^ n) / 4. ● a(n) = a(n - 1) + 3 * a(n - 2) + a(n - 3). [corrected by _ Paul Curtz _ , Mar 04 2008] ● a(n) = (Sum _{ k=0..floor(n / 2) } binomial(n, 2 * k) * 2 ^ k) / 2 - (- 1) ^ n / 2. ● a(n) = Sum _{ k=0..n } (- 1) ^ k * Pell(n - k). - _ Paul Barry _ , Oct 22 2009 ●

▶ [A322284] 1,4,8,22,48,116,256,584,1280,2832,6144,13344,28672,61504,131072,278656,589824,1245440,2621440,5505536,11534336,24118272,50331648,104859648,218103808 ⋆ Number of nonequivalent ways to place n nonattacking kings on a 2 X 2n chessboard under all symmetry operations of the rectangle. ● a(n) = (n + 1) * 2 ^ (n - 2) + (1 + (- 1) ^ n) ^ (n / 2 - 1) for n > 1. ● a(n) = 4 * a(n - 1) - 2 * a(n - 2) - 8 * a(n - 3) + 8 * a(n - 4) for n>4. (End) ●

▶ [A175655] 1,4,8,22,50,124,290,694,1628,3838,8978,21004,48962,114022,265004,615262,1426658,3305212,7650722,17697430,40911740,94528318,218312114,503994220,1163124866 ⋆ Eight bishops and one elephant on a 3 X 3 chessboard. G.f.: (1 + x - 5 * x ^ 2) / (1 - 3 * x - x ^ 2 + 6 * x ^ 3). ● a(n) = 3 * a(n - 1) + a(n - 2) - 6 * a(n - 3) with a(0)=1, a(1)=4 and a(2)=8. ● a(n) = ((10 + 8 * A) * A ^ (- n - 1) + (10 + 8 * B) * B ^ (- n - 1)) / 13 - 2 ^ n with A = (- 1 + sqrt(13)) / 6 and B = (- 1 - sqrt(13)) / 6. ●

▶ [A052528] 1,1,4,8,22,52,132,324,808,2000,4968,12320,30576,75856,188224,467008,1158752,2875072,7133632,17699904,43916928,108966400,270366848,670832640,1664466176 ⋆ Expansion of (1 - x) / (1 - 2 * x - 2 * x ^ 2 + 2 * x ^ 3). ● a(n) = Sum _{ alpha=RootOf(2 * Z ^ 3 - 2 * Z ^ 2 - 2 * Z + 1) } (1 / 37) * (5 - 9 * alpha ^ 2 + 12 * alpha) * alpha ^ (- 1 - n). ● a(n) = 2 * a(n - 2) + Sum _{ i=0..n - 1 } a(i). - _ Yuchun Ji _ , Dec 29 2018 ●

▶ [A284778] 0,1,1,4,8,22,54,142,370,983,2627,7086,19238,52561,144377,398518,1104794,3074809,8588093,24064642,67630898,190584766,538412426,1524554956,4326119748 ⋆ Number of self - avoiding planar walks of length n + 1 starting at (0, 0), ending at (n,0), remaining in the first quadrant and using steps (0,1), (1,0), (1,1), (- 1,1), and (1, - 1) with the restriction that (0,1) is never used below the diagonal and (1,0) is never used above the diagonal. ● a(n) = Sum _{ k=0..floor(n / 2) } (k + 1) ^ 2 / (n - k) * Sum _{ i=0..n - 1 - 2 * k } C(i,n - 1 - 2 * k - i) * C(n - k,i), n>0, a(0)=0. - _ Vladimir Kruchinin _ , Mar 20 2023 ●

▶ [A170938] 4,8,22,74,274,1058,4162,16514,65794,262658,1049602,4196354,16781314,67117058,268451842,1073774594,4295032834,17180000258,68719738882,274878431234,1099512676354,4398048608258,17592190238722,70368752566274,281474993487874 ⋆ 4 ^ n + 2 ^ n + 2. ● a(n)= 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3). G.f.: 2 * (2 - 10 * x + 11 * x ^ 2) / ((1 - x) * (2 * x - 1) * (4 * x - 1)). [From _ R. J. Mathar _ , Feb 15 2010] ●

▶ [A075688] 4,8,22,232,596,4016,7277650,1749701948 ⋆ Pair sums are even interprimes. ● a(1)=4; smallest a(n) > a(n - 1): a(1) + a(n), ..., a(n - 1) + a(n) all are even interprimes. ●

▶ [A181688] 1,1,4,8,23,55,144,360,921,2329,5924,15024,38159,96847,245888,624176,1584593,4022609,10211940,25924088,65811431,167069767,424126160,1076693080,2733310377 ⋆ Number of maximal self - avoiding walks from NW to SW corners of a 4 - by - n grid ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) + a(n - 4), n > 4. ●

▶ [A212686] 0,0,4,8,24,40,76,112,176,240,340,440,584,728,924,1120,1376,1632,1956,2280,2680,3080,3564,4048,4624 ⋆ Number of (w,x,y,z) with all terms in { 1,...,n } and 2|w - x|=n + |y - z|. ● a(n)=2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + a(n - 4) + 2 * a(n - 5) - a(n - 6). ●

▶ [A180002] 4,8,24,43,179,783,1504,6668,29604,56983,253079,1124043,2163724,9610208,42683904,82164403,364934699,1620864183,3120083464,13857908228,61550154924,118481007103,526235577839,2337285022803,4499158186324 ⋆ a(n) red and b(n) blue balls in an urn; draw 5 balls without replacement; Probability(5 red balls) = Probability(3 red and 2 blue balls). ● a(n + 9) = 39 * a(n + 6) - 39 * a(n + 3) + a(n). ● a(3 * n + 1) = (14 + (1 + r) * (19 + 6 * r) ^ n + (1 - r) * (19 - 6 * r) ^ n) / 4. ● a(3 * n + 2) = (14 + 3 * (3 + r) * (19 + 6 * r) ^ n + 3 * (3 - r) * (19 - 6 * r) ^ n) / 4. ● a(3 * n + 3) = (14 + (41 + 13 * r) * (19 + 6 * r) ^ n + (41 - 13 * r) * (19 - 6 * r) ^ n) / 4. ● a(n) = a(n - 1) + 38 * a(n - 3) - 38 * a(n - 4) - a(n - 6) + a(n - 7). - _ G. C. Greubel _ , Mar 20 2019 ●

▶ [A208901] 0,0,4,8,24,48,112,224,480,960,1984,3968,8064,16128,32512,65024,130560,261120,523264,1046528,2095104,4190208,8384512,16769024,33546240 ⋆ Number of bitstrings of length n (with at least two runs) where the last two runs have different lengths. ● a(n) = 2 ^ n - 2 ^ (floor(n / 2) + 1). ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 4 * a(n - 3), a(0) = 0, a(1) = 0, a(2) = 4. ●

▶ [A153334] 1,1,4,8,24,52,136,296,720,1556,3624,7768,17584,37416,83024,175568,383904,807604,1746280,3657464,7839216,16357496,34812144,72407728,153204064 ⋆ Number of zig - zag paths from top to bottom of an n X n square whose color is that of the top right corner. ● a(n) = (n + 1)2 ^ (n - 2) - 2(n - 1)binomial(n - 2,(n - 2) / 2) for n even, a(n) = (n + 1)2 ^ (n - 2) - (n - 1)binomial(n - 1,(n - 1) / 2) for n odd. ●

▶ [A159612] 1,4,8,24,56,152,376,984,2488,6424,16376,42072,107576,275864,706168,1809624,4634296,11872792,30409976,77901144,199541048,511145624,1309309816,3353892312,8591131576 ⋆ INVERT transform of (1, 3, 1, 3, 1, ...). ● a(n) = a(n - 1) + 4 * a(n - 2), a(1)=1, a(2)=4. - _ Vincenzo Librandi _ , Mar 11 2011 ● a(n) = 2 ^ (- 3 - n) * ((1 - sqrt(17)) ^ n * (- 5 + 3 * sqrt(17)) + (1 + sqrt(17)) ^ n * (5 + 3 * sqrt(17))) / sqrt(17) for n > 0. - _ Colin Barker _ , Dec 22 2016 ●

▶ [A190156] 1,1,4,8,24,61,175,486,1405,4059,11924,35223,105007,314867,950018,2880620,8775638,26843704,82420464,253916555,784672011,2431695541,7555381574,23531026853,73448858179 ⋆ Expansion of (1 - x - 3 * x ^ 2 - sqrt(1 - 2 * x - 5 * x ^ 2 + 2 * x ^ 3 + x ^ 4)) / (2 * x ^ 3 * (1 + 2 * x)). ● a(n) = Sum _{ m=0..n } Sum _{ j=0..n - m + 2 } 2 ^ (m - j + 1) * C(n - m,j - 1) * C(n - m + 2,j) * C(n - m - j + 1,m - j + 1) / (n - m + 2). - _ Vladimir Kruchinin _ , Oct 19 2020 ● a(n) = Sum _{ k=0..floor(n / 2) } 2 ^ k * binomial(n - k, k) * hypergeom([- k, k - n - 1], [2], 1 / 2). - _ Peter Luschny _ , Oct 19 2020 ●

▶ [A291024] 0,4,8,24,64,172,456,1200,3136,8148,21064,54216,139008,355196,904840,2298720,5825408,14729636,37168008,93612408,235369664,590852172,1481051720,3707411472,9268764096 ⋆ p - INVERT of (1,1,1,1,1,...), where p(S) = (1 - 2 S ^ 2) ^ 2. ● a(n) = 4 * a(n - 1) - 2 a(n - 2) - 4 * a(n - 3) - a(n - 4) for n >= 5. ● a(n) = ((1 + sqrt(2)) ^ n * (3 * sqrt(2) + 2 * (- 1 + sqrt(2)) * n) - (1 - sqrt(2)) ^ n * (3 * sqrt(2) + 2 * (1 + sqrt(2)) * n)) / 4. - _ Colin Barker _ , Aug 24 2017 ●

▶ [A116556] 0,4,8,24,64,176,480,1312,3584,9792,26752,73088,199680,545536,1490432,4071936,11124736,30393344,83036160,226859008,619790336,1693298688,4626178048,12638953472,34530263040 ⋆ a(n) = 2 * a(n - 1) + 2 * a(n - 2), a(0)=0, a(1)=4. ● a(n) = (2 / sqrt(3)) * ([1 + sqrt(3)] ^ n - [1 - sqrt(3)] ^ n), n>=0. - _ Paolo P. Lava _ , Jun 10 2008 ●

▶ [A265185] 4,8,24,80,272,928,3168,10816,36928,126080,430464,1469696,5017856,17132032,58492416,199705600,681837568,2327939072,7948081152,27136446464,92649623552,316325601280,1080003158016,3687361429504,12589439401984 ⋆ Non - vanishing traces of the powers of the adjacency matrix for the simple Lie algebra B _ 4: 2 * ((2 + sqrt(2)) ^ n + (2 - sqrt(2)) ^ n). ● a(n) = 2 * ((2 + sqrt(2)) ^ n + (2 - sqrt(2)) ^ n) = Sum _{ k=0..3 } 2 ^ (2n) (cos((2k + 1) * Pi / 8)) ^ (2n) = 2 * 2 ^ (2n) (cos(Pi / 8) ^ (2n) + cos(3 * Pi / 8) ^ (2n)) = 2 Sum _{ k=0..1 } (exp(i(2k + 1) * Pi / 8) + exp(- i * (2k + 1) * Pi / 8)) ^ (2n). ●

▶ [A008950] 4,8,24,90,114,524,888,1130,1328,9552,15684,19610,31398,155922,360654,370262,492114,1349534,1357202,2010734,4652354,17051708,20831324,47326694,122164748 ⋆ Increasing length runs of consecutive composite numbers (starting points). ● a(n) <= (n + 1)! + 2. [_ Joerg Arndt _ , May 01 2013] ●

▶ [A000964] 0,0,1,1,4,8,25,53,164,348,1077,2285,7072,15004,46437,98521,304920,646920,2002201,4247881,13147084,27892928,86327905,183153773,566856284 ⋆ The convergent sequence C _ n for the ternary continued fraction (3,1;2,2) of period 2. ● a(n) = 7 * a(n - 2) - 3 * a(n - 4) + a(n - 6); a(0)=0, a(1)=0, a(2)=1, a(3)=1, a(4)=4, a(5)=8. - _ Harvey P. Dale _ , Jun 29 2011 ●

▶ [A174171] 1,1,4,8,25,65,197,571,1753,5351,16746,52626,167547,536559,1732272,5622960,18357211,60205319,198323708,655787680,2176141555,7244106347,24185285341,80960692691,271685400443 ⋆ A generalized Chebyshev transform of the Motzkin numbers A001006. ● a(0) = a(1) = 1; a(n) = a(n - 1) + 2 * a(n - 2) + Sum _{ k=0..n - 2 } a(k) * a(n - k - 2). - _ Ilya Gutkovskiy _ , Nov 09 2021 ●

▶ [A099513] 1,4,8,27,89,257,784,2421,7336,22324,68147,207549,632177,1926608,5870089,17884476,54493120,166034731,505883825,1541369745,4696373312,14309268413,43598614528,132839740908,404746601923 ⋆ Row sums of triangle A099512, so that a(n) = Sum _{ k=0..n } coefficient of z ^ k in (1 + 3 * z + z ^ 2) ^ (n - [k / 2]), where [k / 2] is the integer floor of k / 2. ● a(0)=1, a(1)=4, a(2)=8, a(3)=27, a(n)=2 * a(n - 1) + a(n - 2) + 7 * a(n - 3) - a(n - 4) [From Harvey P. Dale, Jul 12 2011] ●

▶ [A117864] 4,8,28,48,148,248,748,1248,3748,6248,18748,31248,93748,156248,468748,781248,2343748,3906248,11718748,19531248,58593748,97656248,292968748,488281248,1464843748 ⋆ Number of palindromes (in base 5) below 5 ^ n. ● a(n) = 6 * 5 ^ ((n - 1) / 2) - 2 (n odd), 2 * 5 ^ (n / 2) - 2 (n even). ● a(1)=4, a(2)=8, a(3)=28, a(n)=a(n - 1) + 5 * a(n - 2) - 5 * a(n - 3). - _ Harvey P. Dale _ , May 30 2012 ●

▶ [A059480] 1,1,4,8,28,76,272,880,3328,12128,48736,194272,827840,3547648,15965248,72727616,344136832,1653233920,8191833728,41256512128,213285020416,1120928287232,6026483756800,32928762650368,183590856570368 ⋆ a(0) = a(1) = 1; a(n) = a(n - 1) + (n + 1) * a(n - 2). ● a(n) = a(n - 1) + (n + 1) * a(n - 2); a(0) = a(1) = 1; ● a(n) = B(0,n) + B(1,n) + B(2,n) / 2 + Q(1,n) + Q(2,n) + Q(3,n) / 2, n>=4, where B and Q are defined in the Mathematica section below. - _ Benedict W. J. Irwin _ , Apr 11 2017 ●

▶ [A020331] 4,8,30,40,50,60,70,80,252,280,308,336,364,392,420,448,476,504,532,560,588,616,644,672,700 ⋆ Numbers whose base - 3 representation is the juxtaposition of two identical strings. ● a(n) = n * 3 ^ floor(log _ 3(n) + 1) + n. - _ Ilya Gutkovskiy _ , Jan 26 2018 ●

▶ [A050442] 0,4,8,32,48,108,144,256,320,500,600,864,1008,1372,1568,2048,2304,2916,3240,4000,4400,5324,5808,6912,7488 ⋆ Octahedral torus number: a(n) = n ^ 2 + 2 * (Sum _{ k=1..n - 1 } k ^ 2) - 2 * (floor((n + 1) / 2) ^ 2 + 2 * (Sum _{

k=1..floor((n + 1) / 2) - 1 } k ^ 2)) + (1 - (- 1) ^ n) / 2. ● a(n) = (2 * n ^ 3 + n) / 3 - (2 / 3) * (2 * floor((n + 1) / 2) ^ 3 + floor((n + 1) / 2)) + (1 - (- 1) ^ n) / 2. ● a(n) = a(n - 1) + 3 * a(n - 2) - 3 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) + a(n - 6) - a(n - 7); a(1)=0, a(2)=4, a(3)=8, a(4)=32, a(5)=48, a(6)=108, a(7)=144. - _ Harvey P. Dale _ , May 13 2012 ●

► [A331408] 0,0,0,0,4,8,32,64,160,320,640,1280,2240,4480,7168,14336,21504,43008,61440,122880,168960,337920,450560,901120,1171456 ⋆ Number of subsets of { 1..n } that contain exactly three odd numbers. ● a(n) = binomial((n + 1) / 2,3) * 2 ^ ((n - 1) / 2), n odd; ● a(n) = binomial(n / 2,3) * 2 ^ (n / 2), n even. ● a(n) = 8 * a(n - 2) - 24 * a(n - 4) + 32 * a(n - 6) - 16 * a(n - 8) for n>8. (End) ●

► [A291938] 0,4,8,32,64,192,384,1024,2048,5120,10240,24576,49152,114688,229376,524288,1048576,2359296,4718592,10485760,20971520,46137344,92274688,201326592,402653184 ⋆ a(n) = 2 ^ (n - 1) (n - mod(n, 2)). ● a(n) = 2 ^ (n - 1) (n - mod(n, 2)). ● a(n) = 2 * a(n - 1) + 4 * a(n - 2) - 8 * a(n - 3). ●

► [A094015] 1,4,8,32,64,256,512,2048,4096,16384,32768,131072,262144,1048576,2097152,8388608,16777216,67108864,134217728,536870912,1073741824,4294967296,8589934592,34359738368,68719476736 ⋆ Expansion of (1 + 4 * x) / (1 - 8 * x ^ 2). ● a(n) = 2 ^ (3 * n / 2) * (1 + sqrt(2) + (- 1) ^ n * (1 - sqrt(2))) / 2. ● a(n) = (1 / 4) * (3 + (- 1) ^ n) * 8 ^ floor((n + 1) / 2). - _ Paul Barry _ , Jul 14 2004 ● a(n) = (1 + sqrt(2)) * (2 * sqrt(2)) ^ n / 2 + (1 - sqrt(2)) * (- 2 * sqrt(2)) ^ n / 2. Third binomial transform is A002315 (NSW numbers). - _ Paul Barry _ , Jul 17 2004 ● a(n + 3) = a(n + 2) * a(n + 1) / a(n). - _ Reinhard Zumkeller _ , Mar 04 2011 ●

► [A209084] 0,4,8,32,96,320,1024,3328,10752,34816,112640,364544,1179648,3817472,12353536,39976960,129368064,418643968,1354760192,4384096256,14187233280,45910851584,148570636288,480784678912,1555851902976 ⋆ a(n) = 2 * a(n - 1) + 4 * a(n - 2) with n>1, a(0)=0, a(1)=4. ● a(n) = (2 / sqrt(5)) * ((1 + sqrt(5)) ^ n - (1 - sqrt(5)) ^ n). ●

► [A241684] 0,0,4,8,32,120,464,1848,7312,29240,116624,466488,1864592,7458360,29827984,119311928,477225872,1908903480,7635526544,30542106168,122168075152,488672300600,1954687804304,7818751217208,31274999276432 ⋆ The total number of rectangles appearing in the Thue - Morse sequence logical matrices after n stages. ● a(n) = (8 + 3 * 2 ^ n + 2 * 4 ^ n + (- 1) ^ n * (24 - 2 ^ n)) / 18, n>0. - _ R. J. Mathar _ , May 04 2014 ●

► [A327493] 1,4,8,32,128,512,1024,4096,32768,131072,262144,1048576,4194304,16777216,33554432,134217728,2147483648,8589934592,17179869184,68719476736,274877906944,1099511627776,2199023255552,8796093022208,70368744177664 ⋆ a(n) = 2 ^ A327492(n). ● a(n) = denominator(b(n)) where b(n) = n! / (2 ^ n * floor(n / 2)!) ^ 2 is the normalized swinging factorial (A056040). ●

► [A103970] 1,4,8,32,128,576,2688,13056,65024,330752,1710080,8962048,47497216,254132224,1370849280,7447117824,40707293184,223731253248,1235630948352,6853893292032,38166664839168,213288826699776,1195775593807872 ⋆ Expansion of (1 - sqrt(1 - 4 * x - 12 * x ^ 2)) / (2 * x). ● a(n) = Sum _{ k=0..n } 3 ^ (n - k) * C(k) * C(k + 1, n - k). ●

► [A039303] 1,4,8,33,124,644,3288,18883,108284,642234,3808768,22785833,136315044,817291024,4900153448,29395534383,176340899404,1057996947014,6347691029328,38085710240533,228511646005364,1371065953050204 ⋆ Number of distinct quadratic residues mod 6 ^ n. ● a(n + 8) = 50 a(n + 6) - 553 a(n + 4) + 1800 a(n + 2) - 1296 a(n) for n >= 1. ●

► [A338086] 0,4,8,36,40,44,72,76,80,324,328,332,360,364,368,396,400,404,648,652,656,684,688,692,720 ⋆ Duplicate the ternary digits of n, so each 0, 1 or 2 becomes 00, 11 or 22 respectively. ● a(n) = 4 * Sum _{ i=0..k } d[i] * 9 ^ i where the ternary expansion of n is n = Sum _{ i=0..k } d[i] * 3 ^ i with digits d[i]=0,1,2. ●

► [A269012] 0,4,8,36,88,272,696,1900,4856,12588,31792,80288,200304,498004,1229672,3024948,7407496,18079664,43980072,106688956,258132824,623113020,1500935776,3608439104,8659683552 ⋆ Number of 2 X n binary arrays with some element plus some horizontally, diagonally or antidiagonally adjacent neighbor totalling two exactly once. ● a(n) = 4 * (- ((1 / 2) * (1 + sqrt(13))) ^ n * (sqrt(13) - 13 * n) + ((1 / 2) * (1 - sqrt(13))) ^ n * (sqrt(13) + 13 * n)) / 169. ●

► [A225824] 1,1,1,4,8,38,206,1200,7034,53012,465190,4072948,40967916,438348328,5113450320,63135973560,835727519000,11736948927176,175225673352928,2749604628466960,45540211979269216,791473522065224592,14405894145521294480,274114459633006310336 ⋆ The number of increasing rooted identity trees. ● a(n) = n! * W(1,n) where W(d,r) = (1 / r) ^ d * [x ^ r] x * exp(Sum _{ i>=1 } Sum _{ j>=1 } (- 1) ^ (i + 1) * W(i * d, j) * x ^ (i * j) / i). - _ Andrew Howroyd _ , Jan 22 2021 ●

► [A321717] 1,1,4,8,39,122,950,5042,45594,366243,3858148,39916802,494852628,6227020802,88543569808,1308012219556,21086562956045,355687428096002,6427672041650478,121645100408832002 ⋆ Number of non - normal (0,1) semi - magic rectangles with sum of all entries equal to n. ● a(p) = p! + 2 for p prime. a(n) >= n! + 2 for n > 1. - _ Chai Wah Wu _ , Jan 13 2019 ●

► [A249572] 1,4,8,48,88,488,888,4888,8888,48888,88888,488888,888888,4888888,8888888,48888888,88888888,488888888,888888888,4888888888,8888888888,48888888888,88888888888,488888888888,888888888888 ⋆ Least positive integer whose decimal digits divide the plane into n + 1 regions. Equivalently, least positive integer with n holes in its decimal digits. ● a(n) = 10 * a(n - 2) + 8 for n >= 3. ● a(n) = a(n - 1) + 10 * a(n - 2) - 10 * a(n - 3) for n > 4. ●

► [A231601] 1,1,1,4,8,54,162,1536,6144,75000,375000,5598720,33592320,592950960,4150656720,84557168640,676457349120,15620794116480,140587147048320,3628800000000000,36288000000000000,1035338990313196800,1138872889344516480,35590219837294510080 0 ⋆ Number of permutations of [n] avoiding ascents from odd to even numbers. ● a(n) = ceiling(n / 2)! * ceiling(n / 2) ^ floor(n / 2). ●

► [A120777] 1,4,8,64,128,512,1024,16384,32768,131072,262144,2097152,4194304,16777216,33554432,1073741824,2147483648,8589934592,17179869184,137438953472,274877906944,1099511627776,2199023255552 ⋆ One half of denominators of partial sums of a series for sqrt(2). ● a(n) = denominator(r(n)), with the rationals r(n) defined under A120088. ● a(n) = denom(C(2 * n + 2,n + 1) / 2 ^ (2 * n + 1)). ●

► [A105036] 0,4,8,116,220,3024,5724,78520,148616,2038508,3858304,52922700,100167300,1373951704,2600491508,35669821616,67512611920,926041410324,1752727418424,24041406846820,45503400267116,624150536607008 ⋆ a(n) = 26 * a(n - 2) - a(n - 4) + 12, with a(0) = 0, a(1) = 4, a(2) = 8, a(3) = 116. ● a(n) = 26 * a(n - 2) - a(n - 4) + 12, for n > 3. ● a(n) = - 1 / 2 + (5 * (7 + sqrt(42)) / 28 - (- 1) ^ n * (6 + sqrt(42)) / 6) * p ^ ((2 * n - 1 + (- 1) ^ n) / 4) + (5 * (7 - sqrt(42)) / 28 - (- 1) ^ n * (6 - sqrt(42)) / 6) * q ^ ((2 * n - 1 + (- 1) ^ n) / 4), where p = 13 + 2 * sqrt(42) and q = 13 - 2 * sqrt(42). - _ Paolo P. Lava _ , Aug 28 2009, [simplified by _ G. C. Greubel _ , Mar 15 2023] ● a(n) = a(n - 1) + 26 * a(n - 2) - 26 * a(n - 3) - a(n - 4) + a(n - 5). (End) ●

► [A088037] 4,9,9,49,225,961,3969,16129,65025,261121,1046529,4190209,16769025,67092481,268402689,1073676289,4294836225,17179607041,68718952449,274876858369,1099509530625,4398042316801,17592177655809 ⋆ Smallest square k == 1 (mod some n - th power), k > 1. ● a(n) = (2 ^ n - 2) ^ 2 / 4 for n>2. a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3) for n>5. G.f.: x * (2 * x + 1) * (32 * x ^ 3 - 56 * x ^ 2 + 27 * x - 4) / ((x - 1) * (2 * x - 1) * (4 * x - 1)). [_ Colin Barker _ , Feb 05 2013] ●

► [A266297] 0,1,4,9,10,11,14,19,20,21,24,29,30,31,34,39,40,41,44,49,50,51,54,59,60 ⋆ Numbers whose last digit is a square. ● a(n) = a(n - 1) + (n - 4) - a(n - 5) for n > 5. ● a(n) = (10n - 11 + (- 1) ^ n + (4 + 2(- 1) ^ n) * (- 1) ^ ((2n - 1 + (- 1) ^ n) / 4)) / 4. ●

► [A028837] 1,4,9,10,13,18,19,22,27,28,31,36,37,40,45,46,49,54,55,58,63,64,67,72,73 ⋆ Iterated sum of digits of n is a square. ● a(n) = a(n - 3) + 9. If n is a multiple of 3 then a(n) = 3n, otherwise a(n) = 3n - 2. Numbers of form { 0, 1, 4 } modulo 9 - _ Henry Bottomley _ , Jun 30 2000 ● a(1)=1, a(2)=4, a(3)=9, a(4)=10, a(n)=a(n - 1) + a(n - 3) - a(n - 4). - _ Harvey P. Dale _ , Jan 26 2015 ●

► [A140292] 4,9,10,14,15,21,22,25,26,35,39,49,51,55,69,82,86,87,91,95,106,115,119,121,122 ⋆ a(n) is a square mod a(n - 1), a(n) > a(n - 1) and a(n) semiprime. ● a(n + 1) = MIN { k>a(n) and a(n) is a quadratic residue of a(n + 1) and a(n + 1) is in A001358 } . ●

► [A157908] 0,1,4,9,10,14,40,44,49,90,91,94,99,100,104,110,111,114,119,140,141,144,190,194,400 ⋆ Nonprimes whose digits are all square. ● a(n) = Theta(n ^ (log _ 4 10)) ●

► [A236652] 1,4,9,10,18,19,22,27,28,36,37,40,45,46,54,55,58,63,64,72,73,76,81,82,90 ⋆ Positive integers n such that n ^ 2 divided by the digital root of n is a square. ● a(n) = a(n - 1) + a(n - 5) - a(n - 6). ●

► [A131457] 4,9,10,21,22,25,26,33,34,35,46,49,51,55,57,58,65,69,77,82,85,86,87,91,93 ⋆ Higgs' semiprimes: a(n + 1) = next semiprime such that a(n + 1) - 1 | (a(1)...a(n)) ^ 2. ● a(n + 1) = MIN { j in A001358 such that (j - 1) | PRODUCT[i=1..n]a(i) ^ 2. ●

► [A197125] 1,4,9,10,40,90,100,400,900,1000,1111,1177,1224,1242,1339,1393,1422,1717,1771,1933,2124,2142,2214,2241,2412 ⋆ Numbers such that sum of digits and sum of the square of digits are both a square. ● a(n) = { A028839 } intersection { A175396 } . ●

► [A365892] 1,4,9,11,20,22,35,37,54,56,77,79,104,106,135,137,170,172,209,211,252,254,299,301,350 ⋆ a(n) is the index of the n - th term of A365876 that includes at least one equation with at least one integer solution. ● a(1) = 1, a(n) = ((n + 1) ^ 2 - (- 1) ^ n * (n - 1)) / 2 for n >= 2. ● a(1) = 1, a(2) = 4, a(3) = 9, a(4) = 11, a(5) = 20, a(6) = 22, a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n >= 7. ●

► [A112652] 0,1,4,9,12,13,16,21,24,25,28,33,36,37,40,45,48,49,52,57,60,61,64,69,72 ⋆ a(n) squared is congruent to a(n) (mod 12). ● a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4). ●

► [A355571] 4,9,12,16,18,20,24,25,28,30,32,36,40,42,44,45,48,49,50,52,54,56,60,63,66 ⋆ Complement of A007956: numbers not of the form P(k) / k where P(n) is the product of the divisors of n. ● a(n) = n + O(n log log n / log n). - _ Charles R Greathouse IV _ , Jul 08 2022 ●

► [A047461] 1,4,9,12,17,20,25,28,33,36,41,44,49,52,57,60,65,68,73,76,81,84,89,92,97 ⋆ Numbers that are congruent to { 1, 4 } mod 8. ● a(n) = a(n - 2) + 8. ● a(n) = 8 * floor((n - 1) / 2) + 4 - 3 * (n mod 2). - _ Reinhard Zumkeller _ , Dec 15 2008 ● a(n) = 8 * n - a(n - 1) - 11 (with a(1)=1). - _ Vincenzo Librandi _ , Aug 06 2010 ● a(n) = 4 * n - (7 + (- 1) ^ n) / 2. - _ Arkadiusz Wesolowski _ , Sep 18 2012 ● a(1)=1, a(2)=4, a(3)=9, a(n) = a(n - 1) + a(n - 2) - a(n - 3). - _ Harvey P. Dale _ , Jun 18 2013 ●

► [A276885] 1,4,9,12,17,22,25,30,33,38,43,46,51,56,59,64,67,72,77,80,85,88,93,98,101 ⋆ Sums - complement of the Beatty sequence for 1 + phi. ● a(n) = 2[(n - 1) phi] + n, where phi = (1 + sqrt(5)) / 2 (see Example 1 in the paper 'The Frobenius problem for homomorphic embeddings of languages into the integers'). - _ Michel Dekking _ , Dec 21 2017 ●

► [A089910] 4,9,12,17,22,25,30,33,38,43,46,51,56,59,64,67,72,77,80,85,88,93,98,101,106 ⋆ Indices n at which blocks (1;1) occur in infinite Fibonacci word, i.e., such that A005614(n) = A005614(n + 1) = 1. ● a(n) = floor((2 + sqrt(5)) * n) + 0 or 1; ●

► [A124623] 1,4,9,12,21,32,37,52,69,80,97,112,137,156,177,208,225,256,293,316,349,384,421,448,489 ⋆ Number of unit squares having center within inscribed circle of an n X n integer square. ● a(n) = n ^ 2 - 4 * k(n); k(n) = number of exterior centers per quadrant. ●

► [A287498] 0,4,9,12,30,55,105,212,405,794,1551,3015,5889,11477,22374,43636,85068,165871,323418,630582,1229517,2397289,4674198,9113711,17769780 ⋆ Number of maximal independent vertex sets (and minimal vertex covers) in the n - web graph. ● a(n) = 2 * a(n - 2) + 3 * a(n - 3) + a(n - 4). ●

► [A174911] 1,4,9,12,33,36,57,60,65,68,119,122,209,212,217,220,623,626,713,716,721,724,745,748,897 ⋆ Sequence by greedy construction satisfying Lucier - Sárközy difference set condition. ● a(1) = 1. a(n) = least positive integer k such that the difference between any two elements of [a(1), ..., a(n - 1) } is never one less than a prime. ●

► [A032820] 1,4,9,12,33,36,73,76,97,100,265,268,289,292,585,588,609,612,777,780,801,804,2121,2124,2145 ⋆ Numbers whose set of base - 8 digits is { 1,4 } . ● a(1)=1, a(2)=4; a(n) = 8 * a(floor(n / 2)) + 1 for n odd, otherwise a(n) = 8 * a(floor((n - 1) / 2)) + 4. - _ Bruno Berselli _ , May 28 2012 ●

► [A033662] 4,9,13,15,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37 ⋆ Possible digital sums of Smith numbers (conjectural). ● a(n) in { 4, 9, 13, 15 } or a(n) >= 17 ●

► [A141000] 0,1,4,9,13,16,20,21,24,25,28,29,32,33,36,37,40,41,44,45,48,49,52,53,56 ⋆ Numbers k for which there is a solution to the Jumping Grasshopper game. ● a(n) = (11 - (- 1) ^ n + 4 * n) / 2 for n > 6. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n > 9. ●

► [A312909] 1,4,9,13,17,23,27,31,37,41,45,50,54,58,63,67,71,77,81,85,91,95,99,104,108 ⋆ Coordination sequence Gal.6.150.2 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) - a(n - 6) + a(n - 7) + a(n - 9) - a(n - 10) for n > 10. ●

► [A312926] 1,4,9,13,18,22,26,30,34,39,43,48,52,56,61,65,70,74,78,82,86,91,95,100,104 ⋆ Coordination sequence Gal.6.118.4 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = 2 * a(n - 1) - a(n - 2) - a(n - 4) + 2 * a(n - 5) - a(n - 6) - a(n - 8) + 2 * a(n - 9) - a(n - 10) for n > 10. ●

► [A312927] 1,4,9,13,18,22,26,30,35,39,44,48,52,57,61,66,70,74,78,83,87,92,96,100,105 ⋆ Coordination sequence Gal.6.149.5 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = a(n - 1) + a(n - 11) - a(n - 12) for n > 12. ●

► [A312928] 1,4,9,13,18,22,26,31,35,40,44,48,53,57,62,66,70,75,79,84,88,92,97,101,106 ⋆ Coordination sequence Gal.3.16.2 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = a(n - 1) + a(n - 5) - a(n - 6) for n > 6. ●

► [A312932] 1,4,9,13,18,22,27,31,36,40,44,49,53,58,62,67,71,76,80,84,89,93,98,102,107 ⋆ Coordination sequence Gal.5.81.4 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = a(n - 1) + a(n - 9) - a(n - 10) for n > 10. ●

► [A330183] 4,9,13,18,22,27,31,36,40,45,51,55,60,64,69,73,78,82,87,91,96,102,106,111,115 ⋆ a(n) = n + floor(ns / r) + floor(nt / r), where r = sqrt(2) - 1 / 2, s = sqrt(2), t = sqrt(2) + 1 / 2. ● a(n) = n + floor(ns / r) + floor(nt / r), where r = sqrt(2) - 1 / 2, s = sqrt(2), t = sqrt(2) + 1 / 2. ●

► [A312933] 1,4,9,13,18,22,27,32,36,41,45,50,54,58,63,67,72,76,81,86,90,95,99,104,108 ⋆ Coordination sequence Gal.6.131.3 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = 2 * a(n - 1) - a(n - 2) - a(n - 6) + 2 * a(n - 7) - a(n - 8) for n > 8. ●

► [A330179] 4,9,13,18,22,27,33,37,42,46,51,55,61,66,70,75,79,84,90,94,99,103,108,112,118 ⋆ a(n) = n + floor(ns / r) + floor(nt / r), where r = e - 1, s = e, t = e + 1. ● a(n) = n + floor(ns / r) + floor(nt / r), where r = e - 1, s = e, t = e + 1. ●

► [A312935] 1,4,9,13,18,22,28,32,37,41,46,50,54,59,63,68,72,78,82,87,91,96,100,104,109 ⋆ Coordination sequence Gal.4.105.1 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = a(n - 1) + a(n - 11) - a(n - 12) for n > 12. ●

► [A312941] 1,4,9,13,18,23,27,31,36,40,45,50,54,58,63,67,72,77,81,85,90,94,99,104,108 ⋆ Coordination sequence Gal.5.14.2 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = a(n - 1) + a(n - 6) - a(n - 7) for n > 7. ●

► [A312943] 1,4,9,13,18,23,27,32,36,40,45,49,54,59,63,68,72,76,81,85,90,95,99,104,108 ⋆ Coordination sequence Gal.4.41.2 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = 2 * a(n - 1) - a(n - 2) - a(n - 4) + 2 * a(n - 5) - a(n - 6) for n > 6. ●

► [A276855] 0,4,9,13,18,23,27,32,36,41,46,50,55,60,64,69,73,78,83,87,92,96,101,106,110 ⋆ Beatty sequence for (3 + golden ratio). ● a(n) = floor(n * (7 + sqrt(5)) / 2). ●

► [A312944] 1,4,9,13,18,23,27,32,37,41,46,50,54,59,63,68,73,77,82,87,91,96,100,104,109 ⋆ Coordination sequence Gal.6.245.2 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = a(n - 1) + a(n - 11) - a(n - 12) for n > 12. ●

► [A312948] 1,4,9,13,18,23,28,33,37,42,46,50,55,59,64,69,74,79,83,88,92,96,101,105,110 ⋆ Coordination sequence Gal.5.66.2 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - 2 * a(n - 4) + 2 * a(n - 5) - 2 * a(n - 6) + 2 * a(n - 7) - 2 * a(n - 8) + 2 * a(n - 9) - a(n - 10) for n > 10. ●

► [A312950] 1,4,9,13,18,23,28,33,38,43,47,52,56,60,65,69,74,79,84,89,94,99,103,108,112 ⋆ Coordination sequence Gal.6.151.2 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = a(n - 1) + a(n - 2) - 2 * a(n - 4) + a(n - 6) + a(n - 7) - a(n - 8) for n > 8. ●

► [A312960] 1,4,9,13,18,24,28,32,38,42,46,52,56,60,66,70,74,80,84,88,94,98,102,108,112 ⋆ Coordination sequence Gal.4.106.2 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n > 7. ●

► [A184901] 4,9,13,18,24,28,33,37,43,48,52,57,63,67,72,76,82,87,91,96,100,106,111,115,120 ⋆ n + floor(ns / r) + floor(nt / r), where r=(1 + sqrt(5)) / 2, s=r + 1, t=r + 2. ● a(n)=n + floor(ns / r) + floor(nt / r), where r=(1 + sqrt(5)) / 2, s=r + 1, t=r + 2. ●

► [A312961] 1,4,9,13,18,24,28,34,39,43,48,52,56,61,65,70,76,80,86,91,95,100,104,108,113 ⋆ Coordination sequence Gal.6.152.2 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = a(n - 1) + a(n - 11) - a(n - 12) for n > 12. ●

► [A312963] 1,4,9,13,18,24,29,34,40,45,49,54,58,62,67,71,76,82,87,92,98,103,107,112,116 ⋆ Coordination sequence Gal.6.153.2 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) - a(n - 6) + a(n - 7) + a(n - 9) - a(n - 10) for n > 10. ●

► [A312969] 1,4,9,13,19,23,27,31,35,41,45,50,54,58,63,67,73,77,81,85,89,95,99,104,108 ⋆ Coordination sequence Gal.6.254.3 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = 3 * a(n - 1) - 4 * a(n - 2) + 3 * a(n - 3) - a(n - 4) - a(n - 6) + 3 * a(n - 7) - 4 * a(n - 8) + 3 * a(n - 9) - a(n - 10) for n > 10. ●

► [A184912] 4,9,13,19,23,28,34,39,43,49,53,58,63,69,73,79,83,88,93,98,103,109,113,118,122 ⋆ n + [ns / r] + [nt / r] + [nu / r], where []=floor and r=2 ^ (1 / 5), s=r ^ 2, t=r ^ 3, u=r ^ 4. ● a(n)=n + [ns / r] + [nt / r] + [nu / r], where []=floor and ●

► [A035104] 1,4,9,13,19,24,31,37,45,52,61,69,79,88,99,109,121,132,145,157,171,184,199,213,229 ⋆ First differences give (essentially) A028242. ● a(n) = (5 + 3 * (- 1) ^ n + 28 * n + 2 * n ^ 2) / 8. ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4). ●

► [A022130] 4,9,13,22,35,57,92,149,241,390,631,1021,1652,2673,4325,6998,11323,18321,29644,47965,77609,125574,203183,328757,531940 ⋆ Fibonacci sequence beginning 4,9. ● a(n) = 4 * Fibonacci(n + 2) + Fibonacci(n). ● a(n)= Fibonacci(n - 2) + Fibonacci(n + 5). - _ Gary Detlefs _ , Mar 31 2012 ●

► [A042125] 1,4,9,13,22,35,57,1346,1403,2749,4152,6901,17954,78717,3796370,15264197,34324764,49588961,83913725,133502686,217416411,513408013953514965 50,10485576689,15837073239 ⋆ Denominators of continued fraction convergents to sqrt(587). ● a(n) = 3814324 * a(n - 14) - a(n - 28) for n>27, - _ Vincenzo Librandi _ , Jan 15 2014 ●

► [A041905] 1,1,4,9,13,22,35,232,267,499,766,2031,6859,8890,380239,389129,1547626,3484381,5032007,8516388,13548395,89806758,103355153,193161911,296517064 ⋆ Denominators of continued fraction convergents to sqrt(474). ● a(n) = 387098 * a(n - 14) - a(n - 28) for n>27. - _ Vincenzo Librandi _ , Dec 26 2013 ●

► [A041323] 1,4,9,13,35,153,4013,16205,36423,52628,141679,619344,16244623,65597836,147440295,213038131,573516557,2507104359,65758229891,265540023923,596838277737,862378301660,2321594881057,10148757825888,266189298354145 ⋆ Denominators of continued fraction convergents to sqrt(175). ● a(n) = 4048 * a(n - 6) - a(n - 12). - _ Vincenzo Librandi _ , Dec 15 2013 ●

► [A041028] 4,9,13,48,61,170,1421,3012,4433,16311,20744,57799,483136,1024071,1507207,5545692,7052899,19651490,164264819,348181128,512445947,1885518969,2397964916,6681448801,55849555324 ⋆ Numerators of continued fraction convergents to sqrt(19). ● a(n) = 340 * a(n - 6) - a(n - 12). G.f.: - (x ^ 11 - 4 * x ^ 10 + 9 * x ^ 9 - 13 * x ^ 8 + 48 * x ^ 7 - 61 * x ^ 6 - 170 * x ^ 5 - 61 * x ^ 4 - 48 * x ^ 3 - 13 * x ^ 2 - 9 * x - 4) / (x ^ 12 - 340 * x ^ 6 + 1). [_ Colin Barker _ , Jul 16 2012] ●

► [A041211] 1,1,4,9,13,61,74,209,701,910,18901,19811,78334,176479,254813,1195731,1450544,4096819,13741001,17837820,370497401,388335221,1535503064,3459341349,4994844413 ⋆ Denominators of continued fraction convergents to sqrt(116). ● a(n) = 19602 * a(n - 10) - a(n - 20). - _ Vincenzo Librandi _ , Dec 13 2013 ●

► [A042323] 1,4,9,13,74,531,1667,12200,62667,74867,212401,924471,48284893,194064043,436412979,630477022,3588798089,25752063645,80844989024,591666986813,3039179923089,3630846909902,10300873742893,4483434188147 4,23416866515 79541 ⋆ Denominators of continued fraction convergents to sqrt(688). ● a(n) = 48497294 * a(n - 12) - a(n - 24) for n>23. - _ Vincenzo Librandi _ , Jan 20 2014 ●

► [A313025] 1,4,9,14,18,22,26,30,35,40,44,48,53,58,62,66,70,74,79,84,88,92,97,102,106 ⋆ Coordination sequence Gal.5.65.5 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - 2 * a(n - 4) + 2 * a(n - 5) - 2 * a(n - 6) + 2 * a(n - 7) - 2 * a(n - 8) + 2 * a(n - 9) - a(n - 10) for n > 10. ●

► [A301293] 1,4,9,14,18,22,27,32,36,40,45,50,54,58,63,68,72,76,81,86,90,94,99,104,108 ⋆ Expansion of (x ^ 2 + x + 1) ^ 2 / ((x ^ 2 + 1) * (x - 1) ^ 2). ● a(n) = 9 * n / 2 + (1 - (- 1) ^ n) * i ^ (n * (n + 1)) / 4 for n>0, a(0)=1 and i=sqrt(- 1). Therefore, for even n>0 a(n) = 9 * n / 2, otherwise a(n) = 9 * n / 2 - (- 1) ^ ((n - 1) / 2) / 2. - _ Bruno Berselli _ , Mar 23 2018 ● a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4) for n>4. - _ Colin Barker _ , Mar 23 2018 ●

► [A313033] 1,4,9,14,18,22,28,33,37,41,47,52,55,60,65,70,74,79,84,88,93,97,102,107,112 ⋆ Coordination sequence Gal.5.247.1 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = a(n - 1) - a(n - 2) + a(n - 3) + a(n - 7) - a(n - 8) + a(n - 9) - a(n - 10) for n > 14. ●

► [A038123] 4,9,14,18,23,28,32,37,42,46,51,56,60,65,70,74,79,84,88,93,98,102,107,112,116 ⋆ Beatty sequence for Feigenbaum's constant. ● a(n)=floor(n * 4.6692016609..) ●

► [A182778] 4,9,14,18,23,28,33,37,42,47,52,56,61,66,70,75,80,85,89,94,99,104,108,113,118 ⋆ Beatty sequence for 3 + sqrt(3). ● a(n) = floor(n * (3 + sqrt(3))). ●

► [A100215] 4,9,14,18,24,44,104,248,544,1104,2144,4128,8064,16064,32384,65408,131584,263424,525824,1049088,2095104,4189184,8382464,16775168,33562624 ⋆ Expansion of (4 - 7 * x + 2 * x ^ 2) / ((1 - 2 * x) * (1 - 2 * x + 2 * x ^ 2)). ● a(n) = 4a(n - 1) - 6a(n - 2) + 4a(n - 3). ● a(n) = vesseq(.5 'j + .5 'k + .5 j' + .5 k' + 1 'ii' + 1 e), where ves sums over all floretion basis vector coefficients. ●

► [A313088] 1,4,9,14,19,23,27,31,35,40,45,50,54,58,63,68,73,77,81,85,89,94,99,104,108 ⋆ Coordination sequence Gal.6.120.4 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = 3 * a(n - 1) - 4 * a(n - 2) + 3 * a(n - 3) - a(n - 4) - a(n - 6) + 3 * a(n - 7) - 4 * a(n - 8) + 3 * a(n - 9) - a(n - 10) for n > 10. ●

► [A016897] 4,9,14,19,24,29,34,39,44,49,54,59,64,69,74,79,84,89,94,99,104,109,114,119,124 ⋆ a(n) = 5n + 4. ● a(n) = 2 * a(n - 1) - a(n - 2), n>1. - _ Philippe Deléham _ , Nov 03 2008 ● a(n) = 10 * n - a(n - 1) + 3, n>0. - _ Vincenzo Librandi _ , Nov 20 2010 ●

► [A313121] 1,4,9,14,19,25,28,33,40,42,48,54,56,63,68,71,77,82,86,91,97,100,105,112,114 ⋆ Coordination sequence Gal.3.25.1 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = a(n - 3) + a(n - 5) - a(n - 8) for n > 10. ●

► [A313154] 1,4,9,14,20,26,32,38,43,48,52,56,61,66,72,78,84,90,95,100,104,108,113,118,124 ⋆ Coordination sequence Gal.6.252.2 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - 2 * a(n - 4) + 2 * a(n - 5) - 2 * a(n - 6) + 2 * a(n - 7) - 2 * a(n - 8) + 2 * a(n - 9) - a(n - 10) for n > 10. ●

► [A086192] 1,4,9,14,27,50,91,168,309,568,1045,1922,3535,6502,11959,21996,40457,74412,136865,251734,463011,851610,1566355,2880976,5298941 ⋆ Tribonacci numbers that start with first three squares. ● a(n) = a(n - 1) + a(n - 2) + a(n - 3). ●

► [A330173] 4,9,15,19,25,30,34,40,45,51,55,60,66,70,76,81,87,91,96,102,106,112,117,121,127 ⋆ a(n) = n + floor(ns / r) + floor(nt / r), where r = sqrt(2), s = sqrt(2) + 1, t = sqrt(2) + 2. ● a(n) = n + floor(ns / r) + floor(nt / r), where r = sqrt(2), s = sqrt(2) + 1, t = sqrt(2) + 2. ●

► [A184916] 4,9,15,19,25,31,35,41,46,51,57,62,67,72,78,83,89,94,98,104,109,115,120,125,131 ⋆ n + [sn / r] + [tn / r] + [un / r], where []=floor and r=1, s=2 ^ (1 / 4), t=s ^ 2, u=s ^ 3. ● a(n)=n + [sn / r] + [tn / r] + [un / r], where []=floor and ●

► [A313241] 1,4,9,15,20,24,29,35,40,44,48,53,59,64,68,73,79,84,88,92,97,103,108,112,117 ⋆ Coordination sequence Gal.5.86.1 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = a(n - 1) + a(n - 9) - a(n - 10) for n > 10. ●

► [A313259] 1,4,9,15,20,25,31,36,41,47,52,56,60,65,71,76,81,87,92,97,103,108,112,116,121 ⋆ Coordination sequence Gal.6.204.1 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = a(n - 1) + a(n - 11) - a(n - 12) for n > 12. ●

► [A313264] 1,4,9,15,20,25,32,36,40,47,52,56,62,68,72,76,82,87,92,98,104,109,112,118,124 ⋆ Coordination sequence Gal.5.216.5 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = a(n - 1) - a(n - 4) + a(n - 5) + a(n - 7) - 2 * a(n - 8) + a(n - 9) + a(n - 11) - a(n - 12) + a(n - 15) - a(n - 16) for n > 19. ●

► [A313265] 1,4,9,15,20,25,32,37,40,45,51,56,61,66,72,78,81,86,92,96,102,107,113,119,121 ⋆ Coordination sequence Gal.6.475.1 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = a(n - 1) - a(n - 2) + a(n - 3) - a(n - 4) + 2 * a(n - 5) - 2 * a(n - 6) + 2 * a(n - 7) - a(n - 8) + a(n - 9) - a(n - 10) + a(n - 11) - a(n - 12) for n > 14. ●

► [A313297] 1,4,9,15,21,27,33,39,45,51,57,62,66,70,75,81,87,93,99,105,111,117,123,128,132 ⋆ Coordination sequence Gal.6.210.1 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = 3 * a(n - 1) - 4 * a(n - 2) + 3 * a(n - 3) - a(n - 4) - a(n - 6) + 3 * a(n - 7) - 4 * a(n - 8) + 3 * a(n - 9) - a(n - 10) for n > 10. ●

► [A270545] 1,4,9,15,21,27,33,39,45,51,57,63,69,75,81,87,93,99,105,111,117,123,129,135,141 ⋆ Number of equilateral triangle units forming perimeter of equilateral triangle. ● a(0)=1 and a(1)=4; thereafter a(n) = (n + 1) ^ 2 - (n - 2) ^ 2 = 6 * n - 3. ● a(n) = 2 * a(n - 1) - a(n - 2) for n>3. G.f.: (1 + x) * (1 + x + x ^ 2) / (1 - x) ^ 2. - _ Colin Barker _ , Mar 20 2016 ●

► [A055999] 0,4,9,15,22,30,39,49,60,72,85,99,114,130,147,165,184,204,225,247,270,294,319,345,372 ⋆ a(n) = n * (n + 7) / 2. ● a(n) = n + a(n - 1) + 3 (with a(0)=0). - _ Vincenzo Librandi _ , Aug 07 2010 ● a(n) = Sum _{ k=1..n } (k + 3). - _ Gary Detlefs _ , Aug 10 2010 ● a(n) = 4n - floor(n / 2) + floor(n ^ 2 / 2). - _ Wesley Ivan Hurt _ , Jun 15 2013 ● a(n) = Sum _{ i=4..n + 3 } i. - _ Wesley Ivan Hurt _ , Jun 28 2013 ●

► [A134227] 1,4,9,15,22,30,39,49,60,72,85,99,114,130,147,165,184,204,225,247,270,294,319,345,372 ⋆ Row sums of triangle A134226. ● a(n) = (n - 1) * (n + 6) / 2 + [n=1]. ●

► [A281026] 0,1,4,9,15,22,31,42,54,67,82,99,117,136,157,180,204,229,256,285,315,346,379,414,450 ⋆ a(n) = floor(3 * n * (n + 1) / 4). ● a(n) = a(- n - 1) = 3 * a(n - 1) - 4 * a(n - 2) + 4 * a(n - 3) - 3 * a(n - 4) + a(n - 5) = a(n - 4) + 6 * n - 9. ● a(n) = 3 * n * (n + 1) / 4 + (i ^ (n * (n + 1)) - 1) / 4. Therefore: ● a(4 * k + r) = 12 * k ^ 2 + 3 * (2 * r + 1) * k + r ^ 2, where 0 <= r <= 3. ● a(n) = n ^ 2 - floor((n - 1) * (n - 2) / 4). ●

► [A184005] 1,4,9,15,23,32,43,55,69,84,101,119,139,160,183,207,233,260,289,319,351,384,419,455,493 ⋆ a(n) = n - 1 + ceiling(3 * n ^ 2 / 4); complement of A184004. ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + 1 * a(n - 4). ● a(n) = (6 * n ^ 2 + 8 * n - (- 1) ^ n - 7) / 8. (End) ● a(n) = round((6 * n ^ 2 + 8 * n - 7) / 8). - _ Bruno Berselli _ , Jan 25 2011 ● a(n) = n ^ 2 - floor((n - 2) ^ 2 / 4). - _ Bruno Berselli _ , Jan 17 2017 ●

► [A080819] 1,4,9,16,16,25,36,36,49,64,81,81,100,121,121,144,169,196,196,225,256,256,289,324,361 ⋆ Row sums from triangle in A080818. ● a(n) = (ceiling(sqrt(n * (n + 1) / 2))) ^ 2. - C. Ronaldo (aga _ new _ ac(AT)hotmail.com), Dec 19 2004 ●

► [A234000] 1,4,9,16,17,25,33,36,41,49,57,64,65,68,73,81,89,97,100,105,113,121,129,132,137 ⋆ Numbers of the form 4 ^ i * (8 * j + 1). ● a(n) = 6n + O(log n). - _ Charles R Greathouse IV _ , Dec 19 2013 ●

► [A072903] 4,9,16,18,20,25,27,32,36,45,48,49,50,52,54,63,64,68,72,75,80,81,84,90,96 ⋆ Numbers m such that the discriminant of the quadratic field Q(sqrt(m)) < m. ● a(n) appears to be asymptotic to C * n with C = 3.4... . ●

► [A301758] 1,4,9,16,21,22,25,32,41,50,61,72,85,98,113,128,145,162,181,200,221,242,265,288,313 ⋆ Clique covering number of the n X n fiveleaper graph. ● a(n) = 3 + (- 1) ^ n + 2 * n * (n + 2)) / 4 for n >= 6. ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4) for n >=10. ●

► [A286069] 1,4,9,16,21,24,25,36,48,60,72,84,92,98,113,132,153,168,185,200,221,242,265,288,313 ⋆ Independence and clique covering number of the n X n antelope graph. ● a(n) = 2 * (a - 1) - 2 * a(n - 3) + a(n - 4) for n >= 24. - _ Eric W. Weisstein _ , Apr 19 2019 ●

► [A360927] 0,1,4,9,16,21,28,33,40,45,52,57,64,69,76,81,88,93,100,105,112,117,124,129,136 ⋆ Expansion of the g.f. x * (1 + 3 * x + 4 * x ^ 2 + 4 * x ^ 3) / ((1 - x) ^ 2 * (1 + x)). ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n > 4. ● a(0) = 0, a(1) = 1, a(n) = 6 * n - 8 for n even, and a(n) = 6 * n - 9 for n odd. ●

► [A246336] 1,4,9,16,21,32,49,64,69,80,97,116,137,176,225,256,261,272,289,308,329,368,417,452,473 ⋆ Partial sums of A151548. ● a(2 ^ k - 2) = (2 ^ k - 1) ^ 2, if k >= 1. ● a(2 ^ k - 1) = 4 ^ k, if k >= 1. ● a(2 ^ k) = 4 ^ k + 5, if k >= 1. ●

► [A027874] 0,4,9,16,23,30,38,46,54,64,74,84,94,104,114,124,134,144,155,166,177,188,199,210,221 ⋆ Minimal degree path length of a tree with n leaves. ● a(n) = 3 * q * n + 2 * (n - 3 ^ q), if 2 * 3 ^ (q - 1)<=n<=3 ^ q; 3 * q * n + 4 * (n - 3 ^ q), if 3 ^ q<=n<=2 * 3 ^ q. ●

► [A281151] 0,1,4,9,16,24,33,44,57,72,88,105,124,145,168,192,217,244,273,304,336,369,404,441,480 ⋆ a(n) = floor(4 * n * (n + 1) / 5). ● a(n) = a(- n - 1) = 2 * a(n - 1) - a(n - 2) + a(n - 5) - 2 * a(n - 6) + a(n - 7) = a(n - 5) + 8 * (n - 2). ● a(5 * k + r) = 20 * k ^ 2 + 4 * (2 * r + 1) * k + r ^ 2, where 0 <= r <= 4. Example: for r=3, a(5 * k + 3) = (2 * k + 1) * (10 * k + 9), which gives: 9, 57, 145, 273, 441, 649 etc. Also, a(n) belongs to A047462, in fact: for r = 0 or 4, a(n) == 0 (mod 8); for r = 1 or 3, a(n) == 1 (mod 8); for r = 2, a(n) == 4 (mod 8). ● a(n) = n ^ 2 - floor((n - 2) ^ 2 / 5). ●

► [A061077] 1,4,9,16,25,26,29,34,41,50,52,58,68,82,100,103,112,127,148,175,179,191,211,239,275 ⋆ a(n) is the sum of the products of the digits of the first n odd numbers. ● a(n) = Sum _{ k = 1..n } (product of the digits of 2k - 1). ● a(5 * 10 ^ n) = (25 / 44) * (45 ^ (n + 1) - 1). ● a(n) <= (25 / 44) * (45 ^ (log(n / 5) + 1) - 1) for all n. ●

► [A004120] 1,4,9,16,25,35,46,58,71,85,100,116,133,151,170,190,211,233,256,280,305,331,358,386,415 ⋆ Expansion of (1 + x - x ^ 5) / (1 - x) ^ 3. ● a(n) = n * (n + 11) / 2 - 5, n>=3. - _ R. J. Mathar _ , Mar 15 2011 ●

► [A080151] 1,4,9,16,25,36,49,64,81,82,85,90,97,106,117,130,145,162,163,166,171,178,187,198,211 ⋆ Let m = Wonderful Demlo number A002477(n); a(n) = sum of digits of m. ● a(n) = (9 ^ 2) * (n / 9 - { n / 9 } + { n / 9 }^ 2) = 81 * (floor(n / 9) + { n / 9 }^ 2), where the symbol { n } means fractional part of n. - _ Enrique Pérez Herrero _ , Nov 22 2009 ● a(9 * n + k) = 81 * n + k ^ 2, with k in range 0 to 9. - _ Enrique Pérez Herrero _ , Nov 05 2022 ●

► [A000290] 0,1,4,9,16,25,36,49,64,81,100,121,144,169,196,225,256,289,324,361,400,441,484,529,576 ⋆ The squares: a(n) = n ^ 2. ● a(n) = a(- n). ● a(0) = 0, a(1) = 1, a(n) = 2 * a(n - 1) - a(n - 2) + 2. - _ Miklos Kristof _ , Mar 09 2005 ● a(n) is the sum of the odd numbers from 1 to 2 * n - 1. ● a(0) = 0, a(1) = 1, then a(n) = a(n - 1) + 2 * n - 1. (End) ● a(n) = binomial(n + 1, 2) + binomial(n, 2). ● a(n) = floor(n * (n + 1) * (Sum _{ i = 1..n } 1 / (n * (n + 1)))). - _ Ctibor O. Zizka _ , Mar 07 2009 ●

► [A253909] 1,1,4,9,16,25,36,49,64,81,100,121,144,169,196,225,256,289,324,361,400,441,484,529,576 ⋆ 1 together with the positive squares. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>=4. - _ David Neil McGrath _ , May 23 2015 ●

► [A265078] 1,4,9,16,25,37,52,69,88,109,133,160,189,220,253,289,328,369,412,457,505,556,609,664,721 ⋆ Partial sums of A072154. ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 5) - 2 * a(n - 6) + a(n - 7). - _ Vincenzo Librandi _ , Jan 01 2016 ●

► [A181640] 0,0,0,1,4,9,16,25,37,53,73,97,125,158,197,242,293,350,414,486,566,654,750,855,970 ⋆ Partial sums of floor(n ^ 2 / 5) (A118015). ● a(n) = Sum _{ k =0..n } floor(k ^ 2 / 5). ● a(n) = round((2 * n ^ 3 + 3 * n ^ 2 - 11 * n - 6) / 30). ● a(n) = floor((2 * n ^ 3 + 3 * n ^ 2 - 11 * n + 6) / 30). ● a(n) = ceiling((2 * n ^ 3 + 3 * n ^ 2 - 11 * n - 18) / 30). ● a(n) = a(n - 5) + (n - 2) ^ 2, n > 4. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 5) - 3 * a(n - 6) + 3 * a(n - 7) - a(n - 8) for n > 7. (End) ●

► [A033616] 1,4,9,16,25,37,53,74,99,125,151,177,205,238,279,328,381,434,483,528,574,627,690,762,840 ⋆ Coordination sequence T1 for Zeolite Code TSC. ● a(0) = 1, a(1) = 4, a(2) = 9, a(3) = 16, a(4) = 25, a(5) = 37, a(6) = 53, a(7) = 74, a(8) = 99, a(9) = 125, a(10) = 151, a(11) = 177, a(12) = 205, a(13) = 238, a(14) = 279, a(15) = 328, a(16) = 381, a(17) = 434, a(18) = 483, a(19) = 528, a(20) = 574, a(21) = 627 ●

► [A011895] 0,0,0,0,1,4,9,16,25,38,55,76,101,132,168,210,258,313,376,447,526,613,710,817,934 ⋆ a(n) = floor(n * (n - 1) * (n - 2) / 13). ● a(n) = + 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 13) - 3 * a(n - 14) + 3 * a(n - 15) - a(n - 16). -_ R. J. Mathar _ , Apr 15 2010 ●

► [A206920] 0,1,4,9,16,25,40,57,78,105,136,169,214,265,328,393,466,551,644,743,850,969,1096,1225,1378 ⋆ Sum of the first n binary palindromes; a(n) = Sum _{ k=1..n } A006995(k). ● a(n) = (8 / 7) * ((3 / 4) * (4 - (- 1) ^ m) / (3 + (- 1) ^ m) * 2 ^ (3 * floor(m / 2)) - 1) + (floor(p / 2 ^ floor(m / 2)) mod 2) * p + 2 ^ m + 1 + Sum _{ k = 1..(floor(m / 2) - 1) } (floor(p / 2 ^ k) mod 2) * (2 ^ k + 2 ^ (m - k) + 2 ^ (m - floor(m / 2) + 1) * (4 ^ (floor(m / 2) - k - 1) - 1) + (2 - (- 1) ^ m) * 2 ^ floor(m / 2) + 2 ^ (floor(m / 2) - k) * (p - floor((p mod (2 ^ (m - k + 1))) / 2 ^ k) * 2 ^ k)). - [Corrected; missing factor to the sum term (2 - (- 1) ^ m) pasted by the author, Sep 07 2018] ● a(n) = A _ m + B _ m + 2 ^ m + 1 + Sum _{ k = 1..(m2 - 1) } C _ k * (D _ k + E _ k + F _ k + G _ k), ●

► [A108612] 1,4,9,16,25,42,56,72,90,110,143,168,195,224,255,304,340,378,418,460,504,572,621,672,725 ⋆ Beatty - 2 (or nested Beatty) sequence for 1 / sin(1). ● a(n) = floor(n * floor(n / sin(1))). ●

► [A036454] 4,9,16,25,49,64,81,121,169,289,361,529,625,729,841,961,1024,1369,1681,1849,2209,2401,2809,3481,3721 ⋆ Prime powers with special exponents: q ^ (p - 1) where p > 2 and q are prime numbers. ● a(n) = (n log n) ^ 2 + 2n ^ 2 log n log log n + O(n ^ 2 log n). - _ Charles R Greathouse IV _ , Apr 26 2012 ●

► [A022334] 1,4,9,16,26,38,52,69,88,109,133,159,187,218,251,286,324,364,406,451,498,547,599,653,709 ⋆ Index of 5 ^ n within sequence of numbers of form 2 ^ i * 5 ^ j. ● a(n) = Sum _{ i=0..n } 1 + floor(log(5 ^ i) / log(2)). - _ Michel Marcus _ , Oct 02 2013 ●

► [A370307] 1,4,9,16,26,39,56,77,103,134,171,214,264,321,386,459,541,632,733,844,966,1099,1244,1401,1571 ⋆ Number of left - labeled (2,n) - bipartite graphs. ● a(n) = (2 * n ^ 3 + 15 * n ^ 2 + 58 * n + 22.5 + 1.5 * (- 1) ^ n) / 24. ●

► [A100216] 1,4,9,16,26,44,84,176,376,784,1584,3136,6176,12224,24384,48896,98176,196864,393984,787456,1573376,3144704,6288384,12578816,25163776 ⋆ Relates row sums of Pascal's triangle to expansion of cos(x) / exp(x). ● a(n + 3) = 4a(n) - 6a(n + 1) + 4a(n + 2), a(0) = 1, a(1) = 4, a(2) = 9; ●

► [A213495] 1,4,9,16,27,38,53,70,89,110,135,160,189,220,253,288,327,366,409,454,501,550,603,656,713 ⋆ Number of (w,x,y) with all terms in { 0,...,n } and w =

min(|w - x|,|x - y|,|y - w|). ● a(n) = a(n - 1) + a(n - 2) - a(n - 4) - a(n - 5) + a(n - 6). ●

▶ [A109593] 1,4,9,16,27,40,55,72,91,112,135,160,189,220,253,288,325,364,405,448,493,540,589,640,693 ★ Sequence and first differences include all odd numbers exactly once. ● a(n) = n ^ 2 + C * n ^ (3 / 2) + O(n), where C = 5 / 6. According to the simplified model: the sum of n consecutive odd numbers without the odd squares. - _ Thomas Ordowski _ , Sep 24 2014 ●

▶ [A132074] 1,4,9,16,27,46,81,148,279,538,1053,2080,4131,8230,16425,32812,65583,131122,262197,524344,1048635,2097214,4194369,8388676,16777287 ★ Row sums of triangle A132073. ● a(n) = 2 ^ n + 3 * n - 1, n > 0. (End) ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 2 * a(n - 3). - _ Vincenzo Librandi _ , Jul 06 2012 ●

▶ [A093175] 1,4,9,16,30,59,114,219,422,814,1569,3024,5829,11236,21658,41747,80470,155111,298986,576314,1110881,2141292,4127473,7955960,15335606 ★ Tetranacci numbers starting with first four squares. ● a(n) = a(n - 1) + a(n - 2) + a(n - 3) + a(n - 4). ●

▶ [A007679] 1,1,4,9,16,31,64,129,256,511,1024,2049,4096,8191,16384,32769,65536,131071,262144,524289,1048576,2097151,4194304,8388609,16777216 ★ If n mod 4 = 0 then 2 ^ (n - 1) + 1 elif n mod 4 = 2 then 2 ^ (n - 1) - 1 else 2 ^ (n - 1). ● a(n) = 2 ^ (n - 1) + cos(n * Pi / 2). ● a(n) = sum(2 ^ k * C(n - k, 2k) * n / (n - k), k=0..floor(n / 3)). ● a(n) = ((- i) ^ n + i ^ n + 2 ^ n) / 2, where i=sqrt(- 1). a(n) = 2 * a(n - 1) - a(n - 2) + 2 * a(n - 3). G.f.: x * (1 - x + 3 * x ^ 2) / ((1 - 2 * x) * (1 + x ^ 2)). [_ Colin Barker _ , May 08 2012] ●

▶ [A068037] 1,1,1,1,1,1,4,9,16,32,64,128,256,512,1024,2048,4096,8192,16384,32768,65536,131072,262144,524288,1048576 ★ Number of subsets of { 1,2,3,...,n } that sum to 0 mod 16. ● a(n) = 2 ^ (- 4 + n) for n>7. G.f.: (2 * x ^ 8 - x ^ 7 - 2 * x ^ 6 + x ^ 5 + x ^ 4 + x ^ 3 + x ^ 2 + x - 1) / (2 * x - 1). - _ Colin Barker _ , Dec 22 2012 ●

▶ [A295720] 1,4,9,16,33,55,104,171,307,502,873,1423,2424,3943,6623,10758,17893,29035,47952,77755,127755,207046,338897,549015,896104 ★ a(n) = a(n - 1) + 3 * a(n - 2) - 2 * a(n - 3) - 2 * a(n - 4), where a(0) = 1, a(1) = 4, a(2) = 9, a(3) = 16. ● a(n) = a(n - 1) + a(n - 3) + a(n - 4), where a(0) = 1, a(1) = 4, a(2) = 9, a(3) = 16. ●

▶ [A357753] 4,9,16,36,64,144,256,529,1024,2116,4096,8281,16384,33124,65536,131769,262144,525625,1048576,2099601,4194304,8392609,16777216,33558849,67108864 ★ a(n) is the least square with n binary digits. ● a(2n + 1) = (2 ^ n) ^ 2 = 4 ^ n, for n>=1; indeed: 4 ^ n _{ 10 } = 10 ^ (2n) _{ 2 } that is the least number with 2n + 1 binary digits. - _ Bernard Schott _ , Oct 15 2022 ●

▶ [A356880] 4,9,16,36,64,144,256,576,1024,2304,4096,9216,16384,36864,65536,147456,262144,589824,1048576,2359296,4194304,9437184,16777216,37748736,67108864 ★ Squares that can be expressed as the sum of two powers of two (2 ^ x + 2 ^ y). ● a(n) = 9 * 2 ^ (n - 2) if n is even (see A002063). ● a(n) = 2 ^ (n + 1) if n is odd (see A000302). ●

▶ [A023110] 0,1,4,9,16,49,169,256,361,1444,3249,18496,64009,237169,364816,519841,2079364,4678569,26666896,92294449,341991049,526060096,749609641,2998438564,6746486769 ★ Squares which remain squares when the last digit is removed. ● a(n) = 1443 * a(n - 7) - 1443 * a(n - 14) + a(n - 21) for n>22. ●

▶ [A368891] 1,1,1,4,9,16,61,183,433,1603,5581,15951,59449,225928,738893,2827321,11387617,41174086,163185805,686315474,2680560361,11035625413,48086847117,199640217719,853587430801 ★ a(n) = Sum _{ k=0..floor(n / 3) } n ^ k * binomial(n - 2 * k,k). ● a(n) = [x ^ n] 1 / (1 - x - n * x ^ 3). ●

▶ [A299921] 0,1,4,9,16,121,324,529,4096,11025,17956,139129,374544,609961,4726276,12723489,20720704,160554241,432224100,703893961,5454117904,14682895929,23911673956,185279454481,498786237504 ★ Squares that differ from a triangular number by 1. ● a(n) = 35 * a(n - 3) - 35 * a(n - 6) + a(n - 9). (End) ●

▶ [A092464] 4,9,17,22,30,35,43,48,56,61,69,74,82,87,95,100,108,113,121,126,134,139,147,152,160 ★ Numbers congruent to 4 or 9 mod 13. ● a(n) = a(n - 2) + 13 = a(n - 1) + a(n - 2) - a(n - 3) = 13 * n / 2 - 13 / 4 - 3 * (- 1) ^ n / 4. ● a(n) = 13 * (n - 1) - a(n - 1), (with a(1)=4). - _ Vincenzo Librandi _ , Nov 17 2010 ●

▶ [A173562] 0,1,4,9,17,26,37,50,66,83,102,123,147,172,199,228,260,293,328,365,405,446,489,534,582 ★ a(n) = n ^ 2 + floor(n / 4). ● a(n) = floor((n + 1 / 8) ^ 2). ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 4) - 2 * a(n - 5) + a(n - 6) for n>5. ● a(n) = (8 * n ^ 2 + 2 * n - 3 + i ^ (2 * n) + (1 + i) * i ^ (- n) + (1 - i) * i ^ n) / 8 where i=sqrt(- 1). - _ Wesley Ivan Hurt _ , Jun 04 2016 ●

▶ [A272718] 1,4,9,17,26,41,54,74,95,122,143,183,208,247,292,340,373,436,473,545,610,673,718,818,883 ★ Partial sums of gcd - sum sequence A018804. ● a(n) = (1 / 2) * Sum _{ k=1..n } phi(k) * floor(n / k) * floor(1 + n / k), where phi(k) is the Euler totient function. - _ Daniel Suteu _ , May 28 2018 ● a(n) = Sum _{ i=1..n, j=i..n } gcd(i,j). ●

▶ [A078567] 0,1,4,9,17,27,41,57,77,100,127,156,191,228,269,314,364,416,474,534,600,670,744,820,904 ★ Number of arithmetic subsequences of [1..n] with length > 1. ● a(n) = Sum _{ i=1..n - 1 } Sum _{ j=1..floor((n - 1) / i) } (n - i * j). ● a(n) = Sum _{ k=1..n - 1 } Sum _{ i=1..n - 1 } floor(k / i). - _ Wesley Ivan Hurt _ , Sep 14 2017 ● a(n) = Sum _{ k=1..n - 1 } Sum _{ i|k } (n - k). - _ Daniel Hoying _ , May 26 2020 ● a(n + 1) = floor(sqrt(n)) ^ 2 * [1 / 4 * (1 + floor(sqrt(n))) ^ 2 - n - 1] + Sum _{ i=1..floor(sqrt(n)) } floor(n / i) * [2n + 2 - i * (1 + floor(n / i)]. - _ Daniel Hoying _ , May 31 2020 ●

▶ [A033617] 1,4,9,17,28,41,56,73,93,117,146,180,216,253,291,329,369,414,466,524,586,650,712,773,836 ★ Coordination sequence T2 for Zeolite Code TSC. ● a(0) = 1, a(1) = 4, a(2) = 9, a(3) = 17, a(4) = 28, a(5) = 41, a(6) = 56, a(7) = 73, a(8) = 93, a(9) = 117, a(10) = 146, a(11) = 180, a(12) = 216, a(13) = 253, a(14) = 291, a(15) = 329, a(16) = 369, a(17) = 414, a(18) = 466, a(19) = 524, a(20) = 586, a(21) = 650. ●

▶ [A008577] 1,4,9,17,28,41,57,76,97,121,148,177,209,244,281,321,364,409,457,508,561,617,676,737,801 ★ Crystal ball sequence for planar net 4.8.8. ● a(n) = a(- 1 - n) = floor((n ^ 2 + n + 1) * 4 / 3) for all n in Z. ●

▶ [A008137] 1,4,9,17,28,42,60,81,105,132,162,196,233,273,316,362,412,465,521,580,642,708,777,849,924 ★ Coordination sequence T1 for Zeolite Code LTA and RHO. ● a(5 * m + k) = 40 * m ^ 2 + 16 * k * m + one of 5 numbers depending on k, 0 <= k < 5 (_ N. J. A. Sloane _). ● a(n) = 12 / 5 - 0 ^ n + (8 / 5) * n ^ 2 - (1 / 25) * (5 + sqrt(5)) * cos(2 * Pi * n / 5) - (1 / 25) * (5 - sqrt(5)) * cos(4 * Pi * n / 5). - _ Eric Simon Jacob _ , Feb 12 2023 ●

▶ [A137441] 0,1,4,9,17,28,43,62,85,112,144,181,224,273,328,389,457,532,615,706,805,912,1028,1153,1287 ★ Partial sums of partial sums of PrimePi(k). ● a(n) = Sum _{ i=1..n } (n + 1 - i) * pi(i), where pi = A000720. - _ Ridouane Oudra _ , Aug 31 2019 ●

▶ [A005744] 0,1,4,9,17,28,43,62,86,115,150,191,239,294,357,428,508,597,696,805,925,1056,1199,1354,1522 ★ G.f.: x * (1 + x - x ^ 2) / ((1 - x) ^ 4 * (1 + x)). ● a(n) = n * (n - 1) / 2 + Sum((n - 2 * i + 1) * (n - 2 * i) / 2, i=1..floor((n + 1) / 2)). - _ N. J. A. Sloane _ , Nov 28 2003 ● a(n) = 5 * n / 12 - 1 / 16 + 5 * n ^ 2 / 8 + n ^ 3 / 12 + (- 1) ^ n / 16 . a(n)= 3 * a(n - 1) - 2 * a(n - 2) - 2 * a(n - 3) + 3 * a(n - 4) - a(n - 5). - _ R. J. Mathar _ , Apr 01 2010 ●

▶ [A008066] 1,4,9,17,29,45,64,85,110,140,173,208,246,289,336,385,437,493,553,616,682,752,825,901,981 ★ Coordination sequence T1 for Zeolite Code CHA. ● a(20 * m + k) = 680 * m ^ 2 + 68 * k * m + one of 20 numbers depending on k, 0 <=k<20 (_ N. J. A. Sloane _). ●

▶ [A008123] 1,4,9,17,29,45,64,86,112,141,173,209,249,292,338,388,441,497,557,621,688,758,832,909,989 ★ Coordination sequence T1 for Zeolite Code KFI. ● a(7 * m + k) = 84 * m ^ 2 + 24 * k * m + one of 7 numbers depending on k, 0<=k <7 (_ N. J. A. Sloane _). ●

▶ [A181286] 0,0,1,4,9,17,29,45,66,93,126,166,214,270,335,410,495,591,699,819,952,1099,1260,1436,1628 ★ Partial sums of floor(n ^ 2 / 3) (A000212). ● a(n) = Sum _{ k=0..n } floor(k ^ 2 / 3). ● a(n) = round((2 * n ^ 3 + 3 * n ^ 2 - 3 * n) / 18). ● a(n) = round((2 * n ^ 3 + 3 * n ^ 2 - 3 * n - 2) / 18). ● a(n) = floor((2 * n ^ 3 + 3 * n ^ 2 - 3 * n) / 18). ● a(n) = ceiling((2 * n ^ 3 + 3 * n ^ 2 - 3 * n - 4) / 18). ● a(n) = a(n - 3) + (n - 1) ^ 2, n > 2. ●

▶ [A008046] 1,4,9,17,30,50,74,97,123,158,198,237,281,336,394,447,501,566,638,709,783,868,960,1047,1133 ★ Coordination sequence T2 for Zeolite Code AWW. ● a(n + 191) - a(n + 128) - 2a(n + 127) + 2a(n + 64) + a(n + 63) - a(n)=0 (_ N. J. A. Sloane _). ●

▶ [A157728] 1,4,9,17,30,51,85,140,229,373,606,983,1593,2580,4177,6761,10942,17707,28653,46364,75021,121389,196414,317807,514225 ★ a(n) = Fibonacci(n) - 4. ● a(n) = 2 * a(n - 1) - a(n - 3). ●

▶ [A130785] 1,4,9,17,32,63,127,256,513,1025,2048,4095,8191,16384,32769,65537,131072,262143,524287,1048576,2097153,4194305,8388608,16777215,33554431 ★ Sequence identical to its third differences: a(n + 3) = 3a(n + 2) - 3a(n + 1) + 2a(n), with a(0)=1, a(1)=4, a(2)=9. ● a(n) = - (1 / 2) * (1 / 2 - (1 / 2) * i * sqrt(3)) ^ n - (1 / 2) * (1 / 2 + (1 / 2) * i * sqrt(3)) ^ n + 2 * 2 ^ n + (1 / 6) * i * (1 / 2 - (1 / 2) * i * sqrt(3)) ^ n * sqrt(3) - (1 / 6) * i * (1 / 2 + (1 / 2) * i * sqrt(3)) ^ n * sqrt(3), with n>=0 and I=sqrt(- 1). - _ Paolo P. Lava _ , Jun 09 2008 ● a(n) = 2 ^ (n + 1) - cos((2 * n + 1) * Pi / 6) * 2 / sqrt(3). - _ Vladimir Reshetnikov _ , Oct 15 2017 ●

▶ [A101424] 4,9,18,28,42,57,76,96,120,145,174,204,238,273,312,352,396,441,490,540,594,649,708,768,832 ★ Number of different cuboids with volume p ^ 4 * q ^ n , where p,q are distinct prime numbers. ● a(n) = (29 + 3 * (- 1) ^ n + 36 * n + 10 * n ^ 2) / 8. ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4). ●

▶ [A244096] 0,4,9,18,30,45,63,84,108,135,166,200,237,277,321,367,417,471,527,587,649,716,785,858,933 ★ Rounded down area ratio of a circle inscribed in a congruent triangle of a regular n - gon and a circle inscribed between a side of such an n - gon and a circumscribed unit circle. ● a(n) = floor((r1(n) / r2(n)) ^ 2) where r1(n) = (s(n) / 2) * sqrt((2 - s(n)) / (2 + s(n))) and r2(n) = (2 - c(n)) / 4 with s(n) = 2 * sin(Pi / n), the side length (length unit 1), and c(n) = 2 * cos(Pi / n), the length ratio of the smallest diagonal and the side of a regular n - gon. [Rewritten by _ Wolfdieter Lang _ , Jul 02 2014] ●

▶ [A111384] 0,0,0,1,4,9,18,30,48,70,100,135,180,231,294,364,448,540,648,765,900,1045,1210,1386,1584 ★ a(n) = binomial(n,3) - binomial(floor(n / 2),3) - binomial(ceiling(n / 2),3). ● a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + a(n - 4) + 2 * a(n - 5) - a(n - 6). ●

▶ [A100037] 4,9,18,31,48,69,94,123,156,193,234,279,328,381,438,499,564,633,706,783,864,949,1038,1131,1228 ★ Positions of occurrences of the natural numbers as a second subsequence in A100035. ● a(n) = 2 * n ^ 2 - n + 3 (conjectured). - _ Ralf Stephan _ , May 15 2007 ●

▶ [A254874] 1,4,9,18,31,49,73,104,142,189,245,311,388,477,578,693,822,966,1126,1303,1497,1710,1942,2194,2467 ★ a(n) = floor((10 * n ^ 3 + 63 * n ^ 2 + 126 * n + 89) / 72). ● a(n) - 2 * a(n + 1) + 2 * a(n + 3) - a(n + 4) = - 1 if n == 1 (mod 3) else - 2 for all n in Z. ●

▶ [A008266] 1,4,9,18,32,48,67,92,120,150,185,224,266,312,361,414,472,532,595,664,736,810,889,972,1058 ★ Coordination sequence T1 for Zeolite Code GIS. ● a(12 * m + k) = 264 * m ^ 2 + 44 * k * m + [2, 4, 9, 18, 32, 48, 67, 92, 120, 150, 185, 224], 0<=k<12 (_ N. J. A. Sloane _). ●

▶ [A008160] 1,4,9,18,32,49,69,93,121,153,189,228,270,317,368,422,480,541,606,676,749,825,905,989,1077 ★ Coordination sequence T1 for Zeolite Code MER. ● a(15 * m + k) = 420 * m ^ 2 + 56 * k * m + one of 15 numbers depending on k, 0<=k<15 (_ N. J. A. Sloane _). ●

▶ [A190798] 0,0,1,4,9,18,32,50,75,108,147,196,256,324,405,500,605,726,864,1014,1183,1372,1575,1800,2048 ★ Maximum value of k ^ 2 * (n - k). ● a(n) = k ^ 2 * (n - k), where k = round(2 * n / 3). ● a(3 * n) = 4 * n ^ 3, a(3 * n - 1) = n * (2 * n - 1) ^ 2, a(3 * n + 1) = n * (2 * n + 1) ^ 2. ● a(n) = 2 * a(n - 1) - a(n - 2) + 2 * a(n - 3) - 4 * a(n - 4) + 2 * a(n - 5) - a(n - 6) + 2 * a(n - 7) - a(n - 8) for n >= 8. ● a(- n) = - a(n). - _ Michael Somos _ , May 22 2011 ●

▶ [A192760] 0,1,4,9,18,33,58,99,166,275,452,739,1204,1957,3176,5149,8342,13509,21870,35399,57290,92711,150024,242759,392808 ★ Coefficient of x in the reduction by x ^ 2 - >x + 1 of the polynomial p(n,x) defined below in Comments. ● a(n) = Sum _{ 1..n } C(n - i + 2,i + 1) + C(n - i,i). - _ Wesley Ivan Hurt _ , Sep 13 2017 ●

▶ [A357282] 0,0,1,4,9,18,33,60,109,202,381,732,1425,2802,5545,11020,21957,43818,87525,174924,349705,699250,1398321,2796444,5592669 ★ a(n) = number of subsets S of { 1,2,...,n } having more than 1 element such that (difference between least two elements of S) = difference between greatest two elements of S. ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) - 2 * a(n - 3) + 5 * a(n - 4) - 2 * a(n - 5). ●

▶ [A027053] 1,4,9,18,35,66,123,228,421,776,1429,2630,4839,8902,16375,30120,55401,101900,187425,344730,634059,1166218,2145011,3945292,7256525 ⋆ a(n) = T(n,n + 2), T given by A027052. ● a(n) = a(n - 1) + a(n - 2) + a(n - 3) + 4. - _ David Bevan _ , Sep 09 2009 ●

▶ [A083706] 1,4,9,18,35,68,133,262,519,1032,2057,4106,8203,16396,32781,65550,131087,262160,524305,1048594,2097171,4194324,8388629,16777238,33554455 ⋆ a(n) = 2 ^ (n + 1) + n - 1. ● a(n) = 2 * a(n - 1) + 3 - n. ●

▶ [A229072] 1,4,9,18,36,72,144,289,578,1156,2312,4624,9248,18496,36992,73984,147969,295938,591876,1183752,2367504,4735008,9470016,18940032,37880064 ⋆ Lexicographically earliest sequence of distinct natural numbers such that, for any number n in the sequence, the positions of the 1's in the binary representation of n are in the sequence, whereas the positions of the 0's are not. ● a(n) = Sum _{ a(i) <= n + 1 } 2 ^ (n + 1 - a(i)), for any n>1, with a(1)=1. ●

▶ [A199972] 0,0,4,9,19,29,41,55,71,89,109,131,155,181,209,239,271,305,341,379,419,461,505,551,599 ⋆ a(n) = the sum of GCQ _ B(n, k) for 1 <= k <= n (see definition in comments). ● a(n) = n * (n - 1) - 1 for n>= 5. ●

▶ [A100448] 0,1,4,9,19,30,51,73,106,140,195,241,319,388,480,572,708,813,984,1124,1310,1485,1738,1926,2216 ⋆ Number of triples (i,j,k) with 1 <= i <= j < k <= n and gcd { i,j,k } = 1. ● a(n) = (1 / 6) * (- 1 + Sum _{ k=1..n } moebius(k) * floor(n / k) ^ 3). - _ Ralf Stephan _ , Jan 03 2005 ●

▶ [A008239] 1,4,9,19,33,50,74,100,129,165,201,242,290,338,393,453,513,580,650,722,801,883,969,1060,1154 ⋆ Coordination sequence T2 for Zeolite Code THO. ● a(24 * m + k) = 1152 * m ^ 2 + 96 * k * m + one of 24 numbers depending on k, 0<=k<24. - _ N. J. A. Sloane _ ●

▶ [A008084] 1,4,9,19,35,52,72,100,131,163,201,244,290,340,393,451,515,580,648,724,803,883,969,1060,1154 ⋆ Coordination sequence T1 for Zeolite Code ACO, ASV, EDI, and THO. ● a(12 * m + k) = 288 * m ^ 2 + 48 * k * m + [2, 4, 9, 19, 35, 52, 72, 100, 131, 163, 201, 244], 0 <= k < 12. - _ N. J. A. Sloane _ ●

▶ [A210730] 0,0,4,9,19,35,62,106,178,295,485,793,1292,2100,3408,5525,8951,14495,23466,37982,61470,99475,160969,260469,421464 ⋆ a(n) = a(n - 1) + a(n - 2) + n + 2 with n>1, a(0)=a(1)=0. ● a(0)=0, a(1)=0, a(2)=4, a(3)=9, a(n) = 3 * a(n - 1) - 2 * a(n - 2) - a(n - 3) + a(n - 4). - _ Harvey P. Dale _ , Jul 24 2013 ● a(n) = - 5 + (2 ^ (- 1 - n) * ((1 - sqrt(5)) ^ n * (- 7 + 5 * sqrt(5)) + (1 + sqrt(5)) ^ n * (7 + 5 * sqrt(5)))) / sqrt(5) - n. - _ Colin Barker _ , Mar 11 2017 ● a(n) = Fibonacci(n + 3) + 3 * Fibonacci(n + 1) - n - 5. - _ G. C. Greubel _ , Jul 08 2019 ●

▶ [A192979] 1,1,4,9,19,36,65,113,192,321,531,872,1425,2321,3772,6121,9923,16076,26033,42145,68216,110401,178659,289104,467809 ⋆ Constant term of the reduction by x ^ 2 - > x + 1 of the polynomial p(n,x) defined at Comments. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - a(n - 3) + a(n - 4). ● a(n) = Fibonacci(n + 3) + Lucas(n + 2) - 2 * (n + 2). - _ G. C. Greubel _ , Jul 24 2019 ●

▶ [A101353] 1,4,9,19,38,75,147,288,565,1111,2190,4327,8567,16992,33753,67131,133654,266323,531051,1059520,2114861,4222959,8434974,16852239,33675823 ⋆ a(n) = Sum _{ k=0..n } (2 ^ k + Fibonacci(k)). ● a(n)= 4 * a(n - 1) - 4 * a(n - 2) - a(n - 3) + 2 * a(n - 4). G.f.: (1 - 3 * x ^ 2) / ((1 - x) * (2 * x - 1) * (x ^ 2 + x - 1)). - _ R. J. Mathar _ , Feb 06 2010 ● a(n) = (- 2 + 2 ^ (1 + n) + (2 ^ (- 1 - n) * ((1 - sqrt(5)) ^ n * (- 3 + sqrt(5)) + (1 + sqrt(5)) ^ n * (3 + sqrt(5)))) / sqrt(5)). - _ Colin Barker _ , Nov 03 2016 ●

▶ [A052549] 1,4,9,19,39,79,159,319,639,1279,2559,5119,10239,20479,40959,81919,163839,327679,655359,1310719,2621439,5242879,10485759,20971519,41943039 ⋆ a(n) = 5 * 2 ^ (n - 1) - 1, n>0, with a(0)=1. ● a(n) = 2 * a(n - 1) + 1, for n >1, with a(0)=1 and a(1)=4. ●

▶ [A153894] 4,9,19,39,79,159,319,639,1279,2559,5119,10239,20479,40959,81919,163839,327679,655359,1310719,2621439,5242879,10485759,20971519,41943039,83886079 ⋆ a(n) = 5 * 2 ^ n - 1. ● a(n) = 2 * a(n - 1) + 1, n>0. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2). ●

▶ [A359278] 1,4,9,19,45,127,491,2597,18905,180253,2176101,32236029,571516361,11885151437,285237145381,7794999370341,239867327549943,8232788441242931,312611538663794793,13040004273788572983 ⋆ Antidiagonal sums of A354967. ● a(n) = Sum _{ k=1..n } p(k, n - k + 1), where p(n,0) = n and p(n,k) = prime(p(n, k - 1)) for k >= 1. ●

▶ [A073360] 1,4,9,20,29,44,69,104,121,180,241,284,349,420,521,664,701,860,1009,1184,1301,1540,1789,1964,2181 ⋆ Nested floor product of n and fractions (k + 1) / k for all k>0 (mod 3), divided by 3. ● a(n)=(1 / 3)[...[[[[n(2 / 1)](3 / 2)](5 / 4)](6 / 5)]...(k + 1) / k]..., k>0 (mod 3), where [x] = floor of x; this infinite nested floor product will eventually level - off at a(n). ●

▶ [A346558] 1,4,9,20,35,78,133,280,531,1070,2057,4212,8203,16534,32865,65840,131087,262818,524305,1049740,2097459,4196390,8388629,16782024,33554575 ⋆ a(n) = Sum _{ d|n } phi(n / d) * (2 ^ d - 1). ● a(n) = Sum _{ k=1..n } (2 ^ gcd(n,k) - 1). ●

▶ [A059403] 0,0,0,1,4,9,20,36,64,100,156,225,324,441,600,784,1024,1296,1640,2025,2500,3025,3660,4356,5184 ⋆ Quarter - squared applied twice. ● a(4n) = 4n ^ 4; a(4n + 1) = n ^ 2 * (2n + 1) ^ 2; ● a(4n + 2) = 2n(n + 1)(2n(n + 1) + 1); a(4n + 3) = (n + 1) ^ 2 * (2n + 1) ^ 2. ●

▶ [A060494] 0,0,0,1,4,9,20,37,64,102,156,228,324,446,600,791,1024,1305,1640,2036,2500,3038,3660,4372,5184 ⋆ a(n) = floor(n ^ 4 / 64). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) + a(n - 16) - 4 * a(n - 17) + 6 * a(n - 18) - 4 * a(n - 19) + a(n - 20). ●

▶ [A268235] 1,4,9,20,37,76,141,280,541,1072,2097,4192,8289,16548,32953,65860,131397,262764,524909,1049736,2098381,4196560,8390865,16781696,33558929 ⋆ a(n) = Sum _{ k=1..n } floor(n / k) * 2 ^ (k - 1). ● a(n) = Sum _{ k=1..n } Sum _{ d|k } 2 ^ (d - 1). ● a(n) = Sum _{ k=1..n } (2 ^ floor(n / k) - 1). - _ Ridouane Oudra _ , Feb 03 2023 ●

▶ [A023607] 0,1,4,9,20,40,78,147,272,495,890,1584,2796,4901,8540,14805,25552,43928,75258,128535,218920,371931,630454,1066464,1800600 ⋆ a(n) = n * Fibonacci(n + 1). ● a(n) = n * Sum _{ k=0..n } binomial(k,n - k). - _ Paul Barry _ , Sep 25 2004 ●

▶ [A084639] 0,1,4,9,20,41,84,169,340,681,1364,2729,5460,10921,21844,43689,87380,174761,349524,699049,1398100,2796201,5592404,11184809,22369620 ⋆ Expansion of x * (1 + 2 * x) / ((1 + x) * (1 - x) * (1 - 2 * x)). ● a(n) = a(n - 1) + 2 * a(n - 2) + 3, a(0)=0, a(1)=1. ● a(n) = 2 ^ (n + 2) / 3 + (- 1) ^ n / 6 - 3 / 2. ● a(n) = 5 * a(n - 2) - 4 * a(n - 4). Cf. A084640, A101622. - _ Paul Curtz _ , Apr 03 2008 ● a(n) = 2 * a(n - 1) + a(n - 2) - 2 * a(n - 3). - _ R. J. Mathar _ , Jun 28 2010 ● a(n) = a(n - 1) + 2 * a(n - 2) + 3, n>1. - _ Gary Detlefs _ , Dec 19 2010 ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) + (- 1) ^ n, n>1. - _ Gary Detlefs _ , Dec 19 2010 ●

▶ [A133095] 1,4,9,20,43,90,185,376,759,1526,3061,6132,12275,24562,49137,98288,196591,393198,786413,1572844,3145707,6291434,12582889,25165800,50331623 ⋆ Row sums of triangle A133094. ● a(n) = 3 * 2 ^ (n - 1) - n, for n >= 2. ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 2 * a(n - 3). ●

▶ [A020708] 4,9,20,44,97,214,472,1041,2296,5064,11169,24634,54332,119833,264300,582932,1285697,2835694,6254320,13794337,30424368,67103056,148000449,326425266,719953588 ⋆ Pisot sequences E(4,9), P(4,9). ● a(n) = 2 * a(n - 1) + a(n - 3) (holds at least up to n = 1000 but is not known to hold in general). ●

▶ [A366726] 1,4,9,20,45,102,230,516,1158,2599,5831,13082,29351,65853,147748,331490,743735,1668650,3743800,8399623,18845471,42281871,94863989,212837706,477524607 ⋆ Lee's empirically improved Tokuda gaps for shellsort. ● a(n) = ceiling((gamma ^ n - 1) / (gamma - 1)), where gamma = 2.243609061420001 ●

▶ [A287143] 0,1,4,9,21,35,65,95,155,210,315,406,574,714,966,1170,1530,1815,2310,2695,3355,3861,4719,5369,6461 ⋆ Expansion of x * (1 + 3 * x + x ^ 2) / ((1 - x) ^ 5 * (1 + x) ^ 4). ● a(n) = a(n - 1) + 4 * a(n - 2) - 4 * a(n - 3) - 6 * a(n - 4) + 6 * a(n - 5) + 4 * a(n - 6) - 4 * a(n - 7) - a(n - 8) + a(n - 9). ● a(n) = (2 * n + 3 + (- 1) ^ n) * (2 * n + 7 + (- 1) ^ n) * (5 * (2 * n ^ 2 + 10 * n + 3) - 3 * (2 * n + 5) * (- 1) ^ n) / 3072. - _ Luce ETIENNE _ , Nov 18 2017 ●

▶ [A027973] 1,4,9,21,46,99,209,436,901,1849,3774,7671,15541,31404,63329,127501,256366,514939,1033449,2072676,4154701,8324529,16673534,33386671,66837421 ⋆ a(n) = T(n,n) + T(n,n + 1) + ... + T(n,2n), T given by A027960. ● a(n) = 2 * a(n - 1) + Fibonacci(n + 1) - Fibonacci(n - 3) for n>=1; a(0)=1. - _ Emeric Deutsch _ , Nov 29 2006 ● a(n) = 2 ^ (n + 2) - Lucas(n + 2). - _ Vincenzo Librandi _ , May 05 2017, corrected by _ Greg Dresden _ , Sep 13 2021 ●

▶ [A348407] 4,9,21,47,105,231,505,1095,2361,5063,10809,22983,48697,102855,216633,455111,953913,1995207,4165177,8679879,18058809,37515719,77827641,161247687,333680185 ⋆ a(n) = ((n + 1) * 3 * 2 ^ (n + 1) + 29 * 2 ^ n + (- 1) ^ n) / 9. ● a(n) = round(((n + 1) * 3 * 2 ^ (n + 1) + 29 * 2 ^ n) / 9). ● a(n + 1) = Sum _{ k=0..floor(n / 2) } binomial(n - k, k) * (k + 2) * 2 ^ (k + 1) ● a(n) = 3 * a(n - 1) - 4 * a(n - 3) for n > 2. (End) ●

▶ [A084861] 1,1,4,9,21,48,108,240,528,1152,2496,5376,11520,24576,52224,110592,233472,491520,1032192,2162688,4521984,9437184,19660800,40894464,84934656 ⋆ Expansion of (1 - 3x + 4x ^ 2 - 3x ^ 3 + x ^ 4) / (1 - 2x) ^ 2. ● a(n) = 3(n + 3)2 ^ (n - 4), n>2. ●

▶ [A132750] 1,4,9,21,49,113,257,577,1281,2817,6145,13313,28673,61441,131073,278529,589825,1245185,2621441,5505025,11534337,24117249,50331649,104857601,218103809 ⋆ A132749 * [1, 2, 3, ...] = A007318 * A065190. ● a(n) = n * 2 ^ (n - 1) + 2 ^ n + 1 - 0 ^ n. - _ Tim Smith _ , Sep 25 2014 ● a(n) = 5 * a(n - 1) - 8 * a(n - 2) + 4 * a(n - 3). - _ Wesley Ivan Hurt _ , Sep 26 2014 ●

▶ [A048582] 4,9,21,49,115,270,634,1489,3498,8218,19307,45359,106565,250361,588192,1381884,3246565,7627402,17919636,42099965,98908653,232373629,545933059,1282602102,3013314774 ⋆ Pisot sequence L(4,9). ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) + a(n - 3) + a(n - 4) - 2 * a(n - 5) + a(n - 6) - a(n - 7) (conjectured). Recurrence is satisfied for at least 760000 terms. - _ Chai Wah Wu _ , Jul 25 2016 ●

▶ [A041743] 1,1,4,9,22,31,53,137,2656,5449,8105,13554,35213,83980,287153,371133,14390207,14761340,58674227,132109794,322893815,455003609,777897424,2010798457,38983068107 ⋆ Denominators of continued fraction convergents to sqrt(391). ● a(n) = 14677360 * a(n - 16) - a(n - 32) for n>31. - _ Vincenzo Librandi _ , Dec 23 2013 ●

▶ [A041943] 1,4,9,22,31,84,115,314,743,3286,145327,584594,1314515,3213624,4528139,12269902,16798041,45865984,108530009,479986020,21227914889,853916455 76,192011206041,469414057658,661425263699 ⋆ Denominators of continued fraction convergents to sqrt(494). ● a(n) = 146070 * a(n - 10) - a(n - 20) for n>19. - _ Vincenzo Librandi _ , Dec 27 2013 ●

▶ [A048654] 1,4,9,22,53,128,309,746,1801,4348,10497,25342,61181,147704,356589,860882,2078353,5017588,12113529,29244646,70602821,170450288,411503397,993457082,2398417561 ⋆ a(n) = 2 * a(n - 1) + a(n - 2); a(0)=1, a(1)=4. ● a(n) = ((3 + sqrt(2)) * (1 + sqrt(2)) ^ n - (3 - sqrt(2)) * (1 - sqrt(2)) ^ n) / 2 * sqrt(2). ● a(n) = binomial transform of 1, 3, 2, 6, 4, 12, ... - Al Hakanson (hawkuu(AT)gmail.com), Aug 08 2009 ● a(n) is the denominator of the continued fraction [4, 2, ..., 2, 4] with n - 1 2's in the middle. For the numerators, see A221174. - _ Greg Dresden _ and _ Tongjia Rao _ , Sep 02 2021 ●

▶ [A131607] 1,4,9,23,57,139,336,811,1960,4732,11424,27580,66585,160752,388089,936931,2261953,5460839,13183632,31828103,76839840,185507784,447855408,1081218600,2610292609 ⋆ Pell companion numbers A001333 without last digit. ● a(n) = 3 * a(n - 1) - a(n - 2) - a(n - 3) - a(n - 6) + 3 * a(n - 7) - a(n - 8) - a(n - 9) for n>12. ●

▶ [A192473] 4,9,23,58,149,385,1000,2605,6799,17766,46457,121537,318044,832417,2178919,5703874,14931949,39090753,102338336,267921061,701419679,1836329614,4807555633,12586315393,32951355124 ⋆ Coefficient of x in the reduction by x ^ 2 - >x + 1 of the polynomial p(n,x)=1 + x ^ n + x ^ (2n + 2). ● a(n) = 4 * a(n - 1) - 3 * a(n - 2) - 2 * a(n - 3) + a(n - 4) for n>4. ●

▶ [A255876] 4,9,24,37,60,81,112,141,180,217,264,309,364,417,480,541,612,681,760,837,924,1009,1104,1197,1300 ⋆ a(n) = (4 * n ^ 2 + 4 * n - 3 - 3 * (- 1) ^ n) / 2. ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4). ●

▶ [A127979] 1,4,9,24,55,130,293,660,1459,3206,6977,15096,32463,69482,148061,314332,665067,1402958,2951545,6194368,12971271,27107634,56545429,117751204,244823075 ⋆ a(n) = (5 * n / 18 + 19 / 54) * 2 ^ n - (- 1) ^ (n - 1) * (3 * n + 4) / 27. ● a(n) = 2 * a(n - 1) + 3 * a(n - 2) - 4 * a(n - 3) - 4 * a(n - 4). - _ Wesley Ivan Hurt _ , May 07 2021 ●

▶ [A059507] 4,9,24,66,182,501,1376,3771,10314,28158,76744,208839,567484,1539981,4173852,11299386,30556346,82547961,222790424,600753663,1618558734,4357256694,11721125644,31507528971,84637773172 ⋆ Transform of A059502 applied to sequence 4,5,6,... ● a(n) = 6 * a(n - 1) - 11 * a(n - 2) + 6 * a(n - 3) - a(n - 4).

● a(n) = ((3 - n) * Fibonacci(2 * n) + (15 + 3 * n) * Fibonacci(2 * n - 1)) / 5. - _ G. C. Greubel _ , Sep 10 2017 ●

▶ [A001248] 4,9,25,49,121,169,289,361,529,841,961,1369,1681,1849,2209,2809,3481,3721,4489,5041,5329,6241,6889,7921,9409 ★ Squares of primes. ● a(n) = prime(n) ^ 2. - _ Jon E. Schoenfield _ , Mar 29 2015 ●

▶ [A175627] 1,4,9,25,64,144,289,625,1296,2601,5329,10816,21904,44100,88209,177241,355216,710649,1423249,2849344,5702544,11410884,22829284,45670564,91355364 ★ a(1) = 1; a(n) is the smallest square > 2 * a(n - 1). ● a(n) = (ceiling(sqrt(2 * a(n - 1)))) ^ 2. ●

▶ [A007598] 0,1,1,4,9,25,64,169,441,1156,3025,7921,20736,54289,142129,372100,974169,2550409,6677056,17480761,45765225,119814916,313679521,821223649,2149991424 ★ Squared Fibonacci numbers: a(n) = F(n) ^ 2 where F = A000045. ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - a(n - 3), n > 2. a(0)=0, a(1)=1, a(2)=1. ● a(- n) = a(n) for all n in Z. ● a(0) = 0, a(1) = 1; a(n) = a(n - 1) + Sum(a(n - i)) + k, 0 <= i < n where k = 1 when n is odd, or k = - 1 when n is even. E.g., a(2) = 1 = 1 + (1 + 1 + 0) - 1, a(3) = 4 = 1 + (1 + 1 + 0) + 1, a(4) = 9 = 4 + (4 + 1 + 1 + 0) - 1, a(5) = 25 = 9 + (9 + 4 + 1 + 1 + 0) + 1. - Sadrul Habib Chowdhury (adil040(AT)yahoo.com), Mar 02 2004 ● a(n) = (2 * Fibonacci(2 * n + 1) - Fibonacci(2 * n) - 2 * (- 1) ^ n) / 5. - _ Ralf Stephan _ , May 14 2004 ● a(n) = (- 1) ^ k * (Fibonacci(n + k) ^ 2 - Fibonacci(k) * Fibonacci(2 * n + k)), for any k. - _ Gary Detlefs _ , Dec 13 2010 ● a(n) = 3 * a(n - 1) - a(n - 2) + 2 * (- 1) ^ (n + 1), n > 1. - _ Gary Detlefs _ , Dec 20 2010 ●

▶ [A304167] 4,9,25,75,229,699,2125,6435,19429,58539,176125,529395,1590229,4774779,14332525,43013955,129074629,387289419,1161999325,3486260115,10459304629,31378962459,94138984525,282421147875,847271832229 ★ a(n) = 3 ^ n - 2 ^ (n - 1) + 2 (n>=1). ● a(n) = 6 * a(n - 1) - 11 * a(n - 2) + 6 * a(n - 3) for n>3. ●

▶ [A216134] 0,1,4,9,26,55,154,323,900,1885,5248,10989,30590,64051,178294,373319,1039176,2175865,6056764,12681873,35301410,73915375,205751698,430810379,1199208780 ★ Numbers k such that 2 * A000217(k) + 1 is triangular. ● a(n + 2) = sqrt(8 * a(n) ^ 2 + 8 * a(n) + 9) + 3 * a(n) + 1; a(0) = 0, a(1) = 1. - _ Raphie Frank _ , Feb 02 2013 ● a(n) = (3 / 8 + sqrt(2) / 4) * (1 + sqrt(2)) ^ n + (- 1 / 8 - sqrt(2) / 8) * (- 1 + sqrt(2)) ^ n + (3 / 8 - sqrt(2) / 4) * (1 - sqrt(2)) ^ n + (- 1 / 8 + sqrt(2) / 8) * (- 1 - sqrt(2)) ^ n - 1 / 2. - _ Robert Israel _ , Aug 13 2014 ●

▶ [A113682] 1,1,4,9,26,70,197,553,1570,4476,12827,36894,106471,308113,893804,2598313,7567466,22076404,64498427,188689684,552675365,1620567763,4756614062,13974168190,41088418151 ★ Expansion of 2 / (sqrt(1 - 2 * x - 3 * x ^ 2) * (1 + x + sqrt(1 - 2 * x - 3 * x ^ 2))). ● a(n) = Sum _{ k=0..floor(n / 2) } (Sum _{ i=0..n - k } C(n - 2k - i, i) * C(n - k, k + i)). ● a(n) = Sum _{ k=0..n } C(n + 1,k + 1) * C(k,n - k). - _ Paul Barry _ , Aug 21 2007 ● a(n) = (- 1) ^ (n + 1) * (hypergeom([1 / 2, - n - 1], [1], 4) - 1) / 2. - _ Vladimir Reshetnikov _ , Apr 25 2016 ●

▶ [A291064] 4,9,26,71,180,433,1006,2283,5096,11237,24546,53215,114652,245721,524246,1114067,2359248,4980685,10485706,22020039,46137284,96468929,201326526,419430331,872415160 ★ a(n) = 2 ^ n * (n + 1) - 3 * (n - 1). ● a(n) = 2 ^ n * (n + 1) - 3 * (n - 1). ● a(n) = 6 * a(n - 1) - 13 * a(n - 2) + 12 * a(n - 3) - 4 * a(n - 4). ●

▶ [A145855] 1,1,4,9,26,76,246,809,2704,9226,32066,112716,400024,1432614,5170604,18784169,68635478,252085792,930138522,3446167834,12815663844,47820414962,178987624514,671825133644,2528212128776 ★ Number of n - element subsets of { 1,2,...,2n - 1 } whose elements sum to a multiple of n. ● a(n) = (1 / (2 * n)) * Sum _{ d|n } (- 1) ^ (n + d) * phi(n / d) * binomial(2 * d,d). Conjectured by _ Vladeta Jovovic _ , Oct 22 2008; proved by _ Max Alekseyev _ , Oct 23 2008 (see link). ●

▶ [A373719] 1,1,1,4,9,26,91,281,1105,4105,16576,70643,301405,1382928,6363876,30605836,150820769,758835104,3941917840,20787546715,112615930451,620969188400,3492709446326,20034747631656,116780977502105 ★ a(n) = Sum _{ k=0..floor(n ^ 2 / (2 * n + 1)) } binomial(n * (n - 2 * k),k). ● a(n) = [x ^ n] 1 / (1 - x * (1 + x ^ 2) ^ n). ●

▶ [A111962] 1,1,4,9,27,74,215,619,1808,5293,15579,45986,136141,403937,1200854,3575835,10663105,31836508,95156251,284684303,852427700,2554346249,7659427811,22981483554,68992151795 ★ Expansion of 1 / (sqrt(1 - 2x - 3x ^ 2) - x ^ 2). ● a(n)=sum { k=0..floor(n / 2), sum { j=0..n - k, C(n - k, j) * C((j - 1) / 2, (j - k) / 2) * 2 ^ (j - k) * (1 + (- 1) ^ (j - k)) / 2 }} ●

▶ [A276984] 0,0,4,9,29,41,90,119,194,255,384,440,649,765,980,1155,1495,1654,2108,2324,2811,3185,3794,4050,4874 ★ Sum of squares of numbers less than n that do not divide n. ● a(n) = n * (n + 1) * (2 * n + 1) / 6 - sigma _ 2(n). ●

▶ [A295910] 4,9,30,61,160,301,718,1305,3000,5377,12190,21733,49024,87237,196446,349345,786232,1397881,3145486,5592141,12582624,22369309,50331310,89478121,201326200 ★ Number of (not necessarily maximal) cliques in the n X n white bishop graph. ● a(n) = ((- 1) ^ (n + 1) + 2 ^ (n + 1) * (17 + (- 1) ^ n) - 6 * n * (n + 4) - 23) / 12. ● a(n) = 2 * a(n - 1) + 4 * a(n - 2) - 10 * a(n - 3) + a(n - 4) + 8 * a(n - 5) - 4 * a(n - 6). ●

▶ [A105865] 1,1,4,9,30,94,328,1165,4294,16134,61752,239610,940716,3729324,14908176,60026109,243211206,990897478,4057013080,16683617326,68879236036,285388549188,1186296731376,4945790840338,20675513743900 ★ Expansion of (1 / (1 - 2 * x ^ 2)) * c(x / (1 - 2 * x ^ 2)), where c(x) is the g.f. of A000108. ● a(n) = Sum _{ k=0..floor(n / 2) } 2 ^ k * C(n - k,k) * C(n - 2 * k). ●

▶ [A230056] 1,4,9,30,132,720,4680,35280,302400,2903040,30844800,359251200,4550515200,62270208000,915372057600,14384418048000,240612083712000,4268249137152000,80029671321600000,1581386305314816000,32844177110384640000,715273190403932160000,16298010552775311360000 ★ G.f.: Sum _{ n>=0 } (n + 3) ^ n * x ^ n / (1 + (n + 3) * x) ^ n. ● a(n) = (n + 7) * n! / 2 for n>0 with a(0)=1. ●

▶ [A041137] 1,1,4,9,31,40,671,711,2804,6319,21761,28080,471041,499121,1968404,4435929,15276191,19712120,330670111,350382231,1381816804,3114015839,10723864321,13837880160,232129946881 ★ Denominators of continued fraction convergents to sqrt(77). ● a(n) = 702 * a(n - 6) - a(n - 12). G.f.: - (x ^ 10 - x ^ 9 + 4 * x ^ 8 - 9 * x ^ 7 + 31 * x ^ 6 - 40 * x ^ 5 - 31 * x ^ 4 - 9 * x ^ 3 - 4 * x ^ 2 - x - 1) / ((x ^ 4 - 9 * x ^ 2 + 1) * (x ^ 8 + 9 * x ^ 6 + 80 * x ^ 4 + 9 * x ^ 2 + 1)). [_ Colin Barker _ , Jul 18 2012] ●

▶ [A111160] 0,1,1,4,9,31,91,309,1009,3481,11956,42065,148655,532039,1915369,6950452,25357233,93034813,342888250,1269246437,4715945712,17583623988,65766726906,246694006971,927801717255 ★ G.f.: C - Z; where C is the g.f. for the Catalan numbers (A000108) and Z is the g.f. for A055113 with offset 0. ● a(n) = sum(j=0..n + 1, binomial(n + 2 * j - 1,j) * (- 1) ^ (n + j + 1) * binomial(2 * n + 1,j + n)) / (2 * n + 1). [_ Vladimir Kruchinin _ , Feb 15 2013] ● a(n) = Sum _{ j=0..(n + 1) / 2 } (binomial(n - j,n - 2 * j + 1) * binomial(2 * n + 1,j)) / (2 * n + 1). - _ Vladimir Kruchinin _ , Oct 05 2015 ● a(n) = (- 1) ^ (n + 1) * C(2 * n + 1,n) * hypergeom([- n - 1,n / 2 + 1 / 2,n / 2],[n,n + 1],4) / (2 * n + 1) for n>0. - _ Peter Luschny _ , Oct 06 2015 ●

▶ [A192876] 1,1,4,9,31,94,309,989,3212,10373,33595,108670,351729,1138113,3683172,11918737,38570247,124815294,403911805,1307084405,4229816636,13687969901,44295207939,143342292894,463865421721 ★ Constant term in the reduction by (x ^ 2 - > x + 1) of the polynomial p(n,x) given in Comments. ● a(n) = 2 * a(n - 1) + 6 * a(n - 2) - 5 * a(n - 3) - 6 * a(n - 4) + 4 * a(n - 5). ●

▶ [A356650] 1,4,9,32 ★ Domination number of the Cartesian product of four n - cycles. ● a(9 * n) = 729 * n ^ 4. ●

▶ [A265645] 0,0,4,9,32,50,108,147,256,324,500,605,864,1014,1372,1575,2048,2312,2916,3249,4000,4410,5324,5819,6912 ★ a(n) = n ^ 2 * floor(n / 2). ● a(n) = n ^ 2 * (2 * n + (- 1) ^ n - 1) / 4. ● a(n) = n ^ 3 / 2 for n even. ● a(n) = n ^ 2 * (n - 1) / 2 for n odd. ● a(n) = a(n - 1) + 3 * a(n - 2) - 3 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) + a(n - 6) - a(n - 7) for n>6. (End) ●

▶ [A005985] 0,1,4,9,32,65,192,385,1024,2049,5120,10241,24576,49153,114688,229377,524288,1048577,2359296,4718593,10485760,20971521,46137344,92274689,201326592 ★ Length of longest trail (i.e., path with all distinct edges) on the edges of an n - cube. ● a(n) = (2 * n * 2 ^ n - (1 - (- 1) ^ n) * (2 ^ n - 2)) / 4. - _ Giovanni Resta _ , May 31 2015 ● a(n) = 2 * a(n - 1) + 5 * a(n - 2) - 10 * a(n - 3) - 4 * a(n - 4) + 8 * a(n - 5), n>5. - _ Wesley Ivan Hurt _ , May 31 2015 ●

▶ [A322780] 1,4,9,32,71,252,559,1984,4401,15620,34649,122976,272791,968188,2147679,7622528,16908641,60012036,133121449,472473760,1048062951,3719778044,8251382159,29285750592,64962994321 ★ First differences of A237262. ● a(n) = 8 * a(n - 2) - a(n - 4) for n>4. ●

▶ [A343547] 1,4,9,32,75,318,931,3712,13014,50110,184767,715656,2704169,10454976,40126395,155462016,601080407,2335849578,9075135319,35359120940,137847221148,538346579034,2104098963743,8234009441952,32247603785500 ★ a(n) = n * Sum _{ d|n } binomial(d + n - 2,n - 1) / d. ● a(n) = [x ^ n] Sum _{ k>=1 } k * x ^ k / (1 - x ^ k) ^ n. ● a(n) = [x ^ n] Sum _{ k>=1 } binomial(k + n - 2,n - 1) * x ^ k / (1 - x ^ k) ^ 2. ●

▶ [A057819] 4,9,32,119,444,1657,6184,23079,86132,321449,1199664,4477207,16709164,62359449,232728632,868555079,3241491684,12097411657,45148154944,168495208119,628832677532,2346835502009,8758509330504,32687201820007 ★ a(0)=4, a(1)=9, a(n) = 4a(n - 1) - a(n - 2). ● a(n) = - (1 / 6) * sqrt(3) * (2 - sqrt(3)) ^ n + (1 / 6) * sqrt(3) * (2 + sqrt(3)) ^ n + 2 * (2 - sqrt(3)) ^ n + 2 * (2 + sqrt(3)) ^ n, with n >= 0. - _ Paolo P. Lava _ , Nov 20 2008 ●

▶ [A173659] 0,0,0,1,4,9,33,79,250,647,1914,5157,14797,40663,115036,319098,896896,2498663,7002446,19546383,54706009,152839003,427510168,1194858679,3341293220 ★ a(n) = a(n - 1) + 8a(n - 2) - 3a(n - 3) - 17a(n - 4) + a(n - 5) + 13a(n - 6) + 4a(n - 7) - 6a(n - 8) - a(n - 9). ● a(n) = a(n - 1) + 8a(n - 2) - 3a(n - 3) - 17a(n - 4) + a(n - 5) + 13a(n - 6) + 4a(n - 7) - 6a(n - 8) - a(n - 9). [M. F. Hasler, Nov 24 2010] ●

▶ [A054433] 1,4,9,33,80,174,588,1596,3135,9950,28512,56268,196040,496496,888300,3524577,9224880,18118362,63239220,150527400,310190454,1129200138,2971168704,5834056536,18513646430 ★ Numbers formed by interpreting the reduced residue set of every even number as a Zeckendorf Expansion. ● a(n) = A054433 _ as _ sum(2 * n). ●

▶ [A219769] 4,9,33,100,283,732,1745,3881,8149,16288,31169,57354,101850,175100,292257,474791,752483,1165864,1769161,2633816,3852648,5544732,7861073,10991157,15170465 ★ Number of n X 4 arrays of the minimum value of corresponding elements and their horizontal or antidiagonal neighbors in a random, but sorted with lexicographically nondecreasing rows and columns, 0..1 n X 4 array. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>14. ●

▶ [A308038] 0,0,4,9,34,57,134,196,370,500,830,1065,1624,2009,2884,3472,4764,5616,7440,8625,11110,12705,15994,18084,22334 ★ a(n) = Sum _{ i=1..floor((n - 1) / 2) } i * (n - i) ^ 2. ● a(n) = (2 * n + 1 - (- 1) ^ n) * (2 * n - 3 - (- 1) ^ n) * (3 * (- 1 + (- 1) ^ n) * (3 + (- 1) ^ n) + 4 * n * (5 + 5 * (- 1) ^ n + 11 * n)) / 3072. ● a(n) = a(n - 1) + 4 * a(n - 2) - 4 * a(n - 3) - 6 * a(n - 4) + 6 * a(n - 5) + 4 * a(n - 6) - 4 * a(n - 7) - a(n - 8) + a(n - 9). ● a(n) = (3 - 3 * (- 1) ^ n - 2 * (17 + 3 * (- 1) ^ n) * n ^ 2 - 12 * (1 + (- 1) ^ n) * n ^ 3 + 22 * n ^ 4) / 384. ●

▶ [A096531] 0,0,4,9,34,71,245,543,1835,4223,14167,33279,111279,264191,882015,2105343,7023295,16809983,56055167,134348799,447916799,1074266111,3581236735,8592031743,28641504255 ★ Number of different squares created when a square sheet of paper is folded n times, the first time by one of the diagonal of the square and after by the median of the triangle. ● a(1)=0, a(2)=0, a(3)=4, a(5)=34, a(6)=71, a(7)=245, a(8)=509 are easily computed. If n even > 8 define Y(8)=130, Y(n)=3 * Y(n - 2) and then a(n)=9 * a(n - 2) - 3 * Y(n - 2); if n odd define Y(7)=27, Y(n)=6 * Y(n - 2) - 3 and then a(n)=8 * a(n - 2) + 3 - 6 * Y(n - 2) ●

▶ [A163069] 4,9,34,104,344,1104,3584,11584,37504,121344,392704,1270784,4112384,13307904,43065344,139362304,450985984,1459421184,4722786304,15283257344,49457659904,160048349184,517927337984,1676048072704 ★ a(n) = ((4 + sqrt(5)) * (1 + sqrt(5)) ^ n + (4 - sqrt(5)) * (1 - sqrt(5)) ^ n) / 2. ● a(n) = 2 * a(n - 1) + 4 * a(n - 2) for n > 1; a(0) = 4, a(1) = 9. ●

▶ [A182144] 1,1,4,9,35,104,376,1321,4960,18667,72220,282368,1119791,4481428,18097960,73612825,301377323,1240776848,5133985196,21337546123,89037498752,372879415520,1566706843664,6602445412864,27900411735756 ★ G.f. satisfies: A(x) = A(x ^ 2) ^ 2 + x * A(x) ^ 2. ● a(2 * n + 1) = b(2 * n) for n>=0, ● a(2 * n) = b(2 * n - 1) + b(n) for n>0 with a(0)=1. ●

► [A176607] 1,4,9,35,143,648,3071,15126,76495,395086,2074699,11044027,59457897,323180520,1771081641,9774955015,54286011887,303138215322,1701016909235,9586701364893,54241695455421,307991483403216,1754468491846461 ⋆ Sequence defined by the recurrence formula a(n + 1)=sum(a(p) * a(n - p) + k,p=0..n) + l for n>=1, with here a(0)=1, a(1)=4, k=0 and l=1. ● a(n) = Sum _{ k=0..n } ((C(k) * Sum _{ l=0..n - k } (binomial(k + 1,l) * 2 ^ l * binomial(n - 2 * l, n - l - k)))), where C(k) is a Catalan number (A000108). - _ Vladimir Kruchinin _ , Mar 15 2016 ●

► [A179934] 4,9,36,85,352,837,3480,8281,34444,81969,340956,811405,3375112,8032077,33410160,79509361,330726484,787061529,3273854676,7791105925,32407820272,77123997717,320804348040,763448871241,3175635660124 ⋆ Expansion of x * (4 + 5 * x - 13 * x ^ 2 - x ^ 3 + x ^ 4) / ((1 - x) * (1 - 10 * x ^ 2 + x ^ 4)). ● a(n) = (1 + sqrt(1 + 24 * b(n) + (b(n) - 1)) / 2; this is equivalent to the Pell equation A(n) ^ 2 - 6 * B(n) ^ 2 = - 5 with the two fundamental solutions (7;3) and (17;7) and the solution (5;2) for the unit form; a(n) = (A(n) + 1) / 2; b(n) = (B(n) + 1) / 2. ● a(n + 4) = 10 * a(n + 2) - a(n) - 4. ● a(n + 6) = 11 * (a(n + 4) - a(n + 2)) + a(n). ● a(2 * n + 1) = (2 + (7 + 3 * r) * (5 + 2 * r) ^ n + (7 - 3 * r) * (5 - 2 * r) ^ n) / 4, r = sqrt(6). ● a(2 * n + 2) = (2 + (17 + 7 * r) * (5 + 2 * r) ^ n + (17 - 7 * r) * (5 - 2 * r) ^ n) / 4, r = sqrt(6). ● a(n) = + a(n - 1) + 10 * a(n - 2) - 10 * a(n - 3) - a(n - 4) + a(n - 5). ●

► [A018224] 1,1,4,9,36,100,400,1225,4900,15876,63504,213444,853776,2944656,11778624,41409225,165636900,590976100,2363904400,8533694884,34134779536,124408576656,497634306624,1828114918084 ⋆ a(n) = binomial(n, floor(n / 2)) ^ 2 = A001405(n) ^ 2. ● a(n) = (n! / (floor(n / 2)! * floor((n + 1) / 2)!)) ^ 2. - _ Peter Luschny _ , Apr 29 2014 ● a(n) = 4 ^ n * [x ^ n]((1 + x) * EllipticK(x) / (x * Pi / 2) - 1 / x). - _ Peter Luschny _ , Oct 14 2015 ● a(n) = Sum _{ k=0..n } (- 1) ^ k * binomial(n,k) * C(k) * binomial(2 * n - 2 * k,n - k) where C(k) are Catalan numbers (A000108), see Prodinger. - _ Michel Marcus _ , Nov 19 2019 ● a(n) = (1 / 2) * 4 ^ (n + 1) * hypergeom([n + 1, - n - 1, 1 / 2], [1, 1], 1). ●

► [A239230] 0,1,1,4,9,36,112,428,1505,5692,21026,79806,301488,1151866,4403778,16929474,65204353,251947668,975366094,3784197606,14705937794,57242631464,223121176224,870805992278,3402485053664 ⋆ Expansion of - x * log'(- sqrt(12 * x + 2 * sqrt(1 - 4 * x) + 2) / 4 + sqrt(1 - 4 * x) / 4 + 5 / 4). ● a(n) = n * sum(k=1..n, sum(j=0..n - k, C(n + 2 * j - 1,j + n - 1) * (- 1) ^ (k + j + n) * C(2 * n - k,j + n)) / (2 * n - k)). ● a(n) = sum(k=1..n, (- 1) ^ (k + n) * C(2 * n - k - 1,n - 1) * hypergeom([k - n, n / 2 + 1 / 2, n / 2], [n, n + 1], 4)). - _ Peter Luschny _ , May 22 2014 ●

► [A077211] 1,4,9,36,169,900,5476,38416,308025,2775556,27762361,305410576,3664970521,47644848729,667028291524,10005429354496,160086894977025,2721477270128400,48986590869089316,930745227141407161 ⋆ a(1) = 1; a(n + 1) is the smallest square greater than n * a(n). ● a(n + 1)=(floor(sqrt(n * a(n))) + 1) ^ 2 - _ Sam Alexander _ , Mar 02 2005 ●

► [A073977] 1,4,9,36,180,972,6300,44928,297432,1784592,10349856,60466176,358108128,2145709440,12958657344,78364164096,472093588224,2832129868032,16957996040448,101554796888064,608764662139392,3652587972836352,21926115464435712,131621703842267136 ⋆ Number of strings of length n over Z _ 6 with trace 1 and subtrace 0. ● a(n; t, s) = a(n - 1; t, s) + a(n - 1; t + 5, s + 5t + 1) + a(n - 1; t + 4, s + 4t + 4) + a(n - 1; t + 3, s + 3t + 3) + a(n - 1; t + 2, s + 2t + 2) + a(n - 1; t + 1, s + t + 1) where t is the trace and s is the subtrace. ●

► [A249101] 1,4,9,37,118,525,2059,9934,44937,233683,1177360,6552069,35986069,212891932,1256487933,7856137825,49320239614,324285063489,2149133929207,14796251405278,102910742502765,739149552929719,5370132965554144,40110161953250937 ⋆ p(n,1), where p(n,x) is defined in Comments; sum of numbers in row n of the array at A249100. ● a(n) = a(n - 1) + (2 * n - 1) * a(n - 2), a(0) = a(1) = 1. - _ Michael Somos _ , Oct 27 2022 ●

► [A142239] 1,4,9,40,89,396,881,3920,8721,38804,86329,384120,854569,3802396,8459361,37639840,83739041,372596004,828931049,3688320200,8205571449,36510605996,81226783441,361417739760,804062262961 ⋆ Denominators of continued fraction convergents to sqrt(3 / 2). ● a(n) = 10 * a(n - 2) - a(n - 4) for n > 3. - _ Vincenzo Librandi _ , Feb 01 2014 ●

► [A238420] 0,4,9,40,120,390,1176,3536,10395,30260,87120,248844,705744,1989820,5581485,15586720,43356936,120187026,332134440,915304520,2516113215,6900949484,18888143904,51599794200,140718765600 ⋆ a(n) is the Wiener index of the Lucas cube L _ n. ● a(n) = (1 / 5) * ((4n + 4) * F(2n - 2) + (7n + 7) * F(2n - 1) - 3(n + 1) * (- 1) ^ n). - _ Ralf Stephan _ , Mar 30 2014 ●

► [A085110] 1,4,9,40,195,1176,8225,65808,592263,5922640,65149029,781788360,10163248667,142285481352,2134282220265,34148515524256,580524763912335,10449445750422048,198539469258018893,3970789385160377880,83386577088367935459,1834504695944094580120 ⋆ a(1)=1, then add 1 multiply by 2 to get a(2), subtract 1 and multiply by 3 to get a(3), add 1 and multiply by 4 to get a(4) and so on. ● a(1)=1, a(n)=n * a(n - 1) + (- 1) ^ n * n ; a(n)=round(n! * (2 - exp(- 1))) + (- 1) ^ n. - _ Benoit Cloitre _ , Sep 24 2006 ● a(n) = ((n - 2) * n / (n - 1)) * a(n - 1) + n * a(n - 2). - _ Robert Israel _ , Aug 04 2014 ●

► [A041229] 1,4,9,40,889,3596,8081,35920,798321,3229204,7256729,32256120,716891369,2899821596,6516534561,28965959840,643767651041,2604036564004,5851840779049,26011399680200,578102633743449,2338421934653996,5254946503051441,23358207946859760 ⋆ Denominators of continued fraction convergents to sqrt(126). ● a(n) = 898 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Dec 13 2013 ●

► [A083859] 0,1,1,4,9,41,133,673,2737,15130,72181,430739,2320825,14815529,88005541,596681296,3843559137,27515587661,189933449365,1428716457761,10474213334761,82448447397646,637534807917701,5233087759204967,42445678665505425 ⋆ Main diagonal of generalized Fibonacci array A083856. ● a(n) = (((1 + sqrt(4 * n + 1)) / 2) ^ n - ((1 - sqrt(4 * n + 1)) / 2) ^ n) / sqrt(4 * n + 1). ● a(n) = y(n,n), where y(m + 2,n) = y(m + 1,n) + n * y(m,n) with y(0,n) = 0 and y(1,n) = 1 for all n. - _ Benedict W. J. Irwin _ , Nov 03 2016 ● a(n) = [x ^ n] x / (1 - x - n * x ^ 2). - _ Ilya Gutkovskiy _ , Oct 10 2017 ● a(n) = Sum _{ s = 0..floor((n - 1) / 2) } binomial(n - 1 - s, s) * n ^ s. - _ Petros Hadjicostas _ , Dec 24 2019 ● a(n) = (sqrt(n)) ^ n * Fibonacci(n, 1 / sqrt(n)), with a(0)=0. ● a(n) = (- sqrt(n) * i) ^ (n - 1) * ChebyshevU(n - 1, i / (2 * sqrt(n))), with a(0)=0. (End) ●

► [A219287] 4,9,42,149,423,1092,2623,5937,12729,26009,50896,95774,173920,305737,521743,866485,1403565,2221983,3444020,5234902,7814504,11471371,16579351,23617153,33191161 ⋆ Number of n X 4 arrays of the minimum value of corresponding elements and their horizontal or vertical neighbors in a random, but sorted with lexicographically nondecreasing rows and columns, 0..1 n X 4 array. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>15. ●

► [A024053] 1,4,9,44,369,2500,14329,75724,386529,1946564,9755625,48813484,244119889,1220674564,6103477209,30517527500,152587825089,762939369604,3814697160649,19073486197804,95367431480625 ⋆ a(n) = 5 ^ n - n ^ 4. ● a(n) = 10 * a(n - 1) - 35 * a(n - 2) + 60 * a(n - 3) - 55 * a(n - 4) + 26 * a(n - 5) - 5 * a(n - 6). ●

► [A081069] 4,9,49,324,2209,15129,103684,710649,4870849,33385284,228826129,1568397609,10749957124,73681302249,505019158609,3461452808004,23725150497409,162614600673849,1114577054219524,7639424778862809 ⋆ Lucas(4n) + 2, or Lucas(2n) ^ 2. ● a(n) = 8a(n - 1) - 8a(n - 2) + a(n - 3). ● a(n) = 2 + [(7 / 2) - (3 / 2) * sqrt(5)] ^ n + [(7 / 2) + (3 / 2) * sqrt(5)] ^ n, with n>=0. - _ Paolo P. Lava _ , Dec 01 2008 ● a(n) = 2 ^ (4 * n) * (cos(Pi / 5) ^ (2 * n) + cos(3 * Pi / 5) ^ (2 * n)) ^ 2. - _ Gary Detlefs _ , Dec 05 2010 ● a(n) = 7 * a(n - 1) - a(n - 2) - 10, n>1. - _ Gary Detlefs _ , Dec 06 2010 ● a(n) = 5 * sum(fibonacci(4 * k + 2),k=0..n) + 4, with offset - 1. - _ Gary Detlefs _ , Dec 06 2010 ●

► [A358594] 1,4,9,52,125,1626,5047,81768,408249,7263910,39916811,990191676,6227020813,174356750582,1348633786515,41861724727696,355687428096017,12904788209623614,121645100408832019,4866124222538035620,51490090294307945301,224800145555530071729 4 ⋆ Expansion of e.g.f. Sum _{ k>0 } x ^ k / ((k - 1)! - x ^ k). ● a(n) = n! * Sum _{ d|n } 1 / (d - 1)! ^ (n / d). ●

► [A069507] 4,9,55,111,1111,11111,111111,1111111,11111111,111111111,1111111111,11111111111,111111111111,1111111111111,11111111111111,111111111111111,1111111111111111,11111111111111111,111111111111111111,1111111111111111111,11111111111111111111,111111111111111111111 ⋆ a(1) = 4; a(n) = smallest palindromic number of the form k * a(n - 1) + 1 with k > 1. ● a(n) = { 10 ^ (n - 1) - 1 }/ 9 for n > 3. ● a(n) = 11 * a(n - 1) - 10 * a(n - 2) for n > 4. ●

► [A203464] 4,9,56,61,69,74,121,126,134,139,186,191,199,204,251,256,264,269,316,321,329,334,381,386,394 ⋆ Numbers n such that 65 divides 4n ^ 2 + 1; alternately, numbers which are 4, 9, 56, or 61 mod 65. ● a(n) = - a(- n + 1) = (1 / 8) * (130 * n + 78 * i ^ (n * (n + 1)) - 45 * (- 1) ^ n - 65), where i=sqrt(- 1). ●

► [A309444] 0,4,9,59,559,3059,12434,59309,371809,371809,8184309,27715559,76543684,320684309,1541387434,25955449934,86990606184,392166387434,2680984746809,14125076543684,52272049199934,338374344121809,2245722976934309,7014094558965559,42776881424199934 ⋆ The successive approximations up to 5 ^ n for 5 - adic integer 4 ^ (1 / 3). ● a(0) = 0 and a(1) = 4, a(n) = a(n - 1) + 3 * (a(n - 1) ^ 3 - 4) mod 5 ^ n for n > 1. ●

► [A041597] 1,1,4,9,76,161,559,720,25039,25759,102316,230391,1945444,4121279,14309281,18430560,640948321,659378881,2619084964,5897548809,49799475436,105496499681,366288974479,471785474160,16406995095919 ⋆ Denominators of continued fraction convergents to sqrt(316). ● a(n) = 25598 * a(n - 8) - a(n - 16) for n>15. - _ Vincenzo Librandi _ , Dec 21 2013 ●

► [A041030] 4,9,76,161,1364,2889,24476,51841,439204,930249,7881196,16692641,141422324,299537289,2537720636,5374978561,45537549124,96450076809,817138163596,1730726404001,14662949395604 ⋆ Numerators of continued fraction convergents to sqrt(20). ● a(2n - 1) = ceiling(1 / (4 / (Fibonacci(6n) * sqrt(5) - Lucas(6n) + 2) - 2)), a(2n) = ceiling(1 / (1 - 2 / (Fibonacci(6n + 3) * sqrt(5) - Lucas(6n + 3) + 2)) - 2). - _ Thomas Baruchel _ ●

► [A309801] 1,4,9,81,244,793,2316,65536,262145,1049600,4196353,17308657,68703188,273234809,1088123500,152587890625,762939453126,3814697527769,19073486852414,95370918425026,476847618556329,2384217176269538,11921023106645561,59886119752101281 ⋆ If 2 * n = Sum (2 ^ e _ k) then a(n) = Sum (e _ k ^ n). ● a(n) = [x ^ n] (1 / (1 - x)) * Sum _{ k>=0 } (k + 1) ^ n * x ^ (2 ^ k) / (1 + x ^ (2 ^ k)). ●

► [A042381] 1,1,4,9,112,121,2048,2169,28076,58321,203039,261360,13793759,14055119,55959116,125973351,1567639328,1693612679,28665442192,30359054871,392974100644,816307256159,2841895869121,3658203125280,193068458383681 ⋆ Denominators of continued fraction convergents to sqrt(717). ● a(n) = 13996798 * a(n - 12) - a(n - 24) for n>23. - _ Vincenzo Librandi _ , Jan 21 2014 ●

► [A111072] 0,1,4,10,10,15,16,24,30,35,40,46,54,55,60,60,66,69,70,70,70,71,74,80,80 ⋆ Write the digit string 0123456789, repeated infinitely many times. Then, starting from the first "0" digit at the left end, move to the right by one digit (to the "1"), then two digits (to the "3"), then three digits (to the "6"), four digits ("0"), five digits ("5"), and so on. Partial sums of the digits thus reached are 0, 1, 4, 10, 10, 15, ... ● a(n + 1) = a(n) + (a(n) - a(n - 1) + (n + 1) mod 10) mod 10, with a(0)=0, a(1)=1. ●

► [A355497] 0,4,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32 ⋆ Numbers k such that x ^ 2 - s * x + p has only integer roots, where s and p denote the sum and product of the digits of k respectively. ● a(n) = n + O(n ^ k) where k = log(9) / log(10) = 0.95424.... - _ Charles R Greathouse IV _ , Jul 07 2022 ●

► [A074226] 1,4,10,11,13,14,16,23,25,34,35,37,38,40,44,47,49,52,56,58,59,61,62,64,71 ⋆ Numbers n such that Kronecker(3,n) = 1. ● a(n) seems to be asymptotic to c * n with c=3. - _ Benoit Cloitre _ , Sep 18 2002 ●

► [A352213] 1,1,1,4,10,12,23,38,64 ⋆ Largest number of maximal cographical node - induced subgraphs of an n - node graph. ● a(m + n) >= a(m) * a(n). ●

► [A087444] 1,4,10,13,19,22,28,31,37,40,46,49,55,58,64,67,73,76,82,85,91,94,100,103,109 ⋆ Numbers that are congruent to { 1, 4 } mod 9. ● a(n) = (18 * n - 17 - 3 * (- 1) ^ n) / 4. ● a(n) = 9 * n - a(n - 1) - 13 (with a(1)=1). - _ Vincenzo Librandi _ , Aug 08 2010 ●

► [A079932] 1,4,10,13,22,27,32,36,40,49,54,62,66,71,80,91,97,102,109,114,120,124,127,138,146 ⋆ Greedy powers of (1 / sqrt(2)): sum _{ n=1..inf } (1 / sqrt(2)) ^ a(n) = 1. ● a(n)=sum _{ k=1..n } floor(g _ k) where g _ 1=1, g _{ n + 1 } =log _ x(x ^ frac(g _ n) - x) (n>0) at x=(1 / sqrt(2)) and frac(y) = y - floor(y). ●

► [A032821] 1,4,10,13,37,40,91,94,118,121,334,337,361,364,820,823,847,850,1063,1066,1090,1093,3007,3010,3034 ⋆ Numbers whose set of base - 9 digits is { 1,4 } . ● a(1)=1, a(2)=4; a(n) = 9 * a(floor(n / 2)) + 1 for n odd, otherwise a(n) = 9 * a(floor((n - 1) / 2)) + 4. - _ Bruno Berselli _ , May 28 2012 ●

► [A179134] 1,4,10,13,68,178,233,1220,3194,4181,21892,57314,75025,392836,1028458,1346269,7049156,18454930,24157817,126491972,331160282,433494437,2269806340,5942430146,7778742049 ⋆ a(n) = (F(2 * n - 1) + F(2 * n + 2)) * (5 / 6 - cos(2 * Pi * n / 3) / 3), where F(n) = Fibonacci(n). ● a(n) = 18 * a(n - 3) - a(n - 6). G.f.: - (2 * x ^ 5 + 4 * x ^ 4 + 5 * x ^ 3 - 10 * x ^ 2 - 4 * x - 1) / ((x ^ 2 - 3 * x + 1) * (x ^ 4 + 3 * x ^ 3 + 8 * x ^ 2 + 3 * x + 1)). - _ Colin Barker _ , Jun 27 2013 ●

► [A310368] 1,4,10,14,18,22,26,30,34,40,44,48,54,58,62,66,70,74,78,84,88,92,98,102,106 ⋆ Coordination sequence Gal.6.230.6 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - 2 * a(n - 4) + 2 * a(n - 5) - 2 * a(n - 6) + 2 * a(n - 7) - 2 * a(n - 8) + 2 * a(n - 9) - a(n - 10) for n > 10. ●

► [A298024] 1,4,10,14,18,24,28,32,38,42,46,52,56,60,66,70,74,80,84,88,94,98,102,108,112 ⋆ G.f.: (x ^ 4 + 3 * x ^ 3 + 6 * x ^ 2 + 3 * x + 1) / ((1 - x) * (1 - x ^ 3)). ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. (Conjectured, correctly, by _ Colin Barker _ , Jan 22 2018.) ●

► [A310393] 1,4,10,14,19,23,28,33,37,42,46,52,56,60,66,70,75,79,84,89,93,98,102,108,112 ⋆ Coordination sequence Gal.6.193.4 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) - a(n - 6) + a(n - 7) + a(n - 9) - a(n - 10) for n > 10. ●

► [A310400] 1,4,10,14,19,24,29,34,39,44,48,54,58,62,68,72,77,82,87,92,97,102,106,112,116 ⋆ Coordination sequence Gal.6.337.1 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) - a(n - 6) + a(n - 7) + a(n - 9) - a(n - 10) for n > 10. ●

► [A146763] 0,4,10,14,20,24,30,34,40,44,50,54,60,64,70,74,80,84,90,94,100,104,110,114,120 ⋆ Rank of terms ending in 0 in A061039. ● a(n) = 10 * n - 6 - a(n - 1) (with a(0)=0). - _ Vincenzo Librandi _ , Nov 26 2010 ● a(n) = (- 1 + (- 1) ^ n + 10 * n) / 2. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3). ●

► [A283234] 4,10,14,20,26,30,36,40,46,52,56,62,68,72,78,82,88,94,98,104,108,114,120,124,130 ⋆ 2 * A001950. ● a(n) = 2 * floor(n * s), where r = (- 1 + sqrt(5)) / 2. ●

► [A022382] 4,10,14,24,38,62,100,162,262,424,686,1110,1796,2906,4702,7608,12310,19918,32228,52146,84374,136520,220894,357414,578308 ⋆ Fibonacci sequence beginning 4, 10. ● a(n) = Fibonacci(n + 5) + Lucas(n - 1). - _ Greg Dresden _ , Feb 18 2022 ● a(n) = a(n - 1) + a(n - 2). - _ Wesley Ivan Hurt _ , Mar 08 2022 ●

► [A365679] 4,10,14,32,40,88,104,224,256,544,608,1280,1408,2944,3200,6656,7168,14848,15872,32768,34816,71680,75776,155648,163840 ⋆ a(n) is the number of exterior top arches (no covering arch) for semi - meanders in generation n + 1 that are generated by semi - meanders with n top arches and floor((n + 2) / 2) exterior top arches using the exterior arch splitting algorithm. ● a(n) = (2 * n - floor((n - 1) / 2)) * 2 ^ floor((n - 1) / 2). ●

► [A310440] 1,4,10,15,19,24,29,34,39,43,48,54,58,62,68,73,77,82,87,92,97,101,106,112,116 ⋆ Coordination sequence Gal.6.202.5 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = a(n - 1) - a(n - 2) + 2 * a(n - 3) - a(n - 4) + a(n - 5) - a(n - 6) for n > 6. ●

► [A310462] 1,4,10,15,20,26,31,36,42,46,50,56,61,66,72,77,82,88,92,96,102,107,112,118,123 ⋆ Coordination sequence Gal.5.138.1 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = a(n - 1) + a(n - 9) - a(n - 10) for n > 10. ●

► [A310499] 1,4,10,16,20,25,31,36,40,46,52,56,60,66,72,76,81,87,92,96,102,108,112,116,122 ⋆ Coordination sequence Gal.6.351.1 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = a(n - 1) + a(n - 11) - a(n - 12) for n > 12. ●

► [A310501] 1,4,10,16,20,26,30,36,40,46,52,56,60,66,72,76,82,86,92,96,102,108,112,116,122 ⋆ Coordination sequence Gal.6.328.1 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = a(n - 1) + a(n - 11) - a(n - 12) for n > 12. ●

► [A310502] 1,4,10,16,20,26,30,36,42,46,50,56,62,66,72,76,82,88,92,96,102,108,112,118,122 ⋆ Coordination sequence Gal.5.132.1 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = a(n - 1) + a(n - 9) - a(n - 10) for n > 10. ●

► [A310503] 1,4,10,16,20,26,32,36,40,46,52,56,62,68,72,76,82,88,92,98,104,108,112,118,124 ⋆ Coordination sequence Gal.4.73.1 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = a(n - 1) + a(n - 7) - a(n - 8) for n > 8. ●

► [A310504] 1,4,10,16,20,26,32,36,42,48,52,56,62,68,72,78,84,88,94,100,104,108,114,120,124 ⋆ Coordination sequence Gal.6.329.1 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - 2 * a(n - 4) + 2 * a(n - 5) - 2 * a(n - 6) + 2 * a(n - 7) - 2 * a(n - 8) + 2 * a(n - 9) - a(n - 10) for n > 10. ●

► [A310509] 1,4,10,16,21,25,30,36,42,46,50,56,62,67,71,76,82,88,92,96,102,108,113,117,122 ⋆ Coordination sequence Gal.5.142.1 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = a(n - 1) + a(n - 9) - a(n - 10) for n > 10. ●

► [A310511] 1,4,10,16,21,26,31,36,41,46,52,58,62,66,72,78,83,88,93,98,103,108,114,120,124 ⋆ Coordination sequence Gal.6.354.1 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = 2 * a(n - 1) - 3 * a(n - 2) + 4 * a(n - 3) - 4 * a(n - 4) + 4 * a(n - 5) - 3 * a(n - 6) + 2 * a(n - 7) - a(n - 8) for n > 8. ●

► [A310512] 1,4,10,16,21,26,31,36,42,48,52,56,62,68,73,78,83,88,94,100,104,108,114,120,125 ⋆ Coordination sequence Gal.6.352.1 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - 2 * a(n - 4) + 2 * a(n - 5) - 2 * a(n - 6) + 2 * a(n - 7) - 2 * a(n - 8) + 2 * a(n - 9) - a(n - 10) for n > 10. ●

► [A277570] 4,10,16,22,24,28,34,40,46,52,58,60,64,70,76,82,88,94,96,100,106,112,118,124,130 ⋆ Numbers k such that k / 6 ^ m == 4 (mod 6), where 6 ^ m is the greatest power of 6 that divides k. ● a(n) = 5n + O(log n). - _ Charles R Greathouse IV _ , Nov 03 2016 ●

► [A310518] 1,4,10,16,22,26,30,36,42,48,52,56,62,68,74,78,82,88,94,100,104,108,114,120,126 ⋆ Coordination sequence Gal.3.21.1 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = a(n - 1) + a(n - 5) - a(n - 6) for n > 6. ●

► [A310521] 1,4,10,16,22,26,32,38,44,48,52,58,64,70,74,80,86,92,96,100,106,112,118,122,128 ⋆ Coordination sequence Gal.5.133.1 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = 2 * a(n - 1) - a(n - 2) - a(n - 3) + 2 * a(n - 4) - a(n - 5) - a(n - 6) + 2 * a(n - 7) - a(n - 8) for n > 8. ●

► [A219239] 4,10,16,22,28,30,36,40,48,52,56,58,70,78,84,90,100,102,110,128,132,134,146,154,164 ⋆ Double magic numbers (in physics). ● a(n) is the sum of two numbers from [2, 8, 20, 28, 50, 82, 126] (the magic numbers A018226). ●

► [A310525] 1,4,10,16,22,28,32,36,42,48,54,60,64,68,74,80,86,92,96,100,106,112,118,124,128 ⋆ Coordination sequence Gal.4.74.1 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - 2 * a(n - 4) + 2 * a(n - 5) - a(n - 6) for n > 6. ●

► [A310529] 1,4,10,16,22,28,34,38,42,48,54,60,66,72,76,80,86,92,98,104,110,114,118,124,130 ⋆ Coordination sequence Gal.4.75.1 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = a(n - 1) + a(n - 7) - a(n - 8) for n > 8. ●

► [A310530] 1,4,10,16,22,28,34,40,44,48,54,60,66,72,78,84,88,92,98,104,110,116,122,128,132 ⋆ Coordination sequence Gal.5.134.1 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - 2 * a(n - 4) + 2 * a(n - 5) - 2 * a(n - 6) + 2 * a(n - 7) - a(n - 8) for n > 8. ●

► [A310532] 1,4,10,16,22,28,34,40,46,52,56,60,66,72,78,84,90,96,102,108,112,116,122,128,134 ⋆ Coordination sequence Gal.6.333.1 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - 2 * a(n - 4) + 2 * a(n - 5) - 2 * a(n - 6) + 2 * a(n - 7) - 2 * a(n - 8) + 2 * a(n - 9) - a(n - 10) for n > 10. ●

► [A016957] 4,10,16,22,28,34,40,46,52,58,64,70,76,82,88,94,100,106,112,118,124,130,136,142,148 ⋆ a(n) = 6 * n + 4. ● a(n) = 2 * (6 * n + 1) - a(n - 1) (with a(0)=4). - _ Vincenzo Librandi _ , Nov 20 2010 ● a(n) = floor((sqrt(36 * n ^ 2 - 36 * n + 1) + 6 * n + 1) / 2). - _ Srikanth K S _ , Dec 18 2010 ● a(n) = 2 * a(n - 1) - a(n - 2). (End) ● a(4 * n + 2) = 4 * a(n). - _ Zhandos Mambetaliyev _ , Sep 22 2018 ●

► [A271911] 0,4,10,16,24,32,42,52,64,76,90,104,120,136,154,172,192,212,234,256,280,304,330,356,384 ⋆ Number of ways to choose three distinct points from a 2 X n grid so that they form an isosceles triangle. ● a(n) = (- 1 + (- 1) ^ n + 16 * n + 2 * n ^ 2) / 4, or equivalently, a(n) = (n ^ 2 + 8 * n) / 2 if n even, (n ^ 2 + 8 * n - 1) / 2 if n odd. ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4) for n>4. ●

► [A073121] 1,4,10,16,28,40,52,64,88,112,136,160,184,208,232,256,304,352,400,448,496,544,592,640,688 ⋆ a(n) = r * a(ceiling(n / 2)) + s * a(floor(n / 2)) with a(1)=1 and (r,s)=(2,2). ● a(n) = 2 * (a(floor(n / 2)) + a(ceiling(n / 2))) for n >= 2; alternatively, a(n) = 2 ^ c(n + 2b) where n = 2 ^ c + b, 0 <= b < 2 ^ c. ● a(n) = 2 * (a(floor(n / 2)) + a(ceiling(n / 2))) for n >= 2; alternatively, a(n) = 2 ^ c(n + 2b) where n = 2 ^ c + b, 0 <= b < 2 ^ c ●

► [A307274] 1,4,10,16,28,46,70,100,130,163,211,268,328,388,460,544,622,703,799,910,1006,1108,1228,1366,1480 ⋆ Partial sums of A307204. ● a(n) = a(n - 1) + 2 * a(n - 4) - 2 * a(n - 5) - a(n - 8) + a(n - 9) for n>17. ●

► [A298031] 1,4,10,16,30,36,48,54,66,72,84,90,102,108,120,126,138,144,156,162,174,180,192,198,210 ⋆ Coordination sequence of Dual(3.4.6.4) tiling with respect to a tetravalent node. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n>4. - _ Colin Barker _ , Jan 25 2018 ●

► [A069982] 0,0,0,0,1,4,10,16,31,40,68,80,125,140,206,224,315,336,456,480,633,660,850,880,1111 ⋆ Number of 4 - gonal compositions of n into positive parts. ● a(n) = (2 * n ^ 3 - 3 * n ^ 2 - 23 * n + 3 * (13 + (n ^ 2 - 7 * n + 11) * (- 1) ^ n)) / 24. - _ Luce ETIENNE _ , Jul 02 2015; edited by _ Mo Li _ , Sep 18 2019 ● a(n) = a(n - 1) + 3 * a(n - 2) - 3 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) + a(n - 6) - a(n - 7) for n>7. - _ Colin Barker _ , Sep 18 2019 ●

► [A056486] 4,10,16,40,64,160,256,640,1024,2560,4096,10240,16384,40960,65536,163840,262144,655360,1048576,2621440,4194304,10485760,16777216,41943040,67108864 ⋆ a(n) = (9 * 2 ^ n + (- 2) ^ n) / 4 for n>0. ● a(n) = 4 ^ ((n + 1) / 2) for n odd, a(n) = 4 ^ (n / 2) * 5 / 2 for n even. ● a(n) = 4 * a(n - 2). ● a(n) = (4 ^ floor((n + 1) / 2) + 4 ^ ceiling((n + 1) / 2)) / 2. - _ Robert A. Russell _ , Sep 21 2018 ●

► [A183905] 1,4,10,17,25,34,44,55,67,80,94,109,125,142,160,179,199,220,242,265,289,314,340,367,395 ⋆ Number of nondecreasing arrangements of n + 2 numbers in 0..2 with each number being the sum mod 3 of two others. ● a(n) = Triangular number(A000217) - 11. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>4. ●

► [A301288] 1,4,10,17,25,40,58,75,95,120,148,177,207,242,282,321,361,408,458,507,559,616,676,737,799 ⋆ Partial sums of A301287. ● a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 3 * a(n - 3) - 3 * a(n - 4) + 2 * a(n - 5) - 2 * a(n - 6) + a(n - 7) for n > 8. ●

► [A347154] 1,4,10,17,25,41,51,66,87,109,123,159,175,203,245,276,296,351,373,423,477,517,543,619,662 ⋆ Sum of all divisors, except the largest of every number,

of the first n positive even numbers. ● a(n) = (5 * Pi ^ 2 / 24 - 1) * n ^ 2 + O(n * log(n)). - _ Amiram Eldar _ , May 15 2023 ●

▶ [A213398] 1,4,10,17,27,38,52,67,85,104,126,149,175,202,232,263,297,332,370,409,451,494,540,587,637 ⋆ Number of (w,x,y) with all terms in { 0,...,n } and min(|w - x|,|x - y|) = x. ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4). ● a(n) = (n + 1) ^ 2 + floor(n / 2). [_ Wesley Ivan Hurt _ , Jul 15 2013] ● a(n) = (4 * n ^ 2 + 10 * n + (- 1) ^ n + 3) / 4. ●

▶ [A213497] 1,4,10,17,29,40,57,73,95,115,143,167,200,229,267,300,344,381,430,472,526,572,632,682,747 ⋆ Number of (w,x,y) with all terms in { 0,...,n } and w = min(|w - x|,|x - y|) ● a(n) = 2 * a(n - 2) + a(n - 3) - a(n - 4) - 2 * a(n - 5) + a(n - 7). ●

▶ [A113804] 4,10,18,24,32,38,46,52,60,66,74,80,88,94,102,108,116,122,130,136,144,150,158,164,172 ⋆ Numbers that are congruent to 4 or 10 mod 14. ● a(n) = 7 n - ((- 1) ^ n + 7) / 2. ● a(n) = 14 * n - a(n - 1) - 14 (with a(1)=4). - _ Vincenzo Librandi _ , Aug 01 2010 ●

▶ [A028552] 0,4,10,18,28,40,54,70,88,108,130,154,180,208,238,270,304,340,378,418,460,504,550,598,648 ⋆ a(n) = n * (n + 3). ● a(n) = a(n - 1) + 2 * (n + 1) for n>0, with a(0)=0. - _ Vincenzo Librandi _ , Aug 05 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3), with a(0)=0, a(1)=4, a(2)=10. - _ Harvey P. Dale _ , Feb 05 2012 ● a(n) = 4 * C(n + 1,2) - 2 * C(n,2) for n>=0. - _ Felix P. Muga II _ , Mar 11 2014 ● a(- 3 - n) = a(n) for all n in Z. - _ Michael Somos _ , Mar 18 2014 ●

▶ [A217748] 1,4,10,18,28,40,54,70,88,108,130,154,180,208,238,270,304,340,378,418,460,504,550,598,648 ⋆ Number of regions with infinite area in the exterior of a regular n - gon with all diagonals drawn. ● a(n) = n * (n - 3) for n > 3. ●

▶ [A283969] 1,4,10,18,29,43,59,78,99,123,150,179,211,246,283,323,365,410,458,508,561,616,674,735,798 ⋆ a(n) = n + 1 + Sum _ ({ k=0..n } floor((n - k) / r, where r = (3 + sqrt(5)) / 2). ● a(n) = n + 1 + Sum _ ({ k=0..n } floor((n - k) / r, where r = (3 + sqrt(5)) / 2). ●

▶ [A332490] 1,4,10,18,30,42,61,77,101,124,153,177,218,246,285,325,373,409,467,507,570,624,683,731,816 ⋆ a(n) = Sum _{ k=1..n } k * ceiling(n / k). ● a(n) = n * (n + 1) / 2 + Sum _{ k=1..n - 1 } sigma(k). ●

▶ [A267882] 1,1,4,10,19,30,43,58,75,94,115,138,163,190,219,250,283,318,355,394,435,478,523,570,619 ⋆ Total number of ON (black) cells after n iterations of the " Rule 233" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>2. ●

▶ [A238705] 1,4,10,19,30,44,61,80,102,127,154,184,217,252,290,331,374,420,469,520,574,631,690,752,817 ⋆ Number of partitions of 4n into 4 parts with smallest part = 1. ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) - 2 * a(n - 4) + a(n - 5). - _ Wesley Ivan Hurt _ , Nov 18 2021 ●

▶ [A022785] 1,4,10,19,30,44,61,81,103,128,156,186,219,255,294,335,379,426,475,527,582,640,700,763,829 ⋆ Place where n - th 1 occurs in A023123. ● a(n) = 1 + Sum _{ k=1..n - 1 } ceiling(e * k). - _ Benoit Cloitre _ , Jan 24 2009 ●

▶ [A005448] 1,4,10,19,31,46,64,85,109,136,166,199,235,274,316,361,409,460,514,571,631,694,760,829,901 ⋆ Centered triangular numbers: a(n) = 3n(n - 1) / 2 + 1 . ● a(n) = C(n + 3, 3) - C(n, 3) = C(n, 0) + 3 * C(n, 1) + 3 * C(n, 2). - _ Paul Barry _ , Jul 01 2003 ● a(n) = 1 + Sum _{ j=0..n - 1 } (3 * j). - Xavier Acloque, Oct 25 2003 ● a(1 - n) = a(n). - _ Michael Somos _ , Sep 23 2006 ● a(n) = binomial(n + 1,n - 1) + binomial(n,n - 2) + binomial(n - 1,n - 3). - _ Zerinvary Lajos _ , Sep 03 2006 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3), a(1)=1, a(2)=4, a(3)=10. - _ Jaume Oliver Lafont _ , Dec 02 2008 ● a(n) = a(n - 1) + 3 * n - 3. - _ Vincenzo Librandi _ , Nov 18 2010 ●

▶ [A007077] 1,4,10,19,31,47,68,92,120,153,190,232,279,332,392,454,521,593,670,753,841,936,1036,1141,1252 ⋆ Optimal cost of search tree for searching an ordered array of n elements with cost k of probing element k. ● a(n) = m(n, 0) where m(0, d) = 0 and for n > 0, m(n, d) = min _{ 1 <= r <= n } { (r + d) * n + m(r - 1, d) + m(n - r, r + d) } [from Knight]. - _ Sean A. Irvine _ , Oct 07 2017 ●

▶ [A098576] 1,1,1,1,4,10,19,31,55,109,220,424,793,1489,2845,5473,10480,19954,37963,72391,138259,263989,503608,960400,1831969 ⋆ a(n) = Sum _{ k=0..floor(n / 4) } C(n - 2 * k,2 * k) * 3 ^ k. ● a(n) = 2 * a(n - 1) - a(n - 2) + 3 * a(n - 4). ●

▶ [A132922] 1,4,10,19,32,50,75,110,160,233,342,508,765,1168,1806,2823,4452,7070,11287,18090,29076,46829,75530,121944,197017 ⋆ Row sums of triangle A132921. ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + a(n - 3) + 2 * a(n - 4) - a(n - 5) for n > 5. ● a(n) = n * (n - 1) + Fibonacci(n + 2) - 1. ●

▶ [A307276] 1,4,10,19,32,50,77,108,142,183,233,291,352,416,491,572,654,739,839,943,1046,1152,1277,1404,1528 ⋆ Partial sums of A307270. ● a(n) = a(n - 1) + 2 * a(n - 4) - 2 * a(n - 5) - a(n - 8) + a(n - 9) for n>17. ●

▶ [A173154] 1,4,10,19,33,52,78,111,153,204,266,339,425,524,638,767,913,1076,1258,1459,1681,1924,2190,2479,2793 ⋆ a(n) = n ^ 3 / 6 + 3 * n ^ 2 / 4 + 7 * n / 3 + 7 / 8 + (- 1) ^ n / 8. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - 2 * a(n - 3) + 3 * a(n - 4) - a(n - 5). ●

▶ [A022905] 1,4,10,19,34,55,85,124,178,247,337,448,589,760,970,1219,1522,1879,2305,2800,3385,4060,4846,5743,6781 ⋆ a(n) = M(n) + m(n) for n >= 2, where M(n) = max { a(i) + a(n - i): i = 1..n - 1 } , m(n) = min { a(i) + a(n - i): i = 1..n - 1 } . ● a(n) = a(n - 1) + 1 + a(floor(n / 2)) + a(ceiling(n / 2))) for n>1, a(1) = 1. - _ Alois P. Heinz _ , Sep 17 2013 ●

▶ [A251176] 1,1,1,1,4,10,19,49,154,415,1066,3322,10639,31279,96751,326908,1082065,3514285,12068659,42713311,148480885,523469791,1915394458,7043990266,25840482346 ⋆ G.f. A(x) satisfies A(x) = 1 + x / (1 - 9 * x ^ 3) ^ (1 / 3) * A(x / sqrt(1 - 9 * x ^ 3) ^ (1 / 3)). ● a(n) = Sum _{ k=0..(n - 1) / 3 } a(n - 3 * k - 1) * binomial(n / 3 - 1,k) * 9 ^ k, for n>0 with a(0)=1. [After _ Vladimir Kruchinin _ in A201169.] ●

▶ [A357837] 0,4,10,20,32,46,64,84,106,132,160,190,224,260,298,340,384,430,480,532,586,644,704,766,832 ⋆ a(n) is the sum of the lengths of all the segments used to draw a square of side n representing a fishbone pattern using symmetric L - shaped tiles with side length 2. ● a(n) = 2 * (ceiling(2 * (n + 1) ^ 2 / 3) - 1). ● a(n) = 2 * (1 + n ^ 2 - 2 * (n - 2) * floor((n - 1) / 3) + 3 * floor((n - 1) / 3) ^ 2) for n > 0. ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) - 2 * a(n - 4) + a(n - 5) for n > 4. ●

▶ [A028358] 1,4,10,20,33,48,64,82,103,128,156,186,217,250,286,326,369,414,460,508,559,614,672,732,793 ⋆ Partial sums of A028357. ● a(n) = (9 + 72 * n + 30 * n ^ 2 + 32 * cos((n + 1) * Pi / 3) - (- 1) ^ n) / 24. - _ Greg Dresden _ , Jun 22 2021 ●

▶ [A140229] 1,4,10,20,33,49,68,90,115,143,174,208,245,285,328,374,423,475,530,588,649,713,780,850,923 ⋆ Binomial transform of [1, 3, 3, 1, - 2, 3, - 4, 5, ...]. ● a(n) = (n + 1)(3n - 4) / 2, for n>=3. - _ Emeric Deutsch _ , May 18 2008 ●

▶ [A119651] 4,10,20,34,52,73,96,120,144,168,192,216,240,264,288,312,336,360,384,408,432,456,480,504,528 ⋆ Number of different values of exactly n standard American coins (pennies, nickels, dimes and quarters). ● a(n) = 2 * a(n - 1) - a(n - 2) for n>2. ● a(n) = 24 * (n - 3) for n>6. ●

▶ [A279015] 0,0,4,10,20,34,52,73,100,128,162,199,240,285,334,387,444,505,570,639,712,789,870,955,1044 ⋆ Greatest possible number of diagonals of a polyhedron having n faces. ● a(n) = 2 * n ^ 2 - 21 * n + 64 for n=12 or n>=14. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>8. ●

▶ [A005893] 1,4,10,20,34,52,74,100,130,164,202,244,290,340,394,452,514,580,650,724,802,884,970,1060,1154 ⋆ Number of points on surface of tetrahedron; coordination sequence for sodalite net (equals 2 * n ^ 2 + 2 for n > 0). ● a(n) = binomial(n + 3, 3) - binomial(n - 1, 3) for n >= 1. - _ Mitch Harris _ , Jan 08 2008 ● a(n) = (n + 1) ^ 2 + (n - 1) ^ 2. - Benjamin Abramowitz, Apr 14 2009 ● a(n) = 2 * n ^ 2 - 0 ^ n + 2. - _ Vincenzo Librandi _ , Sep 27 2011 ● a(0)=1, a(1)=4, a(2)=10, a(3)=20, a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Feb 26 2012 ● a(n) = a(- n) for all n in Z. - _ Michael Somos _ , May 14 2014 ●

▶ [A008132] 1,4,10,20,34,52,74,102,136,172,210,252,300,354,410,468,530,600,678,756,834,916,1006,1104,1202 ⋆ Coordination sequence T1 for Zeolite Code LOS . ● a(10 * m + k) = 208 * m ^ 2 + b(k) * m + c(k), where b(k), c(k) are constants depending on k, 0<=k<10 (_ N. J. A. Sloane _). ●

▶ [A008129] 1,4,10,20,34,53,76,103,135,170,209,252,300,354,410,470,534,602,676,752,833,918,1007,1103,1200 ⋆ Coordination sequence T1 for Zeolite Code LIO. ● a(15 * m + k) = 468 * m ^ 2 + b(k) * m + c(k), where b(k), c(k) are constants depending on k, 0<=k<15 (_ N. J. A. Sloane _). ●

▶ [A008013] 1,4,10,20,34,54,78,104,134,168,210,256,302,352,406,470,538,604,674,748,834,924,1010,1100,1194 ⋆ Coordination sequence occurring in Zeolite Codes AFG, CAN, LIO, LOS. ● a(5m)=52 * m ^ 2 + 2, a(5m + 1)=52 * m ^ 2 + 22 * m + 4, a(5m + 2)=52 * m ^ 2 + 42 * m + 10, a(5m + 3)=52 * m ^ 2 + 62 * m + 20, a(5m + 4)=52 * m ^ 2 + 82 * m + 34 (_ N. J. A. Sloane _). ●

▶ [A132152] 0,0,0,1,4,10,20,34,56,100,200,356,624,1160,2320,4104,7136,13200,26400,46736,81344,150560,301120,533024,927616 ⋆ a(4n + k) = 4a(4n + k - 1) - 6a(4n + k - 2) + 4a(4n + k - 3), for k = 0,1,2; 2 * a(4n + 3) = 7a(4n + 2) - 8(4n + 1) + 2a(4n), with a(0) = a(1) = a(2) = 0, a(3) = 1. ● a(n)=10 * a(n - 4) + 16 * a(n - 8), n>8. - _ R. J. Mathar _ , Feb 07 2009 ●

▶ [A347252] 1,4,10,20,35,56,83,107,141,174,213,249,303,345,396,450,513,567,639,699,777,849,924,996,1098 ⋆ Number of nonnegative triples (a, b, c) satisfying (a + b + c <= n) and (a * b * c <= n). ● a(n) = Sum _{ a=0..n } Sum _{ b=0..n - a } Sum _{ c=0..n - a - b } [a * b * c<=n], where [] is the Iverson bracket. ●

▶ [A201722] 4,10,20,35,56,83,116,155,200,251,308,371,440,515,596,683,776,875,980,1091,1208,1331,1460,1595,1736 ⋆ Number of n X 1 0..4 arrays with rows and columns lexicographically nondecreasing and no element equal to the number of horizontal and vertical neighbors equal to itself. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>5. ●

▶ [A352208] 1,1,1,4,10,20,35,56,84 ⋆ Largest number of maximal 3 - colorable node - induced subgraphs of an n - node graph. ● a(m + n) >= a(m) * a(n). ●

▶ [A000292] 0,1,4,10,20,35,56,84,120,165,220,286,364,455,560,680,816,969,1140,1330,1540,1771,2024,2300,2600 ⋆ Tetrahedral (or triangular pyramidal) numbers: a(n) = C(n + 2,3) = n * (n + 1) * (n + 2) / 6. ● a(n) = C(n + 2,3) = n * (n + 1) * (n + 2) / 6 (see the name). ● a(n) = - a(- 4 - n) for all in Z. ● a(n) = Sum _{ 1 <= i <= j <= n } |i - j|. - _ Amarnath Murthy _ , Aug 05 2002 ● a(n) = (n + 3) * a(n - 1) / n. - _ Ralf Stephan _ , Apr 26 2003 ● a(n) = Sum _{ k=0..floor((n - 1) / 2) } (n - 2k) ^ 2 [offset 0]; a(n + 1) = Sum _{ k=0..n } k ^ 2 * (1 - (- 1) ^ (n + k - 1)) / 2 [offset 0]. - _ Paul Barry _ , Apr 16 2005 ● a(n) = Sum _{ k=1..n } binomial(n * k + 1, n * k - 1), with a(0) = 0. - _ Paolo P. Lava _ , Apr 13 2007 ●

▶ [A101552] 0,0,0,0,0,0,1,4,10,20,35,56,84,120,166,228,322,484,785,1352,2396,4248,7405,12592,20856 ⋆ C(n - 3,3) + C(n - 7,7) + ... + C(n - (4 * floor((n - 4) / 4) + 3),4 * floor((n - 4) / 4) + 3). ● a(n) = sum { k=0..n, if(mod(k + 1, 4)=0, C(n - k, k), 0) } . ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) + a(n - 8). - _ G. C. Greubel _ , May 17 2016 ●

▶ [A373935] 0,0,1,4,10,20,35,56,85,131,231,506,1287,3367,8464,20026,44609,94334,191710,380190,748924,1491735,3044927,6398259,13770795 ⋆ Number of compositions of 7 * n - 3 into parts 6 and 7. ● a(n) = Sum _{ k=0..floor(n / 6) } binomial(n + k,n - 3 - 6 * k). ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 6 * a(n - 6) + a(n - 7). ●

▶ [A352210] 1,1,1,4,10,20,35,56,97 ⋆ Largest number of maximal 2 - degenerate node - induced subgraphs of an n - node graph. ● a(m + n) >= a(m) * a(n). ●

▶ [A266353] 1,4,10,20,35,57,89,136,205,306,454,671,989,1455,2138,3139,4606,6756,9907,14525,21293,31212,45749,67054,98278 ⋆ Expansion of b(3) * b(4) / (1 - 2 * x + x ^ 2 - x ^ 3 + x ^ 4), where b(k) = (1 - x ^ k) / (1 - x). ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) - a(n - 4) for n>5. ● a(n) = a(n - 1) + a(n - 3) + 12 for n>4. - _ Greg Dresden _ , Feb 09 2020 ●

▶ [A139748] 0,0,0,1,4,10,20,35,57,93,165,330,715,1574,3381,6995,13990,27370,53143,103702,204820,409640,826045,1669801,3368259 ⋆ a(n) = Sum _{ k >= 0 } binomial(n,5 * k + 3). ● a(n) = round((2 / 5) * (2 ^ (n - 1) + phi ^ n * cos(Pi * (n - 6) / 5))), where phi is the golden ratio and round(x) is the integer nearest to x. - _ Vladimir Shevelev _ , Jun 28 2017 ● a(n + m) = a(n) * H _ 1(m) + H _ 3(n) * H _ 2(m) + H _ 2(n) * H _ 3(m) + H _ 1(n) * a(m) + H _ 5(n) * H _ 5(m), where H _ 1=A139398, H _ 2=A133476, H _ 3=A139714, H _ 5=A139761. - _ Vladimir Shevelev _ , Jun 28 2017 ●

► [A373963] 0,0,1,4,10,20,35,57,94,175,385,935,2289,5385,12031,25686,53176,108699,223215,465867,991088,2138884,4643816,10067197,21695156 ⋆ Number of compositions of 6 * n - 3 into parts 5 and 6. ● a(n) = Sum _{ k=0..floor(n / 5) } binomial(n + k,n - 3 - 5 * k). ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 7 * a(n - 5) - a(n - 6). ●

► [A368174] 0,0,0,0,4,10,20,35,616,5124,29520,138765,1312300,16576846,175795984,1539037955,15687832720,216382727240,3170822906976,42007311638169,553841577209940,8435274815148370,145708900713412960,2517047758252082671,42575155321545439384 ⋆ Expansion of e.g.f. - log(1 - x ^ 3 / 6 * (exp(x) - 1)). ● a(n) = n! * Sum _{ k=1..floor(n / 4) } (k - 1)! * Stirling2(n - 3 * k,k) / (6 ^ k * (n - 3 * k)!). ●

► [A355308] 0,0,0,0,4,10,20,35,1176,10164,58920,277365,4472380,69189406,772011604,6861855455,95279504880,1819310613800,30768119885136,430200439251369,6770486332450740,139958614722287410,3033142442978720380,58782387380290683571,1138026666874389737544 ⋆ Expansion of e.g.f. - LambertW(x ^ 3 / 6 * (1 - exp(x))). ● a(n) = n! * Sum _{ k=1..floor(n / 4) } k ^ (k - 1) * Stirling2(n - 3 * k,k) / (6 ^ k * (n - 3 * k)!). ●

► [A355180] 0,0,0,0,4,10,20,35,6776,60564,352920,1663365,126625180,2361079006,27334747804,245495250455,11174333090480,328952158255400,62453140099467 36,905766506399673 69,3209305759254634740,12255720304708496581 0,336506866 5450300234580 ⋆ Expansion of e.g.f. - LambertW(x ^ 3 * (1 - exp(x))) / 6. ● a(n) = (n! / 6) * Sum _{ k=1..floor(n / 4) } k ^ (k - 1) * Stirling2(n - 3 * k,k) / (n - 3 * k)!. ●

► [A140226] 1,4,10,20,36,60,94,140,200,276,370,484,620,780,966,1180,1424,1700,2010,2356,2740,3164,3630,4140,4696 ⋆ Binomial transform of [1, 3, 3, 1, 1, - 1, 1, - 1, 1, ...]. ● a(n) = n * (11 + n ^ 2) / 3 for n >= 1. ●

► [A145132] 0,1,4,10,20,36,61,99,155,236,352,517,750,1077,1534,2171,3057,4287,5992,8353,11620,16138,22383,31012,42932 ⋆ Expansion of x / ((1 - x - x ^ 4) * (1 - x) ^ 3). ● a(n) = 4a(n - 1) - 6a(n - 2) + 4a(n - 3) - 3a(n - 5) + 3a(n - 6) - a(n - 7). ●

► [A131924] 1,4,10,20,36,62,106,184,328,602,1134,2180,4252,8374,16594,33008,65808,131378,262486,524668,1048996,2097614,4194810,8389160,16777816 ⋆ Row sums of triangle A131923. ● a(n) = 2 ^ n + n ^ 2 + n. - _ Michel Marcus _ , Jul 18 2018 ● a(n) = 5 * a(n - 1) - 9 * a(n - 2) + 7 * a(n - 3) - 2 * a(n - 4) for n>3. ●

► [A000749] 0,0,0,1,4,10,20,36,64,120,240,496,1024,2080,4160,8256,16384,32640,65280,130816,262144,524800,1049600,2098176,4194304 ⋆ a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3), n > 3, with a(0)=a(1)=a(2)=0, a(3)=1. ● a(n) = Sum _{ k=0..n } binomial(n, 4 * k + 3). ● a(n) = (2 ^ n - 2 ^ (n / 2 + 1) * sin(Pi * n / 4) - 0 ^ n) / 4. ● a(n + 1) is the binomial transform of A021913. (End) ● a(n; t, s) = a(n - 1; t, s) + a(n - 1; t + 1, s + t + 1) where t is the trace and s is the subtrace. ●

► [A360046] 1,4,10,20,36,64,120,240,497,1036,2158,4524,9625,20816,45560,100368,221915,492380,1097302,2457228,5526666,12474000,28233600,64061920,145704327 ⋆ a(n) = Sum _{ k=0..floor(n / 4) } binomial(n + 3,4 * k + 3) * Catalan(k). ● a(n) = binomial(n + 3,3) + Sum _{ k=0..n - 4 } a(k) * a(n - k - 4). ●

► [A354696] 1,1,4,10,20,36,64,120,240,499,1060,2314,5252,12360,29632,70992,168096,392465,905940,2075314,4730052,10735516,24258688,54553000,122076240 ⋆ G.f. A(x) satisfies: A(x) = 1 + x * A(x ^ 4 / (1 - x) ^ 4) / (1 - x) ^ 4. ● a(0) = 1; a(n) = Sum _{ k=0..floor((n - 1) / 4) } binomial(n + 2,4 * k + 3) * a(k). ●

► [A369851] 0,0,1,4,10,20,36,65,129,285,661,1521,3394,7359,15706,33457,71760,155248,337745,735723,1600062,3471298,7517368,16269333,35221440 ⋆ Number of compositions of 5 * n - 3 into parts 4 and 5. ● a(n) = Sum _{ k=0..floor(n / 4) } binomial(n + k,n - 3 - 4 * k). ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 4 * a(n - 4) + a(n - 5). ●

► [A369693] 1,4,10,20,36,72,220,936,4045,15836,56174,187148,616651,2114448,7717752,29498000,114243269,437915876,1650264874,6149423732,22909545269,86129798600,327872238092,1260466647944,4867739842821 ⋆ G.f. satisfies A(x) = 1 / (1 - x) ^ 4 + x ^ 4 * A(x) ^ 4. ● a(n) = Sum _{ k=0..floor(n / 4) } binomial(n + 8 * k + 3,n - 4 * k) * binomial(4 * k,k) / (3 * k + 1). ●

► [A008254] 1,4,10,20,38,58,80,112,144,180,226,270,320,380,436,500,574,642,720,808,888,980,1082,1174,1280 ⋆ Coordination sequence T1 for feldspar. ● a(3 * m) = 20 * m ^ 2, a(3 * m + 1) = 20 * m ^ 2 + 14 * m + 4, a(3 * m + 2) = 20 * m ^ 2 + 26 * m + 12 (m>0). ●

► [A279262] 0,4,10,20,38,68,120,208,358,612,1042,1768,2992,5052,8514,14324,24062,40364,67624,113160,189150,315844,526890,878160,1462368 ⋆ Number of n X 2 0..1 arrays with no element equal to a strict majority of its horizontal and vertical neighbors, with the exception of exactly one element, and with new values introduced in order 0 sequentially upwards. ● a(n) = (1 / 25) * (2 ^ (- n) * (- 25 * 2 ^ (2 + n) + (50 - 6 * sqrt(5)) * (1 - sqrt(5)) ^ n + 50 * (1 + sqrt(5)) ^ n + 6 * sqrt(5) * (1 + sqrt(5)) ^ n - 5 * (1 - sqrt(5)) ^ n * (1 + sqrt(5)) * n + 5 * (- 1 + sqrt(5)) * (1 + sqrt(5)) ^ n * n)). ●

► [A168673] 1,4,10,20,38,74,148,298,598,1196,2390,4778,9556,19114,38230,76460,152918,305834,611668,1223338,2446678,4893356,9786710,19573418,39146836 ⋆ Binomial transform of A169609. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + 2 * a(n - 3) for n > 2; a(0) = 1, a(1) = 4, a(2) = 10. ● a(n) = - (2 / 3) *{ [(1 - I * sqrt(3)) / 2] ^ n + [(1 + I * sqrt(3)) / 2] ^ n } + (7 / 3) * 2 ^ n, with n>=0 and I=sqrt(- 1). - _ Paolo P. Lava _ , Dec 03 2009 ●

► [A100354] 0,0,0,1,4,10,20,40,70,112,168,252,360,495,661,881,1145,1457,1824,2279,2804,3404,4090,4906,5824 ⋆ Maximal number of 1432 patterns in a permutation of 1,2,...,n. ● a(n) = max(a(k) + k * choose(n - k, 3), 1 <= k < n) ●

► [A032275] 4,10,20,55,136,430,1300,4435,15084,53764,192700,704370,2589304,9608050,35824240,134301715,505421344,1909209550,7234153420,27489127708,104717491064,399827748310,1529763696820 ⋆ Number of bracelets (turnover necklaces) of n beads of 4 colors. ● a(n) = (k ^ floor((n + 1) / 2) + k ^ ceiling((n + 1) / 2)) / 4 + (1 / (2 * n)) * Sum _{ d|n } phi(d) * k ^ (n / d), where k=4 is the maximum number of colors. - _ Robert A. Russell _ , Sep 24 2018 ● a(n) = (k ^ floor((n + 1) / 2) + k ^ ceiling((n + 1) / 2)) / 4 + (1 / (2 * n)) * Sum _{ i=1..n } k ^ gcd(n,i), where k=4 is the maximum number of colors. (See A075195 formulas.) - _ Richard L. Ollerton _ , May 04 2021 ●

► [A015220] 0,4,10,20,56,84,120,220,286,364,560,680,816,1140,1330,1540,2024,2300,2600,3276,3654,4060,4960,5456,5984 ⋆ Even tetrahedral numbers. ● a(n) = a(n - 1) + 3 * a(n - 3) - 3 * a(n - 4) - 3 * a(n - 6) + 3 * a(n - 7) + a(n - 9) - a(n - 10). ● a(n) = 64 + 3 * a(n - 3) - 3 * a(n - 6) + a(n - 9). ●

► [A306158] 4,10,20,70,204,690,2340,8230,29120,104958,381300,1398430,5162220,19175130,71582716,268439590,1010580540,3817763040,14467258260,54975633906,209430785460,799645010850,3059510616420,11728124726270,45035996273664 ⋆ Inverse Weigh transform of 4 ^ n. ● a(n) = 1 / n * (4 ^ n + Sum _{ d<n and d|n } (- 1) ^ (n / d) * d * a(d)). ●

► [A049486] 1,4,10,21,34,53,74,101,130,165,202,245,290,341,394,453,514,581,650,725,802,885,970,1061,1154 ⋆ Maximum length of non - crossing path on n X n square lattice. ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4) for n > 6. ●

► [A038407] 1,4,10,21,36,53,76,108,142,173,210,259,310,360,418,482,546,615,692,769,848,940,1036,1127,1224 ⋆ Coordination sequence T2 for Zeolite Code AWO. ● a(n) = - a(n - 2) + a(n - 5) + 3 * a(n - 7) + 2 * a(n - 9) - 2 * a(n - 12) - 3 * a(n - 14) - a(n - 16) + a(n - 19) + a(n - 21) for n>21. ●

► [A008000] 1,4,10,21,36,54,78,106,136,173,214,256,306,360,414,477,544,610,686,766,844,933,1026,1116,1218 ⋆ Coordination sequence T1 for Zeolite Code ABW and ATN. ● a(3m)=19m ^ 2 + 2, a(3m + 1)=19m ^ 2 + 13m + 4, a(3m + 2)=19m ^ 2 + 25m + 10, for m>0. [_ N. J. A. Sloane _] ●

► [A038408] 1,4,10,21,36,55,79,106,138,175,215,260,309,362,420,482,548,618,693,772,855,943,1034,1130,1231 ⋆ Coordination sequence for Zeolite Code DFT. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) + a(n - 5) - a(n - 6) - a(n - 8) + a(n - 9) for n>9. ●

► [A008260] 1,4,10,21,37,57,81,109,142,180,222,268,318,373,433,497,565,637,714,796,882,972,1066,1165,1269 ⋆ Coordination sequence for Paracelsian. ● a(5 * k) = 55 * k ^ 2 + 2 with k>0 and a(0)=1, ● a(5 * k + 1) = 55 * k ^ 2 + 22 * k + 4, ● a(5 * k + 2) = 55 * k ^ 2 + 44 * k + 10, ● a(5 * k + 3) = 55 * k ^ 2 + 66 * k + 21, ● a(5 * k + 4) = 55 * k ^ 2 + 88 * k + 37. (End) ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 5) - 2 * a(n - 6) + a(n - 7) for n>7. - _ Colin Barker _ , Feb 15 2018 ●

► [A358042] 0,1,4,10,21,38,62,95,138,192,259,340,436,549,680,830,1001,1194,1410,1651,1918,2212,2535,2888,3272 ⋆ Partial sums of A071619. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + 2 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) - a(n - 6) for n > 5. ●

► [A253688] 1,4,10,21,39,64,94,129,171,218,272,331,397,468,546,629,719,814,916,1023,1137,1256,1382,1513,1651 ⋆ The total number of pentagons in a variant of pentagon expansion (vertex - to - vertex, two consecutive vertices and one isolated vertex) after n iterations. ● a(n) = (53 - (- 1) ^ n - 38 * n + 12 * n ^ 2) / 4 for n>5. ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4) for n>9. ●

► [A049480] 1,4,10,21,39,66,104,155,221,304,406,529,675,846,1044,1271,1529,1820,2146,2509,2911,3354,3840,4371,4949 ⋆ a(n) = (2 * n - 1) * (n ^ 2 - n + 6) / 6. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4); a(1)=1, a(2)=4, a(3)=10, a(4)=21. (End) ●

► [A216172] 0,0,1,4,10,21,39,66,105,159,231,325,445,595,780,1005,1275,1596,1974,2415,2926,3514,4186,4950,5814 ⋆ Number of all possible tetrahedra of any size, having reverse orientation to the original regular tetrahedron, formed when intersecting the latter by planes parallel to its sides and dividing its edges into n equal parts. ● a(n) = (1 / 72) * (- 6 * n - 5 * n ^ 2 + 2 * n ^ 3 + n ^ 4 + 4 - 4 * (- 1) ^ (n mod 3)). ●

► [A220907] 0,1,4,10,21,40,70,119,190,301,455,686,998,1450,2051,2895,4001,5523,7490,10141,13545,18046,23773,31255,40687 ⋆ a(n) = n * p(n) - spt(n) (= n * A000041(n) - A092269(n)). ● a(n) = N _ 2(n) / 2 (where N _ 2(n) is the second rank moment, see relation (1.1) of the Garvan reference). ●

► [A226405] 0,1,4,10,21,40,71,120,196,312,487,749,1139,1717,2571,3830,5683,8407,12408,18281,26898,39537,58071,85245,125082 ⋆ Expansion of x / ((1 - x - x ^ 3) * (1 - x) ^ 3). ● a(n) = Sum _{ j=0..floor((n + 2) / 3) } binomial(n - 2 * j + 2, j + 3). ●

► [A001891] 0,1,4,10,21,40,72,125,212,354,585,960,1568,2553,4148,6730,10909,17672,28616,46325,74980,121346,196369,317760,514176 ⋆ Hit polynomials; convolution of natural numbers with Fibonacci numbers F(2), F(3), F(4), ... ● a(n) = Fibonacci(n + 5) - (5 + 2 * n). - _ Wolfdieter Lang _ ● a(n) = a(n - 1) + a(n - 2) + (2n + 1); a(- x)=0. - _ Barry E. Williams _ , Mar 27 2000 ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - a(n - 3) + a(n - 4). - Sam Lachterman (slachterman(AT)fuse.net), Sep 22 2003 ● a(n) = (- 3 + (2 ^ (- 1 - n) * ((1 - sqrt(5)) ^ n * (- 11 + 5 * sqrt(5)) + (1 + sqrt(5)) ^ n * (11 + 5 * sqrt(5)))) / sqrt(5) - 2 * (1 + n)). - _ Colin Barker _ , Mar 11 2017 ●

► [A266355] 1,4,10,21,40,73,129,224,385,658,1122,1910,3248,5519,9375,15922,27038,45911,77954,132358,224727,381555,647823,1099903,1867461 ⋆ Expansion of b(2) * b(4) * b(6) / (1 - x - x ^ 2 - x ^ 4 + x ^ 6 + x ^ 8), where b(k) = (1 - x ^ k) / (1 - x). ● a(n) = a(n - 1) + a(n - 2) + a(n - 4) - a(n - 6) - a(n - 8) for n>9. ●

► [A132925] 1,4,10,21,41,78,148,283,547,1068,2102,4161,8269,16474,32872,65655,131207,262296,524458,1048765,2097361,4194534,8388860,16777491,33554731 ⋆ a(n) = 2 ^ n - 1 + n * (n - 1) / 2. ● a(n) = 5 * a(n - 1) - 9 * a(n - 2) + 7 * a(n - 3) - 2 * a(n - 4); a(1)=1, a(2)=4, a(3)=10, a(4)=21. - _ Harvey P. Dale _ , Jun 19 2011 ●

► [A264079] 1,4,10,21,41,79,150,282,527,982,1829,3405,6337,11790,21932,40797,75888,141161,262573,488407,908474,1689830,3143211,5846606,10875117 ⋆ Expansion of b(2) * b(6) / (1 - 2 * x + x ^ 3 - x ^ 4 - x ^ 5 + 2 * x ^ 6), where b(k) = (1 - x ^ k) / (1 - x). ● a(n) = 2 * a(n - 1) - a(n - 3) + a(n - 4) + a(n - 5) - 2 * a(n - 6) for n>6. ●

► [A111927] 0,0,0,1,4,10,21,42,84,169,340,682,1365,2730,5460,10921,21844,43690,87381,174762,349524,699049,1398100,2796202,5592405 ⋆ Expansion of x ^ 3 / ((x - 1) * (2 * x - 1) * (x ^ 2 - x + 1)). ● a(n) = 2 ^ n / 3 + 2 * cos((Pi * n) / 3) / 3 - 1. [Cournot] ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 5 * a(n - 3) - 2 * a(n - 4) for n > 3. ●

► [A290998] 0,0,1,4,10,21,43,92,205,462,1035,2301,5099,11303,25088,55728,123800,274969,610628,1355970,3011157,6686979,14850196,32978725,73237462 ⋆ p - INVERT of (1,1,1,1,1,...), where p(S) = 1 - S ^ 3 - S ^ 4. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 5 * a(n - 3) - a(n - 4) for n >= 5. ●

► [A369846] 0,1,4,10,21,44,101,250,629,1557,3784,9120,21992,53228,129177,313701,761403,1846804,4478044,10858285,26332515,63865592,154900529,375691009,911166977 ⋆ Number of compositions of 5 * n - 1 into parts 3 and 5. ● a(n) = Sum _{ k=0..floor(n / 3) } binomial(n + 1 + 2 * k,n - 2 - 3 * k). ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 11 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ●

► [A008255] 1,4,10,22,38,56,82,112,142,182,226,268,322,380,434,502,574,640,722,808,886,982,1082,1172,1282 ⋆ Coordination sequence T2 for feldspar. ● a(3 * m) = 20 * m ^ 2 + 2, a(3 * m + 1) = 20 * m ^ 2 + 14 * m + 4, a(3 * m + 2) = 20 * m ^ 2 + 26 * m + 10. ●

► [A339609] 0,0,4,10,22,39,61,88,120,157,199,246,298,355,417,484,556,633,715,802,894,991,1093,1200,1312 ⋆ Consider a triangle drawn on the perimeter of a triangular lattice with side length n. a(n) is the number of regions inside the triangle after drawing unit circles centered at each lattice point inside the triangle. ● a(n) = (5 * n ^ 2 - 21 * n + 24) / 2 for n >= 4, with a(1)=a(2)=0, a(3)=4. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n >= 4. (End) ●

► [A061777] 1,4,10,22,40,70,112,178,268,406,592,874,1252,1822,2584,3730,5260,7558,10624,15226,21364,30574,42856,61282,85852 ⋆ Start with a single triangle; at n - th generation add a triangle at each vertex, allowing triangles to overlap; sequence gives total population of triangles at n - th generation. ● a(n) = 21 * 2 ^ (n / 2) - 6 * n - 20 if n is even. ● a(n) = 30 * 2 ^ ((n - 1) / 2) - 6 * (n - 1) - 26 if n is odd. ● a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + 2 * a(n - 4). ● a(n) = - 20 - 6 * n + (21 + 15 * sqrt(2)) * sqrt(2) ^ (n - 2) + (21 - 15 * sqrt(2)) * (- sqrt(2)) ^ (n - 2). ● a(n) = 2 * a(n - 2) + ((3 * n - 2) / (3 * n - 5)) * (a(n - 1) - 2 * a(n - 3)). (End) ●

► [A298030] 1,4,10,22,40,73,112,163,220,289,364,451,544,649,760,883,1012,1153,1300,1459,1624,1801,1984,2179,2380 ⋆ Partial sums of A298029. ● a(n) = (9 * n ^ 2 - 18 * n + 8) / 2 for n>3 and even. ● a(n) = (9 * n ^ 2 - 18 * n + 11) / 2 for n>3 and odd. ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4) for n>5. (End) ●

► [A227327] 0,1,4,10,22,41,72,116,180,265,380,526,714,945,1232,1576,1992,2481,3060,3730,4510,5401,6424,7580,8892 ⋆ Number of non - equivalent ways to choose two points in an equilateral triangle grid of side n. ● a(n) = (n ^ 4 + 2 * n ^ 3 + 8 * n ^ 2 - 8 * n) / 48; if n even. ● a(n) = (n ^ 4 + 2 * n ^ 3 + 8 * n ^ 2 - 2 * n - 9) / 48; if n odd. ●

► [A006001] 1,4,10,22,43,76,124,190,277,388,526,694,895,1132,1408,1726,2089,2500,2962,3478,4051,4684,5380,6142,6973 ⋆ Number of paraffins. ● a(n) = 1 + 5 * n / 2 + n ^ 3 / 2. - _ Enrique Pérez Herrero _ , Mar 19 2012 ●

► [A004798] 1,4,10,22,45,88,167,310,566,1020,1819,3216,5645,9848,17090,29522,50793,87080,148819,253610,431086,731064,1237175,2089632,3523225 ⋆ Convolution of Fibonacci numbers 1,2,3,5,... with themselves. ● a(n) = a(n - 1) + a(n - 2) + Fibonacci(n + 2). - _ Philippe Deléham _ , Jan 22 2012 ● a(n) = Sum _{ i=0..floor((n + 1) / 2) } binomial(n + 1 - i,i) * (n - i). - _ John M. Campbell _ , Apr 07 2018 ● a(n) = n * (hypergeom([- (n + 1) / 2, - n / 2], [- n - 1], - 4) - hypergeom([(1 - n) / 2, 1 - n / 2], [- n], - 4)). - _ Peter Luschny _ , Apr 10 2018 ●

► [A265052] 1,4,10,22,45,89,172,328,622,1176,2220,4186,7888,14859,27987,52710,99268,186946,352062,663010,1248588,2351350,4428075,8338971,15703984 ⋆ Poincaré series for hyperbolic reflection group with Coxeter diagram shown in Comments. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + 2 * a(n - 3) - 2 * a(n - 5) + 2 * a(n - 6) - 2 * a(n - 8) + 3 * a(n - 9) - 3 * a(n - 10) + a(n - 11) for n>11. - _ Vincenzo Librandi _ , Jan 01 2016 ●

► [A038621] 1,4,10,22,46,81,129,198,284,392,530,691,883,1114,1374,1674,2022,2405,2837,3326,3856,4444,5098,5799,6567 ⋆ Growth function of an infinite cubic graph (number of nodes at distance <=n from fixed node). ● a(0)=1, a(1)=4; for n>=2: if n == 0 (mod 3), a(n) = (4 * n ^ 3 + 6 * n ^ 2 + 15 * n - 9) / 9; if n == 1 (mod 3), a(n) = (4 * n ^ 3 + 6 * n ^ 2 + 18 * n - 10) / 9; if n == 2 (mod 3), a(n) = (4 * n ^ 3 + 6 * n ^ 2 + 15 * n + 4) / 9. ●

► [A296953] 0,1,4,10,22,46,94,190,382,766,1534,3070,6142,12286,24574,49150,98302,196606,393214,786430,1572862,3145726,6291454,12582910,25165822 ⋆ Number of bisymmetric, quasitrivial, and order - preserving binary operations on the n - element set { 1,...,n } . ● a(0)=0, a(1)=1, a(n + 1) - 2 * a(n) = 2. ● a(n) = 3 * 2 ^ (n - 1) - 2 for n>0. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>2. ●

► [A033484] 1,4,10,22,46,94,190,382,766,1534,3070,6142,12286,24574,49150,98302,196606,393214,786430,1572862,3145726,6291454,12582910,25165822,50331646 ⋆ a(n) = 3 * 2 ^ n - 2. ● a(n) = 2 * (a(n - 1) + 1) for n>0, with a(0)=1. ●

► [A178452] 0,0,1,4,10,22,47,98,200,404,813,1632,3270,6546,13099,26206,52420,104848,209705,419420,838850,1677710,3355431,6710874,13421760 ⋆ Partial sums of floor(2 ^ n / 5). ● a(n) = round((4 * 2 ^ n - 5 * n - 5) / 10). ● a(n) = floor((4 * 2 ^ n - 5 * n - 3) / 10). ● a(n) = ceiling((4 * 2 ^ n - 5 * n - 7) / 10). ● a(n) = round((4 * 2 ^ n - 5 * n - 4) / 10). ● a(n) = a(n - 4) + 3 * 2 ^ (n - 3) - 2, n > 4. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) + a(n - 4) - 3 * a(n - 5) + 2 * a(n - 6) for n > 6. (End) ●

► [A137247] 0,0,0,1,4,10,22,49,112,256,580,1309,2956,6682,15106,34141,77152,174352,394024,890473,2012404,4547866,10277806,23227033,52491280 ⋆ a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 6 * a(n - 3) - 3 * a(n - 4), with initial terms 0, 0, 0, 1. ● a(n) = (1 / 6) * (- 3 + ((2 - 2 ^ (1 / 3) * (1 - i * sqrt(3))) / 2) ^ n + ((2 - 2 ^ (1 / 3) * (1 + i * sqrt(3))) / 2) ^ n + (1 + 2 ^ (1 / 3)) ^ n), with n >= 0 and i=sqrt(- 1). - _ Paolo P. Lava _ , Jun 09 2008 ●

► [A276308] 1,1,1,1,4,10,22,115,319,736,3886,10816,24991,131989,367405,848947,4483720,12480934,28839196,152314471,423984331,979683706,5174208274,14402986300,33280406797 ⋆ a(n) = (a(n - 1) + 1) * (a(n - 3) + 1) / a(n - 4) for n > 3, a(0) = a(1) = a(2) = a(3) = 1. ● a(n) = 35 * a(n - 3) - 35 * a(n - 6) + a(n - 9) for n>8. ●

► [A334260] 0,0,4,10,23,33,39,68,76,85,116,138,175,228,242,257,306,375,393,470,490,511,578,624,697 ⋆ Sum of the largest composite parts in the partitions of 2n into two parts. ● a(n) = Sum _{ i=1..n } (2 * n - i) * (1 - c(2 * n - i)) * (1 - [2 * n - i = 1]), where [] is the Iverson bracket and c is the prime characteristic (A010051). ●

► [A002071] 1,4,10,23,40,68,108,167,241,345,482,653,869,1153,1502,1930,2454,3106,3896 ⋆ Number of pairs of consecutive integers x, x + 1 such that all prime factors of both x and x + 1 are at most the n - th prime. ● a(n) <= (2 ^ n - 1) * (prime(n) + 1) / 2 is implicit in Lehmer 1964. - _ Charles R Greathouse IV _ , Feb 19 2013 ●

► [A118645] 0,0,1,4,10,23,51,109,228,471,964,1960,3967,8003,16107,32362,64941,130200,260866,522415,1045831,2093129,4188408,8379967,16764552 ⋆ Number of binary strings of length n such that there exist three consecutive digits where at least two of them are 1's. ● a(n) = 3 * 2 ^ (n - 3) + a(n - 1) + a(n - 3) for n >= 3. - _ Tanya Khovanova _ , Aug 22 2006 ●

► [A159347] 1,1,1,4,10,23,53,123,286,665,1546,3594,8355,19423,45153,104968,244021,567280,1318766,3065759,7127025,16568323,38516678,89540413,208156206 ⋆ Transform of the finite sequence (1, 0, - 1) by the T _{ 0,0 } transformation. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) + a(n - 3) for n >= 5, with a(0)=1, a(1)=1, a(2)=1, a(3)=4, a(4)=10. ●

► [A008258] 1,4,10,24,40,64,90,120,160,200,244,300,354,412,484,552,624,712,794,880,984,1080,1180,1300,1410 ⋆ Coordination sequence T1 for Moganite. ● a(3 * m) = 22 * m ^ 2 + 2, a(3 * m + 1) = 22 * m ^ 2 + 14 * m + 4, a(3 * m + 2) = 22 * m ^ 2 + 30 * m + 12, m>0. - _ N. J. A. Sloane _ ●

► [A107659] 1,4,10,24,52,112,232,480,976,1984,4000,8064,16192,32512,65152,130560,261376,523264,1047040,2095104,4191232,8384512,16771072,33546240,67096576 ⋆ a(n) = Sum _{ k=0..n } 2 ^ max(k, n - k). ● a(2n) = 2 ^ n(2 ^ (n + 2) - 3), a(2n + 1) = 2 ^ n(2 ^ (n + 3) - 4). ● a(0)=1, a(1)=4, a(2)=10, a(n)=2 * a(n - 1) + 2 * a(n - 2) - 4 * a(n - 3). - _ Harvey P. Dale _ , Nov 10 2013 ● a(n) = 2 ^ (n + 2) - (2 + mod(n + 1, 2)) * 2 ^ floor((n + 1) / 2). - _ Michael Somos _ , Jun 24 2018 ●

► [A266367] 1,4,10,24,54,116,250,536,1142,2436,5194,11064,23574,50228,107002,227960,485654,1034628,2204170,4695768,10003830,21312116,45403258,96726872,206066486 ⋆ Expansion of b(2) * b(4) / (1 - 2 * x - 2 * x ^ 3 + 3 * x ^ 4), where b(k) = (1 - x ^ k) / (1 - x). ● a(n) = 2 * a(n - 1) + 2 * a(n - 3) - 3 * a(n - 4) for n>4. ●

► [A316528] 1,4,10,24,54,118,252,530,1102,2272,4654,9486,19260,38986,78726,158672,319318,641830,1288828,2586018,5185566,10393024,20821470,41700254,83493244 ⋆ a(n) = 3 * a(n - 1) - a(n - 2) - 2 * a(n - 3) for n > 2, a(0)=1, a(1)=4, a(2)=10. ● a(n) = 5 * 2 ^ n - 2 * Fibonacci(n + 3). - _ Bruno Berselli _ , Jul 16 2018 ● a(n) = (5 * 2 ^ n - (2 ^ (1 - n) * ((1 - sqrt(5)) ^ n * (- 2 + sqrt(5)) + (1 + sqrt(5)) ^ n * (2 + sqrt(5)))) / sqrt(5)). - _ Colin Barker _ , Jul 23 2018 ●

► [A152548] 1,4,10,24,54,120,260,560,1190,2520,5292,11088,23100,48048,99528,205920,424710,875160,1798940,3695120,7574996,15519504,31744440,64899744,132503644 ⋆ Sum of squared terms in rows of triangle A152547: a(n) = Sum _{ k=0..C(n,[n / 2]) - 1 } A152547(n,k) ^ 2. ● a(n) = Sum _{ k=0..[(n + 1) / 2] } C(n + 1, k) * (n + 1 - 2k) ^ 3 / (n + 1). ● a(n) = (- 2) ^ n * hypergeom([- n,3 / 2], [1], 2). - _ Peter Luschny _ , Apr 26 2016 ●

► [A291727] 4,10,24,55,116,234,460,879,1640,3006,5424,9650,16964,29510,50852,86893,147360,248198,415440,691428,1144772,1886270,3094292,5055140,8227084 ⋆ p - INVERT of (1,0,1,0,0,0,0,...), where p(S) = (1 - S) ^ 4. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 8 * a(n - 3) - 13 * a(n - 4) + 12 * a(n - 5) - 10 * a(n - 6) + 12 * a(n - 7) - 6 * a(n - 8) + 4 * a(n - 9) - 4 * a(n - 10) - a(n - 12) for n >= 13. ●

► [A291224] 4,10,24,55,120,254,524,1059,2104,4120,7968,15244,28888,54284,101240,187537,345268,632122,1151408,2087485,3768280,6775322,12136940,21666712,38555100 ⋆ p - INVERT of (0,1,0,1,0,1,...), where p(S) = (1 - S) ^ 4. ● a(n) = 4 * a(n - 1) - 2 * a(n - 2) - 8 * a(n - 3) + 5 * a(n - 4) + 8 * a(n - 5) - 2 * a(n - 6) - 4 * a(n - 7) - a(n - 8) for n >= 9. ●

► [A087447] 1,1,4,10,24,56,128,288,640,1408,3072,6656,14336,30720,65536,139264,294912,622592,1310720,2752512,5767168,12058624,25165824,52428800,109051904 ⋆ a(0) = a(1) = 1; for n > 1, a(n) = (n + 2) * 2 ^ (n - 2). ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n, 2k) * (2k + 1). - _ Paul Barry _ , Nov 29 2004 ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) for n > 3. (End) ●

► [A129953] 0,1,4,10,24,56,128,288,640,1408,3072,6656,14336,30720,65536,139264,294912,622592,1310720,2752512,5767168,12058624,25165824,52428800,109051904 ⋆ First differences of A129952. ● a(0) = 0, a(1) = 1; for n > 1, a(n) = (n + 2) * 2 ^ (n - 2). ●

► [A079859] 4,10,24,56,128,288,640,1408,3072,6656,14336,30720,65536,139264,294912,622592,1310720,2752512,5767168,12058624,25165824,52428800,109051904,226492416,469762048 ⋆ a(n) = n * 2 ^ (n - 4). ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) for n>5. - _ Colin Barker _ , Sep 29 2015 ●

► [A298802] 1,4,10,24,56,128,294,676,1552,3564,8186,18800,43176,99160,227734,523020,1201184,2758676,6335658,14550664,33417496,76747632,176260934,404806196,929690160 ⋆ Growth series for group with presentation < S, T : S ^ 4 = T ^ 4 = (S * T) ^ 4 = 1 >. ● a(n) = 2 * a(n - 1) + 2 * a(n - 3) - a(n - 4) for n >4. - _ Colin Barker _ , Feb 04 2018 ●

► [A019494] 4,10,24,57,135,319,753,1777,4193,9893,23341,55069,129925,306533,723205,1706261,4025589,9497589,22407701,52866581,124728341,294272085,694277333,1638011349,3864566869 ⋆ Define the sequence T(a(0),a(1)) by a(n + 2) is the greatest integer such that a(n + 2) / a(n + 1) < a(n + 1) / a(n) for n >= 0. This is T(4,10). ● a(n + 1) = ceiling(a(n) ^ 2 / a(n - 1)) - 1 for n>0. - _ Bruno Berselli _ , Feb 15 2016 ●

► [A212330] 0,0,0,0,0,4,10,24,61,148,349,808,1847,4174,9346,20764,45825,100552,219528,477152,1033008,2228480,4792064,10274816,21972224 ⋆ Expansion of x ^ 5 * (1 - x) ^ 2 * (4 - 14 * x + 8 * x ^ 2 + 11 * x ^ 3 - 6 * x ^ 4 - 2 * x ^ 5 + 2 * x ^ 6 + 5 * x ^ 7 - 2 * x ^ 8 + x ^ 9) / (1 - 2 * x) ^ 4. ● a(n) = 8 * a(n - 1) - 24 * a(n - 2) + 32 * a(n - 3) - 16 * a(n - 4) for n>16, n=4, n=11. ●

► [A291412] 1,4,10,24,62,156,391,987,2484,6252,15744,39636,99788,251237,632525,1592480,4009326,10094104,25413498,63982496,161086011,405559431,1021059816,2570679048,6472089792 ⋆ p - INVERT of (1,1,0,0,0,0,...), where p(S) = 1 - S - 2 S ^ 2 + S ^ 3. ● a(n) = a(n - 1) + 3 * a(n - 2) + 3 * a(n - 3) - a(n - 4) - 3 * a(n - 5) - a(n - 6) for n >= 7. ●

► [A001868] 1,4,10,24,70,208,700,2344,8230,29144,104968,381304,1398500,5162224,19175140,71582944,268439590,1010580544,3817763740,14467258264,54975633976,209430787824,799645010860,3059510616424,11728124734500 ⋆ Number of n - bead necklaces with 4 colors. ● a(0) = 1; a(n) = (1 / n) * Sum _{ k=1..n } 4 ^ gcd(n,k). - _ Ilya Gutkovskiy _ , Apr 17 2021 ● a(0) = 1; a(n) = (1 / n) * Su

m _{ k=1..n } 4 ^ (n / gcd(n,k)) * phi(gcd(n,k)) / phi(n / gcd(n,k)). - _ Richard L. Ollerton _ , May 07 2021 ●

▶ [A298018] 1,4,10,25,49,67,100,148,178,229,301,343,412,508,562,649,769,835,940,1084,1162,1285,1453,1543,1684 ⋆ Partial sums of A298015. ● a(n) = a(n - 1) + 2 * a(n - 3) - 2 * a(n - 4) - a(n - 6) + a(n - 7) for n>7. ●

▶ [A300760] 0,1,4,10,25,51,98,165,267,407,601,849,1175,1580,2089,2703,3452,4338,5395,6622,8058,9706,11606,13758,16210 ⋆ Number of ways to select 4 numbers from the set of the first n natural numbers avoiding 3 - term arithmetic progressions. ● a(n) = (n ^ 4 - 12 * n ^ 3 + 51 * n ^ 2 - 78 * n + 32) / 24 + b(n) + c(n), where ● a(n) = (n ^ 4 - 12 * n ^ 3 + 51 * n ^ 2 - 78 * n + 32) / 24 + (n == 1 (mod 2)) * (- n + 2) / 4 - (n == 0 (mod 3)) / 3 - (n == 0 (mod 4)). ● a(n) = 2 * a(n - 1) - a(n - 3) - 2 * a(n - 5) + 2 * a(n - 6) + a(n - 8) - 2 * a(n - 10) + a(n - 11) for n>14. ●

▶ [A347481] 4,10,25,54,104,205,410,814,1609,3190,6340,12609,25094,49990,99665,198814,396784,792205,1582210,3160854,6315929,12622510,25229900,50435329,100831054 ⋆ Number of total dominating sets in the n - dipyramidal graph. ● a(n) = Lucas(n) + 2 * cos(n * Pi / 2) + 3 * 2 ^ n - 3. ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 3 * a(n - 3) - 2 * a(n - 4) - a(n - 5) + 2 * a(n - 6). ●

▶ [A227712] 4,10,25,58,127,268,553,1126,2275,4576,9181,18394,36823,73684,147409,294862,589771,1179592,2359237,4718530,9437119,18874300,37748665,75497398,150994867 ⋆ a(n) = 9 * 2 ^ n - 3 * n - 5. ● a(0)=4, a(1)=10, a(2)=25, a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 2 * a(n - 3). - _ Harvey P. Dale _ , Apr 15 2015 ●

▶ [A159297] 1,4,10,25,58,130,286,620,1329,2827,5977,12559,26227,54493,112849,233272,481616,992955,2043238,4194649,8591014,17559133,35833948,73054885,148849186 ⋆ Number of 3D matrices with positive integer entries such that sum of all entries equals n ● a(n) = sum(C(n - 1, ijk - 1)) where the sum is over all triples (i, j, k) such that 0 < i, j, k and ijk <= n. [_ Joel B. Lewis _ , May 07 2009] ●

▶ [A279101] 1,4,10,25,59,142,340,819,1973,4760,11486,27725,66927,161570,390056,941671,2273385,5488428,13250226,31988865,77227939,186444726,450117372,1086679451,2623476253 ⋆ a(n) = Sum _{ k=0..n } ceiling((1 + sqrt(2)) ^ k). ● a(n) = 3 * a(n - 1) - 4 * a(n - 3) + a(n - 4) + a(n - 5). ● a(n) = (4 * (1 + sqrt(2)) ^ n + 2 * sqrt(2) * (1 + sqrt(2)) ^ n - 2 * (- 2 + sqrt(2)) * (1 - sqrt(2)) ^ n + 2 * n - (- 1) ^ n - 3) / 4. ●

▶ [A276599] 1,4,10,25,59,146,344,851,2005,4960,11686,28909,68111,168494,396980,982055,2313769,5723836,13485634,33360961,78600035,194441930,458114576,1133290619,2670087421 ⋆ Values of n such that n ^ 2 + 5 is a triangular number (A000217). ● a(n) = 6 * a(n - 2) - a(n - 4) for n>4. ●

▶ [A298806] 1,4,10,25,60,148,358,869,2106,5110,12396,30070,72942,176939,429214,1041172,2525640,6126607,14861710,36051016,87451296,212136296,514592810,1248281249,3028037016 ⋆ Growth series for group with presentation < S, T : S ^ 3 = T ^ 6 = (S * T) ^ 6 = 1 >. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) + a(n - 3) + 2 * a(n - 4) - 3 * a(n - 5) + 2 * a(n - 6) + a(n - 7) - 2 * a(n - 8) + 3 * a(n - 9) - a(n - 10) for n>10. - _ Colin Barker _ , Feb 06 2018 ●

▶ [A362179] 1,1,4,10,25,61,146,344,800,1840,4192,9472,21248,47360,104960,231424,507904,1110016,2416640,5242880,11337728,24444928,52559872,112721920,241172480 ⋆ Main diagonal of the square array A058395. ● a(n) = 6 * a(n - 1) - 12 * a(n - 2) + 8 * a(n - 3) for n > 5. ●

▶ [A033539] 1,1,1,4,10,25,61,148,358,865,2089,5044,12178,29401,70981,171364,413710,998785,2411281,5821348,14053978,33929305,81912589,197754484,477421558 ⋆ a(0)=1, a(1)=1, a(2)=1, a(n) = 2 * a(n - 1) + a(n - 2) + 1. ● a(n) = (3 / 4) * (1 + sqrt(2)) ^ (n - 1) + 3 / 4 * (1 - sqrt(2)) ^ (n - 1) - 1 / 2 + 3 * 0 ^ n, with n >= 0. - _ Jaume Oliver Lafont _ , Sep 10 2009 ● a(n) = 3 * a(n - 1) - a(n - 2) - a(n - 3), a(0)=1, a(1)=1, a(2)=1, a(3)=4. - _ Harvey P. Dale _ , Nov 20 2011 ● a(n) = - 1 / 2 - (3 / 4) * (1 + sqrt(2)) ^ n - (3 / 4) * sqrt(2) * (1 - sqrt(2)) ^ n - (3 / 4) * (1 - sqrt(2)) ^ n + (3 / 4) * (1 + sqrt(2)) ^ n * sqrt(2) for n >= 1. - _ Alexander R. Povolotsky _ , Mar 05 2013 ●

▶ [A020709] 4,10,25,63,159,401,1011,2549,6427,16205,40859,103021,259755,654941,1651355,4163693,10498251,26470077,66741115,168279693,424297003,1069813853,2697406939,6801187117,17148375179 ⋆ Pisot sequence E(4,10). ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) (holds at least up to n = 1000 but is not known to hold in general). ●

▶ [A347725] 1,4,10,25,64,163,415,1057,2692,6856,17461,44470,113257,288445,734617,1870936,4764934,12135421,30906712,78713779,200469691,510559873,1300303216,3311635996,8434135081 ⋆ Number of irredundant sets in the (2n - 1) - triangular snake graph (for n > 1). ● a(n) = 2 * a(n - 1) + a(n - 2) + a(n - 3) for n > 3. ●

▶ [A097136] 1,4,10,25,64,166,433,1132,2962,7753,20296,53134,139105,364180,953434,2496121,6534928,17108662,44791057,117264508,307002466,803742889,2104226200,5508935710,14422580929 ⋆ a(n) = 3 * Fibonacci(2 * n) + 1. ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) + a(n - 3). ● a(n) = 1 + 3((3 + sqrt(5)) / 2) ^ n / sqrt(5) - 3((3 - sqrt(5)) / 2) ^ n / sqrt(5). ●

▶ [A283958] 1,1,1,1,4,10,25,139,391,1033,5806,16384,43345,243685,687709,1819441,10228936,28867366,76373161,429371599,1211741635,3205853305,18023378194,50864281276,134569465633 ⋆ a(n) = (Sum _{ j=1..h - 1 } a(n - j) + a(n - 1) * a(n - h + 1)) / a(n - h) with a(1), ..., a(h)=1, where h = 4. ● a(3 * k) = 3 * a(3 * k - 1) - a(3 * k - 2) - 1, ● a(3 * k + 1) = 3 * a(3 * k) - a(3 * k - 1) - 1, ● a(3 * k + 2) = 6 * a(3 * k + 1) - a(3 * k) - 1. ●

▶ [A269064] 0,1,4,10,26,48,87,135,208,293,410,542,714,904,1141,1399,1712,2049,2448,2874,3370,3896,4499,5135,5856 ⋆ At stage 1, start with a unit equilateral triangle. At each successive stage add 3 * (n - 1) new triangles around outside with vertex - to - vertex contacts. Sequence gives number of triangles at n - th stage. ● a(n) = (7 * n ^ 3 - 3 * n ^ 2 + 4 * n) / 2 for n even. ● a(n) = (28 * n ^ 3 + 30 * n ^ 2 + 16 * n + 7 + (- 1) ^ n) / 8 for n odd. ● a(n) = (14 * n ^ 3 - 12 * n ^ 2 + 23 * n + 6 + 3 * (3 * n - 2) * (- 1) ^ n + 2 * ((- 1) ^ ((2 * n - 1 + (- 1) ^ n) / 4) - (- 1) ^ ((6 * n - 1 + (- 1) ^ n) / 4))) / 32. ●

▶ [A000294] 1,1,4,10,26,59,141,310,692,1483,3162,6583,13602,27613,55579,110445,217554,424148,820294,1572647,2992892,5652954,10605608,19765082,36609945 ⋆ Expansion of g.f. Product _{ k >= 1 } (1 - x ^ k) ^ (- k * (k + 1) / 2). ● a(n) = (1 / (2 * n)) * Sum _{ k=1..n } (sigma[2](k) + sigma[3](k)) * a(n - k). - _ Vladeta Jovovic _ , Sep 17 2002 ●

▶ [A285186] 0,1,4,10,26,64,160,396,984,2440,6056,15024,37280,92496,229504,569440,1412896,3505664,8698240,21582016,53549184,132865920,329666176,817965824,2029532160 ⋆ Expansion of (x + 2 * x ^ 2) / (1 - 2 * x - 2 * x ^ 2 + 2 * x ^ 3). ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) for n>2. - _ Colin Barker _ , Apr 23 2017 ●

▶ [A175658] 1,4,10,26,66,166,414,1026,2530,6214,15214,37154,90546,220294,535230,1298946,3149506,7630726,18476494,44714786,108168210,261575494,632367774,1528408194,3693378466 ⋆ Eight bishops and one elephant on a 3 X 3 chessboard: a(n) = 2 * Pell(n + 1) + 2 * Pell(n) - 2 ^ n, with Pell = A000129. ● a(n) = 4 * a(n - 1) - 3 * a(n - 2) - 2 * a(n - 3) with a(0)=1, a(1)=4 and a(2)=10. ● a(n) = (1 - sqrt(2)) ^ (1 + n) + (1 + sqrt(2)) ^ (1 + n) - 2 ^ n. - Colin Barker, Aug 29 2017 ●

▶ [A277236] 1,4,10,26,66,170,434,1114,2850,7306,18706,47930,122754,314474,805490,2063386,5285346,13538890,34680274,88835834,227556930,582900266,1493127986,3824729050,9797240994 ⋆ Number of strings of length n composed of symbols from the circular list [1,2,3,4] such that adjacent symbols in the string must be adjacent in the list. No runs of length 2 or more are allowed for symbols 1 and 3. ● a(n) = ((13 + 3 * sqrt(17)) * z1 ^ n - (13 - 3 * sqrt(17)) * z2 ^ n) / (4 * sqrt(17)) where z1=(1 + sqrt(17)) / 2 and z2=(1 - sqrt(17)) / 2. ●

▶ [A099234] 1,1,4,10,26,69,181,476,1252,3292,8657,22765,59864,157422,413966,1088589,2862617,7527704,19795288,52054840,136886433,359964521,946583628,2489191330,6545722210 ⋆ A trisection of 1 / (1 - x - x ^ 4). ● a(n) = Sum _{ k=0..n } binomial(3 * (n - k), k). ● a(n) = a(n - 1) + 3 * a(n - 2) + 3 * a(n - 3) + a(n - 4). ● a(n) = Sum _{ k=0..n } C(3 * k,n - k) = Sum _{ k=0..n } C(n,k) * C(4 * k,n) / C(4 * k,k). - _ Paul Barry _ , Feb 04 2006 ●

▶ [A192879] 0,1,4,10,27,70,184,481,1260,3298,8635,22606,59184,154945,405652,1062010,2780379,7279126,19057000,49891873,130618620,341963986,895273339,2343856030,6136294752 ⋆ Coefficient of x in the reduction by (x ^ 2 - > x + 1) of the polynomial p(n,x) given in Comments. ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - a(n - 3), with a(0) = 0, a(1) = 1, a(2) = 4. ● a(n) = (2 ^ (- 1 - n) * ((- 1) ^ n * 2 ^ (1 + n) + (3 + sqrt(5)) ^ n * (- 1 + 3 * sqrt(5)) - (3 - sqrt(5)) ^ n * (1 + 3 * sqrt(5)))) / 5. - _ Colin Barker _ , Sep 29 2016 ● a(n) = F(n - 1) * F(n) + F(2n), where F(n) is a Fibonacci number. - _ Rigoberto Florez _ , Feb 06 2020 ●

▶ [A032248] 4,10,28,56,113,197,340,544,856,1284,1896,2709,3816,5247,7128,9504,12540,16302,21001,26728,33748,42185,52364,64448,78832 ⋆ "DHK[7]" (bracelet, identity, unlabeled, 7 parts) transform of 1,1,1,1,... ● a(n) = 3 * a(n - 1) - 8 * a(n - 3) + 6 * a(n - 4) + 6 * a(n - 5) - 8 * a(n - 6) + a(n - 7) - a(n - 9) + 8 * a(n - 10) - 6 * a(n - 11) - 6 * a(n - 12) + 8 * a(n - 13) - 3 * a(n - 15) + a(n - 16) for n>25. - _ Colin Barker _ , Feb 25 2019 ●

▶ [A026534] 1,4,10,28,64,172,388,1036,2332,6220,13996,37324,83980,223948,503884,1343692,3023308,8062156,18139852,48372940,108839116,290237644,653034700,1741425868,3918208204 ⋆ a(n) = Sum _{ i=0..2 * n } Sum _{ j=0..n - 1 } A026519(j, i). ● a(n) = (1 / 60) * (6 ^ ((n + 1) / 2) * ((4 * sqrt(6) - 9) * (- 1) ^ n + (4 * sqrt(6) + 9)) - 48). - _ G. C. Greubel _ , Dec 20 2021 ●

▶ [A026150] 1,1,4,10,28,76,208,568,1552,4240,11584,31648,86464,236224,645376,1763200,4817152,13160704,35955712,98232832,268377088,733219840,2003193856,5472827392,14952042496 ⋆ a(0) = a(1) = 1; a(n + 2) = 2 * a(n + 1) + 2 * a(n). ● a(n) = (1 / 2) * ((1 + sqrt(3)) ^ n + (1 - sqrt(3)) ^ n). - _ Benoit Cloitre _ , Oct 28 2002 ● a(n) = Sum _{ k=0..floor(n / 2) } C(n, 2k) * 3 ^ k; ● a(n) = round((1 + sqrt(3)) ^ n / 2) for n > 0. - _ Bruno Berselli _ , Feb 04 2013 ● a(n) = (- sqrt(2) * i) ^ n * T(n,sqrt(2) * i / 2), with i = sqrt(- 1) and the Chebyshev T - polynomials (A053120). - _ Wolfdieter Lang _ , Feb 10 2018 ●

▶ [A103457] 1,4,10,28,82,244,730,2188,6562,19684,59050,177148,531442,1594324,4782970,14348908,43046722,129140164,387420490,1162261468,3486784402,10460353204,31381059610,94143178828,282429536482 ⋆ a(n) = 3 ^ n + 1 - 0 ^ n. ● a(n) = Sum _{ k=0..n } binomial(n, k) * 0 ^ (k(n - k)) * 3 ^ k. ● a(n) = 3 * a(n - 1) - 2, with a(1)=4. - _ Vincenzo Librandi _ , Dec 29 2010 ●

▶ [A061639] 0,1,1,1,4,10,28,85,262,829,2677,8776,29143,97825,331381,1131409,3889381,13450744,46764532,163357807,573064849,2018027719,7131064045,25278463756,89866690732 ⋆ Number of planar planted trees with n non - root nodes and every 2 - valent node isolated. ● a(n) = Sum _{ m=0..n - 1 } Sum _{ i=0..n - m - 1 } (- 1) ^ i / (m + 1) * binomial(2 * m, m) * binomial(m + i, i) * binomial(m + i + 1, n - m - i - 1). ●

▶ [A239577] 1,4,10,28,91,280,820,2440,7381,22204,66430,199108,597871,1794160,5380840,16140880,48427561,145287604,435848050,1307529388,3922632451,11767941640,35303692060,105910943320,317733228541 ⋆ Expansion of 1 / ((x - 1) * (3 * x - 1) * (3 * x ^ 2 + 1)). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 12 * a(n - 3) - 9 * a(n - 4) for n > 3, a(0)=1, a(1)=4, a(2)=10, a(3)=16. ● a(n) = (- 1 + 3 ^ (2 + n) + (- 1 + (- 1) ^ n) * (- 3) ^ ((1 + n) / 2)) / 8. [_ Bruno Berselli _ , Mar 24 2014] ●

▶ [A052946] 1,1,4,10,29,80,224,624,1741,4855,13541,37765,105326,293751,819264,2284905,6372539,17772840,49567974,138243749,385558106,1075311210,2999014106,8364169855,23327445251 ⋆ Expansion of (1 - x) ^ 2 / (1 - 3 * x + 2 * x ^ 3 - x ^ 4). ● a(n) = 3 * a(n - 1) - 2 * a(n - 3) + a(n - 4). ● a(n) = Sum _{ alpha=RootOf(- 1 + 3 * z - 2 * z ^ 3 + z ^ 4) } (1 / 643) * (79 + 128 * alpha - 133 * alpha ^ 2 + 40 * alpha ^ 3) * alpha ^ (- 1 - n). ●

▶ [A025179] 1,4,10,29,81,231,659,1891,5443,15718,45508,132067,384047,1118820,3264642,9539787,27913083,81769236,239794422,703906719,2068153899,6081507831,17896695831,52703944965,155310270101 ⋆ a(n) = number of (s(0), s(1), ..., s(n)) such that s(i) is an integer, s(0) = 0, |s(1)| = 1, |s(i) - s(i - 1)| <= 1 for i >= 2, s(n) = 1. Also a(n) = T(n,n - 1), where T is the array defined in A025177. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n, 2 * k) * binomial(2 * k + 1, k + 1). ● a(n + 1) = Sum _{ k=0..n } C(n, k) * C(k + 1, k / 2 + 1) * (1 + (- 1) ^ k) / 2 } . (End) ●

▶ [A116388] 1,1,4,10,29,82,236,681,1975,5745,16757,48982,143442,420721,1235663,3633453,10695292,31511524,92919758,274203662,809719718,2392579638,7073684393,20924387460,61925598216 ⋆ Expansion of 1 / ((1 + x * (1 - M(x))) * sqrt(

1 - 2 * x - 3 * x ^ 2)), M(x) the g.f. of A001006. • a(n) = Sum _{ k=0..floor(n / 2) } Sum _{ j=0..n - k } C(n - k,j - k) * C(j,n - k - j). •

► [A006357] 1,4,10,30,85,246,707,2037,5864,16886,48620,139997,403104,1160693,3342081,9623140,27708726,79784098,229729153,661478734,1904652103,5484227157,15791202736,45468956106,130922641160 ⋆ Number of distributive lattices; also number of paths with n turns when light is reflected from 4 glass plates. • a(n) = 2 * a(n - 1) + 3 * a(n - 2) - a(n - 3) - a(n - 4). • a(n) is asymptotic to z(4) * w(4) ^ n where w(4) = (1 / 2) / cos(4 * Pi / 9) and z(4) is the root 1 < x < 2 of P(4, X) = 1 + 27 * X - 324 * X ^ 2 + 243 * X ^ 3. - _ Benoit Cloitre _ , Oct 16 2002 •

► [A363509] 1,4,10,30,101,361,1354,5238,20740,83683,342719,1421019,5953306,25162342,107163924,459438524,1981247950,8588054014,37398421941,163534601567,717776072291,3161117717887,13964782042188,61866495037806,2747923827899 58 ⋆ G.f. satisfies A(x) = exp(Sum _{ k>=1 } (- 1) ^ (k + 1) * (3 + A(x ^ k)) * x ^ k / k). • a(0) = 1; a(n) = (- 1 / n) * Sum _{ k=1..n } (3 * (- 1) ^ k + Sum _{ d|k } (- 1) ^ (k / d) * d * a(d - 1)) * a(n - k). •

► [A346754] 0,0,0,1,4,10,30,175,1176,7364,50520,425205,4010380,39433966,414654604,4793188855,59834495280,789420239560,11016095913456,163423065359529,2565467553034740,42320595474149650,732058678770177220,13275485607004016011 ⋆ E.g.f.: - log(1 - x ^ 3 * exp(x) / 3!). • a(0) = 0; a(n) = binomial(n,3) + (1 / n) * Sum _{ k=1..n - 1 } binomial(n,k) * binomial(n - k,3) * k * a(k). •

► [A034730] 1,4,10,31,82,256,730,2218,6571,19768,59050,177430,531442,1595056,4783060,14351125,43046722,129146980,387420490,1162281262,3486785140,10460412256,31381059610,94143358444,282429536563 ⋆ Dirichlet convolution of b _ n=1 with c _ n=3 ^ (n - 1). • a(n) = Sum _{ d|n } 3 ^ (d - 1). - _ Seiichi Manyama _ , Jun 26 2019 •

► [A006342] 1,1,4,10,31,91,274,820,2461,7381,22144,66430,199291,597871,1793614,5380840,16142521,48427561,145282684,435848050,1307544151,3922632451,11767897354,35303692060,105911076181 ⋆ Coloring a circuit with 4 colors. • a(n) = 2 * a(n - 1) + 3 * a(n - 2) - 1, n > 1. - _ Gary Detlefs _ , Jun 21 2010 • a(n) = (3 ^ (n + 1) + 5) / 8 for n even. • a(n) = (3 ^ (n + 1) - 1) / 8 for n odd. • a(n) = 3 * a(n - 1) + a(n - 2) - 3 * a(n - 3) for n > 2. • a(n) = 3 * a(n - 1) + (3 * (- 1) ^ n - 1) / 2 for n > 0. - _ Yuchun Ji _ , Dec 05 2019 •

► [A017936] 1,4,10,32,100,317,1000,3163,10000,31623,100000,316228,1000000,3162278,10000000,31622777,100000000,316227767,1000000000,3162277661,10000000000,31622776602,100000000000,316227766017,1000000000000 ⋆ Smallest number whose square has n digits. • a(n) = ceiling(10 ^ ((n - 1) / 2)). •

► [A033297] 1,1,4,10,32,100,329,1101,3761,13035,45751,162261,580639,2093801,7601044,27756626,101888164,375750536,1391512654,5172607766,19293659254,72188904386,270870709264,1019033438060,3842912963392 ⋆ Number of ordered rooted trees with n edges such that the rightmost leaf of each subtree is at even level. Equivalently, number of Dyck paths of semilength n with no return descents of odd length. • a(n) = Sum _{ i=0..n - 2 } (- 1) ^ i * C(n - 1 - i), where C(n) are the Catalan numbers A000108. • a(n) = Catalan(n - 1) * hypergeom([1, - n], [3 / 2 - n], - 1 / 4) + (- 1) ^ n * 3 / 2. - Erroneous formula replaced by _ Peter Luschny _ , Nov 22 2016 •

► [A137954] 1,1,1,4,10,32,107,360,1270,4544,16537,61092,228084,860056,3269994,12521488,48250690,186959312,727989318,2847167632,11179394088,44053232012,174160578150,690576010820,2745713062854 ⋆ G.f. satisfies A(x) = 1 + x + x ^ 2 * A(x) ^ 4. • a(n) = Sum _{ k=0..n - 1 } C(n - k,k) / (n - k) * C(4 * k,n - k - 1) for n>0 with a(0)=1. - _ Paul D. Hanna _ , Jun 16 2009 •

► [A151746] 1,4,10,32,118,460,1826,7288,29134,116516,466042,1864144,7456550,29826172,119304658,477218600,1908874366,7635497428,30541989674,122167958656,488671834582,1954687338284,7818749353090,31274997412312,125099989649198 ⋆ G.f.: (1 - 2 * x - 5 * x ^ 2 + 4 * x ^ 3) / ((1 - 4 * x) * (1 - x) ^ 2). • a(n) = 14 / 9 + 2 * n / 3 + 4 ^ (n + 1) / 9, n>0. [From _ R. J. Mathar _ , Jun 17 2009] •

► [A110145] 0,1,4,10,32,126,472,1716,6400,24310,92504,352716,1351616,5200300,20060016,77558760,300533760,1166803110,4537591960,17672631900,68923172032,269128937220,1052049834576,4116715363800,16123800489472 ⋆ a(n) = Sum _{ k=0..n } C(n,k) ^ 2 * mod(k,2). • a(n) = Sum _{ k=0..n } C(n, k) ^ 2 * (1 - (- 1) ^ k) / 2. • a(n) = C(2n - 1, n - 1)(1 - (- 1) ^ n) / 2 + (C(2n, n) / 2 - (- 1) ^ (n / 2) * C(n, floor(n / 2)) / 2)(1 + (- 1) ^ n) / 2. • a(n) = (binomial(2 * n, n) - binomial(n, n / 2) * cos(Pi * n / 2)) / 2 = n ^ 2 * hypergeom([1 / 2 - n / 2, 1 / 2 - n / 2, 1 - n / 2, 1 - n / 2], [1, 3 / 2, 3 / 2], 1). - _ Vladimir Reshetnikov _ , Oct 04 2016 •

► [A162427] 1,4,10,33,68,123,226,342,547,778,1071,1412,1901,2392,2997,3762,4391,5534,6645,7632,9045,10546,11983,13870,16011 ⋆ Row 4 of table A162424. • a(n) = Sum _{ m=n(n + 1) / 2..n(n + 1) / 2 + n } [x ^ m] S(x) ^ 4 for n>=0 where S(x) = Sum _{ n>=0 } x ^ ((n + 1)(n + 2) / 2 - 1). •

► [A007716] 1,1,4,10,33,91,298,910,3017,9945,34207,119369,429250,1574224,5916148,22699830,89003059,356058540,1453080087,6044132794,25612598436,110503627621,485161348047,2166488899642,9835209912767 ⋆ Number of polynomial symmetric functions of matrix of order n under separate row and column permutations. • a(n) is the coefficient of x ^ n in the cycle index Z(S _ n X S _ n; x _ 1, x _ 2, ...) if we replace x _ i with 1 + x ^ i + x ^ (2 * i) + x ^ (3 * i) + x ^ (4 * i) + ..., where S _ n X S _ n is the Cartesian product of symmetric groups S _ n of degree n. - _ Vladeta Jovovic _ , Mar 09 2000 •

► [A140725] 0,1,4,10,34,94,298,862,2650,7822,23722,70654,212986,636910,1914826,5736286,17225242,51642958,154994410,464852158,1394818618,4183931566,12552843274,37656432670,112973492314 ⋆ Inverse binomial transform of (0 followed by A037481). • a(n) = a(n - 1) + 6 * a(n - 2) for n>2, a(0)=0, a(1)=1, a(2)=4. - _ Philippe Deléham _ , Nov 17 2013 •

► [A156700] 0,1,1,4,10,34,103,346,1153,3965,13746,48396,171835,615966,2223755,8082457,29543309,108545916,400623807,1484716135,5522723344,20612084010,77164686511,289688970195,1090342139349 ⋆ Number of partitions of the set of odd numbers { 1, 3, 5, ..., 4 * n - 1 } into two subsets with equal sum. • a(n) = [x ^ 0](Product _{ k=1..2 * n } x ^- (2 * k - 1) + x ^ (2 * k - 1)) / 2. - _ Andrew Howroyd _ , Nov 22 2018 •

► [A283070] 4,10,34,130,514,2050,8194,32770,131074,524290,2097154,8388610,33554434,134217730,536870914,2147483650,8589934594,34359738370,137438953474,549755813890,2199023255554,8796093022210,35184372088834,140737488355330,562949953421314 ⋆ Sierpinski tetrahedron or tetrix numbers: a(n) = 2 * 4 ^ n + 2. • a(n) = 5 * a(n - 1) - 4 * a(n - 2) for n > 1. •

► [A344559] 0,0,0,1,4,10,35,140,476,1624,6070,22495,81455,301301,1131494,4230681,15852396,59881956,226877648,860447129,3273728234,12493453344,47760610689,182905145214,701883651799 ⋆ a(n) = (1 / 6) * 2 ^ (- n) * n! * [x ^ n] Exp(2 * x, 1) * (Exp(2 * x, 3) - 1), where Exp(x, m) = Sum _{ k>=0 } (x ^ k / k!) ^ m. • a(n) = (1 / 6) * (hypergeom([- n / 3, (1 - n) / 3, (2 - n) / 3], [1, 1], - 27) - 1). •

► [A220205] 4,10,36,89,182,333,567,918,1431,2164,3190,4599,6500,9023,12321,16572,21981,28782,37240,47653,60354,75713,94139,116082,142035 ⋆ Number of 2 X n arrays of the minimum value of corresponding elements and their horizontal, vertical or diagonal neighbors in a random, but sorted with lexicographically nondecreasing rows and nonincreasing columns, 0..3 2 X n array. • a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>7. •

► [A196880] 1,1,4,10,36,94,284,692,1828,4124,9828,20798,45564,91018,186788,355906,692004,1264678,2347716,4138358,7389572,12625938,21804900,36243644,60777212 ⋆ Number of partitions of n ^ 2 into powers of 2. • a(n) = [x ^ (n ^ 2)] 1 / Product _{ j>=0 } (1 - x ^ (2 ^ j)). •

► [A088013] 1,1,4,10,36,116,400,1352,4624,15760,53824,183712,627264,2141504,7311616,24963200,85229824,290992384,993510400,3392055808,11581203456,39540700160,135000395776,460920178688,1573679927296 ⋆ Binomial transform of A001541 (with interpolated zeros). • a(n) = ((sqrt(2)) ^ n + (- sqrt(2)) ^ n + (2 + sqrt(2)) ^ n + (2 - sqrt(2)) ^ n) / 4. •

► [A345245] 1,1,4,10,36,135,504,2000,8072,33099,138132,582930,2485412,10692219,46340984,202175344,887175352,3913032212,17338327848,77141235796,344491008296,1543591834950,6937783312048,31270131096820,141305878384704 ⋆ G.f. A(x) satisfies: A(x) = x + x ^ 2 * exp(4 * Sum _{ k>=1 } (- 1) ^ (k + 1) * A(x ^ k) / k). • a(n + 2) = (4 / n) * Sum _{ k=1..n } (Sum _{ d|k } (- 1) ^ (k / d + 1) * d * a(d)) * a(n - k + 2). •

► [A052572] 1,4,10,36,168,960,6480,50400,443520,4354560,47174400,558835200,7185024000,99632332800,1482030950400,23538138624000,397533007872000,7113748561920000,134449847820288000,2676192208994304000 ⋆ E.g.f. (1 + 2x - 2x ^ 2) / (1 - x) ^ 2. • a(n) = (n + 3) * n! for n>0. •

► [A079725] 0,0,4,10,37,49,94,112,175,305,335,505,622,664,799,1049,1329,1389,1709,1916,1988,2368,2611,3041,3692 ⋆ Sum of composite numbers less than n - th prime. • a(n) = prime(n) * (prime(n) + 1) / 2 - sum _{ 1..n } prime(k) - 1. •

► [A154152] 4,10,37,67,220,394,1285,2299,7492,13402,43669,78115,254524,455290,1483477,2653627,8646340,15466474,50394565,90145219,293721052,525404842,1711931749,3062283835,9977869444 ⋆ Indices k such that 26 plus the k - th triangular number is a perfect square. • a(n) = + a(n - 1) + 6 * a(n - 2) - 6 * a(n - 3) - a(n - 4) + a(n - 5). •

► [A220198] 4,10,38,103,245,547,1168,2395,4724,8982,16504,29381,50797,85475,140254,224821,352624,541994,817506,1211611,1766573,2536747,3591236,5016967,6922228 ⋆ Number of n X 2 arrays of the minimum value of corresponding elements and their horizontal, vertical or diagonal neighbors in a random, but sorted with lexicographically nondecreasing rows and nonincreasing columns, 0..3 n X 2 array. • a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n >10. •

► [A100307] 1,4,10,40,82,328,820,3280,6562,26248,65620,262480,538084,2152336,5380840,21523360,43046722,172186888,430467220,1721868880,3529831204,14119324816,35298312040,141193248160,282472589764 ⋆ Modulo 2 binomial transform of 3 ^ n. • a(n) = Sum _{ k=0..n } (binomial(n, k) mod 2) * 3 ^ k. • a(2 ^ n) = 3 ^ (2 ^ n) + 1, n >= 0. • a(2 ^ t * n + 2 ^ (t - 1)) = 8 * (3 ^ (2 ^ (t - 1) + 1)) / (3 ^ (2 ^ (t - 1)) - 1) * a(2 ^ t * n + 2 ^ (t - 1) - 2), t >= 2. • a(n) = Product _{ b _ j != 0 } a(2 ^ j) where n = Sum _{ j>=0 } b _ j * 2 ^ j is the binary representation of n. • a(2 * k + 1) = 4 * a(2 * k). (End) •

► [A156798] 4,10,40,130,340,754,1480,2650,4420,6970,10504,15250,21460,29410,39400,51754,66820,84970,106600,132130,162004,196690,236680,282490,334660 ⋆ a(n) = n ^ 4 + 5 * n ^ 2 + 4. • a(n) = (n ^ 2 + 1) * (n ^ 2 + 4) = n ^ 2 + (n ^ 2 + 2) ^ 2. • a(0)=4, a(1)=10, a(2)=40, a(3)=130, a(4)=340, a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Harvey P. Dale _ , May 04 2011 •

► [A032121] 1,4,10,40,136,544,2080,8320,32896,131584,524800,2099200,8390656,33562624,134225920,536903680,2147516416,8590065664,34359869440,137439477760,549756338176,2199025352704,8796095119360,35184380477440,140737496743936 ⋆ Number of reversible strings with n beads of 4 colors. • a(n) = (4 ^ m + 3 * 2 ^ m + (- 2) ^ m) / 8, where m = n + 1. - _ Frank Ruskey _ , Jul 14 2002 • a(n) = 2 ^ (n - 2) * (3 + (- 1) ^ (1 + n) + 2 ^ (1 + n)). • a(n) = 4 * a(n - 1) + 4 * a(n - 2) - 16 * a(n - 3) for n>2. •

► [A368166] 0,0,0,0,4,10,40,210,1904,15120,132600,1293600,14673120,178738560,2341182480,32915282400,499117301760,8075042976000,138689356915200,2519863488979200,48354005826489600,976893364144857600,20721305503846886400,460363370406207206400 ⋆ Expansion of e.g.f. - log(1 + x ^ 3 / 6 * log(1 - x)). • a(n) = n! * Sum _{ k=1..floor(n / 4) } (k - 1)! * |Stirling1(n - 3 * k,k)| / (6 ^ k * (n - 3 * k)!). •

► [A355995] 0,0,0,0,4,10,40,210,2464,20160,178800,1755600,22323840,289729440,3950069760,57127870800,921032555520,15786602832000,284810759251200,5394363163862400,108742028591923200,2312415679065811200,51543520889668684800,1199641884471310156800 ⋆ Expansion of e.g.f. - LambertW(x ^ 3 / 6 * log(1 - x)). • a(n) = n! * Sum _{ k=1..floor(n / 4) } k ^ (k - 1) * |Stirling1(n - 3 * k, k)| / (6 ^ k * (n - 3 * k)!). •

► [A355993] 0,0,0,0,4,10,40,210,8064,70560,640800,6375600,189383040,3165402240,48879754560,762766804800,21652937349120,525738717504000,11796584629939200,259139188966694400,7842638783736115200,240231375437935795200,7066934411387842252800 ⋆ Expansion of e.g.f. - LambertW(x ^ 3 / 6 * log(1 - x)) / 6. • a

(n) = (n! / 6) * Sum _{ k=1..floor(n / 4) } k ^ (k - 1) * |Stirling1(n - 3 * k,k)| / (n - 3 * k)!. ●

▶ [A052394] 1,1,4,10,44,197,1228,7692,52828,373636,2735952,20506258,156922676,1221179926,9642496488,77092885016,623121750844,5085013101164,41850600967984,347060754685888,2897800158952304,24344668688424333,205667187527660076,1746375819789491996,14898241072028602276 ★ Number of unlabeled 4 - ary cacti having n polygons ● a(n) = (1 / n) * (Sum _{ d|n } phi(n / d) * binomial (4 * d, d)) - 3 * binomial(4 * n, n) / (3 * n + 1) for n > 0. - _ Andrew Howroyd _ , May 02 2018 ●

▶ [A115327] 1,1,4,10,46,166,856,3844,21820,114076,703216,4125496,27331624,175849480,1241782816,8627460976,64507687696,478625814544,3768517887040,29614311872416,244419831433696,2021278543778656,17419727924101504 ★ E.g.f.: exp(x + 3 / 2 * x ^ 2). ● a(n) = a(n - 1) + 3 * (n - 1) * a(n - 2). (End) ● a(n) = n! * Sum _{ k=0..floor(n / 2) } 3 ^ k / (2 ^ k * k! * (n - 2 * k)!). - _ Luis Manuel Rivera Martínez _ , Feb 26 2015 ●

▶ [A099606] 1,4,10,48,116,560,1352,6528,15760,76096,183712,887040,2141504,10340096,24963200,120532992,290992384,1405035520,3392055808,16378294272,39540700160,190919389184,460920178688,2225519493120,5372879343616 ★ Row sums of triangle A099605, in which row n equals the inverse Binomial transform of column n of the triangle A034870 of even - indexed rows of Pascal's triangle. ● a(n) = Pell(n + 1) * 2 ^ [(n + 1) / 2]. a(n) = 12 * a(n - 2) - 4 * a(n - 4) for n>=4. G.f.: (1 + 4 * x - 2 * x ^ 2) / (1 - 12 * x ^ 2 + 4 * x ^ 4). ●

▶ [A335873] 0,1,4,10,48,216,1440,9360,80640,685440,7257600,76204800,958003200,11975040000,174356582400,2528170444800,41845579776000,690452066304000,12804747411456000,236887827111936000,4865804016353280000,997489823352422 40000,22480014555555215360000 ★ Total number of points in all permutations of [n] that are fixed or reflected. ● a(0) = 0, a(n) = 2 * n! - (n mod 2) * (n - 1)! for n > 0. ● a(n) = (n - 1) * (4 * a(n - 1) + (n - 2) * (4 * n - 3) * a(n - 2)) / (4 * n - 7) for n >= 2, a(n) = n for n < 2. ●

▶ [A276123] 1,1,1,4,10,55,154,868,2449,13825,39025,220324,621946,3511351,9912106,55961284,157971745,891869185,2517635809,14213945668,40124201194,226531261495,639469583290,3610286238244,10191389131441 ★ a(0) = a(1) = a(2) = 1; for n > 2, a(n) = (a(n - 1) + 1) * (a(n - 2) + 1) / a(n - 3). ● a(n) = (9 - 3 * (- 1) ^ n) / 2 * a(n - 1) - a(n - 2) - 1. ● a(n) = 17 * a(n - 2) - 17 * a(n - 4) + a(n - 6) for n > 5. ●

▶ [A336997] 1,4,10,56,136,1952,5104,94208,605056,7741952,39917824,1458295808,6227024896,175463616512,2353813878784,48886264659968,355687428161536,17362063156969472,121645100409094144,6001501553433509888,85800344155030552576,2248030289949388439552 ★ a(n) = n! * Sum _{ d|n } 2 ^ (d - 1) / d!. ● a(p) = p! + 2 ^ (p - 1), where p is prime. ●

▶ [A124724] 4,10,60,455,3876,35420,339300,3362260,34179860,354465254,3735373880,39884521950,430571952300,4691735290080,51534335175776,570003171679020,6343110854237300,70968228417131850,797820661622862900 ★ a(n) = (4 / (n + 1)) * C(5 * n, n). ● a(n) = C(5 * n, n) / (4 * n + 1) + 2 * C(5 * n + 1, n) / (4 * n + 2) + 3 * C(5 * n + 2, n) / (4 * n + 3) + 4 * C(5 * n + 3, n) / (4 * n + 4). ●

▶ [A204542] 1,4,11,14,16,19,26,29,31,34,41,44,46,49,56,59,61,64,71,74,76,79,86,89,91 ★ Numbers that are congruent to { 1, 4, 11, 14 } mod 15. ● a(n) = - a(1 - n), a(n) = 15 + a(n - 4), a(n) = floor(15 * n / 4) - ((n + 1) mod 4) for all n in Z . ● a(n) = (30 * n + 10 * i ^ (n * (n + 1)) - 3 * (- 1) ^ n + 1) / 8 - 2, where i= sqrt(- 1). - _ Bruno Berselli _ , Nov 28 2012 ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. - _ Wesley Ivan Hurt _ , Jun 07 2016 ●

▶ [A271508] 1,4,11,14,21,24,31,34,41,44,51,54,61,64,71,74,81,84,91,94,101,104,111,114,121 ★ Numbers that are congruent to { 1,4 } mod 10. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n>3. ● a(n) = 5 * n - 5 - (- 1) ^ n. ●

▶ [A032822] 1,4,11,14,41,44,111,114,141,144,411,414,441,444,1111,1114,1141,1144,1411,1414,1441,1444,4111,4114,4141 ★ Numbers whose set of base - 10 digits is { 1,4 } . ● a(1)=1, a(2)=4; a(n) = 10 * a(floor(n / 2)) + 1 for n odd, otherwise a(n) = 10 * a(floor((n - 1) / 2)) + 4. - _ Bruno Berselli _ , May 28 2012 ●

▶ [A320494] 1,4,11,15,22,28,32,39,45,48,56,62,65,73,78,82,90,95,99,106,112,116,123,129,132 ★ Coordination sequence of thinnest 5 - neighbor packing of the plane with congruent triangles with respect to a tetravalent point. ● a(n) = a(n - 3) + a(n - 5) - a(n - 8) for n>9. ●

▶ [A022131] 4,11,15,26,41,67,108,175,283,458,741,1199,1940,3139,5079,8218,13297,21515,34812,56327,91139,147466,238605,386071,624676 ★ Fibonacci sequence beginning 4, 11. ● a(n) = ((10 + 9 * sqrt(5)) / 5) * ((1 + sqrt(5)) / 2) ^ n + ((10 - 9 * sqrt(5)) / 5) * ((1 - sqrt(5)) / 2) ^ n starting at n=0. - _ Bogart B. Strauss _ , Oct 27 2013 ●

▶ [A213479] 1,4,11,18,30,41,58,73,95,114,141,164,196,223,260,291,333,368,415,454,506,549,606,653,715 ★ Number of (w,x,y) with all terms in { 0,...,n } and |w - x| + |x - y| = w + x + y. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). ● a(n) = (18 * n ^ 2 + 2 * (- 1) ^ n * n + 42 * n + 5 * (- 1) ^ n + 11) / 16. ● a(n) = (9 * n ^ 2 + 22 * n + 8) / 8 for n even. ● a(n) = (9 * n ^ 2 + 20 * n + 3) / 8 for n odd. (End) ●

▶ [A210464] 4,11,18,33,48,74,100,140,180,237,294,371,448,548,648,774,900,1055,1210,1397,1584,1806,2028,2288,2548 ★ Number of bracelets with 2 blue, 2 red, and n black beads. ● a(n) = (25 + 7 * (- 1) ^ n + 3 * (11 + (- 1) ^ n) * n + 14 * n ^ 2 + 2 * n ^ 3) / 16. a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + a(n - 4) + 2 * a(n - 5) - a(n - 6). G.f.: - x * (2 * x ^ 5 - 4 * x ^ 4 - 2 * x ^ 3 + 8 * x ^ 2 - 3 * x - 4) / ((x - 1) ^ 4 * (x + 1) ^ 2). [_ Colin Barker _ , Feb 06 2013] ●

▶ [A063215] 4,11,19,27,35,41,51,57,65,73,81,87,97,103,111,119,127,133,143,149,157,165,173,179,189 ★ Dimension of the space of weight 2n cuspidal newforms for Gamma _ 0(47). ● a(n) = a(n - 2) + a(n - 3) - a(n - 5) for n>6. G.f.: x * (4 + 11 * x + 15 * x ^ 2 + 12 * x ^ 3 + 5 * x ^ 4 - x ^ 5) / ((1 - x) ^ 2 * (1 + x) * (1 + x + x ^ 2)). - _ Colin Barker _ , Sep 27 2012 ●

▶ [A101418] 1,4,11,19,30,44,60,78,99,122,148,176,207,240,276,314,354,397,443,491,541,594,649,707,767 ★ Floor of the area of a lens constructed using circular arcs of radius n. ● a(n) = floor((4 * Pi - 3 * sqrt(3)) / 6 * n ^ 2). ●

▶ [A213395] 1,4,11,19,31,44,62,79,103,125,154,181,216,247,288,324,370,411,463,508,566,616,679,734,803 ★ Number of (w,x,y) with all terms in { 0,...,n } and max(|w - x|,|x - y|) = w. ● a(n) = 2 * a(n - 2) + a(n - 3) - a(n - 4) - 2 * a(n - 5) + a(n - 7). ●

▶ [A321643] 4,11,19,41,79,161,319,641,1279,2561,5119,10241,20479,40961,819119,163841,327679,655361,1310719,2621441,5242879,10485761,209715194194304 1,83886079 ★ a(n) = 5 * 2 ^ n - (- 1) ^ n. ● a(n + 2) - a(n) = a(n + 1) + a(n) = 15 * 2 ^ n, n >= 0. ● a(n) - 2 * a(n - 1) = period 2: repeat [3, - 3], n > 0, a(0)=4, a(1)=11. ● a(n) = a(n - 1) + 2 * a(n - 2) for n > 1. ●

▶ [A212959] 1,4,11,20,33,48,67,88,113,140,171,204,241,280,323,368,417,468,523,580,641,704,771,840,913 ★ Number of (w,x,y) such that w,x,y are all in { 0,...,n } and |w - x| = |x - y|. ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4). ● a(n) = (6 * n ^ 2 + 8 * n + 3 + (- 1) ^ n) / 4. - _ Luce ETIENNE _ , Apr 05 2014 ●

▶ [A345118] 0,4,11,20,34,50,69,92,116,144,175,208,246,286,329,376,424,476,531,588,650,714,781,852,924 ★ a(n) is the sum of the lengths of all the segments used to draw a square of side n representing a basketweave pattern where all the multiple strands are of unit width, the horizontal ones appearing as 1 X 3 rectangles, while the vertical ones as unit area squares. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) - a(n - 4) + 3 * a(n - 5) - 3 * a(n - 6) + a(n - 7) for n > 6. ● a(n) = (n * (5 + 3 * n) - (1 - (- 1) ^ n) * sin((n - 1) * Pi / 4)) / 2. ●

▶ [A272042] 4,11,21,31,47,61,69,87,99,113,127,141,161,171,179,209,219,241,259,275,289,307,315,357,361 ★ a(n) = 2 * prime(2n) - prime(n). ● a(n) = 3n * log n + 3n * log log n - (3 - log 2) * n + O(n log log n / log n). - _ Charles R Greathouse IV _ , Apr 18 2016 ●

▶ [A115067] 0,4,11,21,34,50,69,91,116,144,175,209,246,286,329,375,424,476,531,589,650,714,781,851,924 ★ a(n) = (3 * n ^ 2 - n - 2) / 2. ● a(n) = (3 * n + 2) * (n - 1) / 2. ● a(n + 1) = n * (3 * n + 5) / 2. - _ Omar E. Pol _ , May 21 2008 ● a(n) = 3 * n + a(n - 1) - 2 for n>1, a(1)=0. - _ Vincenzo Librandi _ , Nov 13 2010 ● a(n) = Sum _{ j=0..n - 2 } (2 * n - j) = Sum _{ j=0..n - 2 } (n + 2 + j), for n>=1. See the trapezoid link. - _ Leo Tavares _ , May 20 2022 ●

▶ [A298787] 1,4,11,21,34,51,71,94,121,151,184,221,261,304,351,401,454,511,571,634,701,771,844,921,1001 ★ Partial sums of A298786. ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) - 2 * a(n - 4) + a(n - 5) for n>4. - _ Colin Barker _ , Jan 27 2018 ●

▶ [A008014] 1,4,11,21,35,53,77,105,137,172,212,256,305,357,413,473,539,609,683,760,842,928,1019,1113,1211 ★ Coordination sequence T1 for Zeolite Code AFI. ● a(10 * m + k) = 210 * m ^ 2 + 42 * k * m + one of 10 numbers depending on k, 0<=k<10 (_ N. J. A. Sloane _). ●

▶ [A307273] 1,4,11,21,35,56,82,114,152,198,249,305,366,437,510,588,672,766,861,961,1068,1185,1302,1424,1554 ★ Partial sums of A307203. ● a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - 2 * a(n - 5) + 2 * a(n - 6) - 2 * a(n - 7) + a(n - 8) for n>16. ●

▶ [A110611] 1,4,11,21,37,58,87,123,169,224,291,369,461,566,687,823,977,1148,1339,1549,1781,2034,2311,2611,2937 ★ Minimal value of sum(p(i)p(i + 1),i=1..n), where p(n + 1)=p(1), as p ranges over all permutations of { 1,2,...,n } . ● a(n) = (n ^ 3 + 3 * n ^ 2 + 5 * n - 6) / 6 if n is even; a(n)=(n ^ 3 + 3 * n ^ 2 + 5 * n - 3) / 6 if n is odd. ● a(n) = (2 * n ^ 3 + 6 * n ^ 2 + 10 * n - 9 - 3 * (- 1) ^ n) / 12. - _ Luce ETIENNE _ , Jul 26 2014 ●

▶ [A212254] 0,0,0,1,4,11,21,37,59,88,125,172,228,296,376,469,576,699,837,993,1167,1360,1573,1808,2064 ★ Number of (w,x,y,z) with all terms in { 1,...,n } and w =x + 2y + 3z - n. ● a(n) = 2 * a(n - 1) - a(n - 3) - a(n - 4) + 2 * a(n - 6) - a(n - 7). ●

▶ [A360096] 0,1,1,4,11,21,41,57,439,640,909,1222,1859,2354,2953,3616,61167,78303,98837,123121,152379,185641,224113,268227,344999 ★ To get a(n), replace 0's in the binary expansion of n with (- 1) and interpret the result in base n. ● a(n) = [x ^ n] g _ n(x) where g _ k(x) satisfies g _ k(x) = k * (x + 1) * g _ k(x ^ 2) + x / (1 + x). ● a(n) = A(n,n) where A(n,k) = k * A(floor(n / 2),k) + 2 * (n mod 2) - 1 for n>0, A(0,k)=0. ●

▶ [A301152] 1,4,11,22,32,49,77,109,139,163,197,250,310,357,398,456,526,603,676,744,819,903,999,1097,1191 ★ Coordination sequence T3 for Zeolite Code OWE . ● a(n) = a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - 2 * a(n - 4) + 3 * a(n - 5) - 2 * a(n - 6) + 4 * a(n - 7) - 3 * a(n - 8) + 4 * a(n - 9) - 4 * a(n - 10) + 3 * a(n - 11) - 4 * a(n - 12) + 2 * a(n - 13) - 3 * a(n - 14) + 2 * a(n - 15) - 2 * a(n - 16) + 2 * a(n - 17) - a(n - 18) + a(n - 19) for n > 19. ●

▶ [A226183] 4,11,22,36,54,75,100,129,161,197,236,278,325,375,428,485,546,610,677,749,823,902,984,1069,1158 ★ Least positive integer k such that 1 + 1 / 2 + ... + 1 / n < 1 / (n + 1) + ... + 1 / k. ● a(n) = round(exp(gamma) * n * (n + 1) + gamma) where gamma is the Euler - Mascheroni constant 0.57714... (A001620). - _ Carl R. White _ , Sep 01 2021 ●

▶ [A084849] 1,4,11,22,37,56,79,106,137,172,211,254,301,352,407,466,529,596,667,742,821,904,991,1082,1177 ★ a(n) = 1 + n + 2 * n ^ 2. ● a(n) - 3 * a(n - 1) + 3 * a(n - 2) - a(n - 3) = 0, with n > 2. - _ Bruno Berselli _ , May 24 2010 ● a(n) = 4 * n + a(n - 1) - 1 (with a(0) = 1). - _ Vincenzo Librandi _ , Aug 08 2010 ●

▶ [A008265] 1,4,11,22,37,59,85,114,147,184,230,280,331,386,445,515,589,662,739,820,914,1012,1107,1206,1309 ★ Coordination sequence T1 for Zeolite Code ATO. ● a(5m)=57m ^ 2 + 2, a(5m + 1)=57m ^ 2 + 24m + 4, a(5m + 2)=57m ^ 2 + 46m + 11, a(5m + 3)=57m ^ 2 + 68m + 22, a(5m + 4)=57m ^ 2 + 90m + 37 (_ N. J. A. Sloane _). ●

▶ [A213759] 1,4,11,22,39,62,93,132,181,240,311,394,491,602,729,872,1033,1212,1411,1630,1871,2134,2421,2732,3069 ★ Principal diagonal of the convolution array A213783. ● a(n) = (3 - 3 * (- 1) ^ n - 4 * n + 18 * n ^ 2 + 4 * n ^ 3) / 24. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - 2 * a(n - 3) + 3 * a(n - 4) - a(n - 5). ●

▶ [A132072] 1,4,11,22,39,66,111,190,335,610,1143,2190,4263,8386,16607,33022,65823,131394,262503,524686,1049015,2097634,4194831,8389182,16777839 ★ Row sums of triangle A132071. ● a(n) = 2 ^ n + n ^ 2 + 2 * n - 1, n > 0. (End) ●

▶ [A008043] 1,4,11,22,40,64,92,121,157,200,248,297,351,414,484,555,630,709,795,885,980,1081,1187,1297,1414 ★ Coordination sequence T1 for Zeolite Code ATV. ● a(40 * m + k) = 3920 * m ^ 2 + 196 * k * m + one of 40 numbers depending on k, 0<=k<40 (_ N. J. A. Sloane _). ●

▶ [A088003] 1,4,11,22,40,64,98,140,195,260,341,434,546,672,820,984,1173,1380,1615,1870,2156,2464,2806,3172,3575 ★ Take the list t(n,0) = { 1,...,n } ; denote by t(n,j) this list after rotating to left (or right) by j positions. Calculate inner p

roduct of t(n,0) and t(n,j) and denote the value by s(n,j). Compute this inner p roduct for all j = 1..n and choose the smallest. This is a(n). • a(n) = Min { y; y=t(n, 0) * t(n, x)=s(n, x); for x=1..n } . • a(n) = n * (2 * n * (5 * n + 12) - 3 * (- 1) ^ n + 11) / 48. • a(n) = Sum _{ i=0..floor(n / 2) } (n - i) * (n - 2 * i). For n=7, a(7) = 7 * 7 + 6 * 5 + 5 * 3 + 4 * 1 = 98. - _ Bruno Berselli _ , Oct 26 2015 •

▶ [A259574] 0,1,4,11,22,42,66,104,150,211,280,377,474,604,750,916,1096,1323,1548,1831,2122,2446,2794,3212,3620 ⋆ Sum of numbers in the n - th antidiagonal o f the reciprocity array of 0. • a(n) = Sum { m=1..n, Sum(k=0..m - 1, floor(n * k / m)). •

▶ [A008249] 1,4,11,22,42,67,97,133,176,223,277,335,400,471,547,627,716,809,907,1011,1122,1237,1359,1485,1618 ⋆ Coordination sequence T1 for Banalsite. • a(12 * m + k) = 408 * m ^ 2 + 68 * k * m + one of 12 numbers depending on k, 0<=k<12. - _ N. J. A. Sloane _ •

▶ [A174405] 1,4,11,22,43,64,107,150,211,274,385,462,619,748,895,1066,1339,1522,1865,2096,2397,2730,3237,3538,4059 ⋆ Partial sums of Sum _{ k=1..n } n / g cd(n,k), or partial sums of Sum _{ d|n } d * phi(d) (see A057660). • a(n) = Su m _{ k=1..n } k * phi(k) * floor(n / k), where phi(k) is the Euler totient functi on. - _ Daniel Suteu _ , May 30 2018 •

▶ [A298790] 1,4,11,23,36,53,77,100,127,163,196,233,281,324,371,431,484,541,613,676,743,827,900,977,1073 ⋆ Partial sums of A298788. • a(n) = a(n - 1) + 2 * a (n - 3) - 2 * a(n - 4) - a(n - 6) + a(n - 7) for n>6. •

▶ [A298023] 1,4,11,23,40,63,91,124,161,203,250,301,357,418,483,553,628,707,791,880,973,1071,1174,1281,1393 ⋆ Partial sums of A298022. • a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) - 2 * a(n - 4) + a(n - 5) for n>5. •

▶ [A027378] 1,4,11,23,41,66,99,141,193,256,331,419,521,638,771,921,1089,1276,1483,1711,1961,2234,2531,2853,3201 ⋆ Expansion of (1 + x ^ 2 - x ^ 3) / (1 - x) ^ 4. • a(n) = binomial(n + 4, 3) - 3 * (n + 1). - _ Milan Janjic _ , Dec 28 2007 [Correction by _ Mathew Englander _ , Feb 03 2022] •

▶ [A092498] 1,4,11,23,41,67,102,147,204,274,358,458,575,710,865,1041,1239,1461,1708,1981,2282,2612,2972,3364,3789 ⋆ Expansion of g.f. (1 + x + 2 * x ^ 2) / ((1 - x) ^ 3 * (1 - x ^ 3)). • a(n) = (4 * n ^ 3 + 21 * n ^ 2 + 35 * n + 18 - 6 * f loor((n + 2) / 3)) / 18. - _ Luce ETIENNE _ , Apr 18 2014 • a(n) = Sum _{ j=0..floor(2 * n / 3) } ((4 * n + 5 - 6 * j - (- 1) ^ j) / 4) * ((4 * n + 3 - 6 * j + (- 1) ^ j) / 4). - _ Luce ETIENNE _ , Oct 28 2014 •

▶ [A019298] 0,1,4,11,23,42,69,106,154,215,290,381,489,616,763,932,1124,1341,1584,1855,2155,2486,2849,3246,3678 ⋆ Number of balls in pyramid with base eithe r a regular hexagon or a hexagon with alternate sides differing by 1 (balls in he xagonal pyramid of height n taken from hexagonal close - packing). • a(n) = flo or((n ^ 2 + 1)(2n + 3) / 8). • a(n) = floor((2n ^ 3 + 3n ^ 2 + 2n) / 8); also ne arest integer to ((n + 1) ^ 4 - n ^ 4) / 16. • a(n) = (4n ^ 3 + 6n ^ 2 + 4n + 1 - (- 1) ^ n) / 16. - Wesley Petty (Wesley.Petty(AT)mail.tamucc.edu), Mar 06 2004 • a(n) = Sum _{ i=1..n } i ^ 2 - floor(i ^ 2 / 4) = Sum _{ i=1..n } i * (2 n - 2i + 1 - floor((n - i + 1) / 2)). - _ Wesley Ivan Hurt _ , Jan 23 2014 • a(2 * n) = (1 / 2) * (n * (n + 1) ^ 3 - (n - 1) * n ^ 3); a(2 * n - 1) = (1 / 2) * ((n + 1) * n ^ 3 - n * (n - 1) ^ 3) (note: replacing the exponent 3 with 2 through out gives the sequence of generalized pentagonal numbers A001318). - _ Peter Bala _ , Aug 11 2021 •

▶ [A002537] 1,1,4,11,23,79,148,533,977,3553,6484,23627,43079,157039,286276,1043669,1902497,6936001,12643492,46094987,84025463,306335887,558412276,2035832213,3711069041 ⋆ a(2n) = a(2n - 1) + 3a(2n - 2), a(2n + 1) = 2a(2n) + 3a(2n - 1). • a(n)=8a(n - 2) - 9a(n - 4). - Mario Catalani (mario.catalani(AT)unito.it) , Apr 24 2003 • a(n + 1) = x ^ n + (- 1) ^ n * (x - 2) ^ n where x = (1 + sqrt(7)) and the term is divided by 2 for a(2) and a(3), 4 for a(4) and a(5)... 2 ^ n fo r a(2n) and a(2n + 1). - _ Ben Paul Thurston _ , Aug 30 2006 •

▶ [A008259] 1,4,11,24,41,62,90,122,157,200,247,296,354,416,479,552,629,706,794,886,977,1080,1187,1292,1410 ⋆ Coordination sequence T2 for Moganite, also fo r BGB1. • a(3m) = 22m ^ 2 + 2, a(3m + 1) = 22m ^ 2 + 15m + 4, a(3m + 2) =22m ^ 2 + 29m + 11. - _ N. J. A. Sloane _ •

▶ [A008250] 1,4,11,24,42,65,97,135,176,221,277,337,400,469,547,629,716,807,907,1013,1122,1235,1359,1487,1618 ⋆ Coordination sequence T2 for Banalsite. • a(12 * m + k) = 408 * m ^ 2 + 68 * k * m + one of 12 numbers depending on k, 0<=k<12. - _ N. J. A. Sloane _ •

▶ [A306262] 0,0,0,4,11,24,42,68,101,144,196,260,335,424,526,644,777,928,1096,1284,1491,1720,1970,2244,2541 ⋆ Difference between maximum and minimum sum of products of successive pairs in permutations of [n]. • a(n + 1) = a(n) + 1 / 4 * ((- 1 + (- 1) ^ (n - 1)) ^ 2 + 2 * (n - 1) * (n + 4)) with a(n) = 0 for n <= 2. • a(n) = (2 * n ^ 3 + 6 * n ^ 2 - 26 * n + 15 - 3 * (- 1) ^ n) / 12 for n > 0. • a(n) = 3 * a(n - 1) - 2 * a(n - 2) - 2 * a(n - 3) + 3 * a(n - 4) - a(n - 5). - _ Wesl ey Ivan Hurt _ , May 28 2021 •

▶ [A006527] 0,1,4,11,24,45,76,119,176,249,340,451,584,741,924,1135,1376,1649,1956,2299,2680,3101,3564,4071,4624 ⋆ a(n) = (n ^ 3 + 2 * n) / 3. • a(0)=0, a(1) =1, a(2)=4, a(3)=11; for n > 3, a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Harvey P. Dale _ , Jun 13 2011 • a(n) = 2 * binomial(n + 1, 3) + binomial(n, 1). • a(n) = binomial(n + 2, 3) + binomial(n, 3). - _ Thomas Or dowski _ , Jun 15 2014 • a(n) = 1 * C(n,1) + 2 * C(n,2) + 2 * C(n,3), where t he coefficient of C(n,k) is the number of oriented triangle colorings using exactl y k colors. •

▶ [A167875] 1,4,11,24,45,76,119,176,249,340,451,584,741,924,1135,1376,1649,1956,2299,2680,3101,3564,4071,4624,5225 ⋆ One third of product plus sum of three consecutive nonnegative integers; a(n)=(n + 1)(n ^ 2 + 2n + 3) / 3. • a(n) = (n ^ 3 + 3 * n ^ 2 + 5 * n + 3) / 3. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + 2 for n > 3; a(0)=1, a(1)=4, a(2)=11, a(3)=24. • a(n) - 4 * a(n - 1) + 6 * a(n - 2) - 4 * a(n - 3) + a(n - 4)=0 for n>3. - _ Bruno Berselli _ , May 26 2010 •

▶ [A001752] 1,4,11,24,46,80,130,200,295,420,581,784,1036,1344,1716,2160,2685,3300,4015,4840,5786,6864,8086,9464,11011 ⋆ Expansion of 1 / ((1 + x) * (1 - x) ^ 5). • a(n) = floor(((n + 3) ^ 2 - 1) * ((n + 3) ^ 2 - 3) / 48). • a(n) = Sum _{ k=0..n } (- 1) ^ (n - k) * C(k + 4, 4). - _ Paul Barry _ , Jul 01 2003 • a(n) = (3 * (- 1) ^ n + 93 + 168 * n + 100 * n ^ 2 + 24 * n ^ 3 + 2 * n ^ 4) / 96. - C ecilia Rossiter (cecilia(AT)noticingnumbers.net), Dec 14 2004 • a(n) = Sum _{ k=0..floor(n / 2) } binomial(n - 2k + 3, 3). • a(n) = Sum _{ k=0..n } binomia l(k + 3, 3) * (1 - (- 1) ^ (n + k - 1)) / 2. (End) • a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 5 * (n - 4) - 4 * a(n - 5) + a(n - 6). •

▶ [A143075] 1,4,11,24,47,86,152,262,444,742,1228,2018,3301,5382,8755,14218,23063,37380,60552,98052,158736,256932,415824,672924,1088929 ⋆ Polynomial expan sion sequence: p(x)=1 / (1 - 4x + 5x ^ 2 - 6x ^ 4 + 6x ^ 5 - x ^ 6 - 2x ^ 7 + x ^ 8). • a(n) = expansion(1 / (1 - 4x + 5x ^ 2 - 6x ^ 4 + 6x ^ 5 - x ^ 6 - 2x ^ 7 + x ^ 8)) •

▶ [A290707] 1,4,11,24,47,88,163,304,575,1104,2147,4216,8335,16552,32963,65760,131327,262432,524611,1048936,2097551,4194744,8389091,16777744,33555007 ⋆ a(n) = 2 ^ (n + 1) + n ^ 2 - 1. • a(n) = 2 ^ (n + 1) + n ^ 2 - 1. • a(n) = 5 * a (n - 1) - 9 * a(n - 2) + 7 * a(n - 3) - 2 * a(n - 4). •

▶ [A159350] 1,1,1,4,11,24,54,127,297,689,1600,3721,8652,20112,46753,108689,252673,587392,1365519,3174448,7379698,17155715,39882197,92714861,215535904 ⋆ Transform of A056594 by the T _{ 0,0 } transformation (see link). • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + 4 * a(n - 3) - 2 * a(n - 4) + a(n - 5) for n >= 5, with a(0)=1, a(1)=1, a(2)=1, a(3)=4, a(4)=11. •

▶ [A159348] 1,1,1,4,11,24,55,128,298,693,1611,3745,8706,20239,47050,109378,254273,591113,1374171,3194560,7426451,17264404,40134870,93302253,216901423 ⋆ Transform of the finite sequence (1, 0, - 1, 0, 1) by the T _{ 0,0 } transform (s ee link). • a(n) = 3 * a(n - 1) - 2 * a(n - 2) + a(n - 3) for n>=7, with a(0)=1, a (1)=1, a(2)=1, a(3)=4, a(4)=11, a(5)=24, a(6)=55. •

▶ [A159349] 1,1,1,4,11,24,56,129,300,698,1623,3773,8771,20390,47401,110194,256170,595523,1384423,3218393,7481856,17393205,40434296,93998334,218519615 ⋆ Transform of the finite sequence (1, 0, - 1, 0, 1, 0, - 1) by the T _{ 0,0 } transf ormation (see link). • a(n) = 3 * a(n - 1) - 2 * a(n - 2) + a(n - 3) for n>=9, wit h a(0)=1, a(1)=1, a(2)=1, a(3)=4, a(4)=11, a(5)=24, a(6)=56, a(7)=129, a(8)= 300. •

▶ [A110610] 1,4,11,25,48,82,129,191,270,368,487,629,796,990,1213,1467,1754,2076,2435,2833,3272,3754,4281,4855,5478 ⋆ Maximal value of sum(p(i)p(i + 1),i=1. .n), where p(n + 1)=p(1), as p ranges over all permutations of { 1,2,...,n } . • a(1)=1; a(n)=(2n ^ 3 + 3n ^ 2 - 11n + 18) / 6 for n>=2. •

▶ [A051462] 1,4,11,25,48,83,133,200,287,397,532,695,889,1116,1379,1681,2024,2411,2845,3328,3863,4453,5100,5807,6577 ⋆ Molien series for group G _{ 1,2 }^{ 8 } of order 1536. • a(n) = 1 + n + 2n ^ 2 + 3[(n + 2)((n - 1) ^ 2) / 18] + 2[(n + 1)((n - 2) ^ 2) / 18] + 3[n((n - 3) ^ 2) / 18] (where [..] denotes the floor funct ion). - _ John W. Layman _ , Nov 22 2000 • a(0)=1, a(1)=4, a(2)=11, a(3)=2 5, a(4)=48, a(5)=83, a(n)=3 * a(n - 1) - 3 * a(n - 2) + 2 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) - a(n - 6). - _ Harvey P. Dale _ , Jun 06 2011 • a(n) = (1 + 2 * (2 * n + 1) * (n ^ 2 + n + 4) - (n mod 3)) / 9. - _ Stefano Spezia _ , May 02 2 022 •

▶ [A006004] 1,4,11,25,49,86,139,211,305,424,571,749,961,1210,1499,1831,2209,2636,3115,3649,4241,4894,5611,6395,7249 ⋆ a(n) = C(n + 2,3) + C(n,3) + C(n - 1, 3). • a(n) = (n ^ 3 - 2n ^ 2 + 5n - 2) / 2. • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4), with a(0)=1, a(1)=4, a(2)=11, a(3)=25. - _ Harvey P. D ale _ , Jun 15 2011 •

▶ [A215052] 1,4,11,25,50,92,158,257,400,600,873,1237,1713,2325,3100,4069,5266,6729,8500,10625,13155,16145,19655,23750,28500 ⋆ a(n) = (binomial(n,5) - floo r(n / 5)) / 5. • a(n) = (1 / 5) *{ binomial(n,5) - floor(n / 5) } . •

▶ [A193912] 1,4,11,25,50,93,162,272,439,694,1069,1627,2432,3611,5292,7730,11181,16156,23167,33237,47390,67673,96134,136868,193971 ⋆ Partial sums of A19391 1. • a(n) = Sum _{ i=1..n } 1 / 8 * (2 ^ (i / 2 + 2) * ((10 - 7 * sqrt(2)) * (- 1) ^ (i) + 10 + 7 * sqrt(2)) - (- 1) ^ (i) - 2 * i * (i + 12) - 79). • a(n) = (1 / 32) * ((- 1 / 2) ^ n + 32 * (41 * sqrt(2) - 58) * (sqrt(2) - 2) ^ n - 32 * (58 + 41 * s qrt(2)) * (- 2 - sqrt(2)) ^ n). •

▶ [A014162] 0,1,4,11,25,51,97,176,309,530,894,1490,2462,4043,6610,10773,17519,28445,46135,74770,121115,196116,317484,513876,831660 ⋆ Apply partial sum o perator thrice to Fibonacci numbers. • a(n - 2) = Sum _{ k=0..floor(n / 2) } b inomial(n - k, k + 3). • a(n - 2) = Sum _{ k=0..n } binomial(k, n - k + 3). (En d) • a(n) = Fibonacci(n + 6) - (n ^ 2 + 7 * n + 16) / 2. • a(n) = Sum _{ k=1.. n } binomial(n - k + 3,k + 2), with n>=0. - _ Paolo P. Lava _ , Apr 16 2008 •

▶ [A113684] 0,1,4,11,25,52,102,193,356,645,1153,2040,3580,6241,10820,18671,32089,54956,93826,159745,271300,459721,777409,1312176,2211000 ⋆ Expansion of x (1 - x ^ 2 - x ^ 3) / ((1 - x)(1 - x - x ^ 2)) ^ 2. • a(n)=4a(n - 1) - 4a(n - 2) - 2a(n - 3) + 4a(n - 4) - a(n - 6); a(n)=sum { k=0..n, (n - k) * C(n - k, k + 1) } ; a(n)=n * (F(n + 2) - 1) - (1 + ((n - 5) * F(n - 1) + (3n - 8) * F(n)) / 5). •

▶ [A356619] 0,1,4,11,25,52,103,198,374,699,1298,2401,4431,8166,15037,27676,50924,93685,172336,316999,583077,1072472,1972611,3628226,6673378 ⋆ a(n) = num ber of k - tuples (u(1), u(2), ..., u(k)) with 1 <= u(1) < u(2) < ... < u(k) <= n such that u(i) - u(i - 1) <= 3 for i = 2,...,k. • a(n) = 3 * a(n - 1) - 2 * a(n - 2) - a(n - 4) + a(n - 5). •

▶ [A266337] 1,4,11,25,52,104,204,397,769,1486,2868,5532,10667,20565,39644,76420,147308,283949,547333,1055022,2033624,3919940,7555931,14564529,28074036 ⋆ Expansion of b(3) * b(4) / (1 - 2 * x + x ^ 5), where b(k) = (1 - x ^ k) / (1 - x). • a(n) = 2 * a(n - 1) - a(n - 5) for n>5. •

▶ [A156127] 4,11,25,53,109,221,445,893,1789,3581,7165,14333,28669,57341,114685,229373,458749,917501,1835005,3670013,7340029,14680061,29360125,58720253,117440509 ⋆ a(n) = 7 * 2 ^ n - 3. • a(n) = 2 * a(n - 1) + 3 with n > 0, a(0)= 4. •

▶ [A178742] 0,0,0,0,1,4,11,25,53,109,222,449,904,1814,3634,7274,14555,29118,58245,116499,233007,466023,932056,1864123,3728258 ⋆ Partial sums of floor(2 ^ n / 9). • a(n) = round((8 * 2 ^ n - 18 * n - 9) / 36). • a(n) = floor((4 * 2 ^ n - 9 * n + 2) / 18). • a(n) = ceiling((4 * 2 ^ n - 9 * n - 11) / 18). • a(n) = round((4 * 2 ^ n - 9 * n - 4) / 18). • a(n) = a(n - 6) + 7 * 2 ^ (n - 5) - 3, n > 5. • a(n) = 4 * a(n - 1) - 5 * a(n - 2) + a(n - 3) + 4 * a(n - 4) - 5 * a(n - 5) + 2 * a(n - 6). •

▶ [A109414] 1,4,11,26,54,90,151,232,326,456,612,811,1030,1304,1607,1953,2383,2812,3329,3893,4515,5226,5983,6809,7703 ⋆ a(n) equals the (n * (n + 1) / 2) - th partial sum of the self - convolution cube of A010054, which has the g.f.: Sum _{ k>=0 } x ^ (k * (k + 1) / 2). • a(n) = [x ^ (n * (n + 1) / 2)] [Sum _{ k> =0 } x ^ (k * (k + 1) / 2)] ^ 3 / (1 - x). •

► [A027966] 1,4,11,26,54,101,174,281,431,634,901,1244,1676,2211,2864,3651,4589,5696,6991,8494,10226,12209,14466,17021,19899 ⋆ T(n, 2 * n - 4), T given by A027960. ● a(n) = (n ^ 4 + 2 * n ^ 3 - 25 * n ^ 2 + 94 * n - 96) / 24. ●

► [A141534] 1,4,11,26,55,105,184,301,466,690,985,1364,1841,2431,3150,4015,5044,6256,7671,9310,11195,13349,15796,18561,21670 ⋆ Derived from the centered polygonal numbers: start with the first triangular number, then the sum of the first square number and the second triangular number, then the sum of first pentagonal number, the second square number and the third triangular number, and so on and so on... ● a(n) = (n - 1) * (n ^ 3 + 11 * n ^ 2 - 38 * n + 120) / 24, n>1. - _ R. J. Mathar _ , Sep 12 2008 ●

► [A192961] 0,1,4,11,26,55,108,201,360,627,1070,1799,2992,4937,8100,13235,21562,35055,56908,92289,149560,242251,392254,634991,1027776 ⋆ Coefficient of x in the reduction by x ^ 2 - > x + 1 of the polynomial p(n,x) defined at Comments. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - a(n - 3) + a(n - 4). ● a(n) = 2 * Fibonacci(n + 5) - (n ^ 2 + 4 * n + 10). - _ G. C. Greubel _ , Jul 12 2019 ●

► [A027660] 1,4,11,26,56,112,210,372,627,1012,1573,2366,3458,4928,6868,9384,12597,16644,21679,27874,35420,44528,55430,68380,83655 ⋆ a(n) = C(n + 2, 2) + C(n + 2, 3) + C(n + 2, 4) + C(n + 2, 5). ● a(n) = (n + 3) * (n + 2) * (n + 1) * (n ^ 2 - n + 20) / 120. ● a(n) = binomial(n + 3,5) + binomial(n + 3,3). - _ Zerinvary Lajos _ , Jul 24 2006, corrected Oct 01 2021 ● a(n) = Sum _{ j=0..3 } binomial(n + 2, j + 2). ●

► [A002940] 1,4,11,26,56,114,223,424,789,1444,2608,4660,8253,14508,25343,44030,76136,131110,224955,384720,656041,1115784,1893216,3205416,5416441 ⋆ Arrays of dumbbells. ● a(n) = Sum _{ k=0..n } (Sum _{ i=0..n } k * C(k, i - k)). - _ Paul Barry _ , Feb 16 2005 ●

► [A356620] 0,1,4,11,26,56,115,230,453,884,1716,3321,6416,12383,23886,46060,88803,171194,330009,636136,1226216,2363633,4556076,8782147,16928162 ⋆ a(n) = number of k - tuples (u(1), u(2), ..., u(k)) with 1 <= u(1) < u(2) < ... < u(k) <= n such that u(i) - u(i - 1) <= 4 for i = 2,...,k. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - a(n - 5) + a(n - 6). ●

► [A248425] 0,0,0,0,1,4,11,26,57,118,235,454,857,1588,2899,5228,9333,16520,29031,50702,88077,152290,262239,449930,769461 ⋆ Number of "squares" (repeated identical blocks) in the n - th Fibonacci word. ● a(n) = (4 / 5)nF(n + 1) - (2 / 5)(n + 6)F(n) - 4F(n - 1) + n + 1 (for n >= 3). ●

► [A356621] 0,1,4,11,26,57,119,242,485,964,1907,3762,7410,14583,28686,56413,110924,218091,428777,842976,1657271,3258134,6405349,12592612,24756452 ⋆ a(n) = number of k - tuples (u(1), u(2), ..., u(k)) with 1 <= u(1) < u(2) < ... < u(k) <= n such that u(i) - u(i - 1) <= 5 for i = 2,...,k. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - a(n - 6) + a(n - 7). ●

► [A000295] 0,0,1,4,11,26,57,120,247,502,1013,2036,4083,8178,16369,32752,65519,131054,262125,524268,1048555,2097130,4194281,8388584,16777191 ⋆ Eulerian numbers (Euler's triangle: column k=2 of A008292, column k=1 of A173018). ● a(n) = 2 ^ n - n - 1. ● a(0)=0, a(1)=0, a(n) = 3 * a(n - 1) - 2 * a(n - 2) + 1. - _ Miklos Kristof _ , Mar 09 2005 ● a(0)=0, a(n) = 2 * a(n - 1) + n - 1 for all n in Z. ● a(n) = Sum _{ k=2..n } binomial(n, k). - _ Paul Barry _ , Jun 05 2003 ● a(n + 1) = Sum _{ i=1..n } Sum _{ j=1..i } C(i, j). - _ Benoit Cloitre _ , Sep 07 2003 ● a(n + 1) = 2 ^ n * Sum _{ k=0..n } k / 2 ^ k. - _ Benoit Cloitre _ , Oct 26 2003 ●

► [A130103] 0,1,1,4,11,26,57,120,247,502,1013,2036,4083,8178,16369,32752,65519,131054,262125,524268,1048555,2097130,4194281,8388584,16777191 ⋆ Expansion of e.g.f. e ^ (2x) - (1 + x) * e ^ x + x. ● a(n) = 2 ^ n - n - 1 + C(1,n) - C(0,n). ●

► [A125128] 1,4,11,26,57,120,247,502,1013,2036,4083,8178,16369,32752,65519,131054,262125,524268,1048555,2097130,4194281,8388584,16777191,33554406,67108837 ⋆ a(n) = 2 ^ (n + 1) - n - 2, or partial sums of main diagonal of array A125127 of k - step Lucas numbers. ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 2 * a(n - 3). ●

► [A373358] 0,0,1,4,11,26,59,136,323,782,1903,4620,11175,26970,65051,156944,378811,914566,2208199,5331476,12871663,31074802,75020243,181113240,437244675 ⋆ a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 2 * a(n - 3) + 2 * a(n - 4) for a(0) = a(1) = 0, a(2) = 1, a(3) = 4 for n >= 4. ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 2 * a(n - 3) + 2 * a(n - 4) for n >= 4. ● a(n) = (- i * sqrt(2) * (1 - i) ^ (n + 1) + i * sqrt(2) * (1 + i) ^ (n + 1) - (1 - sqrt(2)) ^ (n + 1) + (1 + sqrt(2)) ^ (n + 1)) / (6 * sqrt(2)). ● a(n) = 2 ^ n * (hypergeom([1 / 2 - n / 2, - n / 2], [- n], - 1) - hypergeom([1 / 2 - n / 2, - n / 2], [- n], 2)) / 3. (End) ●

► [A268775] 4,11,26,65,148,343,766,1709,3752,8195,17746,38233,81916,174767,371366,786437,1660240,3495259,7340026,15379121,32156324,67108871,139810126,290805085,603979768 ⋆ Number of n X 2 binary arrays with some element plus some horizontally, vertically, diagonally or antidiagonally adjacent neighbor totalling two no more than once. ● a(n) = ((- 1) ^ (1 + n) + 2 ^ (2 + n) + ((- 1) ^ n + 2 ^ (1 + n)) * n) / 3. ●

► [A192965] 0,1,1,4,11,27,58,115,215,386,673,1149,1932,3213,5301,8696,14207,23143,37622,61071,99035,160486,259941,420889,681336 ⋆ Coefficient of x in the reduction by x ^ 2 - > x + 1 of the polynomial p(n,x) defined at Comments. ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + a(n - 3) + 2 * a(n - 4) - a(n - 5). ● a(n) = Fibonacci(n + 4) + 3 * Fibonacci(n + 2) - (n ^ 2 + 3 * n + 6). - _ G. C. Greubel _ , Jul 11 2019 ●

► [A160399] 1,4,11,27,62,137,296,630,1326,2768,5744,11867,24429,50135,102627,209641,427518,870579,1770536,3596614,7298397,14796658,29974913,60681233,122767148 ⋆ a(n) = Sum _{ k=1..n } binomial(n,k) * d(k), where d(k) = the number of positive divisors of k. ● a(n) = 2 ^ n * (log(n) + 2 * gamma - log(2)) + O(2 ^ n * n ^ (- 1 / 4)). [Put alpha _ n = beta _ n = 1 / 2 in Thm. 4.2 of Schmidt.] - _ Eric M. Schmidt _ , Feb 03 2018 ● a(n) = Sum _{ i=1..n } Sum _{ j=1..n } binomial(n,i * j). - _ Ridouane Oudra _ , Nov 12 2019 ●

► [A047859] 1,4,11,27,63,143,319,703,1535,3327,7167,15359,32767,69631,147455,311295,655359,1376255,2883583,6029311,12582911,26214399,54525951,113246207,234881023 ⋆ a(n) = T(2, n), where T is the array given by A047858. ● a(0) = 1, a(1) = 4, a(2) = 11, a(n) = 5 * a(n - 1) - 8 * a(n - 2) + 4 * a(n - 3). - _ Vincenzo Librandi _ , Sep 28 2011 ●

► [A100335] 0,1,4,11,27,64,149,341,768,1707,3755,8192,17749,38229,81920,174763,371371,786432,1660245,3495253,7340032,15379115,32156331,67108864,139810133 ⋆ An inverse Catalan transform of J(2n). ● a(n) = 5 * a(n - 1) - 9 * a(n - 2) + 8 * a(n - 3) - 4 * a(n - 4). ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n - k, k) * (- 1) ^ k * (4 ^ (n - k) - 1) / 3. ●

► [A340228] 4,11,27,64,149,342,775,1736,3849,8458,18443,39948,86029,184334,393231,835600,1769489,3735570,7864339,16515092,34603029,72351766,150994967,314572824,654311449 ⋆ a(n) is the sum of the lengths of all the segments used to draw a rectangle of height 2 ^ (n - 1) and width n divided into 2 ^ (n - 1) rectangles of unit height, in turn, divided into rectangles of unit height and lengths corresponding to the parts of the compositions of n. ● a(n) = 6 * a(n - 1) - 13 * a(n - 2) + 12 * a(n - 3) - 4 * a(n - 4) for n > 4. ● a(n) = n + 3 * (n + 1) * 2 ^ (n - 2). ●

► [A080869] 1,4,11,27,64,149,345,797,1839,4242,9782,22554,52001,119892,276417,637290,1469294,3387506,7810005,18006217,41513909,95711641,220666238,508753041,1172946341 ⋆ a(n + 1) = floor((a(n) + 1) ^ (1 + 1 / n)), with a(1) = 1. ● a(n) = floor(t ^ n) - 1, where t = 2.30553184793480801944987312451742393976098898... ●

► [A137229] 1,4,11,27,64,150,350,815,1896,4409,10251,23832,55404,128800,299425,696080,1618191,3761839,8745216,20330162,47261894,109870575,255418100,593775045,1380359511 ⋆ Expansion of g.f. x / ((1 - x) * (1 - 3 * x + 2 * x ^ 2 - x ^ 3)). ● a(n) = term (4,1) in the 4x4 matrix [3,1,0,0; - 2,0,1,0; 1,0,0,0; 1,0,0,1] ^ (n). - _ Alois P. Heinz _ , Jul 24 2008 ●

► [A108985] 1,4,11,27,66,161,389,940,2271,5483,13238,31961,77161,186284,449731,1085747,2621226,6328201,15277629,36883460,89044551,214972563,518989678,1252951921,3024893521 ⋆ Expansion of (x + 1) * (x ^ 3 - x ^ 2 - x - 1) / ((1 - x) * (x ^ 2 + 2 * x - 1) * (x ^ 2 + x + 1)). ● a(n) = 2 * a(n - 1) + a(n - 2) + a(n - 3) - 2 * a(n - 4) - a(n - 5) for n>4. - _ Colin Barker _ , May 06 2019 ●

► [A239031] 4,11,28,59,110,189,306,473,704,1015,1424,1951,2618,3449,4470,5709,7196,8963,11044,13475,16294,19541,23258,27489,32280 ⋆ Number of 4 X n 0..2 arrays with no element equal to the sum of elements to its left or one plus the sum of the elements above it, modulo 3. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

► [A003230] 1,4,11,28,67,152,335,724,1539,3232,6727,13900,28555,58392,118959,241604,489459,989520,1997015,4024508,8100699,16289032,32726655,65705268,131837763 ⋆ Expansion of 1 / ((1 - x) * (1 - 2 * x) * (1 - x - 2 * x ^ 3)). ● a(n + 3) = a(n + 2) + 2 * a(n) + 2 ^ (n + 4) - 1, with a(- 3)=a(- 2)=a(- 1)=0. - _ Manfred Lindemann _ , Nov 11 2015 ● a(n) = q(n) + q(n - 1) + 2 * Sum _{ i=0..n - 2 } (q(i)), where q(i)=A003477 and q(- 1)=0. - _ Manfred Lindemann _ , Dec 08 2015 ● a(n) = (1 / 2) * (AR * ROR ^- (n + 4) + AC * ROC ^- (n + 4) + conjugate(AC * ROC ^- (n + 4)) + 1 * (1 / 2) ^- (n + 4) + 1 * 1 ^- (n + 4)). ●

► [A099326] 1,4,11,28,67,156,354,792,1747,3820,8278,17832,38174,81368,172644,365104,769411,1617228,3389838,7090440,14797546,30828424,64106716,133113168,275967022 ⋆ Expansion of ((1 - 2x) * sqrt(1 + 2x) + sqrt(1 - 2x)) / (2 * (1 - 2x) ^ (5 / 2)). ● a(n) = Sum _{ k=0..n } (k + 1) * binomial(n, (n - k) / 2) * binomial(k + 3, 3) * (1 + (- 1) ^ (n - k)) / (n + k + 2). ● a(n) = Sum _{ k=0..n } C(n,k) * (floor((abs(n - 2k) + 1) ^ 2 / 4) + floor((abs(n - 2k + 1) + 1) ^ 2 / 4)). - _ Paul Barry _ , Oct 25 2007 ●

► [A127985] 0,1,4,11,28,67,156,355,796,1763,3868,8419,18204,39139,83740,178403,378652,800995,1689372,3553507,7456540,15612131,32622364,68040931,141674268 ⋆ a(n) = floor(2 ^ n * (n / 3 + 4 / 9)). ● a(n) = (n / 3 + 4 / 9) * 2 ^ n - 1 / 2 + (- 1) ^ n / 18. ● a(1)=1, a(2)=4, a(3)=11, a(4)=28, a(n) = 4 * a(n - 1) - 3 * a(n - 2) - 4 * a(n - 3) + 4 * a(n - 4). - _ Harvey P. Dale _ , May 15 2011 ●

► [A339252] 1,4,11,28,68,160,368,832,1856,4096,8960,19456,41984,90112,192512,409600,868352,1835008,3866624,8126464,17039360,35651584,74448896,155189248,322961408 ⋆ a(0) = 1, a(1) = 4, a(2) = 11, and a(n) = 4 * a(n - 1) - 4 * a(n - 2) for n >= 3. ● a(n) = 2 ^ (n - 2) * (3 * n + 5) for n >= 1. - _ Kevin Ryde _ , Nov 28 2020 ●

► [A005409] 1,1,4,11,28,69,168,407,984,2377,5740,13859,33460,80781,195024,470831,1136688,2744209,6625108,15994427,38613964,93222357,225058680,543339719,1311738120 ⋆ Number of polynomials of height n: a(1)=1, a(2)=1, a(3)=4, a(n) = 2 * a(n - 1) + a(n - 2) + 2 for n >= 4. ● a(n) = ((1 + sqrt(2)) ^ n - (1 - sqrt(2)) ^ n) / (2 * sqrt(2)) - 1 for n > 1, a(1)=1. ● a(n) = 3 * a(n - 1) - a(n - 2) - a(n - 3). - _ Toby Gottfried _ , Mar 08 2013 ●

► [A290890] 0,1,4,11,28,72,188,493,1292,3383,8856,23184,60696,158905,416020,1089155,2851444,7465176,19544084,51167077,133957148,350704367,918155952,2403763488,6293134512 ⋆ p - INVERT of the positive integers, where p(S) = 1 - S ^ 2. ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ●

► [A152689] 0,0,0,1,4,11,28,79,284,1363,8356,61583,523924,5024179,53479148,624890431,7946278828,109195935539,1612048228564,25439293045903,427278358483556,7609502950269523,143217213477235804,2840152418116022399 ⋆ Apply partial sum operator thrice to factorials. ● a(n) = ((n ^ 2 - 3 * n + 1) * !n - (n - 2) * n! + 2 * (n - 1)) / 2. ●

► [A000604] 1,4,11,29,54,99,163,239,344,486,648,847,1069,1355,1680,2046,2446,2911,3443,4022,4662,5395,6145,6998,7913 ⋆ Number of nonnegative solutions to x ^ 2 + y ^ 2 + z ^ 2 <= n ^ 2. ● a(n) = [x ^ (n ^ 2)] (1 + theta _ 3(x)) ^ 3 / (8 * (1 - x)), where theta _ 3() is the Jacobi theta function. - _ Ilya Gutkovskiy _ , Apr 15 2018 ●

► [A109803] 1,4,11,29,72,175,425,1028,2483,5997,14480,34959,84401,203764,491931,1187629,2867192,6922015,16711225,40344468,97400163,235144797,567689760,1370524319,3308738401 ⋆ Expansion of (x ^ 2 + 1) * (x + 1) ^ 2 / ((x - 1) * (x ^ 2 + x + 1) * (x ^ 2 + 2 * x - 1)). ● a(n) = 2 * a(n - 1) + a(n - 2) + a(n - 3) - 2 * a(n - 4) - a(n - 5) for n>4. - _ Colin Barker _ , May 16 2019 ●

► [A027968] 1,4,11,29,73,171,370,743,1397,2482,4201,6821,10685,16225,23976,34591,48857,67712,92263,123805,163841,214103,276574,353511,447469 ⋆ a(n) = T(n, 2 * n - 6), T given by A027960. ● a(n) = (- 7920 + 7548 * n - 3176 * n ^ 2 + 735 * n ^ 3 - 65 * n ^ 4 - 3 * n ^ 5 + n ^ 6) / 720. ●

► [A027970] 1,4,11,29,76,196,487,1148,2552,5353,10636,20120,36425,63415,106630,173821,275603,426242,644593,955207,1389626,1987886,2800249,3889186,53316

34 ⋆ a(n) = T(n, 2 * n - 8), T given by A027960. ● a(n) = (- 1169280 + 111931 2 * n - 517700 * n ^ 2 + 148092 * n ^ 3 - 26551 * n ^ 4 + 2688 * n ^ 5 - 70 * n ^ 6 - 12 * n ^ 7 + n ^ 8) / 40320. - _ Colin Barker _ , Nov 25 2014 ●

▶ [A027972] 1,4,11,29,76,199,518,1324,3278,7784,17643,38138,78753,155793,2962 48,543333,964239,1660748,2783499,4550843,7273394,11385571,17485634,2638594 6,39175444 ⋆ T(n, 2n - 10), T given by A027960. ● a(n) = - 76 + 183941 * n / 2 520 + 386899 * n ^ 3 / 36288 - 1747657 * n ^ 2 / 50400 - 831241 * n ^ 4 / 36288 0 + 11887 * n ^ 5 / 34560 - 5807 * n ^ 6 / 172800 + 41 * n ^ 7 / 24192 + n ^ 8 / 60480 - n ^ 9 / 145152 + n ^ 10 / 3628800. - _ R. J. Mathar _ , Jan 30 2011 ●

▶ [A002878] 1,4,11,29,76,199,521,1364,3571,9349,24476,64079,167761,439204,114 9851,3010349,7881196,20633239,54018521,141422324,370248451,969323029,25377 20636,6643838879,17393796001 ⋆ Bisection of Lucas sequence: a(n) = L(2 * n + 1). ● a(n + 1) = 3 * a(n) - a(n - 1). ● a(n) = phi ^ (2 * n + 1) - phi ^ (- 2 * n - 1), n >= 0. - _ Paolo P. Lava _ , Jan 03 2011 ● a(n) = (- 1) ^ n * Sum _{ k =0..n } (- 5) ^ k * binomial(n + k, n - k). - _ Benoit Cloitre _ , May 09 2004 ● a(n) = Fibonacci(2n) + Fibonacci(2n + 2). (End) ● a(n) = (1 / 2) * (3 / 2 + (1 / 2) * sqrt(5)) ^ n + (1 / 2) * (3 / 2 + (1 / 2) * sqrt(5)) ^ n * sqrt(5) - (1 / 2) * (3 / 2 - (1 / 2) * sqrt(5)) ^ n * sqrt(5) + (1 / 2) * (3 / 2 - (1 / 2) * sqrt(5)) ^ n, with n >= 0. - _ Paolo P. Lava _ , Nov 21 2008 ● a(n) = floor(phi ^ (2n + 1)), where phi is the golden ratio, A001622. - _ Thomas Ordowski _ , Jun 10 2012 ●

▶ [A369844] 0,1,4,11,29,81,235,685,1986,5739,16577,47904,138472,400285,115707 1,3344567,9667590,27944604,80775310,233485250,674901117,1950836005,5638990 526,16299788815,47115369056 ⋆ Number of compositions of 5 * n - 4 into parts 2 and 5. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n + 1 + 3 * k,n - 2 - 2 * k). ● a(n) = 5 * a(n - 1) - 9 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ●

▶ [A351438] 1,1,1,4,11,29,85,281,1003,3764,14811,61327,267153,1219497,580747 3,28763988,147898511,788330533,4349414397,24799271517,145904796179,884577 652276,5519858796807,35415056743815,233393746525705 ⋆ G.f. A(x) satisfies: A (x) = 1 + x + x ^ 2 * A(x / (1 - x)) / (1 - x) ^ 3. ● a(0) = a(1) = 1; a(n) = Su m _{ k=0..n - 2 } binomial(n,k + 2) * a(k). ●

▶ [A224215] 1,4,11,30,66,115,200,302,441,619,829,1085,1395,1771,2200,2666,322 8,3843,4564,5351,6185,7143,8158,9349,10526 ⋆ Number of nonnegative solutions to x ^ 3 + y ^ 3 + z ^ 3 <= n ^ 3. ● a(n) = [x ^ (n ^ 3)] (1 / (1 - x)) * (Sum _{ k>=0 } x ^ (k ^ 3)) ^ 3. - _ Ilya Gutkovskiy _ , Apr 20 2018 ●

▶ [A291238] 4,11,30,79,202,508,1262,3109,7614,18569,45152,109560,265448,6424 63,1553790,3755843,9075302,21923060,52949458,127869209,308767326,74553730 9,1800065788,4346043888,10492781068 ⋆ p - INVERT of (0,1,0,1,0,1,...), where p(S) = (1 - S) ^ 2 (1 - 2 S). ● a(n) = 4 * a(n - 1) - 2 * a(n - 2) - 6 * a(n - 3) + 2 * a(n - 4) + 4 * a(n - 5) + a(n - 6) for n >= 7. ●

▶ [A341104] 1,1,4,11,30,81,217,578,1533,4053,10690,28145,74001,194370,51013 3,1338077,3508194,9194697,24092281,63114914,165317997,432970149,113385459 4,2969117921,7774547745 ⋆ a(n) = [x ^ n] (x - 1) ^ 4 / ((1 - 2 * x) * (x ^ 2 - 3 * x + 1)). ● a(n) = Sum _{ k=0..n } Sum _{ j=0..k } (binomial(n + k - j, 2 * k) - binomial(n + j - 1, 2 * k)) for n >= 1. ● a(n) = 5 * a(n - 1) - 7 * a(n - 2) + 2 * a(n - 3) for n >= 5. ●

▶ [A021006] 4,11,30,82,224,612,1672,4568,12480,34096,93152,254496,695296,189 9584,5189760,14178688,38736896,105831168,289136128,789934592,2158141440,58 96152064,16108587008,44009478144,120236130304 ⋆ Pisot sequence P(4,11), a(0)=4, a(1)=11, a(n + 1) is the nearest integer to a(n) ^ 2 / a(n - 1). Evidently s atisfies a(n) = 2 * a(n - 1) + 2 * a(n - 2). ● a(n) = (7 / 6) * sqrt(3) * ((1 + sqrt (3)) ^ n - (1 - sqrt(3)) ^ n) + 2 * ((1 + sqrt(3)) ^ n + (1 - sqrt(3)) ^ n). [_ Pa olo P. Lava _ , Dec 01 2008] ●

▶ [A090327] 1,4,11,30,83,234,671,1950,5723,16914,50231,149670,446963,133679 4,4002191,11990190,35937803,107747874,323112551,969075510,2906702243,87190 58154,26155077311,78461037630,235374724283 ⋆ Number of rules of a context - free grammar in Chomsky normal form that generates all permutations of n sy mbols. ● a(n) = ceiling[(5 * 3 ^ (n - 2)) / 2 + 2 ^ (n - 1) - 1 / 2] for n > 1. ● a(n) = 6 * a(n - 1) - 11 * a(n - 2) + 6 * a(n - 3) for n >= 5. - _ Robert Israel _ , Jan 15 2015 ●

▶ [A183125] 0,1,4,11,30,83,236,687,2026,6027,18008,53927,161654,484803,145421 2,4362399,13086914,39260411,117780848,353342103,1060025806,3180076851,9540 229916,28620689039,85862066330 ⋆ Magnetic Tower of Hanoi, total number of moves, generated by a certain algorithm, yielding a "forward moving" non - opt imal solution of the [NEUTRAL ; NEUTRAL ; NEUTRAL] pre - colored puzzle . ● a(n) = + 5 * a(n - 1) - 6 * a(n - 2) - 2 * a(n - 3) + 7 * a(n - 4) - 3 * a(n - 5). ● a(n) = 3 * a(n - 1) - 2 * n ^ 2 + 17 * n - 43 ; n even ; n >= 6. ● a(n) = 3 * a (n - 1) - 2 * n ^ 2 + 17 * n - 42 ; n odd ; n >= 5. ● a(n) = S64(n - 1) + S64(n - 2) + S75(n - 3) + 4 * 3 ^ (n - 3) + 2 ; n >= 3. ● a(n) = 0.5 * (197 / 324) * 3 ^ n + n ^ 2 - 5.5 * n + 91 / 8; n even; n >= 4. ● a(n) = 0.5 * (197 / 324) * 3 ^ n + n ^ 2 - 5.5 * n + 93 / 8; n odd; n >= 5. ●

▶ [A183123] 0,1,4,11,30,83,236,691,2050,6123,18336,54971,164870,494563,148363 6,4450851,13352490,40057403,120172136,360516331,1081548910,3244646643,9733 939836,29201819411,87605458130 ⋆ Magnetic Tower of Hanoi, total number of moves, generated by a certain algorithm, yielding a "forward moving" non - opt imal solution of the [NEUTRAL ; NEUTRAL ; NEUTRAL] pre - colored puzzle . ● a(n)= + 4 * a(n - 1) - 2 * a(n - 2) - 4 * a(n - 3) + 3 * a(n - 4) for n>6. ● a(n) = - 5 - (- 1) ^ n / 8 + (67 * 3 ^ (- 3 + n)) / 8 + (5 * n) / 2 for n>2. - _ C olin Barker _ , Sep 18 2014 ●

▶ [A183121] 0,1,4,11,30,85,244,715,2118,6317,18900,56635,169822,509365,152797 2,4583771,13751142,41253229,123759460,371278123,1113834078,3341501909,1002 4505364,30073515691,90220546630 ⋆ Magnetic Tower of Hanoi, total number of moves, generated by a certain algorithm, yielding a "forward moving" non - opt imal solution of the [RED ; NEUTRAL ; NEUTRAL] or [NEUTRAL ; NEUTR AL ; BLUE] pre - colored puzzle. ● a(n) = 3 * a(n - 1) - n ^ 2 + 6 * n - 11; n ev en; n >= 4. ● a(n) = 3 * a(n - 1) - n ^ 2 + 6 * n - 10; n odd; n >= 3. ● a(n) = a(n - 1) + 2 * S75(n - 3) + 5 * 3 ^ (n - 3) + 2; n >= 3 ● a(n) = 0.5 * (23 / 36) * 3 ^ n + 0.5 * n ^ 2 - 1.5 * n + 17 / 8; n even; n >= 2. ● a(n) = 0.5 * (23 / 3 6) * 3 ^ n + 0.5 * n ^ 2 - 1.5 * n + 19 / 8; n odd; n >= 3. ● a(n) = 5 * a(n - 1) - 6 * a(n - 2) - 2 * a(n - 3) + 7 * a(n - 4) - 3 * a(n - 5), for n>5. - _ Vincenzo L ibrandi _ , Dec 04 2018 ●

▶ [A104743] 1,4,11,30,85,248,735,2194,6569,19692,59059,177158,531453,159433 6,4782983,14348922,43046737,129140180,387420507,1162261486,3486784421,1046 0353224,31381059631,94143178850,282429536505 ⋆ Numbers m = n + 3 ^ n suc h that the equation x = 3 ^ (m - x) has solution x = 3 ^ n. ● a(n) = n + 3 ^ n. ● a(n) = 5 * a(n - 1) - 7 * a(n - 2) + 3 * a(n - 3). ●

▶ [A004080] 0,1,4,11,31,83,227,616,1674,4550,12367,33617,91380,248397,67521 4,1835421,4989191,13562027,36865412,100210581,272400600,740461601,20127833 15,5471312310,14872568831 ⋆ Least k such that H(k) >= n, where H(k) is the h armonic number Sum _{ i=1..k } 1 / i. ● a(n) = exp(n - gamma + o(1)). - _ Charles R Greathouse IV _ , Mar 10 2009 ●

▶ [A298300] 1,4,11,31,87,246,699,1996,5723,16468,47533,137567,399073,116008 2,3378483,9855207,28790403,84218052,246651729,723165765,2122391109,6234634 266,18330019029,53932825926,158802303429 ⋆ Analog of Motzkin numbers for C oxeter type D. ● a(n) = hypergeom([(1 - n) / 2,1 - n / 2],[1],4] + (n - 2) * hyper geom([1 - n / 2,3 / 2 - n / 2],[2],4). ● a(n) = G(n - 1,1 - n, - 1 / 2) + G(n - 2,1 - n, - 1 / 2) * (n - 2) / (n - 1) where G(n,a,x) denotes the n - th Gegenbauer poly nomial. (End) ●

▶ [A077995] 1,1,4,11,31,88,249,705,1996,5651,15999,45296,128241,363073,102792 4,2910235,8239391,23327176,66043369,186980481,529374876,1498754083,4243238 399,12013359840,34011950561 ⋆ Expansion of (1 - x) / (1 - 2 * x - 2 * x ^ 2 - x ^ 3). ● a(n) = Sum _{ m=1..n } Sum _{ i=0..n - m } C(m + i - 1,m - 1) * Sum _{ j=0..m } C(j,n - 3 * m + 2 * j - i) * C(m,j) * 2 ^ (n - 3 * m + 2 * j - i), n>0, a(0)=1. - _ Vladimir Kruchinin _ , May 12 2011 ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) + a(n - 3); a(0)=1, a(1)=1, a(2)=4. - _ Harvey P. Dale _ , Sep 11 2013 ●

▶ [A034754] 1,4,11,32,85,260,735,2224,6585,19780,59059,177472,531453,159507 6,4783175,14351168,43046737,129147252,387420507,1162281440,3486785925,1046 0412292,31381059631,94143360944,282429536825 ⋆ Dirichlet convolution of 3 ^ (n - 1) with phi(n). ● a(n) = Sum _{ k=1..n } 3 ^ (n / gcd(n,k) - 1) * phi(gcd(n,k)) / phi(n / gcd(n,k)). - _ Richard L. Ollerton _ , May 06 2021 ●

▶ [A052545] 1,1,4,11,32,92,265,763,2197,6326,18215,52448,151018,434839,125206 9,3605189,10380728,29890115,86065156,247814740,713554105,2054597159,591597 6737,17034376106,49048531159 ⋆ Expansion of (1 - x) ^ 2 / (1 - 3 * x + x ^ 3). ● a(n) = 3 * a(n - 1) - a(n - 3), with a(0)=a(1)=1, a(2)=4. ● a(n) = Sum _{ al pha = RootOf(1 - 3 * x + x ^ 3) } (- 1 / 9 * (- 1 + 2 * alpha ^ 2 - 2 * alpha) * alpha ^ (- 1 - n)). ●

▶ [A183114] 0,1,4,11,32,93,272,807,2404,7185,21516,64483,193352,579909,173949 6,5218143,15653900,46960889,140881444,422642459,1267924528,3803769261,1141 1301184,34233893527,102701665332 ⋆ Magnetic Tower of Hanoi, total number o f moves, optimally solving the [RED ; NEUTRAL ; BLUE] pre - colored puzzle. ● a(N) = a(N - 2) + 2 * a(N - 3) + 8 * 3 ^ (N - 3) + 2 ; N 3 ; S727(0) = 0 ● a (N) = (4 / 11) * 3 ^ N + AS * 1 ^ N + BS * 2 ^ N + CS * 3 ^ N - 1 ● a(n) = 4 * a(n - 1) - 2 * a(n - 2) - 2 * a(n - 3) - 5 * a(n - 4) + 6 * a(n - 5). - _ Vince nzo Librandi _ , Dec 04 2018 ●

▶ [A183119] 0,1,4,11,32,93,276,823,2464,7385,22148,66435,199296,597877,179362 0,5380847,16142528,48427569,145282692,435848059,1307544160,3922632461,1176 7897364,35303692071,105911076192 ⋆ Magnetic Tower of Hanoi, total number o f moves generated by a certain algorithm, yielding a "forward moving" non - op timal solution of the [RED ; NEUTRAL ; BLUE] pre - colored puzzle. ● a(n) = 3 * a(n - 1) - n + 3; n even; n >= 2 ● a(n) = 3 * a(n - 1) - n + 2; n odd; n >= 1 ● a(n) = a(n - 2) + 3 ^ (n - 1) + 1; n >= 2 ● a(n) = 3 ^ (n + 1) / 8 + (n - 1) / 2 + (- 1) ^ n / 8. ●

▶ [A199109] 4,11,32,95,284,851,2552,7655,22964,68891,206672,620015,1860044,5 580131,16740392,50221175,150663524,451990571,1355971712,4067915135,122037 45404,36611236211,109833708632,329501125895,988503377684 ⋆ a(n) = (7 * 3 ^ n + 1) / 2. ● a(n) = 3 * a(n - 1) - 1. ● a(n) = 4 * a(n - 1) - 3 * a(n - 2). ●

▶ [A179905] 1,4,11,33,79,158,279,451,683,984,1363,1829,2391,3058,3839,4743,577 9,6956,8283,9769,11423,13254,15271,17483,19899 ⋆ (1, 4, 7, 10, 13, ...) convolve d with (1, 0, 4, 7, 10, 13, ...); given A016777 = (1, 4, 7, 10, 13, ...). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Vincenzo Librandi _ , Jul 04 2012 ●

▶ [A143787] 1,1,4,11,33,95,278,808,2355,6856,19969,58151,169353,493190,143628 8,4182793,12181260,35474611,103310209,300862991,876181998,2551642760,74309 68523,21640683328,63022629465 ⋆ Number of compositions of n into floor((3 * j) / 2) kinds of j's for all j>=1. ● a(n) = + 2 * a(n - 1) + 3 * a(n - 2) - 1 * a(n - 3). ●

▶ [A180305] 1,1,4,11,34,96,288,833,2456,7175,21054,61633,180674,529220,155080 0,4543446,13312552,39004278,114281748,334837511,981059294,2874447292,84219 86238,24675963950,72299290794 ⋆ G.f.: 1 / (1 + x * d / dx log(eta(x))), where eta(x) is Dedekind's eta(q) function without the q ^ (1 / 24) factor. ● a(n) = S um _{ k=0,n - 1 } sigma(n - k) * a(k) for n>0 with a(0) = 1. ●

▶ [A060925] 1,4,11,34,101,304,911,2734,8201,24604,73811,221434,664301,199290 4,5978711,17936134,53808401,161425204,484275611,1452826834,4358480501,1307 5441504,39226324511,117678973534,353036920601 ⋆ a(n) = 2 * a(n - 1) + 3 * a(n - 2), a(0) = 1, a(1) = 4. ● a(n) = (5 * 3 ^ n - (- 1) ^ n) / 4. ● a(2n) = 3 * a(2n - 1) - 1; a(2n + 1) = 3 * a(2n) + 1. - _ Philippe Deléham _ , Jul 23 2005 ●

▶ [A227329] 4,11,34,104,285,683,1469,2906,5383,9457,15904,25780,40493,61887,9 2339,134870,193271,272245,377566,516256,696781,929267,1225737,1600370,2069 783 ⋆ Number of n X 2 0,1 arrays indicating 2 X 2 subblocks of some larger (n + 1) X 3 binary array having two adjacent 1's and two adjacent 0's, with rows and columns of the latter in lexicographically nondecreasing order. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for x>10. ●

▶ [A135919] 4,11,34,133,566,2488,11056,49323,220373,985176,4405203,1969953 5,88096982,393978082,1761917118,7879521402,35238270419,157590299379,70476 5178272,3151805575994,14095302829230,63036110202947 ⋆ Chromatic number o f stage - n Menger sponge. ● a(n) = floor((7 + sqrt(1 + 48 * (21 * 20 ^ n + 38 * 8 ^ n - 59) / 133)) / 2). ●

► [A052550] 1,1,4,11,35,108,337,1049,3268,10179,31707,98764,307641,958273,2984932,9297787,28961747,90213164,281005665,875306665,2726499332,8492793331,26454265995,82402592652,256676457289 ⋆ Expansion of (1 - 2 * x) / (1 - 3 * x - x ^ 2 + 2 * x ^ 3). ● a(n) = 3 * a(n - 1) + a(n - 2) - 2 * a(n - 3), with a(0)=1, a(1)=1, a(2)=4. ● a(n) = Sum((- 1 / 229) * (- 5 - 74 * alpha + 16 * alpha ^ 2) * alpha ^ (- 1 - n), alpha = RootOf(1 - 3 * z - z ^ 2 + 2 * z ^ 3)). ●

► [A349185] 1,1,4,11,35,111,365,1221,4160,14371,50251,177503,632514,2271027,8208259,29840993,109049568,400352639,1475929092,5461571729,20279092033,75531360153,282123848574,1056539226257,3966214054639 ⋆ G.f. A(x) satisfies: A(x) = (1 - x) / (1 - 2 * x - x ^ 2 - x ^ 2 * A(x)). ● a(0) = a(1) = 1; a(n) = 2 * a(n - 1) + a(n - 2) + Sum _{ k=0..n - 2 } a(k) * a(n - k - 2). ●

► [A339034] 1,1,4,11,35,147,805,5399,42273,375787,3728261,40788255,487539769,6319430483,88272658797,1321745733511,21117967813025,358591883025339,6448525343069653,122424951294889967,2446864618294774281,51354975368171586595,1129258990476358286909 ⋆ Row sums of A339033. ● a(n) = n! - (n - 1)! + Sum _{ k=1..n } (n + 1 - k) * (k - 1)! for n > 0. ●

► [A054577] 0,1,4,11,36,115,381,1287,4420,15396,54264,193154,693373,2507287,9124560,33393355,122821380,453756765,1683107800,6265751310,23402516280,87670790155,329337229104,1240292449350,4681874312509 ⋆ A Catalan - like sequence. ● a(n) = Floor(1 / (n + k) * C(pn, n)), where k=2, p=2. ●

► [A206687] 1,4,11,36,116,376,1216,3936,12736,41216,133376,431616,1396736,4519936,14626816,47333376,153174016,495681536,1604059136,5190844416,16797925376,54359228416,175910158336,569257230336,1842155094016 ⋆ Number of n X 2 0..3 arrays with no element equal to another within two positions in the same row or column, and new values 0..3 introduced in row major order. ● a(n) = ((1 - sqrt(5)) ^ n * (- 5 + 3 * sqrt(5)) + (1 + sqrt(5)) ^ n * (5 + 3 * sqrt(5))) / (16 * sqrt(5)) for n>2. ●

► [A282702] 4,11,37,122,403,1331,4396,14519,47953,158378,523087,1727639,5706004,18845651,62242957,205574522,678966523,2242474091,7406388796,24461640479,80791310233,266835571178,881298023767,2910729642479,9613486951204 ⋆ a(n) = 3 * a(n - 1) + a(n - 2), with a(0)=4, a(1)=11. ● a(n) = (2 ^ (- n) * ((3 - sqrt(13)) ^ n * (- 5 + 2 * sqrt(13)) + (3 + sqrt(13)) ^ n * (5 + 2 * sqrt(13)))) / sqrt(13). - _ Colin Barker _ , Feb 26 2017 ●

► [A355888] 1,4,11,38,159,888,5929,46276,409163,4038086,43954887,522957240,6749978041,93928274284,1401602642411,22324392570758,378011820666759,6780385526758368,128425485935590369,2561327494115859316,53652269665825304363,1177652997443472901166 ⋆ a(n) = Sum _{ k=1..n } k! * floor(n / k). ● a(n) = Sum _{ k=1..n } Sum _{ d|k } d!. ●

► [A106269] 1,1,4,11,39,137,501,1853,6936,26163,99314,378879,1451392,5579179,21509692,83137939,322049887,1249941049,4859617537,18922572949,73782881947,288051510169,1125832363807,4404766873969,17249634205357 ⋆ Expansion of 1 / ((1 - x ^ 2) * (2 - c(x))), where c(x) is the g.f. of A000108. ● a(n) = (- 1) ^ n * Sum { k = 0..floor(n / 2) } binomial(2 * k - n, n - 2 * k). ●

► [A366695] 1,4,11,39,166,765,3716,18725,96956,512690,2756806,15027651,82853678,461215414,2588619402,14632777719,83232244238,476040155118,27360059623 14,157938632917 92,915308814279 64,532343678619778,3106141476531628,18177446846299299 ⋆ G.f. satisfies A(x) = (1 + x) ^ 3 + x * A(x) ^ 2. ● a(n) = Sum _{ k=0..n } binomial(3 * (k + 1),n - k) * binomial(2 * k,k) / (k + 1). ●

► [A243760] 0,1,1,4,11,40,138,512,1903,7256,27910,108704,426702,1688080,6719252,26895360,108171319,436935544,1771673454,7208637920,29422782282,120436341360,494277785356,2033457590656,8384379887334 ⋆ Expansion of (sqrt(8 * x + 4 * sqrt(1 - 4 * x) - 3) - 1) / (2 * sqrt(1 - 4 * x) - 2). ● a(n) = Sum _{ k=0..(n - 1) / 2 } 2 ^ k * binomial(2 * k + 1,k) * binomial(2 * n - 2 * k - 2,n - 1)) / n, n >0, a(0)=0. ●

► [A077236] 4,11,40,149,556,2075,7744,28901,107860,402539,1502296,5606645,20924284,78090491,291437680,1087660229,4059203236,15149152715,56537407624,211000477781,787464503500,2938857536219,10967965641376 ⋆ a(n) = 4 * a(n - 1) - a(n - 2) with a(0) = 4 and a(1) = 11. ● a(n) = - (1 / 2) * sqrt(3) * (2 - sqrt(3)) ^ n + (1 / 2) * sqrt(3) * (2 + sqrt(3)) ^ n + 2 * (2 - sqrt(3)) ^ n + 2 * (2 + sqrt(3)) ^ n, with n >= 0. - _ Paolo P. Lava _ , Nov 20 2008 ● a(n) = ((4 + sqrt(3)) * (2 + sqrt(3)) ^ n + (4 - sqrt(3)) * (2 - sqrt(3)) ^ n) / 2. Offset 0. ● a(n) = second binomial transform of 4,3,12,9,36. (End) ●

► [A343548] 1,4,11,41,127,498,1717,6610,24366,93391,352717,1358826,5200301,20097076,77562773,300786339,1166803111,4539163784,17672631901,68933291834,269129233484,1052113994124,4116715363801,16124221819056,63205303242628 ⋆ a(n) = Sum _{ d|n } binomial(d + n - 1,n). ● a(n) = [x ^ n] Sum _{ k>=1 } x ^ k / (1 - x ^ k) ^ (n + 1). ● a(n) = [x ^ n] Sum _{ k>=1 } binomial(k + n - 1,n) * x ^ k / (1 - x ^ k). ●

► [A030981] 1,1,4,11,41,146,564,2199,8835,35989,148912,623008,2633148,11222160,48181056,208180847,904593623,3950338043,17328256180,76316518987,337332601513,1495992837550,6654367576732,29681131861564 ⋆ Number of noncrossing bushes with n nodes; i.e., rooted noncrossing trees with n nodes and no nonroot nodes of degree 1. ● a(n) = Sum _{ k=1..n } ((- 1) ^ (n - k) * 2 ^ (n - k) * binomial(n, k) * binomial(3 * k, k - 1)) / n. ● a(n) = (- 1) ^ (n + 1) * 2 ^ (n - 1) * hypergeom([4 / 3, 5 / 3, 1 - n], [2, 5 / 2], 27 / 8). - _ Peter Luschny _ , Aug 03 2017 ●

► [A307702] 1,4,11,41,161,641,2561,10241,40961,163841,655361,2621441,10485761,41943041,167772161,671088641,2684354561,10737418241,42949672961,171798691841,687194767361,2748779069441,10995116277761,43980465111041,175921860444161 ⋆ Clique covering number of the n - Sierpinski tetrahedron graph. ● a(n) = 5 * a(n - 1) - 4 * a(n - 2) for n>4. ●

► [A278988] 0,0,1,1,4,11,41,162,610,2165,7327,23948,76352,239175,739909,2268710,6912430,20966441,63390587,191220048,575888044,1732382363,5207108161,15642295562,46970926394 ⋆ a(n) is the number of words of length n over an alphabet of size 3 that are in standard order and which have the property that every letter that appears in the word is repeated. ● a(n) = (2 * (3 + 3 ^ n) - 3 * (2 + 2 ^ n) * n + 6 * n ^ 2) / 12 for n>3. ● a(n) = 10 * a(n - 1) - 40 * a(n - 2) + 82 * a(n - 3) - 91 * a(n - 4) + 52 * a(n - 5) - 12 * a(n - 6) for n>9. ●

► [A278989] 0,0,1,1,4,11,41,162,715,3425,16777,80928,379347,1726375,7654817,33219630,141692075,596122477,2480969257,10237751324,41963944275,1711037657 47,694775280993,2812004330666,11352134320523 ⋆ a(n) is the number of words of length n over an alphabet of size 4 that are in standard order and which have the property that every letter that appears in the word is repeated. ● a(n) = 20 * a(n - 1) - 175 * a(n - 2) + 882 * a(n - 3) - 2835 * a(n - 4) + 6072 * a(n - 5) - 8777 * a(n - 6) + 8458 * a(n - 7) - 5204 * a(n - 8) + 1848 * a(n - 9) - 288 * a(n - 10) for n > 14. ●

► [A176645] 1,4,11,42,177,817,3981,20164,105027,558915,3025287,16603039,92169795,516644985,2920055107,16622691454,95220681081,548477688005,3174801937437,18457766735525,107734640321681,631075890235811 ⋆ a(n + 1) = m + Sum _{ j=0..n } (a(j) * a(n - j) + k) for n>=1, with a(0)=1, a(1)=4, k=1 and m=1. ● a(n) = m + k * n + Sum _{ j=0..n - 1 } a(j) * a(n - j - 1), with a(0)=1, a(1)=4, k=1 and m=1. ●

► [A363663] 1,4,11,46,127,596,1717,7792,24806,108450,352717,1563914,5200301,22539046,77876117,331982444,1166803111,4945693769,17672631901,74053888812,269344740908,1118110015874,4116715363801,16984153623296,63205318063252 ⋆ a(n) = Sum _{ d|n } (n / d) ^ (d - 1) * binomial(d + n - 1,n). ● a(n) = [x ^ n] Sum _{ k>0 } x ^ k / (1 - k * x ^ k) ^ (n + 1). ●

► [A372115] 1,1,4,11,48,174,784,3219,14816,65082,304656,1393854,6617184,31086556,149336672,714494467,3466785216,16808037474,82244904016,402770823114,1984987570016,9797722907684,48581811550112,241324198117678,1202874359046464 ⋆ G.f. A(x) satisfies A(x) = 1 / (1 - x * (1 + 4 * x) ^ (1 / 2) * A(x)). ● a(n) = Sum _{ k=0..n } 4 ^ (n - k) * binomial(2 * k,k) * binomial(k / 2,n - k) / (k + 1). ●

► [A361359] 1,1,1,4,11,49,196,868,3721,16306,70891,309739,1350831,5897934,25740386,112368153,490489041,2141121271,9346382981,40799215354,178097506051,777437032059,3393689486976,14814237183658,64667544141561 ⋆ Number of nonequivalent noncrossing caterpillars with n edges up to rotation. ● a(n) = 6 * a(n - 1) - 3 * a(n - 2) - 26 * a(n - 3) + 36 * a(n - 4) - 2 * a(n - 5) - 18 * a(n - 6) + 6 * a(n - 7) + 5 * a(n - 8) - 4 * a(n - 9) + a(n - 10) for n >= 10. ●

► [A318120] 1,1,1,4,11,51,162,876,3761,20782,109293,678569,4038388,27644436,186524145,1379760895,10323844183,82864869803,674798169662,5832742205056,51385856585637,474708148273586,4486977535287371,44152005855084345,444577220573083896 ⋆ Number of set partitions of { 1,...,n } with relatively prime block sizes. ● a(n) = Sum _{ |y| = n, GCD(y) = 1 } n! / (Product _ i y _ i! * Product _ i (y) _ i!) where the sum is over all relatively prime integer partitions of n and (y) _ i is the multiplicity of i in y. ●

► [A355337] 1,1,4,11,51,212,1133,6001,36508,228435,1559575,11079180,83753497,659858617,5459331036,46980355355,421272977267,3917446787884,37766791690501,376447420971545,3875957531387172,41149332371734371,449984429580538407,5061923434006018612,58517321729774406129 ⋆ Expansion of e.g.f.: exp(exp(x) + x ^ 2 - 1). ● a(0) = a(1) = 1; a(n) = 2 * (n - 1) * a(n - 2) + Sum _{ k=1..n } binomial(n - 1,k - 1) * a(n - k). - _ Seiichi Manyama _ , Jun 29 2022 ●

► [A032181] 0,1,1,4,11,56,267,1730,11643,93532,804563,7789838,81109107,923080328,11250876171,147433014058,2056359699659,30514968348500,479058943716579,7942752339181286,138576460230586755,2539126631897727808,48733588613803358939 ⋆ Number of ways to partition n labeled elements into pie slices each of at least 2 elements. ● a(n) = n! * sum(k=1..n, sum(j=0..k, binomial(k,j) * stirling2(n - k + j,j) * j! / (n - k + j)! * (- 1) ^ (k - j)) / k). - _ Vladimir Kruchinin _ , Feb 01 2011 ●

► [A203577] 1,1,4,11,58,212,1304,5567,37734,178148,1284124,6501420,48758648,259775440,2000594288,11080668871,86930955662,496461841956,3947716126292,23113333523180,185660199980696,1109722749130576,8983793097101144,5464562907627535 6,445109373450545608 ⋆ Exponential (or binomial) half - convolution of the sequence A000108 (Catalan) with itself. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n,k) * Catalan(k) * Catalan(n - k), n >= 0. ●

► [A081073] 4,11,58,380,2587,17714,121396,832043,5702890,39088172,267914299,1836311906,12586269028,86267571275,591286729882,4052739537884,27777890035291,190392490709138,1304969544928660,8944394323791467 ⋆ Fibonacci(4n + 2) + 3, or Fibonacci(2n - 1) * Lucas(2n + 3). ● a(n) = 8a(n - 1) - 8a(n - 2) + a(n - 3). ● a(n) = 3 + (1 / 2) *{ [(7 / 2) - (3 / 2) * sqrt(5)] ^ n + [(7 / 2) + (3 / 2) * sqrt(5)] ^ n }+ (3 / 10) * sqrt(5) *{ [(7 / 2) + (3 / 2) * sqrt(5)] ^ n - [(7 / 2) - (3 / 2) * sqrt(5)] ^ n } , with n>=0. - _ Paolo P. Lava _ , Dec 01 2008 ●

► [A134823] 4,11,63,409,2818,19669,137725,965065,6763525,47403061,332233597,2328528748,16319989180,114382129186,801671598205,5618686762534,39379767287245,276001517369095,1934415636331069,13557765514528696 ⋆ Expansion of - x * (x ^ 5 + 11 * x ^ 4 + x ^ 3 + x ^ 2 + 21 * x - 4) / ((x ^ 2 + x - 1) * (3 * x ^ 4 + 7 * x - 1)). ● a(n) = + 8 * a(n - 1) - 6 * a(n - 2) - 7 * a(n - 3) + 3 * a(n - 4) - 3 * a(n - 5) - 3 * a(n - 6). - _ Colin Barker _ , Mar 17 2013 ●

► [A006551] 1,1,4,11,66,302,2416,15619,156190,1310354,15724248,162512286,2275172004,27971176092,447538817472,6382798925475,114890380658550,1865385657780650,37307713155613000,679562217794156938,14950368791471452636 ⋆ Maximal Eulerian numbers. ● a(n) = sum _{ 0<=j<=floor(n / 2) } (- 1) ^ j binomial(n + 1,j) (floor(n / 2) - j + 1) ^ n. [_ Peter Luschny _ , Aug 08 2010] ● a(n + 1) / a(n) ~ n. - _ Ran Pan _ , Oct 26 2015 ●

► [A167418] 1,4,11,124,841,3844,23571,159164,903201,5174084,32096731,192836604,1128271161,6758574724,40676603491,241740656444,1439437080721,8616705389764,51443701799851,306634988322684,1830991983267881 ⋆ G.f.: 1 / (1 - 4 * x + 5 * x ^ 2 - 100 * x ^ 3). ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 100 * a(n - 3) for n > 2. ●

► [A055979] 4,11,134,373,4552,12671,154634,430441,5253004,14622323,178447502,496728541,6061962064,16874148071,205928262674,573224305873,6995498968852,19472752251611,237641036678294,661500352248901,8072799748093144,22471539224211023 ⋆ Solutions (value of r) of the Diophantine equation 2 * x ^ 2 + 3 * x + 2 = r ^ 2. ● a(n) = 34 * a(n - 2) - a(n - 4); a(0)=4, a(1)=11, a(2)=134, a(3)=373. - _ Harvey P. Dale _ , Feb 21 2012 ●

► [A224785] 1,4,12,15,45,48,144,147,441,444,1332,1335,4005,4008,12024,12027,36081,36084,108252,108255,324765,324768,974304,974307,2922921 ⋆ Expansion of (1 + 4 * x + 8 * x ^ 2 - x ^ 3) / ((1 - x) * (1 + x) * (1 - 3 * x ^ 2)). ● a(n) = a(n - 1) + 3 if n odd. ● a(n) = 3 * a(n - 1) if n even. ● a(2n) = (11 * 3 ^ n - 9) / 2. ● a(2n + 1) = (11 * 3 ^ n - 3) / 2. ● a(n) = 4 * a(n - 2) - 3 * a(n - 4) with n

>3, a(0)=1, a(1)=4, a(2)=12, a(3)=15. • a(n) = (11 * 3 ^ floor(n / 2) - 3(- 1) ^ n) / 2 - 3. - _ Bruno Berselli _ , Apr 27 2013 •

► [A195547] 1,4,12,15,80,208,273,1428,3740,4895,25632,67104,87841,459940,1204140,1576239,8253296,21607408,28284465,148099380,387729212,507544127,2657535552,6957518400,9107509825 ⋆ Denominators a(n) of Pythagorean approximations b(n) / a(n) to 1 / 2. • a(n) = 2 * F(n) * F(n + 1) / (2 - ((n + 2) ^ 2 mod 3)), where F(n)=Fibonacci(n). - _ Gary Detlefs _ , Oct 15 2011 •

► [A108269] 4,12,16,20,28,36,44,48,52,60,64,68,76,80,84,92,100,108,112,116,124,132,140,144,148 ⋆ Numbers of the form (2 * m - 1) * 4 ^ k where m >= 1, k >= 1. • a(n) = 6 * n + O(log n). - _ Charles R Greathouse IV _ , Nov 03 2016 [Corrected by _ Amiram Eldar _ , Jan 12 2021] •

► [A253122] 4,12,16,40,64,144,256,544,1024,2112,4096,8320,16384,33024,65536,131584,262144,525312,1048576,2099200,4194304,8392704,16777216,33562624,67108864 ⋆ Number of length n + 2 0..1 arrays with the sum of medians of adjacent triples multiplied by some arrangement of +- 1 equal to zero. • a(n) = 2 ^ (n / 2 + 1) + 2 ^ (n + 1) for n even. • a(n) = 2 ^ (n + 1) for n odd. •

► [A134860] 4,12,17,25,33,38,46,51,59,67,72,80,88,93,101,106,114,122,127,135,140,148,156,161,169 ⋆ Wythoff AAB numbers; also, Fib101 numbers: those n for which the Zeckendorf expansion A014417(n) ends with 1,0,1. • a(n) = A(A(B(n))), n>=1, with A=A000201, the lower Wythoff sequence and B=A001950, the upper Wythoff sequence. •

► [A362873] 1,4,12,17,33,42,64,77,105,122,158,177,219,242,292,319,375,406,470,503,573,610,688,729,813 ⋆ a(n) is the number of points with integer coordinates that are inside an equilateral triangle inscribed in a circle of radius n, the location of the triangle in the Oxy coordinate plane is described in the comments. • a(n) = (3 * n - 2) / 2 + 2 * Sum _{ k=1..floor(sqrt(3) * n / 2) } floor(- sqrt(3) * k + 3 * n / 2) if n is even; • a(n) = (3 * n - 1) / 2 + 2 * Sum _{ k=1..floor(sqrt(3) * n / 2) } floor(- sqrt(3) * k + (3 * n + 1) / 2) if n is odd. •

► [A230628] 4,12,18,24,30,36,42,48,54,60,66,72,78,84,90,96,102,108,114,120,126,132,138,144,150 ⋆ Maximum number of colors needed to color a planar map of several empires, each empire consisting of n countries. • a(1)=4; thereafter a(n) = 6 * n (See Jackson & Ringel 1984). • a(n) = 2 * a(n - 1) - a(n - 2) for n > 3. - _ Wesley Ivan Hurt _ , Mar 07 2016 •

► [A319259] 1,4,12,20 ⋆ Minimal number of straight lines of a covering tree needed to cover n X n X n points arranged in a 3 - D grid. • a(n) = n ^ 2 + n for even n and for n = 3. - _ Marco Ripà _ , Aug 25 2020 •

► [A017113] 4,12,20,28,36,44,52,60,68,76,84,92,100,108,116,124,132,140,148,156,164,172,180,188,196 ⋆ a(n) = 8 * n + 4. • a(n) = Sum _{ k=0..4 * n } ((i ^ k + 1) * (i ^ (4 * n - k) + 1), where i=sqrt(- 1). - _ Bruno Berselli _ , Mar 19 2012 •

► [A212965] 1,4,12,21,37,52,76,97,129,156,196,229,277,316,372,417,481,532,604,661,741,804,892,961,1057 ⋆ Number of triples (w,x,y) with all terms in { 0,...,n } and such that w = max(w,x,y) - min(w,x,y). • a(n) = (14 * n * (n + 1) + (2 * n + 1) * (- 1) ^ n + 7) / 8. • a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). • a(n) = (7 * n ^ 2 + 8 * n + 4 - (2 * n + 1) * (n mod 2)) / 4. (End) •

► [A092285] 1,4,12,22,65,116,399,554,2475,3232,14938,20208,101413,130846,691890,924946,4867559,6281552,35154066,46902128,253485141,328375720,1877693458,2504042868,13754442225 ⋆ Number of productions of a certain "divide - and - conquer" context - free grammar in Chomsky normal form that generates all permutations of n symbols. • a(n) = Sum _{ k=1..n } t(n, k) * C(k, ceiling(k / 2)), where t(n, k) is the n - th row in the Pascal - like triangle of A090349 and C(k, i) is the binomial coefficient. •

► [A319868] 4,12,24,24,32,80,360,1704,1716,1836,3024,13584,13600,13824,16944,57264,57284,57644,64104,173544,173568,174096,185688,428568,428596 ⋆ a(n) = 4 * 3 * 2 * 1 + 8 * 7 * 6 * 5 + 12 * 11 * 10 * 9 + 16 * 15 * 14 * 13 + ... + (up to the n - th term). • a(n) = a(n - 1) + 5 * a(n - 4) - 5 * a(n - 5) - 10 * a(n - 8) + 10 * a(n - 9) + 10 * a(n - 12) - 10 * a(n - 13) - 5 * a(n - 16) + 5 * a(n - 17) + a(n - 20) - a(n - 21) for n>21. •

► [A286040] 0,0,0,0,4,12,24,28,33,40,49,60,77,98,112,124,136,156,176,200,220,242,264,288,312 ⋆ Matching number of the n X n antelope graph. • a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4) for n>23. •

► [A273315] 4,12,24,32,40,48,56,64,72,80,88,96,104,112,120,128,136,144,152,160,168,176,184,192,200 ⋆ First differences of number of active (ON,black) cells in n - th stage of growth of two - dimensional cellular automaton defined by "Rule 643", based on the 5 - celled von Neumann neighborhood. • a(n) = 8 * (1 + n) for n>1. • a(n) = 2 * a(n - 1) - a(n - 2) for n>3. •

► [A296909] 1,4,12,24,39,59,84,112,143,179,220,264,311,363,420,480,543,611,684,760,839,923,1012,1104,1199 ⋆ Partial sums of A296368. • a(n) = (- 1 / 4 - i / 4) * ((1 - i) + (- i) ^ n - i * i ^ n) + 2 * n + 2 * n ^ 2 for n>1, where i=sqrt(- 1). • a(n) = 3 * a(n - 1) - 4 * a(n - 2) + 4 * a(n - 3) - 3 * a(n - 4) + a(n - 5) for n>6. •

► [A046092] 0,4,12,24,40,60,84,112,144,180,220,264,312,364,420,480,544,612,684,760,840,924,1012,1104,1200 ⋆ 4 times triangular numbers: a(n) = 2 * n * (n + 1). • a(n) = C(2n, 2) - n = 4 * C(n, 2). - _ Zerinvary Lajos _ , Feb 15 2005 • a(n) = A028896 - A002378; a(n) = A124080 - A028896; a(n) = A049598 - A033996. - _ Zerinvary Lajos _ , Mar 06 2007 • a(n) = a(n - 1) + 4 * n; o.g.f.:4 * x / (1 - x) ^ 3; e.g.f.: exp(x) * (2 * x ^ 2 + 4 * x). - _ Geoffrey Critzer _ , May 17 2009 • a(n) = 1 / int(- (x * n + x - 1) * (step((- 1 + x * n) / n) - 1) * n * step((x * n + x - 1) / (n + 1)),x=0..1) where step(x)=piecewise(x<0,0,0<=x,1) is the Heaviside step function. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3); a(0)=0, a(1)=4, a(2)=12. - _ Harvey P. Dale _ , Jul 25 2011 • a(n) * (2m + 1) ^ 2 + a(m) = a(n * (2m + 1) + m), for any nonnegative integers n and m. •

► [A008253] 1,4,12,24,42,64,92,124,162,204,252,304,362,424,492,564,642,724,812,904,1002,1104,1212,1324,1442 ⋆ Coordination sequence for diamond. • a(2 * m) = 10 * m ^ 2 + 2, a(2 * m + 1) = 10 * m ^ 2 + 10 * m + 4 (_ N. J. A. Sloane _). • a(n) = 2 * (2 + Sum _{ k=1..n - 1 } floor((5 * k + 3) / 2)). - _ Alexander Adamchuk _ , May 23 2006 • a(n) = (5 * n ^ 2 + 4) / 2 for n>0 and even. • a(n) = (5 * n ^ 2 + 3) / 2 for n odd. • a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4) for n>4. •

► [A011887] 0,0,0,1,4,12,24,42,67,100,144,198,264,343,436,546,672,816,979,1162,1368,1596,1848,2125,2428 ⋆ [n(n - 1)(n - 2) / 5]. • a(n) = + 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 5) - 3 * a(n - 6) + 3 * a(n - 7) - a(n - 8). G.f.: x ^ 3 * (1 + x + 3 * x ^ 2 - x ^ 3 + 2 * x ^ 4) / ((- 1 + x) ^ 4 * (1 + x + x ^ 2 + x ^ 3 + x ^ 4)). [From _ R. J. Mathar _ , Apr 15 2010] •

► [A128624] 1,4,12,24,45,72,112,160,225,300,396,504,637,784,960,1152,1377,1620,1900,2200,2541,2904,3312,3744,4225 ⋆ Row sums of A128623. • a(n) = n * (2 * n ^ 2 + 4 * n - (- 1) ^ n + 1) / 8. • a(n) = (n ^ 3 + 2 * n ^ 2) / 4 for n even. • a(n) = (n ^ 3 + 2 * n ^ 2 + n) / 4 for n odd. •

► [A321879] 0,1,4,12,24,48,72,120,168,240,312,432,528,696,840,1032,1224,1512,1728,2088,2376,2760,3120,3648,4032 ⋆ Partial sums of the Jordan function J _ 2(k), for 1 <= k <= n. • a(n) = Sum _{ k=1..n } mu(k) * Bernoulli(3, 1 + floor(n / k)) / 3, where mu(k) is the Moebius function and Bernoulli(n,x) are the Bernoulli polynomials. •

► [A192797] 4,12,24,48,80,132,196,288,396,540,704,912,1144,1428,1740,2112,2516,2988,3496,4080,4704,5412,6164,7008,7900 ⋆ Molecular topological indices of the cycle graphs • a(n) = n * (2 * n ^ 2 + (- 1) ^ n + 15) / 4. • a(n) = + 2 * a(n - 1) + 1 * a(n - 2) - 4 * a(n - 3) + 1 * a(n - 4) + 2 * a(n - 5) - 1 * a(n - 6). •

► [A330011] 1,4,12,24,48,96,168,264,456,720,1056,1656,2520,3600,5352,7944,11256,16248,23664,33432,47520,68232,96216,135696,192888 ⋆ Number of length - n strings w over a 4 - letter alphabet with the property that if x is a subword of w and |x| >= 2, then x reversed is not a subword of w. • a(n) = a(n - 1) + 5a(n - 3) - 3a(n - 4) - 2a(n - 5) - 8a(n - 6) + a(n - 7) + 6a(n - 8) + 5a(n - 9) + 2a(n - 10) - 4a(n - 11) - 2a(n - 12) for n >= 17. •

► [A132477] 1,4,12,24,48,96,192,384,768,1536,3072,6144,12288,24576,49152,98304,196608,393216,786432,1572864,3145728,6291456,12582912,25165824,50331648 ⋆ Row sums of triangle A132476. • a(0) = 1, a(1) = 4, a(n) = 3 * 2 ^ n for n>1. • a(n) = 2 * a(n - 1) for n>1. - _ Harvey P. Dale _ , May 31 2017 •

► [A143270] 1,4,12,24,50,72,126,176,252,320,462,552,754,896,1080,1280,1632,1836,2280,2560,2940,3300,3956,4320,5000 ⋆ a(n) = n * A002088(n). • a(n) = SUM(SUM(0 ^ (GCD(i,j) - 1): 1<=j<=i * n): 1<=i<=n). [_ Reinhard Zumkeller _ , Jan 15 2009] •

► [A136486] 0,4,12,24,52,76,112,148,192,256,308,376,440,524,608,688,796,904,1012,1124,1232,1372,1508,1648,1788 ⋆ Number of unit square lattice cells enclosed by origin centered circle of diameter 2n + 1. • a(n) = 4 * Sum _{ k=1..n } floor(sqrt((n + 1 / 2) ^ 2 - k ^ 2)). •

► [A216244] 4,12,24,60,84,144,180,264,420,480,684,840,924,1104,1404,1740,1860,2244,2520,2664,3120,3444,3960,4704,5100 ⋆ a(n) = (prime(n) ^ 2 - 1) / 2 for n >= 2. • a(n) = (prime(n) ^ 2 - 1) / 2 for n >= 2. • a(n) = (prime(n) - 1) * (prime(n) + 1) / 2 = lcm(prime(n) + 1, prime(n) - 1) for n > 1 because one of prime(n) + 1 or prime(n) - 1 is even and the other is divisible by 4. Say prime(n) - 1 is divisible by 4; then (prime(n) + 1) / 2 and (prime(n) - 1) / 4 must be coprime. - _ Frank M Jackson _ , Dec 11 2018 •

► [A318610] 0,4,12,24,72,252,756,2160,6480,19764,59292,176904,530712,1595052,4785156,14346720,43040160,129146724,387440172,1162241784,3486725352,10460412252,31381236756,94143001680,282429005040 ⋆ a(1) = 0, a(2) = 4, a(3) = 12; for n > 3, a(n) = 3 * a(n - 1) - 3 * a(n - 2) + 9 * a(n - 3). • a(n) = last term in M ^ n * [1, 0, 0] ^ T, where M = the 3 X 3 matrix [1, 0, 2 / 2, 1, 0 / 0, 2, 1] and T denotes transpose. [Edited by _ Petros Hadjicostas _ , Dec 19 2019] • a(n) = 3 ^ (n / 2 - 1) * ((- i) ^ n * (- 1 - sqrt(3) * i) / 2 + i ^ n * (- 1 + sqrt(3) * i) / 2 + 3 ^ (n / 2)), where i is the imaginary unit. • a(n) = 3 ^ (n / 2 - 1) * (2 * cos(n * Pi / 2 + 2 * Pi / 3) + 3 ^ (n / 2)). • a(n) = 3 ^ (n - 1) + (- 3) ^ (n / 2 - 1) for even n and 3 ^ (n - 1) - (- 3) ^ ((n - 1) / 2) for odd n. •

► [A218034] 1,4,12,24,84,240,732,2184,6564,19680,59052,177144,531444,1594320,4782972,14348904,43046724,129140160,387420492,1162261464,3486784404,10460353200,31381059612,94143178824,282429536484 ⋆ Number of ways to seat 4 types of people in n labeled seats around a circle such that no two adjacent people are of the same type. • a(0) = 1, a(1) = 4, a(n) = 3 ^ n + 3 * (- 1) ^ n for n >= 2. • a(n + m) = a(n) * a(m) / 4 + a(n + 1) * a(m + 1) / 12. - _ Yuchun Ji _ , Sep 12 2017 •

► [A008044] 1,4,12,25,42,61,88,122,160,200,246,299,358,417,480,550,628,710,796,887,984,1083,1188,1298,1412 ⋆ Coordination sequence T2 for Zeolite Code ATV. • a(40 * m + k) = 3920 * m ^ 2 + 196 * k * m + one of 40 numbers depending on k, 0<=k<40. - _ N. J. A. Sloane _ •

► [A116668] 1,4,12,25,43,66,94,127,165,208,256,309,367,430,498,571,649,732,820,913,1011,1114,1222,1335,1453 ⋆ a(n) = (5 * n ^ 2 + n + 2) / 2. • a(n) = 5 * n + a(n - 1) - 2 (with a(0)=1) - _ Vincenzo Librandi _ , Nov 13 2010 •

► [A008264] 1,4,12,25,44,67,96,130,170,214,264,319,380,445,516,592,674,760,852,949,1052,1159,1272,1390,1514 ⋆ Coordination sequence for tridymite, lonsdaleite, and wurtzite. • a(4 * m + k) = 42 * m ^ 2 + 21 * k * m + [2, 4, 12, 25], 0 <= k < 4 (_ N. J. A. Sloane _). • a(n) = 1 + (42 * n ^ 2 + (1 + (- 1) ^ n) * (3 + 2 * (- 1) ^ ((n - 1) * n / 2)) + 6) / 16 for n > 0, a(0) = 1. - _ Bruno Berselli _ , Jul 24 2013 •

► [A000297] 0,4,12,25,44,70,104,147,200,264,340,429,532,650,784,935,1104,1292,1500,1729,1980,2254,2552,2875,3224 ⋆ a(n) = (n + 1) * (n + 3) * (n + 8) / 6. • a(n) = Sum _{ k=3..n } n * (k + 1) / 3, n>=2. - _ Zerinvary Lajos _ , Jan 29 2008 • a(n) = a(n - 1) + (n ^ 2 + 7n + 8) / 2. •

► [A078618] 1,4,12,25,45,73,112,162,225,302,396,507,637,787,960,1156,1377,1624,1900,2205,2541,2909,3312,3750,4225 ⋆ a(n) = floor(average of first n cubes). • a(n) = floor((1 / n)(Sum _{ i=1..n } i ^ 3) = floor(n * (n + 1) ^ 2 / 4). •

► [A301141] 1,4,12,26,43,64,99,133,161,210,274,318,364,441,528,593,649,746,877,953,1003,1145,1314,1383,1450 ⋆ Coordination sequence T2 for Zeolite Code NSI. • a(n) = - 2 * a(n - 2) + 2 * a(n - 3) + 4 * a(n - 5) + a(n - 6) - a(n - 8) - 4 * a(n - 9) - 2 * a(n - 11) + 2 * a(n - 12) + a(n - 14) for n > 14. •

► [A264100] 0,1,4,12,26,50,82,130,188,265,358,473,602,765,944,1151,1386,1657,1948,2284,2642,3048,3490,3972,4480 ⋆ Sum of the lengths of the arithmetic progressions in { 1,2,3,...,n } , including trivial arithmetic progressions of lengths 1 and 2. • a(n) = n + Sum _{ k=2..n } k * floor((n - 1) / (k - 1)) * (2 * n - (k - 1) * floor((n + k - 2) / (k - 1))) / 2. •

► [A266958] 1,4,12,27,43,68,92,127,159,204,244,299,347,412,468,543,607,692,764,859,939,1044,1132,1247,1343 ⋆ Numbers m such that 9 * m + 13 is a square. ● a(n) = a(- n + 1) = (18 * (n - 1) * n + (2 * n - 1) * (- 1) ^ n - 7) / 8. ●
► [A212973] 1,4,12,27,50,84,131,192,270,367,484,624,789,980,1200,1451,1734,2052,2407,2800,3234,3711,4232,4800,5417 ⋆ Number of (w,x,y) with all terms in { 0,...,n } and w<=floor((x + y) / 3)). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + 2 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) - a(n - 6). ●
► [A047732] 1,4,12,27,51,86,134,197,277,376,496,639,807,1002,1226,1481,1769,2092,2452,2851,3291,3774,4302,4877,5501 ⋆ First differences are A005563. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ● a(n) = (2 * n ^ 3 + 9 * n ^ 2 + 7 * n + 6) / 6. (End) ●
► [A104385] 0,0,1,4,12,27,52,91,147,225,331,469,645,867,1141,1474,1875,2352,2914,3571,4332,5208,6211,7351,8640 ⋆ Number of distinct partitions of triangular numbers n * (n + 1) / 2 into 3 parts for n>=1. ● a(n) = round((3n ^ 4 + 6n ^ 3 - 33n ^ 2 - 36n + 110) / 144) (conjectured). - _ Ralf Stephan _ , Nov 13 2010. ●
► [A213760] 1,4,12,27,52,92,148,230,335,480,656,889,1162,1512,1912,2412,2973,3660,4420,5335,6336,7524,8812,10322,11947 ⋆ Antidiagonal sums of the convolution array A213783. ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 6 * a(n - 3) + 6 * a(n - 5) - 2 * a(n - 6) - 2 * a(n - 7) + a(n - 8). ● a(n) = (2 * n ^ 4 + 22 * n ^ 3 + 40 * n ^ 2 + 8 * n) / 96 for n even. ● a(n) = (2 * n ^ 4 + 22 * n ^ 3 + 34 * n ^ 2 + 26 * n + 12) / 96 for n odd. ●
► [A327032] 0,4,12,27,53,95,159,252,382,558,790,1089,1467,1937,2513,3210,4044,5032,6192,7543,9105,10899,12947,15272,17898 ⋆ a(n) = T(n, 4) with T(n, k) = Sum _{ d|k } phi(d) * binomial(n - 1 + k / d, k / d). ● a(n) = ((7 * n ^ 2 - 14 * n - 9) * a(n - 1) - 2 * (2 * n ^ 2 + n - 3) * a(n - 2)) / (3 * (n ^ 2 - 4 * n + 3)) for n >= 4. ● a(n) = n * (n * (n * (n + 6) + 23) + 66) / 24. ●
► [A007009] 1,4,12,27,54,96,160,250,375,540,756,1029,1372,1792,2304,2916,3645,4500,5500,6655,7986,9504,11232,13182,15379 ⋆ Number of 3 - voter voting schemes with n linearly ranked choices. ● a(n) = (1 / 2) * Sum _{ k=1..n + 1 } k * floor(k / 2) * ceiling(k / 2). - _ Vladeta Jovovic _ , Apr 29 2006 ● a(n) = (n ^ 4 + 6 * n ^ 3 + 12 * n ^ 2 + 8 * n) / 32 for n even; a(n) = (n ^ 4 + 6 * n ^ 3 + 12 * n ^ 2 + 10 * n + 3) / 32 for n odd. - _ Colin Barker _ , Jan 07 2016 ●
► [A013697] 1,4,12,27,57,119,245,497,1005,2023,4063,8149,16327,32692,65435,130938,261965,524050,1048259,2096730,4193742,8387859,16776218,33553102,67107091 ⋆ Second term in continued fraction for zeta(n). ● a(n) = floor(1 / (zeta(n) - 1)). ● a(n) = 2 ^ n - (4 / 3) ^ n + O(1). It appears that a(n) = 2 ^ n - floor((4 / 3) ^ n) - k, where k is usually 2 but is sometimes 1. Up to n=1000, the only values of n where k = 1 are 4, 5, 13, 14, and 17. (End) ●
► [A212522] 0,0,0,0,4,12,27,60,112,180,300,450,648,924,1274,1680,2240,2880,3645,4590,5700,6930,8470,10164,12096 ⋆ Number of (w,x,y,z) with all terms in { 1,...,n } and w>=2x and y>3z. ● a(n) = 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4) - 4 * a(n - 5) + 2 * a(n - 7) - 2 * a(n - 9) + 4 * a(n - 11) + a(n - 12) - 2 * a(n - 13) - 2 * a(n - 14) + a(n - 16). ●
► [A112087] 4,12,28,52,84,124,172,228,292,364,444,532,628,732,844,964,1092,1228,1372,1524,1684,1852,2028,2212,2404 ⋆ a(n) = 4 * (n ^ 2 - n + 1). ● a(n) = 8 * n + a(n - 1) - 8 (with a(1)=4). - _ Vincenzo Librandi _ , Nov 13 2010 ●
► [A184633] 1,4,12,28,55,96,152,227,324,444,591,768,976,1219,1500,1820,2183,2592,3048,3555,4116,4732,5407,6144,6944 ⋆ Floor(1 /{ (9 + n ^ 4) ^ (1 / 4) }), where {} = fractional part. ● a(n) = floor(1 /{ (9 + n ^ 4) ^ (1 / 4) }), where {} = fractional part. ●
► [A006000] 1,4,12,28,55,96,154,232,333,460,616,804,1027,1288,1590,1936,2329,2772,3268,3820,4431,5104,5842,6648,7525 ⋆ a(n) = (n + 1) * (n ^ 2 + n + 2) / 2; g.f.: (1 + 2 * x ^ 2) / (1 - x) ^ 4. ● a(n) = Sum _{ j=1..n + 1 } (binomial(0,0 * j) + binomial(n + 1,2)). - _ Zerinvary Lajos _ , Jul 25 2006 ● a(n - 1) = n + (n ^ 3 - n ^ 2) / 2 = n + n * T(n - 1) where T(n - 1) is a triangular number, n >= 1. - _ William A. Tedeschi _ , Aug 22 2010 ●
► [A085622] 1,4,12,28,56,88,132,180,240,304,380,460,552,648,756,868,992,1120,1260,1404,1560,1720,1892,2068,2256 ⋆ Maximal number of segments (equivalently, corners) in a rook circuit of a 2n X 2n board. ● a(n) = 4n ^ 2 - 2n if n is even and 4n ^ 2 - 2n - 2 if n is odd and > 1. ● a(n) = - 1 + (- 1) ^ n - 2 * n + 4 * n ^ 2 for n>1. ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4) for n>5. ●
► [A011940] 0,0,0,0,0,4,12,28,56,100,168,264,396,572,800,1092,1456,1904,2448,3100,3876,4788,5852,7084,8500 ⋆ a(n) = floor(n(n - 1)(n - 2)(n - 3) / 30). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) + a(n - 5) - 4 * a(n - 6) + 6 * a(n - 7) - 4 * a(n - 8) + a(n - 9). ●
► [A223764] 4,12,28,56,101,169,267,403,586,826,1134,1522,2003,2591,3301,4149,5152,6328,7696,9276,11089,13157,15503,18151,21126 ⋆ Number of n X 2 0..1 arrays with rows, columns and antidiagonals unimodal and diagonals nondecreasing. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n >5. ●
► [A102653] 4,12,28,56,112,228,460,920,1840,3684,7372,14744,29488,58980,117964,235928,471856,943716,1887436,3774872,7549744,15099492,30198988,60397976,120795952 ⋆ a(n) = 4 * floor(27 * 2 ^ n / 15). ● a(0)=4, a(1)=12, a(2)=28, a(3)=56, a(n)=3 * a(n - 1) - 3 * a(n - 2) + 3 * a(n - 3) - 2 * a(n - 4). - _ Harvey P. Dale _ , Jun 15 2011 ●
► [A011939] 0,0,0,0,0,4,12,28,57,104,173,273,409,591,828,1129,1506,1969,2532,3207,4009,4953,6053,7328,8793 ⋆ [n(n - 1)(n - 2)(n - 3) / 29]. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) + a(n - 29) - 4 * a(n - 30) + 6 * a(n - 31) - 4 * a(n - 32) + a(n - 33) for n > 32. ●
► [A203286] 4,12,28,57,104,176,280,425,620,876,1204,1617,2128,2752,3504,4401,5460,6700,8140,9801,11704,13872,16328,19097,22204 ⋆ Number of arrays of 2n nondecreasing integers in - 3..3 with sum zero and equal numbers greater than zero and less than zero. ● a(n) = (48 + 80 * n + 52 * n ^ 2 + 16 * n ^ 3 + 2 * n ^ 4) / 48 for n even. ● a(n) = (42 + 80 * n + 52 * n ^ 2 + 16 * n ^ 3 + 2 * n ^ 4) / 48 for n odd. ●
► [A028346] 1,4,12,28,58,108,188,308,483,728,1064,1512,2100,2856,3816,5016,6501,8316,10516,13156,16302,20020,24388,29484,35399 ⋆ Expansion of 1 / ((1 - x) ^ 4 * (1 - x ^ 2) ^ 2). ● a(n) = (n + 4) * (2 * n ^ 4 + 32 * n ^ 3 + 172 * n ^ 2 + 352 * n + 15 * (- 1) ^ n + 225) / 960. - _ R. J. Mathar _ , Apr 01 2010 ● a(n) = C(n + 3, 3) + 2 * C(n + 1, 3) + 3 * C(n - 1, 3) + 4 * C(n - 3, 3) + ... ● a(n) = Sum _{ i = 1..z } i * C(n + 5 - 2 * i,3) where z = (2 * n + 3 + (- 1) ^ n) / 4. ●
► [A356728] 1,4,12,28,58,114,220,424,822,1606,3160,6252,12418,24730,49332,98512,196846,393486,786736,1573204,3146106,6291874,12583372,25166328,50332198 ⋆ The number of 3 - permutations that avoid the patterns 132 and 213. ● a(n) = a(n - 1) + 3 * 2 ^ (n - 2) + 2 * (n - 2). ● a(n) = 5 * a(n - 1) - 9 * a(n - 2) + 7 * a(n - 3) - 2 * a(n - 4) for n > 4. ● a(n) = 3 * 2 ^ (n - 1) + n ^ 2 - 3 * n. (End) ●
► [A179023] 0,1,4,12,28,60,120,231,432,792,1430,2552,4512,7917,13804,23940,41328,71060,121752,207955,354200,601776,1020074,1725552,2913408 ⋆ a(n) = n(F(n + 2) - 1) where F(n) is defined by A000045. ● a(0)=0, a(1)=1 and for n>1, a(n) = a(n - 1) + F(n + 1) + nF(n) - 1. ●
► [A269712] 1,4,12,28,60,124,252,508,1020,2044,4092,8188,16380,32764,65532,131068 ⋆ Number of active (ON,black) cells at stage 2 ^ n - 1 of the two - dimensional cellular automaton defined by "Rule 20", based on the 5 - celled von Neumann neighborhood. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>2. ●
► [A028399] 0,4,12,28,60,124,252,508,1020,2044,4092,8188,16380,32764,65532,131068,262140,524284,1048572,2097148,4194300,8388604,16777212,33554428,67108860 ⋆ a(n) = 2 ^ n - 4. ● a(n) = a(n - 1) + 2 ^ (n - 1) (with a(2)=0). - _ Vincenzo Librandi _ , Nov 22 2010 ●
► [A173033] 1,4,12,28,60,124,252,508,1020,2044,4092,8188,16380,32764,65532,131068,262140,524284,1048572,2097148,4194300,8388604,16777212,33554428,67108860 ⋆ Second diagonal under the main diagonal in A172119 written in a square (see comment). ● a(n) = 2 ^ (n + 2) - 4 for n>=1, a(0)=1. ● a(n) = 2 * a(n - 1) + 4 for n>1. - _ J. Conrad _ , Nov 01 2015 ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>2. - _ Colin Barker _ , Nov 03 2015 ●
► [A339124] 1,4,12,28,60,132,300,692,1596,3668,8412,19284,44220,101428,232668,533716,1224252,2808180,6441372,14775188,33891324,77739956,178319964,409030356,938233788 ⋆ a(n) is the number of squares at distance n from the central square of a golden square fractal. ● a(0) = 1. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 4) for n > 4. - _ Stefano Spezia _ , Dec 02 2020 ●
► [A014342] 4,12,29,58,111,188,305,462,679,968,1337,1806,2391,3104,3953,4978,6175,7568,9185,11030,13143,15516,18177,21150,24471 ⋆ Convolution of primes with themselves. ● a(n) = Sum _{ i=1..n } prime(i) * prime(n + 1 - i), where prime(i) is the i - th prime. ●
► [A086274] 1,4,12,29,60,111,189,302,459,670,946,1299,1742,2289,2955,3756,4709,5832,7144,8665,10416,12419,14697,17274,20175 ⋆ Antidiagonal sums of A086272 (and of A086273). ● a(n)=n + Sum { (k + 1)C(n + 1 - k, 2): k=1, 2, ..., n } . ●
► [A174121] 1,4,12,29,61,118,218,395,715,1308,2432,4601,8841,17202,33782,66775,132567,263928,526396,1051045,2100021,4197614,8392402,16781539,33559331 ⋆ Partial sums of A001580. ● a(n) = (n - 2) * (2 * n ^ 2 + n + 3) / 6 + 2 ^ n. ● a(n) = 6 * a(n - 1) - 14 * a(n - 2) + 16 * a(n - 3) - 9 * a(n - 4) + 2 * a(n - 5) for n>5. ●
► [A128563] 1,4,12,29,61,120,222,392,669,1109,1792,2838,4413,6751,10184,15169,22332,32538,46955,67162,95288,134173,187593,260562,359682 ⋆ Column 2 of triangle A128562. ● a(n) is the coefficient of q ^ (2 * n + 6) in the q - binomial coefficient [2 * n + 5, n + 2]. ●
► [A227085] 4,12,29,62,122,225,393,655,1048,1618,2421,3524,5006,6959,9489,12717,16780,21832,28045,35610,44738,55661,68633,83931,101856 ⋆ Number of n X 2 binary arrays indicating whether each 2 X 2 subblock of a larger binary array has lexicographically increasing rows and columns, for some larger (n + 1) X 3 binary array with rows and columns of the latter in lexicographically nondecreasing order. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. ●
► [A192978] 0,1,4,12,29,62,122,227,406,706,1203,2020,3356,5533,9072,14816,24129,39218,63654,103215,167250,270886,438599,709992,1149144 ⋆ Coefficient of x in the reduction by x ^ 2 - > x + 1 of the polynomial p(n,x) defined at Comments . ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + a(n - 3) + 2 * a(n - 4) - a(n - 5). ● a(n) = Lucas(n + 5) - n * (n + 5) - 11. - _ Ehren Metcalfe _ , Jul 13 2019 ● a(n) = (1 / 2) * (- 22 + (11 - 5 * sqrt(5)) * ((1 / 2) * (1 - sqrt(5))) ^ n + 11 * ((1 / 2) * (1 + sqrt(5))) ^ n + 5 * sqrt(5) * ((1 / 2) * (1 + sqrt(5))) ^ n - 10 * n - 2 * n ^ 2). ●
► [A008261] 1,4,12,30,52,80,116,156,204,258,318,384,458,536,622,714,812,916,1028,1144,1268,1398,1534,1676,1826 ⋆ Coordination sequence for quartz. ● a(6m) =114m ^ 2 + 2, a(6m + 1)=114m ^ 2 + 38m + 4, a(6m + 2)=114m ^ 2 + 76m + 14 (m>0), a(6m + 3)=114m ^ 2 + 114m + 30, a(6m + 4)=114m ^ 2 + 152m + 52, a(6m + 5)=114m ^ 2 + 190m + 80 (_ N. J. A. Sloane _). ●
► [A099407] 1,4,12,30,60,96,144,198,308,420,540,720,840,966,1196,1508,1740,1980,2310,2520,2808,3198,3608,4224,4800 ⋆ Number of points of self - intersection of the path of a billiard ball traveling at a 45 - degree angle on a prime(n) X prime(n + 1) billiard table. Also equal to 1 / 2 the number of the lattice points lying within a prime(n) X prime(n + 1) rectangle. ● a(n) = (prime(n) - 1) * (prime(n + 1) - 1) / 2. ●
► [A011938] 0,0,0,0,0,4,12,30,60,108,180,282,424,612,858,1170,1560,2040,2622,3322,4152,5130,6270,7590,9108 ⋆ a(n) = floor(n * (n - 1) * (n - 2) * (n - 3) / 28). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) + a(n - 7) - 4 * a(n - 8) + 6 * a(n - 9) - 4 * a(n - 10) + a(n - 11). - _ Chai Wah Wu _ , May 25 2016 ●
► [A212519] 0,0,0,1,4,12,30,63,108,192,300,450,660,936,1260,1715,2240,2880,3672,4617,5670,7000,8470,10164,12144 ⋆ Number of (w,x,y,z) with all terms in { 1,...,n } and w>2x and y>=3z. ● a(n) = 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4) - 4 * a(n - 5) + 2 * a(n - 7) - 2 * a(n - 9) + 4 * a(n - 11) + a(n - 12) - 2 * a(n - 13) - 2 * a(n - 14) + a(n - 16). ●
► [A166213] 1,4,12,30,64,122,218,364,579,886,1310,1880,2636,3614,4862,6434,8387,10784,13704,17220,21422,26408,32280,39148,47143 ⋆ Number of 5 X 5 X 5 triangular nonnegative integer arrays, symmetric under 120 degree rotation, with all sums of an element and its neighbors <= n. ● a(n) = 2 * a(n - 1) + a(n - 2) - 2 * a(n - 3) - 3 * a(n - 4) + 6 * a(n - 6) - 3 * a(n - 8) - 2 * a(n - 9) + a(n - 10) + 2 * a(n - 11) - a(n - 12) for n>11. ●

► [A011797] 0,0,0,0,0,0,0,1,4,12,30,66,132,245,429,715,1144,1768,2652,3876,5537,7752,10659,14421,19228 ⋆ a(n) = floor(C(n,6) / 7). ● a(n) = floor(binomial(n + 1,7) / (n + 1)). [_ Gary Detlefs _ , Nov 23 2011] ●
► [A032192] 1,1,4,12,30,66,132,246,429,715,1144,1768,2652,3876,5538,7752,10659,14421,19228,25300,32890,42288,53820,67860,84825 ⋆ Number of necklaces with 7 black beads and n - 7 white beads. ● a(n) = ceiling(binomial(n, 7) / n)) (conjecture by _ Wolfdieter Lang _). ● a(n) = (6 / 7) * I(7|n) + (1 / 7) * C(n - 1,6) = (6 / 7) * I(7|n) + (1 / n) * C(n,7), where I(condition) = 1 if the condition holds, and = 0 otherwise. - _ Petros Hadjicostas _ , Dec 08 2017 ●
► [A097809] 1,4,12,30,68,146,304,622,1260,2538,5096,10214,20452,40930,81888,163806,327644,655322,1310680,2621398,5242836,10485714,20971472,41942990,83886028 ⋆ a(n) = 5 * 2 ^ n - 2 * n - 4. ● a(n) = 2 * a(n - 1) + 2 * n, n>0. ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 2 * a(n - 3), with a(0)=1, a(1)=4, a(2)=12. ●
► [A272144] 0,0,1,4,12,30,69,150,316,652,1329,2688,5412,10866,21781,43618,87300,174672,349425,698940,1397980,2796070,5592261,11184654,22369452 ⋆ Convolution of A000217 and A001045. ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) - 2 * a(n - 3) + 5 * a(n - 4) - 2 * a(n - 5). ● a(n + 2) = (- 105 + (- 1) ^ n + 2 ^ (7 + n) - 48 * n - 6 * n ^ 2) / 24. - _ Colin Barker _ , Apr 21 2016 ●
► [A100691] 1,4,12,30,70,158,352,780,1724,3806,8398,18526,40864,90132,198796,438462,967062,2132926,4704320,10375708,22884348,50473022,111321758,245527870,541528768 ⋆ Number of self - avoiding paths with n steps on a triangular lattice in the strip Z x { 0,1 } . ● a(n) = 2 * a(n - 1) + a(n - 3) + 6 for n >= 4. ●
► [A218009] 0,1,4,12,30,70,160,364,824,1848,4096,8976,19488,42016,90112,192448,409472,868224,1835008,3866880,8126976,17039872,35651584,74447872,155187200 ⋆ Binomial transform of A212831(n). ● a(n) = 2 ^ (n - 3) * (3 * n + 2) + (1 + i) ^ (n - 4) + (1 - i) ^ (n - 4), where i=sqrt(- 1) and n>1, with a(0)=0, a(1)=1. - _ Bruno Berselli _ , Oct 18 2012 ● a(n) = 6 * a(n - 1) - 14 * a(n - 2) + 16 * a(n - 3) - 8 * a(n - 4). ●
► [A162740] 1,4,12,30,72,168,390,900,2076,4782,11016,25368,58422,134532,309804,713406,1642824,3783048,8711526,20060676,46195260,106377294,244963080,564094968,1298984214 ⋆ Number of reduced words of length n in Coxeter group on 4 generators S _ i with relations (S _ i) ^ 2 = (S _ i S _ j) ^ 3 = I. ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 3 * a(n - 3) for n>3. ● a(n) = - 2 + ((- 7 + 2 * sqrt(13)) * (1 - sqrt(13)) ^ n + (7 + 2 * sqrt(13)) * (1 + sqrt(13)) ^ n) / (3 * sqrt(13) * 2 ^ (n - 1)) for n>0. (End) ●
► [A299053] 4,12,31,62,133,224,377,558,865,1304,1805,2462,3337,4280,5389,6726,8449,10264,12663,15294,18061,21200,24961,29166,34173 ⋆ Minimum value of the cyclic autocorrelation of first n primes. ● a(n) = Min _{ k=1..n } Sum _{ i =1..n } prime(i) * prime(1 + (i + k) mod n). ●
► [A037255] 0,1,4,12,31,70,141,259,442,711,1090,1606,2289,3172,4291,5685,7396,9469,11952,14896,18355,22386,27049,32407,38526 ⋆ For n weights, number of combinations when limited to two weights per pan. ● a(n) = (n ^ 4 - 2 * n ^ 3 + 7 * n ^ 2 + 2 * n) / 8. ●
► [A027658] 1,4,12,31,71,147,280,498,837,1342,2068,3081,4459,6293,8688,11764,15657,20520,26524,33859,42735,53383,66056,81030,98605 ⋆ a(n) = binomial(n + 2, 2) + binomial(n + 4, 5). ● a(n) = (n + 1) * (n + 2) * (60 + 12 * n + 7 * n ^ 2 + n ^ 3) / 120. (End) ● a(n) = Sum _{ j=1..2 } binomial(n + 2 * j, 3 * j - 1). ●
► [A129707] 0,0,1,4,12,31,73,162,344,707,1416,2778,5358,10188,19139,35582,65556,119825,217487,392286,703618,1255669,2230608,3946020,6954060 ⋆ Number of inversions in all Fibonacci binary words of length n. ● a(n) = 2 * a(n - 1) + a(n - 2) - 2 * a(n - 3) - a(n - 4) + F(n), a(0)=a(1)=0, a(2)=1, a(3)=4. ● a(n) = Sum _{ k=floor((n - 1) / 2)..n - 1 } k * (k + 1) / 2 * C(k,n - k - 1). - _ Vladimir Kruchinin _ , Sep 17 2020 ●
► [A232580] 0,0,0,1,4,12,31,74,168,369,792,1672,3487,7206,14788,30185,61356,124308,251199,506578,1019920,2050785,4119280,8267216,16580799 ⋆ Number of binary sequences of length n that contain at least one contiguous subsequence 011 . ● a(n) = (1 + 2 ^ n - (2 ^ (- n) * ((1 - sqrt(5)) ^ n * (- 2 + sqrt(5)) + (1 + sqrt(5)) ^ n * (2 + sqrt(5)))) / sqrt(5)). ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) - a(n - 3) + 2 * a(n - 4) for n > 3. (End) ● a(n) = 2 ^ n - Fibonacci(n + 3) + 1. - _ Ehren Metcalfe _ , Dec 27 2018 ●
► [A273387] 4,12,32,32,40,48,56,64,72,80,88,96,104,112,120,128,136,144,152,160,168,176,184,192,200 ⋆ First differences of number of active (ON,black) cells in n - th stage of growth of two - dimensional cellular automaton defined by "Rule 659", based on the 5 - celled von Neumann neighborhood. ● a(n) = 8 * (1 + n) for n>2. ● a(n) = 2 * a(n - 1) - a(n - 2) for n>4. ●
► [A369817] 4,12,32,55,108,154,256,333,500,616,864,1027,1372,1590,2048,2329,2916,3268,4000,4431,5324,5842,6912,7525,8788 ⋆ The fifth term of the greedy B _ n set of natural numbers. ● a(n) = floor((n + 3) / 2) * n ^ 2 + floor((3 * n + 2) / 2), proved in arXiv:2311.14021. ●
► [A348864] 0,4,12,32,70,162,350,800,1746,3950,8602,19164,41392,90846,194490,421568,895594,1922022,4057298,8638580,18140640,38378054,80244562,168877272,351827100 ⋆ a(n) is the number of multiplications required to compute the permanent of general n X n matrices using trellis method with normalization. ● a(n) = n * 2 ^ (n - 1) - ceiling(n / 2) * binomial(n, floor(n / 2)) + n ^ 2 - n (see Theorem 6, p. 11 in Kiah et al.). ●
► [A208903] 0,4,12,32,76,180,412,940,2108,4700,10364,22716,49404,106876,229884,492284,1049596,2229756,4720636,9964540,20975612,44046332,92282876,192950268,402669564 ⋆ The sum over all bitstrings b of length n with at least two runs of the number of runs in b not immediately followed by a longer run. ● a(n) = 2 ^ n * (2 + (n - 1) / 2 - (1 / 2) ^ (n - 1) - 2 (1 - (1 / 2) ^ floor(n / 2)) + (1 / 2) ^ (floor(n / 2) + 1) (1 + (- 1) ^ n)) - 2. ● a(n) = 5 * a(n - 1) - 6 * a(n - 2) - 6 * a(n - 3) + 16 * a(n - 4) - 8 * a(n - 5), a(1) = 0, a(2) = 4, a(3) = 12, a(4) = 32, a(5) = 76. ●
► [A139756] 0,0,1,4,12,32,80,192,448,1024,2304,5120,11264,24576,53248,114688,245760,524288,1114112,2359296,4980736,10485760,22020096,46137344,96468992 ⋆ Binomial transform of A004526. ● a(n) = 2 * a(n - 1) + 2 ^ (n - 2), n>=2. - _ Philippe Deléham _ , Mar 20 2013 ●
► [A001787] 0,1,4,12,32,80,192,448,1024,2304,5120,11264,24576,53248,114688,245760,524288,1114112,2359296,4980736,10485760,22020096,46137344,96468992,201326592 ⋆ a(n) = n * 2 ^ (n - 1). ● a(n) = Sum _{ k=1..n } k * binomial(n, k). - _ Benoit Cloitre _ , Dec 06 2002 ● a(n) = 2 * a(n - 1) + 2 ^ (n - 1). ● a(2 * n) = n * 4 ^ n, a(2 * n + 1) = (2 * n + 1)4 ^ n. ● a(n - 1) = (Sum { k=0..n } 2 ^ (n - k - 1) * C(n - k, k) * C(1,(k + 1) / 2) * (1 - (- 1) ^ k) / 2) - 0 ^ n / 4. - _ Paul Barry _ , Oct 15 2004 ● a(n) = Sum { k=0..floor(n / 2) } binomial(n, k)(n - 2k) ^ 2. - _ Paul Barry _ , May 13 2005 ● a(n) = n! * Sum { k=0..n } 1 / ((k - 1)!(n - k)!). - _ Paul Barry _ , Mar 26 2003 ●
► [A048776] 1,4,12,32,81,200,488,1184,2865,6924,16724,40384,97505,235408,568336,1372096,3312545,7997204,19306972,46611168,112529329,271669848,655869048,1583407968,3822685009 ⋆ First partial sums of A048739; second partial sums of A000129. ● a(n) = 2 * a(n - 1) + a(n - 2) + n + 1; a(0)=1, a(1)=4. ● a(n) = (((7 / 2 + (5 / 2) * sqrt(2)) * (1 + sqrt(2)) ^ n - (7 / 2 - (5 / 2) * sqrt(2)) * (1 - sqrt(2)) ^ n) / 2 * sqrt(2)) - (n + 3) / 2. ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) + a(n - 4). ●
► [A291038] 4,12,32,84,216,544,1348,3300,8000,19236,45936,109056,257604,605820,1419232,3313396,7711944,17900320,41445764,95746260,220735616,507934276,1166792160,2676017408,6128381316 ⋆ p - INVERT of (1,0,0,1,0,0,1,0,0,...), where p(S) = (1 - 2 S) ^ 2. ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) + 2 * a(n - 3) - 4 * a(n - 4) - a(n - 6) for n >= 7. ●
► [A120369] 4,12,32,87,238,649,1769,4820,13128,35744,97295,264783,720465,1960095,5332044,14503451,39447240,107283957,291762849,793424505,2157567407,5866897880,15952911029,43377066302,117942558396 ⋆ a(n) = smallest value of k such that n * k ^ (1 / n) >= (n + 1) * k ^ (1 / (n + 1)). ● a(n) = ceiling(((n + 1) / n) ^ ((n + 1) * n)). ●
► [A066536] 1,4,12,32,90,312,1288,5504,22608,88660,339064,1297056,5043376,19975256,80027280,321692928,1291650786,5177295432,20748447108,83279292960,335056780464,1351064867328,5456890474248,22063059606912 ⋆ Number of ways of writing n as a sum of n + 1 squares. ● a(n) equals the coefficient of x ^ n in the (n + 1) - th power of Jacobi theta _ 3(x) where theta _ 3(x) = 1 + 2 * Sum _{ n>=1 } x ^ (n ^ 2). - _ Paul D. Hanna _ , Oct 26 2009 ●
► [A225894] 4,12,33,78,162,304,527,858,1328,1972,2829,3942,5358,7128,9307,11954,15132,18908,23353,28542,34554,41472,49383,58378,68552 ⋆ Number of n X 2 binary arrays whose sum with another n X 2 binary array containing no more than a single 1 has rows and columns in lexicographically nondecreasing order. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●
► [A227554] 4,12,33,81,179,362,680,1201,2014,3232,4995,7473,10869,15422,21410,29153,39016,51412,66805,85713,108711,136434,169580,208913,255266 ⋆ Number of n X 2 0,1 arrays indicating 2 X 2 subblocks of some larger (n + 1) X 3 binary array having nonzero determinant, with rows and columns of the latter in lexicographically nondecreasing order. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. ●
► [A343561] 4,12,33,86,216,528,1264,2976,6912,15872,36096,81408,182272,405504,897024,1974272,4325376,9437184,20512768,44433408,95944704,206569472,443547648,950009856,2030043136 ⋆ 2nd row of A341867: a(n) = (n ^ 2 + 15 * n + 32) * 2 ^ (n - 3). ● a(n) = Sum _{ k=0..n } binomial(n,k) * (k ^ 2 + 7 * k + 8) / 2. ●
► [A104747] 1,4,12,33,87,222,550,1327,3129,7236,16464,36957,82027,180346,393354,852123,1835181,3932352,8388820,17826025,37748991,79692054,167772462,352321863,738197857 ⋆ a(n) = (n - 3) * 2 ^ n + n * (n + 3) / 2 + 3. ● a(n) = + 7 * a(n - 1) - 19 * a(n - 2) + 25 * a(n - 3) - 16 * a(n - 4) + 4 * a(n - 5). G.f. - x * (1 - 3 * x + 3 * x ^ 2) / ((2 * x - 1) ^ 2 * (x - 1) ^ 3). - _ R. J. Mathar _ , Oct 30 2011 ● a(n) = Sum _{ i=0..n - 1 } (2 ^ (n - i) - 1) * (2 ^ i - i). - _ J. M. Bergot _ , Sep 13 2017 ● a(n) = Sum _{ k=0..n } Sum _{ i=1..n } (i - k) * C(n - k,i). - _ Wesley Ivan Hurt _ , Sep 19 2017 ●
► [A070050] 4,12,33,87,223,559,1375,3327,7935,18687,43519,100351,229375,520191,1171455,2621439,5832703,12910591,28442623,62390271,136314879,297647007,643825663,1392508927,3003121663 ⋆ Number of Bottleneck - Monge matrices with 2 rows. In the formula below, P = 2. ● a(P, N) = 1 + Sum _{ n=1..N, p =1..P } (C(N, n) * C(P, p) * K(p, n)), ● a(n) = (n ^ 2 + 3 * n + 16) * 2 ^ (n - 3) - 1. - _ Vaclav Kotesovec _ , Aug 15 2013 ● a(n) = 7 * a(n - 1) - 18 * a(n - 2) + 20 * a(n - 3) - 8 * a(n - 4) for n>4. ●
► [A293064] 0,0,0,1,4,12,33,88,232,609,1596,4180,10945,28656,75024,196417,514228,1346268,3524577,9227464,24157816,63245985,165580140,433494436,1134903169 ⋆ Number of vertices of type B at level n of the hyperbolic Pascal pyramid P P _ (4,5). ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) + a(n - 3), n >= 4. ● a(n) = - 1 + (2 ^ (- n) * ((3 - sqrt(5)) ^ n * (2 + sqrt(5)) + (- 2 + sqrt(5)) * (3 + sqrt(5)) ^ n)) / sqrt(5) for n>0. ●
► [A027941] 0,1,4,12,33,88,232,609,1596,4180,10945,28656,75024,196417,514228,1346268,3524577,9227464,24157816,63245985,165580140,433494436,1134903169,2971215072,7778742048 ⋆ a(n) = Fibonacci(2 * n + 1) - 1. ● a(n) = Sum _{ i =1..n } binomial(n + i, n - i). - _ Benoit Cloitre _ , Oct 15 2002 ● a(n) = Sum _{ k=1..n } F(2 * k), i.e., partial sums of A001906. - _ Benoit Cloitre _ , Oct 27 2003 ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) + a(n - 3) with n>=2, a(- 1)=0, a(0)=0, a(1)=1. ● a(n) = 3 * a(n - 1) - a(n - 2) + 1 with n>=1, a(- 1)=0, a(0)=0. ● a(n) = 2 * a(n - 1) + (Sum _{ k=1..n - 2 } a(k)) + n. - _ Jon Perry _ , Sep 01 2012 ● a(n) = S(n, 3) - S(n - 1, 3) - 1, n >= 0, with Chebyshev's S - polynomials (see A049310), where S(- 1, x) = 0. - _ Wolfdieter Lang _ , Aug 28 2014 ●
► [A219092] 1,4,12,33,90,244,665,1808,4914,13359,36315,98715,268337,729416,1982759,5389698,14650719,39824784,108254987,294267566,799902177,2174359553,5910522063,16066464720,43673179097 ⋆ a(n) = floor(e ^ (n + 1 / 2)). ● a(n) = [e ^ (n + 1 / 2)]. ●
► [A135254] 0,0,1,4,12,33,90,252,729,2160,6480,19521,58806,176904,531441,1595052,4785156,14353281,43053282,129146724,387420489,1162241784,3486725352,10460235105,31380882462 ⋆ Binomial transform of A131666. ● a(n) = 6 * a(n - 1) - 12 * a(n - 2) + 9 * a(n - 3). (End) ●
► [A248873] 1,4,12,34,93,255,693,1884,5122,13923,37847,102880,279658,760190,2066413,5617093,15268842,41505016,112822331,306682894,833650539,2266097111,6159890600,16744318683,45515777207 ⋆ a(n) = floor(e ^ (n + 1) - e ^ n). ● a(n) = floor(e ^ (n + 1) - e ^ n). ●

► [A293005] 0,1,4,12,34,94,258,706,1930,5274,14410,39370,107562,293866,802858,2193450,5992618,16372138,44729514,122203306,333865642,912137898,2492007082,6808289962,18600594090 ★ Number of associative, quasitrivial, and order - preserving binary operations on the n - element set { 1,...,n } . ● a(0) = 0, a(1) = 1, a(n + 2) - 2 * a(n + 1) - 2 * a(n) = 2. ● a(n) = (- 4 - (1 - sqrt(3)) ^ n * (- 2 + sqrt(3)) + (1 + sqrt(3)) ^ n * (2 + sqrt(3))) / 6. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>2. ●

► [A115390] 0,0,1,4,12,34,96,272,772,2192,6224,17672,50176,142464,404496,1148480,3260864,9258528,26287616,74638080,211918912,601698560,1708394752,4850622592,13772308480 ★ Binomial transform of tribonacci sequence A000073. ● a(n) = sum(sum(binomial(j - 1,k - 1) * 2 ^ (j - k) * binomial(n - j + k - 1,2 * k - 1),j,k,n - k),k,1,n). - _ Vladimir Kruchinin _ , Aug 18 2010 ●

► [A005056] 1,4,12,34,96,274,792,2314,6816,20194,60072,179194,535536,1602514,4799352,14381674,43112256,129271234,387682632,1162785754,3487832976,10462450354,31385253912,94151567434,282446313696 ★ a(n) = 3 ^ n + 2 ^ n - 1. ● a(n) = 5 * a(n - 1) - 6 * a(n - 2) - 2 for n > 1, a(0)=1, a(1)=4. - _ Vincenzo Librandi _ , Dec 31 2010 ● a(n) = 6 * a(n - 1) - 11 * a(n - 2) + 6 * a(n - 3) for n > 2, a(0)=1, a(1)=4, a(2)=12. - _ Rick L. Shepherd _ , Aug 07 2017 ●

► [A014143] 1,4,12,34,98,294,919,2974,9891,33604,116103,406614,1440025,5147876,18550572,67310938,245716094,901759950,3325066996,12312494462,45766188948,170702447074,638698318850,2396598337950 ★ Partial sums of A014138. ● a(n) = 2 * Sum _{ k=0..n } Sum _{ j=0..k } C(2 * j + 1,j) / (j + 2). - _ Vaclav Kotesovec _ , Oct 27 2012 ●

► [A361476] 0,1,4,12,34,99,308,1040,3820,15197,65060,297828,1449742,7468527,40555732,231335944,1381989864,8623700793,56078446596,379233142780,2662013133274,19362917621979,145719550012276,1133023004941248,9090156910550084 ★ Antidiagonal sums of A361475. ● a(n) = Sum _{ k=2..n + 2 } (k ^ (n - k + 2) - 1) / (k - 1). ●

► [A077843] 1,1,4,12,34,100,292,852,2488,7264,21208,61920,180784,527824,1541056,4499328,13136416,38353600,111978688,326937408,954539392,2786910976,8136775552,23756451840,69360276736 ★ Expansion of (1 - x) / (1 - 2 * x - 2 * x ^ 2 - 2 * x ^ 3). ● a(n) = sum(k=1..n, sum(i=k..n,(sum(j=0..k, binomial(j, - 3 * k + 2 * j + i) * 2 ^ (- 2 * k + j + i) * binomial(k,j))) * binomial(n + k - i - 1,k - 1))). - _ Vladimir Kruchinin _ , May 05 2011 ●

► [A318941] 0,0,1,4,12,35,99,274,747,2015,5394,14359,38067,100610,265299,698359,1835922,4821695,12653739,33188674,87010587,228039695,597501714,1565251879,4099826787 ★ Number of Dyck paths with n nodes and altitude 2. ● a(n) = 2 ^ (- 3 - n) * (- 3 * 4 ^ n + 4 * (3 - sqrt(5)) ^ n * (3 + sqrt(5)) - 4 * (- 3 + sqrt(5)) * (3 + sqrt(5)) ^ n) for n>2. ● a(n) = 5 * a(n - 1) - 7 * a(n - 2) + 2 * a(n - 3) n>5. ●

► [A090328] 1,4,12,35,103,306,914,2737,8205,24608,73816,221439,664307,1992910,5978718,17936141,53808409,161425212,484275620,1452826843,4358480511,13075441514,39226324522,117678973545,353036920613 ★ Number of rules of a context - free grammar in Chomsky normal form that generates all permutations of n symbols. ● a(n) = (5 * 3 ^ n) / 12 + n / 2 - 3 / 4. ● a(n) = 5 * a(n - 1) - 7 * a(n - 2) + 3 * a(n - 3). - _ Colin Barker _ , Jan 15 2015 ●

► [A095735] 4,12,36,64,72,104,144,180,216,240,276,324,396,420,468,480,504,600,648,672 ★ Mersenne - like sequence factors of complex imaginary square type 2 * Prime[m] * n - 1. ● a(n) =if (2 ^ n - 1) / (2 * n * Prime[m] - 1)=Integer then n ●

► [A307182] 0,0,0,0,4,12,36,72,144,240,400,600,900,1260,1764,2352,3136,4032,5184,6480,8100,9900,12100,14520,17424 ★ Crossing number of the n - crown graph (conjectured). ● a(n) = (2 * (n - 4) * n * (n ^ 2 - 4 * n + 5) - (2 * n ^ 2 - 8 * n + 9) * (- 1) ^ n + 9) / 32. ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 6 * a(n - 3) + 6 * a(n - 5) - 2 * a(n - 6) - 2 * a(n - 7) + a(n - 8). ●

► [A063810] 1,4,12,36,82,164,294,476,724,1052,1464,1972,2590,3324,4186,5188,6336,7644,9124,10780,12626,14676,16934,19412,22124 ★ Growth series for Heisenberg group. ● a(n) = (c _ n + 31 * n ^ 3 - 57 * n ^ 2 + 105 * n) / 18 where c _ n = - 7, - 14, 9, - 16, - 23, 18, - 7, - 32, 9, 2, - 23, 0 for n >= 1, c _{ n + 12 } = c _ n. - _ R. J. Mathar _ , Sep 27 2016 ●

► [A261584] 1,4,12,36,92,228,540,1236,2748,6004,12876,27252,57036,118308,243564,498564,1015484,2060484,4167804,8409588,16934748,34049940,68378220,137185428,275026476 ★ Expansion of Product _{ k>=1 } (1 + 2 * x ^ k) / (1 - 2 * x ^ k). ● a(n) = c * 2 ^ n, where c = 1 / (A048651 * A083864) = 2 * Product _{ j>=1 } (2 ^ j + 1) / (2 ^ j - 1) = 16.511975871556500131088281698864546253054003233576460691207505127256745 6... ●

► [A084776] 1,4,12,36,100,300,776,2412,6304,19036,50952,148896,393452,1211444,3167004,9672772,25295248,76084796,200590424,608621376,1617201648,4908511140,12658776540,38907904188,102775961200 ★ a(n) = sum of absolute - valued coefficients of (1 + 2 * x - x ^ 2) ^ n. ● a(n) = Sum _{ k=0..2 * n } abs(f(n, k)), where f(n, k) = (sqrt(2) - 1) ^ k * Sum _{ j=0..k } binomial(n, j) * binomial(n, k - j) * (- 1) ^ j * (1 + sqrt(2)) ^ (2 * j). - _ G. C. Greubel _ , Jun 03 2023 ●

► [A291732] 4,12,36,104,288,780,2080,5472,14240,36736,94080,239440,606144,1527360,3833024,9584768,23890944,59380160,147207168,364084224,898569216,2213388288,5442392064,13360097536,32746992640 ★ p - INVERT of (1,0,1,0,0,0,0,...), where p(S) = (1 - 2 S) ^ 2. ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) + 4 * a(n - 3) - 8 * a(n - 4) - 4 * a(n - 6) for n >= 7. ●

► [A291264] 4,12,36,104,292,804,2180,5840,15492,40764,106532,276792,715556,1841748,4722180,12066208,30737924,78088812,197892388,500374024,1262618148,3180066180,7995639940,20071580784,50312160388 ★ p - INVERT of (0,1,0,1,0,1,...), where p(S) = (1 - 2 S) ^ 2. ● a(n) = 4 * a(n - 1) - 2 * a(n - 2) - 4 * a(n - 3) - a(n - 4) for n >= 5. ● a(n) = ((1 - sqrt(2)) ^ (1 + n) * (2 - 3 * sqrt(2) + 2 * n) + (1 + sqrt(2)) ^ (1 + n) * (2 + 3 * sqrt(2) + 2 * n)) / 4. - _ Colin Barker _ , Aug 26 2017 ●

► [A290380] 1,4,12,36,105,306,889,2584,7515,21880,63778,186132,543855,1590876,4658580,13655472,40065243,117654876,345786396,1017040380,2993498739,8816790906,25984489545,76625467128,226085062525 ★ Analog of Motzkin sums for Coxeter type D. ● a(n) = Sum _{ i=1..n / 2 } (n - 2) / i * binomial(2 * i - 2, i - 1) * binomial(n - 2, 2 * i - 2). ● a(n) = (n - 2) * hypergeom([1 - n / 2, 3 / 2 - n / 2], [2], 4). ● a(n) = (- 1) ^ n (n - 2) * hypergeom([2 - n, 3 / 2], [3], 4). ●

► [A163315] 1,4,12,36,108,318,936,2760,8136,23976,70662,208260,613788,1808964,5331420,15712878,46309320,136483800,402247944,1185513624,3493970742,10297504260,30349021740,89445276900,263615006412 ★ Number of reduced words of length n in Coxeter group on 4 generators S _ i with relations (S _ i) ^ 2 = (S _ i S _ j) ^ 5 = I. ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) + 2 * a(n - 3) + 2 * a(n - 4) - 3 * a(n - 5). - _ Wesley Ivan Hurt _ , May 10 2021 ●

► [A164353] 1,4,12,36,108,324,972,2910,8712,26088,78120,233928,700488,2097576,6281094,18808452,56321052,168650820,505017180,1512250884,4528366236,13559985966,40604758920,121589096856,364092999624 ★ Number of reduced words of length n in Coxeter group on 4 generators S _ i with relations (S _ i) ^ 2 = (S _ i S _ j) ^ 7 = I. ● a(n) = - 3 * a(n - 7) + 2 * Sum _{ k=1..6 } a(n - k). - _ Wesley Ivan Hurt _ , May 11 2021 ●

► [A164697] 1,4,12,36,108,324,972,2916,8742,26208,78576,235584,706320,2117664,6349104,19035648,57071982,171111132,513019140,1538115228,4611520836,13826093148,41452886916,124282529820,372619336494 ★ Number of reduced words of length n in Coxeter group on 4 generators S _ i with relations (S _ i) ^ 2 = (S _ i S _ j) ^ 8 = I. ● a(n) = - 3 * a(n - 8) + 2 * Sum _{ k=1..7 } a(n - k). - _ Wesley Ivan Hurt _ , May 11 2021 ●

► [A166468] 1,4,12,36,108,324,972,2916,8748,26244,78732,236196,708582,2125728,6377136,19131264,57393360,172178784,516532464,1549585728,4648722192,13946061600,41837869872,125512664832,376535160174 ★ Number of reduced words of length n in Coxeter group on 4 generators S _ i with relations (S _ i) ^ 2 = (S _ i S _ j) ^ 12 = I. ● a(n) = - 3 * a(n - 12) + 2 * Sum _{ k=1..11 } a(n - k). - _ Wesley Ivan Hurt _ , May 06 2021 ●

► [A052156] 1,1,4,12,36,108,324,972,2916,8748,26244,78732,236196,708588,2125764,6377292,19131876,57395628,172186884,516560652,1549681956,4649045868,13947137604,41841412812,125524238436 ★ Number of compositions of n into 2 * j - 1 kinds of j's for all j>=1. ● a(n) = 4 * 3 ^ (n - 2); n >= 2; a(0) = 1; a(1) = 1. ● a(n) = 3 * a(n - 1) + (- 1) ^ n * C(2, 2 - n). ● a(n) = (- 4 * n + 9) * a(n - 1) + 3 * Sum _{ k=1..n - 1 } a(k) * a(n - k) if n>1. - _ Michael Somos _ , Jul 23 2011 ●

► [A003946] 1,4,12,36,108,324,972,2916,8748,26244,78732,236196,708588,2125764,6377292,19131876,57395628,172186884,516560652,1549681956,4649045868,13947137604,41841412812,125524238436,376572715308 ★ Expansion of (1 + x) / (1 - 3 * x). ● a(n) = floor(4 * 3 ^ (n - 1)). - _ Michael Somos _ , Jun 18 2002 ● a(n + 1) = (((1 + sqrt(- 11)) / 2) ^ n + ((1 - sqrt(- 11)) / 2) ^ n) ^ 2 - (((1 + sqrt(- 11)) / 2) ^ n - ((1 - sqrt(- 11)) / 2) ^ n) ^ 2. - _ Raphie Frank _ , Dec 07 2015 ●

► [A177881] 0,0,1,4,12,36,109,328,984,2952,8857,26572,79716,239148,717445,2152336,6457008,19371024,58113073,174339220,523017660,1569052980,4707158941,14121476824,42364430472 ★ Partial sums of round(3 ^ n / 10). ● a(n) = round((3 * 3 ^ n - 3) / 20) = round((3 * 3 ^ n - 5) / 20). ● a(n) = floor((3 * 3 ^ n - 1) / 20). ● a(n) = ceiling((3 * 3 ^ n - 9) / 20). ● a(n) = a(n - 4) + 4 * 3 ^ (n - 3), n > 3. ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) + 4 * a(n - 3) - 3 * a(n - 4), n > 3. ● a(n) = (3 ^ (n + 1) + (3 - (- 1) ^ n) * i ^ (n * (n + 1)) - 5) / 20, where i = sqrt(- 1) - _ Bruno Berselli _ , May 12 2021 ●

► [A290899] 0,1,4,12,36,110,332,983,2876,8380,24428,71357,208868,612178,1795228,5264684,15436060,45248195,132616392,388652536,1138993032,3338020181,9782903524,28671786116,84032220964 ★ p - INVERT of the positive integers, where p(S) = 1 - S ^ 2 - S ^ 4. ● a(n) = 8 * a(n - 1) - 27 * a(n - 2) + 52 * a(n - 3) - 63 * a(n - 4) + 52 * a(n - 5) - 27 * a(n - 6) + 8 * a(n - 7) - a(n - 8). ●

► [A290905] 0,1,4,12,36,111,344,1064,3288,10161,31404,97060,299980,927135,2865456,8856144,27371312,84595361,261455316,808068924,2497464564,7718808463,23856195976,73731339384,227878342920 ★ a(n) = (1 / 2) * A290904(n). ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ●

► [A279277] 1,4,12,37,110,327,968,2864,8469,25040,74029,218856,647008,1912753,5654670,16716883,49420052,146100276,431915561,1276869920,3774804441,11159436284,32990587972,97529916957,288327225550 ★ Composition of Lucas numbers A000032 with Fibonacci numbers A000045. ● a(n) = 3 * a(n - 1) + a(n - 2) - 3 * a(n - 3) - a(n - 4), a(1)=1, a(2)=4, a(3)=12, a(4)=46. ●

► [A033130] 1,4,12,37,112,336,1009,3028,9084,27253,81760,245280,735841,2207524,6622572,19867717,59603152,178809456,536428369,1609285108,4827855324,14483565973,43450697920,130352093760,391056281281 ★ Base - 3 digits are, in order, the first n terms of the periodic sequence with initial period 1,1,0. ● a(n) = 3 * a(n - 1) + a(n - 3) - 3 * a(n - 4). ●

► [A099098] 1,1,4,12,37,114,351,1081,3329,10252,31572,97229,299426,922111,2839729,8745217,26931732,82938844,255418101,786584466,2422362079,7459895657,22973462017,70748973084,217878227876 ★ Quadrisection of a Padovan sequence. ● a(n)=sum { k=0..2n, binomial(k, 4n - 2k) } ; ● a(n)=2a(n - 1) + 3a(n - 2) + a(n - 3); ● a(n) = Sum [k=0..n, C(2n - k, 2k)]. ●

► [A192907] 0,1,4,12,37,116,364,1141,3576,11208,35129,110104,345096,1081625,3390108,10625524,33303293,104381612,327160468,1025410221,3213915568,10073288784,31572437041,98956636912 ★ Coefficient of x in the reduction by (x ^ 2 -> x + 1) of the polynomial p(n,x) defined below at Comments. ● a(n) = 3 * a(n - 1) + a(n - 3) + a(n - 4). ●

► [A047088] 1,4,12,37,118,380,1229,3989,12987,42394,138709,454768,1493690,4913969,16189534,53407853,176397299,583242159,1930349545,6394665589,21201345460,70346920007,233581374587,776105485336,2580316142887 ★ a(n) = A047080(2 * n + 1, n + 2). ● a(n + 4) = ((16 * n ^ 5 + 324 * n ^ 4 + 2624 * n ^ 3 + 10509 * n ^ 2 + 20655 * n + 15930) * a(n + 3) - (8 * n ^ 5 + 148 * n ^ 4 + 1090 * n ^ 3 + 3953 * n ^ 2 + 7365 * n + 5994) * a(n + 2) + (4 * n ^ 4 + 84 * n ^ 3 + 701 * n ^ 2 + 2451 * n + 2646) * a(n + 1) - (n - 3) * (n + 6) * (2 * n + 7) * (2 * n ^ 2 + 23 * n + 72) * a(n)) / ((n + 3) * (n + 6) * (2 * n + 5) * (2 * n ^ 2 + 19 * n + 51)). - _ G. C. Greubel _ , Oct 31 2022 ●

► [A280891] 1,4,12,37,118,387,1298,4433,15366,53924,191216,684114,2466428,8951945,32683230,119949945,442281030,1637618400,6086481720,22699003830,84918443220,318593346630,1198421583684,4518886787802,17077448924828 ★ Number of certain noncrossing set partitions. ● a(n) = C(n + 1) - C(n - 1) where C(n) is the n - th Catalan number (A000108). - _ Joel B. Lewis _ , Apr 19 2017 ●

► [A362886] 1,1,4,12,37,123,440,1686,6901,30085,139212,681336,3515397,19064135,108370384,644142962,3994439189,25789465377,173033812804,1204425693988,8683782562597,64757730613875,498827437211176,3964154812486062,32463601480302005 ⋆ Antidiagonal sums of A362885. ● a(n) = Sum _{ k=0..n } (1 + 2 * (n - k)) * k ^ (n - k). ●
► [A183159] 1,1,4,12,38,90,220,460,1018,2022,4304,8376,17566,33922,70756,136260,283682,545790,1135576,2184112,4543366,8737626,18174764,34951932,72700618 ⋆ The number of partial isometries (of an n - chain) of fix zero (fix of alpha = 0)). Equivalently, the number of partial derangement isometries (of an n - chain). ● a(2n) = (13 * 4 ^ n - 12 * n ^ 2 - 18 * n - 10) / 3, n>=0. ● a(2n + 1) = (25 * 4 ^ n - 12 * n ^ 2 - 30 * n - 22) / 3, n>=0. ● a(n) = (51 * 2 ^ n + (- 2) ^ n - 40) / 12 - n * (n + 3). - _ Jean - François Alcover _ , Nov 22 2017 ●
► [A289809] 1,4,12,38,114,354,1076,3311,10120,31043,95044,291284,892242,2733804,8375092,25659298,78610859,240840496,737856017,2260561368,6925635380,21217961710,65005083598,199154984626,610147638720 ⋆ p - INVERT of (1,2,1,3,1,4,1,5,...) (A133622), where p(S) = 1 - S - S ^ 2. ● a(n) = a(n - 1) + 7 * a(n - 2) + a(n - 3) - 9 * a(n - 4) - 3 * a(n - 5) + 5 * a(n - 6) + a(n - 7) - a(n - 8).. ●
► [A014345] 4,12,38,118,362,1082,3166,8910,24426,64226,165262,413418,1021362,2490686,6009150,14401410,34098042,80281962,187356750,432549154,992941250,2256712462,5088826238,11408805862,25425739346 ⋆ Exponential convolution of primes with themselves. ● a(n) = Sum _{ j=0..n } binomial(n,j) * prime(j + 1) * prime(n - j + 1). - _ G. C. Greubel _ , Jun 07 2019 ●
► [A006192] 1,4,12,38,125,414,1369,4522,14934,49322,162899,538020,1776961,5868904,19383672,64019918,211443425,698350194,2306494009,7617832222,25159990674,83097804242,274453403399,906458014440 ⋆ Number of nonintersecting (or self - avoiding) rook paths joining opposite corners of 3 X n board. ● a(n) = 4 * a(n - 1) - 3 * a(n - 2) + 2 * a(n - 3) + a(n - 4) with a(0) = 0, a(1) = 1, a(2) = 4 and a(3) = 12. - _ Henry Bottomley _ , Sep 05 2001 ●
► [A122920] 1,1,4,12,39,129,436,1498,5218,18386,65420,234734,848403,3086001,11288412,41499354,153247278,568188606,2114334312,7893906144,29561195238,111007927386,417918303144,1577061975492,5964172347604 ⋆ Diagonal sums of number triangle A122919. ● a(n) = 9 / (16 * (- 2) ^ n) + 3 * (2 * n + 4)! * hypergeom([1,n + 5 / 2,n + 3], [n + 2,n + 5], - 8) / ((n + 1)! * (n + 4)!). ● a(n) = 9 / (16 * (- 2) ^ n) + 8 * 2 ^ n * (2 * n + 5)!! * hypergeom([1,n + 7 / 2], [n + 5], - 8) / (n + 4)! - 4 * 2 ^ n * (2 * n + 3)!! * hypergeom([1,n + 5 / 2], [n + 4], - 8) / (n + 3)!. (End) ●
► [A087206] 1,4,12,40,128,416,1344,4352,14080,45568,147456,477184,1544192,4997120,16171008,52330496,169345024,548012032,1773404160,5738856448,18571329536,60098084864,194481487872,629355315200,2036636581888 ⋆ a(n) = 2 * a(n - 1) + 4 * a(n - 2); with a(0)=1, a(1)=4. ● a(n) = (1 - sqrt(5)) ^ n * (1 / 2 - 3 * sqrt(5) / 10) + (1 + sqrt(5)) ^ n * (1 / 2 + 3 * sqrt(5) / 10). ● a(n) = 2 ^ n * Fibonacci(n + 2). - _ Paul Barry _ , Mar 22 2004 ● a(n) = ((1 + sqrt(5)) ^ n - (1 - sqrt(5)) ^ n) / sqrt(80). Offset 2. a(4)=12. - Al Hakanson (hawkuu(AT)gmail.com), Apr 11 2009 ●
► [A275863] 1,1,4,12,40,130,425,1387,4529,14789,48294,157707,515002,1681772,5491935,17934267,58565504,191249427,624537327,2039466884,6660010527,21748693527,71021760134,231926134152,757369735715 ⋆ Floor(r * a(n - 1)) + floor(r * a(n - 2)), where r = 5 / 2, a(0) = 1, a(1) = 1. ● a(n) = floor(r * a(n - 1)) + floor(r * a(n - 2)), where r = 5 / 2, a(0) = 1, a(1) = 1. ●
► [A081875] 1,4,12,40,130,480,1722,6480,24336,92520,352726,1352640,5200312,20060040,77559060,300546720,1166803126,4537592928,17672631918,68923357200,269128940724,1052049834616,4116715363822,16123803207552 ⋆ a(n) = Sum _{ d|n } phi(n / d) * C(2 * d,d) / 2. ● a(n) = Sum _{ k=1..n } C(2 * gcd(n,k),gcd(n,k)) / 2. ●
► [A100320] 1,4,12,40,140,504,1848,6864,25740,97240,369512,1410864,5408312,20801200,80233200,310235040,1202160780,4667212440,18150270600,7069052760 0,275693057640,1076515748880,4208197927440,16466861455200 ⋆ A Catalan transform of (1 + 2 * x) / (1 - 2 * x). ● a(n) = 4 * binomial(2 * n - 1, n) - 3 * 0 ^ n. ● a(n) = binomial(2 * n, n) * (4 * 2 ^ (n - 1) - 0 ^ n) / 2 ^ n. ● a(n) = Sum _{ j=0..n } Sum _{ k=0..n } C(2 * n, n - k) * ((2 * k + 1) / (n + k + 1)) * C(k, j) * (- 1) ^ (j - k) * (4 * 2 ^ (j - 1) - 0 ^ j). ● a(n) = [x ^ n] (1 + 2 * x) / (1 - x) ^ (n + 1). - _ Ilya Gutkovskiy _ , Oct 12 2017 ● a(n) = 2 * (2 * n - 1) * a(n - 1) / n. - _ G. C. Greubel _ , Feb 01 2023 ●
► [A064649] 1,4,12,40,140,816,5082,40800,363258,3632880,39916910,479052528,6227020956,87178936992,1307674429440,20922800222848,355687428096272,6402373892575992,121645100408832342,2432902011892837920 ⋆ Row sums of the table A047916. ● a(n) = Sum _{ d|n } phi(n / d) * (n / d) ^ d * d!. - _ Michel Marcus _ , Mar 06 2016 ●
► [A028403] 4,12,40,144,544,2112,8320,33024,131584,525312,2099200,8392704,33562624,134234112,536903680,2147549184,8590065664,34360000512,137439477760,549756862464,2199025352704,8796097216512,35184380477440,140737505132544,562949986975744 ⋆ Number of types of Boolean functions of n variables under a certain group. ● a(n) = 6 * a(n - 1) - 8 * a(n - 2). ●
► [A343517] 1,4,12,42,130,506,1722,6622,24426,93427,352726,1359388,5200312,20097156,77567064,300787366,1166803126,4539197723,17672631918,68933307843,269129530770,1052113994340,4116715363822,16124224571368,63205303313900 ⋆ a(n) = Sum _{ 1 <= x _ 1 <= x _ 2 <= ... <= x _ n <= n } gcd(x _ 1, x _ 2, ... , x _ n, n). ● a(n) = Sum _{ d|n } phi(n / d) * binomial(d + n - 1, n). ● a(n) = [x ^ n] Sum _{ k >= 1 } phi(k) * x ^ k / (1 - x ^ k) ^ (n + 1). ●
► [A100217] 1,1,4,12,42,149,543,2007,7501,28265,107196,408653,1564506,6010964,23164467,89501021,346588092,1344804060,5227147969,20349230347,79330194097,309653982738,1210071825851,4733665388134,18535196846866 ⋆ Diagonal sums of a binomial number triangle. ● a(n)=sum { k=0..floor(n / 2), binomial(2n - 3k - 1, n - 2k) } . ●
► [A220881] 1,1,4,12,43,143,504,1768,6310,22610,81752,297160,1086601,3991995,14732720,54587280,202997670,757398510,2834510744,10637507400,40023636310,150946230006,570534578704,2160865067312,8199711378716 ⋆ Number of nonequivalent dissections of an n - gon into n - 3 polygons by nonintersecting diagonals up to rotation. ● a(n) = (1 / (2n - 4)) Sum _{ d |(2n - 4, n) } phi(d) * binomial((2n - 4) / d, n / d) for n >= 4. - _ Wouter Meeussen _ , Aug 03 2002 ●
► [A320643] 0,0,0,0,0,4,12,44,137,408,1190,3416,9730,27560,78148,221250,627960,1784038,5081154,14496956,41455409,118764600,340919744,980315700,2823696150 ⋆ Number of chiral pairs of color patterns (set partitions) in a cycle of length n using exactly 3 colors (subsets). ● a(n) = - Ach(n,k) / 2 + (1 / 2n) * Sum _{ d|n } phi(d) * A(d,n / d,k), where k=3 is number of colors or sets, Ach(n,k) = [n>=0 & n<2 & n==k] + [n>1] * (k * Ach(n - 2,k) + Ach(n - 2,k - 1) + Ach(n - 2,k - 2)), and A(d,n,k) = [n==0 & k==0] + [n>0 & k>0] * (k * A(d,n - 1,k) + Sum _{ j|d } A(d,n - 1,k - j)). ●
► [A188312] 1,1,4,12,45,174,709,2978,12825,56303,251060,1133943,5176926,23851690,110759081,517853840,2435786531,11517940357,54722081630,261089977806,1250479470053,6009884614944,28975052979797,140098515402139,679189779433800 ⋆ Expansion of (1 / (1 - x ^ 2)) * c(x / ((1 - x) * (1 - x ^ 2))) where c(x) is the g.f. of A000108. ● a(n) = a(n - 1) + Sum _{ i=0..n - 1) a(i) * a(n - 1 - i) + (- 1) ^ n. - _ Vladimir Kruchinin _ , May 03 2018 ● a(n) = Sum _{ i=0..n } Sum _{ k=1..n - i } (- 1) ^ (n - k - i) * C(k + i - 1,k - 1) * C(2 * k + i - 2,k + i - 1) * C(n - i - 1,n - k - i) / k. - _ Vladimir Kruchinin _ , May 03 2018 ● a(n) = Sum _{ i=0..n } (- 1) ^ (n - i) * hypergeom([(i + 1) / 2, i / 2 + 1, i - n], [1, 2], 4). - _ Peter Luschny _ , May 03 2018 ●
► [A101225] 1,4,12,46,194,977,5492,33666,220068,1513371,10833076,80104927,608455060,4726881850,37431015268,301327263751,2460711566651,20348625806080,170149286304116,1436870802519360,12241980697771924,105136072207222852,909475787902559408,7919305232077304848 ⋆ Numbers formed by the third nesting of pi(10 ^ n). ● a(n) = pi(pi(pi(10 ^ n))) where pi(x) is the number of primes <= x. ●
► [A000775] 1,4,12,46,220,1268,8568,66456,582048,5681952,61174080,720089280,9199906560,126783809280,1874605662720,29601115891200,497155992883200,8849184886886400,166399076525875200,3296032301811916800,68596838245232640000,1496490349337948160000 ⋆ a(n) = n! * (n + 1 + 2 * Sum _{ k=1...n } 1 / k). ● a(0)=1, a(n + 1) = (n + 1) * a(n) + (n + 3) * n! for n > 0. - _ Sean A. Irvine _ , Jun 10 2011 ●
► [A282023] 1,4,12,48,144,576,1728,6912,20736,82944,248832,995328,2985984,11943936,35831808,143327232,429981696,1719926784,5159780352,20639121408,61917364224,247669456896,743008370688,2972033482752,8916100448256 ⋆ Start with 1; multiply alternately by 4 and 3. ● a(n) = 2 ^ n * 3 ^ (n / 2) for n even. ● a(n) = 2 ^ (n + 1) * 3 ^ ((n - 1) / 2) for n odd. ● a(n) = 12 * a(n - 2) for n>1. ●
► [A019309] 1,4,12,48,180,720,2832,11328,45132,180528,721392,2885568,11539440,46157760,184619712,738478848,2953870260,11815481040,47261743632,189046974528,756187176720,3024748706880,12098991941952 ⋆ Number of ”bifix - free” words of length n over a four - letter alphabet. ● a(2n + 1) = 4a(2n); a(2n) = 4a(2n - 1) - a(n). ●
► [A151483] 1,1,4,12,48,192,832,3712,17152,81152,392192,1928192,9621504,48623616,248463360,1282031616,6672285696,34993274880,184793432064,981947645952,5247335399424,28185150357504,152104870084608,824404913160192,4486067252101120 ⋆ Number of walks within N ^ 2 (the first quadrant of Z ^ 2) starting at (0,0), ending on the vertical axis and consisting of n steps taken from { (- 1, 0), (- 1, 1), (0, - 1), (0, 1), (1, - 1), (1, 0) } . ● a(n) = sqrt(- 1 / 3) * (- 2) ^ n * hypergeom([1 / 2, n + 4],[2],4 / 3) / (n + 1). - _ Mark van Hoeij _ , Aug 23 2014 ●
► [A034488] 4,12,50,252,1394,8052,47450,282252,1686434,10097892,60526250,362976252,2177317874,13062296532,78368963450,470199366252,2821153019714,16926788715972,101560344351050,609360902796252,3656161927895954,21936961102828212 ⋆ Sum of n - th powers of divisors of 6. ● a(n) = 1 ^ n + 2 ^ n + 3 ^ n + 6 ^ n. ●
► [A127866] 4,12,52,172,580,1852,5828,17980,54788,165116,493316,1463036,4312068,12641276,36887556,107201532,310427652,896045052,2579017732,7403843580,21205303300,60604891132,172872744964,492233179132,1399272374276 ⋆ Number of L - shaped tiles in all tilings of a 2 X n board with 1 X 1 and L - shaped tiles (where the L - shaped tiles cover 3 squares). ● a(n) = 4 (- 1) ^ n - (2 / 9)[(9 - 5 * Sqrt(3))(1 + Sqrt(3)) ^ n + (9 + 5 * Sqrt(3))(1 - Sqrt(3)) ^ n] - (n / 3)[(1 - Sqrt(3))(1 + Sqrt(3)) ^ n + (1 + Sqrt(3))(1 - Sqrt(3)) ^ n]. ●
► [A277431] 1,1,4,12,52,260,1568,10976,87824,790416,7904192,86946112,1043353408,13563594304,189890320384,2848354805760,45573676892416,774752507171072,13945545129079808,264965357452516352,5299307149050328064,111285450130056889344,2448279902861251567616 ⋆ Expansion of e.g.f.: cosh(sqrt(2) * x) / (1 - x). ● a(n) = (Gamma(n + 1, sqrt(2)) * exp(sqrt(2)) + Gamma(n + 1, - sqrt(2)) / exp(sqrt(2))) / 2. ● a(2 * n + 1) = (2 * n + 1) * a(2 * n). ●
► [A298680] 0,0,4,12,56,192,756,2748,10408,38544,144452,537900,2009880,7496160,27985684,104424732,389756936,1454515632,5428480356,20259056268,75608443768,282173320704,1053087635252,3930171627900,14667610061160 ⋆ Start with the triangle with 4 markings of the Shield tiling and recursively apply the substitution rule. a(n) is the number of triangles with 6 markings after n iterations. ● a(n) = (1 / 39) * (- 26 + (- 1) ^ n * 2 ^ (3 + n) - (2 - sqrt(3)) ^ n * (- 9 + sqrt(3)) + (2 + sqrt(3)) ^ n * (9 + sqrt(3))). ● a(n) = 3 * a(n - 1) + 5 * a(n - 2) - 9 * a(n - 3) + 2 * a(n - 4) for n>3. ●
► [A179607] 1,4,12,56,208,864,3392,13696,54528,218624,873472,3495936,13979648,55926784,223690752,894795776,3579117568,14316601344,57266143232,229065097216,916259340288,3665039458304,14660153638912,58640622944256 ⋆ Eight white kings and one red king on a 3 X 3 chessboard. G.f.: (1 + 2 * x - 4 * x ^ 2) / (1 - 2 * x - 8 * x ^ 2). ● a(n) = 2 * a(n - 1) + 8 * a(n - 2), for n >= 3, with a(0) = 1, a(1) = 4 and a(2) = 12. ● a(n) = 5 * (4) ^ (n) / 6 - (- 2) ^ (n) / 3 for n >= 1 and a(0) = 1. ●
► [A164575] 0,0,4,12,56,240,1324,7392,49136,337920,2652244,21660672,196658216,1859020800,19192151164,206057828352,2385488163296,28669154426880,367966308562084,4893320282898432,68978503204900376,1005520890400604160,15445185289163949004,244890632417194278912 ⋆ a(n) = n! * [x ^ n] 2 * (tan(x)) ^ 2 * (sec(x) + tan(x)). ● a(n - 2) = | { up - down 2nd - max - upper permutations in S _ n } | for n >= 2 (see Definition 3.4 in Kobayashi). ●
► [A054719] 1,4,12,60,240,1020,4020,16380,65280,262080,1047540,4194300,16772880,67108860,268419060,1073740740,4294901760,17179869180,68719210560,274877906940,1099510578960,4398046494660,17592181850100,70368744177660,28147

4959868160 ⋆ Number of 4 - ary sequences with primitive period n. ● a(n) = S um _{ d|n } mu(d) * 4 ^ (n / d). ●
► [A356662] 1,4,12,60,240,1740,10080,87360,735840,7514640,79833600,976686480,12454041600,175736040480,2616448554720,42011071502400,711374856192000,12830610027755520,243290200817664000,4870565189425615680,102182981410948838400,2249099140674523737600 ⋆ a(n) = n! * Sum _{ d|n } 1 / (d!) ^ (n / d - 1). ● a(p) = 2 * p! for prime p. ●
► [A356661] 1,4,12,60,240,1860,10080,95760,766080,8210160,79833600,1100484000,12454041600,188172784800,2683799838720,44951306400000,711374856192000,13745322470880000,243290200817664000,5142812718440517120,103294640229580800000,2351280996859354560000 ⋆ a(n) = n! * Sum _{ d|n } 1 / d ^ (n / d - 1). ● a(p) = 2 * p! for prime p. ●
► [A355268] 1,1,4,12,60,300,1920,13440,109200,982800,9858240,108440640,1301952960,16925388480,236972736000,3554591040000,56873975558400,966857584492800,17403454164096000,330665629117824000,6613313252799052800,138879578308780108800,3055350750951750451200 ⋆ a(n) = n! * [x ^ n] - exp(x ^ 2) / (x - 1) . ● a(n) = n! * hypergeom([- floor(n / 2)], [- floor(n / 2)], 1). ● a(n) = n! * S um _{ k=0..floor(n / 2) } 1 / k!. - _ Seiichi Manyama _ , Jul 17 2022 ●
► [A291772] 4,12,61,316,1304,5223,21557,90404,377863,1572942,6545785,27262279,113572619,473082153,1970443556,8207168564,34184621296,142386794787,5930718212 62,2470268797246,10289192009129,42856677944829,178507203892808,743520516941183 ⋆ Number of minimal dominating sets in the 2n - crossed prism graph. ● a(n) = 4 * a(n - 1) - 2 * a(n - 2) + 7 * a(n - 3) + 17 * a(n - 4) + 2 * a(n - 5) for n > 5. ●
► [A356667] 1,1,4,12,72,240,2520,10080,127680,816480,11037600,79833600,1514177280,12454041600,261655954560,2699348652000,62869385779200,711374856192000,19407798693803520,243290200817664000,7300765959334848000,102980278869910041600 ⋆ Expansion of e.g.f. Sum _{ k>=0 } x ^ k / (1 - k * x ^ k / k!). ● a(n) = n! * Sum _{ d|n } 1 / ((d - 1)! ^ (n / d - 1)) for n > 0. ● a(p) = 2 * p! for prime p. ●
► [A052558] 1,1,4,12,72,360,2880,20160,201600,1814400,21772800,239500800,3353011200,43589145600,697426329600,10461394944000,188305108992000,3201186852864000,64023737057280000,1216451004088320000,26761922089943040000,562003636388803840000 ⋆ a(n) = n! * ((- 1) ^ n + 2 * n + 3) / 4. ● a(n) = ((- 1) ^ n + 2 * n + 3) * n! / 4. ● a(n) = (n + 1)! / 2 if n is odd; a(n) = n!(n + 2) / 2 if n is even. ●
► [A232325] 4,12,72,2111,14265,70424,308832,4371476,320218450,1101000257,1402058984 1,102772320834,963205851651,5997003656523,50649135127796,640772902021920,2101002284323870,3502967772807064 5,176996397541889098,1433436623499128186 ⋆ Engel expansion of 1 to the base Pi. ● a(n) = ceiling(Pi / f ^ (n)(1)), where f ^ (n)(x) denotes the n - th iterate of the map f(x) = x / Pi * (ceilin g(Pi / x)) - 1, with the convention that f ^ (0)(x) = x. ●
► [A318432] 1,4,12,76,460,3104,22404,169152,1315020,10460416,84764512,697212652,5805722692,48847196896,414623627136,3546272614976,30532934225100,264420681260336,2301782759539392,20129523771781288,176765807152990560,1558058796052048968 ⋆ Number of n - element subsets of [4n] whose elements sum to a multiple of n. ● a(n) = (- 1) ^ n * (1 / n) * Sum _{ d|n } C(4d,d) * (- 1) ^ d * phi(n / d) for n>0, a(0)=1. ●
► [A205337] 0,4,12,82,454,2912,18652,124299,841400,5800725,40506816,286137616,2040430976,14670243774,106225269954,773958961125,5670067999156,41742291894425,308645064367896,2291123920091484,17067970534656790 ⋆ Number of l ength n + 1 nonnegative integer arrays starting and ending with 0 with adjacen t elements unequal but differing by no more than 4. ● a(n) = Sum _{ i=1..n } ((Sum _{ l=0..i } (binomial(i,l) * (Sum _{ j=0..(4 * (i - l)) / 9 } ((- 1) ^ j * bi nomial(i - l,j) * binomial(- l + 4 * (- l - 2 * j + i) - j + i - 1,4 * (- l - 2 * j + i) - j))) * (- 1) ^ l)) * a(n - i)) / n, a(0)=1. - _ Vladimir Kruchinin _ , Apr 07 20 17 ●
► [A074930] 1,1,4,12,96,240,4320,20160,241920,1451520,36288000,159667200,5748019200,37362124800,697426329600,10461394944000,334764638208000,2134124568576000,115242726703104000,9731608032706560 00,291948240981196800 00,5109094217170944000 00 ⋆ Number of integers in { 1, 2, ..., n! } that are coprime to n. ● a(n) = (n - 1)! * phi(n). - _ Vladeta Jovovic _ , Dec 28 2002 ●
► [A287596] 1,1,1,4,12,96,480,5760,8064,645120,5806080,116121600,1277337600,6131220480,398529331200,11158821273600,167382319104000,5356234211328000,182111963185152 00,3278015337332736000,62282291409321984000,1465465680219340800 00,5231712478383046656 0000 ⋆ a(n) is the denominator of r(n), where r(n) = r(n - 1) + r(n - 2) / (2 * (n - 1)) with r(0) = 0, r(1) = 1. ● a(n) = deno minator(r(n)), where r(n) = r(n - 1) + r(n - 2) / 2 * (n - 2) with r(0)=0 and r(1)=1. ●
► [A268363] 1,1,4,12,96,480,5760,40320,645120,5806080,116121600,1277337600,30656102400,398529331200,11158821273600,167382319104000,5356234211328000,91055981592576000,3278015337332736000,62282291409321984000,2491291656372879360000 ⋆ Number of n X 2 arrays containing 2 copies of 0..n - 1 with row sums equal. ● a(n) = 2 ^ floor(n / 2) * n!. - _ Joel B. Lewis _ , Aug 11 2016 ●
► [A077611] 0,0,4,12,144,720,8640,60480,806400,7257600,108864000,1197504000,20118067200,261534873600,4881984307200,73229764608000,1506440871936000,25609494822912000,576213633515520000,10948059036794880000,267619220899430400000,5620003638888038400000 ⋆ Number of adjacent pairs of form (odd,o dd) among all permutations of { 1,2,...,n } . ● a(n) = ceiling(n / 2) * ceiling(n / 2 - 1) * (n - 1)!. Proof: There are ceiling(n / 2) * ceiling(n / 2 - 1) pairs (r, s) w ith r and s odd and distinct. For each pair, there are n - 1 places it can occur in a permutation and (n - 2)! possible arrangements of the other numbers. ● a(n) = (n - 1)! * (2 * n * (n - 1) - (2 * n - 1) * (- 1) ^ n - 1) / 8. - _ Bruno Berselli _ , Nov 07 2011 ●
► [A222393] 0,4,12,152,424,5180,14420,175984,489872,5978292,16641244,203085960,565312440,6898944364,19203981732,234361022432,652370066464,7961375818340,22161378278060,270452416801144,752834491387592,9187420795420572,25574211328900084 ⋆ Nonnegative integers m such that 18 * m * (m + 1) + 1 is a s quare. ● a(n) = a(- n + 1) = a(n - 1) + 34 * a(n - 2) - 34 * a(n - 3) - a(n - 4) + a(n - 5). ● a(n) = - 1 / 2 + ((3 + t * (- 1) ^ n) * (3 - 2 * t) ^ (2 * floor(n / 2)) + (3 - t * (- 1) ^ n) * (3 + 2 * t) ^ (2 * floor(n / 2))) / 12, where t=sqrt(2). ●
► [A228137] 1,4,13,16,25,28,37,40,49,52,61,64,73,76,85,88,97,100,109,112,121,124,133,136,145 ⋆ Numbers that are congruent to { 1, 4 } mod 12. ● a(n) = - 13 / 2 - 3 * (- 1) ^ n / 2 + 6 * n. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3). ●
► [A032824] 1,4,13,16,49,52,157,160,193,196,589,592,625,628,1885,1888,1921,1924,2317,2320,2353,2356,7069,7072,7105 ⋆ Numbers whose set of base - 12 digits is { 1,4 } . ● a(1)=1, a(2)=4; a(n) = 12 * a(floor(n / 2)) + 1 for n odd, otherwise a(n) = 12 * a(floor((n - 1) / 2)) + 4. - _ Bruno Berselli _ , May 28 2012 ●
► [A022132] 4,13,17,30,47,77,124,201,325,526,851,1377,2228,3605,5833,9438,15271,24709,39980,64689,104669,169358,274027,443385,717412 ⋆ Fibonacci sequence beginning 4, 13. ● a(n) = term (1,1) in the 1x2 matrix [4,9] . [1,1; 1,0] ^ n. (En d) ● a(n) = Lucas(n + 4) + Fibonacci(n - 4). - _ Greg Dresden _ and Kyle Wo od, Mar 03 2022 ●
► [A041559] 1,4,13,17,30,77,107,184,659,2820,96539,388976,1263467,1652443,2915910,7484263,10400173,17884436,64053481,274098360,9383397721,37807689244,122806465453,160614154697,283420620150 ⋆ Denominators of continued fraction convergents to sqrt(297). ● a(n) = 97198 * a(n - 10) - a(n - 20) for n>19. - _ Vincenzo Librandi _ , Dec 20 2013 ●
► [A041407] 1,1,4,13,17,489,506,2007,6527,8534,245479,254013,1007518,3276567,4284085,123230947,127515032,505776043,1644843161,2150619204,6186218083,64012800077,253900581104,825714543389,1079615124493 ⋆ Denominators of c ontinued fraction convergents to sqrt(218). ● a(n) = 502 * a(n - 5) + a(n - 10) f or n>9. - _ Vincenzo Librandi _ , Dec 17 2013 ●
► [A228138] 4,13,20,50,63,111,130,196,221,305,336,438,475,595,638,776,825,981,1036,1210,1271,1463,1530,1740,1813 ⋆ Number of blocks in a Steiner system S(2, 4, A228137(n + 1)). ● a(n) = (1 - (- 1) ^ n + (- 4 + 6 * (- 1) ^ n) * n + 12 * n ^ 2) / 4. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). ●
► [A155095] 4,13,21,30,38,47,55,64,72,81,89,98,106,115,123,132,140,149,157,166,174,183,191,200,208 ⋆ Numbers k such that k ^ 2 == - 1 (mod 17). ● a(n) = 4 * (- 1) ^ (n + 1) + 17 * floor(n / 2). ● a(n) = a(n - 2) + 17 for all n > 2. (End) ● a(n) - a(n - 1) - a(n - 2) + a(n - 3) = 0 for n > 3. ● a(n) = (34 * n + (- 1) ^ n - 17) / 4. (End) ●
► [A063219] 4,13,21,31,39,47,57,65,73,83,91,99,109,117,125,135,143,151,161,169,177,187,195,203,213 ⋆ Dimension of the space of weight 2n cuspidal newforms for Gamma _ 0(53). ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>5. ●
► [A063121] 4,13,21,31,39,49,57,67,75,85,93,103,111,121,129,139,147,157,165,175,183,193,201,211,219 ⋆ Dimension of the space of weight 2n cusp forms for Ga mma _ 0(53). ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n>4. ● a(n) = ((- 1) ^ n + 18 * n - 11) / 2 for n>1. ●
► [A199798] 4,13,21,132,837,1373,8708,55229,90597,574596,3644277,5978029,37914628,240467053,394459317,2501790852,15867181221,26028336893,165080281604,1046993493533,1717475775621,10892796795012,69085703391957,113327372854093,718759508189188 ⋆ y - values in the solution to 17 * x ^ 2 + 16 = y ^ 2. ● a(n) = 66 * a(n - 3) - a(n - 6), a(1)=4, a(2)=13, a(3)=21, a(4)=132, a(5)=837, a (6)=1373. ●
► [A256390] 1,4,13,22,55,64,133,172,247,280,469,508,781,868,997,1144,1621,1714,2323,2488,2785,3010,3907,4078,4837 ⋆ a(n) = number of triples (a,b,c) of natu ral numbers a,b,c <= n with gcd(a,b)=gcd(b,c)=gcd(c,a)=1. ● a(n) = sum _ a sum _ b sum _ c mu(a) mu(b) mu(c) [n / gcd(a,b)][n / gcd(b,c)][n / gcd(c,a)], where mu(.) is Moebius function [x] integer part of x, and a,b,c run through na tural numbers. ●
► [A255840] 0,1,4,13,24,41,60,85,112,145,180,221,264,313,364,421,480,545,612,685,760,841,924,1013,1104 ⋆ a(n) = (4 * n ^ 2 - 4 * n + 1 - (- 1) ^ n) / 2. ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4). ●
► [A307271] 1,4,13,25,46,76,106,139,181,238,289,343,406,490,562,637,721,832,925,1021,1126,1264,1378,1495,1621 ⋆ Partial sums of A307201. ● a(n) = a(n - 1) + 2 * a(n - 4) - 2 * a(n - 5) - a(n - 8) + a(n - 9) for n>8. ●
► [A333297] 1,4,13,25,55,73,136,184,265,325,490,562,796,922,1102,1294,1702,1864,2377,2617,2995,3325,4084,4372,5122 ⋆ a(n) = Sum _{ i=1..n, j=1..n, gcd(i,j)= 1 } i. ● a(n) = a(n - 1) + 3 * n * phi(n) / 2 for n > 1, a(n) = n for n <= 1. ● a(n) = 1 + Sum _{ k=2..n } 3 * k * phi(k) / 2. (End) ●
► [A091823] 4,13,26,43,64,89,118,151,188,229,274,323,376,433,494,559,628,701,778,859,944,1033,1126,1223,1324 ⋆ a(n) = 2 * n ^ 2 + 3 * n - 1. ● a(n) = n + 4 * binomial(2 + n, n), with offset 0. - _ Zerinvary Lajos _ , May 12 2006 ●
► [A212901] 1,4,13,26,45,66,95,126,163,204,251,300,357,416,481,550,625,702,787,874,967,1064,1167,1272,1385 ⋆ Number of (w,x,y,z) with all terms in { 0,...,n } and equal consecutive gap sizes. ● a(n) = a(n - 1) + a(n - 2) - a(n - 4) - a(n - 5) + a(n - 6). ●
► [A119652] 4,13,27,46,69,94,119,144,169,194,219,244,269,294,319,344,369,394,419,444,469,494,519,544,569 ⋆ Number of different values of <= n standard Ame rican coins (pennies, nickels, dimes and quarters). ● a(n) = 2 * a(n - 1) - a(n - 2) for n>6. ● a(n) = 25 * n - 56 for n>4. ●
► [A147875] 0,4,13,27,46,70,99,133,172,216,265,319,378,442,511,585,664,748,837,931,1030,1134,1243,1357,1476 ⋆ Second heptagonal numbers: a(n) = n * (5 * n + 3) / 2. ● a(n) - a(n - 1) = 5 * n - 1. - _ Vincenzo Librandi _ , Nov 26 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3); a(0)=0, a(1)=4, a(2)=13. - _ Har vey P. Dale _ , May 15 2013 ●
► [A298017] 1,4,13,28,46,73,110,147,191,248,302,363,440,511,589,686,774,869,986,1091,1203,1340,1462,1591,1748 ⋆ Partial sums of A298014. ● a(n) = a(n - 1) + 2 * a(n - 3) - 2 * a(n - 4) - a(n - 6) + a(n - 7) for n>10. ●
► [A356984] 1,4,13,28,49,70,109,148,181,244,301,334,433,508,565,676,769,811,973,1069,1165,1324,1453,1534,1729 ⋆ Number of regions in an equilateral triangle when n internal equilateral triangles are drawn between the 3n points that divi de each side into n + 1 equal parts. ● a(n) = 1 + 3 * n + T2(n) + 2 * T3(n) + 3 * T4(n); a(n) = 1 + 3 * n ^ 2 - T3(n) - 3 * T4(n), where T2 is the number of i nternal vertices meeting exactly two segments (these vertices are labeled in the A357007 links as ”4 ngons”), T3 is the number of internal vertices meeting exac tly three segments (”6 ngons”), and T4 is the number of internal vertices meeti ng exactly four segments (”8 ngons”). - _ Talmon Silver _ , Sep 23 2022 ●

► [A307272] 1,4,13,28,49,73,103,145,187,232,283,352,415,481,553,649,733,820,913,1036,1141,1249,1363,1513,1639 ⋆ Partial sums of A307202. ● a(n) = a(n - 1) + 2 * a(n - 4) - 2 * a(n - 5) - a(n - 8) + a(n - 9) for n>8. ●
► [A056107] 1,4,13,28,49,76,109,148,193,244,301,364,433,508,589,676,769,868,973,1084,1201,1324,1453,1588,1729 ⋆ Third spoke of a hexagonal spiral. ● a(n) = 3 * n ^ 2 + 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>2. ● a(n) = a(n - 1) + 6 * n - 3 for n>0. ● a(n) = 2 * a(n - 1) - a(n - 2) + 6 for n>1. ●
► [A060488] 4,13,28,50,80,119,168,228,300,385,484,598,728,875,1040,1224,1428,1653,1900,2170,2464,2783,3128,3500,3900 ⋆ Number of 4 - block ordered tricover ings of an unlabeled n - set. ● a(n) = binomial(n + 3, 3) - 6 * binomial(n + 1, 1) + 8 * binomial(n, 0) - 3 * binomial(n - 1, - 1). ● a(n) = (n + 9) * binomial(n - 1, 2) / 3. ● a(n) = (n - 2) * (n - 1) * (n + 9) / 6. - _ Zak Seidov _ , Jun 15 2006 ● a(3)=4, a(4)=13, a(5)=28, a(6)=50, a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Harvey P. Dale _ , Jul 21 2012 ●
► [A054968] 4,13,28,52,91,154,256,421,688,1120,1819,2950,4780,7741,12532,20284,32827,53122,85960,139093,225064,364168,589243,953422,1542676 ⋆ 3 * Fibonacci(n) - 11. ● a(n) = 2 * a(n - 1) - a(n - 3). - _ Colin Barker _ , Dec 01 2014 ●
► [A087035] 1,4,13,28,53,88,137,200,281,380,501,644,813,1008,1233,1488,1777,2100,2461,2860,3301,3784,4313,4888,5513 ⋆ Maximum value taken on by f(P)=sum(i=1..n, p(i) * p(n + 1 - i)) as { p(1),p(2),...,p(n) } ranges over all permutations P of { 1,2,3,...n } . ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - 2 * a(n - 3) + 3 * a(n - 4) - a(n - 5). ● a(n) = (2 * (n - 1) * (n + 1) * (2 * n + 3) - 3 * (- 1) ^ n + 9) / 12. - _ Bruno Berselli _ , Jun 11 2012 ●
► [A212578] 0,1,4,13,28,55,92,147,216,309,420,561,724,923,1148,1415,1712,2057,2436,2869,3340,3871,4444,5083,5768 ⋆ Number of (w,x,y,z) with all terms in { 1,...,n } and |w - x| = 2 * |x - y| - |y - z|. ● a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + a(n - 4) + 2 * a(n - 5) - a(n - 6). ●
► [A168559] 0,4,13,29,54,90,139,203,284,384,505,649,818,1014,1239,1495,1784,2108,2469,2869,3310,3794,4323,4899,5524 ⋆ a(n) = n ^ 2 + a(n - 1), with a(1)=0. ● a(n) = n ^ 3 / 3 + n ^ 2 / 2 + n / 6 - 1. - _ Gary Detlefs _ , Jun 30 2010 ● a(1)=0, a(2)=4, a(3)=13, a(4)=29, a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Harvey P. Dale _ , Dec 07 2013 ●
► [A212247] 0,1,4,13,29,56,95,150,222,315,430,571,739,938,1169,1436,1740,2085,2472,2905,3385,3916,4499,5138,5834 ⋆ Number of (w,x,y,z) with all terms in { 1,...,n } and 3w=x + y + z + n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + 2 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) - a(n - 6). ● a(n) = (2 * n * (10 * n ^ 2 + 3 * n + 2) - 9(- 1) ^ n + 9) / 48. [_ Bruno Berselli _ , May 30 2012] ●
► [A213801] 4,13,29,57,96,153,226,323,440,587,759,967,1204,1483,1796,2157,2556,3009,3505,4061,4664,5333,6054,6847,7696 ⋆ Number of 3 X 3 0..n symmetric arrays with all rows summing to floor(n * 3 / 2). ● a(n) = (14 * n ^ 3 + 42 * n ^ 2 + 53 * n + 25 + 3 * (n + 1) * (- 1) ^ n + 2 * ((- 1) ^ ((2 * n + 1 - (- 1) ^ n) / 4) - (- 1) ^ ((6 * n + 5 - (- 1) ^ n) / 4))) / 32. - _ Luce ETIENNE _ , Aug 23 2014 ●
► [A266891] 1,1,4,13,29,81,188,456,1030,2405,5295,11611,25246,53552,113332,235685,486011,990840,2006567,4018010,7992003,15768511,30875424,60060509,116042548 ⋆ Expansion of Product _{ k>=1 } (1 + k * x ^ k) ^ k. ● a(0) = 1 and a(n) = (1 / n) * Sum _{ k=1..n } b(k) * a(n - k) where b(n) = Sum _{ d|n } d * (- d) ^ (1 + n / d). - _ Seiichi Manyama _ , Nov 18 2017 ●
► [A041301] 1,1,4,13,30,43,73,554,627,7451,8078,63997,72075,136072,344219,1168729,3850406,5019135,124309646,129328781,512295989,1666216748,3844729485,5510946233,9355675718 ⋆ Denominators of continued fraction convergents to sqrt(163). ● a(n) = 128160052 * a(n - 18) - a(n - 36) for n>35. [_ Bruno Berselli _ , Dec 15 2013] ●
► [A071400] 0,0,4,13,30,59,102,162,241,344,471,627,815,1036,1294,1591,1931,2316,2749,3233,3771,4366,5020,5736,6517 ⋆ Rounded volume of a regular octahedron with edge length n. ● a(n) = round(n ^ 3 * sqrt(2) / 3) ●
► [A206806] 1,4,13,30,62,112,190,300,455,660,931,1274,1708,2240,2892,3672,4605,5700,6985,8470,10186,12144,14378,16900,19747 ⋆ Sum _{ 0<j<k<=n } s(k) - s(j), where s(j)=A002620(j) is the j - th quarter - square. ● a(n) = Sum _{ i=1..n } i * (n - i) * (i - ceiling((i - 1) / 2)). ● a(n) = (108 - 36n - n ^ 2 + n ^ 4 + (70n - 266) * ceiling((3 - n) / 2) - (42n - 234) * ceiling((3 - n) / 2) ^ 2 + (8n - 88) * ceiling((3 - n) / 2) ^ 3 + 12 * ceiling((3 - n) / 2) ^ 4 - 4n * floor(n / 2) - (12n - 12) * floor(n / 2) ^ 2 - (8n - 24) * floor(n / 2) ^ 3 + 12 * floor(n / 2) ^ 4) / 12. (End) ● a(n) = (n * (1 + 3 * (- 1) ^ n - 2 * n + 2 * n ^ 2 + 2 * n ^ 3)) / 48. - _ Colin Barker _ , Jul 10 2014 ●
► [A042487] 1,1,4,13,30,133,163,296,459,755,1969,53918,109805,163723,273528,437251,710779,3280367,7271513,25094906,82556231,107651137,5895717629,6003368766,23905823927 ⋆ Denominators of continued fraction convergents to sqrt(77 1). ● a(n) = 5978273860 * a(n - 22) - a(n - 44) for n>43. - _ Vincenzo Librandi _ , Jan 23 2014 ●
► [A100136] 1,1,1,1,1,1,4,13,31,61,106,169,262,424,748,1417,2749,5251,9709,17395,30553,53434,94285,168859,306283 ⋆ a(n) = Sum _{ k=0..floor(n / 6) } C(n - 3k,3k) * 3 ^ k. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + 3 * a(n - 6). ●
► [A011937] 0,0,0,0,0,4,13,31,62,112,186,293,440,635,889,1213,1617,2115,2720,3445,4306,5320,6502,7871,9445 ⋆ [n(n - 1)(n - 2)(n - 3) / 27]. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) + a(n - 27) - 4 * a(n - 28) + 6 * a(n - 29) - 4 * a(n - 30) + a(n - 31) for n > 30. ●
► [A307304] 0,1,4,13,31,66,123,214,346,535,790,1131,1569,2128,2821,3676,4708,5949,7416,9145,11155,13486,16159,19218,22686 ⋆ Number of inequivalent ways of placing 2 nonattacking rooks on n X n board up to rotations and reflections of the board. ● a(n) = (1 / 16) * n * (n ^ 3 - 2n ^ 2 + 6n - 4) if n is even; ● a(n) = (1 / 16) * (n - 1) * (n ^ 3 - n ^ 2 + 5n - 1) if n is odd. ●
► [A097122] 1,1,1,4,13,31,70,169,421,1036,2521,6139,14998,36661,89545,218644,533941,1304071,3184966,7778449,18996733,46394716,113307745,276726019,675833686 ⋆ Expansion of (1 - x) ^ 2 / ((1 - x) ^ 3 - 3 * x ^ 3). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + 4 * a(n - 3). ● a(n) = Sum _{ k=0..floor(n / 3) } binomial(n, 3k) * 3 ^ k. ●
► [A116411] 1,1,1,4,13,31,76,211,589,1597,4351,12046,33496,93094,259351,725089,2031709,5701189,16023181,45104044,127134283,358764613,1013494318,2865933907,8111573416 ⋆ Coefficient of x ^ n in the expansion of (1 + x + x ^ 3) ^ n. ● a(n) = Sum _{ k=0..floor(n / 3) } C(n, 3 * k) * C(3 * k, k). ● a(n) = Sum _{ k=0..n } C(n, k) * C(k, k / 3) * (cos(2 * Pi * k / 3) + 1 / 2) * 2 / 3. ● a(n) = coefficient of x ^ (2 * n) in the expansion of (1 + x ^ 2 + x ^ 3) ^ n. ● a(n) = 3 F2[1 / 3 - n / 3,2 / 3 - n / 3, - n / 3; 1 / 2,1; - 27 / 4]. - _ Benedict W. J. Irwin _ , Nov 01 2016 ●
► [A333047] 1,1,1,4,13,31,76,218,645,1849,5281,15346,44980,131704,385568,1131874,3331429,9819405,28977079,85633438,253424053,750895163,2227288196,6613217348,19654450476 ⋆ Number of compositions of 2n into n powers of 2. ● a(n) mod 2 = 1 <=> n in { A003714 } . ●
► [A106337] 1,1,1,4,13,31,82,253,757,2173,6341,18888,56266,167324,499773,1499059,4503557,13546893,40824379,123233868,372472353,1127080252,3414310032,10353722919,31425764410 ⋆ Number of ways of writing n as the sum of n triangular numbers. ● a(n) = [x ^ n] Product _{ j=1..n } (1 + x ^ j - x ^ (2 * j) - x ^ (3 * j)) ^ n. - _ Alois P. Heinz _ , Aug 01 2017 ●
► [A026567] 1,4,13,31,85,193,517,1165,3109,6997,18661,41989,111973,251941,671845,1511653,4031077,9069925,24186469,54419557,145118821,326517349,870712933,1959104101,5224277605 ⋆ a(n) = Sum _{ i=0..2 * n } Sum _{ j=0..i } T(i, j) , where T is given by A026552. ● a(n) = 6 * a(n - 2) + 7. - _ Philippe Deléham _ , Feb 24 2014 ● a(n) = (2 ^ (n / 2 + 2) * 3 ^ (n / 2 + 1) - 7) / 5 for n even. ● a(n) = (2 ^ ((n - 1) / 2) * 3 ^ ((n + 5) / 2) - 7) / 5 for n odd. (End) ● a(n) = (1 / 10) * (2 * (1 + (- 1) ^ n) * 6 ^ ((n + 2) / 2) + 27 * (1 - (- 1) ^ n) * 6 ^ ((n - 1) / 2) - 14). - _ G. C. Greubel _ , Dec 19 2021 ●
► [A372377] 1,1,1,4,13,31,91,313,988,3095,10377,35146,117682,400117,1381582,4779997,16599766,58095076,204319835,720756820,2552544940,9074710255,32356325145,115679362789,414701335849 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 + x) ^ 2 / (1 + x + x ^ 3) ^ 3). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 3) } binomial(3 * n + 3,k) * binomial(n - k + 1,n - 3 * k). ●
► [A226839] 1,1,1,4,13,31,271,1576,6049,55693,573661,3839716,36369301,432793219,3670898323,47260464616,758854978561,8126729609401,106290146259289,1742497711849828,22974498485218621,454423040764317031,8508721270142443351,120131676428508219784,2346431431552540513633 ⋆ E.g.f.: exp(Sum _{ n>=1 } x ^ (n * (n + 1) / 2) / n!). ● a(n) == 1 (mod 3) (conjecture - valid up to n=1024; if true for n>=0, why?). ●
► [A036487] 0,0,4,13,32,62,108,171,256,364,500,665,864,1098,1372,1687,2048,2456,2916,3429,4000,4630,5324,6083,6912 ⋆ a(n) = floor((n ^ 3) / 2). ● a(n) = ((- 1) ^ n - 1 + 2 * n ^ 3) / 4. ●
► [A184632] 1,4,13,32,62,108,171,256,364,500,665,864,1098,1372,1687,2048,2456,2916,3429,4000,4630,5324,6083,6912,7812 ⋆ Floor(1 /{ (8 + n ^ 4) ^ (1 / 4) }), where {} =fractional part. ● a(n)=floor(1 /{ (8 + n ^ 4) ^ (1 / 4) }), where {} =fractional part. ●
► [A212747] 1,4,13,32,63,108,171,256,365,500,665,864,1099,1372,1687,2048,2457,2916,3429,4000,4631,5324,6083,6912,7813 ⋆ Number of (w,x,y,z) with all terms in { 0,...,n } and 2w=floor((x + y + z) / 2)). ● a(n)=4 * a(n - 1) - 7 * a(n - 2) + 8 * a(n - 3) - 7 * a(n - 4) + 4 * a(n - 5) - a(n - 6). ●
► [A011936] 0,0,0,0,0,4,13,32,64,116,193,304,456,660,924,1260,1680,2196,2824,3577,4472,5524,6752,8173,9808 ⋆ a(n) = floor(n(n - 1)(n - 2)(n - 3) / 26). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) + a(n - 13) - 4 * a(n - 14) + 6 * a(n - 15) - 4 * a(n - 16) + a(n - 17) for n > 16. ●
► [A037235] 0,1,4,13,32,65,116,189,288,417,580,781,1024,1313,1652,2045,2496,3009,3588,4237,4960,5761,6644,7613,8672 ⋆ a(n) = n * (2 * n ^ 2 - 3 * n + 4) / 3. ● a(n) = Sum _{ k=0..n - 1 } (2 * k ^ 2 + 1). - _ Mike Warburton _ , Sep 08 2007 ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) with n>3, a(0)=0, a(1)=1, a(2)=4, a(3)=13. - _ Yosu Yurramendi _ , Sep 03 2013 ●
► [A363256] 1,4,13,32,66,121,204,323,487,706,991,1354,1808,2367,3046,3861,4829,5968,7297,8836,10606,12629,14928,17527,20451 ⋆ Number of length n strings on the alphabet { 0,1,2,3 } with digit sum at most 4. ● a(n) = (((n + 10) * n + 35) * n + 26) * n / 24 + 1. ●
► [A208638] 4,13,32,71,150,309,628,1267,2546,5105,10224,20463,40942,81901,163820,327659,655338,1310697,2621416,5242855,10485734,20971493,41943012,83886051,167772130 ⋆ Number of 3 X n 0..1 arrays with new values 0..1 introduced in row major order and no element equal to more than one of its immediate leftward or upward or right - upward antidiagonal neighbors. ● a(n) = 5 * 2 ^ n - n - 5. ●
► [A227122] 4,13,33,81,202,492,1143,2524,5315,10718,20776,38839,70225,123134,209884,348550,565100,896136,1392363,2122925,3180764,4689176,6809757,9751952,13784441 ⋆ Number of n X 3 0,1 arrays indicating 2 X 2 subblocks of some larger (n + 1) X 4 binary array having a sum of zero, with rows and columns of the latter in lexicographically nondecreasing order. ● a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10) for n>12. ●
► [A322599] 1,4,13,34,68,121,197,299,432,600,806,1055,1352,1698,2100,2561,3085,3675,4338,5074,5891,6790,7777,8854,10029 ⋆ a(n) is the number of unlabeled rank - 3 graded lattices with 4 coatoms and n atoms. ● a(n) = (97 / 144)n ^ 3 - (5 / 6)n ^ 2 + [44 / 48, 47 / 48]n + [0, 13, 8, - 45, 40, - 19, 0, - 5, 8, - 27, 40, - 37] / 72. The value of the first bracket depends on whether n is even or odd. The value of the second bracket depends on whether (n mod 12) is 0, 1, 2, ..., 11. ● a(n) = a(n - 1) + a(n - 2) - 2 * a(n - 5) + a(n - 8) + a(n - 9) - a(n - 10) for n >10. ●
► [A135859] 1,4,13,34,73,136,229,358,529,748,1021,1354,1753,2224,2773,3406,4129,4948,5869,6898,8041,9304,10693,12214,13873 ⋆ Row sums of triangle A135858. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Vincenzo Librandi _ , Jun 29 2012 ● a(n) = n ^ 3 - 3 * n ^ 2 + 5 * n - 2. - _ R. J. Mathar _ , Oct 20 2017 ●
► [A101946] 1,4,13,34,79,172,361,742,1507,3040,6109,12250,24535,49108,98257,196558,393163,786376,1572805,3145666,6291391,12582844,25165753,50331574,100663219 ⋆ a(n) = 6 * 2 ^ n - 3 * n - 5. ● a(0)=1, a(1)=4, a(2)=13 and for n>2, a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 2 * a(n - 3). ●
► [A213578] 1,4,13,34,80,174,359,712,1371,2580,4768,8684,15629,27852,49225,86390,150704,261530,451795,777360,1332791,2277864,3882048,6599064,11191705 ⋆ Antidiagonal sums of the convolution array A213576. ● a(n) = 4 * a(n - 1) - 4 *

a(n - 2) - 2 * a(n - 3) + 4 * a(n - 4) - a(n - 6). ● a(n) = n * F(n + 4) - 2 * (F(n + 5) - n - 5), F = A000045. - _ Ehren Metcalfe _ , Jul 05 2019 ●

▶ [A357284] 0,0,0,0,1,4,13,34,83,188,413,878,1839,3792,7761,15762,31891,64276,129301,259606,520727,1043480,2090009,4184090,8374299 ⋆ a(n) = (1 / 2) * A357283(n). ● a(n) = 4 * a(n - 1) - 3 * a(n - 2) - 6 * a(n - 3) + 10 * a(n - 4) - 4 * a(n - 5). ●

▶ [A271358] 4,13,35,92,241,631,1652,4325,11323,29644,77609,203183,531940,1392637,3645971,9545276,24989857,65424295,171283028,448424789,1173991339,3073549228,8046656345,21066419807,55152603076 ⋆ a(n) = k * Fibonacci(2 * n + 1) + (k + 1) * Fibonacci(2 * n), where k=4. ● a(n) = 3 * a(n - 1) - a(n - 2) for n>1. ● a(n) = (2 ^ (- 2 - n) * ((11 - sqrt(5)) * (3 + sqrt(5)) ^ (n + 1) - (11 + sqrt(5)) * (3 - sqrt(5)) ^ (n + 1))) / sqrt(5). ● a(n) = 5 * Fibonacci(2 * n + 2) - Fibonacci(2 * n + 1). ●

▶ [A002727] 1,4,13,36,87,190,386,734,1324,2284,3790,6080,9473,14378,21323,30974,44159,61898,85440,116286,156240,207446,272432,354162,456097 ⋆ Number of 3 X n binary matrices up to row and column permutations. ● a(0)=1, a(1)=4, a(2)=13, a(3)=36, a(4)=87, a(5)=190, a(6)=386, a(7)=734, a(8)=1324, a(9)=2284, a(10)=3790, a(11)=6080, a(12)=9473, a(13)=14378. For n>13, a(n)=4 * a(n - 1) - 4 * a(n - 2) - 2 * a(n - 3) + 2 * a(n - 4) + 4 * a(n - 5) + 3 * a(n - 6) - 12 * a(n - 7) + 3 * a(n - 8) + 4 * a(n - 9) + 2 * a(n - 10) - 2 * a(n - 11) - 4 * a(n - 12) + 4 * a(n - 13) - a(n - 14). - _ Harvey P. Dale _ , Nov 10 2011 ● a(n) = - a(- 8 - n) for all n in Z. - _ Michael Somos _ , Aug 22 2016 ●

▶ [A221882] 1,4,13,36,91,218,505,1144,2551,5622,12277,26612,57331,122866,262129,557040,1179631,2490350,5242861,11010028,23068651,48234474,100663273,209715176,436207591 ⋆ Number of order - preserving or order - reversing full contraction mappings of an n - chain. ● a(n) = (n + 1) * 2 ^ (n - 1) - n. ● a(n) = + 6 * a(n - 1) - 13 * a(n - 2) + 12 * a(n - 3) - 4 * a(n - 4). ●

▶ [A206603] 0,0,1,4,13,36,94,232,557,1300,2986,6744,15074,33320,73116,159184,344701,742068,1590898,3395320,7222550,15308920,32362276,68213424,143463378 ⋆ Maximal apex value of an addition triangle whose base is a permutation of { k - n / 2, k=0..n } . ● a(n) = Sum _{ k=0..n } C(n,floor(k / 2)) * (k - n / 2). ●

▶ [A271176] 1,1,4,13,36,94,239,597,1471,3586,8669,20818,49726,118259,280239,662117,1560516,3670321,8617584,20203698,47308391,110659649,258614439,603929562,1409413761 ⋆ Expansion of - (4 * x ^ 3 - 7 * x ^ 2 + 4 * x - 1) / (2 * x ^ 4 - 5 * x ^ 3 + 8 * x ^ 2 - 5 * x + 1). ● a(n) = (n + 1) * Sum _{ k=0..n } (Sum _{ i=0..n - k } (binomial(i + k,i) * 2 ^ i * binomial(2 * k + 2,n - i - k) * (- 1) ^ (n - i - k)) / (k + 1)). ● a(n) = 5 * a(n - 1) - 8 * a(n - 2) + 5 * a(n - 3) - 2 * a(n - 4) for n>3, a(0)=1, a(1)=1, a(2)=4, a(3)=13. ●

▶ [A251701] 1,4,13,36,97,268,765,2236,6625,19764,59149,177268,531585,1594492,4783165,14349132,43046977,129140452,387420813,1162261828,3486784801,10460353644,31381060093,94143179356,282429537057 ⋆ a(n) = 3 ^ n + n ^ 2. ● a(n) = 6 * a(n - 1) - 12 * a(n - 2) + 10 * a(n - 3) - 3 * a(n - 4) for n>3. ●

▶ [A003727] 1,1,1,4,13,36,181,848,3865,23824,140521,871872,6324517,44942912,344747677,2860930816,23853473329,213856723200,1996865965009,19099352929280,193406280000061,2010469524579328,21615227339380357,242177953175506944 ⋆ Expansion of e.g.f. exp(x * cosh(x)). ● a(n) = Sum _{ k=1..n } (if n=k then n! otherwise (1 / 2) ^ k * Sum _{ i=0..k } binomial(n,k) * binomial(k,i) * (k - 2 * i) ^ (n - k)), n>0. - _ Vladimir Kruchinin _ , Aug 22 2010 ● a(n) ^ (1 / n) ~ n * exp(1 / (2 * LambertW(sqrt(n / 2))) - 1) / (2 * LambertW(sqrt(n / 2))). - _ Vaclav Kotesovec _ , Aug 05 2014 ● a(0) = 1; a(n) = Sum _{ k=0..floor((n - 1) / 2) } binomial(n - 1,2 * k) * (2 * k + 1) * a(n - 2 * k - 1). - _ Ilya Gutkovskiy _ , Feb 24 2022 ●

▶ [A279111] 0,0,4,13,37,75,147,246,406,610,910,1275,1779,2373,3157,4060,5212,6516,8136,9945,12145,14575,17479,20658,24402 ⋆ Number of non - equivalent ways to place 2 non - attacking kings on an n X n board. ● a(n) = (n ^ 4 - 2 * n ^ 2 - 4 * n + IF(MOD(n, 2) = 1, 2 * n ^ 2 - 4 * n + 7)) / 16. ● a(n) = (2 * n ^ 4 - 2 * n ^ 2 - 12 * n + 7 - (2 * n ^ 2 - 4 * n + 7) * (- 1) ^ n) / 32. - _ Bruno Berselli _ , Dec 07 2016 ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 6 * a(n - 3) + 6 * a(n - 5) - 2 * a(n - 6) - 2 * a(n - 7) + a(n - 8). ● a(n) = n * (n - 2) * (n ^ 2 + 2 * n + 2) / 16 for n even. ● a(n) = (n - 1) * (n ^ 3 + n ^ 2 + n - 7) / 16 for n odd. ●

▶ [A299111] 4,13,37,82,183,344,601,918,1355,2048,2873,3978,5455,7112,9105,11530,14391,17504,21353,25686,30311,35536,41421,48010,55911 ⋆ Maximum value of the cyclic convolution of first n primes with themselves. ● a(n) = Max _{ k=1..n } Sum _{ i=1..n } prime(n - i + 1) * prime(1 + (i + k) mod n). ●

▶ [A226866] 4,13,37,91,199,397,736,1285,2134,3397,5215,7759,11233,15877,21970,29833,39832,52381,67945,87043,110251,138205,171604,211213,257866 ⋆ Number of n X 2 (- 1,0,1) arrays of determinants of 2 X 2 subblocks of some (n + 1) X 3 binary array with rows and columns of the latter in lexicographically nondecreasing order. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. ●

▶ [A048474] 1,4,13,37,97,241,577,1345,3073,6913,15361,33793,73729,159745,344065,737281,1572865,3342337,7077889,14942209,31457281,66060289,138412033,289406977,603979777 ⋆ a(n) = 3 * n * 2 ^ (n - 1) + 1. ● a(n) = 5 * a(n - 1) - 8 * a(n - 2) + 4 * a(n - 3); a(0)=1, a(1)=4, a(2)=13. ●

▶ [A054761] 1,4,13,37,99,254,636,1567,3822,9261,22346,53773,129174,309958,743228,1781330,4268166,10224885,24492034,58662298,140498877,336491169,805872377,1929983778,4622083068 ⋆ Number of positive braids with n crossings of 5 strands. ● a(n) = 4 * a(n - 1) - 3 * a(n - 2) - 3 * a(n - 3) + 2 * a(n - 4) + 2 * a(n - 6) - a(n - 10). - _ Wesley Ivan Hurt _ , May 12 2023 ●

▶ [A080145] 0,1,4,13,37,101,269,710,1865,4890,12810,33546,87834,229963,602062,1576231,4126639,10803695,28284455,74049680,193864595,507544116,1328767764,3478759188,9107509812 ⋆ a(n) = Sum _{ m=1..n } Sum _{ i=1..m } F(i) * F(i + 1) where F(n)=Fibonacci numbers A000045. ● a(n) = F(n + 1) * F(n + 2) - floor((n + 2) / 2). ● a(n) = (4 * Lucas(2 * n + 3) + (- 1) ^ (n + 1) - 10 * n - 15) / 20. - _ Ehren Metcalfe _ , Aug 21 2017 ● a(n) = (4 * Fibonacci(n + 1) * Fibonacci(n + 2) - 2 * n - 3 - (- 1) ^ n) / 4. - _ G. C. Greubel _ , Jul 23 2019 ● a(n) = Sum _{ j=1..n } j * F(n + 1 - j) * F(n + 2 - j). - _ Michael A. Allen _ , Jan 07 2022 ●

▶ [A095126] 4,13,37,109,316,922,2683,7816,22759,66283,193027,562144,1637086,4767577,13884268,40434181,117753589,342925453,998677492,2908377754,8469862531,24666180832,71833571503,209195822971,609226179619 ⋆ Expansion of x * (4 + 5 * x - x ^ 2) / (1 - 2 * x - 3 * x ^ 2 + x ^ 3). ● a(n + 3) = 2 * a(n + 2) + 3 * a(n + 1) - a(n); with a(1) = 4, a(2) = 13, a(3) = 37. ●

▶ [A108489] 1,1,4,13,37,130,427,1441,4954,16987,58843,204610,713893,2500183,8778478,30898309,108987427,385136680,1363252603,4832572951,17153677534,60961916965,216887253409,772400234074,2753261490919 ⋆ Expansion of 1 / sqrt(1 - 2x - 5x ^ 2 - 6x ^ 3 + 9x ^ 4). ● a(n) = Sum _{ k=0..n } , C(n - k, k) ^ 2 * 3 ^ k. ●

▶ [A024450] 4,13,38,87,208,377,666,1027,1556,2397,3358,4727,6408,8257,10466,13275,16756,20477,24966,30007,35336,41577,48466,56387,65796 ⋆ Sum of squares of the first n primes. ● a(n) = Sum _{ i=1..n } prime(i) ^ 2. - _ Walter Kehowski _ , Jun 24 2006 ●

▶ [A357286] 0,0,0,0,0,0,0,1,4,13,38,99,240,565,1274,2799,6052,12857,26958,56099,115704,237133,484002,983543,1992012 ⋆ a(n) = (1 / 8) * A357285). ● a(n) = 4 * a(n - 1) - 3 * a(n - 2) - 6 * a(n - 3) + 10 * a(n - 4) - 4 * a(n - 5). ●

▶ [A181527] 1,4,13,38,103,264,649,1546,3595,8204,18445,40974,90127,196624,426001,917522,1966099,4194324,8912917,18874390,39845911,83886104,176160793,369098778,771751963 ⋆ Binomial transform of A113127; (1, 1, 3, 7, 15, 31, ...) convolved with (1, 3, 7, 15, 31, 63, ...). ● a(n) = 3 + n + 2 ^ (n + 1) * (n - 1) = 6 * a(n - 1) - 13 * a(n - 2) + 12 * a(n - 3) - 4 * a(n - 4). ●

▶ [A049611] 0,1,4,13,38,104,272,688,1696,4096,9728,22784,52736,120832,274432,618496,1384448,3080192,6815744,15007744,32899072,71827456,156237824,338690048,731906048 ⋆ a(n) = T(n,2), array T as in A049600. ● a(n) = Sum _{ k=0..n } binomial(n, k)floor((k + 1) ^ 2 / 4). - _ Paul Barry _ , May 27 2003 ● a(n) = 2 ^ (n - 4)(n ^ 2 + 5n + 2) - 0 ^ n / 8. - _ Paul Barry _ , Jun 09 2003 ● a(n) = Hyper2F1([- n + 1, 3], [1], - 1) for n>0. - _ Peter Luschny _ , Aug 02 2014 ●

▶ [A084851] 1,4,13,38,104,272,688,1696,4096,9728,22784,52736,120832,274432,618496,1384448,3080192,6815744,15007744,32899072,71827456,156237824,338690048,731906048,1577058304 ⋆ Binomial transform of binomial(n + 2,2). ● a(n) = (n ^ 2 + 7 * n + 8) * 2 ^ (n - 3). ● a(n) = Sum _{ k=0..n } C(n, k) * C(k + 2, 2). ●

▶ [A094706] 0,1,4,13,38,105,280,729,1866,4717,11812,29365,72590,178641,438064,1071153,2613138,6362965,15470140,37565389,91125206,220864377,534951112,1294960905,3133261530 ⋆ Convolution of Pell(n) and 2 ^ n. ● a(n) = Sum _{ k=0..n } ((1 + sqrt(2)) ^ n - (1 - sqrt(2)) ^ n) / (2 * sqrt(2)) * 2 ^ (n - k). ● a(n) = (1 + 3 * sqrt(2) / 4) * (1 + sqrt(2)) ^ n + (1 - 3 * sqrt(2) / 4) * (1 - sqrt(2)) ^ n - 2 ^ (n + 1). ● a(n) = 4 * a(n - 1) - 3 * a(n - 2) - 2 * a(n - 3). ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n - k, k + 1) * 2 ^ (n - 2k - 1); ● a(n) = Sum _{ k=0..n } binomial(k, n - k + 1) * 2 ^ k * (1 / 2) ^ (n - k + 1). - _ Paul Barry _ , Oct 07 2004 ●

▶ [A056014] 0,0,0,1,4,13,38,106,288,771,2046,5401,14212,37324,97904,256621,672336,1760997,4611642,12075526,31617520,82781215,216732890,567428401,1485570024 ⋆ a(n) = (Fibonacci(2n - 1) - Fibonacci(n + 1)) / 2. ● a(n) = 4 * a(n - 1) - 3 * a(n - 2) - 2 * a(n - 3) + a(n - 4), a(0)=a(1)=a(2)=0, a(3)=1. ●

▶ [A183112] 0,1,4,13,38,113,336,1001,2994,8965,26868,80565,241630,724793,2174232,6522465,19567050,58700621,176101052,528301933,1584903926,4754708929,14264122464,42792360793,128377072354 ⋆ Magnetic Tower of Hanoi, total number of moves, optimally solving the [RED ; BLUE ; NEUTRAL] or [NEUTRAL ; RED ; BLUE] pre - colored puzzle. ● a(n) = a(n - 2) + a(n - 3) + 3 ^ (n - 1) + 3 ^ (n - 3) + 2; n >= 3 ; a(0) = 0 ● a(n) = (5 / 11) * 3 ^ n + AS * 1 ^ (n - 1) + BS * 2 ^ (n - 1) + CS * 3 ^ (n - 1) - 1. ●

▶ [A364647] 1,4,13,38,135,677,3538,15868,63313,268430,1348190,7038185,33328258,144159428,642323050,3213846836,16700677289,80935833050,363843867265,1660048399600,8276473557820,42830085070355,210286731046320,967456811687945,4476690297795850 ⋆ G.f. satisfies A(x) = 1 / (1 - 5 * x) - x * A(x) ^ 3. ● a(n) = Sum _{ k=0..n } (- 1) ^ k * 5 ^ (n - k) * binomial(n + k,2 * k) * binomial(3 * k,k) / (2 * k + 1). ●

▶ [A266429] 4,13,39,106,259,574,1170,2223,3982,6787,11089,17472,26677,39628,57460,81549,113544,155401,209419,278278,365079,473386,607270,771355,970866 ⋆ Number of 3 X n binary arrays with rows and columns lexicographically nondecreasing and column sums nondecreasing. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

▶ [A105693] 0,1,4,13,39,112,313,859,2328,6253,16687,44320,117297,309619,815656,2145541,5637351,14799280,38826025,101809867,266865720,699311581,1832117599,4799138368,12569491809 ⋆ a(n) = Fibonacci(2n + 2) - 2 ^ n. ● a(n) = 5 * a(n - 1) - 7 * a(n - 2) + 2 * a(n - 3) for n>2. - _ Colin Barker _ , Sep 12 2016 ●

▶ [A215404] 0,0,1,4,13,39,113,322,910,2561,7192,20175,56563,158535,444276,1244936,3488381,9774440,27387681,76739023,215018609,602469686,1688083894,4729907909,13252910268 ⋆ a(n) = 4 * a(n - 1) - 3 * a(n - 2) - a(n - 3), with a(0)=0, a(1)=0 and a(2)=1. ● a(n) = (1 / 7) * ((c(2) - c(4)) * (1 - c(1)) ^ n + (c(4) - c(1)) * (1 - c(2)) ^ n + (c(1) - c(2)) * (1 - c(4)) ^ n), where c(j):=2 * cos(2 * Pi * j / 7) - this formula is the Binet formula for a(n) (see the Binet formula (3.17) for the respective quasi - Fibonacci number C(n;d) for value d= - 1 in the Witula - Slota - Warzynski paper). ●

▶ [A290929] 1,4,13,39,114,330,948,2703,7655,21554,60389,168468,468199,1296826,3581185,9862749,27096216,74277342,203200986,554869701,1512575195,4116813032,11188568267,30367047720,82316338381 ⋆ p - INVERT of the positive integers, where p(S) = (1 - S)(1 - S ^ 2). ● a(n) = 7 * a(n - 1) - 18 * a(n - 2) + 23 * a(n - 3) - 18 * a(n - 4) + 7 * a(n - 5) - a(n - 6). ●

▶ [A133409] 0,0,0,0,1,4,13,39,117,351,1054,3163,9490,28470,85410,256230,768691,2306074,6918223,20754669,62264007,186792021,560376064,1681128193,5043384580 ⋆ Zero followed by partial sums of A133405. ● a(n) = 4 * a(n - 1) - 3 * a(n - 2) - a(n - 3) + 4 * a(n - 4) - 3 * a(n - 5). ●

▶ [A360606] 0,1,4,13,40,117,324,853,2152,5245,12436,28845,65736,147685,327940,721189,1573192,3408237,7340436,15729085,33554920,71303701,150995524,318767733,671089320 ⋆ The polygonal polynomials evaluated at x = 1 / 2 and normalized with 2 ^ n. ● a(n) = [x ^ n] x * (- 4 * x ^ 2 + 3 * x - 1) / ((1 - 2 * x) ^ 2 * (x - 1) ^ 3). ● a(n) = 8 + 4 * n + n ^ 2 + (n - 4) * 2 ^ (n + 1). - _ Vaclav Kotesovec _ , Feb 21 2023 ●

► [A119915] 0,1,4,13,40,117,332,921,2512,6761,18004,47525,124536,324317,840092,2166065,5562272,14232273,36300196,92321085,234192584,592695109,1496810732,3772761289,9492450672 ⋆ Number of ternary words of length n and having exactly one run of 0's of odd length. ● a(n) = [z ^ n] z * (1 - z ^ 2) / (1 - 2 * z - z ^ 2) ^ 2. ● a(n) = n! * [x ^ n](h(sqrt(2)) + h(- sqrt(2))). (End) ●

► [A238846] 1,4,13,40,120,354,1031,2972,8495,24110,68016,190884,533293,1484020,4115185,11375764,31358376,86223942,236540915,647556620,1769374931,4826148314,13142564448,35736448200,97037995225 ⋆ Expansion of (1 - 2 * x) / (1 - 3 * x + x ^ 2) ^ 2. ● a(n) = 6 * a(n - 1) - 11 * a(n - 2) + 6 * a(n - 3) - a(n - 4) for n>3, a(0)=1, a(1)=4, a(2)=13, a(3)=40. ● a(n) = ((3 + sqrt(5)) ^ (1 + n) * (8 - (1 - sqrt(5)) * (13 + 5 * n)) + (3 - sqrt(5)) ^ (1 + n) * (8 - (1 + sqrt(5)) * (13 + 5 * n))) / (25 * 2 ^ (2 + n)). - _ Bruno Berselli _ , Mar 06 2014 ●

► [A003462] 0,1,4,13,40,121,364,1093,3280,9841,29524,88573,265720,797161,2391484,7174453,21523360,64570081,193710244,581130733,1743392200,5230176601,15690529804,47071589413,141214768240 ⋆ a(n) = (3 ^ n - 1) / 2. ● a(n) = 4 * a(n - 1) - 3 * a(n - 2), n > 1. a(0) = 0, a(1) = 1. ● a(n) = 3 * a(n - 1) + 1, a(0) = 0. ● a(n + 1) = Sum _{ k = 0..n } binomial(n + 1, k + 1) * 2 ^ k. - _ Paul Barry _ , Aug 20 2004 ● a(n) = Sum _{ i = 0..n - 1 } 3 ^ i, for n > 0; a(0) = 0. ● a(n) = StirlingS2(n + 1, 3) + StirlingS2(n + 1, 2). - _ Ross La Haye _ , Jan 10 2008 ● a(n) = 2 * a(n - 1) + 3 * a(n - 2) + 2, n > 1. - _ Gary Detlefs _ , Jun 21 2010 ●

► [A098183] 1,1,4,13,40,124,385,1195,3709,11512,35731,110902,344218,1068385,3316057,10292389,31945552,99152713,307750528,955197136,2964744121,9201982891,28561145809,88648181548,275146527535 ⋆ a(n) = 3 * a(n - 1) + a(n - 3), a(0) = 1, a(1) = 1, a(2) = 4. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n + k,3 * k) * 3 ^ k. ●

► [A149424] 1,1,4,13,40,136,496,1753,6256,22912,85216,314836,1170688,4396048,16623328,62744017,237680992,904962400,3459831424,13219219972,50621972224,194465172304,749061374848,2884682636764,11126422372864 ⋆ Number of walks within N ^ 3 (the first octant of Z ^ 3) starting at (0,0,0) and consisting of n steps taken from { (- 1, 0, 0), (0, - 1, 0), (0, 0, - 1), (1, 1, 1) } . ● a(n) == 1 (mod 3). - _ Alois P. Heinz _ , Jul 12 2021 ●

► [A351892] 1,1,1,4,13,40,205,952,4921,31168,189145,1318528,9843781,74869888,632536933,5475991552,49996774897,485393809408,4829958877105,50858117779456,554544498995965,6259096187060224,73822470722135293,894846287081242624,11261265009125680681 ⋆ Expansion of e.g.f. exp(sinh(sqrt(3) * x) / sqrt(3)). ● a(0) = 1; a(n) = Sum _{ k=0..floor((n - 1) / 2) } binomial(n - 1,2 * k) * 3 ^ k * a(n - 2 * k - 1). ●

► [A213496] 0,4,13,41,82,158,255,403,580,824,1105,1469,1878,2386,2947,3623,4360,5228,6165,7249,8410,9734,11143,12731,14412 ⋆ Number of (w,x,y) with all terms in { 0,...,n } and x != max(|w - x|,|x - y|) ● a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + a(n - 4) + 2 * a(n - 5) - a(n - 6). ● a(n) = (2 * n ^ 3 + 2 * n ^ 2 + 3 * n + 1 - (2 + n + 1) * ((n + 1) mod 2)) / 2. (End) ●

► [A220926] 4,13,41,114,260,545,1104,2182,4201,7862,14295,25272,43500,73013,119684,191880,301285,463918,701375,1042326,1524300,2195793,3118736,4371362,6051513 ⋆ Number of n X 2 arrays of the minimum value of corresponding elements and their horizontal, vertical or antidiagonal neighbors in a random, but sorted with lexicographically nondecreasing rows and columns, 0..3 n X 2 array. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>12. ●

► [A368344] 0,0,0,1,4,13,41,125,377,1134,3405,10218,30658,91978,275938,827819,2483462,7450391,22351179,67053543,201160635,603481912,1810445743,5431337236,16294011716 ⋆ a(n) = Sum _{ k=0..n } 3 ^ (n - k) * floor(k / 3). ● a(n) = a(n - 3) + (3 ^ (n - 2) - 1) / 2. ● a(n) = 1 / 2 * Sum _{ k=0..n } floor(3 ^ k / 13) = Sum _{ k=0..n } floor(3 ^ k / 26). ● a(n) = 4 * a(n - 1) - 3 * a(n - 2) + a(n - 3) - 4 * a(n - 4) + 3 * a(n - 5). ● a(n) = (floor(3 ^ (n + 1) / 26) - floor((n + 1) / 3)) / 2. ●

► [A190214] 1,1,4,13,41,127,395,1232,3842,11977,37336,116392,362846,1131150,3526285,10992961,34269838,106833983,333047961,1038255251,3236692893,10090178578,31455472326,98060379357,305696824386 ⋆ Expansion of (1 - x) / (1 - x ^ 6 - 3 * x ^ 5 - 4 * x ^ 4 - 3 * x ^ 3 - 2 * x ^ 2 - 2 * x). ● a(n) = Sum _{ m=1..n } Sum _{ r=m..n } (Sum _{ k=m..r } binomial(k,r - k) * Sum _{ j=0..m } binomial(j, - 3 * m + k + 2 * j) * binomial(m,j)))) * binomial(- r + n + m - 1,m - 1). ●

► [A052529] 1,1,4,13,41,129,406,1278,4023,12664,39865,125491,395033,1243524,3914488,12322413,38789712,122106097,384377665,1209982081,3808901426,11990037126,37743426307,118812495276,374009739309 ⋆ Expansion of (1 - x) ^ 3 / (1 - 4 * x + 3 * x ^ 2 - x ^ 3). ● a(n) = Sum _{ a=0..n } (Sum _{ b=0..n } (Sum _{ c=0..n } C(n - b - c,a) * C(n - a - c,b) * C(n - a - b,c))). ● a(n) = 4 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>=4. ● a(n) = Sum _{ alpha = RootOf(- 1 + 4 * x - 3 * x ^ 2 + x ^ 3) } (1 / 31) * (6 - 5 * alpha - 3 * alpha ^ 2) * alpha ^ (- 1 - n). ● a(n) = Sum _{ k=0..n } binomial(n + 2 * k - 1, n - k). - _ Vladeta Jovovic _ , Mar 23 2003 ●

► [A049222] 0,0,0,1,4,13,41,130,415,1329,4260,13657,43781,140346,449891,1442157,4622932,14819125,47503729,152276498,488132887,1564743865,5015895108,16078800033,51541709869 ⋆ Number of horizontally convex n - ominoes in which the top row has exactly 1 square, which is not above the rightmost square in the second row and the rightmost square in the second row is above the leftmost square in the third row. ● a(n) = 5 * a(n - 1) - 7 * a(n - 2) + 4 * a(n - 3) for n > = 6. ●

► [A001453] 1,4,13,41,131,428,1429,4861,16795,58785,208011,742899,2674439,9694844,35357669,129644789,477638699,1767263189,6564120419,24466267019,91482563639,343059613649,1289904147323,4861946401451,18367353072151 ⋆ Catalan numbers - 1. ● a(n) = Sum _{ k=1..floor(n / 2) } (C(n,k) - C(n,k - 1)) ^ 2. - _ J. M. Bergot _ , Sep 17 2013 ● a(n)= 3 * Sum _{ k=1..n } binomial(2 * k - 2,k) / (k + 1). - _ Gary Detlefs _ , Feb 14 2020 ●

► [A186202] 0,1,4,13,41,151,652,2675,10579,59071,711536,6180307,76629775,873676259,7496233396,49493077951,1571673343007,24729597043375,584039297226784,8662254974851091,87570847718549791,1147293660298060507,66175019781864421220,1378758199197350367079 ⋆ The maximal set of disjoint prime cycle permutations on n elements which generate unique subgroups of S(n). ● a(n) = n! * Sum _{ p|p prime, p<=n } ●

► [A109454] 0,0,0,0,4,13,42,119,330,890,2376,6291,16588,43615,114492,300236,786828,2061233,5398470,14136759,37015990,96917974,253748880,664346375,1739318904 ⋆ Sum of non - Fibonacci numbers between successive Fibonacci numbers: a(n) = Sum _{ k=F(n) + 1..F(n + 1) - 1) } k. ● a(n) = Fibonacci(n + 2) * (Fibonacci(n - 1) - 1) / 2, n>1. - _ Vladeta Jovovic _ , Aug 27 2005 ● a(n) = 3 * a(n - 1) + a(n - 2) - 5 * a(n - 3) - a(n - 4) + a(n - 5) for n>6. - _ Colin Barker _ , Mar 26 2015 ●

► [A287349] 4,13,42,131,398,1186,3482,10103,29034,82777,234424,660098,1849552,5160001,14341098,39723791,109701122,302131618,830079014,2275509227,6225274794,16999389733,46341292012,126130604546,342800478748 ⋆ Number of matchings in the n - gear graph. ● a(n) = Lucas(2 * n) + n * Fibonacci(2 * n) for n > 0. ● a(n) = 6 * a(n - 1) - 11 * a(n - 2) + 6 * a(n - 3) - a(n - 4) for n>4. - _ Colin Barker _ , Jun 05 2017 ●

► [A192910] 0,1,4,13,42,133,418,1311,4110,12883,40380,126563,396684,1243317,3896896,12213937,38281814,119985657,376067806,1178699171,3694364986,11579148423,36292212248,113749700903,356522616120 ⋆ Coefficient of x in the reduction by (x ^ 2 - > x + 1) of the polynomial p(n,x) defined below at Comments. ● a(n) = 4 * a(n - 1) - 3 * a(n - 2) + a(n - 3) - a(n - 5). ●

► [A289807] 1,4,13,42,133,424,1348,4291,13653,43449,138261,439979,1400101,4455420,14178073,45117606,143573662,456881476,1453892534,4626590576,14722780217,46850970327,149089600359,474434334814,1509749422360 ⋆ p - INVERT of (1,2,2,3,3,4,4,...) (A080513), where p(S) = 1 - S - S ^ 2. ● a(n) = 3 * a(n - 1) + 2 * a(n - 2) - 5 * a(n - 3) + a(n - 4) + 2 * a(n - 5) - a(n - 6). ●

► [A175005] 0,1,4,13,42,137,448,1465,4790,15661,51204,167413,547362,1789617,5851208,19130705,62548430,204504021,668632204,2186113613,7147565882,23369187097,76406277968,249812682345,816770269670 ⋆ Expansion of x / (1 - 4 * x + 3 * x ^ 2 - 2 * x ^ 3). ● a(n) = 4 * a(n - 1) - 3 * a(n - 2) + 2 * a(n - 3), starting 0, 1, 4. ●

► [A070031] 1,4,13,42,138,462,1573,5434,19006,67184,239666,861764,3120180,11366370,41630805,153216570,566343030,2101610280,7826451270,29240172780,109566326220,411671536380,1550629453698,5854180360932,22148866939948 ⋆ Expansion of (1 + x * C) * C ^ 3, where C = (1 - sqrt(1 - 4 * x)) / (2 * x) is g.f. for Catalan numbers, A000108. ● a(n) = 2 * (5 * n + 3) * binomial(2 * n + 1, n) / ((n + 2) * (n + 3)). - _ Emeric Deutsch _ , Dec 13 2002 ● a(n) = leftmost term of M ^ n * V, M = an infinite tridiagonal matrix with all 1's in the super and subdiagonals and all 2's in the main diagonal; with the rest zeros. V = Vector [1,2,0,0,0,...]. - _ Gary W. Adamson _ , Jun 16 2011 ●

► [A267240] 4,13,42,141,486,1685,5804,19769,66544,221581,730918,2391717,7772610,25110933,80713016,258280817,823269116,2615088973,8281113730,26150883901,82375282494,258893742933,811984918692,2541865829801,7943330715176 ⋆ Number of n X 3 binary arrays with row sums nondecreasing and columns lexicographically nondecreasing. ● a(n) = (24 + (31 + 3 ^ (2 + n)) * n + 12 * n ^ 2 + 2 * n ^ 3) / 24. ●

► [A192802] 0,1,4,13,42,143,514,1915,7268,27805,106680,409633,1573086,6040587,23193782,89051615,341901032,1312664601,5039704492,19348873781,74285859698,285204660583,1094982340202,4203950929347,16140172668812 ⋆ Coefficient of x in the reduction of the polynomial (x + 2) ^ n by x ^ 3 - >x ^ 2 + x + 1. ● a(n) = 7 * a(n - 1) - 15 * a(n - 2) + 11 * a(n - 3). ●

► [A003688] 1,4,13,43,142,469,1549,5116,16897,55807,184318,608761,2010601,6640564,21932293,72437443,239244622,790171309,2609758549,8619446956,28468099417,94023745207,310539335038,1025641750321,3387464586001 ⋆ a(n) = 3 * a(n - 1) + a(n - 2), with a(1)=1 and a(2)=4. ● a(n) = (1 / 2 - sqrt(13) / 26) * (3 / 2 + sqrt(13) / 2) ^ n + (1 / 2 + sqrt(13) / 26) * (3 / 2 - sqrt(13) / 2) ^ n. - _ Paul Barry _ , Oct 02 2004 ● a(n) ^ 2 is the denominator of continued fraction [3,3,...,3, 5, 3,3,...,3], which has n - 1 3's before, and n - 1 3's after, the middle 5. - _ Greg Dresden _ , Sep 18 2019 ●

► [A033434] 1,4,13,43,145,497,1727,6071,21554,77180,278426,1010990,3692213,13553555,49981875,185082495,687923790,2565602160,9598056630,36008860650,135446603370,510706730274,1929930236790,7308166696118,27727426756580 ⋆ Third differences of Catalan numbers A000108. ● a(n) = (27 * n ^ 3 + 81 * n ^ 2 + 108 * n + 24) * binomial(2 * n, n) / ((n + 1) * (n + 2) * (n + 3) * (n + 4)). - _ Benoit Cloitre _ , Jun 11 2004 ● a(n) = - binomial(2 * n,n) / (n + 1) * hypergeom([- 3,n + 1 / 2],[n + 2],4). - _ Peter Luschny _ , Aug 15 2012 ●

► [A297928] 4,13,43,151,559,2143,8383,33151,131839,525823,2100223,8394751,33566719,134242303,536920063,2147581951,8590131199,34360131583,137439739903,549757386751,2199026401279,8796099313663,35184384671743,140737513521151,562950003752959 ⋆ a(n) = 2 * 4 ^ n + 3 * 2 ^ n - 1. ● a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3), n > 2. ●

► [A252831] 4,13,44,127,288,529,850,1251,1732,2293,2934,3655,4456,5337,6298,7339,8460,9661,10942,12303,13744,15265,16866,18547,20308 ⋆ Number of n X 3 nonnegative integer arrays with upper left 0 and every value within 2 of its king move distance from the upper left and every value increasing by 0 or 1 with every step right, diagonally se or down. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>6. ●

► [A219708] 4,13,44,129,338,813,1822,3840,7665,14578,26557,46556,78861,129536,206973,322561,491490,733707,1075042,1548523,2195900,3069399,4233728,5768358,7770103 ⋆ Number of n X 2 arrays of the minimum value of corresponding elements and their horizontal or antidiagonal neighbors in a random, but sorted with lexicographically nondecreasing rows and nonincreasing columns, 0..3 n X 2 array. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>9. ●

► [A345230] 0,1,4,13,44,140,512,1782,6652,24682,93599,354341,1359470,5210328,20098886,77621774,300797854,1167164438,4539201401,17674941735,68933414989,269143872226,1052114789548,4116808923486,16124224585644 ⋆ a(n) = Sum _{ 1 <= x _ 1 <= x _ 2 <= ... <= x _ n <= n } gcd(x _ 1, x _ 2, ..., x _ n). ● a(n) = Sum _{ k=1..n } Sum _{ d|k } phi(k / d) * binomial(d + n - 2, n - 1). ● a(n) = [x ^ n] (1 / (1 - x)) * Sum _{ k >= 1 } phi(k) * x ^ k / (1 - x ^ k) ^ n. ●

► [A117882] 1,4,13,44,141,447,1408,4428,13916,43725,137373,431577,1355846,4259523,13381694,42039839,132072059,414916622,1303499025,4095062974,12865019770,40416651612,126972655803,398896362696,1253169882609 ⋆ Partial sums of floor(Pi ^ n). ● a(n) = Sum _{ i=0..n } floor(Pi ^ i). ●

► [A291236] 4,13,44,147,488,1616,5344,17661,58348,192739,636620,2102688,6944828,22937405,75757420,250210275,826389232,2729379568,9014530520,29772975309,98333463212,324773375891,1072653608596,3542734230336,11700856345972 ⋆ p - INVERT of (0,1,0,1,0,1,...), where p(S) = (1 - S)(1 - 3 S). ● a(n) = 4 * a(n - 1) - a(n - 2) - 4 * a(n - 3) - a(n - 4) for n >= 5. ●

► [A339850] 1,4,13,44,148,498,1676,5640,18980,63872,214944,723336,2434192,8191616,27566672,92768192,312186304,1050578720,3535439040,11897565568,40038044736,134737229824,453421769728,1525868548224,5134898635008 ⋆ Number of Hamiltonian circuits within parallelograms of size 3 X n on the triangular lattice. ● a(n) = 2 * a(n - 1) + 4 * a(n - 2) + 2 * a(n - 3) for n > 4. ●

► [A073717] 0,1,4,13,44,149,504,1705,5768,19513,66012,223317,755476,2555757,8646064,29249425,98950096,334745777,1132436852,3831006429,12960201916,43844049029,148323355432,501774317241,1697490356184 ⋆ a(n) = T(2n + 1), where T(n) are the tribonacci numbers A000073. ● a(n) = 3 * a(n - 1) + a(n - 2) + a(n - 3), a(0)=0, a(1)=1, a(2)=4. ●

► [A290907] 0,1,4,13,44,152,524,1803,6204,21351,73480,252880,870280,2995049,10307396,35472677,122078436,420130248,1445868996,4975926307,17124540796,58933729999,202819133840,697997582240,2402143306640 ⋆ a(n) = (1 / 3) * A290906(n). ● a(n) = 4 * a(n - 1) - 3 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ●

► [A252933] 4,13,44,153,494,1343,3016,5833,10114,16179,24348,34941,48278,64679,84464,107953,135466,167323,203844,245349,292158,344591,402968,467609,538834 ⋆ Number of n X 3 nonnegative integer arrays with upper left 0 and every value within 3 of its king move distance from the upper left and every value increasing by 0 or 1 with every step right, diagonally se or down. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>8. ●

► [A081197] 0,0,0,1,4,13,44,162,643,2724,12259,58423,293902,1555743,8640526,50222288,304792741,1927313470,12673784445,86517541197,612134881624,4482215342305,33919417267456,264951302794510,2133720505175351 ⋆ Diagonal sums of A081130. ● a(n) = Sum _{ k=1..n - 2 } k ^ (n - k - 2) * binomial(n - k, 2). ● a(n) = Sum _{ k=0..n - 1 } (n - k) ^ (k - 2) * binomial(k, 2). - _ G. C. Greubel _ , May 15 2021 ●

► [A005490] 1,4,13,44,163,666,2985,14550,76497,430746,2582447,16403028,109918745,774289168,5715471605,44087879136,354521950931,2965359744446,25749723493073,231719153184018,2157494726318233,20753996174222510,205985762120971167,2106795754056142536 ⋆ Number of partitions of [n] where the first k elements are marked (0 <= k <= n - 1) and at least k blocks contain their own index. ● a(n) = Sum _{ i=1..n } b(n, i) where b(n, 1) = n and b(n + 1, i + 1) = (n - i) * b(n, i) + b(n + 1, i) [From Whitehead]. - _ Sean A. Irvine _ , Jul 01 2016 ●

► [A285188] 0,4,13,45,95,203,350,606,930,1430,2035,2899,3913,5285,6860,8908,11220,14136,17385,21385,25795,31119,36938,43850,51350 ⋆ a(n) = Sum _{ k=1..n } (k ^ 2 * floor(k / 2)). ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 6 * a(n - 3) + 6 * a(n - 5) - 2 * a(n - 6) - 2 * a(n - 7) + a(n - 8) for n > 8. ● a(n) = n * (n + 1) * (3 * n ^ 2 + n - 1 + 3 * (- 1) ^ n) / 24. - _ Robert Israel _ , Apr 26 2017 ●

► [A203573] 4,13,45,152,491,1531,4652,13865,40713,118144,339559,968183,2742100,7721797,21637221,60367976,167787107,464776435,1283571068,3535240289,9713031489,26627195728,72847698655,198929987567,542305383076 ⋆ Bisection of A099924 (convolution of Lucas numbers); even arguments. ● a(0)=4, a(1)=13, a(2)=45, a(3)=152, a(n) = 6 * a(n - 1) - 11 * a(n - 2) + 6 * a(n - 3) - a(n - 4). - _ Harvey P. Dale _ , Jan 11 2014 ●

► [A214997] 4,13,45,153,523,1785,6095,20809,71047,242569,828183,2827593,9654007,32960841,112535351,384219721,1311808183,4478793289,15291556791,52208640585,178251448759,608588513865,2077851157943,7094227604041,24221208100279 ⋆ Power ceiling - floor sequence of 2 + sqrt(2). ● a(n) = floor(x * a(n - 1)) if n is odd, a(n) = ceiling(x * a(n - 1) if n is even, where x = 2 + sqrt(2) and a(0) = ceiling(x). ● a(n) = 3 * a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3). ● a(n) = (1 / 14) * (2 * (- 1) ^ n + (27 - 19 * sqrt(2)) * (2 - sqrt(2)) ^ n + (2 + sqrt(2)) ^ n * (27 + 19 * sqrt(2))). - _ Colin Barker _ , Nov 13 2017 ●

► [A320743] 0,0,0,0,0,4,13,46,144,420,1221,3474,9856,27794,78632,222156,629760,1787440,5087797,14509580,41479867,118811286,341009901,980488510,2824029648 ⋆ Number of chiral pairs of color patterns (set partitions) in a cycle of length n using 3 or fewer colors (subsets). ● a(n) = Sum _{ j=1..k } - Ach(n,j) / 2 + (1 / 2n) * Sum _{ d|n } phi(d) * A(d,n / d,j), where k=3 is the maximum number of colors, Ach(n,k) = [n>=0 & n<2 & n==k] + [n>1] * (k * Ach(n - 2, k) + Ach(n - 2,k - 1) + Ach(n - 2,k - 2)), and A(d,n,k) = [n==0 & k==0] + [n>0 & k>0] * (k * A(d,n - 1,k) + Sum _{ j|d } A(d,n - 1,k - j)). ●

► [A180144] 1,4,13,46,163,580,2065,7354,26191,93280,332221,1183222,4214107,15008764,53454505,190381042,678052135,2414918488,8600859733,30632416174,109098967987,388561736308,1383883144897,4928772907306 ⋆ Eight rooks and one berserker on a 3 X 3 chessboard. G.f.: (1 - 2 * x ^ 2) / (1 - 4 * x + x ^ 2 + 2 * x ^ 3). ● a(n) = 4 * a(n - 1) - 1 * a(n - 2) - 2 * a(n - 3) with a(0)=1, a(1)=4 and a(2)=13. ● a(n) = 1 / 4 + (21 - 6 * A) * A ^ (- n - 1) / 68 + (21 - 6 * B) * B ^ (- n - 1) / 68 with A=(- 3 + sqrt(17)) / 4 and B=(- 3 - sqrt(17)) / 4. ●

► [A026641] 1,1,4,13,46,166,610,2269,8518,32206,122464,467842,1794196,6903352,26635774,103020253,399300166,1550554582,6031074184,23493410758,91638191236,357874310212,1399137067684,5475504511858,21447950506396 ⋆ Number of nodes of even outdegree (including leaves) in all ordered trees with n edges. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(k + n, n - k) * binomial(n - k, k). - Detlef Pauly (dettodet(AT)yahoo.de), Nov 15 2001 ● a(n) = (- 1) ^ n * Sum _{ k=0..n } (- 1) ^ k * C(n + k, k). - _ Benoit Cloitre _ , Aug 20 2002 ● a(n) = Sum _{ j=0..floor(n / 2) } binomial(2 * n - 2 * j - 1, n - 1). - _ Emeric Deutsch _ , Jan 28 2004 ● a(n) = Sum _{ k=0..n } binomial(2 * n - k, k) * binomial(k, n - k). - _ Paul Barry _ , Jul 25 2005 ● a(n) = (- 1 / 2) ^ (n + 2) + (2 / 3) * Sum _{ k=0..n } ((4 ^ n - k) * binomial(2 * k,k) * (1 / (1 - 2 * k)) * (1 - (- 1 / 8) ^ (n - k + 1))). - _ Yalcin Aktar _ , Jul 06 2007 ● a(n) = (- 1 / 2) ^ (n + 2) + (3 / 4) * Sum _{ k=0..n } (- 1 / 2) ^ (n - k) * binomial(2 * k,k). - _ Yalcin Aktar _ , Jul 06 2007 ●

► [A087440] 1,4,13,46,172,664,2608,10336,41152,164224,656128,2622976,10488832,41949184,167784448,671113216,2684403712,10737516544,42949869568,171799085056,687195553792,2748780642304,10995119423488,43980471402496 ⋆ Expansion of (1 - 2x - 3x ^ 2) / ((1 - 2x)(1 - 4x)). ● a(n) = 5 * 4 ^ n / 8 + 3 * 2 ^ n / 4 - 3 * 0 ^ n / 8. ● a(n) = 6 * a(n - 1) - 8 * a(n - 2), n>2. - _ Harvey P. Dale _ , Jan 18 2012 ●

► [A014145] 0,1,4,13,46,199,1072,6985,53218,462331,4500244,48454957,571411270,7321388383,101249656696,1502852293009,23827244817322,401839065437635,7182224591785948,135607710526966261,2696935204638786574,56349204870460046887,1234002202313888987200 ⋆ Partial sums of A007489. ● a(n) = Sum _{ k=1..n } k * (n + 1 - k)!. - _ Amarnath Murthy _ , Sep 30 2003 ● a(n) = (n + 2) * a(n - 1) - (2 * n + 1) * a(n - 2) + n * a(n - 3) for n > 2, a(n) = n ^ 2 for n < 3. - _ Alois P. Heinz _ , Jun 16 2017 ●

► [A354550] 1,1,1,4,13,46,241,1156,6889,44668,300241,2328976,18390901,159273544,1461200833,13995753136,144068872081,1531949061136,17259159775969,202543867724608,2474236899786781,31633380519660256,417760492214548561,5751414293905728064 ⋆ Expansion of e.g.f. exp(x * exp(x ^ 2 / 2)). ● a(n) = n! * Sum _{ k=0..floor(n / 2) } (n - 2 * k) ^ k / (2 ^ k * k! * (n - 2 * k)!). ●

► [A078468] 1,4,13,47,188,825,3937,20270,111835,657423,4097622,26965867,186685725,1355314108,10289242825,81481911259,671596664012,5749877335253,51042081429213,469037073951694,4454991580211951,43677136038927595,441452153556357966,4594438326374915007 ⋆ Distinct compositions of the complete graph with one edge removed (K ^-_ n). ● a(n) = Sum _{ k=0..n } Stirling2(n,k) * (k + 1) ^ 2. - _ Ilya Gutkovskiy _ , Aug 09 2021 ●

► [A351509] 1,1,4,13,48,162,600,2109,7760,28166,103992,383218,1427312,5317284,19934768,74908957,282588832,1068648734,4053382328,15408585766,58713314864,224166303708,857527923728,3286072863410,12613110808416 ⋆ G.f. A(x) = lim _{ n - >infinity } (P(n) - 1) / (2 * x) ^ n, where P(1,x) = 1 / sqrt(1 - 4 * x), and P(n + 1,x) = 1 / sqrt(1 - 4 * x + 4 * x / P(n,x)) for n >= 1. ● a(2 ^ n - 1) = 1 (mod 2) for n >= 0. ●

► [A294298] 1,4,13,49,157,481,1534,4693,14170,43357,130918,393601,1188454,3573013,10726690,32248957,96815758,290516161,872169223,2617128409,7852005967,23561605318,70690403371,212076797530,636280680100 ⋆ Sum of products of terms in all partitions of 3 * n into powers of 3. ● a(n) = [x ^ (3 * n)] Product _{ k>=0 } 1 / (1 - 3 ^ k * x ^ (3 ^ k)). - _ Ilya Gutkovskiy _ , Sep 10 2018 ●

► [A300579] 1,1,4,13,49,157,589,1885,6826,22378,78754,256630,904711,2934247,10133851,33287620,113522089,370582069,1262300701,4110883510,13869616495,45364050184,151708228636,494743296757,1654133919475 ⋆ Expansion of Product _{ k>=1 } 1 / (1 - 3 ^ (k - 1) * x ^ k). ● a(n) = Sum _{ k=0..n } p(n,k) * 3 ^ (n - k), where p(n,k) is the number of partitions of n into k parts. - _ Ilya Gutkovskiy _ , Jun 08 2022 ●

► [A096971] 1,1,4,13,49,181,685,2605,9988,38479,148879,577930,2249698,8777614,34315012,134377393,526994773,2069403898,8135377102,32014655626,126099239329,497083313908,1960943833567,7740893831005,30576064032568 ⋆ G.f. satisfies: A(x) = A(x ^ 2 * A000108(x ^ 2)) * x * A000984(x ^ 2), where A000108(x) is the g.f. for the Catalan sequence and A000984(x) = d / dx x * A000108(x). ● a(n) = Sum _{ j=0..[(n + 1) / 2] } C(2 * n - 2 * j - 1, n - 1) * a(j), a(0)=a(1)=1. G.f. satisfies: A(x) = A((1 - sqrt(1 - 4 * x ^ 2)) / 2) * x / sqrt(1 - 4 * x ^ 2), where A(x) = Sum _{ n>=0 } a(n) * x ^ (2 * n - 1). ●

► [A140660] 4,13,49,193,769,3073,12289,49153,196609,786433,3145729,12582913,50331649,201326593,805306369,3221225473,12884901889,51539607553,206158430209,824633720833,3298534883329,13194139533313,52776558133249 ⋆ a(n) = 3 * 4 ^ n + 1. ● a(n) = 4 * a(n - 1) - 3. ● a(n) = 5 * a(n - 1) - 4 * a(n - 2). (End) ●

► [A101125] 1,1,1,4,13,49,233,1240,7201,45521,311225,2285116,17909309,149080865,1312597361,12180044528,118740086369,1212695223137,12942512039697,144018843991220,1667526171728525,20053044685823697,250043383489271193 ⋆ Row sums of a Chebyshev number triangle. ● a(n)=sum { k=0..n, if(k<n, T(n - k, k), if(k=n, 1, 0)) } where T(n, k)=(n / 2)sum { j=0..floor(n / 2), C(n - j, j)(- 1) ^ j * (2k) ^ (n - 2j) } . ●

► [A230081] 0,4,13,50,173,613,2149,7557,26543,93264,327657,1151183,4044478,14209634,49923211,175397097,616229093,2165020570,7606447024,26724012524,93890464368,329868851103,1158940469863,4071748539926,14305425173111 ⋆ Sequence needed for the nonpositive powers of rho(11) = 2 * cos(Pi / 11) in the power basis of the degree 5 number field Q(rho(11)). Negative of the coefficients of the second power. ● a(n) = 3 * a(n - 1) + 3 * a(n - 2) - 4 * a(n - 3) - a(n - 4) + a(n - 5) for n >= 0, with a(- 5)=3, a(- 4)=0, a(- 3)=0, a(- 2)= - 1, a(- 1)=0. ●

► [A105968] 1,4,13,50,185,692,2581,9634,35953,134180,500765,1868882,6974761,26030164,97145893,362553410,1353067745,5049717572,18845802541,70333492594,262488167833,979619178740,3655988547125,13644335009762,50921351491921 ⋆ a(n) = 4 * a(n - 1) - a(n - 2) - 2 * (- 1) ^ n, a(0) = 1, a(1) = 4. ● a(n) = 1 / 6 * sqrt(3) * ((2 + sqrt(3)) ^ n - (2 - sqrt(3)) ^ n) + 2 / 3 * ((2 - sqrt(3)) ^ n + (2 + sqrt(3)) ^ n) - 1 / 3 * (- 1) ^ n. - _ Paolo P. Lava _ , Jul 27 2011 ● a(n) = 3 * a(n - 1) + 3 * a(n - 2) - a(n - 3). - _ Colin Barker _ , May 25 2015 ● a(n) = (4 * ChebyshevU(n,2) - 5 * ChebyshevU(n - 1,2) - (- 1) ^ n) / 3. - _ G. C. Greubel _ , Jan 15 2020 ●

► [A364742] 1,1,4,13,50,201,841,3627,15993,71803,327082,1508002,7023446,32995626,156173668,744029238,3565030063,17169013899,83061503584,403483653745,1967217524551,9623463731721,47220968518786,232354408276613,1146254897566224 ⋆ G.f. satisfies A(x) = 1 / (1 - x * (1 + x * A(x)) ^ 3). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..n } binomial(n + 1,k) * binomial(3 * k,n - k). ●

► [A002746] 1,4,13,50,203,1154,6627,49356,403293,3858376,33929377,460614670,5168544119,64518640406,946910125319,16124114481720,221243980745433,4261440137319852,68524390012831189,1477309421907315082 ⋆ Sum of logarithmic numbers. ● a(p) == - 2 (mod p) for prime p. The pseudoprimes of this congruence are 4, 12, 30, 380, 858, 1722 ... - _ Amiram Eldar _ , May 13 2020 ●

► [A219579] 4,13,51,132,277,514,881,1429,2225,3355,4927,7074,9957,13768,18733,25115,33217,43385,56011,71536,90453,113310,140713,173329,211889 ★ Number of 2 X n arrays of the minimum value of corresponding elements and their horizontal or vertical neighbors in a random, but sorted with lexicographically nondecreasing rows and nonincreasing columns, 0..3 2 X n array. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>7. ●
► [A135345] 1,4,13,51,204,819,3277,13108,52429,209715,838860,3355443,13421773,53687092,214748365,858993459,3435973836,13743895347,54975581389,219902325556,879609302221,3518437208883,14073748835532,56294995342131,225179981368525 ★ a(n) = 3 * a(n - 1) + 4 * a(n - 2) - a(n - 3) + 3 * a(n - 4) + 4 * a(n - 5). ● a(n) = (4 ^ (n + 1) / 5) - (2 / 15) * (- 1) ^ n + (1 / 3) * cos(Pi * n / 3) + (sqrt(3) / 3) * cos(Pi * n / 3). - _ Richard Choulet _ , Jan 04 2008 ●
► [A357962] 1,1,1,4,13,51,271,1366,8849,58717,432541,3530176,29787781,279974839,2715912291,28415168146,312503079841,3600714035321,43979791574809,556150585730140,7417561518005341,102438949373356891,1476636470594132031 1,2210261832805726794 ★ Expansion of e.g.f. exp((exp(x ^ 2) - 1) / x). ● a(n) = n! * Sum _{ k=0..floor(n / 2) } Stirling2(n - k,n - 2 * k) / (n - k)!. ●
► [A097169] 1,4,13,52,133,604,1333,6772,13333,74284,133333,801892,1333333,8550364,13333333,90286612,133333333,945912844,1333333333,9846548932,13333333333,101952273724,133333333333,1050903796852,1333333333333 ★ a(n) = Sum _{ k=0..n } C(floor((n + 1) / 2),floor((k + 1) / 2)) * 3 ^ k. ● a(n) = 2((1 - sqrt(10))(- sqrt(10)) ^ n + (1 + sqrt(10))(sqrt(10)) ^ n) / 3 + 3((- 3) ^ n - 3 ^ n) / 2 - 1 / 3. ● a(n) = a(n - 1) + 19a(n - 2) - 19a(n - 3) - 90a(n - 4) + 90a(n - 5). ●
► [A129147] 1,1,4,13,52,214,928,4141,18940,88258,417616,2001058,9690184,47348812,233158144,1155900541,5764510060,28898899594,145556001136,736206912982,3737768204344,19042072755124,97313398530496,498737257238482,2562773039735896 ★ Expansion of c(x(1 + 2x)), c(x) the g.f. of A000108. ● a(n)=sum { k=0..n, C(k,n - k) * 2 ^ (n - k) * C(k) } ; ● a(n)=(1 / (2 * pi)) * int(x ^ n * sqrt(8 + 4x - x ^ 2) / (x + 2),x,2 - 2 * sqrt(3),2 + 2 * sqrt(3)); ●
► [A140454] 4,13,52,259,1595,10548,74914,563533,4387106 ★ Number of primes p less than 10 ^ n such that p ^ 2 - 2 is prime. ● a(n) = #{ p < 10 ^ n in A028870 } . ●
► [A369226] 1,1,4,13,53,220,968,4373,20271,95705,458904,2228220,10934524,54143848,270189008,1357428997,6860264323,34853234867,177900211204,911867479717,4691701977973,24222505191984,125448280976224,651555603531308,3392951906596708 ★ Expansion of (1 / x) * Series _ Reversion(x * (1 - x) / (1 + x ^ 2) ^ 2). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 2) } binomial(2 * n + 2,k) * binomial(2 * n - 2 * k,n - 2 * k). ●
► [A006604] 1,1,4,13,53,228,1037,4885,23640,116793,586633,2986616,15377097,79927913,418852716,2210503285,11738292397,62673984492,336260313765,1811960161517,9802082905840,53213718977777,289817858570513,1583076422786096,8670574105626961 ★ Generalized Fibonacci numbers. ● a(n) = sum(k=1..n / 2 + 1, (k * sum(j=0..n - 2 * k + 2, (- 1) ^ j * 2 ^ (n - 2 * k - j + 2) * C(n - k + 2,j) * C(2 * n - 3 * k - j + 3,n - k + 1))) / ((n - k + 2))). - _ Vladimir Kruchinin _ , Oct 22 2011 ●
► [A082570] 1,4,13,53,266,1597,11180,89441,804970,8049701,88546712,1062560545,13813287086,193386019205,2900790288076,46412644609217,789014958356690,1420226925042042 1,2698431157579880 00,5396862315159760001,11333410861835496002 2,24933503890380912048 5 ★ a(1)=1, a(n)=ceiling(n * (a(n - 1) + 1 / a(n - 1))). ● a(1)=1 and for n>1, a(n)=floor((e - 1 / 2) * n!) ●
► [A365854] 1,1,4,13,55,232,1052,4869,23206,112519,554560,2767336,13959941,71060356,364569352,1883143669,9785481498,51118097686,268294595396,1414106565611,7481787454031,39721596068000,211549545257760,1129912319370600,6050931114958080 ★ Expansion of (1 / x) * Series _ Reversion(x * (1 + x) ^ 2 * (1 - x) ^ 3). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..n } (- 1) ^ k * binomial(2 * n + k + 1,k) * binomial(4 * n - k + 2,n - k). ●
► [A163070] 4,13,56,237,1004,4253,18016,76317,323284,1369453,5801096,24573837,104096444,440959613,1867934896,7912699197,33518731684,141987625933,601469235416,2547864567597,10792927505804,45719574590813 ★ a(n) = ((4 + sqrt(5)) * (2 + sqrt(5)) ^ n + (4 - sqrt(5)) * (2 - sqrt(5)) ^ n) / 2. ● a(n) = 4 * a(n - 1) + a(n - 2) for n > 1; a(0) = 4, a(1) = 13. ●
► [A009300] 1,1,1,4,13,56,301,1688,11705,84160,698521,6141312,59340997,613282944,6782462597,80158806016,1000434618609,13267800137728,184576848771889,2710082835353600,41577074746699261,669033814167273472 ★ Expansion of exp(x / cos(x)). ● a(n) = sum(binomial(n,k) * (if n=k then 1 else if oddp(n - k) then 0 else sum(sum(binomial(m,j) * 2 ^ (1 - j) * sum((- 1) ^ ((n - k) / 2) * binomial(j,i) * (j - 2 * i) ^ (n - k),i,0,floor((j - 1) / 2)) * (- 1) ^ (m - j),j,1,m) * (- 1) ^ m * binomial(k + m - 1,k - 1),m,1,n - k)),k,1,n), n>0. - _ Vladimir Kruchinin _ , Sep 12 2010 ●
► [A158267] 1,4,13,59,151,916,1961,12035,35110,166204,384781,3154367,5600323,34384676,124093963,582290595,1235438587,9831378712,18602770421,144738772109,410101237013,1721535323380,4295702988313,40309503022439 ★ Inverse Euler transform of A156305. ● a(n) = (1 / n) * Sum _{ d|n } sigma(d) * C(2d - 1,d) * moebius(n / d). ●
► [A219572] 4,13,59,181,469,1107,2447,5120,10197,19415,35485,62501,106471,175993,283101,444308,681875,1025337,1513319,2195677,3136001,4414519,6131443,8410800,11404793 ★ Number of n X 2 arrays of the minimum value of corresponding elements and their horizontal or vertical neighbors in a random, but sorted with lexicographically nondecreasing rows and nonincreasing columns, 0..3 n X 2 array. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>10. ●
► [A219367] 4,13,60,193,514,1231,2748,5802,11665,22432,41419,73698,126799,211612,343525,543837,841488,1275151,1895734,2769343,3980760,5637493,7874458,10859356,14798811 ★ Number of n X 2 arrays of the minimum value of corresponding elements and their horizontal or vertical neighbors in a random, but sorted with lexicographically nondecreasing rows and columns, 0..3 n X 2 array. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>9. ●
► [A372125] 1,1,4,13,60,256,1252,5979,30360,153626,801632,4197284,22355788,119695396,647666544,3522773337,19298660772,106213538104,587632185580,3264011196578,18203515158400,101862717712340,571859834176800,3219573318768300,18175140989890716 ★ G.f. A(x) satisfies A(x) = 1 / (1 - x * A(x) * (1 + 4 * x * A(x)) ^ (1 / 2)). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..n } 4 ^ (n - k) * binomial(n + k,k) * binomial(k / 2,n - k). ●
► [A367888] 1,1,4,13,61,304,1747,10945,74830,550687,4335109,36272086,320980645,2991373597,29253607780,299258487553,3193634980753,35469069928792,409082335024591,4890313138089133,60489400453642822,772967507343358171,10189818916331129017,138398721137005215526 ★ Expansion of e.g.f. exp(3 * (exp(x) - 1) - 2 * x). ● a(n) = exp(- 3) * Sum _{ k>=0 } 3 ^ k * (k - 2) ^ n / k!. ● a(0) = 1; a(n) = - 2 * a(n - 1) + 3 * Sum _{ k=1..n } binomial(n - 1,k - 1) * a(n - k). ●
► [A351933] 1,1,1,4,13,61,331,1996,14449,109873,971821,8995636,93329941,1018571269,12110589583,151955795356,2037757374241,28837620752161,430834395468889,6777014821152868,111663525724783741,1930478057636642221,34781068833200111731 ★ Expansion of e.g.f. exp(x / (1 - x ^ 2 / 2)). ● a(n) = Sum _{ k=0..floor((n - 1) / 2) } (2 * k + 1)! / 2 ^ k * binomial(n - 1,2 * k) * a(n - 1 - 2 * k) for n > 2. ●
► [A157311] 1,1,1,4,13,66,394,2759,22005,198049,1979646,21776107,261287398,3396736175,47553219799,713298307974,11412712029909,194016104508454,3492285524896921,66353424973041500,1327068107226627278,27868430252187313730,613105422439136585 ★ G.f.: exp(Sum _{ n>=1 } a(n) * x ^ n / n) = Product _{ n>=1 } (1 + a(n - 1) * x ^ n). ● a(n) = Sum _{ d divides n, 1<=d<=n } - d * (- a(d - 1)) ^ (n / d) for n>0 with a(0)=1. ●
► [A121452] 1,1,1,4,13,71,391,2836,21729,198829,1939501,21515836,254169301,3319328299,45979476635,691443303916,10979537304961,186915474027321,3345563762493049,63613875064443796,1266776073045809341 ★ Exponential generating function (1 - x ^ 2) ^ (- 1 / x). ● a(n) = n! * Sum _{ m=floor((n + 1) / 2)..n } (- 1) ^ (n - m) * Stirling1(m,2 * m - n) / m!. - _ Vladimir Kruchinin _ , Mar 09 2013 ● a(0) = 1; a(n) = (n - 1)! * Sum _{ k=1..floor((n + 1) / 2) } (2 * k - 1) / k * a(n - 2 * k + 1) / (n - 2 * k + 1)!. - _ Seiichi Manyama _ , May 01 2022 ●
► [A012150] 1,1,1,4,13,76,421,3256,25369,245008,2449801,28441216,346065061,4700478784,67243537453,1047088053376,17192488230961,302112622479616,5593309059948049,109527844826856448,2255588021494237501 ★ Expansion of e.g.f. exp(tan(arcsin(x))). ● a(n) = n! * Sum _{ k=1..n } (1 + (- 1) ^ (n - k)) * C((n - 2) / 2,(n - k) / 2) / (2 * k!), n>0. ● a(n) = (3 * n ^ 2 - 12 * n + 13) * a(n - 2) - 3 * (n - 4) * (n - 3) ^ 2 * (n - 2) * a(n - 4) + (n - 6) * (n - 5) * (n - 4) ^ 2 * (n - 3) * (n - 2) * a(n - 6). - _ Vaclav Kotesovec _ , Nov 08 2013 ●
► [A362572] 1,1,1,4,13,76,421,3361,26209,267688,2689201,33579811,412800961,6103089994,88754687113,1517513934301,25487131948321,495009722435176,9430633148123809,205154208873930763,4371962638221712801,105330237499426955926 ★ E.g.f. satisfies A(x) = exp(x * A(x) ^ (x / 2)). ● a(n) = n! * Sum _{ k=0..floor(n / 2) } ((n - k) / 2) ^ k * binomial(n - k - 1,k) / (n - k)!. ●
► [A041433] 1,4,13,95,298,1287,38908,156919,509665,3724574,11683387,50458122,1525427047,6152166310,19981925977,146025648149,458058870424,1978261129845,59805892765774,241201832192941,783411389344597,5725081557605120,17958656062159957 ★ Denominators of continued fraction convergents to sqrt(232). ● a(n) = 39206 * a(n - 6) - a(n - 12) for n>7. - _ Vincenzo Librandi _ , Dec 17 2013 ●
► [A058014] 1,1,1,4,13,96,541,5888,47545,686080,7231801,130179072,1695106117,36590059520,567547087381,14290429935616,257320926233329,7405376630685696,151856004814953841,4917457306800619520 ★ Number of labeled trees with n + 1 nodes such that the degrees of all nodes, excluding the first node, are odd. ● a(n) = (1 / 2 ^ n) * Sum _{ k=0..n } binomial(n,k) * (n + 1 - 2 * k) ^ (n - 1). ●
► [A042537] 1,4,13,173,186,917,3854,4771,65877,202402,875485,49229562,197793733,642610761,8551733626,9194344387,45329111174,190510789083,2358399002573256429492424,10005128377529,43276943002540,2433513936519769,9777332689081616 ★ Denominators of continued fraction convergents to sqrt(797). ● a(n) = 49431964 * a(n - 11) + a(n - 22) for n>21. - _ Vincenzo Librandi _ , Jan 23 2014 ●
► [A168420] 4,14,14,24,24,34,34,44,44,54,54,64,64,74,74,84,84,94,94,104,104,114,114,124,124 ★ a(n) = 4 + 10 * floor(n / 2). ● a(n) = 10 * n - a(n - 1) - 2, with n >1, a(1)=4. ● a(n) = (3 + 5 * (- 1) ^ n + 10 * n) / 2. - _ Paolo P. Lava _ , Nov 27 2009 ● a(n) = a(n - 1) + a(n - 2) - a(n - 3). - _ Vincenzo Librandi _ , Sep 19 2013 ●
► [A032825] 1,4,14,17,53,56,183,186,222,225,690,693,729,732,2380,2383,2419,2422,2887,2890,2926,2929,8971,8974,9010 ★ Numbers whose set of base - 13 digits is { 1,4 } . ● a(1)=1, a(2)=4; a(n) = 13 * a(floor(n / 2)) + 1 for n odd, otherwise a(n) = 13 * a(floor((n - 1) / 2)) + 4. - _ Bruno Berselli _ , May 28 2012 ●
► [A022383] 4,14,18,32,50,82,132,214,346,560,906,1466,2372,3838,6210,10048,16258,26306,42564,68870,111434,180304,291738,472042,763780 ★ Fibonacci sequence beginning 4, 14. ● a(n) = 4 * Fibonacci(n + 2) + 6 * Fibonacci(n) = 4 * Fibonacci(n) + 14 * Fibonacci(n - 1). - _ G. C. Greubel _ , Mar 06 2018 ●
► [A185008] 4,14,21,33,46,51,62,74,82,91,106,111,121,133,141,155,161,177,183,194,201,213,221,235,247 ★ Next semiprime after 10 * n. ● a(n) = MIN[k in A218255 and k > 10 * n]. ●
► [A165721] 4,14,22,25,35,55,69,74,90,120,140,147,169,209,235,244,272,322,354,365,399,459,497,510,550 ★ Integers of the form k * (k + 13) / 12. ● a(n)= 3 * a(n - 1) - 5 * a(n - 2) + 7 * a(n - 3) - 7 * a(n - 4) + 5 * a(n - 5) - 3 * a(n - 6) + a(n - 7). - R. J. Mathar, Sep 25 2009 ●
► [A213399] 1,4,14,23,43,58,88,109,149,176,226,259,319,358,428,473,553,604,694,751,851,914,1024,1093,1213 ★ Number of (w,x,y) with all terms in { 0,...,n } and max(|w - x|,|x - y|) = x. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). ● a(n) = (8 * n ^ 2 + 2 * (- 1) ^ n * n + 8 * n + (- 1) ^ n + 3) / 4. ● a(n) = (4 * n ^ 2 + 5 * n + 2) / 2 for n even. ● a(n) = (4 * n ^ 2 + 3 * n + 1) / 2 for n odd. ●
► [A017317] 4,14,24,34,44,54,64,74,84,94,104,114,124,134,144,154,164,174,184,194,204,214,224,234,244 ★ a(n) = 10n + 4. ● a(n) = 10 * n + 4; a(n) = 2 * a(n - 1) - a(n - 2). - _ Vincenzo Librandi _ , May 29 2011 ●

► [A289179] 0,1,4,14,28,55,88,140,200,285,380,506,644,819,1008,1240,1488,1785,2100,2470,2860,3311,3784,4324,4888 ⋆ Edge count of the n X n white bishop graph. ● a(n) = ((- 1 + n) * (- 3 + 3 * (- 1) ^ n - 2 * n + 4 * n ^ 2)) / 12. ● a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + a(n - 4) + 2 * a(n - 5) - a(n - 6). ●

► [A049451] 0,4,14,30,52,80,114,154,200,252,310,374,444,520,602,690,784,884,990,1102,1220,1344,1474,1610,1752 ⋆ Twice second pentagonal numbers. ● a(n) = n * (3 * n + 1). ● a(n) = a(n - 1) + 6 * n - 2, n > 0. - _ Vincenzo Librandi _ , Aug 06 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) with a(0) = 0, a(1) = 4, a(2) = 14. - _ Philippe Deléham _ , Mar 26 2013 ● a(n) = (24 / (n + 2)!) * Sum _{ j=0..n } (- 1) ^ (n - j) * binomial(n,j) * j ^ (n + 2). - _ Bruno Berselli _ , Jun 04 2013 - after the similar formula of _ Vladimir Kruchinin _ in A002411 ● a(n) = Sum _{ i = 2..5 } P(i,n), where P(i,m) = m * ((i - 2) * m - (i - 4)) / 2. - _ Bruno Berselli _ , Jul 04 2018 ●

► [A117109] 1,4,14,30,69,107,209,295,480,641,1000,1209,1819,2166,2976,3546,4844,5379,7314,8110,10402,11645,14949,15890,20405 ⋆ Moebius transform of binomial(n + 3, 4). ● a(n) = | { (x,y,z,w) : 1 <= x <= y <= z <= w <= n, gcd(x,y,z,w,n) = 1 } |. ●

► [A140063] 1,4,14,31,55,86,124,169,221,280,346,419,499,586,680,781,889,1004,1126,1255,1391,1534,1684,1841,2005 ⋆ Binomial transform of [1, 3, 7, 0, 0, 0, ...]. ● a(n) = 7 * n ^ 2 / 2 - 15 * n / 2 + 5 = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ R. J. Mathar _ , Jul 31 2009 ● a(n) = a(n - 1) + 7 * n - 11 (with a(1)=1). - _ Vincenzo Librandi _ , Nov 24 2010 ●

► [A159920] 4,14,32,60,100,154,224,312,420,550,704,884,1092,1330,1600,1904,2244,2622,3040,3500,4004,4554,5152,5800,6500 ⋆ Sums of the antidiagonals of Sundaram's sieve (A159919). ● a(n) = (n - 1) * n * (n + 4) / 3. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ● a(n) = Sum _{ i=1..n - 1 } i * (i + 3). - _ Wesley Ivan Hurt _ , Oct 19 2013 ●

► [A036486] 0,1,4,14,32,63,108,172,256,365,500,666,864,1099,1372,1688,2048,2457,2916,3430,4000,4631,5324,6084,6912 ⋆ a(n) = ceiling((n ^ 3) / 2). ● a(n) = (2 * n ^ 3 - (- 1) ^ n + 1) / 4. - _ Bruno Berselli _ , Jun 07 2011 ● a(n) = (n ^ 3 + (n mod 2)) / 2. - _ Wesley Ivan Hurt _ , May 21 2014 ●

► [A323723] 0,0,4,14,32,64,108,174,256,368,500,670,864,1104,1372,1694,2048,2464,2916,3438,4000,4640,5324,6094,6912 ⋆ a(n) = (- 2 - (- 1) ^ n * (- 2 + n) + n + 2 * n ^ 3) / 4. ● a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + a(n - 4) + 2 * a(n - 5) - a(n - 6) for n > 5. ● a(n) = (6 + n + n ^ 3 + 12 * floor((n - 3) / 2) + 4 * floor((n - 3) / 2) ^ 2 - 2 * (1 + n) * floor((n - 1) / 2) / 2. ● a(n) = n ^ 3 / 2 for even n; a(n) = (n - 1) * (n ^ 2 + n + 2) / 2 otherwise. - _ Bruno Berselli _ , Feb 06 2019 ●

► [A324042] 4,14,32,70,124,226,360,566,820,1218,1696,2310,3020,4018,5160,6590,8196,10218,12464,15110,18012,21650,25624,30142,35028 ⋆ Number of triangular regions into which a figure made up of a row of n adjacent congruent rectangles is divided upon drawing diagonals of all possible rectangles. ● a(n) = 2 * (2 * n ^ 2 - n + 1 + 2 * Sum _{ i=2..floor(n / 2) } (n + 1 - 2 * i) * (n + 1 - i) * phi(i)). - _ Chai Wah Wu _ , Aug 16 2021 ●

► [A228272] 0,4,14,33,65,113,179,268,381,523,696,904,1150,1436,1767,2144,2572,3053,3591,4188,4849,5575,6370,7238,8181 ⋆ Volume of sphere (rounded down) with the diameter equal to n. ● a(n) = floor((Pi * n ^ 3) / 6)). ●

► [A011935] 0,0,0,0,0,4,14,33,67,120,201,316,475,686,960,1310,1747,2284,2937,3720,4651,5745,7022,8500,10200 ⋆ [n(n - 1)(n - 2)(n - 3) / 25]. ● a(n) = + 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) + a(n - 25) - 4 * a(n - 26) + 6 * a(n - 27) - 4 * a(n - 28) + a(n - 29). [From _ R. J. Mathar _ , Apr 15 2010] ●

► [A253001] 4,14,34,69,69,3072,39758,228484,775433,1932763,3965261,7139167,11720721,17976163,26171733,36573671,49448217,65061611,83680093,105569903,130997281,160228467,193529701,231167223,273407273 ⋆ Number of n X 5 nonnegative integer arrays with upper left 0 and lower right its king - move distance a way minus 3 and every value within 3 of its king move distance from the upper left and every value increasing by 0 or 1 with every step right, diagonally se or down. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>12. ●

► [A295180] 1,1,4,14,35,96,242,609,1483,3565,8376,19389,44254,99584,221470,486810,1058914,2280519,4866492,10294313,21598679,44966391,92930485,190721585,388828094 ⋆ Expansion of Product _{ k>=1 } (1 + x ^ k) ^ (3 * k * (k - 1) / 2 + 1). ● a(0) = 1 and a(n) = (1 / n) * Sum _{ k=1..n } b(k) * a(n - k) where b(n) = Sum _{ d|n } d * (3 * d * (d - 1) / 2 + 1) * (- 1) ^ (1 + n / d). - _ Seichi Manyama _ , Nov 16 2017 ●

► [A213045] 0,4,14,36,72,128,206,312,448,620,830,1084,1384,1736,2142,2608,3136,3732,4398,5140,5960,6864,7854,8936,10112 ⋆ Number of (w,x,y) with all terms in { 0,...,n } and 2|w - x|>max(w,x,y) - min(w,x,y). ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - 2 * a(n - 3) + 3 * a(n - 4) - a(n - 5). ●

► [A061989] 0,0,0,0,4,14,36,76,140,234,364,536,756,1030,1364,1764,2236,2786,3420,4144,4964,5886,6916,8060,9324 ⋆ Number of ways to place 3 nonattacking queens on a 3 X n board. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4), n >= 7. ●

► [A079908] 1,4,14,36,76,140,234,364,536,756,1030,1364,1764,2236,2786,3420,4144,4964,5886,6916,8060,9324,10714,12236,13896 ⋆ Solution to the Dancing School Problem with 3 girls and n + 3 boys: f(3,n). ● a(n) = max(1, n ^ 3 + 3 * n), found by elementary counting. ●

► [A038164] 1,4,14,36,85,176,344,624,1086,1800,2892,4488,6798,10032,14520,20592,28743,39468,53482,71500,94523,123552,159952,205088,260780 ⋆ G.f.: 1 / ((1 - x) * (1 - x ^ 2)) ^ 4. ● a(0)=1, a(1)=4, a(2)=14, a(3)=36, a(4)=85, a(5)=176, a(6)=344, a(7)=624, a(8)=1086, a(9)=1800, a(10)=2892, a(11)=4488, a(n)=4 * a(n - 1) - 2 * a(n - 2) - 12 * a(n - 3) + 17 * a(n - 4) + 8 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) + 17 * a(n - 8) - 12 * a(n - 9) - 2 * a(n - 10) + 4 * a(n - 11) - a(n - 12). - _ Harvey P. Dale _ , Jul 02 2011 ●

► [A027166] 1,4,14,36,103,248,684,1624,4445,10524,28762,68060,185955,439984,1202072,2844144,7770361,18384884,50228454,118841812,324681887,768205608,2098776772,4965759176,13566706389 ⋆ a(n) = Sum _{ 0<=j<=i<=n } A027157(i, j). ● a(n) = 2 * a(n - 1) + 5 * a(n - 2) - 12 * a(n - 3) + 9 * a(n - 4) - 6 * a(n - 5) + 3 * a(n - 6) for n>5. ●

► [A209399] 0,0,0,0,4,14,37,83,181,387,824,1728,3584,7360,15032,30571,61987,125339,252883,509294,1024300,2057848,4130724,8285758,16610841 ⋆ Number of subsets of { 1,...,n } containing two elements whose difference is 3. ● a(n) = 3 * a(n - 1) - a(n - 2) - 3 * a(n - 3) + 3 * a(n - 4) - a(n - 5) - a(n - 6) - 3 * a(n - 7) + a(n - 8) + 2 * a(n - 9). ● a(n) = 2 ^ n - Product(i=0 to 2) F(floor((n + i) / 3) + 2) where F(n) is the n - th Fibonacci number. ●

► [A192974] 0,1,4,14,37,84,172,329,600,1058,1821,3080,5144,8513,13996,22902,37349,60764,98692,160105,259520,420426,680829,1102224,1784112 ⋆ Coefficient of x in the reduction by x ^ 2 - > x + 1 of the polynomial p(n,x) defined at Comments. ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + a(n - 3) + 2 * a(n - 4) - a(n - 5). ● a(n) = Fibonacci(n + 7) + Lucas(n + 3) - 2 * n * (n + 4) - 17. - _ Ehren Metcalfe _ , Jul 14 2019 ●

► [A006071] 1,4,14,38,76,136,218,330,472,652,870,1134,1444,1808,2226,2706,3248,3860,4542,5302,6140,7064,8074,9178,10376 ⋆ Maximal length of rook tour on a n n X n board. ● a(2n)= 2 + 2 * n * (8n ^ 2 - 5) / 3, n>=1. a(2n + 1)= 2n(1 + 8n ^ 2 + 12n) / 3, n>=1. ●

► [A086954] 1,1,4,14,38,92,214,490,1108,2474,5462,11948,25942,55978,120148,256682,546134,1157804,2446678,5155498,10835284,22719146,47535446,99265196,206918998 ⋆ Binomial transform of A061800. ● a(n)=0 ^ n + n2 ^ (n - 1) + sum { k=0..floor((n - 1) / 3) C(n - 1, 3k + 2) } ●

► [A130423] 4,14,39,88,170,294,469,704,1008,1390,1859,2424,3094,3878,4785,5824,7004,8334,9823,11480,13314,15334,17549,19968,22600 ⋆ Main diagonal of array A[k,n] = n - th sum of 3 consecutive k - gonal numbers, k>2. ● a(n) = A[n + 2,n] = P(k + 2,n) + P(k + 2,n + 1) + P(k + 2,n + 2) where P(k,n) = k * ((n - 2) * k - (n - 4)) / 2. ● a(n) = n * (3 * n ^ 2 - 3 * n + 8) / 2. G.f.: x * (4 - 2 * x + 7 * x ^ 2) / (1 - x) ^ 4. [_ Colin Barker _ , Apr 30 2012] ● a(1)=4, a(2)=14, a(3)=39, a(4)=88, a(n)=4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Harvey P. Dale _ , Aug 15 2012 ●

► [A074083] 0,0,0,0,0,4,14,39,97,224,494,1051,2177,4412,8784,17228,33360,63886,121164,227833,425147,787916,1451198,2657821,4842727 ⋆ Coefficient of q ^ 3 in nu(n), where nu(0)=1, nu(1)=b and, for n>=2, nu(n)=b * nu(n - 1) + lambda * (1 + q + q ^ 2 + ... + q ^ (n - 2)) * nu(n - 2) with (b,lambda)=(1,1). ● a(n) = 4a(n - 1) - 2a(n - 2) - 8a(n - 3) + 5a(n - 4) + 8a(n - 5) - 2a(n - 6) - 4a(n - 7) - a(n - 8) for n>=11. ●

► [A182819] 1,4,14,39,101,238,533,1131,2314,4566,8763,16376,29939,53612,94302,163112,277953,467064,774943,1270528,2060331,3306771,5256579,8280649,12934125 ⋆ G.f.: exp(Sum _{ n>=1 } sigma(3n) * x ^ n / n). ● a(n) = Sum _{ j = 0..3 * n } (Sum _{ k = 0..3 * n - j } w ^ (j + 2 * k) * p(k) * p(j) * p(3 * n - j - k)). (End) ●

► [A066375] 1,4,14,40,97,206,394,694,1145,1792,2686,3884,5449,7450,9962,13066,16849,21404,26830,33232,40721,49414,59434,70910,83977 ⋆ a(n) = 6 * binomial(n,4) + 3 * binomial(n,3) + 4 * binomial(n,2) - n + 2. ● a(n) = (8 - 14 * n + 13 * n ^ 2 - 4 * n ^ 3 + n ^ 4) / 4. ●

► [A023003] 1,4,14,40,105,252,574,1240,2580,5180,10108,19208,35693,64960,116090,203984,353017,602348,1014580,1688400,2778517,4524760,7296752,11658920,18468245 ⋆ Number of partitions of n into parts of 4 kinds. ● a(0)=1, a(n) = (1 / n) * Sum _{ k=0..n - 1 } 4 * a(k) * sigma _ 1(n - k). - _ Joerg Arndt _ , Feb 05 2011 ●

► [A001872] 1,4,14,40,105,256,594,1324,2860,6020,12402,25088,49963,98160,190570,366108,696787,1315072,2463300,4582600,8472280,15574520,28481220,51833600,93914325 ⋆ Convolved Fibonacci numbers. ● a(n) = F'''(n + 3, 1) / 6, i.e., 1 / 6 times the 3rd derivative of the (n + 3)th Fibonacci polynomial evaluated at 1. - _ T. D. Noe _ , Jan 18 2006 ● a(n) = ((((- i) ^ n) / 3!) * (d ^ 3 / dx ^ 3)S(n + 3,x)| _{ x=i } , where i is the imaginary unit. Third derivative of Chebyshev S(n + 3,x) polynomial evaluated at x=i multiplied by ((- i) ^ (n - 3)) / 3!. See A049310 for the S - polynomials. - _ Wolfdieter Lang _ , Apr 04 2007 ● a(n) = Sum _{ i=ceiling(n / 2)..n } (i + 1) * (i + 2) * (i + 3) * binomial(i,n - i) / 6. - _ Vladimir Kruchinin _ , Apr 26 2011 ●

► [A054443] 1,4,14,40,109,276,682,1624,3810,8744,19868,44496,98941,217780,476786,1036024,2241814,4823160,10342180,22076080,46994386,99673224,210923364,445000560,937051684 ⋆ Third convolution of A001405 (central binomial numbers). ● a(2 * k)= (2 * k + 7) * 4 ^ (k + 1) - binomial(2 * (k + 2), k + 2) * (4 * k + 9) / 2, a(2 * k + 1)= (k + 4) * 4 ^ (k + 2) - (k + 3) * binomial(2 * (k + 3), k + 3), k >= 0. ●

► [A072674] 0,4,14,40,110,304,854,2440,7070,20704,61094,181240,539630,1610704,4815734,14414440,43177790,129402304,387944774,1163310040,3488881550,10464547504,31389448214,94159956040,282463090910 ⋆ 3 ^ n + 2 * 2 ^ n - 3. ● a(0)=0, a(1)=4, a(2)=14, a(n)=6 * a(n - 1) - 11 * a(n - 2) + 6 * a(n - 3). - _ Harvey P. Dale _ , Sep 06 2012 ●

► [A326008] 1,4,14,40,155,596,2954,14784,83955,494060,3112246,20505484,141656697,1020670280,7650120170,59509447736,479350116043,3990968968884,34287091686110,303500118414180,2764254404207136,25873492982703592,248602031383697602,2449525056696683760,24727324378709830225 ⋆ G.f.: Sum _{ n>=0 } (n + 1) * (n + 2) * (n + 3) / 3! * x ^ n * ((1 + x) ^ n + 1) ^ n / (1 + x * (1 + x) ^ n) ^ (n + 4). ● a(n) = Sum _{ i=0..n } binomial(n - i + 3,n - i) * Sum _{ j=0..n - i } Sum _{ k=0..n - i - j } (- 1) ^ k * binomial(n - i,j) * binomial(n - i - j,k) * binomial((n - i - j) * (n - i - k),i). ● a(n) = Sum _{ i=0..n } binomial(n - i + 3,n - i) * Sum _{ j=0..n - i } Sum _{ k=0..n - i - j } binomial((n - i - j) * (n - i - k),i) * (- 1) ^ j * (n - i)! / ((n - i - j - k)! * j! * k!). ●

► [A132357] 1,4,14,41,122,364,1093,3280,9842,29525,88574,265720,797161,2391484,7174454,21523361,64570082,193710244,581130733,1743392200,5230176602,15690529805,47071589414,141214768240,423644304721 ⋆ a(n) = 3 * a(n - 1) - a(n - 3) + 3 * a(n - 4). ● a(n) = (1 / 2) * 3 ^ (n + 1) + (1 / 6) * (- 1) ^ n - (2 / 3) * cos(Pi * n / 3). Or, a(n) = (1 / 2) * 3 ^ (n + 1) + (1 / 2) * [- 1; - 1; 1; 1; 1; - 1]. - _ Richard Choulet _ , Jan 02 2008 ● a(n) = - (1 / 3) * (1 / 2 - (1 / 2) * i * sqrt(3)) ^ n + (3 / 2) * 3 ^ n + (1 / 6) * (- 1) ^ n - (1 / 3) * (1 / 2 + (1 / 2) * i * sqrt(3)) ^ n, with n>=0 and i=sqrt(- 1). - _ Paolo P. Lava _ , Jun 09 2008 ●

► [A262875] 0,1,4,14,41,127,400,1297,4520,17064,64857,262286,1156325,5199261,23835336,117674608,609741279,3268286263,18109939168,102866828839,620474818814,4005211833858,25747541532731,166978138395205,1168773990780772 ⋆ Number of equal - sized disjoint subset combinations from a set of n items. ● a(n

) = Sum _{ m=2..n } b(n,m), where b(n,m) = Sum _{ k=1..floor(n / m) } (P roduct _{ j=0..(m - 1) } binomial(n - k * j, k)) / m!. ●
▶ [A189052] 0,0,0,1,4,14,42,118,314,806,2010,4902,11738,27686,64474,148518,33 8906,767014,1723354,3847206,8539098,18854950,41438170,90682406,197675994 ★ a(n) is the number of inversions in all compositions of n. ● a(n) = 2 ^ (n - 1) * (1 / 24 * (n + 2) * (n + 1) - 5 / 36 * (n + 1) - 5 / 108) - 2 / 27 * (- 1) ^ n for n>0. ● a(n) = + 5 * a(n - 1) - 6 * a(n - 2) - 4 * a(n - 3) + 8 * a(n - 4). ●
▶ [A189426] 0,0,1,4,14,42,119,322,847,2180,5521,13804,34160,83818,204204,494 494,1191227,2856666,6823334,16240714,38534657,91175154,215179125,50667039 4,1190534467 ★ Expansion of (x ^ 2) / (1 - 2 * x - x ^ 2 + x ^ 3) ^ 2 ● a(n)=4 * a(n - 1) - 2 * a(n - 2) - 6 * a(n - 3) + 3 * a(n - 4) + 2 * a(n - 5) - a(n - 6), n>=6 . ●
▶ [A007076] 1,4,14,42,123,351,988,2761,7682,21313,59029,163314,451529,124784 2,3447574,9523375,26303825,72646588,200627795,554056162,1530058222,4225290 890,11668141901,32221405479,88978639438 ★ Number of irreducible positions of size n in Montreal solitaire. ● a(n) = d(n, 3) where d(n, k) is defined in A00704 6. - _ Sean A. Irvine _ , Oct 06 2017 ●
▶ [A037528] 1,4,14,43,130,392,1177,3532,10598,31795,95386,286160,858481,2575 444,7726334,23179003,69537010,208611032,625833097,1877499292,5632497878,16 897493635,50692480906,152077442720,456232328161 ★ Base - 3 digits are, in ord er, the first n terms of the periodic sequence with initial period 1,1,2. ● a(n) = 3 * a(n - 1) + a(n - 3) - 3 * a(n - 4). - _ Wesley Ivan Hurt _ , Apr 21 2021 ●
▶ [A212688] 0,0,4,14,44,98,200,356,600,940,1420,2050,2884,3934,5264,6888,888 0,11256,14100,17430,21340,25850,31064,37004,43784 ★ Number of (w,x,y,z) with all terms in { 1,...,n } and 2|w - x|>=n + |y - z|. ● a(n)=3 * a(n - 1) - a(n - 2) - 5 * a(n - 3) + 5 * a(n - 4) + a(n - 5) - 3 * a(n - 6) + a(n - 7). ●
▶ [A007466] 1,4,14,44,128,352,928,2368,5888,14336,34304,80896,188416,434176,9 91232,2244608,5046272,11272192,25034752,55312384,121634816,266338304,58091 1104,1262485504,2734686208 ★ Exponential - convolution of natural numbers wi th themselves. ● a(n) = 2 ^ (n - 1) * n + 1 / 4 * 2 ^ (n - 1) * (n - 1) * (n - 2). ● a(n) = Sum _{ k=0..(n + 2) } C(n + 2, k) * floor(k / 2) ^ 2. - _ Paul Barry _ , Mar 06 2003 ●
▶ [A062109] 1,4,14,44,129,360,968,2528,6448,16128,39680,96256,230656,546816,1 284096,2990080,6909952,15859712,36175872,82051072,185139200,415760384,9295 62624,2069889024,4591714304 ★ Expansion of ((1 - x) / (1 - 2 * x)) ^ 4. ● a(n) = (n + 5) * (n ^ 2 + 13 * n + 18) * 2 ^ (n - 5) / 3, with a(0)=1. ●
▶ [A006645] 0,0,1,4,14,44,131,376,1052,2888,7813,20892,55338,145428,379655,98 5520,2545720,6547792,16777993,42847988,109099078,277040572,701794187,17738 51304,4474555476 ★ Self - convolution of Pell numbers (A000129). ● a(n) = Su m _{ k=0..floor((n - 2) / 2) } 2 ^ (n - 2) * (n - k - 1) * binomial(n - 2 - k, k) * (1 / 4) ^ k, n >= 2. ● a(n) = F'(n, 2), the derivative of the n - th Fibonacci pol ynomial evaluated at x=2. - _ T. D. Noe _ , Jan 19 2006 ●
▶ [A094309] 1,4,14,44,132,384,1096,3088,8624,23936,66144,182208,500800,13742 08,3766400,10313984,28226304,77211648,211138048,577223680,1577772032,43120 88576,11783915520,32200396800,87985401856 ★ Number of (s(0), s(1), ..., s(n)) s uch that 0 < s(i) < 6 and |s(i) - s(i - 1)| <= 1 for i = 1,2,...,n, s(0) = 2, s(n) = 5. ● a(n) = (1 / 3) * Sum _{ k=1..5 } sin(Pi * k / 3) * sin(5 * Pi * k / 6) * (1 + 2 * cos(Pi * k / 6)) ^ n. ● a(n) = 4 * a(n - 1) - 2 * a(n - 2) - 4 * a(n - 3); ● a(n) = (1 + sqrt(3)) ^ n * (3 / 2 + 5 * sqrt(3) / 6) + (1 - sqrt(3)) ^ n * (3 / 2 - 5 * sqrt(3) / 6) - 2 ^ (n + 1) [offset 0]. (End) ●
▶ [A005323] 1,4,14,44,133,392,1140,3288,9438,27016,77220,220584,630084,18003 84,5147328,14727168,42171849,120870324,346757334,995742748,2862099185,8234 447672,23713180780,68350541480,197188167735 ★ Column of Motzkin triangle. ● a(n) = number of (s(0), s(1), ..., s(n)) such that s(i) is a nonnegative integer a nd |s(i) - s(i - 1)| <= 1 for i = 1, 2, ..., n, s(0) = 0, s(n) = 3. ● a(n) = 4 * (- 3) ^ (1 / 2) * (- 1) ^ n * n * ((- 3 * n ^ 3 - 9 * n ^ 2 - 6 * n - 9) * hypergeom([1 / 2, n],[1],4 / 3) + (2 * n ^ 3 + n ^ 2 - 17 * n - 13) * hypergeom([1 / 2, n + 1],[1], 4 / 3)) / (3 * (n + 1) * (n + 2) * (n + 3) * (n + 4) * (n + 5)) (for n >= 3). - _ Mark van Hoeij _ , Nov 12 2009 ● a(n) = 4 * sum(j=ceiling((n - 3) / 2)..n + 1, C(j,2 * j - n + 3) * C(n + 1,j)) / (n + 1). - _ Vladimir Kruchinin _ , Mar 17 2014 ●
▶ [A027831] 1,4,14,44,134,400,1184,3488,10252,30096,88296,258960,759368,2226 560,6528256,19140352,56117392,164528960,482376160,1414257856,4146398048,12 156629760,35641443840,104495439360 ★ Expansion of 1 / (1 - 4 * x + 2 * x ^ 2 + 4 * x ^ 3 - 2 * x ^ 4). ● a(n) = 4 * a(n - 1) - 2 * a(n - 2) - 4 * a(n - 3) + 2 * a (n - 4). - _ Vincenzo Librandi _ , Jun 20 2012 ●
▶ [A097137] 0,0,1,4,14,44,135,408,1228,3688,11069,33212,99642,298932,896803,2 690416,8071256,24213776,72641337,217924020,653772070,1961316220,588394867 1,17651846024,52955538084 ★ Convolution of 3 ^ n and floor(n / 2). ● a(n) = 4 * a(n - 1) - 2 * a(n - 2) - 4 * a(n - 3) + 3 * a(n - 4). ● a(n) = Sum _{ k=0..n } floor((n - k) / 2) * 3 ^ k = Sum _{ k=0..n } floor(k / 2) * 3 ^ (n - k). ● a(n) = round((3 * 3 ^ n - 4 * n - 4) / 16) = floor((3 * 3 ^ n - 4 * n - 3) / 16) = ceiling((3 * 3 ^ n - 4 * n - 5) / 16) = round((3 * 3 ^ n - 4 * n - 3) / 16). ● a(n) = a(n - 2) + (3 ^ (n - 1) - 1) / 2, n > 2. (End) ●
▶ [A083377] 1,4,14,44,141,447,1414,4472,14142,44721,141421,447213,1414213,44 72135,14142135,44721359,141421356,447213595,1414213562,4472135954,1414213 5623,44721359549,141421356237,447213595499,1414213562373 ★ a(n) = the larg est integer whose square has n digits and first digit 1. ● a(n) = floor(sqrt(10 ^ n / 5)). ●
▶ [A184138] 4,14,45,130,336,785,1682,3351,6280,11176,19031,31200,49492,7627 5,114596,168317,242268,342418,476065,652046,880968,1175461,1550454,202347 5,2614976 ★ Number of n X 3 binary arrays with rows and columns in nondecre asing order. ● a(n) = (5040 + 7860 * n + 4494 * n ^ 2 + 2044 * n ^ 3 + 525 * n ^ 4 + 175 * n ^ 5 + 21 * n ^ 6 + n ^ 7) / 5040. ●
▶ [A108765] 1,4,14,45,139,422,1272,3823,11477,34440,103330,310001,930015,279 0058,8370188,25110579,75331753,225995276,677985846,2033957557,6101872691,1 8305618094,54916854304,164750562935,494251688829 ★ G.f. (1 - x + x ^ 2) / ((1 - 3 * x) * (x - 1) ^ 2). ● a(0) = 1; a(n) = 3 * a(n - 1) + n. ● a(n) = (7 * 3 ^ n - 2 * n - 3) / 4. (End) ● a(0)=1, a(1)=4, a(2)=14, a(n) = 5 * a(n - 1) - 7 * a(n - 2) + 3 * a(n - 3). - _ Harvey P. Dale _ , Dec 11 2012 ●
▶ [A005775] 1,4,14,45,140,427,1288,3858,11505,34210,101530,300950,891345,263 8650,7809000,23107488,68375547,202336092,598817490,1772479905,5247421410,1 5538054455,46019183840,136325212750,403933918375 ★ Number of compact - ro oted directed animals of size n having 3 source points. ● a(n + 1) = Sum _{ k =0..n } C(n,k) * C(k,floor(k / 2) - 1). (End) ● a(n) = GegenbauerC(n - 4, - n + 1, - 1 / 2) + GegenbauerC(n - 3, - n + 1, - 1 / 2). - _ Peter Luschny _ , May 1 2 2016 ●
▶ [A094688] 0,1,4,14,45,140,428,1297,3912,11770,35365,106184,318696,956321,2 869340,8608630,25826877,77482228,232449268,697351985,2092062720,627619910 6,18828615029,56485873744,169457667600 ★ Convolution of Fibonacci(n) and 3 ^ n. ● a(n) = (1 / 5) * (3 ^ (n + 1) - Lucas(n + 2)). ● a(n) = 4 * a(n - 1) - 2 * a(n - 2) - 3 * a(n - 3). ● a(n) = a(n - 1) + a(n - 2) + 3 ^ (n - 1) for n > 1, with a(0) = 0, a(1) = 1. - _ Ross La Haye _ , Aug 20 2005 ● a(n) = 3 * a(n - 1) + F ibonacci(n), where a(0) = 0. - _ Taras Goy _ , Mar 24 2019 ●
▶ [A068092] 1,4,14,45,141,447,1414,4472,14142,44721,141421,447214,1414214,44 72136,14142136,44721360,141421356,447213595,1414213562,4472135955,1414213 5624,44721359550,141421356237,447213595500,1414213562373 ★ Index of smalle st triangular number with n digits. ● a(n) = b where b = floor(sqrt(2 * 10 ^ (n - 1))) and if b(b + 1) / 2 < 10 ^ (n - 1), then b = b + 1. [corrected by _ Ray Chandler _ , Oct 04 2011] ● a(n) = round((2 * 10 ^ (n - 1)) ^ (1 / 2)). - _ Vla deta Jovovic _ , Mar 08 2004 ●
▶ [A030267] 1,4,14,46,145,444,1331,3926,11434,32960,94211,267384,754309,2116 936,5914310,16458034,45638101,126159156,347769719,956238170,2623278946,718 1512964,19622668679,53522804976,145753273225 ★ Compose the natural numbe rs with themselves, A(x) = B(B(x)) where B(x) = x / (1 - x) ^ 2 is the generati ng function for natural numbers. ● a(n) = Sum _{ k = 1..n } k * C(n + k - 1, 2 * k - 1). ● a(n) = (2 / 5) * F(2 * n) + (1 / 5) * n * L(2 * n), where F(k) are t he Fibonacci numbers (F(0)=0, F(1)=1) and L(k) are the Lucas numbers (L(0) = 2, L(1) = 1). - _ Emeric Deutsch _ , Jul 21 2008 ● a(0) = 1, a(1) = 4, a(2) = 14, a(3) = 46, a(n) = 6 * a(n - 1) - 11 * a(n - 2) + 6 * a(n - 3) - a(n - 4). - _ Harvey P. Dale _ , Aug 01 2011 ● a(n) = ((3 - sqrt(5)) ^ n * (5 * n - 2 * sqrt(5)) + (3 + sqrt(5)) ^ n * (5 * n + 2 * sqrt(5))) / (25 * 2 ^ n). - _ Peter Luschn y _ , Mar 07 2022 ●
▶ [A027649] 1,4,14,46,146,454,1394,4246,12866,38854,117074,352246,1058786,31 80454,9549554,28665046,86027906,258149254,774578834,2323998646,697252022 6,20918609254,62757924914,188277969046 ★ a(n) = 2 * (3 ^ n) - 2 ^ n. ● a(n) = 3 * a(n - 1) + 2 ^ (n - 1), with a(0) = 1. ● a(n) = Sum _{ k=0..n } binomial(n, k) * (2 ^ (k + 1) - 1). - _ Paul Barry _ , Mar 24 2003 ● a(n) = Sum _{ k=0.. n } Sum _{ j=0..n } binomial(n,j) * binomial(j + 1,k + 1). - _ Paul Barry _ , Sep 18 2006 ● a(n) = 5 * a(n - 1) - 6 * a(n - 2), a(0)=1, a(1)=4. - _ Harvey P. Dale _ , Apr 22 2011 ●
▶ [A330796] 0,1,4,14,46,147,462,1437,4438,13637,41746,127426,388076,1179739,3 581052,10856790,32880942,99496293,300845658,909073356,2745419352,82871100 75,25003877784,75412396575,227366950140 ★ a(n) = Sum _{ k=0..n } binomial (n, k) * (2 ^ k - binomial(k, floor(k / 2)). ● a(n) = n! * [x ^ n] e ^ x * (e ^ (2 * x) - I _{ 0 } (2 * x) - I _{ 1 } (2 * x)), where I _{ n } (x) ● a(n) = [x ^ n] (x + sqrt(1 - 3 * x) * sqrt(x + 1) - 1) / (2 * x * (3 * x - 1)). ● a(n) = 2 * Sum _{ j=0..n - 1 } (- 1) ^ j * C(2 * j + 1,j) * 3 ^ (n - j - 1) * C(n + 1,j + 2) / (n + 1). - _ Vladimir Kruchinin _ , Sep 30 2020 ● a(n) = Sum _{ k=0..n } k * binomia l(n,k) * hypergeom([(k - n) / 2, (k - n + 1) / 2], [k + 2], 4). - _ Peter Luschny _ , May 24 2021 ●
▶ [A124805] 1,4,14,46,162,574,2042,7270,25890,92206,328394,1169590,4165554,1 4835838,52838618,188187526,670239810,2387094478,8501763050,30279478102,10 7841960402,384084837406,1367938433018,4871984973862 ★ Number of circular n - letter words over the alphabet { 0,1,2,3 } with adjacent letters differing by at most 2. ● a(n) = 1 + ((3 - sqrt(17)) / 2) ^ n + ((3 + sqrt(17)) / 2) ^ n for n>0 . ● a(n) = 4 * a(n - 1) - a(n - 2) - 2 * a(n - 3) for n > 3. (End) ●
▶ [A046718] 1,4,14,47,152,472,1408,4048,11264,30464,80384,207616,526336,1312 768,3227648,7835648,18808832,44695552,105250816,245825536,569901056,131229 2864,3003121664,6833569792,15468593152 ★ Number of permutations of [n] wi th exactly one 132 - pattern and two 123 - patterns. ● a(n) = 2 ^ (n - 8) * (n ^ 3 - 11 * n ^ 2 + 54 * n - 88). - _ R. J. Mathar _ , Oct 02 2012 ●
▶ [A291385] 1,4,14,47,152,480,1488,4548,13744,41152,122272,360944,1059584,30 95552,9005568,26101824,75404544,217191424,623928832,1788071680,511313715 2,14592352256,41569120256,118219097088,335685021696 ★ a(n) = (1 / 4) * A07 3388(n + 1). ● a(n) = 4 * a(n - 1) - 8 * a(n - 3) + 4 * a(n - 4) for n >= 5. ●
▶ [A192877] 0,1,4,14,47,152,496,1601,5192,16786,54351,175836,569100,1841513,5 959484,19284934,62407951,201955408,653543000,2114907025,6843987040,221476 00586,71671151919,231932702004,750550018452 ★ Coefficient of x in the reducti on by (x ^ 2 - >x + 1) of the polynomial p(n,x) given in Comments. ● a(n) = 2 * a(n - 1) + 6 * a(n - 2) - 5 * a(n - 3) - 6 * a(n - 4) + 4 * a(n - 5). ●
▶ [A263622] 0,1,4,14,47,153,486,1516,4669,14255,43268,130818,394491,1187557,3 570850,10728920,32219513,96724059,290303232,871171822,2614039735,78431677 61,23531600414,70598995524,211805375157 ★ a(n) = (3 ^ (n + 1) - 2 ^ (n + 2) + 2 * n + 1) / 4. ● a(n) = 7 * a(n - 1) - 17 * a(n - 2) + 17 * a(n - 3) - 6 * a(n - 4) for n>3. ●
▶ [A094789] 1,4,14,47,155,507,1652,5373,17460,56714,184183,598091,1942071,63 05992,20475625,66484244,215873462,700937471,2275930827,7389902771,2399486 6364,77910846021,252974934692,821404463698,2667083556359 ★ Number of (s(0), s(1), ..., s(2n + 1)) such that 0 < s(i) < 7 and |s(i) - s(i - 1)| = 1 for i = 1,2,.. .,2n + 1, s(0) = 1, s(2n + 1) = 4. ● a(n) = (2 / 7) * Sum _{ k = 1..6 } sin(Pi * k / 7) * sin(4 * Pi * k / 7) * (2 * cos(Pi * k / 7)) ^ (2n + 1). ● a(n) = 5 * a(n - 1) - 6 * a(n - 2) + a(n - 3). ● a(n) = 2 ^ n * B(n; 1 / 2) = (1 / 7) * ((c(1) - c(4)) * (c(4)) ^ (2n) + (c(2) - c(1)) * (c(1)) ^ (2n) + (c(4) - c(2)) * (c(2)) ^ (2n)), w here c(j) := 2 * cos(2 * Pi * j / 7). Here B(n; d), n in N, d in C denotes the res pective quasi - Fibonacci number - see A121449 and Witula - Slota - Warzynski paper for details (see also A052975, A085810, A077998, A006054, A121442). - _ Roman Witula _ , Aug 09 2012 ●
▶ [A273714] 0,1,4,14,47,155,508,1662,5438,17809,58395,191732,630373,2075221,6 840140,22571800,74564874,246568051,816099650,2703492238,8963064935,297381

23605,98735734915,328034119098,1090509180192 ⋆ Number of doublerises in all bargraphs having semiperimeter n (n>=2). A doublerise in a bargraph is any p air of adjacent up steps. • a(n) = (y(n + 2) - 2 * y(n + 1) - y(n)) / 2. •

► [A082574] 1,4,14,47,156,516,1705,5632,18602,61439,202920,670200,2213521,7310764,24145814,79748207,263390436,869919516,2873148985,9489366472,31341248402,103513111679,341880583440,1129154862000,3729345169441 ⋆ a(1)=1, a(n) = ceiling(r(3) * a(n - 1)) where r(3) = (1 / 2) * (3 + sqrt(13)) is the positive ro ot of X ^ 2 = 3 * X + 1. • a(1)=1, a(2)=4, a(3)=14, a(n) = 4 * a(n - 1) - 2 * a(n - 2) - a(n - 3). • a(n) = floor(t(3) * r(3) ^ n) where t(3) = (1 / 6) * (1 + 5 / s qrt(13)) is the positive root of 39 * X ^ 2 = 13 * X + 1. •

► [A289780] 1,4,14,47,156,517,1714,5684,18851,62520,207349,687676,2280686,7563923,25085844,83197513,275925586,915110636,3034975799,10065534960,33382471801,110713382644,367182309614,1217764693607,4038731742156 ⋆ p - INVER T of the positive integers (A000027), where p(S) = 1 - S - S ^ 2. • a(n) = 5 * a (n - 1) - 7 * a(n - 2) + 5 * a(n - 3) - a(n - 4). •

► [A137284] 1,4,14,47,157,522,1735,5764,19148,63609,211305,701941,2331798,7746066,25731875,85479439,283956550,943283242,3133519104,10409325148,34579029658,114869050115,381586724811,1267603661786,4210888217270 ⋆ a(0)=1 and a(n) for n > 0 equals the minimal positive integer such that addition of 2 ^ (- a (n)) to Sum _{ k = 0,1,...,n - 1 } 2 ^ (- a(k)) changes only trailing zeros in its decimal representation. • a(n + 1) = ceiling(a(n) * log _ 2(10)) = ceiling(a(n) * A020862). - Conjectured by _ R. J. Mathar _ , proved by _ Max Alekseyev _ •

► [A365987] 1,4,14,47,157,524,1747,5824,19414,64714,215714,719047,2396824,7989414,26631380,88771267,295904224,986347414,3287824714,10959415714,36531385714,121771285714,405904285714,1353014285714,4510047619047 ⋆ Multiply ea ch term by 3 and erase the rightmost digit of the result: this leaves the sequenc e unchanged. • a(n) = ceiling(a(n - 1) / 3 * 10), starting a(1) = 1. - _ Alois P. Heinz _ , Sep 24 2023 •

► [A331319] 0,1,4,14,48,156,496,1544,4736,14352,43072,128224,379136,1114560,3260160,9494656,27545600,79642880,229573632,659951104,1892478976,5414755328,15461117952,44064835584,125371383808 ⋆ a(n) = [x ^ n](x - 2 * x ^ 3) / (1 - 2 * x * (x + 1)) ^ 2. • a(n) = 2 * ((n ^ 2 - n - 2) * a(n - 2) + (n ^ 2 - 2 * n - 4) * a(n - 1)) / (n ^ 2 - 3 * n). • a(n) = n! [x ^ n] (1 / 9) * exp(x) * (sqrt(3) * (3 * x + 2) * sinh(sqrt(3) * x) + 3 * x * cosh(sqrt(3) * x)). • a(n) = ((1 - sqrt(3)) ^ n * (- 2 * sqrt(3) + 3 * n) + (1 + sqrt(3)) ^ n * (2 * sqrt(3) + 3 * n)) / 18. • a(n) = 4 * a(n - 1) - 8 * a(n - 3) - 4 * a(n - 4) for n>3. •

► [A291254] 4,14,48,159,512,1618,5036,15491,47192,142624,428144,1277884,3795208,11222716,33060072,97060033,284095940,829298422,2414859016,7016265637,20344112608,58879534286,170117201548,490736173432,1413562889020 ⋆ p - INV ERT of (0,1,0,1,0,1, ...), where p(S) = (1 - 2 S - S ^ 2) ^ 2. • a(n) = 4 * a(n - 1) + 2 * a(n - 2) - 16 * a(n - 3) - 3 * a(n - 4) + 16 * a(n - 5) + 2 * a(n - 6) - 4 * a(n - 7) - a(n - 8) for n >= 9. •

► [A007070] 1,4,14,48,164,560,1912,6528,22288,76096,259808,887040,3028544,10340096,35303296,120532992,411525376,1405035520,4797091328,16378294272,55918994432,190919389184,651839567872 ⋆ a(n) = 4 * a(n - 1) - 2 * a(n - 2) with a(0) = 1, a(1) = 4. • a(n) = ((2 + sqrt(2)) ^ (n + 1) - (2 - sqrt(2)) ^ (n + 1)) / s qrt(8). - Al Hakanson (hawkuu(AT)gmail.com), Dec 27 2008, corrected Mar 28 2011 • a(n) = (2 - sqrt(2)) ^ n * (1 / 2 - sqrt(2) / 2) + (2 + sqrt(2)) ^ n * (1 / 2 + sqrt(2) / 2). - _ Paul Barry _ , May 09 2003 • a(n) = ceiling((2 + sqrt(2)) * a(n - 1)). - _ Benoit Cloitre _ , Aug 15 2003 • a(n) = U(n, sqrt(2)) * sqrt(2) ^ n. - _ Paul Barry _ , Nov 19 2003 • a(n) = (1 / 4) * Sum _{ r=1..7 } sin(r * Pi / 8) * sin(r * Pi / 2) * (2 * cos(r * Pi / 8)) ^ (2n + 3)). - _ Herbert Kocie mba _ , Jun 11 2004 • a(2n) = Sum _{ r=0..n } 2 ^ (2n - 1 - r) * (4 * binomia l(2n - 1,2r) + 3 * binomial(2n - 1,2r + 1)) a(2n - 1) = Sum _{ r=0..n } 2 ^ (2n - 2 - r) * (4 * binomial(2n - 2,2r) + 3 * binomial(2n - 2,2r + 1)). - _ Jeffrey Lie se _ , Oct 12 2006 •

► [A204089] 1,1,4,14,48,164,560,1912,6528,22288,76096,259808,887040,3028544,10340096,35303296,120532992,411525376,1405035520,4797091328,16378294272,55918994432,190919389184,651839567872,2225519493120 ⋆ The number of 1 by n Haunted Mirror Maze puzzles with a unique solution ending with a mirror, whe re mirror orientation is fixed. • a(n) = Sum _{ i=0..n - 1 } a(i) * (2 ^ (n - i) - 1), with a(0)=1. • a(n) = 4 * a(n - 1) - 2 * a(n - 2), a(1)=1, a(2)=4. • a(n) = ((2 + sqrt(2)) ^ n - (2 - sqrt(2)) ^ n) / (2 * sqrt(2)). - _ Colin Barker _ , Dec 0 6 2015 • a(n) = [n=0] + 2 ^ ((n - 1) / 2) * ChebyshevU(n - 1, sqrt(2)). - _ G. C. Greubel _ , Dec 21 2022 •

► [A092489] 0,0,1,4,14,48,165,568,1954,6717,23082,79307,272470,936065,3215741,11047122,37950140,130369334,447853808,1538496047,5285135093,18155807539,62369881206,214256590058,736026444181 ⋆ Arises in enumeration of 321 - hex agon - avoiding permutations. • a(n) = 6 * a(n - 1) - 11 * a(n - 2) + 9 * a(n - 3) - 4 * a(n - 4) - 4 * a(n - 5) + a(n - 6) for n>7. •

► [A094827] 1,4,14,48,165,571,1988,6953,24396,85786,302104,1064945,3756519,13256712,46796545,165225380,583440086,2060408640,7276716445,25700060995,90770326604,320598127113,1132355884236,3999522488002 ⋆ Number of (s(0), s(1), ..., s(2n + 1)) such that 0 < s(i) < 9 and |s(i) - s(i - 1)| = 1 for i = 1,2,...,2n + 1, s(0) = 1, s(2n + 1) = 4. • a(n) = (2 / 9) * Sum _{ r=1..8 } sin(r * Pi / 9) * sin(4 * r * Pi / 9) * (2 * cos(r * Pi / 9)) ^ (2 * n + 1). • a(n) = 7 * a(n - 1) - 1 5 * a(n - 2) + 10 * a(n - 3) - a(n - 4). •

► [A094667] 1,4,14,48,165,572,2001,7056,25042,89320,319793,1148184,4131009,14885468,53697270,193862592,700312381,2530902676,9149426897,33083393640,119645675898,432748165304,1565346866889,5662560013488,20484930829825 ⋆ Nu mber of (s(0), s(1), ..., s(2n + 1)) such that 0 < s(i) < 10 and |s(i) - s(i - 1)| = 1 for i = 1,2,...,2n + 1, s(0) = 1, s(2n + 1) = 4. • a(n) = (1 / 5) * Sum _{ r=1 ..9 } sin(r * Pi / 10) * sin(2 * r * Pi / 5) * (2 * cos(r * Pi / 10)) ^ (2 * n + 1). • a(n) = 8 * a(n - 1) - 21 * a(n - 2) + 20 * a(n - 3) - 5 * a(n - 4). • a(n) = Sum _{ k=0..n } binomial(2 * n,n + k) * (k|20), where (k|20) represents the Krone cker symbol. - _ Greg Dresden _ , Oct 09 2022 •

► [A370051] 1,4,14,48,165,572,2002,7071,25176,90251,325358,1178291,4282811,15612092,57040186,208772476,765186422,2807556411,10309833845,37883902913,139275229088,512223805060,1884404481767,6934058102453,25519786076294 ⋆ Ex pansion of (1 - 5 * x + 6 * x ^ 2 - x ^ 3) / (1 - 9 * x + 28 * x ^ 2 - 35 * x ^ 3 + 15 * x ^ 4 - x ^ 5). • a(n) = 9 * a(n - 1) - 28 * a(n - 2) + 35 * a(n - 3) - 15 * a(n - 4) + a(n - 5); a(0) = 1, a(1) = 4, a(2) = 14, a(3) = 48, a(4) = 165. •

► [A099376] 0,1,4,14,48,165,572,2002,7072,25194,90440,326876,1188640,4345965,15967980,58929450,218349120,811985790,3029594040,11338026180,42550029600,160094486370,603784920024,2282138106804,8643460269248 ⋆ An inverse Cheb yshev transform of x ^ 3. • a(n) = Sum _{ k=0..n } (k + 1) * C(n, (n - k) / 2) * (- 1) ^ k * (C(3, k) - 3 * C(2, k) + 3 * C(1, k) - C(0, k)) * (1 + (- 1) ^ (n - k)) / (n + k + 2). •

► [A002057] 1,4,14,48,165,572,2002,7072,25194,90440,326876,1188640,4345965,15967980,58929450,218349120,811985790,3029594040,11338026180,42550029600,160094486370,603784920024,2282138106804,8643460269248,32798844771700 ⋆ Fo urth convolution of Catalan numbers: 4 * binomial(2n + 3,n) / (n + 4). • a(n) = 32 * 4 ^ n * Gamma(5 / 2 + n) * (1 + n) / (sqrt(Pi) * Gamma(5 + n)). - _ Peter Luschny _ , Dec 14 2015 • a(n) = C(n + 1) - 2 * C(n) where C is Catala n number A000108. _ Yuchun Ji _ , Oct 18 2017 [Note: Offset is off by 2] • a(n) = Integral _{ x=0..4 } x ^ n * W(x) dx where W(x) = - x ^ (3 / 2) * (1 - x / 2) * sqrt(4 - x) / Pi, defined on the open interval (0,4). - _ Karol A. Penson _ , Nov 13 2022 •

► [A082590] 1,4,14,48,166,584,2092,7616,28102,104824,394404,1494240,5692636,21785872,83688344,322494208,1246068806,4825743832,18726622964,72798509728,283443548276,1105144970992,4314388905704,16862208539008,65972020761116 ⋆ Expansion of 1 / ((1 - 2 * x) * sqrt(1 - 4 * x)). • a(n) = 2 ^ n * JacobiP(n, 1 / 2, - 1 - n, 3). • a(n) = Sum _{ k=0..n + 1 } binomial(2 * n + 2, k) * sin((n - k + 1) * pi / 2. - _ Paul Barry _ , Nov 02 2004 • a(n) = Sum { k=0..n } 2 ^ (n - k) * binomial(2 * k, k). • a(n) = Sum { k=0..n } (2 * k)! * (2 * (n - k))! / (n! * k! * (n - k)!). (End) • a(n) = Sum { k=0..n } C(2 * n, n) * C(n, k) / C(2 * n, 2 * k) - _ Paul Barry _ , Mar 18 2007 • a(n) = 2 ^ (n + 1) * Pochhammer (1 / 2, n + 1) * hyper2F1([1 / 2, - n], [3 / 2], - 1) / n!. - _ Peter Luschny _ , A ug 02 2014 •

► [A085280] 1,4,14,48,166,584,2094,7648,28406,107064,408574,1575248,6123846,23963944,94261454,372262848,1474702486,5855763224,23293912734,92788230448,369990660326,1476475856904,5895443074414,23550391238048 ⋆ Expansion of (1 - 4x + x ^ 2) / ((1 - x)(1 - 3x)(1 - 4x)). • a(n) = 3 ^ n + 4 ^ n / 3 - 1 / 3. •

► [A007851] 1,4,14,48,167,593,2144,7864,29171,109173,411501,1560089,5943199,22732739,87253604,335897864,1296447899,5015206349,19439895089,75487384829,293595204239,1143532045499,4459774977449,17413705988873 ⋆ Number of el ements w of the Weyl group D(n) such that the roots sent negative by w span a n Abelian subalgebra of the Lie algebra. • a(n) = (n + 3) * C(n) / 2 - 1, where C(n) is a Catalan number (see A000108). •

► [A368555] 1,4,14,48,168,624,2592,12816,78768,599184,5426352,56195856,647589168,8169788304,111687656112,1642737336336,25851001897008,433240433787024,7702095007089072,144751385430099216,2867156164466937648,59692410665110252944 ⋆ a(n) = Sum _{ k=0..n } k! * 3 ^ (n - k). • a(0) = 1; a(n) = 3 * a(n - 1) + n!. • a(n) = (n + 3) * a(n - 1) - 3 * n * a(n - 2). •

► [A327610] 0,0,1,4,14,49,154,496,1520,4705,14266,43384,130844,394849,1187614,3571936,10729040,32222785,96724306,290313064,871172324,2614069249,7843168774,23531688976,70598997560 ⋆ Number of length n reversible string structur es that are not palindromic using exactly three different colors. • a(n) = 6 * a(n - 1) - 6 * a(n - 2) - 24 * a(n - 3) + 49 * a(n - 4) + 6 * a(n - 5) - 66 * a(n - 6) + 36 * a(n - 7) for n > 7. •

► [A278692] 4,14,49,171,596,2077,7238,25223,87897,306303,1067403,3719680,12962320,45171020,157411717,548547468,1911575138,6661446313,23213770727,80895217952,281903201529,982374694626,3423373822671,11929753885009,41572739387791 ⋆ Pisot sequence T(4,14). • a(n) = floor(a(n - 1) ^ 2 / a(n - 2)), a(0) = 4 , a(1) = 14. • a(n) = 4 * a(n - 1) - 2 * a(n - 2) + a(n - 3) - a(n - 4). (End) •

► [A291384] 1,4,14,49,172,604,2120,7442,26124,91704,321912,1130020,3966752,13924640,48880192,171585992,602324816,2114363648,7422130912,26054187664,91459003200,321052008000,1127001041280,3956154502688,13887439208896 ⋆ a(n) = (1 / 2) * A291383(n). • a(n) = 2 * a(n - 1) + 4 * a(n - 2) + 4 * a(n - 3) + 2 * a(n - 4) for n >= 5. •

► [A277084] 4,14,49,172,604,2122,7456,26198,92052,323444,1136489,3993295,14031289,49301911,173232725,608689936,2138761243,7514991434,26405516950,92781386582,326007088306,1145495077635,4024940008834,14142480741305,49692606865991 ⋆ Pisot sequence L(4,14). • a(n) = ceiling(a(n - 1) ^ 2 / a(n - 2)), a(0) = 4, a(1) = 14. •

► [A001894] 1,4,14,49,174,628,2298,8504,31758,119483,452284,1720774,6574987,25214332,96997223,374153699,1446677555,5605337934,21758936146,84604366100,329453055975,1284626463105,5015200610785,19601107218591,76685359017750 ⋆ Number of permutations of { 1,...,n } having n - 4 inversions (n>=4). • a(n) = 2 ^ (2 * n - 5) / sqrt(Pi * n) * Q * (1 + O(n ^{- 1 })), where Q is a digita l search tree constant, Q = 0.2887880951... (see A048651). - corrected by _ Va clav Kotesovec _ , Mar 16 2014 •

► [A215493] 0,1,4,14,49,175,637,2352,8771,32928,124166,469567,1779141,6749211,25623472,97329337,369821228,1405502182,5342323441,20307982135,77201862045,293497548512,1115812645899,4242135876440,16128056932078 ⋆ a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 7 * a(n - 3) with a(0)=0, a(1)=1, a(2)=4. • a(n) * sqrt(7) = s(1) ^ (2n - 1) + s(2) ^ (2n - 1) + s(4) ^ (2n - 1), where s(j) := 2 * Sin(2 * Pi * j / 7) (for the sums of the respective even powers see A215494, see also A0 94429, A115146). For the proof of these formula see Witula - Slota's paper. •

► [A079309] 1,4,14,49,175,637,2353,8788,33098,125476,478192,1830270,7030570,27088870,104647630,405187825,1571990935,6109558585,23782190485,92705454895,361834392115,1413883873975,5530599237775,21654401079325,84859704298201 ⋆ a(n) = C(1,1) + C(3,2) + C(5,3) + ... + C(2 * n - 1,n). • a(n) = Sum _{ j=1..n } binomial(2 * j, j) / 2. - _ Zerinvary Lajos _ , Oct 25 2006 • a(n) = Su m _{ 0 <= i <= j <= n } binomial(i + j, i). - _ Benoit Cloitre _ , Nov 25 20 06 • a(n) = - binomial(2 * n + 1, n) * hypergeom([1, n + 3 / 2], [n + 2], 4) - (i / sqrt(3) + 1) / 2. - _ Peter Luschny _ , May 18 2018 •

► [A352456] 1,4,14,49,301,1589,9761,51529,452411,3041573,23140153,143573641,1260538619,8474639717 ⋆ Smallest Matula - Goebel number of a rooted binar

y tree (everywhere 0 or 2 children) of n childless vertices. • a(n) = Min _{ x + y=n } prime(a(x)) * prime(a(y)). •

► [A120747] 0,1,4,14,50,175,616,2163,7601,26703,93819,329615,1158052,4068623,14294449,50221212,176444054,619907431,2177943781,7651850657,26883530748,94450905714,331837870408,1165858298498,4096053203771 ⋆ Sequence relating to the hendecagon (11 - gon). • a(n) = 3 * a(n - 1) + 3 * a(n - 2) - 4 * a(n - 3) - a(n - 4) + a(n - 5). • a(n) = T(n,4) with T(n,k) = Sum _{ k1 = 6 - k..6 } T(n - 1, k1), T(1,1) = T(1,2) = T(1,3) = T(1,4) = 0 and T(1,5) = 1, n>=1 and 1 <= k <= 5. [Steinbach] •

► [A055099] 1,4,14,50,178,634,2258,8042,28642,102010,363314,1293962,4608514,16413466,58457426,208199210,741512482,2640935866,9405832562,33499369418,119309773378,424928058970,1513403723666,5390067288938 ⋆ Expansion of g.f. : (1 + x) / (1 - 3 * x - 2 * x ^ 2). • a(n) = a * c ^ n - b * d ^ n, a := (5 + sqrt(17)) / (2 * sqrt(17)), b := (5 - sqrt(17)) / (2 * sqrt(17)), c := (3 + sqrt(17)) / 2, d := (3 - sqrt(17)) / 2. • a(n) = 3 * a(n - 1) + 2 * a(n - 2) with a(0) = 1, a(1) = 4. - _ Vincenzo Librandi _ , Dec 08 2010 • a(n) = (i * sqrt(2)) ^ (n - 1) * (i * sqrt(2) * ChebyshevU(n, - 3 * i / (2 * sqrt(2))) + ChebyshevU(n - 1, - 3 * i / (2 * sqrt(2)))). - _ G. C. Greubel _ , Jun 27 2021 •

► [A335921] 0,1,4,14,50,178,644,2347,8624,31908,118768,444308,1669560,6298280,23842032,90531032,344702646,1315726218,5033357852,19294463682,74099098212,285056401796,1098314920968,4237879802726,16373796107092 ⋆ Total height of all binary search trees with n internal nodes. • a(n) is odd <=> n in { A083420 } . •

► [A372874] 1,4,14,50,179,632,2192,7478,25157,83660,275570,900506,2922935,9433088,30292148,96855134,308501513,979312916,3099363926,9782367362,30799928891,96758267144,303350242904,949277053190,2965510133069 ⋆ a(n) is the total number of runs of descents over all flattened Catalan words of length n. • a(n) = (27 * n - 9 + (5 * n + 1) * 3 ^ n) / 36. (End) •

► [A153367] 4,14,50,180,650,2350,8500,30750,111250,402500,1456250,5268750,19062500,68968750,249531250,902812500,3266406250,11817968750,42757812500,154699218750,559707031250,2025039062500,7326660156250,26508105468750 ⋆ Number of zig - zag paths from top to bottom of a rectangle of width 9 with 2n - 1 rows whose color is not that of the top right corner. • a(n) = (2 ^ (- n) * ((5 - sqrt(5)) ^ n * (- 5 + 3 * sqrt(5)) + (5 + sqrt(5)) ^ n * (5 + 3 * sqrt(5)))) / (5 * sqrt(5)) for n>0. • a(n) = 5 * a(n - 1) - 5 * a(n - 2) for n>2. •

► [A055990] 1,4,14,50,181,657,2385,8657,31422,114051,413966,1502555,5453761,19795288,71850128,260791401,946583628,3435774958,12470688498,45264335853,164294064481,596331286321,2164478699633,7856317702310 ⋆ a(n) is its own 4 th difference. • a(n) = Sum _{ m=0..n - 1 } C(n + 3m + 1,n - m - 1). - _ Vladimir Kruchinin _ , Nov 18 2020 •

► [A087945] 1,4,14,50,182,670,2482,9226,34358,128078,477698,1782202,6650086,24816094,92610194,345616490,1289839382,4813708270,17964928162,67045873306,250218302918,933826814078,3485087904818,13006522708042 ⋆ Expansion of (1 - 2x - x ^ 2) / ((1 - 2x)(1 - 4x + x ^ 2)). • a(0)=1, a(2)=4, a(2)=14, a(n)=6a(n - 1) - 9a(n - 2) + 2a(n - 3), n>2; a(n)=(2 ^ n + (1 - sqrt(3))(2 - sqrt(3)) ^ n + (1 + sqrt(3))(2 + sqrt(3)) ^ n) / 3. •

► [A051924] 1,4,14,50,182,672,2508,9438,35750,136136,520676,1998724,7696444,29716000,115000920,445962870,1732525830,6741529080,26270128500,102501265020,400411345620,1565841089280,6129331763880,24014172955500 ⋆ a(n) = binomial(2 * n,n) - binomial(2 * n - 2,n - 1); or (3n - 2) * C(n - 1), where C = Catalan numbers (A000108). • a(n + 1) = binomial(2 * n, n) + 2 * sum(i=0, n - 1, binomial(n + i, i) (V's in Pascal's Triangle). - _ Jon Perry _ Apr 13 2004 • a(n) = 2 ^ (- 2 + 2 * n) * Gamma(- 1 / 2 + n) * (3 * n - 2) / (sqrt(Pi) * Gamma(1 + n)). - _ Peter Luschny _ , Dec 14 2015 •

► [A076024] 0,1,4,14,50,186,714,2794,11050,43946,175274,700074,2798250,11188906,44747434,178973354,715860650,2863377066,11453377194,45813246634,183252462250,733008800426,2932033104554,11728128223914,46912504507050 ⋆ a(n) = (2 ^ n + 4) * (2 ^ n - 1) / 6. • a(n) = Sum _{ k=0..n } C(n, k) * (3 ^ (k - 1) + 1 - 4 * 0 ^ k / 3) / 2. • a(n) = Sum _{ k=0..n } C(n, k + 1) * (3 ^ k + 1). •

► [A363507] 1,4,14,50,191,763,3180,13640,59937,268304,1219626,5614038,26117296,122598622,579977691,2762264225,13234003724,63737225733,308406648979,1498558628584,7309116199687,35772044402485,175621484712091,864670723348447 ⋆ G.f. satisfies A(x) = exp(Sum _{ k>=1 } (3 + A(x ^ k)) * x ^ k / k). • a(0) = 1; a(n) = (1 / n) * Sum _{ k=1..n } (3 + Sum _{ d|k } d * a(d - 1)) * a(n - k). •

► [A292463] 1,1,4,14,51,188,702,2644,10026,38223,146359,562456,2168134,8379539,32459199,125984039,489837300,1907490728,7438346255,29042470132,113522618066,444199913556,1739735079466,6819657196928,26753893533257 ⋆ Number of partitions of n with n kinds of 1. • a(n) = [x ^ n] 1 / (1 - x) ^ n * 1 / Product _{ j=2..n } (1 - x ^ j). • a(n) is n - th term of the Euler transform of n,1,1,1,... . •

► [A371870] 1,1,4,14,51,189,709,2683,10220,39130,150438,580328,2245004,8705686,33828704,131688362,513445147,2004688605,7836832057,30670416703,120153739079,471143251989,1848978071615,7261781367389,28540427527441 ⋆ a(n) = Sum _{ k=0..floor(n / 2) } binomial(2 * n - k - 1,n - 2 * k). • a(n) = [x ^ n] 1 / ((1 - x - x ^ 2) * (1 - x) ^ (n - 1)). •

► [A165813] 1,4,14,51,216,1095,6588,46137,369120,3322107,33221100,365432133,4385185632,57007413255,798103785612,11971556784225,191544908547648,3256263445310067,58612742015581260,1113642098296043997 ⋆ a(n) = n * (a(n - 1) + 3), a(0)=1. • a(n) = n! + 3 * floor(e * n!) - 3. - _ Gary Detlefs _ , Jun 06 2010 •

► [A099486] 0,1,4,14,52,195,728,2716,10136,37829,141180,526890,1966380,7338631,27388144,102213944,381467632,1423656585,5313158708,19828978246,74002754276,276182038859,1030725401160,3846719565780,14356152861960 ⋆ Expansion of x / ((1 + x ^ 2) * (1 - 4 * x + x ^ 2)). • a(n) = 4 * a(n - 1) - 2 * a(n - 2) + 4 * a(n - 3). • a(n) = Sum _{ k=0..n } cos(Pi * (n - k) / 2) * ((2 + sqrt(3)) ^ k - (2 - sqrt(3)) ^ k) / (2 * sqrt(3)). • a(n) = Sum _{ k=0..floor(n / 2) } binomial(n - k, k) * (- 1) ^ n * (4 ^ (n - 2 * k) - 0 ^ (n - 2 * k)) / 4. •

► [A262594] 1,4,14,52,203,808,3232,12936,51765,207100,828466,3313964,13259599,53024192,212097028,848388448,3393554217,13574217396,54296870230,217187481700,868749927731,3474999712024,13899998849384,55599995399032,222399981597853 ⋆ Expansion of (1 - 2 * x) ^ 2 / ((1 - x) ^ 4 * (1 - 4 * x)). • a(n) = 8 * a(n - 1) - 22 * a(n - 2) + 28 * a(n - 3) - 17 * a(n - 4) + 4 * a(n - 5) for n>4. • a(n) = (34 + 2 ^ (7 + 2 * n) + 93 * n + 18 * n ^ 2 - 9 * n ^ 3) / 162. •

► [A345242] 1,1,4,14,52,205,832,3492,14960,65322,289384,1298064,5882712,26897352,123919576,574718308,2681028168,12571650355,59222213028,280139215118,1330101884932,6336757979653,30282375754944,145124083402256,697293746743760 ⋆ G.f. A(x) satisfies: A(x) = x + x ^ 2 * exp(4 * Sum _{ k>=1 } A(x ^ k) / k). • a(n + 2) = (4 / n) * Sum _{ k=1..n } (Sum _{ d|k } d * a(d)) * a(n - k + 2). •

► [A370891] 1,4,14,52,205,844,3588,15632,69434,313264,1431650,6613732,30834548,144895284,685566370,3263309844,15616322995,75085908112,362563417968,1757412095456,8548129677400,41710100368160,204110896990686,1001480947876276,4925833177966164 ⋆ G.f. satisfies A(x) = (1 + x * A(x) ^ (1 / 4) * (1 + A(x) ^ (3 / 4))) ^ 2. • a(n) = 2 * Sum _{ k=0..n } binomial(n,k) * binomial(n / 2 + 3 * k / 2 + 2,n) / (n / 2 + 3 * k / 2 + 2). •

► [A129997] 0,1,4,14,52,208,884,3952,18460,89648,450892,2341456,12522068,68819920,387978292,2240112368,13228210684,79794191152,491143503500,3081692690128,19693923313012,128082776294096,847127801497588 ⋆ a(n) = 4 * a(n - 1) + (n - 6) * a(n - 2). • a(n) = 4 * a(n - 1) + (n - 6) * a(n - 2). - _ Vaclav Kotesovec _ , Oct 20 2012 •

► [A308023] 1,1,4,14,52,208,908,4304,22016,120796,706896,4389752,28800668,198884648,1440809932,10918549748,86331306980,710609746752,6076740094448,53887906573064,494734785732236,4695242718593096,45998992617959932,464614423225361404,4832633949407618644 ⋆ G.f. A(x) satisfies: A(x) = x * (1 + (1 / (1 - x)) * (A(x / (1 - x)) + A(x ^ 2 / (1 - x) ^ 2) + A(x ^ 3 / (1 - x) ^ 3) + ...)). • a(1) = 1; a(n + 1) = Sum _{ k=1..n } binomial(n,k) * Sum _{ d|k } a(d). •

► [A090319] 1,4,14,52,217,1040,5768,36992,272584,2285184,21550656,226071744,2611146384,32911082496,449243785728,6598780563456,103734755882496,1737181702840320,30866291090657280,579859321408266240 ⋆ Fifth column (k=4) of triangle A084938. • a(n) = Sum _{ a + b + c + d = n } a! * b! * c! * d!. • a(n) = (n + 3)! * Sum _{ k=0..n } Sum _{ m=0..k } Sum _{ j=0..m } Beta(k + 3, n - k + 1) * Beta(m + 2, k - m + 1) * Beta(j + 1, m - j + 1), where Beta(x,y) is the Beta function. • a(n) = Sum _{ k=0..n } Sum _{ m=0..k } Sum _{ j=0..m } n! / (binomial(n,k) * binomial(k,m) * binomial(m,j)). (End) •

► [A295518] 0,1,4,14,52,220,1092,6388,43588,341444,3022660,29835844,324782916,3864151876,49875956548,694041238340,10356520497988,164956188717892,2793150548587332,50100649026499396,948943120107352900,18925792541725471556,396439630395708060484 ⋆ a(n) = e ^ 2 * Sum _{ k=0..n - 1 } Gamma(k + 1, 2). • a(n) = (2 * n - 4) * a(n - 3) + (3 - 3 * n) * a(n - 2) + (2 + n) * a(n - 1) for n >= 3. •

► [A214998] 4,14,53,197,736,2746,10249,38249,142748,532742,1988221,7420141,27692344,103349234,385704593,1439469137,5372171956,20049218686,74824702789,279249592469,1042173667088,3889445075882,14515606636441,54172981469881,202176319243084 ⋆ Power ceiling - floor sequence of 2 + sqrt(3). • a(n) = floor(x * a(n - 1)) if n is odd, a(n) = ceiling(x * a(n - 1) if n is even, where x = 2 + sqrt(3) and a(0) = ceiling(x). • a(n) = 3 * a(n - 1) + 3 * a(n - 2) - a(n - 3). • a(n) = (- 1) ^ n + 4 * a(n - 1) - a(n - 2) with a(0) = 4 and a(1) = 14. - _ Peter Bala _ , Nov 12 2017 • a(n) = (1 / 12) * (2 * (- 1) ^ n + (23 - 13 * sqrt(3)) * (2 - sqrt(3)) ^ n + (2 + sqrt(3)) ^ n * (23 + 13 * sqrt(3))). - _ Colin Barker _ , Nov 13 2017 •

► [A308555] 1,4,14,53,222,1011,4944,25884,144963,865556,5477661,36518635,255323564,1867122987,14259709474,113593734317,942317654779,8123227487723,72599829900774,671199117610868,6407156027307909,63061416571124056,639303956718643041,6670690645674913424 ⋆ Expansion of e.g.f. Sum _{ k>=1 } sigma(k) * (exp(x) - 1) ^ k / k!, where sigma = sum of divisors (A000203). • a(n) = Sum _{ k=1..n } Stirling2(n,k) * sigma(k). •

► [A180142] 1,4,14,54,204,774,2934,11124,42174,159894,606204,2298294,8713494,33035364,125246574,474845814,1800277164,6825368934,25876938294,98106921684,371951579934,1410175504854,5346381254364,20269670277654,76848154596054 ⋆ Eight rooks and one berserker on a 3 X 3 chessboard. G.f.: (1 + x - x ^ 2) / (1 - 3 * x - 3 * x ^ 2). • a(n) = 3 * a(n - 1) + 3 * a(n - 2) for n >= 2 with a(0) =1, a(1)=4 and a(2)=14. • a(n) = (6 - 2 * A) * A ^ (- n - 1) / 21 + (6 - 2 * B) * B ^ (- n - 1) / 21 with A=(- 3 + sqrt(21)) / 6 and B=(- 3 - sqrt(21)) / 6. •

► [A045501] 1,1,4,14,54,233,1101,5625,30846,180474,1120666,7352471,50772653,367819093,2787354668,22039186530,181408823710,1551307538185,13756835638385,126298933271289,1198630386463990,11742905240821910 ⋆ Third - from - right diagonal of triangle A121207. • a(n + 1) = Sum _{ k=0..n } binomial(n + 2, k + 2) * a(k). - _ Vladeta Jovovic _ , Nov 10 2003 •

► [A162481] 1,4,14,54,235,1119,5658,29800,161621,896198,5056824,28938519,167548937,979653821,5776252440,34305807512,205039491091,1232333298174,7443336041318,45157243590384,275051410542141,1681362181696823,10311616254855422,63428758470722109 ⋆ Expansion of (1 / (1 - x) ^ 3) * c(x / (1 - x) ^ 3), c(x) the g.f. of A000108. • a(n) = binomial(n + 2,2) + Sum _{ k=0..n - 1 } a(k) * a(n - k - 1). - _ Seiichi Manyama _ , Jan 23 2023 •

► [A143406] 1,1,4,14,55,252,1319,7737,50040,351636,2659375,21519027,185279186,1688183135,16206401020,163376811610,1724624368377,19011582728772,218312877627483,2605840967052663,32271957793959066,413991491885677105,5492584623675060620 ⋆ Number of forests of labeled rooted trees of height at most 1, with n labels, where each root contains a nonempty set of labels of equal size, also row sums of A143398. • a(n) = 1 if n=0 and a(n) = n! * Sum _{ k=1..n } Sum _{ i=1..floor(n / k) } i ^ (n - k * i) / ((n - k * i)! * i! * k! ^ i) else. •

► [A073155] 1,1,4,14,56,237,1046,4762,22198,105430,508384,2482297,12248416,60980875,305955356,1545397464,7852100294,40105277640,205798130604,1060467961508,5485199090812,28469067353686,148220323891460 ⋆ Leftmost column sequence of triangle A073153. • a(n + 1) = Sum _{ k=0..n } [a(k) + a(k - 1)] * [a(n - k) + a(n - k - 1)], where a(- 1)=0. • a(n) = Sum _{ k=0..n } C(2k,n - k) * C(k). - _ Paul Barry _ , Jul 09 2006 •

► [A370720] 1,4,14,56,241,1088,5082,24352,119036,591224,2975150,15136036,77721311,402276364,2096572304,10993229392,57951531087,306954017592,1632807881

8084,8719002979360,46720890435026,251149205370864,1353974197346154,7318852828505148 ⋆ G.f. A(x) satisfies A(x) = (1 + x * A(x) ^ (3 / 4) / (1 + x)) ^ 4. • a(n) = 4 * Sum _{ k=0..n } (- 1) ^ (n - k) * binomial(n - 1,n - k) * binomial (3 * k + 4,k) / (3 * k + 4). •

► [A006212] 0,1,4,14,56,256,1324,7664,49136,345856,2652244,22014464,196658216,1881389056,19192151164,207961585664,2385488163296,28879019769856,367966308562084,4922409168011264,68978503204900376,1010472388453728256,15445185289163949004 ⋆ Number of down - up permutations of n + 3 starting with n + 1. • a(n) = T(n + 2, n), where T is the triangle in A008282. (End) •

► [A296943] 0,1,4,14,58,292,1754,12280,98242,884180,8841802,97259824,1167117890,15172532572,212415456010,3186231840152,50979709442434,866655060521380,15599791089384842,296396030698312000,5927920613966240002,124486332893291040044 ⋆ Number of bisymmetric and quasitrivial operations on an arbitrary n - element set. • a(n + 1) = (n + 1) * a(n) + 2, a(0)=0, a(1)=1. •

► [A137956] 1,1,4,14,64,301,1500,7738,40948,221278,1215284,6765148,38083556,216431253,1240048740,7155236960,41542685352,242513393884,1422608044604,8381507029660,49574494112992,294260899150492,1752288415205896 ⋆ G.f. satisfies A(x) = 1 + x * (1 + x * A(x) ^ 2) ^ 4. • a(n) = Sum _{ k=0..n - 1 } C(4 * (n - k),k) / (n - k) * C(2 * k,n - k - 1) for n>0 with a(0)=1. - _ Paul D. Hanna _ , Jun 16 2009 •

► [A154407] 4,14,64,344,1984,11744,70144,420224,2520064,15117824,90701824,544200704,3265183744,19591061504,117546287104,705277558784,4231665025024,25389989494784,152339935657984,914039611326464,5484237662715904 ⋆ a(n) = 5 * 2 ^ (n - 1) + 3 * 6 ^ n / 2. • a(n + 1) = 6 * a(n) - 10 * 2 ^ n. •

► [A081891] 1,4,14,64,830,14704,228734,3136144,39450110,468241264,5338397054,59140070224,641540046590,6850671429424,72282030453374,755587489260304,7840735233590270,80889167950995184,830567232465613694 ⋆ A sum of decreasing powers. • a(n)=10 ^ n - 9 ^ n - 8 ^ n - 7 ^ n + 3 * 6 ^ n. •

► [A305654] 1,1,4,14,65,323,1890,12002,83901,630818,5081318,43546333,395422430,3788368227,38151667046,402516707510,4436230390977,50948789415297,608433141666219,7540823673023319,96826154085714992,1285991546051286085,17640769457638701839,249602608552024560609 ⋆ a(n) = [x ^ n] exp(Sum _{ k>=1 } x ^ k * (1 + x ^ k) / (k * (1 - x ^ k) ^ n)). • a(n) = [x ^ n] Product _{ k>=1 } 1 / (1 - x ^ k) ^ (2 * binomial(n + k - 2,n - 1) - binomial(n + k - 3,n - 2)). •

► [A187742] 1,1,4,14,66,384,2640,20880,186480,1854720,20321280,243129600,3153427200,44068147200,660064204800,10548573235200,179151388416000,3222109642752000,61178237632512000,1222853377794048000,25667116186263552000,564433265896980480000,12977099311614197760000 ⋆ G.f.: Sum _{ n>=0 } (n + x) ^ n * x ^ n / (1 + n * x + x ^ 2) ^ n. • a(n) = (n ^ 2 + n + 2) * (n - 1)! / 2, for n>1 with a(0)=a(1)=1. •

► [A161132] 1,1,1,4,14,78,426,3216,24024,229080,2170680,25022880,287250480,3884393520,52370755920,812752093440,12585067447680,220448163358080,3854801333416320,75225258805132800,1465957162768492800,31537353006189676800,677696237345719468800 ⋆ Number of permutations of { 1,2,...,n } that have no even fixed points. • a(n) = Sum _{ j=0..floor(n / 2) } (- 1) ^ j * binomial(floor(n / 2),j) * (n - j)!. • a(n) = n! * hypergeom([- floor(n / 2)], [- n], - 1). •

► [A202139] 0,1,1,4,14,88,544,4688,41712,459520,5333376,71876352,1027670016,16428530688,278818065408,5167215464448,101437811718144,2140879726411776,47698275298050048,1130276555155243008,28167446673847812096,740796870212763254784 ⋆ Expansion of e.g.f. log(1 / (1 - arctanh(x))). • a(n) = n! * Sum _{ m=1..n } (m - 1)! * Sum _{ k=0..n - m } Stirling1(k + m,m) * 2 ^ k * binomial(n - 1,k + m - 1) / (k + m)!. • a(0) = 0; a(n) = (n mod 2) * (n - 1)! + Sum _{ k=1..floor(n / 2) } (2 * k - 2)! * binomial(n - 1,2 * k - 1) * a(n - 2 * k + 1). - _ Seiichi Manyama _ , Apr 30 2022 •

► [A269590] 0,4,14,114,364,989,13489,13489,169739,560364,2513489,2513489,2513489,246654114,3908763489,22219310364,52736888489,52736888489,310449470089,6919191966614 ⋆ One of the two successive approximations up to 5 ^ n for the 5 - adic integer sqrt(- 4). These are the 4 mod 5 numbers (except for n=0). • a(n) == Lucas(3 * (5 ^ n)) (mod 5 ^ n). - _ Peter Bala _ , Nov 14 2022 •

► [A022133] 4,15,19,34,53,87,140,227,367,594,961,1555,2516,4071,6587,10658,17245,27903,45148,73051,118199,191250,309449,500699,810148 ⋆ Fibonacci sequence beginning 4, 15. • a(n) = term (1,1) in the 1 X 2 matrix [4,11] . [1,1; 1,0] ^ n. (End) •

► [A051531] 1,1,4,15,24,44,81,115,168,247,322,424,561,693,860,1071,1276,1524,1825,2119,2464,2871,3270,3728,4257 ⋆ Molien series for group H _{ 1,3 }^{ 8 } of order 2304. • a(0)=1, a(1)=1, a(2)=4, a(3)=15, a(4)=24, a(5)=44, a(6)=81, a(7)=115, a(n)= 2 * a(n - 1) - a(n - 2) + 2 * a(n - 3) - 4 * a(n - 4) + 2 * a(n - 5) - a(n - 6) + 2 * a(n - 7) - a(n - 8). - _ Harvey P. Dale _ , Jan 12 2013 •

► [A017437] 4,15,26,37,48,59,70,81,92,103,114,125,136,147,158,169,180,191,202,213,224,235,246,257,268 ⋆ a(n) = 11 * n + 4. • a(0)=4, a(1)=15, a(n) = 2 * a(n - 1) - a(n - 2). - _ Harvey P. Dale _ , May 19 2012 •

► [A372237] 4,15,26,49,96,191,318,573,1084,2107,4154,8249,16440,32823,65590,131125,262196,524339,1048626,2097201,4194352,8388655,16777262,33554477,67108908 ⋆ a(0) = 4; to obtain a(k), write out the base - (2 ^ k) expansion of a(k - 1), bump to base 2 ^ (k + 1), then subtract 1. • a(k) = 2 ^ (k + 2) + 68 - k for 5 <= k <= 68. The base - (2 ^ (k + 1)) expansion of a(k) consists of two digits 2 and 68 - k. • a(k) = 2 ^ (k + 1) + 2 ^ 70 + 68 - k for 69 <= 2 ^ 70 + 68. The base - (2 ^ (k + 1)) expansion of a(k) consists of two digits 1 and 2 ^ 70 + 68 - k. • a(k) = 2 ^ (2 ^ 70 + 70) + 2 ^ 70 + 68 - k for 2 ^ 70 + 69 <= k <= 2 ^ (2 ^ 70 + 70) + 2 ^ 70 + 68. The base - (2 ^ (k + 1)) expansion of a(k) consists of a single digit 2 ^ (2 ^ 70 + 70) + 2 ^ 70 + 68 - k. •

► [A337519] 4,15,28,47,68,95,124,159,196,239,284,335,388,447,508,575,644,719,796,879,964,1055,1148,1247,1348 ⋆ Length of the shortest walk in an n X n grid graph that starts in one corner and visits every edge. • a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4) for n > 5. (End) •

► [A366659] 1,4,15,30,66,115,200,295,471,659,946,1259,1715,2194,2920,3591,4561,5585,6916,8216,10082,11823,14124,16389,19350 ⋆ a(n) = Sum _{ k=1..n } (- 1) ^ (k - 1) * binomial(floor(n / k) + 3,4). • a(n) = Sum _{ k=1..n } binomial(k + 2,3) * (floor(n / k) mod 2). •

► [A270710] 1,4,15,32,55,84,119,160,207,260,319,384,455,532,615,704,799,900,1007,1120,1239,1364,1495,1632,1775 ⋆ a(n) = 3 * n ^ 2 + 2 * n - 1. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). • a(n) = Sum _{ i = n - 1..2 * n - 1 } (2 * i + 1). - _ Bruno Berselli _ , Feb 16 2018 •

► [A317614] 1,4,15,32,65,108,175,256,369,500,671,864,1105,1372,1695,2048,2465,2916,3439,4000,4641,5324,6095,6912,7825 ⋆ a(n) = (1 / 2) * (n ^ 3 + n * (n mod 2)). • a(n) = Sum _{ k=1..n } T(n,k), where T(n,k) = ((n + 1) * k - n) * (n mod 2) + ((n - 1) * k + 1) * (1 - (n mod 2)). • a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + a(n - 4) + 2 * a(n - 5) - a(n - 6) for n>6. • a(n) = n ^ 3 / 2 for n even. • a(n) = (n ^ 3 + n) / 2 for n odd. •

► [A331761] 0,1,4,15,32,71,124,211,320,499,716,999,1328,1799,2340,3023,3792,4767,5852,7135,8544,10319,12260,14471,16864 ⋆ a(n) = Sum _{ i=1..n, j=1..n, gcd(i,j)=2 } (n + 1 - i) * (n + 1 - j). • a(n) = (n - 1) ^ 2 + 2 * Sum _{ i=2..floor(n / 2) } (n + 1 - 2 * i) * (n + 1 - i) * phi(i). - _ Chai Wah Wu _ , Aug 16 2021 •

► [A022265] 0,4,15,33,58,90,129,175,228,288,355,429,510,598,693,795,904,1020,1143,1273,1410,1554,1705,1863,2028 ⋆ a(n) = n * (7 * n + 1) / 2. • a(n) = 7 * n + a(n - 1) - 3 for n>0, a(0)=0. - _ Vincenzo Librandi _ , Aug 04 2010 • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) with a(0)=0, a(1)=4, a(2)=15. - _ Philippe Deléham _ , Mar 26 2013 •

► [A054556] 1,4,15,34,61,96,139,190,249,316,391,474,565,664,771,886,1009,1140,1279,1426,1581,1744,1915,2094,2281 ⋆ a(n) = 4 * n ^ 2 - 9 * n + 6. • a(n) ^ 2 = Sum _{ i = 0..2 * (4 * n - 5) } (4 * n ^ 2 - 13 * n + 9 + i) ^ 2 * (- 1) ^ i = ((n - 1) * (4 * n - 5) + 1) ^ 2. - _ Bruno Berselli _ , Apr 29 2010 • a(0)=1, a(1)=4, a(2)=15; for n > 2, a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Aug 21 2011 • a(n) = binomial(2 * n - 2, 2) + 2 * (n - 1) ^ 2 + 1. •

► [A190093] 4,15,36,66,96,130,164,204,248,296,344,396,448,504,560,620,680,744,808,876,944,1016,1088,1164,1240 ⋆ Number of rhombuses on an (n + 1) X 5 grid. • a(n) = n ^ 2 + 28 * n - 84 for n>7 and even. • a(n) = n ^ 2 + 28 * n - 85 for n>7 and odd. •

► [A077414] 0,4,15,36,70,120,189,280,396,540,715,924,1170,1456,1785,2160,2584,3060,3591,4180,4830,5544,6325,7176,8100 ⋆ a(n) = n * (n - 1) * (n + 2) / 2. • a(n) = n * (binomial(n + 1, 2) - 1). • a(n) = n * Sum _{ j=2..n } j. - _ Zerinvary Lajos _ , Sep 12 2006 • a(1)=0, a(2)=4, a(3)=15, a(4)=36; for n>4, a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Harvey P. Dale _ , Jun 04 2012 • a(n) = Sum _{ i=1..n - 1 } i * (3 * (n - i) + 1). - _ Bruno Berselli _ , Feb 13 2014 • a(n) = n ^ 3 / 2 + n ^ 2 / 2 - n. - _ Tanner Robeson _ , Aug 23 2020 •

► [A304487] 1,4,15,36,73,128,207,312,449,620,831,1084,1385,1736,2143,2608,3137,3732,4399,5140,5961,6864,7855,8936,10113 ⋆ a(n) = (3 + 2 * n - 3 * n ^ 2 + 4 * n ^ 3 - 3 * ((- 1 + n) mod 2)) / 6. • a(n) = (2 * n - 3 * n ^ 2 + 4 * n ^ 3) / 6 for n even. • a(n) = (3 + 2 * n - 3 * n ^ 2 + 4 * n ^ 3) / 6 for n odd. • a(n) = 3 * a(n - 1) - 2 * a(n - 2) - 2 * a(n - 3) + 3 * a(n - 4) - a(n - 5) for n > 5. •

► [A350689] 0,0,0,1,4,15,36,84,160,300,500,825,1260,1911,2744,3920,5376,7344,9720,12825,16500,21175,26620,33396,41184 ⋆ a(n) = n * (1 - (- 1) ^ n - 2 * (3 + (- 1) ^ n) * n ^ 2 + 2 * n ^ 4) / 384. • a(n) = 2 * a(n - 1) + 3 * a(n - 2) - 8 * a(n - 3) - 2 * a(n - 4) + 12 * a(n - 5) - 2 * a(n - 6) - 8 * a(n - 7) + 3 * a(n - 8) + 2 * a(n - 9) - a(n - 10) for n > 9. •

► [A212974] 0,4,15,37,75,132,212,320,459,633,847,1104,1408,1764,2175,2645,3179,3780,4452,5200,6027,6937,7935,9024,10208 ⋆ Number of (w,x,y) with all terms in { 0,...,n } and w>floor((x + y) / 3)). • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + 2 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) - a(n - 6). •

► [A033813] 4,15,37,77,146,262,454,769,1283,2119,3476,5676,9240,15011,24353,39473,63942,103538,167610,271285,439039,710475,1149672,1860312,3010156 ⋆ Convolution of natural numbers n >= 1 with Lucas numbers L(k)(A000032) for k >= 3. • a(n)=L(6) * (F(n + 1) - 1) + L(5) * F(n) - L(4) * n, F(n): Fibonacci (A000045), G.F. x * (4 + 3 * x) / ((1 - x - x ^ 2) * (1 - x) ^ 2) • a(0)=4, a(1)=15, a(2)=37, a(3)=77, a(n)=3 * a(n - 1) - 2 * a(n - 2) - a(n - 3) + a(n - 4) [From Harvey P. Dale, May 23 2011] •

► [A209409] 0,0,0,0,0,4,15,37,87,200,448,992,2160,4628,9823,20699,43335,90246,187068,386192,794560,1629944,3334975,6808073,13870191 ⋆ Number of subsets of { 1,...,n } containing { a,a + 2,a + 4 } for some a. • a(n) = 2 ^ n - t[floor(n / 2) + 2] * t[floor((n + 1) / 2) + 2] where t(n) is the n - th tribonacci number. • a(n) = 3 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - 4 * a(n - 4) + 2 * a(n - 5) - 2 * a(n - 6) - 4 * a(n - 7) - a(n - 8) + a(n - 9) + 2 * a(n - 10). •

► [A014629] 0,4,15,39,84,160,279,455,704,1044,1495,2079,2820,3744,4879,6255,7904,9860,12159,14839,17940,21504,25575,30199,35424 ⋆ Number of segments created by diagonals of n - gon. • a(n) = (n ^ 4 + 2 * n ^ 3 + 5 * n ^ 2 + 4 * n - 12) / 12. [adapted to offset by _ Gionata Neri _ , Feb 06 2021] •

► [A053698] 1,4,15,40,85,156,259,400,585,820,1111,1464,1885,2380,2955,3616,4369,5220,6175,7240,8421,9724,11155,12720,14425 ⋆ a(n) = n ^ 3 + n ^ 2 + n + 1. • a(n) = Sum _{ i=0..n } 2 * n * (n - i) + 1. - _ Bruno Berselli _ , Jan 02 2017 • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>3. - _ Colin Barker _ , Jan 02 2017 •

► [A059140] 4,15,40,93,202,423,868,1761,3550,7131,14296,28629,57298,114639,229324,458697,917446,1834947,3669952,7339965,14679994,29360055,58720180,117440433,234880942 ⋆ A hierarchical sequence (S(W2 { 2 }* c) - see A059126). • a(n) = 2 * (- 5 + 7 * 2 ^ n) - 3 * n. • a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 2 * a(n - 3) for n > 2. •

► [A031164] 1,4,15,40,99,212,429,800,1430,2424,3978,6288,9690,14520,21318,30624,43263,60060,82225,110968,148005,195052,254475,328640,420732 ⋆ Irreducible Euler sums of weight 8 and depth 10 + 2n. • a(n) = [C(n + 8,7) - (n % 2) * C((n + 7) / 2,3)] / 8, where C = binomial, n % 2 = parity of n (=1 if odd, 0 else). - _ M. F. Hasler _ , May 02 2009 • a(0)=1, a(1)=4, a(2)=15, a(3)=40, a(4)=99, a(5)=212, a(6)=429, a(7)=800, a(8)=1430, a(9)=2424, a(10)=3978, a(11)=6288, a(n) = 4 * a(n - 1) - 2 * a(n - 2) - 12 * a(n - 3) + 17 * a(n - 4) + 8 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) + 17 * a(n - 8) - 12 * a(n - 9) - 2 * a(n - 10) + 4 * a(n - 11) - a(n - 12). - _ Harvey P. Dale _ , Jun 20 2011 •

► [A342352] 0,0,0,0,4,15,41,98,218,465,967,1980,4016,8099,16277,32646,65398,130917,261971,524096,1048364,2096919,4194049,8388330,16776914 ⋆ Expansion of

e.g.f. (exp(x) - 1) * (exp(x) - x ^ 2 / 2 - x - 1). ● a(n) = 2 ^ n - Sum _{ i= { 0, 1,2,n }} binomial(n,i). ●

► [A011844] 0,0,0,0,0,0,0,0,1,4,15,41,99,214,429,804,1430,2431,3978,6298,9690,14535,21318,30644,43263 ⋆ a(n) = floor(C(n,7) / 8). ● a(n) = floor(binomial(n + 1,8) / (n + 1)). [_ Gary Detlefs _ , Nov 23 2011] ●

► [A100503] 1,4,15,42,93,176,299,470,697,988,1351,1794,2325,2952,3683,4526,5489,6580,7807,9178,10701,12384,14235,16262,18473 ⋆ Bisection of A000125. ● a(n) = (4 * n ^ 3 + 5 * n + 3) / 3. - _ Ralf Stephan _ , May 15 2007 ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ●

► [A213498] 0,4,15,43,88,164,267,415,600,844,1135,1499,1920,2428,3003,3679,4432,5300,6255,7339,8520,9844,11275,12863,14568 ⋆ Number of (w,x,y) with all terms in { 0,...,n } and w != max(|w - x|,|x - y|,|y - w|) ● a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + a(n - 4) + 2 * a(n - 5) - a(n - 6). ● a(n) = (2 * n * (4 * n ^ 2 + 5 * n + 5) - (2 * n + 1) * (- 1) ^ n + 1) / 8. ●

► [A294259] 0,1,4,15,43,100,201,364,610,963,1450,2101,2949,4030,5383,7050,9076,11509,14400,17803,21775,26376,31669,37720,44598 ⋆ a(n) = n * (n ^ 3 + 2 * n ^ 2 - 5 * n + 10) / 8. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>4. ● a(n) = 2 * n + Sum _{ i=0..n } i * (i ^ 2 - 3) / 2. ●

► [A240359] 4,15,43,111,261,571,1171,2278,4235,7570,13076,21918,35774,57018,88954,136111,204610,302615,440881,633413,898251,1258397,1742901,2388124,3239197 ⋆ Number of n X 2 0..3 arrays with no element equal to one plus the sum of elements to its left or two plus the sum of elements above it or two plus the sum of the elements diagonally to its northwest, modulo 4. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>13. ●

► [A329523] 0,1,4,15,44,105,216,399,680,1089,1660,2431,3444,4745,6384,8415,10896,13889,17460,21679,26620,32361,38984,46575,55224 ⋆ a(n) = n * (binomial(n + 1, 3) + 1). ● a(n) = n * (n + 2) * (n ^ 2 - 2 * n + 3) / 6. ●

► [A321880] 1,1,4,15,44,135,456,1239,3424,8694,27240,65846,171864,406133,960848,2615460,5998416,14304089,32273100,72271516,153768520,385905072,817485768,1841794483,3915726528 ⋆ Number of partitions of n into colored blocks of equal parts with colors from a set of size n. ● a(n) = [x ^ n] Product _{ j=1..n } (1 + (n - 1) * x ^ j) / (1 - x ^ j). ●

► [A188716] 1,1,4,15,46,125,316,763,1786,4089,9208,20471,45046,98293,212980,458739,983026,2097137,4456432,9437167,19922926,41943021,88080364,184549355,385875946 ⋆ a(n) = n + (n - 1) * (2 ^ n - 2). ● a(n) = 6 * a(n - 1) - 13 * a(n - 2) + 12 * a(n - 3) - 4 * a(n - 4). ●

► [A238807] 4,15,48,118,254,498,916,1605,2702,4395,6936,10656,15982,23456,33756,47719,66366,90929,122880,163962,216222,282046,364196,465849,590638 ⋆ Number of n X 3 0..2 arrays with no element equal to one plus the sum of elements to its left or one plus the sum of the sum of elements above it, modulo 3. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>9. ●

► [A240333] 4,15,48,125,284,582,1097,1932,3219,5123,7846,11631,16766,23588,32487,43910,58365,76425,98732,126001,159024,198674,245909,301776,367415 ⋆ Number of n X 2 0..3 arrays with no element equal to two plus the sum of elements to its left or two plus the sum of elements above it or one plus the sum of the elements diagonally to its northwest, modulo 4. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>8. ●

► [A227099] 4,15,48,136,341,771,1606,3133,5789,10214,17315,28342,44977,69437,104592,154099,222553,315656,440405,605300,820573,1098439,1453370,1902393,2465413 ⋆ Number of n X 2 0,1 arrays indicating 2 X 2 subblocks of some larger (n + 1) X 3 binary array having a sum of two, with rows and columns of the latter in lexicographically nondecreasing order. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>11. ●

► [A225976] 4,15,48,138,350,790,1616,3049,5384,9001,14376,22092,32850,47480,66952,92387,125068,166451,218176,282078,360198,454794,568352,703597,863504 ⋆ Number of n X 2 binary arrays whose sum with another n X 2 binary array containing no more than two 1s has rows and columns in lexicographically nondecreasing order. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. ●

► [A093967] 0,1,4,15,48,145,420,1183,3264,8865,23780,63151,166320,434993,1130948,2925375,7533312,19323713,49395780,125877071,319888560,810893265,2050891876,5176349663,13040153280 ⋆ a(n) = n * Pell(n). ● a(n) = n * ((1 + sqrt(2)) ^ n - (1 - sqrt(2)) ^ n) / (2 * sqrt(2)); ●

► [A052201] 4,15,48,175,816,4851,34960,292743,2774040,29251651,339184776,4285584615,58571107168,860622082035,13525670637216,226358825764711,4018390654376520,75413358213752643,1491684815796629080,31014754853346045831,676190458445520562896 ⋆ Equivalent of the Kurepa hypothesis for left factorial. ● a(1)=4, a(2)=15, a(3)=48, a(n) = (n + 1) * (a(n - 1) - a(n - 3)) - 3 * a(n - 2). ●

► [A320460] 1,4,15,48,190,600,2205,6720,29988,95760,364980,1108800,4813380,15135120,57432375,172972800,892371480,2916033120,11616348744,35384469120,162510369840,514937142720,1992665514840,5996736345600,30797112654000 ⋆ Alphabetic length of a divide - and - conquer approach to the regular expression for permutations of n symbols. ● a(n) = binomial(n, floor(n / 2)) * (a(floor(n / 2)) + a(ceiling(n / 2))), a(1) = 1. ●

► [A178704] 0,0,1,4,15,49,153,465,1402,4213,12648,37954,113874,341634,1024915,3074758,9224289,27672883,83018667,249056019,747168076,2241504247,6724512762,20173538308,60520614948 ⋆ Partial sums of floor(3 ^ n / 7). ● a(n) = round((6 * 3 ^ n - 14 * n - 7) / 28). ● a(n) = floor((6 * 3 ^ n - 14 * n + 2) / 28). ● a(n) = ceiling((6 * 3 ^ n - 14 * n - 16) / 28). ● a(n) = round((6 * 3 ^ n - 14 * n - 6) / 28). ● a(n) = a(n - 6) + 52 * 3 ^ (n - 5) - 3, n > 5. ● a(n) = 5 * a(n - 1) - 7 * a(n - 2) + 2 * a(n - 3) + 5 * a(n - 4) - 7 * a(n - 5) + 3 * a(n - 6). ●

► [A099167] 1,4,15,49,154,473,1437,4340,13067,39277,117954,354061,1062505,3188036,9564951,28696217,86090858,258276145,774834213,2324511988,6973551091,20920677749,62762072850,188286282629,564858951569 ⋆ G.f.: (1 + x ^ 2) / ((1 - 3x)(1 - x - x ^ 2)). ● a(n)=4a(n - 1) - 2a(n - 2) - 3a(n - 3); a(n)=2 * 3 ^ n - Fib(n + 2); a(n)=sum { k=0..n, (L(k) - 0 ^ k)3 ^ (n - k) } . ●

► [A053406] 1,4,15,49,172,511,1600,4968,15328,40858,82484,106963,114376,116592,117100,117127,117128,117129 ⋆ Number of stars brighter than visual magnitude n - 1. ● a(n) would be proportional to 10 ^ (0.6 * n) in the simplifying hypothesis of a uniform distribution of identical stars in an infinite universe. Any empirical formula matching the actual sequence for n=0 to 10 is welcome. ●

► [A301973] 0,1,4,15,50,140,336,714,1380,2475,4180,6721,10374,15470,22400,31620,43656,59109,78660,103075,133210,170016,214544,267950,331500 ⋆ a(n) = (n ^ 2 - 3 * n + 6) * binomial(n + 2,3) / 4. ● a(n) = [x ^ n] x * (1 - 3 * x + n * x) / (1 - x) ^ 5. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). ●

► [A132308] 1,4,15,50,157,480,1451,4366,13113,39356,118087,354282,1062869,3188632,9565923,28697798,86093425,258280308,774840959,2324522914,6973568781,20920706384,62762119195,188286357630,564859072937 ⋆ a(n) = 2 * 3 ^ n - n - 1. ● a(n) = 2 * 3 ^ n - n - 1. - _ Rolf Pleisch _ , Sep 26 2010 ●

► [A056327] 0,0,1,4,15,50,160,502,1545,4730,14356,43474,131145,395150,1188580,3572902,10732065,32225810,96733636,290322394,871200825,2614097750,7843255300,23531775502,70599259185 ⋆ Number of reversible string structures with n beads using exactly three different colors. ● a(n) = (S2(n,k) + A(n,k)) / 2, where k=3 is the number of colors (sets), S2 is the Stirling subset number A008277 and A(n,k) = [n>1] * (k * A(n - 2,k) + A(n - 2,k - 1) + A(n - 2,k - 2)) + [n<2 & n==k & n>=0]. ●

► [A014532] 1,4,15,50,161,504,1554,4740,14355,43252,129844,388752,1161615,3465840,10329336,30759120,91538523,272290140,809676735,2407049106,7154586747,21263575256,63191778950,187790510700,558069593445 ⋆ Form array in which n - th row is obtained by expanding (1 + x + x ^ 2) ^ n and taking the 3rd column from the center. ● a(n) = sum _{ i=0 }^ floor((n - 1) / 2) binomial(n + 2, n - 1 - i) * binomial(n - 1 - i,i). - _ Shanzhen Gao _ , Apr 20 2010 ● a(n) = - (1 / (162 * (n + 5) * (n + 3))) * (9 * n + 18) * (- 1) ^ n * (- 3) ^ (1 / 2) * ((n + 7) * hypergeom([1 / 2, n + 5],[1],4 / 3) + hypergeom([1 / 2, n + 4],[1],4 / 3) * (5 * n + 19)). - _ Mark van Hoeij _ , Oct 30 2011 ● a(n) = C(4 + 2 * n, n - 1) * hypergeom([- n + 1, - n - 5], [- 3 / 2 - n], 1 / 4). ● a(n) = GegenbauerC(n - 1, - n - 2, - 1 / 2). (End) ●

► [A094705] 0,1,4,15,50,161,504,1555,4750,14421,43604,131495,395850,1190281,3576304,10739835,32241350,96767741,290390604,871346575,2614389250,7843866801,23532998504,70601791715,211810967550 ⋆ Convolution of Jacobsthal(n) and 3 ^ n. ● a(n) = (3 ^ (n + 2) - 2 ^ (n + 3) - (- 1) ^ n) / 12. ● a(n) = 4 * a(n - 1) - a(n - 2) - 6 * a(n - 3). ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n - k, k + 1) * 2 ^ (n - k - 1) * (3 / 2) ^ k. - _ Paul Barry _ , Oct 25 2004 ●

► [A005492] 4,15,52,151,372,799,1540,2727,4516,7087,10644,15415,21652,29631,39652,52039,67140,85327,106996,132567,162484,197215,237252,283111,335332 ⋆ From expansion of falling factorials. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ● a(n) = n ^ 4 - 16 * n ^ 3 + 102 * n ^ 2 - 300 * n + 340. ●

► [A003013] 1,1,4,15,52,165,486,1351,3592,9225,23050,56331,135180,319501,745486,1720335,3932176,8912913,20054034,44826643,99614740,220200981,484442134,1061158935,2315255832 ⋆ E.g.f. 1 + x * exp(x) + x ^ 2 * exp(2 * x). ● a(0)=1, a(1)=1, a(2)=4, a(3)=15, a(4)=52, a(5)=165, a(n)= 8 * a(n - 1) - 25 * a(n - 2) + 38 * a(n - 3) - 28 * a(n - 4) + 8 * a(n - 5) [From Harvey P. Dale, Nov 01 2011] ●

► [A117202] 0,1,4,15,52,170,534,1631,4880,14373,41810,120406,343884,975325,2749852,7713435,21540304,59917826,166094370,458998523,1264919720,3477182961,9536877614,26102772910,71309161752 ⋆ Binomial transform of n * F(n). ● a(n) = 6a(n - 1) - 11a(n - 2) + 6a(n - 3) - a(n - 4). ● a(n) = Sum _{ k=0..n } C(n, k) * k * F(k). ● a(n) = Sum _ [k=1..n } F(2k) * B(2n - 2k) * binomial(2n,2k) where F=Fibonacci numbers and B=Bernoulli numbers; ● a(n) = n * F(2n - 1). ● a(n) = (2 ^ (- 1 - n) * (- (- 5 + sqrt(5)) * (3 + sqrt(5)) ^ n + (3 - sqrt(5)) ^ n * (5 + sqrt(5))) * n) / 5. - _ Colin Barker _ , Feb 26 2017 ●

► [A291011] 4,15,52,172,552,1736,5384,16536,50440,153112,463176,1397720,4210568,12668568,38083528,114414424,343587336,1031482904,3095956040,9291013848,27879595144,83652416920,250985562312,753015407192,2259167856392 ⋆ p - INVERT of (1,1,1,1,1,...), where p(S) = (1 - S) ^ 2 * (1 - 2 * S). ● a(n) = 7 * a(n - 1) - 16 * a(n - 2) + 12 * a(n - 3) for n >= 4. ● a(n) = 8 * 3 ^ n - 2 ^ (n - 1) * (8 + n). - _ Colin Barker _ , Aug 23 2017 ●

► [A132894] 0,1,4,15,52,175,576,1869,6000,19107,60460,190333,596652,1863745,5804176,18028755,55873872,172818243,533589660,1644921789,5063762220,15568666029,47811348816,146675181975,449538774048 ⋆ Number of (1,0) steps in all paths of length n with steps U=(1,1), D=(1, - 1) and H=(1,0), starting at (0,0), staying weakly above the x - axis (i.e., in all length - n left factors of Motzkin paths). ● a(n) = Sum _{ k=0..n } k * C(n,k) * C(n - k, floor((n - k) / 2)). ● a(n) = Sum _{ k=0..n } k * C(n,k) * C(2 * k,k) * (- 1) ^ (n - k). - _ Wadim Zudilin _ , Oct 11 2010 ● a(n) = (- 1) ^ (n + 1) * JacobiP(n - 1,1, - n + 1 / 2, - 7). - _ Peter Luschny _ , Sep 23 2014 ●

► [A192431] 0,1,4,15,52,185,648,2287,8040,28321,99660,350879,1235036,4347705,15304208,53873695,189642192,667570433,2349942420,8272149359,29119170180,102503781241,360828342424,1270168882575,4471181087032 ⋆ Coefficient of x in the reduction by x ^ 2 - >x + 1 of the polynomial p(n,x) defined below in Comments. ● a(n) = 2 * a(n - 1) + 6 * a(n - 2) - 2 * a(n - 3) - a(n - 4) for n>3. ●

► [A371217] 1,4,15,52,197,896,4987,33216,257161,2262124,22241671,241476060,2867551117,36960108680,513753523571,7659705147976,121918431264273,2063255678027668,36991535865656959,700377953116334788,13963866589144933461,292421219327021540176,6417047546280200867819 ⋆ The maximum deck size to perform Colm Mulcahy's n - card trick. ● a(n) = 1 + (n - 1) * (1 + 2 * Sum _{ i= 1..n - 1 } (i - 1)! * binomial(n - 1, i)). ●

► [A289802] 1,4,15,53,185,643,2234,7764,26988,93819,326149,1133811,3941521,13702079,47633109,165588965,575643853,2001134880,6956629199,24183622175,84070541130,292257951771,1015988587832,3531923782817,12278174929397 ⋆ p - INVERT of the quarter - squares (A002620), where p(S) = 1 - S - S ^ 2. ● a(n) = 5 * a(n - 1) - 5 * a(n - 2) - 4 * a(n - 3) + 12 * a(n - 4) - 5 * a(n - 5) - 4 * a(n - 6) + 4 * a(n - 7) - a(n - 8). ●

▶ [A289927] 1,4,15,53,187,656,2301,8071,28308,99293,348275,1221603,4284864,15029495,52717114,184909361,648583888,2274958177,7979591823,27989035739,98173708464,344351878525,1207840857737,4236595263812,14860185689435 ⋆ p - INVERT of A014217 (starting at n=1), where p(S) = 1 - S - S ^ 2. ● a(n) = 3 * a(n - 1) + 4 * a(n - 2) - 7 * a(n - 3) - 5 * a(n - 4) + 7 * a(n - 5) + 4 * a(n - 6) - 3 * a(n - 7) - a(n - 8) for n>7. ●

▶ [A164619] 4,15,54,75,132,169,320,459,735,847,1104,1250,1764,2175,2904,3179,3780,4107,5200,6027,7425,7935,9024,9604,11492 ⋆ Integers of the form A164577(k) / 3. ● a(n)= + 2 * a(n - 1) - a(n - 2) - a(n - 3) + 2 * a(n - 4) - a(n - 5) + 2 * a(n - 6) - 4 * a(n - 7) + 2 * a(n - 8) + 2 * a(n - 9) - 4 * a(n - 10) + 2 * a(n - 11) - a(n - 12) + 2 * a(n - 13) - a(n - 14) - a(n - 15) + 2 * a(n - 16) - a(n - 17). - _ R. J. Mathar _ , Jan 25 2011 ●

▶ [A227382] 4,15,54,185,587,1704,4532,11126,25430,54568,110768,214130,396492,706695,1217599,2035257,3310713,5254953,8157605,12410055,18533721,27214306,39342934,56065160,78838936 ⋆ Number of n X 3 0,1 arrays indicating 2 X 2 subblocks of some larger (n + 1) X 4 binary array having a sum of one, with rows and columns of the latter in lexicographically nondecreasing order. ● a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10) for n>13. ●

▶ [A090326] 1,4,15,54,185,608,1939,6058,18669,57012,173063,523262,1577953,4750216,14283387,42915666,128878037,386896220,1161212911,3484687270,10456158921,31372671024,94126401635,282395982074,847221500605 ⋆ Number of rules of a context - free grammar in Chomsky normal form that generates all permutations of n symbols. ● a(n) = 3 ^ n - 2 ^ (n + 1) + n + 1. ●

▶ [A291032] 1,4,15,54,188,645,2208,7570,25982,89190,306095,1050268,3603276,12361763,42409154,145491117,499126660,1712311759,5874263702,20152234481,69134134820,237171010852,813636681973,2791253840066,9575645985794 ⋆ p - INVERT of the positive integers, where p(S) = 1 - S - S ^ 2 - S ^ 3 + S ^ 4. ● a(n) = 9 * a(n - 1) - 33 * a(n - 2) + 68 * a(n - 3) - 87 * a(n - 4) + 68 * a(n - 5) - 33 * a(n - 6) + 9 * a(n - 7) - a(n - 8). ●

▶ [A094821] 1,4,15,54,190,660,2276,7816,26776,91600,313104,1069728,3653728,12477504,42606656,145479808,496722304,1695962368,5790470400,19770087936,67499673088,230459040768,786837865472,2686435477504 ⋆ Number of (s(0), s(1), ..., s(2n)) such that 0 < s(i) < 8 and |s(i) - s(i - 1)| = 1 for i = 1,2,...,2n, s(0) = 3, s(2n) = 5. ● a(n) = (1 / 4) * Sum _{ r=1..7 } sin(3 * r * Pi / 8) * sin(5 * r * Pi / 8) * (2 * cos(r * Pi / 8)) ^ (2n). ● a(n) = 6 * a(n - 1) - 10 * a(n - 2) + 4 * a(n - 3), n >= 4. ●

▶ [A071723] 1,4,15,54,192,682,2431,8710,31382,113696,414086,1515516,5571750,20569590,76228095,283481670,1057628550,3957577800,14849601090,558598864 20,210622646520,795898303668,3013646759910,11432740177564,43448822603452 ⋆ Expansion of (1 + x ^ 2 * C ^ 2) * C ^ 4, where C = (1 - (1 - 4 * x) ^ (1 / 2)) / (2 * x) is g.f. for Catalan numbers, A000108. ● a(n) = (Sum _{ k=0..n } (k + 1) * (k ^ 2 + k + 1) * binomial(2 * n - k,n)) / (n + 1). - _ Vladimir Kruchinin _ , Sep 28 2011 ●

▶ [A268164] 1,4,15,55,197,695,2421,8351,28573,97111,328197,1103887,3697709,12342407,41069973,136292543,451213885,1490644663,4915285029,16180569199,53184539981,174578141159,572354795445,1874403215135,6132368790877 ⋆ Number of n X 1 0..3 arrays with every repeated value in every row and column one larger mod 4 than the previous repeated value, and upper left element zero. ● a(n) = - 3 ^ n + (5 / 8 - 11 / (8 * sqrt(5))) * (1 - sqrt(5)) ^ n + (1 / 40) * (1 + sqrt(5)) ^ n * (25 + 11 * sqrt(5)). ●

▶ [A291029] 1,4,15,55,198,706,2510,8923,31737,112918,401799,1429744,5087461,18102522,64413263,229198253,815544198,2901909494,10325718678,36741486569,130735386073,465189151460,1655259161187,5889825416864,20957469541173 ⋆ p - INVERT of the positive integers, where p(S) = 1 - S - S ^ 2 - S ^ 3. ● a(n) = 7 * a(n - 1) - 18 * a(n - 2) + 25 * a(n - 3) - 18 * a(n - 4) + 7 * a(n - 5) - a(n - 6). ●

▶ [A094833] 1,4,15,55,199,714,2548,9061,32148,113887,403051,1425471,5039254,17809336,62928201,222324436,785402143,2774421135,9800231959,34617003682,122274355596,431893332397,1525507797700,5388281150223 ⋆ Number of (s(0), s(1), ..., s(2n)) such that 0 < s(i) < 9 and |s(i) - s(i - 1)| = 1 for i = 1,2,...,2n, s(0) = 3, s(2n) = 5. ● a(n) = (2 / 9) * Sum _{ r=1..8 } sin(r * Pi / 3) * sin(5 * r * Pi / 9) * (2 * cos(r * Pi / 9)) ^ (2n). ● a(n) = 6a(n - 1) - 9a(n - 2) + a(n - 3). ●

▶ [A039717] 1,4,15,55,200,725,2625,9500,34375,124375,450000,1628125,5890625,21312500,77109375,278984375,1009375000,3651953125,13212890625,47804687500,172958984375,625771484375,2264062500000,8191455078125 ⋆ Row sums of convolution triangle A030523. ● a(n) = (sqrt(5) / 2 + 5 / 2) ^ n * (3 * sqrt(5) / 10 + 1 / 2) - (5 / 2 - sqrt(5) / 2) ^ n * (3 * sqrt(5) / 10 - 1 / 2). (End) ● a(n) = (1 / 5) * Sum _{ r=1..9 } sin(3 * r * Pi / 10) * sin(r * Pi / 2) * (2 * cos(r * Pi / 10)) ^ (2n)). ● a(n) = 5 * a(n - 1) - 5 * a(n - 2). ● a(n) = Sum _{ k=0..n } Sum _{ i=0..n } binomial(n, i) * binomial(k + i + 1, 2k + 1). - _ Paul Barry _ , Jun 22 2004 ●

▶ [A220948] 1,4,15,55,200,726,2638,9604,35037,128061,468809,1718446,6305546,23155863,85089015,312823200,1150506841,4232595095,15574796945,57320990295,210990647105,776707569176,2859475304889,10527898398268,38763003252400 ⋆ Expansion of (1 - x) ^ 2 * (1 - 3 * x) / (1 - 9 * x + 28 * x ^ 2 - 35 * x ^ 3 + 15 * x ^ 4 - x ^ 5). ● a(n) = 9 * a(n - 1) - 28 * a(n - 2) + 35 * a(n - 3) - 15 * a(n - 4) + a(n - 5) with a(0) = 1, a(1) = 4, a(2) = 15, a(3) = 55, a(4) = 200. ●

▶ [A026013] 1,4,15,55,200,726,2639,9620,35190,129200,476102,1760673,6533150,24319050,90795375,339929880,1275977670,4801199400,18106714050,68430306750,259129680264,983085703116,3736124441990,14222020085880,54221213973500 ⋆ a(n) = number of (s(0), s(1), ..., s(2n)) such that s(i) is a nonnegative integer and |s(i) - s(i - 1)| = 1 for i = 1,2,...,n, s(0) = 2, s(2n) = 4. Also a(n) = T(2n,n - 1), where T is the array defined in A026009. ● a(n) = C(n + 3) - 4 * C(n + 2) + 3 * C(n + 1) + Sum _{ j=0..n - 1 } C(j + 1) * C(n - j - 1), where C(n) are the Catalan numbers (A000108). ●

▶ [A371820] 1,4,15,55,200,726,2640,9636,35343,130339,483395,1802901,6760781,25482643,96506229,367077447,1401772536,5372120718,20653929804,79634421312,307826528346,1192608522258,4629875048634,18006340509702,70142823370656 ⋆ a(n) = Sum _{ k=0..floor(n / 3) } (- 1) ^ k * binomial(2 * n + 2,n - 3 * k). ● a(n) = [x ^ n] 1 / (((1 - x) ^ 3 + x ^ 3) * (1 - x) ^ n). ● a(n) = binomial(2 * (1 + n), n) * hypergeom([1, (1 - n) / 3, (2 - n) / 3, - n / 3], [1 + n / 3, (4 + n) / 3, (5 + n) / 3], 1). - _ Stefano Spezia _ , Apr 07 2024 ●

▶ [A050183] 0,1,4,15,55,200,728,2652,9690,35530,130750,482885,1789515,6653325,24812400,92798375,347993910,1308233790,4929576600,18615637950,70441574000,267058714626,1014283603024,3858687620200,14702930414900 ⋆ T(2n + 5,n), array T as in A051168; a count of Lyndon words. ● a(n) = (1 / (2 * n + 5)) * Sum _{ d|gcd(n,5) } mu(d) * binomial((2 * n + 5) / d, n / d). (This is a special case of A. Howroyd's formula for double array A051168.) ● a(n) = (1 / (2 * n + 5)) * (binomial(2 * n + 5, n) - binomial((2 * n / 5) + 1, n / 5)) if 5|n; = (1 / (2 * n + 5)) * binomial(2 * n + 5, n) otherwise. ●

▶ [A082133] 0,1,4,15,56,205,732,2555,8752,29529,98420,324775,1062888,3454373,11160268,35872275,114791264,365897137,1162261476,3680494655,11622614680,36611236221,115063885244,360882185515,1129718145936 ⋆ Expansion of e.g.f. x * exp(2 * x) * cosh(x). ● a(n) = n * (1 ^ (n - 1) + 3 ^ (n - 1)) / 2. ● a(n) = Sum _{ k=1..n } (Sum _{ j=1..3 } Stirling2(n,j)). - _ G. C. Greubel _ , Feb 07 2018 ●

▶ [A291030] 1,4,15,56,208,767,2812,10278,37530,137044,500571,1828818,6682264,24416877,89218462,325997507,1191160160,4352355633,15902968338,58107491971,212317732888,775783501558,2834620130881,10357363200392,37844566834330 ⋆ p - INVERT of the positive integers, where p(S) = 1 - S - S ^ 2 - S ^ 3 - S ^ 4. ● a(n) = 9 * a(n - 1) - 33 * a(n - 2) + 68 * a(n - 3) - 85 * a(n - 4) + 68 * a(n - 5) - 33 * a(n - 6) + 9 * a(n - 7) - a(n - 8). ●

▶ [A217779] 1,4,15,56,208,768,2821,10320,37639,136972,497652,1805984,6548425,23729916,85953823,311240928,1126753336,4078394080,14760382029,53415642632,193291233367,699417041844,2530731376540,9156839587776,33131242464913 ⋆ Expansion of (1 - 4x + 4 * x ^ 2) / ((1 - 5x + 5 * x ^ 2) * (1 - 3x + x ^ 2)). ● a(n) = 8 * a(n - 1) - 21 * a(n - 2) + 20 * a(n - 3) - 5 * a(n - 4) for n>=4, a(0) = 1, a(1) = 4, a(2) = 15, a(3) = 56. ●

▶ [A221859] 1,4,15,56,209,779,2898,10760,39882,147612,545721,2015721,7440251,27448008,101217076,373128151,1375167467,5067236766,18669118971,68774597447,253334948791,933111590565,3436767111783,12657552835178,46616152422035 ⋆ Expansion of (1 - 3 * x + x ^ 2) * (1 - 2 * x) / (1 - 9 * x + 28 * x ^ 2 - 35 * x ^ 3 + 15 * x ^ 4 - x ^ 5). ● a(n) = 9 * a(n - 1) - 28 * a(n - 2) + 35 * a(n - 3) - 15 * a(n - 4) + a(n - 5) with a(0) = 1, a(1) = 4, a(2) = 15, a(3) = 56, a(4) = 209. ●

▶ [A001353] 0,1,4,15,56,209,780,2911,10864,40545,151316,564719,2107560,7865521,29354524,109552575,408855776,1525870529,5694626340,21252634831,79315912984,296011017105,1104728155436,4122901604639,15386878263120 ⋆ a(n) = 4 * a(n - 1) - a(n - 2) with a(0) = 0, a(1) = 1. ● a(n) = ((2 + sqrt(3)) ^ n - (2 - sqrt(3)) ^ n) / (2 * sqrt(3)). ● a(n) = 2 * a(n - 1) + sqrt(3 * a(n - 1) ^ 2 + 1). - _ Lekraj Beedassy _ , Feb 18 2002 ● a(n) = - a(- n) for all integer n. - _ Michael Somos _ , Sep 19 2008 ● a(n) = S(n - 1, 4) = U(n - 1, 2); S(- 1, x) := 0, Chebyshev's polynomials of the second kind A049310. ● a(n + 1) = Sum _{ k=0..floor(n / 2) } binomial(n - k, k)(- 1) ^ k * 4 ^ (n - 2 * k). - _ Paul Barry _ , Oct 25 2004 ● a(n) = Sum _{ k=0..n - 1 } binomial(n + k,2 * k + 1) * 2 ^ k. - _ Paul Barry _ , Nov 30 2004 ●

▶ [A010905] 4,15,56,209,780,2911,10864,40545,151316,564719,2107560,7865521,29354524,109552575,408855776,1525870529,5694626340,21252634831,79315912984,296011017105,1104728155436,4122901604639,15386878263120,57424611447841,214311567528244 ⋆ Pisot sequence E(4,15): a(n) = floor(a(n - 1) ^ 2 / a(n - 2) + 1 / 2) for n>1, a(0)=4, a(1)=15. ● a(n) = 4 * a(n - 1) - a(n - 2) for n>=2. (Proved using the PtoRv program of Ekhad - Sloane - Zeilberger.) - _ N. J. A. Sloane _ , Sep 09 2016 ●

▶ [A026030] 1,4,15,56,209,780,2912,10880,40698,152456,572033,2150040,8095425,30535260,115377660,436698240,1655607390,6286707000,23908446510,91057063344,347281885818,1326262602104,5071418015120,19415851639296,74419447792340 ⋆ a(n) = T(2n,n - 1), where T is defined in A026022. ● a(n) = C(2n, n - 1) - C(2n, n - 5). G.f.: (1 + x ^ 2C ^ 4) * C ^ 4, where C=(1 - sqrt(1 - 4x)) / (2x). - _ Ralf Stephan _ , Jan 09 2005 ●

▶ [A001791] 0,1,4,15,56,210,792,3003,11440,43758,167960,646646,2496144,9657700,37442160,145422675,565722720,2203961430,8597496600,33578000610,131282408400,513791607420,2012616400080,7890371113950,30957699535776 ⋆ a(n) = binomial coefficient C(2n, n - 1). ● a(n) = Sum _{ k=0..n } C(n, k) * C(n, k + 1). - _ Paul Barry _ , May 15 2003 ● a(n) = Sum _{ i=1..n } binomial(i + n - 1, n). ● a(n) = A092956 / (n!). - _ Amarnath Murthy _ , Jun 16 2004 ● a(n) = (1 / (2 * Pi)) * Integral _{ x=0..4 } (x ^ n * (x - 2) / sqrt(x(4 - x))) is the moment sequence representation. - _ Paul Barry _ , Jan 11 2007 ● a(n) = Sum _{ i=1..n } binomial(2 * i - 2,i - 1) * binomial(2 * (n - i + 1),n - i + 2) / (n - i + 1). - _ Vladimir Kruchinin _ , Sep 07 2015 ● a(n) = Product _{ i=1..(n - 1) } (((4 * i + 6) * i + 2) / ((i + 2) * i)), for n>=1. - _ Neven Sajko _ , Oct 10 2021 ●

▶ [A087438] 1,4,15,56,212,816,3184,12544,49728,197888,789248,3151872,12596224,50360320,201388032,805437440,3221504000,12885491712,51540852736,206161051648,824639225856,3298546417664,13194163650560,52776608464896 ⋆ a(n) = 3 * 2 ^ (2 * (n - 1)) + 2 ^ (n - 2) * (n + 1). ● a(n) = 8 * a(n - 1) - 20 * a(n - 2) + 16 * a(n - 3); a(0)=1, a(1)=4, a(2)=15. - _ Harvey P. Dale _ , May 20 2011 ●

▶ [A125145] 1,4,15,57,216,819,3105,11772,44631,169209,641520,2432187,9221121,34959924,132543135,502509177,1905156936,7222998339,27384465825,103822392492,393620574951,1492328902329,5657848431840,21450532002507 ⋆ a(n) = 3a(n - 1) + 3a(n - 2). a(0) = 1, a(1) = 4. ● a(n) = (5 * sqrt(21) / 42 + 1 / 2) * (3 / 2 + sqrt(21) / 2)) ^ (n - 1) + (- 5 * sqrt(21) / 42 + 1 / 2) * (3 / 2 - sqrt(21) / 2)) ^ (n - 1). - _ Antonio Alberto Olivares _ , Mar 20 2008 ●

▶ [A242781] 0,0,1,4,15,57,217,828,3169,12165,46827,180701,698867,2708307,10514331,40885356,159216543,620845293,2423825649,9473195889,37061983617,145131715707,568808493081,2231063305461,8757391892965 ⋆ Expansion of (1 - 2 * x - sqrt(1 - 4 * x)) / (4 * x ^ 2 + sqrt(1 - 4 * x) * (3 * x + 1) - 5 * x + 1). ● a(n) = Sum _{ k=1..ceiling((n + 1) / 3) } binomial(2 * n - 3 * k + 1,n - 3 * k + 1)), n>0, a(0)=0. ●

▶ [A371854] 1,4,15,57,219,847,3290,12819,50066,195909,767790,3013002,11837043,46548919,183209125,721628692,2844297119,11217639757,44265835891,174765349896,690308413773,2727823240762,10783518961394,42644560775835,168699835910561 ⋆ a(n) = Sum _{ k=0..floor(n / 3) } binomial(2 * n - k + 2,n - 3 * k). ● a(n) = [x ^ n] 1 / (((1 - x) ^ 2 - x ^ 3) * (1 - x) ^ (n + 1)). ●
▶ [A277924] 1,4,15,57,219,848,3302,12911,50643,199140,784626,3096514,12236830,48412432,191718188,759852347,3013746563,11960699132,47494802618,188689585982,749961486698,2981943800192,11860758904148,47191458566582 ⋆ a(n) = Sum _{ i=0..n + 1 } binomial(2 * n,n - i + 1). ● a(n) = 2 ^ (2 * n - 1) - 4 ^ n * (n - 1 / 2)! / (sqrt(Pi) * (n + 1)!) + 3 * 2 ^ (2 * n - 1) * (n - 1 / 2)! / (sqrt(Pi) * n!). - _ Bruno Berselli _ , Nov 04 2016 ● a(n) = ((3 * n + 1) * Catalan(n) + 4 ^ n) / 2. - _ Peter Luschny _ , Nov 04 2016 ●
▶ [A371777] 1,4,15,57,220,858,3368,13276,52479,207861,824527,3274395,13015081,51769813,206045841,820475513,3268499356,13025237058,51922543076,207034128448,825713206746,3293865399518,13142007903586,52443095356218,209304385553096 ⋆ a(n) = Sum _{ k=0..floor(n / 3) } binomial(2 * n + 2,n - 3 * k). ● a(n) = [x ^ n] 1 / (((1 - x) ^ 3 - x ^ 3) * (1 - x) ^ n). ●
▶ [A095930] 1,4,15,57,220,859,3381,13380,53143,211585,843756,3368259,13455325,53774932,214978335,859595529,3437550076,13748021995,54986385093,219930610020,879683351911,3518631073489,14074256379660,56296324109907,225183460127725 ⋆ Number of walks of length 2n between two nodes at distance 2 in the cycle graph C _ 10. ● a(n) = (4 ^ n / 10) * Sum _{ r=0..9 } cos(2 * Pi * r / 5) * cos(Pi * r / 5) ^ (2 * n). ● a(n) = 7 * a(n - 1) - 13 * a(n - 2) + 4 * a(n - 3). ● a(n) = (4 ^ n + Lucas(2 * n - 1)) / 5. With a(0) = 0, binomial transform of A098703. - _ Ross La Haye _ , May 31 2006 ● a(n) = (2 ^ (- 1 - n) * (2 ^ (1 + 3 * n) - (3 - sqrt(5)) ^ n * (1 + sqrt(5)) + (- 1 + sqrt(5)) * (3 + sqrt(5)) ^ n)) / 5. - _ Colin Barker _ , Apr 27 2016 ●
▶ [A164589] 1,4,15,58,221,848,3243,12422,47545,182044,696903,2668114,10214549,39105896,149713635,573168542,2194332529,8400844852,32162017407,123129948778,471394019405,1804697680256,6909153496347,26451190754486,101266455983401 ⋆ a(n) = ((4 + 3 * sqrt(2)) * (1 + 2 * sqrt(2)) ^ n + (4 - 3 * sqrt(2)) * (1 - 2 * sqrt(2)) ^ n) / 8. ● a(n) = 2 * a(n - 1) + 7 * a(n - 2) for n > 1; a(0) = 1, a(1) = 4. ●
▶ [A003126] 1,4,15,58,226,882,3457,13606,53683,212090,838484,3319596,13159676,52220801,207374051,823906473,3274464556,13019414133,51790661881,206112818880,820583696869,3267935428368,13017497498243,51863262314021 ⋆ Value of an urn with n balls of type - 1 and n + 1 balls of type + 1. ● a(n) = B(n, n + 1) where B(n, m) is defined in A003125. ●
▶ [A160156] 1,4,15,58,229,912,3643,14566,58257,233020,932071,3728274,14913085,59652328,238609299,954437182,3817748713,15270994836,61083979327,244335917290,977343669141,3909374676544,15637498706155,62549994824598 ⋆ Partial sums of A007583. ● a(n) = (3n + 1 + 2 ^ (2n + 3)) / 9. - _ Emeric Deutsch _ , Jun 20 2009 ● a(n) = 6 * a(n - 1) - 9 * a(n - 2) + 4 * a(n - 3), n >= 2, a(- 1)=0, a(0)=1, a(1)=4. ● a(n) = 5 * a(n - 1) - 4 * a(n - 2) - 1, n >= 2, a(0)=1, a(1)=4. (End) ●
▶ [A199210] 4,15,59,235,939,3755,15019,60075,240299,961195,3844779,15379115,61516459,246065835,984263339,3937053355,15748213419,62992853675,251971414699,1007885658795,4031542635179,16126170540715,64504682162859 ⋆ a(n) = (11 * 4 ^ n + 1) / 3. ● a(n) = 4 * a(n - 1) - 1. ● a(n) = 5 * a(n - 1) - 4 * a(n - 2). ●
▶ [A291244] 4,15,60,239,952,3792,15104,60161,239628,954465,3801740,15142752,60315260,240242367,956911980,3811486495,15181573232,60469889136,240858271816,959365196977,3821257929948,15220493940369,60624914631700,241475755550400,961824703141876 ⋆ p - INVERT of (0,1,0,1,0,1,...), where p(S) = 1 - 4 S + S ^ 2. ● a(n) = 4 * a(n - 1) + a(n - 2) - 4 * a(n - 3) - a(n - 4) for n >= 5. ●
▶ [A290910] 0,1,4,15,60,240,956,3809,15180,60495,241080,960736,3828664,15257745,60804180,242312895,965649716,3848244944,15335777460,61115150865,243552156060,970588338271,3867926023024,15414209227200,61427712082800 ⋆ a(n) = (1 / 5) * A290909(n), n>= 0. ● a(n) = 4 * a(n - 1) - a(n - 2) + 4 * a(n - 3) - a(n - 4). ●
▶ [A369838] 1,4,15,60,245,1001,4085,16665,67985,277350,1131476,4615966,18831276,76823991,313410816,1278589392,5216127688,21279691689,86812537085,354160046356,1444829775128,5894321227301,24046447082350,98099780277675,400207434286276 ⋆ Number of compositions of 5 * n - 3 into parts 1 and 5. ● a(n) = Sum _{ k=0..n } binomial(n + 1 + 4 * k,n - 1 - k). ● a(n) = 6 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ●
▶ [A007526] 0,1,4,15,64,325,1956,13699,109600,986409,9864100,108505111,1302061344,16926797485,236975164804,3554627472075,56874039553216,966858672404689,17403456103284420,330665665962403999,6613313319248080000,138879579704209680021,3055350753492612960484 ⋆ a(n) = n(a(n - 1) + 1), a(0) = 0. ● a(n) = floor(e * n! - 1). - Joseph K. Horn ● a(n) = n(a(n - 1) + 1). ● a(n) = Sum _{ k=1..n } k! * C(n, k). - _ Benoit Cloitre _ , Dec 06 2002 ● a(n) = Sum _{ k=0..n - 1 } (n! / k!). - _ Ross La Haye _ , Sep 22 2004 ● a(n) = Sum _{ k=1..n } (Product _{ j=0..k - 1 } (n - j)). - _ Joerg Arndt _ , Apr 24 2011 ● a(n) = Integral _{ x>=0 } (((1 + x) ^ n - 1) * exp(- x)). - _ Paul Barry _ , Feb 06 2008 ●
▶ [A369229] 1,1,4,15,65,298,1429,7073,35869,185403,973198,5173644,27797914,150715321,823541564,4530609391,25073291597,139492998775,779706274423,4376600956063,24659875131049,139424357994344,790763858547445,449778815320394,2565034263587106 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 - x) ^ 3 / (1 - x + x ^ 2) ^ 2). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 2) } binomial(2 * n + 2,k) * binomial(2 * n - k,n - 2 * k). ●
▶ [A102129] 1,4,15,66,277,1176,4979,21094,89353,378508,1603383,6792042,28771549,121878240,516284507,2187016270,9264349585,39244414612,166242008031,704212446738,2983091794981,12636579626664,53529410301635,226754220833206,960546293634457 ⋆ Expansion of (1 - x) * (1 + 2 * x) / ((1 + x) * (1 - 4 * x - x ^ 2)). ● a(n) = - (10 * (- 1) ^ n + (2 - sqrt(5)) ^ n * (- 15 + sqrt(5)) - (2 + sqrt(5)) ^ n * (15 + sqrt(5))) / 20. - _ Colin Barker _ , Jun 06 2017 ●
▶ [A164310] 4,15,66,306,1440,6804,32184,152280,720576,3409776,16135200,76352544,361304064,1709709120,8090430336,38284327296,181163381760,857274326784,4056665670144,19196348060160,90838094340096,429850477679616 ⋆ a(n) = 6 * a(n - 1) - 6 * a(n - 2) for n > 1; a(0) = 4, a(1) = 15. ● a(n) = ((4 + sqrt(3)) * (3 + sqrt(3)) ^ n + (4 - sqrt(3)) * (3 - sqrt(3)) ^ n) / 2. ●
▶ [A369486] 1,1,4,15,67,314,1547,7865,41004,217953,1176832,6436676,35587416,198569471,1116741601,6323669519,36024382515,206315985386,1187205083022,6860598312545,39797882898452,231666709974264,1352813494962672,7922553881534274,46520280837291427 ⋆ Expansion of (1 / x) * Series _ Reversion(x / (1 - x) * (1 - x - x ^ 2) ^ 2). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 2) } binomial(2 * n + k + 1,k) * binomial(2 * n - k,n - 2 * k). ●
▶ [A125062] 1,1,4,15,68,370,2364,17388,144864,1349136,13894560,156831840,1925527680,25550778240,364416917760,5559659078400,90349397913600,1558170228787200,28423674336153600,546807873520742400 ⋆ Number of increasing trees with hills of height 1. ● a(n) = 2 * (n - 1) * a(n - 1) - (n ^ 2 - 4 * n + 5) * a(n - 2) - (n - 3) * (n - 2) * a(n - 3). - _ Vaclav Kotesovec _ , Nov 19 2012 ●
▶ [A098614] 1,1,4,15,70,336,1716,9009,48620,267410,1494844,8465184,48466796,280073300,1631408400,9568812015,56466198990,335002137360,1997007404700,11955535480350,71850862117320,433322055191220,2621615826231480,15906988165723200,96775058652983100 ⋆ Product of Fibonacci and Catalan numbers: a(n) = A000045(n + 1) * A000108(n). ● a(n) == 1 (mod 2) iff n = 2 ^ k - 1 for k>=0. ●
▶ [A367040] 1,1,4,15,70,360,1953,11008,63837,378390,2282205,13960890,86411232,540166219,3405341160,21625820793,138216775785,888371346825,5738510504979,37234351046835,242567430368298,1585979835198675,10403866383915844,68453912880893025 ⋆ G.f. satisfies A(x) = 1 + x ^ 2 + x * A(x) ^ 3. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(2 * (n - 2 * k) + 1,k) * binomial(3 * (n - 2 * k), n - 2 * k) / (2 * (n - 2 * k) + 1). ●
▶ [A366034] 1,4,15,70,405,2676,19075,142562,1100961,8711968,70257055,575269278,4769615773,39961571228,337805166747,2877506096794,24675158973081,212835736433304,1845348003175063,16073746202176150,140590118902532757,1234285061013293716 ⋆ G.f. A(x) satisfies A(x) = 1 / (1 - x) ^ 3 + x * (1 - x) ^ 3 * A(x) ^ 3. ● a(n) = Sum _{ k=0..n } binomial(n + 2 * k + 2,n - k) * binomial(3 * k,k) / (2 * k + 1). ●
▶ [A307996] 1,1,4,15,73,410,2591,18165,139266,1155509,10293729,97815520,986113613,10499247005,117603042220,1381191356979,16958788930317,217132031279842,2892337840164051,40002168264724193,573363461815952802,8502905138072937073,130268705062115090965,2058969680487762098496 ⋆ Expansion of e.g.f. exp(1 - exp(x) * (1 - 2 * x)). ● a(0) = 1; a(n) = Sum _{ k=1..n } (2 * k - 1) * binomial(n - 1,k - 1) * a(n - k). ●
▶ [A002467] 0,1,1,4,15,76,455,3186,25487,229384,2293839,25232230,302786759,3936227868,55107190151,826607852266,13225725636255,224837335816336,4047072044694047,76894368849186894,1537887376983737879,32295634916658495460,710503968166486900119 ⋆ The game of Mousetrap with n cards (given n letters and n envelopes, how many ways are there to fill the envelopes so that at least one letter goes into its right envelope?). ● a(n) = (n - 1) * (a(n - 1) + a(n - 2)), n > 1; a(1) = 1. - _ Michael Somos _ , Aug 11 1999 ● a(n) = n * a(n - 1) - (- 1) ^ n. - _ Michael Somos _ , Aug 11 1999 ● a(0) = 0, a(n) = floor(n!(e - 1) / e + 1 / 2) for n > 0. - _ Michael Somos _ , Aug 11 1999 ● a(n) = - n! * Sum _{ i=1..n } (- 1) ^ i / i!. Limit _{ n - >infinity } a(n) / n! = 1 - 1 / e. - _ Gerald McGarvey _ , Jun 08 2004 ● a(n) = (n - 1) * (a(n - 1) + a(n - 2)), n > 1. - _ Gary Detlefs _ , Apr 11 2010 ● a(n) = n! - floor((n! + 1) / e), n > 0. - _ Gary Detlefs _ , Apr 11 2010 ●
▶ [A125307] 1,1,4,15,80,480,3444,27790,253504,2556792,28382880,343071168,4490999424,63253633872,954133373088,15343385194800,262060291958784,4737396899952384,90370907329842432,1814141041750834560,38229440785429201920,843786230514306621696 ⋆ Number of increasing trees with branches of height 1. ● a(n) = n! * (sum((- 1) ^ (m) * (n - m + 1) / (m - 1)! * sum(k! * Stirling1(m - 1,k),k,1,m - 1),m,2,n) + 1). - _ Vladimir Kruchinin _ , Sep 09 2010 ●
▶ [A129653] 1,1,4,15,83,556,4435,40773,423836,4908403,62606297,871421976,13136605577,213122669141,3701085673676,68480774296803,1344611320542931,27917413103561540,611000785570868627,14056645627856206809,339018269053380096209,8557085279980716462407 ⋆ Antidiagonal sums of number triangle A129652. ● a(n) = Sum _{ k=0..floor(n / 2) } (((n - k)! / k!) * sum { i=0..n - 2k } C(n - 2k - 1,i) / (n - 2k - i)!). ●
▶ [A151379] 1,1,4,15,84,420,2640,15015,100100,612612,4232592,27159132,192203088,1274816400,9178678080,62386327575,455053212900,3151664844900,23222793594000,163256238965820,1212760632317520,8629643838226320,64534727833692480,463843356304664700,3488102039411078544 ⋆ Number of walks within N ^ 2 (the first quadrant of Z ^ 2) starting at (0,0), ending on the vertical axis and consisting of 2 n steps taken from { (- 1, 0), (1, - 1), (1, 1) } . ● a(n) = Catalan(n) * binomial(n, floor(n / 2)). ●
▶ [A034496] 4,15,85,585,4369,33825,266305,2113665,16843009,134480385,1074791425,8594130945,68736258049,549822930945,4398314962945,35185445863425,281479271743489,2251816993685505,18014467229220865 ⋆ Sum of n - th powers of divisors of 8. ● a(n) = (2 ^ (4 * n) - 1) / (2 ^ n - 1) = 1 + 2 ^ n + 4 ^ n + 8 ^ n. Exp(Sum _{ n >= 1 } a(n) * x ^ n / n) = 1 + 15 * x + 155 * x ^ 2 + 1395 * x ^ 3 + ... is the o.g.f. for the 3rd subdiagonal of triangle A022166, essentially A006096. - _ Peter Bala _ , Apr 07 2015 ●
▶ [A081011] 4,15,91,612,4183,28659,196420,1346271,9227467,63245988,433494439,2971215075,20365011076,139583862447,956722026043,6557470319844,44945570212855,308061521170131,2111485077978052,14472334024676223 ⋆ a(n) = Fibonacci(4n + 3) + 2, or Fibonacci(2n + 3) * Lucas(2n). ● a(n) = 8 * a(n - 1) - 8 * a(n - 2) + a(n - 3). ● a(n) = 2 + [(7 / 2) - (3 / 2) * sqrt(5)] ^ n + [(7 / 2) + (3 / 2) * sqrt(5)] ^ n + (2 / 5) * sqrt(5) *{ [(7 / 2) + (3 / 2) * sqrt(5)) ^ n - [(7 / 2) - (3 / 2) * sqrt(5)] ^ n } , with n >= 0. - _ Paolo P. Lava _ , Dec 01 2008 ●
▶ [A366697] 1,4,15,94,706,5769,49923,449376,4164228,39459852,380594767,3724049805,36876008673,368835076813,3720863181033,37815675159285,386818379566749,3979362306753315,41144521893563511,427335033811660713,4456402044181677264 ⋆ G.f. satisfies A(x) = (1 + x) ^ 3 + x * A(x) ^ 3. ● a(n) = Sum _{ k=0..n } binomial(3 * (2 * k + 1),n - k) * binomial(3 * k,k) / (2 * k + 1). ●

► [A146510] 1,4,16,19,31,34,46,49,61,64,76,79,91,94,106,109,121,124,136,139,151,154,166,169,181 ⋆ Numbers congruent to { 1, 4 } mod 15. ● a(2k - 1) = 15 * (k - 1) + 1, a(2k) = 15 * (k - 1) + 4, where k>0. ●
► [A032827] 1,4,16,19,61,64,241,244,286,289,916,919,961,964,3616,3619,3661,3664,4291,4294,4336,4339,13741,13744,13786 ⋆ Numbers whose set of base - 15 digits is { 1,4 } . ● a(1)=1, a(2)=4; a(n) = 15 * a(floor(n / 2)) + 1 for n odd, otherwise a(n) = 15 * a(floor((n - 1) / 2)) + 4. - _ Bruno Berselli _ , May 28 2012 ●
► [A326781] 0,4,16,20,32,36,48,52,64,68,80,84,96,100,112,116,256,260,272,276,288,292,304,308,320 ⋆ No position of a 1 in the reversed binary expansion of n is a power of 2. ● a(n) = a(n - 1) + a(n - 16) - a(n - 17) for n>17. ●
► [A234275] 1,4,16,24,32,40,48,56,64,72,80,88,96,104,112,120,128,136,144,152,160,168,176,184,192 ⋆ Expansion of (1 + 2 * x + 9 * x ^ 2 - 4 * x ^ 3) / (1 - x) ^ 2 . ● a(n) = 8 * n, n>1. ● a(n) = 2 * a(n - 1) - a(n - 2) for n>3. ●
► [A135556] 1,4,16,25,49,64,100,121,169,196,256,289,361,400,484,529,625,676,784,841,961,1024,1156,1225,1369 ⋆ Squares of numbers not divisible by 3: a(n) = A001651(n) ^ 2. ● a(n) = (18 * n ^ 2 - 6 * (- 1) ^ n * n - 18 * n + 3 * (- 1) ^ n + 5) / 8. ● a(n) = (9 * n ^ 2 - 12 * n + 4) / 4 for n even. ● a(n) = (9 * n ^ 2 - 6 * n + 1) / 4 for n odd. ●
► [A295921] 4,16,25,57,129,289,641,1409,3073,6657,14337,30721,65537,139265,294913,622593,1310721,2752513,5767169,12058625,25165825,52428801,109051905,226492417,469762049 ⋆ Number of (not necessarily maximal) cliques in the n - folded cube graph. ● a(n) = 2 ^ (n - 2) * (n + 2) + 1 for n > 3. ● a(n) = 5 * a(n - 1) - 8 * a(n - 2) + 4 * a(n - 3) for n > 3. ●
► [A332044] 4,16,28,48,68,96,124,160,196,240,284,336,388,448,508,576,644,720,796,880,964,1056,1148,1248,1348 ⋆ a(n) is the length of the shortest circuit that visits every edge of an undirected n X n grid graph. ● a(n) = 2 * n ^ 2 - 4 + 2 * (n mod 2). ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4) for n > 5. ●
► [A273368] 0,4,16,28,52,72,108,136,184,220,280,324,396,448,532,592,688,756,864,940,1060,1144,1276,1368,1512 ⋆ Numbers k such that 10 * k + 9 is a perfect square. ● a(2n) = 10 * n ^ 2 + 6 * n, n>=0. ● a(2n - 1) = 10 * n ^ 2 - 6 * n, n>=1. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). (End) ●
► [A160410] 0,4,16,28,64,76,112,148,256,268,304,340,448,484,592,700,1024,1036,1072,1108,1216,1252,1360,1468,1792 ⋆ Number of "ON" cells at n - th stage in simple 2 - dimensional cellular automaton (see Comments for precise definition). ● a(2 ^ k) = (2 * (2 ^ k)) ^ 2 for k>=0. ●
► [A173019] 1,4,16,28,112,448,784,3136,12301,19684,78736,314944,551152,2204608,8818432,15432256,61729024,242132884,387459856,1549839424,6199180549,10848875968,43395503872,173577055372,303766932781 ⋆ a(n) is the value of row n in triangle A083093 seen as ternary number. ● a(3 ^ n) = 3 ^ (3 ^ n) + 1. ● a(3 ^ n) = (8 * a((3 ^ n) - 1) + 12) / 5. [5 * a(3 ^ n) = 1200...0012 (base 3), 8 * a((3 ^ n) - 1) = (22)(1212...2121) = 11222...2202 (base 3).] ●
► [A296819] 0,1,4,16,32,69,108,184,256,385,500,696,864,1141,1372,1744,2048,2529,2916,3520,4000,4741,5324,6216,6912 ⋆ Maximum detour index of any bipartite graph on n nodes. ● a(2 * n - 1) = 4 * (n - 1) ^ 3, a(2 * n) = n * (4 * n ^ 2 - 5 * n + 2). ● a(n) = a(n - 1) + 3 * a(n - 2) - 3 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) + a(n - 6) - a(n - 7) for n>7. ●
► [A281795] 0,4,16,36,60,88,132,172,224,284,344,416,484,568,664,756,856,956,1076,1200,1324,1452,1600,1740,1884 ⋆ Number of unit squares (partially) covered by a disk of radius n centered at the origin. ● a(n) = Sum _{ k=0..n - 1 } 4 * ceiling(sqrt(n ^ 2 - k ^ 2)). - _ Luis Mendo _ , Aug 09 2021 ●
► [A055808] 0,1,4,16,36,64,100,144,196,256,324,400,484,576,676,784,900,1024,1156,1296,1444,1600,1764,1936,2116 ⋆ a(n) and floor(a(n) / 4) are both squares; i.e., squares that remain squares when written in base 4 and last digit is removed . ● a(n) = 4 * (- 1 + n) ^ 2 for n>1; a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>4; G.f.: x * (x ^ 3 - 7 * x ^ 2 - x - 1) / (x - 1) ^ 3. - _ Colin Barker _ , Sep 15 2014 ●
► [A016742] 0,4,16,36,64,100,144,196,256,324,400,484,576,676,784,900,1024,1156,1296,1444,1600,1764,1936,2116,2304 ⋆ Even squares: a(n) = (2 * n) ^ 2. ● a(n) = a(n - 1) + 8 * n - 4 (with a(0)=0). - _ Vincenzo Librandi _ , Nov 19 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) with a(0) = 0, a(1) = 4, a(2) = 16. - _ Philippe Deléham _ , Mar 26 2013 ●
► [A030179] 0,0,1,4,16,36,81,144,256,400,625,900,1296,1764,2401,3136,4096,5184,6561,8100,10000,12100,14641,17424,20736 ⋆ Quarter - squares squared: A002620 ^ 2. ● a(n) = floor(n ^ 2 / 4) ^ 2. ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 6 * a(n - 3) + 6 * a(n - 5) - 2 * a(n - 6) - 2 * a(n - 7) + a(n - 8). (End) ● a(n) = (2 * n ^ 4 - 2 * n ^ 2 + 1 + (- 1) ^ n * (2 * n ^ 2 - 1)) / 32. - _ Luce ETIENNE _ , Aug 11 2014 ●
► [A256322] 0,4,16,37,65,102,147,200,261,331,408,494,588,690,800,919,1045,1180,1323,1474,1633,1801,1976,2160,2352 ⋆ Number of partitions of 7n into exactly 3 parts. ● a(n) = a(n - 1) + a(n - 2) - a(n - 4) - a(n - 5) + a(n - 6) for n>5. ●
► [A080855] 1,4,16,37,67,106,154,211,277,352,436,529,631,742,862,991,1129,1276,1432,1597,1771,1954,2146,2347,2557 ⋆ a(n) = (9 * n ^ 2 - 3 * n + 2) / 2. ● a(n) = 9 * n + a(n - 1) - 6 with n > 0, a(0)=1. - _ Vincenzo Librandi _ , Aug 08 2010 ● a(0)=1, a(1)=4, a(2)=16; for n > 2, a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Jul 24 2013 ●
► [A103770] 1,1,4,16,37,121,376,1072,3289,9889,29404,88672,265885,796537,2392240,7174816,21520369,64574977,193709428,581117680,1743420757,5230158649,15690480040,47071742800,141214610761 ⋆ A weighted tribonacci sequence, (1,3,9) . ● a(n) = Sum _{ k=0..n } T(n - k, k) * 3 ^ k, T(n, k) = trinomial coefficients (A027907). ● a(n) = Sum _{ k=0..n } 3 ^ (n - k) * Sum _{ i=0..floor((n - k) / 2) } C(n - k - i, i) * C(k, n - k - i)). - _ Paul Barry _ , Apr 26 2005 ● a(n) / 3 ^ n converges to 1 / 2. - _ Hieronymus Fischer _ , Feb 02 2006 ● a(n) = a(n - 1) + 3 * a(n - 2) + 9 * a(n - 3), n >= 3; a(0)=1, a(1)=1, a(2)=4. - _ Hieronymus Fischer _ , Feb 04 2006 ●
► [A121318] 0,4,16,38,74,128,204,306,438,604,808,1054,1346,1688,2084,2538,3054,3636,4288,5014,5818,6704,7676,8738,9894 ⋆ Molecular topological indices of the path graphs P _ n ● a(1) = 0; a(n) = (2n ^ 3 - 3n ^ 2 + 13n - 18) / 3 - Eric W. Weisstein, Jul 10 2011. ●
► [A152133] 4,16,38,78,136,220,330,474,652,872,1134,1446,1808,2228,2706,3250,3860,4544,5302,6142,7064,8076,9178,10378,11676 ⋆ Maximal length of rook tour on an n X n + 2 board. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - 2 * a(n - 3) + 3 * a(n - 4) - a(n - 5). ● a(n) = 2 * n ^ 3 / 3 + 2 * n ^ 2 + n / 3 + 3 / 2 + (- 1) ^ n / 2. [_ R. J. Mathar _ , Oct 20 2009] ●
► [A210440] 0,4,16,40,80,140,224,336,480,660,880,1144,1456,1820,2240,2720,3264,3876,4560,5320,6160,7084,8096,9200,10400 ⋆ a(n) = 2 * n * (n + 1) * (n + 2) / 3. ● a(n) = - a(- n - 2) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ● a(n) = Sum _{ i=1..n } i * (2n - i + 3). - _ Wesley Ivan Hurt _ , Oct 03 2013 ●
► [A331574] 0,0,0,0,0,0,1,4,16,40,100,200,400,700,1225,1960,3136,4704,7056,10080,14400,19800,27225,36300,48400 ⋆ a(n) is the number of subsets of { 1..n } that contain 3 even and 3 odd numbers. ● a(n) = binomial(n / 2,3) ^ 2, n even; ● a(n) = binomial((n - 1) / 2,3) * binomial((n + 1) / 2,3), n odd. ● a(n) = 2 * a(n - 1) + 4 * a(n - 2) - 10 * a(n - 3) - 5 * a(n - 4) + 20 * a(n - 5) - 20 * a(n - 7) + 5 * a(n - 8) + 10 * a(n - 9) - 4 * a(n - 10) - 2 * a(n - 11) + a(n - 12) for n>11. ●
► [A110477] 1,4,16,40,110,182,336,480,750,1210,1540,2236,2912,3500,4400,5712,7242,8322,10260,12040,13552,16192,18584,21800,26000 ⋆ a(n) = Sum _{ k=1..n } k * (prime(k) - k). ● a(n) = n * (n + 1) * (3 * prime(n) - 2 * n - 1) / 6. ●
► [A206918] 0,1,4,16,40,136,328,1096,2632,8776,21064,70216,168520,561736,1348168,4493896,10785352,35951176,86282824,287609416,690262600,2300875336,5522100808,18407002696,44176806472 ⋆ Sum of binary palindromes p < 2 ^ n. ● a(n) = (8 / 7) * ((3 / 4) * ((4 - (- 1) ^ n) / (3 + (- 1) ^ n)) * 2 ^ (3 * floor(n / 2)) - 1). ●
► [A190090] 1,1,4,16,42,137,443,1365,4316,13625,42785,134758,424331,1335378,4203927,13233947,41657808,131135696,412803240,1299458257,4090567673,12876698159,40534529294,127598621869,401667591501 ⋆ Diagonal sums of the triangular matrix A190088. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(3 * n - 4 * k + 1,3 * n - 6 * k + 1). ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) + 6 * a(n - 3) - 3 * a(n - 4) + a(n - 6), and a(0)=1, a(1)=1, a(2)=4, a(3)=16, a(4)=42, a(5)=137, . - _ Harvey P. Dale _ , Jul 04 2011 ●
► [A227012] 1,4,16,43,91,166,275,422,614,857,1158,1521,1953,2460,3049,3724,4492,5359,6332,7415,8615,9938,11391,12978,14706 ⋆ a(n) = floor(M(g(n - 1) + 1, ..., g(n))), where M = harmonic mean and g(n) = n ^ 3. ● a(n + 2) = (1 / 8) * (27 - (- 1) ^ n - 2 * cos(n * Pi / 2) + 2 * sin(n * Pi / 2) + 2 * n * (4 * n ^ 2 + 18 n + 27)) for n >= 1 (conjectured). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 4) - 3 * a(n - 5) + 3 * a(n - 6) - a(n - 7) for n >= 10 (conjectured). ● a(n) = (2 * n ^ 3 - 3 * n ^ 2 + n + 2) / 2 + floor(max(0, n - 3) / 4 (conjectured). - _ Franck Maminirina Ramaharo _ , Apr 12 2018 ●
► [A034131] 4,16,43,92,167,275,422,615,858,1158,1521,1954,2461,3049,3724,4493,5360,6332,7415,8616,9939,11391,12978,14707,16582 ⋆ Decimal part of cube root of a(n) starts with 5: first term of runs. ● a(n) = ceiling((n + 1 / 2) ^ 3). - _ Benoit Cloitre _ , Apr 16 2003 ●
► [A212960] 0,4,16,44,92,168,276,424,616,860,1160,1524,1956,2464,3052,3728,4496,5364,6336,7420,8620,9944,11396,12984,14712 ⋆ Number of (w,x,y) with all terms in { 0,...,n } and |w - x| != |x - y|. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - 2 * a(n - 3) + 3 * a(n - 4) - a(n - 5). ● a(n) = (4 * n ^ 3 + 6 * n ^ 2 + 4 * n + 1 - (- 1) ^ n) / 4. - _ Luce ETIENNE _ , Apr 05 2014 ●
► [A217873] 0,4,16,44,96,180,304,476,704,996,1360,1804,2336,2964,3696,4540,5504,6596,7824,9196,10720,12404,14256,16284,18496 ⋆ a(n) = 4 * n * (n ^ 2 + 2) / 3. ● a(0)=0, a(1)=4, a(2)=16, a(3)=44, a(n)=4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Harvey P. Dale _ , Mar 16 2015 ●
► [A018210] 1,4,16,44,110,236,472,868,1519,2520,4032,6216,9324,13608,19440,27192,37389,50556,67408,88660,115258,148148,188552,237692,297115 ⋆ Alkane (or paraffin) numbers l(9,n). ● a(2n) = (n + 1)(n + 2)(n + 3) ^ 2(4n ^ 2 + 6n + 5) / 90, a(2n - 1) = n(n + 1)(n + 2)(n + 3)(4n ^ 2 + 6n + 5) / 90. - _ M. F. Hasler _ , May 02 2009 ● a(n) = (1 / (2 * 6!)) * (n + 2) * (n + 4) * (n + 6) * ((n + 1) * (n + 3) * (n + 5) + 1 * 3 * 5) - (1 / 2) * (1 / 2 ^ 4) * (n ^ 2 + 7 * n + 1 1) * (1 / 2) * (1 - (- 1) ^ n). - _ Yosu Yurramendi _ , Jun 23 2013 ●
► [A054498] 1,4,16,44,116,260,560,1100,2090,3740,6512,10868,17732,28028,43472,65780,97955,143000,205920,291720,408408,563992,770848,1041352,1394068 ⋆ Number of symmetric nonnegative integer 8 X 8 matrices with sum of elements equal to 4 * n, under action of dihedral group D _ 4. ● a(n) = ((8 + n) * (2835 * (1739 + 309 * (- 1) ^ n) + 576 * (15259 + 1029 * (- 1) ^ n) * n + 36 * (166171 + 3717 * (- 1) ^ n) * n ^ 2 + 448 * (4661 + 27 * (- 1) ^ n) * n ^ 3 + 14 * (29749 + 27 * (- 1) ^ n) * n ^ 4 + 49280 * n ^ 5 + 3416 * n ^ 6 + 128 * n ^ 7 + 2 * n ^ 8)) / 46448640. - _ Colin Barker _ , Jan 15 2017 ●
► [A213501] 0,4,16,45,94,172,281,433,626,875,1177,1547,1981,2497,3087,3772,4543,5421,6396,7492,8695,10032,11488,13090,14822 ⋆ Number of (w,x,y) with all terms in { 0,...,n } and w != max(|w - x|,|x - y|) ● a(n) = a(n - 1) + 2 * a(n - 2) - a(n - 3) - 2 * a(n - 4) - a(n - 5) + 2 * a(n - 6) + a(n - 7) - a(n - 8). ● a(n) = (6 * n * (n + 1) * (24 * n + 17) - 9 * (2 * n + 1) * (- 1) ^ n + 32 * cos(2 * pi * (n + 2) / 3) + 25) / 144. - _ Bruno Berselli _ , Jul 02 2012 ●
► [A213480] 0,4,16,46,95,175,285,439,634,886,1190,1564,2001,2521,3115,3805,4580,5464,6444,7546,8755,10099,11561,13171,14910 ⋆ Number of (w,x,y) with all terms in { 0,...,n } and |w - x| + |x - y| != w + x + y. ● a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + a(n - 4) + 2 * a(n - 5) - a(n - 6). ● a(n) = (8 * n ^ 3 + 15 * n ^ 2 + 4 * n + 5 - (2 * n + 5) * ((n + 1) mod 2)) / 8. - _ Ayoub Saber Rguez _ , Nov 20 2021 ●
► [A306302] 0,4,16,46,104,214,380,648,1028,1562,2256,3208,4384,5924,7792,10052,12744,16060,19880,24486,29748,35798,42648,50648,59544 ⋆ Number of regions into which a figure made up of a row of n adjacent congruent rectangles is divided upon drawing diagonals of all possible rectangles (a(0)=0 by convention). ● a(n) = Sum _{ i=1..n, j=1..n, gcd(i,j)=1 } (n + 1 - i) * (n + 1 - j) + n ^ 2 + 2 * n. - _ N. J. A. Sloane _ , Apr 11 2020 ● a(n) = 2n(n + 1) + Sum _{ i=2..n } (n + 1 - i) * (2n + 2 - i) * phi(i). - _ Chai Wah Wu _ , Aug 16 2021 ●
► [A159940] 4,16,46,106,208,364,586,886,1276,1768,2374,3106,3976,4996,6178,7534,9076,10816,12766,14938,17344,19996,22906,26086,29548 ⋆ The number of tristubstitution products with composition C _ n H _ (2n - 1) X _ 2 Y. ● a(n) = (2 n ^ 3 - 9 n ^ 2 + 19 n - 14) where n is the number of carbons. ●
► [A000704] 1,1,1,1,4,16,46,106,316,1324,5356,18316,63856,272416,1264264,5409496,22302736,101343376,507711376,2495918224,11798364736,58074029056,309240315616,1670570920096,8792390355904 ⋆ Number of degree - n even permutati

ons of order dividing 2. • a(n) = Sum _{ i = 0..floor(n / 4) } C(n, 4i) * (4i - 1)!!. - _ Ralf Stephan _ , May 08 2007 [Corrected by _ Sean A. Irvine _ , Mar 01 2011] •

▶ [A369401] 1,1,1,4,16,46,139,511,1891,6707,24366,91840,348236,1320309,5056414,19565036,76077330,296994727,1165438921,4594915664,18181401268,72176250259,287450966807,1148178877918,4598148937702 ⋆ Expansion of (1 / x) * Series _ Reversion(x / (1 + x) * (1 - x ^ 3) ^ 3). • a(n) = (1 / (n + 1)) * Sum _{ k =0..floor(n / 3) } binomial(3 * n + k + 2,k) * binomial(n + 1,n - 3 * k). •

▶ [A308592] 1,4,16,46,148,466,1468,4630,14596,46018,145084,457414,1442116,4546642,14334460,45193078,142482820,449213794,1416262204,4465131430,14077477060,44382872818,139928439676,441160451926,1390871968516 ⋆ Number of total dominating sets in the (2n - 1) - triangular snake (for n > 1). • a(n) = 2 * a(n - 1) + 3 * a(n - 2) + 2 * a(n - 3). •

▶ [A006009] 4,16,48,108,216,384,640,1000,1500,2160,3024,4116,5488,7168,9216,11664,14580,18000,22000,26620,31944,38016,44928,52728,61516 ⋆ Number of paraffins. • a(n) = Sum(i=1, n, i * floor(i ^ 2 / 2)). - _ Enrique Pérez Herrero _ , Mar 10 2012 •

▶ [A223839] 4,16,48,118,255,503,926,1614,2690,4318,6712,10146,14965,21597,30566,42506,58176,78476,104464,137374,178635,229891,293022,370166,463742 ⋆ Number of 3 X n 0..1 arrays with rows and antidiagonals unimodal and columns nondecreasing. • a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. •

▶ [A058922] 0,4,16,48,128,320,768,1792,4096,9216,20480,45056,98304,212992,458752,983040,2097152,4456448,9437184,19922944,41943040,88080384,184549376,385875968,805306368 ⋆ a(n) = n * 2 ^ n - 2 ^ n. • a(1)=0, a(n) = 2 * a(n - 1) + 2 ^ n for n>1. - _ Philippe Deléham _ , Apr 20 2009 • a(n)= 4 * a(n - 1) - 4 * a(n - 2). •

▶ [A086601] 1,4,16,49,121,256,484,841,1369,2116,3136,4489,6241,8464,11236,14641,18769,23716,29584,36481,44521,53824,64516,76729,90601 ⋆ Triangular numbers + 1 squared. • a(n) = (binomial(2 + n,2) - binomial(n,1)) ^ 2. - _ Zerinvary Lajos _ , May 30 2006, corrected by _ R. J. Mathar _ , May 14 2014 •

▶ [A224147] 4,16,49,124,275,554,1037,1831,3082,4984,7789,11818,17473,25250,35753,49709,67984,91600,121753,159832,207439,266410,338837,427091,533846 ⋆ Number of 3 X n 0..1 arrays with rows and antidiagonals unimodal and columns nondecreasing. • a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. •

▶ [A227266] 4,16,49,132,341,836,1934,4232,8804,17501,33392,61393,109141,188181,315546,515823,823812,1287900,1974288,2972226,4400429,6414866,9218134,13070650,18303916 ⋆ Number of n X 3 0,1 arrays indicating 2 X 2 subblocks of some larger (n + 1) X 4 binary array having a sum of three or less, with rows and columns of the latter in lexicographically nondecreasing order. • a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10) for n>13. •

▶ [A173712] 1,4,16,49,166,499,1666,4999,16666,49999,166666,499999,1666666,4999999,16666666,49999999,166666666,499999999,1666666666,4999999999,16666666666,49999999999,166666666666,499999999999,1666666666666 ⋆ Numbers n such that (n + n + 1) divides the decimal concatenation [n, n + 1]. • a(n) = 11 * a(n - 2) - 10 * a(n - 4) for n>4. • a(n) = (10 ^ ((n + 1) / 2) - 4) * (1 - (- 1) ^ n) / 12 + (10 ^ (n / 2) - 2) * (1 + (- 1) ^ n) / 4. (End) •

▶ [A085697] 0,0,1,1,4,16,49,169,576,1936,6561,22201,75076,254016,859329,2907025,9834496,33269824,112550881,380757169,1288092100,4357584144,14741602225,49870482489,168710633536 ⋆ a(n) = T(n) ^ 2, where T(n) = A000073(n) is the n - th tribonacci number. • a(n + 6) = 2 * a(n + 5) + 3 * a(n + 4) + 6 * a(n + 3) - a(n + 2) - a(n). •

▶ [A227675] 4,16,50,131,301,625,1198,2153,3670,5986,9406,14315,21191,30619,43306,60097,81992,110164,145978,191011,247073,316229,400822,503497,627226 ⋆ Number of n X 2 0,1 arrays indicating 2 X 2 subblocks of some larger (n + 1) X 3 binary array having an odd sum, with rows and columns of the latter in lexicographically nondecreasing order. • a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. •

▶ [A100774] 0,4,16,52,160,484,1456,4372,13120,39364,118096,354292,1062880,3188644,9565936,28697812,86093440,258280324,774840976,2324522932,6973568800,20920706404,62762119216,188286357652,564859072960 ⋆ a(n) = 2 * (3 ^ n - 1). • a(n) = 2 * (3 ^ n - 1); • a(0) = 0, a(n) = 4 * Sum _{ i = 0 to n - 1 } 3 ^ i for n > 0; • a(n) = 4 * a(n - 1) - 3 * a(n - 2). - _ Eric W. Weisstein _ , Mar 13 2018 •

▶ [A107767] 0,1,4,16,52,169,520,1600,4840,14641,44044,132496,397852,1194649,3585040,10758400,32278480,96845281,290545684,871666576,2615029252,7845176329,23535617560,70607118400,211821620920 ⋆ a(n) = (1 + 3 ^ n - 2 * 3 ^ (n / 2)) / 4 if n is even, (1 + 3 ^ n - 4 * 3 ^ ((n - 1) / 2)) / 4 if n odd. • a(n) = 4 * a(n - 1) - 12 * a(n - 3) + 9 * a(n - 4). - _ Vincenzo Librandi _ , Jun 26 2012 • a(n - 1) = Sum _{ j=0..k } (S2(n,j) - Ach(n,j)) / 2, where k=3 is the maximum number of colors, S2 is the Stirling subset number A008277, and Ach(n,k) = [n>=0 & n<2 & n==k] + [n>1] * (k * Ach(n - 2,k) + Ach(n - 2,k - 1) + Ach(n - 2,k - 2)). • a(n) = (1 + 3 ^ n - 3 ^ ((n - 1) / 2) * (4 + (- 2 + sqrt(3)) * (1 + (- 1) ^ n))) / 4. Therefore: • a(2 * k) = (3 ^ k - 1) ^ 2 / 4; • a(2 * k + 1) = (3 ^ k - 1) * (3 ^ (k + 1) - 1) / 4. (End) •

▶ [A223711] 4,16,53,155,418,1066,2611,6205,14408,32852,73825,163951,360574,786574,1704095,3670193,7864516,16777432,35651821,75497731,159383834,335544626,704643403,1476395365,3087008128 ⋆ Number of n X 2 0..1 arrays with row sums and column sums unimodal. • a(n) = (- 2 * (2 ^ (3 + n) - 9) + (5 + 2 ^ (3 + n)) * n + n ^ 2) / 2. •

▶ [A239032] 4,16,54,149,354,757,1495,2773,4888,8258,13456,21249,32642,48927,71737,103105,145528,202036,276266,372541,495954,652457,848955,1093405,1394920 ⋆ Number of 5 X n 0..2 arrays with no element equal to the sum of elements to its left or one plus the sum of the elements above it, modulo 3. • a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>8. •

▶ [A238419] 0,1,4,16,54,176,548,1667,4968,14592,42348,121728,347112,983173,2768812,7758928,21648546,60172784,166687436,460356359,1267964496,3483818880,9550754520,26129950080,71356349520 ⋆ a(n) = the Wiener index of the Fibonacci cube G _ n. • a(n) = (4 * (n + 1) * F(n) ^ 2 + (9 * n + 2) * F(n) * F(n + 1) + 6 * n * F(n + 1) ^ 2) / 25, where F = A000045 (Fibonacci numbers). • a(n) = sum(F(i) * F(i + 1) * F(n - i + 1) * F(n - i + 2), i=1..n), where F = A000045. • a(n + 3) = (2 * (n + 3) * a(n + 2) + 2 * (n + 4) * a(n + 1) - (n + 5) * a(n)) / (n + 2). - _ Robert Israel _ , Aug 29 2014 • a(n) = 4 * a(n - 1) - 10 * a(n - 3) + 4 * a(n - 5) - a(n - 6). - _ G. C. Greubel _ , Mar 27 2016 •

▶ [A267227] 4,16,54,176,564,1790,5646,17732,55512,173354,540258,1680848,5221740,16200758,50204790,155413724,480622848,1484980802,4584213642,14140323560,43583756436,134239102286,413179757214,1270924525556,3906925144104 ⋆ Number of length - n 0..3 arrays with no following elements greater than or equal to the first repeated value. • a(n) = (- 9 - 9 * 2 ^ n + 11 * 3 ^ (1 + n) + 2 * 3 ^ n * n) / 18 for n>1. •

▶ [A212520] 0,0,4,16,56,132,279,504,880,1380,2125,3090,4392,6006,8134,10640,13824,17568,22113,27360,33700,40810,49247,58740,69696 ⋆ Number of (w,x,y,z) with all terms in { 1,...,n } and w>=2x and y<3z. • a(n) = 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4) - 4 * a(n - 5) + 2 * a(n - 7) - 2 * a(n - 9) + 4 * a(n - 11) + a(n - 12) - 2 * a(n - 13) - 2 * a(n - 14) + a(n - 16). •

▶ [A115108] 1,4,16,56,156,248,1584,2248,18512,51856,189440,609664,2023808,6579712,21441536,69575680,225665024,731127808,2367905792,7666302976,24816189440,80321511424,259955621888,841292972032,2722599796736 ⋆ Expansion of - (9520 * x ^ 9 - 11504 * x ^ 8 + 2840 * x ^ 7 - 1040 * x ^ 6 + 248 * x ^ 5 + 36 * x ^ 4 - 1) / ((2 * x - 1) * (4 * x ^ 2 + 2 * x - 1)). • a(n) = + 4 * a(n - 1) - 8 * a(n - 3). - _ Colin Barker _ , Mar 15 2013 •

▶ [A073388] 1,4,16,56,188,608,1920,5952,18192,54976,164608,489088,1443776,4238336,12382208,36022272,104407296,301618176,868765696,2495715328,7152286720,20452548608,58369409024 ⋆ Convolution of A002605(n) (generalized (2,2) - Fibonacci), n >= 0, with itself. • a(n) = Sum _{ k=0..floor(n / 2) } binomial(n - k + 1, 1) * binomial(n - k, k) * 2 ^ (n - k). • a(n) = Sum _{ k=0..floor((n + 2) / 2) } k * binomial(n - k + 2, k)2 ^ (n - k + 1). - _ Paul Barry _ , Oct 15 2004 •

▶ [A026155] 1,4,16,56,189,616,1967,6182,19205,59124,180726,549276,1661646,5007520,15042722,45068836,134727499,401991436,1197519631,3562523314,10585937404,31424706800,93206486620,276253350360,818278951035 ⋆ T(n,n - 4), where T is the array in A026148. • a(n) = 12 * a(n - 1) - 53 * a(n - 2) + 90 * a(n - 3) + 26 * a(n - 4) - 256 * a(n - 5) + 160 * a(n - 6) + 224 * a(n - 7) - 203 * a(n - 8) - 84 * a(n - 9) + 77 * a(n - 10) + 14 * a(n - 11) - 7 * a(n - 12) for n > 15. •

▶ [A255301] 1,4,16,56,196,680,2348,8096,27892,96056,330748,1138768,3920644,13498088,46471180,159990272,550811156,1896319640,6528602140,22476505520,77381536036,266407155784,917179667500,3157642420064,10871049557044 ⋆ a(n) = A255300(2 ^ k - 1). • a(n) = 4 * a(n - 1) - a(n - 2) - 2 * a(n - 3) - 4 * a(n - 4) for n>3. - _ Colin Barker _ , Feb 04 2017 •

▶ [A290908] 0,4,16,56,208,780,2912,10864,40544,151316,564720,2107560,7865520,29354524,109552576,408855776,1525870528,5694626340,21252634832,79315912984,296011017104,1104728155436,4122901604640,15386878263120,57424611447840 ⋆ p - INVERT of the positive integers, where p(S) = 1 - 4 * S ^ 2. • a(n) = 4 * a(n - 1) - 2 * a(n - 2) + 4 * a(n - 3) - a(n - 4). •

▶ [A281064] 4,16,56,284,1004,5096,18016,91444,323284,1640896,5801096,29444684,104096444,528363416,1867934896,9481096804,33518731684,170131379056,601469235416,3052883726204,10792927505804,54781775692616,193671225869056,983019078740884 ⋆ Values of x such that x ^ 2 = 5 * y ^ 2 + 11, where x and y are positive integers. • a(n) = ((- 2 - r) ^ n * (r - 5) + (5 + r) * (r - 2) ^ n + (15 + 7 * r) * (r + 2) ^ n + (2 - r) ^ n * (7 * r - 15)) / (4 * r) where r=sqrt(5). • a(n) = 18 * a(n - 2) - a(n - 4) for n>3. •

▶ [A126644] 4,16,58,196,634,1996,6178,18916,57514,174076,525298,1582036,4758394,14299756,42948418,128943556,387027274,1161475036,3485211538,10457207476,31374768154,94130595916,282404370658,847238277796 ⋆ a(n) = 3 * 3 ^ n - 3 * 2 ^ n + 1. • a(n) = 3 * 3 ^ n - 3 * 2 ^ n + 1. • a(n) = 6 * a(n - 1) - 11 * a(n - 2) + 6 * a(n - 3). G.f.: - 2 * x * (3 * x ^ 2 - 4 * x + 2) / ((x - 1) * (2 * x - 1) * (3 * x - 1)). [_ Colin Barker _ , Dec 10 2012] •

▶ [A267466] 4,16,58,204,712,2490,8770,31200,112300,409254,1510102,5638956,21290368,81183858,312262954,1210023672,4718194516,18492663102,72787129726,287468548548,1138446338344,4518338475786,17963524388818,71514144464784 ⋆ Number of length - n 0..3 arrays with no following elements larger than the first repeated value. • a(n) = (- 18 - 9 * 2 ^ (1 + n) + 50 * 3 ^ n + 9 * 4 ^ n + 4 * 3 ^ n * n) / 36. •

▶ [A180143] 1,4,16,58,208,742,2644,9418,33544,119470,425500,1515442,5397328,19222870,68463268,243835546,868433176,3092970622,11015778220,39233275906,139731384160,497660704294,1772444881204,6312656052202 ⋆ Eight rooks and one berserker on a 3 X 3 chessboard. G.f.: (1 + x ^ 2) / (1 - 4 * x + x ^ 2 + 2 * x ^ 3). • a(n) = 4 * a(n - 1) - 1 * a(n - 2) - 2 * a(n - 3) with a(0)=1, a(1)=4 and a(2)=16. • a(n) = - 1 / 2 + (9 + 12 * A) * A ^ (- n - 1) / 34 + (9 + 12 * B) * B ^ (- n - 1) / 34 with A=(- 3 + sqrt(17)) / 4 and B=(- 3 - sqrt(17)) / 4. •

▶ [A123893] 1,4,16,58,208,750,2708,9772,35256,127210,459012,1656228,5976040,21562946,77804232,280736004,1012961416,3655002994,13188110940,47585806908,171700784680,619536821778,2235434596432,8065973894524,29103931264328 ⋆ Expansion of g.f.: (1 + x ^ 2) * (1 + 2 * x ^ 2) * (1 + 3 * x ^ 2) / (1 - 4 * x + 6 * x ^ 2 - 18 * x ^ 3 + 11 * x ^ 4 - 22 * x ^ 5 + 6 * x ^ 6 - 6 * x ^ 7). • a(0)=1, a(1)=4, a(2)=16, a(3)=58, a(4)=208, a(5)=750, a(6)=2708, a(n)= 4 * a(n - 1) - 6 * a(n - 2) + 18 * a(n - 3) - 11 * a(n - 4) + 22 * a(n - 5) - 6 * a(n - 6) + 6 * a(n - 7). - _ Harvey P. Dale _ , May 20 2012 •

▶ [A374096] 1,4,16,59,214,768,2745,9792,34900,124339,442906,1577540,5618665,20011452,71272296,253840779,904068526,3219889720,11467810393,40843217384,145465283884,518082304131,1845177508818,6571697181084,23405446635913 ⋆ Number of edge covers of fan graph F _{ 1,n } . • a(n) = 4 * a(n - 1) - 5 * a(n - 3) - 2 * a(n - 4). •

▶ [A032094] 4,16,60,160,396,848,1716,3200,5720,9696,15912,25152,38760,58080,85272,122496,173052,240240,328900,443872,592020,780208,1017900,1314560,1682928 ⋆ Number of reversible strings with n - 1 beads of 2 colors. 7 beads are black. String is not palindromic. • a(n) = (n ^ 7 - 28 * n ^ 6 + 322 * n ^ 5 - 1960 *

n ^ 4 + 6664 * n ^ 3 - 11872 * n ^ 2 + 8448 * n) / 10080 if n is even. • a(n) = (n ^ 7 - 28 * n ^ 6 + 322 * n ^ 5 - 1960 * n ^ 4 + 6769 * n ^ 3 - 13132 * n ^ 2 + 13068 * n - 5040) / 10080 if n is odd. • a(n) = (1 / 2) * (binomial(n - 1, n - 8) - binomial((n / 2) - 1, (n - 8) / 2)) if n is even. • a(n) = (1 / 2) * binomial(n - 1, n - 8) if n is odd. •

► [A120926] 1,4,16,60,216,756,2592,8748,29160,96228,314928,1023516,3306744,10628820,34012224,108413964,344373768,1090516932,3443737680,10847773692,34093003032,106928054964,334731302496,1046035320300,3263630199336 ⋆ Number of isolated 0's in all ternary words of length n on { 0,1,2 } . • a(n) = (4 / 27) * (n + 1) * 3 ^ n for n >= 2. •

► [A255303] 1,4,16,60,216,768,2728,9704,34552,123064,438328,1561176,5560248,19803096,70529656,251194904,894643768,3186321112,11348251384,40417397400,143948695992,512680882776,1825940038264,6503181876248,23161425701176 ⋆ a(n) = A255302(2 ^ n - 1). • a(n) = 5 * a(n - 1) - 6 * a(n - 2) + 2 * a(n - 3) + 4 * a(n - 4). - _ Matthew House _ , Jan 15 2017 •

► [A273347] 1,4,16,60,218,778,2744,9600,33391,115638,399137,1374050,4720272,16187632,55434424,189607406,647872199,2211794804,7545239986,25722676402,87641357150,298456587038,1015914399813,3456670564220,11757143968393 ⋆ The sum of the areas of the bargraphs of semiperimeter n (n>=2). • a(n) = ((69 - 115 * n + 28 * n ^ 2) * a(n - 1) - (264 - 265 * n + 52 * n ^ 2) * a(n - 2) + (3 * (29 - 29 * n + 4 * n ^ 2)) * a(n - 3) - (3 * (10 - 21 * n + 4 * n ^ 2)) * a(n - 4) + (4 * n - 9) * (5 * n - 29) * a(n - 5) + (4 * n - 13) * (n - 6) * a(n - 6) + (n - 7) * (4 * n - 9) * a(n - 7)) / (n * (4 * n - 13)) for n>=7. - _ Alois P. Heinz _ , Jun 04 2016 •

► [A268939] 4,16,60,220,788,2780,9684,33404,114292,388444,1312788,4415548,14790836,49369628,164279892,545170172,1804855540,5962578652,19661140116,64722276796,212738159924,698312564636,2289419181780,7497612860540 ⋆ Number of length - n 0..3 arrays with no repeated value unequal to the previous repeated value plus one mod 3 + 1. • a(n) = (- 40 * 3 ^ n + (25 - 11 * sqrt(5)) * (1 - sqrt(5)) ^ n + (1 + sqrt(5)) ^ n * (25 + 11 * sqrt(5))) / 10. •

► [A269673] 4,16,60,224,820,2976,10700,38224,135780,480176,1691740,5941824,20814740,72755776,253836780,884207024,3075861700,10687549776,37098781820,128668433824,445930140660,1544500542176,5346546062860,18499277662224 ⋆ Number of length - n 0..3 arrays with no repeated value differing from the previous repeated value by other than plus or minus one modulo 3 + 1. • a(n) = (- 20 * 3 ^ n + (18 - 7 * sqrt(6)) * (1 - sqrt(6)) ^ n + (1 + sqrt(6)) ^ n * (18 + 7 * sqrt(6))) / 15. •

► [A231896] 0,4,16,60,224,836,3120,11644,43456,162180,605264,2258876,8430240,31462084,117418096,438210300,1635423104,6103482116,22778505360,85010539324,317263651936,1184044068420,4418912621744,16491606418556,61547513052480 ⋆ a(n) = 4 * a(n - 1) - a(n - 2) with a(0) = 0, a(1) = 4. • a(n) = ((2 * (- (2 - sqrt(3)) ^ n + (2 + sqrt(3)) ^ n))) / sqrt(3). - _ Colin Barker _ , Oct 12 2015 •

► [A128650] 0,4,16,60,224,840,3168,12012,45760,175032,671840,2586584,9984576,38630800,149768640,581690700,2262890880,8815845720,34389986400,134312002440,525129633600,2055166429680,8050465600320,31561484455800 ⋆ Number of polygons on n vertices with exactly three faces. • a(n) = 4 * (n - 2) / (n - 1) * C(2 * n - 4,n - 2). •

► [A072335] 1,4,16,60,225,840,3136,11704,43681,163020,608400,2270580,8473921,31625104,118026496,440480880,1643897025,6135107220,22896531856,85451020204,318907548961,1190179175640,4441809153600,16577057438760,61866420604141 ⋆ Expansion of 1 / ((1 - x ^ 2) * (1 - 4 * x + x ^ 2)). • a(n) = (1 / 12) * ((7 - 4 * sqrt(3)) * (2 - sqrt(3)) ^ n + (7 + 4 * sqrt(3)) * (2 + sqrt(3)) ^ n - 3 + (- 1) ^ n). Recurrence: a(n) = 4 * a(n - 1) - 4 * a(n - 3) + a(n - 4). • a(n)=sum { k=0..floor(n / 2), U(n - 2k, 2) } - _ Paul Barry _ , Nov 15 2003 •

► [A032106] 1,1,4,16,60,226,848,3200,12120,46126,176232,675808,2599688,10028292,38777664,150266880,583395120,2268771670,8836291640,34461586016,134564376232,526024564572,2058357329184 ⋆ Number of reversible strings with n black beads and n - 1 white beads. String is not palindromic. • a(2 * n + 1) = (1 / 2) * (C(4 * n + 1, 2 * n + 1) - C(2 * n, n)) for n >= 1. •

► [A269462] 4,16,60,228,852,3180,11796,43644,160980,592572,2177268,7988700,29277204,107195196,392179380,1433907228,5240022612,19140884220,69894099966,255150047964,931214323860,3397977981372,12397189043508,45224087388060 ⋆ Number of length - n 0..3 arrays with no repeated value equal to the previous repeated value. • a(n) = (- 28 * 3 ^ n + (49 - 17 * sqrt(7)) * (1 - sqrt(7)) ^ n + (1 + sqrt(7)) ^ n * (49 + 17 * sqrt(7))) / 63. •

► [A123620] 1,4,16,60,228,864,3276,12420,47088,178524,676836,2566080,9728748,36884484,139839696,530172540,2010036708,7620627744,28891993356,109537863300,415289569968,1574482299804,5969315609316,22631393727360,85802128010028 ⋆ Expansion of (1 + x + x ^ 2) / (1 - 3 * x - 3 * x ^ 2). • a(0)=1, a(1)=4, a(2)=16, a(n)=3 * a(n - 1) + 3 * a(n - 2) for n>2. - _ Philippe Deléham _ , Sep 18 2009 • a(n) = ((2 ^ (1 - n) * (- (3 - sqrt(21)) ^ (1 + n) + (3 + sqrt(21)) ^ (1 + n)))) / (3 * sqrt(21)) for n>0. - _ Colin Barker _ , Oct 17 2017 •

► [A133161] 1,4,16,61,229,856,3196,11929,44521,166156,620104,2314261,8636941,32233504,120297076,448954801,1675522129,6253133716,23337012736,87094917229,325042656181,1213075707496,4527260173804,16895964987721 ⋆ Indices of the triangular numbers which are also centered triangular number. • a(n + 2)= 4 * a(n + 1) - a(n) + 1. • a(n + 1)=2 * a(n) + 0.5 + 0.5 * (12 * a(n) ^ 2 + 12 * a(n) - 15) ^ 0.5. • a(n)= - (1 / 2) - (1 / 4) * sqrt(3) * [2 - sqrt(3)] ^ n + (1 / 4) * sqrt(3) * [2 + sqrt(3)] ^ n + (3 / 4) * [2 - sqrt(3)] ^ n + (3 / 4) * [2 + sqrt(3)] ^ n, with n>=0 - _ Paolo P. Lava _ , Jul 30 2008 •

► [A103820] 1,4,16,61,232,880,3337,12652,47968,181861,689488,2614048,9910609,37573972,142453744,540083149,2047610680,7763081488,29432076505,111585473980,423052651456,1603914376309,6080901083296,23054446378816 ⋆ Whitney transform of 3 ^ n. • a(n) = 4a(n - 1) - 3a(n - 3); • a(n) = Sum _{ k=0..n } (Sum _{ i=0..n } C(k, i - k)) * 3 ^ k. • a(n) = 3(a(n - 1) + a(n - 2)) + 1, n > 1. [_ Gary Detlefs _ , Jun 21 2010] •

► [A276042] 1,4,16,62,230,812,2728,8752,26944,80000,230144,644096,1759744,4707328,12359680,31920128,81231872,204013568,506331136,1243217920,3022913536,7285243904,17415274496,41321234432,97370767360 ⋆ Exponential convolution of central polygonal numbers (A000124) with themselves. • a(n) = 10 * a(n - 1) - 40 * a(n - 2) + 80 * a(n - 3) - 80 * a(n - 4) + 32 * a(n - 5). • a(n) = 2 ^ (n - 6) * (n ^ 4 + 2 * n ^ 3 + 19 * n ^ 2 + 42 * n + 64). •

► [A084859] 1,4,16,62,232,842,2980,10334,35248,118610,394684,1301126,4255624,13825658,44657428,143521838,459230560,1463719586,4649308012,14722502870,46491507256,146447041994,460259735236,1443537130622 ⋆ Binomial transform of Cullen numbers A002064. • a(n)=2 ^ n + 2n * 3 ^ (n - 1); a(n)=sum { k=0..n, C(n, k)(1 + k * 2 ^ k) } . • a(0)=1, a(1)=4, a(2)=16, a(n)=8 * a(n - 1) - 21 * a(n - 2) + 18 * a(n - 3). - _ Harvey P. Dale _ , Mar 31 2015 •

► [A113438] 1,4,16,62,237,901,3418,12956,49096,186029,704861,2670692,10119152,38341126,145273353,550436561,2085588866,7902239404,29941371656,113447051497,429847830217,1628681887876,6171031956688,23381874459566,88593294803061 ⋆ Third row of A113435. • a(n) = 7 * a(n - 1) - 15 * a(n - 2) + 11 * a(n - 3) - a(n - 4), n>4. •

► [A195339] 1,4,16,62,239,920,3540,13620,52401,201604,775636,2984122,11480879,44170640,169938680,653808840,2515413201,9677604804,37232862856,143246816182,551116641919,2120323237160,8157566453420,31384785713660,120747379738401 ⋆ Expansion of 1 / (1 - 4 * x + 2 * x ^ 3 + x ^ 4). • a(n) = 4 * a(n - 1) - 2 * a(n - 3) - a(n - 4). •

► [A172025] 1,4,16,62,239,920,3544,13672,52834,204528,793092,3080226,11980667,46662704,181971248,710454896,2776717742,10863073784,42537035408,166704021596,653827252022,2566222449104,10079023179536,39611016586832 ⋆ Expansion of (2 / (3 * sqrt(1 - 4 * z) - 1 + 4 * z)) * ((1 - sqrt(1 - 4 * z)) / (2 * z)) ^ k with k=3. • a(n) = Sum _{ p=0..n } (- 1) ^ (p) * binomial(2 * n + k - p,n - p), with k=3. • a(n) = [x ^ n] 1 / ((1 - x ^ 2) * (1 - x) ^ (n + 3)). - _ Ilya Gutkovskiy _ , Oct 25 2017 •

► [A206839] 1,4,16,62,241,936,3636,14124,54865,213124,827884,3215930,12492337,48526704,188502840,732242616,2844409393,11049158596,42920651992,166726031798,647650219393,2515808732184,9772703517132,37962239661540,147464991401185 ⋆ Number of 1 X n 0..3 arrays avoiding the pattern z - 2 z - 1 z in any row, column, nw - to - se diagonal or ne - to - sw antidiagonal. • a(n) = 4 * a(n - 1) - 2 * a(n - 3) + a(n - 4). •

► [A257838] 0,1,4,16,63,247,967,3785,14820,58060,227612,892926,3505386,13770404,54129602,212904952,837885495,3299264407,12997784803,51230474669,202014314769,796928589755,3145066003589,12416625685891,49037912997003 ⋆ Main diagonal of iterated partial sums array of Fibonacci numbers (starting with the first partial sums). • a(n) = F ^{ n + 1 } (n), n >= 0, with the k - th iterated partial sum F ^{ k } of the Fibonacci number A000045. - _ Wolfdieter Lang _ , Jun 03 2015 •

► [A099503] 1,4,16,63,248,976,3841,15116,59488,234111,921328,3625824,14269185,56155412,220995824,869714111,3422701032,13469808304,53009519105,208615375388,820991693248,3230957253887,12715213640160,50039862867392 ⋆ Expansion of 1 / (1 - 4 * x + x ^ 3). • a(n) = 4 * a(n - 1) - a(n - 3). • a(n) = Sum _{ k=0..floor(n / 3) } binomial(n - 2 * k, k) * (- 1) ^ k * 4 ^ (n - 3 * k). •

► [A022030] 4,16,63,249,984,3889,15370,60745,240075,948819,3749901,14820274,58572352,231488326,914882931,3615779646,14290202610,56477415835,223208766625,882160643536,3486455360919,13779090092886,54457408494633,215225339261149,850608722312629 ⋆ For even n, a(n + 2) is the greatest integer such that a(n + 2) / a(n + 1) < a(n + 1) / a(n); for odd n, the least integer such that a(n + 2) / a(n + 1) > a(n + 1) / a(n); a(0) = 4, a(1) = 16. • a(n) = ceiling(a(n - 1) ^ 2 / a(n - 2)) - 1 for even n > 0, a(n) = floor(a(n - 1) ^ 2 / a(n - 2)) + 1 for even n > 0. - _ M. F. Hasler _ , Feb 11 2016 •

► [A135450] 0,0,0,1,4,16,63,252,1008,4033,16132,64528,258111,1032444,4129776,16519105,66076420,264305680,1057222719,4228890876,16915563504,67662254017,270649016068,1082596064272,4330384257087 ⋆ a(n) = 3 * a(n - 1) + 4 * a(n - 2) - a(n - 3) + 3 * a(n - 4) + 4 * a(n - 5). • a(n + 1) - 4 * a(n) = hexaperiodic 0, 0, 1, 0, 0, - 1, A131531. • a(n) + a(n + 3) = 1, 4, 16, 64 = 2 ^ 2n = A000302 . • a(n) = (1 / 65) * 4 ^ n + (1 / 15) * (- 1) ^ (n + 1) + (2 / 39) * cos((Pi * n) / 3) - (4 * sqrt(3) / 39) * sin((Pi * n) / 3). Or, a(n) = (1 / 65) * (4 ^ n + [- 1; - 4; - 16; 1; 4; 16]). - _ Richard Choulet _ , Dec 31 2007 •

► [A337968] 4,16,64,136,424,1216,2944,7696,24868,66016,187840,568864,1632232,4868992,14760064,43243552,129586312,390119248,1163757376,3491600176,10483526656,31391806528,94159476352,282588457024,847413793324 ⋆ L.g.f.: - log(Sum _{ n= - oo.. + oo } (- p) ^ n * (p * x) ^ (n ^ 2)) = Sum _{ n>=1 } a(n) * x ^ n / n, where p = sqrt(3). • a(n) = 4 (mod 12) for n >= 1. •

► [A248088] 1,4,16,64,229,808,2800,9472,31705,105004,344416,1121920,3631645,11691472,37466656,119574784,380244721,1205309140,3809636848,12010028224,37773505429,118550674936,371342504848,1161099257344,3624512382793 ⋆ a(n) = Sum _{ k=0..floor(n / 4) } binomial(n - 3k, k) * (- 3) ^ (3k) * 4 ^ (n - 4k). • a(n) = 3 ^ n * (3 * n + 5) / 6 - (- 1) ^ n * 3 ^ (n + 1) / 2 * sin((n - 1) * arcsin(sqrt(2 / 3))) / (6 * sqrt(2)). • a(n) = (1 + 3 / n) * a(n - 1) + (3 + 6 / n) * a(n - 2) + (9 + 9 / n) * a(n - 3). - _ Robert Israel _ , Oct 27 2014 •

► [A289694] 0,0,0,1,4,16,64,236,818,2736,8934,28622,90324,281792,871556,2677750,8184383,24913238,75593383,228793147,691094857,2084237036,6277871658,18890568921,56798001639 ⋆ The number of partitions of [n] with exactly 4 blocks without peaks. • a(n)= 10 * a(n - 1) - 45 * a(n - 2) + 130 * a(n - 3) - 280 * a(n - 4) + 471 * a(n - 5) - 643 * a(n - 6) + 734 * a(n - 7) - 701 * a(n - 8) + 575 * a(n - 9) - 400 * a(n - 10) + 237 * a(n - 11) - 121 * a(n - 12) + 49 * a(n - 13) - 18 * a(n - 14) + 4 * a(n - 15) - a(n - 16). - _ R. J. Mathar _ , Mar 11 2021 •

► [A269685] 4,16,64,248,944,3544,13168,48536,177776,647896,2351728,8508440,30701168,110537560,397266544,1425629336,5109684848,18295104472,65449056880,233970500888,835908980336,2984966034520,10654610339440,38017445912984 ⋆ Number of length - n 0..3 arrays with no repeated value differing from the previous repeated value by plus or minus one modulo 3 + 1. • a(n) = 2 ^ (- n) * (- 17 * 2 ^ (2 + n) * 3 ^ n + (51 - 15 * sqrt(17)) * (3 - sqrt(17)) ^ n + 3 * (3 + sqrt(17)) ^ n * (17 + 5 * sqrt(17))) / 51. •

► [A077821] 1,4,16,64,253,1000,3952,15616,61705,243820,963424,3806848,15042277,59437648,234860320,928020736,3666956113,14489511508,57253465072,226229798080,893918323981,3532204761400,13957058650384,55149545207296,217916425857241 ⋆ Expansion of (1 - x) ^ (- 1) / (1 - 3 * x - 3 * x ^ 2 - 3 * x ^ 3). • a(0

)=1, a(1)=4, a(2)=16, a(3)=64, a(n)=4 * a(n - 1) - 3 * a(n - 4) [From Harvey P. Dale, May 10 2011] ●

▶ [A206450] 4,16,64,255,1016,4048,16128,64257,256012,1020000,4063872,16191231,64508912,257015648,1023998720,4079803649,16254705684,64761807088,258023229632,1028013114879,4095797753832,16318429208240,65015693603328 ⋆ Number of 0..3 arrays of length n avoiding the consecutive pattern 0..3. ● a(n) = 4 * a(n - 1) - a(n - 4). ●

▶ [A294452] 0,1,4,16,64,256,1024,4096,16320,64512,252416,976896,3740928,14186496,53330944,198946816,737156096,2715254784,9949593600,36292198400,131845099520,477257695232,1722054197248,6195670220800,22233100238848 ⋆ Expansion of x * (16 * x ^ 6 + 20 * x ^ 4 - 32 * x ^ 3 + 24 * x ^ 2 - 8 * x + 1) / ((- 1 + 2 * x) ^ 2 * (2 * x ^ 2 - 4 * x + 1) ^ 2). ● a(n) = 12 * a(n - 1) - 56 * a(n - 2) + 128 * a(n - 3) - 148 * a(n - 4) + 80 * a(n - 5) - 16 * a(n - 6) for n>5. - _ Colin Barker _ , Nov 23 2017 ●

▶ [A000302] 1,4,16,64,256,1024,4096,16384,65536,262144,1048576,4194304,16777216,67108864,268435456,1073741824,4294967296,17179869184,68719476736,274877906944,1099511627776,4398046511104,17592186044416,70368744177664,281474976710656 ⋆ Powers of 4: a(n) = 4 ^ n. ● a(n) = 4 ^ n. ● a(0) = 1; a(n) = 4 * a(n - 1). ● a(n) = Sum _{ k = 0..n } binomial(2k, k) * binomial(2(n - k), n - k). - _ Benoit Cloitre _ , Jan 26 2003 [See Graham et al., eq. (5.39), p. 187. - _ Wolfdieter Lang _ , Aug 16 2019] ● a(n) = Sum _{ j = 0..n } 2 ^ (n - j) * binomial(n + j, j). - Peter C. Heinig (algorithms(AT)gmx.de), Apr 06 2007 ● a(n) = 6 * StirlingS2(n + 1, 4) + 6 * StirlingS2(n + 1, 3) + 3 * StirlingS2(n + 1, 2) + 1 = 2 * StirlingS2(2 ^ n, 2 ^ n - 1) + StirlingS2(n + 1, 2) + 1. - _ Ross La Haye _ , Jun 26 2008 ● a(n) = Sum _{ k = 0..n } binomial(2 * n + 1, k). - _ Mircea Merca _ , Jun 25 2011 ●

▶ [A083589] 1,4,16,64,257,1028,4112,16448,65793,263172,1052688,4210752,16843009,67372036,269488144,1077952576,4311810305,17247241220,68988964880,275955859520,1103823438081,4415293752324,17661175009296,70644700037184 ⋆ Expansion of 1 / ((1 - 4 * x) * (1 - x ^ 4)). ● a(0)=1, a(n) = 4 * a(n - 1) if n is not a multiple of 4, otherwise a(n) = 4 * a(n - 1) + 1. - _ Vincenzo Librandi _ , Mar 19 2011 ● a(0)=1, a(1)=4, a(2)=16, a(3)=64, a(4)=257, a(n) = 4 * a(n - 1) + a(n - 4) - 4 * a(n - 5). - _ Harvey P. Dale _ , Sep 13 2011 ● a(n) = floor(64 * (2 ^ (2 * (n + 1)) + 1) / 255). - _ Tani Akinari _ , Jul 09 2013 ●

▶ [A098590] 1,4,16,64,257,1032,4144,16640,66817,268300,1077344,4326016,17370881,69751824,280084640,1124664576,4516029185,18133868564,72815558896,292386900160,1174063629825,4714388387864,18930369110352,76013863341568 ⋆ a(n) = 4 ^ n for n = 0..3; for n > 3, a(n) = 4 * a(n - 1) + a(n - 4). ● a(n) = Sum _{ k=0..floor(n / 3) } binomial(n - 3 * k, k) * 4 ^ (n - 4 * k). ●

▶ [A071357] 0,1,4,16,64,260,1072,4480,18944,80928,348800,1515008,6625280,29147456,128918272,572928000,2557100032,11457170944,51514963968,232370167808,1051235287040,4768568354816,21684663148544,98835356778496,451433970008064 ⋆ Expansion of (1 - 4 * x - (1 - 2 * x) * sqrt(1 - 4 * x - 4 * x ^ 2)) / (8 * x ^ 3). ● a(n) = (1 / Pi) * Integral _{ x=2 - 2 * sqrt(2)..2 + 2 * sqrt(2) } x ^ n * sqrt(- x ^ 2 + 4x + 4) * (x - 2) / 8. - _ Paul Barry _ , Sep 16 2006 ●

▶ [A158778] 1,4,16,64,320,1344,5440,21824,103744,447808,1840448,7427392,33985856,148624704,619779392,2521191744,11221570880,49269495104,207933019456,853358105920,3726080251200,16339070997824,69569923978560 ⋆ G.f.: (1 + 3 * x + 12 * x ^ 2 + 48 * x ^ 3) / (1 - x - 256 * x ^ 4) ● a(n)= + a(n - 1) + 256 * a(n - 4). ●

▶ [A033140] 1,4,16,65,260,1040,4161,16644,66576,266305,1065220,4260880,17043521,68174084,272696336,1090785345,4363141380,17452565520,69810262081,279241048324,1116964193296,4467856773185,17871427092740,71485708370960 ⋆ Base - 4 digits are, in order, the first n terms of the periodic sequence with initial period 1,0,0. ● a(n) = + 4 * a(n - 1) + a(n - 3) - 4 * a(n - 4). G.f.: x / ((x - 1) * (4 * x - 1) * (1 + x + x ^ 2)). - R. J. Mathar, Jan 08 2011 ●

▶ [A181879] 0,1,4,16,65,263,1065,4312,17459,70690,286218,1158873,4692181,18998253,76922356,311452261,1261044460,5105864780,20673224441,83704176903,338911293253,1372223811812,5556020785351,22495868896554,91083913642878 ⋆ Expansion of x * (1 + x) / (1 - 3 * x - 4 * x ^ 2 - x ^ 3). ● a(n) = 3 * a(n - 1) + 4 * a(n - 2) + a(n - 3), n>=2, a(- 1):=1, a(0)=0, a(1)=1. ●

▶ [A052927] 1,4,16,65,264,1072,4353,17676,71776,291457,1183504,4805792,19514625,79242004,321773808,1306609857,5305681432,21544499536,87484608001,355244113436,1442520953280,5857568421121,23785517797920,96584592144960,392195937000961 ⋆ Expansion of 1 / (1 - 4 * x - x ^ 3). ● a(n) = 4 * a(n - 1) + a(n - 3), with a(0)=1, a(1)=4, a(2)=16. ● a(n) = Sum _{ r=RootOf(- 1 + 4 * z + z ^ 3) } (1 / 283) * (64 + 9 * r + 24 * r ^ 2) * r ^ (- 1 - n). ● a(n) = Sum _{ k=0..floor(n / 3) } binomial(n - 2 * k, k) * 4 ^ (n - 3 * k). - _ Paul Barry _ , Oct 20 2004 ●

▶ [A012781] 0,1,4,16,65,265,1081,4410,17991,73396,299426,1221537,4983377,20330163,82938844,338356945,1380359512,5631308624,22973462017,93722435101,382349636061,1559831901918,6363483400447,25960439030624 ⋆ Take every 5th term of Padovan sequence A000931, beginning with the second term. ● a(n + 3) = 5 * a(n + 2) - 4 * a(n + 1) + a(n). ●

▶ [A165201] 1,1,4,16,65,267,1105,4597,19196,80380,337284,1417582,5965622,25130844,105954110,447015744,1886996681,7969339643,33670068133,142301618265,601586916703,2543852427847,10759094481491,45513214057191 ⋆ Expansion of 1 / (1 - x * c(x) ^ 3), c(x) the g.f. of A000108. ● a(n) = (1 / 2) * Sum _{ k=0..n } C(2k,k) * F(3(n - k) + 1) / (1 - 2k) + (1 / 2) * (F(3n - 2) + 2 * 0 ^ n). ●

▶ [A026674] 1,4,16,65,267,1105,4597,19196,80380,337284,1417582,5965622,25130844,105954110,447015744,1886996681,7969339643,33670068133,142301618265,601586916703,2543852427847,10759094481491,45513214057191,192560373660245,814807864164497 ⋆ a(n) = T(2n - 1,n - 1) = T(2n,n + 1), T given by A026725. ● a(n) is the upper left term in M ^ n, where M is the following infinite square production matrix: ● a(n) = (1 / n) * Sum _{ k=1..n } k * binomial(2 * n,n - k) * Sum _{ i=0..k / 2 } binomial(k - i,i). - _ Vladimir Kruchinin _ , Apr 28 2016 ●

▶ [A099781] 1,4,16,65,268,1120,4737,20244,87280,379073,1656348,7272896,32060673,141775396,628505296,2791696705,12419264300,55315472416,246607247233,1100229683508,4911436984752,21934428189121,97992663440444 ⋆ a(n) = Sum _{ k=0..floor(n / 3) } C(n - k,2 * k) * 4 ^ (n - 3 * k). ● a(n) = 8 * a(n - 1) - 16 * a(n - 2) + a(n - 3). ●

▶ [A081915] 1,4,16,65,272,1184,5376,25344,122880,606208,3014656,15007744,74448896,367001600,1795162112,8707375104,41875931136,199715979264,944892805120,4436701216768,20684562497536,95794950569984,440904162738176 ⋆ a(n) = 4 ^ n * (n ^ 3 - 3n ^ 2 + 2n + 384) / 384. ● a(n) = 4 ^ n * (n ^ 3 - 3n ^ 2 + 2n + 384) / 384. ●

▶ [A082307] 1,4,16,66,280,1208,5248,22816,98944,427392,1838080,7870976,33568768,142637056,604045312,2550276096,10737713152,45097779200,188979871744,790276734976,3298540650496,13743907405824,57174629810176 ⋆ Expansion of e.g.f. (1 + x) * exp(3 * x) * cosh(x). ● a(n) = ((n + 2) * 2 ^ (n - 1) + (n + 4) * 4 ^ (n - 1)) / 2. ●

▶ [A099782] 1,4,16,66,280,1216,5380,24144,109504,500488,2300128,10612224,49096720,227578432,1056304384,4907373600,22813275520,106100835328,493609021504,2296885357824,10689540189184,49753373831296,231588118339072 ⋆ a(n) = Sum _{ k=0..floor(n / 3) } C(n - k,2 * k) * 2 ^ k * 4 ^ (n - 3 * k). ● a(n) = 8 * a(n - 1) - 16 * a(n - 2) + 2 * a(n - 3). ●

▶ [A110276] 1,4,16,66,280,1218,5422,24666,114540,542278,2614178,12814102,63772982,321754290,1643263134,8483485886,44214343344,232362906298,1230090777342,6553657204178,35113127086114,189062666857686,1022459506515674 ⋆ Convolution of large Schroeder numbers and central binomial coefficients. ● a(n) = Sum _{ k=0..n } C(2 * k, k) * (Sum _{ j=0..n - k } C(n - k + j, n - k) * C(n - k, j) / (j + 1)). ●

▶ [A349730] 1,1,4,16,66,284,1296,6432,35862,231652,1760232,15629648,158866436,1807908216,22636353856,308050239360,4517683948830,70949359114740,1187285196326520,21083306170356720,395875848847690140,7835534053016676360,163032210287312821920 ⋆ Row sums of A349728. ● a(n) = hypergeom([1, 1, 1 - n], [1 - 2 * n], 1) * binomial(2 * n - 1, n - 1) for n >= 1. ●

▶ [A024551] 1,4,16,67,283,1198,5074,21493,91045,385672,1633732,6920599,29316127,124185106,526056550,2228411305,9439701769,39987218380,169388575288,717541519531,3039554653411,12875760133174,54542595186106,231046140877597 ⋆ a(n) = floor(a(n - 1) / (sqrt(5) - 2)) for n > 0 and a(0) = 1. ● a(n) = 5 * a(n - 1) - 3 * a(n - 2) - a(n - 3). - _ Clark Kimberling _ , Aug 16 2012 ●

▶ [A351049] 1,1,1,4,16,67,307,1585,9235,59548,415564,3094807,24452785,204611653,1810429597,16892405896,165592138372,1698918207403,18184602679435,202577753111653,2344503929765023,28146188358379120,349996346545057288,4501360727764475503 ⋆ G.f. A(x) satisfies: A(x) = 1 + x + x ^ 2 * A(x / (1 - 3 * x)) / (1 - 3 * x). ● a(0) = a(1) = 1; a(n) = Sum _{ k=0..n - 2 } binomial(n - 2,k) * 3 ^ k * a(n - k - 2). ●

▶ [A179611] 1,4,16,68,280,1168,4848,20160,83776,348224,1447296,6015488,25002240,103917568,431915008,1795179520,7461349376,31011794944,128895102976,535729963008,2226667929600,9254755975168,38465775239168 ⋆ Eight white kings and one red king on a 3 X 3 chessboard. G.f.: (1 + 2 * x) / (1 - 2 * x - 8 * x ^ 2 - 4 * x ^ 3). ● a(n) = 2 * a(n - 1) + 8 * a(n - 2) + 4 * a(n - 3) with a(1)=1, a(2)=4 and a(3)=16. ● a(n) = (8 + 3 * z1 - 6 * z1 ^ 2) * z1 ^ (- n) / (z1 * 37) + (8 + 3 * z2 - 6 * z2 ^ 2) * z2 ^ (- n) / (z2 * 37) + (8 + 3 * z3 - 6 * z3 ^ 2) * z3 ^ (- n) / (z3 * 37) with z1, z2 and z3 the roots of f(x) = 1 - 2 * x - 8 * x ^ 2 - 4 * x ^ 3 = 0. ●

▶ [A290912] 0,1,4,16,68,287,1208,5088,21432,90273,380236,1601584,6745996,28414655,119684720,504121280,2123397744,8943915201,37672461204,158679314512,668369521108,2815224014047,11857940853032,49946562182048,210378775263272 ⋆ a(n) = (1 / 6) * A290911(n). ● a(n) = 4 * a(n - 1) + 4 * a(n - 3) - a(n - 4). ●

▶ [A089979] 1,4,16,68,288,1216,5136,21696,91648,387136,1635328,6907904,29180160,123261952,520679424,2199438336,9290801152,39245922304,165781442560,700288974848,2958139588608,12495684124672,52783892398080 ⋆ Expansion of 1 / (1 - 4x - 4x ^ 3). ● a(n) = Sum _{ k=0..floor(n / 2) } C(n - 2 * k, k) * 4 ^ (n - 2 * k). ● a(n) = 4 * a(n - 1) + 4 * a(n - 3). - _ G. C. Greubel _ , Apr 29 2017 ●

▶ [A179191] 0,1,4,16,68,296,1312,5888,26672,121696,558464,2574848,11917952,55345408,257741824,1203224576,5629027072,26383656448,123868321792,582414688256,2742116907008,12926036258816,60998951747584 ⋆ Expansion of o.g.f. (1 / 2) * (- 1 + 1 / sqrt(1 - 4 * x - 4 * x ^ 2)). ● a(n) = Sum _{ m=1..n } m * Sum _{ k=m..n } Sum _{ i=k..n } binomial(i - 1,k - 1) * binomial(i,n - i)) * Sum _{ j=0..k } binomial(j,2 * j - m - k) * binomial(k,j)) / k)). - _ Vladimir Kruchinin _ , Mar 11 2011 ● a(n) = Sum _{ k=0..n } 2 ^ (n - k - 1) * binomial(n,k) * binomial(n - k,k). - _ Vladimir Kruchinin _ , Mar 12 2015 ●

▶ [A006319] 1,1,4,16,68,304,1412,6752,33028,164512,831620,4255728,22004292,114781008,603308292,3192216000,16989553668,90890869312,488500827908,2636405463248,14281895003716,77631035881072,423282220216964,2314491475510816,12688544297945348 ⋆ Royal paths in a lattice (convolution of A006318). ● a(n) = Sum _{ j=0..n } (n - j) * (Sum _{ i=0..j } a(i) * a(j - i)) for n > 0, a(0)=1. ● a(n) is the sum of top row terms in M ^ (n - 1), M = an infinite square production matrix as follows: ● a(n) = Sum _{ k=0..n } (2 / (k + 2)) * binomial(n + k,k + 1) * binomial(n - 1,k) for n >= 1. - _ David Callan _ , Jul 21 2017 ● a(n) = 0 ^ n + n * hypergeom([1 - n, n + 1], [3], - 1). - _ Peter Luschny _ , Jan 31 2020 ●

▶ [A059606] 0,1,4,16,68,311,1530,8065,45344,270724,1709526,11376135,79520644,582207393,4453142140,35500884556,294365897104,2533900264547,22604669612078,208656457858161,1990060882027600 ⋆ Expansion of (1 / 2) * (exp(2 * x) - 1) * exp(exp(x) - 1). ● a(n) = Sum _{ i=0..n } Stirling2(n, i) * binomial(i + 1, 2). ● a(n) = (1 / 2) * (Bell(n + 2) - Bell(n + 1) - Bell(n)). - _ Vladeta Jovovic _ , Sep 23 2003 ●

▶ [A354121] 1,4,16,68,316,1616,9080,55800,373080,2699520,21035040,175708320,1566916320,14862171840,149429426880,1587766126080,17779538050560,209295747832320,2583920845209600,33389139008678400,450642388471395840,6342869733912760320 ⋆ Expansion of e.g.f. 1 / (1 - log(1 + x)) ^ 4. ● a(n) = (1 / 6) * Sum _{ k=0..n } (k + 3)! * Stirling1(n,k). ●

▶ [A180145] 1,4,16,70,304,1330,5812,25414,111112,485818,2124124,9287278,40606576,177543394,776269636,3394069270,14839825624,64883892490,283690631212,1240375248574,5423269532992,23712060090418,103675797469204 ⋆ Eight rook

s and one berserker on a 3 X 3 chessboard. G.f.: (1 - 3 * x ^ 2) / (1 - 4 * x - 3 * x ^ 2 + 6 * x ^ 3). ● a(n) = 4 * a(n - 1) + 3 * a(n - 2) - 6 * a(n - 3) with a(0)= 1, a(1)=4 and a(2)=16. ● a(n) = 1 / 4 + (7 + 6 * A) * A ^ (- n - 1) / 44 + (7 + 6 * B) * B ^ (- n - 1) / 44 with A=(- 3 + sqrt(33)) / 12 and B=(- 3 - sqrt(33)) / 12. ●

► [A133789] 0,1,4,16,70,316,1414,6196,26590,112156,466774,1923076,7863310,31972396,129459334,522571156,2104535230,8460991036,33972711094,136277478436,546270602350,2188566048076,8764718254054,35090241492916,140455083984670 ★ Let P(A) denote the power set of an n - element set A. Then a(n) = the number of pairs of elements { x,y } of P(A) for which either 0) x and y are disjoint and for which x is not a subset of y and y is not a subset of x, 1) x and y are disjoint and for which either x is a subset of y or y is a subset of x, or 2) x and y intersect but for which x is not a subset of y and y is not a subset of x. ● a(n) = (1 / 2)(4 ^ n - 2 * 3 ^ n + 3 * 2 ^ n - 2). ● a(n) = 3 * StirlingS2(n + 1,4) + StirlingS2(n + 1,3) + StirlingS2(n + 1,2). - _ Ross La Haye _ , Jan 11 2008 ● a(n) = 3 * StirlingS2(n + 1,4) + StirlingS2(n + 1,3) + StirlingS2(n + 1,2). - _ Ross La Haye _ , Jan 11 2008 ● a(n) = 10 * a(n - 1) - 35 * a(n - 2) + 50 * a(n - 3) - 24 * a(n - 4). [_ Aaron Meyerowitz _ , Oct 29 2013] ●

► [A373959] 1,4,16,71,322,1455,6558,29548,133146,599998,2703794,12184181,54905857,247423522,1114970351,5024416818,22641646338,102030577247,459782762029,2071929748572,9336785189996,42074572144477,189601622519548,854406199035948,3850230516227419 ★ Number of compositions of 6 * n - 4 into parts 1 and 6. ● a(n) = Sum _{ k=0..n } binomial(n + 1 + 5 * k,n - 1 - k). ● a(n) = 7 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). ●

► [A161797] 1,1,4,16,71,336,1660,8464,44207,235306,1271807,6961307,38508659,214950425,1209170536,6848080767,39014400171,223439516338,1285660965508,7428738358924,43087099589998,250766507928988,1464026402082801 ★ G.f. satisfies: A(x) = 1 / (1 - x / (1 - x * A(x)) ^ 3). ● a(n) = Sum _{ k=0..n } C(n,k) / (n - k + 1) * C(n + 2 * k - 1,n - k). ● a(n,m) = Sum _{ k=0..n } C(n + m - 1,k) * m / (n - k + m) * C(n + 2 * k - 1,n - k). ●

► [A327541] 1,4,16,72,271,1024,3809,13968,50992,185364,672079,2433024,8798609,31797532,114864976,414821664,1497814207,5407599616,19521754897,70471314792,254385558128,918256161068,3314588702303,11964424716288,43186863073121 ★ A linear divisibility sequence of order 8. ● a(n) = (1 / 2) * Sum _{ i = 1..4 } (alpha(i) ^ n - 1 / alpha(i) ^ n), where alpha(i), 1 <= i <= 4, are the zeros of the quartic polynomial 1 - x - 2 * x ^ 2 - 3 * x ^ 3 + x ^ 4. ● a(n) ^ 2 = - (1 / 4) * Product _{ i = 1..6 } (1 - beta(i) ^ n), where beta(i), 1 <= i <= 6, are the zeros of the sextic polynomial x ^ 6 + 2 * x ^ 5 + 2 * x ^ 4 - 14 * x ^ 3 + 2 * x ^ 2 + 2 * x + 1. ● a(n) = 4 * a(n - 1) + a(n - 2) - 4 * a(n - 3) - 16 * a(n - 4) - 4 * a(n - 5) + a(n - 6) + 4 * a(n - 7) - a(n - 8). ●

► [A158784] 1,4,16,72,288,1168,5184,20768,85120,373312,1499392,6194304,26890752,108349696,450216960,1937707520,7834814464,32689300480,139682910208,566806726656,2371481051136,10073319706624,41018592608256 ★ Expansion of (1 + 4 * x + 14 * x ^ 2) / (1 - 2 * x ^ 2 - 64 * x ^ 3). ● a(n)= 2 * a(n - 2) + 64 * a(n - 3). [From R. J. Mathar, Mar 31 2009] ●

► [A180141] 1,4,16,72,312,1368,5976,26136,114264,499608,2184408,9550872,41759064,182582424,798301656,3490399512,15261008472,66725422488,291742318296,1275579489816,5577192379224,24385054076568,106618316505048 ★ Eight rooks and one berserker on a 3 X 3 chessboard. G.f.: (1 + x - 2 * x ^ 2) / (1 - 3 * x - 6 * x ^ 2). ● a(n) = 4 * a(n - 1) - 2 * a(n - 3) with a(0)=2, a(1)=8 and a(2)=31. ● a(n) = 3 * a(n - 1) + 6 * a(n - 2) for n >= 3 with a(0)=1, a(1)=4 and a(2) =16. ● a(n) = (6 + 2 * A) * A ^ (- n - 1) / 33 + (6 + 2 * B) * B ^ (- n - 1) / 33 with A=(- 3 - sqrt(33)) / 12 and B=(- 3 + sqrt(33)) / 12 for n >= 1 with a (0)=1. ●

► [A059371] 1,4,16,72,372,2208,14976,115200,996480,9607680,102366720,1195568640,15193785600,208728576000,3081867264000,48659595264000,817953583104000,14581909536768000,274755150544896000,5455208664170496000,113825841809670144000 ★ a(n) = (n - 1)! + ((n + 1) / 2) * a(n - 1), a(1)=0. ● a(n) = Sum _{ i=1..n - 1 } i! * (n - i)!. E.g., a(6) = 1! * 5! + 2!4! + 3!3! + 4!2! + 5!1! = 120 + 48 + 36 + 48 + 120 = 372. - _ Jon Perry _ , May 06 2006 ● a(n) = 2 * Integral _{ t>=0 } t ^ n * exp(- t) * (t * exp(- t) * Ei(t) - 1), with Ei the exponential integral function. ● a(n) = - 2 * n! - 2 * (n + 1)! * Re(LerchPhi(2, 1, 2 + n)). - _ Vladimir Reshetnikov _ , Oct 17 2015 ● a(n) = n! * Re(hypergeom([1,1],[n + 2],2) - 1). - _ Vladimir Reshetnikov _ , Oct 19 2015 ●

► [A208528] 0,4,16,72,384,2400,17280,141120,1290240,13063680,145152000,1756339200,22992076800,323805081600,4881984307200,78460462080000,1339058552832000,24186745110528000,460970906812416000,9245027631071232000,194632160654131200000 ★ Number of permutations of n>1 having exactly 3 points P on the boundary of their bounding square. ● a(n) = (4 * n - 8) * (n - 2)! ●

► [A366495] 1,1,4,16,74,366,1900,10210,56315,317005,1813860,10518652,61684208,365177622,2179549853,13100686947,79232836206,481821573994,2944253855746,18069720545174,111333779015326,688399685561554,4270250156814421,2656707515376492 9 ★ G.f. A(x) satisfies A(x) = 1 + x * (1 + x) ^ (3 / 2) * A(x) ^ (5 / 2). ● a(n) = Sum _{ k=0..n } binomial(3 * k / 2,n - k) * binomial(5 * k / 2,k) / (3 * k / 2 + 1). ●

► [A306495] 1,4,16,74,402,2542,18446,151482,1390738,14126582,157365222,1908110866,25022451482,352918443438,5327630246542,85716034274282,1464281837606946,26470821156031462,504879319309407158,10132393298394712002,213441590598213760042 ★ Expansion of e.g.f. (2 - exp(- x)) * exp(x) / (x - 1) ^ 2. ● a(n) = (2 * n + 1) * a(n - 1) - (n + 2) * (n - 1) * a(n - 2) + (n - 1) * (n - 2) * a(n - 3) for n > 2, a(n) = 4 ^ n for n < 3. ●

► [A094559] 0,0,4,16,76,304,1264,5056,20404,81616,327184,1308736,5237776,20951104,83815744,335262976,1341097036,5364388144,21457733104,85830932416,343324451056,1373297804224,5493194102464,21972776409856,87891117178864 ★ Number of words of length n over an alphabet of size 4 that are not "bifix - free". ● a(0)=a(1)=0, a(2n)=4 ^ n + 4a(2n - 1) - a(n), a(2n + 1)=4a(2n). - _ Emeric Deutsch _ , Feb 04 2006 ●

► [A199214] 4,16,76,376,1876,9376,46876,234376,1171876,5859376,29296876,146484376,732421876,3662109376,18310546876,91552734376,457763671876,2288818359376,11444091796876,57220458984376,286102294921876,1430511474609376 ★ a(n) = 3 * 5 ^ n + 1. ● a(n) = 5 * a(n - 1) - 4. ● a(n) = 6 * a(n - 1) - 5 * a(n - 2). ●

► [A241023] 1,4,16,76,384,2004,10672,57628,314368,1728292,9560016,53144172,296642688,1661529588,9333781872,52566230076,296697618432,1677889961028,9505151782288,53928746972812,306393243712384,1742920028025364,9925790375394096,56584659163097436 ★ Central terms of the triangle in A102413. ● a(n) = 2 * Hyper2F1([- n, n], [1], - 1) for n>0. - _ Peter Luschny _ , Aug 02 2014 ●

► [A260949] 1,4,16,76,416,2576,17840,137268,1170104,11050940,115885968,1353366864,17640817784,256630492660,4153220868128,74315436120300,1458541231513152,31131651836906752,716862465409883040,17683184383300077828,464519709712796199816 ★ Coefficients in asymptotic expansion of sequence A259871. ● a (k) ~ 4 * exp(- 1) * (k - 1)! / (log(2)) ^ k. ●

► [A049426] 1,1,4,16,76,436,2776,19384,148576,1226656,10824256,101695936,1010783104,10577428096,116166090496,1334409569536,15985101216256,199216504113664,2577292524107776,34542575915216896,478781761481291776 ★ Row sums of triangle A049410. ● a(n) = n! * Sum _ (k=1..n, Sum _ (j=0..k, binomial(4 * j,n) * (- 1) ^ (k - j) / (4 ^ k * (k - j)! * j!))). - _ Vladimir Kruchinin _ , Feb 07 2011 ●

► [A345889] 1,4,16,76,436,2956,23116,204556,2018956,21977356,261478156,3374988556,46964134156,700801318156,11162196262156,189005910310156,3390192763174156,64212742967590156,1280663747055910156,26826134832910630156,588826498721714470156 ★ Number of tilings of an n - cell circular array with rectangular tiles of any size, and where the number of possible colors of a tile is given by the smallest cell covered. ● a(n) = Sum _{ k=2..n + 1 } k! / 2. ●

► [A364474] 1,1,4,16,77,403,2228,12800,75653,457022,2809266,17514200,110480475,703850686,4522217364,29268545416,190645760149,1248817411471,8221323983431,54365667330636,360954069730636,2405225494066647,16080210766344354,107828663888705292 ★ G.f. satisfies A(x) = 1 + x * A(x) ^ 3 + x ^ 2 * A(x). ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(3 * n - 5 * k,k) * binomial(3 * n - 6 * k,n - 2 * k) / (2 * n - 4 * k + 1). ●

► [A204208] 1,4,16,78,404,2208,12492,72589,430569,2596471,15870357,98102191,612222083,3852015239,24408653703,155629858911,997744376239,6427757480074,41590254520410,270163621543421,1761179219680657 ★ Number of length n + 1 nonnegative integer arrays starting and ending with 0 with adjacent elements differing by no more than 3. ● a(n) = Sum _{ i=1..n } ((Sum _{ j=0..(3 * i) / 7 } (binomial(i,j) * binomial(- 7 * j + 4 * i - 1,3 * i - 7 * j) * (- 1) ^ j)) * a(n - i)) / n. - _ Vladimir Kruchinin _ , Apr 06 2017 ●

► [A000780] 1,4,16,78,456,3120,24480,216720,2136960,23224320,275788800,3552595200,49337164800,734788454400,11681891020800,197458829568000,3535951491072000,66869236482048000,1331693730791424000,27856727993622528000,610658404052336640000 ★ a(n) = (n + 1)! / 2 + (n - 1)(n - 1)!. ● a(n) = (n - 1)! * (n ^ 2 + 3 * n - 2) / 2. - _ Gary Detlefs _ , May 22 2010 ●

► [A221763] 1,4,16,79,319,1576,6364,31441,126961,627244,2532856,12513439,50530159,249641536,1008070324,4980317281,20110876321,99356704084,401209456096,1982153764399,8004078245599,39543718583896,159680355455884,788892217913521 ★ Numbers m such that 11 * m ^ 2 - 7 is a square. ● a(n) = ((11 + 2 * t * (- 1) ^ n) * (10 - 3 * t) ^ floor(n / 2) + (11 - 2 * t * (- 1) ^ n) * (10 + 3 * t) ^ floor(n / 2)) / 22, where t=sqrt(11). ● a(n) * a(n - 3) - a(n - 1) * a(n - 2) = (3 / 2) * (9 + (- 1) ^ n). ●

► [A362750] 4,16,79,336,1144,4351,17224,67936,267919,1063216,4233904,16882191,67380304,269142736,1075602319,4299846976,17192621224,68752838911,274965310744,1099740514416,4398645585679,17593754283616,70372850295904,281485727082511,1125928050595744 ★ Number of total dominating sets in the n - double cone graph. ● a(n) = 7 * a(n - 1) - 15 * a(n - 2) + 18 * a(n - 3) - 24 * a(n - 4) - 6 * a(n - 5) + 27 * a(n - 6) - 15 * a(n - 7) + 13 * a(n - 8) - 4 * a(n - 9) for n > 9. ●

► [A106568] 0,4,16,80,384,1856,8960,43264,208896,1008640,4870144,23515136,113541120,548225024,2647064576,12781158400,61712891904,297976201216,1438756372480,6946930294784,33542746669056,161958707855360 ★ Expansion of 4 * x / (1 - 4 * x - 4 * x ^ 2). ● a(n) = 4 * a(n - 1) + 4 * a(n - 2) for n > 2; a(0) = 0, a (1)=4. ●

► [A351816] 1,1,4,16,83,526,3826,31338,285556,2857831,31083421,364523891,4579906098,61313286380,870531542926,13055593578453,206097824225131,3414146518958089,59189048364709453,1071264611091540458,20197719805598878119,393917304689782855768 ★ G.f. A(x) satisfies: A(x) = 1 + x * A(x / (1 - x) ^ 3) / (1 - x) ^ 3. ● a(0) = 1; a(n) = Sum _{ k=0..n - 1 } binomial(n + 2 * k + 1,n - k - 1) * a(k). ●

► [A134006] 4,16,84,496,3108,20176,134004,903856,6161988,42326416,292299924,2026332016,14085959268,98111307856,684331371444,4778093436976,33385561506948,233393582580496,1632228682596564,11417969833962736 ★ a(n) = 1 ^ n + 3 ^ n + 5 ^ n + 7 ^ n. ● a(n) = 15 * a(n - 1) - 71 * a(n - 2) + 105 * a(n - 3) - 48. ●

► [A090013] 4,16,84,536,4004,34176,327604,3481096,40585284,514872176,7058605844,103969203576,1637182717924,27442553929696,487806792137844,9164718013496936,181446744138509444,3775570370986139856 ★ Permanent of (0,1) - matrix of size n X (n + d) with d=3 and n - 1 zeros not on a line. ● a(n) = (n + 2) * a(n - 1) + (n - 2) * a(n - 2), a(1)=4, a(2)=16 ●

► [A121145] 1,1,4,16,85,439,2358,12502,66471,351565,1855784,9765628,51271097,268554691,1403816410,7324218754,38147011723,198364257817,1029968457036,5340576171880,27656556152349,143051147460943,739097600097662,3814697265625006,19669532800292975 ★ Numbers of isomers of unbranched a - 4 - catapolyoctagons - see Brunvoll reference for precise definition. ● a(n) = (1 / 4) * (n + (n + 8) * 5 ^ (n - 3) + (1 - (- 1) ^ n) * 5 ^ (floor(n / 2) - 1)) for n >= 2. ●

► [A300279] 1,1,4,16,86,544,3904,31328,276798,2660564,27576614,306051500,3615559236,45241980928,597141146374,8283583741588,120393776421550,1828261719906800,28937578248560784,476355010859517352,8139464481630136242,144109168217154747856,2639508261422244889106,49940898467864797567140,974790619672853340925800 ★ G.f.: Sum _{ n>=0 } (1 + x * (1 + x) ^ n) ^ n / 2 ^ (n + 1). ● a(n) = Sum _{ k=0..n } Sum _{ j>=0 } C(j + k, k) * C((j + k) * k, n - k) / 2 ^ (j + k + 1). ●

► [A005618] 4,16,88,520,3112,18664,111976,671848,4031080,24186472,145118824,870712936,5224277608,31345665640,188073993832,1128443962984,6770663777896,40623982667368,243743896004200,1462463376025192 ★ a(n) = 6 * a(n - 1) - 8. ● a(n) = (4 / 5) * (2 + 3 * 6 ^ n), with n >= 0. - _ Paolo P. Lava _ , Jun 25 2008 ●

► [A052124] 1,1,4,16,88,568,4288,36832,354688,3781504,44199424,561823744,7714272256,113769309184,1793341407232,30085661765632,535170830467072,10060645294440448,199287423535808512,4148644277780217856 ★ Expansion of e.g.f. exp(- 2 * x) / (1 - x) ^ 3. ● a(n) = n * a(n - 1) + 2 * (n - 1) * a(n - 2). - Detlef Pauly (dettodet(AT)yahoo.de), Sep 22 2003 ● a(n) = (n + 5) * (n + 2) * n! * Sum _{ k=0..n } (- 1) ^ k * 2 ^ (k + 2) * (k + 3) / (k + 5)!. - _ Vaclav Kotesovec _ , Oct 28 2012 ●

► [A003762] 1,4,16,92,432,1884,8582,39736,181936,829672,3793850,17366388,79441576,363298928,1661695126,7601017276,34767611570,159026305464,727389859704,3327116203688,15218354613018,69609219627912 ★ Number of spanning trees with degrees 1 and 3 in D _ 4 X P _ n. ● a(1) = 1, ● a(2) = 4, ● a(3) = 16, ● a(4) = 92, ● a(5) = 432, ● a(6) = 1884, ●

► [A293143] 4,16,96,688,5280,41584,330720,2639920,21101856,168762352,1349941344,10799058352,86391049632,691124145520,5528980409568,44231805012784,353854325311008,2830834258114288,22646673031792992,181173381154980016 ★ Number of vertex points in a Sierpinski Carpet grid subdivided into squares: a(n + 1) = 8 * a(n) - 8 * (3 ^ n + 1), a(0) = 4. ● a(n) = 8 * (5 + 11 * 2 ^ (3 * n - 1) + 7 * 3 ^ n) / 35. ● a(n) = 12 * a(n - 1) - 35 * a(n - 2) + 24 * a(n - 3) for n > 2. (End) ●

► [A065731] 1,1,1,4,16,100,676,4900,40000,362404,3625216,39904489,478996996,6226945921,87177877081,1307672296225,20922784184449,355687416544329,6402373660047556,121645099966283776,2432902006216007824,51090942169052381124,1124000727752683686724 ★ Greatest perfect square that does not exceed n!. ● a(n) = floor(sqrt(n!)) ^ 2. ●

► [A111883] 1,1,4,16,100,676,5776,53824,583696,6864400,90174016,1274204416,19642583104,323196798016,5714394630400,107112895415296,2135062451773696,44858948563673344,994634863541502976,23133227941938073600,564474119626559497216,14388648533002088866816 ★ Unsigned row sums of triangle A111595 (normalized rescaled squared Hermite polynomials). ● a(n) = |H _ n(i / sqrt(2))| ^ 2 / 2 ^ n = H _ n(i / sqrt(2)) * H _ n(- i / sqrt(2)) / 2 ^ n, where H _ n(x) is n - th Hermite polynomial, i = sqrt(- 1). - _ Vladimir Reshetnikov _ , Oct 11 2016 ●

► [A370529] 0,0,0,0,0,0,1,4,16,100,730,5940,54160,547540,6077155,73473400,961231264,13530711096,203921897844,3276281076600,55900700199840,1009488884673720,19236189509000805,385733279064689820,8119635049867486640 ★ Number of permutations of [n] having exactly three adjacent 2 - cycles. ● a(n) = (1 / 6) * Sum _{ k=0..floor(n / 2) - 3 } (- 1) ^ k * (n - k - 3)! / k!. ●

► [A363443] 1,4,16,128,864,6912,55936,470016,4025600,35144704,311190784,2789206016,25254028288,230652174336,2122466561024,19659305379840,183146187440128,1714933158969344,16131631511164928,152366562180972544 ★ G.f. satisfies A(x) = exp(Sum _{ k>=1 } (- 1) ^ (k + 1) * A(x ^ k) * (4 * x) ^ k / k). ● a(0) = 1; a(n) = (- 1 / n) * Sum _{ k=1..n } (Sum _{ d|k } d * (- 4) ^ (k / d) * a(d - 1)) * a(n - k). ●

► [A319166] 4,16,144,960,12880,62208,1087632,7027200,85098816,691398400,10374307328,49985372160,1061265441600,7064952935040,90426613939200,708867057254400,11892871258806912,65078340559220736,1287559798913990448,8819554320783360000,111715065087913437696 ★ Number of primitive polynomials of degree n over GF(11). ● a(n) = phi(11 ^ n - 1) / n where phi is A000010. ●

► [A037976] 0,4,16,436,3200,78004,675808,15919320,150266880,3450748180,34461586016,774842070600,8061900244736,178065876017176,1912172640160960,41596867935469936,458156035085377536 ★ a(n) = (1 / 4) * (binomial(4 * n, 2 * n) - (- 1) ^ n * binomial(2 * n, n) + (1 - (- 1) ^ n) * binomial(2 * n, n) ^ 2). ● a(n) = (1 / 4) * (binomial(4 * n, 2 * n) - (- 1) ^ n * binomial(2 * n, n) + (1 - (- 1) ^ n) * binomial(2 * n, n) ^ 2). ● a(n) = Sum _{ k=0..floor((n - 1) / 2) } binomial(2 * n, 2 * k + 1) ^ 2. ●

► [A212748] 1,4,17,20,53,56,117,120,217,220,361,364,557,560,813,816,1137,1140,1537,1540,2021,2024,2597,2600,3273 ★ Number of (w,x,y,z) with all terms in { 0,...,n } and w=2 * floor((x + y + z) / 2)). ● a(n) = a(n - 1) + 3 * a(n - 2) - 3 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) + a(n - 6) - a(n - 7). ● a(n) = (2 * n ^ 3 + 3 * ((- 1) ^ n + 5) * n ^ 2 + (15 * (- 1) ^ n + 37) * n + 12) / 12. ● a(n) = (n ^ 3 + 9 * n ^ 2 + 26 * n + 6) / 6 for n even. ● a(n) = (n ^ 3 + 6 * n ^ 2 + 11 * n + 6) / 6 for n odd. (End) ●

► [A032828] 1,4,17,20,65,68,273,276,321,324,1041,1044,1089,1092,4369,4372,4417,4420,5137,5140,5185,5188,16657,16660,16705 ★ Numbers whose set of base - 16 digits is { 1,4 } . ● a(1)=1, a(2)=4; a(n) = 16 * a(floor(n / 2)) + 1 for n odd, otherwise a(n) = 16 * a(floor((n - 1) / 2)) + 4. - _ Bruno Berselli _ , May 28 2012 ●

► [A022134] 4,17,21,38,59,97,156,253,409,662,1071,1733,2804,4537,7341,11878,19219,31097,50316,81413,131729,213142,344871,558013,902884 ★ Fibonacci sequence beginning 4, 17. ● a(n) = term (1,1) in the 1x2 matrix [4,13] . [1,1; 1,0] ^ n. (End) ●

► [A042033] 1,4,17,21,227,248,1219,5124,236923,952816,4048187,5001003,54058217,59059220,290295097,1220239608,56421317065,226905507868,964043348537,1190948856405,12873531912587,14064480768992,69131454988555,29059030072321 2,13436285288256307 ★ Denominators of continued fraction convergents to sqrt(540). ● a(n) = 238142 * a(n - 8) - a(n - 16). - _ Wesley Ivan Hurt _ , Sep 05 2022 ●

► [A319970] 4,17,28,41,48,61,72,85,98,109,122,129,142,153,166,177,190,197,210,221,234,247,258,271,278 ★ a(n) = A003146(A003144(n)). ● a(1) = 4, a(n + 1)= 4 + Sum _{ k=1..n } d(k), where d is the tribonacci sequence on the alphabet (1 3,11,7 } . - _ Michel Dekking _ , Oct 04 2019 ●

► [A212756] 1,4,17,32,71,104,187,247,380,484,685,823,1122,1311,1690,1963,2452,2767,3416,3806,4557,5079,5982,6546,7679 ★ Number of (w,x,y,z) with all terms in { 0,...,n } and 2w - x=max { w,x,y,z }- min { w,x,y,z } . ● a(n)= - 2 * a(n - 1) + 5 * a(n - 3) + 7 * a(n - 4) - 9 * a(n - 6) - 9 * a(n - 7) + 7 * a(n - 9) + 5 * a(n - 10) - 2 * a(n - 12) - a(n - 13). ●

► [A273675] 1,4,17,33,56,85,120,161,208,261,320,385,456,533,616,705,800,901,1008,1121,1240,1365,1496,1633,1776 ★ Number of active (ON,black) cells in n - th stage of growth of two - dimensional cellular automaton defined by "Rule 833", based on the 5 - celled von Neumann neighborhood. ● a(n) = n * (2 + 3 * n) for n>2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>5. ●

► [A173511] 0,4,17,37,66,102,147,199,260,328,405,489,582,682,791,907,1032,1164,1305,1453,1610,1774,1947,2127,2316 ★ a(n) = 4 * n ^ 2 + floor(n / 2). ● a(n) = floor((2 * n + 1 / 8) ^ 2). ● a(n)= 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4). G.f.: - x * (4 + 9 * x + 3 * x ^ 2) / ((1 + x) * (x - 1) ^ 3). - _ R. J. Mathar _ , Feb 21 2010 ●

► [A182868] 1,4,17,38,67,104,149,202,263,332,409,494,587,688,797,914,1039,1172,1313,1462,1619,1784,1957,2138,2327 ★ a(n) = - 1 + n + 4 * n ^ 2. ● a(n) = 4 * n ^ 2 + n - 1. ● a(n) = a(n - 1) - 3 + 8 * n. ● a(n) = 2 * a(n) - a(n - 2) + 8. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A178947] 1,4,17,38,81,138,229,340,497,680,921,1194,1537,1918,2381,2888,3489,4140,4897,5710,6641,7634,8757,9948,11281 ★ Expansion of x * (1 + 2 * x + 8 * x ^ 2 + 3 * x ^ 4 + 4 * x ^ 3) / ((1 + x) ^ 2 * (x - 1) ^ 4). ● a(n) = (- 1 + (- 1) ^ n + (7 - 3 * (- 1) ^ n) * n - 6 * n ^ 2 + 6 * n ^ 3) / 8. ● a(n) = (3 * n ^ 3 - 3 * n ^ 2 + 2 * n) / 4 for n even. ● a(n) = (3 * n ^ 3 - 3 * n ^ 2 + 5 * n - 1) / 4 for n odd. ● a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + a(n - 4) + 2 * a(n - 5) - a(n - 6) for n>6. ●

► [A041859] 1,4,17,38,321,6779,54553,115885,518093,2188257,92424887,371887805,1579976107,3531840019,29834696259,630060461458,5070318387923,107706972373 04,48153107337139,203383126585860,8590244423943259,3456436082235889 6,146847687713378843 ★ Denominators of continued fraction convergents to sqrt(451). ● a(n) = 92942980 * a(n - 10) - a(n - 20) for n>19. - _ Vincenzo Librandi _ , Dec 26 2013 ●

► [A022266] 0,4,17,39,70,110,159,217,284,360,445,539,642,754,875,1005,1144,1292,1449,1615,1790,1974,2167,2369,2580 ★ a(n) = n * (9 * n - 1) / 2. ● a(n) = binomial(9 * n,2) / 9 for n >= 0. - _ Zerinvary Lajos _ , Jan 02 2007 ● a(n) = 9 * n + a(n - 1) - 5 for n > 0, a(0)=0. - _ Vincenzo Librandi _ , Aug 04 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n > 2. ● a(n) = (1 / 7) * Sum _{ i=n..(8 * n - 1) } i. (End) ●

► [A273309] 1,4,17,40,73,112,161,216,281,352,433,520,617,720,833,952,1081,1216,1361,1512,1673,1840,2017,2200,2393 ★ Number of active (ON,black) cells in n - th stage of growth of two - dimensional cellular automaton defined by "Rule 641", based on the 5 - celled von Neumann neighborhood. ● a(n) = (- 15 + (- 1) ^ n + 8 * n + 8 * n ^ 2) / 2 for n>1. ● a(n) = 4 * n ^ 2 + 4 * n - 7 for n>1 and even. ● a(n) = 4 * n ^ 2 + 4 * n - 8 for n>1 and odd. ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4) for n>3. ●

► [A145995] 1,4,17,40,73,116,169,232,305,388,481,584,697,820,953,1096,1249,1412,1585,1768,1961,2164,2377,2600,2833 ★ a(n) = 8 - 12 * n + 5 * n ^ 2. ● a(n) = a(n - 1) + 10 * n - 17, with a(1)=1. - _ Vincenzo Librandi _ , Nov 26 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>3, a(1)=1, a(2)=4, a(3)=17. ●

► [A212575] 0,1,4,17,42,85,142,235,346,495,680,911,1172,1505,1872,2305,2798,3365,3978,4699,5470,6335,7284,8335,9448 ★ Number of (w,x,y,z) with all terms in { 1,...,n } and 2|w - x|=|x - y| + |y - z|. ● a(n) = 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4) - 4 * a(n - 5) - a(n - 6) + 2 * a(n - 7) + 2 * a(n - 8) - a(n - 10). ●

► [A162148] 0,4,17,44,90,160,259,392,564,780,1045,1364,1742,2184,2695,3280,3944,4692,5529,6460,7490,8624,9867,11224,12700 ★ a(n) = n * (n + 1) * (5 * n + 7) / 6. ● a(n) = 4 * binomial(n + 2,3) + binomial(n + 1,3). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4), a(0)=0, a(1)=4, a(2)=17, a(3)=44. - _ Harvey P. Dale _ , May 20 2014 ●

► [A147656] 0,4,17,45,94,170,279,427,620,864,1165,1529,1962,2470,3059,3735,4504,5372,6345,7429,8630,9954,11407,12995,14724 ★ The arithmetic mean of the n - th and (n + 1) - st cubes, rounded down. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Vincenzo Librandi _ , May 06 2012 ● a(n) = Sum _{ k=0..n - 1 } (n + 1) ^ 2 - k for n >= 0 with empty domain of summation for n = 0. ● a(n) = n * (n + 1) ^ 2 - n * (n - 1) / 2 for n >= 0. ●

► [A095667] 4,17,45,95,175,294,462,690,990,1375,1859,2457,3185,4060,5100,6324,7752,9405,11305,13475,15939,18722,21850,25350,29250 ★ Fifth column (m=4) of (1,4) - Pascal triangle A095666. ● a(n) = sum _{ k=1..n } (sum _{ i=1..k } i * (n - k + 4)). - _ Wesley Ivan Hurt _ , Sep 25 2013 ●

► [A212577] 0,1,4,17,46,89,154,251,374,531,736,979,1268,1621,2024,2485,3026,3629,4302,5071,5914,6839,7876,8999,10216 ★ Number of (w,x,y,z) with all terms in { 1,...,n } and |w - x|=2|x - y| - |y - z|. ● a(n) = 2 * a(n - 1) - a(n - 2) + 2 * a(n - 3) - 4 * a(n - 4) + 2 * a(n - 5) - a(n - 6) + 2 * a(n - 7) - a(n - 8). ●

► [A213499] 0,4,17,47,96,176,286,439,634,885,1188,1561,1997,2515,3108,3796,4569,5451,6429,7528,8735,10076,11535,13142,14878 ★ Number of (w,x,y) with all terms in { 0,...,n } and w != min(|w - x|,|x - y|) ● a(n) = a(n - 1) + 2 * a(n - 2) - a(n - 3) - 2 * a(n - 4) - a(n - 5) + 2 * a(n - 6) + a(n - 7) - a(n - 8). ●

► [A213502] 0,4,17,47,98,178,291,445,644,896,1205,1579,2022,2542,3143,3833,4616,5500,6489,7591,8810,10154,11627,13237,14988 ★ Number of (w,x,y) with all terms in { 0,...,n } and x != min(|w - x|,|x - y|) ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - 2 * a(n - 3) + 3 * a(n - 4) - a(n - 5). ● a(n) = (2 * n * (2 * n ^ 2 + 4 * n + 1) - (- 1) ^ n + 1) / 4. - _ Bruno Berselli _ , Jul 02 2012 ●

► [A273334] 1,4,17,48,80,120,168,224,288,360,440,528,624,728,840,960,1088,1224,1368,1520,1680,1848,2024,2208,2400 ★ Number of active (ON,black) cells in n - th stage of growth of two - dimensional cellular automaton defined by "Rule 657", based on the 5 - celled von Neumann neighborhood. ● a(n) = 4 * n * (1 + n) for n>2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>5. ●

► [A273766] 1,4,17,48,81,121,169,225,289,361,441,529,625,729,841,961,1089,1225,1369,1521,1681,1849,2025,2209,2401 ★ Number of active (ON,black) cells in n - th stage of growth of two - dimensional cellular automaton defined by "Rule 913", based on the 5 - celled von Neumann neighborhood. ● a(n) = (1 + 2 * n) ^ 2 for n>3. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>6. ●

► [A173704] 0,0,4,17,49,111,219,390,646,1010,1510,2175,3039,4137,5509,7196,9244,11700,14616,18045,22045,26675,31999,38082,44994 ★ Partial sums of floor(n ^

3 / 2). • a(n) = Sum _{ k=0..n } floor(k ^ 3 / 2). • a(n) = round((n ^ 4 + 2 * n ^ 3 + n ^ 2 - 2 * n) / 8). • a(n) = round((n ^ 4 + 2 * n ^ 3 + n ^ 2 - 2 * n - 1) / 8). • a(n) = floor((n ^ 4 + 2 * n ^ 3 + n ^ 2 - 2 * n) / 8). • a(n) = ceiling ((n - 1) * (n + 1) * (n ^ 2 + 2 * n + 2) / 8). • a(n) = a(n - 2) + (n - 1) * (2 * n ^ 2 - n + 2) / 2, n>1. •

▶ [A334694] 0,4,17,51,124,260,489,847,1376,2124,3145,4499,6252,8476,11249,14655,18784,23732,29601,36499,44540,53844,64537,76751,90624 ⋆ a(n) = (n / 4) * (n ^ 3 + 2 * n ^ 2 + 5 * n + 8). • a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>4. •

▶ [A228960] 1,1,4,17,51,136,393,1233,3865,11851,36301,112520,351352,1098189,3433704,10758609,33794505,106344793,335061790,1056924667,3338026857,10554163533,33402840615,105809430024,335444908176 ⋆ a(n) = [x ^ n] (1 + x + x ^ 3 + x ^ 4) ^ n. • a(n) = [x ^ (3 * n)](1 + x + x ^ 3 + x ^ 4) ^ n. • a(n) = Sum _{ k = 0..floor(n / 3) } binomial(n,k) * binomial(n,3 * k). Applying Maple's sumrecursion command to this formula gives the above recurrence of Kotesovec. (End) • a(n) = hypergeom([1 / 3 - n / 3, 2 / 3 - n / 3, - n, - n / 3], [1 / 3, 2 / 3, 1], 1). - _ Vladimir Reshetnikov _ , Oct 04 2016 •

▶ [A370212] 1,1,1,4,17,51,142,442,1457,4702,14951,48038,156158,508860,1658112,5414754,17735473,58209803,191310964,629605300,2074916167,6846553375,22615507300,74775856026,247463508542 ⋆ Coefficient of x ^ n in the expansion of ((1 + x) / (1 - x ^ 3)) ^ n. • a(n) = Sum _{ k=0..floor(n / 3) } binomial(n + k - 1,k) * binomial(n,n - 3 * k). •

▶ [A362173] 1,1,1,4,17,51,481,3676,18369,272917,3011201,21058236,427112401,6160655359,55380250017,1423658493076,25361574327041,278603741558601,8673295084155649,183914415577719892,2387417408385462801,8727323918949763617 1,214647956819857007201 ⋆ a(n) = n! * Sum _{ k=0..floor(n / 3) } (n / 6) ^ k * binomial(n - 2 * k,k) / (n - 2 * k)!. • a(n) = n! * [x ^ n] exp(x + n * x ^ 3 / 6). •

▶ [A047668] 4,17,52,129,276,529,932,1537,2404,3601,5204,7297,9972,13329,17476,22529,28612,35857,44404,54401,66004,79377,94692,112129,131876 ⋆ Row 4 of a rray in A047666. • a(n) = (1 / 3) * (n ^ 4 + 8n ^ 2 + 3). •

▶ [A092091] 1,4,17,52,147,360,819,1712,3382,6312,11286,19368,32154,51744,81114,124080,185823,272844,393679,558844,781781,1078792,1470261,1980576,2639676 ⋆ Molien series for 9 - dimensional group of structure Z _ 2 X Z _ 2 and order 4, corresponding to complete weight enumerators of Hermitian self - dual GF(3) - linear codes over GF(9). • a(n) = ((315 * (857 + 167 * (- 1) ^ n) + 60 * (8347 + 581 * (- 1) ^ n) * n + (384718 + 6930 * (- 1) ^ n) * n ^ 2 + 84 * (2027 + 5 * (- 1) ^ n) * n ^ 3 + 48888 * n ^ 4 + 9240 * n ^ 5 + 1092 * n ^ 6 + 72 * n ^ 7 + 2 * n ^ 8)) / 322560. - _ Colin Barker _ , Jan 16 2017 •

▶ [A213577] 1,4,17,56,172,498,1395,3820,10307,27534,73064,193012,508341,1336132,3507189,9197732,24107124,63159782,165433895,433246860,1134484871,2970509594,7777554192,20363014056,53312938537 ⋆ Principal diagonal of the convolution array A213576. • a(n) = 5 * a(n - 1) - 6 * a(n - 2) - 3 * a(n - 3) + 6 * a(n - 4) + a(n - 5) - a(n - 6). • a(n) = Fibonacci(2 * n + 3) - Fibonacci(n + 3) - n * Fibonacci(n + 1). - _ G. C. Greubel _ , Jul 05 2019 •

▶ [A202752] 1,4,17,62,184,462,1022,2052,3819,6688,11143,17810,27482,41146,60012,85544,119493,163932,221293,294406,386540,501446,643402,817260,1028495 ⋆ Number of n X 4 nonnegative integer arrays with each row and column increasing from zero by 0 or 1. • a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. •

▶ [A252815] 4,17,63,187,468,1032,2067,3840,6716,11179,17855,27537,41212,60090,85635,119598,164052,221429,294559,386711,501636,643612,817491,1028748,1283532 ⋆ Number of n X 3 nonnegative integer arrays with upper left 0 and every value within 2 of its city block distance from the upper left and every value increasing by 0 or 1 with every step right or down. • a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n >7. •

▶ [A191272] 0,4,17,63,256,1025,4095,16384,65537,262143,1048576,4194305,16777215,67108864,268435457,1073741823,4294967296,17179869185,68719476735,274877906944,1099511627777,4398046511103,17592186044416,70368744177665 ⋆ Expansion of x * (4 + 5 * x) / ((1 - 4 * x) * (1 + x + x ^ 2)). • a(n + 1) = 4 * a(n) + (n - th element of periodic length 3 repeat 4, 1, - 5). • a(0)=0, a(1)=4, a(2)=17, a(n) = 3 * a(n - 1) + 3 * a(n - 2) + 4 * a(n - 3). - _ Harvey P. Dale _ , Jun 19 2011 • a(n) = 4 * a(n - 1) + a(n - 3) - 4 * (n - 4) (n>3). - _ Bruno Berselli _ , Jul 04 2011 •

▶ [A119916] 0,1,4,17,64,233,820,2825,9568,31985,105796,346913,1129312,3653657,11758132,37665881,120172096,382039649,1210689028,3825777329,12058462720,37918780361,118986517684,372650082857,1165021837984 ⋆ Number of runs of 0's of odd length in all ternary words of length n. • a(n) = ((- 1) ^ (n - 1) + (3 + 4 * n) * 3 ^ (n - 1)) / 8. - _ Johannes W. Meijer _ , Aug 01 2010 •

▶ [A005784] 1,4,17,65,230,736,2197,6093,15864,38960,90837,202005,430577,883057,1748909,3355213,6252575,11345602,20089514,34778306,58964020,98053576,160151566,257229974,406739271 ⋆ Number of 4 - covers of an unlabeled n - set. • a(n) = n ^ 14 / 2092278988800 + n ^ 13 / 19926466560 + n ^ 12 / 418037760 + n ^ 11 / 14598144 + 689 * n ^ 10 / 522547200 + 253 * n ^ 9 / 13934592 + 2184839 * n ^ 8 / 11705057280 + 10313 * n ^ 7 / 6967296 + 2319707 * n ^ 6 / 25082256 + 1817221 * n ^ 5 / 39813120 + 2405336243 * n ^ 4 / 13795246080 + 151784975 * n ^ 3 / 306561024 + 93746545019 * n ^ 2 / 95103590400 + 924100468541 * n / 717352796160 + 1 + (n ^ 2 / 486 + 5 * n / 162 + 233 / 2187) * floor(n / 3) + (n ^ 2 / 256 + 15 * n / 256 + 101 / 512) * floor(n / 4) - (n ^ 3 / 1458 + 7 * n ^ 2 / 486 + 22 * n / 243 + 356 / 2187) * floor((n + 1) / 3) + (n ^ 5 / 122880 + 5 * n ^ 4 / 16384 + 125 * n ^ 3 / 24576 + 359 * n ^ 2 / 8192 + 10967 * n / 61440 + 8461 / 32768) * floor(n / 2) + (n / 256 + 15 / 512) * floor((n + 1) / 4). - _ Vaclav Kotesovec _ , Aug 09 2022 •

▶ [A102207] 4,17,65,244,912,3405,12709,47432,177020,660649,2465577,9201660,34341064,128162597,478309325,1785074704,6661989492,24862883265,92789543569,346295291012,1292391620480,4823271190909,18000693143157 ⋆ a(n) = 5a(n - 1) - 5a(n - 2) + a(n - 3) with a(0) = 4, a(1) = 17, a(2) = 65. • a(n)=1 / 12 * ((3 - 7 * Sqrt[3]) * (2 - Sqrt[3]) ^ n + (3 + 7 * Sqrt[3]) * (2 + Sqrt[3]) ^ n - 6). - _ Harvey P. Dale _ , Mar 15 2013 •

▶ [A217539] 0,0,0,1,4,17,66,252,946,3523,13054,48248,178146,657813,2430962,8995521,33342588,123822171,460772982,1718304786,6421729878,24051429321,90272123682,339522804129,1279556832780 ⋆ Number of Dyck paths of semilength n which satisfy the condition: number of returns + number of hills < number of peaks. • a(n) = C(n) - (n - 1) * M(n - 2) - M(n - 1) for n > 0; C(n) Catalan, M(n) Motzkin numbers. •

▶ [A291394] 4,17,66,254,968,3679,13962,52957,200812,761396,2886768,10944725,41494856,157319353,596443614,2261290498,8573204920,32503490435,123230092830,467200760741,1771292578424,6715480046152,25460317920096,96527393973769,365963135802988 ⋆ p - INVERT of (1,1,0,0,0,0,...), where p(S) = (1 - S)(1 - 3 S). • a(n) = 4 * a(n - 1) + a(n - 2) - 6 * a(n - 3) - 3 * a(n - 4) for n >= 5. •

▶ [A244616] 1,4,17,66,265,1046,4165,16561,66017,263377,1051774,4202363,16797551,67159565,268561326,1074052233,4295730126,17181735211,68724026662,274888965526,1099538433297,4398111321331,17592342396443,70369120593536,281475881240563 ⋆ G.f.: Sum _{ n>=0 } (3 + x ^ n) ^ n * x ^ n / (1 - x) ^ (n + 1). • a(n) - 4 ^ n ~ n / 13 * ((1 + sqrt(13)) / 2) ^ n. - _ Vaclav Kotesovec _ , Jul 02 2014 •

▶ [A081113] 1,4,17,68,259,950,3387,11814,40503,136946,457795,1515926,4979777,16246924,52694573,170028792,546148863,1747255194,5569898331,17698806798,56076828573,177208108824,558658899825,1757365514652 ⋆ Number of paths of length n - 1 a king can take from one side of an n X n chessboard to the opposite side. • a(n) = Sum _{ k=1..n } k * (n - k + 1) * M(n - 1, k - 1) where k * (n - k + 1) is the triangular view of A003991 and M() is the Motzkin triangle A026300. •

▶ [A033114] 1,4,17,68,273,1092,4369,17476,69905,279620,1118481,4473924,17895697,71582788,286331153,1145324612,4581298449,18325193796,73300775185,293203100740,1172812402961,4691249611844,18764998447377,75059993789508 ⋆ Base - 4 digits are, in order, the first n terms of the periodic sequence with initial period 1,0. • a(n) = floor(4 ^ (n + 1) / 15) = 4 ^ (n + 1) / 15 - 1 / 6 - (- 1) ^ n / 10. - _ Benoit Cloitre _ , Apr 18 2003 • a(n) = Sum _{ k=0..floor(n / 2) } 4 ^ (n - 2 * k); a(n) = Sum _{ k=0..n } Sum _{ j=0..k } (- 1) ^ (j + k) * 4 ^ j. - _ Paul Barry _ , Nov 12 2003 • a(n) = round((8 * 4 ^ n - 5) / 30) = ceiling((4 * 4 ^ n - 4) / 15) = round((4 * 4 ^ n - 4) / 15); a(n) = a(n - 2) + 4 ^ (n - 1), n > 1. - _ Mircea Merca _ , Dec 28 2010 •

▶ [A096881] 1,4,17,68,289,1156,4913,19652,83521,334084,1419857,5679428,24137569,96550276,410338673,1641354692,6975757441,27903029764,118587876497,474351505988,2015993900449,8063975601796,34271896307633,137087585230532,582622237229761 ⋆ Expansion of g.f. (1 + 4 * x) / (1 - 17 * x ^ 2). • a(n) = 3 * a(n - 1) + 4 * a(n - 2) + 17 ^ floor((n - 2) / 2). • a(n) = Sum _{ k=0..floor(n / 2) } binomial(floor(n / 2), k) * 4 ^ (n - 2 * k). • a(n) = (1 / 5) * (- 1) ^ n * Sum _{ i=2..n } (17 ^ floor(- 1 + 1 / 2 * i) * (- 1) ^ i) + (4 / 5) * Sum _{ i=2..n } (17 ^ floor(- 1 + 1 / 2 * i) * (1 / 4) ^ i) * 4 ^ n + 4 ^ n, with n>=0. - _ Paolo P. Lava _ , Jun 12 2008 • a(n) = 17 * a(n - 2), n>1. - _ Harvey P. Dale _ , Jan 21 2012 •

▶ [A033122] 1,4,17,69,276,1105,4421,17684,70737,282949,1131796,4527185,18108741,72434964,289739857,1158959429,4635837716,18543350865,74173403461,296693613844,1186774455377,4747097821509,18988391286036,75953565144145 ⋆ Base - 4 digits are, in order, the first n terms of the periodic sequence with initial period 1,0,1. • a(n) = 4 * a(n - 1) + a(n - 3) - 4 * a(n - 4). •

▶ [A330246] 4,17,69,277,1109,4437,17749,70997,283989,1135957,4543829,18175317,72701269,290805077,1163220309,4652881237,18611524949,74446099797,297784399189,1191137596757,4764550387029,19058201548117,76232806192469,304931224769877,1219724899079509 ⋆ a(n) = 4 ^ (n + 1) + (4 ^ n - 1) / 3. • a(n) = 5 * a(n - 1) - 4 * a(n - 2) for n > 1. • a(n) = 4 * a(n - 1) + 1 for n > 0. • a(n) = (13 * 4 ^ n - 1) / 3, for n >= 0. - _ Wolfdieter Lang _ , Sep 16 2021 •

▶ [A349695] 1,4,17,70,282,1122,4433,17446,68510,268736,1053626,4130524,16195220,63517950,249214545,978228870,3841579830,15093382920,59329549950,233324644020,918016888620,3613561263780,14230112774202,56061218710620,220948453132652 ⋆ a(n) = (2n ^ 2 - n + 2) * (2n)! / ((n + 1) * (n + 2) * n! ^ 2). • a(n) = 4 ^ n * (2 * n ^ 2 - n + 2) * Gamma(n + 1 / 2) / (sqrt(Pi) * (n + 2)!). - _ Chai Wah Wu _ , Dec 17 2021 •

▶ [A003127] 0,1,4,17,70,282,1136,4583,18457,74131,296945,1190344,4773949,19145523,76751393,307503585,1231182078,4929075135,19736248104,79031964989,316476142454,1267191674419,5073155081395,20306187559891,81265371486027 ⋆ Value of an urn with n balls of type - 1 and n balls of type + 1. • a(n) = B(n, n) where B(n, m) is defined in A003125. - _ Sean A. Irvine _ , Feb 02 2015 •

▶ [A172447] 1,4,17,70,283,1136,4549,18202,72815,291268,1165081,4660334,18641347,74565400,298261613,1193046466,4772185879,19088743532,76354974145,305419896598,1221679586411,4886718345664,19546873382677,78187493530730,312749974122943 ⋆ a(n) = (- 1 + 5 * 2 ^ (2 * n + 1) - 3 * n) / 9. • a(n) = 6 * a(n - 1) - 9 * a(n - 2) + 4 * a(n - 3). • a(n + 1) - 4 * a(n) = n. •

▶ [A291009] 4,17,70,284,1144,4592,18400,73664,294784,1179392,4718080,18873344,75495424,301985792,1207951360,4831821824,19327320064,77309345792,309237514240,1236950319104,4947801800704,19791208251392,79164835102720,316659344605184,1266637386809344 ⋆ p - INVERT of (1,1,1,1,1,...), where p(S) = (1 - S) * (1 - 3 * S). • a(n) = 6 * a(n - 1) - 8 * a(n - 2) for n >= 3. • a(n) = 2 ^ (n - 1) * (9 * 2 ^ n - 1). •

▶ [A017955] 1,4,17,70,289,1191,4913,20256,83521,344365,1419857,5854220,24137569,99521746,410338673,1691869691,6975757441,28761784747,118587876497,488950340714,2015993900449,8312155792152 ⋆ Powers of sqrt(17) rounded down. • a(n) = floor(sqrt(17 ^ n)). - _ Vincenzo Librandi _ , Jun 24 2011 •

▶ [A188482] 1,4,17,71,295,1221,5040,20761,85380,350659,1438568,5896098,24145941,98812861,404118745,1651811920,6748282361,27556753703,112482005583,458958881572,1872034052651,7633342954234,31116252892098,126806214027741,516633711969649 ⋆ Diagonal sums of the Riordan matrix (1 / (1 - 4x),(1 - sqrt(1 - 4x)) / (2 * sqrt(1 - 4x)) (A188481). • a(n) = [x ^ n] 1 / ((1 - x) ^ (n + 1) * (1 - 2 * x - x ^ 2 + x ^ 3)). • a(n) = Sum _{ k=0..n } Sum _{ i=0..k } binomial(k,i) * binomial(2 * n + k - 2 * i + 2, n - k) * (- 1) ^ i. •

▶ [A364705] 1,4,17,71,297,1242,5194,21721,90836,379871,1588599,6643431,27782452,116184640,485877581,2031912512,8497342989,35535406887,148607058025,62

1466295998,2598936835130,10868606578493,45451896853104,190077257155779,794892318897727 ⋆ Expansion of 1 / (1 - 4 * x - x ^ 2 + x ^ 3). ● a(n) = 4 * a(n - 1) + a(n - 2) - a(n - 3). ● a(n) = Sum _{ k=0..n } Sum _{ j=0..k } binomial (n - k, j) * binomial(n - k, k - j) * 4 ^ (n - 2 * k) * ((1 - sqrt(17)) / 2) ^ (k - j) * (1 + sqrt(17)) / 2) ^ j. ●

▶ [A179606] 1,4,17,71,298,1249,5237,21956,92053,385939,1618082,6783941,28442233,119246404,499950377,2096083151,8788001338,36844419769,154473265997,647641896836,2715292020493,11384085545659,47728716739442 ⋆ Eight white kings and one red king on a 3 X 3 chessboard. G.f.: (1 + x) / (1 - 3 * x - 5 * x ^ 2). ● a(n) = 3 * a(n - 1) + 5 * a(n - 2) with a(0) = 1 and a(1) = 4. ● a(n) = ((29 + 7 * sqrt(29)) * A ^ (- n - 1) + (29 - 7 * sqrt(29)) * B ^ (- n - 1)) / 290 with A = (- 3 + sqrt(29)) / 10 and B = (- 3 - sqrt(29)) / 10 ●

▶ [A022031] 4,17,72,304,1283,5414,22845,96397,406757,1716352,7242319,30559689,128949662,544115986,2295951781,9687997993,40879475731,172495033261,727860031657,3071278144467,12959565068034,54684179957837,230745362360740,973653116715681,4108426630946045 ⋆ Define the sequence T(a(0),a(1)) by a(n + 2) is the greatest integer such that a(n + 2) / a(n + 1) < a(n + 1) / a(n) for n >= 0. This is T(4,17). ● a(n + 1) = ceiling(a(n) ^ 2 / a(n - 1)) - 1 for all n > 0. a(n + 1) / a(n) ~ 4.219599938... as n - > oo. - _ M. F. Hasler _ , Feb 11 2016 ●

▶ [A255117] 1,4,17,72,304,1284,5424,22912,96784,408832,1726976,7295040,30815488,130169856,549859584,2322700288,9811480576,41445360640,175072243712,739534897152,3123921031168,13195973099520,55742031986688,235463812071424,994639140683776 ⋆ Number of n - length words on { 0,1,2,3,4 } in which 0 appears only in runs of length 2. ● a(n + 3) = 4 * a(n + 2) + 4 * a(n) with n>1, a(0) = 1, a(1) = 4, a(2) = 17. ●

▶ [A001076] 0,1,4,17,72,305,1292,5473,23184,98209,416020,1762289,7465176,31622993,133957148,567451585,2403763488,10182505537,43133785636,182717648081,774004377960,3278735159921,13888945017644,58834515230497,249227005939632 ⋆ Denominators of continued fraction convergents to sqrt(5). ● a(n) = 4 * a(n - 1) + a(n - 2), n > 1. a(0)=0, a(1)=1. ● a(n) = ((2 + sqrt(5)) ^ n - (2 - sqrt(5)) ^ n) / (2 * sqrt(5)). ● a(n) = ((- i) ^ (n - 1)) * S(n - 1, 4 * i), with i ^ 2 = - 1 and S(n, x) := U(n, x / 2) Chebyshev's polynomials of the second kind. See A049310. S(- 1, x)=0. ● a(n) = Sum _{ i=0..n } Sum _{ j=0..n } Fibonacci(i + j) * n! / (i!j!(n - i - j)!) / 2. - _ Paul Barry _ , Feb 06 2004 ● a(n) = F(1) + F(4) + F(7) + ... + F(3n - 2), for n > 0. ● a(n) = Sum _{ k=0..n } Sum _{ j =0..n } C(n, j) * C(j, k)F(j) / 2. - _ Paul Barry _ , Feb 14 2005 ●

▶ [A257388] 1,4,17,72,306,1304,5573,23888,102702,442904,1915978,8314480,36195236,158067312,692475053,3043191200,13415404246,59321085720,263100680926,1170347803440,5221037429948,23356788588752,104772374565666,471214329434208,2124649562373708 ⋆ Number of 4 - Motzkin paths of length n with no level steps at odd level. ● a(n) = Sum _{ i=0..floor(n / 2) } 4 ^ (n - 2i) * C(i) * binomial(n - i,i), where C(n) is the n - th Catalan number A000108. ●

▶ [A113442] 1,4,17,72,306,1305,5577,23858,102108,437080,1871065,8009866,34289712,146792138,628407994,2690174883,11516466985,49301256865,211055514017,903515089697,3867890010850,16558188448465,70884540117396 ⋆ Third row of A113439. ● a(n) = 9 * a(n - 1) - 28 * a(n - 2) + 38 * a(n - 3) - 20 * a(n - 4) + a(n - 5). ●

▶ [A083330] 1,4,17,73,311,1309,5447,22453,91871,373789,1514327,6115333,24636431,99073069,397878407,1596280213,6399436991,25640729149,102691925687,411154861093,1645781181551,6586610462029,26356900104167 ⋆ a(n) = (3 * 4 ^ n - 2 * 3 ^ n + 2 ^ n) / 2. ● a(n) = (3 * 4 ^ n - 2 * 3 ^ n + 2 ^ n) / 2. ●

▶ [A255632] 1,4,17,73,312,1333,5697,24348,104057,444713,1900592,8122653,34714177,148359668,634051937,2709778633,11580912872,49493911173,211524537857,904002715788,3863480419017,16511544365353,70566191040352 ⋆ Number of n - length words on { 0,1,2,3,4 } avoiding runs of zeros of length 1 (mod 3). ● a(n + 3) = 4 * a(n + 2) + 5 * a(n) with n > 0, a(0) = 1, a(1) = 4, a(2) = 17. ●

▶ [A255814] 1,4,17,73,313,1341,5745,24613,105449,451773,1935521,8292309,35526553,152205613,652091089,2793739205,11969154121,51279178141,219694231041,941231059125,4032495084025,17276328107789,74016584439345,317107590101669 ⋆ Numbers of words on { 0,1,2,3,4, } having no isolated zeros. ● a(n + 3) = 5 * a(n + 2) - 4 * a(n + 1) + 4 * a(n) with n>=0, a(0) = 1, a(1) = 4, a(2) = 17. ●

▶ [A095940] 0,1,4,17,73,314,1351,5813,25012,107621,463069,1992482,8573203,36888569,158723236,682950473,2938582657,12644061866,54404561359,234090621197,1007239421908,4333925245949,18647907964021,80237764082258 ⋆ a(n + 2) = 5a(n + 1) - 3a(n) (n >= 1); a(0) = 0, a(1) = 1, a(2) = 4. ● a(n)=(1 / 2) * [5 / 2 - (1 / 2) * sqrt(13)] ^ n - (3 / 26) * [5 / 2 - (1 / 2) * sqrt(13)] ^ n * sqrt(13) + (3 / 26) * sqrt(13) * [5 / 2 + (1 / 2) * sqrt(13)] ^ n + (1 / 2) * [5 / 2 + (1 / 2) * sqrt(13)] ^ n + [C(2 * n,n) mod 2], with n>=0 [From _ Paolo P. Lava _ , Oct 02 2008] ●

▶ [A018902] 1,4,17,73,314,1351,5813,25012,107621,463069,1992482,8573203,36888569,158723236,682950473,2938582657,12644061866,54404561359,234090621197,1007239421908,4333925245949,18647907964021,80237764082258,345245096519227,1485512190349361 ⋆ a(n + 2) = 5 * a(n + 1) - 3 * a(n). ● a(n + 1) * a(n + 1) - a(n + 2) * a(n) = - 3 ^ n for n>0. - D. G. Rogers, Jul 11 2004 ● a(n) = 4 * a(n - 1) + a(n - 2) + a(n - 3) + a(n - 4) + ... + a(0). - _ Gary W. Adamson _ , Aug 12 2013 ● a(n) = (2 ^ (- 1 - n) * ((5 - sqrt(13)) ^ n * (- 3 + sqrt(13)) + (3 + sqrt(13)) * (5 + sqrt(13)) ^ n)) / sqrt(13). - _ Colin Barker _ , Jan 20 2017 ●

▶ [A344506] 1,4,17,73,315,1362,5895,25528,110579,479068,2075683,8993897,38971621,168871854,731764089,3170939841,13740635787,59542470588,258016586955,1118069698011,4844962624953,20994821090790,90977510544237,394235745437286,1708354520308101 ⋆ a(n) = [x ^ n] 2 / (1 - 7 * x + sqrt(1 - 2 * x - 3 * x ^ 2)). ● a(n) = [x ^ n] reverse((3 * x ^ 2 + x) / (13 * x ^ 2 + 7 * x + 1)) / x. ● a(n) = Sum _{ k=0..n } 3 ^ k * binomial(n, k) * hypergeom([(k - n) / 2, (k - n + 1) / 2], [k + 2], 4). ● a(n) = (39 * (2 - n) * a(n - 3) - (17 * n + 5) * a(n - 2) + (19 * n + 10) * a(n - 1)) / (3 * n + 3) for n >= 3. ●

▶ [A363541] 1,4,17,73,324,1469,6838,32490,157398,775010,3870690,19567202,99957231,515250057,2676884745,14002926871,73693381322,389904743248,2072794614996,11066421965311,59310040841395,318978744562253,1720962766007827 ⋆ G.f. satisfies A(x) = exp(Sum _{ k>=1 } (3 ^ k + A(x ^ k)) * x ^ k / k). ● a(0) = 1; a(n) = (1 / n) * Sum _{ k=1..n } (3 ^ k + Sum _{ d|k } d * a(d - 1)) * a(n - k). ●

▶ [A086351] 1,4,17,74,325,1432,6317,27878,123049,543148,2397545,10583234,46716589,206216896,910285253,4018193246,17737162705,78295623508,345613602113,1525612248122,6734378273941,29726983906792,131221255523165 ⋆ T(n,3) of A086350. ● a(n)=((1 + sqrt(2))(3 + sqrt(2)) ^ n - (1 - sqrt(2))(3 - sqrt(2)) ^ n) / (sqrt(8)). ●

▶ [A049027] 1,1,4,17,74,326,1446,6441,28770,128750,576944,2587850,11615932,52167688,234383146,1053386937,4735393794,21291593238,95747347176,430624242942,1936925461644,8712882517188,39195738193836,176335080590442,793336332850164 ⋆ G.f.: (1 - 2 * x * c(x)) / (1 - 3 * x * c(x)) where c(x) = (1 - sqrt(1 - 4 * x)) / (2 * x) is the g.f. for Catalan numbers A000108. ● a(n + 1) = Sum _{ k=0..n } 2 ^ k * comb(2n + 1, n - k) * 2 * (k + 1) / (n + k + 2) - _ Paul Barry _ , Jun 22 2004 ● a(n) = (9 * a(n - 1) - Catalan(n - 1)) / 2, n > 1. - _ Vladeta Jovovic _ , Aug 08 2004 ● a(n) = upper left term in M ^ (n - 1), M = an infinite square production matrix as follows: ● a(n) = 3 ^ (2 * n - 1) / 2 ^ (n + 1) + 2 ^ n * (2 * n - 1)!! * hypergeom([1,n + 1], [n + 2], 8 / 9) / (9 * (n + 1)!) + 0 ^ n * 2 / 3. - _ Vladimir Reshetnikov _ , Oct 08 2016 ●

▶ [A218984] 4,17,75,333,1481,6589,29317,130445,580413,2582541,11490989,51129037,227498125,1012250573,4503998541,20040495309,89169978317,396760903885,1765383572173,7855056096461,34950991530189,155514078313677,691958296315085,3078861341887693 ⋆ Power floor sequence of 2 + sqrt(6). ● a(n) = [x * a(n - 1)], where x=2 + sqrt(6), a(0) = [x]. ● a(n) = 5 * a(n - 1) - 2 * a(n - 2) - 2 * a(n - 3). ● a(n) = (1 / 30) * (6 + (57 - 23 * sqrt(6)) * (2 - sqrt(6)) ^ n + (2 + sqrt(6)) ^ n * (57 + 23 * sqrt(6))). - _ Colin Barker _ , Nov 13 2017 ●

▶ [A081568] 1,4,17,75,338,1541,7069,32532,149965,691903,3193706,14745009,68084297,314394980,1451837593,6704518371,30961415074,142980203437,660285858245,3049218769908,14081386948661,65028302171639,300302858766202 ⋆ Third binomial transform of Fibonacci(n + 1). ● a(n) = 7 * a(n - 1) - 11 * a(n - 2) for n >= 2, with a(0) = 1 and a(1) = 4. ●

▶ [A026378] 1,4,17,75,339,1558,7247,34016,160795,764388,3650571,17501619,84179877,406020930,1963073865,9511333155,46169418195,224484046660,1093097083475,5329784874185,26018549129545,127154354598330,622031993807565 ⋆ a(n) = number of integer strings s(0),...,s(n) counted by array T in A026374 that have s(n)=1; also a(n) = T(2n - 1,n - 1). ● a(n) = coefficient of t ^ n in (1 + t)(1 + 3t + t ^ 2) ^ (n - 1). - _ Emeric Deutsch _ , Jan 30 2004 ● a(n) = [2(3n - 2)a(n - 1) - 5(n - 2)a(n - 2)] / n for n>=2; a(0)=0, a(1)=1. - _ Emeric Deutsch _ , Mar 18 2004 ● a(n + 1) = sum(k=0, n, binomial(n, k) * sum(i=0, k, binomial(k + i, i))). - _ Benoit Cloitre _ , Aug 06 2004 ● a(n + 1) = sum(k=0, n, binomial(n, k) * binomial(2 * k + 1, k + 1)). - _ Benoit Cloitre _ , Aug 06 2004 ● a(n) = hypergeom([3 / 2, 1 - n], [2], - 4). - _ Vladimir Reshetnikov _ , Apr 25 2016 ● a(n) = (- 1) ^ n * (GegenbauerC(n - 2, - n + 1,3 / 2) - GegenbauerC(n - 1, - n + 1,3 / 2)). - _ Peter Luschny _ , May 13 2016 ●

▶ [A290914] 0,1,4,17,76,336,1484,6559,28988,128111,566184,2502240,11058600,48873265,215994436,954583169,4218761572,18644733936,82400035556,364165339279,1609421566844,7112807014943,31434910948176,138925971735744,613980604384080 ⋆ a(n) = (1 / 7) * A290913(n). ● a(n) = 4 * a(n - 1) + a(n - 2) + 4 * a(n - 3) - a(n - 4). ●

▶ [A117439] 1,4,17,76,337,1496,6641,29480,130865,580924,2578785,11447508,50816737,225581040,1001378849,4445229968,19732860833,87596322228,388849631729,1726145941404,7662550168241,34014896233544,150995835638929,670286989081400,2975477077435217 ⋆ Expansion of (1 - x ^ 2) / (1 - 4 * x - 2 * x ^ 2 + x ^ 4). ● a(n) = 4 * a(n - 1) + 2 * a(n - 2) - a(n - 4). ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(2 * n - 3 * k, k) * 4 ^ (n - 2 * k). ●

▶ [A081910] 1,4,17,76,352,1664,7936,37888,180224,851968,3997696,18612224,85983232,394264576,1795162112,8120172544,36507222016,163208757248,725849473024,3212635537408,14156212207616,62122406969344,271579372060672 ⋆ a(n) = 4 ^ n * (n ^ 2 - n + 32) / 32. ● a(n) = 4 ^ n * (n ^ 2 - n + 32) / 32. ● a(0)=1, a(1)=4, a(2)=17, a(n)=12 * a(n - 1) - 48 * a(n - 2) + 64 * a(n - 3). - _ Harvey P. Dale _ , Jan 18 2014 ●

▶ [A026773] 1,4,17,76,352,1674,8129,40156,201236,1020922,5234660,27089726,141335846,742712598,3927908193,20891799036,111688381228,599841215226,3234957053984,17512055200470,95125188934942,518340392855286,2832580291316092,15520177744727766 ⋆ a(n) = T(2n - 1,n - 1), T given by A026769. Also T(2n + 1,n + 1), T given by A026780. ● a(n) = Sum _{ k=0..n } C(n + k + 1, n + 1) * C(n + 1, k) / (k + 1). ● a(n) = Sum _{ k=0..n + 1 } C(n + 2, k) * C(n + k, n + 1) }/ (n + 2). (End) ●

▶ [A081186] 1,4,17,76,353,1684,8177,40156,198593,986404,4912337,24502636,122336033,611148724,3054149297,15265963516,76315468673,381534296644,1907542343057,9537324294796,47685459212513,238423809278164,1192108586037617,5960511549128476 ⋆ 4th binomial transform of (1,0,1,0,1,...), A059841. ● a(n) = 8 * a(n - 1) - 15 * a(n - 2) with n>1, a(0)=1, a(1)=4. ● a(n) = (3 ^ n + 5 ^ n) / 2. ● a(n) = Sum _{ k=0..floor(n / 2) } C(n, 2 * k) * 4 ^ (n - 2 * k). ●

▶ [A239204] 1,4,17,76,353,1688,8257,41128,207905,1063932,5501073,28695252,150827073,798054000,4247388417,22722717328,122125206977,659101365812,3570473750929,19407758970268,105820555054241,578622868877704,3172136074486337 ⋆ Expansion of ((x - 1) * sqrt(x ^ 2 - 6 * x + 1) - x ^ 2 - 4 * x + 1) / (8 * x ^ 3). ● a(n) = (Sum _{ i=0..n + 3 } binomial(n + 1, n - i + 3) * binomial(n + i, n)) / (2 * (n + 1)). ● a(n) = hypergeom([- n, - n - 2], [2], 2). - _ Peter Luschny _ , Sep 23 2014 ●

▶ [A005572] 1,4,17,76,354,1704,8421,42508,218318,1137400,5996938,31940792,171605956,928931280,5061593709,27739833228,152809506582,845646470616,4699126915422,26209721959656,146681521121244,823429928805936 ⋆ Number of walks on cubic lattice starting and finishing on the xy plane and never going below it. ● a(0) = 1 and, for n > 0, a(n) = 4a(n - 1) + Sum _{ i=1..n - 1 } a(i - 1) * a(n - i - 1). - _ John W. Layman _ , Jan 07 2000 ● a(n) = sum of top row terms of M ^ n, M = an infinite square production matrix as follows: ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n,2 * k) * binomial(2k,k) * 4 ^ (n - 2k) / (k + 1). - _ Max Alekseyev _ , Feb 02 2015 ● a(n) = Sum _{ k=0..n } binomial(n,k) * 2

^ (n - k) * binomial(2 * k + 2, k) / (k + 1). • a(n) = [x ^ n] (1 + 4 * x + x ^ 2) ^ (n + 1) / (n + 1). • a(n) = 2 ^ n * hypergeom([3 / 2, - n], [3], - 2). - _ Pet er Luschny _ , Feb 03 2015 •

▶ [A202879] 1,4,17,76,355,1724,8671,45028,240809,1323460,7461121,43079084,25 4388667,1534503676,9445067375,59263320964,378729294481,2463130313348,1629 0919259569,109500022678540,747527556645971,5180110680154684,364185214101 84127,259636520604139556 ⋆ E.g.f.: exp(4 * x + x ^ 2 / 2). • a(n) = Sum _{ k =0..[n / 2] } 4 ^ (n - 2 * k) / 2 ^ k * n! / ((n - 2 * k)! * k!). •

▶ [A124325] 0,0,1,4,17,76,362,1842,9991,57568,351125,2259302,15288000,108478 124,805037105,6233693772,50257390937,421049519856,3659097742426,329319567 13294,306490813820239,2945638599347760,29198154161188501 ⋆ Number of blo cks of size >1 in all partitions of an n - set. • a(n) = B(n + 1) - B(n) - n * B(n - 1), where B(q) are the Bell numbers (A000110). •

▶ [A104455] 1,4,17,77,371,1890,10095,56040,320795,1881524,11250827,6833077 3,420314629,2612922694,16389162537,103587298965,659071002195,421769977314 0,27129590096595,175303621195647,1137400502295081,7406899253418414,48396 105031873197,317180187174490902,2084542632685363221 ⋆ Expansion of e.g.f. e xp(5 * x) * (BesselI(0,2 * x) - BesselI(1,2 * x)). • a(n) = Sum _{ k=0..n } C(n , k) * C(k) * 3 ^ (n - k). • a(n) = 3 ^ n + Sum _{ k=0..n - 1 } a(k) * a(n - 1 - k), a(0)=1. - _ Philippe Deléham _ , Dec 12 2009 • a(n) = upper left term of M ^ n, M = an infinite square production matrix as follows: •

▶ [A123952] 1,4,17,77,371,1891,10123,56503,326699,1945799,11879987,7403916 7,469266331,3014973511,19581735203,128267231663,845770626539,560530959067 9,37293554232307,248855791875007,1664285028373691,11148949376158631,7477 9855705724483 ⋆ Sum of first row of the 5 X 5 matrix M ^ n, where M = {{ 5, - 1,0,0,0 } , {- 1,5, - 1,0,0 } , { 0, - 1,5, - 1,0 } , { 0,0, - 1,5, - 1 } , { 0,0,0, - 1,5 }} . • a(n) = 25 * a(n - 1) - 246 * a(n - 2) + 1190 * a(n - 3) - 2828 * a(n - 4) + 2640 * a(n - 5) (follows from the minimal polynomial of M). • a(n) = (2 * 5 ^ n + (5 - sqrt(3)) ^ n * (2 + sqrt(3)) - (- 2 + sqrt(3)) * (5 + sqrt(3)) ^ n) / 6. • a (n) = 15 * a(n - 1) - 72 * a(n - 2) + 110 * a(n - 3) for n>2. •

▶ [A005494] 1,4,17,77,372,1915,10481,60814,372939,2409837,16360786,11639320 5,865549453,6713065156,54190360453,454442481041,3952241526188,35590085232 519,331362825860749,3185554606447814,31581598272055879,32251628320644689 7 ⋆ 3 - Bell numbers: E.g.f.: exp(3 * z + exp(z) - 1). • a(n) = exp(- 1) * Sum _{ k>=0 } ((k + 3) ^ n) / k!. - _ Gerald McGarvey _ , Jun 03 2004. May be rewritten as a(n) = Sum _{ k>=3 } (k ^ n * (k - 1) * (k - 2) / k!) / exp(1), w hich is a Dobinski - type relation for this sequence. - _ Karol A. Penson _ , Au g 18 2006 • a(0) = 1; a(n) = 3 * a(n - 1) + Sum _{ k=0..n - 1 } binomial(n - 1, k) * a(k). - _ Ilya Gutkovskiy _ , Jul 02 2020 •

▶ [A257072] 1,4,17,77,374,1959,11085,67500,438485,3004985,21485222,15874446 7,1202966761,9297312916,72981656937,580105886517,4658713796790,3773632609 8735,307913254091925,2528335636842300,20875157745756429 ⋆ Number of 3 - c olored Schroeder paths of semilength n in which there are no (2,0) - steps at le vel 1. • a(n) = (3 ^ n + Sum _{ m=1..n } (m * Sum _{ j=0..n - m } (((Sum _{ k=0..j } (binomial(j + m,k) * binomial(j - 1,j - k) * 4 ^ (j - k))) * 3 ^ (n - j - m) * binomial(n - j,m)) / (j + m)))). - _ Vladimir Kruchinin _ , Mar 13 2016 • a(n) = 8 * y(n). •

▶ [A053486] 1,4,17,78,393,2208,13977,100026,806769,7280604,72865089,8016931 26,9620848953,125072630712,1751021612937,26265338542962,420245459734113,7 144417294420084,128595113390582001,2443307155583319486,4886614311515317 4121 ⋆ E.g.f.: exp(3x) / (1 - x). • a(n) = Sum[(n! / k!) * 3 ^ k { k=0...n }]. - _ Ross La Haye _ , Sep 21 2004 • a(n) = sum { k=0..n, k! * C(n, k)3 ^ (n - k) } . - _ Paul Barry _ , Apr 22 2005 • a(n) = n * a(n - 1) + 3 ^ n with a(0) = 1. • a(n) = n! * e ^ 3 - sum { k >= 0 } 3 ^ (n + k + 1) / ((n + 1) * ... * (n + k + 1)) • a(n) = exp(3) * Gamma(1 + n,3). - _ Peter Luschny _ , Dec 18 2017 • a(n) = KummerU(- n, - n, 3). - _ Peter Luschny _ , May 10 2022 •

▶ [A218134] 1,4,17,80,369,1700,7841,36160,166753,768996,3546289,16354000,754 17809,347795396,1603886913,7396455680,34109360321,157298104900,7253930760 49,3345209499600,15426707209777,71141522037604,328074947492321,151294445 3384000,6977067089461281 ⋆ Norm of coefficients in the expansion of 1 / (1 - 2 * x - i * x ^ 2), where i is the imaginary unit. • a(n) = 1 / (2 * sqrt(2)) * (T(n,1 + sqrt(2)) - T(n,1 - sqrt(2))), where T(n,x) denotes the Chebyshev polynomial of the first kind. • a(n) = the bottom left entry of the 2 X 2 matrix T(n, M), w here M is the 2 X 2 matrix [0, 1; 1, 2]. Note, the bottom left element of the ma trix M ^ n gives the Lucas sequence A000129. • a(n) = U(n - 1,exp(2 * i * Pi / 8)) * U(n - 1,exp(- 2 * i * Pi / 8)) = U(n - 1,(1 + i) / sqrt(2)) * U(n - 1,(1 - i) / sqrt(2)), where U(n,x) denotes the Chebyshev polynomial of the second kind. •

▶ [A089165] 1,4,17,80,401,2084,11073,59712,325441,1788004,9885457,54932176,3 06528145,1716461764,9640310017,54282691840,306337928449,1732172652868,981 1489710737,55660919625680,316204733423121,1798580947651044 ⋆ Partial sums of the central Delannoy numbers (A001850). • a(n) = Sum _{ j=0..n } Sum _{ i=0..2n } binomial(i, j) * binomial(j, i - j). - _ Benoit Cloitre _ , Oct 23 2004 •

▶ [A371915] 1,1,4,17,80,414,2289,13199,78306,474630,2926744,18304543,1158377 26,740379722,4772461321,30989448116,202518745795,1330961476358,8791022012 712,58325109518331,388523983047285,2597516226459845,17423367396517210,11 7223205014488833 ⋆ G.f. A(x) satisfies A(x) = 1 - x / A(x) ^ 2 * (1 - A(x) - A(x) ^ 5). • a(n) = (1 / n) * Sum _{ k=0..n } binomial(n,k) * binomial(3 * n - 5 * k,n - k - 1) for n > 0. •

▶ [A121545] 0,1,1,4,17,81,412,2192,12049,67891,390041,2276176,13455356,80402 284,484865032,2947107384,18036248337,111046920567,687345582787,4274642610 932,26697307240777,167377288848977 ⋆ Coefficients of Taylor series expansion of the operad Prim L. • a(n) = (1 / n) * Sum _{ k=1..n } k * (- 1) ^ (k + 1) * C(3 * n - k - 1,n - k). - _ Vladimir Kruchinin _ , Oct 09 2022 • a(n) = binomia l(3 * n - 2, n - 1) * hypergeom([2, 1 - n], [2 - 3 * n], - 1) / n for n >= 1. - _ Pet er Luschny _ , Oct 09 2022 •

▶ [A373931] 1,4,17,83,413,2037,10010,49183,241722,1188097,5839638,28702296,1 41073905,693388850,3408058991,16750869834,82331801783,404667078256,198896 9518921,9775936716973,48049473757425,236166824233838,1160777933797328,57 05311980035178 ⋆ Number of compositions of 7 * n - 5 into parts 1 and 7. • a(n) = Sum _{ k=0..n } binomial(n + 1 + 6 * k,n - 1 - k). • a(n) = 8 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). • a(n) = n * (1 + n) * hypergeom([1 - n,(2 + n) / 6, (3 + n) / 6, (4 + n) / 6, (5 + n) / 6, 1 + n / 6, (7 + n) / 6], [3 / 7, 4 / 7, 5 / 7, 6 / 7, 8 / 7, 9 / 7], - 6 ^ 6 / 7 ^ 7) / 2. - _ Stefano Spezia _ , Jun 23 2024 •

▶ [A093344] 0,1,4,17,84,485,3236,24609,210572,2004749,21033900,241237001,300 3349124,40345599957,581765196884,8963453118065,146969877361116,255536195 4692189,469633738568640 92,909707559383702169,185248168536364 7380,395634 467245613474981 ⋆ a(n) = n! * Sum _{ i=1..n } (1 / i) * Sum _{ j=0..i - 1 } 1 / j!. • a(n) = Integral _{ x=1..oo } exp(1 - x) * (x ^ n * log(x) - n! / x) dx. - _ Groux Roland _ , Mar 12 2011 • a(n) = n! * e * Sum _{ k=1..n } Gamma(k,1) / k!. - _ Robert Israel _ , Oct 28 2015 •

▶ [A104979] 1,1,4,17,85,459,2614,15454,93947,583568,3687761,23633072,1532272 50,1003281314,6624658716,44062205158,294938814921,1985330061570,134306122 84606,91262392343333,622624395706714,4263163419492661 ⋆ Semidiagonal sum s of triangle A104978: a(n) = Sum _{ k=0..[n / 2] } A104978(n - k,n - 2 * k). • a(n) = Sum _{ k=0..floor(n / 2) } binomial(3 * n - 4 * k, 3 * n - 5 * k) * bin omial(3 * n - 5 * k, n - 2 * k) / (2 * n - 3 * k + 1). •

▶ [A163071] 4,17,86,448,2344,12272,64256,336448,1761664,9224192,48298496,25 2894208,1324171264,6933450752,36304019456,190090313728,995325804544,52115 93572352,27288258215936,142883175006208,748146017173504 ⋆ a(n) = ((4 + sq rt(5)) * (3 + sqrt(5)) ^ n + (4 - sqrt(5)) * (3 - sqrt(5)) ^ n) / 2. • a(n) = 6 * a(n - 1) - 4 * a(n - 2) for n > 1; a(0) = 4, a(1) = 17. •

▶ [A056542] 0,1,4,17,86,517,3620,28961,260650,2606501,28671512,344058145,447 2755886,62618582405,939278736076,15028459777217,255483816212690,45987086 91828421,87375465144740000,1747509302894800001 ⋆ a(n) = n * a(n - 1) + 1, a (1) = 0. • a(n) = floor((e - 2) * n!). • a(n) = (n - 1) * (a(n - 1) + a(n - 2)) + 2, n > 2. - _ Gary Detlefs _ , Jun 22 2010 •

▶ [A110508] 1,1,4,17,87,490,2945,18517,120340,802005,5451651,37652546,263480 357,1864065017,13311094644,95816113129,694511157535,5064818563258,3713516 5923801,273581694291309,2024194855052180,15034769479254861 ⋆ Expansion of 1 / (1 - (x + x ^ 2)c(2x)), c(x) the g.f. of A000108. • a(0)=1; for n>0, a(n) = S um _{ k=0..floor(n / 2) } Sum _{ j=0..(n - k) } j * C(2n - 2k - j - 1, n - k - j) * C(j, k) * 2 ^ (n - k - j) / (n - k). •

▶ [A135168] 4,17,87,503,3123,20207,134067,903983,6162243,42326927,29230094 7,2026334063,14085963363,98111316047,684331387827,4778093469743,333855615 72483,233393582711567,1632228682858707,11417969834487023,798876372170856 03,559022711703937487 ⋆ a(n) = 7 ^ n + 5 ^ n + 3 ^ n + 2 ^ n. • a(n) = 17 * a(n - 1) - 101 * a(n - 2) + 247 * a(n - 3) - 210 * a(n - 4). •

▶ [A357617] 0,1,4,17,88,657,6844,83393,1072880,14242785,197046964,289589534 5,45930435016,789930042865,14628150636012,287915593953889,59508311213626 56,128180962018224833,2868724306984850020,6670487785079701435 3,161313817 6448134032440 ⋆ Expansion of e.g.f. sinh((exp(4 * x) - 1) / 4). • a(n) = Sum _{ k=0..floor((n - 1) / 2) } 4 ^ (n - 1 - 2 * k) * Stirling2(n,2 * k + 1). •

▶ [A058279] 1,1,4,17,89,551,3946,32119,293017,2962289,32878196,397500641,520 0386529,73202912047,1103244067234,17725107987791,302430079859681,5461466 545462049,104070294443638612,2086867355418234289,4392828475822655868 1,96 850913203640252527 1 ⋆ a(0)=a(1)=1, a(n)=a(n - 2) + (n + 1) * a(n - 1). • a(n) is asymptotic to c * n! with c=0.9007... - _ Benoit Cloitre _ , Sep 03 2002 •

▶ [A143405] 1,1,4,17,89,552,3895,30641,265186,2497551,25373097,276105106,319 9697517,39297401197,509370849148,6943232742493,99217486649933,1482237515 573624,23093484367004715,374416757914118941,6304680593346141746,11006331 1977033807187 ⋆ Number of forests of labeled rooted trees of height at most 1, with n labels, where any root may contain >= 1 labels, also row sums of A1433 95, A143396 and A143397. • a(n) = Sum _{ k=0..n } Sum _{ t=k..n } C(n,t) * Stirling2(t,k) * k ^ (n - t). • a(n) = Sum _{ k=0..n } Sum _{ t=0..k } C(n, k) * Stirling2(k,t) * t ^ (n - k). • a(n) = Sum _{ k=0..n } Sum _{ t=0..k } C(n,k - t) * Stirling2(n - (k - t),t) * t ^ (k - t). • a(n) = sum(binomial(n,k) * 2 ^ k * bell(k) * S(n - k, - 1),k=0..n), where bell(n) are the Bell numbers (A000110) a nd S(n,x) = sum(Stirling2(n,k) * x ^ k,k=0..n) are the Stirling (or exponential) polynomials. - _ Emanuele Munarini _ , Sep 15 2016 •

▶ [A024052] 1,4,17,98,561,3000,15409,77782,390113,1952396,9764625,48826794,2 44138897,1220700928,6103512881,30517574750,152587886529,762939448212,3814 697259793,19073486321266,95367431632625 ⋆ a(n) = 5 ^ n - n ^ 3. • a(n) = 9 * a(n - 1) - 26 * a(n - 2) + 34 * a(n - 3) - 21 * a(n - 4) + 5 * a(n - 5). •

▶ [A209903] 1,1,4,17,111,752,6893,64171,733540,8751579,119847295,171629478 0,27583937857,460405876777,8428298492136,160944930254405,330921078941638 7,70814345769448444,1617322515279759301,3832285587232745163,96082091085 2189283072 ⋆ E.g.f.: Product _{ n>=1 } B(x ^ n) where B(x) = exp(exp(x) - 1) = e.g.f. of Bell numbers. • a(n) = (n - 1)! * Sum _{ k=1..n } k * (Sum _{ d|k } 1 / d!) * a(n - k) / (n - k)! for n > 0. - _ Seiichi Manyama _ , Jul 02 20 21 •

▶ [A335945] 1,1,1,4,17,116,907,9010,102097,1348408,19939571,330204854,601565 7529,120016789348,2597201945899,60667591974826,1520434054966433,40710815 980598000,1159627208850209251,3501802233972642892 6,1117395892399939407 2 41,3756970961231426955439 6 ⋆ E.g.f. A(x) satisfies A(x) = exp(x * A(x) / (1 + x)). • a(n) = Sum _{ k=0..n } (- 1) ^ (n - k) * binomial(n - 1,k - 1) * (k + 1) ^ (k - 1) * n! / k!. •

▶ [A041701] 1,4,17,650,2617,11118,425101,1711522,7271189,278016704,11193380 05,4755368724,181823349517,732048766792,3110018416685,118912748600822,478 761012819973,2033956799880714,7776911940828710 5,313110434433029134,13302 10857140403641 ⋆ Denominators of continued fraction convergents to sqrt(370). • a(n) = 654 * a(n - 3) + a(n - 6) for n>5. - _ Vincenzo Librandi _ , Dec 23 2 013 •

▶ [A022384] 4,18,22,40,62,102,164,266,430,696,1126,1822,2948,4770,7718,12488,2 0206,32694,52900,85594,138494,224088,362582,586670,949252 ⋆ Fibonacci seque nce beginning 4, 18. • a(0)=4, a(1)=18, a(n) = a(n - 1) + a(n - 2). - _ Harvey P. Dale _ , Sep 04 2011 • a(n) = 4 * Fibonacci(n + 2) + 10 * Fibonacci(n) = 4 * Fibonacci(n + 2) + 18 * Fibonacci(n). - _ G. C. Greubel _ , Mar 02 2018 •

▶ [A130656] 1,4,18,32,75,108,196,256,405,500,726,864,1183,1372,1800,2048,260 1,2916,3610,4000,4851,5324,6348,6912,8125 ⋆ Interlacing n ^ 3 / 2 and n ^ 2(n +

1) / 2. ● a(n) = n ^ 2 * floor((n + 1) / 2). ● a(n) = a(n - 1) + 3 * a(n - 2) - 3 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) + a(n - 6) - a(n - 7), a(1)=1, a(2)=4, a(3)=18, a(4)=32, a(5)=75, a(6)=108, a(7)=196. - _ Harvey P. Dale _ , Feb 18 2015 ●

▶ [A336630] 0,4,18,38,108,274,726,1892,4962,12982,33996,88994,232998,609988,1596978,4180934,10945836,28656562,75023862,196415012,514221186,1346248534,3524524428,9227324738,24157449798 ⋆ a(n) = 2 * F(2 * n + 1) + 4 * F(n + 1) * F(n - 1) for n > 0, with a(0) = 0 and F(n) = A000045(n). ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - a(n - 2) for n > 3. (End) ●

▶ [A187297] 0,4,18,40,70,108,154,208,270,340,418,504,598,700,810,928,1054,1188,1330,1480,1638,1804,1978,2160,2350 ⋆ Number of 2 - step one space leftwards or up, two space rightwards or down asymmetric rook's tours on an n X n board summed over all starting positions ● a(n) = + 3 * a(n - 1) - 3 * a(n - 2) + 1 * a(n - 3). ●

▶ [A213492] 0,4,18,48,98,178,290,442,640,890,1196,1568,2008,2524,3122,3808,4586,5466,6450,7546,8760,10098,11564,13168,14912 ⋆ Number of (w,x,y) with all terms in { 0,...,n } and w != min(|w - x|,|x - y|,|y - w|). ● a(n) = 2 * a(n - 1) - a(n - 3) - a(n - 4) + 2 * a(n - 6) - a(n - 7). ●

▶ [A045991] 0,0,4,18,48,100,180,294,448,648,900,1210,1584,2028,2548,3150,3840,4624,5508,6498,7600,8820,10164,11638,13248 ⋆ a(n) = n ^ 3 - n ^ 2. ● a(n) = floor(n ^ 5 / (n ^ 2 + n + 1)). - _ Gary Detlefs _ , Feb 10 2010 ● a(n) = 4 * binomial(n,2) + 6 * binomial(n,3). - _ Gary Detlefs _ , Mar 25 2012 ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ● a(n) = Sum _{ k=0..n - 1 } Sum _{ i=n - k - 1..n + k - 1 } i. (End) ●

▶ [A114364] 4,18,48,100,180,294,448,648,900,1210,1584,2028,2548,3150,3840,4624,5508,6498,7600,8820,10164,11638,13248,15000,16900 ⋆ a(n) = n * (n + 1) ^ 2. ● a(n) = n * (n + 1) ^ 2. ●

▶ [A259451] 0,1,4,18,48,125,288,637,1344,2754,5500,10769,20736,39377,73892,137250,252672,461533,837216,1509341,2706000,4827186,8572124,15159553,26707968 ⋆ a(n) = n ^ 2 * Fibonacci(n). ● a(n) = 3 * a(n - 1) - 5 * a(n - 3) + 3 * a(n - 5) + a(n - 6). ●

▶ [A027271] 1,4,18,48,180,432,1512,3456,11664,25920,85536,186624,606528,1306368,4199040,8957952,28553472,60466176,191476224,403107840,1269789696,2660511744,8344332288,17414258688,54419558400 ⋆ a(n) = Sum _{ k=0..2n } (k + 1) * T(n,k), where T is given by A026536. ● a(n) = 6 ^ (n / 2) * ((3 - sqrt(6)) * (- 1) ^ n + (3 + sqrt(6))) * (n + 1) / 6. (End) ● a(n) = 4 * b(n) + b(n + 1) + 6 * b(n - 1) with b(n)= 0, 1, 0, 12, 0, 108, 0, 864, ... (aerated A053469). - _ R. J. Mathar _ , Sep 29 2012 ●

▶ [A073991] 0,4,18,48,180,1080,7056,44928,286416,1762560,10349856,60217344,356638464,2145709440,12976433280,78399995904,472093588224,2832561529344,16960580969472,101554796888064,608733733690368,3652526115938304,21926115464435712,131620960833896448 ⋆ Number of strings of length n over Z _ 6 with trace 3 and subtrace 2. ● a(n; t, s) = a(n - 1; t, s) + a(n - 1; t + 5, s + 5t + 1) + a(n - 1; t + 4, s + 4t + 4) + a(n - 1; t + 3, s + 3t + 3) + a(n - 1; t + 2, s + 2t + 2) + a(n - 1; t + 1, s + t + 1) where t is the trace and s is the subtrace. ●

▶ [A120656] 0,4,18,50,166,474,1478,4330,13206,39194,118438,353610,1064246,3185914,9571398,28686890,86115286,258236634,774928358,2324348170,6973918326,20920007354,62763517318,188283561450,564864665366 ⋆ a(n) = (- 4 + (- 2) ^ n + 2 * 3 ^ (n + 1)) / 3 - [n=0]. ● a(n) = (- 4 + (- 2) ^ n + 2 * 3 ^ (n + 1)) / 3 - [n=0]. ● a(n) = 2 * a(n - 1) + 5 * a(n - 2) - 6 * a(n - 3) for n>3. ●

▶ [A027659] 4,18,52,121,246,455,784,1278,1992,2992,4356,6175,8554,11613,15488,20332,26316,33630,42484,53109,65758,80707,98256,118730,142480 ⋆ a(n) = binomial(n + 2,2) + binomial(n + 3,3) + binomial(n + 4,4) + binomial(n + 5,5). ● a(n) = binomial(n + 6, 5) - binomial(n + 2, 1). - _ Zerinvary Lajos _ , May 08 2006 ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6), with a(0)=4, a(1)=18, a(2)=52, a(3)=121, a(4)=246, a(5)=455. - _ Harvey P. Dale _ , Aug 18 2012 ● a(n) = Sum _{ j=0..3 } binomial(n + j + 2, j + 2). ●

▶ [A059133] 4,18,52,126,280,594,1228,2502,5056,10170,20404,40878,81832,163746,327580,655254,1310608,2621322,5242756,10485630,20971384,41942898,83885932,167772006,335544160 ⋆ A hierarchical sequence (S(W2 { 2 } c) - see A059126). ● a(n) = 4 * (- 4 + 5 * 2 ^ n) - 6 * n. ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 2 * a(n - 3) for n>2. ● a(1) is the sum of the first phrase, (1,2,1). ●

▶ [A212250] 0,0,4,18,54,129,262,478,807,1281,1938,2821,3975,5451,7305,9595,12385,15744,19743,24459,29974,36372,43743,52182,61786 ⋆ Number of (w,x,y,z) with all terms in { 1,...,n } and 3w>=x + y + z + n. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 5 * a(n - 3) - 5 * a(n - 4) + 6 * a(n - 5) - 4 * a(n - 6) + a(n - 7). ● a(n) = (13 * n ^ 4 + 10 * n ^ 3 - 5 * n ^ 2 + 6 * n + 8 * b) / 72, where b = 0, - 3,1, 0, - 3,1,... (repeated). [_ Bruno Berselli _ , Jun 05 2012] ●

▶ [A212680] 0,0,4,18,56,120,228,378,592,864,1220,1650,2184,2808,3556,4410,5408,6528,7812,9234,10840,12600,14564,16698,19056 ⋆ Number of (w,x,y,z) with all terms in { 1,...,n } and |x - y|=|y - z| + 1. ● a(n)=2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + a(n - 4) + 2 * a(n - 5) - a(n - 6). ●

▶ [A027286] 1,4,18,56,190,564,1722,4976,14454,40940,115698,322728,896558,2471588,6786090,18537184,50459366,136844892,370030434,997705240,2683514526,7201203988,19284880794,51546789456,137541880150 ⋆ a(n) = Sum _{ k=0..2n } (k + 1) * A026584(n, k). ● a(n) = 2 ^ (n - 3) * (- 6 * F(n + 1, 1 / 2) + Sum _{ j=0..n } F(n - j + 1, 1 / 2) * (14 * F(j + 1, 1 / 2) + 5 * F(j, 1 / 2)), where F(n, x) are the Fibonacci polynomials. ● a(n) = (2 ^ (n - 1) / 17) * (n + 1) * (14 * L(n + 2, 1 / 2) + 5 * L(n + 1, 1 / 2)), where L(n, x) are the Lucas polynomials. ● a(n) = 2 * a(n - 1) + 7 * a(n - 2) - 8 * a(n - 3) - 16 * a(n - 4). (End) ●

▶ [A212521] 0,0,4,18,60,138,297,528,912,1440,2200,3180,4536,6174,8330,10920,14144,17928,22599,27900,34300,41580,50094,59664,70848 ⋆ Number of (w,x,y,z) with all terms in { 1,...,n } and w>=2x and y<=3z. ● a(n) = 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4) - 4 * a(n - 5) + 2 * a(n - 7) - 2 * a(n - 9) + 4 * a(n - 11) + a(n - 12) - 2 * a(n - 13) - 2 * a(n - 14) + a(n - 16). ●

▶ [A073373] 1,4,18,60,195,576,1644,4488,11925,30860,78278,195012,478599,1159080,2774880,6575280,15439065,35955540,83118970,190862860,435601611,988620624,2232236628,5016441240,11224087965 ⋆ Third convolution of A001045(n + 1) (generalized (1,2) - Fibonacci), n>=0, with itself. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n - k + 3, 3) * binomial(n - k, k) * 2 ^ k. ●

▶ [A227162] 4,18,62,193,558,1507,3828,9149,20609,43918,88960,172130,319637,572050,990413,1664308,2722302,4345275,6783191,10375943,15578976,22994469,33408938,47838207,67580783 ⋆ Number of n X 3 0,1 arrays indicating 2 X 2 subblocks of some larger (n + 1) X 4 binary array having a sum of one or less, with rows and columns of the latter in lexicographically nondecreasing order. ● a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10) for n>13. ●

▶ [A212766] 0,4,18,64,150,324,588,1024,1620,2500,3630,5184,7098,9604,12600,16384,20808,26244,32490,40000,48510,58564,69828,82944,97500 ⋆ Number of (w,x,y,z) with all terms in { 0,...,n } , w even and x odd. ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 6 * a(n - 3) + 6 * a(n - 5) - 2 * a(n - 6) - 2 * a(n - 7) + a(n - 8). ● a(n) = (2n(n + 2) - (- 1) ^ n + 1)(n + 1) ^ 2 / 8. [_ Bruno Berselli _ , Jun 11 2012] ●

▶ [A100177] 1,4,18,64,175,396,784,1408,2349,3700,5566,8064,11323,15484,20700,27136,34969,44388,55594,68800,84231,102124,122728,146304,173125 ⋆ Structured meta - prism numbers, the n - th number from a structured n - gonal prism number sequence. ● a(n) = (1 / 6) * (3 * n ^ 4 - 9 * n ^ 3 + 12 * n ^ 2). ●

▶ [A362316] 0,0,4,18,64,210,664,2058,6304,19170,58024,175098,527344,1586130,4766584,14316138,42981184,129009090,387158344,1161737178,3485735824,10458256050,31376865304,94134790218,282412759264 ⋆ Expansion of e.g.f (exp(x) - 1) * (exp(2 * x) - 1). ● a(n) = 3 ^ n - 2 ^ n - 1, n>0; a(0)=0. ●

▶ [A005367] 4,18,70,270,1054,4158,16510,65790,262654,1049598,4196350,16781310,67117054,268451838,1073774590,4295032830,17180000254,68719738878,274878431230,1099512676350,4398048608254,17592190238718 ⋆ a(n) = 2 * (2 ^ n + 1) * (2 ^ (n + 1) - 1). ● a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3). (End) ●

▶ [A027261] 1,4,18,72,270,972,3402,11664,39366,131220,433026,1417176,4605822,14880348,47829690,153055008,487862838,1549681956,4907326194,15496819560,48814981614,153418513644,481176247338,1506290861232,4707158941350 ⋆ a(n) = Sum _{ k=0..2n } (k + 1) * A025177(n, k). ● a(n) = 2(n + 1) * 3 ^ (n - 1), for n>1 (conjectured). - _ Ralf Stephan _ , Feb 02 2004 ●

▶ [A159715] 4,18,72,270,972,3402,11664,39366,131220,433026,1417176,4605822,14880348,47829690,153055008,487862838,1549681956,4907326194,15496819560,48814981614,153418513644,481176247338,1506290861232,4707158941350 ⋆ Number of permutations of 2 indistinguishable copies of 1..n arranged in a circle with exactly 1 local maximum. ● a(n) = (copies * n) * (copies + 1) ^ (n - 2), here: copies = 2. ● a(n) = 2 * 3 ^ (n - 2) * n for n>1. ● a(n) = 6 * a(n - 1) - 9 * a(n - 2) for n>3. (End) ●

▶ [A290919] 4,18,72,271,976,3398,11516,38179,124272,398248,1259240,3935420,12173440,37314700,113452128,342426657,1026711724,3059968146,9069834488,26748151221,78518859336,229505772002,668173273988,1938126895864,5602502738380 ⋆ p - INVERT of the positive integers, where p(S) = (1 - S) ^ 4. ● a(n) = 12 * a(n - 1) - 58 * a(n - 2) + 144 * a(n - 3) - 195 * a(n - 4) + 144 * a(n - 5) - 58 * a(n - 6) + 12 * a(n - 7) - a(n - 8). ●

▶ [A117615] 0,1,4,18,72,290,1160,4642,18568,74274,297096,1188386,4753544,19014178,76056712,304226850,1216907400,4867629602,19470518408,77882073634,311528294536,1246113178146,4984452712584,19937810850338,79751243401352 ⋆ a(0)=0, a(1)=1, a(n)=4a(n - 1) + 2 for n =3,5,7,..., a(n)=4a(n - 1) for n =2,4,6,... . ● a(n) = 3 * a(n - 1) + 4 * a(n - 2) + 2,n>=3. - _ R. J. Mathar _ , Nov 07 2015 ●

▶ [A343580] 1,1,4,18,72,600,2400,29400,117600,1905120,7620480,153679680,614718720,14841066240,59364264960,1669619952000,6678479808000,214453407168000,857813628672000,30967071995059200,123868287980236800,4965992272662220800,19863969090648883200 ⋆ a(n) = abs(A021009(n, floor(n / 2))). ● a(n) = ((- 1) ^ floor(n / 2) * n! / floor(n / 2)!) * hypergeom([n + 1, - floor(n / 2)], [1], 1). ● a(n) = binomial(n, floor(n / 2)) * FallingFactorial(n, n - floor(n / 2)). ●

▶ [A037497] 1,4,18,73,292,1170,4681,18724,74898,299593,1198372,4793490,19173961,76695844,306783378,1227133513,4908534052,19634136210,78536544841,314146179364,1256584717458,5026338869833,20105355479332,80421421917330 ⋆ Base - 4 digits are, in order, the first n terms of the periodic sequence with initial period 1,0,2. ● a(n) = 4 * a(n - 1) + a(n - 3) - 4 * a(n - 4). (End) ● a(n) = floor(2 * 4 ^ n / 7). - _ Karl V. Keller, Jr. _ , Sep 22 2020 ●

▶ [A266753] 1,4,18,74,298,1194,4778,19114,76458,305834,1223338,4893354,19573418,78293674,313174698,1252698794,5010795178,20043180714,80172722858,320690891434,1282763565738,5131054262954,20524217051818,82096868207274,328387472829098 ⋆ Decimal representation of the n - th iteration of the "Rule 163" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = 5 * a(n - 1) - 4 * a(n - 2) for n>2. ● a(n) = 4 * a(n - 1) + 2, n>1, conjectured. - _ Yosu Yurramendi _ , Jan 22 2017 ●

▶ [A180140] 1,4,18,74,312,1306,5478,22964,96282,403666,1692408,7095554,29748702,124723876,522915138,2192364794,9191670072,38536834186,161568852918,677390729684,2840016453642,11907003009346,49921091296248 ⋆ Eight rooks and one berserker on a 3 X 3 chessboard. G.f.: (1 + x + x ^ 2) / (1 - 3 * x - 5 * x ^ 2). ● a(n) = 3 * a(n - 1) + 5 * a(n - 2) for n>=3 with a(0)=1, a(1)=4 and a(2)=18. ● a(n) = ((22 + 54 * A) * A ^ (- n - 1) + (22 + 54 * B) * B ^ (- n - 1)) / 145 with A=(- 3 + sqrt(29)) / 10 and B=(- 3 - sqrt(29)) / 10 for n>=1 with a(0)=1. ●

▶ [A066259] 1,4,18,75,320,1352,5733,24276,102850,435655,1845504,7817616,33116057,140281700,594243090,2517253683,10663258432,45170286424,191344405725,810547906740,3433536036866,14544692047439,61612304237568 ⋆ a(n) = Fibonacci(n) * Fibonacci(n + 1) ^ 2. ● a(n) = (1 / 5) * (F(3n + 2) - (- 1) ^ n * F(n - 1)). - _ Ralf Stephan _ , Jul 26 2005 ● a(n) = (F(n + 2) ^ 3 - 2 * F(n) ^ 3 - F(n - 1) ^ 3) / 6. - _ Greg Dresden _ , Aug 12 2022 ●

▶ [A084213] 1,4,18,76,312,1264,5088,20416,81792,327424,1310208,5241856,20969472,83881984,335536128,1342160896,5368676352,21474770944,85899214848,343597121536,1374389010432,5497557090304,21990230458368,87960926027776 ⋆ Binomial transform of A081250. ● a(n) = (5 * 4 ^ n - 2 ^ (n + 1) + 0 ^ n) / 4. ● a(n + 1) = 2 ^ n * (5 * 2 ^ n - 1) for all n >= 0. - _ M. F. Hasler _ , Nov 03 2012 ●

► [A291417] 4,18,76,322,1360,5744,24256,102428,432528,1826456,7712656,32568568,137528704,580748416,2452351488,10355650832,43729255232,184657419808,779760883392,3292730050592,13904353779456,58714516845824,247936332973056,1046971490364864 ⋆ p - INVERT of (1,1,0,0,0,0,...), where p(S) = 1 - 4 S + 2 S ^ 2. ● a(n) = 4 * a(n - 1) + 2 * a(n - 2) - 4 * a(n - 3) - 2 * a(n - 4) for n >= 5. ●

► [A017958] 1,4,18,76,324,1374,5832,24743,104976,445375,1889568,8016758,34012224,144301645,612220032,2597429617,11019960576,46753733110,198359290368,841567195983,3570467226624,15148209527700 ⋆ Powers of sqrt(18) rounded down. ● a(n) = floor(sqrt(18 ^ n)). - _ Vincenzo Librandi _ , Jun 24 2011 ●

► [A100069] 1,4,18,76,326,1384,5892,25036,106438,452344,1922588,8170936,34726940,147589264,627256088,2665837516,11329815878,48151714264,204644809932,869740430056,3696396920116,15709686864304,66766169526008,283756220309176,1205963937666076 ⋆ a(n) = Sum _{ k=0..floor(n / 2) } binomial(n,k) * 4 ^ (n - 2 * k). ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n, k) * 4 ^ (n - 2 * k) . ● a(n) = Sum _{ k=0..n } binomial(n, (n - k) / 2) * (1 + (- 1) ^ (n - k)) * 4 ^ k / 2. ●

► [A208309] 4,18,78,336,1446,6222,26772,115194,495654,2132688,9176478,39484326,169892196,731008002,3145363422,13533793104,58232875254,250562996958,1078116359028,4638892804266,19960114944246,85883896308432 ⋆ Number of n X 3 0..1 arrays with new values 0..1 introduced in row major order and no element equal to more than one of its immediate leftward or upward neighbors. ● a(n) = (2 ^ (- n) * ((5 - sqrt(13)) ^ n * (- 7 + sqrt(13)) + (5 + sqrt(13)) ^ n * (7 + sqrt(13)))) / (3 * sqrt(13)). ●

► [A177755] 0,4,18,80,200,468,882,1600,2592,4100,6050,8784,12168,16660,22050,28928,36992,46980,58482,72400,88200,106964,128018,152640,180000 ⋆ Number of ways to place 2 nonattacking bishops on an n X n toroidal board. ● a(1)=0, a(2)=4, a(3)=18, a(4)=80, a(5)=200, a(6)=468, a(7)=882, a(8)=1600, a(n)=2 * a(n - 1) + 2 * a(n - 2) - 6 * a(n - 3) + 6 * a(n - 5) - 2 * a(n - 6) - 2 * a(n - 7) + a(n - 8). - _ Harvey P. Dale _ , Mar 06 2013 ●

► [A037965] 0,1,4,18,80,350,1512,6468,27456,115830,486200,2032316,8465184,35154028,145608400,601749000,2481880320,10218366630,42004911960,172427570700,706905276000,2894777105220,11841673237680,48394276165560,1976023374624 00 ⋆ a(n) = n * binomial(2 * n - 2, n - 1). ● a(n + 1) = Sum _{ k=0..n } binomial(2 * k,k) * (4 ^ (n - k) + 0 ^ (n - k)) / 2. (End) ●

► [A045902] 1,4,18,80,355,1580,7066,31772,143645,652860,2981910,13682328,63046776,291646860,1353967250,6306552800,29464361530,138045441260,648449195350,3053348997200,14409512770575,68143962854836,322886537205062,1532716400556220,7288075248828605 ⋆ Catafusenes (see reference for precise definition). ● a(n) = (4 / n) * Sum _{ j=1..n } binomial(n, j) * binomial(2j + 3, j - 1) for n >= 1. - _ Emeric Deutsch _ , Mar 25 2004 ●

► [A090017] 0,1,4,18,80,356,1584,7048,31360,139536,620864,2762528,12291840,54692416,243353344,1082798208,4817899520,21437194496,95384577024,424412697088,1888419942400,8402505163776,37386860539904,166352452487168 ⋆ a(n) = 4 * a(n - 1) + 2 * a(n - 2) for n>1, a(0)=0, a(1)=1. ● a(n) = (- i * sqrt(2)) ^ (n - 1) U(n - 1, i * sqrt(2)) where U is the Chebyshev polynomial of the second kind and i ^ 2 = - 1. ● a(n) = ((2 + sqrt(6)) ^ n - (2 - sqrt(6)) ^ n) / (2 sqrt(6)). - Al Hakanson (hawkuu(AT)gmail.com), Jan 05 2009, Jan 07 2009 ●

► [A252823] 4,18,81,340,1238,3891,10761,26764,60988,129236,257653,487744,883142,1538541,2591269,4236040,6743492,10483190,15951849,23807612,34911302,50375655,71623633,100457012,139136540 ⋆ Number of n X 3 nonnegative integer arrays with upper left 0 and every value within 3 of its city block distance from the upper left and every value increasing by 0 or 1 with every step right or down. ● a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10) for n>10. ●

► [A100192] 1,4,18,82,374,1704,7752,35214,159750,723880,3276908,14821668,66991436,302605528,1366182276,6165204102,27811282374,125415953208,565408947756,2548400193852,11483706241044,51739037228688,233070330199296 ⋆ a(n) = Sum _{ k=0..n } binomial(2n,n + k) * 2 ^ k. ● a(n) = sum { k=0..n, binomial(2n, n - k)2 ^ k } . ● a(n) = sum { k=0..n, C(2n,k) * 2 ^ (n - k) } ; - _ Paul Barry _ , Jan 11 2007 ● a(n) = sum { k=0..n, C(n + k - 1,k)3 ^ (n - k) } ; - _ Paul Barry _ , Sep 28 2007 ● a(n) = [x ^ n] 1 / ((1 - x) ^ n * (1 - 3 * x)). - _ Ilya Gutkovskiy _ , Oct 12 2017 ●

► [A052913] 1,4,18,82,374,1706,7782,35498,161926,738634,3369318,15369322,70107974,319801226,1458790182,6654348458,30354161926,138462112714,631602239718,2881086973162,13142230386374,59948977985546,273460429154982,1247404189803818,5690100090709126 ⋆ a(n + 2) = 5 * a(n + 1) - 2 * a(n), with a(0) = 1, a(1) = 4. ● a(n) = Sum _{ alpha=RootOf(1 - 5 * z + 2 * z ^ 2) } (1 / 17) * (3 + alpha) * alpha ^ (- 1 - n). ● a(n) = ((17 + 3 * sqrt(17)) / 34) * ((5 + sqrt(17)) / 2) ^ n + ((17 - 3 * sqrt(17)) / 34) * ((5 - sqrt(17)) / 2) ^ n. - _ N. J. A. Sloane _ , Jun 03 2002 ●

► [A279285] 0,1,4,18,82,377,1740,8045,37226,172314,797744,3693493,17101128,79180525,366618808,1697509962,7859781454,36392245541,168502887396,780199897985,3612471696230,16726421117538,77446465948772,358591660029577,1660346632032144 ⋆ Self - composition of the Pell numbers; g.f.: A(x) = G(G(x)), where G(x) = g.f. of A000129. ● a(n) = 6 * a(n - 1) - 5 * a(n - 2) - 6 * a(n - 3) - a(n - 4). ●

► [A187077] 1,4,18,83,385,1788,8305,38575,179170,832189,3865253,17952864,83385309,387298083,1798875698,8355202169,38807241321,180247221864,837190686169,3888482927823,18060759310562,83886449530197,389625723579965 ⋆ Number of row - convex polyplets with n cells. ● a(n) = 7a(n - 1) - 13a(n - 2) + 10a(n - 3) - 2a(n - 4) for n > 4. ●

► [A218986] 4,18,83,385,1788,8306,38587,179265,832820,3869074,17974755,83506241,387949228,1802315634,8373110219,38899387777,180716881764,839565690386,3900413406835,18120350698497,84182643014492,391091624153458,1816914425657307,8440932575089601 ⋆ Power floor sequence of 2 + sqrt(7). ● a(n) = [x * a(n - 1)], where x=2 + sqrt(7), a(0) = [x]. ● a(n) = 5 * a(n - 1) - a(n - 2) - 3 * a(n - 3). ● a(n) = (14 + (161 - 61 * sqrt(7)) * (2 - sqrt(7)) ^ n + (2 + sqrt(7)) ^ n * (161 + 61 * sqrt(7))) / 84. - _ Colin Barker _ , Sep 02 2016 ●

► [A290916] 0,1,4,18,84,387,1784,8228,37944,174981,806940,3721270,17160940,79139079,364956336,1683025992,7761412016,35792386313,165059516916,761185462362,3510269016516,16187892672139,74651791054120,344262840164460,1587596244438120 ⋆ a(n) = (1 / 8) * A290915(n). ● a(n) = 4 * a(n - 1) + 2 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ●

► [A126020] 1,4,18,84,394,1836,8468,38632,174426,780156,3460156,15232344,66613828,289609144,1252537704,5391904208,23114020090,98712408732,420134237996,1782630641656,7542431851692,31830492787880,134013965210008,563006802201264,2360517093477284 ⋆ Number of convex permutominoes of size n. ● a(n) = 2 * (n + 3) * 4 ^ (n - 2) - n / 2 * binomial(2 * n,n). ●

► [A086405] 1,4,18,84,396,1872,8856,41904,198288,938304,4440096,21010752,99423936,470479104,2226331008,10535111424,49852682496,235905426432,1116316463616,5282466223104,24996898556928,118286594002944 ⋆ Row T(n,3) of number array A086404. ● a(n) = (3 - sqrt(3)) ^ n * (1 / 2 - 1 / (2 * sqrt(3))) + (3 + sqrt(3)) ^ n * (1 / 2 + 1 / (2 * sqrt(3))). ● a(n) = Sum _{ k=1..floor(n / 2) } C(n, 2k) * 3 ^ (n - k - 1). - _ Paul Barry _ , Nov 22 2003 ● a(n) = (((1 + sqrt(3)) * (3 + sqrt(3)) ^ n) - ((1 - sqrt(3)) * (3 - sqrt(3)) ^ n)) / sqrt(12). - Al Hakanson (hawkuu(AT)gmail.com), Jun 10 2009 ● a(n) = 6 * (a(n - 1) - a(n - 2)), a(0) =1, a(1)=4. - _ David Nacin _ , Feb 27 2012 ●

► [A293490] 1,4,18,84,400,1932,9436,46512,231066,1155660,5813808,29396952,149305884,761282032,3894953640,19987999696,102847396416,530446714812,2741576339716,14196136939600,73631851898220,382483602131400,1989514312826400,10361255764532400,54020655931542300 ⋆ a(n) = Sum _{ k=0..n } binomial(2 * k, k) * binomial(2 * n - k, n). ● a(n) = [x ^ n] 1 / (sqrt(1 - 4 * x) * (1 - x) ^ (n + 1)). ● a(n) = [x ^ n] 1 / ((1 - x) ^ (n + 1) * (1 - 2 * x / (1 - x / (1 - x / (1 - x / (1 - ...)))))), a continued fraction. ● a(n) = 4 ^ n * Gamma(n + 1 / 2) * 2F1(- n,n + 1; 1 / 2 - n; 1 / 4) / (sqrt(Pi) * Gamma(n + 1)). ●

► [A010849] 1,4,18,84,403,1976,9860,49912,255701,1323292,6907830,36331500,192339687,1024140336,5481165832,29469454640,159094662121,862087135988,4687164401114,25562520325828,139803777476859,766578879858024 ⋆ Let S(x,y) = number of lattice paths from (0,0) to (x,y) that use the step set { (0,1), (1,0), (2,0), (3,0), ... } and never pass below y = x. Sequence gives S(n - 3,n). ● a(n) = (4 / n) * sum(binomial(n, k) * binomial(n + k + 3, k - 1), k=1..n) = 4 * hypergeom([1 - n, n + 5], [2], - 1), n>=1, a(0)=1. ●

► [A085923] 1,1,4,18,84,440,2670,18732,149912,1349280,13492890,148421900,1781062932,23153818272,324153455990,4862301840060,77796829441200,1322546100500672,23805829809012402,452310766371235980,9046215327424719980,189970521875919120000,4179351481270220640462 ⋆ a(0) = 1, a(n + 1) = (n + 1) * (a(n) + n). ● a(n) = n! * (1 + Sum _{ k=0..n - 2 } 1 / k!), for n>1. - _ Vaclav Kotesovec _ , Oct 28 2012 ●

► [A110166] 1,4,18,85,410,1999,9807,48304,238570,1180615,5851253,29033074,144190943,716652070,3564079250,17734184365,88280673770,439625873215,2189988826125,10912480440850,54389237971285,271142650382080 ⋆ Row sums of Riordan array A110165. ● a(n) = Sum _{ k = 0..n } Sum _{ j = 0..n } C(n, j) * C(2 * j, j + k). ● a(n) = (1 / 2) * (5 ^ n) * (1 + Sum _{ k = 0..n } binomial(n,k) * binomial(2 * k,k) * (- 1 / 5) ^ k). ● a(n) = [x ^ n] (5 * x + 1 / (1 + x)) ^ n. ● a(0) = 1, a(1) = 4 and n * a(n) = 3 * (2 * n - 1) * a(n - 1) - 5 * (n - 1) * a(n - 2) + 5 ^ (n - 1) for n >= 2. ●

► [A055834] 1,1,4,18,85,413,2044,10248,51876,264550,1357070,6994780,36196706,187938842,978599560,5108177816,26721644973,140050505085,735254208670,3865837887450,20353393741065,107290306033845,566194674179160,2990958274811520,15814562990604300 ⋆ T(2n,n), where T is the array in A055830. ● a(n) = Sum _{ k=0..n } binomial(n + k - 1,n) * binomial(k,n - k). - _ Max Alekseyev _ , Jun 17 2007 ●

► [A082685] 1,4,18,86,422,2094,10438,52126,260502,1302254,6510758,32552766,162761782,813804814,4069015878,20345063006,101725282262,508626345774,2543131597798,12715657726846,63578288109942,317891439501134 ⋆ (2 * 5 ^ n + 2 ^ n) / 3. ● a(n)=sum { k=0..n, sum { j=0..n, C(n, j)C(j + k, 2k)2 ^ (j - k) }} . - _ Paul Barry _ , Nov 16 2005 ● a(0)=1, a(1)=4, a(n)=7 * a(n - 1) - 10 * a(n - 2). - _ Harvey P. Dale _ , Apr 09 2014 ●

► [A111966] 1,4,18,86,424,2128,10798,55190,283510,1461730,7557166,39153338,203188892,1055863564,5492668906,28598497610,149012237696,776904940576,4052654604042,21149661562298,110415949871240,576636302495488 ⋆ Expansion of 1 / (sqrt(1 - 6x + 5x ^ 2) - x). ● a(n) = Sum _{ k=0..n } Sum _{ j=0..n } C((k + 2j - 1) / 2,j) * C(j,n - j - k) * (- 6) ^ (k - n + 2 * j) * 5 ^ (n - k - j). ●

► [A225887] 1,4,18,86,426,2162,11166,58438,309042,1648154,8851206,47813790,259585002,1415431266,7747200558,42545600310,234346445154,1294260644906,7165245015510,39754745775886,221009855334426,1230909476804594,6867024985408638,38369226561522086 ⋆ a(n) = A212205(2 * n + 1). ● a(n) = Sum _{ k=0..n } ((k + 1) * Sum _{ j=0..n + 1 } (binomial(j,n - k - j) * 3 ^ (- n + k + 2 * j) * 2 ^ (n - k - j) * binomial(n + 1,j))) / (n + 1). - _ Vladimir Kruchinin _ , Mar 13 2016 ●

► [A153294] 1,1,4,18,86,427,2180,11373,60380,325259,1773842,9776637,54380144,304905223,1721650832,9782051362,55888463214,320898932595,1850762866662,10717217871255,62287285235230,363212668363520,2124430957852380 ⋆ G.f.: A(x) = F(x * F(x) ^ 2) = F(F(x) - 1) where F(x) = 1 + x * F(x) ^ 2 is the g.f. of A000108 (Catalan). ● a(n) = Sum _{ k=0..n } C(2k + 1,k) / (2k + 1) * C(2n,n - k) * k / n for n>0 with a(0)=1. ●

► [A164045] 1,4,18,87,431,2150,10744,53713,268557,1342776,6713870,33569339,167846683,839233402,4196166996,20980834965,104904174809,524520874028,2622604370122,13113021850591,65565109252935,327825546264654 ⋆ a(n + 1) = 5 * a(n) - n. ● a(0)=1; a(n + 1) = 5 * a(n) - n. ● a(n) = (11 * 5 ^ n + 4 * n + 5) / 16. ● a(n) = 7 * a(n - 1) - 11 * a(n - 2) + 5 * a(n - 3). ●

► [A178577] 0,1,4,18,87,434,2170,10851,54254,271268,1356337,6781684,33908420,169542101,847710504,4238552518,21192762587,105963812934,529819064670,2649095323351,13245476616754,66227383083768,331136915418837 ⋆ Partial sums of round(5 ^ n / 9). ● a(n) = round((5 * 5 ^ n + 9) / 36). ● a(n) = floor((5 * 5 ^ n + 23) / 36). ● a(n) = ceiling((5 * 5 ^ n - 5) / 36). ● a(n) = a(n - 6) + 434 * 5 ^ (n - 5), n > 5. ● a(n) = 6 * a(n - 1) - 5 * a(n - 2) - a(n - 3) + 6 * a(n - 4) - 5 * a(n - 5), n > 4. ●

► [A298646] 0,0,4,18,88,360,1524,6090,24784,98244,393820,1556324,6196656,24461424,97079220,383132250,1518103840,5992343940,23726184372,93686670220,370840981680,1464969055368,5798679839524,22917832613988,90725318348448 ⋆ a(n) is the sum of the degrees of asymmetry of all Dyck paths of semilength n. ● a(n) = (2 * (n - 1) * (34328 * n ^ 3 + 1024539 * n ^ 2 - 2260739 * n - 3203910) * n * a(n - 1) + 24 * (n - 1) * (63276 * n ^ 4 - 396683 * n ^ 3 + 460919 * n ^ 2 + 544393 * n - 1067970) * a(n - 2) - 32 * (34328 * n ^ 5 + 784243 * n ^ 4 - 7831140 * n ^ 3 + 24334466 * n ^ 2 - 31463717 * n + 15037140) * a(n - 3) - 128 * (n - 3) * (n - 4) * (2 * n - 7) * (38875 * n ^ 2 - 225739 * n + 246552) * a(n - 4)) / ((n + 2) * (n + 1) * n * (56039 * n ^ 2 - 121145 * n - 130144)) for n>3, a(n) = 0 for n<3, a(3) = 4. - _ Alois P. Heinz _ , Feb 28 2018 ●

► [A199309] 4,18,88,438,2188,10938,54688,273438,1367188,6835938,34179688,170898438,854492188,4272460938,21362304688,106811523438,534057617188,2670288085938,13351440429688,66757202148438,333786010742188,1668930053710938 ⋆ (7 * 5 ^ n + 1) / 2. ● a(n) = 5 * a(n - 1) - 2. ● a(n) = 6 * a(n - 1) - 5 * a(n - 2). ●

► [A083325] 1,4,18,88,450,2344,12258,63928,331650,1710664,8776098,44810968,227894850,1155188584,5839863138,29458185208,148335970050,745888724104,3746365209378,18799770682648,94271406797250,472449572045224,2366624986030818,11850654354079288 ⋆ a(n) = 5 ^ n - 4 ^ n + 3 ^ n. ● a(n) = 5 ^ n - 4 ^ n + 3 ^ n. ●

► [A050146] 1,1,4,18,88,450,2364,12642,68464,374274,2060980,11414898,63521352,354870594,1989102444,11180805570,63001648608,355761664002,2012724468324,11406058224594,64734486343480,367891005738690,2093292414443164,11923933134635298,67990160422313808 ⋆ a(n) = T(n,n), array T as in A050143. ● a(n) = Sum _{ k=1..n } binomial(n, k) * binomial(n + k - 2, k - 1), n > 0. (End) ● a(n + 1) = Jacobi _ P(n, 1, - 1, 3); a(n + 1) = Sum { k=0..n } C(n + 1, k) * C(n - 1, n - k) * 2 ^ k. - _ Paul Barry _ , Jan 23 2006 ● a(n) = n * hypergeometric([1 - n, n], [2], - 1) for n >= 1. - _ Peter Luschny _ , Sep 17 2014 ●

► [A083879] 1,4,18,88,452,2384,12744,68576,370192,2001472,10829088,58612096,317289536,1717746944,9299922048,50350919168,272608444672,1475954689024,7991119286784,43265588647936,234249039168512,1268274072276992 ⋆ a(0)=1, a(1)=4, a(n) = 8 * a(n - 1) - 14 * a(n - 2), n >= 2. ● a(n) = 2 ^ ((n - 2) / 2) * (2 * sqrt(2) - 1) ^ n + 2 ^ ((n - 2) / 2) * (2 * sqrt(2) + 1) ^ n; ● a(n) = Sum _{ k=0..n } C(n, 2k) * 5 ^ (n - 2k)2 ^ k. ●

► [A081671] 1,4,18,88,454,2424,13236,73392,411462,2325976,13233628,75682512,434662684,2505229744,14482673832,83940771168,487610895942,2838118247064,16547996212044,96635257790352,565107853947444,3308820294176016,19395905063796312,113814537122646432 ⋆ Expansion of e.g.f. exp(4x) * I _ 0(2x). ● a(n) = Sum _{ m=0..m } Sum _{ k=0..m } C(n, m) * C(m, k) * C(2k, k). ● a(n) = Sum _{ k=0..n } 2 ^ (n - k) * C(n, k) * C(2 * k, k). - _ Paul Barry _ , Jan 27 2005 ● a(n) = Sum _{ k=0..n } 6 ^ (n - k) * (- 1) ^ k * C(n,k) * C(2 * k, k). - _ Paul D. Hanna _ , Dec 09 2018 ● a(n) = 2 ^ n * hypergeom([- n,1 / 2], [1], - 2). - _ Peter Luschny _ , Apr 26 2016 ● a(n) = GegenbauerC(n, - n, - 2). - _ Peter Luschny _ , May 09 2016 ● a(n) = Sum _{ k=0..floor(n / 2) } 4 ^ (n - 2 * k) * binomial(n,2 * k) * binomial(2 * k,k). - _ Seiichi Manyama _ , May 04 2019 ●

► [A006629] 1,4,18,88,455,2448,13566,76912,444015,2601300,15426840,92431584,558685348,3402497504,20858916870,128618832864,797168807855,4963511449260,31032552351570,194743066471800,1226232861415695 ⋆ Self - convolution 4th power of A001764, which enumerates ternary trees. ● a(n) = 2 * binomial(3 * n + 3,n) / (n + 2). - _ Emeric Deutsch _ ●

► [A068764] 1,1,4,18,88,456,2464,13736,78432,456416,2697088,16141120,97632000,595912960,3665728512,22703097472,141448381952,885934151168,5575020435456,35230798994432,223485795258368,1422572226146304,9083682419818496,58169612556614592,373486362257899520 ⋆ Generalized Catalan numbers. ● a(n + 1) = 2 * sum(a(k) * a(n - k), k=0..n), n>=1, a(0) = 1 = a(1). ● a(n) = (2 ^ n) * p(n, - 1 / 2) with the row polynomials p(n, x) defined from array A068763. ● a(n) = subs(t=1,(d ^ (n - 1) / dt ^ (n - 1))(- 1 + 2 * t ^ 2) ^ n) / n!, n >= 2, due to the Lagrange series for the given implicit o.g.f. equation. This formula holds also for n=1 if no differentiation is used. - _ Wolfdieter Lang _ , Nov 13 2007 , Feb 22 2008 ● a(n) = sum(binomial(n - 1,k - 1) * 1 / k * sum(binomial(k,j) * binomial(k + j,j - 1),j,1,k),k,1,n), n>0. - _ Vladimir Kruchinin _ , Aug 11 2010 ● a(n) = 4 ^ (n - 1) * hypergeom([(1 - n) / 2,1 - n / 2], [2], 1 / 2) + 0 ^ n / sqrt(2). - _ Vladimir Reshetnikov _ , Nov 07 2015 ● a(n) = (- 1) ^ n * Sum _{ k=0..n } (- 2) ^ k * binomial(n,k) * binomial(2 * k + 1,n) / (2 * k + 1). - _ Seiichi Manyama _ , Jul 24 2023 ●

► [A046984] 1,4,18,88,468,2672,16072,100064,636368,4097984,26579488,173093760,1129796928,7383588608,48287978624,315921649152,2067346607360,13530037877760,88555066819072,579620448450560,3793872862974976,24832858496561152,162544900186359808 ⋆ Number of ways to tile a 4 X 3n rectangle with right trominoes. ● a(0)=1, a(1)=4, a(2)=18, a(n)=10 * a(n - 1) - 22 * a(n - 2) - 4 * a(n - 3). - _ Harvey P. Dale _ , Mar 31 2012 ●

► [A011270] 1,1,4,18,90,481,2690,15547,92124,556664,3417062,21248966,133576724,847465593,5419399722,34895368578,226050057378,1472170887755,9633297762870,63305402213336,417612181048826,2764492667188504,18358282050480384,122265756020847943 ⋆ Hybrid binary rooted trees with n nodes whose root is labeled by "n". ● a(n) = (2 / (n + 2)) * Sum _{ j=0...n } binomial(n + j + 1, n + 1) * binomial(n + j + 2, n - j). - _ Vladimir Kruchinin _ , Dec 24 2010 ●

► [A355247] 1,4,18,90,494,2946,18926,130066,950654,7353794,59954638,513333618,4601380766,43062556322,419742815726,4252083713874,44680229906622,486145710591874,5468499473222670,63503107472489266,760281866742088670,9373065303624742498,118858898763010225198 ⋆ Expansion of e.g.f. exp(2 * (exp(x) - 1 + x)). ● a(n) = Sum _{ k=0..n } binomial(n,k) * Bell(k + 1) * Bell(n - k + 1). - _ Ilya Gutkovskiy _ , Jun 26 2022 ●

► [A367875] 1,4,18,91,512,3169,21352,155257,1209680,10039825,88318136,819958033,8004898600,81913041721,876117919616,9770201709649,113347591376672,1365288066794017,17043527322085096,220145837754233713,2937871757773069496,40451715334029650953 ⋆ Expansion of e.g.f. exp(x * (3 + exp(x))). ● a(n) = Sum _{ k=0..n } (k + 3) ^ (n - k) * binomial(n,k). ●

► [A172964] 0,4,18,92,230,522,1022,1808,2970,4610,6842,9792,13598,18410,24390,31712,40562,51138,63650,78320,95382,115082,137678,163440,192650 ⋆ Number of ways to place 2 nonattacking knights on an n X n cylindrical board. ● a(n) = n * (n ^ 3 - 9 * n + 12) / 2, n>=5. ●

► [A185298] 0,1,4,18,92,520,3222,21700,157544,1224576,10133450,88843084,821832156,7992373168,81458868974,867700216380,9636146477648,111323478770560,1335253363581330,16598183219157772,213488758730421380,2837046652845556963,88899888173340835894 ⋆ Expansion of e.g.f. x * exp(x) * exp(x * exp(x)). ● a(n) = Sum _{ k=1..n } binomial(n,k) * k ^ (n - k + 1). - _ Vladimir Kruchinin _ , Sep 23 2011 ●

► [A337010] 1,4,18,92,532,3440,24552,191280,1612304,14597952,141123872,1449324992,15743376704,180203389696,2166381979264,27274611880704,358690234163456,4916123783848960,70076765972288000,1036967662211324928,15902394743591408640 ⋆ a(n) = exp(- 1 / 2) * Sum _{ k>=0 } (2 * k + 3) ^ n / (2 ^ k * k!). ● a(0) = 1; a(n) = 4 * a(n - 1) + Sum _{ k=2..n } binomial(n - 1,k - 1) * 2 ^ (k - 1) * a(n - k). ●

► [A081923] 1,4,18,92,536,3552,26608,223456,2085504,21450752,241320704,2949474816,38933066752,552141672448,8374148696064,135274709700608,2318995023429632,42051109758173184,804227474125029376 ⋆ Expansion of exp(2x) / (1 - x) ^ 2. ● a(n) = n! * sum(k=0..n, (k + 1) * 2 ^ (n - k) / (n - k)!). [_ Dennis P. Walsh _ , Sep 18 2013] ● a(n) = n! * sum(k=0..n, (n - k + 1) * 2 ^ k / k!). [_ Dennis P. Walsh _ , Sep 18 2013] ● a(n) = KummerU(- n, - n - 1, 2). - _ Peter Luschny _ , May 10 2022 ●

► [A346763] 1,4,18,93,550,3636,26079,197931,1562382,12685116,105187512,886700898,7574331987,65413265014,570155069547,5008957733472,44306834969838,394269180748272,3527034255411864,31700659283908242,286124960854479888,2592334353741781752,23567790327842864046 ⋆ G.f. A(x) satisfies: A(x) = 1 / (1 - 3 * x) + x * (1 - 3 * x) * A(x) ^ 3. ● a(n) = Sum _{ k=0..n } binomial(n,k) * binomial(3 * k,k) * 3 ^ (n - k) / (2 * k + 1). ●

► [A121584] 1,4,18,93,569,4074,33336,306035,3111771,34708944,421407314,5533007841,78125977725,1180594364966,19012215609564,325058642549919,5880810783960431,112243265407073100,2254038189505807926 ⋆ Number of cells in columns 1 and 2 of all deco polyominoes of height n. A deco polyomino is a directed column - convex polyomino in which the height, measured along the diagonal, is attained only in the last column. ● a(1)=1, a(2)=4, a(n)=[(2n - 3)a(n - 1) - (n - 1)a(n - 2)] / (n - 2) + (1 / 2)(2n ^ 3 - 9n ^ 2 + 17n - 16)(n - 1)! / (n - 2) for n >=3. ●

► [A364475] 1,1,4,18,94,529,3135,19270,121732,785496,5155167,34304706,230923653,1569684910,10759159000,74281473504,516089542684,3605685460750,25316226436086,178538289189108,1264131169628799,8982889404251721,64041351551534215 ⋆ G.f. satisfies A(x) = 1 + x * A(x) ^ 3 + x ^ 2 * A(x) ^ 3. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(3 * n - 3 * k,k) * binomial(3 * n - 4 * k,n - 2 * k) / (2 * n - 2 * k + 1). ●

► [A001563] 0,1,4,18,96,600,4320,35280,322560,3265920,36288000,439084800,5748019200,80951270400,1220496076800,19615115520000,334764638208000,6046686277632000,115242726703104000,2311256907767808000,48658040163532800000,1072909785605898240000 ⋆ a(n) = n * n! = (n + 1)! - n!. ● a(0)=0, a(n) = n * a(n - 1) + n!. - _ Benoit Cloitre _ , Feb 16 2003 ● a(0) = 0, a(n) = (n - 1) * (1 + Sum _{ i=1..n - 1 } a(i)) for i > 0. - _ Gerald McGarvey _ , Jun 11 2004 ● a(n) = 1 / (Sum _{ k>=0 } k! / (n + k + 1)!), n > 0. - _ Vladeta Jovovic _ , Sep 13 2006 ●

► [A094258] 1,1,4,18,96,600,4320,35280,322560,3265920,36288000,439084800,5748019200,80951270400,1220496076800,19615115520000,334764638208000,6046686277632000,115242726703104000,2311256907767808000,48658040163532800000,1072909785605898240000,24728016011107368960000,594596384994354462720000 ⋆ a(1) = 1, a(n + 1) = n * n! for n >= 1. ● a(n) = n! - (n - 1)! for n >= 2. ● a(n) = n! - a(n - 1) - a(n - 2) - ... - a(1). with a(1) = 1. (End) ●

► [A370569] 1,1,1,4,18,97,607,4358,35523,324356,3280902,36427352,440515699,5764104507,81147821501,1223090709078,19651920713844,335323035157947,6055709997021397,115397482250691724,2314064310772997407,48711753977589111112,1073990818947724506060 ⋆ Number of permutations of [n] having no adjacent 2 - cycles and no adjacent 4 - cycles. ● a(n) = Sum _{ i, j>=0 and 2 * i + 4 * j <=n } (- 1) ^ (i + j) * (n - i - 3 * j)! / (i! * j!). ●

► [A263688] 0,1,1,4,18,98,630,4676,39368,370748,3861900,44087008,547360968,7342948312,105848450344,1631635791184,26782838577600,466413214471568,8588795078851344,166747235206457024,3404055687248777120,72895914363584236064,1633918325381940384864 ⋆ c(n) in (sqrt(2)) _ n = b(n) + c(n) * sqrt(2), where (x) _ n is the Pochhammer symbol, b(n) and c(n) are integers. ● a(n) = ((sqrt(2)) _ n - (- sqrt(2)) _ n) / (2 * sqrt(2)). ●

► [A244309] 0,0,0,4,18,100,448,2028,8820,38148,163350,697048,2965248,12595048,53440504,226608900,960530634,4070452764,17246835648,73069580980,309555981900,1311374255620,5555264316910,23532984885744,99688652356608 ⋆ a(n) = F(n) ^ 3 - F(n) ^ 2, where F(n) is the n - th Fibonacci number (A000045). ● a(n) = (F(3 * n) - 3 * (- 1) ^ n * F(n)) / 5 - (L(2 * n) - 2 * (- 1) ^ n) / 5, where F=A000045 and L=A000032. - _ Ehren Metcalfe _ , Mar 26 2016 ●

► [A137958] 1,1,4,18,100,587,3660,23640,157076,1066281,7363620,51568732,365369868,2614235293,18862816112,137096744232,1002785827620,7376023180645,54525165453672,404858512190316,3018190533410664,22581907465905018 ⋆ G.f. satisfies A(x) = 1 + x * (1 + x * A(x) ^ 3) ^ 4. ● a(n) = Sum _{ k=0..n - 1 } C(4 * (n - k),k) / (n - k) * C(3 * k,n - k - 1) for n>0 with a(0)=1. - _ Paul D. Hanna _ , Jun 16 2009 ●

► [A371543] 1,4,18,100,611,3964,26796,186664,1330541,9657748,71138964,530417668,3995461515,30359913132,232434013174,1791205897652,13883372595753,108159238126644,846472588860134,6651825146945508,52465622957295300,415208597109815172 ⋆ G.f. A(x) satisfies A(x) = (1 + x * A(x) / (1 + x)) ^ 4. ● a(n) = Sum _{ k=0..n } (- 1) ^ (n - k) * binomial(n - 1,n - k) * binomial(4 * k + 4,k) / (k + 1). ●

► [A371723] 1,4,18,100,623,4156,29032,209656,1552535,11724904,89958000,699213444,5494103979,43570067100,348274269966,2803139823512,22698137859554,184779492011244,1511406790180350,12415340284461312,102377122022648745,8471

44310799588732 ⋆ G.f. satisfies A(x) = (1 + x * A(x) ^ (1 / 4) * (1 + A(x) ^ (5 / 4))) ^ 2. • a(n) = 2 * Sum _{ k=0..n } binomial(n,k) * binomial(n / 2 + 5 * k / 2 + 2,n) / (n / 2 + 5 * k / 2 + 2). •

▶ [A327833] 1,1,4,18,100,665,5124,44772,437016,4710915,55568480,711802894,9838192572,145921265581,2311617527660,38950657146120,695562375445104,13121344429311687,260728755911619336,5443039353326333330,119101575356825879860,2725785134463572716689 ⋆ Number of non - overlapping pairs of adjacent runs in permutations of [n]. • a(n) = (n - 1) * n! - (n / 3 - 1 / 2) * floor(e * n!) + (n / 6 - 1 / 2), for all n > 1. •

▶ [A350267] 1,1,4,18,100,675,5376,49294,510728,5894109,74915740,1039180186,15613569324,252501251743,4371586879128,80652138666870,1579212732426256,32701859350855769,713914404925713588,16384896394304282722,394340620941231415540,9929838681717090607611 ⋆ a(n) = n * hypergeom([1, 1 - n, - n], [2], 1) if n >= 1, a(0) = 1. • a(n) = Sum _{ k=1..n } binomial(n, k) ^ 2 * k! / (n - k + 1), for n >= 1. •

▶ [A191365] 1,1,4,18,102,695,5485,49077,490308,5404569,65106103,850535477,11972432846,180605413001,2906109200293,49678357272247,898988188301320,17167497793440977,344991795682802331,7277230501449340417,160765066207998479698 ⋆ Expansion of e.g.f. (1 / (1 - x)) ^ exp(x). • a(n) = sum(k=1..n, sum(i=0..n - k, binomial(n,i) * k ^ i * (- 1) ^ (n - k - i) * Stirling1(n - i,k))), n>0, a(0)= 1. •

▶ [A144085] 1,1,4,18,108,780,6600,63840,693840,8361360,110557440,1590351840,24713156160,412393101120,7352537512320,139443752448000,2802408959750400,59479486120454400,1329239028813696000,31194214921732262400,766888191387539020800,19707387644116280908800,528327710066244459571200 ⋆ a(n) is the number of partial bijections (or subpermutations) of an n - element set without fixed points (also called partial derangements). • a(n) = n! * Sum _{ m=0..n } (- 1 ^ m / m!) * Sum _{ j=0..n - m } binomial(n - m, j) / j!. • a(n) = (2 * n - 1) * a(n - 1) - (n - 1) * (n - 3) * a(n - 2) - (n - 1) * (n - 2) * a(n - 3), a(0)=1, a(n)=0 if n < 0. •

▶ [A364623] 1,4,18,112,847,7086,62974,583002,5560323,54249583,538873135,5431177821,55402340842,570899082760,5933922697380,62138800690564,654949976467593,6942859160218698,73972792893687427,791722414873487767,8508265804914763731 ⋆ G.f. satisfies A(x) = 1 / (1 - x) ^ 3 + x * A(x) ^ 3. • a(n) = Sum _{ k=0..n } binomial(n + 5 * k + 2,6 * k + 2) * binomial(3 * k,k) / (2 * k + 1). •

▶ [A053529] 1,1,4,18,120,840,7920,75600,887040,10886400,152409600,2235340800,36883123200,628929100800,11769069312000,230150688768000,4833164464128000,105639166144512000,2464913876705280000,59606099200327680000,1525429559126753280000,40464026199993876480000 ⋆ a(n) = n! * number of partitions of n. • a(n) = Sum { k=1..n } (((n - 1)! / (n - k)!) * sigma(k) * a(n - k)), n > 0, and a(0)=1. See A274760. - _ Johannes W. Meijer _ , Jul 28 2016 •

▶ [A005442] 1,1,4,18,120,960,9360,105840,1370880,19958400,322963200,5748019200,111607372800,2347586841600,53178757632000,1290674601216000,33413695451136000,919096314200064000,26768324463648768000 ⋆ a(n) = n! * Fibonacci(n + 1). • a(n) = D ^ n(1 / (1 - x)) evaluated at x = 0, where D is the operator sqrt(1 + 4 * x) * d / dx. Cf. A080599 and A052585. - _ Peter Bala _ , Dec 07 2011 •

▶ [A065857] 4,18,133,1197,11374,110487,1084605,10708555,106091745,1053422339,10475688327,104287176419,1039019056246,10358018863853,103307491450820,1030734020030318,10287026204717358,102692313540015924,102535143486411806,1023953129231079895 6,102270102190290407386 ⋆ The (10 ^ n) - th composite number. • a(n) = 10 ^ (n + n / log n + 2n / log ^ 2 + 4n / log ^ 3 n + O(n / log ^ 4 n)). See Bojarincev for an asymptotic expansion. - _ Charles R Greathouse IV _ , May 30 2013 •

▶ [A296602] 4,19,23,25,29,31,33,35,39,41,43,45,49,51,53,55,57,59,61,63,65,67,69,71,73 ⋆ Values of F for which there is a unique convex polyhedron with F faces that are all regular polygons. • a(n) = 2 * a(n - 1) - a(n - 2) for n>14. •

▶ [A210374] 0,4,19,40,68,104,149,204,270,348,439,544,664,800,953,1124,1314,1524,1755,2008,2284,2584,2909,3260,3638 ⋆ Number of 2 X 2 matrices with all terms in { 0,1,...,n } and (sum of terms) = n + 2. • a(n) = (- 36 + 47 * n + 12 * n ^ 2 + n ^ 3) / 6 for n>0. • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>4. •

▶ [A352116] 1,4,19,40,85,140,231,336,489,660,891,1144,1469,1820,2255,2720,3281,3876,4579,5320,6181,7084,8119,9200,10425 ⋆ Partial sums of the odd triangular numbers (A014493). • a(n) = n * (4 * n ^ 2 - 1 - 3 * (- 1) ^ n) / 6. •

▶ [A283394] 4,19,43,76,118,169,229,298,376,463,559,664,778,901,1033,1174,1324,1483,1651,1828,2014,2209,2413,2626,2848 ⋆ a(n) = 3 * n * (3 * n + 7) / 2 + 4. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). • a(n) = 4 * binomial(n,0) + 15 * binomial(n,1) + 9 * binomial(n,2). •

▶ [A162254] 4,19,51,106,190,309,469,676,936,1255,1639,2094,2626,3241,3945,4744,5644,6651,7771,9010,10374,11869,13501,15276,17200 ⋆ n * (2 * n ^ 2 + 5 * n + 1) / 2. • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). (End) •

▶ [A304993] 0,4,19,52,110,200,329,504,732,1020,1375,1804,2314,2912,3605,4400,5304,6324,7467,8740,10150,11704,13409,15272,17300 ⋆ a(n) = n * (n + 1) * (7 * n + 5) / 6. • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). • a(n) = Sum _{ k = n..2 * n } k * (k + 1) / 2. •

▶ [A159833] 0,4,19,54,124,250,459,784,1264,1944,2875,4114,5724,7774,10339,13500,17344,21964,27459,33934,41500,50274,60379,71944,85104 ⋆ a(n) = n ^ 2 * (n ^ 2 + 15) / 4. • a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). •

▶ [A166808] 4,19,54,124,250,460,790,1285,2000,3001,4366,6186,8566,11626,15502,20347,26332,33647,42502,53128,65778,80728,98278,118753,142504 ⋆ Number of n X 5 1..2 arrays containing at least one of each value, all equal values connected, rows considered as a single number in nondecreasing order, and columns considered as a single number in nondecreasing order. • a(n) = binomial(n + 5,5) - 2. - _ Jeffrey Shallit _ , May 30 2012 •

▶ [A215862] 0,4,19,55,125,245,434,714,1110,1650,2365,3289,4459,5915,7700,9860,12444,15504,19095,23275,28105,33649,39974,47150,55250 ⋆ Number of simple labeled graphs on n + 2 nodes with exactly n connected components that are trees or cycles. • a(n) = C(n + 2,3) * (3 * n + 13) / 4. • a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5), n>4. - _ Harvey P. Dale _ , Sep 10 2012 • a(n) = 1 / n! * Sum _{ j=0..n } C(n,j) * (- 1) ^ (n - j) * (j) ^ (n + 1) * (j - 1)). - _ Vladimir Kruchinin _ , Jun 06 2013 •

▶ [A134507] 0,4,19,57,134,269,486,813,1281,1926,2788,3910,5340,7130,9335,12015,15234,19059,23562,28819,34909,41916,49928,59036,69336 ⋆ Number of rectangles in a pyramid built with squares. The squares counted in A092498 are excluded. • a(n) = (3 * n ^ 4 + 5 * n ^ 3 - 3 * n ^ 2 - 5 * n + 6 * floor((n + 1) / 3)) / 18. - _ Luce ETIENNE _ , Jul 31 2015 •

▶ [A212039] 0,1,4,19,58,136,271,484,799,1243,1846,2641,3664,4954,6553,8506,10861,13669,16984,20863,25366,30556,36499,43264,50923 ⋆ Number of lower triangular n X n arrays colored with integers 0 upwards introduced in row major order, with no element equal to any element within a city block distance of two, and containing the value n(n + 1) / 2 - 2. • a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>6. •

▶ [A100185] 1,4,19,68,185,416,819,1464,2433,3820,5731,8284,11609,15848,21155,27696,35649,45204,56563,69940,85561,103664,124499,148328,175425 ⋆ Structured meta - anti - prism numbers, the n - th number from a structured n - gonal anti - prism number sequence. • a(n) = (1 / 6) * (3 * n ^ 4 - 8 * n ^ 3 + 9 * n ^ 2 + 2 * n). •

▶ [A096978] 0,1,4,19,74,305,1208,4863,19398,77709,310612,1242907,4970722,19884713,79535216,318148151,1272578046,5090341317,20361307020,81445344595,325781145370,1303125047521,5212499258024,20849998896239,83399991856694 ⋆ Sum of the areas of the first n Jacobsthal rectangles. • a(n) = 8 * 4 ^ n / 27 - 2 * (- 2) ^ n / 27 - (n + 2) / 9; • a(n) = Sum _{ k=0..n } (2 * 4 ^ k / 3 + (- 2) ^ k / 3) * (n - k). • a(n) = 4 * a(n - 1) + 3 * a(n - 2) - 14 * a(n - 3) + 8 * a(n - 4). •

▶ [A167478] 1,4,19,75,264,869,2741,8396,25175,74271,216336,623689,1782889,5060500,14277019,40070259,111954456,311555501,863978525,2388417116,6584117471,18104432199,49667825184,135974484625,371543306449 ⋆ Expansion of (1 - 2x + 6x ^ 2 - x ^ 3) / (1 - 3x + x ^ 2) ^ 2. • a(n) = 6 * a(n - 1) - 11 * a(n - 2) + 6 * a(n - 3) - a(n - 4). - _ Wesley Ivan Hurt _ , Jul 28 2022 •

▶ [A094734] 0,1,1,4,19,76,271,904,2899,9076,27991,85504,259579,784876,2366911,7125304,21425059,64373476,193317031,580344304,1741819339,5227030876,15684238351,47059006504,141189602419 ⋆ Number of connected 2 - element multitichains on a labeled n - set. • a(n) = (5 - 3 * 2 ^ n + 3 ^ n) / 2 for n > 0. • a(n) = 6 * a(n - 1) - 11 * a(n - 2) + 6 * a(n - 3) for n > 3. •

▶ [A156760] 4,19,79,319,1279,5119,20479,81919,327679,1310719,5242879,20971519,83886079,335544319,1342177279,5368709119,21474836479,85899345919,343597383679,1374389534719,5497558138879,21990232555519,87960930222079,351843720888319 ⋆ 5 * 4 ^ n - 1. • a(n) = 4a(n - 1) + 3, a(0)=4. •

▶ [A320088] 1,4,19,79,334,1339,5434,21754,87274,349159,1397734,5590954,22368169,89472934,357908119,1431633559,5726600854,22906403494,91625880229,366503524969,1466015148634,5864060611159,23456246655574,93824986622614,375299963333014 ⋆ Number of primitive (=aperiodic) 4 - ary words with length less than or equal to n which are earlier in lexicographic order than any other word derived by cyclic shifts of the alphabet. • a(n) = Sum _{ j=1..n } Sum _{ d|j } 4 ^ (d - 1) * mu(j / d). •

▶ [A122909] 1,4,19,79,338,1427,6053,25628,108583,459931,1948354,8253271,34961561,148099316,627359147,2657535383,11257501522,47687540107,202007664157,855718193164,3624880442591,15355239954179,65045840274434 ⋆ F(n + 1)F(2n + 2) + F(n)F(2n). • a(n)=(sqrt(5) + 2) ^ n(sqrt(5) / 5 + 3 / 5) - 2 ^ (- n - 1)(sqrt(5) - 1) ^ n(sqrt(5) / 5 + 1 / 5) + 2 ^ (- n - 1)(sqrt(5) + 1) ^ n(sqrt(5) / 5 - 1 / 5)(- 1) ^ n + (sqrt(5) - 2) ^ n(3 / 5 - sqrt(5) / 5)(- 1) ^ n; •

▶ [A215037] 1,4,19,79,339,1431,6072,25707,108922,461362,1954426,8278978,35070483,148560678,629313573,2665814361,11292572005,47836100785,202636977730,858384007525,3636173014596,15403076054964,65248477252164 ⋆ a(n) = Sum _{ k=0..n } fibonomial(k + 3,3), n >= 0. • a(n) = Sum _{ k=0..n } F(k + 3) * F(k + 2) * F(k + 1) / 2. • a(n) = (F(n + 3) ^ 2 * F(n + 2) + (- 1) ^ n * F(n + 1) - 1) / 4. • a(n) = (F(n + 3) ^ 3 + F(n + 2) ^ 3 + (- 1) ^ n * F(n + 1) - 2) / 8. • a(n) = (F(3 * n + 8) + 4 * (- 1) ^ n * F(n + 1) - 5) / 20. • a(n) = 4 * a(n - 1) + 3 * a(n - 2) - 9 * a(n - 3) + 2 * a(n - 4) + a(n - 5). •

▶ [A050914] 1,4,19,82,325,1216,4375,15310,52489,177148,590491,1948618,6377293,20726200,66961567,215233606,688747537,2195382772,6973568803,22082967874,69735688021,219667417264,690383311399,2165293113022,6778308875545 ⋆ a(n) = n * 3 ^ n + 1. • a(n) = 7 * a(n - 1) - 15 * a(n - 2) + 9 * a(n - 3). •

▶ [A017961] 1,4,19,82,361,1573,6859,29897,130321,568056,2476099,10793065,47045881,205068240,893871739,3896296578,16983563041,74029634996,322687697779,1406563064942,6131066257801,26724698233906 ⋆ Powers of sqrt(19) rounded down. • a(n) = floor(sqrt(19 ^ n)). - _ Vincenzo Librandi _ , Jun 24 2011 •

▶ [A180146] 1,4,19,82,361,1576,6895,30142,131797,576244,2519515,11016010,48165121,210591424,920764999,4025843542,17602120621,76961423116,336496993075,1471259517922,6432760512217,28125838644184,122974079005855 ⋆ Eight rooks and one berserker on a 3 X 3 chessboard. G.f.: 1 / (1 - 4 * x - 3 * x ^ 2 + 6 * x ^ 3). • a(n) = 4 * a(n - 1) + 3 * a(n - 2) - 6 * a(n - 3) with a(- 2)=0, a(- 1)= 0, a(0)=1, a(1)=4 and a(2)=19. • a(n) = (- 1 / 8) + (13 + 30 * A) * A ^ (- n - 1) / 88 + (13 + 30 * B) * B ^ (- n - 1) / 88 with A=(- 3 + sqrt(33)) / 12 and B=(- 3 - sqrt(33)) / 12. •

▶ [A357572] 0,1,1,4,19,85,406,2191,13105,84190,573121,4127521,31434184,252388957,2126998693,18740283556,172134162631,1644920020417,16324076578870,167938152551491,1787952325142341,19667748794844550,223217829954224029,2610546296216999197 ⋆ Expansion of e.g.f. sinh(sqrt(3) * (exp(x) - 1)) / sqrt(3). • a(n) = Sum _{ k=0..floor((n - 1) / 2) } 3 ^ k * Stirling2(n,2 * k + 1). • a(n) = (Bell _ n(sqrt(3)) - Bell _ n(- sqrt(3))) / (2 * sqrt(3)), where Bell _ n(x) is n - th Bell polynomial. •

▶ [A291416] 4,19,86,392,1784,8121,36966,168267,765940,3486508,15870352,72240785,328835240,1496836103,6813498210,31014589884,141176346720,642625324009,2925187658218,13315259321575,60610173266216,275893470389144,1255848695053856,5716539585528849 ⋆ p - INVERT of (1,1,0,0,0,0,...), where p(S) = 1 - 4 S + S ^ 2. • a(n) = 4 * a(n - 1) + 3 * a(n - 2) - 2 * a(n - 3) - a(n - 4) for n >= 5. •

► [A084155] 0,1,4,19,88,401,1804,8051,35760,158401,700564,3095731,13673224,60375953,266559388,1176763859,5194762080,22931453953,101225940772,446836798675,1972442421688,8706804701201,38433749994028 ⋆ A Pell - related fourth - order recurrence. ● a(n) = 8 * a(n - 1) - 18 * a(n - 2) + 8 * a(n - 3) + 7 * a(n - 4), a(0)=0, a(1)=1, a(2)=4, a(3)=19. ● a(n) = ((3 + sqrt(2)) ^ n + (3 - sqrt(2)) ^ n - (1 + sqrt(2)) ^ n - (1 - sqrt(2)) ^ n) / 4. ●

► [A015530] 0,1,4,19,88,409,1900,8827,41008,190513,885076,4111843,19102600,88745929,412291516,1915403851,8898489952,41340171361,192056155300,892245135283,4145149007032,19257331433977,89464772757004 ⋆ Expansion of x / (1 - 4 * x - 3 * x ^ 2). ● a(n) = 4 * a(n - 1) + 3 * a(n - 2). ● a(n) = Sum _{ k=0..floor ((n - 1) / 2) } C(n - k - 1, k) * 3 ^ k * 4 ^ (n - 2k - 1). - _ Paul Barry _ , Apr 23 2005 ● a(n) = ((2 + sqrt(7)) ^ n - (2 - sqrt(7)) ^ n) / sqrt(28). Offset 1. a(3) =19. - Al Hakanson (hawkuu(AT)gmail.com), Jan 05 2009 ●

► [A256959] 1,4,19,89,385,1601,6529,26369,105985,424961,1701889,6811649,27254785,109035521,436174849,1744764929,6979190785,27917025281,111668625409,446675550209,1786704297985,7146821386241,28587293933569,114349192511489,457396803600385 ⋆ a(0)=1, a(1)=4; thereafter a(n) = 13 * 4 ^ n / 8 - 2 ^ (n + 1) + 1. ● a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3). - _ Colin Barker _ , Jun 05 2015 ● a(n) = (2 ^ n) ^ 2 + (2 ^ n - 1) ^ 2 - (2 ^ (n - 1)) ^ 2 - 2 * (2 ^ (n - 2)) ^ 2 (see (4) in arXiv link). - _ Michel Marcus _ , Jun 06 2015 ●

► [A181880] 1,4,19,89,417,1954,9156,42903,201034,942001,4414009,20683073,96916320,454128508,2127946065,9971086104,46722311119,218930448853,1025859814873,4806952917170,22524321562152,105544004814991,494555936863590,2317380083461485,10858732149251701 ⋆ Expansion of 1 / (1 - 4 * x - 3 * x ^ 2 - x ^ 3). ● a(n) = 4 * a(n) + 3 * a(n - 2) + a(n - 3), n>=2, a(- 1):=0, a(0)=1, a(1)=4. ●

► [A291016] 4,19,90,426,2016,9540,45144,213624,1010880,4783536,22635936,107114400,506870784,2398538304,11350005120,53708800896,254152774656,1202663842560,5691066407424,26930415389184,127436093890560,603034071008256,2853587862706176 ⋆ p - INVERT of (1,1,1,1,1,...), where p(S) = 1 - 4 * S + S ^ 2. ● a(n) = 6 * a(n - 1) - 6 * a(n - 2) n >= 3. ● a(n) = ((3 + sqrt(3)) ^ (n + 4) - (3 - sqrt(3)) ^ (n + 4)) / (72 * sqrt(3)). ● a(n) = 6 ^ (n / 2) * (4 * ChebyshevU(n , sqrt(3 / 2)) - (5 / sqrt(6)) * ChebyshevU[n - 1, sqrt(3 / 2))). ●

► [A004253] 1,4,19,91,436,2089,10009,47956,229771,1100899,5274724,25272721,121088881,580171684,2779769539,13318676011,63813610516,305749376569,1464933272329,7018916985076,33629651653051,161129341280179 ⋆ a(n) = 5 * a(n - 1) - a(n - 2), with a(1)=1, a(2)=4. ● a(n) = Sum _{ k=0..n } binomial(n + k, 2k) * 3 ^ k. - _ Paul Barry _ , Jul 26 2004[offset 0] ● a(n) = (- 1) ^ n * U(2n, i * sqrt(3) / 2), U(n, x) Chebyshev polynomial of second kind, i=sqrt(- 1). - _ Paul Barry _ , Mar 13 2005[offset 0] ● a(n) = ((sqrt(21) - 3) * ((5 + sqrt(21)) / 2) ^ n + (sqrt(21) + 3) * ((5 - sqrt(21)) / 2) ^ n) / 2 / sqrt(21). - _ Seiichi Kirikami _ , Sep 06 2011 ●

► [A218988] 4,19,91,439,2119,10231,49399,238519,1151671,5560759,26849719,129641911,625966519,3022433719,14593600951,70464138679,340230958519,1642780388791,7932045389239,38299303112119,184925394005431,892898788470199,4311296729902519 ⋆ Power floor sequence of 2 + sqrt(8). ● a(n) = floor(x * a(n - 1)), where x=2 + sqrt(8), a(0) = floor(x). ● a(n) = 5 * a(n - 1) - 4 * a(n - 3). ● a (n) = (1 / 28) * (4 + (54 - 39 * sqrt(2)) * (2 - 2 * sqrt(2)) ^ n + (2 * (1 + sqrt(2))) ^ n * (54 + 39 * sqrt(2))). - _ Colin Barker _ , Nov 13 2017 ●

► [A288687] 1,1,4,19,92,421,1830,7687,31624,128521,518666,2084875,8361996,33497101,134094862,536608783,2146926608,8588754961,34357248018,137433710611,549744803860,2199000186901,8796044787734,35184271425559,140737278640152 ⋆ Number of n - digit biquanimous strings using digits { 0,1,2,3 } . ● a(n) = (2 ^ (2 * n - 1) + n - 2 ^ (n - 1) * (1 + n)). ● a(n) = 10 * a(n - 1) - 37 * a(n - 2) + 64 * a(n - 3) - 52 * a(n - 4) + 16 * a(n - 5) for n>5. ●

► [A083065] 1,4,19,94,469,2344,11719,58594,292969,1464844,7324219,36621094,183105469,915527344,4577636719,22888183594,114440917969,572204589844,2861022949219,14305114746094,71525573730469,357627868652344 ⋆ 4th row of number array A083064. ● a(n) = (3 * 5 ^ n + 1) / 4. ● a(n) = 5 * a(n - 1) - 1 with n >0, a(0)=1. - _ Vincenzo Librandi _ , Aug 08 2010 ● a(n) = 6 * a(n - 1) - 5 * a(n - 2). - _ Vincenzo Librandi _ , Nov 04 2011 ● a(n) = 5 ^ n - Sum _{ i=0.. n - 1 } 5 ^ i. - _ Bruno Berselli _ , Jun 20 2013 ●

► [A278678] 1,4,19,94,519,3144,20903,151418,1188947,10064924,91426347,887296422,9164847535,100398851344,1162831155151,14198949045106,182317628906283,2455925711626404,34632584722468115,510251350142181470,7840215226100517191,125427339735162102104 ⋆ Popularity of left children in treeshelves avoiding pattern T321. ● a(n) = (n + 1) * e(n) - e(n + 1), where e(n) is the n - th Euler number (see A000111). ●

► [A047781] 0,1,4,19,96,501,2668,14407,78592,432073,2390004,13286043,74160672,415382397,2333445468,13141557519,74174404608,419472490257,2376287945572,13482186743203,76598310928096,435730007006341,2481447593848524,14146164790774359 ⋆ a(n) = Sum _{ k=0..n - 1 } binomial(n - 1,k) * binomial(n + k,k). Also a(n) = T(n,n), array T as in A049600. ● a(n + 1) = Sum _{ k=0..n } binomial(n, k) * binomial(n + 1, k + 1) * 2 ^ k. - _ Paul Barry _ , Sep 20 2004 ● a(n) = Sum _{ k=0..n } T(n, k), array T as in A008288. ● a(n) = Sum _{ k =0..n - 1 } C(n,k) * C(n - 1,k) * 2 ^ (n - k - 1); a(n + 1) = 2 ^ n * Hypergeometric2F1(- n, - n - 1;1;1 / 2). - _ Paul Barry _ , Feb 08 2011 ● a(n) = Hyper2F1([- n, n], [1], - 1) / 2 for n > 0. - _ Peter Luschny _ , Aug 02 2014 ● a(n) = [x ^ n] (1 / 2) * ((1 + x) / (1 - x)) ^ n for n > 0. - _ Seiichi Manyama _ , Jun 07 2018 ●

► [A083315] 1,4,19,97,505,2629,13609,69997,357985,1822309,9241849,46731997,235754065,1187152789,5969306089,29980723597,150440439745,754349584069,3780337658329,18936047636797,94817676351025,474638135996149 ⋆ (2 * 5 ^ n - (4 ^ n - 2 ^ n)) / 2. ● a(n)=(2 * 5 ^ n - (4 ^ n - 2 ^ n)) / 2 ●

► [A301417] 1,4,19,98,516,2725,14400,76105,402229,2125864,11235643,59382770,313850616,1658767513,8766940464,46335152161,244891172089,1294302130684,6840663104371,36154365042098,191083538489436,1009917298758493,5337628549243344,28210506508524169 ⋆ Sums of positive coefficients in generalized Chebyshev polynomials of the first kind, for a family of 4 data. ● a(n + 5) = 5 * a(n + 4) + 2 * a(n + 3) - 2 * a(n + 2) - 3 * a(n + 1) - a(n). ●

► [A047099] 1,4,19,98,531,2974,17060,99658,590563,3540464,21430267,130771376,803538100,4967127736,30866224824,192696614730,1207967820099,7600482116932,47981452358201,303820299643138,1929099000980219,12279621792772822,78346444891033856 ⋆ a(n) = A047098(n) / 2. ● a(n) = binomial(3 * n, n) - (1 / 2) * Sum _{ k=0..n } binomial(3 * n, k). - _ Vladeta Jovovic _ , Mar 22 2003 ● a(n) is the upper left term in M ^ n, where M is the infinite square production matrix as follows: ● a(n) = (1 / n) * Sum _{ k=1..n } k * C(3 * n,n - k). - _ Vladimir Kruchinin _ , Oct 03 2022 ●

► [A177249] 1,1,1,4,19,99,611,4376,35621,324965,3285269,36462924,440840359,5767387591,81184266631,1223531387056,19657686459529,335404201199049,6056933308042409,115417137054004820,2314399674388138811,48717810299204919851,1074106226256896375531 ⋆ Number of permutations of [n] having no adjacent transpositions, that is, no cycles of the form (i, i + 1). ● a(n) = Sum _{ j=0..floor(n / 2) } (- 1) ^ j * (n - j)! / j!. ● a(n) - n * a(n - 1) = a(n - 2) if n is odd; a (n) - n * a(n - 1)=a(n - 2) + 2 * (- 1) ^{ n / 2 } if n is even. ●

► [A083882] 1,4,19,100,553,3124,17803,101812,583057,3340900,19147459,109747972,629066809,3605810836,20668618171,118473404500,679095199777,3892607339716,22312621120627,127897073548708,733112513821513 ⋆ a(0)=1, a(1)=4, a(n) =8a(n - 1) - 13a(n - 2), n>=2. ● a(n) = ((4 - sqrt(3)) ^ n + (4 + sqrt(3)) ^ n) / 2. ● a(n) = Sum _{ k=0..floor(n / 2) } C(n, 2k)4 ^ (n - 2k)3 ^ k. ●

► [A007564] 1,1,4,19,100,562,3304,20071,124996,793774,5120632,33463102,221060008,1473830308,9904186192,67015401391,456192667396,3122028222934,21467769499864,148246598341018,1027656663676600,7148588698592956,49884553176689584 ⋆ Shifts left when INVERT transform applied thrice. ● a(0)=1; for n>=1, a(n) = Sum _{ k=0..n } 3 ^ k * N(n,k) where N(n,k) = (1 / n) * binomial(n, k) * binomial(n, k + 1) are the Narayana numbers (A001263). - _ Benoit Cloitre _ , May 24 2003 ● a(n) = upper left term in M ^ n, M = the production matrix: ● a(n) = 2 ^ n / sqrt(3) * LegendreP(n, - 1,2) for n >= 1, where Legendre P is the associated Legendre function of the first kind, in Maple's notation. - _ Robert Israel _ , Mar 24 2015 ●

► [A307678] 1,1,4,19,101,578,3479,21714,139269,912354,6078832,41066002,280636657,1936569717,13475408847,94446518559,666149216744,4724705621702,33676421377532,241100485812034,1732999323835918,12501487280292424,90478497094713958,656788523782034248,4780725762185300389 ⋆ G.f. A(x) satisfies: A(x) = 1 + x * A(x) ^ 3 / (1 - x). ● a(0) = 1; a(n) = Sum _{ j=0..n - 1 } Sum _{ i=0..j } Sum _{ k=0..i } a(k) * a(i - k) * a(j - i). ● a(n) = Sum _{ k=0..n } C(n - 1, n - k) * C(2 * k,k)) / (2 * k + 1). - _ Vladimir Kruchinin _ , Feb 05 2022 ●

► [A188675] 1,4,19,103,598,3601,22165,138445,873916,5560741,35605756,229142476,1480820176,9603245620,62463474700,407330900284,2662179813931,17433248900656,114359597479261,751343566800961,4943188072606456 ⋆ Partial sums of the binomial coefficients binomial(3 * n,n) (A005809). ● a(n) = Sum _{ k=0..n } binomial(3 * k,k). ●

► [A225029] 1,4,19,103,616,3949,26545,184120,1303135,9341191,67490044,489978217,3567727441,26024391436,190036459099,1388593185079,10150390743088,74215146065461,542704850311009,3968914608295360,29026988765886535,212297824609934455,1552734183515322436 ⋆ Non - crossing, non - nesting, 3 - colored set partitions. ● a(n) = 14 * a(n - 1) - 59 * a(n - 2) + 74 * a(n - 3) - a(n - 4), with a(0) = 1, a(1) = 4, a(2) = 19 and a(3) = 103. - _ Muniru A Asiru _ , Dec 18 2018 ●

► [A078940] 1,4,19,103,622,4117,29521,227290,1865881,16239523,149142952,1439618143,14555631781,153700654036,1690684883191,19328770917499,229203640111870,2814018686591089,35711716110387589,467766675528462562 ⋆ Row sums of A078938. ● a(n) = exp(- 3) * Sum _{ k>=0 } (k + 1) ^ n * 3 ^ k / k!. - _ Ilya Gutkovskiy _ , Apr 20 2020 ●

► [A186997] 1,1,4,19,104,614,3816,24595,162896,1101922,7580904,52878654,373100272,2658188524,19096607120,138182654595,1006202473888,7367648586954,54214472633064,400698865376842,2973344993337520,22142778865313364 ⋆ G.f. satisfies: A(x) = 1 + x * A(x) ^ 3 + x ^ 2 * A(x) ^ 4. ● a(n) = Sum _{ k=0..n } binomial(k,n - k) * binomial(n + 2 * k,n + k) / (n + k + 1). - _ Vladimir Kruchinin _ , May 12 2011 ●

► [A088129] 0,1,4,19,104,661,4812,39607,364240,3704617,41310740,501328411,6578864184,92843236669,1402257345244,22570640656831,385718738160032,6975222838783057,133078088319220260,2671441145266564387,56287972249358876680,1242089553461115778021 ⋆ Expansion of e.g.f. sinh(x) / (1 - x) ^ 2. ● a(n) = Sum _{ k=0..floor((n - 1) / 2) } binomial(n,2 * k + 1) * (n - 2 * k)!. - _ Ilya Gutkovskiy _ , Apr 10 2022 ●

► [A082030] 1,4,19,106,685,5056,42079,390454,4000441,44881660,547457611,7215589954,102211815589,1548801969976,25000879886935,428332610385166,7763306399014129,148412806214119924,2984692721713278211 ⋆ Expansion of e.g.f. exp(x) / (1 - x) ^ 3. ● a(n) = Sum _{ k=0..n } binomial(n, k) * (k + 2)! / 2. - _ Philippe Delêham _ , Jun 19 2004 ● a(n) = Sum _{ k=0..n } binomial(n,k) * (k + 1) ^ (k + 1) * (- k) ^ (n - k). - _ Paul D. Hanna _ , Sep 30 2011 ● a(n) = hypergeometric([3, - n], [], - 1). - _ Peter Luschny _ , Sep 20 2014 ● a(n) = KummerU(- n, - n - 2, 1). - _ Peter Luschny _ , May 10 2022 ●

► [A182541] 1,4,19,107,702,5274,44712,422568,4407120,50292720,623471040,8344624320,119938250880,1842662908800,30136443724800,522780938265600,9587906028280800,185371298306611200,3768248516336640000,80349669847157760000,1793238207723325440000,41806479141525288960000 ⋆ Coefficients in g.f. for certain marked mesh patterns. ● a(n) = (n - 3)! * Sum _{ i=1..n - 2 } (Sum _{ j =1..i } (i / j)). ● a(n) = (1 / 4) * (n - 1)! * (2 * harmonic(n - 1) - 1). (End) ●

► [A206227] 1,1,4,19,108,674,4494,31275,225132,1662894,12541802,96225037,748935563,5900502806,46976736513,377425326138,3056671009814,24930725879856,204623068332997,1688980598900228,14012122025369431,116784468316023069,977437078888272796,8212186058546599006 ⋆ Number of partitions of n ^ 2 + n into parts not greater than n. ● a(n) = [x ^ (n ^ 2 + n)] Product _{ k=1..n } 1 / (1 - x ^ k). ●

► [A091643] 4,19,108,687,4766,35139,267486,2083814,16531372,133059504,1082995490,8896945667,73651718719,613664827254 ⋆ Number of primes less than 10 ^ n which do not contain the digit 9. ● a(n) <= max(4,24 * (9 ^ (n - 2))) <= 1 + (9 ^ n) / 3 (see formula in A091634). - _ Chai Wah Wu _ , Sep 17 2018 ●

► [A306183] 0,1,4,19,108,719,5496,47465,457160,4858865,56490060,713165035,9715762980,142069257055,2219386098160,36889108220305,650018185589520,12103669982341025,237476572759473300,4896758300881695875,105866710959427454300,2394660132226522508975,56560492065670933962600 ⋆ The coefficients of x in the reduction of x ^ 2 - > x + 1 for the polynomial p(n,x) = Product _{ k=1..n } (x + k). ● a(n) = 2 * n * a(n - 1) - (n ^ 2 - n - 1) * a(n - 2). ● a(n) = cos(Pi * sqrt(5) / 2) * (Gamma(sqrt(5) * phi) * Gamma(n + 1 / phi ^ 2) / phi ^ 2 - phi ^ 2 * Gamma(sqrt(5) / phi) * Gamma(n + phi ^ 2)) / (Pi * sqrt(5)). ●

► [A199318] 4,19,109,649,3889,23329,139969,839809,5038849,30233089,181398529,1088391169,6530347009,39182082049,235092492289,1410554953729,8463329722369,50779978334209,304679870005249,1828079220031489,10968475320188929 ⋆ 3 * 6 ^ n + 1. ● a(n) = 6 * a(n - 1) - 5. ● a(n) = 7 * a(n - 1) - 6 * a(n - 2). ●

► [A004212] 1,1,4,19,109,742,5815,51193,498118,5296321,60987817,754940848,9983845261,140329768789,2087182244308,32725315072135,539118388883449,9304591246975030,167804098493079547,3155000165773280893 ⋆ Shifts one place left under 3rd - order binomial transform. ● a(n) = the upper left term in M ^ n, M = the following infinite square production matrix: ●

► [A060905] 1,1,4,19,110,751,5902,52165,509588,5437729,62828306,780287839,10351912276,145944541159,2176931651546,34225419288421,565282627986368,9779830102138945,176776613812205074,3330780287838743575 ⋆ Expansion of e.g.f. exp(x * exp(x) + 1 / 2 * x ^ 2 * exp(x) ^ 2). ● a(n) = sum(sum(k ^ (n - k) / (n - k)! * binomial(m,k - m) * (1 / 2) ^ (k - m),k,m,n) / m!,m,1,n), n>0. - _ Vladimir Kruchinin _ , Aug 20 2010 ●

► [A331326] 0,1,4,19,112,801,6756,65563,717760,8729857,116570980,1693096131,26548383984,446689827169,8023582921732,153192673528651,3097301219335936,66095983547942913,1484384376886189380,34991710162280602867,863797053818651591920,22282392569877969167521 ⋆ a(n) = n! * [x ^ n] sinh(x / (1 - x)) / (1 - x). ● a(n) = Sum _{ k=0..n } binomial(n, 2 * k + 1) * n! / (2 * k + 1)!. ● a(n) = n * n! * hypergeom([1 / 2 - n / 2, 1 - n / 2], [1, 3 / 2, 3 / 2], 1 / 4). ●

► [A122835] 1,1,4,19,112,811,7024,70939,818752,10630891,153371344,2433948859,42137351392,790287522571,15962014455664,345424786466779,7973482022972032,195556150543703851,5078301994885267984 ⋆ Number of topologies on n labeled elements in which no element belongs to any pair of noncomparable members of the topology. ● a(n) = 2 ^ (n - 1) - 1 + Sum { C(n,k) * a(n - k), k = 1 ... n } ●

► [A361532] 1,1,4,19,118,886,7786,78184,881644,11017108,150966856,2249261356,36181351504,624658612384,11516406883528,225740649754936,4686671645814736,102712289940757264,2369128149877075264,57359541280704038128,1454229915957292684576 ⋆ Expansion of e.g.f. exp((x + x ^ 2 / 2) / (1 - x)). ● a(n) = (2 * n - 1) * a(n - 1) - (n - 1) * (n - 3) * a(n - 2) - binomial(n - 1,2) * a(n - 3) for n > 2. ●

► [A366182] 1,4,19,128,1037,9221,86847,851073,8586951,88598014,930473246,9913648325,106891041270,1164153791878,12788021717902,141518588447588,1576271179332762,17657110535606919,198792746866201879,2248222906227731856,25529220583699163958 ⋆ G.f. A(x) satisfies A(x) = 1 / (1 - x) ^ 3 + x * A(x) ^ 3 / (1 - x). ● a(n) = Sum _{ k=0..n } binomial(n + 6 * k + 2,n - k) * binomial(3 * k,k) / (2 * k + 1). ●

► [A121681] 1,1,4,19,131,1136,11670,138727,1864711,27843874,456081803,8114074563,155519173031,3189879446235,69629136671356,1609836360587087,39262941548917619,1006616998791629666,27044968746461571213 ⋆ a(n) = A121680(n) / (n + 1) = [x ^ n] (1 + x * (1 + x) ^ (n + 1)) ^ (n + 1) / (n + 1). ● a(n) = Sum _{ k=0..n + 1 } C(n + 1,k) * C((n + 1) * k,n - k) / (n + 1). ●

► [A135742] 1,1,1,4,19,131,1156,12622,166825,2600677,47038456,974165336,22829939089,599668759483,17512623094240,564613124026876,19972670155565761,771019774737952313,32326390781950804048 ⋆ E.g.f.: A(x) = Sum _{ n>=0 } exp(n * (n - 1) / 2 * x) * x ^ n / n!. ● a(n) = Sum _{ k=0..n } C(n,k) * (k * (k - 1) / 2) ^ (n - k). ●

► [A273791] 4,20,24,32,40,48,56,64,72,80,88,96,104,112,120,128,136,144,152,160,168,176,184,192,200 ⋆ First differences of number of active (ON,black) cells in n - th stage of growth of two - dimensional cellular automaton defined by ”Rule 931”, based on the 5 - celled von Neumann neighborhood. ● a(n) = 2 * a(n - 1) - a(n - 2) for n>3. ●

► [A097251] 0,4,20,24,100,104,120,124,500,504,520,524,600,604,620,624,2500,2504,2520,2524,2600,2604,2620,2624,3000 ⋆ Numbers whose set of base 5 digits is { 0,4 } . ● a(2n) = 5 * a(n), a(2n + 1) = a(2n) + 4. ●

► [A259755] 4,20,28,44,52,68,76,92,100,116,124,140,148,164,172,188,196,212,220,236,244,260,268,284,292 ⋆ Numbers that are congruent to { 4, 20 } mod 24. ● a(n) = 2 * (6 * n + (- 1) ^ n - 3). ●

► [A181433] 1,4,20,29,61,76,124,145,209,236,316,349,445,484,596,641,769,820,964,1021,1181,1244,1420,1489,1681 ⋆ Numbers k such that 11 * k is 5 less than a square. ● a(n) = (22 * n * (n - 1) - 5 * (2 * n - 1) * (- 1) ^ n + 3) / 8. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n>5, a(1)=1, a(2)=4, a(3)=20, a(4)=29, a(5)=61. ●

► [A341895] 0,4,20,39,175,779,1500,6664,29600,56979,253075,1124039,2163720,9610204,42683900,82164399,364934695,1620864179,3120083460,13857908224,61550154920,118481007099,526235577835,2337285022799,4499158186320 ⋆ Indices of triangular numbers that are ten times other triangular numbers. ● a(n) = 38 * a(n - 3) - a(n - 6) + 18 for n > 3, with a(- 2) = - 21, a(- 1) = - 5, a(0) = - 1, a(1) = 0, a(2) = 4, a(3) = 20. ● a(n) = a(n - 1) + 38 * (a(n - 3) - a(n - 4)) - (a(n - 6) - a(n - 7)) for n >= 4 with a(- 2) = - 21, a(- 1) = - 5, a(0) = - 1, a(1) = 0, a(2) = 4, a(3) = 20. ●

► [A033579] 0,4,20,48,88,140,204,280,368,468,580,704,840,988,1148,1320,1504,1700,1908,2128,2360,2604,2860,3128,3408 ⋆ Four times pentagonal numbers: a(n) = 2 * n * (3 * n - 1). ● a(n) = a(n - 1) + 12 * n - 8 for n > 0, a(0)=0. - _ Vincenzo Librandi _ , Aug 05 2010 ●

► [A187274] 0,4,20,48,160,320,960,1792,5120,9216,25600,45056,122880,212992,573440,983040,2621440,4456448,11796480,19922944,52428800,88080384,230686720,385875968,1006632960 ⋆ a(n) = n * 4 ^ (n / 2 - 1) * (9 + (- 1) ^ n). ● a(n) = 8 * a(n - 2) - 16 * a(n - 4). - _ Colin Barker _ , Jul 25 2013 ● a(2 * n) = 5 * n * 4 ^ n, a(2 * n + 1) = (2 * n + 1) * 4 ^ (n + 1). - _ Andrew Howroyd _ , Mar 28 2016 ● a(n) = - (4 ^ n) * a(- n) for all n in Z. - _ Michael Somos _ , Jul 10 2018 ●

► [A108099] 4,20,52,100,164,244,340,452,580,724,884,1060,1252,1460,1684,1924,2180,2452,2740,3044,3364,3700,4052,4420,4804 ⋆ a(n) = 8n ^ 2 + 8n + 4. ● a(n) = 8 * n ^ 2 + 8 * n + 4. ● a(n) = 16 * n + a(n - 1), a(0)=4. - _ Vincenzo Librandi _ , Nov 13 2010 ●

► [A213485] 0,4,20,54,109,191,309,469,674,930,1246,1628,2079,2605,3215,3915,4708,5600,6600,7714,8945,10299,11785,13409,15174 ⋆ Number of (w,x,y) with all terms in { 0,...,n } and |w - x| + |x - y| + |y - w| != w + x + y. ● a(n) = 4 * a(n - 1) - 7 * a(n - 2) + 8 * a(n - 3) - 7 * a(n - 4) + 4 * a(n - 5) - a(n - 6). ●

► [A366151] 0,4,20,54,112,200,324,490,704,972,1300,1694,2160,2704,3332,4050,4864,5780,6804,7942,9200,10584,12100,13754,15552 ⋆ a(n) = T(n, 3), where T(n, k) = Sum _{ i=0..n } i ^ k * binomial(n, i) * (1 / 2) ^ (n - k). ● a(n) = n ^ 2 * (n + 3). ● a(n) = [x ^ n] (2 * x * (2 + 2 * x - x ^ 2)) / (x - 1) ^ 4. ● a(n) = n! * [x ^ n] exp(x) * (x ^ 3 + 6 * x ^ 2 + 4 * x). ●

► [A002492] 0,4,20,56,120,220,364,560,816,1140,1540,2024,2600,3276,4060,4960,5984,7140,8436,9880,11480,13244,15180,17296,19600 ⋆ Sum of the first n even squares: 2 * n * (n + 1) * (2 * n + 1) / 3. ● a(- 1 - n) = - a(n). ● a(n) = binomial(2 * n + 2, 3). - _ Lekraj Beedassy _ , Jun 19 2004 ● a(n) - a(n - 1) = 4 * n ^ 2. - _ Joerg Arndt _ , Jun 16 2011 ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>3. - _ Harvey P. Dale _ , Aug 15 2012 ● a(n) = Sum _{ k=0..3 } C(n - 2 + k,n - 2) * C(n + 3 - k,n), for n>2. - _ J. M. Bergot _ , Jun 14 2014 ●

► [A033488] 0,4,20,60,140,280,504,840,1320,1980,2860,4004,5460,7280,9520,12240,15504,19380,23940,29260,35420,42504,50600,59800,70200 ⋆ a(n) = n * (n + 1) * (n + 2) * (n + 3) / 6. ● a(n) = n * C(3 + n, 3). - _ Zerinvary Lajos _ , Jan 10 2006 ●

► [A018211] 1,4,20,60,170,396,868,1716,3235,5720,9752,15912,25236,38760,58200,85272,122661,173052,240460,328900,444158,592020,780572,1017900,1315015 ⋆ Alkane (or paraffin) numbers l(10,n). ● a(n) = (1 / (2 * 7!)) * (n + 1) * (n + 2) * (n + 3) * (n + 4) * (n + 5) * (n + 6) * (n + 7) + (1 / 3) * (1 / 2 ^ 5) * (n + 2) * (n + 4) * (n + 6) * (1 / 2) * (1 + (- 1) ^ n) [_ Yosu Yurramendi _ Jun 23 2013] ●

► [A131479] 0,0,4,20,64,156,324,600,1024,1640,2500,3660,5184,7140,9604,12656,16384,20880,26244,32580,40000,48620,58564,69960,82944 ⋆ a(n) = floor(n ^ 4 / 4). ● a(2 * k) = 4 * k ^ 4; a(2 * k + 1) = 2 * (k ^ 3 * (k + 1) + k * (k + 1) ^ 3). - _ Robert Israel _ , Jun 01 2015 ●

► [A344993] 0,4,20,68,168,368,676,1184,1912,2944,4292,6152,8456,11484,15164,19624,24944,31508,39076,48212,58656,70672,84284,100192,117888 ⋆ Number of polygons formed when every pair of vertices of a row of n adjacent congruent rectangles are joined by an infinite line. ● a(n) = 2 * n * (n + 1) + 2 * Sum _{ i=2..n } (n + 1 - i) * (2 * n + 2 - i) * phi(i). - _ Chai Wah Wu _ , Aug 21 2021 ●

► [A291526] 0,0,4,20,68,196,516,1284,3076,7172,16388,36868,81924,180228,393220,851972,1835012,3932164,8388612,17825796,37748740,79691780,167772164,352321540,738197508 ⋆ a(n) = 2 ^ n * (n - 3) + 4. ● a(n) = 5 * a(n - 1) - 8 * a(n - 2) + 4 * a(n - 3). ●

► [A061981] 0,0,4,20,72,232,716,2172,6544,19664,59028,177124,531416,1594296,4782940,14348876,43046688,129140128,387420452,1162261428,3486784360,10460353160,31381059564,94143178780,282429536432 ⋆ a(n) = 3 ^ n - 2 * n - 1. ● a(n) = Sum _{ j=2..n } Sum _{ i=0..j } n! / ((j - i)! * i! * (n - j)!). ● a(n) = 4 + 4 * a(n - 1) - 3 * a(n - 2). (End) ●

► [A054611] 0,4,20,72,280,1040,4200,16408,65840,262296,1049680,4194344,16782000,67108912,268451960,1073744160,4295033440,17179869248,68719474320,274877907016,1099512679520,4398046544304,17592190238920,70368744177752 ⋆ a(n) = Sum _{ d|n } phi(d) * 4 ^ (n / d). ● a(n) = Sum _{ k=1..n } 4 ^ gcd(n,k). - _ Ilya Gutkovskiy _ , Apr 16 2021 ●

► [A196508] 0,4,20,76,252,764,2172,5884,15356,38908,96252,233468,557052,1310716,3047420,7012348,15990780,36175868,81264636,181403644,402653180,889192444,1954545660,4278190076,9328132092 ⋆ a(n) = 2 ^ n * (n ^ 2 - n + 4) - 4. ● a(n) = 2 * 2 + 4 * 4 + 7 * 8 + 11 * 16 + 16 * 32 + ... (n terms of A000124 * A000079). ●

► [A145563] 0,4,20,76,260,844,2660,8236,25220,76684,232100,700396,2109380,6344524,19066340,57264556,171924740,516036364,1548633380,4646948716,13942943300,41833024204,125507461220,376539160876,1129651037060 ⋆ a(0)=0 and a(n + 1) = 3 * a(n) + 2 ^ (n + 2). ● a(n) = 5 * a(n - 1) - 6 * a(n - 2). ●

► [A082138] 1,4,20,80,280,896,2688,7680,21120,56320,146432,372736,931840,2293760,5570560,13369344,31752192,74711040,174325760,403701760,928514048,2122317824,4823449600,10905190400,24536678400 ⋆ A transform of C(n,3). ● a(n) = (2 ^ (n - 1) + 0 ^ n / 2) * C(n + 3, n). ● a(n) = Sum _{ j=0..n } C(n + 3, j + 3) * C(j + 3, 3) * (1 + (- 1) ^ j) / 2. ● a(n) = ceiling(binomial(n + 3,3) * 2 ^ (n - 1)). - _ Zerinvary Lajos _ , Nov 01 2006 ●

► [A074358] 0,0,0,4,20,80,288,976,3184,10112,31488,96576,292672,878336,2614784,7731456,22728448,66482176,193617920,561718272,1624101888,4681535488,13457924096,38592008192,110419341312 ⋆ Coefficient of q ^ 1 in nu(n), where nu(0)=1, nu(1)=b and, for n >= 2, nu(n) = b * nu(n - 1) + lambda * (1 + q + q ^ 2 + ... + q ^ (n - 2)) * nu(n - 2) with (b,lambda)=(2,2). ● a(n) = (1 / 18) * ((1 + sqrt(3)) ^ n * (- 9 + 2 * sqrt(3)) - (1 - sqrt(3)) ^ n * (9 + 2 * sqrt(3)) + 3 * ((1 - sqrt(3)) ^ n + (1 + sqrt(3)) ^ n) * n) for n > 0 (conjectured). - _ Colin Barker _ , Nov 17 2017 ● a(n) = 4 * a(n - 1) - 8 * a(n - 3) - 4 * a(n - 4) for n > 4 (conjectured). - _ Colin Barker _ , Nov 17 2017 ●

► [A292540] 4,20,80,320,1280,5120,20480,81920,327680,1310720,5242880,20971520,83886080,335544320,1342177280,5368709120,21474836480,85899345920,343597383680,1374389534720,5497558138880,21990232555520,87960930222080,351843720888320,1407374883553280 ⋆ Number of 3 - cycles in the n - Sierpinski tetrahedron graph. ● a(n) = 5 * 4 ^ (n - 1) for n > 1. ● a(n) = 4 * a(n - 1) for n > 2. ●

► [A320934] 0,0,1,4,20,80,336,1344,5440,21760,87296,349184,1397760,5591040,22368256,89473024,357908480,1431633920,5726601216,22906404864,91625881600,366503526400,1466015154176,5864060616704,23456246661120 ⋆ Number of chiral pairs of color patterns (set partitions) for a row of length n using 4 or fewer col

ors (subsets). • a(n) = Sum _{ j=1..k } (S2(n,j) - Ach(n,j)) / 2, where k=4 is the maximum number of colors, S2 is the Stirling subset number A008277, and Ach(n,k) = [n>=0 & n<2 & n==k] + [n>1] * (k * Ach(n - 2,k) + Ach(n - 2,k - 1) + Ach(n - 2,k - 2)). • a(2 * m) = (16 ^ m - 4 * 4 ^ m) / 48. • a(2 * m - 1) = (16 ^ m - 4 * 4 ^ m) / 192. • a(n) = (4 ^ n - 4 ^ floor(n / 2 + 1)) / 48. • a(n) = 2 ^ n * (2 ^ n - (- 1) ^ n - 3) / 48. - _ Bruno Berselli _ , Oct 31 2018 •

► [A217482] 0,0,0,0,4,20,84,220,560,1140,2300,4060,7140,11480,18424,27720,41664,59640,85320,117480,161700,215820,287980,374660,487344 ⋆ Quarter - square tetrahedrals: a(n) = k * (k - 1) * (k - 2) / 6, k = A002620(n). • a(n) = (1 / 6) * floor(n ^ 2 / 4) * (floor(n ^ 2 / 4) - 1) * (floor(n ^ 2 / 4) - 2). •

► [A167682] 1,4,20,84,324,1188,4212,14580,49572,166212,551124,1810836,5904900,19131876,61647156,197696052,631351908,2008846980,6370914708,20145865428,63536960196,199908972324,627621192180,1966546402164,6150687683364 ⋆ Expansion of (1 - 2 * x + 5 * x ^ 2) / (1 - 3 * x) ^ 2. • a(0)=1, a(1)=4, a(2)=20, a(n) = 6 * a(n - 1) - 9 * a(n - 2) for n>2. • a(n) = 3 ^ (n - 2) * (8 * n + 4) for n >0. - _ Colin Barker _ , Jan 21 2017 •

► [A155721] 4,20,84,340,1364,5460,21844,87380,349524,1398100,5592404,22369620,89478484,357913940,1431655764,5726623060,22906492244,91625968980,366503875924,1466015503700,5864062014804,23456248059220,93824992236884 ⋆ Positions of parity change in A033035. • a(n) = 5 * a(n - 1) - 4 * a(n - 2) for n > 2. G.f.: 4 * x / ((x - 1) * (4 * x - 1)). - _ Chai Wah Wu _ , Aug 30 2019 •

► [A080674] 0,4,20,84,340,1364,5460,21844,87380,349524,1398100,5592404,22369620,89478484,357913940,1431655764,5726623060,22906492244,91625968980,366503875924,1466015503700,5864062014804,23456248059220,93824992236884,375299968947540 ⋆ a(n) = (4 / 3) * (4 ^ n - 1). • a(n) = Sum _{ i = 1..n } 4 ^ i. - Adam McDougall (mcdougal(AT)stolaf.edu), Sep 29 2004 • a(n) = 4 * a(n - 1) + 4. - _ Alexandre Wajnberg _ , Apr 25 2005 • a(n) = 4 ^ n + a(n - 1) (with a(0) = 0). - _ Vincenzo Librandi _ , Aug 08 2010 • a(n) = 5 * a(n - 1) - 4 * a(n - 2). •

► [A158608] 1,4,20,84,404,1748,8212,36180,167572,746452,3427604,15370836,70212500,316145876,1439545876,6497879892,29530613908,133496692180,605986514708,2741933589588,12437717824916,56308655258324,255312140456980 ⋆ a(n) = a(n - 1) + 16 * a(n - 2), starting a(0)=1, a(1)=4. • a(n) = (1 / 2) * ((1 / 2 - (1 / 2) * sqrt(65)) ^ n + (1 / 2 + (1 / 2) * sqrt(65)) ^ n) + (7 / 130) * sqrt(65) * ((1 / 2 + (1 / 2) * sqrt(65)) ^ n - (1 / 2 - (1 / 2) * sqrt(65)) ^ n). - _ Paolo P. Lava _ , Mar 30 2009 •

► [A262768] 0,0,4,20,85,344,1365,5368,21021,82160,320892,1253240,4896034,19137104,74847175,292929840,1147223325,4496006880,17631691440,69189377400,271676550390,1067383059600,4195964793930,16503454480656,64943823784050 ⋆ a(n) = binomial(2 * n + 2,n) - 2 * binomial(2 * n,n) + binomial(2 * n - 2,n). • a(n) = Sum _{ k=0..n } (binomial(k,n - k) * 2 ^ (2 * k - n) * binomial(n - 1,k - 2)). •

► [A320935] 0,0,1,4,20,86,400,1852,8868,42892,210346,1038034,5150110,25623486,127740880,637539592,3184224728,15910524632,79520923966,397508610454,1987255480650,9935410066186,49674450471460,248364429410332,1241798688445588 ⋆ Number of chiral pairs of color patterns (set partitions) for a row of length n using 5 or fewer colors (subsets). • a(n) = Sum _{ j=1..k } (S2(n,j) - Ach(n,j)) / 2, where k=5 is the maximum number of colors, S2 is the Stirling subset number A008277, and Ach(n,k) = [n>=0 & n<2 & n==k] + [n>1] * (k * Ach(n - 2,k) + Ach(n - 2,k - 1) + Ach(n - 2,k - 2)). •

► [A320936] 0,0,1,4,20,86,409,1976,10168,54208,299859,1699012,9808848,57335124,338073107,2004955824,11936998016,71253827696,426061036747,2550545918300,15280090686256,91588065861292,549159350303235,3293482358956552,19755007003402944 ⋆ Number of chiral pairs of color patterns (set partitions) for a row of length n using 6 or fewer colors (subsets). • a(n) = Sum _{ j=1..k } (S2(n,j) - Ach(n,j)) / 2, where k=6 is the maximum number of colors, S2 is the Stirling subset number A008277, and Ach(n,k) = [n>=0 & n<2 & n==k] + [n>1] * (k * Ach(n - 2,k) + Ach(n - 2,k - 1) + Ach(n - 2,k - 2)). • a(n) = 16 * a(n - 1) - 84 * a(n - 2) + 84 * a(n - 3) + 685 * a(n - 4) - 2140 * a(n - 5) + 180 * a(n - 6) + 7200 * a(n - 7) - 8244 * a(n - 8) - 4176 * a(n - 9) + 11664 * a(n - 10) - 5184 * a(n - 11) for n>11. •

► [A320937] 0,0,1,4,20,86,409,1988,10404,57488,338180,2103378,13814202,95423766,691415451,5239857008,41431883216,341036489096,2916365967707,25862060748614,237434856965694,2253357681164288,22076002386446896,222979432604192844,2319295160051570620 ⋆ Number of chiral pairs of color patterns (set partitions) for a row of length n. • a(n) = Sum _{ j=1..n } (S2(n,j) - Ach(n,j)) / 2, where S2 is the Stirling subset number A008277, and Ach(n,k) = [n>=0 & n<2 & n==k] + [n>1] * (k * Ach(n - 2,k) + Ach(n - 2,k - 1) + Ach(n - 2,k - 2)). •

► [A093357] 0,4,20,88,368,1504,6080,24448,98048,392704,1571840,6289408,25161728,100655104,402636800,1610579968,6442385408,25769672704,103078952960,412316336128,1649266393088,6597067669504,26388274872320 ⋆ Number of occurrences of pattern 2 - 1 after n iterations of morphism A007413. • a(1) = 0, a(n) = { 3 * 4 ^ (n - 1) - 2 ^ n }/ 2. • a(1)=0, a(2)=4, a(3)=20, a(n)=6 * a(n - 1) - 8 * a(n - 2) [From Harvey P. Dale, Apr 04 2012] •

► [A017964] 1,4,20,89,400,1788,8000,35777,160000,715541,3200000,14310835,64000000,286216701,1280000000,5724334022,25600000000,114486680447,512000000000,2289733608959,10240000000000,45794672179195 ⋆ Powers of sqrt(20) rounded down. • a(n) = floor(sqrt(20 ^ n)). - _ Vincenzo Librandi _ , Jun 24 2011 •

► [A099025] 1,4,20,95,456,2184,10465,50140,240236,1151039,5514960,26423760,126603841,606595444,2906373380,13925271455,66719983896,319674648024,1531653256225,7338591633100,35161304909276,168467932913279,807178359657120,3867423865372320 ⋆ Expansion of 1 / ((1 + x) * (1 - 5 * x + x ^ 2)). • a(n) = 5 * a(n - 1) - a(n - 2) + (- 1) ^ n, a(0)=1, a(1)=4. - _ Vincenzo Librandi _ , Mar 22 2011 • a(- 3 - n) = - a(n). - _ Michael Somos _ , Jan 25 2013 • a(n) = (2 ^ (- n) * (3 * (- 2) ^ n + (9 - 2 * sqrt(21)) * (5 - sqrt(21)) ^ n + (5 + sqrt(21)) ^ n * (9 + 2 * sqrt(21)))) / 21. - _ Colin Barker _ , Nov 02 2016 •

► [A008353] 1,4,20,96,432,1856,7744,31744,128768,519168,2085888,8364032,33501184,134103040,536625152,2146959360,8588820480,34357379072,137433972736,549745328128,2199001235456,8796046884864,35184275619840,140737287028736,562949533990912 ⋆ 2 ^ n * (2 ^ (n + 1) - n - 1). • a(n) = sum { k=0..n + 1, C(2 n + 2, 2k) - 2k(n - k + 1) * C(n + 1, k) / n } , n>0. - _ Paul Barry _ , Feb 24 2005 • a(n) = 8 * a(n - 1) - 20 * a(n - 2) + 16 * a(n - 3). - _ Colin Barker _ , Feb 26 2015 •

► [A250162] 4,20,96,436,1880,7836,32032,129572,521256,2091052,8376368,33529908,134168632,536772668,2147287104,8589541444,34358952008,137437380684,549752668240,2199016964180,8796080439384,35184346923100,140737438023776 ⋆ Number of length n + 1 0..3 arrays with the sum of adjacent differences multiplied by some arrangement of +- 1 equal to zero. • a(n) = 2 * (2 - 3 * 2 ^ n + 4 ^ n + 2 * n). •

► [A296665] 1,4,20,96,444,2000,8840,38528,166124,710256,3016056,12736064,53530840,224107936,935062544,3890018816,16141765964,66829954736,276135664664,1138932645056,4690042582664,19285299964256,79196366286704,324835930747136,1330905207444344 ⋆ Row sums of A296666. • a(n) = 4 ^ n * ((2 * (n + 1) * Gamma(n + 1 / 2)) / (sqrt(Pi) * Gamma(n + 1)) - 1). •

► [A057087] 1,4,20,96,464,2240,10816,52224,252160,1217536,5878784,28385280,137056256,661766144,3195289600,15428222976,74494050304,359689093120,1736732573696,8385686667264,40489676963840,195501454524416 ⋆ Scaled Chebyshev U - polynomials evaluated at i. Generalized Fibonacci sequence. • a(n) = 4 * (a(n - 1) + a(n - 2)), a(- 1)=0, a(0)=1. • a(n) = S(n, 2 * i) * (- 2 * i) ^ n with S(n, x) := U(n, x / 2), Chebyshev's polynomials of the 2nd kind, A049310. • a(n) = - (1 / 8) * sqrt(2) * (2 - 2 * sqrt(2)) ^ (n + 1) + (1 / 8) * (2 + 2 * sqrt(2)) ^ (n + 1) * sqrt(2). - _ Paolo P. Lava _ , Nov 20 2008 • a(n) = 4 ^ n * hypergeom([1 / 2 - n / 2, - n / 2], [- n], - 1)) for n>=1. - _ Peter Luschny _ , Dec 17 2015 •

► [A151254] 1,4,20,96,480,2368,11840,58880,294400,1468416,7342080,36667392,183336960,916144128,4580720640,22896574464,114482872320,572320645120,2861603225600,14306741583872,71533707919360,357650927714304,1788254638571520,8941026626502656,44705133132513280 ⋆ Number of walks within N ^ 3 (the first octant of Z ^ 3) starting at (0,0,0) and consisting of n steps taken from { (- 1, 0, 0), (1, 0, 0), (1, 0, 1), (1, 1, 0), (1, 1, 1) } . • a(n) = (5 * (n + 1) * a(n - 1) + 16 * (n - 2) * a(n - 2) - 80 * (n - 2) * a(n - 3)) / (n + 1). - _ G. C. Greubel _ , Nov 09 2022 •

► [A293710] 0,0,1,4,20,97,472,2296,11169,54332,264300,1285697,6254320,30424368,148000449,719953588,3502240516,17036776865,82876023112,403153440424,1961154631009,9540108308844,46408205199836,225754408665729,1098190563771104 ⋆ Expansion of x ^ 2 / (1 - 4 * x - 4 * x ^ 2 - x ^ 3). • a(n + 2) = 4 * a(n + 1) + 4 * a(n) + a(n - 1). •

► [A178874] 0,1,4,20,98,489,2442,12208,61036,305177,1525880,7629396,38146974,190734865,953674318,4768371584,23841857912,119209289553,596046447756,2980232238772,14901161193850,74505805969241,372529029846194 ⋆ Partial sums of round(5 ^ n / 8). • a(n) = round((5 * 5 ^ n + 4 * n - 1) / 32) = round((5 * 5 ^ n + 4 * n - 5) / 32). • a(n) = floor((5 * 5 ^ n + 4 * n + 3) / 32). • a(n) = ceiling((5 * 5 ^ n + 4 * n - 5) / 32). • a(n) = a(n - 2) + (3 * 5 ^ (n - 1) + 1) / 4 , n > 1. • a(n) = 6 * a(n - 1) - 4 * a(n - 2) - 6 * a(n - 3) + 5 * a(n - 4), n > 3 . • a(n) = (5 ^ (n + 1) + 4 * n - 4 * (- 1) ^ n - 1) / 32. - _ Bruno Berselli _ , Jan 12 2011 •

► [A103771] 1,4,20,100,496,2464,12240,60800,302016,1500224,7452160,37017600,183879936,913398784,4537185280,22537856000,111953760256,556115206144,2762427289600,13721985024000,68162110078976,338586089570304 ⋆ Expansion of 1 / (1 - 4x - 4x ^ 2 - 4x ^ 3). • a(n)=sum { k=0..n, T(n - k, k)4 ^ (n - k) } , T(n, k) = trinomial coefficients (A027907) •

► [A005054] 1,4,20,100,500,2500,12500,62500,312500,1562500,7812500,39062500,195312500,976562500,4882812500,24414062500,122070312500,610351562500,3051757812500,15258789062500,76293945312500,381469726562500,1907348632812500,9536743164062500 ⋆ a(0) = 1; a(n) = 4 * 5 ^ (n - 1) for n >= 1. • a(n) = (4 * 5 ^ n + 0 ^ n) / 5. - _ R. J. Mathar _ , May 13 2008 • a(n) = 5 * a(n - 1) for n>=2. - _ Vincenzo Librandi _ , Dec 31 2010 • a(n + 1) = (((1 + sqrt(- 19)) / 2) ^ n + ((1 - sqrt(- 19)) / 2) ^ n) ^ 2 - (((1 + sqrt(- 19)) / 2) ^ n - ((1 - sqrt(- 19)) / 2) ^ n) ^ 2. - _ Raphie Frank _ , Dec 07 2015 •

► [A105480] 1,4,20,100,525,2912,17052,105240,683100,4652340,33168850,246999480,1917186635,15480884720,129811538960,1128494172720,10155257740443,94465951576560,907162152191470,8982422995787780,91603484234843812 ⋆ Number of partitions of { 1...n } containing 3 pairs of consecutive integers, where each pair is counted within a block and a string of more than 2 consecutive integers are counted two at a time. • a(n) = binomial(n - 1, 3) * Bell(n - 4), the case r = 3 in the general case of r pairs: c(n, r) = binomial(n - 1, r) * B(n - r - 1). •

► [A168606] 1,4,20,102,496,2294,10200,44062,186416,776934,3203080,13101422,53279136,215749174,870919160,3507493182,14101520656,56620923014,227128606440,910449955342,3647607982976,14607859562454,58483727432920 ⋆ The number of ways of partitioning the multiset { 1,1,1,2,3,...,n - 2 } into exactly four nonempty parts. • a(n) = (10 * 4 ^ (n - 4) - 5 * 3 ^ (n - 3) + 9 * 2 ^ (n - 4) - 1) / 3. •

► [A155485] 1,4,20,104,540,2784,14260,72664,368780,1865744,9416100,47430024,238548220,1198333504,6014037140,30159664184,151156234860,757212830064,3791790773380,18981860359144,95000927764700,475371142699424,2378321729000820,11897472707018904 ⋆ a(n) = 5 ^ n + (1 - 4 ^ n) / 3. • a(n) = 10a(n - 1) - 29a(n - 2) + 20a(n - 3), as in A097165. • a(n) = (1 / 3) * (1 + 3 * 5 ^ n - 4 ^ n), with n >= 0. - _ Paolo P. Lava _ , Jan 26 2009 •

► [A155181] 1,4,20,104,540,2804,14560,75604,392580,2038504,10585100,54964004,285405120,1481989604,7695353140,39958755304,207489129660,1077404403604,5594511147680,29049960142004,150844311857700,783271519430504 ⋆ a(n)=5 * a(n - 1) + a(n - 2), n>2 ; a(0)=1, a(1)=4, a(2)=20 . • a(n)=2 *{ [(5 / 2) + (1 / 2) * sqrt(29)] ^ (n - 1) + [(5 / 2) - (1 / 2) * sqrt(29)] ^ (n - 1) }+ (10 / 29) * sqrt(29) *{ [(5 / 2) + (1 / 2) * sqrt(29)] ^ (n - 1) - [(5 / 2) - (1 / 2) * sqrt(29)] ^ (n - 1) }+ [C(2 * n,n) mod 2], with n>=0 [From _ Paolo P. Lava _ , Jan 26 2009] •

► [A082761] 1,4,20,104,544,2848,14912,78080,408832,2140672,11208704,58689536,307302400,1609056256,8425127936,44114542592,230986743808,1209462292480,6332826779648,33159111507968,173623361929216,909103725543424 ⋆ Trinomial transform of the Fibonacci numbers (A000045). • a(n) = Sum[Trinomial[n, k] Fibonacci[k + 1], { k, 0, 2n }] where Trinomial[n, k] = trinomial coefficients

(A027907). • a(n) = a(- 1 - n) * 2 ^ (2 * n + 1) for all n in Z. - _ Michael Somos _ , Mar 18 2014 •

► [A076035] 1,4,20,104,548,2904,15432,82128,437444,2331128,12426200,66250672,353258536,1883768176,10045773072,53573890464,285714489348,1523763466296,8126565627192,43341046493424,231149891614008,1232790669780816,6574850950474992,35065749759115104 ⋆ G.f.: 1 / (1 - 4 * x * C) where C = (1 / 2 - 1 / 2 * (1 - 4 * x) ^ (1 / 2)) / x = g.f. for Catalan numbers A000108. • a(n) = sum { k=0..n, 3 ^ k * C(2n, n - k)(2k + 1) / (n + k + 1) } . - _ Paul Barry _ , Jun 22 2004 • a(n) = if(n=0,1,sum { k=1..n, C(2n - k - 1,n - k) * k * 4 ^ k / n }). - _ Paul Barry _ , Jan 20 2007 •

► [A120978] 0,4,20,104,552,2892,14908,75952,384080,1933460,9706596,48651000,243609208,1219108828,6098732684,30503229248,152544843936,762810312996,3814309845172,19072324066696,95363944856264,476826697849964 ⋆ 2n + 5 ^ n - 3 ^ n. • a(0)=0, a(1)=4, a(2)=20, a(3)=104, a(n) = 10 * a(n - 1) - 32 * a(n - 2) + 38 * a(n - 3) - 15 * a(n - 4) [_ Harvey P. Dale _ , Jun 15 2011] •

► [A104550] 1,4,20,104,552,2972,16172,88720,489872,2719028,15157188,84799992,475894200,2677788492,15102309468,85347160608,483183316512,2739851422820,15558315261812,88462135512712,503569008273992,2869602773253884,16368396446913420,93449566652932784,533954950648248752 ⋆ Number of horizontal segments in all Schroeder paths of length 2n (a horizontal segment is a maximal string of horizontal steps). • a(n) = Jacobi _ P(n + 1, - 1, - 2,3). [_ Paul Barry _ , Sep 27 2009] • a(n) = Hyper2F1([- n, n - 1], [1], - 1). - _ Peter Luschny _ , Aug 02 2014 • a(n) = Sum _{ k=0..n + 1 } C(n + 1,k) * C(n + k - 1,k). - _ Vladimir Kruchinin _ , Jun 15 2020 •

► [A089382] 1,4,20,104,553,2984,16272,89440,494681,2749772,15348372,85967112,482927985,2719787856,15351385152,86816721792,491819758417,2790451952660,15854070902964,90187514559208,513619224125657,2928073006131704,16708228671139600,95423104768226144,545408567460801513 ⋆ Total number of triangles in all the dissections of a convex (n + 3) - gon by nonintersecting diagonals. • a(n) = Sum _{ j=0..n } ((- 1) ^ j * 2 ^ (n - j) * binomial(n + 3,j) * binomial(2 * n - j + 2,n + 2)). - _ Vladimir Kruchinin _ , Apr 08 2016 •

► [A195256] 1,4,20,104,568,3296,20576,139840,1044416,8617472,78605824,790252544,8709555200,104581771264,1359831461888,19038714208256,285585008091136,4569377309327360,77679482978041856,1398230968482660352,26566389500682174464 ⋆ O.g.f.: Sum _{ n>=0 } 4 * (n + 4) ^ (n - 1) * x ^ n / (1 + n * x) ^ n. • a(n) = (n - 1)! * Sum _{ k=1..n } 4 ^ k / (k - 1)! for n>0, with a(0)=1. •

► [A061709] 1,4,20,104,752,5600,44224,350592,2800384,22377984,178990080,1431721984,11453509632,91626496000,733009854464,5864066220032,46912512917504,375300002545664,3002399885885440,24019198281252864,192153585175232512,1537228674957312000 ⋆ Consider a (hollow) triangle with n cells on each edge, for a total of 3(n - 1) cells if n>1, or 1 cell if n=1; a(n) is number of ways of labeling cells with 0's and 1's; triangle may be rotated and turned over. • a(n) = (1 / 6) * (2 ^ (3 * (n - 1)) + 2 ^ n + 3 * 2 ^ (floor((3 * n - 1) / 2))) for n>1. • a(2)=4, a(3)=20, a(4)=104, a(5)=752, a(n)=10 * a(n - 1) - 8 * a(n - 2) - 80 * a(n - 3) + 128 * a(n - 4). - _ Harvey P. Dale _ , Apr 22 2013 •

► [A135159] 1,4,20,106,560,2914,14960,76066,384320,1933954,9707600,48653026,243613280,1219116994,6098749040,30503261986,152544909440,762810444034,3814310107280,19072324590946,95363945904800,476826699947074,2384154414150320,11920834820287906,59604362362631360 ⋆ a(n) = 5 ^ n - 3 ^ n + 2 ^ n. • a(n) = 5 ^ n - 3 ^ n + 2 ^ n. • a(n) = 10 * a(n - 1) - 31 * a(n - 2) + 30 * a(n - 3). - _ G. C. Greubel _ , Sep 30 2016 •

► [A190724] 1,4,20,106,576,3174,17648,98746,555104,3131854,17720880,100507554,571179792,3251459670,18535914480,105803208906,604598535360,3458315246238,19799128470896,113441876080306,650450158678256,3731985710892454,21425304596140080 ⋆ Row sums of Riordan matrix A118384. • a(n) = (6 ^ n + d(n) - sum(6 ^ (k - 1) * d(n - k),k=1..n)) / 2, where d(n) = central Delannoy number (A001850). •

► [A243585] 1,4,20,106,580,3244,18446,106250,618340,3628600,21438820,127377980,760346350,4556473276,27396081950,165189725326,998492094244,6048338850560,36706629690824,223139239595840,1358475322091620 ⋆ Expansion of x * log'(C(C(x) - 1) - 1), C(x) = (1 - sqrt(1 - 4 * x)) / (2 * x). • a(n) = Sum _{ k=0..n } binomial(2 * k,k) * binomial(2 * n,n - k). • a(n) = binomial(2 * n, n) * hypergeom([1 / 2, - n], [n + 1], - 4]. - _ Peter Luschny _ , Aug 04 2019 •

► [A262394] 1,4,20,110,637,3808,23256,144210,904475,5722860,36463440,233646504,1504152860,9721421440,63040282096,409972529754,2672860120455,17464206951100,114330456032100,749760805916430 ⋆ a(n) = (1 / n) * Sum _{ k=1..n } k * binomial(n,k - 1) * binomial(2 * n,n - k). • a(n) = (n + 2) * binomial(3 * n, n - 1) / (3 * n). - _ Vaclav Kotesovec _ , Sep 21 2015 •

► [A153295] 1,1,4,20,110,638,3828,23515,146972,930869,5958094,38462190,250054804,1635421543,10750864640,70987129653,470542935654,3129729034478,20880459397920,139689406647522,936832986074664,6297064070279195 ⋆ G.f.: A(x) = F(x * G(x) ^ 2) where F(x) = G(x / F(x)) = 1 + x * F(x) ^ 2 is the g.f. of A000108 (Catalan) and G(x) = F(x * G(x)) = 1 + x * G(x) ^ 3 is the g.f. of A001764. • a(n) = Sum _{ k=0..n } C(2k + 1,k) / (2k + 1) * C(3n - k,n - k) * 2k / (3n - k) for n>0 with a(0)=1. •

► [A014523] 1,4,20,111,624,3505,19676,110444,619935,3479776,19532449,109638260,615414276,3454402959,19390027600,108838828241,610926955724,3429215026140,19248644351551,108045225087424,606472354675265,3404210752374756,19108292005806324 ⋆ Number of Hamiltonian paths in a 4 X (2n + 1) grid starting at the lower left corner and finishing in the upper right corner. • a(n) = 7 * a(n - 1) - 9 * a(n - 2) + 7 * a(n - 3) - a(n - 4) = - a(- 2 - n). •

► [A153299] 1,1,4,20,111,657,4067,26028,170913,1145446,7804797,53911104,376669462,2657391772,18904566514,135460704648,976795422828,7082951967141,51614974500605,377798933519164,2776363089297553,20476554379564305 ⋆ G.f.: A(x) = F(x * G(x)) where F(x) = G(x * F(x)) = 1 + x * F(x) ^ 3 is the g.f. of A001764 and G(x) = F(x / G(x)) = 1 + x * G(x) ^ 2 is the g.f. of A000108 (Catalan). • a(n) = Sum _{ k=0..n } C(3k + 1,k) / (3k + 1) * C(2n - k,n - k) * k / (2n - k) for n>0 with a(0)=1. •

► [A081335] 1,4,20,112,656,3904,23360,140032,839936,5039104,30233600,181399552,1088393216,6530351104,39182090240,235092508672,1410554986496,8463329787904,50779978465280,304679870267392,1828079220555776 ⋆ a(n) = (6 ^ n + 2 ^ n) / 2. • a(n) = 8 * a(n - 1) - 12 * a(n - 2), a(0)=1, a(1)=4. • a(n) = Sum _{ k=0..floor(n / 2) } binomial(n,2 * k) * 4 ^ (n - k) = Sum _{ k=0..n } binomial(n,k) * 4 ^ (n - k / 2) * (1 + (- 1) ^ k) / 2. - _ Paul Barry _ , Nov 22 2003 •

► [A136783] 1,4,20,112,660,3976,24180,147648,903140,5528504,33853220,207325392,1269787060,7777149416,47633751380,291750220768,1786933908740,10944758154264,67035370422020,410583912229872,2514779283989460,15402734618128456,94339983758166580 ⋆ Number of multiplex juggling sequences of length n, base state <3> and hand capacity 3. • a(n) = 10 * a(n - 1) - 27 * a(n - 2) + 20 * a(n - 3) for n>3. - _ Colin Barker _ , Aug 31 2016 •

► [A227726] 1,4,20,112,660,4004,24752,155040,980628,6249100,40060020,2580489601668903600,10829900592,70480305440,459823234112,3006465218196,19694758782300,129235131438140,849311959095600,5589126007740660,36825913869817380,242910890642347200 ⋆ a(n) = [x ^ n] (1 + x) / (1 - x) ^ (2 * n + 1). • a(n) = binomial(3 * n, n) + binomial(3 * n - 1, n - 1). • a(n) = Sum _{ r = 0..n - 1 } C(n - 1,r) * C(2 * n,r) + Sum _{ r = 0..n } C(n,r) * C(2 * n,n + r) - _ J. M. Bergot _ , Mar 18 2014 • a(n) = [x ^ n](1 / C(- x) ^ 4) ^ n, where C(x) = (1 - sqrt(1 - 4 * x)) / (2 * x) is the o.g.f. for the Catalan numbers A000108. Cf. A224274. (End) •

► [A080609] 1,4,20,112,664,4064,25376,160640,1027168,6618496,42904960,279503360,1828222720,11999226880,78984381440,521218322432,3447059138048,22840932997120,151607254267904,1007830488424448,6708862677274624 ⋆ Binomial transform of central Delannoy numbers A001850. • a(n) = LegendreP _ n(sqrt(2)) * 8 ^ (n / 2). - _ Vladimir Reshetnikov _ , Nov 01 2015 •

► [A003645] 1,4,20,112,672,4224,27456,183040,1244672,8599552,60196864,426008576,3042918400,21909012480,158840340480,1158600130560,8496400957440,62605059686400,463277441679360,3441489566760960,25654740406763520,191852841302753280,1438896309770649600 ⋆ a(n) = 2 ^ n * C(n + 1, n) = A000108(n) Catalan numbers. • a(n) = 2 ^ n * binomial(2n + 3, n + 1) / (2n + 3). - _ Len Smiley _ , Feb 24 2006 • a(n) = sum of top row terms in M ^ n. Example: top row of M ^ 3 = (40, 40, 24, 8, 0, 0, 0, ...), sum = 112 = a(3). (End) • a(n) = Product _{ 1 <= i <= j <= n } (i + j + 2) / (i + j - 1). Cf. A001700. - _ Peter Bala _ , Feb 22 2023 •

► [A081085] 1,4,20,112,676,4304,28496,194240,1353508,9593104,68906320,500281280,3664176400,27033720640,200683238720,1497639994112,11227634469668,84509490017680,638344820152784,4836914483890112,36753795855173776,279985580271435584,2137790149251471680 ⋆ Expansion of 1 / AGM(1, 1 - 8 * x) in powers of x. • a(n) = Sum _{ k=0..n } binomial(n, k) * binomial(2 * n - 2 * k, n - k) * binomial(2 * k, k) = binomial(2 * n, n) * hypergeom([- n, - n, 1 / 2], [1, - n + 1 / 2], - 1). - _ Vladeta Jovovic _ , Sep 16 2003 • a(n) = Sum _{ k=0..[n / 2] } 4 ^ (n - 2 * k) * binomial(n, 2 * k) * binomial(2 * k, k) ^ 2. - _ Seiichi Manyama _ , Apr 02 2017 • a(n) = (1 / Pi) ^ 2 * Integral _{ 0 <= x, y <= Pi } (4 * cos(x) ^ 2 + 4 * cos(y) ^ 2) ^ n dx dy. - _ Peter Bala _ , Feb 10 2022 • a(n) = a(- 1 - n) * 32 ^ (n - 1 / 2) and 0 = + a(n) * (+ a(n + 1) * (+ 32768 * a(n + 2) - 23552 * a(n + 3) + 3072 * a(n + 4)) + a(n + 2) * (- 8192 * a(n + 2) + 8448 * a(n + 3) - 1248 * a(n + 4)) + a(n + 3) * (- 512 * a(n + 3) + 96 * a(n + 4))) + a(n + 1) * (+ a(n + 1) * (- 5120 * a(n + 2) + 3840 * a(n + 3) - 512 * a(n + 4)) + a(n + 2) * (+ 1536 * a(n + 2) - 1728 * a(n + 3) + 264 * a(n + 4)) + a(n + 3) * (+ 120 * a(n + 3) - 23 * a(n + 4))) + a(n + 2) * (+ a(n + 2) * (- 32 * a(n + 2) + 48 * a(n + 3) - 8 * a(n + 4)) + a(n + 3) * (- 5 * a(n + 3) + a(n + 4))) for all n in Z. - _ Michael Somos _ , Apr 04 2022 • a(n) = binomial(2 * n, n) * hypergeom([1 / 2, - n, - n], [1, 1 / 2 - n], - 1). - _ Peter Luschny _ , Apr 05 2022 •

► [A212326] 1,4,20,112,676,4312,28704,197600,1397060,10090676,74152456,552666448,4167528000,31736182776,243698432960,1884809367456,14668777816708,114789815231560,902661488046900,7129068237647408,56524456978032904,449752267499647104 ⋆ G.f. satisfies: A(x) = theta _ 3(x * A(x)) ^ 2, where theta _ 3(x) is Jacobi's theta _ 3 function. • a(n) = [x ^ n] theta _ 3(x) ^ (2 * n + 2) / (n + 1). •

► [A294119] 1,4,20,112,688,4544,31936,236800,1841408,14943232,126063616,1101983744,9954734080,92714156032,888502796288,8746003922944,88294183469056,912920984944640,9655688415674368,104353064578711552,1151244577906098176,12953223477921316864 ⋆ Expansion of e.g.f.: exp(2 * ((1 + x) ^ 2 - 1)). • a(n) = 4 * a(n - 1) + 4 * (n - 1) * a(n - 2). - _ Robert Israel _ , Jun 16 2020 •

► [A245375] 1,4,20,112,736,5632,49024,474112,5017600,57597952,712597504,9446981632,133474877440,2000265674752,31666683510784,527786775150592,9233419259084800,169106747636580352,3234542505882025984,64473076850860490752,1336621867385969704960,28769619371258703511552 ⋆ G.f.: Sum _{ n>=0 } x ^ n / ((1 + x) ^ (n + 1) * (1 - 4 * (n + 1) * x)). • a(n) = Sum _{ k=0..floor(n / 2) } Sum _{ i=0..k } (- 1) ^ i * binomial(k,i) * 4 ^ (n - k) * (k - i + 1) ^ (n - k). •

► [A108447] 1,1,4,20,113,688,4404,29219,199140,1385904,9807820,70364704,510609620,3741212535,27639233548,205660399220,1539916433473,11594310041792,87725707127600,666681174728724,5086601816592432,38948589882247968 ⋆ Number of paths from (0,0) to (3n,0) that stay in the first quadrant (but may touch the horizontal axis), consisting of steps u=(2,1),U=(1,2), or d=(1, - 1) and have no peaks of the form ud. • a(n) = (1 / n) * Sum _{ j=0..n } binomial(n, j) * binomial(n + 2j, j - 1) (n>=1); a(0)=1. • a(n) = hypergeom([1 - n,(n + 3) / 2,(n + 4) / 2],[2,n + 3], - 4) for n>=1. - _ Peter Luschny _ , Oct 30 2015 •

► [A258664] 0,0,1,1,4,20,115,787,6184,54888,542805,5916725,70463900,910167596,12672415015,189181881575,3014307220880,51054940726928,915987174021609,17352888926841897,346144782915314740,7251738265074465220,159193007549552845339,3654204694819144118651 ⋆ A total of n married couples, including a mathematician M and his wife, are to be seated at the 2n chairs around a circular table, with no man seated next to his wife. After the ladies are seated at every other chair, M is the first man allowed to choose one of the remaining chairs. The sequence gives the number of ways of seating the other men, with no man seated next to his wife, if M chooses the chair that is 3 seats clockwise from his wife's chair. • a(n) = Sum _{ 0<=k<=n - 1 } (- 1) ^ k * (n - k - 1)! * Sum _{ max(k - n + 2, 0)<=j<=min(k,1) } binomial(2 - j, j) * binomial(2 * n - k + j -

4, k - j). ●

► [A106567] 0,4,20,116,660,3764,21460,122356,697620,3977524,22678100,129300596,737215380,4203279284,23965257940,136639406836,779058065940,4441847957044,25325472048980,144394752073076,823275648561300,4693957251098804,26762888849739220 ★ a(n) = 5 * a(n - 1) + 4 * a(n - 2), with a(0) = 4, a(1) = 4. ● a(n) = 5 * a(n - 1) + 4 * a(n - 2) for n > 1. ● a(n) = 4 * (p ^ n - q ^ n) / (p - q), where 2 * p = 5 + sqrt(41), 2 * q = 5 - sqrt(41). - _ G. C. Greubel _ , Sep 06 2021 ●

► [A077445] 4,20,116,676,3940,22964,133844,780100,4546756,26500436,154455860,900234724,5246952484,30581480180,178241928596,1038870091396,6054978619780,35291001627284,205691031143924,1198855185236260 ★ Numbers k such that (k ^ 2 - 8) / 2 is a square. ● a(n) = (((3 + 2 * sqrt(2)) ^ n + (3 - 2 * sqrt(2)) ^ n) + ((3 + 2 * sqrt(2)) ^ (n - 1) + (3 - 2 * sqrt(2)) ^ (n - 1))) / 2. ● a(n) = (2 + sqrt(2)) * (3 + 2 * sqrt(2)) ^ n + (2 - sqrt(2)) * (3 - 2 * sqrt(2)) ^ n. - _ Antonio Alberto Olivares _ , Feb 23 2006 ●

► [A165311] 1,4,20,116,724,4660,30356,198644,1302100,8540596,56031764,367636340,2412218836,15827788084,103854591380,681446713076,4471346955604,29338975191220,192509225431316,1263159425822324,8288287225499860 ★ a(0)=1, a(1)=4, a(n)=9 * a(n - 1) - 16 * a(n - 2) for n>1. ● a(n) = ((17 - sqrt(17)) * (9 + sqrt(17)) ^ n + (17 + sqrt(17)) * (9 - sqrt(17)) ^ n) / (34 * 2 ^ n). [From _ Klaus Brockhaus _ , Sep 26 2009] ●

► [A082298] 1,4,20,116,740,5028,35700,261780,1967300,15072836,117297620,924612532,7367204260,59240277988,480118631220,3917880562644,32163325863300,265446382860420,2201136740855700,18329850024033012,153225552507991140 ★ G.f.: (1 - 3 * x - sqrt(9 * x ^ 2 - 10 * x + 1)) / (2 * x). ● a(0)=1, n>0 a(n) = (1 / n) * Sum _{ k=0..n } 4 ^ k * binomial(n, k) * binomial(n, k - 1). ● a(1)=1, a(n) = 3 * a(n - 1) + Sum _{ i=1..n - 1 } a(i) * a(n - i). - _ Benoit Cloitre _ , Mar 16 2004 ● a(n) = Sum _{ k=0..n } 1 / (n + 1) Binomial(n + 1,k)Binomial(2n - k,n - k)3 ^ k. - _ David Callan _ , Jun 07 2006 ● a(n) = 4 * hypergeom([1 - n, - n], [2], 4)) for n>0. - _ Peter Luschny _ , May 22 2017 ●

► [A078944] 1,4,20,116,756,5428,42356,355636,3188340,30333492,304716148,3218555700,35618229364,411717043252,4957730174836,62045057731892,805323357485684,10820999695801908,150271018666120564,2153476417340487476 ★ First column of A078939, the fourth power of lower triangular matrix A056857. ● a(n) = exp(- 4) * Sum _{ k>=0 } 4 ^ k * k ^ n / k!. - _ Benoit Cloitre _ , Sep 25 2003 ●

► [A370530] 0,0,0,0,0,0,0,0,0,0,1,4,20,116,820,6600,59650,598140,6592740,79232140,1031214100,14450182880,216911207555,3472641749080,59063810100120,1063582404217144 ★ Number of permutations of [n] having exactly three adjacent 3 - cycles. ● a(n) = (1 / 6) * Sum _{ k=0..floor(n / 3) - 3 } (- 1) ^ k * (n - 2 * k - 6)! / k!. ●

► [A258666] 0,0,0,0,4,20,117,791,6204,55004,543595,5922925,70518884,910711076,12678337153,189252394275,3015217877068,51067618521276,916176420499159,17355904074255065,346195849623668420,7252654428822549364,159210363264445218829,3654550887654460566191 ★ A total of n married couples, including a mathematician M and his wife, are to be seated at the 2n chairs around a circular table, with no man seated next to his wife. After the ladies are seated at every other chair, M is the first man allowed to choose one of the remaining chairs. The sequence gives the number of ways of seating the other men, with no man seated next to his wife, if M chooses the chair that is 7 seats clockwise from his wife's chair. ● a(n)=0, n<=4; for n>=5, a(n) = Sum _{ k=0..n - 1 } (- 1) ^ k * (n - k - 1)! Sum _{ j=max(k - n + 4, 0)..min(k,3) } binomial(6 - j, j) * binomial(2 * n - k + j - 8, k - j). ●

► [A046729] 0,4,20,120,696,4060,23660,137904,803760,4684660,27304196,159140520,927538920,5406093004,31509019100,183648021600,1070379110496,6238626641380,36361380737780,211929657785304,1235216565974040 ★ Expansion of 4 * x / ((1 + x) * (1 - 6 * x + x ^ 2)). ● a(n) = ((1 + sqrt(2)) ^ (2n + 1) + (1 - sqrt(2)) ^ (2n + 1) + 2 * (- 1) ^ (n + 1)) / 4. ● a(n) = ceiling((sqrt(2) + 1) ^ (2 * n + 1) - (sqrt(2) - 1) ^ (2 * n + 1) - 2 * (- 1) ^ n) / 4. - Lambert Klasen (Lambert.Klasen(AT)gmx.net), Nov 12 2004 ● a(n + 1) = (3 * a(n) + 2 * (- 1) ^ n) + 2 * sqrt(2 * a(n) * (a(n) + (- 1) ^ n) + 1). ● a(n - 1) = (3 * a(n) + 2 * (- 1) ^ n) - 2 * sqrt(2 * a(n) * (a(n) + (- 1) ^ n) + 1). ● a(n + 1) = 6 * a(n) - a(n - 1) + 4 * (- 1) ^ n. ● a(n + 1) = 5 * a(n) + 5 * a(n - 1) - a(n - 2). ●

► [A093123] 1,4,20,120,800,5600,40000,288000,2080000,15040000,108800000,787200000,5696000000,41216000000,298240000000,2158080000000,15616000000000,112998400000000,817664000000000,5916672000000000,42813440000000000 ★ Third binomial transform of Fibonacci(3n - 1) (A015448). ● a(n) = (5 - sqrt(5)) * (5 + sqrt(5)) ^ n / 10 + (5 + sqrt(5)) * (5 - sqrt(5)) ^ n / 10. ●

► [A092055] 1,4,20,120,816,5984,45760,357760,2829056,22500864,179481600,1433753600,11461636096,91659526144,733141975040,5864598896640,46914643623936,375308558925824,3002434111406080,24019335451770880,192154133857304576,1537230871833083904,12297838178567454720 ★ a(n) = binomial(2 + 2 ^ n,3). ● a(n) = [x ^ 3] 1 / (1 - x) ^ (2 ^ n). - _ Geoffrey Critzer _ , Jul 11 2013 ● a(n) = 14 * a(n - 1) - 56 * a(n - 2) + 64 * a(n - 3). - _ Colin Barker _ , Sep 13 2014 ●

► [A370653] 0,0,0,0,0,0,0,0,0,0,0,0,1,4,20,120,836,6700,60360,603960,6646090,79773180,1037232420,14523065760,217865924620 ★ Number of permutations of [n] having exactly three adjacent 4 - cycles. ● a(n) = (1 / 6) * Sum _{ k=0..floor(n / 4) - 3 } (- 1) ^ k * (n - 3 * k - 9)! / k!. ●

► [A121553] 1,4,20,122,874,7164,65988,674064,7558416,92276640,1218255840,17293495680,262656570240,4250077896960,72992067321600,1326101675673600,25410150701107200,512158576546713600,10832221231772774400 ★ Total area of all deco polyominoes of height n. A deco polyomino is a directed column - convex polyomino in which the height, measured along the diagonal, is attained only in the last column. ● a(1)=1; a(n)=n * a(n - 1) + (n - 1)! * [1 + n(n - 1) / 2] for n >=2 (see Barcucci et al. reference, p. 34). ● a(n)=n![n(n - 1) / 4 + 1 / 1 + 1 / 2 + ... + 1 / n]. - _ Emeric Deutsch _ , Apr 06 2008 ●

► [A347339] 1,1,4,20,123,902,7656,73509,785154,9213324,117624569,1621028312,23959376436,377730250003,6322478398476,111904530008040,2087093471665987,40891426070289970,839329531471890724,18004595602417946685,402747680140030433886,9376084240910510840672,226760664399026618376569 ★ E.g.f.: exp((exp(x) - 1) * exp(exp(x) - 1)). ● a(0) = 1; a(n) = Sum _{ k=1..n } binomial(n - 1,k - 1) * (Bell(k + 1) - Bell(k)) * a(n - k). ●

► [A361548] 1,1,4,20,126,966,8656,88544,1016380,12920156,179996816,2725070096,44521522024,780344770440,14599772973696,290311643773376,6112190642062096,135798496839920144,3174483084427144000,77872118431269176896,1999809157085214044896 ★ Expansion of e.g.f. exp((x + x ^ 2 / 2 + x ^ 3 / 6) / (1 - x)). ● a(n) = (2 * n - 1) * a(n - 1) - (n - 1) * (n - 3) * a(n - 2) - 2 * binomial(n - 1,3) * a(n - 4) for n > 3. ●

► [A361558] 1,1,4,20,127,976,8776,90084,1037555,13233077,184956386,2809098986,46038214729,809411443790,15189361799522,302932433571356,6396529241755881,142523960797017589,3341115707515530400,82187749261419720712,2116421112495023612311 ★ Expansion of e.g.f. exp((x + x ^ 2 / 2 + x ^ 3 / 6 + x ^ 4 / 24) / (1 - x)). ● a(n) = (2 * n - 1) * a(n - 1) - (n - 1) * (n - 3) * a(n - 2) - binomial(n - 1,3) * a(n - 4) - 3 * binomial(n - 1,4) * a(n - 5) for n > 4. ●

► [A080795] 1,1,4,20,128,1024,9856,110720,1421312,20525056,329334784,5812797440,111923560448,2334639652864,52444850814976,1262260748288000,32405895451246592,883950436237705216,25530268718794276864 ★ Number of minimax trees on n nodes. ● a(n) = (2 * sqrt(2)) ^ (n - 1) * Sum _{ k = 1..n } k! * Stirling2(n,k) * w ^ (k - 1), with w = (sqrt(2) - 1) / 2. ● a(p) = (- 1) ^ ((p ^ 2 - 1) / 8) (mod p) for odd prime p. ●

► [A360467] 4,20,130,884,6052,41474,284260,1948340,13354114,91530452,627359044,4299982850,29472520900,202007663444,1384581123202,9490060198964,65045840269540,445830821687810,3055769911545124,20944558559128052,143556140002351234,983948421457330580 ★ a(n) = Fibonacci(4 * n + 2) + 3 * Fibonacci(2 * n + 1) ^ 2. ● a(n) = Fibonacci(2 * n + 1) * (Fibonacci(2 * n) + Fibonacci(2 * n + 2) + 3 * Fibonacci(2 * n + 1)). ● a(n) = a(n - 3) - 8 * (a(n - 2) - a(n - 1)) for n >= 3. - _ Peter Luschny _ , Feb 17 2023 ●

► [A366183] 1,4,20,145,1250,11746,116641,1204039,12790067,138895021,1535005454,17207743738,195197256289,2236419124408,25842382083071,300822398531482,3524358836945936,41524956284752018,491722951928324392,5848997420625891294,69854562522309219081 ★ G.f. A(x) satisfies A(x) = 1 / (1 - x) ^ 3 + x * A(x) ^ 3 / (1 - x) ^ 2. ● a(n) = Sum _{ k=0..n } binomial(n + 7 * k + 2,n - k) * binomial(3 * k,k) / (2 * k + 1). ●

► [A082988] 0,4,20,148,916,6036,38804,251796,1628052,10540948,68212628,441505684,2857424788,18493790100,119693957012,774676469652,5013809190804,32450060277652,210021188163476,1359285717096340,8797481879000980 ★ a(n)=sum(k=0,n,4 ^ k * F(k)) where F(k) is the k - th Fibonacci number. ● a(0)=0, a(1)=4, a(2)=20, a(n)=5a(n - 1) + 12a(n - 2) - 16a(n - 3) ●

► [A042429] 1,4,21,25,121,993,1114,7677,8791,78005,320811,398816,2314891,9658380,523867411,2105128024,11049507531,13154635555,63668049751,522499033563,586167083314,4039501533447,4625668616761,41044850467535,168805070486901 ★ Denominators of continued fraction convergents to sqrt(742). ● a(n) = 526182302 * a(n - 14) - a(n - 28) for n>27. - _ Vincenzo Librandi _ , Jan 22 2014 ●

► [A306285] 4,21,30,47,56,73,82,99,108,125,134,151,160,177,186,203,212,229,238,255,264,281,290,307,316 ★ Numbers congruent to 4 or 21 mod 26. ● a(n) = 13 * n - 5 for n even. ● a(n) = 13 * n - 9 for n odd. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n>3. (End) ●

► [A204557] 1,4,21,36,85,120,217,280,441,540,781,924,1261,1456,1905,2160,2737,3060,3781,4180,5061,5544,6601,7176,8425 ★ Right edge of the triangle A045975. ● a(n) = n * (2 * n ^ 2 + (3 - (- 1) ^ n) * n - (- 1) ^ n - 3) / 4. ● a(n) = (n ^ 3 + n ^ 2 - 2 * n) / 2 for n even. ● a(n) = (n ^ 3 + 2 * n ^ 2 - n) / 2 for n odd. ●

► [A063122] 4,21,39,57,75,93,111,129,147,165,183,201,219,237,255,273,291,309,327,345,363,381,399,417,435 ★ Dimension of the space of weight 2n cusp forms for Gamma _ 0(54). ● a(n) = 2 * a(n - 1) - a(n - 2) for n>3. ●

► [A273417] 1,4,21,41,72,113,160,217,280,353,432,521,616,721,832,953,1080,1217,1360,1513,1672,1841,2016,2201,2392 ★ Number of active (ON,black) cells in n - th stage of growth of two - dimensional cellular automaton defined by "Rule 705", based on the 5 - celled von Neumann neighborhood. ● a(n) = (- 15 - (- 1) ^ n + 8 * n + 8 * n ^ 2) / 2 for n>2. ● a(n) = 4 * (n ^ 2 + n - 2) for n>2 and even. ● a(n) = 4 * n ^ 2 + 4 * n - 7 for n>2 and odd. ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4) for n>6. ●

► [A273443] 1,4,21,41,80,120,168,224,288,360,440,528,624,728,840,960,1088,1224,1368,1520,1680,1848,2024,2208,2400 ★ Number of active (ON,black) cells in n - th stage of growth of two - dimensional cellular automaton defined by "Rule 721", based on the 5 - celled von Neumann neighborhood. ● a(n) = 4 * n * (1 + n) for n>3. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>6. ●

► [A273405] 1,4,21,44,77,116,165,220,285,356,437,524,621,724,837,956,1085,1220,1365,1516,1677,1844,2021,2204,2397 ★ Number of active (ON,black) cells in n - th stage of growth of two - dimensional cellular automaton defined by "Rule 673", based on the 5 - celled von Neumann neighborhood. ● a(n) = ((- 1) ^ n + 8 * n + 8 * n ^ 2 - 7) / 2 for n>0. ● a(n) = 4 * n ^ 2 + 4 * n - 3 for n>0 and even. ● a(n) = 4 * (n ^ 2 + n - 1) for n>0 and odd. ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4) for n>4. ●

► [A273831] 1,4,21,45,76,117,164,221,284,357,436,525,620,725,836,957,1084,1221,1364,1517,1676,1845,2020,2205,2396 ★ Number of active (ON,black) cells in n - th stage of growth of two - dimensional cellular automaton defined by "Rule 961", based on the 5 - celled von Neumann neighborhood. ● a(n) = (- 7 - (- 1) ^ n + 8 * n + 8 * n ^ 2) / 2 for n>2. ● a(n) = 4 * (n ^ 2 + n - 1) for n>2 and even. ● a(n) = 4 * n ^ 2 + 4 * n - 3 for n>2 and odd. ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4) for n>6. ●

► [A273847] 1,4,21,45,76,121,169,225,289,361,441,529,625,729,841,961,1089,1225,1369,1521,1681,1849,2025,2209,2401 ★ Number of active (ON,black) cells in n - th stage of growth of two - dimensional cellular automaton defined by "Rule 969", based on the 5 - celled von Neumann neighborhood. ● a(n) = (1 + 2 * n) ^ 2 for n>4. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>7. ●

► [A273780] 1,4,21,48,81,121,169,225,289,361,441,529,625,729,841,961,1089,1225,1369,1521,1681,1849,2025,2209,2401 ★ Number of active (ON,black) cells in n - th stage of growth of two - dimensional cellular automaton defined by "Rule 9

29", based on the 5 - celled von Neumann neighborhood. • a(n) = (1 + 2 * n) ^ 2 for n>3. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>6. •

► [A033569] 1,4,21,50,91,144,209,286,375,476,589,714,851,1000,1161,1334,1519,1716,1925,2146,2379,2624,2881,3150,3431 ⋆ a(n) = (2 * n - 1) * (3 * n + 1). • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Jul 07 2012 •

► [A131478] 0,1,4,21,64,157,324,601,1024,1641,2500,3661,5184,7141,9604,12657,16384,20881,26244,32581,40000,48621,58564,69961,82944 ⋆ a(n) = ceiling(n ^ 4 / 4). • a(n) = floor(n ^ 4 / 4 + 3 / 4). - _ Bruno Berselli _ , Dec 21 2017 •

► [A212246] 0,0,4,21,65,155,315,574,966,1530,2310,3355,4719,6461,8645,11340,14620,18564,23256,28785,35245,42735,51359,61226,72450 ⋆ Number of (w,x,y,z) with all terms in { 1,...,n } and w <= x > y <= z. • a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). • a(n) = (n - 1) * n * (n + 1) * (5 * n + 6) / 24. - _ Bruno Berselli _ , May 31 2012 •

► [A095668] 4,21,66,161,336,630,1092,1782,2772,4147,6006,8463,11648,15708,20808,27132,34884,44289,55594,69069,85008,103730,125580,150930,180180 ⋆ Sixth column (m=5) of (1,4) - Pascal triangle A095666. • a(n) = (n + 20) * binomial(n + 4, 4) / 5. •

► [A192429] 0,1,4,21,76,329,1256,5157,20216,81505,322924,1293189,5144644,20550089,81881168,326756661,1302722672,5196774145,20723304532,82657204533,329642305468,1314745861769,5243461810232,20912613564549,83404589311592 ⋆ Coefficient of x in the reduction by x ^ 2 - > x + 1 of the polynomial p(n,x) defined below in Comments. • a(n) = 2 * a(n - 1) + 10 * a(n - 2) - 6 * a(n - 3) - 9 * a(n - 4). • a(n) = Sum _{ k=0..n } T(n,k) * Fibonacci(k), where T(n, k) = [x ^ k] (((x + sqrt(x + 4)) ^ n + (x - sqrt(x + 4)) ^ n) / 2 + ((x + sqrt(x + 4)) ^ n - (x - sqrt(x + 4)) ^ n) / (2 * sqrt(x + 4))). - _ G. C. Greubel _ , Jul 13 2023 •

► [A348621] 0,4,21,82,275,836,2373,6406,16647,41992,103433,249866,593931,1392652,3227661,7405582,16842767,38010896,85196817,189792274,420478995,926941204,2034237461,4445962262,9680453655 ⋆ The number of additions required to compute the permanent of general n X n matrices using Ryser's formula without Gray code ordering. • a(n) = (n ^ 2 - 2 * n + 2) * 2 ^ (n - 1) + n - 2. • a(n) = 8 * a(n - 1) - 25 * a(n - 2) + 38 * a(n - 3) - 28 * a(n - 4) + 8 * a(n - 5) for n > 5. •

► [A017967] 1,4,21,96,441,2020,9261,42439,194481,891223,4084101,18715701,85766121,393029741,1801088541,8253624572,37822859361,173326116021,794280046581,3639848436450,16679880978201,76436817165460 ⋆ Powers of sqrt(21) rounded down. • a(n) = floor(sqrt(21 ^ n)). - _ Vincenzo Librandi _ , Jun 24 2011 •

► [A080043] 1,4,21,100,465,2164,10053,46708,216993,1008100,4683381,21757828,101081457,469599316,2181641637,10135364500,47086382913,218751625156,1016265649365,4721317472932,21934066839825,101900219778100 ⋆ a(n)=floor((2 + sqrt(7)) ^ n). • a(0)=1, a(1)=4, a(2)=21, a(3)=100, a(n)=4 * a(n - 1) + 4 * a(n - 2) - 4 * a(n - 3) - 3 * a(n - 4). - _ Harvey P. Dale _ , Aug 11 2015 •

► [A113022] 4,21,102,503,2504,12505,62506,312507,1562508,7812509,39062510,195312511,976562512,4882812513,24414062514,122070312515,610351562516,3051757812517,15258789062518,76293945312519,381469726562520,1907348632812521,9536743164062522,47683715820312523,238418579101562524 ⋆ a(n) = size of union of 2 ^ k (mod 10 ^ n), 0 < k <= 5 ^ n. • a(n) = 4 * 5 ^ (n - 1) + (n - 1). - _ David A. Corneth _ , Apr 21 2021 •

► [A291184] 4,21,104,507,2452,11808,56732,272229,1305400,6257355,29988140,143701056,688563508,3299237877,15807943688,75741312603,362900797636,1738768378464,8330956025036,39916050834885,191249400483544,916331219497131,4390407398410844 ⋆ p - INVERT of the positive integers, where p(S) = 1 - 4 * S + 3 * S ^ 2. • a(n) = 8 * a(n - 1) - 17 * a(n - 2) + 8 * a(n - 3) - a(n - 4). •

► [A015531] 0,1,4,21,104,521,2604,13021,65104,325521,1627604,8138021,40690104,203450521,1017252604,5086263021,25431315104,127156575521,635782877604,3178914388021,15894571940104,79472859700521 ⋆ Linear 2nd order recurrence: a(n) = 4 * a(n - 1) + 5 * a(n - 2). • a(n) = (5 ^ n - (- 1) ^ n) / 6. • a(n) = Sum _{ k=1..n } binomial(n, k) * (- 1) ^ (n + k) * 6 ^ (k - 1). - _ Paul Barry _ , May 13 2003 • a(n) = 5 ^ (n - 1) - a(n - 1). - _ Emeric Deutsch _ , Apr 01 2004 • a(n) = ((2 + sqrt(9)) ^ n - (2 - sqrt(9)) ^ n) / 6. - Al Hakanson (hawkuu(AT)gmail.com), Jan 07 2009] • a(n) = round(5 ^ n / 6). - _ Mircea Merca _ , Dec 28 2010 •

► [A083425] 1,4,21,104,521,2604,13021,65104,325521,1627604,8138021,40690104,203450521,1017252604,5086263021,25431315104,127156575521,635782877604,3178914388021,15894571940104,79472859700521,397364298502604,1986821492513021,9934107462565104 ⋆ a(n) = (5 * 5 ^ n + (- 1) ^ n) / 6. • a(n) = (5 * 5 ^ n + (- 1) ^ n) / 6. • a(n) = Sum _{ k=0..n } C(n - k,k) * 4 ^ (n - 2k) * 5 ^ k. - _ Paul Barry _ , Jul 29 2004 • a(n) = 4 * a(n - 1) + 5 * a(n - 2). - _ Vincenzo Librandi _ , Jun 23 2012 •

► [A100237] 1,4,21,109,566,2939,15261,79244,411481,2136649,11094726,57610279,299146121,1553340884,8065850541,41882593589,217478818486,1129276686019,5863862248581,30448587928924,158106801893201,820982597394929,4263019788867846,22136081541734159 ⋆ Secondary diagonal of triangle A100235 divided by row number: a(n) = A100235(n + 1,n) / (n + 1) for n >= 0. • a(n) = 5 * a(n - 1) + a(n - 2) for n>1, with a(0)=1, a(1)=4. • a(n) = (2 ^ (- 1 - n) * ((5 - sqrt(29)) ^ n * (- 3 + sqrt(29)) + (3 + sqrt(29)) * (5 + sqrt(29)) ^ n)) / sqrt(29). - _ Colin Barker _ , Oct 13 2015 •

► [A117381] 1,4,21,109,575,3047,16192,86171,458972,2445825,13037508,69509558,370634265,1976421031,10539858413,56208784808,299766435277,1598704176149,8526238418811,45472594256564,242517996824355 ⋆ Expansion of 1 / ((1 - 4 * x * c(x))(1 - x ^ 2 * c(x))), c(x) the g.f. of A000108. • a(n)=sum { k=0..floor(n / 2), [k<=n - k] * sum { j=0..n - k, (j / (n - k - j)) * C(2n - k - j,n - k - j)[k<=j] * 4 ^ (j - k) }} •

► [A010908] 4,21,110,576,3016,15792,82688,432960,2267008,11870208,62153216,325438464,1704017920,8922353664,46718050304,244618887168,1280841121792,6706571182080,35116062605312,183870090903552,962756295000064,5041057406386176,26395319258316800 ⋆ Pisot sequence E(4,21), a(n) = floor(a(n - 1) ^ 2 / a(n - 2) + 1 / 2). • a(n) = (((3 - sqrt(5)) ^ n * (- 9 + 4 * sqrt(5)) + (3 + sqrt(5)) ^ n * (9 + 4 * sqrt(5)))) / (2 * sqrt(5)). •

► [A136786] 1,4,21,111,592,3171,17021,91456,491641,2643523,14215596,76448559,411134641,2211076788,11891207045,63951270079,343932277888,1849681481203,9947663349453,53498950981392,287719621233865,1547368337500659,8321812723167356,44755063012476127 ⋆ Number of primitive multiplex juggling sequences of length n, base state <2,1> and hand capacity 3. • a(n) = 9 * a(n - 1) - 22 * a(n - 2) + 13 * a(n - 3) + 3 * a(n - 4) for n>4. - _ Colin Barker _ , Aug 31 2016 •

► [A301972] 0,1,4,21,112,570,2772,13013,59488,266526,1175720,5123426,22108704,94645460,402503220,1702300725,7165821120,30043474230,125523450360,522857438070,2172127120800,9002522512620,37233403401480,153704429299746,633442159732032 ⋆ a(n) = n * (n ^ 2 - 2 * n + 4) * binomial(2 * n,n) / ((n + 1) * (n + 2)). • a(n) = [x ^ n] x * (1 - 3 * x + n * x) / (1 - x) ^ (n + 3). •

► [A190089] 1,4,21,114,616,3329,17991,97229,525456,2839729,15346786,82938844,448227521,2422362079,13091204281,70748973084,382349636061,2066633730754,11167134898976,60350698792449,326154101090951,1762639037938629,9525854090667496,51480702630305689,278217860370802066 ⋆ Row sums of the triangular matrix A190088. • a(n) = Sum _{ k=0..n } binomial(3 * n - k + 1,3 * n - 3 * k + 1). • a(n) = 5 * a(n - 1) + 2 * a(n - 2) + a(n - 3) and a(0)=1, a(1)=4, a(2)=21. - _ Harvey P. Dale _ , Sep 18 2013 •

► [A024051] 1,4,21,116,609,3100,15589,78076,390561,1953044,9765525,48828004,244140481,1220702956,6103515429,30517577900,152587890369,762939452836,3814697265301,19073486327764,95367431640225 ⋆ a(n) = 5 ^ n - n ^ 2. • a(n) = 8 * a(n - 1) - 18 * a(n - 2) + 16 * a(n - 3) - 5 * a(n - 4). •

► [A212419] 1,1,1,4,21,116,713,5030,40301,362852,3628744,39916716,479001426,6227020536,87178290639,1307674367142,20922789886141,355687428093140,6402373705721708,121645100408822276,2432902008176618342,51090942171709406408,1124000727777607604418 ⋆ Size of the equivalence class of S _ n containing the identity permutation under transformations of positionally adjacent elements of the form abc < - > acb < - > bac < - > cba, where a<b<c. • a(n) = 1 for n<3, otherwise: a(n) = n! - C([(n - 1) / 2] - C([n / 2]), where [x] is the floor function and C(n) denotes the n - th Catalan number (A000108). •

► [A046090] 1,4,21,120,697,4060,23661,137904,803761,4684660,27304197,159140520,927538921,5406093004,31509019101,183648021600,1070379110497,6238626641380,36361380737781,211929657785304,1235216565974041 ⋆ Consider all Pythagorean triples (X,X + 1,Z) ordered by increasing Z; sequence gives X + 1 values. • a(n) = 6 * a(n - 1) - a(n - 2) - 2, n >= 2, a(0) = 1, a(1) = 4. • a(n) = 1 / 2 + ((1 - 2 ^ (1 / 2)) / 4) * (3 - 2 ^ (3 / 2)) ^ n + ((1 + 2 ^ (1 / 2)) / 4) * (3 + 2 ^ (3 / 2)) ^ n. - _ Antonio Alberto Olivares _ , Oct 13 2003 • a(n + 1) = round((1 + (7 + 5 * sqrt(2)) * (3 + 2 * sqrt(2)) ^ n) / 2); • a(n) * (a(n) - 1) / 2 = b(n) * b(n + 1) and 2 * a(n) - 1 = b(n) + b(n + 1), where b(n) = A001109. - _ Kenneth J Ramsey _ , Apr 24 2011 • a(0)=1, a(1)=4, a(2)=21, a(n) = 7 * a(n - 1) - 7 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Apr 13 2012 •

► [A182435] 0,1,4,21,120,697,4060,23661,137904,803761,4684660,27304197,159140520,927538921,5406093004,31509019101,183648021600,1070379110497,6238626641380,36361380737781,211929657785304,1235216565974041,7199369738058940,41961001862379597 ⋆ a(n) = 6 * a(n - 1) - a(n - 2) - 2 with n>1, a(0)=0, a(1)=1. • a(n) = 1 / 2 + 1 / 4 * sqrt(2) * ((3 + 2 * sqrt(2)) ^ n - (3 - 2 * sqrt(2)) ^ n) - 1 / 4 * ((3 - 2 * sqrt(2)) ^ n + (3 + 2 * sqrt(2)) ^ n). - _ Paolo P. Lava _ , May 10 2012 •

► [A045721] 1,4,21,120,715,4368,27132,170544,1081575,6906900,44352165,286097760,1852482996,12033222880,78378960360,511738760544,3348108992991,21945588357420,144079707346575,947309492837400,6236646703759395 ⋆ a(n) = binomial(3 * n + 1,n). • a(n) is asymptotic to c / sqrt(n) * (27 / 4) ^ n with c=0.73... - _ Benoit Cloitre _ , Jan 27 2003 • a(n + 2) = C(3n + 1,n) = Sum _{ k=0..n } C(3n - k,n - k). - _ Paul Barry _ , May 13 2006 • a(n) = (n + 1) * hypergeometric2F1([- 2 * n, - n], [2], 1). - _ Peter Luschny _ , Sep 04 2012 • a(n) = Sum _{ r=0..n } C(n,r) * C(2 * n + 1,r). - _ J. M. Bergot _ , Mar 18 2014 • a(n) = binomial(3 * n + 1,n). • a(n) = Sum _{ k = 0..n } 1 / (2 * k + 1) * binomial(3 * n - 3 * k,n - k) * binomial(3 * k, k). •

► [A101810] 1,4,21,120,1365,8568,100947,657800,7888725,163011640,1121099408,22595200368,266783135710,1889912732400,22512762077400,443643407165376,8550047575185300,62724534168736440,1206459883091241450 ⋆ Number of compositions (ordered partitions) of the n - th prime into n nonnegative integers. • a(n) = binomial(prime(n) + n - 1, n - 1). - _ Vladeta Jovovic _ , Apr 25 2005 •

► [A371774] 1,4,21,121,727,4473,27949,176549,1124332,7205511,46411744,300183757,1948255421,12681654613,82755728730,541213820732,3546268982757,23276100962571,153004515241866,1007131032951572,6637396253259291,43791520333601111 ⋆ a(n) = Sum _{ k=0..floor(n / 3) } binomial(3 * n - k + 1,n - 3 * k). • a(n) = [x ^ n] 1 / (((1 - x) ^ 2 - x ^ 3) * (1 - x) ^ (2 * n)). •

► [A274969] 1,1,4,21,121,728,4488,28101,177859,1134705,7283640,46981740,304253964,1976886616,12880883408,84130964709,550649378199,3610705776755,23714554702020,155979407872365,1027269675638745,6773476758296220,44709685668953760,295402076512228140,1953492865541875476 ⋆ Number of walks in the first quadrant starting and ending at (0,0) consisting of 3n steps taken from { E=(1, 0), D=(- 1, 1), S=(0, - 1) } , no S step occurring before the final E step. • a(n) = binomial(3 * n,n) - 2 * binomial(3 * n,n - 1) + binomial(3 * n,n - 2). - _ Janis Stipins _ , May 27 2019 •

► [A103769] 1,4,21,123,757,4788,30817,200784,1320093,8740284,58193673,389233287,2613338091,17602627006,118892784555,804951501469,5461228061541,37120212399708,252720891884473,1723088114793535,11763751150648785 ⋆ Trinomial transform of central binomial coefficients A001405. • a(n) = sum _{ k=0..2n } T(n,k) * C(k,floor(k / 2)), where T(n,k) is given by A027907. • a(n) = sum _{ k=0..n } sum _{ j=0..n } C(n,j) * C(j,k) * C(j + k,floor((j + k) / 2)). •

► [A003014] 1,1,4,21,124,705,3726,18361,85240,376641,1597690,6551721,26116740,101647585,387634534,1452554265,5360857456,19523426433,70272302706,250318462537,883418329660,3091835703201,10739780397214 ⋆ Expansion of e.g.f.: 1 + x * exp(x) + x ^ 2 * exp(2 * x) + x ^ 3 * exp(3 * x). • a(n) = n + n * (n - 1) * 2 ^ (n - 2) + n * (n - 1) * (n - 2) * 3 ^ (n - 3). - _ Ralf Stephan _ , Mar 24 2004 •

▶ [A108404] 1,4,21,124,761,4724,29421,183404,1143601,7131364,44471301,277325404,1729418921,10784771924,67254567261,419404046924,2615432135521,16310012568004,101710347053301,634272638178364,3955367287840601 ⋆ Expansion of (1 - 4x) / (1 - 8x + 11x ^ 2). • a(n) = 8a(n - 1) - 11a(n - 2), a(0) = 1, a(1) = 4. • a(n) = ((4 + sqrt(5)) ^ n + (4 - sqrt(5)) ^ n) / 2. • a(n + 1) / a(n) converges to 4 + sqrt(5) = 6.2360679774997896964... = 4 + A002163. •

▶ [A364866] 1,1,4,21,124,781,5120,34474,236492,1644222,11543644,81623504,580104672,4137414963,29574658416,211639869236,1514729242092,10832683182538,77342204972120,550791674067623,3908735530965604,27612614422978557,193943797650498016 ⋆ G.f. satisfies A(x) = 1 + x * A(x) ^ 5 / (1 + x * A(x) ^ 5). • a(n) = Sum _{ k=0..n } (- 1) ^ k * 2 ^ (n - k) * binomial(n,k) * binomial(5 * n + k + 1,n) / (5 * n + k + 1). • a(n) = (1 / n) * Sum _{ k=0..n - 1 } (- 2) ^ k * binomial(n,k) * binomial(6 * n - k,n - 1 - k) for n > 0. • a(n) = (1 / n) * Sum _{ k=1..n } (- 1) ^ (n - k) * binomial(n,k) * binomial(5 * n,k - 1) for n > 0. •

▶ [A153291] 1,1,4,21,124,782,5145,34873,241682,1704240,12186900,88162753,644058237,4744733614,35210349041,262976828766,1975324849238,14913200362138,113107780322778,861417424802187,6585224638006020,50515048389265713 ⋆ G.f.: A(x) = F(x * F(x)) where F(x) = 1 + x * F(x) ^ 3 is the g.f. of A001764. • a(n) = Sum _{ k=0..n } C(3k + 1,k) / (3k + 1) * C(3n - 2k,n - k) * k / (3n - 2k) for n>0 with a(0)=1. •

▶ [A366115] 1,4,21,125,801,5390,37558,268656,1961355,14555266,109472688,832625469,6393072182,49488174700,385795571040,3026190911853,23867383581009,189156323865632,1505649098866535,12031665674394905,96486323017581420,776255276240140980 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 + x + x ^ 2) / (1 + x) ^ 5). • a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 2) } (- 1) ^ k * binomial(n + k,k) * binomial(4 * n - k + 4,n - 2 * k). •

▶ [A003168] 1,1,4,21,126,818,5594,39693,289510,2157150,16348960,125642146,976789620,7668465964,60708178054,484093913917,3884724864390,31348290348086,254225828706248,2070856216759478,16936016649259364 ⋆ Number of blobs with 2n + 1 edges. • a(n) = Sum _{ k=1..n } binomial(n, k) * binomial(2 * n + k, k - 1) / n. • a(n) = JacobiP(n - 1,1,n + 1,3) / n for n > 0. - _ Mark van Hoeij _ , Jun 02 2010 • a(n) = (1 / (2 * n + 1)) * Sum _{ j=0..n } (- 1) ^ j * 2 ^ (n - j) * binomial(2 * n + 1,j) * binomial(3 * n - j,2 * n). - _ Vladimir Kruchinin _ , Dec 24 2010 • a(n) = upper left term in M ^ n, M = the production matrix: • a(n) = (1 / n) * Sum _{ i = 0..n } 2 ^ (n - i - 1) * binomial(2 * n,i) * binomial(n,i + 1). •

▶ [A185047] 1,4,21,126,819,5616,40014,293436,2200770,16805880,130245570,1021926780,8102419470,64819355760,522606055815,4242331511910,34645707347265,284459491903860,2346790808206845,19444838125142430,161745698950048395,1350224965148230080 ⋆ Expansion of 2F1([1, 4 / 3]; [3]; 9 * x). • a(n) = - 9 ^ (n + 1) * binomial(n + 1 / 3, n + 2). - _ Karol A. Penson _ , Nov 06 2015 • a(n) = (1 / (6 * sqrt(3) * Pi)) * Integral _{ x = 0..9 } x ^ n * x ^ (1 / 3) * (9 - x) ^ (2 / 3). Cf. A034164. - _ Peter Bala _ , Nov 17 2015 • a(n) = ((n + 3) / 3) * Product _{ 1 <= i <= j <= n } (2 * i + j + 3) / (2 * i + j - 1). - _ Peter Bala _ , Feb 22 2023 •

▶ [A281581] 1,4,21,127,807,5179,33111,210067,1321887,8255899,51225351,316067107,1941032367,11873549419,72394874391,440204293747,2670669533247,16172309991739,97779619272231,590423692897987,3561340764760527,21462312506478859 ⋆ a(n) = (15 * 2 ^ (2 * n + 2) + 15 * 2 ^ (n + 2) + 5 * 2 ^ (n + 3) * 3 ^ (n + 1) - 24 * 5 ^ (n + 1)) / 120. • a(n) = 6 ^ n + 2 ^ (n - 1) - 5 ^ n + 4 ^ n / 2 . - _ R. J. Mathar _ , Mar 19 2017 •

▶ [A007345] 1,4,21,127,831,5722,40879,300440,2258455,17291704,134417955,1058279251,8422155293,67647554826,547699155261,4465275681735,36627214297455,302067234113560,2503174651819435,20832888975309257,174057811108059017,1459365504991034106 ⋆ Number of Havender tableaux of height 2 with n columns. • a(n) = Sum _{ q=0..2 * n } Sum _{ j=max(0, n - q)..floor((2 * n - q) / 2) } n! * (4 * n - 2 * q - 2 * j)! / ((2 * n - q - 2 * j)! * (j + 1)! * ((2 * n - q - j)!) ^ 2 * (q - n + j)!) [from Gouyou - Beauchamps]. - _ Sean A. Irvine _ , Dec 28 2017 •

▶ [A255673] 1,1,4,21,127,833,5763,41401,305877,2309385,17739561,138197876,1089276972,8670856834,69606939717,562879492551,4580890678781,37490975387565,308369889858450,2547741413147700,21133987935358776,175947462569886786,1469656053534121804 ⋆ Coefficients of A(x), which satisfies: A(x) = 1 + x * A(x) ^ 3 + x ^ 2 * A(x) ^ 6. • a(n) = 1 / (3 * n + 1) * Sum _{ k=0..n } (- 1) ^ k * binomial(3 * n + 1, k) * binomial(6 * n + 2 - 2 * k, n - k). (conjectured) •

▶ [A099250] 1,4,21,127,835,5798,41835,310572,2356779,18199284,142547559,1129760415,9043402501,73007772802,593742784829,4859761676391,40002464776083,330931069469828,2750016719520991,22944749046030949,192137918101841817,1614282136160911722 ⋆ Bisection of Motzkin numbers A001006. • a(n) = (2 / Pi) * Integral _{ x= - 1..1 } (1 + 2 * x) ^ (2 * n + 1) * sqrt(1 - x ^ 2). [_ Peter Luschny _ , Sep 11 2011] • a(n) = Sum _{ j=0..3 * n + 4 } binomial(j,2 * j - 5 * n - 7) * binomial(3 * n + 4,j) / (3 * n + 4). [_ Vladimir Kruchinin _ , Mar 09 2013] •

▶ [A300674] 1,4,21,128,819,5460,37449,262144,1864128,13421772,97612893,715827840,5286113595,39268272420,293203100463,2199023255552,16557351571215,125099989647360,948126237341157,7205759403792768,54901024028884989,419244183493398900,3208129404123400281,24595658764945981440 ⋆ Number of monic irreducible polynomials of degree n over GF(8) that have a given nonzero trace. • a(n) = (1 / (8 * n)) * Sum _{ odd d divides n } mu(d) * 8 ^ (n / d), where mu is the Möbius function A008683. •

▶ [A371430] 1,4,21,128,851,5984,43759,329396,2535406,19863592,157874971,1269833668,10316765299,84540929568,697928139977,5799156785376,48461097907978,407020852551016,3434002483872566,29090171931564848,247333930963224287,2109921586071433064 ⋆ Expansion of (1 / x) * Series _ Reversion(x / ((1 + x) ^ 4 - x ^ 2)). • a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 2) } (- 1) ^ k * binomial(n + 1,k) * binomial(4 * n - 4 * k + 4,n - 2 * k). •

▶ [A232956] 4,21,129,771,4629,27771,166629,999771,5998629,35991771,215950629,1295703771,7774222629,46645335771,279872014629,1679232087771,10075392526629,60452355159771,362714130958629,2176284785751771 ⋆ Number of 2 X n 0.3 arrays with no element x(i,j) adjacent to value 3 - x(i,j) horizontally, diagonally or antidiagonally, and top left element zero. • a(n) = (25 * 6 ^ n - 18) / 42 for n even. • a(n) = (25 * 6 ^ n + 18) / 42 for n odd. •

▶ [A111177] 4,21,130,913,7176,62629,602806,6356865,72994348,907497301,12152572554,174476220241,2674434002800,43603430324133,753581024080126,13763517571878529,264919276238885076,5360264479811601685 ⋆ Number of base n numbers in which each digit appears at most once (all unnecessary 0's deleted). • a(n)=Sum(i=0, n - 1) (i ^ 2 + i + 1)(n - 1)! / (n - 1 - i)!; n>1 •

▶ [A058308] 0,1,4,21,130,931,7578,69133,698908,7757121,93784360,1226953801,17271137574,260294017411,4181975416150,71353876091961,1288551745071448,24553837032449473,492365292394060908,10364224977307728541,228505314793164088810 ⋆ a(n) = (n + 2) * a(n - 1) + a(n - 2), with a(0)=0, a(1)=1. • a(n) = Sum _{ k = 0..floor((n - 1) / 2) } (n - 2 * k - 1)! * binomial(n - k - 1,k) * binomial(n - k + 2,k + 3). Cf. A058798. - _ Peter Bala _ , Aug 01 2013 • a(n) = (- 4 * BesselI(3 + n, - 2) * BesselK(4,2) + BesselI(3 + n, - 2) * BesselK(5,2) + 4 * BesselI(4,2) * BesselK(3 + n,2) + BesselI(5,2) * BesselK(3 + n,2)) / (BesselI(5,2) * BesselK(4,2) + BesselI(4,2) * BesselK(5,2)). - _ Vaclav Kotesovec _ , Oct 05 2013 • a(n) = (n + 2)! * hypergeometric([1 / 2 - n / 2,1 - n / 2],[4, - n - 2,1 - n],4) / 6 for n >= 2. - _ Peter Luschny _ , Sep 10 2014 • a(n) = (n + 1)! [x ^ (n + 1)] (2 / (1 - x)) * (K(3,2) * I(2,2 * sqrt(1 - x)) + I(3,2) * K(2,2 * sqrt(1 - x))), K and I Bessel functions. - _ Peter Luschny _ , May 01 2017 •

▶ [A131965] 1,1,1,4,21,131,943,7701,70409,712891,7921011,95844233,1254688141,17670191319,266412115271,4281623281141,73073037331473,1319881736799731,25155393101359579,504505383866156001,10621165976129600021,234196709773657680463,5397676549069062730671 ⋆ a(n) = 1 + Sum _{ i=2..n - 1 } n * a(i). • a(n) = 1 + Sum _{ i=2..n - 1 } n * a(i). • a(n) = (n + 1) * a(n - 1) + a(n - 2) + ... + a(2), e.g., a(5) = 6 * 21 + 4 + 1 = 131. •

▶ [A001909] 0,1,4,21,134,1001,8544,81901,870274,10146321,128718044,1764651461,25992300894,409295679481,6860638482424,121951698034461,2291179503374234,45361686034627361,943892592746534964,20592893110265899381,470033715095287415734 ⋆ a(n) = n * a(n - 1) + (n - 4) * a(n - 2), a(2) = 0, a(3) = 1. • a(n) = hypergeom([5, - n + 3],[],1)) * (- 1) ^ (n + 1) for n>=3. - _ Peter Luschny _ , Sep 20 2014 •

▶ [A367047] 1,1,4,21,136,941,6864,52006,405312,3228654,26170764,215166638,1789998808,15040070843,127450104568,1087988783356,9347556057040,80766068931498,701359680126592,6117887649100980,53581405635501276,470988258063461393 ⋆ G.f. satisfies A(x) = 1 - x ^ 3 + x * A(x) ^ 4. • a(n) = Sum _{ k=0..floor(n / 3) } (- 1) ^ k * binomial(3 * (n - 3 * k) + 1,k) * binomial(4 * (n - 3 * k),n - 3 * k) / (3 * (n - 3 * k) + 1). •

▶ [A052852] 0,1,4,21,136,1045,9276,93289,1047376,12975561,175721140,2581284541,40864292184,693347907421,12548540320876,241253367679185,4909234738857696,105394372192969489,2380337795595885156,56410454014314490981,1399496554158060983080 ⋆ Expansion of e.g.f.: (x / (1 - x)) * exp(x / (1 - x)). • a(n) = Sum _{ m=0..n } n! * binomial(n + 2, n - m) / m!. - _ Wolfdieter Lang _ , Jun 19 2001 • a(n) = D ^ n(x * exp(x)) evaluated at x = 0, where D is the operator (1 + x) ^ 2 * d / dx. Cf. A000262 and A005493. - _ Peter Bala _ , Nov 25 2011 • a(n) = (n + 1)! * hypergeom([- n + 1], [3], - 1) / 2 for n>=1. - _ Peter Luschny _ , Oct 18 2014 • a(n) = Sum _{ k=0..n } L(n,k) * k; L(n,k) the unsigned Lah numbers. - _ Peter Luschny _ , Oct 18 2014 • a(n) = (n - 1)! * LaguerreL(n - 1, 2, - 1) for n>=1. - _ Peter Luschny _ , Apr 08 2015 •

▶ [A180399] 0,1,4,21,138,999,7683,61542,507663,4281849,36748998,319845591,2816007714,25032803841,224355173193,2024955168606,18388543939947,167882583075453,1540000362501702,14186252492098011,131176523761136568,1217094112710349731,11327464549934673309 ⋆ Expansion of (1 / 3) * (1 - (1 - 9 * x - 9 * x ^ 2) ^ (1 / 3)). • a(n) = sum(m=1..n, binomial(m,n - m) / m * sum(k=0..m - 1, binomial(k,m - 1 - k) * 3 ^ k * (- 1) ^ (m - 1 - k) * binomial(m + k - 1,m - 1))). [From _ Vladimir Kruchinin _ , Feb 08 2011] •

▶ [A349534] 1,4,21,138,1063,9075,82770,789204,7766721,78267306,803447526,8371413999,88300495746,941004684748,10116276976218,109578418285452,1194764348642313,13102287157827918,144422108994233625,1599198859915070640,17780781456147340764 ⋆ G.f. A(x) satisfies A(x) = 1 / ((1 - 3 * x) * (1 - x * A(x) ^ 2)). • a(n) = 3 ^ n + Sum _{ i=0..n - 1 } Sum _{ j=0..n - i - 1 } a(i) * a(j) * a(n - i - j - 1). • a(n) = Sum _{ k=0..n } binomial(n + k,2 * k) * binomial(3 * k,k) * 3 ^ (n - k) / (2 * k + 1). • a(n) = 3 ^ n * F([1 / 3, 2 / 3, - n, 1 + n], [1 / 2, 1, 3 / 2], - 3 ^ 2 / 2 ^ 4), where F is the generalized hypergeometric function. - _ Stefano Spezia _ , Nov 21 2021 •

▶ [A087761] 1,1,4,21,140,1130,10674,115206,1396016,18739080,275712840,4408612560,76070179272,1408041937848,27816773482848,583970117197320,12978149959718400,304310928180279360,7506092106055537344 ⋆ Expansion of (1 - x) ^ (1 / (x - 1)). • a(n) = (n - 1)! * Sum _{ k=0..n - 1 } (n - k) * H(n - k) * a(k) / k! for n>0 with a(0)=1. (End) •

▶ [A006879] 0,4,21,143,1061,8363,68906,586081,5096876,45086079,404204977,3663002302,33489857205,308457624821,2858876213963,26639628671867,249393770611256,2344318816620308,22116397130086627,209317712988603747,1986761935284574233,18906449883457813088,180340017203297174362 ⋆ Number of primes with n digits. • a(n) = pi(10 ^ n) - pi(10 ^ (n - 1)) where pi(10 ^ (- 1)) := 0 (cf. A000720 and A006880). •

▶ [A228063] 4,21,143,1063,8371,68785,583436,5069633,44876757,403025174,3660702622,33550877248,309726969451,2876065468123,26835315229835,251389798269317,2362887262236150,22272676889496853,210455460654786509,1992806263723883464 ⋆ Integer nearest to F[4n](S(n)), where F[4n](x) are Fibonacci polynomials and S(n) = Sum _{ i=0..3 } (C(i) * (log(log(A * (B + n ^ 2)))) ^ i) (see coefficients A, B, C(i) in comments). • a(n) = round(F[4n](Sum _{ i=0..3 } (C(i) * (log(log(A * (B + n ^ 2)))) ^ i))). •

▶ [A228111] 4,21,143,1063,8385,68929,584467,5074924,44885325,402777151,3656032622,33492393634,309106153431,2870123507479,26783122426197,250971797533095,2359952229466124,22256979400698116,210440626023838163,1994088284872617955,18931694933036811169 ⋆ Integer nearest to (S(n) * F(4n)(S(n))), where F(4n)(x) are Fibonacci polynomials of multiple of 4 indices (4n) and S(n) = Sum _{ i=0..3 } (C(i) * (log(log(A * (B + n ^ 2)))) ^ i) (see coefficients A, B, C(i

) in comments). • a(n) = round(S(n) * F(4n)(S(n))), where S(n)=Sum _{ i=0..3 } (C(i) * (log(log(A * (B + n ^ 2)))) ^ i)). •

► [A144010] 1,1,1,4,21,160,1525,17760,243145,3833600,68373225,1361264000,29925477725,719991897600,18817847565725,530921477363200,16082605690148625,520603130117939200,17934634668874889425 ★ E.g.f. satisfies: A'(x) = 1 / (1 - x * A(x)) with A(0)=1. • a(0) = 1, a(1) = 1, a(n) = Sum _{ 0 < k < n } k * binomial(n - 1, k) * a(k) * a(n - k - 1). - _ Vladimir Reshetnikov _ , May 17 2016 •

► [A366184] 1,4,21,163,1487,14697,153226,1659338,18483960,210437161,2437721418,28640748192,340473075541,4087735789616,49494986770104,603699827411356,7410709463933414,91484338902961485,1135029142529785303,14145212892466682781,176993823220824229047 ★ G.f. A(x) satisfies A(x) = (1 + x * A(x) ^ 3) / (1 - x) ^ 3. • a(n) = Sum _{ k=0..n } binomial(n + 8 * k + 2,n - k) * binomial(3 * k,k) / (2 * k + 1). •

► [A041667] 1,1,4,21,193,986,3151,4137,152083,156220,620743,3259935,29960158,153060725,489142333,642203058,23608452421,24250655479,96360418858,506052749769,4650835166779,23760228583664,75931520917771,99691749501435,3664834502969431 ★ Denominators of continued fraction convergents to sqrt(352). • a(n) = 155234 * a(n - 8) - a(n - 16) for n>15. - _ Vincenzo Librandi _ , Dec 22 2013 •

► [A268924] 0,1,4,22,22,22,508,508,2695,2695,2695,2695,356989,888430,4077076,4077076,18425983,18425983,147566146,534986635,534986635,7508555437,284292261843,28429261843,122572440670 ★ One of the two successive approximations up to 3 ^ n for the 3 - adic integer sqrt(- 2). These are the numbers congruent to 1 mod 3 (except for n = 0). • a(n) ^ 2 + 2 == 0 (mod 3 ^ n), and a(n) == 1 (mod 3). Representatives of the complete residue system { 0, 1, ..., 3 ^ n - 1 } are taken. • a(n) == Lucas(3 ^ n) (mod 3 ^ n). - _ Peter Bala _ , Nov 10 2022 •

► [A022385] 4,22,26,48,74,122,196,318,514,832,1346,2178,3524,5702,9226,14928,24154,39082,63236,102318,165554,267872,433426,701298,1134724 ★ Fibonacci sequence beginning 4, 22. • a(n) = 4 * Fibonacci(n + 2) + 14 * Fibonacci(n) = 4 * Fibonacci(n - 1) + 22 * Fibonacci(n). - _ G. C. Greubel _ , Mar 02 2018 •

► [A290709] 4,22,49,94,169,298,529,958,1777,3370,6505,12718,25081,49738,98977,197374,394081,787402,1573945,3146926,6292777,12584362,25167409,50333374,100665169 ★ Number of irredundant sets in the complete tripartite graph K _{ n,n,n } . • a(n) = 3 * (2 ^ n + n ^ 2) - 2 for n > 1. - _ Andrew Howroyd _ , Aug 10 2017 • a(n) = 5 * a(n - 1) - 9 * a(n - 2) + 7 * a(n - 3) - 2 * a(n - 4) for n > 5. •

► [A163433] 0,4,22,52,94,148,214,292,382,484,598,724,862,1012,1174,1348,1534,1732,1942,2164,2398,2644,2902,3172,3454 ★ Number of different fixed (possibly) disconnected trominoes bounded tightly by an n X n square. • a(n) = 6 * n ^ 2 - 12 * n + 4, n > 1. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n > 4. • a(n + 1) = (n * i - 1) ^ 3 - (n * i + 1) ^ 3, where n > 0, i=sqrt(- 1). - _ Bruno Berselli _ , Jan 23 2014 •

► [A052149] 0,4,22,70,170,350,644,1092,1740,2640,3850,5434,7462,10010,13160,17000,21624,27132,33630,41230,50050,60214,71852,85100,100100 ★ Number of nonsquare rectangles on an n X n board. • a(n) = n * (n - 1) * (n + 1) * (3 * n + 2) / 12. • a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Vincenzo Librandi _ , Apr 28 2012 • a(n) = Sum _{ k=1..n } (k - 1) * k ^ 2. - _ Michel Marcus _ , Nov 09 2012 •

► [A062966] 4,22,74,195,441,896,1680,2958,4950,7942,12298,18473,27027,38640,54128,74460,100776,134406,176890,229999,295757,376464,474720,593450,735930 ★ a(n) = C(3 + n, n) + C(4 + n, n) + C(5 + n, n) + C(6 + n, n). • a(0)=4, a(1)=22, a(2)=74, a(3)=195, a(4)=441, a(5)=896, a(6)=1680, a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). - _ Harvey P. Dale _ , May 02 2012 •

► [A237530] 0,4,22,82,231,566,1216,2410,4428,7712,12780,20392,31409,47032,68594,97878,136836,187998,254100,338602,445213,578524,743424,945860,1192126 ★ Number of non - equivalent (mod D _ 3) ways to choose three points in an n X n X n triangular grid so that they do not form a 2 X 2 X 2 subtriangle. • a(n) = (n ^ 6 + 3 * n ^ 5 - 3 * n ^ 4 + 10 * n ^ 3 - 48 * n ^ 2 + IF(n==1 mod 2) * (27 * n ^ 2 - 45 * n - 9) + IF(n==1 mod 3) * 64) / 288. •

► [A079272] 4,22,94,364,1336,4738,16402,55768,186988,620014,2037190,6643012,21523360,69353050,222408058,710270896,2259952852,7167279046,22664098606,71479080220,224897593864,706073841202,2212364702434,6919523643784,21605859540796 ★ a(n) = ((2n + 1) * 3 ^ n - 1) / 2. • a(n) = 7 * a(n - 1) - 15 * a(n - 2) + 9 * a(n - 3). •

► [A088581] 1,4,22,103,427,1642,6016,21325,73813,250960,841450,2790067,9167359,29893558,96855124,312088729,1000836265,3196219036,10169787838,32252755711,101988443731,321655860994,1012039172392,3177332285413,9955641160957 ★ a(n) = n * x ^ n + (n - 1) * x ^ (n - 1) + . . . + x + 1 for x=3. • a(n) = 1 / 4 * ((6 * n - 3) * 3 ^ n + 7). • a(n) = 6 * a(n - 1) - 8 * a(n - 2) - 6 * a(n - 3) + 9 * a(n - 4) for n>3. - _ Colin Barker _ , Jun 13 2015 •

► [A017970] 1,4,22,103,484,2270,10648,49943,234256,1098758,5153632,24172676,113379904,531798888,2494357888,11699575548,54875873536,257390662067,1207269217792,5662594565481,26559922791424 ★ Powers of sqrt(22) rounded down. • a(n) = floor(sqrt(22 ^ n)). - _ Vincenzo Librandi _ , Jun 24 2011 •

► [A099013] 0,1,4,22,103,508,2452,11929,57856,280930,1363495,6618856,32128024,155953777,757013548,3674624638,17836995847,86582609284,420280790476,2040085854985,9902784679240,48069126732586,233332442310919 ★ a(n) = Sum _{ k=0..n } 3 ^ (k - 1) * Fibonacci(k). • a(n) = 4 * a(n - 1) + 6 * a(n - 2) - 9 * a(n - 3). • a(n) = 3 ^ (n - 1) * Sum _{ k=0..n } Fibonacci(n - k) * 3 ^ (- k). • a(n) = (3 / 2 + 3 * sqrt(5) / 2) ^ n * (1 / 22 + 7 * sqrt(5) / 110) + (1 / 22 - 7 * sqrt(5) / 110) * (3 / 2 - 3 * sqrt(5) / 2) ^ n - 1 / 11. •

► [A159616] 1,4,22,110,562,2854,14514,73782,375106,1906982,9694866,49287446,250571106,1273871494,6476200114,32924174710,167382301826,850950257638,4326122494162,21993454571478,111811915784610,568437508112710 ★ Expansion of (1 - x) / (1 - 5 * x - 2 * x ^ 2 + 8 * x ^ 3). • a(n) = 5 * a(n - 1) + 2 * a(n - 2) - 8 * a(n - 3) for n > 2 with a(0)=1, a(1)=4, a(2)=22. - _ Harvey P. Dale _ , Dec 22 2013 •

► [A084157] 0,1,4,22,112,556,2704,13000,62080,295312,1401664,6644320,31472896,149017792,705395968,3338614912,15800258560,74772443392,353840161792,1674425579008,7923565146112,37494981225472,177428889407488 ★ a(n) = 8 * a(n - 1) - 16 * a(n - 2) + 12 * a(n - 4) with a(0)=0, a(1)=1, a(2)=4, a(3)=22. • a(n) = 8 * a(n - 1) - 16 * a(n - 2) + 12 * a(n - 4). • a(n) = ((3 + sqrt(3)) ^ n + (3 - sqrt(3)) ^ n - (1 + sqrt(3)) ^ n - (1 - sqrt(3)) ^ n) / 4. •

► [A085939] 0,1,4,22,112,580,2992,15448,79744,411664,2125120,10970464,56632576,292353088,1509207808,7790949760,40219045888,207621882112,1071801803776,5532938507776,28562564853760 ★ Horadam sequence (0,1,6,4). • a(n) = s * a(n - 1) + r * a(n - 2); for n > 1, where a(0) = 0, a(1) = 1, s = 4, r = 6. • a(n) = ((2 + sqrt(10)) ^ n - (2 - sqrt(10)) ^ n) / (2 * sqrt(10)). - _ Rolf Pleisch _ , Jul 06 2009 •

► [A106835] 0,4,22,114,590,3066,15998,83786,440270,2320314,12260382,64931114,344562670,1831630106,9751275838,51981730186,277413656590,1481919831674,7922862005342,42388551182314,226923616315950,1215450062928346 ★ Expansion of 2 * x ^ 2 * (- 2 + 9 * x + 3 * x ^ 2) / ((2 * x ^ 2 + 5 * x - 1) * (2 * x ^ 2 - 5 * x + 1)). • a(n) = 10 * a(n - 1) - 25 * a(n - 2) + 4 * a(n - 4). (End) •

► [A291183] 4,22,116,608,3180,16618,86812,453440,2368292,12369174,64601428,337397536,1762142540,9203221994,48066074172,251036784256,1311100720708,6847542588950,35762957380148,186780746599392,975507894703660,5094827328491242,26608975328086364 ★ p - INVERT of the positive integers, where p(S) = 1 - 4 * S + 2 * S ^ 2. • a(n) = 8 * a(n - 1) - 16 * a(n - 2) + 8 * a(n - 3) - a(n - 4). •

► [A245087] 0,0,1,4,22,116,716,5034,40314,362874,3628789,39916793,479001588,6227020788,87178291188,1307674367982,20922789887982,355687428095978,6402373705727977,121645100408831983,2432902008176639978,51090942171709439975,1124000727777607679972 ★ Largest number such that 2 ^ a(n) is a divisor of (n!)!. • a(n) = n! - Hw(n!), Hw being the Hamming weight function. •

► [A155596] 1,4,22,118,610,3094,15562,77998,390370,1952614,9764602,48826078,244136530,1220694934,6103499242,30517545358,152587825090,762939322054,3814697003482,19073485803838,95367430592050,476837156105974 ★ a(n) = 5 ^ n - 2 ^ n + 1 ^ n. • a(n) = 7 * a(n - 1) - 10 * a(n - 2) + 4 with a(0)=1, a(1)=4. - _ Vincenzo Librandi _ , Jul 21 2010 •

► [A236576] 1,4,22,121,664,3643,19987,109657,601624,3300760,18109345,99355414,545105209,2990674357,16408085929,90021597712,493896002842,2709719309845,14866649448256,81564634762843,447497579542135 ★ The number of tilings of a 5 X (3n) floor with 1 X 3 trominoes. • a(n) = 6 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ M. Poyraz Torcuk _ , Oct 24 2021 •

► [A185858] 4,22,124,694,3892,21814,122284,685462,3842404,21538774,120736732,676795894,3793814164,21266419702,119210006284,668237802454,3745841266372,20997505287574,117702592547644,659787917778742 ★ 1 / 128 the number of (n + 2) X 3 binary arrays with no 3 X 3 subblock trace equal to any horizontal or vertical neighbor 3 X 3 subblock trace. • a(n) = ((2 - sqrt(13)) ^ n * (- 4 + sqrt(13)) + (2 + sqrt(13)) ^ n * (4 + sqrt(13))) / (3 * sqrt(13)). •

► [A180034] 1,4,22,124,700,3952,22312,125968,711184,4015168,22668640,127981504,722551744,4079347456,23030981248,130027192576,734101192960,4144552772608,23399114249728,132105579953152,745835251219456 ★ Eight white queens and one red queen on a 3 X 3 chessboard. G.f.: (1 - 2 * x) / (1 - 6 * x + 2 * x ^ 2). • a(n) = 6 * a(n - 1) - 2 * a(n - 2) with a(0) = 1 and a(1) = 4. • a(n) = ((1 + 4 * A) * A ^ (- n - 1) + (1 + 4 * B) * B ^ (- n - 1)) / 14 with A = (3 + sqrt(7)) / 2 and B = (3 - sqrt(7)) / 2. •

► [A136777] 1,4,22,124,706,4036,23110,132412,758866,4349572,24931318,142906108,819141730,4695354436,26913992998,154272336316,884296781554,5068833880324,29054812882390,166543662614908,954636733448194,5472026253591748,31365932493907462 ★ Number of multiplex juggling sequences of length n, base state <2,1> and hand capacity 2. • a(1)=1, a(2)=4, a(3)=22, a(n) = 8 * a(n - 1) - 13 * a(n - 2). - _ Harvey P. Dale _ , Aug 26 2012 • a(n) = ((4 - sqrt(3)) ^ n * (- 9 + 14 * sqrt(3)) + (4 + sqrt(3)) ^ n * (9 + 14 * sqrt(3))) / (169 * sqrt(3)) for n>1. - _ Colin Barker _ , Aug 31 2016 •

► [A100525] 4,22,128,746,4348,25342,147704,860882,5017588,29244646,170450288,993457082,5790292204,33748296142,196699484648,1146448611746,6681992185828,38945504503222,226991034833504,1323000704497802,7711013192153308,44943078448422046 ★ Bisection of A048654. • a(0)=4, a(1)=22, a(n) = 6 * a(n - 1) - a(n - 2) for n>1. - _ Philippe Deléham _ , Sep 19 2009 • a(n) = ((5 + 4 * sqrt(2)) * (3 + 2 * sqrt(2)) ^ n - (5 - 4 * sqrt(2)) * (3 - 2 * sqrt(2)) ^ n) / (2 * sqrt(2)). - _ Colin Barker _ , Oct 13 2015 • a(n) = 2 * (2 * ChebyshevU(n, 3) - ChenyshevU(n - 1, 3)). •

► [A199033] 1,4,22,128,771,4744,29618,186880,1188679,7608764,48953224,316283264,2050706932,13336273528,86953633242,568221290496,3720529001823,24403423540348,160314652983158,1054635453261568,6946703172803003,45809043607167328,302395650703501688 ★ Number of ways to place n non - attacking bishops on a 2 X 2n board. • a(n) = Sum _{ j=0..n } (binomial(2n - j + 1,j) * binomial(n + j + 1,n - j)). • a(n) = [x ^ n] 1 / ((1 - x ^ 2) * (1 - x) ^ (2 * n + 2)). - _ Ilya Gutkovskiy _ , Oct 25 2017 •

► [A370695] 1,4,22,128,777,4872,31330,205560,1370868,9266104,63343006,437183260,3042337215,21323543252,150395596016,1066637271424,7602188660799,54422262148632,391146728466980,2821396586367568,20417766975784066,148200184917042112 ★ G.f. A(x) satisfies A(x) = (1 + x * A(x) ^ (3 / 4) / (1 - x)) ^ 4. • a(n) = 4 * Sum _{ k=0..n } binomial(n - 1,n - k) * binomial(3 * k + 4,k) / (3 * k + 4). •

► [A261399] 1,4,22,130,778,4666,27994,167962,1007770,6046618,36279706,217678234,1306069402,7836416410,47018498458,282110990746,1692665944474,10155995666842,60935974001050,365615844006298,2193695064037786,13162170384226714,78973022305360282,473838133832161690 ★ a(1)=1; thereafter a(n) = (2 / 5) * (9 * 6 ^ (n - 2) + 1). • a(n) = 7 * a(n - 1) - 6 * a(n - 2), n > 2. • a(n) = 6 * a(n - 1) - 2, n > 1. • a(n) = 3 * 6 ^ (n - 2) + a(n - 1), n > 1. •

► [A088536] 1,4,22,130,791,4900,30738,194634,1241383,7963384,51325352,332095816,2155894508,14035149748,91593941402,599021799242,3924954250975,25760310654100,169322682857430,1114452091832130,7344021912458295,48448974411575280,319942093205166840,2114743632331515480 ★ Number of unimodal functions [1..n] - >[1..n]. • a(n) = Sum _{ k=0..n - 1 } binomial(2k + n - 1,2k). •

► [A066380] 1,4,22,130,794,4944,31180,198440,1271626,8192524,53009102,344212906,2241812648,14637774688,95786202688,628002401520,4124304597834,27126202533252,178651732923346,1178005033926998,7776048412324714 ⋆ a(n) = Sum _{ k=0..n } binomial(3 * n,k). ● a(0)=1, a(n) = 8 * a(n - 1) - (5 * n ^ 2 + n - 2) * (3 * n - 3)! / ((2 * n - 1)! * n!). - _ Tani Akinari _ , Sep 02 2014 ● a(n) = [x ^ n] 1 / ((1 - 2 * x) * (1 - x) ^ (2 * n)). - _ Ilya Gutkovskiy _ , Oct 25 2017 ●
► [A197657] 1,4,22,134,866,5812,40048,281374,2006698,14482064,105527060,775113440,5731576720,42628923040,318621793472,2391808860446,18023208400634,136271601087352,1033449449559724,7858699302115444,59906766929537116,457685157123172664 ⋆ Row sums of A194595. ● a(n) = Sum { k=0..n } Sum { j=0..2 } Sum { i=0..2 } (- 1) ^ (j + i) * C(i,j) * C(n,k) ^ 3 * (n + 1) ^ j * (k + 1) ^ (2 - j) / (k + 1) ^ 2. - _ Peter Luschny _ , Nov 02 2011 ● a(n) = Sum _{ k=0..n } h(n,k) * binomial(n,k) ^ 3, where h(n,k) = (1 + k) * (1 - ((n - k) / (1 + k)) ^ 3) / (1 + 2 * k - n) if 1 + 2 * k - n <> 0 else h(n,k) = 3. - _ Peter Luschny _ , Nov 24 2011 ● a(n) = 2 ^ n * hypergeom([n + 1, - n / 2, - n / 2 - 1 / 2], [1, 1], 1). - _ Peter Luschny _ , Mar 26 2023 ●
► [A143648] 1,4,22,136,868,5584,35992,232096,1496848,9653824,62262112,401558656,2589848128,16703198464,107727106432,694784866816,4481007870208,28900214293504,186391635645952,1202130942232576,7753131181401088 ⋆ a(n) = ((4 + sqrt 6) ^ n + (4 - sqrt 6) ^ n) / 2. ● a(n) = 8 * a(n - 1) - 10 * a(n - 2). ●
► [A069835] 1,4,22,136,886,5944,40636,281488,1968934,13875544,98365972,700701808,5011371964,35961808432,258805997752,1867175631136,13500088649734,97794850668952,709626281415076,5157024231645616,37528209137458516,273431636191026064,1994448720786816712 ⋆ Define an array as follows: b(i,0)=b(0,j)=1, b(i,j) = 2 * b(i - 1,j - 1) + b(i - 1,j) + b(i,j - 1). Then a(n) = b(n,n). ● a(n) = 2 ^ n * LegendreP(n, 2) = 2 ^ n * hypergeom([- n, n + 1], [1], - 1 / 2) = 2 ^ n * GegenbauerC(n, 1 / 2, 2) = Sum _{ k=0..n } 3 ^ k * binomial(n, k) ^ 2. ● a(n) equals the central coefficient of (1 + 4 * x + 3 * x ^ 2) ^ n. - _ Paul D. Hanna _ , Jun 03 2003 ● a(n) = Sum _{ k=0..floor(n / 2) } C(n, k) * C(2 * (n - k), n) * (- 1) ^ k * 2 ^ (n - 2 * k). - _ Paul Barry _ , May 25 2005 ● a(n) = Sum _{ k=0..n } C(n, k) * C(n + k, k) * 2 ^ (n - k). - _ Paul Barry _ , May 25 2005 ● a(n) = Sum _{ k=0..n } C(n, k) ^ 2 * 3 ^ k. - _ Paul Barry _ , Oct 15 2005 ●
► [A142984] 1,4,22,136,984,8016,73392,742464,8254080,99838080,1307301120,18407831040,277570298880,4460506444800,76131788544000,1375048700928000,26208041287680000,525597067634688000,11065538390925312000 ⋆ a(1) = 1, a(2) = 4, a(n + 2) = 4 * a(n + 1) + (n + 1) * (n + 2) * a(n). ● a(n) = n! * p(n + 1) * sum { k = 1..n } (- 1) ^ (k + 1) / (p(k) * p(k + 1)), where p(n) = n ^ 2. Recurrence: a(1) = 1, a(2) = 4, a(n + 2) = 4 * a(n + 1) + (n + 1) * (n + 2) * a(n). The sequence b(n):= n! * p(n + 1) satisfies the same recurrence with b(1) = 4, b(2) = 18. Hence we obtain the finite continued fraction expansion a(n) / b(n) = 1 / (4 + 1 * 2 / (4 + 2 * 3 / (4 + 3 * 4 / (4 + ... + (n - 1) * n / 4)))), for n >=2. The behavior of a(n) for large n is given by lim n - > infinity a(n) / b(n) = sum { k = 1..inf } (- 1) ^ (k + 1) / (k ^ 2 * (k + 1) ^ 2) = 1 / (4 + 1 * 2 / (4 + 2 * 3 / (4 + 3 * 4 / (4 + ... + n * (n + 1) / (4 + ...))))) = 3 - 4 * log(2), where the final equality follows by a result of Ramanujan (see [Berndt, Chapter 12, Entry 32(i)]). ●
► [A097593] 0,0,1,4,22,138,998,8174,74898,759634,8451862,102381222,1341503546,18907621562,285259758366,4587192222958,78327809126818,1415429225667234,26987142531214118,541434621007942454,11402270678456333322 ⋆ Number of increasing runs of even length in all permutations of [n]. ● a(n) = (2 * n - 1) * a (n - 1) - (n - 2) * (n - 1) * a(n - 2) - (n - 2) * (n - 1) * a(n - 3). - _ Vaclav Kotesovec _ , Nov 19 2012 ●
► [A025756] 1,1,4,22,139,949,6808,50548,384916,2988418,23559826,188061592,1516680130,12337999870,101111413540,833914857316,6916004156083,57638242134229,482444724374734,4053815358183454,34181335453533439 ⋆ 3rd - order Vatalan numbers (generalization of Catalan numbers). ● a(n) = Sum _{ m=1..n - 1 } (m / n) * Sum _{ k=1..n - m } binomial(k,n - m - k) * 3 ^ k * (- 1) ^ (n - m - k) * binomial(n + k - 1,n - 1) + 1. - _ Vladimir Kruchinin _ , Feb 08 2011 ●
► [A366119] 1,4,22,139,950,6831,50899,389402,3040433,24127641,194015198,1577355740,12943616840,107061667210,891666351501,7471125565836,62932782325745,532621542290355,4526846632642489,38621126867786485,330636368752515710,2839344812305017875 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 + x + x ^ 3) / (1 + x) ^ 5). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 3) } (- 1) ^ k * binomial(n + k,k) * binomial(4 * n - k + 4,n - 3 * k). ●
► [A200731] 1,1,4,22,139,953,6894,51796,400269,3161262,25403536,207043048,1707345547,14219399626,119431172630,1010495472960,8604568715969,73683710894255,634142349130800,5482062214763436,47582484748270453,414503778412715065,3622792181209018168,31758958747482608912 ⋆ G.f. satisfies: A(x) = (1 + x * A(x) ^ 3) * (1 + x ^ 2 * A(x) ^ 6). ● a(n) = 1 / (3 * n + 1) * Sum _{ k = 0..floor(n / 2) } binomial(3 * n + 1,k) * binomial(3 * n + 1,n - 2 * k). ●
► [A240586] 1,4,22,140,950,6692,48284,354216,2630310,19713188,148817524,1130011896,8621650492,66043991080,507628779896,3913088587472,30240258982662,234210742764964,1817484391184900,14128074297880536 ⋆ Expansion of (((8 - 8 / sqrt(1 - 8 * x)) / (2 * sqrt(8 * x + 2 * sqrt(1 - 8 * x) + 2)) + 4 / sqrt(1 - 8 * x)) * ((x * (sqrt(8 * x + 2 * sqrt(1 - 8 * x) + 2) - sqrt(1 - 8 * x) - 1)) - 4 * x ^ 2)) / (sqrt(8 * x + 2 * sqrt(1 - 8 * x) + 2) - sqrt(1 - 8 * x) - 1) ^ 2. ● a(n) = Sum _{ m=1..n } (Sum _{ j=0..m } j * (Sum _{ k=1..n } (binomial(k, n - k) * binomial(2 * k + j - 1, k + j - 1)) / (k + j))) * (- 1) ^ (j - m) * binomial(m, j))) * binomial(n - 1, m - 1)). ●
► [A369156] 1,4,22,140,968,7064,53544,417456,3326304,26967040,221733568,1844667136,15498804480,131325820032,1120928667264,9628975973120,83181462291968,722175844640768,6297942966129664,55143987250677760,484589284705202176,4272491458636754944 ⋆ Expansion of (1 / x) * Series _ Reversion(x / ((1 + x) ^ 4 - x ^ 4)). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 4) } (- 1) ^ k * binomial(n + 1,k) * binomial(4 * n - 4 * k + 4,n - 4 * k). ●
► [A002293] 1,1,4,22,140,969,7084,53820,420732,3362260,27343888,225568798,1882933364,15875338990,134993766600,1156393243320,9969937491420,86445222719724,753310723010608,6594154339031800,57956002331347120,511238042454541545 ⋆ Number of dissections of a polygon: binomial(4 * n, n) / (3 * n + 1). ● a(n) = binomial(4 * n,n - 1) / n, n >= 1, a(0) = 1. From the Lagrange series of the o.g.f. A(x) with its above given implicit equation. ● a(n) = upper left term in M ^ n, M = the production matrix: ● a(n) = Sum _{ i=0..n - 1 } Sum _{ j=0..n - 1 - i } Sum _{ k=0..n - 1 - i - j } a(i) * a(j) * a(k) * a(n - 1 - i - j - k) for n >=1; and a(0) = 1. - _ Robert FERREOL _ , Apr 02 2015 ●
► [A369126] 1,4,22,140,970,7104,54096,424008,3398224,27721024,229410328,1921308272,16253502512,138683973120,1192142838656,10314377770720,89749921081280,784913791336192,6895599255571840,60825440855493376,538507243041624864,4783482648574893056 ⋆ Expansion of (1 / x) * Series _ Reversion(x / ((1 + x) ^ 4 + x ^ 4)). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 4) } binomial(n + 1,k) * binomial(4 * n - 4 * k + 4,n - 4 * k). ●
► [A366677] 1,1,4,22,141,973,7112,54040,422552,3377770,27478568,226753828,1893462584,15969598554,135842638632,1164075017512,10039732285528,87081507756245,759128176746864,6647475055207618,58445784269830824,515745587816906733 ⋆ G.f. satisfies A(x) = 1 + x ^ 4 + x * A(x) ^ 4. ● a(n) = Sum _{ k=0..floor(n / 4) } binomial(3 * (n - 4 * k) + 1,k) * binomial(4 * (n - 4 * k),n - 4 * k) / (3 * (n - 4 * k) + 1). ●
► [A045744] 1,4,22,141,988,7337,56749,452332,3689697,30652931,258465558,2206330790,19029531220,165582392070,1451789520435,12813638048184,113755675163767,1015119850103821,9100463691522759,81923222827031025 ⋆ Number of noncrossing connected graphs on n nodes on a circle having no four - sided faces. ● a(n) = Sum _{ i=0..floor((n - 2) / 3) } binomial(n - 2 + i, i) * binomial(4 * n - 4 - i, n - 2 - 3 * i) / (n - 1). ●
► [A369504] 1,4,22,142,1005,7546,59033,475962,3927204,33001024,281449964,2429922400,21196031340,186521336460,1653830553417,14761130834428,132516050272100,1195778542160992,10839917478886459,98671228898404032,901509955793840923 ⋆ Expansion of (1 / x) * Series _ Reversion(x / ((1 + x) ^ 2 + x ^ 3) ^ 2). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 3) } binomial(2 * n + 2,k) * binomial(4 * n - 2 * k + 4,n - 3 * k). ●
► [A243626] 0,1,4,22,142,1006,7570,59410,480910,3986230,33666154,288675322,2506487158,21993277294,194717676514,1737297725602,15604975886110,140999418473830,1280687414193370,11686769594020810,107093513405758342 ⋆ Expansion of (1 - 3 * x - sqrt(x ^ 2 - 10 * x + 1)) / (4 * x + 2). ● a(n) = Sum _{ k=0..n - 1 } (k + 1) * Sum _{ i=0..n - k - 1 } 2 ^ i * binomial(n,n - k - i - 1) * binomial(n + i - 1,i))) / n, n > 1, a(0)=0. ● a(n) = Sum _{ k=0..n - 1 } binomial(n - 1, k) * hypergeom([k + 1 - n, n], [k + 2], - 2). - _ Peter Luschny _ , Jan 07 2018 ●
► [A369485] 1,4,22,142,1007,7590,59683,484112,4021061,34029532,292373296,2543542676,22360917140,198341377680,1772860026933,15952960500612,144397901220980,1313835276189792,12009823111155481,110240431974732436,1015727265740887873 ⋆ Expansion of (1 / x) * Series _ Reversion(x / ((1 + x) ^ 2 * (1 + x + x ^ 3) ^ 2)). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 3) } binomial(2 * n + 2,k) * binomial(4 * n - k + 4,n - 3 * k). ●
► [A081002] 1,4,22,145,988,6766,46369,317812,2178310,14930353,102334156,701408734,4807526977,32951280100,225851433718,1548008755921,10610209857724,72723460248142,498454011879265,3416454622906708,23416728348467686 ⋆ a(n) = Fibonacci(4n) + 1, or Fibonacci(2n - 1) * Lucas(2n + 1). ● a(n) = 8a(n - 1) - 8a(n - 2) + a(n - 3). ● a(n) = Sum _{ k=0..n } binomial(2n - k, 2k) * 2 ^ (2n - 3k). ● a(n) = 1 - 0 ^ n + Sum _{ k=0..2n } binomial(4n - k - 1, k). (End) ● a(n) = 1 - (1 / 5) * sqrt(5) *{ [(7 / 2) - (3 / 2) * sqrt(5)) ^ n + [(7 / 2) + (3 / 2) * sqrt(5)] ^ n } , with n>=0. - _ Paolo P. Lava _ , Dec 01 2008 ●
► [A369617] 1,4,22,146,1079,8525,70468,601816,5268241,47019566,426250277,3914020148,36328457669,340278596273,3212416054283,30534649412247,291981031204917,2806832429353512,27109863184695640,262951127248539898,2560229132085602215 ⋆ Expansion of (1 / x) * Series _ Reversion(x / (1 / (1 - x) ^ 3 + x)). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..n } binomial(n + 1,k) * binomial(4 * n - 4 * k + 2,n - k). ●
► [A199418] 4,22,148,1030,7204,50422,352948,2470630,17294404,121060822,847425748,5931980230,41523861604,290667031222,2034669218548,14242684529830,99698791708804,697891541961622,4885240793731348,34196685556119430 ⋆ 3 * 7 ^ n + 1. ● a(n) = 7 * a(n - 1) - 6. ● a(n) = 8 * a(n - 1) - 7 * a(n - 2). ●
► [A039304] 1,4,22,151,1051,7354,51472,360301,2522101,17654704,123582922,865080451,6055563151,42388942054,296722594372,2077058160601,14539407124201,101775849869404,712430949085822,4987016643600751,34909116505205251 ⋆ Number of distinct quadratic residues mod 7 ^ n. ● a(n) = floor((7 ^ n + 3) * 7 / 16). ● a(n) = 7 * a(n - 1) + a(n - 2) - 7 * a(n - 3). - _ Vincenzo Librandi _ , Apr 21 2012 ●
► [A371496] 1,4,22,156,1233,10420,92120,841376,7876616,75177492,728784802,7156081536,71024862452,711383912672,7181295333306,72989746391780,746308443708928,7671359593228624,79226966456758424,821691132077059740,8554576791134761387 ⋆ G.f. A(x) satisfies A(x) = 1 / (1 - x * A(x) / (1 + x)) ^ 4. ● a(n) = Sum _{ k=0..n } (- 1) ^ (n - k) * binomial(n - 1,n - k) * binomial(5 * k + 3, k) / (k + 1). ●
► [A067369] 0,0,4,22,166,1266,11166,106128,1122192,12809520,159451920,2128973760,30594214080,468275713920,7641089769600,131971588761600,2412294180710400,46422407927347200,940023724189132800,19949344876532736000,443393309963068416000,10288553164881868800000 ⋆ Weight of the alternating group (A _ n) in transpositions. ● a(n) = a(n - 1) + [(n - 1)! / 2] * [vbar(P _ N - 1) + 1] * [n - 1)] where vbar(P _ N) is the average weight of a permutation in P _ N, the periphery of A _ n. vbar(P _ N - 1) is p(n - 1) / (n - 1)!2 where p(n) is from sequence A067370. ● a(n) = (1 / 2) * ((- 1) ^ (n + 1) * (n - 2)! + n * n! - abs(Stirling1(n + 1, 2))), n > 1. ●
► [A169599] 4,23,33,52,62,81,91,110,120,139,149,168,178,197,207,226,236,255,265,284,294,313,323,342,352 ⋆ Numbers that are congruent to { 4, 23 } mod 29. ● a(n) = (58 * n + 9 * (- 1) ^ n - 33) / 4. - _ Vincenzo Librandi _ , Jan 06 2013, modified Jul 07 2015 ● a(n) = a(n - 1) + a(n - 2) - a(n - 3). - _ Vincenzo Librandi _ , Jan 06 2013 ●
► [A030653] 4,23,60,121,212,339,508,725,996,1327,1724,2193,2740,3371,4092,4909,5828,6855,7996,9257,10644,12163,13820,15621,17572 ⋆ n ^ 3 * a(n) is the number of circles in complex projective plane tangent to three smooth curves of degree n in general position. ● a(n) = n ^ 3 + 3 * n ^ 2 + 3 * n - 3. ● a(n) = 4 * a

(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Wesley Ivan Hurt _ , Oct 20 2022 ●

► [A132112] 1,4,23,68,150,280,469,728,1068,1500,2035,2684,3458,4368,5425,6640,8024,9588,11343,13300,15470,17864,20493,23368,26500 ⋆ a(n) = n * (n + 1) * (11 * n + 1) / 6. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Vincenzo Librandi _ , Jun 29 2012 ●

► [A071246] 0,0,4,23,76,190,400,749,1288,2076,3180,4675,6644,9178,12376,16345,21200,27064,34068,42351,52060,63350,76384,91333,108376 ⋆ a(n) = n * (n - 1) * (2 * n ^ 2 + n + 2) / 6. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5), n > 4, a(0)=0, a(1)=0, a(2)=4, a(3)=23, a(4)=76. [_ Yosu Yurramendi _ , Sep 03 2013] ●

► [A219465] 4,23,82,239,619,1471,3259,6800,13464,25453,46178,80755,136643,224449,358927,560200,855236,1279611,1879594,2714591,3859987,5410427,7483579,10224424,13810120 ⋆ Number of n X 2 arrays of the minimum value of corresponding elements and their horizontal or antidiagonal neighbors in a random, but sorted with lexicographically nondecreasing rows and columns, 0..3 n X 2 array. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>9. ●

► [A321614] 1,4,23,106,473,1939,7618,28703,105112,375597,1316944,4544124,15474559,52108212,173799309,574908646,1888125243,6162032375,19998659760,64584817367,207655073310,665017743665 ⋆ Number of nonequivalent ways to place 2n nonattacking kings on a 4 X 2n chessboard under all symmetry operations of the rectangle. ● a(n) = 12 * a(n - 1) - 54 * a(n - 2) + 98 * a(n - 3) + 17 * a(n - 4) - 346 * a(n - 5) + 505 * a(n - 6) - 210 * a(n - 7) - 120 * a(n - 8) + 126 * a(n - 9) - 27 * a(n - 10) for n>9. ●

► [A082970] 4,23,107,464,1950,8063,33033,134576,546312,2212550,8946454,36134656,145831270,588199815,2371435125,9557736480,38511326040,155143873170,624899673690,2516678580000,10134353299980,40805797511622 ⋆ Number of permutations of length n containing 2 occurrences of 132. ● a(n) = C(2 * n - 6,n - 2) * (n ^ 3 + 17 * n ^ 2 - 80 * n + 80) / (2n(n - 1)). ●

► [A017973] 1,4,23,110,529,2536,12167,58350,279841,1342070,6436343,30867616,148035889,709955183,3404825447,16328969210,78310985281,375566291832,1801152661463,8638024712142,41426511213649 ⋆ Powers of sqrt(23) rounded down. ● a(n) = floor(sqrt(23 ^ n)). - _ Vincenzo Librandi _ , Jun 24 2011 ●

► [A353096] 4,23,117,586,2930,14649,73243,366212,1831056,9155275,45776369,228881838,1144409182,5722045901,28610229495,143051147464,715255737308,3576278686527,17881393432621,89406967163090,447034835815434,2235174179077153,11175870895385747 ⋆ a(1) = 4; for n > 1, a(n) = 5 * a(n - 1) + 5 - n. ● a(n) = 7 * a(n - 1) - 11 * a(n - 2) + 5 * a(n - 3). ● a(n) = (3 * 5 ^ (n + 1) + 4 * n - 15) / 16. ● a(n) = Sum _{ k=0..n - 1 } (5 - n + k) * 5 ^ k. ●

► [A015532] 0,1,4,23,120,641,3404,18103,96240,511681,2720404,14463383,76896360,408829121,2173591004,11556167863,61439808480,326652408961,1736688295204,9233320043543,49090098240600,260993633267201,1387605220753004,7377376315882423 ⋆ a(n) = 4 * a(n - 1) + 7 * a(n - 2). ● a(n) = - 7 ^ n * (A ^ n - B ^ n) / (2 * sqrt(11)) where A = - 1 / (2 + sqrt(11)) and B = 1 / (sqrt(11) - 2). (End) ●

► [A144465] 1,4,23,121,617,3109,15593,78061,390497,1952869,9765113,48827101,244138577,1220699029,6103507433,30517561741,152587857857,762939387589,3814697134553,19073486065981,95367431116337 ⋆ a(n) = 5 ^ n - 2 ^ (n - 1) for n > 0; a(0) = 1. ● a(n) = 7 * a(n - 1) - 10 * a(n - 2), n > 3. ●

► [A024050] 1,4,23,122,621,3120,15619,78118,390617,1953116,9765615,48828114,244140613,1220703112,6103515611,30517578110,152587890609,762939453108,3814697265607,19073486328106,95367431640605 ⋆ a(n) = 5 ^ n - n. ● a(n) = 7 * a(n - 1) - 11 * a(n - 2) + 5 * a(n - 3). ●

► [A291026] 4,23,128,711,3948,21920,121700,675673,3751296,20826953,115629868,641969344,3564171060,19788040311,109861881472,609945846247,3386378699324,18800948912352,104381615697460,579519775642745,3217455182279552,1786309600262569 ⋆ p - INVERT of the positive integers, where p(S) = 1 - 4 * S + S ^ 2. ● a(n) = 8 * a(n - 1) - 15 * a(n - 2) + 8 * a(n - 3) - a(n - 4). ●

► [A038723] 1,4,23,134,781,4552,26531,154634,901273,5253004,30616751,178447502,1040068261,6061962064,35331704123,205928262674,1200237871921,6995498968852,40772755941191,237641036678294,1385073464128573 ⋆ a(n) = 6 * a(n - 1) - a(n - 2), n >= 2, a(0)=1, a(1)=4. ● a(n) = ((4 + sqrt(2)) / 8) * (3 + 2 * sqrt(2)) ^ (n - 1) + ((4 - sqrt(2)) / 8) * (3 - 2 * sqrt(2)) ^ (n - 1). - _ Antonio Alberto Olivares _ , Mar 29 2008 ●

► [A302761] 1,4,23,136,707,3312,14527,61264,252515,1027192,4147343,16674984,66887875,267960544,1072726271,4292804896,17175281987,68709777768,274857460111,1099468636600,4397956334051,17591997301264,70368349913663,281474154627696,1125898195567267 ⋆ Number of total dominating sets in the n - barbell graph. ● a(n) = (2 ^ n - n) ^ 2 - (2 ^ n - 2 * n). - _ Andrew Howroyd _ , Apr 14 2018 ● a(n) = 11 * a(n - 1) - 47 * a(n - 2) + 101 * a(n - 3) - 116 * a(n - 4) + 68 * a(n - 5) - 16 * a(n - 6) for n>6. ●

► [A237362] 1,4,23,136,1147,11277,105046,927054,7581063,57507712,405267267,2662585198,16366889904,94486124304,514135539077 ⋆ Nonzero Hilbert function values for the invariant ring of 3 X 3 X 3 X 3 tensors. ● a(n) = H(3n); H(d) = (1 / d!) sum _{ lambda } C _ lambda * chi(mu,lambda) ^ k. ●

► [A038736] 1,4,23,141,888,5676,36622,237821,1551727,10161409,66732392,439267525,2897064773,19137833146,126599140313,838477244705,5559158604616,36891869005316,245025744759152,1628602268643928,10832010390274304,72088640151558145,480026332241373281,3198037386794785777,21315944308822771118 ⋆ T(3 * n + 1, n + 1), array T as in A038792. ● a(n) = Sum _{ j=0..n } binomial(4 * n - j, j). - _ Petros Hadjicostas _ , Sep 04 2019 ● a(n) = hypergeom([1 / 2 - 2 * n, - 2 * n], [- 4 * n], - 4) - binomial(3 * n - 1, n + 1) * hypergeom([1, 1 - n, 3 / 2 - n], [1 - 3 * n, n + 2], - 4) for n > 0. - _ Peter Luschny _ , Sep 04 2019 ●

► [A162561] 4,23,142,914,6016,40052,268168,1800536,12105664,81444848,548123872,3689452064,24835795456,167190009152,1125512591488,7576945713536,51008180122624,343388995528448,2311709992586752,15562542024241664 ⋆ a(n) = ((4 + sqrt(3)) * (5 + sqrt(3)) ^ nv + v(4 - sqrt(3)) * (5 - sqrt(3)) ^ n) / 2. ● a(n) = 10 * a(n - 1) - 22 * a(n - 2) for n > 2; a(0) = 4, a(1) = 23. ●

► [A367043] 1,1,4,23,144,997,7304,55646,436320,3497846,28538852,236203518,1978290648,16735471979,142789868112,1227339581084,10617748941840,92377468226466,807769888050640,7095187345173620,62574408414192220,553881698543850337 ⋆ G.f. satisfies A(x) = 1 + x ^ 3 + x * A(x) ^ 4. ● a(n) = Sum _{ k=0..floor(n / 3) } binomial(3 * (n - 3 * k) + 1,k) * binomial(4 * (n - 3 * k),n - 3 * k) / (3 * (n - 3 * k) + 1). ●

► [A146964] 1,4,23,148,977,6484,43079,286276,1902497,12643492,84025463,558412276,3711069041,24662841844,163903113383,1089259330468,7238946623297,48108239012164,319715392487639,2124748988791636,14120553377944337 ⋆ a(n) = ((4 + sqrt(7)) ^ n + (4 - sqrt(7)) ^ n)) / 2. ● a(n) = 8 * a(n - 1) - 9 * a(n - 2) with a(0)=1, a(1)=4. ●

► [A194006] 1,1,4,23,149,1122,9895,99017,1095022,13225701,173261337,2444494252,36889309869,592107098533,10063638652228,180435656257819,3401248197894641,67204507885768562,1388196723844580331,29907194746593479677,670590559444043372630 ⋆ E.g.f.: exp(exp(3 * x) - 2 * exp(2 * x) + 2 * exp(x) - 1). ● a(n) = Sum _ (k=1..n } Sum _ (j=k..n } j! * (Sum _ (i=0..(j - k) / 3 } (- 1) ^ i * binomial(j - 3 * i - 1,k - 1) * binomial(k,k - i))) * Stirling2(n,j)) / k!), n>1, a(0)=1. ●

► [A116881] 1,4,23,150,1037,7408,54035,399850,2990105,22540260,170991647,1303789534,9983164453,76711854040,591236890667,4568611684306,35382196437041,274564234870732,2134337640202295,16617270658727878 ⋆ Row sums of triangle A116880 (generalized Catalan C(1,2)). ● a(n) = sum(k=0..n, ((k + 1) ^ 2 * binomial(2 * (n + 1),n - k) * binomial(n + k + 2,n + 1)) / ((n + k + 1) * (n + k + 2))). - _ Vladimir Kruchinin _ , Nov 23 2014 ●

► [A246813] 1,4,23,152,1085,8156,63579,509136,4161649,34566580,290798551,2471871784,21191824645,182984610220,1589620392835,13881368684128,121767703088377,1072382299895428,9477296423786207,84017470425706040,746903374745524629,6656552616997851036,59459592374756968323 ⋆ G.f.: Sum _{ n>=0 } x ^ n / (1 - 3 * x) ^ (2 * n + 1) * [Sum _{ k=0..n } C(n,k) ^ 2 * x ^ k] * [Sum _{ k=0..n } C(n,k) ^ 2 * 3 ^ k * x ^ k]. ● a(n) = Sum _{ k=0..[n / 2] } Sum _{ j=0..n - 2 * k } C(n - k, k + j) ^ 2 * C(k + j, j) ^ 2 * 3 ^ j. ●

► [A369213] 1,4,23,152,1091,8264,65021,526236,4352942,36637576,312763225,2701521420,23567184019,207343098824,1837623853627,16391011930424,147029997389386,1325506554640872,12003342144724338,109136630802023808,995907341988015935 ⋆ Expansion of (1 / x) * Series _ Reversion(x / ((1 + x) ^ 4 + x ^ 2)). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 2) } binomial(n + 1,k) * binomial(4 * n - 4 * k + 4,n - 2 * k). ●

► [A364478] 1,1,4,23,154,1124,8675,69626,575243,4859778,41789764,364565277,3218581695,28702642553,258172627259,2339496034381,21337716782873,195726876816623,1804472496834650,16711389876481027,155395461519245354,1450298253483719944 ⋆ G.f. satisfies A(x) = 1 + x * A(x) ^ 3 + x ^ 2 * A(x) ^ 8. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(3 * n + 2 * k,k) * binomial(3 * n + k,n - 2 * k) / (2 * n + 3 * k + 1). ●

► [A271469] 1,1,4,23,155,1142,8910,72350,605056,5175866,45077560,398348733,3562916317,32192775763,293410452560,2694283228653,24902681767987,231496130358758,2162985033344112,20301976721356134,191336242071696514,1809916398759630481,17178063381786563194,163536967014934201972,1561247114394683682834 ⋆ G.f. satisfies A(x) = 1 + x * (A(x) ^ 3 - A(x) ^ 4 + A(x) ^ 5). ● a(n) = (1 / n) * Sum _{ k=0..n - 1 } binomial(n,k) * binomial(3 * n + k,n - 1 - k) for n > 0. ● a(n) = (1 / n) * Sum _{ k=0..n - 1 } (- 1) ^ k * binomial(n,k) * binomial(5 * n - 2 * k,n - 1 - k) for n > 0. (End) ●

► [A366070] 1,4,23,155,1143,8932,72682,609348,5227035,45659020,404756300,3632075109,32928392154,301152242600,2775117150576,25741623112539,240162703635495,2252187478291088,21217451539791085,200709823787548845,1905712342347978340 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 + x - x ^ 2) / (1 + x) ^ 5). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 2) } binomial(n + k,k) * binomial(4 * n - k + 4,n - 2 * k). ●

► [A007297] 1,1,4,23,156,1162,9192,75819,644908,5616182,49826712,448771622,4092553752,37714212564,350658882768,3285490743987,30989950019532,294031964658430,2804331954047160,26870823304476690,258548658860327880 ⋆ Number of connected graphs on n labeled nodes on a circle with straight - line edges that don't cross. ● a(n) = (1 / n) * Sum _{ k=0..n } binomial(3n, n - k - 1) * binomial(n + k - 1, k). - _ Paul Barry _ , May 11 2005 ● a(n) = 4 ^ (n - 1) * (Gamma(3 * n / 2 - 1) / Gamma(n / 2 + 1) / Gamma(n) - Gamma((3 * n - 1) / 2) / Gamma((n + 1) / 2) / Gamma(n + 1)). - _ Mark van Hoeij _ , Aug 27 2005, adapted to offset Feb 21 2020 by _ R. J. Mathar _ ● a(n) = 4 ^ n * binomial(3 * n / 2, n / 2) / (9 * n - 6) - 4 ^ (n - 1) * binomial(3 * (n - 1) / 2, (n - 1) / 2) / n. - _ Mark van Hoeij _ , Aug 27 2005, adapted to offset Feb 21 2020 by _ R. J. Mathar _ ● a(n) = (1 / n) * Sum _{ k=0..n } C(3n, k) * C(2n - k - 2, n - 1). - _ Paul Barry _ , Sep 27 2005 ● a(n) = binomial(3 * n,2 * n + 1) * hypergeom([1 - n,n], [2 * n + 2], - 1) / n. - _ Vladimir Reshetnikov _ , Oct 25 2015 ●

► [A198916] 1,1,4,23,158,1212,10058,88811,826982,8085950,82922624,893003234,10129641140,121552747370,1550460365622,21115793548491,308004022741254,4817224946243142,80703099826887368,1444218797390453282,27501426760092853796,554910390616969332656 ⋆ G.f. satisfies: A(x) = Sum _{ n>=0 } n! * x ^ n * A(x) ^ (2 * n). ● a(n) = [x ^ n] (Sum _{ k>=0 } k! * x ^ k) ^ (2 * n + 1) / (2 * n + 1). ●

► [A182969] 1,1,4,23,159,1236,10454,94401,899286,8964253,92961432,998600238,11075132605,126489183013,1484601117235,17876874457054,220546820252773,2784446513061287,35940592329823310,473893641259375150 ⋆ G.f. satisfies: A(x) = 1 + x * A(x) ^ 3 * A(x * A(x)). ● a(n)=T(n - 1,1), T(n,m)=m / n * sum(k=1..n - m, sum(i=k..n - m, T(n - m,i) * k / i * binomial(2 * i - k - 1,i - 1)) * binomial(n + k - 1,n - 1)), n>m, T(n,n)=1. [_ Vladimir Kruchinin _ , May 07 2012 ●

► [A245110] 1,1,4,23,161,1302,11810,117889,1277890,14894043,185226966,2442933979,33998594943,497207012018,7613797641286,121711037138949,2025687745708717,35020194893837462,627586143525936866,11636932722633705392,222893347544826491780,4403534468187986689781 ⋆ G.f.: Sum _{ n>=0 } (exp(- 1 / (1 - n * x)) / (1 - n * x) ^ n) / n!. ● a(n) = Sum _{ k=1..n } Stirling2(n, k) * C(n + k - 1, k - 1) for n>0 with a(0)=1. ●

► [A317057] 1,1,4,23,166,1437,14512,167491,2174746,31374953,497909380,8619976719,161667969646,3265326093109,70663046421208,1631123626335707,40004637435452866,1038860856732399105,28476428717448349996 ⋆ a(n) is the number of time - dependent assembly trees satisfying the connected gluing rule for a cycle on n vertices. ● a(n) = 1 + Sum _{ j=2..n - 1 } binomial(n, j) * a(j), a(1)=a(2)=1. ●

► [A350669] 1,4,23,176,563,6508,88069,91072,1593269,31037876,31730711,744355888,3788707301,11552032628,340028535787,10686452707072,10823198495797,109521302394 52,409741429887649,414022624965424,1714189423161560 9,743947082888833412,750488463554668427,3556731991703199174 4,25094767086325837888 3 ⋆ Numerators of Sum _{ j=0..n } 1 / (2 * j + 1), for n >= 0. ● a(n) = numerator((Psi(n + 3 / 2) + gamma + 2 * log(2)) / 2), with the Digamma function Psi(z), and the Euler - Mascheroni constant gamma = A001620. See Abramowitz - Stegun, p. 258. 6.3.4. ● a(n) = (1 / 2) * numerator of (2 * H _{ 2 * n + 2 } - H _{ n + 1 }), where H _{ n } is the n - th Harmonic number. - _ G. C. Greubel _ , Jul 24 2023 ●

► [A166727] 4,24,34,44,54,64,74,84,94,104,124,134,144,154,164,174,184,194,204,224,234,244,254,264,274 ⋆ Positive integers with English names ending in ”r”. ● a(n) = a(n - 9) + 100, for n >= 10. - _ Michael S. Branicky _ , Apr 24 2021 ●

► [A139245] 4,24,44,64,84,104,124,144,164,184,204,224,244,264,284,304,324,344,364,384,404,424,444,464,484 ⋆ a(n) = 20 * n - 16. ● a(n) = a(n - 1) + 20. ● a(n) = 20 * n - 16, with n >= 1. - _ Paolo P. Lava _ , Sep 06 2010 ● a(n) = 2 * a(n - 1) - a(n - 2) for n > 2. (End) ●

► [A128205] 0,1,4,24,56,128,384,832,1792,4608,9728,20480,49152,102400,212992,491520,1015808,2097152,4718592,9699328,19922944,44040192,90177536,184549376,402653184 ⋆ a(n) = 2 ^ (n - 1) * A047240(n). ● a(n) = 2 ^ (n - 1) * (cos(2 * Pi * n / 3) + sqrt(3) * sin(2 * Pi * n / 3) / 3 + 2n - 1); ●

► [A085250] 0,4,24,60,112,180,264,364,480,612,760,924,1104,1300,1512,1740,1984,2244,2520,2812,3120,3444,3784,4140,4512 ⋆ 4 times hexagonal numbers: a(n) = 4 * n * (2 * n - 1). ● a(n) = 16 * n + a(n - 1) - 12 (with a(0)=0). - _ Vincenzo Librandi _ , Aug 08 2010 ●

► [A124350] 0,4,24,60,144,260,456,700,1056,1476,2040,2684,3504,4420,5544,6780,8256,9860,11736,13756,16080,18564,21384,24380,27744 ⋆ a(n) = 4 * n * (floor(n ^ 2 / 2) + 1). For n>=3, this is the number of directed Hamiltonian paths on the n - prism graph. ● a(n) = n * (3 + (- 1) ^ n + 2 * n ^ 2). G.f.: 4 * x * (x ^ 2 + 1) * (x ^ 2 + 4 * x + 1) / ((x - 1) ^ 4 * (x + 1) ^ 2). - _ Colin Barker _ , Sep 06 2013 ●

► [A181617] 0,4,24,72,160,300,504,784,1152,1620,2200,2904,3744,4732,5880,7200,8704,10404,12312,14440,16800,19404,22264,25392,28800 ⋆ Molecular topological indices of the complete graph K _ n. ● a(n) = 2 * n * (n - 1) ^ 2. ●

► [A261256] 4,24,72,160,432,896,2592,5632,12800,26624,61440,124416,278528,622592,1376256,2949120,5971968,12058624,25690112,60817408,130023424,262144000,528482304,1107296256,2264924160 ⋆ Let S _ k denote the sequence of numbers j such that A001222(j) - A001221(j) = k. Then a(n) is the n - th term of S _ n. ● a(n + 1) > 2 * a(n). ● a(n) >= 2 ^ prime(n) for n < 5. ● a(n) = b(n) * 2 ^ (n + 1), where b(n) consists of the values of k / 2 ^ excess(k) over odd k, sorted in ascending order. In particular, a(n) <= prime(n) * 2 ^ (n + 1), with equality only when n = 2. - _ Charlie Neder _ , Jan 31 2019 ●

► [A011915] 0,0,0,0,4,24,72,168,336,604,1008,1584,2376,3432,4804,6552,8736,11424,14688,18604,23256,28728,35112,42504,51004 ⋆ a(n) = floor(n(n - 1)(n - 2)(n - 3) / 5). ● a(n) = + 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) + a(n - 5) - 4 * a(n - 6) + 6 * a(n - 7) - 4 * a(n - 8) + a(n - 9). ●

► [A112742] 0,0,4,24,80,200,420,784,1344,2160,3300,4840,6864,9464,12740,16800,21760,27744,34884,43320,53200,64680,77924,93104,110400 ⋆ a(n) = n ^ 2 * (n ^ 2 - 1) / 3. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ●

► [A158494] 4,24,80,248,768,2360,7200,21848,66048,199160,599520,1802648,541612 8,16264760,48827040,146546648,439771008,1319575160,3959249760,11878797848,35638490688,106919666360,320767387680,962318940248,2886990375168 ⋆ Boundary area of the T - square fractal. ● a(1)=4, a(2)=24, a(3)=80; for n>3, a(n) = 3 * a(n - 1) + 2 ^ n - 8. ● a(n) = 4 + (92 / 27) * 3 ^ n - 2 * 2 ^ n - (56 / 9) * (binomial(2 * (n - 1),n - 1) mod 2) - (8 / 3) * (binomial(n ^ 2,n + 2) mod 2). - _ Paolo P. Lava _ , Mar 31 2009 ● a(n) = 4 - 2 ^ (n + 1) + 92 * 3 ^ (n - 3) for n>2. ● a(n) = 6 * a(n - 1) - 11 * a(n - 2) + 6 * a(n - 3) for n>5. (End) ●

► [A211071] 0,4,24,83,208,384,756,1332,1944,3099,4672,6144,8768,12100,15000,19995,26064,31104,39588,49588,57624,70931,86272,98304,117984 ⋆ Number of 2 X 2 matrices having all terms in { 1,...,n } and determinant = 1 (mod 3). ● a(n) = a(n - 1) + 4 * a(n - 3) - 4 * a(n - 4) - 6 * a(n - 6) + 6 * a(n - 7) + 4 * a(n - 9) - 4 * a(n - 10) - a(n - 12) + a(n - 13) for n > 13. ● a(n) = r ^ 2 * s ^ 2 + 2 * r ^ 2 * s * t + r ^ 2 * t ^ 2 + 2 * r * s ^ 3 + 6 * r * s ^ 2 * t + 6 * r * s * t ^ 2 + 2 * r * t ^ 3 + 2 * s ^ 3 * t + 2 * s * t ^ 3. ●

► [A212135] 0,0,4,24,84,220,480,924,1624,2664,4140,6160,8844,12324,16744,22260,29040,37264,47124,58824,72580,88620,107184,128524,152904 ⋆ Number of (w,x,y,z) with all terms in { 1,...,n } and median<mean. ● a(n) = n * (n - 1) * (n ^ 2 - n + 2) / 2. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ●

► [A005561] 1,4,24,84,392,1344,5760,19800,81675,283140,1145144,4008004,16032016,56632576,225059328,801773856,3173688180,11392726800,44986664800,162594659920,641087516256,2331227331840,9183622822400,33577620944400,132211882468575 ⋆ Number of walks on square lattice. ● a(n) = C(n + 4, ceiling(n / 2)) * C(n + 3, floor(n / 2)) - C(n + 4, ceiling((n - 1) / 2)) * C(n + 3, floor((n - 1) / 2)). - _ Paul D. Hanna _ , Apr 16 2004 ●

► [A212681] 0,0,4,24,88,230,504,966,1696,2772,4300,6380,9144,12714,17248,22890,29824,38216,48276,60192,74200,90510,109384,131054,155808 ⋆ Number of (w,x,y,z) with all terms in { 1,...,n } and |x - y|<|y - z|. ● a(n) = 3 * a(n - 1) - a(n - 2) - 5 * a(n - 3) + 5 * a(n - 4) + a(n - 5) - 3 * a(n - 6) + a(n - 7). ●

► [A054603] 0,4,24,96,280,660,1344,2464,4176,6660,10120,14784,20904,28756,38640,50880,65824,83844,105336,130720,160440,194964,234784,280416,332400 ⋆ a(n) = Sum _{ d|4 } phi(d) * n ^ (4 / d). ● a(n) = n ^ 4 + n ^ 2 + 2n. ●

► [A091143] 1,4,24,96,448,1792,7680,30720,126976,507904,2064384,8257536,33292288,133169152,534773760,2139095040,8573157376,34292629504,137304735744,549218942976,2197949513728,8791798054912,35175782154240,140703128616960,562881233944576 ⋆ Number of Pythagorean triples mod 2 ^ n; i.e., number of solutions to x ^ 2 + y ^ 2 = z ^ 2 mod 2 ^ n. ● a(2 * k) = (2 ^ (k + 1) - 1) * 2 ^ (3 * k), a(2 * k - 1) = (2 ^ k - 1) * 2 ^ (3 * k - 1). ● a(n) = 4 * a(n - 1) + 8 * a(n - 2) - 32 * a(n - 3). ●

► [A119920] 1,4,24,96,480,1728,8064,30720,129024,506880,2095104,8232960,33546240,133152768,536248320,2139095040,8589803520,34285289472,137438429184,549212651520,2198882746368,8791793860608,35184363700224 ⋆ Number of rational in [0, 1) having exactly n preperiodic bits, then exactly n periodic bits. ● a(n) = 2 ^ (n - 1) * sum _{ d|n } (2 ^ d - 1) * mu(n / d) ●

► [A052462] 4,24,99,599,2474,14974,61849,374349,1546224,9358724,38655599,233968099,966389974,5849202474,24159749349,146230061849,603993733724,3655751546224,15099843343099,91393788655599,377496083577474 ⋆ a(n) is the minimal positive integral solution k to 24 * k == 1 (mod 5 ^ n). ● a(n) = (1 + (21 + 2 * (- 1) ^ n) * 5 ^ n) / 24. - _ Bruno Berselli _ , Apr 04 2011 ● a(n) = a(n - 1) + 25 * a(n - 2) - 25 * a(n - 3). - _ Vincenzo Librandi _ , Jul 01 2012 ●

► [A120908] 0,4,24,108,432,1620,5832,20412,69984,236196,787320,2598156,8503056,27634932,89282088,286978140,918330048,2927177028,9298091736,29443957164,92980917360,292889889684,920511081864,2887057484028 ⋆ Sum of the lengths of the drops in all ternary words of length n on { 0,1,2 } . The drops of a ternary word on { 0,1,2 } are the subwords 10,20 and 21, their lengths being the differences 1, 2 and 1, respectively. ● a(n) = 4 * (n - 1) * 3 ^ (n - 2). ●

► [A145655] 4,24,108,448,1812,7272,29116,116496,466020,1864120,7456524,29826144,119304628,477218568,1908874332,7635497392,30541989636,122167958616,488671834540,1954687338240,7818749353044,31274997412264 ⋆ Partial sums of A080674. ● a(1)=4, a(2)=24, a(3)=108, a(n)=6 * a(n - 1) - 9 * a(n - 2) + 4 * a(n - 3). - _ Harvey P. Dale _ , Nov 27 2013 ●

► [A306610] 4,24,109,524,2504,11979,57299,274084,1311049,6271254,29997829,143491199,686373809,3283190949,15704770004,75121978804,359337430474,1718849676159,8221921677724,39328626006254,188124003629279,899869747188249,4304424455586134 ⋆ a(n) = (2 * cos(Pi / 15)) ^ (- n) + (2 * cos(7 * Pi / 15)) ^ (- n) + (2 * cos(11 * Pi / 15)) ^ (- n) + (2 * cos(13 * Pi / 15)) ^ (- n), for n >= 1. ● a(n) = 4a(n - 1) + 4a(n - 2) - a(n - 3) - a(n - 4). ● a(n) = round((2 * cos(7 * Pi / 15)) ^ (- n)) for n >= 3. ●

► [A059153] 4,24,112,480,1984,8064,32512,130560,523264,2095104,8384512,33546240,134201344,536838144,2147418112,8589803520,34359476224,137438429184,549754765312,2199021158400,8796088827904,35184363700224,140737471578112,562949919866880 ⋆ a(n) = 2 ^ (n + 2) * (2 ^ (n + 1) - 1). ● a(n) = 6 * a(n - 1) - 8 * a(n - 2). ●

► [A099582] 0,0,1,4,24,112,560,2688,13056,62976,304384,1469440,7096320,34263040,165441536,798818304,3857055744,18623496192,89922273280,434183077888,2096421666816,10122418978816,48875363631104,235991130439680 ⋆ a(n) = Sum _{ k=0..floor(n / 2) } binomial(n - k, k - 1) * 4 ^ (n - k - 1). ● a(n) = 4 * a(n - 1) + 8 * a(n - 2) - 16 * a(n - 3) - 16 * a(n - 4) with a(n) = (n ^ 3 - n) / 6 for n< 5. ●

► [A017976] 1,4,24,117,576,2821,13824,67723,331776,1625363,7962624,39008731,191102976,936209559,4586471424,22469029417,110075314176,539256706015,2641807540224,12942160944371,63403380965376 ⋆ Powers of sqrt(24) rounded down. ● a(n) = floor(sqrt(24 ^ n)). - _ Vincenzo Librandi _ , Jun 24 2011 ●

► [A002011] 4,24,120,560,2520,11088,48048,205920,875160,3695120,15519504,64899744,270415600,1123264800,4653525600,19234572480,79342611480,326704870800,1343120024400,5513861152800,22606830726480,92580354403680,378737813469600 ⋆ a(n) = 4 * (2n + 1)! / n! ^ 2. ● a(n) = 1 / J(n) where J(n) = Integral _{ t=0..Pi / 4 } (cos(t) ^ 2 - 1 / 2) ^ (2n + 1). - _ Benoit Cloitre _ , Oct 17 2006 ●

► [A024049] 0,4,24,124,624,3124,15624,78124,390624,1953124,9765624,48828124,244140624,1220703124,6103515624,30517578124,152587890624,762939453124,3814697265624,19073486328124,95367431640624 ⋆ a(n) = 5 ^ n - 1. ● a(n + 1) = 5 * a(n) + 4. - _ Reinhard Zumkeller _ , Nov 22 2009 ● a(n) = Sum _{ i=1..n } 4 ^ i * binomial(n,n - i) for n>0, a(0)=0. - _ Bruno Berselli _ , Nov 11 2015 ●

► [A103455] 1,4,24,124,624,3124,15624,78124,390624,1953124,9765624,48828124,244140624,1220703124,6103515624,30517578124,152587890624,762939453124,3814697265624,19073486328124,95367431640624,476837158203124 ⋆ a(n) = 0 ^ n + 5 ^ n - 1. ● a(n) = Sum _{ k=0..n } (2 * 0 ^ (n - k) - 1) * 0 ^ (k * (n - k)) * 5 ^ k. ●

► [A180222] 0,1,4,24,128,704,3840,20992,114688,626688,3424256,18710528,102236160,558628864,3052404736,16678649856,91133837312,497964548096,2720928890880,14867431948288,81237158920192,443888091267072,2425449636429824,13252903275855872 ⋆ a(n) = 4 * a(n - 1) + 8 * a(n - 2), with a(1)=0 and a(2)=1. ● a(n) = 2 ^ (n - 3) * ((1 + sqrt(3)) ^ (n - 1) - (1 - sqrt(3)) ^ (n - 1)) / sqrt(3). - _ Rolf Pleisch _ , May 14 2011 ●

► [A153337] 1,4,24,136,720,3624,17584,83024,383904,1746280,7839216,34812144,153204064,669108496,2903267040,12526343584,53779871552,229895033832,978965187184,4154438114480,17575883030496,74150192517808 ⋆ Number of zig - zag paths from top to bottom of a 2n - 1 by 2n - 1 square whose color is that of the top right corner ● a(n) = n * 2 ^ (2n - 2) - 2(n - 1) * binomial(2n - 2,n - 1). ●

► [A122690] 1,4,24,136,776,4424,25224,143816,819976,4675144,26655624,151978696,866515976,4940494664,28168537224,160604664776,915697472776,5220906022984,29767320006024,169720224122056,967670400634376 ⋆ a(n) = 5 * a(n - 1) + 4 * a(n - 2) with a(0)=1, a(1)=4. ● a(n) = (1 / 2) * ((5 - sqrt(41)) / 2) ^ n + (3 / 82) * sqrt(41) * ((5 + sqrt(41)) / 2) ^ n - (3 / 82) * sqrt(41) * ((5 - sqrt(41)) / 2) ^ n + (1 / 2) * ((5 + sqrt(41)) / 2) ^ n, with n>=0 - _ Paolo P. Lava _ , Jul 07 2008 ● a(n) = 2 ^ (n - 1) * (2 * Fibonacci(n + 1, 5 / 2) - Fibonacci(n, 5 / 2)) = - (2 / I) ^ (n - 1) * (2 * I * ChebyshevU(n, 5 * I / 4) + ChebyshevU(n - 1, 5 * I / 4)). - _ G. C. Greubel _ , Dec 26 2019 ●

► [A262376] 1,1,1,4,24,139,853,5886,46198,409069,4037859,43954648,522956236,6749977023,93928268209,1401602636194,22324392524178,378011820620161,678

0385526348143,1284245859351801 24,2561327494111820104,536522696658212600 83,1177652997443428940061 ⋆ a(n) = Sum _{ k=0..n } (k! - k). • a(n) = Sum _{ k=0..n } k! - k. •

▶ [A005319] 0,4,24,140,816,4756,27720,161564,941664,5488420,31988856,186444 716,1086679440,6333631924,36915112104,215157040700,1254027132096,73090057 51876,42600007379160,248291038523084,1447146223759344,8434586304032980 ⋆ a(n) = 6 * a(n - 1) - a(n - 2). • a(n) = ((3 + 2 * sqrt(2)) ^ n - (3 - 2 * sqrt(2)) ^ n) / sqrt(2). - _ Gregory V. Richardson _ , Oct 06 2002 •

▶ [A155119] 1,4,24,140,820,4800,28100,164500,963000,5637500,33002500,193200 000,1131012500,6621062500,38760375000,226907187500,1328337812500,77762250 00000,455228140625 00,2664951953125 00,15600900468750 00,91329262109375 00 ⋆ a(n) = 5 * a(n - 1) + 5 * a(n - 2), n > 2, a(0)=1, a(1)=4, a(2)=24. • a(n) = (1 4 / 15) * sqrt(5) * ((5 / 2 + (3 / 2) * sqrt(5)) ^ (n - 1) - (5 / 2 - (3 / 2) * sqrt(5)) ^ (n - 1)) + 2 * ((5 / 2 + (3 / 2) * sqrt(5)) ^ (n - 1) + (5 / 2 - (3 / 2) * sqrt(5)) ^ (n - 1)) + (1 / 5) * (C(2 * n,n) mod 2), with n >= 0. - _ Paolo P. Lava _ , Jan 26 2009 • a(n) = (1 / 5) * [n=0] - 4 * (sqrt(5) * i) ^ (n - 2) * Chebyshe vU(n, - sqrt(5) * i / 2). - _ G. C. Greubel _ , Mar 25 2021 •

▶ [A067411] 1,4,24,144,864,5184,31104,186624,1119744,6718464,40310784,24186 4704,1451188224,8707129344,52242776064,313456656384,1880739938304,1128443 9629824,677066377788944,406239826673664 ⋆ Third column of triangle A067410 and second column of A067417. • a(n) = 4 * 6 ^ (n - 1), for n >= 1, a(0)=1. •

▶ [A077613] 0,1,4,24,144,1080,8640,80640,806400,9072000,108864000,143700480 0,20118067200,305124019200,4881984307200,83691159552000,150644087193600 0,2881068167577600 0,57621363351552 0000,1216451004883200000,267619220899 430400000,6182004002776842240000 ⋆ Number of adjacent pairs of form (even,o dd) among all permutations of { 1,2,...,n } . Also, number of adjacent pairs of f orm (odd,even). • a(n) = floor(n / 2) * ceiling(n / 2) * (n - 1)!. Proof: There a re floor(n / 2) * ceiling(n / 2) pairs (r, s) with r even and s odd. For each pair, there are n - 1 places it can occur in a permutation and (n - 2)! possible arrang ements of the other numbers. •

▶ [A104531] 1,4,24,148,920,5736,35808,223668,1397496,8732920,54575888,34108 2504,2131706864,13322959888,83267756400,520420803060,3252620324280,203288 41669080,127055130786960,794094089779800,4963086293860560,31019282772508 080,193870492861908480 ⋆ Expansion of (1 + sqrt(1 - 4 * x)) / (5 * sqrt(1 - 4 * x) - 3). • a(n) = 0 ^ n + sum { k=0..n, 4 ^ (k + 1) * C(2n - 1, n - k - 1) * 2 * (k + 1) / (n + k + 1) } •

▶ [A225050] 1,4,24,148,920,5754,36204,229128,1458072,9325030,59905274,38636 8008,2500651244,16234450288,105680341560,689579733648,4509096746904,29539 804567230,193843622021910,1273932593379600,8383551165082170,552383325468 51630,364364231864557080 ⋆ Number of shortest paths from one vertex of a cu be (side = n units) to farthest vertex, along the grid on 3 surfaces meeting at a nother vertex. • a(n) = 2 * binomial(3n,n) - binomial(2n,n). •

▶ [A045738] 1,4,24,148,925,5838,37128,237576,1527867,9867000,63946740,41568 3216,2709186844,17697136408,115833872400,759517409424,4987999112007,32804 320226580,216018805979760,1424151150922500,9398957079664845,620902036177 15350,4105366329083073 60 ⋆ Number of branches in all noncrossing rooted tree s on n nodes on a circle. • a(n) = binomial(3n - 3, n - 2) - 2 * binomial(3n - 6, n - 3). •

▶ [A084130] 1,4,24,160,1088,7424,50688,346112,2363392,16138240,110198784,75 2484352,5138284544,35086401536,239584935936,1635988275200,1117122671411 2,76281907511296,520885446377472,3556828310929408,24287542916415488 ⋆ a(n) = 8 * a(n - 1) - 8 * a(n - 2), a(0)=1, a(1)=4. • a(n) = (4 + sqrt(8)) ^ n / 2 + (4 - sqrt(8)) ^ n / 2. •

▶ [A059304] 1,4,24,160,1120,8064,59136,439296,3294720,24893440,189190144,14 44724736,11076222976,85201715200,657270374400,5082890895360,393924044390 40,305870434467840,2378992268083200,18531097667174400 ⋆ a(n) = 2 ^ n * (2 * n)! / (n!) ^ 2. • a(n) = C(2 * n,n) * 2 ^ n. • a(n) = Sum _{ k = 0..2 * n } (- 1) ^ (n + k) * binomial(2 * n,k) * binomial(3 * n - 2 * k,n) * binomial(n + k,n). - _ Peter Bala _ , Aug 04 2016 • a(n) = Sum _{ k = n..2 * n } binomial(2 * n,k) * binomial(k,n). In general, for m >= 1, Sum _{ k = n..m * n } binomial(m * n,k) * binomial(k,n) = 2 ^ ((m - 1) * n) * binomial(m * n,n). - _ Peter Bal a _ , Mar 25 2023 •

▶ [A069722] 0,4,24,160,1120,8064,59136,439296,3294720,24893440,189190144,14 44724736,11076222976,85201715200,657270374400,5082890895360,393924044390 40,305870434467840,2378992268083200,18531097667174400 ⋆ Number of rooted unicursal planar maps with n edges and exactly one vertex of valency 1 (unicur sal means that exactly two vertices are of odd valency; there is an Eulerian pat h). • a(n) = 2 ^ (n - 1) * binomial(2n - 2, n - 1), n>1. •

▶ [A214377] 1,4,24,168,1280,10296,86016,739024,6488064,57946200,524812288,4 808643120,44493176832,415146189360,3901709352960,36902658748320,35098043 2461824,335474301700188 0,3220761615532032 0,3104468579557080 0,3003167577 200394240,2914691026461546 0240 ⋆ G.f. satisfies: A(x) = 1 + 4 * x * A(x) ^ (3 / 2). • a(n) = 2 ^ (2 * n + 1) * binomial(3 * n / 2, n) / (n + 2). •

▶ [A369503] 1,4,24,168,1284,10384,87360,756704,6703168,60444928,552990592,5 120101760,47887472000,451759449600,4293634467840,41073654689280,39517016 6443008,3821262491103232,3711897353066086 4,3620359919638691 84,3544080121 528001536 ⋆ Expansion of (1 / x) * Series _ Reversion(x / ((1 + x) ^ 2 + x ^ 2) ^ 2). • a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 2) } binomial(2 * n + 2,k) * binomial(4 * n - 2 * k + 4,n - 2 * k). •

▶ [A246423] 1,4,24,168,1286,10440,88112,764368,6766278,60828024,553529808,5 086837680,47127896444,439608960656,4124536224864,38891699480992,36832608 2421446,3501654020899800,3340333585510836 8,3196123867715946 08,3066480362 268978804,2949340158242608 2032,2843013043263768 55200 ⋆ G.f.: Sum _{ n>= 0 } x ^ n / (1 - 3 * x) ^ (2 * n + 1) * [Sum _{ k=0..n } C(n,k) ^ 2 * 2 ^ k * x ^ k] * [Sum _{ k=0..n } C(n,k) ^ 2 * 3 ^ k * x ^ k]. • a(n) = Sum _{ k=0..[n / 2] } 2 ^ k * Sum _{ j=0..n - 2 * k } C(n - k, k + j) ^ 2 * C(k + j, j) ^ 2 * 3 ^ j. •

▶ [A188913] 1,4,24,168,1300,10896,97734,928752,9262116,96091440,1029267888,1 1311712352,126921365298,1448378629600,16760687848890,196237061599008,232 0532776851972,27676644749022672,332568471941572944,4022574792189178080 ⋆ Binomial convolution of the binomial coefficients bin(3n,n) (A005809) and bin(3 n,n) / (2n + 1) (A001764). • a(n) = sum(binomial(n,k) * binomial(3 * k,k) * bi nomial(3 * n - 3 * k,n - k) / (2 * n - 2 * k + 1),k=0..n). •

▶ [A052685] 1,1,4,24,168,1680,18720,252000,3830400,65681280,1251936000,2622 5337600,599710003200,14851444608000,396138155212800,1132053700377 6000,34 5079573622784000,1117641036563251 2000 ⋆ Expansion of e.g.f. (1 - x ^ 2) / (1 - x - 2 * x ^ 2 + x ^ 4). • a(n) = (n! / 283) * Sum _{ alpha=RootOf(1 - z - 2 * Z ^ 2 + Z ^ 4) } (27 + 112 * alpha + 9 * alpha ^ 2 - 48 * alpha ^ 3) * alpha ^ (- 1 - n). •

▶ [A365225] 1,1,4,24,169,1301,10605,89963,785943,7023148,63892489,58977135 0,5509967214,52001860377,495048989686,4748144843341,45838627944500,445072 967642096,4343508043479012,42581707009501604,41915811968498678 1,41412702 08611084284 ⋆ G.f. satisfies A(x) = 1 + x * A(x) ^ 5 / (1 + x * A(x) ^ 2). • a(n) = Sum _{ k=0..n } (- 1) ^ (n - k) * binomial(2 * n + 3 * k + 1,k) * binomi al(n - 1,n - k) / (2 * n + 3 * k + 1). •

▶ [A369478] 1,4,24,170,1320,10868,93197,823484,7445184,68545882,640446224,6 057249180,57878746750,557903174040,5418441862824,52971933934834,52086955 9359424,5147999004530720,51113415228327827,5095837840517486 92,5099262428 810825568 ⋆ Expansion of (1 / x) * Series _ Reversion(x / ((1 + x) ^ 2 * (1 + x + x ^ 2) ^ 2)). • a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 2) } binomial (2 * n + 2,k) * binomial(4 * n - k + 4,n - 2 * k). •

▶ [A368975] 1,4,24,170,1320,10868,93199,823548,7446480,68567202,640757920,6 061477500,57933260067,558580920160,5426644737984,53069206438226,52200484 9765080,5161083186971000,51262685633583970,51127266011715469 2,5118240198 221249088 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 - x) ^ 2 * (1 - x + x ^ 2) ^ 2). • a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 2) } (- 1) ^ k * binomial(2 * n + k + 1,k) * binomial(5 * n - k + 3,n - 2 * k). •

▶ [A366980] 1,1,4,24,171,1336,11060,95298,845649,7675398,70921457,66490544 5,6309060313,60473691666,584684295383,5695312881404,55839455579659,550621 231581791,5457218248143692,54332533436452743,54314849696227973 0,54497427 50024662824 ⋆ G.f. satisfies A(x) = 1 + x * A(x) ^ 5 * (1 - x * A(x)). • a(n) = Sum _{ k=0..n } (- 1) ^ (n - k) * binomial(n + 4 * k + 1,k) * binomial(k,n - k) / (n + 4 * k + 1). •

▶ [A032349] 1,4,24,172,1360,11444,100520,911068,8457504,80006116,768464312,7 474561164,73473471344,728745517972,7284188537672,73301177482172,74200915 7612608,755059941087482 0,7719349756671932 0,7924985886594269 24 ⋆ Number of paths from (0,0) to (3n,0) that stay in first quadrant (but may touch horizon tal axis), where each step is (2,1),(1,2) or (1, - 1) and start with (2,1). • a(n) = 2 * Sum _{ i=0..n - 1 } (2 * n + i - 1)! / (i! * (n - i - 1)! * (n + i + 1)!). - _ V ladimir Kruchinin _ , Oct 18 2011 •

▶ [A156017] 1,4,24,176,1440,12608,115584,1095424,10646016,105522176,1062623 232,10840977408,111811534848,1163909087232,12212421230592,12902737634918 4,1371482141884416,1465621230623296,1573699856435773 44,1696975718802522 112,18369603773021552640 ⋆ Schroeder paths with two rise colors and two level colors. • a(n) = 2 ^ n * hypergeom([- n, n + 1], [2], - 1). - _ Peter Luschny _ , Nov 25 2020 •

▶ [A000309] 1,1,4,24,176,1456,13056,124032,1230592,12629760,133186560,14360 98560,15774990336,176028860416,1990947110912,22783499599872,263411369705 472,3073132646563840,36143187370967040,428157758086840320,51050726417183 53920,612284928043725 61920 ⋆ Number of rooted planar bridgeless cubic maps with 2n nodes. • a(n) = 4 * a(n - 1) * binomial(3 * n, 3) / binomial(2 * n + 2, 3). • a(n) = 2 ^ n * (3 * n)! / ((n + 1)! * (2 * n + 1)!). • a(n) = - (- 2) ^ (n - 1) * (3 * n + 2) * hypergeom([- 3 * (n + 1), - n, - n + 1 / 3], [- n - 1, - n - 2 / 3], 1). The a(n) are values of the polynomials A358091. - _ Peter Luschny _ , Oct 28 2022 •

▶ [A111556] 1,4,24,184,1664,17024,192384,2366144,31362304,444907264,6720628 224,107674883584,1823884857344,32575705493504,612054254936064,1207198761 9713024,2494777774203043 84,5392386599983366144 ⋆ Column 3 of triangle A11 1553. • a(n + 1) is the moment of order n for the density 6 * x ^ 3 * exp(- x) / ((x ^ 3 * exp(- x) * Ei(x) - x ^ 2 - x - 2) ^ 2 + Pi ^ 2 * x ^ 6 * exp(- 2 * x)) over the interval 0..infinity. (End) •

▶ [A349514] 1,4,24,192,1792,18240,196224,2194176,25247232,296979456,3555010 560,43165900800,530362220544,6581594275840,82373440339968,10385795807969 28,131790234624983 04,1681839762395627 52,2157085003249876992,277906524865 43474688,3594859650931218 18624 ⋆ G.f. A(x) satisfies: A(x) = (1 + x * A(x) ^ 3) / (1 - 3 * x). • a(0) = 1; a(n) = 3 * a(n - 1) + Sum _{ i=0..n - 1 } Sum _{ j=0..n - i - 1 } a(i) * a(j) * a(n - i - j - 1). • a(n) = Sum _{ k=0..n } binomial(n + 2 * k,3 * k) * binomial(3 * k,k) * 3 ^ (n - k) / (2 * k + 1). •

▶ [A346631] 4,24,240,2880,41760 ⋆ Number of strongly asymmetric Boolean nes ted canalizing functions with n variables. • a(n) = n!((1 + sqrt(2)) ^{ n - 1 }- (1 - sqrt(2)) ^{ n - 1 }) / sqrt(2). •

▶ [A141013] 0,4,24,250,3096,40834,554664,7647250,106237176,1481554114,20701 400904,289537131250,4051542498456,56707753666594,793811662272744,1111268 5048647250,155572843119354936 ⋆ E.g.f. Sum _{ d|M } (exp(d * x) - 1) / d, M =14. • a(n) = sum _{ d|14 } d ^ (n - 1) = 1 + 2 ^ (n - 1) + 7 ^ (n - 1) + 14 ^ (n - 1). • a(n)= 24 * a(n - 1) - 163 * a(n - 2) + 336 * a(n - 3) - 196 * a(n - 4), n >4. •

▶ [A141014] 0,4,24,260,3528,51332,762744,11406980,170939688,2563287812,3844 5332184,576660215300,8649804864648,129746582562692,1946196290656824,2919 293213368922 0,437893920912786408 ⋆ E.g.f. Sum _{ d|M } (exp(d * x) - 1) / d , M=15. • a(n) = sum _{ d|15 } d ^ (n - 1) = 1 + 3 ^ (n - 1) + 5 ^ (n - 1) + 1 5 ^ (n - 1). G.f.: - 4 * x * (- 1 + 18 * x - 79 * x ^ 2 + 90 * x ^ 3) / ((x - 1) * (1 5 * x - 1) * (3 * x - 1) * (5 * x - 1)). a(n) = 24 * a(n - 1) - 158 * a(n - 2) + 360 * a(n - 3) - 225 * a(n - 4). - _ R. J. Mathar _ , Mar 05 2010 •

▶ [A216092] 4,24,624,624,90624,890624,2890624,12890624,212890624,821289062 4,18212890624,918212890624,9918212890624,59918212890624,259918212890624,6 259918212890624,56259918212890624,256259918212890624 ⋆ a(n) = 2 ^ (2 * 5 ^ (n - 1)) mod 10 ^ n. • a(n) = 5 ^ (2 ^ n) mod 10 ^ n - 1. •

▶ [A042889] 1,4,25,29,83,278,361,1722,3805,13137,30079,133453,163532,624049,1 411630,2035679,13625704,56538495,3519012394,14132588071,88314540820,10244 7128891,293208798602,982073524697,1275282323299 ⋆ Denominators of continu

ed fraction convergents to sqrt(976). • a(n) = 3532638098 * a(n - 18) - a(n - 36) for n > 35. - _ Vincenzo Librandi _ , Jan 31 2014 •

► [A169600] 4,25,35,56,66,87,97,118,128,149,159,180,190,211,221,242,252,273,28 3,304,314,335,345,366,376 ⋆ Numbers that are congruent to { 4, 25 } mod 31. • a(n) = (62 * n + 11 * (- 1) ^ n - 35) / 4. - _ Vincenzo Librandi _ , Jan 06 201 3, modified Jul 07 2015 • a(n) = a(n - 1) + a(n - 2) - a(n - 3). - _ Vincenzo Lib randi _ , Jan 06 2013 •

► [A199772] 1,4,25,41,260,1649,2705,17156,108809,178489,1132036,7179745,1177 7569,74697220,473754361,777141065,4928884484,31260608081,51279532721,3252 31678724,2062726378985,3383672018521,21460361911300,136108680404929,2232 71073689665 ⋆ x - values in the solution to 17 * x ^ 2 - 16 = y ^ 2. • a(n) = 66 * a(n - 3) - a(n - 6), a(1)=1, a(2)=4, a(3)=25, a(4)=41, a(5)=260, a(6)=1649. •

► [A337173] 0,1,4,25,52,170,280,674,984,1979,2684,4795,6188,10164,12656,1952 4,23664,34773,41268,58333,68068,93214,107272,143078,162760 ⋆ a(n) = Sum _{ k=1..floor(n / 2) } k ^ 2 * (n - k) ^ 2. • a(n) = (2 * n - 1 + (- 1) ^ n) * (2 * n + 3 + (- 1) ^ n) * (16 * n ^ 3 - n ^ 2 + 10 * n - 4 - (n ^ 2 + 6 * n + 4) * (- 1) ^ n) / 3840. • a(n) = a(n - 1) + 5 * a(n - 2) - 5 * a(n - 3) - 10 * a(n - 4) + 10 * a(n - 5) + 10 * a(n - 6) - 10 * a(n - 7) - 5 * a(n - 8) + 5 * a(n - 9) + a(n - 10) - a(n - 11). •

► [A016790] 1,4,25,64,121,196,289,400,529,676,841,1024,1225,1444,1681,1936,220 9,2500,2809,3136,3481,3844,4225,4624,5041 ⋆ a(n) = (3n + 2) ^ 2. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). (End) • a(n) = a(n - 1) + 3 * (6 * n + 1). - _ Miquel Cerda _ , Oct 25 2016 •

► [A212893] 1,4,25,64,169,324,625,1024,1681,2500,3721,5184,7225,9604,12769,16 384,21025,26244,32761,40000,48841,58564,70225,82944,97969 ⋆ Number of quad ruples (w,x,y,z) with all terms in { 0,...,n } such that w - x, x - y, and y - z all h ave the same parity. • a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 6 * a(n - 3) + 6 * a(n - 5) - 2 * a(n - 6) - 2 * a(n - 7) + a(n - 8). •

► [A180569] 4,25,72,154,280,459,700,1012,1404,1885,2464,3150,3952,4879,5940,7 144,8500,10017,11704,13570,15624,17875,20332,23004,25900 ⋆ The Wiener index of the P _ 3 X P _ n grid, where P _ m is the path graph on m nodes. The W iener index of a connected graph is the sum of distances between all unordered pairs of nodes in the graph. • a(n) = (1 / 2) * n * (n + 3) * (3n - 1). •

► [A041991] 1,1,4,25,79,104,4655,4759,18932,118351,373985,492336,22036769,22 529105,89624084,560273609,1770444911,2330718520,104322059791,10665277831 1,424280394724,2652335146655,8381285834689,11033620981344,49386060901382 5 ⋆ Denominators of continued fraction convergents to sqrt(518). • a(n) = 4734 * a(n - 6) - a(n - 12) for n>11. - _ Vincenzo Librandi _ , Jan 11 2014 •

► [A027764] 4,25,90,245,560,1134,2100,3630,5940,9295,14014,20475,29120,4046 0,55080,73644,96900,125685,160930,203665,255024,316250,388700,473850,573300 ⋆ a(n) = (n + 1) * binomial(n + 1,4). • a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). - _ Harvey P. Dale _ , Jun 14 2013 • a(n) = 10 * C(n + 2,2) * C(n + 2,5) / (n + 2) ^ 2. - _ Gary Detlefs _ , Aug 20 2013 •

► [A323967] 1,1,4,25,94,266,632,1332,2570,4631,7900,12883,20230,30760,45488,6 5654,92754,128573,175220,235165,311278,406870,525736,672200,851162 ⋆ Numb er of 3 X n integer matrices (m _{ i,j }) such that m _{ 1,1 } =0, m _{ 3,n } =2, and all rows, columns, and falling diagonals are (weakly) monotonic withou t jumps of 2. • a(n) = 2 + (((((n + 12) * n + 55) * n + 120) * n - 236) * n - 3 12) * n) / 360 for n > 0, a(0) = 1. •

► [A195509] 1,1,1,4,25,96,481,3368,20721,141760,1146721,9098112,77652169,726 208640,6891125697,69344336896,738718169569,8076031881216,92647353941569,1 106883171037184,13616813607795321,174298975125127168,230451527113412457 7 ⋆ Expansion of e.g.f. (exp(x * exp(x)) + exp(x / exp(x))) / 2. • a(n) = Sum _{ m=0..floor((n - 1) / 2) } binomial(n,2 * m) * (n - 2 * m) ^ (2 * m) for n > = 1. - _ Vladimir Kruchinin _ , Mar 10 2013 [Edited by _ Petros Hadjicostas _ , May 06 2020] •

► [A027949] 1,4,25,97,309,894,2462,6610,17519,46135,121115,317484,831660,217 7872,5702389,14929789,39087537,102333450,267913514,701407870,1836310955,48 07525939,12586267895,32951278872,86267569944 ⋆ a(n) = T(2n,n + 1), T given by A027948. • a(1)=1, a(2)=4, a(3)=25, a(4)=97, a(5)=309, a(6)=894, a(n) = 6 * a(n - 1) - 13 * a(n - 2) + 13 * a(n - 3) - 6 * a(n - 4) + a(n - 5). - _ Harvey P. Dale _ , Apr 20 2012 • a(n) = Sum _{ j=0..n - 1 } binomial(2 * n - j, j + 3) , with a(1)=1. - _ G. C. Greubel _ , Sep 29 2019 •

► [A226547] 0,4,25,98,386,1402,4938,16936,57020,189172,620397,2015456,64963 91,20801576,66231279,209847980,662049349,2080850248,6518383898,2035832736 2,63413001935,197042859318,610922240964,1890331512546,5838350817615 ⋆ Nu mber of squares in all tilings of a 4 X n rectangle using integer - sided square til es. • a(n) = 4 * a(n - 1) + 2 * a(n - 2) - 12 * a(n - 3) - 11 * a(n - 4) + 2 * a(n - 5) + 10 * a(n - 6) + 6 * a(n - 7) - a(n - 8) - 2 * a(n - 9) - a(n - 10) for n>9. - _ Colin Barker _ , Jun 07 2020 •

► [A082044] 1,4,25,100,289,676,1369,2500,4225,6724,10201,14884,21025,28900,38 809,51076,66049,84100,105625,131044,160801,195364,235225,280900,332929 ⋆ M ain diagonal of A082043: a(n) = n ^ 4 + 2 * n ^ 2 + 1. • a(n) = n ^ 4 + 2 * n ^ 2 + 1. • a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Harvey P. Dale _ , Feb 27 2015 •

► [A167889] 0,0,1,4,25,100,481,1924,8425,33700,141361,565444,2320825,928330 0,37664641,150658564,607417225,2429668900,9761722321,39046889284,15657497 7625,626299910500,2508686426401,10034745705604,40170363882025 ⋆ a(n) = (- 7 * 3 ^ n + (- 3) ^ n + 6 * 4 ^ n) / 42. • a(n) = 4 * a(n - 1) + 9 * a(n - 2) - 36 * a(n - 3). •

► [A110051] 1,4,25,119,599,2887,14039,67767,327607,1581751,7638967,3688389 5,178097591,859930039,4152135095,20048276919,96801746359,467400158647,225 6808013239,10896832949687,52614565424567,254045594545591 ⋆ Expansion of (1 - x + 2 * x ^ 3 + x ^ 2) / ((1 - x) * (2 * x + 1) * (2 * x - 1) * (4 * x ^ 2 + 4 * x - 1)). • a(0)=1, a(1)=4, a(2)=25, a(3)=119, a(4)=599, a(n)=5 * a(n - 1) + 4 * a(n - 2) - 24 * a(n - 3) + 16 * a(n - 5). - _ Harvey P. Dale _ , Sep 07 2012 • a(n)=1 / 112 * (- 2 * (7 * (- 2) ^ n + 7 * 2 ^ (n + 1) - 8) + (13 - 9 * Sqrt[2]) * (2 - 2 * Sqrt[2]) ^ n + 9 * 2 ^ (n + 1 / 2) * (1 + Sqrt[2]) ^ n + 13 * (2 * (1 + S qrt[2])) ^ n). - _ Harvey P. Dale _ , Sep 07 2012 •

► [A334551] 1,4,25,120,497,1924,7265,27288,102745,388692,1477721,5643064,216 32785,83204260,320932177,1240939448,4808642313,18668848852,72601081385,28 2762109272,1102772229313,4306062994148,16832791708257,65867445819160,257 980829463017 ⋆ Number of fixed polyominoes with 2n - 1 cells and width and h eight both equal to n. • a(n) = 2 * binomial(2 * (n - 1), n - 1) + 4 * (n - 2) + (n - 2) ^ 2 * (2 * n - 5) + 2 * Sum _{ i=1..n - 2 } Sum _{ j=1..n - 2 } ((n - 2 - i) * (n - 2 - j) + 2) * binomial(i + j, i) for n > 1. • a(n) = 8 * binomial(2 * (n - 1), n - 1) - 3 * n ^ 2 + 4 * n - 8. - _ Peter J. Taylor _ , Dec 15 2020 •

► [A362391] 1,1,1,4,25,121,751,7351,73417,749449,9477181,136883341,204125064 1,33289802833,608025141907,11815916748091,242532915013201,53693038590036 01,126896359555326745,315309676242618655 3,827058817333485302 41,229351192 2269658189121 ⋆ E.g.f. satisfies A(x) = exp(x + x ^ 3 / 2 * A(x)). • a(n) = n! * Sum _{ k=0..floor(n / 3) } (1 / 2) ^ k * (k + 1) ^ (n - 2 * k - 1) / (k! * (n - 3 * k)!). •

► [A156701] 4,25,136,481,1300,2929,5800,10441,17476,27625,41704,60625,8539 6,117121,157000,206329,266500,339001,425416,527425,646804,785425,945256,112 8361,1336900 ⋆ a(n) = 4 * n ^ 4 + 17 * n ^ 2 + 4. • a(n) = (2 * (n ^ 2 - 1)) ^ 2 + (5 * n) ^ 2. •

► [A015533] 0,1,4,25,136,769,4300,24121,135184,757825,4247956,23812249,13348 0600,748232641,4194255964,23511117625,131792774176,738771155329,414121958 8900,23213818753561,130126251314344,729429374039425,408885375798796,229 20279398302009 ⋆ a(n) = 4 * a(n - 1) + 9 * a(n - 2). • a(n) = - 9 ^ n * (A ^ n - B ^ n) / (2 * sqrt(13)) where A = - 1 / (2 + sqrt(13)) and B = 1 / (sqrt(13) - 2). (End) •

► [A079291] 0,1,4,25,144,841,4900,28561,166464,970225,5654884,32959081,19209 9600,1119638521,6525731524,38034750625,221682772224,1292061882721,7530688 524100,43892069261881,255821727047184,1491038293021225 ⋆ Squares of Pell n umbers. • a(n) = (r ^ n + (1 / r) ^ n - 2 * (- 1) ^ n) / 8, with r = 3 + sqrt(8). • a(n + 3) = 5 * a(n + 2) + 5 * a(n + 1) - a(n). • a(n) is the rightmost term of M ^ n * [1 0 0] where M is the 3 X 3 matrix [4 4 1 / 2 1 0 / 1 0 0]. a(n + 1) = l eftmost term. E.g., a(6) = 4900, a(5) = 841 since M ^ 5 * [1 0 0] = [4900 2030 8 41]. - _ Gary W. Adamson _ , Oct 31 2004 • a(n) = ((((1 - sqrt(2)) ^ n + (1 + sqrt(2)) ^ n) / 2) ^ 2 + (- 1) ^ (n + 1)) / 2. - Antonio Pane (apane1(AT)s pc.edu), Dec 15 2007 • a(n + 1) = 6 * a(n) - a(n - 1) + 2 * (- 1) ^ n. • a(n + 1) = (1 + (- 1) ^ n) / 2 + 4 * Sum _{ k=1..n } (k * a(n + 1 - k)). (End) •

► [A349540] 1,4,25,145,931,5866,38359,249880,1655035,10968724,73320259,4910 01721,3304488565,22283168350,150744668065,1021597533865,6938921001235,472 02858834100,321640950882475,2194500145215595,1499229709603634 5,102535471 011848230,702004865920831525 ⋆ E.g.f.: exp(x) * (BesselI(0,6 * x) + BesselI(1, 6 * x)). • a(n) = Sum _{ k=0..n } binomial(n,k) * binomial(k,floor(k / 2)) * 3 ^ k. •

► [A072221] 1,4,25,148,865,5044,29401,171364,998785,5821348,33929305,197754 484,1152597601,6717831124,39154389145,228208503748,1330096633345,77523712 96324,45184131144601,263352415571284,1534930362283105,8946229758127348,5 2142448186480985 ⋆ a(n) = 6 * a(n - 1) - a(n - 2) + 2, with a(0)=1, a(1)=4. • a (n) = - 1 / 2 + (3 / 4) * ((3 + sqrt(8)) ^ n + (3 - sqrt(8)) ^ n) for n >= 0. • a (n) = floor((3 / 4) * (3 + sqrt(8)) ^ n) for n > 0. (End) • a(n) = a(- n) for all n in Z. - _ Michael Somos _ , Dec 25 2018 •

► [A055846] 1,4,25,150,900,5400,32400,194400,1166400,6998400,41990400,25194 2400,1511654400,9069926400,54419558400,326517350400,1959104102400,1175462 4614400,7052774768640 0,423166486118400,2538998916710400 ⋆ a(n) = 25 * 6 ^ (n - 2), with a(0)=1 and a(1)=4. • a(n) = 25 * 6 ^ (n - 2), a(0)=1, a(1)=4. a(n) = 6a(n - 1) + ((- 1) ^ n) * binomial(2, 2 - n); g.f.(x)=(1 - x) ^ 2 / (1 - 6x). •

► [A079750] 0,4,25,156,1099,8800,79209,792100,8713111,104557344,1359245485,1 9029436804,285441552075,4567064833216,77640102164689,1397521838964420,26 552914940323999,531058298806480000,11152224247493608 0021 ⋆ Operation coun t to create all permutations of n distinct elements using the "streamlined" versi on of Algorithm L (lexicographic permutation generation) from Knuth's The Ar t of Computer Programming, Vol. 4, chapter 7.2.1.2. Sequence gives number of comparisons required to find j in step L2.2'. • a(3)=0, a(n) = n * a(n - 1) + n f or n >= 4. • a(n) = Sum _{ j=3..n } (n + 1)! / j!. - _ Zerinvary Lajos _ , Oc t 20 2006 •

► [A128419] 1,4,25,168,1181,8524,62609,465616,3495013,26423604,200920985,15 34936440,11771854381,90578698396,698921030945,5406132020128,419052494053 01,325434733291396,2531523208218665,19721766268370248,15384752445550342 1,120160109405303959 6,9395224234956935345 ⋆ Expansion of 8 / (sqrt(1 - 8 * x) * (sqrt(1 - 8 * x) + 4 * x + 7)). • a(n) = Sum _{ k=0..floor(n / 2) } 2 ^ (n - 2k) * C(2n - 2k,n - 2k). •

► [A225137] 4,25,168,1228,9592,78529,664614,5761262,50847534,455065829,4118 207819,37608740621,346064579205,3204855540243,29843276960952,27922484391 1465,2623449162422369,2473936752771428 5,2340576672782875 56,2220873676061 063755 ⋆ Integer nearest to (4 * ((S(n)) ^ (n - 1))), where S(n) = Sum _{ i=0.. 2 } (C(i) * (log(log(A * (B + n ^ (8 / 3))))) ^ (2i)) (see coefficients A, B, C(i) i n comments). • a(n)= round(4 * ((Sum _{ i=0..2 } (C(i) * (log(log(A * (B + n ^ (8 / 3))))) ^ (2i))) ^ (n - 1))). •

► [A229255] 4,25,168,1229,9592,78488,664356,5761311,50857532,455110791,4117 706679,37598394076,345973354409,3204537723387,29847287869987,27931795322 0125,2624541016148480,2474791910628641 4,2340894438164384 14,2220530456953 251916,2111902563108816913 9,2013588097363981 35352,1924434871799161020 53,1843488435994347326719 4,1769942188222877117571 27 ⋆ Integer nearest to (2 ^ (n - 1) + 3 ^ (n - 1)) ^ (2 * b(n)) where b(n) = (C1 * n ^ (Pi) * exp(C2 * n) * cos(C3 * n + C4) + C5) * (C6 * n ^ C7 + Pi / 2) (see coefficients in commen ts). • a(n) = round((2 ^ (n - 1) + 3 ^ (n - 1)) ^ (2 * (C1 * n ^ (Pi) * exp(C2 * n) * cos(C3 * n + C4) + C5) * (C6 * n ^ C7 + Pi / 2))). •

► [A227693] 4,25,168,1229,9595,78527,664408,5759130,50833725,455019102,4118 498801,37616575907,346165453783,3205869110911,29851888456753,27928633421 5803,2623780688311969,2473995347753316 6,2340411088303443 56,2220562531262 307905,2112461201646074538 3,2014484825565320266 84,1925296277838503159 17,1843783269678959015711,1769012809098200320144 22 ⋆ Integer nearest to (F [2n + 1](S(n))) ^ 2, where F[2n + 1](x) are Fibonacci polynomials of odd indice

s [2n + 1] and S(n) = Sum _{ i=0..2 } (C(i) * (log(log(A * (B + n ^ 2)))) ^ (2i)) (see coefficients A, B, C(i) in comments). • a(n) = round((F[2n + 1](Sum _{ i=0..2 } (C(i) * (log(log(A * (B + n ^ 2)))) ^ (2i)))) ^ 2). •

▶ [A081068] 1,4,25,169,1156,7921,54289,372100,2550409,17480761,119814916,821223649,5628750625,38580030724,264431464441,1812440220361,12422650078084,85146110326225,583600122205489,4000054745112196,27416783093579881 ⋆ a(n) = (Lucas(4 * n + 2) + 2) / 5, or Fibonacci(2 * n + 1) ^ 2, or A081067(n) / 5. • a(n) = 8 * a(n - 1) - 8 * a(n - 2) + a(n - 3). • a(n) = (2 / 5) + (3 / 10) *{ [(7 / 2) - (3 / 2) * sqrt(5)] ^ n + [(7 / 2) + (3 / 2) * sqrt(5)] ^ n }+ (1 / 10) * sqrt (5) *{ [(7 / 2) + (3 / 2) * sqrt(5)] ^ n - [(7 / 2) - (3 / 2) * sqrt(5)] ^ n } , with n>=0. - _ Paolo P. Lava _ , Dec 01 2008 • a(n) = Fibonacci(2 * n) * Fibonacci(2 * n + 2) + 1. - _ Gary Detlefs _ , Apr 01 2012 •

▶ [A163072] 4,25,170,1200,8600,62000,448000,3240000,23440000,169600000,1227200000,8880000000,64256000000,464960000000,3364480000000,24345600000000,176166400000000,1274752000000000,9224192000000000,66746880000000000 ⋆ a(n) = ((4 + sqrt(5)) * (5 + sqrt(5)) ^ n + (4 - sqrt(5)) * (5 - sqrt(5)) ^ n) / 2. • a(n) = 10 * a(n - 1) - 20 * a(n - 2) for n > 1; a(0) = 4, a(1) = 25. •

▶ [A034494] 1,4,25,172,1201,8404,58825,411772,2882401,20176804,141237625,988663372,6920643601,48444505204,339111536425,2373780754972,16616465284801,116315256993604,814206798955225,5699447592686572 ⋆ a(n) = (7 ^ n + 1) / 2. • a(n) = 7a(n - 1) - 3, a(0) = 1. • a(n) = 8 * a(n - 1) - 7 * a(n - 2), a(0)=1, a(1)=4. [_ Philippe Deléham _ , Nov 15 2008] • a(n) = ((4 + sqrt(9)) ^ n + (4 - sqrt(9)) ^ n) / 2. [Al Hakanson (hawkuu(AT)gmail.com), Dec 08 2008] •

▶ [A006348] 0,1,4,25,174,1393,12536,125361,1378970,16547641,215119332,3011670649,45175059734,722800955745,12287616247664,221177092457953,4202364756701106,84047295134022121,1764993197814464540,38829850351918219881,893086558094119057262 ⋆ a(n) = (n + 2) * a(n - 1) + (- 1) ^ n. • a(n) = (n + 1)(a(n - 1) + a(n - 2)). - _ Gary Detlefs _ , Dec 17 2009 • a(n) = Gamma(n + 3, - 1) / e - (n + 2)! / 3. •

▶ [A362206] 1,1,4,25,181,1399,11212,91936,765805,6452449,54841438,469306102,4038193870,34903997029,302828905471,2635745917759,23003622046900,201241080558652,1764149626139119,15493365042402772,136288275628625410,1200600389345625754 ⋆ Expansion of 1 / (1 - x / (1 - 9 * x) ^ (1 / 3)). • a(n) = Sum _{ k=0..n } (- 9) ^ k * binomial(- (n - k) / 3,k) = Sum _{ k=0..n } 9 ^ (n - k) * binomial(n - 2 * k / 3 - 1,n - k). •

▶ [A364759] 1,1,4,25,182,1447,12175,106575,960579,8854622,83089537,791063172,7622317663,74191096721,728389554533,7204640725610,71727367291455,718195853746770,7227785937663908,73069500402699226,741712341691454837,7556704348506425398 ⋆ G.f. satisfies A(x) = 1 + x * A(x) ^ 5 / (1 + x * A(x)). • a(n) = (1 / n) * Sum _{ k=0..n - 1 } (- 1) ^ k * binomial(n,k) * binomial(5 * n - 4 * k,n - 1 - k) for n > 0. •

▶ [A246539] 1,4,25,184,1489,12796,114241,1047568,9796057,92989876,893250193,8663461000,84697699297,833616713164,8251811812465,82088310375904,820140832103881,8225191769615620,82768982623011841,835404195075128536,845474391130733685 7,857759613075562255 96,872156269935215409577 ⋆ G.f.: Sum _{ n >=0 } 3 ^ n * x ^ n / (1 - x) ^ (2 * n + 1) * [Sum _{ k=0..n } C(n,k) ^ 2 * x ^ k] ^ 2. • a(n) = Sum _{ k=0..[n / 2] } 3 ^ k * Sum _{ j=0..n - 2 * k } C(n - k, k + j) ^ 2 * C(k + j, j) ^ 2 * 3 ^ j. •

▶ [A369479] 1,4,25,185,1503,12958,116410,1077872,10213954,98574454,965545161,9574235477,95920415338,969467658540,9872949735243,101211280459929,1043597450013094,10816134194658976,112617367970103163,1177413807406659659,1235575391529122959 6 ⋆ Expansion of (1 / x) * Series _ Reversion(x / ((1 + x) * (1 + x + x ^ 2) ^ 3)). • a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 2) } binomial(3 * n + 3,k) * binomial(4 * n - k + 4,n - 2 * k). •

▶ [A054368] 1,1,1,4,25,187,1772,17880,191967,2141232,24640989,290610414,3498042924,42831369777,532148952720,6695274478834,85166167050949,1093843440166718,14169564589464986,184957445502335682,2430876839834279341,32147041999684759275,427520786795342624432 ⋆ Number of unlabeled 6 - gonal cacti having n polygons. • a(n) = ((Sum _{ d|n } phi(n / d) * binomial(6 * d, d)) + (Sum _{ d|gcd(n - 1, 6) } phi(d) * binomial(6 * n / d, (n - 1) / d))) / (6 * n) - binomial(6 * n, n) / (5 * n + 1) for n > 0. - _ Andrew Howroyd _ , May 04 2018 •

▶ [A365764] 1,4,25,188,1563,13840,127972,1221260,11938471,118936100,1203155633,12325599632,127611357300,1333153669632,14035828918560,148773617605036,1586305110768863,17002975960876300,183102052226442475,1980078493171083292,21493846031259095539 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 - x) ^ 3 / (1 + x)). • a(n) = (1 / (n + 1)) * Sum _{ k=0..n } binomial(n + 1, k) * binomial(4 * n - k + 2,n - k) = (1 / (n + 1)) * Sum _{ k=0..n } binomial(3 * n + k + 2,k) * binomial(n + 1,n - k). •

▶ [A064063] 1,1,4,25,190,1606,14506,137089,1338790,13403950,136846144,1419257434,14911016596,158363649640,1697452010230,18338919413425,199496184219910,2183299541440150,24021874198331080,265559590979820910,2948253066186839140,32857382497018933060 ⋆ Generalized Catalan numbers C(3; n). • a(n) = Sum _{ m=0..n - 1 } (n - m) * binomial(n - 1 + m, m) * (3 ^ m) / n. • a(n) = upper left term in M ^ n, M = the infinite square production matrix: • a(n) = hypergeometric([1 - n, n], [- n], 3) for n>0. - _ Peter Luschny _ , Nov 30 2014 •

▶ [A199494] 4,25,193,1537,12289,98305,786433,6291457,50331649,402653185,3221225473,25769803777,206158430209,1649267441665,13194139533313,105553116266497,844424930131969,6755399441055745,54043195528445953 ⋆ a(n) = 3 * 8 ^ n + 1. • a(n) = 8 * a(n - 1) - 7. • a(n) = 9 * a(n - 1) - 8 * a(n - 2). •

▶ [A051500] 1,4,25,196,1681,14884,133225,1196836,10764961,96864964,871725625,7845353476,70607649841,635467254244,5719200505225,51472790198116,463255068736321,4169295489486724,37523659017960025,337712929999378756,3039416366507624401 ⋆ a(n) = (3 ^ n + 1) ^ 2 / 4. • a(n) = 13 * a(n - 1) - 39 * a(n - 2) + 27 * a(n - 3) for n > 2. •

▶ [A001246] 1,1,4,25,196,1764,17424,184041,2044900,23639044,282105616,3455793796,43268992144,551900410000,7152629313600,93990019574025,1250164827828900,16807771574144100,228138727737690000,3123219182728976100,43087676888260976400,598598221893939680400,8369059450146650049600 ⋆ Squares of Catalan numbers. • a(n) = 1 / (2 * n + 1) * f(2 * n) / (f(n) * f(n)), where f(n) = n! * (n + 1)!. Cf. Catalan(n) = 1 / (n + 1) * (2 * n)! / (n! * n!). •

▶ [A182953] 1,1,4,25,197,1797,18178,198937,2318858,28487593,366129764,4896068759,67843403960,971032668429,14319735032679,217136949146091,3379973833321141,53936100582832901,881318215466710693,14731508761600217914 ⋆ G.f. satisfies: A(x) = 1 + x * A(x) * A(x * A(x)) ^ 3. • a(n,m) = Sum _{ k=0..n } m * C(n + m,k) / (n + m) * a(n - k,3k). •

▶ [A337167] 1,4,25,199,1795,17422,177463,1870960,20241403,223438852,2506596547,28494103183,327507800725,3799735202218,44440058006593,523388751658831,6201937444137619,73888034816382820,884517283667145259,10634234680321209373,128347834921058404249 ⋆ a(n) = 1 + 3 * Sum _{ k=0..n - 1 } a(k) * a(n - k - 1). • a(n) = Sum _{ k=0..n } binomial(n,k) * 3 ^ k * Catalan(k). • a(n) = 2F1([1 / 2, - n], [2], - 12), where 2F1 is the hypergeometric function. •

▶ [A347585] 1,1,4,25,201,1773,16751,165083,1681341,17562238,187255089,2030853040,22344663465,248900855994,2802367768848,31848644363490,364960085991118,4212964989100093,48953036382441044,572178690287957687,6723501191850208483,79388206896842420091 ⋆ Number of partitions of n ^ 2 into n or more parts. • a(n) = [x ^ (n ^ 2)] Sum _{ k>=n } x ^ k / Product _{ j=1..k } (1 - x ^ j). •

▶ [A120955] 1,1,1,4,25,206,2060,23920,314065,4582300,73393490,1278859176,24073541260,486806278752,10525038917720,242318610557760,5919811842140945,152974724047702626,4169576527021400852 ⋆ G.f. A(x) satisfies: Series _ Reversion(x / A(x)) / x = 2 * A(x) - (1 + x). • a(n) = [x ^ n] A(x) ^ n / (2 * n) for n>1; i.e., a(n) equals the coefficient of x ^ n in A(x) ^ n divided by 2 * n. •

▶ [A046963] 1,4,26,29,51,73,95,117,139,161,183,538,893,1248,1603,1958,2313,2668,3023,3378,3733,4088,4443,4798,5153 ⋆ Bessel function |Y _ 0(n)| is a monotonically decreasing positive sequence. • a(n) = 2 * a(n - 1) - a(n - 2) for n > 11. •

▶ [A022386] 4,26,30,56,86,142,228,370,598,968,1566,2534,4100,6634,10734,17368,28102,45470,73572,119042,192614,311656,504270,815926,1320196 ⋆ Fibonacci sequence beginning 4, 26. • a(n) = 4 * Fibonacci(n + 2) + 18 * Fibonacci(n) = 4 * Fibonacci(n - 1) + 26 * Fibonacci(n). - _ G. C. Greubel _ , Mar 02 2018 •

▶ [A273981] 1,4,26,56,98,152,218,296,386,488,602,728,866,1016,1178,1352,1538,1736,1946,2168,2402,2648,2906,3176,3458 ⋆ Erroneous version of A005897. • a(n) = n ^ 3 - (n - 2) ^ 3 for n > 2. - _ Joerg Arndt _ , Jun 06 2016 •

▶ [A142962] 4,26,81,184,350,594,931,1376,1944,2650,3509,4536,5746,7154,8775,10624,12716,15066,17689,20600,23814,27346,31211,35424,40000 ⋆ Scaled convolution of (n ^ 3) * A000984(n) with A000984(n). • a(n) = n ^ 2 * (3 + 5 * n) / 2. • a(n) = (2 ^ 3) * S(3,n) / 4 ^ n with the convolution S(3,n) defined above. •

▶ [A172123] 0,4,26,92,240,520,994,1736,2832,4380,6490,9284,12896,17472,23170,30160,38624,48756,60762,74860,91280,110264,132066,156952,185200 ⋆ Number of ways to place 2 nonattacking bishops on an n X n board. • a(n) = n * (n - 1) * (3 * n ^ 2 - n + 2) / 6. • a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Vincenzo Librandi _ , Apr 29 2013 •

▶ [A101166] 0,4,26,94,251,555,1079,1911,3154,4926,7360,10604,14821,20189,26901,35165,45204,57256,71574,88426,108095,130879,157091,187059,221126 ⋆ a(n) = (15 * n ^ 4 + 22 * n ^ 3 + 45 * n ^ 2 + 14 * n) / 24. • a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5), with a(0)=0, a(1)=4, a(2)=26, a(3)=94, a(4)=251. - _ Harvey P. Dale _ , Oct 12 2012 •

▶ [A267847] 1,4,26,122,506,2042,8186,32762,131066,524282,2097146,8388602,33554426,134217722,536870906,2147483642,8589934586,34359738362,137438953466,549755813882,2199023255546,8796093022202,35184372088826,140737488355322,562949953421306 ⋆ Decimal representation of the n - th iteration of the "Rule 227" elementary cellular automaton starting with a single ON (black) cell. • a(n) = 5 * a(n - 1) - 4 * a(n - 2) for n>3. •

▶ [A359962] 1,4,26,132,623,2632,10500,39384,141659,490100,1644186,5366436,171133433,53454528,163963312,494786352,1471423866,4318092136,12520027756,35901819336,101909674398,286575107424,798886300056,2209115439664,6062818714752 ⋆ Number of multisets of n nonempty words with a total of 2n letters over binary alphabet. • a(n) = [x ^ (2 * n) * y ^ n] Product _{ j>=1 } 1 / (1 - y * x ^ j) ^ (2 ^ j). •

▶ [A100236] 1,4,26,139,726,3774,19601,101784,528526,2744419,14250626,73997554,384238401,1995189564,10360186226,53796120699,279340789726,1450500069334,7531841136401,39109705751344,203080369893126 ⋆ Main diagonal of triangle A100235. • a(n) = 5 * a(n - 1) + a(n - 2) + 5 for n>1, with a(0)=1, a(1)=4. G.f.: Sum _{ n>=1 } a(n) * x ^ n / n = log((1 - x) / (1 - 5 * x - x ^ 2)). •

▶ [A229278] 0,4,26,144,736,3584,16896,77824,352256,1572864,6946816,30408704,132120576,570425344,2449473536,10468982784,44560285696,188978561024,798863917056,3367254360064,14156212207616,59373627899904,248489627877376,1037938976620544 ⋆ Number of ascending runs in { 1,...,4 }^n. • a(n) = 2 ^ (2 * n - 3) * (5 * n + 3) for n>0, a(0) = 0. •

▶ [A180226] 0,1,4,26,144,836,4784,27496,157824,906256,5203264,29875616,171535104,984896576,5654937344,32468715136,186424233984,1070384087296,6145778689024,35286955629056,202605609406464,1163291993916416,6679224069730304,38349816218085376 ⋆ a(n) = 4 * a(n - 1) + 10 * a(n - 2), with a(1)=0 and a(2)=1. • a(n) = ((2 + sqrt(14)) ^ (n - 1) - (2 - sqrt(14)) ^ (n - 1)) / (2 * sqrt(14)). - _ Rolf Pleisch _ , May 14 2011 •

▶ [A092167] 4,26,154,926,5554,33326,199954,1199726,7198354,43190126,259140754,1554844526,9329067154,55974402926,335846417554,2015078505326,12090471031954,72542826191726,435256957150354,2611541742902126 ⋆ Let M = 2 X 2 matrix [1 2 / 5 4]; a(n) = (2,2) entry of M ^ n. • a(n) = (5 * 6 ^ n + 2 * (- 1) ^ n) / 7. • a(n) = 5 * a(n - 1) + 6 * a(n - 2). •

▶ [A145840] 1,4,26,164,1031,6480,40728,255984,1608914,10112368,63558392,399478064,2510804924,15780945024,99186608832,623409013632,3918258753416,24627092844352,154786536605216,972866430709568,6114673231661936,38432026791933696,241553493927992448 ⋆ Number of 4 - compositions of n. • a(n + 4) = 8 * a(n + 3) - 12 * a(n + 2) + 8 * a(n + 1) - 2 * a(n). • a(n) = sum(k>=0, C(n + 4 * k - 1,n) / 2 ^ (k + 1)). - _ Vaclav Kotesovec _ , Dec 31 2013 •

▶ [A199490] 4,26,180,1258,8804,61626,431380,3019658,21137604,147963226,1035742580,7250198058,50751386404,355259704826,2486817933780,17407725536458,1

21854078755204,852978551286426,5970849859004980,41795949013034858 ⋆ (11 * 7 ^ n + 1) / 3. • a(n) = 7 * a(n - 1) - 2. • a(n) = 8 * a(n - 1) - 7 * a(n - 2). •

▶ [A084134] 1,4,26,184,1316,9424,67496,483424,3462416,24798784,177615776,1272133504,9111373376,65258185984,467397247616,3347628865024,23976647434496,171727406285824,1229959365679616,8809310487721984 ⋆ a(n) = 8 * a(n - 1) - 6 * a(n - 2), a(0) = 1, a(1) = 4. • a(n) = (4 + sqrt(10)) ^ n / 2 + (4 - sqrt(10)) ^ n / 2. •

▶ [A098443] 1,4,26,184,1366,10424,80996,637424,5064166,40528984,326251276,2638751504,21426682876,174563719984,1426219233416,11681133293024,95877105146246,788433553532824,6494463369141116,53576199709855184 ⋆ Expansion of 1 / sqrt(1 - 8x - 4x ^ 2). • a(n) = Sum _{ k=0..floor(n / 2) } binomial(n, k) * binomial(2(n - k), n) * 2 ^ (n - 2k). •

▶ [A137964] 1,1,4,26,184,1451,12020,103734,921132,8364877,77317704,725029730,6880482816,65955731874,637703938860,6211709281162,60900108419200,600486291654444,5950951929703520,59242473406384472,592166933647780576 ⋆ G.f. satisfies A(x) = 1 + x * (1 + x * A(x) ^ 5) ^ 4. • a(n) = Sum _{ k=0..n - 1 } C(4 * (n - k),k) / (n - k) * C(5 * k,n - k - 1) for n>0 with a(0)=1. - _ Paul D. Hanna _ , Jun 16 2009 •

▶ [A371517] 1,4,26,188,1459,11892,100444,871528,7722557,69590628,635807180,5876094308,54836925779,516029817620,4891147100886,46653935716492,447490869463145,4313492172957396,41763413498670702,405968522259130636,3960526930400038404 ⋆ G.f. A(x) satisfies A(x) = (1 + x * A(x) / (1 - x)) ^ 4. • a(n) = 4 * Sum _{ k=0..n } binomial(n - 1,n - k) * binomial(4 * k + 3,k) / (3 * k + 4). •

▶ [A114496] 1,4,26,190,1462,11584,93536,765314,6323270,52638760,440815036,3709445084,31340292076,265683004240,2258793820988,19251776923210,164440378882630,1407266585304760,12063701803046300,103571977632247076 ⋆ a(n) = Sum of binomial(n,k) * binomial(2n + k,k) over all k. • a(n) = Sum _{ k=0..n } (binomial(n,k) * binomial(2n + k,k)). • a(n) = Sum _{ i = 0..n } 2 ^ (n - i) * binomial(2 * n,i) * binomial(n,i). •

▶ [A349361] 1,1,4,26,194,1581,13625,122120,1126780,10631460,102104845,994855179,9809872626,97710157154,981636609906,9935473707279,101214412755647,1036991125300748,10678412226507032,110459290208905008,1147261657267290037 ⋆ G.f. A(x) satisfies: A(x) = 1 + x * A(x) ^ 5 / (1 + x). • a(n) = Sum _{ k=0..n } (- 1) ^ (n - k) * binomial(n - 1,k - 1) * binomial(5 * k,k) / (4 * k + 1). • a(n) = (- 1) ^ (n + 1) * F([6 / 5, 7 / 5, 8 / 5, 9 / 5, 1 - n], [3 / 2, 7 / 4, 2, 9 / 4], 5 ^ 5 / 2 ^ 8), where F is the generalized hypergeometric function. - _ Stefano Spezia _ , Nov 15 2021 •

▶ [A246509] 1,4,26,200,1694,15224,141972,1359120,13264246,131384536,1316769196,13323636208,135885868780,1395157192624,14406117404584,149489132177440,1557898906160806,16297193704008856,171058624529373116,1800860588158214960,19010179617892702404,201164103801453466896 ⋆ G.f.: Sum _{ n>=0 } x ^ n / (1 - 3 * x) ^ (2 * n + 1) * [Sum _{ k=0..n } C(n,k) ^ 2 * 3 ^ k * x ^ k] * [Sum _{ k=0..n } C(n,k) ^ 2 * 4 ^ k * x ^ k]. • a(n) = Sum _{ k=0..[n / 2] } 4 ^ k * Sum _{ j=0..n - 2 * k } C(n - k, k + j) ^ 2 * C(k + j, j) ^ 2 * 3 ^ j. •

▶ [A368976] 1,4,26,202,1729,15730,149249,1460300,14627340,149254996,1545959720,16212144520,171789072036,1836515799464,19783708310984,214539449634588,2340148164406642,25658221358522584,282627226176802000,3126081536554547488,34706443838025828198 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 - x) ^ 2 * (1 - x + x ^ 3) ^ 2). • a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 3) } (- 1) ^ k * binomial(2 * n + k + 1,k) * binomial(5 * n - 2 * k + 3,n - 3 * k). •

▶ [A369124] 1,4,26,204,1770,16352,157696,1569096,15988652,165998624,1749696208,18673883696,201394693864,2191421381632,24028822589440,265238416143584,2944999336948944,32869042668479424,368551132961138784,4149643380825661824,46897527236429235520 ⋆ Expansion of (1 / x) * Series _ Reversion(x * ((1 - x) ^ 4 + x ^ 4)). • a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 4) } (- 1) ^ k * binomial(n + k,k) * binomial(5 * n + 3,n - 4 * k). •

▶ [A118971] 1,4,26,204,1771,16380,158224,1577532,16112057,167710664,1772645420,18974357220,205263418941,2240623268512,24648785802336,272994644359580,3041495503591365,34064252968167180,383302465665133014 ⋆ a(n) = binomial(5 * n + 3,n) / (n + 1). • a(n) = (4 / 5) * binomial(5 * (n + 1),n + 1) / (5 * (n + 1) - 1). - _ Bruno Berselli _ , Jan 17 2014 •

▶ [A369102] 1,4,26,204,1772,16408,158752,1585968,16235472,169423232,1795611168,19275231872,209140483328,2289981517312,25271472702464,280795784911616,3138701648319744,35270318924758016,398215386792574464,4515067063939210240,51388662166213954560 ⋆ Expansion of (1 / x) * Series _ Reversion(x * ((1 - x) ^ 4 - x ^ 4)). • a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 4) } binomial(n + k,k) * binomial(5 * n + 3,n - 4 * k). •

▶ [A368968] 1,4,26,206,1813,17030,167229,1695920,17624932,186722580,2009077416,21894695420,241170873096,2680761546396,30032284769832,338744791093796,3843699928567438,43844993166845920,502497843180361288,5783367971991398760,66815895492710846218 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 - x) ^ 2 * (1 - x - x ^ 3) ^ 2). • a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 3) } binomial(2 * n + k + 1,k) * binomial(5 * n - 2 * k + 3,n - 3 * k). •

▶ [A369511] 1,4,26,206,1815,17082,168159,1710234,17828973,189504744,2045971440,22374997320,247344411792,2759394009008,31027178033064,351270123392892,4000793799046578,45809545263096832,527010005799822844,6088666065809281348,70612995488695876634 ⋆ Expansion of (1 / x) * Series _ Reversion(x * ((1 - x) ^ 2 - x ^ 3) ^ 2). • a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 3) } binomial(2 * n + k + 1,k) * binomial(5 * n - k + 3,n - 3 * k). •

▶ [A363363] 0,0,0,0,0,4,26,209,1513,12145 ⋆ Number of connected unlabeled n - node graphs G that are not weakly pancyclic, i.e., there exists an integer k such that G contains a cycle that is longer than k and a cycle that is shorter than k but no cycle of length k. • a(n) = 0 for n <= 5, because all graphs on at most 5 nodes are weakly pancyclic. •

▶ [A371539] 1,4,26,224,2171,22600,246754,2787856,32318849,382266056,4594893684,55966343520,689245218880,8568130064280,107371481352870,1354944741505580,17203182641794020,219604431213873060,2816826935574781930,36286757255072528360,469266638574298431490 ⋆ G.f. A(x) satisfies A(x) = (1 + x * A(x) ^ (3 / 2) / (1 + x)) ^ 4. • a(n) = 4 * Sum _{ k=0..n } (- 1) ^ (n - k) * binomial(n - 1,n - k) * binomial(6 * k + 4,k) / (6 * k + 4). •

▶ [A078111] 4,27,64,115,182,263,359,470,596,736,891,1061,1246,1445,1660,1889,2132,2391,2664,2953,3256,3573,3906,4253,4615 ⋆ a(n) = floor((n + 2) ^ (n + 2) / n ^ n). • a(n) - e ^ 2(n + 1) ^ 2 is bounded. Conjecture: there's a constant c = 2.462... such that a(n) = floor(e ^ 2 * (n + 1) ^ 2 - c). •

▶ [A180576] 4,27,69,148,255,417,616,888,1206,1615,2079,2652,3289,4053,4890,5872,6936,8163,9481,10980,12579,14377,16284,18408,20650 ⋆ Wiener index of the n - web graph. • a(2n) = n * (9 * n ^ 2 + 20 * n - 2); a(2n + 1) = (2 * n + 1) * (9 * n ^ 2 + 29 * n + 8) / 2. • a(n) = n * (2 * n * (9 * n + 40) + 9 * (- 1) ^ n - 25) / 16. - _ Bruno Berselli _ , Oct 31 2012 •

▶ [A158186] 1,4,27,70,133,216,319,442,585,748,931,1134,1357,1600,1863,2146,2449,2772,3115,3478,3861,4264,4687,5130,5593 ⋆ a(n) = 10 * n ^ 2 - 7 * n + 1. • a(n) = (2 * n - 1) * (5 * n - 1). • a(n) = a(n - 1) + 20 * n - 17 (with a(0)=1). - _ Vincenzo Librandi _ , Dec 03 2010 •

▶ [A092364] 0,4,27,96,250,540,1029,1792,2916,4500,6655,9504,13182,17836,23625,30720,39304,49572,61731,76000,92610,111804,133837,158976,187500 ⋆ a(n) = n ^ 2 * binomial(n,2). • a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Eric W. Weisstein _ , Sep 14 2017 •

▶ [A063262] 4,27,104,305,756,1667,3368,6354,11340,19327,31680,50219,77324,116055,170288,244868,345780,480339,657400,887589,1183556,1560251,2035224,2628950,3365180 ⋆ Eighth column (k=7) of sextinomial array A063260. • a(n) = 4 * C(n + 2,2) + 15 * C(n + 2,3) + 20 * C(n + 2,4) + 15 * C(n + 2,5) + 6 * C(n + 2,6) + C(n + 2,7) (see comment in A213888). - _ Vladimir Shevelev _ and _ Peter J. C. Moses _ , Jun 22 2012 •

▶ [A267685] 1,4,27,119,495,2015,8127,32639,130815,523775,2096127,8386559,33550335,134209535,536854527,2147450879,8589869055,34359607295,137438691327,549755289599,2199022206975,8796090925055,35184367894527,140737479966719,562949936644095 ⋆ Decimal representation of the n - th iteration of the "Rule 203" elementary cellular automaton starting with a single ON (black) cell. • a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3) for n>4. • a(n) = 2 * 4 ^ n - 2 ^ n - 1 for n > 1. - _ Karl V. Keller, Jr. _ , Jun 07 2022 •

▶ [A190584] 4,27,119,497,2023,8149,32692,130938,524050,2096730,8387859,33553102,134215364,536866711,2147476180,8589921317,34359714770,137438911520,549755739309,2199023122967,8796092786503,35184371669802,140737487610388,562949952096975 ⋆ Bisection of A013697. • a(n) = floor(1 / (zeta(2n + 1) - 1)). •

▶ [A268598] 0,0,0,0,0,4,27,120,440,1440,4368,12544,34560,92160,239360,608256,1517568,3727360,9031680,21626880,51249152,120324096,280166400,647495680,1486356480 ⋆ Expansion of x ^ 5 * (4 - 5 * x) / (1 - 2 * x) ^ 4. • a(n) = 2 ^ (n - 7) * (n - 4) * (n - 3) * (n + 3) for n>2. • a(n) = 8 * a(n - 1) - 24 * a(n - 2) + 32 * a(n - 3) - 16 * a(n - 4) for n>3. (End) •

▶ [A267886] 1,4,27,127,511,2047,8191,32767,131071,524287,2097151,8388607,33554431,134217727,536870911,2147483647,8589934591,34359738367,137438953471,549755813887,2199023255551,8796093022207,35184372088831,140737488355327,562949953421311 ⋆ Decimal representation of the n - th iteration of the "Rule 235" elementary cellular automaton starting with a single ON (black) cell. • a(n) = 5 * a(n - 1) - 4 * a(n - 2) for n>4. •

▶ [A015534] 0,1,4,27,152,905,5292,31123,182704,1073169,6302420,37014539,217384776,1276699033,7498028668,44035804035,258621531488,1518879970337,8920356727716,52389106584571,307680350343160 ⋆ Expansion of x / (1 - 4 * x - 11 * x ^ 2). • a(n) = 4 * a(n - 1) + 11 * a(n - 2). • a(n) = (1 / 30) * (2 + sqrt(15)) ^ n * sqrt(15) - (1 / 30) * sqrt(15) * (2 - sqrt(15)) ^ n, with n >= 0. - _ Paolo P. Lava _ , Aug 06 2008 •

▶ [A010910] 4,27,182,1227,8272,55767,375962,2534607,17087452,115197747,776623742,5235731187,35297505832,237963690927,1604269674722,10815436502967,72913967391412,491560986863307,3313935758136902,22341419483137947,150618195689512192,1015416271552762887 ⋆ Pisot sequence E(4,27): a(n) = floor(a(n - 1) ^ 2 / a(n - 2) + 1 / 2) for n>1, a(0)=4, a(1)=27. • a(n) = (((3 - sqrt(14)) ^ n * (- 15 + 4 * sqrt(14)) + (3 + sqrt(14)) ^ n * (15 + 4 * sqrt(14)))) / (2 * sqrt(14)). • a(n) = 6 * a(n - 1) + 5 * a(n - 2) for n>1. •

▶ [A164311] 4,27,192,1413,10620,80811,619272,4764501,36738036,283627899,2191179600,16934434533,130904287596,1012015111563,7824339848088,60495579495477,467743738958820,3616570744155099,27963305544220128,216212831973523269 ⋆ a(n) = 12 * a(n - 1) - 33 * a(n - 2) for n > 1; a(0) = 4, a(1) = 27. • a(n) = ((4 + sqrt(3)) * (6 + sqrt(3)) ^ n + (4 - sqrt(3)) * (6 - sqrt(3)) ^ n) / 2. •

▶ [A026005] 1,4,27,208,1700,14364,123970,1085760,9612108,85795600,770755843,6960408624,63127818572,574609830760,5246348656500,48027225765120,440671237120764,4051508174260272,37315784743418332 ⋆ a(n) = T(4 * n,n), where T = Catalan triangle (A008315). • a(n) = (2n + 2) / (3n + 2) * C(4n + 1, n). - _ Ralf Stephan _ , Apr 30 2004 • a(n) = Sum _{ k=0..n } ((n + k + 1) * binomial(n + k,k) * binomial(3 * n - k,n - k)) / (2 * n + 1). - _ Vladimir Kruchinin _ , Dec 02 2016 •

▶ [A371786] 1,4,27,209,1716,14553,125971,1105885,9809019,87691592,788832045,7131655908,64743390321,589808771881,5389066722654,49365637128655,453212161425716,4168951499299185,38415242186255419,354527945536409116,3276414018301664025 ⋆ a(n) = Sum _{ k=0..floor(n / 2) } (- 1) ^ k * binomial(4 * n - k,n - 2 * k). • a(n) = [x ^ n] 1 / ((1 - x + x ^ 2) * (1 - x) ^ (3 * n)). •

▶ [A190738] 1,4,27,212,1785,15630,140287,1280592,11833389,110360150,1036670272,9794291556,92972640761,886023463122,8471878678545,81236546627920,780898417097733,7522708492892214,72607180401922894,701969331508141900,6796919869909393140 ⋆ Central coefficients of the Riordan matrix A104259. • a(n) = sum(k=0..n, binomial(2 * n,n + k) * binomial(n + 2 * k,k) * (n + 1) / (n + k + 1)). •

▶ [A361717] 0,1,4,27,216,1875,17088,160867,1549936,15195843,151017780,1517232189,15379549056,157058738343,1614039427224,16676755365555,173118505001952,1804500885273123,18877476988765404,198120856336103017,2085303730716475960 ⋆ a(n) = Sum _{ k = 0..n - 1 } binomial(n - 1,k) ^ 2 * binomial(n + k,k). • a(n) = hypergeom([1 + n, 1 - n, 1 - n], [1, 1], 1) for n >= 1. •

▶ [A275607] 1,4,27,216,1890,17496,168399,1667952,16888014,173997720,1818276174,19225409616,205299909828,2210922105840,23984556773175,261854925711840,2874948871877910,31722346066169880,351589335566716170,3912422681494285

200,436946478565066306204895971722555152896 80 ⋆ a(n) = 2 * 12 ^ n * Gamma(n + 1 / 2) * (n + 1) / (sqrt(Pi) * Gamma(n + 3)). ● a(n) = 2 * 3 ^ n * binomial(2n + 1, n - 1) * (n + 1) / (2n ^ 2 + n). - _ Charles R Greathouse IV _ , Nov 14 2016 ●

▶ [A365753] 1,4,27,220,1984,19064,191325,1981932,21031965,227463808,2498039219,27782561352,312281382836,3541879743840,40484779373060,465888833819532,5393215780225983,62761359573224612,733784067570047400,8615217370731224160,101533102164551821896 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 + x) * (1 - x) ^ 5). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..n } (- 1) ^ k * binomial(n + k,k) * binomial(6 * n - k + 4,n - k). ●

▶ [A354588] 1,4,27,226,2116,21218,222851,2420134,26954622,306203536,3534170486,41326973520,488562349730,5829471835390,70112478797987,849110215237094,10345827793291654,126734013316914248,1559884942820510474,19281814963272771308,239263099541276559360,2979328903819471935332 ⋆ Number of marked chord diagrams (linear words in which each letter appears twice) with n chords, whose intersection graph is connected and distance - hereditary. ● a(n) = (1 / (n + 1)) * Sum _{ k=0..n } binomial(n + k, n) * binomial(2 * (n + 1) + k, n - k) * 2 ^ k. ●

▶ [A161120] 0,1,4,27,240,2625,34020,509355,8648640,164189025,3445942500,79222218075,1979900722800,53443570205025,1549547301802500,48028060502296875,1584712538529120000,55458748565165570625 ⋆ Number of cycles with entries of opposite parities in all fixed - point - free involutions of { 1,2,...,2n } . ● a(n) =n ^ 2 * (2n - 3)!! ●

▶ [A183430] 4,27,244,2187,19684,177147,1594324,14348907,129140164,1162261467,10460353204,94143178827,847288609444,7625597484987,68630377364884,617673396283947,5559060566555524,50031545098999707,450283905890997364 ⋆ One third the number of n X 2 0..3 arrays with no element equal to its row sum plus its column sum mod 4. ● a(n) = 9 ^ n / 3 for n even. ● a(n) = (6 + 2 * 9 ^ n) / 6 for n odd. ●

▶ [A085001] 4,28,70,130,208,304,418,550,700,868,1054,1258,1480,1720,1978,2254,2548,2860,3190,3538,3904,4288,4690,5110,5548 ⋆ a(n) = (3 * n + 1) * (3 * n + 4). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Jul 08 2012 ●

▶ [A153784] 0,4,28,72,136,220,324,448,592,756,940,1144,1368,1612,1876,2160,2464,2788,3132,3496,3880,4284,4708,5152,5616 ⋆ 4 times heptagonal numbers: 2n(5 n - 3). ● a(n)=20 * n + a(n - 1) - 16 (with a(0)=0) - _ Vincenzo Librandi _ , Aug 03 2010 ● a(0)=0, a(1)=4, a(2)=28, a(n)=3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Mar 19 2015 ●

▶ [A294315] 0,4,28,90,208,400,684,1078,1600,2268,3100,4114,5328,6760,8428,10350,12544,15028,17820,20938,24400,28224,32428,37030,42048 ⋆ a(n) = 3 * n ^ 3 + n ^ 2. ● a(n) = 3 * n ^ 3 + n ^ 2. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>3. ●

▶ [A187452] 0,4,28,96,244,516,968,1664,2680,4100,6020,8544,11788,15876,20944,27136,34608,43524,54060,66400,80740,97284,116248,137856,162344 ⋆ Number of right isosceles triangles that can be formed from the n ^ 2 points of n X n grid of points (or geoboard). ● a(n) = (3 - 3 * (- 1) ^ n - 16 * n ^ 2 + 10 * n ^ 4) / 24. ● a(n) = (5 * n ^ 4 - 8 * n ^ 2) / 12 for n even. ● a(n) = (5 * n ^ 4 - 8 * n ^ 2 + 3) / 12 for n odd. ●

▶ [A201243] 0,4,28,102,268,580,1104,1918,3112,4788,7060,10054,13908,18772,24808,32190,41104,51748,64332,79078,96220,116004,138688,164542,193848 ⋆ Number of ways to place 2 non - attacking ferses on an n X n board. ● a(n) = 1 / 2 * (n - 1) * (n ^ 3 + n ^ 2 - 4n + 4) by C. Poisson, 1990. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Vincenzo Librandi _ , Apr 30 2013 ●

▶ [A058227] 4,28,112,352,972,2484,6040,14200 ⋆ Number of edges in all simple (loopless) paths, connecting any node with all the remaining ones in optimal graphs of degree 4. ● a(n) = d(V) * Sum _{ k=1..d(G) } k * (2 ^ k - 1) where d(V) is graph degree, and d(G) is graph diameter a(n)=d(V) * array(1..d(G)) * array(1..(2 ^ d(G) - 1)); ● a(n) = 4 * Sum _{ k=1..n } k * (2 ^ k - 1). ● a(n) = (8 * n - 8) * 2 ^ n - 2 * n ^ 2 - 2 * n + 8. ● a(n) = a(n - 1) + 4 * n * (2 ^ n - 1) with a(0)=0. ●

▶ [A328685] 0,4,28,120,320,716,1380,2464,3984,6196,9124,13128,18048,24476,32244,42096,53440,67460,83604,103192,124944,150892,179908,214080,251184 ⋆ Row sums of A309038. ● a(n) = 2 * a(n - 1) - a(n - 2) + 3 * a(n - 4) - 6 * a(n - 5) + 3 * a(n - 6) - 3 * a(n - 8) + 6 * a(n - 9) - 3 * a(n - 10) + a(n - 12) - 2 * a(n - 13) + a(n - 14) for n > 18. ●

▶ [A212900] 0,4,28,122,340,786,1558,2814,4690,7404,11130,16140,22652,30992,41416,54310,69968,88830,111234,137674,168526,204344,245542,292728,346360 ⋆ Number of (w,x,y,z) with all terms in { 0,...,n } and distinct consecutive gap sizes . ● a(n) = 2 * a(n - 1) + a(n - 2) - 3 * a(n - 3) - a(n - 4) + a(n - 5) + 3 * a(n - 6) - a(n - 7) - 2 * a(n - 8) + a(n - 9). ●

▶ [A196514] 0,4,28,124,444,1404,4092,11260,29692,75772,188412,458748,1097724,2588668,6029308,13893628,31719420,71827452,161480700,360710140,801112060,1769996284,3892314108,8522825724,18589155324 ⋆ Partial sums of A100381. ● a(n) = 7 * a(n - 1) - 18 * a(n - 2) + 20 * a(n - 3) - 8 * a(n - 4); a(0)=0, a(1)=4, a(2)=28, a(3)=124. - _ Harvey P. Dale _ , Jan 12 2016 ●

▶ [A249629] 0,0,4,28,124,532,2164,8788,35284,141628,567004,2269948,9081724,36334492,145345564,581412508,2325680284,9302841652,37211487124,148846430068,595386201844,2381546731732,9526188851284,38104763100628,152419060098004 ⋆ Number of strings of length n over a 4 - letter alphabet that begin with a nontrivial palindrome. ● a(0) = 0; a(1) = 0; a(n + 1) = 4 * a(n) + 4 ^ ceiling((n + 1) / 2) - a(ceiling((n + 1) / 2)). ●

▶ [A240434] 0,4,28,128,480,1600,4928,14336,39936,107520,281600,720896,1810432,4472832,10895360,26214400,62390272,147062784,343670784,796917760,1835008000,4198498304,9550430208,21609054208,48653926400 ⋆ Binomial transform of the sum of the first n even squares (A002492). ● a(n) = (- 1) ^ n * Sum _{ k=0..floor(n / 2) } binomial(n - k, k) * (- 4) ^ (n - k) * (n - k). - _ Joseph M. Shunia _ , Jul 20 2022 ●

▶ [A270218] 1,4,28,140,620,2604,10668,43180,173740,697004,2792108,11176620,44722860,178924204,715762348,2863180460 ⋆ Number of active (ON,black) cells at stage 2 ^ n - 1 of the two - dimensional cellular automaton defined by "Rule 129", based on the 5 - celled von Neumann neighborhood. ● a(n) = 4 * (1 - 3 * 2 ^ n + 2 ^ (1 + 2 * n)) / 3. ● a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3) for n>3. ●

▶ [A273565] 1,4,28,141,625,2625,10753,43521,175105,702465,2813953,11264001,45072385,180322305,721354753,2885550081 ⋆ Number of active (ON,black) cells at stage 2 ^ n - 1 of the two - dimensional cellular automaton defined by "Rule 793", based on the 5 - celled von Neumann neighborhood. ● a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3) for n>4. ●

▶ [A123520] 4,28,152,744,3436,15284,66224,281424,1178196,4874444,19973192,81189688,327817404,1316035940,5257118560,20909651104,82849544868,327163551612,1288036695544,5057236343176,19807689093644,77408388584724 ⋆ Number of vertical dominoes in all possible tilings of a 2n X 3 grid by dominoes. ● a(n) = Sum _{ k=0..n } 2 ^ (k + 1) * k * C(n + k,2 * k). ● a(n) = (2 + sqrt(3)) ^ n * ((1 + sqrt(3)) * n + 1 / sqrt(3)) / 3 + (2 - sqrt(3)) ^ n * ((1 - sqrt(3)) * n - 1 / sqrt(3)) / 3. - _ Vaclav Kotesovec _ , Nov 29 2012 ●

▶ [A053524] 0,1,4,28,160,976,5824,35008,209920,1259776,7558144,45349888,272097280,1632587776,9795518464,58773127168,352638730240,2115832446976,12694994550784,76169967566848,457019804876800,2742118830309376,16452712979759104 ⋆ a(n) = (6 ^ n - (- 2) ^ n) / 8. ● a(n) = 4 * a(n - 1) + 12 * a(n - 2), with a(0)=0, a(1)=1. ●

▶ [A320527] 0,0,0,0,4,28,167,824,3840,16920,72655,305140,1265264,5193188,21173607,85887984,347150080,1399355440,5629755935,22615859180,90754215024,363888497148,1458169977847,5840524999144,23385639542720 ⋆ Number of chiral pairs of color patterns (set partitions) in a row of length n using exactly 4 colors (subsets). ● a(n) = (S2(n,k) - A(n,k)) / 2, where k=4 is the number of colors (sets), S2 is the Stirling subset number A008277 and A(n,k) = [n>1] * (k * A(n - 2,k) + A(n - 2,k - 1) + A(n - 2,k - 2)) + [n<2 & n==k & n>=0]. ●

▶ [A182190] 0,4,28,168,984,5740,33460,195024,1136688,6625108,38613964,225058680,1311738120,7645370044,44560482148,259717522848,1513744654944,8822750406820,51422757785980,299713796309064 ⋆ a(n) = 6 * a(n - 1) - a(n - 2) + 4 with n > 1, a(0)=0, a(1)=4. ● a(n) = - 1 + (1 / (2 * sqrt(2))) * ((3 + 2 * sqrt(2)) ^ n - (3 - 2 * sqrt(2)) ^ n) + (1 / 2) * ((3 + 2 * sqrt(2)) ^ n + (3 - 2 * sqrt(2)) ^ n). - _ Paolo P. Lava _ , May 10 2012. ●

▶ [A125687] 4,28,172,1036,6220,37324,223948,1343692,8062156,48372940,290237644,1741425868,10448555212,62691331276,376147987660,2256887925964,13541327555788,81247965334732,487487792008396,2924926752050380,17549560512302284,105297363073813708 ⋆ The base 6 numbers 4 44 444 4444 44444 ... converted to base 10. ● a(n) = (6 ^ n - 1) * 4 / 5. ●

▶ [A223166] 4,28,175,1244,9628,78625,664916,5762207,50849233,455055612,4118066398,37607950279,346065645808,3204942065690,29844571475285,279238344248555,2623557165610820,24739954309690413,234057667376222380,2220819602783663481 ⋆ Integer nearest to Li(10 ^ n) - Li(3), where Li(x) = integral(0..x, dt / log(t)). ● a(n) = round(Li(10 ^ n) - Li(3)). ●

▶ [A216211] 1,4,28,178,1008,5493,29879,163357,895519,4911542,26932856,147666219,809584243,4438588016,24334993398,133419407518,731487440774,4010463570150,21987820817522,120550714106036,660932932241338,3623639639745022,19867014703421770,108923158026586497,597183548915194615 ⋆ Number of self - avoiding walks of any length from NW to SW corners of a grid or lattice with n rows and 4 columns. ● a(n) = 12 * a(n - 1) - 54 * a(n - 2) + 124 * a(n - 3) - 133 * a(n - 4) - 16 * a(n - 5) + 175 * a(n - 6) - 94 * a(n - 7) - 69 * a(n - 8) + 40 * a(n - 9) + 12 * a(n - 10) - 4 * a(n - 11) - a(n - 12) for n>12. ●

▶ [A155611] 1,4,28,190,1216,7534,45928,277750,1673056,10058014,60407128,362619910,2176250896,13059099694,78359381128,470170635670,2821066860736,16926530304574,101559569247928,609358577749030,3656154953278576 ⋆ 6 ^ n - 3 ^ n + 1. ● a(n)=9 * a(n - 1) - 18 * a(n - 2) + 10 with a(0)=1, a(1)=4 [From _ Vincenzo Librandi _ , Jul 21 2010] ●

▶ [A270471] 1,4,28,196,1372,9604,67228,470596,3294172,23059204,161414428,1129900996,7909306972,55365148804,387556041628,2712892291396,18990246039772,132931722278404,930522055948828,6513654391641796,45595580741492572,319169065190448004 ⋆ Expansion of (1 - 3 * x) / (1 - 7 * x). ● a(n) = 7 * a(n - 1) for n>1. ● a(n) = 4 * 7 ^ (n - 1) for n>0. ●

▶ [A198630] 1,4,28,208,1540,11344,83188,607408,4416580,31986064,230784148,1659338608,11892395620,84983496784,605698755508,4306834677808,30560156566660 ⋆ Alternating sums of powers of 1,2,...,7. ● a(n)=sum(((-1)^(j+1))*j^n,j=1..7), n>=0. ●

▶ [A090965] 1,4,28,208,1552,11584,86464,645376,4817152,35955712,268377088,2003193856,14952042496,111603564544,833020346368,6217748512768,46409906716672,346408259682304,2585626450591744,19299378566004736 ⋆ a(n) = 8 * a(n - 1) - 4 * a(n - 2), where a(0) = 1, a(1) = 4. ● a(n) = (1 / 2) * ((4 - 2 * sqrt(3)) ^ n + (4 + 2 * sqrt(3)) ^ n), with n >= 0. - _ Paolo P. Lava _ , Nov 20 2008 ● a(n) = Sum _{ k = 0..floor(n / 2) } 4 ^ (n - 2 * k) * 12 ^ k * binomial(n,2 * k). ● a(n) = [x ^ n] (4 * x + sqrt(1 + 12 * x ^ 2)) ^ n. ●

▶ [A085363] 1,4,28,212,1676,13604,112380,940020,7936620,67494980,577309148,4961187092,42801458764,370478720356,3215827927228,27982214082612,244004165618220,2131710838837380,18654504783815580,163488269572628820 ⋆ a(0)=1, for n>0: a(n) = 4 * 9 ^ (n - 1) - (1 / 2) * Sum _{ i=1..n - 1 } a(i) * a(n - i). ● a(n) = Sum _{ k=1..n } 2 ^ k * binomial(n - 1, k - 1) * binomial(2 * k, k). (End) ● a(0) = 1; a(n) = (4 / n) * Sum _{ k=0..n - 1 } (n + k) * a(k). - _ Seiichi Manyama _ , Mar 28 2023 ●

▶ [A182432] 1,4,28,217,1705,13420,105652,831793,6548689,51557716,405913036,3195746569,25160059513,198084729532,1559517776740,12278057484385,96664942098337,761041479302308,5991666892320124,47172293659258681,371386682381749321 ⋆ Recurrence a(n) * a(n - 2) = a(n - 1) * (a(n - 1) + 3) with a(0) = 1, a(1) = 4. ● a(n) = 1 / 2 + 1 / 2 * sum _{ k = 0..n } 6 ^ k * binomial(n + k,2 * k). ● a(n) = R(n,3) where R(n,x) denotes the row polynomials of A211955. ● a(n) = 1 / u * T(n,u) * T(n + 1,u) with u = sqrt(5 / 2) and T(n,x) the Chebyshev polynomial of the first kind. ● a(0)=1, a(1)=4, a(2)=28, a(n) = 9 * a(n - 1) - 9 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , May 14 2012 ●

► [A243116] 1,4,28,220,1816,15424,133456,1169872,10354528,92331904,828204928,7464652672,67547774464,613295870464,5584367987968,50974595472640,466307503244800,4273832891668480,39237007284226048,360768875975526400,3321625537178669056,30619908430235828224,282578914501599305728 ⋆ a(n) = Sum _{ k=0..n } C(n + 2 * k, 3 * k) * C(3 * k, 2 * k). ● a(n) = - (- 2) ^ n + 2 * Sum _{ k=0..[n / 2] } C(n + 4 * k, 6 * k) * C(6 * k, 4 * k). ● a(n) = Sum _{ k = 0..floor(n / 4) } (- 1) ^ k * binomial(n,k) * binomial(4 * n - 4 * k,3 * n). ●

► [A005810] 1,4,28,220,1820,15504,134596,1184040,10518300,94143280,847660528,7669339132,69668534468,635013559600,5804731963800,53194089192720,488526937079580,4495151581425648,41432089765583440,382460951663844400 ⋆ a(n) = binomial(4n,n). ● a(n) is asymptotic to c * (256 / 27) ^ n / sqrt(n) with c = sqrt(2 / (3 Pi)) = 0.460658865961780639... - _ Benoit Cloitre _ , Jan 26 2003; corrected by _ Charles R Greathouse IV _ , Dec 14 2006 ● a(n) = Sum _{ k=0..2 n } binomial(2n,k) * binomial(2n,k - n). - _ Paul Barry _ , Mar 08 2011 ● a(n) = binomial(4 * n,n - 1) * (3 * n + 1) / n. - _ Gary Detlefs _ , Apr 03 2013 ● a(n) = C(4 * n - 1,n - 1) * C(16 * n ^ 2,2) / (3 * n * C(4 * n + 1,3)), n>0. - _ Gary Detlefs _ , Jan 02 2014 ● a(n) = Sum _{ i,j,k = 0..n } binomial(n,i) * binomial(n,j) * binomial(n,k) * binomial(n,i + j + k). - _ Peter Bala _ , Dec 28 2014 ● a(n) = GegenbauerC(n, - 2 * n, - 1). - _ Peter Luschny _ , May 07 2016 ●

► [A371755] 1,4,28,221,1834,15657,136137,1199014,10661184,95493145,860339723,7788028028,70777321331,645359630071,5901209474518,54093485799726,496910913391428,4573312196055502,42160889572810597,389258294230352460,3598732127428879981 ⋆ a(n) = Sum _{ k=0..floor(n / 3) } binomial(4 * n - 2 * k,n - 3 * k). ● a(n) = [x ^ n] 1 / ((1 - x - x ^ 3) * (1 - x) ^ (3 * n)). ●

► [A121203] 0,4,28,224,1784,13692,102036,745432,5374192,38400500,272709644,1928498640,13597146600,95668307308,672119557252,4717043931848,33080342679008,231867574534116,1624598900644860,11379821699045056 ⋆ 2n + 7 ^ n - 5 ^ n. ● a(n) = 14 * a(n - 1) - 60 * a(n - 2) + 82 * a(n - 3) - 35 * a(n - 4). - _ Vincenzo Librandi _ , Feb 26 2013 ●

► [A370187] 1,4,28,226,1940,17214,155914,1432106,13289076,124276528,1169346298,11057293526,104986087178,1000248093420,9557756114130,91559051752596,879027678226452,8455595252761536,81476137225450096,786286875175380088,7598503022428758570 ⋆ Coefficient of x ^ n in the expansion of ((1 + x) ^ 2 * (1 + x + x ^ 3) ^ 2) ^ n. ● a(n) = Sum _{ k=0..floor(n / 3) } binomial(2 * n,k) * binomial(4 * n - k,n - 3 * k). ●

► [A152599] 1,4,28,232,1984,17056,146752,1262848,10867456,93520384,804794368,6925699072,59599458304,512886194176,4413668442112,37982050091008,326856479604736,2812780194955264,24205524194295808,208301879603494912 ⋆ a(n)=10 * a(n - 1) - 12 * a(n - 2), n>1 ; a(0)=1, a(1)=4 . ● a(n)=(1 / 26) * sqrt(13) *{ [5 - sqrt(13)] ^ n - [5 + sqrt(13)] ^ n }+ (1 / 2) *{ [5 - sqrt(13)] ^ n + [5 + sqrt(13)] ^ n } , with n>=0 [From _ Paolo P. Lava _ , Dec 12 2008] ●

► [A035610] 1,4,28,232,2092,19864,195352,1970896,20275660,211823800,2240795848,23951289520,258255469816,2805534253552,30675477376432,337306474674592,3727578443380492,41376874025687032,461121792658583272,5157384457905440752,57869888433073055272,651266142688270063312,7349148747954997832272 ⋆ G.f.: 3 / (1 + 2 * sqrt(1 - 12 * x)). ● a(0) = 1; a(n) = (4 / n) * Sum _{ j=0..n - 1 } C(2 * n,j) * (n - j) * 3 ^ j for n > 0. ● a(n) = upper left term in M ^ n, M = an infinite square production matrix as follows: ● a(n) are special values of the hypergeometric function 2F1, in Maple notation: a(n) = 3 * 12 ^ n * GAMMA(n + 1 / 2) * hypergeom([1,n + 1 / 2],[n + 2],3 / 4) / (4 * sqrt(Pi) * (n + 1)!), n=0,1,... . - _ Karol A. Penson _ , Jul 06 2015 ●

► [A368967] 1,4,28,238,2244,22568,237199,2574276,28627224,324503718,3735672880,43555658640,513277420803,6103767231712,73153216133600,882708243017414,107149178672470201307525973620684961603069096165788706,1973712396874 6454284,2439301752821665744 32 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 - x) ^ 2 * (1 - x - x ^ 2) ^ 2). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 2) } binomial(2 * n + k + 1,k) * binomial(5 * n - k + 3,n - 2 * k). ●

► [A369510] 1,4,28,240,2288,23296,248064,2728704,30764800,353633280,4128783360,48827351040,583674642432,7041154416640,85610725769216,1048040981594112,12907157115568128,159802897621319680,1987875305403187200,24833149969036738560,311409431144819589120 ⋆ Expansion of (1 / x) * Series _ Reversion(x * ((1 - x) ^ 2 - x ^ 2) ^ 2). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 2) } binomial(2 * n + k + 1,k) * binomial(5 * n + 3,n - 2 * k). ●

► [A199561] 4,28,244,2188,19684,177148,1594324,14348908,129140164,1162261468,10460353204,94143178828,847288609444,7625597484988,68630377364884,617673396283948,5559060566555524,50031545098999708,450283905890997364 ⋆ a(n) = 3 * 9 ^ n + 1. ● a(n) = 9 * a(n - 1) - 8. ● a(n) = 10 * a(n - 1) - 9 * a(n - 2). ●

► [A103211] 1,4,28,244,2380,24868,272188,3080596,35758828,423373636,5092965724,62071299892,764811509644,9511373563492,119231457692284,1505021128450516,19112961439180588,244028820862442116,3130592301487969948,40333745806536135028,521655330655122923980 ⋆ a(n) = (1 / n) * Sum _{ i=0..n - 1 } C(n, i) * C(n,i + 1) * 3 ^ i * 4 ^ (n - i), a(0)=1. ● a(n) = Sum _{ k=0..n } C(n + k, 2k) * 3 ^ k * C(k), C(n) given by A000108. - _ Paul Barry _ , May 21 2005 ● a(0)=1, a(n) = a(n - 1) + 3 * Sum _{ k=0..n - 1 } a(k) * a(n - 1 - k). - _ Philippe Deléham _ , Oct 23 2007 ● a(n) = Sum _{ k=0..n } (- 1) ^ (n - k) binomial(n,k) * hypergeom([k - n, n + 1], [k + 2], 4). - _ Peter Luschny _ , Jan 08 2018 ●

► [A371693] 1,4,28,248,2480,26688,301648,3531424,42449088,520858496,6497190528,82146802944,1050370074624,13559126110720,176469550681344,2313050095245824,30506619439926272,404558181197010944,5391161355764205568,72156618656648237056,969557980700415827968 ⋆ G.f. satisfies A(x) = (1 + x * A(x) * (1 + A(x))) ^ 2. ● a(n) = Sum _{ k=0..n } binomial(n,k) * binomial(2 * n + 2 * k + 2,n) / (n + k + 1). ●

► [A064340] 1,1,4,28,256,2704,31168,380608,4840960,63458560,851399680,11635096576,161396604928,2266669453312,32166082822144,460531091685376,6644185553305600,96498260064403456,1409750653282287616 ⋆ Generalized Catalan numbers C(2,2; n). ● a(n)= ((4 ^ (n - 1)) / (n - 1)) * sum((m + 1) * (m + 2) * binomial(2 * (n - 2) - m, n - 2 - m) * ((1 / 2) ^ (m + 1)), m=0..n - 2), n >= 2, a(0) := 1=: a(1). ●

► [A042379] 1,1,4,29,62,91,153,1009,10243,11252,21495,97232,215959,313191,3974251,4287442,12549135,54483982,67033117,121517099,1282204107,7814741741,9096945848,16911687589,42920321026 ⋆ Denominators of continued fraction convergents to sqrt(716). ● a(n) = 70231439376398 * a(n - 28) - a(n - 56) for n>55. - _ Vincenzo Librandi _ , Jan 21 2014 ●

► [A192025] 4,29,84,178,320,519,784,1124,1548,2065,2684,3414,4264,5243,6360,7624,9044,10629,12388,14330,16464,18799,21344,24108,27100 ⋆ The Wiener index of the double - comb graph \/_\/_\/ ... \/_\/ with 3n (n>=1) nodes. The Wiener index of a connected graph is the sum of the distances between all unordered pairs of vertices in the graph. ● a(n) = n * (3 * n ^ 2 + 12 * n - 7) / 2. ●

► [A024394] 4,29,93,214,410,699,1099,1628,2304,3145,4169,5394,6838,8519,10455,12664,15164,17973,21109,24590,28434,32659,37283,42324,47800 ⋆ a(n) is the sum of squares of the first n positive integers congruent to 2 mod 3. ● a(n) = 3 * n ^ 3 + 3 * n ^ 2 / 2 - n / 2. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Vincenzo Librandi _ , Jun 19 2012 ●

► [A211545] 0,4,29,99,238,470,819,1309,1964,2808,3865,5159,6714,8554,10703,13185,16024,19244,22869,26923,31430,36414,41899,47909,54468 ⋆ Number of ordered triples (w,x,y) with all terms in {- n,... - 1,1,...,n } and w + x + y>0. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ● a(n) = (n * (3 - 3 * n + 8 * n ^ 2)) / 2. ●

► [A200069] 1,4,29,168,1049,6380,39157,239568,1467313,8983636,55009613,336825720,2062427849,12628445756,77325345061,473471175072,2899114186081,17751582020260,108694812500093,665549816263752,4075231827556217,24953074921653644,152790313444845397 ⋆ a(n) = 4 * a(n - 1) + 13 * a(n - 2) for n>2, a(1)=1, a(2)=4. ● a(n) = ((2 + sqrt(17)) ^ n - (2 - sqrt(17)) ^ n) / (2 * sqrt(17)). ●

► [A198794] 4,29,179,1079,6479,38879,233279,1399679,8398079,50388479,302330879,1813985279,10883911679,65303470079,391820820479,2350924922879,14105549537279,84633297223679,507799783342079,3046798700052479,18280792200314879,109684753201889279 ⋆ a(n) = 5 * 6 ^ n - 1. ● a(n) = 6 * a(n - 1) + 5. ● a(n) = 7 * a(n - 1) - 6 * a(n - 2), n > 1. ●

► [A288913] 4,29,199,1364,9349,64079,439204,3010349,20633239,141422324,969323029,6643838879,45537549124,312119004989,2139295485799,14662949395604,100501350283429,688846502588399,4721424167835364,32361122672259149,221806434537978679,1520283919093591604 ⋆ a(n) = Lucas(4 * n + 3). ● a(n) = 7 * a(n - 1) - a(n - 2) for n>1, with a(0)=4, a(1)=29. ● a(n) = ((sqrt(5) + 1) ^ (4 * n + 3) - (sqrt(5) - 1) ^ (4 * n + 3)) / (8 * 16 ^ n). ● a(n) = Fibonacci(4 * n + 4) + Fibonacci(4 * n + 2). ● a(n + 1) * a(n + k) - a(n) * a(n + k + 1) = 15 * Fibonacci(4 * k). Example: for k=6, a(n + 1) * a(n + 6) - a(n) * a(n + 7) = 15 * Fibonacci(24) = 695520. ●

► [A100022] 1,4,29,205,1412,9688,66416,455237,3120256 ⋆ Number of digits in A090162(n). ● a(n + 1) / a(n) - > Phi ^ 4 = 6.8541... - _ Robert G. Wilson v _ , Nov 23 2004 ●

► [A079756] 0,0,4,29,215,1734,15630,156327,1719637,20635688,268264004,3755696121,56335441899,901367070474,15323240198170,275818323567179,5240548147776545,104810962955531052,2201030222066152272 ⋆ Operation count to create all permutations of n distinct elements using the ”streamlined” version of Algorithm L (lexicographic permutation generation) from Knuth’s The Art of Computer Programming, Vol. 4, chapter 7.2.1.2. Sequence gives number of interchanges in reversal step. ● a(3)=0, a(4)=0, a(n) = n * a(n - 1) + (n - 1) * (floor((n - 1) / 2) - 1) for n>=5. ●

► [A371743] 1,4,29,231,1926,16491,143683,1267395,11282393,101151544,912011633,8260998772,75115815749,685232639419,6268299350776,57478389714473,527167137069958,4862304525663579,44836026545219765,414048025058547788,3828677665694353049 ⋆ a(n) = Sum _{ k=0..floor(n / 2) } binomial(4 * n - k,n - 2 * k). ● a(n) = [x ^ n] 1 / ((1 - x - x ^ 2) * (1 - x) ^ (3 * n)). ●

► [A254124] 1,4,29,257,2408,22873,217969,2078716,19827701,189133073,1804125632,17209452337,164160078241,1565914719064,14937181915469,142485030313697,1359157571347928,12964936038223753,123671875897903249,1179699833714208556,11253097663211943461 ⋆ The number of tilings of a 3 X n rectangle using integer length rectangles with at least one side of length 1, i.e., tiles are 1 X 1, 1 X 2, ..., 1 X n, 2 X 1, 3 X 1. ● a(n) = 12 * a(n - 1) - 24 * a(n - 2) + 5 * a(n - 3) for n > 2. - _ Colin Barker _ , Jun 07 2020 ●

► [A369215] 1,4,29,261,2627,28315,319648,3731037,44663058,545312504,6764556591,85015779095,1080185111768,13852183882612,179058158369828,2330621446075640,30519758687849439,401806204894374041,5315243189757111099,70613088335938995385,941714812929017751855 ⋆ Expansion of (1 / x) * Series _ Reversion(x * ((1 - x) ^ 3 - x)). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..n } binomial(n + k,k) * binomial(4 * n + 2 * k + 2,n - k). ●

► [A022387] 4,30,34,64,98,162,260,422,682,1104,1786,2890,4676,7566,12242,19808,32050,51858,83908,135766,219674,355440,575114,930554,1505668 ⋆ Fibonacci sequence beginning 4, 30. ● a(n) = 4 * Fibonacci(n + 2) + 22 * fibonacci(n) = 4 * Fibonacci(n - 1) + 30 * Fibonacci(n). - _ G. C. Greubel _ , Mar 02 2018 ●

► [A201975] 4,30,72,131,208,304,420,557,716,898,1104,1335,1592,1876,2188,2529,2900,3302,3736,4203,4704,5240,5812,6421,7068 ⋆ Number of n X 2 0..3 arrays with rows and columns lexicographically nondecreasing read forwards and nonincreasing read backwards. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>4. ●

► [A211624] 0,4,30,104,245,485,837,1339,1998,2858,3920,5234,6795,8659,10815,13325,16172,19424,23058,27148,31665,36689,42185,48239,54810 ⋆ Number of ordered triples (w,x,y) with all terms in {- n,... - 1,1,...,n } and w + 2x + 2y>0. ● a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + a(n - 4) + 2 * a(n - 5) - a(n - 6). ● a(n) = (64 * n ^ 3 - 14 * n ^ 2 + 12 * n) / 16 for n even. ● a(n) = (64 * n ^ 3 - 14 * n ^ 2 + 24 * n - 10) / 16 for n odd. (End) ●

► [A211628] 0,4,30,105,249,487,846,1346,2012,2871,3943,5253,6828,8688,10858,13365,16229,19475,23130,27214,31752,36771,42291,48337,54936 ⋆ Number of ordered triples (w,x,y) with all terms in {- n,... - 1,1,...,n } and 3w + x + y>0. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + 2 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) - a(n - 6) for n>5. ●

► [A213824] 4,30,114,310,690,1344,2380,3924,6120,9130,13134,18330,24934,33180,43320,55624,70380,87894,108490,132510,160314,192280,228804,270300,317200

⋆ Antidiagonal sums of the convolution array A213822. ● a(n) = (2 * n + 5 * n ^ 2 + 6 * n ^ 3 + 3 * n ^ 4) / 4 = n * (1 + n) * (2 + 3 * n + 3 * n ^ 2) / 4. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ● a(n) = Sum _{ i=1..n } i * (3 * i ^ 2 + 1). - _ Bruno Berselli _ , Feb 09 2017 ●

▶ [A027789] 4,30,120,350,840,1764,3360,5940,9900,15730,24024,35490,50960,71400,97920,131784,174420,227430,292600,371910,467544,581900,717600,877500,1064700 ⋆ a(n) = 2 * (n + 1) * binomial(n + 3,4). ● a(n) = C(n + 1, 2) * C(n + 3, 3). - _ Zerinvary Lajos _ , May 10 2005, corrected by _ R. J. Mathar _ , Feb 13 2016 ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). - _ Harvey P. Dale _ , Jan 20 2015 ● a(n) = Sum _{ k=1..n + 1 } Sum _{ i=1..n + 1 } (n - i + 1) * C(k + 1,k - 1). - _ Wesley Ivan Hurt _ , Sep 21 2017 ●

▶ [A130424] 4,30,125,365,854,1724,3135,5275,8360,12634,18369,25865,35450,47480,62339,80439,102220,128150,158725,194469,235934,283700,338375,400595,471024 ⋆ Main diagonal of array A[k,n] = n - th sum of k consecutive k - gonal numbers, k>2. ● a(n) = A[n + 2,n] = P(k + 2,n) + P(k + 2,n + 1) + P(k + 2,n + 2) + ... P(k + 2,n + k - 1) where P(k,n) = k * ((n - 2) * k - (n - 4)) / 2. ● a(n) = (n + 2) * (7 * n ^ 3 - 8 * n ^ 2 + 12 * n - 3) / 6. [_ R. J. Mathar _ , Oct 30 2008] ●

▶ [A005715] 4,30,126,393,1016,2304,4740,9042,16236,27742,45474,71955,110448,165104,241128,344964,484500,669294,910822,1222749,1621224,2125200,2756780,3541590,4509180 ⋆ Coefficient of x ^ 7 in expansion of (1 + x + x ^ 2) ^ n. ● a(n) = binomial(n, 4) * (n ^ 3 + 27 * n ^ 2 + 116 * n - 120) / 210, n >= 4. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8). _ Vincenzo Librandi _ , Jun 16 2012 ● a(n) = 4 * binomial(n,4) + 10 * binomial(n,5) + 6 * binomial(n,6) + binomial(n,7) (see our comment in A026729). - _ Vladimir Shevelev _ and _ Peter J. C. Moses _ , Jun 22 2012 ● a(n) = GegenbauerC(N, - n, - 1 / 2) where N = 7 if 7< n else 2 * n - 7. - _ Peter Luschny _ , May 10 2016 ●

▶ [A113450] 0,4,30,192,1160,6860,40222,235008,1371120,7994836,46605438,271656000,1583374520,9228697244,53789065150,313506312192,1827250301280,10649999100580,62072753005662,361786539945408,2108646537394280 ⋆ Difference between the square root of n - th square triangular number and n - th lambda number given by the recurrence f(n) = 2f(n - 1) + f(n - 2), f(1) = 1, f(2)= 2. ● a(n) = 8 * a(n - 1) - 12 * a(n - 2) - 4 * a(n - 3) + a(n - 4). ●

▶ [A344399] 1,4,30,200,1190,6552,34188,171600,836550,3986840,18660356,86062704,392102620,1768102000,7902970200,35056559520,154477660230,676745803800,2949418972500,12794985495600,55276458056820,237909980502480,1020487997404200,4363718285628000 ⋆ a(n) = 4 ^ n * binomial(n - 1 / 2, - 1 / 2) * (n ^ 2 + 1). ● a(n) = [x ^ n] (20 * x ^ 2 - 6 * x + 1) / (1 - 4 * x) ^ (5 / 2). ● a(n) = a(n - 1) * (- 2 + 4 * n - 2 * n ^ 2 + 4 * n ^ 3) / (2 * n - 2 * n ^ 2 + n ^ 3) for n > 0. ●

▶ [A094567] 1,4,30,203,1394,9552,65473,448756,3075822,21081995,144498146,990405024,6788337025,46527954148,318907342014,2185823439947,14981856737618,102687173723376,703828359326017,4824111341558740,33064951031585166,226630545879537419 ⋆ Associated with alternating row sums of array in A094566. ● a(n) = F(4n + 1) - a(n - 1) for n >= 1, with a(0) = 1. ● a(n) = (Fib(4n + 3) + (- 1) ^ n) / 3. - _ Ralf Stephan _ , Dec 04 2004 ● a(n) = 6 * a(n - 1) + 6 * a(n - 2) - a(n - 3), with a(0)=1, a(1)=4, a(2)=30. - _ Harvey P. Dale _ , Jul 13 2011 ● a(n) = (- 1) ^ n * sum((- 1) ^ k * Fibonacci(4 * k + 1), k=0..n). - _ Gary Detlefs _ , Jan 22 2013 ● a(n) = (2 ^ (- n) * (5 * (- 2) ^ n + (7 - 3 * sqrt(5)) ^ n * (5 - 2 * sqrt(5)) + (5 + 2 * sqrt(5)) * (7 + 3 * sqrt(5)) ^ n)) / 15. - _ Colin Barker _ , Mar 05 2016 ●

▶ [A134093] 1,4,30,215,1729,15176,143814,1462995,15876410,182811992,2223580281,28458251185,381943459065,5359649816728,78430018675440,1194057733357517,1887387091426342 4,3091547875196512 84,5238840625331179517 ⋆ Column 3 of triangle A134090. ● a(n) = [x ^ n] Sum _{ k=0..n + 3 } C(n + 3,k) * x ^ k / (1 - k * x) ^ 3 / [Product _{ i=1..k } (1 - i * x)]. ●

▶ [A000313] 0,0,0,1,4,30,220,1855,17304,177996,2002440,24474285,323060540,4581585866,69487385604,1122488536715,19242660629360,348933579412440,6673354706262864,134252194678935321,2834212998777523380,62651024183503148470,1447238658638922729580 ⋆ Number of permutations of length n with 3 consecutive ascending pairs. ● a(n) = (n * (n + 1)! / 6) * sum((- 1) ^ k / k!, k=0..n). ● a(n) = round((exp(- 1) * (n + 1)! + (- 1) ^ n) * n / 6). - _ Mark van Hoeij _ , Oct 25 2011 ●

▶ [A082144] 1,4,30,224,1680,12672,96096,732160,5601024,42997760,331082752,2556051456,19778969600,153363087360,1191302553600,9268801044480,72219408138240,563445537177600,4401135695953920,34414895667609600 ⋆ A subdiagonal of number array A082137. ● a(n) = (2 ^ (n - 1) + 0 ^ n / 2) * C(2 * n + 2, n). ●

▶ [A137971] 1,1,4,30,232,2037,18720,179454,1770380,17864490,183510672,1912621814,20175123732,214980182783,2310645275932,25021270486830,272717638241172,2989549949264304,32938634975109864,364566094737276708 ⋆ G.f. satisfies A(x) = 1 + x * (1 + x * A(x) ^ 6) ^ 4. ● a(n) = Sum _{ k=0..n - 1 } C(4 * (n - k),k) / (n - k) * C(6 * k,n - k - 1) for n>0 with a(0)=1. - _ Paul D. Hanna _ , Jun 16 2009 ●

▶ [A086452] 1,4,30,250,2236,20979,203748,2031054,20662980,213679114,2239507936,23735786529,253964904550,2739547645735,29761236016632,325318710375558,3575517449089572,39489206184518220,438032736572732520 ⋆ Number of maximal triangulations (using all 2(n + 2) points) of a convex polygon having (n + 2) sides and an interior point in the middle of each side. ● a(n) = sum(k=0..n + 2, binomial(n + 2, k) * (- 1) ^ k * binomial(2 * (2 * n + 2 - k), 2 * n + 2 - k) / (2 * n + 3 - k)); (by inclusion - exclusion) ●

▶ [A334719] 0,4,30,250,2245,21221,208129,2098565,21619910,226593015,2408424760,25899375645,281273231985,3080585212120,33986840371400,377364606387005,4213620859310140,47284625533425750,532996618440511710,6032169040263819485,68517222947120776290 ⋆ a(n) is the total number of down - steps after the final up - step in all 4 - Dyck paths of length 5 * n (n up - steps and 4 * n down - steps). ● a(n) = binomial(5 * (n + 1) + 1, n + 1) / (5 * (n + 1) + 1) - binomial(5 * n + 1, n) / (5 * n + 1). ●

▶ [A091527] 1,4,30,256,2310,21504,204204,1966080,19122246,187432960,1848483780,18320719872,182327718300,1820797698048,18236779032600,183120225632256,1842826521244230,18581317012684800,187679234340049620,1898554215471513600,19232182592635611060 ⋆ a(n) = ((3 * n)! / n! ^ 2) * (Gamma(1 + n / 2) / Gamma(1 + 3n / 2)). ● a(n) = Sum _{ i = 0..n } binomial(3 * n,i) * binomial(2 * n - i - 1,n - i). ● a(n) = [x ^ n] ((1 + x) ^ 3 / (1 - x)) ^ n. ● a(n) = Sum _{ k = 0..floor(n / 2) } binomial(4 * n,n - 2 * k) * binomial(n + k - 1,k). ● a(n) = 4 ^ n * 2 * (n + 1) * binomial((3 * n - 1) / 2, n + 1) / (n - 1) for n >= 2. - _ Peter Luschny _ , Feb 03 2020 ●

▶ [A201200] 1,4,30,256,2356,22384,215640,2090176,20315536,197702464,19250424 00,18749072896,182629124416,1779030655744,17330352562560,168824779580416,1644626142474496,16021353180980224,156074394613317120,1520422660926324736 ⋆ Total number of round trips of length n on the closed Laguerre graph Lc _ 4 divided by 4. ● a(n) = 16 * a(n - 1) - 68 * a(n - 2) + 64 * a(n - 3) + 44 * a(n - 4) for n>3. ● a(n) = ((2 - sqrt(6)) ^ n + (2 + sqrt(6)) ^ n + (6 - sqrt(14)) ^ n + (6 + sqrt(14)) ^ n) / 4. ●

▶ [A371486] 1,4,30,260,2465,24796,260008,2811216,31117240,350890260,4016744586,46556054072,545273713228,6443442857024,76727957438650,919796418086076,11091249210406816,134439965189940176,1637160457090585016,20019920157735604796,245733987135102838131 ⋆ G.f. A(x) satisfies A(x) = 1 / (1 - x * A(x) / (1 - x)) ^ 4. ● a(n) = Sum _{ k=0..n } binomial(n - 1,n - k) * binomial(5 * k + 3,k) / (k + 1). ●

▶ [A330801] 1,4,30,264,2490,24396,244790,2496528,25763058,268243860,2812481870,29653804824,314097641130,3339741725404,35626286189670,381098437754912,4086504567333858,43912100376527652,472743964145437310,5097853987059017000,55054474579787825562 ⋆ a(n) = A080247(2 * n, n), the central values of the Big - Schröder triangle. ● a(n) = ((n + 1) / (2 * n + 1)) * Sum _{ j=0..n } binomial(2 * n + 1, n + j + 1) * binomial(2 * n + j, j). ● a(n) = ((n + 1) / (2 * n + 1)) * binomial(2 * n + 1, n + 1) * hypergeom([- n, 2 * n + 1], [n + 2], - 1). ●

▶ [A367872] 1,4,30,272,2695,28080,302064,3321120,37095201,419276660,4782798020,54960207120,635339153865,7380876649216,86101923008160,1007980225327680,11836181297108565,139353762142502100 ⋆ Number of dissections of a convex (4n + 4) - sided polygon into n hexagons and one square (up to equivalence). ● a(n) = binomial(5 * n + 2,n) * (n + 3) / (4 * n + 3). ●

▶ [A172392] 1,4,30,280,2940,33264,396396,4907760,62573940,816621520,10861066216,146738321184,2008917492400,27815780664000,388924218927000,5484594083378400,77926940934668100,1114620641232714000 ⋆ a(n) = C(2n,n) * C(2n + 2,n + 1) / (n + 2). ● a(n) = 4 ^ n * [x ^ n]hypergeom([3 / 2, - 2 * n], [3], - x). - _ Peter Luschny _ , Feb 03 2015 ●

▶ [A145348] 1,1,4,30,312,3965,57824,933998,16346728,305539046,6037780164,125227212342,2711254371568,61021656441091,1423063422363676,34297379607790288,852463916004336464,21812807282389353798 ⋆ G.f. satisfies: A(x / A(x) ^ 2) = 1 + x * A(x) ^ 2. ● a(n) = [x ^ (n - 1)] 2 * A(x) ^ (2 * n + 2) / (n + 1) for n >=1 with a(0)=1; i.e., a(n) equals the coefficient of x ^ (n - 1) in 2 * A(x) ^ (2 * n + 2) / (n + 1) for n>=1 (see comment). ●

▶ [A216302] 4,31,46,64,88,109,130,367,400,493,523,550,823,829,886,946,1033,1117,1369,1390,1408,1432,1825,1999,2161 ⋆ Numbers k such that 10k + 9 is composite but 10k + 1, 10k + 3, 10k + 7 are all prime. ● a(n) >> n log ^ 3 n. - _ Charles R Greathouse IV _ , Sep 07 2012 ●

▶ [A210377] 0,0,4,31,80,146,224,315,420,540,676,829,1000,1190,1400,1631,1884,2160,2460,2785,3136,3514,3920,4355,4820 ⋆ Number of 2 X 2 matrices with all terms in { 0,1,...,n } and (sum of terms) = n + 5. ● a(n) = (- 504 + 146 * n + 21 * n ^ 2 + n ^ 3) / 6 for n>3. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>5. ●

▶ [A211629] 0,4,31,105,252,492,851,1353,2024,2884,3959,5273,6852,8716,10891,13401,16272,19524,23183,27273,31820,36844,42371,48425,55032 ⋆ Number of ordered triples (w,x,y) with all terms in {- n, ..., - 1, 1, ..., n } and 4w + x + y > 0. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 4) - 3 * a(n - 5) + 3 * a(n - 6) - a(n - 7) for n > 6. ●

▶ [A183911] 1,4,31,231,1093,3631,9576,21660,43980,82453,145376,244106,393876,614764,932833,1381461,2002881,2849952,3988183,5498033,7477511,10045101,13343038,17540962,22839978 ⋆ Number of nondecreasing arrangements of n + 2 numbers in 0..8 with each number being the sum mod 9 of two others. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>11. ●

▶ [A001091] 1,4,31,244,1921,15124,119071,937444,7380481,58106404,457470751,3601659604,28355806081,223244789044,1757602506271,13837575261124,108942999582721,857706421400644,6752708371622431,53163960551578804 ⋆ a(n) = 8 * a(n - 1) - a(n - 2); a(0) = 1, a(1) = 4. ● a(n) = ((4 + sqrt(15)) ^ n + (4 - sqrt(15)) ^ n) / 2. ● a(n) = 4 * S(n - 1, 8) - S(n - 2, 8) = (S(n, 8) - S(n - 2, 8)) / 2, n>=1; S(n, x) := U(n, x / 2) with Chebyshev's polynomials of the 2nd kind, A049310, with S(- 1, x) := 0 and S(- 2, x) := - 1. ● a(n) = T(n, 4) with Chebyshev's polynomials of the first kind; see A053120. ● a(n) * a(n + 3) - a(n + 1) * a(n + 2) = 120. - _ Ralf Stephan _ , Jun 06 2005 ● a(n) = Sum _{ k = 0..floor(n / 2) } 4 ^ (n - 2 * k) * 15 ^ k * binomial(n,2 * k). ● a(n) = [x ^ n] (4 * x + sqrt(1 + 15 * x ^ 2)) ^ n. ●

▶ [A309184] 1,4,31,244,2126,19780,192130,1922740,19692535,205444504,2175519380,23322657460,252631900236,2760767859784,30400169157656,336977765092788,3757141504436393,42107201575818028,474084628585822413,5359833704140818744,60823006052351729266 ⋆ (1 / 5) times the number of n - member subsets of [5n] whose elements sum to a multiple of n. ● a(n) = 1 / (5n) * Sum _{ d|n } binomial(5d,d) * (- 1) ^ (n + d) * phi(n / d). ●

▶ [A039306] 1,4,31,274,2461,22144,199291,1793614,16142521,145282684,1307544151,11767897354,105911076181,953199685624,8578797170611,77209174535494,694882570819441,6253943137374964,56285488236374671,506569394127372034 ⋆ Number of distinct quadratic residues mod 9 ^ n. ● a(n) = floor((9 ^ n + 3) * 3 / 8). ● a(n) = 9 * a(n - 1) + a(n - 2) - 9 * a(n - 3). - _ Vincenzo Librandi _ , Apr 22 2012 ● a(n) = (5 + 3 ^ (2n + 1)) / 8 = a(n - 1) + 3 ^ (2n - 1). - _ Danny Rorabaugh _ , Dec 15 2015 ●

► [A199683] 4,31,301,3001,30001,300001,3000001,30000001,300000001,3000000001,30000000001,300000000001,3000000000001,30000000000001,300000000000001,3000000000000001,30000000000000001,300000000000000001 ★ 3 * 10 ^ n + 1. ● a(n) = 10 * a(n - 1) - 9. ● a(n) = 11 * a(n - 1) - 10 * a(n - 2). ●

► [A290809] 0,4,32,32,1404,13409,97444,215093,3509265,15038867,257160509,1669536754,5624190240,19465477441,310132508662,310132508662,2879550156832 0,228193084985926,1623976168909168,8137630560550964,76531001672789822,555284599458461828 ★ One of the two successive approximations up to 7 ^ n for t he 7 - adic integer sqrt(- 5). These are the numbers congruent to 4 mod 7 (exc ept for the initial 0). ● a(0) = 0 and a(1) = 4, a(n) = a(n - 1) + 6 * (a(n - 1) ^ 2 + 5) mod 7 ^ n for n > 1. ●

► [A153794] 0,4,32,84,160,260,384,532,704,900,1120,1364,1632,1924,2240,2580,2944,3332,3744,4180,4640,5124,5632,6164,6720 ★ 4 times octagonal numbers: a(n) = 4 * n * (3 * n - 2). ● a(n) = 24 * n + a(n - 1) - 20 (with a(0)=0). - _ Vincenzo Librandi _ , Aug 03 2010 ● a(0)=0, a(1)=4, a(2)=32, a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Jul 14 2011 ●

► [A211625] 0,4,32,104,250,492,845,1349,2021,2871,3949,5267,6830,8698,10878,13370,16244,19502,23139,27235,31787,36785,42319,48381,54956 ★ Number of ordered triples (w,x,y) with all terms in {- n,..., - 1,1,...,n } and w + 3x + 3y>0. ● a(n) = 2 * a(n - 1) - a(n - 2) + 2 * a(n - 3) - 4 * a(n - 4) + 2 * a(n - 5) - a(n - 6) + 2 * a(n - 7) - a(n - 8). ●

► [A211630] 0,4,32,106,252,495,855,1359,2029,2891,3970,5286,6866,8732,10910,13425,16297,19553,23215,27309,31860,36888,42420,48478,55088 ★ Number of ordered triples (w,x,y) with all terms in {- n, ..., - 1, 1, ..., n } and 5w + x + y > 0. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 5) - 3 * a(n - 6) + 3 * a(n - 7) - a(n - 8) for n > 7. ●

► [A211626] 0,4,32,108,250,492,854,1360,2021,2885,3965,5285,6849,8719,10901,13419,16270,19530,23198,27298,31820,36854,42392,48458,55035 ★ Number of ordered triples (w,x,y) with all terms in {- n,... - 1,1,...,n } and w + 4x + 4y>0. ● a(n) = 2 * a(n - 1) - a(n - 2) + 2 * a(n - 4) - 4 * a(n - 5) + 2 * a(n - 6) - a(n - 8) + 2 * a(n - 9) - a(n - 10) for n>9. ●

► [A211627] 0,4,32,108,256,492,854,1360,2034,2900,3965,5285,6869,8741,10925,13419,16297,19559,23229,27331,31854,36890,42430,48498,55118 ★ Number of ordered triples (w,x,y) with all terms in {- n,... - 1,1,...,n } and w + 5x + 5y>0. ● a(n) = 2 * a(n - 1) - a(n - 2) + 2 * a(n - 5) - 4 * a(n - 6) + 2 * a(n - 7) - a(n - 10) + 2 * a(n - 11) - a(n - 12) for n>11. ●

► [A338322] 0,0,0,4,32,116,320,728,1472,2796,5056,8584,13792,21136,31168,45464,64704,90036,122784,164472,216864,281584,360416,457400,574304 ★ a(n) is the number of regular hexagons with all six vertices (x,y,z) in the set { 1,2,...,n }^ 3. ● a(n) >= 4 * (n - 2) ^ 3 for n >= 2. ●

► [A088658] 0,4,32,124,320,716,1328,2340,3792,5852,8544,12260,16864,22916,30272,39188,49824,62948,78080,96348,117232,141260,168480,200292,235680 ★ Number of triangles in an n X n unit grid that have minimal possible area (of 1 / 2). ● a(n) = 4 * (n - 1) ^ 2 + 4 * Sum _{ i=2..n - 1 } (n - i) * (2n - i) * phi(i). - _ Chai Wah Wu _ , Aug 15 2021 ●

► [A088802] 1,4,32,128,2048,8192,65536,262144,8388608,33554432,268435456,1073741824,17179869184,68719476736,549755813888,2199023255552,140737488355328,562949953421312,4503599627370496,18014398509481984 ★ Denominators of the coefficients of powers of n ^ (- 1) in the Romanovsky series expansion of th e mean of the standard deviation from a normal population. ● a(n) = denominator(Sum _{ k=0..n } binomial(2 * k, k) / 8 ^ k). ● a(n) = denominator(binomial(1 / 4, n)). (End) ●

► [A123854] 1,4,32,128,2048,8192,65536,262144,8388608,33554432,268435456,1073741824,17179869184,68719476736,549755813888,2199023255552,140737488355328,562949953421312,4503599627370496,18014398509481984,28823037615171174,1152921504606846976 ★ Denominators in an asymptotic expansion for the cub ic recurrence sequence A123851. ● a(n) = denominator(binomial(1 / 4,n)). - _ Peter Luschny _ , Apr 07 2016 ●

► [A332430] 4,32,145,514,1605,4618,12565,32810,83029,204970,495957,1180330,2770261,6425259,14751062,33565356,75781465,169913009,378623329,839035584,1850037628,4060785394,8876545497,19330149277,41948632852 ★ a(n) = floor(2 ^ n / (1 - cos(1 / n))). ● a(n) = floor(2 ^ n / (1 - cos(1 / n))). ●

► [A270287] 1,4,32,157,689,2881,11777,47617,191489,768001,3076097,12312577,49266689,197099521,788463617,3153985537 ★ Number of active (ON,black) cells at stage 2 ^ n - 1 of the two - dimensional cellular automaton defined by "Rule 145", based on the 5 - celled von Neumann neighborhood. ● a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3) for n>4. ●

► [A290026] 0,0,4,32,160,640,2240,7168,21504,61440,168960,450560,1171456,2981888,7454720,18350080,44564480,106954752,254017536,597688320,1394606080,3229614080,7428112384,16978542592,38587596800 ★ Number of 3 - cycles in the n - halved cube graph. ● a(n) = 2 ^ (n - 1) * binomial(n,3). ● a(n) = 8 * a(n - 1) - 24 * a(n - 2) + 32 * a(n - 3) - 16 * a(n - 4). ●

► [A083299] 1,4,32,160,1088,6016,38144,220672,1356800,8009728,48582656,289398784,1744781312,10435133440,62745018368,375933239296,2257746919424,13537891581952,81261709230080,487432816427008,2925146654375936 ★ a(n) = (4 * 6 ^ n + (- 4) ^ n) / 5. ● a(n) = (4 * 6 ^ n + (- 4) ^ n) / 5. ●

► [A269811] 1,4,32,164,732,3084,12692,51604,208492,839324,3371652,13526244,54217052,217190764,869703412,3481580084 ★ Number of active (ON,black) cells at stage 2 ^ n - 1 of the two - dimensional cellular automaton defined by "Rule 33", based on the 5 - celled von Neumann neighborhood. ● a(n) = - 2 + (- 1) ^ n / 3 - (5 * 2 ^ (1 + n)) / 3 - 5 * 3 ^ (- 2 + n) + 13 * 4 ^ (- 1 + n) for n>1. ● a(n) = (117 * 2 ^ (2 * n) - 15 * 2 ^ (n + 3) - 20 * 3 ^ n - 60) / 36 for n>1 and even. ● a(n) = (117 * 2 ^ (2 * n) - 15 * 2 ^ (n + 3) - 20 * 3 ^ n - 84) / 36 for n> 1 and odd. ●

► [A271804] 1,4,32,164,744,3196,13376,55220,226200,922156,3747248,15191396,61473672,248391004,1002403616,4040994836 ★ Number of active (ON,black) cells at stage 2 ^ n - 1 of the two - dimensional cellular automaton defined by "Rule 401", based on the 5 - celled von Neumann neighborhood. ● a(n) = (1 - 2 ^ (2 + n) + 4 ^ (1 + n) + (2 ^ (- 1 - n) * (- (3 - sqrt(17)) ^ n * (- 7 + sqrt(17)) - (3 + sqrt(17)) ^ n * (7 + sqrt(17)))) / sqrt(17)) for n>0. ●

► [A099133] 0,1,4,32,192,1280,8192,53248,344064,2228224,14417920,93323264,603979776,3909091328,25300041728,163745628160,1059783180288,6859062771712,44392781971456,287316132233216,1859549040476160,12035254277636096,77893801758162944 ★ 4 ^ (n - 1) * Fibonacci(n). ● a(n) = 4 * a(n - 1) + 16 * a(n - 2). ● a(n) = (2 + 2 * sqrt(5)) ^ n / (4 * sqrt(5)) - (2 - sqrt(5)) ^ n / (4 * sqrt(5)). ● a(- n) = - (- 1) ^ n * a(n) / 16 ^ n for all n in Z. - _ Michael Somos _ , Mar 18 2014 ●

► [A248216] 0,4,32,208,1280,7744,46592,279808,1679360,10077184,60465152,362795008,2176778240,13060685824,78364147712,470184951808,2821109841920,16926659313664,101559956406272,609359739486208,3656158439014400,21936950638280704 ★ a(n) = 6 ^ n - 2 ^ n. ● a(n) = 8 * a(n - 1) - 12 * a(n - 2). ●

► [A133642] 1,4,32,208,1472,10048,69632,479488,3310592,22832128,157540352,1086803968,7498022912,51728171008,356873142272,2462055989248,16985686802432,117183866994688,808449204027392,5577474156003328,38478880704561152,265465005938311168 ★ a(n) = 4 * a(n - 1) + 20 * a(n - 2) for n>=3, a(0)=1, a(1)=4, a(2)=32. ● a(n) = - [2 - 2 * sqrt(6)] ^ (n - 1) * sqrt(6) + sqrt(6) * [2 + 2 * sqrt(6)] ^ (n - 1) + 2 * [2 - 2 * sqrt(6)] ^ (n - 1) + 2 * [2 + 2 * sqrt(6)] ^ (n - 1) + 1 / 5 * [C(2 * n,n) mod 2], with n>=0. - _ Paolo P. Lava _ , Nov 18 2008 ●

► [A098981] 0,0,4,32,212,1184,6256 ★ Total number of self - intersections of all walks on the square lattice starting at the origin. ● a(n) = r * a(n - 1) + w(n) - b(n); a(0)=0; or a(n) = r * a(n - 1) + Sum _{ m=0 }^{ n - 1 } b(m) q(n - m); a(0)=0; ●

► [A125823] 0,4,32,228,1600,11204,78432,549028,3843200,26902404,188316832,1318217828,9227524800,64592673604,452148715232,3165041006628,22155287046400,155087009324804,1085609065273632,7599263456915428,53194844198408000,372363909388856004,2606547365721992032 ★ Numbers whose base 7 representation is 4444....4. ● a(n) = 7 * a(n - 1) + 4, with a(1)=0. - _ Vincenzo Librandi _ , Sep 30 2010 ●

► [A273053] 0,4,32,252,1984,15620,122976,968188,7622528,60012036,472473760,3719778044,29285750592,230566226692,1815244062944,14291386276860,112515846151936,885835382938628,6974167217357088,54907502355918076,432285851629987520,3403379310683982084 ★ Numbers n such that 15 * n ^ 2 + 16 is a square. ● a(n) = 8 * a(n - 1) - a(n - 2) for n>2. ● a(n) = - (2 * ((4 - sqrt(15)) ^ n * (4 + sqrt(15)) + (- 4 + sqrt(15)) * (4 + sqrt(15)) ^ n)) / sqrt(15). - _ Colin Barker _ , May 14 2016 ● a(n + 2) - a(n + 1) = 4 * 070997(n) for n>0. - _ Wesley Ivan Hurt _ , May 14 2016 ●

► [A213413] 4,32,253,1970,15109,114302,854473,6323090,46390429,337896422,2446208593,17618827610,126352826149,902840120942,6431323577113,45694024938530,323937251540269,2292187810495862,16193839911208033,114251845502143850 ★ Half the number of n X 3 binary arrays with no 3 X 3 submatrix formed wi th any three rows and columns equal to J - I. ● a(n) = (5 ^ n - 3 * 6 ^ n + 3 * 7 ^ n) / 2. ● a(n) = 18 * a(n - 1) - 107 * a(n - 2) + 210 * a(n - 3). ●

► [A092811] 1,4,32,256,2048,16384,131072,1048576,8388608,67108864,536870912,4294967296,34359738368,274877906944,2199023255552,17592186044416,140737488355328,1125899906842624,9007199254740992,72057594037927936 ★ Expansion of (1 - 4 * x) / (1 - 8 * x). ● a(n) = 8 ^ n / 2 + 0 ^ n / 2. ● a(n) = 4 * 8 ^ (n - 1), a(0)=1. - _ Vincenzo Librandi _ , Jun 16 2011 ●

► [A013731] 4,32,256,2048,16384,131072,1048576,8388608,67108864,536870912,4294967296,34359738368,274877906944,2199023255552,17592186044416,140737488355328,1125899906842624,9007199254740992,72057594037927936,576460752303423488 ★ a(n) = 2 ^ (3 * n + 2). ● a(n) = 8 * a(n - 1), n > 0; a(0)=4. ●

► [A363440] 1,4,32,256,2208,19712,183808,1763328,17332992,173621248,1766188288,18196260864,189474570240,1990887063552,21082432966656,224766598100992,2410570956881920,25988893875994624,281505478557407232,3062014088362049536 ★ G.f. satisfies A(x) = exp(Sum _{ k>=1 } A(x ^ k) * (4 * x) ^ k / k). ● a(0) = 1; a(n) = (1 / n) * Sum _{ k=1..n } (Sum _{ d|k } d * 4 ^ (k / d) * a(d - 1)) * a(n - k). ●

► [A199566] 4,32,284,2552,22964,206672,1860044,16740392,150663524,1355971712,12203745404,109833708632,988503377684,8896530399152,80068773592364,720618962331272,6485570660981444,58370135948832992,525331223539496924 ★ (7 * 9 ^ n + 1) / 2. ● a(n) = 9 * a(n - 1) - 4. ● a(n) = 10 * a(n - 1) - 9 * a(n - 2). ●

► [A370160] 1,4,32,286,2688,26004,256322,2559960,25816576,262307824,2681024032,27534988936,283926200706,2937573629800,30480431060160,317053438632786,3305105501423616,34519689280675808,361146528603877520,3784045825018539968,39702608870540290688 ★ Coefficient of x ^ n in the expansion of ((1 + x) ^ 2 * (1 + x + x ^ 2) ^ 2) ^ n. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(2 * n,k) * binomial(4 * n - k,n - 2 * k). ●

► [A372464] 1,4,32,286,2688,26004,256334,2560352,25824768,262447684,2683152032,27565067600,284330359950,2942808943572,30546407611136,317867390671536,3314979452815360,34637849797078380,362544825234198020,3800439733237986800,39893311092729794688 ★ Coefficient of x ^ n in the expansion of 1 / ((1 - x) * (1 - x + x ^ 2)) ^ (2 * n). ● a(n) = Sum _{ k=0..floor(n / 2) } (- 1) ^ k * binomial(2 * n + k - 1,k) * binomial(5 * n - k - 1,n - 2 * k). ●

► [A370099] 1,4,32,292,2816,28004,284000,2919620,30316544,317222212,3339504032,35329425124,375282559232,4000059761572,42760427177696,458259268924292,4921911787962368,52965710906750084,570951048018417440,6164049197776406180,66639047280436354816 ★ a(n) = Sum _{ k=0..n } binomial(2 * n,k) * binomial(3 * n - k - 1,n - k). ● a(n) = [x ^ n] ((1 + x) ^ 2 / (1 - x) ^ 2) ^ n. ●

► [A294592] 1,4,32,304,3072,32024,340352,3666016,39878656,437091892,4819567552,53401892240,594093969408,6631726263608,74242911364864,833237193123104,9371924860764160,105614054423502408,1192210691317862048,13478559927485340144,152588996020498655232,1729590806617202662528 ★ a(n) = [x ^ n] (theta _ 3(x) / theta _ 4(x)) ^ n, where theta _ () is the Jacobi theta function. ● a(n) = [x ^ n] Product _{ k>=0 } ((1 + x ^ (2 * k + 1)) / (1 - x ^ (2 * k + 1))) ^ (2 * n). ●

► [A052704] 0,1,4,32,320,3584,43008,540672,7028736,93716480,1274544128,17611882496,246566354944,3489862254592,49855175065600,717914520944640,10409760553697280,151860036312760320,2227280532587151360,32823081532863283 20

0,4857816066863765913601721732627291188078592 0 ⋆ Apart from the leading term, a(n) = Catalan(n - 1) * 4 ^ (n - 1). ● a(n) = 16 ^ n * Gamma(n + 1 / 2) / Gamma(n + 2) / Pi ^ (1 / 2). ● a(0)=0, a(1)=1, a(n) = 4 * Sum _{ i=1..n - 1 } a(i) * a(n - i). - _ Benoit Cloitre _ , Mar 16 2004 ● a(n + 1) = (1 / (8 * Pi)) * Integral _{ x=0..16 } x ^ n * sqrt(x * (16 - x)) / x dx; a(n + 1) = (1 / (8 * Pi)) * Integral _{ x= - 4..4 } x ^ (2 * n) * sqrt(4 - x) * sqrt(4 + x) * dt. - _ Paul Barry _ , Oct 01 2007 ● a(n) = upper left term of M ^ (n - 1), where M is a n infinite matrix as follows: ● a(n) = 4 * Sum _{ k=1..n - 1 } a(k) * a(n - k) if n>1. - _ Michael Somos _ , Jul 23 2011 ●

► [A362676] 1,4,32,328,3840,48504,641984,8765712,122370048,1736921560,24975268032,362872728816,5317470233088,78479369810352,1165299414952320,17393306836535328,260791399517110272,3925811865435871896,59305018671515758784 ⋆ a(n) = Sum _{ k = 0..n } 4 ^ (n - k) * binomial(n,k) * binomial(n - 1,k) * binomial(2 * k,k). ● a(n) = 4 ^ n * hypergeom ([- n, 1 - n, 1 / 2], [1, 1], 1). ● a(n) = Sum _{ k = 0..n } (- 1) ^ k * binomial(- n,k) * binomial(2 * n - 2 * k,n - k) * binomial(2 * k,k). Cf. A081085. _ Peter Bala _ , Jul 07 2023 ● a(n) = binomial(2 * n,n) * hypergeom([- n, n, 1 / 2], [1, 1 / 2 - n], 1). - _ Peter Bala _ , Jul 07 2023 ●

► [A037964] 0,4,32,472,6400,92504,1351616,20060016,300533760,4537591960,68923172032,1052049834576,16123800489472,247959271674352,3824345280321920,59132290859989472,916312070170755072 ⋆ a(n) = (1 / 2) * (binomial(4 * n, 2 * n) - (- 1) ^ n * binomial(2 * n,n)). ● a(n) = Sum _{ k=0..n - 1 } binomial(2 * n, 2 * k + 1) ^ 2. ●

► [A034663] 4,32,500,9632,196964,4101152,85884500,1801914272,37828630724,794320419872,16680163512500,350279478046112,7355841353205284,154472474629724192,3243920610749364500,68122323330527541152 ⋆ Sum of n - th powers of divisors of 21. ● a(n) = (1 + 3 ^ n) * (1 + 7 ^ n). - _ Bruno Berselli _ , Apr 17 2014 ●

► [A066645] 0,4,33,113,268,523,904,1436,2144,3053,4188,5575,7238,9202,11494,14137,17157,20579,24429,28730,33510,38792,44602,50965,57905 ⋆ a(n) = floor((4 / 3) * Pi * n ^ 3). ● a(n) = floor((4 / 3) * Pi * n ^ 3). ●

► [A152041] 0,4,33,129,355,795,1554,2758,4554,7110,10615,15279,21333,29029,38640,50460,64804,82008,102429,126445,154455,186879,224158,266754,315150 ⋆ A008893 / 2. ● a(n) = n * (n + 1) * (7 * n ^ 2 + 7 * n + 2) / 8. ● a(0)=0, a(1)=4, a(2)=33, a(3)=129, a(4)=355, a(n)=5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) [From Harvey P. Dale, Jul 20 2011] ●

► [A364946] 0,0,0,4,33,140,424,1039,2213,4262,7606,12786,20482,31532,46952,67957,95983,132710,180086,240352,316068,410140,525848,666875,837337 ⋆ Sixth Lie - Betti number of a path graph on n vertices. ● a(1) = a(2) = a(3) = 0, a(4) = 4, a(5) = 33, a(n) = (n ^ 6 + 45 * n ^ 5 - 125 * n ^ 4 - 2865 * n ^ 3 + 23524 * n ^ 2 - 76740 * n + 98640) / 720 for n >= 6. ●

► [A095671] 4,33,153,525,1485,3663,8151,16731,32175,58630,102102,171054,277134,436050,668610,1001946,1470942,2119887,3004375,4193475,5772195,7844265,10535265,13996125,18407025 ⋆ Ninth column (m=8) of (1,4) - Pascal triangle A095666. ● a(0)=4, a(1)=33, a(2)=153, a(3)=525, a(4)=1485, a(5)=3663, a(6)=8151, a(7)=16731, a(8)=32175, a(n)=9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9). - _ Harvey P. Dale _ , Jul 07 2015 ●

► [A273676] 1,4,33,161,705,2945,12033,48641,195585,784385,3141633,12574721,50315265,201293825,805240833,3221094401 ⋆ Number of active (ON,black) cells at stage 2 ^ n - 1 of the two - dimensional cellular automaton defined by ”Rule 833”, based on the 5 - celled von Neumann neighborhood. ● a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3) for n>4. ●

► [A097705] 1,4,33,200,1361,8844,58513,384400,2532321,16664084,109705793,722112600,4753448881,31289709724,205967469873,1355794944800,8924626767041,58747021129764,386706739558753,2545526317441000 ⋆ a(n) = 4 * a(n - 1) + 17 * a(n - 2), a(1)=1, a(2)=4. ● a(n)= - (1 / 42) * [2 - sqrt(21)] ^ n * sqrt(21) + (1 / 42) * sqrt(21) * [2 + sqrt(21)] ^ n, with n>=0. -_ Paolo P. Lava _ , Oct 02 2008 ●

► [A081007] 0,4,33,232,1596,10945,75024,514228,3524577,24157816,165580140,1134903169,7778742048,53316291172,365435296161,2504730781960,17167680177564,117669030460993,806515533049392,5527939700884756,37889062373143905,259695496911122584 ⋆ a(n) = Fibonacci(4n + 1) - 1, or Fibonacci(2n) * Lucas(2n + 1). ● a(n) = 8 * a(n - 1) - 8 * a(n - 2) + a(n - 3). ● a(n) = - 1 + (1 / 2) * ((7 / 2 - (3 / 2) * sqrt(5)) ^ n + (7 / 2 + (3 / 2) * sqrt(5)) ^ n) + (1 / 10) * sqrt(5) * ((7 / 2 + (3 / 2) * sqrt(5)) ^ n - (7 / 2 - (3 / 2) * sqrt(5)) ^ n), with n >= 0. - _ Paolo P. Lava _ , Nov 28 2008 ● a(n) = Sum _{ i=1..2n } binomial(2n + i, 2n - i). - _ Wesley Ivan Hurt _ , Oct 06 2013 ●

► [A041024] 4,33,268,2177,17684,143649,1166876,9478657,76996132,625447713,5080577836,41270070401,335241141044,2723199198753,22120834731068,179689877047297,1459639851109444,11856808685922849,96314109338492236 ⋆ Numerators of continued fraction convergents to sqrt(17). ● a(n) = ((- i) ^ (n + 1)) * T(n + 1, 4 * i) with T(n, x) Chebyshev’s polynomials of the first kind (see A053120) and i ^ 2 = - 1. ● a(n) = 8 * a(n - 1) + a(n - 2), n > 1. - _ Philippe Deléham _ , Nov 20 2008 ● a(n) = (1 / 2) * sqrt(17) * ((4 + sqrt(17)) ^ n - (4 - sqrt(17)) ^ n) + 2 * ((4 + sqrt(17)) ^ n + (4 - sqrt(17)) ^ n), with n >= 0. - _ Paolo P. Lava _ , Nov 28 2008 ● a(n) = ((4 + sqrt(17)) ^ n + (4 - sqrt(17)) ^ n) / 2. - _ Sture Sjöstedt _ , Dec 08 2011 ●

► [A088317] 1,4,33,268,2177,17684,143649,1166876,9478657,76996132,625447713,5080577836,41270070401,335241141044,2723199198753,22120834731068,179689877047297,1459639851109444,11856808685922849,96314109338492236,782369683393860737,6355271576489378132,51624542295308885793 ⋆ a(n) = 8 * a(n - 1) + a(n - 2), starting with a(0) = 1 and a(1) = 4. ● a(n) = ((4 + sqrt(17)) ^ n + (4 - sqrt(17)) ^ n) / 2. ● a(n) = Sum _{ k=0..floor(n / 2) } C(n, 2 * k) * 17 ^ k * 4 ^ (n - 2 * k). ● a(n) = (- i) ^ n * T(n, 4 * i) with T(n, x) Chebyshev’s polynomials of the first kind (see A053120) and i ^ 2= - 1. (End) ● a(n) = (1 / 2) * ((33 + 8 * sqrt(17)) * (4 - sqrt(17)) ^ (n + 2) + (33 - 8 * sqrt(17)) * (4 + sqrt(17)) ^ (n + 2)). - _ Harvey P. Dale _ , May 07 2012 ●

► [A054371] 1,1,1,4,33,300,3412,40770,518043,6830545,92909684,1295151600,18426823044,266696759064,3916798516462,58253090490630,875948658280305,13299481192954961,203661940884670135,3142707632566279222,48829032430870168660,763383551090733489744 ⋆ Number of unlabeled 7 - gonal cacti having n polygons. ● a(n) = ((Sum _{ d|n } phi(n / d) * binomial(7 * d, d)) + (Sum _{ d|gcd(n - 1, 7) } phi(d) * binomial(7 * n / d, (n - 1) / d))) / (7 * n) - binomial(7 * n, n) / (6 * n + 1) for n > 0. - _ Andrew Howroyd _ , May 04 2018 ●

► [A198900] 1,4,33,380,4801,62004,804833,10459180,135958401,1767426404,22976444833,298693487580,3883014452801,50479185229204,656229400008033,8530982176189580,110902768218720001,1441735986628126404 ⋆ Number of n X 2 0..4 arrays with values 0..4 introduced in row major order and no element equal to any horizontal or vertical neighbor. ● a(n) = (26 + 13 * 3 ^ n + 13 ^ n) / 78. ●

► [A049293] 0,0,4,34,220,1330,7924,47194,281740,1685410,10095844,60522154,362968060,2177301490,13062263764,78368897914,470199235180,2821152757570,16926788191684,101560343302474,609360900699100 ⋆ Number of subgroups of index 3 in fundamental group of a closed surface of characteristic - n. ● a(n) = 6 ^ (n + 1) + 3 ^ (n + 1) - 3 * 2 ^ (n + 1) + 1. ● a(- 2)=0, a(- 1)=0, a(0)=4, a(1)=34, a(n)=12 * a(n - 1) - 47 * a(n - 2) + 72 * a(n - 3) - 36 * a(n - 4) [_ Harvey P. Dale _ , Mar 03 2012] ●

► [A198687] 4,34,244,1714,12004,84034,588244,4117714,28824004,201768034,1412376244,9886633714,69206436004,484445052034,3391115364244,23737807549714,166164652848004,1163152569936034,8142067989552244,56994475926865714 ⋆ 5 * 7 ^ n - 1. ● a(n) = 7 * a(n - 1) + 6 = 8 * a(n - 1) - 7 * a(n - 2), n>1. ●

► [A216239] 0,0,1,4,34,260,2275,21784,228676,2614296,32372805,431971100,6182204006,94495208444,1536740258599,26498747241680,482990781797000,9279452377499504,187442757190618761,3971627425918503156,88084356619901450410,2040857112777615061300 ⋆ Total number of inversions in all derangement permutations of [n]. ● a(n) = SUM(k=0..n - 2, (- 1) ^ k * n! / k! * (3 * n + k) * (n - k - 1)) / 12. - _ Max Alekseyev _ , Aug 13 2013 ●

► [A155628] 1,4,34,280,2146,15784,113554,807160,5699266,40091464,281426674,1973132440,13824509986,96821901544,677954637394,4746487768120,33228635602306,232613334118024,1628344878433714,11398620307466200 ⋆ a(n) = 7 ^ n - 4 ^ n + 1 ^ n. ● a(n) = 11 * a(n - 1) - 28 * a(n - 2) + 18 with a(0)=1, a(1)=4. - _ Vincenzo Librandi _ , Jul 21 2010 ●

► [A005569] 4,34,308,3024,31680,349206,4008004,47530912,579058896,7215393640,91644262864,1183274479040,15497363512800,205519758825150,2755739674246500,37314861293793600,509727100259638800 ⋆ Number of walks on square lattice. ● a(n)(n - 1)(n + 2)(n + 3)(5n + 2) = a(n - 1)4n(2n - 1)(2n + 1)(5n + 7), n>1. - _ Michael Somos _ , Mar 04 2003 ●

► [A370171] 1,4,34,319,3146,31929,330145,3458620,36585194,389893576,4179819559,45025583343,486961123577,5284324727023,57508473997848,627410367071169,6859805605391466,75144918246760324,824558759018846116,9061483047671168437,99716283188165243471 ⋆ Coefficient of x ^ n in the expansion of ((1 + x) * (1 + x + x ^ 2) ^ 3) ^ n. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(3 * n, k) * binomial(4 * n - k,n - 2 * k). ●

► [A208215] 1,4,34,322,3164,31484,314662,3149674,31544384,315981452,3165414034,31710994234,317682195692,3182564368244,31883205466534,319408833724882,3199866987994304,32056562443839284,321145602837871522,3217266324544621714,32230871396722195484 ⋆ Number of ways of dividing a 3 X n rectangle into rectangles of integer side lengths. ● a(n) = 18 * a(n - 1) - 100 * a(n - 2) + 216 * a(n - 3) - 153 * a(n - 4) with n>4 (see paper in Link lines, p. 1). ● a(n) = 15 * a(n - 1) - 55 * a(n - 2) + 51 * a(n - 3) with n>3. [_ Bruno Berselli _ , Apr 24 2012] ●

► [A337390] 1,4,34,328,3334,34904,372436,4027216,43976774,483860632,53556970845956928881 6,665238165916,7454247891952,83769667651816,943744775565728,10655369806377542,120535523282756632,1365840013196530348,15500428304345011504,176148760580561346484 ⋆ Expansion of sqrt((1 - 2 * x + sqrt(1 - 12 * x + 4 * x ^ 2)) / (2 * (1 - 12 * x + 4 * x ^ 2))). ● a(n) = Sum _{ k=0..n } 2 ^ (n - k) * binomial(2 * k,k) * binomial(2 * n,2 * k). ● a(0) = 1, a(1) = 4 and n * (2 * n - 1) * (4 * n - 5) * a(n) = (4 * n - 3) * (24 * n ^ 2 - 36 * n + 8) * a(n - 1) - 4 * (n - 1) * (2 * n - 3) * (4 * n - 1) * a(n - 2) for n > 1. - _ Seiichi Manyama _ , Aug 28 2020 ●

► [A093137] 1,4,34,334,3334,33334,333334,3333334,33333334,333333334,3333333334,33333333334,333333333334,3333333333334,33333333333334,333333333333334,3333333333333334,33333333333333334,333333333333333334 ⋆ Expansion of (1 - 7 * x) / ((1 - x)(1 - 10 * x)). ● a(n) = 3 * 10 ^ n / 9 + 6 / 9. ● a(n) = 10 * a(n - 1) - 6 with a(0)=1. - _ Vincenzo Librandi _ , Aug 02 2010 ●

► [A333095] 1,4,34,337,3554,38754,431521,4874377,55639010,640177033,7412165034,86256322816,1007980394849,11820510331777,139032549536551,1639506780365337,19376785465043938,229458302589724067,2721958273545613513,32339465512495259708,384758834631081248554 ⋆ a(n) = the n - th order Taylor polynomial (centered at 0) of c(x) ^ (3 * n) evaluated at x = 1, where c(x) = (1 - sqrt(1 - 4 * x)) / (2 * x) is the o.g.f. of the sequence of Catalan numbers A000108. ● a(n) = Sum _{ k = 0..n } 3 * n / (3 * n + k) * binomial(3 * n + 2 * k - 1,k) for n >= 1. ● a(n) = [x ^ n] ((1 + x) * c ^ 3(x / (1 + x))) ^ n. ●

► [A199752] 4,34,364,3994,43924,483154,5314684,58461514,643076644,7073843074,77812273804,855935011834,9415285130164,103568136431794,1139249500749724,12531744508246954,137849189590716484,1516341085497881314 ⋆ 3 * 11 ^ n + 1 ● a(n) = 11 * a(n - 1) - 10. ● a(n) = 12 * a(n - 1) - 11 * a(n - 2). ●

► [A264607] 1,1,4,34,364,4269,52844,679172,8976188,121223668,1665558544,23207619274,327167316436,4657884819670,66875794530120,967202289590280,14077773784645980,206058395118133932,3031188276557963312,44789055557553810152 ⋆ Degeneracies of entanglement witness eigenstates for spin 3 / 2 particles. ● a(n) = (1 / Pi) * int((sin(4x) / sin(x)) ^ (2n) * (sin(x)) ^ 2,x,0,2 Pi). - _ Thomas Curtright _ , Jun 24 2016 ● a(n) = Catalan(3 * n) * 2F1(- 1 - 3 * n, - 2 * n; 1 / 2 - 3 * n;1 / 2). - _ Benedict W. J. Irwin _ , Sep 27 2016 ●

► [A198976] 1,4,34,481,8731,174454,3603244,75251971,1577395861,33105096904,695065679254,14595390246661,306496273473391,6436373295247354,135163500079092064,2838431127851480551,59607037068329713321 ⋆ Number of n X 2 0..5 arrays with values 0..5 introduced in row major order and no element equal to any horizontal or vertical neighbor. ● a(n) = (189 + 56 * 3 ^ n + 18 * 7 ^ n + 21 ^ n) / 504. ●

► [A257600] 4,35,100,210,380,627,970,1430,2030,2795,3752,4930,6360,8075,10110,12502,15290,18515,22220,26450,31252,36675,42770,49590,57190 ⋆ Expansion of (4 + 15 * x - 35 * x ^ 2 + 20 * x ^ 3 - 2 * x ^ 5) / (1 - x) ^ 5. ● a(n) = (24 + 250 * n + 125 * n ^ 2 + 20 * n ^ 3 + n ^ 4) / 12 for n > 0. - _ Colin Barker _ , Apr 15 2016 ●

► [A211612] 0,4,35,117,274,530,909,1435,2132,3024,4135,5489,7110,9022,11249,13815,16744,20060,23787,27949,32570,37674,43285,49427,56124 ⋆ Number of ordered triples (w,x,y) with all terms in {- n,... - 1,1,...,n } and w + x + y>=0. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ● a(n) = (n * (- 3 + 3 * n + 8 * n ^ 2)) / 2. ●

► [A228887] 4,35,120,286,560,969,1540,2300,3276,4495,5984,7770,9880,12341,15180,18424,22100,26235,30856,35990,41664,47905,54740,62196,70300 ⋆ a(n) = binomial(3 * n + 1,3). ● a(n) = - a(- n) = binomial(3 * n + 1,3) = 1 / 6 * (3 * n + 1) * (3 * n) * (3 * n - 1). ●

► [A354855] 0,4,35,228,1287,6820,34667,171332,829455,3952836,18604979,86693156,400623383,1838490212,8387044091,38065809540,171999313951,774138335108,3472202765123,15525625108324,69229056160039,307921937307684,1366491508589195,6051666872017348 ⋆ a(n) = floor(n * (2 + sqrt(5)) ^ n), equivalently, floor(n * phi ^ (3n)), where phi = (1 + sqrt(5)) / 2 is the golden ratio. ● a(n) = floor((2 + sqrt(5)) ^ n * n). ● a(n) = floor(n * phi ^ (3n)) where phi=(1 + sqrt(5)) / 2 is the golden ratio. ●

► [A128811] 1,4,35,240,3003,26880,415701,4435200,79676025,968647680,19535112675,263472168960,5837993287875,85816649318400,2058476433304725,32567418416332800,836589039864843825,14112547980410880000 ⋆ A113551(n) / A006882(n). ● a(n) = n * (n + 2) * ... * ((3 * n) - 2) / n!!. ●

► [A145607] 0,4,35,279,2200,17324,136395,1073839,8454320,66560724,524031475,4125691079,32481497160,255726286204,2013328792475,15850904053599,124793903636320,982500325036964,7735208696659395,60899169248238199 ⋆ Numbers k such that (3 * (2 * k + 1) ^ 2 + 2) / 5 is a square. ● a(n + 2) = 8 * a(n + 1) - a(n) + 3. ● a(n) = - (1 / 2) + (1 / 4) * ((4 - sqrt(15)) ^ (n - 1) + (4 + sqrt(15)) ^ (n - 1)) - (1 / 12) * sqrt(15) * ((4 - sqrt(15)) ^ (n - 1) - (4 + sqrt(15)) ^ (n - 1)). - _ Paolo P. Lava _ , Nov 25 2008 ●

► [A188527] 4,35,313,2813,25309,227765,2049853,18448613,166037389,1494336245,13449025693,121041230213,1089371069869,9804339624725,88239056614333,794151509512613,7147363585580749,64326272270161205,578936450431319773,5210428053881615813,46893852484934018029 ⋆ a(n) = A188526(n) / 7. ● a(n) = (3 ^ (2 * n + 3) + 2 ^ n) / 7. ●

► [A215541] 1,4,35,350,3705,40480,451269,5101360,58261125,670609940,7766844470,90404916420,1056658719675,12393263030400,145787921878840,1719353829326880,20322351313767965,240674861588534100,2855214354095519625,33924757188414045330,403641797464597415570 ⋆ a(n) = binomial(5 * n,n) * (3 * n + 1) / (4 * n + 1). ● a(n) = C(5 * n,n) * (3 * n + 1) / (4 * n + 1). ● a(n) = [x ^ n] ((1 - sqrt(1 - 4 * x)) / (2 * x)) ^ (3 * n + 1). - _ Ilya Gutkovskiy _ , Nov 01 2017 ●

► [A183878] 4,35,446,2827,13686,59859,250198,1023347,4140830,16663627,66867438,267922683,1072654438,4292666147,17175010598,68709242467,274856398542,1099466524251,4397952122110,17591988892331,70368333113174 ⋆ Number of arrangements of n + 2 numbers in 0..3 with each number being the sum mod 4 of two others. ● a(n) = 12 * a(n - 1) - 58 * a(n - 2) + 148 * a(n - 3) - 217 * a(n - 4) + 184 * a(n - 5) - 84 * a(n - 6) + 16 * a(n - 7) for n>9. ●

► [A152760] 0,4,36,96,184,300,444,616,816,1044,1300,1584,1896,2236,2604,3000,3424,3876,4356,4864,5400,5964,6556,7176,7824 ⋆ 4 times 9 - gonal numbers: a(n) = 2 * n * (7 * n - 5). ● a(n) = a(n - 1) + 28 * n - 24 (with a(0)=0). - _ Vincenzo Librandi _ , Nov 26 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A016826] 4,36,100,196,324,484,676,900,1156,1444,1764,2116,2500,2916,3364,3844,4356,4900,5476,6084,6724,7396,8100,8836,9604 ⋆ a(n) = (4n + 2) ^ 2. ● a(n) = a(n - 1) + 32 * n (with a(0)=4). - _ Vincenzo Librandi _ , Dec 15 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3), with a(0)=4, a(1)=36, a(2)=100. - _ Harvey P. Dale _ , Nov 24 2011 ●

► [A060783] 0,0,4,36,132,340,720,1344,2296,3672,5580,8140,11484,15756,21112,27720,35760,45424,56916,70452,86260,104580,125664,149776,177192 ⋆ Number of conics which pass through 3 points and are bitangent to a general curve of order n. ● a(n) = (n - 1) * n * (n ^ 2 + 3 * n - 6) / 2. ●

► [A173961] 4,36,140,364,756,1364,2236,3420,4964,6916,9324,12236,15700,19764,24476,29884,36036,42980,50764,59436,69044,79636,91260,103964,117796 ⋆ Averages of two consecutive even cubes: (n ^ 3 + (n + 2) ^ 3) / 2. ● a(n) = 8n ^ 3 - 12n ^ 2 + 12n - 4. - _ Charles R Greathouse IV _ , Jan 02 2012 ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Vincenzo Librandi _ , Jul 02 2012 ●

► [A035287] 0,4,36,144,400,900,1764,3136,5184,8100,12100,17424,24336,33124,44100,57600,73984,93636,116964,144400,176400,213444,256036,304704,360000 ⋆ Number of ways to place a non - attacking white and black rook on n X n chessboard. ● a(n) = n ^ 2 * (n - 1) ^ 2. ● a(n) = n! * (2 * n + 1) / lim _{ x - >0 } (d ^ n / dx ^ n) (polylog(2,x) * (1 - 1 / x)); ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n >= 6. - _ Jianing Song _ , Dec 30 2022 ●

► [A083223] 1,4,36,144,1296,5184,46656,186624,1679616,6718464,60466176,241864704,2176782336,8707129344,78364164096,313456656384,2821109907456,11284439639824,101559956668416,406239826673664,3656158440062976 ⋆ a(n) = (5 * 6 ^ n + (- 6) ^ n) / 6. ● a(n) = (5 * 6 ^ n + (- 6) ^ n) / 6. ● a(n) = 36 * a(n - 2). - _ Wesley Ivan Hurt _ , Jun 24 2021 ●

► [A270084] 1,4,36,188,876,3788,15756,64268,259596,1043468,4184076,16756748,67067916,268353548,1073577996,4294639628 ⋆ Number of active (ON,black) cells at stage 2 ^ n - 1 of the two - dimensional cellular automaton defined by ”Rule 65”, based on the 5 - celled von Neumann neighborhood. ● a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3) for n>4. ●

► [A302946] 4,36,196,1156,6724,39204,228484,1331716,7761796,45239076,263672644,1536796804,8957108164,52205852196,304278004996,1773462177796,10336495061764,60245508192804,351136554095044,2046573816377476,11928306344169796,69523264248641316 ⋆ Number of minimal (and minimum) total dominating sets in the 2n - crossed prism graph. ● a(n) = 5 * a(n - 1) + 5 * a(n - 2) - a(n - 3) . ● a(n) = 2 * (chebyshevT(n,3) + (- 1) ^ n). - _ Eric W. Weisstein _ , Apr 17 2018 ● a(n) = 4 * (- 1) ^ n * chebyshevT(n,i) ^ 2, where i is the imaginary unit. - _ Eric W. Weisstein _ , Apr 17 2018 ●

► [A220436] 4,36,196,1444,9604,66564,454276,3118756,21362884,146458404,1003749124,6880038916,47155859716,323212716324,2215328606404,15184099435684,104073336269956,713329336067076,4889231802533764,33511293841053604,229689823620354244,1574317475335503396,10790532493690424836 ⋆ a(n) = A127546(n) ^ 2. ● a(n) = 4 * (4 * ((- 1) ^ (n + 1) * Lucas(2 * (n + 1)) + Lucas(4 * (n + 1))) + 9) / 25. - _ Ehren Metcalfe _ , Feb 18 2017 ● a(n) = 2 * (F(n) ^ 4 + F(n + 1) ^ 4 + F(n + 2) ^ 4), where F(n) is the n - th Fibonacci number (A000045) (Candido, 1951). - _ Amiram Eldar _ , Jan 11 2022 ●

► [A257888] 4,36,224,1200,5940,28028,128128,572832,2519400,10943240,47070144,200880160,851809140,3592795500,15085939200,63102895680,263083395960,1093683448440,4535210472000,18764563053600,77485731403080,319402222692696,1314511549519104 ⋆ Number of nonintersecting (or self - avoiding) rook paths of length 2n + 2 joining opposite corners of an n X n grid. ● a(n) = 2 * (n - 1) * binomial(2 * n - 2, n - 3). ●

► [A176097] 1,4,36,272,2150,16992,134848,1072192,8536914,68036600,542607560,4329671040,34561892560,275979195520,2204266118400,17609217372416,140698273234634,1124340854572296,8985828520591912,71822662173752800 ⋆ Degree of the hyperdeterminant of the cubic format (k + 1) X (k + 1) X (k + 1). ● a(n) = Sum _{ j = 0..n / 2 } ((j + n + 1)! * 2 ^ (n - 2j)) / ((j!) ^ 3 * (n - 2j)!). ● a(n) = (a(n - 1) * (21 * n ^ 3 - 10 * n ^ 2 - 9 * n + 6) + a(n - 2) * (24 * n ^ 3 + 16 * n ^ 2)) / ((3 * n - 1) * n ^ 2) for n >= 2. - _ Peter Luschny _ , Sep 12 2019 ●

► [A173429] 0,4,36,276,1152,3920,10568,25348,53848,106292,194732,339416,562652,899796,1388008,2083908,3044992,4356344,6102144,8404204,11380564,15199100,20019856,26067112,33551812 ⋆ Number of ways to place 3 nonattacking night riders on an n X n board. ● a(n) = 1 / 6 * n ^ 6 - 5 / 6 * n ^ 5 + 4031 / 1440 * n ^ 4 - 621 / 100 * n ^ 3 + 3313 / 288 * n ^ 2 - 2623 / 150 * n + 82321 / 43200 + (1 / 4 * n ^ 3 - 25 / 32 * n ^ 2 + 77 / 50 * n - 43 / 64) * (- 1) ^ n - (1 + (- 1) ^ n) / 8 * cos(Pi * n / 2) + 8 / 27 * (- 1) ^ n * cos(Pi * n / 3) + (- 4 * (- 1) ^ n + (sqrt(5) + 3 + (1 - sqrt(5) / 5) * (- 1) ^ n) * n) * 4 / 25 * cos(Pi * n / 5) + (sqrt(58 * sqrt(5) + 130) - sqrt(50 - 22 * sqrt(5)) * (- 1) ^ n / 5) * 16 / 25 * sin(Pi * n / 5) + (- 4 + (sqrt(5) / 5 + 1 + (3 - sqrt(5)) * (- 1) ^ n) * n) * 4 / 25 * cos(2 * Pi * n / 5) + (sqrt(22 * sqrt(5) + 50) / 5 - sqrt(130 - 58 * sqrt(5)) * (- 1) ^ n) * 16 / 25 * sin(2 * Pi * n / 5). ●

► [A172134] 0,4,36,276,1360,4752,13340,32084,68796,135040,247152,427380,705144,1118416,1715220,2555252,3711620,5272704,7344136,10050900,13539552,17980560,23570764,30535956,39133580 ⋆ Number of ways to place 3 nonattacking knights on an n X n board. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7), for n >= 11. ●

► [A098916] 0,4,36,288,2400,21600,211680,2257920,26127360,326592000,4390848000,63228211200,971415244800,15866448998400,274611617280000,5021469573120000,96746980442112000,1959126353952768000 ⋆ Permanent of the n X n (0,1) - matrices with ij - th entry equal to zero iff (i=1,j=1),(i=1,j=n),(i=n,j=1) and (i=n,j=n). ● a(n) = (n - 2) * (n - 3) * (n - 2)!. - Herman Jamke (hermanjamke(AT)fastmail.fm), May 13 2007 ●

► [A108019] 0,4,36,292,2340,18724,149796,1198372,9586980,76695844,613566756,4908534052,39268272420,314146179364,2513169434916,20105355479332,160842843834660,1286742750677284,10293942005418276,82351536043346212 ⋆ a(n) = (8 ^ n - 1) * 4 / 7. ● a(n) = 8 * a(n - 1) + 4 with n>0, a(0)=0. - _ Vincenzo Librandi _ , Nov 13 2010 ● a(n) = 9 * a(n - 1) - 8 * a(n - 2). ●

► [A270473] 1,4,36,324,2916,26244,236196,2125764,19131876,172186884,1549681956,13947137604,125524238436,1129718145924,10167463313316,91507169819844,823564528378596,7412080755407364,66708726798666276,600378541187996484,5403406870691968356 ⋆ Expansion of (1 - 5 * x) / (1 - 9 * x). ● a(n) = 9 * a(n - 1) for n>1. ● a(n) = 4 * 9 ^ (n - 1) for n>0. ●

► [A189334] 1,4,36,340,3220,30500,288900,2736500,25920500,245522500,2325622500,22028612500,208658012500,1976437062500,18721080562500,177328620312500,1679680800312500,15910164901562500,150703245014062500,1427481625632812500 ⋆ Expansion of (1 - 6 * x + x ^ 2) / (1 - 10 * x + 5 * x ^ 2) ● a(n)=10 * a(n - 1) - 5 * a(n - 2), n>2, a(0)=1, a(1)=4, a(2)=36. ● a(n)=(1 / 5) * Sum _{ k=1..5) ((w _ k) ^ 3 - 2 * w _ k) ^ (2 * n), w _ k=2 * cos((2 * k - 1) * Pi / 10). ●

► [A372465] 1,4,36,358,3740,40194,439998,4879326,54630316,616194700,6991215286,79700776588,912207989030,10475536585674,120641989237890,1392811194744288,16114668707519404,186798818992569818,2168990381036497812,25222834639587149890,293708687012053512870 ⋆ Coefficient of x ^ n in the expansion of 1 / ((1 - x) * (1 - x + x ^ 3)) ^ (2 * n). ● a(n) = Sum _{ k=0..floor(n / 3) } (- 1) ^ k * binomial(2 * n + k - 1,k) * binomial(5 * n - 2 * k - 1,n - 3 * k). ●

► [A168595] 1,4,36,358,3748,40404,443886,4941654,55555236,629285416,7170731236,82108083204,943960439086,10889085499348,125974782200478,1461030555025458,16981658850393252,197757344280343968 ⋆ a(n) = Sum _{ k=0..2n } C(2n,k) * A027907(n,k) where A027907 is the triangle of trinomial coefficients. ● a(n) = Sum _{ k=0..n } (- 1) ^ (n - k) * binomial(n,k) * cb(n + k) with cb(n) = binomial(2n,n). - _ Peter Luschny _ , Aug 15 2017 ●

► [A163455] 1,4,36,364,3876,42504,475020,5379616,61523748,708930508,8217822536,95722852680,1119487075980,13136858812224,154603005527328,1824010149372864,21566576904406820,255485622301674660,3031718514166879020,36030431772522503316 ⋆ a(n) = binomial(5 * n - 1,n). ● a(n) = (5n - 1)! / (n!(4n - 1)!). ●

► [A371772] 1,4,36,365,3892,42714,477621,5411109,61901268,713435333,8271470666,96361329024,1127086021461,13227336997645,155680966681101,1836862248992565,21719923705450260,257316706385394615,3053599633736172765,36292098436808314572,431918050456887676362 ⋆ a(n) = Sum _{ k=0..floor(n / 3) } binomial(5 * n - 3 * k - 1,n - 3 * k). ● a(n) = [x ^ n] 1 / ((1 - x ^ 3) * (1 - x) ^ (4 * n)). ●

► [A372461] 1,4,36,370,4012,44814,510198,5886206,68579020,805045276,9507007686,112817021332,1344160003030,16069300956726,192662610805386,2315694030560640,27893938099222316,336643301659031102,4069747367955175236,49274614400855690158 ⋆ Coefficient of x ^ n in the expansion of 1 / ((1 - x) * (1 - x - x

^ 3)) ^ (2 * n). ● a(n) = Sum _{ k=0..floor(n / 3) } binomial(2 * n + k - 1,k) * binomial(5 * n - 2 * k - 1,n - 3 * k). ●

► [A198638] 4,36,376,3936,41216,431616,4519936,47333376,495681536,5190844416,54359228416,569257230336,5961339109376,62427953627136,653754017775616,6846200955273216,71694347178868736,750792950862053376 ⋆ Number of 2n X 2 0..2 arrays with values 0..2 introduced in row major order and each element equal to an even number of horizontal and vertical neighbors. ● a(n) = ((6 - 2 * sqrt(5)) ^ n * (- 5 + 3 * sqrt(5)) + (2 * (3 + sqrt(5))) ^ n * (5 + 3 * sqrt(5))) / (16 * sqrt(5)) for n>1. ●

► [A131765] 1,4,36,404,5076,68324,963396,14046964,210062196,3204118724,49656709476,779690085204,12376867734036,198301332087204,3202580085625476,52080967814444724,852103170531254196,14016301507253656964 ⋆ Series reversion of x * (1 - 5x) / (1 - x) . ● a(n) = Sum _{ k=0..n } (- 1) ^ k * binomial(n, k) * hypergeom([k - n, n + 1], [k + 2], - 4). - _ Peter Luschny _ , Jan 08 2018 ●

► [A145401] 0,1,4,37,154,1072,5320,32675,175294,1024028,5668692,32463802,181971848,1033917350,5824476298,32989068162,186210666468,1053349394128,5950467515104,33643541208290,190115484271760,1074685815276400,6073680777522430,34330607094625734 ⋆ Number of Hamiltonian cycles in P _ 6 X P _ n. ● a(2) = 1, ● a(3) = 4, ● a(4) = 37, ● a(5) = 154, ● a(6) = 1072, ● a(7) = 5320, ●

► [A063418] 4,37,180,640,1876,4809,11152,23905,48070,91652,167024,292747,495950,815390,1305328,2040374,3121472,4683215,6902700,10010154,14301584,20153727,28041600,38558975,52442130 ⋆ Tenth column (k=9) of septinomial array A063265. ● a(n) = 4 * C(n + 2,2) + 25 * C(n + 2,3) + 56 * C(n + 2,4) + 70 * C(n + 2,5) + 56 * C(n + 2,6) + 28 * C(n + 2,7) + 8 * C(n + 2,8) + C(n + 2,9) (see comment in A213889). - _ Vladimir Shevelev _ and _ Peter J. C. Moses _ , Jun 22 2012 ●

► [A162649] 1,1,1,4,37,276,2221,26888,397097,6055696,103023481,2047621632,44856857101,1051415079872,26792169643877,743266588537216,22085066412427729,698048232173484288,23495515539312273265 ⋆ E.g.f. satisfies: A(x) = exp(x * cosh(x * A(x))). ● a(n) = Sum _{ k=0..n } C(n,k) * (n - k + 1) ^ (k - 1) * Sum _{ j=0..k } C(k,j) * (2j - k) ^ (n - k) / 2 ^ k. ● a(n,m) = Sum _{ k=0..n } C(n,k) * m * (n - k + m) ^ (k - 1) * Sum _{ j=0..k } C(k,j) * (2j - k) ^ (n - k) / 2 ^ k. ●

► [A199690] 4,37,367,3667,36667,366667,3666667,36666667,366666667,3666666667,36666666667,366666666667,3666666666667,36666666666667,366666666666667,3666666666666667,36666666666666667,366666666666666667 ⋆ (11 * 10 ^ n + 1) / 3. ● a(n) = 10 * a(n - 1) - 3. ● a(n) = 11 * a(n - 1) - 10 * a(n - 2). ●

► [A371753] 1,4,37,376,4013,44064,492871,5585080,63901421,736575316,8540549322,99503540008,1163910870767,13660217796736,160782910480936,1897131524755896,22433316399634669,265775992115557076,3154067508987675679,37487016824453703920,446148092364247390618 ⋆ a(n) = Sum _{ k=0..floor(n / 2) } binomial(5 * n - 2 * k - 1,n - 2 * k). ● a(n) = [x ^ n] 1 / ((1 - x ^ 2) * (1 - x) ^ (4 * n)). ●

► [A073237] 1,4,37,1340164183006357436 ⋆ a(n) = ceiling(Pi ^ Pi ^ ... ^ Pi), where Pi appears n times. ● a(n) = ceiling(Pi ^ Pi ^ ... ^ Pi), where Pi occurs n times, a(0) = 1 (=Pi ^ 0). ●

► [A020865] 0,4,38,328,2686,21224,163982,1249784,9447102,71056840,532854638,3988597144,29822927134,222836912744,1664351910350,12427793513528,92784673372542,692656225953544,5170521713987630,38595421782328024,288089831076277726,2150375933904641960 ⋆ Number of forests in Moebius ladder M _ n. ● a(n) = (4 + sqrt(12)) ^ n + (4 - sqrt(12)) ^ n + 2 ^ n - (5 / 2 + 1 / 2 * sqrt(17)) ^ n - (5 / 2 - 1 / 2 * sqrt(17)) ^ n - 1. ●

► [A155859] 4,38,377,3766,37655,376544,3765433,37654322,376543211,3765432100,37654320989,376543209878,3765432098767,37654320987656,376543209876545,3765432098765434,37654320987654323,376543209876543212,3765432098765432101,37654320987654320990 ⋆ a(n) = (1 / 162) * (61 * 10 ^ n + 18 * n + 20). ● a(n) = 12 * a(n - 1) - 21 * a(n - 2) + 10 * a(n - 3). (End) ●

► [A024212] 4,39,159,445,1005,1974,3514,5814,9090,13585,19569,27339,37219,49560,64740,83164,105264,131499,162355,198345,240009,287914,342654,404850,475150 ⋆ 2nd elementary symmetric function of first n + 1 positive integers congruent to 1 mod 3. ● a(n) = n * (n + 1) * (9 * n ^ 2 + 9 * n - 2) / 8. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Clark Kimberling _ , Aug 18 2012 ●

► [A006408] 4,39,190,651,1792,4242,8988,17490,31812,54769,90090,142597,218400,325108,472056,670548,934116,1278795,1723414,2289903,3003616,3893670,4993300,6340230,7977060 ⋆ Number of nonseparable rooted toroidal maps with n + 3 edges and n + 1 vertices. ● a(n) = (n * (12 - 28 * n - 45 * n ^ 2 + 20 * n ^ 3 + 33 * n ^ 4 + 8 * n ^ 5)) / 360. ● a(n) = binomial(n + 2,4) * (8 * n ^ 2 + 17 * n - 6) / 15. - _ Andrew Howroyd _ , Apr 05 2021 ●

► [A112460] 4,39,207,795,2475,6633,15873,34749,70785,135850,247962,433602,730626,1191870,1889550,2920566,4412826,6532713,9493825,13567125,19092645,26492895,36288135,49113675,65739375 ⋆ Absolute value of coefficient of term [x ^ (n - 4)] in characteristic polynomial of maximum matrix A of size n X n, where n >= 4. Maximum matrix A(i,j) is MAX(i,j), where indices i and j run from 1 to n. ● a(n) = (n - 3) * (n - 2) * (n - 1) * n * (n + 1) * (n + 2) * (n + 3) * (7 * n + 4) / 8!. ●

► [A290559] 0,4,39,235,235,12240,79468,667713,3961885,15491487,15491487,15491487,7924798459,77131234464,561576286499,4630914723593,23621160763365,189785813611370,1352938383547405,4609765579368303,4609765579368303,403571097067428308 ⋆ One of the two successive approximations up to 7 ^ n for the 7 - adic integer sqrt(2). These are the numbers congruent to 4 mod 7 (except for the initial 0). ● a(0) = 0 and a(1) = 4, a(n) = a(n - 1) + 6 * (a(n - 1) ^ 2 - 2) mod 7 ^ n for n > 1. ● a(n) == 2 * T(7 ^ n, 2) (mod 7 ^ n) == (2 + sqrt(3)) ^ (7 ^ n) + (2 - sqrt(3)) ^ (7 ^ n) (mod 7 ^ n), where T(n, x) denotes the n - th Chebyshev polynomial of the first kind. - _ Peter Bala _ , Dec 03 2022 ●

► [A059945] 0,0,4,39,280,1815,11284,68859,416560,2509455,15086764,90610179,543928840,3264374295,19588645444,117539063499,705255937120,4231600258335,25389795391324,152339353740819,914037866361400,5484232429393575,32905410268988404,197432508689714139 ⋆ Number of 4 - block bicoverings of an n - set. ● a(n) = (1 / 4!) * (6 ^ n - 4 * 3 ^ n - 3 * 2 ^ n + 12). ● a(n) = 12 * a(n - 1) - 47 * a(n - 2) + 72 * a(n - 3) - 36 * a(n - 4) for n > 4. - _ Harvey P. Dale _ , Aug 10 2011 ●

► [A198853] 4,39,319,2559,20479,163839,1310719,10485759,83886079,671088639,5368709119,42949672959,343597383679,2748779069439,21990232555519,175921860444159,1407374883553279,11258999068426239,90071992547409919 ⋆ a(n) = 5 * 8 ^ n - 1. ● a(n) = 8 * a(n - 1) + 7. ● a(n) = 9 * a(n - 1) - 8 * a(n - 2), n > 1. ●

► [A093851] 4,39,324,2799,24999,228570,2124999,19999999,189999999,1818181817,17499999999,169230769229,1642857142856,15999999999999,156249999999999,1529411764705881,14999999999999999,147368421052631577,1449999999999999999,14285714285714285713 ⋆ a(n) = A002283(n - 1) + floor(A052268(n) / (1 + n)). ● a(n) = 10 ^ (n - 1) - 1 + floor(9 * 10 ^ (n - 1) / (n + 1)). - _ G. C. Greubel _ , Apr 02 2019 ●

► [A199757] 4,39,424,4659,51244,563679,6200464,68205099,750256084,8252816919,90780986104,998590847139,10984499318524,120829492503759,1329124417541344,14620368592954779,160824054522502564,1769064599747528199 ⋆ a(n) = (7 * 11 ^ n + 1) / 2. ● a(n) = 11 * a(n - 1) - 5. ● a(n) = 12 * a(n - 1) - 11 * a(n - 2). ●

► [A217397] 4,40,41,42,43,44,45,46,47,48,49,400,401,402,403,404,405,406,407,408,409,410,411,412,413 ⋆ Numbers starting with 4. ● a(n) = n + (35 * 10 ^ floor (log _ 10(9 * n - 8)) - 8) / 9. - _ Alan Michael Gómez Calderón _ , May 17 2023 ●

► [A238328] 4,40,180,544,1280,2592,4732,7968,12636,19120,27808,39168,53716,71960,94500,121984,155040,194400,240844,295120,358092,430672,513728,608256,715300 ⋆ Sum of all the parts in the partitions of 4n into 4 parts. ● a(n) = 16 / 9 * n ^ 4 + 4 / 3 * n ^ 3 + O(n). - _ Ralf Stephan _ , May 29 2014 ●

► [A271286] 1,4,40,200,872,3624,14760,59560,239272,959144,3840680,15370920,61500072,246033064,984197800,3936922280 ⋆ Number of active (ON,black) cells at stage 2 ^ n - 1 of the two - dimensional cellular automaton defined by ”Rule 337”, based on the 5 - celled von Neumann neighborhood. ● a(n) = (11 * 4 ^ n) / 3 - 8 / 3 - 2 ^ (2 + n) for n>0. ● a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3) for n>3. ●

► [A273310] 1,4,40,216,952,3960,16120,65016,261112,1046520,4190200,16769016,67092472,268402680,1073676280,4294836216 ⋆ Number of active (ON,black) cells at stage 2 ^ n - 1 of the two - dimensional cellular automaton defined by ”Rule 641”, based on the 5 - celled von Neumann neighborhood. ● a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3) for n>4. ●

► [A270088] 1,4,40,225,961,3969,16129,65025,261121,1046529,4190209,16769025,67092481,268402689,1073676289,4294836225 ⋆ Number of active (ON,black) cells at stage 2 ^ n - 1 of the two - dimensional cellular automaton defined by ”Rule 73”, based on the 5 - celled von Neumann neighborhood. ● a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3) for n>4. ●

► [A115286] 0,4,40,228,960,3200,8904,21560,46848,93420,173800,305404,511680,823368,1279880,1930800,2837504,4074900,5733288,7920340,10763200,14410704,19035720,24837608,32044800 ⋆ a(n) = (1 / 6) * (n ^ 6 + 3 * n ^ 4 + 12 * n ^ 3 + 8 * n ^ 2). ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n > 6. ●

► [A212699] 4,40,300,2000,12500,75000,437500,2500000,14062500,78125000,429687500,2343750000,12695312500,68359375000,366210937500,1953125000000,10375976562500,54931640625000,289916992187500,1525878906250000 ⋆ Main transitions in systems of n particles with spin 2. ● a(n) = n * (b - 1) * b ^ (n - 1) where b=5. ● a(0)=a(1)=4, a(2)=40, a(n)=10 * a(n - 1) - 25 * a (n - 2). - _ Harvey P. Dale _ , Aug 19 2014 ●

► [A190541] 0,4,40,316,2320,16564,116920,821356,5758240,40333924,282416200,1977149596,13840755760,96887416084,678218289880,4747547161036,33232887522880,232630384847044,1628413210489960,11398894023111676 ⋆ 7 ^ n - 3 ^ n. ● a(n) = 10 * a(n - 1) - 21 * a(n - 2). ●

► [A298198] 4,40,320,2368,16832,116608,793088,5318656,35271680,231786496,1511653376,9795518464,63126683648,404881506304,2586017398784,16456474427392,104381066510336,660139718213632,4163958223142912,26202468819927040,164527129801785344 ⋆ Number of Eulerian cycles in the graph Cartesian product of C _ n and a double edge. ● a(n) = 14 * a(n - 1) - 60 * a(n - 2) + 72 * a(n - 3) for n > 3. ●

► [A121126] 1,4,40,330,2814,22464,174798,1321920,9798840,71383680,512709912,3638048256,25547006016,177770557440,1227161345184,8411086946304,57284205913728,387902612275200,2613053064378240,17519092525301760,116946290184302592,777543028253392896 ⋆ Unbranched a - 4 - catapolynonagons (see Brunvoll reference for precise definition). ● a(n) = 24 * a(n - 1) - 204 * a(n - 2) + 576 * a(n - 3) + 1260 * a(n - 4) - 9504 * a(n - 5) + 7776 * a(n - 6) + 31104 * a(n - 7) - 46656 * a(n - 8) for n>13. - _ Colin Barker _ , Aug 03 2019 ●

► [A145730] 0,4,40,332,2672,21396,171192,1369564,10956544,87652388,701219145609753196,44878025616,359024204980,2872193639896,22977549119228,183820392953888,1470563143631172,11764505149049448,94116041192395660 ⋆ Partial sums of A108019. ● a(0)=0, a(1)=4, a(2)=40, a(n)=10 * a(n - 1) - 17 * a(n - 2) + 8 * a(n - 3). - _ Harvey P. Dale _ , Aug 08 2013 ●

► [A069721] 0,0,4,40,336,2688,21120,164736,1281280,9957376,77395968,601968640,4686094336,36515020800,284817162240,2223764766720,17379001958400,135942415319040,1064286014668800,8338993950228480,65388301768458240,513094808135270400,4028909667357818880 ⋆ Number of rooted unicursal planar maps with n edges and no vertices of valency 1 (unicursal means that exactly two vertices are of odd valency; there is an Eulerian path). ● a(n) = 2 ^ (n - 2) * (n - 2) * binomial(2n - 2, n - 1) / n, n>1. ● a(n + 1) = (4 * (n - 1) * (2 * n - 1) / ((n + 1) * (n - 2))) * a(n). ●

► [A191681] 0,4,40,364,3280,29524,265720,2391484,21523360,193710244,1743392200,15690529804,141214768240,1270932914164,11438396227480,102945566047324,926510094425920,8338590849833284,75047317648499560,675425858836496044 ⋆ a(n) = (9 ^ n - 1) / 2. ● a(0)=0, a(1)=4, a(n) = 10 * a(n - 1) - 9 * a(n - 2). - _ Harvey P. Dale _ , Jun 19 2011 ●

► [A155641] 1,4,40,388,3472,29644,246520,2019028,16386592,132264604,1063976200,8541106468,68475336112,548535110764,4391942995480,35153854510708,281322388820032,2251036874232124,18010583812216360,144096114589527748 ⋆ 8 ^ n - 5 ^ n + 1 ^ n. ● a(n)=13 * a(n - 1) - 40 * a(n - 2) + 28 with a(0)=1, a(1)=4 - _ Vincenzo Librandi _ , Jul 21 2010 ●

► [A122652] 0,4,40,396,3920,38804,384120,3802396,37639840,372596004,3688320200,36510605996,361417739760,3577666791604,35415250176280,350574834971196,3470333099535680,34352756160385604,340057228504320360,3366219528882817996,33322138060323859600 ⋆ a(0) = 0, a(1) = 4; for n > 1, a(n) = 10 * a(n - 1) - a(n - 2). ● a(n) = (1 / 6) * (5 + 2 * sqrt(6)) ^ n * sqrt(6) - (1 / 6) * sqrt(6) * (5 - 2 * sqrt(6)) ^ n, with n >= 0. - _ Paolo P. Lava _ , Oct 02 2008 ● a(n) = (2 * arcsinh(sqrt(2)) * sinh(2 * n * arcsinh(sqrt(2))) / log(sqrt(2) + sqrt(3))) / sqrt(6). - _ Artur Jasinski _ , Aug 09 2016 ●

► [A299867] 4,40,396,3963,39636,396357,3963567,39635676,396356757,3963567567,39635675670,396356756706,3963567567057,39635675670567,396356756705673,39635675670567276,396356756705672757,3963567567056727567,39635675670567276,396356756705672757,3963567567056727567 2,39635675670567276722 ⋆ The sum of the first n terms of the sequence is the concatenation of the first n digits of the sequence, and a(1) = 4. ● a(n) = c(n) - c(n - 1), where c(n) = concatenation of the first n digits, c(n) ~ 0.44 * 10 ^ n, a(n) ~ 0.396 * 10 ^ n. See A300000 for the proof. - _ M. F. Hasler _ , Feb 22 2018 ●

► [A093141] 1,4,40,400,4000,40000,400000,4000000,40000000,400000000,4000000000,40000000000,400000000000,4000000000000,40000000000000,400000000000000,4000000000000000,40000000000000000,400000000000000000 ⋆ Expansion of (1 - 6x) / (1 - 10x). ● a(n) = 4 * 10 ^ n / 10 + 6 * 0 ^ n / 10. ● a(n) = phi(10 ^ n). - _ Paul Barry _ , Jul 02 2007 ● a(n) = 4 * 10 ^ (n - 1), n>0. - _ Vincenzo Librandi _ , Aug 02 2010 ●

► [A221588] 4,40,418,3760,31416,256736,2075520,16690688,133871616,1072357376,8584396800,68697325568,549667209216,4397692092416,35182954414080,281469306011648,2251777130889216,18014307778297856,144114825151119360 ⋆ Equals one maps: number of n X 3 binary arrays indicating the locations of corresponding elements equal to exactly one of their king - move neighbors in a random 0..3 n X 3 array. ● a(n) = 8 ^ n - 169 * 2 ^ (2 * n - 7) for n>4. ●

► [A075878] 4,40,544,8320,131584,2099200,33562624,536903680,8590065664,137439477760,2199025352704,35184380477440 ⋆ Sum of coefficients of (x1) ^ (2i(1)) * (x2) ^ (2i(2)) * (x3) ^ (2i(3)) * (x4) ^ (2i(4)) for { (i1),(i2),(i3),(i4) } =0,1,2,... : sum(i)=2n in the expansion of (x1 + x2 + x3 + x4) ^ (2n) where n=1,2,3,... ● a(n, 4) = 2 ^ (1 - 4) * (sum(r=0 to Floor((4 - 1) / 2))Binomial(4, r) * (4 - 2 * r) ^ 2n a(n, k) = 2 ^ (1 - k) * (sum(r=0 to Floor((k - 1) / 2))Binomial(k, r) * (k - 2 * r) ^ 2n for k=1, 2, 3, 4, ... ●

► [A092812] 1,4,40,544,8320,131584,2099200,33562624,536903680,8590065664,137439477760,2199025352704,35184380477440,562949986975744,900719938895872 0,1441151886127267 84,2305843011361177600 ⋆ Number of closed walks of length 2 * n on the 4 - cube. ● a(n) = 3 * 0 ^ n / 8 + 16 ^ n / 8 + 4 ^ n / 2. ● a(n) = 20 * a(n - 1) - 64 * a(n - 2); a(0) = 1, a(1) = 4, a(2) = 40. - _ Harvey P. Dale _ , Aug 23 2011 ● a(n) = (1 / 2 ^ 4) * Sum _{ j = 0..4 } binomial(4, j) * (4 - 2 * j) ^ (2 * n). See Reyzin link. - _ Peter Bala _ , Jun 03 2019 ●

► [A294972] 1,4,41,127,295,1012,10415,32257,74929,257044,2645369,8193151,19031671,65288164,671913311,2081028097,4833969505,16582936612,170663335625,528572943487,1227809222599,4212000611284,43347815335439,134255446617601,311858708570641 ⋆ Numerators of continued fraction convergents to sqrt(7) / 2. ● a(n) = 254 * a(n - 4) - a(n - 8) for n > 7. ●

► [A213823] 4,41,147,358,710,1239,1981,2972,4248,5845,7799,10146,12922,16163,19905,24184,29036,34497,40603,47390,54894,63151,72197,82068,92800 ⋆ Principal diagonal of the convolution array A213822. ● a(n) = (- n - 3n ^ 2 + 12 * n ^ 3) / 2. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ●

► [A273418] 1,4,41,217,953,3961,16121,65017,261113,1046521,4190201,16769017,67092473,268402681,1073676281,4294836217 ⋆ Number of active (ON,black) cells at stage 2 ^ n - 1 of the two - dimensional cellular automaton defined by "Rule 705", based on the 5 - celled von Neumann neighborhood. ● a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3) for n>4. ●

► [A231653] 0,0,4,41,244,1029,3485,9926,25030,57126,120570,238330,446344,797825,1370684,2274259,3660612,5734776,8771181,13127940,19270240,27789713,39435814,55142010,76066910 ⋆ Number of non - equivalent ways to choose 4 points in an equilateral triangle grid of side n. ● a(n) = (n ^ 8 + 4 * n ^ 7 - 6 * n ^ 6 - 32 * n ^ 5 + 84 * n ^ 4 - 32 * n ^ 3 - 16 * n ^ 2 - 192 * n + B + C) / 2304 ●

► [A089664] 0,4,41,306,1966,11540,63726,336700,1720364,8562024,41718190,199753004,942561636,4392660376,20253510956,92519626200,419201709976,1885719209936,8428262686254,37453751742604,165575219275700,728534225415864,3191850894862564 ⋆ a(n) = S2(n,1), where S2(n, t) = Sum _{ k=0..n } k ^ t * (Sum _{ j=0..k } binomial(n,j)) ^ 2. ● a(n) = (1 / 8) * (n * (3 * n + 5) * 4 ^ n - 2 * n * (n - 1) * binomial(2 * n, n)). (see Wang and Zhang, p. 338) ● a(n) = (1 / 2) * (n * (3 * n + 5) * 4 ^ (n - 1) - 3 * binomial(n + 1, 3) * Catalan(n)). ●

► [A109109] 1,4,41,414,4181,42224,426421,4306434,43490761,439214044,4435631201,44795526054,452390891741,4568704443464,46139435326381,465963057707274,4705770012399121,47523663181698484,479942401829383961,4846947681475538094,48949419216584764901 ⋆ a(0)=1, a(1)=4, a(n) = 10a(n - 1) + a(n - 2). ● a(n) = (1 / 2 / sqrt(26))((sqrt(26) - 1)(5 + sqrt(26)) ^ n + (sqrt(26) + 1)(5 - sqrt(26)) ^ n). ●

► [A136045] 1,4,42,660,12810,281736,6727644,170316432,4504487130,123255492360,3465702008340,99645553785960,2918768920720380,86852063374902000,2619552500788984200,79939673971478231760 ⋆ Bisection of A138546. ● a(n) = hypergeom([1 / 2, - n, - n],[1,2],4) * binomial(2 * n,n). - _ Mark van Hoeij _ , May 13 2013 ●

► [A193448] 4,44,124,244,404,604,844,1124,1444,1804,2204,2644,3124,3644,4204,4804,5444,6124,6844,7604,8404,9244,10124,11044,12004 ⋆ a(n) = 4 * (5 * n ^ 2 - 5 * n + 1). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>3. - _ Wesley Ivan Hurt _ , Nov 21 2015 ●

► [A053314] 4,44,144,4144,14144,414144,1414144,41414144,441414144,1441414144,11441414144,411441414144,4411441414144,44411441414144,444411441414144,1444411441414144,41444411441414144,414444411441414144 ⋆ a(n) contains n digits (either '1' or '4') and is divisible by 2 ^ n. ● a(n) = a(n - 1) + 10 ^ (n - 1) * (4 - 3 * (a(n - 1) / 2 ^ (n - 1) mod 2)), i.e., a(n) ends with a(n - 1); if (n - 1) - th term is divisible by 2 ^ n then n - th term begins with a 4, if not then n - th term begins with a 1. ●

► [A330651] 0,4,44,174,472,1040,2004,3514,5744,8892,13180,18854,26184,35464,47012,61170,78304,98804,123084,151582,184760,223104,267124,317354,374352 ⋆ a(n) = n ^ 4 + 3 * n ^ 3 + 2 * n ^ 2 - 2 * n. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

► [A269907] 1,4,44,220,956,3964,16124,65020,261116,1046524,4190204,16769020,67092476,268402684,1073676284,4294836220 ⋆ Number of active (ON,black) cells at stage 2 ^ n - 1 of the two - dimensional cellular automaton defined by "Rule 1", based on the 5 - celled von Neumann neighborhood. ● a(n) = 4 * (4 ^ n - 2 ^ n - 1) for n>0. ● a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3) for n>3. ●

► [A270130] 1,4,44,225,961,3969,16129,65025,261121,1046529,4190209,16769025,67092481,268402689,1073676289,4294836225 ⋆ Number of active (ON,black) cells at stage 2 ^ n - 1 of the two - dimensional cellular automaton defined by "Rule 89", based on the 5 - celled von Neumann neighborhood. ● a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3) for n>5. ●

► [A081078] 4,44,319,2204,15124,103679,710644,4870844,33385279,228826124,1568397604,10749957119,73681302244,505019158604,3461452807999,23725150497404,162614600673844,1114577054219519,7639424778862804,52361396397820124,358890350005878079 ⋆ a(n) = Lucas(4n) - 3, or Lucas(2n - 1) * Lucas(2n + 1). ● a(n) = 8a(n - 1) - 8a(n - 2) + a(n - 3). ● a(n) = - 3 + (7 / 2) *{ [(7 / 2) - (3 / 2) * sqrt(5)] ^ n + [(7 / 2) + (3 / 2) * sqrt(5)] ^ n }+ (3 / 2) * sqrt(5) *{ [(7 / 2) + (3 / 2) * sqrt(5)] ^ n - [(7 / 2) - (3 / 2) * sqrt(5)] ^ n } , with n>=0. - _ Paolo P. Lava _ , Dec 01 2008 ● a(n) = Lucas(2 * n) ^ 2 - 5. ●

► [A035014] 4,44,344,3344,33344,333344,3333344,33333344,333333344,3333333344,33333333344,333333333344,3333333333344,33333333333344,333333333333344,3333333333333344,33333333333333344,333333333333333344,3333333333333333344 ⋆ a(n) contains n digits (either '3' or '4') and is divisible by 2 ^ n. ● a(n) = a(n - 1) + 10 ^ (n - 1) * (4 - [a(n - 1) / 2 ^ (n - 1) mod 2]), i.e., a(n) ends with a(n - 1). - _ Henry Bottomley _ , Feb 14 2000 ●

► [A341590] 0,0,4,44,360,2680,19244,136164,957520,6715760,47049684,329465884,2306615480,16147371240,113034787324,791253077204,5538800238240,38771687761120,271402072608164,1899815283098124,13298709306209800 ⋆ a(n) = (Sum _{ j=1..3 } StirlingS1(3,j) * (2 ^ j - 1) ^ n) / 3!. ● a(n) = (2 - 3 ^ (1 + n) + 7 ^ n) / 6. ● a(n) = (- 1) ^ n * (Sum _{ j=0..n } binomial(n,j) * (- 1) ^ j * binomial(2 ^ j,3)). ●

► [A297384] 4,44,372,2932,22484,170196,1279828,9590612,71736660,536055124,4003591508,29892900180,223162389844,1665861735764,12434781197652,92816950121812,692805066118484,5171207088198996,38598573880071508,288104312443589972,2150442403051689300 ⋆ Number of Eulerian cycles in the n - antiprism graph. ● a(n) = 13 * a(n - 1) - 48 * a(n - 2) + 52 * a(n - 3) - 16 * a(n - 4). ● a(n) = 2 ^ n * ((2 - sqrt(3)) ^ n + (2 + sqrt(3)) ^ n) - 2 / 3 * (2 + 4 ^ n). ●

► [A198962] 4,44,404,3644,32804,295244,2657204,23914844,215233604,1937102444,17433922004,156905298044,1412147682404,12709329141644,114383962274804,1029455660473244,9265100944259204,83385908498332844,750473176484995604 ⋆ 5 * 9 ^ n - 1. ● a(n) = 9 * a(n - 1) + 8, n>0. ● a(n) = 10 * a(n - 1) - 9 * a(n - 2), n>1. ●

► [A002754] 0,0,4,44,408,3688,33212,298932,2690416,24213776,217924020,1961316220,17651846024,158866614264,1429799528428,12868195755908,115813761803232,1042323856229152,9380914706062436,84428232354561996,759854091191058040 ⋆ Related to coefficient of m in Jacobi elliptic function cn(z, m). ● a(n) = (9 ^ n - 8 * n - 1) / 16. (End) ●

► [A105038] 0,4,44,440,4360,43164,427284,4229680,41869520,414465524,4102785724,40613391720,402031131480,3979697923084,39394948099364,389969783070560,3860302882606240,38213059042991844,378270287547312204,3744489816430130200,37066627876753989800 ⋆ Nonnegative n such that 6 * n ^ 2 + 6 * n + 1 is a square. ● a(0)=0, a(1)=4, a(2)=44, a(n)=11 * a(n - 1) - 11 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Sep 29 2013 ● a(n) = (- 6 - (5 - 2 * sqrt(6)) ^ n * (- 3 + sqrt(6)) + (3 + sqrt(6)) * (5 + 2 * sqrt(6)) ^ n) / 12. - _ Colin Barker _ , Mar 05 2016 ●

► [A002278] 0,4,44,444,4444,44444,444444,4444444,44444444,444444444,4444444444,44444444444,444444444444,4444444444444,44444444444444,444444444444444,4444444444444444,44444444444444444 ⋆ a(n) = 4 * (10 ^ n - 1) / 9. ● a(n)=10 * a(n - 1) + 4, with a(0)=0. - _ Paolo P. Lava _ , Jan 23 2009 ● a(n) = a(n - 1) + 4 * 10 ^ (n - 1) with a(0)=0; ● a(n) = 11 * a(n - 1) - 10 * a(n - 2) with a(0)=0, a(1)=4. (End) ●

► [A053315] 4,44,544,4544,44544,444544,4444544,54444544,454444544,5454445444,45454444544,545454444544,5545454444544,55545454444544,555545454444544,5555545454444544,45555545454444544,455555545454444544,5455555545454444544 ⋆ a(n) contains n digits (either '4' or '5') and is divisible by 2 ^ n. ● a(n) = a(n - 1) + 10 ^ (n - 1) * (4 + (a(n - 1) / 2 ^ (n - 1) mod 2)), i.e., a(n) ends with a(n - 1); if (n - 1) - th term is divisible by 2 ^ n then n - th term begins with a 4, if not then n - th term begins with a 5. ●

► [A005721] 1,4,44,580,8092,116304,1703636,25288120,379061020,5724954544,86981744944,1327977811076,20356299454276,313095240079600,4829571309488760,74683398325804080,1157402982351003420,17971185794898859248 ⋆ Central quadrinomial coefficients. ● a(n) = sum _{ k=0..floor(3n / 4) } (- 1) ^ k binomial(2n,k) * binomial(5n - 4k - 1,3n - 4k). - _ Muniru A Asiru _ , Sep 26 2018 ● a(n) = Sum _{ i=0..n } Sum _{ j=n..2n } (f); f= ((2 * n)! / ((j - n)! * (3 * n + i - 2 * j)! * (j - 2 * i)! * i!)); f=0 for (3 * n + i - 2 * j)<0 or (j - 2 * i)<0. See also formula in Links section. - _ Zagros Lalo _ , Sep 27 2018 ●

► [A053332] 4,44,744,7744,47744,447744,4447744,44447744,444447744,4444447744,74444447744,474444447744,4474444447744,44474444447744,444474444447744,7444474444447744,77444474444447744,474444474444447744 ⋆ a(n) contains n digits (either '4' or '7') and is divisible by 2 ^ n. ● a(n) = a(n - 1) + 10 ^ (n - 1) * (4 + 3 * [a(n - 1) / 2 ^ (n - 1) mod 2]) i.e. a(n) ends with a(n - 1); if (n - 1) - th

term is divisible by 2 ^ n then n - th term begins with a 4, if not then n - th ter m begins with a 7. ●

► [A053333] 4,44,944,4944,94944,994944,4994944,94994944,494994944,949499494 4,49494994944,449494994944,9449494994944,99449494994944,499449494994944,9 499449494994944,49499449494994944,949499449494994944 ⋆ a(n) contains n dig its (either '4' or '9') and is divisible by 2 ^ n. ● a(n)=a(n - 1) + 10 ^ (n - 1) * (4 + 5 * [a(n - 1) / 2 ^ (n - 1) mod 2]) i.e. a(n) ends with a(n - 1); if (n - 1) - th term is divisible by 2 ^ n then n - th term begins with a 4, if not then n - th ter m begins with a 9. ●

► [A273832] 1,4,45,221,957,3965,16125,65021,261117,1046525,4190205,1676902 1,67092477,268402685,1073676285,4294836221 ⋆ Number of active (ON,black) c ells at stage 2 ^ n - 1 of the two - dimensional cellular automaton defined by "R ule 961", based on the 5 - celled von Neumann neighborhood. ● a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3) for n>4. ●

► [A123650] 4,45,280,1105,3276,8029,17200,33345,59860,101101,162504,250705,3 73660,540765,762976,1052929,1425060,1895725,2483320,3208401,4093804,516476 5,6449040,7977025,9781876 ⋆ a(n) = 1 + n ^ 2 + n ^ 3 + n ^ 5. ● a(n) = 1 + n ^ 2 + n ^ 3 + n ^ 5 = 101101 (base n) = +/- (n + 1) * (n ^ 2 - n + 1) * (n ^ 2 + 1). ●

► [A122910] 1,4,45,302,2636,20184,165040,1305952,10504896,83809664,67139456 0,5367485952,42954566656,343577810944,2748857364480,21989919383552,175923 113148416,1407369872769024,11259019111628800,90071912374730752 ⋆ Expansi on of (1 - 2x - 3x ^ 2) / ((1 - 2x)(1 + 4x)(1 - 8x)). ● a(0)=1, a(1)=4, a(2)=45, a (n)=6 * a(n - 1) + 24 * a(n - 2) - 64 * a(n - 3). - _ Harvey P. Dale _ , Jun 21 2 011 ●

► [A117644] 4,45,369,2961,23697,189585,1516689,12133521,97068177,77654542 5,6212363409,49698907281,397591258257,3180730066065,25445840528529,203566 724228241,1628533793825937,13028270350607505,104226162804860049,83380930 2438880401,6670474419511043217,53363795356088345745 ⋆ Number of distinct pairs a < b with nonzero decimal digits such that a + b = 10 ^ n. ● a(n) = 9 * a(n - 1) - 8 * a(n - 2) for n > 3. ● a(n) = 9 * (9 * 8 ^ n - 16) / 112 for n>1. - _ Colin Barker _ , Sep 22 2016 ●

► [A232729] 4,45,405,4095,40500,405450,4050000,40504500,405000000,405004500 0,40500000000,405000450000,4050000000000,40500004500000,405000000000000,4 050000045000000,40500000000000000,405000004500000000,405000000000000000 0,40500000004500000000,4050000000000000000 ⋆ Number of n - digit number s that yield an n - digit number after Reverse and Add. ● a(1) = 4, a(3) = 405, a(2k + 1) = 100 * a(2k - 1), k > 1. ● a(2) = 45, a(4) = 4095, a(2k) = 110 * a(2 k - 2) - 1000 * a(2k - 4), k > 2. ● a(n) = 10 * a(n - 1) + 10 * a(n - 2) - 100 * a(n - 3) for n>4. ●

► [A055602] 0,4,45,432,4200,43200,476280,5644800,71850240,979776000,1427025 6000,221298739200,3642807168000,63465795993600,1167099373440000,22596613 079040000,459548157100032000,9795631769763840000 ⋆ Number of n X n binar y matrices with no 0 rows or columns and with n + 1 1's. ● a(n) = n * (n - 1) * (n + 2) * n! / 4. - _ Vladeta Jovovic _ , Mar 25 2006 ●

► [A346629] 1,4,45,450,4500,45000,450000,4500000,45000000,450000000,4500000 000,45000000000,450000000000,4500000000000,45000000000000,450000000000000 0,4500000000000000,45000000000000000,450000000000000000,4500000000000000 000,45000000000000000000,450000000000000000000 ⋆ Number of n - digit positi ve integers that are the product of two integers ending with 2. ● a(n) = 10 * a(n - 1) for n > 3, with a(1) = 1, a(2) = 4 and a(3) = 45. ● a(n) = 45 * 10 ^ (n - 3) for n > 2. ●

► [A264123] 4,45,576,5733,53361,533610,5336100,53361000,533610000,533610000 0,53361000000,533610000000,5336100000000,53361000000000,533610000000000,5 336100000000000,53361000000000000,533610000000000000 ⋆ Number of (n + 1) X (3 + 1) arrays of permutations of 0..n * 4 + 3 with each element having inde x change +- (.,.) 0,0 1, - 2 or 2, - 1. ● a(n) = 53361 * 10 ^ (n - 5) for n>4. ●

► [A309450] 0,4,46,95,1124,15530,82758,435705,4553420,27612624,269734266,16 82110511,9591417483,9591417483,9591417483,4078929854577,23069175894349,12 2767967603152,1053290023551980,9195358013104225,77588729125343083,237173 261720567085,1354264989887135099 ⋆ The successive approximations up to 7 ^ n for 7 - adic integer 2 ^ (1 / 5). ● a(0) = 0 and a(1) = 4, a(n) = a(n - 1) + (a(n - 1) ^ 5 - 2) mod 7 ^ n for n > 1. ●

► [A155652] 1,4,46,514,5266,51274,484786,4503034,41367106,377342794,3426318 226,31018262554,280252754146,2528805134314,22798428290866,20542094711007 4,1850199078944386,16660255040221834,149993075340330706 ⋆ 9 ^ n - 6 ^ n + 1. ● a(n)=15 * a(n - 1) - 54 * a(n - 2) + 40 with a(0)=1, a(1)=4 - _ Vincenzo L ibrandi _ , Jul 21 2010 ●

► [A222098] 4,46,530,6108,70394,811286,9350020,107758398,1241908834,143129 22076,1649555368 10,1901102303238,21910085816324,252512376457166,29101894 35065650,335397522560 81628,386543558932945114 ⋆ Number of n X 2 0..5 array s with entries increasing mod 6 by 0, 1, 2 or 3 rightwards and downwards, starti ng with upper left zero. ● a(n) = (2 ^ (- n) * ((13 - sqrt(101)) ^ n * (- 29 + 3 * sqrt(101)) + (13 + sqrt(101)) ^ n * (29 + 3 * sqrt(101)))) / (17 * sqrt(101)). ●

► [A006422] 4,47,240,831,2282,5362,11256,21690,39072,66649,108680,170625,259 350,383348,552976,780708,1081404,1472595,1974784,2611763,3410946,4403718,5 625800,7117630,8924760 ⋆ Number of rooted toroidal maps with 2 faces and n v ertices and without separating cycles or isthmuses. ● a(n) = n * (n + 1) * (n + 2) * (8 * n ^ 3 + 87 * n ^ 2 + 148 * n - 3) / 360. ●

► [A192418] 4,48,180,448,900,1584,2548,3840,5508,7600,10164,13248,16900,2116 8,26100,31744,38148,45360,53428,62400,72324,83248,95220,108288,122500 ⋆ Mol ecular topological indices of the complete bipartite graphs K _{ n,n } . ● a(n) = 4 * n ^ 2 * (2 * n - 1). ●

► [A162673] 0,4,48,204,580,1320,2604,4648,7704,12060,18040,26004,36348,4950 4,65940,86160,110704,140148,175104,216220,264180,319704,383548,456504,53940 0 ⋆ Number of different fixed (possibly) disconnected trominoes bounded (not n ecessarily tightly) by an n * n square ● a(n)=n * (n - 1) * (3 * n ^ 2 - 3 * n - 2) / 2. ●

► [A273335] 1,4,48,224,960,3968,16128,65024,261120,1046528,4190208,1676902 4,67092480,268402688,1073676288,4294836224 ⋆ Number of active (ON,black) c ells at stage 2 ^ n - 1 of the two - dimensional cellular automaton defined by " Rule 657", based on the 5 - celled von Neumann neighborhood. ● a(n) = 2 ^ (n + 2) * (2 ^ n - 1) for n>1. ● a(n) = 6 * a(n - 1) - 8 * a(n - 2) for n>3. ●

► [A275138] 4,48,224,1088,5248,25344,122368,590848,2852864,13774848,6651084 8,321142784,1550614528,7487029248,36150575104,174550417408,842803970048,4 069417549824,19648886079488,94873214517248,458088402386944 ⋆ Number of n X 4 0..2 arrays with no element equal to any value at offset (- 2, - 2) (- 1, - 2) or (0, - 1) and new values introduced in order 0..2. ● a(n) = 2 * ((2 - 2 * sqrt(2)) ^ n + (2 * (1 + sqrt(2))) ^ n) for n>1. ●

► [A273767] 1,4,48,225,961,3969,16129,65025,261121,1046529,4190209,1676902 5,67092481,268402689,1073676289,4294836225 ⋆ Number of active (ON,black) c ells at stage 2 ^ n - 1 of the two - dimensional cellular automaton defined by " Rule 913", based on the 5 - celled von Neumann neighborhood. ● a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3) for n>5. ●

► [A292074] 1,4,48,240,1000,3300,9114,21952,47520,94500,175450,307824,51511 2,828100,1286250,1939200,2848384,4088772,5750730,7942000,10789800,1444304 4,19074682,24884160,32100000 ⋆ Number of minimum dominating sets in the n X n rook complement graph. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n > 10. ● a(n) = 6 * binomial(n, 3) ^ 2 + n ^ 2 * (n - 1) ^ 2 for n > 3. - _ Andrew Howroyd _ , Se p 13 2017 ●

► [A127211] 4,48,256,1792,11264,73728,475136,3080192,19922944,128974848,834 666496,5402263552,34963718144,226291089408,1464583847936,9478992822272,61 349312856064,397061136580608,2569833552019456,16632312393367552 ⋆ a(n) = 4 ^ n * Lucas(n), where Lucas = A000204. ● a(n) = Trace of matrix [({ 4,4 } , { 4,0 }) ^ n]. ● a(n) = 4 ^ n * Trace of matrix [({ 1,1 } , { 1,0 }) ^ n]. ● a(n) = 4 * a(n - 1) + 16 * a(n - 2). ●

► [A129002] 4,48,288,1280,4800,16128,50176,147456,414720,1126400,2973696,76 67712,19382272,48168960,117964800,285212672,681836544,1613758464,37853593 60,8808038400,20346568704,46690992128,106501767168,241591910400 ⋆ a(n) = (n ^ 3 + n ^ 2) * 2 ^ n. ● a(n) = 8 * a(n - 1) - 24 * a(n - 2) + 32 * a(n - 3) - 16 * a(n - 4). - _ Vincenzo Librandi _ , Feb 12 2013 ●

► [A291623] 1,4,48,320,1610,6012,17948,45488,101970,207920,393272,699888,118 4378,1921220,3006180,4560032,6732578,9706968,13704320,18988640,25872042,34 720268,45958508,60077520,77640050 ⋆ Number of maximal irredundant and mi nimal dominating sets in the n X n rook complement graph. ● a(n) = 2 * n + 6 * binomial(n,3) ^ 2 + n ^ 2 * (n - 1) ^ 2 + 12 * binomial(n,4) * binomial(n,2) fo r n > 2. ● a(n) = (5 * n ^ 6 - 33 * n ^ 5 + 89 * n ^ 4 - 99 * n ^ 3 + 38 * n ^ 2 + 24 * n) / 12 for n > 2. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 3 5 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n > 9. ●

► [A091904] 0,1,4,48,320,2816,21504,176128,1392640,11206656,89391104,716177 408,5725224960,45818576896,366481506304,2932120485888,23455890145280,1876 51416129536,1501194149167104,12009621912813568,96076700424601600 ⋆ Expa nsion of x / ((1 + 4x)(1 - 8x)). ● a(n)=8 ^ n / 12 - (- 4) ^ n / 12 ● a(0)=0, a(1)=1, a(n)=4 * a(n - 1) + 32 * a(n - 2). - _ Harvey P. Dale _ , May 06 2014 ●

► [A192831] 4,48,360,2304,13600,76032,407680,2113536,10658304,52531200,2540 03200,1208549376,5672083456,26309885952,120803328000,549772591104,2482528 976896,11132640165888,49615651471360,219902744985600,969770180542464,425 7311052791808 ⋆ Molecular topological indices of the hypercube graphs. ● a(n) = 2 ^ n * n ^ 2 * (1 + 2 ^ (n - 1)). - _ Andrew Howroyd _ , May 11 2017 ● a(n) = 18 * a(n - 1) - 132 * a(n - 2) + 504 * a(n - 3) - 1056 * a(n - 4) + 1152 * a(n - 5) - 512 * a(n - 6). - _ Eric W. Weisstein _ , May 27 2017 ●

► [A158681] 4,48,368,2304,12864,66816,330496,1579008,7353344,33583104,15105 6384,671219712,2953068544,12885491712,55835820032,240520790016,1030797656 064,4398058045440,18691721789440,79164887531520,334251639701504,14073751 01657088,5910974963908608 ⋆ Wiener indexes of the complete binary trees wit h n levels, root being at level 0. ● a(n) = (n + 4)2 ^ (n + 1) + (n - 2)2 ^ (2n + 2), n>0. ●

► [A283049] 0,4,48,480,4560,42504,393120,3624768,33390720,307618740,2835722 032,26162863584,241614915360,2233533229200,20667453710400,19142279983526 4,1774573628661504,16465220088660432,152894968403313600,1420856831349155 200,13213537097286612240 ⋆ Numbers of configurations of A'Campo forests wit h co - dimension 1 and degree n>0. ● a(n) = 4 * binomial(4n,n - 2), for n>1. ●

► [A099671] 4,48,492,4936,49380,493824,4938268,49382712,493827156,493827160 0,49382716044,493827160488,4938271604932,49382716049376,493827160493820,4 938271604938264,49382716049382708,493827160493827152 ⋆ Partial sums of rep digits of A002278. ● a(n) = (4 / 81) * (10 ^ (n + 1) - 9 * n - 10). - R. Piyo (nag oya314(AT)yahoo.com), Dec 10 2004 ● a(n) = 12 * a(n - 1) - 21 * a(n - 2) + 10 * a(n - 3) for n > 3. ●

► [A003774] 4,48,672,8496,106944,1349760,17032800,214925952,2712031104,342 21651456,431824387584,5448956749824,68757417818112,867612411420672,10947 928532312064,138145948088696832 ⋆ Number of spanning trees with degrees 1 and 3 in K _ 4 X P _ n. ● a(n) = 12a(n - 1) + 4a(n - 2) + 48a(n - 3), n>7. ●

► [A061100] 4,49,121,256,400,625,841,1156,1444,1849,2209,2704,3136,3721,422 5,4900,5476,6241,6889,7744,8464,9409,10201,11236,12100 ⋆ Squares with digital root 4. ● a(n) = (16 - 72 * n + 81 * n ^ 2) / 4 for n even; ● a(n)=(25 - 90 * n + 81 * n ^ 2) / 4 for n odd; ●

► [A016874] 4,49,144,289,484,729,1024,1369,1764,2209,2704,3249,3844,4489,518 4,5929,6724,7569,8464,9409,10404,11449,12544,13689,14884 ⋆ a(n) = (5 * n + 2) ^ 2. ● a(n) = a(n - 1) + 50 * n - 5; a(0)=4. - _ Vincenzo Librandi _ , Jun 07 2 011 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Wesley Ivan Hurt _ , Oc t 02 2020 ●

► [A041065] 1,4,49,200,2449,9996,122401,499600,6117601,24970004,305757649,1 248000600,15281764849,62375059996,763782484801,3117504999200,3817384247 5201,155812874900004,1907928341275249,7787526240001000,9535824322128724 9,389220499125149996 ⋆ Denominators of continued fraction convergents to sqr t(39). ● a(n) = 50 * a(n - 2) - a(n - 4). - _ Vincenzo Librandi _ , Dec 10 2013 ●

► [A166826] 0,4,49,219,666,1636,3499,6783,12212,20748,33637,52459,79182,1162 20,166495,233503,321384,434996,579993,762907,991234,1273524,1619475,204003 1,2547484 ⋆ Number of n X 2 1..4 arrays containing at least one of each value, a

ll equal values connected, rows considered as a single number in nondecreasing order, and columns considered as a single number in nonincreasing order. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

▶ [A163944] 0,4,49,246,834,2250,5214,10829,20696,37044,62875,102124,159834,242346,357504,514875,725984,1004564,1366821,1831714,2421250,3160794,4079394,5210121,6590424 ⋆ Fourth left hand column of triangle A163940. ● a(n) = (10 * n ^ 2 + 107 * n ^ 3 + 61 * n ^ 4 + 13 * n ^ 5 + n ^ 6) / 48. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). ●

▶ [A000596] 4,49,273,1023,3003,7462,16422,32946,61446,108031,180895,290745,451269,679644,997084,1429428,2007768,2769117,3757117,5022787,6625311,8632866,11123490,14185990,17920890 ⋆ Central factorial numbers. ● a(n) = 1 / 360 * n * (n - 1) * (n - 2) * (2 * n - 1) * (2 * n - 3) * (5 * n + 1). ● a(n) = s(n,n - 2) ^ 2 - 2 * s(n,n - 3) * s(n,n - 1) + 2 * s(n,n - 4), where s(n,k) are Stirling numbers of the first kind, A048994. - _ Mircea Merca _ , Apr 03 2012 ● a(n) = Sum _{ 0 < i < j < n } (i * j) ^ 2. ● a(n) = binomial(2n,5) * (5 * n + 1) / 4!. (End) ●

▶ [A067474] 4,49,400,4096,40000,400689,4000000,40005625,400000000,4000056516,40000000000,400000591936,4000000000000,40000008597136,400000000000000,40000000100766916,40000000000000000,40000000122231408 9,400000000000000000,4000000008389413041 ⋆ Smallest n - digit square starting with 4. ● a(n) = ceiling(sqrt(4 * 10 ^ (n - 1))) ^ 2. - _ Rick L. Shepherd _ , Feb 18 2002 ●

▶ [A198971] 4,49,499,4999,49999,499999,4999999,49999999,499999999,4999999999,49999999999,499999999999,4999999999999,49999999999999,499999999999999,4999999999999999,49999999999999999,499999999999999999 ⋆ a(n) = 5 * 10 ^ n - 1. ● a(n) = 10 * a(n - 1) + 9. ● a(n) = 11 * a(n - 1) - 10 * a(n - 2), n>1. ●

▶ [A199028] 4,49,544,5989,65884,724729,7972024,87692269,964614964,10610764609,116718410704,1283902517749,14122927695244,155352204647689,1708874251124584,18797616762370429,206773784386074724,2274511628246821969 ⋆ (9 * 11 ^ n - 1) / 2. ● a(n) = 11 * a(n - 1) + 5. ● a(n) = 12 * a(n - 1) - 11 * a(n - 2). ●

▶ [A055793] 0,1,4,49,676,9409,131044,1825201,25421764,354079489,4931691076,68689595569,956722646884,13325427460801,185599261804324,2585064237799729,36005300067391876,501489136705686529,6984842613812219524,97286307456665386801 ⋆ Numbers n such that n and floor[n / 3] are both squares; i.e., squares which remain squares when written in base 3 and last digit is removed. ● a(n) = 14 * a(n - 1) - a(n - 2) - 6, with a(0)=1, a(1)=4. (See Brown and Shiue) ●

▶ [A232731] 4,50,450,4590,45405,454950,4544550,45454500,454495500,4545045000,45449955000,454500450000,4544999550000,45450004500000,454499995500000,4545000045000000,45449999955000000,454500000450000000,454499999955000000,45450000004500000000 ⋆ Number of numbers that yield an n - digit number after Reverse and Add!. ● a(n) = 10 * a(n - 1) + 10 * a(n - 2) - 100 * a(n - 3) for n>5. ●

▶ [A114480] 4,50,650,8500,111250,1456250,19062500,249531250,3266406250,42757812500,559707031250,7326660156250,95907226562500,1255441894531250,16433947753906250,215123168945312500,2815998840332031250 ⋆ Kekulé numbers for certain benzenoids. ● a(n) = 2 * ((sqrt(5) + 2)((15 + 5 * sqrt(5)) / 2) ^ (n - 1) + (sqrt(5) - 2) * ((15 - 5 * sqrt(5)) / 2) ^ (n - 1)) / sqrt(5). ● a(n) = 15 * a(n - 1) - 25 * a(n - 2). ●

▶ [A320645] 0,0,0,0,0,0,4,51,339,2010,10900,56700,286888,1426542,7014746,34229050,166197824,804243285,3883608940,18729354638,90266471623,434946282498,2096010533584,10104160993993,48733654211358 ⋆ Number of chiral pairs of color patterns (set partitions) in a cycle of length n using exactly 5 colors (subsets). ● a(n) = - Ach(n,k) / 2 + (1 / 2n) * Sum _{ d|n } phi(d) * A(d,n / d,k), where k=5 is number of colors or sets, Ach(n,k) = [n>=0 & n<2 & n==k] + [n>1] * (k * Ach(n - 2,k) + Ach(n - 2,k - 1) + Ach(n - 2,k - 2)), and A(d,n,k) = [n==0 & k==0] + [n>0 & k>0] * (k * A(d,n - 1,k) + Sum _{ j|d } A(d,n - 1,k - j)). ●

▶ [A233474] 1,4,52,169,1993,6436,75700,244417,2874625,9281428,109160068,352449865,4145207977,13383813460,157408743076,508232461633,5977387028929,19299449728612,226983298356244,732870857225641,8619387950508361,27829793124845764 ⋆ Numbers m such that 5 * T(m) - 1 is a square, where T = A000217. ● a(n) = a(n - 1) + 38 * a(n - 2) - 38 * a(n - 3) - a(n - 4) + a(n - 5) for n>5, a(1)=1, a(2)=4, a(3)=52, a(4)=169, a(5)=1993. ● a(n) = - 1 / 2 + ((15 + 4 * sqrt(10) * (- 1) ^ n) * (19 - 6 * sqrt(10)) ^ floor(n / 2) + (15 - 4 * sqrt(10) * (- 1) ^ n) * (19 + 6 * sqrt(10)) ^ floor(n / 2)) / 20. ●

▶ [A071953] 4,52,292,1092,3192,7896,17304,34584,64284,112684,188188,301756,467376,702576,1028976,1472880,2065908,2845668,3856468,5150068,6786472,8834760,11373960,14493960,18296460 ⋆ Diagonal T(n,n - 2) of triangle in A071951. ● a(n) = (n - 2) * (n - 1) * n * (n + 1) * (5 * n ^ 2 - 11 * n + 3) / 90. ● a(0)=4, a(1)=52, a(2)=292, a(3)=1092, a(4)=3192, a(5)=7896, a(6)=17304, a(n)=7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). - _ Harvey P. Dale _ , Jul 03 2011 ●

▶ [A155661] 1,4,52,658,7600,83194,882352,9176458,94235200,959646394,9717524752,98022673258,986158712800,9903110989594,99321776927152,995252438490058,9966767069430400,99767369486012794,998371586402089552 ⋆ a(n) = 10 ^ n - 7 ^ n + 1. ● a(n) = 17 * a(n - 1) - 70 * a(n - 2) + 54 with a(0)=1, a(1)=4. - _ Vincenzo Librandi _ , Jul 21 2010 ● a(0)=1, a(1)=4, a(2)=52, a(n)=18 * a(n - 1) - 87 * a(n - 2) + 70 * a(n - 3). - _ Harvey P. Dale _ , May 05 2011] ●

▶ [A241872] 4,53,429,2748,15342,78339,376159,1728458,7689744,33393393,142376385,598555320,2489143090,10264270175,42048021027,171366151974,695585112660,2814484154445,11359684937605,45759869226260,184050366838134,739376299832763,2967455421451239 ⋆ Number of ascent sequences of length n with exactly two descents. ● a(n) = 4 ^ n / 6 - 3 ^ (n - 1) * (2 * n + 1) / 4 + 2 ^ (n - 4) * (n + 2) * (n - 1) + 1 / 12. - _ Vaclav Kotesovec _ , May 03 2014 ●

▶ [A001545] 4,54,154,304,504,754,1054,1404,1804,2254,2754,3304,3904,4554,5254,6004,6804,7654,8554,9504,10504,11554,12654,13804,15004 ⋆ a(n) = (5n + 1) * (5n + 4). ● a(n) = 50 * n + a(n - 1) with a(0)=4. - _ Vincenzo Librandi _ , Jan 20 2011 ●

▶ [A302942] 0,4,54,490,4050,32674,261954,2096770,16776450,134216194,1073738754,8589928450,68719464450,549755789314,4398046461954,35184371990530,281474976514050,2251799813292034,18014398508695554,144115188074283010,1152921504603701250,9223372036848484354 ⋆ a(n) = (2 ^ n - 1) ^ 2 * (2 ^ n + 2). ● a(n) = 11 * a(n - 1) - 26 * a(n - 2) + 16 * a(n - 3). ●

▶ [A199022] 4,54,604,6654,73204,805254,8857804,97435854,1071794404,11789738454,129687123004,1426558353054,15692141883604,172613560719654,1898749167916204,20886240847078254,229748649317860804,2527235142496468854 ⋆ 5 * 11 ^ n - 1. ● a(n) = 11 * a(n - 1) + 10. ● a(n) = 12 * a(n - 1) - 11 * a(n - 2), n>1. ●

▶ [A133218] 0,1,4,55,154,1885,5248,64051,178294,2175865,6056764,73915375,205751698,2510946901,6989500984,85298279275,237437281774,2897630548465,8065878079348,98434140368551,274002417416074,3343863141982285,9308016314067184,113592912687029155 ⋆ Indices of triangular numbers (A000217) that are also decagonal (A001107). ● a(n) = floor(1 / 8 * (4 + sqrt(2) * (- 1) ^ n) * (1 + sqrt(2)) ^ (2 * n - 3)). ●

▶ [A190441] 0,1,4,55,376,3649,29260,259351,2178544,18828865,160278676,1375440439,11752630120,100652697601,860963365084,7369308666775,63054805905376,539622261625729,4617626476812580,39515774110653751,338150529038305624,2893717306468718785 ⋆ a(n) = 4 * a(n - 1) + 39 * a(n - 2), with a(0)=0, a(1)=1. ● a(n) = ((2 + sqrt(43)) ^ n - (2 - sqrt(43)) ^ n) / (2 * sqrt(43)). ●

▶ [A151576] 0,4,55,396,2114,9528,38637,146080,526240,1831644,6217523,20716164,68059710,221195824,712856665,2282058360,7266358556,23035517940,72760054815,229112753980,719545590010,2254604460264,7050252659525,22006821057936,68581455012504 ⋆ Number of permutations of 1..n arranged in a circle with exactly 3 adjacent element pairs in decreasing order. ● a(n) = n * (3 ^ (n - 1) - n * 2 ^ (n - 1) + n * (n - 1) / 2). ● a(n) = 16 * a(n - 1) - 111 * a(n - 2) + 438 * a(n - 3) - 1083 * a(n - 4) + 1740 * a(n - 5) - 1817 * a(n - 6) + 1190 * a(n - 7) - 444 * a(n - 8) + 72 * a(n - 9). ●

▶ [A073352] 1,4,55,868,13825,220324,3511351,55961284,891869185,14213945668,226531261495,3610286238244,57538048550401,916998490568164,14614437800540215,232914006318075268,3712009663288664065 ⋆ Positive integers making n ^ 2 * (n - 1) * (2 * n - 1) ^ 2 * (7 * n - 1) / 36 a square. ● a(n) = 16 * a(n - 1) - a(n - 2) - 8. (Corrected by _ Paolo P. Lava _ , Jun 19 2008) ● a(n) = 4 / 7 + (3 / 14) * ((8 - 3 * sqrt(7)) ^ n + (8 + 3 * sqrt(7)) ^ n), with n>=0 - _ Paolo P. Lava _ , Jun 19 2008 ● a(n) = (4 + 3 * ChebyshevU(n, 8) - 24 * ChebyshevU(n - 1, 8)) / 7. - _ G. C. Greubel _ , Feb 09 2020 ●

▶ [A192845] 4,56,180,400,740,1224,1876,2720,3780,5080,6644,8496,10660,13160,16020,19264,22916,27000,31540,36560,42084,48136,54740,61920,69700 ⋆ Molecular topological indices of the sun graphs. ● a(n) = 4 * n * (- 3 + 3 * n + n ^ 2). ●

▶ [A144138] 0,4,56,204,496,980,1704,2716,4064,5796,7960,10604,13776,17524,21896,26940,32704,39236,46584,54796,63920,74004,85096,97244,110496 ⋆ Chebyshev polynomial of the second kind U(3,n). ● a(n) = 4 * n * (2 * n ^ 2 - 1). - _ Vincenzo Librandi _ , May 29 2014 ●

▶ [A006592] 0,4,56,216,544,1100,1944,3136,4736,6804,9400,12584,16416,20956,26264,32400,39424,47396,56376,66424,77600,89964,103576,118496,134784 ⋆ a(n) = 10 * n ^ 3 - 6 * n ^ 2. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4); a(0)=0, a(1)=4, a(2)=56, a(3)=216. - _ Harvey P. Dale _ , Aug 13 2012 ●

▶ [A077122] 0,4,56,460,2976,16884,88392,438940,2101232,9794884,44755608,201359340,894850368,3937184404,17180131304,74446624060,320691939984,1374391631844,5864066209080,24922271951500,105553133043680,445668746679604,1876499911846536 ⋆ Let M _ n be the n X n matrix M _ (i,j) = 2 ^ i - 2 ^ j then the characteristic polynomial of M _ n = x ^ n - a(n) * x ^ (n - 2). ● a(n) = 1 / 3 * [(n - 2)4 ^ (n + 2) + 3 * 2 ^ (n + 4) - 4(n - 4)]. - _ Ralf Stephan _ , May 09 2004 ● a(n) = 12 * a(n - 1) - 53 * a(n - 2) + 106 * a(n - 3) - 96 * a(n - 4) + 32 * a(n - 5) for n>4. ●

▶ [A020540] 4,56,496,4064,32704,262016,2096896,16776704,134216704,1073739776,8589930496,68719468544,549755797504,4398046478336,35184372023296,281474976579584,2251799813423104,18014398508957696,144115188074807296 ⋆ a(n) = 8 ^ (n + 1) - 2 ^ (n + 2). ● a(0)=4, a(1)=56, a(n) = 10 * a(n - 1) - 16 * a(n - 2). - _ Harvey P. Dale _ , Feb 27 2013 ●

▶ [A026740] 0,0,4,56,560,4960,41664,341376,2763520,22238720,178433024,1429559296,11444858880,91592417280,732873539584,5863525154816,46910348656640,375291379056640,3002365391929344,24019060573863936,192153034345676800,1537226473786572800 ⋆ a(n) = 2 ^ n * (2 ^ n - 1) * (2 ^ n - 2) / 6. ● a(n) = binomial(2 ^ n, 3). ● a(n) = 14 * a(n - 1) - 56 * a(n - 2) + 64 * a(n - 3) for n>=3. - _ Harvey P. Dale _ , Jun 20 2012 ●

▶ [A191466] 0,4,56,604,5936,55924,515816,4704844,42656096,385467364,3477018776,31332231484,282185395856,2540645125204,22870688939336,205860614516524,1852867600961216,16676418760213444,150090820599733496,1350832644186663964 ⋆ 9 ^ n - 5 ^ n. ● a(n) = 14 * a(n - 1) - 45 * a(n - 2). ●

▶ [A155668] 1,4,58,820,10546,128284,1509418,17390020,197581666,2223729964,24863682778,276721736020,3069708899986,33972956330044,375351787072138,4142063797326820,45668254886861506,503195228685608524 ⋆ 11 ^ n - 8 ^ n + 1. ● a(n)=19 * a(n - 1) - 88 * a(n - 2) + 70 with a(0)=1, a(1)=4 - _ Vincenzo Librandi _ , Jul 21 2010 ●

▶ [A245827] 4,59,216,526,1040,1809,2884,4316,6156,8455,11264,14634,18616,23261,28620,34744,41684,49491,58216,67910,78624,90409,103316,117396,132700 ⋆ Szeged index of the grid graph P _ 3 X P _ n. ● a(n) = (1 / 2) * n * (17 * n ^ 2 - 9). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). G.f.: x * (4 * x ^ 2 + 43 * x + 4) / (x - 1) ^ 4. - _ Colin Barker _ , Aug 07 2014 ●

▶ [A200048] 4,59,220,581,1162,2105,3370,5171,7384,10319,13744,18089,22990,29021,35662,43655,52300,62531,73444,86189,99634,115169,131410,150011,169312 ⋆ Number of real singularities on a family of degree - 3n algebraic surfaces. ● a(n) = (1 / 12) * (135 * n ^ 3 - 126 * n ^ 2 + 45 * n - 6) if n is odd; a(n) = (1 / 12) * (135 * n ^ 3 - 117 * n ^ 2 + 54 * n - 12) if n is even. ● a(n) = a(n - 1) + 3 * a(n - 2) - 3 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) + a(n - 6) - a(n - 7) for n>7. ●

▶ [A199107] 4,59,719,8639,103679,1244159,14929919,179159039,2149908479,25798901759,309586821119,3715041853439,44580502241279,534966026895359,6419592322744319,77035107872931839,924421294475182079,11093055533702184959 ⋆

a(n) = 5 * 12 ^ n - 1. • a(n) = 12 * a(n - 1) + 11. • a(n) = 13 * a(n - 1) - 12 * a(n - 2). •

► [A280668] 4,59,858,12484,181640,2642832,38452768,559481408,8140361856,118440917248,1723295736320,25073667646464,364817712941056,5308037323346496,77231064216379392,1123699197608083456 ⋆ Number of n X 3 0..2 arrays with no element equal to more than one of its horizontal and antidiagonal neighbors and with new values introduced in order 0 sequentially upwards. • a(n) = ((7 - sqrt(57)) ^ n * (- 11 + 3 * sqrt(57)) + (7 + sqrt(57)) ^ n * (11 + 3 * sqrt(57))) / (16 * sqrt(57)). •

► [A118005] 1,4,61,424,4441,36844,347221,3046864,27812401,248358484,2244991981,20156099704,181649037961,1633620638524,14708689262341,132347685782944,1191281759937121,10720772899980964,96490770797094301 ⋆ a(n) = ((- 1) ^ n * 5 ^ (n + 1) + 9 ^ (n + 1)) / 14. • a(n) = 4 * a(n - 1) + 45 * a(n - 2). •

► [A132064] 1,4,61,442,8671,48643,275491,4691011,44046781,421781671,4866217861,44417846491,469583176771,4807072338781,42155398282291,461921395126861,4447050855867481,42996432430288771,480551127927589171,4866530171154022291,46198061648602166491 ⋆ Numbers multiplied by 4 and written backwards. • a(n) = reverse(4 * a(n - 1)) where a(1) = 1 •

► [A229666] 0,4,61,652,5048,33152,197248,1098752,5838848,29949952,149454848,729546752,3497525248,16517169152,77015810048,355207217152,1622826549248,7352984010752,33073395662848,147798414589952,656648959950848 ⋆ Number of defective 4 - colorings of an n X 2 0..3 array connected horizontally, antidiagonally and vertically with exactly two mistakes, and colors introduced in row - major 0..3 order. • a(n) = 2 ^ (2 * n - 7) * (106 - 145 * n + 50 * n ^ 2) for n>3. •

► [A286438] 0,4,63,494,2247,7396,19739,45518,94259,179732,321031,543774,881423,1376724,2083267,3067166,4408859,6205028,8570639,11641102,15574551,20554244,26791083,34526254,44033987 ⋆ Number of ways to tile an n X n X n triangular area with three 2 X 2 X 2 triangular tiles and an appropriate number (= n ^ 2 - 12) of 1 X 1 X 1 tiles. • a(n) = (n ^ 6 - 9 * n ^ 5 + 6 * n ^ 4 + 153 * n ^ 3 - 361 * n ^ 2 - 564 * n + 1848) / 6 for n>=4. •

► [A141046] 0,4,64,324,1024,2500,5184,9604,16384,26244,40000,58564,82944,114244,153664,202500,262144,334084,419904,521284,640000,777924,937024,1119364,1327104 ⋆ a(n) = 4 * n ^ 4. • a(n) = 4 * n ^ 4. • a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). •

► [A249483] 1,4,64,361,6241,35344,611524,3463321,59923081,339370084,5871850384,33254804881,575381414521,3258631508224,56381506772644,319312633001041,5524812282304561,31289379402593764,541375222159074304,3066039868821187801,53049246959306977201 ⋆ Squares (A000290) which are also centered triangular numbers (A005448). • a(n) = a(n - 1) + 98 * a(n - 2) - 98 * a(n - 3) - a(n - 4) + a(n - 5). •

► [A165516] 4,64,361,6241,35344,611524,3463321,59923081,339370084,5871850384,33254804881,575381414521,3258631508224,56381506772644,319312633001041,5524812282304561,31289379402593764,541375222159074304,3066039868821187801,53049246959306977201,300440617765073810704,5198284826789924691364 ⋆ Perfect squares (A000290) that can be expressed as the sum of three consecutive triangular numbers (A000217). • a(n) = a(n - 1) + 98 * a(n - 2) - 98 * a(n - 3) - a(n - 4) + a(n - 5). • a(n) = 98 * a(n - 2) - a(n - 4) - 30. - _ Ant King _ , Dec 09 2010 • a(n) = (1 / 32) * (10 - 3 * (sqrt(6) - 3) * (5 - 2 * sqrt(6)) ^ n + (2 + sqrt(6)) * (- 5 - 2 * sqrt(6)) ^ n - (sqrt(6) - 2) * (2 * sqrt(6) - 5) ^ n + 3 * (3 + sqrt(6)) * (5 + 2 * sqrt(6)) ^ n). •

► [A154021] 0,4,64,1020,16256,259076,4128960,65804284,1048739584,16714029060,266375725376,4245297576956,67658385505920,1078288870517764,17184963542778304,273881127813935100,4364913081480183296 ⋆ a(n + 2) = 16 * a(n + 1) - a(n), with a(1)=0, a(2)=4. • a(n) = (2 / 21) * sqrt(7) * ((8 + 3 * sqrt(7)) ^ (n - 1) - (8 - 3 * sqrt(7)) ^ (n - 1)). - _ Paolo P. Lava _ , Jan 15 2009 •

► [A013709] 4,64,1024,16384,262144,4194304,67108864,1073741824,17179869184,274877906944,4398046511104,70368744177664,1125899906842624,18014398509481984,288230376151711744,4611686018427387904 ⋆ a(n) = 4 ^ (2n + 1). • a(n) = 16 * a(n - 1), n > 0; a(0) = 4. G.f.: 4 / (1 - 16 * x). [_ Philippe Deléham _ , Nov 23 2008] • a(n) = 4 ^ (2 * n + 1) = 2 ^ (4 * n + 2). - _ Alonso del Arte _ , Sep 03 2012 •

► [A208357] 4,64,1764,68644,3341584,190992400,12310790116,871343837764,66469126179600,5391179227622500 ⋆ Number of meanders of order 2n + 1 (4 * n + 2 crossings of the infinite line) with central 1 - 1 cut. • a(n) = b(n) ^ 2 where b(n) = A005315 (with a different offset). •

► [A041119] 1,4,65,264,4289,17420,283009,1149456,18674305,75846676,1232221121,5004731160,81307919681,330236409884,5365090477825,21790598321184,354014663616769,1437849252788260,23359602708228929,94876260085703976,1541379764079492545 ⋆ Denominators of continued fraction convergents to sqrt(68). • a(n) = 66 * a(n - 2) - a(n - 4). - _ Vincenzo Librandi _ , Dec 11 2013 •

► [A272134] 0,4,68,282,736,1520,2724,4438,6752,9756,13540,18194,23808,30472,38276,47310,57664,69428,82692,97546,114080,132384,152548,174662,198816 ⋆ a(n) = n * (15 * n ^ 2 - 15 * n + 4). • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4), for n>3. •

► [A222309] 0,4,70,476,1961,6204,16167,37040,76486,146300,262260,446844,728295,1144836,1742461,2581184,3730972,5280660,7331346,10008700,13453045,17835884,23345795,30210096,38675586 ⋆ Let P be a one - move "rider" with move set M= { (1,2) } ; a(n) is the number of non - attacking positions of three indistinguishable pieces P on an n X n board. • a(n) = n ^ 6 / 6 - 5 * n ^ 5 / 24 + n ^ 4 / 16 - 11 * n ^ 3 / 48 + 7 * n ^ 2 / 48 + 1 / 32 + (- 1) ^ n * (n ^ 3 / 16 - n ^ 2 / 16 - 1 / 32). •

► [A349457] 0,0,0,0,4,70,825,8526,85372,870756 ⋆ Number of singular positroids in the Grassmannian variety Gr(k,n) for a fixed n and any 0 <= k <= n. • a(n) = Sum _{ i=0..n } (2 ^ i) * binomial(n,i) * b(n), where b(n) is the sequence A349456. •

► [A192826] 4,72,448,2400,13824,72128,389120,1949184,9932800,47950848,234160128,1098559488,5200642048,23876812800,110456995840,498763431936,2266990903296,10103408033792,45289255731200,199725155352576,885321097019392 ⋆ Molecular topological indices of the folded cube graphs. • a(n) = 2 ^ (n - 2) * n ^ 2 * (2 + 2 ^ (n - 1) - binomial(n - 1,floor((n - 1) / 2))), for n>2. - _ Andrew Howroyd _ , May 11 2017 •

► [A190398] 0,4,72,496,2100,6708,17640,40384,83376,158900,284108,482160,783484,1227156,1862400,2750208,3965080,5596884,7752836,10559600,14165508,18742900,24490584,31636416,40440000 ⋆ Number of ways to place 3 nonattacking grasshoppers on a toroidal chessboard of size n x n. • a(n) = 1 / 6 * n ^ 2 * (n ^ 4 - 3 * n ^ 2 - 24 * n + 74), n>3. •

► [A003752] 4,72,584,4016,24656,140624,761960,3976704,20173280,100097008,488003448,2345542720,11142878992,52426883056,244682331976,1134222633280,5227498311360,23975219772016,109500177006104,498322800625728,2260840364623472,10230065398683632 ⋆ Number of Hamiltonian paths in C _ 4 X P _ n. • a(1) = 4, • a(2) = 72, • a(3) = 584, • a(4) = 4016, • a(5) = 24656, • a(6) = 140624, •

► [A192830] 0,4,72,672,4800,30240,178752,1017856,5640192,30528000,161694720,839393280,4277944320,21442011136,105877094400,515867934720,2483703250944,11831408197632,55825060331520,261152938393600,1212257811824640,5587829998485504 ⋆ Molecular topological indices of the halved cube graphs. • a(n) = 2 ^ (n - 3) * n ^ 2 * (n - 1) * (n - 1 + 2 ^ (n - 2)). - _ Andrew Howroyd _ , May 11 2017 • a(n) = 26 * a(n - 1) - 296 * a(n - 2) + 1936 * a(n - 3) - 8016 * a(n - 4) + 21792 * a(n - 5) - 38912 * a(n - 6) + 44032 * a(n - 7) - 28672 * a(n - 8) + 8192 * a(n - 9). - _ Eric W. Weisstein _ , May 27 2017 •

► [A139745] 0,4,72,988,12240,144244,1653912,18663628,208594080,2317594084,25654949352,283334343868,3124587089520,34425823133524,379071610510392,4172500607905708,45916496933002560,505214397985306564,5558288899894321032,61147691553229173148 ⋆ a(n) = 11 ^ n - 7 ^ n. • a(n) = 18 * a(n - 1) - 77 * a(n - 2). - _ Vincenzo Librandi _ , Jun 02 2011 •

► [A060645] 0,4,72,1292,23184,416020,7465176,133957148,2403763488,43133785636,774004377960,13888945017644,249227005939632,4472197161895732,80250321908183544,1440033597185408060,25840354427429161536 ⋆ a(0) = 0, a(1) = 4, then a(n) = 18 * a(n - 1) - a(n - 2). • a(n) = 18 * a(n - 1) - a(n - 2), with a(1) = denominator of continued fraction [2; 4] and a(2) = denominator of [2; 4, 4, 4]. • a(n) may be computed either as (i) the denominator of the (2n - 1) - th convergent of the continued fraction [2; 4, 4, 4, ...] = sqrt(5), or (ii) as the coefficient of sqrt(5) in (9 + sqrt(5)) ^ n. • a(n) = 17 * (a(n - 1) + a(n - 2)) - a(n - 3) = 19 * (a(n - 1) - a(n - 2)) + a(n - 3). - _ Mohamed Bouhamida _ , Sep 20 2006 • a(n) = - (1 / 10) * (9 - 4 * sqrt(5)) ^ n * sqrt(5) + (1 / 10) * sqrt(5) * (9 + 4 * sqrt(5)) ^ n, with n >= 0. - _ Paolo P. Lava _ , Oct 02 2008 • a(n) = Fibonacci(6 * n) / 2. - _ Gary Detlefs _ , Apr 02 2012 • a(n) = 4 * S(n - 1, 18), with Chebyshev's S - polynomials. See A049310. S(- 1, x)= 0. - _ Wolfdieter Lang _ , Aug 24 2014 •

► [A201976] 4,72,1372,9260,38112,117744,301612,676792,1375740,2589832,4584684,7717252,12454712,19395120,29289852,43067824,61861492,87034632,120211900,163310172,218571664,288598832,376391052,485383080,619485292 ⋆ Number of n X 3 0..3 arrays with rows and columns lexicographically nondecreasing read forwards and nonincreasing read backwards. • a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. •

► [A089665] 0,4,73,788,6630,48120,316526,1940568,11284380,62968560,339954670,1786320184,9176663028,46248446608,229285525420,1120646918000,5409322603896,25824570392544,122086747617198,572130452101240,2660063893120900,12279619924999504,56318986959592676 ⋆ a(n) = S2(n,2), where S2(n, t) = Sum _{ k=0..n } k ^ t * (Sum _{ j=0..k } binomial(n,j)) ^ 2. • a(n) = (1 / 24) * n * ((n + 1) * (7 * n + 5) * 4 ^ n - 2 * (n - 1) * (3 * n ^ 2 - 2 * n + 1) * binomial(2 * n, n) / (2 * n - 1)). (See Wang and Zhang, p. 338.) • a(n) = (n / 6) * ((n + 1) * (7 * n + 5) * 4 ^ (n - 1) - (n - 1) * (3 * n ^ 2 - 2 * n + 1) * Catalan(n - 1)). •

► [A114878] 0,4,74,1024,12750,150952,1739556,19740728,222003850,2482142420,27682969578,307999242192,3422552275480,38003214330588,421781012676970,4679808933074296,51914858228808470,575847287536870136 ⋆ a(n) = (1 / 15) * (3 * Fibonacci(5 * (n + 1)) - 5 * Fibonacci(4 * (n + 1))). • a(n) = Fibonacci(5 * (n + 1)) / Fibonacci(5) - Fibonacci(4 * (n + 1)) / Fibonacci(4). •

► [A072373] 1,4,75,384,1805,8100,35287,150528,632025,2620860,10759331,43804800,177105253,711809364,2846259375,11330543616,44929049777,177540878700,699402223099,2747583822720,10766828545725,42095796462852,164244726238343 ⋆ Complexity of doubled cycle (regarding case n = 2 as a graph). • a(n)=10a(n - 1) - 35a(n - 2) + 52a(n - 3) - 35a(n - 4) + 10a(n - 5) - a(n - 6), n>8. •

► [A006412] 4,75,604,3150,12480,40788,115500,292578,677820,1459315,2954952,5679700,10438272,18449760,31511880,52213596,84206100,132543411,204105220,308116050,456776320,666022500,956435220,1354315950,1892954700 ⋆ Number of nonseparable tree - rooted planar maps with n + 3 edges and 4 vertices. • a(n) = 4 * binomial(n + 4, 5) + 51 * binomial(n + 4, 6) + 163 * binomial(n + 4, 7) + 194 * binomial(n + 4, 8) + 78 * binomial(n + 4, 9). - _ Sean A. Irvine _ , Apr 03 2017 • a(n) = binomial(n + 5,6) * (n + 3) * (13 * n ^ 2 + 57 * n + 14) / 84. - _ Andrew Howroyd _ , Apr 05 2021 •

► [A094160] 0,4,76,344,936,1980,3604,5936,9104,13236,18460,24904,32696,41964,52836,65440,79904,96356,114924,135736,158920,184604,212916,243984,277936 ⋆ Column 4 of A048790. • a(n) = 64 / 3 n ^ 3 - 30 n ^ 2 + 38 / 3 n. - _ Joshua Zucker _ , Aug 14 2006 • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>4. •

► [A045996] 0,4,76,516,2148,6768,17600,40120,82608,157252,280988,477012,775172,1214768,1844512,2725000,3930384,5550844,7692300,10482124,14066996,18619128,24337056,31449200,40212160 ⋆ Number of triangles in an n X n grid (or geo plane). • a(n) = ((n - 1) ^ 2 * n ^ 2 * (n + 1) ^ 2) / 6 - 2 * Sum _{ m=2..n } Sum _{ k=2..n } (n - k + 1) * (n - m + 1) * gcd(k - 1, m - 1). •

► [A210519] 0,4,78,399,1263,3084,6395,11848,20212,32377,49348,72250,102328,140942,189575,249824,323407,412159,518035,643108,789568,959725,1156007,1380959,1637248 ⋆ a(n) = floor(volume of 4 - sphere of radius n). • a(n) = floor(1 / 2 * Pi ^ 2 * n ^ 4). •

► [A279437] 0,4,78,528,2200,6900,17934,40768,83808,159300,284350,482064,782808,1225588,1859550,2745600,3958144,5586948,7739118,10541200,14141400,18711924,24451438,31587648,40380000 ⋆ Number of ways to place 3 points on an n X n square grid so that no more than 2 points are on a vertical or horizontal strai

ght line. • a(n) = (n ^ 6 - 5 * n ^ 4 + 6 * n ^ 3 - 2 * n ^ 2) / 6. • a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). •

► [A296997] 0,4,78,544,2260,7068,18298,41472,85032,161300,287430,486624,789308,1234604,1871730,2761728,3979088,5613732,7772862,10583200,14193060,18774844,24527338,31678464,40487800 ⋆ Number of ways to place 3 points on an n X n point grid so that no point is equally distant from two other points on the same row or the same column. • a(n) = (n ^ 6 - 3 * n ^ 4 - 3 * n ^ 3 + 8 * n ^ 2) / 6 - (n == 1 (mod 2)) * n / 2. • a(n) = (n ^ 6 - 3 * n ^ 4 - 3 * n ^ 3 + 8 * n ^ 2) / 6 for n even, • a(n) = (n ^ 6 - 3 * n ^ 4 - 3 * n ^ 3 + 8 * n ^ 2 - 3 * n) / 6 for n odd. • a(n) = 5 * a(n - 1) - 8 * a(n - 2) + 14 * a(n - 4) - 14 * a(n - 5) + 8 * a(n - 7) - 5 * a(n - 8) + a(n - 9) for n>9. •

► [A192790] 4,80,336,880,1820,3264,5320,8096,11700,16240,21824,28560,36556,45920,56760,69184,83300,99216,117040,136880,158844,183040,209576,238560,270100 ⋆ Molecular topological index of the Andrasfai graphs • a(n) = 2 * n * (3 * n - 2) * (3 * n - 1). • a(n) = + 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - 1 * a(n - 4). •

► [A192834] 0,4,80,800,6248,43424,283880,1793600,11110088,68008544,413290280,2500208000,15081582728,90806120864,546088834280,3281497784000,19708713860168,118330793948384,710297609395880,4263033439001600,2558318094819840 8,1535189744655391 04 ⋆ Molecular topological indices of the Mycielski graphs. • a(n) = (3 * 2 ^ n - 8) * (18 - 27 * 2 ^ n + 14 * 3 ^ n) / 36, n > 1, with a(1)=0. •

► [A041189] 1,4,81,328,6641,26892,544481,2204816,44640801,180768020,3660001201,14820772824,300075457681,1215122603548,24602527528641,99625232718112,2017107181890881,8168053960281636,165378186387523601,669680799510376040 ⋆ Denominators of continued fraction convergents to sqrt(105). • a(n) = 82 * a(n - 2) - a(n - 4). - _ Vincenzo Librandi _ , Dec 12 2013 •

► [A123198] 1,4,81,400,1225,2916,5929,10816,18225,28900,43681,63504,89401,12500,164025,215296,277729,352836,442225,547600,670761,813604,978121,1166400,1380625 ⋆ a(n)=[(n + 1)(2n - 1)] ^ 2. • a(n)=Sum((4k - 1)(4k ^ 2 - 2k - 1),k=0..n) (n>=0). •

► [A289224] 0,4,82,670,3028,9780,25574,57862,117800,221268,390010,652894,1047292,1620580,2431758,3553190,5072464,7094372,9743010,13163998,17526820,23027284,29890102,38371590,48762488 ⋆ Number of ways to select 3 disjoint point triples from an n X n X n triangular point grid, each point triple forming a 2 X 2 X 2 triangle. • a(n) = (n ^ 6 - 6 * n ^ 5 - 24 * n ^ 4 + 208 * n ^ 3 - 67 * n ^ 2 - 1684 * n + 2712) / 6. • a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>9. •

► [A172138] 0,4,84,452,1772,5596,14888,34640,72712,140716,255036,437968,718980,1136092,1737376,2582576,3744848,5312620,7391572,10106736,13604716,18056028,23657560,30635152,39246296 ⋆ Number of ways to place 3 nonattacking zebras on an n X n board. • a(n) = (n ^ 6 - 27 * n ^ 4 + 120 * n ^ 3 + 74 * n ^ 2 - 1608 * n + 2976) / 6, n >=6. •

► [A178208] 0,4,84,560,2300,7140,18424,41664,85320,161700,287980,487344,790244,1235780,1873200,2763520,3981264,5616324,7775940,10586800,14197260,18779684,24532904,31684800,40495000 ⋆ Number of ways to choose three points in an (n X n) - grid (or geoplane). • a(n) = binomial(n ^ 2,3) = 1 / 6 * n ^ 2 * (n ^ 2 - 1) * (n ^ 2 - 2). - _ Martin Renner _ , May 23 2010 • a(1)=0, a(2)=4, a(3)=84, a(4)=560, a(5)=2300, a(6)=7140, a(7)=18424, a(n)=7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). - _ Harvey P. Dale _ , Nov 09 2012 •

► [A122209] 4,87,1556,13275,65796,239087,710844,1789395,4083404,8384727,16156884,29194283,50363460,82888311,132264452,204330315,306450780,450504551,647579748,913503459,1262033828,1725350295,2318488092,3072687971 ⋆ Sum of squares of the first n ^ 2 primes = A024450[n ^ 2]. • a(n) = Sum[Prime[k] ^ 2, { k,1,n ^ 2 }]. a(n) = A024450[n ^ 2]. •

► [A254652] 1,4,88,421,9661,46288,1062604,5091241,116876761,559990204,12855381088,61593831181,1413975042901,6774761439688,155524399338004,745162164534481,17106269952137521,81961063337353204,1881534170335789288,9014971804944317941 ⋆ Indices of pentagonal numbers (A000326) which are also centered heptagonal numbers (A069099). • a(n) = a(n - 1) + 110 * a(n - 2) - 110 * a(n - 3) - a(n - 4) + a(n - 5). •

► [A248041] 1,4,91,1126819,2146097524939083451 ⋆ Numerators of approximation to 2 ^ (1 / 3) by Newton's method after n iterations. • a(n) = x(n) / gcd(x(n),y(n)) •

► [A269091] 4,96,1152,11424,103488,889056,7375872,59698464,474360768,3715826016,28777886592,220814937504,1681292682048,12718165610976,95670977133312,716203564928544,5338972029467328,39651633731043936,293513242790716032 ⋆ Number of n X 2 0..3 arrays with some element plus some horizontally or vertically adjacent neighbor totalling three exactly once. • a(n) = 96 * 7 ^ (n - 3) * (5 * n - 3) for n>1. •

► [A041275] 1,4,97,392,9505,38412,931393,3763984,91267009,368832020,8943235489,36141773976,876345810913,3541525017628,85872946233985,347033309953568,8414672385119617,34005722850432036,824552020795488481 ⋆ Denominators of continued fraction convergents to sqrt(150). • a(n) = 98 * a(n - 2) - a(n - 4). - _ Vincenzo Librandi _ , Dec 14 2013 •

► [A365608] 0,4,100,1060,9316,77092,624484,5019172,40223332,321996580,2576602468,20614709284,164923342948,1319403749668,10555281015652,84442401180196,675539668606564,5404318726347556,43234553943265636,345876443943580708,2767011588741012580,22136092821505201444,177088742906772914020 ⋆ Number of degree 4 vertices in the n - Sierpinski carpet graph. • a(n) = (3 / 10) * 8 ^ n - (32 / 15) * 3 ^ n + 4. • a(n) = 8 * a(n - 1) + 32 * 3 ^ (n - 2) - 28. •

► [A128865] 4,108,1372,13500,119164,1000188,8193532,66325500,533731324,4282396668,34309431292,274676629500,2198218047484,17588965015548,140724603846652,1125848368021500,9006993097883644,72056769407352828,576457453774831612 ⋆ Number of n - tuples where each entry is chosen from the subsets of { 1,2,3,4 } such that the intersection of all n entries contains exactly one element. • a(n)=4 * (2 ^ n - 1) ^ 3 •

► [A269270] 4,108,1620,20412,236196,2598156,27634932,286978140,2927177028,29443957164,292889889684,2887057484028,28242953648100,274521509459532,2653707924775476,25530500379736476,244598664928443012 ⋆ Number of n X 2 0..3 arrays with some element plus some horizontally or antidiagonally adjacent neighbor totalling three exactly once. • a(n) = 9 ^ (n - 1) * (8 * n - 4). •

► [A135917] 0,4,112,859,3640,11250,28544,63217,126704,235200,410800,682759,1088872,1676974,2506560,3650525,5197024,7251452,9938544,13404595,17819800,23380714,30312832,38873289,49353680 ⋆ a(n) = (n ^ 6 - 30 * n ^ 4 + 45 * n ^ 3 + 206 * n ^ 2 - 576 * n + 384) / 6. • a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n > 9. - _ Stefano Spezia _ , Sep 03 2018 •

► [A041377] 1,4,113,456,12881,51980,1468321,5925264,167375713,675428116,19079362961,76992879960,2174880001841,8776512887324,247917240846913,1000445476274976,28260390576546241,114042007782459940,3221436608485424561,12999788441724158184 ⋆ Denominators of continued fraction convergents to sqrt(203). • a(n) = 114 * a(n - 2) - a(n - 4). - _ Vincenzo Librandi _ , Dec 16 2013 •

► [A064204] 0,0,4,120,1140,6525,27580,94724,279160,730930,1741300,3839660,7937644,15535975,29012620,52014200,89976240,150801764,245731940,390446960,6066440100,922712945,1377845084,2022497180,2922412200 ⋆ a(n) = 280 * binomial(n + 4,9) + 280 * binomial(n + 4,8) + 105 * binomial(n + 3,7) + 77 * binomial(n + 3,6) + 43 * binomial(n + 2,5) - 16 * binomial(n + 2,4) + 20 * binomial(n + 1,3) - floor(n * (n ^ 2 - 1) * (n ^ 2 - 4) * (n - 3) / 360). • a(n) = (n * (- 720 + 1080 * n + 404 * n ^ 2 - 1098 * n ^ 3 + 282 * n ^ 4 + 9 * n ^ 5 + 33 * n ^ 6 + 9 * n ^ 7 + n ^ 8)) / 1296. • a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10) for n>9. •

► [A054644] 4,120,1140,6545,27720,95284,280840,735130,1750540,3858140,7971964,15596035,29112720,52174360,90223760,151173044,246274580,391222160,607525380,924205205,1379864024,2025189100,2925954200,4166590350 ⋆ Number of labeled pure 2 - complexes on n nodes with 3 2 - simplexes. • a(n) = binomial(binomial(n, 3), 3) = 4 * binomial(n, 4) + 100 * binomial(n, 5) + 480 * binomial(n, 6) + 945 * binomial(n, 7) + 840 * binomial(n, 8) + 280 * binomial(n, 9) = n * (n - 1) * (n - 2) * (n - 3) * (n ^ 2 + 2) * (n ^ 3 - 3 * n ^ 2 + 2 * n - 12) / 1296. •

► [A017186] 4,121,400,841,1444,2209,3136,4225,5476,6889,8464,10201,12100,14161,16384,18769,21316,24025,26896,29929,33124,36481,40000,43681,47524 ⋆ a(n) = (9 * n + 2) ^ 2. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3); a(0)=4, a(1)=121, a(2)=400. - _ Harvey P. Dale _ , Apr 16 2013 •

► [A355751] 4,121,562,1543,3280,5989,9886,15187,22108,30865,41674,54751,70312,88573,109750,134059,161716,192937,227938,266935,310144,357781,410062,467203,529420 ⋆ Positive numbers k such that the centered cube number k ^ 3 + (k + 1) ^ 3 is equal to the difference of two positive cubes and to A352759(n). • a(n) = (9 * (2 * n - 1) ^ 3 - 1) / 2. • a(n) can be extended for negative n such that a(- n) = - a(n + 1) - 1. •

► [A073351] 0,4,125,1078,5220,18150,50869,122500,263568,519840,956725,1664234,2762500,4407858,6799485,10186600,14876224,21241500,29730573,40876030,55304900,73749214,97057125,126204588,162307600 ⋆ n ^ 2(n + 1)(2n + 1) ^ 2(7n + 1) / 36. • a(n)=sum(i=1, n, i ^ 2) * sum(i=n + 1, 2 * n, i ^ 2). •

► [A041495] 1,4,129,520,16769,67596,2179841,8786960,283362561,1142237204,36834953089,148482049560,4788260539009,19301524205596,622437035118081,2509049664677920,80912026304811521,326157154883924004,10517940982590379649,42397921085245442600 ⋆ Denominators of continued fraction convergents to sqrt(264). • a(n) = 130 * a(n - 2) - a(n - 4) for n>3. - _ Vincenzo Librandi _ , Dec 18 2013 •

► [A006429] 0,4,135,1368,7350,28400,89073,241220,585057,1301420,2699125,5282172,9842430,17584416,30289835,50530680,81940901,129557940,200246795,303220720,450674190,658545360,947426925,1343646044,1880535825 ⋆ Number of loopless tree - rooted planar maps with 4 vertices and n faces. • a(n) = n * (n + 2) * (13 * n ^ 7 + 268 * n ^ 6 + 2254 * n ^ 5 + 4900 * n ^ 4 - 10703 * n ^ 3 - 62048 * n ^ 2 + 28596 * n + 137520) / 60480 for n > 1. - _ Sean A. Irvine _ , Apr 10 2017 • a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10) for n > 11. •

► [A089666] 0,4,137,2136,23452,209840,1640346,11648224,76976048,481048128,2874897670,16564931504,92584313112,504313834336,2687067833492,14045889333120,72202366588096,365713117287680,1828223537042142,9032706189007888,44158716127799240,213826835772518304 ⋆ a(n) = S2(n,3), where S2(n, t) = Sum _{ k=0..n } k ^ t * (Sum _{ j=0..k } binomial(n,j)) ^ 2. • a(n) = n * (15 * n ^ 3 + 30 * n ^ 2 + 21 * n - 2) * 4 ^ (n - 3) - (n - 1) ^ 2 * n ^ 2 * (n + 1) * binomial(2 * n, n) / (8 * (2 * n - 1)). (See Wang and Zhang, p. 338.) • a(n) = n * (15 * n ^ 3 + 30 * n ^ 2 + 21 * n - 2) * 4 ^ (n - 3) - 9 * binomial(n + 1, 3) ^ 2 * Catalan(n - 1) / (n + 1). •

► [A017294] 4,144,484,1024,1764,2704,3844,5184,6724,8464,10404,12544,14884,17424,20164,23104,26244,29584,33124,36864,40804,44944,49284,53824,58564 ⋆ a(n) = (10 * n + 2) ^ 2. • a(n) = a(n - 1) + 200n - 60, n>0 ; a(0)=4. - _ Miquel Cerda _ , Oct 30 2016 •

► [A134631] 0,4,144,1152,4960,15300,38304,83104,162432,293220,497200,801504,1239264,1850212,2681280,3787200,5231104,7085124,9430992,12360640,15976800,20393604,25737184,32146272,39772800 ⋆ a(n) = 5 * n ^ 5 - 3 * n ^ 3 + 2 * n ^ 2. Coefficients and exponents are the prime numbers in decreasing order. • a(n) = 5 * n ^ 5 - 3 * n ^ 3 + 2 * n ^ 2. •

► [A289231] 0,4,159,1644,9548,38872,125367,342831,829052,1822785,3714519,7113539,12935256,22511616,37728563,61194888,96446684,148191316,222597315,327633979,473466444,672912717,941968139,1300402591,1772439504 ⋆ Number of nonequivalent ways to select 4 disjoint point triples from an n X n X n triangular point grid, each point triple forming a 2 X 2 X 2 triangle. • a(n) = (n ^ 8 - 8 * n ^ 7 - 50 * n ^ 6 + 556 * n ^ 5 + 261 * n ^ 4 - 12724 * n ^ 3 + 19088 * n ^ 2 + 86016 * n - 201024) / 144 + IF(MOD(n, 2) = 1, - 2 * n + 5) / 4 + IF(MOD(n, 3) = 1, - n ^ 2 + 2 * n + 12) / 9. •

► [A041779] 1,4,161,648,26081,104972,4224961,17004816,684417601,2754675220,110871426401,446240380824,17960486659361,72288187018268,29094879673900

81,11710240056578592,4713190902305337 61,18969866009786136 36,76350783129379079201 ⋆ Denominators of continued fraction convergents to sqrt(410). ● a(n) = 162 * a(n - 2) - a(n - 4). G.f.: - (x ^ 2 - 4 * x - 1) / (x ^ 4 - 162 * x ^ 2 + 1) . [_ Colin Barker _ , Jul 16 2012] ●

▶ [A278124] 4,168,512,1200,2576,5328,10832,21840,43856,87888,175952,352080,704336,1408848,2817872,5635920,11272016,22544208,45088592,90177360,180354896,360709968,721420112,1442840400,2885680976 ⋆ a(n) = 172 * 2 ^ n - 176. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2). ●

▶ [A017414] 4,169,576,1225,2116,3249,4624,6241,8100,10201,12544,15129,17956,21025,24336,27889,31684,35721,40000,44521,49284,54289,59536,65025,70756 ⋆ (11n + 2) ^ 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Jul 07 2012 ●

▶ [A017546] 4,196,676,1444,2500,3844,5476,7396,9604,12100,14884,17956,21316,24964,28900,33124,37636,42436,47524,52900,58564,64516,70756,77284,84100 ⋆ (12n + 2) ^ 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Jul 07 2012 ●

▶ [A144044] 1,4,196,2304,55696,906304,18181696,325730304,6199357696,114211554304,2141141533696,39766241378304,742275639709696,13817991215202304,257604225193885696,4798702283133026304,89428432275804061696 ⋆ a(n) = ((1 + sqrt(11)) ^ n - (1 - sqrt(11)) ^ n) ^ 2 / 44. ● a(n) = 14 * a(n - 1) + 140 * a(n - 2) - 1000 * a(n - 3). ●

▶ [A089667] 0,4,265,5984,85722,944904,8771462,72095520,541127988,3785356752,25032083230,158102986624,961123994220,5656943319664,32386277835772,181019819948864,990793669704552,5323620638111136,28137973407708174,146552649537716992 ⋆ a(n) = S2(n,4), where S2(n, t) = Sum _{ k=0..n } k ^ t * (Sum _{ j=0..k } binomial(n,j)) ^ 2. ● a(n) = (1 / 480) * (n * (n + 1) * (93 * n ^ 3 + 132 * n ^ 2 + 53 * n - 38) * 4 ^ n - 4 * n * (n - 1) * (15 * n ^ 5 - 99 * n ^ 3 + 116 * n ^ 2 - 34 * n + 6) * binomial(2 * n, n) / ((2 * n - 1) * (2 * n - 3)). (See Wang and Zhang, p. 338.) ● a(n) = (1 / 30) * (n * (n + 1) * 93 * n ^ 3 + 132 * n ^ 2 + 53 * n - 38) * 4 ^ (n - 2) - (n - 1) * (15 * n ^ 5 - 99 * n ^ 3 + 116 * n ^ 2 - 34 * n + 6) * Catalan(n - 2)). ●

▶ [A283101] 0,0,4,344,8760,157504,2388204,32737984,419969088,5141235840,60795581132,700024311536,7892352548080 ⋆ Numbers of A'Campo forests of degree n>2 and co - dimension 3. ● a(n) is obtained by using the generating function N _{ 1 } =1 + yN _{ 2 }^ 4 and (1 - N _{ 2 } + 2yN _{ 2 }^ 4 - yN _{ 2 }^{ 5 } + xyN _{ 2 }^{ 6 } + y ^{ 2 } N _{ 2 }^{ 8 })(1 + yN _{ 2 }^{ 4 }- xyN _{ 2 }^{ 5 }) + x ^ 3y ^{ 2 } N _{ 2 }^{ 9 } =0, where N _{ 1 } (x,y)= \ sum _{ n } N _{ 1 } '(3,n)x ^{ 3 } y ^{ n } and N _{ 1 } '(3,n) is the number of A'Campo forests with co - dimension 3; N _{ 3 } (x,y)= \ sum _{ n } N _{ 3 } '(3,n)x ^{ 3 } y ^{ n } where N _{ 3 } '(3,n) is the number of partial configurations. ●

▶ [A052391] 0,0,4,349,9985,213230,4000444,69940479,1170549895,19024433560,302846958634,4748624978009,73628721516805,1132119741733890,17298702716660824,263082403948681939,3986935934969727715 ⋆ Number of 4 - element intersecting families (of distinct sets) whose union is an n - element set. ● a(n) = (15 ^ n - 6 * 11 ^ n + 12 * 9 ^ n - 8 ^ n - 22 * 7 ^ n + 15 * 6 ^ n + 12 * 5 ^ n - 17 * 4 ^ n + 17 * 3 ^ n - 11 * 2 ^ n - 6) / 4!. ●

▶ [A324155] 4,498,1139556,33182655688 ⋆ Greatest number N such that the number of primes (<= N) <= the number of base - n - zerofree numbers (<= N). ● a(n) = max(k | pi(k) <= numOfZerofreeNum _ n(k)), where numOfZerofreeNum _ n(k) is the number of base - n zerofree numbers <= k ((see A324161 for general formulas regarding numOfZerofreeNum _ n(k))). ● a(n) < e * (p * log(p * log((e / (e - 1)) * p * log(p)))) ^ (1 / (1 - d)), ● a(n) > e ^ 1.1 * (q * log(q * log(q * log(q)))) ^ (1 / (1 - d)), ● a(n) < e * ((e / (e - 1)) * p * log(p)) ^ (1 / (1 - d)), ● a(n) < e * ((e / (e - 1)) * p * log(p)) ^ ((n - 1 / 2) * log(n)), ● a(n) < n * ((e / (e - 1)) * n * log(n) * log(n * log(n))) ^ ((n - 1 / 2) * log(n)), n > 3. ●

▶ [A089668] 0,4,521,17136,320716,4356560,48024786,456843520,3893995184,30487086144,223052123830,1544098243424,10208488021176,64917814932256,399310478637476,2386386863086080,13906802738650816,79261768839946496,442921922267640894 ⋆ a(n) = S2(n,5), where S2(n, t) = Sum _{ k=0..n } k ^ t * (Sum _{ j=0..k } binomial(n,j)) ^ 2. ● a(n) = (1 / 128) * n * (21 * n ^ 5 + 61 * n ^ 4 + 55 * n ^ 3 + 15 * n ^ 2 - 28 * n + 4) * 4 ^ n - (1 / 48) * n ^ 2 * (n - 1) ^ 2 * (3 * n - 5) * (n ^ 2 + 4 * n - 6) * binomial(2 * n, n) / ((2 * n - 1) * (2 * n - 3)). (See Wang and Zhang, p. 338) ● a(n) = (1 / 2) * (n * (21 * n ^ 5 + 61 * n ^ 4 + 55 * n ^ 3 + 15 * n ^ 2 - 28 * n + 4) * 4 ^ (n - 3) - (n - 1) * (3 * n - 5) * (n ^ 2 + 4 * n - 6) * binomial(n + 1, 3) * Catalan(n - 2)). ●

▶ [A123657] 4,593,20494,266497,1969376,10125649,40473658,134483969,387958492,1001010001,2359733894,5162787073,10609354744,20668614737,38454800626,68736319489,118612097588,198393407569,322734873982,512064160001 ⋆ a(n) = 1 + n ^ 4 + n ^ 6 + n ^ 9. ● a(n) = 1 + n ^ 4 + n ^ 6 + n ^ 9 = 1001010001 (base n). ●

▶ [A160737] 0,4,743,6732,30046,94100,237429,517468,1014332,1834596,3115075,5026604,7777818,11618932,16845521,23802300,32886904,44553668,59317407,77757196,100520150,128325204,161966893,202319132,250338996 ⋆ 4 * P _ 5(n), 4 times the Legendre Polynomial of order 5 at n. ● a(n) = n * (63 * n ^ 4 - 70 * n ^ 2 + 15) / 2. - _ Vaclav Kotesovec _ , Jul 31 2013 ●

▶ [A176186] 4,832,22708,312956,2716096,17117832,84871680,349093856,1239869972,3905117168,11139611892,29224290600,71402912960,164029487484,357164398040,741835920276,1477798367368,2836053660668,5263672510684,9478352925488,16606678238496,28378012168908 ⋆ Number of ways to place 6 nonattacking queens on an n X n board. ● a(n)=1 / 720 * n ^ 12 - 5 / 72 * n ^ 11 + 77 / 48 * n ^ 10 - 73339 / 3240 * n ^ 9 ● a(6) = 4, ● a(7) = 832, ● a(8) = 22708, ● a(9) = 312956, ● a(10) = 2716096, ●

▶ [A283103] 0,0,0,4,1380,75600,2340744,54275296,1055436228,18230184752,289150871152,4300858168200,60843411796440 ⋆ Number of A'Campo forests of degree n and co - dimension 5. ● a(n) is obtained by using the generating function N _{ 1 } =1 + yN _{ 2 }^ 4 and (1 - N _{ 2 } + 2yN _{ 2 }^ 4 - yN _{ 2 }^{ 5 } + xyN _{ 2 }^{ 6 } + y ^{ 2 } N _{ 2 }^{ 8 })(1 + yN _{ 2 }^{ 4 }- xyN _{ 2 }^{ 5 }) + x ^ 3y ^{ 2 } N _{ 2 }^{ 9 } =0, where N _{ 1 } (x,y)= \ sum _{ n } N _{ 1 } '(5,n)x ^{ 5 } y ^{ n } and N _{ 1 } '(5,n) is the number of A'Campo forests with co - dimension 5; N _{ 2 } (x,y)= \ sum _{ n } N _{ 2 } '(5,n)x ^{ 5 } y ^{ n } where N _{ 2 } '(5,n) is the number of partial configurations. ●

▶ [A132639] 1,1,4,3125,11112006825558016 ⋆ Catalan number C(n) raised to power C(n). ● a(n) = (C(n)) ^ (C(n)). ●

▶ [A360760] 1,4,98309,57395638,5368709137,183105468776,3291294892069,37980492079594,316659348799553,2058911320946572,11000000000000101,50126978032987934,200291280469622929,716602502197270768,2333521433367183557,7006302246093750226,19599665578316398849 ⋆ a(n) = n ^ 16 + n ^ 15 + n ^ 2 + 1. ● a(n) = n ^ 16 + n ^ 15 + n ^ 2 + 1. ●

▶ [A266200] 0,0,1,4,7625597484987 ⋆ Herbert - Ackermann numbers: a(n) = Hack(n,n,n) = H _{ n + 1 } (n,n), where Hack is the Herbert - Ackermann function. ● a(- 1) = 0; ● a(n) = Hack(n,n,n), n >= 0. ● a(n) = H _{ n + 1 } (n,n) = n[n + 1]n, n >= - 1. ●

▶ [A341600] 1,5,5,5,5,69,197,453,453,1477,3525,3525,3525,3525,3525,3525,134597,396741,396741,1445317,1445317,1445317,9833925,26611141,60165573 ⋆ One of the two successive approximations up to 2 ^ n for 2 - adic integer sqrt(- 3 / 5). This is the 1 (mod 4) case. ● a(2) = 1; for n >= 3, a(n) = a(n - 1) if 5 * a(n - 1) ^ 2 + 3 is divisible by 2 ^ (n + 1), otherwise a(n - 1) + 2 ^ (n - 1). ● a(n) == Fibonacci(2 ^ (2 * n - 1)) (mod 2 ^ n). - _ Peter Bala _ , Nov 11 2022 ●

▶ [A098526] 1,1,5,5,5,21,37,117,197,277,613,1205,3077,6229,10661,20469,39749,88981,188645,359221,686725,1322709,2746405,5764725,11512261 ⋆ Expansion of (1 + 4x ^ 2) / (1 - x - 16x ^ 5). ● a(n)=a(n - 1) + 16a(n - 5); a(n)=sum { k=0..floor(n / 2), binomial(n - 2k, floor(k / 2))4 ^ k } . ● a(0)=1, a(1)=1, a(2)=5, a(3)=5, a(4)=5, a(n)=a(n - 1) + 16 * a(n - 5). - _ Harvey P. Dale _ , Jun 15 2014 ●

▶ [A019528] 5,5,6,8,11,16,25,38,59,93,148,235,376,602,966,1550,2491,4003,6436,10348,16643,26766,43052,69247,111387 ⋆ Poincaré series [or Poincare series] for depths of roots in a certain root system. ● a(n + 1) = sum _{ i=n - 11 }^ n v(i) * a(i), where v = [0,0, - 1, - 1, - 2, - 1,0,2,2,1,0]. ●

▶ [A191695] 5,5,6,9,14,23,37,61,101,168,278,462,769,1280,2131,3550,5913,9853,16418,27359,45594,75985,126636,211055,351751 ⋆ a(n) = floor((5 ^ n) / (3 ^ n - 2 ^ n)). ● a(n) = (5 / 3) ^ n + (10 / 9) ^ n + O(1). - _ Charles R Greathouse IV _ , Mar 14 2022 ●

▶ [A163980] 1,5,5,9,9,13,13,17,17,21,21,25,25,29,29,33,33,37,37,41,41,45,45,49,49 ⋆ a(n) = 2 * n + (- 1) ^ n. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3). ● a(n) = 4 * n - 2 - a(n - 1), with a(1)=1. - _ Vincenzo Librandi _ , Nov 30 2010 ●

▶ [A173322] 5,5,9,25,97,481,2881,20161,161281,1451521,14515201,159667201,1916006401,24908083201,348713164801,5230697472001,83691159552001,1422749712384001,25609494822912001,486580401635328001,9731608032706560001,204363768686837760001 ⋆ 4 * n! + 1. ● a(0) = 5, a(n) = n * a(n - 1) - n + 1. - _ Sergei N. Gladkovskii _ , Jul 04 2012 ●

▶ [A168284] 0,5,5,10,10,15,15,20,20,25,25,30,30,35,35,40,40,45,45,50,50,55,55,60,60 ⋆ a(n) = (10 * n + 5 * (- 1) ^ n - 5) / 4. ● a(n) = 5 * n - a(n - 1) - 5, with n > 1, a(1)=0. ●

▶ [A309457] 0,0,0,0,0,5,5,10,14,24,33,46,58,80,99,129,154,195,233,285,335,404,469,555,636 ⋆ Number of squarefree parts in the partitions of n into 5 parts. ● a(n) = Sum _{ l=1..floor(n / 5) } Sum _{ k=l..floor((n - 1) / 4) } Sum _{ j=k..floor((n - k - l) / 3) } Sum _{ i=j..floor((n - j - k - l) / 2) } (mu(i) ^ 2 + mu(j) ^ 2 + mu(k) ^ 2 + mu(l) ^ 2 + mu(n - i - j - k - l) ^ 2), where mu is the Möbius function (A008683). ●

▶ [A022088] 0,5,5,10,15,25,40,65,105,170,275,445,720,1165,1885,3050,4935,7985,12920,20905,33825,54730,88555,143285,231840 ⋆ Fibonacci sequence beginning 0, 5. ● a(n) = round((2 * phi - 1) * phi ^ n) for n>3. - _ Thomas Baruchel _ , Sep 08 2004 ● a(n) = 5 * Fibonacci(n). ●

▶ [A082450] 5,5,10,20,35,55,80,110,145,185,230,280,335,395,460,530,605,685,770,860,955,1055,1160,1270,1385 ⋆ a(n) = 5 * (n ^ 2 - n + 2) / 2. ● a(n) = 5 * n + a(n - 1) - 5 for n>0, a(0)=5. - _ Vincenzo Librandi _ , Aug 08 2010 ● a(0)=5, a(1)=5, a(2)=10; for n>2, a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Mar 23 2013 ●

▶ [A173316] 5,5,11,35,143,719,4319,30239,241919,2177279,21772799,239500799,2874009599,37362124799,523069747199,7846046207999,125536739327999,2134124568575999,38414242234367999,729870602452991999 ⋆ 6 * n! - 1. ● a(0)=5, a(n) = n * a(n - 1) + n - 1. - _ Vincenzo Librandi _ , Sep 30 2013 ●

▶ [A188272] 1,5,5,15,15,37,41,84,106,186,256,400,570,834,1184,1663,2305,3149,4241,5669,7455,9771,12607,16216,20592 ⋆ Number of nondecreasing strings of numbers x(i=1..n) in - 4..4 with sum x(i) ^ 3 equal to 0 ● a(n) = [y ^ 0] [x ^ n] Product _{ j= - 4..4 } 1 / (1 - x * y ^ (j ^ 3)). - _ Robert Israel _ , Feb 06 2019 ●

▶ [A275016] 0,0,0,5,5,15,35,55,135,255,495,1055,2015,4095,8255,16255,32895,65535,130815,262655,523775,1048575,2098175,4192255,8390655 ⋆ a(n) = (2 ^ n - (- 1 + i) ^ n - (- 1 - i) ^ n) / 4 - 1 where i is the imaginary unit. ● a(n) = a(n - 1) + 2 * a(n - 2) + 2 * a(n - 3) - 4 * a(n - 4) for n>4. - _ Colin Barker _ , Nov 12 2016 ● a(n) = - 2 ^ (n - 2) * a(4 - n) for all n in Z. - _ Michael Somos _ , Nov 13 2016 ●

▶ [A189316] 5,5,15,35,95,245,645,1685,4415,11555,30255,79205,207365,542885,1421295,3720995,9741695,25504085,66770565,174807605,457652255,1198149155,3136795215,8212236485,21499914245 ⋆ Expansion of 5 * (1 - x - x ^ 2) / ((1 + x) * (1 - 3 * x + x ^ 2)) ● a(n)=2 * a(n - 1) + 2 * a(n - 2) - a(n - 3), n>2, a(0)=5, a(1)=5, a(2)=15. ● a(n)=Sum _{ k=1..5) ((w _ k) ^ 2 - 1) ^ n, w _ k=2 * cos((2 * k - 1) * Pi / 10); hence ● a(n)=(- 1) ^ n + 2 * (1 / tau ^ (2 * n) + tau ^ (2 * n)), tau=(1 + Sqrt(5)) / 2=1.618033.... ●

▶ [A095342] 1,1,5,5,17,25,61,109,233,449,917,1813,3649,7273,14573,29117,58265,116497,233029,466021,932081,1864121,3728285,7456525,14913097 ⋆ Number of elements in n - th string generated by a Kolakoski(5,1) rule starting with a(1)=1. ● a(1) = a(2) = 1, a(n) = a(n - 1) + 2 * a(n - 2) - 2 * (- 1) ^ n. ● a(n) = (2 ^ (n + 2) + (- 1) ^ n * (5 - 6 * n)) / 9. (End) ●

▶ [A100745] 0,1,1,5,5,17,27,85,85,257,427,1285,1455,4369,7279,21845,21845,65537,109227,327685,371375,1114129,1856879,5570645,5614335 ⋆ Modulo 2 binomial

transform of the Jacobsthal numbers J(n). • a(n)=sum { k=0..n, mod(binomial (n, k), 2)J(k) } . •

▶ [A099921] 5,5,20,45,125,320,845,2205,5780,15125,39605,103680,271445,710645,1860500,4870845,12752045,33385280,87403805,228826125,599074580,1568397605,4106118245,10749957120,28143753125 ⋆ a(n) = 5 * Fibonacci(n) ^ 2. • a(n) = Lucas(n) ^ 2 - 4(- 1) ^ n. • a(n) = 2 * a(n - 1) + 2 * a(n - 2) - a(n - 3) for n > 3. - _ Matthew House _ , Jan 13 2017 • a(n) = ((3 - sqrt(5)) / 2) ^ n + ((3 + sqrt(5)) / 2) ^ n - 2 * (- 1) ^ n. - _ Colin Barker _ , Jan 14 2017 • a(n) = 2 * Fibonacci(2 * n + 1) - Fibonacci(2 * n) - 2 * (- 1) ^ n. - _ Vincenzo Librandi _ , Sep 14 2017 • a(n) = Lucas(2 * n) - 2 * (- 1) ^ n. - _ Amiram Eldar _ , Jan 17 2022 •

▶ [A175713] 1,1,5,5,23,25,107,125,499,621,2331,3069,10907,15101,51115,74029,239899,361757,1127467,1762957,5305595,8571069,24996555,41584365,117897499 ⋆ Expansion of 1 / (1 - x - 4 * x ^ 2 + 4 * x ^ 3 - 2 * x ^ 4). • a(0)=1, a(1)=1, a(2)=5, a(3)=5; for n>3, a(n) = a(n - 1) + 4 * a(n - 2) - 4 * a(n - 3) + 2 * a(n - 4). - _ Harvey P. Dale _ , Oct 10 2014 •

▶ [A162962] 1,5,5,25,25,125,125,625,625,3125,3125,15625,15625,78125,78125,390625,390625,1953125,1953125,9765625,9765625,48828125,48828125,244140625,244140625 ⋆ a(n) = 5 * a(n - 2) for n > 2; a(1) = 1, a(2) = 5. • a(n) = 5 ^ ((1 / 4) * (2 * n - 1 + (- 1) ^ n)). •

▶ [A189318] 5,5,25,65,225,705,2305,7425,24065,77825,251905,815105,2637825,8536065,27623425,89391105,289275905,936116225,3029336065,9803137025,31723618305,102659784705,332214042625,1075067224065,3478990618625 ⋆ Expansion of 5 * (1 - 2 * x) / (1 - 3 * x - 2 * x ^ 2 + 4 * x ^ 3) • a(n)=3 * a(n - 1) + 2 * a(n - 2) - 4 * a(n - 3), n>3, a(0)=5, a(1)=5, a(2)=25, a(3)=65. • a(n)=Sum _{ k=1..5 } ((w _ k) ^ 4 - 3 * (w _ k) ^ 2 + 1) ^ n, w _ k=2 * cos((2 * k - 1) * Pi / 10). • a(n)=1 + 2 * (1 - Sqrt(5)) ^ n + 2 * (1 + Sqrt(5)) ^ n. •

▶ [A284182] 1,1,5,5,29,61,117,213,381,509,2037,4053,8061,16381,32757,65493,130941,262141,524277,1048533,2097021,4194301,8388597,16777173,33554301 ⋆ Decimal representation of the x - axis, from the origin to the right edge, of the n - th stage of growth of the two - dimensional cellular automaton defined by "Rule 813", based on the 5 - celled von Neumann neighborhood. • a(n) = 2 * a(n - 1) + a(n - 4) - 2 * a(n - 5) for n>10. •

▶ [A189749] 5,5,50,275,1625,9500,55625,325625,1906250,11159375,65328125,382437500,2238828125,13106328125,76725781250,449160546875,2629431640625,15392960937500,90111962890625,527524619140625,3088182910156250,18078537646484375,105833602783203125 ⋆ a(1)=5, a(2)=5, a(n)=5 * a(n - 1) + 5 * a(n - 2). • a(n) = 5 / 2 * ((5 / 2 + 3 / 2 * sqrt(5)) ^ (n - 1) + (5 / 2 - 3 / 2 * sqrt(5)) ^ (n - 1)) + 1 / 2 * sqrt(5) * ((5 / 2 - 3 / 2 * sqrt(5)) ^ (n - 1) - (5 / 2 + 3 / 2 * sqrt(5)) ^ (n - 1)). - Paolo P. Lava, May 24 2011 •

▶ [A157729] 5,6,6,7,8,10,13,18,26,39,60,94,149,238,382,615,992,1602,2589,4186,6770,10951,17716,28662,46373 ⋆ a(n) = Fibonacci(n) + 5. • a(0)=5, a(1)=6, a(2)=6, a(n)=2 * a(n - 1) + 0 * a(n - 2) - a(n - 3). - _ Harvey P. Dale _ , Aug 17 2012 • a(0) = 5, a(1) = 6, a(n) = a(n - 2) + a(n - 1) - 5. - _ Reinhard Zumkeller _ , Jul 30 2013 •

▶ [A020710] 5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29 ⋆ n + 5. • a(n) = n + 5. a(n) = 2a(n - 1) - a(n - 2). •

▶ [A047577] 0,1,5,6,7,8,9,13,14,15,16,17,21,22,23,24,25,29,30,31,32,33,37,38,39 ⋆ Numbers that are congruent to { 0, 1, 5, 6, 7 } mod 8. • a(n) = a(n - 1) + a(n - 5) - a(n - 6) for n > 6. • a(n) = a(n - 5) + 8 for n>5. • a(n) = (40 * n - 25 + 3 * (n mod 5) + 3 * ((n + 1) mod 5) - 12 * ((n + 2) mod 5) + 3 * ((n + 3) mod 5) + 3 * ((n + 4) mod 5)) / 25. • a(5 * k) = 8 * k - 1, a(5 * k - 1) = 8 * k - 2, a(5 * k - 2) = 8 * k - 3, a(5 * k - 3) = 8 * k - 7, a(5 * k - 4) = 8 * k - 8. (End) •

▶ [A293481] 5,6,7,8,9,15,16,17,18,19,25,26,27,28,29,35,36,37,38,39,45,46,47,48,49 ⋆ Numbers with last digit greater than or equal to 5 (in base 10). • a(n) = a(n - 1) + a(n - 5) - a(n - 6). •

▶ [A174138] 5,6,7,8,9,15,16,17,18,19,30,31,32,33,34,40,41,42,43,44,55,56,57,58,59 ⋆ Numbers congruent to { 5,6,7,8,9,15,16,17,18,19 } mod 25. • a(10 + n) = a(n) + 25 for n >= 1. • a(n) = a(n - 1) + a(n - 10) - a(n - 11). G.f.: x * (5 + x + x ^ 2 + x ^ 3 + x ^ 4 + 6 * x ^ 5 + x ^ 6 + x ^ 7 + x ^ 8 + x ^ 9 + 6 * x ^ 10) / ((1 + x) * (x ^ 4 + x ^ 3 + x ^ 2 + x + 1) * (x ^ 4 - x ^ 3 + x ^ 2 - x + 1) * (x - 1) ^ 2). - _ R. J. Mathar _ , Oct 08 2011 • a(n) = n + 9 + 5 * floor((floor((n - 1) / 5) - 1) / 2) + 10 * floor(floor((n - 1) / 5) / 2). - _ Wesley Ivan Hurt _ , Mar 22 2015 •

▶ [A294239] 0,0,0,0,5,6,7,8,9,20,22,24,39,42,45,48,51,54,57,60,84,88,92,96,100 ⋆ Sum of the parts in the partitions of n into two parts with larger part nonsquarefree. • a(n) = n * Sum _{ i=1..floor(n / 2) } (1 - mu(n - i) ^ 2), where mu is the Möbius function (A008683). •

▶ [A128427] 5,6,7,8,10,11,13,14,15,17,18,20,21,23,24,26,27,28,30,31,33,34,36,37,39 ⋆ Last point where sum of n consecutive n - th powers does not exceed the next n - th power. • a(n) is the largest integer for which the sum of the n consecutive n - th powers from (a(n) - n) ^ n to (a(n) - 1) ^ n inclusive does not exceed a(n) ^ n. •

▶ [A047322] 0,1,5,6,7,8,12,13,14,15,19,20,21,22,26,27,28,29,33,34,35,36,40,41,42 ⋆ Numbers that are congruent to { 0, 1, 5, 6 } mod 7. • a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. • a(n) = (14n - 11 - 3 * I ^ (2n) + (3 - 3 * I) * I ^ (- n) + (3 + 3 * I) * I ^ n) / 8 where I=sqrt(- 1). •

▶ [A047575] 0,5,6,7,8,13,14,15,16,21,22,23,24,29,30,31,32,37,38,39,40,45,46,47,48 ⋆ Numbers that are congruent to { 0, 5, 6, 7 } mod 8. • a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. • a(n) = (4 * n - 1 + i ^ (2 * n) - (1 + i) * i ^ (- n) - (1 - i) * i ^ n) / 2 where i=sqrt(- 1). •

▶ [A014097] 1,1,1,5,6,7,8,13,19,26,34,47,66,92,126,173,239,331,457,630,869,1200,1657,2287,3156 ⋆ a(n) = a(n - 1) + a(n - 4). • a(n) = Sum _{ j=0..(n - 1) / 3 } (binomial(n - 3 * j,n - 4 * j) * n / (n - 3 * j)). - _ Vladimir Kruchinin _ , Mar 25 2016 • a(n) = r1 ^ n + r2 ^ n + r3 ^ n + r4 ^ n, where { r1,r2,r3,r4 } are the four roots of x ^ 4 - x ^ 3 - 1=0, see A086106, A230151. • a(n) = round(r ^ n) for n>21 and r the positive real root of x ^ 4 - x ^ 3 - 1. •

▶ [A241203] 5,6,7,9,12,15,19,23,29,37,46,58,72,90,113,142,177,222,277,346,433,542,677,847,1058 ⋆ a(n) = floor(5 ^ n / 4 ^ (n - 1)). • a(n) = floor(5 ^ n / 4 ^ (n - 1)), n >= 1. •

▶ [A047576] 1,5,6,7,9,13,14,15,17,21,22,23,25,29,30,31,33,37,38,39,41,45,46,47,49 ⋆ Numbers that are congruent to { 1, 5, 6, 7 } mod 8. • a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. • a(n) = (8 * n - 1 + i ^ (2 * n) - (2 + i) * i ^ (- n) - (2 - i) * i ^ n) / 4 where i=sqrt(- 1). •

▶ [A047266] 0,1,5,6,7,11,12,13,17,18,19,23,24,25,29,30,31,35,36,37,41,42,43,47,48 ⋆ Numbers that are congruent to { 0, 1, 5 } mod 6. • a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. - _ Wesley Ivan Hurt _ , Nov 09 2015 • a(n) = 2 * n - 2 + cos(2 * n * Pi / 3) + sin(2 * n * Pi / 3) / sqrt(3). • a(3k) = 6k - 1, a(3k - 1) = 6k - 5, a(3k - 2) = 6k - 6. (End) •

▶ [A064615] 1,5,6,7,11,13,17,19,23,25,29,30,31,35,36,37,41,42,43,47,49,53,55,59,61 ⋆ Numbers of the form m * 6 ^ k for k >= 0 and m > 0 with gcd(m, 6) = 1. • a(n) = 5n / 2 + O(log n). - _ Charles R Greathouse IV _ , Sep 02 2016 •

▶ [A047320] 0,5,6,7,12,13,14,19,20,21,26,27,28,33,34,35,40,41,42,47,48,49,54,55,56 ⋆ Numbers that are congruent to { 0, 5, 6 } mod 7. • a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. • a(n) = (21 * n - 9 - 8 * sqrt(3) * sin(2 * n * Pi / 3)) / 9. • a(3k) = 7k - 1, a(3k - 1) = 7k - 2, a(3k - 2) = 7k - 7. (End) •

▶ [A047574] 5,6,7,13,14,15,21,22,23,29,30,31,37,38,39,45,46,47,53,54,55,61,62,63,69 ⋆ Numbers that are congruent to { 5, 6, 7 } mod 8. • a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. • a(n) = (8 * n - 10 * sin(2 * Pi * (n + 1) / 3) / sqrt(3) + 2) / 3. - _ Ilya Gutkovskiy _ , May 30 2016 • a(n) = 8 * floor((n - 1) / 3) + ((n - 1) mod 3) + 5. - _ David A. Corneth _ , May 30 2016 • a(3k) = 8k - 1, a(3k - 1) = 8k - 2, a(3k - 2) = 8k - 3. - _ Wesley Ivan Hurt _ , Jun 10 2016 •

▶ [A221175] 5,6,7,20,47,114,275,664,1603,3870,9343,22556,54455,131466,317387,766240,1849867,4465974,10781815,26029604,62841023,151711650,366264323,884240296,2134744915 ⋆ a(0)= - 5, a(1)=6; thereafter a(n) = 2 * a(n - 1) + a(n - 2). • a(n)=(1 / 4) * (11 * sqrt(2) * ((1 + sqrt(2)) ^ n - (1 - sqrt(2)) ^ n) - 10 * ((1 + sqrt(2)) ^ n + (1 - sqrt(2)) ^ n)). - _ Paolo P. Lava _ , Jan 04 2013 •

▶ [A057854] 5,6,8,9,10,12,13,14,15,16,17,19,20,21,22,23,24,25,26,27,28,30,31,32,33 ⋆ Non - Lucas numbers: the complement of A000032. • a(n) = floor(1 / 2 - LambertW(- 1, - log(phi) / phi ^ (n + 1 / 2)) / log(phi)) with phi = (1 + sqrt(5)) / 2. - Nicolas Normand (nicolas.normand (at) polytech.univ - nantes.fr) •

▶ [A047439] 0,1,5,6,8,9,13,14,16,17,21,22,24,25,29,30,32,33,37,38,40,41,45,46,48 ⋆ Numbers that are congruent to { 0, 1, 5, 6 } mod 8. • a(n) = Sum _{ i=1..n } gcd(i + 2, i - 2). - _ Wesley Ivan Hurt _ , Jan 23 2014 • a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. • a(n) = 2n + (1 + i) * (4i - 4 - (1 - i) * i ^ (2n) - i ^ (1 - n) + i ^ n) / 4 where i=sqrt(- 1). •

▶ [A074819] 1,5,6,8,10,13,22,24,27,37,44,46,48,49,58,61,63,65,69,73,75,77,80,82,98 ⋆ Numbers k such that mu(k) + mu(k + 1) = 0. • a(n) seems to be asymptotic to c * n with c=3.7.... •

▶ [A262161] 1,5,6,8,11,14,17,20,24,28,32,36,40,44,49,54,59,64,69,74,79,85,91,97,103 ⋆ a(n) is the largest term in the continued fraction for a(n - 1) + n ^ 2 / a(n - 1), where a(1)=1. • a(n) = n * (sqrt(2 * n / 3) - 1 / 5) + O(sqrt(n)) and this is sharp (see link). •

▶ [A290744] 5,6,8,11,15,19,24,30,37,45,53,62,72,83,95,107,120,134,149,165,181,198,216,235,255 ⋆ Maximum number of distinct Lyndon factors that can appear in words of length n over an alphabet of size 5. • a(n) = binomial(n + 1,2) - (s - p) * binomial(m + 1,2) - p * binomial(m + 2,2) + s where s=5, m=floor(n / s), p=n - m * s. - _ Andrew Howroyd _ , Aug 14 2017 • a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 5) - 2 * a(n - 6) + a(n - 7) for n>6. •

▶ [A169622] 5,6,8,11,16,24,37,58,92,147,236,380,613,990,1600,2587,4184,6768,10949,17714,28660,46371,75028,121396,196421 ⋆ a(n) = a(n - 1) + Fibonacci(n), a(1)=5. • a(n) = 3 + (2 ^ (- 1 - n) * ((1 - sqrt(5)) ^ n * (- 3 + sqrt(5)) + (1 + sqrt(5)) ^ n * (3 + sqrt(5)))) / sqrt(5). - _ Colin Barker _ , Apr 20 2017 •

▶ [A047321] 1,5,6,8,12,13,15,19,20,22,26,27,29,33,34,36,40,41,43,47,48,50,54,55,57 ⋆ Numbers that are congruent to { 1, 5, 6 } mod 7. • a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. • a(n) = (21 * n - 6 - 3 * cos(2 * n * Pi / 3) - 5 * sqrt(3) * sin(2 * n * Pi / 3)) / 9. • a(3k) = 7k - 1, a(3k - 1) = 7k - 2, a(3k - 2) = 7k - 6. (End) •

▶ [A140504] 5,6,8,12,20,36,68,132,260,516,1028,2052,4100,8196,16388,32772,65540,131076,262148,524292,1048580,2097156,4194308,8388612,16777220 ⋆ a(n) = 2 ^ n + 4. • a(n) = 2 * a(n - 1) - 4 with a(0) = 5. - _ Vincenzo Librandi _ , Nov 24 2009 • a(n) = m * (2 ^ (n - 2) + 1), with m = 4. •

▶ [A047437] 0,5,6,8,13,14,16,21,22,24,29,30,32,37,38,40,45,46,48,53,54,56,61,62,64 ⋆ Numbers that are congruent to { 0, 5, 6 } mod 8. • a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. • a(n) = (24 * n - 15 - 3 * cos(2 * n * Pi / 3) - 7 * sqrt(3) * sin(2 * n * Pi / 3)) / 9. • a(3k) = 8k - 2, a(3k - 1) = 8k - 3, a(3k - 2) = 8k - 8. (End) •

▶ [A365553] 5,6,8,20,861 ⋆ Starting with a plane on which two parallel lines and two additional lines have been drawn such that the four lines form two noncongruent isosceles triangles, a(n) is the total number of intersections on the plane after the n - th step, where each step consists of drawing lines that connect every intersection of two lines. If more than 2 lines intersect at the same point it is only counted once. • a(n + 1) <= (a(n) ^ 4 - a(n) ^ 2) / 8 + (a(n) - a(n) ^ 3) / 4 which is equivalent to • a(n + 1) <= binomial(binomial(a(n),2),2) (proven). •

▶ [A227006] 5,6,9,10,11,12,13,14,16,17,18,19,20,21,23,24,25,26,27,28,29,30,31,32,33 ⋆ Numbers n such that n - 1 is not squarefree or a prime divisor of n - 1 is in the sequence. • a(n) = n + 16 for n > 1791. - _ Charles R Greathouse IV _ , Jun 27 2013 •

▶ [A047438] 1,5,6,9,13,14,17,21,22,25,29,30,33,37,38,41,45,46,49,53,54,57,61,62,65 ⋆ Numbers that are congruent to { 1, 5, 6 } mod 8. • a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. • a(n) = 2 * (12 * n - 6 - 3 * cos(2 * n * Pi / 3) - 2 * sqrt(3) * sin(2 * n * Pi / 3)) / 9. • a(3k) = 8k - 2, a(3k - 1) = 8k - 3, a(3k - 2) = 8k - 7. (End) •

▶ [A218735] 5,6,9,13,22,33,57,86,149,225,390,589,1021,1542,2673,4037,6998,10569,18321,27670,47965,72441,125574,189653,328757 ⋆ Values of x in the solutions to x ^ 2 - 3xy + y ^ 2 + 29 = 0, where 0 < x < y. • a(n) = 3 * a(n - 2) - a(n - 4). •

▶ [A117951] 5,6,9,14,21,30,41,54,69,86,105,126,149,174,201,230,261,294,329,366,405,446,489,534,581 ⋆ a(n) = n ^ 2 + 5. • a(n) = 2 * n + a(n - 1) - 1 (with a(0)

=5). - _ Vincenzo Librandi _ , Nov 13 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●
► [A265188] 0,1,5,6,10,11,12,16,17,21,22,23,27,28,32,33,34,38,39,43,44,45,49,50,54 ★ Nonnegative m for which 3 * floor(m ^ 2 / 11) = floor(3 * m ^ 2 / 11). ● a(n) = a(n - 1) + a(n - 5) - a(n - 6), n>6. ●
► [A008851] 0,1,5,6,10,11,15,16,20,21,25,26,30,31,35,36,40,41,45,46,50,51,55,56,60 ★ Congruent to 0 or 1 mod 5. ● a(n) = 5 * n - a(n - 1) - 9, n >= 2. - _ Vincenzo Librandi _ , Nov 18 2010 [Corrected for offset by _ David Lovler _ , Oct 10 2022] ● a(n) = floor((5 / 3) * floor(3 * (n - 1) / 2)). - _ Clark Kimberling _ , Jul 04 2012 ● a(n) = (10 * n - 13 - 3 * (- 1) ^ n) / 4. - _ Robert Israel _ , Nov 17 2014 [Corrected by _ David Lovler _ , Sep 21 2022] ●
► [A093509] 0,5,6,10,12,15,18,20,24,25,30,35,36,40,42,45,48,50,54,55,60,65,66,70,72 ★ Multiples of 5 or 6. ● a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - 2 * a(n - 4) + 2 * a(n - 5) - 2 * a(n - 6) + 2 * a(n - 7) - 2 * a(n - 8) + 2 * a(n - 9) - a(n - 10) for n>10. ● a(n) = 5 * floor((n + 9) / 10) * (- 1) ^ n / 2 + 5 * floor((n + 9) / 10) / 2 - n * (- 1) ^ n / 4 - (- 1) ^ n + 11 * n / 4 - 4. (End) ●
► [A164095] 5,6,10,12,20,24,40,48,80,96,160,192,320,384,640,768,1280,1536,2560,3072,5120,6144,10240,12288,20480 ★ a(n) = 2 * a(n - 2) for n > 2; a(1) = 5, a(2) = 6. ● a(n) = (4 - (- 1) ^ n) * 2 ^ (1 / 4 * (2 * n - 1 + (- 1) ^ n)). ●
► [A287665] 1,5,6,10,14,15,19,20,24,28,29,33,37,38,42,43,47,51,52,56,57,61,65,66,70 ★ Positions of 1's in A287663; complement of A287664. ● a(n) = 3 * floor(n * phi) - 2 * n. - _ Michel Dekking _ , Aug 21 2019 ●
► [A075156] 5,6,10,24,70,216,664,2008,5998,17808,52770,156360,463492,1374392,4076222,12090144,35859742,106359928,315460168,935639768,2775057510,8230670416,24411730298,72403913480,214746249796 ★ Binomial transform of pentanacci numbers A074048: a(n) = Sum _{ k=0..n } binomial(n,k) * A074048(k). ● a(n) = 6a(n - 1) - 13a(n - 2) + 14a(n - 3) - 7a(n - 4) + 2a(n - 5), a(0)=5, a(1)=6, a(2)=10, a(3)=24, a(4)=70. ● a(n) = term (1,5) in the 1 X 5 matrix [70,24,10,6,5]. [6,1,0,0,0; - 13,0,1,0,0; 14,0,0,1,0; - 7,0,0,0,1; 2,0,0,0,0] ^ n. - _ Alois P. Heinz _ , Jul 25 2008 ●
► [A047264] 0,5,6,11,12,17,18,23,24,29,30,35,36,41,42,47,48,53,54,59,60,65,66,71,72 ★ Numbers that are congruent to 0 or 5 mod 6. ● a(n) = 3 * n + (- 1) ^ n - 2. ● a(n) = 6 * n - a(n - 1) - 7 (with a(1)=0). - _ Vincenzo Librandi _ , Aug 05 2010 ●
► [A231000] 0,5,6,11,17,22,23,28,33,34,39,45,50,51,56,61,62,67,73,78,79,84,89,90,95 ★ Number of years after which a date can fall on the same day of the week, in the Julian calendar. ● a(n) = a(n - 1) + a(n - 7) - a(n - 8) for n>7. ●
► [A022095] 1,5,6,11,17,28,45,73,118,191,309,500,809,1309,2118,3427,5545,8972,14517,23489,38006,61495,99501,160996,260497 ★ Fibonacci sequence beginning 1, 5. ● a(n) = a(n - 1) + a(n - 2), n>=2, a(0)=1, a(1)=5. ● a(n) = 4 * Fibonacci(n) + Fibonacci(n + 1), n>=1. - _ Zerinvary Lajos _ , Oct 05 2007, corrected by _ R. J. Mathar _ , Apr 07 2011 ● a(n - 1) = ((1 + sqrt5) ^ n - (1 - sqrt5) ^ n) / (2 ^ n * sqrt5) + 2 * ((1 + sqrt5) ^ (n - 1) - (1 - sqrt5) ^ (n - 1)) / (2 ^ (n - 2) * sqrt5). - Al Hakanson (hawkuu(AT)gmail.com), Jan 14 2009 ● a(n) = 4 * Fibonacci(n + 2) - 3 * Fibonacci(n + 1). - _ Gary Detlefs _ , Dec 21 2010 ● a(n) = (L(n - 2) + 8 * L(n - 1) + 4 * L(n) + 2 * L(n + 1)) / 5 for the Lucas numbers L(n). - _ J. M. Bergot _ , Oct 22 2012 ● a(n) = ((2 * sqrt(5) - 1) * (((1 + sqrt(5)) / 2) ^ (n + 1)) + (2 * sqrt(5) + 1) * (((1 - sqrt(5)) / 2) ^ (n + 1))) / (sqrt(5)). - _ Bogart B. Strauss _ , Jul 19 2013 ●
► [A042531] 1,5,6,11,17,28,45,73,118,191,1073,60279,302468,362747,665215,1027962,1693177,2721139,4414316,7135455,11549771,64884310,3645071131,18290239965,21935311096 ★ Denominators of continued fraction convergents to sqrt(794). ● a(n) = 60470 * a(n - 11) + a(n - 22)for n>21. - _ Vincenzo Librandi _ , Jan 23 2014 ●
► [A042839] 1,1,5,6,11,17,28,45,118,163,281,444,725,1169,5401,6570,399601,406171,2024285,2430456,4454741,6885197,11339938,18225135,47790208 ★ Denominators of continued fraction convergents to sqrt(950). ● a(n) = 405002 * a(n - 16) - a(n - 32) for n>31. - _ Vincenzo Librandi _ , Jan 30 2014 ●
► [A042881] 1,5,6,11,17,130,797,927,3578,4505,66648,71153,280107,351260,2387667,17064929,19452596,36517525,55970121,316368130,19670794181,98670339035,118341133216,217011472251,335352605467 ★ Denominators of continued fraction convergents to sqrt(972). ● a(n) = 19726764302 * a(n - 20) - a(n - 40) for n > 39. - _ Vincenzo Librandi _ , Jan 31 2014 ●
► [A042493] 1,1,5,6,11,28,39,67,307,374,20503,20877,104011,124888,228899,582686,811585,1394271,6388669,7782940,426667429,434450369,2164468905,2598919274,4763388179 ★ Denominators of continued fraction convergents to sqrt(774). ● a(n) = 20810 * a(n - 10) - a(n - 20). - _ Vincenzo Librandi _ , Dec 15 2013 ●
► [A041355] 1,1,5,6,11,39,89,217,2910,6037,14984,50989,65973,116962,533821,650783,17454179,18104962,89874027,107978989,197853016,701538037,1600929090,3903396217,52345079911 ★ Denominators of continued fraction convergents to sqrt(191). ● a(n) = 17988000 * a(n - 16) - a(n - 32) for n>31. [_ Bruno Berselli _ , Dec 16 2013] ●
► [A041227] 1,5,6,11,61,1353,6826,8179,15005,83204,1845493,9310669,11156162,20466831,113490317,2517253805,12699759342,15217013147,27916772489,154800875592,3433536035513,17322481053157,20756017088670,38078498141827,211148507797805 ★ Denominators of continued fraction convergents to sqrt(125). ● a(n) = 1364 * a(n - 5) + a(n - 10). - _ Vincenzo Librandi _ , Dec 13 2013 ●
► [A041939] 1,5,6,11,116,127,243,1342,59291,297797,357088,654885,6905938,7560823,14466761,79894628,3529830393,17729046593,21258876986,38987923579,411138112776,450126036355,861264149131,4756446782010,210144922557571 ★ Denominators of continued fraction convergents to sqrt(492). ● a(n) = 59534 * a(n - 8) - a(n - 16) for n>15. - _ Vincenzo Librandi _ , Dec 27 2013 ●
► [A047319] 5,6,12,13,19,20,26,27,33,34,40,41,47,48,54,55,61,62,68,69,75,76,82,83,89 ★ Numbers that are congruent to { 5, 6 } mod 7. ● a(n) = 1 / 4 + 7 * n / 2 - 5 * (- 1) ^ n / 4. ●
► [A022310] 0,5,6,12,19,32,52,85,138,224,363,588,952,1541,2494,4036,6531,10568,17100,27669,44770,72440,117211,189652,306864 ★ a(n) = a(n - 1) + a(n - 2) + 1 for n>1, a(0)=0, a(1)=5. ● a(n) = 6 * F(n) + F(n - 1) - 1, where F = A000045. - _ Bruno Berselli _ , Feb 20 2017 ● a(n) = - 1 + (2 ^ (- 1 - n) * ((1 - t) ^ n * (- 11 + t) + (1 + t) ^ n * (11 + t))) / t where t=sqrt(5). ● a(n) = 2 * a(n - 1) - a(n - 3) for n>2. (End) ●
► [A302300] 0,1,1,5,6,12,21,33,50,79,116,169,246,346,487,675,927,1254,1702,2263,3014,3966,5210,6766,8795 ★ a(n) = Sum _{ p in P } (Sum _{ k _ j = 1 } 1) ^ 2, where P is the set of partitions of n, and the k _ j are the frequencies in p. ● a(n) = Sum _{ p in P } (Sum _{ k _ j = 1 } 1) ^ 2, where P is the set of partitions of n, and k _ j are the frequencies in p. ●
► [A047436] 5,6,13,14,21,22,29,30,37,38,45,46,53,54,61,62,69,70,77,78,85,86,93,94,101 ★ Numbers that are congruent to { 5, 6 } mod 8. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3). ● a(n) = 8 * n - a(n - 1) - 5, n > 1. (End) ●
► [A084381] 5,6,13,32,69,130,221,348,517,734,1005,1336,1733,2202,2749,3380,4101,4918,5837,6864,8005,9266,10653,12172,13829 ★ a(n) = n ^ 3 + 5. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>3. - _ Vincenzo Librandi _ , Jun 09 2016 ●
► [A266304] 0,1,5,6,14,15,27,28,44,45,65,66,90,91,119,120,152,153,189,190,230,231,275,276,324 ★ Total number of OFF (white) cells after n iterations of the "Rule 15" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = n * (n + (- 1) ^ n + 2) / 2. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n>4. ● a(n) = Sum _{ i=1..n } (n - i - 1) mod 2. - _ Wesley Ivan Hurt _ , Sep 15 2017 ●
► [A308839] 0,0,0,0,0,5,6,14,16,36,50,77,84,130,154,225,240,340,396,532,580,777,858,1104,1176 ★ Sum of all the parts in the partitions of n into 5 squarefree parts. ● a(n) = n * Sum _{ l=1..floor(n / 5) } Sum _{ k=l..floor((n - l) / 4) } Sum _{ j=k..floor((n - k - l) / 3) } Sum _{ i=j..floor((n - j - k - l) / 2) } mu(l) ^ 2 * mu(k) ^ 2 * mu(j) ^ 2 * mu(i) ^ 2 * mu(n - i - j - k - l) ^ 2, where mu is the Möbius function (A008683). ●
► [A309480] 0,0,0,0,0,5,6,14,20,41,62,94,124,185,245,344,425,582,736,953,1169,1497,1805,2256,2670 ★ Sum of the squarefree parts of the partitions of n into 5 parts. ● a(n) = Sum _{ l=1..floor(n / 5) } Sum _{ k=l..floor((n - 1) / 4) } Sum _{ j=k..floor((n - k - l) / 3) } Sum _{ i=j..floor((n - j - k - l) / 2) } (i * mu(i) ^ 2 + j * mu(j) ^ 2 + k * mu(k) ^ 2 + l * mu(l) ^ 2 + (n - i - j - k - l) * mu(n - i - j - k - l) ^ 2), where mu is the Möbius function (A008683). ●
► [A282466] 5,6,14,48,216,1200,7920,60480,524160,5080320,54432000,638668800,8143027200,112086374400,1656387532800,26153487360000,439378587648000,7825123418112000,147254595231744000,2919482409811968000,60822550204416000000,1328364496464445440000 ★ a(n) = n * a(n - 1) + n!, with n>0, a(0)=5. ● a(n) = (n + 5) * n!. ●
► [A030533] 1,1,5,6,15,19,35,44,69,85,121,146,195,231,295,344,425,489,589,670,791,891,1035,1156,1325 ★ Expansion of Molien series for 4 - D extraspecial group 2 ^{ 1 + 2 * 2 } . ● a(n) = n * (2 * n ^ 2 - 9 * (- 1) ^ n + 13) / 24. [_ Bruno Berselli _ , Jan 31 2013] ●
► [A081283] 0,1,1,5,6,16,20,40,50,85,105,161,196,280,336,456,540,705,825,1045,1210,1496,1716,2080,2366 ★ An interleaved sequence of pyramidal and polygonal numbers. ● a(n) = (2 * n + 1 - (- 1) ^ n) * (2 * n + 5 - (- 1) ^ n) * (2 * n ^ 2 + 2 * (5 + (- 1) ^ n) * n + 27 - 11 * (- 1) ^ n) / 1536. - _ Luce ETIENNE _ , Mar 11 2015 ●
► [A115376] 1,1,5,6,16,20,41,51,90,111,177,216,321,387,546,651,882,1041,1366,1597,2042,2367,2962,3407,4187 ★ <h[d + 1,d - 1],s[d,d] * s[d,d] * s[d,d]> where h[d + 1,d - 1] is a homogeneous symmetric function, s[d,d] is a Schur function indexed by two parts, * represents the Kronecker product and <, > is the standard scalar product on symmetric functions. ● a(n) = a(n - 1) + 4 * a(n - 2) - 3 * a(n - 3) - 7 * a(n - 4) + 2 * a(n - 5) + 8 * a(n - 6) + 2 * a(n - 7) - 7 * a(n - 8) - 3 * a(n - 9) + 4 * a(n - 10) + a(n - 11) - a(n - 12) for n>11. - _ Colin Barker _ , May 10 2019 ●
► [A099571] 1,1,5,6,17,23,50,73,138,211,370,581,979,1560,2575,4135,6755,10890,17700,28590,46356,74946,121380,196326,317797 ★ a(n) = Sum _{ k=0..floor(n / 2) } binomial(n - k + 3, k). ● a(n) = a(n - 1) + 4 * a(n - 2) - 3 * a(n - 3) - 6 * a(n - 4) + 3 * a(n - 5) + 4 * a(n - 6) - a(n - 7) - a(n - 8); ● a(n) = Sum _{ k=0..n } Fibonacci(n - k + 1) * binomial(k / 2 + 2, 2) * (1 + (- 1) ^ k) / 2. ● a(n) = Fibonacci(n + 4) + (- 1) ^ n * (n ^ 2 + 4 * n + 7) / 16 - (n ^ 2 + 12 * n + 39) / 16. - _ G. C. Greubel _ , Jul 25 2022 ●
► [A041773] 1,5,6,17,23,132,5303,26647,31950,90547,122497,703032,28243777,141921917,170165694,482253305,652418999,3744348300,150426350999,755876103295,906302454294,2568481011883,3474783466177,19942398342768,801170717176897 ★ Denominators of continued fraction convergents to sqrt(407). ● a(n) = 53265 * a(n - 6) - a(n - 12) for n>11. - _ Vincenzo Librandi _ , Dec 24 2013 ●
► [A041054] 5,6,17,23,247,270,787,1057,11357,12414,36185,48599,522175,570774,1663723,2234497,24008693,26243190,76495073,102738263,1103877703,1206615966,3517109635,4723725601,50754365645 ★ Numerators of continued fraction convergents to sqrt(33). ● a(n) = 46 * a(n - 4) - a(n - 8). G.f.: - (x ^ 7 - 5 * x ^ 6 + 6 * x ^ 5 - 17 * x ^ 4 - 23 * x ^ 3 - 17 * x ^ 2 - 6 * x - 5) / (x ^ 8 - 46 * x ^ 4 + 1). [_ Colin Barker _ , Jul 16 2012] ●
► [A041747] 1,1,5,6,17,74,91,165,256,421,5308,5729,11037,16766,27803,127978,283759,411737,1930707,2342444,90943579,93286023,464087671,557373694,1578835059 ★ Denominators of continued fraction convergents to sqrt(393). ● a(n) = 92874286 * a(n - 20) - a(n - 40) for n>39. - _ Vincenzo Librandi _ , Dec 23 2013 ●
► [A192727] 0,0,0,0,1,1,5,6,18,24,57,81,169,250,482,732,1341,2073,3669,5742,9922,15664,26609,42273,70929 ★ a(n) = Fibonacci(n - 2) + 2 * a(n - 2) - (n mod 2). ● a(n) = Fibonacci(n - 2) + 2 * a(n - 2) - n mod 2 for all n >= 2, with a(0) = a(1) = 0. ●
► [A129722] 0,0,1,1,5,6,19,25,65,90,210,300,654,954,1985,2939,5911,8850,17345,26195,50305,76500,144516,221016,411900 ★ Number of 0's in even position in all Fibonacci binary words of length n. A Fibonacci binary word is a binary word having no 00 subword. ● a(2 * n + 1) = a(2 * n) + a(2 * n - 1) (n>=1). ● a(n) = F(n) * (n + 1) / 5 + F(n + 1) * (2 * n - 5 + 5 * (- 1) ^ n) / 20 where F = A000045. - _ Greg Dresden _ , Jan 01 2021 ●
► [A231181] 1,1,5,6,20,27,75,110,275,429,1001,1637,3639,6172,13243,23104,48280,86090,176341,319792,645150,1185305,2363596,4386331,8669142 ★ Expansion of 1 / (1 - x - 4 * x ^ 2 + 3 * x ^ 3 + 3 * x ^ 4 - x ^ 5). ● a(n) = a(n - 1) + 4 * a(

n - 2) - 3 * a(n - 3) - 3 * a(n - 4) + a(n - 5) for n>=0, with a(- 5)=1, a(- 4)=a(- 3)=a(- 2)=a(- 1)=0. ●
► [A060423] 0,0,0,0,0,5,6,21,24,54,60,110,120,195,210,315,336,476,504,684,720,945,990,1265,1320 ⋆ Number of obtuse triangles made from vertices of a regular n - gon. ● a(n) = n * (n - 1) * (n - 3) / 8 when n odd; n * (n - 2) * (n - 4) / 8 whe n n even. ● a(n) = n * (2 * n - 3 - (- 1) ^ n) * (2 * n - 7 - (- 1) ^ n) / 32. - _ Wesley Ivan Hurt _ , Dec 31 2013 ●
► [A095308] 1,1,5,6,21,28,84,121,331,507,1300,2093,5110,8568,20129,34885,79477,141494,314489,572264,1246784,2309385,4950751,9303411,19684692 ⋆ Number of walks of length n between two nodes at distance 3 in the cycle graph C _ 7. ● a(n) = (2 ^ n / 7) * Sum _{ r=0..6 } cos(6 * Pi * r / 7) * cos(2 * Pi * r / 7) ^ n. ● a(n) = a(n - 1) + 4 * a(n - 2) - 3 * a(n - 3) - 2 * a(n - 4). ●
► [A224915] 0,1,5,6,22,23,27,28,92,93,97,98,114,115,119,120,376,377,381,382,398,399,403,404,468 ⋆ a(n) = Sum _{ k=0..n } n XOR k where XOR is the bitwis e logical exclusive - or operator. ● a(n) = Sum _{ j=1..n } 4 ^ (v _ 2(j)), wher e v _ 2(j) is the exponent of highest power of 2 dividing j. - _ Ridouane Oudra _ , Jun 08 2019 ● a(n) = n + 3 * Sum _{ j=1..floor(log _ 2(n)) } 4 ^ (j - 1) * f loor(n / 2 ^ j), for n>=1. - _ Ridouane Oudra _ , Dec 09 2020 ● a(2 * n + b) = 4 * a(n) + n + b where b = 0 or 1. ●
► [A135301] 1,5,6,22,23,59,60,124,125,225,226,370,371,567,568,824,825,1149,1150,1550,1551,2035,2036,2612,2613 ⋆ a(1)=1, a(n)=a(n - 1) + n ^ 0 if n odd, a(n) =a(n - 1) + n ^ 2 if n is even. ● a(1)=1, a(2)=5, a(3)=6, a(4)=22, a(5)=23, a(6)=59, a(7)=60, a(n)=a(n - 1) + 3 * a(n - 2) - 3 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) + a(n - 6) - a (n - 7). - _ Harvey P. Dale _ , Jul 16 2014 ● a(n) = ((2 * n + 1) * (n ^ 2 + n + 3) + 3 * (n ^ 2 + n - 1) * (- 1) ^ n) / 12. - _ Luce ETI ENNE _ , Jul 26 2014 ●
► [A192917] 0,5,6,22,51,140,360,949,2478,6494,16995,44500,116496,304997,798486,2090470,5472915,14328284,37511928,98207509,257110590,673124270,1762262211,4613662372,12078724896 ⋆ Coefficient of x in the reduction by (x ^ 2 - > x + 1) of the polynomial C(n) * x ^ n, where C=A022095. ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - a(n - 3). ● a(n) = - 3 * a(n - 1) + a(n - 2) = 9 * (- 1) ^ (n + 1). - _ R. J. Mathar _ , May 08 2014 ● a(n) = (2 ^ (- 1 - n) * (- 9 * (- 1) ^ n * 2 ^ (1 + n) - (3 - sqrt(5)) ^ n * (- 9 + sqrt(5)) + (3 + sqrt(5)) ^ n * (9 + sqrt(5)))) / 5. - _ Colin Barker _ , Oct 01 2016 ● a(n) = Fibonacci(2 * n + 1) + 2 * Fibo nacci(n) ^ 2 - (- 1) ^ n. - _ G. C. Greubel _ , Jul 29 2019 ●
► [A042283] 1,1,5,6,23,167,1359,2885,24439,173958,546313,720271,3427397,4147668,210810797,214958465,1070644657,1285603122,4927454023,35777781283,291149704287,618077189857,5235767223143,37268447751858,117041110478717 ⋆ Den ominators of continued fraction convergents to sqrt(667). ● a(n) = 214238194 * a(n - 14) - a(n - 28) for n>27. - _ Vincenzo Librandi _ , Jan 19 2014 ●
► [A160529] 1,5,6,25,26,30,31,50,51,55,56,75,76,80,81,100,101,105,106,125,126,130,131,150,151 ⋆ a(1) = 1; for n>1, a(n) = a(n - 1) + d1 + d2 where d1 = 4 if n is even. d1 = 1 if n is odd, d2 = 15 if n mod 4 = 0, d2 = 0 if n mod 4 != 0. ● a(n) = 25 * floor(n / 4) + [0,1,5,6](n mod 4). ● a(n) = (- 1 - 21 * (- 1) ^ n + (15 - i * 15) * (- i) ^ n + (15 + 15 * i) * i ^ n + 50 * n) / 8 where i=sqrt(- 1). - _ Colin Barker _ , Oct 16 2015 ●
► [A033042] 0,1,5,6,25,26,30,31,125,126,130,131,150,151,155,156,625,626,630,631,650,651,655,656,750 ⋆ Sums of distinct powers of 5. ● a(n) = Sum _{ i=0..m } d(i) * 5 ^ i, where Sum _{ i=0..m } d(i) * 2 ^ i is the base - 2 representation of n. ● a(2n) = 5 * a(n), a(2n + 1) = a(2n) + 1. ●
► [A249222] 1,5,6,25,31,125,156,625,781,3125,3906,15625,19531,78125,97656,390625,488281,1953125,2441406,9765625,12207031,48828125,61035156,244140625,305175781 ⋆ Expansion of x * (1 + 5 * x - 5 * x ^ 3) / (1 - 6 * x ^ 2 + 5 * x ^ 4). ● a(n) = 6 * a(n - 2) - 5 * a(n - 4). ●
► [A048060] 0,0,0,0,0,5,6,27,35,119,164,494,714,2001,3002,8007,12375,31823,50387,125969,203489,497419,817189,1961255,3268759 ⋆ Number of nonempty subse ts of { 1,2,...,n } in which exactly 1 / 2 of the elements are <= (n - 4) / 2. ● a(n) = binomial(n, ceiling(n / 2) + 2) - 1 for n >= 4. - _ Robert Israel _ , Jul 1 1 2018 ●
► [A249221] 1,5,6,28,34,158,192,892,1084,5036,6120,28432,34552,160520,195072,906256,1101328,5116496,6217824,28886464,35104288,163085792,198190080,920741824,1118931904 ⋆ Expansion of x * (1 + 5 * x - 2 * x ^ 3) / (1 - 6 * x ^ 2 + 2 * x ^ 4). ● a(n) = 6 * a(n - 2) - 2 * a(n - 4). ●
► [A152118] 1,1,1,5,6,29,35,169,204,985,1189,5741,6930,33461,40391,195025,235416,1136689,1372105,6625109,7997214,38613965,46611179,225058681,271669860 ⋆ a(n) = product(4 + 4 * cos(k * Pi / n) ^ 2, k=1..(n - 1) / 2). ● a(n) = 6 * a(n - 2) - a(n - 4) for n>4. ● a(n) = ((- (- 1 - sqrt(2)) ^ n - 3 * (1 - sqrt(2)) ^ n + (- 1 + sqrt(2)) ^ n + 3 * (1 + sqrt(2)) ^ n)) / (8 * sqrt(2)) for n>0. - _ Colin Barker _ , Mar 28 2016 ●
► [A041011] 1,1,5,6,29,35,169,204,985,1189,5741,6930,33461,40391,195025,235416,1136689,1372105,6625109,7997214,38613965,46611179,225058681,271669860,1311738121 ⋆ Denominators of continued fraction convergents to sqrt(8). ● a(n) = 6 * a(n - 2) - a(n - 4). Also: ● a(2n) = a(2n - 1) + a(2n - 2), a(2n + 1)=4 * a (2n) + a(2n - 1). ● a(n) = product { k = 1..floor((n - 1) / 2) } (4 + 4 * cos ^ 2 (k * Pi / n)) for n >= 1. (End) ● a(n) = ((- (- 1 - sqrt(2)) ^ n - 3 * (1 - sqrt(2)) ^ n + (- 1 + sqrt(2)) ^ n + 3 * (1 + sqrt(2)) ^ n)) / (8 * sqrt(2)). - _ Coli n Barker _ , Mar 27 2016 ●
► [A041056] 5,6,29,35,379,414,2035,2449,26525,28974,142421,171395,1856371,2027766,9967435,11995201,129919445,141914646,697578029,839492675,9092504779,9931997454,48820494595,58752492049 ⋆ Numerators of continued fraction con vergents to sqrt(34). ● a(n) = 70 * a(n - 4) - a(n - 8). G.f.: - (x ^ 7 - 5 * x ^ 6 + 6 * x ^ 5 - 29 * x ^ 4 - 35 * x ^ 3 - 29 * x ^ 2 - 6 * x - 5) / (x ^ 8 - 70 * x ^ 4 + 1). [_ Colin Barker _ , Jul 16 2012] ●
► [A042643] 1,5,6,29,64,477,541,4264,9069,40540,49609,288585,16787539,84226280,101013819,488281556,1077576931,8031320073,9108897004,71793599101,152696095206,682577979925,835274075131,4858948355580,28265427869877 1 ⋆ Denomi nators of continued fraction convergents to sqrt(851). ● a(n) = 16837148 * a(n - 12) - a(n - 24) for n>23. - _ Vincenzo Librandi _ , Jan 26 2014 ●
► [A166023] 1,5,6,30,36,180,216,1080,1296,6480,7776,38880,46656,233280,279936,1399680,1679616,8398080,10077696,50388480,60466176,302330880,362797056,1813985280,2176782336 ⋆ a(n) = 6 * a(n - 2) for n > 2; a(1) = 1, a(2) = 5. ● a(n) = 6 ^ (1 / 4 * (2 * n + 3 + (- 1) ^ n)) * (11 - (- 1) ^ n) / 72. ●
► [A047170] 0,0,0,0,0,0,0,0,0,5,6,36,42,147,168,448,504,1134,1260,2565,2827,5687,6270,13860,15444 ⋆ Number of nonempty subsets of { 1,2,...,n } in which exac tly 5 / 6 of the elements are <= n / 2. ● a(n) = Sum _{ k>=1 } binomial(floo r(n / 2), 5 * k) * binomial(ceiling(n / 2), k). - _ Andrew Howroyd _ , Apr 11 2021 ●
► [A273050] 0,5,6,45,54,365,438,2925,3510,23405,28086,187245,224694,1497965,1797558,11983725,14380470,95869805,115043766,766958445,920350134,6135667565,7362801078,49085340525,58902408630 ⋆ Numbers k such that ror(k) XOR rol (k) = k, where ror(x)=A038572(x) is x rotated one binary place to the right, ro l(x)=A006257(x) is x rotated one binary place to the left, and XOR is the binar y exclusive - or operator. ● a(n) = (- 11 + (- 1) ^ n + 2 ^ (- 1 / 2 + (3 * n) / 2) * (3 - 3 * (- 1) ^ n + 5 * sqrt(2) + 5 * (- 1) ^ n * sqrt(2))) / 14. ● a(n) = 5 * (2 ^ (3 * n / 2) - 1) / 7 for n even. ● a(n) = 3 * (2 ^ ((3 * n) / 2 - 1 / 2) - 2) / 7 for n odd. ● a(n) = 9 * a(n - 2) - 8 * a(n - 4) for n>4. ●
► [A269908] 1,5,6,50,51,167,168,388,389,745,746,1270,1271,1995,1996,2952,2953,4173,4174,5690,5691,7535,7536,9740,9741 ⋆ Partial sums of the number of acti ve (ON,black) cells in n - th stage of growth of two - dimensional cellular autom aton defined by "Rule 1", based on the 5 - celled von Neumann neighborhood. ● a(n) = (3 + 9 * (- 1) ^ n - 2 * (1 + 12 * (- 1) ^ n) * n - 12 * (- 2 + (- 1) ^ n) * n ^ 2 + 8 * n ^ 3) / 12. ● a(n) = (4 * n ^ 3 + 6 * n ^ 2 - 13 * n + 6) / 6 fo r n even. ● a(n) = (4 * n ^ 3 + 18 * n ^ 2 + 11 * n - 3) / 6 for n odd. ● a(n) = a(n - 1) + 3 * a(n - 2) - 3 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) + a(n - 6) - a(n - 7) for n>6. ●
► [A041057] 1,1,5,6,65,71,349,420,4549,4969,24425,29394,318365,347759,1709401,2057160,22281001,24338161,119633645,143971806,1559351705,1703323511,8372645749,10075969260,109132338349 ⋆ Denominators of continued fraction conver gents to sqrt(34). ● a(n) = 70 * a(n - 4) - a(n - 8). G.f.: - (x ^ 2 - x - 1) * (x ^ 4 + 6 * x ^ 2 + 1) / (x ^ 8 - 70 * x ^ 4 + 1). [_ Colin Barker _ , Jul 16 2012] ●
► [A041058] 5,6,65,71,775,846,9235,10081,110045,120126,1311305,1431431,15625615,17057046,186196075,203253121,2218727285,2421980406,26438531345,28860511751,315043648855,343904160606,3754085254915 ⋆ Numerators of continued fr action convergents to sqrt(35). ● a(n) = 12 * a(n - 2) - a(n - 4). G.f.: (5 + 6 * x + 5 * x ^ 2 - x ^ 3) / (1 - 12 * x ^ 2 + x ^ 4). [_ Colin Barker _ , Apr 17 2012] ●
► [A041139] 1,1,5,6,101,107,529,636,10705,11341,56069,67410,1134629,1202039,5942785,7144824,120259969,127404793,629879141,757283934,12746422085,13503706019,66761246161,80264952180,1351000481041 ⋆ Denominators of continued fr action convergents to sqrt(78). ● a(n) = 106 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Dec 11 2013 ●
► [A041257] 1,1,5,6,137,143,709,852,19453,20305,100673,120978,2762189,2883167,14294857,17178024,392211385,409389409,2029769021,2439158430,55691254481,58130412911,288212906125,346343319036 ⋆ Denominators of continued fractio n convergents to sqrt(140). ● a(n) = 142 * a(n - 4) - a(n - 8). - _ Vincenzo Libr andi _ , Dec 13 2013 ●
► [A041411] 1,1,5,6,173,179,889,1068,30793,31861,158237,190098,5480981,5671079,28165297,33836376,975583825,1009420201,5013264629,6022684830,173648439869,179671124699,892332938665,1072004063364 ⋆ Denominators of continued fr action convergents to sqrt(220). ● a(n) = 178 * a(n - 4) - a(n - 8). G.f.: - (x ^ 2 - x - 1) * (x ^ 4 + 6 * x ^ 2 + 1) / (x ^ 8 - 178 * x ^ 4 + 1). [_ Colin Barker _ , Jul 16 2012] ●
► [A041601] 1,1,5,6,209,215,1069,1284,44725,46009,228761,274770,9570941,9845711,48953785,58799496,2048136649,2106936145,10475881229,12582817374,438291671945,450874489319,2241789629221,2692664118540,93792369659581 ⋆ Denomi nators of continued fraction convergents to sqrt(318). ● a(n) = 214 * a(n - 4) - a(n - 8) for n>7. - _ Vincenzo Librandi _ , Dec 21 2013 ●
► [A041827] 1,1,5,6,245,251,1249,1500,61249,62749,312245,374994,15312005,15686999,78060001,93747000,3827940001,3921687001,19514688005,23436375006,956969688245,980406063251,4878593941249,5859000004500,239238594121249 ⋆ Den ominators of continued fraction convergents to sqrt(434). ● a(n) = 250 * a(n - 4) - a(n - 8) for n>7. - _ Vincenzo Librandi _ , Dec 25 2013 ●
► [A042089] 1,1,5,6,281,287,1429,1716,80365,82081,408689,490770,22984109,23474879,116883625,140358504,6573374809,6713733313,33428308061,40142041374,1879962211265,1920104252639,9560379221821,11480483474460,537662619046981 ⋆ Denominators of continued fraction convergents to sqrt(568). ● a(n) = 286 * a(n - 4) - a(n - 8) for n>7. - _ Vincenzo Librandi _ , Jan 14 2014 ●
► [A047479] 0,1,5,7,8,9,13,15,16,17,21,23,24,25,29,31,32,33,37,39,40,41,45,47,48 ⋆ Numbers that are congruent to { 0, 1, 5, 7 } mod 8. ● a(n) = (- 7 - (- 1) ^ n + (2 - i) * (- i) ^ n + (2 + i) * i ^ n + 8 * n) / 4 where i=sqrt(- 1). ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. - _ Vincenzo Librandi _ , May 16 2012 ●
► [A080720] 5,7,8,10,11,12,13,15,18,19,21,24,27,30,31,33,34,35,36,39,40,42,43,44,45 ⋆ a(0) = 5; for n>0, a(n) is taken to be the smallest positive integer greater t han a(n - 1) which is consistent with the condition "n is a member of the seque nce if and only if a(n) is a multiple of 3". ● a(a(n)) = 3 * (n + 4). ●
► [A047384] 0,1,5,7,8,12,14,15,19,21,22,26,28,29,33,35,36,40,42,43,47,49,50,54,56 ⋆ Numbers that are congruent to { 0, 1, 5 } mod 7. ● a(n) = Sum _{ i=0..n - 2 } 2 ^ (- i mod 3). - _ Wesley Ivan Hurt _ , Jul 08 2014 ● a(n) = 3 + floor((n - 2) / 3) + 2 * floor((n - 4) / 3) + 4 * floor(n / 3). - _ Wesley Ivan Hurt _ , Jul 13 2014 ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. ● a(n) = (21 * n - 24 + 6 * cos(2 * n * Pi / 3) + 4 * sqrt(3) * sin(2 * n * Pi / 3)) / 9. ● a(3k) = 7k - 2, a(3k - 1) = 7k - 6, a(3k - 2) = 7k - 7. (End) ●
► [A047477] 0,5,7,8,13,15,16,21,23,24,29,31,32,37,39,40,45,47,48,53,55,56,61,63,64 ⋆ Numbers that are congruent to { 0, 5, 7 } mod 8. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. - _ Vincenzo Librandi _ , May 16 2012 ● a(n) = (24 * n - 12 + 3 * cos(2 * n * Pi / 3) - 7 * sqrt(3) * sin(2 * n * Pi / 3)) / 9. ● a(3 * k) = 8 * k - 1, a(3 * k - 1) = 8 * k - 3, a(3 * k - 2) = 8 * k - 8. (End) ●
► [A354454] 0,5,7,9,10,11,12,13,14,15,16,17,17,18,19,19,20,21,21,22,22,23,24,24,25 ⋆ Nearest integer to sqrt(8 * Pi * n). ● a(n) = floor(sqrt(8 * Pi * n) + 1 / 2). ●

▶ [A160811] 5,7,9,10,11,13,14,15,16,17,18,19,20,21,22,23,25,26,27,28,29,30,31,32,33 ⋆ Numbers not dividing 24. • a(n) = n + 8 for n > 16. [_ Charles R Greathouse IV _ , Oct 26 2011] •

▶ [A184110] 5,7,9,10,12,13,15,17,18,19,21,22,24,25,27,28,29,31,32,33,35,36,37,39,40 ⋆ n + floor(3 * sqrt(n + 1)). • a(n) = n + floor(3 * sqrt(n + 1)) •

▶ [A080353] 5,7,9,11,12,14,15,17,18,20,21,22,24,25,26,28,29,30,32,33,34,35,37,38,39 ⋆ a(1)=5; for n>1, a(n)=a(n - 1) + 1 if n is already in the sequence, a(n)=a(n - 1) + 2 otherwise. • a(n) = n + floor(sqrt(6 * n)) + O(1). •

▶ [A184108] 1,5,7,9,11,12,14,15,17,19,20,21,23,24,26,27,29,30,31,33,34,35,37,38,39 ⋆ n + floor(3 * sqrt(n - 1)); complement of A184109. • a(n) = n + floor(3 * sqrt(n - 1)) •

▶ [A279289] 5,7,9,11,13,14,15,16,17,19,20,21,22,23,25,26,27,28,29,31,32,33,34,35,36 ⋆ Numbers n such that phi(n) > tau(n). • a(n) = n + 11 for n >= 20. •

▶ [A267872] 1,1,5,7,9,11,13,15,17,19,21,23,25,27,29,31,33,35,37,39,41,43,45,47,49 ⋆ Number of ON (black) cells in the n - th iteration of the "Rule 237" elementary cellular automaton starting with a single ON (black) cell. • a(n) = 2 * a(n - 1) - a(n - 2) for n>3. •

▶ [A020735] 5,7,9,11,13,15,17,19,21,23,25,27,29,31,33,35,37,39,41,43,45,47,49,51,53 ⋆ Odd numbers >= 5. • a(n) = 2 * n + 3. •

▶ [A035034] 1,5,7,9,11,13,17,19,21,22,23,25,26,27,29,31,33,34,35,37,38,39,41,43,44 ⋆ Numbers k such that k >= d(k) ^ 2, where d(k) is the number of divisors of k. • a(n) = n + 52 for n >= 1209. - _ Amiram Eldar _ , Aug 29 2020 •

▶ [A086398] 1,5,7,9,11,15,17,21,23,27,29,33,35,37,39,43,45,49,51,53,55,59,61,65,67 ⋆ a(1)=1; a(n)=a(n - 1) + 2 if n is in the sequence; a(n)=a(n - 1) + 2 if n and (n - 1) are not in the sequence; a(n)=a(n - 1) + 4 if n is not in the sequence but (n - 1) is in the sequence. • a(n) = (1 + sqrt(3)) * n + O(1). •

▶ [A283771] 5,7,9,11,18,20,22,24,31,33,35,37,44,46,48,50,57,59,61,63,68,70,72,74,76 ⋆ Numbers k such that L(k) = 2 mod 3, where L = A000201 = lower Wythoff sequence. • a(n + 1) - a(n) is in { 2,5,7 } for every n. •

▶ [A188793] 1,5,7,9,11,29,31,89,91,269,271,809,811,2429,2431,7289,7291,21869,21871,65609,65611,196829,196831,590489,590491 ⋆ Start with 1 and 5, then repeatedly adjoin the smallest number that is greater than the last term and not equal to the sum of a subset of the existing terms. • a(2h) = 10 * 3 ^ (h - 2) - 1 for h >= 2. • a(2h + 1) = 10 * 3 ^ (h - 2) + 1 for h >= 2. (End) •

▶ [A184102] 5,7,9,12,13,15,17,19,21,22,24,25,27,28,30,32,33,34,36,37,39,40,42,43,45 ⋆ n + floor(4 * sqrt(n)); complement of A184103. • a(n)=n + floor(4 * sqrt(n)). •

▶ [A005427] 5,7,9,12,16,22,29,39,52,69,92,123,164,218,291,388,517,690,920,1226,1635,2180,2907,3876,5168 ⋆ Josephus problem: numbers m such that, when m people are arranged on a circle and numbered 1 through m, the final survivor when we remove every 4th person is one of the first three people. • a(n) = 5 + ceiling(Sum _{ k=1..n - 1 } a(k) / 3). - _ Petros Hadjicostas _ , Jul 21 2020 •

▶ [A047478] 1,5,7,9,13,15,17,21,23,25,29,31,33,37,39,41,45,47,49,53,55,57,61,63,65 ⋆ Numbers that are congruent to { 1, 5, 7 } mod 8. • a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. - _ Vincenzo Librandi _ , May 16 2012 • a(n) = (24 * n - 9 - 4 * sqrt(3) * sin(2 * n * Pi / 3)) / 9. • a(3k) = 8k - 1, a(3k - 1) = 8k - 3, a(3k - 2) = 8k - 7. (End) • a(n) = 2 * (n + floor((n + 1) / 3)) - 1. - _ Wolfdieter Lang _ , Sep 11 2021 •

▶ [A079523] 1,5,7,9,13,17,21,23,25,29,31,33,37,39,41,45,49,53,55,57,61,65,69,71,73 ⋆ Utterly odd numbers: numbers whose binary representation ends in an odd number of ones. • a(n) is asymptotic to 3n. •

▶ [A097280] 5,7,9,13,19,29,45,71,113,181,291,469,757,1223,1977,3197,5171,8365,13533,21895,35425,57317,92739,150053,242789 ⋆ Perimeter of integer triangle (A001611(n), A001611(n + 1), A001611(n + 2)). • a(n) = 2 * a(n - 1) - a(n - 3). • a(n) = 2 * Fibonacci(n + 2) + 3. - _ Greg Dresden _ , Oct 10 2020 •

▶ [A350666] 0,5,7,9,14,16,18,23,25,27,32,34,36,41,43,45,50,52,54,59,61,63,68,70,72 ⋆ Numbers congruent to 0, 5, and 7 modulo 9: positions of 0 in A159955. • a(n) = 1 + 3 * n - (2 / sqrt(3)) * sin(2 * (n + 1) * Pi / 3) (from the previous formula). •

▶ [A247283] 5,7,9,15,18,27,36,54,72,108,144,216,288,432,576,864,1152,1728,2304,3456,4608,6912,9216,13824,18432 ⋆ Positions of subrecords in A048673. • a(n) = 2 * a(n - 2) for n > 6. •

▶ [A278579] 5,7,10,11,14,15,17,19,20,21,22,28,30,33,34,37,38,40,42,43,44,45,51,53,56 ⋆ Quadratic non - residues of 23: numbers n such that Jacobi(n,23) = - 1. • a(n + 11) = a(n) + 23. •

▶ [A123122] 0,5,7,10,12,14,15,17,19,20,21,22,24,25,26,27,28,29,30,31,32,33,34,35,36 ⋆ Numbers of the form 5i + 7j for some nonnegative integers i and j. • a(n) = n + 11 for n > 12. - _ Charles R Greathouse IV _ , Oct 26 2011 •

▶ [A256680] 0,1,5,7,10,12,15,17,20,22,25,27,30,32,35,37,40,42,45,47,50,52,55,57,60 ⋆ Minimal most likely sum for a roll of n 4 - sided dice. • a(n) = floor(5 * n / 2), for n>=2; a(0)=0 and a(1)=1. • a(n) = (- 1 + (- 1) ^ n + 10 * n) / 4 for n>1. • a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n>4. •

▶ [A179196] 1,5,7,10,13,15,17,19,20,25,26,28,31,35,36,39,41,42,49,50,51,52,53,56,57 ⋆ Number of primes up to the n - th Ramanujan prime: A000720(A104272(n)). • a(n) = rho(n) in the paper by Sondow, Nicholson, and Noe. •

▶ [A089061] 5,7,10,13,17,22,29,39,54,77,113,170,261,407,642,1021,1633,2622,4221,6807,10990,17757,28705,46418,75077 ⋆ a(0) = 5, a(1) = 7; for n>1, a(n) = a(n - 1) + a(n - 2) - (2n - 2). • a(n) = Fibonacci(n + 1) + 2n + 4. - _ Ralf Stephan _ , Feb 24 2004 •

▶ [A022441] 1,5,7,10,14,17,20,23,25,28,31,34,37,40,43,46,50,53,56,59,62,65,68,71,74 ⋆ a(n) = c(n) + c(n - 1) where c (A055562) is the sequence of numbers not in a. • a(n) + a(n - 1) = 3n + 2 - (floor(log _ 2 n) mod 2) for n >= 1. - _ Jeffrey Shallit _ , Jun 08 2000 •

▶ [A190035] 5,7,10,14,18,22,26,30,34,38,42,46,50,54,58,62,66,70,74,78,82,86,90,94,98 ⋆ Number of nondecreasing arrangements of n + 2 numbers in 0..3 with the last equal to 3 and each after the second equal to the sum of one or two of the preceding three. • a(n) = 2 * a(n - 1) - a(n - 2) for n>4. •

▶ [A070875] 5,7,10,14,20,28,40,56,80,112,160,224,320,448,640,896,1280,1792,2560,3584,5120,7168,10240,14336,20480 ⋆ Binary expansion is 1x100...0 where x = 0 or 1. • a(n) = (6 - (- 1) ^ n) * 2 ^ ((2 * n + (- 1) ^ n - 1) / 4). Therefore: a(n) = 5 * 2 ^ (n / 2) for n even, otherwise a(n) = 7 * 2 ^ ((n - 1) / 2). • a(n) = 2 * a(n - 2) for n>1. (End) • a(n) = sqrt(2 * a(n - 1) - (- 2) ^ (n - 1)). - _ Richard R. Forberg _ , Sep 06 2013 • a(n + 3) = a(n + 2) * a(n + 1) / a(n). - _ Richard R. Forberg _ , Sep 06 2013 • a(n) = 2 ^ ((n - 3) / 2) * (5 * sqrt(2) * (1 + (- 1) ^ n) + 7 * (1 - (- 1) ^ n)). (End) •

▶ [A091522] 5,7,10,14,20,28,40,57,81,115,163,231,327,463,655,927,1311,1854,2622,3708,5244,7416,10488,14832,20976 ⋆ Graham - Pollak sequence with initial term 5. • a(n) = floor(sqrt(2) * (a(n - 1) + 1 / 2)). •

▶ [A020711] 5,7,10,14,20,29,42,61,89,130,190,278,407,596,873,1279,1874,2746,4024,5897,8642,12665,18561,27202,39866 ⋆ Pisot sequences E(5,7), P(5,7). • a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) - a(n - 4) (holds at least up to n = 1000 but is not known to hold in general). •

▶ [A133756] 5,7,10,14,21,33,52,85,144,248,438,791,1456,2731,5213,10112,19920,39819,80704,165749,344758,725888,1546398,3331879,7257856 ⋆ a(n) = round(2 * Gamma(3 + n / 3) + 2 ^ (n / 3)). • a(n) = round(2 * Gamma(f(n) + 3) + 2 ^ f(n)), where f(n) = n / 3. •

▶ [A048584] 5,7,10,15,23,36,57,91,146,235,379,612,989,1599,2586,4183,6767,10948,17713,28659,46370,75027,121395,196420,317813 ⋆ Pisot sequence L(5,7). • a(n) = Fib(n + 4) + 2. a(n) = 2a(n - 1) - a(n - 3). • a(n)=2 + (3 / 2) * [1 / 2 + (1 / 2) * sqrt(5)] ^ n + (7 / 10) * [1 / 2 + (1 / 2) * sqrt(5)] ^ n * sqrt(5) - (7 / 10) * sqrt(5) * [1 / 2 - (1 / 2) * sqrt(5)] ^ n + (3 / 2) * [1 / 2 - (1 / 2) * sqrt(5)] ^ n, with n>=0 - _ Paolo P. Lava _ , Jun 10 2008 •

▶ [A035035] 5,7,11,13,17,19,21,22,23,25,26,27,29,31,33,34,35,37,38,39,41,43,44,45,46 ⋆ Numbers k such that k > d(k) ^ 2, where d(k) is the number of divisors of k. • a(n) = n + 54 for n >= 1207. - _ Amiram Eldar _ , Aug 29 2020 •

▶ [A007310] 1,5,7,11,13,17,19,23,25,29,31,35,37,41,43,47,49,53,55,59,61,65,67,71,73 ⋆ Numbers congruent to 1 or 5 mod 6. • a(n) = (6 * n + (- 1) ^ n - 3) / 2. - _ Antonio Esposito _ , Jan 18 2002 • a(n) = a(n - 1) + a(n - 2) - a(n - 3), n > = 4. - _ Roger L. Bagula _ • a(n) = 3 * n - 1 - (n mod 2). - _ Zak Seidov _ , Jan 18 2006 • a(1) = 1 then alternatively add 4 and 2. a(1) = 1, a(n) = a(n - 1) + 3 + (- 1) ^ n. - _ Zak Seidov _ , Mar 25 2006 • a(n) = 6 * floor(n / 2) - 1 + 2 * (n mod 2). - _ Reinhard Zumkeller _ , Oct 02 2008 • a(n) = 6 * n - a(n - 1) - 6 for n>1, a(1) = 1. - _ Vincenzo Librandi _ , Nov 18 2010 •

▶ [A101635] 5,7,11,13,17,19,23,31,41,43,47,61,71,73,83,97,101,103,107,109,113,127,131,139,149 ⋆ Increasing primes of alternating congruences modulo 6. • a(2n) == 1 (mod 6) & a(2n + 1) == - 1 (mod 6). •

▶ [A037141] 5,7,11,14,18,22,27,33,41,52,68,92,129,187,279,426,662,1042,1655,2645,4245,6832,11016,17784,28733 ⋆ Convolution of natural numbers n >= 1 with Fibonacci numbers F(k), for k >= - 5, with F(- n)=(- 1) ^ (n + 1) * F(n);. • a(n) = F(n - 1) + (4 + 3 * n); G.f.: (5 - 8 * x) / ((1 - x - x ^ 2) * (1 - x) ^ 2) •

▶ [A075317] 1,5,7,11,15,17,21,23,27,31,33,37,41,43,47,49,53,57,59,63,65,69,73,75,79 ⋆ Pair the odd numbers such that the k - th pair is (r, r + 2k) where r is the smallest odd number not included earlier: (1,3),(5,9),(7,13),(11,19),(15,25),(17,29),(21,35),(23,39),(27,45),... This is the sequence of the first member of pairs. • a(n) = 2 * floor(n * phi) - 1, where phi=(1 + sqrt(5)) / 2. - _ Michel Dekking _ , Sep 05 2016 •

▶ [A046133] 5,7,11,17,19,29,31,41,47,59,61,67,71,89,97,101,127,137,139,151,167,179,181,199,211 ⋆ Primes p such that p + 12 is also prime. • a(n) >> n log ^ 2 n. \\ _ Charles R Greathouse IV _ , Apr 28 2015 •

▶ [A027690] 5,7,11,17,25,35,47,61,77,95,115,137,161,187,215,245,277,311,347,385,425,467,511,557,605 ⋆ a(n) = n ^ 2 + n + 5. • a(n) = 2 * n + a(n - 1) for n> 0, a(0)=5. - _ Vincenzo Librandi _ , Aug 05 2010 •

▶ [A027755] 5,7,11,17,47,61,137,277,311,347,467,557,761,997,1061,1487,1811,2357,2657,3911,4561,5261,5407,5857,6011 ⋆ Primes of the form k ^ 2 + k + 5. • a(n) >> n ^ 2 log n (Brun sieve). - _ Charles R Greathouse IV _ , Nov 01 2022 •

▶ [A218394] 1,5,7,11,25,27,31,35,37,51,55,57,61,125,127,131,135,137,151,155,157,161,175,177,181 ⋆ Numbers such that sum(i<=n) binomial(n,i) * binomial(2 * n - 2 * i, n - i) is not divisible by 5. • a(n)=2 * n - 1 + 2 * sum { i=1,n } 5 ^ (i - 1) * floor((2 * n - 1) / 3 ^ i). •

▶ [A047382] 0,5,7,12,14,19,21,26,28,33,35,40,42,47,49,54,56,61,63,68,70,75,77,82,84 ⋆ Numbers that are congruent to { 0, 5 } mod 7. • a(n) = 7 * n - a(n - 1) - 9 for n>1, with a(1)=0. - _ Vincenzo Librandi _ , Aug 05 2010 • a(n) = (14 * n + 3 * (- 1) ^ n - 11) / 4. • a(n) = ceiling((7 / 3) * ceiling(3 * n / 2)). - _ Clark Kimberling _ , Jul 04 2012 •

▶ [A263536] 5,7,12,17,19,24,29,31,36,41,43,48,53,55,60,65,67,72,77,79,84,89,91,96,101 ⋆ Row sum of an equilateral triangle tiled with the 3,4,5 Pythagorean triple. • a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. •

▶ [A047550] 5,7,13,15,21,23,29,31,37,39,45,47,53,55,61,63,69,71,77,79,85,87,93,95,101 ⋆ Numbers that are congruent to { 5, 7 } mod 8. • a(n) = 8 * n - a(n - 1) - 4 (with a(1)=5). - _ Vincenzo Librandi _ , Aug 06 2010 • a(n) = 4 * n - (- 1) ^ n. - _ Rolf Pleisch _ , Nov 02 2010 • a(1)=5, a(2)=7, a(3)=13; for n>3, a(n) = a(n - 1) + a(n - 2) - a(n - 3). - _ Harvey P. Dale _ , Jun 04 2012 •

▶ [A236204] 1,5,7,13,17,19,23,25,29,31,35,37,41,43,47,49,53,59,61,65,67,71,73,79,83 ⋆ Numbers not divisible by 2, 3 or 11. • a(n) = a(n - 1) + a(n - 20) - a(n - 21). - _ Charles R Greathouse IV _ , Mar 26 2014 •

▶ [A108719] 5,7,13,17,19,23,29,31,37,41,43,47,53,59,61,67,71,73,79,83,89,97,101,103,107 ⋆ Primes which can be partitioned into a sum of distinct primes in more than one way. • a(n) = prime(n + 3) for n > 2. [_ Charles R Greathouse IV _ , Feb 09 2012] •

▶ [A178218] 1,5,7,13,17,25,31,41,49,61,71,85,97,113,127,145,161,181,199,221,241,265,287,313,337 ⋆ Numbers of the form 2k ^ 2 - 2k + 1 or 2k ^ 2 - 1. • a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4). G.f.: x * (1 + 3 * x - 3 * x ^ 2 + x ^ 3) / ((1 - x) ^ 3 * (1 + x)). [_ Colin Barker _ , Apr 04 2012] • a(n) = (2n(n + 2) + 3(- 1) ^ n + 1) / 4. [_ Bruno Berselli _ , Apr 04 2012] • a(1)=1, a(n) = n * (n + 1) - a(n - 1). [_ Alex Ratushnyak _ , Aug 03 2012] •

▶ [A022319] 1,5,7,13,21,35,57,93,151,245,397,643,1041,1685,2727,4413,7141,11555,18697,30253,48951,79205,128157,207363,335521 ⋆ a(n) = a(n - 1) + a(n - 2) + 1 for n > 1, a(0)=1, a(1)=5. • a(n) = Fibonacci(n - 2) + Fibonacci(n + 4) - 1. - _ Zerinvary Lajos _ , Feb 01 2008 •

▶ [A155757] 5,7,13,25,45,75,117,173,245,335,445,577,733,915,1125,1365,1637,1943,2285,2665,3085,3547,4053,4605,5205 ⋆ (n ^ 3 - n + 15) / 3. ● a(n)=n(n - 1) + a(n - 1), with a(1)=5. ●

▶ [A027674] 1,1,1,1,1,5,7,13,25,49,89,169,319,601,1129,2129,4009,7549,14215,26773,50417,94945,178801,336721,634111 ⋆ Numerical distance between m - th and (m + n) - th spheres in loxodromic sequence of spheres in which each 5 consecutive spheres are in mutual contact. ● a(n) = a(n - 1) + a(n - 2) + a(n - 3) + a(n - 4) - a(n - 5). - corrected by _ Harvey P. Dale _ , Apr 12 2013 ●

▶ [A168609] 5,7,13,31,85,247,733,2191,6565,19687,59053,177151,531445,1594327,4782973,14348911,43046725,129140167,387420493,1162261471,3486784405,10460353207,31381059613,94143178831,282429536485 ⋆ a(n) = 3 ^ n + 4. ● a(n) = 3 * a(n - 1) - 8, with n>0, a(0)=5. ● a(n) = 4 * a(n - 1) - 3 * a(n - 2) for n>1. - _ Vincenzo Librandi _ , May 13 2014 ●

▶ [A105638] 0,1,5,7,14,17,27,31,44,49,65,71,90,97,119,127,152,161,189,199,230,241,275,287,324 ⋆ Maximum number of intersections in self - intersecting n - gon. ● a(n) = n(n - 3) / 2 if n odd, n(n - 4) / 2 + 1 if n even. ● a(n) = a(n - 1) + 2a(n - 2) - 2a(n - 3) - a(n - 4) + a(n - 5). ●

▶ [A079360] 1,5,7,15,19,35,43,75,91,155,187,315,379,635,763,1275,1531,2555,3067,5115,6139,10235,12283,20475,24571 ⋆ Sequence of sums of alternating increasing powers of 2. ● a(2n) = 6 * 2 ^ n - 5, a(2n - 1) = 5 * (2 ^ n - 1). - _ Benoit Cloitre _ , Feb 16 2003 ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3). ●

▶ [A279875] 1,1,5,7,16,23,84,125,257,383,1344,2015,4096,6143,21504,32255,65536,98303,344064,516095,1048576,1572863,5505024,8257535,16777216 ⋆ Decimal representation of the x - axis, from the left edge to the origin, of the n - th stage of growth of the two - dimensional cellular automaton defined by "Rule 211", based on the 5 - celled von Neumann neighborhood. ● a(n) = a(n - 2) + 16 * a(n - 4) - 16 * a(n - 6) for n>10. ●

▶ [A092242] 5,7,17,19,29,31,41,43,53,55,65,67,77,79,89,91,101,103,113,115,125,127,137,139,149 ⋆ Numbers that are congruent to { 5, 7 } (mod 12). ● a(n) = 12 * n - a(n - 1) - 12 (with a(1)=5). - _ Vincenzo Librandi _ , Nov 16 2010 ● a(n) = 6 * n - 3 - 2 * (- 1) ^ n. ●

▶ [A048700] 1,5,7,17,21,27,31,65,73,85,93,99,107,119,127,257,273,297,313,325,341,365,381,387,403 ⋆ Binary palindromes of odd length (written in base 10). ● a(n) = (2 ^ (floor _ log _ 2(n))) * n + sum('(bit _ i(n, i) * (2 ^ (floor _ log _ 2(n) - i))), 'i'=1..floor _ log _ 2(n)); ●

▶ [A164120] 5,7,17,21,41,49,89,105,185,217,377,441,761,889,1529,1785,3065,3577,6137,7161,12281,14329,24569,28665,49145 ⋆ Partial sums of A162396. ● a(n) = 2 * a(n - 2) + 7 for n > 2; a(1) = 5, a(2) = 7. ● a(n) = (19 - 5 * (- 1) ^ n) * 2 ^ ((2 * n - 1 + (- 1) ^ n) / 4) / 2 - 7. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3). - _ G. C. Greubel _ , Sep 12 2017 ●

▶ [A214345] 5,7,17,23,37,47,65,79,101,119,145,167,197,223,257,287,325,359,401,439,485,527,577,623,677 ⋆ Interleaved reading of A073577 and A053755. ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4). ● a(n) = (2 * n * (n + 4) + 3 * (- 1) ^ n + 7) / 2. ● a(n) = 4 * (n + 1) + a(n - 2) for n > 1; a(- n) = a(n - 4). - _ Guenther Schrack _ , Oct 24 2018 ●

▶ [A290471] 1,5,7,17,31,52,99,169,301,536,947,1698,3043,5482,9919,17993,32743,59713,109099,199634,365719,670605,1230547,2259286,4149841 ⋆ Number of minimal edge covers in the n - wheel graph. ● a(n) = a(n - 1) + 3 * a(n - 2) + a(n - 3) - 5 * a(n - 4) - 5 * a(n - 5) + 4 * a(n - 7) + 3 * a(n - 8) + a(n - 9) for n>10. ●

▶ [A166977] 0,1,5,7,17,31,65,127,257,511,1025,2047,4097,8191,16385,32767,65537,131071,262145,524287,1048577,2097151,4194305,8388607,16777217 ⋆ Jacobsthal - Lucas numbers A014551, except a(0) = 0. ● a(n) = a(n - 1) + 2 * a(n - 2), n >2. ● a(n) = (- 1) ^ n + 2 ^ n for n>0. - _ Colin Barker _ , Jun 06 2012 ●

▶ [A153192] 5,7,18,22,39,45,68,76,105,115,150,162,203,217,264,280,333,351,410,430,495,517,588,612,689 ⋆ Numbers such that the numerator of floor(sqrt(n)) / n , when reduced to its lowest terms, is equal to 2. ● a(n) = (2 * n + 3) * (2 * n - (- 1) ^ n + 1) / 4. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). ●

▶ [A162268] 5,7,19,45,109,263,635,1533,3701,8935,21571,52077,125725,303527,732779,1769085,4270949,10310983,24892915,60096813,145086541,350269895,845626331,2041522557,4928671445 ⋆ a(n) = ((5 + sqrt(2)) * (1 + sqrt(2)) ^ n + (5 - sqrt(2)) * (1 - sqrt(2)) ^ n) / 2. ● a(n) = 2 * a(n - 1) + a(n - 2) for n > 1; a(0) = 5, a(1) = 7. ● a(n) = (5 / 2) * ((1 + sqrt(2)) ^ n + (1 - sqrt(2)) ^ n) + (1 / 2) * sqrt(2) * ((1 + sqrt(2)) ^ n - (1 - sqrt(2)) ^ n), with n >= 0. - _ Paolo P. Lava _ , Jul 15 2009 ●

▶ [A258282] 1,1,5,7,20,31,75,118,266,401,841,1345,2581,4023,7758,11932,21543,33941,59099,91816,159059,242955,407523,634827,1032202 ⋆ Number of partitions of 4 copies of n into distinct parts. ● a(n) = 1 / 4! * [(x * y * z * u) ^ n] Product _{ j>0 } (1 + x ^ j + y ^ j + z ^ j + u ^ j). ●

▶ [A192422] 0,1,1,5,7,20,35,83,161,355,720,1541,3185,6733,14027,29500,61663,129403,270865,567911,1189440,2492905,5222449,10943813,22928815 ⋆ Coefficient of x in the reduction by x ^ 2 - > x + 1 of the polynomial p(n,x) defined below in Comments. ● a(n) = a(n - 1) + 3 * a(n - 2) - a(n - 3) - a(n - 4). ● a(n) = n * Sum _{ i=0..floor((n - 1) / 2) } (binomial(n - i - 1,i) / (n - 2 * i)) * Fibonacci(n - 2 * i). (End) ● a(n) = Sum _{ j=0..n } T(n, j) * Fibonacci(j), where T(n, k) = [x ^ k] ((x + sqrt(x ^ 2 + 4)) ^ n + (x - sqrt(x ^ 2 + 4)) ^ n) / 2 ^ n. - _ G. C. Greubel _ , Jul 11 2023 ●

▶ [A097038] 0,1,1,5,7,21,35,85,155,341,651,1365,2667,5461,10795,21845,43435,87381,174251,349525,698027,1398101,2794155,5592405,11180715 ⋆ A Jacobsthal variant. ● a(n) = 2 * 2 ^ n / 3 + (- 1) ^ n / 3 - 2 ^ (n / 2) * (1 + (- 1) ^ n) / 2; ● a(n) = sum { k=0..floor((n + 1) / 2), binomial(n - k + 1, k - 1)2 ^ k } ; ●

▶ [A049114] 1,1,5,7,21,37,89,173,383,777,1665,3441,7277,15159,31885,66645,139865,292757,613823,1285585,2694433,5644609,11828501,24782311,51928773 ⋆ 2 - ranks of difference sets constructed from Glynn type II hyperovals. ● a(n + 1) = a(n) + 3 * a(n - 1) - a(n - 2) - a(n - 3) + 1. ●

▶ [A036498] 0,5,7,22,26,51,57,92,100,145,155,210,222,287,301,376,392,477,495,590,610,715,737,852,876 ⋆ Numbers of the form m * (6 * m - 1) and m * (6 * m + 1), where m is an integer. ● a(n) = n(n + 1) / 6 for n=0 or 5 (mod 6). ● a(n) = 1 / 8 * (- 1 + (- 1) ^ n + 2 * n) * (- 3 + (- 1) ^ n + 6 * n) (see MATHEMATICA code). ● a(1)=0, a(2)=5, a(3)=7, a(4)=22, a(5)=26, a(n)=a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). - _ Harvey P. Dale _ , Aug 13 2012 ●

▶ [A167936] 0,1,1,5,7,23,37,101,175,431,781,1805,3367,7463,14197,30581,58975,124511,242461,504605,989527,2038103,4017157,8211461,16245775 ⋆ 2 ^ n - A108411(n). ● a(n) = 2 * a(n - 1) + 3 * a(n - 2) - 6 * a(n - 3). ●

▶ [A077242] 5,7,23,37,133,215,775,1253,4517,7303,26327,42565,153445,248087,894343,1445957,5212613,8427655,30381335,49119973,177075397,286292183,1032071047,1668633125,6015350885 ⋆ Combined Diophantine Chebyshev sequences A077240 and A077239. ● a(n) = 6 * a(n - 2) - a(n - 4) for n>3. - _ Vincenzo Librandi _ , Feb 18 2014 ● a(n) = ((6 - 5 * sqrt(2)) * (1 - sqrt(2)) ^ n - (- 1 - sqrt(2)) ^ n * (- 4 + sqrt(2)) + 4 * (- 1 + sqrt(2)) ^ n + sqrt(2) * (- 1 + sqrt(2)) ^ n + 6 * (1 + sqrt(2)) ^ n + 5 * sqrt(2) * (1 + sqrt(2)) ^ n) / 4. - _ Colin Barker _ , Mar 27 2016 ●

▶ [A100095] 0,1,1,5,7,25,41,125,225,625,1195,3125,6227,15625,32059,78125,163727,390625,831505,1953125,4206145,9765625,21215481,48828125,106782837 ⋆ An inverse Chebyshev transform of the Fibonacci numbers. ● a(n) = sum(k=0..floor(n / 2), binomial(n, k)Fib(n - 2k)). ● a(n) = sum(j=0..(n - 1) / 2, 4 ^ (j) * binomial((n - 1) / 2,j)). - _ Vladimir Kruchinin _ , May 31 2014 ● a(2 * n) = 5 ^ n / sqrt(5) - 2 ^ n * (2 * n - 1)!! * hypergeom([1, n + 1 / 2], [n + 1], 4 / 5) / (5 * n!), a(2 * n + 1) = 5 ^ n. - _ Vladimir Reshetnikov _ , Oct 13 2016 ●

▶ [A104683] 1,1,5,7,29,41,169,239,985,1393,5741,8119,33461,47321,195025,275807,1136689,1607521,6625109,9369319,38613965,54608393,225058681,318281039,1311738121 ⋆ Interlaces "2 * n ^ 2 - 1 is a square" with NSW numbers. ● a(n) = ((1 + 2 * sqrt(2) + (- 1) ^ n) * (1 + sqrt(2)) ^ n - (1 - 2 * sqrt(2) + (- 1) ^ n) * (1 - sqrt(2)) ^ n) / (4 * sqrt(2)). [_ Bruno Berselli _ , Apr 04 2012] ●

▶ [A280926] 5,7,29,47,119,699,1407,4911,18971,46803,119951,363209,1276197,3722389,19973297,73605289,183273481,390720475,1671075265,4541314567,22107473795,44810965685,172567099183,617945607281,1835952288687 ⋆ Least k such that the first n digits of the decimal expansion of the ratio of the perimeter of a regular k - gon to its diameter match those of Pi. ● a(n) = 1 + 2 * floor((1 / 2) * (1 + sqrt((Pi ^ 3 / 24) / (Pi - floor(Pi * 10 ^ (n - 1)) / 10 ^ (n - 1))))). - _ Jon E. Schoenfield _ , Mar 28 2021 ●

▶ [A359066] 1,1,5,7,31,49,209,351,1471,2561,10625,18943,78079,141569,580865,1066495,4361215,8085505,32978945,61616127,250806271,471556097,1916280833,3621830655,14698053631 ⋆ a(n) = Sum _{ k=0..floor((n - 1) / 2) } binomial(n,k) * binomial(n - 1 - k,floor((n - 1) / 2) - k). ● a(n) = Sum _{ k=0..floor((n - 1) / 2) } binomial(n,k) * binomial(n - 1 - k,floor((n - 1) / 2) - k). ● a(n) = binomial(n - 1, floor((n - 1) / 2)) * hypergeom([- n, ceil((1 - n) / 2)], [1 - n], - 1). - _ Peter Luschny _ , Jan 03 2023 ●

▶ [A243019] 1,1,5,7,33,51,233,379,1697,2851,12585,21627,94449,165075,714873,1266027,5445441,9746883,41687369,75275227,320420753,582881971,2471008281,4523575371,19108837601 ⋆ Expansion of - (2 * x * sqrt(1 - 8 * x ^ 2) - 2 * x) / (16 * x ^ 3 + sqrt(1 - 8 * x ^ 2) * (4 * x ^ 2 + 2 * x - 1) - 8 * x ^ 2 - 2 * x + 1). ● a(n) = sum(i=0..floor(n / 2), 2 ^ i * binomial(n,i)). ●

▶ [A154148] 5,7,40,50,237,295,1384,1722,8069,10039,47032,58514,274125,341047,1597720,1987770,9312197,11585575,54275464,67525682 ⋆ Numbers k such that 21 plus the k - th triangular number is a perfect square. ● a(n)= + a(n - 1) + 6 * a(n - 2) - 6 * a(n - 3) - a(n - 4) + a(n - 5). ●

▶ [A167205] 1,1,5,7,41,61,365,547,3281,4921,29525,44287,265721,398581,2391485,3587227,21523361,32285041,193710245,290565367,1743392201,2615088301,15690529805,23535794707,141214768241 ⋆ a(n) = (3 ^ n + 1) / (3 - (- 1) ^ n). ● a(n) = 10 * a(n - 2) - 9 * a(n - 4). ● a(n) = numerator((1 / 4) ^ n + (3 / 4) ^ n), n > 0. ●

▶ [A234040] 1,1,5,7,42,66,429,715,4862,8398,58786,104006,742900,1337220,9694845,17678835,129644790,238819350,1767263190,3282060210,24466267020,45741281820,343059613650,644952073662,4861946401452 ⋆ a(n) = binomial(2 * (n + 1), n) * gcd(n,2) / (2 * (n + 1)). ● a(n) = binomial(2 * (n + 1),n) * gcd(n,2) / (2 * (n + 1)) for n >= 0. ●

▶ [A307361] 0,1,5,7,65,151,2105,6847,127265,532231,12365705,63206287,1762220465,10645162711,346257393305,2413453999327,89717615769665,708721089607591,29639206807284905,261679010699505967,12159552732032614865,118654880542567722871,6064946899313607640505 ⋆ Expansion of e.g.f. (sinh(x) + 5 * cosh(x) - 5) / (3 - 2 * cosh(x)). ● a(n) = Sum _{ k=1..n } (- 1) ^ (n - k) * Stirling2(n, k) * k! * Lucas(k). ●

▶ [A335298] 0,1,5,8,8,13,25,32,32,41,61,72,72,85,113,128,128,145,181,200,200,221,265,288,288 ⋆ a(n) is the squared distance between the points P(n) and P(0) on a plane, n >= 0, such that the distance between P(n) and P(n + 1) is n + 1 and, going from P(n) to P(n + 2), a 90 - degree left turn is taken in P(n + 1). ● a(n) = abs(z(n)) ^ 2 with ● a(n) = 3 * a(n - 1) - 5 * a(n - 2) + 7 * a(n - 3) - 7 * a(n - 4) + 5 * a(n - 5) - 3 * a(n - 6) + a(n - 7) for n > 6. (End) ●

▶ [A100832] 1,5,8,9,12,13,16,17,20,21,24,25,28,29,32,33,36,37,40,41,44,45,48,49,52 ⋆ Amenable numbers: n such that there exists a multiset of integers (s(1), ..., s(n)) whose size, sum and product are all n. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3), n > 4. ●

▶ [A047616] 0,1,5,8,9,13,16,17,21,24,25,29,32,33,37,40,41,45,48,49,53,56,57,61,64 ⋆ Numbers that are congruent to { 0, 1, 5 } mod 8. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. ● a(n) = (24 * n - 30 + 3 * cos(2 * n * Pi / 3) + 5 * sqrt(3) * sin(2 * n * Pi / 3)) / 9. ● a(3k) = 8k - 3, a(3k - 1) = 8k - 7, a(3k - 2) = 8k - 8. (End) ●

▶ [A164682] 5,8,10,16,20,32,40,64,80,128,160,256,320,512,640,1024,1280,2048,2560,4096,5120,8192,10240,16384,20480 ⋆ a(n) = 2 * a(n - 2) for n > 2; a(1) = 5, a(2) = 8. ● a(n) = (9 - (- 1) ^ n) * 2 ^ (1 / 4 * (2 * n - 5 + (- 1) ^ n)). ●

▶ [A047700] 5,8,11,13,14,16,17,19,20,21,22,23,24,25,26,27,28,29,30,31,32,34,35,36,37 ⋆ Numbers that are the sum of 5 positive squares. ● a(n) = n + 12 for n > = 22. - _ David A. Corneth _ , Aug 04 2020 ●

▶ [A180486] 5,8,11,14,17,20,23,26,29,32,35,38,41,44,47,50,53,56,59,62,65,68,71,74,77 ⋆ Numbers of the form ceiling(A179896(j) / A018252(j)) where A179896(j) mod A018252(j) <> 0. ● a(n) = 2 * a(n - 1) - a(n - 2) for n>2. ● a(n) = 2 + 3 * n. ●

▶ [A063247] 1,5,8,11,14,18,20,24,27,30,33,37,39,43,46,49,52,56,58,62,65,68,71,75,77 ⋆ Dimension of the space of weight 2n cuspidal newforms for Gamma _ 0(100). ● a(n) = a(n - 2) + a(n - 3) - a(n - 5) for n>5. ●

▶ [A001954] 1,5,8,11,15,18,22,25,29,32,35,39,42,46,49,52,56,59,63,66,69,73,76,80,83 ⋆ a(n) = floor((n + 1 / 2) * (2 + sqrt(2))); winning positions in the 2 - Wyth off game. ● a(n + 1) - a(n) is either 3 or 4. Note the comment regarding some intervals in the complement (A001953). - _ Ralf Steiner _ , Oct 27 2019 ●

▶ [A079896] 5,8,12,13,17,20,21,24,28,29,32,33,37,40,41,44,45,48,52,53,56,57,60,61,65 ⋆ Discriminants of indefinite binary quadratic forms. ● a(2 * k ^ 2 + 2 * k) = 4 * (k + 1) ^ 2 + 1 for k >= 0. - _ Gheorghe Coserea _ , Nov 07 2016 ● a(2 * k ^ 2 + 4 * k + 1 + (k + 1) * (- 1) ^ k) = (2 * k + 3) * (2 * k + 3 + (- 1) ^ k) for k >= 0. - _ Bruno Berselli _ , Nov 10 2016 ●

▶ [A278040] 1,5,8,12,14,18,21,25,29,32,36,38,42,45,49,52,56,58,62,65,69,73,76,80,82 ⋆ The tribonacci representation of a(n) is obtained by appending 0,1 to the tribonacci representation of n (cf. A278038). ● a(n) - 1 = B1(n), where B1 - numbers are B - numbers from A278039 followed by an A - number from A278040. See a comment and example in A319968. ● a(n) - 1 = B(B(n)) = B(B(n) + 1) - 2, for n > = 0, where B = A278039. ●

▶ [A214858] 5,8,12,15,19,22,26,29,32,36,39,43,46,49,53,56,60,63,67,70,73,77,80,84,87 ⋆ Natural numbers missing from A214857. ● a(n + 1) - a(n) = 3 or 4. ●

▶ [A047383] 1,5,8,12,15,19,22,26,29,33,36,40,43,47,50,54,57,61,64,68,71,75,78,82,85 ⋆ Numbers that are congruent to { 1, 5 } mod 7. ● a(n) = ceiling((7 * n + 2) / 2). ● a(n) = 7 * n - a(n - 1) - 8 (with a(1)=1). - _ Vincenzo Librandi _ , Aug 05 2010 ● a(n) = (1 / 4) * ((- 1) ^ n + 14 * n - 9) with n >= 1. ● a(n) = - 2 + Sum _{ k=1..n } (1 / 2) * (7 + (- 1) ^ k). (End) ● a(1)=1, a(2)=5, a(3)=8; for n>3, a(n) = a(n - 1) + a(n - 2) - a(n - 3). - _ Harvey P. Dale _ , Dec 24 2012 ● a(n) = 4 * n - floor((n - 1) / 2) - 3. ●

▶ [A247060] 1,5,8,12,16,17,21,24,28,32,33,37,40,44,48,49,53,56,60,64,65,69,72,76,80 ⋆ Dynamic Betting Game D(n,4,1). ● a(n) = floor(8 * n / 5) + 2 * floor(4 * n / 5). ● a(n) = a(n - 1) + a(n - 5) - a(n - 6). - _ Colin Barker _ , Sep 11 2014 ●

▶ [A145285] 5,8,12,16,20,25,28,32,37,41,45,49,53,57,61,65,69,73,77,81,85,89,93,97,101 ⋆ a(n) is the number of monomials in the n - th power of polynomial x ^ 4 - x ^ 3 - x ^ 2 - x - 1. ● a(n) = 2 * a(n - 1) - a(n - 2) for n > 10. ● a(n) = 4 * n + 1 for n > 8. - _ Chai Wah Wu _ , Jan 09 2022 ●

▶ [A362243] 5,8,12,18,22,32,36,42,46,60,66,80,84,90,94,108,118,128,138,142,152,162,166,180,200 ⋆ a(n) = number of isomorphism classes of elliptic curves over the finite field of order prime(n). ● a(1) = 5, a(2) = 8, and for n > 2, a(n) = 2 * prime(n) + C, where C is 6, 2, 4, 0 if prime(n) is 1, 5, 7, 11 mod 12 respectively. ●

▶ [A001043] 5,8,12,18,24,30,36,42,52,60,68,78,84,90,100,112,120,128,138,144,152,162,172,186,198 ⋆ Numbers that are the sum of 2 successive primes. ● a(n) = prime(n) + prime(n + 1). ●

▶ [A020749] 5,8,12,18,27,40,59,87,128,188,276,405,594,871,1277,1872,2744,4022,5895,8640,12663,18559,27200,39864,58424 ⋆ Pisot sequence T(5,8), a(n) = floor(a(n - 1) ^ 2 / a(n - 2)). ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) - a(n - 4) (holds at least up to n = 1000 but is not known to hold in general). ●

▶ [A220885] 5,8,12,19,28,40,56,77,105,142,191,256,342,456,607,807,1072,1423,1888,2504,3320,4401,5833,7730,10243 ⋆ a(3)=5, a(4)=8, a(5)=12; thereafter a(n) = a(n - 1) + A000931(n + 7). ● a(n) = a(n - 1) + a(n - 2) - a(n - 4) for n>8. G.f.: x ^ 3 * (x ^ 5 + 2 * x ^ 4 - x ^ 3 - x ^ 2 + 3 * x + 5) / ((x - 1) * (x ^ 3 + x ^ 2 - 1)). [_ Colin Barker _ , Jan 04 2013] ● a(n) = a(n - 2) + a(n - 3) + 9 for n >= 8. - _ Greg Dresden _ , May 18 2020 ●

▶ [A047615] 0,5,8,13,16,21,24,29,32,37,40,45,48,53,56,61,64,69,72,77,80,85,88,93,96 ⋆ Numbers that are congruent to { 0, 5 } mod 8. ● a(n) = 8 * n - a(n - 1) - 11 (with a(1)=0). - _ Vincenzo Librandi _ , Aug 06 2010 ● a(n) = a(n - 1) + a(n - 2) - a(n - 3). ● a(n) = (8n - 7 + (- 1) ^ n) / 2. ●

▶ [A101345] 5,8,13,18,21,26,29,34,39,42,47,52,55,60,63,68,73,76,81,84,89,94,97,102,107 ⋆ a(n) = Knuth's Fibonacci (or circle) product "2 o n". ● a(n) = floor(phi ^ 3 * (n + 1)) - 3 - floor(2 * phi * (n + 1)) + 2 * floor(phi * (n + 1)) where phi = (1 + sqrt(5)) / 2. - _ Benoit Cloitre _ , Jan 11 2014 ●

▶ [A020712] 5,8,13,21,34,55,89,144,233,377,610,987,1597,2584,4181,6765,10946,17711,28657,46368,75025,121393,196418,317811,514229 ⋆ Pisot sequences E(5,8), P(5,8). ● a(n) = Fib(n + 5). a(n) = a(n - 1) + a(n - 2). ● a(n) = (2 ^ (- 1 - n) * ((1 - sqrt(5)) ^ n * (- 11 + 5 * sqrt(5)) + (1 + sqrt(5)) ^ n * (11 + 5 * sqrt(5)))) / sqrt(5). - _ Colin Barker _ , Jun 05 2016 ●

▶ [A364526] 1,1,1,1,5,8,13,21,34,149,274,504,927,1705,3136,5768,20569,39648,76424,147312,283953,547337,1055026,2033628,3919944 ⋆ Number of compositions (ordered partitions) of n into parts not greater than sqrt(n). ● a(n) = [x ^ n] 1 / (1 - Sum _{ 1 <= j <= sqrt(n) } x ^ j). ●

▶ [A182506] 0,1,5,8,13,21,42,63,105,170,291,465,772,1253,2037,3300,5337,8637,13974,22611,36625,59270,95895,155169,251064 ⋆ a(0)=0, a(1)=1, a(n) = ((a(n - 1) + a(n - 2)) XOR n) + n. ● a(0)=0, a(1)=1, a(n) = ((a(n - 1) + a(n - 2)) XOR n) + n, where XOR is the bitwise exclusive - or operator. ●

▶ [A020736] 5,8,13,22,38,66,115,201,352,617,1082,1898,3330,5843,10253,17992,31573,55406,97230,170626,299427,525457,922112,1618193,2839730 ⋆ Pisot sequence L(5,8). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + 2 * a(n - 3) - a(n - 4) (holds at least up to n = 1000 but is not known to hold in general). ●

▶ [A253195] 5,8,14,17,23,26,32,35,41,44,50,53,59,62,68,71,77,80,86,89,95,98,104,107,113 ⋆ Numbers congruent to 5 or 8 mod 9. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3), n >= 4. ● a(n) = a(n - 2) + 9. ● a(n) = 9 * n - a(n - 1) - 5. ● a(n) = 4 * n + 2 * ceiling(n / 2) - floor(n / 2) - 1. ● a(n) = (9 * n - (3 / 2) * (1 + (- 1) ^ n) + 1) / 2. ●

▶ [A357359] 5,8,14,21,28,39,50 ⋆ Maximum number of nodes in an induced path (or chordless path or snake path) in the n X n torus grid graph. ● a(n) <= (2 * n ^ 2 - 1) / 3. ●

▶ [A124011] 5,8,14,23,35,50,68,89,113,140,170,203,239,278,320,365,413,464,518,575,635,698,764,833,905 ⋆ Add three, add six, add nine, ... ● a(n) = 3 * n + a(n - 1) - 3 with a(1)=5. - _ Vincenzo Librandi _ , Nov 28 2009 ●

▶ [A220034] 5,8,15,34,61,95,137,187,246,315,395,487,592,711,845,995,1162,1347,1551,1775,2020,2287,2577,2891,3230 ⋆ Number of 4 X n arrays of the minimum value of corresponding elements and their horizontal or diagonal neighbors in a random, but sorted with lexicographically nondecreasing rows and nonincreasing columns, 0..1 4 X n array. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>9. ●

▶ [A065905] 5,8,16,17,18,25,27,28,30,33,34,35,36,45,46,47,51,56,57,58,63,66,67,68,69 ⋆ Integers i > 1 for which there are two primes p such that i is a solution mod p of x ^ 4 = 2. ● a(n) = n - th integer i such that i ^ 4 - 2 has two prime factors > i. ●

▶ [A365316] 1,5,8,16,21,26,38,45,52,59,75,84,93,102,111,131,142,153,164,175,186,210,223,236,249 ⋆ a(n) = number of visible diamonds (squares rotated by 45 degrees with diagonal 2) in the large square bounded by the parabola y=x ^ 2 and starting from the point (0, 2n). ● a(n) = f(n) + a(n - 1), where f(n) = Sum _{ i=size(n - 1)..size(n) } 2 * i - 1 and size(n) = floor((1 + sqrt(1 + 8 * n) / 2) ●

▶ [A001082] 0,1,5,8,16,21,33,40,56,65,85,96,120,133,161,176,208,225,261,280,320,341,385,408,456 ⋆ Generalized octagonal numbers: k * (3 * k - 2), k=0, +- 1, +- 2, +- 3, ... ● a(n) = n * (3 * n - 4) / 4 if n even, (n - 1) * (3 * n + 1) / 4 if n odd. ● a(n) = n ^ 2 - n - floor(n / 2) ^ 2. ● a(n) = n ^ 2 + n - ceiling(n / 2) ^ 2 with offset 0 and a(0)=0. - _ Gary Detlefs _ , Feb 23 2010 ● a(n) = (6 * n ^ 2 - 6 * n - 1 - (2 * n - 1) * (- 1) ^ n) / 8. - _ Luce ETIENNE _ , Dec 11 2014 ●

▶ [A246638] 5,8,17,41,104,269,701,1832,4793,12545,32840,85973,225077,589256,1542689,4038809,10573736,27682397,72473453,189737960,496740425,1300483313,3404709512,8913645221,23336226149 ⋆ Sequence a(n) = 2 + 3 * A001519(n + 1) appearing in a certain four circle touching problem together with A246639. ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) + a(n - 3), n >=1, a(- 2) = 8, a(- 1) = 5, a(0) = 5. ● a(n) = (2 ^ (- 1 - n) * (5 * 2 ^ (2 + n) - 3 * (3 - sqrt(5)) ^ n * (- 5 + sqrt(5)) + 3 * (3 + sqrt(5)) ^ n * (5 + sqrt(5)))) / 5. - _ Colin Barker _ , Nov 02 2016 ●

▶ [A155086] 5,8,18,21,31,34,44,47,57,60,70,73,83,86,96,99,109,112,122,125,135,138,148,151,161 ⋆ Numbers k such that k ^ 2 == - 1 (mod 13). ● a(n) = a(n - 1) + a(n - 2) - a(n - 3). ● a(n) = 13 * (n - 1 / 2) / 2 - 7 * (- 1) ^ n / 4. ● a(n) = a(n - 2) + 13. - _ M. F. Hasler _ , Jun 16 2010 ●

▶ [A245534] 1,5,8,18,23,39,46,68,77,105,116,150,163,203,218,264,281,333,352,410,431,495,518,588,613 ⋆ a(n) = n ^ 2 + floor(n / 2) * (- 1) ^ n. ● a(n) = (4 * n ^ 2 + 1 + (2 * n - 1) * (- 1) ^ n) / 4. ● a(n) = n ^ 2 - Sum _{ k=1..n - 1 } (- 1) ^ k * k for n>1. Example: for n=5, a(5) = 5 ^ 2 - (4 - 3 + 2 - 1) = 23. - _ Bruno Berselli _ , May 23 2018 ●

▶ [A302393] 0,5,8,18,24,41,50,72,84,113,128,162,180,221,242,288,312,365,392,450,480,545,578,648,684 ⋆ Number of even parts in the partitions of 3n into 3 parts. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) + a(n - 4) - a(n - 5) - a(n - 6) + a(n - 7) for n>7. ●

▶ [A084568] 1,5,8,20,32,80,128,320,512,1280,2048,5120,8192,20480,32768,81920,131072,327680,524288,1310720,2097152,5242880,8388608,20971520,33554432 ⋆ a(0)=1, a(1)=5, a(n + 2)=4a(n), n>0. ● a(n)=(9 * 2 ^ n - (- 2) ^ n) / 4 - 0 ^ n. ●

▶ [A198635] 5,8,20,56,164,488,1460,4376,13124,39368,118100,354296,1062884,3188648,9565940,28697816,86093444,258280328,774840980,2324522936,6973568804,20920706408,62762119220,188286357656,564859072964 ⋆ Total number of round trips, each of length 2 * n on the graph P _ 5 (o - o - o - o - o). ● a(n) = w(5,2 * n), n >= 0, with w(5,l) the total number of closed walks on the graph P _ 5 (the simple path with 5 points (vertices) and 4 lines (or edges)). ● a(n) = 3 * a(n - 1) - 4, n > 1. - _ Vincenzo Librandi _ , Jan 02 2012 ● a(n) = 2 * 3 ^ n + 2 for n > 0. - _ Andrew Howroyd _ , Mar 18 2017 ●

▶ [A178675] 5,8,20,68,260,1028,4100,16388,65540,262148,1048580,4194308,16777220,67108868,268435460,1073741828,4294967300,17179869188,68719476740,274877906948,1099511627780,4398046511108,17592186044420,70368744177668,281474976710660 ⋆ a(n) = 4 ^ n + 4. ● a(n) = 4 * (a(n - 1) - 3) with n > 0, a(0)=5. ● a(n) = 5 * a(n - 1) - 4 * a(n - 2). - _ Vincenzo Librandi _ , Jun 18 2013 ●

▶ [A277369] 5,8,21,50,121,292,705,1702,4109,9920,23949,57818,139585,336988,813561,1964110,4741781,11447672,27637125,66721922,161080969,388883860,938848689,2266581238,5472011165 ⋆ a(0) = 5, a(1) = 8; for n>1, a(n) = 2 * a(n - 1) + a(n - 2). ● a(n) = (((1 - sqrt(2)) ^ n * (- 3 + 5 * sqrt(2)) + (1 + sqrt(2)) ^ n * (3 + 5 * sqrt(2)))) / (2 * sqrt(2)). ●

▶ [A192651] 0,0,1,1,5,8,23,47,113,252,578,1316,2994,6832,15545,35445,80711,183928,418973,954571,2174681,4954436,11287336,25715016,58584744 ⋆ Coefficient of x ^ 2 in the reduction of the n - th Fibonacci polynomial by x ^ 3 - >x ^ 2 + x + 1. See Comments. ● a(n) = a(n - 1) + 4 * a(n - 2) - a(n - 3) - 4a(n - 4) + a(n - 5) + a(n - 6). ●

▶ [A105963] 1,5,8,23,47,116,257,605,1376,3191,7319,16892,38849,89525,206072,474647,1092863,2516804,5795393,13345805,30731984,70769399,162965351,375273548,864169601 ⋆ Expansion of (1 + 4 * x) / (1 - x - 3 * x ^ 2). ● a(n) = (2 ^ (- 1 - n) * ((1 - sqrt(13)) ^ n * (- 9 + sqrt(13)) + (1 + sqrt(13)) ^ n * (9 + sqrt(13)))) / sqrt(13). ● a(n) = a(n - 1) + 3 * a(n - 2) for n > 1. (End) ● a(n) = 3 ^ ((n - 1) / 2) * (sqrt(3) * Fibonacci(n + 1, 1 / sqrt(3)) + 4 * Fibonacci(n, 1 / sqrt(3))). - _ G. C. Greubel _ , Jan 15 2020 ●

▶ [A140113] 1,5,8,24,29,65,72,136,145,245,256,400,413,609,624,880,897,1221,1240,1640,1661,2145,2168,2744,2769 ⋆ a(1)=1, a(n)=a(n - 1) + n if n odd, a(n)=a(n - 1) + n ^ 2 if n is even. ● a(n) = a(n - 1) + ((1 - (- 1) ^ n) / 2) + ((1 + (- 1) ^ n) / 2) * n ^ 4, with a(1)=1. ● a(n) = (1 / 8) - (1 / 8) * (- 1) ^ n + (1 / 6) * n ^ 3 + (1 / 4) * (- 1) ^ n * n ^ 2 + (1 / 2) * n ^ 2 + (1 / 3) * n. (End) ●

▶ [A069959] 1,5,8,25,61,164,425,1117,2920,7649,20021,52420,137233,359285,940616,2462569,6447085,16878692,44188985,115688269,302875816,792939185,2075941733,5434886020,14228716321 ⋆ Define C(n) by the recursion C(0) = 2 * i where i ^ 2 = - 1, C(n + 1) = 1 / (1 + C(n)), then a(n) = 2 * (- 1) ^ n / Im(C(n)) where Im(z) denotes the imaginary part of the complex number z. ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - a(n - 3). ● a(n) = (2 ^ (- 1 - n) * (- 3 * (- 1) ^ n * 2 ^ (2 + n) - (3 - sqrt(5)) ^ n * (- 11 + sqrt(5)) + (3 + sqrt(5)) ^ n * (11 + sqrt(5)))) / 5. - _ Colin Barker _ , Sep 28 2016 ●

▶ [A192920] 0,5,8,26,63,170,440,1157,3024,7922,20735,54290,142128,372101,974168,2550410,6677055,17480762,45765224,119814917,313679520,821223650,2149991423,5628750626,14736260448 ⋆ Coefficient of x in the reduction by (x ^ 2 - > x

+ 1) of the polynomial F(n + 4) * x ^ n, where F=A000045 (Fibonacci sequence). • a(n) = 2 * a(n - 1) + 2 * a(n - 2) - a(n - 3). • a(n) = Fibonacci(n + 2) ^ 2 - (- 1) ^ n. - _ G. C. Greubel _ , Feb 06 2019 •

▶ [A162562] 5,8,26,68,188,512,1400,3824,10448,28544,77984,213056,582080,1590272,4344704,11869952,32429312,88598528,242055680,661308416,1806728192,4936073216,13485602816,36843352064,100657909760 ⋆ a(n) = ((5 + sqrt(3)) * (1 + sqrt(3)) ^ n + (5 - sqrt(3)) * (1 - sqrt(3)) ^ n) / 2. • a(n) = 2 * a(n - 1) + 2 * a(n - 2) for n > 1; a(0) = 5, a(1) = 8. • a(n) = 2 * (a(n - 1) + a(n - 2)), with a(0)=5 and a(1)=8. - _ Paolo P. Lava _ , Jul 15 2009 •

▶ [A228472] 5,8,30,49,185,302,1140,1861,7025,11468,43290,70669,266765,435482,1643880,2683561,10130045,16536848,62424150,101904649,384674945,627964742,2370473820,3869693101,14607517865 ⋆ a(n) = 6 * a(n - 2) + a(n - 4), where a(0) = 5, a(1) = 8, a(2) = 30, a(3) = 49. • a(n) = (3 + sqrt(10)) ^ (1 / 4 * ((- 1) ^ n - 1) + 1 / 2 * n) * (13 / 4 + sqrt(10) * (1 - 1 / 4 * (- 1) ^ n) - 3 / 4 * (- 1) ^ n) + (3 - sqrt(10)) ^ (1 / 4 * ((- 1) ^ n - 1) + 1 / 2 * n) * (13 / 4 - sqrt(10) * (1 - 1 / 4 * (- 1) ^ n) - 3 / 4 * (- 1) ^ n). - _ Paolo P. Lava _ , Sep 12 2013 •

▶ [A275571] 1,5,8,45,121,320,841,2205,5776,15125,39601,103680,271441,710645,1860496,4870845,12752041,33385280,87403801,228826125,599074576,1568397605,4106118241,10749957120,28143753121 ⋆ Incorrect duplicate of A004146. • a(n) = Sum _{ i=1..n - 1 } (Fibonacci(2n - 2i) * i ^ 2) + n ^ 2. •

▶ [A117474] 5,8,48,65,297,396,1748,2325,10205,13568,59496,79097,346785,461028,2021228,2687085,11780597,15661496,68662368,91281905,400193625,532029948,2332499396,3100897797,13594802765 ⋆ The values of 'a' in a ^ 2 + b ^ 2 = c ^ 2 where b - a = 7 and gcd(a,b,c)=1. • a(n) = 6 * a(n - 2) - a(n - 4) + 14; a(1)=5, a(2)=8, a(3)=48, a(4)=65. •

▶ [A063213] 1,5,9,11,15,19,21,25,29,31,35,39,41,45,49,51,55,59,61,65,69,71,75,79,81 ⋆ Dimension of the space of weight 2n cuspidal newforms for Gamma _ 0(45). • a(n) = 4 * n - 2 * floor(n / 3 - 1 / 3) - 3. This formula follows from Mathar's generating function. - _ Bruno Berselli _ , Feb 16 2016 •

▶ [A080455] 1,5,9,13,13,17,21,25,25,29,33,37,37,41,45,49,49,53,57,61,61,65,69,73,73 ⋆ a(1)=1; for n>1, a(n) = a(n - 1) if n is already in the sequence, a(n) = a(n - 1) + 4 otherwise. • a(n) = a(n - 1) + a(n - 4) - a(n - 5). •

▶ [A304868] 1,5,9,13,14,17,21,25,26,29,30,33,37,41,45,46,49,53,57,58,61,62,65,69,73 ⋆ Numbers x satisfying x == 1 (mod 4) or x == 14, 26, 30 (mod 32). • a(n) = a(n - 1) + a(n - 11) - a(n - 12) for n>12. •

▶ [A141135] 5,9,13,17,21,24,28,32,36,39,43,47,50,54,58,61,65,69,72,76,80,83,87,90,94 ⋆ Minimal number of unit edges required to construct n regular pentagons when allowing edge - sharing. • a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>10. •

▶ [A016813] 1,5,9,13,17,21,25,29,33,37,41,45,49,53,57,61,65,69,73,77,81,85,89,93,97 ⋆ a(n) = 4 * n + 1. • a(n) = 2 * a(n - 1) - a(n - 2); a(0)=1, a(1)=5. a(n) = 4 + a(n - 1). - _ Philippe Deléham _ , Nov 03 2008 • a(n) = 8 * n - 2 - a(n - 1) for n > 0, a(0) = 1. - _ Vincenzo Librandi _ , Nov 20 2010 •

▶ [A004766] 5,9,13,17,21,25,29,33,37,41,45,49,53,57,61,65,69,73,77,81,85,89,93,97,101 ⋆ Numbers whose binary expansion ends 01. • a(n) = 8 * n - a(n - 1) - 2 (with a(1)=5). - _ Vincenzo Librandi _ , Nov 18 2010 • a(n) = 2 * a(n - 1) - a(n - 2). •

▶ [A247128] 5,9,13,17,22,27,31,35,39,44,49,53,57,61,66,71,75,79,83,88,93,97,101,105,110 ⋆ Positive numbers that are congruent to { 0,5,9,13,17 } mod 22. • a(n) = a(n - 1) + a(n - 5) - a(n - 6). - _ Colin Barker _ , Nov 20 2014 •

▶ [A079497] 1,5,9,13,17,89,161,233,305,1597,2889,4181,5473,28657,51841,75025,98209,514229,930249,1346269,1762289,9227465,16692641,24157817,31622993 ⋆ a(1)=1; for n > 2, a(n) is the smallest integer > a(n - 1) such that frac(sqrt(5) * a(n)) < frac(sqrt(5) * a(n - 1)). • a(1)=1, a(2)=5, a(3)=9, a(4)=13; for n > 4, if n == 1 (mod 4) then a(n) = 6a(n) - a(n - 1); otherwise, a(n) = 2a(n) - a(n - 1). •

▶ [A081835] 1,5,9,13,18,22,26,30,35,39,43,47,52,56,60,64,68,73,77,81,85,90,94,98,102 ⋆ a(1)=1, a(n) = a(n - 1) + 5 if n is already in the sequence, a(n) = a(n - 1) + 4 otherwise. • a(n) = floor(rn - (4r - 1) / (r + 1)) where r=2 + sqrt(5). •

▶ [A301291] 1,5,9,13,18,23,27,31,36,41,45,49,54,59,63,67,72,77,81,85,90,95,99,103,108 ⋆ Expansion of (x ^ 4 + 3 * x ^ 3 + x ^ 2 + 3 * x + 1) / ((x ^ 2 + 1) * (x - 1) ^ 2). • a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4) for n > 4. - _ Colin Barker _ , Mar 23 2018 •

▶ [A314742] 1,5,9,13,18,24,30,36,42,47,51,55,60,65,69,73,78,84,90,96,102,107,111,115,120 ⋆ Coordination sequence Gal.6.262.3 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. • a(n) = 3 * a(n - 1) - 4 * a(n - 2) + 3 * a(n - 3) - a(n - 4) - a(n - 6) + 3 * a(n - 7) - 4 * a(n - 8) + 3 * a(n - 9) - a(n - 10) for n > 10. •

▶ [A087461] 5,9,13,20,25,30,36,42,50,55,63,71,75,80,92,99,106,115,122,127,136,141,156,163,170 ⋆ Arithmetic mean of n - th and 2n - th primes. • a(n) = (n - th prime + 2n - th prime) / 2 •

▶ [A257171] 1,5,9,13,27,36,62,78,120,145,207,243,329,378,492,556,702,783,965,1065,1287,1408,1674,1818,2132 ⋆ Sum of numbers on n - th segment of Ulam's spiral. • a(0) = 1; a(1) = 5; a(2) = 9; for n >= 3, a(n) = a(n - 1) + ((n - 1) / 2 + 1) ^ 2, if n = even; otherwise a(n) = a(n - 1) + 2 * ((n - 1) ^ 2 / 4 + (n - 1) + 7 / 4). • a(n) = (n ^ 3 + 5 * n ^ 2 + 14 * n + 16) / 8 for n even and n>1. • a(n) = (n ^ 3 + 4 * n ^ 2 + 11 * n + 8) / 8 for n odd and n>1. •

▶ [A089977] 1,1,1,5,9,13,33,69,121,253,529,1013,2025,4141,8193,16293,32857,65629,130801,262229,524745,1047949,2096865,4195845,8387641 ⋆ Expansion of 1 / ((1 - 2 * x) * (1 + x + 2 * x ^ 2)). • a(n) = Sum _{ k=0..floor(n / 2) } C(n - 2 * k, k) * 4 ^ k. • a(n) = 2 ^ (n - 1) + 2 ^ (n / 2) * (cos((n + 2) * arctan(sqrt(7) / 7) + Pi * n / 2) / 4 + 5 * sqrt(7) * sin((n + 2) * arctan(sqrt(7) / 7) + Pi * n / 2) / 28). • a(n) = Sum _{ k=0..n } C(k, floor((n - k) / 2))2 ^ (n - k) * (1 + (- 1) ^ (n - k)) / 2. - _ Paul Barry _ , Jan 12 2006 • a(n) = a(n - 1) + 4 * a(n - 3) for n>=3, a(0)=1, a(1)=1, a(2)=1. - _ Michal Kaczmarczyk _ , Apr 24 2006 • a(n) = hypergeom([1 / 3 - n / 3,2 / 3 - n / 3, - n / 3],[1 / 2 - n / 2, - n / 2], - 27). - _ Peter Luschny _ , Feb 07 2015 •

▶ [A314829] 1,5,9,14,18,22,27,31,36,41,45,50,54,58,63,67,72,77,81,86,90,94,99,103,108 ⋆ Coordination sequence Gal.4.41.3 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. • a(n) = 2 * a(n - 1) - a(n - 2) - a(n - 4) + 2 * a(n - 5) - a(n - 6) for n > 6. •

▶ [A130877] 0,5,9,14,18,23,27,32,36,41,45,50,54,59,63,68,72,77,81,86,90,95,99,104,108 ⋆ Numbers that are congruent to { 0, 5 } mod 9. • a(n) = a(n - 2) + 9 for n >= 3. • a(n) = 9 / 2 * (n + 1) - 4 + Sum { j=0..n } (- 1) ^ j / 2. • a(n) = 5n - 5 - floor((n - 1) / 2). - _ Wesley Ivan Hurt _ , Oct 25 2013 •

▶ [A140490] 1,5,9,14,19,23,27,32,38,43,47,51,56,62,67,71,75,81,86,91,95,99,104,110,116 ⋆ Trajectory of 1 under repeated application of the map: n - > n + third - smallest number that does not divide n. • a(n + 12) = a(n) + 60 for n >= 13. - _ Robert Israel _ , Jan 17 2023 •

▶ [A301298] 1,5,9,14,19,23,28,33,37,42,47,51,56,61,65,70,75,79,84,89,93,98,103,107,112 ⋆ Expansion of (1 + 4 * x + 4 * x ^ 2 + 4 * x ^ 3 + x ^ 4) / ((1 - x) * (1 - x ^ 3)). • a(n) = 5 * n - floor((n + 1) / 3) for n>0, a(0)=1. - _ Bruno Berselli _ , Mar 26 2018 •

▶ [A226724] 5,9,14,19,24,28,34,38,43,48,53,57,63,67,71,77,81,86,91,96,100,106,110,115,120 ⋆ Positions of the numbers 5 ^ n, for n >= 1, in the joint ranking of all the numbers 2 ^ h, 3 ^ k, 5 ^ k, for h >= 0, k >= 1. • a(n) = 1 + n + floor(n * log _ 2(5)) + floor(n * log _ 3(5). •

▶ [A314945] 1,5,9,14,20,24,30,35,39,44,49,53,58,64,68,74,79,83,88,93,97,102,108,112,118 ⋆ Coordination sequence Gal.5.84.2 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. • a(n) = a(n - 1) + a(n - 9) - a(n - 10) for n > 10. •

▶ [A314955] 1,5,9,14,20,25,29,34,40,45,49,54,59,63,68,74,79,83,88,94,99,103,108,113,117 ⋆ Coordination sequence Gal.6.322.3 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. • a(n) = a(n - 1) + a(n - 11) - a(n - 12) for n > 12. •

▶ [A314963] 1,5,9,14,20,25,31,36,42,47,51,56,61,65,70,76,81,87,92,98,103,107,112,117,121 ⋆ Coordination sequence Gal.6.199.2 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. • a(n) = a(n - 1) + a(n - 11) - a(n - 12) for n > 12. •

▶ [A169872] 5,9,14,25,44,81,150,289,558,1089,2138,4225,8374,16641,33130,66049,131796,263169,525736,1050625,2100048,4198401,8394400,16785409,33566018 ⋆ Maximum number of rational points on a smooth absolutely irreducible projective curve of genus 1 over the field F _ 2 ^ n. • a(n) = 2 ^ n + 1 + floor(2 ^ (n / 2 + 1)) if floor(2 ^ (n / 2 + 1)) is odd, n is even, or n = 1. Otherwise a(n) = 2 ^ n + floor(2 ^ (n / 2 + 1)) [Deuring - Waterhouse]. - _ Robin Visser _ , Aug 17 2023 •

▶ [A314994] 1,5,9,15,16,24,27,34,37,44,44,52,55,62,65,72,72,80,83,90,93,100,100,108,111 ⋆ Coordination sequence Gal.6.547.4 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. • a(n) = a(n - 1) + a(n - 6) - a(n - 7) for n > 10. •

▶ [A063093] 0,5,9,15,19,25,29,35,39,45,49,55,59,65,69,75,79,85,89,95,99,105,109,115,119 ⋆ Dimension of the space of weight 2n cusp forms for Gamma _ 0(25). • a(n) = 10 * n - a(n - 1) - 16 for n>2, with a(1)=0, a(2)=5. - _ Vincenzo Librandi _ , Aug 07 2010 • a(n) = ((- 1) ^ n + 10 * n - 11) / 2 for n>1. • a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n>3. •

▶ [A294020] 0,1,5,9,15,23,27,41,65,81,103,111,115,129,153,169,191,199,203,217,241,257,279,287,291 ⋆ Total number of elements after n - th stage of a hybrid cellular automaton formed by D - toothpicks and toothpicks (see Comments lines for precise definition). • a(n) = a(n - 1) + a(n - 6) - a(n - 7) for n>10. •

▶ [A345953] 1,1,1,5,9,15,37,75,145,311,641,1295,2689,5543,11345,23383,48145,98903,203521,418791,861169,1771543,3644513,7496231,15419985 ⋆ Number of ways to tile a 2 X n strip with squares and P - shaped pentominos. • a(n) = a(n - 1) + 4 * a(n - 3) + 2 * a(n - 5). •

▶ [A353551] 0,1,5,9,16,20,36,40,50,57,73,77,105,109,125,141,154,158,186,190,218,234,250,254,294 ⋆ a(n) = Sum _{ k=1..n } tau(k ^ 3), where tau is the number of divisors function A000005. • a(n) = Sum _{ k=1..n } tau(k ^ 3). •

▶ [A188555] 5,9,16,28,48,80,129,201,303,443,630,874,1186,1578,2063,2655,3369,4221,5228,6408,7780,9364,11181,13253,15603 ⋆ Number of 4 X n binary arrays without the pattern 0 1 diagonally, vertically, antidiagonally or horizontally. • a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. •

▶ [A020958] 5,9,16,28,48,81,134,221,361,589,957,1554,2519,4082,6610,10702,17322,28035,45368,73415,118795,192223,311031,503268,814313 ⋆ a(n) = Sum _{ k >= 1 } floor(3 * tau ^ (n - k)). • a(n) = Sum _{ k= - 2..(n - 1) } floor(3 * tau ^ k). - _ Giovanni Resta _ , Jul 08 2019 •

▶ [A020750] 5,9,16,28,49,85,147,254,438,755,1301,2241,3860,6648,11449,19717,33955,58474,100698,173411,298629,514265,885608,1525092,2626337 ⋆ Pisot sequence T(5,9), a(n) = floor(a(n - 1) ^ 2 / a(n - 2)). • a(n) = 2 * a(n - 1) - 2 * a(n - 4) + a(n - 5) (holds at least up to n = 40000 but is not known to hold in general). •

▶ [A020713] 5,9,16,28,49,86,151,265,465,816,1432,2513,4410,7739,13581,23833,41824,73396,128801,226030,396655,696081,1221537,2143648,3761840 ⋆ Pisot sequences E(5,9), P(5,9). • a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) (holds at least up to n = 1000 but is not known to hold in general). •

▶ [A090990] 5,9,16,29,52,94,169,305,549,990,1783,3214,5790,10435,18801,33881,61048,110009,198224,357194,643633,1159797,2089869,3765830,6785771 ⋆ Number of meaningful differential operations of the n - th order on the space R ^ 5. • a(n + 3) = a(n + 2) + 2 * a(n + 1) - a(n). •

▶ [A225605] 5,9,16,29,53,97,178,327,601,1105,2032,3737,6873,12641,23250,42763,78653,144665,266080,489397,900141,1655617,3045154,5600911,10301681 ⋆ (1) = least k such that 1 / 3 < H(k) - 1 / 3; a(2) = least k such that H(a(1)) - H(3) < H(k) - H(a(1)), and for n > 2, a(n) = least k such that H(a(n - 1)) - H(a(n - 2) > H(k) - H(a(n - 1)), where H = harmonic number. • a(n) = 2 * a(n - 1) - a(n - 4) (conjectured). •

▶ [A276194] 5,9,17,23,27,29,33,39,43,45,51,53,57,65,71,75,77,83,85,89,95,99,101,105,111 ⋆ Odd numbers whose binary representation contains an even number of 1's and at least one 0. • a(2 ^ n - floor(n / 2)) = 4 * 2 ^ n + 1, for all n >= 0. - _ Gheorghe Coserea _ , Oct 24 2016 •

▶ [A210978] 0,1,5,9,17,24,36,46,62,75,95,111,135,154,182,204,236,261,297,325,365,396,440,474,522 ⋆ A186029 and positive terms of A001106 interleaved. • a(n)

= (3 * (- 1 + (- 1) ^ n) + 2 * (5 + (- 1) ^ n) * n + 14 * n ^ 2) / 16. a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). G.f.: - x * (2 * x ^ 2 + 4 * x + 1) / ((x - 1) ^ 3 * (x + 1) ^ 2). - _ Colin Barker _ , Sep 15 2013 ●

▶ [A211434] 1,1,5,9,17,25,33,45,57,73,89,105,125,145,169,193,217,245,273,305,337,369,405,441,481 ⋆ Number of ordered triples (w,x,y) with all terms in {- n,...,0,...,n } and w + 2x + 5y=0. ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 5) - 2 * a(n - 6) + a(n - 7) for n>6. ● a(n) = (4 * n * (n + 1) + c(n)) / 5, where c(n) is 5 if n is 0 or 4 (mod 5), - 3 if n is 1 or 3 (mod 5), and 1 if n is 2 (mod 5). - _ Pontus von Brömssen _ , Jan 17 2020 ●

▶ [A182388] 1,1,5,9,17,25,37,41,41,41,45,49,73,81,109,113,113,113,117,121,129,169,213,217,217 ⋆ a(0)=1, a(n) = (a(n - 1) XOR n) + n. ● a(0)=1, a(n)=(a(n - 1) XOR n) + n, where XOR is the bitwise exclusive - OR operator. ●

▶ [A080335] 1,5,9,17,25,37,49,65,81,101,121,145,169,197,225,257,289,325,361,401,441,485,529,577,625 ⋆ Diagonal in square spiral or maze arrangement of natural numbers. ● a(n) = (3 + 4 * n + 2 * n ^ 2 - (- 1) ^ n) / 2. ● a(0)=1, a(1)=5, a(2)=9, a(3)=17, a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4). - _ Harvey P. Dale _ , Jan 29 2012 ● a(n) = (n + 1) ^ 2 when n is even; a(n) = (n + 1) ^ 2 + 1 when n is odd. ●

▶ [A294774] 5,9,17,29,45,65,89,117,149,185,225,269,317,369,425,485,549,617,689,765,845,929,1017,1109,1205 ⋆ a(n) = 2 * n ^ 2 + 2 * n + 5. ● a(n) = a(- 1 - n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ● a(n) = Integral _{ x=0..2n + 4 } |3 - x| dx. - _ Pedro Caceres _ , Dec 29 2020 ●

▶ [A192746] 1,5,9,17,29,49,81,133,217,353,573,929,1505,2437,3945,6385,10333,16721,27057,43781,70841,114625,185469,300097,485569 ⋆ Constant term of the reduction by x ^ 2 - > x + 1 of the polynomial p(n,x) defined below in Comments. ● a(n) = 4 * Fibonacci(n + 2) - 3. - _ Gerry Martens _ , Jul 04 2015 ●

▶ [A081295] 1,1,5,9,17,29,65,137,261,497,1025,2085,4097,8129,16405,32905,65537,130845,262145,524793,1048645,2096129,4194305,8390821,16777233 ⋆ a(n) = (- 1) ^ (n + 1) * coefficient of x ^ n in Sum _{ k>=1 } x ^ k / (1 + 2 * x ^ k). ● a(p) = 2 ^ (p - 1) - 1 p prime. ● a(n) = (- 1) ^ (n + 1) * Sum _{ d|n } (- 2) ^ (d - 1). - _ Robert Israel _ , Jun 04 2018 ●

▶ [A020737] 5,9,17,33,65,129,257,513,1025,2049,4097,8193,16385,32769,65537,131073,262145,524289,1048577,2097153,4194305,8388609,16777217,33554433,67108865 ⋆ Pisot sequence L(5,9). ● a(n) = 2 ^ (n + 2) + 1. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2). ●

▶ [A061502] 1,5,9,18,22,38,42,58,67,83,87,123,127,143,159,184,188,224,228,264,280,296,300,364,373 ⋆ a(n) = Sum _{ k<=n } tau(k) ^ 2, where tau = number of divisors function A000005. ● a(n) = Sum _{ k=1..n } tau(k ^ 2) * floor(n / k). ●

▶ [A110349] 1,5,9,18,25,39,49,68,81,105,121,150,169,203,225,264,289,333,361,410,441,495,529,588,625 ⋆ a(n) = n + (n + 1) + (n - 1) + (n + 2) + (n - 2) ... n terms. ● a(2n - 1) = (2n - 1) ^ 2; a(2n)=4n ^ 2 + n. - _ Emeric Deutsch _ , Aug 03 2005 ● a(n) = n(4n + (- 1) ^ n + 1) / 4. - _ Bruno Berselli _ , Mar 19 2012 ●

▶ [A113805] 5,9,19,23,33,37,47,51,61,65,75,79,89,93,103,107,117,121,131,135,145,149,159,163,173 ⋆ Numbers that are congruent to { 5, 9 } mod 14. ● a(n) = 14 * n - a(n - 1) - 14 (with a(1) = 5). - _ Vincenzo Librandi _ , Nov 13 2010 ● a(n) = 7 * n - (7 + 3 * (- 1) ^ n) / 2. ●

▶ [A061202] 1,5,9,19,23,39,43,63,73,89,93,133,137,153,169,204,208,248,252,292,308,324,328,408,418 ⋆ (tau<=) _ 4(n). ● a(n) = Sum _{ k = 1..n } tau _{ 3 } (k) * floor (n / k), where tau _{ 3 } is A007425. - _ Enrique Pérez Herrero _ , Jan 23 2013 ● a(n) = Sum _{ i=1..n } Sum _{ j=1..n } Sum _{ k=1..n } floor(n / (i * j * k)). - _ Ridouane Oudra _ , Oct 31 2022 ●

▶ [A060161] 1,5,9,19,37,73,143,281,553,1091,2157,4273,8479,16849,33521,66755,133045,265337,529455,1056937,2110681,4216195,8424029,16834529,33647167 ⋆ a(n) = 2 ^ n - 1 + 2 * Fibonacci(n - 1). ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) - a(n - 3) + 2 * a(n - 4). ●

▶ [A228338] 5,9,19,43,102,250,628,1608,4181,11009,29295,78655,212815,579675,1588245,4374285,12103407,33628827,93786969,262450881,736710360,2073834420,5853011850,16558618510,46949351275 ⋆ Third diagonal of Catalan difference table (A059346). ● a(n) = 5 * (- 1) ^ n * hypergeom([7 / 2, - n], [5], 4). - _ Peter Luschny _ , May 25 2021 ●

▶ [A253951] 0,1,5,9,20,23,42,52,69,77,113,119,165,177,190,214,279,291,366,379,399,422,517,533,599 ⋆ A partial double sum of integers: a(n) = Sum _{ x=1..n } Sum _{ y=1..n } T(x,y), where T is the matrix product: T = A051731 * A127093 * Transpose(A054524) and T(n,1)=0 (* stands for matrix multiplication). ● a(n) = Sum _{ x=1..n } Sum _{ y=1..n } T(x,y), where T is the matrix product: T=A051731 * A127093 * Transpose(A054524) and T(n,1)=0. (* stands for matrix multiplication) ●

▶ [A092387] 5,9,20,49,125,324,845,2209,5780,15129,39605,103684,271445,710649,1860500,4870849,12752045,33385284,87403805,228826129,599074580,1568397609,4106118245,10749957124,28143753125 ⋆ a(n) = Fibonacci(2 * n + 1) + Fibonacci(2 * n - 1) + 2. ● a(1)=5, a(2)=9, a(3)=20, a(n) = 4 * a(n - 1) - 4 * a(n - 2) + a(n - 3). ● a(n) = 3 + floor((1 + phi) ^ n) where phi = (1 + sqrt(5)) / 2. ●

▶ [A319384] 1,5,9,21,29,49,61,89,105,141,161,205,229,281,309,369,401,469,505,581,621,705,749,841,889 ⋆ a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5), a(0)=1, a(1)=5, a(2)=9, a(3)=21, a(4)=29. ● a(- n) = a(n). ● a(n) = (6 * n ^ 2 + 6 * n + 5 - (2 * n + 1) * (- 1) ^ n) / 4. - _ Wesley Ivan Hurt _ , Oct 04 2018 ●

▶ [A097074] 1,1,5,9,21,41,85,169,341,681,1365,2729,5461,10921,21845,43689,87381,174761,349525,699049,1398101,2796201,5592405,11184809,22369621 ⋆ Expansion of (1 - x + 2 * x ^ 2) / ((1 - x) * (1 - x - 2 * x ^ 2)). ● a(n) = (2 ^ (n + 2) + 2 * (- 1) ^ n - 3) / 3. ● a(n) = a(n - 1) + 2 * a(n - 2) + 2, a(0)=1, a(1)=1. ● a(n) = 2 * a(n - 1) + a(n - 2) - 2 * a(n - 3), a(0)=1=a(1), a(2)=5. Observed by G. Detlefs. See the W. Lang link. (End) ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) + 4 * (- 1) ^ n. - _ Gary Detlefs _ , Dec 19 2010 ●

▶ [A299266] 1,5,9,22,37,57,82,117,145,178,229,281,322,377,445,514,577,645,730,825,901,982,1093,1205,1294 ⋆ Coordination sequence for "cab" 3D uniform tiling formed from octahedra and truncated cubes. ● a(n) = a(n - 1) - a(n - 2) + 2 * a(n - 3) - 2 * a(n - 7) + a(n - 8) - a(n - 9) + a(n - 10) for n>12. - _ Colin Barker _ , Feb 15 2018 ●

▶ [A163607] 5,9,23,55,133,321,775,1871,4517,10905,26327,63559,153445,370449,894343,2159135,5212613,12584361,30381335,73347031,177075397,427497825,1032071047,2491639919,6015350885 ⋆ a(n) = ((5 + 2 * sqrt(2)) * (1 + sqrt(2)) ^ n + (5 - 2 * sqrt(2)) * (1 - sqrt(2)) ^ n) / 2. ● a(n) = 2 * a(n - 1) + a(n - 2) for n > 1; a(0) = 5, a(1) = 9. ●

▶ [A132354] 0,5,9,24,32,57,69,104,120,165,185,240,264,329,357,432,464,549,585,680,720,825,869,984,1032 ⋆ Integers m such that 7 * m + 1 is a square. ● a(2 * k) = k * (7 * k + 2), a(2 * k + 1) = 7 * k ^ 2 + 12 * k + 5. ● a(n) = n ^ 2 + n + 3 * ceiling(n / 2) ^ 2. - _ Gary Detlefs _ , Feb 23 2010 ●

▶ [A116520] 0,1,5,9,25,29,45,61,125,129,145,161,225,241,305,369,625,629,645,661,725,741,805,869,1125 ⋆ a(0) = 0, a(1) = 1; a(n) = max { 4 * a(k) + a(n - k) | 1 <= k <= n / 2 } , for n > 1. ● a(0) = 1, a(1) = 1; thereafter a(2n) = 5a(n) and a(2n + 1) = 4a(n) + a(n + 1). ● a(n) = Sum _{ k=0..n - 1 } 4 ^ wt(k), where wt = A000120. - _ Mike Warburton _ , Mar 14 2019 ●

▶ [A234277] 0,0,0,0,0,0,0,1,5,9,25,35,75,95,175,210,350,406,630,714,1050,1170,1650,1815,2475 ⋆ a(n) = binomial(floor(n / 2),4) + (ceiling(n / 2) - 3) * binomial(floor(n / 2),3). ● a(n) = (2 * n - 1 + (- 1) ^ n) * (2 * n - 5 + (- 1) ^ n) * (2 * n - 9 + (- 1) ^ n) * (10 * n - 57 - 3 * (- 1) ^ n) / 6144. - _ Luce ETIENNE _ , Nov 18 2017 ●

▶ [A259665] 0,1,5,9,25,41,57,121,185,249,313,569,825,1081,1337,1593,2617,3641,4665,5689,6713,7737,11833,15929,20025 ⋆ a(0)=0, a(1)=1, a(n) = min { 4 a(k) + (4 ^ (n - k) - 1) / 3, k=0..(n - 1) } for n>=2. ● a(n) = min { 4 * a(k) + (4 ^ (n - k) - 1) / 3 ; k < n } . ●

▶ [A284285] 5,9,25,45,61,189,289,489,7065,42229 ⋆ Numbers k such that (2 ^ k + 3) / 5 is prime. ● a(n) == 1 (mod 4). ●

▶ [A276918] 1,5,9,25,49,113,225,481,961,1985,3969,8065,16129,32513,65025,130561,261121,523265,1046529,2095105,4190209,8384513,16769025,33546241,67092481 ⋆ a(2n) = A060867(n + 1), a(2n + 1) = A092440(n + 1). ● a(n) = 1 + 2 ^ (n + 2) - 2 ^ (1 + n / 2) + (- 1) ^ (n + 1) * 2 ^ (1 + n / 2) - 2 ^ ((n + 1) / 2) + (- 1) ^ (n + 2) * 2 ^ ((n + 1) / 2). ● a(n) = 3 * a(n - 1) - 6 * a(n - 3) + 4 * a(n - 4) for n>3. ●

▶ [A127976] 1,1,5,9,25,53,125,273,609,1325,2885,6217,13353,28517,60685,128641,271857,572829,1203925,2524345,5281721,11029461,22991005,47846129,99420545 ⋆ a(n) = ((6 * n + 10) / 27) * 2 ^ (n - 1) + ((- 1) ^ (n - 1)) * (6 * n + 5) / 27. ● a(n) = + 2 * a(n - 1) + 3 * a(n - 2) - 4 * a(n - 3) - 4 * a(n - 4). ●

▶ [A137199] 1,1,1,5,9,25,57,141,337,817,1969,4757,11481,27721,66921,161565,390049,941665,2273377,5488421,13250217,31988857,77227929,186444717,450117361 ⋆ a(n)=a(n - 1) + 3a(n - 2) + a(n - 3). ● a(n)= - (- 1) ^ n + [1 + sqrt(2)] ^ n + (1 / 2) * sqrt(2) * [1 - sqrt(2)] ^ n + [1 - sqrt(2)] ^ n - (1 / 2) * [1 + sqrt(2)] ^ n * sqrt(2), with n>=0 - _ Paolo P. Lava _ , Jun 09 2008 ●

▶ [A219499] 5,9,26,58,107,179,281,421,608,852,1164,1556,2041,2633,3347,4199,5206,6386,7758,9342,11159,13231,15581,18233,21212 ⋆ Number of n X 5 arrays of the minimum value of corresponding elements and their horizontal or vertical neighbors in a random, but sorted with lexicographically nondecreasing rows and nonincreasing columns, 0..1 n X 5 array. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>7. ●

▶ [A006131] 1,1,5,9,29,65,181,441,1165,2929,7589,19305,49661,126881,325525,833049,2135149,5467345,14007941,35877321,91909085,235418369,603054709,1544728185,3956947021 ⋆ a(n) = a(n - 1) + 4 * a(n - 2), a(0) = a(1) = 1. ● a(n) = (((1 + sqrt(17)) / 2) ^ (n + 1) - ((1 - sqrt(17)) / 2) ^ (n + 1)) / sqrt(17). ● a(n + 1) = Sum _{ k=0..ceiling(n / 2) } 4 ^ k * binomial(n - k, k). - _ Benoit Cloitre _ , Mar 06 2004 ● a(n) = Sum _{ k=0..n } binomial((n + k) / 2, (n - k) / 2) * (1 + (- 1) ^ (n - k)) * 2 ^ (n - k) / 2. - _ Paul Barry _ , Aug 28 2005 ● a(n) = Product _{ k=1..floor((n - 1) / 2) } (1 + 16 * cos(k * Pi / n) ^ 2). - _ Roger L. Bagula _ , Nov 21 2008 ● a(n) = (Sum _{ 1<=k<=n + 1, k odd } C(n + 1,k) * 17 ^ ((k - 1) / 2)) / 2 ^ n. - _ Vladimir Shevelev _ , Feb 05 2014 ● a(n) = 2 ^ n * Fibonacci(n + 1, 1 / 2) = (2 / i) ^ n * ChebyshevU(n, i / 4). - _ G. C. Greubel _ , Dec 26 2019 ●

▶ [A270595] 1,1,5,9,29,81,265,881,3065,10897,39533,145561,542645,2043745,7764497,29719521,114495985,443623521,1727552085,6757763753,26541775821,104626427441,413800025625,1641535159889,6529945089769 ⋆ a(n) = (n + 1) * Sum _{ i=0..n / 2 } ((binomial(n - i,i)) * binomial(2 * (n - 2 * i),(n - 2 * i)) / (n - 2 * i + 1) ^ 2). ● a(n) = (2 - y1(n) - y1(n + 2) + (- 1) ^ n * (y2(n) + y2(n + 2) - 2)) / 4. ●

▶ [A242329] 5,9,29,129,629,3129,15629,78129,390629,1953129,9765629,48828129,244140629,1220703129,6103515629,30517578129,152587890629,762939453129,3814697265629,19073486328129,95367431640629,476837158203129 ⋆ a(n) = 5 ^ n + 4. ● a(n) = 6 * a(n - 1) - 5 * a(n - 2) for n>1. ●

▶ [A049602] 0,1,1,5,9,30,68,195,483,1309,3355,8900,23112,60813,158717,416325,1088661,2852242,7463884,19546175,51163695,133962621,350695511,918170280,2403740304 ⋆ a(n) = (Fibonacci(2 * n) - (- 1) ^ n * Fibonacci(n)) / 2. ● a(n)=Sum { T(2i + 1, n - 2i - 1): i=0, 1, ..., [(n + 1) / 2] } , array T as in A049600. ● a(n)=sum { k=0..floor(n / 2), C(n, 2k)Fib(n - 2k) } ; - _ Paul Barry _ , May 01 2005 ● a(n)=2a(n - 1) + 3a(n - 2) - 4a(n - 3) + a(n - 4). - _ Paul Curtz _ , Jun 16 2008 ●

▶ [A350280] 0,1,1,5,9,30,69,203,519,1466,3933,11025,30345,85190,238063,671651,1895265,5376856,15279117,43568435,124478129,356537150,1023113061,2941713513,8472215013 ⋆ Number of bracelets describing topological configurations of points and lines formed by the perpendicular bisectors of the sides of a convex cyclic n - gon. ● a(n) = (b(n) + (Sum _{ d|n, n / d==1 (mod 2) } phi(n / d) * (3 ^ d - (- 1) ^ d) / 2 - 2 ^ d)) / n) / 2 where b(n) = 1 + 3 ^ (n / 2 - 1) for even n and 0 otherwise. ●

▶ [A116390] 1,1,5,9,33,73,233,569,1693,4353,12477,32985,92637,248673,690549,1869513,5158881,14033161,38587193,105246041,288818305,788939769,2162574513,5912375033,16196093881 ⋆ Expansion of 1 / (2 * sqrt(1 - 4 * x ^ 2) - x - 1). ● a(n) = Sum _{ k=0..n } Sum _{ j=0..k } Sum _{ i=0..floor(n / 2) } (- 1) ^ (k - j) * C(k,j) * C(i + (j - 1) / 2,i) * C(j,n - 2 * i) * 4 ^ i. ●

► [A098477] 1,1,5,9,37,89,325,905,3109,9337,31173,97449,321445,1027225,3374405,10920649,35855909,116937145,384340421,1259728873,4147000229,13639616473,44978045765,148314302473,489879442469 ⋆ Expansion of 1 / sqrt(1 - 2 * x - 7 * x ^ 2 + 8 * x ^ 3). • a(n) = Sum _{ k=0..floor(n / 2) } binomial(2 * k,k) * binomial(n - k, n - 2k) * 2 ^ k. •

► [A243762] 1,5,9,37,113,261,505,869,1377,2053,2921,4005,5329,6917,8793,10981,13505,16389,19657,23333,27441,32005,37049,42597,48673 ⋆ 4 * n ^ 3 + 5. • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>3. •

► [A226065] 0,1,1,5,9,44,114,564,1882,9665,39083,211025,993803,5686104,30342060,184813048,1095555260,7118824417,46199135453,320295658577,2250749112381,16626717667348,125452246988974,985178854556524 ⋆ Sum of all the smaller parts raised to their corresponding larger parts of the partitions of n into exactly two parts. • a(n) = Sum _{ i = 1..floor(n / 2) } i ^ (n - i). •

► [A321718] 1,1,5,9,44,123,986,5043,45832,366300,3862429,39916803,495023832,6227020803,88549595295,1308012377572,21086922542349,355687428096003,6427700493998229,121645100408832003 ⋆ Number of coupled non - normal semi - magic rectangles with sum of entries equal to n. • a(p) = p! + 3 for p prime. a(n) >= n! + 3 for n > 1. - _ Chai Wah Wu _ , Jan 15 2019 •

► [A121724] 1,1,5,9,45,97,485,1145,5725,14289,71445,185193,925965,2467137,12335685,33563481,167817405,464221105,2321105525,6507351113,32536755565,92236247841,461181239205,1319640776249,6598203881245 ⋆ Generalized central binomial coefficients for k=2. • a(n) = (1 / (n + 1)) * Sum _{ k=0..n + 1 } Sum _{ j=0..k } C(n,k) * C(k,j) * C(2 * n - 2 * k + j, n - 2 * k + j) * (- 1) ^ (n - 2 * k + j) * 2 ^ j * 5 ^ (k - j). • a(n) = (1 / Pi) * 8 * 4 ^ n * Integral _{ x= - 1..1 } x ^ n * sqrt(1 - x ^ 2) / (5 - 4 * x) dx. •

► [A100305] 1,1,5,9,45,113,469,1369,5117,16065,56997,185513,641485,2125585,7257461,24262137,82321821,276418913,934993477,3146344777,10626292589,35797050801,120807391509,407183797913,1373642929981 ⋆ Expansion of (1 - x - 4 * x ^ 2) / (1 - 2 * x - 7 * x ^ 2 + 8 * x ^ 3). • a(n) = 2 * a(n - 1) + 7 * a(n - 2) - 8 * a(n - 3). • a(n) = 1 / 2 + 2 ^ (- n) * (sqrt(33) / 132) * ((1 + sqrt(33)) ^ (n + 1) - (1 - sqrt(33)) ^ (n + 1)). • a(n) = (1 / 2) * (1 + (2 * sqrt(2) * i) ^ n * ChebyshevU(n, - i / (4 * sqrt(2)))). - _ G. C. Greubel _ , Feb 03 2023 •

► [A080872] 1,1,5,9,49,89,485,881,4801,8721,47525,86329,470449,854569,4656965,8459361,46099201,83739041,456335045,828931049,4517251249,8205571449,44716177445,81226783441,442644523201 ⋆ a(n) * a(n + 3) - a(n + 1) * a(n + 2) = 4, given a(0)=a(1)=1, a(2)=5. • a(n) = (3 + sqrt(3)) / 12 * (sqrt(3) - sqrt(2)) ^ n + (3 - sqrt(3)) / 12 * (- sqrt(3) + sqrt(2)) ^ n + (3 + sqrt(3)) / 12 * (sqrt(3) + sqrt(2)) ^ n + (3 - sqrt(3)) / 12 * (- sqrt(3) - sqrt(2)) ^ n. [_ Richard Choulet _ , Dec 03 2008] • a(n + 4) = 10 * a(n + 2) - a(n). [_ Richard Choulet _ , Dec 04 2008] •

► [A173776] 5,9,49,449,4449,44449,444449,4444449,44444449,444444449,4444444449,44444444449,444444444449,4444444444449,44444444444449,444444444444449,4444444444444449,44444444444444449,444444444444444449 ⋆ a(n) = (4 * 10 ^ n + 41) / 9. • a(n) = 10 * a(n - 1) - 41 with n>0, a(0)=5. • a(n) = 11 * a(n - 1) - 10 * a(n - 2). - _ Vincenzo Librandi _ , Jul 05 2012 •

► [A143554] 1,1,1,5,9,55,117,775,1785,12350,29799,211876,527085,3818430,9706503,71282640,184138713,1366368375,3573805950,26735839650,70625252863,531838637759,1416298046436,10723307329700,28748759731965 ⋆ G.f. satisfies: A(x) = 1 + x * A(x) ^ 5 * A(- x) ^ 4. • a(2n) = C(9 * n,n) / (8 * n + 1); a(2n + 1) = C(9 * n + 4,n) * 5 / (8 * n + 5). •

► [A145400] 0,5,9,222,1140,13903,99051,972080,7826275,71053230,599141127,5285091303,45349095730,395755191515,3418116104881,29709767180643,257232791130155,2232466696767889,19346930092499853,167813061128260612,1454798219804865516,12616086588695738786 ⋆ Number of 2 - factors in P _ 6 X P _ n. • a(n) = 5 * a(n - 1) + 49 * a(n - 2) - 116 * a(n - 3) - 363 * a(n - 4) + 627 * a(n - 5) + 544 * a(n - 6) - 1061 * a(n - 7) + 133 * a(n - 8) + 264 * a(n - 9) - 47 * a(n - 10) - 26 * a(n - 11) + 3 * a(n - 12) + a(n - 13) for n > 13. •

► [A004757] 5,10,11,20,21,22,23,40,41,42,43,44,45,46,47,80,81,82,83,84,85,86,87,88,89 ⋆ Binary expansion starts 101. • a(2n) = 2a(n), a(2n + 1) = 2a(n) + 1 + 4 * [n==0]. • a(2 ^ m + k) = 5 * 2 ^ m + k, m >= 0, 0 <= k < 2 ^ m. - _ Yosu Yurramendi _ , Aug 08 2016 •

► [A285683] 5,10,12,17,22,24,29,31,36,41,43,48,53,55,60,62,67,72,74,79,81,86,91,93,98 ⋆ Positions of 2 in A285680. • a(n) = 3 * floor(n * phi) - n + 3 (this follows from Theorem 29 in Allouche and Dekking, since the overlap word 101010 that contains 1010 does not occur in the Fibonacci word). - _ Michel Dekking _ , Oct 09 2018 •

► [A192336] 5,10,13,14,17,20,21,25,26,29,30,34,35,37,38,39,40,41,42,45,46,49,50,51,52 ⋆ Sums of two or more distinct squares. • a(n) = n + 37 for n >= 92. •

► [A224448] 5,10,13,14,17,21,25,26,29,30,34,35,37,38,41,42,45,46,49,50,53,54,58,59,61 ⋆ Nonnegative numbers that have a representation as a sum of three primitive and distinct squares (square 0 allowed). • a(n) is the n - th largest number m satisfying m = a ^ 2 + b ^ 2 + c ^ 2, with a, b, and c integers, 0 <= a < b < c, and gcd(a,b,c) = 1. •

► [A073503] 5,10,13,15,16,17,20,25,26,29,30,32,34,35,37,39,40,41,45,48,50,51,52,53,55 ⋆ Numbers n such that the number of solutions to x ^ 4 == 1 (mod n) is twice the number of solutions of x ^ 2 == 1 (mod n). • a(n) seems to be asympt otic to 2n. •

► [A001958] 1,5,10,14,18,22,27,31,35,40,44,48,53,57,61,65,70,74,78,83,87,91,96,100,104 ⋆ v - pile numbers of the 3 - Wythoff game with i=1. • a(n) = floor((n + 1 / 3) * (5 + sqrt(13)) / 2). - _ R. J. Mathar _ , Feb 14 2011 •

► [A313615] 1,5,10,14,20,24,30,34,40,44,49,54,59,64,68,74,78,84,88,94,98,103,108,113,118 ⋆ Coordination sequence Gal.6.323.3 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. • a(n) = a(n - 1) + a(n - 11) - a(n - 12) for n > 12. •

► [A313646] 1,5,10,14,20,26,31,36,42,48,52,57,62,67,72,76,82,88,93,98,104,110,114,119,124 ⋆ Coordination sequence Gal.6.205.2 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. • a(n) = a(n - 1) + a(n - 3) - a(n - 4) - a(n - 6) + a(n - 7) + a(n - 9) - a(n - 10) for n > 10. •

► [A224692] 1,5,10,14,28,32,64,68,136,140,280,284,568,572,1144,1148,2296,2300,4600,4604,9208,9212,18424,18428,36856 ⋆ Expansion of (1 + 5 * x + 7 * x ^ 2 - x ^ 3) / ((1 - 2 * x ^ 2) * (1 - x) * (1 + x)). • a(n) = a(n - 1) + 4 if n odd. • a(n) = a(n - 1) * 2 if n even. • a(n) = 3 * a(n - 2) - 2 * a(n - 4) with n>3, a(0)=1, a(1)=5, a(2)=10, a(3)=14. • a(n) = 9 * 2 ^ floor(n / 2) - 2 * (- 1) ^ n - 6. [_ Bruno Berselli _ , Apr 27 2013] •

► [A179123] 5,10,14,49,80,355,599,2764,4685,21730,36854,171049,290120,1346635,2284079,10602004,17982485,83469370,141575774,657152929,1114623680,5173754035,8775413639,40732879324,69088685405 ⋆ a(n) red and b(n) blue balls in an urn; draw 6 balls without replacement; Probability(6 red balls)=Probability(4 red and 2 blue balls); binomial(a(n),6)=binomial(a(n),4) * binomial(b(n),2); • a(n + 4)=8 * a(n + 2) - a(n) - 27; r15=sqrt(15); • a(n)=((1 + r15) * (4 + r15) ^ ((n - 1) / 2) + (1 - r15 * (4 - r15) ^ ((n - 1) / 2) + 18) / 4 n odd • a(n)=((11 + 3 * r15) * (4 + r15) ^ ((n - 2) / 2) + (11 - 3 * r15) * (4 - r15) ^ ((n - 2) / 2) + 18) / 4 n even • a(n)=a(n - 1) + 8 * a(n - 2) - 8 * a(n - 3) - a(n - 4) + a(n - 5). G.f.: - x * (4 * x ^ 4 - 5 * x ^ 3 - 36 * x ^ 2 + 5 * x + 5) / ((x - 1) * (x ^ 4 - 8 * x ^ 2 + 1)). [_ Colin Barker _ , Jan 01 2013] •

► [A081839] 0,5,10,15,19,24,29,34,39,43,48,53,58,63,67,72,77,82,86,91,96,101,106,110,115 ⋆ a(1)=0, a(n)=a(n - 1) + 4 if n is already in the sequence, a(n)=a(n - 1) + 5 otherwise. • a(n) = floor(r * n - (3 * r + 1) / (r - 1)) where r = (1 / 2) * (5 + sqrt(21)) = 4.79128784747792... •

► [A008706] 1,5,10,15,20,25,30,35,40,45,50,55,60,65,70,75,80,85,90,95,100,105,110,115,120 ⋆ Coordination sequence for 3.3.3.4.4 planar net. • a(n) = 0 ^ n + 5n. (End) •

► [A330003] 5,10,15,20,25,30,35,40,45,50,55,60,65,70,75,80,85,90,95,100,106,111,116,121,126 ⋆ Beatty sequence for (x + 1) ^ 2, where 1 / x + 1 / (x + 1) ^ 2 = 1. • a(n) = floor(n x), where x = 1.24697960371... is the constant in A255249. •

► [A067761] 5,10,15,20,25,30,40,45,50,55,60,65,75,80,85,90,95,100,110,115,120,125,130,135,145 ⋆ Positive integers divisible by 5 but not by 7. • a(n) = a(n - 6) + 35. - _ David A. Corneth _ , Jun 17 2020 •

► [A313740] 1,5,10,15,20,25,31,37,43,49,55,60,65,70,75,80,85,90,95,100,105,111,117,123,129 ⋆ Coordination sequence Gal.5.309.5 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. • a(n) = 2 * a(n - 1) - a(n - 2) - a(n - 5) + 2 * a(n - 6) - a(n - 7) - a(n - 10) + 2 * a(n - 11) - a(n - 12) for n > 12. •

► [A104356] 1,5,10,15,20,32,64,128,256,512,1024,2048,4096,8192,16384,32768,65536,131072,262144,524288,1048576,2097152,4194304,8388608,16777216 ⋆ Smallest m such that A104350(m) has exactly n trailing zeros in decimal representation. • a(n) = if n=0 then 1 else (if n<5 then 5 * n else 2 ^ n). •

► [A313774] 1,5,10,15,21,25,31,37,41,47,52,57,62,67,72,77,83,87,93,99,103,109,114,119,124 ⋆ Coordination sequence Gal.6.622.5 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. • a(n) = a(n - 1) + a(n - 3) - a(n - 4) - a(n - 6) + a(n - 7) + a(n - 9) - a(n - 10) for n > 10. •

► [A115181] 5,10,15,21,26,31,36,42,47,52,57,63,68,73,78,84,89,94,100,105,110,115,121,126,131 ⋆ Beatty sequence for (Cc / (Cc - 1)) with Cc = 1.2345678910111 21314... = 10 * (Champernowne constant). • a(n) = floor(n * 5.26315808...). •

► [A313793] 1,5,10,15,21,27,32,37,42,47,52,57,63,69,74,79,84,89,94,99,105,111,116,121,126 ⋆ Coordination sequence Gal.4.134.1 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. • a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - 2 * a(n - 4) + 2 * a(n - 5) - 2 * a(n - 6) + 2 * a(n - 7) - a(n - 8) for n > 8. •

► [A020332] 5,10,15,68,85,102,119,136,153,170,187,204,221,238,255,1040,1105,1170,1235,1300,1365,1430,1495,1560,1625 ⋆ Numbers whose base - 4 representation is the juxtaposition of two identical strings. • a(n) = n * 4 ^ floor(log _ 4(n) + 1) + n. - _ Ilya Gutkovskiy _ , Jan 26 2018 •

► [A313837] 1,5,10,16,20,26,31,36,42,46,52,57,62,67,72,78,82,88,93,98,104,108,114,119,124 ⋆ Coordination sequence Gal.6.618.2 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. • a(n) = a(n - 1) + a(n - 3) - a(n - 4) - a(n - 6) + a(n - 7) + a(n - 9) - a(n - 10) for n > 10. •

► [A313859] 1,5,10,16,21,25,30,35,39,44,50,55,60,65,70,76,81,85,90,95,99,104,110,115,120 ⋆ Coordination sequence Gal.6.340.6 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. • a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - 2 * a(n - 4) + 2 * a(n - 5) - 2 * a(n - 6) + 2 * a(n - 7) - 2 * a(n - 8) + 2 * a(n - 9) - 2 * a(n - 10) + 2 * a(n - 11) - a(n - 12) for n > 12. •

► [A313884] 1,5,10,16,21,27,31,35,41,46,52,57,62,67,72,78,83,89,93,97,103,108,114,119,124 ⋆ Coordination sequence Gal.6.347.3 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. • a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - 2 * a(n - 4) + 2 * a(n - 5) - 2 * a(n - 6) + 2 * a(n - 7) - 2 * a(n - 8) + 2 * a(n - 9) - 2 * a(n - 10) + 2 * a(n - 11) - a(n - 12) for n > 12. •

► [A276853] 0,5,10,16,21,27,32,38,43,48,54,59,65,70,76,81,86,92,97,103,108,114,119,125,130 ⋆ Beatty sequence for 2 * e. • a(n) = floor(2 * e * n). •

► [A178181] 0,5,10,16,21,27,32,38,43,49,54 ⋆ Minute with hour hand overlap problem on analog clock. • a(n)= floor((720 / 11) * n) (mod 60), n=0..10. See the solution in Loyd's book with (65 + 5 / 11)m = 720 / 11 m. • a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n=4..10. - _ Colin Barker _ , Aug 19 2014 • a(n) = (- 3 - (- 1) ^ n + 22 * n) / 4 for n=1..10. - _ Colin Barker _ , Aug 19 2014 •

► [A277645] 5,10,16,21,27,32,38,43,49,54,59,65,70,76,81,87,92,98,103,108,114,119,125,130,136 ⋆ Beatty sequence for 3 + sqrt(6). • a(n) = floor(n * (3 + sqrt(6))). •

► [A313896] 1,5,10,16,21,27,33,37,42,48,54,59,63,69,75,80,86,91,96,101,106,112,117,123,129 ⋆ Coordination sequence Gal.6.364.4 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. • a(n) = 3 * a(n - 1) - 4 * a(n - 2) + 3 * a(n - 3) - a(n - 4) - a(n - 6) + 3 * a(n - 7) - 4 * a(n - 8) + 3 * a(n - 9) - a(n - 10) - a(n - 12) + 3 * a(n - 13) - 4 * a(n - 14) + 3 * a(n - 15) - a(n - 16) for n > 16. •

► [A313912] 1,5,10,16,22,27,31,35,40,46,52,57,62,67,72,78,84,89,93,97,102,108,114,119,124 ⋆ Coordination sequence Gal.6.207.6 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. • a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - 2 * a(n - 4) + 2 * a(n - 5) - 2 * a(n - 6) + 2 * a(n - 7) - 2 * a(n - 8) + 2 * a(n - 9) - 2 * a(n - 10) + 2 * a(n - 11) - a(n - 12) for n > 12. •
► [A313921] 1,5,10,16,22,27,34,41,46,52,56,59,66,73,78,84,90,95,102,109,112,116,122,127,134 ⋆ Coordination sequence Gal.5.313.2 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. • a(n) = 2 * a(n - 1) - 3 * a(n - 2) + 4 * a(n - 3) - 5 * a(n - 4) + 6 * a(n - 5) - 6 * a(n - 6) + 6 * a(n - 7) - 6 * a(n - 8) + 6 * a(n - 9) - 5 * a(n - 10) + 4 * a(n - 11) - 3 * a(n - 12) + 2 * a(n - 13) - a(n - 14) for n > 14. •
► [A052905] 1,5,10,16,23,31,40,50,61,73,86,100,115,131,148,166,185,205,226,248,271,295,320,346,373 ⋆ a(n) = (n ^ 2 + 7 * n + 2) / 2. • a(n) = n + a(n - 1) + 3, with n>0, a(0)=1. - _ Vincenzo Librandi _ , Aug 06 2010 •
► [A345070] 5,10,16,24,33,40,48,57,66,75,84,95,104,110,122,135,145,157,168,177,187,196,211,226,234 ⋆ Averages of two consecutive even - indexed primes. • a(n) = (prime(2 * n) + prime(2 * n + 2)) / 2. •
► [A194275] 0,1,5,10,16,25,35,46,60,75,91,110,130,151,175,200,226,255,285,316,350,385,421,460,500 ⋆ Concentric pentagonal numbers of the second kind: a(n) = floor(5 * n * (n + 1) / 6). • a(n) = floor(5 * n * (n + 1) / 6). - _ Arkadiusz Wesolowski _ , Aug 23 2011 •
► [A301290] 1,5,10,16,28,42,57,75,96,122,150,176,207,245,282,320,364,410,457,507,560,618,678,736,799 ⋆ Partial sums of A301289. • a(n) = 3 * a(n - 1) - 5 * a(n - 2) + 7 * a(n - 3) - 8 * a(n - 4) + 8 * a(n - 5) - 7 * a(n - 6) + 5 * a(n - 7) - 3 * a(n - 8) + a(n - 9) for n > 9. •
► [A054514] 1,1,1,5,10,16,45,109,222,540,1341,3065,7328,18112,43530,105390,260254,639244,1570257,3893805,9669236,24014264,59903650,149806494,374982790 ⋆ Number of ways to place non - crossing diagonals in convex (n + 4) - gon so as to create no triangles or quadrilaterals. • a(n) = Sum _{ j=0..(n - 1) / 3 } binomial[n - 2j - 1, n - 3j - 1] binomial[n + 3 + j, n + 2] / (n + 3). This counts the polygon dissections above by number j of diagonals. - _ David Callan _ , Jul 15 2004 •
► [A313962] 1,5,10,17,21,27,31,38,43,48,53,58,65,69,75,79,86,91,96,101,106,113,117,123,127 ⋆ Coordination sequence Gal.3.53.2 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. • a(n) = 2 * a(n - 1) - a(n - 2) - a(n - 3) + 2 * a(n - 4) - a(n - 5) - a(n - 6) + 2 * a(n - 7) - a(n - 8) for n > 8. •
► [A313969] 1,5,10,17,21,28,34,38,43,47,54,59,66,73,76,81,85,92,98,104,111,113,118,123,130 ⋆ Coordination sequence Gal.6.489.5 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. • a(n) = 2 * a(n - 1) - a(n - 2) - a(n - 3) + a(n - 4) + a(n - 5) - 2 * a(n - 6) + 2 * a(n - 7) - 2 * a(n - 8) + a(n - 9) + a(n - 10) - a(n - 11) - a(n - 12) + 2 * a(n - 13) - a(n - 14) for n > 14. •
► [A098021] 5,10,17,22,29,34,39,46,51,58,63,68,75,80,87,92,99,104,109,116,121,128,133,138,145 ⋆ Positions of 0's in the zero - one sequence [nr + 2r] - [nr] - [2r], where r=sqrt(2) and [ ]=floor; see A187967. • a(n) = 7 * floor(n * (sqrt(2) - 1)) + 5 * floor(n * (2 - sqrt(2))) + 5. - _ Miko Labalan _ , Dec 14 2015 • a(n) = 3 * n + 2 * floor(n * sqrt(2)). - _ G. C. Greubel _ , Mar 27 2018 •
► [A276382] 1,5,10,17,25,35,46,59,73,89,106,125,145,167,190,215,241,269,298,329,361,395,430,467,505 ⋆ a(1) = 1, and a(n) = a(n - 1) + floor(3 * n / 2) + 1 for n >= 2. • a(n) = ((- 1) ^ n + 12 * n + 6 * n ^ 2 - 9) / 8 for n > 0. • a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4) for n > 4. • a(n) = - 1 + Sum _{ k=1..n } floor((n + k + 3) / 2). - _ Wesley Ivan Hurt _ , Apr 01 2017 •
► [A080341] 1,5,10,17,27,38,51,67,84,103,125,148,173,201,230,261,295,330,367,407,448,491,537,584,633 ⋆ Sum of the first n terms that are congruent to 1, 4 or 5 mod 6 (A047259). • a(n) = n ^ 2 + (n + 1) / 3 with integer division, that is n mod 3 = 0 : n ^ 2 + n / 3 n mod 3 = 1 : n ^ 2 + (n - 1) / 3 n mod 3 = 2 : n ^ 2 + (n + 1) / 3. •
► [A086653] 5,10,17,28,47,82,149,280,539,1054,2081,4132,8231,16426,32813,65584,131123,262198,524345,1048636,2097215,4194370,8388677,16777288,33554507 ⋆ 2 ^ n + 3 * n. • a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 2 * a(n - 3). G.f.: x * (5 - 10 * x + 2 * x ^ 2) / ((1 - x) ^ 2 * (1 - 2 * x)). [_ Colin Barker _ , Sep 05 2012] •
► [A284703] 1,5,10,17,51,98,211,457,964,2095,4489,9638,20723,44469,95550,205225,440777,946808,2033571,4367947,9381928,20151345,43283195,92967814,199685501 ⋆ Number of maximal matchings in the n - prism graph. • a(n) = a(n - 1) + 2 * a(n - 2) + a(n - 3) - a(n - 4) + 2 * a(n - 5) + a(n - 6) - a(n - 7) - a(n - 8) for n>8. •
► [A035608] 0,1,5,10,18,27,39,52,68,85,105,126,150,175,203,232,264,297,333,370,410,451,495,540,588 ⋆ Expansion of x * (1 + 3 * x) / (((1 + x) * (1 - x) ^ 3). • a(n) = n ^ 2 + n - 1 - floor((n - 1) / 2). • a(n) = floor((n + 1 / 4) ^ 2). - _ Reinhard Zumkeller _ , Jan 27 2010 • a(n) = (- 1) ^ n * Sum _{ i=0..n } (- 1) ^ i * (2 * i ^ 2 + 3 * i + 1). Omits the leading 0. - _ William A. Tedeschi _ , Aug 25 2010 • a(n) = n ^ 2 + floor(n / 2), from Mathematica section. - _ Vladimir Joseph Stephan Orlovsky _ , Apr 12 2011 • a(0)=0, a(1)=1, a(2)=5, a(3)=10; for n > 3, a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4). - _ Harvey P. Dale _ , Feb 21 2013 •
► [A164004] 0,5,10,18,28,40,54,70,88,108,130,154,180,208,238,270,304,340,378,418,460,504,550,598,648 ⋆ Zero together with row 4 of the array in A163280. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n > 4. •
► [A053311] 1,5,10,19,33,56,93,153,250,407,661,1072,1737,2813,4554,7371,11929,19304,31237,50545,81786,132335,214125,346464,560593 ⋆ Partial sums of A000285. • a(n) = a(n - 1) + a(n - 2) + 4; a(0)=1, a(1)=5; n >= 1. •
► [A072703] 5,10,20,25,35,40,50,55,65,70,80,85,95,100,110,115,125,130,140,145,155,160,170,175,185 ⋆ Indices of Fibonacci numbers whose last digit is 5. • a(n) = 15 * (n - 1) - a(n - 1), with a(1)=5. - _ Vincenzo Librandi _ , Aug 08 2010 • a(1)=5, a(2)=10, a(3)=20, a(n)=a(n - 1) + a(n - 2) - a(n - 3). - Harvey P. Dale, May 15 2011 • a(n) = - (5 / 4) * (3 + (- 1) ^ n - 6 * n). - _ Harvey P. Dale _ , May 15 2011 •
► [A306775] 1,5,10,20,27,47,56,78,95,123,136,186,201,237,272,318,337,405,426,496,541,593,618,728,765 ⋆ Partial sums of A060648: sum of the inverse Moebius transform of the Dedekind psi function from 1 to n. • a(n) = (1 / 2) * Sum _{ k=1..n } 2 ^ omega(k) * floor(n / k) * floor(1 + n / k). •
► [A370532] 1,5,10,20,30,40,50,60,70,80,90,100,110,120,130,140,150,160,170,180,190,200,210,220,230 ⋆ Integers m > 0 such that m ^ m and m ^ (m ^ m) have the same rightmost m digits. • a(n) = 10 * (n - 2) for any n > 2. •
► [A210677] 1,1,5,10,20,36,63,107,179,296,486,794,1293,2101,3409,5526,8952,14496,23467,37983,61471,99476,160970,260470,421465 ⋆ a(n) = a(n - 1) + a(n - 2) + n + 1, a(0) = a(1) = 1. • a(n) = 3 * a(n - 1) - 2 * a(n - 2) - a(n - 3) + a(n - 4). •
► [A146523] 1,5,10,20,40,80,160,320,640,1280,2560,5120,10240,20480,40960,81920,163840,327680,655360,1310720,2621440,5242880,10485760,20971520,41943040 ⋆ Binomial transform of A010685. • a(n) = 5 * 2 ^ (n - 1) for n >= 1, a(0) = 1. •
► [A020714] 5,10,20,40,80,160,320,640,1280,2560,5120,10240,20480,40960,81920,163840,327680,655360,1310720,2621440,5242880,10485760,20971520,41943040,83886080 ⋆ a(n) = 5 * 2 ^ n. • a(n) = 5 * 2 ^ n. a(n) = 2 * a(n - 1). •
► [A106367] 5,10,20,70,204,700,2340,8230,29140,104968,381300,1398500,5162220,19175140,71582940,268439590,1010580540,3817763740,14467258260,54975633976,209430787820,799645010860,3059510616420,11728124734500 ⋆ Necklaces with n beads of 5 colors, no 2 adjacent beads the same color. • a(n) = (1 / n) * Sum _{ d | n } totient(n / d) * (4 * (- 1) ^ d + 4 ^ d) for n > 1. - _ Andrew Howroyd _ , Mar 12 2017 •
► [A132174] 1,5,10,21,44,92,189,385,778,1565,3141,6294,12602,25219,50454,100926,201871,403763,807548,1615119,3230263,6460552,12921132,25842293,51684616 ⋆ Index of starting position of n - th generation of terms in A063882. • a(n) = 3 * a(n - 1) - 2 * a(n - 2) + a(n - 5) - 3 * a(n - 6) + 2 * a(n - 7) for n > 8. •
► [A132461] 1,1,5,10,21,51,122,295,725,1792,4455,11133,27930,70305,177483,449160,1139157,2894625,7367720,18781387,47941271,122524216,313484385,802877055,2058184346 ⋆ Row squared sums of triangle of Lucas polynomials (A034807) for n>0: Sum _{ k=0..floor(n / 2) } A034807(n,k) ^ 2, with a(0)=1. • a(n) = Sum _{ k=0..floor(n / 2) } (C(n - k, k) + C(n - k - 1, k - 1)) ^ 2. •
► [A064694] 1,5,10,22,34,58,80,120,155,215,266,350,420,532,624,768,885,1065,1210,1430,1606,1870,2080,2392,2639 ⋆ Add column entries of the table with rows (1,2,0,0...), (0,3,4,5,0,0...), (0,0,6,7,8,9,0,0...), (0,0,0,10,11,12,13,14,0,0...), ... • a(2n - 1) = n * (n + 1) * (7 * n - 4) / 6 (see A007584), a(2n) = n * (n + 1) * (7 * n + 8) / 6. • a(n) = sum { k=0..floor((n + 1) / 2), (n - k + 1)ceiling((n - k + 1) / 2) + k + if(mod(n - k + 1, 2) =0, ceiling((n - k + 1) / 2), 0) } . - _ Paul Barry _ , Aug 25 2004 • a(n) = sum { k=0..floor(n / 2), C(n - k + 1,2) + k } ; - _ Paul Barry _ , Jul 23 2008 • a(n) = (2 * n + 1 - (- 1) ^ n) * (2 * n + 5 - (- 1) ^ n) * (14 * n + 15 + 17 * (- 1) ^ n) / 384. - _ Luce ETIENNE _ , Feb 17 2015 • a(n) = (7 * n ^ 3 + 30 * n ^ 2 + 32 * n) / 48 for n even. • a(n) = (7 * n ^ 3 + 27 * n ^ 2 + 17 * n - 3) / 48 for n odd. •
► [A229440] 5,10,22,53,128,293,625,1244,2327,4124,6976,11335,17786,27071,40115,58054,82265,114398,156410,210601,279652,366665,475205,609344,773707 ⋆ Number of n X 3 0..2 arrays with horizontal differences mod 3 never 1, vertical differences mod 3 never - 1, and rows and columns lexicographically nondecreasing. • a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. •
► [A175661] 1,5,10,23,49,104,217,449,922,1883,3829,7760,15685,31637,63706,128111,257353,516536,1036033,2076857,4161466,8335475,16691245,33415328,66883789 ⋆ Eight bishops and one elephant on a 3 X 3 chessboard: a(n) = 2 ^ (n + 2) - 3 * F(n + 1), with F(n) = A000045(n). • a(n) = 3 * a(n - 1) - a(n - 2) - 2 * a(n - 3) with a(0)=1, a(1)=5 and a(2)=10. •
► [A355552] 5,10,23,54,117,240,497,1006,2027,4074,8169,16356,32741,65506,131039,262110,524253,1048536,2097113,4194262,8388563,16777170,33554385,67108812,134217677 ⋆ Number of ways to select 3 or more collinear points from a 4 X n grid. • a(n) == H(n) + 3 * D4(n) + 2 * E(n), where •
► [A106729] 5,10,25,65,170,445,1165,3050,7985,20905,54730,143285,375125,982090,2571145,6731345,17622890,46137325,120789085,316229930,827900705,2167472185,5674515850,14856075365,38893710245 ⋆ Sum of two consecutive squares of Lucas numbers (A001254). • a(n) = 3 * a(n - 1) - a(n - 2). - _ T. D. Noe _ , Dec 11 2006 • a(n) = ((5 + sqrt(5)) / 2) * ((3 + sqrt(5)) / 2) ^ n + ((5 - sqrt(5)) / 2) * ((3 - sqrt(5)) / 2) ^ n, with n>=0. - _ Paolo P. Lava _ , Nov 19 2008 • a(n) = Fibonacci(n - 2) ^ 2 + Fibonacci(n + 3) ^ 2. - _ Gary Detlefs _ , Dec 28 2010 • a(n) = [1,1; 1,2] ^ (n - 2). { 3,4 } . { 3,4 } , for n>=3. - _ John M. Campbell _ , Jul 09 2011 • a(n) = Lucas(2n) + Lucas(2n + 2). - _ Richard R. Forberg _ , Nov 23 2014 •
► [A290055] 0,1,5,10,26,40,80,110,190,245,385,476,700,840,1176,1380,1860,2145,2805,3190,4070,4576,5720,6370,7826 ⋆ Expansion of x * (1 + 4 * x + x ^ 2) / ((1 - x) ^ 5 * (1 + x) ^ 4). • a(n) = a(n - 1) + 4 * a(n - 2) - 4 * a(n - 3) - 6 * a(n - 4) + 6 * a(n - 5) + 4 * a(n - 6) - 4 * a(n - 7) - a(n - 8) + a(n - 9). • a(n) = (2 * n + 3 + (- 1) ^ n) * (2 * n + 7 + (- 1) ^ n) * (6 * n ^ 2 + 30 * n + 5 - (2 * n + 5) * (- 1) ^ n) / 1536. - _ Luce ETIENNE _ , Nov 18 2017 •
► [A005514] 1,1,5,10,29,57,126,232,440,750,1282,2052,3260,4950,7440,10824,15581,21879,30415,41470,56021,74503,98254,127920,165288 ⋆ Number of n - bead bracelets (turnover necklaces) with 8 red beads and n - 8 black beads. • a(n) = ((n + 4) / 32) * s(n,0,8) + ((n - 4) / 32) * s(n,4,8) + (48 * C(n - 1,7) + (n + 1) * (n - 2) * (n - 4) * (n - 6)) / 768, if n is even >= 8; a(n) = (48 * C(n - 1,7) + (n - 1) * (n - 3) * (n - 5) * (n - 7)) / 768, if n odd >= 8. •
► [A069921] 1,5,10,29,73,194,505,1325,3466,9077,23761,62210,162865,426389,1116298,2922509,7651225,20031170,52442281,137295677,359444746,941038565,2463670945,6449974274,16886251873 ⋆ Define C(n) by the recursion C(0) = 1 + I where I ^ 2 = - 1, C(n + 1) = 1 / (1 + C(n)); then a(n) = (- 1) ^ n / Im(C(n)) where Im(z) is the imaginary part of the complex number z. • a(n) = ceiling(3 / 5 * (g / 2) ^ (n + 1)) - (1 + (- 1) ^ n) / 2, with g = 3 + sqrt(5). • a(n) = 2 * a(n - 1) + 2 * a(n - 2) - a(n - 3). - _ Vladeta Jovovic _ , May 06 2002 • a(n) = F(n) ^ 2 + F(n + 2) ^ 2. - _ Ron Knott _ , Aug 02 2004 • a(n) = 2 * F(n) * F

(n + 2) + F(n + 1) ^ 2 = F(n + 1) * F(n + 3) + F(n) ^ 2 + (- 1) ^ (n - 1). - _ J. M. Bergot _ , Sep 15 2012 ●

▶ [A294286] 0,0,5,10,30,46,91,124,204,260,385,470,650,770,1015,1176,1496,1704,2109,2370,2870,3190,3795,4180,4900 ⋆ Sum of the squares of the parts in the partitions of n into two distinct parts. ● a(n) = Sum _{ i=1..floor((n - 1) / 2) } i ^ 2 + (n - i) ^ 2. ● a(n) = a(n - 1) + 3 * a(n - 2) - 3 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) + a(n - 6) - a(n - 7) for n > 7. ●

▶ [A133629] 1,5,10,30,55,155,280,780,1405,3905,7030,19530,35155,97655,177580,488280,878905,2441405,4394530,12207030,21972655,61035155,109863280,305175780,549316405 ⋆ a(1)=1, a(n) = a(n - 1) + (p - 1) * p ^ (n / 2 - 1) if n is even, otherwise a(n) = a(n - 1) + p ^ ((n - 1) / 2), where p=5. ● a(n) = (p / (p - 1)) * (p ^ (n / 2) - 1) if n is even, otherwise a(n)=(p / (p - 1)) * ((2p - 1) * p ^ ((n - 3) / 2) - 1). ● a(n) = (p / (p - 1)) * (p ^ floor(n / 2) + p ^ floor((n - 1) / 2) - p ^ floor((n - 2) / 2) - 1). ● a(n) = p ^ floor(n / 2) + (p ^ floor((n + 1) / 2) - p) / (p - 1). ● a(n) = 5 * (5 ^ (n / 2) - 1) / 4 for n even. ● a(n) = (9 * 5 ^ (n / 2 - 1 / 2) - 5) / 4 for n odd. ● a(n) = a(n - 1) + 5 * a(n - 2) - 5 * a(n - 3) for n > 3. ●

▶ [A156302] 1,1,5,10,30,57,152,289,676,1304,2809,5335,10961,20487,40329,74476,141914,258094,479638,860025,1563716,2767982,4940567,8636563,15173805 ⋆ G.f.: A(x) = exp(Sum _{ n>=1 } sigma(n) ^ 2 * x ^ n / n), a power series in x with integer coefficients. ● a(n) = (1 / n) * Sum _{ k=1..n } sigma(k) ^ 2 * a(n - k) for n>0, with a(0) = 1. ●

▶ [A002571] 1,5,10,30,74,199,515,1355,3540,9276,24276,63565,166405,435665,1140574,2986074,7817630,20466835,53582855,140281751,367262376,961505400,2517253800,6590256025,17253514249 ⋆ From a definite integral. ● a(n) = (- 1) ^ n * Sum _{ i=1..n + 1 } (- 1) ^ (i + 1) * Fibonacci(i) * Fibonacci(i + 1). - _ Alexander Adamchuk _ , Jun 16 2006 ● a(n) = 8 * a(n - 2) - 8 * a(n - 4) + a(n - 6) + 2(- 1) ^ n, n>6. - _ Sean A. Irvine _ , Apr 09 2014 ● a(n) - a(n - 2) = Fibonacci(n + 1) ^ 2. - _ Peter Bala _ , Aug 30 2015 ●

▶ [A373568] 1,5,10,30,85,246,707,2037,5864,16886,48620,139997,403104,1160693,3342081,9623140,27708726,79784098,229729153,661478734,1904652103,54842227157,15791202736,45468956106,130922641160 ⋆ Expansion of x - 1 / (x - 1 / (x - 1 / (x - 1 / (x + 1)))). ● a(n) = [x ^ n] (x ^ 5 + x ^ 4 - 4 * x ^ 3 - 3 * x ^ 2 + 3 * x + 1) / (x ^ 4 + x ^ 3 - 3 * x ^ 2 - 2 * x + 1). ●

▶ [A189315] 5,10,30,100,350,1250,4500,16250,58750,212500,768750,2781250,10062500,36406250,131718750,476562500,1724218750,6238281250,22570312500,81660156250,295449218750,1068945312500,3867480468750,13992675781250,50625976562500 ⋆ Expansion of 5 * (1 - 3 * x + x ^ 2) / (1 - 5 * x + 5 * x ^ 2). ● a(n) = 5 * a(n - 1) - 5 * a(n - 2), n>2, a(0)=5, a(1)=10, a(2)=30. ● a(n) = Sum _{ k=1..5) (w _ k) ^ (2 * n), w _ k=2 * cos((2 * k - 1) * Pi / 10). ● a(n) = 2 ^ (1 - n) * ((5 - Sqrt(5)) ^ n + (5 + Sqrt(5)) ^ n), for n>0, with a(0)=5. ●

▶ [A052648] 0,5,10,30,120,600,3600,25200,201600,1814400,18144000,199584000,2395008000,31135104000,435891456000,6538371840000,104613949440000,1778437140480000,32011868528640000,608225502044160000 ⋆ Expansion of e.g.f. 5 * x / (1 - x). ● a(n) = 5 * n!, n>0. ●

▶ [A052538] 1,1,5,10,32,79,224,589,1613,4321,11714,31552,85283,230080,621353,1677097,4528013,12223258,32999264,89084263,240496544,649248085,1752733013,4731720649,12773896082 ⋆ Expansion of (1 - x) / (1 - 2 * x - 3 * x ^ 2 + 3 * x ^ 3). ● a(n) = 2 * a(n - 1) + 3 * a(n - 2) - 3 * a(n - 3), with a(0)=1, a(1)=1, a(2)=5. ● a(n) = Sum _{ alpha = RootOf(1 - 2 * x - 3 * x ^ 2 + 3 * x ^ 3) } (1 / 107) * (13 + 38 * alpha + 33 * alpha ^ 2) * alpha ^ (- n - 1). ●

▶ [A189732] 1,5,10,35,85,260,685,1985,5410,15335,42385,119060,330985,926285,2581210,7212635,20118685,56181860,156775285,437684585,1221561010,3409983935,9517788985,26567708660,74156653585 ⋆ a(1)=1, a(2)=5, a(n) = a(n - 1) + 5 * a(n - 2). ● a(n) = (1 / 2) * ((1 / 2 + (1 / 2) * sqrt(21)) ^ (n - 1) + (1 / 2 - (1 / 2) * sqrt(21)) ^ (n - 1) + (3 / 14) * sqrt(21) * ((1 / 2 + (1 / 2) * sqrt(21)) ^ (n - 1) - (1 / 2 - (1 / 2) * sqrt(21)) ^ (n - 1)). - _ Paolo P. Lava _ , May 24 2011 ●

▶ [A355327] 1,1,5,10,39,83,317,678,2585,5531,21085,45116,171987,368005,1402873,3001764,11443033,24484957,93339173,199720270,761354199,1629089495,6210256613,13288248522,50656169297 ⋆ Number of ways to tile a 2 X n board with squares and dominoes where vertical dominoes are only allowed in even - numbered locations. ● a(2 * n - 1) = Sum _{ k=1..2 * n - 1 } k * a(2 * n - 1 - k). ● a(2 * n - 1) = a(2 * n - 2) + 4 * a(2n - 3) + a(2 * n - 4) - a(2 * n - 5). ● a(2 * n) = 2 * a(2 * n - 1) + 4 * a(2n - 2) - a(2 * n - 4). ● a(n) = 9 * a(n - 2) - 7 * a(n - 4) + a(n - 6). ●

▶ [A117865] 5,10,40,70,250,430,1510,2590,9070,15550,54430,93310,326590,559870,1959550,3359230,11757310,20155390,70543870,120932350,423263230,725594110,2539579390,4353564670,15237476350 ⋆ Number of palindromes (in base 6) below 6 ^ n. ● a(n) = 7 * 6 ^ ((n - 1) / 2) - 2 (n odd), 2 * 6 ^ (n / 2) - 2 (n even). ●

▶ [A163305] 0,5,10,40,120,400,1280,4160,13440,43520,140800,455680,1474560,4771840,15441920,49971200,161710080,523304960,1693450240,5480120320,17734041600,57388564480,185713295360,600980848640,1944814878720 ⋆ Numerators of fractions in the approximation of the square root of 5 satisfying: a(n)= (a(n - 1) + c) / (a(n - 1) + 1); with c=5 and a(1)=0. Also product of the powers of two and five times the Fibonacci numbers. ● a(n) = 2 * a(n - 1) + 4 * a(n - 2). ●

▶ [A001692] 1,5,10,40,150,624,2580,11160,48750,217000,976248,4438920,20343700,93900240,435959820,2034504992,9536718750,44878791360,211927516500,1003867701480,4768371093720,22706531339280 ⋆ Number of irreducible polynomials of degree n over GF(5); dimensions of free Lie algebras. ● a(n) = Sum _{ d|n } mu(d) * 5 ^ (n / d) / n, for n>0. ●

▶ [A328605] 1,5,10,45,95,415,890,3855,8305,35885,77410,334245,721295,3113815,6720290,29009655,62611105,270270485,583326010,2518004445,5434634495,23459291215,50632463690,218561383455,471723701905 ⋆ Expansion of (1 + 5 * x - 2 * x ^ 2 - 15 * x ^ 3) / (1 - 12 * x ^ 2 + 25 * x ^ 4). ● a(n) = 12 * a(n - 2) - 25 * a(n - 4) for n>3. - _ Colin Barker _ , Oct 21 2019 ● a(2 * n) / a(2 * n - 1) ~ 2 * a(2 * n + 1) / a(2 * n) ~ 1 + sqrt(11). ●

▶ [A103971] 1,5,10,45,190,930,4660,24445,131190,719830,4013260,22684370,129661740,748252580,4353379560,25508284445,150392391590,891549228430,5310994644060,31775749689670,190860711108740,1150473009844380 ⋆ Expansion of (1 - sqrt(1 - 4x - 16x ^ 2)) / (2x). ● a(n) = Sum _{ k=0..n } 4 ^ (n - k) * C(k) * C(k + 1, n - k). ●

▶ [A270085] 1,5,10,46,55,151,168,356,377,689,714,1182,1211,1867,1900,2776,2813,3941,3982,5394,5439,7167,7216,9292,9345 ⋆ Partial sums of the number of active (ON,black) cells in n - th stage of growth of two - dimensional cellular automaton defined by "Rule 65", based on the 5 - celled von Neumann neighborhood. ● a(n) = 1 / 4 * (- 45 + (- 1) ^ n) + (35 * n) / 6 - (- 1 + (- 1) ^ n) * n ^ 2 + (2 * n ^ 3) / 3 for n>3. ● a(n) = (4 * n ^ 3 + 35 * n - 66) / 6 for n>3 and even. ● a(n) = (4 * n ^ 3 + 12 * n ^ 2 + 35 * n - 69) / 6 for n>3 and odd. ● a(n) = a(n - 1) + 3 * a(n - 2) - 3 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) + a(n - 6) - a(n - 7) for n>8. ●

▶ [A216390] 1,1,5,10,47,200,842,4698,28831 ⋆ Number of values of k for which sigma(k) is a permutation of decimal digits of k, for 10 ^ (n - 1) < k < 10 ^ n. ● a(n) = # { k in A115920 | 10 ^ (n - 1) < k < 10 ^ n } . - _ M. F. Hasler _ , Feb 24 2014 ●

▶ [A270089] 1,5,10,50,50,171,171,396,396,757,757,1286,1286,2015,2015,2976,2976,4201,4201,5722,5722,7571,7571,9780,9780 ⋆ Partial sums of the number of active (ON,black) cells in n - th stage of growth of two - dimensional cellular automaton defined by "Rule 73", based on the 5 - celled von Neumann neighborhood. ● a(n) = (- 87 - 9 * (- 1) ^ n + (22 - 24 * (- 1) ^ n) * n - 12 * (- 2 + (- 1) ^ n) * n ^ 2 + 8 * n ^ 3) / 12 for n>2. ● a(n) = (4 * n ^ 3 + 6 * n ^ 2 - n - 48) / 6 for n>2 and even. ● a(n) = (4 * n ^ 3 + 18 * n ^ 2 + 23 * n - 39) / 6 for n>2 and odd. ● a(n) = a(n - 1) + 3 * a(n - 2) - 3 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) + a(n - 6) - a(n - 7) for n>9. ●

▶ [A032088] 5,10,50,300,1500,7750,38750,195000,975000,4881250,24406250,122062500,610312500,3051718750,15258593750,76293750000,381468750000,1907347656250,9536738281250,47683710937500 ⋆ Number of reversible strings with n beads of 5 colors. If more than 1 bead, not palindromic. ● a(n) = 5 * a(n - 1) + 5 * a(n - 2) - 25 * a(n - 3) for n > 4. ● a(n) = 5 ^ (n / 2) * (5 ^ (n / 2) - 1) / 2 for n > 1 and even. ● a(n) = - 5 * (5 ^ (n / 2 - 1 / 2) - 5 ^ (n - 1)) / 2 for n > 1 and odd. ●

▶ [A081076] 5,10,50,325,2210,15130,103685,710650,4870850,33385285,228826130,1568397610,10749957125,73681302250,505019158610,3461452808005,23725150497410,162614600673850,1114577054219525,7639424778862810 ⋆ a(n) = Lucas(4n) + 3, or 5 * Fibonacci(2n - 1) * Fibonacci(2n + 1). ● a(n) = 8 * a(n - 1) - 8 * a(n - 2) + a(n - 3). ● a(n) = 3 + ((7 - 3 * sqrt(5)) / 2) ^ n + ((7 + 3 * sqrt(5)) / 2) ^ n. - _ Paolo P. Lava _ , Dec 01 2008 ● a(n) = Lucas(n) ^ 4 - 4 * (- 1) ^ n * Lucas(n) ^ 2 + 5. ●

▶ [A277247] 1,1,5,10,53,126,662,1716,8885,24310,124130,352716,1778966,5200300,25947612,77558760,383358645,1166803110,5719519850,17672631900,85990654178,269128937220,1300866635172,4116715363800,19780031677718 ⋆ a(n) = Sum _{ k=0..floor(n / 2) } binomial(n, k) ^ 2. ● a(n) = (binomial(2 * n, n) + (binomial(n, n / 2) * cos(Pi * n / 2)) ^ 2) / 2. ●

▶ [A270131] 1,5,10,54,54,175,175,400,400,761,761,1290,1290,2019,2019,2980,2980,4205,4205,5726,5726,7575,7575,9784,9784 ⋆ Partial sums of the number of active (ON,black) cells in n - th stage of growth of two - dimensional cellular automaton defined by "Rule 89", based on the 5 - celled von Neumann neighborhood. ● a(n) = 1 / 12 * (- 39 - 9 * (- 1) ^ n + (22 - 24 * (- 1) ^ n) * n - 12 * (- 2 + (- 1) ^ n) * n ^ 2 + 8 * n ^ 3) for n>2. ● a(n) = (4 * n ^ 3 + 6 * n ^ 2 - n - 24) / 6 for n>2 and even. ● a(n) = (4 * n ^ 3 + 18 * n ^ 2 + 23 * n - 15) / 6 for n>2 and odd. ● a(n) = a(n - 1) + 3 * a(n - 2) - 3 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) + a(n - 6) - a(n - 7) for n>9. ●

▶ [A328332] 1,5,10,60,110,610,1110,6110,11110,61110,111110,611110,1111110,6111110,11111110,61111110,111111110,611111110,1111111110,6111111110,11111111110,61111111110,111111111110,611111111110,1111111111110 ⋆ Expansion of (1 + 4 * x - 5 * x ^ 2 + 10 * x ^ 3) / ((1 - x) * (1 - 10 * x ^ 2)). ● a(n) = a(n - 1) + 10 * a(n - 2) - 10 * a(n - 3). - _ Wesley Ivan Hurt _ , Aug 25 2022 ●

▶ [A358491] 1,1,5,10,74,216,2316,8688,128880,581760,11406240,59667840,1482693120,8782905600,266800262400,1762116249600,63536485017600,462613126348800,19342202181120000,153884245616640000,7325057766297600000 ⋆ a(n) = n! * Sum _{ m=0..floor((n - 1) / 2) } 1 / (n - m) / binomial(n - m - 1,m). ● a(n) = n! * Sum _{ i=1..n } (F(i) / (n - i + 1)) * (2 * (- 1) ^ (i + 1) + (- 1) ^ n), F(n) - Fibonacci numbers. ●

▶ [A325583] 1,5,10,80,568,4220,38692,369602,3829789,42483419,498335248,6168187340,80190252964,1090909725218,15487454931220,228882342189464,3513421961681770,55912182446264327,920864428915749175,15671937126462121502,275216319427229910676,4980676147299194153192,92778491004412178347075,1776939414715404683846648,34955882406696210297175882 ⋆ G.f. A(x) satisfies: 1 = Sum _{ n>=0 } x ^ n * ((1 + 3 * x) ^ n - A(x)) ^ (n + 1), where A(0) = 0. ● a(n) = (- 1) ^ n (mod 3) for n >= 0. ●

▶ [A227146] 5,11,13,14,19,29,35,37,38,43,53,59,61,62,67,77,83,85,86,91,101,107,109,110,115 ⋆ Numbers that are congruent to { 5, 11, 13, 14, 19 } modulo 24. ● a(n) = a(n - 1) + a(n - 5) - a(n - 6) for n > 6. ● a(n) = (120 * n - 50 - (n mod 5) + 19 * ((n + 1) mod 5) + 14 * ((n + 2) mod 5) - 6 * ((n + 3) mod 5) - 26 * ((n + 4) mod 5)) / 25. (End) ●

▶ [A206547] 1,5,11,13,17,19,23,25,29,31,37,41,43,47,53,55,59,61,65,67,71,73,79,83,85 ⋆ Positive odd numbers relatively prime to 21. ● a(n) = a(n - 12) + 42, n >=13. ● a(n) = a(n - 1) + a(n - 12) - a(n - 13), n>=13, with a(0)= - 1. ● a(n) = 2 * n - 1 + 2 * sum(F21[j] * floor((n + (j - 1)) / 12),j=1..12), with F21=[1,2,0,1,0,1,0,1,0,2,1,0], n>=1. For n=0 this becomes - 1, but the following o.g.f. has a(0)=0 if it starts with x ^ 0. ●

▶ [A230288] 0,5,11,13,17,26,35,44,53,62,71,79,97,105,111,113,117,125,131,133,137,145,151,153,157 ⋆ Sum of two digits touching a comma = difference between the two terms separated by that comma; start with a(0)=0, a(1)=5. If there is a choice, choose the smaller value for a(n). ● a(n + 1) - a(n) = lsd(a(n)) + msd(a(n + 1)), where ●

▶ [A206581] 5,11,13,19,23,37,43,47,61,67,73,79,103,151,157,163,191,193,211,223,271,277,283,313,331 ⋆ Odd primes p such that p + 1 is a prime times a power of two. ● a(n) >> n log ^ 2 n is implicit in Broughan & Qizhi, see A192869. - _ Charles R Greathouse IV _ , Sep 15 2015 ●

► [A269819] 5,11,13,19,29,35,37,43,53,59,61,67,77,83,85,91,101,107,109,115,125,131,133,139,149 ⋆ Numbers that are congruent to { 5, 11, 13, 19 } mod 24. • a(n) = a(n - 4) + 24. • a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4) for n>4. • a(n) = 6 * n - 3 - (1 - i) * i ^ (- n) - (1 + i) * i ^ n for i=sqrt(- 1). (End) •

► [A190620] 5,11,13,23,27,29,47,55,59,61,95,111,119,123,125,191,223,239,247,251,253,383,447,479,495 ⋆ Odd numbers with a single zero in their binary expansion. • a((n - 1) * (n - 2) / 2 - (i - 1)) = 2 ^ n - 2 ^ i - 1 for n >= 3 and 1 <= i <= n - 2 (after _ Robert Israel _ in A357773). • a(n) = 4 * 2 ^ k(n) - 2 ^ (1 - n + (k(n) + k(n) ^ 2) / 2) - 1, where k is the Kruskal - Macaulay function A123578. •

► [A228706] 1,1,1,5,11,14,18,30,45,55,67,91,119,140,164,204,249,285,325,385,451,506,566,650,741 ⋆ Expansion of (1 - 3 * x + 5 * x ^ 2 - 3 * x ^ 3 + x ^ 4) / ((1 - x) ^ 4 * (1 + x ^ 2) ^ 2). • a(n) = (n + 2) * (2 * (n + 1) * (n + 3) + 9 * (1 + (- 1) ^ n) * i ^ (n * (n + 1))) / 48, where i=sqrt(- 1). [_ Bruno Berselli _ , Sep 07 2013] •

► [A284396] 5,11,14,20,26,29,35,38,44,50,53,59,65,68,74,77,83,89,92,98,101,107,113,116,122 ⋆ Positions of 2 in A284394. • a(n) = 3 * floor(n * phi) + 2. This follows from Theorem 29 in Allouche and Dekking, since the overlap word 10101 that contains 101 does not occur in the Fibonacci word. Note that v = 3 * phi. - _ Michel Dekking _ , Oct 17 2018 •

► [A217585] 0,1,5,11,15,19,23,27,31,35,39,43,47,51,55,59,63,67,71,75,79,83,87,91,95 ⋆ Number of triangles with endpoints of the form (x,x ^ 2), x in {- n,...,n } , having at least one angle of 45 degrees. • a(n) = 4n - 1 for n > 2. • a(n) = 2 * a(n - 1) - a(n - 2) for n > 4. •

► [A314021] 1,5,11,15,20,24,29,33,39,44,49,55,59,64,68,73,77,83,88,93,99,103,108,112,117 ⋆ Coordination sequence Gal.5.84.4 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. • a(n) = a(n - 1) + a(n - 9) - a(n - 10) for n > 10. •

► [A187715] 1,5,11,15,21,25,31,35,41,45,51,55,61,65,71,75,81,85,91,95,101,105,111,115,121 ⋆ a(n) = 5 * n - (9 + (- 1) ^ n) / 2. • a(n) = a(n - 1) + 4 if n is even, a(n) = a(n - 1) + 6 if n is odd. • a(n) = 2 * a(n - 1) - a(n - 2) - 2 * (- 1) ^ n. • a(n) = 5 * (n - 1) bitwise - OR 1. - _ Jon Maiga _ , Nov 24 2018 •

► [A314054] 1,5,11,15,21,26,32,38,43,49,53,59,64,69,75,79,85,90,96,102,107,113,117,123,128 ⋆ Coordination sequence Gal.4.142.2 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. • a(n) = 2 * a(n - 1) - a(n - 2) - a(n - 4) + 2 * a(n - 5) - a(n - 6) - a(n - 8) + 2 * a(n - 9) - a(n - 10) for n > 10. •

► [A314056] 1,5,11,15,21,27,31,37,42,47,53,57,63,69,73,79,84,89,95,99,105,111,115,121,126 ⋆ Coordination sequence Gal.4.135.3 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. • a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - 2 * a(n - 4) + 2 * a(n - 5) - 2 * a(n - 6) + 2 * a(n - 7) - a(n - 8) for n > 8. •

► [A314068] 1,5,11,15,22,27,31,37,42,49,53,57,64,69,75,79,84,91,95,101,106,111,117,121,128 ⋆ Coordination sequence Gal.3.55.2 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. • a(n) = a(n - 1) - a(n - 2) + a(n - 3) + a(n - 5) - a(n - 6) + a(n - 7) - a(n - 8) for n > 8. •

► [A314070] 1,5,11,15,22,27,31,38,42,48,54,58,65,69,74,81,85,91,96,101,107,111,118,123,127 ⋆ Coordination sequence Gal.6.657.2 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. • a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 3 * a(n - 3) - 4 * a(n - 4) + 4 * a(n - 5) - 4 * a(n - 6) + 4 * a(n - 7) - 4 * a(n - 8) + 3 * a(n - 9) - 2 * a(n - 10) + 2 * a(n - 11) - a(n - 12) for n > 12. •

► [A276037] 1,5,11,15,51,55,111,115,151,155,511,515,551,555,1111,1115,1151,1155,1511,1515,1551,1555,5111,5115,5151 ⋆ Numbers using only digits 1 and 5. • a(2n + 1) = 10 a(n) + 1. • a(2n + 2) = 10 a(n) + 5. •

► [A314088] 1,5,11,16,20,24,28,33,39,44,49,55,60,64,68,72,77,83,88,93,99,104,108,112,116 ⋆ Coordination sequence Gal.5.111.5 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. • a(n) = a(n - 1) + a(n - 9) - a(n - 10) for n > 10. •

► [A314108] 1,5,11,16,21,26,30,34,39,44,49,55,60,65,71,76,81,86,90,94,99,104,109,115,120 ⋆ Coordination sequence Gal.6.198.6 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. • a(n) = 2 * a(n - 1) - a(n - 2) - a(n - 4) + 2 * a(n - 5) - a(n - 6) - a(n - 8) + 2 * a(n - 9) - a(n - 10) for n > 10. •

► [A219529] 1,5,11,16,21,27,32,37,43,48,53,59,64,69,75,80,85,91,96,101,107,112,117,123,128 ⋆ Coordination sequence for 3.3.4.3.4 Archimedean tiling. • a(n) = (16 * n - ChebyshevU(n - 1, - 1 / 2)) / 3 for n>0 with a(0)=1. •

► [A314159] 1,5,11,16,22,28,33,38,44,50,55,61,66,71,77,82,88,94,99,104,110,116,121,127,132 ⋆ Coordination sequence Gal.6.624.3 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. • a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - 2 * a(n - 4) + 2 * a(n - 5) - 2 * a(n - 6) + 2 * a(n - 7) - 2 * a(n - 8) + 2 * a(n - 9) - 2 * a(n - 10) + 2 * a(n - 11) - a(n - 12) for n>12. •

► [A314161] 1,5,11,16,22,28,33,39,44,49,55,60,66,72,77,83,88,93,99,104,110,116,121,127,132 ⋆ Coordination sequence Gal.4.140.2 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. • a(n) = 2 * a(n - 1) - a(n - 2) - a(n - 4) + 2 * a(n - 5) - a(n - 6) for n > 6. •

► [A022136] 5,11,16,27,43,70,113,183,296,479,775,1254,2029,3283,5312,8595,13907,22502,36409,58911,95320,154231,249551,403782,653333 ⋆ Fibonacci sequence beginning 5, 11. • a(n) = 2 * Lucas(n - 1) + 7 * Fibonacci(n + 1). - _ Lechoslaw Ratajczak _ , May 01 2017 • a(n) = Fibonacci(n + 6) - Fibonacci(n + 1) - Lucas(n). - _ Greg Dresden _ and _ Aamen Muharram _ , Jul 22 2022 •

► [A041117] 1,5,11,16,27,205,232,437,1106,5967,96578,488857,1074292,1563149,2637441,20025236,22662677,42687913,108038503,582880428,9434125351,47753507183,104941139717,152694646900,257635786617 ⋆ Denominators of continued fraction convergents to sqrt(67). • a(n) = 97684 * a(n - 10) - a(n - 20). - _ Vincenzo Librandi _ , Dec 11 2013 •

► [A042121] 1,5,11,16,75,91,257,1376,66305,332901,732107,1065008,4992139,6057147,17106433,91589312,4413393409,22158556357,48730506123,70889062480,332286756043,403175818523,1138638393089,6096367783968,293764292023553 ⋆ Denominators of continued fraction convergents to sqrt(585). • a(n) = 66562 * a(n - 8) - a(n - 16) for n>15. - _ Vincenzo Librandi _ , Jan 15 2014 •

► [A314203] 1,5,11,17,22,26,30,35,41,47,52,57,63,69,74,78,82,87,93,99,104,109,115,121,126 ⋆ Coordination sequence Gal.5.88.5 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. • a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - 2 * a(n - 4) + 2 * a(n - 5) - 2 * a(n - 6) + 2 * a(n - 7) - 2 * a(n - 8) + 2 * a(n - 9) - a(n - 10) for n > 10. •

► [A301710] 1,5,11,17,22,27,33,39,44,49,55,61,66,71,77,83,88,93,99,105,110,115,121,127,132 ⋆ Coordination sequence for node of type V2 in "krc" 2 - D tiling (or net). • a(n) = ((- i) ^ (1 + n) + i ^ (1 + n) + 22 * n) / 4 for n>0, where i=sqrt(- 1) (conjectured). - _ Colin Barker _ , Apr 07 2018 •

► [A187387] 5,11,17,22,28,34,39,45,51,56,62,68,73,79,85,90,96,102,108,113,119,125,130,136,142 ⋆ Floor(r * n), where r=1 + sqrt(6) + sqrt(5); complement of A187388. • a(n)=floor(r * n), where r=1 + sqrt(6) + sqrt(5). •

► [A190334] 5,11,17,22,28,34,40,45,51,57,63,68,74,80,85,91,97,103,108,114,120,126,131,137,143 ⋆ a(n) = n + floor(n * r / t) + floor(n * s / t) where r=1, s=sqrt(3), t=1 / s. • a(n) = 4 * n + floor(n * sqrt(3)). •

► [A314228] 1,5,11,17,23,27,31,38,45,51,55,59,65,71,78,83,87,93,99,105,109,114,121,127,133 ⋆ Coordination sequence Gal.6.650.3 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. • a(n) = a(n - 5) + a(n - 7) - a(n - 12) for n > 12. •

► [A277571] 5,11,17,23,29,30,35,41,47,53,59,65,66,71,77,83,89,95,101,102,107,113,119,125,131 ⋆ Numbers k such that k / 6 ^ m == 5 (mod 6), where 6 ^ m is the greatest power of 6 that divides k. • a(n) = 5n + O(log n). - _ Charles R Greathouse IV _ , Nov 03 2016 •

► [A059538] 5,11,17,23,29,35,41,47,53,59,65,71,77,83,89,95,101,107,113,118,124,130,136,142,148 ⋆ Beatty sequence for zeta(3) / (zeta(3) - 1). • a(n) = floor(n * zeta(3) / (zeta(3) - 1)). - _ Michel Marcus _ , Jan 05 2015 •

► [A016969] 5,11,17,23,29,35,41,47,53,59,65,71,77,83,89,95,101,107,113,119,125,131,137,143,149 ⋆ a(n) = 6 * n + 5. • a(0) = 5; for n > 0, a(n) = a(n - 1) + 6. • a(n) = floor((12n - 1) / 2) with offset 1..a(1)=5. - _ Gary Detlefs _ , Mar 07 2010 • a(n) = 4 * (3 * n + 1) - a(n - 1) (with a(0) = 5). - _ Vincenzo Librandi _ , Nov 20 2010 • a(n) = floor(1 / (1 / sin(1 / n) - n)). - _ Clark Kimberling _ , Feb 19 2010 • a(n) = 3 * Sum _{ k = 0..n } binomial(6 * n + 5, 6 * k + 2) * Bernoulli(6 * k + 2). - _ Michel Marcus _ , Jan 11 2016 •

► [A023489] 5,11,17,25,38,57,87,135,213,337,537,860,1382,2226,3591,5800,9372,15151,24501,39629,64106,103710,167790,271473,439235 ⋆ Sum of n - th Lucas number greater than 3 and n - th number that is 1 or is not a Fibonacci number. • a(n) = phi ^ (n + 2) + n + log _ phi(n) + O(1), where phi = 1 / 2 + sqrt(5) / 2 is the golden ratio. - _ Charles R Greathouse IV _ , Jan 17 2012 •

► [A184822] 5,11,18,24,30,37,42,49,55,61,68,74,79,86,92,99,105,111,117,123,130,136,142,149,154 ⋆ a(n) = n + floor(n * t) + floor(n * t ^ 2), where t is the tribonacci constant. • a(n) = n + floor(n * q / p) + floor(n * r / p), where p=t, q=t ^ 2, r=t ^ 3, and t is the tribonacci constant (see Clark Kimberling's formula in A184812). •

► [A056000] 0,5,11,18,26,35,45,56,68,81,95,110,126,143,161,180,200,221,243,266,290,315,341,368,396 ⋆ a(n) = n * (n + 9) / 2. • a(n) = binomial(n,2) - 4 * n, n >= 9. - _ Zerinvary Lajos _ , Nov 25 2006 • a(n) = n + a(n - 1) + 4. - _ Vincenzo Librandi _ , Aug 07 2010 • a(n) = Sum _{ k=1..n } (k + 4). - _ Gary Detlefs _ , Aug 10 2010 • a(n) = 5n - floor(n / 2) + floor(n ^ 2 / 2). - _ Wesley Ivan Hurt _ , Jun 15 2013 •

► [A240438] 0,1,5,11,18,28,40,53,69,87,106,128,152,177,205,235,266,300,336,373,413,455,498,544,592 ⋆ Greatest minimal difference between numbers of adjacent cells in a regular hexagonal honeycomb of order n with cells numbered from 1 through the total number of cells, the order n corresponding to the number of cells on one side of the honeycomb. • a(n) = n * (n - 1) - floor((n + 1) / 3). • a(n + 3) = a(n) + 6 * n + 5. - _ Paul Curtz _ , Nov 11 2014 •

► [A365417] 1,5,11,18,28,42,62,86,110,133,159,193,235,279,319,356,398,452,516,580,636,687,745,819,905 ⋆ Partial sums of A265036. • a(n) = 5 * a(n - 1) - 12 * a(n - 2) + 18 * a(n - 3) - 18 * a(n - 4) + 12 * a(n - 5) - 5 * a(n - 6) + a(n - 7) for n > 10. •

► [A089270] 1,5,11,19,29,31,41,55,59,61,71,79,89,95,101,109,121,131,139,145,149,151,155,179,181 ⋆ Positive numbers represented by the integer binary quadratic form x ^ 2 + x * y - y ^ 2 with x and y relatively prime. • a(n) = x ^ 2 + x * y - y ^ 2 with relatively prime integers x and y (proper solutions of the Diophantine equation). •

► [A028387] 1,5,11,19,29,41,55,71,89,109,131,155,181,209,239,271,305,341,379,419,461,505,551,599,649 ⋆ a(n) = n + (n + 1) ^ 2. • a(0) = 1, a(1) = 5, a(n) = (n + 1) * a(n - 1) - (n + 2) * a(n - 2) for n > 1. - _ Gerald McGarvey _ , Sep 24 2004 • a(n) = (n + 2 + 1 / phi) * (n + 2 - phi); where phi = 1.618033989... Example: a(3) = 19 = (5 + .6180339...) * (3.381966...). Cf. next to leftmost column in A162997 array. - _ Gary W. Adamson _ , Jul 23 2009 • a(n) = a(n - 1) + 2 * (n + 1), with n > 0, a(0) = 1. - _ Vincenzo Librandi _ , Nov 18 2010 • a(n) = lower right term in M ^ 2, M = the 2 X 2 matrix [1, n; 1, (n + 1)]. - _ Gary W. Adamson _ , Jun 29 2011 •

► [A352795] 1,1,1,1,5,11,19,29,55,113,223,409,747,1405,2691,5109,9587,17965,33851,63973,120731,227365,428091,806789,1521291 ⋆ Number of ways to tile a 4 X n strip with squares and L - shaped heptominoes with legs of equal length. • a(n) = a(n - 1) + 4 * a(n - 4) + 2 * a(n - 5) + 2 * a(n - 6) + 2 * a(n - 7). •

► [A368898] 1,1,1,1,5,11,19,29,105,298,671,1299,3997,12468,33083,75781,220625,708867,2086183,5412778,15756741,51093316,160523859,457283931,1365001273 ⋆ a(n) = Sum _{ k=0..floor(n / 4) } n ^ k * binomial(n - 3 * k,k). • a(n) = [x ^ n] 1 / (1 - x - n * x ^ 4). • a(n) = hypergeom([(1 - n) / 4, (2 - n) / 4, (3 - n) / 4, - n / 4], [(1 - n) / 3, (2 - n) / 3, - n / 3], - 256 * n / 27). - _ Stefano Spezia _ , Jan 09 2024 •

► [A274946] 0,5,11,19,30,46,70,106,160,241,363,547,824,1241,1869,2815,4240,6386,9618,14486,21818,32861,49493,74543,112272 ⋆ Boyd's Pisot - like sequence F(0,5,11). ● a(n) = a(n - 1) + a(n - 3) + a(n - 5) - a(n - 6) for n>5. ●
► [A371668] 0,1,1,1,5,11,19,43,93,181,371,771,1547,3121,6357,12821,25805,52123,105031,211243,425215,855457,1719257,3455153,6942387 ⋆ Number of binary necklaces of length n which have more 00 than 01 substrings. ● a(n) = (8 * (n - 7) * a(n - 7) + 4 * (29 - 5 * n) * a(n - 6) + (26 * n - 110) * a(n - 5) + (77 - 23 * n) * a(n - 4) + (15 * n - 46) * a(n - 3) + (22 - 10 * n) * a(n - 2) + 5 * (n - 1) * a(n - 1)) / n for n>=7. ●
► [A032527] 0,1,5,11,20,31,45,61,80,101,125,151,180,211,245,281,320,361,405,451,500,551,605,661,720 ⋆ Concentric pentagonal numbers: floor(5 * n ^ 2 / 4). ● a(n) = 5 * n ^ 2 / 4 + ((- 1) ^ n - 1) / 8. - _ Omar E. Pol _ , Sep 28 2011 ● a(n) = a(- n); a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4) for n>0, a(- 1) = 1, a(0) = 0, a(1) = 1, a(2) = 5, n >= 3. (See the _ Bruno Berselli _ recurrence and a general comment for primes 1 (mod 4) under A227541). - _ Wolfdieter Lang _ , Aug 08 2013 ● a(n) = Sum _{ j=1..n } Sum { i=1..n } ceiling((i + j - n + 1) / 2). - _ Wesley Ivan Hurt _ , Mar 12 2015 ●
► [A212978] 1,5,11,20,32,46,63,83,105,130,158,188,221,257,295,336,380,426,475,527,581,638,698,760,825 ⋆ Number of (w,x,y) with all terms in { 0,...,n } and range = 2 * n - w - x. ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) - 2 * a(n - 4) + a(n - 5). ●
► [A080957] 5,11,20,34,55,85,126,180,249,335,440,566,715,889,1090,1320,1581,1875,2204,2570,2975,3421,3910,4444,5025 ⋆ Expansion of (5 - 9 * x + 6 * x ^ 2) / (1 - x) ^ 4. ● a(n) = 3!(C(n + 1, 1) - C(n + 2, 2) / 2 + C(n + 3, 3) / 3) = (2n ^ 3 + 3n ^ 2 + 31n + 30) / 6. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4), n>3. - _ Vincenzo Librandi _ , Sep 07 2015 ●
► [A118375] 1,5,11,20,35,57,85,120,165,221,287,364,455,561,681,816,969,1141,1331,1540,1771,2025,2301,2600,2925 ⋆ Minimum over all permutations b of 1..n of sum b(i) * b ^{- 1 } (i). ● a(n) = 4 * a(n - 1) - 7 * a(n - 2) + 8 * a(n - 3) - 7 * a(n - 4) + 4 * a(n - 5) - a(n - 6). - _ Vincenzo Librandi _ , Jun 27 2012 ●
► [A164096] 5,11,21,33,53,77,117,165,245,341,501,693,1013,1397,2037,2805,4085,5621,8181,11253,16373,22517,32757,45045,65525 ⋆ Partial sums of A164095. ● a(n) = 2 * a(n - 2) + 11 for n > 2; a(1) = 5, a(2) = 11. ● a(n) = (27 - 5 * (- 1) ^ n) * 2 ^ (1 / 4 * (2 * n - 1 + (- 1) ^ n)) / 2 - 11. ●
► [A298785] 1,5,11,21,35,51,71,95,121,151,185,221,261,305,351,401,455,511,571,635,701,771,845,921,1001 ⋆ Partial sums of A298784. ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) - 2 * a(n - 4) + a(n - 5) for n>4. - _ Colin Barker _ , Jan 27 2018 ●
► [A166863] 1,5,11,21,37,63,105,173,283,461,749,1215,1969,3189,5163,8357,13525,21887,35417,57309,92731,150045,242781,392831,635617 ⋆ a(1)= 1; a(2)= 5; thereafter a(n)= a(n - 1) + a(n - 2) + 5. ● a(n) = 2 * a(n - 1) - a(n - 3). ●
► [A163704] 1,5,11,21,38,66,112,187,309,507,828,1348,2190,3553,5759,9329,15106,24454,39580,64055,103657,167735,271416,439176,710618 ⋆ Number of n X 2 binary arrays with all 1s connected, a path of 1s from left column to lower right corner, and no 1 having more than two 1s adjacent. ● a(n) = - 4 + (2 ^ (- n) * ((1 - sqrt(5)) ^ n * (- 5 + 2 * sqrt(5)) + (1 + sqrt(5)) ^ n * (5 + 2 * sqrt(5)))) / sqrt(5) - n for n>1. ●
► [A131898] 1,5,11,21,39,73,139,269,527,1041,2067,4117,8215,16409,32795,65565,131103,262177,524323,1048613,2097191,4194345,8388651,16777261,33554479 ⋆ a(n) = 2 ^ (n + 1) + 2 * n - 1. ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 2 * a(n - 3). - _ Vincenzo Librandi _ , Jul 05 2012 ●
► [A168642] 1,5,11,21,43,85,171,341,683,1365,2731,5461,10923,21845,43691,87381,174763,349525,699051,1398101,2796203,5592405,11184811,22369621,44739243 ⋆ a(n) = (8 * 2 ^ n + (- 1) ^ n) / 3 for n > 0; a(0) = 1. ● a(n) = a(n - 1) + 2 * a(n - 2) for n > 2; a(0) = 1, a(1) = 5, a(2) = 11. ●
► [A234597] 5,11,21,48,107,229,501,1099,2394,5225,11417,24923,54409,118808,259403,566361,1236597,2699975,5895058,12871185,28102765,61359099,133970477,292509056,638659595 ⋆ Number of Weyl group elements, not containing an s _ 1 factor, which contribute nonzero terms to Kostant's weight multiplicity formula when computing the multiplicity of the zero - weight in the adjoint representation for the Lie algebra of type D and rank n. ● a(n) = a(n - 1) + a(n - 2) + 3 * a(n - 3) + a(n - 4). G.f.: - x ^ 4 * (x ^ 3 + 5 * x ^ 2 + 6 * x + 5) / (x ^ 4 + 3 * x ^ 3 + x ^ 2 + x - 1). - _ Colin Barker _ , Dec 30 2013 ●
► [A184552] 0,5,11,22,28,33,39,50,56,61,67,78,84,89,95,106,112,117,123,134,140,145,151,162,168 ⋆ Super - birthdays (falling on the same weekday), version 4 (birth in the year preceding a February 29). ● a(n) = + 1 * a(n - 1) + 1 * a(n - 4) - 1 * a(n - 5). (End) ●
► [A222548] 1,5,11,22,32,52,66,92,115,147,169,219,245,289,333,390,424,496,534,612,672,740,786,898,957 ⋆ a(n) = Sum _{ k=1..n } floor(n / k) ^ 2. ● a(n) = zeta(2) * n ^ 2 + O(n log n). ● a(n) = Sum _{ d=1..n } (2 * d - 1) * floor(n / d). [Uspensky and Heaslet] - _ Michael Somos _ , Feb 16 2020 ● a(n) = Sum _{ k =1..n } Sum _{ d|k } floor(n / d). - _ Ridouane Oudra _ , Jul 16 2020 ● a(n) = Sum _{ i=1..n } Sum _{ j=1..n } tau(gcd(i,j)). - _ Ridouane Oudra _ , Nov 23 2021 ●
► [A024921] 1,5,11,22,33,52,67,93,117,149,174,219,250,293,339,392,434,500,546,619,680,748,804,903,969 ⋆ a(n) = Sum _{ k=1..n } floor((n / k) * floor(n / k)). ● a(n) = n ^ 2 * Pi ^ 2 / 6 + O(n * log n) as n - > infinity. - _ Robert Israel _ , Aug 05 2016 ●
► [A192761] 0,1,5,11,22,40,70,119,199,329,540,882,1436,2333,3785,6135,9938,16092,26050,42163,68235,110421,178680,289126,467832 ⋆ Coefficient of x in the reduction by x ^ 2 - >x + 1 of the polynomial p(n,x) defined below in Comments. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - a(n - 3) + a(n - 4). G.f.: x * (2 * x ^ 2 - 2 * x - 1) / ((x - 1) ^ 2 * (x ^ 2 + x - 1)). [_ Colin Barker _ , Dec 08 2012] ●
► [A143127] 1,5,11,23,33,57,71,103,130,170,192,264,290,346,406,486,520,628,666,786,870,958,1004,1196,1271 ⋆ a(n) = Sum _{ k=1..n } k * d(k) where d(k) is the number of divisors of k. ● a(n) = Sum _{ k=1..n } k / 2 * floor(n / k) * floor(1 + n / k). - _ Daniel Suteu _ , May 28 2018 ● a(n) = Sum _{ i=1..floor(sqrt(n)) } i * floor(n / i) * (1 + floor(n / i)) - [floor(sqrt(n)) * (1 + floor(sqrt(n))) / 2] ^ 2; ● a(n) = Sum _{ k=1..n } b(n,k), with b(n, k) = Sum _{ j=1..floor(n / k) } j * k = floor(n / k) * floor(n / k) + 1) / 2. See the formula by _ Daniel Suteu _ above. - _ Wolfdieter Lang _ , Oct 18 2021 ●
► [A210731] 0,0,5,11,23,42,74,126,211,349,573,936,1524,2476,4017,6511,10547,17078,27646,44746,72415,117185,189625,306836,496488 ⋆ a(n) = a(n - 1) + a(n - 2) + n + 3 with n>1, a(0) = a(1) = 0. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - a(n - 3) + a(n - 4). ● a(n) = Fibonacci(n + 3) + 4 * Fibonacci(n + 1) - (n + 6). - _ G. C. Greubel _ , Jul 09 2019 ●
► [A192954] 1,1,5,11,23,43,77,133,225,375,619,1015,1657,2697,4381,7107,11519,18659,30213,48909,79161,128111,207315,335471,542833 ⋆ Constant term of the reduction by x ^ 2 - > x + 1 of the polynomial p(n,x) defined at Comments. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - a(n - 3) + a(n - 4). ● a(n) = 2 * Lucas(n + 2) - (2 * n + 5). - _ G. C. Greubel _ , Jul 12 2019 ●
► [A052940] 1,5,11,23,47,95,191,383,767,1535,3071,6143,12287,24575,49151,98303,196607,393215,786431,1572863,3145727,6291455,12582911,25165823,50331647 ⋆ a(0) = 1; a(n) = 3 * 2 ^ n - 1, for n > 0. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2). ●
► [A296911] 1,5,11,25,39,61,83,113,143,181,219,265,311,365,419,481,543,613,683,761,839,925,1011,1105,1199 ⋆ Partial sums of A296910. ● a(n) = 2 * n ^ 2 + 2 * n - (- 1) ^ n for n >= 1. ●
► [A084640] 0,1,5,11,25,51,105,211,425,851,1705,3411,6825,13651,27305,54611,109225,218451,436905,873811,1747625,3495251,6990505,13981011,27962025 ⋆ Generalized Jacobsthal numbers. ● a(n) = a(n - 1) + 2a(n - 2) + 4, a(0)=0, a(1)=1. ● a(n) = (5 * 2 ^ n + (- 1) ^ n - 6) / 3. ● a(n + 1) - 2 * a(n) = period 2: repeat 1, 3. - _ Paul Curtz _ , Apr 03 2008 ● a(n) = 2 * a(n - 1) + a(n - 2) - 2 * a(n - 3), a(0)=0, a(1)=1, a(2)=5. Observed by G. Detlefs. See the W. Lang link. - _ Wolfdieter Lang _ , Oct 18 2010 ●
► [A274681] 0,5,11,26,38,63,81,116,140,185,215,270,306,371,413,488,536,621,675,770,830,935,1001,1116,1188 ⋆ Numbers k such that 4 * k + 1 is a triangular number. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n>5. ● a(n) = (1 - (- 1) ^ n + 2 * (- 4 + (- 1) ^ n) * n + 8 * n ^ 2) / 4. ● a(n) = (4 * n ^ 2 - 3 * n) / 2 for n even, a(n) = (4 * n ^ 2 - 5 * n + 1) / 2 for n odd. ●
► [A287350] 5,11,26,63,155,386,971,2463,6290,16151,41651,107778,279635,727031,1893266,4936383,12883115,33647426,87928091,229874703,601171730,1572591911,4114506851,10766734338,28177307555 ⋆ Number of independent vertex sets and vertex covers in the n - gear graph. ● a(n) = 2 ^ n + Lucas(2 * n). ● a(n) = 5 * a(n - 1) - 7 * a(n - 2) + 2 * a(n - 3) for n>3. ● a(n) = 2 ^ (- n) * (4 ^ n + (3 - sqrt(5)) ^ n + (3 + sqrt(5)) ^ n). ●
► [A048655] 1,5,11,27,65,157,379,915,2209,5333,12875,31083,75041,181165,437371,1055907,2549185,6154277,14857739,35869755,86597249,209064253,504725755,1218515763,2941757281 ⋆ Generalized Pellian with second term equal to 5. ● a(n) = 2 * a(n - 1) + a(n - 2); a(0)=1, a(1)=5. ● a(n) = ((4 + sqrt(2))(1 + sqrt(2)) ^ n - (4 - sqrt(2))(1 - sqrt(2)) ^ n) / 2 * sqrt(2). ● a(n) = P(n) - 3 * P(n + 1) + 2 * P(n + 2). - _ Creighton Dement _ , Jan 18 2005 ● a(n) = 3 * Pell(n) + Pell(n + 1), where Pell = A000129. - _ Vladimir Reshetnikov _ , Sep 27 2016 ●
► [A041671] 1,1,5,11,27,497,1021,2539,11177,13716,504953,518669,2579629,5677927,13935483,256516621,526968725,1310454071,5768785009,7079239080,26062139189,267700630969,1331423915765,2930548462499,7192520840763 ⋆ Denominators of continued fraction convergents to sqrt(354). ● a(n) = 516130 * a(n - 10) - a(n - 20) for n>19. - _ Vincenzo Librandi _ , Dec 22 2013 ●
► [A059508] 5,11,29,79,216,590,1609,4381,11911,32339,87690,237496,642509,1736399,4688081,12645655,34080924,91775426,246948241,663999649,1784138875,4790751131,12856028814,34478744044,92416515221 ⋆ Transform of A059502 applied to sequence 5,6,7,... ● a(n) = 6 * a(n - 1) - 11 * a(n - 2) + 6 * a(n - 3) - a(n - 4). ● a(n) = ((3 - n) * Fibonacci(2 * n) + (20 + 3 * n) * Fibonacci(2 * n - 1)) / 5. - _ G. C. Greubel _ , Sep 10 2017 ●
► [A114688] 1,5,11,30,71,175,421,1020,2461,5945,14351,34650,83651,201955,487561,1177080,2841721,6860525,16562771,39986070,96534911,233055895,562646701,1358349300,3279345301 ⋆ Expansion of (1 + 3 * x - x ^ 2) / ((1 - x ^ 2) * (1 - 2 * x - x ^ 2)); a Pellian - related sequence. ● a(0)=1, a(1)=5, a(2)=11, a(3)=30, a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4). - _ Harvey P. Dale _ , Dec 18 2012 ● a(n) = (- 6 - 6 * (- 1) ^ n + 5 * sqrt(2) * ((1 + sqrt(2)) ^ (1 + n) - (1 - sqrt(2)) ^ (1 + n))) / 8. - _ Colin Barker _ , May 26 2016 ●
► [A023259] 5,11,31,59,61,71,149,179,269,439,499,541,571,719,761,1049,1091,1181,1319,1451,1489,1579,1601,1831,1861 ⋆ Primes that remain prime through 2 iterations of function f(x) = 7x + 6. ● a(n) = 1 or 9 (mod 10) for n > 1. - _ John Cerkan _ , Sep 14 2016 ●
► [A038580] 5,11,31,59,127,179,277,331,431,599,709,919,1063,1153,1297,1523,1787,1847,2221,2381,2477,2749,3001,3259,3637 ⋆ Primes with indices that are primes with prime indices. ● a(n) = prime(prime(prime(n))). ●
► [A077446] 1,5,11,31,65,181,379,1055,2209,6149,12875,35839,75041,208885,437371,1217471,2549185,7095941,14857739,41358175,86597249,241053109,504725755,1404960479,2941757281 ⋆ Numbers n such that 2 * n ^ 2 + 14 is a square. ● a(2 * k - 1) = [2 * [(3 + 2 * Sqrt(2)) ^ n - (3 - 2 * Sqrt(2)) ^ n] - [(3 + 2 * Sqrt(2)) ^ (n - 1) - (3 - 2 * Sqrt(2)) ^ (n - 1)] + [(3 + 2 * Sqrt(2)) ^ (n - 2) - (3 - 2 * Sqrt(2)) ^ (n - 2)]] / (4 * Sqrt(2)) a(2 * k) = [5 * [(3 + 2 * Sqrt(2)) ^ n - (3 - 2 * Sqrt(2)) ^ n] + [(3 + 2 * Sqrt(2)) ^ (n - 1) - (3 - 2 * Sqrt(2)) ^ (n - 1)]] / (4 * Sqrt(2)). ● a(n) = 6 * a(n - 2) - a(n - 4). ● a(n) = 6 * a(n - 2) - a(n - 4) with a(1)=1, a(2)=5, a(3)=11, a(4)=31. - _ Sture Sjöstedt _ , Oct 08 2012 ●
► [A023276] 5,11,31,71,281,521,911,1181,2371,2521,3391,3701,4211,4931,5051,7211,7411,8221,8431,8461,8501,8641,8951,9601,9871 ⋆ Primes that remain prime through 3 iterations of function f(x) = 2x + 9. ● a(n) == 1 (mod 10) for n > 1. - _ John Cerkan _ , Sep 16 2016 ●
► [A236428] 1,1,5,11,31,79,209,545,1429,3739,9791,25631,67105,175681,459941,1204139,3152479,8253295,21607409,56568929,148099381,387729211,1015088255,2657535551,6957518401 ⋆ a(n) = F(n + 1) ^ 2 + F(n + 1) * F(n) - F(n) ^ 2, where F = A000045. ● a(n) = (2 * Lucas(2 * n + 1) + 3 * (- 1) ^ n) / 5. - _ Ralf Stephan _ , Feb 27 2014 ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - a(n - 3). - _ Colin Barker _ , Dec 20 2014 ● a(n) = F(n - 1) * F(n + 2) + F(n) * F(n + 1). - _ J. M. Bergot _ , Dec 20 2014 ● a(n) = 2 * F(n) * F(n + 1) + (- 1) ^ n. - _ Bruno Berselli _ , Oct 30 2015 ● a(n) = F(2 * n + 1) - F(n - 1) ^ 2 + (- 1) ^ n for n >0. - _ J. M. Bergot _ , Jan 19 2016 ● a(n) = (2 ^ (- n) * (3 * (- 2) ^ n - (3 -

sqrt(5)) ^ n * (- 1 + sqrt(5)) + (1 + sqrt(5)) * (3 + sqrt(5)) ^ n)) / 5. - _ Coli n Barker _ , Sep 28 2016 ●

▶ [A349611] 0,0,1,1,5,11,32,44,82,120,207,277,405,541,768,966,1272,1592,2087,24 89,3103,3719,4588,5348,6386 ⋆ Number of solutions to x ^ 2 + y ^ 2 + z ^ 2 + w ^ 2 <= n ^ 2, where x, y, z, w are positive odd integers. ● a(n) = [x ^ (n ^ 2)] theta _ 2(x ^ 4) ^ 4 / (16 * (1 - x)). ●

▶ [A127864] 1,1,5,11,33,87,241,655,1793,4895,13377,36543,99841,272767,74521 7,2035967,5562369,15196671,41518081,113429503,309895169,846649343,23130890 25,6319476735,17265131521 ⋆ Number of tilings of a 2 X n board with 1 X 1 an d L - shaped tiles (where the L - shaped tiles cover 3 squares). ● a(n) = a(n - 1) + 4 * a(n - 2) + 2 * a(n - 3). ● a(n) = (- 1) ^ n + (1 / sqrt(3)) * ((1 + sqrt(3)) ^ n - (1 - sqrt(3)) ^ n). ●

▶ [A194589] 0,0,1,1,5,11,34,92,265,751,2156,6194,17874,51702,149941,435749,126 8761,3700391,10808548,31613474,92577784,271407896,796484503,2339561795,687 7992334 ⋆ a(n) = A194588(n) - A005043(n); complementary Riordan numbers. ● a(n) = PSUMSIGN([0,0,1,2,6,16,45,..] = PSUMSIGN([0,0,A005717]) where P SUMSIGN is from Sloane's "Transformations of integer sequences". - Peter Lu schny, Jan 17 2012 ● a(n) = Sum _{ k=0..n / 2 } C(n + 2,k) * C(n - k,k). - _ Vladimir Kruchinin _ , Sep 28 2015 ● a(n) = hypergeom([1 - n / 2, - n,3 / 2 - n / 2],[1,2 - n],4) for n>=3. - _ Peter Luschny _ , Mar 07 2017 ●

▶ [A164560] 1,5,11,35,71,215,431,1295,2591,7775,15551,46655,93311,279935,5598 71,1679615,3359231,10077695,20155391,60466175,120932351,362797055,72559411 1,2176782335,4353564671 ⋆ Partial sums of A164532. ● a(n) = 6 * a(n - 2) + 5 for n > 2; a(1) = 1, a(2) = 5. ● a(n) = (3 - (- 1) ^ n) * 6 ^ (1 / 4 * (2 * n - 1 + (- 1) ^ n)) / 2 - 1. ●

▶ [A054854] 1,1,5,11,35,93,269,747,2115,5933,16717,47003,132291,372157,104718 1,2946251,8289731,23323853,65624397,184640891,519507267,1461688413,4112616 845,11571284395,32557042499 ⋆ Number of ways to tile a 4 X n region with 1 X 1 and 2 X 2 tiles. ● a(n) = a(n - 1) + 4 * a(n - 2) + 2 * (a(n - 3) + a(n - 4) + . .. + a(0)). ● a(n) = 2 * a(n - 1) + 3 * a(n - 2) - 2 * a(n - 3). [See proofs in Ma thar (a transfer matrix approach) and in Abadie et al.(direct proof).] - Keith Sc hneider (kschneid(AT)bulldog.unca.edu), Apr 02 2006 ● a(n) = Term (2,2) of m atrix [5,1,1; 1,1,0; 1,0,1 / 2] * [2,1,0; 3,0,1; - 2,0,0] ^ n. - _ Alois P. Heinz _ , M ay 18 2008 ●

▶ [A188161] 5,11,35,131,515,2051,8195,32771,131075,524291,2097155,8388611,33 554435,134217731,536870915,2147483651,8589934595,34359738371,13743895347 5,549755813891,2199023255555,8796093022211,35184372088835,14073748835533 1 ⋆ 2 * 4 ^ n + 3. ● a(n) = + 5 * a(n - 1) - 4 * a(n - 2). [_ Joerg Arndt _ , A pr 09 2011] ● a(n) = a(n - 1) + 6 * 4 ^ (n - 1) for n > 0, a(0)=5. - _ Felix P. Muga II _ , Mar 19 2014 ● a(n) = a(n - 1) + 12 * a(n - 2) - 36 for n > 1, a(0)= 5, a(1)=11. - _ Felix P. Muga II _ , Mar 19 2014 ●

▶ [A005178] 0,1,1,5,11,36,95,281,781,2245,6336,18061,51205,145601,413351,1174 500,3335651,9475901,26915305,76455961,217172736,616891945,1752296281,49774 72781,14138673395 ⋆ Number of domino tilings of 4 X (n - 1) board. ● a(n) = a (n - 1) + 5 * a(n - 2) + a(n - 3) - a(n - 4). ● a(n) = (5 * sqrt(29) / 145) * (((1 + sqrt(29) + sqrt(14 + 2 * sqrt(29))) / 4) ^ n + ((1 + sqrt(29) - sqrt(14 + 2 * sqrt(29))) / 4) ^ n - ((1 - sqrt(29) + sqrt(14 - 2 * sqrt(29))) / 4) ^ n - ((1 - sqrt (29) - sqrt(14 - 2 * sqrt(29))) / 4) ^ n). - _ Tim Monahan _ , Jul 30 2011 ● a(n) = (T(n,alpha) - T(n,beta)) / (alpha - beta), where alpha = (1 + sqrt(29)) / 4 and beta = (1 - sqrt(29)) / 4 and T(n,x) denotes the Chebyshev polynomial of the first kind. ● a(n) = the bottom left entry of the 2 X 2 matrix T(n, M), whe re M is the 2 X 2 matrix [0, 7 / 4; 1, 1 / 2]. ● a(n) = U(n - 1,i * (1 + sqrt(5)) / 4) * U(n - 1,i * (1 - sqrt(5)) / 4), where U(n,x) denotes the Chebyshev polynom ial of the second kind. ●

▶ [A042719] 1,1,5,11,38,49,87,1006,2099,3105,11414,219971,231385,451356,68274 1,1134097,7487323,8621420,50594423,59215843,228241952,1885151459,588369632 9,7768847788,44727935269 ⋆ Denominators of continued fraction convergents to sqrt(889). ● a(n) = 2646394943560731443 0 * a(n - 42) - a(n - 84) for n>83. - _ Vincenzo Librandi _ , Jan 27 2014 ●

▶ [A302766] 0,5,11,39,60,130,175,306,384,595,715,1025,1196,1624,1855,2420,272 0,3441,3819,4715,5180,6270,6831,8134,8800 ⋆ a(n) = n * ((4 * n + 1) * (7 * n - 4) + 15 * n * (- 1) ^ n) / 48. ● a(n) = Sum _{ i=1..floor(n / 2) } n * i + n * (n - i) + i * (n - i). ● a(n) = floor(n / 2) * (6 * n ^ 2 + 3 * n - 1 + 3 * (n - 1) * f loor(n / 2) - 2 * floor(n / 2) ^ 2) / 6. ● a(n) = (14 * n ^ 3 + 3 * n ^ 2 - 2 * n) / 24 for n even. ● a(n) = (14 * n ^ 3 - 12 * n ^ 2 - 2 * n) / 24 for n odd. ● a(n) = a(n - 1) + 3 * a(n - 2) - 3 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) + a(n - 6) - a(n - 7) for n>7. (End) ●

▶ [A141355] 1,1,5,11,43,85,341,683,2731,5461,21845,43691,174763,349525,139810 1,2796203,11184811,22369621,89478485,178956971,715827883,1431655765,572662 3061,11453246123,45812984491 ⋆ The Jacobsthal sequence, dropping each third term. ● a(4n + 1)=2a(4n) - 1. a(4n + 2)=4a(4n + 1) + 1. a(4n + 3)=2a(4n + 2) + 1. a(4n + 4)=4a(4n + 3) - 1. ● a(n)=7 * a(n - 2) + 8 * a(n - 4). G.f.: (1 + x - 2 * x ^ 2 + 4 * x ^ 3) / ((1 - 8 * x ^ 2) * (1 + x ^ 2)). - R. J. Mathar, Feb 2 3 2009 ●

▶ [A276300] 5,11,45,173,693,2765,11061,44237,176949,707789,2831157,1132462 1,45298485,181193933,724775733,2899102925,11596411701,46385646797,1855425 87189,742170348749,2968681394997,11874725579981,47498902319925 ⋆ Number of 3 X n 0..2 arrays with no element equal to any value at offset (- 2, - 1) (- 1, 1) or (0, - 1) and new values introduced in order 0..2. ● a(n) = (8 + 27 * 4 ^ n) / 40 for n>1 and even. ● a(n) = (72 + 27 * 4 ^ n) / 40 for n>1 and odd. ●

▶ [A297445] 1,5,11,47,101,425,911,3827,8201,34445,73811,310007,664301,279006 5,5978711,25110587,53808401,225995285,484275611,2033957567,4358480501,1830 5618105,39226324511,164750562947,353036920601 ⋆ a(n) = a(n - 1) + 9 * a(n - 2) - 9 * a(n - 3), where a(0) = 1, a(1) = 5, a(2) = 11. ● a(n) = a(n - 1) + 9 * a(n - 2) - 9 * a(n - 3) for n>2. - Corrected by _ Colin Barker _ , Jan 21 2018 ● a (n) = (- 1 - (- 3) ^ n + 2 * 3 ^ (1 + n)) / 4. - _ Colin Barker _ , Jan 21 2018 ●

▶ [A041213] 1,1,5,11,49,60,1249,1309,6485,14279,63601,77880,1621201,1699081,8 417525,18534131,82554049,101088180,2104317649,2205405829,10925940965,2405 7287759,107155092001,131212379760 ⋆ Denominators of continued fraction conv ergents to sqrt(117). ● a(n) = 1298 * a(n - 6) - a(n - 12). ●

▶ [A249075] 1,5,11,51,161,773,3027,15395,69881,377781,1915163,10981907,60776 145,368269541,2191553891,13976179203,88489011497,591631462805,39542138996 91,27619472411891,193696456198913,1408953242322117,10318990227472115,779 48745858933731 ⋆ Sum of the numbers in row n of the array at A249074. ● a(n) = a(n - 1) + 2 * (n + 1) * a(n - 2). - _ Vaclav Kotesovec _ , Aug 10 2021, fol lowing a suggestion from _ John M. Campbell _ ●

▶ [A109546] 5,11,53,203,821,3275,13109,52427,209717,838859,3355445,1342177 1,53687093,214748363,858993461,3435973835,13743895349,54975581387,2199023 25557,879609302219,3518437208885,14073748835531,56294995342133 ⋆ (4 ^ (n + 1) - (- 1) ^ n 9) / 5. ● a(0)= - 1, a(n)=4 * a(n - 1) - (- 1) ^ n * 9, n >=1. ●

▶ [A083860] 0,1,1,5,11,55,176,937,3781,21571,102455,624493,3356640,21752431,1 29055681,884773585,5696734715,41129090011,283908657880,2149818248341,1576 5656131765,124759995175751,965186517474191,7956847444317049,645771728503 66176 ⋆ First subdiagonal of generalized Fibonacci array A083856. ● a(n) = (((1 + sqrt(4 * n + 5)) / 2) ^ n - ((1 - sqrt(4 * n + 5)) / 2) ^ n) / sqrt(4 * n + 5). ● a(n) = Sum _{ s = 0..floor((n - 1) / 2) } binomial(n - 1 - s, s) * (n + 1) ^ s. - _ Petros Hadjicostas _ , Dec 25 2019 ●

▶ [A141496] 1,5,11,55,275,1375,6875,34375,171875,859375,4296875,21484375,107 421875,537109375,2685546875,13427734375,67138671875,335693359375,16784667 96875,83923338475,41961669921875,209808349609375 ⋆ a(0)=1; a(1)=5; a(2) =11; a(n)=a(1) * a(n - 1). ● a(n) = 11 * 5 ^ (n - 2) for n>1. a(n) = 5 * a(n - 1) for n>2. G.f.: (1 - 14 * x ^ 2) / (1 - 5 * x). [_ Colin Barker _ , Oct 13 2012] ●

▶ [A192428] 1,1,5,11,57,185,829,3067,12801,49633,201413,794747,3190617,12673 529,50672029,201782923,805529409,3210794113,12810136517,51078991403,20374 4818617,812521585145,3240726179389,12924488375899,51547405667265 ⋆ Const ant term of the reduction by x ^ 2 - > x + 1 of the polynomial p(n,x) defined b elow in Comments. ● a(n) = 2 * a(n - 1) + 10 * a(n - 2) - 6 * a(n - 3) - 9 * a(n - 4). ● a(n) = Sum _{ k=0..n } T(n,k) * Fibonacci(k - 1), where T(n, k) = [x ^ k] (((x + sqrt(x + 4)) ^ n + (x - sqrt(x + 4)) ^ n) / 2 + ((x + sqrt(x + 4)) ^ n - (x - sqrt(x + 4)) ^ n) / (2 * sqrt(x + 4))). - _ G. C. Greubel _ , Jul 13 2023 ●

▶ [A041697] 1,5,11,60,2291,11515,25321,138120,5273881,26507525,58288931,317 952180,12140471771,61020311035,134181093841,731925780240,27947360742961,1 40468729495045,308884819733051,1684892828160300,6433481228982445 1,323358 954277282555 ⋆ Denominators of continued fraction convergents to sqrt(368). ● a(n) = 2302 * a(n - 4) - a(n - 8) for n>7. - _ Vincenzo Librandi _ , Dec 23 201 3 ●

▶ [A161852] 1,5,11,79,175,1259,2789,20065,44449,319781,708395,5096431,112898 71,81223115,179929541,1294473409,2867582785,20630351429,45701395019,32879 1149455,728354737519,5240028039851,11607974405285,83511657488161,1849992 35747041 ⋆ Solutions to the simultaneous equations m(n) + 1=a(n) ^ 2 and 7 * m(n) + 1=b(n) ^ 2. ● a(n) = ((7 + (- 1) ^ n * t) * (8 - 3 * t) ^ floor(n / 2) + (7 - (- 1) ^ n * t) * (8 + 3 * t) ^ floor(n / 2)) / 14 with t=sqrt(7). (End) ● a(n) = 16 * a(n - 2) - a(n - 4) with a(1)=1, a(2)=5, a(3)=11, a(4)=79. - _ Sture Sjös tedt _ , Nov 18 2011 ●

▶ [A345015] 1,5,11,81,85,801,805,811,881,885,808001,808005,808011,808081,8080 85,808801,808805,808811,808881,808885,808000001,808000005,808000011,808000 081,808000085 ⋆ Starting with 1, the next entry is the next higher odd integer whose spelling in English comes lexicographically earlier. ● a(10 + i) = 808000 + a(i), for i in 1..10. ● a(20 + i) = 808000000 + a(i), for i in 1..20. ● a(40 + i) = 8000000000 + a(i), for i in 1..40. (End) ●

▶ [A120778] 1,5,11,93,193,793,1619,26333,53381,215955,436109,3518265,708853 3,28539857,57414019,1846943453,3711565741,14911085359,29941580393,2404162 74739,482473579583,1936010885087,3883457090629,62306843256889 ⋆ Numerato rs of partial sums of Catalan numbers scaled by powers of 1 / 4. ● a(n) = nume rator(1 - ((n + 1 / 2)!) / (sqrt(Pi) * (n + 1)!)). ● a(n) = 2 ^ (2 * (n + 1) - Ha mmingWeight(n + 1)) * (1 - ((n + 1 / 2)!) / (sqrt(Pi) * (n + 1)!)). (End) ●

▶ [A041909] 1,1,5,11,115,241,1079,1320,56519,57839,287875,633589,6623765,138 81119,62148241,76029360,3255381361,3331410721,16581024245,36493459211,381 515616355,799524691921,3579614384039,4379139075960,187503455574359 ⋆ Den ominators of continued fraction convergents to sqrt(476). ● a(n) = 57598 * a(n - 8) - a(n - 16) for n>15. - _ Vincenzo Librandi _ , Dec 27 2013 ●

▶ [A041048] 5,11,115,241,2525,5291,55435,116161,1217045,2550251,26719555,55 989361,586613165,1229215691,12878770075,26986755841,282746328485,59247941 2811,6207540456595,13007560326001,136283143716605,285573847759211,299202 1621308715,6269617090376641 ⋆ Numerators of continued fraction convergents to sqrt(30). ● a(n) = 22 * a(n - 2) - a(n - 4). - _ Wesley Ivan Hurt _ , Jun 16 2023 ●

▶ [A336623] 0,5,11,186,390,6335,13265,215220,450636,7311161,15308375,248364 270,520034130,8437074035,17665852061,286612152936,600118935960,9736376125 805,20386377970595,330750176124450,692536732064286,11235769612105511,235 25862512215145,381685416635462940 ⋆ First member of the Diophantine pair (m, k) that satisfies 8 * (m ^ 2 + m) = k ^ 2 + k; a(n) = m ● a(n) = 34 a(n - 2) - a(n - 4) + 16 for n>=2, with a(1)=5, a(0)=0, a(- 1)=0, a(- 2)=5. ● a(n) = a (n - 1) + 34 a(n - 2) - 34 a(n - 3) - a(n - 4) + a(n - 5) for n>=3 with a(2)=11, a (1)=5, a(0)=0, a(- 1)=0, a(- 2)=5. ● a(n) = (C + ((- 1) ^ n) * D) * A ^ n + (E + ((- 1) ^ n) * F) * B ^ n - 1 / 2 with A = (sqrt(2) + 1) ^ 2 ; B = (sqrt(2) - 1) ^ 2 ; C = 3 * (2 + sqrt(2)) / 16 ; D = - (1 + sqrt(2)) / 8 ; E = 3 * (2 - sqrt(2)) / 16 ; F = (sqrt(2) - 1) / 8 and n>=0. ● a(n) = ((3 * sqrt(2) - 2 * (- 1) ^ n) * (1 + sqrt(2)) ^ (2 * n + 1) + (3 * sqrt(2) + 2 * (- 1) ^ n) * (sqrt(2) - 1) ^ (2 * n + 1) - 8) / 16. - _ Vaclav Kotesovec _ , Sep 08 2020 ● a(n) = ((4 + sqrt(2))(1 + sqrt(2)) ^ (2n) + (4 - sqrt(2))(1 - sqrt(2)) ^ (2n)) / 16 - 1 / 2 for even n. ● a(n) = ((8 + 5 sqrt(2))(1 + sqrt(2)) ^ (2n) + (8 - 5 sqrt(2))(1 - sqrt(2)) ^ (2n)) / 16 - 1 / 2 for odd n. (End) ●

▶ [A314287] 1,5,12,17,24,27,32,37,46,51,54,61,68,75,76,81,88,97,100,103,112,119,1 24,125,132 ⋆ Coordination sequence Gal.6.654.1 where G.u.t.v denotes the coor dination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = a(n - 1) - a(n - 2) + a(n - 3) + a(n - 9) - a(n - 10) + a(n - 11) - a(n - 12) for n > 12. ●

▶ [A214067] 0,5,12,17,25,30,37,42,50,55,62,67,75,80,87,92,100,105,112,117,125,13 0,137,142,150 ⋆ [(5 / 2) * [(5 / 2) * n]], where [ ] = floor. ● a(n) = (50 * n - 7 +

5 * (- 1) ^ n + (1 + i) * (- i) ^ n + (1 - i) * i ^ n) / 8, where i = sqrt(- 1). ● a(n) = a(n - 1) + a(n - 4) - a(n - 5). ●

▶ [A290494] 5,12,17,25,44,76,131,219,376,645,1107,1894,3245,5564,9539,16351,28027,48047,82367,141200,242054,414949,711342,1219443,2090471 ★ Number of irredundant sets in the n - wheel graph. ● a(n)=2 * a(n - 1) - a(n - 3) + a(n - 4) - a(n - 5) - a(n - 6) + a(n - 7). ●

▶ [A022137] 5,12,17,29,46,75,121,196,317,513,830,1343,2173,3516,5689,9205,14894,24099,38993,63092,102085,165177,267262,432439,699701 ★ Fibonacci sequence beginning 5, 12. ● a(n) = Lucas(n + 4) - Fibonacci(n - 3). - _ Ehren Metcalfe _ , Oct 16 2017 ●

▶ [A294143] 1,5,12,18,29,43,60,72,84,106,131,147,176,208,243,265,304,328,371,397,444,494,547,579,611 ★ Sum of the larger parts of the partitions of 2n into two parts with smaller part squarefree. ● a(n) = Sum _{ i=1..n } (2 * n - i) * mu(i) ^ 2, where mu is the Möbius function (A008683). ●

▶ [A017041] 5,12,19,26,33,40,47,54,61,68,75,82,89,96,103,110,117,124,131,138,145,152,159,166,173 ★ a(n) = 7 * n + 5. ● a(n) = 7 * n + 5, n >= 0 (see the name). ●

▶ [A086570] 1,5,12,20,28,36,44,52,60,68,76,84,92,100,108,116,124,132,140,148,156,164,172,180,188 ★ Expansion of (1 + 3x + 5x ^ 2 + 7x ^ 3 + ...) / (1 - 2x + 3x ^ 2 - 4x ^ 3 + ...). ● a(0) = 1, a(1) = 5, a(2) = 12; then a(n + 1) = a(n) + 8, n > 2. ● a(n) = 8n - 4 + 4 * C(0, n) + C(1, n); ● a(n) = C(n + 1, n) + 3 * C(n, n - 1) + 3 * C(n - 1, n - 2) + C(n - 2, n - 3). (End) ●

▶ [A270079] 1,5,12,20,32,44,68,72,100,112,156,160,204,216,276,280,340,352,428,432,508,520,612,616,708 ★ Number of active (ON,black) cells in n - th stage of growth of two - dimensional cellular automaton defined by "Rule 62", based on the 5 - celled von Neumann neighborhood. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) + a(n - 4) - a(n - 5) - a(n - 6) + a(n - 7) for n>10. ●

▶ [A028347] 0,5,12,21,32,45,60,77,96,117,140,165,192,221,252,285,320,357,396,437,480,525,572,621,672 ★ a(n) = n ^ 2 - 4. ● a(n + 2) = n * (n + 4). G.f.: x ^ 3 * (5 - 3 * x) / (1 - x) ^ 3. - _ Barry E. Williams _ , Jun 16 2000, _ R. J. Mathar _ , Aug 06 2009 ● a(n) = 2 * n + a(n - 1) - 1. - _ Vincenzo Librandi _ , Aug 02 2010 ● a(n) = x, the solution of k = (sqrt(x) + n) / 2 and k + (1 / k) = n (also valid for a(0) = - 4 and a(1) = - 3). - _ Charles L. Hohn _ , Apr 16 2011 ●

▶ [A256320] 0,1,5,12,21,33,48,65,85,108,133,161,192,225,261,300,341,385,432,481,533,588,645,705,768 ★ Number of partitions of 4n into exactly 3 parts. ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) - 2 * a(n - 4) + a(n - 5) for n>4. ● a(n) = 2 * (6 * n ^ 2 + cos((2 * Pi * n) / 3) - 1) / 9. - _ Colin Barker _ , Jun 06 2016 ●

▶ [A301693] 1,5,12,21,33,49,70,95,121,150,184,222,263,305,351,403,458,515,573,636,706,778,851,925,1005 ★ Partial sums of A301692. ● a(n) = a(n - 1) + 2 * a(n - 5) - 2 * a(n - 6) - a(n - 10) + a(n - 11) for n>10. ●

▶ [A293502] 0,1,5,12,22,35,50,69,90,114,141,171,203,239,277,318,362,408,458,510,565,623,684,748,814 ★ Greatest integer k such that k / n ^ 2 < sqrt(2). ● a(n) = floor(r * n ^ 2), where r = sqrt(2). ●

▶ [A000326] 0,1,5,12,22,35,51,70,92,117,145,176,210,247,287,330,376,425,477,532,590,651,715,782,852 ★ Pentagonal numbers: a(n) = n * (3 * n - 1) / 2. ● a(n) = n * (3 * n - 1) / 2. ● a(n) = binomial(3 * n, 2) / 3. - _ Paul Barry _ , Jul 20 2003 ● a(0) = 0, a(1) = 1; for n >= 2, a(n) = 2 * a(n - 1) - a(n - 2) + 3. - _ Miklos Kristof _ , Mar 09 2005 ● a(n) = Sum _{ k=1..n } (2 * n - k). - _ Paul Barry _ , Aug 19 2005 ● a(n) = binomial(n + 1, 2) + 2 * binomial(n, 2). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3), a(0) = 0, a(1) = 1, a(2) = 5. - _ Jaume Oliver Lafont _ , Dec 02 2008 ●

▶ [A034971] 5,12,22,36,53,73,97,124,154,187,223,263,306,352,402,454,510,569,632,697,766,838,914,992,1074 ★ a(n) = floor(E _ (n + 1) / E _ (n)) where E _ n is n - th Euler number (see A028296 and A000364). ● a(n) = floor(E(n + 1) / E(n)) where E(n) is the n - th coefficient in the expansion of sec(x). ●

▶ [A299257] 1,5,12,22,36,56,82,111,144,183,226,272,324,382,442,505,576,653,730,810,900,996,1090,1187,1296 ★ Coordination sequence for 3D uniform tiling formed by stacking parallel layers of the 3.12.12 2D tiling (cf. A250122). ● a(n) = (4 - (2 + 8 * i) * (- i) ^ n - (2 - 8 * i) * i ^ n + i * ((- i) ^ n - i ^ n) * n + 18 * n ^ 2) / 8 for n>2, where i=sqrt(- 1). ● a(n) = 3 * a(n - 1) - 5 * a(n - 2) + 7 * a(n - 3) - 7 * a(n - 4) + 5 * a(n - 5) - 3 * a(n - 6) + a(n - 7) for n>9. ●

▶ [A298791] 1,5,12,22,37,55,75,101,130,160,197,237,277,325,376,426,485,547,607,677,750,820,901,985,1065 ★ Partial sums of A298789. ● a(n) = a(n - 1) + 2 * a(n - 3) - 2 * a(n - 4) - a(n - 6) + a(n - 7) for n>6. ●

▶ [A332569] 1,5,12,23,36,54,74,97,125,156,186,226,268,306,354,409,458,515,574,636,710,778,838,922,1013 ★ a(n) = Sum _{ k=1..n } floor(n / k) * ceiling(n / k). ● a(n) = 1 + Sum _{ k=1..n - 1 } (sigma(k) + sigma(k + 1)) for n > 0. ●

▶ [A341209] 1,5,12,23,39,61,90,127,173,229,296,375,467,573,694,831,985,1157,1348,1559,1791,2045,2322,2623,2949 ★ a(n) = (n ^ 3 + 6 * n ^ 2 + 17 * n + 6) / 6. ● a(n) = (n ^ 3 + 6 * n ^ 2 + 17 * n + 6) / 6. ●

▶ [A130624] 0,1,5,12,23,43,84,169,341,684,1367,2731,5460,10921,21845,43692,87383,174763,349524,699049,1398101,2796204,5592407,11184811,22369620 ★ Binomial transform of A101000. ● a(0)=0, a(1)=1, a(2)=5; for n>2, a(n) = 3 * a(n - 1) - 3 * a(n - 2) + 2 * a(n - 3). ● a(n) = - (2 / 3) * (1 / 2 - (1 / 2) * i * sqrt(3)) ^ n - (2 / 3) * (1 / 2 + (1 / 2) * i * sqrt(3)) ^ n + (4 / 3) * 2 ^ n - (1 / 3) * i * (1 / 2 - (1 / 2) * i * sqrt(3)) ^ n * sqrt(3) + (1 / 3) * i * (1 / 2 + (1 / 2) * i * sqrt(3)) ^ n * sqrt(3), with i = sqrt(- 1). - _ Paolo P. Lava _ , Oct 06 2008 ● a(n) = 2 ^ n + a(n - 1) - a(n - 2). - _ Jon Maiga _ , Nov 14 2018 ●

▶ [A270681] 1,5,12,24,32,52,60,88,96,132,140,184,192,244,252,312,320,388,396,472,480,564,572,664,672 ★ Number of active (ON,black) cells in n - th stage of growth of two - dimensional cellular automaton defined by "Rule 190", based on the 5 - celled von Neumann neighborhood. ● a(n) = 3 / 2 * (- 1 + (- 1) ^ n) - (- 5 + (- 1) ^ n) * n + n ^ 2 for n>1. ● a(n) = n ^ 2 + 4 * n for n>1 and even. ● a(n) = n ^ 2 + 6 * n - 3 for n>1 and odd. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n>4. ●

▶ [A101425] 5,12,24,38,57,78,104,132,165,200,240,282,329,378,432,488,549,612,680,750,825,902,984,1068,1157 ★ Number of different cuboids with volume p ^ 5 X q ^ n, where p,q are distinct prime numbers. ● a(n) = (37 + 3 * (- 1) ^ n + 48 * n + 14 * n ^ 2) / 8. ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4). ●

▶ [A336877] 0,1,5,12,25,41,60,85,125,168,205,245,300,361,425,504,625,749,840,925,1025,1128,1225,1337,1500 ★ The harmonic function on the Sierpinski gasket with vertices 0, 1, w = (- 1) ^ (1 / 3) defined by the values a(0) = 0, a(1) = 1, a(w) = - 1. ● a(2 ^ p + n) - 2 * a(2 ^ p) + a(2 ^ p - n) = 3 * a(n). ● a(2 * n) = 5 * a(n). ●

▶ [A212058] 0,1,5,12,25,41,66,94,132,176,229,285,359,436,522,617,727,840,971,1105,1257,1418,1588,1761,1964 ★ Number of (w,x,y,z) with all terms in { 1,...,n } and w>=x * y * z. ● a(n) = Sum _{ i=1..n + 1 } Sum _{ j=1..n + 1 } tau(i) * floor((n + 1 - j) / i). - _ Ridouane Oudra _ , Oct 03 2020 ●

▶ [A289586] 1,5,12,25,60,125,300,625,1500,3125,7500,15625,37500,78125,187500,390625,937500,1953125,4687500,9765625,23437500,48828125,117187500,244140625,585937500 ★ Numbers k whose smallest multiple that is a Fibonacci number is Fibonacci(k). ● a(2 * k) = 5 ^ k for k >= 1. ● a(2 * k - 1) = 12 * 5 ^ (k - 2) for k >= 2. ●

▶ [A364970] 1,5,12,26,42,73,102,152,204,278,345,464,556,693,835,1021,1175,1422,1613,1907,2173,2496,2773,3228,3569 ★ a(n) = Sum _{ k=1..n } binomial(floor(n / k) + 2,3). ● a(n) = Sum _{ k=1..n } binomial(k + 1,2) * floor(n / k). ●

▶ [A212561] 0,0,1,5,12,26,45,75,112,164,225,305,396,510,637,791,960,1160,1377,1629,1900,2210,2541,2915,3312 ★ Number of (w,x,y,z) with all terms in { 1,...,n } and w + x = 2y + 2z. ● a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + a(n - 4) + 2 * a(n - 5) - a(n - 6). ● a(n) = (2 * n ^ 3 - 2 * n ^ 2 + n - 1 - (n - 1) * (- 1) ^ n) / 8 = (n - 1) * (2 * n ^ 2 + 1 - (- 1) ^ n) / 8. - _ Luce ETIENNE _ , Jul 26 2014 ●

▶ [A199771] 1,5,12,26,45,75,112,164,225,305,396,510,637,791,960,1160,1377,1629,1900,2210,2541,2915,3312,3756,4225 ★ Row sums of the triangle in A199332. ● a(n) = n * (3 + 2 * n ^ 2 + 4 * n + (- 1) ^ n)) / 8. - _ R. J. Mathar _ , Jun 23 2023 ●

▶ [A200252] 5,12,26,45,75,112,164,225,305,396,510,637,791,960,1160,1377,1629,1900,2210,2541,2915,3312,3756,4225,4745 ★ Number of 0..n arrays x(0..2) of 3 elements with each no smaller than the sum of its previous elements modulo (n + 1). ● a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + a(n - 4) + 2 * a(n - 5) - a(n - 6). ● a(n) = (n ^ 3 + 5 * n ^ 2 + 8 * n + 4) / 4 for n even. ● a(n) = (n ^ 3 + 5 * n ^ 2 + 9 * n + 5) / 4 for n odd. ●

▶ [A176448] 5,12,26,54,110,222,446,894,1790,3582,7166,14334,28670,57342,114686,229374,458750,917502,1835006,3670014,7340030,14680062,29360126,58720254,117440510 ★ a(n) = 7 * 2 ^ n - 2. ● a(n) = 2 * (a(n - 1) + 1) with a(0)=5. ● a(n)= 3 * a(n - 1) - 2 * a(n - 2). ●

▶ [A229422] 5,12,27,55,102,175,282,432,635,902,1245,1677,2212,2865,3652,4590,5697,6992,8495,10227,12210,14467,17022,19900,23127 ★ Number of n X 2 0..2 arrays with horizontal differences mod 3 never 1, vertical differences mod 3 never - 1, rows lexicographically nondecreasing, and columns lexicographically nonincreasing. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

▶ [A128439] 1,5,12,27,55,107,203,375,684,1229,2189,3863,6773,11801,20460,35311,60707,104003,177631,302539,513996,871265,1473817,2488367,4194025 ★ a(n) = floor(n * t ^ n), where t=golden ratio=(1 + sqrt(5)) / 2. ● a(n) = n * F(n - 1) + floor(n * t * F(n)), where F=A000045, the Fibonacci numbers. ●

▶ [A038376] 0,0,0,0,1,5,12,28,50,90,140,220,315,455,616,840,1092,1428,1800,2280,2805,3465,4180,5060,6006 ★ a(n) = (n - 3) * A006918(n) / 2. ● a(n) = (n ^ 4 - 3 * n ^ 3 - 4 * n ^ 2 + 12 * n) / 48 for n even. ● a(n) = (n ^ 4 - 3 * n ^ 3 - n ^ 2 + 3 * n) / 48 for n odd. ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 6 * a(n - 3) + 6 * a(n - 5) - 2 * a(n - 6) - 2 * a(n - 7) + a(n - 8) for n>7. ●

▶ [A055245] 1,1,5,12,28,61,127,257,507,982,1872,3523,6557,12089,22105,40128,72380,129809,231611,411337,727455,1281578,2249856,3936935,6868537 ★ Numerator sequence of mean length of certain stackings of n + 1 squares on a double staircase. ● a(0)=1, a(1)=1, a(2)=5, a(3)=12, a(4)=28, a(5)=61, a(n)=3 * a(n - 1) - 5 * a(n - 3) + 3 * a(n - 5) + a(n - 6). - _ Harvey P. Dale _ , Aug 24 2014 ●

▶ [A266471] 5,12,29,66,137,261,463,775,1237,1898,2817,4064,5721,7883,10659,14173,18565,23992,30629,38670,48329,59841,73463,89475,108181 ★ Number of 4 X n binary arrays with rows and columns lexicographically nondecreasing and column sums nonincreasing. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. ●

▶ [A069306] 5,12,29,70,169,408,985,2378,5741,13860,33461,80782,195025,470832,1136689,2744210,6625109,15994428,38613965,93222358,225058681,543339720,1311738121,3166815962,7645370045 ★ Number of 2 X n binary arrays with a path of adjacent 1's from upper left corner to anywhere in right hand column. ● a(n) = 2 * a(n - 1) + a(n - 2). [_ Philippe Deléham _ , Nov 20 2008] ●

▶ [A277088] 5,12,29,71,174,427,1048,2573,6318,15514,38095,93544,229702,564045,1385042,3401044,8351444,20507414,50357044,123654396,303639937,745603993,1830870208,4495799044,11039673351 ★ Pisot sequences L(5,12), S(5,12). ● a(n) = ceiling(a(n - 1) ^ 2 / a(n - 2)), a(0) = 5, a(1) = 12. ● a(n) = floor(a(n - 1) ^ 2 / a(n - 2) + 1), a(0) = 5, a(1) = 12. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4) + a(n - 6) - a(n - 7) - a(n - 9). (End) ●

▶ [A220029] 5,12,30,61,111,187,297,450,656,926,1272,1707,2245,2901,3691,4632,5742,7040,8546,10281,12267,14527,17085,19966,23196 ★ Number of n X 5 arrays of the minimum value of corresponding elements and their horizontal or diagonal neighbors in a random, but sorted with lexicographically nondecreasing rows and nonincreasing columns, 0..1 n X 5 array. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>6. ●

▶ [A094125] 5,12,30,78,210,582,1650,4758,13890,40902,121170,360438,1075170,3213222,9615090,28796118,86290050,258673542,775627410,2326095798,6976714530,20926997862,62774702130,188311523478,564909404610 ★ a(n) = 3 * 2 ^ n + 2 * 3 ^ n. ● a(n) = 5 * a(n - 1) - 6 * a(n - 2). (End) ●

▶ [A066280] 5,12,32,90,260,762,2252,6690,19940,59562,178172,533490,1598420,4791162,14365292,43079490,129205700,387551562,1162523612,3487308690,10461401780,31383156762,94147373132,282437925090,847305386660 ★ a(n) = 1 ^ n + 2 ^ (n + 1) + 3 ^ (n + 2). ● a(n) = 6 * a(n - 1) - 11 * a(n - 2) + 6 * a(n - 3). ●

▶ [A192243] 1,1,5,12,34,88,233,609,1597,4180,10946,28656,75025,196417,514229,1346268,3524578,9227464,24157817,63245985,165580141,433494436,1134903170,2971215072,7778742049 ★ 0 - sequence of reduction of Lucas sequence by x ^ 2

- > x + 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 3) + a(n - 4). ● a(n) = (- 1) * (2 ^ (- 1 - n) * (5 * ((- 2) ^ n + 2 ^ n) + (- 5 + sqrt(5)) * (3 + sqrt(5)) ^ n - (3 - sqrt(5)) ^ n * (5 + sqrt(5)))) / 5. - _ Colin Barker _ , Dec 22 2017 ● a(n) = F(2n - 1) - 1 if n is even and F(2n - 1) if n is odd, where F(n) is the n - th Fibonacci number. - _ Rigoberto Florez _ , Aug 29 2019 ●

▶ [A298992] 0,0,5,12,35,58,112,160,258,340,495,620,845,1022,1330,1568,1972,2280,2793,3180,3815,4290,5060,5632,6550 ⋆ a(n) = (2 * n - 3 - (- 1) ^ n) * (22 * n ^ 2 - 21 * n + 5 * n * (- 1) ^ n) / 96. ● a(n) = Sum _{ i=1..floor((n - 1) / 2) } i * (n - 2 * i) + 2 * i ^ 2 + 2 * (n - 2 * i) ^ 2. ● a(n) = a(n - 1) + 3 * a(n - 2) - 3 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) + a(n - 6) - a(n - 7) for n>7. ●

▶ [A050189] 0,5,12,35,64,126,200,330,480,715,980,1365,1792,2380,3024,3876,4800,5985,7260,8855,10560,12650,14872,17550,20384 ⋆ T(n,4), array T as in A050186; a count of aperiodic binary words. ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 6 * a(n - 3) + 6 * a(n - 5) - 2 * a(n - 6) - 2 * a(n - 7) + a(n - 8) for n > 11 (conjectured). ●

▶ [A122299] 0,1,1,5,12,38,107,316,915,2671,7771,22640,65922,191993,559112,1628281,4741905,13809541,40216516,117119750,341079507,993301748,2892722267,8424270271,24533405595 ⋆ Expansion of x * (1 - x) / (1 - 2 * x - 3 * x ^ 2 + x ^ 3). ● a(n)= + 2 * a(n - 1) + 3 * a(n - 2) - a(n - 3). ●

▶ [A162269] 5,12,38,128,436,1488,5080,17344,59216,202176,690272,2356736,8046400,27472128,93795712,320238592,1093362944,3732974592,12745172480,43514740736,148568617984,507244990464,1731842725888,5912880922624 ⋆ a(n) = ((5 + sqrt(2)) * (2 + sqrt(2)) ^ n + (5 - sqrt(2)) * (2 - sqrt(2)) ^ n) / 2. ● a(n) = 4 * a(n - 1) - 2 * a(n - 2) for n>1; a(0) = 5, a(1) = 12. ● a(2 * n) = 2 ^ (n - 1) * (Q(2 * n + 1) + 4 * Q(2 * n)), where Q(m) = Pell - Lucas numbers. ● a(2 * n + 1) = 2 ^ (n + 1) * (P(2 * n + 2) + 4 * P(2 * n + 1)), where P(m) = Pell numbers. (End) ●

▶ [A164737] 5,12,40,96,320,768,2560,6144,20480,49152,163840,393216,1310720,3145728,10485760,25165824,83886080,201326592,671088640,1610612736,5368709120,12884901888,42949672960,103079215104,343597383680 ⋆ a(n) = 8 * a(n - 2) for n > 2; a(1) = 5, a(2) = 12. ● a(n) = (13 - 7 * (- 1) ^ n) * 2 ^ (1 / 4 * (6 * n - 11 + 3 * (- 1) ^ n)). ●

▶ [A052644] 1,5,12,42,192,1080,7200,55440,483840,4717440,50803200,598752000,7664025600,105859353600,1569209241600,24845812992000,418455797760000,7469435990016000,140852221526016000 ⋆ E.g.f. (1 + 3x - 3x ^ 2) / (1 - x) ^ 2. ● a(n) = (n + 4) * n!, n>0. ●

▶ [A179994] 0,1,5,12,55,124,565,1268,5775,12956,59005,132372,602855,1352444,6159365,13817908,62930175,141177436,642957005,1442408532,6569085655,14737074364,67116286165,150568549748,685726462575 ⋆ a(n) = 11 * a(n - 2) - 8 * a(n - 4), starting a(0)=0, a(1)=1, a(2)=5, a(3)=12. ● a(n) = 5 * a(n - 1) - a(n - 2) if n is even. a(n) = 4 * a(n - 1) - 8 * a(n - 2) if n is odd. - _ R. J. Mathar _ , Jun 18 2014 ●

▶ [A290804] 0,5,12,306,306,2707,69935,658180,4775895,10540696,10540696,575491194,4530144680,59895293484,544340345519,1900786491217,20891032530989,87356893670191,319987407657398,1009046899512009 2,44287154551239521,203871687146463523 ⋆ One of the two successive approximations up to 7 ^ n for the 7 - adic integer sqrt(- 3). These are the numbers congruent to 5 mod 7 (except for the initial 0). ● a(0) = 0 and a(1) = 5, a(n) = a(n - 1) + 2 * (a(n - 1) ^ 2 + 3) mod 7 ^ n for n > 1. ● a(n) = L(7 ^ n,5) (mod 7 ^ n) = (((5 + sqrt(29)) / 2) ^ (7 ^ n) + ((5 - sqrt(29)) / 2) ^ (7 ^ n)) (mod 7 ^ n), where L(n,x) denotes the n - th Lucas polynomial of A114525. - _ Peter Bala _ , Nov 28 2022 ●

▶ [A235337] 1,5,13,13,25,41,41,61,85,113,113,145,181,181,221,265,313,313,365,421,421,481,545,545,613 ⋆ Number of integer lattice points inside the square ABCD with side length n>0 with A(- n * sqrt(2) / 2| 0), B(n * sqrt(2) / 2| 0), C(0| n * sqrt(2) / 2) and D(- n * sqrt(2) / 2| 0). ● a(n) := 2 * z ^ 2 - 2 * z + 1, where z = ceiling(n * sqrt(2) / 2). - _ Giovanni Resta _ , Jan 10 2014 ●

▶ [A341751] 1,5,13,13,45,45,173,429,429,1453,3501,7597,7597,23981,23981,23981,155053,417197,941485,1990061,1990061,1990061,10378669,10378669,10378669 ⋆ Successive approximations up to 2 ^ n for the 2 - adic integer 17 ^ (1 / 4). This is the 1 (mod 4) case. ● a(2) = 1; for n >= 3, a(n) = a(n - 1) if a(n - 1) ^ 4 - 17 is divisible by 2 ^ (n + 2), otherwise a(n - 1) + 2 ^ (n - 1). ●

▶ [A292565] 5,13,14,25,26,27,41,42,43,44,61,62,63,64,65,85,86,87,88,89,90,113,114,115,116 ⋆ Take 0, skip 3 * 1 + 1, take 1, skip 3 * 2 + 1, take 2, skip 3 * 3 + 1, ... ● a(n) = n + 4 + (3k ^ 2 + 11k) / 2 where k = floor((sqrt(2 * n) - 1 / 2)). - _ Jon E. Schoenfield _ , Sep 30 2017 ●

▶ [A087445] 1,5,13,17,25,29,37,41,49,53,61,65,73,77,85,89,97,101,109,113,121,125,133,137,145 ⋆ Numbers that are congruent to 1 or 5 mod 12. ● a(n) = 6 * (n - 1) - (- 1) ^ n. - _ Rolf Pleisch _ , Aug 04 2009 ● a(n) = 12 * n - a(n - 1) - 18 (with a(1)=1). - _ Vincenzo Librandi _ , Aug 08 2010 ● a(n) = a(n - 1) + a(n - 2) - a(n - 3), with a(0)=1, a(1)=5, a(2)=13. - _ Harvey P. Dale _ , Jun 13 2011 ●

▶ [A349900] 5,13,17,29,37,41,53,61,89,101,109,149,173,181,197,229,257,269,281,293,349,353,389,401,433 ⋆ Primes of the form x ^ 2 + (y ^ 2 + 1) ^ 2. ● a(n) (n log n) ^ (4 / 3). ●

▶ [A245906] 5,13,17,33,37,61,65,97,101,141,145,193,197,253,257,321,325,397,401,481,485,573,577,673,677 ⋆ Numbers of the form 4n ^ 2 + 1 or 4n ^ 2 + 8n + 1. ● a(n) = n ^ 2 + O(n). - _ Charles R Greathouse IV _ , Nov 20 2014 ● a(n) = (2 * n * (n + 5) - (2n + 1) * (- 1) ^ n + 11) / 2. [_ Bruno Berselli _ , Dec 02 2014] ●

▶ [A195549] 1,5,13,17,89,233,305,1597,4181,5473,28657,75025,98209,514229,1346269,1762289,9227465,24157817,31622993,165580141,433494437,567451585,2971215073,7778742049,10182505537 ⋆ Hypotenuses of primitive Pythagorean triples in A195547 and A195548. ● a(n) = (F(n) ^ 2 + F(n + 1) ^ 2) / (2 - ((n + 2) ^ 2 mod 3)), F(n) = Fibonacci(n). - _ Gary Detlefs _ , Oct 14 2011 ● a(n) = 18 * a(n - 3) - a(n - 6). ●

▶ [A022138] 5,13,18,31,49,80,129,209,338,547,885,1432,2317,3749,6066,9815,15881,25696,41577,67273,108850,176123,284973,461096,746069 ⋆ Fibonacci sequence beginning 5, 13. ● a(0) = 5, a(1) = 13, a(n) = a(n - 2) + a(n - 1). ●

▶ [A055045] 5,13,20,21,29,37,45,52,53,61,69,77,80,84,85,93,101,109,116,117,125,133,141,148,149 ⋆ Numbers of the form 4 ^ i * (8 * j + 5). ● a(n) = 6n + O(log n). - _ Charles R Greathouse IV _ , Dec 19 2013 ●

▶ [A184825] 5,13,20,27,34,42,49,56,63,71,77,85,92,99,105,113,120,127,134,142,149,156,163,171,177 ⋆ a(n) = n + floor(n * t) + floor(n * t ^ 2) + floor(n / t), where t is the tetranacci constant. ● a(n) = n + floor(n * p / q) + floor(n * r / q) + floor(n * s / q), where p=t, q=t ^ 2, r=t ^ 3, s=t ^ 4, and t is the tetranacci constant. ●

▶ [A184837] 5,13,20,29,36,44,51,59,66,74,81,90,97,105,111,120,127,135,142,151,158,166,172,181,188 ⋆ a(n) = n + floor(n * t) + floor(n * t ^ 2) + floor(n / t) + floor(n / t ^ 2), where t is the pentanacci constant. ● a(n) = n + floor(n * p / r) + floor(n * q / r) + floor(n * s / r) + floor(n * u / r), where p=t, q=t ^ 2, r=t ^ 3, s=t ^ 4, u=t ^ 5, and t is the pentanacci constant. ●

▶ [A004770] 5,13,21,29,37,45,53,61,69,77,85,93,101,109,117,125,133,141,149,157,165,173,181,189,197 ⋆ Numbers of form 8n + 5; or, numbers whose binary expansion ends in 101. ● a(n) = 8 * n - 3; G.f. x * (5 + 3 * x) / (x - 1) ^ 2. - _ R. J. Mathar _ , Mar 14 2011 ● a(n) = 2 * a(n - 1) - a(n - 2). - _ Vincenzo Librandi _ , May 28 2011 ●

▶ [A316357] 1,5,13,21,33,53,73,93,121,153,185,221,261,305,353,401,453,513,573,633,701,773,845,921,1001 ⋆ Partial sums of A316316. ● a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 3 * a(n - 3) - 3 * a(n - 4) + 2 * a(n - 5) - 2 * a(n - 6) + a(n - 7) for n>6. ●

▶ [A143988] 5,13,23,31,41,49,59,67,77,85,95,103,113,121,131,139,149,157,167,175,185,193,203,211,221 ⋆ Numbers congruent to { 5, 13 } mod 18. ● a(n) = 18 * (n - 1) - a(n - 1) for n > 1 and a(1)=5. - _ Vincenzo Librandi _ , Nov 25 2010 ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n>3. ● a(n) = ((- 1) ^ (1 + n) + 18 * n - 9) / 2. (End) ●

▶ [A108195] 5,13,23,35,49,65,83,103,125,149,175,203,233,265,299,335,373,413,455,499,545,593,643,695,749 ⋆ a(n) = n ^ 2 + 5 * n - 1. ● a(n) = 2 * n + a(n - 1) + 4, with n>1, a(1)=5. - _ Vincenzo Librandi _ , Nov 13 2010 ●

▶ [A074798] 1,5,13,23,36,52,72,94,119,147,178,211,248,288,331,376,425,476,531,588,649,712,778,847,919 ⋆ Floor of S * n ^ 2, where S equals sum of reciprocal terms of this same sequence. ● a(n) = floor(S * n ^ 2), where S = Sum _{ k>=1 } 1 / a(k). ●

▶ [A213483] 1,5,13,23,38,55,78,103,135,169,211,255,308,363,428,495,573,653,745,839,946,1055,1178,1303,1443 ⋆ Number of (w,x,y) with all terms in { 0,...,n } and |w - x| + |x - y| >= w + x + y. ● a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + a(n - 4) + 2 * a(n - 5) - a(n - 6). ● a(n)= (n ^ 3 + 33 * n ^ 2 + 71 * n + 15 + (3 * n + 9) * ((n + 1) mod 2)) / 24. (End) ●

▶ [A140090] 0,5,13,24,38,55,75,98,124,153,185,220,258,299,343,390,440,493,549,608,670,735,803,874,948 ⋆ a(n) = n * (3 * n + 7) / 2. ● a(n) = (3 * n ^ 2 + 7 * n) / 2. ● a(n) = a(n - 1) + 3 * n + 2 (with a(0)=0). - _ Vincenzo Librandi _ , Nov 24 2010 ●

▶ [A271937] 1,5,13,24,39,57,79,104,133,165,201,240,283,329,379,432,489,549,613,680,751,825,903,984,1069 ⋆ a(n) = (7 / 4) * n ^ 2 + (5 / 2) * n + (7 + (- 1) ^ n) / 8. ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4). ● a(2 * k) = k * (7 * k + 5) + 1, a(2 * k + 1) = (k + 1) * (7 * k + 5). ● a(n) = Sum _{ j=0..n } floor((2n + 3j + 2) / 2). ●

▶ [A001844] 1,5,13,25,41,61,85,113,145,181,221,265,313,365,421,481,545,613,685,761,841,925,1013,1105,1201 ⋆ Centered square numbers: a(n) = 2 * n * (n + 1) + 1. Sums of two consecutive squares. Also, consider all Pythagorean triples (X, Y, Z=Y + 1) ordered by increasing Z; then sequence gives Z values. ● a(n) = 2 * n ^ 2 + 2 * n + 1 = n ^ 2 + (n + 1) ^ 2. ● a(n) = 1 / real(z(n + 1)) where z(1)=i, (i ^ 2= - 1), z(k + 1) = 1 / (z(k) + 2i). - _ Benoit Cloitre _ , Aug 06 2002 ● a(n) = a(n - 1) + 4n. ● a(- n) = a(n - 1). ● a(n) = 1 + Sum _{ j=0..n } 4 * j. - Xavier Acloque, Oct 08 2003 ● a(n) = Sum _{ k=0..n + 1 } (- 1) ^ k * binomial(n, k) * Sum _{ j=0..n - k + 1 } binomial(n - k + 1, j) * j ^ 2. - _ Paul Barry _ , Dec 22 2004 ●

▶ [A099776] 5,13,25,41,61,85,113,145,181,221,265,313,365,421,481,545,613,685,761,841,925,1013,1105,1201,1301 ⋆ Length of the hypotenuse of an integer right triangle with the hypotenuse being one more than the longer side. The shorter sides are just consecutive odd numbers 3, 5, 7, ... ● a(n) = ((2 * n + 1) ^ 2 - 1) / 2 + 1. ● a(n) = a(n - 1) + 4 * n for n>1, a(1)=5. - _ Vincenzo Librandi _ , Nov 17 2010 ● a(n) = 1 + 2 * n + 2 * n ^ 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A301302] 1,5,13,25,41,61,86,116,150,189,232,279,332,388,448,513,581,656,734,815,902,991,1088,1188,1290 ⋆ Partial sums of A301301. ● a(n) = a(n - 1) + 2 * a(n - 5) - 2 * a(n - 6) - a(n - 10) + a(n - 11) for n>12. ●

▶ [A299258] 1,5,13,25,41,62,89,121,157,197,242,293,349,409,473,542,617,697,781,869,962,1061,1165,1273,1385 ⋆ Coordination sequence for 3D uniform tiling formed by stacking parallel layers of the 4.6.12 2D tiling (cf. A072154). ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 5) - 2 * a(n - 6) + a(n - 7) for n>7. - _ Colin Barker _ , Feb 09 2018 ●

▶ [A301671] 1,5,13,25,41,63,89,115,151,187,231,273,327,377,441,497,569,635,717,787,879,959,1059,1145,1255 ⋆ Partial sums of A301670. ● a(n) = a(n - 2) + a(n - 3) + a(n - 4) - a(n - 5) - a(n - 6) - a(n - 7) + a(n - 9) for n > 9. ●

▶ [A098483] 1,1,1,1,5,13,25,41,85,205,473,985,2021,4365,9785,21673,46965,101581,222745,492665,1087237,2388749,5251065,11587529,25633045 ⋆ Expansion of 1 / sqrt((1 - x) ^ 2 - 8x ^ 4). ● a(n)=sum { k=0..floor(n / 2), binomial(n - 2k, k) binomial(n - 3k, k)2 ^ k } . ●

▶ [A240001] 5,13,25,42,65,95,133,180,237,305,385,478,585,707,845,1000,1173,1365,1577,1810,2065,2343,2645,2972,3325 ⋆ Number of 2 X n 0..3 arrays with no element equal to one plus the sum of elements to its left or two plus the sum of the elements above it or one plus the sum of the elements diagonally to its north west, modulo 4. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n >4. ●

▶ [A301685] 1,5,13,25,43,65,93,127,163,205,253,303,359,421,485,555,631,709,793,883,975,1073,1177,1283,1395 ⋆ Partial sums of A301684. ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) - 2 * a(n - 4) + a(n - 5) for n > 8. ●

▶ [A102724] 5,13,25,43,67,97,133,175,227,287,355,433,517,607,707,819,939,1067,1205,1349,1501,1663,1835,2021,2219 ⋆ Sum of the first n pairs of consecutive pri

mes (for example, a(3) = (2 + 3) + (3 + 5) + (5 + 7) = 25). • a(n) = 2sum(prime(i), i = 1 .. n) - (2 + prime(n)). - _ Alonso del Arte _ , Apr 21 2016 •

► [A249513] 1,5,13,25,51,125,295,625,1345,3125,7173,15625,34269,78125,177153,390625,864315,1953125,4401655,9765625,21706831,48828125,109676283,244140625,544031251 ⋆ Expansion of - (4 * x * sqrt(4 * x ^ 2 + 1) + 8 * x ^ 2 + 1) / ((2 * x ^ 2 - 1) * sqrt(4 * x ^ 2 + 1) + 4 * x ^ 3 + x). • a(n) = sum(k = 0..n, 4 ^ (n - k) * binomial((n + 1) / 2,n - k)). • a(n) = 5 ^ ((n + 1) / 2) if n is odd else a(n) = (4 ^ n * binomial(n / 2 + 1 / 2, n) * hypergeometric([1, - n], [- n / 2 + 3 / 2], - 1 / 4)). # _ Peter Luschny _ , Oct 31 2014 •

► [A097117] 1,1,1,5,13,25,57,141,325,737,1713,3989,9213,21289,49321,114205,264245,611569,1415713,3276837,7584237,17554489,40632089,94046637,217679141 ⋆ Expansion of (1 - x) / ((1 - x) ^ 2 - 4 * x ^ 3). • a(n) = 2 * a(n - 1) - a(n - 2) + 4 * a(n - 3). • a(n) = Sum _{ k=0..floor(n / 2) } binomial(n - k, 2 * k) * 4 ^ k. •

► [A066885] 5,13,25,61,85,145,181,265,421,481,685,841,925,1105,1405,1741,1861,2245,2521,2665,3121,3445,3961,4705,5101 ⋆ a(n) = (prime(n) ^ 2 + 1) / 2. • a(n) mod 4 = 1. - _ Altug Alkan _ , Apr 08 2016 •

► [A098480] 1,1,1,5,13,25,65,181,445,1113,2945,7685,19821,51865,136513,358229,942109,2487385,6573825,17387045,46066253,122213913,324512833,862511605,2294698109 ⋆ Expansion of 1 / sqrt((1 - x) ^ 2 - 8x ^ 3). • a(n)=sum { k=0..floor(n / 2), binomial(n - k, k)binomial(n - 2k, k)2 ^ k } . D - finite with recurrence: n * a(n) + (- 2 * n + 1) * a(n - 1) + (n - 1) * a(n - 2) + 4 * (- 2 * n + 3) * a(n - 3)=0. - _ R. J. Mathar _ , Nov 10 2014 •

► [A301300] 1,5,13,26,44,66,92,121,155,195,239,287,337,392,454,520,590,661,737,821,909,1001,1093,1190,1296 ⋆ Partial sums of A301299. • a(n) = a(n - 1) + 2 * a(n - 5) - 2 * a(n - 6) - a(n - 10) + a(n - 11) for n>10. •

► [A299259] 1,5,13,26,45,69,98,133,173,218,269,325,386,453,525,602,685,773,866,965,1069,1178,1293,1413,1538 ⋆ Coordination sequence for 3D uniform tiling formed by stacking parallel layers of the 4.8.8 2D tiling (cf. A008576). • a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) - 2 * a(n - 4) + a(n - 5) for n>5. - _ Colin Barker _ , Feb 09 2018 •

► [A008778] 1,5,13,26,45,71,105,148,201,265,341,430,533,651,785,936,1105,1293,1501,1730,1981,2255,2553,2876,3225 ⋆ a(n) = (n + 1) * (n ^ 2 + 8 * n + 6) / 6. Number of n - dimensional partitions of 4. Number of terms in 4th derivative of a function composed with itself n times. • a(n) = dot _ product(n, n - 1, ...2, 1) * (2, 3, ..., n, 1) for n = 2, 3, 4, ... [i.e., a(2) = (2, 1) * (2, 1), a(3) = (3, 2, 1) * (2, 3, 1)]. - _ Clark Kimberling _ • a(n) = Sum _{ 0<=k, l<=n; k + l|n } k * l. - _ Ralf Stephan _ , May 06 2005 •

► [A299277] 1,5,13,26,46,73,104,140,187,240,292,352,417,482,567,660,740,838,944,1031,1150,1290,1399,1531,1677 ⋆ Coordination sequence for "pcu - i" 3D uniform tiling. • a(n) = - a(n - 2) + a(n - 3) + a(n - 5) + 2 * a(n - 6) + 2 * a(n - 8) - 2 * a(n - 9) - 2 * a(n - 11) - a(n - 12) - a(n - 14) + a(n - 15) + a(n - 17) for n>21. - _ Colin Barker _ , Feb 14 2018 •

► [A180671] 0,5,13,26,47,81,136,225,369,602,979,1589,2576,4173,6757,10938,17703,28649,46360,75017,121385,196410,317803,514221,832032 ⋆ a(n) = Fibonacci(n + 6) - Fibonacci(6). • a(n) = F(n + 6) - F(6) with F = A000045. • a(n) = a(n - 1) + a(n - 2) + 8 for n>1, a(0)=0, a(1)=5, and where 8 = F(6). • a(n) = 2 * a(n - 1) - a(n - 3). (End) • a(n) = (- 8 + (2 ^ (- n) * ((1 - sqrt(5)) ^ n * (- 9 + 4 * sqrt(5)) + (1 + sqrt(5)) ^ n * (9 + 4 * sqrt(5)))) / sqrt(5)). - _ Colin Barker _ , Apr 20 2017 •

► [A322417] 5,13,26,55,110,223,446,895,1790,3583,7166,14335,28670,57343,114686,229375,458750,917503,1835006,3670015,7340030,14680063,29360126,58720255,117440510 ⋆ a(n) - 2 * a(n - 1) = period 2: repeat [3, 0] for n > 0, a(0)=5, a(1)=13. • a(n) = a(n - 2) + 21 * 2 ^ (n - 2) for n >= 2. • a(n) = 7 * 2 ^ n - 2 for n even. • a(n) = 7 * 2 ^ n - 1 for n odd. • a(n) = 2 * a(n - 1) + a(n - 2) - 2 * a(n - 3) for n > 2. •

► [A008580] 1,5,13,27,45,67,95,125,163,201,249,295,353,407,475,537,615,685,773,851,949,1035,1143,1237,1355 ⋆ Crystal ball sequence for planar net 3.6.3.6. • a(n) = (18 * n ^ 2 + 2 * (- 1) ^ n * n + 18 * n - 7 * (- 1) ^ n - 1) / 8 for n>0. • a(n) = (9 * n ^ 2 + 10 * n - 4) / 4 for n>0 and even. • a(n) = (9 * n ^ 2 + 8 * n + 3) / 4 for n odd. (End) • a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). - _ Wesley Ivan Hurt _ , Apr 19 2023 •

► [A307275] 1,5,13,27,46,70,99,135,179,227,281,339,408,476,553,633,727,815,915,1017,1136,1244,1367,1491,1635 ⋆ Partial sums of A307205. • a(n) = a(n - 1) + 2 * a(n - 4) - 2 * a(n - 5) - a(n - 8) + a(n - 9) for n>14. •

► [A212151] 0,0,0,1,5,13,27,47,75,112,156,214,278,358,444,552,660,796,930,1099,1259,1457,1649,1885,2101 ⋆ Number of 2 X 2 matrices M of positive integers such that permanent(M) < n. • a(n) = Sum _{ k=1..n - 1 } Sum _{ i=1..n - 1 } d(k) * floor((n - k - 1) / i), where d(k) is the number of divisors of k (A000005). - _ Wesley Ivan Hurt _ , Nov 16 2017 •

► [A123326] 1,5,13,27,47,77,114,165,226,302,391,502,622,768,933,1120,1325,1564,1819,2112,2424,2768,3143,3564,3998 ⋆ Let M be the matrix defined in A111490. Sequence gives the sum of the elements of the submatrices (from the upper left element): M(1,1); M(1,1) + M(1,2) + M(1,2) + M(2,2); M(1,1) + M(1,2) + M(1,3) + M(2,1) + M(2,2) + M(2,3) + M(3,1) + M(3,2) + M(3,3), etc. • a(n) = Sum _{ i=1..n } Sum _{ j=1..n } M(i,j). •

► [A002717] 0,1,5,13,27,48,78,118,170,235,315,411,525,658,812,988,1188,1413,1665,1945,2255,2596,2970,3378,3822 ⋆ a(n) = floor(n(n + 2)(2n + 1) / 8). • a(n) = (1 / 16) * [2n(2n + 1)(n + 2) + cos(Pi * n) - 1]. - Justin C. Bozonier (justinb67(AT)excite.com), Dec 05 2000 • a(m + 1) - 2a(m) + 2a(m - 2) - a(m - 3) = 3. - _ Len Smiley _ , Oct 08 2001 • a(n) = (2n(2n + 1)(n + 2) + (- 1) ^ n - 1) / 16. - Wesley Petty (Wesley.Petty(AT)mail.tamucc.edu), Oct 25 2003 • a(n) = Sum _{ k=0..n } (- 1) ^ (n - k) * k * binomial(k + 1,2). • a(0)=0, a(1)=1, a(2)=5, a(3)=13, a(4)=27, a(n)=3 * a(n - 1) - 2 * a(n - 2) - 2 * a(n - 3) + 3 * a(n - 4) - a(n - 5). - _ Harvey P. Dale _ , Jan 20 2013 •

► [A079989] 1,1,1,1,5,13,27,51,103,221,498,1064,2240,4728,10076,21559,46075,98085,208759,444727,948151,2021335,4307861,9179111,19560273 ⋆ Number of permutations satisfying - k <= p(i) - i <= r and p(i) - i not in I, i=1..n, with k=3, r=3, I= { 1,2 } . • a(n) = a(n - 1) + a(n - 2) + 2 * a(n - 3) + a(n - 4) + 3 * a(n - 5) + 4 * a(n - 6) - 7 * a(n - 7) - 7 * a(n - 8) - 6 * a(n - 9) + 6 * a(n - 10) - 2 * a(n - 11) - a(n - 12) + a(n - 13) + 4 * a(n - 14) + a(n - 15) - 3 * a(n - 16) + a(n - 18) - a(n - 19) - a(n - 20). •

► [A027024] 1,5,13,27,53,101,189,351,649,1197,2205,4059,7469,13741,25277,46495,85521,157301,289325,532155,978789,1800277,3311229,6090303,11201817 ⋆ a(n) = T(n,n + 2), T given by A027023. • a(n) = a(n - 1) + a(n - 2) + a(n - 3) + 8, for n>4. - _ Greg Dresden _ , Feb 09 2020 •

► [A344521] 1,5,13,28,47,82,116,172,235,321,397,538,641,798,980,1192,1361,1655,1863,2218,2553,2912,3210,3766,4171 ⋆ a(n) = Sum _{ 1 <= i <= j <= k <= n } gcd(i,j,k). • a(n) = Sum _{ k=1..n } Sum _{ d|k } phi(k / d) * d * (d + 1) / 2. (End) •

► [A175254] 1,5,13,28,49,82,123,179,248,335,434,561,702,867,1056,1276,1514,1791,2088,2427,2798,3205,3636,4127,4649 ⋆ a(n) = Sum _{ k<=n } A000203(k) * (n - k + 1), where A000203(m) is the sum of divisors of m. • a(n) = Sum _{ k=1..n } Sum _{ i=1..k } k - (k mod i). - _ Wesley Ivan Hurt _ , Sep 13 2017 •

► [A294172] 1,5,13,28,50,83,126,184,255,345,451,580,728,903,1100,1328,1581,1869,2185,2540,2926,3355,3818,4328,4875 ⋆ Maximum value of the cyclic convolution of first n positive integers with themselves. • a(n) = Max { x; x=Sum _{ i=1..n } (n - i + 1) * (1 + (i + k) mod n); for k=1..n } . • a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + a(n - 4) + 2 * a(n - 5) - a(n - 6) for n>6. •

► [A055328] 1,5,13,28,53,91,146,223,326,461,634,851,1119,1446,1839,2307,2859,3504,4252,5114,6100,7222,8492,9922,11525 ⋆ Number of rooted identity trees with n nodes and 3 leaves. • a(n) = 3 * a(n - 1) - 2 * a(n - 2) - a(n - 3) + a(n - 5) + 2 * a(n - 6) - 3 * a(n - 7) + a(n - 8) for n>13. - _ Colin Barker _ , Sep 06 2019 •

► [A023537] 1,5,13,28,54,98,171,291,487,806,1324,2164,3525,5729,9297,15072,24418,39542,64015,103615,167691,271370,439128,710568,1149769 ⋆ a(n) = Lucas(n + 4) - (3 * n + 7). • a(n) = 7 * (F(n + 1) - 1) + 4 * F(n) - 3 * n; F(n) = A000045 (Fibonacci); • a(n) = - 4 + (2 ^ (- 1 - n) * ((1 - sqrt(5)) ^ n * (- 15 + 7 * sqrt(5)) + (1 + sqrt(5)) ^ n * (15 + 7 * sqrt(5)))) / sqrt(5) - 3 * (1 + n). • a(n) = 3 * a(n - 1) - 2 * a(n - 2) - a(n - 3) + a(n - 4) for n > 4. •

► [A060182] 1,5,13,28,58,118,238,478,958,1918,3838,7678,15358,30718,61438,122878,245758,491518,983038,1966078,3932158,7864318,15728638,31457278,62914558 ⋆ a(0) = 1, a(1) = 5, a(2) = 13; a(n) = 2 * a(n - 1) + 2, n > 2. • a(n) = 3(a(n - 1) - a(n - 2) + a(n - 3) - ... ((- 1) ^ (n + 1)) * a(0)) + 1; • a(n) = (2 ^ (n - 3)) * a(3) + (2 ^ (n - 2)) - 2 for n > 3. • a(n) = 15 * 2 ^ (n - 2) - 2, n > 1. (End) •

► [A178854] 0,1,1,5,13,29,29,93,221,221,733,1757,3805,7901,7901,24285,57053,122589,122589,384733,384733,384733,2481885,2481885,10870493 ⋆ Asymptotic value of odd Catalan numbers mod 2 ^ n. • a(n) = remainder(Catalan(2 ^ m - 1), 2 ^ n) for any m >= n - 1. •

► [A000328] 1,5,13,29,49,81,113,149,197,253,317,377,441,529,613,709,797,901,1009,1129,1257,1373,1517,1653,1793 ⋆ Number of points of norm <= n ^ 2 in square lattice. • a(n) = [x ^ (n ^ 2)] theta _ 3(x) ^ 2 / (1 - x), where theta _ 3() is the Jacobi theta function. - _ Ilya Gutkovskiy _ , Apr 14 2018 •

► [A129371] 0,1,5,13,29,50,86,126,190,255,355,451,595,728,924,1100,1356,1581,1905,2185,2585,2926,3410,3818,4394 ⋆ a(n) = Sum _{ k=0..floor(n / 2) } (n - k) ^ 2. • a(n) = Sum _{ k = floor((n + 1) / 2)..n } k ^ 2. • a(n) = a(n - 1) + 3 * a(n - 2) - 3 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) + a(n - 6) - a(n - 7). • a(n) = 7 * n ^ 3 / 24 + 9 * n ^ 2 / 16 + 7 * n / 48 + n * (- 1) ^ n * (n - 1) / 16. (End) •

► [A078370] 5,13,29,53,85,125,173,229,293,365,445,533,629,733,845,965,1093,1229,1373,1525,1685,1853,2029,2213,2405 ⋆ a(n) = 4 * (n + 1) * n + 5. • a(n) = (2n + 1) ^ 2 + 4. • a(n) = 4 * (n + 1) * n + 5 = 8 * binomial(n + 1, 2) + 5, hence subsequence of A004770 (5 (mod 8) numbers). [Typo fixed by _ Zak Seidov _ , Feb 26 2012] • a(n) = 8 * n + a(n - 1), with a(0) = 5. - _ Vincenzo Librandi _ , Aug 08 2010 •

► [A247903] 1,5,13,29,53,93,149,237,357,541,789,1165,1669,2429,3445,4973,7013,10077,14165,20301,28485,40765,57141,81709,114469 ⋆ Start with a single square; at n - th generation add a square at each expandable vertex (this is the "vertex to side" version); a(n) is the sum of all label values at n - th generation. (See comment for construction rules.) • a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + 2 * a(n - 4). - _ Colin Barker _ , Sep 26 2014 •

► [A240130] 5,13,29,53,137,173,293,397,593,857,977,1373,1697,1913,2213,2909,3517,3821,4493,5077,5333,6257,7213,7937,9413 ⋆ Least prime of the form prime(n) ^ 2 + k ^ 2, or 0 if none. • a(n) == 1 (mod 4) if a(n) > 0. • a(n) > 0 if Bunyakovsky's conjecture is true. • a(n) <> a(m) if n <> m and a(n) > 0, by uniqueness in Fermat's 4n + 1 Theorem. •

► [A347503] 5,13,29,57,115,229,453,897,1775,3513,6957,13785,27331,54221,107629,213761,424767,844465,1679605,3342057,6652563,13247093,26387445,52578561,104796015 ⋆ Number of dominating sets in the n - dipyramidal graph. • a(n) =4 * a(n - 1) - 4 * a(n - 2) - a(n - 4) + 2 * a(n - 5). •

► [A023619] 1,5,13,29,60,118,225,419,767,1385,2474,4380,7697,13441,23345,40357,69480,119186,203793,347455,590851,1002385,1696918,2867064,4835425 ⋆ Convolution of Lucas numbers and (F(2), F(3), F(4), ...). • a(n) = (n + 1) * Sum _{ k=1..n + 1 } binomial(k,n + 1 - k) * (k - 1) / k. - _ Vladimir Kruchinin _ , Sep 26 2011 •

► [A113914] 1,5,13,29,61,131,271,569,1381,2789,5581,11171,22369,44741,89491,185543,373273,766229,1532701,3065411,6130849,12261701,24700549,49401101,98802211 ⋆ (1,2,3) Jasinski - like positive power sequence. • a(1) = 1, a(n + 1) = the least prime p such that p = 2 * a(n) + 3 ^ k for integer k>0. •

► [A239367] 1,5,13,29,69,197,669,2509,9813,38965,155501,621565,2485733,9942309,39768509,159073197,636291829,2545166229,10180663693,40722653405,162890612101,651562446725,2606249785053,10424999138189 ⋆ The bisection of A238315 that remains constant with changes in the offset of the exponent of the second term. • a(n) = (- 1 + 4 ^ n - 12 * n + 36 * n ^ 2) / 27. • a(n) = 6 * a(n - 1) - 8 * a(n - 2) - 2 * a(n - 3) + 9 * a(n - 4) - 4 * a(n - 5). •

► [A124698] 1,5,13,29,73,185,481,1265,3361,8993,24193,65345,177025,480641,1307137,3559169,9699841,26452481,72173569,196989953,537802753,1468536833,4010582017,10954043393,29920862209 ⋆ Number of base 5 circular n - digit numbers with adjacent digits differing by 1 or less. • a(n) = 5 * a(n - 1) - 6 * a(n - 2) - 2 * a(n - 3) + 4 * a(n - 4) for n>4. •

▶ [A271997] 5,13,31,49,81,113,163,213,285,357,455,553,681,809,971,1133,1333,1533,1775,2017,2305,2593,2931,3269,3661 ⋆ The icosagen sequence : a(n) = A018227(n) - 5, for n >= 2. ● a(n) = n * ((n + 3) ^ 2 + 2) / 6 + (n + 2) * (1 + (- 1) ^ n) / 4 - 6, for n >= 2. ● a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + a(n - 4) + 2 * a(n - 5) - a(n - 6). ●

▶ [A023261] 5,13,31,61,101,103,163,191,233,241,251,433,461,643,751,761,821,863,983,1021,1153,1193,1283,1291,1531 ⋆ Primes that remain prime through 2 iterations of function f(x) = 8x + 3. ● a(n) = 1 or 3 (mod 10) for n > 1. - _ John Cerkan _ , Sep 14 2016 ●

▶ [A118646] 0,0,1,5,13,31,71,159,346,739,1559,3258,6756,13922,28547,58300,118668,240880,487835,986085,1990025,4010658,8073786,16237521,32629241 ⋆ a(n) is the number of binary strings of length n such that there exists a subsequence of length 4 containing 3 or more ones. ● a(n) = a(n - 1) + a(n - 2) + a(n - 4) - a(n - 6) + 13 * 2 ^ (n - 6). ● a(n) = + 3 * a(n - 1) - a(n - 2) - 2 * a(n - 3) + a(n - 4) - 2 * a(n - 5) - a(n - 6) + 2 * a(n - 7). ●

▶ [A370754] 5,13,33,56,109,155,257,334,501,617,865,1028,1373,1591,2049,2330,2917,3269,4001,4432,5325,5843,6913,7526,8789 ⋆ a(n) = 2 + n ^ 2 * floor((n + 3) / 2) + floor(3 * n / 2). ● a(n) = a(n - 1) + 3 * a(n - 2) - 3 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) + a(n - 6) - a(n - 7) for n > 7. ●

▶ [A308812] 1,5,13,33,61,143,246,521,985,1995,3499,7923,14028,28642,55603,115369,210665,455399,838338,1755983,3383652,6974159,13034492,28011611,52475486 ⋆ a(n) = Sum _{ k=1..n } binomial(n,k) * floor(n / k). ● a(n) = [x ^ n] (1 / (1 - x)) * Sum _{ k=1..n } binomial(n,k) * x ^ k / (1 - x ^ k). ● a(n) = Sum _{ k=1..n } Sum _{ d|k } binomial(n,d). ●

▶ [A321124] 1,5,13,33,73,141,245,393,593,853,1181,1585,2073,2653,3333,4121,5025,6053,7213,8513,9961,11565,13333,15273,17393 ⋆ a(n) = (4 * n ^ 3 - 6 * n ^ 2 + 14 * n + 3) / 3. ● a(n) = 8 * binomial(n, 3) + 4 * binomial(n, 2) + 4 * binomial(n, 1) + 1. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4), n >= 4. ●

▶ [A141025] 1,1,1,5,13,33,73,157,325,665,1345,2709,5437,10897,21817,43661,87349,174729,349489,699013,1398061,2796161,5592361,11184765,22369573 ⋆ a(n) = (2 ^ (2 + n) - (- 1) ^ n) / 3 - 2 * n. ● a(n) = 3 * a(n - 1) - a(n - 2) - 3 * a(n - 3) + 2 * a(n - 4). ● a(n + 1) - 2 * a(n)= 2 * (n - 1) + (- 1) ^ n = - 1, - 1, 3, 3, 7, 7, 11, 11,... duplicated A004767. ●

▶ [A100227] 1,1,5,13,33,81,197,477,1153,2785,6725,16237,39201,94641,228485,551613,1331713,3215041,7761797,18738637,45239073,109216785,263672645,636562077,1536796801 ⋆ Main diagonal of triangle A100226. ● a(n) = 2 * a(n - 1) + a(n - 2) + 2 for n > 1, with a(0)=1, a(1)=1. ● a(n) = n * Sum _{ k=1..n } (1 / k) * Sum _{ i=0..n - k } binomial(k, i) * binomial(n - i - 1, k - 1), n > 0, a(0)=1. - _ Vladimir Kruchinin _ , May 13 2011 ● a(n) = - 1 + (1 - sqrt(2)) ^ n + (1 + sqrt(2)) ^ n. - _ Colin Barker _ , Mar 16 2016 ● a(n) = 3 * a(n - 1) - a(n - 2) - a(n - 3). - _ Wesley Ivan Hurt _ , Jul 13 2020 ●

▶ [A278764] 5,13,33,83,208,521,1305,3268,8183,20490,51306,128467,321673,805448,2016788,5049902,12644616,31661270,79277695,198506027,497045767,1244569236,3116317824,7803050645,19538315026 ⋆ Pisot sequence T(5,13). ● a(n) = floor(a(n - 1) ^ 2 / a(n - 2)), a(0) = 5, a(1) = 13. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) + 3 * a(n - 3) - 3 * a(n - 4) + a(n - 5) - a(n - 6). (End) ●

▶ [A109786] 1,1,1,1,1,5,13,33,85,225,589,1541,4033,10561,27649,72385,189505,496133,1298893,3400545,8902741,23307681,61020301,159753221,418239361 ⋆ Expansion of - (x + 2 * x ^ 2 + 3 * x ^ 3 - 1 + 5 * x ^ 4) / ((x + 1) * (x ^ 2 - 3 * x + 1) * (1 + x ^ 2)). ● a(0)=1, a(1)=1, a(2)=1, a(3)=1, a(4)=1, a(n)=2 * a(n - 1) + a(n - 2) + a(n - 3) + 2 * a(n - 4) - a(n - 5). - _ Harvey P. Dale _ , Apr 14 2015 ●

▶ [A283959] 1,1,1,1,1,5,13,33,85,561,1597,4229,11089,73393,209089,553873,1452529,9613829,27388957,72553041,190270165,1259338113,3587744173,9503894405,24923939041 ⋆ a(n) = (Sum _{ j=1..h - 1 } a(n - j) + a(n - 1) * a(n - h + 1)) / a(n - h) with a(1), ..., a(h)=1, where h = 5. ● a(4 * k - 1) = 3 * a(4 * k - 2) - a(4 * k - 3) - 1, ● a(4 * k) = 3 * a(4 * k - 1) - a(4 * k - 2) - 1, ● a(4 * k + 1) = 3 * a(4 * k) - a(4 * k - 1) - 1, ● a(4 * k + 2) = 7 * a(4 * k + 1) - a(4 * k) - 1. ● a(n) = 132 * a(n - 4) - 132 * a(n - 8) + a(n - 12) for n>12. ●

▶ [A055426] 1,5,13,33,89,221,485,953,1713,2869,4541,6865,9993,14093,19349,25961,34145,44133,56173,70529,87481,107325,130373,156953,187409 ⋆ Number of points in Z ^ n of norm <= 2. ● a(n) = (3 + 2 * n + 16 * n ^ 2 - 8 * n ^ 3 + 2 * n ^ 4) / 3. - corrected by _ Colin Barker _ , Jul 07 2013 ● a(0)=1, a(1)=5, a(2)=13, a(3)=33, a(4)=89, a(n)=5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Harvey P. Dale _ , Feb 09 2015 ●

▶ [A283329] 1,1,1,1,5,13,33,217,617,1633,10813,30805,81601,540401,1539601,4078401,27009205,76949213,203838433,1349919817,3845921017,10187843233,67468981613,192219101605,509188323201 ⋆ a(n) = (1 + Sum _{ j=1..K - 1 } a(n - j) + a(n - 1) * a(n - K + 1)) / a(n - K) with a(1),...,a(K)=1, where K=4. ● a(3 * n) = 3 * a(3 * n - 1) - a(3 * n - 2) - 1, ● a(3 * n + 1) = 3 * a(3 * n) - a(3 * n - 1) - 1, ● a(3 * n + 2) = 7 * a(3 * n + 1) - a(3 * n) - 1. (End) ● a(n) = 51 * a(n - 3) - 51 * a(n - 6) + a(n - 9). ●

▶ [A106587] 5,13,34,65,146,205,338,425,610,941,1082,1513,1850,2045,2434,3065,3770,4045,4850,5441,5770,6725,7418,8497,10034 ⋆ Sum of n - th prime squared and n - th perfect square. ● a(n) = n ^ 2 + prime(n) ^ 2. ●

▶ [A167710] 1,5,13,35,79,185,397,875,1831,3905,8053,16835,34399,70985,144157,294875,596311,1212305,2444293,4947635,9954319,20085785,40348717,81228875,162989191 ⋆ a(n) = 10 * 2 ^ n - 3 * A083658(n + 2). ● a(n) = 2 * a(n - 1) + 3 * a(n - 2) - 6 * a(n - 3). ●

▶ [A264080] 1,5,13,35,91,239,625,1637,4285,11219,29371,76895,201313,527045,1379821,3612419,9457435,24759887,64822225,169706789,444298141,1163187635,3045264763,7972606655,20872555201 ⋆ a(n) = 6 * F(n) * F(n + 1) + (- 1) ^ n, where F = A000045. ● a(n) = - a(- n - 1) = 2 * a(n - 1) + 2 * a(n - 2) - a(n - 3) for all n in Z. ● a(n) = (2 ^ (- n) * (- (- 2) ^ n - 3 * (3 - sqrt(5)) ^ n * (- 1 + sqrt(5)) + 3 * (1 + sqrt(5)) * (3 + sqrt(5)) ^ n)) / 5. - _ Colin Barker _ , Sep 28 2016 ●

▶ [A290588] 5,13,35,113,355,1105,3435,10625,32723,100433,307323,937985,2856547,8682897,26349835,79850241,241679859,730700881,2207155867,6661493633,20090908803,60555714705,182419600683,549259559297,1653098625555 ⋆ Number of irredundant sets in the n - helm graph. ● a(n) = 6 * a(n - 1) - 10 * a(n - 2) + 4 * a(n - 3) - 5 * a(n - 4) + 6 * a(n - 5). ●

▶ [A238460] 5,13,37,41,101,113,157,173,181,197,229,241,281,313,337,349,353,373,409,421,433,509,541,617,677 ⋆ Primes p for which x! + (p - 1)! / x!==0 (mod p) has only two solutions 1<=x<=p - 2 following from Wilson theorem: x = 1 and x = p - 2. ● a(n) == 1 (mod 4). ●

▶ [A269803] 1,5,13,37,99,265,701,1849,4861,12761,33463,87697,229737,601693,1575629,4125661,10802107,28281881,74045509,193857841,507533181,1328750065,3478730543,9107463457,23843695249 ⋆ a(n) = F(n + 1) * F(n + 2) - F(n), where F = A000045 (Fibonacci numbers). ● a(n) = F(n + 1)F(n + 2) - F(n), F = A000045 (Fibonacci numbers). ● a(n) = 3 * a(n - 1) + a(n - 2) - 5 * a(n - 3) - a(n - 4) + a(n - 5). ●

▶ [A182312] 5,13,37,109,193,421,457,541,613,709,757,1033,1117,1201,1549,1597,1621,1789,2137,2293,2377,2437,2797,3061,3109 ⋆ Primes of the form a ^ 2 + b ^ 2 such that both a ^ 2 + b ^ 2 - a * b and a ^ 2 + b ^ 2 + a * b are prime. ● a(n) == 1 (mod 4). - _ Thomas Ordowski _ , Mar 13 2018 ●

▶ [A071100] 5,13,37,109,313,905,2617,7561,21853,63157,182525,527509,1524529,4405969,12733489,36800465,106355317,307372573,888323221,2567301757,7419639785,21443156953,61971873769,179102039257,517614500173 ⋆ Expansion of (5 + 3 * x + x ^ 2 - x ^ 3) / (1 - 2 * x - 2 * x ^ 2 - 2 * x ^ 3 + x ^ 4) in powers of x. ● a(- n) = a(- 5 + n). a(- 1) = a(- 2) = 1. a(n) = 2 * a(n - 1) + 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4). - _ Michael Somos _ , Dec 15 2011 ●

▶ [A199108] 5,13,37,109,325,973,2917,8749,26245,78733,236197,708589,2125765,6377293,19131877,57395629,172186885,516560653,1549681957,4649045869,13947137605,41841412813,125524238437,376572715309,1129718145925 ⋆ a(n) = 4 * 3 ^ n + 1. ● a(n) = 3 * a(n - 1) - 2. ● a(n) = 4 * a(n - 1) - 3 * a(n - 2). ●

▶ [A360797] 1,5,13,39,81,225,449,1115,2345,5373,11265,25483,53249,116497,246405,529195,1114113,2372741,4980737,10515511,22025617,46204953,96468993,201506607,419432417 ⋆ Expansion of Sum _{ k>0 } x ^ k / (1 - 2 * x ^ k) ^ (k + 1). ● a(n) = Sum _{ d|n } 2 ^ (n / d - 1) * binomial(d + n / d - 1,d). ●

▶ [A080143] 0,5,13,39,102,272,712,1869,4893,12815,33550,87840,229968,602069,1576237,4126647,10803702,28284464,74049688,193864605,507544125,1328767775,3478759198,9107509824,23843770272 ⋆ a(n) = F(3) * F(n) * F(n + 1) + F(4) * F(n + 1) ^ 2 - F(4) if n even, F(3) * F(n) * F(n + 1) + F(4) * F(n + 1) ^ 2 if n odd, where F(n) is the n - th Fibonacci number (A000045). ● a(n) = (2 * Lucas(2 * n + 5) + 7 * (- 1) ^ (n + 1) - 15) / 10. - _ Ehren Metcalfe _ , Aug 21 2017 ● a(n) = (2 * Fibonacci(n + 2) * Fibonacci(n + 3) - 3 - (- 1) ^ n) / 2. - _ G. C. Greubel _ , Jul 23 2019 ●

▶ [A054856] 1,1,5,13,40,117,348,1029,3049,9028,26738,79183,234502,694476,2056692,6090891,18038173,53420041,158203433,468519406,1387520047,4109140098,12169216863,36039131181,106729873498 ⋆ Number of ways to tile a 4 X n region with 1 X 1, 2 X 2, 3 X 3 and 4 X 4 tiles. ● a(n) = a(n - 1) + 4 * a(n - 2) + 4 * a(n - 3) + 3 * a(n - 4) + 2 * (a(n - 5) + a(n - 6) + ... + a(0)), a(0)=a(1)=1, a(2)=5, a(3)=13 ● a(n) = 2 * a(n - 1) + 3 * a(n - 2) - a(n - 4) - a(n - 5). G.f.=(1 - z) / ((1 + z) * (1 - 3 * z + z ^ 4)). - _ Emeric Deutsch _ , Oct 16 2006 ●

▶ [A283456] 5,13,40,136,490,1828,6970,26956,105250,413668,1633450,6471676,25703410,102269908,407460730,1625010796,6485595970,25899140548,103467028810,413479908316,1652755798930,6607533265588,26419666417690,105647272028236,422494919768290 ⋆ Row n=4 of A144048. ● a(n) = 1 + (9 * 2 ^ (2 * n + 2) + 9 * 2 ^ (n + 2) + 8 * 3 ^ (n + 1)) / 24. ● a(n) = (2 + 3 * 2 ^ n + 2 * 3 ^ n + 3 * 4 ^ n) / 2. ● a(n) = 10 * a(n - 1) - 35 * a(n - 2) + 50 * a(n - 3) - 24 * a(n - 4) for n>3. (End) ●

▶ [A046717] 1,1,5,13,41,121,365,1093,3281,9841,29525,88573,265721,797161,2391485,7174453,21523361,64570081,193710245,581130733,1743392201,5230176601,15690529805,47071589413,141214768241 ⋆ a(n) = 2 * a(n - 1) + 3 * a(n - 2), a(0) = a(1) = 1. ● a(n) = (3 ^ n + (- 1) ^ n) / 2. ● a(n) = Sum _{ k=0..n } binomial(n, 2k)2 ^ (2k). - _ Paul Barry _ , Feb 26 2003 ● a(n) = ceiling(3 ^ n / 4) + floor(3 ^ n / 4) = ceiling(3 ^ n / 4) ^ 2 - floor(3 ^ n / 4) ^ 2. - _ Paul Barry _ , Jan 17 2005 ● a(n) = Sum _{ k=0..n } Sum _{ j=0..n } C(n,j)C(n - j,k) * (1 + (- 1) ^ (j - k)) / 2. - _ Paul Barry _ , May 21 2006 ● a(n) = (3 ^ n + (- 1) ^ n) / 2. - _ M. F. Hasler _ , Mar 20 2008 ●

▶ [A080925] 0,1,5,13,41,121,365,1093,3281,9841,29525,88573,265721,797161,2391485,7174453,21523361,64570081,193710245,581130733,1743392201,5230176601,15690529805,47071589413,141214768241 ⋆ Binomial transform of Jacobsthal gap sequence (A080924). ● a(n)=Sum { k=1..n, Binomial(n, 2k - 2)2 ^ (2k - 2) } ● a(n)=(3 ^ n - 2 * 0 ^ n + (- 1) ^ n) / 2; G.f.: x(1 + 3x) / ((1 + x)(1 - 3x)); E.g.f.: (exp(3x) - 2exp(0) + exp(- x)) / 2. - _ Paul Barry _ , May 19 2003 ●

▶ [A164907] 1,5,13,41,121,365,1093,3281,9841,29525,88573,265721,797161,2391485,7174453,21523361,64570081,193710245,581130733,1743392201,5230176601,15690529805,47071589413,141214768241,423644304721 ⋆ a(n) = (3 * 3 ^ n - (- 1) ^ n) / 2. ● a(n) = 2 * a(n - 1) + 3 * a(n - 2) for n > 1; a(0) = 1, a(1) = 5. ● a(n) = 3 * a(n - 1) + 2 * (- 1) ^ n. - _ Carmine Suriano _ , Mar 21 2014 ●

▶ [A085601] 5,13,41,145,545,2113,8321,33025,131585,525313,2099201,8392705,33562625,134234113,536903681,2147549185,8590065665,34360000513,137439477761,549756862465,2199025352705,8796097216513,35184380477441 ⋆ a(n) = 2 * (4 ^ n + 2 ^ n) + 1. ● a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3). ●

▶ [A105262] 1,1,5,13,42,126,387,1180,3606,11012,33636,102733,313781,958384,2927209,8940617,27307465,83405605,254747014,778077690,2376494563,7258563604,22169941574,67713990832,206819875428 ⋆ a(n)=number of tilings of a 4 X n rectangle using tiles that are either 1 X 1 squares or trominoes (here by a tromino we mean a 2 X 2 square with the upper right 1 X 1 square removed; no rotations allowed). ● a(n) = a(n - 1) + 5a(n - 2) + 4a(n - 3) - a(n - 5) for n>=5; a(0)=1, a(1)=1, a(2)=5, a(3)=13, a(4)=42. ●

▶ [A052899] 1,1,5,13,45,141,461,1485,4813,15565,50381,163021,527565,1707213,5524685,17878221,57855181,187223245,605867213,1960627405,6344723661,20531956941,66442808525,215013444813,695798123725 ⋆ Expansion of g.f.: (1 - 2 * x) / ((x - 1) * (4 * x ^ 2 + 2 * x - 1)). ● a(n) = Sum(- 1 / 25 * (- 1 - 8 *_ alpha + 4 *_ alpha ^ 2) *_ alpha ^ (- 1 - n), _ alpha=RootOf(1 - 3 *_ Z - 2 *_ Z ^ 2 + 4 *_ Z ^ 3)). ● a(n) / a(n - 1) tends to (1 + sqrt(5)) = 3.236067... - _ Gary W. Adamson _ , Mar 01 2008 ● a(n) = (1 / 5) * Sum _{ k=1..5 } ((x _ k) ^

4 - 3 * (x _ k) ^ 2 + 1), x _ k=2 * cos((2 * k - 1) * Pi / 10). Also, a(n) / a(n - 1) - > spectral radius of matrix A _ (10,4) above. - _ L. Edson Jeffery _ , Apr 19 2011 ●

▶ [A162563] 5,13,47,175,653,2437,9095,33943,126677,472765,1764383,6584767,24574685,91713973,342281207,1277410855,4767362213,17792037997,66400789775,247811121103,924843694637,3451563657445,12881410935143,48074080083127 ⋆ a(n) = ((5 + sqrt(3)) * (2 + sqrt(3)) ^ n + (5 - sqrt(3)) * (2 - sqrt(3)) ^ n) / 2. ● a(n) = 4 * a(n - 1) - a(n - 2) for n > 1; a(0) = 5, a(1) = 13. ● a(n) = 4 * a(n - 1) - a(n - 2), with a(0)=5 and a(1)=13. - _ Paolo P. Lava _ , Jul 15 2009 ●

▶ [A343549] 1,5,13,49,131,545,1723,6809,24484,94445,352727,1366273,5200313,20135939,77571083,301034537,1166803127,4540794476,17672631919,68943346009,269129827042,1052178506615,4116715363823,16124644677569,63205303337656 ⋆ a(n) = n * Sum _{ d|n } binomial(d + n - 1,n) / d. ● a(n) = [x ^ n] Sum _{ k>=1 } k * x ^ k / (1 - x ^ k) ^ (n + 1). ● a(n) = [x ^ n] Sum _{ k>=1 } binomial(k + n - 1,n) * x ^ k / (1 - x ^ k) ^ 2. ● a(n) = Sum _{ d|n } binomial(d + n - 1,d). ● a(n) = [x ^ n] Sum _{ k>=1 } (1 / (1 - x ^ k) ^ n - 1). (End) ●

▶ [A084601] 1,1,5,13,49,161,581,2045,7393,26689,97285,355565,1305745,4808545,17760965,65753693,243954113,906758785,3375949829,12587460557,46995614449,175669746209,657370655045,2462383495357,9232029156001 ⋆ Coefficients of 1 / (1 - 2x - 7x ^ 2) ^ (1 / 2); also, a(n) is the central coefficient of (1 + x + 2x ^ 2) ^ n. ● a(n)=sum { k=0..floor(n / 2), binomial(n - k, k)binomial(n, k)2 ^ k } . - _ Paul Barry _ , Aug 26 2004 ● a(n) is also the central coefficient of (2 + x + x ^ 2) ^ n; a(n)=sum _{ k=0..n } C(n,k) T(k,n), where T(k,n) is the triangle of trinomial coefficients = coefficient of x ^ n of (1 + x + x ^ 2) ^ k : A027907 - _ N - E. Fahssi _ , Feb 05 2008 ● a(n + 2)=((2 * n + 3) * a(n + 1) + 7 * (n + 1) * a(n)) / (n + 2); a(0)=a(1)=1 - Sergei N. Gladkovskii, Aug 01 2012 ● a(n) = hypergeom([1 / 2 - n / 2, - n / 2], [1], 8). - _ Peter Luschny _ , Mar 18 2018 ●

▶ [A372370] 1,1,5,13,53,176,677,2451,9333,34978,133580,508806,1953701,7509178,28981643,112046213,434289525,1686080622,6557830310,25542229740,99622788428,389023326600,1520817551742,5951305115982,23310374278437 ⋆ Coefficient of x ^ n in the expansion of ((1 + x + x ^ 2) ^ 2 / (1 + x)) ^ n. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(2 * n,k) * binomial(n - k,n - 2 * k). ●

▶ [A363472] 0,0,1,1,5,13,55,193,941,4081,22351,113761,694565,4030153,27107095,175738753,1289775821,9209233921,73147903471,568928274961,4857161139365,40796613003433,372190216061335,3352314486348433,32518958606637101 ⋆ Total number of blocks in all partitions of [n] where each block has at least one odd element and at least one even element. ● a(n) = Sum _{ k=0..floor(n / 2) } k * Stirling2(floor(n / 2),k) * Stirling2(ceiling(n / 2),k) * k!. ●

▶ [A176648] 1,5,13,55,245,1215,6317,34187,190093,1079983,6239989,36554363,216600357,1295906671,7817665373,47499325915,290411653437,1785401003887,11030252590149,68444469966843,426386709191893,2665740642304879 ⋆ a(n + 1) = m + Sum _{ j=0..n } (a(j) * a(n - j) + k) for n>=1, with a(0)=1, a(1)=5, k=1 and m=1. ● a(n) = m + k * n + Sum _{ j=0..n - 1 } a(j) * a(n - j - 1) with a(0) = m = k = 1 and a(1) = 5. ●

▶ [A084136] 1,1,5,13,57,201,797,2997,11569,44113,169205,647197,2478825,9488025,36327821,139071813,532438369,2038379425,7803827429,29876310829,114379413657,437893003113,1676441901821,6418134825429,24571362963601 ⋆ Binomial transform of cosh(sqrt(2) * x) ^ 2. ● a(n) = ((1 + sqrt(8)) ^ n + (1 - sqrt(8)) ^ n + 2) / 4. ●

▶ [A091147] 1,1,5,13,57,201,861,3445,14897,63313,278389,1223069,5465065,24513945,111037005,505298565,2314343265,10645982625,49202944485,228253816365,1062783893145,4964167491945,23256852644925,109249893866133,514494575459217 ⋆ Expansion of (1 - x - sqrt(1 - 2x - 15x ^ 2)) / (8x ^ 2). ● a(n) = sum { k =0..n, C(n, 2k)C(k)4 ^ k } . - _ Paul Barry _ , May 16 2005 ● a(n) = integral(x= - 2..2, (2 * x + 1) ^ n * sqrt((2 - x) * (2 + x))) / (2 * Pi). [_ Peter Luschny _ , Sep 11 2011] ● a(n) = (2 ^ n / (n + 1)) * [x ^ n] (1 + x / 2 + x ^ 2) ^ (n + 1). [_ Emanuele Munarini _ , Apr 27 2012] ● a(n) = hypergeom([- n / 2, (1 - n) / 2], [2], 16). - _ Peter Luschny _ , May 28 2014 ● a(n) = 2 ^ n * GegenbauerC(n, - n - 1, - 1 / 4) / (n + 1). - _ Peter Luschny _ , May 08 2016 ●

▶ [A201805] 1,1,5,13,61,221,1001,4145,18733,82381,375745,1703945,7858225,36279985,168992045,789433013,3707816333,17467638925,82599195809,391645961993,1862242702201,8875355178521,42394598106965,202903189757053 ⋆ Number of arrays of n integers in - 2..2 with sum zero and equal numbers of elements greater than zero and less than zero. ● a(n) appears to be the constant term of (1 + X + 1 / X + Y + 1 / Y) ^ n, which has o.g.f. hypergeom([1 / 2, 1 / 2],[1],16 * x ^ 2 / (1 - x) ^ 2) / (1 - x). - _ Mark van Hoeij _ , May 07 2013 ● a(n) is exactly the constant term of (1 + X + 1 / X + Y + 1 / Y) ^ n since this generates closed walks on the square lattice with self - loops. Non - constant terms generate walks to the neighbors of a vertex. Removing the 1 is equivalent to removing the self - loops. ● a(n) = 3F2([1 / 2, 1 / 2 - n / 2, - n / 2], [1, 1], 16). ● a(n) = Sum _{ k=0..n } C(n,2k) * C(2k,k) ^ 2. ●

▶ [A372383] 1,1,5,13,63,225,1069,4425,21008,93927,449574,2099993,10161845,48761421,238544091,1165258909,5756929854,28480358700,141911407403,708766944499,3557401656125,17900413391858,90401732441880,457657822713177,2323507912981800 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 + x) ^ 3 / (1 + x + x ^ 2) ^ 4). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 2) } binomial(4 * n + 4,k) * binomial(n - k + 1,n - 2 * k). ●

▶ [A309167] 1,5,13,65,97,229,997,1145,2245,5725,7213,9805,10445,24193,34121,37321,52225,83729,98449,125233,145493,156925,171037,260893,334981 ⋆ a(n) ^ 2 is the least possible value at the root of a binary tree of height n where all nodes hold positive squares and all interior nodes also equal the sum of their two children. ● a(n) <= 5 ^ (n - 1). ●

▶ [A115329] 1,1,5,13,73,281,1741,8485,57233,328753,2389141,15539261,120661465,866545993,7140942173,55667517781,484124048161,4046845186145,36967280461093,328340133863533,3137853448906601,29405064157989241 ⋆ E.g.f.: exp(x + 2 * x ^ 2). ● a(n) = Sum _{ k=0..floor(n / 2) } C(n - k,k)2 ^ k * n! / (n - k)! = Sum _{ k=0..n } C(n,k)2 ^ k * (n - k)! / (n - 2k)!. - _ Paul Barry _ , Nov 07 2008 ● a(n) = D ^ n(exp(x)) evaluated at x = 0, where D is the operator sqrt(1 + 8 * x) * d / dx. Cf. A000085 and A047974. - _ Peter Bala _ , Dec 07 2011 ● a(n) = i ^ (1 - n) * 2 ^ (3 * (n - 1) / 2) * KummerU((1 - n) / 2, 3 / 2, - 1 / 8). - _ Peter Luschny _ , Nov 21 2017 ●

▶ [A294208] 0,0,1,5,13,77,77,599,1303,4189,4189,48599,48599,659507,659507,659507,1364059,23909723,23909723,466536977,466536977,466536977,466536977,10963143031,10963143031 ⋆ a(n) = reduced numerator of Sum _{ p <= n } Sum _{ k=1..floor(log(n) / log(p)) } 1 / p ^ k, where p runs over the primes. ● a(n) = reduced numerator of Sum _{ p <= n } (p ^ floor(log(n) / log(p)) - 1) / p ^ floor(log(n) / log(p)) / (p - 1), where p runs over the primes. ●

▶ [A027457] 0,1,5,13,77,87,669,1443,4609,4861,55991,58301,785633,811373,835397,1715839,29889983,30570663,593094837,604734465,615819825,626401305,14640022575,14863115445,75386423001 ⋆ a(n) = (H(n) - 1) * lcm { 1,...,n } , where H(n) is the n - th harmonic number. ● a(n) = (Psi(n + 1) - 1 + gamma) * LCM(n), LCM(n) = lcm { 1..n } . - _ Peter Luschny _ , Dec 01 2011 ●

▶ [A190949] 1,5,13,89,233,1597,4181,28657,75025,514229,1346269,9227465,24157817,165580141,433494437,2971215073,7778742049,53316291173,139583862445,956722026041,2504730781961,17167680177565,44945570212853,308061521170129,806515533049393 ⋆ Odd Fibonacci numbers with odd index. ● a(n) = 18 * a(n - 2) - a(n - 4), with a(1)=1, a(2)=5, a(3)=13, and a(4)=89. ● a(n) = (- (2 - sqrt(5)) ^ n + (- 2 - sqrt(5)) ^ n * (- 2 + sqrt(5)) + 2 * (- 2 + sqrt(5)) ^ n + sqrt(5) * (- 2 + sqrt(5)) ^ n + (2 + sqrt(5)) ^ n) / (2 * sqrt(5)) for n>0. - _ Colin Barker _ , Mar 27 2016 ●

▶ [A350467] 1,1,5,13,89,341,2653,13021,110449,648469,5891381,39734685,382729801,2887493077,29287115341,242592910621,2577978650081,23125601566165,256460946182821,2465492129670493,28441473938165561,290630718826209301,3477967327342044989,37528922270996471133 ⋆ a(n) = hypergeom([1 / 2 - n / 2, - n / 2], [- n], - 8 * n). ● a(n) = Sum _{ k=0..n } binomial(n - k, k) * (2 * n) ^ k. ●

▶ [A228280] 5,13,112,587,3631,21166,126119,745178,4416695,26150120,154877307,917205757,5431915952,32169045631,190512481196,1128258633821,6681806858103,39571194265886,234349700556332,1387872742075595 ⋆ Number of nX5 binary arrays with top left value 1 and no two ones adjacent horizontally, vertically or nw - se diagonally. ● a(n) = a(n - 1) + 21 * a(n - 2) + 48 * a(n - 3) + 14 * a(n - 4) - 69 * a(n - 5) - 38 * a(n - 6) + 68 * a(n - 7) + 13 * a(n - 8) - 57 * a(n - 9) + 37 * a(n - 10) - 8 * a(n - 11) - 2 * a(n - 12) + a(n - 13) ●

▶ [A022139] 5,14,19,33,52,85,137,222,359,581,940,1521,2461,3982,6443,10425,16868,27293,44161,71454,115615,187069,302684,489753,792437 ⋆ Fibonacci sequence beginning 5, 14. ● a(0)=5, a(1)=14, a(n)=a(n - 1) + a(n - 2). - _ Harvey P. Dale _ , Apr 15 2015 ● a(n) = Fibonacci(n + 6) - Lucas(n - 2). - _ Greg Dresden _ and Tyler Zidlicky, Mar 01 2022 ●

▶ [A353974] 0,1,5,14,21,28,37,41,42,51,52,56,65,72,79,88,92,93,102,103,107,116,123,130,139 ⋆ a(n) is the n - th partial sum of A056992. ● a(n) = a(n - 1) + a(n - 9) - a(n - 10) for n > 9. ●

▶ [A017221] 5,14,23,32,41,50,59,68,77,86,95,104,113,122,131,140,149,158,167,176,185,194,203,212,221 ⋆ a(n) = 9 * n + 5. ● a(n) = a(n - 1) + 9, with a(0) = 5. ●

▶ [A063223] 5,14,24,34,44,52,64,72,82,92,102,110,122,130,140,150,160,168,180,188,198,208,218,226,238 ⋆ Dimension of the space of weight 2n cuspidal newforms for Gamma _ 0(59). ● a(n) = a(n - 2) + a(n - 3) - a(n - 5) for n>6. G.f.: x * (5 + 14 * x + 19 * x ^ 2 + 15 * x ^ 3 + 6 * x ^ 4 - x ^ 5) / ((1 - x) ^ 2 * (1 + x) * (1 + x + x ^ 2)). [_ Colin Barker _ , Sep 27 2012] ●

▶ [A332623] 1,5,14,25,43,58,87,106,141,171,212,239,302,333,386,439,507,546,631,674,765,834,911,962,1091 ⋆ a(n) = Sum _{ k=1..n } ceiling(n / k) ^ 2. ● a(n) = n + Sum _{ k=1..n - 1 } (2 * sigma(k) + d(k)). ●

▶ [A301689] 1,5,14,26,43,65,89,119,154,190,233,281,329,385,446,506,575,649,721,803,890,974,1069,1169,1265 ⋆ Partial sums of A301688. ● a(n) = a(n - 1) + 2 * a(n - 3) - 2 * a(n - 4) - a(n - 6) + a(n - 7) for n > 6. ●

▶ [A014106] 0,5,14,27,44,65,90,119,152,189,230,275,324,377,434,495,560,629,702,779,860,945,1034,1127,1224 ⋆ a(n) = n * (2 * n + 3). ● a(n) = a(n - 1) + 4 * n + 1, n > 0. - _ Vincenzo Librandi _ , Nov 19 2010 ●

▶ [A301294] 1,5,14,28,46,68,95,127,163,203,248,298,352,410,473,541,613,689,770,856,946,1040,1139,1243,1351 ⋆ Partial sums of A301293. ● a(n) = 3 * a(n - 1) - 4 * a(n - 2) + 4 * a(n - 3) - 3 * a(n - 4) + a(n - 5) for n>4. ●

▶ [A073347] 1,5,14,28,46,69,97,130,168,211,259,311,368,430,497,569,646,728,815,907,1004,1105,1211,1322,1438 ⋆ a(1)=1; a(n + 1) is the smallest integer > a(n) such that Sum _{ k=a(n)..a(n + 1) } 1 / sqrt(k) > Pi. ● a(n) is asymptotic to Pi ^ 2 * n ^ 2 / 4. ●

▶ [A134238] 1,5,14,28,47,71,100,134,173,217,266,320,379,443,512,586,665,749,838,932,1031,1135,1244,1358,1477 ⋆ Row sums of triangle A134237. ● a(n) = a(n - 1) + 5 * n - 6 (with a(1)=1). - _ Vincenzo Librandi _ , Nov 23 2010 ●

▶ [A005586] 0,5,14,28,48,75,110,154,208,273,350,440,544,663,798,950,1120,1309,1518,1748,2000,2275,2574,2898,3248 ⋆ a(n) = n * (n + 4) * (n + 5) / 6. ● a(n) = C(5 + n, 3) - C(5 + n, 2). - _ Zerinvary Lajos _ , Jan 09 2006 ● a(n) = C(n,3) - C(n,1), n>=4. - _ Zerinvary Lajos _ , Nov 25 2006 ●

▶ [A212678] 0,0,0,0,5,14,28,53,87,130,191,265,353,465,595,743,922,1123,1347,1608,1896,2211,2570,2960,3382 ⋆ Number of (w,x,y,z) with all terms in { 1,...,n } and w + x + y=|x - y| + |y - z|. ● a(n)=a(n - 1) + a(n - 2) + a(n - 3) - 2 * a(n - 4) - 2 * a(n - 5) + a(n - 6) + a(n - 7) + a(n - 8) - a(n - 9). ●

▶ [A301681] 1,5,14,29,49,75,107,143,183,229,281,337,399,467,539,615,697,785,877,975,1079,1187,1299,1417,1541 ⋆ Partial sums of A301680. ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 7) - 2 * a(n - 8) + a(n - 9) for n > 11. ●

▶ [A005918] 1,5,14,29,50,77,110,149,194,245,302,365,434,509,590,677,770,869,974,1085,1202,1325,1454,1589,1730 ⋆ Number of points on surface of square pyramid: 3 * n ^ 2 + 2 (n>0). ● a(- n) = a(n) for all n in Z. - _ Michael Somos _ , Aug 07 2014 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>3. - _ Colin Barker _ , Aug 07 2014 ● a(n) = (n - 1) ^ 2 + n ^ 2 + (n + 1) ^ 2. - _ Charlie Marion _ , Aug 31 2021 ●

▶ [A256666] 0,5,14,29,51,82,123,176,242,323,420,535,669,824,1001,1202,1428,1681,1962,2273,2615,2990,3399,3844,4326 ⋆ a(n) = (2 * n * (2 * n ^ 2 + 11 * n + 26) - (- 1) ^ n + 1) / 16. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - 2 * a(n - 3) + 3 * a(n - 4) - a(n - 5) for n>4. - _ Colin Barker _ , Apr 07 2015 ●

► [A319007] 0,1,5,14,29,51,82,124,178,245,327,426,543,679,836,1016,1220,1449,1705,1990,2305,2651,3030,3444,3894 ⋆ Sum of the next n nonnegative integers repeated (A004526). • a(n) = - a(- n) = 4 * a(n - 1) - 7 * a(n - 2) + 8 * a(n - 3) - 7 * a(n - 4) + 4 * a(n - 5) - a(n - 6). • a(n) = (2 * n * (n ^ 2 - 2) + (1 - (- 1) ^ n) * (- 1) ^ ((n - 1) / 2)) / 8. •

► [A299291] 1,5,14,29,56,85,130,181,226,299,382,445,538,635,708,845,962,1079,1218,1363,1456,1671,1808,1987,2170 ⋆ Coordination sequence for "ubt" 3D uniform tiling. • a(n) = - a(n - 1) + a(n - 3) + a(n - 4) + 2 * a(n - 6) + 2 * a(n - 7) - 2 * a(n - 9) - 2 * a(n - 10) - a(n - 12) - a(n - 13) + a(n - 15) + a(n - 16) for n>17. - _ Colin Barker _ , Feb 14 2018 •

► [A000330] 0,1,5,14,30,55,91,140,204,285,385,506,650,819,1015,1240,1496,1785,2109,2470,2870,3311,3795,4324,4900 ⋆ Square pyramidal numbers: a(n) = 0 ^ 2 + 1 ^ 2 + 2 ^ 2 + ... + n ^ 2 = n * (n + 1) * (2 * n + 1) / 6. • a(n) = n * (n + 1) * (2 * n + 1) / 6 = binomial(n + 2, 3) + binomial(n + 1, 3). • a(n) = - a(- 1 - n) for all n in Z. • a(n) = binomial(2 * (n + 1), 3) / 4. - _ Paul Barry _ , Jul 19 2003 • a(n) = (((n + 1) ^ 4 - n ^ 4) - ((n + 1) ^ 2 - n ^ 2)) / 12. - Xavier Acloque, Oct 16 2003 • a(n) = sqrt(Sum _{ j=1..n } Sum _{ i=1..n } (i * j) ^ 2). • a(n) = (Sum _{ k=1..n } Sum _{ j=1..n } Sum _{ i=1..n } (i * j * k) ^ 2) ^ (1 / 3). (End) •

► [A299276] 1,5,14,31,59,101,161,242,347,479,641,837,1070,1343,1659,2021,2433,2898,3419,3999,4641,5349,6126,6975,7899 ⋆ Partial sums of A008137. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 5) - 3 * a(n - 6) + 3 * a(n - 7) - a(n - 8) for n>7. • a(n) = - a(- 1 - n) for all n in Z. •

► [A267167] 1,5,14,31,59,101,161,243,351,488,658,865,1112,1403,1741,2130,2574,3077,3643,4274,4974,5747,6597,7528,8543 ⋆ Growth series for affine Coxeter group B _ 4. • a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 5) - 2 * a(n - 6) + 2 * a(n - 7) - 2 * a(n - 8) + a(n - 9) - a(n - 12) + 2 * a(n - 13) - a(n - 14), n > 0. - _ Muniru A Asiru _ , Oct 25 2018 •

► [A023652] 1,5,14,31,61,112,197,337,566,939,1545,2528,4121,6701,10878,17639,28581,46288,74941,121305,196326,317715,514129,831936,1346161 ⋆ Convolution of (F(2), F(3), F(4), ...) and odd numbers. • a(n) = Fibonacci(n + 6) - 4 * n - 8. - _ Ralf Stephan _ , Feb 15 2004 •

► [A295344] 1,5,14,32,52,81,116,157,208,258,319,384,457,540,623,716,812,914,1025,1142,1268,1396,1528,1669,1816 ⋆ Maximum number of lattice points inside and on a circle of radius n. • a(n) = Pi * n ^ 2 + O(n), as n goes to infinity. •

► [A064412] 1,5,14,32,60,103,160,238,335,459,606,786,994,1241,1520,1844,2205,2617,3070,3580,4136,4755,5424,6162,6955 ⋆ At stage 1, start with a unit equilateral equiangular triangle. At each successive stage add 3 * (n - 1) new triangles around outside with edge - to - edge contacts. Sequence gives number of triangles (regardless of size) at n - th stage. • a(2n + 1) = (7n ^ 3 + 12n ^ 2 + 7n + 2) / 2; a(2n) = (28n ^ 3 + 6n ^ 2 + 4n + 1 + (- 1) ^ (n + 1)) / 8. - _ Len Smiley _ , Oct 07 2001 • a(n) = (14 * n ^ 3 + 6 * n ^ 2 + 5 * n + 7 + 3 * (n - 1) * (- 1) ^ n - 2 * ((- 1) ^ ((2 * n - 1 + (- 1) ^ n) / 4) + (- 1) ^ ((6 * n - 1 + (- 1) ^ n) / 4))) / 32. - _ Luce ETIENNE _ , Jun 27 2014 •

► [A180668] 0,0,1,5,14,32,67,133,256,484,905,1681,3110,5740,10579,19481,35856,65976,121377,223277,410702,755432,1389491,2555709,4700720 ⋆ a(n) = a(n - 1) + a(n - 2) + a(n - 3) + 4 * n - 8 with a(0)=0, a(1)=0 and a(2)=1. • a(n) = a(n - 1) + a(n - 2) + a(n - 3) + 4 * n - 8 with a(0)=0, a(1)=0 and a(2)=1. • a(n) = 2 * a(n - 1) - a(n - 4) + 4 for n>4. • a(n) - 3 * a(n - 1) + 2a(n - 2) + a(n - 4) - a(n - 5) = 0 for n>4. (End) •

► [A053209] 1,5,14,32,68,140,284,572,1148,2300,4604,9212,18428,36860,73724,147452,294908,589820,1179644,2359292,4718588,9437180,18874364,37748732,75497468 ⋆ Row sums of A051598. • a(0) = 1, a(1) = 5, a(n + 1) = 2 * a(n) + 4, for n >= 1. • a(n) = 9 * 2 ^ (n - 1) - 4, n >= 1. • a(n) = 4 * n + Sum[i = 0, n - 1] a(i). - _ Jon Perry _ , Nov 20 2012 • a(n) = 3 * a(n - 1) - 2 * a(n - 2) with a(0)=1, a(1)=5, a(2)=14. - _ Philippe Deléham _ , Apr 15 2013 •

► [A274324] 1,1,5,14,33,63,109,172,257,365,501,666,865,1099,1373,1688,2049,2457,2917,3430,4001,4631,5325,6084,6913 ⋆ Number of partitions of n ^ 3 into at most two parts. • a(n) = (3 + (- 1) ^ n + 2 * n ^ 3) / 4. • a(n) = 3 * a(n - 1) - 2 * a(n - 2) - 2 * a(n - 3) + 3 * a(n - 4) - a(n - 5) for n>4. •

► [A188589] 1,1,5,14,33,72,151,310,629,1268,2547,5106,10225,20464,40943,81902,163821,327660,655339,1310698,2621417,5242856,10485735,20971494,41943013 ⋆ Expansion of (1 - 3 * x + 6 * x ^ 2 - 3 * x ^ 3) / ((1 - x) ^ 2 * (1 - 2 * x)). • a(n) = 5 * 2 ^ (n - 1) - n - 3, n>0. •

► [A094002] 1,5,14,33,72,151,310,629,1268,2547,5106,10225,20464,40943,81902,163821,327660,655339,1310698,2621417,5242856,10485735,20971494,41943013,83886052 ⋆ a(n + 3) = 3 * a(n + 2) - 2 * a(n + 1) + 1 with a(0)=1, a(1)=5. • a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 2 * a(n - 3). •

► [A105082] 5,14,33,80,193,466,1125,2716,6557,15830,38217,92264,222745,537754,1298253,3134260,7566773,18267806,44102385,106472576,257047537,620567650,1498182837,3616933324,8732049485 ⋆ Expansion of (5 + 4x) / (1 - 2x - x ^ 2). • a(n) = ((9 + 5 * sqrt(2)) * (1 + sqrt(2)) ^ n - (9 - 5 * sqrt(2)) * (1 - sqrt(2)) ^ n) / (2 * sqrt(2)) - Lambert Herrgesell (zero815(AT)googlemail.com), Jan 26 2007 •

► [A192957] 0,1,1,5,14,34,72,141,261,465,806,1370,2296,3809,6273,10277,16774,27306,44368,71997,116725,189121,306286,495890,802704 ⋆ Coefficient of x in the reduction by x ^ 2 - > x + 1 of the polynomial p(n,x) defined at Comments. • a(n) = 4 * a(n - 1) - 5 * a(n - 2) + a(n - 3) + 2 * a(n - 4) - a(n - 5). • a(n) = Fibonacci(n + 4) + 4 * Fibonacci(n + 2) - (n ^ 2 + 4 * n + 7). - _ G. C. Greubel _ , Jul 12 2019 •

► [A094584] 1,5,14,34,74,152,299,571,1066,1956,3540,6336,11237,19777,34582,60134,104062,179320,307855,526775,898706,1529160,2595624,4396224,7431049 ⋆ Dot product of (1,2,...,n) and first n distinct Fibonacci numbers. • a(n) = F(2) + 2 * F(3) + 3 * F(4) + ... + n * F(n + 1) = (n + 1) * F(n + 3) - F(n + 5) + 3. • a(n) = 3 * a(n - 1) - a(n - 2) - 3 * a(n - 3) + a(n - 4) + a(n - 5). • a(n) = Sum _{ i=1..n + 2 } (n - i + 1) * F(n - i + 2). • a(n) = (30 * (- 1 - sqrt(5)) ^ n + (- 15 + 7 * sqrt(5)) * 2 ^ n - (15 + 7 * sqrt(5)) * (- 3 - sqrt(5)) ^ n + 2n * (5 - 2 * sqrt(5)) * 2 ^ n + (5 + 2 * sqrt(5)) * (- 3 - sqrt(5)) ^ n)) / (10 * (- 1 - sqrt(5)) ^ n). (End) •

► [A047860] 1,5,14,34,78,174,382,830,1790,3838,8190,17406,36862,778228163838,344062,720894,1507326,3145726,6553598,13631486,28311550,58720254,121634814,251658238 ⋆ a(n) = T(3,n), array T given by A047858. • a(0)=1, a(1)=5, a(2)=14, a(n) = 5 * a(n - 1) - 8 * a(n - 2) + 4 * a(n - 3). - _ Vincenzo Librandi _ , Sep 28 2011 •

► [A083332] 1,5,14,34,124,260,1016,2056,8176,16400,65504,131104,524224,1048640,4194176,8388736,33554176,67109120,268434944,536871424,2147482624,4294968320,17179867136,34359740416,137438949376 ⋆ a(n) = 10 * a(n - 2) - 16 * a(n - 4) for n > 3, a(0) = 1, a(1) = 5, a(2) = 14, a(3) = 34. • a(n) = sqrt(2) ^ (3 * n - 1) * (1 + sqrt(2) + (- 1) ^ n * (sqrt(2) - 1)) + sqrt(2) ^ (n - 3) * (1 - sqrt(2) - (- 1) ^ n * (sqrt(2) + 1)). •

► [A027974] 1,5,14,35,81,180,389,825,1726,3575,7349,15020,30561,61965,125294,252795,509161,1024100,2057549,4130225,8284926,16609455,33282989,66669660,133507081 ⋆ a(n) = Sum _{ i=0..n } Sum _{ j=0..i } T(i,j), T given by A027960. • a(n) = 8 * 2 ^ n - Fibonacci(n + 5) - Fibonacci(n + 3). •

► [A211562] 5,14,36,81,162,295,499,796,1211,1772,2510,3459,4656,6141,7957,10150,12769,15866,19496,23717,28590,34179,40551,47776,55927 ⋆ Number of nonnegative integer arrays of length n + 2 with new values 0 upwards introduced in order, and containing the value n - 1. • a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. •

► [A052951] 1,5,14,36,88,208,480,1088,2432,5376,11776,25600,55296,118784,253952,540672,1146880,2424832,5111808,10747904,22544384,47185920,98566144,205520896,427819008 ⋆ Expansion of (1 + x - 2 * x ^ 2) / (1 - 2 * x) ^ 2. • a(n) = 4 * (a(n - 1) - a(n - 2)). • a(n) = (n + 1) * 2 ^ n + 2 ^ (n - 1), n > 0. •

► [A048745] 1,5,14,36,89,217,526,1272,3073,7421,17918,43260,104441,252145,608734,1469616,3547969,8565557,20679086,49923732,120526553,290976841,702480238,1695937320,4094354881 ⋆ Partial sums of A048654. • a(n) = 2 * a(n - 1) + a(n - 2) + 3, a(0)=1, a(1)=5. • a(n) = (((4 + (5 / 2) * sqrt(2)) * (1 + sqrt(2)) ^ n - (4 - (5 / 2) * sqrt(2)) * (1 - sqrt(2)) ^ n) / 2 * sqrt(2)) - 3 / 2. • a(n) = 3 * a(n - 1) - a(n - 2) - a(n - 3), n>2, a(0)=1, a(1)=5, a(2)=14. - _ Philippe Deléham _ , Dec 16 2008 •

► [A054486] 1,5,14,37,97,254,665,1741,4558,11933,31241,81790,214129,560597,1467662,3842389,10059505,26336126,68948873,180510493,472582606,1237237325,3239129369,8480150782,22201322977 ⋆ Expansion of (1 + 2 * x) / (1 - 3 * x + x ^ 2). • a(n) = 3 * a(n - 1) - a(n - 2), a(0)=1, a(1)=5. • a(n) = (5 * (((3 + sqrt(5)) / 2) ^ n - ((3 - sqrt(5)) / 2) ^ n) - (((3 + sqrt(5)) / 2) ^ (n - 1) - ((3 - sqrt(5)) / 2) ^ (n - 1))) / sqrt(5). • a(n) = - 2 * F(n) ^ 2 + 6 * F(n) * F(n + 1) + F(n + 1) ^ 2 for all n in Z where F = Fibonacci. - _ Michael Somos _ , Mar 17 2015 • a(n) = 3 * F(2 * n) + F(2 * n + 1) for all n in Z where F = Fibonacci. - _ Michael Somos _ , Mar 17 2015 • a(n) = (a(n - m) + a(n + m)) / Lucas(2 * m), m <= n. • a(n) = sum of 2 * m + 1 consecutive terms starting with a(n - m) divided by Lucas(2 * m + 1), m <= n. •

► [A072130] 0,1,5,14,37,99,260,681,1785,4674,12237,32039,83880,219601,574925,1505174,3940597,10316619,27009260,70711161,185124225,484661514,1268860317,3321919439,8696898000 ⋆ a(n + 1) - 3 * a(n) + a(n - 1) = (2 / 3) * (1 + w ^ (n + 1) + w ^ (2 * n + 2)); a(1) = 0, a(2) = 1; where w is the cubic root of unity. • a(1)=0, a(2)=1, a(3)=5, a(4)=14, a(5)=37, a(n)=3 * a(n - 1) - a(n - 2) + a(n - 3) - 3 * a(n - 4) + a(n - 5). - _ Harvey P. Dale _ , Aug 19 2012 •

► [A183898] 5,14,38,70,111,162,224,298,385,486,602,734,883,1050,1236,1442,1669,1918,2190,2486,2807,3154,3528,3930,4361 ⋆ Number of nondecreasing arrangements of n + 3 numbers in 0..3 with each number being the sum mod 4 of three others. • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>5. •

► [A225865] 0,1,5,14,38,83,191,401,849,1740,3600,7285,14845,29938,60486,121686,245046,492090,988782,1983945,3981105,7982802,16006686,32080696,64292920 ⋆ a(n) = 2 ^ m minus (the total number of distinct subsets of length - (m - n) binary words that can appear as the factor of a word of length m, for 0 <= n < m / 2). • a(n) = Sum _{ i=1..n + 1 } (i - 1) * L(i), where L(i) is the number of Lyndon words of length i (sequence A001037). •

► [A119996] 1,5,14,39,103,272,713,1869,4894,12815,33551,87840,229969,602069,1576238,4126647,10803703,28284464,74049689,193864605,507544126,1328767775,3478759199,9107509824,23843770273 ⋆ Numerator of Sum _{ k=1..n } 1 / (Fibonacci(k) * Fibonacci(k + 2)). • a(n) = 3 * a(n - 1) - 3 * a(n - 3) + a(n - 4); a(0)=1, a(1)=5, a(2)=14, a(3)=39. - _ Harvey P. Dale _ , Aug 22 2011 • a(n) = Fibonacci(n + 1) * Fibonacci(n + 2) - 1. - _ Gary Detlefs _ , Mar 31 2012 • a(n) = Sum _{ k=1..n } Fibonacci(k + 1) ^ 2. Can be proved by induction from Gary Detlefs formula. - _ Joel Courtheyn _ , Mar 15 2021 •

► [A032249] 5,14,42,90,197,368,680,1152,1926,3044,4740,7100,10494,15072,21384,29680,40755,54994,73502,96854,126555,163424,209456,265792,335036 ⋆ "DHK[8]" (bracelet, identity, unlabeled, 8 parts) transform of 1,1,1,1,... • a(n) = (1 / 16) * Sum _{ d|gcd(n, 8) } mu(d) * (binomial((n / d) - 1, (8 / d) - 1) - 8 * binomial(floor(b(n,d) / 2), floor(4 / d))) for n >= 11, where b(n,d) = n / d + ((- 1) ^ (8 / d) - 1) / 2. (Thus, b(n,d) = n / d for d = 1, 2, 4, and b(n, d) = n / d - 1 for d = 8.) - _ Petros Hadjicostas _ , May 27 2019 •

► [A266941] 1,1,5,14,42,103,289,690,1771,4206,10142,23449,54786,123528,279480,619206,1366405,2969071,6425534,13727775,29187555,61439660,128620370,267044222,551527679 ⋆ Expansion of Product _{ k>=1 } 1 / (1 - k * x ^ k) ^ k. • a(0) = 1 and a(n) = (1 / n) * Sum _{ k=1..n } (Sum _{ d|k } d ^ (2 + k / d)) * a(n - k) for n > 0. - _ Seiichi Manyama _ , Nov 02 2017 •

► [A302762] 1,5,14,44,112,238,449,782,1287,2030,3096,4592,6650,9430,13123,17954,24185,32118,42098,54516,69812,88478,111061,138166,170459 ⋆ Number of minimal total dominating sets in the n - Andrasfai graph. • a(n) = (- 720 + 2732 * n - 1880 * n ^ 2 + 505 * n ^ 3 - 40 * n ^ 4 + 3 * n ^ 5) / 120 for n > 2. • a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n > 8. •

► [A140796] 1,5,14,44,128,392,1160,3512,10472,31544,94376,283640,849896,2551736,7651112,22961528,68868200,206637368,619846568,1859670776,5578750184,16736774840,50209275944,150629924984,451885580648 ⋆ a(n)=a(n - 1) + 6a(n - 2), n>2. • a(n) = (- 1) ^ (n + 1) * 2 ^ n / 10 + 8 * 3 ^ n / 5, n>0. - _ R. J. Mathar _ , Jul 29 2008 •

► [A100059] 1,5,14,45,139,434,1351,4209,13110,40837,127203,396226,1234207,3844441,11975078,37301261,116189979,361921042,1127350583,3511592833,10938286998,34071752661,106130359315,330586256610 ⋆ First differences of A052911. ● a(n) = rightmost term in M ^ 5 * [1 1 1], where M = the 3 X 3 upper triangular matrix [2 1 2 / 1 1 0 / 1 0 0]. ●

► [A270062] 1,1,5,14,45,140,438,1371,4287,13413,41956,131249,410572,1284352,4017713,12568213,39315905,122988066,384731445,1203517448,3764844982,11777193395,36841433019,115247422841,360517151000 ⋆ Number of tilings of a 2 X n rectangle using monominoes and trominoes of any shape. ● a(n) = a(n - 1) + 5 * (a(n - 2) + a(n - 3)) + a(n - 4) - a(n - 5) - a(n - 6). ●

► [A236043] 5,14,45,141,447,1414,4472,14142,44721,141421,447214,1414214,4472136,14142136,44721360,141421356,447213595,1414213562,4472135955,14142135624,44721359550,141421356237,447213595500,1414213562373,4472135955000 ⋆ Number of triangular numbers <= 10 ^ n. ● a(n) = floor(sqrt(2 * 10 ^ n + 1 / 4) + 1 / 2), adapted from Tanton (see Links section). - _ Chris Boyd _ , Jan 19 2014 ●

► [A077335] 1,1,5,14,46,107,352,789,2314,5596,14734,34572,92715,210638,531342,1250635,3042596,6973974,16973478,38399806,91301956,207992892,483244305,1089029008,2533640066 ⋆ Sum of products of squares of parts in all partitions of n. ● a(n) = S(n,1), where S(n,m) = n ^ 2 + Sum _{ k=m..n / 2 } k ^ 2 * S(n - k,k), S(n,n) = n ^ 2, S(n,m) = 0 for m > n. - _ Vladimir Kruchinin _ , Sep 07 2014 ●

► [A176640] 0,1,5,14,46,111,303,688,1712,3761,8881,19122,43698,92851,207539,436916,961204,2009781,4369077,9087670,19573430,40544951,86682295,178956984,380283576 ⋆ Partial sums of A005985. ● a(0)=0, a(1)=1, a(2)=5, a(3)=14, a(4)=46, a(5)=111, a(n)=3 * a(n - 1) + 3 * a(n - 2) - 15 * a(n - 3) + 6 * a(n - 4) + 12 * a(n - 5) - 8 * a(n - 6). - _ Harvey P. Dale _ , Jun 11 2015 ●

► [A336006] 1,5,14,46,127,383,1407,3594,11786,31469,97005,451299,982740,3079892,7862861,24640077,110733519,244951247,1019792225,3344315159,13804668362,48164406730,185603360202,468032896683,1567544524459 ⋆ a(n) = the least k such that the mixed binary - ternary representation of k has n terms. See Comments. ● a(n + 1) = a(n) + t, where t is the least element in B such that the largest element of B in the interval (a(n), a(n) + t) is t; see link for proof. - _ Michael S. Branicky _ , Jan 06 2022 ●

► [A163608] 5,14,46,156,532,1816,6200,21168,72272,246752,842464,2876352,9820480,33529216,114475904,390845184,1334428928,4556025344,15555243520,53108923392,181325206528,619082979328,2113681504256,7216560058368 ⋆ a(n) = ((5 + 2 * sqrt(2)) * (2 + sqrt(2)) ^ n + (5 - 2 * sqrt(2)) * (2 - sqrt(2)) ^ n) / 2. ● a(n) = 4 * a(n - 1) - 2 * a(n - 2) for n > 1; a(0) = 5, a(1) = 14. ●

► [A081496] 5,14,46,160,574,2100,7788,29172,110110,418132,1595620,6113744,23505356,90633800,350351640,1357278300,5268292830,20483876820,79765662900,311038321440,1214362277700,4746455801880,18570960418920,72728638093800 ⋆ Start with Pascal's triangle; a(n) is the sum of the numbers on the periphery of the n - th central rhombus containing exactly 4 numbers. ● a(n) = (9 * n - 4) * Catalan(n - 1) = (9 * n - 4) * binomial(2 * (n - 1), (n - 1)) / n. - C. Ronaldo (agaa _ new _ ac(AT)hotmail.com), Dec 20 2004 ●

► [A220563] 1,5,14,47,149,481,1544,4965,15957,51293,164870,529947,1703417,5475329,17599456,56570281,181834969,584475733,1878691886,6038716423,19410365421,62391120801,200545011400,644615789581,2072001259341 ⋆ Number of ways to reciprocally link elements of an 2 X n array either to themselves or to exactly one horizontal or antidiagonal neighbor. ● a(n) = 2 * a(n - 1) + 4 * a(n - 2) - a(n - 4). ●

► [A107242] 0,0,1,5,14,50,194,723,2659,9884,36780,136636,507517,1885793,7006962,26034006,96728470,359395319,1335332919,4961420008,18434129192,68491926888,254481427113,945524491213,3513091674982 ⋆ Sum of squares of tetranacci numbers (A001630). ● a(n)= 3 * a(n - 1) + 2 * a(n - 2) + 2 * a(n - 3) + 6 * a(n - 4) - 16 * a(n - 5) - 2 * a(n - 6) + 6 * a(n - 7) - 2 * a(n - 8) + 2 * a(n - 9) + a(n - 10) - a(n - 11). G.f.: x ^ 2 * (1 + x) * (x ^ 6 - x ^ 5 - 4 * x ^ 2 + x + 1) / ((x - 1) * (x ^ 4 + x ^ 3 - 3 * x ^ 2 - 3 * x + 1) * (x ^ 6 - x ^ 5 + 2 * x ^ 4 -\ 2 * x ^ 3 - 2 * x ^ 2 - x - 1)). [_ R. J. Mathar _ , Aug 11 2009] ●

► [A262247] 5,14,55,140,506,819,1785,2470,4324,8555,10416,17575,23821,27434,35720,51039,70210,77531,102510,121836,132349,167480,194054,238965,308945 ⋆ Number of squares formed from a square composed of p ^ 2 unit squares where p is n - th prime. ● a(n) = prime(n) * (prime(n) + 1) * (2 * prime(n) + 1) / 6. ●

► [A279511] 5,14,55,252,1221,6034,30035,149912,749041,3744174,18718815,93589972,467941661,2339691914,11698426795,58492068432,292460211081,1462300793254,7311503441975,36557516161292,182787578709301,913937889352194,4569689438372355,22848447175084552 ⋆ Sierpinski square - based pyramid numbers: a(n) = 5 * a(n - 1) - (2 ^ (n + 1) + 7). ● a(n) = 5 * a(n - 1) - (2 ^ (n + 1) + 7). ● a(n) = 8 * a(n - 1) - 17 * a(n - 2) + 10 * a(n - 3) for n > 2. ●

► [A281698] 5,14,55,269,1465,8369,48865,288449,1713025,10210049,60993025,364899329,2185181185,13094268929,78498422785,470721937409,2823257554945,16935249707009,101594317062145,609497180274689,3656708198498305,21939149668876289,131630499945775105 ⋆ a(n) = 5 * 2 ^ (n - 1) + 2 ^ (2 * n - 1) + 6 ^ n + 1. ● a(n) = 13 * a(n - 1) - 56 * a(n - 2) + 92 * a(n - 3) - 48 * a(n - 4) for n>3. ●

► [A165517] 0,5,14,63,152,637,1518,6319,15040,62565,148894,619343,1473912,6130877,14590238,60689439,144428480,600763525,1429694574,5946945823,14152517272,58868694717,140095478158,582740001359,1386802264320 ⋆ Indices of the least triangular numbers (A000217) for which three consecutive triangular numbers sum to a perfect square (A000290). ● a(n) = a(n - 1) + 10 * a(n - 2) - 10 * a(n - 3) - a(n - 4) + a(n - 5). ● a(n) = 10 * a(n - 2) - a(n - 4) + 12. - _ Zak Seidov _ , Sep 25 2009 ●

► [A007838] 1,1,1,5,14,74,474,3114,24240,219456,2231280,23753520,288099360,3692907360,51677246880,775999798560,12364465397760,208583679951360,3770392002048000,71251563061002240,1421847102467635200,29861872557056870400,655829140087057305600 ⋆ Number of permutations of n elements with distinct cycle lengths. ● a(n) = Sum _{ k=1..n } (n - 1)! / (n - k)! * b(k) * a(n - k), where b(k) = Sum _{ d divides k } (- d) ^ (1 - k / d) and a(0) = 1. - _ Vladeta Jovovic _ , Oct 13 2002 ●

► [A024167] 1,1,5,14,94,444,3828,25584,270576,2342880,29400480,312888960,4546558080,57424792320,948550176000,13869128448000,256697973504000,4264876094976000,87435019510272000,1627055289796608000,36601063093905408000,754132445894209536000 ⋆ a(n) = n! * (1 - 1 / 2 + 1 / 3 - ... + c / n), where c = (- 1) ^ (n + 1). ● a(n) = a(n - 1) + a(n - 2) * (n - 1) ^ 2, n > 1. - _ Michael Somos _ , Oct 29 2002 ● a(n) = (1 / 2) * n! * ((- 1) ^ n * (digamma((n + 1) / 2) - digamma((n + 2) / 2)) + log(4)). - _ Daniel Suteu _ , Dec 03 2016 ● a(n) = n! * (log(2) - (- 1) ^ n * LerchPhi(- 1, 1, n + 1)). - _ Peter Luschny _ , Dec 27 2018 ●

► [A077262] 0,5,14,99,260,1785,4674,32039,83880,574925,1505174,10316619,27009260,185124225,484661514,3321919439,8696898000,59609425685,156059502494,1069647742899,2800374146900,19194049946505,50250675141714,344423251294199,901711778403960 ⋆ Second member of the Diophantine pair (m,k) that satisfies 5 * (m ^ 2 + m) = k ^ 2 + k; a(n) = k. ● a(n) = (- 1 + sqrt(8 * b(n) + 1)) / 2 where b(n) are the entries in A077261. ● a(n) = 18 * a(n - 2) - a(n - 4) + 8. - _ Vladimir Pletser _ , Mar 23 2020 ; a(- 2) = - 6, a(- 1) = - 1, a(0) = 0, a(1) = 5. [Edited by _ Vladimir Pletser _ , Jul 26 2020] ● a(n) = a(n - 1) + 18 * a(n - 2) - 18 * a(n - 3) - a(n - 4) + a(n - 5). (End) ●

► [A166621] 5,15,15,25,25,35,35,45,45,55,55,65,65,75,75,85,85,95,95,105,105,115,115,125,125 ⋆ a(n) = 10 * n - a(n - 1), with n>1, a(1)=5. ● a(n) = (5 / 2) * (2 * n + (- 1) ^ n + 1). - _ Paolo P. Lava _ , Nov 10 2009 ● a(n) = a(n - 1) + a(n - 2) - a(n - 3). (End) ●

► [A043509] 5,15,25,35,45,50,51,52,53,54,56,57,58,59,65,75,85,95,105,115,125,135,145,150,151 ⋆ Numbers having exactly one 5 in base 10. ● a(n) n ^ k log n, with k = log 9 / log 10 = 0.9542425... = A104139. - _ Charles R Greathouse IV _ , Nov 01 2022 ●

► [A017329] 5,15,25,35,45,55,65,75,85,95,105,115,125,135,145,155,165,175,185,195,205,215,225,235,245 ⋆ a(n) = 10 * n + 5. ● a(n) = 20 * n - a(n - 1) (with a(0)=5). - _ Vincenzo Librandi _ , Nov 19 2010 ●

► [A268581] 5,15,29,47,69,95,125,159,197,239,285,335,389,447,509,575,645,719,797,879,965,1055,1149,1247,1349 ⋆ a(n) = 2 * n ^ 2 + 8 * n + 5. ● a(n) = 2 * (n + 2) ^ 2 - 3. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). (End) ●

► [A298025] 1,5,15,29,47,71,99,131,169,211,257,309,365,425,491,561,635,715,799,887,981,1079,1181,1289,1401 ⋆ Partial sums of A298024. ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) - 2 * a(n - 4) + a(n - 5) for n>4. ●

► [A028895] 0,5,15,30,50,75,105,140,180,225,275,330,390,455,525,600,680,765,855,950,1050,1155,1265,1380,1500 ⋆ 5 times triangular numbers: a(n) = 5 * n * (n + 1) / 2. ● a(n + 1) = 5 * n + a(n). - _ Vincenzo Librandi _ , Aug 05 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n > 2. - _ Wesley Ivan Hurt _ , Nov 27 2015 ●

► [A056108] 1,5,15,31,53,81,115,155,201,253,311,375,445,521,603,691,785,885,991,1103,1221,1345,1475,1611,1753 ⋆ Fourth spoke of a hexagonal spiral. ● a(n) = 3 * n ^ 2 + n + 1. ● a(n) = a(n - 1) + 6 * n - 2 = 2 * a(n - 1) - a(n - 2) + 6 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ● a(n) = 6 * n + a(n - 1) - 2 with n >0, a(0)=1. - _ Vincenzo Librandi _ , Aug 07 2010 ●

► [A055831] 5,15,31,54,85,125,175,236,309,395,495,610,741,889,1055,1240,1445,1671,1919,2190,2485,2805,3151,3524,3925 ⋆ T(n,n - 4), where T is the array in A055830. ● a(n) = (n - 3) * (n ^ 2 + 6 * n - 10) / 6, n>3. ●

► [A298032] 1,5,15,31,61,97,145,199,265,337,421,511,613,721,841,967,1105,1249,1405,1567,1741,1921,2113,2311,2521 ⋆ Partial sums of A298031. ● a(n) = (9 * n ^ 2 - 6 * n + 2) / 2 for n>2 and even. ● a(n) = (9 * n ^ 2 - 6 * n - 1) / 2 for n >2 and odd. ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4) for n>4. ●

► [A073361] 1,5,15,31,65,105,151,275,420,631,695,1050,1411,1685,2385,2941,3425,4410,5326,6995,7350,9316,10880 ⋆ Nested floor product of n and fractions (k + 1) / k for all k>0 (mod 4), divided by 4. ● a(n)=(1 / 3)[...[[[[n(2 / 1)](3 / 2)](4 / 3)](6 / 5)]...(k + 1) / k]..., k>0 (mod 4), where [x] = floor of x; this infinite nested floor product will eventually level - off at a(n). ●

► [A260918] 0,1,5,15,33,60,100,154,224,313,423,555,713,898,1112,1358,1638,1953,2307,2701,3137,3618,4146,4722,5350 ⋆ Number of squares of all sizes in polyominoes obtained by union of two pyramidal figures (A092498) with intersection equals A002623. ● a(n) = (1 / 8) * (Sum { j=0...floor(2 * n / 3) } (4 * n + 1 - 6 * i - (- 1) ^ i) * (4 * n - 1 - 6 * i + (- 1) ^ i) - (Sum { j=0...(2 * n - 1 + (- 1) ^ n) / 4 } (2 * n + 1 - (- 1) ^ n - 4 * j) * (2 * n + 1 + (- 1) ^ n - 4 * j)). ● a(n) = (52 * n ^ 3 + 90 * n ^ 2 + 20 * n - 3 * (32 * floor((n + 1) / 3) + 3 * (1 - (- 1) ^ n)) / 144. ● a(n) = (52 * n ^ 3 + 90 * n ^ 2 + 20 * n - 3 * (32 * floor((n + 1) / 3) + 3 * (1 - (- 1) ^ n))) / 144. ●

► [A212983] 1,5,15,33,62,104,162,238,335,455,601,775,980,1218,1492,1804,2157,2553,2995,3485,4026,4620,5270,5978,6747 ⋆ Number of (w,x,y) with all terms in { 0,...,n } and w<=x + y and x<=y. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - 2 * a(n - 3) + 3 * a(n - 4) - a(n - 5). ● a(n) = (10 * n ^ 3 + 39 * n ^ 2 + 50 * n + 24 - 3 * (n mod 2)) / 24. (End) ●

► [A238340] 1,5,15,34,64,108,169,249,351,478,632,816,1033,1285,1575,1906,2280,2700,3169,3689,4263,4894,5584,6336,7153 ⋆ Number of partitions of 4n into 4 parts. ● a(n) = 4 / 9 * n ^ 3 + 1 / 3 * n ^ 2 + O(1). - _ Ralf Stephan _ , May 29 2014 ● a(n) = round(((4n) ^ 3 + 3 * (4n) ^ 2) / 144). - _ Giacomo Guglieri _ , Jun 28 2020 ●

► [A006003] 0,1,5,15,34,65,111,175,260,369,505,671,870,1105,1379,1695,2056,2465,2925,3439,4010,4641,5335,6095,6924 ⋆ a(n) = n * (n ^ 2 + 1) / 2. ● a(n) = binomial(n + 2, 3) + binomial(n + 1, 3) + binomial(n, 3). [corrected by _ Michel Marcus _ , Jan 22 2020] ● a(n) = - a(- n) for all n in Z. - _ Michael Somos _ , Dec 24 2011 ● a(n) = Sum _{ k = 1..n } A(k - 1, k - 1 - n) where A(i, j) = i ^ 2 + i * j + j ^ 2 + i + j + 1. - _ Michael Somos _ , Jan 02 2012 ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4), with a(0)=0, a(1)=1, a(2)=5, a(3)=15. - _ Harvey P. Dale _ , May 16 2012 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + 3. - _ Ant King _ , Jun 13 2012 ● a(n) = T(n) + T(n - 1) + T(n - 2), where T means the tetrahedral numbers, A000292. - _ Heinz Dabrock _ , Jun 03 2016 ●

► [A111385] 0,0,0,0,1,5,15,34,68,120,200,310,465,665,931,1260,1680,2184,2808,3540,4425,5445,6655,8030,9636 ⋆ a(n) = binomial(n,4) - binomial(floor(n / 2),4) - binomial(ceiling(n / 2),4). ● a(n) = + 2 a(n - 1) + 2 a(n - 2) - 6 a(n - 3) + 6 a(

n - 5) - 2 a(n - 6) - 2 a(n - 7) + a(n - 8). - _ R. J. Mathar _ , Mar 11 2012 ● a(n) = n ^ 2 * (7 * n ^ 2 - 36 * n + 44) / 192 for n even. ● a(n) = (7 * n ^ 4 - 36 * n ^ 3 + 38 * n ^ 2 + 36 * n - 45) / 192 for n odd. ●

▶ [A083049] 1,5,15,34,68,127,225,387,652,1084,1787,2927,4775,7769,12616,20462,33160,53709,86962,140769,227834,368711,596658,965488,1562270 ⋆ Antidiagonal sums of table A083047. ● a(n) = Sum _{ k=0..n } T(k, n - k), where T(n, 0) = floor(n * x / (x - 1)) + 1, T(n, k + 1) = ceiling(x * T(n, k)), for n>=0, k>=0, with x = (sqrt(5) + 1) / 2. ●

▶ [A061829] 5,15,35,55,75,95,115,135,155,175,195,315,335,355,375,395,515,535,555,575,595,715,735,755,775 ⋆ Multiples of 5 having only odd digits. ● a(5 * n) = 25 + 10 * a(n). ● a(5 * n + 1) = 45 + 10 * a(n). ● a(5 * n + 2) = - 35 + 10 * a(n + 1). ● a(5 * n + 3) = - 15 + 10 * a(n + 1). ● a(5 * n + 4) = 5 + 10 * a(n + 1). ●

▶ [A069983] 0,0,0,0,0,1,5,15,35,65,121,185,305,420,640,826,1190,1470,2030,2430,3246,3795,4935,5665,7205 ⋆ Number of 5 - gonal compositions of n into positive parts. ● a(n) = a(n - 1) + 4 * a(n - 2) - 4 * a(n - 3) - 6 * a(n - 4) + 6 * a(n - 5) + 4 * a(n - 6) - 4 * a(n - 7) - a(n - 8) + a(n - 9) for n > 9. - _ Colin Barker _ , Sep 18 2019 ●

▶ [A005894] 1,5,15,35,69,121,195,295,425,589,791,1035,1325,1665,2059,2511,3025,3605,4255,4979,5781,6665,7635,8695,9849 ⋆ Centered tetrahedral numbers. ● a(n) = (2 * n + 1) * (n ^ 2 + n + 3) / 3. ● a(n) = C(n, 0) + 4 * C(n, 1) + 6 * C(n, 2) + 4 * C(n, 3). - _ Paul Barry _ , Jul 01 2003 ● a(n) = binomial(n + 3, n) + binomial(n + 2,n - 1) + binomial(n + 1,n - 2) + binomial(n,n - 3). (modified by _ G. C. Greubel _ , Nov 30 2017) ● a(n) = a(n - 1) + 2 * n ^ 2 + 2, n >=1 (first differences A005893). - _ Vincenzo Librandi _ , Mar 27 2011 ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4); a(0)=1, a(1)=5, a(2)=15, a(3)=35. - _ Harvey P. Dale _ , Nov 03 2011 ●

▶ [A008487] 1,5,15,35,70,125,205,315,460,645,875,1155,1490,1885,2345,2875,3480,4165,4935,5795,6750,7805,8965,10235,11620 ⋆ Expansion of (1 - x ^ 5) / (1 - x) ^ 5. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n > 4. - _ Colin Barker _ , Jan 06 2017 ●

▶ [A000332] 0,0,0,0,1,5,15,35,70,126,210,330,495,715,1001,1365,1820,2380,3060,3876,4845,5985,7315,8855,10626 ⋆ Binomial coefficient binomial(n,4) = n * (n - 1) * (n - 2) * (n - 3) / 24. ● a(n) = n * (n - 1) * (n - 2) * (n - 3) / 24. ● a(n) = n * a(n - 1) / (n - 4). - _ Benoit Cloitre _ , Apr 26 2003, _ R. J. Mathar _ , Jul 07 2009 ● a(n) = Sum _{ k=1..n - 3 } Sum _{ i=1..k } i * (i + 1) / 2. - _ Benoit Cloitre _ , Jun 15 2003 ● a(4 * n + 2) = Pyr(n + 4, 4 * n + 2) where the polygonal pyramidal numbers are defined for integers A>2 and B>=0 by Pyr(A, B) = B - th A - gonal pyramid number = ((A - 2) * B ^ 3 + 3 * B ^ 2 - (A - 5) * B) / 6; For all positive integers i and the pentagonal number function P(x) = x * (3 * x - 1) / 2: a(3 * i - 2) = P(P(i)) and a(3 * i - 1) = P(P(i) + i); 1 + 24 * a(n) = (n ^ 2 + 3 * n + 1) ^ 2. - _ Jonathan Vos Post _ , Nov 15 2004 ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5); a(0)=0, a(1)=0, a(2)=0, a(3)=0, a(4)=1. - _ Harvey P. Dale _ , Aug 22 2011 ● a(n) = (binomial(n - 1,2) ^ 2 - binomial(n - 1,2)) / 6. - _ Gary Detlefs _ , Nov 20 2011 ●

▶ [A342213] 1,1,1,1,5,15,35,70,126,211 ⋆ Largest number of maximal planar node - induced subgraphs of an n - node graph. ● a(m + n) >= a(m) * a(n). ●

▶ [A373936] 0,0,0,1,5,15,35,70,126,211,342,573,1079,2366,5733,14197,34223,78832,173166,364876,745066,1493990,2985725,6030652,12428911 ⋆ Number of compositions of 7 * n - 4 into parts 6 and 7. ● a(n) = Sum _{ k=0..floor(n / 6) } binomial(n + k,n - 4 - 6 * k). ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 6 * a(n - 6) + a(n - 7). ●

▶ [A140227] 1,5,15,35,70,127,215,345,530,785,1127,1575,2150,2875,3775,4877,6210,7805,9695,11915,14502,17495,20935,24865,29330 ⋆ Binomial transform of [1, 4, 6, 4, 1, 1, - 1, 1, - 1, 1, ...]. ● a(n) = 2 + 35 * (n - 1) ^ 2 / 12 + (n - 1) ^ 4 / 12, n > 1. (End) ●

▶ [A139761] 0,0,0,0,1,5,15,35,70,127,220,385,715,1430,3004,6385,13380,27370,54740,107883,211585,416405,826045,1652090,3321891 ⋆ a(n) = Sum _{ k >= 0 } binomial(n,5 * k + 4). ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + 2 * a(n - 5). ● a(n) = round((2 / 5) * (2 ^ (n - 1) + phi ^ n * cos(Pi * (n - 8) / 5))), where phi is the golden ratio, round(x) is the integer nearest to x. - _ Vladimir Shevelev _ , Jun 28 2017 ● a(n + m) = a(n) * H _ 1(m) + H _ 4(n) * H _ 2(m) + H _ 3(n) * H _ 3(m) + H _ 2(n) * H _ 4(m) + H _ 1(n) * a(m), where H _ 1=A139398, H _ 2=A133476, H _ 3=A139714, H _ 4=A139748. - _ Vladimir Shevelev _ , Jun 28 2017 ●

▶ [A049016] 1,5,15,35,70,127,220,385,715,1430,3004,6385,13380,27370,54740,107883,211585,416405,826045,1652090,3321891,6690150,13455325,26985675,53971350 ⋆ Expansion of 1 / ((1 - x) ^ 5 - x ^ 5). ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + 2 * a(n - 5). - _ Paul Curtz _ , May 24 2008 ●

▶ [A360047] 1,5,15,35,70,127,220,385,715,1430,3005,6400,13500,28050,57800,119515,250425,533525,1151975,2504700,5453176,11856275,25748450,55962300,121981725 ⋆ a(n) = Sum _{ k=0..floor(n / 5) } binomial(n + 4,5 * k + 4) * Catalan(k). ● a(n) = binomial(n + 4,4) + Sum _{ k=0..n - 5 } a(k) * a(n - k - 5). ●

▶ [A373964] 0,0,0,1,5,15,35,70,127,221,396,781,1716,4005,9390,21421,47107,100283,208982,432197,898064,1889152,4028036,8671852,18739049 ⋆ Number of compositions of 6 * n - 4 into parts 5 and 6. ● a(n) = Sum _{ k=0..floor(n / 5) } binomial(n + k,n - 4 - 5 * k). ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 7 * a(n - 5) - a(n - 6). ●

▶ [A100355] 0,0,0,0,1,5,15,35,70,140,252,420,660,990,1485,2145,3003,4095,5460,7280,9520,12240,15504,19381,24226 ⋆ Maximal number of 15432 patterns in a permutation of 1,2,...,n. ● a(n) = max(a(k) + k * choose(n - k, 4), 1 <= k < n) ●

▶ [A363608] 0,0,0,1,5,15,35,71,126,215,330,511,715,1036,1370,1891,2380,3201,3876,5061,6020,7645,8855,11207,12655 ⋆ Expansion of Sum _{ k>0 } x ^ (4 * k) / (1 - x ^ k) ^ 5. ● a(n) = Sum _{ d|n } binomial(d,4). ●

▶ [A145133] 0,1,5,15,35,71,132,231,386,622,974,1491,2241,3318,4852,7023,10080,14367,20359,28712,40332,56470,78853,109865,152797 ⋆ Expansion of x / ((1 - x - x ^ 4) * (1 - x) ^ 4). ● a(n) = 5a(n - 1) - 10a(n - 2) + 10a(n - 3) - 4a(n - 4) - 3a(n - 5) + 6a(n - 6) - 4a(n - 7) + a(n - 8). ●

▶ [A270784] 1,5,15,35,71,135,255,495,992,2028,4186,8710,18335,39151,84711,185079,406994,899374,1996676,4453904,9980570,22454570,50688170,114750090,260454417 ⋆ Expansion of (1 - sqrt(1 - 4 * x ^ 4 / (1 - x) ^ 4)) / (2 * x ^ 4 * (1 - x)). ● a(n) = ((n + 4) / 4) * Sum _{ k=0..(n + 4) / 4 } (binomial(2 * k,k) * binomial(n + 3,n - 4 * k) / (k + 1) ^ 2). ●

▶ [A213580] 1,5,15,35,74,146,277,511,925,1651,2916,5108,8889,15385,26507,45491,77806,132678,225645,382835,648121,1095075,1846920,3109800,5228209 ⋆ Principal diagonal of the convolution array A213579. ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) - 2 * a(n - 3) + 4 * a(n - 4) + a(n - 5). ● a(n) = Fibonacci(n + 3) + n * Fibonacci(n + 2) - 2 * (n + 1). - _ G. C. Greubel _ , Jul 08 2019 ●

▶ [A346755] 0,0,0,0,1,5,15,35,105,756,6510,46530,289245,1892605,16187171,170721915,1833783770,18875258780,196470797580,2255939795436,29179692064545,401813199660285,5612352516200815,79620308330422475,1182881543312932386 ⋆ E.g.f.: - log(1 - x ^ 4 * exp(x) / 4!). ● a(0) = 0; a(n) = binomial(n,4) + (1 / n) * Sum _{ k=1..n - 1 } binomial(n,k) * binomial(n - k,4) * k * a(k). ●

▶ [A032276] 5,15,35,120,377,1505,5895,25395,110085,493131,2227275,10196680,46989185,218102685,1017448143,4768969770,22440372245,105966797755,501938733555,2384200683816,11353290089305 ⋆ Number of bracelets (turnover necklaces) with n beads of 5 colors. ● a(n) = (3 / 2) * 5 ^ (n / 2) + (1 / (2 * n)) * Sum _{ d|n } phi(n / d) * 5 ^ d, if n is even, and = (1 / 2) * 5 ^ ((n + 1) / 2) + (1 / (2 * n)) * Sum _{ d|n } phi(n / d) * 5 ^ d, if n is odd. - _ Petros Hadjicostas _ , Sep 01 2018 ● a(n) = (k ^ floor((n + 1) / 2) + k ^ ceiling((n + 1) / 2)) / 4 + (1 / (2 * n)) * Sum _{ d divides n } phi(d) * k ^ (n / d), where k=5 is the maximum number of colors. - _ Richard L. Ollerton _ , May 04 2021 ● a(n) = (k ^ floor((n + 1) / 2) + k ^ ceiling((n + 1) / 2)) / 4 + (1 / (2 * n)) * Sum _{ i=1..n } k ^ gcd(n,i), where k=5 is the maximum number of colors. (See A051137.) - _ Richard L. Ollerton _ , May 04 2021 ●

▶ [A105720] 5,15,36,67,112,169,240,323,424,539,662,803,964,1133,1312,1523,1746,1987,2246,2519,2808,3119,3436,3787,4154 ⋆ Triangular matchstick numbers in the class of prime numbers: sum of n - th and next n primes. ● a(n) = p(n) + p(n + 1) + ... + p(2n - 1) + p(2n), where p(k)=k - th prime. ● a(1)=5; for n > 1, a(n) = a(n - 1) - prime(n - 1) + prime(2 * n - 1) + prime(2 * n). - _ Zak Seidov _ , Oct 18 2009 ●

▶ [A184631] 1,5,15,36,71,123,196,292,416,571,760,987,1255,1568,1928,2340,2807,3332,3919,4571,5292,6084,6952,7899,8928 ⋆ Floor(1 /{ (7 + n ^ 4) ^ (1 / 4) }), where {} =fractional part. ● a(n)=floor(1 /{ (7 + n ^ 4) ^ (1 / 4) }), where {} =fractional part. ●

▶ [A011933] 0,0,0,0,1,5,15,36,73,131,219,344,516,746,1044,1424,1899,2483,3193,4044,5055,6245,7633,9240,11088 ⋆ a(n) = floor(n * (n - 1) * (n - 2) * (n - 3) / 23). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) + a(n - 23) - 4 * a(n - 24) + 6 * a(n - 25) - 4 * a(n - 26) + a(n - 27) for n > 26. ●

▶ [A006008] 0,1,5,15,36,75,141,245,400,621,925,1331,1860,2535,3381,4425,5696,7225,9045,11191,13700,16611,19965,23805,28176 ⋆ Number of inequivalent ways to color vertices of a regular tetrahedron using <= n colors. ● a(n) = (n ^ 4 + 11 * n ^ 2) / 12. (Replace all x _ i's in the cycle index with n.) ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5), with a(0)=0, a(1)=1, a(2)=5, a(3)=15, a(4)=36. - _ Harvey P. Dale _ , Aug 11 2011 ● a(n) = C(n,1) + 3C(n,2) + 3C(n,3) + 2C(n,4). Each term indicates the number of tetrahedra with exactly 1, 2, 3, or 4 colors. - _ Robert A. Russell _ , Dec 03 2014 ● a(n) = binomial(n + 3,4) + binomial(n,4). - _ Collin Berman _ , Jan 26 2016 ●

▶ [A144898] 0,1,5,15,36,76,147,267,463,775,1262,2011,3150,4867,7438,11268,16951,25358,37766,56047,82945,122482,180553,265798,390880 ⋆ Expansion of x / ((1 - x - x ^ 3) * (1 - x) ^ 4). ● a(n) = Sum _{ j=0..floor((n + 3) / 3) } binomial(n - 2 * j + 3, j + 4). ●

▶ [A163250] 0,0,1,5,15,36,76,148,273,485,839,1424,2384,3952,6505,10653,17383,28292,45964,74580,120905,195885,317231,513600,831360 ⋆ a(n) = A000045(n + 6) - (n ^ 2 + 4 * n + 8). ● a(n) = F(n + 6) - (n ^ 2 + 4 * n + 8), where F(n) are the Fibonacci numbers. ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + a(n - 3) + 2 * a(n - 4) - a(n - 5). ● a(n) = Sum _{ k=0..n - 1 } Sum _{ i=0..n - 1 } i ^ 2 * C(n - k - 1,k - i). - _ Wesley Ivan Hurt _ , Sep 21 2017 ● a(n) = (n - 1) ^ 2 + a(n - 1) + a(n - 2), n>2 (conjectured). - _ Bill McEachen _ , Jan 20 2023 ●

▶ [A053808] 1,5,15,36,76,148,273,485,839,1424,2384,3952,6505,10653,17383,28292,45964,74580,120905,195885,317231,513600,831360,1345536,2177521 ⋆ Partial sums of A001891. ● a(n) = a(n - 1) + a(n - 2) + (n + 1) ^ 2, a(- n)=0. ● a(n) = Fibonacci(n + 6) - (n ^ 2 + 4 * n + 8), n >= 2 (see p. 184 of FQ reference). ● a(n - 2) = Sum _{ i=0..n } Fibonacci(i) * (n - i) ^ 2. - _ Benoit Cloitre _ , Mar 06 2004 ●

▶ [A111926] 0,0,0,0,1,5,15,36,78,162,331,671,1353,2718,5448,10908,21829,43673,87363,174744,349506,699030,1398079,2796179,5592381 ⋆ Expansion of x ^ 4 / ((1 - 2 * x) * (x ^ 2 - x + 1) * (x - 1) ^ 2). ● a(0)=0, a(1)=0, a(2)=0, a(3)=0, a(4)=1, a(n)=5 * a(n - 1) - 10 * a(n - 2) + 11 * a(n - 3) - 7 * a(n - 4) + 2 * a(n - 5). - _ Harvey P. Dale _ , Feb 24 2016 ●

▶ [A213487] 1,5,15,37,77,138,223,338,489,679,911,1191,1525,1916,2367,2884,3473,4137,4879,5705,6621,7630,8735,9942,11257 ⋆ Number of (w,x,y) with all terms in { 0,...,n } and |w - x| + |x - y| + |y - w| <= w + x + y. ● a(n) = 4 * a(n - 1) - 7 * a(n - 2) + 8 * a(n - 3) - 7 * a(n - 4) + 4 * a(n - 5) - a(n - 6). ●

▶ [A005491] 1,5,15,37,77,141,235,365,537,757,1031,1365,1765,2237,2787,3421,4145,4965,5887,6917,8061,9325,10715,12237,13897 ⋆ a(n) = n ^ 3 + 3 * n + 1. ● a(0)=1, a(1)=5, a(2)=15, a(3)=37, a(n)=4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Harvey P. Dale _ , Oct 01 2014 ●

▶ [A050488] 0,1,5,15,37,83,177,367,749,1515,3049,6119,12261,24547,49121,98271,196573,393179,786393,1572823,3145685,6291411,12582865,25165775,50331597 ⋆ a(n) = 3 * (2 ^ n - 1) - 2 * n. ● a(n) = 2 * a(n - 1) + (2n - 1). - _ Gary W. Adamson _ , Sep 30 2007 ● a(n) = 4a(n - 1) - 5a(n - 2) + 2a(n - 3) for n>2 with a(0) = 0, a(1) = 1, a(2) = 5. ● a(n) = 2 * n + 2 * a(n - 1) - 1 (with a(0)=0). - _ Vincenzo Librandi _ , Aug 06 2010 ●

▶ [A142964] 1,5,15,37,83,177,367,749,1515,3049,6119,12261,24547,49121,98271,196573,393179,786393,1572823,3145685,6291411,12582865,25165775,50331597,100663243 ⋆ a(n) = 6 * 2 ^ n - 2 * n - 5. ● a(n) = 4a(n - 1) - 5a(n - 2) + 2a(n - 3) for n > 2 with a(0) = 1, a(1) = 5, a(2) = 15. ● a(n) = Sum _{ i=0..n } Sum _{ j=0..n } 2 ^ min(i,j) (Billault et al) (compare with A339771 that has max instead of min). - _ Bernard Schott _ , Dec 16 2020 ●

► [A357290] 0,0,0,1,5,15,39,91,200,424,879,1796,3639,7334,14734,29545,59179,118459,237033,474195,948534,1897228,3794633,7589460,15179133 ⋆ a(n) = number of subsets S of { 1,2,...,n } having more than 2 elements such that (sum of least two elements of S) > difference between greatest two elements of S. ● a(n) = 3 * a(n - 1) - a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) + 3 * a(n - 6) - 2 * a(n - 7). ●

► [A099035] 1,5,15,39,95,223,511,1151,2559,5631,12287,26623,57343,122879,262143,557055,1179647,2490367,5242879,11010047,23068671,48234495,100663295,209715199,436207615 ⋆ a(n) = (n + 1) * 2 ^ (n - 1) - 1. ● a(n) = 5 * a(n - 1) - 8 * a(n - 2) + 4 * a(n - 3). ●

► [A034182] 1,5,15,39,97,237,575,1391,3361,8117,19599,47319,114241,275805,665855,1607519,3880897,9369317,22619535,54608391,131836321,318281037,768398399,1855077839,4478554081 ⋆ Number of not - necessarily - symmetric n X 2 cross word puzzle grids. ● a(n) = 2a(n - 1) + a(n - 2) + 4. ● a(n) = - 2 + (3 / 2) * (1 + sqrt(2)) ^ (n - 1) - sqrt(2) * (1 - sqrt(2)) ^ (n - 1) + (3 / 2) * (1 - sqrt(2)) ^ (n - 1) + (1 + sqrt(2)) ^ (n - 1) * sqrt(2), with n>=1 - _ Paolo P. Lava _ , Jun 10 2008 ● a(n) = (- 4 + (1 - sqrt(2)) ^ (1 + n) + (1 + sqrt(2)) ^ (1 + n)) / 2 . G.f.: x * (1 + x) ^ 2 / ((1 - x) * (1 - 2 * x - x ^ 2)). - _ Colin Barker _ , May 22 2012 ●

► [A291225] 5,15,40,100,236,535,1175,2515,5270,10846,21980,43950,86850,169840,329042,632135,1205205,2281925,4293270,8030558,14940700,27659095,50968455,93518940,170905555 ⋆ p - INVERT of (0,1,0,1,0,1,...), where p(S) = (1 - S) ^ 5. ● a(n) = 5 * a(n - 1) - 5 * a(n - 2) - 10 * a(n - 3) + 15 * a(n - 4) + 11 * a(n - 5) - 15 * a(n - 6) - 10 * a(n - 7) + 5 * a(n - 8) + 5 * a(n - 9) + a(n - 10) for n >= 11. ●

► [A201157] 0,5,15,40,105,275,720,1885,4935,12920,33825,88555,231840,606965,1589055,4160200,10891545,28514435,74651760,195440845,511670775,1339571480,3507043665,9181559515,24037634880 ⋆ y - values in the solution to 5 * x ^ 2 - 20 = y ^ 2. ● a(n) = 3 * a(n - 1) - a(n - 2), n>2. ● a(n) = 5 * Fibonacci(2 * n - 2) = Lucas(2 * n - 1) + Lucas(2 * n - 3) with Lucas(- 1) = - 1. - _ Bruno Berselli _ , Feb 15 2017 ● a(n) = Lucas(n) ^ 2 - Lucas(n - 2) ^ 2. - _ Greg Dresden _ , Apr 15 2022 ●

► [A306159] 5,15,40,165,624,2620,11160,48915,217000,976872,4438920,20346320,93900240,435970980,2034504992,9536767665,44878791360,211927733500,1003867701480,4768372070592,22706531339280,108372083629260,518301258916440,2483526875798820 ⋆ Inverse Weigh transform of 5 ^ n. ● a(n) = 1 / n * (5 ^ n + Sum _{ d<n and d|n } (- 1) ^ (n / d) * d * a(d)). ●

► [A113861] 0,1,5,15,41,103,249,583,1337,3015,6713,14791,32313,70087,151097,324039,691769,1470919,3116601,6582727,13864505,29127111,61050425,127693255,266571321 ⋆ a(n) = (1 / 9) * ((6 * n - 7) * 2 ^ (n - 1) - (- 1) ^ n). ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) + (- 1) ^ (n + 1), n>2. - _ Gary Detlefs _ , Dec 19 2010 ● a(n) = 3 * a(n - 1) - 4 * a(n - 3), n>3. - _ Gary Detlefs _ , Dec 19 2010 ●

► [A080870] 1,5,15,41,107,276,708,1811,4629,11827,30214,77182,197159,503632,1286495,3286264,8394533,21443246,54775263,139919550,357414628,912990471,2332169791,5957363305,15217664544 ⋆ a(n + 1) is smallest number with a(n + 1) ^ n > (a(n) + 1) ^ (n + 1), with a(1)=1. ● a(n) = floor(x ^ n) - 1, where x=2.5542949539272 4... ●

► [A102620] 1,5,15,41,113,313,867,2401,6649,18413,50991,141209,391049,1082929,2998947,8304961,22998865,63690581,176377839,488441801,1352638145,3745850473,10373355075,28726852897,79553054089 ⋆ Number of legal Go positions on a 1 X n board (for which 3 ^ n is a trivial upper bound). ● a(n) = Sum _{ k=0..floor((n - 1) / 2) } 2 ^ k * (binomial(n + k + 1,3 * k + 2) + 2 * binomial(n + k, 3 * k + 2) + binomial(n + k - 1,3 * k + 2)). - _ Emanuele Munarini _ , Apr 17 2013 ●

► [A211380] 0,1,5,15,42,94,189,340,572,903,1365,1981,2790,3820,5117,6714,8664,11005,13797,17083,20930,25386,30525,36400,43092 ⋆ Number of pairs of intersecting diagonals in the interior and exterior of a regular n - gon. ● a(n) = 1 / 8 * n * (n ^ 3 - 11 * n ^ 2 + 43 * n - 58) for n even; ● a(n) = 1 / 8 * n * (n - 3) * (n ^ 2 - 8 * n + 19) for n odd. ●

► [A032193] 1,1,5,15,43,99,217,429,810,1430,2438,3978,6310,9690,14550,21318,30667,43263,60115,82225,111041,148005,195143,254475,328756 ⋆ Number of necklaces with 8 black beads and n - 8 white beads. ● a(n) = (1 / 8) * Sum _{ d|gcd(n,8) } phi(d) * binomial(n / d - 1, 8 / d - 1) = (1 / n) * Sum _{ d|gcd(n,8) } phi(d) * binomial(n / d, 8 / d). - _ Petros Hadjicostas _ , Aug 31 2018 ●

► [A178965] 0,1,5,15,43,103,263,591,1391,3103,7007,15039,33983,72063,156543,334591,722687,1510911,3255807,6773759,14433279,30193663,63535103,131264511,278589439 ⋆ a(n) = numerator of Sum _{ k>=1 } floor(n / k) / 2 ^ k. ● a(n) = Sum _{ i=1..n } 2 ^ (n - i) * floor(n / i). - _ Ridouane Oudra _ , Jul 30 2019 ●

► [A005665] 0,1,5,15,43,119,327,895,2447,6687,18271,49919,136383,372607,1017983,2781183,7598335,20759039,56714751,154947583,423324671,1156544511,3159738367,8632565759,23584608255 ⋆ Tower of Hanoi with 3 pegs and cyclic moves only (clockwise). ● a(n) = ((sqrt(3) + 1) ^ (n + 1) + (sqrt(3) - 1) ^ (n + 1) * (- 1) ^ n) * sqrt(3) / 6 - 1. (End) ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) + 3. - _ John W. Layman _ ● a(n) = (1 / (2 * s3)) * ((1 + s3) ^ (n + 1) - (1 - s3) ^ (n + 1)) - 1 where s3 = sqrt(3). ● a(n) = 3 * a(n - 1) - 2 * a(n - 3), a(0)=0, a(1)=1, a(2)=5 (from the given o.g.f.). Observed by _ Gary Detlefs _ . See the W. Lang link. - _ Wolfdieter Lang _ , Oct 18 2010 ●

► [A271180] 1,1,5,15,45,125,342,921,2461,6535,17282,45567,119898,315020,826830,2168583,5684731,14896459,39024899,102216045,267693813,700997144,1835543565,4806092673,12583591525 ⋆ Expansion of (4 * x ^ 3 - 7 * x ^ 2 + 4 * x - 1) / (x ^ 6 - 4 * x ^ 5 + 4 * x ^ 4 + x ^ 3 - 7 * x ^ 2 + 5 * x - 1). ● a(n) = (n + 1) * Sum _{ k=0..n } (Sum _{ i=0..n - k } (binomial(i + k,i) * 2 ^ i * binomial(2 * k + 2,n - i - k) * (- 1) ^ (n - i - k)) / (k + 1) * F(k + 1)), where F = A000045 (Fibonacci numbers). ● a(n) = 5 * a(n - 1) - 7 * a(n - 2) + a(n - 3) + 4 * a(n - 4) - 4 * a(n - 5) + a(n - 6) for n>3, a(0)=1, a(1)=1, a(2)=5, a(3)=15. ●

► [A035069] 5,15,45,142,448,1415,4473,14143,44722,141422,447214,1414214,4472136,14142136,44721360,141421357,447213596,1414213563,4472135955,14142135624,44721359550,141421356238,447213595500,1414213562374 ⋆ a(n) is root of square starting with digit 2: first term of runs. ● a(n) = ceiling(sqrt(2 * 10 ^ n)). ●

► [A001869] 1,5,15,45,165,629,2635,11165,48915,217045,976887,4438925,20346485,93900245,435970995,2034505661,9536767665,44878791365,211927736135,1003867701485,4768372070757,22706531350485,108372083629275,518301258916445 ⋆ Number of n - bead necklaces with 5 colors. ● a(n) = (1 / n) * Sum _{ d|n } phi(d) * 5 ^ (n / d), n > 0. ● a(0) = 1; a(n) = (1 / n) * Sum _{ k=1..n } 5 ^ gcd(n,k). - _ Ilya Gutkovskiy _ , Apr 17 2021 ● a(0) = 1; a(n) = (1 / n) * Sum _{ k=1..n } 5 ^ (n / gcd(n,k)) * phi(gcd(n,k)) / phi(n / gcd(n,k)). - _ Richard L. Ollerton _ , May 07 2021 ●

► [A344814] 1,5,15,46,128,384,1114,3332,9903,29671,88721,266151,797593,2392649,7175709,21526834,64573556,193720536,581141026,1743422288,5230207428,15690619684,47071679294,141215037738,423644574301 ⋆ a(n) = Sum _{ k=1..n } floor(n / k) * 3 ^ (k - 1). ● a(n) = Sum _{ k=1..n } Sum _{ d|k } 3 ^ (d - 1). ● a(n) = (1 / 2) * Sum _{ k=1..n } (3 ^ floor(n / k) - 1). - _ Ridouane Oudra _ , Feb 05 2023 ●

► [A331237] 0,0,1,5,15,47,127,363,978,2778,7624,21566,60584,172221,488978,1398457,4001323,11490717,33037548,95195793,274609124,793298293,2294114542,6641070332,19241453969 ⋆ Total cutting number of all trees of order n. ● a(n) = Sum _{ T } c(T) where the sum is over all trees with n vertices and c(T) is the cutting number of T. ●

► [A077841] 1,1,5,15,47,149,469,1479,4663,14701,46349,146127,460703,1452485,4579333,14437527,45518023,143507293,452443709,1426445343,4497236399,14178696245,44701992373,140934546279,444332462167 ⋆ Expansion of (1 - x) / (1 - 2 * x - 3 * x ^ 2 - 2 * x ^ 3). ● a(n) = sum(k=1..n, sum(i=k..n,(sum(j=0..k, binomial(j, - 3 * k + 2 * j + i) * 3 ^ (- 3 * k + 2 * j + i) * 2 ^ (k - j) * binomial(k,j))) * binomial(n + k - i - 1,k - 1))), n>0, a(0)=1. - _ Vladimir Kruchinin _ , May 05 2011 ●

► [A340395] 5,15,50,150,455,1365,4100,12300,36905,110715,332150,996450,2989355,8968065,26904200,80712600,242137805,726413415,2179240250,6537720750,19613162255,58839486765,176518460300,529555380900,1588666142705 ⋆ a(n) = A340131(A001006(n)). ● a(n) = 5 * 3 ^ (n - 2 * k) * (9 ^ k - 1) / 8 where k = floor(n / 2). ● a(n + 1) = 3 * a(n) for even n >= 2; a(n + 1) = 3 * a(n) + 5 for odd n >= 3. ● a(n) = (5 / 8) * (3 ^ n - (- 1) ^ (n - 1) - 2). ● a(n) = 2 * a(n - 1) + 3 * a(n - 2) + 5 for n > 3. ● a(n) = 3 * a(n - 1) + a(n - 2) - 3 * a(n - 3) for n > 4. (End) ●

► [A029609] 1,5,15,50,175,630,2310,8580,32175,121550,461890,1763580,6760390,26001500,100291500,387793800,1502700975,5834015550,22687838250,88363159500,344616322050,1345644686100,5260247409300,20583576819000 ⋆ Central numbers in the (2,3) - Pascal triangle A029600. ● a(n) = 5 / 2 * binomial(2 * n,n) for n >= 1. ●

► [A363510] 1,5,15,50,190,766,3231,14066,62681,284591,1311622,6120183,28855529,137257541,657894518,3174411715,15406640415,75162477018,368383443235,1813007892858,8956214966017,44393932344984,220732441125743,1100621484436502 ⋆ G.f. satisfies A(x) = exp(Sum _{ k>=1 } (- 1) ^ (k + 1) * (4 + A(x ^ k)) * x ^ k / k). ● a(0) = 1; a(n) = (- 1 / n) * Sum _{ k=1..n } (4 * (- 1) ^ k + Sum _{ d|k } (- 1) ^ (k / d) * d * a(d - 1)) * a(n - k). ●

► [A255442] 1,5,15,51,153,477,1431,4347,13041,39285,117855,354051,1062153,3187917,9563751,28695627,86086881,258273765,774821295,2324503251,6973509753,20920647357,62761942071,188286180507,564858541521 ⋆ a(n) = A255304(2 ^ n - 1). ● a(n) = 2 * 3 ^ n - 3 ^ ((n - 1) / 2) / 2 * (1 - (- 1) ^ n + sqrt(3) + (- 1) ^ n * sqrt(3)). ● a(n) = 3 * a(n - 1) + 3 * a(n - 2) - 9 * a(n - 3) for n>2. ●

► [A335025] 5,15,53,195,725,2703,10085,37635,140453,524175,1956245,7300803,27246965,101687055,379501253,1416317955,5285770565,19726764303,73621286645,274758382275,1025412242453,3826890587535,14282150107685,53301709843203,198924689265125 ⋆ Largest side lengths of almost - equilateral Heronian triangles. ● a(n) = (2 + sqrt(3)) ^ n + (2 - sqrt(3)) ^ n + 1. ● a(n) = 5 * a(n - 1) - 5 * a(n - 2) + a(n - 3). (End) ●

► [A123011] 1,5,15,55,185,645,2215,7655,26385,91045,314015,1083255,3736585,12889445,44461815,153370855,529050785,1824955845,6295165615,21715110455,74906048985,258387650245,891305545415,3074549342055 ⋆ a(n) = 2 * a(n - 1) + 5 * a(n - 2) for n > 1; a(0) = 1, a(1) = 5. ● a(n) = ((3 + 2 * sqrt(6)) * (1 + sqrt(6)) ^ n + (3 - 2 * sqrt(6)) * (1 - sqrt(6)) ^ n) / 6. - _ Klaus Brockhaus _ , Aug 15 2009 ● a(n) = (sqrt(5) * i) ^ (n - 1) * (sqrt(5) * i * ChebyshevU(n, - i / sqrt(5)) + 3 * ChebyshevU(n - 1, - i / sqrt(5))) for n > 0 with a(0) = 1. - _ G. C. Greubel _ , Jul 13 2021 ●

► [A006358] 1,5,15,55,190,671,2353,8272,29056,102091,358671,1260143,4427294,15554592,54648506,191998646,674555937,2369942427,8326406594,29253473175,102777312308,361091343583,1268635610806,4457144547354 ⋆ Number of distributive lattices; also number of paths with n turns when light is reflected from 5 glass plates. ● a(n) = 3 * a(n - 1) + 3 * a(n - 2) - 4 * a(n - 3) - a(n - 4) + a(n - 5). ● a(n) is asymptotic to z(5) * w(5) ^ n where w(5) = (1 / 2) / cos(5 * Pi / 11) and z(5) is the root 1 < x < 2 of P(5, X) = - 1 + 55 * X + 847 * X ^ 2 - 5324 * X ^ 3 - 14641 * X ^ 4 + 14641 * X ^ 5. - _ Benoit Cloitre _ , Oct 16 2002 ●

► [A054108] 1,5,15,55,197,727,2705,10165,38455,146301,559131,2145025,8255575,31861025,123256495,477823895,1855782325,7219352975,28125910825,109720617995,428537256445,1675561707275,6557869020325,25689734662775 ⋆ a(n) = (- 1) ^ (n + 1) * Sum _{ k=0..n + 1 } (- 1) ^ k * binomial(2 * k,k). ● a(n) = C(2n, n) - a(n - 1) with a(0)=1. - _ Labos Elemer _ , Apr 26 2003 ● a(n) = Sum _{ k=0..n } (- 1) ^ (k + n) * ((2k)! / (k!) ^ 2). - _ Alexander Adamchuk _ , Jul 05 2006 ●

► [A137959] 1,1,1,5,15,55,220,876,3645,15485,66735,292155,1293456,5782320,26071435,118402495,541150155,2487204315,11488482130,53302256250,248293549685,1160794446445,5444674773325,25614768620105,120837493137460 ⋆ G.f. satisfies A(x) = 1 + x + x ^ 2 * A(x) ^ 5. ● a(n) = Sum _{ k=0..n - 1 } C(n - k,k) / (n - k) * C(5 * k,n - k - 1) for n>0 with a(0)=1. - _ Paul D. Hanna _ , Jun 16 2009 ●

► [A001552] 5,15,55,225,979,4425,20515,96825,462979,2235465,10874275,53201625,261453379,1289414505,6376750435,31605701625,156925970179,780248593545,3883804424995,19349527020825,96470431101379,481245667164585,2401809362313955,11991391850823225 ⋆ a(n) = 1 ^ n + 2 ^ n + ... + 5 ^ n. ● a(n) = Sum _{ k=1..5 } k ^ n, n >= 0. ●

► [A110614] 1,5,15,57,215,841,3319,13193,52599,210057,839543,3356809,13424503,53692553,214759287,859015305,3436017527,13743982729,54975756151,219902675081,879610001271,3518438606985,14073751631735,56295000934537,225179992553335 ⋆ a(n + 3) = 5 * a(n + 2) - 2 * a(n + 1) - 8 * a(n), a(0) = 1, a(1) = 5, a(2) = 15. ● a(n) = (- 7 * (- 1) ^ n + 5 * 2 ^ (1 + n) + 3 * 4 ^ (1 + n)) / 15. - _ Colin Barker _ , Feb 05 2017 ●

► [A066886] 1,5,15,65,175,671,1105,2465,3439,6095,12209,14911,25345,34481,39775,51935,74465,102719,113521,150415,178991,194545,246559,285935,352529,456385 ⋆ Sum of the elements in any transversal of a prime(n) X prime(n) array containing the numbers from 1 to prime(n) ^ 2 in standard order. ● a(n) = prime(n) * (prime(n) ^ 2 + 1) / 2, where prime(n) is the n - th prime. ●

► [A247281] 0,5,15,65,255,1025,4095,16385,65535,262145,1048575,4194305,16777215,67108865,268435455,1073741825,4294967295,17179869185,68719476735,274877906945,1099511627775,4398046511105,17592186044415 ⋆ a(n) = 4 ^ n - (- 1) ^ n. ● a(n + 1) = 4 * a(n) + 5 * (- 1) ^ n. ● a(n) = 3 * a(n - 1) + 4 * a(n - 2). - _ Colin Barker _ , Sep 11 2014 ●

► [A318376] 1,1,5,15,71,287,1237,5205,22105,93547,396419,1679019,7112825,30129785,127632829,540659703,2290273903,9701751655,41097286445,174090887853,737460853361,3123934276211,13233197998795,56056726205715,237460102927921 ⋆ a(n) = F(n + 1) ^ 3 - 3 * F(n - 1) * F(n) ^ 2, where F(n) = A000045(n), the n - th Fibonacci number. ● a(n) = 3 * a(n - 1) + 6 * a(n - 2) - 3 * a(n - 3) - a(n - 4) for n>3. ●

► [A101553] 1,5,15,75,225,1125,3375,16875,50625,253125,759375,3796875,11390625,56953125,170859375,854296875,2562890625,12814453125,38443359375,192216796875,576650390625,2883251953125,8649755859375,43248779296875 ⋆ A modular recurrence. ● a(n) = b(2 * n) where b(0)=1, b(1)=0, b(n) = (3 + 2 * (n / 2 mod 2)) * b(n - 2). ● a(2n) = 15 ^ n, a(2n + 1) = 5 * 15 ^ n. - _ Ralf Stephan _ , May 16 2007 ●

► [A032122] 1,5,15,75,325,1625,7875,39375,195625,978125,4884375,24421875,122078125,610390625,3051796875,15258984375,76294140625,381470703125,1907349609375,9536748046875,47683720703125 ⋆ Number of reversible strings with n beads of 5 colors. ● a(n) = 5 * a(n - 1) + 5 * a(n - 2) - 25 * a(n - 3). - _ Vincenzo Librandi _ , Jan 31 2012 ●

► [A054363] 1,1,5,15,85,510,4051,33130,291925,2661255,25059670,241724380,2379912355,23833198140,242173108050,2491817151160,25921371278805,272256630756265,2884054952424115,30784716141936525,330853932861650870,3577823885433087690,38907658120970944700 ⋆ Number of unlabeled 5 - ary cacti having n polygons. ● a(n) = (1 / n) * (Sum _{ d|n } phi(n / d) * binomial(5 * d, d)) - 4 * binomial(5 * n, n) / (4 * n + 1) for n > 0. - _ Andrew Howroyd _ , May 02 2018 ●

► [A336998] 1,5,15,87,201,3123,5769,148347,913761,11541123,39975849,2616723387,6227552241,230557039443,4151870901369,76980002333707,3556874711427221,27886053280896963,121645100796252489,1047467495748235867,1351172952825965928401,28116645559206927756 03 ⋆ a(n) = n! * Sum _{ d|n } 3 ^ (d - 1) / d!. ● a(p) = p! + 3 ^ (p - 1), where p is prime. ●

► [A362577] 5,15,88,435,1957,8394,35273,146795,607492,2503687,10282873,42103670,171925709,700339023,2846710048,11549292123,46778169517,189188288130,764162167025,3083079787091,12426568931356,50042249662927,201366368701441,809732016511598,3254128933657397 ⋆ Number of vertex cuts in the n - trapezohedral graph. ● a(n) = 13 * a(n - 1) - 65 * a(n - 2) + 156 * a(n - 3) - 179 * a(n - 4) + 69 * a(n - 5) + 37 * a(n - 6) - 38 * a(n - 7) + 8 * a(n - 8) for n > 8. ●

► [A173736] 5,15,115,1115,11115,111115,1111115,11111115,111111115,1111111115,11111111115,111111111115,1111111111115,11111111111115,111111111111115,1111111111111115,11111111111111115 ⋆ (10 ^ n + 35) / 9 for n>0. ● a(n) = a(n - 1) + 10 ^ (n - 1) = 10 * a(n - 1) - 35 with n>0, a(0)=4. ● a(n) = 11 * a(n - 1) - 10 * a(n - 2). - _ Vincenzo Librandi _ , Jul 05 2012 ●

► [A004130] 1,1,5,15,195,663,4641,16575,480675,1762475,13042315,48612265,729183975,2748462675,20809788825,79077197535,4823709049635,18443593425075,141400882925575,543277076503525,8366466978154285,32270658344309385 ⋆ Numerators in expansion of (1 - x) ^{- 1 / 4 } . ● a(n) = 2 ^ (e _ 2((2n)!) - n) / n! Product[4k + 1, { k,0,n - 1 }], where e _ 2((2n)!) is the highest power of 2 that divides (2n)! (sequence A005187). - _ Emanuele Munarini _ , Jan 25 2011 ●

► [A168463] 5,16,16,27,27,38,38,49,49,60,60,71,71,82,82,93,93,104,104,115,115,126,126,137,137 ⋆ a(n) = 5 + 11 * floor(n / 2). ● a(n) = 11 * n - a(n - 1) - 1, with n>1, a(1)=5. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3). - _ Vincenzo Librandi _ , Sep 19 2013 ● a(n) = (22 * n + 11 * (- 1) ^ n + 9) / 4. ●

► [A151980] 0,1,5,16,20,21,25,36,40,41,45,56,60,61,65,76,80,81,85,96,100,101,105,116,120 ⋆ Numbers n such that n ^ 2 - n is divisible by 20. ● a(n) = a(n - 1) + a(n - 4) - a(n - 5). [_ Colin Barker _ , Nov 29 2012] ●

► [A124865] 5,16,21,24,40,45,48,72,96,112,117,120,144,160,165,168,192,240,264,280,285,288,312,336,352 ⋆ Numbers of the form p ^ 2 - q ^ 2 with p > q prime. ● a(n) >> n log n, see Luca. - _ Charles R Greathouse IV _ , Feb 17 2014 ●

► [A077469] 1,5,16,21,29,35,39,52,57,63,68,76,82,88,93,99,106,113,118,127,134,150,155,160,167 ⋆ Greedy powers of (3 / 4): sum _{ n=1..inf } (3 / 4) ^ a(n) = 1. ● a(n)=sum _{ k=1..n } floor(g _ k) where g _ 1=1, g _{ n + 1 } =log _ x (x ^ frac(g _ n) - x) (n>0) at x=(3 / 4) and frac(y) = y - floor(y). ● a(n) seems to be asymptotic to c * n with c around 8.0... - _ Benoit Cloitre _ ●

► [A041855] 1,5,16,21,37,58,443,501,2948,15241,18189,142564,160753,303317,464070,1695527,8941705,377247137,1895177390,6062779307,7957956697,14020736004,21978692701,167871584911,189850277612 ⋆ Denominators of continued fraction convergents to sqrt(449). ● a(n) = 378942664 * a(n - 17) + a(n - 34) for n>33. - _ Vincenzo Librandi _ , Dec 26 2013 ●

► [A041107] 1,1,5,16,21,58,137,195,722,3083,3805,56353,60158,296985,951113,1248098,3447309,8142716,11590025,42912791,183241189,226153980,3349396909,3575550889,17651600465 ⋆ Denominators of continued fraction convergents to sqrt(61). ● a(n) = 59436 * a(n - 11) + a(n - 22). - _ Vincenzo Librandi _ , Dec 11 2013 ●

► [A225539] 5,16,23,34,41,52,59,70,77,88,95,106,113,124,131,142,149,160,167,178,185,196,203,214,221 ⋆ Numbers n where 2 ^ n and n have the same digital root. ● a(n) = 9 * n - 3 + (- 1) ^ n. ● a(n) = a(n - 1) + 7 (odd n), a(n) = a(n - 1) + 11 (even n) with a(1) = 5. ●

► [A063232] 5,16,24,36,44,56,64,76,84,96,104,116,124,136,144,156,164,176,184,196,204,216,224,236,244 ⋆ Dimension of the space of weight 2n cuspidal newforms for Gamma _ 0(77). ● a(n) = 5 + 10 * (n - 1) + (- 1) ^ n +{ C[2 * (n - 1),n - 1] mod 2 } , with n>=1. - _ Paolo P. Lava _ , Nov 20 2009 ● a(n) = - 5 + (- 1) ^ n + 10 * n for n>1. a(n)=a(n - 1) + a(n - 2) - a(n - 3) for n>4; G.f.: x * (x ^ 3 + 3 * x ^ 2 + 11 * x + 5) / ((x - 1) ^ 2 * (x + 1)). - _ Colin Barker _ , Sep 08 2013 ●

► [A017449] 5,16,27,38,49,60,71,82,93,104,115,126,137,148,159,170,181,192,203,214,225,236,247,258,269 ⋆ a(n) = 11 * n + 5. ● a(n) = 2 * a(n - 1) - a(n - 2). ●

► [A063135] 5,16,28,38,50,62,72,84,96,106,118,130,140,152,164,174,186,198,208,220,232,242,254,266,276 ⋆ Dimension of the space of weight 2n cusp forms for Gamma _ 0(67). ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>5. ●

► [A063290] 1,5,16,28,40,52,64,76,88,100,112,122,136,148,160,170,184,194,208,218,232,242,256,264,280 ⋆ Dimension of the space of weight n cuspidal newforms for Gamma _ 1(17). ● a(n) = a(n - 4) + a(n - 6) - a(n - 10) for n>13. ●

► [A134594] 5,16,29,44,61,80,101,124,149,176,205,236,269,304,341,380,421,464,509,556,605,656,709,764,821 ⋆ a(n) = n ^ 2 + 10 * n + 5: coefficients of the irrational part of (1 + sqrt(n)) ^ 5. ● a(n) = ((1 + sqrt(n)) ^ 5 - (5 * n ^ 2 + 10 * n + 1)) / sqrt(n), for n > 0. [corrected by _ Jon E. Schoenfield _ , Nov 23 2018] ● a(n) = 2 * n + a(n - 1) + 9 (with a(0)=5). - _ Vincenzo Librandi _ , Nov 23 2010 ●

► [A132479] 1,5,16,32,64,128,256,512,1024,2048,4096,8192,16384,32768,65536,131072,262144,524288,1048576,2097152,4194304,8388608,16777216,33554432,67108864 ⋆ Row sums of triangle A132478. ● a(0) = 1, a(2) = 5, a(n) = 2 ^ (n + 2) for n > 1. ●

► [A045944] 0,5,16,33,56,85,120,161,208,261,320,385,456,533,616,705,800,901,1008,1121,1240,1365,1496,1633,1776 ⋆ Rhombic matchstick numbers: a(n) = n * (3 * n + 2). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3), with a(0)=0, a(1)=5, a(2)=16. - _ Harvey P. Dale _ , May 06 2011 ● a(n) = a(n - 1) + 6 * n - 1 (with a(0)=0). - _ Vincenzo Librandi _ , Nov 18 2010 ●

► [A227719] 5,16,33,56,86,121,162,209,263,322,387,458,536,619,708,803,905,1012,1125,1244,1370,1501,1638,1781,1931 ⋆ Floor(1 / s(n)), where s(n) = n * log(1 + 1 / n) - (2n - 1) / (2n). ● a(n) = - 2 * a(n - 1) - a(n - 2) + a(n - 4) - 2 * a(n - 5) + a(n - 6) (conjectured). ●

► [A172166] 5,16,33,62,99,140,193,252,319,390,487,588,715,864,1043,1234,1457,1684,1935,2192,2461,2768,3079,3410,3757 ⋆ Partial sums of A028388 good primes (version 2). ● a(n) = SIM[i=1..n] { p _ n such that (p _ n) ^ 2 > p _{ n - i } p _{ n + i } for all 1 <= i <= n - 1 } . ●

► [A131425] 1,5,16,33,68,101,156,205,280,389,468,605,732,841,988,1181,1392,1545,1784,1999,2182,2463,2714,3027,3410 ⋆ Row sums of triangle A131424. ● a(n) = n * (prime(n) - 3) + Sum _{ k=1..n } prime(k). - _ Andrew Howroyd _ , Aug 28 2018 ●

► [A227720] 5,16,34,57,86,121,163,210,263,322,388,459,536,619,709,804,905,1012,1126,1245,1370,1501,1639,1782,1931 ⋆ Round(1 / s(n)), where s(n) = n * log(1 + 1 / n) - (2n - 1) / (2n). ● a(n) = - 2 * a(n - 1) - a(n - 2) + a(n - 4) - 2 * a(n - 5) + a(n - 6) (conjectured). ●

► [A077415] 0,5,16,35,64,105,160,231,320,429,560,715,896,1105,1344,1615,1920,2261,2640,3059,3520,4025,4576,5175,5824 ⋆ a(n) = n * (n + 2) * (n - 2) / 3. ● a(n) = Sum _{ i=0..floor((n - 1) / 2) } (- 1) ^ i * 2 ^ (n - 2 * i - 1) * binomial(n - i - 1, i) * (n - 2 * i - 2). - _ John M. Campbell _ , Jan 08 2016 ●

► [A363605] 0,1,5,16,35,76,126,226,335,531,715,1092,1365,1947,2420,3286,3876,5251,5985,7861,8986,11342,12650,16252,17585 ⋆ Expansion of Sum _{ k>0 } x ^ (2 * k) / (1 - x ^ k) ^ 5. ● a(n) = Sum _{ d|n } binomial(d + 2,4). ●

► [A321019] 1,5,16,36,63,98,143,196,255,322,399,484,575,674,783,900,1023,1154,1295,1444,1599,1762,1935,2116,2303 ⋆ Coordination sequence for 3 - D tiling (Cairo tiling) X Z, with respect to a 5 - valent point. ● a(n) = 3 * a(n - 1) - 4 * a(n - 2) + 4 * a(n - 3) - 3 * a(n - 4) + a(n - 5) for n>5. ● a(n) = (- 2 + (- i) ^ (1 + n) + i ^ (1 + n) + 8 * n ^ 2) / 2 for n>2, where i=sqrt(- 1). ●

► [A184635] 5,16,36,64,100,144,196,256,324,400,484,576,676,784,900,1024,1156,1296,1444,1600,1764,1936,2116,2304,2500 ⋆ a(n) = floor(1 /{ (n + n ^ 4) ^ (1 / 4) }), where {} = fractional part. ● a(n) = floor(1 /{ (n + n ^ 4) ^ (1 / 4) }), where {} = fractional part. ●

► [A055232] 1,5,16,36,69,117,184,272,385,525,696,900,1141,1421,1744,2112,2529,2997,3520,4100,4741,5445,6216,7056,7969 ⋆ Expansion of (1 + 2 * x + 3 * x ^ 2) / ((1 - x) ^ 3 * (1 - x ^ 2)). ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - 2 * a(n - 3) + 3 * a(n - 4) - a(n - 5). - _ Clark Kimberling _ , Jun 02 2012 ● a(n) = (7 + (- 1) ^ n + 16 * n + 14 * n ^ 2 + 4 * n ^ 3) / 8. - _ Eric W. Weisstein _ , Apr 04 2013 ● a(n) = ((n + 1) ^ 3 + ceiling((n + 1) / 2) ^ 2 + floor((n + 1) / 2) ^ 2) / 2. - _ Wesley Ivan Hurt _ , Apr 15 2016 ●

► [A274248] 1,5,16,37,72,124,197,294,419,575,766,995,1266,1582,1947,2364,2837,3369,3964,4625,5356,6160,7041,8002,9047 ⋆ Row sums of A273751. ● a(n) = (14 n ^ 3 - 3 n ^ 2 + 10 n + 3 mod(n, 2)) / 24. ●

► [A041044] 5,16,37,127,1307,4048,9403,32257,331973,1028176,2388325,8193151,84319835,261152656,606625147,2081028097,21416906117,66331746448,154080399013,528572943487,5439809833883,16848002445136 ⋆ Numerators of continued fraction convergents to sqrt(28). ● a(n) = 254 * a(n - 4) - a(n - 8). G.f.: - (x ^ 7 - 5 * x ^ 6 + 16 * x ^ 5 - 37 * x ^ 4 - 127 * x ^ 3 - 37 * x ^ 2 - 16 * x - 5) / ((x ^ 4 - 16 * x ^ 2 + 1) * (x ^ 4 + 16 * x ^ 2 + 1)). [_ Colin Barker _ , Jul 16 2012] ●

► [A174723] 1,5,16,38,75,131,210,316,453,625,836,1090,1391,1743,2150,2616,3145,3741,4408,5150,5971,6875,7866,8948,10125 ⋆ a(n) = n * (4 * n ^ 2 - 3 * n + 5) / 6. ● a(1)=1, a(2)=5, a(3)=16, a(4)=38; for n > 4, a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Harvey P. Dale _ , Jan 16 2012 ●

► [A011932] 0,0,0,0,1,5,16,38,76,137,229,360,540,780,1092,1489,1985,2596,3338,4228,5285,6529,7980,9660,11592 ⋆ [n(n - 1)(n - 2)(n - 3) / 22]. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) + a(n - 11) - 4 * a(n - 12) + 6 * a(n - 13) - 4 * a(n - 14) + a(n - 15) for n > 14. ●

► [A357289] 0,0,0,1,5,16,38,83,167,314,572,1021,1757,3004,5082,8439,13971,23086,37576,61281,99833,160912,259878,420283,672847 ⋆ a(n) = number of subsets S of { 1,2,...,n } having more than 2 elements such that (sum of least three elements of S) > max(S). ● a(n) = 3 * a(n - 1) - a(n - 2) - a(n - 3) - 6 * a(n - 4) + 2 * a(n - 5) + 20 * a(n - 6) - 24 * a(n - 7) + 8 * a(n - 8). ●

► [A131283] 0,0,1,5,16,38,85,185,396,838,1748,3609,7400,15097,30681,62154,125588,253246,509850,1025153,2059159,4132679,8288643,16615051,33291367 ⋆ a(n) is the number of binary strings of length n such that there exist 3 or more ones in a subsequence of length 5 or less. ● a(n)= + 3 * a(n - 1) - 2 * a(n - 2) + a(n - 3) - 2 * a(n - 4) + 2 * a(n - 5) - 4 * a(n - 6) - a(n - 8) + 2 * a(n - 9) - a(n - 10) + 2 * a(n - 11). ●

► [A155965] 0,5,16,39,80,145,240,371,544,765,1040,1375,1776,2249,2800,3435,4160,4981,5904,6935,8080,9345,10736,12259,13920 ⋆ a(n) = n * (n ^ 2 + 4). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>3. - _ Vincenzo Librandi _ , May 03 2014 ●

► [A216173] 1,5,16,39,80,147,249,396,600,874,1232,1690,2265,2975,3840,4881,6120,7581,9289,11270,13552,16164,19136,22500,26289 ⋆ Number of all possible tetrahedra of any size and orientation, formed when intersecting the original regular tetrahedron by planes parallel to its sides and dividing its edges into n equal parts. ● a(n) = (1 / 18) * (1 - (- 1) ^ (n mod 3) + 3 * n + 7 * n ^ 2 + 5 * n ^ 3 + n ^ 4). ●

► [A011863] 0,0,1,5,16,39,81,150,256,410,625,915,1296,1785,2401,3164,4096,5220,6561,8145,10000,12155,14641,17490,20736 ⋆ Nearest integer to (n / 2) ^ 4. ● a(n) = + 4 * a(n - 1) - 5 * a(n - 2) + 5 * a(n - 4) - 4 * a(n - 5) + a(n - 6). ● a(n) = n ^ 4 / 16 - 1 / 32 + (- 1) ^ n / 32 - _ R. J. Mathar _ , Dec 07 2010, adapted to added a(0) by _ Hugo Pfoertner _ , Dec 29 2019 ● a(n) = floor(n ^ 4 / 8) / 2. - _ Gary Detlefs _ , Feb 19 2011, adapted to added a(0) by _ Hugo Pfoertner _ , Dec 29 2019 ●

► [A006007] 0,1,5,16,40,85,161,280,456,705,1045,1496,2080,2821,3745,4880,6256,7905,9861,12160,14840,17941,21505,25576,30200 ⋆ 4 - dimensional analog of centered polygonal numbers: a(n) = n(n + 1) * (n ^ 2 + n + 4) / 12. ● a(n) = 2 * binomial(n + 2, 4) + binomial(n + 1, 2). ● a(0)=0, a(1)=1, a(2)=5, a(3)=16, a(4)=40, a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Harvey P. Dale _ , Sep 30 2011 ●

► [A001753] 1,5,16,40,86,166,296,496,791,1211,1792,2576,3612,4956,6672,8832,11517,14817,18832,23672,29458,36322,44408,53872,64883 ⋆ Expansion of 1 / ((1 + x) * (1 - x) ^ 6). ● a(n) = Sum { k=0..n } (- 1) ^ (n - k) * binomial(k + 5, 5); a(n) = (4 * n ^ 5 + 70 * n ^ 4 + 460 * n ^ 3 + 1400 * n ^ 2 + 1936 * n + 945) / 960 + (- 1) ^ n / 64. - _ Paul Barry _ , Jul 01 2003 ● a(n) = a(n - 2) + (n * (n + 1) * (n + 2) * (n - 1)) / 24, a(1) = 0, a(2) = 1; (15 * (- 1) ^ n - 15 * (- 1) ^ (2 * n) + 96 * n - 160 * (- 1) ^ (2 * n) * n + 200 * n ^ 2 - 200 * (- 1) ^ (2 * n) * n ^ 2 + 140 * n ^ 3 - 80 * (- 1) ^ (2 * n) * n ^ 3 + 40 * n ^ 4 - 10 * (- 1) ^ (2 * n) * n ^ 4 + 4 * n ^ 5) / 960. - Cecilia Rossiter (cecilia(AT)noticingnumbers.net), Dec 14 2004 ●

► [A014166] 0,1,5,16,41,92,189,365,674,1204,2098,3588,6050,10093,16703,27476,44995,73440,119575,194345,315460,511576,829060,1342936,2174596 ⋆ Apply partial sum operator 4 times to Fibonacci numbers. ● a(n) = Fibonacci(n + 8) - (n ^ 3 + 12 * n ^ 2 + 59 * n + 126) / 6. ● a(n) = Sum _{ k=1..n } binomial(n - k + 4, k + 3), with n>=0. - _ Paolo P. Lava _ , Apr 16 2008 ●

► [A097810] 1,5,16,41,94,203,424,869,1762,3551,7132,14297,28630,57299,114640,229325,458698,917447,1834948,3669953,7339966,14679995,29360056,58720181,117440434 ⋆ a(n) = 7 * 2 ^ n - 3n - 6. ● a(n) = 2a(n - 1) + 3n, n>0, a(0)=1. ● a(n) = 4a(n - 1) - 5a(n - 2) + 2a(n - 3). ●

► [A187004] 1,5,16,41,101,254,638,1609,4048,10185,25631,64502,162319,408476,1027931,2586793,6509675,16381622,41224415,103741401,261065639,656972695,1653274340,4160471302,10469842201 ⋆ Expansion of A(x) = (1 + 2 * x ^ 2 + 6 * x ^ 3 + 9 * x ^ 4 + 8 * x ^ 5 + 5 * x ^ 6) / (1 - x - 2 * x ^ 2 - 3 * x ^ 3 - 3 * x ^ 4 - 2 * x ^ 5 - x ^ 6). ● a(n) = n * Sum _{ m=1..n } Sum _{ k=m..n } binomial(m, k - m) * Sum _{ j=0..k } binomial(k,j) * binomial(j, n - 3 * k + 2 * j))) / m). ● a(n) = a(n - 1) + 2 * a(n - 2) + 3 * a(n - 3) + 3 * a(n - 4) + 2 * a(n - 5) + a(n - 6); a(1)=1, a(2)=5, a(3)=16, a(4)=41, a(5)=101, a(6)=254. - _ Harvey P. Dale _ , Jun 14 2011 ●

► [A255135] 1,5,16,41,102,242,558,1263,2817,6214,13583,29471,63548,136305,291019,618849,1311314,2769847,5834119,12257072,25691785,53738815,112188059,233796875,486435094 ⋆ Dimensions where the volume of an L ^ p unit ball is maximized. ● a(n) = the value x that gives the largest volume. (End) ●

► [A055796] 1,5,16,42,98,210,420,792,1419,2431,4004,6370,9828,14756,21624,31008,43605,60249,81928,109802,145222,189750,245180,313560,397215 ⋆ T(2n + 3,n), array T as in A055794. ● a(n) = (n + 1)(n + 2)(n + 3)(n + 4)(n ^ 2 - n + 30) / 720. ● a(n - 4) = binomial(n,6) + binomial(n,4) for n>3. - _ Zerinvary Lajos _ , Jul 24 2006 ●

► [A002662] 0,0,0,1,5,16,42,99,219,466,968,1981,4017,8100,16278,32647,65399,130918,261972,524097,1048365,2096920,4194050,8388331,16776915 ⋆ a(n) = 2 ^ n - 1 - n * (n + 1) / 2. ● a(n) = Sum _{ k=0..n } binomial(n,k + 3) = Sum _{ k=3..n } binomial(n,k). - _ Paul Barry _ , Jul 30 2004 ● a(n + 1) = 2 * a(n) + binomial(n,2). - _ Paul Barry _ , Aug 23 2004 ● a(n) = n - 2 + 3 * a(n - 1) - 2 * a(n - 2), for n >= 2. - _ Richard R. Forberg _ , Jul 11 2013 ● a(n) = Sum _{ k=1..n - 2 } Sum _{ i=1..n } (n - k - 1) * C(k,i). - _ Wesley Ivan Hurt _ , Sep 19 2017 ● a(n) = 5 * a(n - 1) - 9 * a(n - 2) + 7 * a(n - 3) - 2 * a(n - 4) for n > 3. - _ Chai Wah Wu _ , Apr 03 2021 ●

► [A321959] 0,1,5,16,42,100,228,512,1144,2544,5616,12288,26656,57408,122944,262144,556928,1179392,2490112,5242880,11010560,23069696,48235520,100663296,209713152 ⋆ a(n) = [x ^ n] ((1 - x) * x) / ((1 - 2 * x) ^ 2 * (2 * x ^ 2 - 2 * x + 1)). ● a(n) = n! [x ^ n] exp(x) * (exp(x) * (2 * x + 1) - sin(x) - cos(x)) / 2. ● a(n) = 2 * ((2 * n + 2) * a(n - 3) - (3 * n + 2) * a(n - 2) + (2 * n + 1) * a(n - 1)) / n for n >= 4. ● a(2 ^ n - 1) = 2 ^ (2 ^ n + n - 2) if n>1. - _ Michael Somos _ , Sep 30 2022 ●

► [A053221] 1,5,16,43,106,249,568,1271,2806,6133,13300,28659,61426,131057,278512,589807,1245166,2621421,5505004,11534315,24117226,50331625,104857576,218103783,452984806 ⋆ Row sums of triangle A053218. ● a(n) = (n + 2) * 2 ^ (n - 1) - n - 1. - _ Vladeta Jovovic _ , Feb 28 2003 ● a(n) = (1 / 2) * Sum _{ k=1..n } Sum _{ i=1..n } C(k,i) + C(n,k). - _ Wesley Ivan Hurt _ , Sep 22 2017 ●

► [A137221] 0,0,0,1,5,16,43,107,256,597,1365,3072,6827,15019,32768,70997,152917,327680,699051,1485483,3145728,6640981,13981013,29360128,61516459 ⋆ a(n) = 5 * a(n - 1) - 9 * a(n - 2) + 8 * a(n - 3) - 4 * a(n - 4), with a(0)=0, a(1)=0, a(2)=0, a(3)=1. ● a(n) = (1 / 6) * ((1 - i * sqrt(3)) / 2) ^ n + (1 / 6) * (1 + i * sqrt(3)) / 2) ^ n - (1 / 3) * 2 ^ n + (i * sqrt(3) / 18) * (1 - i * sqrt(3)) / 2) ^ n + (1 / 6) * 2 ^ n * n - (i * sqrt(3) / 18) * (1 + i * sqrt(3)) / 2) ^ n, with n>=0 and i=sqrt(- 1). - _ Paolo P. Lava _ , Jun 09 2008 ● a(n) = (1 / 3) * (2 ^ (n - 1) * (n - 2) + ChebyshevU(n, 1 / 2)). - _ G. C. Greubel _ , Jan 05 2022 ●

► [A271359] 5,16,43,113,296,775,2029,5312,13907,36409,95320,249551,653333,1710448,4478011,11723585,30692744,80354647,210371197,550758944,1441905635,3774957961,9882968248,25873946783,67738872101 ⋆ a(n) = k * Fibonacci(2 * n + 1) + (k + 1) * Fibonacci(2 * n), where k=5. ● a(n) = 3 * a(n - 1) - a(n - 2) for n>1. ● a(n) = (2 ^ (- 2 - n) * ((13 - sqrt(5)) * (3 + sqrt(5)) ^ (n + 1) - (13 + sqrt(5)) * (3 - sqrt(5)) ^ (n + 1))) / sqrt(5). ●

► [A053220] 1,5,16,44,112,272,640,1472,3328,7424,16384,35840,77824,167936,360448,770048,1638400,3473408,7340032,15466496,32505856,68157440,142606336,297795584,620756992 ⋆ a(n) = (3 * n - 1) * 2 ^ (n - 2). ● a(n) = (3 * n - 1) * 2 ^ (n - 2). ● a(n + 1) = det(f(i - j + 1)) _{ 1 <= i, j <= n } , where f(0) = 1, f(1) = 5 and for k > 0, we have f(k + 1) = 9 and f(- k) = 0. - _ Mircea Merca _ , Jun 23 2012 ●

► [A048777] 1,5,16,44,113,281,688,1672,4049,9789,23648,57108,137889,332913,803744,1940432,4684641,11309749,27304176,65918140,159140497,384199177,927538896,2239277016,5406092977 ⋆ First partial sums of A005409; second partial sums of A001333. ● a(n) = 2 * a(n - 1) + a(n - 2) + 2 * n + 1 with a(0)=1, a(1)=5. ● a(n) = ({ (5 + (7 / 2) * sqrt(2)) * (1 + sqrt(2)) ^ n - (5 - (7 / 2) * sqrt(2)) * (1 - sqrt(2)) ^ n }/ 2 * sqrt(2)) - (2 * n + 5) / 2. ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) + a(n - 4). ●

► [A185003] 1,5,16,45,116,284,673,1557,3535,7910,17502,38376,83500,180479,387881,829605,1766998,3749765,7931114,16724870,35173777,73794660,154485527,322771344,673155141 ⋆ a(n) = Sum _{ k=1..n } binomial(n,k) * sigma(k). ● a(n) = Sum _{ i=1..n } Sum _{ j=1..n } i * binomial(n,i * j). - _ Ridouane Oudra _ , Nov 12 2019 ●

► [A189390] 0,1,5,16,45,116,286,680,1581,3604,8106,18008,39650,86568,187804,404944,868989,1856180,3950194,8376056,17708310,37329016,78499620,164682416,344789970 ⋆ The maximum possible value for the apex of a triangle of numbers whose base consists of a permutation of the numbers 0 to n, and each number in a higher row is the sum of the two numbers directly below it. ● a(n) = Sum _{ k=0..floor((n - 1) / 2) } (4 * k + 1) * C(n,k) + (n + 1 mod 2) * n * C(n, n / 2). ● a(n) = Sum _{ k=1..n } Sum _{ i=1..k } C(n,floor((n - k) / 2) + i). - _ Stefano Spezia _ , Aug 20 2019 ●

► [A099327] 1,5,16,45,117,291,700,1646,3799,8647,19448,43330,95738,210094,458216,994204,2146955,4617439,9893376,21128058,44982486,95510090,202278376,427425860,901236582 ⋆ Expansion of ((1 - x) * sqrt(1 + 2x) + (1 + x) * sqrt(1 - 2x)) / (2 * (1 - 2x) ^ (5 / 2)). ● a(n) = Sum _{ k=0..n } (k + 1) * binomial(n, (n - k) / 2) * binomial(k + 4, 4) * (1 + (- 1) ^ (n - k)) / (n + k + 2). ●

► [A004146] 0,1,5,16,45,121,320,841,2205,5776,15125,39601,103680,271441,710645,1860496,4870845,12752041,33385280,87403801,228826125,599074576,1568397605,4106118241,10749957120 ⋆ Alternate Lucas numbers - 2. ● a(n + 1) = 3 * a(n) - a(n - 1) + 2. ● a(n) = 2 * (T(n, 3 / 2) - 1) with Chebyshev's polynomials T(n, x) of the first kind. See their coefficient triangle A053120. ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) + a(n - 3), n>=3, a(0)=0, a(1)=1, a(2)=5. ● a(n) = ((3 + sqrt(5)) / 2) ^ n + ((3 - sqrt(5)) / 2) ^ n - 2. - Felix Goldberg (felixg(AT)tx.technion.ac.il), Jun 09 2001 ● a(n) = n * Sum _{ k=1..n } binomial(n + k - 1,2 * k - 1) / k, n > 0. - _ Vladimir Kruchinin _ , Sep 03 2010 ● a(n) = floor(tau ^ (2 * n) * (tau ^ (2 * n) - floor(tau ^ (2 * n)))), where tau = (1 + sqrt(5)) / 2. - _ L. Edson Jeffery _ , Aug 26 2013 ●

► [A071101] 5,16,45,130,377,1088,3145,9090,26269,75920,219413,634114,1832625,5296384,15306833,44237570,127848949,369490320,1067846845,3086134658,8919094697,25776662080,74495936025,215297250946,622220603405 ⋆ Expansion of (5 + 6 * x + 3 * x ^ 2 - 2 * x ^ 3) / (1 - 2 * x - 2 * x ^ 2 - 2 * x ^ 3 + x ^ 4) in powers of x. ● a(- n) = a(- 6 + n). a(- 1) = 2, a(- 2) = 1, a(- 3) = 0. a(n) = 2 * a(n - 1) + 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4). - _ Michael Somos _ , Dec 15 2011 ●

► [A351283] 1,1,1,5,16,46,142,496,1888,7538,31291,135739,617461,2939215,14575027,75014471,399901294,2205630124,12572140372,73961880118,448447331338,2798640572516,17956583819425,118336081817953,800278211629795 ⋆ G.f. A(x) satisfies: A(x) = 1 + x + x ^ 2 * A(x / (1 - x)) / (1 - x) ^ 4. ● a(0) = a(1) = 1; a(n) = Sum _{ k=0..n - 2 } binomial(n + 1,k + 3) * a(k). ●

► [A166868] 1,5,16,48,133,357,932,2392,6057,15189,37800,93520,230301,565045,1382236,3373208,8216033,19980037,48525632,117730352,285384437,691295429,1673567700,4049615640,9795168601 ⋆ Convolution of Jacobsthal(n + 2) and Pell(n + 1). ● a(n) = 3 * a(n - 1) + a * (n - 2) - 5 * a(n - 3) - 2 * a(n - 4). ●

► [A052909] 1,5,16,49,148,445,1336,4009,12028,36085,108256,324769,974308,2922925,8768776,26306329,78918988,236756965,710270896,2130812689,6392438068,19177314205,57531942616,172595827849,517787483548 ⋆ Expansion of (1 + x - x ^ 2) / ((1 - x) * (1 - 3 * x)). ● a(n) = 3 * a(n - 1) + 1, with a(0)=1, a(1)=5, a(2)=16. ● a(n) = (11 * 3 ^ n - 3) / 6. ● a(n) = 4 * a(n - 1) - 3 * a(n - 2). - _ Vincenzo Librandi _ , Jun 22 2012 ● a(n) = Sum _{ k=1..3 } floor((3 ^ n) / k). - _ Lechoslaw Ratajczak _ , Jul 31 2016 ●

► [A037480] 1,5,16,50,151,455,1366,4100,12301,36905,110716,332150,996451,2989355,8968066,26904200,80712601,242137805,726413416,2179240250,6537720751,19613162255,58839486766,176518460300,529555380901 ⋆ Base - 3 digits are, in order, the first n terms of the periodic sequence with initial period 1,2. ● a(n) = (5 * 3 ^ n + (- 1) ^ n - 6) / 8 . - _ Paul D. Hanna _ , Sep 23 2007 ● a(n) = 3 * a(n - 1) + a(n - 2) - 3 * a(n - 3). G.f.: x * (2 * x + 1) / ((x - 1) * (x + 1) * (3 * x - 1)). - _ Colin Barker _ , Apr 30 2014 ●

► [A304168] 5,16,50,154,470,1426,4310,12994,39110,117586,353270,1060834,3184550,9557746,28681430,86060674,258214790,774709906,2324260790,6973044514,20

919657830,62760022066,188282163350,564850684354,1694560441670 ⋆ a(n) = 2 * 3 ^ n - 2 ^ (n - 1) (n>=1). ● a(n) = 5 * a(n - 1) - 6 * a(n - 2) for n>2. ●

▶ [A077840] 1,1,5,16,50,163,524,1687,5435,17503,56372,181558,584741,1883272,6065441,19534921,62915981,202633048,652618802,2101884691,6769524932,21802560343,70219349555,226154954935,728375639564 ⋆ Expansion of (1 - x) / (1 - 2 * x - 3 * x ^ 2 - 3 * x ^ 3). ● a(0)=1 and, for n >= 1, a(n) = Sum(k=1..n, Sum(i=k..n,(Sum(j=0..k, binomial(j, - 3 * k + 2 * j + i) * 3 ^ (- 2 * k + j + i) * binomial(k,j))) * binomial(n + k - i - 1,k - 1))). - _ Vladimir Kruchinin _ , May 05 2011 ● a(0)=1, a(1)=1, a(2)=5, a(n) = 2 * a(n - 1) + 3 * a(n - 2) + 3 * a(n - 3). - _ Harvey P. Dale _ , Aug 19 2014 ●

▶ [A147536] 5,16,52,172,580,1996,7012,25132,91780,340876,1284772,4902892,18902980,73486156,287567332,1131137452,4467154180,17696429836,70269158692,279526952812,1113458765380 ⋆ a(n) = 4 * 3 ^ n + 4 ^ n. ● a(n)=7 * a(n - 1) - 12 * a(n - 2) = 4 * 3 ^ n + 4 ^ n. G.f.: (5 - 19x) / ((1 - 4x)(1 - 3x)). [From _ R. J. Mathar _ , Nov 09 2008] ●

▶ [A108300] 1,5,16,53,175,578,1909,6305,20824,68777,227155,750242,2477881,8183885,27029536,89272493,294847015,973813538,3216287629,10622676425,35084316904,115875627137,382711198315,1264009222082,4174738864561 ⋆ a(n + 2) = 3 * a(n + 1) + a(n), with a(0) = 1, a(1) = 5. ● a(n) = - (7 / 26) * (3 / 2 - (1 / 2) * sqrt(13)) ^ n * sqrt(13) + (7 / 26) * sqrt(13) * (3 / 2 + (1 / 2) * sqrt(13)) ^ n + (1 / 2) * (3 / 2 - (1 / 2) * sqrt(13)) ^ n + (1 / 2) * (3 / 2 + (1 / 2) * sqrt(13)) ^ n, with n>=0. - _ Paolo P. Lava _ , Sep 19 2008 ● a(n) * a(n - 2) = a(n - 1) ^ 2 + 9 * (- 1) ^ n. - _ Roger L. Bagula _ , May 17 2010 ●

▶ [A041469] 1,1,5,16,53,228,281,8658,8939,44414,142181,470957,2026009,2496966,76934989,79431955,394662809,1263420382,4184923955,18003116202,22188040157,683644320912,705832361069,3506973765188,11226753656633 ⋆ Denominators of continued fraction convergents to sqrt(250). ● a(n) = 8886 * a(n - 7) + a(n - 14) for n>13. - _ Vincenzo Librandi _ , Dec 18 2013 ●

▶ [A098912] 1,5,16,54,180,607,2098,7397,26452,95821,350554,1292634,4797694,17904220,67125898,252679320,954505718,3616951513,13744169104,52358244166,199912298266,764879838343,2932035371786,11259007784430,43303859981236 ⋆ Number of ways angles from Pi / n to (n - 1)Pi / n can tile around a vertex, where rotations and reflections of an angle sequence are not counted. ● a(n) = 2 ^ (n - 2) - 2 ^ (floor(n / 2)) - 2 ^ (floor((n - 1) / 2)) + (1 / (4 * n)) * (Sum _{ d | 2 * n } phi(2 * n / d) * 2 ^ d). ●

▶ [A057553] 1,5,16,56,203,749,2795,10517,39832,151658,579956,2225964,8570330,33086030,128028650,496432760,1928418395,7503144365,29235705215,114064338335,445552419545,1742264571605,6819546853625,26717004445325 ⋆ Rank of (1,1,...,1) (n 1's) when { 0,1,2,... }^ n is lexicographically ordered. ● a(n)=C(2n - 1, n) + b(n - 2) + 1, where b=A057552. ●

▶ [A077235] 5,16,59,220,821,3064,11435,42676,159269,594400,2218331,8278924,30897365,115310536,430344779,1606068580,5993929541,22369649584,83484668795,311569025596,1162791433589,4339596708760,16195595401451,60442784897044,225575544186725 ⋆ Bisection (odd part) of Chebyshev sequence with Diophantine property. ● a(n) = 4 * a(n - 1) - a(n - 2) with a(0)=5 and a(1)=16. - _ Philippe Deléham _ , Nov 16 2008 ● a(n) = - sqrt(3) * [2 - sqrt(3)] ^ n + sqrt(3) * [2 + sqrt(3)] ^ n + (5 / 2) * [2 - sqrt(3)] ^ n + (5 / 2) * [2 + sqrt(3)] ^ n, with n>=0. - _ Paolo P. Lava _ , Nov 20 2008 ●

▶ [A098347] 1,5,16,60,213,771,2772,9990,35973,129573,466668,1680804,6053697,21803499,78529176,282836934,1018687833,3668986773,13214513016,47594435868,171419886333,617399427555,2223674634060,8008962525846 ⋆ A sequence derived from a Ferrers graph partition of 16. ● a(1)=1, a(2)=5, a(3)=16, a(n)= 3a(n - 1) + 3a(n - 2) - 3a(n - 3). ●

▶ [A189450] 1,5,16,61,225,841,3136,11705,43681,163021,608400,2270581,8473921,31625105,118026496,440480881,1643897025,6135107221,22896531856,85451020205,318907548961,1190179175641,4441809153600,16577057438761 ⋆ Number of 2 X n array permutations with each element moving zero or one space horizontally or diagonally. ● a(n) = ((2 - sqrt(3)) ^ (n + 1) + (2 + sqrt(3)) ^ (n + 1) + 8) / 12 for n even. ● a(n) = (- 2 + (2 - sqrt(3)) ^ (1 + n) + (2 + sqrt(3)) ^ (1 + n)) / 12 for n odd. ●

▶ [A307469] 1,5,16,62,220,812,2944,10760,39184,142928,520960,1899488,6924736,25246400,92041216,335560832,1223368960,4460102912,16260419584,59281456640,216125430784,787939601408,2872631787520,10472901183488,38181593092096 ⋆ a(n) = 2 * a(n - 1) + 6 * a(n - 2) for n >= 2, a(0) = 1, a(1) = 5. ● a(n) = (- (2 / 7) * sqrt(7) + 1 / 2) * (1 - sqrt(7)) ^ n + ((2 / 7) * sqrt(7) + 1 / 2) * (1 + sqrt(7)) ^ n. ●

▶ [A365907] 0,1,5,16,63,262,1105,4676,19803,83882,355325,1505176,6376023,27009262,114413065,484661516,2053059123,8696898002,36840651125,156059502496,661078661103,2800374146902,11862575248705,50250675141716,212865275815563 ⋆ Smallest nonnegative integer that is not the sum of fewer than n signed Lucas numbers. ● a(n) = n, for n<2. ●

▶ [A042087] 1,1,5,16,69,85,3979,4064,20235,64769,279311,344080,16106991,16451071,81911275,262184896,1130650859,1392835755,65201095589,66593931344,331576820965,1061324394239,4576874397921,5638198792160,263934018837281 ⋆ Denominators of continued fraction convergents to sqrt(567). ● a(n) = 4048 * a(n - 6) - a(n - 12) for n>11. - _ Vincenzo Librandi _ , Jan 14 2014 ●

▶ [A332470] 1,1,5,16,69,226,923,3312,12825,47896,184755,700712,2704155,10373455,40113421,154946976,601080389,2332498482,9075135299,35338355380,137846298360,538213522254,2104098963719,8233142596640,32247603662625 ⋆ a(n) = Sum _{ d|n } mu(n / d) * binomial(n + d - 2, n - 1). ● a(n) = [x ^ n] Sum _{ k >=1 } mu(k) * x ^ k / (1 - x ^ k) ^ n. ● a(n) = | { (x _ 1, x _ 2, ... , x _{ n - 1 }) : 1 <= x _ 1 <= x _ 2 <= ... <= x _ n = n, gcd(x _ 1, x _ 2, ... , x _ n) = 1 } |. - _ Seiichi Manyama _ , Apr 20 2021 ●

▶ [A363299] 5,16,70,346,1810,9826,54850,312706,1810690,10601986,62563330,371185666,2210336770,13194911746,78901035010,472332468226,2829699842050,16961019183106,101697395621890,609909495824386,3658357463318530,21945746733400066,131656888214355970,789870960541958146 ⋆ a(n) is the sum of the n - th powers of the terms of row 4 of Pascal's triangle. ● a(n) = 2 + 2 * 4 ^ n + 6 ^ n. ●

▶ [A363558] 1,5,16,77,256,1104,4121,16832,65536,264688,1048617,4205568,16779008,67162112,268436016,1073999165,4294967296,17180983296,68719549696,274882887680,1099511628896,4398068904021,17592186086656,70368840646656,281474978676736 ⋆ Expansion of g.f. A(x) = Sum _{ n= - oo.. + oo } x ^ n * (2 + x ^ n) ^ (2 * n). ● a(2 ^ n) = 4 ^ (2 ^ n) for n > 0 (conjecture). ● a(p) = p * 2 ^ (p - 1) + 4 ^ p for primes p > 3 (conjecture). ●

▶ [A334647] 0,5,16,78,470,3153,22588,169188,1308762,10374460,83829856,687929086,5717602930,48030047206,407142435000,3478286028840,29917720938690,258866494630164,2251694583485824,19677972159742360,172694287830500440,1521328368800877065 ⋆ a(n) is the total number of down steps between the first and second up steps in all 3 _ 1 - Dyck paths of length 4 * n. ● a(0) = 0 and a(n) = 3 * binomial(4 * n, n) / (n + 1) - 2 * binomial(4 * n + 1, n) / (n + 1) + 6 * binomial(4 * (n - 1), n - 1) / n - 2 * [n=1] for n > 0, where [ ] is the Iverson bracket. ●

▶ [A160739] 5,16,10159,143824,867211,3415120,10373071,26425744,59271739,120704656,227860495,404631376,683245579,1106013904,1727242351,2615311120,3854919931,5549499664,7823790319,10826585296,14733641995,19750758736,26117017999 ⋆ 16 * P _ 6(n), 16 times the Legendre Polynomial of order 6 at n. ● a(n) = 231 * n ^ 6 - 315 * n ^ 4 + 105 * n ^ 2 - 5. - _ Vaclav Kotesovec _ , Jul 31 2013 ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>6. ●

▶ [A237437] 5,17,17,17,83,167,167,227,2273,5297,5297,69467,69467,116387,348563,348563,2004917,5472953,8062073,8062073 ⋆ Least prime p > prime(n + 1) such that p is not a square mod the first n odd primes 3, 5, 7, 11, ..., prime(n + 1). ● a(n) = a(n + 1) if and only if Legendre (a(n)|prime(n + 2)) = - 1. ●

▶ [A117635] 1,5,17,25,47,79,165 ⋆ Royal elements sequence from A018226 plus closed next shell at 168: H,B,Cl,Mn,Ag,Au,X(Unknown). ● a(n) = Abs[A018226[n] - 3] ●

▶ [A195032] 0,5,17,27,51,66,102,122,170,195,255,285,357,392,476,516,612,657,765,815,935,990,1122,1182,1326 ⋆ Vertex number of a square spiral in which the length of the first two edges are the legs of the primitive Pythagorean triple [5, 12, 13]. The edges of the spiral have length A195031. ● a(n) = (1 / 2) * ((2 * n + (- 1) ^ n + 3) / 4) * ((34 * n - 3 * (- 1) ^ n + 3) / 4) = (2 * n * (17 * n + 27) + (14 * n - 3) * (- 1) ^ n + 3) / 16. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). (End) ●

▶ [A023258] 5,17,29,37,89,127,199,229,269,347,359,379,397,499,769,809,929,947,977,1049,1087,1129,1277,1279,1367 ⋆ Primes that remain prime through 2 iterations of function f(x) = 6x + 7. ● a(n) = 7 or 9 (mod 10) for n > 1. - _ John Cerkan _ , Sep 14 2016 ●

▶ [A017581] 5,17,29,41,53,65,77,89,101,113,125,137,149,161,173,185,197,209,221,233,245,257,269,281,293 ⋆ a(n) = 12 * n + 5. ● a(n) = 2 * a(n - 1) - a(n - 2) for n>1, a(0)=5, a(1)=17. - _ Vincenzo Librandi _ , Jun 08 2011 ●

▶ [A075695] 1,5,17,29,45,61,81,97,109,145,157,177,185,201,245,269,285,329,345,353,381,397,421,445,469 ⋆ a(1)=1, then "jump over two primes": a(n) = 2 * nextprime(nextprime(a(n - 1))) - a(n - 1). ● a(1)=1, a(n) = 2 * nextprime(nextprime(a(n - 1))) - a(n - 1). ●

▶ [A220082] 1,5,17,29,53,73,109,137,185,221,281,325,397,449,533,593,689,757,865,941,1061,1145,1277,1369,1513 ⋆ Numbers k such that 10 * k - 1 is a square. ● a(n) = a(- n + 1) = (10 * n * (n - 1) - (2 * n - 1) * (- 1) ^ n + 3) / 4. ●

▶ [A083364] 1,5,17,32,71,105,187,248,389,485,701,840,1147,1337,1751,2000,2537,2853,3529,3920,4751,5225,6227,6792,7981 ⋆ Antidiagonal sums of table A083362. ● a(2n) = n(n + 1)(4n + 3) + (2n + 1), a(2n + 1) = ((n + 1) ^ 2)(4n + 3) + (2n + 2), for n>=0. - _ Paul D. Hanna _ , Apr 30 2003 ● a(n) = a(n - 1) + 3 * a(n - 2) - 3 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) + a(n - 6) - a(n - 7). - _ Colin Barker _ , Sep 26 2014 ● a(n) = (4 * n ^ 3 + 12 * n ^ 2 + 18 * n + 9 + (2 * n ^ 2 + 2 * n - 1) * (- 1) ^ n) / 8. - _ Wesley Ivan Hurt _ , Sep 26 2014 ●

▶ [A026394] 1,5,17,34,75,114,202,272,425,535,771,930,1267,1484,1940,2224,2817,3177,3925,4370,5291,5830,6942,7584,8905 ⋆ a(n) = T(n,n - 3), where T is the array in A026386. ● a(n) = (18 * n ^ 3 - 9 * (- 1) ^ n * n ^ 2 - 111 * n ^ 2 + 53 * (- 1) ^ n * n + 243 * n - 75 * (- 1) ^ n - 181) / 32. ● a(n) = (9 * n ^ 3 - 60 * n ^ 2 + 148 * n - 128) / 16 for n even. ● a(n) = (9 * n ^ 3 - 51 * n ^ 2 + 95 * n - 53) / 16 for n odd. ●

▶ [A004538] 1,5,17,35,59,89,125,167,215,269,329,395,467,545,629,719,815,917,1025,1139,1259,1385,1517,1655,1799 ⋆ a(n) = 3 * n ^ 2 + 3 * n - 1. ● a(n) = 5 * Sum _{ k=1..n } k ^ 4 / Sum _{ k=1..n } k ^ 2, n > 0. ● a(n) = a(n - 1) + 6 * n with a(0)= - 1. - _ Vincenzo Librandi _ , Nov 18 2010 ●

▶ [A186029] 0,5,17,36,62,95,135,182,236,297,365,440,522,611,707,810,920,1037,1161,1292,1430,1575,1727,1886,2052 ⋆ a(n) = n * (7 * n + 3) / 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>2, a(0)=0, a(1)=5, a(2)=17. - _ Philippe Deléham _ , Mar 26 2013 ●

▶ [A083048] 1,5,17,36,80,164,300,575,1020,1884,3426,5921,10568,18697,31850,55716,94332,163579,282388,474625,814328,1363979,2328358,3963781,6609951 ⋆ Main diagonal of table A083047. ● a(n) = T(n, n), where T(n, 0) = floor(n * x / (x - 1)) + 1, T(n, k + 1) = ceiling(x * T(n, k)), for n >= 0, k >= 0, with x = (sqrt(5) + 1) / 2. ●

▶ [A053755] 1,5,17,37,65,101,145,197,257,325,401,485,577,677,785,901,1025,1157,1297,1445,1601,1765,1937,2117,2305 ⋆ a(n) = 4 * n ^ 2 + 1. ● a(n) = 3a(n - 1) - 3a(n - 2) + a(n - 3). (End) ● a(n + 1) = denominator of Sum _{ k=0..n } (- 1) ^ n * (2 * n + 1) ^ 3 / ((2 * n + 1) ^ 4 + 4), see Knuth reference. - _ Reinhard Zumkeller _ , Apr 11 2010 ● a(n) = 8 * n + a(n - 1) - 4. with a(0)=1. - _ Vincenzo Librandi _ , Aug 06 2010 ● a(n) = ((2 * n - 1) ^ 2 + (2 * n + 1) ^ 2) / 2. - _ J. M. Bergot _ , May 31 2012 ● a(n) = 2 * a(n - 1) - a(n - 2) + 8 with a(0)=1, a(5)=5. - _ Vincenzo Librandi _ , Jun 26 2013 ●

▶ [A212968] 1,5,17,38,75,127,203,300,429,585,781,1010,1287,1603,1975,2392,2873,3405,4009,4670,5411,6215,7107,8068,9125 ⋆ Number of (w,x,y) with all terms in { 0,...,n } and w>=range { w,x,y } . ● a(n) = (n + 1) * (14 * n * (n + 2) + 3 * (- 1) ^ n + 21) / 24. ● a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + a(n - 4) + 2 * a(n - 5) - a(n - 6). ●

▶ [A011931] 0,0,0,0,1,5,17,40,80,144,240,377,565,817,1144,1560,2080,2720,3497,4429,5537,6840,8360,10120,12144 ⋆ a(n) = floor(n * (n - 1) * (n - 2) * (n - 3) / 21

). • a(n) = + 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) + a(n - 7) - 4 * a(n - 8) + 6 * a(n - 9) - 4 * a(n - 10) + a(n - 11). [_ R. J. Mathar _ , Apr 15 2010] •

► [A139545] 1,1,1,5,17,41,88,190,421,935,2051,4445,9562,20476,43681,92837,196613,415073,873820,1835002,3844765,8039075,16777223,34952549,72701278 ⋆ Binomial transform of [1, 0, 0, 4, 0, 0, 7, 0, 0, 10, ...]. • a(n) = Sum _{ k=0..n / 3 } (3k + 1) * binomial(n,3k). - _ Emeric Deutsch _ , May 03 2008 •

► [A097123] 1,1,1,5,17,41,97,253,673,1745,4481,11573,30001,77689,200929,519725,1344833,3479969,9004033,23296357,60276817,155961545,403535969,1047107357,2701521889 ⋆ Expansion of (1 - x) ^ 2 / ((1 - x) ^ 3 - 4 * x ^ 3). • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + 5 * a(n - 3). • a(n) = Sum _{ k=0..floor(n / 3) } binomial(n, 3k) * 4 ^ k. •

► [A168617] 0,5,17,43,97,207,429,875,1769,3559,7141,14307,28641,57311,114653,229339,458713,917463,1834965,3669971,7339985,14680015,29360077,58720203,117440457 ⋆ a(n) = 7 * 2 ^ (n - 1) - 2 * n - 5. • a(n) = 2 * a(n - 1) + 2 * n + 1 (with a(1)=0). • a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 2 * a(n - 3). •

► [A046916] 1,5,17,43,97,211,457,995,2177,4771,10441,22771,49441,106835,229769,491971,1049089,2228803,4719241,9962195,20972321,44041075,92275657,192939043,402654337 ⋆ a(n) = n * 2 ^ n + 2 * n ^ 2 + 1. • a(n) = 7 * a(n - 1) - 19 * a(n - 2) + 25 * a(n - 3) - 16 * a(n - 4) + 4 * a(n - 5); a(0)=1, a(1)=5, a(2)=17, a(3)=43, a(4)=97. - _ Harvey P. Dale _ , Dec 06 2012 •

► [A294102] 1,1,5,17,44,127,332,866,2182,5412,13119,31292,73516,170136,388829,877653,1959111,4327221,9464856,20511598,44067446,93901142,198539477,416696608,868448305 ⋆ Expansion of Product _{ k>=1 } (1 + x ^ k) ^ (k * (3 * k - 1) / 2). • a(0) = 1 and a(n) = (1 / (2 * n)) * Sum _{ k=1..n } b(k) * a(n - k) where b(n) = Sum _{ d|n } d ^ 2 * (3 * d - 1) * (- 1) ^ (1 + n / d). - _ Seiichi Manyama _ , Nov 14 2017 •

► [A174794] 0,1,5,17,45,97,181,305,477,705,997,1361,1805,2337,2965,3697,4541,5505,6597,7825,9197,10721,12405,14257,16285 ⋆ a(0) = 0 and a(n) = (4 * n ^ 3 - 12 * n ^ 2 + 20 * n - 9) / 3 for n >= 1. • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4), n >= 5. • a(n) = 8 * binomial(n - 1, 3) + 8 * binomial(n - 1, 2) + 4 * binomial(n - 1, 1) + 1, n >= 1. •

► [A133252] 1,5,17,45,100,196,350,582,915,1375,1991,2795,3822,5110,6700,8636,10965,13737,17005,20825,25256,30360,36202,42850,50375 ⋆ Partial sums of A006000. • a(n) = (n + 1) * (n + 2) * (3 * n ^ 2 + 5 * n + 12) / 24. - _ Alois P. Heinz _ , Apr 28 2013 •

► [A299335] 1,5,17,45,103,211,399,707,1190,1918,2982,4494,6594,9450,13266,18282,24783,33099,43615,56771,73073,93093,117481,146965,182364 ⋆ Expansion of 1 / ((1 - x) ^ 7 * (1 + x) ^ 2). • a(n) = (2 * n ^ 6 + 54 * n ^ 5 + 575 * n ^ 4 + 3060 * n ^ 3 + 8468 * n ^ 2 + 11376 * n + 5760) / 5760 for n even. • a(n) = (2 * n ^ 6 + 54 * n ^ 5 + 575 * n ^ 4 + 3060 * n ^ 3 + 8468 * n ^ 2 + 11286 * n + 5355) / 5760 for n odd. • a(n) = 5 * a(n - 1) - 8 * a(n - 2) + 14 * a(n - 4) - 14 * a(n - 5) + 8 * a(n - 7) - 5 * a(n - 8) + a(n - 9) for n>8. •

► [A247618] 1,5,17,45,105,229,481,989,2009,4053,8145,16333,32713,65477,131009,262077,524217,1048501,2097073,4194221,8388521,16777125,33554337,67108765,134217625 ⋆ Start with a single square; at n - th generation add a square at each expandable vertex; a(n) is the sum of all label values at n - th generation. (See comment for construction rules.) • a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 2 * a(n - 3). • a(n) = (- 7 + 2 ^ (3 + n) - 4 * n). •

► [A269962] 1,5,17,45,105,237,537,1229,2825,6493,14905,34189,78409,179837,412505,946221,2170473,4978653,11420025,26195213,60086537,137826493,316146457,725176813,1663410601 ⋆ Start with a square; at each stage add a square at each expandable vertex so that the ratio of the side of the squares at stage n + 1 and at stage n is the golden ratio phi=0.618...; a(n) is the number of squares at n - th stage. • a(n) = 2 * a(n - 1) + a(n - 2) - 2 * a(n - 3) + 2 * a(n - 4) + 2 * a(n - 5) + 4. • a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 2 * a(n - 3) + 2 * a(n - 4) - 2 * a(n - 5). •

► [A213767] 1,5,17,47,114,254,533,1071,2083,3951,7348,13452,24313,43481,77077,135615,237094,412234,713325,1229155,2110151,3610655,6159912,10481112,17790769 ⋆ Antidiagonal sums of the convolution array A213765. • a(n) = 4 * a(n - 1) - 4 * a(n - 2) - 2 * a(n - 3) + 4 * a(n - 4) - a(n - 6). • a(n) = n * Fibonacci(n + 5) - Lucas(n + 6) + 2 * (2 * n + 9). - _ Ehren Metcalfe _ , Jul 10 2019 •

► [A136303] 1,5,17,48,123,300,714,1679,3925,9149,21296,49537,115192,267824,622653,1447533,3365149,7823068,18186475,42278476,98285586,228486323,531166317,1234811937,2870589548 ⋆ Expansion of g.f. (1 + x ^ 2) / ((1 - x) ^ 2 * (1 - 3 * x + 2 * x ^ 2 - x ^ 3)). • a(n + 5) = 5 * a(n + 4) - 9 * a(n + 3) + 8 * a(n + 2) - 4 * a(n + 1) + a(n) (n>=0). - _ Richard Choulet _ , Apr 07 2009 • a(n) = - 2 * (n + 2) + Sum _{ k=0..floor(n / 2) } (5 * binomial(n + k + 2, 3 * k + 2) - 4 * binomial(n + k + 1, 3 * k + 2) + 2 * binomial(n + k, 3 * k + 2)). (End) •

► [A273384] 1,5,17,49,81,121,169,225,289,361,441,529,625,729,841,961,1089,1225,1369,1521,1681,1849,2025,2209,2401 ⋆ Number of active (ON,black) cells in n - th stage of growth of two - dimensional cellular automaton defined by ”Rule 659”, based on the 5 - celled von Neumann neighborhood. • a(n) = (1 + 2 * n) ^ 2 for n>2. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>5. •

► [A006457] 1,5,17,49,125,297,669,1457,3093,6457,13309,27201,55237,111689,225101,452689,908885,1822809,3652701,7315553,14645349,29311081,58650733,117342321,234741877 ⋆ Number of elements in Z[i] whose ’smallest algorithm’ is <= n. • a(n + 5) - 4 * a(n + 4) + 3 * a(n + 3) + 6 * a(n + 2) - 10 * a(n + 1) + 4 * a(n) = 0. • a(2k) = 14 * 4 ^ k - 34 * 2 ^ k + 8 * k + 21. • a(2k + 1) = 28 * 4 ^ k - 48 * 2 ^ k + 8 * k + 25. •

► [A083091] 1,5,17,49,128,321,790,1924,4664,11282,27262,65843,158988,383863,926761,2237435,5401685,13040863,31483472,76007871,183499282,443006506,1069512368,2582031320,6233575089 ⋆ Antidiagonal sums of table A083087. • a(n) = Sum _{ k=0..n } T(k, n - k), where T(n, 0) = floor(n * x / (x - 1)) + 1, T(n, k + 1) = ceiling(x * T(n, k)), for n>=0, k>=0, with x = 1 + sqrt(2). •

► [A000337] 0,1,5,17,49,129,321,769,1793,4097,9217,20481,45057,98305,212993,458753,983041,2097153,4456449,9437185,19922945,41943041,88080385,184549377,385875969 ⋆ a(n) = (n - 1) * 2 ^ n + 1. • a(n) = Sum _{ k=1..n } k * 2 ^ (k - 1), partial sums of A001787. - _ Zerinvary Lajos _ , Oct 19 2006 • a(n) = 5 * a(n - 1) - 8 * a(n - 2) + 4 * a(n - 3), n > 2. - _ Harvey P. Dale _ , Jun 21 2011 • a(n) = Sum _{ k=1..n } Sum _{ i=1..n } i * C(k,i). - _ Wesley Ivan Hurt _ , Sep 19 2017 •

► [A054452] 0,0,1,5,17,50,138,370,979,2575,6755,17700,46356,121380,317797,832025,2178293,5702870,14930334,39088150,102334135,267914275,701408711,1836311880,4807526952 ⋆ Partial sums of A027941(n - 1) with a(- 1) = 0. • a(n) = + 5 * a(n - 1) - 8 * a(n - 2) + 5 * a(n - 3) - 1 * a(n - 4). • a(n) = Sum _{ k=0..n - 2 } binomial(2 * n - k - 1, k). - _ Johannes W. Meijer _ , Aug 12 2013 • a(n) = Sum _{ i=1..n - 1 } Sum _{ j=1..n - 1 } binomial(i + j, i - j). - _ Wesley Ivan Hurt _ , Mar 25 2015 • a(n) = Sum _{ k=0..n } (binomial(n + 1,k + 2) * Fibonacci(k)). - _ Vladimir Kruchinin _ , Oct 21 2016 • a(n) = (- ((3 - sqrt(5)) / 2) ^ n + ((3 + sqrt(5)) / 2) ^ n) / sqrt(5) - n. - _ Colin Barker _ , Jan 28 2017 •

► [A116521] 0,0,0,1,5,17,51,148,429,1250,3655,10701,31336,91752,268623,786414,2302262,6739984,19731685,57765711,169112717,495088023,1449400960,4243211207,12422263776 ⋆ Binomial transform of tetranacci sequence A000078. • a(n) = 5 * a(n - 1) - 8 * a(n - 2) + 6 * a(n - 3) - a(n - 4). - _ G. C. Greubel _ , Nov 03 2016 •

► [A290900] 0,1,5,17,51,149,439,1308,3916,11728,35093,104943,313773,938199,2805439,8389163,25086356,75016104,224321012,670787533,2005857561,5998122649,17936209267,53634716681,160384099011 ⋆ p - INVERT of the positive integers, where p(S) = 1 - S ^ 2 - S ^ 3. • a(n) = 6 * a(n - 1) - 14 * a(n - 2) + 19 * a(n - 3) - 14 * a(n - 4) + 6 * a(n - 5) - a(n - 6). •

► [A137500] 0,0,1,5,17,51,149,439,1309,3927,11797,35423,106301,318903,956645,2869807,8609293,25827879,77483893,232452191,697357085,2092071255,6276212741,18828636175,56485906477 ⋆ Binomial transform of b(n) = (0, 0, A007910). • a(n) = 5 * a(n - 1) - 8 * a(n - 2) + 6 * a(n - 3) for n >= 3. •

► [A190173] 0,1,5,17,52,148,408,1101,2937,7777,20504,53912,141520,371113,972573,2547825,6672876,17473996,45754280,119797205,313650865,821177281,2149916400,5628629232,14736064032 ⋆ a(n) = Sum _{ 1 <= i < j <= n } F(i) * F(j), where F(k) is the k - th Fibonacci number. • a(n) = F(n + 1) ^ 2 - F(n + 2) + (1 - (- 1) ^ n) / 2. •

► [A178703] 0,0,1,5,17,52,156,468,1405,4217,12653,37960,113880,341640,1024921,3074765,9224297,27672892,83018676,249056028,747168085,2241504257,6724512773,20173538320,60520614960 ⋆ Partial sums of round(3 ^ n / 7). • a(n) = round((3 * 3 ^ n - 7) / 14). • a(n) = floor((3 * 3 ^ n - 1) / 14). • a(n) = ceiling((3 * 3 ^ n - 13) / 14). • a(n) = a(n - 6) + 52 * 3 ^ (n - 5), n > 5. • a(n) = 5 * a(n - 1) - 8 * a(n - 2) + 7 * a(n - 3) - 3 * a(n - 4), n > 3. •

► [A186254] 5,17,53,149,449,1289,3761,11261,33773,101117,302681,907757,2723069,8169137,24506597,73519793,220559369,661677761,1985001917,5955003077,17865008333,53595020201,160785060361,482355180761,1447065541373 ⋆ a(n) = 2 * b(n) + 1, where b(n) lists the zeros of the sequence u(n)=abs(u(n - 1) - gcd(u(n - 1),2 * n - 1)), u(1)=1. • a(n + 1) <= 3 * a(n) + 2 for all n. - See the wiki link for a sketch of a proof that a(n) ~ c * 3 ^ n with c = 1.7078779... - _ M. F. Hasler _ , Aug 22 2015 •

► [A088210] 1,5,17,53,157,449,1253,3433,9273,24765,65529,172061,448853,1164409,3006157,7728337,19794545,50532469,128621281,326513669,826887693,2089505841,5269572021,13265211961,33336792745 ⋆ Numerators of convergents of the continued fraction with the n + 1 partial quotients: [2;2,2,...(n 2’s)...,2,n + 1], starting with [1], [2;2], [2;2,3], [2;2,2,4], ... • a(n) = P(n - 1) + n * P(n) where P() = A000129 are the Pell numbers. •

► [A135344] 1,1,1,1,5,17,53,157,469,1405,4217,12653,37961,113881,341641,1024921,3074765,9224297,27672893,83018677,249056029,747168085,2241504257,6724512773,20173538321 ⋆ a(n) = 3 * a(n - 1) - a(n - 3) + 3 * a(n - 4). • a(n) = (1 / 14) * 3 ^ n + (1 / 6) * (- 1) ^ n + (16 / 21) * cos(Pi * n / 3) + (8 * sqrt(3) / 21) * sin(Pi * n / 3). • a(n) = (1 / 14) * 3 ^ n + (1 / 14) * [13; 11; 5; - 13; - 11; - 5]. (End) •

► [A048473] 1,5,17,53,161,485,1457,4373,13121,39365,118097,354293,1062881,3188645,9565937,28697813,86093441,258280325,774840977,2324522933,6973568801,20920706405,62762119217,188286357653,564859072961 ⋆ a(0)=1, a(n) = 3 * a(n - 1) + 2; a(n) = 2 * 3 ^ n - 1. • a(0)=1, a(n) = a(n - 1) + 3 ^ n + 3 ^ (n - 1). - Lee Reeves, May 10 2004 • a(n) = (3 ^ n + 3 ^ (n + 1) - 2) / 2. - _ Creighton Dement _ , Jul 31 2004 • a(0)=1, a(1)=5, a(n) = 4 * a(n - 1) - 3 * a(n - 2). - _ Harvey P. Dale _ , Mar 06 2012 •

► [A178828] 0,0,1,5,17,53,162,490,1474,4426,13283,39855,119571,358719,1076164,3228500,9685508,29056532,87169605,261508825,784526485,2353579465,7060738406,21182215230,63546645702 ⋆ Partial sums of floor(3 ^ n / 10) / 2. • a(n) = a(n - 4) + 2 * 3 ^ (n - 3) - 1, n > 4. • a(n) = 5 * a(n - 1) - 8 * a(n - 2) + 8 * a(n - 3) - 7 * a(n - 4) + 3 * a(n - 5), n > 5. •

► [A242429] 1,5,17,53,167,550,1899,6809,25067,93902,355775,1358208,5212573,20082860,77607895,300638481,1166999699,4537960846,17673418311,68924837252,269132082925,1052055773292,4116727946687,16123827007348,63205353550497 ⋆ Length of longest chain of nonempty proper subsemigroups of the monoid of partial injective order - preserving functions of a chain with n elements. • a(n) = binomial(2 * n,n) / 2 + 3 * 2 ^ (n - 1) - n - 2. - _ Gheorghe Coserea _ , May 16 2016 •

► [A183712] 5,17,54,174,559,1797,5776,18566,59677,191821,616574,1981866,6370351,20476345,65817520,211558554,680016837,2185791545,7025832918,22583273462,72589861759,233327025821,749987665760,2410700161342,7748761123965 ⋆ 1 / 20 of the number of (n + 1) X 3 0..4 arrays with every 2 X 2 subblock strictly increasing clockwise or counterclockwise with one decrease. • a(n) = 3 * a(n - 1) + a(n - 2) - a(n - 3). •

► [A081495] 1,5,17,55,189,681,2519,9451,35765,136153,520695,1998745,7696467,29716025,115000947,445962899,1732525861,6741529113,26270128535,102501265057,400411345659,1565841089321,6129331763923,24014172955545,94163002754699 ⋆ Start with Pascal’s triangle; form a rhombus by sliding down n steps from top on both sides then sliding down inwards to complete the rhombus and then deleting the inner numbers; a(n) = sum of entries on perimeter of rhombus. • a(0)=1 for n>0 a(n)=binomial(2 * n, n) - binomial(2 * n - 2, n - 1) + 2 * n - 3. - _ Benoit Cloitre _ , Sep 10 2003 •

► [A033538] 1,1,5,17,57,189,625,2065,6821,22529,74409,245757,811681,2680801,8854085,29243057,96583257,318992829,1053561745,3479678065,11492595941,37957465889,125364993609,414052446717,1367522333761 ⋆ a(0)=1, a(1)=1, a(n) = 3 * a(n - 1) + a(n - 2) + 1. ● a(n) = 4 * a(n - 1) - 2 * a(n - 2) - a(n - 3), a(0)=1= a(1), a(2)=5. Observed by G. Detlefs. See the W. Lang link. - _ Wolfdieter Lang _ , Oct 18 2010 ● a(n) = - 1 / 3 + (2 / 39) * (3 / 2 - (1 / 2) * sqrt(13)) ^ n * sqrt(13) - (2 / 39) * sqrt(13) * (3 / 2 + (1 / 2) * sqrt(13)) ^ n + (2 / 3) * (3 / 2 - (1 / 2) * sqrt(13)) ^ n + (2 / 3) * (3 / 2 + (1 / 2) * sqrt(13)) ^ n, with n >= 0. - _ Paolo P. Lava _ , Sep 01 2008 ● a(n) = (4 * (F(n,3) + F(n - 1,3)) - 1) / 3, where F(n,x) is the Fibonacci polynomial (see A102426). - _ G. C. Greubel _ , Oct 13 2019 ●

► [A098184] 1,1,5,17,57,193,653,2209,7473,25281,85525,289329,978793,3311233,11201821,37895489,128199521,433695873,1467182629,4963443281,16791208345,56804250945,192167404461,650097672673,2199264673425 ⋆ a(n) = 3a(n - 1) + a(n - 2) + a(n - 3), a(0)=1, a(1)=1, a(2)=5. ● a(n) / a(n - 1) tends to 3.38297576..., the square of the tribonacci constant A058265. - _ Gary W. Adamson _ , Feb 28 2006 ●

► [A009229] 1,1,1,5,17,57,337,1661,9697,68529,451809,3570613,29324913,247557481,2348275633,22399292077,229227939521,2476740370529,27378158737089,323000223133285,3912000089144273,49350756905258905,649905519911431953,8776449485870211549 ⋆ Expansion of e.g.f. exp(sinh(x) * cosh(x)). ● a(n) = sum(k=1..n, ((sum(i=0..k, (- 1) ^ i * (k - 2 * i) ^ n * binomial(k,i))) * 2 ^ (n - 2 * k)) / k!), n>0, a(0)=1. - _ Vladimir Kruchinin _ , May 29 2011 ● a(0) = 1; a(n) = Sum _{ k=0..floor((n - 1) / 2) } binomial(n - 1,2 * k) * 4 ^ k * a(n - 2 * k - 1). - _ Ilya Gutkovskiy _ , Feb 24 2022 ●

► [A010914] 5,17,58,198,676,2308,7880,26904,91856,313616,1070752,3655776,12481600,42614848,145496192,496755072,1696027904,5790601472,19770350080,67500197376,230460089344,786839962624,2686439671808,9172078761984,31315435704320 ⋆ Pisot sequence E(5,17), a(n) = floor(a(n - 1) ^ 2 / a(n - 2) + 1 / 2). ● a(n) is the 3rd subdiagonal of array A228405. - _ Richard R. Forberg _ , Sep 02 2013 ●

► [A287804] 1,5,17,59,205,713,2481,8635,30057,104629,364225,1267923,4413861,15365465,53490097,186209299,648230545,2256616133,7855718641,27347281995,95201200637,331413874569,1153716087665,4016309864843,13981555011321 ⋆ Number of quinary sequences of length n such that no two consecutive terms have distance 1. ● a(n) = 5 * a(n - 1) - 5a(n - 2) - a(n - 3), a(0)=1, a(1)=5, a(2)=17. ●

► [A007483] 1,5,17,61,217,773,2753,9805,34921,124373,442961,1577629,5618809,20011685,71272673,253841389,904069513,3219891317,11467812977,40843221565,145465290649,518082315077,1845177526529,6571697209741 ⋆ a(n) = 3 * a(n - 1) + 2 * a(n - 2), with a(0)=1, a(1)=5. ● a(n) = ((17 + 7 * sqrt(17)) / 34) * ((3 + sqrt(17)) / 2) ^ n * + ((17 - 7 * sqrt(17)) / 34) * ((3 - sqrt(17)) / 2) ^ n. - _ Paul Barry _ , Dec 08 2004 ● a(n) = upper left term in the 2 X 2 matrix [1,2; 2,2] ^ (n + 1). Also [a(n), a(n + 1)] = the 2 X 2 matrix [0,1; 2,3] ^ (n + 1) * [1,1]. Example: [0,1; 2,3] ^ 4 * [1,1] = [61, 217]. - _ Gary W. Adamson _ , Mar 16 2008 ● a(n) = (i * sqrt(2)) ^ (n - 1) * (i * sqrt(2) * ChebyshevU(n, - 3 * i / (2 * sqrt(2))) + 2 * ChebyshevU(n - 1, - 3 * i / (2 * sqrt(2)))). - _ G. C. Greubel _ , Jun 28 2021 ●

► [A051736] 1,5,17,63,227,827,2999,10897,39561,143677,521721,1894607,6879979,24983923,90725999,329460929,1196397873,4344577397,15776816033,57291635519,208047769363,755500774443,2743511349031,9962735709201,36178491743225 ⋆ Number of 3 X n (0,1) - matrices with no consecutive 1's in any row or column. ● a(n) = 2 * a(n - 1) + 6 * a(n - 2) - a(n - 4). ●

► [A301560] 0,1,5,17,63,231,858,3217,12155,46189,176358,676039,2600150,10029150,38779380,150270097,583401555,2268783825,8836315950,34461632205,134564468610,526024740930,2058357681900,8061900920775,31602651609438 ⋆ Matching number of the n - odd graph. ● a(n) = floor(binomial(2 * n - 1, n - 1) / 2). ●

► [A366978] 1,5,17,64,220,839,3061,11684,44126,169432,648589,2505411,9670165,37497431,145502481,566076182,2204451031,8599761208,33581164151,131296796355,513812162117,2012709456997,7890502860027,30958303856804,121549519502347 ⋆ a(n) = Sum _{ j=1..n } binomial(floor(n / j) + n,n + 1). ● a(n) = Sum _{ j=1..n } binomial(j + n - 1,n) * floor(n / j). ●

► [A120893] 1,1,5,17,65,241,901,3361,12545,46817,174725,652081,2433601,9082321,33895685,126500417,472105985,1761923521,6575588101,24540428881,91586127425,341804080817,1275630195845,4760716702561,17767236614401 ⋆ a(n) = 3 * a(n - 1) + 3 * a(n - 2) - a(n - 3); a(0)=1, a(1)=1, a(2)=5. ● a(n) = [(- 1) ^ n + (2 - sqrt(3)) ^ n + (2 + sqrt(3)) ^ n] / 3. - _ Emeric Deutsch _ , Jul 24 2006 ●

► [A092896] 1,1,5,17,65,257,1025,4097,16385,65537,262145,1048577,4194305,16777217,67108865,268435457,1073741825,4294967297,17179869185,68719476737,274877906945,1099511627777,4398046511105,17592186044417,70368744177665 ⋆ Related to random walks on the 4 - cube. ● a(n) = 1 + 4 ^ n / 4 - 0 ^ n / 4 + Sum _{ k=0..n } binomial(n, k) * k * (- 1) ^ k. ● a(n) = 4 ^ (n - 1) + 1 for n > 1. - _ Colin Barker _ , Nov 25 2016 ●

► [A162270] 5,17,67,283,1229,5393,23755,104779,462389,2040881,9008563,39765211,175531325,774831473,3420269563,15097797067,66644895461,294184793297,1298594491555,5732273396251,25303478936621,111694959845969 ⋆ a(n) = ((5 + sqrt(2)) * (3 + sqrt(2)) ^ n + (5 - sqrt(2)) * (3 - sqrt(2)) ^ n) / 2. ● a(n) = 6 * a(n - 1) - 7 * a(n - 2) for n > 1; a(0) = 5, a(1) = 17. ●

► [A096980] 1,5,17,69,257,997,3793,14565,55681,213317,816401,3126021,11966849,45815845,175399633,671510181,2570817793,9842206853,37680138257,144255724485,552272416769,2114334904933,8094576727249,30989497789029 ⋆ Expansion of (1 + 3x) / (1 - 2x - 7x ^ 2). ● a(n) = (1 + sqrt(2)) * (1 + 2 * sqrt(2)) ^ n / 2 + (1 - sqrt(2)) * (1 - 2 * sqrt(2)) ^ n / 2. ● a(n) = 3 * Sum _{ k=0..floor((n - 1) / 2) } binomial(n - k - 1, k) * (7 / 2) ^ k * 2 ^ (n - k - 1) + Sum _{ k=0..floor(n / 2) } binomial(n - k, k) * (7 / 2) ^ k * 2 ^ (n - k). ●

► [A272743] 1,5,17,69,277,1109,4437,17749,70997,283989,1135957,4543829,18175317,72701269,290805077,1163220309 ⋆ Number of active (ON,black) cells at stage 2 ^ n - 1 of the two - dimensional cellular automaton defined by "Rule 526", based on the 5 - celled von Neumann neighborhood. ● a(n) = 5 * a(n - 1) - 4 * a(n - 2) for n>4. ●

► [A249015] 1,1,5,17,69,339,1677,9321,55137,343659,2285289,15910857,116120781,886308147,7033465989,58008074409,495792941337,4381170220251,39980186877537,376025841184329,3640077999981189,36224841818288547,370112212444620861,3878334404076375657 ⋆ A binomial convolution. ● a(n) = 0 ^ 0 + Sum _{ k=0..n - 1 } binomial(n,k) * b(k) * c(n - k - 1), ●

► [A146511] 5,17,71,83,137,149,203,215,269,281,335,347,401,413,467,479,533,545,599,611,665,677,731,743,797 ⋆ Numbers congruent to { 5, 17 } modulo 66. ● a(2k - 1) = 66 * (k - 1) + 5, a(2k) = 66 * (k - 1) + 17, where k>0. ●

► [A084777] 1,5,17,73,273,881,3785,13081,48737,184321,632193,2526305,8854081,32077921,124093025,428178641,1638563969,5878561921,21469361537,82252171393,286863949025,1061000856417,3998983314849,14361380710817 ⋆ a(n) = sum of absolute - valued coefficients of (1 + 2 * x - 2 * x ^ 2) ^ n. ● a(n) = Sum _{ k=0..2 * n } abs(f(n, k)), where f(n, k) = ((sqrt(3) - 1) / 2) ^ k * Sum _{ j=0..k } binomial(n, j) * binomial(n, k - j) * (- 1) ^ j * ((1 + sqrt(3)) / 2) ^ (2 * j). - _ G. C. Greubel _ , Jun 03 2023 ●

► [A325156] 1,1,5,17,73,305,1357,6113,28241,132257,628181,3015281,14611481,71367505,351026077,1737069249,8642422689,43204965953,216918504613,1093299119057,5529714637545,28057603921521,142778662494957,728511386126497,3726298158066673 ⋆ G.f.: A(x) = Sum _{ n>=0 } x ^ n * (1 + (- 1) ^ n * sqrt(A(x))) ^ n / (1 - (- 1) ^ n * x * sqrt(A(x))) ^ (n + 1). ● a(n) = 1 (mod 4) for n >= 0. ●

► [A369262] 1,1,5,17,80,363,1792,8969,46319,242994,1296046,6996163,38175142,210162728,1166020560,6512854409,36593709385,206686641555,1172856064443,6683348391034,38228129813288,219411037878578,1263245957786120,7293833100110787,42224142505632305 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 - x) / (1 + x ^ 2) ^ 3). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 2) } binomial(3 * n + 3,k) * binomial(2 * n - 2 * k,n - 2 * k). ●

► [A179605] 1,5,17,81,325,1413,5913,25193,106429,451421,1911089,8097825,34298293,145299189,615478665,2607246617,11044399597,46784976077,198184041761,839521667409,3556269662821,15064602415845,63814675131897 ⋆ Eight white kings and one red king on a 3 X 3 chessboard. G.f.: (1 + 3 * x - 2 * x ^ 2) / (1 - 2 * x - 9 * x ^ 2 - 2 * x ^ 3). ● a(n) = 2 * a(n - 1) + 9 * a(n - 2) + 2 * a(n - 3) with a(0)=1, a(1)=5 and a(2)=17. ● a(n) = (- 4 / 11) * (- 1 / 2) ^ (- n) + ((17 + 41 * A) * A ^ (- n - 1) + (17 + 41 * B) * B ^ (- n - 1)) / 110 with A = (- 2 + sqrt(5)) and B =(- 2 - sqrt(5)). ●

► [A023253] 5,17,83,101,131,251,257,263,389,419,461,467,521,587,797,809,1217,1319,1511,1721,1847,1907,2141,2531,2579 ⋆ Primes that remain prime through 2 iterations of the function f(x) = 5x + 4. ● a(n) == 5 (mod 6). - _ John Cerkan _ , Sep 13 2016 ●

► [A365878] 1,1,5,17,83,381,1939,9905,52544,282315,1545130,8552557,47880020,270401515,1539288570,8821594865,50860072024,294774097800,1716506373521,10037592274363,58920231785426,347051995986538,2050627029532225,12151336260368205 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 + x) ^ 3 * (1 - x) ^ 4). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..n } (- 1) ^ k * binomial(3 * n + k + 2,k) * binomial(5 * n - k + 3,n - k). ●

► [A038183] 1,5,17,85,257,1285,4369,21845,65537,327685,1114129,5570645,16843009,84215045,286331153,1431655765,4294967297,21474836485,73014444049,365072220245,1103806595329,5519032976645,18764712120593,93823560602965,281479271743489 ⋆ One - dimensional cellular automaton 'sigma - minus' (Rule 90): 000,001,010,011,100,101,110,111 - > 0,1,0,1,1,0,1,0. ● a(n) = Product _{ i>=0 } bit _ n(n, i) * (2 ^ (2 ^ (i + 1))) + 1: A direct algebraic formula! ● a(n) = Sum _{ k=0..n } (C(2 * n, 2 * k) mod 2) * 4 ^ (n - k). - _ Paul Barry _ , Jan 03 2005 ● a(2 * n + 1) = 5 * a(2n); a(n + 1) = a(n) XOR 4 * a(n) where XOR is binary exclusive OR operator. - _ Philippe Deléham _ , Jun 18 2005 ●

► [A212291] 1,1,1,5,17,89,529,3709,29665,266993,2669921,29369141,352429681,4581585865,64142200297,962133031469,15394128503489,261700184559329,4710603322067905,89501463119290213,1790029262385804241,37590614510101889081,826993519222241559761 ⋆ Number of permutations of n elements with at most one fixed point. ● a(n) = 2 / e * n! + O(n). ● a(n) = 2 * !n - (- 1) ^ n, where !n is the subfactorial. - _ Eric W. Weisstein _ , Dec 30 2017 ●

► [A262862] 1,5,17,93,273,1501,4369,24029,69905,384477,1118481,6151645,17895697,98426333,286331153,1574821341,4581298449,25197141469,73300775185,403154263517,1172812402961,6450468216285,18764998447377,103207491460573,300239975158033 ⋆ Decimal representation of the n - th iteration of the "Rule 147" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = 17 * a(n - 2) - 16 * a(n - 4) for n>3. ● a(n) = floor((16 + 6 * (n mod 2)) * 4 ^ n / 15). - _ Karl V. Keller, Jr. _ , Apr 14 2021 ●

► [A367921] 1,1,5,17,93,505,3269,22657,172461,1407177,12284629,113832273,1114775869,11487315481,124118143717,1401808691489,16504815145421,202101235848297,2568312461002741,33808677627863537,460227870278020957,6468672644291075001,93745096205219336709 ⋆ Expansion of e.g.f. exp(4 * (exp(x) - 1) - 3 * x). ● a(n) = exp(- 4) * Sum _{ k>=0 } 4 ^ k * (k - 3) ^ n / k!. ● a(0) = 1; a(n) = - 3 * a(n - 1) + 4 * Sum _{ k=1..n } binomial(n - 1,k - 1) * a(n - k). ●

► [A254759] 5,17,97,565,3293,19193,111865,651997,3800117,22148705,129092113,752403973,4385331725,25559586377,148972186537,868273532845,5060669010533,29495740530353,171913774171585,1001986904499157 ⋆ Part of the positive proper solutions y of the Pell equation x ^ 2 - 2 * y ^ 2 = - 7 ^ 2 based on the fundamental solution (x0, y0)= (1, 5). ● a(n) = irrational part of z(n), where z(n) = (1 + 5 * sqrt(2)) * (3 + 2 * sqrt(2)) ^ n, n >= 0. ● a(n) = 6 * a(n - 1) - a(n - 2), n >= 1, with a(- 1) = 13 and a(0) = 5. ● a(n) = 5 * S(n, 6) - 13 * S(n - 1, 6), n >= 0, with Chebyshev's S - polynomials evaluated at x = 6 (see A049310). ●

► [A349011] 1,1,5,17,105,433,2925,13185,93425,443009,3233205,15840209,117950745,591187953,4466545245,22766535297,173906505825,897941153665,6918379345125,36089242700049,279988660639305,1472715584804529,11490841104036045,60857608450349313,477104721264920145 ⋆ G.f. A(x) satisfies: A(x) = (1 - x * A(- x)) / (1 - 2 * x * A(x)). ● a(0) = 1; a(n) = (- 1) ^ n * a(n - 1) + 2 * Sum _{ k=0..n - 1 } a(k) * a(n - k - 1). ●

► [A297476] 5,17,107,553,2635,12569,60611,292737,1412171,6809817,32841715,158395537,763938843,3684432713,17769791107,85702684353,413339234987,199351

1754617,9614594040211,46370641538673,223642974511931,1078617383866281,5202110473022883 ⋆ Number of maximal matchings in the 2n - crossed prism graph. ● a(n) = 5 * a(n - 1) - 4 * a(n - 2) + 14 * a(n - 3) + 4 * a(n - 4) + 8 * a(n - 5) for n > 5. ●

▶ [A234797] 1,1,5,17,109,649,5285,44513,448861,4836601,58743125,766520657,10939702669,167136559849,2746173173765,48016925121473,893361709338301,17586678489001,365487998075525045,7994319232001122097,183644125043688405229,4418905413530661307849 ⋆ E.g.f. satisfies: A'(x) = 1 + A(x) + 2 * A(x) ^ 2, where A(0)=0. ● a(n) = 2 ^ n * A(n, 1 / 2) where A(n,x) are the André polynomials. - _ Peter Luschny _ , May 05 2016 ●

▶ [A012259] 1,1,1,5,17,121,721,6845,58337,698161,7734241,111973685,1526099057,25947503401,419784870961,8200346492525,153563504618177,3389281372287841,72104198836466881,1774459993676715365,42270463533824671697,1147649139272698443481 ⋆ Expansion of e.g.f. exp(arctanh(tan(x))). ● a(n) = 2 ^ n * Z(n,1 / 2), where Z(n,x) is the n - th zigzag polynomial as defined in A147309. ●

▶ [A286307] 0,1,1,5,17,151,823,10631,15871,1344097,12731713,266731133,3061359593,15281334539,1030023060151,29833932429263,461929309281059,15229246883432833,532576131933710 21,9845267571825141941,191853269052081088769,46242299093811301456 7,1689220731459479679759 99 ⋆ a(n) is the numerator of r(n), where r(n) = r(n - 1) + r(n - 2) / (2 * (n - 1)) with r(0) = 0, r(1) = 1. ● a(n) = numerator(r(n)). See the name for the recurrence of r(n). (End) ●

▶ [A182066] 1,1,5,17,158,741,4062,22193,223831,1335126,9060774,56864949,385073172,2564432294,16901547638,112676217841,937204012264,6501855139871,48016961289750,334280249251750,2491679096609658,17706521277052782,128014129417240852,907908731566219349 ⋆ a(n) = sum of the squares of the coefficients of x ^ (2 * k) in A(x ^ 2) ^{ 2 * (n - 2 * k + 1) } , as k varies from 0 to floor(n / 2), with a(0)=1. ● a(n) = Sum _{ k=0..n \ 2 } ([x ^ (2 * k)] A(x ^ 2) ^{ 2 * (n - 2 * k + 1) }) ^ 2 for n>0 with a(0)=1. ●

▶ [A355277] 5,17,177,5573,79137,791377,7913777,79971937,557335733,5995957537,59995599137,599591791137,7991739957973,79971739957537,799739357539937,79917131977537 77,79991971791119137,799999173991317537,799739131391179797 3 ⋆ Largest n - digit number k with only odd digits such that the k - th triangular number also has only odd digits. ● a(n) = max { k in A347475 | k < 10 ^ n } . ●

▶ [A281504] 5,17,247,787,11357,36185,522175,1663723,24008693,76495073,1103877703,3517109635,50754365645,161710548137,2333596941967,7435168104667,10729470496483 7,341856022266545,4933222831440535,15717941856156403,226820955541299773,722683469360927993 ⋆ Solutions y to the negative Pell equation y ^ 2 = 33 * x ^ 2 - 8 with x,y >= 0. ● a(n) = 46 * a(n - 2) - a(n - 4) for n>4. ●

▶ [A022142] 5,18,23,41,64,105,169,274,443,717,1160,1877,3037,4914,7951,12865,20816,33681,54497,88178,142675,230853,373528,604381,977909 ⋆ Fibonacci sequence beginning 5, 18. ● a(n) = a(n - 1) + a(n - 2). - _ Wesley Ivan Hurt _ , Oct 02 2021 ●

▶ [A155450] 5,18,28,41,51,64,74,87,97,110,120,133,143,156,166,179,189,202,212,225,235,248,258,271,281 ⋆ Numbers congruent to 5 or 18 mod 23. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3), with a(1)=5, a(2)=18, a(3)=28. ● a(n) = (1 / 4) * (23 - 3 * (- 1) ^ (n - 1) + 46 * (n - 1)). - _ Paolo P. Lava _ , Jan 26 2009 ●

▶ [A322409] 5,18,29,42,49,62,73,86,99,110,123,130,143,154,167,178,191,198,211,222,235,248,259,272,279 ⋆ Compound tribonacci sequence with a(n) = A278040(A278040(n)), for n >= 0. ● a(n) = A(A(n)) = A(A(n) + 1) - 3 = 2 * (A(n) + B(n)) + n + 3, for n >= 0, where A = A278040 and B = A278039. For a proof see the W. Lang link in A278040, Proposition 9, eq. (48). ●

▶ [A287894] 1,5,18,30,33,94,136,186,225,268,348,413,502,682,792,938,1098,1254,1441,1529,1647,1905,2148,2392,2674 ⋆ Sum of the digit sums of the n - th powers of the first n positive integers. ● a(n) = Sum _{ k=1..n } digsum(k ^ n), n >= 1. ●

▶ [A063141] 5,18,30,42,54,68,78,92,104,116,128,142,152,166,178,190,202,216,226,240,252,264,276,290,300 ⋆ Dimension of the space of weight 2n cusp forms for Gamma _ 0(73). ● a(n) = a(n - 2) + a(n - 3) - a(n - 5) for n>6. ●

▶ [A154609] 5,18,31,44,57,70,83,96,109,122,135,148,161,174,187,200,213,226,239,252,265,278,291,304,317 ⋆ a(n) = 13 * n + 5. ● a(n) = 2 * a(n - 1) - a(n - 2). - _ Vincenzo Librandi _ , Feb 26 2012 ●

▶ [A063125] 5,18,32,44,58,72,84,98,112,124,138,152,164,178,192,204,218,232,244,258,272,284,298,312,324 ⋆ Dimension of the space of weight 2n cusp forms for Gamma _ 0(57). ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>5. ●

▶ [A063120] 5,18,32,46,60,74,88,102,116,130,144,158,172,186,200,214,228,242,256,270,284,298,312,326,340 ⋆ Dimension of the space of weight 2n cusp forms for Gamma _ 0(52). ● a(n) = 2 * a(n - 1) - a(n - 2) for n>3. ● a(n) = 2 * (7 * n - 5) for n>1. ●

▶ [A294090] 5,18,35,50,180,315,350,500,1800,3150,3500,5000,18000,31500,35000,50000,180000,315000,350000,500000,1800000,3150000,3500000,5000000,18000000 ⋆ Base - 10 complementary numbers: n equals the product of the 10's complement of its digits. ● a(n + 4) = 10 a(n) for all n >= 3. ●

▶ [A007742] 0,5,18,39,68,105,150,203,264,333,410,495,588,689,798,915,1040,1173,1314,1463,1620,1785,1958,2139,2328 ⋆ a(n) = n * (4 * n + 1). ● a(n) = floor((n + 1 / 4) ^ 2). - _ Reinhard Zumkeller _ , Feb 20 2010 ● a(n) = 8 * n + a(n - 1) - 3. - _ Vincenzo Librandi _ , Nov 21 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>2, a(0)=0, a(1)=5, a(2)=18. - _ Philippe Deléham _ , Mar 26 2013 ●

▶ [A276819] 1,5,18,40,71,111,160,218,285,361,446,540,643,755,876,1006,1145,1293,1450,1616,1791,1975,2168,2370,2581 ⋆ a(n) = (9 * n ^ 2 - n) / 2 + 1. ● a(n) = (9 * n ^ 2 - n) / 2 + 1. ● a(n) = a(n - 1) + 9 * n - 5 with a(0) = 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n > 2. ●

▶ [A236364] 1,5,18,40,80,135,217,320,459,625,836,1080,1378,1715,2115,2560,3077,3645,4294,5000,5796,6655,7613,8640,9775 ⋆ Sum of all the middle parts in the partitions of 3n into 3 parts. ● a(n) = n * (n + 1) * (2 * n + 1) / 6 - floor((n - 1) / 2) * (4 * floor((n - 1) / 2) ^ 2 + 3 * (n + 2) * floor((n - 1) / 2) - 6 * n ^ 2 + 3 * n + 2) / 6. ● a(n) = (n * (3 - 3 * (- 1) ^ n + 10 * n ^ 2)) / 16. - _ Colin Barker _ , Jan 23 2014 ● a(n) = (n ^ 3 + ceiling(n / 2) ^ 3 + floor(n / 2) ^ 3) / 2. - _ Wesley Ivan Hurt _ , Apr 15 2016 ● a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + a(n - 4) + 2 * a(n - 5) - a(n - 6). - _ Wesley Ivan Hurt _ , Nov 19 2021 ●

▶ [A212343] 0,0,5,18,42,80,135,210,308,432,585,770,990,1248,1547,1890,2280,2720,3213,3762,4370,5040,5775,6578,7452 ⋆ a(n) = (n + 1) * (n - 2) * (n - 3) / 2. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>7. - _ Colin Barker _ , Jul 10 2015 ●

▶ [A056640] 1,5,18,42,83,143,228,340,485,665,886,1150,1463,1827,2248,2728,3273,3885,4570,5330,6171,7095,8108,9212,10413 ⋆ At stage 1, start with a unit square. At each successive stage add 4 * (n - 1) new squares around outside with edge - to - edge contacts. Sequence gives number of squares (regardless of size) at n - th stage. ● a(n) = (8 * n ^ 3 - 2 * n + 3 - 3 * (- 1) ^ n) / 12. - _ Luce ETIENNE _ , Aug 21 2014 ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - 2 * a(n - 3) + 3 * a(n - 4) - a(n - 5). - _ Colin Barker _ , Sep 29 2014 ●

▶ [A213397] 1,5,18,43,83,144,229,341,486,667,887,1152,1465,1829,2250,2731,3275,3888,4573,5333,6174,7099,8111,9216,10417 ⋆ Number of (w,x,y) with all terms in { 0,...,n } and 2 * w >= |x + y - z|. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + 2 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) - a(n - 6). ● a(n) = floor(2 * n ^ 3 / 3) + 2 * n * (n + 1) + 1. - _ Bruno Berselli _ , Dec 22 2017 ●

▶ [A037140] 5,18,44,91,172,308,533,902,1504,2483,4072,6648,10821,17578,28516,46219,74868,121228,196245,317630,514040,831843,1346064,2178096,3524357 ⋆ Convolution of natural numbers n >= 1 with Fibonacci numbers F(k), for k >= 5. ● a(n) = Fibonacci(n + 9) - (29 + 8 * n). ●

▶ [A081435] 1,5,18,46,95,171,280,428,621,865,1166,1530,1963,2471,3060,3736,4505,5373,6346,7430,8631,9955,11408,12996,14725 ⋆ Diagonal in array of n - gonal numbers A081422. ● a(n) = (2 * n ^ 3 + 3 * n ^ 2 + 3 * n + 2) / 2. ●

▶ [A176145] 0,1,5,18,49,110,216,385,638,999,1495,2156,3015,4108,5474,7155,9196,11645,14553,17974,21965,26586,31900,37973,44874 ⋆ a(n) = n * (n - 3) * (n ^ 2 - 7 * n + 14) / 8. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5), with a(3)= 0, a(4)= 1, a(5)=5, a(6)= 18, a(7) = 49. [_ Bobby Milazzo _ , Jun 24 2013] ● a(n) = Sum _{ k=(n - 3)..(n - 2) * (n - 3) / 2 } k. - _ J. M. Bergot _ , Jan 21 2015 ●

▶ [A257055] 0,1,5,18,50,115,231,420,708,1125,1705,2486,3510,4823,6475,8520,11016,14025,17613,21850,26810,32571,39215,46828,55500 ⋆ a(n) = n * (n + 1) * (n ^ 2 - n + 3) / 6. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Wesley Ivan Hurt _ , May 27 2021 ●

▶ [A125641] 1,5,18,52,125,261,490,848,1377,2125,3146,4500,6253,8477,11250,14656,18785,23733,29602,36500,44541,53845,64538,76752,90625 ⋆ Square of the (3,1) - entry of the 3 X 3 matrix M ^ n, where M = [1,0,0; 1,1,0, 1,i,1]. ● a(n) = |(b(n)| ^ 2, where b(n) = 3b(n - 1) - 3b(n - 2) + b(n - 3) for n >= 4; b(1)=1, b(2)=2 + i, b(3)=3 + 3i (the recurrence relation follows from the minimal polynomial t ^ 3 - 3t ^ 2 + 3t - 1 of the matrix M). ● a(n) = n ^ 2 * (n ^ 2 - 2 * n + 5) / 4. - _ T. D. Noe _ , Feb 09 2007 ● a(n) = binomial(n,2) ^ 2 + n ^ 2, n > 1. - _ Gary Detlefs _ , Nov 23 2011 ●

▶ [A127983] 1,5,18,52,137,339,808,1874,4263,9553,21158,46416,101029,218447,469668,1004878,2140835,4543821,9611938,20272460,42642081,89478475,187345568,391468362,816491167 ⋆ Numbers of the form (n - 2 / 3) * 2 ^ (n) - n / 2 + 3 / 4 - (- 1) ^ n / 12. ● a(n) = (n - 2 / 3) * 2 ^ (n) - n / 2 + 3 / 4 - (- 1) ^ n / 12. ●

▶ [A226903] 5,18,53,102,197,306,491,684,989,1290,1745,2178,2813,3402,4247,5016,6101,7074,8429,9630,11285,12738,14723,16452,18797 ⋆ Shiraishi numbers: a parametrized family of solutions c to the Diophantine equation a ^ 3 + b ^ 3 + c ^ 3 = d ^ 3 with d = c + 1. ● a(2n - 1) = 9n ^ 3 - 6n ^ 2 + 3n - 1. ● a(2n) = 9n ^ 3 + 6n ^ 2 + 3n. ● a(n) = (18 * n ^ 3 + 27 * n ^ 2 + 27 * n + 1 - (3 * n ^ 2 + 3 * n + 1) * (- 1) ^ n) / 16. [_ Bruno Berselli _ , Jun 22 2013] ●

▶ [A271771] 1,5,18,53,140,347,826,1913,4344,9719,21494,47093,102388,221171,475122,1015793,2162672,4587503,9699310,20447213,42991596,90177515,188743658,394264553,822083560 ⋆ Maximum total Hamming distance between pairs of consecutive elements in any permutation of all 2 ^ n binary words of length n. ● a(n) = n * 2 ^ n - 2 ^ (n - 1) - n + 1. ●

▶ [A081492] 1,5,18,54,135,291,560,988,1629,2545,3806,5490,7683,10479,13980,18296,23545,29853,37354,46190,56511,68475,82248,98004,115925 ⋆ Sum of terms in n - th row of A081491. ● a(n) = n * (2 * n ^ 3 - 6 * n ^ 2 + 13 * n - 3) / 6. ●

▶ [A263318] 0,1,5,18,55,143,333,715,1430,2700,4862,8398,13995,22610,35530,54477,81719,120175,173583,246675,345345,476901,650325,876525,1168695 ⋆ Number of aperiodic necklaces (Lyndon words) with 9 black beads and n white beads. ● a(n) = (1 / (n + 9)) * Sum _{ d divides gcd(n + 9,9) } mu(d) * binomial((n + 9) / d, 9 / d). ●

▶ [A011845] 0,0,0,0,0,0,0,0,0,1,5,18,55,143,333,715,1430,2701,4862,8398,13996,22610,35530,54479,81719 ⋆ a(n) = floor(binomial(n,8) / 9). ● a(n) = floor(binomial(n + 1,9) / (n + 1)). [_ Gary Detlefs _ , Nov 23 2011] ●

▶ [A344847] 0,0,5,18,56,80,192,306,566,731,1273,1433,2123,3023,3762,5128,6604,7038,9694,11735,13942,16695,21015,22027,28292 ⋆ Sum of the prime numbers in, but not on the border of, an n X n square array whose elements are the numbers from 1..n ^ 2, listed in increasing order by rows. ● a(n) = (Sum _{ k=1..n ^ 2 } k * c(k)) - (Sum _{ k=1..n } (n ^ 2 - k + 1) * c(n ^ 2 - k + 1) + k * c(k)) - (Sum _{ k=1..n - 2 } (n * k + 1) * c(n * k + 1)), where c(n) is the prime characteristic. ●

▶ [A001793] 1,5,18,56,160,432,1120,2816,6912,16640,39424,92160,212992,487424,1105920,2490368,5570560,12386304,27394048,60293120,132120576,288358400,627048448,1358954496,2936012800 ⋆ a(n) = n * (n + 3) * 2 ^ (n - 3). ● a(n) = Sum _{ k=0..floor((n + 4) / 2) } C(n + 4, 2k) * C(k, 2). - _ Paul Barry _ , May 15 2003 ● a(n) = Sum _{ k=0..n + 2 } C(n + 2, k) * floor(k ^ 2 / 4). - _ Paul Barry _ , May 27 2003 ● a(n) = Sum _{ i=0..j } binomial(i + 1, 2) * binomial(j, i). - _ Jon Perry _ , Feb 26 2004 ● a(n) = Sum _{ k=0..n + 1 } (- 1) ^ (n - k + 1) * C(k, n - k + 1) * k * C(2k, k) / 2. - _ Paul Barry _ , Oct 07 2005 ● a(n) = (1 / n) * Sum _{ k=0..n } binomial(n,k) * k ^ 3. - _ Gary Detlefs _ , Nov 26 2011 ●

▶ [A317849] 1,5,18,56,161,443,1190,3156,8315,21835,57246,149970,392743,1028351,2692416,7049018,18454775,48315461,126491780,331160070,866988641,2269806085,5942429868,15557483796,40730021821 ⋆ Number of states of the Finite Stat

e Automaton Gn accepting the language of maximal (or minimal) lexicographic representatives of elements in the positive braid monoid An. • a(n) = Sum _{ i=1..n } (binomial(n + 1 - i, 2) + 1) * Fibonacci(2 * i). •

▶ [A093374] 1,5,18,57,168,472,1280,3376,8704,22016,54784,134400,325632,780288,1851392,4354048,10158080,23527424,54132736,123797504,281542656,637009920,1434451968,3215982592,7180648448 ⋆ Number of 1 - 2 - 3 - avoiding permutations with exactly thrice the 1 - 3 - 2 pattern. • a(n) = C(n - 3, 1)2 ^ (n - 4) + C(n - 3, 1)2 ^ (n - 5) + C(n - 3, 2)2 ^ (n - 7) for n<4, a(n) = 0. • a(n) = 2 ^ (n - 8) * (- 120 + 38 * n - 3 * n ^ 2 + n ^ 3) / 3 for n>3. • a(n) = 8 * a(n - 1) - 24 * a(n - 2) + 32 * a(n - 3) - 16 * a(n - 4) for n>7. •

▶ [A258109] 1,5,18,57,169,482,1341,3669,9922,26609,70929,188226,497845,1313501,3459042,9096393,23895673,62721698,164531565,431397285,1130708866,2962826465,7761964833,20331456642,53249182309 ⋆ Number of balanced parenthesis expressions of length 2n and depth 3. • a(n) = 2 ^ (n - 3) + 3 * a(n - 1) - a(n - 2). • a(n) = 5 * a(n - 1) - 7 * a(n - 2) + 2 * a(n - 3) for n>5. - _ Colin Barker _ , May 24 2015 • a(n) = 2 ^ (- 1 - n) * (- 5 * 4 ^ n - (- 5 + sqrt(5)) * (3 + sqrt(5)) ^ n + (3 - sqrt(5)) ^ n * (5 + sqrt(5))) / 5. - _ Colin Barker _ , Jun 05 2017 •

▶ [A364553] 0,1,5,18,58,175,507,1428,3940,10701,28705,76230,200766,525083,1365175,3531240,9093512,23325785,59625981,151947066,386139650,978834759,2475645491,6248406780,15740857452 ⋆ Number of edges in the n - Pell graph. • a(n) = 4 * a(n - 1) - 2 * a(n - 2) - 4 * a(n - 3) - a(n - 4). • a(n) = (n / 8) * ((2 + sqrt(2)) * (1 + sqrt(2)) ^ n - (sqrt(2) - 2) * (1 - sqrt(2)) ^ n). •

▶ [A000340] 1,5,18,58,179,543,1636,4916,14757,44281,132854,398574,1195735,3587219,10761672,32285032,96855113,290565357,871696090,2615088290,7845264891,23535794695,70607384108,211822152348,635466457069 ⋆ a(0)=1, a(n) = 3 * a(n - 1) + n + 1. • a(n) = (3 ^ (n + 2) - 2 * n - 5) / 4. • a(n) = Sum _{ k=0..n + 1 } (n - k + 1) * 3 ^ k = Sum _{ k=0..n + 1 } k * 3 ^ (n - k + 1). - _ Paul Barry _ , Jul 30 2004 • a(n) = Sum _{ k=0..n } binomial(n + 2, k + 2) * 2 ^ k. - _ Paul Barry _ , Jul 30 2004 • a(- 1)=0, a(0)=1, a(n) = 4 * a(n - 1) - 3 * a(n - 2) + 1. - _ Miklos Kristof _ , Mar 09 2005 • a(n) = 5 * a(n - 1) - 7 * a(n - 2) + 3 * a(n - 3). - _ Johannes W. Meijer _ , Feb 20 2009 •

▶ [A284968] 0,1,5,18,59,190,618,2047,6908,23703,82488,290499,1033398,3707837,13402681,48760350,178405139,656043838,2423307027,8987427446,33453694465,124936258104,467995871753,1757900019076,6619846420527 ⋆ Least hairpin family matchings with n edges that are both L & P and C & C whose leftmost edge is part of a hairpin. • a(n) = (Sum _{ k=1..n } Catalan(k)) - n. - _ Peter Luschny _ , Jul 22 2017 •

▶ [A099449] 1,5,18,60,197,650,2153,7140,23682,78545,260498,863945,2865282,9502740,31515953,104523050,346651997,1149675660,3812913618,12645575405,41939208002,139091904605,461300030418,1529907284460,5073956524397 ⋆ An Alexander sequence for the knot 7 _ 6. • a(n) = 5 * a(n - 1) - 7 * a(n - 2) + 5 * a(n - 3) - a(n - 4) for n>4. - _ Colin Barker _ , Feb 10 2014 •

▶ [A104630] 0,1,5,18,60,198,655,2171,7200,23880,79200,262669,871145,2889162,9581940,31778622,105394195,349541159,1159257600,3844692240,12750969600,42288749161,140251162205,465144722658,1542658254060 ⋆ Expansion of x / (1 - 5 * x + 7 * x ^ 2 - 5 * x ^ 3 + x ^ 4). • a(n) = 5 * a(n - 1) - 7 * a(n - 2) + 5 * a(n - 3) - a(n - 4). • a(n) = Sum _{ k=0..n } binomial(n + k + 1, 2 * k + 1) * F(k), where F(n) = Fibonacci(n). • a(n) = - a(- 2 - n) for all n in Z. •

▶ [A113301] 0,1,5,18,62,211,715,2420,8188,27701,93713,317030,1072506,3628263,12274327,41523752,140473848,475219625,1607656477,5438662906,18398864822,62242913851,210566269283,712340586524,2409830942708 ⋆ Sum of odd - indexed terms of tribonacci numbers. • a(n) = 4 * a(n - 1) - 2 * a(n - 2) - a(n - 4), a(0)=0, a(1)=1, a(2)=5, a(3)=18. - _ Harvey P. Dale _ , Apr 12 2013 •

▶ [A111567] 1,5,18,62,212,724,2472,8440,28816,98384,335904,1146848,3915584,13368640,45643392,155836288,532058368,1816560896,6202126848,21175385600,72297288704,246838383616,842758957056,2877359060992 ⋆ Binomial transform of A048654: generalized Pellian with second term equal to 4. • a(n) = ((2 + sqrt(18)) * (2 + sqrt(2)) ^ n) + (2 - sqrt(18)) * (2 - sqrt(2)) ^ n) / 4, offset 0. - Al Hakanson (hawkuu(AT)gmail.com), Aug 08 2009 • a(n) = ((5 + sqrt(32))(2 + sqrt(2)) ^ n + (5 - sqrt(32))(2 - sqrt(2)) ^ n) / 2 offset 0. - Al Hakanson (hawkuu(AT)gmail.com), Aug 15 2009 •

▶ [A372420] 1,5,18,62,214,750,2676,9708,35718,132926,499228,1888644,7186876,27478508,105474216,406182552,1568563014,6071812638,23552366796,91525132692,356242058004,1388588519268,5419533876696,21176597444712,828342293001 24 ⋆ Expansion of (1 + x) / ((1 - 2 * x) * sqrt(1 - 4 * x)). • a(n) = - 2 ^ (n - 1) * 3 * i + binomial(2 * n,n) * (1 - 3 / 2 * hypergeom([1,n + 1 / 2],[n + 1],2)). •

▶ [A121050] 0,0,0,0,0,1,5,18,62,226,892,3835,17910,90401,490421,2844970,17570207,115078228,796630963,5811215750,44551231383,358087648032,3010990488143,26433752431402,241852566790848 ⋆ Partial sums of floor(n! / e ^ n). • a(n) = Sum _{ i=1..n } floor(i! / exp(i)). •

▶ [A033453] 1,5,18,63,221,776,2725,9569,33602,117995,414345,1454992,5109273,17941453,63002258,221235399,776878533,2728045592,9579660701,33639430153,118126444802,414806579603,1456612858961,5114964721440,17961439747441 ⋆ "INVERT" transform of squares A000290. • a(n) = 4 * a(n - 1) - 2 * a(n - 2) + a(n - 3) for n>2. - _ Colin Barker _ , Mar 19 2019 •

▶ [A147535] 5,18,64,228,820,2988,11044,41388,157060,602508,2332324,9095148,35676100,140586828,555986404,2204846508,8762055940,34876167948,138988373284,554404335468,2212969344580 ⋆ a(n) = 2 * 4 ^ n + 4 * 3 ^ n - 2 ^ n. • a(n) = 9 * a(n - 1) - 26 * a(n - 2) + 24 * a(n - 3) = 2 * 4 ^ n + 4 * 3 ^ n - 2 ^ n. G.f.: (5 - 27x + 32x ^ 2) / ((1 - 2x)(1 - 3x)(1 - 4x)). [_ R. J. Mathar _ , Nov 09 2008] •

▶ [A166677] 1,5,18,66,280,1420,8544,59836,478720,4308516,43085200,473937244,5687246976,73934210740,1035078950416,15526184256300,248418948100864,4223122117714756,76016198118865680,1444307764258447996 ⋆ a(n)= n * (a(n - 1) + 4), a(0)=1. • a(n) = n! + 4 * floor(e * n!) - 4, n>0. [_ Gary Detlefs _ , Jun 06 2010] • a(n) = n! * (1 + Sum _{ k=0..n - 1 } 4 / k!) = n! + 4 e n Gamma(n,1). •

▶ [A158879] 1,5,18,67,260,1029,4102,16391,65544,262153,1048586,4194315,16777228,67108877,268435470,1073741839,4294967312,17179869201,68719476754,274877906963,1099511627796,4398046511125,17592186044438,70368744177687 ⋆ a(n) = 4 ^ n + n. • a(n) = 6 * a(n - 1) - 9 * a(n - 2) + 4 * a(n - 3). - _ R. J. Mathar _ , Mar 29 2009 •

▶ [A109438] 1,5,18,68,253,945,3526,13160,49113,183293,684058,2552940,9527701,35557865,132703758,495257168,1848324913,6898042485,25743845026,96077337620,358565505453,1338184684193,4994173231318,18638508241080 ⋆ a(n) = 5a(n - 1) - 5a(n - 2) + a(n - 3) + 2 * (- 1) ^ (n + 1), alternatively a(n) = 3a(n - 1) + 3a(n - 2) - a(n - 3). • a(n) = (- 2 * (- 1) ^ n + (7 - 5 * sqrt(3)) * (2 - sqrt(3)) ^ n + (2 + sqrt(3)) ^ n * (7 + 5 * sqrt(3))) / 12. - _ Colin Barker _ , May 12 2019 •

▶ [A164051] 5,18,68,264,1040,4128,16448,65664,262400,1049088,4195328,16779264,67112960,268443648,1073758208,4295000064,17179934720,68719607808,274878169088,1099512152064,4398047559680,17592188141568,70368748371968,281474985099264 ⋆ a(n) = 2 ^ (2n) + 2 ^ (n - 1). • a(n) = 6 * a(n - 1) - 8 * a(n - 2). •

▶ [A052926] 1,1,5,18,74,299,1216,4941,20083,81625,331760,1348416,5480549,22275332,90536629,367980201,1495631437,6078896062,24707275082,100421102079,408154995212,1658919257681,6742568719699,27404729150841 ⋆ Expansion of (1 - 3 * x) / (1 - 4 * x - x ^ 2 + 3 * x ^ 3). • a(n) = 4 * a(n - 1) + a(n - 2) - 3 * a(n - 3), with a(0)=1, a(1)=1, a(2)=5. • a(n) = Sum _{ r=RootOf(1 - 4 * z - z ^ 2 + 3 * z ^ 3) } (- 1 / 761) * (17 - 278 * r + 15 * r ^ 2) * r ^ (- 1 - n). •

▶ [A227451] 0,1,5,18,77,306,1229,4914,19661,78642,314573,1258290,5033165,20132658,80530637,322122546,1288490189,5153960754,20615843021,82463372082,329853488333,1319413953330,5277655813325,21110623253298,84442493013197 ⋆ Number whose binary expansion encodes via runlengths the partition that is at the top of the main trunk of Bulgarian solitaire game tree drawn for the deck with n(n + 1) / 2 cards. • a(n) = (1 / 10) * (3 * 4 ^ n + 7 * (- 1) ^ n - 5). • a(n) = 4 * a(n - 1) + a(n - 2) - 4 * a(n - 3), n>3. •

▶ [A162814] 5,18,78,360,1692,7992,37800,178848,846288,4004640,18950112,89672832,424336320,2007980928,9501867648,44963320320,212768716032,1006832374272,4764381949440,22545297451008,106685493009408,504841173350400 ⋆ a(n) = 6 * a(n - 1) - 6 * a(n - 2) for n > 1; a(0) = 5, a(1) = 18. • a(n) = ((5 + sqrt(3)) * (3 + sqrt(3)) ^ n + (5 - sqrt(3)) * (3 - sqrt(3)) ^ n) / 2. •

▶ [A156305] 1,1,5,18,87,290,1553,5015,25436,94500,431464,1519749,8024004,26746757,125190249,498138920,2221127601,8020960187,38836436844,138444409552,655009491676,2512996318026,10775473291178,40824090856703 ⋆ G.f.: A(x) = exp(Sum _{ n>=1 } sigma(n) * C(2 * n - 1,n) * x ^ n / n), a power series in x with integer coefficients. • a(n) = (1 / n) * Sum _{ k=1..n } sigma(k) * C(2 * k - 1,k) * a(n - k) for n>0, with a(0) = 1. •

▶ [A213190] 1,1,5,18,87,489,3195,23832,200241,1873665,19337373,218332098,2677997295,35468961129,504599447691,7675398598752,124320175923105,2136469186489041,38829405884572053,744168119366336130,14999850604980438759,317229367062688222329 ⋆ a(0)=1, a(1)=1, a(n) = n * a(n - 1) + 3 * a(n - 2). • a(0)=1, a(1)=1, a(n) = Sum _{ k=0..floor(n / 2 + 1) } ((n - k - 2)! * binomial(n - k,k + 2) * 3 ^ (k + 1) / k!) + Sum _{ k=0..floor((n + 1) / 2) } (n - k)! * binomial(n - k - 1,k) * 3 ^ k / (k + 1)!), n>1. • a(n) = 2 * sqrt(3) ^ (n + 1) * (BesselI(0, 2 * sqrt(3)) * BesselK(n + 1, 2 * sqrt(3)) - BesselK(0, 2 * sqrt(3)) * BesselI(n + 1, - 2 * sqrt(3))), n >= 0. See Q(n,3) from A084950. - _ Wolfdieter Lang _ , Mar 06 2013 • a(n) = Sum _{ k=0..floor(n / 2) } (((n - k)! / k!) * binomial(n - k,k) * 3 ^ k). - _ Gary Detlefs _ and _ Wolfdieter Lang _ , Mar 06 2013 •

▶ [A212153] 0,5,19,19,1048,15454,82682,82682,3376854,14906456,135967277,700917775,4655571261,18496858462,406052900090,3797168264335,22787414304107,188952067152112,654213095126526,654213095126526,57648689021992241 ⋆ Approximations up to 7 ^ n for one of the three 7 - adic integers (- 1) ^ (1 / 3). • a(n) == 5 ^ (7 ^ (n - 1)) (mod 7 ^ n) == 5 (mod 7), n>= 1. •

▶ [A074229] 1,5,19,23,25,29,43,47,49,53,67,71,73,77,91,95,97,101,115,119,121,125,139,143,145 ⋆ Numbers n such that Kronecker(6,n)==mu(gcd(6,n)). • a(n) = (3 / 2 + (3 * i) / 2) * (i ^ n - i * (- i) ^ n) - (- 1) ^ n + 6 * (n + 1) - 9 where i = sqrt(- 1). • a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. •

▶ [A146509] 1,5,19,23,37,41,55,59,73,77,91,95,109,113,127,131,145,149,163,167,181,185,199,203,217 ⋆ Numbers that are congruent to { 1, 5 } mod 18. • a(2k - 1) = 18 * (k - 1) + 1, a(2k) = 18 * (k - 1) + 5, where k>0. • a(n) = (18 * n - 5 * (- 1) ^ n - 21) / 2. - _ Bruno Berselli _ , Jul 12 2012 [Corrected by _ David Lovler _ , Sep 24 2022 • a(1)=1, a(n) = 18 * n - a(n - 1) - 30. - _ Vincenzo Librandi _ , Jul 12 2012 •

▶ [A022143] 5,19,24,43,67,110,177,287,464,751,1215,1966,3181,5147,8328,13475,21803,35278,57081,92359,149440,241799,391239,633038,1024277 ⋆ Fibonacci sequence beginning 5, 19. • a(n) = term (1,1) in the 1x2 matrix [5,14] . [1,1; 1,0] ^ n. (End) •

▶ [A356716] 5,19,31,101,179,655,1189,4451,8111,30469,55555,208799,380741,1431091,2609599,9808805,17886419,67230511,122595301,460804739,840280655,3158402629,5759369251,21648013631,39475304069 ⋆ a(n) is the integer w such that (c(n) ^ 2, - d(n) ^ 2, - w) is a primitive solution to the Diophantine equation 2 * x ^ 3 + 2 * y ^ 3 + z ^ 3 = 11 ^ 3, where c(n) = F(n + 2) + (- 1) ^ n * F(n - 3), d(n) = F(n + 1) + (- 1) ^ n * F(n - 4) and F(n) is the n - th Fibonacci number (A000045). • a(n) = ((1 - (- 1) ^ n) / 2) * (- 1 + 6 * Sum _{ k=0..n - 1 } Fibonacci(4 * k - 1) + 14 * Sum _{ k=0..n - 2 } Fibonacci(4 * k + 1)) + ((1 + (- 1) ^ n) / 2) * (- 1 + 6 * Sum _{ k=0..n - 1 } Fibonacci(4 * k - 1) + 14 * Sum _{ k=0..n - 1 } Fibonacci(4 * k + 1)). • a(n) = a(n - 1) + 7 * a(n - 2) - 7 * a(n - 3) - a(n - 4) + a(n - 5) for n > 5. (End) •

▶ [A239831] 5,19,39,67,101,143,191,247,308,379,454,539,628,727,830,942,1060,1186,1318,1458,1604,1758,1917,2086,2259 ⋆ Floor(7n ^ 2 / 2) + floor(5n / 2) + floor(3n / 7). • a(n) = + a(n - 1) + a(n - 2) - a(n - 3) + a(n - 7) - a(n - 8) - a(n - 9) + a(n - 10). [_ Bruno Berselli _ , Mar 28 2014] •

▶ [A262997] 0,5,19,40,69,107,152,205,267,336,413,499,592,693,803,920,1045,1179,1320,1469,1627,1792,1965,2147,2336 ⋆ a(n + 3) = a(n) + 24 * n + 40, a(0)=0, a(1)=5, a(2)=19. • a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) - 2 * a(n - 4) - a(n - 5), n> 4. • a(- n) = e(n). • a(- n) + a(n) = 8 * n ^ 2. • a(n + 2) - 2 * a(n + 1) + a(n) = period 3:repeat 9, 7, 8. • a(n + 3) - a(n - 3) = 8 * (1 + 6 * n). • a(n + 7) - a(n - 7) = 40 * (2 + 3 * n). •

► [A125202] 1,5,19,41,71,109,155,209,271,341,419,505,599,701,811,929,1055,1189,1331,1481,1639,1805,1979,2161,2351 ⋆ a(n) = 4 * n ^ 2 - 6 * n + 1. ● a(1) = -1, a(n) = a(n - 1) + 8 * n - 10. ● a(n) = 2 * a(n - 1) - a(n - 2) + 8 with a(1) = -1 and a(2) = 5. ●

► [A033622] 1,5,19,41,109,209,505,929,2161,3905,8929,16001,36289,64769,146305,260609,587521,1045505,2354689,4188161,9427969,16764929,37730305,67084289,150958081 ⋆ Good sequence of increments for Shell sort (best on big values). ● a(n) = 9 * 2 ^ n - 9 * 2 ^ (n / 2) + 1 if n is even; ● a(n) = 8 * 2 ^ n - 6 * 2 ^ ((n + 1) / 2) + 1 if n is odd. ● a(0)=1, a(1)=5, a(2)=19, a(3)=41, a(4)=109, a(n)=a(n - 1) + 6 * a(n - 2) - 6 * a(n - 3) - 8 * a(n - 4) + 8 * a(n - 5). - _ Harvey P. Dale _ , Mar 02 2015 ●

► [A022267] 0,5,19,42,74,115,165,224,292,369,455,550,654,767,889,1020,1160,1309,1467,1634,1810,1995,2189,2392,2604 ⋆ a(n) = n * (9 * n + 1) / 2. ● a(n) = 9 * n + a(n - 1) - 4 with n>0, a(0)=0. - _ Vincenzo Librandi _ , Aug 04 2010 ●

► [A172043] 1,5,19,43,77,121,175,239,313,397,491,595,709,833,967,1111,1265,1429,1603,1787,1981,2185,2399,2623,2857 ⋆ a(n) = 5 * n ^ 2 - n + 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Jul 06 2012 ●

► [A024191] 5,19,47,95,170,280,434,642,915,1265,1705,2249,2912,3710,4660,5780,7089,8607,10355,12355,14630,17204,20102,23350,26975 ⋆ [(3rd elementary symmetric function of 3,4,...,n + 4) / (3 + 4 + ... + n + 4)]. ● a(1)=5, a(2)=19, a(3)=47, a(4)=95, a(5)=170, a(n)=5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Harvey P. Dale _ , Apr 28 2014 ●

► [A100104] 1,1,5,19,49,101,181,295,449,649,901,1211,1585,2029,2549,3151,3841,4625,5509,6499,7601,8821,10165,11639,13249 ⋆ a(n) = n ^ 3 - n ^ 2 + 1. ● a(0)=1, a(1)=1, a(2)=5, a(3)=19, a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ●

► [A060100] 1,5,19,55,140,316,660,1284,2370,4170,7062,11550,18348,28380,42900,63492,92235,131703,185185,256685,351208,474760,634712,839800,1100580 ⋆ Fifth column (m=4) of triangle A060098. ● a(n) = (315 * (3797 + 299 * (- 1) ^ n) + 12 * (204347 + 4165 * (- 1) ^ n) * n + 2 * (970241 + 4095 * (- 1) ^ n) * n ^ 2 + 28 * (28457 + 15 * (- 1) ^ n) * n ^ 3 + 189168 * n ^ 4 + 26936 * n ^ 5 + 2268 * n ^ 6 + 104 * n ^ 7 + 2 * n ^ 8) / 1290240. - _ Colin Barker _ , Jan 17 2017 ●

► [A327821] 1,5,19,57,161,449,1247,3457,9577,26525,73459,203433,563369,1560137,4320479,11964673 ⋆ Number of legal Go positions on a board which is an n - cycle graph. ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) + 2 * a(n - 3) - a(n - 4) for n > 4. ● a(n) = r _ 1 ^ n + r _ 2 ^ n + r _ 3 ^ n - 2 where r _ 1, r _ 2 and r _ 3 are roots of x ^ 3 - 3 * x ^ 2 + x - 1 = 0 for n > 0. ● a(n) = floor(r ^ n - 3 / 2) where r is the real root of x ^ 3 - 3 * x ^ 2 + x - 1 = 0 for n > 2. ●

► [A109415] 1,5,19,58,152,309,585,1046,1666,2601,3871,5508,7680,10423,13835,17984,23168,29225,36431,45000,54780,66299,79637,94546,111612 ⋆ a(n) equals the (n * (n + 1) / 2) - th partial sum of the self - convolution 4th power of A010054, which has the g.f.: Sum _{ k>=0 } x ^ (k * (k + 1) / 2). ● a(n) = [x ^ (n * (n + 1) / 2)] [Sum _{ k>=0 } x ^ (k * (k + 1) / 2)] ^ 4 / (1 - x). ●

► [A092442] 0,1,5,19,59,161,405,967,2231,5029,11153,24443,53091,114505,245549,524047,1113839,2358989,4980393,10485379,22019675,46136881,96468485,201326039,419429799 ⋆ Sequence arising from enumeration of domino tilings of Aztec Pillow - like regions. ● a(n)=(n + 1)(2 ^ n - 1) - n ^ 2. ●

► [A135266] 0,1,5,19,60,182,546,1639,4919,14761,44286,132860,398580,1195741,3587225,10761679,32285040,96855122,290565366,871696099,2615088299,7845264901,23535794706,70607384120,211822152360 ⋆ Partial sums of A132357. ● a(n + 1) - 3a(n) = 0, 1, 2, 4, 3, 2,... (periodically extended with period length 6) = partial sums of A132367. ● a(n) = (1 / 4) * 3 ^ (n + 1) - (1 / 12) * (- 1) ^ n + (1 / 3) * cos(Pi * n / 3) - (sqrt(3) / 3) * sin (Pi * n / 3) - 1. Or, a(n) = (1 / 4) * 3 ^ (n + 1) + (1 / 4) * [- 3; - 5; - 7; - 5; - 3; - 1] for n>=0. - _ Richard Choulet _ , Jan 02 2008 ●

► [A338229] 0,1,5,19,61,176,474,1219,3035,7378,17608,41405,96177,221092,503702,1138567,2555767,5701478,12648276,27918145,61341485,134217496,292552450,635436779,1375731411 ⋆ Number of ternary strings of length n that contain at least one 0 and at most two 1's. ● a(n) = 2 ^ n + n * 2 ^ (n - 1) + binomial(n,2) * 2 ^ (n - 2) - binomial(n,2) - n - 1. ●

► [A102841] 1,5,19,61,179,493,1299,3309,8211,19949,47635,112109,260627,599533,1366547,3089901,6937107,15476205,34331155,75769325,166451731,364127725,793500179,1723082221,3729512979 ⋆ a(n) = ((9 * n ^ 2 + 33 * n + 26) * 2 ^ n + (- 1) ^ n) / 27. ● a(n) = 5 * a(n - 1) - 6 * a(n - 2) - 4 * a(n - 3) + 8 * a(n - 4). - _ Wesley Ivan Hurt _ , Jul 03 2020 ●

► [A189427] 0,0,1,5,19,61,180,502,1349,3529,9050,22854,57014,140832,345036,839530,2030757,4887423,11710757,27951471,66486128,157661282,372840407,879510801,2070045268 ⋆ Expansion of (x ^ 2) / ((1 - x) * (1 - 2 * x - x ^ 2 + x ^ 3) ^ 2) ● a(n)=5 * a(n - 1) - 6 * a(n - 2) - 4 * a(n - 3) + 9 * a(n - 4) - a(n - 5) - 3 * a(n - 6) + a(n - 7), n>=7, a { m } = { 0,0,1,5,19,61,180 } , m=0..6. ●

► [A295288] 1,5,19,62,184,512,1360,3488,8704,21248,50944,120320,280576,647168,1478656,3350528,7536640,16842752,37421056,82706432,181927936,398458880,869269504,1889533952,4093640704 ⋆ Binomial transform of the centered triangular numbers A005448. ● a(n + 3) = 8 * a(n) - 12 * a(n + 1) + 6 * a(n + 2). ● a(n + 1) = 2 * a(n) + 3 * (n + 2) * 2 ^ (n - 1). ● a(n) = (3 * n ^ 2 + 9 * n + 8) * 2 ^ (n - 3). ●

► [A143131] 1,5,19,63,157,321,575,939,1433,2077,2891,3895,5109,6553,8247,10211,12465,15029,17923,21167,24781,28785,33199,38043,43337 ⋆ Binomial transform of [1, 4, 10, 20, 0, 0, 0, ...]. ● a(n) = (- 39 + 77 * n - 45 * n ^ 2 + 10 * n ^ 3) / 3. - _ T. D. Noe _ , Aug 22 2008 ●

► [A053545] 0,1,5,19,63,191,543,1471,3839,9727,24063,58367,139263,327679,761855,1753087,3997695,9043967,20316159,45350911,100663295,222298111,488636415,1069547519,2332033023 ⋆ Comparisons needed for Batcher's sorting algorithm applied to 2 ^ n items. ● a(n) = 2 ^ (n - 2) * (n ^ 2 - n + 4) - 1. ● a(n) = 7 * a(n - 1) - 18 * a(n - 2) + 20 * a(n - 3) - 8 * a(n - 4); a(0)=0, a(1)=1, a(2)=5, a(3)=19. - _ Harvey P. Dale _ , Apr 03 2013 ●

► [A049612] 0,1,5,19,63,192,552,1520,4048,10496,26624,66304,162560,393216,940032,2224128,5214208,12124160,27983872,64159744,146210816,331350016,747110400,1676673024,3746562048 ⋆ a(n) = T(n,3), array T as in A049600. ● a(n) = Sum _{ k=0..floor((n + 3) / 2) } C(n + 3, 2k)C(k + 1, 3). - _ Paul Barry _ , May 15 2003 ● a(n + 1) = 2 ^ n * n ^ 3 / 48 + 5 * 2 ^ n * n ^ 2 / 16 + 7 * 2 ^ n * n / 6 + 2 ^ n, n=1,2,... - _ Milan Janjic _ , Nov 18 2007 ●

► [A318946] 0,0,0,1,5,19,64,201,603,1752,4973,13871,38176,103985,280947,754216,2014469,5358823,14209456,37580841,99188427,261360696,687777245,1808000351,4748806720 ⋆ Column 1 of triangle A318945. ● a(n) = 7 * a(n - 1) - 17 * a(n - 2) + 16 * a(n - 3) - 4 * a(n - 4) for n>5. ●

► [A304162] 5,19,65,185,445,935,1769,3085,5045,7835,11665,16769,23405,31855,42425,55445,71269,90275,112865,139465,170525,206519,247945,295325,349205 ⋆ a(n) = n ^ 4 - 3 * n ^ 3 + 9 * n ^ 2 - 7 * n + 5 (n>=1). ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

► [A001870] 1,5,19,65,210,654,1985,5911,17345,50305,144516,411900,1166209,3283145,9197455,25655489,71293590,197452746,545222465,1501460635,4124739581,11306252545,30928921224,84451726200,230204999425 ⋆ Expansion of (1 - x) / (1 - 3 * x + x ^ 2) ^ 2. ● a(n) = Sum _{ k=1..n + 1 } k * binomial(n + k + 1, 2k). - _ Emeric Deutsch _ , Jun 11 2003 ● a(n) = 6 * a(n - 1) - 11 * a(n - 2) + 6 * a(n - 3) - a(n - 4). - _ Vincenzo Librandi _ , Jun 10 2012 ● a(n) = ((2 * n - 1) * Fibonacci(2 * n) - n * Fibonacci(2 * n - 1)) / 5 [Czabarka et al.]. - _ N. J. A. Sloane _ , Sep 18 2018 ●

► [A001047] 0,1,5,19,65,211,665,2059,6305,19171,58025,175099,527345,1586131,4766585,14316139,42981185,129009091,387158345,1161737179,3485735825,10458256051,31376865305,94134790219,282412759265 ⋆ a(n) = 3 ^ n - 2 ^ n. ● a(n) = 5 * a(n - 1) - 6 * a(n - 2). ● a(n) = 3 * a(n - 1) + 2 ^ (n - 1). - _ Jon Perry _ , Aug 23 2002 ● a(n) = Sum _{ k=0..n - 1 } binomial(n, k) * 2 ^ k. - _ Ross La Haye _ , Aug 20 2005 ● a(n) = 2 * a(n - 1) + 3 ^ (n - 1). - _ Toby Gottfried _ , Mar 28 2013 ● a(n) = Sum _{ k=0..2 } Stirling1(2,k) * (k + 1) ^ n = c _ 2 ^{ (- n) } , poly - Cauchy numbers. - _ Takao Komatsu _ , Mar 28 2013 ● a(n + 1) = Sum _{ k=0..n } 2 ^ k * 3 ^ (n - k). - _ J. M. Bergot _ , Mar 27 2018 ●

► [A124806] 1,5,19,65,247,955,3733,14649,57583,226505,891219,3507047,13801285,54313277,213745019,841177105,3310392415,13027820227,51270096661,201769982673,794052091767,3124938240153,12297982928987,48397879544975 ⋆ Number of circular n - letter words over the alphabet { 0,1,2,3,4 } with adjacent letters differing by at most 2. ● a(n) = 5 * a(n - 1) - 3 * a(n - 2) - 5 * a(n - 3) + a(n - 4) + a(n - 5) for n>5. (End) ●

► [A059509] 1,5,19,66,216,679,2075,6211,18299,53244,153366,438095,1242709,3504161,9830371,27454614,76375860,211732471,585157679,1612689439,4433421131,12160156560,33284285874,90931830431 ⋆ Main diagonal of the array A059503. ● a(n) = 6 * a(n - 1) - 11 * a(n - 2) + 6 * a(n - 3) - a(n - 4). ● a(n) = ((3 - n) * Fibonacci(2 * n) - (5 - 8 * n) * Fibonacci(2 * n - 1)) / 5. - _ G. C. Greubel _ , Sep 10 2017 ●

► [A005021] 1,5,19,66,221,728,2380,7753,25213,81927,266110,864201,2806272,9112264,29587889,96072133,311945595,1012883066,3288813893,10678716664,34673583028,112584429049,365559363741,1186963827439,3854047383798 ⋆ Random walks (binomial transform of A006054). ● a(n) = 5 * a(n - 1) - 6 * a(n - 2) + a(n - 3). - _ Emeric Deutsch _ , Apr 02 2004 ● a(n) = Sum _{ j= - infinity..infinity } (binomial(5 + 2 * k, 7 * j + k - 2) - binomial(5 + 2 * k, 7 * j + k - 1)) (a finite sum). ● a(n - 2) = 2 ^ n * C(n;1 / 2)=(1 / 7) * ((c(2) - c(4)) * (c(4)) ^ (2n) + (c(4) - c(1)) * (c(1)) ^ (2n) + (c(1) - c(2)) * (c(2)) ^ (2n)), where a(- 2)=a(- 1):=0, c(j):=2 * cos(2Pi * j / 7). This formula follows from the Binet formula for C(n;d) – one of the quasi - Fibonacci numbers (see comments in A121449 and the formula (3.17) in the Witula - Slota - Warzynski paper). - _ Roman Witula _ , Aug 09 2012 ●

► [A163872] 1,5,19,67,227,751,2445,7869,25107,79567,250793,786985,2460397,7667921,23832931,73902627,228692115,706407903,2178511449,6708684009,20632428249,63380014845,194486530791,596213956023,1826103432573 ⋆ Inverse binomial transform of the beta numbers 1 / beta(n + 1,n + 1) (A002457). ● a(n) = (- 1) ^ n * hypergeom([- n,3 / 2], [1], 4). - _ Peter Luschny _ , Apr 26 2016 ●

► [A372884] 1,5,19,67,230,778,2602,8618,28303,92275,298949,963253,3089020,9864896,31388260,99545572,314779181,992765041,3123577735,9806581175,30727287586,96104495110,300081382574,935547839662,2912554595035 ⋆ a(n) is the sum of all symmetric peaks in the set of flattened Catalan words of length n. ● a(n) = (63 + 3 ^ n + 2 * (3 ^ n - 45) * n + 18 * n ^ 2) / 144. (End) ●

► [A035344] 1,5,19,67,231,791,2703,9231,31519,107615,367423,1254463,4283007,14623103,49926399,170459391,581984767,1987020287,6784111615,23162405887,79081400319,270000789503,921840357375 ⋆ Expansion of 1 / ((1 - x) * (1 - 4 * x + 2 * x ^ 2)). ● a(- 1)=0, a(0)=1, a(n) = 4 * a(n - 1) - 2 * a(n - 2) + 1. - _ Miklos Kristof _ , Mar 09 2005 ●

► [A114277] 1,5,19,67,232,804,2806,9878,35072,125512,452388,1641028,5986993,21954973,80884423,299233543,1111219333,4140813373,15478839553,58028869153,218123355523,821908275547,3104046382351,11747506651599 ⋆ Sum of the lengths of the second ascents in all Dyck paths of semilength n + 2. ● a(n) = 4 * Sum _{ j=0..n } binomial(2 * j + 3, j) / (j + 4). ● a(n) = c(n + 3) - (c(0) + c(1) + ... + c(n + 2)), where c(k)=binomial(2k,k) / (k + 1) is a Catalan number (A000108). - _ Emeric Deutsch _ , Feb 27 2007 ● a(n) = exp((2 * i * Pi) / 3) - 4 * binomial(2 * n + 5,n + 1) * hypergeom([1,3 + n,n + 7 / 2],[n + 2,n + 6],4) / (n + 5). - _ Peter Luschny _ , Feb 26 2017 ● a(n - 1) = Sum _{ i + j + k + l<n } C(i)C(j)C(k)C(l), where C=A000108 Catalan number. - _ Yuchun Ji _ , Jan 10 2019 ●

► [A092492] 0,0,0,0,0,1,5,19,68,240,839,2911,10054,34641,119203,409893,1408873,4841373,16634350,57149111,196333312,674477710,2317047808,7959739375,27343914410 ⋆ Arises in enumeration of 321 - hexagon - avoiding permutations. ● a(n) = 6 * a(n - 1) - 11 * a(n - 2) + 9 * a(n - 3) - 4 * a(n - 4) - 4 * a(n - 5) + a(n - 6) for n>7. ●

► [A070857] 1,5,19,68,240,847,3003,10712,38454,138890,504526,1842392,6760390,24915555,92196075,342411120,1275977670,4769563590,17879195130,67197912600,253172676120,955992790038,3617431679934,13714878284368 ⋆ Expansion of (1 + x * C) * C ^ 4, where C = (1 - (1 - 4 * x) ^ (1 / 2)) / (2 * x) is g.f. for Catalan numbers, A000108. ● a(n) = (Sum _{ k=0..n } (k + 1) ^ 3 * C(2 * n - k,n)) / (n + 1). - _ Vladimir Kruchinin _ , Apr 27 2017 ●

► [A240525] 5,19,68,268,1040,4144,16448,65728,262400,1049344,4195328,16780288,67112960,268447744,1073758208,4295016448,17179934720,68719673344,274878169088,1099512414208,4398047559680,17592189190144,70368748371968,281474989293568,1125899923619840 ⋆ 2 ^ (n - 2) * (2 ^ (n + 4) - (- 1) ^ n + 5). ● a(n) = 4 * a(n - 1) + 4 * a(n - 2) - 16 * a(n - 3) with n>2, a(0)=5, a(1)=19, a(2)=68. ●

► [A055991] 1,5,19,69,250,907,3292,11949,43371,157422,571388,2073943,7527704,27322992,99173120,359964521,1306548149,4742323107,17213011605,62477347458,226771411939,823102698260,2987581397893,10843899100203 ⋆ a(n) is its own 4th difference. ● a(n) = sum _{ k=1..n } binomial(n + 3 * k - 1, n - k). - _ Vladeta Jovovic _ , Mar 23 2003 ● a(n) = sum { k=0..n, binomial(4n - 3k - 1,k) } . - _ Paul Barry _ , Feb 02 2006 ●

► [A030662] 1,5,19,69,251,923,3431,12869,48619,184755,705431,2704155,10400599,40116599,155117519,601080389,2333606219,9075135299,35345263799,137846528819,538257874439,2104098963719,8233430727599,32247603683099,126410606437751 ⋆ Number of combinations of n things from 1 to n at a time, with repeats allowed. ● a(n) = 2 * (2 * n - 1)! / (n! * (n - 1)!) - 1. ● a(n) = Sum _{ k=1..n } binomial(n, k) ^ 2. - _ Benoit Cloitre _ , Aug 20 2002 ● a(n) = Sum _{ j=0..n } Sum _{ i=j..n + j } binomial(i, j). - Klaus Strassburger (strass(AT)ddfi.uni - duesseldorf.de), Jul 23 2003 ● a(n) = Sum _{ i=0..n - 1 } Sum _{ j=0..n - 1 } binomial(i + j, i). - _ N. J. A. Sloane _ , Jan 31 2009 ● a(n) = Sum _{ j=1..n } Sum _{ i=1..n } (2n - i - j)! / ((n - i)! * (n - j)!). - _ Alexander Adamchuk _ , Jul 04 2006 ●

► [A001834] 1,5,19,71,265,989,3691,13775,51409,191861,716035,2672279,9973081,37220045,138907099,518408351,1934726305,7220496869,26947261171,100568547815,375326930089,1400739172541,5227629760075,19509779867759,72811489710961 ⋆ a(0) = 1, a(1) = 5, a(n) = 4 * a(n - 1) - a(n - 2). ● a(n) = ((1 + sqrt(3)) ^ (2 * n + 1) + (1 - sqrt(3)) ^ (2 * n + 1)) / 2 ^ (n + 1). - _ N. J. A. Sloane _ , Nov 10 2009 ● a(n) = (1 / 2) * ((1 + sqrt(3)) * (2 + sqrt(3)) ^ n + (1 - sqrt(3)) * (2 - sqrt(3)) ^ n). - _ Dean Hickerson _ , Dec 01 2002 ● a(n) = ((1 + sqrt(3)) ^ (2 * n + 1) + (1 - sqrt(3)) ^ (2 * n + 1)) / 2 ^ (n + 1). - Anton Vrba, Feb 14 2007 ● a(n) = 2 ^ (- n) * Sum _{ k>=0 } binomial(2 * n + 1, 2 * k) * 3 ^ k; see A091042. - _ Philippe Deléham _ , Mar 01 2004 ● a(n) = Jacobi _ P(n, 1 / 2, - 1 / 2, 2) / Jacobi _ P(n, - 1 / 2, 1 / 2, 1). - _ Paul Barry _ , Feb 03 2006 ● a(- 1 - n) = - a(n). - _ Michael Somos _ , Sep 19 2008 ●

► [A099393] 1,5,19,71,271,1055,4159,16511,65791,262655,1049599,4196351,16781311,67117055,268451839,1073774591,4295032831,17180000255,68719738879,274878431231,1099512676351,4398048608255,17592190238719 ⋆ a(n) = 4 ^ n + 2 ^ n - 1. ● a(n) = 2 ^ (2 * n - 1) + 2 * a(n - 1) + 1. - _ Roger L. Bagula _ , Aug 08 2007 ●

► [A083588] 1,5,19,71,273,1081,4367,17835,73165,300317,1230795,5031439,20509577,83366913,337984903,1367085683,5518563909,22239268069,89495156291,359724017367,1444513666561,5796069718985,23241810818559,93150299455291 ⋆ Binomial transform of A083587. ● a(n) = 4 * 4 ^ n / 3 - 5 / 6 - n3 ^ (n - 1) + 3 ^ n / 2. ● a(n) = 11 * a(n - 1) - 43 * a(n - 2) + 69 * a(n - 3) - 36 * a(n - 4). - _ Wesley Ivan Hurt _ , May 17 2023 ●

► [A212403] 5,19,74,291,1150,4558,18100,71971,286454,1140954,4547020,18129294,72309164,288493756,1151300584,4595507491,18346672294,73257044386,292550538844,1168434892186,4667175448324,18644235526276,74485459541464 ⋆ Number of binary arrays of length 2 * n + 1 with no more than n ones in any length 2n subsequence (=50 % duty cycle). ● a(n) = 4 ^ n + C(2 * n - 1, n). - _ Vaclav Kotesovec _ , Oct 28 2012 ●

► [A098913] 1,5,19,75,287,1053,3859,14089,51463,188697,695155,2573235,9571195,35759799,134154259,505163055,1908619755,7233118641,27486768415,104713346699,399818311219,1529747101965,5864045590035,22517965253595,86607619323751 ⋆ Number of different ways angles from Pi / n to (n - 1)Pi / n can tile around a vertex, where rotations of an angle sequence are not counted, but reflections that are different are counted. ● a(n) = (Sum _{ d | 2 * n } phi(2 * n / d) * 2 ^ d) / (2 * n) - 1 - 2 ^ n. ●

► [A126392] 1,5,19,75,295,1161,4569,17981,70763,278483,1095951,4313041,16973681,66798773,262882051,1034554523,4071419319,16022795225,63056626377,248155086189,976597549531,3843333571747,15125179200799,59524119253665 ⋆ Number of base 5 n - digit numbers with adjacent digits differing by two or less. ● a(n) = 4 * a(n - 1) - a(n - 3). G.f.: - (x ^ 2 - x - 1) / (x ^ 3 - 4 * x + 1). [_ Colin Barker _ , Nov 25 2012] ●

► [A206373] 5,19,75,299,1195,4779,19115,76459,305835,1223339,4893355,19573419,78293675,313174699,1252698795,5010795179,20043180715,80172722859,320690891435,1282763565739,5131054262955,20524217051819,82096868207275,328387472829099,1313549891316395 ⋆ a(n) = (14 * 4 ^ n + 1) / 3. ● a(n) = (14 * 4 ^ n + 1) / 3. ● a(n + 1) = 4 * a(n) - 1 with a(0) = 5. ● a(n) = 5 * a(n - 1) - 4 * a(n - 2) with a(0) = 5 and a(1) = 19. ●

► [A275859] 1,1,5,19,76,304,1220,4898,19667,78971,317103,1273309,5112902,20530578,82439414,331030964,1329236757,5337477605,21432349833,86060430295,345570957936,1387621309348,5571917587224,22373730779190,89840494074695 ⋆ a(n) = floor(c * s * a(n - 1)) + floor(d * r * a(n - 2)), where r = 1 + sqrt(2), s = r / (r - 1), c = 2, d = 1, a(0) = 1, a(1) = 1. ● a(n) = floor(s * a(n - 1)) + floor(r * a(n - 2)), where r = 1 + sqrt(2), s = r / (r - 1). ●

► [A108981] 1,5,19,77,307,1229,4915,19661,78643,314573,1258291,5033165,20132659,80530637,322122547,1288490189,5153960755,20615843021,82463372083,329853488333,1319413953331,5277655813325,21110623253299 ⋆ a(n) = 3a(n - 1) + 4a(n - 2), a(0) = 1, a(1) = 5. ● a(2n) = 4a(2n - 1) - 1; a(2n + 1) = 4a(2n) + 1. ● a(n) = 3 * 2 ^ (2 * n - 1) - a(n - 1), with a(0) = 1; also a(n) = abs((3 * Sum _{ i=1..n } (- 1) ^ i * 2 ^ (2 * i - 1)) + 1), with a(0) = 1. - _ Paolo P. Lava _ and _ Giorgio Balzarotti _ , May 28 2007 ●

► [A370194] 1,1,5,19,77,326,1391,6028,26349,116011,513730,2285570,10208111,45742724,205550840,925918544,4179740909,18903381337,85635147983,388517336189,1765019420602,8028115465732,36555667019338,166621503161184,760161934681647 ⋆ Coefficient of x ^ n in the expansion of ((1 + x) * (1 + x ^ 2) ^ 2) ^ n . ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(2 * n,k) * binomial(n,n - 2 * k) . ●

► [A160702] 1,1,1,5,19,79,333,1441,6351,28451,129185,593373,2752427,12876343,60684533,287857209,1373286375,6584979659,31719337353,153416338549,744777567043,3627787084319 ⋆ Sequence such that the Hankel transform of a(n + 1) satisfies a generalized Somos - 4 recurrence. ● a(n) = if(n=0,1,if(n=1,1,if(n=2,1,a(n - 1) + 2 * sum { k=0..n - 2, a(k) * a(n - 1 - k) }))) ●

► [A163609] 5,19,79,341,1493,6571,28975,127853,564293,2490787,10994671,48532517,214232405,945666811,4174374031,18426576509,81338840837,359047009459,1584910170895,6996131959157,30882420558677,136321599637963 ⋆ a(n) = ((5 + 2 * sqrt(2)) * (3 + sqrt(2)) ^ n + (5 - 2 * sqrt(2)) * (3 - sqrt(2)) ^ n) / 2. ● a(n) = 6 * a(n - 1) - 7 * a(n - 2) for n > 1; a(0) = 5, a(1) = 19. ●

► [A240688] 1,1,5,19,81,351,1553,6959,31489,143551,658305,3033471,14034177,65147135,303285505,1415422719,6620053505,31021657087,145613977601,684537354239,3222408929281,15187861143551,71663163121665 ⋆ Expansion of - (x * sqrt(- 4 * x ^ 2 - 4 * x + 1) - 2 * x ^ 2 - 3 * x) / ((x + 1) * sqrt(- 4 * x ^ 2 - 4 * x + 1) + 4 * x ^ 3 + 8 * x ^ 2 + 3 * x - 1). ● a(n) = Sum _{ k=0..n } Sum _{ i=0..(n - k) } binomial(k,n - k - i) * binomial(k + i - 1,i) * binomial(n,k). ● a(n) = Sum _{ i=0..n / 2 } binomial(n,i) * binomial(2 * n - 2 * i - 1,n - 2 * i). - _ Vladimir Kruchinin _ , Mar 10 2015 ●

► [A094726] 1,5,19,83,337,1421,5875,24539,101953,424757,1767091,7356995,30617809,127448573,530457427,2207952011,9190020865,38251609829,159213407443,662691303347,2758303273681,11480828277485,47786386018099 ⋆ Let M = the 2 X 2 matrix [0 3 / 3 2]. Take (M ^ n * [1 1]) / 3 = [p q]; then a(n) = p. ● a(n) = 2 * a(n - 1) + 9 * a(n - 2). ●

► [A348410] 1,1,5,19,85,376,1715,7890,36693,171820,809380,3830619,18201235,86770516,414836210,1988138644,9548771157,45948159420,221470766204,1069091485500,5167705849460,25009724705460,121171296320475,587662804774890,2852708925078675 ⋆ Number of nonnegative integer solutions to n = Sum _{ i=1..n } (a _ i + b _ i), with b _ i even. ● a(n) = [x ^ n] ((1 - x) * (1 - x ^ 2)) ^ (- n). Cf. A234839. ● a(n) = Sum _{ k = 0..floor(n / 2) } binomial(2 * n - 2 * k - 1,n - 2 * k) * binomial(n + k - 1,k). ●

► [A005191] 1,1,5,19,85,381,1751,8135,38165,180325,856945,4091495,19611175,94309099,454805755,2198649549,10651488789,51698642405,251345549849,1223798004815,5966636799745,29125608152345,142330448514875,696235630761115,3408895901222375 ⋆ Central pentanomial coefficients: largest coefficient of (1 + x + ... + x ^ 4) ^ n. ● a(n) = Sum _{ k=0..floor(2n / 5) } binomial(n,k) * binomial(- n, 2n - 5k); a(n) = (5 ^ n + Sum _{ j=1..2n - 1 } (sin(5j * Pi / (2n)) / sin(j * Pi / (2n))) ^ n) / (2n) - 2. - _ Max Alekseyev _ , Mar 04 2005 ● a(n) = Sum _{ i=0..n / 2 } Sum _{ j=0..n } Sum _{ q=n..2 * n } (f); f=(n! / ((q - n)! * (j - 2 * q + 2 * n)! * (i - 2 * j + q)! * (j - 2 * i)! * i!)); f=0 for (j - 2 * q + 2 * n)<0 or (i - 2 * j + q)<0 or (j - 2 * i)<0. Also see formula in Links section. - _ Zagros Lalo _ , Sep 25 2018 ●

► [A324595] 1,1,5,19,85,381,1751,8135,38173,180415,857695,4096830,19645975,94523729,456079769,2206005414,10693086637,51930129399,252617434619,1230714593340,6003931991895,29325290391416,143393190367102,701862880794183,3438561265961263 ⋆ Number of colored integer partitions of 2n such that all colors from an n - set are used and parts differ by size or by color. ● a(n) = [x ^ (2n)] (- 1 + Product _{ j>=1 } (1 + x ^ j)) ^ n. - _ Alois P. Heinz _ , Jan 29 2021 ●

► [A275027] 1,1,5,19,85,401,1931,9605,48469,248365,1286605,6726875,35441275,187935775,1002122525,5369287019,28889315669,156015203845,845330354321,4593724615175,25029614166685,136704935601785,748273234994675,4103928115592365,22549175326327675 ⋆ a(n) = Sum _{ k=0..n } C(n,k) ^ 2 * C(n - k,k), where C(n,k) denotes the binomial coefficient n! / (k! * (n - k)!). ● a(n) = Sum _{ k=0..n } C(n,k) * C(n,2k) * C(2k,k). ● a(n) = hypergeom([- n, 1 / 2 - n / 2, - n / 2], [1, 1], - 4). - _ Peter Luschny _ , Mar 21 2018 ●

► [A364743] 1,1,5,19,85,402,1971,9976,51633,272131,1455486,7879664,43096967,237777710,1321792096,7396125088,41624735353,235461758085,1338049873397,5763493086645,43726638130854,251273386911443,1448362622788376,8371936106228253 ⋆ G.f. satisfies A(x) = 1 / (1 - x * (1 + x * A(x)) ^ 4). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..n } binomial(n + 1,k) * binomial(4 * k,n - k). ●

► [A340994] 1,1,5,19,89,391,1817,8429,39697,187849,894965,4282191,20572961,99158645,479294877,2322365959,11276837761,54860498415,267336028565,1304677123305,6375749480369,31195075605755,152798541606529,749184538847397,3676699991008897 ⋆ a(n) is the (2n) - th term of the n - fold self - convolution of the Euler totient function phi. ● a(n) = [x ^ (2n)] (Sum _{ j>=1 } mu(j) * x ^ j / (1 - x ^ j) ^ 2) ^ n. ●

► [A296162] 1,1,5,19,89,406,1913,9073,43505,209971,1019390,4971781,24343037,119579006,589050663,2908727839,14393759457,71360342129,354372852011,1762416036422,8776797353574,43761058841638,218431753457637,1091385769314272,5458068218285909 ⋆ a(n) = [x ^ n] Product _{ k>=1 } ((1 - x ^ (3 * k)) / (1 - x ^ k)) ^ n. ● a(n) = [x ^ n] Product _{ k>=1 } (1 + x ^ k + x ^ (2 * k)) ^ n. ●

► [A371836] 1,1,5,19,91,426,2190,11467,63811,365806,2200978,13677962,88553726,591576220,4093814812,29164567635,214244414371,1616044475734,12523774634922,99418836782602,808492937082410,6720935024074092,57100849909374340,495022008799053006 ⋆ a(n) = Sum _{ k=0..floor(n / 2) } n ^ k * binomial(2 * n - 2 * k - 1,n - 2 * k). ● a(n) = [x ^ n] 1 / ((1 - n * x ^ 2) * (1 - x) ^ n). ●

► [A263245] 1,5,19,95,319,1535,5119,24575,81919,393215,1310719,6291455,20971519,100663295,335544319,1610612735,5368709119,25769803775,85899345919,412316860415,1374389534719,6597069766655,21990232555519,105553116266495,351843720888319 ⋆ Decimal representation of the n - th iteration of the "Rule 155" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = a(n - 1) + 16 * a(n - 2) - 16 * a(n - 3) for n>3. ●

► [A361278] 1,1,5,19,97,581,3661,26335,202049,1659817,14621941,135567851,1326672865,13624218349,146056961597,1633376573431,18980051829121,228677164878545,2852155973178469,36740599423566787,488127224550517601,6678832987859315221 ⋆ Expansion of e.g.f. exp(x * (1 + x) ^ 2). ● a(n) = n! * Sum _{ k=0..n } binomial(2 * k,n - k) / k!. ● a(0) = 1; a(n) = (n - 1)! * Sum _{ k=1..n } k * binomial(2,k - 1) * a(n - k) / (n - k)!. ●

► [A005165] 0,1,1,5,19,101,619,4421,35899,326981,3301819,36614981,442386619,5784634181,81393657019,1226280710981,19696509177019,335990918918981,606

6382786809019,115578717622022981,2317323290554617019,487736188811548229 81 ★ Alternating factorials: n! - (n - 1)! + (n - 2)! - ... 1!. ● a(0) = 0, a(n) = n! - a(n - 1) for n > 0; also a(n) = n * a(n - 2) + (n - 1) * a(n - 1) for n > 1. Sum _{ n>=1 } Pi ^ n / a(n) ~ 30.00005. - _ Gerald McGarvey _ , Jun 19 2004 ● a(n) = (- 1) ^ n * (exp(1) * (gamma(n + 2) * gamma(- 1 - n,1) * (- 1) ^ n + Ei(1)) - 1). - _ Gerry Martens _ , May 22 2018 ●

▶ [A199480] 1,1,5,19,113,701,5269,42883,393441,3887065,42013381,484389731,60 08730001,78857557013,1101462510485,16168488228691,250664264773825,406184 0593263921,69116855497839109,1223722811124319219,2265150465295055224 1 ★ E.g.f. exp(x * (1 + log(1 + x)) / (1 - log(1 + x))) ● a(n)=sum(m=1..n, binomia l(n,m) * sum(k=1..n - m, k! * (sum(i=0..k, binomial(m,k - i) * binomial(m + i - 1,m - 1))) * stirling1(n - m,k))) + 1. ●

▶ [A187018] 1,1,5,19,145,851,7741,58605,600769,5420035,61026901,628076153,76 48488145,87388647373,1138801242125,14182492489651,196218339243777,262897 1539313875,38377805385510181,54781569090228322 5,839581777583563560 1,1267 25586542235932329 ★ Coefficient of x ^ n in (1 + x + n * x ^ 2) ^ n. ● a(n) = [x ^ n] (1 + x + n * x ^ 2) ^ n. ● a(n) = n ^ (n / 2) * GegenbauerPoly(n, - n, - 1 / (2 * sqrt(n))). - _ Emanuele Munarini _ , Oct 20 2016 ● a(n) = Sum _{ k =0..floor(n / 2) } binomial(n, k) * binomial(n - k, n - 2 * k) * n ^ k. ● a(n) = [x ^ n] 1 / sqrt(1 - 2 * x - (4 * n - 1) * x ^ 2). - _ Paul D. Hanna _ , Dec 12 201 4 ● a(n) = n! * [x ^ n] exp(x) * BesselI(0,2 * sqrt(n) * x). - _ Ilya Gutkovskiy _ , May 31 2020 ●

▶ [A122150] 1,1,5,19,305,1219,19505,78019,1248305,79891519,319566077,204522 28927,327235662833,1308942651331,20943082421297,1340357274963007,8578286 5597632449,343131462390529795,2196041359299390688 1 ★ Numerator of Sum[(- 1) ^ (k + 1) * 1 / 2 ^ Prime[k], { k,1,n }]. ● a(n) = Numerator[Sum[(- 1) ^ (k + 1) * 1 / 2 ^ Prime[k], { k,1,n }]]. ●

▶ [A063133] 5,20,32,48,60,76,88,104,116,132,144,160,172,188,200,216,228,244,25 6,272,284,300,312,328,340 ★ Dimension of the space of weight 2n cusp forms for Gamma _ 0(65). ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n>4. ● a(n) = (- 1) ^ n + 14 * n - 9 for n>1. ●

▶ [A178977] 5,20,44,77,119,170,230,299,377,464,560,665,779,902,1034,1175,132 5,1484,1652,1829,2015,2210,2414,2627,2849 ★ a(n) = (3 * n + 2) * (3 * n + 5) / 2. ● a(n) = a(n - 1) + 6 + 9 * n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Apr 19 2013 ●

▶ [A033429] 0,5,20,45,80,125,180,245,320,405,500,605,720,845,980,1125,1280,144 5,1620,1805,2000,2205,2420,2645,2880 ★ a(n) = 5 * n ^ 2. ● a(n) = a(n - 1) + 5 * (2 * n - 1) (with a(0)=0). - _ Vincenzo Librandi _ , Nov 17 2010 ● a(n) = a(n - 1) + 10 * n - 5, with a(0)=0. - _ Jean - Bernard François _ , Oct 04 2013 ● a(n) = Sum _{ i = 2..6 } P(i,n), where P(i,m) = m * ((i - 2) * m - (i - 4)) / 2. - _ Bruno Berselli _ , Jul 04 2018 ●

▶ [A160749] 5,20,46,83,131,190,260,341,433,536,650,775,911,1058,1216,1385,156 5,1756,1958,2171,2395,2630,2876,3133,3401 ★ a(n) = (11 * n ^ 2 + 19 * n + 10) / 2. ● a(n) = a(n - 1) + 11 * n + 4 for n>0, a(0)=5. - _ Vincenzo Librandi _ , Sep 18 2011 ●

▶ [A005287] 5,20,49,98,174,285,440,649,923,1274,1715,2260,2924,3723,4674,579 5,7105,8624,10373,12374,14650,17225,20124,23373,26999 ★ Number of permutati ons of [n] with four inversions. ● a(n) = n * (n + 1) * (n ^ 2 + n - 14) / 24. ●

▶ [A134481] 1,5,20,50,100,175,280,420,600,825,1100,1430,1820,2275,2800,3400,40 80,4845,5700,6650,7700,8855,10120,11500,13000 ★ Row sums of triangle A13448 0. ● a(n) = 5 * binomial(n + 2,3) for n>0. - _ Milan Janjic _ , Dec 28 2007 ● a(n) = Sum _{ i=0..n } (n + i) * (1 + i) for n > 0. - _ Bruno Berselli _ , Dec 16 2013 ●

▶ [A006504] 5,20,51,105,190,315,490,726,1035,1430,1925,2535,3276,4165,5220,64 60,7905,9576,11495,13685,16170,18975,22126,25650,29575 ★ Coefficient of x ^ 4 i n (1 - x - x ^ 2) ^ (- n). ● a(n) = n * (n + 1) * (n + 3) * (n + 14) / 4!. - _ Alo is P. Heinz _ , Jan 21 2017 ●

▶ [A173034] 1,5,20,52,116,244,500,1012,2036,4084,8180,16372,32756,65524,1310 60,262132,524276,1048564,2097140,4194292,8388596,16777204,33554420,6710885 2,134217716 ★ Sequence whose G.f is f such that: f(z)=8 / (1 - 2 * z) - 12 / (1 - z) + z + 5. ● a(n) = 8 * 2 ^ n - 12, n>=2. - R. J. Mathar, Apr 20 2011 ●

▶ [A226639] 1,1,1,5,20,56,126,246,435,715,1111,1651,2366,3290,4460,5916,7701,9 861,12445,15505,19096,23276,28106,33650,39975 ★ a(n) = n ^ 4 / 8 + (5 * n ^ 3) / 12 - n ^ 2 / 8 - (5 * n) / 12 + 1. ● a(n) = stirling2(n + 2,n) - (n + 2) * stirli ng2(n + 1,n) + ((n + 1) * (n + 2)) / 2. ● a(n) = Sum _{ j=0..n } (j - 1) ^ (n + 2) * (- 1) ^ (n - j) * binomial(n,j)) / n!. ● a(n) = Sum _{ k=1..n + 2 } Sum _{ i=1..k } (n - i + 1) * (n - k + 1). - _ Wesley Ivan Hurt _ , Sep 12 2017 ●

▶ [A001873] 1,5,20,65,190,511,1295,3130,7285,16435,36122,77645,163730,33953 5,693835,1399478,2790100,5504650,10758050,20845300,40075630,76495450,14505 2300,273381350,512347975 ★ Convolved Fibonacci numbers. ● a(n) = Sum _{ m=0.. floor(n / 2) } binomial(4 + n - m, 4) * binomial(n - m, m). ● a(n) = F’’’’ (n + 4, 1) / 24, i.e., 1 / 24 times the 4th derivative of the (n + 4)th Fibonacci p olynomial evaluated at 1. - _ T. D. Noe _ , Jan 18 2006 ●

▶ [A120297] 1,5,20,65,193,544,1489,4005,10660,28193,74273,195200,512257,1343 077,3519412,9219105,24144289,63224096,165544721,433437125,1134810436,29710 65025,7778499265,20364618240,53315655553 ★ Sum of all matrix elements of n X n matrix M(i,j) = Fibonacci(i + j - 1). ● a(n) = Sum _{ j=1..n } Sum _{ i= 1..n } Fibonacci(i + j - 1). ● a(n) = Fibonacci(2 * n + 3) - 2 * Fibonacci(n + 3) + 2. - _ Vladeta Jovovic _ , Jul 21 2006 ●

▶ [A322600] 1,5,20,68,190,441,907,1690,2916,4734,7310,10836,15528,21619,2936 5,39045,50961,65434,82809,103453,127751,156117,188980,226794,270037 ★ a(n) i s the number of unlabeled rank - 3 graded lattices with 5 coatoms and n atoms. ● a(n) = a(n - 1) + a(n - 2) - a(n - 5) - a(n - 6) - a(n - 7) + a(n - 8) + a(n - 9) + a(n - 10) - a(n - 13) - a(n - 14) + a(n - 15) for n>15. ●

▶ [A055403] 1,5,20,70,165,357,688,1154,1867,2907,4272,6070,8357,11307,14998,1 9470,24809,31211,38928,47816,58201,70361,83962,99648,117519 ★ Number of poi nts in N ^ 4 of norm <= n. ● a(n) = [x ^ (n ^ 2)] (1 + theta _ 3(x)) ^ 4 / (1 6 * (1 - x)), where theta _ 3() is the Jacobi theta function. - _ Ilya Gutkovskiy _ , Apr 15 2018 ●

▶ [A291288] 1,5,20,70,210,546,1260,2640,5115,9295,16016,26390,41860,64260,958 80,139536,198645,277305,380380,513590,683606,898150,1166100,1497600,190417 5 ★ a(n) = binomial(n + 3, 3) * (1 + binomial(n + 2, 3) / 4). ● a(n) = (n + 1) * (n + 2) * (n + 3) * (n + 4) * (n ^ 2 - n + 6) / 144. ●

▶ [A080930] 1,5,20,70,224,672,1920,5280,14080,36608,93184,232960,573440,1392 640,3342336,7938048,18677760,43581440,100925440,232128512,530579456,120586 2400,2726297600,6134169600,13740539904 ★ a(n) = 2 ^ (n - 3) * (n + 2) * (n + 3) * (n + 4) / 3. ● a(n) = binomial(n + 3,3) * 2 ^ (n - 3), n>0. - _ Zerinvary Lajos _ , Oct 29 2006 ● a(n) = 8 * a(n - 1) - 24 * a(n - 2) + 32 * a(n - 3) - 16 * a(n - 4) for n>3, a(0)=1, a(1)=5, a(2)=20, a(3)=70. - _ Bruno Berselli _ , Aug 06 2013 ●

▶ [A169792] 1,5,20,70,225,681,1970,5500,14920,39520,102592,261760,657920,163 2000,4001280,9708544,23336960,55623680,131563520,309002240,721092608,16728 06400,3859415040,8859156480,20240138240 ★ Expansion of ((1 - x) / (1 - 2x)) ^ 5. ● a(n) = 10 * a(n - 1) - 40 * a(n - 2) + 80 * a(n - 3) - 80 * a(n - 4) + 32 * a(n - 5), n >= 6. - _ Vincenzo Librandi _ , Mar 14 2011 ● a(n) = 2 ^ n * (n + 4) * (n ^ 3 + 26 * n ^ 2 + 171 * n + 186) / 768, n > 0. - _ R. J. Mathar _ , Ma r 14 2011 ●

▶ [A005324] 1,5,20,70,230,726,2235,6765,20240,60060,177177,520455,1524120,44 53320,12991230,37854954,110218905,320751445,933149470,2714401580,78957196 34,22969224850,66829893650,194486929650,566141346225 ★ Column of Motzkin triangle A026300. ● a(n) = (- 5 * I * (- 1) ^ n * (n ^ 4 - 6 * n ^ 3 - 43 * n ^ 2 - 24 * n + 36) * 3 ^ (1 / 2) * hypergeom([1 / 2, n + 2],[1],4 / 3) + 15 * I * (- 1) ^ n * (n ^ 4 + 6 * n ^ 3 + 17 * n ^ 2 + 24 * n - 12) * 3 ^ (1 / 2) * hypergeom ([1 / 2, n + 1],[1],4 / 3)) / (6 * (n + 3) * (n + 2) * (n + 4) * (n + 5) * (n + 6)). - _ Mark van Hoeij _ , Oct 29 2011 ● a(n) (n + 6) (n - 4) = n (2 n + 1) a(n - 1) + 3 n (n - 1) a(n - 2). - _ Simon Plouffe _ , Feb 09 2012, corrected for offset A ug 17 2022 ● a(n) = 5 * sum(j=ceiling((n - 4) / 2)..(n + 1), binomial(j,2 * j - n + 4) * binomial(n + 1,j)) / (n + 1). - _ Vladimir Kruchinin _ , Mar 17 2014 ●

▶ [A243869] 1,5,20,70,231,735,2290,7040,21461,65065,196560,592410,1782691,53 58995,16098830,48340180,145107921,435498525,1306845100,3921234350,1176510 1151,35298099655,105899891370,317710858920,953154946381 ★ Expansion of x ^ 4 / [(1 + x) * Product _{ k=1..3 } (1 - k * x)]. ● a(n) = (3 ^ n - 4 * 2 ^ n + (- 1) ^ n + 6) / 24. (End) ● a(n) = 5 * a(n - 1) - 5 * a(n - 2) - 5 * a(n - 3) + 6 * a(n - 4). - _ Wesley Ivan Hurt _ , May 27 2021 ●

▶ [A054444] 1,5,20,71,235,744,2285,6865,20284,59155,170711,488400,1387225,39 16061,10996580,30737759,85573315,237387960,656451269,1810142185,497864359 6,13661617195,37409025455,102238082976,278920277425 ★ Even - indexed terms of A001629(n), n >= 2, (Fibonacci convolution). ● a(n) = Sum _{ k=1..n + 1 } k * binomial(2 * n - 2 * k + 2, k). - _ Emeric Deutsch _ , Jun 11 2003 ●

▶ [A122695] 0,0,1,5,20,71,236,755,2360,7271,22196,67355,203600,613871,184775 6,5555555,16691240,50122871,150466916,451597355,1355185280,4066342271,1220 0599676,36604944755,109821125720 ★ Number of edges in the n - th Mycielski g raph. ● a(n) = 3 * a(n - 1) + 3 * 2 ^ (n - 3) - 1 for n > 2. [corrected by _ Moe ez Muhammad _ , Apr 17 2021] ● a(n) = (18 - 27 * 2 ^ n + 14 * 3 ^ n) / 36 for n>1. ● a(n) = 6 * a(n - 1) - 11 * a(n - 2) + 6 * a(n - 3) for n>4. ●

▶ [A066822] 1,5,20,71,238,770,2436,7590,23397,71566,217646,659022,1988805,59 86176,17980968,53922096,161492571,483149385,1444245936,4314214443,1288010 7548,38436170366,114657076900,341926185770,1019435748435 ★ The fourth colu mn of A038622, triangular array that counts rooted polyominoes. ● a(0)=0; a(1)=1; (n + 7) * n * a(n)=2 * (n + 4) * (n + 3) * a(n - 1) + 3 * (n + 3) * (n + 2) * a(n - 2). ● a(n) = ((- 3) ^ (1 / 2) / 9) * (- 2 * (n + 7) ^ (- 1) * (n + 4) * (- 1) ^ n * hypergeom([3 / 2, n + 6],[2],4 / 3) - (n + 6) ^ (- 1) * (- 1) ^ n * (5 * n + 18) * hypergeom([3 / 2, n + 5],[2],4 / 3)). - _ Mark van Hoeij _ , Oct 31 2 011 ● a(n) = GegenbauerC(n, - n + 1 - 4, - 1 / 2) + GegenbauerC(n - 1, - n - 3, - 1 / 2)). - _ Peter Luschny _ , May 12 2016 ●

▶ [A137212] 0,0,1,5,20,72,245,805,2584,8160,25465,78773,242060,740040,225358 1,6841525,20719600,62629632,189025585,569820965,1716088004,5164258440,1553 1389285,46687390213,140287229320 ★ a(n) = 5 * a(n - 1) - 5 * a(n - 2) - 3 * a(n - 3). ● a(n) = (1 / 2) * 3 ^ n - (1 / 4) * (1 + sqrt(2)) ^ n + (1 / 4) * sqrt(2) * (1 - sqrt(2)) ^ n - (1 / 4) * (1 - sqrt(2)) ^ n - (1 / 4) * sqrt(2) * (1 + sqrt(2)) ^ n , with n>=0 - _ Paolo P. Lava _ , Jun 09 2008 ●

▶ [A270080] 1,5,20,72,280,1080,4216,16632,66040,263160,1050616,4198392,16785 400,67125240,268468216,1073807352 ★ Number of active (ON,black) cells at sta ge 2 ^ n - 1 of the two - dimensional cellular automaton defined by ”Rule 62”, b ased on the 5 - celled von Neumann neighborhood. ● a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3) for n>5. ●

▶ [A094806] 1,5,20,74,264,924,3200,11016,37792,129392,442496,1512224,516595 2,17643456,60250112,205729920,702452224,2398414592,8188884992,2795897292 8,95458646016,325917686784,1112755552256,3799191029760,12971261403136 ★ Number of (s(0), s(1), ..., s(2n)) such that 0 < s(i) < 8 and |s(i) - s(i - 1)| = 1 f or i = 1,2,...,2n, s(0) = 1, s(2n) = 5. ● a(n) = (1 / 4) * Sum _{ k=1..7 } sin(Pi * k / 8) * sin(5 * Pi * k / 8) * (2 * cos(Pi * k / 8)) ^ (2n). ● a(n) = 6 * a(n - 1) - 10 * a(n - 2) + 4 * a(n - 3). ● a(n) = (- 2 ^ n + (- (2 - sqrt(2)) ^ n + (2 + sq rt(2)) ^ n) / sqrt(2)) / 4. - _ Colin Barker _ , Apr 27 2016 ●

▶ [A092490] 0,0,0,1,5,20,75,271,957,3337,11559,39896,137423,472808,1625632,55 87228,19198971,65963978,226623902,778551761,2674604282,9188106871,3156380 7424,108430368827,372487292867 ★ a(n) = A058094(n) - 3 * A058094(n - 1) + A 058094(n - 2) for n >=4. ● a(n) = 6 * a(n - 1) - 11 * a(n - 2) + 9 * a(n - 3) - 4 * a(n - 4) - 4 * a(n - 5) + a(n - 6) for n>7. - _ Colin Barker _ , Aug 21 2019 ●

▶ [A094828] 1,5,20,75,274,988,3536,12597,44745,158632,561683,1987154,702640 8,24835744,87763945,310088381,1095490524,3869911659,13670143618,482871473 00,170561502896,602454835293,2127962632993,7516243783216 ★ Number of (s(0), s(1), ..., s(2n)) such that 0 < s(i) < 9 and |s(i) - s(i - 1)| = 1 for i = 1,2,...,2n, s(0) = 1, s(2n) = 5. ● a(n) = (2 / 9) * Sum _{ r=1..8 } sin(r * Pi / 9) * sin(5 * r * Pi / 9) * (2 * cos(r * Pi / 9)) ^ (2 * n). ● a(n) = 7 * a(n - 1) - 15 * a(n - 2) + 10 * a(n - 3) - a(n - 4). ●

▶ [A093131] 0,1,5,20,75,275,1000,3625,13125,47500,171875,621875,2250000,8140 625,29453125,106562500,385546875,1394921875,5046875000,18259765625,660644 53125,239023437500,864794921875,3128857421875,11320312500000 ★ Binomial t

ransform of Fibonacci(2n). • a(n) = (((5 + sqrt(5)) / 2) ^ n - ((5 - sqrt(5)) / 2) ^ n) / sqrt(5). • a(n) = Sum _{ k=0..n } Sum _{ j=0..n } C(n, j) * C(j, k) * Fibonacci(j - k). - _ Paul Barry _ , Feb 15 2005 • a(n) = Sum _{ k=0..n } C(n, k) * 2 ^ k * Fibonacci(n - k) = Sum _{ k=0..n } C(n, k) * 2 ^ (n - k) * Fibonacci(k). - _ Paul Barry _ , Apr 22 2005 • a(n) = Sum _{ i=0..n - 1; j=0..n - 1; i + 2 * j=n - 1 } 5 ^ i * ((i + j)! / (i! * j!)). • a(n * k) / a(k) = Sum _{ i=0..n - 1; j=0..n - 1; i + 2 * j=n - 1 } (- 1) ^ (j * (k - 1)) * b(k) ^ i * ((i + j)! / (i! * j!)). • a(m + r) * a(n + s) - a(m + s) * a(n + r) = - 5 ^ (n + s) * a(m - n) * a(r - s). •

► [A030191] 1,5,20,75,275,1000,3625,13125,47500,171875,621875,2250000,8140625,29453125,106562500,385546875,1394921875,5046875000,18259765625,66064453125,239023437500,864794921875,3128857421875,11320312500000,40957275390625 ⋆ Scaled Chebyshev U - polynomial evaluated at sqrt(5) / 2. • a(n) = (sqrt(5)) ^ n * U(n, sqrt(5) / 2). • a(2 * k + 1) = 5 ^ (k + 1) * Fibonacci(2 * k + 2). • a(2 * k) = 5 ^ k * Lucas(2 * k + 1). • a(n - 1) = Sum _{ k=0..n } C(n, k) * Fibonacci(2 * k). - _ Benoit Cloitre _ , Jun 21 2003 • a(n) = 5 * a(n - 1) - 5 * a(n - 2). - _ Benoit Cloitre _ , Oct 23 2003 • a(n - 1) = (((5 + sqrt(5)) / 2) ^ n - ((5 - sqrt(5)) / 2) ^ n) / sqrt(5) is the 2nd binomial transform of Fibonacci(n), the first binomial transform of Fibonacci(2n) and its n - th term is the n - th term of the third binomial transform of Fibonacci(3n) divided by 2 ^ n. - _ Paul Barry _ , Mar 23 2004 •

► [A224422] 1,5,20,75,275,1001,3639,13243,48280,176341,645150,2363596,8669142,31825005,116914020,429737220,1580244061,5812839156,21387636101,78708626396,289699273501,1066406842677,3925882147566,14453780545834,53216783798234 ⋆ Expansion of (1 - x) * (1 - 3 * x) / (1 - 9 * x + 28 * x ^ 2 - 35 * x ^ 3 + 15 * x ^ 4 - x ^ 5). • a(n) = 9 * a(n - 1) - 28 * a(n - 2) + 35 * a(n - 3) - 15 * a(n - 4) + a(n - 5) with a(0) = 1, a(1) = 5, a(2) = 20, a(3) = 75, a(4) = 275. •

► [A000344] 1,5,20,75,275,1001,3640,13260,48450,177650,653752,2414425,8947575,33266625,124062000,463991880,1739969550,6541168950,24647883000,93078189750,352207870014,1335293573130,5071418015120,19293438101000,73514652074500 ⋆ a(n) = 5 * binomial(2n, n - 2) / (n + 3). • a(n) = (1 / (n + 1)) * Sum _{ i=0..n - 2 } (- 1) ^ (n + i) * (n - i + 1) * binomial(2n + 2,i), n >= 2. - _ Taras Goy _ , Aug 09 2018 •

► [A290922] 1,5,20,75,279,1040,3881,14485,54060,201755,752959,2810080,10487361,39139365,146070100,545141035,2034494039,7592835120,28336846441,105754550645,394681356140,1472970873915,5497202139519,20515837684160,76566418597121 ⋆ p - INVERT of the positive integers, where p(S) = 1 - S - 2 * S ^ 2. • a(n) = 5 * a(n - 1) - 6 * a(n - 2) + 5 * a(n - 3) - a(n - 4). •

► [A275909] 1,5,20,75,288,1094,4171,15897,60565,230816,879521,3351544,12771524,48667365,185453453,706693601,2692945820,10261812539,39103937948,149010523846,567823518619,2163763618201,8245296020629,31419747421972,119728937140293 ⋆ Expansion of (1 + 4 * x + 8 * x ^ 2 + 8 * x ^ 3 + 7 * x ^ 4 + 4 * x ^ 5 + 2 * x ^ 6) / (1 - x - 7 * x ^ 2 - 12 * x ^ 3 - 6 * x ^ 4 - 7 * x ^ 5 - 4 * x ^ 6 - 2 * x ^ 7). • a(n) = 2 * a(n - 1) + 6 * a(n - 2) + 5 * a(n - 3) - 6 * a(n - 4) + a(n - 5) - 3 * a(n - 6) - 2 * a(n - 7) - 2 * a(n - 8) for n>6. - _ Colin Barker _ , Aug 26 2016 •

► [A275908] 1,5,20,75,288,1105,4234,16226,62188,238340,913452,3500857,13417236,51422337,197079099,755317101,2894796675,11094476468,42520225774,162961236161,624558407329,2393656389397,9173827208656,35159225871899,134749776270503 ⋆ Expansion of (1 + 2 * x + 4 * x ^ 2 + 4 * x ^ 3 + 6 * x ^ 4 + 4 * x ^ 5 + x ^ 6) / (1 - 3 * x - x ^ 2 - 6 * x ^ 3 - 7 * x ^ 4 - 7 * x ^ 5 - 5 * x ^ 6 - x ^ 7). • a(n) = 3 * a(n - 1) + a(n - 2) + 6 * a(n - 3) + 7 * a(n - 4) + 7 * a(n - 5) + 5 * a(n - 6) + a(n - 7) for n>6. - _ Colin Barker _ , Aug 26 2016 •

► [A290909] 0,5,20,75,300,1200,4780,19045,75900,302475,1205400,4803680,19143320,76288725,304020900,1211564475,4828248580,19241224720,76678887300,305575754325,1217760780300,4852941691355,19339630115120,77071046136000,307138560414000 ⋆ p - INVERT of the positive integers, where p(S) = 1 - 5 * S ^ 2. • a(n) = 4 * a(n - 1) - a(n - 2) + 4 * a(n - 3) - a(n - 4). •

► [A061278] 0,1,5,20,76,285,1065,3976,14840,55385,206701,771420,2878980,10744501,40099025,149651600,558507376,2084377905,7779004245,29031639076,108347552060,404358569165,1509086724601,5631988329240,21018866592360 ⋆ a(n) = 5 * a(n - 1) - 5 * a(n - 2) + a(n - 3) with a(1) = 1 and a(k) = 0 if k <= 0. • a(n) = 4 * a(n - 1) - a(n - 2) + 1. • a(n + 2) = 4 * a(n + 1) - a(n) + 1 for a(0)=0, a(1)=1. • a(n) = (1 / 12) * ((3 - sqrt(3)) * (2 - sqrt(3)) ^ n + (3 + sqrt(3)) * (2 + sqrt(3)) ^ n - 6). (End) • a(n + 1) = Sum _{ k=0..n } U(k, 2) } = Sum _{ k=0..n } S(k, 4), where U(n,x) and S(n,x) are Chebyshev polynomials. - _ Paul Barry _ , Nov 14 2003 • a(n) * a(n - 2) = a(n - 1) * (a(n - 1) - 1) for n>1. - _ Bruno Berselli _ , Nov 29 2016 • a(n) ^ 2 - a(n) + a(n - 1) ^ 2 - a(n - 1) - 4 * a(n) * a(n - 1) = 0. •

► [A005283] 1,5,20,76,285,1068,4015,15159,57486,218895,836604,3208036,12337630,47572239,183856635,712033264,2762629983,10736569602,41788665040,162869776650,635562468075,2482933033659,9710010151831,38008957336974,148912655255315 ⋆ Number of permutations of (1,...,n) having n - 5 inversions (n>=5). • a(n) = 2 ^ (2 * n - 6) / sqrt(Pi * n) * Q * (1 + O(n ^{- 1 })), where Q is a digital search tree constant, Q = 0.2887880951... (see A048651). - corrected by _ Vaclav Kotesovec _ , Mar 16 2014 •

► [A057552] 1,5,20,76,286,1078,4081,15521,59279,227239,873885,3370029,13027729,50469889,195892564,761615284,2965576714,11563073314,45141073924,176423482324,690215089744,2702831489824,10593202603774,41550902139550,163099562175850 ⋆ a(n) = Sum _{ k=0..n } C(2k + 2,k). • a(n) = Sum _{ k=1..n + 1 } Sum _{ i=1..k } C(i + k - 1,k). - _ Wesley Ivan Hurt _ , Sep 19 2017 •

► [A269708] 1,5,20,76,292,1132,4420,17356,68452,270892,1074820,4273036,17013412,67817452,270561220,1080119116 ⋆ Number of active (ON,black) cells at stage 2 ^ n - 1 of the two - dimensional cellular automaton defined by "Rule 14", based on the 5 - celled von Neumann neighborhood. • a(n) = 4 * 3 ^ (n - 2) + 4 ^ n for n>1. • a(n) = 7 * a(n - 1) - 12 * a(n - 2) for n>3. •

► [A270985] 1,5,20,76,300,1212,4900,19740,79284,317836,1272804,5094204,20382868,81543660,326199108,1304845468 ⋆ Number of active (ON,black) cells at stage 2 ^ n - 1 of the two - dimensional cellular automaton defined by "Rule 238", based on the 5 - celled von Neumann neighborhood. • a(n) = (320 - 27 * 2 ^ (3 + n) + 175 * 4 ^ n + 384 * n) / 144 for n>2. • a(n) = 8 * a(n - 1) - 21 * a(n - 2) + 22 * a(n - 3) - 8 * a(n - 4) for n>6. •

► [A289786] 1,5,20,77,291,1098,4149,15689,59332,224369,848447,3208370,12132345,45878109,173486772,656035301,2480778763,9380993978,35473960589,134143768193,507260826084,1918192318185,7253589435975,27429241169378,103722891648049 ⋆ p - INVERT of the odd positive integers (A005408), where p(S) = 1 - S - S ^ 2. • a(n) = 5 * a(n - 1) - 6 * a(n - 2) + 5 * a(n - 3) + a(n - 4). •

► [A129869] 1,1,5,20,77,294,1122,4290,16445,63206,243542,940576,3640210,14115100,54826020,213286590,830905245,3241119750,12657425550,49483369320,193641552390,758454277620,2973183318300,11664026864100,45791597230002 ⋆ Number of positive clusters of type D _ n. • a(n) = (3 * n - 4) / n * C(2 * n - 3,n - 1). • a(n) = (1 / 8) * 4 ^ n * Gamma(n - 1 / 2) * (3 * n - 4) / (sqrt(Pi) * Gamma(1 + n)) - 0 ^ (n - 1) / 2. - _ Peter Luschny _ , Dec 14 2015 •

► [A028814] 1,5,20,78,307,1219,4862,19428,77685,310705,1242776,4971050,19884135,79536463,318145762,1272582944,5090331657,20361326493,81445305820,325781223110,1303124892251,5212499568795,20849998274950,83399993099548,333599972397917 ⋆ Expansion of (1 - 2 * x) / ((1 - x) ^ 3 * (1 - 4 * x)). • a(n) = (- 10 + 4 ^ (3 + n) + 15 * n + 9 * n ^ 2) / 54. • a(n) = 6 * a(n - 1) - 8 * a(n - 2) - 2 * a(n - 3) + 9 * a(n - 4) - 4 * a(n - 5) for n>3. •

► [A346394] 0,1,5,20,78,324,1520,8336,53872,405600,3492416,33798016,362543104,4264455168,54540715008,753246711808,11168972683264,176937613586432,2982069587042304,53271637651996672,1005385746384846848,19987620914387812352,417489079682758213632 ⋆ Expansion of e.g.f. - log(1 - x) * exp(2 * x). • a(n) = n! * Sum _{ k=0..n - 1 } 2 ^ k / ((n - k) * k!). • a(0) = 0, a(1) = 1, a(n) = (n + 1) * a(n - 1) - 2 * (n - 1) * a(n - 2) + 2 ^ (n - 1). - _ Seiichi Manyama _ , May 27 2022 •

► [A275907] 1,5,20,79,317,1274,5121,20583,82728,332503,1336407,5371332,21588639,86769787,348748058,1401699971,5633759855,22643397846,91009109229,365786884945,1470182999606,5909009156125,23749689131575,95455552520474,383658179966447 ⋆ Expansion of (1 + x - x ^ 3) / (1 - 4 * x - x ^ 4 - x ^ 5). • a(n) = 4 * a(n - 1) + a(n - 4) + a(n - 5) for n>4. - _ Colin Barker _ , Aug 26 2016 •

► [A163316] 1,5,20,80,320,1270,5040,20010,79440,315360,1251930,4969980,19730070,78325380,310939920,1234384470,4900319640,19453527810,77227563240,306581745960,1217083163130,4831636082580,19180864497870,76145131089180 ⋆ Number of reduced words of length n in Coxeter group on 5 generators S _ i with relations (S _ i) ^ 2 = (S _ i S _ j) ^ 5 = I. • a(n) = 3 * a(n - 1) + 3 * a(n - 2) + 3 * a(n - 3) + 3 * a(n - 4) - 6 * a(n - 5). - _ Wesley Ivan Hurt _ , May 10 2021 •

► [A163878] 1,5,20,80,320,1280,5110,20400,81450,325200,1298400,5184000,20697690,82637820,329940630,1317324420,5259563280,20999387520,83842374870,334749945240,1336526142210,5336228292840,21305481048360,85064487085440 ⋆ Number of reduced words of length n in Coxeter group on 5 generators S _ i with relations (S _ i) ^ 2 = (S _ i S _ j) ^ 6 = I. • a(n) = - 6 * a(n - 6) + 3 * Sum _{ k=1..5 } a(n - k). - _ Wesley Ivan Hurt _ , May 11 2021 •

► [A164354] 1,5,20,80,320,1280,5120,20470,81840,327210,1308240,5230560,20912640,83612160,334295130,1336566780,5343813270,21365442180,85422543120,341533342080,1365506334720,5459518355670,21828050092440,87272125451010 ⋆ Number of reduced words of length n in Coxeter group on 5 generators S _ i with relations (S _ i) ^ 2 = (S _ i S _ j) ^ 7 = I. • a(n) = - 6 * a(n - 7) + 3 * Sum _{ k=1..6 } a(n - k). - _ Wesley Ivan Hurt _ , May 11 2021 •

► [A269696] 1,5,20,80,320,1280,5120,20480,81920,327680,1310720,5242880,20971520,83886080,335544320,1342177280 ⋆ Number of active (ON,black) cells at stage 2 ^ n - 1 of the two - dimensional cellular automaton defined by "Rule 6", based on the 5 - celled von Neumann neighborhood. • a(n) = 5 * 4 ^ (n - 1) for n>0. • a(n) = 4 * a(n - 1) for n>1. •

► [A003947] 1,5,20,80,320,1280,5120,20480,81920,327680,1310720,5242880,20971520,83886080,335544320,1342177280,5368709120,21474836480,85899345920,343597383680,1374389534720,5497558138880,21990232555520,87960930222080,351843720888320 ⋆ Expansion of (1 + x) / (1 - 4 * x). • a(n) = (5 * 4 ^ n - 0 ^ n) / 4. • a(n) = 4 * a(n - 1), n>1. - _ Vincenzo Librandi _ , Dec 31 2010 •

► [A369837] 1,5,20,80,325,1326,5411,22076,90061,367411,1498887,6114853,24946129,101770120,415180936,1693770328,6909898016,28189589705,115002126790,469162173146,1913991948274,7808313175575,31854760257925,129954540535600,530161974821876 ⋆ Number of compositions of 5 * n - 2 into parts 1 and 5. • a(n) = Sum _{ k=0..n } binomial(n + 2 + 4 * k,n - 1 - k). • a(n) = 6 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). •

► [A363508] 1,5,20,80,340,1516,7046,33736,165436,826566,4193348,21542664,111848161,585949358,3093526496,16442687695,87914559018,472522551440,2551591234444,13836226412386,75311992329508,411336641019998,2253641429297336 ⋆ G.f. satisfies A(x) = exp(Sum _{ k>=1 } (4 + A(x ^ k)) * x ^ k / k). • a(0) = 1; a(n) = (1 / n) * Sum _{ k=1..n } (4 + Sum _{ d|k } d * a(d - 1)) * a(n - k). •

► [A033131] 1,5,20,81,325,1300,5201,20805,83220,332881,1331525,5326100,21304401,85217605,340870420,1363481681,5453926725,21815706900,87262827601,349051310405,1396205241620,5584820966481,22339283865925,89357135463700 ⋆ Base - 4 digits are, in order, the first n terms of the periodic sequence with initial period 1,1,0. • a(n) = 4 * a(n - 1) + a(n - 3) - 4 * a(n - 4). • a(n) = floor((20 / 63) * 4 ^ n). - _ Tani Akinari _ , Jul 16 2014 •

► [A022021] 5,20,81,329,1337,5434,22086,89767,364852,1482917,6027219,24497237,99567416,404685244,1644816681,6685249720,27171759829,110437838993,448867366641,1824392026070,7415121953942,30138277741915,122495056843392,497873139253657,2023572780632275 ⋆ Define the sequence S(a(0),a(1)) by a(n + 2) is the least integer such that a(n + 2) / a(n + 1) > a(n + 1) / a(n) for n >= 0. This is S(5,20). • a(n + 1) = floor(a(n) ^ 2 / a(n - 1)) + 1 for all n > 0. - _ M. F. Hasler _ , Feb 10 2016 •

► [A006231] 0,1,5,20,84,409,2365,16064,125664,1112073,10976173,119481284,1421542628,18348340113,255323504917,3809950976992,60683990530208,1027542662934897,18430998766219317,349096664728623316,6962409983976703316,145841989688186383337 ⋆ a(n) = Sum _{ k=2..n } n(n - 1)...(n - k + 1) / k. • a(n) = n * (3F1(1,1,1 - n; 2; - 1) - 1). - _ Jean - François Alcover _ , Mar 29 2011 •

► [A152187] 1,5,20,85,355,1490,6245,26185,109780,460265,1929695,8090410,33919705,142211165,596232020,2499751885,10480415755,43940006690,184222098845,772366329985,3238209484180,13576460102465,56920427728295 ★ a(n) = 3 * a(n - 1) + 5 * a(n - 2), with a(0)=1, a(1)=5. ● a(n) = (1 / 2) * (((3 / 2) + (1 / 2) * sqrt(29)) ^ n + ((3 / 2) - (1 / 2) * sqrt(29)) ^ n) + (7 / 58) * sqrt(29) * (((3 / 2) + (1 / 2) * sqrt(29)) ^ n - ((3 / 2) - (1 / 2) * sqrt(29)) ^ n). - _ Paolo P. Lava _ , Dec 01 2008 ●

► [A341920] 1,5,20,85,385,1836,9120,46805,246675,1328925,7292688,40652780,229698220,1313175880,7585060680,44212723797,259808593975,1537840085775,9162371040900,54913015836525,330888232445505,2003659057873200,12187811305300800,74444226847892460,456458831442283860 ★ Number of simple strong triangulations of a fixed pentagon with n interior nodes. ● a(n) = 5 * (5 * n - 3) * binomial(3 * n,n) / ((n + 1) * (2 * n + 1) * (2 * n + 3)). ● a(n + 1) = 3 * (3 * n + 1) * (3 * n + 2) * (5 * n + 2) / (2 * (n + 2) * (2 * n + 5) * (5 * n - 3)) * a(n). (End) ●

► [A045499] 1,1,5,20,85,400,2046,11226,65676,407787,2675410,18475311,133843405,1014271763,8019687099,66011609670,564494701167,5005880952390,45958055208576,436161412834300,4273045478169842,43160044390231165 ★ Fourth - from - right diagonal of triangle A121207. ● a(n + 1) = Sum _{ k=0..n } binomial(n + 3, k + 3) * a(k). - _ Vladeta Jovovic _ , Nov 10 2003 ●

► [A358518] 1,5,20,85,405,2116,11766,68237,407789,2492553,15506942,97859544,624880895,4029896310,26209648212,171711104853,1132143259711,7506530891217,50019287312324,334784759816729,2249720564735567,15172573979205166,102662981205576494 ★ a(n) = Sum _{ k=0..n } binomial(n + 3 * k + 3,n - k) * Catalan(k). ● a(n) = binomial(n + 3,3) + Sum _{ k=0..n - 1 } a(k) * a(n - k - 1). ●

► [A099014] 0,1,5,20,87,365,1552,6565,27825,117844,499235,2114729,8958240,37947545,160748653,680941780,2884516383,12219006325,51760543280,219261176861,928805254905,3934482189716,16666734024715,70601418270865 ★ a(n) = Fibonacci(n) * (Fibonacci(n - 1) ^ 2 + Fibonacci(n + 1) ^ 2). ● a(n) = ((- 1) ^ n * Fib(n) + 3 * Fib(3 * n)) / 5. - _ Ehren Metcalfe _ , May 21 2016 ●

► [A219672] 0,1,5,20,87,405,1924,9225,44625,217528,1066725,5256087,26001000,129053365,642376709,3205403100,16029187391,80309053285,403040543420,2025751379997,10195547237235,51376594943136,259180112907875,1308811957775785,6615338387858107 2 ★ a(n) = Sum _{ k=0..n } binomial(n,k) ^ 2 * Fibonacci(k). ● a(n) = (hypergeom([- n, - n], [1], phi) - hypergeom([- n, - n], [1], 1 - phi)) / sqrt(5) = ((1 - phi) ^ n * P _ n(- sqrt(5) - 2) - phi ^ n * P _ n(sqrt(5) - 2)) / sqrt(5), where phi = (1 + sqrt(5)) / 2, P _ n(x) is the Legendre polynomial. - _ Vladimir Reshetnikov _ , Sep 28 2016 ●

► [A011966] 1,5,20,87,409,2066,11155,64077,389946,2504665,16923381,119928232,888980293,6876320041,55382419676,463539664643,4024626253845,36189297168874,336513491259647,3231446022478129,32004743929977258,326548129128737469,3428663026172389201 ★ Third differences of Bell numbers. ● a(n) = Bell(n + 3) - 3 * Bell(n + 2) + 3 * Bell(n + 1) - Bell(n). ●

► [A269716] 1,5,20,88,368,1504,6080,24448,98048,392704,1571840,6289408,25161728,100655104,402636800,1610579968 ★ Number of active (ON,black) cells at stage 2 ^ n - 1 of the two - dimensional cellular automaton defined by "Rule 22", based on the 5 - celled von Neumann neighborhood. ● a(n) = 2 ^ (n - 1) * (3 * 2 ^ n - 2) for n>1. ● a(n) = 6 * a(n - 1) - 8 * a(n - 2) for n>3. ●

► [A196532] 1,5,20,94,524,3408,25416,214128,2012832,20894400,237458880,2932968960,39126516480,560704273920,8591147712000,140160890419200,2425888391270400,44398288688947200,856727919929548800 ★ a(n) = (n + 1)! * (H(n) + H(n + 1)), where H(n) = Sum _{ k=1..n } 1 / k is the n - th harmonic number. ● a(n + 3) = (3 * n + 8) * a(n + 2) - (3 * n + 7) * (n + 2) * a(n + 1) + (n + 1) * (n + 2) ^ 2 * a(n). (End) ●

► [A002745] 1,5,20,96,469,3145,20684,173544,1557105,16215253,159346604,2230085528,26985045333,368730610729,5628888393652,97987283458928,1475486672174337,29097611462122437,505383110562327268,10970329921706735216 ★ Sum of logarithmic numbers. ● a(p) == - 1 (mod p) for prime p. The pseudoprimes of this congruence are 30, 858, 1722, ... - _ Amiram Eldar _ , May 13 2020 ●

► [A182959] 1,5,20,96,528,3136,19584,126720,841984,5710848,39376896,275185664,1944821760,13875707904,99807723520,722997411840,5269761884160,38620004352000,284405842575360,2103530005463040,15619068033761280 ★ G.f. 2 * (1 + x) ^ 2 / (1 - 2 * x + sqrt(1 - 8 * x)). ● a(n) = 3 * (2 ^ n) * (3 * n - 1) / (n * (n + 1)) * binomial(2 * n - 2,n - 1) for n >= 2. ●

► [A369488] 1,1,5,20,101,522,2860,16115,93200,549286,3288633,19942666,122243210,756188245,4714629930,29595888020,186903732003,1186606564605,7569137651545,48486925091800,311788811682494,2011863788481296,13022795014568290,84539592912435990 ★ Expansion of (1 / x) * Series _ Reversion(x / (1 - x) ^ 2 * (1 - x - x ^ 2) ^ 3). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 2) } binomial(3 * n + k + 2,k) * binomial(2 * n - k,n - 2 * k). ●

► [A137961] 1,1,5,20,105,575,3306,19760,121035,757230,4815530,31039402,202335855,1331569725,8834918160,59035907480,396937508816,2683518356850,18230570856710,124390574548960,852074529347120,5857453791938135 ★ G.f. satisfies A(x) = 1 + x * (1 + x * A(x) ^ 2) ^ 5. ● a(n) = Sum _{ k=0..n - 1 } C(5 * (n - k),k) / (n - k) * C(2 * k,n - k - 1) for n>0 with a(0)=1. - _ Paul D. Hanna _ , Jun 16 2009 ●

► [A300490] 0,1,1,5,20,109,689,5053,42048,391641,4036697,45618341,560889988,7454314789,106488455033,1627269878557,26487441519584,457532446622001,8359188190686609,161056273132588933,3263644496701880404,69389030027882288861,1544501472271318499105 ★ Expansion of e.g.f. - exp(- x) * log(1 - x) / (1 - x). ● a(n) = Sum _{ k=1..n } (- 1) ^ (n - k) * binomial(n,k) * k! * H(k), where H(k) is the k - th harmonic number. ●

► [A258665] 0,0,0,1,5,20,116,791,6203,55000,543576,5922813,70518113,910704988,12678282940,189251856883,3015212009143,51067548545968,916175515710896,17355891466436025,346195661281979133,7252651426282955236,159210312386078554436,3654549974493252076175 ★ A total of n married couples, including a mathematician M and his wife, are to be seated at the 2n chairs around a circular table, with no man seated next to his wife. After the ladies are seated at every other chair, M is the first man allowed to choose one of the remaining chairs. The sequence gives the number of ways of seating the other men, with no man seated next to his wife, if M chooses the chair that is 5 seats clockwise from his wife's chair. ● a(n) = Sum _{ 0<=k<=n - 1 } (- 1) ^ k * (n - k - 1)! * Sum _{ max(k - n + 3, 0)<=j<=min(k,2) } binomial(4 - j, j) * binomial(2 * n - k + j - 6, k - j). ●

► [A081067] 5,20,125,845,5780,39605,271445,1860500,12752045,87403805,599074580,4106118245,28143753125,192900153620,1322157322205,9062201101805,62113250390420,425730551631125,2918000611027445,20000273725560980 ★ Lucas(4n + 2) + 2, or 5 * Fibonacci(2n + 1) ^ 2. ● a(n) = 8a(n - 1) - 8a(n - 2) + a(n - 3). ● a(n) = 2 + (3 / 2) *{ [(7 / 2) - (3 / 2) * sqrt(5)] ^ n + [(7 / 2) + (3 / 2) * sqrt(5)] ^ n }+ (1 / 2) * sqrt(5) *{ [(7 / 2) + (3 / 2) * sqrt(5)] ^ n - [(7 / 2) - (3 / 2) * sqrt(5)] ^ n } , with n>=0. - _ Paolo P. Lava _ , Dec 01 2008 ●

► [A318250] 1,5,20,126,624,6000,36000,428400,3669120,47174400,442713600,8382528000,81430272000,1556755200000,22666355712000,445916959488000,6067609067520000,161837779783680000,2317659281473536000,66418224823222272000,1216451004088320000000,31165474724742758400000 ★ a(n) = (n - 1)! * sigma _ 2(n), where sigma _ 2(n) = sum of squares of divisors of n (A001157). ● a(p ^ k) = (p ^ (2 * k + 2) - 1) * (p ^ k - 1)! / (p ^ 2 - 1), where p is a prime. ●

► [A318433] 1,5,20,155,1220,10630,98900,960650,9613700,98462675,1027222520,10877596900,116613287300,1263159501180,13803839298920,152000845788280,1684888825463940,18785707522181965,210536007879090140,2370423142929112065,26799168520704093720 ★ Number of n - element subsets of [5n] whose elements sum to a multiple of n. ● a(n) = (- 1) ^ n * (1 / n) * Sum _{ d|n } C(5d,d) * (- 1) ^ d * phi(n / d) for n>0, a(0)=1. ●

► [A205338] 0,5,20,160,1130,8927,71630,594405,5025740,43243674,377127756,3327001441,29634744950,266164547110,2407763862342,21918167505714,200631620380132,1845576127894008,17052050519557200,158176470846492722 ★ Number of length n + 1 nonnegative integer arrays starting and ending with 0 with adjacent elements unequal but differing by no more than 5. ● a(n) = Sum _{ i=1..n } ((Sum _{ l=0..i } (binomial(i,l) * (Sum _{ j=0..(5 * (i - l)) / 11 } ((- 1) ^ j * binomial(i - l,j) * binomial(- l + 5 * (- l - 2 * j + i) - j + i - 1,5 * (- l - 2 * j + i) - j))) * (- 1) ^ l)) * a(n - i)) / n, a(0)=1. - _ Vladimir Kruchinin _ , Apr 07 2017 ●

► [A189317] 5,20,180,1700,16100,152500,1444500,13682500,129602500,1227612500,11628112500,110143062500,1043290062500,9882185312500,93605402812500,886643101562500,8398404001562500,79550824507812500,753516225070312500,7137408128164062500 ★ Expansion of 5 * (1 - 6 * x + x ^ 2) / (1 - 10 * x + 5 * x ^ 2) ● a(n)=10 * a(n - 1) - 5 * a(n - 2), n>2, a(0)=5, a(1)=20, a(2)=180. ● a(n)=Sum _{ k=1..5) ((w _ k) ^ 3 - 2 * w _ k) ^ (2 * n), w _ k=2 * cos((2 * k - 1) * Pi / 10). ● a(n)=2 * ((5 - 2 * Sqrt(5)) ^ n + (5 + 2 * Sqrt(5)) ^ n), for n>0, with a(0)=5. ●

► [A228141] 1,5,21,25,41,45,61,65,81,85,101,105,121,125,141,145,161,165,181,185,201,205,221,225,241 ★ Numbers that are congruent to { 1, 5 } mod 20. ● a(n) = - 3 * (4 + (- 1) ^ n) + 10 * n. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3). ●

► [A170837] 0,1,5,21,37,53,69,85,101,117,133,149,165,181,197,213,229,245,261,277,293,309,325,341,357 ★ a(0)=0, a(1)=1 and a(n) = 16n - 27 for n >= 2. ● a(n) = 2 * a(n - 1) - a(n - 2), n>=4. ●

► [A373193] 1,5,21,37,61,89,129,177,221,277,341,401,489,561,657,749,845,949,1049,1185,1313,1441,1573,1709,1877 ★ On a unit square grid, the number of squares enclosed by a circle of radius n with origin at the center of a square. ● a(n) = 4 * Sum _{ k=1..n - 1 } floor(sqrt(n ^ 2 - (k + 1 / 2) ^ 2) - 1 / 2) + 4 * n - 3. ●

► [A341198] 1,5,21,37,61,97,129,177,221,277,349,413,489,569,657,749,845,957,1073,1193,1313,1441,1581,1733,1877 ★ Number of points on or inside the circle of radius n, as rasterized by the midpoint circle algorithm. ● a(n) == 1 (mod 4). ●

► [A366346] 0,5,21,40,111,160,270,342,505,812,937,1335,1632,1800,2170,2750,3427,3672,4415,4967,5260,6152,6800,7847,9305 ★ a(n) = A002070(n) + A036689(n). ● a(n) = Sum _{ y=1..prime(n) } Sum _{ x=1..prime(n) } [GCD(f(x,y), prime(n)) = 1], ● a(n) = Sum _{ y=1..prime(n) } Sum _{ x=1..prime(n) } (1 - [MOD(f(x,y), prime(n)) = 0]) where f(x,y) = x ^ 3 - x ^ 2 - y ^ 2 - y, in the last two formulas. ●

► [A265056] 1,5,21,45,77,117,165,221,285,357,437,525,621,725,837,957,1085,1221,1365,1517,1677,1845,2021,2205,2397 ★ Partial sums of A234275. ● a(n) = 4 * n ^ 2 + 4 * n - 3 for n>0. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>3. ●

► [A078371] 5,21,45,77,117,165,221,285,357,437,525,621,725,837,957,1085,1221,1365,1517,1677,1845,2021,2205,2397,2597 ★ a(n) = (2 * n + 5) * (2 * n + 1). ● a(n) = 8 * (binomial(n + 2, 2) - 1) + 5, hence subsequence of A004770 (5 (mod 8) numbers). ● a(n) = 8 * (n + 1) + a(n - 1) for n > 0, a(0)=5. - _ Vincenzo Librandi _ , Aug 08 2010 ●

► [A296200] 1,5,21,47,104,182,318,490,755,1075,1531,2065,2786,3612,4684,5892,7413,9105,11185,13475,16236,19250,22826,26702,31239 ★ Harary index of the n X n white bishop graph. ● a(n) = (21 - 4 * n - 42 * n ^ 2 + 16 * n ^ 3 + 6 * n ^ 4 + 3 * (- 1) ^ n * (- 7 + 4 * n + 2 * n ^ 2)) / 96. ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 6 * a(n - 3) + 6 * a(n - 5) - 2 * a(n - 6) - 2 * a(n - 7) + a(n - 8). ●

► [A041825] 1,1,5,21,47,115,162,601,7975,8576,16551,25127,41678,566941,1742501,2309442,6361385,15032212,66490233,280993144,347483377,14180328224,14527811601,72291574628,303694110113 ★ Denominators of continued fraction convergents to sqrt(433). ● a(n) = 14461321368 * a(n - 21) + a(n - 42) for n>41. - _ Vincenzo Librandi _ , Dec 25 2013 ●

► [A022268] 0,5,21,48,86,135,195,266,348,441,545,660,786,923,1071,1230,1400,1581,1773,1976,2190,2415,2651,2898,3156 ★ a(n) = n * (11 * n - 1) / 2. ● a(n) = 11 * n + a(n - 1) - 6 for n>0. - _ Vincenzo Librandi _ , Aug 04 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n > 2. ● a(n) = (1 / 9) * Sum _{ i=n..10 n - 1 } i. (End) ●

► [A366723] 1,5,21,50,121,236,447,736,1247,1896,2898,4151,5972,8146,11292,14797,19643,25248,32564,40663,51515,63168,78119,94452,114998 ★ a(n) = Sum _{ k=1..n } (- 1) ^ (k - 1) * binomial(floor(n / k) + 4,5). ● a(n) = Sum _{ k=1..n } binomial(k + 3,4) * (floor(n / k) mod 2). ●

► [A339623] 1,5,21,52,97,156,229,316,417,532,661,804,961,1132,1317,1516,1729,1956,2197,2452,2721,3004,3301,3612,3937 ★ Consider a square drawn on the peri

meter of a square lattice with side length n. a(n) is the number of regions inside the square after drawing unit circles centered at each interior lattice point of the square. • a(n) = 7 * n ^ 2 - 18 * n + 12 for n >= 3, with a(1) = 1, a(2) = 5. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n >= 3. (End) •

▶ [A147834] 1,1,5,21,53,197,661,2085,7093,23365,76757,255333,842741,2785157,9220117,30473637,100775989,333311941,1102099541,3644659173,12052800629,39856631813,131803744405,435863879205,1441358438581 ⋆ Coefficient expansion of the characteristic polynomial of the { 3,4,5 } simplex matrix: M = {{ 0, 3, 0 } , { 0, 0, 4 } , { 1, 1, 1 }} ; p(x)=12 + 4 x + x ^ 2 - x ^ 3. • a(n) = a(n - 1) + 4 * a(n - 2) + 12 * a(n - 3) for n>2. •

▶ [A160378] 0,0,5,21,54,110,195,315,476,684,945,1265,1650,2106,2639,3255,3960,4760,5661,6669,7790,9030,10395,11891,13524 ⋆ a(n) = n ^ 3 - n * (n + 1) / 2. • a(n) = (2 * n ^ 3 - n ^ 2 - n) / 2. - _ Vincenzo Librandi _ , Dec 12 2010; edited by _ Klaus Brockhaus _ , Dec 12 2010 • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n > 3. •

▶ [A096942] 5,21,55,115,210,350,546,810,1155,1595,2145,2821,3640,4620,5780,7140,8721,10545,12635,15015,17710,20746,24150,27950,32175 ⋆ Fifth column of (1, 5) - Pascal triangle A096940. • a(n) = sum _{ k=1..n } (sum _{ i=1..k) i * (n - k + 5)). - _ Wesley Ivan Hurt _ , Sep 26 2013 •

▶ [A033275] 0,5,21,56,120,225,385,616,936,1365,1925,2640,3536,4641,5985,7600,9520,11781,14421,17480,21000,25025,29601,34776,40600 ⋆ Number of diagonal dissections of an n - gon into 3 regions. • a(n) = binomial(n + 1, 2) * binomial(n - 3, 2) / 3. •

▶ [A166464] 1,5,21,57,121,221,365,561,817,1141,1541,2025,2601,3277,4061,4961,5985,7141,8437,9881,11481,13245,15181,17297,19601 ⋆ a(n) = (3 + 2n + 6n ^ 2 + 4n ^ 3) / 3. • a(n) = 3a(n - 1) - 3a(n - 2) + a(n - 3) + 8 or a(n) - 3a(n - 1) + 3a(n - 2) - a(n - 3)=8 =A010731. •

▶ [A059859] 0,0,1,5,21,57,138,282,538,938,1563,2463,3759,5523,7924,11060,15156,20340,26901,35001,45001,57101,71742,89166,109902 ⋆ Sum of squares of first n quarter - squares (A002620). • a(n) = 3 * a(n - 1) - 8 * a(n - 3) + 6 * a(n - 4) + 6 * a(n - 5) - 8 * a(n - 6) + 3 * a(n - 8) - a(n - 9). • a(n) = Sum _{ i=1..n } floor(i ^ 2 / 4) ^ 2). - _ Enrique Pérez Herrero _ , Mar 20 2012 • a(n) = (2 * n * (2 * n ^ 4 + 5 * n ^ 3 - 5 * n + 3) + 5 * (2 * n * (n + 1) - 1) * (- 1) ^ n + 5) / 320. - _ Bruno Berselli _ , Mar 21 2012 •

▶ [A203233] 1,5,21,60,216,540,1836,4320,14256,32400,104976,233280,746496,1632960,5178816,11197440,35271936,75582720,236825856,503884800,1572120576,3325639680,10339716096,21767823360,67480252416 ⋆ (n - 1) - st elementary symmetric function of the first n terms of the periodic sequence (3,2,3,2,3,2,...). • a(n) = (5 / 12) * n * 6 ^ (n / 2) if n is even, (5 * n - 1) * 6 ^ ((n + 1) / 2) / 24 if n is odd. - _ Robert Israel _ , May 04 2017 •

▶ [A303170] 1,1,1,1,5,21,61,141,309,757,2111,6051,16721,44617,118301,318501,871781,2400741,6596953,18067329,49460555,135697395,373271515,1028451579,2835353337 ⋆ Number of ordered ways of writing n as a sum of n tetrahedral numbers. • a(n) = [x ^ n] (Sum _{ k>=0 } x ^ (k * (k + 1) * (k + 2) / 6)) ^ n. •

▶ [A287617] 1,1,1,1,5,21,61,141,309,766,2191,6436,18041,48348,128311,347166,960197,2674883,7413514,20411986,56130675,154907229,429349768,1192532452,3312339849 ⋆ Main diagonal of A045847. • a(n) = [x ^ n] (1 + theta _ 3(x)) ^ n / 2 ^ n, where theta _ () is the Jacobi theta function. - _ Ilya Gutkovskiy _ , Jan 17 2018 •

▶ [A354551] 1,1,1,1,5,21,61,211,1401,8065,37241,240021,1997821,13856701,94418325,874328911,8304303281,69158458881,658339599601,7454839614985,78224066633781,805961931388741,9828080719704941,124199805022959051,1466207770078872745 ⋆ Expansion of e.g.f. exp(x * exp(x ^ 3 / 6)). • a(n) = n! * Sum _{ k=0..floor(n / 3) } (n - 3 * k) ^ k / (6 ^ k * k! * (n - 3 * k)!). •

▶ [A351934] 1,1,1,1,5,21,61,281,1961,10585,59641,509521,4086061,29792621,288051765,2997900361,27857436881,302238265841,3759751338481,43054257392545,526471319508181,7463835257515141,101755979383832621,1404876681654178041,22115830210157954425 ⋆ Expansion of e.g.f. exp(x / (1 - x ^ 3 / 6)). • a(n) = Sum _{ k=0..floor((n - 1) / 3) } (3 * k + 1)! / 6 ^ k * binomial(n - 1,3 * k) * a(n - 1 - 3 * k) for n > 3. •

▶ [A362573] 1,1,1,1,5,21,61,351,2521,13105,96041,933021,7098301,65348141,787190405,7896243811,88712631281,1269172794401,15784837036561,210688183375705,3486485630182581,51674172769168741,801474314335394701,15059801657898920231,258815184609843935305 ⋆ E.g.f. satisfies A(x) = exp(x * A(x) ^ (x ^ 2 / 6)). • a(n) = n! * Sum _{ k=0..floor(n / 3) } ((n - 2 * k) / 6) ^ k * binomial(n - 2 * k - 1,k) / (n - 2 * k)!. •

▶ [A357723] 0,0,0,5,21,63,135,270,462,770,1170,1755,2475,3465,4641,6188,7980,10260,12852,16065,19665,24035,28875,34650,40986 ⋆ Number of ways to place a non - attacking black king and white king on an n X n board, up to rotation and reflection. • a(n) = n ^ 4 / 8 - (5 / 8) * n ^ 2 + 1 / 2 if n is odd, else n ^ 4 / 8 - (7 / 8) * n ^ 2 + (3 / 4) * n. • a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 6 * a(n - 3) + 6 * a(n - 5) - 2 * a(n - 6) - 2 * a(n - 7) + a(n - 8). • a(n) = n ^ 4 / 8 - (3 / 4) * n ^ 2 + (3 / 8) * n + 1 / 4 + (- (1 / 8) * n ^ 2 + (3 / 8) * n - 1 / 4) * (- 1) ^ n. • a(n) = (n ^ 4 + (2 * (n mod 2) - 7) * n ^ 2 + 6 * (1 - (n mod 2)) * n + (n mod 2) * 4) / 8. • a(n) = (n - 2) * (n - 1) * (n ^ 2 + 3 * n + 2 * (n mod 2)) / 8. •

▶ [A342379] 0,0,0,0,0,5,21,63,162,381,847,1815,3796,7813,15913,32191,64838,130237,261155,523127,1047224,2095589,4192509,8386559,16774890 ⋆ Expansion of e.g.f. (exp(x) - 1) * (exp(x) - x ^ 3 / 6 - x ^ 2 / 2 - x - 1). • a(n) = 2 ^ n - Sum _{ i= { 0..3,n }} binomial(n,i). •

▶ [A202462] 1,5,21,70,214,614,1703,4619,12363,32812,86636,228012,598893,1571089,4118305,10790194,28262594,74014290,193807315,507451415,1328617751,3478516440,9107117016,23843134680,62422772569 ⋆ a(n) = Sum _{ j=1..n } Sum _{ i=1..n } F(i,j), where F is the Fibonacci fusion array of A202453. • a(n) = Fibonacci(n + 2) * Fibonacci(n + 3) - 2 * Fibonacci(n + 4) + n + 4. - _ G. C. Greubel _ , Jul 23 2019 •

▶ [A186948] 1,1,5,21,73,233,717,2173,6545,19665,59029,177125,531417,1594297,4782941,14348877,43046689,129140129,387420453,1162261429,3486784361,10460353161,31381059565,94143178781,282429536433 ⋆ a(n) = 3 ^ n - 2 * n. • a(n) = 3 * a(n - 1) + 2 * (2n - 3). - _ Vincenzo Librandi _ , Mar 13 2011 • a(n) = 5 * a(n - 1) - 7 * a(n - 2) + 3 * a(n - 3); a(0)=1, a(1)=1, a(2)=5. - _ Harvey P. Dale _ , Nov 24 2011 •

▶ [A126645] 5,21,77,261,845,2661,8237,25221,76685,232101,700397,2109381,6344525,19066341,57264557,171924741,516036365,1548633381,4646948717,13942943301,41833024205,125507461221,376539160877,1129651037061,3389020220045 ⋆ a(n) is the number of integers k less than 10 ^ n such that the decimal representation of k lacks the digits 1,2,3,4 and 5, at least one of digits 6,7 and at least one of digits 8,9. • a(n) = 4 * 3 ^ n - 4 * 2 ^ n + 1. • a(n) = 6 * a(n - 1) - 11 * a(n - 2) + 6 * a(n - 3). - _ Colin Barker _ , Feb 22 2015 •

▶ [A014533] 1,5,21,77,266,882,2850,9042,28314,87802,270270,827190,2520336,7651632,23162976,69954048,210859245,634569201,1907165337,5725520801,17172595110,51465297950,154135675070,461366154990,1380317174145 ⋆ Form array in which n - th row is obtained by expanding (1 + x + x ^ 2) ^ n and taking the 4th column from the center. • a(n) = C(6 + 2 * n, n - 1) * hypergeom([- n + 1, - n - 7], [- 5 / 2 - n], 1 / 4). • a(n) = GegenbauerC(n - 1, - n - 3, - 1 / 2). (End) •

▶ [A084780] 1,5,21,77,291,1119,3523,15007,50923,182669,701121,2379129,8909361,32490021,106309861,423990203,1456199483,5089398187,19942506259,65753622619,252337832801,903751067081,3026099773993,11771846189609 ⋆ a(n) = sum of absolute - valued coefficients of (1 + 3 * x - x ^ 2) ^ n. • a(n) = Sum _{ k=0..2 * n } abs(f(n, k)), where f(n, k) = (n! / (2 * n - k)!) * i ^ (k - n) * (13) ^ (n / 2) * LegendreP(n, n - k, 3 / sqrt(13)).. - _ G. C. Greubel _ , Jun 04 2023 •

▶ [A186244] 0,0,1,5,21,79,281,963,3217,10547,34089,108955,345137,1085331,3392377,10549739,32667201,100782787,309946697,950599131,2908512145,8880484019,27064776729,82350874699,250212362465 ⋆ Number of ternary strings of length n containing 00. • a(n) = 3 * a(n - 1) + 2 * (3 ^ (n - 3) - a(n - 3)). This recursive formula is based on adding any of { 0,1,2 } to strings of length n - 1 which already have 00 in them, or { 100,200 } to strings of length n - 3 which do not. For n = 3, we add { 0,1,2 } to 00, and { 100,200 } to the empty string to get the 5 strings of length 3 which have 00 in them. For n = 4, we add { 0,1,2 } to those 5, and { 100,200 } to all three strings of length 1, to get the 21 strings of length 4. • a(n) = - (1 / 3) * (1 + sqrt(3)) ^ n * sqrt(3) - (1 / 2) * (1 + sqrt(3)) ^ n + 3 ^ n - (1 / 2) * (1 - sqrt(3)) ^ n + (1 / 3) * sqrt(3) * (1 - sqrt(3)) ^ n. - _ Alexander R. Povolotsky _ , Feb 18 2011 • a(n) = 2 * a(n - 1) + 2 * a(n - 2) + 3 ^ (n - 2). This recursive formula is based on adding the case where the last two digits are not the same to the case where the last two digits are the same. In the first case, there are 2 * a(n - 1) strings, since any string of length n - 1 containing 00 can be made into an appropriate string of length n by appending either of the values { 0,1,2 } that are not the same as the (n - 1) - th digit. The case where the last two digits are the same has two subcases: to any string of length n - 2 containing 00, we can append 11 or 22. There are 2 * a(n - 2) strings in this subcase. Or, to any string of length n - 2 (whether or not it contains 00), we can append 00. There are 3 ^ (n - 2) strings in this subcase. - _ Todd Cadwaladerolsker _ , Oct 24 2020 • a(n) = 5 * a(n - 1) - 4 * a(n - 2) - 6 * a(n - 3). - _ Kevin Ryde _ , Oct 24 2020 •

▶ [A231430] 0,0,0,1,5,21,81,295,1037,3555,11961,39667,130049,422403,1361385,4359115,13880129,43984227,138795849,436367131,1367434577,4272615603,13315096089,41397076939,128429930465 ⋆ Number of ternary sequences which contain 000. • a(n) = 3 * a(n - 1) + 2 * (3 ^ (n - 4) - a(n - 4)). •

▶ [A081038] 1,5,21,81,297,1053,3645,12393,41553,137781,452709,1476225,4782969,15411789,49424013,157837977,502211745,1592728677,5036466357,15884240049,49977243081,156905298045,491636600541,1537671920841 ⋆ 3rd binomial transform of (1,2,0,0,0,0,0,0,...). • a(n) = 6 * a(n - 1) - 9 * a(n - 2), with a(0)=1, a(1)=5. • a(n) = (2 * n + 3) * 3 ^ (n - 1). • a(n) = Sum _{ k=0..n } (k + 1) * 2 ^ k * binomial(n, k). •

▶ [A292878] 1,5,21,81,313,1213,4701,18217,70593,273557,1060069,4107905,15918665,61686893,239044717,926329305,3589646289,13910345285,53904393461,208886521137,809462381657,3136771792413,12155397830269,47103744291977,182533122922465 ⋆ Number of ascending ballistic random walks of length n in 3 - dimensions. • a(n) = a(n - 1) + 4(2 ^ n - 1) + 4 Sum _{ k=2..n } (2 ^ (k - 1) - 1) * a(n - k) for n > 0. • a(n) = 4a(n - 1) - a(n - 2) + 2a(n - 3). •

▶ [A346225] 1,1,5,21,81,325,1433,6473,28741,128457,585837,2711361,12591237,58423305,272649261,1281745485,6054729657,28656157453,135772544321,645415060421,3078755726041,14721799860429,70493732528001,337920205112261,1623127315174873 ⋆ Number of n - step 4 - dimensional nonnegative lattice walks starting at the origin and using steps that increment all components or decrement one component by 1. • a(n) == 1 (mod 4). •

▶ [A094834] 1,5,21,82,308,1131,4096,14705,52497,186733,662630,2347680,8309143,29388368,103895601,367187437,1297452581,4583924154,16193659132,57204089987,202065531888,713750040577,2521114546457,8905002445437 ⋆ Number of (s(0), s(1), ..., s(2n + 1)) such that 0 < s(i) < 9 and |s(i) - s(i - 1)| = 1 for i = 1,2,...,2n + 1, s(0) = 3, s(2n + 1) = 6. • a(n) = (2 / 9) * Sum _{ r=1..8 } sin(r * Pi / 3) * sin(2 * r * Pi / 3) * (2 * cos(r * Pi / 9)) ^ (2n + 1). • a(n) = 6 * a(n - 1) - 9 * a(n - 2) + a(n - 3). •

▶ [A303647] 1,5,21,82,317,1221,4699,18080,69561,267625,1029641,3961362,15240637,58635641,225590199,867918160,3339160721,12846826845,49425880861,190157283842,731596320957,2814686695261,10829006332499,41662675404240,160289731905481 ⋆ a(n) = ceiling(a(n - 1) / (2 ^ (1 / 3) - 1) + 1), a(1)=1. • a(n) = 4 * a(n - 1) - 2 * a(n - 3) - a(n - 4) for n>4. •

▶ [A217783] 1,5,21,83,318,1196,4445,16389,60097,219527,799734,2907800,10558041,38297573,138819053,502925211,1821362830,6594366404,23870720757,86396702117,312668994969,1131463798415,4094241931526,14814592074288,53603587025713 ⋆ Expansion of (1 - x) * (1 - 2x) / ((1 - 5x + 5 * x ^ 2) * (1 - 3x + x ^ 2)). • a(n) = 8 * a(n - 1) - 21 * a(n - 2) + 20 * a(n - 3) - 5 * a(n - 4) for n>=4, a(0) = 1, a(1) = 5, a(2) = 21, a(3) = 83. •

▶ [A221862] 1,5,21,83,319,1208,4535,16932,62986,233702,865513,3201026,11826582,43660921,161090910,594092895,2190225106,8072519511,29746921227,109599320930,403758993204,1487294628182,5478244777582,20177275278559,74313150143975 ⋆ Expansion of (1 - 3 * x + x ^ 2) * (1 - x) / (1 - 9 * x + 28 * x ^ 2 - 35 * x ^ 3 + 15 * x ^ 4 - x ^ 5). • a(n) = 9 * a(n - 1) - 28 * a(n - 2) + 35 * a(n - 3) -

15 * a(n - 4) + a(n - 5) with a(0) = 1, a(1) = 5, a(2) = 21, a(3) = 83, a(4) = 319. ●

▶ [A216271] 1,5,21,83,319,1209,4549,17051,63783,238337,890077,3322995,12403951,46296905,172791861,644886923,2406788599,8982333009,33522674509,125108627171,466912358463,1742541855257,6503257159717,24270490977915,90578715140551 ★ Expansion of (1 - x) / ((1 - 2x)(1 - 4x + x ^ 2)). ● a(n) = 6 * a(n - 1) - 9 * a(n - 2) + 2 * a(n - 3), a(0) = 1, a(1) = 5, a(2) = 21. ●

▶ [A132310] 1,5,21,83,319,1209,4551,17085,64125,240995,907741,3428655,12990121,49370963,188229489,719805987,2760498351,10615101273,40920439119,158106581157,612166272291,2374756691313,9228369037659,35918537840577 ★ a(n) = 3 ^ n * Sum _{ k=0..n } binomial(2 * k,k) / 3 ^ k. ● a(n) = C(2n,n) * sum _{ k =0..2n } trinomial(n,k) / C(2n,k) where trinomial(n,k) = [x ^ k] (1 + x + x ^ 2) ^ n, where [x ^ k] denotes "coefficient of x ^ k in ...". ● a(n) = sum _{ k=0.. 2n } trinomial(n,k) * k! * (2 * n - k)! / (n!) ^ 2. ●

▶ [A083319] 1,5,21,83,321,1235,4761,18443,71841,281315,1106601,4369403,17304561,68694995,273202041,1088057963,4337948481,17308878275,69106635081,276039644123,1102997363601,4408504767155,17623562909721,70462878967883 ★ 4 ^ n + 3 ^ n - 2 ^ n. ● a(n)=4 ^ n + 3 ^ n - 2 ^ n. ●

▶ [A215008] 0,1,5,21,84,329,1274,4900,18767,71687,273371,1041348,3964051,15083082,57374296,218205281,829778397,3155194917,11996903828,45614046737,173428037986,659377938380,2506951364015,9531364676687,36237879209259 ★ a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 7 * a(n - 3), a(0)=0, a(1)=1, a(2)=5. ● a(n + 1) - 2 * a(n) = (1 / sqrt(7)) * Sum _{ k=0,1,2 } cot(2 ^ k * alpha) * (2 * sin(2 ^ k * alpha)) ^ (2n), where alpha = 2 * Pi / 7. - _ Roman Witula _ , May 16 2014 ●

▶ [A002054] 1,5,21,84,330,1287,5005,19448,75582,293930,1144066,4457400,17383860,67863915,265182525,1037158320,4059928950,15905368710,62359143990,244626270200,960566918220,3773655750150,14833897694226,58343356817424,229591913401900 ★ Binomial coefficient C(2n + 1, n - 1). ● a(n) = Sum _{ j=0..n - 1 } binomial(2 * j, j) * binomial(2 * n - 2 * j, n - j - 1) / (j + 1). - Yong Kong (ykong(AT)curagen.com), Dec 26 2000 ● a(n) = (1 / (n + 1)) * Sum _{ i=0..n - 1 } (n + 1 - i) * binomial(2n + 2,i), n >= 1. - _ Taras Goy _ , Aug 09 2018 ●

▶ [A289797] 1,5,21,84,330,1291,5052,19784,77500,303608,1189372,4659245,18252027,71500068,280092848,1097230105,4298267549,16837948391,65960645632,258392925744,1012223324455,3965263584006,15533444957104,60850409347588,238374187312038 ★ p - INVERT of the triangular numbers (A000217), where p(S) = 1 - S - S ^ 2. ● a(n) = 7 * a(n - 1) - 17 * a(n - 2) + 23 * a(n - 3) - 16 * a(n - 4) + 6 * a(n - 5) - a(n - 6). ●

▶ [A246986] 1,5,21,84,331,1300,5111,20144,79611,315420,1252351,4980904,19837091,79086740,315557991,1259856864,5032285771,20107685260,80366302031,321271760024,1284506433651,5136283390980,20539905484471,82143935602384,328528679208731 ★ Expansion of (1 - 5 * x + 6 * x ^ 2 - x ^ 3) / ((1 - x) * (1 - 2 * x) * (1 - 3 * x) * (1 - 4 * x)). ● a(n) = (3 ^ (n + 1) + 7 * 4 ^ n - 3 * 2 ^ n - 1) / 6. - _ Todd Silvestri _ , Nov 16 2014 ●

▶ [A002450] 0,1,5,21,85,341,1365,5461,21845,87381,349525,1398101,5592405,22369621,89478485,357913941,1431655765,5726623061,22906492245,91625968981,366503875925,1466015503701,5864062014805,23456248059221,93824992236885 ★ a(n) = (4 ^ n - 1) / 3. ● a(n + 1) = 4 * a(n) + 1, with a(0) = 0. - _ Philippe Deléham _ , Feb 25 2004 ● a(n) = Sum _{ i = 0..n - 1 } C(2 * n - 1 - i, i) * 2 ^ i . - Mario Catalani (mario.catalani(AT)unito.it), Jul 23 2004 ● a(n + 1) = Sum _{ k = 0..n } binomial(n + 1, k + 1) * 3 ^ k. - _ Paul Barry _ , Aug 20 2004 ● a(n) = 4 * a(n - 1) + a(n - 2) - 4 * a(n - 3) = 5 * a(n - 1) - 4 * a(n - 2), a(0) = 0, a(1) = 1, a(2) = 5. - _ Wolfdieter Lang _ , Oct 18 2010 ● a(0) = 0, a(n + 1) = a(n) + 2 ^ (2 * n). - _ Washington Bomfim _ , Jan 21 2011 ● a(n) = Sum _{ k = 1..floor((n + 2) / 3) } C(2 * n + 1, n + 2 - 3 * k). - _ Mircea Merca _ , Jun 25 2011 ●

▶ [A273489] 1,5,21,85,413,1765,7325,30085,122813,499045,2020445,8156485,32854013,132108325,530526365,2128417285 ★ Number of active (ON,black) cells at stage 2 ^ n - 1 of the two - dimensional cellular automaton defined by "Rule 758", based on the 5 - celled von Neumann neighborhood. ● a(n) = 10 * a(n - 1) - 35 * a(n - 2) + 50 * a(n - 3) - 24 * a(n - 4) for n>6. ●

▶ [A097113] 1,5,21,85,421,1445,8181,24565,155461,417605,2904981,7099285,53578981,120687845,977951541,2051693365,17698918021,34878787205,318061475541,592939382485,5681922991141,10079969502245,100990737360501 ★ Expansion of (1 + 5 * x - 12 * x ^ 2 - 80 * x ^ 3) / (1 - 33 * x ^ 2 + 272 * x ^ 4). ● a(n) = 33 * a(n - 2) - 272 * a(n - 4). ● a(n) = (5 / 2 + 5 * sqrt(17) / 34) * (sqrt(17)) ^ n + (5 / 2 - 5 * sqrt(17) / 34) * (- sqrt(17)) ^ n - 4 ^ (n + 1) * (1 + (- 1) ^ n) / 2. ● a(n) = Sum _{ k=0..n } binomial(floor(n / 2), floor(k / 2))4 ^ k. ●

▶ [A368345] 0,0,0,1,5,21,86,346,1386,5547,22191,88767,355072,1420292,5681172,22724693,90898777,363595113,1454380458,5817521838,23270087358,93080349439,372321397763,1489285591059,5957142364244 ★ a(n) = Sum _{ k=0..n } 4 ^ (n - k) * floor(k / 3). ● a(n) = a(n - 3) + (4 ^ (n - 2) - 1) / 3. ● a(n) = 1 / 3 * Sum _{ k=0..n } floor(4 ^ k / 21) = Sum _{ k=0..n } floor(4 ^ k / 63). ● a(n) = 5 * a(n - 1) - 4 * a(n - 2) + a(n - 3) - 5 * a(n - 4) + 4 * a(n - 5). ● a(n) = (floor(4 ^ (n + 1) / 63) - floor((n + 1) / 3)) / 3. ●

▶ [A265939] 1,5,21,86,349,1410,5682,22860,91869,368906,1480486,5938740,23813746,95462996,382594884,1533053976,6141910749,24603000666,98541647454,394644228516,1580344177254,6327940829436,25336229584764,101436400902696,406088663224434 ★ Central terms of triangle A102363. ● a(n) = (3 * 4 ^ n - binomial(2 * n, n)) / 2. - _ Vaclav Kotesovec _ , Feb 21 2016 ●

▶ [A012814] 0,1,5,21,86,351,1432,5842,23833,97229,396655,1618192,6601569,26931732,109870576,448227521,1828587033,7459895657,30433357674,124155792775,506505428836,2066337330754,8429820731201 ★ Take every 5th term of Padovan sequence A000931, beginning with the third term. ● a(n + 3) = 5 * a(n + 2) - 4 * a(n + 1) + a(n). ●

▶ [A292494] 1,5,21,88,362,1470,5940,23996,97028,392592,1588840,6430088,26021472,105301184,426118816,1724362608,6977946160,28237566352,114268643984,462409605552,1871227376592,7572272759344,30642622403664,124001121308400,501793808163600 ★ p - INVERT of the odd positive integers, where p(S) = 1 - S - S ^ 2 - S ^ 3. ● a(n) = 7 * a(n - 1) - 17 * a(n - 2) + 23 * a(n - 3) + 12 * a(n - 4) + 6 * a(n - 5) + 2 * a(n - 6) for n >= 7. ●

▶ [A347041] 0,0,1,5,21,88,389,1852,9525,52632,310141,1936489,12749204,88149847,637769490,4812457992,37763509549,307453610201,2592851608305,22626572045811,204197274002794,1905132039608335,18370391387293756,183001650861913887,1882207129695280320 ★ Stirling transform of pi (A000720). ● a(n) = Sum _{ k=0..n } Stirling2(n,k) * pi(k). ●

▶ [A015448] 1,1,5,21,89,377,1597,6765,28657,121393,514229,2178309,9227465,39088169,165580141,701408733,2971215073,12586269025,53316291173,225851433717,956722026041,4052739537881,17167680177565,72723460248141,308061521170129 ★ a(0) = 1, a(1) = 1, and a(n) = 4 * a(n - 1) + a(n - 2) for n >= 2. ● a(n) = Fibonacci(3n - 1) = ((1 + sqrt(5)) * (2 - sqrt(5)) ^ n - (1 - sqrt(5)) * (2 + sqrt(5)) ^ n) / (2 * sqrt(5)). ● a(n) = upper left term in the 2 X 2 matrix [1,2; 2,3] ^ n. - _ Gary W. Adamson _ , Mar 02 2008 ● a(n) = Fibonacci(3n + 1) mod Fibonacci(3n), n > 0. ● a(n) = (5 * F(n) ^ 3 + 5 * F(n - 1) ^ 3 + 3 * (- 1) ^ n * F(n - 2)) / 2, ● a(n) = (F(n + 1) ^ 3 + 2 * F(n) ^ 3 - F(n - 2) ^ 3) / 2, n >= 0, with F(- 1) = 1 and F(- 2) = - 1. Second line from first one with 3 * (- 1) ^ n * F(n - 2) = F(n - 1) ^ 3 - 4 * F(n - 2) ^ 3 - F(n - 3) ^ 3 (in Koshy's book, p. 89 , 32. (with a - sign) and 33. For the Koshy reference see A000045) and the F ^ 3 recurrence (see row n=4 of A055870, or Koshy p. 87, 1.). First line from the preceding _ R. J. Mathar _ formula with F(3 * n) = 5 * F(n) ^ 3 + 3 * (- 1) ^ n * F(n) (Koshy p. 89, 46.) and the above mentioned formula, Koshy's 32. and 33., with n - > n + 2 in order to eliminate F(n + 1) ^ 3. (End) ● a(n + 1) = i ^ n * (S(n - 1, - 4 * i) - i * S(n - 2, - 4 * i)), for n >= 0, with i = sqrt(- 1), and the Chebyshev S - polynomials (see A049310) with S(n, - 1) = 0. From the simplified Fibonacci trisection formula for { F(3 * n + 2) }_{ n>=0). (End) ●

▶ [A273796] 1,5,21,89,385,1649,6961,29009,119665,489809,1993201,8075729,32613745,131391569,528384241,2122007249 ★ Number of active (ON,black) cells at stage 2 ^ n - 1 of the two - dimensional cellular automaton defined by "Rule 942", based on the 5 - celled von Neumann neighborhood. ● a(n) = 10 * a(n - 1) - 35 * a(n - 2) + 50 * a(n - 3) - 24 * a(n - 4) for n>5. ●

▶ [A188707] 5,21,90,387,1665,7164,30825,132633,570690,2455551,10565685,45461772,195611805,841673709,3621533130,15582644523,67048623225,288495188556,1241330043105,5341164667857,22981833209970,98885672046279 ★ Number of 3 X n binary arrays without the pattern 0 0 diagonally or vertically. ● a(n) = 5 * a(n - 1) - 3 * a(n - 2). ● a(n) = [1,1;1,4] ^ (n - 1). { 1,2 } . { 1,2 } . - _ John M. Campbell _ , Jul 09 2011 ●

▶ [A164037] 5,21,91,399,1757,7749,34195,150927,666197,2940693,12980779,57299823,252933485,1116502149,4928478499,21755355951,96032786213,423909225621,1871225850235,8259990522063,36461362180733,160948239429957 ★ Expansion of (5 - 9 * x) / (1 - 6 * x + 7 * x ^ 2). ● a(n) = 6 * a(n - 1) - 7 * a(n - 2) for n > 1; a(0) = 5, a(1) = 21. ● a(n) = ((5 + 3 * sqrt(2)) * (3 + sqrt(2)) ^ n + (5 - 3 * sqrt(2)) * (3 - sqrt(2)) ^ n) / 2. ●

▶ [A125784] 1,5,21,91,433,2307,13804,92433,688611,5670713,51291468,506502769,5430460072,62894124926,783259655434,10445143907067,148592182641759,2247301621235992,36021020633412788,610161098104988668 ★ Column 4 of table A125781. ● a(n) = Sum _{ k=0..n } [A091351 ^ 2](n + 1,k + 1) where A091351 ^ 2 is the matrix square of A091351. ●

▶ [A373958] 1,5,21,92,414,1869,8427,37975,171121,771119,3474913,15659094,70564951,317988473,1432958824,6457375642,29099021980,131129599227,590912361256,2662842109828,11999627299824,54074199444301,243675821963849,1098082020999797,4948312537227216 ★ Number of compositions of 6 * n - 3 into parts 1 and 6. ● a(n) = Sum _{ k=0..n } binomial(n + 2 + 5 * k,n - 1 - k). ● a(n) = 7 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). ●

▶ [A154964] 1,1,5,21,93,405,1773,7749,33885,148149,647757,2832165,12383037,54142101,236724525,1035026181,4525425693,19786434165,86511856653,378254174949,1653833664765,7231026043989,31616080120557,138234396625605,604399670600157 ★ a(n) = 3 * a(n - 1) + 6 * a(n - 2), n>2, a(0)=1, a(1)=1, a(2)=5. ● a(n) = (1 / 2) * (((3 / 2) - (1 / 2) * sqrt(33)) ^ (n - 1) + ((3 / 2) + (1 / 2) * sqrt(33)) ^ (n - 1)) + (7 / 66) * sqrt(33) * (((3 / 2) + (1 / 2) * sqrt(33)) ^ (n - 1) - ((3 / 2) - (1 / 2) * sqrt(33)) ^ (n - 1)) + (2 / 3) * (C(2 * n,n) mod 2). - _ Paolo P. Lava _ , Jan 20 2009 ●

▶ [A273570] 1,5,21,93,429,1869,7821,32013,129549,521229,2091021,8376333,33529869,134168589,536772621,2147287053 ★ Number of active (ON,black) cells at stage 2 ^ n - 1 of the two - dimensional cellular automaton defined by "Rule 798", based on the 5 - celled von Neumann neighborhood. ● a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3) for n>4. ●

▶ [A103519] 1,5,21,94,485,2931,20545,164396,1479609,14796145,162757661,1953092010,25390196221,355462747199,5331941208105,85311059329816,1450288008607025,26105184154926621,495998498943605989,9919969978872119990 ★ a(1) = 1, a(n) = sum of n successive numbers starting with a(n - 1) + 1. ● a(n + 1) = k (k + 1) / 2 - a(n) * (a(n) + 1) / 2, where k = a(n) + n + 1. ● a(n) = n * a(n - 1) + n * (n + 1) / 2. - _ Emeric Deutsch _ , Mar 16 2008 ●

▶ [A159289] 5,21,95,433,1975,9009,41095,187457,855095,3900561,17792615,81161953,370224535,1688798769,7703544775,35140126337,160293542135,731187458001,3335350205735,15214376112673,69401180151895,316577148534129 ★ a(n + 1) = 5 * a(n) - 2 * a(n - 1). ● a(n) = (5 / 2) * ((5 / 2 + (1 / 2) * sqrt(17)) ^ n + (5 / 2 - (1 / 2) * sqrt(17)) ^ n) + (1 / 2) * sqrt(17) * ((5 / 2 + (1 / 2) * sqrt(17)) ^ n - (5 / 2 - (1 / 2) * sqrt(17)) ^ n), with n >= 0. - _ Paolo P. Lava _ , Jul 31 2009 ●

▶ [A338673] 1,1,5,21,101,421,2021,8421,39397,167397,766437,3244517,14881253,62804453,283415013,1210159589,5401907685,22966866405,102497423845,435085808101,1925197238757,8215432696293,36068400468453,153579729097189,674546796630501 ★ Expansion of Product _{ k>=1 } 1 / (1 - 4 ^ (k - 1) * x ^ k). ● a(n) = Sum _{ k=0..n } p(n,k) * 4 ^ (n - k), where p(n,k) = number of partitions of n into k parts. ●

▶ [A199215] 5,21,101,501,2501,12501,62501,312501,1562501,7812501,39062501,195312501,976562501,4882812501,24414062501,122070312501,610351562501,3051757812501,15258789062501,76293945312501,381469726562501,1907348632812501

⋆ a(n) = 4 * 5 ^ n + 1. ● a(n) = 5 * a(n - 1) - 4. ● a(n) = 6 * a(n - 1) - 5 * a(n - 2). ●

▶ [A097175] 1,5,21,105,361,2045,6141,38865,104401,726245,1774821,13394745,30171961,244487885,512923341,4424729505,8719696801,79515368885,148234845621,1420480747785,2519992375561,25247684340125,42839870384541 ⋆ a(n) = Sum _{ k=0..n } binomial(floor((n + 1) / 2), floor((k + 1) / 2)) * 4 ^ k. ● a(n) = (5 / 8) * ((1 - sqrt(17)) * (- sqrt(17)) ^ n + (1 + sqrt(17)) * (sqrt(17)) ^ n) - 2 * (4 ^ n - (- 4) ^ n) - 1 / 4. ● a(n) = a(n - 1) + 33 * a(n - 2) - 33 * a(n - 3) - 272 * a(n - 4) + 272 * a(n - 5). ●

▶ [A100284] 1,1,5,21,105,521,2605,13021,65105,325521,1627605,8138021,40690105,203450521,1017252605,5086263021,25431315105,127156575521,635782877605,3178914388021,15894571940105,79472859700521,397364298502605 ⋆ Expansion of (1 - 4 * x - x ^ 2) / ((1 - x) * (1 - 4 * x - 5 * x ^ 2)). ● a(n) = 5 * a(n - 1) + a(n - 2) - 5 * a(n - 3). ● a(n) = (1 / 6) * (3 + 5 ^ n + 2 * (- 1) ^ n). ●

▶ [A337168] 1,1,5,21,105,553,3053,17405,101713,606033,3667797,22485477,139340985,871429497,5492959293,34862161869,222592918689,1428814897825,9215016141989,59684122637237,388045493943049,2531696701375689,16569559364596365,108758426952823709 ⋆ a(n) = (- 1) ^ n + 2 * Sum _{ k=0..n - 1 } a(k) * a(n - k - 1). ● a(n) = Sum _{ k=0..n } (- 1) ^ (n - k) * binomial(n,k) * 2 ^ k * Catalan(k). ●

▶ [A341853] 5,21,105,595,3675,24150,166257,1186680,8717940,65572325,502957455,3922142574,31021294850,248377859100,2010068042625,16421073515280,135277629836412,1122788441510820,9381874768828100,78871575753345375,666727830129370275 ⋆ Number of triangulations of a fixed pentagon with n internal nodes. ● a(n) = 210 * binomial(4 * n + 5, n) / ((3 * n + 6) * (3 * n + 7)). ●

▶ [A325157] 1,1,5,21,109,573,3209,18409,108569,651897,3977677,24578237,153522117,967698037,6147885585,39325620689,253063546417,1637141058033,10641294559637,69461189473381,455143665718301,2992662818159277,19739469132843673,130576261281640377,866046528206946377 ⋆ G.f.: A(x) = Sum _{ n>=0 } x ^ n * (1 + (- 1) ^ n * A(x)) ^ n / (1 - (- 1) ^ n * x * A(x)) ^ (n + 1). ● a(n) = 1 (mod 4) for n >= 0. ●

▶ [A041321] 1,5,21,110,2881,14515,60941,319220,8360661,42122525,176850761,926376330,24262635341,122239553035,513220847481,2688343790440,70410159398921,354739140785045,1489366722539101,7801572753480550,20433025831303340 1,102945286431864755 5 ⋆ Denominators of continued fraction convergents to sqrt(174). ● a(n) = 2902 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Dec 15 2013 ●

▶ [A213009] 1,1,1,5,21,125,825,6133,49925,439417,4142945,41544161,440710117,4924691541,57766255689,709205703565,9090541134373,121389729560633,1685431945085489,24289856880005441,362776874949660485,5606980244843123077,89560387072919814553 ⋆ G.f. A(x) satisfies: A(A(x)) = x + x ^ 2 + x * A(A(A(A(x)))). ● a(n) == 1 (mod 4). ●

▶ [A049452] 0,5,22,51,92,145,210,287,376,477,590,715,852,1001,1162,1335,1520,1717,1926,2147,2380,2625,2882,3151,3432 ⋆ Pentagonal numbers with even index. ● a(n) = n * (6 * n - 1). ● a(n) = C(6 * n,2) / 3. - _ Zerinvary Lajos _ , Jan 02 2007 ● a(n) = 12 * n + a(n - 1) - 7 for n>0, a(0)=0. - _ Vincenzo Librandi _ , Aug 06 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>2, a(0)=0, a(1)=5, a(2)=22. - _ Harvey P. Dale _ , Mar 07 2012 ●

▶ [A273677] 1,5,22,55,111,196,316,477,685,946,1266,1651,2107,2640,3256,3961,4761,5662,6670,7791,9031,10396,11892,13525,15301 ⋆ Partial sums of the number of active (ON,black) cells in n - th stage of growth of two - dimensional cellular automaton defined by "Rule 833", based on the 5 - celled von Neumann neighborhood. ● a(n) = (2 * n ^ 3 + 5 * n ^ 2 + 3 * n + 2) / 2 for n>1. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>5. ●

▶ [A050533] 0,5,22,59,124,225,370,567,824,1149,1550,2035,2612,3289,4074,4975,6000,7157,8454,9899,11500,13265,15202,17319,19624 ⋆ Thickened pyramidal numbers: a(n) = 2 * (n + 1) * n + Sum _{ i=1..n } (4 * i * (i - 1) + 1). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Vincenzo Librandi _ , Apr 27 2012 ●

▶ [A273311] 1,5,22,62,135,247,408,624,905,1257,1690,2210,2827,3547,4380,5332,6413,7629,8990,10502,12175,14015,16032,18232,20625 ⋆ Partial sums of the number of active (ON,black) cells in n - th stage of growth of two - dimensional cellular automaton defined by "Rule 641", based on the 5 - celled von Neumann neighborhood. ● a(n) = (57 + 3 * (- 1) ^ n - 58 * n + 48 * n ^ 2 + 16 * n ^ 3) / 12 for n>0. ● a(n) = (8 * n ^ 3 + 24 * n ^ 2 - 29 * n + 30) / 6 for n>0 and even. ● a(n) = (8 * n ^ 3 + 24 * n ^ 2 - 29 * n + 27) / 6 for n>0 and odd. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - 2 * a(n - 3) + 3 * a(n - 4) - a(n - 5) for n>5. ●

▶ [A288534] 1,5,22,63,140,265,450,707,1048,1485,2030,2695,3492,4433,5530,6795,8240,9877,11718,13775,16060,18585,21362,24403,27720 ⋆ a(n) = n * (2 * n ^ 2 + 3), n >= 1; a(0)=1. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n > 4. ●

▶ [A273336] 1,5,22,70,150,270,438,662,950,1310,1750,2278,2902,3630,4470,5430,6518,7742,9110,10630,12310,14158,16182,18390,20790 ⋆ Partial sums of the number of active (ON,black) cells in n - th stage of growth of two - dimensional cellular automaton defined by "Rule 657", based on the 5 - celled von Neumann neighborhood. ● a(n) = 2 / 3 * (2 * n ^ 3 + 6 * n ^ 2 + 4 * n - 15) for n>1. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>5. ●

▶ [A273768] 1,5,22,70,151,272,441,666,955,1316,1757,2286,2911,3640,4481,5442,6531,7756,9125,10646,12327,14176,16201,18410,20811 ⋆ Partial sums of the number of active (ON,black) cells in n - th stage of growth of two - dimensional cellular automaton defined by "Rule 913", based on the 5 - celled von Neumann neighborhood. ● a(n) = (4 * n ^ 3 + 12 * n ^ 2 + 11 * n - 39) / 3 for n>2. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>6. ●

▶ [A032168] 1,5,22,70,200,497,1144,2424,4862,9225,16796,29372,49742,81686,130750,204248,312455,468611,690690,1001400,1430715,2015871,2804880,3856528,5245125 ⋆ Number of aperiodic necklaces of n beads of 2 colors, 10 of them black. ● a(n) = (1 / 10) * (binomial(n - 1, 9) - I(2|n) * binomial(floor(n / 2) - 1, 4) - I(5|n) * (floor(n / 5) - 1) + I(10|n)), where I(a|b) = 1 if integer a divides integer b, and 0 otherwise. - _ Petros Hadjicostas _ , Aug 25 2018 ●

▶ [A011846] 0,0,0,0,0,0,0,0,0,0,1,5,22,71,200,500,1144,2431,4862,9237,16796,29393,49742,81719,130750 ⋆ a(n) = floor(binomial(n,9) / 10). ● a(n) = floor(binomial(n + 1,10) / (n + 1)). [_ Gary Detlefs _ , Nov 23 2011] ●

▶ [A191008] 1,5,22,86,319,1139,3964,13532,45517,151313,498226,1627538,5281195,17039327,54705208,174877304,556916953,1767605981,5593383310,17651846030,55570626391,174557144075,547207226932,1712229064916,5348509347109 ⋆ a(n) = (n * 3 ^ (n + 1) + ((5 * 3 ^ (n + 1) + (- 1) ^ (n)) / 4)) / 4. ● a(n) = (n * 3 ^ (n + 1) + ((5 * 3 ^ (n + 1) + (- 1) ^ (n)) / 4)) / 4. ● a(n) = 5 * a(n - 1) - 3 * a(n - 2) - 9 * a(n - 3) for n>2. ●

▶ [A081892] 1,5,22,90,351,1323,4860,17496,61965,216513,747954,2558790,8680203,29229255,97785144,325241892,1076168025,3544180029,11622614670,37967207922,123587135991,400980206115,1297083797172,4184141281200 ⋆ Second binomial transform of C(n + 2,2). ● a(n) = 3 ^ (n - 2) * (n + 2) * (n + 9) / 2 = 3 ^ n * (n ^ 2 + 11 * n + 18) / 18. ●

▶ [A097138] 0,0,1,5,22,90,363,1455,5824,23300,93205,372825,1491306,5965230,23860927,95443715,381774868,1527099480,6108397929,24433591725,97734366910,390937467650,1563749870611,6254999482455,25019997929832 ⋆ Convolution of 4 ^ n and floor(n / 2). ● a(n) = Sum _{ k=0..n } floor((n - k) / 2)4 ^ k = Sum _{ k=0..n } floor(k / 2) * 4 ^ (n - k). ● a(n) = 5 * a(n - 1) - 3 * a(n - 2) - 5 * a(n - 3) + 4 * a(n - 4). ● a(n) = a(n - 2) + (4 ^ (n - 1) - 1) / 3, n>1. (End) ● a(n) = (4 ^ (n + 2) - 30 * n + 9 * (- 1) ^ n - 25) / 180. - _ Bruno Berselli _ , Dec 27 2010 ●

▶ [A208736] 0,0,0,1,5,22,91,361,1392,5265,19653,72694,267179,977593,3565600,12975457,47142021,171075606,620303547,2247803785,8141857808,29481675889,106728951109,386314552438,1398132674955 ⋆ Number of nonisomorphic graded posets with 0 and 1 and non - uniform Hasse graph of rank n, with exactly 2 elements of each rank level between 0 and 1. ● a(n) = 8 * a(n - 1) - 21 * a(n - 2) + 20 * a(n - 3) - 5 * a(n - 4), a(2) = 0, a(3) = 1, a(4) = 5, a(5) = 22. ●

▶ [A085812] 1,5,22,91,366,1454,5748,22691,89590,354010,1400268,5544334,21973420,87158972,345977832,1374249251,5461704870,21717305762,86391846492,343800647066,1368639516420,5450093895812,21708897213912,86492537630606 ⋆ Sum (sum(binomial(i,j),i=n..2 * n),j=0..n). ● a(n) = 4 ^ n - 2 ^ n + C(2 * n + 2, n + 1) / 2. - _ Vaclav Kotesovec _ , Oct 28 2012 ●

▶ [A172061] 1,5,22,91,367,1461,5776,22748,89402,350974,1377174,5403193,21201211,83211277,326703424,1283211208,5042294926,19822108582,77958648604,306739666198,1207433301046,4754874514690,18732340230592,73827134976216 ⋆ Expansion of (2 / (3 * sqrt(1 - 4 * z) - 1 + 4 * z)) * ((1 - sqrt(1 - 4 * z)) / (2 * z)) ^ k with k=4. ● a(n) = Sum _{ p=0..n } (- 1) ^ (p) * binomial(2 * n + k - p, n - p), with k=4. ●

▶ [A053297] 1,5,22,92,372,1468,5688,21728,82064,307088,1140320,4206912,15434048,56350912,204875648,742104064,2679197952,9644109056,34623075840,124001176576,443136848896,1580464036864,5626501838848,19996918849536 ⋆ Row sums of array T in A053199. ● a(n) = 8 * a(n - 1) + 20 * a(n - 2) - 16 * a(n - 3) + 4 * a(n - 4) for all n in Z. - _ Michael Somos _ , Nov 03 2016 ● a(n) = - a(- n) * 2 ^ n for all n in Z. - _ Michael Somos _ , Nov 03 2016 ●

▶ [A010036] 1,5,22,92,376,1520,6112,24512,98176,392960,1572352,6290432,25163776,100659200,402644992,1610596352,6442418176,25769738240,103079084032,412316598272,1649266917376,6597068718080,26388276969472,105553112072192,422212456677376 ⋆ Sum of 2 ^ n, ..., 2 ^ (n + 1) - 1. ● a(n) = 3 * 2 ^ (2 * n - 1) - 2 ^ (n - 1). - Daniele Parisse (daniele.parisse(AT)t - online.de), Jun 10 2007 ● a(n) = 6 * a(n - 1) - 8 * a(n - 2) for n > 1; a(0) = 1, a(1) = 5. ●

▶ [A127617] 1,1,5,22,92,395,1684,7189,30685,130973,559038,2386160,10184931,43472696,185556025,792015257,3380586357,14429474710,61589830404,262886022219,1122085581740,4789437042413,20442921249973,87257234103245,372443097062686 ⋆ Number of walks from (0,0) to (n,n) in the region 0 <= x - y <= 3 with the steps (1,0), (0, 1), (2,0) and (0,2). ● a(n) = 3 * a(n - 1) + 5 * a(n - 2) + 2 * a(n - 3) - a(n - 4). - _ Vincenzo Librandi _ , Dec 13 2018 ●

▶ [A095932] 1,5,22,93,385,1574,6385,25773,103702,416405,1669801,6690150,26789257,107232053,429124630,1717012749,6869397265,27481113638,109933682017,439758885885,1759098789526,7036560738245,28146676447417,112587840692838,450354333986425 ⋆ Number of walks of length 2n + 1 between two nodes at distance 3 in the cycle graph C _ 10. ● a(n) = 4 ^ n / 5 * Sum _{ r=0..9 } cos(3 * Pi * r / 5) * cos(Pi * r / 5) ^ (2 * n + 1). ● a(n) = 7 * a(n - 1) - 13 * a(n - 2) + 4 * a(n - 3). ● a(n) = (2 ^ (1 + 2 * n) - (1 / 2 * (3 - sqrt(5))) ^ n - (1 / 2 * (3 + sqrt(5))) ^ n) / 5. - _ Colin Barker _ , Apr 27 2016 ● a(n) = Sum _{ k>0 } binomial(2 * n,n + k) - binomial(2 * n,n + 5k). ●

▶ [A000346] 1,5,22,93,386,1586,6476,26333,106762,431910,1744436,7036530,28354132,114159428,459312152,1846943453,7423131482,29822170718,119766321572,480832549478,1929894318332,7744043540348,31067656725032,124613686513778,499744650202436 ⋆ a(n) = 2 ^ (2 * n + 1) - binomial(2 * n + 1, n + 1). ● a(n) = Sum _{ k=0..n + 1 } binomial(n + k, k - 1)2 ^ (n - k + 1). - _ Paul Barry _ , Nov 13 2004 ● a(n) = Sum _{ i=0..n } binomial(2n + 2, i). See A008949. - Ed Catmur (ed(AT)catmur.co.uk), Dec 09 2006 ● a(n) = Sum _{ k=0..n + 1, C(2n + 2,k) } - C(2n + 2,n + 1). - _ Paul Barry _ , Jan 21 2007 ● a(n) = Sum _{ 0<=i<j<=n + 1 } binomial(n + 1, i) * binomial(n + 1, j). - _ Mircea Merca _ , Apr 05 2012 ● a(n) = Sum _{ m = n + 2..2 * (n + 1) } binomial(2 * (n + 1), m), n >= 0. - _ Wolfdieter Lang _ , May 22 2015 ● a(n) = Sum _{ j=1..n + 1 } Sum _{ k=1..j } 2 ^ (j - k) * binomial(n + k - 1, n). - _ Fabio Visonà _ , May 04 2022 ●

▶ [A289798] 1,5,22,93,387,1602,6623,27377,113174,467877,1934315,7996978,33061703,136686153,565097958,2336269341,9658775347,39932014114,165089847535,682526498529,2821750872886,11665888441301,48229967585083,199395852702354,824356889826903 ⋆ p - INVERT of (- 1 + 2 ^ n), where p(S) = 1 - S - S ^ 2. ● a(n) = 7 * a(n - 1) - 15 * a(n - 2) + 14 * a(n - 3) - 4 * a(n - 4). ●

▶ [A049652] 0,1,5,22,94,399,1691,7164,30348,128557,544577,2306866,9772042,41395035,175352183,742803768,3146567256,13329072793,56462858429,239180506510,1013184884470,4291920044391,18180865062035 ⋆ a(n) = (F(3 * n + 2) - 1) / 4, where F=A000045 (the Fibonacci sequence). ● a(0) = 0, a(1) = 1; a(n) = ceiling(r(4) * a(n - 1)) where r(4) = 2 + sqrt(5) is the positive root of X ^ 2 = 4 * X + 1. More generally the sequence a(1) = 1, a(n) = ceiling(r(z) * a(n - 1)) wh

ere r(z) = (1 / 2) * (z + sqrt(z ^ 2 + 4)) is the positive root of X ^ 2 = z * X + 1 satisfies the linear recurrence : n>3 a(n) = (z + 1) * a(n - 1) - (z - 1) * a(n - 2) - a(n - 3) and the closed form formula : a(n) = floor(t(z) * r(z) ^ n) where t(z) = 1 / (2 * z) * (1 + (z + 2) / sqrt(z ^ 2 + 4)) is the positive root of z * (z ^ 2 + 4) * X ^ 2 = (z ^ 2 + 4) * X + 1. - _ Benoit Cloitre _ , May 06 2003 ● a(0) = 0, a(1) = 1, a(2) = 5, a(3) = 22, a(n) = 5a(n - 1) - 3a(n - 2) - a(n - 3); a(n) = floor(t(4) * r(4) ^ n) where t(4) = 1 / 8 * (1 + 3 / sqrt(5)) is the positive root of 80 * X ^ 2 = 20 * X + 1. - _ Benoit Cloitre _ , May 06 2003 ● a(n + 2) = 4 * a(n + 1) + a(n) + 1. - _ Anant Godbole _ , Apr 27 2006 ●

► [A053154] 0,1,5,22,95,406,1715,7162,29615,121486,495275,2009602,8124935,32761366,131834435,529712842,2125993055,8525430046,34166159195,136858084882,548012945975,2193794127526,8780404589555,35137304693722 ⋆ Number of 2 - element intersecting families (with not necessarily distinct sets) of an n - element set. ● a(n) = (4 ^ n - 3 ^ n + 2 ^ n - 1) / 2. ● a(n) = 3 * StirlingS2(n + 1,4) + 2 * StirlingS2(n + 1,3) + StirlingS2(n + 1,2). - _ Ross La Haye _ , Jan 11 2008 ●

► [A141222] 1,5,22,95,406,1722,7260,30459,127270,529958,2200276,9111830,37650172,155266100,639191160,2627302995,10784089350,44208873390,181025067300,740483276610,3026059513620,12355464845100 ⋆ Expansion of - 1 / (2 * x) + (2 * x - 1) ^ 2 / (2 * x * (1 - 4x) ^ (3 / 2)). ● a(n) = Sum _{ k=0..n } (1 + (k + 1) * 2 ^ (k - 1) - 0 ^ k / 2) * C(2n - k,n - k); a(n) = Sum _{ k=0..n } C(2n,k) * C(n + 1,2n - k). ● a(n) = (1 + 3 * n + n ^ 2) * C(2 * n,n) / (n + 1). ●

► [A116415] 1,5,22,95,409,1760,7573,32585,140206,603275,2595757,11168960,48057529,206780765,889731238,3828313895,16472375761,70876937120,304967558317,1312206980225,5646132226174,24294040190195,104531804272453 ⋆ a(n) = 5 * a(n - 1) - 3 * a(n - 2). ● a(n) = Sum _{ k=0..n } Sum _{ j=0..n } C(n - j,k) * C(k + j,j) * 3 ^ j. ● a(n) = (1 / sqrt(13)) * (((5 + sqrt(13)) / 2) ^ n - ((5 - sqrt(13)) / 2) ^ n). - _ Sergio Falcon _ , Nov 23 2007 ● a(n) = 4 * a(n - 1) + a(n - 2) + a(n - 3) + ... + a(0) + 1. These expansions with the partial sums on one side can be generated en masse by taking the g.f. of the partial sum and its partial fraction, 1 / (1 - x) / (1 - 5 * x + 3 * x ^ 2) = - 1 / (1 - x) + (2 - 3 * x) / (1 - 5 * x + 3 * x ^ 2) and reading this as a(0) + a(1) + ... + a(n) = - 1 + 2 * a(n) - 3 * a(n - 1). - _ Gary W. Adamson _ , Feb 18 2011 ●

► [A266430] 5,22,96,404,1556,5365,16585,46463,119452,285124,638247,1351194,2724385,5262379,9785590,17590461,30674359,52045522,86143170,139398464,220973442,343722465,525429159,790381435,1171358006 ⋆ Number of 4 X n binary arrays with rows and columns lexicographically nondecreasing and column sums nondecreasing. ● a(n) = 12 * a(n - 1) - 66 * a(n - 2) + 220 * a(n - 3) - 495 * a(n - 4) + 792 * a(n - 5) - 924 * a(n - 6) + 792 * a(n - 7) - 495 * a(n - 8) + 220 * a(n - 9) - 66 * a(n - 10) + 12 * a(n - 11) - a(n - 12) for n>12. ●

► [A083586] 0,1,5,22,96,419,1819,7824,33302,140317,585873,2427146,9989068,40886295,166600967,676368388,2737758594,11055063953,44553867901,179280877950,720513441080,2892804682891,11605214879475,46528078138232 ⋆ Binomial transform of A083580. ● a(n) = 2 * 4 ^ n / 3 - 5 / 12 - n * 3 ^ (n - 1) / 2 - 3 ^ n / 4. ●

► [A129164] 1,5,22,97,436,1994,9241,43257,204052,968440,4619011,22120630,106300507,512321437,2475395302,11986728457,58156146652,282640193312,1375737276787,6705522150972,32724071280517,159878425878847,781910419686412,3827639591654862,18753350784435811 ⋆ Sum of pyramid weights in all skew Dyck paths of semilength n. ● a(n) = n * Sum _ (m=1..n, Sum _ (k=m..n,(binomial(- m + 2 * k - 1,k - 1) * binomial(n - 1,k - 1)) / k)). - _ Vladimir Kruchinin _ , Oct 07 2011 ● a(n) = n * hypergeometric([1, 3 / 2, 1 - n], [2, 2], - 4). - _ Peter Luschny _ , Sep 16 2014 ● a(n) = Sum _{ k=1..n } (binomial(n,k) * binomial(2 * k,k)) / 2. - _ Vladimir Kruchinin _ , Oct 11 2016 ●

► [A123347] 1,5,22,98,436,1940,8632,38408,170896,760400,3383392,15054368,66984256,298045760,1326151552,5900697728,26255094016,116821771520,519797274112,2312832639488,10290925106176,45789365703680,203739313027072,906535983515648,4033622560116736 ⋆ Number of words of length n over the alphabet { 1, 2,3,4,5 } such that 1 is not followed by an odd letter. ● a(n) = ((2 + sqrt(6)) ^ (n + 1) + (2 - sqrt(6)) ^ (n + 1)) / 4. ● a(n) = 4 * a(n - 1) + 2 * a(n - 2) for n > 1. ●

► [A087439] 1,5,22,98,451,2135,10312,50468,249061,1235465,6147802,30650438,152986471,764135195,3818284492,19084248008,95399716681,476934013325,2384476356382,11921800651178,59607259863691,298031069141855 ⋆ Expansion of (1 - 4x) / ((1 - x)(1 - 3x)(1 - 5x)). ● a(n)=5 * 5 ^ n / 8 + 3 * 3 ^ n / 4 - 3 / 8. ●

► [A033452] 0,1,5,22,99,471,2386,12867,73681,446620,2856457,19217243,135610448,1001159901,7714225057,61904585510,516347066551,4468588592739,40058673825258,371421499686007,3556976106133821,35138574378189700,357654857584636597,3746672593640388775 ⋆ "STIRLING" transform of squares A000290. ● a(n) = Bell(n + 2) - 2 * Bell(n + 1). - _ Vladeta Jovovic _ , Jul 28 2003 ●

► [A295519] 0,1,5,22,100,493,2701,16678,116704,923473,8204077,81069166,882762292,10503611245,135576241957,1886597854894,28151936397856,4483973961319 69,7592570340752053,136187683731334054,2579494839314653540,51445637954467827661 ⋆ a(n) = e ^ 3 * Sum _{ k=0..n - 1 } Gamma(k + 1, 3). ● a(n) = (3 * n - 6) * a(n - 3) + (4 - 4 * n) * a(n - 2) + (3 + n) * a(n - 1) for n >= 3. ●

► [A179602] 1,5,22,101,457,2078,9433,42845,194566,883613,4012801,18223694,82760689,375847925,1706868598,7751541269,35202703993,159868900862,726025630537,3297159197645,14973657006694,68001085403597,308818855257649 ⋆ Eight white kings and one red king on a 3 X 3 chessboard. G.f.: (1 + 2 * x) / (1 - 3 * x - 7 * x ^ 2). ● a(n) = 3 * a(n - 1) + 7 * a(n - 2) with a(0) = 1 and a(1) = 5. ● a(n) = ((37 + 4 * 37 ^ (1 / 2)) * A ^ (- n - 1) + (37 - 4 * 37 ^ (1 / 2)) * B ^ (- n - 1)) / 259 with A = (- 3 + sqrt(37)) / 14 and B = (- 3 - sqrt(37)) / 14. ●

► [A262440] 1,1,5,22,101,476,2282,11075,54245,267592,1327580,6617128,33110090,166215895,836761343,4222640822,21354409445,108193910000,549084400088,2790744368660,14203023709276,72371208424880,369170645788840,1885051297844624 ⋆ a(n) = Sum _{ k=0..n } (binomial(n,k) * binomial(n + k - 1,n - k)). ● a(n) = n ^ 2 * hypergeom([1 - n, 1 - n, n + 1], [3 / 2, 2], 1 / 4) for n >= 1. - _ Peter Luschny _ , Mar 06 2022 ●

► [A296044] 1,1,5,22,101,481,2330,11425,56549,281911,1413465,7120136,36006362,182681916,929461993,4740491107,24229115109,124069449335,636376573943,3268955179686,16814509004601,86593280920756,446437797872016,2303948443259841,11900990745759578 ⋆ a(n) = [x ^ n] Product _{ k>=1 } ((1 + x ^ (2 * k)) / (1 - x ^ (2 * k - 1))) ^ n. ● a(n) = [x ^ n] Product _{ k>=1 } ((1 - x ^ (4 * k)) / (1 - x ^ k)) ^ n. ●

► [A308807] 5,22,103,504,2505,12506,62507,312508,1562509,7812510,39062511,195312512,976562513,4882812514,24414062515,122070312516,610351562517,3051757812518,15258789062519,76293945312520,381469726562521,1907348632812529,536743164062523 ⋆ a(n) = 4 * 5 ^ (n - 1) + n. ● a(n) = 7 * a(n - 1) - 11 * a(n - 2) + 5 * a(n - 3) for n>3. ●

► [A296163] 1,1,5,22,105,501,2456,12160,60801,306130,1550255,7887034,40281720,206405967,1060602800,5463059772,28199365873,145832364580,755420838614,3918935839970,20357605331355,105878815699042,551273881133750,2873161931172668,14988243880188600 ⋆ a(n) = [x ^ n] Product _{ k>=1 } ((1 - x ^ (5 * k)) / (1 - x ^ k)) ^ n. ● a(n) = [x ^ n] Product _{ k>=1 } (1 + x ^ k + x ^ (2 * k) + x ^ (3 * k) + x ^ (4 * k)) ^ n. ●

► [A008485] 1,1,5,22,105,506,2492,12405,62337,315445,1605340,8207563,42124380,216903064,1119974875,5796944357,30068145905,156250892610,813310723925,4239676354650,22130265931900,115654632452535,605081974091875,3168828466966388,16610409114771900 ⋆ Coefficient of x ^ n in Product _{ k>=1 } 1 / (1 - x ^ k) ^ n. ● a(n) = Sum _{ pi } Product _{ i=1..n } binomial(k _ i + n - 1, k _ i) where pi runs through all nonnegative solutions of k _ 1 + 2 * k _ 2 + ... + n * k _ n=n. a(n) = b(n, n) where b(n, m)= m / n * Sum _{ i=1..n } sigma(i) * b(n - i, m) is recurrence for number of partitions of n into parts of m kinds. - _ Vladeta Jovovic _ , Sep 08 2002 ●

► [A213684] 1,5,22,105,511,2534,12720,64449,328900,1688115,8705060,45064110,234054198,1219053680,6364813192,33302104593,174570695175,916628799380,4820160541350,25381091113455,133808636072595,706211862466500,3730964595817680,19729042153581150 ⋆ Logarithmic derivative of A001002. ● a(n) = n * Sum _{ r=1..n } binomial(r + n - 1,n) * binomial(r,n - r) / r. ● a(n) = Sum _{ k=0..n } (- 1) ^ floor((n - k) / 2) [x ^ k] G(n,n,x / 2), where G(n,a,x) denotes the n - th Gegenbauer polynomial; row sums of A298610. - _ Peter Luschny _ , Jan 26 2018 ● a(n) = [x ^ n] (1 / (1 - x - x ^ 2)) ^ n. - _ Alois P. Heinz _ , Feb 07 2021 ●

► [A373930] 1,5,22,105,518,2555,12565,61748,303470,1491567,7331205,36033501,177107406,870496256,4278555247,21029425081,103361226864,508028305120,2496997824041,12272934541014,60322408298439,296489232532277,1457267166329605,7162579146364783 ⋆ Number of compositions of 7 * n - 4 into parts 1 and 7. ● a(n) = Sum _{ k=0..n } binomial(n + 2 + 6 * k,n - 1 - k). ● a(n) = 8 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). ● a(n) = n * (1 + n) * (2 + n) * hypergeom([1 - n, (3 + n) / 6, (4 + n) / 6, (5 + n) / 6, 1 + n / 6, (7 + n) / 6, (8 + n) / 6], [4 / 7, 5 / 7, 6 / 7, 8 / 7, 9 / 7, 10 / 7], - 6 ^ 6 / 7 ^ 7) / 6. - _ Stefano Spezia _ , Jun 23 2024 ●

► [A082297] 0,1,5,22,105,551,3125,18901,120785,809956,5669525,41253125,310968905,2421594449,19434554165,160416509794,1359425390625,11809173506531,105013666399445,954781355707373,8865807366284825,83996265859375000,811222567266570805,7980019803318567233 ⋆ Main diagonal of array A083861. ● a(n) = (((5 + sqrt(4 * n + 1)) / 2) ^ n - ((5 - sqrt(4 * n + 1)) / 2) ^ n) / sqrt(4 * n + 1). ●

► [A162271] 5,22,106,540,2836,15128,81320,438768,2371664,12830560,69441184,375901632,2035036480,11017668992,59650841216,322959363840,1748563133696,9467073975808,51256707934720,277514627816448 ⋆ a(n) = ((5 + sqrt(2)) * (4 + sqrt(2)) ^ n + (5 - sqrt(2)) * (4 - sqrt(2)) ^ n) / 2. ● a(n) = 8 * a(n - 1) - 14 * a(n - 2) for n > 1; a(0) = 5, a(1) = 22. ●

► [A164593] 5,22,108,520,2512,12128,58560,282752,1365248,6592000,31828992,153683968,742051840,3582943232,17299980288,83531694080,403326697472,1947433566208,9403041054720,45401898483712,219219758153728 ⋆ a(n) = ((5 + sqrt(18)) * (2 + sqrt(8)) ^ n + (5 - sqrt(18)) * (2 - sqrt(8)) ^ n) / 2. ● a(n) = 4 * a(n - 1) + 4 * a(n - 2) for n > 1; a(0) = 5, a(1) = 22. ●

► [A213167] 1,5,22,114,696,4920,39600,357840,3588480,39553920,475372800,6187104000,86699289600,1301447347200,20835611596800,354379753728000,6381450915840000,121289412980736000,2426499634470912000 ⋆ a(n) = n! - (n - 2)!. ● a(n) = n! - (n - 2)!. ●

► [A372139] 1,1,5,22,131,775,5018,33066,225915,1569663,11114665,79715150,578603008,4239698240,31329174328,233166912152,1746351112863,13152340002195,99545267265903,756752801436930,5775810585852675,44241685802126865,339991810347999194 ⋆ G.f. A(x) satisfies A(x) = 1 / (1 - x * (1 + 4 * x) ^ (1 / 2) * A(x) ^ 2). ● a(n) = Sum _{ k=0..n } 4 ^ (n - k) * binomial(3 * k,k) * binomial(k / 2,n - k) / (2 * k + 1). ●

► [A231002] 5,23,33,51,61,79,89,107,117,135,145,163,173,191,201,219,229,247,257,275,285,303,313,331,341 ⋆ Number of years after which it is possible to have a date falling on same day of the week, but the entire year does not have the same calendar, in the Julian calendar. ● a(n + 1) = a(n - 1) + 28, for all n > 1. - _ M. F. Hasler _ , Apr 14 2015 ● a(2n) = 28n - 5 (n>0), a(2n + 1) = 28n + 5 (n>=0), a(n) = 28 * floor(n / 2) - 5 * (- 1) ^ n. - _ M. F. Hasler _ , Apr 14 2015 ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n>3. ● a(n) = - 7 + 2 * (- 1) ^ n + 14 * n. ●

► [A140811] 1,5,23,53,95,149,215,293,383,485,599,725,863,1013,1175,1349,1535,1733,1943,2165,2399,2645,2903,3173,3455 ⋆ a(n) = 6 * n ^ 2 - 1. ● a(n) = 2 * a(n - 1) - a(n - 2) + 12. ● a(n) = a(n - 1) + 12 * n - 6. - _ Vincenzo Librandi _ , Feb 05 2012 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Feb 05 2012 ● a(- n) = a(n). - _ Paul Curtz _ , Sep 17 2018 ●

► [A098499] 1,5,23,57,109,169,246,334,439,555,688,832,993,1165,1354,1554,1771,1999,2244,2500,2773,3057,3358,3670,3999 ⋆ Number of squares on infinite half chessboard at <=n knight moves from a fixed point on the diagonal. ● a(n) = (1 / 4) [28n ^ 2 - 6n + 9 + 3(- 1) ^ n], for n>3. ●

► [A098498] 1,5,23,60,110,172,248,338,442,560,692,838,998,1172,1360,1562,1778,2008,2252,2510,2782,3068,3368,3682,4010 ⋆ Number of squares on infinite half chessboard at <=n knight moves from a fixed point on the edge. ● a(n) = 7 * n ^ 2 - n + 2, for n>3. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>6.

G.f.: - (2 * x ^ 6 - x ^ 5 - 6 * x ^ 4 + 5 * x ^ 3 + 11 * x ^ 2 + 2 * x + 1) / (x - 1) ^ 3. - _ Colin Barker _ , Jul 14 2013 ●

▶ [A331987] 0,5,23,62,130,235,385,588,852,1185,1595,2090,2678,3367,4165,5080,6120,7293,8607,10070,11690,13475,15433,17572,19900 ⋆ a(n) = ((n + 1) - 9 * (n + 1) ^ 2 + 8 * (n + 1) ^ 3) / 6. ● a(n) = [x ^ n] (x * (5 + 3 * x) / (1 - x) ^ 4). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ● a(n) = binomial(n + 2, 3) + binomial(n + 1, 3) + 2 * (n + 1) * binomial(n + 1, 2). ● a(n) = 3 * binomial(n + 1,1) - 11 * binomial(n + 2,2) + 8 * binomial(n + 3,3). ● a(n) = n * binomial(8 * n + 8,2) / 24. ● a(n) = n * (n + 1) * (8 * n + 7) / 6. ●

▶ [A241765] 0,5,23,65,145,280,490,798,1230,1815,2585,3575,4823,6370,8260,10540,13260,16473,20235,24605,29645,35420,41998,49450,57850 ⋆ a(n) = n * (n + 1) * (n + 2) * (3 * n + 17) / 24. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ● a(n) = Sum _{ j=0..n + 2 } (- 1) ^ (n - j) * binomial(- j, - n - 2) * S1(j,n), S1 Stirling cycle numbers A132393. - _ Peter Luschny _ , Apr 10 2016 ●

▶ [A113946] 1,5,23,81,367,1297,5871,20753,93935,332049,1502959,5312785,24047343,85004561,384757487,1360072977,6156119791,21761167633,98497916655,348178682129,1575966666479,5570858914065,25215466663663,89133742625041 ⋆ Series expansion of Farey rational polynomial based on A112627. ● a(n) = (5 * (- 4) ^ n + 4 * (- 1) ^ n + 81 * 4 ^ n) / 60 for n>0. G.f.: - (2 * x + 1) ^ 3 / ((x + 1) * (4 * x - 1) * (4 * x + 1)). [_ Colin Barker _ , Dec 03 2012] ● a(n) = - a(n - 1) + 16 * a(n - 2) + 16 * a(n - 3). - _ Wesley Ivan Hurt _ , May 07 2021 ●

▶ [A283114] 0,0,0,1,5,23,82,230,560,1208,2392,4405,7673,12733,20320,31326,46914,68460,97698,136635,187737,253813,338240,444818,578038 ⋆ Number of nonequivalent ways (mod D _ 3) to place 3 points on an n X n X n triangular grid so that no two of them are on the same row, column or diagonal. ● a(n) = (n ^ 6 - 9 * n ^ 5 + 27 * n ^ 4 - 20 * n ^ 3 - 24 * n ^ 2 + 24 * n) / 288 + IF(MOD(n, 2) = 1, n ^ 2 - 3 * n - 5) / 32 + IF(MOD(n, 3) = 1, 2) / 9. ● a(n) = (2 * n ^ 6 - 18 * n ^ 5 + 54 * n ^ 4 - 40 * n ^ 3 - 39 * n ^ 2 + 21 * n - 45 - 9 * (n ^ 2 - 3 * n - 5) * (- 1) ^ n + 128 * ((n mod 3) mod 2)) / 576. - _ Bruno Berselli _ , Mar 01 2017 ●

▶ [A290938] 5,23,83,291,1015,3539,12339,43043,150239,524723,1833771,6412467,22437095,78553491,275180323,964534339,3382685743,11869824179,41673547291,146387820371,514484547639,1809077492883,6364347723667,22400458807139,78878848178815 ⋆ Number of dominating sets in the n - gear graph. ● a(n) = 7 * a(n - 1) - 12 * a(n - 2) - 2 * a(n - 3) + 3 * a(n - 4) + 3 * a(n - 5) + 2 * a(n - 6). ●

▶ [A283224] 1,5,23,90,317,1036,3192,9358,26336,71542,188440,483007,1208275,2956941,7093531,16709523,38706389,88281394,198474497,440263342,964424210,2087882510,4470194335,9471079495,19868723042 ⋆ Expansion of exp(Sum _{ n>=1 } sigma _ 2(2 * n) * x ^ n / n) in powers of x. ● a(n) = (1 / n) * Sum _{ k=1..n } sigma _ 2(2 * k) * a(n - k). - _ Seiichi Manyama _ , Mar 04 2017 ●

▶ [A255457] 1,5,23,93,359,1335,4873,17535,62601,222181,785855,2772717,9768351,34378167,120910529,425062511,1493898001,5249371781,18443445415,64795091709,227625068503,799619495287,2808906276921,9866994688223,34659998140825 ⋆ a(n) = A255456(2 ^ n - 1). ● a(n) = 5 * a(n - 1) - 24 * a(n - 3) + 15 * a(n - 4) + 17 * a(n - 5) for n>4. - _ Colin Barker _ , Feb 03 2017 ●

▶ [A140529] 5,23,95,383,1535,6143,24575,98303,393215,1572863,6291455,25165823,100663295,402653183,1610612735,6442450943,25769803775,103079215103,412316860415,1649267441663,6597069766655,26388279066623,105553116266495 ⋆ a(n) = 6 * 4 ^ n - 1. ● a(n) = 4 * a(n - 1) + 3, a(0)=5. ●

▶ [A084615] 1,5,23,99,401,1525,6345,27331,122083,520805,2117293,8301441,34517395,147850771,628707981,2675100397,10920387779,43701876543,180872758207,769658883325,3243501133481,13617178197183,56148348498199 ⋆ a(n) = sum of absolute values of coefficients of (1 + x - 3x ^ 2) ^ n. ● a(n) = Sum _{ k=0..2 * n } abs(Sum _{ j=0..k } binomial(n,k - j) * binomial(k - j,j) * (- 3) ^ j). - _ G. C. Greubel _ , Mar 25 2023 ●

▶ [A268400] 1,5,23,99,413,1691,6842,27464,109631,435887,1728018,6835668,26996393,106486529,419639903,1652533719,6504159137,25589302163,100646529977,395775842389,1556107102849,6117771240251,24050813530815,94550689834203,371715533473021 ⋆ Number of North - East lattice paths from (0,0) to (n,n) that bounce off the diagonal y = x to the right exactly twice. ● a(n) = ((Sum _{ m=1..n - 3 } ((m + 2) * (Sum _{ k=0..m / 2 } ((m ^ 2 + (3 - 2 * k) * m + k ^ 2 - 3 * k + 2) * binomial(m - k,k))) * binomial(2 * n - m - 5,n - m - 3))) + 2 * binomial(2 * n - 4,n - 2)) / (2 * n - 2), n>2. - _ Vladimir Kruchinin _ , Feb 28 2016 ●

▶ [A364754] 0,1,5,23,99,421,1785,7563,32039,135721,574925,2435423,10316619,43701901,185124225,784198803,3321919439,14071876561,59609425685,2525095793 03,1069647742899,4531100550901,19194049946505,81307300336923,34442325129 4199 ⋆ Smallest nonnegative integer not expressible by the addition and subtraction of fewer than n Lucas numbers. ● a(0) = 0. ●

▶ [A049674] 0,0,1,5,23,100,428,1820,7721,32725,138655,587400,2488344,10540920,44652257,189150325,801254167,3394167980,14377927684,60905881300,258001457065,1092911716325,4629648333311,19611505067280 ⋆ a(n) = (F(3 * n) - 2 * F(n)) / 6, where F=A000045 (the Fibonacci sequence). ● a(n) = 5 * a(n - 1) - 2 * a(n - 2) - 5 * a(n - 3) - a(n - 4), n>=4, a(0)=a(1)=0, a(2)=1, a(3)=5. (End) ●

▶ [A085350] 1,5,23,101,431,1805,7463,30581,124511,504605,2038103,8211461,33022991,132623405,532087943,2133134741,8546887871,34230598205,137051532983,548593552421,2195536471151,8785632669005,35152991029223 ⋆ Binomial transform of poly - Bernoulli numbers A027649. ● a(n) = 2 * 4 ^ n - 3 ^ n. ● a(n) = 4 * a(n - 1) + 9 * a(n - 2) - 36 * a(n - 3); ●

▶ [A113443] 1,5,23,101,436,1871,8014,34309,146868,628708,2691401,11521603,49323052,211148530,903912916,3869592721,16565477544,70915744968,303585747088,1299631069856,5563637060865,23817572559345,101961496787621 ⋆ Fourth row of A113439. ● a(n) = 9 * a(n - 1) - 28 * a(n - 2) + 38 * a(n - 3) - 20 * a(n - 4) + a(n - 5). ●

▶ [A124999] 1,5,23,101,467,2165,10055,46709,216995,1008101,4683383,21757829,101081459,469599317,2181641639,10135364501,47086382915,218751625157,1016265649367,4721317472933,21934066839827,101900219778101,473403079631879,2199312977861813 ⋆ Number of base 5 circular n - digit numbers with adjacent digits differing by 3 or less. ● a(n) = 1 + (2 - sqrt(7)) ^ n + (2 + sqrt(7)) ^ n for n>0. ● a(n) = 5 * a(n - 1) - a(n - 2) - 3 * a(n - 3) for n>3. ●

▶ [A258431] 0,1,5,23,102,443,1898,8054,33932,142163,592962,2464226,10209620,42190558,173962532,715908428,2941192472,12065310083,49428043442,202249741418,826671597572,3375609654698,13771567556012,56138319705908,228669994187432 ⋆ Sum over all peaks of Dyck paths of semilength n of the arithmetic mean of the x and y coordinates. ● a(n) = (2 * (4 * n - 5) * a(n - 1) - 8 * (2 * n - 3) * a(n - 2)) / (n - 1) for n>2, a(0)=0, a(1)=1, a(2)=5. ● a(n) = (4 ^ (n - 1) + (2 * n - 1)! / (n - 1)! ^ 2) / 2 for n>0, a(0) = 0. ● a(n) = (1 / 2) * binomial(2 * n,n) * (1 + 2 * (n - 1) / (n + 1) + 3 * (n - 1) * (n - 2) / ((n + 1) * (n + 2)) + 4 * (n - 1) * (n - 2) * (n - 3) / ((n + 1) * (n + 2) * (n + 3)) + 5 * (n - 1) * (n - 2) * (n - 3) * (n - 4) / ((n + 1) * (n + 2) * (n + 3) * (n + 4)) + ...) for n >= 1. - _ Peter Bala _ , Feb 17 2022 ●

▶ [A054441] 0,1,5,23,103,455,1993,8679,37633,162643,701075,3015563,12948083,55513327,237705547,1016736115,4344766607,18550920063,79149527249,337482635279,1438155203665,6125448713739,26077796587441,110974892937943,472081467302933 ⋆ Convolution of (shifted) A026671 with A000984 (central binomial coefficients of even order). ● a(n) = Sum _{ k=1..n } a(k - 1) * binomial(2 * (n - k), n - k) + 4 ^ (n - 1), n >= 1. ● a(n) = Sum _{ k=1..n } binomial(2 * n,n - k) * F(k), where F denotes a Fibonacci number (A000045). - _ Vladimir Kruchinin _ , Mar 19 2016 ●

▶ [A289803] 1,5,23,103,456,2009,8833,38803,170399,748176,3284833,14421533,63314735,277968871,1220356440,5357681369,23521603225,103265890987,453363808127,1990383615264,8738295434881,38363361811637,168425013526727,739429075564711,3246283590352104 ⋆ p - INVERT of the even bisection (A001906) of the Fibonacci numbers, where p(S) = 1 - S - S ^ 2. ● a(n) = 7 * a(n - 1) - 13 * a(n - 2) + 7 * a(n - 3) - a(n - 4). ●

▶ [A102285] 1,5,23,103,457,2021,8927,39415,174001,768101,3390599,14966887,66067129,291634565,1287337487,5682582967,25084135393,110726731589,488771441783,2157541529575,9523849084969,42040303802789 ⋆ G.f. (1 - x) / (7 * x ^ 2 - 6 * x + 1). ● a(n) = ((1 + sqrt(2)) * (3 + sqrt(2)) ^ n + (1 - sqrt(2)) * (3 - sqrt(2)) ^ n) / 2 offset 0. ● a(n) = 6 * a(n - 1) - 7 * a(n - 2) for n > 1; a(0)=1, a(1)=5. - _ Philippe Deléham _ , Sep 19 2009 ●

▶ [A218985] 5,23,103,459,2043,9091,40451,179987,800851,3563379,15855219,70547635,313900979,1396699187,6214598707,27651793203,123036370227,547449067315,2435869009715,10838374173491,48225234713395,214577687200563,954761218229043,4248200247317299 ⋆ Power ceiling sequence of 2 + sqrt(6). ● a(n) = [x * a(n - 1)], where x=2 + sqrt(6), a(0) = [x]. ● a(n) = 5 * a(n - 1) - 2 * a(n - 2) - 2 * a(n - 3). ● a(n) = (1 / 15) * (- 3 + (39 - 16 * sqrt(6)) * (2 - sqrt(6)) ^ n + (2 + sqrt(6)) ^ n * (39 + 16 * sqrt(6))). - _ Colin Barker _ , Nov 13 2017 ●

▶ [A290924] 1,5,23,104,469,2115,9539,43024,194053,875245,3947651,17805240,80307649,362214635,1633710407,7368586016,33234813001,149900237685,676100727791,3049442757256,13754017334317,62035266076915,279800013602699,1261992614249520,5692013155802701 ⋆ a(n) = (1 / 2) * A290923(n). ● a(n) = 6 * a(n - 1) - 8 * a(n - 2) + 6 * a(n - 3) - a(n - 4). ●

▶ [A107839] 1,5,23,105,479,2185,9967,45465,207391,946025,4315343,19684665,89792639,409593865,1868384047,8522732505,38876894431,177339007145,808941246863,3690028220025,16832258606399,76781236591945,350241665746927,1597645855550745,7287745946259871 ⋆ a(n) = 5 * a(n - 1) - 2 * a(n - 2); a(0)=1, a(1)=5. ● a(n) = [M ^ (n + 1)] _ 1,2, where M is the 3 X 3 matrix defined as follows: M = [2,1,2; 1,1,1; 2,1,2]. - _ Simone Severini _ , Jun 12 2006 ● a(n) = (((5 + s) / 2) ^ (n + 1) - ((5 - s) / 2) ^ (n + 1)) / s with s = 17 ^ (1 / 2). - David Pasino (davepasino(AT)yahoo.com), Jan 09 2009 ●

▶ [A126473] 1,5,23,107,497,2309,10727,49835,231521,1075589,4996919,23214443,107848529,501037445,2327695367,10813893803,50238661313,233396326661,1084301290583,5037394142315,23402480441009,108722104190981,505095858086951,2346549744920747 ⋆ Number of strings over a 5 symbol alphabet with adjacent symbols differing by three or less. ● a(n) = 4 * a(n - 1) + 3 * a(n - 2) with a(0) = 1 and a(1) = 5. ● a(n) = ((1 + 3 / sqrt(7)) / 2) * (A) ^ (- n) + ((1 - 3 / sqrt(7)) / 2) * (B) ^ (- n) with A = (- 2 + sqrt(7)) / 3 and B = (- 2 - sqrt(7)) / 3. ●

▶ [A238112] 0,0,1,5,23,107,509,2473,12235,61463,312761,1609005,8355423,43741635,230614773,1223414481,6525975315,34981856303,188341400945,1018043304661,5522585343271,30056208280091,164066282507501,898029800045945,4927810473507803 ⋆ Expansion of g.f.: (1 - 5 * x + 2 * x ^ 2 + (2 * x - 1) * sqrt(x ^ 2 - 6 * x + 1)) / (4 * x). ● a(n) = (2 * GegenbauerC(n, - 1 / 2,3) - GegenbauerC(n + 1, - 1 / 2,3)) / 4, n>1. - _ Benedict W. J. Irwin _ , Sep 26 2016 ● a(n) = ((3 * n ^ 2 + 3 * n - 6) * CD(n + 2) + (34 * n ^ 2 + 52 * n + 18) * CD(n) + (20 - 23 * n ^ 2 - 21 * n) * CD(n + 1)) / (4 * (n ^ 3 - n)) where CD(n) are the central Delannoy numbers A001850, for n >= 2. - _ Peter Luschny _ , Feb 01 2020 ●

▶ [A179598] 1,5,23,109,511,2405,11303,53149,249871,1174805,5523383,25968589,122092831,574027205,2698824263,12688690429,59656665391,280479519605,1318691881943,6199911802669,29149270463551,137047105812005 ⋆ Eight white kings and one red king on a 3 X 3 chessboard. G.f.: (1 + 2 * x) / (1 - 3 * x - 8 * x ^ 2). ● a(n) = 3 * a(n - 1) + 8 * a(n - 2) with a(0) = 1 and a(1) = 5. ● a(n) = ((41 + 5 * sqrt(41)) * A ^ (- n - 1) + (41 - 5 * sqrt(41)) * B ^ (- n - 1)) / 328 with A = (- 3 + sqrt(41)) / 16 and B = (- 3 - sqrt(41)) / 16. ●

▶ [A192810] 0,1,5,23,109,527,2565,12503,60957,297183,1448821,7063207,34434061,167870511,818390501,3989759863,19450597117,94824185471,462280211797,2253676033863,10986963179245,53562871542735,261125950919109,1273022903354903 ⋆ Coefficient of x ^ 2 in the reduction of the polynomial (x ^ 2 + 2) ^ n by x ^ 3 - > x ^ 2 + 2. ● a(n) = 7 * a(n - 1) - 12 * a(n - 2) + 8 * a(n - 3). ●

▶ [A278677] 1,5,23,109,544,2876,16113,95495,597155,3929243,27132324,196122796,1480531285,11647194573,95297546695,809490850313,7126717111964,64930685865768,611337506786061,5940420217001199,59502456129204083,613689271227219015,6510381400140132872 ⋆ Popularity of left children in treeshelves avoiding pattern T231. ● a(n) = (n + 1) * b(n) - b(n + 1) where b(n) is the n - th Bell number (see A000110). ● a(n) = Sum _{ k=1..n } Stirling2(n,k) * (n - k). - _ Ilya Gutkovskiy _ , Apr 06 2021 ●

► [A178873] 0,1,5,23,112,558,2790,13951,69755,348773,1743862,8719308,43596540,217982701,1089913505,5449567523,27247837612,136239188058,681195940290,3405979701451,17029898507255,85149492536273 ⋆ Partial sums of round(5 ^ n / 7). • a(n) = round((5 * 5 ^ n + 7) / 28). • a(n) = floor((5 * 5 ^ n + 19) / 28). • a(n) = ceiling((5 * 5 ^ n - 5) / 28). • a(n) = a(n - 6) + 558 * 5 ^ (n - 5), n>5 . • a(n) = 5 * a(n - 1) + a(n - 6) - 5 * a(n - 7), n>6. • a(n) = 7 * a(n - 1) - 12 * a(n - 2) + 11 * a(n - 3) - 5 * a(n - 4), n>3. •

► [A199312] 5,23,113,563,2813,14063,70313,351563,1757813,8789063,43945313,219726563,1098632813,5493164063,27465820313,137329101563,686645507813,3433227539063,17166137695313,85830688476563,429153442382813,2145767211914063 ⋆ (9 * 5 ^ n + 1) / 2. • a(n) = 5 * a(n - 1) - 2. • a(n) = 6 * a(n - 1) - 5 * a(n - 2). •

► [A358607] 1,1,1,5,23,115,697,4925,39623,357955,3589177,39558845,475412423,6187461955,86702878777,1301486906045,20836087009223,354385941189955,6381537618718777,121290714467642045,2426520470557921223,50969651457241797955,1121574207307049758777 ⋆ a(n) = Sum _{ k=0..floor(n / 2) } (- 1) ^ k * (n - 2 * k)!. • a(n) = n * a(n - 1) - a(n - 2) + n * a(n - 3) for n > 2. •

► [A321798] 1,1,5,23,117,636,3607,21106,126489,772468,4789844,30075937,190851839,1222000222,7885041530,51222338580,334720178969,2198755865424,14511029102232,96169424666028,639757737711300,4270520564506069,28595671605541357,192025292117465445,1292866976587651519 ⋆ G.f. satisfies: A(x) = 1 / (1 - x / (1 - x * A(x)) ^ 4). • a(n) = Sum _{ k=0..n } (C(n,k) / (n - k + 1)) * C(n + 3 * k - 1,n - k). •

► [A005393] 0,0,1,5,23,118,710,4980,39902,359536,3598695,39615625,475687486,6187239475,86661001740,1300430722199,20814114415223,353948328666100,6372804626194309,121112786592293963,2422786846761133393,50888617325509644403 ⋆ Leading term of Stirling's approximation to n!, sqrt(2 * Pi) * n ^ (n + (1 / 2)) / e ^ n, rounded down. • a(n) = floor(sqrt(2 * Pi) * n ^ (n + (1 / 2)) / e ^ n). - _ Wesley Ivan Hurt _ , Jun 11 2016 •

► [A162815] 5,23,119,653,3677,20927,119615,684869,3923957,22488359,128895431,738814781,4234877645,24274429007,139142022671,797568604277,4571702539493,26205228460343,150209694669335,861009587370221 ⋆ a(n) = 8 * a(n - 1) - 13 * a(n - 2) for n > 1; a(0) = 5, a(1) = 23. • a(n) = ((5 + sqrt(3)) * (4 + sqrt(3)) ^ n + (5 - sqrt(3)) * (4 - sqrt(3)) ^ n) / 2. •

► [A351756] 1,1,5,23,119,709,4749,35031,281271,2438565,22673021,224739303,2363075191,26246762213,306830932749,3763323446487,48292462190743,646763208308421,9020009372203965,130737162573013159,1965798562640921879,30613694640191725381 ⋆ G.f. A(x) satisfies: A(x) = 1 + x * A(x / (1 - 2 * x)) / (1 - 2 * x) ^ 2. • a(0) = 1; a(n) = Sum _{ k=1..n } binomial(n,k - 1) * 2 ^ (k - 1) * a(n - k). •

► [A033312] 0,0,1,5,23,119,719,5039,40319,362879,3628799,39916799,479001599,6227020799,87178291199,1307674367999,20922789887999,355687428095999,6402373705727999,121645100408831999,2432902008176639999,51090942171709439999,1124000727777607679999 ⋆ a(n) = n! - 1. • a(n) = Sum _{ k = 1 .. n } (k - 1) * (k - 1)!. • a(n) = a(n - 1) * (n - 1) + a(n - 1) + n - 1, a(0) = 0. - _ Reinhard Zumkeller _ , Feb 03 2003 • a(0) = a(1) = 0, a(n) = a(n - 1) * n + (n - 1) for n >= 2. - _ Jaroslav Krizek _ , Jan 23 2010 •

► [A151881] 1,5,23,120,724,5012,39332,345832,3371976,36135792,422379792,5349561984,72996193152,1067779243008,16670798231040,276718772067840,4866610479828480,90401487246167040,1768784607499944960,36360467544043008000,783508616506603008000 ⋆ Sum (number of cycles) ^ 2 over all n! permutations of [1..n]. • a(n) = (- 1) ^ (n + 1) * (Stirling1(n + 1,2) - 2 * Stirling1(n + 1,3)). - _ Vladeta Jovovic _ , Jul 22 2009 • a(n) = n! * (H(n) + H(n) ^ 2 - H2(n)), where H(n)=sum(k=1..n,1 / k), H2(n)=sum(k=1..n,1 / k ^ 2). - _ Vladimir Reshetnikov _ , Oct 20 2015 • a(n) = Sum _{ k=0..n } |Stirling1(n,k)| * k ^ 2. - _ Peter Luschny _ , Jan 14 2020 •

► [A121636] 0,1,5,23,122,754,5364,43308,391824,3929616,43287840,519711840,6755460480,94527008640,1416783432960,22646604153600,384576130713600,6914404440115200,131217341055897600,2621176954176614400 ⋆ Number of 2 - cell columns starting at level 0 in all of deco polyominoes of height n. A deco polyomino is a directed column - convex polyomino in which the height, measured along the diagonal, is attained only in the last column. • a(1)=0, a(2)=1, a(n) = n(n - 2)! + (n - 1) * a(n - 1) for n >= 3. • a(n) = (n - 1)! * (n ^ 2 - 2n - 1) / n + (n - 1)! * (1 / 1 + 1 / 2 + ... + 1 / n) (n >= 2). - _ Emeric Deutsch _ , Oct 22 2008 • a(n) = (n - 1)! * (h(n - 1) + n - 2), n > 1, where h(n) = Sum _{ k=1..n } 1 / k. - _ Gary Detlefs _ , Oct 24 2010 • a(n + 1) = (n - 1)! * (n ^ 2 + Sum _{ k=1..n - 1 } k / (n - k)), n > 0. - _ Ron L.J. van den Burg _ , Jan 20 2020 •

► [A361305] 1,1,5,23,123,700,4170,25677,162101,1043603,6825429,45222437,302892681,2047499720,13950769772,95710823820,660609751890,4584018016679,31960334260971,223782306725768,1572921720684820,11094267854522250,78499108540111380,557041048588402170 ⋆ Expansion of A(x) satisfying A(x) = x + A(x) ^ 2 * (1 + A(x)) ^ 3. • a(n + 1) = Sum _{ k=0..n } binomial(n + k + 1,k) * binomial(3 * k,n - k) / (n + k + 1). - _ Seiichi Manyama _ , Aug 24 2023 •

► [A078509] 1,1,1,1,5,23,131,883,6859,60301,591605,6405317,75843233,974763571,13512607303,200949508327,3190881283415,53880906258521,964039575154409,18217997734199113,362584510633666621,7580578211464070863,166099466140519353035,3806162403813140850651 ⋆ Number of permutations p of { 1,2,...,n } such that p(i) - i != 1 and p(i) - i != 2 for all i. • a(n) = Sum _{ k=1..n } (- 1) ^ (n - k) * k! * binomial(n + k - 2,2 * k - 2). (End) •

► [A077240] 5,23,133,775,4517,26327,153445,894343,5212613,30381335,177075397,1032071047,6015350885,35060034263,204344854693,1191009093895,6941709708677,40459249158167,235813785240325,1374423462283783,8010726988462373,46689938468490455 ⋆ Bisection (even part) of Chebyshev sequence with Diophantine property. • a(n) = 6 * a(n - 1) - a(n - 2), a(- 1) = 7, a(0) = 5. • a(n) = (((3 - 2 * sqrt(2)) ^ n * (- 4 + 5 * sqrt(2)) + (3 + 2 * sqrt(2)) ^ n * (4 + 5 * sqrt(2)))) / (2 * sqrt(2)). - _ Colin Barker _ , Oct 12 2015 •

► [A356010] 1,5,23,134,814,6324,50028,475824,4806576,54597600,644119200,8847100800,121718332800,1853505158400,29894856364800,518855607244800,9197155541145600,179420609436364800,3537039053405491200,75849875285280768000,1670700245252548608000 ⋆ a(n) = n! * Sum _{ k=1..n } floor(n / k) / k. • a(n) = n! * Sum _{ k=1..n } sigma(k) / k. - _ Seiichi Manyama _ , Aug 03 2022 •

► [A351817] 1,1,5,23,139,1052,9166,90073,989205,11981051,158149438,2255926638,34549223880,564898101239,9812669832553,180324597042263,3492960489714519,71092066388237562,1516044005669227542,33788707128788508476,785270646437483414261,18992014442689191510460 ⋆ G.f. A(x) satisfies: A(x) = 1 + x * A(x / (1 - x) ^ 4) / (1 - x) ^ 4. • a(0) = 1; a(n) = Sum _{ k=0..n - 1 } binomial(n + 3 * k + 2,n - k - 1) * a(k). •

► [A007836] 1,1,1,5,23,151,1141,10205,103823,1190191,15151981,212222405,3242472023,53670028231,956685677221,18271360434605,372221031054623,8056751598834271,184647141575344861,4466900836910758805 ⋆ Springer numbers associated with symplectic group. • a(n) = P _ n(1) - Q _ n(1) (see A155100 and A104035), defining Q _{- 1 } = 0. Cf. A156142. •

► [A023275] 5,23,293,593,953,2063,3323,4133,4583,8243,8783,9173,9203,14723,15383,16103,16763,18413,19163,20123,25733,29453,37223,38783,39443 ⋆ Primes that remain prime through 3 iterations of function f(x) = 2x + 7. • a(n) == 23 (mod 30) for n > 1. - _ John Cerkan _ , Sep 16 2016 •

► [A063143] 5,24,44,64,84,104,124,144,164,184,204,224,244,264,284,304,324,344,364,384,404,424,444,464,484 ⋆ Dimension of the space of weight 2n cusp forms for Gamma _ 0(75). • a(n) = 2 * a(n - 1) - a(n - 2) for n>3. • a(n) = 4 * (5 * n - 4) for n>1. •

► [A121546] 5,24,56,100,156,225,307,401,508,627,759,904,1061,1231,1413,1607,1815,2035,2267,2512,2770,3040,3323,3618,3926 ⋆ a(n) = dimension of the space in which the sphere of radius n is of maximum volume. • a(n) >= 6.2835n ^ 2 - 0.009903n - 0.9212 is a lower bound on the real value of the dimension. •

► [A135703] 0,5,24,57,104,165,240,329,432,549,680,825,984,1157,1344,1545,1760,1989,2232,2489,2760,3045,3344,3657,3984 ⋆ a(n) = n * (7 * n - 2). • a(n) = 5 * n + 14 * binomial(n,2). • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). (End) • a(n) = a(n - 1) + 14 * n - 9 (with a(0)=0). - _ Vincenzo Librandi _ , Nov 24 2010 •

► [A006328] 5,24,79,223,579,1432,3434,8071,18714,42991,98127,222965,505008,1141236,2574845,5802636,13065935,29403439,66141015,148734156,334391354,751675943,1689494650,3797059555,8533209055 ⋆ Total preorders. • a(n) = 4 * a(n - 1) - 3 * a(n - 2) - 4 * a(n - 3) + 4 * a(n - 4) + a(n - 5) - a(n - 6) for n>8. •

► [A213766] 1,5,24,83,263,776,2201,6077,16488,44211,117615,311232,820641,2158645,5669096,14872483,38989367,102165928,267628569,700924525,1835493016,4806144675,12583939679,32947361088,86260987393 ⋆ Principal diagonal of the convolution array A213765. • a(n) = 5 * a(n - 1) - 6 * a(n - 2) - 3 * a(n - 3) + 6 * a(n - 4) + a(n - 5) - a(n - 6). •

► [A268587] 0,0,0,0,5,24,85,264,760,2080,5488,14080,35328,87040,211200,505856,1198080,2809856,6533120,15073280,34537472,78643200,178061312,401080320,899153920 ⋆ Expansion of x ^ 4 * (5 - 16 * x + 13 * x ^ 2) / (1 - 2 * x) ^ 4. • a(n) = 8 * a(n - 1) - 24 * a(n - 2) + 32 * a(n - 3) - 16 * a(n - 4) for n > 6. • a(n) = 2 ^ (n - 7) * (n - 3) * (n + 4) * (n + 11) / 3 for n > 2. (End) •

► [A270682] 1,5,24,88,312,1144,4344,16888,66552,264184,1052664,4202488,16793592,67141624,268500984,1073872888 ⋆ Number of active (ON,black) cells at stage 2 ^ n - 1 of the two - dimensional cellular automaton defined by "Rule 190", based on the 5 - celled von Neumann neighborhood. • a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3) for n>4. •

► [A074085] 0,0,0,0,5,24,91,308,978,2978,8802,25440,72251,202316,559941,1534548,4170256,11250630,30158900,80389600,213204513,562896832,1480086111,3877337556,10123000126 ⋆ Coefficient of q ^ 2 in nu(n), where nu(0) = 1, nu(1) = b and, for n >= 2, nu(n) = b * nu(n - 1) + lambda * (1 + q + q ^ 2 + ... + q ^ (n - 2)) * nu(n - 2) with (b,lambda) = (2,1). • a(n) = 6 * a(n - 1) - 9 * a(n - 2) - 4 * a(n - 3) + 9 * a(n - 4) + 6 * a(n - 5) + a(n - 6) for n >= 8. •

► [A180354] 0,5,24,93,272,645,1320,2429,4128,6597,10040,14685,20784,28613,38472,50685,65600,83589,105048,130397,160080,194565,234344,279933,331872 ⋆ a(n) = n ^ 4 + 4 * n. • a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n > 4. •

► [A270126] 1,5,24,96,384,1536,6144,24576,98304,393216,1572864,6291456,25165824,100663296,402653184,1610612736 ⋆ Number of active (ON,black) cells at stage 2 ^ n - 1 of the two - dimensional cellular automaton defined by "Rule 86", based on the 5 - celled von Neumann neighborhood. • a(n) = 4 * a(n - 1) for n >2. • a(n) = 3 * 2 ^ (2 * n - 1) for n>1. •

► [A276139] 1,5,24,97,411,1718,7209,30217,126696,531173,2226999,9336862,39145581,164121053,688091064,2884878457,12095090691,50709664358,212604446529,891361661377,3737107216776,15668129957213,65689925955519,275410427652622,1154680912735461 ⋆ Series expansion of (1 + 2x + 4x ^ 2) / (1 - 3x - 5x ^ 2) . • a(0)=1, a(1)=5, a(2)=24, a(n) = 3 * a(n - 1) + 5 * a(n - 2) for n>2. •

► [A291395] 5,24,103,425,1704,6715,26153,101052,388303,1486337,5673840,21616915,82244873,312603348,1187325847,4507385921,17104894344,64893555547,246150297257,933554883084,3540272085535,13424640644225,50903370755040,193007618806051,731797403031305 ⋆ p - INVERT of (1,1,0,0,0,0,...), where p(S) = (1 - 2 S)(1 - 3 S). • a(n) = 5 * a(n - 1) - a(n - 2) - 12 * a(n - 3) - 6 * a(n - 4) for n >= 5. •

► [A273622] 1,5,24,105,451,1920,8149,34545,146376,620125,2626999,11128320,47140601,199691245,845906424,3583318305,15179181851,64300049280,272379384749,1153817597625,4887649790376,20704416783605,87705316964399,371525684705280 ⋆ a(n) = (1 / 3) * (Lucas(3 * n) - Lucas(n)). • a(n) = (1 / 3) * ((2 + sqrt(5)) ^ n + (2 - sqrt(5)) ^ n - ((1 + sqrt(5)) / 2) ^ n - ((1 - sqrt(5)) / 2) ^ n). • a(n) = - a(- n). • a(n) = 5 * a(n - 1) - 2 * a(n - 2) - 5 * a(n - 3) - a(n - 4). •

► [A008464] 1,5,24,108,464,1936,7936,32192,129792,521472,2091008,8375296,33525760,134156288,536739840,2147205120,8589344768,34358493184,137436332032,549750308864,2199011721216,8796068904960,35184321757184,140737383497728,562949735317504 ⋆ a(n) = 2 ^ (2n + 3) - 2 ^ n * (n + 3). • a(n) = 8 * a(n - 1) - 20 * a(n - 2) + 16 * a(n - 3). - _ Wesley Ivan Hurt _ , Sep 04 2022 •

► [A291010] 5,24,108,468,1980,8244,33948,138708,563580,2280564,9200988,37040148,148869180,597602484,2396787228,9606280788,38482518780,154102262004,616925608668,2469252116628,9881657512380,39540577187124,158204150161308,632942124883668 ⋆ p - INVERT of (1,1,1,1,1,...), where p(S) = (1 - 2 * S) * (1 -

3 * S). ● a(n) = 7 * a(n - 1) - 12 * a(n - 2) for n >= 3. ● a(n) = 9 * 4 ^ n - 4 * 3 ^ n. - _ Colin Barker _ , Aug 23 2017 ●

▶ [A296770] 1,5,24,111,500,2210,9632,41531,177564,754014,3184016,13382710,56026984,233765636,972504704,4035441491,16707488684,69033916166,284733161264,1172510645666,4821324991064,19799091571676,81208982686784,332726301861086,1361862906980120 ⋆ Row sums of A050158. ● a(n) = Sum _{ k=0..n } (binomial(2 * n + 1, n + 1) - binomial(2 * n + 1, n - k - 1)). ● a(n) = 4 ^ n * ((2 * (n + 2) * Gamma(n + 3 / 2)) / (sqrt(Pi) * Gamma(n + 2)) - 1). ● a(n) = (n / 2 + 1) * binomial(2 * (n + 1), n + 1) - 4 ^ n. ●

▶ [A079028] 1,5,24,112,512,2304,10240,45056,196608,851968,3670016,15728640,67108864,285212672,1207959552,5100273664,21474836480,90194313216,377957122048,1580547964928,6597069766656,27487790694400,114349209288704,474989023199232,1970324836974592 ⋆ a(0) = 1, a(n) = (n + 4) * 4 ^ (n - 1) for n >= 1. ● a(n) = 8 * a(n - 1) - 16 * a(n - 2), a(0) = 1, a(1) = 5. - _ Paul Barry _ , Mar 07 2003 ● a(n) = (n + 4) * 4 ^ (n - 1). - _ Paolo P. Lava _ , Jul 08 2008 ●

▶ [A218987] 5,24,112,521,2421,11248,52256,242769,1127845,5239688,24342288,113088217,525379733,2440783584,11339273536,52679444897,244735600197,1136980735480,5282129742512,24539461176489,114004233933493,529635319263440,2460553978854240 ⋆ Power ceiling sequence of 2 + sqrt(7). ● a(n) = ceiling(x * a(n - 1)), where x=2 + sqrt(7), a(0) = ceiling(x). ● a(n) = 5 * a(n - 1) - a(n - 2) - 3 * a(n - 3). ● a(n) = (- 14 + (217 - 83 * sqrt(7)) * (2 - sqrt(7)) ^ n + (2 + sqrt(7)) ^ n * (217 + 83 * sqrt(7))) / 84. - _ Colin Barker _ , Sep 02 2016 ●

▶ [A347029] 1,5,24,112,536,2576,12392,59610,286752,1379411,6635624,31920520,153552936,738662923,3553321281,17093171649,82226315586,395547831245,1902773895293,9153250784395,44031505860633,211812562992414,1018919543279305,4901489415968643,23578503968558227 ⋆ a(n) = ceiling(e ^ (n * (Pi / 2))). ● a(n) = ceiling(e ^ (n * Pi / 2)) = ceiling(i ^ (- n * i)). ●

▶ [A141223] 1,5,24,113,526,2430,11166,51105,233190,1061510,4822984,21879786,99135076,448707992,2029215114,9170247393,41416383366,186957126702,843575853984,3804927658878,17156636097156,77339426905812 ⋆ Expansion of 1 / (sqrt(1 - 4 * x) * (1 - 3 * x * c(x))), where c(x) is the g.f. of A000108. ● a(n) = Sum _{ k=0..n } C(2n - k,n - k) * 3 ^ k. ● a(n) = [x ^ n] 1 / ((1 + x) ^ (n + 1) * (1 - 3x)). ● a(n) = 3 ^ (2n + 1) / 2 ^ (n + 2) + (1 / 4) * sum(binomial(2k,k) * (9 / 2) ^ (n - k),k=0..n). ●

▶ [A289783] 1,5,24,113,527,2446,11325,52369,242008,1117997,5163891,23849270,110142089,508652653,2349005592,10847859961,50095958215,231345247934,1068361195173,4933730638937,22784141325656,105217952251285,485900111176779,2243903303473318 ⋆ p - INVERT of the (3 ^ n), where p(S) = 1 - S - S ^ 2. ● a(n) = 7 * a(n - 1) - 11 * a(n - 2). ● a(n) = (2 ^ (- n - 1) * ((7 - sqrt(5)) ^ (n + 1) * (- 4 + sqrt(5)) + (4 + sqrt(5)) * (7 + sqrt(5)) ^ (n + 1))) / (11 * sqrt(5)). - _ Colin Barker _ , Aug 11 2017 ●

▶ [A140766] 1,5,24,114,540,2556,12096,57240,270864,1281744,6065280,28701216,135815616,642686400,3041224704,14391229824,68100030720,322252805376,1524916647936,7215983055360,34146398444544,161582492335104,764616563343360,3618204426049536 ⋆ a(n) = 6 * a(n - 1) - 6 * a(n - 2). ● a(n) = 6 * a(n - 1) - 6 * a(n - 2); a(1) = 1, a(2) = 5. ● a(n)=(1 / 2) * [3 - sqrt(3)] ^ n + (1 / 3) * sqrt(3) * [3 + sqrt(3)] ^ n + (1 / 2) * [3 + sqrt(3)] ^ n - (1 / 3) * [3 - sqrt(3)] ^ n * sqrt(3), with n>=0 - _ Paolo P. Lava _ , Jun 25 2008 ●

▶ [A026388] 1,5,24,114,541,2573,12275,58747,282003,1357407,6549906,31675020,153481299,745011075,3622111560,17635418730,85975792075,419644943495,2050493623760,10029194506990,49098707209695,240568930012575 ⋆ a(n) is the number of integer strings s(0),...,s(n) counted by array T in A026386 that have s(n)=2; also a(n) = T(2n,n - 1). ● a(n) = hypergeom([3 / 2, 2, 1 - n], [1, 3], - 4). - _ Vladimir Reshetnikov _ , Apr 25 2016 ● a(n) = Sum _{ k=1..n } C(2 * k,k - 1) * C(n - 1,k - 1). - _ Vladimir Kruchinin _ , Sep 17 2020 ●

▶ [A057969] 1,5,24,115,551,2542,11193,46547,182164,670476,2325506,7624434,23716419,70253721,198905506,540079754,1410786483,3555443969,8667153126,20484365167,47037898503,105143200252,229178029000 ⋆ 5 x n binary matrices without unit columns up to row and column permutations. ● a(n)=(1 / 5!) * (Z(S _ n; 27, 27, ...) + 10 * Z(S _ n; 13, 27, 13, 27, ...) + 15 * Z(S _ n; 7, 27, 7, 27, ...) + 20 * Z(S _ n; 6, 6, 27, 6, 6, 27, ...) + 20 * Z(S _ n; 4, 6, 13, 6, 4, 27, 4, 6, 13, 6, 4, 27, ...) + 30 * Z(S _ n; 3, 7, 3, 27, 3, 7, 3, 27, ...) + 24 * Z(S _ n; 2, 2, 2, 2, 27, 2, 2, 2, 2, 27, ...)), where Z(S _ n; x _ 1, x _ 2, ..., x _ n) is cycle index of symmetric group S _ n of degree n. ●

▶ [A004254] 0,1,5,24,115,551,2640,12649,60605,290376,1391275,6665999,31938720,153027601,733199285,3512968824,16831644835,80645255351,386394631920,1851327904249,8870244889325,42499896542376,203629237822555,975646292570399,4674602225029440 ⋆ a(n) = 5 * a(n - 1) - a(n - 2) for n > 1, a(0) = 0, a(1) = 1. ● a(n) = ((5 + sqrt(21)) / 2) ^ n - ((5 - sqrt(21)) / 2) ^ n) / sqrt(21). - _ Barry E. Williams _ , Aug 29 2000 ● a(n) = S(2 * n - 1, sqrt(7)) / sqrt(7) = S(n - 1, 5); S(n, x)=U(n, x / 2), Chebyshev polynomials of 2nd kind, A049310. ● a(n) = Sum _{ k=0..n - 1 } binomial(n + k, 2 * k + 1) * 2 ^ k. - _ Paul Barry _ , Nov 30 2004 ● a(n + 1) = Sum _{ k=0..n } Gegenbauer _ C(n - k,k + 1,2). - _ Paul Barry _ , Apr 21 2009 ● a(n) = - a(- n) for all n in Z. - _ Michael Somos _ , Jan 22 2017 ●

▶ [A086347] 1,5,24,116,560,2704,13056,63040,304384,1469696,7096320,34264064,165441536,798822400,3857055744,18623512576,89922273280,434183143424,2096421666816,10122419240960,48875363631104,235991131488256,1139465980477440,5501828447862784 ⋆ On a 3 X 3 board, number of n - move routes of chess king ending in a given side square. ● a(n) = (Sqrt[2] / 32)((2 + Sqrt[8]) ^ (n + 2) - (2 - Sqrt[8]) ^ (n + 2)) ● a(n) = 4 * a(n - 1) + 4 * a(n - 2). - _ Tanya Khovanova _ , Jan 11 2007 ●

▶ [A235115] 5,24,116,564,2756,13524,66596,328884,1628036,8074644,40111076,199506804,993339716,4949921364,24682497956,123144054324,614646529796,3068937681684,15327508539236,76568823219444,382569238190276,1911746679323604,9554335350106916,47754084564490164,238700054078273156 ⋆ Number of independent vertex subsets of the graph obtained by attaching two pendant edges to each vertex of the star graph S _ n (having n vertices; see A235114). ● a(n) = 4 * 5 ^ (n - 1) + 2 ^ (2 * n - 2) for n>=1. ● a(n) = 9 * a(n - 1) - 20 * a(n - 2) for n>1. - _ Colin Barker _ , Jul 31 2017 ●

▶ [A110190] 0,1,5,24,116,568,2820,14184,72180,371112,1925380,10068728,53023860,280969560,1497072132,8016213960,43114424308,232817773640,1261793848836,6861179441880,37421756333172,204671007577464,1122275850740996,6168352091629864,33977333521770996 ⋆ Number of (1,0) - steps on the lines y=0 and y=1 in all Schroeder paths of length 2n (a Schroeder path of length 2n is a path from (0,0) to (2n,0), consisting of steps U=(1,1), D=(1, - 1) and H=(2,0) and never going below the x - axis). ● a(n) = Sum _{ k=0..n } ((k + 1) * Sum _{ i=0..n - k } (binomial(n + 1,n - k - i) * binomial(n + i,n)) / (n + 1) * a113127(k)). - _ Vladimir Kruchinin _ , Mar 13 2016 ●

▶ [A291245] 5,24,120,599,2990,14925,74500,371876,1856265,9265776,46251265,230868900,1152410620,5752399899,28713814350,143328549649,715442152480,3571217840400,17826174791885,88981552487776,444162405876285,2217091490069376,11066885918992400 ⋆ p - INVERT of (0,1,0,1,0,1,...), where p(S) = 1 - 5 S + S ^ 2. ● a(n) = 5 * a(n - 1) + a(n - 2) - 5 * a(n - 3) - a(n - 4) for n >= 5. ●

▶ [A163610] 5,24,122,640,3412,18336,98920,534656,2892368,15653760,84736928,458742784,2483625280,13446603264,72802072192,394164131840,2134084044032,11554374506496,62557819435520,338701312393216,1833801027048448 ⋆ a(n) = ((5 + 2 * sqrt(2)) * (4 + sqrt(2)) ^ n + (5 - 2 * sqrt(2)) * (4 - sqrt(2)) ^ n) / 2. ● a(n) = 8 * a(n - 1) - 14 * a(n - 2) for n > 1; a(0) = 5, a(1) = 24. ●

▶ [A193668] 1,1,5,24,134,866,6392,53198,493628,5057522,56741240,692118422,9122245508,129220379978,1958059133552,31607140330670,541515698082332,9814691158604258,187629572002767848,3773371262361852422,79636835475910932020 ⋆ a(n) = Sum _{ i=0..n - 1 } (n + i) * a(n - 1 - i) for n>1, a(0)=1, a(1)=1. ● a(n) = (n - n ^ 2 - 1) * Gamma(n) + e * (n * Gamma(n + 1,1) - (n - 1) * Gamma(n,1)) for n>0. - _ Peter Luschny _ , May 30 2014. ●

▶ [A256325] 0,0,1,5,24,136,933,7589,71376,760796,9051353,118784325,1703388648,26486926720,443732646029,7965563713781,152504645563072,3101366761047866,67653627906345057,1515914174890163541,36218232449903567992,908098606824551207384,23839591584412453131765 ⋆ a(n) = Sum _{ k=0..n - 1 } (n - k)! * exp(- k / 2) * M _{ k - n,1 / 2 } (k), where M is the Whittaker function. ● a(n) = Sum _{ k=0..n - 1 } k * (n - k)! * hypergeom([k - n + 1],[2], - k). ● a(n) = Sum _{ k=0..n - 1 } (Sum _{ j=0.. n - k } ((n - k - j)! * C(n - k,j) * C(n - k - 1,j - 1) * k ^ j)). ● a(n) = Sum _{ k=0..n - 1 } (n - k - 1) * k! * LaguerreL(k, 1, k - n + 1). - _ G. C. Greubel _ , Feb 23 2021 ●

▶ [A201952] 1,1,5,24,139,945,7377,65016,638418,6910650,81747665,1049089470,14516096009,215419836359,3412889885571,57492203734320,1026121982213480,19342642266760680,383995631680561234,8007915240045479980,175020604366224762038,4000551483475536398178 ⋆ A diagonal of irregular triangle A201949. ● a(n) = [x ^ (n - 1)] Product _{ k=0..n - 1 } (1 + k * x + x ^ 2). ●

▶ [A221788] 0,0,0,5,24,142,840,4919,28704,167344,975408,5685161,33135624,193128658,1125636408,6560689883,38238502992,222870328180,1298983466208,7571030469197,44127199349112,257192165625622,1499025794404776 ⋆ Number of 3 X n arrays of occupancy after each element moves to some horizontal or antidiagonal neighbor, without 2 - loops or left turns. ● a(n) = (408 + sqrt(2) * ((10041 - 7100 * sqrt(2)) * (3 + 2 * sqrt(2)) ^ n - (3 - 2 * sqrt(2)) ^ n * (10041 + 7100 * sqrt(2))) - 72 * (1 + n)) / 32 for n>2. ●

▶ [A111766] 0,5,24,145,840,4901,28560,166465,970224,5654885,32959080,192099601,1119638520,6525731525,38034750624,221682772225,1292061882720,7530688524101,43892069261880,255821727047185,1491038293021224,8690408031080165,5065140989345976 0 ⋆ Numbers occurring in three Pythagorean triples of the form: odd: a, (a ^ 2 - 1) / 2, (a ^ 2 + 1) / 2 or even: a, a ^ 2 / 4 - 1, a ^ 2 / 4 + 1. ● a(n) = (6 * (- 1) ^ n + (3 - 2 * sqrt(2)) ^ n + (3 + 2 * sqrt(2)) ^ n) / 8 for n>0. ● a(n) = 5 * a(n - 1) + 5 * a(n - 2) - a(n - 3) for n>3. ●

▶ [A372138] 1,1,5,24,149,945,6464,45360,328661,2426971,18244053,138988092,1071271988,8336754044,65421283160,517081111568,4112772482949,32894217211791,264391091936095,2134466592084000,17300375657257629,140728012021470193,1148477345709237844 ⋆ G.f. A(x) satisfies A(x) = 1 / (1 - x * A(x) ^ 2 * (1 + 4 * x * A(x)) ^ (1 / 2)). ● a(n) = Sum _{ k=0..n } 4 ^ (n - k) * binomial(n + 2 * k,k) * binomial(k / 2,n - k) / (n + k + 1). ●

▶ [A084967] 5,25,35,55,65,85,95,115,125,145,155,175,185,205,215,235,245,265,275,295,305,325,335,355,365 ⋆ Multiples of 5 whose GCD with 6 is 1. ● a(n) = 5 * (- 3 + (- 1) ^ n + 6 * n) / 2. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3). ●

▶ [A273789] 1,5,25,49,81,121,169,225,289,361,441,529,625,729,841,961,1089,1225,1369,1521,1681,1849,2025,2209,2401 ⋆ Number of active (ON,black) cells in n - th stage of growth of two - dimensional cellular automaton defined by "Rule 931", based on the 5 - celled von Neumann neighborhood. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>4. ●

▶ [A290700] 1,5,25,49,141,389,1009,2761,7441,19925,53769,144721,389325,1048325,2821665,7594761,20444065,55029413,148124153,398713969,1073231821,2888859781,7776063377,20931130057,56341150641 ⋆ Number of minimal edge covers in the n - prism graph. ● a(n) = a(n - 1) + 2 * a(n - 2) + 6 * a(n - 3) + 2 * a(n - 4) + 2 * a(n - 5) - 2 * a(n - 6) - 2 * a(n - 7) - a(n - 8) + a(n - 9) for n > 9. ●

▶ [A152734] 0,5,25,60,110,175,255,350,460,585,725,880,1050,1235,1435,1650,1880,2125,2385,2660,2950,3255,3575,3910,4260 ⋆ 5 times pentagonal numbers: 5 * n * (3 * n - 1) / 2. ● a(n) = a(n - 1) + 15 * n - 10 (with a(0)=0). - _ Vincenzo Librandi _ , Nov 26 2010 ●

▶ [A080856] 1,5,25,61,113,181,265,365,481,613,761,925,1105,1301,1513,1741,1985,2245,2521,2813,3121,3445,3785,4141,4513 ⋆ a(n) = 8 * n ^ 2 - 4 * n + 1. ● a(n) = C(n,0) + 4 * C(n,1) + 16 * C(n,2). - _ Reinhard Zumkeller _ , Jun 17 2009 ● a(n) = 16 * n + a(n - 1) - 12 with n>0, a(0)=1. - _ Vincenzo Librandi _ , Aug 08 2010 ●

▶ [A060820] 5,25,61,113,181,265,365,481,613,761,925,1105,1301,1513,1741,1985,2245,2521,2813,3121,3445,3785,4141,4513,4901 ⋆ (2 * n - 1) ^ 2 + (2 * n) ^ 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). G.f.: x * (5 + 10 * x + x ^ 2) / (1 - x) ^ 3. - _ Colin Barker _ , Apr 22 2012 ●

▶ [A179131] 1,5,25,65,85,445,1165,1525,7985,20905,27365,143285,375125,491045,2571145,6731345,8811445,46137325,120789085,158114965,827900705,2167472185,2837257925,14856075365,38893710245 ⋆ Numerators of A178381(4 * n + 1) / A178381(4 * n) ● a(n) = 18 * a(n - 3) - a(n - 6) for n>6. G.f.: - (4 * x ^ 6 + 5

* x ^ 5 + 5 * x ^ 4 - 47 * x ^ 3 - 25 * x ^ 2 - 5 * x - 1) / ((x ^ 2 - 3 * x + 1) * (x ^ 4 + 3 * x ^ 3 + 8 * x ^ 2 + 3 * x + 1)). - _ Colin Barker _ , Jun 27 2013 ●

▶ [A322594] 1,5,25,69,145,261,425,645,929,1285,1721,2245,2865,3589,4425,5381,6465,7685,9049,10565,12241,14085,16105,18309,20705 ⋆ a(n) = (4 * n ^ 3 + 12 * n ^ 2 - 4 * n + 3) / 3. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4), n >= 5. ● a(n) = 8 * binomial(n, 3) + 16 * binomial(n, 2) + 4 * binomial(n, 1) + 1. ●

▶ [A154286] 5,25,75,175,350,630,1050,1650,2475,3575,5005,6825,9100,11900,15300,19380,24225,29925,36575,44275,53130,63250,74750,87750,102375 ⋆ a(n) = E(k) * C(n + k,k) = Euler(k) * binomial(n + k,k) for k=4. ● a(n) = (n + 1) * (n + 2) * (n + 3) * (n + 4) * 5 / 24. ● a(n) = a(n - 1) * (n + 4) / n (n>0), a(0)=5. ●

▶ [A331575] 0,0,0,0,0,0,0,0,0,1,5,25,75,225,525,1225,2450,4900,8820,15876,26460,44100,69300,108900,163350,245025 ⋆ a(n) is the number of subsets of { 1..n } that contain 4 even and 4 odd numbers. ● a(n) = binomial(n / 2,4) ^ 2, n even; ● a(n) = binomial((n - 1) / 2,4) * binomial((n + 1) / 2,4), n odd. ● a(n) = 2 * a(n - 1) + 6 * a(n - 2) - 14 * a(n - 3) - 14 * a(n - 4) + 42 * a(n - 5) + 14 * a(n - 6) - 70 * a(n - 7) + 70 * a(n - 9) - 14 * a(n - 10) - 42 * a(n - 11) + 14 * a(n - 12) + 14 * a(n - 13) - 6 * a(n - 14) - 2 * a(n - 15) + a(n - 16) for n>15. ●

▶ [A171272] 1,5,25,77,177,341,585,925,1377,1957,2681,3565,4625,5877,7337,9021,10945,13125,15577,18317,21361,24725,28425,32477,36897 ⋆ a(n) = 1 + 4 * n * (1 + 2 * n ^ 2) / 3. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ●

▶ [A062989] 0,5,25,80,205,456,917,1708,2994,4995,7997,12364,18551,27118,38745,54248,74596,100929,134577,177080,230209,295988,376717,474996,593750 ⋆ a(n) = C(n + 6, 6) - n - 1. ● a(0)=0, a(1)=5, a(2)=25, a(3)=80, a(4)=205, a(5)=456, a(6)=917, a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). - _ Harvey P. Dale _ , Aug 08 2013 ●

▶ [A122679] 0,5,25,80,225,605,1600,4205,11025,28880,75625,198005,518400,1357205,3553225,9302480,24354225,63760205,166926400,437019005,1144130625,2995372880,7841988025,20530591205,53749785600 ⋆ Related to number of n - circum - C _ 5 H _ 5 systems. ● a(1)=0, a(2)=5, a(3)=25, a(n) = 4 * a(n - 1) - 4 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Apr 21 2015 ● a(n) = - 5 * 2 ^ (- 1 - n) * (2 ^ (2 + n) - (3 - sqrt(5)) ^ n * (3 + sqrt(5)) + (- 3 + sqrt(5)) * (3 + sqrt(5)) ^ n). - _ Colin Barker _ , Nov 03 2016 ●

▶ [A018212] 1,5,25,85,255,651,1519,3235,6470,12190,21942,37854,63090,101850,160050,245322,367983,541035,781495,1110395,1554553,2146573,2927145,3945045,5260060 ⋆ Alkane (or paraffin) numbers l(11,n). ● a(n) = (1 / (2 * 8!)) * (n + 2) * (n + 4) * (n + 6) * (n + 8) * ((n + 1) * (n + 3) * (n + 5) * (n + 7) + 1 * 3 * 5 * 7) - (1 / 3) * (1 / 2 ^ 6) * (n ^ 3 + (27 / 2) * n ^ 2 + 56 * n + (279 / 4)) * (1 / 2) * (1 - (- 1) ^ n) [_ Yosu Yurramendi _ Jun 23 2013] ●

▶ [A223840] 5,25,89,249,596,1286,2578,4886,8851,15439,26072,42800,68523,107273,164567,247843,366992,535000,768715,1089755,1525574,2110704,2888192,3911252,5245153 ⋆ Number of 4 X n 0..1 arrays with rows and antidiagonals unimodal and columns nondecreasing. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>11. ●

▶ [A083090] 1,5,25,90,247,766,2258,5860,16526,45639,124043,313327,837221,2216256,5545541,14524810,37810204,97907017,242993558,625252309,1602714963,3962518559,10109705767,25718726896,63402237401 ⋆ Main diagonal of table A083087. ● a(n) = T(n, n), where T(n, 0) = floor(n * x / (x - 1)) + 1, T(n, k + 1) = ceiling(x * T(n, k)), for n >= 0, k >= 0, where x = 1 + sqrt(2). ●

▶ [A224148] 5,25,92,272,691,1573,3296,6472,12058,21506,36961,61517,99542,157084,242371,366419,543763,793327,1139450,1613086,2253197,3108359,4238602,5717506,7634576 ⋆ Number of 4 X n 0..1 arrays with rows and antidiagonals unimodal and columns nondecreasing. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>9. ●

▶ [A073374] 1,5,25,95,340,1106,3430,10130,28915,80035,216143,571225,1482110,3783640,9522740,23665300,58149845,141435985,340854645,814589475,1931900376,4549699950,10645737330,24761578470 ⋆ Fourth convolution of A001045(n + 1) (generalized (1,2) - Fibonacci), n>=0, with itself. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n - k + 4, 4) * binomial(n - k, k) * 2 ^ k. ●

▶ [A255459] 1,5,25,101,361,1205,3865,12101,37321,114005,346105,1046501,3155881,9500405,28566745,85831301,257756041,773792405,2322425785,6969374501,20912317801,62745342005,188252803225,564791964101,1694443001161 ⋆ a(n) = A255458(2 ^ n - 1). ● a(n) = (3 - 2 ^ (3 + n) + 2 * 3 ^ (1 + n)). ● a(n) = 6 * a(n - 1) - 11 * a(n - 2) + 6 * a(n - 3) for n>2. ●

▶ [A083877] 1,5,25,101,385,1397,4921,16949,57409,191909,634777,2081477,6775873,21921941,70548793,225995285,721032577,2292237893,7264134169,22954663973,72350776321,227512682165,713919106105,2235900497141,6990131027905 ⋆ Absolute value of determinant of n X n matrix where the element a(i,j) = if i + j > n then 2 * (i + j - n) - 1, else 2 * (n + 1 - i - j). ● a(n) = 1 / 12 * [(4n - 1)3 ^ n - 3(- 1) ^ n]. ● a(n) = 5 * a(n - 1) - 3 * a(n - 2) - 9 * a(n - 3). G.f.: x * (3 * x ^ 2 + 1) / ((x + 1) * (3 * x - 1) ^ 2). - _ Colin Barker _ , Sep 28 2014 ●

▶ [A272762] 1,5,25,105,417,1657,6689,27353,112513,462969,1899873,7766041,31617089,128250041,518623777,2091988569 ⋆ Number of active (ON,black) cells at stage 2 ^ n - 1 of the two - dimensional cellular automaton defined by ”Rule 822”, based on the 5 - celled von Neumann neighborhood. ● a(n) = 12 * a(n - 1) - 55 * a(n - 2) + 120 * a(n - 3) - 124 * a(n - 4) + 48 * a(n - 5) for n > 4 (conjectured). ● a(n) = 5 - 2 ^ (1 + n) + 2 ^ (1 + 2 * n) - 4 * 3 ^ n + 2 ^ (2 + n) * n (conjectured). - _ Colin Barker _ , Apr 28 2017 ●

▶ [A245551] 1,5,25,105,420,1596,5880,21120,74415,258115,883883,2994355,10051860,33479460,110750580,364177332,1191186855,3877914915,12571302975,40598200335,130657125984,419173385400,1340928798300,4278305877300,13617034683525 ⋆ G.f.: 1 / (1 - 2 * x - 3 * x ^ 2) ^ (5 / 2). ● a(n) = (2 + 3 / n) * a(n - 1) + (3 + 9 / n) * a(n - 2) for n >= 2. - _ Robert Israel _ , Aug 01 2014 ●

▶ [A275903] 1,5,25,109,465,1989,8521,36509,156417,670133,2871033,12300301,52697905,225772453,967271849,4144061053,17754307681,76064381589,325880921433,1396164311533,5981555398289,25626643431045,109791652808201,470377911909981,2015229522041281 ⋆ Expansion of (1 + 4 * x ^ 2) / (1 - 5 * x + 4 * x ^ 2 - 4 * x ^ 3). ● a(n) = 5 * a(n - 1) - 4 * a(n - 2) + 4 * a(n - 3) for n>2. - _ Colin Barker _ , Aug 26 2016 ●

▶ [A282077] 0,5,25,110,350,1001,2485,5720,12120,24310,46126,83980,146860,248710,408430,653752,1021240,1562275,2343055,3453450,5007002,7153575,10079355,14024400,19282640 ⋆ Number of 9 - element subsets of [n + 9] having an even sum. ● a(n) = ((384 + 400 * n + 140 * n ^ 2 + 20 * n ^ 3 + n ^ 4) * (- 945 * (- 1 + (- 1) ^ n) + 3378 * n + 1900 * n ^ 2 + 460 * n ^ 3 + 50 * n ^ 4 + 2 * n ^ 5)) / 1451520. - _ Colin Barker _ , Feb 06 2017 ●

▶ [A290920] 5,25,110,450,1746,6505,23465,82435,283270,955258,3169520,10368490,33497790,107028120,338582738,1061557195,3301399385,10191612315,31250047480,95226980516,288523285450,869559080385,2607834545025,7785230674580,23142279699355 ⋆ p - INVERT of the positive integers, where p(S) = (1 - S) ^ 5. ● a(n) = 15 * a(n - 1) - 95 * a(n - 2) + 330 * a(n - 3) - 685 * a(n - 4) + 873 * a(n - 5) - 695 * a(n - 6) + 330 * a(n - 7) - 95 * a(n - 8) + 15 * a(n - 9) - a(n - 10). ●

▶ [A267228] 5,25,110,470,1980,8274,34396,142474,588596,2426738,9989292,41065818,168636772,691859842,2836150748,11617837802,47559474708,194575978386,795613053964,3251559375226,13282278193604,54232112235170 ⋆ Number of length - n 0..4 arrays with no following elements greater than or equal to the first repeated value. ● a(n) = (2 * (- 3 * 2 ^ (1 + n) - 8 * 3 ^ n + 41 * 4 ^ n - 8) + 3 * 4 ^ n * n) / 48 for n>1. ●

▶ [A092440] 1,5,25,113,481,1985,8065,32513,130561,523265,2095105,8384513,33546241,134201345,536838145,2147418113,8589803521,34359476225,137438429185,549754765313,2199021158401,8796088827905,35184363700225 ⋆ a(n) = 2 ^ (2n + 1) - 2 ^ (n + 1) + 1. ● a(n) = 2 ^ (2n + 1) - 2 ^ (n + 1) + 1. ● a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3). ●

▶ [A267467] 5,25,115,515,2285,10119,44901,200119,897301,4052183,18444197,84651063,391805877,1828676887,8604122053,40793238647,194778656213,936040595031,4524410973669,21981448319671,107275320299509,525571712299415 ⋆ Number of length - n 0..4 arrays with no following elements larger than the first repeated value. ● a(n) = (- 80 - 15 * 2 ^ (2 + n) - 80 * 3 ^ n + 335 * 4 ^ n + 48 * 5 ^ n) / 240 + 4 ^ (- 2 + n) * n. ●

▶ [A200781] 1,5,25,115,530,2425,11100,50775,232275,1062500,4860250,22232375,101698250,465201250,2127983750,9734098125,44526969375,203681015625,931704015625,4261920875000,19495429065625,89178510250000,407931862578125,1866014626609375,8535765175875000 ⋆ G.f.: 1 / (1 - 5 * x + 10 * x ^ 3 - 5 * x ^ 4). ● a(n) = 5 * a(n - 1) - 10 * a(n - 3) + 5 * a(n - 4). ●

▶ [A357598] 0,1,1,5,25,117,601,3509,22457,153141,1105561,8453557,68339833,581495605,5184047961,48259748533,468040609593,4719817792565,49396003390489,535526127566773,6004124908829177,69509047405180213,829801009239621849,10202835010223731893 ⋆ Expansion of e.g.f. sinh(2 * (exp(x) - 1)) / 2. ● a(n) = Sum _{ k=0..floor((n - 1) / 2) } 4 ^ k * Stirling2(n,2 * k + 1). ● a(n) = (Bell _ n(2) - Bell _ n(- 2)) / 4, where Bell _ n(x) is n - th Bell polynomial. ●

▶ [A089927] 1,5,25,120,576,2760,13225,63365,303601,1454640,6969600,33393360,159997201,766592645,3672966025,17598237480,84318221376,403992869400,1935646125625,9274237758725,44435542668001,212903475581280 ⋆ Expansion of 1 / ((1 - x ^ 2)(1 - 5x + x ^ 2)). ● a(n) = 5 * a(n - 1) - 5 * a(n - 3) + a(n - 4). ● a(n) = ((5 - sqrt(21)) ^ n * ((23 - 5 * sqrt(21)) / 21 + (5 + sqrt(21)) ^ n * ((23 + 5 * sqrt(21)) / 21) * 2 ^ (- 1 - n) + (- 1) ^ n / 14. ● a(n) = Sum _{ k=0..floor(n / 2) } U(n - 2k, 5 / 2) where U is the Chebyshev polynomial of the second kind. ●

▶ [A123871] 1,5,25,120,580,2800,13520,65280,315200,1521920,7348480,35481600,171320320,827207680,3994112000,19285278720,93117562880,449611366400,2170915717120,10482108334080,50612096204800,244376818155520,1179955657441280,5697329902387200 ⋆ Expansion of g.f.: (1 + x + x ^ 2) / (1 - 4 * x - 4 * x ^ 2). ● a(n) = 4 * a(n - 1) + 4 * a(n - 2) for n>2. - _ Philippe Deléham _ , Sep 19 2009 ●

▶ [A218989] 5,25,121,585,2825,13641,65865,318025,1535561,7414345,35799625,172855881,834622025,4029911625,19458134601,93952184905,453641278025,2190373851721,10576060518985,51065737482825,246567192007241,1190531717960265,5748395639870025 ⋆ Power ceiling sequence of 2 + sqrt(8). ● a(n) = ceiling(x * a(n - 1)), where x=2 + sqrt(8), a(0) = ceiling(x). ● a(n) = 5 * a(n - 1) - 4 * a(n - 3). ● a(n) = (1 / 7) * (- 1 + (18 - 13 * sqrt(2)) * (2 - 2 * sqrt(2)) ^ n + (2 * (1 + sqrt(2))) ^ n * (18 + 13 * sqrt(2))). - _ Colin Barker _ , Nov 13 2017 ●

▶ [A275906] 1,5,25,121,589,2865,13937,67797,329801,1604329,7804317,37964385,184679137,898378405,4370194553,21258970969,103415040493,503066240401,2447184094545,11904416380277,57909468139689,281702722174409,1370353177636669,6666133067384001,32427647702257089 ⋆ Expansion of (1 + x + x ^ 2) / (1 - 4 * x - 4 * x ^ 2 - x ^ 3). ● a(n) = 4 * a(n - 1) + 4 * a(n - 2) + a(n - 3). - _ Colin Barker _ , Aug 26 2016 ●

▶ [A086093] 1,5,25,123,593,2803,13017,59531,268705,1199331,5301929,23245819,101194737,437801939,1883831161,8067412587,34402785089,146158028227,618862711113,2612502377435,10998603062161,46189948719795,193545427548185,809334701221963,3377982150064353 ⋆ a(n) = 3 ^ n + 2 * n * 4 ^ (n - 1). ● a(n) = 11 * a(n - 1) - 40 * a(n - 2) + 48 * a(n - 3). - _ Wesley Ivan Hurt _ , Oct 30 2022 ●

▶ [A099504] 1,5,25,124,615,3050,15126,75015,372025,1844999,9149980,45377875,225044376,1116071900,5534981625,27449863749,136133246845,675131252600,3348206399251,16604898749410,82349362494450,408398606072999 ⋆ Expansion of 1 / (1 - 5 * x + x ^ 3). ● a(n) = 5 * a(n - 1) - a(n - 3). ● a(n) = Sum _{ k=0..floor(n / 3) } binomial(n - 2 * k, k) * (- 1) ^ k * 5 ^ (n - 3 * k). ●

▶ [A337950] 5,25,125,353,1425,5425,18625,69121,286145,1082625,4250625,17072897,67375105,269185025,1079450625,4296933377,17185439745,68786663425,274902810625,1099633590273,4399081242625,17592482791425,70369226522625,281488801333249,1125907377946625 ⋆ L.g.f.: - log(Sum _{ n= - oo.. + oo } (- 2) ^ n * (2 * x) ^ (n ^ 2)) = Sum _{ n>=1 } a(n) * x ^ n / n. ● a(4 * n + k) = 0 (mod 5) for n >= 0, and k = 1,2,3 (conjecture). ●

▶ [A267780] 1,5,25,125,505,2045,8185,32765,131065,524285,2097145,8388605,33554425,134217725,536870905,2147483645,8589934585,34359738365,137438953465,549755813885,2199023255545,8796093022205,35184372088825,140737488355325,562949953421305 ⋆ Decimal representation of the n - th iteration of the ”Rule

211" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = 4 * a(n - 1) + a(n - 2) - 4 * a(n - 3) for n>3. ●

► [A126642] 5,25,125,601,2765,12265,52925,223801,932525,3844105,15722525,63936601,258902285,1045109545,4209004925,16921851001,67945160045,272554432585,1092540156125,4377129999001,17529432313805,70180474597225,280910151192125 ⋆ a(n) is the number of integers k less than 10 ^ n such that the decimal representation of k lacks the digits 1,2,3,4 and 5 and at least one of digits 6,7,8,9. ● a(n) = 4 * 4 ^ n - 6 * 3 ^ n + 4 * 2 ^ n - 1. ● a(n) = 10 * a(n - 1) - 35 * a(n - 2) + 50 * a(n - 3) - 24 * a(n - 4). - _ Colin Barker _ , Feb 22 2015 ●

► [A269686] 5,25,125,615,2995,14465,69405,331255,1574195,7454385,35195485,165766535,779138355,3655796065,17128371485,80151962775,374677320115,1749902587025,8166591981405,38087874378535,177538468225715,827166275107905 ⋆ Number of length - n 0..4 arrays with no repeated value differing from the previous repeated value by plus or minus one modulo 4 + 1. ● a(n) = (- 5 / 42) * (7 * 4 ^ n + (2 - sqrt(7)) ^ n * (- 7 + 3 * sqrt(7)) - (2 + sqrt(7)) ^ n * (7 + 3 * sqrt(7))). ●

► [A163844] 1,5,25,125,621,3065,15051,73645,359485,1752125,8532591,41537105,202200415,984526275,4795673085,23372376525,113978687085,556205251325,2716129289775,13273197773125,64909884686595,317652752793975,1555587408645225,7623031579626625 ⋆ Row sums of triangle A163841. ● a(n) = Sum _{ k=0..n } Sum _{ i=k..n } binomial(n - k,n - i) * (2i) $ where i $ denotes the swinging factorial of i (A056040). ●

► [A206451] 5,25,125,625,3124,15615,78050,390125,1950000,9746876,48718765,243515775,1217188750,6083993750,30410221874,152002390605,759768437250,3797624997500,18982040993750,94879794746876,474246971343775 ⋆ Number of 0..4 arrays of length n avoiding the consecutive pattern 0..4 ● a(n) = 5 * a(n - 1) - a(n - 5) ● a(n) = [1 1 1 1 1] M ^ n [1 0 0 0 0] ^ T, where ●

► [A102169] 5,25,125,625,3125,15625,78005,384550,1829850,8209410,34219650,131875900,470597480,1562441800,4855374080,14208711350,39381411950,103917328350,262270328730,635683810740,1484963848500,3353799866500 ⋆ a(n) = the number of sequences of n integers such that each integer is in the range 0..4 and the sum of the integers is in the range 0..24. ● a(n) is the sum of the coefficients of 1, x, x ^ 2, ..., x ^ 24 in (1 + x + x ^ 2 + x ^ 3 + x ^ 4) ^ n = (1 - x ^ 5) ^ n / (1 - x) ^ n. ●

► [A000351] 1,5,25,125,625,3125,15625,78125,390625,1953125,9765625,48828125,244140625,1220703125,6103515625,30517578125,152587890625,762939453125,3814697265625,19073486328125,95367431640625,476837158203125,2384185791015625,11920928955078125 ⋆ Powers of 5: a(n) = 5 ^ n. ● a(n) = 5 ^ n. ● a(0) = 1; a(n) = 5 * a(n - 1) for n > 0. ●

► [A083590] 1,5,25,125,625,3126,15630,78150,390750,1953750,9768751,48843755,244218775,1221093875,6105469375,30527346876,152636734380,763183671900,3815918359500,19079591797500,95397958987501,476989794937505 ⋆ Expansion of 1 / ((1 - 5 * x) * (1 - x ^ 5)). ● a(n) = floor(625 * (5 ^ (n + 1) + 1) / 3124). - _ Tani Akinari _ , Jul 09 2013 ●

► [A111993] 1,5,25,125,630,3206,16470,85350,445775,2344595,12408903,66042795,353259900,1898119100,10240583420,55454182716,301307002605,1642192132625,8975693643525,49186242980105,270186765784210 ⋆ Fifth convolution of Schroeder's (second problem) numbers A001003(n), n>=0. ● a(n)= (5 / n) * Sum _{ k=1,..,n } binomial(n,k) * binomial(n + k + 4,k - 1), a(0)=1. ● a(n) = 5 * hypergeom([1 - n, n + 6], [2], - 1), n>=1, a(0)=1. ●

► [A341266] 1,1,5,25,125,646,3395,18054,96885,523600,2845700,15537457,85160387,468279280,2582140370,14272523740,79056303957,438711518556,2438587839980,13574970187300,75668677723100,422294150816010,2359326605275755,13194525668986350,73857744668632275 ⋆ a(n) is the n - th term of the n - fold self - convolution of the twice left - shifted tribonacci sequence (A000073). ● a(n) = [x ^ n] (1 / (1 - x - x ^ 2 - x ^ 3)) ^ n. ●

► [A033141] 1,5,25,126,630,3150,15751,78755,393775,1968876,9844380,49221900,246109501,1230547505,6152737525,30763687626,153818438130,769092190650,3845460953251,19227304766255,96136523831275,480682619156376 ⋆ Base - 5 digits are, in order, the first n terms of the periodic sequence with initial period 1,0,0. ● a(n) = + 5 * a(n - 1) + a(n - 3) - 5 * a(n - 4). G.f.: x / ((x - 1) * (5 * x - 1) * (1 + x + x ^ 2)). - R. J. Mathar, Jan 08 2011 ●

► [A099524] 1,5,25,126,635,3200,16126,81265,409525,2063751,10400020,52409625,264111876,1330959400,6707206625,33800145001,170331684405,858365628650,4325628288251,21798473125660,109850731256950,553579284573001 ⋆ Expansion of 1 / (1 - 5 * x - x ^ 3). ● a(n) = 5 * a(n - 1) + a(n - 3). ● a(n) = Sum _ (k=0..floor(n / 3)) binomial(n - 2 * k, k) * 5 ^ (n - 3 * k). ●

► [A081916] 1,5,25,126,645,3375,18125,100000,565625,3265625,19140625,113281250,673828125,4013671875,23876953125,141601562500,836181640625,4913330078125,28717041015625,166931152343750,965118408203125 ⋆ a(n) = 5 ^ n * (n ^ 3 - 3n ^ 2 + 2n + 750) / 750. ● a(n) = 5 ^ n * (n ^ 3 - 3n ^ 2 + 2n + 750) / 750. ●

► [A082308] 1,5,25,127,657,3449,18281,97395,519841,2773741,14776377,78538343,416367665,2201517153,11610231433,61078202971,320570884929,1678897264085,8775159682649,45780628812879,238431945108433 ⋆ Expansion of e.g.f. (1 + x) * exp(4 * x) * cosh(x). ● a(n) = ((n + 3) * 3 ^ (n - 1) + (n + 5) * 5 ^ (n - 1)) / 2. ●

► [A060928] 1,5,25,129,665,3425,17641,90865,468025,2410689,12416905,63956625,329425881,1696797025,8739811625,45016761649,231870996345,1194314228225,6151638187721,31685674923985,163205631532825 ⋆ Expansion of 1 / (1 - 5 * x - 4 * x ^ 3). ● a(n) = 5 * a(n - 1) + 4 * a(n - 3), n >= 3, a(n) = 5 ^ n, n = 0, 1, 2. ●

► [A002002] 0,1,5,25,129,681,3653,19825,108545,598417,3317445,18474633,103274625,579168825,3256957317,18359266785,103706427393,586889743905,3326741166725,18885056428537,107347191941249,610916200215241 ⋆ a(n) = Sum _{ k=0..n - 1 } binomial(n,k + 1) * binomial(n + k,k). ● a(n) = Sum _{ k=0..n - 1 } binomial(n - 1, k) * binomial(n + k, k + 1). - _ Paul Barry _ , Sep 20 2004 ● a(n) = n * hypergeom([n + 1, - n + 1], [2], - 1) = (n + 1) * LegendreP(n + 1,3) - (5 * n + 3) * LegendreP(n,3)) / (2 * n) for n > 0. - _ Mark van Hoeij _ , Jul 12 2010 ● a(n) = - a(- n) for all n in Z. - _ Michael Somos _ , Aug 09 2011 ● a(n) = (- 1) ^ (n - 1) * Sum _{ k=0..n - 1 } (- 2) ^ k * binomial(n - 1,k) * binomial(n + k,k) and n ^ 3 * a(n) = Sum _{ k=0..n - 1 } (4 * k ^ 3 + 4 * k ^ 2 + 4 * k + 1) * binomial(n - 1,k) * binomial(n + k,k). For each of the two equalities, both sides satisfy the same recurrence – this follows from the Zeilberger algorithm. - _ Zhi - Wei Sun _ , Aug 30 2014 ● a(n) = hypergeom([1 - n, - n], [1], 2) for n >= 1. - _ Peter Luschny _ , Nov 19 2014 ● a(n + 1) = (1 / 2 ^ (n + 1)) * Sum _{ k >= 0 } (1 / 2 ^ k) * binomial(n + k, n) * binomial(n + k, n + 1). - _ Peter Bala _ , Mar 02 2017 ●

► [A351050] 1,1,1,5,25,129,713,4373,30289,235041,1998001,18226117,176364969,1803064033,19463340729,221691818005,2658751147297,33458500940993,440140082161121,6032572875160069,85936355674437561,1270176766188103105,19453176663852208937 ⋆ G.f. A(x) satisfies: A(x) = 1 + x + x ^ 2 * A(x / (1 - 4 * x)) / (1 - 4 * x). ● a(0) = a(1) = 1; a(n) = Sum _{ k=0..n - 2 } binomial(n - 2,k) * 4 ^ k * a(n - k - 2). ●

► [A344396] 1,5,25,133,726,4037,22737,129285,740554,4266830,24701425,143567173,837212650,4896136845,28703894775,168640510725,992671051482,5853000551090,34562387229046,204368928058958,1209916827501876,7170955214476509,42543879586512435,252638095187722437 ⋆ a(n) = binomial(2 * n + 1, n) * hypergeom([- (n + 1) / 2, - n / 2], [n + 2], 4). ● a(n) = Sum _{ j=0..2 * n + 1) } C(2 * n + 1, j) * (C(2 * n + 1 - j, j + n) - C(2 * n + 1 - j, j + n + 2)). ●

► [A366431] 1,1,5,25,135,775,4651,28845,183450,1190050,7844230,52389678,353770190,2411324700,16568343325,114639216915,798076174113,5586035989185,39287407321075,277508001643575,1967816928168265,14003018984540741,99965175670335750 ⋆ G.f. A(x) satisfies A(x) = 1 + x * (A(x) / (1 - x)) ^ (5 / 2). ● a(n) = Sum _{ k=0..n } binomial(n + 3 * k / 2 - 1,n - k) * binomial(5 * k / 2,k) / (3 * k / 2 + 1). ●

► [A272706] 1,5,25,137,649,2825,11785,48137,194569,782345,3137545,12566537,50298889,201261065,805175305,3220963337 ⋆ Number of active (ON,black) cells at stage 2 ^ n - 1 of the two - dimensional cellular automaton defined by "Rule 515", based on the 5 - celled von Neumann neighborhood. ● a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3) for n>4. ●

► [A275905] 1,5,25,137,757,4181,23089,127505,704125,3888413,21473113,118581689,654847621,3616286885,19970341825,110282885537,609018861517,3363205196141,18572740363369,102564864314825,566397375191125,3127835138929013,17272948436630353,95386979953377329,526758704688230941 ⋆ Expansion of (1 - x - 2 * x ^ 2) / (1 - 6 * x + 3 * x ^ 2 - 2 * x ^ 3). ● a(n) = 6 * a(n - 1) - 3 * a(n - 2) + 2 * a(n - 3) for n>2. - _ Colin Barker _ , Aug 26 2016 ●

► [A358504] 1,5,25,137,793,4697,28057,168089,1008025,6047129,36280729,217680281,1306073497,7836424601,47018514841,282111023513,1692666010009,10155995797913,60935974263193,365615844530585,2193695065086361,13162170386323865,78973022309554585 ⋆ Number of genetic relatives of a person M in a genealogical tree extending back n generations and where everyone has 3 children down to the generation of M. ● a(n) = 2 ^ n + 3 * (6 ^ n - 1) / 5. ●

► [A365772] 1,1,5,25,137,801,4893,30857,199377,1313089,8782389,59491257,407308377,2814044897,19594237133,137364464681,968743846561,6868059398273,48921561805413,349942779608153,2512722402972457,18104571857859233,130856263145140861,948520413875412681 ⋆ Expansion of g.f. A(x) satisfying A(x) = 1 + x * A(x) / (1 - 2 * x * A(x)) ^ 2. ● a(n) = Sum { k=0..n } binomial(n + 1, n - k) / (n + 1) * binomial(2 * n - k - 1, k) * 2 ^ k. ●

► [A094094] 1,5,25,139,871,6131,48161,419399,4025071,42359239,486703009,6081751259,82345132871,1203618149579,18920122802881,318578240878351,5722495974697951,109204791111380879,2205128748183225281 ⋆ Define x[1]...x[n] by the equations Sum _{ j=1..n } x[j] ^ i = i, i=1..n; a(n) = n! * Sum _{ j=1..n } x[j] ^ (n + 1). ● a(n) = n! * (n + 1 - LaguerreL(n,1,1)) = Sum _{ k=1..n } (- 1) ^ (k + 1) * n! / k! * binomial(n + 1,k + 1). - _ Vladeta Jovovic _ , Apr 27 2006 ● a(n) = (3 * n - 1) * a(n - 1) - n * (3 * n - 4) * a(n - 2) + (n - 2) * (n - 1) * n * a(n - 3). - _ Vaclav Kotesovec _ , Nov 13 2017 ●

► [A199319] 5,25,145,865,5185,31105,186625,1119745,6718465,40310785,241864705,1451188225,8707129345,52242776065,313456656385,1880739938305,11284439629825,67706637778945,406239826673665,2437438960041985,14624633760251905 ⋆ 4 * 6 ^ n + 1. ● a(n) = 6 * a(n - 1) - 5. ● a(n) = 7 * a(n - 1) - 6 * a(n - 2). ●

► [A366221] 1,1,5,25,145,905,5941,40433,282721,2018897,14661349,107945993,803922289,6045458905,45840518933,350100674785,2690717983169,20794719218593,161502488175557,1259855507859193,9867012143508305,77554946281194793,615757252584030615 ⋆ G.f. A(x) satisfies A(x) = 1 + x * (1 + x) ^ 2 * A(x) ^ 3. ● a(n) = Sum _{ k=0..n } binomial(2 * k,n - k) * binomial(3 * k,k) / (2 * k + 1). ●

► [A371725] 1,5,25,145,925,6266,44245,322075,2399725,18211775,140285018,1093997085,8620125925,68523526635,548867710575,4425604018075,35892727867805,292604563615625,2396375011877275,19707111724556025,162671328783723678,1347313142469049275 ⋆ G.f. satisfies A(x) = (1 + x * A(x) ^ (1 / 5) * (1 + A(x))) ^ (5 / 2). ● a(n) = Sum _{ k=0..n } binomial(n,k) * binomial(n / 2 + 5 * k / 2 + 5 / 2,n) / (n / 5 + k + 1). ●

► [A049427] 1,1,5,25,145,1025,8245,72745,704705,7424065,83940805,1012504505,12972555025,175624847425,2501468566325,37364323364425,583569693556225,9504040277271425,161021013457176325,2832196631069755225,51619359912771959825 ⋆ Row sums of triangle A049424. ● a(n) = n! * sum(k=0..n, sum(j=0..k, binomial(5 * j,n) * (- 1) ^ (k - j) / (5 ^ k * (k - j)! * j!))). - _ Vladimir Kruchinin _ , Feb 07 2011 ●

► [A121639] 0,1,5,25,147,996,7668,66264,635976,6717600,77482080,969338880,13076778240,189261999360,2925629280000,48111515827200,838731380659200,15451544605593600,299960798422118400,6120505381423104000 ⋆ Number of 2 - cell columns in all deco polyominoes of height n. A deco polyomino is a directed column - convex polyomino in which the height, measured along the diagonal, is attained only in the last column. ● a(1)=0, a(2)=1, a(3)=5, a(n)=na(n - 1) + (n - 1)! - (n - 3)! for n>=4. ●

► [A098212] 5,25,149,865,5045,29401,171365,998785,5821349,33929305,197754485,1152597601,6717831125,39154389145,228208503749,1330096633345,7752371296325,45184131144601,263352415571285,1534930362283105,8946229758127349,52142448186480985 ⋆ Expansion of (5 - x ^ 2) / ((1 + x) * (1 - 6 * x + x ^ 2)). ● a(n) = 5 * a(n - 1) + 5 * a(n - 2) - a(n - 3), a(0) = 5, a(1) = 25, a(2) = 149. - _

Robert G. Wilson v _ , Nov 05 2004 ● a(n) = (1 / 2) * (- 1) ^ n - (3 / 2) * sqrt (2) * ((3 - 2 * sqrt(2)) ^ n - (3 + 2 * sqrt(2)) ^ n) + (9 / 4) * ((3 + 2 * sqrt(2)) ^ n + (3 - 2 * sqrt(2)) ^ n), with n >= 0. - _ Paolo P. Lava _ , Nov 28 2008 ●

► [A002050] 0,1,5,25,149,1081,9365,94585,1091669,14174521,204495125,3245265145,56183135189,1053716696761,21282685940885,460566381955705,10631309363962709,260741534058271801,6771069326513690645 ★ Number of simplices in barycentric subdivision of n - simplex. ● a(n) = Sum _{ k=0..n } (- 1) ^ (n - k)k! * S2(n, k)(2 ^ k - 1). - _ Paul Barry _ , Apr 20 2005 ● a(n) = 1 + 2 * Sum _{ k=2..n } k! * Stirling2(n,k), n > 0, a(0)=1. - _ Vladimir Kruchinin _ , Sep 27 2013 ●

► [A106565] 0,5,25,150,875,5125,30000,175625,1028125,6018750,35234375,206265625,1207500000,7068828125,41381640625,242252343750,1418169921875,8302111328125,48601406250000,284517587890625,1665594970703125 ★ a(n) = 5 * a(n - 1) + 5 * a(n - 2) with a(0) = 0, a(1) = 5. ● a(n) = 5 * a(n - 1) + 5 * a(n - 2), n > 1; a(0)=0, a(1)=5. ● a(n) = (1 / 6) * 5 ^ ((n + 1) / 2) * ((1 - (- 1) ^ n) * Lucas(2 * n) + (1 + (- 1) ^ n) * sqrt(5) * Fibonacci(2 * n)). - _ G. C. Greubel _ , Sep 06 2021 ●

► [A216689] 1,1,5,25,153,1121,9373,87417,898033,10052353,121492341,1573957529,21729801481,318121178337,4917743697805,79981695655801,1364227940101857,24335561350365953,452874096174214117,8772713803852981785,176541611843378273401,3684142819311127955041,79596388271096140589949 ★ E.g.f. exp(x * exp(x) ^ 2). ● a(n) = Sum _{ k=0..n } binomial(n,k) * (2 * k) ^ (n - k) for n >=0. - _ Paul D. Hanna _ , Aug 02 2014 ●

► [A092166] 5,25,155,925,5555,33325,199955,1199725,7198355,43190125,259140755,1554844525,9329067155,55974402925,335846417555,2015078505325,12090471031955,72542826191725,435256957150355,2611541742902125 ★ Let M = 2 X 2 matrix [1 2 / 5 4]; a(n) = (2,1) entry of M ^ n. ● a(n) = (5 * 6 ^ n - 5 * (- 1) ^ n) / 7. ● a(n) = 5 * a(n - 1) + 6 * a(n - 2). ●

► [A204209] 1,5,25,155,1025,7167,51945,387000,2944860,22791189,178840639,1419569398,11377983292,91957314063,748575327757,6132254500856,50514620902564,418174191239443,3477075679541185,29026557341147912,243184916545458556 ★ Number of length n + 1 nonnegative integer arrays starting and ending with 0 with adjacent elements differing by no more than 4. ● a(n) = Sum _{ i=1..n } ((Sum _{ j=0..(4 * i) / 9 } (binomial(i,j) * binomial(- 9 * j + 5 * i - 1,4 * i - 9 * j) * (- 1) ^ j)) * a(n - i)) / n. - _ Vladimir Kruchinin _ , Apr 06 2017 ●

► [A090014] 5,25,155,1135,9545,90445,952175,11016595,138864365,1893369505,27756952355,435287980375,7269934161905,128812336516885,2413131201408695,47652865538001595,989254278781162325 ★ Permanent of (0,1) - matrix of size n X (n + d) with d=4 and n - 1 zeros not on a line. ● a(n) = (n + 3) * a(n - 1) + (n - 2) * a(n - 2), a(1)=5, a(2)=25. ●

► [A137963] 1,1,5,25,160,1075,7671,56760,431865,3357790,26558520,213032988,1728808700,14168337265,117096909495,974842628790,8167462511193,68813778610350,582675107162175,4955767502292960,42318868510894860 ★ G.f. satisfies A(x) = 1 + x * (1 + x * A(x) ^ 3) ^ 5. ● a(n) = Sum _{ k=0..n - 1 } C(5 * (n - k),k) / (n - k) * C(3 * k,n - k - 1) for n>0 with a(0)=1. - _ Paul D. Hanna _ , Jun 16 2009 ●

► [A134007] 5,25,165,1225,9669,79225,665445,5686825,49208709,429746905,3779084325,33407391625,296515495749,2639977136185,23561123826405,210669225531625,1886405750358789,16910575282247065,151726863979595685 ★ a(n) = 1 ^ n + 3 ^ n + 5 ^ n + 7 ^ n + 9 ^ n. ● a(n) = 24 * a(n - 1) - 206 * a(n - 2) + 744 * a(n - 3) - 945 * a(n - 4) + 384. ●

► [A184958] 0,0,0,0,5,25,269,1883,20103,180927,2172149,23893639,326640467,4246326071,65675585793,985133786895,17069814958319,290186854291423,5579050805341613,106001965301490647,2241684406438644939,47075372535211543719 ★ Number of nonincreasing even cycles in all permutations of { 1,2,...,n } . A cycle (b(1), b(2), ...) is said to be increasing if, when written with its smallest element in the first position, it satisfies b(1)<b(2)<b(3)<... . A cycle is said to be even if it has an even number of entries. ● a(n) = (n! * H(n) - 2F0(1, - n;; - 1) + (- 1) ^ (n + 1) * 2F0(1, - n;;1) + n! * (2 + (- 1) ^ n * LerchPhi(- 1,1,n + 1) - log(2))) / 2, where H(n) is the n - th harmonic number. - _ Benedict W. J. Irwin _ , May 30 2016 ●

► [A165656] 0,0,0,0,0,0,0,0,0,0,0,0,0,1,1,5,25,297,8199,377004,22014143,1493574756,114880777582,9919463450855 ★ Number of disconnected 6 - regular (sextic) graphs on n vertices. ● a(n) = D(n, 6) in the triangle A068933. ●

► [A007185] 5,25,625,625,90625,890625,2890625,12890625,212890625,8212890625,18212890625,918212890625,9918212890625,59918212890625,259918212890625,6259918212890625,56259918212890625,256259918212890625,2256259918212890625,92256259918212890625 ★ Automorphic numbers ending in digit 5: a(n) = 5 ^ (2 ^ n) mod 10 ^ n. ● a(n) = 5 ^ (2 ^ n) mod 10 ^ n. ● a(n) ^ 2 == a(n) (mod 10 ^ n), that is, a(n) is an idempotent in Z[10 ^ n]. ● a(n + 1) = a(n) ^ 2 mod 10 ^ (n + 1). - _ Eric M. Schmidt _ , Jul 28 2012 ● a(2n) = (3 * a(n) ^ 2 - 2 * a(n) ^ 3) mod 10 ^ (2n). - _ Sylvie Gaudel _ , Mar 10 2018 ●

► [A042883] 1,5,26,57,482,1021,5587,28956,1800859,9033251,46967114,102967479,870706946,1844381371,10092613801,52307450376,3253154537113,16318080135941,84843555216818,186005190569577,1572885079773434,3331775350116445,18231761830355659 ★ Denominators of continued fraction convergents to sqrt(973). ● a(n) = 1806446 * a(n - 8) - a(n - 16) for n > 15. - _ Vincenzo Librandi _ , Jan 31 2014 ●

► [A139273] 0,5,26,63,116,185,270,371,488,621,770,935,1116,1313,1526,1755,2000,2261,2538,2831,3140,3465,3806,4163,4536 ★ a(n) = n * (8 * n - 3). ● a(n) = 8 * n ^ 2 - 3 * n. ● a(n) = 16 * n + a(n - 1) - 11 for n>0, a(0)=0. - _ Vincenzo Librandi _ , Aug 03 2010 ● a(0)=0, a(1)=5, a(2)=26; for n>2, a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Feb 02 2012 ●

► [A185939] 5,26,65,122,197,290,401,530,677,842,1025,1226,1445,1682,1937,2210,2501,2810,3137,3482,3845,4226,4625,5042,5477 ★ a(n) = 9 * n ^ 2 - 6 * n + 2. ● a(n) = a(n - 1) + 18 * n - 15, a(1) = 5. - _ Vincenzo Librandi _ , Feb 07 2011 ● a(n) = (2 * n - 1) ^ 2 + (2 * n) ^ 2 + (n - 1) ^ 2. - _ Bruno Berselli _ , Feb 06 2012 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ G. C. Greubel _ , Feb 25 2017 ●

► [A273419] 1,5,26,67,139,252,412,629,909,1262,1694,2215,2831,3552,4384,5337,6417,7634,8994,10507,12179,14020,16036,18237,20629 ★ Partial sums of the number of active (ON,black) cells in n - th stage of growth of two - dimensional cellular automaton defined by "Rule 705", based on the 5 - celled von Neumann neighborhood. ● a(n) = (111 - 3 * (- 1) ^ n - 58 * n + 48 * n ^ 2 + 16 * n ^ 3) / 12 for n>1. ● a(n) = (8 * n ^ 3 + 24 * n ^ 2 - 29 * n + 54) / 6 for n>1 and even. ● a(n) = (8 * n ^ 3 + 24 * n ^ 2 - 29 * n + 57) / 6 for n>1 and odd. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - 2 * a(n - 3) + 3 * a(n - 4) - a(n - 5) for n>6. ●

► [A273447] 1,5,26,67,147,267,435,659,947,1307,1747,2275,2899,3627,4467,5427,6515,7739,9107,10627,12307,14155,16179,18387,20787 ★ Partial sums of the number of active (ON,black) cells in n - th stage of growth of two - dimensional cellular automaton defined by "Rule 721", based on the 5 - celled von Neumann neighborhood. ● a(n) = (4 * n ^ 3 + 12 * n ^ 2 + 8 * n - 39) / 3 for n>2. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>6. ●

► [A273406] 1,5,26,70,147,263,428,648,933,1289,1726,2250,2871,3595,4432,5388,6473,7693,9058,10574,12251,14095,16116,18320,20717 ★ Partial sums of the number of active (ON,black) cells in n - th stage of growth of two - dimensional cellular automaton defined by "Rule 673", based on the 5 - celled von Neumann neighborhood. ● a(n) = (9 + 3 * (- 1) ^ n - 10 * n + 48 * n ^ 2 + 16 * n ^ 3) / 12. ● a(n) = (8 * n ^ 3 + 24 * n ^ 2 - 5 * n + 6) / 6 for n even. ● a(n) = (8 * n ^ 3 + 24 * n ^ 2 - 5 * n + 3) / 6 for n odd. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - 2 * a(n - 3) + 3 * a(n - 4) - a(n - 5) for n>4. ●

► [A273833] 1,5,26,71,147,264,428,649,933,1290,1726,2251,2871,3596,4432,5389,6473,7694,9058,10575,12251,14096,16116,18321,20717 ★ Partial sums of the number of active (ON,black) cells in n - th stage of growth of two - dimensional cellular automaton defined by "Rule 961", based on the 5 - celled von Neumann neighborhood. ● a(n) = (16 * n ^ 3 + 48 * n ^ 2 - 10 * n - 3 * ((- 1) ^ n - 5)) / 12 for n>1. ● a(n) = (8 * n ^ 3 + 24 * n ^ 2 - 5 * n + 6) / 6 for n>1 and even. ● a(n) = (8 * n ^ 3 + 24 * n ^ 2 - 5 * n + 9) / 6 for n>1 and odd. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - 2 * a(n - 3) + 3 * a(n - 4) - a(n - 5) for n>6. ●

► [A273849] 1,5,26,71,147,268,437,662,951,1312,1753,2282,2907,3636,4477,5438,6527,7752,9121,10642,12323,14172,16197,18406,20807 ★ Partial sums of the number of active (ON,black) cells in n - th stage of growth of two - dimensional cellular automaton defined by "Rule 969", based on the 5 - celled von Neumann neighborhood. ● a(n) = (4 * n ^ 3 + 12 * n ^ 2 + 11 * n - 51) / 3 for n>3. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>7. ●

► [A273781] 1,5,26,74,155,276,445,670,959,1320,1761,2290,2915,3644,4485,5446,6535,7760,9129,10650,12331,14180,16205,18414,20815 ★ Partial sums of the number of active (ON,black) cells in n - th stage of growth of two - dimensional cellular automaton defined by "Rule 929", based on the 5 - celled von Neumann neighborhood. ● a(n) = (n - 1) * (4 * n ^ 2 + 16 * n + 27) / 3 for n>2. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>6. ●

► [A048395] 0,5,26,75,164,305,510,791,1160,1629,2210,2915,3756,4745,5894,7215,8720,10421,12330,14459,16820,19425,22286,25415,28824 ★ Sum of consecutive nonsquares. ● a(n) = 2 * n ^ 3 + 2 * n ^ 2 + n. ● a(n) = Sum _{ j=0..n } ((n + j + 2) ^ 2 - j ^ 2 + 1). - _ Zerinvary Lajos _ , Sep 13 2006 ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4); a(0)=0, a(1)=5, a(2)=26, a(3)=75. - _ Harvey P. Dale _ , Nov 01 2013 ●

► [A309451] 0,5,26,75,1104,3505,20312,20312,4961570,28020774,229788809,512264058,2489590801,71696026806,71696026806,71696026806,19061942066578,218459525484184,451090039471391 ★ The successive approximations up to 7 ^ n for 7 - adic integer 3 ^ (1 / 5). ● a(0) = 0 and a(1) = 5, a(n) = a(n - 1) + 2 * (a(n - 1) ^ 5 - 3) mod 7 ^ n for n > 1. ●

► [A081530] 1,5,26,77,522,669,5772,13827,48610,55991,699612,785633,11359222,12530955,13726712,29889983,550271934,593094837,12094689300,12932216325,13780828710,14640022575,356714770680,376932115005,1986818142426 ★ a(n) = running sum of the first n harmonic numbers, multiplied by the LCM of 1..n. ● a(n) = lcm(1..n) * (n + 1) * (H(n + 1) - 1), where H(n) is the n - th harmonic number. - C. Ronaldo (aga _ new _ ac(AT)hotmail.com), Dec 19 2004 ●

► [A096943] 5,26,81,196,406,756,1302,2112,3267,4862,7007,9828,13468,18088,23868,31008,39729,50274,62909,77924,95634,116380,140530,168480,200655 ★ Sixth column of (1,5) - Pascal triangle A096940. ● a(0)=5, a(1)=26, a(2)=81, a(3)=196, a(4)=406, a(5)=756, a(n)=6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). - _ Harvey P. Dale _ , Jan 11 2014 ●

► [A079909] 1,5,26,90,246,566,1146,2106,3590,5766,8826,12986,18486,25590,34586,45786,59526,76166,96090,119706,147446,179766,217146,260090,309126 ★ Solution to the Dancing School Problem with 4 girls and n + 4 boys: f(4,n). ● a(0)=1, a(1)=5, a(n)=n ^ 4 - 2 * n ^ 3 + 9 * n ^ 2 - 8 * n + 6 (n>=2) found by applying theorem 7.2.1 of Brualdi, Ryser: Combinatorial Matrix Theory. ●

► [A362317] 1,1,1,1,5,26,91,246,2801,26650,159601,702406,12479941,172561676,1462655195,8918930476,215370384321,3906667179836,42828875064001,333816101642140,10190496077676901,228789539391769336,3077152545301687931,29203537040556576776 ★ a(n) = n! * Sum _{ k=0..floor(n / 4) } (n / 24) ^ k / (k! * (n - 4 * k)!). ● a(n) = n! * [x ^ n] exp(x + n * x ^ 4 / 24). ●

► [A047669] 5,26,95,276,681,1486,2947,5416,9357,15362,24167,36668,53937,77238,108043,148048,199189,263658,343919,442724,563129,708510,882579,1089400,1333405 ★ Row 5 of array in A047666. ● a(n) = (n / 15) * (2n ^ 4 + 30n ^ 2 + 43). ●

► [A211606] 0,0,1,5,26,110,490,2086,9240,40776,185820,855580,4048616,19455800,95773496,479581480,2454041920,12776826816,67849286160,366455145936,2015621873440,11268605368160,64074235576736,370040657037920,2171138049287296 ★ Total number of inversions over all involutions of length n. ● a(n) = (n * (n - 2) * (9 * n - 7) * a(n - 1) + n * (n - 1) * (9 * n ^ 2 - 13 * n + 2) * a(n - 2)) / ((n - 2) * (9 * n ^ 2 - 31 * n + 24)) for n>=3; a(n) = n * (n - 1) / 2 for n<3. ●

► [A247491] 0,0,0,0,1,5,26,126,624,3193,17119,96668,576104,3621982,23980620,166805068,1215842905,9263445775,73599067250,608471202527,5224252803246,46499854580107,428369819029085,4078345518655015,40073659206668916 ★ Number of crossing partitions of { 1,2,...,n } that contain no singletons. ● a(n) = Sum _{ k=0..n } (- 1) ^ (n - k) * C(n,k) * (Bell(k) - Catalan(k)). ●

► [A244617] 1,5,26,127,636,3153,15727,78406,391494,1955563,9772721,48847892,244196337,1220857221,6103941997,30518746918,152591088797,762948154799,3814720881833,19073550187976,95367603900506,476837621600990,2384187034951204,11920932287085421,59604653684027019 ★ G.f.: Sum _{ n>=0 } (4 + x ^ n) ^ n * x ^ n / (1 - x) ^ (n + 1). ● a(n) - 5 ^ n ~ n / 17 * ((1 + sqrt(17)) / 2) ^ n. - _ Vaclav Kotesovec _ , Jul 02 2014 ●

► [A033115] 1,5,26,130,651,3255,16276,81380,406901,2034505,10172526,50862630,254313151,1271565755,6357828776,31789143880,158945719401,794728597005,3973642985026,19868214925130,99341074625651,496705373128255 ★ Base - 5 digits are, in order, the first n terms of the periodic sequence with initial period 1,0 . ● a(n) = 5 * a(n - 1) + a(n - 2) - 5 * a(n - 3). - _ Joerg Arndt _ , Jan 08 2011 ● a(n) = floor(5 ^ (n + 2) / 24); ● a(n) = Sum _{ k=0..floor(n / 2) } 5 ^ (n - 2 * k); ● a(n) = Sum _{ k=0..n } Sum _{ j=0..k } (- 1) ^ (j + k) * 5 ^ j. ● a(n) = 4 * a(n - 1) + 5 * a(n - 2) + 1. (End) ● a(n) = (1 / 3) * floor(5 ^ (n + 1) / 8) = floor((5 * 5 ^ n - 1) / 24) = round((5 * 5 ^ n - 3) / 24) = round((5 * 5 ^ n - 5) / 24) = ceiling((5 * 5 ^ n - 5) / 24); ●

► [A033123] 1,5,26,131,655,3276,16381,81905,409526,2047631,10238155,51190776,255953881,1279769405,6398847026,31994235131,159971175655,799855878276,3999279391381,19996396956905,99981984784526,499909923922631,2499549619613155,12497748098065776 ★ Base - 5 digits are, in order, the first n terms of the periodic sequence with initial period 1,0,1. ● a(n) = 5 * a(n - 1) + a(n - 3) - 5 * a(n - 4). ●

► [A022032] 5,26,135,700,3629,18813,97527,505582,2620947,13587040,70435478,365138879,1892887004,9812762803,50869551972,263708740319,1367071205166,7086923541985,36738748574433,190454382472052,987319198674433,5118281802804775,26533271760636405,137548993480193164 ★ Define the sequence T(a(0),a(1)) by a(n + 2) is the greatest integer such that a(n + 2) / a(n + 1) < a(n + 1) / a(n) for n >= 0. This is T(5,26). ● a(n + 1) = ceiling(a(n) ^ 2 / a(n - 1)) - 1 for all n > 0. - _ M. F. Hasler _ , Feb 11 2016 ●

► [A255118] 1,5,26,135,700,3630,18825,97625,506275,2625500,13615625,70609500,366175000,1898953125,9847813125,51069940625,264844468750,1373461409375,7122656750000,36937506093750,191554837515625,993387471328125,5151624887109375,26715898623125000 ★ Number of n - length words on { 0,1,2,3,4,5 } in which 0 appears only in runs of length 2. ● a(n + 3) = 5 * a(n + 2) + 5 * a(n) with n>1, a(0) = 1, a(1) = 5, a(2) = 26. ●

► [A052918] 1,5,26,135,701,3640,18901,98145,509626,2646275,13741001,71351280,370497401,1923838285,9989688826,51872282415,269351100901,1398627786920,7262490035501,37711077964425,195817879857626 ★ a(0) = 1, a(1) = 5, a(n + 1) = 5 * a(n) + a(n - 1). ● a(n) = Sum _{ alpha=RootOf(- 1 + 5 * z + z ^ 2) } (1 / 29) * (5 + 2 * alpha) * alpha ^ (- 1 - n). ● a(n - 1) = (((5 + sqrt(29)) / 2) ^ n - ((5 - sqrt(29)) / 2) ^ n) / sqrt(29). - _ Gary W. Adamson _ , Jul 01 2003 ● a(n) = U(n, 5 * i / 2) * (- i) ^ n with i ^ 2 = - 1 and Chebyshev's U(n, x / 2) = S(n, x) polynomials. See triangle A049310. ● a(n) = F(n, 5), the n - th Fibonacci polynomial evaluated at x = 5. - _ T. D. Noe _ , Jan 19 2006 ● a(n) is the upper - left term of (1 / 5) * (A ^ (n + 2) - A ^ (n + 1)); ● a(n) is the upper - right term of A ^ (n + 1); ●

► [A255633] 1,5,26,136,710,3706,19346,100990,527186,2752006,14365970,74992966,391476866,2043580150,10667858546,55688153926,290702250530,1517518403926,7921720943186,41352818219110,215869201519106,1126876333254646,5882498575587890,30707708087054086 ★ Number of n - length words on { 0,1,2,3,4,5 } avoiding runs of zeros of length 1 (mod 3). ● a(n + 3) = 5 * a(n + 2) + 6 * a(n) with n > 0, a(0) = 1, a(1) = 5, a(2) = 26. ●

► [A255815] 1,5,26,136,711,3716,19421,101501,530481,2772486,14490016,75730071,395792776,2068556381,10811024761,56502330541,295301641346,1543353319176,8066123361031,42156481777036,220325040452941,1151498450637621 ★ Numbers of words on { 0,1,2,3,4,5 } having no isolated zeros. ● a(n + 3) = 6 * a(n + 2) - 5 * a(n + 1) + 5 * a(n) with n>=0, a(0) = 1, a(1) = 5, a(2) = 26. ●

► [A018903] 1,5,26,136,712,3728,19520,102208,535168,2802176,14672384,76825600,402264064,2106281984,11028635648,57746685952,302365573120,1583206694912,8289777876992,43405840482304,227275931385856,1190032226385920,6231089632772096,32626408891088896 ★ Define the sequence S(a(0),a(1)) by a(n + 2) is the least integer such that a(n + 2) / a(n + 1) > a(n + 1) / a(n) for n >= 0. This is S(1,5). ● a(n) = (a(1) + 1) * a(n - 1) - (a(1) - 1) * a(n - 2) = 6 * a(n - 1) - 4 * a(n - 2). ● a(n) = ((3 - sqrt(5)) ^ n * (- 2 + sqrt(5)) + (2 + sqrt(5)) * (3 + sqrt(5)) ^ n) / (2 * sqrt(5)). - _ Colin Barker _ , Jan 20 2017 ●

► [A083331] 1,5,26,137,722,3785,19706,101897,523682,2677385,13629386,69136457,349699442,1764742985,8889229466,44709799817,224608392002,1127293880585,5653520131946,28335932715977,141953379225362,710862920970185 ★ a(n) = (3 * 5 ^ n - 2 * 4 ^ n + 3 ^ n) / 2. ● a(n) = (3 * 5 ^ n - 2 * 4 ^ n + 3 ^ n) / 2. ●

► [A076025] 1,1,5,26,137,726,3858,20532,109361,582782,3106550,16562668,8831463 4,470942044,2511443268,13393472616,71428622337,380940866574,2031641406798,10835261623356,57787472903502,308197667445204,1643712737618748,8766437439778776,46754218658948922 ★ Expansion of g.f.: (1 - 3 * x * C) / (1 - 4 * x * C) where C = (1 - sqrt(1 - 4 * x)) / (2 * x) = g.f. for Catalan numbers A000108. ● a(n + 1) = Sum _{ k=0..n } 3 ^ k * binomial(2n + 1, n - k) * 2 * (k + 1) / (n + k + 2). - _ Paul Barry _ , Jun 22 2004 ● a(n) = upper left term in M ^ (n - 1), M = an infinite square production matrix as follows: ●

► [A288785] 1,5,26,137,750,4307,25996,164825,1096217,7633650,55549664,421599778,3331027887,27349472297,232967157736,2055635993935,18762063976810,176896220650029,1720762736285790,17249873608817569,178010337967774511,1889129778601708612 ★ Number of blocks of size >= three in all set partitions of n. ● a(n) = Bell(n + 1) - Sum _{ j=0..2 } binomial(n,j) * Bell(n - j). ● a(n) = Sum _{ j=0..n - 3 } binomial(n,j) * Bell(j). ●

► [A161731] 1,5,26,138,740,3988,21544,116520,630544,3413072,18476960,100032672,541583936,2932214080,15875537536,85953303168,465368899840,2519604954368,13641675037184,73858930936320,399887996969984 ★ Expansion of (1 - 3 * x) / (1 - 8 * x + 14 * x ^ 2). ● a(n) = ((2 + sqrt(2)) * (4 + sqrt(2)) ^ n + (2 - sqrt(2)) * (4 - sqrt(2)) ^ n) / 4. ● a(n)=8 * a(n - 1) - 14 * a(n - 2). - _ R. J. Mathar _ , Jun 18 2009 ●

► [A035029] 1,5,26,138,743,4043,22180,122468,679757,3789297,21199998,1189735 50,669447123,3775577367,21336790152,120795829128,684962855705,3889578815453,22115533878178,125892252068498,717400693313471,4092099111728355,23362391663233196,133488737662062188,763310051648602213 ★ a(n) = Sum _{ k=0..n } (k + 1) * Sum _{ j=0..n } 2 ^ j * binomial(n,j) * binomial(n - k,j). ● a(n) = T(n + 1, n + 2), array T as in A049600. ● a(n) = Jypergeometric2F1([- n, n + 3]; [1]; - 1), which satisfies the recurrence. - _ Benedict W. J. Irwin _ , Oct 14 2016 ●

► [A081569] 1,5,26,139,757,4172,23165,129217,722818,4050239,22718609,127512940,715962889,4020920141,22584986378,126867394723,712691811325,4003745802188,22492567804517,126361939999081,709898671705906 ★ Fourth binomial transform of F(n + 1). ● a(n) = 9 * a(n - 1) - 19 * a(n - 2) for n >= 2, with a(0) = 1 and a(1) = 5. ● a(n) = (1 / 2 - sqrt(5) / 10) * (9 / 2 - sqrt(5) / 2) ^ n + (sqrt(5) / 10 + 1 / 2) * (sqrt(5) / 2 + 9 / 2) ^ n. ●

► [A005573] 1,5,26,139,758,4194,23460,132339,751526,4290838,24607628,141648830,817952188,4736107172,27487711752,159864676803,931448227590,5435879858958,31769632683132,185918669183370,1089302293140564 ★ Number of walks on cubic lattice (starting from origin and not going below xy plane). ● a(n) = Sum _{ i=0..n } (- 1) ^ i * 6 ^ (n - i) * binomial(n, i) * binomial(2 * i, i) / (i + 1); ● a(n) = Sum _{ j=0..n } 4 ^ (n - j) * binomial(n, floor(n / 2)) * binomial(n, j) . (End) ● a(n) = Sum _{ k=0..n } binomial(n, k) * binomial(2 * k + 1, k) * 2 ^ (n - k). ● a(n) = Sum _{ k=0..n } (- 1) ^ k * binomial(n, k) * Catalan(k) * 6 ^ (n - k). ● a(n) = 2 ^ n * hypergeom([- n, 3 / 2], [2], - 2). - _ Peter Luschny _ , Apr 26 2016 ●

► [A081911] 1,5,26,140,775,4375,25000,143750,828125,4765625,27343750,156250000,888671875,5029296875,28320312500,158691406250,885009765625,4913330078125,27160644531250,149536132812500,820159912109375 ★ a(n) = 5 ^ n * (n ^ 2 - n + 50) / 50. ● a(n) = 5 ^ n * (n ^ 2 - n + 50) / 50. ● a(n) = 15 * a(n - 1) - 75 * a(n - 2) + 125 * a(n - 3); a(0)=1, a(1)=5, a(2)=26. - _ Harvey P. Dale, Jul 22 2011 ●

► [A081187] 1,5,26,140,776,4400,25376,148160,872576,5169920,30757376,1834956 80,1096779776,6563901440,39316299776,235629363200,1412702437376,8471919656960,50814338072576,304817308958720,1828628975845376 ★ 5th binomial transform of (1,0,1,0,1,...), A059841. ● a(n) = 10 * a(n - 1) - 24 * a(n - 2) with n>1, a(0)=1, a(1)=5. ● a(n) = (4 ^ n + 6 ^ n) / 2. ● a(n) = Sum _{ k=0..floor(n / 2) } C(n, 2k) * 5 ^ (n - 2k). ●

► [A182401] 1,5,26,140,777,4425,25755,152675,919139,5606255,34578292,215322310,1351978807,8550394455,54419811354,348309105300,2240486766555,14476490777175,93914850905862,611489638708140,3994697746533171,26175407271617955,171991872078871311 ★ Number of paths from (0,0) to (n,0), never going below the x - axis, using steps U=(1,1), H=(1,0) and D=(1, - 1), where the H steps come in five colors. ● a(n) = [x ^ n] (1 + 5 * x + x ^ 2) ^ (n + 1) / (n + 1). ● a(n) = sum(binomial(n,2 * k) * binomial(2 * k,k) / (k + 1) * 5 ^ (n - 2 * k),k=0..n / 2). ●

► [A104498] 0,1,5,26,141,798,4706,28820,182461,1188406,7926102,53910828,372671250,2610977388,18498911268,132310178472,953981219997,6926326243110,50593306470542,371528742549692,2741187564459910,20310150708154564 ★ Expansion of (1 / 2) * (1 - sqrt(1 - 8 * x) / sqrt(1 - 4 * x)). ● a(n + 1) = (1 / Pi) * Integral _{ x=4..8 } x ^ n * sqrt(8 - x) / (2 * sqrt(x - 4)); ● a(n + 1) = 4 ^ n * F(- n,1 / 2;2; - 1). (End) ● a(n) = upper left term of M ^ (n - 1), M = an infinite square production matrix as follows: ●

► [A045379] 1,5,26,141,799,4736,29371,190497,1291020,9131275,67310847,516369838,4116416797,34051164985,291871399682,2588914083065,23733360653955,224592570163192,2191466128865567,22024934452712437,227771488390279260 ★ Expansion of e.g.f.: exp(4 * z + exp(z) - 1). ● a(n) = exp(- 1) * Sum _{ k>=0 } ((k + 4) ^ n) / k!. - _ Gerald McGarvey _ , Jun 03 2004 ● a(0) = 1; a(n) = 4 * a(n - 1) + Sum _{ k=0..n - 1 } binomial(n - 1,k) * a(k). - _ Ilya Gutkovskiy _ , Jul 02 2020 ●

► [A053487] 1,5,26,142,824,5144,34960,261104,2154368,19651456,197563136,2177388800,26145442816,339957865472,4759678552064,71396252022784,1142344327331840,19419870744510464,349557742120665088,6641597375170543616,132831948602922500096 ★ E.g.f.: exp(4x) / (1 - x). ● a(n) = exp(4) * Gamma(n + 1,4). - _ Gerry Martens _ , Jul 24 2015 ● a(n) = KummerU(- n, - n, 4). - _ Peter Luschny _ , May 10 2022 ●

► [A001705] 0,1,5,26,154,1044,8028,69264,663696,6999840,80627040,1007441280,13575738240,196287356160,3031488633600,49811492505600,867718162483200,15974614352793600,309920046408806400,6320046028584960000,135153868608460800000,3024476051557847040000 ★ Generalized Stirling numbers: a(n) = n! * Sum _{ k=0..n - 1 } (k + 1) / (n - k). ● a(n) = (n + 1)! * H(n) - n * n!, H(n) = Sum _{ k=1..n } (1 / k). ● a(n) = Sum _{ k=0..n - 1 } ((- 1) ^ (n - 1 + k) * (k + 1) * 2 ^ k * Stirling1(n, k + 1)). - Borislav Crstici (bcrstici(AT)etv.utt.ro) , Jan 26 2004 ● a(n) = Sum _{ k=1..n } (k * StirlingCycle(n + 1,k + 1)). - _ David Callan _ , Sep 25 2006 ● a(n) = (2 * n + 1) * a(n - 1) - n ^ 2 * a(n - 2). - _ Gary Detlefs _ , Nov 27 2009 ● a(n) = (n + 1)! * (H(n + 1) - 1) where H(n) is the n - th harmonic number. - _ Gary Detlefs _ , Dec 18 2009 ● a(n) = n! * Sum _{ k=1..n } (- 1) ^ (k + 1) * binomial(n + 1,k + 1) / k. - _ Vladimir Kruchinin _ , Oct 10 2016 ●

► [A185108] 0,1,5,26,157,1100,8801,79210,792101,8713112,104557345,1359245486,19029436805,285441552076,4567064833217,77640102164690,1397521838964421,26552914940324000,531058298806480001,11152224274936080022 ★ a(0)=0; for n>0, a(n) = (n + 2) * a(n - 1) + 1. ● a(n) = e * Gamma(n + 3,1) - (5 / 2) * (n + 2)!, where Gamma(a,x) is the incomplete gamma function. [_ Bruno Berselli _ , Dec 24 2012] ● a(n) = floor((n + 2)! * (e - 5 / 2)). ●

► [A367041] 1,1,5,26,168,1195,8988,70318,566388,4665221,39113732,332691758,2863778072,24900264326,218372530380,1929363592870,17157018725000,153442147343648,1379250344938676,12453816724761706,112907775890596400,1027394297869071687 ★ G.f. satisfies A(x) = 1 + x ^ 2 + x * A(x) ^ 4. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(3 * (n - 2 * k) + 1,k) * binomial(4 * (n - 2 * k),n - 2 * k) / (3 * (n - 2 * k) + 1). ●

► [A090226] 1,5,26,169,1230,9593,78499,664580,5761456,50847535,455052512,4118054814,37607912019,346065536840,3204941750803,29844570422670,279238341033926,2623557157654234,24739954287740861,234057667276344608,2220819602560918841,21127269486018731929 ⋆ Least k such that prime(k) has n digits. Index of least n - digit prime. ● a(1)=1; a(n) = pi(10 ^ (n - 1)) + 1 for n > 1 where pi(x) is the number of primes less than x. - C. Ronaldo (aga _ new _ ac(AT) hotmail.com), Dec 26 2004 ●

► [A007286] 1,1,5,26,205,1936,22265,297296,4544185,78098176,1491632525,31336418816,718181418565,17831101321216,476768795646785,13658417358350336,4137370516232719345,135510221950531010 56 ⋆ E.g.f.: (sin x + cos 2x) / cos 3x. ● a(n) = Re(2 * ((1 - I) / (1 + I)) ^ n * (1 + sum _{ j=0..n } (binomial(n,j) * Li _{- j } (I) * 3 ^ j))). - _ Peter Luschny _ , Apr 28 2013 ●

► [A181890] 5,27,65,119,189,275,377,495,629,779,945,1127,1325,1539,1769,2015,2277,2555,2849,3159,3485,3827,4185,4559,4949 ⋆ a(n) = 8 * n ^ 2 + 14 * n + 5. ● a(n) = (2 * n + 1) * (4 * n + 5). ● a(n) = a(n - 1) + 16 * n + 6; ● a(n) = 2 * a(n - 1) - a(n - 2) + 16. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A135713] 0,5,27,78,170,315,525,812,1188,1665,2255,2970,3822,4823,5985,7320,8840,10557,12483,14630,17010,19635,22517,25668,29100 ⋆ a(n) = n * (n + 1) * (4 * n + 1) / 2. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n >3. - _ Bruno Berselli _ , Nov 19 2010 ●

► [A085740] 0,0,5,27,84,200,405,735,1232,1944,2925,4235,5940,8112,10829,14175,18240,23120,28917,35739,43700,52920,63525,75647,89424 ⋆ a(n) = T(n) ^ 2 - n ^ 2, where T(n) is a triangular number. ● a(n) = n ^ 2 * (n ^ 2 + 2 * n - 3) / 4 . ●

► [A338996] 0,5,27,85,205,420,770,1302,2070,3135,4565,6435,8827,11830,15540,20060,25500,31977,39615,48545,58905,70840,84502,100050,117650 ⋆ Numbers of squares and rectangles of all sizes in 3 * n * (n + 1) / 2 - ominoes in form of three - quarters of Aztec diamonds. ● a(n) = 5 * (n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ● a(n) = n * (n + 1) * (n + 2) * (7 * n + 13) / 24. ●

► [A349919] 0,0,5,27,90,230,495,945,1652,2700,4185,6215,8910,12402,16835,22365,29160,37400,47277,58995,72770,88830,107415,128777,153180 ⋆ Number of transitive relations on an n - set with exactly two ordered pairs. ● a(n) = 5 * C(n,2) + 12 * C(n,3) + 12 * C(n,4). ● a(n) = (1 / 2) * (n ^ 4 - 2 * n ^ 3 + 4 * n ^ 2 - 3). ●

► [A129868] 0,5,27,119,495,2015,8127,32639,130815,523775,2096127,8386559,33550335,134209535,536854527,2147450879,8589869055,34359607295,137438691327,549755289599,2199022206975,8796090925055,35184367894527,140737479966719,562949936644095 ⋆ Binary palindromic numbers with only one 0 bit. ● a(n) = 2 ^ (2n + 1) - 2 ^ n - 1 = 2 * 4 ^ n - 2 ^ n - 1 = (2 ^ n - 1)(2 * 2 ^ n + 1). ● a(n) = (1 / 2) * (7 + 8 * a(n - 1) + sqrt(9 + 8 * a(n - 1))), a(0) = 0; ● a(n) = 6 * a(n - 1) - 8 * a(n - 2) - 3, a(0) = 0, a(1) = 5; ● a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3), a(0) = 0, a(1) = 5, a(2) = 27. ●

► [A069993] 5,27,121,503,2037,8179,32753,131055,524269,2097131,8388585,33554407,134217701,536870883,2147483617,8589934559,34359738333,137438953435,549755813849,2199023255511,8796093022165,35184372088787 ⋆ a(n) = 2 ^ (2n + 1) * Sum _{ k=1..2 * n } binomial(2n + 1,k) * Bernoulli(k) / 2 ^ k. ● a(n) = 2 (4 ^ n - n) - 1; ● a(n) = 6 * a(n - 1) - 9 * a(n - 2) + 4 * a(n - 3) for n>3. ●

► [A249995] 1,5,27,121,539,2289,9619,39737,162987,663553,2690051,10865673,43783195,176086097,707220723,2837479129,11375770763,45580514721,182554616035,730915611305,2925754935291,11709295114225,46856010770387,187480525633601,750091566966379 ⋆ Expansion of 1 / ((1 + 2 * x) * (1 - 3 * x) * (1 - 4 * x)). ● a(n) = ((- 1) ^ n * 2 ^ (n + 1) + 5 * 2 ^ (2 * n + 3) - 3 ^ (n + 3)) / 15. - _ Colin Barker _ , Dec 29 2014 ● a(n) = 5 * a(n - 1) + 2 * a(n - 2) - 24 * a(n - 3) . - _ Colin Barker _ , Dec 29 2014 ●

► [A198771] 5,27,137,687,3437,17187,85937,429687,2148437,10742187,53710937,268554687,1342773437,6713867187,33569335937,167846679687,839233398437,4196166992187,20980834960937,104904174804687,524520874023437,2622604370117187 ⋆ (11 * 5 ^ n - 1) / 2. ● a(n) = 5 * a(n - 1) + 2. a(n) = 6 * a(n - 1) - 5 * a(n - 2), n>1. ●

► [A084177] 0,1,5,27,137,691,3465,17347,86777,433971,2170025,10850467,54253017,271266451,1356334985,6781680387,33908412857,169542086131,847710474345,4238552459107,21192762470297,105963812701011,529819064204105 ⋆ Binomial transform of Jacobsthal oblongs. ● a(n) = (2 * 5 ^ n - (- 1) ^ n - 2 ^ n) / 9. ● a(n) = 6 * a(n - 1) - 3 * a(n - 2) - 10 * a(n - 3). ●

► [A015535] 0,1,5,27,145,779,4185,22483,120785,648891,3486025,18727907,100611585,540513739,2903791865,15599986803,83807517745,450237562331,2418802847145,12994489360387,69810052496225,375039241201899,2014816311001945,10824160037413523 ⋆ Expansion of x / (1 - 5 * x - 2 * x ^ 2). ● a(n) = 5 * a(n - 1) + 2 * a(n - 2) with n > 1, a(0)=0, a(1)=1. ● a(n) = (1 / 33) * sqrt(33) * ((5 / 2 + (1 / 2) * sqrt(33)) ^ n - (5 / 2 - (1 / 2) * sqrt(33)) ^ n). - _ Paolo P. Lava _ , Jan 13 2009 ●

► [A100193] 1,5,27,146,787,4230,22686,121476,649731,3472382,18546922,99023292,528535726,2820451964,15048601308,80283276936,428271193827,2284478396334,12185310873138,64993897108236,346655914156602 ⋆ a(n) = Sum _{ k=0..n } binomial(2n,n + k) * 3 ^ k. ● a(n) = Sum _{ k=0..n } binomial(2n, n - k) * 3 ^ k. ● a(n) = (Sum _{ k=0..n } binomial(2n, n - k)) * (Sum _{ j=0..n } binomial(n, j) * (- 1) ^ (n - j) * 4 ^ j). ● a(n) = Sum _{ k=0..n } C(2n,k) * 3 ^ (n - k). - _ Paul Barry _ , Jan 11 2007 ● a(n) = Sum _{ k=0..n } C(n + k - 1,k) * 4 ^ (n - k). - _ Paul Barry _ , Sep 28 2007 ● a(n) = [x ^ n] 1 / ((1 - x) ^ n * (1 - 4 * x)). - _ Ilya Gutkovskiy _ , Oct 12 2017 ●

► [A158869] 1,5,27,147,801,4365,23787,129627,706401,3849525,20977947,114319107,622980801,3394927485,18500622507,100818952587,549411848001,2994014230245,16315849837467,88913056334067 ⋆ Number of ways of filling a 2 X 3 X 2n hole with 1 X 2 X 2 bricks. ● a(0)=1, a(1)=5 and a(n) = 6 * a(n - 1) - 3 * a(n - 2) for n > 1. ● a(n) = (3 ^ n) * 2F1[- ((n + 1) / 2), - (n / 2); 1 / 2; 2 / 3], using Gauss' hypergeometric function. ● a(n) = (1 / 6) * ((3 + sqrt(6)) ^ (n + 1) + (3 - sqrt(6)) ^ (n + 1)). (End) ●

► [A162557] 1,5,27,151,857,4893,28003,160415,919281,5268853,30200171,173106279,992248009,5687602445,32601595443,186873931759,1071170713313,6140004593637,35194817476027,201738480090935,1156375213539129,6628401467130877,37994333961038339,217785452615605311 ⋆ a(n) = ((3 + sqrt(3)) * (4 + sqrt(3)) ^ n + (3 - sqrt(3)) * (4 - sqrt(3)) ^ n) / 6. ● a(n) = 8 * a(n - 1) - 13 * a(n - 2) for n > 1; a(0) = 1, a(1) = 5. ●

► [A134425] 1,5,27,151,861,4969,28911,169187,994329,5862925,34658691,205305423,1218183669,7238062641,43055682327,256365292443,1527728176305,9110460044821,54362600841963,324557242893191,1938584147698701 ⋆ Number of paths of length n in the first quadrant, starting at the origin and consisting of 2 kinds of upsteps U=(1,1) (U1 and U2), 3 kinds of flatsteps F=(1,0) (F1, F2 and F3) and 1 kind of downsteps D=(1, - 1). ● a(n) = Sum _{ k=0..n } ((k + 1) * Sum _{ j=0..n + 1 } (binomial(j,n - k - j) * 3 ^ (- n + k + 2 * j) * 2 ^ (n - j) * binomial(n + 1,j))) / (n + 1). - _ Vladimir Kruchinin _ , Mar 13 2016 ●

► [A305573] 1,5,27,152,879,5181,30980,187352,1143447,7031999,43524851,270892380,1694120644,10639643324,67071402168,424231073712,2691390885735,17121286350819,109187993381489,697911059909408 ⋆ Number of (1,1) paths occurring at depth 3n of the Fibonacci tree. ● a(n) = 3 * Sum _{ k=0..n } (k + 1) ^ 2 * C(3 * n + 2, n - k) / (2 * n + k + 3). (End) ●

► [A083880] 1,5,27,155,929,5725,35883,227155,1446241,9237845,59114907,378678635,2427143489,15561826285,99793962603,640017621475,4104915074881,26328745454885,168874407826587,1083182932803515,6947717948023649 ⋆ a(0)=1, a(1)=5, a(n) = 10 * a(n - 1) - 23 * a(n - 2), n >= 2. ● a(n) = ((5 - sqrt(2)) ^ n + (5 + sqrt(2)) ^ n) / 2; ● a(n) = Sum _{ k=0..n } C(n, 2k) * 5 ^ (n - 2k) * 2 ^ k. ●

► [A098409] 1,5,27,155,931,5775,36645,236325,1542195,10153775,67313377,448691985,3004182349,20188647185,136094684907,919884469275,6232016686995,42305974804575,287706424085745,1959685788407025,13367193276457881,91295551930615005,624255065007468207 ⋆ Expansion of 1 / (sqrt(1 - 3 * x) * sqrt(1 - 7 * x)). ● a(n) = Sum _{ k=0..n } 3 ^ (n - k) * binomial(n,k) * binomial(2k,k). - _ Paul Barry _ , Mar 08 2005 ● a(n) = [x ^ n] (1 + 5 * x + x ^ 2) ^ n. - _ Emanuele Munarini _ , Apr 27 2012 ● a(n) = Sum _{ k=0..n } 7 ^ (n - k) * (- 1) ^ k * binomial(n,k) * binomial(2 * k,k). - _ Seiichi Manyama _ , Apr 22 2019 ● a(n) = Sum _{ k=0..floor(n / 2) } 5 ^ (n - 2 * k) * binomial(n,2 * k) * binomial(2 * k,k). - _ Seiichi Manyama _ , May 04 2019 ● a(n) = (1 / Pi) * Integral _{ x = - 1..1 } (3 + 4 * x ^ 2) ^ n / sqrt(1 - x ^ 2) dx = (1 / Pi) * Integral _{ x = - 1..1 } (7 - 4 * x ^ 2) ^ n / sqrt(1 - x ^ 2) dx. (End) ●

► [A052227] 1,5,27,156,935,5733,35700,224808,1427679,9126975,58659315,378658800,2453288292,15944020316,103897691640,678610095504,4441369072335,29120107628115,191233066114545,1257635016353100 ⋆ a(n) = (4 * n + 1) * binomial(3 * n,n) / (2 * n + 1). ● a(n) = binomial(3 * n + 1, n) + binomial(3 * n, n - 1) for n>=0. - _ Paul D. Hanna _ , Jul 22 2013 ● a(n) is the coefficient of [x ^ n] in (1 + x) / (1 - x) ^ (2n + 2) and forms the main diagonal in the following table of coefficients: ●

► [A101386] 5,27,157,915,5333,31083,181165,1055907,6154277,35869755,209064253,1218515763,7102030325,41393666187,241259966797,1406166134595,8195736840773,47768254910043,278413792619485,1622714500806867,9457873212221717,55124524772523435 ⋆ Expansion of g.f.: (5 - 3 * x) / (1 - 6 * x + x ^ 2). ● a(n) = 6 * a(n - 1) - a(n - 2), a(0)=5, a(1)=27. - _ Philippe Deléham _ , Nov 17 2008 ● a(n) = ((5 + sqrt(18)) * (3 + sqrt(8)) ^ n + (5 - sqrt(18)) * (3 - sqrt(8)) ^ n) / 2. ● a(n) = rational part of z(n, with z(n) = (5 + 3 * sqrt(2)) * (3 + 2 * sqrt(2)) ^ n), n >= 0, the general positive solutions of the second class of proper solutions. See the preceding formula. - _ Wolfdieter Lang _ , Feb 05 2015 ●

► [A084076] 1,5,27,157,963,6141,40323,270845,1852419,12857341,90337283,641286141,4592533507,33139654653,240723001347,1758796578813,12916805074947,95300512382973,706044251602947,5250379998560253,39176121681444867 ⋆ Length of list created by n substitutions k - > Range[- 1 - abs(k), abs(k) + 1] starting with { 1 } . ● a(n) = ((7 * n - 1) * (7 * n - 2) * a(n - 1) + 4 * (2 * n - 1) * (7 * n + 2) * a(n - 2)) / ((n + 2) * (7 * n - 5)), with a(0) = 1, a(1) = 5. - _ G. C. Greubel _ , Nov 23 2022 ●

► [A337011] 1,5,27,159,1025,7221,55307,457631,4065569,38566021,388757083,4146851583,46636281185,551163837685,6825500514059,88341860285631,1192267628956353,16743728349797765,244221140242647579,3693367920926321375,57821628101627115329 ⋆ a(n) = 2 ^ n * exp(- 1 / 2) * Sum _{ k>=0 } (k + 2) ^ n / (2 ^ k * k!). ● a(0) = 1; a(n) = 5 * a(n - 1) + Sum _{ k=2..n } binomial(n - 1,k - 1) * 2 ^ (k - 1) * a(n - k). ●

► [A081924] 1,5,27,159,1029,7353,58095,506691,4860297,51023277,583097859,7215769575,96210083853,1375803720801,21012273704151,341449444105227,5883436565417745,107162594556721749,2057521815411573483 ⋆ E.g.f.: exp(3 * x) / (1 - x) ^ 2. ● a(n) + (- n - 4) * a(n - 1) + 3 * (n - 1) * a(n - 2) = 0. - _ R. J. Mathar _ , Nov 24 2012 ● a(n) = n! * Sum _{ k = 0..n } (n - k + 1) * 3 ^ k / k!. ● a(n) = (n + 1)! * hypergeom([- n],[- n - 1],3). ● a(n) = KummerU(- n, - n - 1, 3). - _ Peter Luschny _ , May 10 2022 ●

► [A366176] 1,1,5,27,161,1030,6921,48190,344669,2517303,18695908,140771477,1072130229,8244820518,63931532190,499308229278,3924204043333,31012883225891,246304580923299,1964794017165157,15735626383151876,126476316316459089,1019883740031357941 ⋆ G.f. A(x) satisfies A(x) = 1 + x * A(x) ^ 3 / (1 - x) ^ 2. ● a(n) = Sum _{ k=0..n } binomial(n + k - 1,n - k) * binomial(3 * k,k) / (2 * k + 1). ●

► [A138772] 0,1,5,27,168,1200,9720,88200,887040,9797760,117936000,1536796800,21555072000,323805081600,5187108326400,88268019840000,1590132031488000,30233431388160000,605024315191296000,12711912992722944000,279783730940313600000,6437458713635389440000 ⋆ Number of entries in the second cycles of all permutations of { 1,2,...,n } ; each cycle is written with the smallest element first and cycles are arranged in increasing order of their first elements. ● a(n) = (1 / 4) * (n - 1)! * (n - 1) * (n + 2). ● a(n) = (n + 1) * a(n - 1) + (n - 2)!. ● a(n) = (n - 1) * a(n - 1) + n! / 2. ● a(n) = n! * Sum _{ i=1..n } (Sum _{ j=1..i } (j / i)). - _ Pedro Caceres _ , Apr 19 2019 ●

► [A367048] 1,1,5,27,177,1270,9645,76206,619913,5156959,43667985,375140383,3261467573,28641957520,253702185717,2263964868768,20334261430769,183680693283325,1667613040080061,15208587941854251,139266058402655669,1279953660931370623 ⋆ G.f. satisfies A(x) = 1 + x * A(x) ^ 4 + x ^ 2 * A(x). ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(3 * n - 5 * k + 1,k) * binomial(4 * n - 7 * k, n - 2 * k) / (3 * n - 5 * k + 1). ●

► [A321072] 0,5,27,753,11401,26042,1475501,17419550,95368234,738444877,21959974096,73834823298,2356328188186,11771613318349,149862461894073,3567610964143242,774485913355889 3,421292427905708342,1937633513403589655,18617385453880284098,18617385453880284098 ⋆ One of the two successive approximations up to 11 ^ n for 11 - adic integer sqrt(3). Here the 5 (mod 11) case (except for n = 0). ● a(n) == ((5 + sqrt(21)) / 2) ^ (11 ^ n) + ((5 - sqrt(21)) / 2) ^ (11 ^ n) (mod 11 ^ n). - _ Peter Bala _ , Dec 04 2022 ●

► [A275709] 0,5,28,81,176,325,540,833,1216,1701,2300,3025,3888,4901,6076,7425,8960,10693,12636,14801,17200,19845,22748,25921,29376 ⋆ a(n) = 2 * n ^ 3 + 3 * n ^ 2. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n > 4. ●

► [A257093] 0,5,28,82,180,335,560,868,1272,1785,2420,3190,4108,5187,6440,7880,9520,11373,13452,15770,18340,21175,24288,27692,31400 ⋆ a(n) = n * (n + 1) * (13 * n + 2) / 6. ● a(n) = Sum _{ j=0..n - 1 } (n - j) * (5 * n - 2 * j). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Vincenzo Librandi _ , Apr 16 2015 ●

► [A027016] 1,5,28,98,291,806,2164,5729,15072,39542,103615,271370,710568,1860413,4870756,12751946,33385179,87403694,228826012,599074457,1568397480,4106118110,10749956983,28143752978,73681302096 ⋆ T(2n + 1,n + 1), T given by A027011. ● a(n) = 5 * a(n - 1) - 8 * a(n - 2) + 5 * a(n - 3) - a(n - 4) for n>4. ●

► [A124133] 0,5,28,123,506,2041,8184,32759,131062,524277,2097140,8388595,33554418,134217713,536870896,2147483631,8589934574,34359738349,137438953452,549755813867,2199023255530,8796093022185,35184372088808 ⋆ a(n) = (- 1 / 2) * Sum _{ i1 + i2 + i3 = 2 * n } ((2 * n)! / (i1! i2! i3!)) * B(i1), where B are the Bernoulli numbers (with i1, i2, i3 >= 1). ● a(n) = 2 ^ (2 * n - 1) - n - 1. ● a(n) = 6 * a(n - 1) - 9 * a(n - 2) + 4 * a(n - 3). ●

► [A270922] 1,1,5,28,141,751,4064,22198,122381,679375,3792155,21263331,119679000,675763232,3826165838,21715370653,123502583565,703694143160,4016079632039,22953901314649,131366012754691,752709483123304,4317601694413683,24790635783551008 ⋆ Coefficient of x ^ n in Product _{ k>=1 } (1 + x ^ k) ^ (k * n). ● a(n) = [x ^ n] exp(n * Sum _{ k>=1 } (- 1) ^ (k + 1) * x ^ k / (k * (1 - x ^ k) ^ 2)). - _ Ilya Gutkovskiy _ , May 30 2018 ●

► [A164537] 5,28,154,840,4564,24752,134120,726432,3933776,21300160,115328416,624425088,3380802880,18304471808,99104534144,536573667840,2905125864704,15728975567872,85160042437120,461074681546752 ⋆ a(n) = 8 * a(n - 1) - 14 * a(n - 2) for n > 1; a(0) = 5, a(1) = 28. ● a(n) = 8 * a(n - 1) - 14 * a(n - 2) for n > 1; a(0) = 5, a(1) = 28. ● a(n) = ((5 + 4 * sqrt(2)) * (4 + sqrt(2)) ^ n + (5 - 4 * sqrt(2)) * (4 - sqrt(2)) ^ n) / 2. ●

► [A015536] 0,1,5,28,155,859,4760,26377,146165,809956,4488275,24871243,137821040,763718929,4232057765,23451445612,129953401355,720121343611,3990466922120,22112698641433,122534893973525,679012565791924,3762667510880195,20850375251776747 ⋆ Expansion of x / (1 - 5 * x - 3 * x ^ 2). ● a(n) = 5 * a(n - 1) + 3 * a(n - 2) with n > 1, a(0)=0, a(1)=1. ● a(n) = (5 / 2 + sqrt(37) / 2) ^ n / sqrt(37) - (5 / 2 - sqrt(37) / 2) ^ n / sqrt(37). ● a(n) = Sum _{ k=0..floor((n - 1) / 2) } binomial(n - k - 1, k)3 ^ k * 5 ^ (n - 2k - 1). (End) ●

► [A005785] 1,5,28,156,863,4571,22952,108182,477136,1969270,7625579,27804973,95858868,313747418,978734539,2920530663,8363945469,23057872913,61357278239,157985305473,394486861086,957156158394,2260761331227 ⋆ Number of 5 - covers of an unlabeled n - set. ● a(n) = n ^ 30 / (30! * 5!) + O(n ^ 29). - _ Vaclav Kotesovec _ , Aug 09 2022 ●

► [A327999] 1,5,28,160,896,4864,25600,131072,655360,3211264,15466496,73400320,343932928,1593835520,7314866176,33285996544,150323855360,674309865472,3006477107200,13331578486784,58823872086016,258385232527360,1130297953353728,4925812092436480 ⋆ a(n) = Sum _{ k=0..2n } (k! * (2n - k)!) / (floor(k / 2)! * floor((2n - k) / 2)!) ^ 2. ● a(n) = 4 ^ n * (n ^ 2 + n + 8) / 8. ● a(n) = [x ^ n] (- 16 * x ^ 2 + 7 * x - 1) / (4 * x - 1) ^ 3. ● a(n) = n! [x ^ n] exp(4 * x) * (2 * x ^ 2 + x + 1). ● a(n) = a(n - 1) * 4 * (8 + n + n ^ 2) / (8 - n + n ^ 2). ● a(n) = 12 * a(n - 1) - 48 * a(n - 2) + 64 * a(n - 3) for n>2. ● a(n) = 2 ^ (2 * n - 3) * (8 + n + n ^ 2). ●

► [A090040] 1,5,28,164,976,5840,35008,209984,1259776,7558400,45349888,272098304,1632587776,9795522560,58773127168,352638746624,2115832446976,12694994616320,76169967566848,457019805138944,2742118830309376 ⋆ (3 * 6 ^ n + 2 ^ n) / 4. ● a(n) = 8 * a(n - 1) - 12 * a(n - 2), a(0)=1, a(1)=5. ● a(n) = (3 * 6 ^ n + 2 ^ n) / 4. ● a(n)=6 * a(n - 1) - 2 ^ (n - 1). - _ Paul Curtz _ , Jan 09 2009 ● a(n) = A019590 (mod 4), proof via a(n)=8 * a(n - 1) - 12 * a(n - 2). - _ R. J. Mathar _ , Feb 25 2009 ●

► [A025174] 0,1,5,28,165,1001,6188,38760,245157,1562275,10015005,64512240,417225900,2707475148,17620076360,114955808528,751616304549,4923689695575,32308782859535,212327989773900,1397281501935165 ⋆ a(n) = binomial(3n - 1, n - 1). ● a(n) = Sum _{ k=1..n } binomial(n - 1,n - k) * binomial(2 * n,n - k). - _ Vladimir Kruchinin _ , Nov 12 2014 ● a(n) = [x ^ n] C(x) ^ n for n >= 1, where C(x) = (1 - sqrt(1 - 4 * x)) / (2 * x) is the generating function for A000108 (Ramanujan). - _ Peter Bala _ , Jun 24 2015 ●

► [A371778] 1,5,28,166,1015,6324,39901,254035,1628380,10493680,67914088,441086947,2873255906,18763759019,122803467241,805241108334,5288922607095,34789875710568,229147231044397,1511104857207706,9975701630282920,65920216186587257 ⋆ a(n) = Sum _{ k=0..floor(n / 3) } binomial(3 * n + 2,n - 3 * k). ● a(n) = [x ^ n] 1 / (((1 - x) ^ 3 - x ^ 3) * (1 - x) ^ (2 * n)). ●

► [A083316] 1,5,28,167,1024,6335,39208,241967,1487584,9110975,55612888,338471567,2054977744,12451139615,75314797768,454933369967,2744837485504,16545254288255,99652801745848,599823577977167,3608476467634864 ⋆ a(n) = (2 * 6 ^ n - (5 ^ n - 3 ^ n)) / 2. ● a(n) = (2 * 6 ^ n - (5 ^ n - 3 ^ n)) / 2. ●

► [A069731] 1,5,28,168,1056,6864,45760,311168,2149888,15049216,106502144,760729600,5477253120,39710085120,289650032640,2124100239360,15651264921600,115819360419840,860372391690240 ⋆ Number of unicursal planar maps with n edges rooted at a vertex of odd valency (unicursal means that exactly two vertices are of odd valency; there is an Eulerian path). ● a(n) = 2 ^ (n - 2) * C _ (n + 1), where C _ n stands for the Catalan numbers (A000108). ●

► [A143647] 1,5,28,170,1084,7100,47152,315320,2115856,14221520,95666368,643790240,4333242304,29169037760,196359046912,1321871638400,8898817351936,59906997474560,403295993003008,2715005985589760,18277548009831424 ⋆ a(n) = ((5 + sqrt(3)) ^ n + (5 - sqrt(3)) ^ n) / 2. ● a(n) = 10 * a(n - 1) - 22 * a(n - 2), a(0)=1, a(1)=5. ●

► [A349318] 1,1,5,28,171,1113,7590,53588,388519,2876003,21648065,165193576,1275043280,9936953788,78087083456,618049278976,4922606097263,39425205882007,317316076325015,2565216211152700,20819872339143179,169586043613302169,1385856599443533442 ⋆ G.f. A(x) satisfies: A(x) = 1 + x * A(x) ^ 3 / (1 - 2 * x). ● a(0) = a(1) = 1; a(n) = 2 * a(n - 1) + Sum _{ i=0..n - 1 } Sum _{ j=0..n - i - 1 } a(i) * a(j) * a(n - i - j - 1). ● a(n) = Sum _{ k=0..n } binomial(n - 1, k - 1) * binomial(3 * k,k) * 2 ^ (n - k) / (2 * k + 1). ●

► [A367889] 1,5,28,173,1165,8468,65923,546197,4791214,44301143,430158397,4372004546,46381674085,512328076385,5879362011436,69958289731457,861605015493073,10965899141265500,144018319806024991,1949190279770578145,27153595018237222774 ⋆ Expansion of e.g.f. exp(3 * (exp(x) - 1) + 2 * x). ● a(n) = exp(- 3) * Sum _{ k>=0 } 3 ^ k * (k + 2) ^ n / k!. ● a(0) = 1; a(n) = 2 * a(n - 1) + 3 * Sum _{ k=1..n } binomial(n - 1,k - 1) * a(n - k). ●

► [A082031] 1,5,28,176,1240,9752,85120,819296,8639872,99209600,1233416704,16517058560,237137769472,3634932675584,59263206154240,1024222802014208,18706559855656960,360062627304341504,7285354765603176448 ⋆ Expansion of e.g.f. exp(2 * x) / (1 - x) ^ 3. ● a(n) = (1 / 2) * (Sum _{ k = 0..n } (k + 2)! * binomial(n,k) * 2 ^ (n - k)). ●

► [A324352] 0,1,5,28,179,1306,10757,98932,1006007,11214406,136041329,1784556808,25174694723,380087428618,6115760751869,104481070398556,1888837397941487,36026457717419662,723015306101706857,15230427461356523056,336009169512596054459 ⋆ Total number of occurrences of 2 in the (signed) displacement sets of all permutations of [n + 2] divided by 2!. ● a(n) = - 1 / 2! * Sum _{ j=1..n } (- 1) ^ j * binomial(n,j) * (n + 2 - j)!. ●

► [A189487] 1,1,5,28,185,1456,13267,135598,1528193,18805240,250522451,3585332554,54774501025,888739031116,15249006695483,275641537989766,5231788966650113,103968303762747472,2157673505603964643,46656574558459795522,1049037051211541521121 ⋆ Expansion of e.g.f. exp(x * exp(x) + x ^ 2 * exp(2 * x)). ● a(n) = n! * sum(m=1..n, sum(k=m..n, (k ^ (n - k) * binomial(m,k - m)) / (n - k)!) / m!), n>0, a(0)=1. ●

► [A367049] 1,1,5,28,187,1361,10479,83914,691738,5830903,50028259,435454040,3835732631,34128555184,306276957665,2769050552948,25197515469820,230599623819217,2121066298440282,19597929365099640,181814132152022195,1692920612932871541 ⋆ G.f. satisfies A(x) = 1 + x * A(x) ^ 4 + x ^ 2 * A(x) ^ 2. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(3 * n - 4 * k + 1,k) * binomial(4 * n - 6 * k,n - 2 * k) / (3 * n - 4 * k + 1). ●

► [A081116] 5,29,42,75,132,134,140,152,159,162,163,201,206,215,241,256,277,301,314,347,404,406,412,424,431 ⋆ Numbers k such that 17 divides 3 ^ k - k. ● a(n + 1) - a(n) is the 16 - periodic sequence (24, 13, 33, 57, 2, 6, 12, 7, 3, 1, 38, 5, 9, 26, 15, 21). ●

► [A300777] 5,29,53,113,449,653,701,809,953,1373,1481,1709,1733,2069,2549,2657,2753,2909,3413,3929,4397,5153,5273,5693,6101 ⋆ Primes of the form a ^ 2 + b ^ 2 such that both a ^ 2 + 3b ^ 2 and 3a ^ 2 + b ^ 2 are prime. ● a(n) == 1 (mod 4). ●

► [A108928] 5,29,69,125,197,285,389,509,645,797,965,1149,1349,1565,1797,2045,2309,2589,2885,3197,3525,3869,4229,4605,4997 ⋆ a(n) = 8 * n ^ 2 - 3. ● a(n) = 2 * (2 * n - 1) * (2 * n + 1) - 1. ● a(1)=5, a(2)=29, a(3)=69, a(n)=3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Jul 21 2012 ●

► [A087348] 5,29,73,137,221,325,449,593,757,941,1145,1369,1613,1877,2161,2465,2789,3133,3497,3881,4285,4709,5153,5617,6101 ⋆ a(n) = 10 * n ^ 2 - 6 * n + 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). G.f.: x * (5 + 14 * x + x ^ 2) / (1 - x) ^ 3. - _ Colin Barker _ , Jun 30 2012 ●

► [A050409] 0,5,29,86,190,355,595,924,1356,1905,2585,3410,4394,5551,6895,8440,10200,12189,14421,16910,19670,22715,26059,29716,33700 ⋆ Truncated square pyramid numbers: a(n) = Sum _{ k = n..2 * n } k ^ 2. ● a(n) = n * (n + 1) * (14 * n + 1) / 6. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Vincenzo Librandi _ , Jun 22 2012 ●

► [A330700] 0,0,5,29,94,230,475,875,1484,2364,3585,5225,7370,10114,13559,17815,23000,29240,36669,45429,55670,67550,81235,96899,114724 ⋆ a(n) = (n - 1) * n * (2 * n ^ 2 + 4 * n - 1) / 6. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n > 4. ●

► [A264750] 5,29,99,259,574,1134,2058,3498,5643,8723,13013,18837,26572,36652,49572,65892,86241,111321,141911,178871,223146,275770,337870,410670,495495 ⋆ Number of sequences of 5 throws of an n - sided die (with faces numbered 1, 2, ..., n) in which the sum of the throws first reaches or exceeds n on the 5th throw. ● a(n) = (n - 4) * (n - 3) * (n - 2) * (n - 1) * (4 * n + 5) / 120. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>10. ●

► [A057721] 1,5,29,109,305,701,1405,2549,4289,6805,10301,15005,21169,29069,39005,51301,66305,84389,105949,131405,161201,195805,235709,281429,333505 ⋆ a(n) = n ^ 4 + 3 * n ^ 2 + 1. ● a(n) = denominator of Integral _{ x=0..infinity } sin(n * x) / exp((n ^ 2 + 1) * x). - _ Francesco Daddi _ , Jul 07 2013 ●

► [A119494] 5,29,109,347,857,1627,2999,4931,7759,11677,16111,22229,29269,37717,48527,61057,75503,91463,110567,131671,155509,183587,214189,248597,286073 ⋆ a(n) = smallest prime number p _ k such that 1 / p _ n + 1 / p _{ n + 1 } + ... + 1 / p _ k > 1. ● a(n) is approximately prime(n) ^ e. ●

► [A000352] 5,29,118,418,1383,4407,13736,42236,128761,390385,1179354,3554454,10696139,32153963,96592972,290041072,870647517,2612991141,7841070590,23527406090,70590606895,211788597919,635399348208,1906265153508,5718929678273 ⋆ One half of the number of permutations of [n] such that the differences have three runs with the same signs. ● a(n) = (3 ^ n - 4 * 2 ^ n - 2 * n + 11) / 4, n>=4. - _ Tim Monahan _ , Jul 14 2011 ●

► [A267921] 1,5,29,125,509,2045,8189,32765,131069,524285,2097149,8388605,33554429,134217725,536870909,2147483645,8589934589,34359738365,137438953469,549755813885,2199023255549,8796093022205,35184372088829,140737488355325,562949953421309 ⋆ Decimal representation of the n - th iteration of the "Rule 243" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = 5 * a(n - 1) - 4 * a(n - 2) for n>2. ●

► [A272921] 1,5,29,149,669,2837,11709,47669,192669,775637,3115389,12495989,50079069,200585237,803115069,3214717109 ⋆ Number of active (ON,black) cells at stage 2 ^ n - 1 of the two - dimensional cellular automaton defined by "Rule 555", based on the 5 - celled von Neumann neighborhood. ● a(n) = 10 * a(n - 1) - 35 * a(n - 2) + 50 * a(n - 3) - 24 * a(n - 4) for n>5. ●

► [A198764] 5,29,149,749,3749,18749,93749,468749,2343749,11718749,58593749,292968749,1464843749,7324218749,36621093749,183105468749,915527343749,4577636718749,22888183593749,114440917968749,572204589843749,2861022949218749 ⋆ 6 * 5 ^ n - 1. ● a(n) = 5 * a(n - 1) + 4. ● a(n) = 6 * a(n - 1) - 5 * a(n - 2), n>1. ●

► [A320089] 1,5,29,149,773,3869,19493,97493,488093,2440589,12206213,61031093,305171717,1525859213,7629374189,38146874189,190734764813,953673824213,4768371089837,23841855464717,119209287089693,596046435527189,2980232226542813,14901161132714813 ⋆ Number of primitive (=aperiodic) 5 - ary words with length less than or equal to n which are earlier in lexicographic order than any other word derived by cyclic shifts of the alphabet. ● a(n) = Sum _{ j=1..n } Sum _{ d|j } 5 ^ (d - 1) * mu(j / d). ●

► [A098780] 1,5,29,157,1437,13725,128413,1176989,20051357,355595677,6261175709,109340390813,1896046785949,32682372363677,560447953696157,9567647208437149,315812421869630877,1069210596333125366 1 ⋆ First n numbers in binary representation concatenated in reverse order. ● a(n) = n * 2 ^ (1 + floor(log _ 2(a(n - 1)))) + a(n - 1); a(1) = 1. ●

► [A015537] 0,1,5,29,165,941,5365,30589,174405,994381,5669525,32325149,184303845,1050819821,5991314485,34159851709,194764516485,1110461989261,6331368012245,36098688018269,205818912140325,1173489312774701,6690722212434805 ⋆ Expansion of x / (1 - 5 * x - 4 * x ^ 2). ● a(n) = 5 * a(n - 1) + 4 * a(n - 2). ● a(n) = Sum _{ k=0..floor((n - 1) / 2) } C(n - k - 1, k) * 4 ^ k * 5 ^ (n - 2 * k - 1). - _ Paul Barry _ , Apr 23 2005 ● a(n) = (1 / 41) * sqrt(41) * ((5 / 2 + (1 / 2) * sqrt(41)) ^ n - (5 / 2 - (1 / 2) * sqrt(41)) ^ n), with n >= 0. - _ Paolo P. Lava _ , Jan 13 2009 ● a(n) = 2 ^ (n - 1) * Fibonacci(n, 5 / 2) = (2 / i) ^ (n - 1) * ChebyshevU(n - 1, 5 * i / 4). - _ G. C. Greubel _ , Dec 26 2019 ●

► [A182017] 1,5,29,165,1020,6606,44805,314299,2266834,16714004,125501364,956725836,7387322749,57669478609,454492588153,3611698593169,28911762536992,232949503809562,1887883708627582,15380196764853214,125893997550676627,1034945699861044243 ⋆ Row square - sums of triangle A182013. ● a(n) = sum (sum(M(i),i=k..n)) ^ 2,k=0..n), where the M(n)'s are the Motzkin numbers. ●

► [A291017] 5,29,168,973,5635,32634,188993,1094513,6338640,36708889,212591743,1231179978,7130117645,41292563669,239137122168,1384911909493,8020423511275,46448581212474,268997103908393,1557839658871433,9021897884741280,52248407581088929 ⋆ p - INVERT of (1,1,1,1,1,...), where p(S) = 1 - 5 S + S ^ 2. ● a(n) = 7 * a(n - 1) - 7 * a(n - 2) n >= 3. ●

► [A001653] 1,5,29,169,985,5741,33461,195025,1136689,6625109,38613965,225058681,1311738121,7645370045,44560482149,259717522849,1513744654945,8822750406821,51422757785981,299713796309065,1746860020068409,10181446324101389,59341817924539925 ⋆ Numbers k such that 2 * k ^ 2 - 1 is a square. ● a(n) = 6 * a(n - 1) - a(n - 2) with a(1)=1, a(2)=5. ● a(n) = (((3 + 2 * sqrt(2)) ^ (n + 1) - (3 - 2 * sqrt(2)) ^ (n + 1)) - ((3 + 2 * sqrt(2)) ^ n - (3 - 2 * sqrt(2)) ^ n)) / (4 * sqrt(2)). Limit _{ n - >infinity } a(n) / a(n - 1) = 3 + 2 * sqrt(2). - _ Gregory V. Richardson _ , Oct 12 2002 ● a(n) * a(n + 3) = 24 + a(n + 1) * a(n + 2). - _ Ralf Stephan _ , May 29 2004 ● a(n) = Sum _{ k=0..n } binomial(n + k, 2 * k)4 ^ k. - _ Paul Barry _ , Aug 30 2004 [offset 0] ● a(n) = Sum _{ k =0..n } binomial(2 * n + 1, 2 * k + 1) * 2 ^ k. - _ Paul Barry _ , Sep 30 2004 [offset 0] ● a(n) = (- 1) ^ n * U(2 * n, i * sqrt(4) / 2) = (- 1) ^ n * U(2 * n, i), U(n, x) Chebyshev polynomial of second kind, i=sqrt(- 1). - _ Paul Barry _ , Mar 13 2005 [offset 0] ●

► [A370175] 1,5,29,169,989,5789,33889,198389,1161389,6798889,39801389,233001389,1364013889,7985076389,46745451389,273652638889,1601990451389,9378215451389,54901029513889,321396224826389,1881486271701389,11014412482638889,64479493771701389 ⋆ a(n) = floor(x * a(n - 1)) for n > 0 where x = (5 + 3 * sqrt(5)) / 2, a(0) = 1. ● a(n) = 6 * a(n - 1) - 5 * a(n - 3), a(0) = 1, a(1) = 5, a(2) = 29. ● a(n) = 5 * a(n - 1) + 5 * a(n - 2) - 1. ● a(n) = (4 * (5 - 2 * sqrt(5)) * ((5 - 3 * sqrt(5)) / 2) ^ n + 4 * (5 + 2 * sqrt(5)) * ((5 + 3 * sqrt(5)) / 2) ^ n + 5) / 45. ●

► [A083066] 1,5,29,173,1037,6221,37325,223949,1343693,8062157,48372941,290237645,1741425869,10448555213,62691331277,376147987661,2256887925965,13541327555789,81247965334733,487487792008397,2924926752050381 ⋆ 5th row of number array A083064. ● a(n) = (4 * 6 ^ n + 1) / 5. ● a(n) = 6 * a(n - 1) - 1 with n>0, a(0)=1. - _ Vincenzo Librandi _ , Aug 08 2010 ● a(n) = 7 * a(n - 1) - 6 * a(n - 2). - _ Vincenzo Librandi _ , Nov 04 2011 ● a(n) = 6 ^ n - Sum _{ i=0..n - 1 } 6 ^ i for n>0. - _ Bruno Berselli _ , Jun 20 2013 ●

► [A163611] 5,29,175,1083,6805,43141,274895,1756707,11244485,72040589,461782735,2960893803,18987935125,121778793781,781065429935,5009742042387,32132915535365,206105088378749,1321993826474095,8479521232029723 ⋆ a(n) = ((5 + 2 * sqrt(2)) * (5 + sqrt(2)) ^ n + (5 - 2 * sqrt(2)) * (5 - sqrt(2)) ^ n) / 2. ● a(n) = 10 * a(n - 1) - 23 * a(n - 2) for n > 1; a(0) = 5, a(1) = 29. ●

► [A160906] 1,5,29,176,1093,6885,43796,280600,1807781,11698223,75973189,494889092,3231947596,21153123932,138712176296,911137377456,5993760282021,39481335979779,260377117268087,1719026098532296,11360252318843933 ⋆ Row sums of A159841. ● a(n) = C(3 * n + 1,n) * Hyper2F1([1, - n],[2 * n + 2], - 1). - _ Peter Luschny _ , May 19 2015 ● a(n) = [x ^ n] 1 / ((1 - 2 * x) * (1 - x) ^ (2 * n + 1)). - _ Ilya Gutkovskiy _ , Oct 25 2017 ●

► [A163073] 1,5,29,177,1097,6829,42565,265401,1654993,10320533,64359341,401348865,2502838169,15607867837,97331722837,606967236489,3785088940705,23604071924261,147196597046333,917927985203793,5724261314120681 ⋆ a(n) = ((5 + sqrt(5)) * (4 + sqrt(5)) ^ n + (5 - sqrt(5)) * (4 - sqrt(5)) ^ n) / 10. ● a(n) = 8 * a(n - 1) - 11 * a(n - 2) for n > 1; a(0) = 1, a(1) = 5. ●

► [A190802] 5,29,177,1245,9629,78627,664917,5762208,50849234,455055614,4118066400,37607950280,346065645809,3204942065691,29844571475287,279238344248556,2623557165610821,24739954309690414,234057667376222381,2220819602783663483 ⋆ Gauss' approximation for the number of primes below 10 ^ n. ● a(n) = round(integral(dt / log(t),t=2..10 ^ n)). ●

► [A139174] 5,29,179,1259,10079,90719,907199,9979199,119750399,1556755199,21794572799,326918591999,5230697471999,88921857023999,1600593426431999,30411275102207999,608225502044159999 ⋆ a(n) = (n! - 4) / 4. ● a(n) = numerator((n + 2)! - 4) / (7 * (n + 2)!)), with offset 2. [_ Gary Detlefs _ , Nov 07 2010] ●

► [A153296] 1,1,5,29,180,1162,7698,51950,355531,2460224,17178755,120861710,855828960,6094211829,43610311298,313449094851,2261820356684,16379528485200,119003715014955,867198605427231,6336861345197670 ⋆ G.f.: A(x) = F(x * G(x) ^ 3) = F(G(x) - 1) where F(x) = G(x / F(x)) = 1 + x * F(x) ^ 2 is the g.f. of A000108 (Catalan) and G(x) = F(x * G(x)) = 1 + x * G(x) ^ 3 is the g.f. of A001764. ● a(n) = Sum _{ k=0..n } C(2k + 1,k) / (2k + 1) * C(3n,n - k) * k / n for n>0 with a(0)=1. ●

► [A194723] 1,1,5,29,181,1181,7941,54573,381333,2699837,19319845,139480397,1014536117,7426790749,54669443141,404388938349,3004139083221,22402851226749,167640057210981,1258340276153229,9471952718661621,71481616200910749,540715584181142661 ⋆ Number of ternary words either empty or beginning with the first character of the alphabet, that can be built by inserting n doublets into the initially empty word. ● a(0) = 1, a(n) = 1 / n * Sum _{ j=0..n - 1 } C(2 * n,j) * (n - j) * 2 ^ j for n>0. ● a(n + 1) = (16 / 9) * 8 ^ n * GAMMA(n + 3 / 2) * hypergeom([1, n + 3 / 2], [n + 3],8 / 9) / (sqrt(Pi) * (n + 2)!), n=0,1,... . ● a(n) = 2 ^ (n + 1) * binomial(2 * n,n) * hypergeom([2,1 - n],[n + 2], - 2) / (n + 1) - 3 ^ (2 * n - 1) for n>=1. - _ Peter Luschny _ , Apr 07 2018 ●

► [A153391] 1,1,5,29,183,1223,8525,61366,453003,3412077,26124599,202748728,1591450129,12612760009,100790253764,811227147197,6570431009209,53512143110041,437976298197769,3600504527707557,29716593448484673 ⋆ G.f.: A(x) = F(x * G(x) ^ 2) where F(x) = G(x * F(x)) = 1 + x * F(x) ^ 3 is the g.f. of A001764 and G(x) = F(x / G(x)) = 1 + x * G(x) ^ 2 is the g.f. of A000108 (Catalan). ● a(n) = Sum _{ k=0..n } C(3k + 1,k) / (3k + 1) * C(2n,n - k) * k / n for n>0 with a(0)=1. ●

► [A081336] 1,5,29,185,1241,8525,59189,412865,2885681,20186645,141267149,988751945,6920909321,48445302365,339113927909,2373787929425,16616486808161,116315321563685,814206992665469,5699448173817305,39896134892198201 ⋆ a(n) = (7 ^ n + 3 ^ n) / 2. ● a(n) = 10 * a(n - 1) - 21 * a(n - 2), a(0)=1, a(1)=5. ●

► [A127846] 0,1,5,29,185,1257,8925,65445,491825,3768209,29324405,231153133,1841801065,14810069497,120029657805,979470140661,8040831465825,66361595715105,550284185213925,4582462506008253,38306388126997785 ⋆ Series reversion of x / (1 + 5x + 4x ^ 2). ● a(n) = hypergeom([1 - n, - n], [2], 4) for n>0. - _ Peter Luschny _ , Sep 23 2014 ●

► [A059231] 1,1,5,29,185,1257,8925,65445,491825,3768209,29324405,231153133,1841801065,14810069497,120029657805,979470140661,8040831465825,66361595715105,550284185213925,4582462506008253,38306388126997785,321327658068506121,2703925940081270205 ⋆ Number of different lattice paths running from (0,0) to (n,0) using steps from S = { (k,k) or (k, - k): k positive integer } that never go below the x - axis. ● a(n) = Sum _{ k=0..n } 4 ^ k * N(n, k) where N(n, k) = (1 / n) * binomial(n, k) * binomial(n, k + 1) are the Narayana numbers (A001263). - _ Benoit Cloitre _ , May 10 2003 ● a(n) = 3 ^ n / 2 * LegendreP(n, - 1, 5 / 3). - _ Vladeta Jovovic _ , Sep 17 2003 ● a(n) = upper left term in M ^ n, M = the production matrix: ● a(n) is the sum of top row terms of Q ^ (n - 1), where Q = the following infinite square production matrix: ●

► [A078945] 1,5,29,189,1357,10589,88909,797085,7583373,76179037,804638925,8904557341,102929260813,1239432543709,15511264432973,201330839371421,2705249923950477,37567754666530141,538369104335121869 ⋆ Row sums of A078939. ● a(n) = exp(- 4) * Sum _{ k>=0 } (k + 1) ^ n * 4 ^ k / k!. - _ Ilya Gutkovskiy _ , Apr 20 2020 ●

► [A188143] 1,5,29,193,1453,12209,113237,1149241,12675661,151095569,1937411429,26614052617,390244490749,6087782363009,100728768290645,1762767028074937,32542231109506285,632202858036492593,12895661952702667205 ⋆ Binomial transform of A187848. ● a(n) = Integral _{ x=2..oo } x ^ n * exp(x - 2) / ((Ei(x - 2)) ^ 2 + Pi ^ 2) dx. ●

► [A199419] 5,29,197,1373,9605,67229,470597,3294173,23059205,161414429,1129900997,7909306973,55365148805,387556041629,2712892291397,18990246039773,132931722278405,930522055948829,6513654391641797,45595580741492573 ⋆ 4 * 7 ^ n + 1. ● a(n) = 7 * a(n - 1) - 6. ● a(n) = 8 * a(n - 1) - 7 * a(n - 2). ●

► [A367050] 1,1,5,29,198,1469,11518,93875,787392,6752175,58929541,521718814,4674070602,42296077935,386027716280,3549332631052,32845586854208,305685481682970,2859315003009776,26866125820982711,253457922829307765,2399910588283502630 ⋆ G.f. satisfies A(x) = 1 + x * A(x) ^ 4 + x ^ 2 * A(x) ^ 3. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(3 * n - 3 * k + 1,k) * binomial(4 * n - 5 * k,n - 2 * k) / (3 * n - 3 * k + 1). ●

► [A134752] 5,29,245,2189,19685,177149,1594325,14348909,129140165,1162261469,10460353205,94143178829,847288609445,7625597484989,68630377364885,617673396283949,5559060566555525,50031545098999709,450283905890997365,4052555153018976269 ⋆ a(n) = 3 ^ (2 * n - 1) + 2. ● a(1)=5, a(2)=29, a(n)=10 * a(n - 1) - 9 * a(n - 2). - _ Harvey P. Dale _ , Dec 08 2015 ●

► [A097252] 0,5,30,35,180,185,210,215,1080,1085,1110,1115,1260,1265,1290,1295,6480,6485,6510,6515,6660,6665,6690,6695,7560 ⋆ Numbers whose set of base 6 digits is { 0,5 } . ● a(2n) = 6 * a(n), a(2n + 1) = a(2n) + 5. ●

► [A169610] 5,30,42,67,79,104,116,141,153,178,190,215,227,252,264,289,301,326,338,363,375,400,412,437,449 ⋆ Numbers that are congruent to { 5, 30 } mod 37. ● a(n) = (74 * n + 13 * (- 1) ^ n - 41) / 4 . - _ Bruno Berselli _ , Jan 05 2013 ●

► [A152745] 0,5,30,75,140,225,330,455,600,765,950,1155,1380,1625,1890,2175,2480,2805,3150,3515,3900,4305,4730,5175,5640 ⋆ 5 times hexagonal numbers: 5 * n * (2 * n - 1). ● a(n) = a(n - 1) + 20 * n - 15 (with a(0)=0). - _ Vincenzo Librandi _ , Nov 26 2010 ●

► [A187275] 0,5,30,75,300,625,2250,4375,15000,28125,93750,171875,562500,1015625,3281250,5859375,18750000,33203125,105468750,185546875,585937500,102539

0625,3222656250,5615234375,17578125000 ⋆ a(n) = (n / 4) * 5 ^ (n / 2) * ((1 + sqrt(5)) ^ 2 + (- 1) ^ n * (1 - sqrt(5)) ^ 2). ● a(n) = 10 * a(n - 2) - 25 * a(n - 4). - _ Colin Barker _ , Jul 25 2013 ● a(2 * n) = 6 * n * 5 ^ n, a(2 * n + 1) = (2 * n + 1) * 5 ^ (n + 1). - _ Andrew Howroyd _ , Mar 28 2016 ●

▶ [A273480] 1,5,30,79,160,281,450,675,964,1325,1766,2295,2920,3649,4490,5451,6540,7765,9134,10655,12336,14185,16210,18419,20820 ⋆ Partial sums of the number of active (ON,black) cells in n - th stage of growth of two - dimensional cellular automaton defined by "Rule 737", based on the 5 - celled von Neumann neighborhood. ● a(n) = (4 * n ^ 3 + 12 * n ^ 2 + 11 * n - 12) / 3 for n>0. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>4. ●

▶ [A164015] 5,30,80,155,255,380,530,705,905,1130,1380,1655,1955,2280,2630,3005,3405,3830,4280,4755,5255,5780,6330,6905,7505 ⋆ 5 times centered pentagonal numbers: 5 * (5 * n ^ 2 + 5 * n + 2) / 2. ● a(n) = a(n - 1) + 25 * n (with a(0)=5). - _ Vincenzo Librandi _ , Nov 30 2010 ● a(0)=5, a(1)=30, a(2)=80, a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Oct 08 2011 ●

▶ [A258582] 0,5,30,91,204,385,650,1015,1496,2109,2870,3795,4900,6201,7714,9455,11440,13685,16206,19019,22140,25585,29370,33511,38024 ⋆ a(n) = n * (2 * n + 1) * (4 * n + 1) / 3. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>3. - _ Vincenzo Librandi _ , Nov 18 2015 ● a(n) = Sum _{ k=1..2 * n } k ^ 2 (see the first comment). E.g.f. exp(x) * (5 * x + 20 * x ^ 2 / 2 + 16 * x ^ 3 / 3!). - _ Wolfdieter Lang _ , Mar 13 2017 ●

▶ [A071252] 0,0,5,30,102,260,555,1050,1820,2952,4545,6710,9570,13260,17927,23730,30840,39440,49725,61902,76190,92820,112035,134090,159252 ⋆ a(n) = n * (n - 1) * (n ^ 2 + 1) / 2. ● a(n) = floor(n ^ 5 / (n + 1)) / 2. - _ Gary Detlefs _ , Mar 31 2011 ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) n>4, a(0)=0, a(1)=0, a(2)=5, a(3)=30, a(4)=102. - _ Yosu Yurramendi _ , Sep 03 2013 ●

▶ [A174002] 0,5,30,105,280,630,1260,2310,3960,6435,10010,15015,21840,30940,42840,58140,77520,101745,131670,168245,212520,265650,328900,403650,491400 ⋆ a(n) = n * binomial(n + 4, 4). ● a(n) = (n ^ 5 + 10 * n ^ 4 + 35 * n ^ 3 + 50 * n ^ 2 + 24 * n) / 24. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6), with a(0)=0, a(1)=5, a(2)=30, a(3)=105, a(4)=280, a(5)=630. - _ Harvey P. Dale _ , Dec 03 2011 ●

▶ [A030506] 5,30,106,283,640,1286,2366,4068,6628,10333,15531,22631,32111,44525,60504,80766,106117,137460,175799,222244,278014,344448,423007,515276,622978 ⋆ Graham - Sloane - type lower bound on the size of a ternary (n,3,6) constant - weight code. ● a(n) = ceiling(binomial(n, w) * 2 ^ w / (2 * n + 1)) with w=6. ●

▶ [A062990] 5,30,110,315,771,1688,3396,6390,11385,19382,31746,50297,77415,116160,170408,245004,345933,480510,657590,887799,1183787,1560504,2035500,2629250,3365505 ⋆ Eighth column (r=7) of FS(5) staircase array A062985. ● a(n) = binomial(n + 7,n) - binomial(n + 2,n)). - _ Zerinvary Lajos _ , Jun 23 2006 ●

▶ [A018213] 1,5,30,110,365,1001,2520,5720,12190,24310,46252,83980,147070,248710,408760,653752,1021735,1562275,2343770,3453450,5008003,7153575,10080720,14024400,19284460 ⋆ Alkane (or paraffin) numbers l(12,n). ● a(n) = (1 / (2 * 9!)) * (n + 1) * (n + 2) * (n + 3) * (n + 4) * (n + 5) * (n + 6) * (n + 7) * (n + 8) * (n + 9) + (1 / 6) * (1 / 2 ^ 7) * (n + 2) * (n + 4) * (n + 6) * (n + 8) * (1 / 2) * (1 + (- 1) ^ n). [_ Yosu Yurramendi _ , Jun 23 2013] ●

▶ [A047661] 5,30,115,340,841,1826,3591,6536,11181,18182,28347,42652,62257,88522,123023,167568,224213,295278,383363,491364,622489,780274,968599,1191704,1454205 ⋆ Row 5 of square array defined in A047662. ● a(n) = (n / 15) * (2 * n ^ 4 + 5 * n ^ 3 + 20 * n ^ 2 + 25 * n + 23) [Corrected by _ Sean A. Irvine _ , May 13 2021]. ●

▶ [A054612] 0,5,30,135,660,3145,15810,78155,391320,1953405,9768870,48828175,244157820,1220703185,6103593930,30517584915,152588282640,762939453205,3814699250430,19073486328215,95367441415140,476837158360185,2384185839844050 ⋆ a(n) = Sum _{ d|n } phi(d) * 5 ^ (n / d). ● a(n) = Sum _{ k=1..n } 5 ^ gcd(n,k). - _ Ilya Gutkovskiy _ , Apr 16 2021 ●

▶ [A282078] 0,5,30,140,490,1491,3976,9696,21816,46126,92252,176232,323092,571802,980232,1633984,2655224,4217499,6560554,10014004,15021006,22174581,32253936,46278336,65560976 ⋆ Number of 10 - element subsets of [n + 10] having an even sum. ● a(n) = (- 2735775 * (- 1 + (- 1) ^ n) - 45 * (- 344851 + 56595 * (- 1) ^ n) * n + (22908402 - 803250 * (- 1) ^ n) * n ^ 2 - 50 * (- 325607 + 2079 * (- 1) ^ n) * n ^ 3 + (6781885 - 4725 * (- 1) ^ n) * n ^ 4 + 1802220 * n ^ 5 + 315546 * n ^ 6 + 36300 * n ^ 7 + 2640 * n ^ 8 + 110 * n ^ 9 + 2 * n ^ 10) / 14515200. - _ Colin Barker _ , Feb 06 2017 ●

▶ [A080951] 1,5,30,140,560,2016,6720,21120,63360,183040,512512,1397760,3727360,9748480,25067520,63504384,158760960,392232960,958791680,2321285120,5571084288,13264486400,31352422400,73610035200,171756748800 ⋆ Sequence associated with recurrence a(n) = 2 * a(n - 1) + k * (k + 2) * a(n - 2). ● a(n) = ceiling(binomial(n + 4,4) * 2 ^ (n - 1)). - _ Zerinvary Lajos _ , Nov 01 2006 ●

▶ [A104891] 0,5,30,155,780,3905,19530,97655,488280,2441405,12207030,61035155,305175780,1525878905,7629394530,38146972655,190734863280,953674316405,4768371582030,23841857910155,119209289550780,596046447753905,2980232238769530,14901161193847655 ⋆ a(0) = 0; a(n) = 5 * a(n - 1) + 5. ● a(n) = 5 * (5 ^ n - 1) / 4. - _ Max Alekseyev _ , Jan 23 2006 ● a(n) = a(n - 1) + 5 ^ n with a(0)=0. - _ Vincenzo Librandi _ , Nov 13 2010 ● a(n) = 6 * a(n - 1) - 5 * a(n - 2). ●

▶ [A122995] 1,5,30,155,905,4780,27405,146905,832030,4504655,25305405,137921780,770556905,4218601405,23482524030,128947559155,716010659905,3939699638780,21839966136405,120332457105905,666331610516030,3674643038163655,20332933301064405,112199009255155780 ⋆ Expansion of x * (1 + 4 * x) / (1 - x - 25 * x ^ 2). ● a(n) = a(n - 1) + 25 * a(n - 2). [_ Philippe Deléham _ , Mar 26 2009] ● a(n) = (1 / 2 + 9 * sqrt(101) / 202) * (1 / 2 + sqrt(101) / 2) ^ (n - 1) + (1 / 2 - 9 * sqrt(101) / 202) * (1 / 2 - sqrt(101) / 2) ^ (n - 1). [_ Antonio Alberto Olivares _ , Jun 07 2011] ●

▶ [A003731] 1,5,30,160,850,4520,24040,127860,680040,3616880,19236840,102313600,544168000,2894227280,15393318880,81871340160,435443220000,2315960597120,12317733383040,65513444349760,348441653760640,1853231611930880,9856649945242240,52423856531251200 ⋆ Number of Hamiltonian cycles in C _ 5 X P _ n. ● a(n) = 6a(n - 1) - 4a(n - 2) + 2a(n - 3), n>3. ●

▶ [A084158] 0,1,5,30,174,1015,5915,34476,200940,1171165,6826049,39785130,231884730,1351523251,7877254775,45912005400,267594777624,1559656660345,9090345184445,52982414446326,308804141493510,1799842434514735 ⋆ a(n) = A000129(n) * A000129(n + 1) / 2. ● a(n) = ((sqrt(2) + 1) ^ (2 * n + 1) - (sqrt(2) - 1) ^ (2 * n + 1) - 2 * (- 1) ^ n) / 16. ● a(n) = 5 * a(n - 1) + 5 * a(n - 2) - a(n - 3). - _ Mohamed Bouhamida _ , Sep 02 2006; corrected by _ Antonio Alberto Olivares _ , Mar 29 2008 ● a(n) = (- 1 / 8) * (- 1) ^ n + ((sqrt(2) + 1) / 16) * (3 + 2 * sqrt(2)) ^ n + ((- sqrt(2) + 1) / 16) * (3 - 2 * sqrt(2)) ^ n. - _ Antonio Alberto Olivares _ , Mar 30 2008 ● a(n) = 6 * a(n - 1) - a(n - 2) - (- 1) ^ n. ● a(n) = 7 * (a(n - 1) - a(n - 2)) + a(n - 3) - 2 * (- 1) ^ n. (End) ● a(n) = sum of squares of first n Pell numbers A000129 (A079291). - _ N. J. A. Sloane _ , Jun 18 2012 ●

▶ [A276598] 0,5,30,175,1020,5945,34650,201955,1177080,6860525,39986070,233055895,1358349300,7917039905,46143890130,268946300875,1567533915120,9136257189845,53250009223950,310363798153855,1808932779699180,10543232880041225,61450464500548170 ⋆ Values of m such that m ^ 2 + 3 is a triangular number (A000217). ● a(n) = 5 * ((3 - 2 * sqrt(2)) * (3 + 2 * sqrt(2)) ^ n - (3 + 2 * sqrt(2)) * (3 - 2 * sqrt(2)) ^ n) / (4 * sqrt(2)). ● a(n) = 6 * a(n - 1) - a(n - 2) for n>2. ●

▶ [A057088] 1,5,30,175,1025,6000,35125,205625,1203750,7046875,41253125,241500000,1413765625,8276328125,48450468750,283633984375,1660422265625,9720281250000,56903517578125,333118994140625,1950112558593750,11416157763671875,66831351611328125,391237546875000000 ⋆ Scaled Chebyshev U - polynomials evaluated at i * sqrt(5) / 2. Generalized Fibonacci sequence. ● a(n) = 5 * (a(n - 1) + a(n - 2)), a(- 1)=0, a(0)=1. ● a(n) = S(n, i * sqrt(5)) * (- i * sqrt(5)) ^ n with S(n, x) := U(n, x / 2), Chebyshev's polynomials of the 2nd kind, A049310. ● a(n) = (1 / 3) * Sum _{ k=0..n } binomial(n, k) * Fibonacci(k) * 3 ^ k. - _ Benoit Cloitre _ , Oct 25 2003 ● a(n) = ((5 + 3 * sqrt(5)) / 2) ^ n(1 / 2 + sqrt(5) / 6) + (1 / 2 - sqrt(5) / 6)((5 - 3 * sqrt(5)) / 2) ^ n. - _ Paul Barry _ , Sep 22 2004 ● a(2 * n - 1) = 5 ^ n * F(4 * n) / 3 = (5 ^ (n - 1 / 2) * L(4 * n) - 2 * 5 ^ (n - 1 / 2) * beta ^ (4 * n)) / 3. ● a(2 * n) = 5 ^ n * L(4 * n + 2) / 3 = (5 ^ (n + 1 / 2) * F(4 * n + 2) + 2 * 5 ^ n * beta ^ (4 * n + 2)) / 3. ●

▶ [A105481] 1,5,30,175,1050,6552,42630,289410,2049300,15120105,116090975,926248050,7668746540,65793760060,584151925320,5360347320420,50776288702215,495946245776940,4989391837053085,51648932225779735,549620905409062872 ⋆ Number of partitions of { 1...n } containing 4 pairs of consecutive integers, where each pair is counted within a block and a string of more than 2 consecutive integers are counted two at a time. ● a(n) = binomial(n - 1, 4) * Bell(n - 5), the case r = 4 in the general case of r pairs: c(n, r) = binomial(n - 1, r) * B(n - r - 1). ●

▶ [A052934] 1,5,30,180,1080,6480,38880,233280,1399680,8398080,50388480,302330880,1813985280,10883911680,65303470080,391820820480,2350924922880,14105549537280,84633297223680,507799783342080 ⋆ Expansion of (1 - x) / (1 - 6 * x). ● a(n) = 6 * a(n - 1), n>=2. ● a(n) = 5 * 6 ^ (n - 1), n>=1. - _ Vincenzo Librandi _ , Sep 15 2011 ●

▶ [A136785] 1,5,30,182,1110,6786,41530,254278,1557190,9536994,58411370,357758662,2191219510,13420938626,82201632730,503475374598,3083728434790,18887481888354,115683658636170,708549144071942,4339782295309910,26580669235880066,162803553266871930 ⋆ Number of multiplex juggling sequences of length n, base state <2,1> and hand capacity 3. ● a(n) = 10 * a(n - 1) - 27 * a(n - 2) + 20 * a(n - 3) for n>4. - _ Colin Barker _ , Aug 31 2016 ●

▶ [A155195] 1,5,30,185,1140,7025,43290,266765,1643880,10130045,62424150,384674945,2370473820,14607517865,90015581010,554701003925,3418221604560,21064030631285,129802405392270,799878462984905,4929073183301700 ⋆ a(n)=6 * a(n - 1) + a(n - 2), n>2 ; a(0)=1, a(1)=5, a(2)=30 . ● a(n)=(3 / 4) * sqrt(10) *{ [3 + sqrt(10)] ^ (n - 1) - [3 - sqrt(10)] ^ (n - 1) }+ (5 / 2) *{ [3 + sqrt(10)] ^ (n - 1) + [3 - sqrt(10)] ^ (n - 1) }+ [C(2 * n,n) mod 2], with n>=0 [From _ Paolo P. Lava _ , Jan 26 2009] ●

▶ [A147837] 1,5,30,185,1145,7090,43905,271885,1683670,10426265,64565505,399827210,2475962945,15332604565,94948417230,587975897785,3641089198345,22547744899490,139628768304705,864662653635485,5354494733924870 ⋆ a(n)=7 * a(n - 1) - 5 * a(n - 2), a(0)=1, a(1)=5 . ● a(n)=(1 / 2) * [(7 / 2) - (1 / 2) * sqrt(29)] ^ n - (3 / 58) * [(7 / 2) - (1 / 2) * sqrt(29)] ^ n * sqrt(29) + (3 / 58) * sqrt(29) * [(7 / 2) + (1 / 2) * sqrt(29)] ^ n + 1 / 2 * [(7 / 2) + (1 / 2) * sqrt(29)] ^ n, with n>=0 [From _ Paolo P. Lava _ , Nov 18 2008] ● a(n)= ((29 + 7 * sqrt(29)) / 58) * (3.5 + 0.5 * sqrt(29) ^ n + ((29 - 7 * sqrt(29)) / 58) * (3.5 - 0.5 * sqrt(29) ^ n [From _ Richard Choulet _ , Nov 20 2008] ●

▶ [A195257] 1,5,30,185,1180,7845,54850,407225,3241200,27882725,260710150,2655929625,29459366500,354733101125,4617633830250,64677391210625,970313455915000,15525778234093125,263942044676848750,4750975877669605625,90268637043154147500 ⋆ O.g.f.: Sum _{ n>=0 } 5 * (n + 5) ^ (n - 1) * x ^ n / (1 + n * x) ^ n. ● a(n) = (n - 1)! * Sum _{ k=1..n } 5 ^ k / (k - 1)! for n>0, with a(0)=1. ●

▶ [A034164] 1,5,30,198,1386,10098,75735,580635,4528953,35819901,286559208,2314516680,18846778680,154543585176,1274984577702,10574872085646,88123934047050,737458184920050,6194648753328420,52212039492339540,441429061162507020,3742550735942994300 ⋆ Related to triple factorial numbers 2 * A034000(n + 1). ● a(n) = 3 ^ (2 * n + 1) * Gamma(n + 5 / 3) / ((n + 2) * Gamma(2 / 3) * Gamma(n + 2)). - _ Vaclav Kotesovec _ , Feb 09 2014 ●

▶ [A103433] 0,1,5,30,199,1355,9276,63565,435665,2986074,20466835,140281751,961505400,6590256025,45170286749,309601751190,2122041971551,14544692049635,99690802375860,683290924581349,4683345669693545 ⋆ a(n) = Sum _{ i=1..n } Fibonacci(2i - 1) ^ 2. ● a(n) = (1 / 5) * (Fibonacci(4n) + 2n). ● a(n) = (floor(5 * n * phi) + 4 * Fibonacci(4 * n)) / 20, where phi =(1 + sqrt(5)) / 2. - _ Gary Detlefs _ , Mar 10 2011 ● a(n) = (8 * (n + 2) * (Sum _{ k=1..n } 1 / (2 * k ^ 2 + 6 * k + 4)) + Fibonacci(4 * n)) / 5. - _ Gary Detlefs _ , Dec 07 2011 ● a(n) = | Sum _{ i=0..2n - 1 } (- 1) ^ i * F(i) * F(i + 1) |, where F(n) = Fibonacci numbers (A000045). - _ Rigoberto Florez _ , May 04 2019 ●

► [A081015] 5,30,200,1365,9350,64080,439205,3010350,20633240,141422325,969323030,6643838880,45537549125,312119004990,2139295485800,14662949395605,100501350283430,688846502588400,4721424167835365,32361122672259150,221806434537978680,1520283919093591605 ⋆ a(n) = Lucas(4n + 3) + 1, or 5 * Fibonacci(2n + 1) * Fibonacci(2n + 2). ● a(n) = 8 * a(n - 1) - 8 * a(n - 2) + a(n - 3). ● a(n) = 1 + 2 *{ [(7 / 2) - (3 / 2) * sqrt(5)] ^ n + [(7 / 2) + (3 / 2) * sqrt(5)] ^ n }+ sqrt(5) *{ [(7 / 2) + (3 / 2) * sqrt(5)] ^ n - [(7 / 2) - (3 / 2) * sqrt(5)] ^ n } , with n>=0. - _ Paolo P. Lava _ , Dec 01 2008 ●

► [A090139] 1,5,30,200,1400,10000,72000,520000,3760000,27200000,196800000,1424000000,10304000000,74560000000,539520000000,3904000000000,28249600000000,204416000000000,1479168000000000,10703360000000000 ⋆ a(n) = 10 * a(n - 1) - 20 * a(n - 2), a(0)=1,a(1)=5. ● a(n) = ((5 - sqrt(5)) ^ n + (5 + sqrt(5)) ^ n) / 2. ● a(n) = Sum _{ k=0..floor(n / 2) } C(n, 2k) * 5 ^ (n - k). ● a(n) = Sum _{ k=0..n } C(n, k) * 5 ^ (n - k / 2) * (1 + (- 1) ^ k) / 2. ●

► [A107265] 1,5,30,200,1425,10625,81875,646875,5211875,42659375,353725000,2965031250,25083859375,213894609375,1836516718750,15863968750000,137767560546875,1202116083984375,10534061644531250,92664360625000000,817975366904296875,7243402948779296875 ⋆ Expansion of (1 - 5 * x - sqrt((1 - 5 * x) ^ 2 - 4 * 5 * x ^ 2)) / (2 * 5 * x ^ 2). ● a(n) = sum { k=0..n, (1 / (k + 1)) * C(k + 1, n - k + 1) * C(n, k) * 5 ^ k } . ●

► [A253076] 1,5,30,205,1476,11070,85410,672605,5380830,43584804,356602950,2941974270,24441017580,204257075490,1715759433624,14476720225405,122626336026960,1042323856225470,8887182353111790,75985409119105764,651303506735164140,5595289216952336550 ⋆ Bisection of A136704. ● a(n) = (1 / 8 * n) * Sum _{ d|n, d odd } mu(d) * (3 ^ (2 * n / d) - 1). - _ Andrew Howroyd _ , Nov 11 2018 ●

► [A165312] 1,5,30,205,1505,11430,88105,683405,5314830,41378005,322287305,2510710230,19560629905,152399173205,1187375157630,9251147403805,72078242501105,561581982417030,4375445744059705,34090353624231005 ⋆ a(0)=1, a(1)=5, a(n)=11 * a(n - 1) - 25 * a(n - 2) for n>1. ● a(n) = ((21 - sqrt(21)) * (11 + sqrt(21)) ^ n + (21 + sqrt(21)) * (11 - sqrt(21)) ^ n) / (42 * 2 ^ n). [_ Klaus Brockhaus _ , Sep 26 2009] ●

► [A082301] 1,5,30,205,1530,12130,100380,857405,7503330,66931030,606337380,5563370130,51594699780,482860844580,4554484964280,43252833007005,413224841606130,3968768817574030,38297678538914580,371128975862945030 ⋆ G.f.: (1 - 4 * x - sqrt(16 * x ^ 2 - 12 * x + 1)) / (2 * x). ● a(0)=1; for n > 0, a(n) = (1 / n) * Sum _{ k=0..n } 5 ^ k * C(n, k) * C(n, k - 1). ● a(n) = 5 * hypergeom([1 - n, - n], [2], 5) for n > 0. - _ Peter Luschny _ , May 22 2017 ●

► [A222050] 1,1,5,30,209,1573,12478,102714,869193,7514445,66083025,589294500,5316256278,48431659786,444928748618,4117185679310,38340948482745,359047299072777,3379057486089649,31942315551724102,303158909307122141,2887629443604011421,27595392738011189028 ⋆ G.f. satisfies: A(x) = sqrt(1 + 2 * x * A(x) ^ 4 + 3 * x ^ 2 * A(x) ^ 6). ● a(n) = [x ^ n] sqrt(1 / (1 - 2 * x - 3 * x ^ 2) ^ (2 * n + 1)) / (2 * n + 1). ●

► [A137965] 1,1,5,30,220,1725,14356,124020,1102770,10023680,92722620,870039474,8261024380,79225392830,766302511445,7466883915800,73227699088806,722228333119200,7159117292177840,71284856957207030,712673042497177450 ⋆ G.f. satisfies A(x) = 1 + x * (1 + x * A(x) ^ 4) ^ 5. ● a(n) = Sum _{ k=0..n - 1 } C(5 * (n - k),k) / (n - k) * C(4 * k,n - k - 1) for n>0 with a(0)=1. - _ Paul D. Hanna _ , Jun 16 2009 ●

► [A371544] 1,5,30,220,1775,15206,135745,1248900,11758240,112736305,1096960024,10804727805,107520029780,1079346767060,10917110317185,111149886462926,1138205538056395,11715403351807780,121137702435412040,1257720947476195045,13106870738511517659 ⋆ G.f. A(x) satisfies A(x) = (1 + x * A(x) / (1 + x)) ^ 5. ● a(n) = Sum _{ k=0..n } (- 1) ^ (n - k) * binomial(n - 1,n - k) * binomial(5 * k + 5,k) / (k + 1). ●

► [A110521] 1,1,5,30,224,1871,16771,157668,1533970,15314626,156008660,1615147014,16944659846,179746651907,1924700759635,20776060271760,225838715259574,2469974866825150,27160344857205806,300101157823582668 ⋆ Expansion of 1 / (1 - (x + x ^ 2)c(3x)), c(x) the g.f. of A000108. ● a(0) = 1, a(n) = Sum _{ k=0..floor(n / 2) } Sum _{ j=0..(n - k) } j * C(2 * n - 2 * k - j - 1, n - k - j) * C(j, k) * 3 ^ (n - k - j) / (n - k), n > 0. ●

► [A167892] 1,5,30,226,1990,19414,203455,2248355,25887399,307993015,3763786811,47032778955,598933188955,7751562502555,101741582076580,1351906409905480,18159677984049580,246298405721739580,3369517588450715680,46457194476711692080 ⋆ a(n) = Sum _{ k=1..n } Catalan(k) ^ 2. ● a(n) = Sum _{ k=1..n } Catalan(k) ^ 2. ● a(n) = Sum _{ k=1..n } ((2k)! / (k! * (k + 1)!)) ^ 2. ●

► [A304659] 0,5,31,94,210,395,665,1036,1524,2145,2915,3850,4966,6279,7805,9560,11560,13821,16359,19190,22330,25795,29601,33764,38300 ⋆ a(n) = n * (n + 1) * (16 * n - 1) / 6. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ●

► [A115519] 0,5,31,96,218,415,705,1106,1636,2313,3155,4180,5406,6851,8533,10470,12680,15181,17991,21128,24610,28455,32681,37306,42348 ⋆ n * (1 + 3 * n + 6 * n ^ 2) / 2. ● a(0) = 0, a(1) = 5, a(2) = 31, a>2: a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + 18; G.f. = (5 * x + 11 * x ^ 2 + 2 * x ^ 3) / (1 - x) ^ 4 - _ Zak Seidov _ , Mar 10 2006 ●

► [A212523] 0,0,5,31,106,270,575,1085,1876,3036,4665,6875,9790,13546,18291,24185,31400,40120,50541,62871,77330,94150,113575,135861,161276 ⋆ Number of (w,x,y,z) with all terms in { 1,...,n } and w + x<y + z. ● a(n) = 5a(n - 1) - 10a(n - 2) + 10a(n - 3) - 5a(n - 4) + a(n - 5). ●

► [A053699] 1,5,31,121,341,781,1555,2801,4681,7381,11111,16105,22621,30941,41371,54241,69905,88741,111151,137561,168421,204205,245411,292561,346201 ⋆ a(n) = n ^ 4 + n ^ 3 + n ^ 2 + n + 1. ● a(n) = n ^ 4 + n ^ 3 + n ^ 2 + n + 1 = (n ^ 5 - 1) / (n - 1). ●

► [A152122] 1,1,1,5,31,121,605,2911,13361,64255,302621,1428031,6770555,31965701,151200251,715034375,3380212751,15984722176,75579365455,357361263031,1689760311371,7989708622205,37778247366211,178629122366311,844620446404405 ⋆ a(n) = Product _{ k=1..(n - 1) / 2 } 1 + 4 * cos(k * Pi / n) ^ 2 + 16 * cos(k * Pi / n) ^ 4 + 64 * cos(k * Pi / n) ^ 6 + 256 * cos(k * Pi / n) ^ 8. ● a(n) = Product _{ k=1..(n - 1) / 2 } Sum _{ j=0..4 } (2 * cos(k * Pi / n)) ^ (2 * j). ●

► [A267938] 1,5,31,127,511,2047,8191,32767,131071,524287,2097151,8388607,33554431,134217727,536870911,2147483647,8589934591,34359738367,137438953471,549755813887,2199023255551,8796093022207,35184372088831,140737488355327,562949953421311 ⋆ Decimal representation of the n - th iteration of the "Rule 251" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = 5 * a(n - 1) - 4 * a(n - 2) for n>3. ●

► [A041303] 1,1,5,31,129,160,3969,4129,20485,127039,528641,655680,16264961,16920641,83947525,520605791,2166370689,2686976480,66653806209,69340782689,344016936965,2133442404479,8877786554881,11011228959360,273147281579521 ⋆ Denominators of continued fraction convergents to sqrt(164). ● a(n) = 4098 * a(n - 6) - a(n - 12). - _ Vincenzo Librandi _ , Dec 15 2013 ●

► [A005826] 1,5,31,141,659,3005,13739,62669,285931,1304285,5949691,27139821,123799979,564720125,2576001179,11750565389,53600825611,244502996765,1115313346651,5087560678701,23207176728299,105860762282045,482889457961819,2202725765240909 ⋆ Worst case of a Jacobi symbol algorithm. ● a(n) = 5 * a(n - 1) - 10a(n - 3) + 4a(n - 4) by definition [_ R. J. Mathar _ , Mar 11 2009] ●

► [A255236] 5,31,181,1055,6149,35839,208885,1217471,7095941,41358175,241053109,1404960479,8188709765,47727298111,278175078901,1621323175295,9449763972869,55077260661919,321013799998645,1871005539329951,10905019435981061,63559111076556415 ⋆ All positive solutions x of the second class of the Pell equation x ^ 2 - 2 * y ^ 2 = - 7. ● a(n) = 6 * a(n - 1) - a(n - 2), n >= 2, with a(- 1) = - 1 and a(0) = 5. ● a(n) = ((3 - 2 * sqrt(2)) ^ n * (- 8 + 5 * sqrt(2)) + (3 + 2 * sqrt(2)) ^ n * (8 + 5 * sqrt(2))) / (2 * sqrt(2)). - _ Colin Barker _ , Oct 13 2015 ●

► [A202753] 1,5,31,184,924,3809,13197,39675,106357,259669,586829,1242946,2491516,4763097,8738111,15461061,26494977,44126629,71634979,113637500,176531380,269049265,402952089,593884703,862423461 ⋆ Number of n X 5 nonnegative integer arrays with each row and column increasing from zero by 0 or 1. ● a(n) = 11 * a(n - 1) - 55 * a(n - 2) + 165 * a(n - 3) - 330 * a(n - 4) + 462 * a(n - 5) - 462 * a(n - 6) + 330 * a(n - 7) - 165 * a(n - 8) + 55 * a(n - 9) - 11 * a(n - 10) + a(n - 11) for n>11. ●

► [A015540] 0,1,5,31,185,1111,6665,39991,239945,1439671,8638025,51828151,310968905,1865813431,11194880585,67169283511,403015701065,2418094206391,14508565238345,87051391430071,522308348580425 ⋆ a(n) = 5 * a(n - 1) + 6 * a(n - 2), a(0) = 0, a(1) = 1. ● a(n) = 5 * a(n - 1) + 6 * a(n - 2). ● a(n) = (6 ^ n - (- 1) ^ n) / 7. ● a(n) = 6 ^ (n - 1) - a(n - 1). - _ Emeric Deutsch _ , Apr 01 2004 ● a(n + 1) = Sum _{ k=0..n } binomial(n - k, k) * 5 ^ (n - 2 * k) * 6 ^ k. - _ Paul Barry _ , Jul 29 2004 ● a(n) = round(6 ^ n / 7). - _ Mircea Merca _ , Dec 28 2010 ●

► [A108079] 1,5,31,195,1231,7798,49596,316767,2031535,13079352,84504355,547707394,3559971156,23197272140,151495214536,991348425879,6498704675439,42669773400220,280567674704625,1847219933032320,12176178948740895,80346934651630500 ⋆ a(n) = Sum _{ i=0..n } C(2n + i,n + i). ● a(n) = binomial(3 * n + 1,n + 1) - binomial(2 * n,n - 1). - _ Zerinvary Lajos _ , May 11 2006, corrected by _ Robert Israel _ , Oct 01 2015 ●

► [A164038] 5,31,195,1237,7885,50399,322635,2067173,13251125,84966271,544886835,3494644117,22414043965,143763624959,922113238395,5914569009893,37937085615845,243335768930911,1560804720144675,10011324516035797 ⋆ Expansion of (5 - 19 * x) / (1 - 10 * x + 23 * x ^ 2). ● a(n) = 10 * a(n - 1) - 23 * a(n - 2) for n > 1; a(0) = 5, a(1) = 31. ● a(n) = ((5 + 3 * sqrt(2)) * (5 + sqrt(2)) ^ n + (5 - 3 * sqrt(2)) * (5 - sqrt(2)) ^ n) / 2. ●

► [A002469] 0,0,1,5,31,203,1501,12449,114955,1171799,13082617,158860349,2085208951,29427878435,444413828821,7151855533913,122190894996451,2209057440250799,42133729714051825,845553296311189109,17810791160738752207,392911423093684031099 ⋆ The game of Mousetrap with n cards: the number of permutations of n cards in which 2 is the only hit. ● a(n) = (n - 3) * floor(((n - 2)! + 1) / e) + (n - 4) * floor(((n - 3)! + 1) / e), for n>2. - _ Gary Detlefs _ , Apr 10 2010 ●

► [A301420] 1,5,31,205,1376,9251,62210,418361,2813485,18920751,127242501,855708865,5754662616,38700243965,260260067876,1750255192001,11770508100345,79156948982921,532332378421395,3579947998967501,24075236064574376 ⋆ Sums of positive coefficients in generalized Chebyshev polynomials of the first kind, for a family of 5 data. ● a(n + 14) = 7 * a(n + 13) - a(n + 12) - 6 * a(n + 11) + 2 * a(n + 10) - a(n + 9) + 4 * a(n + 8) + a(n + 7) + 4 * a(n + 5) + 2 * a(n + 4) - a(n + 3) - 5 * a(n + 2) - 4 * a(n + 1) - a(n) (conjectured). ●

► [A337928] 1,5,31,209,1429,9791,67105,459941,3152479,21607409,148099381,1015088255,6957518401,47687540549,326855265439,2240299317521,15355239957205,105246380382911,721369422723169,4944339578679269,33889007628031711,232278713817542705 ⋆ Numbers w such that (F(2n + 1) ^ 2, - F(2n) ^ 2, - w) are primitive solutions of the Diophantine equation 2 * x ^ 3 + 2 * y ^ 3 + z ^ 3 = 1, where F(n) is the n - th Fibonacci number (A000045). ● a(n) = (2 * F(2 * n + 1) ^ 6 - 2 * F(2 * n) ^ 6 - 1) ^ (1 / 3). ● a(n) = 8 * a(n - 1) - 8 * a(n - 2) + a(n - 3) for n>2. ● a(n) = F(2 * n + 1) * F(2 * n + 2) - F(2 * n) ^ 2. - _ Wolfgang Berndt _ , May 26 2023 ●

► [A178792] 1,5,31,209,1471,10625,78079,580865,4361215,32978945,250806271,1916280833,14698053631,113104519169,872801042431,6751535300609,52337071357951,406468580343809,3162019821780991,24634626678980609,192179216026959871 ⋆ Dot product of the rows of triangle A046899 with vector (1,2,4,8,...) (= A000079). ● a(n) = 2 ^ n * binomial(2 + 2 * n,1 + n) * 2F1(1, 2 + 2 * n; 2 + n; - 1). - _ Olivier Gérard _ , Aug 19 2012 ● a(n) = Sum _{ k = 0..n } binomial(k + n,n) * binomial(2 * n + 1,n - k). - _ Vladimir Kruchinin _ , Oct 28 2016 ● a(n) = 1 / 2 * (n + 1) * binomial(2 * n + 2,n + 1) * Sum _{ k = 0..n } binomial(n,k) / (n + k + 1). - _ Peter Bala _ , Feb 21 2017 ● a(n) = binomial(2 * n + 2,n + 1) * hypergeom([- n, n + 1], [n + 2], - 1) / 2. - _ Peter Luschny _ , Feb 21 2017 ● a(n) = (- 1) ^ (n + 1) - 2 ^ (n + 1) * (2 * n + 1) * binomial(2 * n,n) * hypergeom([1, 2 * n + 2], [n + 2], 2) / (n + 1). - _ John M. Campbell _ , Jul 14 2018 ●

► [A153292] 1,1,5,31,211,1516,11295,86423,675051,5361323,43171480,351709926,2894115003,24022408477,200918146461,1691749323232,14329850844625,122028162988698,1044131083377287,8972696721635997,77408293908402336 ⋆ G.f.: A(x

) = F(x * F(x) ^ 2) where F(x) = 1 + x * F(x) ^ 3 is the g.f. of A001764. ● a(n) = Sum _{ k=0..n } C(3k + 1,k) / (3k + 1) * C(3n - k,n - k) * 2k / (3n - k) for n>0 with a(0)=1. ●

▶ [A146962] 1,5,31,215,1561,11525,85591,636935,4743121,35329445,263175151,1960492055,14604592681,108796577765,810478516711,6037650189575,44977410078241,335058747180485,2496016680318271,18594050606753495 ⋆ a(n) = 10 * a(n - 1) - 19 * a(n - 2) with a(0)=1, a(1)=5. ● a(n) = ((5 + sqrt(6)) ^ n + (5 - sqrt(6)) ^ n) / 2. ●

▶ [A269730] 1,5,31,215,1597,12425,99955,824675,6939769,59334605,513972967,4501041935,39784038517,354455513105,3179928556219,28701561707675,260447708523505,2374690737067925,21744508765633327,199877846477679815,1843718766426242221,17060955558786455705,158333204443000060291 ⋆ Dimensions of the 2 - polytridendriform operad TDendr _ 2. ● a(n) = P _ n(2), where P _ n(x) is the polynomial associated with row n of triangle A126216 in order of decreasing powers of x. ● a(n) = (1 / (2 * m * (m + 1))) * Integral _{ x = 1..2 * m + 1 } Legendre _ P(n,x) dx at m = 2. ● a(n) = (1 / (2 * n + 1)) * (1 / (2 * m * (m + 1))) * (Legendre _ P(n + 1,2 * m + 1) - Legendre _ P(n - 1,2 * m + 1)) at m = 2. (End) ●

▶ [A153232] 1,1,5,31,217,1637,12985,106767,901857,7779321,68238029,606829087,5458425065,49575244557,454002681969,4187624605215,38868943003201,362779053190001,3402660186792277,32055797319184735,303189929508106169,2877922441328068981,27406770566397160361 ⋆ a(n) = Sum((- 1) ^ (n - i) * binomial(3i,i) * binomial(n + 2i,3i) * 2 ^ i / (2i + 1),i=0..n). ● a(n) = (- 1) ^ n * 3F2(- n, 1 + n / 2, (n + 1) / 2; 1, 3 / 2; 2). - _ Vaclav Kotesovec _ , Oct 27 2012 ●

▶ [A287899] 1,1,5,31,217,1661,13721,121703,1157857,11826121,129877645,1535504015,19546846441,267633414517,3932330905361,61806788736551,1035452546213441,18421374554192017,346790652640704725,6885640002624595007,143771244649798115257 ⋆ Number of permutations of [2n] with exactly n cycles such that the elements of each cycle form an integer interval. ● a(n) = [x ^ n] (1 / (1 - x / (1 - x / (1 - 2 * x / (1 - 2 * x / (1 - 3 * x / (1 - 3 * x / (1 - ...))))))))) ^ n, a continued fraction. - _ Ilya Gutkovskiy _ , Sep 29 2017 ●

▶ [A143020] 1,5,31,218,1658,13293,110675,947870,8297926,73924162,668038006,6108962580,56426393268,525673683069,4933634156571,46604425575734,442753710351950,4227598589181750,40549714320544770,390522305786747820 ⋆ Sum of the distances from a fixed node (root) to the next node in all non - crossing graphs on n nodes on a circle. ● a(n) = Sum _{ k=1..n - 1 } k * T(n,k), where T(n,k) = k * L(n - k - 1,3n - k - 4,n - 1) / (n - 1) (n >= 2, 1 <= k <= n - 1), with L(p,q,r)=[u ^ p](1 + u) ^ q / (1 - u) ^ r = Sum[binomial(q,i)binomial(r + p - 1 - i,r - 1), i=0..min(p,q)] (T(n,k) is A143018). ●

▶ [A349331] 1,1,5,31,219,1678,13570,114014,985542,8708099,78298727,714105907,6590200215,61427125994,577456943614,5468604044500,52122539760992,499613409224137,4813105582181533,46576519080852235,452545041339982871,4413071971740021275,43177663974461532959 ⋆ G.f. A(x) satisfies A(x) = 1 + x * A(x) ^ 4 / (1 - x). ● a(n) = Sum _{ k=0..n } binomial(n - 1,k - 1) * binomial(4 * k,k) / (3 * k + 1). ●

▶ [A058309] 0,1,5,31,222,1807,16485,166657,1849712,22363201,292571325,4118361751,62067997590,997206323191,17014575491837,307259565176257,5854946313840720,117406185841990657,2471384848995644517,54487872863746170031,1255692460715157555230 ⋆ a(n) = (n + 3) * a(n - 1) + a(n - 2), with a(0)=0, a(1)=1. ● a(n) = Sum _{ k = 0..floor((n - 1) / 2) } (n - 2 * k - 1)! * binomial(n - k - 1,k) * binomial(n - k + 3,k + 4). Cf. A058798. - _ Peter Bala _ , Aug 01 2013 ● a(n) = (I(n + 4, - 2) * (5 * K _ 5 - K _ 6) + K(n + 4,2) * (5 * I _ 5 + I _ 6)) / (I _ 6 * K _ 5 + I _ 5 * K _ 6), where I _ n and K _ n are the Bessel functions of the first respectively the second kind, all evaluated at x=2. - _ Peter Luschny _ , Sep 11 2014 ● a(n) = (n + 3)! * hypergeometric([1 / 2 - n / 2, 1 - n / 2], [5, - n - 3, 1 - n], 4) / 24 for n >= 2. - _ Peter Luschny _ , Sep 12 2014 ● a(- 8 - n) = a(n) for all n in Z. - _ Michael Somos _ , Sep 13 2014 ●

▶ [A365180] 1,1,5,31,223,1740,14328,122549,1078197,9695359,88710199,823247686,7730244098,73310150097,701163085849,6755544043969,65506554804129,638794412442172,6260571309256152,61632794482411367,609197871548209907,6043456939539775056 ⋆ G.f. satisfies A(x) = 1 + x * A(x) ^ 4 * (1 + x * A(x)). ● a(n) = Sum _{ k=0..n } binomial(n + 3 * k + 1,k) * binomial(k,n - k) / (n + 3 * k + 1). ●

▶ [A192950] 0,1,5,31,224,1844,17028,174284,1958176,23959760,317128240,4514617360,68784608640,1116787186240,19248968150720,351024831699520,6752328440253440,136640443206206720,2901703626188801280,64522443639953657600 ⋆ a(n) = A192942(n) / 2. ● a(n) = 1 / 10 * sqrt(5) * Gamma(n + 2 + sqrt(5)) / Gamma(sqrt(5) + 2) - 1 / 10 * sin(Pi * (sqrt(5) + 3)) * Gamma(sqrt(5) + 1) * Gamma(n + 2 - sqrt(5)) / (Pi * (sqrt(5) - 1)). - _ Vaclav Kotesovec _ , Oct 26 2012 ●

▶ [A001910] 0,1,5,31,227,1909,18089,190435,2203319,27772873,378673901,5551390471,87057596075,1453986832381,25762467303377,482626240281739,9530573107600319,197850855756232465,4307357140602486869,98125321641110663023,2334414826276390013171 ⋆ a(n) = n * a(n - 1) + (n - 5) * a(n - 2). ● a(n) = hypergeometric([6, - n + 4],[],1) * (- 1) ^ n for n >=4. - _ Peter Luschny _ , Sep 20 2014 ●

▶ [A349535] 1,5,31,232,2007,19213,196912,2114360,23467039,266945359,3094963919,36433302124,434269638196,5230582604476,63560612650120,778281652963504,9593248679529551,118938874458415987,1482248642350235245,18557299563105608336 ⋆ G.f. A(x) satisfies A(x) = 1 / ((1 - 4 * x) * (1 - x * A(x) ^ 2)). ● a(n) = 4 ^ n + Sum _{ i=0..n - 1 } Sum _{ j=0..n - i - 1 } a(i) * a(j) * a(n - i - j - 1). ● a(n) = Sum _{ k=0..n } binomial(n + k,2 * k) * binomial(3 * k,k) * 4 ^ (n - k) / (2 * k + 1). ● a(n) = 4 ^ n * F([1 / 3, 2 / 3, - n, 1 + n], [1 / 2, 1, 3 / 2], - 3 ^ 3 / 2 ^ 6), where F is the generalized hypergeometric function. - _ Stefano Spezia _ , Nov 21 2021 ●

▶ [A056541] 0,1,5,31,249,2491,29893,418503,6696049,120528883,2410577661,53032708543,1272785005033,33092410130859,926587483664053,27797624509921591,889523984317490913,30243815466794691043 ⋆ a(n) = 2n * a(n - 1) + 1 with a(0)=0. ● a(n) = Sum[P(n, k) * 2 ^ k { k=0 to n - 1 }] - _ Ross La Haye _ , Sep 15 2004 ● a(n) = 2 ^ n * n! * Sum _{ k=1..n }{ 1 / (k! * 2 ^ k) } , with n>=0. - _ Paolo P. Lava _ , Apr 26 2010 ●

▶ [A140154] 1,5,32,48,173,209,552,616,1345,1445,2776,2920,5117,5313,8688,8944,13857,14181,21040,21440,30701,31185,43352,43928,59553 ⋆ a(1)=1, a(n) = a(n - 1) + n ^ 3 if n odd, a(n) = a(n - 1) + n ^ 2 if n is even. ● a(n) = a(n - 1) + { [1 - (- 1) ^ n] / 2 }* n ^ 3 + { [1 + (- 1) ^ n] / 2 }* n ^ 2, with a(1)=1. ● a(n) = (- 1 / 16) + (1 / 4) * (- 1) ^ n * n + (1 / 16) * (- 1) ^ n - (1 / 4) * (- 1) ^ n * n ^ 3 + (5 / 12) * n ^ 3 - (1 / 8) * (- 1) ^ n * n ^ 2 + (3 / 8) * n ^ 2 + (1 / 12) * n + (1 / 8) * n ^ 4, with n>=1. - _ Paolo P. Lava _ , Jun 06 2008 ● a(n) = a(n - 1) + 4 * a(n - 2) - 4 * a(n - 3) - 6 * a(n - 4) + 6 * a(n - 5) + 4 * a(n - 6) - 4 * a(n - 7) - a(n - 8) + a(n - 9). ●

▶ [A341423] 1,5,32,94,219,437,804,1362,2177,3271,4768,6708,9227,12381,16254,20954,26707,33461,41480,50884,61703,74183,88606,104862,123481 ⋆ Number of positive solutions to (x _ 1) ^ 2 + (x _ 2) ^ 2 + (x _ 3) ^ 2 + (x _ 4) ^ 2 <= n ^ 2. ● a(n) is the coefficient of x ^ (n ^ 2) in expansion of (theta _ 3(x) - 1) ^ 4 / (16 * (1 - x)). ●

▶ [A184536] 5,32,108,256,500,864,1372,2048,2916,4000,5324,6912,8788,10976,13500,16384,19652,23328,27436,32000,37044,42592,48668,55296,62500 ⋆ a(n) = floor (1 /{ (1 + n ^ 4) ^ (1 / 4) }), where {} = fractional part. ● a(n) = floor[1 /{ (1 + n ^ 4) ^ (1 / 4) }], where {} =fractional part. ●

▶ [A089574] 5,32,113,299,664,1309,2366,4002,6423,9878,14663,21125,29666,40747,54892,72692,94809,121980,155021,194831,242396,298793,365194,442870,533195 ⋆ Column 4 of an array closely related to A083480. (Both arrays have shape sequence A083479). ● a(n)= + 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). G.f.: x * (5 + 2 * x - 4 * x ^ 2 + x ^ 3) / (x - 1) ^ 6. a(n) = n * (n + 1) * (4 * n ^ 3 + 51 * n ^ 2 + 159 * n + 86) / 120. [From _ R. J. Mathar _ , Jun 26 2010] ●

▶ [A273623] 1,5,32,135,605,2560,10933,46305,196384,831875,3524489,14929920,63245753,267913165,1134902560,4807524015,20365009477,86267563520,365435291981,1548008735625,6557470308896,27777889982155,117669030432337,498454011740160,2111485077903025 ⋆ a(n) = Fibonacci(3 * n) - (2 + (- 1) ^ n) * Fibonacci(n). ● a(n) = Fibonacci(3 * n) - 2 * Fibonacci(n) + Fibonacci(- n). ● a(2 * n) = 5 * Fibonacci(2 * n) ^ 3; ● a(2n + 1) = Fibonacci(2 * n + 1) * (5 * Fibonacci(2 * n + 1) ^ 2 - 4) = Fibonacci(2 * n + 1) * Lucas(2 * n + 1) ^ 2. ● a(n) = 4 * a(n - 1) + 4 * a(n - 2) - 12 * a(n - 3) - 4 * a(n - 4) + 4 * a(n - 5) + a(n - 6). - _ G. C. Greubel _ , Jun 02 2016 ●

▶ [A015541] 0,1,5,32,195,1199,7360,45193,277485,1703776,10461275,64232807,394392960,2421594449,14868722965,91294775968,560554940595,3441838134751,21133075257920,129758243232857,796722742969725,4891921417478624,30036666288181195 ⋆ Expansion of x / (1 - 5 * x - 7 * x ^ 2). ● a(n) = 5 * a(n - 1) + 7 * a(n - 2). ● a(n) = (1 / 53) * sqrt(53) * ((5 / 2 + (1 / 2) * sqrt(53)) ^ n - (5 / 2 - (1 / 2) * sqrt(53)) ^ n), with n >= 0. - _ Paolo P. Lava _ , Jan 13 2009 ●

▶ [A024064] 1,5,32,207,1280,7751,46620,279887,1679552,10077615,60466076,362796935,2176782192,13060693847,78364163900,470184984351,2821109907200,16926659444447,101559956668092,609359740010135 ⋆ a(n) = 6 ^ n - n ^ 2. ● a(0)=1, a(1)=5, a(2)=32, a(3)=207, a(n)=9 * a(n - 1) - 21 * a(n - 2) + 19 * a(n - 3) - 6 * a(n - 4). - _ Harvey P. Dale _ , Mar 26 2014 ●

▶ [A164594] 5,32,216,1472,10048,68608,468480,3198976,21843968,149159936,1018527744,6954942464,47491317760,324291002368,2214397476864,15120851759968,103251634552832,705046262054912,4814357020016640,32874486063693824,224481032349417472 ⋆ a(n) = ((5 + sqrt(18)) * (4 + sqrt(8)) ^ n + (5 - sqrt(18)) * (4 - sqrt(8)) ^ n) / 2. ● a(n) = 8 * a(n - 1) - 8 * a(n - 2) for n > 1; a(0) = 5, a(1) = 32. ● a(n) = (2 * sqrt(2)) ^ n * (3 * ChebyshevU(n, sqrt(2)) + 2 * ChebyshevT(n, sqrt(2))). - _ G. C. Greubel _ , Apr 21 2020 ●

▶ [A199486] 5,32,221,1544,10805,75632,529421,3705944,25941605,181591232,1271138621,8897970344,62285792405,436000546832,3052003827821,21364026794744,149548187563205,1046837312942432,7327861190597021,51295028334179144 ⋆ (9 * 7 ^ n + 1) / 2. ● a(n) = 7 * a(n - 1) - 3. ● a(n) = 8 * a(n - 1) - 7 * a(n - 2). ●

▶ [A153396] 1,1,5,32,228,1726,13587,109923,907499,7609898,64609346,554108863,4792190298,41739160686,365746143064,3221723465187,28509044813580,253295607463902,2258539046009268,20203103111671575,181242298665210280 ⋆ G.f.: A(x) = F(x * G(x) ^ 3) where F(x) = G(x / F(x) ^ 2) = 1 + x * F(x) ^ 2 is the g.f. of A000108 (Catalan) and G(x) = F(x * G(x) ^ 2) = 1 + x * G(x) ^ 4 is the g.f. of A002293. ● a(n) = Sum _{ k=0..n } C(2k + 1,k) / (2k + 1) * C(4n - k,n - k) * 3k / (4n - k) for n>0 with a(0)=1. ●

▶ [A146965] 1,5,32,230,1724,13100,99968,763880,5839376,44643920,341330432,2609713760,19953189824,152557050560,1166413088768,8918103977600,68185604178176,521330170184960,3985960826642432,30475665203095040 ⋆ a(n) = 10 * a(n - 1) - 18 * a(n - 2) with a(0)=1, a(1)=5. ● a(n) = ((5 + sqrt(7)) ^ n + (5 - sqrt(7)) ^ n) / 2. ●

▶ [A364922] 1,1,5,32,233,1833,15180,130392,1151057,10378883,95182445,885053524,8324942620,79071217228,757310811912,7305728683824,70923966744609,692370887676567,6792525607165935,66933512163735000,662190712902022017,6574831459429388169 ⋆ G.f. satisfies A(x) = 1 + x * A(x) ^ 3 / (1 - 2 * x * A(x) ^ 2). ● a(n) = Sum _{ k=0..n } 3 ^ k * (- 2) ^ (n - k) * binomial(n,k) * binomial(2 * n + k + 1,n) / (2 * n + k + 1). ● a(n) = (1 / n) * Sum _{ k=0..n - 1 } 2 ^ k * binomial(n,k) * binomial(3 * n - k,n - 1 - k) for n > 0. ● a(n) = (1 / n) * Sum _{ k=1..n } 3 ^ (n - k) * binomial(n,k) * binomial(2 * n,k - 1) for n > 0. ●

▶ [A364747] 1,1,5,32,234,1854,15490,134380,1198944,10931761,101412677,954155059,9083120975,87326765375,846709605539,8269910074087,81291388929027,803592049667495,7983612883739843,79671910265120574,798283229227457304,8027625597750959053 ⋆ G.f. satisfies A(x) = 1 + x * A(x) ^ 4 / (1 - x * A(x)). ● a(n) = (1 / n) * Sum _{ k=0..n - 1 } binomial(n,k) * binomial(4 * n - 3 * k,n - 1 - k) for n > 0. ●

▶ [A053157] 1,5,32,235,1816,14055,107052,800315,5886416,42739855,307295572,2193374595,15571898616,110121224855,776543100092,5464689616075,38398915520416,269529406433055,1890416947176612,13251578251332755 ⋆ Number of 3 - element intersecting families (with not necessarily distinct sets) whose union is a

n n - element set. ● a(n) = (7 ^ n - 3 * 5 ^ n + 3 * 4 ^ n + 2 * 3 ^ n - 3 * 2 ^ n + 2) / 6. ●

▶ [A365181] 1,1,5,32,237,1905,16160,142392,1290613,11955947,112697701,1077438356,10422562156,101827196684,1003312506776,9958506719664,99479743121349,999370184665407,10090067735619023,102330789530653912,1041997707624103589,1064896396111406612 ⋆ G.f. satisfies A(x) = 1 + x * A(x) ^ 4 * (1 + x * A(x) ^ 2). ● a(n) = Sum _{ k=0..n } binomial(2 * n + 2 * k + 1,k) * binomial(k,n - k) / (2 * n + 2 * k + 1). ●

▶ [A185212] 1,5,33,85,161,261,385,533,705,901,1121,1365,1633,1925,2241,2581,2945,3333,3745,4181,4641,5125,5633,6165,6721 ⋆ a(n) = 12 * n ^ 2 - 8 * n + 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) with a(0)=1, a(1)=5, a(2)=33. - _ Harvey P. Dale _ , Jul 07 2015 ●

▶ [A292000] 5,33,117,322,745,1515,2793,4772,7677,11765,17325,24678,34177,46207,61185,79560,101813,128457,160037,197130,240345,290323,347737,413292,487725 ⋆ Number of (undirected) paths in the n - gear graph. ● a(n) = n * (- 21 + 58 * n - 15 * n ^ 2 + 8 * n ^ 3) / 6. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ●

▶ [A270222] 1,5,33,161,705,2945,12033,48641,195585,784385,3141633,12574721,50315265,201293825,805240833,3221094401 ⋆ Number of active (ON,black) cells at stage 2 ^ n - 1 of the two - dimensional cellular automaton defined by "Rule 131", based on the 5 - celled von Neumann neighborhood. ● a(n) = 1 - 2 ^ (2 + n) + 3 * 4 ^ n. ● a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3) for n>3. ●

▶ [A050915] 1,5,33,193,1025,5121,24577,114689,524289,2359297,10485761,46137345,201326593,872415233,3758096385,16106127361,68719476737,292057776129,1236950581249,5222680231937,21990232555521,92358976733185 ⋆ a(n) = n * 4 ^ n + 1. ● a(n) = 9 * a(n - 1) - 24 * a(n - 2) + 16 * a(n - 3). ●

▶ [A091056] 0,0,1,5,33,193,1169,6993,42001,251921,1511697,9069841,54419729,326517009,1959104785,11754623249,70527750417,423166480657,2538998927633,15233993478417,91403961045265,548423765922065 ⋆ Expansion of x ^ 2 / ((1 - x) * (1 + 2 * x) * (1 - 6 * x)). ● a(n) = (3 * 6 ^ n + 5 * (- 2) ^ n - 8) / 120. ● a(0)=0, a(1)=0, a(2)=1, a(n) = 5 * a(n - 1) + 8 * a(n - 2) - 12 * a(n - 3). - _ Harvey P. Dale _ , Apr 02 2015 ●

▶ [A015544] 0,1,5,33,205,1289,8085,50737,318365,1997721,12535525,78659393,493581165,3097180969,19434554165,121950218577,765227526205,4801739379641,30130517107845,189066500576353,1186376639744525,7444415203333449,46713089134623445 ⋆ Lucas sequence U(5, - 8): a(n + 1) = 5 * a(n) + 8 * a(n - 1), a(0)=0, a(1)=1. ● a(n) = 5 * a(n - 1) + 8 * a(n - 2). ● a(n) = (1 / 57) * sqrt(57) * [5 / 2 + (1 / 2) * sqrt(57)] ^ n - (1 / 57) * sqrt(57) * [5 / 2 - (1 / 2) * sqrt(57)] ^ n, with n>=0. - _ Paolo P. Lava _ , Aug 05 2008 ●

▶ [A155597] 1,5,33,209,1281,7745,46593,279809,1679361,10077185,60465153,362795009,2176778241,13060685825,78364147713,470184951809,2821109841921,16926659313665,101559956406273,609359739486209,3656158439014401,21936950638280705,131621703838072833 ⋆ a(n) = 6 ^ n - 2 ^ n + 1. ● a(n) = 8 * a(n - 1) - 12 * a(n - 2) + 5 with a(0)=1, a(1)=5. - _ Vincenzo Librandi _ , Jul 21 2010 ● a(0)=1, a(1)=5, a(2)=33, a(n) = 9 * a(n - 1) - 20 * a(n - 2) + 12 * a(n - 3). - _ Harvey P. Dale _ , Jul 13 2011 ●

▶ [A164538] 5,33,215,1391,8965,57657,370375,2377639,15257765,97891953,627990935,4028394431,25840152805,165748456137,1063161046855,6819395977399,43741255696325,280566449483073,1799615613815255,11543127800041871 ⋆ a(n) = 10 * a(n - 1) - 23 * a(n - 2) for n > 1; a(0) = 5, a(1) = 33. ● a(n) = 10 * a(n - 1) - 23 * a(n - 2) for n > 1; a(0) = 5, a(1) = 33. ● a(n) = ((5 + 4 * sqrt(2)) * (5 + sqrt(2)) ^ n + (5 - 4 * sqrt(2)) * (5 - sqrt(2)) ^ n) / 2. ●

▶ [A083076] 1,5,33,229,1601,11205,78433,549029,3843201,26902405,188316833,1318217829,9227524801,64592673605,452148715233,3165041006629,22155287046401,155087009324805,1085609065273633,7599263456915429,53194844198408001 ⋆ Third row of number array A083075. ● a(n) = (2 * 7 ^ n + 1) / 3. ● a(n) = Sum _{ k=0..2 * n } trinomial(n,k) * Fibonacci(k + 1), where trinomial(n,k) are the trinomial coefficients (A027907). - _ Paul Barry _ , Sep 10 2007 ● a(n) = 7 * a(n - 1) - 2, a(n) = 8 * a(n - 1) - 7 * a(n - 2). - _ Vincenzo Librandi _ , Nov 06 2011 ●

▶ [A162816] 5,33,231,1683,12573,95337,729135,5603499,43180533,333250929,2574053559,19891362051,153752577165,1188615978297,9189556693119,71050353033627,549348865530597,4247524736257473,32841784272579975,253933094974463091 ⋆ a(n) = 12 * a(n - 1) - 33 * a(n - 2) for n > 1; a(0) = 5, a(1) = 33. ● a(n) = ((5 + sqrt(3)) * (6 + sqrt(3)) ^ n + (5 - sqrt(3)) * (6 - sqrt(3)) ^ n) / 2. ●

▶ [A142989] 1,5,33,240,1992,18360,187416,2093760,25462080,334592640,4728412800,71488811520,1151817408000,19699405286400,356504125824000,6805868977152000,136702533123072000,2881808345235456000 ⋆ a(1) = 1, a(2) = 5, a(n + 2) = 5 * a(n + 1) + (n + 1) * (n + 3) * a(n). ● a(n) = (n + 2)! * p(n + 2) * sum { k = 1..n } (- 1) ^ (k + 1) / (k * (k + 1) * (k + 2) * p(k + 1) * p(k + 2)), where p(n) = (2 * n - 1) / 3. Recurrence: a(1) = 1, a(2) = 5, a(n + 2) = 5 * a(n + 1) + (n + 1) * (n + 3) * a(n). The sequence b(n) := 1 / 2 * (n + 2)! * p(n + 2) satisfies the same recurrence with b(1) = 5, b(2) = 28. Hence we obtain the finite continued fraction expansion a(n) / b(n) = 1 / (5 + 1 * 3 / (5 + 2 * 4 / (5 + 3 * 5 / (5 + ... + (n - 1) * (n + 1) / 5)))), for n >=2. Lim n - > infinity a(n) / b(n) = 1 / (5 + 1 * 3 / (5 + 2 * 4 / (5 + 3 * 5 / (5 + ... + (n - 1) * (n + 1) / (5 + ...))))) = 2 * sum { k = 1..inf } (- 1) ^ (k + 1) / (k * (k + 1) * (k + 2) * p(k + 1) * p(k + 2)) = 17 / 2 - 12 * log(2). ●

▶ [A084131] 1,5,33,245,1889,14725,115137,901045,7053121,55213445,432231393,3383685365,26488919969,207366548485,1623353845377,12708307129525,99486055923841,778819338036485,6096930429659553,47729375549975285 ⋆ a(n) = 10 * a(n - 1) - 17 * a(n - 2), a(0) = 1, a(1) = 5. ● a(n) = (5 + sqrt(8)) ^ n / 2 + (5 - sqrt(8)) ^ n / 2. ● a(n) = 17 ^ ((n - 1) / 2) * (sqrt(17) * ChebyshevU(n, 5 / sqrt(17)) - 5 * ChebyshevU(n - 1, 5 / sqrt(17))). - _ G. C. Greubel _ , Oct 13 2022 ●

▶ [A084771] 1,5,33,245,1921,15525,127905,1067925,9004545,76499525,653808673,5614995765,48416454529,418895174885,3634723102113,31616937184725,275621102802945,2407331941640325,21061836725455905,184550106298084725 ⋆ Coefficients of expansion of 1 / sqrt(1 - 10 * x + 9 * x ^ 2); also, a(n) is the central coefficient of (1 + 5 * x + 4 * x ^ 2) ^ n. ● a(n) = Sum _{ k = 0..n } Sum _{ j = 0..n - k } C(n,j) * C(n - j,k) * C(2 * n - 2 * j,n - j). - _ Paul Barry _ , May 19 2006 ● a(n) = Sum _{ k = 0..n } 4 ^ k * C(n,k) ^ 2. - heruneedollar (heruneedollar(AT)gmail.com), Mar 20 2010 ● a(n) = hypergeom([- n, - n], [1], 4). - _ Vladimir Reshetnikov _ , Nov 29 2013 ● a(n) = hypergeom([- n, 1 / 2], [1], - 8). - _ Peter Luschny _ , Apr 26 2016 ● a(n) = - 3 * 9 ^ n * a(- 1 - n) for all n in Z. ● a(n) = 3 ^ n * LegendreP(n, 5 / 3). - _ G. C. Greubel _ , May 30 2023 ●

▶ [A153398] 1,1,5,33,245,1941,16023,136075,1179833,10392981,92701411,835271032,7589337123,69444928453,639280878401,5915683250220,54991636090761,513257729193329,4807619948647095,45177320023095160,425766248463523359 ⋆ G.f.: A(x) = F(x * G(x) ^ 2) where F(x) = G(x / F(x)) = 1 + x * F(x) ^ 3 is the g.f. of A001764 and G(x) = F(x * G(x)) = 1 + x * G(x) ^ 4 is the g.f. of A002293. ● a(n) = Sum _{ k=0..n } C(3k + 1,k) / (3k + 1) * C(4n - 2k,n - k) * k / (2n - k) for n>0 with a(0)=1. ●

▶ [A242522] 0,0,0,0,1,5,33,245,2053,19137,196705,2212037,27029085,356723177,5058388153,76712450925,1239124984693,21241164552785,385159565775633,7365975246680597,148182892455224845,3128251523599365177,69149857480654157545,1597343462243140957757 ⋆ Number of cyclic arrangements of S= { 1,2,...,n } such that the difference between any two neighbors is at least 2. ● a(n) = (n - 1)! / 2 + sum _{ i=1..n - 1 } ((- 1) ^ i * (n - i - 1)! * sum _{ j=0..i - 1 } (2 ^ j * C(i - 1,j) * C(n - i,j + 1))), for n>=5. - _ Andrew Woods _ , Jan 08 2015 ● a(n) = n a(n - 1) - (n - 5) a(n - 2) - (n - 4) a(n - 3) + (n - 4) a(n - 4), for n>6. - _ Jean - François Alcover _ , Oct 07 2017 ●

▶ [A034015] 1,5,33,249,2033,17485,156033,1431281,13412193,127840085,1235575201,12080678505,119276490193,1187542872989,11909326179841,120191310803937,1219780566014657,12440630635406245,127446349676475425,1310820823328281561,13530833791486094769 ⋆ Small 3 - Schroeder numbers: a(n) = A027307(n + 1) / 2. ● a(n) = Sum _{ i=0..n } Sum _{ j=0..i } (- 2) ^ (n - i) * binomial(i,j) * binomial(2i + j, n) * binomial(n + 1,i) / (n + 1) (conjectured). - _ Michael D. Weiner _ , May 25 2017 ● a(n) = hypergeom([- n, - 2 * (n + 1)], [2], 2). - _ Peter Luschny _ , Nov 08 2021 ●

▶ [A364792] 1,1,5,33,250,2054,17800,160183,1482535,14022415,134943095,1317046306,13005842030,129708875695,1304588594925,13217663310305,134775670244250,1382019265706377,14242560597119165,147435736533094415,1532365596794307010 ⋆ G.f. satisfies A(x) = 1 + x * A(x) ^ 4 / (1 - x * A(x) ^ 2). ● a(n) = (1 / n) * Sum _{ k=0..n - 1 } binomial(n,k) * binomial(4 * n - 2 * k,n - 1 - k) for n > 0. ●

▶ [A365182] 1,1,5,33,252,2091,18319,166750,1561599,14948572,145615404,1438752770,14384289530,145248707646,1479212551278,15175516654760,156691764630780,1627069871618145,16980373299730925,178006989972532900,1873607777794186000 ⋆ G.f. satisfies A(x) = 1 + x * A(x) ^ 4 * (1 + x * A(x) ^ 3). ● a(n) = Sum _{ k=0..n } binomial(3 * n + k + 1,k) * binomial(k,n - k) / (3 * n + k + 1). ●

▶ [A330802] 1,5,33,253,2121,18853,174609,1667021,16290969,162171445,1638732129,16765758429,173325794409,1807840791237,19001320087473,201050792435949,2139811906460985,22892988893079637,246061004607915777,2655768423781296893,28771902274699214601 ⋆ Evaluation of the Big - Schröder polynomials at 1 / 2 and normalized with 2 ^ n. ● a(n) = ((24 - 12 * n) * a(n - 3) + (32 * n - 10) * a(n - 2) + (9 * n - 9) * a(n - 1)) / (n + 1). ● a(n) = [x ^ n] 2 / (1 - 4 * x + sqrt(1 + 4 * (x - 3) * x)). ● a(n) = [x ^ n] reverse((x - x ^ 2) / (3 * x ^ 2 + 4 * x + 1)) / x. ●

▶ [A199552] 5,33,257,2049,16385,131073,1048577,8388609,67108865,536870913,4294967297,34359738369,274877906945,2199023255553,17592186044417,140737488355329,1125899906842625,9007199254740993,72057594037927937 ⋆ 4 * 8 ^ n + 1. ● a(n) = 8 * a(n - 1) - 7. ● a(n) = 9 * a(n - 1) - 8 * a(n - 2). ●

▶ [A061253] 5,33,261,2241,19845,177633,1595781,14353281,129153285,1162300833,10460471301,94143533121,847289672325,7625600673633,68630386930821,617673424981761,5559060652648965,50031545357280033,450283906665838341 ⋆ Let G _ n be the elementary Abelian group G _ n = (C _ 3) ^ n; a(n) is the number of times the number 1 appears in the character table of G _ n. ● a(n) = 3 ^ (n - 1) * (3 ^ n + 2). ● a(n) = 12 * a(n - 1) - 27 * a(n - 2) for n > 2. ●

▶ [A325153] 1,5,33,277,2465,22149,199297,1793621,16142529,145282693,1307544161,11767897365,105911076193,953199685637,8578797170625,77209174535509,694882570819457,6253943137374981,56285488236374689,506569394127372053,4559124547146348321,41032120924317134725,369289088318854212353,3323601794869687910997,29912416153827191198785 ⋆ A column of triangle A322220; a(n) = A322220(n,1) for n >= 1. ● a(n) = (9 ^ n - 9) / 24 + n, for n >= 1. ●

▶ [A317297] 0,5,34,111,260,505,870,1379,2056,2925,4010,5335,6924,8801,10990,13515,16400,19669,23346,27455,32020,37065,42614,48691,55320 ⋆ a(n) = (n - 1) * (4 * n ^ 2 - 8 * n + 5). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n > 4. - _ Stefano Spezia _ , Sep 01 2018 ●

▶ [A284850] 0,5,34,171,776,3361,14190,58967,242452,989517,4017146,16245763,65514528,263652473,1059392902,4251920559,17050729004,68332056229,273715645458,1096024843355,4387586157880,17560804984785,70274600998814,281192547174151,1125052618233156 ⋆ a(n) = 4 ^ n - 3 ^ n - n. ● a(n) = 9 * a(n - 1) - 27 * a(n - 2) + 31 * a(n - 3) - 12 * a(n - 4) for n>4. ●

▶ [A353097] 5,34,207,1244,7465,44790,268739,1612432,9674589,58047530,348285175,2089711044,12538266257,75229597534,451377585195,2708265511160,16249593066949,97497558401682,584985350410079,3509912102460460,21059472614762745,126356835688576454 ⋆ a(1) = 5; for n > 1, a(n) = 6 * a(n - 1) + 6 - n. ● a(n) = 8 * a(n - 1) - 13 * a(n - 2) + 6 * a(n - 3). ● a(n) = (4 * 6 ^ (n + 1) + 5 * n - 24) / 25. ● a(n) = Sum _{ k=0..n - 1 } (6 - n + k) * 6 ^ k. ●

▶ [A024063] 1,5,34,213,1292,7771,46650,279929,1679608,10077687,60466166,362797045,2176782324,13060694003,78364164082,470184984561,2821109907440,16926659444719,101559956668398,609359740010477 ⋆ a(n) = 6 ^ n - n. ● a(n) = 8 * a(n - 1) - 13 * a(n - 2) + 6 * a(n - 3). - _ Vincenzo Librandi _ , Jun 16 2013 ●

▶ [A015545] 0,1,5,34,215,1381,8840,56629,362705,2323186,14880275,95310049,610472720,3910154041,25045024685,160416509794,1027487771135,6581187443821,42153327159320,269997322790989,1729366558388825,11076808697063026,70948342510814555 ⋆ Expansion of x / (1 - 5 * x - 9 * x ^ 2). ● a(n) = 5 * a(n - 1) + 9

* a(n - 2). ● a(n) = (1 / 61) * sqrt(61) * (((5 / 2) + (1 / 2) * sqrt(61)) ^ n - ((5 / 2) - (1 / 2) * sqrt(61)) ^ n), with n>=0. - _ Paolo P. Lava _ , Jan 13 2009 ●

► [A102436] 1,5,34,223,1469,9672,63685,419329,2761042,18179883,119704137,788183312,5189736537,34171448333,224999452834,1481492773799,9754783005797,64229669677144,422915657312253,2784657839576297,18335379997029650 ★ Number of matchings of the corona L'(n) of the ladder graph L(n)=P _ 2 X P _ n. and the complete graph K(1); in other words, L'(n) is the graph constructed from L(n) by adding for each vertex v a new vertex v' and the edge vv'. ● a(n) = 6 * a(n - 1) + 4 * a(n - 2) - a(n - 3) for n>=3. ●

► [A291027] 5,34,226,1501,9968,66195,439582,2919134,19385099,128730656,854861845,5676882210,37698479330,250344342349,1662462010576,11039913707011,73312769785118,486848208799710,3233013554202907,21469477452590144,142572387761274149,946780646936461346 ★ p - INVERT of the positive integers, where p(S) = 1 - 5 * S + S ^ 2. ● a(n) = 9 * a(n - 1) - 17 * a(n - 2) + 9 * a(n - 3) - a(n - 4). ●

► [A033889] 1,5,34,233,1597,10946,75025,514229,3524578,24157817,165580141,1134903170,7778742049,53316291173,365435296162,2504730781961,17167680177565,117669030460994,806515533049393,5527939700884757,37889062373143906,259695496911122585,1779979416004714189 ★ a(n) = Fibonacci(4 * n + 1). ● a(n) = 7 * a(n - 1) - a(n - 2) for n >= 2. - _ Floor van Lamoen _ , Dec 10 2001 ● a(n) = (1 / 2) * (7 / 2 - (3 / 2) * sqrt(5)) ^ n - (1 / 10) * (7 / 2 - (3 / 2) * sqrt(5)) ^ n * sqrt(5) + (1 / 10) * sqrt(5) * (7 / 2 + (3 / 2) * sqrt(5)) ^ n + (1 / 2) * (7 / 2 + (3 / 2) * sqrt(5)) ^ n. - _ Paolo P. Lava _ , Jun 25 2008 ● a(n) = sqrt(1 + 2 * Fibonacci(2 * n) * Fibonacci(2 * n + 1) + 5 * (Fibonacci(2 * n) * Fibonacci(2 * n + 1)) ^ 2). - _ Artur Jasinski _ , Feb 06 2010 ● a(n) = Fibonacci(2 * n) ^ 2 + Fibonacci(2 * n) * Fibonacci(2 * n + 2) + 1. - _ Gary Detlefs _ , Apr 18 2012 ● a(n) = Fibonacci(2 * n) ^ 2 + Fibonacci(2 * n + 1) ^ 2. - _ Bruno Berselli _ , Apr 19 2012 ●

► [A334608] 0,5,34,236,1714,12922,100300,796572,6443536,52909593,439896626,3695917940,31331587252,267669458420,2302188456120,19918434257052,173240112503520,1513821095788420,13283888136738344,117009704490121520,1034217260142108570,9169842145476773250,81537271617856588380 ★ a(n) is the total number of down - steps after the final up - step in all 3 _ 1 - Dyck paths of length 4 * n (n up - steps and 3n down - steps). ● a(n) = 2 * binomial(4 * (n + 1) + 2, n + 1) / (4 * (n + 1) + 2) - 4 * binomial(4 * n + 2, n) / (4 * n + 2). ●

► [A073279] 1,1,1,5,34,250,2058,18661,185695,2017527,23804069,303413813,4157895295,60989187252,953766105164,15844435971349,278704524938621,5175632136205088,101198102131888304,2078318050691940125,44731639502987747576,1006917859088311808499 ★ Number of digits of n! ^ n! (ultrafactorial numbers). ● a(n) = floor(log(n! ^ n!) / log(10)) + 1. ●

► [A081342] 1,5,34,260,2056,16400,131104,1048640,8388736,67109120,536871424,4294968320,34359740416,274877911040,2199023263744,17592186060800,140737488388096,1125899906908160,9007199254872064,72057594038190080,576460752303947776,4611686018428436480 ★ a(n) = (8 ^ n + 2 ^ n) / 2. ● a(n) = (8 ^ n + 2 ^ n) / 2. ● a(n) = 10 * a(n - 1) - 16 * a(n - 2), a(0)=1, a(1)=5. ● a(n) = ((5 + sqrt(9)) ^ n + (5 - sqrt(9)) ^ n) / 2. - Al Hakanson (hawkuu(AT)gmail.com), Dec 08 2008 ●

► [A248055] 1,5,34,265,2219,19490,177119,1651405,15707416,151791375,1485814989,14697965770,146673432721,1474490991635,14915914368896,151701887367855,1550083118902041,15903333300738320,163749905809635219,1691449817705302875,17521670544878571584,181972459046153912945 ★ G.f.: Sum _{ n>=0 } x ^ n / (1 - 4 * x) ^ (2 * n + 1) * [Sum _{ k=0..n } C(n,k) ^ 2 * x ^ k] * [Sum _{ k=0..n } C(n,k) ^ 2 * 4 ^ k * x ^ k]. ● a(n) = Sum _{ k=0..[n / 2] } Sum _{ j=0..n - 2 * k } C(n - k, k + j) ^ 2 * C(k + j, j) ^ 2 * 4 ^ j. ●

► [A365218] 1,1,5,34,265,2232,19766,181300,1706737,16392049,159959240,1581278838,15800619070,159321921844,1618981274136,16562211506496,170426473666497,1762771226922775,18316562635133813,191104193378725552,2001224271292820200 ★ G.f. satisfies A(x) = 1 + x * A(x) ^ 6 / (1 + x * A(x) ^ 6). ● a(n) = Sum _{ k=0..n } (- 1) ^ k * 2 ^ (n - k) * binomial(n,k) * binomial(6 * n + k + 1,n) / (6 * n + k + 1). ● a(n) = Sum _{ k=0..n } (- 2) ^ (n - k) * binomial(6 * n + k + 1,k) * binomial(n - 1,n - k) / (6 * n + k + 1). ● a(n) = (1 / (6 * n + 1)) * Sum _{ k=0..n } (- 1) ^ (n - k) * binomial(6 * n + 1,k) * binomial(n - 1, n - k). ●

► [A243659] 1,1,5,34,267,2279,20540,192350,1853255,18252079,182924645,1859546968,19127944500,198725331588,2082256791048,21979169545670,233495834018591,2494624746580655,26786319835972799,288915128642169250,3128814683222599331,34007373443388857999 ★ Number of Sylvester classes of 3 - packed words of degree n. ● a(0) = 1 and a(n) = (1 / n) * Sum _{ i=1..n } (Sum _{ j=0..3 * i } (2 ^ (j - 2 * i) * (- 1) ^ (i - j) * binomial(i,3 * i - j) * binomial(i + j - 1,i - 1)) * a(n - i)) for n > 0. - _ Vladimir Kruchinin _ , Apr 09 2017 ● a(n) = (- 1) ^ n * Sum _{ k=0..n } (- 2) ^ k * binomial(n,k) * binomial(3 * n + k + 1,n) / (3 * n + k + 1). ● a(n) = ((- 1) ^ n / (3 * n + 1)) * Sum _{ k=0..n } (- 2) ^ (n - k) * binomial(3 * n + 1,k) * binomial(4 * n - k,n - k). (End) ● a(n) = (1 / n) * Sum _{ k=0..n - 1 } binomial(n,k) * binomial(4 * n - k,n - 1 - k) for n > 0. - _ Seiichi Manyama _ , Aug 08 2023 ●

► [A365183] 1,1,5,34,268,2299,20838,196326,1903524,18868861,190356231,1948055058,20173907384,211020478270,2226243632838,23660868061422,253099278807684,2722819049879436,29439894433161189,319749417998303470,3486914150183526920 ★ G.f. satisfies A(x) = 1 + x * A(x) ^ 4 * (1 + x * A(x) ^ 4). ● a(n) = (1 / (4 * n + 1)) * Sum _{ k=0..n } binomial(4 * n + 1,k) * binomial(k,n - k). ●

► [A371391] 1,5,34,269,2326,21314,203428,2000957,20142862,206524790,2149261852,22644243218,241061343004,2589022298084,28019201644744,305254481274269,3345077342003134,36846738570089774,407754101877613804,4531049315843043974,50538820796852529364 ★ Expansion of (1 / x) * Series _ Reversion(x * (1 - x) / (1 + 2 * x) ^ 2). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..n } 2 ^ k * binomial(2 * (n + 1),k) * binomial(2 * n - k,n - k). ●

► [A058248] 0,5,34,269,2334,21950,215880,2194607,22847147,242104347,2601245287,28259222007,309787170203,3421648542571,38034025346108,425087937349054,4773520663632666,53826449764030293,609169697312869287,6916564779879112525,78759689142381711336 ★ Number of primes <= 12 ^ n. ● a(n) = pi(12 ^ n), where pi is the prime counting function (A000720). - _ Wesley Ivan Hurt _ , Oct 02 2020 ●

► [A014632] 1,5,35,51,117,145,247,287,425,477,651,715,925,1001,1247,1335,1617,1717,2035,2147,2501,2625,3015,3151,3577 ★ Odd pentagonal numbers. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). ● a(n) = 48 + 2 * a(n - 2) - a(n - 4). - _ Ant King _ , Aug 16 2011 ● a(n) = (3 * (- 1) ^ n + 12 * n + 1) * ((- 1) ^ n + 4 * n + 1) / 8. - _ Ant King _ , Aug 16 2011 ●

► [A117793] 0,5,35,70,145,210,330,425,590,715,925,1080,1335,1520,1820,2035,2380,2625,3015,3290,3725,4030,4510,4845,5370 ★ Pentagonal numbers divisible by 5. ● a(2 * n + 1) = 5 * n * (15 * n - 1) / 2, a(2 * n + 2) = 5 * (5 * n + 2) * (3 * n + 1) / 2. - _ Robert Israel _ , Jun 01 2014 ●

► [A145920] 0,1,5,35,70,210,330,715,1001,1820,2380,3876,4845,7315,8855,12650,14950,20475,23751,31465,35960,46376,52360,66045,73815 ★ List of numbers that are both pentagonal (A000326) and binomial coefficients C(n,4) (A000332). ● a(n) = (27x ^ 4 - 18x ^ 3 - 3x ^ 2 + 2x) / 8 where x = floor(n / 2) * (- 1) ^ n, for n >= 1. - _ William A. Tedeschi _ , Aug 16 2010 ●

► [A153785] 0,5,35,90,170,275,405,560,740,945,1175,1430,1710,2015,2345,2700,3080,3485,3915,4370,4850,5355,5885,6440,7020 ★ 5 times heptagonal numbers: a(n) = 5 * n * (5 * n - 3) / 2. ● a(n) = 25 * n + a(n - 1) - 20 (with a(0)=0). - _ Vincenzo Librandi _ , Aug 03 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A162540] 5,35,105,231,429,715,1105,1615,2261,3059,4025,5175,6525,8091,9889,11935,14245,16835,19721,22919,26445,30315,34545,39151,44149 ★ a(n) = (2 * n + 1) * (2 * n + 3) * (2 * n + 5) / 3. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n > 3. ● a(n) = 5 * Pochhammer(7 / 2,n) / Pochhammer(1 / 2,n). Hence e.g.f. is 5 * 1F1(7 / 2;1 / 2;x), with 1F1 being the confluent hypergemetric function (also known as Kummer's). - _ Stanislav Sykora _ , May 26 2016 ●

► [A161199] 1,5,35,105,1155,3003,15015,36465,692835,1616615,7436429,16900975,152108775,339319575,1502700975,3305942145,115707975075,251835004575,1091285019825,2354878200675,20251952525805,43397041126725,185423721177825,395033145117975 ★ Numerators in expansion of (1 - x) ^ (- 5 / 2). ● a(n) = numerator(((3 + 8 * n + 4 * n ^ 2) / 3) * binomial(2 * n,n) / (4 ^ n)). ● a(n) = denominator((3 / 2) * Integral _{ x=0..1 } x ^ n * sqrt(1 - x) dx), where the integral is sqrt(Pi) * n! / Gamma(n + 5 / 2) = n! / ((n + 3 / 2) * (n + 1 / 2) * (n - 1 / 2) * ... * (1 / 2)). - _ Groux Roland _ , Feb 23 2011 ●

► [A111877] 1,5,35,105,1155,15015,15015,255255,4849845,4849845,111546435,557732175,1673196525,48522699225,1504203675975,1504203675975,1504203675975,55655536011075,55655536011075,2281876976454075,98120709987525225 ★ a(n) = denominator of 3 * Sum _{ j=0..n + 1 } 1 / (2 * j + 1). ● a(n) = denominator of (3 / 2) * (digamma(n + 5 / 2) + 2 * log(2) + euler _ gamma). ● a(n) = denominator of (3 * Sum _{ j=0..n + 1 } 1 / (2 * j + 1)). ● a(n) = (1 / 3) * denominator of (2 * H _{ 2 * n + 4) - H _{ n + 2 }), where H _{ n } is the n - th Harmonic number. - _ G. C. Greubel _ , Jul 24 2023 ●

► [A179337] 5,35,107,197,341,491,707,917,1205,1475,1835,2165,2597,2987,3491,3941,4517,5027,5675,6245,6965,7595,8387,9077,9941 ★ Positive integers of the form (6 * m ^ 2 + 1) / 11. ● a(n) = (66 * n * (n - 1) - 3 * (2 * n - 1) * (- 1) ^ n + 17) / 4. ● a(n) = a(- n + 1) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). ●

► [A053126] 5,35,126,330,715,1365,2380,3876,5985,8855,12650,17550,23751,31465,40920,52360,66045,82251,101270,123410,148995,178365,211876,249900,292825 ★ Binomial coefficients binomial(2 * n - 3,4). ● a(n) = binomial(2 * n - 3, 4) if n >= 4 else 0; ●

► [A005562] 1,5,35,140,720,2700,12375,45375,196625,715715,3006003,10930920,45048640,164105760,668144880,2441298600,9859090500,36149998500,145173803500,534239596880,2136958387520,7892175863000,31479019635375,116657543354625,464342770607625 ★ Number of walks on square lattice. ● a(n) = C(n + 5, ceiling(n / 2)) * C(n + 4, floor(n / 2)) - C(n + 5, ceiling((n - 1) / 2)) * C(n + 4, floor((n - 1) / 2)). - _ Paul D. Hanna _ , Apr 16 2004 ●

► [A124793] 1,5,35,157,1123,5021,35939,160669,1150051,5141405,36801635,164524957,1177652323,5264798621,37684874339,168473555869,1205915978851,5391153787805,38589311323235,172516921209757,1234857962343523 ★ Numbers in a perpendicular plane intersecting a 3D clockwise spiral produced by powers of 2. ● a(n) = 2 ^ ((1 / 4) * (10 * n - 7 - (- 1) ^ n)) + 2 ^ ((1 / 4) * (10 * n - 1 + (- 1) ^ n)) - a(n - 1), with a(0)=1. ● a(n) = - a(n - 1) + 32 * a(n - 2) + 32 * a(n - 3). ● a(n) = (- 1984 + 248 * sqrt(2)) ^ (- 1) * (- (4 * sqrt(2)) ^ (n - 1) * (936 + 472 * sqrt(2)) + (- 4 * sqrt(2)) ^ (n - 1) * (744 * sqrt(2) - 1240) + (- 1) ^ (n - 1) * (192 - 24 * sqrt(2))). [_ Paolo P. Lava _ , Jul 10 2012] ● a(2n) = 3 / 31 + 19 * 32 ^ n / 124, a(2n + 1) = - 3 / 31 + 136 * 32 ^ n / 124. [_ R. J. Mathar _ , Jul 10 2012] ●

► [A048515] 1,5,35,160,577,1816,5245,14288,37313,94384,232861,563080,1339249,3141464,7282493,16711456,38010625,85786336,192282301,428342936,948960881,2091908680,4590665245,10032774640,21843934657 ★ a(n) = T(n,n), array T given by A048505. ● a(n) = (9 * n ^ 2 + n) * 2 ^ (n - 2) - n ^ 2 + 1. - _ Ralf Stephan _ , Feb 05 2004 ●

► [A002737] 0,5,35,189,924,4290,19305,85085,369512,1587222,6760390,28601650,120349800,504131940,2103781365,8751023325,36300541200,150217371150,620309379690,2556724903590,10520494818600,43225511319900,177361820257050,726860987017074,2975511197688624 ★ a(n) = Sum _{ j=0..n } (n + j) * binomial(n + j,j). ● a(n) = Sum _{ j=0..n } binomial(n + j,j) * (n + j). - _ Zerinvary Lajos _ , Aug 30 2006 ● a(n) = n * binomial(2 * n + 4, n + 2) / 4. - _ Zerinvary Lajos _ , Feb 28 2007 ● a(n) = (n * (2 * n + 3) * binomial(2 * n + 1, n + 1)) / (n + 2). - _ Peter Luschny _ , Jan 18 2020 ●

► [A123008] 1,5,35,195,1265,7405,46435,277995,1716865,10383605,63688835,386967795,2366156465,14406507805,87966927235,536096549595,3271366280065,19945146300005,121674449601635,741977556703395,4525816353447665 ★ Expansion of x * (1 + 3 * x) / (1 - 2 * x - 25 * x ^ 2). ● a(n) = 2 * a(n - 1) + 25 * a(n - 2) for n>2. ● a(n) = (5 * i) ^ (n - 2) * (3 * ChebyshevU(n - 2, - i / 5) + 5 * i * ChebyshevU(n - 1, - i / 5)). - _ G. C. Greubel _ , Jul 13 2021 ●

► [A320071] 1,5,35,210,1295,7735,46655,279720,1679580,10076395,60466175,362789070,2176782335,13060647355,78364162765,470184704640,2821109907455,1692

6657757380,101559956668415,609359729932590,3656158440016285,219369505799 11675,131621703842267135 ⋆ Number of length n primitive (=aperiodic or peri od n) 6 - ary words which are earlier in lexicographic order than any other wor d derived by cyclic shifts of the alphabet. • a(n) = Sum _{ d|n } 6 ^ (d - 1) * mu(n / d). • a(n) = 6 ^ (n - 1) - Sum _{ d<n,d|n } a(d). •

► [A024062] 0,5,35,215,1295,7775,46655,279935,1679615,10077695,60466175,362797055,2176782335,13060694015,78364164095,470184984575,2821109907455,16926659444735,101559956668415,609359740010495,3656158440062975,219369506403 77855,131621703842267135 ⋆ a(n) = 6 ^ n - 1. • a(n + 1) = 6 * a(n) + 5, with a (0) = 0. - _ Reinhard Zumkeller _ , Nov 22 2009 • a(n) = Sum _{ i = 1..n } 5 ^ i * binomial(n, n - i) for n > 0, a(0) = 0. - _ Bruno Berselli _ , Nov 11 2015 •

► [A180250] 0,1,5,35,225,1475,9625,62875,410625,2681875,17515625,114396875,7 47140625,4879671875,31869765625,208145546875,1359425390625,887858242187 5,5798716601562 5,37872165429687 5,247347993164062 5,1615461620117187 5,1055 07880322265625 ⋆ a(n) = 5 * a(n - 1) + 10 * a(n - 2), with a(1)=0 and a(2)=1. • a(n) = ((5 + sqrt(65)) ^ (n - 1) - (5 - sqrt(65)) ^ (n - 1)) / (2 ^ (n - 1) * sqrt(65)). - _ Rolf Pleisch _ , May 14 2011 • a(n) = (i * sqrt(10)) ^ (n - 1) * Cheby shevU(n - 1, - i * sqrt(5 / 8)). - _ G. C. Greubel _ , Jul 21 2023 •

► [A187444] 1,5,35,231,1716,12155,92378,676039,5200300,38779380,300540195,2 268783825,17672631900,134564468610,1052049481860,8061900920775,632053032 18876,4867348564128 28,38243453003802 20,2956614539121535 6,2327141766276305 44,1804857108504066435 ⋆ A trisection of A001405 (central binomial coefficien ts): binomial(3n + 2,floor((3n + 2) / 2)) / 2, n>=0. • a(n) = binomial(3 * n + 2,floor((3 * n + 2) / 2)) / 2, n>=0. •

► [A007995] 5,35,235,1380,6711,26630,89695,266305,716460,1780978,4147915,91 44485,19231895,38819255,75566971,142424625,260749275,464984685,809559075,1 378889190,2301674475,3771041860,6072576655,9622868805,15021940010 ⋆ Poinc aré series [or Poincare series] of Lie algebra associated with a certain braid grou p. • a(n) = (1 / 87178291200) [n ^ 14 + 91 * n ^ 13 + 3731 * n ^ 12 + 91091 * n ^ 11 + 1474473 * n ^ 10 + 16429413 * n ^ 9 + 126387833 * n ^ 8 + 65977211 3 * n ^ 7 + 430175746 * n ^ 6 - 19046231204 * n ^ 5 - 113904491064 * n ^ 4 + 7 33785439296 * n ^ 3 + 1856912273280 * n ^ 2 - 12048593356800 * n + 13512635 136000]. - _ Ralf Stephan _ , Jun 11 2005 •

► [A091928] 1,5,35,235,1585,10685,72035,485635,3273985,22072085,148802435,1 003175035,6763062385,45594249485,307380808835,2072256100435,139704406467 85,94183924382885,634955749531235,4280654119101835 ⋆ a(0)=1, a(1)=5; a(n) = 6 * a(n - 1) + 5 * a(n - 2) for n > 1. • a(n) = (3 + sqrt(14)) ^ n(1 / sqrt(14) + 1 / 2) + (3 - sqrt(14)) ^ n(1 / 2 - 1 / sqrt(14)). •

► [A290903] 5,35,240,1645,11275,77280,529685,3630515,24883920,170556925,11 69014555,8012544960,54918800165,376419056195,2580014593200,1768368309620 5,121205767080235,830756686465440,5694091038177845,39027880580779475,267 501073027278480 ⋆ p - INVERT of the positive integers, where p(S) = 1 - 5 * S . • a(n) = 7 * a(n - 1) - a(n - 2). •

► [A155127] 1,5,35,240,1650,11340,77940,535680,3681720,25304400,173916720,1 195326720,8215460640,56464724160,388081108800,2667274997760,183321366393 60,125996469822720,865971638772480,5951808651571200 ⋆ a(n) = 6 * a(n - 1) + 6 * a(n - 2), n>2, a(0)=1, a(1)=5, a(2)=35. • a(n) = (2 / 3) * sqrt(15) * ((3 + sqrt(15)) ^ (n - 1) - (3 - sqrt(15)) ^ (n - 1)) + (5 / 2) * ((3 + sqrt(15)) ^ (n - 1) + (3 - sqrt(15)) ^ (n - 1)) + (1 / 6) * [binomial(2 * n,n) mod 2], with n>=0. - _ Paolo P. Lava _ , Jan 26 2009 • a(n) = (1 / 6) * [n=0] - 5 * (sqrt(6) * i) ^ (n - 2) * ChebyshevU(n, - sqrt(6) * i / 2). - _ G. C. Greubel _ , Mar 25 2021 •

► [A193577] 5,35,245,1715,12005,84035,588245,4117715,28824005,201768035,14 12376245,9886633715,69206436005,484445052035,3391115364245,2373780754971 5,166164652848005,1163152569936035,8142067989552245,56994475926865715 ⋆ 5 * 7 ^ n • a(n) = 7 * a(n - 1), a(0)=5. •

► [A196661] 1,5,35,245,1715,12005,84035,588245,4117715,28824005,201768035,1 412376245,9886633715,69206436005,484445052035,3391115364245,237378075497 15,166164652848005,1163152569936035,8142067989552245,56994475926865715,3 98961331488060005 ⋆ Expansion of (1 - 2x) / (1 - 7x). • a(0) = 1, a(n) = 5 * 7 ^ (n - 1) for n>0. •

► [A104532] 1,5,35,250,1795,12910,92910,668820,4815075,34667110,249598330,1 797091180,12938997710,93160575500,670755400700,4829436210600,34771931021 475,250357867996950,1802576519933250,12978550465880700,9344556158707785 0,6728080368628400 00,4844217840946181700 ⋆ Expansion of (1 + sqrt(1 - 4 * x)) / (6 * sqrt(1 - 4 * x) - 4). • a(n) = 0 ^ n + sum { k=0..n, 5 ^ (k + 1) * C(2n - 1, n - k - 1) * 2 * (k + 1) / (n + k + 1) } . •

► [A084135] 1,5,35,275,2225,18125,147875,1206875,9850625,80403125,65627187 5,5356671875,43722640625,356876328125,2912923671875,23776091796875,194067 062890625,1584029251953125,12929286576171875,105532426982421875 ⋆ a(n) = 10 * a(n - 1) - 15 * a(n - 2), a(0)=1, a(1)=5. • a(n) = (5 + sqrt(10)) ^ n / 2 + (5 - sqrt(10)) ^ n / 2. •

► [A138233] 5,35,275,2315,20195,179195,1602515,14381675,129271235,11627857 55,10462450355,94151567435,847322163875,7625731702715,68630914235795,6176 75543767595,5559069156490115,50031579458738075,450284043329950835 ⋆ a(n) = 2 ^ (2 * n + 1) + 3 ^ (2 * n + 1). • a(n + 1) = 4 * a(n) + 5 * 3 ^ (2 * n + 1), a(0) = 5. •

► [A322666] 5,35,282,2600,25317,251000,2503163,25010000,250031623,250010000 0,25000316228,250001000000,2500003162278,25000010000000,250000031622777,2 500000100000000,25000000316227767,250000001000000000,250000000316227766 1,25000000010000000000 ⋆ a(n) is the smallest positive integer k such that ther e does not exist an m such that floor(m ^ 2 / 10 ^ n) = k. • a(n) = 25 * 10 ^ (n - 2) + ceiling(10 ^ (n / 2)) for n >= 2. •

► [A248053] 1,5,35,285,2519,23545,228715,2284365,23294551,241366025,2532599 675,26845322925,286946021495,3088651368025,33443864305675,36398341074292 5,3979005075583255,43667580737050025,480884378835323675,5311978947724802 925,58839469859529979319,653372409529941364345 ⋆ G.f.: Sum _{ n>=0 } x ^ n / (1 - 4 * x) ^ (2 * n + 1) * [Sum _{ k=0..n } C(n,k) ^ 2 * 2 ^ k * x ^ k] * [Sum _{ k=0..n } C(n,k) ^ 2 * 4 ^ k * x ^ k]. • a(n) = Sum _{ k=0..[n / 2] } 2 ^ k * Sum _{ j=0..n - 2 * k } C(n - k, k + j) ^ 2 * C(k + j, j) ^ 2 * 4 ^ j. •

► [A369157] 1,5,35,285,2530,23750,231850,2329850,23940475,250394375,2656849 375,28529354375,309445377750,3385369628750,37312228370000,41391302321250 0,4617886656665625,51781448191328125,583266654383859375,6596645477096428 125,74881064169289121875 ⋆ Expansion of (1 / x) * Series _ Reversion(x / ((1 + x) ^ 5 - x ^ 5)). • a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 5) } (- 1) ^ k * binomial(n + 1,k) * binomial(5 * n - 5 * k + 5,n - 5 * k). •

► [A002294] 1,1,5,35,285,2530,23751,231880,2330445,23950355,250543370,26589 68130,28558343775,309831575760,3390416787880,37377257159280,414741863546 285,4628362722856425,51912988256282175,584909606696793885,66170786469606 13370 ⋆ a(n) = binomial(5 * n, n) / (4 * n + 1). • a(n) = binomial(5 * n, n - 1) / n, n >= 1, a(0) = 1. From the Lagrange series of the o.g.f. A(x) with its abo ve given implicit equation. • a(n) = upper left term in M ^ n, M = the product ion matrix: • a(0) = 1; a(n) = Sum _{ i1 + i2 + ... + i5 = n - 1 } a(i1) * a(i2) * ... * a(i5) for n >= 1. - _ Robert FERREOL _ , Apr 03 2015 •

► [A369128] 1,5,35,285,2530,23752,231910,2331040,23960235,250692365,2661086 895,28587333725,310217791590,3395464391870,37442295427120,41557088542528 0,4638842010800025,52044582325415025,586553425250933055,6637525235622842 585,75387741117556006435 ⋆ Expansion of (1 / x) * Series _ Reversion(x / ((1 + x) ^ 5 + x ^ 5)). • a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 5) } binom ial(n + 1,k) * binomial(5 * n - 5 * k + 5,n - 5 * k). •

► [A051406] 1,5,35,287,2501,22265,199655,1794707,16145801,145292525,1307573 675,11767985927,105911341901,953200482785,8578799562095,77209181709947,69 4882592342801,6253943201945045,56285488430084915,506569394708502767,4559 124548889740501 ⋆ a(n) = (3 ^ n + 1) * (3 ^ (n + 1) + 1) / 8. • a(n) = 13 * a(n - 1) - 39 * a(n - 2) + 27 * a(n - 3). G.f.: - (1 - 8 * x + 9 * x ^ 2) / ((x - 1) * (3 * x - 1) * (9 * x - 1)). [_ R. J. Mathar _ , Jul 25 2009] •

► [A000356] 1,5,35,294,2772,28314,306735,3476330,40831076,493684828,6114096 716,77266057400,993420738000,12964140630900,171393565105575,229196885101 9650,30961684478686500,422056646314726500 ⋆ Number of rooted cubic maps w ith 2n nodes and a distinguished Hamiltonian cycle: (2n)!(2n + 1)! / (n! ^ 2 * (n + 1)!(n + 2)!). • a(n) = Product _{ 1 <= i <= j <= n - 1 } (i + j + 3) / (i + j - 1). • a(n) = (2 ^ (n - 1)) * Product _{ 1 <= i <= j <= n - 1 } (i + j + 3) / (i + j) for n >= 1. •

► [A370844] 1,5,35,295,2760,27556,287564,3098780,34216020,385106280,4401850 866,50957904938,596231618166,7039674475190,83767631913840,10035640499999 16,12094813260406732,146534778450346908,1783695235540931924,218036153932 76536720,2675376025837937485 1 ⋆ Expansion of (1 / x) * Series _ Reversion(x / (1 / (1 - x) ^ 4 + x)). • a(n) = hypergeom([4 / 5, 6 / 5, 7 / 5, 8 / 5, - n], [5 / 4, 3 / 2, 7 / 4, 2], - 3125 / 256). - _ Stefano Spezia _ , Mar 03 2024 •

► [A371540] 1,5,35,310,3055,32151,353755,4019825,46808750,555621400,6698027 100,81779512155,1009194553315,12567338972700,157725047958100,19929907413 98625,253335859769262 75,323725357496659565,4156196637610760235,535851063 40408250725,6934914931954791 27175 ⋆ G.f. A(x) satisfies A(x) = 1 / (1 - x * A (x) / (1 + x)) ^ 5. • a(n) = Sum _{ k=0..n } (- 1) ^ (n - k) * binomial(n - 1,n - k) * binomial(6 * k + 4,k) / (k + 1). •

► [A262248] 0,0,5,35,330,715,2380,3876,8855,23751,31465,66045,101270,123410,1 78365,292825,455126,521855,766480,971635,1088430,1502501,1837620,2441626,3 464840 ⋆ Number of intersections of diagonals in the interior of a regular p - go n where p is the n - th prime. • a(n) = (prime(n) ^ 4 - 6 * prime(n) ^ 3 + 11 * prime(n) ^ 2 - 6 * prime(n)) / 24. •

► [A042029] 1,5,36,41,77,580,2977,137522,690587,4971631,5662218,10633849,80 099161,411129654,18992063245,95371445879,686592184398,781963630277,14685 55814675,1106185433 3002,56777827479685,2622841918398512,1317098741947224 5,94819753854704227 ⋆ Denominators of continued fraction convergents to sqrt (538). • a(n) = 138102 * a(n - 7) + a(n - 14). - _ Wesley Ivan Hurt _ , Sep 05 2022 •

► [A096945] 5,36,148,456,1170,2640,5412,10296,18447,31460,51480,81328,12464 4,186048,271320,387600,543609,749892,1019084,1366200,1808950,2368080,30677 40,3935880,5004675 ⋆ Eighth column of (1,5) - Pascal triangle A096940. • a(0) =5, a(1)=36, a(2)=148, a(3)=456, a(4)=1170, a(5)=2640, a(6)=5412, a(7)=102 96, a(n)=8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8). - _ Harvey P. Dale _ , Aug 16 2014 •

► [A063417] 5,36,149,470,1251,2954,6371,12789,24210,43637,75438,125801,20329 4,319545,490058,735182,1081251,1561914,2219675,3107664,4291661,5852396,788 8149,10517675,13883480 ⋆ Ninth column (k=8) of septinomial array A063265. • a(n) = 5 * C(n + 2,2) + 21 * C(n + 2,3) + 35 * C(n + 2,4) + 35 * C(n + 2,5) + 21 * C(n + 2,6) + 7 * C(n + 2,7) + C(n + 2,8) (see comment in A213889). - _ Vladimir Shevelev _ and _ Peter J. C. Moses _ , Jun 22 2012 • a(0)=5, a(1)=36, a(2)=149, a(3)=470, a(4)=1251, a(5)=2954, a(6)=6371, a(7)=12789, a(8) =24210, a(n)=9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9). - _ Harvey P. D ale _ , Aug 22 2012 •

► [A271254] 1,5,36,188,876,3788,15756,64268,259596,1043468,4184076,1675674 8,67067916,268353548,1073577996,4294639628 ⋆ Number of active (ON,black) c ells at stage 2 ^ n - 1 of the two - dimensional cellular automaton defined by ”R ule 323”, based on the 5 - celled von Neumann neighborhood. • a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3) for n>4. •

► [A271055] 1,5,36,212,948,3956,16116,65012,261108,1046516,4190196,1676901 2,67092468,268402676,1073676276,4294836212 ⋆ Number of active (ON,black) c ells at stage 2 ^ n - 1 of the two - dimensional cellular automaton defined by ”R ule 259”, based on the 5 - celled von Neumann neighborhood. • a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3) for n>4. •

► [A212329] 0,5,36,217,1272,7421,43260,252145,1469616,8565557,49923732,2909 76841,1695937320,9884647085,57611945196,335787024097,1957110199392,114068 74172261,66484134834180,387497934832825,2258503474162776,131635229101438 37,7672263398670025 2 ⋆ Expansion of x * (5 + x) / (1 - 7 * x + 7 * x ^ 2 - x ^ 3). • a(n) = + 7 * a(n - 1) - 7 * a(n - 2) + 1 * a(n - 3). • a(n) = (- 6 + (5 - 3 * sqrt(2)) * (3 + 2 * sqrt(2)) ^ n + (3 - 2 * sqrt(2)) ^ n * (5 + 3 * sqrt(2))) / 4. •

► [A015547] 0,1,5,36,235,1571,10440,69481,462245,3075516,20462275,13614205 1,905795280,6026538961,40096442885,266774142996,1774931586715,1180917350

6531,78570114986520,522751483504441,3478028682373925,23140409730418476 ⋆ Expansion of x / (1 - 5 * x - 11 * x ^ 2). ● a(n) = 5 * a(n - 1) + 11 * a(n - 2). ● a(n) = (1 / 69) * sqrt(69) * [5 / 2 + (1 / 2) * sqrt(69)] ^ n - (1 / 69) * [5 / 2 - (1 / 2) * sqrt(69)] ^ n * sqrt(69), with n>=0. - _ Paolo P. Lava _ , Aug 06 2008 ●

▶ [A098305] 0,1,5,36,245,1681,11520,78961,541205,3709476,25425125,174266401,1194439680,8186811361,56113239845,384605867556,2636127833045,18068288963761,123841894913280,848824975429201,5817932933091125,39876705556208676,273319005960369605,1873356336166378561 ⋆ Unsigned member r= - 5 of the family of Chebyshev sequences S _ r(n) defined in A092184. ● a(n) = 7 * a(n - 1) - a(n - 2) + 2 * (- 1) ^ (n + 1), n>=2, a(0)=0, a(1)=1. ● a(n) = 6 * a(n - 1) + 6 * a(n - 2) - a(n - 3), n>=3, a(0)=0, a(1)=1, a(2)=5. ● a(n) = (Lucas(4 * n) - 2 * (- 1) ^ n) / 9. - _ Greg Dresden _ , Oct 10 2020 ●

▶ [A055270] 1,5,36,252,1764,12348,86436,605052,4235364,29647548,207532836,1452729852,10169108964,71183762748,498286339236,3488004374652,24416030622564,170912214357948,1196385500505636,8374698503539452,58622889524776164,410360226673433148,2872521586714032036 ⋆ a(n) = 7 * a(n - 1) + (- 1) ^ n * binomial(2,2 - n) with a(- 1)=0. ● a(n) = 6 ^ 2 * 7 ^ (n - 2), n >= 2 with a(0)=1, a(1)=5. ●

▶ [A164110] 5,36,262,1920,14132,104304,771160,5707584,42271568,313200960,2321178208,17205305856,127543611200,945542935296,7010032442752,51971929512960,385322051101952,2856819009782784,21180878379927040 ⋆ a(n) = 12 * a(n - 1) - 34 * a(n - 2) for n > 1; a(0) = 5, a(1) = 36. ● a(n) = ((5 + 3 * sqrt(2)) * (6 + sqrt(2)) ^ n + (5 - 3 * sqrt(2)) * (6 - sqrt(2)) ^ n) / 2. ●

▶ [A285392] 1,5,36,264,1944,14328,105624,778680,5740632,42321528,312006168,2300197176,16957700568,125016939000,921660044184,6794737129656,50092713636696,369297577174392,2722565630929176,20071519752269880,147972890199278808,1090897747662707 12 ⋆ Start with a single cell at coordinates (0, 0), then iteratively subdivide the grid into 3 X 3 cells and remove the cells whose sum of modulo 2 coordinates is 0; a(n) is the number of cells after n iterations. ● a(0) = 1, a(1) = 5, a(2) = 36, a(n) = 9 * a(n - 1) - 12 * a(n - 2). ● a(n) = (2 ^ (- 3 - n) * ((9 - sqrt(33)) ^ n * (- 13 + 3 * sqrt(33)) + (9 + sqrt(33)) ^ n * (13 + 3 * sqrt(33)))) / sqrt(33) for n>0. - _ Colin Barker _ , Apr 18 2017 ● a(n) = (1 / 4) * ([n=0] + (2 * sqrt(3)) ^ (n - 1) * (6 * sqrt(3) * ChebyshevU(n, 9 / (4 * sqrt(3))) - 7 * ChebyshevU(n - 1, 9 / (4 * sqrt(3))))). - _ G. C. Greubel _ , Dec 11 2021 ●

▶ [A253470] 1,5,36,280,2201,17325,136396,1073840,8454321,66560725,524031476,4125691080,32481497161,255726286205,2013328792476,15850904053600,124793903636321,982500325036965,7735208696659396,60899169248238200,479458145289246201,3774765993065731405 ⋆ Indices of centered triangular numbers (A005448) which are also centered pentagonal numbers (A005891). ● a(n) = 9 * a(n - 1) - 9 * a(n - 2) + a(n - 3). ● a(n) = (6 - (4 - sqrt(15)) ^ n * (3 + sqrt(15)) + (- 3 + sqrt(15)) * (4 + sqrt(15)) ^ n) / 12. - _ Colin Barker _ , Mar 03 2016 ●

▶ [A052203] 1,5,36,286,2380,20349,177100,1560780,13884156,124403620,1121099408,10150595910,92263734836,841392966470,7694644696200,70539987842520,648045936942300,5964720367660956,54991682779774384,507749884105448600,4694436188839116720 ⋆ a(n) = (4n + 1) * binomial(4n,n) / (3n + 1). ● a(n) = C(4n + 1, n); a(n) is asymptotic to c / sqrt(n) * (256 / 27) ^ n with c=0.614... - _ Benoit Cloitre _ , Jan 27 2003 [c = 2 ^ (5 / 2) / (3 ^ (3 / 2) * sqrt(Pi)) = 0.61421182128... - _ Vaclav Kotesovec _ , Feb 14 2019] ● a(n) = [x ^ n] 1 / (1 - x) ^ (3 * n + 2). - _ Ilya Gutkovskiy _ , Oct 03 2017 ●

▶ [A371775] 1,5,36,287,2396,20539,179125,1581282,14085997,126357958,1139825257,10328791996,93951594230,857328996139,7844767641718,71951952863375,661311093597592,6089245462608316,56160004711457917,518707264791838694,4797177987838607105 ⋆ a(n) = Sum _{ k=0..floor(n / 3) } binomial(4 * n - k + 1,n - 3 * k). ● a(n) = [x ^ n] 1 / (((1 - x) ^ 2 - x ^ 3) * (1 - x) ^ (3 * n)). ●

▶ [A364765] 1,1,5,36,304,2808,27475,279845,2935987,31511097,344344868,3818320487,42855633210,485923475563,5557803724920,64046876264292,742908320701832,8667090253409215,101631581618367133,1197190915359577973,14160413911721178800 ⋆ G.f. satisfies A(x) = 1 + x * A(x) ^ 4 / (1 - x * A(x) ^ 5). ● a(n) = (1 / n) * Sum _{ k=0..n - 1 } binomial(n,k) * binomial(4 * n + k,n - 1 - k) for n > 0. ● a(n) = (1 / n) * Sum _{ k=0..n - 1 } (- 1) ^ k * binomial(n,k) * binomial(6 * n - 2 * k,n - 1 - k) for n > 0. ●

▶ [A246510] 1,5,36,305,2821,27690,282699,2967285,31785786,345815975,3808549531,42360017130,474990254821,5362633500755,60897115958286,695012481567465,7966829676299139,91674042449673960,1058486539560201051,12258669983923625475,142359286920427682046,1657287004720545992505 ⋆ G.f.: Sum _{ n>=0 } x ^ n / (1 - 4 * x) ^ (2 * n + 1) * [Sum _{ k=0..n } C(n,k) ^ 2 * 3 ^ k * x ^ k] * [Sum _{ k=0..n } C(n,k) ^ 2 * 4 ^ k * x ^ k]. ● a(n) = Sum _{ k=0..[n / 2] } 3 ^ k * Sum _{ j=0..n - 2 * k } C(n - k, k + j) ^ 2 * C(k + j, j) ^ 2 * 4 ^ j. ●

▶ [A365754] 1,5,36,305,2833,27916,286632,3033513,32858595,362515725,4059475368,46021411644,527163783916,6092053249160,70939443268112,831558454664649,9804617762941095,116201796106426543,1383557994261012100,16541672701743657545,198510770031798279825 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 - x) / (1 + x) ^ 4). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..n } binomial(n + k,k) * binomial(4 * (n + 1),n - k). ●

▶ [A249861] 1,5,37,101,229,485,2533,6629,23013,88549,219621,481765,1006053,3103205,7297509,24074725,158292453,1232034277,3379517925,7674485221,282552392165,1382064019941,5780110531045,14576203553253,84944947730917 ⋆ a(n) are values of k that yield "record - breaking" integer sequence lengths for the recursion: b(i) = 3 * (b(i - 1) + b(i - 2)) / 2, with b(0) = 1 and b(1) = k. ● a(n) = a(n - 1) + 2 ^ (Nmax(a(n - 1)) - 1), where Nmax at a(n - 1) (i.e., the prior record - breaking k value) must be found by calculation of b(i) and "observation". ●

▶ [A023289] 5,37,127,347,977,2017,3607,5477,9137,10487,13687,14057,14107,19037,19697,19727,20507,22157,23887,24097,25237,25307,26717,26777,27107 ⋆ Primes that remain prime through 3 iterations of function f(x) = 6x + 7. ● a(n) == 7 (mod 10), for n > 1. - _ John Cerkan _ , Sep 21 2016 ●

▶ [A305861] 5,37,165,613,2085,6757,21285,65893,201765,613477,1856805,5603173,16875045,50756197,152530725,458116453,1375397925,4128290917,12389067045,37175589733,111543546405,334664193637,1004059689765,3012313287013,9037208296485 ⋆ a(n) = 32 * 3 ^ n - 2 ^ (n + 5) + 5. ● a(n) = 6 * a(n - 1) - 11 * a(n - 2) + 6 * a(n - 3). ●

▶ [A273251] 1,5,37,181,789,3285,13397,54101,217429,871765,3491157,13972821,55907669,223663445,894719317,3579008341 ⋆ Number of active (ON,black) cells at stage 2 ^ n - 1 of the two - dimensional cellular automaton defined by "Rule 619", based on the 5 - celled von Neumann neighborhood. ● a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3) for n>3. ●

▶ [A269815] 1,5,37,185,817,3425,14017,56705,228097,914945,3664897,14669825,58699777,234840065,939442177,3757932545 ⋆ Number of active (ON,black) cells at stage 2 ^ n - 1 of the two - dimensional cellular automaton defined by "Rule 35", based on the 5 - celled von Neumann neighborhood. ● a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3) for n>3. ●

▶ [A273539] 1,5,37,197,901,3845,15877,64517,260101,1044485,4186117,16760837,67076101,268369925,1073610757,4294705157 ⋆ Number of active (ON,black) cells at stage 2 ^ n - 1 of the two - dimensional cellular automaton defined by "Rule 779", based on the 5 - celled von Neumann neighborhood. ● a(n) = 5 - 2 ^ (3 + n) + 4 ^ (1 + n). ● a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3) for n>2. ●

▶ [A088582] 1,5,37,229,1253,6373,30949,145637,669925,3029221,13514981,59652325,260978917,1133394149,4891490533,20997617893,89717094629,381774870757,1618725452005,6841405683941,28831638239461,121190614972645,508218707949797,2126699824036069 ⋆ a(n) = n * x ^ n + (n - 1) * x ^ (n - 1) + . . . + x + 1 for x=4. ● a(n) = (13 + (3n - 1) * 4 ^ (n + 1)) / 9 = 9 * a(n - 1) - 24 * a(n - 2) + 16 * a(n - 3). G.f.: (1 - 4x + 16x ^ 2) / ((1 - x)(1 - 4x) ^ 2). - _ R. J. Mathar _ , Jul 22 2009 ●

▶ [A015548] 0,1,5,37,245,1669,11285,76453,517685,3505861,23741525,160777957,1088788085,7373275909,49931836565,338138493733,2289874507445,15507034462021,105013666399445,711152745541477,4815927724500725,32613471569001349 ⋆ Expansion of x / (1 - 5 * x - 12 * x ^ 2). ● a(n) = 5 a(n - 1) + 12 a(n - 2). ● a(n) = (1 / 73) * (5 / 2 + (1 / 2) * sqrt(73)) ^ n * sqrt(73) - (1 / 73) * (5 / 2 - (1 / 2) * sqrt(73)) ^ n * sqrt(73), with n >= 0. - _ Paolo P. Lava _ , Aug 06 2008 ●

▶ [A054417] 1,5,37,249,1657,11037,73533,489905,3263921,21745397,144875541,965212201,6430585769,42842841485,285434194093,1901663763041,12669557966433,84409085446373,562363243040517,3746663234776665 ⋆ Number of connected 3 X n binary matrices with rightmost column [1,0,0]'. ● a(n)=7 * a(n - 1) - 3 * a(n - 2) + 5 * a(n - 3). ●

▶ [A083232] 1,5,37,257,1801,12605,88237,617657,4323601,30265205,211856437,1482995057,10380965401,72666757805,508667304637,3560671132457,24924697927201,174472885490405,1221310198432837,8549171389029857 ⋆ a(n) = (3 * 7 ^ n + (- 1) ^ n) / 4. ● a(n) = (3 * 7 ^ n + (- 1) ^ n) / 4. ●

▶ [A089303] 1,5,37,277,2222,18518,158730,1388888,12345679,111111111,1010101010,9259259259,85470085470,793650793650,7407407407407,69444444444444,653594771241830,6172839506172839,58479532163742690,555555555555555555 ⋆ a(n) = floor((10 ^ n - 1) / (9 * n)). ● a(n) = floor((10 ^ n - 1) / (9n)). ●

▶ [A164595] 5,37,285,2221,17365,135893,1063725,8327069,65187365,510313477,3994949565,31274166541,244827522805,1916614396853,15004076080845,117458316061949,919513867245125,7198347299398117,56351737250814045,441145468418372461,3453475150919885845 ⋆ a(n) = 10 * a(n - 1) - 17 * a(n - 2) for n > 1; a(0) = 5, a(1) = 37. ● a(n) = ((5 + sqrt(18)) * (5 + sqrt(8)) ^ n + (5 - sqrt(18)) * (5 - sqrt(8)) ^ n) / 2. ● a(n) = (1 / 2) * Sum _{ k=0..n } binomial(n,k) * 2 ^ (n - k) * (3 * Q(2 * k + 1) + 2 * Q(2 * k)), where Q(n) are the Pell - Lucas numbers (A002203). - _ G. C. Greubel _ , Apr 21 2020 ●

▶ [A046636] 1,5,37,293,2341,18725,149797,1198373,9586981,76695845,613566757,4908534053,39268272421,314146179365,2513169434917,20105355479333,160842843834661,1286742750677285,10293942005418277,82351536043346213 ⋆ Number of cubic residues mod 8 ^ n. ● a(n) = (4 * 8 ^ n + 3) / 7. ● a(n) = 8 * a(n - 1) - 3 (with a(0)=1). - _ Vincenzo Librandi _ , Nov 18 2010 ●

▶ [A066381] 1,5,37,299,2517,21700,190051,1683218,15033173,135142796,1221246132,11083374659,100946732307,922205369324,8446802334994,77542088287444,713250450657109,6572130378649468,60652194138406780,560522209086365852 ⋆ a(n) = Sum _{ k=0..n } binomial(4 * n,k). ● a(0) = 1, a(n) = 16 * a(n - 1) - 2 * (44 * n ^ 3 - 34 * n ^ 2 - 2 * n + 3) * (4 * n - 4)! / (n! * (3 * n - 1)!). - _ Tani Akinari _ , Sep 02 2014 ● a(n) are special values of the hypergeometric function 2F1, in Maple notation: a(n)=16 ^ n - binomial(4 * n,n + 1) * hypergeom([1, - 3 * n + 1],[n + 2], - 1), n=0,1,... . - _ Karol A. Penson _ , Jun 03 2015 ● a(n) = [x ^ n] 1 / ((1 - 2 * x) * (1 - x) ^ (3 * n)). - _ Ilya Gutkovskiy _ , Oct 25 2017 ●

▶ [A006442] 1,5,37,305,2641,23525,213445,1961825,18205345,170195525,1600472677,15122515985,143457011569,1365435096485,13033485491077,124715953657025,1195966908404545,11490534389896325,110584004488276645,1065853221648055025 ⋆ Expansion of 1 / sqrt(1 - 10 * x + x ^ 2). ● a(n) equals the central coefficient of (1 + 5 * x + 6 * x ^ 2) ^ n. - _ Paul D. Hanna _ , Jun 03 2003 ● a(n) equals the (n + 1) - th term of the binomial transform of 1 / (1 - 2x) ^ (n + 1). - _ Paul D. Hanna _ , Sep 29 2003 ● a(n) = Sum _{ k=0..n } 2 ^ k * binomial(n, k) * binomial(n + k, k). - _ Benoit Cloitre _ , Apr 13 2004 ● a(n) = Sum _{ k=0..n } binomial(n,k) ^ 2 * 2 ^ k * 3 ^ (n - k). - _ Paul D. Hanna _ , Feb 04 2012 ● a(n) = hypergeom([- n, n + 1], [1], - 2). - _ Peter Luschny _ , May 23 2014 ● a(n) = Sum _{ k=0..n } 2 ^ k * C(2 * k, k) * C(n + k, n - k). - _ Paul D. Hanna _ , Aug 17 2014 ●

▶ [A208675] 1,1,5,37,309,2751,25493,242845,2360501,23301307,232834755,2349638259,23905438725,244889453043,2523373849701,26132595017037,271826326839477,2838429951771795,29740725671232119,312573076392760183,3294144659048391059,34802392680979707121 ⋆ Number of words, either empty or beginning with the first letter of the ternary alphabet, where each letter of the alphabet occurs n times and letters of neighboring word positions are equal or neighbors in the alphabet. ● a(n) = Sum _{ k = 0..n } binomial(n,k) * binomial(n - 1,k) * binomial(n + k - 1,k). ● a(n) = Sum _{ k = 1..n } binomial(n,k) * binomial(n - 1,k - 1) * binomial(n + k - 1,k - 1) for n >= 1. ● a(n) = Sum _{ k = 0..n - 1 } (- 1) ^ k * binomial(n - 1,k) * binomial(2 * n - k - 1,n - k) ^ 2. ● a(n) = B(n,n -

1,n - 1) in the notation of Straub, equation 24. Hence ● a(n) = [(x ^ n) * (y * z) ^ (n - 1)] 1 / (1 - x - y - z + x * z + y * z - x * y * z) for n >= 1. ●

▶ [A323219] 0,1,5,37,313,2811,26093,247311,2377905,23104441,226289605,2230309533,22093913449,219786279909,2194096906461,21969023675097,220538907003489,2218881134793411,22368588800763701,225891901214751423,2284746661102951833,23140953249273852519 ⋆ a(n) = [x ^ n] (1 - 4 * x) ^ (- n / 2) * x / (1 - x). ● a(n) = 1 / (- 3) ^ (n / 2) - 4 ^ n * Pochhammer(n / 2,n) / n! * hypergeom ([1,3 * n / 2],[n + 1],4). - _ Robert Israel _ , Jan 28 2019 ●

▶ [A359643] 1,5,37,317,2885,27105,259765,2523813,24768069,244941833,2437083697,24367722725,244639635749,2464477467769,24899468129405,252202062544617,2560119328830725,26038134699958233,265278657849511561,2706809063101138409,27657194997231516145,282941098708193905485 ⋆ a(n) = Sum _{ k=0..n } binomial(n,k) * binomial(4 * k,k). ● a(n) = 4F3(- n,1 / 4,1 / 2,3 / 4 ; 1 / 3, 2 / 3,1 ; - 256 / 27). - _ R. J. Mathar _ , Jan 10 2023 ●

▶ [A199562] 5,37,325,2917,26245,236197,2125765,19131877,172186885,1549681957,13947137605,125524238437,1129718145925,10167463313317,91507169819845,823564528378597,7412080755407365,66708726798666277,600378541187996485 ⋆ 4 * 9 ^ n + 1. ● a(n) = 9 * a(n - 1) - 8. ● a(n) = 10 * a(n - 1) - 9 * a(n - 2). ●

▶ [A246540] 1,5,37,325,3125,31925,339077,3700645,41200981,465736725,5328229797,61552244485,716791570549,8403794763125,99096946864325,1174370518273125,13977636401394069,167001257979441365,2002052157653251557,24073717683854557125,290261630170911545525,3508332484300450371125 ⋆ G.f.: Sum _{ n>=0 } 4 ^ n * x ^ n / (1 - x) ^ (2 * n + 1) * [Sum _{ k=0..n } C(n,k) ^ 2 * x ^ k] ^ 2. ● a(n) = Sum _{ k=0..[n / 2] } 4 ^ k * Sum _{ j=0..n - 2 * k } C(n - k, k + j) ^ 2 * C(k + j, j) ^ 2 * 4 ^ j. ●

▶ [A365842] 1,5,37,325,3141,32261,345605,3818501,43197445,497868805,5825331205,69013667845,826213203973,9979713945605,121472752156677,1488482728148997,18346810389299205,227319830355640325,2829629321065267205,35369618935665131525,443775430273133445125 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 - x) ^ 2 / (1 + x) ^ 3). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..n } binomial(2 * n + k + 1,k) * binomial(3 * (n + 1),n - k). ●

▶ [A369480] 1,5,38,342,3379,35427,387038,4358119,50222276,589439699,7021368716,84669873678,1031603223880,12679812357672,157038146685360,1957792379658934,24549963008189965,309435808369427643,3918185776941808956,49818464846052855850,635788103792527271239 ⋆ Expansion of (1 / x) * Series _ Reversion(x / ((1 + x) ^ 2 * (1 + x + x ^ 2) ^ 3)). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..floor(n / 2) } binomial(3 * n + 3,k) * binomial(5 * n - k + 5,n - 2 * k). ●

▶ [A365839] 1,5,38,345,3454,36786,408848,4687969,55048310,658645110,8001060132,98419541226,1223430822028,15344868505700,193952279202660,2467977904556145,31589883835911846,406463726382152142,5254324418131556900,68206459568715464110,888731044203480723076 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 - x) ^ 3 / (1 + x) ^ 2). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..n } binomial(3 * n + k + 2,k) * binomial(2 * (n + 1),n - k). ●

▶ [A158266] 1,1,5,38,352,3659,41012,484739,5959417,75523708,980470867,12980840984,174675568464,2382923659387,32890264803521,458576476085929,6450351908991558,91437202854436755,1305115286958337403 ⋆ G.f.: A(x) = exp(Sum _{ n>=1 } C(2n - 1,n) ^ 2 * x ^ n / n). ● a(n) = (1 / n) * Sum _{ k=1..n } C(2k - 1,k) ^ 2 * a(n - k) for n>0, with a(0)=1. ●

▶ [A219086] 0,5,39,150,410,915,1785,3164,5220,8145,12155,17490,24414,33215,44205,57720,74120,93789,117135,144590,176610,213675,256289,304980,360300 ⋆ a(n) = floor((n + 1 / 2) ^ 4). ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ● a(n) = (2 * n ^ 4 + 4 * n ^ 3 + 3 * n ^ 2 + n) / 2. - _ J. M. Bergot _ , Apr 05 2014 ● a(n) = Sum _{ i=0..n } i * (4 * i ^ 2 + 1) = n * (n + 1) * (2 * n ^ 2 + 2 * n + 1) / 2. - _ Bruno Berselli _ , Feb 09 2017 ● a(n) = lcm((2 * n + 1) ^ 2 - 1, (2 * n + 1) ^ 2 + 1) / 8 for n>=1. - _ Lechoslaw Ratajczak _ , Mar 26 2017 ● a(n) = ((2 * n + 1) ^ 4 - 1) / 16. - _ Jianing Song _ , Jan 03 2023 ●

▶ [A202391] 5,39,237,1391,8117,47319,275805,1607519,9369317,54608391,318281037,1855077839,10812186005,63018038199,367296043197,2140758220991,12477253282757,72722761475559,423859315570605,2470433131948079 ⋆ Indices of the smallest of four consecutive triangular numbers summing up to a square. ● a(n + 2) = 6 * a(n + 1) - a(n) + 8; a(n + 3) = 7 * a(n + 2) - 7 * a(n + 1) + a(n); a(n + 1) = (- 4 + (7 + 5 * r) * (3 + 2 * r) ^ n + (7 - 5 * r) * (3 - 2 * r) ^ n) / 2 where r = sqrt(2). - _ Paul Weisenhorn _ , Jan 13 2013 ●

▶ [A053573] 1,5,39,265,1871,13065,91519,640505,4483791,31386025,219703199,1537920345,10765446511,75358117385,527506838079,3692547833785,25847834902031,180934844183145,1266543909544159,8865807366284825,62060651565042351 ⋆ a(n) = 5 * a(n - 1) + 14 * a(n - 2), a(0)=1, a(1)=5. ● a(n) = (7 ^ (n + 1) - (- 2) ^ (n + 1)) / 9. ● a(n) = 5 * a(n - 1) + 14 * a(n - 2), with a(0)=1, a(1)=5. ●

▶ [A003482] 0,5,39,272,1869,12815,87840,602069,4126647,28284464,193864605,1328767775,9107509824,62423800997,427859097159,2932589879120,20100270056685,137769300517679,944284833567072,6472224534451829,44361286907595735,304056783818718320 ⋆ a(n) = 7 * a(n - 1) - a(n - 2) + 4, with a(0) = 0, a(1) = 5. ● a(n) = Fibonacci(2 * n) * Fibonacci(2 * n + 3). ● a(n) = Fibonacci(2 * n + 2) ^ 2 - Fibonacci(2 * n + 1) ^ 2. - _ Gary Detlefs _ , Oct 12 2011 ● a(n) = 8 * a(n - 1) - 8 * a(n - 2) + a(n - 3). - _ Vladimir Joseph Stephan Orlovsky _ and _ Vincenzo Librandi _ , Jan 22 2012 ● a(n) = - 4 / 5 + (sqrt(5) / 5 + 2 / 5) * (7 / 2 + 3 * sqrt(5) / 2) ^ n - (sqrt(5) / 5 - 2 / 5) * (7 / 2 - 3 * sqrt(5) / 2) ^ n. - _ Antonio Alberto Olivares _ , May 29 2013 ● a(n) = Sum _{ k=2..2 * n + 1 } Fibonacci(k) ^ 2. ●

▶ [A135849] 1,5,39,297,2259,17181,130671,993825,7558587,57487221,437222007,3325314393,25290849123,192350849805,1462934251071,11126421459153,84622568920011,643601286982629,4894942589100999,37228736851860105,283145067047577843,2153474325825042429 ⋆ a(n) is the ratio of the sum of the bends (curvatures) of the circles in the n - th generation of an Apollonian packing to the sum of the bends in the initial four - circle configuration. ● a(n) = 31 * sqrt(13) * (A ^ n - B ^ n) / 234 - 7 * (A ^ n + B ^ n) / 18 for n>1 where A=3 / (4 - sqrt(13)) and B=3 / (4 + sqrt(13)). - _ R. J. Mathar _ , Apr 24 2008 ●

▶ [A105426] 1,5,39,307,2417,19029,149815,1179491,9286113,73109413,575589191,4531604115,35677243729,280886345717,2211413522007,17410421830339,137071961120705,1079165267135301,8496250175961703,66890836140558323 ⋆ a(0)=1, a(1)=5, a(n)=8 * a(n - 1) - a(n - 2). ● a(n)=(1 / 2) * [4 - sqrt(15)] ^ n - (1 / 30) * [4 - sqrt(15)] ^ n * sqrt(15) + (1 / 2) * [4 + sqrt(15)] ^ n + (1 / 30) * sqrt(15) * [4 + sqrt(15)] ^ n, with n>=0 - _ Paolo P. Lava _ , Jul 08 2008 ●

▶ [A356622] 1,5,39,317,2585,21085,171987,1402873,11443033,93339173,761354199,6210256613,50656169297,413195081581,3370372805763,27491645850097,224245398092113,1829137434684101,14920010771362215 ⋆ Number of ways to tile a hexagonal strip made up of 4 * n equilateral triangles, using triangles and diamonds. ● a(n) = 9 * a(n - 1) - 7 * a(n - 2) + a(n - 3). ●

▶ [A244039] 1,5,39,338,3075,28770,274134,2645844,25781283,253068530,2498678754,24788450076,246889978062,2467197059124,24725226928140,248396412496488,2500825206700323,25225687837101330,254877697946626410,2579123090162503500,2613351297091997385 0,26512617629061836646 0 ⋆ a(n) = 2 ^ (2 * n - 1) * (binomial(3 * n / 2,n) + binomial((3 * n - 1) / 2,n)). ● a(n) = [x ^ n] ((1 + 2 * x) ^ 3 / (1 + x)) ^ n. Cf. A091527. ● a(n) = Sum _{ k = 0..n } (- 1) ^ k * 2 ^ (n - k) * binomial(3 * n,n - k) * binomial(n + k - 1,k). ● a(n) = 2 ^ n * binomial(3 * n, n) * hypergeom([- n, n], [2 * n + 1], 1 / 2). - _ Peter Luschny _ , Mar 07 2022 ●

▶ [A182954] 1,1,5,39,381,4284,53163,710810,10085621,150326044,2336828792,37687170215,628069684439,10782885724300,190248852445782,3442896376032300,63804661588968521,1209314277690837796 ⋆ G.f. satisfies: A(x) = 1 + x * A(x) * A(x * A(x)) ^ 4. ● a(n,m) = Sum _{ k=0..n } m * C(n + m,k) / (n + m) * a(n - k,4k). ●

▶ [A253920] 1,5,39,760,6494,55518,1095199,9363623,80056197,1579275478,13502337152,115440979836,2277314143357,19470360808841,166465812866595,3283885415444596,28076246784010850,240043586712649434,4735360491756963355,40485928392182836139 ⋆ Indices of centered octagonal numbers (A016754) which are also heptagonal numbers (A000566). ● a(n) = a(n - 1) + 1442 * a(n - 3) - 1442 * a(n - 4) - a(n - 6) + a(n - 7). ●

▶ [A153795] 0,5,40,105,200,325,480,665,880,1125,1400,1705,2040,2405,2800,3225,3680,4165,4680,5225,5800,6405,7040,7705,8400 ⋆ 5 times octagonal numbers: a(n) = 5 * n * (3 * n - 2). ● a(n) = 30 * n + a(n - 1) - 25 for n > 0, a(0) = 0. - _ Vincenzo Librandi _ , Aug 03 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A244725] 0,5,40,135,320,625,1080,1715,2560,3645,5000,6655,8640,10985,13720,16875,20480,24565,29160,34295,40000,46305,53240,60835,69120 ⋆ a(n) = 5 * n ^ 3. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>3. ●

▶ [A272586] 1,5,40,200,872,3624,14760,59560,239272,959144,3840680,15370920,61500072,246033064,984197800,3936922280 ⋆ Number of active (ON,black) cells at stage 2 ^ n - 1 of the two - dimensional cellular automaton defined by ”Rule 507”, based on the 5 - celled von Neumann neighborhood. ● a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3) for n>4. ●

▶ [A271092] 1,5,40,216,952,3960,16120,65016,261112,1046520,4190200,16769016,67092472,268402680,1073676280,4294836216 ⋆ Number of active (ON,black) cells at stage 2 ^ n - 1 of the two - dimensional cellular automaton defined by ”Rule 275”, based on the 5 - celled von Neumann neighborhood. ● a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3) for n>4. ●

▶ [A273653] 5,40,220,1040,4550,19040,77448,308640,1209450,4668400,17766892,66718288,247397150,906584000,3285842960,11788924992,41902786770,147668053200,516315206260,1792304871280,6180666260230,21184488791840,72205377800600,244837696095200 ⋆ Number of forests of labeled rooted trees of height at most 1, with n labels, three of which are used for root nodes and any root may contain >= 1 labels. ● a(n) = C(n,3) * Sum _{ j=0..3 } Stirling2(3,j) * j ^ (n - 3). ●

▶ [A269822] 0,5,40,240,1280,6400,30720,143360,655360,2949120,13107200,57671680,251658240,1090519040,4697620480,20132659200,85899345920,365072220160,1546188226560,6528350289920,27487790694400,115448720916480 ⋆ Number of n X 1 0..4 arrays with some element plus some horizontally, diagonally, antidiagonally or vertically adjacent neighbor totalling four exactly once. ● a(n) = 5 * 4 ^ (n - 2) * (n - 1). ●

▶ [A054604] 0,5,40,255,1040,3145,7800,16835,32800,59085,100040,161095,248880,371345,537880,759435,1048640,1419925,1889640,2476175,3200080,4084185,5153720,6436435,7962720 ⋆ a(n) = Sum _{ d|5 } phi(d) * n ^ (5 / d). ● a(n) = n ^ 5 + 4n. ●

▶ [A157794] 1,5,40,259,1727,11677,78887,532826,3599266,24313336,164238089,1109439854,7494345348,50624835011,341974359592 ⋆ a(n) = term (1,1) in M ^ n * [1,0,0,0,...]; M = parity check matrix for the binary Golay code. ● a(n) = term (1,1) in M ^ n * [1,0,0,0,...]; M = parity check matrix for the binary Golay code. ●

▶ [A001656] 1,5,40,260,1820,12376,85085,582505,3994320,27372840,187628376,1285992240,8814405145,60414613805,414088493560,2838203264876,19453338487220,133335155341960,913892777190965,6263914210945105 ⋆ Fibonomial coefficients. ● a(n) = product(Fibonacci(k + 4) / Fibonacci(k), k=1..n). - _ Gary Detlefs _ , Feb 06 2011 ● a(n) = (F(n + 3) ^ 2 - F(n + 2) ^ 2) * F(n + 3) * F(n + 2) / 6, where F(n) is the n - th Fibonacci number. - _ Gary Detlefs _ , Oct 12 2011 ● a(n) = a(- 5 - n) for all n in Z. - _ Michael Somos _ , Sep 19 2014 ●

▶ [A229279] 0,5,40,275,1750,10625,62500,359375,2031250,11328125,62500000,341796875,1855468750,10009765625,53710937500,286865234375,1525878906250,8087158203125,42724609375000,225067138671875,1182556152343750,6198883056640625,32424926757812500 ⋆ Number of ascending runs in { 1,...,5 }^ n. ● a(n) = 5 ^ (n - 1) * (3 * n + 2) for n>0, a(0) = 0. ●

▶ [A125729] 0,5,40,285,2000,14005,98040,686285,4804000,33628005,235396040,1647772285,11534406000,80740842005,565185894040,3956301258285,27694108808000,193858761656005,1357011331592040,9499079321144285 ⋆ Numbers whose base 7 representation is 555....5. ● a(n) = 7 * a(n - 1) + 5 for n > 1. - _ Vincenzo Librandi _ , Sep 30 2010 ●

▶ [A145841] 1,5,40,310,2395,18501,142920,1104060,8528890,65885880,508970002,3931805460,30373291380,234634403620,1812556389540,14002041536004,108166106338760,835585763004880,6454920038905520,49864411953151840,385203777033190008,2975708406629602400 ⋆ Number of 5 - compositions of n. ● a(n + 5) = 10 * a(n + 4) - 20 * a(n + 3) + 20 * a(n + 2) - 10 * a(n + 1) + 2 * a(n). ● a(n)

= sum(k>=0, C(n + 5 * k - 1,n) / 2 ^ (k + 1)). - _ Vaclav Kotesovec _ , Dec 31 2013 ●

▶ [A123943] 0,1,5,40,315,2490,19681,155563,1229604,9719061,76821600,607214857,4799560053,37936780428,299860673343,2370164848026,18734305316497,148080078051971,1170457572108040,9251554605638681,73126326541645648,578006601205833441 ⋆ The (1,5) - entry in the 5 X 5 matrix M ^ n, where M= {{ 5, 3, 2, 1, 1 } , { 3, 2, 1, 1, 0 } , { 2, 1, 1, 0, 0 } , { 1, 1, 0, 0, 0 } , { 1, 0, 0, 0, 0 }} . ● a(n) = 8 * a(n - 1) - 6 * a(n - 3) + a(n - 5) for n>=5 (follows from the minimal polynomial of the matrix M). ●

▶ [A137973] 1,1,5,40,355,3495,36251,391650,4355810,49550130,573811635,6742112506,80175836395,963137138105,11670425726255,142471372540290,1750641388279500,21634966222174020,268734270298502640 ⋆ G.f. satisfies A(x) = 1 + x * (1 + x * A(x) ^ 6) ^ 5. ● a(n) = Sum _{ k=0..n - 1 } C(5 * (n - k),k) / (n - k) * C(6 * k,n - k - 1) for n>0 with a(0)=1. - _ Paul D. Hanna _ , Jun 16 2009 ●

▶ [A371520] 1,5,40,360,3495,35726,378965,4133080,46059020,522196465,6004261226,69849651025,820651943130,9723556336780,116056250171385,1394082307995626,16840510019954835,204453614350921540,2493311080293185200,30528431677508637205,375155454309681439001 ⋆ G.f. A(x) satisfies A(x) = (1 + x * A(x) / (1 - x)) ^ 5. ● a(n) = 5 * Sum _{ k=0..n } binomial(n - 1,n - k) * binomial(5 * k + 4,k) / (4 * k + 5). ●

▶ [A219560] 1,5,40,364,2897,21369,148257,970246,6032341,35850410,204646488,1126463948,5999145787,30999381232,155798366059,763194776551,3650648583934,17079277343463,78262895082681,351708874155894,1551843168854346 ⋆ Number of tripartite partitions of (n,n,n) into distinct triples. ● a(n) = [(x * y * z) ^ n] 1 / 2 * Product _{ i,j,k>=0 } (1 + x ^ i * y ^ j * z ^ k). ●

▶ [A349362] 1,1,5,40,370,3740,40006,445231,5102165,59799505,713496815,8637432580,105826926716,1309793896431,16351672606365,205665994855320,2603696877136060,33151784577226295,424258396639960591,5454120586840761631,7040273249368027775 ⋆ G.f. A(x) satisfies: A(x) = 1 + x * A(x) ^ 6 / (1 + x). ● a(n) = Sum _{ k=0..n } (- 1) ^ (n - k) * binomial(n - 1,k - 1) * binomial(6 * k,k) / (5 * k + 1). ● a(n) = (- 1) ^ (n + 1) * F([7 / 6, 4 / 3, 3 / 2, 5 / 3, 11 / 6, 1 - n], [7 / 5, 8 / 5, 9 / 5, 2, 11 / 5], 6 ^ 6 / 5 ^ 5), where F is the generalized hypergeometric function. - _ Stefano Spezia _ , Nov 15 2021 ●

▶ [A220673] 5,40,376,3560,33720,319400,3025400,28657000,271443000,2571145000,24354235000,230686625000,2185095075000,20697517625000,196049700875000,1857009420625000,17589845701875000,166613409915625000,1578184870646875000 ⋆ Coefficients of formal series in powers of (tan(x)) ^ 2 tan(5 * x) / tan(x) . ● a(n) = delta(n,0) / 5 - 8 * b(n) + 24 * b(n + 1) / 5, n>=0, ●

▶ [A130564] 1,5,40,385,4095,46376,548340,6690585,83615350,1064887395,13770292256,180320238280,2386316821325,31864803599700,428798445360120,5809228810425801,79168272296871450,1084567603590147950 ⋆ Member k=5 of a family of generalized Catalan numbers. ● a(n) = binomial((k + 1) * n - 2,n) / (k * n - 1), with k=5. ● a(n) = (5 / 6) * binomial(6 * n,n) / (6 * n - 1). [_ Bruno Berselli _ , Jan 17 2014] ●

▶ [A041599] 1,1,5,41,46,133,312,445,3872,15933,19805,689303,709108,3525735,28914988,32440723,93796434,220033591,313830025,2730673791,11236525189,13967198980,486121290509,500088489489,2486475248465 ⋆ Denominators of continued fraction convergents to sqrt(317). ● a(n) = 705236 * a(n - 11) + a(n - 22) for n>21. - _ Vincenzo Librandi _ , Dec 21 2013 ●

▶ [A276916] 1,5,41,61,145,181,313,365,545,613,841,925,1201,1301,1625,1741,2113,2245,2665,2813,3281,3445,3961,4141,4705 ⋆ Subsequence of centered square numbers obtained by adding four triangles from A276914 and a central element, a(n) = 4 * A276914(n) + 1. ● a(n) = 4 * n * (2 * n + (- 1) ^ n) + 1. ● a(n) = 4 * n * (2 * n + 1) + 1 for n even. ● a(n) = 4 * n * (2 * n - 1) + 1 for n odd. ● a(n) is sum of two squares; a(n) = k ^ 2 + (k + 1) ^ 2 where k = 2n - (n mod 2). - _ David A. Corneth _ , Sep 27 2016 ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n > 4. ●

▶ [A271017] 1,5,41,185,761,3065,12281,49145,196601,786425,3145721,12582905,50331641,201326585,805306361,3221225465 ⋆ Number of active (ON,black) cells at stage 2 ^ n - 1 of the two - dimensional cellular automaton defined by "Rule 251", based on the 5 - celled von Neumann neighborhood. ● a(n) = 3 * 4 ^ n - 7 for n>0. ● a(n) = 5 * a(n - 1) - 4 * a(n - 2) for n>2. ●

▶ [A027954] 1,5,41,189,674,2098,6050,16703,44995,119575,315460,829060,2174596,5698329,14924829,39081553,102326310,267905078,701397990,1836299475,4807512695,12586252715,32951261576,86267550344,225851410184 ⋆ a(n) = T(2n + 1, n + 2), T given by A027948. ● a(n) = Sum _{ j=0..n - 1 } binomial(2 * n - j + 1, j + 4) for n >= 2. ● a(n) = Fibonacci(2 * n + 6) - (24 + 23 * n + 12 * n ^ 2 + 4 * n ^ 3) / 3 for n >= 2. (End) ●

▶ [A270165] 1,5,41,197,849,3489,14145,56961,228609,915969,3666945,14673921,58707969,234856449,939474945,3757998081 ⋆ Number of active (ON,black) cells at stage 2 ^ n - 1 of the two - dimensional cellular automaton defined by "Rule 107", based on the 5 - celled von Neumann neighborhood. ● a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3) for n>6. ●

▶ [A273313] 1,5,41,217,953,3961,16121,65017,261113,1046521,4190201,16769017,67092473,268402681,1073676281,4294836217 ⋆ Number of active (ON,black) cells at stage 2 ^ n - 1 of the two - dimensional cellular automaton defined by "Rule 643", based on the 5 - celled von Neumann neighborhood. ● a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3) for n>4. ●

▶ [A356198] 5,41,233,1217,6185,31121,155993,780737,3905225,19529201,97652153,488273057,2441389865,12206998481,61035090713,305175650177,1525878644105,7629394006961,38146971607673,190734861184097,953674312211945,4768371573642641 ⋆ Number of edge covers in the n - book graph. ● a(n) = 2 * 5 ^ n - 2 ^ (n + 1) - 1. ● a(n) = 8 * a(n - 1) - 17 * a(n - 2) + 10 * a(n - 3). ●

▶ [A083300] 1,5,41,269,1937,13397,94265,658397,4613153,32278949,225992009,1581825965,11073136049,77510889461,542579414873,3798046338173,26586353065025,186104385361733,1302730955812457,9119115915846221 ⋆ a(n) = (4 * 7 ^ n + (- 3) ^ n) / 5. ● a(n) = (4 * 7 ^ n + (- 3) ^ n) / 5. ●

▶ [A155455] 0,1,5,41,285,2081,14965,108121,780045,5630161,40631525,293240201,2116305405,15273370241,110227737685,795512612281,5741206864365,41434236118321,299030490421445,2158100230000361,15574988996744925 ⋆ a(n) = 5 * a(n - 1) + 16 * a(n - 2), n>1 ; a(0)=0, a(1)=1. ● a(n) = - (1 / 89 ^ (1 / 2)) * 32 ^ n * ((- 1) ^ n * (5 + 89 ^ (1 / 2)) ^ (- n) - (- 5 + 89 ^ (1 / 2)) ^ (- n)). - _ Paolo P. Lava _ , Jan 26 2009, adapted Apr 01 2011 ●

▶ [A198688] 5,41,293,2057,14405,100841,705893,4941257,34588805,242121641,1694851493,11863960457,83047723205,581334062441,4069338437093,28485369059657,199397583417605,1395783083923241,9770481587462693,68393371112238857 ⋆ 6 * 7 ^ n - 1. ● a(n) = 7 * a(n - 1) + 6. a(0) = 8 * a(n - 1) - 7 * a(n - 2), n>1. ●

▶ [A349541] 1,5,41,301,2513,20181,170745,1423101,12161441,103344037,889924553,7650373325,66271512433,574065261173,4996181205657,43511277885597,380108373809985,3323551100483397,29122753514303337,255427680480306285,2243831648555990289,19728657265135701525 ⋆ E.g.f.: exp(x) * (BesselI(0,8 * x) + BesselI(1,8 * x)). ● a(n) = Sum _{ k=0..n } binomial(n,k) * binomial(k,floor(k / 2)) * 4 ^ k. ●

▶ [A155612] 1,5,41,317,2321,16565,116921,821357,5758241,40333925,282416201,1977149597,13840755761,96887416085,678218289881,4747547161037,33232887522881,232630384847045,1628413210489961,11398894023111677 ⋆ 7 ^ n - 3 ^ n + 1. ● a(n) = 10 * a(n - 1) - 21 * a(n - 2) + 12 with a(0)=1, a(1)=5. - _ Vincenzo Librandi _ , Jul 21 2010 ●

▶ [A083884] 1,5,41,365,3281,29525,265721,2391485,21523361,193710245,1743392201,15690529805,141214768241,1270932914165,11438396227481,102945566047325,926510094425921,8338590849833285,75047317648499561,675425858836496045,6078832729528464401 ⋆ a(n) = (3 ^ (2 * n) + 1) / 2. ● a(0) = 1, a(n) = 9 * a(n - 1) - 4. ● a(n) = Sum _{ k=0..n } binomial(2 * n, 2 * k) * 4 ^ k. ● a(n) = (3 ^ n + 1 ^ n + (- 1) ^ n + (- 3) ^ n) / 4. ● a(n) = 10 * a(n - 1) - 9 * a(n - 2). - _ Wesley Ivan Hurt _ , Apr 21 2021 ●

▶ [A026000] 1,5,41,377,3649,36365,369305,3800305,39490049,413442773,4354393801,46082942185,489658242241,5220495115997,55818956905529,598318746037217,6427269150511105,69175175263888037,745778857519239785 ⋆ a(n) = T(2n, n) , where T is the Delannoy triangle (A008288). ● a(n) = hypergeom([- n, - n, n + 1], [1 / 2, 1], 1). - _ Peter Luschny _ , Mar 14 2018 ● a(n) = Sum _{ k = 0..n } C(2 * n, n - k) * C(2 * n + k, k). ● a(n) = C(2 * n, n) * hypergeom([- n, 2 * n + 1], [n + 1], - 1). ●

▶ [A199684] 5,41,401,4001,40001,400001,4000001,40000001,400000001,4000000001,40000000001,400000000001,4000000000001,40000000000001,400000000000001,4000000000000001,40000000000000001 ⋆ a(n) = 4 * 10 ^ n + 1. ● a(n) = 10 * a(n - 1) - 9. ● a(n) = 11 * a(n - 1) - 10 * a(n - 2). ●

▶ [A064087] 1,1,5,41,413,4641,55797,702297,9137549,121909457,1658755685,22929591433,321111942781,4546112358529,64958195967957,935566629270201,13567825195172973,197957440018622769,2903721563443327557,42796201522669935081,633443408407612143453 ⋆ Generalized Catalan numbers C(4; n). ● a(n) = hypergeometric([1 - n, n], [- n], 4) for n > 0. - _ Peter Luschny _ , Nov 30 2014 ●

▶ [A115257] 1,5,41,441,5341,68845,922621,12701245,178338145,2542242545,36677022081,534311328705,7846771001041,116019251361041,1725360846921041,25786805857871441,387084441100423541,5833280243112311194 1 ⋆ Partial sums of binomial(2n,n) ^ 2. ● a(n) = Sum _{ k=0..n } ((2k)! / (k!) ^ 2) ^ 2. a(n) = Sum _{ k=0..n } A000984[k] ^ 2. - _ Alexander Adamchuk _ , Jul 05 2006 ● a(n) = (2 / Pi) * K(16) - ((16 ^ (n + 1) * Gamma(n + 3 / 2) ^ 2) / (Pi * Gamma(n + 2) ^ 2)) * hypergeometric (1,n + 3 / 2,n + 3 / 2;n + 2,n + 2;16). ●

▶ [A062021] 0,5,42,151,548,1185,2542,4403,7608,13621,20834,32535,47980,65609,88278,119947,162368,208869,269194,340007,416580,512305,622286,756003,925432 ⋆ a(n) = Sum _{ i=1..n } Sum _{ j=1..i } (prime(i) ^ 2 - prime(j) ^ 2). ● a(n) = 2 * a(n - 1) - a(n - 2) + (n - 1) * (prime(n) ^ 2 - prime(n - 1) ^ 2) with a(1) = 0, a(2) = 5. ●

▶ [A082145] 1,5,42,336,2640,20592,160160,1244672,9674496,75246080,585761792,4564377600,35602145280,277970595840,2172375244800,16992801914880,133035751833600,1042374243778560,8173537721057280,64136851016908800 ⋆ A subdiagonal of number array A082137. ● a(n) = (2 ^ (n - 1) + (0 ^ n) / 2) * binomial(2 * n + 3, n). ●

▶ [A024492] 1,5,42,429,4862,58786,742900,9694845,129644790,1767263190,24466267020,343059613650,4861946401452,69533550916004,1002242216651368,14544636039226909,212336130412243110,3116285494907301262 ⋆ Catalan numbers with odd index: a(n) = binomial(4 * n + 2, 2 * n + 1) / (2 * n + 2). ● a(n) = 4 ^ n * binomial(2n + 1 / 2, n) / (n + 1). - _ Paul Barry _ , May 10 2005 ● a(n) = binomial(4n + 1,2n + 1) / (n + 1). - _ Paul Barry _ , Nov 09 2006 ● a(n) = (1 / (2 * Pi) * Integral _{ x= - 2..2 } (2 + x) ^ (2 * n) * sqrt((2 - x) * (2 + x)) . - _ Peter Luschny _ , Sep 12 2011 ● a(n) = Sum _{ k=0..n } (k + 1) ^ 2 * binomial(2 * (n + 1),n - k) ^ 2 / (n + 1) ^ 2. - _ Vladimir Kruchinin _ , Oct 14 2014 ● a(n) = (1 / Pi) * 16 ^ (n + 1) * Integral _{ x=0..Pi / 2 } (cos x) ^ (4n + 2) * (sin x) ^ 2. - _ Greg Dresden _ , May 30 2021 ● a(n) = (1 / 4 ^ n) * Product _{ 1 <= i <= j <= 2 * n } (i + j + 2) / (i + j - 1). ●

▶ [A126963] 1,5,43,177,2867,11531,92479,370345,11857475,47442055,3795826291518418695,24295375159,97182800711,777467420263,3109879375897,199032580597603,796130905791967,6369049515119561,25476202478636219,407619274119811709,1630477163761481141 ⋆ Numerators of sequence defined by f(0)=1, f(1)=5 / 4; f(n) = ((6 * n - 1) * f(n - 1) - (2 * n - 1) * f(n - 2)) / (4n). ● a(n) = numerator(Sum _{ k=0..n } binomial(2 * k, k) / 8 ^ k). - _ G. C. Greubel _ , Jan 29 2020 ●

▶ [A221874] 1,5,43,191,1633,7253,62011,275423,2354785,10458821,89419819,397159775,3395598337,15081612629,128943316987,572704120127,4896450447169,21747674952197,185936173675435,825838944063359,7060678149219361,31360132199455445 ⋆ Numbers m such that 10 * m ^ 2 + 6 is a square. ● a(n) = ((- 5 * (- 1) ^ n + 2 * t) * (3 + t) ^ (2 * floor(n / 2)) - (5 * (- 1) ^ n + 2 * t) * (3 - t) ^ (2 * floor(n / 2))) / 10, where t=sqrt(10). ● a(n) * a(n - 3) - a(n - 1) * a(n - 2) = - 36 + 12(- 1) ^ n. ●

▶ [A182191] 1,5,43,265,1559,9101,53059,309265,1802543,10506005,61233499,356895001,2080136519,12123924125,70663408243,411856525345,2400475743839,13990997937701,81545511882379,475282073356585,2770146928257143,16145599496186285,94103450048860579 ⋆ a(n) = 6 * a(n - 1) - a(n - 2) + 12 with n>1, a(0)= -

1, a(1)=5. ● a(n) = - 3 + (1 / 4) * ((4 + sqrt(2)) * (3 + 2 * sqrt(2)) ^ n + (4 - sqrt(2)) * (3 - 2 * sqrt(2)) ^ n). - _ Colin Barker _ , Mar 05 2016 ●

► [A178826] 0,5,43,309,2176,15248,106752,747285,5231019,36617157,256320128,1794240928,12559686528,87917805733,615424640171,4307972481237,30155807368704,211090651580976,1477634561066880,10343441927468213,72404093492277547,506828654445942885,3547800581121600256,24834604067851201856,173842228474958413056 ★ Partial sums of floor(7 ^ n / 9). ● a(n) = round((7 * 7 ^ n - 24 * n - 16) / 54). ● a(n) = floor((7 * 7 ^ n - 24 * n - 7) / 54). ● a(n) = ceiling((7 * 7 ^ n - 24 * n - 25) / 54). ● a(n) = round((7 * 7 ^ n - 24 * n - 7) / 54). ● a(n) = a(n - 3) + (19 * 7 ^ (n - 2) - 4) / 3, n > 3. ● a(n) = 8 * a(n - 1) - 7 * a(n - 2) + a(n - 3) - 8 * a(n - 4) + 7 * a(n - 5), n > 5. ●

► [A082311] 1,5,43,341,2731,21845,174763,1398101,11184811,89478485,715827883,5726623061,45812984491,366503875925,2932031007403,23456248059221,187649984473771,1501199875790165,12009599006321323,96076792050570581 ★ A Jacobsthal sequence trisection. ● a(n) = 7 * a(n - 1) + 8 * a(n - 2). ●

► [A322246] 1,5,43,395,3811,37775,381205,3895925,40193395,417697775,436604347 3,45852847265,483447391309,5114115365585,54252753665083,576948203182475,6148667240501395,65651351673108575,702154850931542305,7520927108084780225,80666557496061224281,866249916689104887005,9312623039533986068863,100216202771039576006495,1079454220008183284872861 ★ Expansion of g.f.: 1 / sqrt(1 - 10 * x - 11 * x ^ 2). ● a(n) = Sum _{ k=0..n } 11 ^ (n - k) * (- 3) ^ k * binomial(n,k) * binomial(2 * k,k). ● a(n) = Sum _{ k=0..n } (- 1) ^ (n - k) * 3 ^ k * binomial(n,k) * binomial(2 * k,k). ● a(n) equals the (central) coefficient of x ^ n in (1 + 5 * x + 9 * x ^ 2) ^ n. ● a(n) = 11 ^ n * 2F1([1 / 2, - n], [1], 12 / 11), where 2F1 is the hypergeometric function. - _ Stefano Spezia _ , Feb 02 2021 ●

► [A156886] 1,5,43,416,4239,44485,475780,5156548,56437231,622361423,6904185523,76964141600,861408728964,9673849095708,108954068684616,1230185577016156,13920106205444335,157814104889538739 ★ a(n) = Sum _{ k=0..n } C(n,k) * C(3 * n + k,k) ● a(n) = Sum _{ k = 0..n } (- 1) ^ (n - k) * C(n,k) * C(3 * n + k,n) * 2 ^ k. ● a(n) = Sum _{ k = 0..n } C(n,k) * C(3 * n,k) * 2 ^ (n - k), ● a(n) = P _ n(0,2 * n,3) where P _ n(a,b,x) is the n - th Jacobi polynomial with parameters a and b. - _ Robert Israel _ , Feb 11 2018 ●

► [A301976] 1,5,43,463,5193,58653,663203,7500343,84825873,959351093,10849935003,122709094303,1387798370393,15695530423373,177511143297043,2007591024144903,22705175829637153,256787863292718693,2904183928335418123,32845338488555237743 ★ Number of no - leaf subgraphs of the 3 X n grid. ● a(n) = 12 * a(n - 1) - 6 * a(n - 2) - 20 * a(n - 3) - 5 * a(n - 4) for n>4. ●

► [A364605] 0,0,0,0,5,44,147,464,1236,3100,7293,16472,35919,76216,158040,321472,643229,1268868,2472147,4764120,9092300,17202636,32294277,60199088,111498175 ★ Number of 6 - cycles in the n - Lucas cube graph. ● a(n) = 4 * a(n - 1) - 2 * a(n - 2) - 8 * a(n - 3) + 5 * a(n - 4) + 8 * a(n - 5) - 2 * a(n - 6) - 4 * a(n - 7) - a(n - 8) for n > 1. ●

► [A109984] 0,5,44,321,2184,14325,91860,580097,3622928,22437477,138049020,844881345,5148375192,31258302933,189199514532,1142148091905,6878977097760,41347348295877,248082231062988,1486116788646977 ★ a(n) = number of steps in all Delannoy paths of length n. ● a(n) = sum _{ k=n..2 * n } k * binomial(n, 2 * n - k) * binomial(k, n). ●

► [A371787] 1,5,44,441,4675,51129,570401,6451688,73715212,848793726,9833394285,114487194485,1338411363535,15700659542105,184722993467063,2178831068873601,25756348168285379,305061478075705411,3619402085862708614,43008294559624639777 ★ a(n) = Sum _{ k=0..floor(n / 2) } (- 1) ^ k * binomial(5 * n - k,n - 2 * k). ● a(n) = [x ^ n] 1 / ((1 - x + x ^ 2) * (1 - x) ^ (4 * n)). ●

► [A003185] 5,45,117,221,357,525,725,957,1221,1517,1845,2205,2597,3021,3477,3965,4485,5037,5621,6237,6885,7565,8277,9021,9797 ★ a(n) = (4 * n + 1)(4 * n + 5). ● a(n) = 32 * n + a(n - 1) + 8 (with a(0)=5). - _ Vincenzo Librandi _ , Nov 12 2010 ● a(0)=5, a(1)=45, a(2)=117, a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Jan 27 2013 ●

► [A027801] 5,45,210,700,1890,4410,9240,17820,32175,55055,90090,141960,216580,321300,465120,658920,915705,1250865,1682450,2231460,2922150,3782350,4843800,6142500,7719075 ★ a(n) = 5 * (n + 1) * binomial(n + 4,5) / 2. ● a(n) = C(n + 1, 2) * C(n + 4, 4) - _ Zerinvary Lajos _ , May 10 2005, corrected by _ R. J. Mathar _ , Feb 13 2016 ●

► [A269911] 1,5,45,221,957,3965,16125,65021,261117,1046525,4190205,16769021,67092477,268402685,1073676285,4294836221 ★ Number of active (ON,black) cells at stage 2 ^ n - 1 of the two - dimensional cellular automaton defined by "Rule 3", based on the 5 - celled von Neumann neighborhood. ● a(n) = 4 ^ (1 + n) - 2 ^ (2 + n) - 3 for n>0. ● a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3) for n>3. ●

► [A249638] 0,0,5,45,245,1305,6605,33405,167405,838845,4196045,20989245,104955245,524820945,2624149445,13120970445,65605075445,328026491505,1640133571805,8200673428605,41003372712605,205016891401905,1025084484848405,5125422563427405 ★ Number of strings of length n over a 5 - letter alphabet that begin with a nontrivial palindrome. ● a(0) = 0; a(1) = 0; a(n + 1) = 5 * a(n) + 5 ^ ceiling((n + 1) / 2) - a(ceiling((n + 1) / 2)). ●

► [A241275] 0,0,5,45,305,1905,11585,69825,419585,2518785,15115265,90696705,544190465,3265163265,19591020545,117546205185,705277394945,4231664697345,25389988839425,152339934347265,914039608705025,5484237657473025,32905425955323905,197432555752914945,1184595334559432705 ★ a(n) = 6 * a(n - 1) + 5 * (2 ^ (n - 1) - 1) for n > 0, a(0) = 0. ● a(n) = 9 * 6 ^ (n - 2) - 5 * 2 ^ (n - 2) + 1. ● a(n) = (4 - 5 * 2 ^ n + 6 ^ n) / 4. G.f.: - 5 * x ^ 2 / ((x - 1) * (2 * x - 1) * (6 * x - 1)). - _ Colin Barker _ , Apr 18 2014 ●

► [A081070] 0,5,45,320,2205,15125,103680,710645,4870845,33385280,228826125,1568397605,10749957120,73681302245,505019158605,3461452808000,23725150497405,162614600673845,1114577054219520,7639424778862805 ★ Lucas(4n) - 2, or 5 * Fibonacci(2n) ^ 2. ● a(n) = 8 * a(n - 1) - 8 * a(n - 2) + a(n - 3). ● a(n) = - 2 + [(7 / 2) - (3 / 2) * sqrt(5)] ^ n + [(7 / 2) + (3 / 2) * sqrt(5)] ^ n, with n>=0. - _ Paolo P. Lava _ , Dec 01 2008 ●

► [A247494] 0,0,0,0,0,5,45,322,2086,13092,82060,523116,3429481,23279555,164244262,1206458632,9228941572,73471779239,608000100209,5222503739340,46493341311706,428345495309624,4078254436854598,40073317276815681,405883920183989049 ★ Number of crossing partitions of { 1,2,...,n } that contain singletons. ● a(n) = Sum _{ k = 0..n - 1 } (- 1) ^ (n - k + 1) * binomial(n,k) * (Bell(k) - Catalan(k)). ●

► [A190540] 0,5,45,335,2385,16775,117585,823415,5764545,40353095,282474225,1977324695,13841283105,96889002215,678223056465,4747561477175,33232930504065,232630513856135,1628413597648305,11398895184848855 ★ 7 ^ n - 2 ^ n. ● a(n) = 9 * a(n - 1) - 14 * a(n - 2). ●

► [A125836] 0,5,45,365,2925,23405,187245,1497965,11983725,95869805,766958445,6135667565,49085340525,392682724205,3141461793645,25131694349165,201053554793325,1608428438346605,12867427506772845,102939420054182765 ★ Numbers whose base 8 or octal representation is 555555555.....5. ● a(n) = 8 * a(n - 1) + 5, with a(1)=0. - _ Vincenzo Librandi _ , Sep 30 2010 ●

► [A067403] 1,5,45,405,3645,32805,295245,2657205,23914845,215233605,1937102445,17433922005,156905298045,1412147682405,12709329141645,114383962274805,1029455660473245,9265100944259205,83385908498332845,750731764849956 05,6754258588364960445,60788327295284644005 ★ Third column of triangle A067402. ● a(n) = 5 * 9 ^ (n - 1) for n>=1, a(0) = 1. ●

► [A022022] 5,45,406,3664,33067,298425,2693244,24306152,219359637,1979690177,17866428166,161242026212,1455186832835,13132858524565,118522219370436,1069646525028644,9653410934956277,87120689404042085,786252089896134534,7095815621924558952,64038747861388870507 ★ Define the sequence S(a(0),a(1)) by a(n + 2) is the least integer such that a(n + 2) / a(n + 1) > a(n + 1) / a(n) for n >= 0. This is S(5,45). ● a(n + 1) = floor(a(n) ^ 2 / a(n - 1)) + 1 for all n > 0. - _ M. F. Hasler _ , Feb 10 2016 ●

► [A005979] 5,45,420,4130,42480,453350,4986860,56251230,648055650,7601584050,90556803600,1093417607850,13359234113250,164935358510470,2055350730457020,25827268868350690,326989527294142480,4168165020885948440,53462092704596804720 ★ Number of Hamiltonian rooted triangulations with n internal nodes and 5 external nodes. ● a(n) = f(n, 5) where f(n, k) is defined in A003122. - _ Sean A. Irvine _ , Feb 02 2015 ●

► [A165225] 1,5,45,425,4025,38125,361125,3420625,32400625,306903125,2907028125,27535765625,260822515625,2470546328125,23401350703125,221660775390625,2099601000390625,19887706126953125,188379056267578125 ★ a(0)=1, a(1)=5, a(n) = 10 * a(n - 1) - 5 * a(n - 2) for n > 1. ● a(n) = ((5 - 2 * sqrt(5)) ^ n + (5 + 2 * sqrt(5)) ^ n) / 2. - _ Klaus Brockhaus _ , Sep 25 2009 ● a(n) = (tan(Pi / 5) ^ (2 * n) + tan(2 * Pi / 5) ^ (2 * n)) / 2 (Smeenk, 2009). - _ Amiram Eldar _ , Apr 03 2022 ●

► [A054318] 1,5,45,441,4361,43165,427285,4229681,41869521,414465525,4102785725,40613391721,402031131481,3979697923085,39394948099365,389969783070561,3860302882606241,38213059042991845,378270287547312205 ★ a(n) - th star number (A003154) is a square. ● a(n) = 11 * (a(n - 1) - a(n - 2)) + a(n - 3). ● a(n) = 1 / 2 + (3 - sqrt(6)) / 12 * (5 + 2 * sqrt(6)) ^ n + (3 + sqrt(6)) / 12 * (5 - 2 * sqrt(6)) ^ n. ● a(n) = a(1 - n) = 10 * a(n - 1) - a(n - 2) - 4. ● a(n) = 12 * a(n - 1) ^ 2 / (a(n - 1) + a(n - 2)) - a(n - 1). ● a(n) = (a(n - 1) + 4) * a(n - 1) / a(n - 2). (End) ● a(n + 1) = 1 + (1 / 2) * Sum _{ k = 1..n } 8 ^ k * binomial(n + k,2 * k). ●

► [A093140] 1,5,45,445,4445,44445,444445,4444445,44444445,444444445,4444444445,44444444445,444444444445,4444444444445,44444444444445,444444444444445,4444444444444445,44444444444444445,444444444444444445,4444444444444444445,44444444444444444445 ★ Expansion of (1 - 6 * x) / ((1 - x) * (1 - 10 * x)). ● a(n) = 4 * 10 ^ n / 9 + 5 / 9. ● a(n) = 10 * a(n - 1) - 5 with a(0)=1. - _ Vincenzo Librandi _ , Aug 02 2010 ● a(n) = 11 * a(n - 1) - 10 * a(n - 2). - _ Wesley Ivan Hurt _ , May 20 2021 ●

► [A137233] 5,45,450,4500,45000,450000,4500000,45000000,450000000,4500000000,45000000000,450000000000,4500000000000,45000000000000,450000000000000,4500000000000000,45000000000000000,450000000000000000 ★ Number of n - digit even numbers. ● a(n) = 9 * 10 ^ (n - 1) / 2 if n > 1. - _ R. J. Mathar _ , May 23 2008 ●

► [A001449] 1,5,45,455,4845,53130,593775,6724520,76904685,886163135,10272278170,119653565850,1399358844975,16421073515280,193253756909160,2280012686716080,26958221130508525 ★ Binomial coefficients binomial(5n,n). ● a(n) = (5 * n)! / ((4 * n)! * (n)!). ● a(n) is asymptotic to c * (3125 / 256) ^ n / sqrt(n), with c = sqrt(5 / (8 * Pi)) = 0.446031029038192778634741 59... - _ Benoit Cloitre _ , Jan 23 2008 ● a(n) = C(5 * n - 1,n - 1) * C(25 * n ^ 2,2) / (3 * n * C(5 * n + 1,3)), n>0. - _ Gary Detlefs _ , Jan 02 2014 ● a(n) = hypergeom([- 4 * n, - n], [1], 1). - _ Peter Luschny _ , Mar 19 2018 ●

► [A371756] 1,5,45,456,4863,53383,597052,6765471,77407257,892270250,10346070471,120542238796,1410040212166,16549315766244,194792566133507,2298472850258746,27179673132135409,322013956853586970,3821532498419234994,45420775578132979989 ★ a(n) = Sum _{ k=0..floor(n / 3) } binomial(5 * n - 2 * k,n - 3 * k). ● a(n) = [x ^ n] 1 / ((1 - x - x ^ 3) * (1 - x) ^ (4 * n)). ●

► [A199753] 5,45,485,5325,58565,644205,7086245,77948685,857435525,9431790765,103749698405,1141246682445,12553713506885,138090848575725,1518999334332965,16708992677662605,183798919454288645,2021788113997175085 ★ 4 * 11 ^ n + 1. ● a(n) = 5 * A083077 ● a(n) = 11 * a(n - 1) - 10. ● a(n) = 12 * a(n - 1) - 11 * a(n - 2). ●

► [A130976] 1,5,45,485,5725,71445,925965,12335685,167817405,2321105525,32536755565,461181239205,6598203881245,95157851939285,1381842797170125,20187779510360325,296499276685062525,4375281190871356725,64836419120040890925 ★ G.f.: 8 / (3 + 5 * sqrt(1 - 16 * x)). ● a(0) = 1; a(n) = (5 / n) * Sum _{ j=0..n - 1 } C(2 * n,j) * (n - j) * 4 ^ j for n > 0. ● a(n) = upper left term in M ^ n, M = an infinite square production matrix as follows: ● a(n) = 4 * 16 ^ n * GAMMA(n + 1 / 2) * hypergeom([1, n + 1 / 2], [n + 2], 16 / 25) / (5 * sqrt(Pi) * (n + 1)!), n=0,1,... ●

► [A232730] 5,45,495,4905,49500,494550,4950000,49495500,495000000,4949955000,49500000000,494999550000,4950000000000,49499995500000,495000000000000,4949999955000000,49500000000000000,494999999955000000000 ★ Number of n - digit numbers that yield an (n + 1) - digit number after Reverse and Add. ● a(1) = 5, a(3) = 495, a(2 * k + 1) = 100 * a(2 * k - 1), k > 1. ● a(2) = 45, a(4) = 4905, a(2 * k) = 110 * a(2 * k - 2) -

1000 * a(2 * k - 4), k > 2. • a(n) = - 45 * (10 ^ (n / 2 - 2) - 11 * 10 ^ (n - 3)) for n>2 even. • a(n) = 99 * 2 ^ (n - 3) * 5 ^ (n - 2) for n>2 odd. • a(n) = 10 * a(n - 1) + 10 * a(n - 2) - 100 * a(n - 3) for n>4. (End) •

► [A248586] 1,5,45,521,6733,92385,1316865,19274925,287694285,4359037985,66837293545,1034774126325,16149186405025,253737607849445,4009771017244485,63681603585696321,1015763347140335565,16264070907887454465 ⋆ a(n)= Sum _{ i=0..n } C(n,i) * C(2i,i) ^ 2. • a(n) = hypergeometric(1 / 2,1 / 2, - n;1,1; - 16). •

► [A096947] 5,46,235,880,2695,7150,17017,37180,75790,145860,267410,470288,797810,1311380,2096270,3268760,4984859,7450850,10935925,15787200,22447425,31475730,43571775,59603700,80640300 ⋆ Tenth column of (1,5) - Pascal triangle A096940. • a(n) = (n + 45) * binomial(n + 8, 8) / 9. •

► [A042533] 1,5,46,235,13206,66265,609591,3114220,175005911,878143775,8078299886,41269643205,2319178319366,11637161240035,107053629479681,546905308638440,3073375091323321,15421565987480004 5,141867468978643272 6,724758910806963675 ⋆ Denominators of continued fraction convergents to sqrt(795). • a(n) = 13252 * a(n - 4) - a(n - 8) for n>7. - _ Vincenzo Librandi _ , Jan 23 2014 •

► [A169963] 5,46,452,4504,45008,450016,4500032,45000064,450000128,4500000256,45000000512,450000001024,4500000002048,45000000004096,450000000008192,450000000016384,4500000000032768,45000000000065536,450000000000131072,4500000000000262144 ⋆ Number of (2n + 1) - digit squares in carryless arithmetic mod 10. • a(n) = 12 * a(n - 1) - 20 * a(n - 2). G.f.: - (14 * x - 5) / ((2 * x - 1) * (10 * x - 1)). - _ Colin Barker _ , May 11 2013 •

► [A371744] 1,5,46,469,5017,55177,617905,7008264,80241790,925457822,10735707149,125128265025,1464140655619,17188834766497,202366206841241,2388313959181973,28246993739096305,334711010978735163,3972765235517468758,47224110710958716845 ⋆ a(n) = Sum _{ k=0..floor(n / 2) } binomial(5 * n - k,n - 2 * k). • a(n) = [x ^ n] 1 / ((1 - x - x ^ 2) * (1 - x) ^ (4 * n)). •

► [A344121] 5,47,243,2301,11905,112747,583343,5524601,28583805,270705447,1400606443,13264566901,68629715705,649963778147,3362856069543,31848225129201,164779947407605,1560563031330847,8074217422972643,76467588535211501,395636653725659505,3746911838225363547,19386196032557315743 ⋆ a(n) is the multiplicative inverse of 24 (mod 7 ^ n). • a(n) = (17 * 7 ^ n + 1) / 24 for n odd; a(n) = (23 * 7 ^ n + 1) / 24 for n even. •

► [A198854] 5,47,383,3071,24575,196607,1572863,12582911,100663295,805306367,6442450943,51539607551,412316860415,3298534883327,26388279066623,211106232532991,1688849860263935,13510798882111487,108086391056891903 ⋆ 6 * 8 ^ n - 1. • a(n) = 8 * a(n - 1) + 7. a(n) = 9 * a(n - 1) - 8 * a(n - 2), n>1. •

► [A215543] 0,5,48,154,350,663,1120,1748,2574,3625,4928,6510,8398,10619,13200,16168,19550,23373,27664,32450,37758,43615,50048,57084,64750 ⋆ Number of standard Young tableaux of shape [3n,3]. • a(n) = (3 * n - 2) * (3 * n + 2) * (n + 1) for n>0, a(0) = 0. •

► [A273385] 1,5,49,225,961,3969,16129,65025,261121,1046529,4190209,16769025,67092481,268402689,1073676289,4294836225 ⋆ Number of active (ON,black) cells at stage 2 ^ n - 1 of the two - dimensional cellular automaton defined by "Rule 659", based on the 5 - celled von Neumann neighborhood. • a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3) for n>4. •

► [A083224] 1,5,49,245,2401,12005,117649,588245,5764801,28824005,282475249,1412376245,13841287201,69206436005,678223072849,3391115364245,33232930569601,166164652848005,1628413597910449,8142067989552245 ⋆ a(n) = (6 * 7 ^ n + (- 7) ^ n) / 7. • a(n) = (6 * 7 ^ n + (- 7) ^ n) / 7. •

► [A351586] 5,49,425,3137,22985,172081,1284953,9579841,71450345,532960209,3975244025,29650441313,221157005321,1649567697393,12303803776025,91771679496321,684507131648297,5105605684127761,38081720625979193,284044154060630177,2118630149395512905,15802450588258380337 ⋆ Number of minimal edge covers of the 2n - crossed prism graph. • a(n) = 5 * a(n - 1) + 12 * a(n - 2) + 40 * a(n - 3) + 56 * a(n - 4) - 8 * a(n - 5) - 32 * a(n - 6) for n > 6. •

► [A198969] 5,49,445,4009,36085,324769,2922925,26306329,236756965,2130812689,19177314205,172595827849,1553362450645,13980262055809,125822358502285,1132401226520569,10191611038685125,91724499348166129,825520494133495165 ⋆ (11 * 9 ^ n - 1) / 2. • a(n) = 9 * a(n - 1) + 4. a(n) = 10 * a(n - 1) - 9 * a(n - 2), n>1. •

► [A155629] 1,5,49,449,3841,31745,258049,2080769,16711681,133955585,1072693249,8585740289,68702699521,549688705025,4397778075649,35183298347009,281470681743361,2251782633816065,18014329790005249,144114913197948929 ⋆ a(n) = 8 ^ n - 4 ^ n + 1 ^ n. • a(n) = 12 * a(n - 1) - 32 * a(n - 2) + 21 with a(0)=1, a(1)=5. - _ Vincenzo Librandi _ , Jul 21 2010 •

► [A001079] 1,5,49,485,4801,47525,470449,4656965,46099201,456335045,4517251249,44716177445,442644523201,4381729054565,43374646022449,429364731169925,4250272665676801,42073361925598085,416483346590304049 ⋆ a(n) = 10 * a(n - 1) - a(n - 2); a(0) = 1, a(1) = 5. • a(n) * a(n + 3) - a(n + 1) * a(n + 2) = 240 . - _ Ralf Stephan _ , Jun 06 2005 • a(n)= ((5 + 2 * sqrt(6)) ^ n + (5 - 2 * sqrt(6)) ^ n) / 2. • a(- n) = a(n). • a(n + 1) = 5 * a(n) + 2 * (6 * a(n) ^ 2 - 6) ^ (1 / 2) - _ Richard Choulet _ , Sep 19 2007 • a(n) = cosh(2 * n * arcsinh(sqrt(2))). - _ Herbert Kociemba _ , Apr 24 2008 • a(n) = (- 1) ^ n * cos(2 * n * arcsin(sqrt(3))). - _ Artur Jasinski _ , Oct 29 2008 •

► [A217398] 5,50,51,52,53,54,55,56,57,58,59,500,501,502,503,504,505,506,507,508,509,510,511,512,513 ⋆ Numbers starting with 5. • a(n) = n + (44 * 10 ^ floor(log _ 10(9 * n - 8)) - 8) / 9. - _ Alan Michael Gómez Calderón _ , May 17 2023 •

► [A302695] 0,5,50,265,996,2985,7610,17185,35320,67341,120770,205865,336220,529425,807786,1199105,1737520,2464405,3429330,4691081,6318740,8392825,11006490,14266785,18295976 ⋆ Number of 6 - cycles in the (n + 5) - path complement graph. • a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). • a(n) = n * (4 + 22 * n + 17 * n ^ 2 + 13 * n ^ 3 + 3 * n ^ 4 + n ^ 5) / 12. •

► [A064054] 5,50,266,1016,3139,8350,19855,43252,87802,168168,306735,536640,905658,1481108,2355962,3656360,5550755,8260934,12075184,17363896,24597925,34370050,47419905,64662780 ⋆ Tenth column of trinomial coefficients. • a(n) = binomial(n + 5, 5) * (n ^ 4 + 66 * n ^ 3 + 1307 * n ^ 2 + 8706 * n + 15120) / (9! / 5!). • a(n) = 5 * binomial(n + 5,5) + 20 * binomial(n + 5,6) + 21 * binomial(n + 5,7) + 8 * binomial(n + 5,8) + binomial(n + 5,9) (see our comment in A026729). - _ Vladimir Shevelev _ and _ Peter J. C. Moses _ , Jun 22 2012 • a(n) = GegenbauerC(N, - n, - 1 / 2) where N = 9 if 9<n else 2 * n - 9. - _ Peter Luschny _ , May 10 2016 •

► [A133646] 1,5,50,400,3500,29500,252500,2147500,18312500,155987500,1329312500,11326187500,96510312500,822337187500,7006995312500,59705092187500,508735320312500,4334829367187500,36936206445312500,314725913242187500 ⋆ a(n)=5 * a(n - 1) + 30 * a(n - 2) for n>=3, a(0)=1, a(1)=5, a(2)=50 . • a(n)=(5 / 2) * [(5 / 2) - (1 / 2) * sqrt(145)] ^ (n - 1) - (15 / 58) * [(5 / 2) - (1 / 2) * sqrt(145)] ^ (n - 1) * sqrt(145) + (15 / 58) * sqrt(145) * [(5 / 2) + (1 / 2) * sqrt(145)] ^ (n - 1) + (5 / 2) * [(5 / 2) + (1 / 2) * sqrt(145)] ^ (n - 1) + (1 / 6) * [C(2 * n,n) mod 2], with n>=0 •

► [A125962] 0,5,50,455,4100,36905,332150,2989355,26904200,242137805,2179240250,19613162255,176518460300,1588666142705,14297995284350,128681957559155,1158137618032400,10423238562291605,93809147060624450,844282323545620055,7598540911910580500 ⋆ Numbers whose base - 9 representation is 555555555.....5. • a(n) = (9 ^ n - 1) * 5 / 8. • a(n) = 9 * a(n - 1) + 5 with n > 0, a(0)=0. - _ Vincenzo Librandi _ , Sep 30 2010 • a(n) = 10 * a(n - 1) - 9 * a(n - 2) for n > 1. •

► [A299868] 5,50,495,4954,49545,495446,4954459,49544595,495445946,4954459459,49544594590,495445945905,4954459459046,49544594590459,495445945904591,4954459459045909,49544594590459095,495445945904590946,4954459459045909459,49544594590459094590,495445945904590945902,4954459459045909459018 ⋆ The sum of the first n terms of the sequence is the concatenation of the first n digits of the sequence, and a(1) = 5. • a(n) = c(n) - c(n - 1), where c(n) = concatenation of the first n digits, c(n) ~ 0.55 * 10 ^ n, a(n) ~ 0.495 * 10 ^ n. See A300000 for the proof. - _ M. F. Hasler _ , Feb 22 2018 •

► [A093143] 1,5,50,500,5000,50000,500000,5000000,50000000,500000000,5000000000,50000000000,500000000000,5000000000000,50000000000000,500000000000000,5000000000000000,50000000000000000,500000000000000000 ⋆ Expansion of (1 - 5 * x) / (1 - 10 * x). • a(n) = 5 * 10 ^ n / 10 for n>0. •

► [A199762] 5,50,545,5990,65885,724730,7972025,87692270,964614965,10610764610,116718410705,1283902517750,14122927695245,155352204647690,1708874251124585,18797616762370430,206773784386074725,2274511628246821970 ⋆ (9 * 11 ^ n + 1) / 2. • a(n) = 11 * a(n - 1) - 5. • a(n) = 12 * a(n - 1) - 11 * a(n - 2). •

► [A093146] 1,5,50,750,12500,212500,3625000,61875000,1056250000,18031250000,307812500000,5254687500000,89703125000000,1531328125000000,26141406250000000,446261718750000000,7618164062500000000 ⋆ Third binomial transform of Pell(3n - 1). • a(n) = (10 + 5 * sqrt(2)) ^ n * (1 / 2 - sqrt(2) / 4) + (10 - 5 * sqrt(2)) ^ n * (1 / 2 + sqrt(2) / 4). •

► [A322927] 0,1,5,51,55,551,555,5551,5555,55551,55555,555551,555555,5555551,55555555,555555551,5555555555,55555555555,555555555555,555555555555 ⋆ Expansion of x * (1 + 5 * x + 40 * x ^ 2) / ((1 - x ^ 2) * (1 - 10 * x ^ 2)). • a(n) = 11 * a(n - 2) - 10 * a(n - 4). • a(n) = 5 * (10 ^ n - 1) / 9 for n even; a(n) = (5 * 10 ^ n - 41) / 9 otherwise. •

► [A041043] 1,5,51,260,2651,13515,137801,702520,7163001,36517525,372338251,1898208780,19354426051,98670339035,1006057816401,5128959421040,52295652026801,266607219555045,2718367847577251,13858446457441300 ⋆ Denominators of continued fraction convergents to sqrt(27). • a(n) = 52 * a(n - 2) - a(n - 4). G.f.: - (x ^ 2 - 5 * x - 1) / (x ^ 4 - 52 * x ^ 2 + 1). - _ Colin Barker _ , Jul 15 2012 •

► [A362516] 1,5,51,293,1383,6017,25315,104941,431775,1768377,7218555,29388325,119381239,484031537,1959295251,7919693789,31972642767,128937189161,519476334379,2091181293589,8412008183079,33816433653921,135865503379395,545598121631437,2190000348372223 ⋆ Number of vertex cuts in the n - gear graph. • a(n) = 2 * (4 ^ n - 1) + 2 * n - 4 * n ^ 2 - (3 - sqrt(17)) / 2) ^ n - (3 + sqrt(17)) / 2) ^ n. • a(n) = 10 * a(n - 1) - 34 * a(n - 2) + 44 * a(n - 3) - 13 * a(n - 4) - 14 * a(n - 5) + 8 * a(n - 6). •

► [A145641] 5,51,455,3855,31775,258111,2080895,16711935,133956095,1072694271,8585742335,68702703615,549688713215,4397778092031,35183298379775,281470681808895,2251782633947135,18014329790267391,144114913198473215,1152920405096267775,9223367638810361855 ⋆ Numbers whose binary representation is the concatenation of n 1's, n 0's and n 1's. • a(n) = (2 ^ n - 1) * (2 ^ (2 * n) + 1) = 8 ^ n - 4 ^ n + 2 ^ n - 1. - _ Alois P. Heinz _ , Nov 04 2012 •

► [A041040] 5,51,515,5201,52525,530451,5357035,54100801,546365045,5517751251,55723877555,562756526801,5683289145565,57395647982451,579639768970075,5853793337683201,59117573145802085,597029524795704051 ⋆ Numerators of continued fraction convergents to sqrt(26). • a(n) = 10 * a(n - 1) + a(n - 2), a(0)=5, a(1)=51. • a(n) = (5 / 2) * ((5 + sqrt(26)) ^ n + (5 - sqrt(26)) ^ n) + (1 / 2) * sqrt(26) * ((5 + sqrt(26)) ^ n - (5 - sqrt(26)) ^ n), with n >= 0. - _ Paolo P. Lava _ , Nov 28 2008 •

► [A088320] 1,5,51,515,5201,52525,530451,5357035,54100801,546365045,5517751251,55723877555,562756526801,5683289145565,57395647982451,579639768970075,5853793337683201,59117573145802085,597029524795704051,6029412821102842595,608911577358241300 01,614940990179344142605 ⋆ a(n) = 10 * a(n - 1) + a(n - 2), starting with a(0) = 1 and a(1) = 5. • a(n) = 10 * a(n - 1) + a(n - 2), starting with a(0) = 1 and a(1) = 5. • a(n) = ((5 + sqrt(26)) ^ n + (5 - sqrt(26)) ^ n) / 2. • a(n) = Sum _{ k=0..floor(n / 2) } C(n, 2 * k) * 26 ^ k * 5 ^ (n - 2 * k). • a(n) = (- i) ^ n * T(n, 5 * i), with T(n, x) Chebyshev's polynomials of the first kind (see A053120) and i ^ 2= - 1. (End) •

► [A081075] 5,52,374,2581,17708,121390,832037,5702884,39088166,267914293,1836311900,12586269022,86267571269,591286729876,4052739537878,27777890035285,190392490709132,1304969544928654,8944394323791461 ⋆ a(n) = Fibonacci(4 n + 2) - 3. • a(n) = 8 * a(n - 1) - 8 * a(n - 2) + a(n - 3). • a(n) = - 3 + 4 * ((7 / 2 - (3 / 2) * sqrt(5)) ^ n + (7 / 2 + (3 / 2) * sqrt(5)) ^ n) + (9 / 5) * sqrt(5) ((7 / 2 + (3 / 2) * sqrt(5)) ^ n - (7 / 2 - (3 / 2) * sqrt(5)) ^ n). - _ Paolo P. La

va _ , Dec 01 2008 ● a(n) = Fibonacci(2 * n + 3) * Lucas(2 * n - 1). - _ Ehren Metcalfe _ , Apr 21 2019 ●

▶ [A075540] 5,53,157,173,211,257,263,373,511,537,563,593,607,653,733,947,977,999,1073,1103,1123,1187,1223,1239,1367 ⋆ Integers that are the average of three successive primes. ● a(n) = (1 / 3) (p(i) + p(i + 1) + p(i + 2)), for some i(n). ●

▶ [A198963] 5,53,485,4373,39365,354293,3188645,28697813,258280325,2324522933,20920706405,188286357653,1694577218885,15251194969973,137260754729765,1235346792567893,11118121133111045,100063090197999413,900567811781994725 ⋆ 6 * 9 ^ n - 1. ● a(n) = 9 * a(n - 1) + 8. a(n) = 10 * a(n - 1) - 9 * a(n - 2), n> 1. ●

▶ [A350995] 5,53,533,5333,53333,533333,5333333,53333333,533333333,5333333333,53333333333,533333333333,5333333333333,53333333333333,533333333333333,5333333333333333,53333333333333333,533333333333333333,5333333333333333333,53333333333333333333,533333333333333333333,5333333333333333333333,53333333333333333333333,533333333333333333333333 ⋆ a(n) = (16 * 10 ^ n - 1) / 3. ● a(n) = 10 * a(n - 1) + 3, n>0. ● a(n) = 11 * a(n - 1) - 10 * a(n - 2), n>1. ●

▶ [A221544] 5,54,364,1386,4018,9665,20386,39007,69242,115813,184570,282611,418402,601897,844658,1159975,1562986,2070797,2702602,3479803,4426130,5567761,6933442,8554607,10465498 ⋆ Number of 0..n arrays of length 6 with each element differing from at least one neighbor by something other than 1, starting with 0. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>10. ●

▶ [A087125] 0,5,54,539,5340,52865,523314,5180279,51279480,507614525,5024865774,49741043219,492385566420,4874114620985,48248760643434,477613491813359,4727886157490160,46801248083088245,463284594673392294,4586044698650834699,45397162391834954700 ⋆ Indices k of hex numbers H(k) that are also triangular. ● a(n) = 11 * a(n - 1) - 11 * a(n - 2) + a(n - 3) for n > 2. - _ Colin Barker _ , Jun 23 2015 ● a(n) = (- 4 - (5 - 2 * sqrt(6)) ^ n * (- 2 + sqrt(6)) + (2 + sqrt(6)) * (5 + 2 * sqrt(6)) ^ n) / 8. - _ Colin Barker _ , Mar 05 2016 ● a(n) = 10 * a(n - 1) - a(n - 2) + 4 for n > 1. - _ Charlie Marion _ , Feb 14 2023 ● a(n) = ((x ^ (n + 1) + 1) * (x ^ n - 1)) / (2 * x ^ n * (x - 1)), with x=5 + 2 * sqrt(6). - _ Federico Provvedi _ , Apr 04 2023 ●

▶ [A110430] 5,54,549,5499,54999,549999,5499999,54999999,549999999,5499999999,54999999999,549999999999,5499999999999,54999999999999,549999999999999,5499999999999999,54999999999999999,549999999999999999,5499999999999999999 ⋆ Arithmetic mean of all n - digit positive even numbers. ● a(n) =1 / 2 { 10 ^ (n - 1) + 10 ^ n - 2 } ●

▶ [A015221] 1,5,55,91,285,385,819,1015,1785,2109,3311,3795,5525,6201,8555,9455,12529,13685,17575,19019,23821,25585,31395,33511,40425 ⋆ Odd square pyramidal numbers. ● a(n) = 3 * a(n - 2) - 3 * a(n - 4) + a(n - 6) + 128. ● a(n) = (1 + 4 * n + (- 1) ^ n) * (2 + 4 * n + (- 1) ^ n) * (3 + 4 * n + (- 1) ^ n) / 24. ●

▶ [A103326] 5,55,305,2255,15005,104005,709805,4873055,33379505,228841255,1568358005,10750060805,73681030805,505019869255,3461450947505,23725155368255,162614587921805,1114577087604805,7639424691459005,52361396626646255,358890349406803505 ⋆ a(n) = Fibonacci(5n) / Fibonacci(n). ● a(n) = L(4n) + (- 1) ^ n * L(2n) + 1, where L(n) = A000032, the Lucas numbers. ● a(n) = 1 + L(n) * L(3n). - Neven Juric, Jan 05 2009 ● a(n) = 25 * (Fibonacci(n) ^ 4 + (- 1) ^ n * Fibonacci(n) ^ 2) + 5. - _ Gary Detlefs _ , Dec 22 2012 ● a(n) = 1 + (1 / 2 * (7 - 3 * sqrt(5))) ^ n + (1 / 2 * (- 3 - sqrt(5))) ^ n + (1 / 2 * (- 3 + sqrt(5))) ^ n + (1 / 2 * (7 + 3 * sqrt(5))) ^ n. - _ Colin Barker _ , Jun 03 2016 ●

▶ [A060558] 5,55,316,1284,4170,11550,28380,63492,131703,256685,474760,838980,1429428,2352732,3759720,5852760,8900265,13252899,19362596,27804700,39303550,54761850,75294180,102265020 ⋆ Fifth column (m=4) of triangle A060556. ● a(n) = (2 * n ^ 2 + 18 * n + 35) * binomial(n + 6, 6) / 7. ●

▶ [A138163] 5,55,394,2225,11539,57064,273612,1283621,5924924,27005978,121861262,545368160,2423923480,10710273856,47085144255,206085075295,898489543020,3903621095130,16906888008960,73018012573950,314540265217362 ⋆ Number of permutations of { 1,2,...,n } containing exactly 5 occurrences of the pattern 132. ● a(n) = (n ^ 12 + 170n ^ 11 + 1861n ^ 10 - 88090n ^ 9 - 307617n ^ 8 + 27882510n ^ 7 - 348117457n ^ 6 + 2119611370n ^ 5 - 6970280884n ^ 4 + 10530947320n ^ 3 + 2614396896n ^ 2 - 30327454080n + 29059430400)(2n - 15)! / [120 n!(n - 7)!] for n>=8; a(5)=5; a(6)=55; a(7)=394. ●

▶ [A190543] 0,5,55,485,4015,32525,261415,2094965,16770655,134198045,1073682775,8589757445,68718945295,549754219565,4398041728135,35184357739925,281474933663935,2251799684545085,18014398122061495,144115186913594405 ⋆ a(n) = 8 ^ n - 3 ^ n. ● a(n) = 11 * a(n - 1) - 24 * a(n - 2). ●

▶ [A002279] 0,5,55,555,5555,55555,555555,5555555,55555555,555555555,5555555555,55555555555,555555555555,5555555555555,55555555555555,555555555555555,5555555555555555,55555555555555555 ⋆ a(n) = 5 * (10 ^ n - 1) / 9. ● a(n) = 10 * a(n - 1) + 5, with a(0)=0. - _ Paolo P. Lava _ , Jan 23 2009 ● a(n) = a(n - 1) + 5 * 10 ^ (n - 1) with a(0)=0; Also: a(n) = 11 * a(n - 1) - 10 * a(n - 2) with a(0)=0, a(1)=5. - _ Vincenzo Librandi _ , Jul 22 2010 ●

▶ [A102312] 0,5,55,610,6765,75025,832040,9227465,102334155,1134903170,12586269025,139583862445,1548008755920,17167680177565,190392490709135,2111485077978050,23416728348467685,259695496911122585,2880067194370816120,31940434634990099905 ⋆ a(n) = Fibonacci(5 * n). ● a(n) = (- ((11 - 5 * sqrt(5)) / 2) ^ n + ((11 + 5 * sqrt(5)) / 2) ^ n) / sqrt(5). - _ Colin Barker _ , Nov 10 2016 ●

▶ [A041995] 1,1,5,56,229,285,12769,13054,64985,727889,2976541,3704430,165971461,169675891,844675025,9461101166,38689079689,48150180855,215729703739,2205447218164,10979085909965,122975392227779,502880654821081,625856047048860 ⋆ Denominators of continued fraction convergents to sqrt(520). ● a(n) = 12998 * a(n - 6) - a(n - 12) for n>11. - _ Vincenzo Librandi _ , Jan 12 2014 ●

▶ [A062125] 5,56,263,815,1982,4115,7646,13088,21035,32162,47225,67061,92588,124805,164792,213710,272801,343388,426875,524747,638570,769991,920738,1092620,1287527 ⋆ Fifth column of A046741. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5), where a(0)=5, a(1)=56, a(2)=263, a(3)=815, a(4)=1982. - _ Harvey P. Dale _ , Dec 21 2011 ● a(n) = (40 + 126 * n + 165 * n ^ 2 + 90 * n ^ 3 + 27 * n ^ 4) / 8. ●

▶ [A030060] 5,56,420,2640,15015,80080,408408,2015520,9699690,45762640,212469400,973496160,4411154475,19800295200,88158457200,389753179200,1712478031110,7483097278800,32540135136600,140883148005600,607558575774150,2610765994183776,11182476723339600 ⋆ Third derivative of Catalan generating function / 3!. ● a(n) = (2 * (n + 3))! / (3! * n! * (n + 4)!) = (n + 1) * (n + 2) * (n + 3) * C(n + 3) / 6, C(n): Catalan numbers. ●

▶ [A076455] 5,57,246,710,1635,3255,5852,9756,15345,23045,33330,46722,63791,85155,111480,143480,181917,227601,281390,344190,416955,500687,596436,705300,828425 ⋆ Sum of numbers that can be written as t * n + u * (n + 1) for nonnegative integers t,u in exactly two ways. ● a(n) = n * (n + 1) * (4 * n ^ 2 + 2 * n - 1) / 2. ●

▶ [A266278] 5,57,489,4125,35117,299681,2557605,21826045,186255781,1589441093,13563736693,115748216413,987755062201,8429158472781,71931509371765,613838505628281,5238284505542721,44701699729693429,381468772192258129,3255321946095461785,27779786302899765081 ⋆ Number of legal Go positions on a 2 X n board. ● a(n) = 10 * a(n - 1) - 16 * a(n - 2) + 31 * a(n - 3) - 13 * a(n - 4) + 20 * a(n - 5) + 2 * a(n - 6) - a(n - 7). ●

▶ [A155642] 1,5,57,605,5937,55925,515817,4704845,42656097,385467365,3477018777,31332231485,282185395857,2540645125205,22870688939337,205860614516525,1852867600961217,16676418760213445,150090820599733497 ⋆ 9 ^ n - 5 ^ n + 1. ● a(n)=14 * a(n - 1) - 45 * a(n - 2) + 32 with a(0)=1, a(1)=5 [From _ Vincenzo Librandi _ , Jul 21 2010] ●

▶ [A173202] 0,5,58,207,500,985,1710,2723,4072,5805,7970,10615,13788,17537,21910,26955,32720,39253,46602,54815,63940,74025,85118,97267,110520 ⋆ Solutions y of the Mordell equation y ^ 2 = x ^ 3 - 3a ^ 2 + 1 for a = 0,1,2, ... (solutions x are given by the sequence A000466) ● a(n) = 8 * n ^ 3 - 24 * n ^ 2 + 21 * n - 5. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Vincenzo Librandi _ , Jul 02 2012 ●

▶ [A334698] 5,58,375,1376,3685,8130,15743,27760,45621,70970,105655,151728,211445,287266,381855,498080,639013,807930,1008311,1243840,1518405,1836098,2201215,2618256,3091925 ⋆ a(n) is the total number of points (both boundary and interior points) in the n - th figure shown in A255011 (meaning the figure with 4n points on the perimeter), where the interior points are counted with multiplicity. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

▶ [A129897] 5,58,585,5859,58597,585987,5859873,58598744,585987447,5859874481,58598744819,585987448203,5859874482048,58598744820487,585987448204883,5859874482048838,58598744820488384,585987448204883846,5859874482048838473,58598744820488384737 ⋆ a(n) is the integer that results from truncating both e and Pi to n digits, adding the results, and discarding the decimal point. ● a(n) = floor(floor(Pi * 10 ^ n) + floor(exp(1) * 10 ^ n)), Pi=3.14159..., e=2.71828... ●

▶ [A024378] 5,59,254,730,1675,3325,5964,9924,15585,23375,33770,47294,64519,86065,112600,144840,183549,229539,283670,346850,420035,504229,600484,709900,833625 ⋆ a(n) = 2nd elementary symmetric function of the first n + 1 positive integers congruent to 1 mod 4. ● a(n) = n * (n + 1) * (12 * n ^ 2 + 8 * n - 5) / 6. ●

▶ [A112461] 5,59,374,1694,6149,19019,52052,129272,296582,636922,1293292,2502604,4644094,8306914,14382544,24188824,39633715,63428365,99360690,152642490,230345115,341940885,499969860,720854160,1025884860 ⋆ Absolute value of coefficient of term [x ^ (n - 5)] in characteristic polynomial of maximum matrix A of size n X n, where n >= 5. Maximum matrix A(i,j) is MAX(i,j), where indices i and j run from 1 to n. ● a(n) = ((9n + 5) / 10!) * Product _{ i= - 4..4 } (n + i). ●

▶ [A099151] 5,59,599,5999,59999,599999,5999999,59999999,599999999,5999999999,59999999999,599999999999,5999999999999,59999999999999,599999999999999,5999999999999999,59999999999999999,599999999999999999,5999999999999999999,59999999999999999999,599999999999999999999,5999999999999999999999,59999999999999999999999,599999999999999999999999 ⋆ Positive integers a such that f(3a) + f(a)=concatenation of 3a and a, where f(k)=k(k + 3) / 2 (A000096). ● a(n) = 6 * 10 ^ (n - 1) - 1. ● a(n) = 11 * a(n - 1) - 10 * a(n - 2) for n > 2. ●

▶ [A249519] 1,5,59,782,10915,156890,2298254,34115772,511402275,7723927970,117355941274,1791748546692,27465854168974,422452379203652,6516524753922620,100771332997219832,1561717224800526627,24249283134262469490 ⋆ Expansion of 4 * x / (16 * x + (sqrt(2) * sqrt(sqrt(1 - 16 * x) + 1) - 1) * sqrt(1 - 16 * x) - 1). ● a(n) = Sum _{ i = 0..n } 2 ^ i * binomial(2 * n - i - 1,n - i) * binomial(2 * n + i - 1,i)). ●

▶ [A126275] 5,60,340,1300,3885,9800,21840,44280,83325,147620,248820,402220,627445,949200,1398080,2011440,2834325,3920460,5333300,7147140,9448285,12336280,15925200,20345000,25742925 ⋆ Moment of inertia of all magic squares of order n. ● a(n) = (n ^ 2 * (n ^ 4 - 1)) / 12. ●

▶ [A059602] 5,60,376,1660,5830,17380,45760,109252,240955,497640,972400,1812200,3241628,5594360,9354080,15206840,24107105,37360004,56722600,84527300,123830850,178592700,253886880,356151900 ⋆ Expansion of (5 + 10 * x + x ^ 2) / (1 - x) ^ 10. ● a(n)= binomial(n + 7, 7) * (4 * n ^ 2 + 41 * n + 90) / 18. ●

▶ [A099672] 5,60,615,6170,61725,617280,6172835,61728390,617283945,6172839500,61728395055,617283950610,6172839506165,61728395061720,617283950617275,617283950617280,617283950617280,617283950617283940,6172839506172839495,61728395061728395050 ⋆ Partial sums of repdigits of A002279. ● a(n) = (5 / 81) * (10 ^ (n + 1) - 9 * n - 10). - R. Piyo (nagoya314(AT)yahoo.com), Dec 10 2004. ● a(n) = 12 * a(n - 1) - 21 * a(n - 2) + 10 * a(n - 3) for n>2. ●

▶ [A138134] 0,5,60,670,7435,82460,914500,10141965,112476120,1247379290,13833648315,153417510760,1701426266680,18869106444245,209261597153380,2320746675131430,25737475023599115,285432971934721700,3165500166305537820 ⋆ a(n) = Sum _{ i=0..n } Fibonacci(5 * i). ● a(n) = 11 * a(n) + a(n - 1) + 5, n > 1. ● a(n) = 12 * a(n - 1) - 10 * a(n - 2) - a(n - 3), n > 2. ● a(n) = 1 / 11 * (Fibonacci(5 * n + 5) + Fibonacci(5n) - 5). ●

▶ [A000363] 5,61,479,3111,18270,101166,540242,2819266,14494859,73802835,373398489,1881341265,9453340172,47417364268,237571096820,1189405165908,5951965440609,29775517732665,148927275340835,744793282001995 ⋆ Number of permutations of [n] with exactly 2 increasing runs of length at least 2. ● a(n) = (5

^ n - (2 * n - 1) * 3 ^ n + 2 * n ^ 2 - 2 * n - 2) / 16. - _ Vaclav Kotesovec _ , Nov 19 2012 ●

▶ [A152031] 0,5,62,363,1364,3905,9330,19607,37448,66429,111110,177155,271452,402233,579194,813615,1118480,1508597,2000718,2613659,3368420,4288305,5399042,6728903,8308824 ⋆ a(n) = n ^ 5 + n ^ 4 + n ^ 3 + n ^ 2 + n. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) n >5, a(0)=0, a(1)=5, a(2)=62, a(3)=363, a(4)=1364, a(5)=3905. [_ Yosu Yurr amendi _ , Sep 03 2013] ●

▶ [A362786] 0,0,0,5,63,476,2772,13680,60060,241472,906048,3214848,10890880,35481600,111794176,342171648,1021031424,2979102720,8520171520,23934468096,66156625920,180198047744,484304486400,1285790105600,3375480176640 ⋆ Number of unordered triples of disjoint self - avoiding paths with nodes that cover all vertices of a convex n - gon. ● a(n) = 2 ^ (n - 12) * n * (n - 1) * (n - 2) * (n - 4) * (n - 5) * (n + 2) * (n + 9) / 90 for n > 3; 0 for n=3. ●

▶ [A071902] 1,5,65,306,975,2479,5425,10660,19311,32825,53009,82070,122655,177891,251425,347464,470815,626925,821921,1062650,1356719,1712535,2139345,2647276,3247375 ⋆ Sum _{ k=0..n ^ 2 } (k ^ 2 - n ^ 2) / n. ● a(n) = n * (2 * n ^ 2 - 5) * (n ^ 2 + 1) / 6. - _ Vladeta Jovovic _ , Jun 15 2002 ●

▶ [A211412] 5,65,325,1025,2501,5185,9605,16385,26245,40001,58565,82945,114245,153665,202501,262145,334085,419905,521285,640001,777925,937025,1119365,1327105,1562501 ⋆ a(n) = 4 * n ^ 4 + 1. ● a(n) = (2 * n ^ 2) ^ 2 + 1 ^ 2 = (2 * n ^ 2 - 1) ^ 2 + (2 * n) ^ 2. - _ Thomas Ordowski _ , Sep 18 2015 ●

▶ [A118004] 0,5,65,665,6305,58025,527345,4766585,42981185,387158345,3485735825,31376865305,282412759265,2541798719465,22876524019505,205890058352825,1853015893884545,16677164519797385,150094566577522385 ⋆ a(n) = 9 ^ n - 4 ^ n. ● a(n) = 13 * a(n - 1) - 36 * a(n - 2), n>=2. - _ Vincenzo Librandi _ , Mar 16 2011 ●

▶ [A199024] 5,65,725,7985,87845,966305,10629365,116923025,1286153285,14147686145,155624547605,1711870023665,18830570260325,207136272863585,2278499001499445,25063489016493905,275698379181432965,3032682170995762625 ⋆ 6 * 11 ^ n - 1. ● a(n) = 11 * a(n - 1) + 10. ● a(n) = 12 * a(n - 1) - 11 * a(n - 2), n >1. ●

▶ [A155653] 1,5,65,785,8705,92225,953345,9720065,98320385,989922305,9939533825,99637202945,997823217665,9986939305985,99921635835905,999529815015425,999717889092545,9998307334055265,99989844043331585 ⋆ 10 ^ n - 6 ^ n + 1. ● a(n)=16 * a(n - 1) - 60 * a(n - 2) + 45 with a(0)=1, a(1)=5 - _ Vincenzo Librandi _ , Jul 21 2010 ●

▶ [A103974] 1,5,65,901,12545,174725,2433601,33895685,472105985,6575588101,91586127425,1275630195845,17767236614401,247465682405765,3446752317066305,48007066756522501,668652182274248705 ⋆ Smaller sides (a) in (a,a,a + 1) - integer triangle with integer area. ● a(n)=(1 / 3) * ((2 + sqrt(3)) ^ (2 * n - 2) + (2 - sqrt(3)) ^ (2 * n - 2) + 1). ● a(n) = 4U(n) ^ 2 + 1, where U(1) = 0, U(2)= 1 and U(n + 1) = 4U(n) - U(n - 1) for n>1. (U(n), V(n)) is the n - th solution to Pell's equation 3U(n) ^ 2 + 1 = V(n) ^ 2. (U(n) is the sequence A001353.)" (End) ● a(n) = floor((7 + 4 * sqrt(3)) * a(n - 1)) - 4, n>=3. - _ Rick L. Shepherd _ , Sep 04 2005 ●

▶ [A042491] 1,1,5,66,71,208,487,695,9522,38783,48305,2647253,2695558,13429485,177278863,190708348,558695559,1308099466,1866795025,25576434791,104172534189,129748968980,7110616859109,7240365828089,36072080171465 ⋆ Denominators of continued fraction convergents to sqrt(773). ● a(n) = 2686036 * a(n - 11) + a(n - 22). - _ Vincenzo Librandi _ , Dec 15 2013 ●

▶ [A183899] 1,5,66,174,329,539,815,1169,1614,2164,2834,3640,4599,5729,7049,8579,10340,12354,14644,17234,20149,23415,27059,31109,35594 ⋆ Number of nondecreasing arrangements of n + 3 numbers in 0..4 with each number being the sum mod 5 of three others. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>8. ●

▶ [A093120] 5,68,1110,19010,329126,5693968,98074332,1680306750,28638104550,485731377560,8202665891316,137983709713668,2313146752430780,38658742468243520,644327268137066104,10712855104602481206 ⋆ Number of convex polyominoes with an n + 1 X n + 1 minimal bounding square. ● a(n) = ((2 + n) * C(4 * n, 2 * n) - 2 * n * C(2 * n, n) ^ 2) / 2, n>0. ●

▶ [A064046] 0,5,70,285,740,1525,2730,4445,6760,9765,13550,18205,23820,30485,38290,47325,57680,69445,82710,97565,114100,132405,152570,174685,198840 ⋆ Number of length 6 walks on an n - dimensional hypercubic lattice starting and finishing at the origin and staying in the nonnegative part. ● a(n) = 5 * n * (3 * n ^ 2 - 3 * n + 1). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ●

▶ [A295332] 1,1,5,71,289,360,1009,1369,6485,92159,375121,467280,1309681,1776961,8417525,119622311,486906769,606529080,1699964929,2306494009,10925940965,155269667519,632004611041,787274278560,2206553168161 ⋆ Denominators of the continued fraction convergents to sqrt(13) / 2 = A295330. ● a(n) = 1298 * a(n - 6) - a(n - 12), n >= 12, with inputs a(0)..a(11). ●

▶ [A064752] 5,71,647,5183,38879,279935,1959551,13436927,90699263,604661759,3990767615,26121388031,169789022207,1097098297343,7052774768639,45137758519295,287753210560511,1828079220031487,11577835060199423 ⋆ a(n) = n * 6 ^ n - 1. ● a(n) = 13 * a(n - 1) - 48 * a(n - 2) + 36 * a(n - 3); a(1)=5, a(2)=71, a(3)=647. - _ Harvey P. Dale _ , May 25 2011 ●

▶ [A120808] 1,5,71,303839,1030349,1356899,1437719,2248529,2416259,2576549,2797961,4007321,4353521,4875491,6137501,6611441,6698831,6904421,7821791,8078981,9221231,9311279,9500279,10157309,11251421 ⋆ Integers p such that x=p ^ 3 is in A120806: x + d + 1 is prime for all divisors d of x. All p greater than 1 are odd primes. ● a(1)=1. a(n) = p where p is the (n - 1)st prime such that x= p ^ 3 is in A120806: x + d + 1 is prime for all divisors d of x. ●

▶ [A155662] 1,5,73,989,12241,144245,1653913,18663629,208594081,2317594085,25654949353,283334343869,3124587089521,34425823133525,379071610510393,4172500607905709,45916496933002561,505214397985306565,5558288899894321033,61147691553229173149 ⋆ a(n) = 11 ^ n - 7 ^ n + 1. ● a(n) = 18 * a(n - 1) - 77 * a(n - 2) + 60; a(0)=1, a(1)=5. - _ Vincenzo Librandi _ , Jul 21 2010 ●

▶ [A151752] 5,75,375,9375,59375,359375,3359375,93359375,193359375,3193359375,73193359375,773193359375,3773193359375,73773193359375,773773193359375,5773773193359375,15773773193359375,515773773193359375,7515773773193359375,97515773773193359375 ⋆ a(n) is the unique n - digit number with all digits odd that is divisible by 5 ^ n. ● a(n) = d(n) * 10 ^ (n - 1) + a(n - 1), where d(n), the leading digit of a(n), is one of the odd digits 1, 3, 5, 7, or 9 (forming the complete set of residues modulo 5) and is uniquely defined by the congruence: d(n) == (- a(n - 1) / 10 ^ (n - 1)) (mod 5). - _ Max Alekseyev _ ●

▶ [A127212] 5,75,500,4375,34375,281250,2265625,18359375,148437500,1201171875,9716796875,78613281250,635986328125,5145263671875,41625976562500,336761474609375,2724456787109375,22041320800781250,178318023681640625 ⋆ a(n) = 5 ^ n * Lucas(n), where Lucas = A000204. ● a(n) = Trace of matrix [({ 5,5 } , { 5,0 }) ^ n]. ● a(n) = 5 ^ n * Trace of matrix [({ 1,1 } , { 1,0 }) ^ n]. ● a(n) = 5 * a(n - 1) + 25 * a(n - 2). ●

▶ [A091903] 0,1,5,75,625,6875,65625,671875,6640625,66796875,666015625,6669921875,66650390625,666748046875,6666259765625,66668701171875,666656494140625,6666717529296875,66666412353515625,666667938232421875 ⋆ Expansion of x / ((1 + 5x)(1 - 10x)). ● a(n)=10 ^ n / 15 - (- 5) ^ n / 15 ● a(0)=0, a(1)=1, a(n)=5 * a(n - 1) + 50 * a(n - 2). - _ Harvey P. Dale _ , Mar 13 2013 ●

▶ [A105490] 5,75,780,7105,61390,521640,4440870,38271750,335892150,3012721855,27672081437,260577574530,2516984551900,24942738309860,253566501600240,2643729700672284,28259635983501165,309569087038701420 ⋆ Number of partitions of { 1...n } containing 4 detached pairs of consecutive integers, i.e., partitions in which only 1 - or 2 - strings of consecutive integers can appear in a block and there are exactly four 2 - strings. ● a(n) = binomial(n - 4, 4) * Bell(n - 5), which is the case r=4 in the general case of r pairs, d(n,r) = binomial(n - r, r) * Bell(n - r - 1), which is the case t=2 of the general formula d(n,r,t) = binomial(n - r * (t - 1), r) * Bell(n - r * (t - 1) - 1). ●

▶ [A105494] 5,75,855,8665,83485,788515,7424515,70378930,675685240,6594991405,65598204272 ⋆ Number of partitions of { 1,...,n } containing 4 strings of 3 consecutive integers such that only v - strings of consecutive integers can appear in a block, where v = 1,2,3. ● a(n)=Sum(w(n, k, 4), k=1...n), where w(n, k, 4) is the case r=4 of w(n, k, r) given by w(m, k, r)=w(m - 1, k - 1, r) + (k - 1)w(m - 1, k, r) + w(m - 2, k - 1, r) + (k - 1)w(m - 2, k, r) + w(m - 3, k - 1, r - 1) + (k - 1)w(m - 3, k, r - 1) r=0, 1, ..., floor(n / 3), k=1, 2, ..., n - 2r, w(n, k, 0)=sum(binomial(n - j, j) * S2(n - j - 1, k - 1), j=0..floor(n / 2)). ●

▶ [A248340] 0,5,75,875,9375,96875,984375,9921875,99609375,998046875,9990234375,99951171875,999755859375,9998779296875,99993896484375,999969482421875,9999847412109375,99999237060546875,999996185302734375,9999980926513671875 ⋆ 10 ^ n - 5 ^ n. ● a(n) = 15 * a(n - 1) - 50 * a(n - 2). ●

▶ [A091882] 1,5,75,1125,16875,253125,3796875,56953125,854296875,12814453125,192216796875,2883251953125,43248779296875,648731689453125,9730975341796875,145964630126953125,2189469451904296875 ⋆ Expansion of (1 - 10x) / (1 - 15x). ● a(n)=15 ^ n / 3 + 2 * 0 ^ n / 3. ●

▶ [A209095] 5,76,1326,23248,407832,7154944,125526240,2202232576,38635976064,677829707776,11891846929920,208630607073280,3660216151873536,64214845877125120,1126585496573239296,19764820171301257216 ⋆ Number of n X 3 0..2 arrays with new values 0..2 introduced in row major order and no element equal to more than one of its immediate leftward or upward or right - upward antidiagonal neighbors. ● a(n) = 2 ^ (n - 3) + ((9 - sqrt(73)) ^ n * (- 25 + sqrt(73)) + (9 + sqrt(73)) ^ n * (25 + sqrt(73))) / (16 * sqrt(73)) for n>1. ●

▶ [A001513] 5,77,221,437,725,1085,1517,2021,2597,3245,3965,4757,5621,6557,7565,8645,9797,11021,12317,13685,15125,16637,18221,19877,21605 ⋆ a(n) = (6 * n + 1) * (6 * n + 5). ● a(n) = 72 * n + a(n - 1) with a(0)=5. - _ Vincenzo Librandi _ , Nov 12 2010 ●

▶ [A269792] 0,5,80,405,1280,3125,6480,12005,20480,32805,50000,73205,103680,142805,192080,253125,327680,417605,524880,651605,800000,972405,1171280,1399205,1658880 ⋆ a(n) = 5 * n ^ 4. ● a(n) = 5 * a(n - 1) - 10 * (9n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ●

▶ [A370197] 0,0,0,0,5,81,658,3830,18525,80587,330330,1312015,5132075,19946915,77383374,300272554,1166405717,4536991655,17671814690,68922126879,269127380699,1052047384687,4116712577510,16123798186665,63205298480275 ⋆ a(n) is the number of ways to place n indistinguishable balls into n distinguishable boxes with at least 4 boxes remaining empty. ● a(n) = binomial(2 * n - 1,n) - binomial(n,2) * binomial(n - 1,2) - binomial(n,3) * binomial(n - 1,3) - n * (n - 1) - 1. ●

▶ [A006471] 5,84,650,3324,13020,42240,118998,300300,693693,1490060,3011580,5779592,10608000,18728832,31957620,52907400,85261341,134115300,206402966,311417700,461446700,672534720,965396250,1366496820,1909325925 ⋆ Number of tree - rooted planar maps with 4 faces and n vertices and no isthmuses. ● a(n) = (n * (2 + n) ^ 2 * (3240 + 10158 * n + 11777 * n ^ 2 + 6400 * n ^ 3 + 1770 * n ^ 4 + 242 * n ^ 5 + 13 * n ^ 6)) / 60480. ●

▶ [A198586] 5,85,341,5461,21845,349525,1398101,22369621,89478485,1431655765,5726623061,91625968981,366503875925,5864062014805,23456248059221,375299968947541,1501199875790165,24019198012642645,96067792050570581,1537228672809129301 ⋆ a(n) = (4 ^ A001651(n + 1) - 1) / 3: numbers (4 ^ k - 1) / 3 for k > 1, not multiples of 3. ● a(n) = a(n - 1) + 64 * a(n - 2) - 64 * a(n - 3) for n >3. ● a(n) = (- 1 + (- 8) ^ n + 3 * 8 ^ n) / 3. ●

▶ [A139744] 0,5,85,1115,13345,153275,1724905,19207235,212679265,2347869995,25876958425,284948873555,3136251594385,34509651449915,379671469419145,4176777984431075,45946908753664705,505430101839849035,5559815753535563065,61158481088674535795 ⋆ a(n) = 11 ^ n - 6 ^ n. ● a(n) = 17 * a(n - 1) - 66 * a(n - 2). _ Vincenzo Librandi _ , Jun 02 2011 ●

▶ [A140159] 1,5,86,102,727,763,3164,3228,9789,9889,24530,24674,53235,53431,104056,104312,187833,188157,318478,318878,513359,513843,793684,794260,1184885 ⋆ a(1)=1, a(n) = a(n - 1) + n ^ 4 if n odd, a(n) = a(n - 1) + n ^ 2 if n is even. ● a(n) = a(n - 1) + { [1 - (- 1) ^ n] / 2 }* n ^ 4 + { [1 + (- 1) ^ n] / 2 }* n ^ 2 , with a(1)=1. ● a(n) = (1 / 2) * (- 1) ^ n * n - (1 / 2) * (- 1) ^ n * n ^ 3 + (1 / 3) * n ^ 3 + (1 / 4) * (- 1) ^ n * n ^ 2 + (1 / 4) * n ^ 2 + (1 / 15) * n + (1 / 10) * n ^ 5 - (1 / 4) * (- 1) ^ n * n ^ 4 + (1 / 4) * n ^ 4, with n>=1. (End) ●

▶ [A221465] 5,88,513,1856,5125,11880,24353,45568,79461,131000,206305,312768,459173,655816,914625,1249280,1675333,2210328,2873921,3688000,4676805,5867048,7288033,8971776,10953125 ⋆ Number of 0..n arrays of length 6 with each e

lement unequal to at least one neighbor, starting with 0. • a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. •
► [A136618] 5,89,107,139,313,331,409,421,443,449,461,491,503,547,653,757,761,769,941,947,1063,1181 ⋆ Primes that give answers to the find root solution the equation of that are imaginary part less than zero: x ^ 2 + 2 x ^ (3 / 2 - 4 * I * Pi x) + x ^ (1 - 8 * I * Pi * x) == 0. • a(n)=If x such that FindRoot[x ^ 2 + 2 x ^ (3 / 2 - 4 * I * Pi x) + x ^ (1 - 8 * I * Pi * x) == 0, { x, Prime[n] }] has Imaginary part Im[x]<0, report the prime[n] •
► [A221517] 0,5,89,532,1970,5513,12872,26477,49598,86465,142388,223877,338762,496313,707360,984413,1341782,1795697,2364428,3068405,3930338,4975337,6231032,7727693,9498350 ⋆ Number of 0..n arrays of length 6 with each element differing from at least one neighbor by 2 or more, starting with 0. • a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n >10. •
► [A152299] 1,5,91,410,7381,33215,597871,2690420,48427561,217924025,3922632451,17651846030,317733228541,1429799528435,25736391511831,115813761803240,2084647712458321,9380914706062445,168856464709124011 ⋆ A threes sequence that gets more even factors out: a(n)=(3 ^ n - 1) * (3 ^ n + 1) / 2 ^ (4 - Mod[n, 2]). • a(n)=(3 ^ n - 1) * (3 ^ n + 1) / 2 ^ (4 - Mod[n, 2]). • a(n)=82 * a(n - 2) - 81 * a(n - 4). G.f.: (1 + 5x + 9x ^ 2) / ((1 - x)(1 - 9x)(1 + x)(1 + 9x)). [From _ R. J. Mathar _ , Dec 04 2008] •
► [A205344] 5,93,689,2912,8927,22297,48335,94456,170529,289229,466389,721352,1077323,1561721,2206531,3048656,4130269,5499165,7209113,9320208,11899223,15019961,18763607,23219080,28483385 ⋆ Number of length 7 nonnegative integer arrays starting and ending with 0 with adjacent elements unequal but differing by no more than n. • a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. •
► [A359271] 5,95,1400,18500,230000,2750000,32000000,365000000,4100000000,45500000000,500000000000,5450000000000,59000000000000,635000000000000,6800000000000000,72500000000000000,770000000000000000,8150000000000000000 ⋆ Number of odd digits necessary to write all nonnegative n - digit integers. • a(n) = 5 * (9 * n + 1) * 10 ^ (n - 2). •
► [A147539] 5,99,1799,30735,507935,8257599,133169279,2139095295,34292630015,549218943999,8791798056959,140703128621055,2251524935786495,36026597995724799,576443160117411839,9223231299366486015 ⋆ Numbers whose binary representation is the concatenation of n 1's, 2n - 1 digits 0 and n 1's. • a(n) = 2 ^ n - 1 + 2 ^ (4 * n - 1) - 2 ^ (3 * n - 1). - _ R. J. Mathar _ , Nov 09 2008 • a(n) = 27 * a(n - 1) - 202 * a(n - 2) + 432 * a(n - 3) - 256 * a(n - 4). - _ Wesley Ivan Hurt _ , Jan 11 2017 •
► [A128784] 0,5,100,1125,10000,78125,562500,3828125,25000000,158203125,976562500,5908203125,35156250000,206298828125,1196289062500,6866455078125,39062500000000,220489501953125,1235961914062500,6885528564453125 ⋆ n ^ 2 * 5 ^ n. • a(0)=0, a(1)=5, a(2)=100, a(n)=15 * a(n - 1) - 75 * a(n - 2) + 125 * a(n - 3) [From Harvey P. Dale, Dec 30 2011] •
► [A041187] 1,5,101,510,10301,52015,1050601,5305020,107151001,541060025,10928351501,55182817530,1114584702101,5628106328035,113676711262801,574011662642040,11593909964103601,58543561483160045,1182465139627304501,5970869259619682550 ⋆ Denominators of continued fraction convergents to sqrt(104). • a(n) = 102 * a(n - 2) - a(n - 4). - _ Vincenzo Librandi _ , Dec 12 2013 •
► [A053133] 5,110,1001,5720,24310,83980,248710,653752,1562275,3453450,7153575,14024400,26225628,47071640,81505820,136719440,222945905,354465254,550858165,838553320,1252716850,1839537700,2658968130,3787984200,5324436975 ⋆ One half of binomial coefficients binomial(2 * n - 8,9). • a(n) = binomial(2 * n - 8, 9) / 2. •
► [A367248] 0,5,111,1601,19095,204545,2045511,19508081,179752215,1613908385,14202967911,123028446161,1052237271735,8907026785025,74758478722311,623053865857841,5162154289325655,42558224511290465,349394287423788711,2858263098464575121,23311522539676521975 ⋆ a(n) is the number of n - digit numbers whose difference between the largest and smallest digits is equal to 7. • a(n) = 23 * 8 ^ (n - 1) - 41 * 7 ^ (n - 1) + 3 * 6 ^ n. • a(n) = 21 * a(n - 1) - 146 * a(n - 2) + 336 * a(n - 3) for n > 3. •
► [A091026] 5,114,771,3235,10365,27825,65828,141552,282375,530090,946275,1619007,2671123,4270245,6640800,10078280,14966001,21794634,31184795,43912995,60941265,83450785,112879860,150966600,199796675 ⋆ Fifth column (m=6) of array A090452. • a(n)= (n + 1) * (n + 2) * (n ^ 6 + 45 * n ^ 5 + 745 * n ^ 4 + 5595 * n ^ 3 + 18694 * n ^ 2 + 22440 * n + 7200) / 2880. 2880=8! / (2 * 7). •
► [A006221] 5,117,535,1463,3105,5665,9347,14355,20893,29165,39375,51727,66425,83673,103675,126635,152757,182245,215303,252135,292945,337937,387315,441283,500045 ⋆ From Apery continued fraction for zeta(3): zeta(3)=6 / (5 - 1 ^ 6 / (117 - 2 ^ 6 / (535 - 3 ^ 6 / (1463...))). • a(n) = 34 * n ^ 3 + 51 * n ^ 2 + 27 * n + 5 = (2 * n + 1) * (17 * n * (n + 1) + 5) [Viennot, p.2]. •
► [A257865] 1,5,119,629,17907119 ⋆ Smallest k such that phi(k) = n * phi(k + 1), where phi(n) = A000010(n) gives the value of Euler's totient function at n. • a(n) >= exp(exp(c(n - 3))) with c=exp(gamma) and gamma being the Euler - Mascheroni _ constant (see pdf). - _ Manfred Scheucher _ , May 27 2015 •
► [A229147] 0,5,128,891,3584,10625,25920,55223,106496,190269,320000,512435,787968,1171001,1690304,2379375,3276800,4426613,5878656,7688939,9920000,12641265,15929408,19868711,24551424 ⋆ a(n) = n ^ 4 * (3 * n + 2). • a(0)=0, a(1)=5, a(2)=128, a(3)=891, a(4)=3584, a(5)=10625, a(n)= 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). - _ Harvey P. Dale _ , Aug 14 2015 •
► [A003732] 5,130,1660,16820,152230,1275680,10154290,77897010,581452680,4250594690,30572999140,217099260110,1525905283670,10636695448300,73649615037480,507171127397480,3476871213780220,23747634842538120 ⋆ Number of Hamiltonian paths in C _ 5 X P _ n. • a(1) = 5, • a(2) = 130, • a(3) = 1660, • a(4) = 16820, • a(5) = 152230, • a(6) = 1275680, •
► [A159355] 5,135,1836,12675,58941,211925,635440,1663821,3921325,8495531,17179020,32795295,59626581,103962825,174792896,284660665,450710325,695946991,1050740300,1554600411,2258257485,3226077405,4538848176,6296973125,8624108701 ⋆ Number of n X n arrays of squares of integers summing to 4. • a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>10. •
► [A054323] 5,140,2016,21120,183040,1397760,9748480,63504384,392232960,2321285120,13264486400,73610035200,398475657216,2111580405760,10984378859520,56221121904640,283661115064320,1413061420253184,6959221409054720 ⋆ Fifth column of Lanczos triangle A053125 (decreasing powers). • a(n) = 20 * a(n - 1) - 160 * a(n - 2) + 640 * a(n - 3) - 1280 * a(n - 4) + 1024 * a(n - 5). - _ Wesley Ivan Hurt _ , May 02 2021 •
► [A061320] 0,5,140,6080,186620,3504380,43599605,392515340,2738219580,15571795365,74962059260,314303754380,1173239918240,3966582090380 ⋆ Column 4 of A061314. • a(n) = n * (n + 1) * (n ^ 8 + 4 * n ^ 7 + 14 * n ^ 6 + 28 * n ^ 5 + 77 * n ^ 4 + 112 * n ^ 3 + 196 * n ^ 2 + 144 * n + 2304) * (n ^ 2 + n + 4) * (n ^ 4 + 2 * n ^ 3 + 5 * n ^ 2 + 4 * n + 36) / 331776. - _ R. J. Mathar _ , Aug 11 2012 •
► [A352758] 5,148,1011,3746,10081,22320,43343,76606,126141,196556,293035,421338,587801,799336,1063431,1388150,1782133,2254596,2815331,3474706,4243665,5133728,6156991,7326126,8654381 ⋆ a(n) = (3 * (2 * n - 1) ^ 2 * ((2 * n - 1) ^ 2 + 2) - 2 * n + 3) / 2 for n > 0. • a(n) = (3 * (2 * n - 1) ^ 2 * ((2 * n - 1) ^ 2 + 2) - 2 * n + 3) / 2. • a(n) can be extended for negative n such that a(- n) = a(n + 1) + (2n + 1). •
► [A094364] 1,5,150,2000,35000,550000,9000000,145000000,2350000000,38000000000,615000000000,9950000000000,161000000000000,2605000000000000,42150000000000000,682000000000000000,11035000000000000000 ⋆ Expansion of (1 - 5x) / (1 - 10x - 100x ^ 2). • a(n) = (5 + 5 * sqrt(5)) ^ n / 2 + (5 - 5 * sqrt(5)) ^ n / 2. •
► [A041431] 1,5,151,760,22951,115515,3488401,17557520,530214001,2668627525,80589039751,405613826280,12249003828151,61650632967035,1861767992839201,9370490597163040,282976485907730401,1424252920135815045 ⋆ Denominators of continued fraction convergents to sqrt(231). • a(n) = 152 * a(n - 2) - a(n - 4). G.f.: - (x ^ 2 - 5 * x - 1) / (x ^ 4 - 152 * x ^ 2 + 1). [_ Colin Barker _ , Jul 15 2012] •
► [A151577] 0,5,156,2114,19328,140571,882340,5007112,26441856,132439905,637468300,2976161790,13569454592,60725449335,267757190100,1166662948900,5034645823680,21556696454685,91704869986620,388044105102650,1634678955350400,6860481786528275,28700914012807556 ⋆ Number of permutations of 1..n arranged in a circle with exactly 4 adjacent element pairs in decreasing order. • a(n) = n * (4 ^ (n - 1) - n * 3 ^ (n - 1) + binomial(n,2) * 2 ^ (n - 1) - binomial(n,3)). (End) •
► [A123111] 5,173,2467,17489,81401,287965,840743,2130497,4842829,10101101,19649675,36082513,63122177,105954269,171622351,269488385,411763733,614115757,896355059,1283208401,1805182345,2499522653,3411274487,4594448449 ⋆ 1 + n ^ 2 + n ^ 3 + n ^ 5 + n ^ 7; 10101101 in base n. • a(n) = 1 + n ^ 2 + n ^ 3 + n ^ 5 + n ^ 7 = 10101101 (base n) = 1 + SUM[i=1..4]n ^ prime(i). • a(n + 7) - 7 * a(n + 6) + 21 * a(n + 5) - 35 * a(n + 4) + 35 * a(n + 3) - 21 * a(n + 2) + 7 * a(n + 1) - a(n)=5040. - _ Robert Israel _ , Sep 02 2014 •
► [A027572] 1,5,181,313,545,1690961,3162613,3187813,5258525,5824285,58281418285,1635446445361,3166046406613,124852060258421,149988757889941,310433303334013,582818040818285,1295157070715921,5227371841481737225,5649436330336349465,5816694029204966185 ⋆ Palindromes of form n ^ 2 + (n + 1) ^ 2. • a(n) = (4 * m ^ 2 - 4 * m + 2) / 2 = (m - 1) ^ 2 + m ^ 2 or a(n) = (4 * n ^ 2 + 4 * n + 2) / 2 = n ^ 2 + (n + 1) ^ 2 with n = m - 1. •
► [A094081] 5,185,1313,4925,13325,29585,57545,101813,167765,261545,390065,561005,782813,1064705,1416665,1849445,2374565,3004313,3751745,4630685,5655725,6842225,8206313,9764885,11535605 ⋆ Smallest integral ladder whose ends slide over the respective distances 1 and m=2n + 1 while slipping down along horizontal ground and vertical wall against which it leans. • a(n) = (2n ^ 2 + 2n + 1) * (16n ^ 2 + 16n + 5). •
► [A128791] 0,5,200,3375,40000,390625,3375000,26796875,200000000,1423828125,9765625000,64990234375,421875000000,2681884765625,16748046875000,102996826171875,625000000000000,3748321533203125,22247314453125000 ⋆ n ^ 3 * 5 ^ n. • a(n) = 20 * a(n - 1) - 150 * a(n - 2) + 500 * a(n - 3) - 625 * a(n - 4). - _ Vincenzo Librandi _ , Feb 09 2013 •
► [A144139] 1,5,209,1189,3905,9701,20305,37829,64769,104005,158801,232805,330049,454949,612305,807301,1045505,1332869,1675729,2080805,2555201,3106405,3742289,4471109,5301505 ⋆ Chebyshev polynomial of the second kind U(4,n). • a(n) = 16 * n ^ 4 - 12 * n ^ 2 + 1 = (4 * n ^ 2 - 2 * n - 1) * (4 * n ^ 2 + 2 * n - 1). - _ Vincenzo Librandi _ , May 29 2014 •
► [A006413] 5,210,3150,27556,170793,829920,3359356,11786190,36845718,104719524,274707420,672982128,1554007910,3407724936,7139933088,14366348780,27878652291,52364814150,95497666810,169546939380,293722986375,497527759560,825473130300,1343631834090 ⋆ Number of nonseparable tree - rooted planar maps with n + 4 edges and 5 vertices. • a(n) = 5 * binomial(n + 6, 7) + 170 * binomial(n + 6, 8) + 1440 * binomial(n + 6, 9) + 4906 * binomial(n + 6, 10) + 7927 * binomial(n + 6, 11) + 6090 * binomial(n + 6, 12) + 1794 * binomial(n + 6, 13). - _ Sean A. Irvine _ , Apr 03 2017 • a(n) = binomial(n + 7,8) * (n + 4) * (23 * n ^ 4 + 279 * n ^ 3 + 941 * n ^ 2 + 599 * n + 138) / 1980. - _ Andrew Howroyd _ , Apr 05 2021 •
► [A055316] 5,210,5250,109200,2116800,40219200,768398400,14968800000,299675376000,6193291104000,132456516192000,2935293064704000,67432408243200000,1605928737853440000,39636028549877760000 ⋆ Number of labeled trees with n nodes and 4 leaves. • a(n) = n! * (n - 4) * (n - 3) * (n - 2) * (3 * n - 11) / 576. - _ Vaclav Kotesovec _ , Jul 25 2014 •
► [A270870] 5,215,1311,5531,18329,50775,122675,266411,531501,989879,1741895,2923035,4711361,7335671,11084379,16315115,23465045,33061911,45735791,62231579,83422185,110322455,144103811,186109611,237871229 ⋆ a(n) = n ^ 6 + 5 * n ^ 5 + 19 * n ^ 4 + 44 * n ^ 3 + 72 * n ^ 2 + 69 * n + 5. • a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). •
► [A166943] 5,247,1689,6731,20173,50415,110897,221779,411861,720743,1201225,1921947,2970269,4455391,6511713,9302435,13023397,17907159,24227321,32303

083,42504045,55255247,71042449,90417651,114004853 ⋆ One third of product pl us sum of six consecutive nonnegative numbers. ● a(n) = (n ^ 6 + 15n ^ 5 + 8 5n ^ 4 + 225n ^ 3 + 274n ^ 2 + 126n + 15) / 3. - _ Charles R Greathouse IV _ , Nov 04 2009 ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) + 240 for n > 5; a(0)=5, a(1)=247, a(2)=1689, a(3) =6731, a(4)=20173, a(5)=50415. - _ Klaus Brockhaus _ , Nov 14 2009 ●

▶ [A135095] 1,5,248,264,3389,3425,20232,20296,79345,79445,240496,240640,611 933,612129,1371504,1371760,2791617,2791941,5268040,5268440,9352541,935302 5,15789368,15789944,25555569 ⋆ a(1)=1, a(n) = a(n - 1) + n ^ 5 if n odd, a(n) = a(n - 1) + n ^ 2 if n is even. ● a(n) = (1 / 24) * (3 + 2 * n + 5 * n ^ 2 + 4 * n ^ 3 + 5 * n ^ 4 + 6 * n ^ 5 + 2 * n ^ 6 - 3 * (- 1) ^ n * (1 - 2 * n - 7 * n ^ 2 + 5 * n ^ 4 + 2 * n ^ 5)), with n>=1. - _ Paolo P. Lava _ , Mar 02 2009 ●

▶ [A094161] 0,5,315,2670,10810,30475,69405,137340,246020,409185,642575,9639 30,1392990,1951495,2663185,3553800,4651080,5984765,7586595,9490310,1173165 0,14348355,17380165,20868820,24858060 ⋆ Column 5 of A048790. ● a(n) = 5 * (n - 1) + 305 * C(n - 1,2) + 1740 * C(n - 1,3) + 2000 * C(n - 1,4) where C(n,k) i s the binomial coefficient. - _ Joshua Zucker _ , Aug 14 2006 ● a(n) = 5 * (672 - 1715 * n + 1595 * n ^ 2 - 652 * n ^ 3 + 100 * n ^ 4) / 6. - _ Colin Barker _ , Feb 28 2015 ●

▶ [A006430] 0,5,360,7350,73700,474588,2292790,9046807,30676440,92393015,252 872984,639382605,1512137536,3377126024,7176513960,14599539314,2857563235 0,54036739617,99069119952,176618150000,306965183268,521265871700,86652760 3370,1412513294049 ⋆ Number of loopless tree - rooted planar maps with 5 vert ices and n faces and no isthmuses. ● a(n) = n * (n + 2) * (n + 3) * (23 * n ^ 10 + 963 * n ^ 9 + 17544 * n ^ 8 + 147952 * n ^ 7 + 481675 * n ^ 6 - 1052153 * n ^ 5 - 7850914 * n ^ 4 - 2900162 * n ^ 3 + 60869272 * n ^ 2 + 37067400 * n - 17 9920800) / (2 * 11!) for n > 1. ●

▶ [A128866] 5,405,12005,253125,4617605,78764805,1300723205,21141253125,340 920883205,5476114739205,87789257318405,1406000997253125,2250700503367680 5,360200017312153605,5763903867804057605 ⋆ Number of n - tuples where each entry is chosen from the subsets of { 1,2,3,4,5 } such that the intersection of all n entries contains exactly one element. ● a(n)=5 * (2 ^ n - 1) ^ 4 ●

▶ [A123658] 5,1617,79543,1315073,11735001,70591825,322948907,1208225793,38 74742893,11001010001,28297158495,67080151297,148467846593,309923269713,61 5105191251,1168247947265,2134605998037,3768860634193,6453801131783,10752 064160001,17474246985385 ⋆ a(n) = 1 + n ^ 4 + n ^ 6 + n ^ 9 + n ^ 10. ● a(n) = 1 + n ^ 4 + n ^ 6 + n ^ 9 + n ^ 10. ●

▶ [A160741] 5,10159,867211,10373071,59271739,227860495,683245579,172724235 1,3854919931,7823790319,14733641995,26117017999,44040338491,71215667791,1 111123125899,168143944495,247704167419,356428995631,502307776651,69486963 8479,945369767995 ⋆ Numerator of P _ 6(2n), the Legendre polynomial of orde r 6 at 2n. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 2 1 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>6. ● a(n) = - 5 + 420 * n ^ 2 - 5040 * n ^ 4 + 14784 * n ^ 6. ●

▶ [A331944] 6,6,6,6,6,6,7,43,265,1639,10177,63463,397585,2456503,15189313,939 61351,581260273,3594003799,22197096865,136829952295,843199062097,51937208 47351,31972185139201,196686016677319,1209120275495089 ⋆ a(n) / ceiling(6 ^ (n - 7)) is the expected number of rolls of a fair 6 - sided die in a game where th e player starts at 0, advances the position by the outcome of the die's roll until exactly position n is reached. Positions beyond n are avoided by staying at the l ast visited position, but counting the rolls. ● a(n) = 7 * a(n - 1) - 46656 * a(n - 7) for n>13. ●

▶ [A361871] 6,6,6,8,10,12,14,16,18,20,22,24,26,28,30,32,34,36,38,40,42,44,46,48,5 0 ⋆ The smallest order of a non - abelian group with an element of order n. ● a (n) = 2 * n for n >= 3. ●

▶ [A183042] 0,6,6,8,12,18,22,28,36,42,52,64,68,82,98,104,118,138,146,164,184,19 4,216,240,248 ⋆ Least number of knight's moves from (0,0) to the segment of po ints (0,n), (1,n - 1), ..., (n,0) on infinite chessboard. ● a(n)=T(n,0) + T(n - 1,1) + ... + T(0,n), where T is formulated at A065775. ●

▶ [A291545] 6,6,9,10,16,16,27,27,28,28,95,95,96,96,121,121,122,122,123,123,124,1 24,125,125,126 ⋆ a(n) is the smallest integer k > n such that (k + 1)(k + 2)...(2 k - n) / (k(k - 1)...(k - n + 1)) is an integer. ● a(n) = min _{ k > n } : (k! / (k - n)!) | ((2k - n)! / k!). - _ Jon E. Schoenfield _ , Aug 28 2017 ●

▶ [A168282] 1,6,6,11,11,16,16,21,21,26,26,31,31,36,36,41,41,46,46,51,51,56,56,61,6 1 ⋆ (10 * n + 5 * (- 1) ^ n - 1) / 4. ● a(n) = 5 * n - a(n - 1) - 3 for n>1, a(1)= 1. ● a(1)=1, a(2)=6, a(3)=6; for n>3, a(n) = a(n - 1) + a(n - 2) - a(n - 3). - _ Harvey P. Dale _ , Jun 17 2013 ●

▶ [A173319] 6,6,11,31,121,601,3601,25201,201601,1814401,18144001,199584001,2 395008001,31135104001,435891456001,6538371840001,104613949440001,1778437 140480001,32011868528640001,608225502044160001 ⋆ 5 * n! + 1. ● a(0)=6; for n>0, a(n) = n * a(n - 1) - n + 1. - _ Vincenzo Librandi _ , Sep 28 2013 ●

▶ [A309458] 0,0,0,0,0,0,6,6,12,17,29,40,62,77,109,139,186,229,299,361,454,547,67 2,797,967 ⋆ Number of squarefree parts in the partitions of n into 6 parts. ● a(n) = Sum _{ m=1..floor(n / 6) } Sum _{ l=m..floor((n - m) / 5) } Sum _{ k =l..floor((n - l - m) / 4) } Sum _{ j=k..floor((n - k - l - m) / 3) } Sum _ (i=j..f loor((n - j - k - l - m) / 2) } (mu(i) ^ 2 + mu(j) ^ 2 + mu(k) ^ 2 + mu(l) ^ 2 + mu(m) ^ 2 + mu(n - i - j - k - l - m) ^ 2), where mu is the Möbius function (A0 08683). ●

▶ [A022089] 0,6,6,12,18,30,48,78,126,204,330,534,864,1398,2262,3660,5922,9582,1 5504,25086,40590,65676,106266,171942,278208 ⋆ Fibonacci sequence beginning 0 , 6. ● a(n) = round((12 * phi - 6) / 5 * phi ^ n) for n>3. - _ Thomas Baruchel _ , Sep 08 2004 ● a(n) = 6F(n) = F(n + 3) + F(n + 1) + F(n - 4), n>3. ●

▶ [A229828] 6,6,13,41,167,839,5039,35279,282239,2540159,25401599,279417599,3 353011199,43589145599,610248038399,9153720575999,146459529215999,2489811 996671999,44816615940095999,851515702861823999,17030314057236479999,3576 36595201966079999 ⋆ 7 * n! - 1. ● a(0)=6, a(n) = n * a(n - 1) + n - 1. ●

▶ [A266223] 0,1,6,6,15,15,28,28,45,45,66,66,91,91,120,120,153,153,190,190,231,23 1,276,276,325 ⋆ Total number of OFF (white) cells after n iterations of the "Rul e 7" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = 1 / 2 * (n + 1) * (n + (- 1) ^ n + 1) for n>0. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n>5. ●

▶ [A038518] 0,1,1,1,1,6,6,16,36,56,136,256,496,1056,2016,4096,8256,16256,32896,6 5536,130816,262656,523776,1048576,2098176,4192256 ⋆ Number of elements of GF(2 ^ n) with trace 0 and subtrace 0. ● a(0)=0; a(n) = (2 ^ n - (- 1 - i) ^ n - (- 1 + i) ^ n) / 4, i=sqrt(- 1). - C. Ronaldo (aga _ new _ ac(AT)hotmail.com), Dec 16 2004 ● a(n) = 2 * a(n - 2) + 4 * a(n - 3) for n>3. - _ Colin Barker _ , Aug 02 2019 ●

▶ [A000976] 0,0,1,1,1,1,6,6,18,18,18,54,54,378,1134,1134,9072,81648,81648,8164 8,1714608,18860688,18860688,56582064,56582064 ⋆ Period of 1 / n! in base 10. ● a(n) = order(10, n! / (2 ^ s * 5 ^ t)) where 2 ^ s is largest power of 2 dividin g n! and 5 ^ t is largest power of 5 dividing n!. - _ Sean A. Irvine _ , Sep 29 2 011 ●

▶ [A092297] 0,6,6,18,30,66,126,258,510,1026,2046,4098,8190,16386,32766,65538,1 31070,262146,524286,1048578,2097150,4194306,8388606,16777218,33554430 ⋆ Nu mber of ways of 3 - coloring an annulus consisting of n zones joined like a pearl necklace. ● a(n) = 2 ^ n + 2 * (- 1) ^ n; recurrence a(1)=0, a(2)=6, a(n) = 2 * a(n - 2) + a(n - 1). ● a(n) = (- 1) ^ n * a(2 - n) * 2 ^ (n - 1) for all n in Z. - _ Michael Somos _ , Oct 25 2014 ●

▶ [A056452] 1,6,6,36,36,216,216,1296,1296,7776,7776,46656,46656,279936,27993 6,1679616,1679616,10077696,10077696,60466176,60466176,362797056,36279705 6,2176782336,2176782336 ⋆ a(n) = 6 ^ floor((n + 1) / 2). ● a(n) = 6 ^ floor((n + 1) / 2). ● a(n) = 6 * a(n - 2). - _ Colin Barker _ , May 06 2012 ●

▶ [A020715] 6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,3 0 ⋆ n + 6. ● a(n) = n + 6. a(n) = 2a(n - 1) - a(n - 2). ●

▶ [A051053] 1,1,1,1,1,1,6,7,8,9,10,11,66,78,91,105,120,136,816,969,1140,1330,154 0,1771,10626 ⋆ a(n) = binomial(n, floor(n / 6)). ● a(n + 6) * (k + 1) * Product _{ m=1..5 } (5 * k + j + m) = a(n) * Product _{ m=1..6 } (6 * k + j + m). ●

▶ [A058368] 1,1,1,1,6,7,8,9,10,16,23,31,40,50,66,89,120,160,210,276,365,485,645,8 55,1131 ⋆ Number of ways to cover (without overlapping) a ring lattice (neckla ce) of n sites with molecules that are 5 sites wide. ● a(n) = 1 + n * Sum _{ i= 1..n / 5 } binomial(n - 4 * i - 1, i - 1) / i. ● a(n) = a(n - 1) + a(n - 5) for n >= 6. ●

▶ [A108613] 0,0,0,0,0,6,7,8,9,10,22,24,26,28,30,48,51,54,57,60,63,88,92,96,100 ⋆ E xcess of Beatty - 2 function of 1 / sin(1) over n ^ 2. ● a(n) = A108612[n] - n ^ 2 = floor(n * floor(n / sin(1))) - n ^ 2. ●

▶ [A143616] 6,7,8,9,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,3 1 ⋆ Record values in A010371. ● a(n) = n + 6 for n > 4. [_ Charles R Greath ouse IV _ , Oct 26 2011] ●

▶ [A047551] 0,1,6,7,8,9,14,15,16,17,22,23,24,25,30,31,32,33,38,39,40,41,46,47,48 ⋆ Numbers that are congruent to { 0, 1, 6, 7 } mod 8. ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. ● a(n) = (4 * n - 3 - i ^ (2 * n) + (1 - i) * i ^ (- n) + (1 + i) * i ^ n) / 2 where i=sqrt(- 1). ●

▶ [A010755] 0,0,1,1,1,1,6,7,8,9,38,47,57,68,245,313,393,486,1594,2080,2673,3388,1 0429,13817,18058 ⋆ Sum along upward diagonal of Pascal triangle up to (but no t including) halfway point. ● a(n) = Sum _{ k=0..floor((n - 2) / 4) } binomial(n - k, k). - _ Seiichi Manyama _ , Feb 10 2022 ●

▶ [A209723] 6,7,8,10,12,16,20,28,36,52,68,100,132,196,260,388,516,772,1028,154 0,2052,3076,4100,6148,8196 ⋆ 1 / 4 the number of (n + 1) X 5 0..2 arrays with e very 2 X 2 subblock having distinct clockwise edge differences. ● a(n) = 3 * 2 ^ (n / 2 - 1) + 4 for n even. ● a(n) = 2 ^ ((n + 1) / 2) + 4 for n odd. ●

▶ [A047275] 0,1,6,7,8,13,14,15,20,21,22,27,28,29,34,35,36,41,42,43,48,49,50,55,56 ⋆ Numbers that are congruent to { 0, 1, 6 } mod 7. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. ● a(n) = (21 * n - 21 + 12 * cos(2 * n * Pi / 3) + 4 * sqrt(3) * sin(2 * n * Pi / 3)) / 9. ● a(3k) = 7k - 1, a(3k - 1) = 7k - 6, a(3k - 2) = 7k - 7. (End) ●

▶ [A047590] 0,6,7,8,14,15,16,22,23,24,30,31,32,38,39,40,46,47,48,54,55,56,62,63,6 4 ⋆ Numbers that are congruent to { 0, 6, 7 } mod 8. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. ● a(n) = (24 * n - 9 - 10 * sqrt(3) * sin(2 * n * Pi / 3)) / 9. ● a(3k) = 8k - 1, a(3k - 1) = 8k - 2, a(3k - 2) = 8k - 8. (End) ●

▶ [A133893] 6,7,8,15,16,17,24,25,26,33,34,35,42,43,44,51,52,53,60,61,62,69,70,71,7 8 ⋆ Numbers m such that binomial(m + 3,m) mod 3 = 0. ● a(n)=3n + 6 - 2 * (n mod 3). ●

▶ [A081053] 6,7,9,11,12,14,15,16,17,20,21,22,23,26,27,28,30,32,33,35,36,38,40,41,4 2 ⋆ Sum of a prime and the square of a prime. ● a(n) = p ^ 2 + q, p and q pri mes. ●

▶ [A048585] 6,7,9,12,16,22,31,44,63,91,132,192,280,409,598,875,1281,1876,2748,4 026,5899,8644,12667,18563,27204 ⋆ Pisot sequence L(6,7). ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) - a(n - 4) (holds at least up to n = 50000 but is not known t o hold in general). ●

▶ [A168614] 6,7,9,13,21,37,69,133,261,517,1029,2053,4101,8197,16389,32773,6554 1,131077,262149,524293,1048581,2097157,4194309,8388613,16777221 ⋆ a(n) = 2 ^ n + 5. ● a(n) = 2 * a(n - 1) - 5 with n>0, a(0)=6. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2). ●

▶ [A047591] 1,6,7,9,14,15,17,22,23,25,30,31,33,38,39,41,46,47,49,54,55,57,62,63,6 5 ⋆ Numbers that are congruent to { 1, 6, 7 } mod 8. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. ● a(n) = (24 * n - 6 - 3 * cos(2 * n * Pi / 3) - 7 * sqrt(3) * sin(2 * n * Pi / 3)) / 9. ● a(3k) = 8k - 1, a(3k - 1) = 8k - 2, a(3k - 2) = 8k - 7 . (End) ●

▶ [A114949] 6,7,10,15,22,31,42,55,70,87,106,127,150,175,202,231,262,295,330,36 7,406,447,490,535,582 ⋆ a(n) = n ^ 2 + 6. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ R. J. Mathar _ , May 17 2009 ● a(n) = 2 * n + a(n - 1) - 1, with n >0, a(0)=6. - _ Vincenzo Librandi _ , Nov 13 2010 ●

▶ [A117618] 1,6,7,10,22,683 ⋆ Least number with complexity height of n, under integer complexity A005245. ● a(n) = least k such that A005245 ^ (n)(k) = A0 05245 ^ (n - 1)(k) but (if n>1) A005245 ^ (n - 1)(k) != A005245 ^ (n - 2)(k), w here ^ denotes repeated application. ●

▶ [A166496] 6,7,11,15,23,27,35,39,47,59,63,75,83,87,95,107,119,123,135,143,147,1 59,167,179,195 ⋆ Prime plus the next composite. ● a(n)=prime(n) + smallest c omposite > prime(n). ●

► [A047225] 0,1,6,7,12,13,18,19,24,25,30,31,36,37,42,43,48,49,54,55,60,61,66,67,72 ⋆ Numbers that are congruent to { 0, 1 } mod 6. ● a(n) = a(n - 2) + 6, n >= 2. (End) ● a(n) = - 1 + (- 1) ^ (n - 1) + 3 * (n - 1). - _ Paolo P. Lava _ , Oct 06 2008 ● a(n) = 6 * n - a(n - 1) - 11 for n>1, a(1)=0. - _ Vincenzo Librandi _ , Aug 05 2010 ●

► [A047335] 0,6,7,13,14,20,21,27,28,34,35,41,42,48,49,55,56,62,63,69,70,76,77,83,84 ⋆ Numbers that are congruent to { 0, 6 } mod 7. ● a(n) - a(n - 1) - a(n - 2) + a(n - 3) = 0 (n > 3). ● a(n) = (14 * n + 5 * (- 1) ^ n - 9) / 4. ● a(n) - a(n - 2) = 7 (n > 2). ●

► [A277567] 1,6,7,13,19,25,31,36,37,42,43,49,55,61,67,73,78,79,85,91,97,103,109,114,115 ⋆ Numbers k such that k / 6 ^ m == 1 (mod 6), where 6 ^ m is the greatest power of 6 that divides k. ● a(n) = 5n + O(log n). - _ Charles R Greathouse IV _ , Nov 03 2016 ●

► [A022096] 1,6,7,13,20,33,53,86,139,225,364,589,953,1542,2495,4037,6532,10569,17101,27670,44771,72441,117212,189653,306865 ⋆ Fibonacci sequence beginning 1, 6. ● a(n) = a(n - 1) + a(n - 2), n>=2, a(0)=1, a(1)=6. ● a(n) = 5 * Fibonacci(n + 2) - 4 * Fibonacci(n + 1). - _ Gary Detlefs _ , Dec 21 2010 ● a(n) = (2 ^ (- 1 - n) * ((1 - sqrt(5)) ^ n * (- 11 + sqrt(5)) + (1 + sqrt(5)) ^ n * (11 + sqrt(5)))) / sqrt(5). - _ Herbert Kociemba _ , Dec 18 2011 ● a(n) = Fibonacci(n + 3) - Fibonacci(n - 4). - _ Greg Dresden _ and Sam Neale, Mar 08 2022 ●

► [A041175] 1,1,6,7,13,20,33,53,86,483,569,10725,11294,67195,78489,145684,224173,369857,594030,963887,5413465,6377352,120205801,126583153,753121566 ⋆ Denominators of continued fraction convergents to sqrt(97). ● a(n) = 11208 * a(n - 11) + a(n - 22). - _ Vincenzo Librandi _ , Dec 12 2013 ●

► [A041749] 1,1,6,7,13,20,73,93,352,1853,4058,9969,53903,171678,225581,841841,1074002,1922423,2996425,16904548,19900973,773141522,793042495,4738353997,5531396492 ⋆ Denominators of continued fraction convergents to sqrt(394). ● a(n) = 790046070 * a(n - 21) + a(n - 42) for n>41. - _ Vincenzo Librandi _ , Dec 23 2013 ●

► [A160825] 1,6,7,13,22,26,44,52,88,104,176,208,352,416,704,832,1408,1664,2816,3328,5632,6656,11264,13312,22528 ⋆ a(1) = 1. For n >=2, a(n) = the smallest integer > a(n - 1) such that both a(n) and a(n) - a(n - 1) have the same number of (non - leading) 0's when they are represented in binary. ● a(2 * n) = 13 * 2 ^ (n - 2) and a(2 * n + 1) = 11 * 2 ^ (n - 1) if n >= 2. - _ Hagen von Eitzen _ , Jun 01 2009 ● a(n) = 2 * a(n - 2) for n>5. ●

► [A042025] 1,6,7,13,33,178,389,567,956,6303,290894,1751667,2042561,3794228,9631017,51949313,113529643,165478956,279008599,1839530550,84897413899,511224013944,596121427843,1107345441787,2810812311417 ⋆ Denominators of continued fraction convergents to sqrt(536). ● a(n) = 291850 * a(n - 10) - a(n - 20) for n>19. - _ Vincenzo Librandi _ , Jan 12 2014 ●

► [A041319] 1,6,7,13,85,2223,13423,15646,29069,190060,4970629,30013834,34984463,64998297,424974245,11114328667,67110946247,78225274914,145336221161,950242601880,24851643870041,150060105822126,174911749692167,3249718555142 93,2124742882777925 ⋆ Denominators of continued fraction convergents to sqrt(173). ● a(n) = 2236 * a(n - 5) + a(n - 10). - _ Vincenzo Librandi _ , Dec 15 2013 ●

► [A283772] 6,7,14,15,21,22,23,29,30,31,37,38,39,45,46,47,53,54,61,62,69,70,76,77,78 ⋆ Numbers k such that U(k) = 0 mod 3, where U = A001950 = upper Wythoff sequence. ● a(n + 1) - a(n) is in { 1,6,7 } for every n. ●

► [A047589] 6,7,14,15,22,23,30,31,38,39,46,47,54,55,62,63,70,71,78,79,86,87,94,95,102 ⋆ Numbers that are congruent to { 6, 7 } mod 8. ● a(n) = 8 * n - a(n - 1) - 3 with n>1, a(1)=6. - _ Vincenzo Librandi _ , Aug 06 2010 ● a(n) = 6 * floor((n - 1) / 2) + n + 5. - _ Gary Detlefs _ , Nov 29 2011 ● a(n) = a(n - 1) + a(n - 2) - a(n - 3). G.f.: x * (6 + x + x ^ 2) / ((1 - x) ^ 2 * (1 + x)). - _ Colin Barker _ , Mar 18 2012 ● a(n) = (1 - 3 * (- 1) ^ n + 8 * n) / 2. - _ Colin Barker _ , May 14 2012 ●

► [A022311] 0,6,7,14,22,37,60,98,159,258,418,677,1096,1774,2871,4646,7518,12165,19684,31850,51535,83386,134922,218309,353232 ⋆ a(n) = a(n - 1) + a(n - 2) + 1 for n>1, a(0)=0, a(1)=1. ● a(n) = F(n + 2) + 5 * F(n) - 1, where F = A000045. - _ G. C. Greubel _ , Aug 25 2017 ●

► [A219382] 6,7,14,25,40,66,103,157,234,341,486,678,927,1244,1641,2131,2728,3447,4304,5316,6501,7878,9467,11289,13366 ⋆ Number of 2 X n arrays of the minimum value of corresponding elements and their horizontal, diagonal or antidiagonal neighbors in a random, but sorted with lexicographically nondecreasing rows and columns, 0..2 2 X n array. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>10. ●

► [A084382] 6,7,14,33,70,131,222,349,518,735,1006,1337,1734,2203,2750,3381,4102,4919,5838,6865,8006,9267,10654,12173,13830 ⋆ a(n) = n ^ 3 + 6. ● a(1)=7, a(2)=14, a(3)=33, a(4)=70; for n>4, a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Harvey P. Dale _ , Aug 08 2013 ●

► [A261195] 0,1,6,7,16,17,22,23,40,41,46,47,56,57,62,63,384,385,390,391,400,401,406,407,424 ⋆ Encoded symmetrical square binary matrices. ● a((2n + 1) * 2 ^ (k - 1)) = a(n * 2 ^ k) + a(2 ^ (k - 1)) for n >= 0 and k >= 1. - _ Eric Werley _ , Sep 13 2015 ●

► [A308903] 0,0,0,0,0,0,6,7,16,18,40,55,96,104,154,195,288,323,450,513,720,819,1056,1196,1584 ⋆ Sum of all the parts in the partitions of n into 6 squarefree parts. ● a(n) = n * Sum _{ m=1..floor(n / 6) } Sum _{ l=m..floor((n - m) / 5) } Sum _{ k=l..floor((n - l - m) / 4) } Sum _{ j=k..floor((n - k - l - m) / 3) } Sum _{ i=j..floor((n - j - k - l - m) / 2) } mu(m) ^ 2 * mu(l) ^ 2 * mu(k) ^ 2 * mu(j) ^ 2 * mu(i) ^ 2 * mu(n - i - k - j - l - m), where mu is the Möbius function (A008683). ●

► [A309481] 0,0,0,0,0,0,6,7,16,23,46,69,116,150,227,309,442,565,787,998,1326,1665,2153,2655,3386 ⋆ Sum of the squarefree parts of the partitions of n into 6 parts. ● a(n) = Sum _{ m=1..floor(n / 6) } Sum _{ l=m..floor((n - m) / 5) } Sum _{ k=l..floor((n - l - m) / 4) } Sum _{ j=k..floor((n - k - l - m) / 3) } Sum _(i=j..floor((n - j - k - l - m) / 2) } (i * mu(i) ^ 2 + j * mu(j) ^ 2 + k * mu(k) ^ 2 + l * mu(l) ^ 2 + m * mu(m) ^ 2 + (n - i - j - k - l - m) * mu(n - i - j - k - l - m) ^ 2), where mu is the Möbius function (A008683). ●

► [A308867] 0,0,0,0,0,0,6,7,16,27,50,77,132,182,280,390,560,748,1044,1349,1800,2310,2992,3749,4776 ⋆ Sum of all the parts in the partitions of n into 6 parts. ● a(n) = n * Sum _{ m=1..floor(n / 6) } Sum _{ l=m..floor((n - m) / 5) } Sum _{ k=l..floor((n - l - m) / 4) } Sum _{ j=k..floor((n - k - l - m) / 3) } Sum _{ i=j..floor((n - j - k - l - m) / 2) } 1. ●

► [A219853] 6,7,17,33,56,86,125,173,230,296,371,455,548,650,761,881,1010,1148,1295,1451,1616,1790,1973,2165,2366 ⋆ Number of 2 X n arrays of the minimum value of corresponding elements and their horizontal or antidiagonal neighbors in a random, but sorted with lexicographically nondecreasing rows and nonincreasing columns, 0..2 2 X n array. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n >5. ●

► [A297556] 1,6,7,19,99,115,307,1587,1843,4915,25395,29491,78643,406323,471859,1258291,6501171,7549747,20132659,104018739,120795955,322122547,1664299827,1932735283,5153960755 ⋆ a(n) = a(n - 1) + 16 * a(n - 3) - 16 * a(n - 4), where a(0) = 1, a(1) = 4, a(2) = 7, a(3) = 19. ● a(n) = a(n - 1) + 16 * a(n - 3) - 16 * a(n - 4), where a(0) = 1, a(1) = 4, a(2) = 7, a(3) = 19. ●

► [A081348] 1,6,7,20,21,42,43,72,73,110,111,156,157,210,211,272,273,342,343,420,421,506,507,600,601 ⋆ First row in maze arrangement of natural numbers. ● a(n) = (2 * n ^ 2 + 4 * n + 3 - (2 * n + 1)(- 1) ^ n) / 2. ●

► [A041076] 6,7,20,47,114,161,2046,2207,6460,15127,36714,51841,658806,710647,2080100,4870847,11821794,16692641,212133486,228826127,669785740,1568397607,3806580954,5374978561,68306323686 ⋆ Numerators of continued fraction convergents to sqrt(45). ● a(n) = 322 * a(n - 6) - a(n - 12). G.f.: - (x ^ 11 - 6 * x ^ 10 + 7 * x ^ 9 - 20 * x ^ 8 + 47 * x ^ 7 - 114 * x ^ 6 - 161 * x ^ 5 - 114 * x ^ 4 - 47 * x ^ 3 - 20 * x ^ 2 - 7 * x - 6) / ((x ^ 2 - 3 * x + 1) * (x ^ 2 + 3 * x + 1) * (x ^ 4 - 3 * x ^ 3 + 8 * x ^ 2 - 3 * x + 1) * (x ^ 4 + 3 * x ^ 3 + 8 * x ^ 2 + 3 * x + 1)). [_ Colin Barker _ , Jul 18 2012] ●

► [A041771] 1,6,7,20,87,629,716,3493,4209,32956,136033,305022,441055,2951352,118495135,713922162,832417297,2378756756,10347444321,74810867003,85158311324,415444112299,500602423623,3919661077660,16179246734263 ⋆ Denominators of continued fraction convergents to sqrt(406). ● a(n) = 118936190 * a(n - 14) - a(n - 28) for n>27, - _ Vincenzo Librandi _ , Dec 24 2013 ●

► [A048062] 0,0,0,0,0,0,0,6,7,21,24,76,90,270,325,945,1155,3311,4102,11611,14547,40755,51555,143227,182703 ⋆ Number of nonempty subsets of { 1,2,...,n } in which exactly 2 / 3 of the elements are <= (n - 4) / 2. ● a(12 * k) = 6 * (3 * k + 1) * (3 * k - 1) * (2 * k - 1) * hypergeom([1, - 6 * k - 1, 2 - 3 * k, - 3 * k + 5 / 2],[3 / 2, 2, 2], - 1) for k >= 1. ● a(12 * k + 1) = 9 * (3 * k - 1) * (1 + 2 * k) * (2 * k - 1) * hypergeom([1, 2 - 3 * k, - 6 * k - 2, - 3 * k + 5 / 2],[3 / 2, 2, 2], - 1) for k >= 1. ● a(12 * k + 2) = 3 * (- 1 + 6 * k) * (3 * k - 1) * (1 + 2 * k) * hypergeom([1, 2 - 3 * k, - 6 * k - 2, - 3 * k + 3 / 2],[3 / 2, 2, 2], - 1) for k >= 1. ● a(12 * k + 3) = 2 * (- 1 + 6 * k) * (2 + 3 * k) * (3 * k - 1) * hypergeom([1, 2 - 3 * k, - 6 * k - 3, - 3 * k + 3 / 2],[3 / 2, 2, 2], - 1) for k >= 1. ● a(12 * k + 4) = 6 * k * (2 + 3 * k) * (- 1 + 6 * k) * hypergeom([1, - 6 * k - 3, 1 - 3 * k, - 3 * k + 3 / 2],[3 / 2, 2, 2], - 1). ● a(12 * k + 5) = 3 * k * (5 + 6 * k) * (- 1 + 6 * k) * hypergeom([1, 1 - 3 * k, - 6 * k - 4, - 3 * k + 3 / 2],[3 / 2, 2, 2], - 1). ●

► [A081284] 0,1,1,6,7,22,27,62,77,147,182,308,378,588,714,1044,1254,1749,2079,2794,3289,4290,5005,6370,7371 ⋆ An interleaved sequence of pyramidal and polygonal numbers. ● a(n) = (2 * n + 1 - (- 1) ^ n) * (2 * n + 5 - (- 1) ^ n) * (2 * n + 9 - (- 1) ^ n) * (2 * n ^ 2 + 15 * n + 51 + 3 * (n - 5) * (- 1) ^ n) / 30720. - _ Luce ETIENNE _ , Mar 13 2015 ●

► [A099572] 1,1,6,7,23,30,73,103,211,314,581,895,1560,2455,4135,6590,10890,17480,28590,46070,74946,121016,196326,317342,514123 ⋆ a(n) = Sum _{ k=0..floor(n / 2) } binomial(n - k + 4, k). ● a(n) = Sum _{ k=0..n } Fibonacci(n - k + 1) * binomial(k / 2 + 3, 3) * ((1 + (- 1) ^ k) / 2). ● a(n) = Fibonacci(n + 5) + (- 1) ^ n * (n ^ 3 + 9 * n ^ 2 + 35 * n + 33) / 96 - (n ^ 3 + 21 * n ^ 2 + 155 * n + 417) / 96. - _ G. C. Greubel _ , Jul 25 2022 ●

► [A282005] 1,1,6,7,24,31,96,127,384,511,1536,2047,6144,8191,24576,32767,98304,131071,393216,524287,1572864,2097151,6291456,8388607,25165824 ⋆ Decimal representation of the x - axis, from the origin to the right edge, of the n - th stage of growth of the two - dimensional cellular automaton defined by "Rule 413", based on the 5 - celled von Neumann neighborhood. ● a(n) = 3 * 2 ^ n / 2 for n>0 and even. ● a(n) = 2 ^ n - 1 for n odd. ● a(n) = 5 * a(n - 2) - 4 * a(n - 4) for n>4. ●

► [A219916] 6,7,24,64,147,308,606,1144,2097,3761,6628,11503,19682,33216,55293,90778,146960,234565,369105,572645,876083,1322052,1968568,2893564,4200467 ⋆ Number of 3 X n arrays of the minimum value of corresponding elements and their horizontal, diagonal, diagonal or antidiagonal neighbors in a random, but sorted with lexicographically nondecreasing rows and nonincreasing columns, 0..2 3 X n array. ● a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10) for n>15. ●

► [A041078] 6,7,27,34,61,156,997,2150,3147,5297,19038,24335,311058,335393,1317237,1652630,2969867,7592364,48524051,104640466,153164517,257804983,926579466,1184384449,15139192854 ⋆ Numerators of continued fraction convergents to sqrt(46). ● a(n) = 48670 * a(n - 12) - a(n - 24). G.f.: - (x ^ 23 - 6 * x ^ 22 + 7 * x ^ 21 - 27 * x ^ 20 + 34 * x ^ 19 - 61 * x ^ 18 + 156 * x ^ 17 - 997 * x ^ 16 + 2150 * x ^ 15 - 3147 * x ^ 14 + 5297 * x ^ 13 - 19038 * x ^ 12 - 24335 * x ^ 11 - 19038 * x ^ 10 - 5297 * x ^ 9 - 3147 * x ^ 8 - 2150 * x ^ 7 - 997 * x ^ 6 - 156 * x ^ 5 - 61 * x ^ 4 - 34 * x ^ 3 - 27 * x ^ 2 - 7 * x - 6) / (x ^ 24 - 48670 * x ^ 12 + 1). - _ Colin Barker _ , Jul 19 2012 ●

► [A042419] 1,6,7,27,88,643,1374,6139,13652,101703,318761,1057986,1376747,9318468,504574019,3036762582,3541336601,13660772385,44523653756,325326348677,695176351110,3106031753117,6907239857344,51456710754525,161277372120919 ⋆ Denominators of continued fraction convergents to sqrt(737). ● a(n) = 505950766 * a(n - 14) - a(n - 28) for n>27. - _ Vincenzo Librandi _ , Jan 21 2014 ●

► [A095369] 1,1,6,7,28,36,120,165,495,716,2003,3018,8024,12512,31977,51357,127110,209475,504736,850840,2003784,3445885,7956715,13926276,31609071 ⋆ Number of walks of length n between two nodes at distance 4 in the cycle graph C _ 9 . ● a(n) = (2 ^ n / 9) * Sum _{ r=0..8 } cos(8 * Pi * r / 9) * cos(2 * Pi * r / 9) ^ n. ● a(n) = a(n - 1) + 5 * a(n - 2) - 4 * a(n - 3) - 5 * a(n - 4) + 2 * a(n - 5). ●

► [A159582] 1,6,7,34,41,198,239,1154,1393,6726,8119,39202,47321,228486,275807,1331714,1607521,7761798,9369319,45239074,54608393,263672646,318281039,15

36796802,1855077841 ⋆ Expansion of (1 + 6 * x + x ^ 2 - 2 * x ^ 3) / ((x ^ 2 + 2 * x - 1) * (x ^ 2 - 2 * x - 1)), bisection is NSW numbers. • a(n) = 6 * a(n - 2) - a(n - 4) for n>3. • a(n) = ((- (- 2 + sqrt(2)) * (- 1 + sqrt(2)) ^ n - (- 1 - sqrt(2)) ^ n * (2 + sqrt(2)) - 3 * (- (1 - sqrt(2)) ^ n * (- 2 + sqrt(2)) - (1 + sqrt(2)) ^ n * (2 + sqrt(2))))) / (4 * sqrt(2)). •

▶ [A041553] 1,6,7,34,41,280,9561,57646,67207,326474,393681,2688560,91804721,553516886,645321607,3134803314,3780124921,25815552840,881508921481,5314869081726,6196378003207,30100381094554,36296759097761,247880935681120,8464248572255841 ⋆ Denominators of continued fraction convergents to sqrt(294). • a(n) = 9602 * a(n - 6) - a(n - 12) for n>11. - _ Vincenzo Librandi _ , Dec 20 2013 •

▶ [A033043] 0,1,6,7,36,37,42,43,216,217,222,223,252,253,258,259,1296,1297,1302,1303,1332,1333,1338,1339,1512 ⋆ Sums of distinct powers of 6. • a(n) = Sum _{ i=0..m } d(i) * 6 ^ i, where Sum _{ i=0..m } d(i) * 2 ^ i is the base - 2 representation of n. • a(2n) = 6 * a(n), a(2n + 1) = a(2n) + 1. •

▶ [A175167] 0,1,1,6,7,36,45,220,286,1365,1820,8568,11628,54264,74613,346104,480700,2220075,3108105,14307150,20160075,92561040,131128140,600805296,854992152 ⋆ a(n) = Sum _{ j=1..floor(n / 2) } binomial(n + j - 1,j - 1). • a(n)=Sum(Binomial(n + j - 1,j - 1),(j,1,Floor[n / 2])). • a(n) = floor(n / 2) * C(n + floor(n / 2), floor(n / 2)) / (n + 1). - _ Vaclav Kotesovec _ , Mar 02 2014 •

▶ [A152119] 1,1,1,6,7,41,48,281,329,1926,2255,13201,15456,90481,105937,620166,726103,4250681,4976784,29134601,34111385,199691526,233802911,1368706081,1602508992 ⋆ a(n) = Product _{ k=1..(n - 1) / 2 } (5 + 4 * cos(k * Pi / n) ^ 2). • a(n) = Product _{ k=1..(n - 1) / 2 } (5 + 4 * cos(k * Pi / n) ^ 2). • a(n) = 7 * a(n - 2) - a(n - 4). •

▶ [A080879] 1,1,6,7,44,52,328,388,2448,2896,18272,21616,136384,161344,1017984,1204288,7598336,8988928,56714752,67094272,423324672,500798464,3159738368,3738010624,23584608256 ⋆ a(n) * a(n + 3) - a(n + 1) * a(n + 2) = 2 ^ n, give n a(0)=1, a(1)=1, a(2)=6. • a(n) = ((9 / 16) * sqrt(3) - 7 / 16) * (1 + sqrt(3)) ^ n + (- (9 / 16) * sqrt(3) - 7 / 16) * (1 - sqrt(3)) ^ n + (- (19 / 48) * sqrt(3) + 15 / 16) * (- (1 + sqrt(3))) ^ n + ((19 / 48) * sqrt(3) + 15 / 16) * (- (1 - sqrt(3))) ^ n. - _ Richard Choulet _ , Dec 06 2008 • a(n + 4) = 8 * a(n + 2) - 4 * a(n). - _ Richard Choulet _ , Dec 06 2008 •

▶ [A042843] 1,1,6,7,48,55,323,378,23003,23381,139908,163289,1119642,1282931,7534297,8817228,536567977,545385205,3263494002,3808879207,26116769244,29925648451,175745011499,205670659950,12515984608499 ⋆ Denominators of continued fraction convergents to sqrt(952). • a(n) = 23326 * a(n - 8) - a(n - 16) for n>15. - _ Vincenzo Librandi _ , Dec 25 2013 •

▶ [A269912] 1,6,7,52,53,170,171,392,393,750,751,1276,1277,2002,2003,2960,2961,4182,4183,5700,5701,7546,7547,9752,9753 ⋆ Partial sums of the number of active (ON,black) cells in n - th stage of growth of two - dimensional cellular automaton defined by "Rule 3", based on the 5 - celled von Neumann neighborhood. • a(n) = (3 * (1 + (- 1) ^ n) + (2 - 12 * (- 1) ^ n) * n - 6 * (- 2 + (- 1) ^ n) * n ^ 2 + 4 * n ^ 3) / 6. • a(n) = (2 * n ^ 3 + 3 * n ^ 2 - 5 * n + 3) / 3 for n even. • a(n) = (2 * n ^ 3 + 9 * n ^ 2 + 7 * n) / 3 for n odd. • a(n) = a(n - 1) + 3 * a(n - 2) - 3 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) + a(n - 6) - a(n - 7) for n>6. •

▶ [A042117] 1,6,7,55,282,1183,6197,44562,50759,349116,16808327,101199078,118007405,927250913,4754261970,19944298793,104475755935,751274590338,8557503046273,5885776667976,283373030409121,1706123959122702,1989496989531823,15632602885845463 ⋆ Denominators of continued fraction convergents to sqrt(583). • a(n) = 16859086 * a(n - 10) - a(n - 20) for n>19. - _ Vincenzo Librandi _ , Jan 15 2014 •

▶ [A041081] 1,1,6,7,90,97,575,672,8639,9311,55194,64505,829254,893759,5298049,6191808,79599745,85791553,508557510,594349063,7640746266,8235095329,48816222911,57051318240,733432041791 ⋆ Denominators of continued fraction convergents to sqrt(47). • a(n) = 96 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Dec 11 2013 •

▶ [A041082] 6,7,90,97,1254,1351,17466,18817,243270,262087,3388314,3650401,47193126,50843527,657315450,708158977,9155223174,9863382151,127515808986,137379191137,1776066102630,1913445293767 ⋆ Numerators of continued fraction convergents to sqrt(48). • a(n) = 14 * a(n - 2) - a(n - 4). G.f.: (6 + 7 * x + 6 * x ^ 2 - x ^ 3) / ((1 - 4 * x + x ^ 2) * (1 + 4 * x + x ^ 2)). [_ Colin Barker _ , Jul 15 2012] •

▶ [A041357] 1,1,6,7,188,195,1163,1358,36471,37829,225616,263445,7075186,7338631,43768341,51106972,1372549613,1423656585,8490832538,9914489123,266267549736,276182038859,1647177744031,1923359782890,51654532099171 ⋆ Denominators of continued fraction convergents to sqrt(192). • a(n) = 194 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Dec 16 2013 •

▶ [A041829] 1,1,6,7,286,293,1751,2044,83511,85555,511286,596841,24384926,24981767,149293761,174275528,7120314881,7294590409,43593266926,50887857335,2079107560326,2129995417661,12729084648631,14859080066292,607092287300311 ⋆ Denominators of continued fraction convergents to sqrt(435). • a(n) = 292 * a(n - 4) - a(n - 8) for n>7. - _ Vincenzo Librandi _ , Dec 25 2013 •

▶ [A047876] 0,6,8,8,12,18,22,28,36,42,52,64,68,82,98,104,118,138,146,164,184,194,216,240,248 ⋆ a(n) = Sum { T(i,n - i): i=0,1,...,n } , array T as in A049604. • a(n) = 2 * a(n - 3) + a(n - 4) - a(n - 6) - 2 * a(n - 7) + a(n - 10) for n > 14 (conjectured). •

▶ [A076517] 1,6,8,9,10,11,12,14,26,34,36,37,41,42,43,45,47,56,62,64,66,67,92,95,97 ⋆ Partial sums of A060370 (cf. A006556). • a(n) seems to be asymptotic to c * n * log(n) with 0.5 < c < 1 •

▶ [A001746] 0,6,8,9,10,16,18,19,20,26,28,29,30,36,38,39,40,46,48,49,50,56,58,59,60 ⋆ At least one digit contains a loop (version 1). • a(n) = n + O(n ^ k) where k = log 6 / log 10 = 0.77815.... - _ Charles R Greathouse IV _ , Feb 11 2017 •

▶ [A047394] 0,1,6,8,9,14,16,17,22,24,25,30,32,33,38,40,41,46,48,49,54,56,57,62,64 ⋆ Numbers that are congruent to { 0, 1, 6 } mod 8. • a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. • a(n) = 8 * n / 3 - 3 + cos(2 * n * Pi / 3) + 5 * sin(2 * n * Pi / 3) / (3 * sqrt(3)). • a(3k) = 8k - 2, a(3k - 1) = 8k - 7, a(3k - 2) = 8k - 8. (End) •

▶ [A001743] 0,6,8,9,60,66,68,69,80,86,88,89,90,96,98,99,600,606,608,609,660,666,668,669,680 ⋆ Numbers in which every digit contains at least one loop (version 1). • a(n) = ((b _ m(n) + 6) mod 9 + floor((b _ m(n) + 2) / 3) - floor(b _ m(n) / 3)) * 10 ^ m + Sum _{ j=0..m - 1 } (b _ j(n) mod 4 + 5 * floor((b _ j(n) + 3) / 4) + floor((b _ j(n) + 2) / 4) - 6 * floor(b _ j(n) / 4))) * 10 ^ j, where n >1, b _ j(n)) = floor((n - 1 - 4 ^ m) / 4 ^ j), m = floor(log _ 4(n - 1)). • a(1 * 4 ^ n + 1) = 6 * 10 ^ n. • a(2 * 4 ^ n + 1) = 8 * 10 ^ n. • a(3 * 4 ^ n + 1) = 9 * 10 ^ n. • a(n) = 6 * 10 ^ log _ 4(n - 1) for n=4 ^ k + 1, • a(n) < 6 * 10 ^ log _ 4(n - 1), otherwise. •

▶ [A080257] 6,8,10,12,14,15,16,18,20,21,22,24,26,27,28,30,32,33,34,35,36,38,39,40,42 ⋆ Numbers having at least two distinct or a total of at least three prime factors. • a(n) = n + O(n / log n). - _ Charles R Greathouse IV _ , Sep 14 2015 •

▶ [A020739] 6,8,10,12,14,16,18,20,22,24,26,28,30,32,34,36,38,40,42,44,46,48,50,52,54 ⋆ 2n + 6. • a(n) = 2a(n - 1) - a(n - 2). •

▶ [A003663] 1,6,8,10,12,15,17,19,24,26,28,33,35,37,42,44,46,51,53,55,60,62,64,69,71 ⋆ a(n) is smallest number != a(j) + a(k), j < k and a(1) = 1, a(2) = 6. • a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n > 9. •

▶ [A295318] 0,0,0,0,6,8,10,12,34,40,46,52,100,112,124,136,220,240,260,280,410,440,470,500,686 ⋆ Sum of the products of the smaller and larger parts of the partitions of n into two distinct parts with the smaller part even. • a(n) = Sum _{ i =1..floor((n - 1) / 2) } i * (n - i) * ((i + 1) mod 2). • a(n) = a(n - 1) + 3 * a(n - 4) - 3 * a(n - 5) - 3 * a(n - 8) + 3 * a(n - 9) + a(n - 12) - a(n - 13) for n>13. • a(n) = (1 / 384) * (- 1) ^ (- (- 1) ^ n / 4) * ((- 2 + 2 * (- 1) ^ n) * ((- 1) ^ (4 * n + 2 - (- 1) ^ n) / 4) + 6 * (- 1) ^ ((2 * n + 1) / 4) + (- 1) ^ ((2 - (- 1) ^ n) / 4)) + 4 * n * (- 6 * n * (- 1) ^ ((2 * n + 1) / 4) + (- 1) ^ ((- 1) ^ n / 4) * (- 16 - 3 * n * (1 + (- 1) ^ n) + 4 * n ^ 2))). - _ Wesley Ivan Hurt _ , Dec 02 2017 •

▶ [A086822] 6,8,10,13,16,19,22,25,28,31,34,37,40,43,46,49,52,55,58,61,64,67,70,73,76 ⋆ a(n) = floor((6 * n ^ 0 + 5 * n ^ 1 + 4 * n ^ 2 + 3 * n ^ 3) / (1 * n ^ 0 + 1 * n ^ 1 + 1 * n ^ 2)). • a(n) = 2 * a(n - 1) - a(n - 2) for n>4. - _ Colin Barker _ , May 23 2015 •

▶ [A350295] 6,8,10,15,21,28,36,45,55,66,78,91,105,120,136,153,171,190,210,231,253,276,300,325,351 ⋆ 2nd subdiagonal of the triangle A350292. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n > 7. •

▶ [A184113] 6,8,11,12,14,16,18,20,21,23,24,26,27,29,31,32,33,35,36,38,39,41,42,44,45 ⋆ n + floor(4 * sqrt(n + 1)). • a(n) = n + floor(4 * sqrt(n + 1)) •

▶ [A167499] 6,8,11,15,20,26,33,41,50,60,71,83,96,110,125,141,158,176,195,215,236,258,281,305,330 ⋆ a(n) = n * (n + 3) / 2 + 6. • a(n) = n + a(n - 1) + 1, with n > 1, a(1) = 8. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Sep 16 2013 •

▶ [A020716] 6,8,11,15,20,27,36,48,64,85,113,150,199,264,350,464,615,815,1080,1431,1896,2512,3328,4409,5841 ⋆ Pisot sequences E(6,8), P(6,8). • a(n) = a(n - 1) + a(n - 2) - a(n - 4) (holds at least up to n = 1000 but is not known to hold in general). • a(n) = a(n - 2) + a(n - 3) + 1. - _ Greg Dresden _ , May 18 2020 •

▶ [A183979] 6,8,11,17,27,47,83,155,291,563,1091,2147,4227,8387,16643,33155,66051,131843,263171,525827,1050627,2100227,4198403,8394755,16785411 ⋆ 1 / 4 the number of (n + 1) X 3 binary arrays with all 2 X 2 subblock sums the same. • a(n) = (3 * 2 ^ (n / 2) + 2 ^ n + 6) / 2 for n even. • a(n) = 2 ^ (n - 1) + 2 ^ ((n + 1) / 2) + 3 for n odd. •

▶ [A063207] 1,6,8,12,14,20,20,26,28,32,34,40,40,46,48,52,54,60,60,66,68,72,74,80,80 ⋆ Dimension of the space of weight 2n cuspidal newforms for Gamma _ 0(33). • a(n) = a(n - 2) + a(n - 3) - a(n - 5) for n>6. G.f.: x * (x ^ 5 + 5 * x ^ 3 + 7 * x ^ 2 + 6 * x + 1) / ((1 - x) ^ 2 * (1 + x) * (1 + x + x ^ 2)). [_ Colin Barker _ , Sep 27 2012] •

▶ [A089241] 6,8,12,16,24,28,36,40,48,60,64,76,84,88,96,108,120,124,136,144,148,160,168,180,196 ⋆ Even numbers k such that k / 2 - 1 is prime. • a(n) = 2 * prime(n) + 2. - _ Alonso del Arte _ , Mar 02 2017 •

▶ [A027691] 6,8,12,18,26,36,48,62,78,96,116,138,162,188,216,246,278,312,348,386,426,468,512,558,606 ⋆ a(n) = n ^ 2 + n + 6. • a(n) = 2 * n + a(n - 1), with a(0)=6. - _ Vincenzo Librandi _ , Aug 05 2010 •

▶ [A047336] 1,6,8,13,15,20,22,27,29,34,36,41,43,48,50,55,57,62,64,69,71,76,78,83,85 ⋆ Numbers that are congruent to { 1, 6 } mod 7. • a(1) = 1; a(n) = 7(n - 1) - a(n - 1). - _ Rolf Pleisch _ , Jan 31 2008 (corrected by _ Jon E. Schoenfield _ , Dec 22 2008) • a(n) = (7 / 2) * (n - (1 - (- 1) ^ n) / 2) - (- 1) ^ n. - _ Rolf Pleisch _ , Nov 02 2010 • a(n) = - a(- n + 1) = a(n - 1) + a(n - 2) - a(n - 3). • a(n) = a(n - 2) + 7. • a(n) = 7 * floor(n / 2) + (- 1) ^ (n + 1). - _ Gary Detlefs _ , Dec 29 2011 •

▶ [A373663] 6,8,13,19,24,34,39,53,58,76,81,103,108,134,139,169,174,208,213,251,256,298,303,349,354 ⋆ a(n) = (1 + (n + 2) ^ 2 + (n - 3) * (- 1) ^ n) / 2. • a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). •

▶ [A047451] 0,6,8,14,16,22,24,30,32,38,40,46,48,54,56,62,64,70,72,78,80,86,88,94,96 ⋆ Numbers that are congruent to { 0, 6 } mod 8. • a(n) = 8 * n - a(n - 1) - 10 (with a(1)=0). - _ Vincenzo Librandi _ , Aug 06 2010 • a(n) = 4 * n - 3 + (- 1) ^ n. • a(n) = ceiling((8 / 3) * ceiling(3 * n / 2)). - _ Clark Kimberling _ , Jul 04 2012 •

▶ [A255844] 6,8,14,24,38,56,78,104,134,168,206,248,294,344,398,456,518,584,654,728,806,888,974,1064,1158 ⋆ a(n) = 2 * n ^ 2 + 6. • a(n) = a(- n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). •

▶ [A168610] 6,8,14,32,86,248,734,2192,6566,19688,59054,177152,531446,1594328,4782974,14348912,43046726,129140168,387420494,1162261472,3486784406,10460353208,31381059614,94143178832,282429536486 ⋆ a(n) = 3 ^ n + 5. • a(n) = 3 * a(n - 1) - 10 with a(0)=6. • a(n) = 4 * a(n - 1) - 3 * a(n - 2). - _ Vincenzo Librandi _ , Jul 06 2012 •

▶ [A022320] 1,6,8,15,24,40,65,106,172,279,452,732,1185,1918,3104,5023,8128,13152,21281,34434,55716,90151,145868,236020,381889 ⋆ a(n) = a(n - 1) + a(n - 2) + 1, with a(0) = 1 and a(1) = 6. • a(n) = 2 * F(n + 2) + 3 * F(n) - 1, where F = A000045. - _ G. C. Greubel _ , Aug 25 2017 •

▶ [A165720] 6,8,18,21,35,39,57,62,84,90,116,123,153,161,195,204,242,252,294,305,351,363,413,426,480 ⋆ Integers of the form k * (k + 11) / 10. • a(n) = a(n - 1

) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). ● a(n) = 5 * (2 * n ^ 2 + 10 * n + 3) / 16 - 3 * (- 1) ^ n * (5 + 2 * n) / 16. ●

► [A113806] 6,8,20,22,34,36,48,50,62,64,76,78,90,92,104,106,118,120,132,134,146,148,160,162,174 ⋆ Numbers that are congruent to { 6, 8 } mod 14. ● a(n) = 14 * n - a(n - 1) - 14 (with a(1) = 6). - _ Vincenzo Librandi _ , Nov 13 2010 ● a(n) = 7 * n - (7 + 5 * (- 1) ^ n) / 2. ●

► [A159469] 6,8,20,24,42,48,72,80,110,120,156,168,210,224,272,288,342,360,420,440,506,528,600,624,702 ⋆ Maximum remainder when (k + 1) ^ n + (k - 1) ^ n is divided by k ^ 2 for variable n and k > 2. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n > 7. - _ Colin Barker _ , Oct 29 2017 (proved by _ Iain Fox _ , Nov 26 2017) ● a(n) = n ^ 2 - n * (3 + (- 1) ^ n) / 2. - _ Iain Fox _ , Nov 26 2017 ●

► [A083595] 1,6,8,20,36,76,148,300,596,1196,2388,4780,9556,19116,38228,76460,152916,305836,611668,1223340,2446676,4893356,9786708,19573420,39146836 ⋆ a(n) = (7 * 2 ^ n - 4(- 1) ^ n) / 3. ● a(n) = (7 * 2 ^ n - 4(- 1) ^ n) / 3 . ●

► [A084962] 6,8,21,10946 ⋆ Iterations of the Fibonacci sequence starting at 6. ● a(0) = 6, a(n) = Fibonacci(a(n - 1)) for n>0. ●

► [A343759] 0,0,0,0,6,8,22,27,32,37,72,82,92,102,168,185,202,219,236,253,270,287,436,464,492 ⋆ Total area of all p X r rectangles where n = p + r, p < r, p is prime and r is a positive integer. ● a(n) = Sum _{ k=1..floor((n - 1) / 2) } k * (n - k) * c(k), where c is the prime characteristic (A010051). ●

► [A024868] 6,8,22,27,52,61,100,114,170,190,266,293,392,427,552,596,750,804,990,1055,1276,1353,1612,1702,2002 ⋆ a(n) = 2 * (n + 1) + 3 * n + ... + (k + 1) * (n + 2 - k), where k = floor(n / 2). ● a(n) = Sum _{ i=1..floor(n / 2) } (i + 1) * (n - i + 2) = floor(n / 2) * (- 2 * floor(n / 2) ^ 2 + 3 * n * floor(n / 2) + 9 * n + 14) / 6, n>1. - _ Wesley Ivan Hurt _ , Sep 20 2013 ● a(n) = (4 * n ^ 3 + 33 * n ^ 2 + 38 * n - 27) / 48 + (- 1) ^ n * (n + 3) ^ 2 / 16. - _ R. J. Mathar _ , Sep 25 2013 ●

► [A219191] 0,6,8,26,30,60,66,108,116,170,180,246,258,336,350,440,456,558,576,690,710,836,858,996,1020 ⋆ Numbers of the form k * (7 * k + 1), where k = 0, - 1,1, - 2,2, - 3,3,... ● a(n) = a(- n + 1) = (14 * n * (n - 1) + 5 * (- 1) ^ n * (2 * n - 1) + 5) / 8. ●

► [A024873] 6,8,26,43,97,156,308,499,915,1480,2598,4204,7178,11614,19476,31513,52219,84492,138900,224745,367509,594642,968924,1567752,2548478 ⋆ a(n) = s(1)t(n) + s(2)t(n - 1) + ... + s(k)t(n - k + 1), where k = [n / 2], s = (natural numbers >= 2), t = (Lucas numbers). ● a(0)=6, a(1)=8, a(2)=26, a(3)=43, a(4)=97, a(5)=156, a(6)=308, a(7)=499, a(8)=915, a(9)=1480, a(n)=a(n - 1) + 3 * a(n - 2) - 2 * a(n - 3) - a(n - 4) - a(n - 5) - 3 * a(n - 6) + 2 * a(n - 7) + a(n - 8) + a(n - 9) + a(n - 10) [From Harvey P. Dale, May 19 2011] ●

► [A007829] 0,0,0,0,0,6,8,28,44,100,162,318,514,942,1518,2672,4302,7380,11882,20040,32276,53810,86710,143396,231204 ⋆ From random walks on complete directed triangle. ● a(n) = 2 * a(n - 1) + 3 * a(n - 2) - 6 * a(n - 3) - 4 * a(n - 4) + 5 * a(n - 5) + 5 * a(n - 6) - 2 * a(n - 7) - 2 * a(n - 8) for n>7. ●

► [A000773] 0,0,0,1,1,6,8,29,45,130,220,561,1001,2366,4368,9829,18565,40410,77540,164921,320001,669526,1309528,2707629,5326685 ⋆ Number of numbers == 0 (mod 3) in range 2 ^ n to 2 ^ (n + 1) with odd number of 1's in binary expansion. ● a(n) = (1 / 6) * (2 ^ n - (- 1) ^ n - 3 ^ ((n + 1) / 2)). G.f.: x ^ 3 / ((1 + x) * (1 - 2 * x) * (1 - 3 * x ^ 2)). - _ Ralf Stephan _ , Aug 08 2004 ● a(n) = a(n - 1) + 2 * a(n - 2) + 3 ^ (n / 2) * (1 + (- 1) ^ n) / 18 for all n in Z. - _ Michael Somos _ , Jan 23 2014 ● a(n) = - 6 * a(n - 4) - 3 * a(n - 3) + 5 * a(n - 2) + a(n - 1) for n > 4. - _ Hugo Pfoertner _ , Jun 13 2017 ●

► [A258283] 1,1,6,8,29,47,134,213,559,939,2178,3564,8184,13225,27904,46376,93151,153022,302948,489271,931845,1540667,2818014,4565768,8369128 ⋆ Number of partitions of 5 copies of n into distinct parts. ● a(n) = 1 / 5! * [(x * y * z * u * v) ^ n] Product _{ j>0 } (1 + x ^ j + y ^ j + z ^ j + u ^ j + v ^ j). ●

► [A154153] 6,8,47,57,278,336,1623,1961,9462,11432,55151,66633,321446,388368,1873527,2263577,10919718,13193096,63644783,76895001,370948982,448176912,2162049111,2612166473,12601345686 ⋆ Numbers k such that 28 plus the k - th triangular number is a perfect square. ● a(n) = + a(n - 1) + 6 * a(n - 2) - 6 * a(n - 3) - a(n - 4) + a(n - 5). ●

► [A164640] 1,6,8,48,64,384,512,3072,4096,24576,32768,196608,262144,1572864,2097152,12582912,16777216,100663296,134217728,805306368,1073741824,6442450944,8589934592,51539607552,68719476736 ⋆ a(n) = 8 * a(n - 2) for n > 2; a(1) = 1, a(2) = 6. ● a(n) = (7 - (- 1) ^ n) * 2 ^ (1 / 4 * (6 * n - 15 + 3 * (- 1) ^ n)). ●

► [A322544] 1,6,8,60,180,1680,8064,90720,604800,7983360,68428800,1037836800,10897286400,186810624000,2324754432000,44460928512000,640237370572800,13516122267648000,221172909834240000,5109094217170944000,936667273148006400000,23501833398986342400000,477268001333261107200000 ⋆ a(n) is the reciprocal of the coefficient of x ^ n in the power series of the function defined by ((1 + 2x) * exp(x) + 3 * exp(- x) - 4) / (4x ^ 2). ● a(n) = (n + 2)! / (3 * floor(n / 2) - n + 2). ● a(n) = (4 * (n + 2)!) / (2n + 5 + 3 * (- 1) ^ n). ● a(n) = 4 / ([x ^ n]((exp(x) * (1 + 2x) + 3 * exp(- x) - 4) / x ^ 2)). ●

► [A250256] 1,6,8,68,88,688,888,6888,8888,68888,88888,688888,888888,6888888,8888888,68888888,88888888,688888888,888888888,6888888888,8888888888,688888888888,888888888888,6888888888888,8888888888888 ⋆ Least positive integer whose decimal digits divide the plane into n regions (A249572 variant). ● a(n) = 10 * a(n - 2) + 8 for n >= 4. ● a(n) = a(n - 1) + 10 * a(n - 2) - 10 * a(n - 3) for n > 4. ●

► [A053869] 1,6,9,10,12,14,20,22,24,25,26,28,30,34,38,40,42,44,46,48,49,52,54,56,58 ⋆ Sum of divisors of n less than n is even. ● a(n) = 2n + 2 * sqrt(n) + O(1). - _ Charles R Greathouse IV _ , Sep 27 2015 ●

► [A105066] 6,9,10,13,16,18,20,22,26,28,32,33,34,38,42,43,47,50,51,52,53,56,58,60,66 ⋆ Positive integers n such that n ^ 8 + 1 is semiprime. ● a(n) ^ 8 + 1 is an element of A001538. ●

► [A184104] 6,9,11,14,16,18,20,22,24,25,27,29,31,32,34,36,37,39,40,42,43,45,46,48,50 ⋆ n + floor(5 * sqrt(n)); complement of A184105. ● a(n)=n + floor(5 * sqrt(n)). ●

► [A214777] 0,6,9,12,15,18,20,21,24,26,27,29,30,32,33,35,36,38,39,40,41,42,44,45,46 ⋆ McNugget numbers: numbers of the form 6 * x + 9 * y + 20 * z for nonnegative integers x, y, z. ● a(n) = n + 21 for n >= 23. - _ Robert Israel _ , May 01 2015 ●

► [A297667] 1,6,9,12,15,22,35,56,87,134,209,332,533,858,1381,2224,3587,5794,9367,15148,24499,39626,64101,103704,167785 ⋆ Number of chordless cycles in the n - Moebius ladder. ● a(n) = n - 2 * cos(n * Pi / 3) + Lucas(n). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - 2 * a(n - 5) + a(n - 6). ●

► [A245685] 6,9,12,18,21,27,30,36,45,48,57,63,66,72,81,90,93,102,108,111,120,126,135,147,153 ⋆ Sigma(2p) / 2, for odd primes p. ● a(n) = T(2 * prime(n + 1), 1) - T(2 * prime(n + 1), 4) = 3 * (prime(n + 1) + 1) / 2 = sigma(2 * prime(n + 1)) / 2 where T(n,k) is defined in A235791. ●

► [A106218] 6,9,12,21,27,33,69,75,84,87,93,96,111,123,126,162,165,192,225,228,231,234,237,240,264 ⋆ Positions of 2's in A106216. ● a(n) = 0 (mod 3) for all n. ●

► [A064799] 6,9,13,16,21,25,31,34,39,47,51,58,63,67,72,79,86,89,97,103,106,113,118,125,135 ⋆ Sum of n - th prime number and n - th composite number. ● a(n) = prime(n) + composite(n). ●

► [A167614] 6,9,13,18,24,31,39,48,58,69,81,94,108,123,139,156,174,193,213,234,256,279,303,328,354 ⋆ a(n) = (n ^ 2 + 3 * n + 8) / 2. ● a(n) = n + a(n - 1) + 1, with n>1, a(1)=6. ●

► [A048626] 6,9,13,19,28,41,60,88,129,189,277,406,595,872,1278,1873,2745,4023,5896,8641,12664,18560,27201,39865,58425 ⋆ Pisot sequence P(6,9). ● a(n) = a(n - 1) + a(n - 3) (Checked up to n = 1000) ●

► [A232553] 6,9,13,36,54,81,216,324,486,1296,1944,2916,7776,11664,17496,46656,69984,104976,279936,419904,629856,1679616,2519424,3779136,10077696 ⋆ Maximal values of permanent on (0,1) square matrices of order n with row and column sums 3. ● a(n) = floor(6 ^ ((n - h) / 3) * (3 / 2) ^ h), where h=0,1 or 2, such that n == h (mod 3). ● a(n) = 6 * a(n - 3) for n>5. ●

► [A047452] 1,6,9,14,17,22,25,30,33,38,41,46,49,54,57,62,65,70,73,78,81,86,89,94,97 ⋆ Numbers that are congruent to { 1, 6 } mod 8. ● a(n) = 8 * n - a(n - 1) - 9, n > 1. - _ Vincenzo Librandi _ , Aug 06 2010 ● a(n) = (1 / 2) * (- 5 + (- 1) ^ n + 8 * n), with n >= 1. - _ Paolo P. Lava _ , Sep 03 2010 ●

► [A134859] 1,6,9,14,19,22,27,30,35,40,43,48,53,56,61,64,69,74,77,82,85,90,95,98,103 ⋆ Wythoff AAA numbers. ● a(n) = A(A(A(n))), n>=1, with A=A000201, the lower Wythoff sequence. ● a(n) = 2 * floor(n * Phi ^ 2) + n - 2 where Phi= (1 + sqrt(5)) / 2. - _ Benoit Cloitre _ , Apr 12 2008; _ R. J. Mathar _ , Oct 16 2009 ●

► [A095098] 6,9,14,19,22,27,30,35,40,43,48,53,56,61,64,69,74,77,82,85,90,95,98,103,108 ⋆ Fib001 numbers: those k for which the Zeckendorf expansion A014417(k) ends with two zeros and a final one. ● a(n) = 2 * floor((n + 1) * phi ^ 2) - n - 3, where phi = (1 + sqrt(5)) / 2. - _ Vladeta Jovovic _ , Jul 05 2004 ●

► [A020717] 6,9,14,22,35,56,90,145,234,378,611,988,1598,2585,4182,6766,10947,17712,28658,46369,75026,121394,196419,317812,514230 ⋆ Pisot sequences L(6,9), E(6,9). ● a(n) = 2 * a(n - 1) - a(n - 3). ● a(n) = 1 + (5 / 2) * (1 / 2 + (1 / 2) * sqrt(5)) ^ n + (11 / 10) * (1 / 2 + (1 / 2) * sqrt(5)) ^ n * sqrt(5) - (11 / 10) * sqrt(5) * (1 / 2 - (1 / 2) * sqrt(5)) ^ n + (5 / 2) * (1 / 2 - (1 / 2) * sqrt(5)) ^ n. - _ Paolo P. Lava _ , Jun 10 2008 ●

► [A325300] 6,9,15,20,24,31,35,42,49,59,63,72,76,84,95,106,110,121,125 ⋆ a(n) is the number of faces of the stepped pyramid with n levels described in A245092. ● a(n) = a(n - 1) + 4 iff n is a prime > 3 (A215848). ●

► [A229354] 6,9,17,39,101,279,797,2319,6821,20199,60077,179199,535541,1602519,4799357,14381679,43112261,129271239,387682637,1162785759,3487832981,10462450359,31385253917,94151567439,282446313701 ⋆ Total sum of n - th powers of parts in all partitions of 3. ● a(n) = 4 + 2 ^ n + 3 ^ n. ●

► [A320492] 1,6,9,18,21,30,33,36,48,48,57,63,63,75,78,84,90,93,102,105,114,117,120,132,132 ⋆ Coordination sequence of thinnest 5 - neighbor packing of the plane with congruent triangles with respect to a hexavalent point with three - fold rotational symmetry. ● a(n) = a(n - 3) + a(n - 5) - a(n - 8) for n>8. ●

► [A118277] 0,1,6,9,19,24,39,46,66,75,100,111,141,154,189,204,244,261,306,325,375,396,451,474,534 ⋆ Generalized 9 - gonal (or enneagonal) numbers: m * (7 * m - 5) / 2 with m = 0, 1, - 1, 2, - 2, 3, - 3, ... ● a(n) = n * (7 * n - 5) / 2 for positive and negative n. ● a(n) = (1 / 16) * (14 * n ^ 2 + 14 * n - 3 + 3 * (- 1) ^ n * (2 * n + 1)). - _ R. J. Mathar _ , Oct 08 2011 ●

► [A165717] 6,9,21,26,44,51,75,84,114,125,161,174,216,231,279,296,350,369,429,450,516,539,611,636,714 ⋆ Integers of the form k * (5 + k) / 4. ● a(n)= a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). - _ R. J. Mathar _ , Sep 25 2009 ●

► [A084431] 1,6,9,24,36,96,144,384,576,1536,2304,6144,9216,24576,36864,98304,147456,393216,589824,1572864,2359296,6291456,9437184,25165824,37748736 ⋆ Expansion of (1 + 6 * x + 5 * x ^ 2) / ((1 - 2 * x) * (1 + 2 * x)). ● a(n) = (- 10 * 0 ^ n - 3 * (- 2) ^ n + 21 * 2 ^ n) / 8. ● a(n) = 4 * a(n - 2), n > 1. - _ Harvey P. Dale _ , Nov 05 2011 ●

► [A274977] 1,6,9,27,54,135,297,702,1593,3699,8478,19575,45009,103734,238761,549963,1266246,2916135,6714873,15463278,35607897,81997731,188821422,434814615,1001278881 ⋆ a(n) = a(n - 1) + 3 * a(n - 2) with n>1, a(0)=1, a(1)=6. ● a(n) = ((13 + 11 * sqrt(13)) * (1 + sqrt(13)) ^ n + (13 - 11 * sqrt(13)) * (1 - sqrt(13)) ^ n) / (26 * 2 ^ n). ● a(n) = 3 ^ ((n - 1) / 2) * (sqrt(3) * Fibonacci(n + 1, 1 / sqrt(3)) + 5 * Fibonacci(n, 1 / sqrt(3))). - _ G. C. Greubel _ , Jan 15 2020 ●

► [A340630] 0,6,9,27,63,128,237 ⋆ Fill an n X n square with nonnegative integers so that all n ^ 2 von Neumann neighborhoods have distinct sums; a(n) is smallest possible sum of the entries. ● a(n) < (1 / 10) * n ^ 4 + 48 * n ^ 3 + (1299 / 10) * n ^ 2 + 4 * n, see the PARI program. - _ Robert Gerbicz _ , Jan 15 2021 ●

► [A192425] 0,1,1,6,9,31,60,169,369,954,2201,5479,12960,31721,75881,184326,443169,1072871,2585340,6249329,15074649,36413754,87877681,212208719,512231040 ⋆ Coefficient of x in the reduction by x ^ 2 - > x + 2 of the polynomial p(n,x) defined below in Comments. ● a(n) = a(n - 1) + 4 * a(n - 2) - a(n - 3) - a(n - 4) . ●

► [A219687] 6,9,31,87,208,452,922,1799,3394,6234,11196,19713,34085,57937,96878,159429,258304,412146,647840,1003547,1532627,2308645,3431682,5036203,7300766 ⋆ Number of 3 X n arrays of the minimum value of corresponding element

s and their horizontal, vertical or antidiagonal neighbors in a random, but sorted with lexicographically nondecreasing rows and nonincreasing columns, 0..2 3 X n array. • a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10) for n>15. •

▶ [A154139] 0,6,9,39,56,230,329,1343,1920,7830,11193,45639,65240,266006,380249,1550399,2216256,9036390,12917289,52667943,75287480,306971270,438807593,1789159679,2557558080 ⋆ Indices k such that 4 plus the k - th triangular number is a perfect square. • a(n) = a(n - 1) + 6 * a(n - 2) - 6 * a(n - 3) - a(n - 4) + a(n - 5). •

▶ [A299914] 0,1,1,6,9,42,69,306,513,2250,3789,16578,27945,122202,206037,900882,1518993,6641514,11198493,48963042,82558521,360969210,608644773,2661166386,4487100705 ⋆ a(n) = a(n - 1) + 3 * a(n - 2) if n even, or 2 * a(n - 1) + 4 * a(n - 2) if n odd, starting with 0, 1. • a(n) = 9 * a(n - 2) - 12 * a(n - 4) for n>3. - _ Colin Barker _ , Mar 11 2018 •

▶ [A098662] 1,1,6,9,54,90,540,945,5670,10206,61236,112266,673596,1250964,7505784,14073345,84440070,159497910,956987460,1818276174,10909657044,20827527084,124965162504,239516561466,1437099368796 ⋆ E.g.f. BesselI(0,2 * sqrt(3) * x) + BesselI(1,2 * sqrt(3) * x) / sqrt(3). • a(n) = binomial(n, floor(n / 2)) * 3 ^ floor(n / 2). •

▶ [A119738] 6,9,69,106,111,119,611,669,689,698,699,818,866,869,901,998,1011,1101,1111,1198,1199,1661,1681,1689,1691 ⋆ Semiprimes that are semiprimes turned upside - down. • a(n) in A001358, a(n) = / = 10 and a(n) upside - down in A001358. UpsideDown(k) is R(k) followed by the substitutions (0,0), (1,1), (6,9), (8,8), (9,6). •

▶ [A111093] 0,1,6,10,10,15,16,16,20,25,30,36,36,45,50,50,56,61,70,70,70,71,76,80,80 ⋆ Like sequence A111072 but moving right by the squares of the sequence of positive integers. • a(n + 1) = a(n) + (a(n) - a(n - 1) + (n + 1) ^ 2 mod 10) mod 10, with a(0)=0, a(1)=1. •

▶ [A248757] 6,10,11,28,149,172,185,754,815,1510,1594,3160,3755,10654,12743,71807,155957 ⋆ Indices of prime Fibonacci 5 - step numbers, A001591. • a(n) = A105756 (n) + 3. •

▶ [A105642] 6,10,12,14,15,18,20,21,22,24,26,28,30,32,33,34,35,38,39,40,42,44,45,46,48 ⋆ Composite nonsquares and noncubes. • a(n) = n + O(n / log n). - _ Charles R Greathouse IV _ , Oct 19 2015 •

▶ [A106543] 6,10,12,14,15,18,20,21,22,24,26,28,30,33,34,35,38,39,40,42,44,45,46,48,50 ⋆ Composite numbers that are not perfect powers. • a(n) = n + O(n / log n). - _ Charles R Greathouse IV _ , Oct 03 2011 •

▶ [A054741] 6,10,12,14,18,20,22,24,26,28,30,34,36,38,40,42,44,46,48,50,52,54,56,58,60 ⋆ Numbers m such that totient(m) < cototient(m). • a(n) seems to be asymptotic to c * n with c=1.9566..... - _ Benoit Cloitre _ , Oct 20 2002 [It is an old theorem that a(n) ~ cn for some c, for any sequence of the form "m / phi(m) > k". - _ Charles R Greathouse IV _ , May 28 2015] [c is in the interval (1.9540, 1.9562) (Kobayashi, 2016). - _ Amiram Eldar _ , Feb 14 2021] •

▶ [A063214] 1,6,10,12,16,22,22,28,32,34,38,44,44,50,54,56,60,66,66,72,76,78,82,88,88 ⋆ Dimension of the space of weight 2n cuspidal newforms for Gamma _ 0(46). • a(n) = a(n - 2) + a(n - 3) - a(n - 5) for n>6. G.f.: x * (1 + 6 * x + 9 * x ^ 2 + 5 * x ^ 3 + x ^ 5) / ((1 - x) ^ 2 * (1 + x) * (1 + x + x ^ 2)). [_ Colin Barker _ , Sep 27 2012] •

▶ [A242100] 6,10,12,18,20,24,30,34,36,40,42,48,56,66,68,72,80,84,90,96,108,110,130,132,136 ⋆ Numbers of the form m = b ^ i + b ^ j, where b > 1 and i > j > 0. • a(n) < n ^ 2 for n > 4. •

▶ [A030229] 1,6,10,14,15,21,22,26,33,34,35,38,39,46,51,55,57,58,62,65,69,74,77,82,85 ⋆ Numbers that are the product of an even number of distinct primes. • a(n) < n * Pi ^ 2 / 3 infinitely often; a(n) > n * Pi ^ 2 / 3 infinitely often. - _ Charles R Greathouse IV _ , Oct 04 2011; corrected Sep 07 2017 •

▶ [A193416] 6,10,14,16,20,22,24,24,28,30,32,32,36,38,40,40,42,42,46,48,50,50,52,52,54 ⋆ Minimum surface area of polycubes with volume n. • a(n ^ 3) = 6n ^ 2, a(n) ~ 6n ^ (2 / 3). - _ Charles R Greathouse IV _ , Aug 25 2011 •

▶ [A073760] 6,10,14,18,22,26,30,34,38,42,46,50,54,58,62,66,70,74,78,82,86,90,94,98,102 ⋆ Integers m such that A073758(m) = 4. • a(n) = 4 * n + 2. - _ Max Alekseyev _ , Mar 03 2007 • a(n) = 8 * n - a(n - 1), with a(1)=6. - _ Vincenzo Librandi _ , Aug 08 2010 • a(1)=6, a(2)=10; for n>2, a(n) = 2 * a(n - 1) - a(n - 2). - _ Harvey P. Dale _ , Mar 06 2012 •

▶ [A315187] 1,6,10,14,18,24,30,34,38,42,48,54,58,62,66,72,78,82,86,90,96,102,106,110,114 ⋆ Coordination sequence Gal.3.14.3 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. • a(n) = a(n - 1) + a(n - 5) - a(n - 6) for n > 6. •

▶ [A007944] 6,10,14,18,26,30,38,42,42,54,62,74,74,90,90,90,108,114,114,134,134,146,162,172,180 ⋆ a(n) is the largest even number k such that 6, 8, ..., k are sums of 2 of first n odd primes. • a(n) << n log n. - _ Charles R Greathouse IV _ , Sep 19 2012 •

▶ [A315203] 1,6,10,14,20,24,28,34,38,42,48,54,58,62,68,72,76,82,86,90,96,102,106,110,116 ⋆ Coordination sequence Gal.6.321.6 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. • a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - 2 * a(n - 4) + 2 * a(n - 5) - 2 * a(n - 6) + 2 * a(n - 7) - 2 * a(n - 8) + 2 * a(n - 9) - a(n - 10) for n > 10. •

▶ [A151972] 0,1,6,10,15,16,21,25,30,31,36,40,45,46,51,55,60,61,66,70,75,76,81,85,90 ⋆ Numbers that are congruent to { 0, 1, 6, 10 } mod 15. • a(n) = (30 * n - 41 - 5 * i ^ (2 * n) + (3 + 3 * i) * i ^ (- n) + (3 - 3 * i) * i ^ n) / 8 where i=sqrt(- 1). • a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. (End) •

▶ [A315266] 1,6,10,15,20,26,31,36,42,47,52,56,62,68,72,77,82,88,93,98,104,109,114,118,124 ⋆ Coordination sequence Gal.6.205.3 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. • a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - 2 * a(n - 4) + 2 * a(n - 5) - 2 * a(n - 6) + 2 * a(n - 7) - 2 * a(n - 8) + 2 * a(n - 9) - 2 * a(n - 10) + 2 * a(n - 11) - a(n - 12) for n > 12. •

▶ [A315271] 1,6,10,15,21,25,30,35,39,45,50,54,60,66,70,75,81,85,90,95,99,105,110,114,120 ⋆ Coordination sequence Gal.6.345.5 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. • a(n) = a(n - 1) + a(n - 3) - a(n - 4) - a(n - 6) + a(n - 7) + a(n - 9) - a(n - 10) for n > 10. •

▶ [A168102] 6,10,15,21,28,35,42,49,56,63,70,77,84,91,98,105,112,119,126,133,140,147,154,161,168 ⋆ a(n) = sum of natural numbers m such that n - 3 <= m <= n + 3. • a(n) = a(n - 1) + 7 for n >= 4. • a(n) = 2 * a(n - 1) - a(n - 2) for n >4. - _ Colin Barker _ , Feb 12 2015 •

▶ [A333747] 6,10,15,21,35,55,77,91,143,187,221,247,323,391,437,551,667,713,899,1073,1147,1271,1517,1591,1763 ⋆ Numbers that are either the product of two consecutive primes or two primes with a prime in between. • a(n) = prime(ceiling(n / 2)) * prime(ceiling((n + 3) / 2)). • a(2 * n - 1) = prime(n) * prime(n + 1). • a(2 * n) = prime(n) * prime(n + 2). •

▶ [A285766] 0,0,6,10,15,22,31,42,55,70,87,106,127,150,175,202,231,262,295,330,367,406,447,490,535 ⋆ Maximum spillway height for a zero or one bend minimal area lake in a number square. • a(n) = 7 - 2 * n + n ^ 2 for n>2. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>5. •

▶ [A332392] 1,1,6,10,15,52,105,175,481,1028,2000,4821,10368,21285,48625,105889,224578,498106,1084331,2331760,5121797,11162455,24152665,52751528,114914016 ⋆ Number of minimal total dominating sets in the 2 X n king graph. • a(n) = a(n - 2) + 5 * a(n - 3) + 4 * a(n - 4) + 8 * a(n - 5) + 16 * a(n - 6) - 8 * a(n - 7) - 48 * a(n - 8) - 64 * a(n - 9) for n >= 9. •

▶ [A315306] 1,6,10,16,20,24,30,34,40,46,50,56,60,64,70,74,80,86,90,96,100,104,110,114,120 ⋆ Coordination sequence Gal.5.130.5 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. • a(n) = 2 * a(n - 1) - a(n - 2) - a(n - 4) + 2 * a(n - 5) - a(n - 6) for n > 6. •

▶ [A131501] 6,10,16,20,26,30,36,40,46,50 ⋆ Xm / CV where Xm is a point of maximum error using an approximation method for x ^ (1 / 2) which I have found and CV is the population coefficient of variation from my list of error values. • a(n) = 10 * n - a(n - 1) - 4, a(1)=6. - _ Vincenzo Librandi _ , Nov 23 2010 •

▶ [A146951] 0,6,10,16,20,26,30,36,40,46,50,56,60,66,70,76,80,86,90,96,100,106,110,116,120 ⋆ Numbers that are congruent to 0 or 6 mod 10. • a(n) = 1 / 2 - (- 1) ^ n / 2 + 5 * n. • a(n) = a(n - 1) + a(n - 2) - a(n - 3). •

▶ [A315318] 1,6,10,16,21,26,31,36,41,46,52,56,62,68,72,78,83,88,93,98,103,108,114,118,124 ⋆ Coordination sequence Gal.6.622.2 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. • a(n) = a(n - 1) + a(n - 3) - a(n - 4) - a(n - 6) + a(n - 7) + a(n - 9) - a(n - 10) for n > 10. •

▶ [A315319] 1,6,10,16,21,26,31,36,42,46,52,58,62,68,73,78,83,88,94,98,104,110,114,120,125 ⋆ Coordination sequence Gal.5.289.4 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. • a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - 2 * a(n - 4) + 2 * a(n - 5) - 2 * a(n - 6) + 2 * a(n - 7) - 2 * a(n - 8) + 2 * a(n - 9) - a(n - 10) for n > 10. •

▶ [A315320] 1,6,10,16,21,26,32,36,42,48,52,58,63,68,74,78,84,90,94,100,105,110,116,120,126 ⋆ Coordination sequence Gal.4.135.2 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. • a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - 2 * a(n - 4) + 2 * a(n - 5) - 2 * a(n - 6) + 2 * a(n - 7) - a(n - 8) for n > 8. •

▶ [A315322] 1,6,10,16,21,27,32,37,43,48,54,58,64,70,74,80,85,91,96,101,107,112,118,122,128 ⋆ Coordination sequence Gal.6.636.3 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. • a(n) = a(n - 1) + a(n - 3) - a(n - 4) - a(n - 6) + a(n - 7) + a(n - 9) - a(n - 10) for n > 10. •

▶ [A315327] 1,6,10,16,22,26,30,36,42,46,52,58,62,68,74,78,82,88,94,98,104,110,114,120,126 ⋆ Coordination sequence Gal.6.329.6 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. • a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - 2 * a(n - 4) + 2 * a(n - 5) - 2 * a(n - 6) + 2 * a(n - 7) - 2 * a(n - 8) + 2 * a(n - 9) - a(n - 10) for n > 10. •

▶ [A301694] 1,6,10,16,22,26,32,38,42,48,54,58,64,70,74,80,86,90,96,102,106,112,118,122,128 ⋆ Expansion of (1 + 5 * x + 4 * x ^ 2 + 5 * x ^ 3 + x ^ 4) / ((1 - x) * (1 - x ^ 3)). • a(n) = 6 * n - 2 * floor((n + 1) / 3) for n>0, a(0)=1. - _ Bruno Berselli _ , Mar 26 2018 •

▶ [A315339] 1,6,10,16,22,28,32,38,44,48,54,60,66,70,76,82,86,92,98,104,108,114,120,124,130 ⋆ Coordination sequence Gal.4.141.3 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. • a(n) = a(n - 1) + a(n - 7) - a(n - 8) for n > 8. •

▶ [A079329] 6,10,16,25,37,52,67,88,106,124,145,166,187,196,214,235,256,277,298,331,385,427,448,493,547 ⋆ Let g(n)=A006512(n) be the larger member of the n - th pair of twin primes. Then a(n) is the average of g(n) and g(n + 1). • a(n)=Sum _{ x=n - th greater of twin primes..(n + 1)th greater of twin primes }-(- 1) ^ x * x - Juri - Stepan Gerasimov, Jul 14 2009 •

▶ [A302748] 6,10,16,25,38,58,88,133,200,301,452,679,1019,1529,2294,3442,5164,7747,11621,17432,26149,39224,58837,88256,132385 ⋆ Half thrice the previous number, rounded down, plus 1, starting with 6. • a(0) = 6, a(n) = floor(3 * a(n - 1) / 2) + 1 for n > 0. •

▶ [A090991] 6,10,16,26,42,68,110,178,288,466,754,1220,1974,3194,5168,8362,13530,21892,35422,57314,92736,150050,242786,392836,635622 ⋆ Number of meaningful differential operations of the n - th order on the space R ^ 6. • a(k + 4) = 3 * a(k + 2) - a(k). • a(k) = 2 * Fibonacci(k + 3). • a(n) = a(n - 1) + a(n - 2), n >2, where a(1)=6, a(2)=10. •

▶ [A320493] 1,6,10,17,23,26,35,39,43,52,55,61,68,72,78,84,90,94,101,107,110,119,123,127,136 ⋆ Coordination sequence of thinnest 5 - neighbor packing of the plane with congruent triangles with respect to a hexavalent point with no symmetry. • a(n) = a(n - 3) + a(n - 5) - a(n - 8) for n>8. •

▶ [A020718] 6,10,17,29,49,83,141,240,409,697,1188,2025,3452,5885,10033,17105,29162,49718,84764,144514,246382,420057,716156,1220976,2081645 ⋆ Pisot sequences E(6,10), P(6,10). • a(n) = 2 * a(n - 1) - a(n - 3) + a(n - 5) - a(n - 6) for n>5 (conjectured). - _ Colin Barker _ , Jun 05 2016 •

► [A048587] 6,10,17,29,50,87,152,266,466,817,1433,2514,4411,7740,13582,23834,41825,73397,128802,226031,396656,696082,1221538,2143649,3761841 ⋆ Pisot sequence L(6,10). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + 2 * a(n - 3) - a(n - 4) (holds at least up to n = 1000 but is not known to hold in general). ●
► [A134351] 1,6,10,18,34,66,130,258,514,1026,2050,4098,8194,16386,32770,65538,131074,262146,524290,1048578,2097154,4194306,8388610,16777218,33554434 ⋆ Binomial transform of [1, 5, - 1, 5, - 1, 5, ...]. Inverse binomial transform of A134350. ● a(n) = 2 + 2 ^ (n + 1) for n >= 2; a(1)=1. - _ Emeric Deutsch _ , Oct 24 2007 ●
► [A270544] 0,6,10,20,24,34,42,52,56,70,78,88,96,106,114,132,136,146,158,168,176,194,202,212,220 ⋆ Number of ordered pairs (i,j) with |i|, |j| <= n, |i * j| <= n, and i odd. ● a(n) = 2 * floor((n + 1) / 2) + 4 * Sum _{ k=0..floor((n + 1) / 2) - 1 } floor(n / (2k + 1)). ●
► [A181995] 0,0,1,6,10,20,27,42,52,72,85,110,126,156,175,210,232,272,297,342,370,420,451,506,540 ⋆ a(n) = if n mod 2 = 1 then n * (n - 1) else (n - 1) ^ 2 + (n - 2) / 2. ● a(n) = n * (4 * n - 5 - (- 1) ^ n) / 4. - _ Luce ETIENNE _ , Oct 04 2014 ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n>4. ● a(n) = Sum _{ i=floor((n - 1) / 2)..floor(3 * (n - 1) / 2) } i. (End) ●
► [A254028] 6,10,20,46,116,310,860,2446,7076,20710,61100,181246,539636,1610710,4815740,14414446,43177796,129402310,387944780,1163310046,3488881556,10464547510,31389448220,94159956046,282463090916 ⋆ a(n) = 2 ^ (n + 1) + 3 ^ n + 3. ● a(n) = 6 * a(n - 1) - 11 * a(n - 2) + 6 * a(n - 3). - _ Colin Barker _ , Jan 24 2015 ●
► [A220035] 6,10,21,55,111,192,302,442,618,838,1111,1447,1857,2353,2948,3656,4492,5472,6613,7933,9451,11187,13162,15398,17918 ⋆ Number of 5 X n arrays of the minimum value of corresponding elements and their horizontal or diagonal neighbors in a random, but sorted with lexicographically nondecreasing rows and nonincreasing columns, 0..1 5 X n array. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>11. ●
► [A212161] 6,10,23,27,40,44,57,61,74,78,91,95,108,112,125,129,142,146,159,163,176,180,193,197,210 ⋆ Numbers congruent to 6 or 10 mod 17. ● a(n) = (1 / 4) * (34 * n + 9 * (- 1) ^ n + 15). - _ Paolo P. Lava _ , May 16 2012 ●
► [A014494] 0,6,10,28,36,66,78,120,136,190,210,276,300,378,406,496,528,630,666,780,820,946,990,1128,1176 ⋆ Even triangular numbers. ● a(n) = (2 * n + 1) * (2 * n + 1 - (- 1) ^ n) / 2. - _ Ant King _ , Nov 18 2010 ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). - _ Ant King _ , Nov 18 2010 ●
► [A178676] 6,10,30,130,630,3130,15630,78130,390630,1953130,9765630,48828130,244140630,1220703130,6103515630,30517578130,152587890630,762939453130,3814697265630,19073486328130,95367431640630,476837158203130,2384185791015630,11920928955078130 ⋆ a(n) = 5 ^ n + 5. ● a(n) = 5 * (a(n - 1) - 4), with n>0, a(0)=6. ● a(n) = 6 * a(n - 1) - 5 * a(n - 2). - _ Vincenzo Librandi _ , Sep 30 2013 ●
► [A266957] 1,6,10,31,39,74,86,135,151,214,234,311,335,426,454,559,591,710,746,879,919,1066,1110,1271,1319 ⋆ Numbers m such that 9 * m + 10 is a square. ● a(n) = a(- n + 1) = (18 * (n - 1) * n + 5 * (2 * n - 1) * (- 1) ^ n - 3) / 8. ●
► [A121801] 0,6,10,32,78,210,544,1430,3738,9792,25630,67106,175680,459942,1204138,3152480,8253294,21607410,56568928,148099382,387729210,1015088256,2657535550,6957518402,18215019648 ⋆ Expansion of 2 * x ^ 2 * (3 - x) / ((1 + x) * (1 - 3 * x + x ^ 2)). ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - a(n - 3). ● a(n) = (8 * (- 1) ^ n + 2 * (F(2 * (n + 1)) + F(2 * n))) / 5 for n >= 1. a(0) = 0. ● a(n) = 2 * (Fibonacci(n) * Fibonacci(n + 1) + (- 1) ^ n). - _ G. C. Greubel _ , Jul 22 2019 ●
► [A192774] 0,0,1,1,6,10,34,74,206,499,1301,3264,8348,21152,53828,136720,347533,883157,2244462,5704094,14496130,36840606,93625542,237939591,604694601 ⋆ Coefficient of x ^ 2 in the reduction of the n - th Fibonacci polynomial by x ^ 3 - >x ^ 2 + 2x + 1. ● a(n)=a(n - 1) + 5 * a(n - 2) - a(n - 3) - 5 * a(n - 4) + a(n - 5) + a(n - 6). ●
► [A246800] 6,10,84,186,1276,3172,19816,52666,310764,863820,4899736,14073060,77509464,228318856,1228859344,3693886906,19513475404,59644341436,310223170744,961665098956,4936304385544,15488087080696,78602174905264,249227373027556,1252310513280376 ⋆ Even - indexed terms of A247984, a sequence motivated by generalized quadrangles. ● a(n) = 2 ^ (2n) - (- 1) ^ n * binomial(2n, n). ●
► [A276136] 6,11,12,13,23,47,192,193,383,786432 ⋆ Numbers m > 1 such that the largest odd divisors of m - 1, m, and m + 1 are prime. ● a(n) >> n log n. - _ Charles R Greathouse IV _ , Aug 22 2016 ●
► [A154293] 0,1,6,11,13,20,35,46,50,63,88,105,111,130,165,188,196,221,266,295,305,336,391,426,438 ⋆ Integers of the form t / 6, where t is a triangular number (A000217). ● a(n) = (f(n) ^ 2 - 1) / 48 where f(n) = 8 * (n - floor(n / 4)) + (- 1) ^ n, with offset 0, a(0)=0. - _ Gary Detlefs _ , Mar 01 2010 ● a(n) = a(1 - n) for all n in Z. - _ Michael Somos _ , Oct 27 2012 ●
► [A301730] 1,6,11,14,18,24,30,34,38,42,48,54,58,62,66,72,78,82,86,90,96,102,106,110,114 ⋆ Expansion of (x ^ 8 - x ^ 7 + x ^ 6 + 5 * x ^ 5 + 4 * x ^ 4 + 3 * x ^ 3 + 5 * x ^ 2 + 5 * x + 1) / (x ^ 6 - x ^ 5 - x + 1). ● a(5 * k) = 24 * k with k >0, a(0)=1; ● a(5 * k + 1) = 24 * k + 6; ● a(5 * k + 2) = 24 * k + 10 with k>0, a(2)=11; ● a(5 * k + 3) = 24 * k + 14; ● a(5 * k + 4) = 24 * k + 18. (End) ●
► [A135708] 6,11,15,19,23,27,30,34,38,41,45,48,52,55,59,62,66,69,72,76,79,83,86,89,93 ⋆ Minimal total number of edges in a polyhex consisting of n hexagonal cells. ● a(n) = 3 * n + ceiling(sqrt(12 * n - 3)). - H. Harborth ●
► [A315447] 1,6,11,16,20,24,29,34,40,46,51,56,60,64,69,74,80,86,91,96,100,104,109,114,120 ⋆ Coordination sequence Gal.5.112.4 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = 2 * a(n - 1) - a(n - 2) - a(n - 4) + 2 * a(n - 5) - a(n - 6) for n > 6. ●
► [A315460] 1,6,11,16,21,25,29,33,38,43,48,54,60,65,70,75,79,83,87,92,97,102,108,114,119 ⋆ Coordination sequence Gal.6.234.5 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = a(n - 1) + a(n - 11) - a(n - 12) for n > 12. ●
► [A315462] 1,6,11,16,21,25,30,35,39,44,49,54,60,66,71,76,81,85,90,95,99,104,109,114,120 ⋆ Coordination sequence Gal.6.339.6 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = 2 * a(n - 1) - a(n - 2) - a(n - 4) + 2 * a(n - 5) - a(n - 6) - a(n - 8) + 2 * a(n - 9) - a(n - 10) for n > 10 (conjectured). ●
► [A315464] 1,6,11,16,21,25,31,35,40,45,50,56,62,67,72,77,81,87,91,96,101,106,112,118,123 ⋆ Coordination sequence Gal.6.346.5 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = a(n - 1) + a(n - 11) - a(n - 12) for n > 12 (conjectured). ●
► [A016861] 1,6,11,16,21,26,31,36,41,46,51,56,61,66,71,76,81,86,91,96,101,106,111,116,121 ⋆ a(n) = 5 * n + 1. ● a(n) = 2 * a(n - 1) - a(n - 2) with a(0)=1, a(1)=6. - _ Vincenzo Librandi _ , Aug 01 2010 ●
► [A140232] 6,11,16,21,26,31,36,41,46,51,56,61,66,71,76,81,86,91,96,101,106,111,116,122,127 ⋆ a(n) = ceiling(n * exp((1 + sqrt(5)) / 2)). ● a(n) = ceiling(n * A139341). - _ R. J. Mathar _ , Feb 06 2009 ●
► [A315469] 1,6,11,16,21,26,31,36,42,48,53,58,63,68,73,78,84,90,95,100,105,110,115,120,126 ⋆ Coordination sequence Gal.4.134.4 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - 2 * a(n - 4) + 2 * a(n - 5) - 2 * a(n - 6) + 2 * a(n - 7) - a(n - 8) for n > 8. ●
► [A315471] 1,6,11,16,21,26,32,38,43,48,53,58,64,70,75,80,85,90,96,102,107,112,117,122,128 ⋆ Coordination sequence Gal.3.52.3 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - 2 * a(n - 4) + 2 * a(n - 5) - a(n - 6) for n > 6. ●
► [A373510] 1,1,1,1,1,1,6,11,16,21,26,106,211,341,496,676,2256,4611,7866,12146,17576,51781,106761,188266,302671 ⋆ Expansion of 1 / (1 - x / (1 - 25 * x ^ 5) ^ (1 / 5)). ● a(5 * n) = 26 ^ (n - 1) for n > 0. ● a(n) = Sum _{ k=0..floor(n / 5) } 25 ^ k * binomial(n / 5 - 1,k). ●
► [A315492] 1,6,11,16,22,28,32,38,44,49,54,60,66,71,76,82,88,92,98,104,109,114,120,126,131 ⋆ Coordination sequence Gal.6.625.2 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = a(n - 1) + a(n - 11) - a(n - 12) for n > 12. ●
► [A301708] 1,6,11,16,22,28,33,38,44,50,55,60,66,72,77,82,88,94,99,104,110,116,121,126,132 ⋆ Coordination sequence for node of type V1 in "krc" 2 - D tiling (or net). ● a(n) = (i * ((- i) ^ n - i ^ n) + 22 * n) / 4 where i=sqrt(- 1) (conjectured). - _ Colin Barker _ , Apr 07 2018 ●
► [A315496] 1,6,11,16,22,28,34,40,45,50,56,62,67,72,78,84,90,96,101,106,112,118,123,128,134 ⋆ Coordination sequence Gal.5.306.3 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - 2 * a(n - 4) + 2 * a(n - 5) - 2 * a(n - 6) + 2 * a(n - 7) - 2 * a(n - 8) + 2 * a(n - 9) - a(n - 10) for n > 10. ●
► [A256429] 1,6,11,16,41,106,211,416,941,2106,4411,9316,20341,44106,94111,201716,435741,938606,2014311,4330116,9324641,20060606,43122511,92747016,199552041 ⋆ a(n) is the total number of pentagrams in a variant of pentagram fractal after n iterations. ● a(n) = 3 * a(n - 1) - 4 * a(n - 2) + 7 * a(n - 3) - 5 * a(n - 4) for n>3. ●
► [A315511] 1,6,11,17,21,27,32,38,44,49,55,59,65,70,76,82,87,93,97,103,108,114,120,125,131 ⋆ Coordination sequence Gal.4.139.3 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = a(n - 1) + a(n - 7) - a(n - 8) for n > 8. ●
► [A315517] 1,6,11,17,22,27,32,37,42,47,53,58,64,70,75,81,86,91,96,101,106,111,117,122,128 ⋆ Coordination sequence Gal.6.208.5 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = a(n - 1) + a(n - 2) - 2 * a(n - 4) + a(n - 6) + a(n - 7) - a(n - 8) for n > 8. ●
► [A001964] 1,6,11,17,22,27,32,37,43,48,53,58,64,69,74,79,85,90,95,100,106,111,116,121,126 ⋆ v - pile positions of the 4 - Wythoff game with i=1. ● a(n) = floor((n + 1 / 4) * (3 + sqrt(5))). - _ R. J. Mathar _ , Feb 14 2011 ●
► [A315520] 1,6,11,17,22,27,33,38,44,50,55,61,66,71,77,82,88,94,99,105,110,115,121,126,132 ⋆ Coordination sequence Gal.4.140.3 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = 2 * a(n - 1) - a(n - 2) - a(n - 4) + 2 * a(n - 5) - a(n - 6) for n > 6. ●
► [A315522] 1,6,11,17,22,28,33,38,44,49,55,60,66,72,77,83,88,94,99,104,110,115,121,126,132 ⋆ Coordination sequence Gal.6.621.4 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = 2 * a(n - 1) - a(n - 2) - a(n - 6) + 2 * a(n - 7) - a(n - 8) for n > 8. ●
► [A231001] 0,6,11,17,22,28,34,39,45,50,56,62,67,73,78,84,90,95,101,106,112,118,123,129,134 ⋆ Number of years after which an entire year can have the same calendar, in the Julian calendar. ● a(n) = a(n - 1) + a(n - 5) - a(n - 6) for n>5. ●
► [A315525] 1,6,11,17,22,28,34,39,45,50,56,62,67,73,78,84,90,95,101,106,112,118,123,129,134 ⋆ Coordination sequence Gal.3.49.2 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = a(n - 1) + a(n - 5) - a(n - 6) for n > 6. ●
► [A315538] 1,6,11,17,23,28,34,40,45,51,57,62,68,74,79,85,91,96,102,108,113,119,125,130,136 ⋆ Coordination sequence Gal.3.50.2 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n > 4. ●
► [A315540] 1,6,11,17,23,29,34,39,45,51,57,62,68,74,79,85,91,97,102,107,113,119,125,130,136 ⋆ Coordination sequence Gal.6.643.4 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - 2 * a(n - 4) + 2 * a(n - 5) - 2 * a(n - 6) + 2 * a(n - 7) - 2 * a(n - 8) + 2 * a(n - 9) - 2 * a(n - 10) + 2 * a(n - 11) - a(n - 12) for n > 12. ●
► [A315541] 1,6,11,17,23,29,34,40,46,51,57,63,69,74,80,86,91,97,103,109,114,120,126,131,137 ⋆ Coordination sequence Gal.4.136.2 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. ● a(n) = a(n - 1) + a(n - 7) - a(n - 8) for n > 8. ●

▶ [A315543] 1,6,11,17,23,29,35,40,46,52,57,63,69,75,81,86,92,98,103,109,115,121,127,132,138 ⋆ Coordination sequence Gal.4.137.2 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. • a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - 2 * a(n - 4) + 2 * a(n - 5) - 2 * a(n - 6) + 2 * a(n - 7) - a(n - 8) for n > 8. •

▶ [A315546] 1,6,11,17,23,29,35,41,46,52,58,63,69,75,81,87,93,98,104,110,115,121,127,133,139 ⋆ Coordination sequence Gal.5.294.2 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. • a(n) = a(n - 1) + a(n - 9) - a(n - 10) for n > 10. •

▶ [A315548] 1,6,11,17,23,29,35,41,47,53,58,64,70,75,81,87,93,99,105,111,117,122,128,134,139 ⋆ Coordination sequence Gal.6.627.2 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. • a(n) = a(n - 1) + a(n - 11) - a(n - 12) for n > 12. •

▶ [A315549] 1,6,11,17,23,29,35,41,47,53,59,64,70,76,81,87,93,99,105,111,117,123,129,134,140 ⋆ Coordination sequence Gal.6.628.2 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. • a(n) = a(n - 1) + a(n - 3) - a(n - 4) - a(n - 6) + a(n - 7) + a(n - 9) - a(n - 10) for n > 10. •

▶ [A184550] 0,6,11,17,28,34,39,45,56,62,67,73,84,90,95,101,112,118,123,129,140,146,151,157,168 ⋆ Super - birthdays (falling on the same weekday), version 2 (birth within 1 and 2 years after a February 29). • a(n) = + 1 * a(n - 1) + 1 * a(n - 4) - 1 * a(n - 5). (End) •

▶ [A315557] 1,6,11,18,22,27,31,41,47,48,54,59,68,72,78,85,88,94,97,105,113,119,122,124,131 ⋆ Coordination sequence Gal.6.663.6 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. • a(n) = a(n - 7) + a(n - 13) - a(n - 20) for n > 20. •

▶ [A160842] 0,1,6,11,18,27,38,51,66,83,102,123,146,171,198,227,258,291,326,363,402,443,486,531,578 ⋆ Number of lines through at least 2 points of a 2 X n grid of points. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n > 4. - _ Colin Barker _ , May 24 2015 •

▶ [A102305] 6,11,18,27,38,51,66,83,102,123,146,171,198,227,258,291,326,363,402,443,486,531,578,627,678 ⋆ a(n) = n ^ 2 + 2 * n + 3. • a(n) = 2 * n + a(n - 1) + 1 (with a(1)=6). - _ Vincenzo Librandi _ , Nov 16 2010 •

▶ [A188556] 6,11,20,36,64,112,192,321,522,825,1268,1898,2772,3958,5536,7599,10254,13623,17844,23072,29480,37260,46624,57805,71058 ⋆ Number of 5 X n binary arrays without the pattern 0 1 diagonally, vertically, antidiagonally or horizontally. • a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. •

▶ [A000382] 6,11,20,36,65,119,218,400,735,1351,2484,4568,8401,15451,28418,52268,96135,176819,325220,598172,1100209,2023599,3721978,6845784,12591359 ⋆ Restricted permutations. • a(n) = a(n - 1) + a(n - 2) + a(n - 3) - 2 (conjectured) . •

▶ [A192750] 1,6,11,21,36,61,101,166,271,441,716,1161,1881,3046,4931,7981,12916,20901,33821,54726,88551,143281,231836,375121,606961 ⋆ Define a pair of sequences c _ n, d _ n by c _ 0=0, d _ 0=1 and thereafter c _ n = c _{ n - 1 }+ d _{ n - 1 } , d _ n = c _{ n - 1 }+ 4 * n + 2; sequence here is d _ n. • a(n) = 5 * Fibonacci(n + 2) - 4. - _ Gerry Martens _ , Jul 04 2015 •

▶ [A083575] 6,11,21,41,81,161,321,641,1281,2561,5121,10241,20481,40961,81921,163841,327681,655361,1310721,2621441,5242881,10485761,20971521,41943041,83886081 ⋆ a(0) = 6; for n>0, a(n) = 2 * a(n - 1) - 1. • a(n) = 5 * 2 ^ n + 1. - _ M. F. Hasler _ , Oct 30 2010 • a(n) = 3 * a(n - 1) - 2 * a(n - 2), n> 1. - _ Vincenzo Librandi _ , Nov 03 2011 •

▶ [A239767] 0,1,6,11,22,31,48,61,84,101,130,151,186,211,252,281,328,361,414,451,510,551,616,661,732 ⋆ Degrees of polynomial on the fermionic side of the finite generalization of identity 46 from Slater's List. • a(n) = (1 / 8) * (10 * n ^ 2 + 2 * (1 + (- 1) ^ n) * n - (1 - (- 1) ^ n)). • a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). •

▶ [A155449] 6,11,23,28,40,45,57,62,74,79,91,96,108,113,125,130,142,147,159,164,176,181,193,198,210 ⋆ Numbers k == 6 or 11 (mod 17). • a(n) = a(n - 1) + a(n - 2) - a(n - 3); a(1)=6, a(2)=11, a(3)=23. • a(n) = (1 / 4) * (17 + 7 * (- 1) ^ (n - 1) + 34 * (n - 1)). - _ Paolo P. Lava _ , Jan 26 2009 •

▶ [A220154] 6,11,23,50,88,137,197,268,350,443,547,662,788,925,1073,1232,1402,1583,1775,1978,2192,2417,2653,2900,3158 ⋆ Number of 2 X n arrays of the minimum value of corresponding elements and their horizontal or diagonal neighbors in a random, but sorted with lexicographically nondecreasing rows and nonincreasing columns, 0..2 2 X n array. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>5. •

▶ [A354594] 0,1,6,11,24,33,54,67,96,113,150,171,216,241,294,323,384,417,486,523,600,641,726,771,864 ⋆ a(n) = n ^ 2 + 2 * floor(n / 2) ^ 2. • a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5), n >= 5. •

▶ [A219628] 6,11,24,54,103,178,290,453,684,1003,1433,2000,2733,3664,4828,6263,8010,10113,12619,15578,19043,23070,27718,33049,39128 ⋆ Number of 2 X n arrays of the minimum value of corresponding elements and their horizontal or antidiagonal neighbors in a random, but sorted with lexicographically nondecreasing rows and columns, 0..2 2 X n array. • a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>8. •

▶ [A061203] 1,6,11,26,31,56,61,96,111,136,141,216,221,246,271,341,346,421,426,501,526,551,556,731,746 ⋆ (tau<=) _ 5(n). • a(n) = Sum _{ k=1..n } tau _{ 4 } (k) * floor(n / k), where tau _{ 4 } is A007426. - _ Enrique Pérez Herrero _ , Jan 23 2013 •

▶ [A140359] 1,1,6,11,26,51,106,211,426,851,1706,3411,6826,13651,27306,54611,109226,218451,436906,873811,1747626,3495251,6990506,13981011,27962026 ⋆ a(n) = 2 * a(n - 1) + a(n - 2) - 2 * a(n - 3). • a(n) = 2 * a(n - 1) + a(n - 2) - 2 * a(n - 3). • a(n) = (5 * 2 ^ (n + 1) - 9 + 5 * (- 1) ^ n) / 6. (End) • a(n) = a(n - 1) + 2 * a(n - 2) + 3, n>1 - _ Gary Detlefs _ , Jun 20 2010 •

▶ [A114960] 1,1,6,11,30,57,128,247,518,1013,2068,4083,8242,16369,32880,65519,131310,262125,524780,1048555,2098154,4194281,8390632,16777191,33558502 ⋆ Expansion of (- 1 + 3 * x - 5 * x ^ 2 + 4 * x ^ 3) / ((1 - 2 * x) * (2 * x ^ 2 - 1) * (x - 1) ^ 2). • a(n) = 2 ^ n - n - 1 - ((- 1) ^ n - 1) * 2 ^ (1 / 2 * n) * sqrt(2) / 4. • a(n) = 4 * a(n - 1) - 3 * a(n - 2) - 6 * a(n - 3) + 10 * a(n - 4) - 4 * a(n - 5) for n>5. - _ Colin Barker _ , May 18 2019 •

▶ [A186410] 0,1,6,11,32,37,58,79,180,185,206,227,328,349,450,551,1052,1057,1078,1099,1200,1221,1322,1423,1924 ⋆ Number of "ON" cells at n - th stage of three - dimensional version of the cellular automaton A183060 using cubes. • a(2 ^ n) = 2 ^ n + (4 / 5) * (6 ^ n - 1). •

▶ [A193866] 0,6,11,35,46,88,105,165,188,266,295,391,426,540,581,713,760,910,963,1131,1190,1376,1441,1645,1716 ⋆ Even pentagonal numbers divided by 2. • a(n) = 1 / 16 * (1 - 3 * (- 1) ^ n + 12 * n) * (1 - (- 1) ^ n + 4 * n). • a(0)=0, a(1)=6, a(2)=11, a(3)=35, a(4)=46, a(n)=a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). G.f.: x * (6 + 5 * x + 12 * x ^ 2 + x ^ 3) / (1 - x - 2 * x ^ 2 + 2 * x ^ 3 + x ^ 4 - x ^ 5). [_ Colin Barker _ , Jan 25 2012] •

▶ [A219500] 6,11,35,88,179,325,550,885,1369,2050,2986,4246,5911,8075,10846,14347,18717,24112,30706,38692,48283,59713,73238,89137,107713 ⋆ Number of n X 6 arrays of the minimum value of corresponding elements and their horizontal or vertical neighbors in a random, but sorted with lexicographically nondecreasing rows and nonincreasing columns, 0..1 n X 6 array. • a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>9. •

▶ [A130667] 1,6,11,36,41,66,91,216,221,246,271,396,421,546,671,1296,1301,1326,1351,1476,1501,1626,1751,2376,2401 ⋆ a(1) = 1; a(n) = max { 5 * a(k) + a(n - k) | 1 <= k <= n / 2 } for n > 1. • a(2 * n) = 6 * a(n) and a(2 * n + 1) = 5 * a(n) + a(n + 1). • a(n) = Sum _{ k=0..n } 5 ^ wt(k), where wt = A000120. - _ Mike Warburton _ , Mar 14 2019 •

▶ [A259669] 0,1,6,11,36,61,86,211,336,461,586,1211,1836,2461,3086,3711,6836,9961,13086,16211,19336,22461,38086,53711,69336 ⋆ a(0)=0, a(1)=1, a(n) = min { 5 a(k) + (5 ^ (n - k) - 1) / 4, k=0..(n - 1) } for n>=2. • a(n) = min { 5 * a(k) + (5 ^ (n - k) - 1) / 4 ; k < n } . •

▶ [A002570] 1,1,6,11,36,85,235,600,1590,4140,10866,28416,74431,194821,510096,1335395,3496170,9153025,23963005,62735880,164244756,429998256,1125750156,2947252056,7716006181 ⋆ From a definite integral. • a(2 * n - 2) = Sum _{ k=0..n) k * Fibonacci(2 * n - 2 * k), n > 1. - _ Greg Dresden _ , Dec 02 2021 •

▶ [A015440] 1,1,6,11,41,96,301,781,2286,6191,17621,48576,136681,379561,1062966,2960771,8275601,23079456,64457461,179854741,502142046,1401415751,3912125981,10919204736,30479834641 ⋆ Generalized Fibonacci numbers. • a(n) = a(n - 1) + 5 a(n - 2). • a(n) = (((1 + sqrt(21)) / 2) ^ (n + 1) - ((1 - sqrt(21)) / 2) ^ (n + 1)) / sqrt(21). • a(n) = Sum _{ k=0..ceiling(n / 2) } 5 ^ k * binomial(n - k, k). - _ Benoit Cloitre _ , Mar 06 2004 • a(n) = (Sum _{ k=1..n + 1, k odd } binomial(n + 1,k) * 21 ^ ((k - 1) / 2)) / 2 ^ n. - _ Vladimir Shevelev _ , Feb 05 2014 •

▶ [A253209] 6,11,41,221,1301,7781,46661,279941,1679621,10077701,60466181,362797061,2176782341,13060694021,78364164101,470184984581,2821109907461,16926659444741,101559956668421,609359740010501,3656158440062981,21936950640377861,131621703842267141 ⋆ a(n) = 6 ^ n + 5. • a(n) = 7 * a(n - 1) - 6 * a(n - 2) for n>1. •

▶ [A094555] 0,1,1,6,11,46,111,386,1051,3366,9671,29866,87891,267086,794431,2396946,7163531,21545206,64526391,193797626,580955971,1743741726,5229477551,15691927906,47068793211 ⋆ Number of walks of length n between two vertices on the same triangular face of a truncated tetrahedron (triangular prism). • a(n) = 3 ^ n / 6 - (- 2) ^ n / 6 + 1 / 6 - 0 ^ n / 6. • a(n) = 2 * a(n - 1) + 5 * a(n - 2) - 6 * a(n - 3) for n >= 4. •

▶ [A269878] 1,6,11,48,61,158,183,368,409,710,771,1216,1301,1918,2031,2848,2993,4038,4219,5520,5741,7326,7591,9488,9801 ⋆ Partial sums of the number of active (ON,black) cells in n - th stage of growth of two - dimensional cellular automaton defined by "Rule 43", based on the 5 - celled von Neumann neighborhood. • a(n) = (3 * (3 + (- 1) ^ n) - 4 * (- 4 + 3 * (- 1) ^ n) * n + (21 - 9 * (- 1) ^ n) * n ^ 2 + 8 * n ^ 3) / 12. • a(n) = (4 * n ^ 3 + 6 * n ^ 2 + 2 * n + 6) / 6 for n even. • a(n) = (4 * n ^ 3 + 15 * n ^ 2 + 14 * n + 3) / 6 for n odd. • a(n) = a(n - 1) + 3 * a(n - 2) - 3 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) + a(n - 6) - a(n - 7) for n>6. •

▶ [A271093] 1,6,11,51,56,168,173,389,394,746,751,1271,1276,1996,2001,2953,2958,4174,4179,5691,5696,7536,7541,9741,9746 ⋆ Partial sums of the number of active (ON,black) cells in n - th stage of growth of two - dimensional cellular automaton defined by "Rule 275", based on the 5 - celled von Neumann neighborhood. • a(n) = (39 + 33 * (- 1) ^ n - 2 * (1 + 12 * (- 1) ^ n) * n - 12 * (- 2 + (- 1) ^ n) * n ^ 2 + 8 * n ^ 3) / 12 for n>0. • a(n) = (4 * n ^ 3 + 6 * n ^ 2 - 13 * n + 36) / 6 for n>0 and even. • a(n) = (4 * n ^ 3 + 18 * n ^ 2 + 11 * n + 3) / 6 for n>0 and odd. • a(n) = a(n - 1) + 3 * a(n - 2) - 3 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) + a(n - 6) - a(n - 7) for n>7. •

▶ [A270166] 1,6,11,52,64,173,189,386,426,747,807,1276,1360,2005,2117,2966,3110,4191,4371,5712,5932,7561,7825,9770,10082 ⋆ Partial sums of the number of active (ON,black) cells in n - th stage of growth of two - dimensional cellular automaton defined by "Rule 107", based on the 5 - celled von Neumann neighborhood. • a(n) = 1 / 12 * (- 9 * (23 + (- 1) ^ n) + (28 - 18 * (- 1) ^ n) * n - 9 * (- 3 + (- 1) ^ n) * n ^ 2 + 8 * n ^ 3) for n>6. • a(n) = (4 * n ^ 3 + 9 * n ^ 2 + 5 * n - 108) / 6 for n>6 and even. • a(n) = (4 * n ^ 3 + 18 * n ^ 2 + 23 * n - 99) / 6 for n>6 and odd. • a(n) = a(n - 1) + 3 * a(n - 2) - 3 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) + a(n - 6) - a(n - 7) for n>13. •

▶ [A152448] 1,1,6,11,59,109,584,1079,5781,10681,57226,105731,566479,1046629,5607564,10360559,55509161,102558961,549484046,1015229051,5439331299,10049731549,53843828944,99482086439,532998958141 ⋆ a(0)=a(1)=1, a(2)=6, a(3)=11; a(n + 4) = 10 * a(n + 2) - a(n). • a(n) = ((1 / 48) * sqrt(3) * sqrt(2) + 1 / 4 + (1 / 8) * sqrt(2)) * (sqrt(3) + sqrt(2)) ^ n + (- (1 / 48) * sqrt(3) * sqrt(2) + 1 / 4 - (1 / 8) * sqrt(2)) * (sqrt(3) - sqrt(2)) ^ n + ((1 / 48) * sqrt(3) * sqrt(2) + 1 / 4 - (1 / 8) * sqrt(2)) * (- sqrt(3) - sqrt(2)) ^ n + (1 / 4 - (1 / 48) * sqrt(3) * sqrt(2) + (1 / 8) * sqrt(2)) * (- sqrt(3) + sqrt(2)) ^ n). •

▶ [A128387] 1,1,6,11,66,146,876,2131,12786,32966,197796,530526,3183156,8786436,52718616,148733571,892401426,2561439806,15368638836,44731364266,268388185596,790211926076,4741271556456,14095578557486 ⋆ Expansion of c(5x ^ 2) / (1 - x * c(5x ^ 2)), where c(x) is the g.f. of A000108. • a(n) = (1 / (n + 1)) * Sum _{ k=0..n + 1 } Sum _{ j=0..k } C(n,k) * C(k,j) * C(2 * n - 2 * k + j, n -

2 * k + j) * (- 1) ^ (n + j) * 2 ^ j * 6 ^ (k - j). • a(n) = Sum _{ k=0..floor(n / 2) } C(n,n - k) * (n - 2 * k + 1) * 5 ^ k / (n - k + 1). •

► [A080875] 1,1,6,11,71,131,846,1561,10081,18601,120126,221651,1431431,2641211,17057046,31472881,203253121,375033361,2421980406,4468927451,28860511751,53252096051,343904160606,634556225161,4097989415521 ⋆ a(n) * a(n + 3) - a(n + 1) * a(n + 2) = 5, given a(0)=a(1)=1, a(2)=6. • a(n + 4) = 12 * a(n + 2) - a(n). [_ Richard Choulet _ , Dec 04 2008] • a(n) = (1 / 4 + ((sqrt(6 + sqrt(35)) - sqrt(6 - sqrt(35))) / (4 * sqrt(35)))) * (sqrt(6 + sqrt(35))) ^ n + (1 / 4 + ((sqrt(6 + sqrt(35)) - sqrt(6 - sqrt(35))) / (4 * sqrt(35)))) * (sqrt(6 - sqrt(35))) ^ n + (1 / 4 - ((sqrt(6 + sqrt(35)) - sqrt(6 - sqrt(35))) / (4 * sqrt(35)))) * (- sqrt(6 + sqrt(35))) ^ n + (1 / 4 - ((sqrt(6 + sqrt(35)) - sqrt(6 - sqrt(35))) / (4 * sqrt(35)))) * (- (sqrt(6 - sqrt(35)))) ^ n. [_ Richard Choulet _ , Dec 06 2008] •

► [A212592] 1,6,11,106,201,2022,3843,38794,73745,744646,1415547,14293930,27172313,274381478,521590643,5266936010,10012281377,101102361990,192192442603,1940727511786,3689262580969,37253563629926,70817864678883,715107089849866 ⋆ a(n) is the difference between multiples of 7 with even and odd digit sum in base 6 in interval [0,6 ^ n). • a(n) = 2a(n - 1) - a(n - 2) when n is odd; a(n) = (a(n + 1) + a(n - 1)) / 2 when n is even. - _ Bob Selcoe _ , Jun 10 2014 •

► [A315598] 1,6,12,12,24,30,36,36,42,54,54,60,66,78,78,78,90,96,102,102,114,120,120,126,132 ⋆ Coordination sequence Gal.3.57.3 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. • a(n) = a(n - 1) - a(n - 2) + a(n - 3) + a(n - 7) - a(n - 8) + a(n - 9) - a(n - 10) for n > 10. •

► [A004758] 6,12,13,24,25,26,27,48,49,50,51,52,53,54,55,96,97,98,99,100,101,102,103,104,105 ⋆ Binary expansion starts 110. • a(2n) = 2a(n), a(2n + 1) = 2a(n) + 1 + 5 * [n==0]. • a(2 ^ m + k) = 6 * 2 ^ m + k, m >= 0, 0 <= k < 2 ^ m. - _ Yosu Yurramendi _ , Aug 08 2016 •

► [A079946] 6,12,14,24,26,28,30,48,50,52,54,56,58,60,62,96,98,100,102,104,106,108,110,112,114 ⋆ Binary expansion of n has form 11 ** ... * 0. • a(n) = 2 ^ floor (log[2](4 * n)) + 2 * n. - Antonio G. Astudillo (afg _ astudillo(AT)hotmail.com), Feb 22 2003 • a(n) = (2 ^ (floor(log(n) / log(2)) + 1) + n) * 2. - _ Klaus Brockhaus _ , Feb 23 2003 • a(2n) = 2a(n), a(2n + 1) = 2a(n) + 2 + 4[n==0]. Twice A004755. - _ Ralf Stephan _ , Oct 12 2003 •

► [A343281] 6,12,15,18,20,24,28,30,35,36,40,42,45,48,54,56,60,63,66,70,72,75,77,78,80 ⋆ Numbers of the form x + y + z in positive integers x,y,z such that (x + y) | x * y, (y + z) | y * z, and (x + z) | x * z. • a(n) = Sum _{ j=1..floor(n / 3) } Sum _{ i=j..floor((n - j) / 2) } c(i * j / (i + j)) * c(i * (n - i - j) / (n - j)) * c(j * (n - i - j) / (n - i)), where c(n) = 1 - ceiling(n) + floor(n). •

► [A315633] 1,6,12,16,20,24,30,34,38,42,48,54,60,66,70,74,78,84,88,92,96,102,108,114,120 ⋆ Coordination sequence Gal.6.261.6 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. • a(n) = a(n - 1) + a(n - 11) - a(n - 12) for n > 12. •

► [A315636] 1,6,12,16,20,26,30,36,40,44,50,56,62,68,72,76,82,86,92,96,100,106,112,118,124 ⋆ Coordination sequence Gal.6.346.6 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. • a(n) = a(n - 1) + a(n - 11) - a(n - 12) for n > 12. •

► [A315640] 1,6,12,16,21,25,32,38,44,49,53,58,62,70,76,82,86,90,95,99,108,114,120,123,127 ⋆ Coordination sequence Gal.6.556.5 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. • a(n) = 2 * a(n - 7) - a(n - 14) for n > 14. •

► [A315645] 1,6,12,16,22,26,32,36,42,46,52,58,64,70,74,80,84,90,94,100,104,110,116,122,128 ⋆ Coordination sequence Gal.6.633.6 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. • a(n) = a(n - 1) + a(n - 11) - a(n - 12) for n > 12. •

► [A063089] 1,6,12,16,22,28,32,38,44,48,54,60,64,70,76,80,86,92,96,102,108,112,118,124,128 ⋆ Dimension of the space of weight 2n cusp forms for Gamma _ 0(2 1). • a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>5. •

► [A315669] 1,6,12,17,21,25,29,34,40,46,52,58,63,67,71,75,80,86,92,98,104,109,113,117,121 ⋆ Coordination sequence Gal.5.113.5 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. • a(n) = a(n - 1) + a(n - 9) - a(n - 10) for n > 10. •

► [A315683] 1,6,12,17,22,27,32,37,42,47,52,58,64,70,76,81,86,91,96,101,106,111,116,122,128 ⋆ Coordination sequence Gal.6.634.6 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. • a(n) = 2 * a(n - 1) - a(n - 2) - a(n - 4) + 2 * a(n - 5) - a(n - 6) - a(n - 8) + 2 * a(n - 9) - a(n - 10) for n > 10. •

► [A315685] 1,6,12,17,22,27,32,38,44,50,56,61,66,71,76,82,88,94,100,105,110,115,120,126,132 ⋆ Coordination sequence Gal.4.140.4 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. • a(n) = 2 * a(n - 1) - a(n - 2) - a(n - 4) + 2 * a(n - 5) - a(n - 6) for n > 6. •

► [A315687] 1,6,12,17,22,27,33,39,44,49,54,60,66,72,78,83,88,93,99,105,110,115,120,126,132 ⋆ Coordination sequence Gal.6.210.4 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. • a(n) = 3 * a(n - 1) - 4 * a(n - 2) + 3 * a(n - 3) - a(n - 4) - a(n - 6) + 3 * a(n - 7) - 4 * a(n - 8) + 3 * a(n - 9) - a(n - 10) for n > 10. •

► [A315688] 1,6,12,17,22,28,32,36,42,47,52,58,64,70,76,81,86,92,96,100,106,111,116,122,128 ⋆ Coordination sequence Gal.6.343.5 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. • a(n) = a(n - 1) + a(n - 3) - a(n - 4) - a(n - 6) + a(n - 7) + a(n - 9) - a(n - 10) for n > 10. •

► [A315690] 1,6,12,17,22,28,33,38,44,50,56,62,67,72,78,83,88,94,100,106,112,117,122,128,133 ⋆ Coordination sequence Gal.5.135.4 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. • a(n) = a(n - 1) + a(n - 9) - a(n - 10) for n > 10. •

► [A315691] 1,6,12,17,22,28,34,39,44,50,56,62,68,73,78,84,90,95,100,106,112,118,124,129,134 ⋆ Coordination sequence Gal.5.306.5 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. • a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - 2 * a(n - 4) + 2 * a(n - 5) - 2 * a(n - 6) + 2 * a(n - 7) - 2 * a(n - 8) + 2 * a(n - 9) - a(n - 10) for n > 10. •

► [A315693] 1,6,12,17,22,28,34,40,46,51,56,62,68,74,80,85,90,96,102,108,114,119,124,130,136 ⋆ Coordination sequence Gal.3.50.3 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. • a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - 2 * a(n - 4) + 2 * a(n - 5) - a(n - 6) for n > 6. •

► [A315696] 1,6,12,17,23,27,33,38,44,50,56,62,67,73,77,83,88,94,100,106,112,117,123,127,133 ⋆ Coordination sequence Gal.5.301.4 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. • a(n) = a(n - 1) + a(n - 9) - a(n - 10) for n > 10. •

► [A315697] 1,6,12,17,23,28,33,38,43,49,54,60,66,72,78,83,89,94,99,104,109,115,120,126,132 ⋆ Coordination sequence Gal.6.621.5 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. • a(n) = 2 * a(n - 1) - a(n - 2) - a(n - 6) + 2 * a(n - 7) - a(n - 8) for n > 8. •

► [A315701] 1,6,12,17,23,28,34,40,46,52,57,63,68,74,80,86,92,97,103,108,114,120,126,132,137 ⋆ Coordination sequence Gal.4.136.3 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. • a(n) = a(n - 1) + a(n - 7) - a(n - 8) for n > 8. •

► [A315707] 1,6,12,17,23,29,35,41,46,52,58,64,70,75,81,87,93,99,104,110,116,122,128,133,139 ⋆ Coordination sequence Gal.5.295.3 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. • a(n) = a(n - 1) + a(n - 5) - a(n - 6) for n > 6. •

► [A100715] 6,12,18,20,24,28,30,36,40,42,48,54,56,60,72,80,84,90,96,100,108,112,120,126,140 ⋆ Pseudoperfect (or semiperfect) k - brilliant numbers for some k>1 : some set of proper divisors of a(n) sums to a(n) and a(n) = p(1)p(2)...p(m) for primes all with the same number of digits. • a(n) is an element in the intersection of A005835 and A078972. a(n) in A005835 and a(n) is a semiprime with the same number of digits in each prime factor. •

► [A315732] 1,6,12,18,22,28,34,38,44,50,56,62,68,74,78,84,90,94,100,106,112,118,124,130,134 ⋆ Coordination sequence Gal.6.640.6 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. • a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - 2 * a(n - 4) + 2 * a(n - 5) - 2 * a(n - 6) + 2 * a(n - 7) - 2 * a(n - 8) + 2 * a(n - 9) - a(n - 10) for n > 10. •

► [A315738] 1,6,12,18,23,27,32,37,41,46,52,58,64,70,76,82,87,91,96,101,105,110,116,122,128 ⋆ Coordination sequence Gal.6.343.6 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. • a(n) = a(n - 1) + a(n - 3) - a(n - 4) - a(n - 6) + a(n - 7) + a(n - 9) - a(n - 10) for n > 10. •

► [A315748] 1,6,12,18,23,29,34,40,46,52,58,64,70,75,81,86,92,98,104,110,116,122,127,133,138 ⋆ Coordination sequence Gal.5.294.4 where G.u.t.v denotes the coordination sequence for a vertex of type v in tiling number t in the Galebach list of u - uniform tilings. • a(n) = a(n - 1) + a(n - 9) - a(n - 10) for n > 10. •

► [A299909] 1,6,12,18,24,24,30,42,48,48,54,66,66,66,78,90,90,90,102,108,108,114,126,132,132 ⋆ Coordination sequence of node of type 3 ^ 6 in 3 - uniform tiling # 3.54 in the Galebach listing. • a(n) = a(n - 1) - a(n - 2) + a(n - 3) + a(n - 7) - a(n - 8) + a(n - 9) - a(n - 10) for n>10. - _ Colin Barker _ , Mar 11 2018 •

► [A008458] 1,6,12,18,24,30,36,42,48,54,60,66,72,78,84,90,96,102,108,114,120,126,132,138,144 ⋆ Coordination sequence for hexagonal lattice. • a(n) = 0 ^ n + 6 * n. - _ Vincenzo Librandi _ , Aug 21 2011 •

► [A008588] 0,6,12,18,24,30,36,42,48,54,60,66,72,78,84,90,96,102,108,114,120,126,132,138,144 ⋆ Nonnegative multiples of 6. • a(n) = 6 * n = 2 * a(n - 1) - a(n - 2). • a(n) = Sum _{ k=2n - 1..2n + 1 } k. - _ Wesley Ivan Hurt _ , Nov 22 2015 •

► [A187389] 6,12,18,24,30,36,42,48,54,60,67,73,79,85,91,97,103,109,115,121,128,134,140,146,152 ⋆ a(n) = floor(r * n), where r = 1 + sqrt(7) + sqrt(6); complement of A187390. • a(n)=floor(r * n), where r=1 + sqrt(7) + sqrt(6). •

► [A020333] 6,12,18,24,130,156,182,208,234,260,286,312,338,364,390,416,442,468,494,520,546,572,598,624,3150 ⋆ Numbers whose base - 5 representation is the juxtaposition of two identical strings. • a(n) = n * 5 ^ floor(log _ 5(n) + 1) + n. - _ Ilya Gutkovskiy _ , Jan 26 2018 •

► [A038130] 0,6,12,18,25,31,37,43,50,56,62,69,75,81,87,94,100,106,113,119,125,131,138,144,150 ⋆ Beatty sequence for 2 * Pi. • a(n) = floor(n * 2 * Pi). •

► [A187391] 6,12,19,25,32,38,45,51,58,64,71,77,84,90,97,103,110,116,123,129,135,142,148,155,161 ⋆ Floor(r * n), where r=1 + sqrt(8) + sqrt(7); complement of A187392. • a(n)=floor(r * n), where r=1 + sqrt(8) + sqrt(7). •

► [A051936] 1,6,12,19,27,36,46,57,69,82,96,111,127,144,162,181,201,222,244,267,291,316,342,369,397 ⋆ Truncated triangular numbers: a(n) = n * (n + 1) / 2 - 9. • a(n) = n + a(n - 1) for n>4, a(4)=1. - _ Vincenzo Librandi _ , Aug 06 2010 •

► [A218438] 1,1,1,6,12,19,48,110,218,470,1040,2208,4710,10184,21879,46879,100767,216570,464952,998613,2145312,4607724,9896436,21257196,45658624 ⋆ G.f.: 1 / ((1 + x ^ 2 - x ^ 3) ^ 2 * (1 - x - 2 * x ^ 2 - x ^ 3)). • a(0)=1, a(1)=1, a(2)=1, a(3)=6, a(4)=12, a(5)=19, a(6)=48, a(7)=110, a(8)=218, a(n)=a(n - 1) + 5 * a(n - 3) + a(n - 4) + a(n - 5) - 3 * a(n - 6) - 2 * a(n - 7) + a(n - 9). - _ Harvey P. Dale _ , Jan 23 2013 •

► [A180291] 1,6,12,20,30,42,56,72,90,110,132,156,182,210,240,272,306,342,380,420,462,506,552,600,650 ⋆ Number of arrangements of n indistinguishable balls in n boxes with the maximum number of balls in any box equal to n - 1. • a(n) = n * (n - 1) for n > 2. - _ Luca Ferrigno _ , Jul 13 2023 •

► [A295904] 6,12,20,32,52,88,156,288,548,1064,2092,4144,8244,16440,32828,65600,131140,262216,524364,1048656,2097236,4194392,8388700,16777312,33554532 ⋆ Number of (not necessarily maximal) cliques in the n - sun graph. • a(n) = 2 ^ n + 4 * n. • a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 2 * a(n - 3). •

► [A366564] 0,0,0,6,12,20,390,2562,11816,166392,1970730,17131070,241009692,3861669396,51411143966,828234487290,15865154629200,283329069136112,5431892804244306,119420738547382134,2628980439169097540,59707303735169923980,1488953374718002643142 ⋆ Expansion of e.g.f. - log(1 - x ^ 2 * (exp(x) - 1)). • a

(n) = n! * Sum _{ k=1..floor(n / 3) } (k - 1)! * Stirling2(n - 2 * k,k) / (n - 2 * k)!. ●

▶ [A222001] 6,12,22,37,58,86,122,167,222,288,366,457,562,682,818,971,1142,1332,1542,1773,2026,2302,2602,2927,3278 ★ Number of n X 3 arrays with each row a permutation of 1..3 having at least as many downsteps as the preceding row, with rows in lexicographically nonincreasing order. ● a(n) = 2 + (1 + n) * (2 + n) * (3 + n) / 6. ●

▶ [A192754] 1,6,12,23,40,68,113,186,304,495,804,1304,2113,3422,5540,8967,14512,23484,38001,61490,99496,160991,260492,421488,681985 ★ Constant term of the reduction by x ^ 2 - >x + 1 of the polynomial p(n,x) defined below in Comments. ● a(n) = 8 * Fibonacci(n) + 3 * Lucas(n) - 5. - _ Greg Dresden _ , Oct 10 2020 ●

▶ [A298033] 1,6,12,24,30,42,48,60,66,78,84,96,102,114,120,132,138,150,156,168,174,186,192,204,210 ★ Coordination sequence of the Dual(3.4.6.4) tiling with respect to a hexavalent node. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n>3. - _ Colin Barker _ , Jan 25 2018 ● a(n) = 6 * floor((3n - 1) / 2) for n > 0. - _ M. F. Hasler _ , Jan 11 2022 ●

▶ [A216453] 0,6,12,24,30,54,60,84,102,138,144,192,198,246,288,336,342,414,420,492,546,618,624,720,750 ★ Number of points hidden from the central point by a closer point in a hexagonal orchard of order n. ● a(n) = 6 * (C(n + 1,2) - Sum _{ i=1..n } phi(i)). - corrected by _ Piyush Kumar _ and _ Robert Israel _ , Aug 26 2014 ●

▶ [A249127] 0,1,6,12,24,35,54,70,96,117,150,176,216,247,294,330,384,425,486,532,600,651,726,782,864 ★ a(n) = n * floor(3 * n / 2). ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). - _ Colin Barker _ , Oct 22 2014 ● a(n) = 3 / 2 * n ^ 2 + ((- 1) ^ n - 1) * n / 4. E.g.f.: ((3 / 2) * x ^ 2 + (5 / 4) * x) * exp(x) - (x / 4) * exp(- x). - _ Robert Israel _ , Oct 26 2014 ●

▶ [A319127] 0,0,6,12,24,36,54,72,96,120,150,180,216,252,294,336,384,432,486,540,600,660,726,792,864 ★ Crossing number of the complete bipartite graph K _{ 6,n } . ● a(n) = 6 * floor(n / 2) * floor((n - 1) / 2). ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4). ● a(n) = (3 / 4) * (2 * n * (n - 2) + 1 - (- 1) ^ n). ●

▶ [A210678] 1,1,6,12,24,43,75,127,212,350,574,937,1525,2477,4018,6512,10548,17079,27647,44747,72416,117186,189626,306837,496489 ★ a(n)=a(n - 1) + a(n - 2) + n + 2, a(0)=a(1)=1. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - a(n - 3) + a(n - 4). G.f.: (1 - 2 * x + 5 * x ^ 2 - 3 * x ^ 3) / ((1 - x) ^ 2 * (1 - x - x ^ 2)). [_ Colin Barker _ , Jun 30 2012] ●

▶ [A082505] 0,1,6,12,24,48,96,192,384,768,1536,3072,6144,12288,24576,49152,98304,196608,393216,786432,1572864,3145728,6291456,12582912,25165824 ★ a(n) = sum of (n - 1) - th row terms of triangle A134059. ● a(n) = (- 6 * n + 16) * a(n - 1) + 2 * Sum _{ k=1..n - 1 } a(k) * a(n - k) if n>1. - _ Michael Somos _ , Jul 23 2011 ● a(n) = 3 * 2 ^ (n - 1) - (3 / 2) * [n=0] - 2 * [n=1]. - _ G. C. Greubel _ , Apr 27 2021 ●

▶ [A091629] 6,12,24,48,96,192,384,768,1536,3072,6144,12288,24576,49152,98304,196608,393216,786432,1572864,3145728,6291456,12582912,25165824,50331648,100663296 ★ Product of digits associated with A091628(n). Essentially the same as A007283. ● a(n) = 6 * 2 ^ (n - 1). ● a(n) = 2 * a(n - 1), with a(1) = 6. ●

▶ [A202805] 6,12,25,48,94,184,363,719,1430,2851,5691,11371,22728,45443,90870 ★ a(n) is the largest k in an n _ nacci(k) sequence (Fibonacci(k) for n=2, tribonacci(k) for n=3, etc.) such that n _ nacci(k) >= 2 ^ (k - n - 1). ● a(n) = greatest k such that n _ nacci(k) >= 2 ^ (k - n - 1). ●

▶ [A180509] 6,12,26,104,159,741,2267,10841,16890,80904,248750,1191812,1857147,8898105,27359639,131087885,204268686,978710052,3009310946,14418474944,22467697719,107649207021,330996843827,1585901155361,2471242479810 ★ Solutions a(n) of (a(n) - 5) * (a(n) - 6) = 21 * b(n) * (b(n) - 1). ● a(4 * n)=(22 + (1 + r) * s ^ n + (1 - r) * t ^ n)) / 4. ● a(4 * n + 1)=(22 + (13 + 3 * r) * s ^ n + (13 - 3 * r) * t ^ n) / 4. ● a(4 * n + 2)=(22 + (41 + 9 * r) * s ^ n + (41 - 9 * r) * t ^ n) / 4. ● a(4 * n + 3)=(22 + (197 + 43 * r) * s ^ n + (197 - 43 * r) * t ^ n) / 4. ● a(n)=111 * a(n - 4) - 111 * a(n - 8) + a(n - 12). ●

▶ [A057029] 1,6,12,27,39,64,82,117,141,186,216,271,307,372,414,489,537,622,676,771,831,936,1002,1117,1189 ★ Central column of arrays in A057027 and A057028. ● a(n) = C(2n - 1, 2) + (n + 1) / 2 if n is odd, else a(n) = C(2n, 2) - (n - 2) / 2. ● a(n) = (5 - (- 1) ^ n + 2 * (- 4 + (- 1) ^ n) * n + 8 * n ^ 2) / 4. ● a(n) = (4 * n ^ 2 - 3 * n + 2) / 2 for n even, a(n) = (4 * n ^ 2 - 5 * n + 3) / 2 for n odd. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n>5. ●

▶ [A146005] 0,1,6,12,28,55,108,203,376,684,1230,2189,3864,6773,11802,20460,35312,60707,104004,177631,302540,513996,871266,1473817,2488368 ★ a(n) = n * Lucas(n). ● a(n) = 2 * a(n - 1) + a(n - 2) - 2 * a(n - 3) - a(n - 4). ●

▶ [A223346] 6,12,28,60,140,300,700,1500,3500,7500,17500,37500,87500,187500,437500,937500,2187500,4687500,10937500,23437500,54687500,117187500,27343750 0,585937500,1367187500 ★ 3 X 3 X 3 triangular graph without horizontal edges coloring a rectangular array: number of n X 1 0..5 arrays where 0..5 label nodes of a graph with edges 0,1 0,2 1,3 1,4 2,4 2,5 and every array movement to a horizontal or vertical neighbor moves along an edge of this graph. ● a(n) = 2 * 5 ^ ((1 / 2) * (n - 3)) * (15 + 7 * sqrt(5) + (- 1) ^ n * (- 15 + 7 * sqrt(5))) for n > 0, a(0)=6. ●

▶ [A036690] 6,12,30,56,132,182,306,380,552,870,992,1406,1722,1892,2256,2862,3540,3782,4556,5112,5402,6320,6972,8010,9506 ★ Product of a prime and the following number. ● a(n) = prime(n) * (prime(n) + 1). ●

▶ [A256579] 6,12,30,60,84,168,330,546,660,1092,1224,1710,2448,3036,3420,6072,6090,7440,12180,12654,14880,17220,19866,25308,25944 ★ Integer areas of integer - sided triangles where at least one of the three altitudes is of prime length. ● a(n) = (prime(n) ^ 3 - prime(n)) / 4 for the right triangles; ● a(n) = (prime(n) ^ 3 - prime(n)) / 2 for the isosceles triangles. ●

▶ [A014131] 0,6,12,30,60,126,252,510,1020,2046,4092,8190,16380,32766,65532,131070,262140,524286,1048572,2097150,4194300,8388606,16777212,33554430,67108860 ★ a(n) = 2 * a(n - 1) if n odd else 2 * a(n - 1) + 6. ● a(n) = 2 ^ (n + 2) - 3 - (- 1) ^ n. (End) ●

▶ [A212976] 0,6,12,36,60,114,168,264,360,510,660,876,1092,1386,1680,2064,2448,2934,3420,4020,4620,5346,6072,6936,7800 ★ Number of (w,x,y) with all terms in { 0,...,n } and odd range. ● a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + a(n - 4) + 2 * a(n - 5) - a(n - 6). ●

▶ [A324483] 1,1,1,6,12,36,91,241,632,1651,4333,11328,29684,77678,203415,532483,1394144,3649813,9555465,25016378,65493916,171465080,448901667,1175239525,3076817368 ★ Expansion of (1 - x - x ^ 2) ^ 2 * (1 + x - x ^ 2) ^ 2 / ((1 - 3 * x + x ^ 2) * (1 - x) ^ 2 * (1 + x) ^ 4). ● a(n) = 2 ^ (- 4 - n) * (- 768 * sqrt(5) * ((3 - sqrt(5)) ^ n - (3 + sqrt(5)) ^ n) - 5 * (517 * (- 2) ^ n + 75 * 2 ^ n) * n + 25 * (- 1) ^ n * 2 ^ (1 + n) * n ^ 3) / 375 for n>1. ● a(n) = a(n - 1) + 6 * a(n - 2) - a(n - 3) - 10 * a(n - 4) - a(n - 5) + 6 * a(n - 6) + a(n - 7) - a(n - 8) for n>8. ●

▶ [A239171] 6,12,36,96,264,720,1968,5376,14688,40128,109632,299520,818304,2235648,6107904,16687104,45590016,124554240,340288512,929685504,2539948032,6939267072,18958430208,51795394560,141507649536 ★ Number of (n + 1) X (1 + 1) 0..2 arrays with no element greater than all horizontal neighbors or equal to a ll vertical neighbors. ● a(n) = sqrt(3) * ((1 + sqrt(3)) ^ n - (1 - sqrt(3)) ^ n). ●

▶ [A276601] 1,6,12,37,71,216,414,1259,2413,7338,14064,42769,81971,249276,477762,1452887,2784601,8468046,16229844,49355389,94594463,287664288,551336934,1676630339,3213427141 ★ Values of k such that k ^ 2 + 9 is a triangular number (A000217). ● a(n) = 6 * a(n - 2) - a(n - 4) for n>4. ●

▶ [A307181] 0,6,12,40,90,216,462,976,1980,3940,7678,14736,27898,52220,96780,177824,324258,587304,1057350,1893320,3373692,5984924,10574342,18613920,32654450 ★ a(n) is the first Zagreb index of the Lucas cube Lambda(n). ● a(n) = 3 * a(n - 1) - 5 * a(n - 3) + 3 * a(n - 5) + a(n - 6) for n>8. ●

▶ [A366752] 0,0,0,6,12,40,540,3528,25200,324000,3648960,41690880,622274400,9573033600,150465579264,2705877820800,51819600268800,1028013655818240,22086154437442560,504188626820659200,11997041025160396800,301999960230701322240 ★ Expansion of e.g.f. - log(1 + x ^ 2 * log(1 - x)). ● a(n) = n! * Sum _{ k=1..floor(n / 3) } (k - 1)! * |Stirling1(n - 2 * k,k)| / (n - 2 * k)!. ●

▶ [A060551] 0,0,0,6,12,42,84,210,420,924,1860,3900,7800,15996,31992,64728,129528,260568,521136,1045464,2090928,4187952,8376240,16764720,33529440 ★ a(n) is the number of nonsymmetric patterns (no reflective, nor rotational symmetry) which may be formed by an equilateral triangular arrangement of closely packed black and white cells satisfying the local matching rule of Pascal's triangle modulo 2, where n is the number of cells in each edge of the arrangement. The matching rule is such that any elementary top - down triangle of three neighboring cells in the arrangement contains either one or three white cells. ● a(n) = 2 ^ n - 3 * 2 ^ ceiling(n / 2) - 2 ^ (floor(n / 3) + (n mod 3)mod 2) + 3 * 2 ^ (floor((n + 3) / 6) + d(n)), with d(n)=1 if n mod 6=1 else d(n)=0. ●

▶ [A129113] 0,0,0,1,1,6,12,42,107,323,888,2568,7224,20629,58429,166230,471780,1340730,3807431,10816631,30722736,87272592,247895472,704164537,2000191753 ★ Expansion of x ^ 3 / (1 - x - 5 * x ^ 2 - x ^ 3 + x ^ 4). ● a(n) = a(n - 1) + 5 * a(n - 2) + a(n - 3) - a(n - 4). ● a(n) = ((- b + c - e - g + i) * (1 + s + k) ^ (n - 1) + (b + d - f + h - j) * (1 - s + l) ^ (n - 1) + (b - d + f - h + j) * (1 - s - l) ^ (n - 1) + (- b - c + e + g - i) * (1 + s - k) ^ (n - 1)) / (5800 * 4 ^ (n - 1)), with b = 100 * s, c = 1015 * k, d = 145 * sqrt(10 * (7 + s)), e = 245 * sqrt(58 * (7 + s)), f = 75 * sqrt(290 * (7 + s)), g = 1914 * sqrt(119 + 22 * s), h = 98 * sqrt[(145 * (119 + 22 * s)), i = 382 * sqrt(3451 + 638 * s), j = 406 * sqrt(595 + 110 * s), k = sqrt(2 * (7 + s)), l = sqrt(2 * (7 - s)), s = sqrt(29). - _ Tim Monahan _ , Sep 09 2011; modified by _ Robert G. Wilson v _ , Sep 26 2011 ●

▶ [A120471] 0,6,12,42,120,366,1092,3282,9840,29526,88572,265722,797160,2391486,7174452,21523362,64570080,193710246,581130732,1743392202,5230176600,15690529806,47071589412,141214768242,423644304720 ★ a(n) = 6 * A015518(n). ● a(0)=0, a(1)=6, a(n) = 2 * a(n - 1) + 3 * a(n - 2). ● a(n) = (3 / 2) * [3 ^ n - (- 1) ^ n], with n>=0. - _ Paolo P. Lava _ , Jun 10 2008 ●

▶ [A018809] 0,0,6,12,48,108,248,428,764,1196,1900,2668,3824,5244,7248,9380,12192,15372,19528,24020,29732,36052,43808,51836,61636 ★ Number of lines through exactly 2 points of an n X n grid of points. ● a(n) = (1 / 2) * (f(n, 3) - 2 f(n, 2) + f(n, 1)) where f(n, k) = Sum ((n - |kx|)(n - |ky|)); - n<kx<n, - n<ky<n, (x, y)=1. [_ Seppo Mustonen _ , Apr 18 2009] ●

▶ [A117866] 6,12,54,96,390,684,2742,4800,19206,33612,134454,235296,941190,1647084,6588342,11529600,46118406,80707212,322828854,564950496,2259801990,3954653484,15818613942,27682574400,110730297606 ★ Number of palindromes (in base 7) below 7 ^ n. ● a(n) = 8 * 7 ^ ((n - 1) / 2) - 2 (n odd), 2 * 7 ^ (n / 2) - 2 (n even). ● a(n) = a(n - 1) + 7 * a(n - 2) - 7 * a(n - 3). ● a(n) = (1 / sqrt(7)) * (- 2 * sqrt(7) + 7 ^ ((n + 1) / 2) + (- 1) ^ n * 7 ^ ((n + 1) / 2) + 4 * 7 ^ (n / 2) - 4 * (- 1) ^ n * 7 ^ (n / 2)). ●

▶ [A290999] 0,6,12,54,168,606,2052,7134,24528,84726,292092,1007814,3476088,11991246,41362932,142682094,492178848,1697768166,5856430572,20201701974,69685556808,240379623486,829187031012,2860272179454,9866479513968 ★ p - INVERT of (1,1,1,1,1,...), where p(S) = 1 - 6 * S ^ 2. ● a(n) = 2 * a(n - 1) + 5 * a(n - 2) for n >= 3. ● a(n) = sqrt(3 / 2) * ((1 + sqrt(6)) ^ n - (1 - sqrt(6)) ^ n). - _ Colin Barker _ , Aug 23 2017 ●

▶ [A341893] 0,1,6,12,55,246,474,2107,9360,18018,80029,355452,684228,3039013,13497834,25982664,115402483,512562258,986657022,4382255359,19463867988,37466984190,166410301177,739114421304,1422758742216 ★ Indices of triangular numbers that are one - tenth of other triangular numbers. ● a(n) = 38 a(n - 3) - a(n - 6) + 18 for n > 3, with a(- 2) = 6, a(- 1) = 1, a(0) = 0, a(1) = 0, a(2) = 1, a(3) = 6. ● a(n) = a(n - 1) + 38 * (a(n - 3) - a(n - 4)) - (a(n - 6) - a(n - 7)) for n >= 4 with a(- 2) = 6, a(- 1) = 1, a(0) = 0, a(1) = 0, a(2) = 1, a(3) = 6. ●

▶ [A107904] 1,6,12,72,144,864,1728,10368,20736,124416,248832,1492992,2985984,17915904,35831808,214990848,429981696,2579890176,5159780352,30958682112,61917364224,371504185344,743008370688,4458050224128 ★ Expansion of (1 + 6x) / (1 - 12x ^ 2). ● a(n) = ((1 + sqrt(3)) * (2 * sqrt(3)) ^ n + (1 - sqrt(3)) * (- 2 * sqrt(3)) ^ n) / 2. ● a(2n) = 12 ^ n, a(2n + 1) = 6 * 12 ^ n. ●

▶ [A071930] 0,6,12,72,240,1056,4032,16512,65280,262656,1047552,4196352,16773120,67117056,268419072,1073774592,4294901760,17180000256,68719214592,274878431232,1099510579200,4398048608256,17592181850112 ★ Number of words of length 2n in the two letters s and t that reduce to the identity 1 by using the relations ssTT=1, ststSS=1 and ststTT=1, where S and T are the inverses of s and t, respectively (i.e., sS=1 and tT=1). The generators s and t and the three st

ated relations generate the quaternion group Q4. ● a(n) = 2 * a(n - 1) + 8 * a - (n - 2). ●

▶ [A054883] 0,0,0,0,0,6,12,84,192,882,2220,8448,22704,78078,218988,710892,2048256,6430794,18837516,58008216,171619248,522598230,1555243404,4705481220,14051590080 ⋆ Number of walks of length n along the edges of a dodecahedron between two opposite vertices. ● a(n) = (5 + 3 ^ n + (- 1) ^ n * 2 ^ (n + 2) - 3 * (1 + (- 1) ^ n) * sqrt(5) ^ n) / 20 for n>0. ●

▶ [A099767] 1,6,12,100,180,2058,3584,52488,90000,1610510,2737152,57921708,97883968,2392031250,4026531840,111612119056,187339329792,5808378560022,9728000000000,333597619564020,557758378619904,20961814674106394,34998666292887552,1430511474609375000 ⋆ Number of n - digit palindromes in base n. ● a(n) = (n - 1) * n ^ (floor((n + 1) / 2) - 1). ●

▶ [A191662] 1,1,6,12,120,360,5040,20160,362880,1814400,39916800,239500800,6227020800,43589145600,1307674368000,10461394944000,355687428096000,3201186852864000,121645100408832000,1216451004088320000,51090942171709440000,562000363888803840000 ⋆ a(n) = n! / A000034(n - 1). ● a(2 * n - 1) = (2 * n - 1)!, a(2 * n) = (2 * n)! / 2. ●

▶ [A164584] 1,6,12,136,272,3168,6336,73856,147712,1721856,3443712,40142848,80285696,935878656,1871757312,21818802176,43637604352,508677193728,1017354387456,11859151814656,23718303629312,276480808452096 ⋆ Expansion of (1 + 6 * x - 12 * x ^ 2 - 8 * x ^ 3) / (1 - 24 * x ^ 2 + 16 * x ^ 4). ● a(n) = 2 ^ n * ((((3 + 2 * sqrt(2)) ^ ((n + 1) / 2) + (3 - 2 * sqrt(2)) ^ ((n + 1) / 2)) / 2)(1 - (- 1) ^ n) / 2 + (((3 + 2 * sqrt(2)) ^ (n / 2) + (3 - 2 * sqrt(2)) ^ (n / 2)) / 2)(1 + (- 1) ^ n) / 2). ●

▶ [A022388] 6,13,19,32,51,83,134,217,351,568,919,1487,2406,3893,6299,10192,16491,26683,43174,69857,113031,182888,295919,478807,774726 ⋆ Fibonacci sequence beginning 6, 13. ● a(n) = 6 * Fibonacci(n + 2) + Fibonacci(n) = 6 * Fibonacci(n - 1) + 13 * Fibonacci(n). - _ G. C. Greubel _ , Mar 02 2018 ● a(n + 1) - a(n - 4) = L(n) * 11. ● a(n) = L(n - 1) + L(n + 4). ● a(n) = 3 * L(n + 1) + L(n + 2) = L(n) + 4 * L(n + 1) = L(n + 6) - 4 * L(n + 2). ● a(n) = L(n + 1) + 5 * F(n + 2) = L(n + 5) - 5 * F(n + 1). ● a(n) = (7 * L(n + 1) + 5 * F(n + 1)) / 2. ●

▶ [A187393] 6,13,20,27,34,40,47,54,61,68,75,81,88,95,102,109,116,122,129,136,143,150,157,163,170 ⋆ a(n) = floor(r * n), where r = 4 + sqrt(8); complement of A187394. ● a(n) = floor(r * n), where r = 4 + sqrt(8). ●

▶ [A004919] 0,6,13,20,27,34,41,47,54,61,68,75,82,89,95,102,109,116,123,130,137,143,150,157,164 ⋆ a(n) = floor(n * phi ^ 4), where phi is the golden ratio, A001622. ● a(n) = 2 * n + floor(3 * n * tau). [Formula corrected by _ Charles R Greathouse IV _ , Mar 11 2011] ●

▶ [A017053] 6,13,20,27,34,41,48,55,62,69,76,83,90,97,104,111,118,125,132,139,146,153,160,167,174 ⋆ a(n) = 7 * n + 6. ● a(n) = 2 * a(n - 1) - a(n - 2). - _ Wesley Ivan Hurt _ , Mar 17 2023 ●

▶ [A330177] 6,13,21,28,34,42,49,57,64,70,78,85,93,99,106,114,121,129,135,142,150,157,165,171,178 ⋆ a(n) = n + floor(ns / r) + floor(nt / r), where r = e - 2, s = e - 1, t = e. ● a(n) = n + floor(ns / r) + floor(nt / r), where r = e - 2, s = e - 1, t = e. ●

▶ [A056115] 0,6,13,21,30,40,51,63,76,90,105,121,138,156,175,195,216,238,261,285,310,336,363,391,420 ⋆ a(n) = n * (n + 11) / 2. ● a(n) = a(n - 1) + n + 5 (with a(0)=0). - _ Vincenzo Librandi _ , Aug 07 2010 ● a(n) = 6 * n - floor(n / 2) + floor(n ^ 2 / 2). - _ Wesley Ivan Hurt _ , Jun 15 2013 ●

▶ [A028872] 1,6,13,22,33,46,61,78,97,118,141,166,193,222,253,286,321,358,397,438,481,526,573,622,673 ⋆ a(n) = n ^ 2 - 3. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). (End) ● a(n + 1) = floor((n ^ 4 + 2 * n ^ 3) / (n ^ 2 + 1)). - _ Gary Detlefs _ , Feb 20 2010, corrected by _ Charles R Greathouse IV _ , Mar 18 2022 ● a(n) = a(n - 1) + 2 * n - 1 (with a(2)=1). - _ Vincenzo Librandi _ , Nov 18 2010 ●

▶ [A293504] 0,1,6,13,23,35,51,69,91,115,141,171,204,239,277,318,362,409,458,511,566,624,684,748,815 ⋆ The integer k that minimizes |k / n ^ 2 - sqrt(2)|. ● a(n) = floor(1 / 2 + (n ^ 2) * sqrt(2)). ●

▶ [A194126] 1,6,13,23,36,51,69,89,112,138,166,197,231,267,306,347,391,438,487,539,593,650,710,772,837 ⋆ - 1 + A088207. ● a(n)= - 1 + sum(floor(j + j * r) : 1 <=j<=n), where r=(1 + sqrt(5)) / 2, the golden ratio. ●

▶ [A032528] 0,1,6,13,24,37,54,73,96,121,150,181,216,253,294,337,384,433,486,541,600,661,726,793,864 ⋆ Concentric hexagonal numbers: floor(3 * n ^ 2 / 2). ● a(n) = + 2 * a(n - 1) - 2 * a(n - 3) + 1 * a(n - 4). (End) ● a(n) = (6 * n ^ 2 + (- 1) ^ n - 1) / 4. - _ Bruno Berselli _ , Aug 22 2011 ● a(- n) = a(n). ● a(n) = a(n - 2) + 6 * (n - 1) for n > 1. ●

▶ [A131833] 1,6,13,24,43,78,145,276,535,1050,2077,4128,8227,16422,32809,65580,131119,262194,524341,1048632,2097211,4194366,8388673,16777284,33554503 ⋆ a(n) = 2 ^ (n + 1) - 1 + 3 * n. ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 2 * a(n - 3). - _ Vincenzo Librandi _ , Jul 05 2012 ●

▶ [A162432] 1,6,13,25,39,52,81,97,129,154,187,234,250,321,337,406,468,493,579,613,699,766,811,918,979 ⋆ Row 3 of table A162430. ● a(n) = Sum _{ m=n(n + 1) / 2..n(n + 1) / 2 + n } [x ^ m] S(x) ^ 3 for n>=0 where S(x) = Sum _{ n>=0 } x ^ (n(n + 1) / 2). ●

▶ [A343007] 6,13,26,41,62,85,114,145,182,221,266,313,366,421,482,545,614,685,762,841,926,1013,1106,1201,1302 ⋆ Relative position of the average value between two consecutive partial sums of the Leibniz formula for Pi. ● a(n) = (3 + (- 1) ^ (n + 1) + 4 * n + 4 * n ^ 2) / 2. ●

▶ [A192762] 0,1,6,13,26,47,82,139,232,383,628,1025,1668,2709,4394,7121,11534,18675,30230,48927,79180,128131,207336,335493,542856 ⋆ Coefficient of x in the reduction by x ^ 2 - >x + 1 of the polynomial p(n,x) defined below in Comments. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - a(n - 3) + a(n - 4). G.f.: x * (3 * x ^ 2 - 3 * x - 1) / ((x - 1) ^ 2 * (x ^ 2 + x - 1)). [_ Colin Barker _ , Dec 08 2012] ●

▶ [A301687] 1,6,13,27,44,63,91,120,151,193,234,277,333,386,441,511,576,643,727,804,883,981,1070,1161,1273 ⋆ Partial sums of A301686. ● a(n) = a(n - 1) + 2 * a(n - 3) - 2 * a(n - 4) - a(n - 6) + a(n - 7) for n > 6. ●

▶ [A086224] 6,13,27,55,111,223,447,895,1791,3583,7167,14335,28671,57343,114687,229375,458751,917503,1835007,3670015,7340031,14680063,29360127,58720255,117440511 ⋆ a(n) = 7 * 2 ^ n - 1. ● a(n + 1) = 2 * a(n) + 1. ● a(n - 1) ^ 2 + a(n) = (7 * 2 ^ (n - 1)) ^ 2. - _ Vincenzo Librandi _ , Aug 08 2010 ●

▶ [A086652] 6,13,28,58,120,244,496,1000,2016,4048,8128,16288,32640,65344,130816,261760,523776,1047808,2096128,4192768,8386560,16774144,33550336,67102720,134209536 ⋆ a(n) = A000225(n + 3) - A052955(n). ● a(n) = 2 ^ (n + 3) - ((5 - (- 1) ^ n) / 2) * 2 ^ ((2 * n - 1 + (- 1) ^ n) / 4). - _ Luce ETIENNE _ , Sep 23 2014 ●

▶ [A159694] 6,13,28,60,128,272,576,1216,2560,5376,11264,23552,49152,102400,212992,442368,917504,1900544,3932160,8126464,16777216,34603008,71303168,146800640,301989888 ⋆ a(n) = 2 * a(n - 1) + 2 ^ (n - 1), for n > 0, with a(0)=6. ● a(n) = Sum _{ k=0..n } (k + 6) * binomial(n,k). ● a(n) = (6 + n / 2) * 2 ^ n. ●

▶ [A101622] 0,1,6,13,30,61,126,253,510,1021,2046,4093,8190,16381,32766,65533,131070,262141,524286,1048573,2097150,4194301,8388606,16777213,33554430 ⋆ A Horadam - Jacobsthal sequence. ● a(n) = (2 ^ (n + 2) + (- 1) ^ n - 5) / 2. ● a(n) = a(n - 1) + 2 * a(n - 2) + 5. ● a(n) = 2 * a(n - 1) + a(n - 2) - 2 * a(n - 3). ● a(2n + 1) - a(2n) = 1, 7, 31, ... = A083420. ● a(2n + 1) - 2 * a(2n) = 1. ● a(2n) = A002446 = 6 * A002450, a(2n + 1) = A141725. (End) ●

▶ [A256871] 6,13,30,76,216,688,2400,8896,34176,133888,529920,2108416,8411136,33599488,134307840,537051136,2147844096,8590655488,34361180160,137441837056,549761581056,2199034789888,8796116090880,35184418226176,140737580630016 ⋆ a(n) = 2 ^ (n - 1) * (2 ^ n + 11). ● a(n) = 6 * a(n - 1) - 8 * a(n - 2). - _ Colin Barker _ , Apr 26 2015 ●

▶ [A048693] 1,6,13,32,77,186,449,1084,2617,6318,15253,36824,88901,214626,518153,1250932,3020017,7290966,17601949,42494864,102591677,247678218,597948113,1443574444,3485097001 ⋆ Generalized Pellian with 2nd term equal to 6. ● a(n) = 2 * a(n - 1) + a(n - 2); a(0)=1, a(1)=6. ●

▶ [A114689] 1,6,13,36,85,210,505,1224,2953,7134,17221,41580,100381,242346,585073,1412496,3410065,8232630,19875325,47983284,115841893,279667074,675176041,630019160,3935214361 ⋆ Expansion of (1 + 4 * x - x ^ 2) / ((1 - x ^ 2) * (1 - 2 * x - x ^ 2)); a Pellian - related sequence. ● a(n) = (- 1 - (- 1) ^ n) + 3 * ((1 + sqrt(2)) ^ (1 + n) - (1 - sqrt(2)) ^ (1 + n)) / (2 * sqrt(2)). ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) for n>3. ●

▶ [A338267] 0,6,13,38,71,108,159,218,317,436,550,697,817,961,1185,1425,1667,1884,2134,2377,2635,3009,3438,3931,4351 ⋆ a(n) is the nearest integer to the area of a triangle with sides prime(n), prime(n + 1), prime(n + 2). ● a(n) = round(sqrt(s * (s - prime(n)) * (s - prime(n + 1)) * (s - prime(n + 2)))) where s = (prime(n) + prime(n + 1) + prime(n + 2)) / 2. ●

▶ [A353964] 1,1,6,13,45,122,373,1073,3182,9293,27349,80178,235509,691097,2028998,5955501,17482685,51318186,150642613,442198913,1298048350,3810328141,11184967717,32832705122,96378199989 ⋆ Number of tilings of a 2 X n rectangle using 2 X 2 and 1 X 1 tiles and right trominoes. ● a(n) = a(n - 1) + 5 * a(n - 2) + 2 * a(n - 3). ●

▶ [A041489] 1,6,13,45,328,373,1447,1820,5087,6907,25808,32715,254813,797154,1849121,11891880,382389281,2306227566,4994844413,17290760805,126030170048,143320930853,555992962607,699313893460,1954620749527 ⋆ Denominators of continued fraction convergents to sqrt(261). ● a(n) = 384238402 * a(n - 16) - a(n - 32) for n>31. [_ Bruno Berselli _ , Dec 18 2013] ●

▶ [A239530] 1,1,6,13,47,128,405,1181,3598,10705,32259,96544,290009,869417,2609238,7826117,23480935,70438624,211322637,633956965,1901888606,5705637161,17116957851,51350798528,154052516977 ⋆ Number of (n + 1) X (1 + 1) 0..2 arrays with no element equal to all horizontal neighbors or unequal to all vertical neighbors, and new values 0..2 introduced in row major order. ● a(n) = (10 * 3 ^ n + 2 ^ (- n) * ((- 1 + sqrt(5)) ^ n * (- 5 + 4 * sqrt(5)) - (- 1 - sqrt(5)) ^ n * (5 + 4 * sqrt(5)))) / 55. ●

▶ [A003757] 0,1,1,6,13,49,132,433,1261,3942,11809,36289,109824,335425,1018849,3104934,9443629,28756657,87504516,266383153,810723277,2467770054,7510988353,22861948801,69584925696 ⋆ Number of perfect matchings (or domino tilings) in D _ 4 X P _ (n - 1). ● a(n) = a(n - 1) + 6a(n - 2) + a(n - 3) - a(n - 4), n >4. ● a(n) = (T(n,alpha) - T(n,beta)) / (alpha - beta), where alpha = (1 + sqrt(33)) / 4 and beta = (1 - sqrt(33)) / 4 and T(n,x) denotes the Chebyshev polynomial of the first kind. ● a(n) = the bottom left entry of the 2 X 2 matrix T(n, M), where M is the 2 X 2 matrix [0, 2; 1, 1 / 2]. ● a(n) = U(n - 1,i * (1 + sqrt(3)) / sqrt(8)) * U(n - 1,i * (1 - sqrt(3)) / sqrt(8)), where U(n,x) denotes the Chebyshev polynomial of the second kind. ●

▶ [A041305] 1,1,6,13,71,84,2087,2171,12942,28055,153217,181272,4503745,4685017,27928830,60542677,330642215,391184892,9719079623,10110264515,60270402198,130651068911,713525746753,844176815664,20973769322689 ⋆ Denominators of continued fraction convergents to sqrt(165). ● a(n) = 2158 * a(n - 6) - a(n - 12). - _ Vincenzo Librandi _ , Dec 15 2013 ●

▶ [A144535] 0,1,6,13,84,181,1170,2521,16296,35113,226974,489061,3161340,6811741,44031786,94875313,613283664,1321442641,8541939510,18405321661,118973869476,256353060613,1657092233154,3570537526921,23080317394680 ⋆ Numerators of continued fraction convergents to sqrt(3) / 2. ● a(n) = 14 * a(n - 2) - a(n - 4). ● a(n) = ((- (- 2 - sqrt(3)) ^ n * (- 3 + sqrt(3)) + (2 - sqrt(3)) ^ n * (- 3 + sqrt(3)) - (3 + sqrt(3)) * ((- 2 + sqrt(3)) ^ n - (2 + sqrt(3)) ^ n))) / (8 * sqrt(3)). - _ Colin Barker _ , Mar 27 2016 ●

▶ [A042285] 1,1,6,13,162,337,1847,2184,111047,113231,677202,1467635,18288822,38045279,208515217,246560496,12536540017,12783100513,76452042582,1656871856775,2064698270706,4295083727089,23540116906151,27835200633240,1415300148568151 ⋆ Denominators of continued fraction convergents to sqrt(668). ● a(n) = 112894 * a(n - 8) - a(n - 16). - _ Wesley Ivan Hurt _ , Mar 09 2023 ●

▶ [A371396] 6,14,20,38,48,74,88,122,140,182,204,254,280,338,368,434,468,542,580,662,704,794,840,938,988 ⋆ Maximum number of vertices of a chordal ring graph with diameter n. ● a(n) = (3 * n ^ 2 + 1) / 2 if n is odd. ●

▶ [A062316] 6,14,22,30,38,42,46,54,62,66,70,78,86,94,102,110,114,118,126,134,138,142,150,154,158 ⋆ Neither the sum or difference of 2 squares. ● a(n) == 2 (mod 4). Subsequence of A016825 (non - differences of squares). All first differences are either 4 or 8, each of which occurs infinitely often. - _ David W. Wilson _ , Mar 09 2005 ●

► [A017137] 6,14,22,30,38,46,54,62,70,78,86,94,102,110,118,126,134,142,150,158,166,174,182,190,198 ⋆ a(n) = 8 * n + 6. ● a(n) = 2 * a(n - 1) - a(n - 2). - _ Vincenzo Librandi _ , Jun 07 2011 ●
► [A028557] 0,6,14,24,36,50,66,84,104,126,150,176,204,234,266,300,336,374,414,456,500,546,594,644,696 ⋆ a(n) = n * (n + 5). ● a(n) = 2 * n + a(n - 1) + 4. - _ Vincenzo Librandi _ , Aug 05 2010 ●
► [A104675] 6,14,24,36,50,66,84,104,126,150,176,204,234,266,300,336,374,414,456,500,546,594,644,696,750 ⋆ a(n) = C(n + 1,n) * C(n + 6,1). ● a(n) = 2 * n + a(n - 1) + 6 (with a(0)=6). _ Vincenzo Librandi _ , Nov 13 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>2. ●
► [A083657] 1,6,14,24,37,54,74,96,121,150,182,216,254,295,338,384,434,487,542,600,662,727,794,865,939 ⋆ a(n) = Sum _{ i=1..n } floor(r * floor(r * i)) where r =sqrt(3). ● a(n) = (n / 2) * (3n - 1) + n / sqrt(3) + O(1). ●
► [A095794] 1,6,14,25,39,56,76,99,125,154,186,221,259,300,344,391,441,494,550,609,671,736,804,875,949 ⋆ a(n) = A005449(n) - 1, where A005449 = second pentagonal numbers. ● a(n) = (3 / 2) * n ^ 2 + (1 / 2) * n - 1 = (n + 1) * (3 * n - 2) / 2. ● a(n) = 3 * n + a(n - 1) - 1, for n>1, a(1)=1. - _ Vincenzo Librandi _ , Nov 16 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>3. ● a(n) = Sum _{ i=n..2n } (i - 1). (End) ●
► [A293400] 0,1,6,14,25,40,58,79,103,131,161,195,232,273,317,364,414,467,524,584,647,713,783,855,931 ⋆ Greatest integer k such that k / n ^ 2 < (1 + sqrt(5)) / 2 (the golden ratio). ● a(n) = floor(r * n ^ 2), where r = (1 + sqrt(5)) / 2. ●
► [A026055] 6,14,25,40,59,84,114,150,192,242,299,364,437,520,612,714,826,950,1085,1232,1391,1564,1750,1950,2164 ⋆ a(n) = (d(n) - r(n)) / 2, where d = A026054 and r is the periodic sequence with fundamental period (1,0,0,0). ● a(n) = - 0.125 - 0.125 * (- 1) ^ n - 0.25 * cos(n * Pi / 2) + (n + 2) * (n + 3) * (n + 13) / 12 [From _ Richard Choulet _ , Dec 13 2008] ● a(n) = (n + 2) * (n + 3) * (n + 13) / 12 - 0.125 - 0.125 * (- 1) ^ n - 0.25 * cos(n * Pi / 2) [From _ Richard Choulet _ , Dec 13 2008] ●
► [A168648] 1,6,14,26,54,106,214,426,854,1706,3414,6826,13654,27306,54614,109226,218454,436906,873814,1747626,3495254,6990506,13981014,27962026,55924054 ⋆ a(n) = (10 * 2 ^ n + 2 * (- 1) ^ n) / 3 for n > 0; a(0) = 1. ● a(n) = a(n - 1) + 2 * a(n - 2) for n > 2; a(0) = 1, a(1) = 6, a(2) = 14. ●
► [A349723] 1,6,14,27,45,70,102,143,193,254,326,411,509,622,750,895,1057,1238,1438,1659,1901,2166,2454,2767,3105 ⋆ Atomic number corresponding to the element that is the first of the two middle elements in the n - th row of the periodic table of elements. ● a(n) = (4 * n ^ 3 + 18 * n ^ 2 + 32 * n + 3 * (- 1) ^ n - 27) / 24. ●
► [A134067] 1,6,14,30,62,126,254,510,1022,2046,4094,8190,16382,32766,65534,131070,262142,524286,1048574,2097150,4194302,8388606,16777214,33554430,67108862 ⋆ Row sums of triangle A134066. ● a(n) = 2 ^ (2 + n) - 2 for n > 0. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n > 0. ●
► [A350107] 1,6,14,31,45,81,101,150,191,253,285,401,439,527,623,752,802,979,1035,1233,1369,1509,1577,1901,2020 ⋆ a(n) = Sum _{ k=1..n } k * floor(n / k) ^ 2. ● a(n) = Sum _{ k=1..n } 2 * k * tau(k) - sigma(k). ●
► [A273365] 0,6,14,32,48,78,102,144,176,230,270,336,384,462,518,608,672,774,846,960,1040,1166,1254,1392,1488 ⋆ Numbers k such that 10 * k + 4 is a perfect square. ● a(2n) = 10 * n ^ 2 + 4 * n, n>=0. ● a(2n - 1) = 10 * n ^ 2 - 4 * n, n>=1. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). (End) ●
► [A271996] 6,14,32,50,82,114,164,214,286,358,456,554,682,810,972,1134,1334,1534,1776,2018,2306,2594,2932,3270,3662 ⋆ The crystallogen sequence (a(n) = A018227(n) - 4). ● a(n) = (6 * (- 9 + (- 1) ^ n) + (25 + 3 * (- 1) ^ n) * n + 12 * n ^ 2 + 2 * n ^ 3) / 12. ● a(n) = (n ^ 3 + 6 * n ^ 2 + 14 * n - 24) / 6 for n even. ● a(n) = (n ^ 3 + 6 * n ^ 2 + 11 * n - 30) / 6 for n odd. ● a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + a(n - 4) + 2 * a(n - 5) - a(n - 6) for n>7. ●
► [A199705] 6,14,32,52,82,114,156,200,254,310,376,444,522,602,692,784,886,990,1104,1220,1346,1474,1612,1752,1902 ⋆ Number of - n..n arrays x(0..2) of 3 elements with zero sum and no two neighbors equal. ● a(n) = n + 3 * n ^ 2 for n even. ● a(n) = 2 + n + 3 * n ^ 2 for n odd. ●
► [A225972] 0,0,1,6,14,32,55,94,140,208,285,390,506,656,819,1022,1240,1504,1785,2118,2470,2880,3311,3806,4324 ⋆ The number of binary pattern classes in the (2,n) - rectangular grid with 3 ’1’s and (2n - 3) ’0’s: two patterns are in same class if one of them can be obtained by a reflection or 180 - degree rotation of the other. ● a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + a(n - 4) + 2 * a(n - 5) - a(n - 6) with n > 5, a(0)=0, a(1)=0, a(2)=1, a(3)=6, a(4)=14, a(5)=32. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) + 4 * (n - 4) * (- 1) ^ n with n > 3, a(0)=0, a(1)=0, a(2)=1, a(3)=6. ● a(n) = (1 / 4) * (binomial(2 * (n - 1),3) + 2 * binomial(n - 2,1) * (1 / 2) * (1 + (- 1) ^ n)). - _ Yosu Yurramendi _ and _ María Merino _ , Aug 21 2013 ●
► [A332724] 0,0,1,6,14,32,65,128,243,452,826,1490,2659,4704,8261,14418,25030,43252,74437,127648,218199,371920,632306,1072486,1815239 ⋆ Number of length n - 1 ordered set partitions of { 1..n } where no element of any block is greater than any element of a non - adjacent consecutive block. ● a(n) = 2 * a(n - 1) + a(n - 2) - 2 * a(n - 3) - a(n - 4) for n > 4. ●
► [A078836] 6,14,32,72,160,352,768,1664,3584,7680,16384,34816,73728,155648,327680,688128,1441792,3014656,6291456,13107200,27262976,56623104,117440512,243269632,503316480 ⋆ a(n) = n * 2 ^ (n - 6). ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) for n > 7. ●
► [A229441] 6,14,37,109,324,915,2402,5843,13229,28071,56234,107080,194989,341334,576993,945488,1506848,2342300,3559899,5301215,7749202,11137381,15760476,21986649,30271487 ⋆ Number of n X 4 0..2 arrays with horizontal differences mod 3 never 1, vertical differences mod 3 never - 1, and rows and columns lexicographically nondecreasing. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>9. ●
► [A269511] 1,6,14,38,55,108,140,236,285,434,506,722,819,1112,1240,1624,1785,2270,2470,3070,3311,4036,4324,5188,5525 ⋆ Partial sums of the number of active (ON,black) cells in n - th stage of growth of two - dimensional cellular automaton defined by ”Rule 342”, based on the 5 - celled von Neumann neighborhood. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - 2 * a(n - 6) + 2 * a(n - 7) + a(n - 8) - a(n - 9) for n>8. ●
► [A182752] 1,6,14,84,196,1176,2744,16464,38416,230496,537824,3226944,7529536,45177216,105413504,632481024,1475789056,8854734336,20661046784 ⋆ a(1) = 1, a(2) = 6, for n >= 3; a(n) = the smallest number greater than a(n - 1) such that [[a(n - 2) + a(n - 1)] * [a(n - 2) + a(n)] * [a(n - 1) + a(n)]] / [a(n - 2) * a(n - 1) * a(n)] is an integer. ● a(2n) = 6 * a(2n - 1), a(2n + 1) = 7 / 3 * a(2n). ●
► [A077401] 0,6,14,104,231,1665,3689,26543,58800,423030,937118,6741944,14935095,107448081,238024409,1712427359,3793455456,27291389670,60457262894,434949807368,963522750855,6931905528225,15355906750793,110475538644239,244730985261840 ⋆ Second member of Diophantine pair (m,k) that satisfies 7 * (m ^ 2 + m) = k ^ 2 + k; a(n) = k. ● a(n) = 16 * a(n - 2) - a(n - 4) + 7, n >= 2 with a(- 2)= - 7, a(- 1)= - 1, a(0)=0, a(1)=6. [Corrected by _ Vladimir Pletser _ , Feb 29 2020, Jul 26 2020] ● a(n) = a(n - 1) + 16 * a(n - 2) - 16 * a(n - 3) - a(n - 4) + a(n - 5). (End) ●
► [A187918] 6,15,22,35,46,62,77,95,119,143,166,194,221,254,287,323,358,398,437,482,527,573,623,674,723 ⋆ Largest semiprime < n ^ 2. ● a(n) = MAX { k in A001358 and k < n ^ 2 } . ●
► [A122709] 1,6,15,24,33,42,51,60,69,78,87,96,105,114,123,132,141,150,159,168,177,186,195,204,213 ⋆ a(0)=1; thereafter a(n) = 9 * n - 3. ● a(n) = 2 * a(n - 1) - a(n - 2) for n > 2; a(0)=1, a(1)=6, a(2)=15. ● a(n) = a(n - 1) + 9 for n > 1; a(0)=1, a(1)=6. ●
► [A051940] 6,15,25,36,48,61,75,90,106,123,141,160,180,201,223,246,270,295,321,348,376,405,435,466,498 ⋆ Truncated triangular numbers: n * (n + 1) / 2 - 3 * t * (t + 1) / 2 with t=4. ● a(n) = n + a(n - 1) with n>8, a(8)=6. - _ Vincenzo Librandi _ , Aug 06 2010 ●
► [A222170] 0,1,6,15,26,41,60,81,106,135,166,201,240,281,326,375,426,481,540,601,666,735,806,881,960 ⋆ a(n) = n ^ 2 + 2 * floor(n ^ 2 / 3). ● a(n) = a(- n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) - 2 * a(n - 4) + a(n - 5). ● a(n) = floor(5 * n ^ 2 / 3). - _ Wesley Ivan Hurt _ , Mar 16 2015 ● a(n) = a(n - 3) + 5 * (2n - 3) [Tadeusz Dorozinski]. - _ Eduard Baumann _ , Jan 18 2023 ●
► [A316320] 1,6,15,27,39,51,63,75,87,99,111,123,135,147,159,171,183,195,207,219,231,243,255,267,279 ⋆ Coordination sequence for a hexavalent node in a chamfered version of the 3 ^ 6 triangular tiling of the plane. ● a(n) = 2 * a(n - 1) - a(n - 2) for n>3. ●
► [A140091] 0,6,15,27,42,60,81,105,132,162,195,231,270,312,357,405,456,510,567,627,690,756,825,897,972 ⋆ a(n) = 3 * n * (n + 3) / 2. ● a(n) = a(n - 1) + 3 * n + 3 with n>0, a(0)=0. - _ Vincenzo Librandi _ , Nov 24 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>2. - _ Harvey P. Dale _ , Aug 15 2015 ●
► [A255605] 1,6,15,27,43,61,84,110,139,172,208,247,290,337,387,440,497,557,621,688,758,832,910,990,1075 ⋆ Integer part of the area of a pentagon with side length n. ● a(n) = floor(5 * n ^ 2 / (4 * tan(Pi / 5))), n >= 1. ●
► [A171972] 0,1,6,15,27,43,62,84,110,140,173,209,249,292,339,389,443,500,561,625,692,763,838,916,997 ⋆ Greatest integer k such that k / n ^ 2 < sqrt(3). ● a(n) = floor(n ^ 2 * sqrt(3)). ●
► [A000384] 0,1,6,15,28,45,66,91,120,153,190,231,276,325,378,435,496,561,630,703,780,861,946,1035,1128 ⋆ Hexagonal numbers: a(n) = n * (2 * n - 1). ● a(n) = Sum _{ k=1..n } tan ^ 2((k - 1 / 2) * Pi / (2n)). - _ Ignacio Larrosa Cañestro _ , Apr 17 2001 ● a(n) = right term of M ^ n * [1,0,0], where M = the 3 X 3 matrix [1,0,0; 1,1,0; 1,4,1]. Example: a(5) = 45 since M ^ 5 * [1,0,0] = [1,5,45]. - _ Gary W. Adamson _ , Dec 24 2006 ● a(n) ^ 2 + (a(n) + 1) ^ 2 + ... + (a(n) + n - 1) ^ 2 = (a(n) + n + 1) ^ 2 + ... + (a(n) + 2n - 1) ^ 2 + n ^ 2; e.g., 6 ^ 2 + 7 ^ 2 = 9 ^ 2 + 2 ^ 2; 28 ^ 2 + 29 ^ 2 + 30 ^ 2 + 31 ^ 2 = 33 ^ 2 + 34 ^ 2 + 35 ^ 2 + 4 ^ 2. - _ Charlie Marion _ , Nov 10 2007 ● a(n) = binomial(n + 1,2) + 3 * binomial(n,2). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3), a(0)=0, a(1)=1, a(2)=6. - _ Jaume Oliver Lafont _ , Dec 02 2008 ● a(n) = a(n - 1) + 4 * n - 3 (with a(0)=0). - _ Vincenzo Librandi _ , Nov 20 2010 ●
► [A301292] 1,6,15,28,46,69,96,127,163,204,249,298,352,411,474,541,613,690,771,856,946,1041,1140,1243,1351 ⋆ Partial sums of A301291. ● a(n) = 3 * a(n - 1) - 4 * a(n - 2) + 4 * a(n - 3) - 3 * a(n - 4) + a(n - 5) for n > 4. ●
► [A359696] 1,6,15,28,49,72,103,138,177,228,275,330,397,464,543,620,707,800,891,1002,1105,1220,1341,1468,1605 ⋆ a(n) is the number of points with integer coordinates located between the x - axis and the graph of the function y = n ^ 3 / (n ^ 2 + x ^ 2). ● a(n) = n + 2 * Sum _{ x > 0 } floor(n ^ 3 / (n ^ 2 + x ^ 2)). - _ Andrew Howroyd _ , Mar 07 2023 ● a(n) = n + 2 * Sum _{ y=1..n - 1 } floor(sqrt(n ^ 3 / y - n ^ 2)). - _ Chai Wah Wu _ , Mar 27 2023 ●
► [A134978] 0,1,6,15,28,53,74,111,152,209,246,339,384,473,582,695,756,917,986,1175,1340,1493,1578,1855,2008 ⋆ Number of 2 X 2 singular integer matrices with entries from { 2,...,n } . ● a(n) << n ^ (2 + e) for all e > 0. - _ Charles R Greathouse IV _ , Jun 17 2013 ●
► [A365418] 1,6,15,29,48,71,99,132,169,211,258,309,365,426,491,561,636,715,799,888,981,1079,1182,1289,1401 ⋆ Partial sums of A301298. ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) - 2 * a(n - 4) + a(n - 5) for n > 5. ●
► [A005286] 1,6,15,29,49,76,111,155,209,274,351,441,545,664,799,951,1121,1310,1519,1749,2001,2276,2575,2899,3249 ⋆ a(n) = (n + 3) * (n ^ 2 + 6 * n + 2) / 6. ● a(- 6 - n) = - a(n). - _ Michael Somos _ , May 12 2005 ● a(0)=1, a(1)=6, a(2)=15, a(3)=29, a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Harvey P. Dale _ , Mar 07 2012 ●
► [A229063] 0,1,6,15,29,50,80,120,171,235,313,407,517,646,795,965,1158,1374,1616,1885,2182,2509,2867,3258,3682 ⋆ Volume of the Johnson square pyramid (rounded down) with all the edge lengths equal to n. ● a(n) = floor(n ^ 3 * sqrt(2) / 6) ●
► [A011886] 0,0,0,1,6,15,30,52,84,126,180,247,330,429,546,682,840,1020,1224,1453,1710,1995,2310,2656,3036 ⋆ a(n) = floor(n * (n - 1) * (n - 2) / 4). ● a(n) = + 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 4) - 3 * a(n - 5) + 3 * a(n - 6) - a(n - 7). G.f.: x ^ 3 * (1 + 3 * x + 2 * x ^ 3) / ((- 1 + x) ^ 4 * (1 + x) * (x ^ 2 + 1)). - _ R. J. Mathar _ , Apr 15 2010 ●
► [A212251] 0,0,1,6,15,30,54,87,131,189,261,349,456,582,729,900,1095,1316,1566,1845,2155,2499,2877,3291,3744 ⋆ Number of (w,x,y,z) with all terms in { 1,...,

n } and 3w = x + y + z + n + 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + 2 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) - a(n - 6). ●

▶ [A213779] 1,6,15,33,58,97,146,214,295,400,521,671,840,1043,1268,1532,1821,2154,2515,2925,3366,3861,4390,4978,5603 ★ Principal diagonal of the convolution array A213778. ● a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + a(n - 4) + 2 * a(n - 5) - a(n - 6). ● a(n) = (16 * n ^ 3 + 30 * n ^ 2 + 2 * (3 * (- 1) ^ n + 7) * n + 3 * ((- 1) ^ n - 1)) / 48. ● a(n) = (8 * n ^ 3 + 15 * n ^ 2 + 10 * n) / 24 for n even. ● a(n) = (8 * n ^ 3 + 15 * n ^ 2 + 4 * n - 3) / 24 for n odd. ●

▶ [A083052] 1,6,15,33,60,107,176,283,463,732,1156,1773,2702,4170,6333,9611,14365,21842,32281,48041,71690,106136,158196,232380,340846 ★ Main diagonal of table A083050. ● a(n) = T(n, n), where T(n, 0) = floor(n * x / (x - 1)) + 1, T(n, k + 1) = ceiling(x * T(n, k)), for n >= 0, k >= 0, with x=sqrt(2). ●

▶ [A120849] 0,6,15,34,85,236,695,2094,6345,19216,58075,175154,527405,1586196,4766655,14316214,42981265,129009176,387158435,1161737274,3485735925,10458256156,31376865415,94134790334,282412759385 ★ 5n + 3 ^ n - 2 ^ n. ● a(n) = 7 * a(n - 1) - 17 * a(n - 2) + 17 * a(n - 3) - 6 * a(n - 4). - _ Vincenzo Librandi _ , Feb 24 2013 ●

▶ [A074149] 1,6,15,36,65,114,175,264,369,510,671,876,1105,1386,1695,2064,2465,2934,3439,4020,4641,5346,6095,6936,7825 ★ Sum of terms in each group in A074147. ● a(2n - 1) = 4n ^ 3 - 6n ^ 2 + 4n - 1, a(2n) = 4n ^ 3 + 2n. a(n) = (n ^ 3 + n) / 2 if n odd, n ^ 3 / 2 + n if n even. a(n) = n ^ 3 / 2 + n(3 + (- 1) ^ n) / 4. - _ Franklin T. Adams - Watters _ , Jul 17 2006 ●

▶ [A324221] 1,0,1,6,15,36,72,139,244,414,663,1030,1540,2247,3187,4433,6036,8088,10658,13861,17785,22571,28329,35227,43401,53049 ★ Number of connected 2n - regular loopless multigraphs with five nodes. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - a(n - 3) + a(n - 4) - 2 * a(n - 5) + 4 * a(n - 6) - 2 * a(n - 7) + a(n - 8) - a(n - 9) - 2 * a(n - 10) + 3 * a(n - 11) - a(n - 12) for n>11. ●

▶ [A177206] 6,15,36,77,148,261,430,671,1002,1443,2016,2745,3656,4777,6138,7771,9710,11991,14652,17733,21276,25325,29926,35127,40978 ★ a(n) = 2 * binomial(n + 4, 4) + n + 4. ● a(n) = (n ^ 4 + 10n ^ 3 + 35n ^ 2 + 62n + 12) / 12. - _ Gary Detlefs _ , Jun 06 2010 ●

▶ [A135854] 1,6,15,36,85,198,455,1032,2313,5130,11275,24588,53261,114702,245775,524304,1114129,2359314,4980755,10485780,22020117,46137366,96469015,201326616,419430425 ★ a(n) = (n + 1) * (2 ^ n + 1) for n > 0 with a(0)=1. ● a(0) = 1, a(n) = (n + 1) * (2 ^ n + 1), n>0. - _ L. Edson Jeffery _ , Jan 14 2014 ●

▶ [A221905] 1,6,15,36,93,258,747,2208,6585,19710,59079,177180,531477,1594362,4783011,14348952,43046769,129140214,387420543,1162261524,3486784461,10460353266,31381059675,94143178896,282429536553 ★ 3 ^ n + 3 * n. ● a(n) = 5 * a(n - 1) - 7 * a(n - 2) + 3 * a(n - 3). ●

▶ [A299267] 1,6,15,37,74,131,213,330,475,653,882,1163,1485,1862,2307,2821,3398,4043,4773,5598,6499,7481,8574,9779,11073 ★ Partial sums of A299266. ● a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 3 * a(n - 3) - 2 * a(n - 4) - 2 * a(n - 7) + 3 * a(n - 8) - 2 * a(n - 9) + 2 * a(n - 10) - a(n - 11) for n>12. ●

▶ [A277089] 6,15,38,97,248,635,1626,4164,10664,27311,69945,179134,458775,1174956,3009148,7706648,19737289,50548641,129458768,331553377,849132458,2174690356,5569541124,14264002343,36531153701 ★ Pisot sequences L(6,15), S(6,15). ● a(n) = ceiling(a(n - 1) ^ 2 / a(n - 2)), a(0) = 6, a(1) = 15. ● a(n) = floor(a(n - 1) ^ 2 / a(n - 2) + 1), a(0) = 6, a(1) = 15. ● a(n) = 3 * a(n - 1) - a(n - 2) - a(n - 4) + 2 * a(n - 6) - 2 * a(n - 7). (End) ●

▶ [A277237] 1,6,15,39,99,255,651,1671,4275,10959,28059,71895,184131,471711,1208235,3095079,7928019,20308335,52020411,133253751,341335395,874350399,2239691979,5737093575,14695861491 ★ Number of strings of length n composed of symbols from the circular list [1,2,3,4,5,6] such that adjacent symbols in the string must be adjacent in the list. No runs of length 2 or more are allowed for symbols 1, 3 and 5. ● a(n) = 3 * ((13 + 3 * sqrt(17)) * z1 ^ n - (13 - 3 * sqrt(17)) * z2 ^ n) / (8 * sqrt(17)), where z1=(1 + sqrt(17)) / 2 and z2=(1 - sqrt(17)) / 2. ●

▶ [A114696] 1,6,15,40,97,238,575,1392,3361,8118,19599,47320,114241,275806,665855,1607520,3880897,9369318,22619535,54608392,131836321,318281038,768398399,1855077840,4478554081 ★ Expansion of (1 + 4 * x + x ^ 2) / ((1 - x ^ 2) * (1 - 2 * x - x ^ 2)); a Pellian - related sequence. ● a(0)=1, a(1)=6, a(2)=15, a(3)=40, a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4). - _ Harvey P. Dale _ , Jan 23 2014 ● a(n) = (- 3 - (- 1) ^ n + (3 - 2 * sqrt(2)) * (1 - sqrt(2)) ^ n + (1 + sqrt(2)) ^ n * (3 + 2 * sqrt(2))) / 2. - _ Colin Barker _ , May 26 2016 ●

▶ [A106368] 6,15,40,165,624,2635,11160,48915,217040,976887,4438920,20346485,93900240,435970995,2034505656,9536767665,44878791360,211927736135,1003867701480,4768372070757,22706531350480,108372083629275 ★ Necklaces with n beads of 6 colors, no 2 adjacent beads the same color. ● a(n) = (1 / n) * Sum _{ d | n } totient(n / d) * (5 * (- 1) ^ d + 5 ^ d) for n > 1. - _ Andrew Howroyd _ , Mar 12 2017 ●

▶ [A220030] 6,15,42,95,192,358,626,1038,1646,2513,3714,5337,7484,10272,13834,18320,23898,30755,39098,49155,61176,75434,92226,111874,134726 ★ Number of n X 6 arrays of the minimum value of corresponding elements and their horizontal or diagonal neighbors in a random, but sorted with lexicographically nondecreasing rows and nonincreasing columns, 0..1 n X 6 array. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>7. ●

▶ [A193449] 0,1,6,15,44,105,258,595,1368,3069,6830,15015,32772,70993,152922,327675,699056,1485477,3145734,6640975,13981020,29360121,61516466,128625315,268435464 ★ Products of the Jacobsthal numbers and the integers: a(n) = n * A001045(n + 1). ● a(n) = n * (2 ^ (n + 1) + (- 1) ^ n) / 3 ● a(n)= sum(sum((- 1) ^ (j + k) * (j + k) * C(n - k + j,j), j=0..k), k=0..n) ● a(n)= sum(n * C(n, k) * 2F1((1, - k); - n)(- 1), k=0..n) ● a(n)=sum(sum((- 1) ^ j * n * C(n - j, k - j), j=0..k), k=0..n) ● a(n)= sum((1 + 2 * k) * C(n + 1, k + 1) * 2F1((1, n + 2); k + 2)(- 1) - C(n + 2, k + 2) 2F1((2, n + 3); k + 3)(- 1) - (- 1) ^ (k) * 2 ^ (k - n - 2) * (n - 3 * k + 1) , k=0..n) ●

▶ [A182420] 0,1,6,15,44,205,1218,8547,68440,615897,6158910,67747911,812974980,10568674805,147961447354,2219421710235,35510747363504,603682705179313,10866288693227382,206459485171319935,4129189703426398300,86712983771954363901 ★ a(0)=0, a(n) = (a(n - 1) XOR n) * n. ● a(0)=0, a(n) = (a(n - 1) XOR n) * n, where XOR is the bitwise exclusive - OR operator. ●

▶ [A095122] 0,1,1,6,15,45,120,325,861,2278,5995,15753,41328,108345,283881,743590,1947351,5099221,13351528,34957341,91523685,239618886,627341331,1642418641,4299936480 ★ Fib(n)(2Fib(n) - 1). ● a(n)=2(Fib(2n - 1) + Fib(2n + 1)) / 5 - Fib(n) + 4(- 1) ^ n / 5; ● a(n)=2L(2n) / 5 - Fib(n) + 4(- 1) ^ n / 5; ● a(0)=0, a(1)=1, a(2)=1, a(3)=6, a(4)=15, a(n)=3 * a(n - 1) + a(n - 2) - 5 * a(n - 3) - a(n - 4) + a(n - 5) [From Harvey P. Dale, Jan 14 2012] ●

▶ [A270455] 1,6,15,48,73,158,207,368,449,710,831,1216,1385,1918,2143,2848,3137,4038,4399,5520,5961,7326,7855,9488,10113 ★ Partial sums of the number of active (ON,black) cells in n - th stage of growth of two - dimensional cellular automaton defined by "Rule 163", based on the 5 - celled von Neumann neighborhood. ● a(n) = (3 * (3 + (- 1) ^ n) + (22 - 6 * (- 1) ^ n) * n - 6 * (- 4 + (- 1) ^ n) * n ^ 2 + 8 * n ^ 3) / 12. ● a(n) = (4 * n ^ 3 + 9 * n ^ 2 + 8 * n + 6) / 6 for n even. ● a(n) = (4 * n ^ 3 + 15 * n ^ 2 + 14 * n + 3) / 6 for n odd. ● a(n) = a(n - 1) + 3 * a(n - 2) - 3 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) + a(n - 6) - a(n - 7) for n>6. ●

▶ [A122365] 0,1,1,6,15,53,160,517,1621,5150,16267,51513,162944,515673,1631609,5162966,16336695,51693645,163571104,517580093,1637750957,5182251182,16397926099,51887105969,164183665152 ★ The (1,6) - entry of the matrix M ^ n, where M is the 6 X 6 matrix {{ 1, 1, 1, 1, 1, 1 } , { 1, 0, 0, 0, 1, 0 } , { 1, 0, 0, 1, 0, 0 } , { 1, 0, 1, 0, 0, 0 } , { 1, 1, 0, 0, 0, 0 } , { 1, 0, 0, 0, 0, 0 }} . ● a(n) = 2 * a(n - 1) + 5 * a(n - 2) - 3 * a(n - 3) - 4 * a(n - 4) + a(n - 5); a(0)=0, a(1)=1, a(2)=1,a(3)=6,a(4)=15 (follows from the minimal polynomial of M). ● a(n) = 2 * a(n - 1) + 4 * a(n - 2) - a(n - 3) for n>2. ●

▶ [A373569] 1,6,15,55,190,671,2353,8272,29056,102091,358671,1260143,4427294,15554592,54648506,191998646,674555937,2369942427,8326406594,29253473175,102777312308,361091343583,1268635610806,4457144547354,15659451261015 ★ Expansion of x + 1 / (- x - 1 / (- x - 1 / (- x - 1 / (- x - 1 / (- x + 1))))). ● a(n) = [x ^ n] (x ^ 6 - x ^ 5 - 5 * x ^ 4 + 4 * x ^ 3 + 6 * x ^ 2 - 3 * x - 1) / (x ^ 5 - x ^ 4 - 4 * x ^ 3 + 3 * x ^ 2 + 3 * x - 1). ●

▶ [A069750] 1,6,15,63,157,633,1578,6334,15786,63344,157866,633445,1578667,6334455,15786676,63344554,157866766,633445544,1578667666,6334455446,15786676667,63344554464,157866766678,633445544643,1578667666788 ★ a(1)=1; a(n + 1) is the smallest integer such that 1 / a(n + 1) = 0.0...00a(n)xxxxx... ● a(1)=1; floor(10 ^ (n - 1) / a(n + 1)) = a(n). ●

▶ [A233450] 0,1,6,15,64,153,638,1519,6320,15041,62566,148895,619344,1473913,6130878,14590239,60689440,144428481,600763526,1429694575,5946945824,14152517273,58868694718,140095478159,582740001360 ★ Numbers n such that 3 * T(n) + 1 is a square, where T = A000217. ● a(n) = a(n - 1) + 10 * a(n - 2) - 10 * a(n - 3) - a(n - 4) + a(n - 5) for n>5, a(1)=0, a(2)=1, a(3)=6, a(4)=15, a(5)=64. ● a(n) = - 1 / 2 + ((- 3 * (- 1) ^ n + 2 * sqrt(6)) * (5 + 2 * sqrt(6)) ^ floor(n / 2) - (3 * (- 1) ^ n + 2 * sqrt(6)) * (5 - 2 * sqrt(6)) ^ floor(n / 2)) / 12. ●

▶ [A032164] 1,6,15,70,315,1554,7735,39990,209790,1119720,6045837,32981550,181394535,1004668770,5597420295,31345665106,176319264240,995685849690,5642219252460,32071565263710,182807918979777 ★ Number of aperiodic necklaces of n beads of 6 colors; dimensions of free Lie algebras. ● a(n) = Sum _{ d|n } mu(d) * 6 ^ (n / d) / n, for n>0. ●

▶ [A220360] 0,6,15,80,312,1365,5712,24310,102795,435744,1845360,7817849,33115680,140282310,594242103,2517255280,10663255848,45170290605,191344398960,810547917686,3433536019155,14544692076096,61612304191200,260993909055025,1105587940064832 ★ a(n) = Fibonacci(n - 1) * Fibonacci(n + 1) * Fibonacci(n + 2). ● a(n) = 4 * (- 1) ^ n * F(n - 1) / 5 + (- 1) ^ n * F(n) + F(3 * n + 2) / 5 with F=A000045. - _ Ehren Metcalfe _ , Mar 26 2016 ●

▶ [A262327] 6,15,90,351,2106,10935,65610,378351,2270106,13482855,80897130,484142751,2904856506,17417978775,104507872650,626946793551,3761680761306,22569180586695,135415083520170,812482365290751,4874894191744506 ★ Number of (n + 1) X (3 + 1) 0..1 arrays with each row and column divisible by 3, read as a binary number with top and left being the most significant bits. ● a(n) = 3 ^ (n - 2) * (14 + 2 ^ (2 + n)) / 2 for n even. ● a(n) = 3 ^ (n - 2) * (28 + 2 ^ (2 + n)) / 2 for n odd. ●

▶ [A133472] 6,15,105,1005,10005,100005,1000005,10000005,100000005,1000000005,10000000005,100000000005,1000000000005,10000000000005,100000000000005,1000000000000005,10000000000000005,100000000000000005 ★ 6 followed by numbers with n - 1 0's between 1 and 5. ● a(n) = 10 * a(n - 1) - 45. (End) ● a(n) = 10 ^ (n - 1) + 5 for n >= 1. - _ Paolo P. Lava _ , Dec 19 2007 ● a(n) = 10 ^ n + 5. - _ Vincenzo Librandi _ , Aug 10 2011 ●

▶ [A104392] 6,16,20,36,40,50,71,75,85,105,127,131,141,161,196,211,215,225,245,280,331,335,336,345,365 ★ Sums of 2 distinct positive pentatope numbers (A000332). ● a(n) = Ptop(i) + Ptop(j) for some positive i= / =j and Ptop(n) = binomial(n + 3,4). ●

▶ [A087446] 1,6,16,21,31,36,46,51,61,66,76,81,91,96,106,111,121,126,136,141,151,156,166,171,181 ★ Numbers that are congruent to { 1, 6 } mod 15. ● a(n) = (18 * n - 1) / 4 + 5 * (- 1) ^ n / 4. ● a(n) = 15 * n - a(n - 1) - 23, with a(1)=1. - _ Vincenzo Librandi _ , Aug 08 2010 ●

▶ [A017341] 6,16,26,36,46,56,66,76,86,96,106,116,126,136,146,156,166,176,186,196,206,216,226,236,246 ★ a(n) = 10 * n + 6. ● a(n) = 2 * a(n - 1) - a(n - 2) with n>1, a(0)=6, a(1)=16. - _ Vincenzo Librandi _ , May 29 2011 ●

▶ [A212905] 1,6,16,26,42,58,82,106,140,174,220,266,326,386,462,538,632,726,840,954,1090,1226,1386,1546,1732 ★ Number of (w,x,y,z) with all terms in { 0,...,n } and |w - x| + |x - y + |y - z|=2n. ● a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + a(n - 4) + 2 * a(n - 5) - a(n - 6) for n>=1. ●

▶ [A264938] 0,1,6,16,29,46,68,93,122,156,193,234,280,329,382,440,501,566,636,709,786,868,953,1042,1136 ★ a(n) = n * (2 * n - 1) + floor(n / 3). ● a(n) = a(n - 3) + 12 * n - 20 for n>2. ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) - 2 * a(n - 4) + a(n - 5) for n>4. ● a(n + 30 * k + 8) - a(n - 30 * k - 7) = 20 * (4 * k + 1) * (3 * n + 1). ● a(n + 30 * k + 16) - a(n - 30 * k - 14) = 20 * (2 * k + 1) * (6 * n + 5). ● a(n + 30 * k + 24) - a(n - 30 * k - 21) = 20 * (4 * k + 3) * (3 * n + 4). ● a(n + 30 * k + 32) - a(n - 30 * k - 28) = 20 * (2 * k + 2) * (6 * n + 11). ●

▶ [A054000] 0,6,16,30,48,70,96,126,160,198,240,286,336,390,448,510,576,646,720,798,880,966,1056,1150,1248 ★ a(n) = 2 * n ^ 2 - 2. ● a(n) = 4 * n + a(n - 1) - 2, with n>1, a(1)=0. - _ Vincenzo Librandi _ , Aug 06 2010 ● a(1)=0, a(2)=6,

a(3)=16; for n>3, a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Feb 03 2012 ● a(n) = (n + i) ^ 2 + (n - i) ^ 2, where i=sqrt(- 1). - _ Bruno Berselli _ , Jan 23 2014 ●

▶ [A102214] 1,6,16,30,49,72,100,132,169,210,256,306,361,420,484,552,625,702,784,870,961,1056,1156,1260,1369 ⋆ Expansion of (1 + 4 * x + 4 * x ^ 2) / ((1 + x) * (1 - x) ^ 3). ● a(n) = floor((3 * n + 2) / 2) * ceiling((3 * n + 2) / 2). - Marcus Schmidt (marcus - schmidt(AT)gmx.net), Jan 13 2006 ● a(n) = (6 * n * (3 * n + 4) + (- 1) ^ n + 7) / 8. - _ Bruno Berselli _ , Oct 25 2011 ● a(20 + n) - a(n) = 30 * (32 + 3 * n). ● a(1 + 2 * n) = 3 * (1 + n) * (2 + 3 * n). ●

▶ [A005891] 1,6,16,31,51,76,106,141,181,226,276,331,391,456,526,601,681,766,856,951,1051,1156,1266,1381,1501 ⋆ Centered pentagonal numbers: (5n ^ 2 + 5n + 2) / 2; crystal ball sequence for 3.3.3.4.4. planar net. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3), a(0)=1, a(1)=6, a(2)=16. - _ Jaume Oliver Lafont _ , Dec 02 2008 ● a(n) = a(n - 1) + 5 * n, with a(0)=1. - _ Vincenzo Librandi _ , Nov 18 2010 ● a(n) = 2 * a(n - 1) - a(n - 2) + 5. - _ Ant King _ , Jun 12 2012 ●

▶ [A092286] 0,6,16,31,52,80,116,161,216,282,360,451,556,676,812,965,1136,1326,1536,1767,2020,2296,2596,2921,3272 ⋆ Fourth diagonal (m=3) of triangle A084938; a(n) = A084938(n + 3,n) = (n ^ 3 + 9 * n ^ 2 + 26 * n) / 6. ● a(n) = 1 / 2 * sum _{ k=1..n } (k + 3)(k + 2). ● a(n) = 1 / 6 * n * (n ^ 2 + 9n + 26). (End) ●

▶ [A301723] 1,6,16,31,53,80,111,149,192,239,293,352,415,485,560,639,725,816,911,1013,1120,1231,1349,1472,1599 ⋆ Partial sums of A301722. ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) - 2 * a(n - 4) + a(n - 5) for n>4. ●

▶ [A276917] 1,6,16,31,71,106,236,311,711,866,2076,2391,6031,6666,17596,18871,51671,54226,152636,157751,452991,463226,1348956,1369431,4026631 ⋆ Numbers obtained by alternatively adding centered pentagonal layers of 5 * (2 ^ n - 1) and 5 * (3 ^ n - 1) elements. ● a(n) = 5 * (Sum _{ i=0..((n + (n mod 2)) / 2) } 2 ^ i + Sum _{ j=0..((n - (n mod 2)) / 2) } 3 ^ j) - 5 * n - 9. ● a(n) = a(n - 1) + 5 * ((2 + ((n + 1) mod 2)) ^ ((n + (n mod 2)) / 2) - 1) for n>0. ● a(n) = (- 10 * n + 5 * 3 ^ (n / 2 + 1) + 5 * 2 ^ (n / 2 + 2) - 33) / 2 for n even. ● a(n) = (- 10 * n + 5 * 3 ^ (n / 2 + 1 / 2) + 5 * 2 ^ (n / 2 + 5 / 2) - 33) / 2 for n odd. ●

▶ [A301698] 1,6,16,32,54,81,113,150,192,240,294,353,417,486,560,640,726,817,913,1014,1120,1232,1350,1473,1601 ⋆ Partial sums of A301697. ● a(n) = 3 * a(n - 1) - 4 * a(n - 2) + 4 * a(n - 3) - 4 * a(n - 4) + 4 * a(n - 5) - 3 * a(n - 6) + a(n - 7) for n>6. ●

▶ [A301713] 1,6,16,32,54,81,114,152,195,244,297,356,421,491,568,649,735,827,923,1026,1134,1247,1367,1491,1621 ⋆ Partial sums of A301712. ● a(n) = 2 * a(n - 1) - a(n - 2) - a(n - 4) + 3 * a(n - 5) - 3 * a(n - 6) + a(n - 7) + a(n - 9) - 2 * a(n - 10) + a(n - 11) for n>10. ●

▶ [A134465] 1,6,16,32,55,86,126,176,237,310,396,496,611,742,890,1056,1241,1446,1672,1920,2191,2486,2806,3152,3525 ⋆ Row sums of triangle A134464. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Vincenzo Librandi _ , Jun 29 2012 ●

▶ [A131949] 1,6,16,32,56,92,148,240,400,692,1244,2312,4408,8556,16804,33248,66080,131684,262828,525048,1049416,2098076,4195316,8389712,16778416 ⋆ Row sums of triangle A131948. ● a(n) = 2 ^ n + 2 * n + 2 * n ^ 2. ● a(n) = 5 * a(n - 1) - 9 * a(n - 2) + 7 * a(n - 3) - 2 * a(n - 4) for n > 3. ●

▶ [A239358] 6,16,32,60,106,156,218,299,399,524,680,874,1113,1404,1754,2170,2659,3228,3884,4634,5485,6444,7518,8714,10039 ⋆ Number of n X 5 0..2 arrays with no element equal to one plus the sum of elements to its left or one plus the sum of elements above it or one plus the sum of the elements diagonally to its north west, modulo 3. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>4. ●

▶ [A171494] 6,16,32,64,128,256,512,1024,2048,4096,8192,16384,32768,65536,131072,262144,524288,1048576,2097152,4194304,8388608,16777216,33554432,67108864,134217728 ⋆ a(n) = 2 * a(n - 1) for n > 1; a(0) = 6, a(1) = 16. ● a(n) = 2 ^ (n + 3) for n > 0; a(0) = 6. ●

▶ [A361230] 0,1,6,16,33,58,92,136,191,258,338,432,541,666,808,968,1147,1346,1566,1808,2073,2362,2676,3016,3383 ⋆ Third Lie - Betti number of a path graph on n vertices. ● a(1) = 0, a(2) = 1, a(n) = (n ^ 3 + 9 * n ^ 2 - 40 * n + 48) / 6 for n >= 3. ● a(n) = [x ^ n] (x ^ 2 * (- x ^ 4 + x ^ 3 - 2 * x ^ 2 + 2 * x + 1)) / (x - 1) ^ 4. - _ Peter Luschny _ , Mar 06 2023 ●

▶ [A236773] 0,1,6,16,33,59,96,145,210,292,393,515,660,829,1026,1252,1509,1799,2124,2485,2886,3328,3813,4343,4920 ⋆ a(n) = n + floor(n ^ 2 / 2 + n ^ 3 / 3). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 6) - 3 * a(n - 7) + 3 * a(n - 8) - a(n - 9). ● a(6h) = 6 * h * (12 * h ^ 2 + 3 * h + 1), ● a(6h + 1) = 72 * h ^ 3 + 54 * h ^ 2 + 18 * h + 1, ● a(6h + 2) = 6 * (4 * h + 1) * (3 * h ^ 2 + 3 * h + 1), ● a(6h + 3) = 2 * (36 * h ^ 3 + 63 * h ^ 2 + 39 * h + 8), ● a(6h + 4) = 3 * (24 * h ^ 3 + 54 * h ^ 2 + 42 * h + 11), ●

▶ [A131820] 1,6,16,33,59,96,146,211,293,394,516,661,831,1028,1254,1511,1801,2126,2488,2889,3331,3816,4346,4923,5549 ⋆ Row sums of triangle A131819. ● a(n) = n ^ 3 / 3 + n ^ 2 / 2 + (7 / 6) * n - 1. ● a(n) = - 1 + Sum _{ k=1..n } (k ^ 2 + 1). ● a(n) = n ^ 2 + a(n - 1) + 1, n > 1. - _ Gary Detlefs _ , Jun 29 2010 ● a(n) = (2n ^ 3 + 3n ^ 2 + 7n - 6) / 6, n > 0. ●

▶ [A083053] 1,6,16,35,66,114,185,290,443,661,976,1425,2064,2972,4259,6083,8667,12327,17506,24834,35203,49869,70615,99959,141462 ⋆ Antidiagonal sums of table A083050. ● a(n) = Sum _{ k=0..n } T(k,n - k), where T(n,0) = floor(n * x / (x - 1)) + 1, T(n,k + 1) = ceiling(x * T(n,k)), for n>=0, k>=0, with x = sqrt(2). ●

▶ [A083046] 1,6,16,35,67,118,197,319,506,789,1215,1860,2830,4290,6481,9771,14708,22120,33239,49921,74946,112490,168807,253286,380008 ⋆ Antidiagonal sums of table A083044. ● a(n) = Sum _{ k=0..n } T(k, n - k), where T(n, 0) = floor (n * x / (x - 1)) + 1, T(n, k + 1) = ceiling(x * T(n, k)), for n>=0, k>=0, with x=3 / 2. ●

▶ [A334047] 0,0,6,16,35,78,168,352,735,1535,3201,6670,13897,28952,60311,125632,261698,545127,1135516,2365311,4927005,10263077,21378247,44531422,92760060 ⋆ a(n) is the number of tilings of a bracelet of length 2n with 1 color of 5 - minoes and 6 - minoes, 2 colors of 7 - minoes and 8 - minoes, 3 colors of 9 - minoes and 10 - minoes, and so on. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 6 * a(n - 3) - 5 * a(n - 4) + 3 * a(n - 5) - a(n - 6) for n>6. ●

▶ [A199629] 1,6,16,35,86,182,317,558,975,1514,2249,3366,4749,6338,8417,10920,13563,16538,19961,23514,27123,30974,34997,38994,42972 ⋆ G.f.: (1 + x) ^ (2 * g) * (1 + x ^ 3) ^ (3 * g) / ((1 - x ^ 2) * (1 - x ^ 4)) - x ^ (2 * g) * (1 + x) ^ 4 / ((1 - x ^ 2) * (1 - x ^ 4)) for g=3. ● a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4) for n>31. ●

▶ [A321973] 0,1,6,16,36,62,112,162,242,332,462,584,784,954,1204,1464,1784,2074,2524,2886,3406,3906,4516,5046,5846 ⋆ Partial sums of the Dedekind psi _ 2(k) function, for 1 <= k <= n. ● a(n) = Sum _{ k=1..n } mu(k) ^ 2 * Bernoulli(3, 1 + floor(n / k)) / 3. ●

▶ [A178465] 0,0,6,16,36,66,114,176,264,370,510,672,876,1106,1386,1696,2064,2466,2934,3440,4020,4642,5346,6096,6936 ⋆ Expansion of - 2 * x ^ 2 * (- 3 - 2 * x + x ^ 2 - x ^ 3 - 2 * x ^ 4 + x ^ 5) / ((1 + x) ^ 2 * (x - 1) ^ 4). ● a(n) = (2 - 2 * (- 1) ^ n + (3 + (- 1) ^ n) * n + 2 * n ^ 3) / 4 for n>1. [_ Colin Barker _ , Feb 18 2013] ●

▶ [A247619] 1,6,16,36,66,116,186,296,446,676,986,1456,2086,3036,4306,6216,8766,12596,17706,25376,35606,50956,71426,102136,143086 ⋆ Start with a single pentagon; at n - th generation add a pentagon at each expandable vertex; a(n) is the sum of all label values at n - th generation. (See comment for construction rules.) ● a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + 2 * a(n - 4). G.f.: - (2 * x ^ 3 + 3 * x ^ 2 + 4 * x + 1) / ((x - 1) ^ 2 * (2 * x ^ 2 - 1)). - _ Colin Barker _ , Sep 21 2014 ●

▶ [A171373] 1,6,16,36,76,152,292,552,1052,2052,4104,8344,17044,34664,69904,139808,278108,552268,1098148,2189908,4379816,8776356,17596496,35263836,70598516 ⋆ Binomial transform of A171372. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + 2 * a(n - 5). ●

▶ [A048487] 1,6,16,36,76,156,316,636,1276,2556,5116,10236,20476,40956,81916,163836,327676,655356,1310716,2621436,5242876,10485756,20971516,41943036,83886076 ⋆ a(n) = T(4,n), array T given by A048483. ● a(n) = 5 * 2 ^ n - 4. - _ Henry Bottomley _ , May 29 2001 ● a(n) = 2 * a(n - 1) + 4 for n > 0 with a(0) = 1. - _ Paul Barry _ , Aug 25 2004 ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n >= 2. ●

▶ [A124699] 1,6,16,36,92,236,622,1658,4468,12132,33146,90998,250802,693426,1922118,5339006,14854932,41387764,115438672,322267784,900314242,2516648618,7038066876,19690060024,55102545322 ⋆ Number of base 6 circular n - digit numbers with adjacent digits differing by 1 or less. ● a(n) = 6 * a(n - 1) - 10 * a(n - 2) + 9 * a(n - 4) - 2 * a(n - 5) - a(n - 6) for n>6. ●

▶ [A064602] 1,6,16,37,63,113,163,248,339,469,591,801,971,1221,1481,1822,2112,2567,2929,3475,3975,4585,5115,5965,6616 ⋆ Partial sums of A001157: Sum _{ j=1..n } sigma _ 2(j). ● a(n) = Sum _{ i=1..n } i ^ 2 * floor(n / i). - _ Enrique Pérez Herrero _ , Sep 15 2012 ●

▶ [A346375] 6,16,37,92,263,858,3069,11584,44995,177350,704201,2806476,11205327,44780242,179038933,715991768,2863639259,11453901534,45814295265,183254559460,733012994791,2932041493226,11728145001197,46912538061552,187650068359923 ⋆ a(n) = Sum _{ k=0..n } (2 ^ k + 2) * (2 ^ k + 3) / 2. ● a(n) = Sum _{ k=0..n } (2 ^ k + 2) * (2 ^ k + 3) / 2. ● a(n) = (2 ^ (n + 1) + 7) * (2 ^ (n + 1) + 8) / 6 - 9 + 3 * n. ● a(n) = 8 * a(n - 1) - 21 * a(n - 2) + 22 * a(n - 3) - 8 * a(n - 4) with n > 3. ●

▶ [A160255] 0,1,6,16,40,63,126,176,270,365,550,624,936,1099,1350,1664,2176,2349,3078,3280,3948,4631,5566,5712,7000 ⋆ The sum of all the entries in an n X n Cayley table for multiplication in Z _ n. ● a(p) = (p - 1) * (p ^ 2 - p) / 2, for p prime. ● a(n) = (n / 2) * Sum _{ i=1..n - 1 } gcd(n,i) * (n / gcd(n,i) - 1). [Edited by _ Richard L. Ollerton _ , May 06 2021] ● a(n) = (n ^ 2 / 2) * Sum _{ d|n } phi(d) * (d - 1) / d, where phi = A000010. - _ Richard L. Ollerton _ , May 06 2021 ● a(n) = Sum _{ i=1..n } Sum _{ j=1..n } (i * j mod n); ● a(n) = n ^ 3 / 2 - (n / 2) * Sum _{ i=1..n } gcd(n,i); ● a(n) = n ^ 3 / 2 - (n / 2) * Sum _{ d|n } d * tau(d) * moebius(n / d); ●

▶ [A213667] 1,6,16,40,98,238,576,1392,3362,8118,19600,47320,114242,275806,665856,1607520,3880898,9369318,22619536,54608392,131836322,318281038,768398400,1855077840,4478554082 ⋆ Number of dominating subsets with k vertices in all the graphs G(n) (n>=1) obtained by taking n copies of the path P _ 3 and identifying one of their endpoints (a star with n branches of length 2). ● a(1)=1, a(2)=6, a(3)=16, a(n) = 2 * a(n - 1) + a(n - 2) + 2 for n>=4. ● a(n) = (- 2 + (1 - sqrt(2)) ^ (1 + n) + (1 + sqrt(2)) ^ (1 + n)) / 2 for n>1. - _ Colin Barker _ , Mar 16 2016 ●

▶ [A283960] 1,1,1,1,1,1,6,16,41,106,276,2101,6026,15976,41901,109726,835906,2397991,6358066,16676206,43670551,332688201,954394051,2530493951,6637087801 ⋆ a(n) = (Sum _{ j=1..h - 1 } a(n - j) + a(n - 1) * a(n - h + 1)) / a(n - h) with a(1), ..., a(h)=1, where h = 6. ● a(5 * k - 2) = 3 * a(5 * k - 3) - a(5 * k - 4) - 1, ● a(5 * k - 1) = 3 * a(5 * k - 2) - a(5 * k - 3) - 1, ● a(5 * k) = 3 * a(5 * k - 1) - a(5 * k - 2) - 1, ● a(5 * k + 1) = 3 * a(5 * k) - a(5 * k - 1) - 1, ● a(5 * k + 2) = 8 * a(5 * k + 1) - a(5 * k) - 1. ● a(n) = 399 * a(n - 5) - 399 * a(n - 10) + a(n - 15) for n>15. ●

▶ [A283330] 1,1,1,1,1,6,16,41,106,806,2311,6126,16066,122401,351136,931006,2441881,18604041,53370241,141506681,371149801,2827691726,8111925376,21508084401,56412327826 ⋆ a(n) = (1 + Sum _{ j=1..K - 1 } a(n - j) + a(n - 1) * a(n - K + 1)) / a(n - K) with a(1),...,a(K)=1, where K=5. ● a(4 * n - 1) = 3 * a(4 * n - 2) - a(4 * n - 3) - 1, ● a(4 * n) = 3 * a(4 * n - 1) - a(4 * n - 2) - 1, ● a(4 * n + 1) = 3 * a(4 * n) - a(4 * n - 1) - 1, ● a(4 * n + 2) = 8 * a(4 * n + 1) - a(4 * n) - 1. (End) ● a(n) = 153 * a(n - 4) - 153 * a(n - 8) + a(n - 12) for n>12. ●

▶ [A352115] 0,6,16,44,80,146,224,344,480,670,880,1156,1456,1834,2240,2736,3264,3894,4560,5340,6160,7106,8096,9224,10400 ⋆ Partial sums of the even triangular numbers (A014494). ● a(n) = (n + 1) * (4 * n ^ 2 + 8 * n + 3 - 3 * (- 1) ^ n) / 6. ●

▶ [A126360] 1,6,16,44,122,340,950,2658,7442,20844,58392,163594,458356,1284250,3598338,10082246,28249720,79153804,221783810,621424108,1741191198,4878708658,13669836930,38302030548,107319902744 ⋆ Number of base 6 n - digit numbers with adjacent digits differing by one or less. ● a(n) = e ^ T A ^ (n - 1) e for n>=1, where A is the 6 X 6 matrix with 1 on the main diagonal and first super - and sub - diagonals, 0 elsewhere, and e the column vector (1,1,1,1,1,1). ●

► [A367993] 0,0,6,16,50,96,196,320,540,800,1210,1680,2366,3136,4200,5376,6936,8640,10830,13200,16170,19360,23276,27456,32500 ⋆ Number of 4 - cycles in the n X n white bishop graph. ● a(n) = (n - 1) ^ 2 * (2 * n ^ 2 - 4 * n - 3 + 3 * (- 1) ^ n) / 24. ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 6 * a(n - 3) + 6 * a(n - 5) - 2 * a(n - 6) - 2 * a(n - 7) + a(n - 8). ●

► [A175659] 1,6,16,52,156,476,1436,4332,13036,39196,117756,353612,1061516,3185916,9560476,28686892,86071596,258236636,774753596,2324348172,6973219276,20920007356,62760721116,188283561452,564853480556 ⋆ Eight bishops and one elephant on a 3 X 3 chessboard: a(n)= (3 ^ (n + 1) - Jacobsthal(n + 1)) - (3 ^ n - Jacobsthal(n)), with Jacobsthal=A001045. ● a(n) = 4 * a(n - 1) - a(n - 2) - 6 * a(n - 3) with a(0)=1, a(1)=6 and a(2)=16. ● a(n) = (- 2 * (- 1) ^ n) / 3 - 2 ^ n / 3 + 2 * 3 ^ n. [_ Colin Barker _ , Oct 07 2012] ●

► [A032282] 1,1,6,16,56,147,392,912,2052,4262,8524,16159,29624,52234,89544,148976,242086,384111,597506,911456,1367184,2017509,2934559,4209504,5963464 ⋆ Number of bracelets (turnover necklaces) of n beads of 2 colors, 11 of them black. ● a(n) = 5 * s(n,0,11) / 11 + (3840 * C(n - 1,10) + 11 * (n - 2) * (n - 4) * (n - 6)(n - 8) * (n - 10)) / 84480, if n is even; ● a(n) = 5 * s(n,0,11) / 11 + (3840 * C(n - 1,10) + 11 * (n - 1) * (n - 3) * (n - 5) * (n - 7) * (n - 9)) / 84480, if n is odd. ●

► [A084057] 1,1,6,16,56,176,576,1856,6016,19456,62976,203776,659456,2134016,6905856,22347776,72318976,234029056,757334016,2450784256,7930904576,25664946176,83053510656,268766806016,869747654656 ⋆ a(n) = 2 * a(n - 1) + 4 * a(n - 2), a(0)=1, a(1)=1. ● a(n) = ((1 + sqrt(5)) ^ n + (1 - sqrt(5)) ^ n) / 2. ● a(2n + 1) = 2 * a(n) * a(n + 1) - (- 4) ^ n. - Mario Catalani (mario.catalani(AT)unito.it), Jun 13 2003 ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n, 2 * k) * 5 ^ k . - _ Paul Barry _ , Jul 25 2004 ●

► [A219817] 6,16,62,165,377,795,1588,3039,5612,10061,17603,30184,50875,84444,138160,222896,354610,556296,860511,1312599,1974749,2931041,4293652,6210413,8873928 ⋆ Number of 3 X n arrays of the minimum value of corresponding elements and their horizontal, vertical or diagonal neighbors in a random, but sorted with lexicographically nondecreasing rows and nonincreasing columns, 0..2 3 X n array. ● a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10) for n>13. ●

► [A142704] 0,1,1,6,16,70,264,1204,5344,26424,130960,698896,3777216,21576256,125331136,760604160,4701036544,30121800064,196619065344,1323267791104,9069634616320,63835247970816,457287705926656 ⋆ A generalized factorial level recursion of a Padovan type: a(n) = b(n) * (a(n - 2) + a(n - 3)) with b(n) = b(n - 1) + k and k=2. ● a(n) = b(n) * (a(n - 2) + a(n - 3)) with b(n) = b(n - 1) + k and k = 2. ● a(n) = 2 * n * (a(n - 2) + a(n - 3)) with a(0) = 0, a(1) = a(2) = 1. - _ Johannes W. Meijer _ , Jul 27 2011 ●

► [A083885] 1,1,6,16,72,256,1056,4096,16512,65536,262656,1048576,4196352,16777216,67117056,268435456,1073774592,4294967296,17180000256,68719476736,274878431232,1099511627776,4398048608256,17592186044416,70368752566272 ⋆ (4 ^ n + 2 ^ n + 0 ^ n + (- 2) ^ n) / 4 ● a(n) = (4 ^ n + 2 ^ n + 0 ^ n + (- 2) ^ n) / 4. ● a(0)=1, a(1)=1, a(2)=6, a(3)=16, a(n)=4 * a(n - 1) + 4 * a(n - 2) - 16 * a(n - 3) [From _ Harvey P. Dale _ , Dec 12 2011] ●

► [A091148] 1,1,6,16,81,301,1451,6231,29891,137731,666976,3193026,15658831,76719891,380788006,1894818776,9502977851,47822585931,241944876266,1228151169656,6258922649451,31992657321551,164040821525031 ⋆ Expansion of (1 - x - sqrt(1 - 2x - 19x ^ 2)) / (10x ^ 2). ● a(n) = sum { k=0..n, C(n, 2k)C(k)5 ^ k } ; - _ Paul Barry _ , May 16 2005 ●

► [A210370] 0,6,16,96,168,486,720,1536,2080,3750,4800,7776,9576,14406,17248,24576,28800,39366,45360,60000,68200,87846,98736,124416,138528 ⋆ Number of 2 X 2 matrices with all elements in { 0,1,...,n } and odd determinant. ● a(n) = (3 - 3 * (- 1) ^ n - 12 * (- 1 + (- 1) ^ n) * n + (22 - 14 * (- 1) ^ n) * n ^ 2 - 4 * (- 5 + (- 1) ^ n) * n ^ 3 + 6 * n ^ 4) / 16. ● a(n) = 2 * ((n + 1) ^ 2 - ceiling(n / 2) ^ 2) * ceiling(n / 2) ^ 2. - _ Andrew Howroyd _ , Apr 28 2020 ●

► [A266180] 1,6,16,96,256,1536,4096,24576,65536,393216,1048576,6291456,16777216,100663296,268435456,1610612736,4294967296,25769803776,68719476736,412316860416,1099511627776,6597069766656,17592186044416,105553116266496,281474976710656 ⋆ Decimal representation of the n - th iteration of the "Rule 6" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = 4 ^ (n - 1) * (5 - (- 1) ^ n). ● a(n) = 16 * a(n - 2) for n>1. ●

► [A115331] 1,1,6,16,106,426,3076,15856,123516,757756,6315976,44203776,391582456,3043809016,28496668656,241563299776,2378813448976,21703877431056,223903020594016,2177251989389056,23448038945820576,241173237884726176 ⋆ E.g.f.: exp(x + 5 / 2 * x ^ 2). ● a(n) = n! * Sum _{ k=0..floor(n / 2) } 5 ^ k / (2 ^ k * k! * (n - 2 * k)!). - _ Luis Manuel Rivera Martínez _ , Feb 26 2015 ●

► [A173737] 6,16,116,1116,11116,111116,1111116,11111116,111111116,1111111116,11111111116,111111111116,1111111111116,11111111111116,111111111111116,1111111111111116,11111111111111116,111111111111111116 ⋆ (10 ^ n + 44) / 9 for n>0. ● a(n) = a(n - 1) + 10 ^ (n - 1) = 10 * a(n - 1) - 44 with n>0, a(0)=5. ● a(n) = 11 * a(n - 1) - 10 * a(n - 2) with a(0)=5, a(1)=6. - _ Vincenzo Librandi _ , Jul 05 2012 ●

► [A152663] 1,1,6,16,120,540,5040,32256,362880,3024000,39916800,410572800,6227020800,76281004800,1307674368000,18598035456000,355687428096000,5762136335155200,121645100408832000,2211729098342400000 ⋆ Number of leading odd entries in all permutations of { 1,2,...,n } (see example). ● a(2n + 1) = (2n + 1)!; ● a(2n) = n(2n)! / (n + 1). ●

► [A053334] 6,16,616,1616,11616,111616,6111616,16111616,616111616,1616111616,61616111616,661616111616,1661616111616,61661616111616,661661616111616,6661661616111616,66661661616111616,666661661616111616 ⋆ a(n) contains n digits (either '1' or '6') and is divisible by 2 ^ n. ● a(n)=a(n - 1) + 10 ^ (n - 1) * (6 - 5 * [a(n - 1) / 2 ^ (n - 1) mod 2]) i.e. a(n) ends with a(n - 1); if (n - 1) - th term is divisible by 2 ^ n then n - th term begins with a 6, if not then n - th term begins with a 1. ●

► [A184549] 0,6,17,23,28,34,45,51,56,62,73,79,84,90,101,107,112,118,129,135,140,146,157,163,168 ⋆ Super - birthdays (falling on the same weekday), version 1 (birth within the year following a February 29). ● a(n) = a(n - 1) + a(n - 4) - a(n - 5). G.f.: x * (5 * x ^ 3 + 6 * x ^ 2 + 11 * x + 6) / ((x - 1) ^ 2 * (x + 1) * (x ^ 2 + 1)). - _ Colin Barker _ , Nov 04 2013 ●

► [A166025] 6,17,23,40,63,103,166,269,435,704,1139,1843,2982,4825,7807,12632,20439,33071,53510,86581,140091,226672,366763,593435,960198 ⋆ a(0) = 6, a(1) = 17, a(n + 1) = a(n) + a(n - 1) for n>0. ● a(n) = 3 * ((1 / 2 + 1 / 2 * sqrt(5)) ^ n + (1 / 2 - 1 / 2 * sqrt(5)) ^ n) + 14 / 5 * sqrt(5) * ((1 / 2 + 1 / 2 * sqrt(5)) ^ n - (1 / 2 - 1 / 2 * sqrt(5)) ^ n). - _ Paolo P. Lava _ , Jun 06 2011 ● a(n) = Fibonacci(n + 6) + Fibonacci(n + 2) + Fibonacci(n - 4). - _ Greg Dresden _ , Feb 18 2022 ●

► [A017461] 6,17,28,39,50,61,72,83,94,105,116,127,138,149,160,171,182,193,204,215,226,237,248,259,270 ⋆ a(n) = 11 * n + 6. ● a(0)=6, a(1)=17; for n>1, a(n) = 2 * a(n - 1) - a(n - 2). - _ Harvey P. Dale _ , Apr 14 2015 ●

► [A130051] 0,6,17,32,51,72,97,127,161,197,236,279,327,378,432,489,550,614,681,751,826,906,989,1074,1162 ⋆ A bisection of A120049. ● a(n)=b(2n - 1), for n>=1, where b=A130049. ●

► [A301696] 1,6,17,33,54,81,113,150,193,241,294,353,417,486,561,641,726,817,913,1014,1121,1233,1350,1473,1601 ⋆ Partial sums of A219529. ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) - 2 * a(n - 4) + a(n - 5) for n>4. (End) ● a(n) = (ChebyshevU(n, - 1 / 2) - ChebyshevU(n - 1, - 1 / 2) + 8 * (3 * n * (n + 1) + 1)) / 9. ●

► [A301727] 1,6,17,33,54,81,114,152,195,244,298,357,422,492,567,648,735,827,924,1027,1135,1248,1367,1491,1620 ⋆ Partial sums of A301726. ● a(n) = 3 * a(n - 1) - 4 * a(n - 2) + 4 * a(n - 3) - 4 * a(n - 4) + 4 * a(n - 5) - 4 * a(n - 6) + 4 * a(n - 7) - 4 * a(n - 8) + 4 * a(n - 9) - 3 * a(n - 10) + a(n - 11) for n>10. ●

► [A038795] 1,6,17,33,55,89,144,232,370,581,895,1350,1993,2881,4082,5676,7756,10429,13817,18058,23307,29737,37540,46928,58134 ⋆ T(n,n - 5), array T as in A038792. ● a(n) = sum(binomial(n - k, k), k=0..5), n >= 9. - _ Johannes W. Meijer _ , Aug 10 2013 ●

► [A301711] 1,6,17,34,56,83,116,155,199,248,303,364,430,501,578,661,749,842,941,1046,1156,1271,1392,1519,1651 ⋆ Partial sums of A301710. ● a(n) = (1 / 8 + i / 8) * ((3 - 3 * i) + (- i) ^ (1 + n) + i ^ n + (11 - 11 * i) * n + (11 - 11 * i) * n ^ 2) where i=sqrt(- 1). ● a(n) = 3 * a(n - 1) - 4 * a(n - 2) + 4 * a(n - 3) - 3 * a(n - 4) + a(n - 5) for n>4. ●

► [A301719] 1,6,17,34,57,85,118,157,202,253,309,370,437,510,589,673,762,857,958,1065,1177,1294,1417,1546,1681 ⋆ Partial sums of A301718. ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 5) - 2 * a(n - 6) + a(n - 7) for n>6. (End) ●

► [A023545] 6,17,34,58,90,131,182,244,318,405,506,622,754,903,1070,1256,1462,1689,1938,2210,2506,2827,3174,3548,3950 ⋆ Convolution of natural numbers >= 2 and natural numbers >= 3. ● a(n) = n * (n ^ 2 + 12 * n + 23) / 6. - _ Ralf Stephan _ , Feb 15 2004; corrected by Lucas Sidiropoulos (lsid77(AT)yahoo.com), Jun 23 2008 ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ●

► [A083045] 1,6,17,35,68,122,224,383,656,1092,1841,2978,4859,7835,12776,20291,32664,51422,82485,129720,204821,319482,506060,789872,1237733 ⋆ Main diagonal of table A083044. ● a(n) = T(n, n), where T(n, 0) = floor(n * x / (x - 1)) + 1, T(n, k + 1) = ceiling(x * T(n, k)), for n >= 0, k >= 0, with x=3 / 2. ●

► [A084990] 0,1,6,17,36,65,106,161,232,321,430,561,716,897,1106,1345,1616,1921,2262,2641,3060,3521,4026,4577,5176 ⋆ a(n) = n * (n ^ 2 + 3 * n - 1) / 3. ● a(n) = (n - 1) * (n + 1) * (n + 3) / 3 + 1. - _ Reinhard Zumkeller _ , Aug 20 2007 ● a(2 * n) = Sum _{ i=0..16 * n ^ 4, i==0 (mod 2 * n + 1) } (- 1) ^ s _ (2 * n)(i), where s _ k(n) is the digit sum of n in base k. - _ Vladimir Shevelev _ , May 18 2012 ● a(2 * n) = (2 / (2 * n + 1)) * Sum _{ i=1..n } tan ^ 4(Pi * i / (2 * n + 1)). - _ Vladimir Shevelev _ , May 23 2012 ● a(n) = Sum _{ i=1..n } i * (i + 1) - 1. - _ Wesley Ivan Hurt _ , Oct 19 2013 ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n > 3. - _ Vincenzo Librandi _ , Mar 28 2014 ●

► [A024181] 1,6,17,36,66,111,175,263,380,532,725,965,1260,1617,2045,2552,3148,3841,4642,5563,6613,7805,9151,10664,12356 ⋆ Integer part of ((4th elementary symmetric function of 2,3,...,n + 4) / (2nd elementary symmetric function of 2,3,...,n + 4)). ● a(n) = floor(1 / 240 n (n + 1) (15 n ^ 4 + 330 n ^ 3 + 2765 n ^ 2 + 10482 n + 15208) / (3 n ^ 2 + 35 n + 104)). - _ Ivan Neretin _ , May 20 2018 ●

► [A212980] 0,1,6,17,37,68,113,174,254,355,480,631,811,1022,1267,1548,1868,2229,2634,3085,3585,4136,4741,5402,6122 ⋆ Number of (w,x,y) with all terms in { 0,...,n } and w<x + y and x<y. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - 2 * a(n - 3) + 3 * a(n - 4) - a(n - 5). ● a(n) = (10 * n ^ 3 + 15 * n ^ 2 + 2 * n - 3 + 3 * ((n + 1) mod 2)) / 24. (End) ●

► [A132127] 1,6,17,37,69,116,181,267,377,514,681,881,1117,1392,1709,2071,2481,2942,3457,4029,4661,5356,6117,6947,7849 ⋆ a(n) = (n ^ 3 + 3 * n - 2) / 2. ● a(n) = n * (n ^ 2 + 3) / 2 - 1. ●

► [A085278] 1,6,17,38,81,166,337,678,1361,2726,5457,10918,21841,43686,87377,174758,349521,699046,1398097,2796198,5592401,11184806,22369617,44739238,89478481 ⋆ Expansion of (1 + 2x) ^ 2 / ((1 - x ^ 2)(1 - 2x)). ● a(n)=16 * 2 ^ n / 3 + (- 1) ^ n / 6 - 9 / 2. ●

► [A061349] 0,1,6,17,40,75,130,203,304,429,590,781,1016,1287,1610,1975,2400,2873,3414,4009,4680,5411,6226,7107,8080 ⋆ Sum of antidiagonals of A060736. ● a(n) = a(n - 1) + n ^ 2 + (n - 1) ^ 2 - floor((n - 1) / 2) * floor((n + 1) / 2). ● a(n) = (n * (13 + 3 * (- 1) ^ n + 14 * n ^ 2)) / 24. ● a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + a(n - 4) + 2 * a(n - 5) - a(n - 6). ●

► [A213780] 1,6,17,40,78,140,230,360,535,770,1071,1456,1932,2520,3228,4080,5085,6270,7645,9240,11066,13156,15522,18200,21203 ⋆ Antidiagonal sums of the convolution array A213778. ● a(n) = 3 * a(n - 1) - a(n - 2) - 5 * a(n - 3) + 5 * a(n - 4) + a(n - 5) - 3 * a(n - 6) + a(n - 7). ●

► [A101945] 1,6,17,40,87,182,373,756,1523,3058,6129,12272,24559,49134,98285,196588,393195,786410,1572841,3145704,6291431,12582886,25165797,50331620,100663267 ⋆ a(n) = 6 * 2 ^ n - n - 5. ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 2 * a(n - 3) for n >= 3. ●

► [A047861] 1,6,17,41,93,205,445,957,2045,4349,9213,19453,40957,86013,180221,376829,786429,1638397,3407869,7077885,14680061,30408701,62914557,130023421,268435453 ⋆ a(n) = T(4,n), array T given by A047858. ● a(0)=1, a(1)=6, a(2)=17, a(n) = 5 * a(n - 1) - 8 * a(n - 2) + 4 * a(n - 3). - _ Vincenzo Librandi _ , Sep 28 2011 ●

▶ [A365409] 1,6,17,42,78,149,234,379,555,815,1102,1557,2013,2662,3388,4349,5319,6695,8026,9846,11712,14027,16328,19503,22464 ⋆ a(n) = Sum _{ k=1..n } binomial(floor(n / k) + 3,4). ● a(n) = Sum _{ k=1..n } binomial(k + 2,3) * floor(n / k). ●

▶ [A171507] 0,0,1,6,17,42,93,198,409,834,1685,3390,6801,13626,27277,54582,109193,218418,436869,873774,1747585,3495210,6990461,13980966,27961977 ⋆ a(n) = (5 * 2 ^ (n + 1) - 9 - (- 1) ^ n) / 6 - 2 * n. ● a(n) = 3 * a(n - 1) - a(n - 2) - 3 * a(n - 3) + 2 * a(n - 4). G.f.: x ^ 2 * (1 + 3 * x) / ((1 + x) * (1 - 2 * x) * (1 - x) ^ 2). ●

▶ [A232567] 0,1,6,17,43,84,159,262,426,635,940,1311,1821,2422,3213,4124,5284,6597,8226,10045,12255,14696,17611,20802,24558 ⋆ Number of non - equivalent binary n X n matrices with two nonadjacent 1's. ● a(n) = (n ^ 4 + 2 * n ^ 2 - 4 * n) / 16 if n is even; a(n) = (n ^ 4 + 4 * n ^ 2 - 8 * n + 3) / 16 if n is odd. ●

▶ [A062020] 0,1,6,17,44,81,142,217,324,485,666,913,1208,1529,1906,2373,2936,3533,4238,5019,5840,6787,7822,8995,10360 ⋆ a(n) = Sum _{ i=1..n } Sum _{ j=1..i } (prime(i) - prime(j)). ● a(n) = a(n - 1) + n * prime(n) - Sum _{ i = 1..n } prime(i), with a(0) = 0. ● a(n) = 2 * a(n - 1) - a(n - 2) + (n - 1) * (prime(n) - prime(n - 1)), with a(1) = 0, a(2) = 1. ●

▶ [A048746] 1,6,17,44,109,266,645,1560,3769,9102,21977,53060,128101,309266,746637,1802544,4351729,10506006,25363745,61233500,147830749,356895002,861620757,2080136520,5021893801 ⋆ Partial sums of A048655. ● a(n)=2 * a(n - 1) + a(n - 2) + 4; a(0)=1, a(1)=6. ● a(n)=[{ (5 + 3 * sqrt(2))(1 + sqrt(2) ^ n - (5 - 3 * sqrt(2))(1 - sqrt(2)) ^ n }/ 2 * sqrt(2)] - 2. ● a(n)=3 * a(n - 1) - a(n - 2) - a(n - 3). G.f.: (1 + 3 * x) / ((1 - x) * (1 - 2 * x - x ^ 2)). [_ Colin Barker _ , Sep 19 2012] ● a(n) = 2 * Pell(n) + 3 * Pell(n + 1) - 2, where Pell = A000129. - _ Vladimir Reshetnikov _ , Sep 27 2016 ●

▶ [A054492] 1,6,17,45,118,309,809,2118,5545,14517,38006,99501,260497,681990,1785473,4674429,12237814,32039013,83879225,219598662,574916761,1505151621,3940538102,10316462685,27008849953 ⋆ a(n) = 3 * a(n - 1) - a(n - 2), a(0)=1, a(1)=6. ● a(n) = (6 * (((3 + sqrt(5)) / 2) ^ n - ((3 - sqrt(5)) / 2) ^ n) - (((3 + sqrt(5)) / 2) ^ (n - 1) - ((3 - sqrt(5)) / 2) ^ (n - 1))) / sqrt(5). ● a(n) = 2 * Lucas(2 * n + 1) - Fibonacci(2 * n + 1). ● a(n) = 5 * Fibonacci(2 * n) + Fibonacci(2 * n - 1). - _ Ehren Metcalfe _ , Mar 26 2016 ●

▶ [A083334] 1,6,17,47,179,414,1723,3793,16201,35166,151337,327167,1411019,3046854,13148803,28383073,122510161,264425526,1141401857,2463529487,10634068259,22951715694,99073772683,213832351153,923033565721 ⋆ a(n) = 12 * a(n - 2) - 25 * a(n - 4). ● a(n) = (x ^ (n + 1) + (- 1) ^ (n + 1) * (x - 2) ^ (n + 1)) / 2 ^ ceiling(n / 2 + 1) where x = 1 + sqrt(11). - _ Ben Paul Thurston _ , Aug 30 2006 [edited by _ Jon E. Schoenfield _ , Jun 25 2019] ●

▶ [A199113] 6,17,50,149,446,1337,4010,12029,36086,108257,324770,974309,2922926,8768777,26306330,78918989,236756966,710270897,2130812690,6392438069,19177314206,57531942617,172595827850,517787483549,1553362450646 ⋆ a(n) = (11 * 3 ^ n + 1) / 2. ● a(n) = 3 * a(n - 1) - 1. ● a(n) = 4 * a(n - 1) - 3 * a(n - 2). ●

▶ [A088016] 1,1,6,17,56,179,576,1851,5950,19125,61474,197597,635140,2041543,6562172,21092919,67799386,217928905,700493182,2251609065,7237391472,23263290299,74775653304,240352858739,772570939222 ⋆ To obtain a(n + 1), add the square of the n - th partial sum to the n - th partial sum of the squares, then divide this result by a(n), for all n >= 0, with a(0)=1. ● a(n) = 3 * a(n - 1) + a(n - 2) - a(n - 3) for n>3. ●

▶ [A363165] 1,1,6,17,59,204,750,2746,10215,37936,141468,527283,1967449,7340090,27392124,102219380,381482477,1423676862,5313214098,19829053909,74002960983,276182321224,1030726172586,3846720619566,14356155740947 ⋆ The number of spanning trees of the ladder graph L _ n up to automorphisms of L _ n. ● a(1) = 1, a(2) = 1, for n >= 3: ● a(n) = ((2 + sqrt(3)) ^ n - (2 - sqrt(3)) ^ n) / (8 * sqrt(3)) + ((2 + sqrt(3)) ^ (n / 2) + (2 - sqrt(3)) ^ (n / 2)) / (2 * sqrt(6)) + n / 4, for n odd, and ● a(n) = ((2 + sqrt(3)) ^ n - (2 - sqrt(3)) ^ n) / (8 * sqrt(3)) + ((2 + sqrt(3)) ^ (n / 2) - (2 - sqrt(3)) ^ (n / 2)) / (4 * sqrt(3)) + n / 4, for n even. ● a(n) = 6 * a(n - 1) - 6 * a(n - 2) - 18 * a(n - 3) + 38 * a(n - 4) - 18 * a(n - 5) - 6 * a(n - 6) + 6 * a(n - 7) - a(n - 8) for n > 10. - _ Peter Kagey _ , Jul 08 2023 ●

▶ [A024080] 1,6,17,100,1377,13682,109873,806736,5732033,40294558,282375249,1977165692,13841038369,96888639114,678222535025,4747560750568,33232929521025,232630512567350,1628413596020881,11398895182897044 ⋆ a(n) = 7 ^ n - n ^ 5. ● a(n) = 13 * a(n - 1) - 57 * a(n - 2) + 125 * a(n - 3) - 155 * a(n - 4) + 111 * a(n - 5) - 43 * a(n - 6) + 7 * a(n - 7) for n > 6. ●

▶ [A017593] 6,18,30,42,54,66,78,90,102,114,126,138,150,162,174,186,198,210,222,234,246,258,270,282,294 ⋆ a(n) = 12 * n + 6. ● a(n) = 24 * n - a(n - 1) with n > 0, a(0)=6. - _ Vincenzo Librandi _ , Nov 19 2010 ● a(0)=6, a(1)=18; for n > 1, a(n) = 2 * a(n - 1) - a(n - 2). - _ Harvey P. Dale _ , Aug 20 2014 ●

▶ [A124353] 6,18,32,58,112,220,450,938,1982,4220,9022,19332,41472,89022,191150,410506,881656,1893634,4067256,8735972,18763898,40302866,86566390,185935764,399371142 ⋆ Number of (directed) Hamiltonian circuits on the n - antiprism graph. ● a(n) = 3 * a(n - 1) - a(n - 2) - 2 * a(n - 3) + a(n - 5). ● a(n) = 2 * a(n - 1) + a(n - 2) - a(n - 3) - a(n - 4) - 12. ●

▶ [A153126] 1,6,18,33,55,80,112,147,189,234,286,341,403,468,540,615,697,782,874,969,1071,1176,1288,1403,1525 ⋆ Sums of rows of the triangle in A153125. ● a(n) = n * (5 * n + 7) / 2 + 1 - n mod 2. ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4). ●

▶ [A181510] 6,18,34,54,78,106,138,174,214,258,306,358,414,474,538,606,678,754,834,918,1006,1098,1194,1294,1398 ⋆ Number of permutations of the multiset { 1, 1,2,2,3,3,...,n + 1,n + 1 } avoiding the permutation patterns { 132, 231, 2134 } . ● a(n) = 2n ^ 2 + 6n - 2. ● a(n) - 3 * a(n - 1) + 3 * a(n - 2) - a(n - 3) = 0 for n>3. ●

▶ [A301715] 1,6,18,34,55,83,114,152,196,243,299,358,422,494,567,649,736,826,926,1027,1135,1250,1366,1492,1621 ⋆ Partial sums of A301714. ● a(n) = 2 * a(n - 1) - a(n - 2) - a(n - 4) + 3 * a(n - 5) - 3 * a(n - 6) + a(n - 7) + a(n - 9) - 2 * a(n - 10) + a(n - 11) for n>10. ●

▶ [A172522] 6,18,36,56,77,101,131,167,207,249,297,351,411,474,540,612,690,770,854,944,1040,1140,1242,1347,1455 ⋆ Partial sums of A049094. ● a(n) = SUM[i=1..n] { i such that 2 ^ i - 1 is divisible by a square } . ●

▶ [A028896] 0,6,18,36,60,90,126,168,216,270,330,396,468,546,630,720,816,918,1026,1140,1260,1386,1518,1656,1800 ⋆ 6 times triangular numbers: a(n) = 3 * n * (n + 1). ● a(n) = polygorial(3, n + 1). - Daniel Dockery (peritus(AT)gmail.com), Jun 16 2003 ● a(n) = a(n - 1) + 6 * n for n>0, a(0)=0. - _ Vincenzo Librandi _ , Aug 05 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>2, a(0)=0, a(1)=6, a(2)=18. ● a(n) = Sum _{ i = n..2 * n } 2 * i. - _ Bruno Berselli _ , Feb 14 2018 ●

▶ [A034857] 1,6,18,36,61,94,136,188,251,326,414,516,633,766,916,1084,1271,1478,1706,1956,2229,2526,2848,3196,3571 ⋆ a(n) = C(n + 2,3) + 2 * C(n,2) + 2 * (n - 2). ● a(n) = (n ^ 3 + 9n ^ 2 + 8n - 24) / 6. - _ Ralf Stephan _ , Feb 15 2004 ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ●

▶ [A372847] 0,6,18,36,64,92,130,172,224,284,344,410,488,570,658,750,852,956,1072,1194,1312,1450,1584,1728,1882 ⋆ Number of unit squares enclosed by a circle of radius n with an even number of rows and the maximum number of squares in each row. ● a(n) = 2 * Sum _{ k=1..n - 1 } floor(2 * sqrt(n ^ 2 - k ^ 2)). ●

▶ [A299272] 1,6,18,37,63,99,142,189,249,317,384,468,562,648,756,877,981,1113,1262,1383,1539,1717,1854,2034,2242 ⋆ Coordination sequence for "flu" 3D uniform tiling formed from tetrahedra, rhombicuboctahedra, and cubes. ● a(n) = 3 * a(n - 3) - 3 * a(n - 6) + a(n - 9) for n>9. ● a(n) = (60 + 104 * n ^ 2 + (n ^ 2 - 6) * cos(2 * n * Pi / 3) - 3 * sqrt(3) * n * sin(2 * n * Pi / 3)) / 27 for n > 0. - _ Stefano Spezia _ , Jan 23 2022 ●

▶ [A101853] 6,18,37,64,100,146,203,272,354,450,561,688,832,994,1175,1376,1598,1842,2109,2400,2716,3058,3427,3824,4250 ⋆ a(n) = n * (20 + 15 * n + n ^ 2) / 6. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Vincenzo Librandi _ , Jun 26 2012 ●

▶ [A005899] 1,6,18,38,66,102,146,198,258,326,402,486,578,678,786,902,1026,1158,1298,1446,1602,1766,1938,2118,2306 ⋆ Number of points on surface of octahedron; also coordination sequence for cubic lattice: a(0) = 1; for n > 0, a(n) = 4n ^ 2 + 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3), with a(0)=1, a(1)=6, a(2)=18, a(3)=38. - _ Harvey P. Dale _ , Nov 08 2011 ● a(n) = 2 * d * Hypergeometric2F1(1 - d, 1 - n, 2, 2) where d=3, n>0. - _ Shel Kaphan _ , Feb 16 2023 ●

▶ [A180118] 0,6,18,38,68,110,166,238,328,438,570,726,908,1118,1358,1630,1936,2278,2658,3078,3540,4046,4598,5198,5848 ⋆ a(n) = Sum _{ k=1..n } (k + 2)! / k! = Sum _{ k=1..n } (k + 2) * (k + 1). ● a(n) = + 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - 1 * a(n - 4) for n>=4. ● a(n) = n * (n ^ 2 + 6 * n + 11) / 3. ●

▶ [A129863] 6,18,39,69,108,156,213,279,354,438,531,633,744,864,993,1131,1278,1434,1599,1773,1956,2148,2349,2559,2778 ⋆ Sums of three consecutive pentagonal numbers. ● a(n) = (9 / 2) * (n ^ 2) + (15 / 2) * n + 6. ● a(n) = (3n ^ 2 + 5n + 4) * (3 / 2). - _ Stefan Steinerberger _ , May 27 2007 ●

▶ [A370349] 1,6,18,39,72,120,185,270,378,511,672,864,1089,1350,1650,1991,2376,2808,3289,3822,4410,5055,5760,6528,7361 ⋆ a(n) is the number of integer triples (x,y,z) satisfying: n + x + y + z >= 0, 49 * n + 13 * x - 11 * y - 23 * z >= 0, 49 * n - 11 * x - 23 * y + 13 * z >= 0, 49 * n - 23 * x + 13 * y - 11 * z >= 0 , n + x + y + z == 0 (mod 12), 49 * n + 13 * x - 11 * y - 23 * z == 0 (mod 7). ● a(n) = floor((10 + 24 * n + 18 * n ^ 2 + 4 * n ^ 3) / 9). ●

▶ [A299256] 1,6,18,40,72,112,162,220,288,364,450,544,648,760,882,1012,1152,1300,1458,1624,1800,1984,2178,2380,2592 ⋆ Coordination sequence for 3D uniform tiling formed by stacking parallel layers of the 3.6.3.6 2D tiling (cf. A008579). ● a(n) = 9 * n ^ 2 / 2 for n>1. ● a(n) = (9 * n ^ 2 - 1) / 2 for n>1. ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4) for n>5. ●

▶ [A002411] 0,1,6,18,40,75,126,196,288,405,550,726,936,1183,1470,1800,2176,2601,3078,3610,4200,4851,5566,6348,7200 ⋆ Pentagonal pyramidal numbers: a(n) = n ^ 2 * (n + 1) / 2. ● a(n) = n * Sum _{ k=0..n } (n - k) = n * Sum _{ k=0..n } k. - _ Paul Barry _ , Jul 21 2003 ● a(0)=0, a(1)=1, a(2)=6, a(3)=18, a(n)=4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Harvey P. Dale _ , Oct 20 2011 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + 3. ● a(n) = binomial(n + 2,3) + 2 * binomial(n + 1,3). ● a(n) = 24 / (n + 3)! * Sum _{ j=0..n } (- 1) ^ (n - j) * binomial(n,j) * (j) ^ (n + 3). - _ Vladimir Kruchinin _ , Jun 04 2013 ● a(n) = Sum _{ k=1..n } GCD(k,n) * LCM(k,n). - _ Vaclav Kotesovec _ , May 22 2021 ●

▶ [A059834] 0,6,18,40,76,130,206,308,440,606,810,1056,1348,1690,2086,2540,3056,3638,4290,5016,5820,6706,7678,8740,9896 ⋆ Sum of squares of entries of Wilkinson's eigenvalue test matrix of order 2n + 1. ● a(n) = (2n ^ 3 + 3n ^ 2 + 13n) / 3. For the matrix of order 2n, the formula is (4n ^ 3 + 23n - 12) / 6 (which is not integer - valued). - _ David Wasserman _ , May 24 2002 ● a(n) = sum(2 * (k + 1) ^ 2 + 4, k=0..(n - 1)). - _ Mike Warburton _ , Sep 08 2007 ●

▶ [A299263] 1,6,18,40,76,132,214,325,469,652,878,1150,1474,1856,2298,2803,3379,4032,4762,5572,6472,7468,8558,9745,11041 ⋆ Partial sums of A299257. ● a(n) = 4 * a(n - 1) - 8 * a(n - 2) + 12 * a(n - 3) - 14 * a(n - 4) + 12 * a(n - 5) - 8 * a(n - 6) + 4 * a(n - 7) - a(n - 8) for n>8. ●

▶ [A015224] 0,6,18,40,126,196,288,550,726,936,1470,1800,2176,3078,3610,4200,5566,6348,7200,9126,10206,11368,13950,15376,16896 ⋆ Even pentagonal pyramidal numbers. ● a(n) = a(n - 1) + 3 * a(n - 3) - 3 * a(n - 4) - 3 * a(n - 6) + 3 * a(n - 7) + a(n - 9) - a(n - 10). ● a(n) = 3 * a(n - 3) - 3 * a(n - 6) + a(n - 9) + 192. ●

▶ [A023620] 1,6,18,41,82,152,269,462,778,1293,2130,3488,5689,9254,15026,24369,39490,63960,103557,167630,271306,439061,710498,1149696,1860337 ⋆ Convolution of Lucas numbers and odd numbers. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - a(n - 3) + a(n - 4). G.f.: - x * (x + 1) * (2 * x + 1) / ((x - 1) ^ 2 * (x ^ 2 + x - 1)). - _ Colin Barker _ , May 14 2014 ●

▶ [A074837] 6,18,42,54,66,78,102,114,126,138,162,174,186,198,222,234,246,258,282,294,306,318,342,354,366 ⋆ Numbers k such that the penultimate 3 divisors of k sum to k. ● a(n) = a(n - 4) + 60. - _ David A. Corneth _ , Jun 18 2021 ●

▶ [A009945] 1,6,18,42,74,114,162,222,290,366,450,546,650,762,882,1014,1154,1302,1458,1626,1802,1986,2178,2382,2594 ⋆ Coordination sequence for NiAs(2), As position. ● a(0)=1, a(4n)=2 * ((6n) ^ 2 + 1), a(4n + 2)=18 * (2n + 1) ^ 2, a(2n + 1)=6 * (3n ^ 2 + 3n + 1). - _ Ralf Stephan _ , Mar 07 2004 ●

▶ [A270683] 1,6,18,42,74,126,186,274,370,502,642,826,1018,1262,1514,1826,2146,2534,2930,3402,3882,4446,5018,5682,6354 ⋆ Partial sums of the number of active (ON,black) cells in n - th stage of growth of two - dimensional cellular automaton defined by "Rule 190", based on the 5 - celled von Neumann neighborhood

. ● a(n) = (9 + 3 * (- 1) ^ n + 7 * n - 3 * (- 1) ^ n * n + 18 * n ^ 2 + 2 * n ^ 3) / 6 for n>0. ● a(n) = (n ^ 3 + 9 * n ^ 2 + 2 * n + 6) / 3 for n>0 and even. ● a(n) = (n ^ 3 + 9 * n ^ 2 + 5 * n + 3) / 3 for n odd. ● a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + a(n - 4) + 2 * a(n - 5) - a(n - 6) for n>6. ●

► [A011930] 0,0,0,0,1,6,18,42,84,151,252,396,594,858,1201,1638,2184,2856,3672,4651,5814,7182,8778,10626,12751 ⋆ a(n) = floor(n(n - 1)(n - 2)(n - 3) / 20). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) + a(n - 5) - 4 * a(n - 6) + 6 * a(n - 7) - 4 * a(n - 8) + a(n - 9). ●

► [A068293] 1,6,18,42,90,186,378,762,1530,3066,6138,12282,24570,49146,98298,196602,393210,786426,1572858,3145722,6291450,12582906,25165818,50331642,100663290 ⋆ a(1) = 1; thereafter a(n) = 6 * (2 ^ (n - 1) - 1). ● a(n) = 3 * a(n - 1) - 2 * a(n - 2); a(1)=1, a(2)=6, a(3)=18. - _ Harvey P. Dale _ , Nov 27 2011 ●

► [A184630] 1,6,18,43,83,144,228,341,486,666,887,1152,1464,1829,2250,2730,3275,3888,4572,5333,6174,7098,8111,9216,10416 ⋆ Floor(1 /{ (6 + n ^ 4) ^ (1 / 4) }), where {} =fractional part. ● a(n)=floor(1 /{ (6 + n ^ 4) ^ (1 / 4) }), where {} =fractional part. ●

► [A344992] 1,6,18,44,83,159,249,401,592,867,1163,1655,2122,2796,3594,4594,5579,7046,8394,10328,12339,14699,17021,20441,23526 ⋆ a(n) = Sum _{ 1 <= i <= j <= k <= m <= n } gcd(i,j,k,m). ● a(n) = Sum _{ k=1..n } Sum _{ d|k } phi(k / d) * d * (d + 1) * (d + 2) / 6. ●

► [A011929] 0,0,0,0,1,6,18,44,88,159,265,416,625,903,1264,1724,2298,3006,3865,4896,6120,7560,9240,11185,13422 ⋆ a(n) = floor(n(n - 1)(n - 2)(n - 3) / 19). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) + a(n - 19) - 4 * a(n - 20) + 6 * a(n - 21) - 4 * a(n - 22) + a(n - 23) for n > 22. ●

► [A304161] 6,18,46,102,198,346,558,846,1222,1698,2286,2998,3846,4842,5998,7326,8838,10546,12462,14598,16966,19578,22446,25582,28998 ⋆ a(n) = 2 * n ^ 3 - 4 * n ^ 2 + 10 * n - 2 (n>=1). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>4. ●

► [A328890] 1,6,18,46,110,254,574,1278,2814,6142,13310,28670,61438,131070,278526,589822,1245182,2621438,5505022,11534334,24117246,50331646,104857598,218103806,452984830 ⋆ Number of acyclic edge covers of the complete bipartite graph K _{ n,2 } . ● a(n) = (2 + n) * 2 ^ (n - 1) - 2. ● a(n) = 5 * a(n - 1) - 8 * a(n - 2) + 4 * a(n - 3) for n>3. ●

► [A128543] 1,6,18,48,120,288,672,1536,3456,7680,16896,36864,79872,172032,368640,786432,1671168,3538944,7471104,15728640,33030144,69206016,144703488,301989888,629145600 ⋆ a(n) = floor(2 ^ (n - 2) * 3 * n). ● a(n) = 3 * n * 2 ^ (n - 2) for n>1. - _ R. J. Mathar _ , Oct 25 2011 ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) for n>3. ●

► [A099857] 1,6,18,48,126,330,864,2262,5922,15504,40590,106266,278208,728358,1906866,4992240,13069854,34217322,89582112,234529014,614004930,1607485776,4208452398,11017871418,28845161856 ⋆ Expansion of (1 + 3x + x ^ 2) / (1 - 3x + x ^ 2). ● a(n) = 0 ^ n + 6 * Fibonacci(2 * n). ●

► [A350155] 1,6,18,49,120,233 ⋆ a(n) is the greatest number of times that a laser can hit a reflector on an n X n grid (see Comments for precise definition). ● a(n) >= 3 * 2 ^ n - 6, this value can be obtained with a simple pattern (see links above). - _ Benjamin Butin _ , Jan 20 2022 ●

► [A086926] 0,0,1,6,18,50,120,273,588,1224,2475,4895,9504,18174,34307,64050,118440,217192,395352,714951,1285350,2298660,4091241,7250221,12797568 ⋆ Product of Fibonacci and (shifted) triangular numbers. ● a(n) = (n / (n - 2) * a(n - 1) + n * (n - 1)) / ((n - 2) * (n - 3)) * a(n - 2). ● a(n) = Sum _{ k=0..n - 1 } Sum _{ i=0..n - 1 } i * C(n - k - 1,k). - _ Wesley Ivan Hurt _ , Sep 19 2017 ● a(n) = ((- 1) * (2 ^ (- 1 - n) * ((1 - sqrt(5)) ^ n - (1 + sqrt(5)) ^ n) * (- 1 + n) * n)) / sqrt(5). ● a(n) = 3 * a(n - 1) - 5 * a(n - 3) + 3 * a(n - 5) + a(n - 6) for n>5. (End) ●

► [A318160] 1,1,1,6,18,50,195,392,1652,2970,12825,22022,96030,160888,705341,1162800,5116200,8335338,36773397,59366450,262462010,420630210,1862790699,2967563040,13160496684 ⋆ Number of compositions of n into exactly n nonnegative parts with largest part ceiling(n / 2). ● a(n) = 3 ^ (3 * n / 2 - 7 / 4 + (- 1) ^ n / 4) * sqrt(n / Pi) / 2 ^ (n - 3 / 2). - _ Vaclav Kotesovec _ , Sep 21 2019 ●

► [A099856] 1,6,18,54,162,486,1458,4374,13122,39366,118098,354294,1062882,3188646,9565938,28697814,86093442,258280326,774840978,2324522934,6973568802,20920706406,62762119218,188286357654,564859072962 ⋆ Expansion of (1 + 3x) / (1 - 3x). ● a(n) = 2 * 3 ^ n - 0 ^ n. ●

► [A292295] 0,0,6,18,54,174,582,1974,6726,22950,78342,267462,913158,3117702,10644486,36342534,124081158,423639558,1446395910,4938304518,16860426246,57565095942,196539531270,671027933190,2291032670214 ⋆ Sum of values of vertices of type A at level n of the hyperbolic Pascal pyramid. ● a(n) = 5 * a(n - 1) - 6 * a(n - 2) + 2 * a(n - 3), n >= 4. ● a(n) = (- 3 / 2) * (- 4 + (4 - 3 * sqrt(2)) * (2 + sqrt(2)) ^ n + (2 - sqrt(2)) ^ n * (4 + 3 * sqrt(2))) for n>0. ●

► [A035070] 6,18,55,174,548,1733,5478,17321,54773,173206,547723,1732051,5477226,17320509,54772256,173205081,547722558,1732050808,5477225576,173205080756,547722557506,1732050807569,5477225575052 ⋆ a(n) is root of square starting with digit 3: first term of runs. ● a(n) = ceiling(sqrt(3 * 10 ^ n)). ●

► [A056343] 0,0,1,6,18,56,147,411,1084,2979,8043,22244,61278,171030,477929,1345236,3795750,10758902,30572427,87149124,248991822,713096352,2046303339,5883433409,16944543810 ⋆ Number of bracelets of length n using exactly three different colored beads. ● a(n) = (k! / 4) * (S2(floor((n + 1) / 2),k) + S2(ceiling((n + 1) / 2),k)) + (k! / 2n) * Sum _{ d|n } phi(d) * S2(n / d,k), where k=3 is the number of colors and S2 is the Stirling subset number A008277. ●

► [A223211] 6,18,60,192,624,2016,6528,21120,68352,221184,715776,2316288,7495680,24256512,78495744,254017536,822018048,2660106240,8608284672,27856994304,90147127296,291722231808,944032972800,3054954872832,9886041636864 ⋆ 3 X 3 X 3 triangular graph coloring a rectangular array: number of n X 1 0..5 arrays where 0..5 label nodes of a graph with edges 0,1 0,2 1,2 1,3 1,4 2,4 3,4 2,5 4,5 and every array movement to a horizontal or vertical neighbor moves along an edge of this graph. ● a(n) = (3 * ((1 - sqrt(5)) ^ n * (- 3 + sqrt(5)) + (1 + sqrt(5)) ^ n * (3 + sqrt(5)))) / (4 * sqrt(5)). ●

► [A144706] 1,6,18,60,210,756,2772,10296,38610,145860,554268,2116296,8112468,31201800,120349800,465352560,1803241170,7000818660,27225405900,106035791400,413539586460,1614773623320 ⋆ Central coefficients of the triangle A132047. ● a(n) = 3 * binomial(2 * n, n) - 2 * 0 ^ n. ●

► [A129369] 1,1,6,18,70,246,924,3412,12870,48550,184756,705180,2704156,10399676,40116600,155114088,601080390,2333593350,9075135300,35345215180,137846528820,538257689684,2104098963720,8233430022168,32247603683100 ⋆ Expansion of 1 / sqrt(1 - 4x) - x / sqrt(1 - 4x ^ 2). ● a(n)=C(2n,n) - C(n - 1,(n - 1) / 2) (1 - (- 1) ^ n) / 2; ●

► [A027266] 1,6,18,72,180,648,1512,5184,11664,38880,85536,279936,606528,1959552,4199040,13436928,28553472,90699264,191476224,604661760,1269789696,3990767616,8344332288,26121388032,54419558400 ⋆ a(n) = Sum _{ k=0..2n } (k + 1) * A026519(n, k). ● a(n) = 12 * a(n - 2) - 36 * a(n - 4), with a(0)=1, a(1)=6, a(2)=18, a(3)=72. - _ Harvey P. Dale _ , Jun 19 2015 ● a(n) = ((n + 1) / 2) * 6 ^ ((n - 1) / 2) * (3 * (1 - (- 1) ^ n) + sqrt(6) * (1 + (- 1) ^ n)). - _ G. C. Greubel _ , Dec 21 2021 ●

► [A242278] 0,6,18,72,216,702,2106,6480,19440,58806,176418,530712,1592136,4780782,14342346,43040160,129120480,387400806,1162202418,3486725352,10460176056,31380882462,94142647386,282429005040,847287015120 ⋆ Number of non - palindromic n - tuples of 3 distinct elements. ● a(n) = 1 / 2 * 3 ^ (n / 2) * ((sqrt(3) - 1) * (- 1) ^ n - sqrt(3) - 1) + 3 ^ n. ● a(n) = 3 ^ n - 3 ^ ceiling(n / 2). ●

► [A299412] 0,6,18,75,126,288,405,726,936,1470,1800,2601,3078,4200,4851,6348,7200,9126,10206,12615,13950,16896,18513,22050,23976 ⋆ Pentagonal pyramidal numbers divisible by 3. ● a(n) = (3 * n / 2) ^ 2 * (3 * n / 2 + 1) / 2 if n even. ● a(n) = ((3 * n + 1) / 2) ^ 2 * ((3 * n + 1) / 2 + 1) / 2 if n odd. ●

► [A219590] 6,18,84,264,705,1739,4129,9518,21271,46019,96412,195879,386603,742477,1389545,2537385,4526097,7895059,13481452,22558778,37028253,59679103,94537481,147328016,226076963 ⋆ Number of n X 3 arrays of the minimum value of corresponding elements and their horizontal or vertical neighbors in a random, but sorted with lexicographically nondecreasing rows and nonincreasing columns, 0..2 n X 3 array. ● a(n) = 12 * a(n - 1) - 66 * a(n - 2) + 220 * a(n - 3) - 495 * a(n - 4) + 792 * a(n - 5) - 924 * a(n - 6) + 792 * a(n - 7) - 495 * a(n - 8) + 220 * a(n - 9) - 66 * a(n - 10) + 12 * a(n - 11) - a(n - 12) for n>14. ●

► [A279260] 0,6,18,90,330,1386,5418,21930,87210,349866,1397418,5593770,22366890,89483946,357903018,1431677610,5726579370,22906579626,91625794218,366504225450,1466014804650,5864063412906,23456245263018,93824997829290,375299957762730 ⋆ Numbers which are cyclops palindromic in their binary reflected Gray code representation. ● a(n) = (- 2 * (1 + ((- 2) ^ n) - (2 ^ (2 * n + 1)))) / 3. ●

► [A104970] 1,6,18,92,298,1444,4852,22840,78490,362580,1265564,5767688,20366596,91866984,327351336,1464522864,5257011066,23361650484,84371466636,372831130344,1353477992556,5952169844664,21704580414936,95051752387344 ⋆ Sum of squares of terms in even - indexed rows of triangle A104967. ● a(n) = 2 ^ (2 * n - 1) * (2 + Sum _{ k=0..n - 1 } (- 1) ^ k * binomial(2 * k + 1,k + 1) / 2 ^ (2 * k)). - _ Vaclav Kotesovec _ , Oct 28 2012 ●

► [A274499] 0,0,6,18,108,324,1458,4374,17496,52488,196830,590490,2125764,6377292,22320522,66961566,229582512,688747536,2324522934,6973568802,23245229340,69735688020,230127770466,690383311398,2259436291848 ⋆ Sum of the degrees of asymmetry of all ternary words of length n. ● a(n) = (1 / 6) * (2n - 1 + (- 1) ^ n) * 3 ^ n. ● a(n) = 3 * a(n - 1) + 9 * a(n - 2) - 27 * a(n - 3) for n > 2. ●

► [A052634] 1,1,6,18,168,840,10800,75600,1249920,11249280,228614400,2514758400,60833203200,790831641600,22230464256000,333456963840000,10691545632768000,181756275757056000,6549628300959744000 ⋆ Expansion of e.g.f. 1 / ((1 - 2 * x ^ 2) * (1 - x)). ● a(n) = (- 1 + Sum(1 / 2 * (1 + 2 *_ alpha) *_ alpha ^ (- 1 - n), with _ alpha=RootOf(- 1 + 2 *_ Z ^ 2))) * n! . ● a(n) = n! * [2 ^ floor(n / 2 + 1) - 1]. ●

► [A235537] 6,19,23,41,49,72,84,112,128,161,181,219,243,286,314,362,394,447,483,541,581,644,688,756,804 ⋆ Expansion of (6 + 13 * x - 8 * x ^ 2 - 8 * x ^ 3 + 6 * x ^ 4) / ((1 + x) ^ 2 * (1 - x) ^ 3). ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). ● a(n) = (6 * n * (3 * n + 17) - (2 * n + 43) * (- 1) ^ n + 11) / 16 + 8. The terms a(2k) are in A235332; the closed form of the terms a(2k + 1) is n * (9 * n + 35) / 2 + 19. ●

► [A041911] 1,1,6,19,25,119,1215,1334,3883,9100,40283,89666,219615,309281,3312425,13558981,16871406,64173199,337737401,401910600,1721798260 1,1053174486 06,333572239019,438889687625 ⋆ Denominators of continued fraction convergents to sqrt(477). ● a(n) = 17555720002 * a(n - 20) - a(n - 40) for n >39. - _ Vincenzo Librandi _ , Dec 27 2013 ●

► [A319968] 6,19,30,43,50,63,74,87,100,111,124,131,144,155,168,179,192,199,212,223,236,249,260,273,280 ⋆ a(n) = A003145(A003145(n)). ● a(n + 1) = B(C(n)) = B(C(n) + 1) - 1 = 2 * (A(n) + B(n)) + n + 4, for n >= 0, where B = A278039, C = A278041 and A = A278040. For a proof see the W. Lang link in A278040, Proposition 9, eq. (53). - _ Wolfdieter Lang _ , Dec 13 2018 ●

► [A063233] 6,19,33,45,59,71,85,97,111,123,137,149,163,175,189,201,215,227,241,253,267,279,293,305,319 ⋆ Dimension of the space of weight 2n cuspidal newforms for Gamma _ 0(79). ● a(n) = 13 / 2 - (1 / 2) * (- 1) ^ (n - 1) + 13 * (n - 1) - (- 1) ^ n - (binomial(2 * (n - 1), n - 1) mod 2), with n >= 1. - _ Paolo P. Lava _ , Nov 27 2009 ● a(n + 2) = a(n) + 26 (n > 1); ● a(2n + 1) = a(2n) + 14 (n > 0); ● a(2n) = a(2n - 1) + 12 (n > 1); ● a(n) = 13n - { 6 if n = 2k + 1, k > 0; 7 otherwise } . ●

► [A063147] 6,19,33,45,59,73,85,99,113,125,139,153,165,179,193,205,219,233,245,259,273,285,299,313,325 ⋆ Dimension of the space of weight 2n cusp forms for Gamma _ 0(79). ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>5. ●

► [A090381] 1,6,19,36,61,90,127,168,217,270,331,396,469,546,631,720,817,918,1027,1140,1261,1386,1519,1656,1801 ⋆ Expansion of (1 + 4x + 7x ^ 2) / ((1 - x) ^ 2 * (1 - x ^ 2)). ● a(2t) = 12t ^ 2 + 6t + 1, a(2t + 1) = 12t ^ 2 + 18t + 6 (t >= 0). ● a(n) = 3 * n * (n + 1) + (1 + (- 1) ^ n) / 2. - _ Wesley Ivan Hurt _ , May 06 2016 ●

► [A179986] 0,6,19,39,66,100,141,189,244,306,375,451,534,624,721,825,936,1054,1179,1311,1450,1596,1749,1909,2076 ⋆ Second 9 - gonal (or nonagonal) numbers: a(n) = n * (7 * n + 5) / 2. ● a(n) = a(n - 1) + 7 * n - 1 for n>0, with a(0)=0. - _ Vincenzo Librandi _ , Feb 05 2011 ● a(0)=0, a(1)=6, a(2)=19; for n>2, a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Aug 19 2011 ●

► [A054567] 1,6,19,40,69,106,151,204,265,334,411,496,589,690,799,916,1041,1174,1315,1464,1621,1786,1959,2140,2329 ⋆ a(n) = 4 * n ^ 2 - 7 * n + 4. ● a(n) = 8 * n + a(n - 1) - 11 for n>1, a(1)=1. - _ Vincenzo Librandi _ , Aug 07 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). G.f.: - x * (4 * x ^ 2 + 3 * x + 1) / (x - 1) ^ 3. - _ Colin Barker _ , Oct 25 2014 ●

► [A096957] 6,19,40,70,110,161,224,300,390,495,616,754,910,1085,1280,1496,1734,1995,2280,2590,2926,3289,3680,4100,4550 ⋆ Fourth column (m=3) of (1,6) - Pascal triangle A096956. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>3. - _ Vincenzo Librandi _ , Apr 19 2017 ●

► [A299281] 1,6,19,41,72,114,166,224,288,364,454,550,648,758,886,1020,1152,1296,1462,1634,1800,1978,2182,2392,2592 ⋆ Coordination sequence for "reo - e" 3D uniform tiling. ● a(n) = 3 * a(n - 1) - 5 * a(n - 2) + 7 * a(n - 3) - 7 * a(n - 4) + 5 * a(n - 5) - 3 * a(n - 6) + a(n - 7) for n>8. - _ Colin Barker _ , Feb 14 2018 ●

► [A212684] 0,1,6,19,42,79,132,205,300,421,570,751,966,1219,1512,1849,2232,2665,3150,3691,4290,4951,5676,6469,7332 ⋆ Number of (w,x,y,z) with all terms in { 1,...,n } and |x - y|=n - w + |y - z|. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - 2 * a(n - 3) + 3 * a(n - 4) - a(n - 5). ● a(n) = (2 * n * (n + 2) * (2 * n - 1) - (- 1) ^ n + 1) / 8. [_ Bruno Berselli _ , Jun 07 2012] ●

► [A005900] 0,1,6,19,44,85,146,231,344,489,670,891,1156,1469,1834,2255,2736,3281,3894,4579,5340,6181,7106,8119,9224 ⋆ Octahedral numbers: a(n) = n * (2 * n ^ 2 + 1) / 3. ● a(n) = 1 ^ 2 + 2 ^ 2 + ... + (n - 1) ^ 2 + n ^ 2 + (n - 1) ^ 2 + ... + 2 ^ 2 + 1 ^ 2. - _ Amarnath Murthy _ , May 28 2001 ● a(n) = (((n + 1) ^ 5 - n ^ 5) - (n ^ 5 - (n - 1) ^ 5))) / 30. - Xavier Acloque, Oct 17 2003 ● a(n) is the sum of the products pq, where p and q are both positive and odd and p + q = 2n, e.g., a(4) = 7 * 1 + 5 * 3 + 3 * 5 + 1 * 7 = 44. - _ Jon Perry _ , May 17 2005 ● a(n) = 4 * binomial(n,3) + 4 * binomial(n,2) + binomial(n,1). - _ Mitch Harris _ , Jul 06 2006 ● a(n) = binomial(n + 2,3) + 2 * binomial(n + 1,3) + binomial(n,3), (this pair generalizes; see A014820, the 4 - cross polytope numbers). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4), n>3. - _ Wesley Ivan Hurt _ , Sep 11 2015 ●

► [A299264] 1,6,19,44,85,147,236,357,514,711,953,1246,1595,2004,2477,3019,3636,4333,5114,5983,6945,8006,9171,10444,11829 ⋆ Partial sums of A299258. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 5) - 3 * a(n - 6) + 3 * a(n - 7) - a(n - 8) for n>7. ● a(n) = - a(- 1 - n) for all n in Z. - _ Michael Somos _ , Oct 03 2018 ●

► [A299265] 1,6,19,45,90,159,257,390,563,781,1050,1375,1761,2214,2739,3341,4026,4799,5665,6630,7699,8877,10170,11583,13121 ⋆ Partial sums of A299259. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + 2 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) - a(n - 6) for n>5. ● a(n) = - a(- 1 - n) for all n in Z. - _ Michael Somos _ , Oct 03 2018 ●

► [A005712] 1,6,19,45,90,161,266,414,615,880,1221,1651,2184,2835,3620,4556,5661,6954,8455,10185,12166,14421,16974,19850,23075 ⋆ Coefficient of x ^ 4 in expansion of (1 + x + x ^ 2) ^ n. ● a(n) = binomial(n + 2,n - 2) + binomial(n + 1,n - 2) - binomial(n,n - 2). - _ Zerinvary Lajos _ , May 16 2006 ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). _ Vincenzo Librandi _ , Jun 16 2012 ● a(n) = binomial(n,2) + 3 * binomial(n,3) + binomial(n,4) (see our comment in A026729). - _ Vladimir Shevelev _ and _ Peter J. C. Moses _ , Jun 22 2012 ● a(n) = GegenbauerC(N, - n, - 1 / 2) where N = 4 if 4<n else 2 * n - 4. - _ Peter Luschny _ , May 10 2016 ●

► [A299278] 1,6,19,45,91,164,268,408,595,835,1127,1479,1896,2378,2945,3605,4345,5183,6127,7158,8308,9598,10997,12528,14205 ⋆ Partial sums of A299277. ● a(n) = a(n - 1) - a(n - 2) + 2 * a(n - 3) - a(n - 4) + a(n - 5) + a(n - 6) - 2 * a(n - 7) + 2 * a(n - 8) - 4 * a(n - 9) + 2 * a(n - 10) - 2 * a(n - 11) + a(n - 12) + a(n - 13) - a(n - 14) + 2 * a(n - 15) - a(n - 16) + a(n - 17) - a(n - 18) for n>21. - _ Colin Barker _ , Feb 14 2018 ●

► [A027963] 1,6,19,47,101,199,370,661,1148,1954,3278,5442,8967,14696,23993,39065,63483,103025,167040,270655,438346,709716,1148844,1859412,3009181 ⋆ T(n, n + 3), T given by A027960. ● a(n) = Lucas(n + 4) - (3 * n ^ 2 + 5 * n + 14) / 2. ●

► [A073362] 1,6,19,48,109,234,355,552,1009,1518,2371,3804,4141,6342,8803,12096,14389,18438,24043,27720,36397,45366,60499,75876,80137 ⋆ Nested floor product of n and fractions (k + 1) / k for all k>0 (mod 5), divided by 5. ● a(n)=(1 / 5)[...[[[n(2 / 1)](3 / 2)](4 / 3)](5 / 4)](7 / 6)]...(k + 1) / k]..., k>0 (mod 5), where [x] = floor of x; this infinite nested floor product will eventually level - off at a(n). ●

► [A095264] 1,6,19,48,109,234,487,996,2017,4062,8155,16344,32725,65490,131023,262092,524233,1048518,2097091,4194240,8388541,16777146,33554359,67108788,134217649 ⋆ a(n) = 2 ^ (n + 2) - 3 * n - 4. ● a(n + 3) = 4 * a(n + 2) - 5 * a(n + 1) + 2 * a(n). ● a(n) = 2 * a(n - 1) + (3n - 2). - _ Gary W. Adamson _ , Sep 30 2007 ●

► [A269059] 1,6,19,48,113,258,579,1284,2821,6150,13319,28680,61449,131082,278539,589836,1245197,2621454,5505039,11534352,24117265,50331666,104857619,218103828,452984853 ⋆ Construct a hollow square of 1's of side n and fill its interior with 0's to create a stack of n binary numbers. Express the sum of the stack in decimal. ● a(n) = 2 * (2 ^ n - 1) + (n - 2) * (2 ^ (n - 1) + 1), for n>1. ●

► [A360951] 0,0,1,6,19,50,121,280,631,1398,3061,6644,14323,30706,65521,139248,294895,622574,1310701,2752492,5767147,12058602,25165801,52428776,109051879 ⋆ Expansion of e.g.f. (cosh(x) - 1) * (1 + x) * exp(x). ● a(n) = 2 ^ (n - 1) + n * 2 ^ (n - 2) - n - 1 for n >= 2. ●

► [A286184] 6,19,56,157,430,1171,3204,8857,24794,70303,201712,584677,1708998,5028715,14873180,44160817,131499442,392401207,1172747208,3508804477,10506490526,31477528579,94344505396,282848966857,848161024650 ⋆ Number of connected induced (non - null) subgraphs of the helm graph with 2n + 1 nodes. ● a(n) = 3 ^ n + (1 + n) * 2 ^ n - n. ● a(n) = 9 * a(n - 1) - 31 * a(n - 2) + 51 * a(n - 3) - 40 * a(n - 4) + 12 * a(n - 5). - _ Eric W. Weisstein _ , May 28 2017 ●

► [A238055] 6,19,58,175,526,1579,4738,14215,42646,127939,383818,1151455,3454366,10363099,31089298,93267895,279803686,839411059,2518233178,7554699535,22664098606,67992295819,203976887458,611930662375,1835791987126 ⋆ a(n) = (13 * 3 ^ n - 1) / 2. ● a(n) = 3 * a(n - 1) + 1, a(0)=6. ● a(n) = 4 * a(n - 1) - 3 * a(n - 2), a(0)=6, a(1)=19. ●

► [A080926] 0,1,6,19,60,181,546,1639,4920,14761,44286,132859,398580,1195741,3587226,10761679,32285040,96855121,290565366,871696099,2615088300,7845264901,23535794706,70607384119,211822152360 ⋆ Partial sums of A080925. ● a(n) = Sum { i=0..n, Sum { k=1..i, Binomial(i, 2k - 2)2 ^ (2k - 2) }} ● a(n) = (3 * 3 ^ n + (- 1) ^ n) / 4 - 1. ● a(n) = 3 * a(n - 1) + a(n - 2) - 3 * a(n - 3) for n>2, a(0)=0, a(1)=1, a(2)=6. Observation by G. Detlefs. See my comment and link. [_ Wolfdieter Lang _ , Oct 18 2010] ●

► [A152098] 1,1,1,6,19,61,240,769,2869,9774,34831,121969,428640,1509301,5297641,18644406,65502139,230343541,809678160,2846468089,10006911469,35178340254,123671565271,434760784009,1528407648960 ⋆ Quartic product sequence: m = 4; p = 4 ^ 3; a(n) = Product _{ k=1..(n - 1) / 2 } (1 + m * cos(k * Pi / n) ^ 2 + p * cos(k * Pi / n) ^ 4). ● a(n) = Product _{ k=1..(n - 1) / 2 } (1 + m * cos(k * Pi / n) ^ 2 + p * cos(k * Pi / n) ^ 4), with m=4 and p=64. ●

► [A041673] 1,1,6,19,63,82,555,637,2466,8035,42641,50676,1866977,1917653,11455242,36283379,120305379,156588758,1059837927,1216426685,4709117982,15343780631,81428021137,96771801768,3565212884785 ⋆ Denominators of continued fraction convergents to sqrt(355). ● a(n) = 1909618 * a(n - 12) - a(n - 24) for n>23. - _ Vincenzo Librandi _ , Dec 22 2013 ●

► [A137195] 1,6,19,64,185,542,1511,4144,11329,29894,80731,207696,556217,1405566,3741263,9328928,24716353,60998086,161022115,394136864,1037382905,2522256670,6622609463,16012527312,41958312193 ⋆ Even - indexed coefficients related to Kirchhoff index of hexagonal (benzene) chains. ● a(n) = 12 * a(n - 2) - 38 * a(n - 4) + 12 * a(n - 6) - a(n - 8). ●

► [A266472] 6,19,67,232,735,2090,5371,12645,27639,56726,110334,204903,365538,629531,1050952,1706538,2703140,4187021,6355333,9470138,13875377,20017232,28468369,39956595,55398509 ⋆ Number of 5 X n binary arrays with rows and columns lexicographically nondecreasing and column sums nonincreasing. ● a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10) for n>10. ●

► [A123950] 0,1,1,6,19,73,264,973,3565,13086,48007,176149,646296,2371321,8700553,31923030,117128107,429752305,1576795176,5785386229,21227039605,77883687150,285761407807,1048481205661,3846960466104 ⋆ Expansion of g.f.: x ^ 2 * (1 - 2 * x) / (1 - 3 * x - 3 * x ^ 2 + 2 * x ^ 3). ● a(n) = 3 * a(n - 1) + 3 * a(n - 2) - 2 * a(n - 3). ●

► [A100191] 1,6,19,73,264,973,3565,13086,48007,176149,646296,2371321,8700553,31923030,117128107,429752305,1576795176,5785386229,21227039605,77883687150,285761407807,1048481205661,3846960466104,14114802199681,51788325586033 ⋆ The (1,1) - entry in the 3 X 3 matrix M ^ n, where M = [1,2,1 / 2,2,0 / 1,0,0]. ● a(n) = 3 * a(n - 1) + 3 * a(n - 2) - 2 * a(n - 3) (derived from the minimal polynomial of the matrix M). ●

► [A191585] 1,1,6,19,74,276,1056,4047,15606,60382,234356,911802,3554864,13883650,54304788,212687199,833958918,3273341382,12859792932,50562992490,198954466524,783371113152,3086377703184,12166795814166,47987669811276 ⋆ Central coefficients of the Riordan matrix (1 / (1 - 3 * x ^ 2),x / (1 - x)) (A191582). ● a(n) = T(2 * n,n), where T(n,k) = A...(n,k). ● a(n) = sum(binomial(2 * n - 2 * i - 1,n - 2 * i) * 3 ^ i,i=0..n / 2). ●

► [A279512] 6,19,85,457,2641,15649,93505,560257,3360001,20156929,120935425,725600257,4353576961,26121412609,156728377345,940370067457,5642220011521,33853319282689,203119914123265,1218719481593857,7312316883271681,43873901287047169,263243407697117185 ⋆ Sierpinski octahedron numbers a(n) = 2 * 6 ^ n + 3 * 2 ^ n + 1. ● a(n) = 3 * 2 ^ n + 2 ^ (n + 1) * 3 ^ n + 1. ● a(n) = 6a(n - 1) - 6(2 ^ n + 1) + 1. ● a(n) = 6a(n - 1) - (3 * 2 ^ (n + 1) + 5). ● a(n) = 2 * 6 ^ n + 3 * 2 ^ n + 1. ● a(n) = 9 * a(n - 1) - 20 * a(n - 2) + 12 * a(n - 3) for n>2. ●

► [A308710] 6,20,28,88,104,272,304,368,464,496,1184,1312,1376,1504,1696,1888,1952,4288,4544,4672,5056,5312,5696,6208,6464 ⋆ Primitive practical numbers of the form 2 ^ i * prime(k). ● a(n) = 2 ^ floor(log _ 2(prime(n + 1))) * prime(n + 1). ●

► [A106528] 6,20,34,56,126,204,330,736,1190,1924,4290,6936,11214,25004,40426,65360,145734,235620,380946,849400,1373294,2220316,4950666,8004144,12940950 ⋆ Values of y in x ^ 2 - 289 = 2 * y ^ 2. ● a(n) = 6 * a(n - 3) - a(n - 6). ●

► [A002943] 0,6,20,42,72,110,156,210,272,342,420,506,600,702,812,930,1056,1190,1332,1482,1640,1806,1980,2162,2352 ⋆ a(n) = 2 * n * (2 * n + 1). ● a(n) = 4 * n ^ 2 + 2 * n. ● a(n) = floor((2 * n + 1 / 2) ^ 2). - _ Reinhard Zumkeller _ , Feb 20 2010 ● a(n) = 8 * n + a(n - 1) - 2 with a(0)=0. - _ Vincenzo Librandi _ , Jul 20 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Aug 11 2011 ●

► [A068377] 1,6,20,42,72,110,156,210,272,342,420,506,600,702,812,930,1056,1190,1332,1482,1640,1806,1980,2162,2352 ⋆ Engel expansion of sinh(1). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>4. ●

► [A009946] 1,6,20,42,74,114,164,222,290,366,452,546,650,762,884,1014,1154,1302,1460,1626,1802,1986,2180,2382,2594 ⋆ Coordination sequence for NiAs(2), Ni position. ● a(0)=1, a(4n)=2 * ((6n) ^ 2 + 1), a(4n + 2)=18 * (2n + 1) ^ 2 + 2, a(2n + 1)=6 * (3n ^ 2 + 3n + 1). - _ Ralf Stephan _ , Mar 07 2004 ● a(n) = (7 + (- 1) ^ n + 18 * n ^ 2) / 4 for n>0. ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4) for n>4. ●

► [A006137] 1,6,20,43,75,116,166,225,293,370,456,551,655,768,890,1021,1161,1310,1468,1635,1811,1996,2190,2393,2605 ⋆ a(n) = 1 + n / 2 + 9 * n ^ 2 / 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3), with a(0)=1, a(1)=6 and a(2)=20. - _ Paolo P. Lava _ , Jul 17 2009 ● a(n) = a(n - 1) + 9 * n - 4 (with a(0)=1). - _ Vincenzo Librandi _ , Nov 18 2010 ●

► [A005564] 6,20,45,84,140,216,315,440,594,780,1001,1260,1560,1904,2295,2736,3230,3780,4389,5060,5796,6600,7475,8424,9450 ⋆ Number of n - step walks on square lattice in the first quadrant which finish at distance n - 3 from the x - axis. ● a(n) = Sum _{ j = 0..n } ((n + j - 1) ^ 2 - (n - j + 1) ^ 2) / 4. - _ Zerinvary Lajos _ , Sep 13 2006 ● a(n) = Sum _{ k = 2..n - 1 } k * n. - _ Zerinvary Lajos _ , Jan 29 2008 ● a(n) = 4 * binomial(n + 1,2) * binomial(n + 1,4) / binomial(n + 1,3) = (n - 2) * binomial(n + 1,2). - _ Gary Detlefs _ , Dec 08 2011 ● a(n

) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Vincenzo Librandi _ , Jun 18 2012 ●

▶ [A011928] 0,0,0,0,1,6,20,46,93,168,280,440,660,953,1334,1820,2426,3173,4080,5168,6460,7980,9753,11806,14168 ⋆ a(n) = floor(n(n - 1)(n - 2)(n - 3) / 18). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) + a(n - 9) - 4 * a(n - 10) + 6 * a(n - 11) - 4 * a(n - 12) + a(n - 13) for n > 12. ●

▶ [A203552] 0,1,6,20,48,95,166,266,400,573,790,1056,1376,1755,2198,2710,3296,3961,4710,5548,6480,7511,8646,9890,11248 ⋆ a(n) = n * (5 * n ^ 2 - 3 * n + 4) / 6. ● a(n) = Sum _{ k = 1..n } A(k - 1, n - k) where A(i, j) = i ^ 2 + i * j + j ^ 2 + i + j + 1. ●

▶ [A299292] 1,6,20,49,105,190,320,501,727,1026,1408,1853,2391,3026,3734,4579,5541,6620,7838,9201,10657,12328,14136,16123,18293 ⋆ Partial sums of A299291. ● a(n) = a(n - 2) + a(n - 3) - a(n - 5) + 2 * a(n - 6) - 2 * a(n - 8) - 2 * a(n - 9) + 2 * a(n - 11) - a(n - 12) + a(n - 14) + a(n - 15) - a(n - 17) for n>17. - _ Colin Barker _ , Feb 14 2018 ●

▶ [A216175] 1,6,20,50,104,193,329,526,800,1169,1652,2271,3049,4011,5184,6597,8280,10266,12589,15285,18392,21950,26000,30586,35753 ⋆ Number of all polyhedra (tetrahedra of any orientation and octahedra) of any size, formed when intersecting a regular tetrahedron by planes parallel to its sides and dividing its edges into n equal parts. ● a(n) = (1 / 288) * (7 + 9 * (- 1) ^ n - 16 * (- 1) ^ (n mod 3) + 24 * n + 124 * n ^ 2 + 104 * n ^ 3 + 22 * n ^ 4). ●

▶ [A002415] 0,0,1,6,20,50,105,196,336,540,825,1210,1716,2366,3185,4200,5440,6936,8721,10830,13300,16170,19481,23276,27600 ⋆ 4 - dimensional pyramidal numbers: a(n) = n ^ 2 * (n ^ 2 - 1) / 12. ● a(n) = 2 * C(n + 2, 4) - C(n + 1, 3). - _ Paul Barry _ , Mar 04 2003 ● a(n) = C(n + 2, 4) + C(n + 1, 4). - _ Paul Barry _ , Mar 13 2003 ● a(n) = n * C(n + 1,3) / 2 = C(n + 1,3) * C(n + 1,2) / (n + 1). - _ Mitch Harris _ , Jul 06 2006 ● a(n) = (1 / 2) * Sum _{ 1 <= x _ 1, x _ 2 <= n } (det V(x _ 1,x _ 2)) ^ 2 = (1 / 2) * Sum _{ 1 <= i,j <= n } (i - j) ^ 2, where V(x _ 1,x _ 2) is the Vandermonde matrix of order 2. - _ Peter Bala _ , Sep 21 2007 ● a(n) = C(n + 1,3) + 2 * C(n + 1,4). - Borislav St. Borisov (b.st.borisov(AT)abv.bg), Mar 05 2009 ● a(n) = (1 / 48) * sinh(2 * arccosh(n)) ^ 2. - _ Artur Jasinski _ , Feb 10 2010 ●

▶ [A213586] 1,6,20,51,112,224,421,758,1324,2263,3808,6336,10457,17158,28036,45675,74256,120544,195485,316790,513116,830831,1344960,2176896,3523057 ⋆ Antidiagonal sums of the convolution array A213584. ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + a(n - 3) + 2 * a(n - 4) - a(n - 5). ● a(n) = Fibonacci(n + 8) - (21 + 10 * n + 2 * n ^ 2). - _ G. C. Greubel _ , Jul 06 2019 ●

▶ [A275112] 0,1,6,20,52,112,215,375,613,948,1407,2013,2799,3793,5034,6554,8398,10603,13220,16290,19870,24006,28761,34185,40347 ⋆ Zero together with the partial sums of A064412. ● a(n) = (28 * n ^ 4 + 36 * n ^ 3 + 18 * n ^ 2 + 12 * n + (1 - (- 1) ^ n)) / 16 for n even. ● a(n) = (28 * n ^ 4 + 92 * n ^ 3 + 114 * n ^ 2 + 68 * n + 17 - (- 1) ^ n) / 16 for n odd. ● a(n) = (14 * n ^ 4 + 36 * n ^ 3 + 36 * n ^ 2 + 42 * n + 11 + 3 * (2 * n - 1) * (- 1) ^ n - 8 * (- 1) ^ (((2 * n - 1 + (- 1) ^ n)) / 4)) / 128. ●

▶ [A027178] 1,6,20,52,120,260,544,1116,2264,4564,9168,18380,36808,73668,147392,294844,589752,1179572,2359216,4718508,9437096,18874276,37748640,75497372,150994840 ⋆ a(n) = T(n,0) + T(n,1) + ... + T(n,n), T given by A027170. ● a(n) = 9 * 2 ^ n - 4n - 8 (conjectured). - _ Ralf Stephan _ , Feb 13 2004 ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 2 * a(n - 3) for n>2. ●

▶ [A213589] 1,6,20,55,135,308,668,1395,2830,5610,10914,20904,39515,73860,136720,250937,457137,827260,1488190,2662905,4741946,8407236,14846100,26120400,45801925 ⋆ Antidiagonal sums of the convolution array A213587. ● a(n) = 3 * a(n - 1) - 5 * a(n - 3) + 3 * a(n - 5) + a(n - 6). ● a(n) = (n + 1) / 2 * Sum _{ j =0..(n + 1) / 2 } ((n - j) * binomial(n - j + 1,j)). - _ Vladimir Kruchinin _ , Apr 09 2016 ● a(n) = (n + 1) * (n * Lucas(n + 3) - 2 * Fibonacci(n)) / 10 = (n + 1) * ((n + 2) * Fibonacci(n + 3) + 2 * (n - 2) * Fibonacci(n + 2)) / 10. - _ G. C. Greubel _ , Jul 08 2019 ●

▶ [A014480] 1,6,20,56,144,352,832,1920,4352,9728,21504,47104,102400,221184,475136,1015808,2162688,4587520,9699328,20447232,42991616,90177536,188743680,394264576,822083584 ⋆ Expansion of (1 + 2 * x) / (1 - 2 * x) ^ 2. ● a(n) = 3 * a(n - 1) - 2 ^ (n - 1) * (2 * n - 5) with a(0) = 1. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) + 2 ^ n with a(0) = 1 and a(1) = 6. ●

▶ [A048778] 1,6,20,56,145,362,888,2160,5233,12654,30572,73832,178273,430418,1039152,2508768,6056737,14622294,35301380,85225112,205751665,496728506,1199208744,2895146064,6989500945 ⋆ First partial sums of A048745; second partial sums of A048654. ● a(n) = 2 * a(n - 1) + a(n - 2) + 3 * n + 1, with a(0)=1, a(1)=6. ● a(n) = (((13 + 9 * sqrt(2)) / 2) * (1 + sqrt(2)) ^ n - ((13 - 9 * sqrt(2)) / 2) * (1 - sqrt(2)) ^ n) / 2 * sqrt(2) - (3 * n + 7) / 2. ●

▶ [A292480] 0,1,6,20,56,160,480,1456,4384,13136,39360,118064,354272,1062928,3188736,9565936,28697632,86093264,258280512,774841520,2324523104,6973567888,20920705152,62762119792,188286360736 ⋆ p - INVERT of the odd positive integers, where p(S) = 1 - S ^ 2. ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 6 * a(n - 3) for n >= 5. ●

▶ [A127982] 1,6,20,57,147,360,850,1959,4433,9894,21840,47781,103759,223908,480590,1026723,2184525,4631202,9786700,20621985,43341131,90876576,190141770,397060767,827675977 ⋆ Numbers of the form (n - 1 / 3)2 ^ (n) - n / 2 + 1 / 4 + (- 1) ^ n / 12. ● a(n) = (n - 1 / 3)2 ^ (n) - n / 2 + 1 / 4 + (- 1) ^ n / 12. ●

▶ [A212689] 0,0,0,6,20,58,124,244,424,700,1080,1610,2300,3206,4340,5768,7504,9624,12144,15150,18660,22770,27500,32956,39160 ⋆ Number of (w,x,y,z) with all terms in { 1,...,n } and 2|w - x|>n + |y - z|. ● a(n)=3 * a(n - 1) - a(n - 2) - 5 * a(n - 3) + 5 * a(n - 4) + a(n - 5) - 3 * a(n - 6) + a(n - 7). ●

▶ [A027984] 1,6,20,58,161,436,1165,3088,8146,21426,56255,147538,386681,1013026,2653240,6948058,18193141,47634936,124717445,326526748,854877926,2238131506,5859556195,15340601158,40162350961 ⋆ a(n) = Sum { T(n,k) * T(n,n + k) } , 0<=k<=n, T given by A027960. ● a(n) = 4 * a(n - 1) - 3 * a(n - 2) - 2 * a(n - 3) + a(n - 4). ●

▶ [A018808] 0,0,6,20,62,140,306,536,938,1492,2306,3296,4722,6460,8830,11568,14946,18900,23926,29544,36510,44388,53586,63648,75674 ⋆ Number of lines through at least 2 points of an n X n grid of points. ● a(0) = L(0,1) = R1(0) = 0, a(n) = L(n,n) = 2L(n - 1,n) - L(n - 1,n - 1) + R1(n), L(n - 1,n) = 2L(n - 1,n - 1) - L(n - 2,n - 1) + R2(n), R1(n) = R1(n - 1) + 4(phi(n - 1) - e(n)), e(n)=0, n even, e(n) = phi((n - 1) / 2), n odd, R2(n) = (n - 1)phi(n - 1), n even, R2(n)=(n - 1)phi(n - 1) / 2, n=1 mod 4, R2(n)=0, n=3 mod 4. - _ Seppo Mustonen _ , Apr 25 2009 ●

▶ [A074353] 0,0,0,0,6,20,70,196,542,1396,3526,8628,20766,49092,114598,264356,603998,1368148,3076166,6870740,15256158,33696804,74073510,162127940,353460766 ⋆ Coefficient of q ^ 2 in nu(n), where nu(0)=1, nu(1)=b and, for n>=2, nu(n)=b * nu(n - 1) + lambda * (1 + q + q ^ 2 + ... + q ^ (n - 2)) * nu(n - 2) with (b,lambda)=(1,2). ● a(0)=0 for n>0, a(n) = (1 / 81) * (2 ^ (n - 1) * (6 * n ^ 2 - 43) + (- 1) ^ n * (6 * n ^ 2 - 24 * n + 62)). - _ Benoit Cloitre _ , Jan 16 2003 ● a(n) = 3 * a(n - 1) + 3 * a(n - 2) - 11 * a(n - 3) - 6 * a(n - 4) + 12 * a(n - 5) + 8 * a(n - 6) for n>7. ●

▶ [A235367] 0,6,20,72,156,342,600,1056,1640,2550,3660,5256,7140,9702,12656,16512,20880,26406,32580,40200,48620,58806,69960,83232,97656 ⋆ Sum of positive even numbers up to n ^ 2. ● a(n) = (n ^ 4 + 2n ^ 2) / 4 if n is even, a(n) = (n ^ 4 - 1) / 4 if n is odd. ● a(n) = ((n ^ 2 - (n ^ 2 mod 2)) / 4)(n ^ 2 + 2 - (n ^ 2 mod 2)). - _ Alonso del Arte _ , Jan 16 2014 ●

▶ [A028402] 6,20,72,272,1056,4160,16512,65792,262656,1049600,4196352,16781312,67117056,268451840,1073774592,4295032832,17180000256,68719738880,274878431232,1099512676352,4398048608256,17592190238720,70368752566272,281474993487872,1125899940397056 ⋆ Number of types of Boolean functions of n variables under a certain group. ● a(n) = 2 ^ (n - 1) * (2 ^ (n - 1) + 1). - _ Sean A. Irvine _ , Jan 07 2020 ● a(n) = 6 * a(n - 1) - 8 * a(n - 2) for n > 3. ●

▶ [A246036] 1,6,20,88,336,1376,5440,21888,87296,349696,1397760,5593088,22368256,89481216,357908480,1431666688,5726601216,22906535936,91625881600,366504050688,1466015154176,5864062713856,23456246661120,93824995033088,375299963355136 ⋆ Expansion of (1 + 4 * x) / ((1 + 2 * x) * (1 - 4 * x)). ● a(n) = 2 * a(n - 1) + 8 * a(n - 2). ● a(n) = (4 ^ (1 + n) - (- 2) ^ n) / 3. - _ Colin Barker _ , Aug 22 2014 ●

▶ [A333048] 1,1,6,20,96,572,3971,31201,272334,2605268,27042522,302171806,3611295430,45911641817,618074912240,8776287336812,130994094465946,2049114914257540,33504826964461451,571285301051283841,10136481840545237652,186803012671904648805 ⋆ Number of compositions of n ^ 2 into powers of n. ● a(n) = 1 + Sum _{ j=0..n } binomial(n * (n - j) + j,j) if n>1, a(0) = a(1) = 1. ●

▶ [A266846] 1,6,20,104,336,1696,5440,27264,87296,436736,1397760,6989824,22368256,111845376,357908480,1789558784,5726601216,28633071616,91625881600,458129670144,1466015154176,7330076819456,23456246661120,117281237499904,375299963355136 ⋆ Decimal representation of the n - th iteration of the "Rule 70" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = 2 * a(n - 1) + 16 * a(n - 2) - 32 * a(n - 3) for n>2. ●

▶ [A267855] 1,6,20,120,368,1888,5952,30592,96000,488960,1537024,7829504,24604672,125263872,393691136,2004320256,6299254784,32068993024,100788338688,513105461248,1612616564736,8209685282816,25801869230080,131354989690880,412829958012928 ⋆ Decimal representation of the n - th iteration of the "Rule 230" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = 16 * a(n - 2) + 16 * a(n - 4) - 256 * a(n - 6) for n>5. ●

▶ [A309454] 0,6,20,265,1980,11584,11584,246882,1070425,29894430,29894430,1159795426,9069102398,9069102398,202847123212,2237516341759,2237516341759,201635099759365,1132157155708193,6017397949439540,17416293134812683,49616989920484689,1613261619087052703 ⋆ The successive approximations up to 7 ^ n for 7 - adic integer 6 ^ (1 / 5). ● a(0) = 0 and a(1) = 6, a(n) = a(n - 1) + 4 * (a(n - 1) ^ 5 - 6) mod 7 ^ n for n > 1. ●

▶ [A020880] 6,21,26,81,129,349,650,1614,3281,7772,16565,38265,83635,190656,422266,955967,2131986,4809229,10764221,24235939,54347662,122246248,274396853,616899656,1385407029 ⋆ Number of strong elementary edge - subgraphs in Moebius ladder M _ n. ● a(n) = 2 * a(n - 1) + 5 * a(n - 2) - 9 * a(n - 3) - 8 * a(n - 4) + 12 * a(n - 5) + 5 * a(n - 6) - 6 * a(n - 7) - a(n - 8) + a(n - 9) for n>10. ●

▶ [A151943] 1,6,21,36,55,80,108,140 ⋆ Maximal number of moves required for the 2 X n generalization of the sliding block 15 - puzzle (or fifteen - puzzle). ● a(n) = 2 * n ^ 2 + O(n * log(n)). ● a(n) >= 2 * n ^ 2 - n. ●

▶ [A056488] 6,21,36,126,216,756,1296,4536,7776,27216,46656,163296,279936,979776,1679616,5878656,10077696,35271936,60466176,211631616,362797056,1269789696,2176782336,7618738176,13060694016 ⋆ Number of periodic palindromes using a maximum of six different symbols. ● a(n) = 6 ^ ((n + 1) / 2) for n odd, a(n) = 6 ^ (n / 2) * 7 / 2 for n even. ● a(n) = 6 * a(n - 2). ● a(n) = (k ^ floor((n + 1) / 2) + k ^ ceiling((n + 1) / 2)) / 2, where k = 6 is the number of possible colors. - _ Robert A. Russell _ , Sep 22 2018 ●

▶ [A180863] 6,21,44,75,114,161,216,279,350,429,516,611,714,825,944,1071,1206,1349,1500,1659,1826,2001,2184,2375,2574 ⋆ Wiener index of the n - sun graph. ● a(n) = n * (4 * n - 5). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n). - _ Eric W. Weisstein _ , Sep 07 2017 ●

▶ [A180857] 1,6,21,44,85,138,217,312,441,590,781,996,1261,1554,1905,2288,2737,3222,3781,4380,5061,5786,6601,7464,8425 ⋆ Wiener index of the Moebius ladder M(n). ● a(n) = n * (n ^ 2 + 2 * n - 2) / 2 if n is even; ● a(n) = n * (n ^ 2 + 2 * n - 1) / 2 if n is odd. ● a(n) = n * (- 3 - (- 1) ^ n + 4 * n + 2 * n ^ 2) / 4. - _ Colin Barker _ , Oct 31 2012 ●

▶ [A081266] 0,6,21,45,78,120,171,231,300,378,465,561,666,780,903,1035,1176,1326,1485,1653,1830,2016,2211,2415,2628 ⋆ Staggered diagonal of triangular spiral in A051682. ● a(n) = 6 * C(n,1) + 9 * C(n,2). ● a(n) = 3 * n * (3 * n + 1) / 2. ● a(n) = 9 * n + a(n - 1) - 3 for n>0, a(0)=0. - _ Vincenzo Librandi _ , Aug 08 2010 ● a(n) = Sum _{ k=0..3n } (- 1) ^ (n + k) * k ^ 2. - _ Bruno Berselli _ , Aug 29 2013 ●

▶ [A212656] 1,6,21,46,81,126,181,246,321,406,501,606,721,846,981,1126,1281,1446,1621,1806,2001,2206,2421,2646,2881 ⋆ a(n) = 5 * n ^ 2 + 1. ● a(n) = 5 * n ^ 2 + 1 = (1 + n * sqrt(- 5)) * (1 - n * sqrt(- 5)). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Jul 10 2012 ●

▶ [A051941] 6,21,46,82,130,191,266,356,462,585,726,886,1066,1267,1490,1736,2006,2301,2622,2970,3346,3751,4186,4652,5150 ⋆ Truncated triangular pyramid numbers: a(n) = (n - 7) * (n ^ 2 + 10 * n - 108) / 6, n >= 8. ● a(n) = Sum _{ k

=8..n } k * (k + 1) / 2 - 30. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). (End) ●

▶ [A267370] 0,6,21,48,90,150,231,336,468,630,825,1056,1326,1638,1995,2400,2856,3366,3933,4560,5250,6006,6831,7728,8700 ★ Partial sums of A140091. ● a(n) = n * (n + 1) * (n + 5) / 2. ●

▶ [A213388] 1,6,21,48,93,158,249,368,521,710,941,1216,1541,1918,2353,2848,3409,4038,4741,5520,6381,7326,8361,9488,10713 ★ Number of (w,x,y) with all terms in { 0,...,n } and 2|w - x| >= max(w,x,y) - min(w,x,y). ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - 2 * a(n - 3) + 3 * a(n - 4) - a(n - 5). ● a(n) = (8 * n ^ 3 + 30 * n ^ 2 + 28 * n + 3 * ((- 1) ^ n + 3)) / 12. ● a(n) = (4 * n ^ 3 + 15 * n ^ 2 + 14 * n + 6) / 6 for n even. ● a(n) = (4 * n ^ 3 + 15 * n ^ 2 + 14 * n + 3) / 6 for n odd. ●

▶ [A263418] 1,6,21,51,106,201,361,626,1061,1771,2926,4801,7841,12766,20741,33651,54546,88361,143081,231626,374901,606731,981846,1588801,2570881 ★ a(n) is the total number of pentagrams in a variant of pentagram fractal after n iterations. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - a(n - 3) + a(n - 4) for n>3. ● a(n) = - 14 + 2 ^ (- 1 - n) * ((25 - 11 * sqrt(5)) * (1 - sqrt(5)) ^ n + (1 + sqrt(5)) ^ n * (25 + 11 * sqrt(5))) - 10 * (1 + n). - _ Colin Barker _ , Mar 12 2017 ●

▶ [A097124] 1,1,1,6,21,51,126,351,981,2646,7101,19251,52326,141831,384021,1040526,2820501,7644051,20713806,56132271,152119701,412245126,1117169901,3027492531,8204438646 ★ Expansion of (1 - x) ^ 2 / ((1 - x) ^ 3 - 5x ^ 3). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + 6 * a(n - 3). ● a(n) = Sum { k=0..floor(n / 3) } binomial(n, 3k) * 5 ^ k. ●

▶ [A069778] 1,6,21,52,105,186,301,456,657,910,1221,1596,2041,2562,3165,3856,4641,5526,6517,7620,8841,10186,11661,13272,15025 ★ q - factorial numbers 3! _ q. ● a(n) = (n + 1) * (n ^ 2 + n + 1). ● a(n) = n ^ 8 mod (n ^ 3 + n), with offset 1..a(1)=1. - _ Gary Detlefs _ , May 02 2010 ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4), n>3. - _ Harvey P. Dale _ , Jul 11 2011 ●

▶ [A238702] 1,6,21,55,119,227,396,645,996,1474,2106,2922,3955,5240,6815,8721,11001,13701,16870,20559,24822,29716,35300,41636,48789 ★ Sum of the smallest parts of the partitions of 4n into 4 parts. ● a(n) = (1 / 9) * n ^ 4 + (1 / 3) * n ^ 3 + (5 / 18) * n ^ 2 + (1 / 6) * n + O(1). - _ Ralf Stephan _ , May 29 2014 ●

▶ [A002817] 0,1,6,21,55,120,231,406,666,1035,1540,2211,3081,4186,5565,7260,9316,11781,14706,18145,22155,26796,32131,38226,45150 ★ Doubly triangular numbers: a(n) = n * (n + 1) * (n ^ 2 + n + 2) / 8. ● a(n) = 3 * binomial(n + 2, 4) + binomial(n + 1, 2). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) + 3. - _ Warut Roonguthai _ , Dec 13 1999 ● a(n) = Sum(Sum(1 + Sum(3 * n))). - Xavier Acloque, Jan 21 2003 ● a(n) = ((n - 1) ^ 4 + 3 * (n - 1) ^ 3 + 2 * (n - 1) ^ 2 + 2 * n)) / 8. - _ Bruce J. Nicholson _ , Apr 05 2017 ● a(n) = a(- 1 - n) for all n in Z. - _ Michael Somos _ , Apr 17 2017 ● a(n) = 2 * n ^ 2 - n + 6 * binomial(n, 3) + 3 * binomial(n, 4). - _ Ryan Jean _ , Mar 20 2021 ●

▶ [A132366] 1,6,21,56,125,246,441,736,1161,1750,2541,3576,4901,6566,8625,11136,14161,17766,22021,27000,32781,39446,47081,55776,65625 ★ Partial sum of centered tetrahedral numbers A005894. ● a(n) = (n ^ 4 + 4 * n ^ 3 + 11 * n ^ 2 + 14 * n + 6) / 6. ● a(n - 1) = n ^ 2 * (5 + n ^ 2) / 6. ● a(n - 1) = binomial(n + 4,5) - binomial(n,5). ● a(n - 1) = 1 * C(n,1) + 4 * C(n,2) + 6 * C(n,3) + 4 * C(n,4), where the coefficient of C(n,k) is the number of achiral colorings using exactly k colors. ●

▶ [A050190] 0,6,21,56,126,250,462,792,1287,2002,3000,4368,6188,8568,11628,15500,20349,26334,33649,42504,53125,65780,80730,98280,118755 ★ T(n,5), array T as in A050186; a count of aperiodic binary words. ● a(n) = n * floor(C(n - 1, 4) / 5). (End) ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) + 2 * a(n - 5) - 8 * a(n - 6) + 12 * a(n - 7) - 8 * a(n - 8) + 2 * a(n - 9) - a(n - 10) + 4 * a(n - 11) - 6 * a(n - 12) + 4 * a(n - 13) - a(n - 14). - _ R. J. Mathar _ , May 20 2013 ●

▶ [A008498] 1,6,21,56,126,251,456,771,1231,1876,2751,3906,5396,7281,9626,12501,15981,20146,25081,30876,37626,45431,54396,64631,76251 ★ 4 - dimensional centered tetrahedral numbers. ● a(n) = C(n,0) + 5 * C(n,1) + 10 * C(n,2) + 10 * C(n,3) + 5 * C(n,4). - _ Paul Barry _ , Jul 01 2003 ● a(n) = (5 * n ^ 4 + 10 * n ^ 3 + 55 * n ^ 2 + 50 * n + 24) / 24. - _ Paul Barry _ , Jul 01 2003 ● a(n) = binomial(n + 5,5) - binomial(n,5). - _ Zerinvary Lajos _ , Jul 21 2006 ●

▶ [A008488] 1,6,21,56,126,252,461,786,1266,1946,2877,4116,5726,7776,10341,13502,17346,21966,27461,33936,41502,50276,60381,71946,85106 ★ Expansion of (1 - x ^ 6) / (1 - x) ^ 6. ● a(n) = (n ^ 4 + 15 * n ^ 2 + 8) / 4 for n > 0. - _ R. J. Mathar _ , Jan 27 2009 ●

▶ [A120478] 6,21,56,126,252,461,786,1266,1946,2877,4116,5726,7776,10341,13502,17346,21966,27461,33936,41502,50276,60381,71946,85106,100002 ★ Binomial(n + 6,5) - binomial(n,5). ● a(0)=6, a(1)=21, a(2)=56, a(3)=126, a(4)=252, a(n)= 5a(n - 1) - 10a(n - 2) + 10a(n - 3) - 5a(n - 4) + a(n - 5) [From Harvey P. Dale, May 04 2011] ●

▶ [A000389] 0,0,0,0,0,1,6,21,56,126,252,462,792,1287,2002,3003,4368,6188,8568,11628,15504,20349,26334,33649,42504 ★ Binomial coefficients C(n,5). ● a(n) = n * (n - 1) * (n - 2) * (n - 3) * (n - 4) / 120. ● a(n) = (n ^ 5 - 10 * n ^ 4 + 35 * n ^ 3 - 50 * n ^ 2 + 24 * n) / 120. (Replace all x _ i's in the cycle index with n.) ● a(n + 2) = Sum _{ i + j + k=n } i * j * k. - _ Benoit Cloitre _ , Nov 01 2002 ● a(n + 3) = (1 / 2!) * (d ^ 2 / dx ^ 2)S(n,x)| _{ x=2 } , n>=2, one half of second derivative of Chebyshev S - polynomials evaluated at x=2. See A049310. - _ Wolfdieter Lang _ , Apr 04 2007 ● a(n) = - a(4 - n) for all n in Z. - _ Michael Somos _ , Oct 07 2014 ● a(n + 4) = 1 * C(n,1) + 4 * C(n,2) + 6 * C(n,3) + 4 * C(n,4) + 1 * C(n,5), where the coefficient of C(n,k) is the number of unoriented pentachoron colorings using exactly k colors. ●

▶ [A140228] 1,6,21,56,126,252,463,798,1308,2058,3129,4620,6650,9360,12915,17506,23352,30702,39837,51072,64758,81284,101079,124614,152404 ★ Binomial transform of [1, 5, 10, 10, 5, 1, 1, - 1, 1, - 1, 1, ...]. ● a(n) = n * (274 + 85 * n + n ^ 4) / 60 for n >= 1. ●

▶ [A290993] 0,0,0,0,0,1,6,21,56,126,252,463,804,1365,2366,4368,8736,18565,40410,87381,184604,379050,758100,1486675,2884776 ★ p - INVERT of (1,1,1,1,1,...), where p(S) = 1 - S ^ 6. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) for n>5. Corrected by _ Colin Barker _ , Aug 24 2017 ●

▶ [A373937] 0,0,0,0,1,6,21,56,126,252,463,805,1378,2457,4823,10556,24753,58976,137808,310974,675850,1420916,2914906,5900631,11931283 ★ Number of compositions of 7 * n - 5 into parts 6 and 7. ● a(n) = Sum _{ k=0..floor(n / 6) } binomial(n + k,n - 5 - 6 * k). ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 6 * a(n - 6) + a(n - 7). ●

▶ [A100356] 0,0,0,0,0,1,6,21,56,126,252,504,924,1584,2574,4004,6006,9009,13104,18564,25704,34884,46512,62016,81396 ★ Maximal number of 165432 patterns in a permutation of 1,2,...,n. ● a(n) = max(a(k) + k * choose(n - k, 5), 1 <= k < n) ●

▶ [A337895] 1,6,21,56,127,258,483,848,1413,2254,3465,5160,7475,10570,14631,19872,26537,34902,45277,58008,73479,92114,114379,140784,171885 ★ Number of oriented colorings of the tetrahedral facets (or vertices) of a regular 4 - dimensional simplex using n or fewer colors. ● a(n) = n * (24 + 35 * n ^ 2 + n ^ 4) / 60. ● a(n) = binomial[4 + n,5] + binomial[n,5]. ● a(n) = 1 * C(n,1) + 4 * C(n,2) + 6 * C(n,3) + 4 * C(n,4) + 2 * C(n,5), where the coefficient of C(n,k) is the number of oriented colorings using exactly k colors. ●

▶ [A145134] 0,1,6,21,56,127,259,490,876,1498,2472,3963,6204,9522,14374,21397,31477,45844,66203,94915,135247,191717,270570,380435,533232 ★ Expansion of x / ((1 - x - x ^ 4) * (1 - x) ^ 5). ● a(n) = 6a(n - 1) - 15a(n - 2) + 20a(n - 3) - 14a(n - 4) + a(n - 5) + 9a(n - 6) - 10a(n - 7) + 5a(n - 8) - a(n - 9). ●

▶ [A247904] 1,6,21,56,131,286,601,1236,2511,5066,10181,20416,40891,81846,163761,327596,655271,1310626,2621341,5242776,10485651,20971406,41942921,83885956,167772031 ★ Start with a single pentagon; at n - th generation add a pentagon at each expandable vertex (this is the "vertex to side" version); a(n) is the sum of all label values at n - th generation. (See comment for construction rules.) ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 2 * a(n - 3). - _ Colin Barker _ , Sep 26 2014 ● a(n) = 10 * 2 ^ n - (5 * n + 9). ●

▶ [A056341] 6,21,56,231,888,4291,20646,107331,563786,3037314,16514106,90782986,502474356,2799220041,15673673176,88162676511,497847963696,2821127825971,16035812864946,91404068329560 ★ Number of bracelets of length n using a maximum of six different colored beads. ● a(n) = Sum _{ d|n } phi(d) * 6 ^ (n / d) / (2 * n); ● a(n) = 6 ^ ((n + 1) / 2) / 2 for n odd, ●

▶ [A144899] 0,1,6,21,57,133,280,547,1010,1785,3047,5058,8208,13075,20513,31781,48732,74090,111856,167903,250848,373330,553883,819681,1210561 ★ Expansion of x / ((1 - x - x ^ 3) * (1 - x) ^ 5). ● a(n) = Sum _{ j=0..floor((n + 4) / 3) } binomial(n - 2 * j + 4, j + 5). ●

▶ [A053809] 1,6,21,57,133,281,554,1039,1878,3302,5686,9638,16143,26796,44179,72471,118435,193015,313920,509805,827036,1340636,2171996,3517532,5695053 ★ Second partial sums of A001891. ● a(n) = a(n - 1) + a(n - 2) + (2 * n + 3) * C(n + 2, 2) / 3; a(- x)=0. ● a(n) = Fibonacci(n + 10) - (2 * n ^ 3 + 27 * n ^ 2 + 145 * n + 324) / 6. ● a(n) = 5 * a(n - 1) - 9 * a(n - 2) + 6 * a(n - 3) + a(n - 4) - 3 * a(n - 5) + a(n - 6). - _ Wesley Ivan Hurt _ , Apr 21 2021 ●

▶ [A290891] 0,0,1,6,21,57,138,330,827,2175,5826,15519,40836,106584,277696,724968,1897380,4972113,13029534,34125561,89336141,233831262,612074526,1602358863,4195173507 ★ p - INVERT of the positive integers, where p(S) = 1 - S ^ 3. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 21 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). ●

▶ [A047520] 0,1,6,21,58,141,318,685,1434,2949,5998,12117,24378,48925,98046,196317,392890,786069,1572462,3145285,6290970,12582381,25165246,50331021,100662618 ★ a(n) = 2 * a(n - 1) + n ^ 2, a(0) = 0. ● a(n) = 2 ^ n * Sum _{ i=1..n } i ^ 2 / 2 ^ i. - _ Benoit Cloitre _ , Jan 27 2002 ● a(0)=0, a(1)=1, a(2)=6, a(3)=21, a(n) = 5 * a(n - 1) - 9 * a(n - 2) + 7 * a(n - 3) - 2 * a(n - 4). - _ Harvey P. Dale _ , Aug 21 2011 ●

▶ [A294836] 1,1,6,21,58,178,494,1365,3640,9533,24401,61384,151958,370335,890565,2113913,4959199,11505799,26420628,60082005,135386341,302448477,670148898,1473387787,3215519032 ★ Expansion of Product _{ k>=1 } (1 + x ^ k) ^ (k * (2 * k - 1)). ● a(0) = 1 and a(n) = (1 / n) * Sum _{ k=1..n } b(k) * a(n - k) where b(n) = Sum _{ d|n } d ^ 2 * (2 * d - 1) * (- 1) ^ (1 + n / d). - _ Seiichi Manyama _ , Nov 14 2017 ●

▶ [A321257] 1,6,21,60,147,330,705,1464,2991,6054,12189,24468,49035,98178,196473,393072,786279,1572702,3145557,6291276,12582723,25165626,50331441,100663080,201326367 ★ Start with an equilateral triangle, and repeatedly append along the triangles of the previous step equilateral triangles with half their side length that do not overlap with any prior triangle; a(n) gives the number of triangles appended at n - th step. ● a(n) = 3 * (2 ^ (n - 1) + 3 * (2 ^ (n - 1) - n)) for any n > 1. ● a(n) - 4 * a(n - 1) + 5 * a(n - 2) - 2 * a(n - 3) = 0, with n>1. - _ Vincenzo Librandi _ , Nov 02 2018 ●

▶ [A066524] 0,1,6,21,60,155,378,889,2040,4599,10230,22517,49140,106483,229362,491505,1048560,2228207,4718574,9961453,20971500,44040171,92274666,192937961,402653160 ★ a(n) = n * (2 ^ n - 1). ● a(n) = n * Sum _{ j = 1..n } binomial(n,j), n >= 0. - _ Zerinvary Lajos _ , May 10 2007 ●

▶ [A113070] 1,6,21,60,156,384,912,2112,4800,10752,23808,52224,113664,245760,528384,1130496,2408448,5111808,10813440,22806528,47972352,100663296,210763776,440401920,918552576 ★ Expansion of ((1 + x) / (1 - 2x)) ^ 2. ● a(n) = 3 * 2 ^ n(3n + 1) / 4 + 0 ^ n / 4; ● a(n) = Sum _{ k=0..n } C(n, k) * Sum _{ j=0..k } (j + 1) * 3 ^ j. ● a(n) = 4 * a(n - 1) - 4 * a(n - 2); a(0)=1, a(1)=6, a(2)=21. - _ Harvey P. Dale _ , May 20 2011 ●

▶ [A048476] 1,6,21,61,161,401,961,2241,5121,11521,25601,56321,122881,266241,573441,1228801,2621441,5570561,11796481,24903681,52428801,110100481,230686721,482344961,1006632961 ★ a(n) = T(4,n), array T given by A048472. ● a(n) = 5 * n * 2 ^ (n - 1) + 1. ● a(n) = 5 * a(n - 1) - 8 * a(n - 2) + 4 * a(n - 3) for n>2. G.f.: (1 + x - x ^ 2) / ((1 - x) * (1 - 2 * x) ^ 2). - _ Colin Barker _ , Feb 18 2016 ●

▶ [A122678] 1,6,21,61,166,441,1161,3046,7981,20901,54726,143281,375121,982086,2571141,6731341,17622886,46137321,120789081,316229926,827900701,2167472181,5674515846,14856075361,38893710241 ★ Related to number of n - circum - C _ 5 H _ 5 systems. ● a(n) = 2 ^ (- 1 - n) * (- 2 ^ (3 + n) - (- 5 + sqrt(5)) * (3 + sqrt(5)) ^ n + (3 - sqrt(5)) ^ n * (5 + sqrt(5))). ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) + a(n - 3) for n>3. (End) ●

▶ [A291226] 6,21,62,168,426,1029,2394,5403,11892,25626,54228,112958,232056,470904,945152,1878351,3699666,7227807,14015538,26991978,51654946,98275461,185958162,350093468,655988730 ⋆ p - INVERT of (0,1,0,1,0,1,...), where p(S) = (1 - S) ^ 6. ● a(n) = 6 * a(n - 1) - 9 * a(n - 2) - 10 * a(n - 3) + 30 * a(n - 4) + 6 * a(n - 5) - 41 * a(n - 6) - 6 * a(n - 7) + 30 * a(n - 8) + 10 * a(n - 9) - 9 * a(n - 10) - 6 * a(n - 11) - a(n - 12) for n >= 13. ●

▶ [A228704] 1,6,21,62,180,540,1683,5418,17901,60390,207207,720954,2537964,9023328,32354910,116873028,424901655,1553574330,5709123135,21075032250,78114397680,290595385080,1084663520730,4060907367660,15246207481050 ⋆ Number of 4 - irreducible maps made up of two hexagons and n squares. ● a(0) = 1, and a(n) = (6 * (2 * (n - 1))! / (n! * (n - 1)!)) * 2F1(- 5, 1 - n, 2 * (1 - n); - 1) for n >= 1, where 2F1(a, b, c; z) is the hypergeometric function. - _ Franck Maminirina Ramaharo _ , Jan 27 2019 ●

▶ [A134931] 1,6,21,66,201,606,1821,5466,16401,49206,147621,442866,1328601,3985806,11957421,35872266,107616801,322850406,968551221,2905653666,8716961001,26150883006,78452649021,235357947066,706073841201 ⋆ a(n) = (5 * 3 ^ n - 3) / 2. ● a(n) = 3 * (a(n - 1) + 1), with a(0)=1. ●

▶ [A364636] 0,1,6,21,68,205,594,1673,4616,12537,33630,89309,235212,615173,1599402,4137105,10653712,27327857,69856182,178017061,452390740,1146776253,2900399106,7320463897,18441561624 ⋆ a(n) = ((1 - sqrt(2)) ^ n + (1 + sqrt(2)) ^ n) * n / 2. ● a(n) = [x ^ n] (x + 2 * x ^ 2 - x ^ 3) / (- 1 + x * (2 + x)) ^ 2. ●

▶ [A318943] 0,0,0,1,6,21,68,208,612,1752,4916,13588,37128,100548,270404,723208,1925844,5110644,13524872,35713828,94140900,247806600,651572660,1711695508,4493475336 ⋆ Number of Dyck paths with n nodes and altitude 3. ● a(n) = 7 * a(n - 1) - 17 * a(n - 2) + 16 * a(n - 3) - 4 * a(n - 4) for n>7. - _ Colin Barker _ , Apr 11 2019 ●

▶ [A360090] 1,1,6,21,71,251,882,3088,10829,37975,133146,466852,1636944,5739647,20125051,70564951,247423522,867546829,3041899638,10665883415,37398034921,131129599227,459782762029,1612146986543,5652708454881 ⋆ a(n) = Sum _{ k=0..n } binomial(5 * k,n - k). ● a(n) = a(n - 1) + 5 * a(n - 2) + 10 * a(n - 3) + 10 * a(n - 4) + 5 * a(n - 5) + a(n - 6). ●

▶ [A107660] 1,6,21,72,225,702,2133,6480,19521,58806,176661,530712,1592865,4780782,14344533,43040160,129127041,387400806,1162222101,3486725352,10460235105,31380882462,94142824533,282429005040,847287546561 ⋆ Sum 3 ^ max(k,n - k),k=0..n. ● a(2n) = 3 ^ (2n + 1) - 2 * 3 ^ n; a(2n + 1) = 9 ^ (n + 1) - 3 ^ (n + 1). ●

▶ [A200249] 6,21,75,267,951,3387,12063,42963,153015,544971,1940943,6912771,24620199,87686139,312298815,1112268723,3961403799,14108748843,50249054127,178964660067,637392088455,2270105585499,8085100933407,28795513971219 ⋆ Number of 0..5 arrays x(0..n - 1) of n elements with each no smaller than the sum of its previous elements modulo 6. ● a(n) = (3 * 2 ^ (- 2 - n) * ((3 - sqrt(17)) ^ n * (- 5 + sqrt(17)) + (3 + sqrt(17)) ^ n * (5 + sqrt(17)))) / sqrt(17). ●

▶ [A054625] 1,6,21,76,336,1560,7826,39996,210126,1119796,6047412,32981556,181402676,1004668776,5597460306,31345666736,176319474366,995685849696,5642220380006,32071565263716,182807925027504,1044616697187576,5982804736593846 ⋆ Number of n - bead necklaces with 6 colors. ● a(n) = (1 / n) * Sum _{ d|n } phi(d) * 6 ^ (n / d), n > 0. ● a(0) = 1; a(n) = (1 / n) * Sum _{ k=1..n } 6 ^ gcd(n,k). - _ Ilya Gutkovskiy _ , Apr 17 2021 ●

▶ [A108306] 1,6,21,81,306,1161,4401,16686,63261,239841,909306,3447441,13070241,49553046,187869861,712268721,2700415746,10238053401,38815407441,147160382526,557927369901,2115263257281,8019571881546,30404505416481,115272231894081 ⋆ Expansion of (3 * x + 1) / (1 - 3 * x - 3 * x ^ 2). ● a(n) = (1 / 2) * (3 / 2 + (1 / 2) * sqrt(21)) ^ n + (3 / 14) * (3 / 2 + (1 / 2) * sqrt(21)) ^ n * sqrt(21) - (3 / 14) * sqrt(21) * (3 / 2 - (1 / 2) * sqrt(21)) ^ n + (1 / 2) * (3 / 2 - (1 / 2) * sqrt(21)) ^ n, with n >= 0. - _ Paolo P. Lava _ , Jun 12 2008 ●

▶ [A199115] 6,21,81,321,1281,5121,20481,81921,327681,1310721,5242881,20971521,83886081,335544321,1342177281,5368709121,21474836481,85899345921,343597383681,1374389534721,5497558138881,21990232555521,87960930222081 ⋆ a(n) = 5 * 4 ^ n + 1. ● a(n) = 4 * a(n - 1) - 3. ● a(n) = 5 * a(n - 1) - 4 * a(n - 2). ●

▶ [A320649] 1,1,6,21,82,294,1116,4103,15326,56833,211454,785441,2920058,10851016,40331874,149892024,557098510,2070493098,7695228038,28600012305,106294901116,395055313662,1468262641770,5456942875386,20281270503914 ⋆ Expansion of 1 / (1 - Sum _{ k>=1 } k ^ 2 * x ^ k / (1 - x ^ k)). ● a(0) = 1; a(n) = Sum _{ k=1..n } sigma _ 2(k) * a(n - k). ●

▶ [A219596] 6,21,84,233,550,1188,2415,4684,8746,15833,27945,48286,81907,136629,224336,362747,577797,906780,1402432,2138159,3214644,4768098,6980453,10091830,14415652 ⋆ Number of 3 X n arrays of the minimum value of corresponding elements and their horizontal or vertical neighbors in a random, but sorted with lexicographically nondecreasing rows and nonincreasing columns, 0..2 3 X n array ● a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10) for n>13. ●

▶ [A182251] 0,1,6,21,84,425,2586,18137,145096,1305873,13058830,143647141,1723765788,22408955257,313725373682,4705880605425,75294089686800,1279999524675617,23039991444161430,437759837439067189,8755196748781343780,183859131724408219737,4044900897936980834346 ⋆ a(0) = 0, a(n) = (a(n - 1) OR n) * n. ● a(0) = 0, a(n) = (a(n - 1) OR n) * n, where OR is the bitwise logical inclusive - OR operator. ●

▶ [A191597] 0,1,6,21,85,342,1365,5461,21846,87381,349525,1398102,5592405,22369621,89478486,357913941,1431655765,5726623062,22906492245,91625968981,366503875926,1466015503701,5864062014805,23456248059222,93824992236885 ⋆ Expansion of x * (1 + 3 * x) / ((1 - 4 * x) * (1 + x + x ^ 2)). ● a(n) = 3 * a(n - 1) + 3 * a(n - 2) + 4 * a(n - 3), n >= 3. ● a(n + 3) - a(n) = 21 * 4 ^ n. ● a(n) = 1 / 3 * 4 ^ n - 1 / 6 * ((- 1 / 2 - (1 / 2 * i) * sqrt(3)) ^ n + (- 1 / 2 + (1 / 2 * i) * sqrt(3)) ^ n) + (1 / 6 * i) * sqrt(3) * ((- 1 / 2 + (1 / 2 * I) * sqrt(3)) ^ n - (- 1 / 2 - (1 / 2 * i) * sqrt(3)) ^ n), with n >= 0 and i = sqrt(- 1). - _ Paolo P. Lava _ , Jul 01 2011 ●

▶ [A088556] 6,21,86,341,1366,5461,21846,87381,349526,1398101,5592406,22369621,89478486,357913941,1431655766,5726623061,22906492246,91625968981,366503875926,1466015503701,5864062014806,23456248059221,93824992236886,375299968947541,1501199875790166 ⋆ Numbers of the form (4 ^ n + 4 ^ (n - 1) + ... + 1) + (n mod 2). ● a(n) = 4 * a(n - 1) + a(n - 2) - 4 * a(n - 3). - _ Colin Barker _ , Apr 02 2012 ●

▶ [A137966] 1,1,1,6,21,86,396,1812,8607,41958,207333,1040234,5281965,27078756,140021248,729369474,3823598232,20158251814,106809280563,568471343322,3037782047947,16292380484454,87669285293451,473172657154822 ⋆ G.f. satisfies A(x) = 1 + x + x ^ 2 * A(x) ^ 6. ● a(n) = Sum _{ k=0..n - 1 } C(n - k,k) / (n - k) * C(6 * k,n - k - 1) for n>0 with a(0)=1. - _ Paul D. Hanna _ , Jun 16 2009 ●

▶ [A006359] 1,6,21,91,371,1547,6405,26585,110254,457379,1897214,7869927,32645269,135416457,561722840,2330091144,9665485440,40093544735,166312629795,689883899612,2861717685450,11870733787751,49241167758705,204258021937291,847285745315256 ⋆ Number of distributive lattices; also number of paths with n turns when light is reflected from 6 glass plates. ● a(n) = 3 * a(n - 1) + 6 * a(n - 2) - 4 * a(n - 3) - 5 * a(n - 4) + a(n - 5) + a(n - 6). ● a(n) is asymptotic to z(6) * w(6) ^ n where w(6) = (1 / 2) / cos(6 * Pi / 13) and z(6) is the root 1 < x < 2 of P(6, X) = - 1 - 91 * X + 2366 * X ^ 2 + 26364 * X ^ 3 - 142805 * X ^ 4 - 371293 * X ^ 5 + 371293 * X ^ 6 - _ Benoit Cloitre _ , Oct 16 2002 ●

▶ [A001553] 6,21,91,441,2275,12201,67171,376761,2142595,12313161,71340451,415998681,2438235715,14350108521,84740914531,501790686201,2978035877635,17706908038281,105443761093411,628709267031321,3752628871164355,22418196307542441,134023513204581091 ⋆ a(n) = 1 ^ n + 2 ^ n + ... + 6 ^ n. ● a(n) = Sum _{ k=1..6 } k ^ n. ●

▶ [A365880] 1,1,6,21,116,566,3176,17501,101391,590756,3519782,21163038,128845344,790810400,4894134376,30486741869,191068074202,1203710067455,7619193325238,48430121151156,309011352878208,1978450305442086,12706836843595840 ⋆ Expansion of (1 / x) * Series _ Reversion(x * (1 + x) ^ 4 * (1 - x) ^ 5). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..n } (- 1) ^ k * binomial(4 * n + k + 3,k) * binomial(6 * n - k + 4,n - k). ●

▶ [A056308] 1,6,21,126,666,3996,23436,140616,840456,5042736,30236976,181421856,1088414496,6530486976,39182222016,235093332096,1410555793536,8463334761216,50779983373056,304679900238336,1828079250264576,10968475501587456,65810852102532096 ⋆ Number of reversible strings with n beads using a maximum of six different colors. ● a(n) = (6 ^ n + 6 ^ floor((n + 1) / 2)) / 2. ● a(n) = 6 * a(n - 1) + 6 * a(n - 2) - 36 * a(n - 3) for n > 3. - _ Colin Barker _ , Mar 20 2017 ● a(n) = 6 ^ (n + floor((n - 1) / 2)) * a(1 - n) for all n in Z. - _ Michael Somos _ , Jul 10 2018 ●

▶ [A081077] 6,21,126,846,5781,39606,271446,1860501,12752046,87403806,599074581,4106118246,28143753126,192900153621,1322157322206,9062201101806,62113250390421,425730551631126,2918000611027446,20000273725560981 ⋆ a(n) = Lucas(4 * n + 2) + 3, or Lucas(2 * n) * Lucas(2 * n + 2). ● a(n) = 8a(n - 1) - 8a(n - 2) + a(n - 3). ● a(n) = 3 + (3 / 2) *{ [(7 / 2) - (3 / 2) * sqrt(5)] ^ n + [(7 / 2) + (3 / 2) * sqrt(5)] ^ n }+ (1 / 2) * sqrt(5) *{ [(7 / 2) + (3 / 2) * sqrt(5)] ^ n - [(7 / 2) - (3 / 2) * sqrt(5)] ^ n } , with n>=0. - _ Paolo P. Lava _ , Dec 01 2008 ●

▶ [A054366] 1,1,6,21,146,1101,10632,107062,1151802,12845442,147845706,1743640908,20988257544,256987965379,3192893716320,40171643847696,510997002280522,6563060603543658,85017387536789916,1109744672540225367,14585261039005676046 ⋆ Number of unlabeled 6 - ary cacti having n polygons. ● a(n) = (1 / n) * (Sum _{ d|n } phi(n / d) * binomial(6 * d, d)) - 5 * binomial(6 * n, n) / (5 * n + 1) for n > 0. - _ Andrew Howroyd _ , May 02 2018 ●

▶ [A372137] 1,1,6,21,181,771,7728,34689,385632,1732971,21041598,92147697,1217109951,5099210686,73380609681,289623783084,4564472639880,16722146775195,290985244619874,974044248064611,18925364858562927,56848541164586820,1251693011560795635 ⋆ G.f. A(x) satisfies A(x) = 1 / (1 - x * (1 + 9 * x) ^ (1 / 3) * A(x) ^ 2). ● a(n) = Sum _{ k=0..n } 9 ^ (n - k) * binomial(3 * k,k) * binomial(k / 3,n - k) / (2 * k + 1). ●

▶ [A078118] 1,6,22,25,28,30,40,42,46,52,58,60,68,70,72,78,87,88,96,98,102,105,106,112,114 ⋆ n + 1 does not divide sigma(n!). ● a(n) seems to be asymptotic to c * n with c=4.8.... ●

▶ [A264043] 6,22,35,46,62,74,82,115,155,166,206,259,262,295,323,355,358,362,395,466,478,482,502,511,559 ⋆ Numbers n such that n and n + 3 are consecutive semiprimes. ● a(n) >> n log n. - _ Charles R Greathouse IV _ , Nov 02 2015 ●

▶ [A202803] 0,6,22,48,84,130,186,252,328,414,510,616,732,858,994,1140,1296,1462,1638,1824,2020,2226,2442,2668,2904 ⋆ a(n) = n * (5 * n + 1). ● a(n) = 5 * n ^ 2 + n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) with a(0) = 0, a(1) = 6, a(2) = 22. - _ Philippe Deléham _ , Mar 27 2013 ● a(n) = (n + 1) ^ 3 - (1 + n + n * (n - 1) + n * (n - 1) * (n - 2)). - _ Michael Somos _ , Aug 10 2014 ●

▶ [A092185] 0,6,22,53,104,180,286,427,608,834,1110,1441,1832,2288,2814,3415,4096,4862,5718,6669,7720,8876,10142,11523,13024 ⋆ a(n) = (5 / 6) * n ^ 3 + (5 / 2) * n ^ 2 + (8 / 3) * n. ● a(n)= + 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). G.f.: x * (6 - 2 * x + x ^ 2) / (x - 1) ^ 4. - _ R. J. Mathar _ , Jun 21 2010 ●

▶ [A212692] 0,0,6,22,54,106,184,292,436,620,850,1130,1466,1862,2324,2856,3464,4152,4926,5790,6750,7810,8976,10252,11644 ⋆ Number of (w,x,y,z) with all terms in { 1,...,n } and w<|x - y| + |y - z|. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - 2 * a(n - 3) + 3 * a(n - 4) - a(n - 5). ●

▶ [A363606] 0,1,6,22,56,133,252,484,798,1344,2002,3157,4368,6441,8630,12112,15504,21274,26334,35014,42762,55133,65780,84349,98336 ⋆ Expansion of Sum _{ k >0 } x ^ (2 * k) / (1 - x ^ k) ^ 6. ● a(n) = Sum _{ d|n } binomial(d + 3,5). ●

▶ [A071239] 0,1,6,22,60,135,266,476,792,1245,1870,2706,3796,5187,6930,9080,11696,14841,18582,22990,28140,34111,40986,48852,57800 ⋆ a(n) = n * (n + 1) * (n ^ 2 + 2) / 6. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5), n>4. - _ Harvey P. Dale _ , May 01 2013 ●

▶ [A105450] 0,6,22,60,142,305,607,1134,2008,3396,5520,8668,13206,19591,28385,40270,56064,76738,103434,137484,180430,234045,300355,381662,480568 ⋆ a(n) = binomial(n + 5,6) + binomial(n + 3,3) + binomial(n + 2,3) + binomial(n - 1, 1). ● a(0)=0, a(1)=6, a(2)=22, a(3)=60, a(4)=142, a(5)=305, a(6)= 607, a(n)= 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). - _ Harvey P. Dale _ , Jun 28 2011 ●

► [A011888] 0,1,6,22,61,142,292,548,958,1583,2498,3794,5579,7980,11144,15240,20460,27021,35166,45166,57321,71962,89452,110188,134602 ⋆ Partial sums of A011863. ● a(n) = (2 * n + 3) * (6 * n ^ 4 + 36 * n ^ 3 + 76 * n ^ 2 + 66 * n + 5) / 960 - (- 1) ^ n / 64. G.f. x * (1 + x + x ^ 2) / ((1 + x) * (x - 1) ^ 6). - _ R. J. Mathar _ , Mar 24 2011 ●

► [A081282] 0,1,6,22,62,147,308,588,1044,1749,2794,4290,6370,9191,12936,17816,24072,31977,41838,53998,68838,86779,108284,133860,164060 ⋆ Generalized centered polygonal numbers. ● a(n) = 2 * C(n + 3, 5) + C(n + 2, 3). ● a(n) = n * (n + 1) * (n + 2) * (n ^ 2 + 2 * n + 7) / 60. - _ Carl Najafi _ , Nov 18 2012 ● a(0)=0, a(1)=1, a(2)=6, a(3)=22, a(4)=62, a(5)=147, a(n)=6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). - _ Harvey P. Dale _ , Jan 09 2014 ●

► [A001769] 1,6,22,62,148,314,610,1106,1897,3108,4900,7476,11088,16044,22716,31548,43065,57882,76714,100386,129844,166166,210574,264446,329329 ⋆ Expansion of 1 / ((1 + x) * (1 - x) ^ 7). ● a(n) = Sum _{ k=0..n } (- 1) ^ (n - k) * C(k + 6, 6). ● a(n) = (4 * n ^ 6 + 96 * n ^ 5 + 910 * n ^ 4 + 4320 * n ^ 3 + 10696 * n ^ 2 + 12864 * n + 5715) / 5760 + (- 1) ^ n / 128. (End) ●

► [A307621] 1,6,22,63,151,316,596,1037,1693,2626,3906,5611,7827,10648,14176,18521,23801,30142,37678,46551,56911,68916,82732,98533,116501 ⋆ Number of cycles in the n - dipyramidal graph. ● a(n) = n * (n - 1) * (2 * n ^ 2 - 4 * n + 15) / 6 + 1. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ●

► [A053739] 1,6,22,63,155,344,709,1383,2587,4685,8273,14323,24416,41119,68595,113590,187030,306605,500950,816410,1327986,2157046,3499982,5674578,9195035 ⋆ Partial sums of A014166. ● a(n) = Sum _{ i=0..floor(n / 2) } binomial(n + 5 - i, n - 2 * i) for n >= 0. ● a(n) = a(n - 1) + a(n - 2) + C(n + 4,4); n >= 0; a(- 1)=0. ● a(n) = Sum _{ k=1..n } binomial(n - k + 5,k + 4), with n>=0. - _ Paolo P. Lava _ , Apr 16 2008 ● a(n) = Fibonacci(n + 11) - (n ^ 4 + 22 * n ^ 3 + 203 * n ^ 2 + 974 * n + 2112) / 4!. - _ G. C. Greubel _ , Sep 06 2019 ●

► [A055797] 1,6,22,64,162,372,792,1584,3003,5434,9438,15808,25636,40392,62016,93024,136629,196878,278806,388608,533830,723580,968760,1282320,1679535 ⋆ T(2n + 4,n), array T as in A055794. ● a(n - 5) = binomial(n,7) + binomial(n,5) for n>4. - _ Zerinvary Lajos _ , Jul 24 2006 ● a(n) = 8 * (n - 1) - 28 * (n - 2) + 56 * (n - 3) - 70 * (n - 4) + 56 * (n - 5) - 28 * (n - 6) + 8 * (n - 7) - (n - 8). - _ Vincenzo Librandi _ , May 01 2012 ● a(n) = (n + 5) * (n + 4) * (n + 3) * (n + 2) * (n + 1) * (n ^ 2 - n + 42) / 5040. - _ R. J. Mathar _ , Oct 01 2021 ●

► [A002663] 0,0,0,0,1,6,22,64,163,382,848,1816,3797,7814,15914,32192,64839,130238,261156,523128,1047225,2095590,4192510,8386560,16774891 ⋆ a(n) = 2 ^ n - C(n,0) - C(n,1) - C(n,2) - C(n,3). ● a(n) = Sum _{ k=0..n } binomial(n,k + 4) = Sum _{ k=4..n } binomial(n,k). - _ Paul Barry _ , Aug 23 2004 ● a(n) = 2 * a(n - 1) + binomial(n - 1,3). - _ Paul Barry _ , Aug 23 2004 ● a(n) = (6 * 2 ^ n - n ^ 3 - 5 * n - 6) / 6. - _ Mats Granvik _ , _ Gary W. Adamson _ , Feb 17 2010 ●

► [A099855] 0,1,6,22,64,164,392,904,2048,4592,10208,22496,49152,106560,229504,491648,1048576,2227968,4718080,9960960,20971520,44041216,92276736,192940032,402653184 ⋆ a(n) = n * 2 ^ n - 2 ^ (n / 2) * sin(Pi * n / 4). ● a(n) = Sum _{ k=0..n } 2 ^ (k / 2) * sin(Pi * k / 4) * 2 ^ (n - k) * (n - k + 1). ● a(n) = 6 * a(n - 1) - 14 * a(n - 2) + 16 * a(n - 3) - 8 * a(n - 4). ●

► [A003469] 1,6,22,65,171,420,988,2259,5065,11198,24498,53157,114583,245640,524152,1113959,2359125,4980546,10485550,22019865,46137091,96468716,201326292,419430075,872414881 ⋆ Number of minimal covers of an (n + 1) - set by a collection of n nonempty subsets, a(n) = A035348(n,n - 1). ● a(n) = (n + 1) * 2 ^ n - (n + 1) * (n + 2) / 2. - _ Paul Barry _ , Jan 27 2003 ●

► [A027992] 1,6,22,66,178,450,1090,2562,5890,13314,29698,65538,143362,311298,671746,1441794,3080194,6553602,13893634,29360130,61865986,130023426,272629762,570425346,1191182338 ⋆ a(n) = 1 * T(n,0) + 2 * T(n,1) + ... + (2n + 1) * T(n,2n), T given by A027926. ● a(n) = 5 * a(n - 1) - 8 * a(n - 2) + 4 * a(n - 3). G.f.: (1 + x) / ((1 - x) * (1 - 2 * x) ^ 2). - _ Colin Barker _ , Apr 04 2012 ●

► [A271389] 1,0,1,6,22,66,179,460,1148,2820,6869,16658,40306,97414,235303,568216,1371960,3312392,7997033,19306782,46610958,112529098,271669595,655868772,1583407668,3822684684 ⋆ a(n) = 2 * a(n - 1) + a(n - 2) + n ^ 2 for n > 1, with a(0) = 0, a(1) = 1. ● a(n) = 5 * a(n - 1) - 8 * a(n - 2) + 4 * a(n - 3) + a(n - 4) - a(n - 5). ● a(n) = (1 / 8) * (- 4 * (n * (n + 4) + 5) + (10 - 7 * sqrt(2)) * (1 - sqrt(2)) ^ n + (10 + 7 * sqrt(2)) * (1 + sqrt(2)) ^ n). ●

► [A351648] 1,1,1,6,22,69,224,819,3296,13942,60941,276399,1309207,6479609,33377271,178186018,983386188,5604262733,32955823822,199771724691,1246747659198,8000380516898,52728354046939,356593588048023,2472544614851517 ⋆ G.f. A(x) satisfies: A(x) = 1 + x + x ^ 2 * A(x / (1 - x)) / (1 - x) ^ 5. ● a(0) = a(1) = 1; a(n) = Sum _{ k=0..n - 2 } binomial(n + 2,k + 4) * a(k). ●

► [A171495] 6,22,70,214,646,1942,5830,17494,52486,157462,472390,1417174,4251526,12754582,38263750,114791254,344373766,1033121302,3099363910,9298091734,27894275206,83682825622,251048476870,753145430614,2259436291846 ⋆ a(n) = 3 * a(n - 1) + 4 for n > 0; a(0) = 6. ● a(n) = 2 * (4 * 3 ^ n - 1). ●

► [A178706] 0,1,6,22,70,215,652,1964,5900,17709,53138,159426,478290,1434883,4304664,12914008,38742040,116226137,348678430,1046035310,3138105950,9414317871,28242953636,84728860932,254186582820 ⋆ Partial sums of floor(3 ^ n / 5). ● a(n) = round((3 * 3 ^ n - 5 * n - 5) / 10). ● a(n) = floor((3 * 3 ^ n - 5 * n - 3) / 10). ● a(n) = ceiling((3 * 3 ^ n - 5 * n - 7) / 10). ● a(n) = round((3 * 3 ^ n - 5 * n - 3) / 10). ● a(n) = a(n - 4) + 8 * 3 ^ (n - 3) - 2, n > 4. ● a(n) = 5 * a(n - 1) - 8 * a(n - 2) + 8 * a(n - 3) - 7 * a(n - 4) + 3 * a(n - 5), n > 5. ●

► [A217530] 0,6,22,75,204,460,906,1617,2680,4194,6270,9031,12612,17160,22834,29805,38256,48382,60390,74499,90940,109956,131802,156745,185064 ⋆ a(n) = n ^ 4 / 2 - 5 * n ^ 3 / 2 + 21 * n - 30. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Wesley Ivan Hurt _ , Nov 10 2014 ●

► [A111566] 1,6,22,76,260,888,3032,10352,35344,120672,412000,1406656,4802624,16397184,55983488,191139584,652591360,2228086272,7607162368,2597247692 8,88675582976,302757378048,1033678346240,3529198628864 ⋆ a(n) = ((1 + sqrt(8)) * (2 + sqrt(2)) ^ n + (1 - sqrt(8)) * (2 - sqrt(2)) ^ n) / 2. ● a(n) = 4 * a(n - 1) - 2 * a(n - 2), a(0) = 1, a(1) = 6. ●

► [A003699] 1,6,22,82,306,1142,4262,15906,59362,221542,826806,3085682,11515922,42978006,160396102,598606402,2234029506,8337511622,31116016982,116126556306,433390208242,1617434276662,6036346898406,22527953316962,84075466369442 ⋆ Number of Hamiltonian cycles in C _ 4 X P _ n. ● a(n) = ceiling((1 - sqrt(1 / 3)) * (2 + sqrt(3)) ^ n) for n > 1. ● a(1) = 1, a(2) = 6, a(3) = 22 and for n > 3, a(n) = 4 * a(n - 1) - a(n - 2). (End) ● a(n) = ((1 + sqrt(3)) * (2 - sqrt(3)) ^ n - (1 - sqrt(3)) * (2 + sqrt(3)) ^ n) / sqrt(3), n > 1. ● a(n) = 2 * (ChebyshevU(n - 1, 2) - ChebyshevU(n - 2, 2)) for n >1, with a(1)=1. - _ G. C. Greubel _ , Dec 23 2019 ●

► [A255465] 1,6,22,90,358,1434,5734,22938,91750,367002,1468006,5872026,23488102,93952410,375809638,1503238554,6012954214,24051816858,96207267430,384829069722,1539316278886,6157265115546,24629060462182,98516241848730,394064967394918 ⋆ a(n) = A255464(2 ^ n - 1). ● a(n) = (- 2 * (- 1) ^ n + 7 * 4 ^ n) / 5. ● a(n) = 3 * a(n - 1) + 4 * a(n - 2) for n>1. ●

► [A349834] 1,6,22,92,358,1460,5756,23288,92294,372036,1478420,5947272,23671516,95102088,378922552,1521039088,6064766662,24329781988,97059838372,389194630888,1553243997172,6226104229528,24855484384072,99604902663568,397733491426972 ⋆ Expansion of sqrt(1 + 4 * x) / (1 - 4 * x). ● a(n) = 2 ^ (2 * n) + (Sum _{ k=0..n - 1 } (- 1) ^ k * 2 ^ (2 * n - 1 - 2 * k) * CatalanNumber(k)). ● a(n) = 2 ^ (2 * n + 1 / 2) - ((- 1) ^ n * CatalanNumber(n) * hypergeom([1, n + 1 / 2], [n + 2], - 1)) / 2. - _ Peter Luschny _ , Dec 03 2021 ●

► [A100300] 1,1,6,22,99,451,2140,10396,51525,259429,1323362,6824434,35519687,186346759,984400760,5231789176,27954506505,150079713481,809181079294,4379654830222,23787413800491,129607968854731,708230837732436,3880366912218772,21312485647242829 ⋆ Number of dissections of a convex n - gon by noninte rsecting diagonals into an odd number of regions. ● a(n) = Sum _{ k=1..floor(n - 1) / 2) } C(n - 3, 2 * k - 2) * C(n + 2 * k - 3, 2 * k - 2) / (2 * k - 1). ● a(n) = ((10 * (n - 5) ^ 2 + 37 * (n - 5) + 30) * a(n - 1) + (10 * (n - 5) ^ 2 + 43 * (n - 5) + 42) * a(n - 2) - (n - 5) * (2 * n - 5) * a(n - 3)) / ((n - 1) * (2 * n - 7)), with a(3) = a(4) = 1, a(5) = 6. ● a(n) = Hypergeometric4F3([n / 2, (n + 1) / 2, (3 - n) / 2, (4 - n) / 2], [1 / 2, 1, 3 / 2], 1). (End) ●

► [A179601] 1,6,22,108,460,2088,9208,41136,182704,813600,3618784,16104384,71651008,318820992,1418569600,6311953152,28084886272,124963582464,556023840256,2474023050240,11008138832896,48980603529216,217938687588352 ⋆ Eight white kings and one red king on a 3 X 3 chessboard. G.f.: (1 + 4 * x) / (1 - 2 * x - 10 * x ^ 2 - 4 * x ^ 3). ● a(n) = 2 * a(n - 1) + 10 * a(n - 2) + 4 * a(n - 3) with a(0)=1, a(1)=6 and a(2)=22. ● a(n) = (- 2 / 5) * (- 1 / 2) ^ (- n) + ((2 + 3 * A) * A ^ (- n - 1) + (2 + 3 * B) * B ^ (- n - 1)) / 10 with A = (- 1 + sqrt(6) / 2) and B = (- 1 - sqrt(6) / 2). ●

► [A193463] 1,1,6,22,117,705,4972,39916,360105,3606865,39721266,477061026,6205806061,86925018817,1304396077272,20877063837400,355003736855697,6391465311099681,121460116022428510,2429579599296960430,51027940329395658981,1122742916106886416001 ⋆ Row sums of triangle A076732. ● a(n) = Sum _{ k=1..n } (k / (n - k)!) * Sum _{ j=0..k - 1 } (- 1) ^ j * binomial(k - 1,j) * (n - 1 - j)!. ●

► [A193445] 1,6,22,154,548,7488,26136,471168,3272832,46114560,241087680,10152587520,39605518080,1245053859840,19626466406400,402874746624000,2446811181158400,156604969130803200,863130293635276800,6202993369776537600 0,858218507492806656000 ⋆ a(n) = n! * Sum _{ d|n } H(d) * H(n / d), where H(n) is the n - th harmonic number. ● a(n) = n! * Sum _{ d|n } (Sum _{ j=1..d } 1 / j) * (Sum _{ k=1..n / d } 1 / k). ●

► [A000993] 1,6,22,159,1044,9121,78132,748719,7161484,70800861,699869892,6978353179,69580078524,695292156201,6947835288052,69465637212039,694529215501164,6944974263529141,69446563720728612,694457689921141299,6944497426351013404 ⋆ Number of distinct quadratic residues mod 10 ^ n; also number of distinct n - digit endings of base - 10 squares. ● a(n) = floor((83 - (- 1) ^ n * (27 + 2 ^ (n + 1) + 5 ^ (n + 1)) + 9 * 2 ^ n + (9 + 2 ^ n) * 5 ^ (n + 1)) / 72). ● a(n + 8) = 130 a(n + 6) - 3129 a(n + 4) + 13000 a(n + 2) - 10000 a(n) for n >= 1. ●

► [A081097] 1,6,23,40,273,1870,7343,12816,87841,602070,2364359,4126648,28284465,193864606,761316191,1328767776,9107509825,62423800998,245141449079,427859097160,2932589879121,20100270056686,78934785287183 ⋆ Numbers n such that n ^ 2= (1 / 5) * (n + floor(sqrt(5) * n * floor(sqrt(5) * n))). ● a(1)=1; a(2)=6; a(3)=23; a(4)=40; a(4n)=2 * a(4n - 1) - a(4n - 2); a(4n + 1)=7 * a(4n) - a(4n - 2) - 1; a(4n + 2)=7 * a(4n + 1) - a(4n - 1) - 1; a(4n + 3)=4 * a(4n + 2) - a(4n + 1) / 2 - 1 / 2. ●

► [A235332] 6,23,49,84,128,181,243,314,394,483,581,688,804,929,1063,1206,1358,1519,1689,1868,2056,2253,2459,2674,2898 ⋆ a(n) = n * (9 * n + 25) / 2 + 6. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A022269] 0,6,23,51,90,140,201,273,356,450,555,671,798,936,1085,1245,1416,1598,1791,1995,2210,2436,2673,2921,3180 ⋆ a(n) = n * (11 * n + 1) / 2. ● a(n) = 11 * n + a(n - 1) - 5 with n>0, a(0)=0. - _ Vincenzo Librandi _ , Aug 04 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) with n>2, a(0)=0, a(1)=6, a(2)=23. - _ Philippe Deléham _ , Mar 27 2013 ●

► [A026817] 6,23,51,90,140,201,273,356,450,555,671,798,936,1085,1245,1416,1598,1791,1995,2210,2436,2673,2921,3180,3450 ⋆ Number of sets which can be obtained by selecting unique elements from two sets with 2n and 3n elements respectively and n common elements. ● a(n)=(11 * n ^ 2 + n) / 2. ●

► [A212570] 0,1,6,23,52,105,178,287,424,609,830,1111,1436,1833,2282,2815,3408,4097,4854,5719,6660,7721,8866,10143,11512 ⋆ Number of (w,x,y,z) with all terms in { 1,...,n } and |w - x|=|x - y| + |y - z|. ● a(n) = 2a(n - 1) + a(n - 2) - 4a(n - 3) + a(n - 4) + 2a(n - 5) - a(n - 6). ● a(n) = n * (- 1 - 3 * (- 1) ^ n + 10 * n ^ 2) / 12. G.f.: x * (x ^ 4 + 4 * x ^ 3 + 10 * x ^ 2 + 4 * x + 1) / ((x - 1) ^ 4 * (x + 1) ^ 2). [_ Colin Barker _ , Oct 04 2012] ●

► [A234729] 0,6,23,55,108,187,297,443,631,866,1152,1496,1902,2376,2922,3547,4254,5050,5940,6928,8020,9221,10536,11971,13531 ⋆ Volume of right regular hexagonal pyramid with height and side lengths n, rounded down. ● a(n)= floor(n ^ 2 * evalf(sqrt(3) * 3 / 2) * n / 3) = floor(0.8660254040 * n ^ 3). ●

► [A162267] 6,23,57,114,200,321,483,692,954,1275,1661,2118,2652,3269,3975,4776,5678,6687,7809,9050,10416,11913,13547,15324,17250 ⋆ a(n) = (2 * n ^ 3 + 5 *

n ^ 2 + 5 * n) / 2. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). (End) ●

▶ [A208598] 6,23,60,125,226,371,568,825,1150,1551,2036,2613,3290,4075,4976,6001,7158,8455,9900,11501,13266,15203,17320,19625,22126 ★ Number of 4 - bead necklaces labeled with numbers - n..n not allowing reversal, with sum zero. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>4. ●

▶ [A273314] 1,6,23,64,137,250,411,628,909,1262,1695,2216,2833,3554,4387,5340,6421,7638,8999,10512,12185,14026,16043,18244,20637 ★ Partial sums of the number of active (ON,black) cells in n - th stage of growth of two - dimensional cellular automaton defined by "Rule 643", based on the 5 - celled von Neumann neighborhood. ● a(n) = (4 * n ^ 3 + 12 * n ^ 2 - 13 * n + 15) / 3 for n>0. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>4. ●

▶ [A213557] 1,6,23,70,184,438,971,2042,4125,8076,15424,28876,53189,96670,173747,309362,546456,958690,1672015,2901170,5011321,8621976,14781888,25263000,43053769 ★ Antidiagonal sums of the convolution array A213590. ● a(n) = 5 * a(n - 1) - 8 * a(n - 2) + 2 * a(n - 3) + 6 * a(n - 4) - 4 * a(n - 5) - a(n - 6) + a(n - 7). ● a(n) = n * Fibonacci(n + 7) - 2 * Fibonacci(n + 9) + 2 * n ^ 2 + 20 * n + 68. - _ G. C. Greubel _ , Jul 06 2019 ●

▶ [A273386] 1,6,23,72,153,274,443,668,957,1318,1759,2288,2913,3642,4483,5444,6533,7758,9127,10648,12329,14178,16203,18412,20813 ★ Partial sums of the number of active (ON,black) cells in n - th stage of growth of two - dimensional cellular automaton defined by "Rule 659", based on the 5 - celled von Neumann neighborhood. ● a(n) = (11 * n) / 3 + 4 * n ^ 2 + (4 * n ^ 3) / 3 - 11 for n>1. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>5. ●

▶ [A045618] 1,6,23,72,201,522,1291,3084,7181,16398,36879,81936,180241,393234,851987,1835028,3932181,8388630,17825815,37748760,79691801,167772186,352321563,738197532,1543503901 ★ Partial sums of A000337(n + 4), n >= 0. ● a(n) = n + 5 + (n - 1) * 2 ^ (n + 2). ● a(n) = Sum _{ i=0...n + 1 } (2 ^ (n + 2 - i) - 1) * (2 ^ i - 1). - _ J. M. Bergot _ , Sep 16 2017 ● a(n) = Sum _{ k=0..n + 2 } Sum _{ i=0..n + 2 } (i - k) * C(n - k + 2,i). - _ Wesley Ivan Hurt _ , Sep 19 2017 ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) + n + 1, with a(- 1) = a(- 2) = 0. - _ Jesse Fiedler _ , Aug 20 2019 ●

▶ [A038737] 1,6,23,73,211,581,1560,4135,10890,28590,74946,196326,514123,1346148,3524441,9227311,24157645,63245795,165579930,433494205,1134902916,2971214796,7778741748,20365010748,53316290821 ★ T(n,n - 2), array T as in A038792. ● a(n) = Sum _{ k=0..n } binomial(n + 2,k + 3) * Fibonacci(k). - _ Vladimir Kruchinin _ , Oct 24 2016 ● a(n) = Sum _{ k=0..n } binomial(k + 1,2) * Fibonacci(2 * n - 2 * k). - _ Greg Dresden _ and _ Yu Xiao _ , Jul 19 2020 ●

▶ [A136530] 1,6,23,74,216,592,1552,3936,9728,23552,56064,131584,305152,700416,1593344,3596288,8060928,17956864,39780352,87687168,192413696,420478976,915406848,1986002944,4294967296 ★ a(n) = 2 ^ n * (3 * n ^ 2 + 13 * n + 8) / 8. ● a(n) = 6 * a(n - 1) - 12 * a(n - 2) + 8 * a(n - 3). ●

▶ [A060188] 1,6,23,76,237,722,2179,6552,19673,59038,177135,531428,1594309,4782954,14348891,43046704,129140145,387420470,1162261447,3486784380,10460353181,31381059586,94143178803,282429536456,847288609417 ★ A column and diagonal of A060187. ● a(n) = 5 * a(n - 1) - 7 * a(n - 2) + 3 * a(n - 3). ●

▶ [A220148] 6,23,77,242,727,2062,5493,13773,32664,73654,158660,327852,652215,1253089,2331716,4212805,7407330,12701233,21278447,34888718,56073127,88463032,137171407,209299293,314584340 ★ Number of n X 3 arrays of the minimum value of corresponding elements and their horizontal or diagonal neighbors in a random, but sorted with lexicographically nondecreasing rows and nonincreasing columns, 0..2 n X 3 array. ● a(n) = 12 * a(n - 1) - 66 * a(n - 2) + 220 * a(n - 3) - 495 * a(n - 4) + 792 * a(n - 5) - 924 * a(n - 6) + 792 * a(n - 7) - 495 * a(n - 8) + 220 * a(n - 9) - 66 * a(n - 10) + 12 * a(n - 11) - a(n - 12) for n>12. ●

▶ [A054491] 1,6,23,86,321,1198,4471,16686,62273,232406,867351,3236998,12080641,45085566,168261623,627960926,2343582081,8746367398,32641887511,121821182646,454642843073,1696750189646,6332357915511,23632681472398 ★ a(n) = 4 * a(n - 1) - a(n - 2), a(0)=1, a(1)=6. ● a(n) = (6 * ((2 + sqrt(3)) ^ n - (2 - sqrt(3)) ^ n) - ((2 + sqrt(3)) ^ (n - 1) - (2 - sqrt(3)) ^ (n - 1))) / (2 * sqrt(3)). ●

▶ [A344815] 1,6,23,92,349,1394,5491,21944,87497,349902,1398479,5593892,22371109,89484074,357919803,1431678080,5726645377,22906581142,91626057879,366504227292,1466015859181,5864063418866,23456249463283,93824997852744,375299974563657 ★ a(n) = Sum _{ k=1..n } floor(n / k) * 4 ^ (k - 1). ● a(n) = Sum _{ k=1..n } Sum _{ d|k } 4 ^ (d - 1). ● a(n) = (1 / 3) * Sum _{ k=1..n } (4 ^ floor(n / k) - 1). - _ Ridouane Oudra _ , Feb 16 2023 ●

▶ [A120775] 1,6,23,100,421,1786,7563,32040,135721,574926,2435423,10316620,43701901,185124226,784198803,3321919440,14071876561,59609425686,252509579303,1069647742900,4531100550901,19194049946506,81307300336923 ★ The (3,1) - entry of the matrix M ^ n, where M is the 3 X 3 matrix [0,1,1; 2,1,2; 1,2,2] (n>=1). ● a(n) = 3a(n - 1 + 5a(n - 2) + a(n - 3) (follows from the minimal polynomial of the matrix M). ● a(n) = (3 / 4) * [2 - sqrt(5)] ^ n - (1 / 2) * (- 1) ^ n + (3 / 4) * [2 + sqrt(5)] ^ n + (1 / 4) * [2 + sqrt(5)] ^ n * sqrt(5) - (1 / 4) * [2 - sqrt(5)] ^ n * sqrt(5), with n>=0. - _ Paolo P. Lava _ , Jun 12 2008 ● a(n) = (Lucas(3n - 1) + (- 1) ^ n) / 2. - _ Greg Dresden _ , Oct 09 2020 ●

▶ [A072710] 6,24,27,33,66,84,87,93,126,144,147,153,186,204,207,213,246,264,267,273,306,324,327,333,366 ★ Last digit of F(n) is 8 where F(n) is the n - th Fibonacci number. ● a(n) = (- 60 - 6 * (- 1) ^ n - (21 - 9 * i) * (- i) ^ n - (21 + 9 * i) * i ^ n + 60 * n) / 4 where i=sqrt(- 1). - _ Colin Barker _ , Oct 16 2015 ●

▶ [A328180] 0,0,0,0,0,6,24,41,60,84,112,144,180,220,264,312,364,420,480,544,612,684,760,840,924 ★ a(n) is the maximum number of 5 - cycles possible in an n - vertex planar graph. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n > 10. ● a(n) = 0 for n < 5, a(5) = 6, a(6) = 24, a(7) = 41, a(n) = 2 * n ^ 2 - 10 * n + 12 for n > 7 (see Theorem 1 in Győri et al.). ●

▶ [A033581] 0,6,24,54,96,150,216,294,384,486,600,726,864,1014,1176,1350,1536,1734,1944,2166,2400,2646,2904,3174,3456 ★ a(n) = 6 * n ^ 2. ● a(n) = 12 * n + a(n - 1) - 6, with a(0)=0. - _ Vincenzo Librandi _ , Aug 05 2010 ● a(n) = 3 * floor(1 / (1 - cos(1 / n))) = floor(1 / (1 - n * sin(1 / n))) for n > 0. - _ Clark Kimberling _ , Oct 08 2014 ●

▶ [A213393] 0,6,24,54,108,192,300,450,648,882,1176,1536,1944,2430,3000,3630,4356,5184,6084,7098,8232,9450,10800,12288,13872 ★ Number of (w,x,y) with all terms in { 0,...,n } and 2 * max(w,x,y) > 3 * min(w,x,y). ● a(n) = 2 * a(n - 1) - a(n - 2) + 2 * a(n - 3) - 4 * a(n - 4) + 2 * a(n - 5) - a(n - 6) + 2 * a(n - 7) - a(n - 8). ● a(n) = (8 * n ^ 2 + 16 * n + 8 - 8 * n * ((2 * n + 2) mod 3) - 8 * ((2 * n + 2) mod 3) + 2 * ((2 * n + 2) mod 3) ^ 2) / 3. (End) ●

▶ [A212904] 1,6,24,58,118,202,324,478,682,926,1232,1586,2014,2498,3068,3702,4434,5238,6152,7146,8262,9466,10804,12238,13818 ★ Number of (w,x,y,z) with all terms in { 0,...,n } and |w - x| + |x - y + |y - z|=n. ● a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + a(n - 4) + 2 * a(n - 5) - a(n - 6) for n>=1. ●

▶ [A211615] 0,6,24,60,114,186,276,384,510,654,816,996,1194,1410,1644,1896,2166,2454,2760,3084,3426,3786,4164,4560,4974 ★ Number of ordered triples (w,x,y) with all terms in {- n,... - 1,1,...,n } and - 1<=w + x + y<=1. ● a(n) = 3a(n - 1) - 3a(n - 2) + a(n - 3) for n>3. ● a(n) = 6 - 9 * n + 9 * n ^ 2 for n>0. G.f.: 6 * x * (1 + x + x ^ 2) / (1 - x) ^ 3. [_ Colin Barker _ , Sep 09 2012] ●

▶ [A195647] 0,6,24,60,116,200,318,472,668,914,1214,1568,1988,2480,3040,3680,4408,5224,6130,7140,8260,9478,10816,12280,13864 ★ a(n) is the optimal wire - length for an n X n grid. ● a(n) = n * (n ^ 2 + n - 2) - t * (2t ^ 2 - 6nt + 3n ^ 2 + 3n - 2) / 3, where t = round((6n - sqrt(6 * (2 - 3n + 3n ^ 2))) / 6). ●

▶ [A007531] 0,0,0,6,24,60,120,210,336,504,720,990,1320,1716,2184,2730,3360,4080,4896,5814,6840,7980,9240,10626,12144 ★ a(n) = n * (n - 1) * (n - 2) (or n! / (n - 3)!). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + 6, n > 2. - _ Zak Seidov _ , Feb 09 2006 ● a(- n) = - a(n + 2). ● a(n + 1) = n ^ 3 - n. - _ Mohammad K. Azarian _ , Jul 26 2007 ● a(0) = 0, a(n) = a(n - 1) + 3 * (n - 1) * (n - 2). - _ Jean - François Alcover _ , Jan 08 2013 ●

▶ [A366546] 0,0,0,6,24,60,480,5250,40656,363384,4839120,65198430,859543080,13311494196,233478687624,4190929145130,79746180437280,1667320408619760,36965002127643936,854734007793179574,20962277675893792440,544839141515795731500 ★ Expansion of e.g.f. - log(1 - x ^ 3 * exp(x)). ● a(n) = n! * Sum _{ k=1..floor(n / 3) } k ^ (n - 3 * k - 1) / (n - 3 * k)!. ●

▶ [A101854] 6,24,61,125,225,371,574,846,1200,1650,2211,2899,3731,4725,5900,7276,8874,10716,12825,15225,17941,20999,24426,28250,32500 ★ a(n) = n * (n + 1) * (n ^ 2 + 21 * n + 50) / 24. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5), n > 5. - _ Harvey P. Dale _ , Nov 05 2011 ●

▶ [A325517] 0,1,6,24,64,145,282,504,832,1305,1950,2816,3936,5369,7154,9360,12032,15249,19062,23560,28800,34881,41866,49864,58944 ★ a(n) = n * ((2 * n + 1) * (2 * n ^ 2 + 2 * n + 3) - 3 * (- 1) ^ n) / 24. ● a(n) = 3 * a(n - 1) - a(n - 2) - 5 * a(n - 3) + 5 * a(n - 4) + a(n - 5) - 3 * a(n - 6) + a(n - 7) for n > 6. ● a(n) = n ^ 2 * (2 * n ^ 2 + 3 * n + 4) / 12 if n is even. ● a(n) = n * (n + 1) * (2 * n ^ 2 + n + 3) / 12 if n is odd. ●

▶ [A274772] 0,1,6,24,66,149,292,520,860,1345,2010,2896,4046,5509,7336,9584,12312,15585,19470,24040,29370,35541,42636,50744,59956 ★ Zero together with the partial sums of A056640. ● a(n) = (4 * n ^ 4 + 8 * n ^ 3 + 2 * n ^ 2 + 4 * n + 3 * (1 - (- 1) ^ n)) / 24. Therefore : ● a(2 * k) = k * (k + 1) * (8 * k ^ 2 + 1) / 3, a(2 * k + 1) = (k + 1) * (8 * k ^ 3 + 16 * k ^ 2 + 9 * k + 3) / 3. ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 5 * a(n - 4) - 4 * a(n - 5) + a(n - 6) for n>5. ●

▶ [A338512] 6,24,67,263,823,3276,10839,43287,147943 ★ a(n) is the number of Chvátal - satisfying graphical n - sequences. ● a(n) = O(4 ^ n / n ^ 3) where O indicates the big O notation (see Ref. 2 in Bauer). ●

▶ [A006528] 0,1,6,24,70,165,336,616,1044,1665,2530,3696,5226,7189,9660,12720,16456,20961,26334,32680,40110,48741,58696,70104,83100 ★ a(n) = (n ^ 4 + n ^ 2 + 2 * n) / 4. ● a(n) = n * (n + 1) * (n ^ 2 - n + 2) / 4. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). [_ Vincenzo Librandi _ , Apr 30 2012] ●

▶ [A052749] 0,0,0,6,24,70,180,434,1008,2286,5100,11242,24552,53222,114660,245730,524256,1114078,2359260,4980698,10485720,22020054,46137300,96468946,201326544 ★ a(n) = 2 * n * Stirling2(n - 1,2). ● a(n) = Sum _{ k=3..n } n * 2 ^ (k - 2). - _ Zerinvary Lajos _ , Oct 09 2006 ● a(n) = Sum _{ j=1..n } (Sum _{ i=2..n - 1 } (j + 1) * 2 ^ (j - i - 1)). - _ Wesley Ivan Hurt _ , Nov 17 2014 ● a(n) = n * (2 ^ n - 4) / 2, n > 1. - _ Wesley Ivan Hurt _ , Nov 17 2014 ●

▶ [A297713] 1,6,24,74,180,464,1113,2646,6360,15222,36795,89584,219635,542320,1346881,3361998,8427172,21195416,53455740,135112332,342093443,867325032,2201286622,5591469852,14211796995 ★ Number of minimal edge covers in the n - dipyramidal graph. ● a(n) = 4 * a(n - 1) + a(n - 2) - 12 * a(n - 3) - 15 * a(n - 4) + 24 * a(n - 5) + 49 * a(n - 6) + 6 * a(n - 7) - 73 * a(n - 8) - 76 * a(n - 9) + 5 * a(n - 10) + 80 * a(n - 11) + 72 * a(n - 12) + 14 * a(n - 13) - 30 * a(n - 14) - 34 * a(n - 15) - 19 * a(n - 16) - 6 * a(n - 17) - a(n - 18). - _ Eric W. Weisstein _ , Jun 27 2018 ●

▶ [A058809] 0,0,6,24,78,240,726,2184,6558,19680,59046,177144,531438,1594320,4782966,14348904,43046718,129140160,387420486,1162261464,3486784398,10460353200,31381059606,94143178824,282429536478 ★ The sequence lambda(3,n), where lambda is defined in A055203. Number of ways of placing n identifiable positive intervals with a total of exactly three starting and / or finishing points. ● a(0)=0, a(1)=0, a(2)=6, a(n) = 4 * a(n - 1) - 3 * a(n - 2). - _ Harvey P. Dale _ , Sep 29 2013 ●

▶ [A173031] 1,6,24,79,232,632,1633,4058,9788,23063,53332,121452,273089,607534,1339376,2929951,6366480,13752880,29556545,63232370,134731956,286044711,605326044,1277246724,2687879137 ★ Sequence whose G.f is given by: 1 / (1 - z) / (1 - 2 * z) ^ 2 / (1 - z - z ^ 2). ● a(n + 5) = 6 * a(n + 4) - 12 * a(n + 3) + 7 * a(n + 2) + 4 * a(n + 1) - 4 * a(n). ● a(n) = (38 / 5 * 5 ^ (1 / 2) + 17) * ((1 + sqrt(5)) / 2) ^ n + (- 38 / 5 * 5 ^ (1 / 2) + 17) * ((1 - sqrt(5)) / 2) ^ n - 32 * 2 ^ n - 1 + 16 * 2 ^ (n - 1) * n. ● a(n) = F(n + 8) + 2 ^ (n + 3) * (n - 4) - 1, where (F(n)) is the Fibonacci sequence for which F(0)=F(1)=1, F(2)=2, ... (related to A000045). ●

▶ [A001788] 0,1,6,24,80,240,672,1792,4608,11520,28160,67584,159744,372736,860160,1966080,4456448,10027008,22413312,49807360,110100480,242221056,530579456,1157627904,2516582400 ★ a(n) = n * (n + 1) * 2 ^ (n - 2). ● a(n) = Sum _{ i=1..n } i ^ 2 * binomial(n, i): binomial transform of A000290. - Yong Kong, Dec 26 2000 ● a(n) = Sum _{ j=0..n } binomial(n + 1,j) * (n + 1 - j) ^ 2. - _ Zerinvary Lajos _ , Aug 22 2006 ● a(n) = Sum _{ 1<=i<=k<=n } (- 1) ^ (i + 1) * i ^ 2 * binomial(n + 1,k + i) * binomial(n + 1,k - i). - _ Mircea Merca _ , Apr 09 2012 ● a(0)=0, a(1)=1, a(2)=6, a(n) = 6 * a(n - 1) - 12 * a(n - 2) + 8 *

a(n - 3). - _ Harvey P. Dale _ , Jul 16 2013 ● a(n) = Sum _{ k=0..n - 1 } Sum _{ i=0..n - 1 } (k + 1) * C(n - 1,i). - _ Wesley Ivan Hurt _ , Sep 20 2017 ●

► [A047790] 0,0,0,1,6,24,81,250,732,2073,5742,15664,42273,113202,301428,799273,2112774,5571816,14668209,38563882,101285580,265817145,697214430,1827923296,4790749761 ⋆ a(n) = Fibonacci(2 * n) - 2 ^ n + 1. ● a(0)=0, a(1)=0, a(2)=0, a(3)=1, a(n)=6 * a(n - 1) - 12 * a(n - 2) + 9 * a(n - 3) - 2 * a(n - 4). - _ Harvey P. Dale _ , Jan 19 2012 ● a(n) = (1 - 2 ^ n - ((3 - sqrt(5)) / 2) ^ n / sqrt(5) + ((3 + sqrt(5)) / 2) ^ n / sqrt(5)). - _ Colin Barker _ , Nov 02 2016 ●

► [A133474] 0,0,0,1,6,24,81,252,756,2241,6642,19764,59049,176904,530712,1592865,4780782,14346720,43046721,129146724,387440172,1162300833,3486843450,10460412252,31381059609 ⋆ Inverse binomial transform of (A113405 preceded by 0). ● a(n) = 6 * a(n - 1) - 12 * a(n - 2) + 9 * a(n - 3). (End) ●

► [A052150] 1,6,24,82,261,804,2440,7356,22113,66394,199248,597822,1793557,5380776,16142448,48427480,145282593,435847950,1307544040,3922632330,11767897221,35303691916,105911076024,317733228372,953199685441 ⋆ Partial sums of A000340, second partial sums of A003462. ● a(n) = ((3 ^ (n + 3)) - (2 * (n ^ 2) + 12n + 19)) / 8. ● a(n) = 3a(n - 1) + C(n + 2,2); a(0)=1. ● a(n) = sum { k=0..n, binomial(n + 3, k + 3)2 ^ k } . - _ Paul Barry _ , Aug 20 2004 ● a(n) = 6 * a(n - 1) - 12 * a(n - 2) + 10 * a(n - 3) - 3 * a(n - 4). ●

► [A317408] 0,1,6,24,84,275,864,2639,7896,23256,67650,194821,556416,1578109,4449354,12480600,34852944,96949079,268746336,742675211,2046683100,5626200216,15430992126,42235173769,115380647424 ⋆ a(n) = n * Fibonacci(2n). ● a(n) = 6 * a(n - 1) - 11 * a(n - 2) + 6 * a(n - 3) - a(n - 4) for n > 4. - _ Andrew Howroyd _ , Jul 27 2018 ● a(n) = (2 ^ (- n) * ((- (3 - sqrt(5)) ^ n + (3 + sqrt(5)) ^ n) * n)) / sqrt(5). - _ Colin Barker _ , Jul 28 2018 ●

► [A166060] 1,6,24,84,276,876,2724,8364,25476,77196,233124,702444,2113476,6352716,19082724,57297324,171990276,516167436,1548895524,4647473004,13943991876,41835121356,125511655524,376547549484,1129667814276 ⋆ a(n) = 4 * 3 ^ n - 3 * 2 ^ n. ● a(n) = 5 * a(n - 1) - 6 * a(n - 2) for n > 1; a(0)= 1, a(1)= 6. ●

► [A124807] 1,6,24,84,332,1336,5478,22658,94196,392664,1639274,6849002,28627874,119688094,500456806,2092720174,8751273556,36596513060,153042707976,640011807436,2676483843602,11192882945426,46807955443900 ⋆ Number of base - 6 circular n - digit numbers with adjacent digits differing by 2 or less. ● a(n) = 6 * a(n - 1) - 6 * a(n - 2) - 8 * a(n - 3) + 5 * a(n - 4) + 2 * a(n - 5) - a(n - 6) for n > 6. ●

► [A255474] 1,6,24,88,336,1280,4928,19072,74240,290304,1139712,4489216,17731584,70197248,278429696,1106083840,4399628288,17518559232,69815500800,278424715264,1110989340672,4435189170176,17712382214144,70757707153408,282733687341056 ⋆ a(n) = A255473(2 ^ n - 1). ● a(n) = 4 ^ n + (- (1 - sqrt(5)) ^ (1 + n) + (1 + sqrt(5)) ^ (1 + n)) / (2 * sqrt(5)) for n>0. ● a(n) = 6 * a(n - 1) - 4 * a(n - 2) - 16 * a(n - 3) for n>3. ●

► [A001352] 1,6,24,90,336,1254,4680,17466,65184,243270,907896,3388314,12645360,47193126,176127144,657315450,2453134656,9155223174,34167758040,127515808986,475895477904,1776066102630,6628368932616,24737409627834,92321269578720 ⋆ a(0) = 1, a(1) = 6, a(2) = 24; for n>=3, a(n) = 4a(n - 1) - a(n - 2). ● a(n) = sqrt(3) * (- (2 - sqrt(3)) ^ n + (2 + sqrt(3)) ^ n) for n>0. - _ Colin Barker _ , Oct 12 2015 ●

► [A155602] 1,6,24,90,336,1266,4824,18570,72096,281826,1107624,4371450,17308656,68703186,273218424,1088090730,4338014016,17309009346,69106897224,276040168410,1102998412176,4408506864306,17623567104024,70462887356490 ⋆ 4 ^ n + 3 ^ n - 1. ● a(n) = 7 * a(n - 1) - 12 * a(n - 2) - 6, n>1 - _ Gary Detlefs _ , Jun 21 2010 ● a(n) = 8 * a(n - 1) - 19 * a(n - 2) + 12 * a(n - 3), n>2, a(0)=1, a(1)=6, a(2)=24. - _ L. Edson Jeffery _ , Oct 17 2012 ●

► [A255296] 1,6,24,92,340,1236,4452,15956,57028,203508,725604,2585876,9212932,32818740,116898468,416365652,1482959428,5281740660,18811402980,669982145 48,238618498180,849854020788,3026803253028,10780126189268,38394001851076 ⋆ a(n) = A255295(2 ^ n - 1). ● a(n) = (2 ^ (- n) * (- 17 * 4 ^ n + (17 - 5 * sqrt(17)) * (3 - sqrt(17)) ^ n + (3 + sqrt(17)) ^ n * (17 + 5 * sqrt(17)))) / 17. ● a(n) = 5 * a(n - 1) - 4 * a(n - 2) - 4 * a(n - 3) for n>2. ●

► [A253101] 1,6,24,96,372,1416,5340,20040,75012,280392,1047324,3910440,14597508,54485736,203357724,758969736,2832570372,10571410056,39453266460,147242049000,549515715972,2050822387752,7653776980764,28564291826760,106603402909188 ⋆ a(n) = A253100(2 ^ n - 1). ● a(n) = - 2 ^ n + 2 * (2 - sqrt(3)) ^ n + 2 * (2 + sqrt(3)) ^ n for n>0. ● a(n) = 6 * a(n - 1) - 9 * a(n - 2) + 2 * a(n - 3) for n>3. ●

► [A002023] 6,24,96,384,1536,6144,24576,98304,393216,1572864,6291456,25165824,100663296,402653184,1610612736,6442450944,25769803776,103079215104,412316860416,1649267441664,6597069766656,26388279066624,105553116266496,422212465065984 ⋆ a(n) = 6 * 4 ^ n. ● a(n) = 4 * a(n - 1) for n > 0, a(0)=6. ●

► [A164908] 1,6,24,96,384,1536,6144,24576,98304,393216,1572864,6291456,25165824,100663296,402653184,1610612736,6442450944,25769803776,103079215104,412316860416,1649267441664,6597069766656,26388279066624,105553116266496,422212465065984 ⋆ a(n) = (3 * 4 ^ n - 0 ^ n) / 2. ● a(n) = 4 * a(n - 1) for n > 1; a(0) = 1, a(1) = 6. ● a(n) = floor(6 * 4 ^ (n - 1)). - _ Karl V. Keller, Jr. _ , Aug 30 2021 ●

► [A290911] 0,6,24,96,408,1722,7248,30528,128592,541638,2281416,9609504,40475976,170487930,718108320,3024727680,12740386464,53663491206,226034767224,952075887072,4010217126648,16891344084282,71147645118192,299679373092288,1262272651579632 ⋆ p - INVERT of the positive integers, where p(S) = 1 - 6 * S ^ 2. ● a(n) = 4 * a(n - 1) + 4 * a(n - 3) - a(n - 4). ●

► [A117614] 1,6,24,98,392,1570,6280,25122,100488,401954,1607816,6431266,25725064,102900258,411601032,1646404130,6585616520,26342466082,105369864328,421479457314,1685917829256,6743671317026,26974685268104 ⋆ a(0)=1, a(n)=4a(n - 1) + 2 for n odd, a(n)=4a(n - 1) for n even. ● a(n) = (- 5 - 3 * (- 1) ^ n + 23 * 4 ^ n) / 15. a(n) = 4 * a(n - 1) + a(n - 2) - 4 * a(n - 3). G.f.: - (x ^ 2 - 2 * x - 1) / ((x - 1) * (x + 1) * (4 * x - 1)). [_ Colin Barker _ , Feb 17 2013] ●

► [A360036] 0,0,0,6,24,100,360,1274,4368,14760,49200,162382,531432,1727180,5580120,17936130,57395616,182948560,581130720,1840247318,5811307320,18305618100,57531942600,180441092746,564859072944 ⋆ Expansion of e.g.f. x * exp(x) * (sinh(x)) ^ 2. ● a(n) = n * (3 ^ (n - 1) + (- 1) ^ (n - 1) - 2) / 4. ●

► [A255471] 1,6,24,100,396,1596,6364,25500,101916,407836,1631004,6524700,26097436,104392476,417564444,1670268700,6681052956,26724255516,106896934684,427587913500,1710351304476,6841405916956,27365622269724,109462491875100,437849961907996 ⋆ a(n) = A255470(2 ^ n - 1). ● a(n) = (- 4 - (- 2) ^ n + 7 * 2 ^ (1 + 2 * n)) / 9. ● a(n) = 3 * a(n - 1) + 6 * a(n - 2) - 8 * a(n - 3) for n>2. ●

► [A052745] 0,0,0,6,24,110,600,3836,28224,235224,2191680,22584672,255087360,3134139840,41620400640,594082771200,9070900715520,147531542054400,2546434166169600,46489412442009600,895079522340864000,18125736166340812800,385129713617510400000 ⋆ A simple grammar. ● a(n) = (- 1) ^ (n + 1) * 2 * n * Stirling1(n - 1, 2). - _ Vladeta Jovovic _ , Nov 08 2003 ●

► [A217193] 6,24,119,588,2279,6996,18043,40884,83923,159404,284431,482108,782799,1225508,1859379,2745316,3957723,5586364,7738343,10540204,14140151,18710388,24449579,31585428,40377379 ⋆ Number of permutations in S _{ n + 3 } containing an increasing subsequence of length n. ● a(0) = 6, a(1) = 24, a(n) = (n ^ 6 + 6 * n ^ 5 + 10 * n ^ 4 + 4 * n ^ 3 + 19 * n ^ 2 + 62 * n + 66) / 6 for n>1. ●

► [A127917] 6,24,120,336,1320,2184,4896,6840,12144,24360,29760,50616,68880,79464,103776,148824,205320,226920,300696,357840,388944,492960,571704,704880,912576 ⋆ Product of three numbers: n - th prime, previous number, and following number. ● a(n) = prime(n) * (prime(n) ^ 2 - 1). - _ Tom Edgar _ , Sep 28 2015 ●

► [A060249] 1,1,6,24,120,1440,5040,40320,362880,3628800,39916800,479001600,6227020800,87178291200,1307674368000,20922789888000,355687428096000,6402373705728000,121645100408832000,2432902008176640000 ⋆ Size of the automorphism group of the symmetric group S _ n. ● a(n) = n! except for n=2 and 6. ●

► [A274072] 0,6,24,126,624,3126,15624,78126,390624,1953126,9765624,48828126,244140624,1220703126,6103515624,30517578126,152587890624,762939453126,3814697265624,19073486328126,95367431640624,476837158203126,2384185791015624,11920928955078126 ⋆ a(n) = 5 ^ n - (- 1) ^ n. ● a(n) = 4 * a(n - 1) + 5 * a(n - 2) for n>1. ●

► [A110707] 6,24,132,804,5196,34872,240288,1688244,12040188,86892384,633162360,4650680640,34390540320,255773538240,1911730760832,14350853162676,108139250403804,817629606524112,6200696697358344,47152195812692664 ⋆ Number of linear arrangements of n blue, n red and n green items such that there are no adjacent items of the same color (first and last elements considered as adjacent). ● a(n) = 2 * Sum[k=0..[n / 2]] binomial(n - 1, k) * (binomial(n - 1, k) * (binomial(2n + 1 - 2k, n + 1) - 3 * binomial(2n - 1 - 2k, n + 1)) + binomial(n - 1, k + 1) * (binomial(2n - 2k, n + 1) - 3 * binomial(2n - 2k - 2, n + 1))) ●

► [A225827] 1,6,24,168,1120,8640,66816,529920,4212736,33632256,268713984,2148630528,17184194560,137456517120,1099579785216,8796367749120,70369826308096,562954298720256,4503616874348544,36028866141093888,288230651566489600,2305844111946547200 ⋆ Number of binary pattern classes in the (3,n) - rectangular grid: two patterns are in same class if one of them can be obtained by a reflection or 180 - degree rotation of the other. ● a(n) = 8 * a(n - 1) + 8 * a(n - 2) - 64 * a(n - 3) - 2 ^ (2n - 3) with n>2, with a(0)=1, a(1)=6, a(2)=24. ● a(n) = 2 ^ (3n / 2 - 1) * (2 ^ (3n / 2 - 1) + 2 ^ (n / 2 - 1) + 1) if n is even, ● a(n) = 2 ^ ((3 * n - 1) / 2 - 1) * (2 ^ ((3 * n - 1) / 2) + 2 ^ ((n - 1) / 2) + 3) if n is odd. ●

► [A372136] 1,1,6,24,199,1023,9363,53724,514422,3147234,30860724,197222004,1959430572,12936907792,129445924524,877093068720,8806256385699,60967636162677,612785441368254,4321431024295452,43413113117835945,311142782601086949,3120889714454477613 ⋆ G.f. A(x) satisfies A(x) = 1 / (1 - x * A(x) ^ 2 * (1 + 9 * x * A(x)) ^ (1 / 3)). ● a(n) = Sum _{ k=0..n } 9 ^ (n - k) * binomial(n + 2 * k,k) * binomial(k / 3,n - k) / (n + k + 1). ●

► [A277985] 6,24,204,546,1050,1716,2544,3534,4686,6000,7476,9114,10914,12876,15000,17286,19734,22344,25116,28050,31146,34404,37824,41406,45150 ⋆ a(n) = 3 * (9 * n - 1) * (3 * n - 2). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Nov 13 2016 ●

► [A231317] 6,24,216,1536,11616,86400,645504,4816896,35956224,268376064,2003195904,14952038400,111603572736,833020329984,6217748545536,46409906651136,346408259813376,2585626450329600,19299378566529024,144052522724622336 ⋆ Number of (n + 1) X (1 + 1) 0..2 arrays with no element equal to a strict majority of its diagonal and antidiagonal neighbors, with values 0..2 introduced in row major order. ● a(n) = ((- 2) ^ (1 + n) + (4 - 2 * sqrt(3)) ^ n + (2 * (2 + sqrt(3))) ^ n) / 2. ●

► [A152886] 0,0,0,6,24,360,2160,30240,241920,3628800,36288000,598752000,7185024000,130767436800,1830744115200,36614882304000,585838116864000,12804747411456000,230485453406208000,5474029518397440000,109480590367948800000,2810001819444019200000 ⋆ Number of descents beginning and ending with an even number in all permutations of { 1,2,...,n } . ● a(2n) = (2n - 1)! * binomial(n,2); a(2n + 1) = (2n)! * binomial(n,2). ●

► [A042879] 1,6,25,31,56,87,230,1237,3941,9119,113369,3523558,42396065,88315688,307343129,1625031333,3557405795,5182437128,8739842923,13922280051,64428963127,400496058813,24895184609533,149771603716011,623981599473577 ⋆ Denominators of continued fraction convergents to sqrt(971). ● a(n) = 24959613572660 * a(n - 22) - a(n - 44) for n > 43. - _ Vincenzo Librandi _ , Jan 31 2014 ●

► [A022270] 0,6,25,57,102,160,231,315,412,522,645,781,930,1092,1267,1455,1656,1870,2097,2337,2590,2856,3135,3427,3732 ⋆ a(n) = n * (13 * n - 1) / 2. ● a(n) = 13 * n + a(n - 1) - 7 for n>0, a(0)=0. - _ Vincenzo Librandi _ , Aug 04 2010 ● a(0)=0, a(1)=6, a(2)=25; for n>2, a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Dec 02 2011 ●

► [A255687] 0,6,25,64,130,230,371,560,804,1110,1485,1936,2470,3094,3815,4640,5576,6630,7809,9120,10570,12166,13915,15824,17900 ⋆ a(n) = n * (n + 1) * (7 * n + 11) / 6. ● a(n) = (1 / 2) * (Sum _{ j=0..n } (n + 1 - j) * (3 * n - j) + Sum _{ j=0..n - 1 } (n - j) * (3 * n + 1 - 3 * j)). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Colin Barker _ , Mar 02 2015 ●

► [A332698] 0,6,25,65,134,240,391,595,860,1194,1605,2101,2690,3380,4179,5095,6136,7310,8625,10089,11710,13496,15455,17595,19924 ⋆ a(n) = (8 * n ^ 3 + 15 *

n ^ 2 + 13 * n) / 6. ● a(n) = [x ^ n] (x * (x ^ 2 + x + 6)) / (x - 1) ^ 4. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ●

► [A096958] 6,25,65,135,245,406,630,930,1320,1815,2431,3185,4095,5180,6460,7956,9690,11685,13965,16555,19481,22770,26450,30550,35100 ★ Fifth column (m=4) of (1,6) - Pascal triangle A096956. ● a(n) = sum _{ k=1..n + 1 } (sum _{ i =1..k } i * (n - k + 7)). - _ Wesley Ivan Hurt _ , Sep 26 2013 ●

► [A241170] 6,25,67,145,275,476,770,1182,1740,2475,3421,4615,6097,7910,10100,12716,15810,19437,23655,28525,34111,40480,47702,55850,65000 ★ Steffensen's bracket function [n,n - 3]. ● a(n) = (n - 2) * (n - 1) * (24 + 7 * n + 3 * n ^ 2) / 24. - _ Vaclav Kotesovec _ , Apr 23 2014 ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>4. - _ Vincenzo Librandi _ , Dec 12 2014 ●

► [A245679] 0,0,0,6,25,69,154,300,531,875,1364,2034,2925,4081,5550,7384,9639,12375,15656,19550,24129,29469,35650,42756,50875 ★ a(n) = pg(n, 3) + pg(n, 4) + ... + pg(n, n) where pg(n, m) is the m - th n - th - order polygonal number. ● a(n) = (- 6 - n + 2 * n ^ 2 - 2 * n ^ 3 + n ^ 4) / 6 for n>1. ●

► [A211911] 0,1,6,25,70,156,301,526,855,1315,1936,2751,3796,5110,6735,8716,11101,13941,17290,21205,25746,30976,36961,43770,51475 ★ Number of lower triangular n X n arrays colored with integers 0 upwards introduced in row major order, with no element equal to any horizontal, vertical, diagonal or antidiagonal neighbor, and containing the value n(n + 1) / 2 - 2. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>6. ●

► [A230723] 0,1,6,25,87,238,575,1228,2425,4446,7734,12806,20422,31444,47072,68639,97929,136893,188061,254170,338679,445297,578616,743524,945968 ★ Number of non - equivalent ways to choose three points in an equilateral triangle grid of side n. ● a(n) = (n ^ 6 + 3 * n ^ 5 - 3 * n ^ 4 + 10 * n ^ 3 + B + C) / 288 ●

► [A055585] 1,6,25,88,280,832,2352,6400,16896,43520,109824,272384,665600,1605632,3829760,9043968,21168128,49152000,113311744,259522560,590872576,1337982976,3014656000,6761218048,15099494400 ★ Second column of triangle A055584. ● a(n) = 2 ^ (n - 3)(n + 1)(n + 3)(n + 8) / 3. ●

► [A001871] 1,6,25,90,300,954,2939,8850,26195,76500,221016,632916,1799125,5082270,14279725,39935214,111228804,308681550,853904015,2355364650,6480104231,17786356776,48715278000,133167004200,363372003625 ★ Expansion of 1 / (1 - 3 * x + x ^ 2) ^ 2. ● a(n) = (2 * (2 * n + 1) * F(2 * (n + 1)) + 3 * (n + 1) * F(2 * n + 1)) / 5 with F(n) = A000045 (Fibonacci numbers). ● a(n) = - a(- 4 - n) = ((4n + 2)F(2n) + (7n + 5)F(2n + 1)) / 5 with F(n) = A000045 (Fibonacci numbers). ● a(n) = (2 * a(n - 1) + (n + 1) * F(2n + 4)) / 3, where F(n) = A000045 (Fibonacci numbers). - _ Emeric Deutsch _ , Oct 08 2002 ● a(n) = (Sum _{ k=0..n } S(k, 3)S(n - k, 3)) S(n, x) = U(n, x / 2) Chebyshev polynomials of 2nd kind, A049310. - _ Paul Barry _ , Nov 14 2003 ● a(n) = Sum _{ k=1..n + 1 } F(2k) * F(2(n - k + 2)) where F(k) is the k - th Fibonacci number. - Dan Daly (ddaly(AT)du.edu), Apr 24 2008 ● a(n) = 6 * a(n - 1) - 11 * a(n - 2) + 6 * a(n - 3) - a(n - 4). - _ Vincenzo Librandi _ , Mar 14 2011 ●

► [A000392] 0,0,0,1,6,25,90,301,966,3025,9330,28501,86526,261625,788970,2375101,7141686,21457825,64439010,193448101,580606446,1742343625,5228079450,15686335501,47063200806 ★ Stirling numbers of second kind S(n,3). ● a(n) = (1 + 3 ^ (n - 1) - 2 ^ n) / 2, n > 0. - _ Dennis P. Walsh _ , Feb 20 2007 ● a(n) = 5 * a(n - 1) - 6 * a(n - 2) + 1, for n > 3. - _ Vincenzo Librandi _ Nov 25 2010 ● a(n) = det(|s(i + 3,j + 2)|, 1 <= i,j <= n - 3), where s(n,k) are Stirling numbers of the first kind. - _ Mircea Merca _ , Apr 06 2013 ● a(n + 2) = (1 - 2 ^ (2 + n) + 3 ^ (1 + n)) / 2 for n > 0. - _ Fred Daniel Kline _ , Oct 02 2014 ● a(n) = Sum _{ k=0..n - 3 } 2 ^ (k - 1) * (3 ^ (n - 2 - k) - 1). - _ J. M. Bergot _ , Feb 05 2018 ●

► [A092491] 0,0,0,0,1,6,25,93,333,1172,4083,14137,48778,167981,577874,1986747,6828120,23462470,80611581,276944893,951422603,3268470411,11228209786,38572124196,132505812826 ★ a(n) = 2 * A058094(n - 2) - 5 * A058094(n - 3) + A058094(n - 4) + a(n - 1) for n >=4. ● a(n) = 6 * a(n - 1) - 11 * a(n - 2) + 9 * a(n - 3) - 4 * a(n - 4) - 4 * a(n - 5) + a(n - 6) for n>6. ●

► [A291230] 6,25,96,351,1242,4304,14706,49761,167232,559303,1864110,6197472,20567262,68166713,225713280,746866143,2470077378,8166190192,26990599050,89190984033,294691499808,973574384231,3216160413654,10623856065984,35092075282998 ★ p - INVERT of (0,1,0,1,0,1,...), where p(S) = (1 - S)(1 - 2 S)(1 - 3 S). ● a(n) = 6 * a(n - 1) - 8 * a(n - 2) - 6 * a(n - 3) + 8 * a(n - 4) + 6 * a(n - 5) + a(n - 6) for n >= 7. ●

► [A092184] 0,1,6,25,96,361,1350,5041,18816,70225,262086,978121,3650400,13623481,50843526,189750625,708158976,2642885281,9863382150,36810643321,137379191136,512706121225,1913445293766,7141075053841,26650854921600 ★ Sequence S _ 6 of the S _ r family. ● a(n) = 1 / 2 * (- 2 + (2 + sqrt(3)) ^ n + (2 - sqrt(3)) ^ n). - _ Ralf Stephan _ , Apr 14 2004 ● a(0)=0, a(1)=1, a(n + 1) = 3 + floor(a(n) * (2 + sqrt(3))). - Anton Vrba (antonvrba(AT)yahoo.com), Jan 16 2007 ● a(n) = 4 * a(n - 1) - a(n - 2) + 2. - _ Zerinvary Lajos _ , Mar 09 2008 ● a(n) = u(n) ^ 2, where { u(n) } is the Lucas sequence in the quadratic integer ring Z[sqrt(6)] defined by the recurrence u(0) = 0, u(1) = 1, u(n) = sqrt(6) * u(n - 1) - u(n - 2) for n >= 2. ● a(n) = (1 / 2) * (((sqrt(6) + sqrt(2)) / 2) ^ n - ((sqrt(6) - sqrt(2)) / 2) ^ n) ^ 2. ● a(n) = bottom left entry of the 2 X 2 matrix T(n, M), where M is the 2 X 2 matrix [0, - 2; 1, 3] and T(n,x) denotes the Chebyshev polynomial of the first kind. Cf. A098306. ●

► [A214955] 1,6,25,98,378,1452,5577,21450,82654,319124,1234506,4784276,18572500,72209880,281150505,1096087770,4278278070,16717354500,65388738030,256000696380,1003116947820,3933750236520,15437682614250,60625494924228,238235373671148 ★ Number of solid standard Young tableaux of shape [[n,n - 1],[1]]. ● a(n) = 2 * (2 * n - 1) ^ 2 / ((n + 1) * (2 * n - 3)) * a(n - 1) for n>1; a(1) = 1. ● a(n) = [x ^ n] x * (1 + 2 * x) / (1 - x) ^ (n + 2). - _ Ilya Gutkovskiy _ , Oct 12 2017 ●

► [A346390] 1,6,25,100,511,3626,30045,262800,2470171,25889446,302003065,3821936300,51672723831,745789322466,11505096936085,189023074558600,3288243760145491,60319276499454686,1164282909466221105,23603464830964817700,501435697062735519151 ★ E.g.f.: - log(1 - (exp(x) - 1) ^ 3 / 3!). ● a(n) = Stirling2(n,3) + (1 / n) * Sum _{ k=1..n - 1 } binomial(n,k) * Stirling2(n - k,3) * k * a(k). ●

► [A323824] 6,25,101,405,1621,6485,25941,103765,415061,1660245,6640981,26563925,106255701,425022805,1700091221,6800364885,27201459541,108805838165,435223352661,1740893410645,6963573642581,27854294570325,111417178281301,445668713125205 ★ a(0) = 6; thereafter a(n) = 4 * a(n - 1) + 1. ● a(n) = (19 * 4 ^ n - 1) / 3. - _ Colin Barker _ , Feb 01 2019 ●

► [A253220] 6,25,102,268,268,3568,16028,40238,77063,126673,189083,264293,352303,453113,566723,693133,832343,984353,1149163,1326773,1517183,1720393,1936403,2165213,2406823 ★ Number of n X 5 nonnegative integer arrays with upper left 0 and lower right its king - move distance away minus 2 and every value within 2 of its king move distance from the upper left and every value increasing by 0 or 1 with every step right, diagonally se or down. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>11. ●

► [A037481] 0,1,6,25,102,409,1638,6553,26214,104857,419430,1677721,6710886,26843545,107374182,429496729,1717986918,6871947673,27487790694,109951162777,439804651110,1759218604441,7036874417766,28147497671065 ★ Base 4 digits are, in order, the first n terms of the periodic sequence with initial period 1,2. ● a(n) = ((4 ^ (n + 1) - (- 1) ^ (n + 1)) / 5 - 1) / 2. - _ Ralf Stephan _ ● a(n) = 4 * a(n - 1) + a(n - 2) - 4 * a(n - 3). - _ Vincenzo Librandi _ , Jun 21 2012 ●

► [A267536] 1,6,25,103,415,1663,6655,26623,106495,425983,1703935,6815743,27262975,109051903,436207615,1744830463,6979321855,27917287423,111669149695,446676598783,1786706395135,7146825580543,28587302322175,114349209288703,457396837154815 ★ Decimal representation of the n - th iteration of the "Rule 143" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = 5 * a(n - 1) - 4 * a(n - 2) for n > 3. ●

► [A147543] 6,25,105,455,2045,9495,45205,219055,1074045,5305895,26335205,131090655,653692045,3263166295,16299929205,81451898255,407116166045,2035150690695,10174462707205,50868440641855,254330583216045 ★ a(n) = (8 * 5 ^ n + 5 * 3 ^ (n + 1) - 5 * 2 ^ n) / 3. ● a(n)= 10 * a(n - 1) - 31 * a(n - 2) + 30 * a(n - 3). ● a(n) = (8 * 5 ^ n + 5 * 3 ^ (n + 1) - 5 * 2 ^ n) / 3. ●

► [A048875] 1,6,25,106,449,1902,8057,34130,144577,612438,2594329,10989754,46553345,197203134,835365881,3538666658,14990032513,63498796710,268985219353,1139439674122,4826743915841,20446415337486,86612405265785,366896036400626,1554196550868289 ★ Generalized Pellian with second term of 6. ● a(n) = ((4 + sqrt(5))(2 + sqrt(5)) ^ n - (4 - sqrt(5))(2 - sqrt(5)) ^ n) / 2 * sqrt(5). ● a(n) = 4a(n - 1) + a(n - 2); a(0)=1, a(1)=6. ●

► [A100296] 1,6,25,111,488,2149,9461,41654,183389,807403,3554736,15650361,68903513,303360038,1335596817,5880203831,25888648920,113979406525,501814720109,2209329044566,9726966211957,42824708216851,188543436246752,830096195208753,3654646945111665 ★ Sequence generated from a symmetric matrix. ● a(n) = rightmost term in M ^ n * [1,1,1], where M = [3,2,1; 2,1,0; 1,0,0]. ● a(n) = 4 * a(n - 1) + 2 * a(n - 2) - a(n - 3). ●

► [A120758] 1,6,25,116,517,2338,10517,47400,213481,961726,4332145,19515036,87908397,395998298,1783838637,8035595600,36197658961,163058307446,734522939465,3308779311556,14904940203477,67141752851858 ★ The (1,3) - entry in the matrix M ^ n, where M is the 3 X 3 matrix [0,2,1; 2,1,2; 1,2,2] (n>=1). ● a(n) =3a(n - 1) + 7a(n - 2) - a(n - 3) (follows from the minimal polynomial of the matrix M). ●

► [A179603] 1,6,25,117,526,2397,10873,49398,224305,1018701,4626238,21009621,95412529,433304934,1967802505,8936542053,40584243694,184308525453,837015282217,3801205524822,17262723549985,78396609323709 ★ Eight white kings and one red king on a 3 X 3 chessboard. G.f.: (1 + 3 * x) / (1 - 3 * x - 7 * x ^ 2). ● a(n) = 3 * a(n - 1) + 7 * a(n - 2) with a(0) = 1 and a(1) = 6. ● a(n) = ((9 + 5 * A) * A ^ (- n - 1) + (9 + 5 * B) * B ^ (- n - 1)) / 37 with A = (- 3 + sqrt(37)) / 14 and B = (- 3 - sqrt(37)) / 14. ●

► [A099359] 6,25,123,727,4911,35935,274623,2146687,16974591,135005695,1076890623,8602523647,68769820671,549957165055,4398851866623,35187593412607,281487861809151,2251851353686015,18014604668698623,144116012711149567,1152924803144876031 ★ a(n) = (2 ^ n + 1) ^ 3 - 2. ● a(n) = (3 * 2 ^ n + 3 * 4 ^ n + 8 ^ n - 1). ● a(n) = 15 * a(n - 1) - 70 * a(n - 2) + 120 * a(n - 3) - 64 * a(n - 4) for n>3. ●

► [A073967] 0,0,6,25,125,600,3150,15750,78625,390625,1952500,9762500,48831250,244140625,1220703125,6103437500,30517656250,152588281250,762941015625,3814697265625,19073484375000,95367421875000,476837167968750,2384185791015625,11920928955078125 ★ Number of strings of length n over Z _ 5 with trace 1 and subtrace 1. ● a(n; t, s) = a(n - 1; t, s) + a(n - 1; t + 4, s + 4t + 1) + a(n - 1; t + 3, s + 3t + 4) + a(n - 1; t + 2, s + 2t + 4) + a(n - 1; t + 1, s + t + 1). ●

► [A242858] 0,0,1,6,25,150,1561,16926,181945,2286150,34082521,548528046,9363855865,174531124950,3547114323481,76969474578366,1771884893993785,43405229295464550,1128511554418948441,30949983774936839886 ★ E.g.f. ((e ^ x - 1) ^ 2 * e ^ x) / (2 * (1 - (e ^ x - 1) ^ 3)). ● a(n) = sum(k=1..(n + 1) / 3, ((3 * k)! * stirling2(n + 1,3 * k)) / k) / 6. ●

► [A200375] 1,1,6,25,154,882,5676,36465,244530,1657942,11471668,80242890,568080772,4056976900,29212908120,211783889025,1544811959970,11328491394990,83473572128100,617702666484750,4588654943721420,34206312386929020,255803818897858920,1918528298674328250,14427334095935095764 ★ Product of Catalan and Jacobsthal numbers: a(n) = A000108(n) * A001045(n + 1). ● a(n) = binomial(2 * n,n) / (n + 1) * (2 ^ (n + 1) + (- 1) ^ n) / 3. ●

► [A254527] 6,26,62,114,182,266,366,482,614,762,926,1106,1302,1514,1742,1986,2246,2522,2814,3122,3446,3786,4142,4514,4902 ★ Total number of points on a sphere when both poles are on an x by x grid where x=8 * n + 1. ● a(n) = 8 * n ^ 2 - 4 * n + 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>3. ●

► [A135036] 0,6,26,68,140,250,406,616,888,1230,1650,2156,2756,3458,4270,5200,6256,7446,8778,10260,11900,13706,15686,17848,20200 ★ Sums of the products of n consecutive pairs of numbers. ● a(n) = 0 * 1 + 2 * 3 + 4 * 5 + ... + 2 * n * (2 * n + 1). ● a(n) = (4 * n ^ 3 - 3 * n ^ 2 - n) / 3 = (n - 1) * n * (4 * n + 1) / 3. ● a(0)=0, a(1)=6, a(2)=26, a(3)=68, a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Harvey P. Dale _ , Jun 20 2013 ●

► [A001701] 1,6,26,71,155,295,511,826,1266,1860,2640,3641,4901,6461,8365,10660,13396,16626,20406,24795,29855,35651,42251,49726,58150 ★ Generalized Stirling numbers. ● a(n) = n * (n - 1) * (3n ^ 2 + 17n + 26) / 24, n > 1. ● a(n) = 5

* a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Colin Barker _ , Jul 08 2020 ●

▶ [A241452] 0,0,0,6,26,75,174,350,636,1071,1700,2574,3750,5291,7266,9750,12824,16575,21096,26486,32850,40299,48950,58926,70356 ⋆ a(n) = pg(3, n) + pg(4, n) + ... + pg(n, n) where pg(m, n) is the n - th m - th - order polygonal number. ● a(n) = n * (- 10 + 9 * n - 4 * n ^ 2 + n ^ 3) / 4 for n > 1. ●

▶ [A175898] 1,6,26,76,186,386,726,1251,2031,3126,4626,6606,9176,12426,16486,21461,27501,34726,43306,53376,65126,78706,94326,112151,132411 ⋆ Expansion of (1 + 3 * x + 9 * x ^ 2 + 9 * x ^ 3 + 9 * x ^ 4 + 3 * x ^ 5 + x ^ 6) / ((1 + x) ^ 2 * (1 - x) ^ 5). ● a(n) = 55 * n ^ 2 / 24 + 185 * n / 96 + 59 / 64 + 35 * n ^ 4 / 96 + 35 * n ^ 3 / 48 + (5 * n / 32 + 5 / 64) * (- 1) ^ n. ● a(2n) = (55 * n ^ 2 + 25 * n + 6 + 35 * n ^ 4 + 35 * n ^ 3) / 6. ● a(n) = + 3 * a(n - 1) - a(n - 2) - 5 * a(n - 3) + 5 * a(n - 4) + a(n - 5) - 3 * a(n - 6) + a(n - 7). ●

▶ [A255870] 1,6,26,76,191,411,816,1521,2726,4741,8081,13566,22536,37146,60896,99436,161921,263151,427086,692481,1122056,1817281,2942351,4762926,7708866 ⋆ a(n) is the total number of pentagrams in a pentagram fractal after n iterations. ● a(n) = 3 * a(n - 1) - a(n - 2) - 4 * a(n - 3) + 3 * a(n - 4) + a(n - 5) - a(n - 6) for n>6. - _ Colin Barker _ , Mar 12 2015 ● a(n) = (- 307 + 5 * (- 1) ^ n - 3 * 2 ^ (2 - n) * s * ((11 - 5 * s) * (1 - s) ^ n - (1 + s) ^ n * (11 + 5 * s)) - 150 * (1 + n) - 50 * (1 + n) * (2 + n)) / 8 for n>0 where s=sqrt(5). - _ Colin Barker _ , Mar 12 2017 ●

▶ [A286188] 6,26,76,218,664,2174,7452,26130,92512,328774,1170052,4166106,14836488,52839374,188188396,670240802,2387095600,8501764310,30279479508,107841961962,384084839128,1367938434910,4871984975932,17351831789874,61799465313024 ⋆ Number of connected induced (non - null) subgraphs of the gear graph with 2n + 1 nodes. ● a(n) = 6 * a(n - 1) - 10 * a(n - 2) + 4 * a(n - 3) + 3 * a(n - 4) - 2 * a(n - 5), for n>5. ●

▶ [A335648] 0,1,6,26,78,195,420,820,1476,2501,4026,6222,9282,13447,18984,26216,35496,47241,61902,80002,102102,128843,160908,199068,244140 ⋆ Partial sums of A006010. ● a(n) = (1 + n) * (5 - 5 * (- 1) ^ n + 8 * n + 12 * n ^ 2 + 8 * n ^ 3 + 2 * n ^ 4) / 80. ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) - 4 * a(n - 3) + 10 * a(n - 4) - 4 * a(n - 5) - 4 * a(n - 6) + 4 * a(n - 7) - a(n - 8) for n > 7. ●

▶ [A229572] 1,6,26,80,216,544,1312,3072,7040,15872,35328,77824,169984,368640,794624,1703936,3637248,7733248,16384000,34603008,72876032,153092096,320864256,671088640,1400897536 ⋆ Number of defective 4 - colorings of an n X 2 0..3 array connected horizontally, vertically, diagonally and antidiagonally with exactly one mistake, and colors introduced in row - major 0..3 order. ● a(n) = 2 ^ (n - 2) * (7 * n - 8) for n>1. (End) ●

▶ [A316160] 6,26,80,226,600,1528,3776,9120,21632,50560,116736,266752,604160,1357824,3031040,6725632,14843904,32604160,71303168,155320320,337117184,729284608,1572864000,3382706176,7256145920 ⋆ Number of pairs of compositions of n corresponding to a seaweed algebra of index n - 3. ● a(n) = (7 * n - 15) * 2 ^ (n - 3) for 3 <= n <= 5 and a(n) = ((1 / 2) * n ^ 2 + (11 / 4) * n - (25 / 4)) * 2 ^ (n - 3) for n >= 5. ●

▶ [A172207] 1,6,26,86,211,426,758,1234,1881,2726,3796,5118,6719,8626,10866,13466,16453,19854,23696,28006,32811,38138,44014,50466,57521 ⋆ Number of ways to place 3 nonattacking bishops on a 3 X n board. ● a(n) = (9n ^ 3 - 45n ^ 2 + 106n - 108) / 2, n>=4. ●

▶ [A060101] 1,6,26,86,246,622,1442,3102,6292,12122,22374,39754,68354,114114,185614,294866,458601,699556,1048476,1546116,2246244,3218644,4553484,6365684,8801104 ⋆ Sixth column (m=5) of triangle A060098. ● a(n) = (14175 * (30827 + 1941 * (- 1) ^ n) + 1440 * (676427 + 11445 * (- 1) ^ n) * n + 126 * (6861329 + 27375 * (- 1) ^ n) * n ^ 2 + 1600 * (258451 + 189 * (- 1) ^ n) * n ^ 3 + 10 * (12016607 + 945 * (- 1) ^ n) * n ^ 4 + 22444800 * n ^ 5 + 2754192 * n ^ 6 + 220800 * n ^ 7 + 11130 * n ^ 8 + 320 * n ^ 9 + 4 * n ^ 10) / 464486400. - _ Colin Barker _ , Jan 17 2017 ●

▶ [A032169] 1,6,26,91,273,728,1768,3978,8398,16796,32065,58786,104006,178296,297160,482885,766935,1193010,1820910,2731365,4032015,5864749,8414640,11920740,16689036 ⋆ Number of aperiodic necklaces of n beads of 2 colors, 11 of them black. ● a(n) = (1 / 11) * (binomial(n - 1, 10) - I(11|n)) = floor(binomial(n - 1, 10) / 11) for n >= 12, where I(a|b) = 1 if integer a divides integer b, and 0 otherwise. - _ Petros Hadjicostas _ , Aug 26 2018 ●

▶ [A032196] 1,1,6,26,91,273,728,1768,3978,8398,16796,32066,58786,104006,178296,297160,482885,766935,1193010,1820910,2731365,4032015,5864750,8414640,11920740 ⋆ Number of necklaces with 11 black beads and n - 11 white beads. ● a(n) = ceiling(binomial(n, 11) / n)) (conjecture _ Wolfdieter Lang _). ●

▶ [A011780] 1,6,26,92,291,850,2348,6216,15925,39742,97086,233012,550983,1286442,2970960,6796320,15417945,34719510,77672290,172743180,382147691,841346306,1844250996,4026531832,8758949501 ⋆ Expansion of 1 / (1 - 2 * x) ^ 3 / (1 - x ^ 2) ^ 2. ● a(n) = (n ^ 2 + n / 3 + 10 / 3) * 2 ^ (n + 3) / 9 + (n / 4 + 1) * (- 1) ^ n / 27 - n / 4 - 2. [_ Bruno Berselli _ , Jun 24 2013] ●

▶ [A224288] 0,0,0,0,1,6,26,94,306,934,2732,7752,21488,58432,156288,411904,1071104,2750976,6984704,17545216,43634688,107511808,262602752,636223488,1529741312 ⋆ Number of permutations of length n containing exactly 2 occurrences of 123 and 2 occurrences of 132. ● a(n) = 2 ^ (- 11 + n) * (1504 - 994 * n + 219 * n ^ 2 - 18 * n ^ 3 + n ^ 4) for n>4. - _ Colin Barker _ , Apr 14 2013 ●

▶ [A143132] 1,6,26,96,321,876,2006,4026,7321,12346,19626,29756,43401,61296,84246,113126,148881,192526,245146,307896,382001,468756,569526,685746,818921 ⋆ Binomial transform of [1, 5, 15, 35, 70, 0, 0, 0, ...]. ● a(n) = (552 - 1190 * n + 895 * n ^ 2 - 280 * n ^ 3 + 35 * n ^ 4) / 12. - _ T. D. Noe _ , Aug 22 2008 ●

▶ [A318947] 0,0,0,0,1,6,26,97,331,1064,3277,9775,28448,81201,228211,633384,1740037,4740327,12825008,34500649,92372683,246352952,654878173,1736172895,4592568896 ⋆ Column 2 of triangle A318945. ● a(n) = 9 * a(n - 1) - 31 * a(n - 2) + 50 * a(n - 3) - 36 * a(n - 4) + 8 * a(n - 5) for n>7. ●

▶ [A186314] 0,0,1,6,26,99,352,1200,3977,12918,41338,130779,410048,1276512,3950929,12170598,37343834,114209811,348332320,1059927312,3218870105,9758944470,29544747706,89335651851,269843267456 ⋆ Number of ternary strings of length n which contain 01. ● a(n) = 3 * a(n - 1) + (3 ^ (n - 2) - a(n - 2)). ●

▶ [A234267] 1,6,26,99,353,1213,4078,13529,44518,145750,475683,1549457,5040985,16387962,53251549,172987342,561848146,1824633763,5925198353,19240299477,62475465318,202861776657,658698488006,2138801439710,6944686435779 ⋆ Expansion of (1 - x) / ((1 - 2 * x) * (1 - 5 * x + 6 * x ^ 2 - x ^ 3)). ● a(n) = 7 * a(n - 1) - 16 * a(n - 2) + 13 * a(n - 3) - 2 * a(n - 4) for n>3, a(0)=1, a(1)=6, a(2)=26, a(3)=99. - _ Philippe Deléham _ , Dec 25 2013 ●

▶ [A344504] 0,1,6,26,100,361,1254,4245,14108,46247,149998,482412,1540880,4893859,15468910,48696930,152764452,477771447,1490245302,4637349186,1440022496,4463255156 7,138101593398,426658380621,1316306945952 ⋆ a(n) = [x ^ n] ((x - 1) / sqrt(4 / (x + 1) - 3) + x + 1) / (2 * x * (3 * x - 1)). ● a(n) = Sum _{ k=0..n } k ^ 2 * binomial(n, k) * hypergeom([(k - n) / 2, (k - n + 1) / 2], [k + 2], 4). ●

▶ [A094811] 1,6,26,100,364,1288,4488,15504,53296,182688,625184,2137408,7303360,24946816,85196928,290926848,993379072,3391793664,11580678656,39539651584,134998297600,460915984384,1573671536640,5372862566400,18344123969536 ⋆ Number of (s(0), s(1), ..., s(2n + 1)) such that 0 < s(i) < 8 and |s(i) - s(i - 1)| = 1 for i = 1,2,...,2n + 1, s(0) = 1, s(2n + 1) = 6. ● a(n) = (1 / 4) * Sum _{ r =1..7 } sin(r * Pi / 8) * sin(r * 3 * Pi / 4) * (2 * cos(r * Pi / 8)) ^ (2n + 1). ● a(n) = 6 * a(n - 1) - 10 * a(n - 2) + 4 * a(n - 3). ● a(n) = (- 2 ^ (1 + n) + (2 - sqrt(2)) ^ n + (2 + sqrt(2)) ^ n) / 4. - _ Colin Barker _ , Apr 27 2016 ●

▶ [A005022] 6,26,100,364,1288,4488,15504,53296,182688,625184,2137408,7303360,24946816,85196928,290926848,993379072,3391793664,11580678656,39539651584,134998297600,460915984384,1573671536640,5372862566400,18344123969536,62630804299776 ⋆ Number of walks of length 2n + 6 in the path graph P _ 7 from one end to the other. ● a(n) = 6 * a(n - 1) - 10 * a(n - 2) + 4 * a(n - 3). - _ Emeric Deutsch _ , Apr 02 2004 ● a(k) = sum(binomial(6 + 2 * k, 8 * j + k - 2) - binomial(6 + 2 * k, 8 * j + k - 1), j= - infinity..infinity) (a finite sum). ● a(n) = - 2 ^ (1 + n) + (3 / 2 - sqrt(2)) * (2 - sqrt(2)) ^ n + (3 / 2 + sqrt(2)) * (2 + sqrt(2)) ^ n - _ Colin Barker _ , Apr 27 2016 ●

▶ [A301476] 1,6,26,100,374,1428,5636,22728,92134,371844,1491148,5954936,23755068,94842824,379167304,1517205392,6072429190,24299685732,97210253564,388810290840,1555033861204,6219560062424,24877574062264,99512092354800,398060511603676 ⋆ Expansion of (sqrt(8 * x ^ 2 - 4 * x + 1) * (1 - 4 * x)) ^ (- 1). ● a(n) = - (sqrt(2) * (- 4) ^ n / n!) * d ^ (n + 1)[arcsinh(1 / x), 1] where d ^ n[f(x), x0] denotes the n - th derivative of f at x = x0. ●

▶ [A290347] 0,1,6,26,100,1096,3920,13936,16544,296256,1068672,11652352,42658304,1100471296,4079876096,15205967872,56939270144,642281037824,2423854317568,9177027411968,34846713511936,1459319692460032,5568939824513024,21297365878571008 ⋆ Numerators of the Harary index for the n - halved cube graph. ● a(n) = - 2 ^ (n - 1) * HarmonicNumber(n) - 2 ^ (2 * n - 1) * Re(LerchPhi(2,1,n + 1)). ●

▶ [A143955] 0,0,0,1,6,26,101,376,1377,5017,18277,66727,244377,898129,3312554,12260129,45526754,169588754,633580634,2373550184,8914719134,33562602134,126640791884,478848661898,1814142235028 ⋆ Sum of the altitudes of the left most valleys of all Dyck paths of semilength n (if path has no valley, then this altitude is taken to be 0). ● a(n) = 5 * Sum _{ k=2..n - 1 } (binomial(2 * k,k - 2) / (k + 3)). - _ Vladimir Kruchinin _ , Mar 15 2016 ●

▶ [A037545] 1,6,26,105,422,1690,6761,27046,108186,432745,1730982,6923930,27695721,110782886,443131546,1772526185,7090104742,28360418970,113441675881,453766703526,1815066814106,7260267256425,29041069025702 ⋆ Base - 4 digits are, in order, the first n terms of the periodic sequence with initial period 1,2,2. ● a(1)=1, a(2)=6, a(3)=26, a(4)=105, a(n)=4 * a(n - 1) + a(n - 3) - 4 * a(n - 4). - _ Harvey P. Dale _ , May 22 2015 ●

▶ [A020989] 1,6,26,106,426,1706,6826,27306,109226,436906,1747626,6990506,27962026,111848106,447392426,1789569706,7158278826,28633115306,114532461226,458129844906,1832519379626,7330077518506,29320310074026,117281240296106,469124961184426 ⋆ a(n) = (5 * 4 ^ n - 2) / 3. ● a(0) = 1, a(n) = 4 * a(n - 1) + 2; a(n) = a(n - 1) + 5 *{ 4 ^ (n - 1) } ; - _ Amarnath Murthy _ , May 27 2001 ● a(n) = 5 * a(n - 1) - 4 * a(n - 2), a(0) = 1, a(1) = 6. - _ Philippe Deléham _ , Feb 22 2014 ●

▶ [A079675] 1,1,6,26,106,431,1757,7168,29244,119305,486716,1985603,8100456,33046585,134816705,549997641,2243767969,9153665985,37343255690,152345382480,621507555626,2535499503900,10343812679475,42198572937400 ⋆ a(1)=1; a(n)=sum(u=1,n - 1,sum(v=1,u,sum(w=1,v,sum(x=1, w,sum(y=1,x,a(y)))))). ● a(1)=1, a(2)=1, a(3)=6, a(4)=26, a(5)=106, a(6)=431; for n>=7, a(n)=5 * u(n - 1) - 4 * u(n - 2) + u(n - 3) + b(n) where b(n) is the 6 periodic sequence (0, 1, 1, 0, - 1, - 1) ●

▶ [A255467] 1,6,26,110,450,1822,7330,29406,117794,471518,1886754,7548382,30196258,120790494,483172898,1932713438,7730897442,30923677150,123694883362,494779882974,1979120230946,7916482321886,31665932083746,126663733927390,506654946894370 ⋆ a(n) = A255466(2 ^ n - 1). ● a(n) = (- 2 * (- 1) ^ n / 15 - 2 ^ (1 + n) / 3 + (9 * 4 ^ n) / 5). ● a(n) = 5 * a(n - 1) - 2 * a(n - 2) - 8 * a(n - 3) for n>2. ●

▶ [A289789] 1,6,26,111,460,1905,7910,32880,136675,568050,2360825,9811650,40777750,169474875,704348000,2927312625,12166086250,50562982500,210142784375,873366003750,3629761440625,15085506018750,62696266831250,260569441284375,1082942209562500 ⋆ p - INVERT of A016777, where p(S) = 1 - S - S ^ 2. ● a(n) = 5 * a(n - 1) - 5 * a(n - 2) + 5 * a(n - 3) + 5 * a(n - 4). ●

▶ [A164549] 1,6,26,116,516,2296,10216,45456,202256,899936,4004256,17816896,79276096,352738176,1569504896,6983495936,31072993536,138258966016,615181851136,2737245336576,12179345048576,54191870867456 ⋆ a(n) = 4 * a(n - 1) + 2 * a(n - 2) for n > 1; a(0) = 1, a(1) = 6. ● a(n) = ((3 + 2 * sqrt(6)) * (2 + sqrt(6)) ^ n + (3 - 2 * sqrt(6)) * (2 - sqrt(6)) ^ n) / 6. ● a(n) = (i * sqrt(2)) ^ n * (ChebyshevU(n, - i * sqrt(2)) - sqrt(2) * i * ChebyshevU(n - 1, - i * sqrt(2))). - _ G. C. Greubel _ , Jul 16 2021 ●

▶ [A046647] 1,6,26,120,594,3094,16728,93024,528770,3058770,17948970,106585440,639318456,3867821640,23574446992,144621823632,892293152994,5533289372170,34468829508750,215594574231960,1353464311979010 ⋆ Number of certain rooted planar maps. ● a(2)=1; a(n) = 4 * (7 * n - 15) * (3 * n - 6)! / ((n - 2)! * (2n - 2)!). - _ Emeric Deutsch _ , Mar 03 2004 ●

▶ [A364744] 1,1,6,26,131,706,3932,22618,133099,797545,4850296,29859028,185712831,1165227025,7366475715,46877977451,300049605259,1930395961235,1247639

4685445,80968876247330,527424073700966,3447190219684125,2259979401081336 0 ⋆ G.f. satisfies A(x) = 1 / (1 - x * (1 + x * A(x)) ^ 5). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..n } binomial(n + 1,k) * binomial(5 * k,n - k). ●

▶ [A100308] 1,6,26,156,626,3756,16276,97656,390626,2343756,10156276,60937656,244531876,1467191256,6357828776,38146972656,152587890626,915527343756,3967285156276,23803710937656,95520019531876,573120117191256 ⋆ Modulo 2 binomial transform of 5 ^ n. ● a(n) = Sum _{ k=0..n } (binomial(n, k) mod 2) * 5 ^ k. ● a(2 ^ n) = 5 ^ (2 ^ n) + 1, n >= 0. ● a(2 ^ t * n + 2 ^ (t - 1)) = 24 * (5 ^ (2 ^ (t - 1) + 1)) / (5 ^ (2 ^ (t - 1)) - 1) * a(2 ^ t * n + 2 ^ (t - 1) - 2), t >= 2. ●

▶ [A352694] 1,1,6,26,167,1157,9372,82742,806872,8487255,96086764,1159845766,14866684968,201266031865,2867695938970,42849364911878,669517721182731,10910196881874549,184997231064875867,3257297876661453487,59443905364431491367,1122496527274459462803 ⋆ Expansion of e.g.f. exp(Sum _{ k>=1 } sigma a _ 2(k) * x ^ k / k!). ● a(0) = 1; a(n) = Sum _{ k=1..n } sigma _ 2(k) * binomial(n - 1,k - 1) * a(n - k). ●

▶ [A363696] 6,27,62,153,258,545,798,1440,2064,3282,4374,6859,8574,12447,15818,21789,26340,36196,42510,56538,66634,85125,98286,126901,142764 ⋆ Expansion of Sum _{ k>0 } (1 / (1 - x ^ k) ^ 6 - 1). ● a(n) = Sum _{ d|n } binomial(d + 5,5). ●

▶ [A167469] 6,27,63,114,180,261,357,468,594,735,891,1062,1248,1449,1665,1896,2142,2403,2679,2970,3276,3597,3933,4284,4650 ⋆ a(n) = 3 * n * (5 * n - 1) / 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>3. ● a(n) = Sum _{ i=n..4 * n - 1 } i. - _ Wesley Ivan Hurt _ , May 08 2016 ● a(n) = Sum _{ i = 2..7 } P(i,n), where P(i,m) = m * ((i - 2) * m - (i - 4)) / 2. - _ Bruno Berselli _ , Jul 04 2018 ●

▶ [A305158] 6,27,69,153,321,657,1329,2673,5361,10737,21489,42993,86001,172017,344049,688113,1376241,2752497,5505009,11010033,22020081,44040177,88080369,176160753,352321521 ⋆ a(n) = 21 * 2 ^ n - 15. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>1. ●

▶ [A273408] 1,6,27,72,149,266,431,652,937,1294,1731,2256,2877,3602,4439,5396,6481,7702,9067,10584,12261,14106,16127,18332,20729 ⋆ Partial sums of the number of active (ON,black) cells in n - th stage of growth of two - dimensional cellular automaton defined by "Rule 675", based on the 5 - celled von Neumann neighborhood. ● a(n) = (4 * n ^ 3 + 12 * n ^ 2 - n + 3) / 3. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>3. ●

▶ [A085788] 6,27,72,150,270,441,672,972,1350,1815,2376,3042,3822,4725,5760,6936,8262,9747,11400,13230,15246,17457,19872,22500,25350 ⋆ Partial sums of n 3 - spaced triangular numbers beginning with t(3), e.g., a(2)=t(3) + t(6)=6 + 21=27. ● a(n) = sum ((j + n + 1) * (n + 1),j=1..n). - _ Zerinvary Lajos _ , Sep 10 2006 ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). G.f.: 3 * x * (x + 2) / (x - 1) ^ 4. - _ Colin Barker _ , Mar 17 2014 ●

▶ [A027276] 1,6,27,72,270,648,2268,5184,17496,38880,128304,279936,909792,1959552,6298560,13436928,42830208,90699264,287214336,604661760,1904684544,3990767616,12516498432,26121388032,81629337600 ⋆ a(n) = Sum _{ k=0..2n } (k + 1) * A026552(n, k). ● a(n) = - (1 / 2) * [n=0] + (1 / 4) * 6 ^ (n / 2) * (n + 1) * (3 * (1 + (- 1) ^ n) + sqrt(6) * (1 - (- 1) ^ n)). - _ G. C. Greubel _ , Dec 18 2021 ●

▶ [A136105] 6,27,73,155,285,476,742,1098,1560,2145,2871,3757,4823,6090,7580,9316,11322,13623,16245,19215,22561,26312,30498,35150,40300 ⋆ Partial sums of A051941. ● a(n) = SUM[j=8..n]SUM[k=8..n] { ((k * (k + 1) / 2) - 30 } . a(n) = SUM[j=8..n](1 / 6) * (j - 7) * (j ^ 2 + 10 * j - 108). ● a(n) = (n - 6)(n - 7)(n ^ 2 + 19n - 144) / 24. O.g.f: x ^ 8(6 - 3x - 2x ^ 2) / (1 - x) ^ 5. - _ R. J. Mathar _ , May 17 2008 ● a(8)=6, a(9)=27, a(10)=73, a(11)=155, a(12)=285, a(n)=5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a (n - 5). - _ Harvey P. Dale _ , Oct 20 2013 ●

▶ [A239568] 0,6,27,75,165,315,546,882,1350,1980,2805,3861,5187,6825,8820,11220,14076,17442,21375,25935,31185,37191,44022,51750,60450 ⋆ Number of ways to place 2 points on a triangular grid of side n so that they are not adjacent. ● a(n) = n * (n - 1) * (n - 2) * (n + 5) / 8. ●

▶ [A124089] 0,6,27,83,209,461,923,1715,3002,5004,8007,12375,18563,27131,38759,54263,74612,100946,134595,177099,230229,296009,376739,475019,593774 ⋆ Binomial(n,6) - 1. ● a(0)=0, a(1)=6, a(2)=27, a(3)=83, a(4)=209, a(5)=461, a(6)=923, a(n)= 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). - _ Harvey P. Dale _ , Dec 26 2015 ●

▶ [A100188] 1,6,27,84,205,426,791,1352,2169,3310,4851,6876,9477,12754,16815,21776,27761,34902,43339,53220,64701,77946,93127,110424,130025 ⋆ Polar structured meta - anti - diamond numbers, the n - th number from a polar structured n - gonal anti - diamond number sequence. ● a(n) = (1 / 6) * (2 * n ^ 4 - 2 * n ^ 2 + 6 * n). ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5); a(1)=1, a(2)=6, a(3)=27, a(4)=84, a(5)=205. - _ Harvey P. Dale _ , May 11 2016 ●

▶ [A125196] 1,6,27,87,228,513,1034,1914,3315,5440,8541,12921,18942,27027,37668,51428,68949,90954,118255,151755,192456,241461,299982,369342,450983 ⋆ Number of magic labelings of the Petersen graph with magic sum n. ● a(n) = (1 / 32) * (29 * C(n + 5,5) + 21 * C(n + 4,5) + 126 * C(n + 3,5) - 34 * C(n + 2,5) + 21 * C(n + 1,5) - 3 * C(n,5) + 3 * (- 1) ^ n). [Stanley]. - _ N. J. A. Sloane _ , Jul 07 2014 ●

▶ [A100189] 1,6,27,92,245,546,1071,1912,3177,4990,7491,10836,15197,20762,27735,36336,46801,59382,74347,91980,112581,136466,163967,195432,231225 ⋆ Equatorial structured meta - anti - diamond numbers, the n - th number from an equatorial structured n - gonal anti - diamond number sequence. ● a(n) = (1 / 6) * (4 * n ^ 4 - 12 * n ^ 3 + 20 * n ^ 2 - 6 * n). ● a(1)=1, a(2)=6, a(3)=27, a(4)=92, a(5)=245, a(n)=5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Harvey P. Dale _ , Jul 05 2011 ●

▶ [A052267] 1,6,27,92,267,678,1561,3312,6582,12372,22194,38232,63594,102564,160974,246576,369567,543114,784069,1113684,1558557,2151578,2933151,3952416,5268796 ⋆ Number of 2 X n matrices over GF(3) under row and column permutations. ● a(n) = ((315 * (475 + 37 * (- 1) ^ n) + 6 * (54959 + 945 * (- 1) ^ n) * n + (298618 + 630 * (- 1) ^ n) * n ^ 2 + 150528 * n ^ 3 + 46788 * n ^ 4 + 9156 * n ^ 5 + 1092 * n ^ 6 + 72 * n ^ 7 + 2 * n ^ 8)) / 161280. - _ Colin Barker _ , Jan 16 2017 ●

▶ [A038166] 1,6,27,92,273,714,1715,3816,8007,15938,30381,55692,98735,169806,284349,464672,742950,1164228,1791426,2710344,4037670,5928988,8591154,12294672,17392258 ⋆ G.f.: 1 / ((1 - x) * (1 - x ^ 2)) ^ 6. ● a(0)=1, a(1)=6, a(2)=27, a(3)=92, a(4)=273, a(5)=714, a(6)=1715, a(7)=3816, a(8)=8007, a(9)=15938, a(10)=30381, a(11)=55692, a(12)=98735, a(13)=169806, a(14)=284349, a(15)=464672, a(16)=742950, a(17)=1164228, a(n)=6 * a(n - 1) - 9 * a(n - 2) - 16 * a(n - 3) + 60 * a(n - 4) - 24 * a(n - 5) - 116 * a(n - 6) + 144 * a(n - 7) + 66 * a(n - 8) - 220 * a(n - 9) + 66 * a(n - 10) + 144 * a(n - 11) - 116 * a(n - 12) - 24 * a(n - 13) + 60 * a(n - 14) - 16 * a(n - 15) - 9 * a(n - 16) + 6 * a(n - 17) - a(n - 18). - _ Harvey P. Dale _ , Jun 10 2013 ●

▶ [A278357] 1,6,27,96,281,708,1590,3264,6237,11242,19305,31824,50661,78248,117708,172992,249033,351918,489079,669504,903969,1205292,1588610,2071680,2675205 ⋆ Number of n X 2 0..1 arrays with rows and columns in lexicographic non decreasing order but with exactly one mistake. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. ●

▶ [A001874] 1,6,27,98,315,924,2534,6588,16407,39430,91959,209034,464723,1013292,2171850,4584620,9546570,19635840,39940460,80421600,160437690,317354740,622844730,1213580820,2348773525 ⋆ Convolved Fibonacci numbers. ● a(n) = F""""(n + 5, 1) / 5!, i.e., 1 / 5! times the 5th derivative of the (n + 5)th Fibonacci polynomial evaluated at 1. - _ T. D. Noe _ , Jan 18 2006 ●

▶ [A054457] 1,6,27,104,366,1212,3842,11784,35223,103122,296805,842160,2360780,6549240,18004980,49106992,132996957,357948894,957993823,2550977112,6761742234,17848312884,46932923478,122980461816 ⋆ Pell numbers A000129(n + 1) (without P(0)) convoluted twice with itself. ● a(n)=F"(n + 3, 2) / 2, that is, 1 / 2 times the 2nd derivative of the (n + 3)th Fibonacci polynomial evaluated at x=2. - _ T. D. Noe _ , Jan 19 2006 ●

▶ [A005325] 1,6,27,104,369,1242,4037,12804,39897,122694,373581,1128816,3390582,10136556,30192102,89662216,265640691,785509362,2319218869,6839057544,20147488020,59306494520,174466248840,512987904000,1507780192035 ⋆ Column of Motzkin triangle. ● a(n) = (sqrt(- 3) / 81) * ((- 1) ^ n * n * (4 * n ^ 3 - 15 * n ^ 2 - 55 * n + 102) / (n + 7) / (n + 3) / (n + 2) * hypergeom([1 / 2, n + 7],[3],4 / 3) - (- 1) ^ n * (4 * n ^ 4 - 17 * n ^ 3 + 23 * n ^ 2 + 242 * n - 288) / (n + 7) / (n + 3) / (n + 2) * hypergeom([1 / 2, n + 6],[3],4 / 3)). - _ Mark van Hoeij _ , Oct 29 2011. ● a(n) (n + 11) (n - 1) = (n + 4) (3 n + 9) a(n - 2) + (n + 4) (2 n + 9) a(n - 1). - _ Simon Plouffe _ , Feb 09 2012 ● a(n) = 6 * sum(j= ceiling((n - 5) / 2)..(n + 1), C(j,2 * j - n + 5) * C(n + 1,j)) / (n + 1). - _ Vladimir Kruchinin _ , Mar 17 2014 ●

▶ [A119852] 0,0,0,1,6,27,106,387,1350,4566,15102,49113,157622,500520,1575558,4923536,15290784,47235771,145246224,444814533,1357368786,4128880561,12523521786,37888119522,114358226428 ⋆ Number of ternary words with exactly one 012. ● a(0)=0, a(1)=0, a(2)=0, a(3)=1, a(4)=6, a(5)=27, a(n)=6 * a(n - 1) - 9 * a(n - 2) - 2 * a(n - 3) + 6 * a(n - 4) - a(n - 6). - _ Harvey P. Dale _ , Apr 28 2014 ●

▶ [A027471] 0,1,6,27,108,405,1458,5103,17496,59049,196830,649539,2125764,6908733,22320522,71744535,229582512,731794257,2324522934,7360989291,23245229340,73222472421,230127770466,721764371007,2259436291848 ⋆ a(n) = (n - 1) * 3 ^ (n - 2), n > 0. ● a(n) = 3 ^ (n - 2) * (n - 1) (convolution of A000244, power s of 3, with itself). (End) ● a(n) = 6 * a(n - 1) - 9 * a(n - 2), n > 2, a(1)=0, a(2)=1. - _ Barry E. Williams _ , Jan 13 2000 ● a(n) = Sum _{ k=0..n } 3 ^ (n - k) * binomial(n - k + 1, k) * binomial(1, (k + 1) / 2) * (1 - (- 1) ^ k) / 2. ● a(n) = (1 / 3) * Sum _{ k=0..2n } T(n, k) * k, where T(n, k) is given by A027907. ● a(n) = (1 / 3) * Sum _{ k=0..n } Sum _{ j=0..n } C(n, j) * C(j, k) * (j + k). ● a(n) = Sum _{ k=0..n } Sum _{ j=0..n } C(n, j) * C(j, k) * (j - k). ●

▶ [A318638] 1,6,27,109,405,1467,5103,17550,59050,197100,649539,2126991,6908733,22325625,71744625,229602925,731794257,2324602206,7360989291,23245524600,73222475256,230128853031,721764371007,2259440202825,7060738412026 ⋆ G.f.: Sum _{ n>=1 } ((3 + x ^ n) ^ n - 3 ^ n). ● a(n) = Sum _{ d|n } 3 ^ (d - n / d) * binomial(d, n / d). - _ Seiichi Manyama _ , Apr 24 2021 ●

▶ [A094829] 1,6,27,109,417,1548,5644,20349,72846,259579,922209,3269889,11579032,40967400,144863001,512050438,1809503019,6393427173,22587086305,797911776292,281856708180,995606748757,3516721295214 ⋆ Number of (s(0), s(1), ..., s(2n + 1)) such that 0 < s(i) < 9 and |s(i) - s(i - 1)| = 1 for i = 1,2,...,2n + 1, s(0) = 1, s(2n + 1) = 6. ● a(n) = (2 / 9) * Sum _{ r=1..8 } sin(r * Pi / 9) * sin(2 * r * Pi / 3) * (2 * cos(r * Pi / 9)) ^ (2 * n + 1), for n >= 2. ● a(n) = 6 * a(n - 1) - 9 * a(n - 2) + a(n - 3). ●

▶ [A037604] 1,6,27,109,438,1755,7021,28086,112347,449389,1797558,7190235,28760941,115043766,460175067,1840700269,7362801078,29451204315,117804817261,471219269046,1884877076187,7539508304749,30158033218998 ⋆ Base - 4 digits are, in order, the first n terms of the periodic sequence with initial period 1,2,3. ● a(n) = 4 * a(n - 1) + a(n - 3) - 4 * a(n - 4) for n > 5, a(1) = 1, a(2) = 6, a(3) = 27, a(4) = 109, a(5) = 438. - _ Philippe Deléham _ , Mar 24 2013 ● a(n) = floor(3 * 4 ^ n / 7). - _ Karl V. Keller, Jr. _ , Mar 18 2021 ●

▶ [A094788] 1,6,27,110,428,1624,6069,22458,82555,302082,1101816,4009616,14567657,52865230,191684283,694609494,2515972324,9110338728,32981059485,119377761602,432046756571,1563510554986,5657752486512,20472344560800 ⋆ Number of (s(0), s(1), ..., s(2n + 1)) such that 0 < s(i) < 10 and |s(i) - s(i - 1)| = 1 for i = 1,2,...,2n + 1, s(0) = 1, s(2n + 1) = 6. ● a(n) = (1 / 5) * Sum _{ r=1..9 } sin(r * Pi / 10) * sin(3 * r * Pi / 5) * (2 * cos(r * Pi / 10)) ^ (2 * n + 1). ● a(n) = 8 * a(n - 1) - 21 * a(n - 2) + 20 * a(n - 3) - 5 * a(n - 4). ●

▶ [A221863] 1,6,27,110,429,1637,6172,23104,86090,319792,1185305,4386331,16212913,59873834,220964744,815057639,3005282745,11077802256,40824723483,150424044413,554183037617,2041477665799,7519722443381,27696997721940,102010147865915 ⋆ Expansion of (1 - 3 * x + x ^ 2) / (1 - 9 * x + 28 * x ^ 2 - 35 * x ^ 3 + 15 * x ^ 4 - x ^ 5). ● a(n) = 9 * a(n - 1) - 28 * a(n - 2) + 35 * a(n - 3) - 15 * a(n - 4) + a(n - 5) with a(0) = 1, a(1) = 6, a(2) = 27, a(3) = 110, a(4) = 429. ●

▶ [A216263] 1,6,27,110,429,1638,6187,23238,87021,325358,1215435,4538430,16942381,63239286,236031147,880918070,3287706669,12270039678,45792714187,170945

01341358,637813699821,2380355555078,8883612714795,33154103692710,1237328 18833261 ⋆ Expansion of 1 / ((1 - 2 * x) * (1 - 4 * x + x ^ 2)). ● a(n) = 6 * a(n - 1) - 9 * a(n - 2) + 2 * a(n - 3), a(0) = 1, a(1) = 6, a(2) = 27. ● a(n) = (- 2 ^ (3 + n) + (7 - 4 * sqrt(3)) * (2 - sqrt(3)) ^ n + (2 + sqrt(3)) ^ n * (7 + 4 * sqr t(3))) / 6. - _ Colin Barker _ , Feb 05 2017 ●

▶ [A003517] 1,6,27,110,429,1638,6188,23256,87210,326876,1225785,4601610,1729 8645,65132550,245642760,927983760,3511574910,13309856820,50528160150,1921 13383644,731508653106,2789279908316,10649977831752,40715807302800 ⋆ Num ber of permutations of [n + 1] with exactly 1 increasing subsequence of length 3 . ● a(n) = 6 * binomial(2 * n + 1, n - 2) / (n + 4). ● a(n) = Sum _{ i>=1, j> =1, k>=1, i + j + k=n + 1 } Catalan(i) * Catalan(j) * Catalan(k). _ T. D. No e _ , Dec 22 2010 ●

▶ [A108958] 0,1,6,27,110,430,1652,6307,24054,91866,351692,1350030,5196204,20 050108,77542376,300507427,1166737574,4537436578,17672369756,68922740122,2 69127888644,1052047384708,4116711169496,16123793452942,63205286441660 ⋆ Number of unordered pairs of distinct length - n binary words having the same number of 1's. ● a(n) = sum(binomial(binomial(n, k), 2), k=0..n); ● a(n) = (1 / 2) * sum(i + j>n,0<=i,j<=n,binomial(i + j,i)). - _ Benoit Cloitre _ , May 26 2006 ● a(n) = sum _{ 0<i<=k<n } (- 1) ^ (i + 1) * binomial(n,k + i) * bino mial(n,k - i). - _ Mircea Merca _ , Apr 05 2012 ● a(n) = 1 / 2 * Sum _{ k=1.. n } binomial(n,k) ^ 2 - binomial(n,k). - _ Gerry Martens _ , Oct 09 2022 ●

▶ [A005284] 1,6,27,111,440,1717,6655,25728,99412,384320,1487262,5762643,2235 7907,86859412,337879565,1315952428,5131231668,20029728894,78265410550,306 109412100,1198306570554,4694809541046,18407850118383 ⋆ Number of permut ations of (1,...,n) having n - 6 inversions (n>=6). ● a(n) = 2 ^ (2 * n - 7) / sqrt (Pi * n) * Q * (1 + O(n ^{- 1 })), where Q is a digital search tree constant, Q = 0.2887880951... (see A048651). - corrected by _ Vaclav Kotesovec _ , Mar 1 6 2014 ●

▶ [A371965] 0,0,0,1,6,27,111,441,1728,6733,26181,101763,395693,1539759,599715 9,23381019,91244934,356427459,1393585779,5453514729,21358883439,837180274 29,328380697629,1288947615849,5062603365999 ⋆ a(n) is the sum of all peaks in the set of Catalan words of length n. ● a(n) = Sum _{ i=1..n - 1 } binomial(2 * (n - i) - 1,n - i - 2). ●

▶ [A198694] 6,27,111,447,1791,7167,28671,114687,458751,1835007,7340031,2936 0127,117440511,469762047,1879048191,7516192767,30064771071,120259084287,4 81036337151,1924145348607,7696581394431,30786325577727 ⋆ 7 * 4 ^ n - 1. ● a (n) = 4 * a(n - 1) + 3. a(n) = 5 * a(n - 1) - 4 * a(n - 2), n>1. ●

▶ [A220101] 0,1,6,27,112,450,1782,7007,27456,107406,419900,1641486,6418656,2 5110020,98285670,384942375,1508593920,5915896470,23213240820,9114028737 0,358042932000,1407342229020,5534695100220,21777424274502,85729014099072 ⋆ Number of ordered set partitions of { 1,...,n } into n - 1 blocks avoiding the p attern 123. ● a(n) / a(n - 1) = 2 * (2 * n - 3) * (n - 1) ^ 2 / ((n + 1) * (n - 2) ^ 2) for n> 2 . - _ Bruno Berselli _ , Dec 05 2012 ● a(n) = 3 * (n - 1) / (2 * n - 1) * binomial(2 * n - 1,n - 2). [See Godbole et al., Theorem 4.] - _ Peter Bala _ , Dec 18 2013 ● a(n) = 3 * 2 ^ (- 2 + 2 * n) * Gamma(- 1 / 2 + n) * (- 1 + n) ^ 2 / (sqrt(Pi) * Gamma(2 + n)). - _ Peter Luschny _ , Dec 14 2015 ●

▶ [A014825] 1,6,27,112,453,1818,7279,29124,116505,466030,1864131,7456536,29 826157,119304642,477218583,1908874348,7635497409,30541989654,12216795863 5,488671834560,1954687338261,7818749353066 ⋆ a(n) = 4 * a(n - 1) + n with n > 1, a(1)=1. ● a(n) = (4 ^ (n + 1) - 3 * n - 4) / 9. ● a(n) = Sum _{ k=0..n } (n - k) * 4 ^ k = Sum _{ k=0..n } k * 4 ^ (n - k). - _ Paul Barry _ , Jul 30 20 04 ● a(n) = Sum _{ k=0..n } binomial(n + 2, k + 2) * 3 ^ k [Offset 0]. - _ Pa ul Barry _ , Jul 30 2004 ●

▶ [A141844] 1,6,27,113,458,1839,7365,29470,117891,471577,1886322,7545303,30 181229,120724934,482899755,1931599041,7726396186,30905584767,12362233909 3,494489356398,1977957425619,7911829702505,31647318810050,12658927524023 1,506357100960957 ⋆ Expansion of (1 + x) * (1 + x ^ 2) / ((1 - x) ^ 2 * (1 + x + x ^ 2) * (1 - 4 * x)). ● a(n) = 5 * a(n - 1) - 4 * a(n - 2) + a(n - 3) - 5 * a(n - 4) + 4 * a(n - 5) for n>4. - _ Colin Barker _ , Jun 26 2017 ●

▶ [A176476] 0,1,6,27,113,464,1896,7738,31571,128800,525455,2143647,8745216,3 5676948,145547524,593775045,2422362078,9882257735,40315615409,16447140818 4,670976837020,2737314167774,11167134898975,45557394660800,1858557478758 75 ⋆ Partial sums of A012814. ● a(n + 3) = 5 * a(n + 2) - 4 * a(n + 1) + a(n) + 1. ●

▶ [A291232] 6,27,114,459,1788,6804,25440,93825,342258,1237329,4439778,15829 992,56135274,198125703,696387570,2438803863,8513220696,29631246012,102865 720452,356257472589,1231184095602,4246476696765,14620160955390,502522668 08784,172462429888782 ⋆ p - INVERT of (0,1,0,1,0,1,...), where p(S) = (1 - 3 S) ^ 2. ● a(n) = 6 * a(n - 1) - 7 * a(n - 2) - 6 * a(n - 3) - a(n - 4) for n >= 5. ● a(n) = 3 * (((3 - sqrt(13)) / 2) ^ n * (- 3 + sqrt(13)) * (- 39 + 17 * sqrt(13) - 39 * n) + 2 ^ (- n) * (3 + sqrt(13)) ^ (1 + n) * (39 + 17 * sqrt(13) + 39 * n)) / 3 38. - _ Colin Barker _ , Aug 26 2017 ●

▶ [A171475] 1,6,27,114,468,1896,7632,30624,122688,491136,1965312,7862784,31 454208,125822976,503304192,2013241344,8053014528,32212156416,12884882227 2,515395682304,2061583515648,8246335635456,32985345687552 ⋆ a(n) = 6 * a(n - 1) - 8 * a(n - 2), for n > 2, with a(0) = 1, a(1) = 6, a(2) = 27. ● a(n) = 3 * (5 * 4 ^ n - 2 * 2 ^ n) / 8 for n > 0. ●

▶ [A130019] 0,0,1,6,27,114,483,2106,9537,44934,219933,1115286,5842707,31537 314,174991443,996169146,5808168297,34633891734,210943794093,131083740264 6,8302614222507,53552183145234,351468155184003,2345436650546106 ⋆ a(n + 2) = 6 * a(n + 1) + (- 11 + n) * a(n) + (6 - 2 * n) * a(n - 1) for n >= 1. ● a(n + 2) = 6 * a(n + 1) + (- 11 + n) * a(n) + (6 - 2 * n) * a(n - 1) for n >= 1. \\ _ Jianing Song _ , Oct 10 2018 ●

▶ [A049651] 0,1,6,27,116,493,2090,8855,37512,158905,673134,2851443,1207890 8,51167077,216747218,918155951,3889371024,16475640049,69791931222,2956433 64939,1252365390980,5305104928861,22472785106426 ⋆ a(n) = (F(3 * n + 1) - 1) / 2, where F=A000045 (the Fibonacci sequence). ● a(n) = 4 * a(n - 1) + a(n - 2) + 2, a(0)=0, a(1)=1. ● a(n) is asymptotic to - 1 / 2 + (sqrt(5) + 5) / 20 * (s qrt(5) + 2) ^ n. (End) ● a(n + 1) = F(2) + F(5) + F(8) + ... + F(3n + 2). ● a (n) = 5 * a(n - 1) - 3 * a(n - 2) - a(n - 3), a(0)=0, a(1)=1, a(2)= 6. Observation by G. Detlefs. See the W. Lang link. - _ Wolfdieter Lang _ , Oct 18 2010 ●

▶ [A109114] 1,6,27,117,504,2169,9333,40158,172791,743481,3199032,13764717,59 226489,254838294,1096512003,4718045133,20300689656,87349312881,3758444954 37,1617174538542,6958339206399,29940172416369,128825844462648 ⋆ a(n) = 5 * a(n - 1) - 3 * a(n - 2), a(0)=1, a(1)=6. ● a(n) = ((sqrt(13) + 7) * ((5 + sqrt(1 3)) / 2) ^ n + (sqrt(13) - 7) * ((5 - sqrt(13)) / 2) ^ n) / (2 * sqrt(13)). ●

▶ [A373302] 1,6,27,119,533,2402,10829,48804,219925,991044,4465957,20125051,9 0690002,408678475,1841637299,8299012941,37398034921,168527634148,75943999 5404,3422282105232,15421909405056,69496108849357,313171930813206,1411253 951813003,6359566489040219 ⋆ Number of compositions of 6 * n - 2 into parts 1 and 6. ● a(n) = Sum _{ k=0..n } binomial(n + 3 + 5 * k,n - 1 - k). ● a(n) = 7 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). ●

▶ [A030297] 0,1,6,27,124,645,3906,27391,219192,1972809,19728190,217010211,26 04122676,33853594957,473950329594,7109254944135,113748079106416,19337173 44809361,34806912206568822,661331331924807979 ⋆ a(n) = n * (n + a(n - 1)) w ith a(0)=0. ● a(n) = sum _{ k=0...n } (n! / k!) * k ^ 2. - _ Ross La Haye _ , Sep 21 2004 ●

▶ [A045500] 1,1,6,27,125,635,3488,20425,126817,831915,5744784,41618459,31538 8311,2493721645,20526285716,175529425815,1556577220651,14290644428279,135 624265589086,1328702240382589,13420603191219111,139592874355534071 ⋆ Fift h - from - right diagonal of triangle A121207. ● a(n + 1) = Sum _{ k=0..n } bi nomial(n + 4, k + 4) * a(k). - _ Vladeta Jovovic _ , Nov 10 2003 ●

▶ [A360057] 1,6,27,125,644,3643,21974,138395,898695,5970927,40386209,277127 148,1924349756,13496536510,95467320600,680260392219,4878382821267,3518220 9381590,255000022472565,1856501085686340,13570366067586294,9955460198634 9471,732756800760507312 ⋆ a(n) = Sum _{ k=0..n } binomial(n + 4 * k + 4,n - k) * Catalan(k). ● a(n) = binomial(n + 4,4) + Sum _{ k=0..n - 1 } a(k) * a(n - k - 1). ●

▶ [A109115] 1,6,27,126,585,2718,12627,58662,272529,1266102,5881995,2732628 6,126951129,589783374,2739986883,12729297654,59137151265,274736498022,127 6357445883,5929639277598,27547629448041,127979435624958 ⋆ a(n) = 4 * a(n - 1) + 3 * a(n - 2), a(0)=1, a(1)=6. ● a(n) = ((sqrt(7) + 4) * (2 + sqrt(7)) ^ n + (sqrt(7) - 4) * (2 - sqrt(7)) ^ n) / (2 * sqrt(7)). ●

▶ [A104745] 1,6,27,128,629,3130,15631,78132,390633,1953134,9765635,4882813 6,244140637,1220703138,6103515639,30517578140,152587890641,762939453142,3 814697265643,19073486328144,95367431640645,476837158203146 ⋆ a(n) = 5 ^ n + n. ● a(n) = 7 * a(n - 1) - 11 * a(n - 2) + 5 * a(n - 3). - _ Vincenzo Librandi _ , Jun 16 2013 ●

▶ [A174634] 1,6,27,135,648,3159,15309,74358,360855,1751787,8503056,4127525 1,200353257,972537030,4720790403,22915204479,111232727064,539935021503,26 20899608085,12722114017782,61754438526111,299762341738371,14550769719501 12,7063091991495675 ⋆ a(n) = 3 ^ n * F(n + 2). ● a(n) = (1 / 2 + 3 * sqrt(5) / 10) * (3 / 2 + 3 * sqrt(5) / 2) ^ n + (1 / 2 - 3 * sqrt(5) / 10) * (3 / 2 - 3 * sqrt (5) / 2) ^ n. ●

▶ [A137968] 1,1,6,27,158,981,6342,42728,295008,2079882,14908740,108312873,7 95836544,5903472999,44151306690,332552305818,2520416719368,1920722274432 6,147086508325056,1131292622149352,8735383810590486 ⋆ G.f. satisfies A(x) = 1 + x * (1 + x * A(x) ^ 2) ^ 6. ● a(n) = Sum _{ k=0..n - 1 } C(6 * (n - k),k) / (n - k) * C(2 * k,n - k - 1) for n>0 with a(0)=1. - _ Paul D. Hanna _ , Jun 16 2009 ●

▶ [A202766] 6,27,167,1206,9442,77563,658097,5714972,50503822,452425909,4097 411586,37441633014,344698955565,3193520274110,29747746198318,27840746467 9282,2616351626277085,24676888631241563,233501199663256017,2215874110986 269907 ⋆ Floor(10 ^ n / sum(k=3..10 ^ n, 1 / k)). ● a(n) = floor((10 ^ n) / (Sum _{ k=3..10 ^ n } 1 / k)). ●

▶ [A289022] 6,27,204,1941,19572,198567,1999056,19931337,196939572,193078409 1,18802964760,182062831005,1754100012108,16826739416271,160799296563312,1 531421717572401,14540848734272388,137690120683444995,130061343280562349 6,1225814203971884549 ⋆ Wiener index of the n - Apollonian network. ● a(n) = 23 * a(n - 1) - 174 * a(n - 2) + 448 * a(n - 3) - 29 * a(n - 4) - 1221 * a(n - 5) + 2088 * a(n - 6) - 4050 * a(n - 7) + 2916 * a(n - 8). ●

▶ [A047778] 1,6,27,220,1765,14126,113015,1808248,28931977,462911642,7406586 283,118505380540,1896086088653,30337377418462,485398038695407,1553273723 8253040,497047591624097297,15905522931971113522 ⋆ Concatenation of the firs t n numbers in binary (converted to base 10). ● a(n) = a(n - 1) * 2 ^ (1 + floor (log _ 2(n))) + n. - _ Henry Bottomley _ , Jan 12 2001 ● a(n) = 4C / 2 ^ frac (log _ 2(n)) * n ^{ n + 1 } / r(frac(log _ 2(n))) ^ n + O(1), where r(x) = 2 ^{ x - 1 + 2 ^{ 1 - x }} ; frac is the fractional part function frac(x) = x - floor(x); and C is the binary Champernowne constant (A066716). (In fact, a(n) is the flo or of this expression; the error term is between 1 / 2 and 1.) r(x) takes on valu es between e * log(2) and 2 for x in the range 0 to 1. It follows using Stirling's approximation that the radius of convergence for the e.g.f. is log 2. - _ Frankli n T. Adams - Watters _ , Sep 07 2006 ●

▶ [A290802] 0,6,27,223,2281,7083,91118,679363,5620621,22915024,22915024,171 7766518,13581726976,13581726976,498026779011,1854472924709,1609715745453 8,1157959491633341,1046318005112169,1046318005112169,2384410837585845 5,10 3636374673470456 ⋆ One of the two successive approximations up to 7 ^ n for t he 7 - adic integer sqrt(- 6). These are the numbers congruent to 6 mod 7 (exc ept for the initial 0). ● a(0) = 0 and a(1) = 6, a(n) = a(n - 1) + 4 * (a(n - 1) ^ 2 + 6) mod 7 ^ n for n > 1. ●

▶ [A091307] 6,28,52,100,196,388,772,1540,3076,6148,12292,24580,49156,98308,19 6612,393220,786436,1572868,3145732,6291460,12582916,25165828,50331652,1006 63300,201326596 ⋆ a(n)=6 * 2 ^ n + 4 (Bode Number A003461(n + 2)) except f or a(1)=6. ● a(1) = 6, a(2) = 28, a(n) = 2 * a(n - 1) - 4 for n > 2. ●

▶ [A014635] 0,6,28,66,120,190,276,378,496,630,780,946,1128,1326,1540,1770,201 6,2278,2556,2850,3160,3486,3828,4186,4560 ⋆ a(n) = 2 * n * (4 * n - 1). ● a(n) = C(4 * n,2), n>=0. - _ Zerinvary Lajos _ , Jan 02 2007 ● a(n) = 8 * n ^ 2 - 2 * n. - _ Omar E. Pol _ , May 07 2008 ● a(n) = a(n - 1) + 16 * n - 10 (with a(0)=0). - _ Vincenzo Librandi _ , Nov 20 2010 ●

► [A227970] 0,0,1,6,28,66,153,276,496,780,1225,1770,2556,3486,4753,6216,8128,10296,13041,16110,19900,24090,29161,34716,41328 ⋆ Triangular arithmetic on half - squares: b(n) * (b(n) - 1) / 2 where b(n) = floor(n ^ 2 / 2). ● a(n) = binomial(floor(n ^ 2 / 2), 2). - _ Wesley Ivan Hurt _ , Sep 27 2013 ●

► [A144945] 0,6,28,76,160,290,476,728,1056,1470,1980,2596,3328,4186,5180,6320,7616,9078,10716,12540,14560,16786,19228,21896,24800 ⋆ Number of ways to place 2 queens on an n X n chessboard so that they attack each other. ● a(n) = (n - 1) * n * (5 * n - 1) / 3. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>4; a(1)=0, a(2)=6, a(3)=28, a(4)=76. - _ Harvey P. Dale _ , Oct 15 2011 ● a(n) = Sum _{ i=1..n - 1 } i * (5 * i + 1), with a(0)=0, a(1)=6. - _ Bruno Berselli _ , Feb 10 2014 ●

► [A308585] 0,6,28,82,200,446,948,1962,4000,8086,16268,32642,65400,130926,261988,524122,1048400,2096966,4194108,8388402,16777000,33554206,67108628,134217482,268435200 ⋆ a(n) = 2 ^ (n + 3) - 10 * n - 6. ● a(n) = 2 ^ (n + 3) - 10 * n - 6. ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 2 * a(n - 3). ●

► [A302650] 1,1,6,28,85,201,406,736,1233,1945,2926,4236,5941,8113,10830,14176,18241,23121,28918,35740,43701,52921,63526,75648,89425 ⋆ Number of minimal total dominating sets in the n - barbell graph. ● a(n) = (2 + (n - 3) * n * (n + 1) / 4) * n. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ●

► [A141255] 0,6,28,86,200,418,748,1282,2040,3106,4492,6394,8744,11822,15556,20074,25456,32086,39724,48934,59456,71554,85252,101250,119040 ⋆ Total number of line segments between points visible to each other in a square n X n lattice. ● a(n) = 2 * (n - 1) * (2n - 1) + 2 * Sum _{ i=2..n - 1 } (n - i) * (2n - i) * phi(i). - _ Chai Wah Wu _ , Aug 16 2021 ●

► [A336535] 1,6,28,91,231,496,946,1653,2701,4186,6216,8911,12403,16836,22366,29161,37401,47278,58996,72771,88831,107416,128778,153181,180901 ⋆ a(n) = (m(n) ^ 2 + 3) * (m(n) ^ 2 + 7) / 32, where m(n) = 2 * n - 1. ● a(n) = (1 - n + n ^ 2) * (2 - n + n ^ 2) / 2. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n > 5. (End) ●

► [A342380] 0,0,0,0,0,0,6,28,92,255,637,1485,3301,7098,14912,30826,63018,127857,258095,519251,1042379,2089604,4185194,8377704,16764264 ⋆ Expansion of e.g.f. (exp(x) - 1) * (exp(x) - x ^ 4 / 24 - x ^ 3 / 6 - x ^ 2 / 2 - x - 1). ● a(n) = 2 ^ n - Sum _{ i= { 0..4,n }} binomial(n,i). ●

► [A172141] 0,6,28,96,240,518,980,1712,2784,4310,6380,9136,12688,17206,22820,29728,38080,48102,59964,73920,90160,108966,130548,155216,183200 ⋆ Number of ways to place 2 nonattacking nightriders on an n X n board. ● a(n) = (1 / 12) * n * (3 * (- 1) ^ n - (11 - 18 * n + 10 * n ^ 2 - 6 * n ^ 3)). ●

► [A172132] 0,6,28,96,252,550,1056,1848,3016,4662,6900,9856,13668,18486,24472,31800,40656,51238,63756,78432,95500,115206,137808,163576,192792 ⋆ Number of ways to place 2 nonattacking knights on an n X n board. ● a(n) = (n - 1) * (n + 4) * (n ^ 2 - 3 * n + 4) / 2. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Vincenzo Librandi _ , Apr 30 2013 ●

► [A276041] 1,6,28,104,336,992,2752,7296,18688,46592,113664,272384,643072,1499136,3457024,7897088,17891328,40239104,89915392,199753728,441450496,970981376,2126512128,4638900224,10083106816 ⋆ Exponential convolution of odd numbers (A005408) with themselves. ● a(n) = 6 * a(n - 1) - 12 * a(n - 2) + 8 * a(n - 3). ● a(n) = 2 ^ n * (n ^ 2 + n + 1). ●

► [A266976] 1,6,28,104,464,1696,7488,27264,120064,436736,1922048,6989824,30756864,111845376,492126208,1789558784,7874084864,28633071616,125985619968,458129670144,2015770968064,7330076819456,32252339683328,117281237499904,516037451710464 ⋆ Decimal representation of the n - th iteration of the "Rule 78" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = 2 * a(n - 1) + 16 * a(n - 2) - 32 * a(n - 3) for n>3. ●

► [A234617] 6,28,107,380,1345,4878,18219,69736,271589,1069538,4240351,16877532,67325913,268902358,1074741203,4297097168,17184391117,68729044938,274898091975,1099554095044,4398135640001,17592372690878,70369134247867,281475790405560,1125901601341365 ⋆ Numbers of undirected cycles in the 2n - crossed prism graph. ● a(n) = 10 * a(n - 1) - 37 * a(n - 2) + 64 * a(n - 3) - 52 * a(n - 4) + 16 * a(n - 5) for n>5. ● a(n) = 2 ^ (n - 1) + 4 ^ n + (2 ^ (n + 1) - 3) * n. - _ Eric W. Weisstein _ , May 11 2017 ●

► [A332751] 6,28,108,400,1486,5516,20464,75912,281590,1044532,3874588,14372392,53312926,197758868,733566368,2721089680,10093604838,37441198412,138884309516,515177191104,1910997283694,7088649655580,26294623424272,97537225651992,361804397590486 ⋆ The number of flips to go from Hamiltonian cycle beta _ n to gamma _ n in the Cameron graph of size n using Thomason's algorithm. ● a(n) = 4 * a(n - 1) - a(n - 2) - a(n - 4) - a(n - 6) for n>6. - _ Colin Barker _ , Feb 22 2020 ●

► [A263942] 6,28,110,416,1558,5820,21726,81088,302630,1129436,4215118,15731040,58709046,219105148,817711550,3051741056,11389252678,42505269660,158631825966,592022034208,2209456310870,8245803209276,30773756526238,114849222895680,428623135056486 ⋆ Positive integers n such that (n + 4) ^ 3 - n ^ 3 is a square. ● a(n) = 5 * a(n - 1) - 5 * a(n - 2) + a(n - 3) for n>3. ●

► [A253068] 1,6,28,112,456,1816,7288,29112,116536,465976,1864248,7456312,29826616,119303736,477220408,1908870712,7635504696,30541975096,122167987768,488671776312,1954687454776,7818749120056,31274997878328,125099988717112,500399960460856 ⋆ The subsequence A253066(2 ^ n - 1). ● a(n) = ((- 2) ^ n + 4 ^ (2 + n) - 8) / 9. - _ Colin Barker _ , Jul 16 2015 ●

► [A229587] 0,6,28,116,444,1620,5724,19764,67068,224532,743580,2440692,7951932,25745364,82904796,265720500,848179836,2697594516,8551948572,27033340788,85232507580,268094978388,841477302108,2636009007156,8242758323964 ⋆ Number of defective 3 - colorings of a 2 X n 0..2 array connected horizontally and antidiagonally with exactly one mistake, and colors introduced in row - major 0..2 order ● a(n) = 6 * a(n - 1) - 9 * a(n - 2) for n>4. ● a(n) = 4 * (3 ^ (n - 2) + 4 * (2 * n - 3) * 3 ^ (n - 4)) for n>2. ●

► [A026014] 1,6,28,119,483,1911,7448,28764,110466,422807,1615152,6163885,23514855,89714835,342411120,1307613480,4997082510,19111589280,73154916744,280265589198,1074685552094,4124573481446,15843809385168,60914041121640 ⋆ a(n) = number of (s(0), s(1), ..., s(2n)) such that s(i) is a nonnegative integer and |s(i) - s(i - 1)| = 1 for i = 1,2,...,n, s(0) = 2, s(2n) = 6. Also a(n) = T(2n,n - 2), where T is the array defined in A026009. ● a(n) = 1 if n = 2 else f(n) - f(n - 1), where f(n) = Sum _{ j=0..n - 2 } C(n - j - 2) * (C(j + 5) - 4 * C(j + 4) + 3 * C(j + 3)) and C(n) are the Catalan numbers. (End) ● a(n) = C(n + 4) - 6 * C(n + 3) + 11 * C(n + 2) - 7 * C(n + 1) + C(n). ● a(n) = 21 * ((n * (n - 1) * (n ^ 2 + n + 4) / ((n + 2) * (n + 3) * (n + 4) * (n + 5))) * C(n), where C(n) are the Catalan numbers. (End) ●

► [A002694] 1,6,28,120,495,2002,8008,31824,125970,497420,1961256,7726160,30421755,119759850,471435600,1855967520,7307872110,28781143380,113380261800,446775310800,1761039350070,6943526580276,27385657281648,108043253365600 ⋆ Binomial coefficients C(2n, n - 2). ● a(n) = Sum _{ k=0..n } C(n, k) * C(n , k + 2). - _ Paul Barry _ , Sep 20 2004 ● a(n) = Sum _{ k=1..n } binomial(2 * n - k,n - k - 1). - _ Vladimir Kruchinin _ , Oct 22 2016 ●

► [A006516] 0,1,6,28,120,496,2016,8128,32640,130816,523776,2096128,8386560,33550336,134209536,536854528,2147450880,8589869056,34359607296,137438691328,549755289600,2199022206976,8796090925056,35184367894528 ⋆ a(n) = 2 ^ (n - 1) * (2 ^ n - 1), n >= 0. ● a(n) = StirlingS2(2 ^ n,2 ^ n - 1) = binomial(2 ^ n ,2). - _ Ross La Haye _ , Jan 12 2008 ● a(n + 1) = 4 * a(n) + 2 ^ n. - _ Philippe Deléham _ , Feb 20 2004 ● a(n + 1) = Sum _{ k=0..n } Sum _{ j=0..n } 4 ^ (n - j) * binomial(j,k). - _ Paul Barry _ , Aug 05 2005 ● a(n + 2) = 6 * a(n + 1) - 8 * a(n), a(1) = 1, a(2) = 6. - Daniele Parisse (daniele.parisse(AT)eads.com), Jul 28 2006 [Typo corrected by _ Yosu Yurramendi _ , Aug 06 2008] ● a(n) = 3 * Stirling2(n + 1,4) + Stirling2(n + 2,3). - _ Ross La Haye _ , Jun 01 2008 ● a(n) = ((4 ^ n - 2 ^ n) / 2 - 2 ^ (n - 1)) / 4, n>=1. - _ Zerinvary Lajos _ , Jun 05 2009 ●

► [A171476] 1,6,28,120,496,2016,8128,32640,130816,523776,2096128,8386560,33550336,134209536,536854528,2147450880,8589869056,34359607296,137438691328,549755289600,2199022206976,8796090925056,35184367894528 ⋆ a(n) = 6 * a(n - 1) - 8 * a(n - 2) for n > 1, a(0)=1, a(1)=6. ● a(n) = Sum _{ k=1..2 ^ n - 1 } k. ● a(n) = 2 * 4 ^ n - 2 ^ n. ● a(n) = 4 * a(n - 1) + 2 ^ n for n > 0, a(0)=1. - _ Vincenzo Librandi _ , Jul 17 2011 ● a(n) = Sum _{ k=0..n } 2 ^ (n + k). - _ Bruno Berselli _ , Aug 07 2013 ●

► [A171496] 6,28,120,496,2016,8128,32640,130816,523776,2096128,8386560,33550336,134209536,536854528,2147450880,8589869056,34359607296,137438691328,549755289600,2199022206976,8796090925056,35184367894528 ⋆ a(n) = 6 * a(n - 1) - 8 * a(n - 2) for n > 1; a(0) = 6, a(1) = 28. ● a(n) = 8 * 4 ^ n - 2 * 2 ^ n. ● a(n) = 4 * a(n - 1) + 2 ^ (n + 1) (with a(0)=6). - _ Vincenzo Librandi _ , Dec 04 2010 ●

► [A292485] 1,6,28,120,504,2128,9016,38208,161864,685648,2904408,12303264,52117544,220773552,935211704,3961620096,16781691912,71088388112,301135245080,1275629368416,5403652717288,22890240236144,96964613663352,410748694893888,1739959393240264 ⋆ p - INVERT of the odd positive integers, where p(S) = 1 - S - 2 S ^ 2. ● a(n) = 5 * a(n - 1) - 5 * a(n - 2) + 7 * a(n - 3) + 2 * a(n - 4) for n >= 5. ●

► [A267689] 1,6,28,122,500,2026,8148,32682,130900,523946,2096468,8387242,33551700,134212266,536859988,2147461802,8589890900,34359650986,137438778708,549755464362,2199022556500,8796091624106,35184369292628,140737482762922,562949942236500 ⋆ Decimal representation of the n - th iteration of the "Rule 199" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = 6 * a(n - 1) - 7 * a(n - 2) - 6 * a(n - 3) + 8 * a(n - 4) for n > 4. ●

► [A289779] 1,6,28,125,546,2371,10304,44838,195209,849896,3700025,16107530,70121400,305262325,1328913506,5785228011,25185131956,109639724218,477300202625,2077855302992,9045633454817,39378817534750,171429815189636,746294159430429,3248880433597858 ⋆ p - INVERT of the squares, where p(S) = 1 - S - S ^ 2. ● a(n) = 7 * a(n - 1) - 16 * a(n - 2) + 22 * a(n - 3) - 12 * a(n - 4) + 5 * a (n - 5) - a(n - 6). ●

► [A084778] 1,6,28,128,660,3016,13108,64112,304068,1332992,6514356,29341384,131904528,623547112,2990903464,13436119424,61647598484,284398511848,1302463169256,6195158123688,28653898573420,130138400720504 ⋆ a(n) = sum of absolute - valued coefficients of (1 + 2 * x - 3 * x ^ 2) ^ n. ● a(n) = Sum _{ k= 0..2 * n } abs(f(n,k)), where f(n, k) = Sum _{ j=0..k } binomial(n, j) * binomial(n, k - j) * (- 3) ^ j = binomial(n, k) * Hypergeometric2F1([- n, - k], [n - k + 1], - 3) = (n! / k!) * 4 ^ n * (- 3) ^ ((k - n) / 2) * LegendreP(n, k - n, - 1 / 2). - _ G. C. Greubel _ , Jun 04 2023 ●

► [A155588] 1,6,28,132,640,3156,15688,78252,390880,1953636,9766648,48830172,244144720,1220711316,6103532008,30517610892,152587956160,762939584196,3814697527768,19073486852412,95367432689200,476837160300276 ⋆ a(n) = 5 ^ n + 2 ^ n - 1 ^ n. ● a(n) = 7 * a(n - 1) - 10 * a(n - 2) - 4 with a(0)=1, a(1)=6. - _ Vincenzo Librandi _ , Jul 21 2010 ●

► [A368574] 0,1,6,28,132,695,4226,29666,237448,2137197,21372190,235094376,2821132876,36674727843,513446190362,7701692856110,123227085698576,2094860456876761,37707488223782838,716442276251875252,14328845525037506580,300905756025787639951,6619926632567328080946 ⋆ a(n) = n! * Sum _{ k=0..n } binomial(k + 2,3) / k!. ● a(0) = 0; a(n) = n * a(n - 1) + binomial(n + 2,3). ●

► [A373929] 1,6,28,133,651,3206,15771,77519,380989,1872556,9203761,45237262,222344668,1092840924,5371396171,26400821252,129762048116,637790353236,3134788177277,15407722718291,75730131016730,372219363549007,1829486529878612,8992065676243395 ⋆ Number of compositions of 7 * n - 3 into parts 1 and 7. ● a(n) = Sum _{ k=0..n } binomial(n + 3 + 6 * k,n - 1 - k). ● a(n) = 8 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). ● a(n) = n * (1 + n) * (2 + n) * (3 + n) * hypergeom([1 - n, (4 + n) / 6, (5 + n) / 6, 1 + n / 6, (7 + n) / 6, (8 + n) / 6, (9 + n) / 6], [5 / 7, 6 / 7, 8 / 7, 9 / 7, 10 / 7, 11 / 7], - 6 ^ 6 / 7 ^ 7) / 24. - _ Stefano Spezia _ , Jun 23 2024 ●

► [A108051] 0,1,6,28,136,656,3168,15296,73856,356608,1721856,8313856,40142848,193826816,935878656,4518821888,21818802176,105350496256,508677193728,2456110759936,11859151814656,57261050298368,276480808452096 ⋆ a(n + 1) = 4 * (a(n) + a(n - 1)) for n>1, a(1)=1, a(2)=6. ● a(n + 1) = - (1 / 2) * (2 - 2 * 2 ^ (1 / 2)) ^ n * (- 1 + 2 ^ (1 / 2)) - (1 / 2) * (2 + 2 * 2 ^ (1 / 2)) ^ n(- 1 - 2 ^ (1 / 2)); G.f.: x * (1 + 2 * x) / (1 - 4 * x - 4 * x ^ 2). ● a(n + 1) = ((3 + sqrt18)(2 + sqrt8) ^ n + (3 - sqrt18)(2 - sqrt8) ^ n) / 6. - Al Hakanson (hawkuu(AT)gmail.com), Aug 15 2009, index corrected Jul 11 2012 ●

▶ [A199315] 6,28,138,688,3438,17188,85938,429688,2148438,10742188,53710938,268554688,1342773438,6713867188,33569335938,167846679688,839233398438,4196166992188,20980834960938,104904174804688,524520874023438,262260437011718 ⋆ (11 * 5 ^ n + 1) / 2. ● a(n) = 5 * a(n - 1) - 2. ● a(n) = 6 * a(n - 1) - 5 * a(n - 2). ●

▶ [A110047] 1,6,28,144,688,3360,16192,78336,378112,1826304,8817664,42577920,205582336,992649216,4792926208,23142334464,111741042688,539533639680,2605098729472,12578530000896,60734514921472,293252181786624,1415946786832384,6836795882864640 ⋆ Expansion of (1 + 2 * x - 4 * x ^ 2) / ((2 * x + 1) * (2 * x - 1) * (4 * x ^ 2 + 4 * x - 1)). ● a(n) = 4 * a(n - 1) + 8 * a(n - 2) - 16 * a(n - 3) - 16 * a(n - 4). - _ Matthew House _ , Feb 17 2017 ● a(n) = (- 3 * (2 - 2 * sqrt(2)) ^ n * (- 2 + sqrt(2)) + 2 ^ n * (- 2 * (1 + (- 1) ^ n) + 3 * (1 + sqrt(2)) ^ n * (2 + sqrt(2)))) / 8. - _ Colin Barker _ , Feb 17 2017 ●

▶ [A163029] 6,28,144,730,3692,18666,94384,477264,2413346,12203374,61707810,312032874,1577831334,7978491800,40344192708,204005208738,1031576601204,5216289773894,26376789637884,133377373911160,674438554337506 ⋆ Number of n X 3 binary arrays with all 1's connected and a path of 1's from top row to bottom row. ● a(n) = 7 * a(n - 1) - 11 * a(n - 2) + 6 * a(n - 3) + a(n - 4) - 7 * a(n - 5) + a(n - 6). [Conjectured by _ R. J. Mathar _ , Aug 11 2009] ●

▶ [A309490] 0,1,6,28,145,876,6139,49120,442089,4420900,48629911,583558944,7586266285,106207728004,1593115920075,25489854721216,433327530260689,7799895544692420,148198015349155999,2963960306983120000,62243166446645520021,1369349661826201440484,31495042222002633131155,755881013328063195147744 ⋆ Total number of adjacent node merge operations to turn a circular list of size n to a node. ● a(n) = n + n * a(n - 1) for n >= 3, a(1) = 0, a(2) = 1. ●

▶ [A045722] 1,6,28,150,858,5096,31008,191862,1201750,7597590,48384180,309939240,1994981688,12892738800,83604224384,543722433078,3545056580814,23164787710610,151662849838500,994674967479270,6533629880128890 ⋆ Number of bo rder edges in all nonconrossing rooted trees on n nodes. ● a(n) = (n + 1) * binomial(3n - 2, n - 1) / n for n >= 2. [Corrected by _ Sean A. Irvine _ , Mar 19 2021] ●

▶ [A338810] 0,1,6,28,170,988,7896,60492,555264,5819904,61776000,725950080,9894493440,137963243520,1875645434880,33258387456000,528975488563200,9760969019289600,175565885864140800,3608256006957772800,72367669059194880000,1745463407406243840000 ⋆ a(n) = (n! / 2) * Sum _{ k=1..n - 1 } d(k) * d(n - k) / (k * (n - k)), where d(n) is the number of divisors of n. ● a(n) = (n - 1)! * Sum _{ k=1..n - 1 } d(k) * d(n - k) / k. ●

▶ [A169723] 6,28,190,1540,13366,118828,1065070,9572500,86113126,774900028,6973745950,62762650660,564860667286,5083736439628,45753599258830,411782307236020,3706040506843846,33354363786753628,300189271756259710,2701703438832768580 ⋆ 3 ^ (n - 1) * (2 * 3 ^ (n - 1) + 3) + 1. ● a(n) = 13 * a(n - 1) - 39 * a(n - 2) + 27 * a(n - 3). - _ Vincenzo Librandi _ , Dec 03 2012 ● a(n) = 2 * 9 ^ (n - 1) + 3 ^ n + 1. - _ Bruno Berselli _ , Dec 05 2012 ●

▶ [A184130] 6,29,112,356,972,2359,5217,10704,20647,37818,66287,111865,182651,289698,447814,676515,1001148,1454203,2076834,2920610,4049518,5542241,7494735,10023130,13266981 ⋆ Number of n X 2 0..2 arrays with rows and columns in nondecreasing order. ● a(n) = (40320 + 79344 * n + 64140 * n ^ 2 + 37884 * n ^ 3 + 16009 * n ^ 4 + 3696 * n ^ 5 + 490 * n ^ 6 + 36 * n ^ 7 + n ^ 8) / 40320. ●

▶ [A326805] 1,6,29,120,436,1484,4841,15352,47695,145855,440529,1317230,3906114,11502747,33672919,98070520,284355536,821268392,2363758888,6782327435,19406607815,55390260847,157736165229,448260958526,1271477862231 ⋆ a(n) = floor(Sum _{ k>=0 } n ^ sqrt(k) / Gamma(sqrt(k) + 1)), where Gamma is Euler's gamma function. ● a(n) = floor(1 + n + n ^ sqrt(2) / Gamma(sqrt(2) + 1) + n ^ sqrt(3) / Gamma(sqrt(3) + 1) + n ^ 2 / 2! + n ^ sqrt(5) / Gamma(sqrt(5) + 1) + n ^ sqrt(6) / Gamma(sqrt(6) + 1) + n ^ sqrt(7) / Gamma(sqrt(7) + 1) + n ^ sqrt(8) / Gamma(sqrt(8) + 1) + n ^ 3 / 3! + ...). ●

▶ [A267774] 1,6,29,123,503,2031,8159,32703,130943,524031,2096639,8387583,33552383,134213631,536862719,2147467263,8589901823,34359672831,137438822399,549755551743,2199022731263,8796091973631,35184369991679,140737484161023,562949945032703 ⋆ Decimal representation of the n - th iteration of the "Rule 207" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3) for n>3. ●

▶ [A081278] 1,6,29,126,513,1998,7533,27702,99873,354294,1240029,4290894,14703201,49955454,168466797,564390342,1879706817,6227425638,20533285917,67411165086,220442258241,718277586606,2332658764269,7552375012566 ⋆ Binomial transform of Chebyshev polynomial coefficients A001793. ● a(n) = (n ^ 2 + 8 * n + 9)3 ^ (n - 2). ● a(n) = 9 * a(n - 1) - 27 * a(n - 2) + 27 * a(n - 3) for n>2, a(0)=1, a(1)=6, a(2)=29. [Corrected by _ Paolo P. Lava _ , Jun 16 2008] ●

▶ [A054146] 0,1,6,29,128,536,2168,8556,33152,126640,478304,1789840,6646272,24519680,89956224,328437184,1194102784,4325299456,15615510016,56209986816,201798074368,722731821056,2582790830080,9211619462144 ⋆ a(n) = A054145(n) / 2. ● a(n) = ((n - 2) * ((2 + sqrt(2)) ^ n + (2 - sqrt(2)) ^ n) + sqrt(2) * ((2 + sqrt(2)) ^ n - (2 - sqrt(2)) ^ n)) / 16. ●

▶ [A172062] 1,6,29,128,541,2232,9076,36568,146446,584082,2322967,9220544,36548573,144732176,572756312,2265577184,8959034798,35421613196,140035644602,553606049024,2188652065586,8653317051056,34216118389384 ⋆ Expansion of (2 / (3 * sqrt(1 - 4 * z) - 1 + 4 * z)) * ((1 - sqrt(1 - 4 * z)) / (2 * z)) ^ k with k=5. ● a(n) = Sum _{ j=0..n } (- 1) ^ j * binomial(2 * n + k - j, n - j), with k=5. ●

▶ [A081674] 0,1,6,29,130,561,2366,9829,40410,164921,669526,2707629,10919090,43942081,176565486,708653429,2841788170,11388676041,45619274246,182670807229,731264359650,2926800830801,11712433499806,46865424529029 ⋆ Generalized Poly - Bernoulli numbers. ● a(n) = ((4 ^ (n + 1) - 1) / 3 - 3 ^ n) / 2 = (4 * 4 ^ n - 3 * 3 ^ n - 1) / 6. ●

▶ [A008549] 0,1,6,29,130,562,2380,9949,41226,169766,695860,2842226,11576916,47050564,190876696,773201629,3128164186,12642301534,51046844836,205954642534,830382690556,3345997029244,13475470680616,54244942336114,218269673491780 ⋆ Number of ways of choosing at most n - 1 items from a set of size 2 * n + 1. ● a(n) = 4 ^ n - C(2 * n + 1, n). ● a(n) = Sum _{ k=1..n } Catalan(k) * 4 ^ (n - k): convolution of Catalan numbers and powers of 4. ● a(n) = Sum _{ k=0..n } C(2 * k, k) * C(2 * (n - k), n - k - 1). - _ Paul Barry _ , Feb 16 2005 ● a(n) = Sum _{ 0 < i <= k < n } binomial(n, k + i) * binomial(n, k - i). - _ Mircea Merca _ , Apr 05 2012 ● a(n) = Sum _{ m = n + 2..2 * n + 1 } binomial(2 * n + 1,m), n >= 0. - _ Wolfdieter Lang _ , May 22 2015 ●

▶ [A345031] 0,0,1,6,29,130,565,2422,10317,43818,185845,787710,3337709,14140594,59904181,253765510,1074982605,4553728698,19289962933,81713711502,346145071085,1466294520130,6211324200181,26311593418006,111457702066509 ⋆ a(n) = 6 * a(n - 1) - 7 * a(n - 2) - 2 * a(n - 3) for n >= 3, with a(0) = a(1) = 0, a(2) = 1. ● a(n) = (((1 + sqrt(5)) / 2) ^ (3n) + ((1 - sqrt(5)) / 2) ^ (3n) - 2 ^ (n + 1)) / 10. ●

▶ [A081179] 0,1,6,29,132,589,2610,11537,50952,224953,993054,4383653,19350540,85417669,377052234,1664389721,7346972688,32431108081,143157839670,631929281453,2789470811028,12313319895997,54353623698786 ⋆ 3rd binomial transform of (0,1,0,2,0,4,0,8,0,16,...). ● a(n) = 6a(n - 1) - 7a(n - 2), a(0)=0, a(1)=1. G. f.: x / (1 - 6x + 7x ^ 2). a(n) = ((3 + sqrt(2)) ^ n - (3 - sqrt(2)) ^ n) / (2 * sqrt(2)). [Corrected by Al Hakanson (hawkuu(AT)gmail.com), Dec 27 2008] ● a(n) = 3 ^ (n - 1) Sum _{ i>=0 } binomial(n, 2i + 1) * (2 / 9) ^ i. - _ Sergio Falcon _ , Mar 15 2016 ● a(n) = 2 ^ (- 1 / 2) * 7 ^ (n / 2) * sinh(n * arcsinh(sqrt(2 / 7)). - _ Robert Israel _ , Mar 15 2016 ●

▶ [A045445] 0,1,6,29,132,590,2628,11732,52608,237129,1074510,4893801,22395420,102943815,475139070,2201301575,10234016880,47731093715,223273611810,1047265325255,4924606035900,23211459517120,109642275853176,518959629394294,2460993383491632 ⋆ Number of nonisomorphic systems of catafusenes for the unsymmetrical schemes (group C _ s) with two appendages (see references for precise definition). ● a(n) = binomial(2n + 2, n + 1) / (n + 2) + Sum _{ k=1..n } binomial(2k, k) * binomial(n - 1, k - 1) * (3k - 2n - 3) / ((n - k + 1) * (k + 1)) (n >= 2). - _ Emeric Deutsch _ , Mar 26 2004 ● a(n) = (2 / (n + 1)) * Sum _{ m=0..n - 1 } C(n + 1,m) * C(2 * n - 2 * m + 2,n - m - 1). - _ Vladimir Kruchinin _ Oct 18 2022 ●

▶ [A289801] 1,6,29,133,597,2661,11856,52878,235986,1053345,4701627,20985035,93662073,418038721,1865820223,8327671681,37168717729,165894342774,740432630793,3304756826019,14750048986898,65833571645931,293833543748968,1311460845206801 ⋆ p - INVERT of the tetrahedral numbers (A000292), where p(S) = 1 - S - S ^ 2. ● a(n) = 9 * a(n - 1) - 31 * a(n - 2) + 62 * a(n - 3) - 74 * a(n - 4) + 57 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8). ●

▶ [A030221] 1,6,29,139,666,3191,15289,73254,350981,1681651,8057274,38604719,184966321,886226886,4246168109,20344613659,97476900186,467039887271,2237722536169,10721572793574,51370141431701,246129134364931,1179275530392954,5650248517599839 ⋆ Chebyshev even indexed U - polynomials evaluated at sqrt(7) / 2. ● a(n) = 5 * a(n - 1) - a(n - 2), a(- 1)= - 1, a(0)=1. ● a(n) = U(2 * n, sqrt(7) / 2). ● a(n) = - a(- 1 - n) for all n in Z. - _ Michael Somos _ , Jan 22 2017 ● a(n) = S(n, 5) + S(n - 1, 5) = S(2 * n, sqrt(7) (see above in terms of U), for n >= 0 with S(- 1, 5) = 0, where the coefficients of the Chebyshev S polynomials are given in A049310. - _ Wolfdieter Lang _ , Oct 26 2020 ●

▶ [A292034] 1,6,29,144,725,3654,18409,92736,467161,2353350,11855141,59720976,300847949,1515539334,7634619025,38459844864,193743743089,975995564166,4916635376621,24767841488400,124769466312581,628533565640646,3166275009522169,15950297619676224,80350567588455625 ⋆ Linear divisibility sequence based on Salem number of order 4 (case t=6, see formula). ● a(n) = round(lambda(6) * alpha(6) ^ n) ● a(n) = 6 * a(n - 1) - 6 * a(n - 2) + 6 * a(n - 3) - a(n - 4) for n>4. ●

▶ [A108982] 1,6,29,146,729,3646,18229,91146,455729,2278646,11393229,56966146,284830729,1424153646,7120768229,35603841146,178019205729,890096028646,4450480143229,22252400716146,111262003580729,556310017903646 ⋆ Inverse binomial of A003949. ● a(n) = 4 * a(n - 1) + 5 * a(n - 2), a(0) = 1, a(1) = 6. ● a(2n) = 5 * a(2n - 1) - 1 and a(2n + 1) = 5 * a(2n) + 1. ● a(n) = (7 * 5 ^ n - (- 1) ^ n) / 6, with n>=0. - _ Paolo P. Lava _ , Nov 19 2008 ●

▶ [A152743] 0,6,30,72,132,210,306,420,552,702,870,1056,1260,1482,1722,1980,2256,2550,2862,3192,3540,3906,4290,4692,5112 ⋆ 6 times pentagonal numbers: a(n) = 3 * n * (3 * n - 1). ● a(n) = a(n - 1) + 18 * n - 12 (with a(0)=0). - _ Vincenzo Librandi _ , Nov 26 2010 ●

▶ [A305163] 6,30,78,174,366,750,1518,3054,6126,12270,24558,49134,98286,196590,393198,786414,1572846,3145710,6291438,12582894,25165806,50331630,100663278,201326574,402653166 ⋆ a(n) = 24 * 2 ^ n - 18. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>1. - _ Colin Barker _ , May 27 2018 ●

▶ [A055112] 0,6,30,84,180,330,546,840,1224,1710,2310,3036,3900,4914,6090,7440,8976,10710,12654,14820,17220,19866,22770,25944,29400 ⋆ a(n) = n * (n + 1) * (2 * n + 1). ● a(n) = n * (n + 1) * (2 * n + 1). ● a(n) = Sum _{ i = 1..2 * n + 1 } (n ^ 2 + (i - 1)). - _ Charlie Marion _ , Sep 14 2012 ●

▶ [A119536] 0,6,30,90,204,390,666,1050,1560,2214,3030,4026,5220,6630,8274,10170,12336,14790,17550,20634,24060,27846,32010,36570,41544 ⋆ 3 * n ^ 3 + 3 * n. ● a(0)=0, a(1)=6, a(2)=30, a(3)=90, a(n)=4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Harvey P. Dale _ , Mar 19 2013 ●

▶ [A033487] 0,6,30,90,210,420,756,1260,1980,2970,4290,6006,8190,10920,14280,18360,23256,29070,35910,43890,53130,63756,75900,89700,105300 ⋆ a(n) = n * (n + 1) * (n + 2) * (n + 3) / 4. ● a(n) = binomial(n + 2,2) ^ 2 - binomial(n + 2,2). - _ Zerinvary Lajos _ , May 17 2006 ● a(n - 1) = Sum _{ j=1..n } Sum _{ i=2..n } i * j = Sum _{ j=1..n } j * (n + 2) * (n - 1) / 2. - _ Zerinvary Lajos _ , May 11 2007 ● a(- 3 - n) = a(n) = 2 * binomial(binomial(n + 2, 2), 2). - _ Michael Somos _ , Apr 06 2014 ●

▶ [A073948] 0,0,0,6,30,90,252,756,2268,6642,19602,58806,176904,530712,1592136,4780782,14351094,43053282,129146724,387440172,1162320516,3486843450,10460294154,31380882462,94143001680 ⋆ Number of strings over Z _ 3 of length n with trace 0 and subtrace 1. ● a(n; t, s) = a(n - 1; t, s) + a(n - 1; t + 2, s + 2t + 1) + a(n - 1; t + 1, s + t + 1) where t is the trace and s is the subtrace. ●

▶ [A101855] 6,30,91,216,441,812,1386,2232,3432,5082,7293,10192,13923,18648,24548,31824,40698,51414,64239,79464,97405,118404,142830,171080,203580 ⋆ a(n) = n * (n + 1) * (n + 2) * (n + 4) * (n + 23) / 120. ● a(1)=6, a(2)=30, a(3)=91

, a(4)=216, a(5)=441, a(6)=812, a(n)=6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). - _ Harvey P. Dale _ , Feb 07 2013 ●

▶ [A348257] 6,30,105,315,868,2268,5715,14025,33726,79794,186277,429975,982920,2228088,5013351,11206485,24903490,55050030,121110297,265289475,578813676,1258290900,2726297275,5888802465,12683574918 ⋆ Number of ways we can write [n] as the union of 2 sets of sizes i, j which intersect in exactly 2 elements (2 < i,j < n; i = j allowed). ● a(n) = (Sum _{ j=3..n / 2 } binomial(n,j) * binomial(j,2)) + (1 / 2) * binomial(n,n / 2 + 1) * binomial(n / 2 + 1,2), if n is even. ● a(n) = Sum _{ j=3..ceiling(n / 2) } binomial(n,j) * binomial(j,2), if n is odd. ● a(n) = binomial(n,2) * Stirling2(n - 2,2). - _ Alois P. Heinz _ , Nov 16 2021 ●

▶ [A292296] 0,0,0,6,30,114,402,1386,4746,16218,55386,189114,645690,2204538,7526778,25698042,87738618,299558394,1022756346,3491908602,11922121722,40704669690,138974435322,474488401914,1620004737018 ⋆ Sum of values of vertices of type B at level n of the hyperbolic Pascal pyramid. ● a(n) = 5 * a(n - 1) - 6 * a(n - 2) + 2 * a(n - 3), n >= 4. ● a(n) = (1 / 2) * (- 12 + (9 - 6 * sqrt(2)) * (2 + sqrt(2)) ^ n + (2 - sqrt(2)) ^ n * (9 + 6 * sqrt(2))) for n>0. ●

▶ [A050510] 0,6,30,120,240,520,960,1386,2184,3240,4160,5742,7068,9282,11914,14040,17472,21420,24534,29450,33280,39270,45936,51060,58968 ⋆ Golden rectangular box numbers: a(n) = n * A007067(n) * A007067(A007067(n)). ● a(n) = n * round(n * (1 + sqrt(5)) / 2) * round(round(n * (1 + sqrt(5)) / 2) * (1 + sqrt(5)) / 2). - _ Wesley Ivan Hurt _ , Apr 23 2021 ●

▶ [A346174] 0,1,6,30,120,420,1344,4032,11520,31680,84480,219648,559104,1397760,3440640,8355840,20054016,47628288,112066560,261488640,605552640,1392771072,3183476736,7235174400,16357785600 ⋆ Inverse binomial transform of A317614. ● a(n) = 8 * a(n - 1) - 24 * a(n - 2) + 32 * a(n - 3) - 16 * a(n - 4) for n > 5. ● a(n) = 2 ^ (n - 4) * n * (n + 1) * (n + 2) with a(0) = 0 and a(1) = 1. ●

▶ [A371036] 0,0,6,30,120,455,1708,6426,24300,92367,352704,1352065,5200286,20058285,77558744,300540178,1166803092,4537567631,17672631880,68923264389,269128937198,1052049481837,4116715363776,16123801841525,63205303218850 ⋆ a(n) is the number of ways to place n indistinguishable balls into n distinguishable boxes with at least one box remaining empty and not all balls placed in a single box. ● a(n) = binomial(2n - 1,n) - n - 1, n > 1; a(1)=0. ●

▶ [A073970] 0,1,6,30,125,600,3025,15500,78000,390625,1952500,9765625,48831250,244156250,1220703125,6103437500,30517265625,152587500000,762939062500,3814697265625,19073484375000,95367431640625,476837167968750,2384185839843750,11920928955078125 ⋆ Number of strings of length n over Z _ 5 with trace 1 and subtrace 4. ● a(n; t, s) = a(n - 1; t, s) + a(n - 1; t + 4, s + 4t + 1) + a(n - 1; t + 3, s + 3t + 4) + a(n - 1; t + 2, s + 2t + 4) + a(n - 1; t + 1, s + t + 1). ●

▶ [A131458] 0,6,30,126,1565,8190,131070,524286,7511964,89777599,2147483646,20166585982,840455563322,4787976306682,5519162753736,2617809209727498,33416956406901275 5,2305843009213693950,4730678186385741363 9 ⋆ Residues of 3 ^ (2 ^ (p(n) - 1) - 1) for Mersenne numbers with prime indices. ● a(n) = 3 ^ (2 ^ (p(n) - 1) - 1) Mod 2 ^ p(n) - 1 ●

▶ [A073389] 1,6,30,128,504,1872,6672,23040,77616,256288,832416,2666496,8441600,26454528,82174464,253280256,775316736,2358812160,7137023488,21487386624,64401106944,192229535744,571630694400,1693996941312,5004131659776 ⋆ Second convolution of A002605(n) (generalized (2,2) - Fibonacci), n >= 0, with itself. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n - k + 2, 2) * binomial(n - k, k) * 2 ^ (n - k). ●

▶ [A320744] 0,0,0,0,0,6,30,130,532,2006,7626,28401,106260,396435,1486147,5580130,21032880,79486763,301317282,1145123672,4362804633,16658456825,63738451998,244332656201,938244497740 ⋆ Number of chiral pairs of color patterns (set partitions) in a cycle of length n using 4 or fewer colors (subsets). ● a(n) = Sum _{ j=1..k } - Ach(n,j) / 2 + (1 / 2n) * Sum _{ d|n } phi(d) * A(d,n / d,j), where k=4 is the maximum number of colors, Ach(n,k) = [n>=0 & n<2 & n==k] + [n>1] * (k * Ach(n - 2,k) + Ach(n - 2,k - 1) + Ach(n - 2,k - 2)), and A(d,n,k) = [n==0 & k==0] + [n>0 & k>0] * (k * A(d,n - 1,k) + Sum _{ j|d } A(d,n - 1,k - j)). ●

▶ [A036068] 1,6,30,135,567,2268,8748,32805,120285,433026,1535274,5373459,18600435,63772920,216827928,731794257,2453663097,8178876990,27119434230,89494132959,294052151151,962352494676,3138105960900,10198844372925 ⋆ Expansion of (- 1 + 1 / (1 - 3 * x) ^ 3) / (9 * x). ● a(n) = 3 ^ (n - 1) * binomial(n + 3, 2); G.f.: (- 1 + (1 - 3 * x) ^ (- 3)) / (x * 3 ^ 2)=(1 - 3 * x + 3 * x ^ 2) / (1 - 3 * x) ^ 3. ●

▶ [A224290] 0,0,0,0,0,1,6,30,136,566,2176,7808,26440,85332,264632,793792,2315136,6592640,18390784,50392064,135921664,361536512,949708800,2466807808,6342115328 ⋆ Number of permutations of length n containing exactly 3 occurrences of 123 and 3 occurrences of 132. ● a(n) = (1 / 9) * 2 ^ (n - 15) * (307008 - 247512 * n + 78118 * n ^ 2 - 12087 * n ^ 3 + 937 * n ^ 4 - 33 * n ^ 5 + n ^ 6) for n >6. ● a(n) = 14 * a(n - 1) - 84 * a(n - 2) + 280 * a(n - 3) - 560 * a(n - 4) + 672 * a(n - 5) - 448 * a(n - 6) + 128 * a(n - 7) for n>13. ●

▶ [A081895] 1,6,30,136,579,2358,9288,35640,133893,494262,1797714,6456024,22930695,80660934,281309436,973599912,3346483977,11431295910,38828142342,131206405608,441271936971,1477621745046,4927988620080,16373939547096 ⋆ Second binomial transform of binomial(n + 3, 3). ● a(n) = 3 ^ n * (n ^ 3 + 24 * n ^ 2 + 137 * n + 162) / 162. ●

▶ [A030280] 1,6,30,137,588,2415,9600,37209,141336,528049,1945800,7086555,25550547,91319973,323890062,1140985116,3995155506,13913280006,48216776266,166355744244,571636515369,1957015021744,6677155551312 ⋆ COMPOSE triangular numbers with triangular numbers. ● a(1)=1, a(2)=6, a(3)=30, a(4)=137, a(5)=588, a(6)=2415, a(7)=9600, a(8)=37209, a(9)=141336, a(n)=12 * a(n - 1) - 57 * a(n - 2) + 139 * a(n - 3) - 195 * a(n - 4) + 174 * a(n - 5) - 102 * a(n - 6) + 39 * a(n - 7) - 9 * a(n - 8) + a(n - 9). - _ Harvey P. Dale _ , Jan 08 2013 ●

▶ [A255463] 1,6,30,138,606,2586,10830,44778,183486,747066,3027630,12228618,49268766,198137946,795740430,3192527658,12798808446,51281327226,205383589230,822309197898,3291561314526,13173218826906,52713796014030,210917946175338,843860071059006 ⋆ a(n) = 3 * 4 ^ n - 2 * 3 ^ n. ● a(n + 1) = 7 * a(n) - 12 * a(n - 1) with a(0)=1, a(1)=6. ●

▶ [A125316] 1,6,30,138,694,3526,18012,92140,471566,2413794,12356010,63250314,323779348,1657433992,8484446994,43432107538,222330112286,1138113767838,5826034724844,29823627148788,152667942902854 ⋆ Number of base 6 circular n - digit numbers with adjacent digits differing by 3 or less. ● a(n) = 6 * a(n - 1) - 3 * a(n - 2) - 8 * a(n - 3) + a(n - 4) + 2 * a(n - 5) for n>5. ●

▶ [A092439] 0,0,6,30,140,560,2058,7098,23472,75372,237182,735878,2260596,6896136,20933778,63325170,191089112,575626052,1731858246,5206059774,15640198620,46966732320,140996664986,423191320490,1269993390720 ⋆ Sequence arising from enumeration of domino tilings of Aztec Pillow - like regions. ● a(n)=(3 ^ (n + 2) + (- 1) ^ (n + 2)) / 2 - 2 ^ (n + 2) - (n + 2)(2 ^ (n + 1) - 1) + (n + 1) ^ 2 ● a(0)=0, a(1)=0, a(2)=6, a(3)=30, a(4)=140, a(5)=560, a(6)=2058, a(n)=9 * a(n - 1) - 30 * a(n - 2) + 42 * a(n - 3) - 9 * a(n - 4) - 39 * a(n - 5) + 40 * a(n - 6) - 12 * a(n - 7) [From Harvey P. Dale, Nov 27 2011] ●

▶ [A082149] 0,0,1,6,30,140,615,2562,10220,39384,147645,541310,1948650,6908772,24180611,83702010,286978200,975725744,3293074233,11041484022,36804946550,122037454140,402723598431,1323234680306,4330586226180 ⋆ A transform of C(n,2). ● a(n) = C(n, 2) * (3 ^ (n - 2) + 1) / 2. ●

▶ [A002457] 1,6,30,140,630,2772,12012,51480,218790,923780,3879876,16224936,67603900,280816200,1163381400,4808643120,19835652870,81676217700,335780006100,1378465288200,5651707681620,23145088600920,94684453367400 ⋆ a(n) = (2n + 1)! / n! ^ 2. ● a(n - 1) = binomial(2 * n, n) * n / 2 = binomial(2 * n - 1, n) * n. ● a(n - 1) = 4 ^ (n - 1) * Sum _{ i=0..n - 1 } binomial(n - 1 + i, i) * (n - i) / 2 ^ (n - 1 + i). ● a(n) = 1 / Integral _{ x=0..1 } x ^ n (1 - x) ^ n dx. - Fred W. Helenius (fredh(AT)ix.netcom.com), Jun 10 2003 ● a(n) = Sum _{ i + j + k=n } binomial(2i, i) * binomial(2j, j) * binomial(2k, k). - _ Benoit Cloitre _ , Nov 09 2003 ● a(n) = Sum _{ k=0..n } binomial(2k,k) * 4 ^ (n - k). - _ Paul Barry _ , Apr 26 2009 ● a(n) = f(n, n - 3) where f is given in A034261. ●

▶ [A082134] 0,1,6,30,144,680,3168,14560,66048,296064,1313280,5772800,25178112,109078528,469819392,2013388800,8590196736,36507779072,154620002304,652837519360,2748784312320,11544883101696,48378534690816 ⋆ Expansion of e.g.f. x * exp(3 * x) * cosh(x). ● a(n) = n * (2 ^ (n - 1) + 4 ^ (n - 1)) / 2. ●

▶ [A030192] 1,6,30,144,684,3240,15336,72576,343440,1625184,7690464,36391680,172207296,814893696,3856118400,18247348224,86347378944,408600184320,1933516832256,9149499887616,43295898332160,204878390667264,969494954010624,4587699380060160 ⋆ Scaled Chebyshev U - polynomial evaluated at sqrt(6) / 2. ● a(n) = (sqrt(6)) ^ n * U(n, sqrt(6) / 2). ● a(n) = ((3 + sqrt(3)) ^ n - (3 - sqrt(3)) ^ n) / sqrt(12). - Al Hakanson (hawkuu(AT)gmail.com), Dec 29 2008 ●

▶ [A026376] 1,6,30,144,685,3258,15533,74280,356283,1713690,8263596,39938616,193419915,938430990,4560542550,22195961280,108171753355,527816696850,2578310320610,12607504827600,61706212037295,302275142049870,1481908332595625,7270432009471224 ⋆ a(n) is the number of integer strings s(0),...,s(n) counted by array T in A026374 that have s(n)=2; also a(n) = T(2n,n - 1). ● a(n) = [t ^ (n + 1)](1 + 3t + t ^ 2) ^ n. a := n - > Sum _{ j=ceiling((n + 1) / 2)..n } 3 ^ (2j - n - 1) * binomial(n, j) * binomial(j, n + 1 - j). - _ Emeric Deutsch _ , Jan 30 2004 ● a(n) = Sum _{ k=0..n } binomial(n, k) * binomial(2k, k + 1). - _ Paul Barry _ , Sep 20 2004 ● a(n) = n * hypergeometric([1, 3 / 2, 1 - n],[1, 3], - 4). - _ Peter Luschny _ , Sep 16 2014 ● a(n) = GegenbauerC(n - 1, - n, - 3 / 2). - _ Peter Luschny _ , May 09 2016 ●

▶ [A135160] 1,6,30,144,690,3336,16290,80184,396930,1972296,9823650,49003224,244667970,1222289256,6108282210,30531894264,152630871810,763068462216,3815084423970,19074648065304,95370917376450,476847616459176,2384217167880930,11921023089868344,59604927188149890 ⋆ a(n) = 5 ^ n + 3 ^ n - 2 ^ n. ● a(n) = 5 ^ n + 3 ^ n - 2 ^ n. ● a(0)=1, a(1)=6, a(2)=30, a(n) = 10 * a(n - 1) - 31 * a(n - 2) + 30 * a(n - 3). - _ Harvey P. Dale _ , Mar 10 2013 ●

▶ [A089817] 1,6,30,145,696,3336,15985,76590,366966,1758241,8424240,40362960,193390561,926589846,4439558670,21271203505,101916458856,488311090776,2339638995025,11209883884350,53709780426726,257339018249281 ⋆ a(n) = 5 * a(n - 1) - a(n - 2) + 1 with a(0)=1, a(1)=6. ● a(n) = (2 / 3 - sqrt(21) / 7) * (5 / 2 - sqrt(21) / 2) ^ n + (2 / 3 + sqrt(21) / 7) * (5 / 2 + sqrt(21) / 2) ^ n - 1 / 3. ● a(n) = 6 * a(n - 1) - 6 * a(n - 2) + a(n - 3) for n >= 2, a(- 1):=0, a(0)=1, a(1)=6. ● a(n) = (S(n + 1, 5) - S(n, 5) - 1) / 3 for n >= 0. ● a(n) * a(n - 2) = a(n - 1) * (a(n - 1) - 1) for n > 1. - _ Bruno Berselli _ , Nov 29 2016 ●

▶ [A006320] 1,6,30,146,714,3534,17718,89898,461010,2386390,12455118,65478978,346448538,1843520670,9859734630,52974158938,285791932578,1547585781414,8408765223294 ⋆ Royal paths in a lattice. ● a(n) = (3 / n) * sum(binomial(n, j) * binomial(n + 2 + j, n - 1), j=0..n) (n>0). - _ Emeric Deutsch _ , Aug 19 2004 ●

▶ [A073965] 0,0,6,30,150,650,3150,15500,78000,390000,1952500,9762500,48831250,244156250,1220781250,6103593750,30517656250,152587500000,762939062500,3814695312500,19073484375000,95367421875000,476837167968750,2384185839843750,11920929199218750 ⋆ Number of strings of length n over Z _ 5 with trace 0 and subtrace 2. ● a(n; t, s) = a(n - 1; t, s) + a(n - 1; t + 4, s + 4t + 1) + a(n - 1; t + 3, s + 3t + 4) + a(n - 1; t + 2, s + 2t + 4) + a(n - 1; t + 1, s + t + 1). ●

▶ [A075886] 1,6,30,150,726,3510,16854,80886,387606,1857078,8894550,42598518,204000918,976929462,4678286550,22403128566,107282481942,513746046774,2460185076054,11781130000758,56416485185430,270162504104886 ⋆ Number of cubes at generation n when building fractal cube with edge ratio of 1 / 2. ● a(1)=1, a(2)=6, a(3)=30, a(n)=5 * a(n - 1) + 4 * a(n - 2) - 24 * a(n - 3) [From Harvey P. Dale, Mar 17 2012] ●

▶ [A163317] 1,6,30,150,750,3735,18600,92640,461400,2298000,11445210,57003000,283904040,1413987000,7042377000,35074632060,174689570400,870043225440,4333259349600,21581843340000,107488595621160,535348070440800 ⋆ Number of reduced words of length n in Coxeter group on 6 generators S _ i with relations (S _ i) ^ 2 = (S _ i S _ j) ^ 5 = I. ● a(n) = 4 * a(n - 1) + 4 * a(n - 2) + 4 * a(n - 3) + 4 * a(n - 4) - 10 * a(n - 5). - _ Wesley Ivan Hurt _ , May 10 2021 ●

▶ [A163922] 1,6,30,150,750,3750,18735,93600,467640,2336400,11673000,58320000,291375210,1455753000,7273154040,36337737000,181548627000,907043385000,4531720872060,22641137570400,113118421225440,565156109349600 ⋆ Number of reduced words of length n in Coxeter group on 6 generators S _ i with relations (S _ i) ^ 2 = (S _ i S _ j) ^ 6 = I. ● a(n) = - 10 * a(n - 6) + 4 * Sum _{ k=1..5 } a(n - k). - _ Wesley Ivan Hurt _ , May 11 2021 ●

► [A164365] 1,6,30,150,750,3750,18750,93735,468600,2342640,11711400,58548000,292695000,1463250000,7315125210,36570003000,182821904040,913968987000,4569142377000,22842199635000,114193439625000,570879418872060 ⋆ Number of reduced words of length n in Coxeter group on 6 generators S _ i with relation s (S _ i) ^ 2 = (S _ i S _ j) ^ 7 = I. ● a(n) = - 10 * a(n - 7) + 4 * Sum _{ k=1..6 } a(n - k). - _ Wesley Ivan Hurt _ , May 11 2021 ●

► [A003948] 1,6,30,150,750,3750,18750,93750,468750,2343750,11718750,58593750,292968750,1464843750,7324218750,36621093750,183105468750,915527343750,4577636718750,22888183593750,114440917968750,572204589843750,2861022949218750,14305114746093750 ⋆ Expansion of (1 + x) / (1 - 5 * x). ● a(n) = 6 * 5 ^ (n - 1) for n>0, a(0)=1. - _ Vincenzo Librandi _ , Nov 18 2010 ●

► [A105488] 1,6,30,150,780,4263,24556,149040,951615,6378625,44785620,328660566,2515643767,20044428810,165955025400,1425299331992,12678325080012,116635133853189,1108221018960830,10862073229428120,109694927532209481,1140199081827172719 ⋆ Number of partitions of { 1...n } containing 2 detached pairs of consecutive integers, i.e., partitions in which only 1 - or 2 - strings of consecutive integers can appear in a block and there are exactly two 2 - strings. ● a(n) = binomial(n - 2, 2) * Bell(n - 3), which is the case r = 2 in the general case of r pairs, d(n, r)=binomial(n - r, r) * Bell(n - r - 1), which is the case t=2 of the general formula d(n, r, t)=binomial(n - r * (t - 1), r) * B(n - r * (t - 1) - 1). ●

► [A033132] 1,6,30,151,756,3780,18901,94506,472530,2362651,11813256,59066280,295331401,1476657006,7383285030,36916425151,184582125756,922910628780,4614553143901,23072765719506,115363828597530,576819142987651 ⋆ Base - 5 digits are, in order, the first n terms of the periodic sequence with initial period 1, 1,0. ● a(n) = 5 * a(n - 1) + a(n - 3) - 5 * a(n - 4). ● a(n) = floor((15 / 62) * 5 ^ n). - _ Tani Akinari _ , Jul 16 2014 ●

► [A022023] 6,30,151,761,3836,19337,97477,491378,2477019,12486565,62944332,317300149,1599498817,8063016906,40645382751,204891935393,1032852992092,5206575364849,26246162074765,132305973770306,666949729466899,3362069972805741,16948075698414380 ⋆ Define the sequence S(a(0),a(1)) by a(n + 2) is the least integer such that a(n + 2) / a(n + 1) > a(n + 1) / a(n) for n >= 0. This is S(6,30). ● a(n + 1) = floor(a(n) ^ 2 / a(n - 1)) + 1 for all n > 0. - _ M. F. Hasler _ , Feb 10 2016 ●

► [A066534] 0,1,6,30,152,840,5232,37072,297600,2680704,26812160,294945024,3539364864,46011796480,644165265408,9662479226880,154599668154368,2628194359738368,47307498477649920,898842471080329216 ⋆ Total number of walks with length > 0 in the Hasse diagram of a Boolean algebra of order n. ● a(n) = n! * Sum _{ i + j<n, i, j >= 0 } 1 / (i! * j!). - _ Benoit Cloitre _ , Nov 01 2002 ●

► [A126474] 1,6,30,154,788,4034,20650,105708,541122,2770018,14179796,72586754,371573530,1902094812,9736874082,49843318162,255149275268,1306115946338,6686042370634,34226029248972,175203956722818 ⋆ Number of arrays in [1..6] ^ n with adjacent elements differing by three or less. ● a(n) = 5 * a(n - 1) + a(n - 2) - 2 * a(n - 3) for n>2. ● a(n) = e ^ T M ^ (n - 1) e where e = [1,1,1,1,1,1] ^ T and M is the 6 X 6 matrix with entries M(i,j) = 1 if |i - j|<=3, 0 otherwise. ●

► [A152224] 1,6,30,156,804,4152,21432,110640,571152,2948448,15220704,78573504,405618240,2093913984,10809365376,55800945408,288059973888,1487045568000,7676542115328,39628441869312,204573020169216,1056062731892736,5451684948586240,28143132585701376 ⋆ a(n)=4 * a(n - 1) + 6 * a(n - 2), n>1 ; a(0)=1, a(1)=6 . ● a(n)=(1 / 2) *{ [2 + sqrt(10)] ^ n + [2 - sqrt(10)] ^ n }+ (1 / 5) * sqrt(10) *{ [2 + sqrt(10)] ^ n - [2 - sqrt(10)] ^ n } , with n>=0 [From _ Paolo P. Lava _ , Dec 12 2008] ●

► [A280474] 1,6,30,158,846,4446,22734,113310,552654,2647390,12492366,58202526,268228430,1224529758,5544352206,24921415326,111297979854,494186360670,2182903872334,9596971862430,42012203555406,183197641092446 ⋆ Number of n X 2 0..2 arrays with no element unequal to a strict majority of its horizontal and antidiagonal neighbors, with the exception of exactly two elements, and with new values introduced in order 0 sequentially upwards. ● a(n) = (8 * (4 ^ n - 1) + 21 * 4 ^ n * n + 6 * (32 + 4 ^ n) * n ^ 2) / 324. ●

► [A038155] 0,0,1,6,30,160,975,6846,54796,493200,4932045,54252550,651030666,8463398736,118487582395,1777313736030,28437019776600,483429336202336,8701728051642201,165332832981201990,3306656659624039990,69439789852104840000 ⋆ a(n) = (n! / 2) * Sum _{ k=0..n - 2 } 1 / k!. ● a(n) = 1 / 2 * floor(n! * exp(1) - n - 1), n>0. - _ Vladeta Jovovic _ , Aug 18 2002 ● a(n) = Sum _{ k=0..n - 1 } a(n - 1) + k, a(0)=0. - _ Ilya Gutkovskiy _ , Apr 13 2016 ●

► [A345887] 1,6,30,164,1030,7422,60620,554248,5611770,62353010,754471432,9876716940,139097096918,2097156230470,33704296561140,575219994643472,10389911153247730,198019483156015578,3971390745517868000,83608226221428800020,1843561388182505040462 ⋆ Number of tilings of an n - celled circular array with rectangular tiles of any size, and where the number of possible colors of a tile is given by the largest cell covered. ● a(n) = n * Sum _{ k=1..n } n! / k!. ●

► [A365273] 6,30,174,1038,6222,37326,223950,1343694,8062158,48372942,290237646,1741425870,10448555214,62691331278,376147987662,2256887925966,13541327555790,81247965334734,487487792008398,2924926752050382 ⋆ Number of vertices in the Laakso graph of order n. ● a(n) = a(n - 1) + 4 * 6 ^ (n - 1). ●

► [A110706] 6,30,174,1092,7188,48852,339720,2403588,17236524,124948668,913820460,6732898800,49918950240,372104853600,2786716100592,20955408717396,158149624268220,1197390368733804,9091866006950892,69214297980023256 ⋆ Number of linear arrangements of n blue, n red and n green items such that there are no adjacent items of the same color. ● a(n) = 2 * (Sum _{ k=0..floor(n / 2) } binomial(n - 1, k) * (binomial(n - 1, k) * binomial(2n + 1 - 2k, n + 1) + binomial(n - 1, k + 1) * binomial(2n - 2k, n + 1))). ●

► [A057754] 6,30,178,1246,9630,78628,664918,5762209,50849235,455055615,4118066401,37607950281,346065645810,3204942065692,29844571475288,279238344248557,2623557165610822,24739954309690415,234057667376222382 ⋆ Integer nearest to Li(10 ^ n), where Li(x) = integral(0..x, dt / log(t)). ● a(n) = round(Li(10 ^ n)) = round(Ei(log(10 ^ n))). ●

► [A029571] 0,0,0,0,6,30,180,1260,8820,79380,793800,8731800,106029000,1378377000,19297278000,289459170000,4627941318000,78675002406000,1416150043308000,26906850822852000,538156815464268000 ⋆ Number of permutations of an n - set containing a 4 - cycle. ● a(n) = n! * (1 - sum(k=0..floor(n / 4), (- 1) ^ k / (k! * 4 ^ k))). ● a(n) / n! is asymptotic to 1 - e ^ (- 1 / 4) = 1 - A092616. ● a(n) = n! (1 - Gamma(floor(n / 4) + 1, - 1 / 4) * exp(1 / 4) / (floor(n / 4))!). - _ Robert Israel _ , Dec 07 2016 ●

► [A239488] 6,30,186,1290,9582,74550,599730,4948050,41638614,356007630,3083837802,27006251610,238704231102,2126733078630,19079571337314,172209370246050,1562686251141030,14248144422407550,130467052593799962 ⋆ Expansion of 1 / x - 4 / (- sqrt(x ^ 2 - 10 * x + 1) - x + 1) - 3. ● a(n) = sum(i = 0..n + 1, 2 ^ i * binomial(n,n - i + 1) * binomial(n + i - 1,n - 1)) / n. ● a(n) = T(2 * n,n - 1) / n where T(n,k) is triangle A116412. ●

► [A278008] 0,6,30,198,1230,7734,48510,304422,1910190,11986326,75213150,471956358,2961486990,18583085814,116607324990,731701311462,4591365157230,28810436277846,180783102647070,1134399003458118,7118259838467150 ⋆ Number of n X 2 0..2 arrays with every element plus 1 mod 3 equal to some element at offset (- 1, - 1) (- 1,0) (- 1,1) (0, - 1) (0,1) or (1,0), with upper left element zero. ● a(n) = 2 ^ (- 3 - n) * ((57 - 5 * sqrt(57)) * (5 + sqrt(57)) ^ n + (5 - sqrt(57)) ^ n * (57 + 5 * sqrt(57))) / 19. ●

► [A054721] 1,6,30,210,1260,7770,46410,279930,1678320,10077480,60458370,362797050,2176734420,13060694010,78363884130,470184976590,2821108227840,16926659444730,101559946544280,609359740010490,3656158379595540,21936950640097710,131621703479470050 ⋆ Number of 6 - ary sequences with primitive period n. ● a(n) = Sum mu(d) * 6 ^ (n / d); d|n. ●

► [A228873] 6,30,240,1560,10920,74256,510510,3495030,23965920,164237040,1125770256,7715953440,52886430870,362487682830,2484530961360,17029219589256,116720030923320,800010932051760,5483356663145790,37583485265670630,257601041359736256 ⋆ a(n) = F(n) * F(n + 1) * F(n + 2) * F(n + 3), the product of four consecutive Fibonacci numbers, A000045. ● a(n + 5) = 5 * a(n + 4) + 15 * a(n + 3) - 15 * a(n + 2) - 5 * a(n + 1) + a(n). - _ Robert Israel _ , Apr 06 2015 ● a(n) = 3 * Sum _{ k=1..n } 2 ^ (n - k) * F(k) ^ 2 * F(k + 1) * F(k + 2) (Seiffert, 2006). - _ Amiram Eldar _ , Jan 11 2022 ●

► [A155097] 6,31,43,68,80,105,117,142,154,179,191,216,228,253,265,290,302,327,339,364,376,401,413,438,450 ⋆ Numbers k such that k ^ 2 == - 1 (mod 37). ● a(n) = 6 * (- 1) ^ (n + 1) + 37 * floor(n / 2). ● a(n) = a(n - 2) + 37 for all n > 2. (End) ●

► [A306331] 6,31,44,69,82,107,120,145,158,183,196,221,234,259,272,297,310,335,348,373,386,411,424,449,462 ⋆ Numbers congruent to 6 or 31 mod 38. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n > 3. ● a(n) = 19 * n - 10 + 3 * (- 1) ^ n. - _ Wesley Ivan Hurt _ , Mar 10 2019 ● a(n) = 19 * n - 13 when n is odd and 19 * n - 7 when n is even. ●

► [A042841] 1,1,6,31,68,235,303,538,841,8107,8948,17055,26003,95064,216131,1175719,6094726,7270445,442321426,449591871,2690280781,13900995776,30492272333,105377812775,135870085108 ⋆ Denominators of continued fraction convergents to sqrt(951). ● a(n) = 448416152 * a(n - 18) - a(n - 36) for n>35. - _ Vincenzo Librandi _ , Jan 30 2014 ●

► [A273790] 1,6,31,80,161,282,451,676,965,1326,1767,2296,2921,3650,4491,5452,6541,7766,9135,10656,12337,14186,16211,18420,20821 ⋆ Partial sums of the number of active (ON,black) cells in n - th stage of growth of two - dimensional cellular automaton defined by ”Rule 931”, based on the 5 - celled von Neumann neighborhood. ● a(n) = (4 * n ^ 3 + 12 * n ^ 2 + 11 * n - 9) / 3 for n>0. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>4. ●

► [A096959] 6,31,96,231,476,882,1512,2442,3762,5577,8008,11193,15288,20468,26928,34884,44574,56259,70224,86779,106260,129030,155480,186030,221130 ⋆ Sixth column (m=5) of (1,6) - Pascal triangle A096956. ● a(n) = (n + 30) * binomial(n + 4, 4) / 5. ●

► [A024447] 0,6,31,101,288,652,1349,2451,4222,7122,11121,17041,25118,35352,48559,65943,88422,115262,148829,189157,235804,292052,357705,435491,528902 ⋆ Sum of the products of the primes taken 2 at a time from the first n primes. ● a(1) = 0, a(n + 1) = prime(n + 1) * (sum of first n primes) + a(n), for n > 1. ●

► [A303172] 1,1,1,1,1,6,31,106,281,631,1306,2806,6931,19306,55070,150816,391161,977501,2426071,6141865,16000186,42465571,112950916,297793651,776866355 ⋆ Number of ordered ways of writing n as a sum of n square pyramidal numbers. ● a(n) = [x ^ n] (Sum _{ k>=0 } x ^ (k * (k + 1) * (2 * k + 1) / 6)) ^ n. ●

► [A354552] 1,1,1,1,1,6,31,106,281,946,7561,54286,281161,1207636,7997991,81996916,701522641,4580581916,29742355441,306369616636,3632198902321,34710574441096,276645112305871,2652825718776696,35647605796451881 ⋆ Expansion of e.g.f. exp(x * exp(x ^ 4 / 24)). ● a(n) = n! * Sum _{ k=0..floor(n / 4) } (n - 4 * k) ^ k / (24 ^ k * k! * (n - 4 * k)!). ●

► [A351935] 1,1,1,1,1,6,31,106,281,1261,10711,71611,350461,1808236,17037021,170285116,1293714241,8653175441,84433291741,1063629264781,11218379358721,97926941650546,1021280770603171,14623420493573046,197153396050112041 ⋆ Expansion of e.g.f. exp(x / (1 - x ^ 4 / 24)). ● a(n) = Sum _{ k=0..floor((n - 1) / 4) } (4 * k + 1)! / 24 ^ k * binomial(n - 1,4 * k) * a(n - 1 - 4 * k) for n > 4. ●

► [A337574] 6,31,112,279,652,1231,2140,3363,5132,7647,10600,14583,19754,25435,31894,40617,50866,62583,76174,91431,108124,127319,147868,172493,200392 ⋆ a(n) is the dot product of the vectors of the first n primes and the next n primes . ● a(n) = Sum _{ k=1..n } prime(k) * prime(n + k). ●

► [A267890] 1,6,31,127,511,2047,8191,32767,131071,524287,2097151,8388607,33554431,134217727,536870911,2147483647,8589934591,34359738367,137438953471,549755813887,2199023255551,8796093022207,35184372088831,140737488355327,562949953421311 ⋆ Decimal representation of the n - th iteration of the ”Rule 239” elementary cellular automaton starting with a single ON (black) cell. ● a(n) = 5 * a(n - 1) - 4 * a(n - 2) for n>3. ●

► [A291396] 6,31,140,596,2440,9751,38344,149147,575794,2211278,8460912,32289105,122994890,467887343,1778208080,6753481344,25636583768,97283620659,369070501684,1399909005427,5309251592646,20133801242298,76346423589984,289487843638333 ⋆ p - INVERT of (1,1,0,0,0,0,...), where p(S) = (1 - S)(1 - 2 S)(1 - 3 S). ● a(n) = 6 * a(n - 1) - 5 * a(n - 2) - 16 * a(n - 3) + 7 * a(n - 4) + 18 * a(n - 5) + 6 * a(n - 6) for n >= 7. ●

► [A094951] 6,31,144,621,2538,9963,37908,140697,511758,1830519,6456024,22497669,77590386,265189059,899198172,3027619377,10130328342,33705582543,111577100832,367662044061,1206427402746,3943553157531,12845313733284 ⋆ a(n) = A081038(n) + A077616(n). ● a(n) = 3 ^ (n - 2) * (9 + 7 * n + 2 * n ^ 2). ● a(n) = 9 * a(n - 1) - 27 * a(n - 2) + 27 * a(n - 3). ●

► [A099621] 0,1,6,31,144,637,2730,11467,47508,194953,794574,3222583,13023192,52491349,211161138,848231779,3403688796,13647040225,54685016022,219030629455,876994213920,3510591943981,14050213040826,56224387958011 ⋆ a(n) = Sum _{ k=0..floor(n / 2) } binomial(n - k,k + 1) * 3 ^ (n - k - 1) * (4 / 3) ^ k. ● a(n) = 6 * a(n - 1) - 5 * a(n - 2) - 12 * a(n - 3). ● a(n) = (4 ^ (n + 2) - 5 * 3 ^ (n + 1) - (- 1) ^ n) / 20. ●

► [A291002] 6,31,146,652,2816,11896,49496,203752,832376,3381736,13683896,55206952,222242936,893219176,3585623096,14380739752,57637717496,230895178216,924613703096,3701553914152,14815513224056,59289946122856,237243465219896,949224905162152 ⋆ p - INVERT of (1,1,1,1,1,...), where p(S) = (1 - S) * (1 - 2 * S) * (1 - 3 * S). ● a(n) = 9 * a(n - 1) - 26 * a(n - 2) + 24 * a(n - 3) for n >= 4. ● a(n) = (2 ^ n - 16 * 3 ^ n + 27 * 4 ^ n) / 2. - _ Colin Barker _ , Aug 23 2017 ●

► [A346226] 1,1,6,31,146,686,3476,18711,101106,540986,2914396,15949626,884943 16,493812436,2757957496,15432771991,86805867666,490992405026,2788039913036,15864244837646,90398688107076,516136925025356,2954961007771656,16960102805812986 ⋆ Number of n - step 5 - dimensional nonnegative lattice walks starting at the origin and using steps that increment all components or decrement one component by 1. ● a(n) == 1 (mod 5). ●

► [A056015] 1,6,31,152,730,3480,16542,78544,372779,1768958,8393741,39827472,188975588,896658432,4254492236,20186832928,95783024581,454473817254,2156399264651,10231739547432,48547824776670,230350985294584 ⋆ A recursive sequence. ● a(n)=6 * a(n - 1) - 5 * a(n - 2) - 4 * a(n - 3) - 3 * a(n - 4) + 2 * a(n - 5) + a(n - 6), a(0)=...=a(4)=0, a(5)=1. ●

► [A003463] 0,1,6,31,156,781,3906,19531,97656,488281,2441406,12207031,61035156,305175781,1525878906,7629394531,38146972656,190734863281,953674316406,4768371582031,23841857910156,119209289550781,596046447753906,2980232238769531 ⋆ a(n) = (5 ^ n - 1) / 4. ● a(n) = Sum _{ k=1..n } binomial(n,k) * 4 ^ (k - 1). - _ Paul Barry _ , Mar 28 2003 ● a(n) = (- 1) ^ n times the (i, j) - th element of M ^ n (for all i and j such that i is not equal to j), where M = ((1, - 1, 1, - 2), (- 1, 1, - 2, 1), (1, - 2, 1, - 1), (- 2, 1, - 1, 1)). - _ Simone Severini _ , Nov 25 2004 ● a(n) = ((3 + sqrt(4)) ^ n - (3 - sqrt(4)) ^ n) / 4. - Al Hakanson (hawkuu(AT)gmail.com), Dec 31 2008 ● a(n) = 6 * a(n - 1) - 5 * a(n - 2) n >1, a(0)=0, a(1)=1. - _ Philippe Deléham _ , Jan 01 2009 ● a(n) = 4 * a(n - 1) + 5 * a(n - 2) + 2, a(0)=0, a(1)=1. ● a(n) = 5 * a(n - 1) + a(n - 2) - 5 * a(n - 3) = 7 * a(n - 1) - 11 * a(n - 2) + 5 * a(n - 3), a(0)=0, a(1)=1, a(2)=6. Observation by G. Detlefs. See the W. Lang comment and link. (End) ●

► [A289788] 1,6,31,156,785,3954,19919,100344,505489,2546430,12827791,64620756,325530881,1639881066,8260997855,41615265264,209639359969,1056070674294,5320018479679,26799907726860,135006120168881,680101314855906,3426050596003631,17258932500172776 ⋆ a(n) = (1 / 2) * A289787(n). ● a(n) = 6 * a(n - 1) - 6 * a(n - 2) + 6 * a(n - 3) - a(n - 4). ●

► [A065096] 0,1,6,31,156,785,3978,20335,104856,545073,2854350,15046383,79787700,425360481,2278586898,12259138975,66216193968,358941938849,1952111592342,10648449309823,58245727453260,319406931168241,1755674399021466,9671384910586511 ⋆ Sums of lists produced by a variant of the iteration that produces the Catalan numbers: start with 0 and at each iteration replace each integer k with the list 0,1,...,k - 1,k,k + 1,k,k - 1,...,1,0 and let a(n) be the sum of the resulting (flattened) list after n iterations. ● a(n) = (1 / Pi) * Integral _{ x=3 - 2 * sqrt(2)..3 + 2 * sqrt(2) } x ^ n * sqrt(- x ^ 2 + 6x - 1) * (x - 3) / 8. - _ Paul Barry _ , Sep 16 2006 ●

► [A334650] 0,6,31,158,975,6639,48050,362592,2820789,22460120,182141553,1499143282,12490923757,105150960654,892973346300,7640934031920,65813450140017,570160918044288,4964875184429660,43431741548248440,381496856026500220,3363457643008999635 ⋆ a(n) is the total number of down steps between the first and second up steps in all 3 _ 2 - Dyck paths of length 4 * n. ● a(0) = 0 and a(n) = 3 * binomial(4 * n, n) / (n + 1) - binomial(4 * n + 2, n) / (n + 1) + 9 * binomial(4 * (n - 1), n - 1) / n - 6 * [n=1] for n > 0, where [ ] is the Iverson bracket. ●

► [A047665] 0,1,6,31,160,841,4494,24319,132864,731281,4048726,22523359,125797984,704966809,3961924126,22321190911,126027618304,712917362209,4039658528934,22924714957471,130271906898720,741188107113961,4221707080583086,24070622500965631,137369104574280960 ⋆ Expansion of (1 / sqrt(1 - 6 * x + x ^ 2) - 1 / (1 - x)) / 2. ● a(n) = Sum _{ j=1..n } C(2 * j - 1, j - 1) * C(n + j, 2 * j). - Stefan Hollos (stefan(AT)exstrom.com), Jul 21 2004 ● a(n) = (hyper2F1(- n, n + 1,1, - 1) - 1) / 2 = (hyper2F1(- n, - n, 1, 2) - 1) / 2. - _ Peter Luschny _ , May 19 2015 ● a(n) = Sum _{ k=1..n } binomial(n,k) ^ 2 * 2 ^ (k - 1). - _ Ilya Gutkovskiy _ , Nov 15 2021 ●

► [A003128] 0,0,1,6,31,160,856,4802,28337,175896,1146931,7841108,56089804,418952508,3261082917,26403700954,221981169447,1934688328192,17454004213180,162765041827846,1566915224106221,15553364227949564,159004783733999787,1672432865100333916 ⋆ Number of driving - point impedances of an n - terminal network. ● a(n) = (Bell(n) - 3 * Bell(n + 1) + Bell(n + 2)) / 2. - _ Vladeta Jovovic _ , Aug 07 2006 ● a(n) = Sum _{ k=1..n } binomial(k,2) * Stirling2(n,k), Stirling transform of A000217. ● a(n) = (1 / (2 * exp(1))) * Sum _{ k>= 0 } k ^ n * (k ^ 2 - 3 * k + 1) / k!. Note that k ^ 2 - 3 * k + 1 = k * (k - 1) - 2 * k + 1 is an example of a Poisson - Charlier polynomial. ● a(n) = D ^ n(x ^ 2 / 2! * exp(x)) evaluated at x = 0, where D is the operator (1 + x) * d / dx. Cf. A005493. ●

► [A015449] 1,1,6,31,161,836,4341,22541,117046,607771,3155901,16387276,8509228 1,441848681,2294335686,11913527111,61861971241,321223383316,1667978887821,8661117822421,44973567999926,233528957822051 ⋆ Expansion of (1 - 4 * x) / (1 - 5 * x - x ^ 2). ● a(n) = 5 * a(n - 1) + a(n - 2). ● a(n) = (1 / 2) * ((5 + sqrt(29)) / 2) ^ n - (3 / 58) * ((5 + sqrt(29)) / 2) ^ n * sqrt(29) + (1 / 2) * ((5 - sqrt(29)) / 2) ^ n + (3 / 58) * sqrt(29) * ((5 - sqrt(29)) / 2) ^ n, with n >= 0. - _ Paolo P. Lava _ , Nov 21 2008 ●

► [A321799] 1,1,6,31,176,1071,6797,44493,298279,2037550,14131441,99244564,704360703,5043969503,36399930179,264451303466,1932650461883,14198082537190,104792195449688,776681663951998,5778226417888171,43135097969972931,323012620411650708,2425745980876575899,18264470545275495152 ⋆ G.f. satisfies: A(x) = 1 / (1 - x / (1 - x * A(x)) ^ 5). ● a(n) = Sum _{ k=0..n } (C(n,k) / (n - k + 1)) * C(n + 4 * k - 1,n - k). ●

► [A338674] 1,1,6,31,181,931,5431,27931,159806,834806,4697306,24478556,137931681,717306681,3989650431,20958791056,115494337931,604881056681,3333662306681,17439531447306,95396181837931,501716543166056,2725636758009806,14311071572462931,77793648720900431 ⋆ Expansion of Product _{ k>=1 } 1 / (1 - 5 ^ (k - 1) * x ^ k). ● a(n) = Sum _{ k=0..n } p(n,k) * 5 ^ (n - k), where p(n,k) = number of partitions of n into k parts. ●

► [A199320] 6,31,181,1081,6481,38881,233281,1399681,8398081,50388481,302330881,1813985281,10883911681,65303470081,391820820481,2350924922881,14105549537281,84633297223681,507799783342081,3046798700052481,18280792200314881 ⋆ 5 * 6 ^ n + 1. ● a(n) = 6 * a(n - 1) - 5. ● a(n) = 7 * a(n - 1) - 6 * a(n - 2). ●

► [A097176] 1,6,31,186,811,5466,21091,157746,548371,4492026,14257651,126558306,370698931,3534656586,9638172211,98004586866,250592477491,2700707149146,6515404414771,74033083143426,169400514784051,2020227593369706 ⋆ a(n) = Sum _{ k=0..n } binomial(floor((n + 1) / 2), floor((k + 1) / 2)) * 5 ^ k. ● a(n) = (3 / 5) * ((1 - sqrt(26)) * (- sqrt(26)) ^ n + (1 + sqrt(26)) * (sqrt(26)) ^ n) - (5 / 2) * (5 ^ n - (- 5) ^ n) - 1 / 5. ● a(n) = a(n - 1) + 51 * a(n - 2) - 51 * a(n - 3) - 650 * a(n - 4) + 650 * a(n - 5). ●

► [A361306] 1,1,6,31,186,1191,7972,55164,391322,2830751,20801826,154853413,1165316224,8850372878,67750780816,522218420336,4049564739054,31570368061361,247293510244174,1945331619223591,15361731119713506,121729460653957980,967664450692965300 ⋆ Expansion of A(x) satisfying A(x) = x + A(x) ^ 2 * (1 + A(x)) ^ 4. ● a(n + 1) = Sum _{ k=0..n } binomial(n + k + 1,k) * binomial(4 * k,n - k) / (n + k + 1). - _ Seiichi Manyama _ , Aug 24 2023 ●

► [A296196] 0,6,32,98,230,460,826,1372,2148,3210,4620,6446,8762,11648,15190,19480,24616,30702,37848,46170,55790,66836,79442,93748,109900 ⋆ Harary index of the n X n queen graph. ● a(n) = n * (n - 1) * (3 * n ^ 2 + 13 * n - 2) / 12. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ●

► [A288961] 0,0,6,32,100,240,490,896,1512,2400,3630,5280,7436,10192,13650,17920,23120,29376,36822,45600,55860,67760,81466,97152,115000 ⋆ Number of 3 - cycles in the n X n rook graph. ● a(n) = 2 * n * binomial(n,3). ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ●

► [A239573] 0,1,6,32,113,329,790,1702,3320,6057,10400,17074,26903,41047,60796,87886,124220,172275,234732,314992,416703,544391,702878,898040,1136098 ⋆ Number of non - equivalent (mod D _ 3) ways to place 3 indistinguishable points on a triangular grid of side n so that no two of them are adjacent. ● a(n) = (n ^ 6 + 3 * n ^ 5 - 39 * n ^ 4 + 10 * n ^ 3 + 456 * n ^ 2 - 1008 * n + 576) / 288 + IF(MOD(n, 2) = 1) * (3 * n ^ 2 - 5 * n - 5) / 32 + IF(MOD(n, 3) = 1) * 2 / 9. ●

► [A202807] 1,6,32,121,356,881,1925,3830,7083,12352,20526,32759,50518,75635,110363,157436,220133,302346,408652,544389,715736,929797,1194689,1519634,1915055 ⋆ Number of n X 3 nonnegative integer arrays with each row and column increasing from zero by 0, 1 or 2. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

► [A292044] 0,1,6,32,160,768,3584,16384,73728,327680,1441792,6291456,27262976,117440512,503316480,2147483648,9126805504,38654705664,163208757248,687194767360,2886218022912,12094627905536,50577534877696,211106232532992,879609302220800 ⋆ Wiener index of the n - halved cube graph. ● a(n) = 2 ^ (2 * n - 5) * n for n > 1. ● a(n) = 8 * a(n - 1) - 16 * a(n - 2) for n > 3. ● a(n) = 4 * a(n - 1) + 2 ^ (2 * n - 5) for n > 2. - _ Joe Slater _ , Apr 11 2018 ● a(n) = (- 1) ^ n * det(M(n - 1)) / 2 for n > 1, where M(n) is the n X n symmetric Toeplitz matrix whose first row consists of 2, 4, ..., 2 * n. (End) ●

► [A006668] 0,0,1,6,32,160,784,3808,18432,89088,430336,2078208,10035200,48455680,233967616,1129701376,5454692352,26337607680,127169265664,614027624448,2964787822592,14315262312448,69120201588736 ⋆ Exponential self - convolution of Pell numbers (divided by 2). ● a(n) = ((2 + sqrt(8)) ^ n + (2 - sqrt(8)) ^ n - 2 ^ (n + 1)) / 16; E.g.f. : exp(2x)(sinh(sqrt(2)x)) ^ 2 / 4=(exp(x)sinh(sqrt(2)x) / sqrt(2)) ^ 2 / 2. - _ Paul Barry _ , May 16 2003 ●

► [A232494] 1,6,32,160,848,4576,25856,148480,870656,5142016,30605312,182640640,1092866048,6545268736,39235813376,235271618560,1411199860736,8465479499776,50787717742592,304705668382720,1828172095029248,10968784904912896,65811966429495296,394868826560266240,2369204043294703616 ⋆ If n mod 2 = 0 then 2 ^ (n - 1) * (3 ^ n + 3 * 3 ^ (n / 2) - 2) otherwise 2 ^ (n - 1) * (3 ^ n + 5 * 3 ^ ((n - 1) / 2) - 2). ● a(n) = 2 ^ (n - 2) * (2 * 3 ^ n - 4 + 3 ^ ((n - 1) / 2)(5 + 3 * sqrt(3) + (- 1) ^ n * (3 * sqrt(3) - 5))). - _ Benedict W. J. Irwin _ , Sep 27 2016 ●

► [A083320] 1,6,32,162,800,3906,18992,92322,449600,2195586,10755152,52845282,260386400,1286217666,6367168112,31576971042,156839811200,779990182146,3883029321872,19347201973602,96463456484000,481224744361026 ⋆ a(n) = 5 ^ n + 4 ^ n - 3 ^ n. ● a(n) = 5 ^ n + 4 ^ n - 3 ^ n. ●

► [A097139] 0,0,1,6,32,162,813,4068,20344,101724,508625,2543130,12715656,63578286,317891437,1589457192,7947285968,39736429848,198682149249,993410746254,4967053731280,24835268656410,124176343282061,620881716410316 ⋆ Convolution of 5 ^ n and floor(n / 2). ● a(n) = 5 ^ (n + 1) / 96 - n / 8 - 3 / 32 + (- 1) ^ n / 24. - _ R. J. Mathar _ , Jan 08 2011 ● a(n) = 6 * a(n - 1) - 4 * a(n - 2) - 6 * a(n - 3) + 5 * a(n - 4). ● a(n) = a(n - 2) + (5 ^ (n - 1) - 1) / 4, n>1. (End) ● a(n) = Sum _{ k=0..n } floor((n - k) / 2) * 4 ^ k = Sum _{ k=0..n } floor(k / 2) * 4 ^ (n - k). ●

► [A082585] 1,6,32,167,868,4508,23409,121554,631180,3277455,17018456,88369736,458867137,2382705422,12372394248,64244676663,333595777564,1732223564484,8994713599985,46705791564410,242523671422036 ⋆ a(1)=1, a(n) = ceiling(r(5) * a(n - 1)) where r(5) = (1 / 2) * (5 + sqrt(29)) is the positive root of X ^ 2 = 5 * X + 1. ● a(n) = - (1 / 5) + (3 / 5) * (5 / 2 + (1 / 2) * sqrt(29)) ^ n + (16 / 145) * (5 / 2 + (1 / 2) * sqrt(29)) ^ n * sqrt(29) + (3 / 5) * (5 / 2 - (1 / 2)

* sqrt(29)) ^ n - (16 / 145) * sqrt(29) * (5 / 2 - (1 / 2) * sqrt(29)) ^ n, with n >= 0. - _ Paolo P. Lava _ , Jun 25 2008 ●

▶ [A084326] 0,1,6,32,168,880,4608,24128,126336,661504,3463680,18136064,94961664,497225728,2603507712,13632143360,71378829312,373744402432,1956951097344,10246728974336,53652569456640,280928500842496,1470960727228416,7702050360000512 ⋆ a(0)=0, a(1)=1; for n>1, a(n) = 6 * a(n - 1) - 4 * a(n - 2). ● a(n) = (1 / 2) * sum(k = 0, n, binomial(n, k) * F(3 * k)) where F(k) denotes the k - th Fibonacci number. ● a(n) = sqrt(5)((3 + sqrt(5)) ^ n - (3 - sqrt(5)) ^ n) / 10. - _ Paul Barry _ , Aug 25 2003 ● a(n) = Sum(C(n, 2k + 1)5 ^ k 3 ^ (n - 2k - 1), k = 0, .., Floor[(n - 1) / 2]). a(n) = 2 ^ (n - 1)F(2n). - Mario Catalani (mario.catalani(AT)unito.it), Jul 22 2004 ● a(n) is the rightmost term in M ^ n * [10] where M is the 2X2 matrix [5 1 / 1 1]. The characteristic polynomial of M = x ^ 2 - 6x + 4. a(n) / a(n - 1) tends to (3 + sqrt(5)), a root of the polynomial and an eigenvalue of M. - _ Gary W. Adamson _ , Dec 16 2004 ● a(n) = sum { k = 0..n, sum { j = 0..n, C(n, j)C(j, k)F(j + k) / 2 }} . - _ Paul Barry _ , Feb 14 2005 ● a(n) = 5a(n - 1) + a(n - 2) + a(n - 3) + ... + a(1) + 1. - _ Gary W. Adamson _ , Feb 18 2011 ●

▶ [A125190] 0,1,6,32,170,912,4942,27008,148626,822560,4573910,25534368,143027898,803467056,4524812190,25537728000,144411206178,818017823808,4640757865126,26364054632480,149959897539018,853941394691792,4867745532495086,2773897706129792 ⋆ Number of ascents in all Schroeder paths of length 2n. ● a(n) = sum(i=0..n - 1, binomial(n + 1,n - i - 1) * binomial(n + i,n)). - _ Vladimir Kruchinin _ , Feb 05 2013 ● a(n) = (n ^ 2 + n) * hypergeometric([1 - n, n + 1], [3], - 1) / 2. - _ Peter Luschny _ , Sep 17 2014 ●

▶ [A180037] 1,6,32,172,924,4964,26668,143268,769676,4134916,22213932,1193394 92,641125324,3444305604,18503778668,99407504548,534045080076,2869040409476,15413292207532,82804541856612,444849293698124 ⋆ Eight white queens and one red queen on a 3 X 3 chessboard. G.f.: (1 + x) / (1 - 5 * x - 2 * x ^ 2). ● a(n) = 5 * a(n - 1) + 2 * a(n - 2) with a(0) = 1 and a(1) = 6. ● a(n) = ((7 - A) * A ^ (- n - 1) + (7 - B) * B ^ (- n - 1)) / 33 with A = (- 5 + sqrt(33)) / 4 and B = (- 5 - sqrt(33)) / 4. ●

▶ [A000558] 1,6,32,175,1012,6230,40819,283944,2090424,16235417,132609666,1135846062,10175352709,95108406130,925496853980,9357279554071,98118527430960,1065259283215810,11956366813630835,138539436100687988,1655071323662574756,20361556640795422729 ⋆ Generalized Stirling numbers of second kind. ● a(n) = Sum _{ k=0..n } Stirling2(n,k) * Stirling2(k,2). - _ Olivier Gérard _ , Mar 25 2009 ● a(n) = Sum _{ k=1..n - 1 } binomial(n - 1,k) * Bell(k) * Bell(n - k). - _ Ilya Gutkovskiy _ , Feb 15 2021 ●

▶ [A228959] 0,1,6,32,186,1222,9086,75882,705298,7231862,81160422,990024466,13047411482,184788881838,2799459801742,45178128866282,773829771302946,14021761172671462,267991492197471158,5388234382450264002,113692608262971520042,2512031106415692960926 ⋆ Total sum of squared lengths of ascending runs in all permutations of [n]. ● a(n) = (2 * n + 1) * a(n - 1) - (n - 1) * ((n + 2) * a(n - 2) - (n - 2) * a(n - 3)) for n>=3, a(n) = n * (2 * n - 1) for n<3. ●

▶ [A302734] 0,0,1,6,32,186,1245,9588,83752,817980,8827745,104277450,1337781336,18518728326,275087536717,4364152920456,73637731186160,1316713607842968,24869730218182497,494752411594456110,10339913354716379440,226485946787802241650,5188447062121251600221 ⋆ Number of paths in the n - path complement graph. ● a(n) = (1 / 2) * Sum _{ k=2..n } Sum _{ i=1..k } Sum _{ j=0..k - i } (- 1) ^ (k - i) * i! * 2 ^ j * binomial(n + i - k, i) * binomial(i, j) * binomial(k - i - 1, k - i - j). - _ Andrew Howroyd _ , Apr 21 2018 ●

▶ [A276351] 6,32,374,2664,12278,42176,118182,285704,617894,1225248,2266646,3961832,6605334,10581824,16382918,24625416,36070982,51647264,72470454,99869288,135410486,180925632,238539494,310699784,400208358 ⋆ a(n) = 2 * (3 + 2 n + 3 n ^ 2 + 3 n ^ 3 + 3 n ^ 4 + n ^ 5 + n ^ 6). ● a(n) = 2(3 + 2 n + 3 n ^ 2 + 3 n ^ 3 + 3 n ^ 4 + n ^ 5 + n ^ 6) for n>=0. ●

▶ [A171141] 6,33,47,74,88,115,129,156,170,197,211,238,252,279,293,320,334,361,375,402,416,443,457,484,498 ⋆ Numbers that are congruent to { 6,33 } mod 41. ● a(n) = (82 * n + 13 * (- 1) ^ n - 45) / 4. - _ Vincenzo Librandi _ , Jan 05 2013 ● a(n) = a(n - 1) + a(n - 2) - a(n - 3). - _ Vincenzo Librandi _ , Jan 05 2013 ●

▶ [A157872] 6,33,78,141,222,321,438,573,726,897,1086,1293,1518,1761,2022,2301,2598,2913,3246,3597,3966,4353,4758,5181,5622 ⋆ a(n) = 9 * n ^ 2 - 3. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Feb 05 2012 ● a(n) = a(n - 1) + 18 * n - 9. - _ Vincenzo Librandi _ , Feb 05 2012 ●

▶ [A153127] 6,33,80,147,234,341,468,615,782,969,1176,1403,1650,1917,2204,2511,2838,3185,3552,3939,4346,4773,5220,5687,6174 ⋆ a(n) = (2 * n + 1) * (5 * n + 6). ● a(n) = a(n - 1) + 20 * n + 7 (with a(0)=6). - _ Vincenzo Librandi _ , Dec 27 2010 ●

▶ [A135526] 1,6,33,95,188,288,388,488,588,688,788,888,988,1088,1188,1288,1388,1488,1588,1688,1788,1888,1988,2088,2188 ⋆ Number of sums payable using exactly n banknotes of denominations 1, 5, 10, 20, 50, 100 (change allowable). ● a(n) = 100 * n - 212 for n>=4. ● a(n) = 2 * a(n - 1) - a(n - 2), for n >= 4. ●

▶ [A204185] 0,0,6,33,102,243,492,894,1500,2370,3570,5175,7266,9933,13272,17388,22392,28404,35550,43965,53790,65175,78276,93258,110292 ⋆ Number of quadrilaterals in a triangular matchstick arrangement of side n. ● a(n) = b(1)T(n - 1) + b(2)T(n - 2) + b(3)T(n - 3) ... + b(k)T(n - k) ... + b(n - 1)T(1), where b(m) = 3(floor(5m / 2)) and T(m) is the m - th triangular number A000217. ● a(n) = a(n - 1) + floor((n + 1)(n - 1)(10n - 3) / 8). ● a(n) = (3 - 3 * (- 1) ^ n - 16 * n - 16 * n ^ 2 + 16 * n ^ 3 + 10 * n ^ 4) / 32. ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 5 * a(n - 4) - 4 * a(n - 5) + a(n - 6). ●

▶ [A063267] 6,33,116,325,786,1709,3424,6426,11430,19437,31812,50375,77506,116265,170528,245140,346086,480681,657780,888009,1184018,1560757,2035776,2629550,3365830 ⋆ Eighth column (k=7) of septinomial array A063265. ● a(n) = binomial(n + 7,n) - binomial(n + 1,n). - _ Zerinvary Lajos _ , Jun 23 2006 ● a(n) = binomial(n + 7,n) + binomial(n + 6,n) + binomial(n + 5,n) + binomial(n + 4,n) + binomial(n + 3,n) + binomial(n + 2,n). - _ Zerinvary Lajos _ , Jun 23 2006 ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8); a(0)=6, a(1)=33, a(2)=116, a(3)=325, a(4)=786, a(5)=1709, a(6)=3424, a(7)=6426. - _ Harvey P. Dale _ , Jan 06 2012 ●

▶ [A082106] 1,6,33,118,321,726,1441,2598,4353,6886,10401,15126,21313,29238,39201,51526,66561,84678,106273,131766,161601,196246,236193,281958,334081 ⋆ Main diagonal of number array A082105. ● a(n) = n ^ 4 + 4 * n ^ 2 + 1. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Harvey P. Dale _ , Dec 06 2012 ●

▶ [A073375] 1,6,33,140,546,1932,6454,20448,62271,183202,523887,1461516,3991400,10698072,28203612,73265056,187822125,475788222,1192287117,2958453036,7274927646,17741533668,42937126290 ⋆ Fifth convolution of A001045(n + 1) (generalized (1,2) - Fibonacci), n>=0, with itself. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n - k + 5, 5) * binomial(n - k, k) * 2 ^ k. ●

▶ [A074087] 0,0,0,6,33,144,570,2118,7587,26448,90420,304470,1013061,3338112,10911150,35423862,114342855,367242336,1174368360,3741029094,11876859369,37591894320,118659631650,373630740966,1173847761003 ⋆ Coefficient of q ^ 1 in nu(n), where nu(0)=1, nu(1)=b and, for n>=2, nu(n)=b * nu(n - 1) + lambda * (1 + q + q ^ 2 + ... + q ^ (n - 2)) * nu(n - 2) with (b,lambda)=(2,3). ● a(n) = 4 * a(n - 1) + 2 * a(n - 2) - 12 * a(n - 3) - 9 * a(n - 4) for n>=5. ●

▶ [A290921] 6,33,158,696,2886,11425,43590,161355,582340,2056818,7130388,24319054,81757104,271353288,890327048,2891047695,9299683770,29658374355,93843661530,294791108106,919849034686,2852495485953,8794877092878,26971256457596,82298545175130 ⋆ p - INVERT of the positive integers, where p(S) = (1 - S) ^ 6. ● a(n) = 18 * a(n - 1) - 141 * a(n - 2) + 630 * a(n - 3) - 1770 * a(n - 4) + 3258 * a(n - 5) - 3989 * a(n - 6) + 3258 * a(n - 7) - 1770 * a(n - 8) + 630 * a(n - 9) - 141 * a(n - 10) + 18 * a(n - 11) - a(n - 12). ●

▶ [A099432] 1,6,33,162,756,3402,14931,64314,273051,1145988,4764744,19656756,80561061,328316814,1331513397,5377120038,21633427836,86747114430,346810621815,1382826606210,5500378861551,21830478128136,86469557676048 ⋆ Convolution of A030195(n) (generalized (3,3) - Fibonacci) with itself. ● a(n) = 6 * a(n - 1) - 3 * a(n - 2) - 18 * a(n - 3) - 9 * a(n - 4). [corrected by _ Harvey P. Dale _ , May 20 2011] ● a(n) = Sum _{ k=0..floor((n + 2) / 2) } k * binomial(n - k + 2, k) * 3 ^ (n - k + 1). ● a(n) = (sqrt(7) * n + 2 * sqrt(7) - sqrt(3)) * (5 * sqrt(7) / 98 + sqrt(3) / 14) * (3 * sqrt(21) / 2 + 15 / 2) ^ (n / 2) + (15 / 2 - 3 * sqrt(21) / 2) ^ (n / 2) * (sqrt(7) * n + 2 * sqrt(7) + sqrt(3)) * (5 * sqrt(7) / 98 - sqrt(3) / 14) * (- 1) ^ n. ●

▶ [A291004] 6,33,168,816,3840,17664,79872,356352,1572864,6881280,29884416,128974848,553648128,2365587456,10066329600,42681237504,180388626432,760209211392,3195455668224,13400297963520,56075093016576,234195976716288,976366325465088,4063794976260096 ⋆ p - INVERT of (1,1,1,1,1,...), where p(S) = (1 - 3 * S) ^ 2. ● a(n) = 8 * a(n - 1) - 16 * a(n - 2) for n >= 3. ● a(n) = 3 * 4 ^ (n - 1) * (3 * n + 8). - _ Colin Barker _ , Aug 23 2017 ●

▶ [A084153] 0,0,1,6,33,170,861,4326,21673,108450,542421,2712446,13562913,67815930,339082381,1695417366,8477097753,42385510610,211927596741,1059638071086,5298190530193,26490953000490,132454765701501,662273829905606 ⋆ Binomial transform of a Jacobsthal convolution. ● a(n) = (5 ^ n - 2 * 2 ^ n + (- 1) ^ n) / 18. ●

▶ [A081893] 1,6,33,172,864,4224,20224,95232,442368,2031616,9240576,41680896,186646528,830472192,3674210304,16173236224,70866960384,309237645312,1344324763648,5823975653376,25151328485376,108301895335936 ⋆ Third binomial transform of C(n + 2,2). ● a(n) = 4 ^ n * (n ^ 2 + 15 * n + 32) / 32. ●

▶ [A111994] 1,6,33,176,930,4908,25954,137712,733539,3922834,21060099,113481504,613619332,3328768344,18112655748,98833261600,540705999621,2965360687518,16299708148901,89784615643728,495545294427558 ⋆ Sixth convolution of Schroeder's (second problem) numbers A001003(n), n>=0. ● a(n)= (6 / n) * Sum _{ k=1,..,n } binomial(n,k) * binomial(n + k + 5,k - 1). ● a(n) = 6 * hypergeom([1 - n, n + 7], [2], - 1), n>=1, a(0)=1. ●

▶ [A138395] 1,6,33,180,981,5346,29133,158760,865161,4714686,25692633,140011740,762992541,4157920026,22658542533,123477495120,672889343121,3666903573366,19982753410833,108895809744900,593426598236901,3233872160186706,17622953166409533 ⋆ a(n) = 6 * a(n - 1) - 3 * a(n - 2), a(1) = 1, a(2) = 6. ● a(n) = ((3 + sqrt(6)) ^ n - (3 - sqrt(6)) ^ n) / (2 * sqrt(6)). - _ Alexander R. Povolotsky _ , Apr 01 2008 ● a(n) = lower left term of n - th power of 2 X 2 matrix [1, 2; 1,5]. ● a(n) = Chebyshev _ U(n, sqrt(3)) * (sqrt(3)) ^ n. - _ Paul Barry _ , Sep 28 2009 ●

▶ [A050151] 0,1,6,33,180,985,5418,29953,166344,927441,5188590,29113953,163786428,923511849,5217709266,29532022785,167417253648,950453221153,5402869685334,30748881013153,175186193208900,999071379620601,5702750629608186,32578618535692033,186257611786501080 ⋆ a(n) = T(n,n + 2), array T as in A050143. ● a(n) = Sum _{ k=0..n } binomial(n, k) * binomial(n + 1, k + 1) / 2. - _ Paul Barry _ , Sep 20 2004 ● a(n) = Sum _{ k=0..n } 2 ^ (k - 1) * binomial(n, k) * binomial(n, k - 1). ● a(n) = (CentralDelannoy(n + 1) - 3 * CentralDelannoy(n)) / 4 where CentralDelannoy(n) is A001850. (End) ● a(n) = (1 / Pi) * Integral _{ x=3 - 2 * sqrt(2)..3 + 2 * sqrt(2) } x ^ n * (x - 3) / (4 * sqrt(- x ^ 2 + 6x - 1)). - _ Paul Barry _ , Sep 16 2006 ● a(n) = (- 1) ^ n * n * hypergeom([- n, n + 1], [2], 2). ●

▶ [A006630] 1,6,33,182,1020,5814,33649,197340,1170585,7012200,42364476,257854776,1579730984,9734161206,60290077905,375138262520,2343880406595,14699630061270,92502956574105,583920410197950,3696470074992240,23461536762704040,149270218961671548 ⋆ From generalized Catalan numbers. ● a(n) = C(3n + 6, n) * 2 / (n + 2). - _ Henry Bottomley _ , Sep 24 2001 ●

▶ [A367850] 0,0,1,6,33,182,1034,6122,37927,246030,1669941,11844324,87644672,675494180,5413500801,45040155758,388441330457,3467619369538,31998729152474,304846692965822,2994781617653439,30304301968015582,315536869771786501,3377398077726963112 ⋆ Total sum of the block maxima minus the block minima over all partitions of [n]. ● a(n) = Bell(n + 1) + (n + 1) * Bell(n) - Bell(n + 2) + Sum _{ k=0..n } Stirling2(n + 1,k) * (n + 1 - k). ●

▶ [A180035] 1,6,33,183,1014,5619,31137,172542,956121,5298231,29359518,162692283,901539969,4995776694,27683503377,153404846967,850074744966,4710588265731,26103165563553,144647592614958,801547459765449 ⋆ Eight white queens and one red queen on a 3 X 3 chessboard. G.f.: (1 + x) / (1 - 5 * x - 3 * x ^ 2). ● a(n) = 5 * a(n - 1) + 3 * a(n - 2) with a(0) = 1 and a(1) = 6. ● a(n) = ((7 +

A) * A ^ (- n - 1) + (7 + B) * B ^ (- n - 1)) / 37 with A = (- 5 + sqrt(37)) / 6 and B = (- 5 - sqrt(37)) / 6. ●

▶ [A360717] 0,1,6,33,185,1050,6027,35014,205326,1209375,7119860,41744703,243218703,1406685280,8073640785,45991600860,260131208396,1461591509805,8162196518322,45327133739245,250431036147285,1377169337010390,7540979990097191,41130452834689218,223528009015333050 ⋆ Number of unordered pairs of self - avoiding paths whose sets of nodes are disjoint subsets of a set of n points on a circle; one - node paths are allowed. ● a(n) = n * (n - 1) * 2 ^ (- 5) * (5 ^ (n - 2) + 6 * 3 ^ (n - 2) + 9). ●

▶ [A093964] 0,1,6,33,196,1305,9786,82201,767208,7891281,88776910,1085051121,14322674796,203121569833,3080677142466,49764784609065,853110593298256,15469738758475041,295858753755835158,5951981987323272001,125652953065713520020,2777591594084193600441 ⋆ a(n) = Sum _{ k=1..n } k * k! * C(n,k). ● a(n) = n if n < 2, a(n) = n * ((n + 1) / (n - 1) * a(n - 1) - a(n - 2)) for n >= 2. - _ Alois P. Heinz _ , Jan 21 2013 ●

▶ [A097662] 0,1,6,33,208,1545,13326,130921,1441728,17572113,234662230,3405357681,53334454416,896324308633,16083557845278,306827170866105,6199668952527616,132240988644215841,2968971263911288998,69974827707903049153,1727194482044146637520,44552237162692939114281 ⋆ a(n) = A002720(n) - 1. ● a(n) = Sum _{ k=1..n } (n! ^ 2 / k! * (n - k)! ^ 2). ● a(n) = Sum _{ k=1..n } P(n , k) * C(n, k) where P(n,k), are the permutation coefficients A008279. ●

▶ [A366200] 1,1,6,33,209,1425,10206,75751,577494,4495368,35582439,285524184,2317387098,18990744137,156918815760,1305927563487,10936673012579,92098612059051,779391530714589,6624730079900931,56532669993156696,484156547579505717,4159926573597719575 ⋆ G.f. A(x) satisfies A(x) = 1 + x * (1 + x) ^ 3 * A(x) ^ 3. ● a(n) = Sum _{ k=0..n } binomial(3 * k,n - k) * binomial(3 * k,k) / (2 * k + 1). ●

▶ [A137970] 1,1,6,33,236,1776,14148,117070,995568,8653068,76508562,686035674,6223653276,57018806567,526802616954,4902775644477,45919926029588,432511043009679,4094087001128088,38927025591433926,371607779425490280 ⋆ G.f. satisfies A(x) = 1 + x * (1 + x * A(x) ^ 3) ^ 6. ● a(n) = Sum _{ k=0..n - 1 } C(6 * (n - k),k) / (n - k) * C(3 * k,n - k - 1) for n>0 with a(0)=1. - _ Paul D. Hanna _ , Jun 16 2009 ●

▶ [A024079] 1,6,33,262,2145,16182,116353,821142,5760705,40347046,282465249,1977312102,13841266465,96888981846,678223034433,4747561459318,33232930504065,232630513903686,1628413597805473,11398895185242822 ⋆ a(n) = 7 ^ n - n ^ 4. ● a(n) = 12 * a(n - 1) - 45 * a(n - 2) + 80 * a(n - 3) - 75 * a(n - 4) + 36 * a(n - 5) - 7 * a(n - 6) for n > 5. ●

▶ [A067389] 0,6,34,102,228,430,726,1134,1672,2358,3210,4246,5484,6942,8638,10590,12816,15334,18162,21318,24820,28686,32934,37582,42648 ⋆ a(n) = 3 * n ^ 3 + 2 * n ^ 2 + n. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n > 3. ●

▶ [A222308] 0,6,34,114,285,602,1127,1940,3126,4790,7040,10006,13819,18634,24605,31912,40732,51270,63726,78330,95305,114906,137379,163004,192050 ⋆ Let P be a one - move "rider" with move set M= { (1,2) } ; a(n) is the number of non - attacking positions of two indistinguishable pieces P on an n X n board. ● a(n) = n ^ 4 / 2 - 5 * n ^ 3 / 24 - 11 * n / 48 + (- 1) ^ n * n / 16. ●

▶ [A166941] 6,34,134,378,862,1706,3054,5074,7958,11922,17206,24074,32814,43738,57182,73506,93094,116354,143718,175642,212606,255114,303694,358898,421302 ⋆ Product plus sum of four consecutive nonnegative numbers. ● a(n) = n ^ 4 + 6 * n ^ 3 + 11 * n ^ 2 + 10 * n + 6. - _ Charles R Greathouse IV _ , Nov 02 2009, [corrected by _ Klaus Brockhaus _ , Nov 14 2009] ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) + 24 for n > 3; a(0)=6, a(1)=34, a(2)=134, a(3)=378. - _ Klaus Brockhaus _ , Nov 14 2009 ●

▶ [A198765] 6,34,174,874,4374,21874,109374,546874,2734374,13671874,68359374,341796874,1708984374,8544921874,42724609374,213623046874,1068115234374,5340576171874,26702880859374,133514404296874 ⋆ 7 * 5 ^ n - 1. ● a(n) = 5 * a(n - 1) + 4. ● a(n) = 6 * a(n - 1) - 5 * a(n - 2), n > 1. ●

▶ [A126643] 6,34,180,886,4116,18334,79260,335446,1398276,5765134,23581740,95900806,388345236,1567647934,6313474620,25382710966,101917608996,408831386734,1638809709900,6565693949926,26294146373556,105270707701534,421365218399580 ⋆ a(n) is the number of integers k less than 10 ^ n such that the decimal representation of k lacks the digits 1,2,3,4, at least one of digits 5,6 and at least one of digits 7,8,9. ● a(n) = 6 * 4 ^ n - 9 * 3 ^ n + 5 * 2 ^ n - 1. ● a(n) = 10 * a(n - 1) - 35 * a(n - 2) + 50 * a(n - 3) - 24 * a(n - 4). - _ Colin Barker _ , Feb 22 2015 ●

▶ [A320745] 0,0,0,0,0,6,34,181,871,4016,18526,85101,393148,1822977,8500893,39809180,187230704,883730048,4184926222,19874478310,94629276256,451604739323,2159748985582,10348493650194,49671898709098 ⋆ Number of chiral pairs of color patterns (set partitions) in a cycle of length n using 5 or fewer colors (subsets). ● a(n) = Sum _{ j=1..k } - Ach(n,j) / 2 + (1 / 2n) * Sum _{ d|n } phi(d) * A(d,n / d,j), where k=5 is the maximum number of colors, Ach(n,k) = [n>=0 & n<2 & n==k] + [n>1] * (k * Ach(n - 2,k) + Ach(n - 2,k - 1) + Ach(n - 2,k - 2)), and A(d,n,k) = [n==0 & k==0] + [n>0 & k>0] * (k * A(d,n - 1,k) + Sum _{ j|d } A(d,n - 1,k - j)). ●

▶ [A084775] 1,6,34,184,956,4776,22986,118304,624634,3281346,17687330,92606914,470392898,2348031430,11932314170,62345998488,326780375778,1691296908076,8780141027670,45168987187058,230213109996786 ⋆ a(n) = sum of absolute value coefficients of (1 + x - 4 * x ^ 2) ^ n. ● a(n) = Sum _{ k=0..2 * n } abs(f(n, k)), where f(n, k) = ((sqrt(17) - 1) / 2) ^ k * Sum _{ j=0..k } binomial(n, j) * binomial(n, k - j) * (- 1) ^ j * ((1 + sqrt(17)) / 4) ^ (2 * j). - _ G. C. Greubel _ , Jun 03 2023 ●

▶ [A085351] 1,6,34,186,994,5226,27154,139866,715714,3644106,18482674,93461946,471504034,2374297386,11938595794,59961414426,300880813954,1508699037066,7560675054514,37872094749306,189635351653474 ⋆ Expansion of (1 - 3 * x) / ((1 - 4 * x) * (1 - 5 * x)). ● a(n) = 2 * 5 ^ n - 4 ^ n. ● a(n) = 9 * a(n - 1) - 20 * a(n - 2) for n>1. - _ Colin Barker _ , Jun 25 2020 ●

▶ [A125343] 1,6,34,186,1058,6026,34354,195866,1116738,6367146,36302674,206981946,1180120418,6728529866,38363130994,218729774426,1247101396098,7110426078186,40540535975314,231144384189306,1317884064847778 ⋆ Number of base 6 circular n - digit numbers with adjacent digits differing by 4 or less. ● a(n) = 1 + ((5 - sqrt(41)) / 2) ^ n + ((5 + sqrt(41)) / 2) ^ n for n>0. ● a(n) = 6 * a(n - 1) - a(n - 2) - 4 * a(n - 3) for n>3. ●

▶ [A163350] 1,6,34,188,1028,5592,30344,164464,890896,4824672,26124832,141453248,765878336,4146681216,22451153024,121555687168,658129355008,3563255219712,19292230787584,104452273224704,565526954771456 ⋆ a(n) = 8 * a(n - 1) - 14 * a(n - 2) for n > 1; a(0) = 1, a(1) = 6. ● a(n) = 8 * a(n - 1) - 14 * a(n - 2) for n > 1; a(0) = 1, a(1) = 6. ● a(n) = ((1 + sqrt(2)) * (4 + sqrt(2)) ^ n + (1 - sqrt(2)) * (4 - sqrt(2)) ^ n) / 2. ●

▶ [A320746] 0,0,0,0,0,6,34,190,996,5070,26454,139484,749742,4082481,22509626,125231540,702004040,3958071545,22423227634,127524417922,727617119592,4163076477731,23876455868772,137228326265794,790200053665362 ⋆ Number of chiral pairs of color patterns (set partitions) in a cycle of length n using 6 or fewer colors (subsets). ● a(n) = Sum _{ j=1..k } - Ach(n,j) / 2 + (1 / 2n) * Sum _{ d|n } phi(d) * A(d,n / d,j), where k=6 is the maximum number of colors, Ach(n,k) = [n>=0 & n<2 & n==k] + [n>1] * (k * Ach(n - 2,k) + Ach(n - 2,k - 1) + Ach(n - 2,k - 2)), and A(d,n,k) = [n==0 & k==0] + [n>0 & k>0] * (k * A(d,n - 1,k) + Sum _{ j|d } A(d,n - 1,k - j)). ●

▶ [A320749] 0,0,0,0,0,6,34,190,1011,5352,29740,172466,1055232,6793791,46034940,327303819,2436650368,18944771253,153488081102,1293086505784,11306373089104,102425178180769,959825673145688,9290807818971900,92771800581171418 ⋆ Number of chiral pairs of color patterns (set partitions) in a cycle of length n. ● a(n) = Sum _{ j=1..n } - Ach(n,j) / 2 + (1 / 2n) * Sum _{ d|n } phi(d) * A(d,n / d,j), where Ach(n,k) = [n>=0 & n<2 & n==k] + [n>1] * (k * Ach(n - 2,k) + Ach(n - 2,k - 1) + Ach(n - 2,k - 2)) and A(d,n,k) = [n==0 & k==0] + [n>0 & k>0] * (k * A(d,n - 1,k) + Sum _{ j|d } A(d,n - 1,k - j)). ●

▶ [A154244] 1,6,34,192,1084,6120,34552,195072,1101328,6217824,35104288,198190080,1118931904,6317211264,35665403776,201358000128,1136817193216,6418187159040,36235488567808,204576557088768,1154988365396992 ⋆ a(n) = 6 * a(n - 1) - 2 * a(n - 2) for n>1; a(1)=1, a(2)=6. ● a(n) = ((3 + sqrt(7)) ^ n - (3 - sqrt(7)) ^ n) / (2 * sqrt(7)). ●

▶ [A126501] 1,6,34,194,1106,6306,35954,204994,1168786,6663906,37994674,216628994,1235123666,7042134306,40151166194,228924368194,1305226505746,7441830001506,42430056030514,241917600158594,1379308224915026 ⋆ Number of n - tuples of numbers [0..5] (leading zeros allowed) in which adjacent digits differ by 4 or less. ● a(n) = 5 * a(n - 1) + 4 * a(n - 2), a(0) = 1, a(1) = 6. ●

▶ [A218990] 6,34,199,1159,6756,39376,229501,1337629,7796274,45440014,2648438111,5436228511,8996893296,52437736924,305629528249,1781339432569,10382407067166,60513102970426,352696210755391,2055664161561919,11981288758616124,69832068390134824 ⋆ Power ceiling - floor sequence of 3 + sqrt(8). ● a(n) = floor(x * a(n - 1)) if n is odd, a(n) = ceiling(x * a(n - 1) if n is even, where x=3 + sqrt(8) and a(0) = ceiling(x). ● a(n) = 5 * a(n - 1) + 5 * a(n - 2) - a(n - 3). ● a(n) = (1 / 16) * (2 * (- 1) ^ n + (47 - 33 * sqrt(2)) * (3 - 2 * sqrt(2)) ^ n + (3 + 2 * sqrt(2)) ^ n * (47 + 33 * sqrt(2))). - _ Colin Barker _ , Nov 13 2017 ●

▶ [A087413] 1,6,34,199,1200,7388,46148,291305,1853580,11868585,76380825,493606725,3201081873,20821158233,135776966761,887393271310,5811082966885,38119865826420,250447855600320,1647729357535485,10854207824989830,71581930485576630 ⋆ a(n) = Sum _{ k=1..n } C(3 * k,k) / 3. ● a(n) = Sum _{ k=1..n } binomial(3 * k - 1,k - 1). [_ Bruno Berselli _ , Oct 10 2015] ●

▶ [A063090] 1,6,34,212,1488,11736,103248,1004832,10733760,124966080,1575797760,21403457280,311623441920,4842481190400,80007869491200,1400671686758400,25902542427955200,504597366114508800,10328835149402112000 ⋆ a(n) / (n * n!) is the average number of comparisons needed to find a node in a binary search tree containing n nodes inserted in a random order. ● a(1) = 1, a(n) = n * n! + 2 * Sum _{ k=1 }^{ n - 1 } (n - 1)! / k! * a(k). ● a(n) = (2 * n - 1) * (n - 1)! + (n + 1) * a(n - 1). ● a(n) = 2 * (n + 1) * abs(Stirling1(n + 1, 2)) - 3 * n * n!. - _ Vladeta Jovovic _ , Jul 06 2004 ● a(n) = n! * ((2 * n + 2) * h(n) - 3 * n), where h(n) is the n - th harmonic number. - _ Gary Detlefs _ , May 28 2012 ●

▶ [A334787] 0,6,34,251,2105,19040,181076,1784728,18067803,186754590,1962728460,20910164730,225308533359,2451112021568,26885549373440,297008527319440,3301615350645935,36903975448964670,414518195957729886,4676429192392769805,52965796433899543810 ⋆ a(n) is the total number of down steps before the first up step in all 4 _ 3 - Dyck paths of length 5 * n. A 4 _ 3 - Dyck path is a lattice path with steps (1, 4), (1, - 1) that starts and ends at y = 0 and stays above the line y = - 3. ● a(0) = 0 and a(n) = 4 * binomial(5 * n, n) / (n + 1) - binomial(5 * n + 3, n) / (n + 1) for n > 0. ●

▶ [A213504] 1,6,35,138,488,1564,4733,13734,38711,106846,290496,781264,2084753,5531846,14619811,38527834,101328712,266119228,698218525,1830665830,4797572551,12568780126,32920653120,86214096768,225758326273 ⋆ Principal diagonal of the convolution array A213590. ● a(n) = 6 * a(n - 1) - 10 * a(n - 2) - 2 * a(n - 3) + 15 * a(n - 4) - 2 * a(n - 5) - 8 * a(n - 6) + a(n - 8). ● a(n) = Fibonacci(2 * n + 6) - Fibonacci(n + 6) - 2 * n * Fibonacci(n + 3) - n ^ 2 * Fibonacci(n + 1). - _ G. C. Greubel _ , Jul 06 2019 ●

▶ [A014337] 0,0,0,1,6,35,180,910,4494,22049,107580,523765,2546280,12370436,60074196,291677905,1416019290,6873991055,33368325084,161976597634,786259649010,3816607413905,18526261416960 ⋆ Three - fold exponential convolution of Fibonacci numbers with themselves (divided by 6). ● a(n) = (1 / 30)(3 ^ n * Fibonacci(n) - 3 * Fibonacci(2n)). - _ Ralf Stephan _ , May 14 2004 ●

▶ [A002041] 1,6,35,180,921,4626,23215,116160,581141,2906046,14531595,72659340,363302161,1816516266,9082603175,45413037720,227065275981,1135326467286,5676632685955,28383163779300,141915820294601,709579102871106,3547895519947935,17739477605332080,88697388049030021 ⋆ Expansion of x / ((1 - x)(1 - 4x ^ 2)(1 - 5x)). ● a(n - 2) = (1 / 252) { 3 * 5 ^ n - 4 ^ [(n + 2) / 2] - 5 * 4 ^ [(n + 3) / 2] + 21 } . - _ Ralf Stephan _ , Aug 22 2004 ●

▶ [A081105] 1,6,35,200,1125,6250,34375,187500,1015625,5468750,29296875,156250000,830078125,4394531250,23193359375,122070312500,640869140625,3356933593750,17547607421875,91552734375000,476837158203125 ⋆ 5th binomial transform of (1,1,0,0,0,0,.....). ● a(n) = 10 * a(n - 1) - 25 * a(n - 2), a(0)=1, a(1)=6. ● a(n) = (n + 5) * 5 ^ (n - 1). ●

► [A079027] 6,35,200,1125,6250,34375,187500,1015625,5468750,29296875,156250000,830078125,4394531250,23193359375,122070312500,640869140625,3356933593750,17547607421875,91552734375000,476837158203125,2479553222656250,12874603271484375 ⋆ a(n) = det(M(n)) where M(n) is the n X n matrix defined by m(i,i)=6, m(i,j)=i / j. ● a(n) = (n + 5) * 5 ^ (n - 1). ● a(n) = 10 * a(n - 1) - 25 * a(n - 2). G.f.: - x * (25 * x - 6) / (5 * x - 1) ^ 2. - _ Colin Barker _ , Jun 18 2013 ●

► [A289784] 1,6,35,201,1144,6477,36557,205950,1158967,6517653,36638504,205911129,1157068585,6501305814,36527449211,205222232433,1152978556888,6477584595765,36391668781013,204450911709582,1148616498546991,6452981164440861,36253117007574920 ⋆ p - INVERT of the (4 ^ n), where p(S) = 1 - S - S ^ 2. ● a(n) = 9 * a(n - 1) - 19 * a(n - 2). ● a(n) = (2 ^ (- 2 - n) * ((9 - sqrt(5)) ^ (n + 1) * (- 11 + 3 * sqrt(5)) + (9 + sqrt(5)) ^ (n + 1) * (11 + 3 * sqrt(5)))) / (19 * sqrt(5)). - _ Colin Barker _ , Aug 11 2017 ●

► [A161727] 1,6,35,202,1161,6662,38203,219018,1255505,7196806,41252883,236464586,1355429209,7769394054,44534572715,255274459018,1463246226849,8387401847558,48077013831427,275579886633162,1579637913256745 ⋆ a(n) = ((2 + sqrt(3)) * (4 + sqrt(3)) ^ n - (2 - sqrt(3)) * (4 - sqrt(3)) ^ n) / sqrt(12). ● a(n) = 8 * a(n - 1) - 13(n - 2) for n > 1; a(0) = 1, a(1) = 6. ●

► [A001109] 0,1,6,35,204,1189,6930,40391,235416,1372105,7997214,46611179,271669860,1583407981,9228778026,53789260175,313506783024,1827251437969,10650001844790,62072759630771,361786555939836,2108646576008245,12290092900109634,71631910824649559 ⋆ a(n) ^ 2 is a triangular number: a(n) = 6 * a(n - 1) - a(n - 2) with a(0)=0, a(1)=1. ● a(n) = S(n - 1, 6) = U(n - 1, 3) with U(n, x) Chebyshev's polynomials of the second kind. S(- 1, x) := 0. Cf. triangle A049310 for S(n, x). ● a(n) = 3 * a(n - 1) + sqrt(8 * a(n - 1) ^ 2 + 1). - _ R. J. Mathar _ , Oct 09 2000 ● a(n) = ((3 + 2 * sqrt(2)) ^ n - (3 - 2 * sqrt(2)) ^ n) / (4 * sqrt(2)). - _ Gregory V. Richardson _ , Oct 13 2002. Corrected for offset 0, and rewritten. - _ Wolfdieter Lang _ , Feb 10 2015 ● a(n) = floor((3 + 2 * sqrt(2)) ^ n / (4 * sqrt(2))). - _ Lekraj Beedassy _ , Apr 23 2003 ● a(- n) = - a(n). (End) ● a(2 * n + 1) = a(n + 1) ^ 2 - a(n) ^ 2. - _ Charlie Marion _ , Jan 12 2004 ●

► [A180033] 1,6,35,205,1200,7025,41125,240750,1409375,8250625,48300000,282753125,1655265625,9690093750,56726796875,332084453125,1944056250000,11380703515625,66623798828125,390022511718750,2283231552734375 ⋆ Eight white queens and one red queen on a 3 X 3 chessboard. G.f.: (1 + x) / (1 - 5 * x - 5 * x ^ 2). ● a(n) = 5 * a(n - 1) + 5 * a(n - 2) with a(0) = 1 and a(1) = 6. ● a(n) = ((7 + 5 * A) * A ^ (- n - 1) + (7 + 5 * B) * B ^ (- n - 1)) / 45 with A = (- 5 + 3 * sqrt(5)) / 10 and B = (- 5 - 3 * sqrt(5)) / 10. ●

► [A291246] 6,35,210,1259,7548,45252,271296,1626481,9751122,58460185,350482050,2101219272,12597285450,75523579487,452780964690,2714524435655,16274188816248,97567447965516,584938949030724,3506841484816717,21024308983216822,126045494230596949 ⋆ p - INVERT of (0,1,0,1,0,1,...), where p(S) = 1 - 6 S + S ^ 2. ● a(n) = 6 * a(n - 1) + a(n - 2) - 6 * a(n - 3) - a(n - 4) for n >= 5. ●

► [A117671] 1,6,35,210,1287,8008,50388,319770,2042975,13123110,84672315,548354040,3562467300,23206929840,151532656696,991493848554,6499270398159,42671977361650,280576272201225 ⋆ a(n) = binomial(3 * n + 1, n + 1). ● a(n) = [x ^ (2 * n)] 1 / (1 - x) ^ (n + 2). - _ Ilya Gutkovskiy _ , Oct 10 2017 ● a(n + 1) = 3 * (3 * n + 2) * (3 * n + 4) * a(n) / (2 * (n + 2) * (2 * n + 1)). - _ Robert Israel _ , Oct 10 2017 ●

► [A000399] 1,6,35,225,1624,13132,118124,1172700,12753576,150917976,1931559552,26596717056,392156797824,6165817614720,102992244837120,1821602444624640,34012249593822720,668609730341153280,13803759753640704000 ⋆ Unsigned Stirling numbers of first kind s(n,3). ● a(n) is the coefficient of x ^ (n + 3) in (- log(1 - x)) ^ 3, multiplied by (n + 3)! / 6. ● a(n) = ((Sum _{ i=1..n - 1 } 1 / i) ^ 2 - Sum _{ i=1..n - 1 } 1 / i ^ 2) * (n - 1)! / 2 for n >= 3. - Klaus Strassburger (strass(AT)ddfi.uni - duesseldorf.de), Jan 18 2000 ● a(n) = det(|S(i + 3,j + 2)|, 1 <= i,j <= n - 3), where S(n,k) are Stirling numbers of the second kind. - _ Mircea Merca _ , Apr 06 2013 ● a(n) = Gamma(n) * (HarmonicNumber(n - 1) ^ 2 + Zeta(2,n) - Zeta(2)) / 2. - _ Gerry Martens _ , Jul 05 2015 ● a(n) = (n - 3)! + (2 * n - 3) * a(n - 1) - (n - 2) ^ 2 * a(n - 2) for n >= 5. ● a(n) = 3 * (n - 2) * a(n - 1) - (3 * n ^ 2 - 15 * n + 19) * a(n - 2) + (n - 3) ^ 3 * a(n - 3) for n >= 6. (End) ●

► [A187443] 1,6,35,252,1716,12870,92378,705432,5200300,40116600,300540195,2333606220,17672631900,137846528820,1052049481860,8233430727600,63205303218876,495918532948104,3824345300380220,30067266499541040,232714176627630544,1832624140942590534,14226520737620288370,112186277816662845432,873065282167813104916 ⋆ A trisection of A001405 (central binomial coefficients): binomial(3n + 1,floor((3n + 1) / 2)), n>=0. ● a(n) = binomial(3 * n + 1,floor((3 * n + 1) / 2)), n>=0. ●

► [A207590] 6,36,60,144,324,756,1728,3996,9180,21168,48708,112212,258336,594972,1369980,3154896,7264836,16729524,38524032,88712604,204284700,470422512,1083276612,2494544148,5744373984 ⋆ Number of 3 X n 0..1 arrays avoiding 0 0 0 and 0 0 1 horizontally and 0 0 1 and 1 1 1 vertically. ● a(n) = (2 ^ (1 - n) * ((1 - sqrt(13)) ^ n * (- 35 + 13 * sqrt(13)) + (1 + sqrt(13)) ^ n * (35 + 13 * sqrt(13)))) / (9 * sqrt(13)) for n>2. ●

► [A069497] 0,6,36,66,78,120,210,276,300,378,528,630,666,780,990,1128,1176,1326,1596,1770,1830,2016,2346,2556,2628 ⋆ Triangular numbers of the form 6 * k. ● a(n) = 3 * a(n - 1) - 5 * a(n - 2) + 7 * a(n - 3) - 7 * a(n - 4) + 5 * a(n - 5) - 3 * a(n - 6) + a(n - 7). ●

► [A139249] 6,36,66,96,126,156,186,216,246,276,306,336,366,396,426,456,486,516,546,576,606,636,666,696,726 ⋆ a(n) = 30 * n - 24. ● a(n) = a(n - 1) + 30. ●

► [A208064] 6,36,72,144,216,324,432,576,720,900,1080,1296,1512,1764,2016,2304,2592,2916,3240,3600,3960,4356,4752,5184,5616 ⋆ Number of n X 3 0..1 arrays avoiding 0 0 0 and 1 1 1 horizontally and 0 0 1 and 0 1 1 vertically. ● a(n) = 9 * n ^ 2 for n>1 and even. ● a(n) = 9 * n ^ 2 - 9 for n>1 and odd. ●

► [A207846] 6,36,72,180,432,1044,2520,6084,14688,35460,85608,206676,498960,1204596,2908152,7020900,16949952,40920804,98791560,238503924,575799408,1390102740,3356004888,8102112516,19560229920 ⋆ Number of 3 X n 0..1 arrays avoiding 0 0 0 and 0 0 1 horizontally and 0 0 0 and 1 1 1 vertically. ● a(n) = 9 * (sqrt(2) * ((1 - sqrt(2)) ^ n * (1 + sqrt(2)) + (- 1 + sqrt(2)) * (1 + sqrt(2)) ^ n)) for n>2. ●

► [A208689] 6,36,78,282,768,2430,7086,21588,64230,193554,579264,1740054,5216502,15655428,46956702,140885610,422631744,1267935822,3803741790,11411331636,34233822966,102701747106,308104791168,924315101862,2772944127078 ⋆ Number of 3 X n 0..1 arrays avoiding 0 0 0 and 0 0 1 horizontally and 0 1 1 and 1 0 1 vertically. ● a(n) = 2 ^ (- n) * (5 * 6 ^ (2 + n) + (75 - 27 * sqrt(5)) * (- 1 + sqrt(5)) ^ n + 3 * (- 1 - sqrt(5)) ^ n * (25 + 9 * sqrt(5))) / 55. ●

► [A207656] 6,36,84,198,474,1140,2748,6630,16002,38628,93252,225126,543498,1312116,3167724,7647558,18462834,44573220,107609268,259791750,627192762,1514177268,3655547292,8825271846,21306090978 ⋆ Number of n X 3 0..1 arrays avoiding 0 0 0 and 1 1 1 horizontally and 0 0 1 and 1 0 0 vertically. ● a(n) = (3 / 2) * (2 + (1 - 2 * sqrt(2)) * (1 - sqrt(2)) ^ n + (1 + sqrt(2)) ^ n * (1 + 2 * sqrt(2))) for n>1. ●

► [A152746] 0,6,36,90,168,270,396,546,720,918,1140,1386,1656,1950,2268,2610,2976,3366,3780,4218,4680,5166,5676,6210,6768 ⋆ Six times hexagonal numbers: 6 * n * (2 * n - 1). ● a(n) = a(n - 1) + 24 * n - 18 (with a(0)=0). - _ Vincenzo Librandi _ , Nov 26 2010 ●

► [A207363] 6,36,90,225,420,784,1260,2025,2970,4356,6006,8281,10920,14400,18360,23409,29070,36100,43890,53361,63756,76176,89700,105625,122850 ⋆ Number of n X 3 0..1 arrays avoiding 0 0 0 and 0 1 1 horizontally and 0 0 1 and 0 1 1 vertically. ● a(n) = (n ^ 4 + 6 * n ^ 3 + 13 * n ^ 2 + 12 * n + 4) / 4 for n even. ● a(n) = (n ^ 4 + 6 * n ^ 3 + 11 * n ^ 2 + 6 * n) / 4 for n odd. ●

► [A080857] 1,6,36,91,171,276,406,561,741,946,1176,1431,1711,2016,2346,2701,3081,3486,3916,4371,4851,5356,5886,6441,7021 ⋆ (25 * n ^ 2 - 15 * n + 2) / 2. ● a(n) = 25 * n + a(n - 1) - 20 with n>0, a(0)=1. - _ Vincenzo Librandi _ , Aug 08 2010 ●

► [A207106] 6,36,98,200,350,556,826,1168,1590,2100,2706,3416,4238,5180,6250,7456,8806,10308,11970,13800,15806,17996,20378,22960,25750 ⋆ Number of n X 3 0..1 arrays avoiding 0 0 0 and 0 1 1 horizontally and 0 0 1 and 1 1 0 vertically. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>4. ●

► [A086113] 6,36,102,216,390,636,966,1392,1926,2580,3366,4296,5382,6636,8070,9696,11526,13572,15846,18360,21126,24156,27462,31056,34950 ⋆ Number of 3 X n (0,1) matrices such that each row and each column is nondecreasing or non increasing. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Vincenzo Librandi _ , Jun 24 2012 ●

► [A207118] 6,36,102,289,612,1296,2340,4225,6890,11236,17066,25921,37352,53824,74472,103041,138030,184900,241230,314721,401676,512656,642252,804609,992082 ⋆ Number of n X 3 0..1 arrays avoiding 0 0 1 and 0 1 0 horizontally and 0 0 1 and 0 1 1 vertically. ● a(n) = (n ^ 6 + 24 * n ^ 5 + 208 * n ^ 4 + 816 * n ^ 3 + 1600 * n ^ 2 + 1536 * n + 576) / 576 for n even. ● a(n) = (n ^ 6 + 24 * n ^ 5 + 205 * n ^ 4 + 768 * n ^ 3 + 1315 * n ^ 2 + 936 * n + 207) / 576 for n odd. ●

► [A270205] 0,0,6,36,108,240,450,756,1176,1728,2430,3300,4356,5616,7098,8820,10800,13056,15606,18468,21660,25200,29106,33396,38088 ⋆ Number of 2 X 2 planar subsets in an n X n X n cube. ● a(n) = 3 * n ^ 3 - 6 * n ^ 2 + 3 * n. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>3. (End) ●

► [A172137] 0,6,36,112,276,582,1096,1896,3072,4726,6972,9936,13756,18582,24576,31912,40776,51366,63892,78576,95652,115366,137976,163752,192976 ⋆ Number of ways to place 2 nonattacking zebras on an n X n board. ● a(n) = (n ^ 4 - 9 * n ^ 2 + 40 * n - 48) / 2, n >= 2. (Christian Poisson, 1990) ●

► [A083374] 0,6,36,120,300,630,1176,2016,3240,4950,7260,10296,14196,19110,25200,32640,41616,52326,64980,79800,97020,116886,139656,165600,195000 ⋆ a(n) = n ^ 2 * (n ^ 2 - 1) / 2. ● a(n) = binomial(n ^ 2,2), n>=1. - _ Zerinvary Lajos _ , Jan 07 2008 ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. - _ R. J. Mathar _ , Apr 10 2009 ● a(n) = Sum _{ i=1..n - 2 } i. - _ Wesley Ivan Hurt _ , Nov 24 2015 ●

► [A331576] 0,0,0,0,0,0,0,0,0,0,1,6,36,126,441,1176,3136,7056,15876,31752,63504,116424,213444,365904,627264 ⋆ a(n) is the number of subsets of { 1..n } that contain 5 even and 5 odd numbers. ● a(n) = binomial(n / 2, 5) ^ 2, for n even; ● a(n) = binomial((n - 1) / 2, 5) * binomial((n + 1) / 2,5), for n odd. ● a(n) = 2 * a(n - 1) + 8 * a(n - 2) - 18 * a(n - 3) - 27 * a(n - 4) + 72 * a(n - 5) + 48 * a(n - 6) - 168 * a(n - 7) - 42 * a(n - 8) + 252 * a(n - 9) - 252 * a(n - 11) + 42 * a(n - 12) + 168 * a(n - 13) - 48 * a(n - 14) - 72 * a(n - 15) + 27 * a(n - 16) + 18 * a(n - 17) - 8 * a(n - 18) - 2 * a(n - 19) + a(n - 20) for n>19. ●

► [A360588] 0,0,0,6,36,130,390,1064,2744,6822,16530,39292,92004,212810,487214,1105680,2490096,5570254,12385962,27393668,60292700,132120114,288357894,627047896,1358953896 ⋆ Expansion of e.g.f. (exp(x) - 1) ^ 2 * (x + x ^ 2 / 2). ● a(n) = n * 2 ^ (n - 1) + binomial(n,2) * (2 ^ (n - 2) - 2) - 2 * n, n >= 3, a(n) = 0 otherwise. ●

► [A321579] 0,0,6,36,132,540,2076,8316,32892,131580,524796,2099196,8390652,33562620,134225916,536903676,2147516412,8590065660,34359869436,137439477756,549756338172,2199025352700,8796095119356,35184380477436,140737496743932 ⋆ Number of n - tuples of 4 elements excluding reverse duplicates and those consisting of repetitions of the same element only. ● a(n) = (2 ^ (n - 2) * ((- 1) ^ (n + 1) + 3) + 2 ^ (2 * n - 1) - 4) for n > 0. ● a(n) = 5 * a(n - 1) - 20 * a(n - 3) + 16 * a(n - 4). - _ Colin Barker _ , Nov 14 2018 ●

► [A364429] 1,6,36,146,456,1182,2668,5418,10128,17718,29364,46530,71000,104910,150780,211546,290592,391782,519492,678642,874728,1113854,1402764,1748874,2160304 ⋆ a(0) = 1, a(n) = (2 * n ^ 5 + 20 * n ^ 3 + 23 * n) * 2 / 15 for n>=1. ● a(0) = 1, a(n) = (2 * n ^ 5 + 20 * n ^ 3 + 23 * n) * 2 / 15 for n>=1. ●

► [A018214] 1,6,36,146,511,1512,4032,9752,21942,46252,92504,176484,323554,572264,981024,1634776,2656511,4218786,6562556,10016006,15024009,22177584,32258304,46282704,65567164 ⋆ Alkane (or paraffin) numbers l(13,n). ● a(n) = (1 / (2 * 10!)) * (n + 2) * (n + 4) * (n + 6) * (n + 8) * (n + 10) * ((n + 1) * (n + 3) * (n + 5) * (n + 7) * (n + 9) + 1 * 3 * 5 * 7 * 9) - (1 / 6) * (1 / 2 ^ 8) * (n ^ 4 + 22 * n ^ 3 + 170 * n ^ 2 + 539 * n + 579) * (1 / 2) * (1 - (- 1) ^ n). [_ Yosu Yurramendi _ , Jun 23 2013] ●

► [A224149] 6,36,155,526,1509,3827,8838,18969,38392,74053,137204,245636,426869,722624,1194983,1934737,3072530,4793530,7356497,11118274,16564901,24350745,35347252,50703161,71918276 ⋆ Number of 5 X n 0..1 arrays with rows and a

ntidiagonals unimodal and columns nondecreasing. ● a(n) = 11 * a(n - 1) - 55 * a(n - 2) + 165 * a(n - 3) - 330 * a(n - 4) + 462 * a(n - 5) - 462 * a(n - 6) + 330 * a(n - 7) - 165 * a(n - 8) + 55 * a(n - 9) - 11 * a(n - 10) + a(n - 11) for n>11. ●

► [A055404] 1,6,36,157,482,1203,2673,5139,9389,15930,25810,39855,59711,86346,122467,168957,229743,305153,400844,518154,662629,835490,1044410,1292216,1588236 ⋆ Number of points in N ^ 5 of norm <= n. ● a(n) = [x ^ (n ^ 2)] (1 + theta _ 3(x)) ^ 5 / (32 * (1 - x)), where theta _ 3() is the Jacobi theta function . - _ Ilya Gutkovskiy _ , Apr 15 2018 ●

► [A223919] 6,36,158,548,1600,4102,9503,20299,40570,76704,138348,239630,400700,649642,1024813,1577669,2376142,3508636,5088714,7260552,10205240,14148014,19366507,26200111,35060546 ⋆ Number of 2 X n 0..2 arrays with rows and an tidiagonals unimodal and columns nondecreasing. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>9. ●

► [A293068] 0,0,0,6,36,170,768,3458,15596,70314,316296,1418538,6342852,28286258,125865936,559075586,2479846748,10987635738,48642380568,215198769114,951576969588,4206079161794,18585710106720,82106786841074,362660527980812 ⋆ Sum of values of vertices of type D at level n of the hyperbolic Pascal pyramid PP _ (4,5). ● a(n) = 12 * a(n - 1) - 53 * a(n - 2) + 106 * a(n - 3) - 94 * a(n - 4) + 28 * a(n - 5) for n>5. ●

► [A146883] 6,36,186,936,4686,23436,117186,585936,2929686,14648436,73242186,366210936,1831054686,9155273436,45776367186,228881835936,1144409179686,5722045898436,28610229492186,143051147460936,715255737304686 ⋆ a(n) = 6 * Sum _{ m=0..n } 5 ^ m. ● a(n) = Sum _{ m=0..n } 6 * 5 ^ m. ● a(n) = 3 * (5 ^ (n + 1) - 1) / 2. - _ Emeric Deutsch _ , Nov 02 2017 ●

► [A159721] 6,36,192,960,4608,21504,98304,442368,1966080,8650752,37748736,163577856,704643072,3019898880,12884901888,54760833024,231928233984,979252543488,4123168604160,17317308137472,72567767433216,303465209266176 ⋆ Number of permutations of 3 indistinguishable copies of 1..n arranged in a circle with exactly 1 local maximum. ● a(n) = (copies * n) * (copies + 1) ^ (n - 2), here: copies = 3. ● a(n) = 3 * 4 ^ (n - 1) * (n + 1). ● a(n) = 8 * a(n - 1) - 16 * a(n - 2) for n>3. (End) ●

► [A267229] 6,36,195,1030,5375,27854,143695,738990,3791775,19421854,99344735,507597950,2591191375,13217410254,67376465775,343259079310,1747901098175,8896431461054,45262405898815,230195833919070,1170328696616175 ⋆ Number of length - n 0..5 arrays with no following elements greater than or equal to the first repeated value. ● a(n) = (- 5 * (15 + 5 * 2 ^ (1 + n) + 10 * 3 ^ n + 15 * 4 ^ n - 97 * 5 ^ n) + 12 * 5 ^ n * n) / 300 for n>1. ●

► [A200782] 1,6,36,196,1071,5796,31395,169884,919413,4975322,26924106,145698840,788446400,4266656226,23088902733,124944995676,676136621430,3658895818470,19800020091895,107147296401684,579824822459421,3137707025200000 ⋆ Expansion of 1 / (1 - 6 * x + 20 * x ^ 3 - 15 * x ^ 4 + x ^ 6). ● a(n) = 6 * a(n - 1) - 20 * a(n - 3) + 15 * a(n - 4) - a(n - 6). ●

► [A374497] 1,6,36,200,1080,5712,29792,153792,787680,4009280,20304768,102405888,514678528,2579028480,12890311680,64283809792,319954540032,1589720712192,7886437652480,39069462835200,193307835764736,955361266917376,4716674314223616,23264437702656000 ⋆ Expansion of 1 / (1 - 4 * x - 4 * x ^ 2) ^ (3 / 2). ● a(0) = 1, a(1) = 6; a(n) = (2 * (2 * n + 1) * a(n - 1) + 4 * (n + 1) * a(n - 2)) / n. ●

► [A345340] 0,0,1,6,36,200,1120,6272,35392,200832,1145856,6566912,37779456,218050560,1262030848,7322034176,42570760192,247970693120,1446799212544,8453937692672,49463868522496,289761061240832,1699288462655488,9975342691254272,58611909535989760 ⋆ The number of squares with vertices from the vertices of the n - dimensional hypercube. ● a(n) = 2 ^ (n - 2) * Sum _{ k=1..floor(n / 2) } n! / (2 * k! * k! * (n - 2 * k)!). - _ Drake Thomas _ , Jun 14 2021 ●

► [A038157] 0,0,0,6,36,200,1230,8652,69272,623520,6235290,68588300,823059732,10699776672,149796873590,2246953104060,35951249665200,611171244308672,11001082397556402,209020565553571980,4180411311071439980,87788637532500240000 ⋆ a(n) = n! * Sum _{ k=1..n - 2 } 1 / k!. ● a(n) = floor(n! * exp(1)) - n - 1 - n! for n>1. - _ Mark van Hoeij _ , Oct 30 2011 ●

► [A267468] 6,36,201,1096,5921,31880,171601,925176,5002641,27155800,148092161,811801256,4475004961,24813260520,138416411121,776822970136,4385905536881,24907563562040,142244725848481,816667390335816 ⋆ Number of length - n 0..5 arrays with no following elements larger than the first repeated value. ● a(n) = (- 75 - 25 * 2 ^ (1 + n) - 50 * 3 ^ n + 25 * 2 ^ (1 + n) * 3 ^ n - 75 * 4 ^ n + 413 * 5 ^ n + 12 * 5 ^ n * n) / 300. ●

► [A111989] 1,6,36,208,1200,6912,39808,229248,1320192,7602688,43782144,252131328,1451966464,8361541632,48152199168,277297463296,1596892446720,9196137086976,52958442815488,304975517319168,1756284007219200 ⋆ G.f.: 1 / (1 - 6 * x + 8 * x ^ 3). ● a(n)= 6 * a(n - 1) - 8 * a(n - 3), a(- 2)= 0 =a(- 1), a(0)=1, (or a(j)=6 ^ j, j=0, 1, 2). ●

► [A268941] 6,36,210,1206,6834,38322,213042,1175850,6450402,35200458,191222994,1034688474,5579060610,29989217034,160755450546,859578198138,4585950964578,24416800390890,129760544069778,688831162218202 ⋆ Number of length - n 0..5 arrays with no repeated value unequal to the previous repeated value plus one mod 5 + 1. ● a(n) = (- 12 * 5 ^ (1 + n) + (35 - 11 * sqrt(10)) * (2 - sqrt(10)) ^ n + (2 + sqrt(10)) ^ n * (35 + 11 * sqrt(10))) / 10. ●

► [A269675] 6,36,210,1212,6918,39156,220050,1229292,6832518,37810116,208443090,1145318172,6274749318,34288099476,186935018130,1017053643852,5523244077318,29944773691236,162103912681170,876339613438332 ⋆ Number of length - n 0..5 arrays with no repeated value differing from the previous repeated value by other than plus or minus one modulo 5 + 1. ● a(n) = (- 924 * 5 ^ n + (660 - 195 * sqrt(11)) * (2 - sqrt(11)) ^ n + 15 * (2 + sqrt(11)) ^ n * (44 + 13 * sqrt(11))) / 385. ●

► [A027910] 1,6,36,210,1221,7098,41328,241128,1409895,8260934,48497064,285219090,1680166215,9912297150,58558256496,346371955776,2051126447742,12158963346852,72147074769640,428476010502582,2546776668682323,15149061841758174,90175327717962024 ⋆ T(2n,n - 2), T given by A027907. ● a(n) = Sum _{ i=0..floor((2 * n - 3) / 2) } C(2 * n,n - 2 - i) * C(n - 2 - i,i). _ Shanzhen Gao _ , Apr 20 2010 ●

► [A075848] 0,6,36,210,1224,7134,41580,242346,1412496,8232630,47983284,279667074,1630019160,9500447886,55372668156,322735561050,1881040698144,10963508627814,63900011068740,372436557784626,2170719335639016 ⋆ Numbers k such that 2 * k ^ 2 + 9 is a square. ● a(n) = ((3 + 2 * sqrt(2)) ^ n - (3 - 2 * sqrt(2)) ^ n) * (3 / (2 * sqrt(2))); ● a(n) = 6 * a(n - 1) - a(n - 2). ●

► [A096979] 0,1,6,36,210,1225,7140,41616,242556,1413721,8239770,48024900,279909630,1631432881,9508687656,55420693056,323015470680,1882672131025,10973017315470,63955431761796,372759573255306,2172602007770041 ⋆ Sum of the areas of the first n + 1 Pell triangles. ● a(n) = 6 * a(n - 1) - 6 * a(n - 3) + a(n - 4). ● a(n) = (3 - 2 * sqrt(2)) ^ n * (3 / 32 - sqrt(2) / 16) + (3 + 2 * sqrt(2)) ^ n * (sqrt(2) / 16 + 3 / 32) - (- 1) ^ n / 16 - 1 / 8. ● a(n) = sum { k=0..n, (sqrt(2) * (sqrt(2) + 1) ^ (2 * k) / 8 - sqrt(2) * (sqrt(2) - 1) ^ (2 * k) / 8) * ((1 + (- 1) ^ (n - k)) / 2. ●

► [A269464] 6,36,210,1230,7170,41730,242370,1405530,8139570,47082330,272068770,1570817130,9062549970,52251339930,301095703170,1734220430730,9984459848370,57463149169530,330612722505570,1901660018436330 ⋆ Number of length - n 0..5 arrays with no repeated value equal to the previous repeated value. ● a(n) = (- 84 * 5 ^ n + (231 - 57 * sqrt(14)) * (2 - sqrt(14)) ^ n + 3 * (2 + sqrt(14)) ^ n * (77 + 19 * sqrt(14))) / 350. ●

► [A123887] 1,6,36,210,1230,7200,42150,246750,1444500,8456250,49503750,289800000,1696518750,9931593750,58140562500,340360781250,1992506718750,11664337500000,68284221093750,399742792968750,2340135070312500,13699389316406250,80197621933593750,469485056250000000 ⋆ Expansion of g.f.: (1 + x + x ^ 2) / (1 - 5 * x - 5 * x ^ 2). ● a(0)=1, a(1)=6, a(2)=36, a(n) = 5 * a(n - 1) + 5 * a(n - 2) for n>2. - _ Philippe Deléham _ , Sep 19 2009 ●

► [A105492] 1,6,36,210,1260,7833,50701,342126,2406645,17633820,134427468,1064801442,8751834839,74540800014 ⋆ Number of partitions of { 1,...,n } containing 2 strings of 3 consecutive integers such that only v - strings of consecutive integers can appear in a block, where v = 1,2,3. ● a(n)=Sum(w(n, k, 2), k=1...n), where w(n, k, 2) is the case r=2 of w(n, k, r) given by w(m, k, r)=w(m - 1, k - 1, r) + (k - 1)w(m - 1, k, r) + w(m - 2, k - 1, r) + (k - 1)w(m - 2, k, r) + w(m - 3, k - 1, r - 1) + (k - 1)w(m - 3, k, r - 1) r=0, 1, ..., floor(n / 3), k=1, 2, ..., n - 2 r, w(n, k, 0)=sum(binomial(n - j, j) * S2(n - j - 1, k - 1), j=0..floor(n / 2)). ●

► [A052748] 0,0,0,6,36,210,1350,9744,78792,708744,7036200,76521456,905507856,11589357312,159580302336,2352940786944,36994905688320,617953469022720,10929614667747840,204073497562936320,4011658382046919680,82822558521844224000,1791791417179298304000 ⋆ Expansion of e.g.f.: - (log(1 - x)) ^ 3. ● a(n) = stirling1(n, 3) * 3! * (- 1) ^ (n + 1). - _ Leonid Bedratyuk _ , Aug 07 2012 ●

► [A292297] 0,0,0,6,36,210,1452,12138,114684,1147002,11729148,120902202,1249686492,12929303130,133809210108,1384977143610,14335551770268,148385432561562,1535924231893308,15898233466089210,164561459781232092,1703363953470584922,17631399812695032444 ⋆ Sum of values of vertices of type C at level n of the hyperbolic Pascal pyramid. ● a(n) = 18 * a(n - 1) - 99 * a(n - 2) + 226 * a(n - 3) - 224 * a(n - 4) + 92 * a(n - 5) - 12 * a(n - 6), n >= 7. ●

► [A337970] 6,36,216,776,3876,18576,83376,399376,2034126,9884376,49034376,245689376,1221921876,6107609376,30563759376,152599609376,762979296876,3815571921876,19073708984376,95369005859376,476858422109376,2384189755859376,11920935693359376,59605116212109376,298023413134765626 ⋆ L.g.f.: - log(Sum _{ n= - oo.. + oo } (- p) ^ n * (p * x) ^ (n ^ 2)) = Sum _{ n>=1 } a(n) * x ^ n / n, where p = sqrt(5). ● a(n) = 6 (mod 10). ●

► [A269687] 6,36,216,1284,7584,44556,260616,1518804,8823984,51132636,295646616,1706201124,9830779584,56564639916,325076005416,1866287024244,10704981330384,61356265686396,351432308441016,2011741878388164 ⋆ Number of length - n 0..5 arrays with no repeated value differing from the previous repeated value by plus or minus one modulo 5 + 1. ● a(n) = (3 / 205) * 2 ^ (- 2 - n) * (- 41 * 2 ^ (2 + n) * 5 ^ n - 5 * (5 - sqrt(41)) ^ n * (- 41 + 7 * sqrt(41)) + 5 * (5 + sqrt(41)) ^ n * (41 + 7 * sqrt(41))). ●

► [A126634] 6,36,216,1296,7656,44136,248016,1362096,7338456,38927736,203958816,1058224896,5448329256,27880971336,141993797616,720419919696,3644189320056,18390164454936,92630272564416,465876904526496,2340309918950856,11745320884258536 ⋆ a(n) is the number of nonnegative integers k less than 10 ^ n such that the decimal representation of k lacks the digits 1,2,3,4 and at least one of digits 5,6,7,8,9. ● a(n) = 5 * 5 ^ n - 10 * 4 ^ n + 10 * 3 ^ n - 5 * 2 ^ n + 1. ●

► [A206452] 6,36,216,1296,7776,46655,279924,1679508,10076832,60459696,362750400,2176455745,13058454546,78349047768,470084209776,2820444798960,16922306043360,101531659804415,609176900371944,3654983053183896 ⋆ Number of 0..5 arrays of length n avoiding the consecutive pattern 0..5. ● a(n) = 6 * a(n - 1) - a(n - 6). ●

► [A000400] 1,6,36,216,1296,7776,46656,279936,1679616,10077696,60466176,362797056,2176782336,13060694016,78364164096,470184984576,2821109907456,16926659444736,101559956668416,609359740010496,3656158440062976,21936950640377856,131621703842267136 ⋆ Powers of 6: a(n) = 6 ^ n. ● a(n) = 6 ^ n. ● a(0) = 1; a(n) = 6 * a(n - 1). ● a(n) = det(|s(i + 3,j)|, 1 <= i,j <= n), where s(n,k) are Stirling numbers of the first kind. - _ Mircea Merca _ , Apr 04 2013 ●

► [A033142] 1,6,36,217,1302,7812,46873,281238,1687428,10124569,60747414,364484484,2186906905,13121441430,78728648580,472371891481,2834231348886,17005388093316,102023228559897,612193971359382,3673163828156292,22038982968937753,132233897813626518 ⋆ Base - 6 digits are, in order, the first n terms of the periodic sequence with initial period 1,0,0. ● a(n) = 6a(n - 1) + a(n - 3) - 6a(n - 4). ● a(n) = floor((36 / 215) * 6 ^ n). - _ Tani Akinari _ , Jul 18 2014 ●

► [A082309] 1,6,36,218,1336,8280,51776,325792,2057856,13023104,82456576,521826816,3298727936,20822038528,131210919936,825373859840,5182772248576,32487861092352,203308891897856,1270289732337664,7924975155019776 ⋆ Expansion of e.g.f.: (1 + x) * exp(5 * x) * cosh(x). ● a(n) = ((n + 4) * 4 ^ (n - 1) + (n + 6) * 6 ^ (n - 1)) / 2. ● a(n) = 20 * a(n - 1) - 148 * a(n - 2) + 480 * a(n - 3) - 576 * a(n - 4), n>3. (End) ●

► [A004319] 1,6,36,220,1365,8568,54264,346104,2220075,14307150,92561040,600805296,3910797436,25518731280,166871334960,1093260079344,7174519270695,47153358767970,310325523515700,2044802197953900,13488561475572645,89067326568860640,588671286046028640 ⋆ Binomial coefficient C(3n,n - 1). ● a(n) = Su

m[i = 0..n - 1, C(i + 2n, i)]. - _ Ralf Stephan _ , Jun 03 2005 ● a(n) = sum(i = 1..n - 1, (binomial(3 * i - 1, 2 * i - 1) * binomial(3 * n - 3 * i - 3, 2 * n - 2 * i - 2)) / (2 * n - 2 * i - 1)) / 2. [_ Vladimir Kruchinin _ , May 15 2013] ● a(n) = [x ^ (2 * n + 1)] 1 / (1 - x) ^ n. - _ Ilya Gutkovskiy _ , Oct 10 2017 ●

▶ [A180218] 0,6,36,220,1500,11508,98784,940896,9862560,112923360,1402980480,18804839040,270532604160,4158579398400,68031755366400,1180252336435200,216446904124416 00,4184047119780864 00,85032554622382080 00 ⋆ a(n) = (n + 2)! * sum(1 / k, k=1..n) ● a(n) = (n + 2) / n * ((2 * n - 1) * a(n - 1) - (n ^ 2 - 1) * a(n - 2)). - _ Robert Israel _ , Aug 13 2014 ●

▶ [A218991] 6,36,221,1361,8386,51676,318441,1962321,12092366,74516516,459191461,2829665281,17437183146,107452764156,662153768081,4080375372641,25144406003926,154946811396196,954825274381101,5883898457682801 ⋆ Power floor sequence of 3 + sqrt(10). ● a(n) = floor(r * a(n - 1)), where r=3 + sqrt(10), a(0) = floor(r). ● a(n) = 7 * a(n - 1) - 5 * a(n - 2) - a(n - 3). ● a(n) = ((5 + sqrt(10)) * (3 - sqrt(10)) ^ (n + 2) + (5 - sqrt(10)) * (3 + sqrt(10)) ^ (n + 2) + 2) / 12. - _ Bruno Berselli _ , Nov 22 2012 ●

▶ [A351056] 1,1,1,6,36,221,1431,10121,80311,718106,7111976,76201501,868288401,10438492181,132166853861,1763179150946,24776241643056,365971430085021,5662954240306111,91450179009971181,1536249848608545451,26782376261726525126,483792982362049317676 ⋆ G.f. A(x) satisfies: A(x) = 1 + x + x ^ 2 * A(x / (1 - 5 * x)) / (1 - 5 * x). ● a(0) = a(1) = 1; a(n) = Sum _{ k=0..n - 2 } binomial(n - 2,k) * 5 ^ k * a(n - k - 2). ●

▶ [A166748] 1,6,36,222,1440,9990,74880,609390,5391360,51798150,539136000,6060383550,73322496000,951480217350,13198049280000,195053444556750,3061947432960000,50908949029311750,894088650424320000 ⋆ E.g.f.: exp(6 * arcsin(x)). ● a(n + 2) = (n ^ 2 + 36) * a(n), a(0)=1, a(1)=6. ● a(n) = (3 * 2 ^ n * gamma(- 3 * i + n / 2) * gamma(3 * i + n / 2) * (cos((n * Pi) / 2) + i * sin((n * Pi) / 2)) * sinh(((6 - i * n) * Pi) / 2)) / Pi where "i" is imaginary unit. (End) ● a(n) = 3 * 2 ^ (n - 1) * (exp(3 * Pi) - (- 1) ^ n * exp(- 3 * Pi)) * |Gamma(n / 2 + 3i)| ^ 2 / Pi. - _ R. J. Mathar _ and _ M. F. Hasler _ , Oct 25 2009 ●

▶ [A200378] 1,6,36,222,1446,10116,75924,602256,4958352,41783046,357442416,3091766904,26991194550,237605649780,2107693469880,18826297197444,169203629332230,1529098507275372,13885733651626548,126641707880226888,1159483975207373952,10652962589325269040,98187525261135608400 ⋆ G.f. satisfies: A(x) = H(x * A(x)) where H(x) = A(x / H(x)) is the theta series of planar hexagonal lattice A _ 2 (A004016). ● a(n) = [x ^ n] H(x) ^ (n + 1) / (n + 1) where H(x) is the g.f. of A004016. ●

▶ [A242136] 0,1,6,36,228,1518,10530,75516,556512,4194801,32224114,251565996,1991331720,15953808780,129171585690,1055640440268,8698890336576,72215877581844,603532770013080,5074488683389840 ⋆ Number of strong triangulations of a fixed square with n interior vertices. ● a(n) = 72 * (4 * n + 3)! / ((3 * n + 6)! * (n - 1)!) = 24 * binomial(4 * n + 3,n - 1) / ((3 * n + 5) * (n + 2)) = binomial(4 * n + 3,n - 1) - 5 * binomial(4 * n + 3,n - 2) + 6 * binomial(4 * n + 3,n - 3). ●

▶ [A284647] 0,1,6,36,231,1540,10440,71253,487578,3339820,22885995,156848616,1075018896,7368190921,50502074766,346145696820,2372516138895,16261462918828,111457712887128,763942497430365,5236139690949090,35888903513454496,245987105715037011 ⋆ Number of nonisomorphic unfoldings in an n - gonal Archimedean antiprism. ● a(n) = (1 / 10) * (((1 + sqrt(5)) / 2) ^ (4 * n) + ((1 + sqrt(5)) / 2) ^ (- 4 * n) - 2) + ((3 + sqrt(5)) ^ n - (3 - sqrt(5)) ^ n) / (2 ^ (n + 1) * sqrt(5)). ● a(n) = 11 * a(n - 1) - 33 * a(n - 2) + 33 * a(n - 3) - 11 * a(n - 4) - a(n - 5) for n>4. ● a(n) = (5 * Fibonacci(2 * n) + Lucas(4 * n) - 2) / 10. - _ Ehren Metcalfe _ , Apr 21 2018 ● a(n) = Fibonacci(2 * n) * (1 + Fibonacci(2 * n)) / 2 - _ Rick Mabry _ , Apr 10 2021 ●

▶ [A099252] 0,1,6,36,232,1585,11298,83097,625992,4805595,37458330,295673994,2358641376,18985057351,154000562758,1257643249140,10331450919456,85317692667643,707854577312178,5897493615536452,49320944483427000,413887836110423787,3484084625456932134,29412628894558563849 ⋆ Bisection of A005043. ● a(n) = - hypergeom([- 2 * n - 1, 1 / 2], [2], 4). - _ Peter Luschny _ , Jul 26 2020 ●

▶ [A066053] 1,6,36,236,1686,13028,108078,956348,8976708,88962160,927129786,10125636716,115543526476,1373933166848,16985192456410,217851008508220,2893517713599370,39732264695056772,563187218351672330,8229159647194683140,123795221970087313340 ⋆ Stirling transform of A002457. ● a(n) = sum(stirling2(n, k) * (2 * k + 2)! / (2 * k! * (k + 1)!), k = 0..n), n = 0, 1, ...; ●

▶ [A001286] 1,6,36,240,1800,15120,141120,1451520,16329600,199584000,2634508800,37362124800,566658892800,9153720576000,156920924160000,2845499424768000,54420176498688000,1094805903679488000,23112569077678080000 ⋆ Lah numbers: a(n) = (n - 1) * n! / 2. ● a(n) = Sum _{ i=0..n - 1 } (- 1) ^ (n - i - 1) * i ^ n * binomial(n - 1,i). - Yong Kong (ykong(AT)curagen.com), Dec 26 2000 [corrected by _ Amiram Eldar _ , May 02 2022] ● a(n + 1) = (- 1) ^ (n + 1) * det(M _ n) where M _ n is the n X n matrix M _ (i,j)=max(i * (i + 1) / 2,j * (j + 1) / 2). - _ Benoit Cloitre _ , Apr 03 2004 ● a(n) = (n + 1)! * Sum _{ k=1..n - 1 } 1 / (k ^ 2 + 3 * k + 2). - _ Gary Detlefs _ , Sep 14 2011 ● a(n + 1) = a(n) * n * (n + 1) / (n - 1). - _ Chai Wah Wu _ , Apr 11 2018 ●

▶ [A180119] 0,1,6,36,240,1800,15120,141120,1451520,16329600,199584000,2634508800,37362124800,566658892800,9153720576000,156920924160000,2845499424768000,54420176498688000,1094805903679488000,23112569077678080000,5109094217170944000 00,1180200764166488064000 0 ⋆ a(n) = (n + 2)! * Sum _{ k = 1..n } 1 / ((k + 1) * (k + 2)). ● a(n) = n * (n + 1)! / 2. [Simplified by _ M. F. Hasler _ , Apr 10 2018] ● a(n) = (n + 1)! * Sum _{ k = 2..n } (1 / (k ^ 2 + k)), with offset 1. - _ Gary Detlefs _ , Sep 15 2011 ● a(n) = Sum _{ k = 0..n } (- 1) ^ (n - k) * binomial(n,k) * k ^ (n + 1) = 1 / (2 * x + 1) * Sum _{ k = 0..n } (- 1) ^ (n - k) * binomial(n,k) * (x * n + k) ^ (n + 1), for arbitrary x != - 1 / 2. - _ Peter Bala _ , Feb 19 2017 ●

▶ [A199422] 6,36,246,1716,12006,84036,588246,4117716,28824006,201768036,1412376246,9886633716,69206436006,484445052036,3391115364246,23737807549716,166164652848006,1163152569936036,8142067989552246,56994475926865716 ⋆ 5 * 7 ^ n + 1. ● a(n) = 7 * a(n - 1) - 6. ● a(n) = 8 * a(n - 1) - 7 * a(n - 2). ●

▶ [A049428] 1,1,6,36,246,2046,19716,209616,2441916,31050396,425883816,6244077456,97391939976,1609040166696,28029696862896,512903202039936,9829166157390096,196739739722616336,4102788435212513376,88945209649582514496,2000700796384204930656 ⋆ Row sums of triangle A049411. ● a(n) = n! * Sum _{ k=1..n } Sum _{ j=0..k } binomial(6 * j,n) * (- 1) ^ (k - j) / (6 ^ k * (k - j)! * j!). - _ Vladimir Kruchinin _ , Feb 07 2011 ●

▶ [A366496] 1,1,6,36,251,1891,15007,123593,1046444,9052330,79660406,710879890,6418000050,58515227946,538008396198,4982752630656,46442071874398,435299781856712,4100411743983559,38797120485576155,368561495153257186,3513923237883474314 ⋆ G.f. A(x) satisfies A(x) = 1 + x * (1 + x) ^ (5 / 2) * A(x) ^ (7 / 2). ● a(n) = Sum _{ k=0..n } binomial(5 * k / 2,n - k) * binomial(7 * k / 2,k) / (5 * k / 2 + 1). ●

▶ [A090015] 6,36,258,2136,19998,208524,2393754,29976192,406446774,5930064372,92608986546,1541044428456,27216454135758,508388707585116,10013199347882058,207381428863832784,4505207996358719334 ⋆ Permanent of (0,1) - matrix of size n X (n + d) with d=5 and n - 1 zeros not on a line. ● a(n) = (n + 4) * a(n - 1) + (n - 2) * a(n - 2), a(1)=6, a(2)=36 ● a(n) = ((n ^ 6 + 21 * n ^ 5 + 160 * n ^ 4 + 545 * n ^ 3 + 814 * n ^ 2 + 415 * n + 1) * exp(- 1) * Gamma(n, - 1) + (- 1) ^ n * (n ^ 5 + 20 * n ^ 4 + 141 * n ^ 3 + 422 * n ^ 2 + 499 * n + 154)) / 120. - _ Robert Israel _ , Nov 26 2018 ●

▶ [A134008] 6,36,286,2556,24310,240276,2437006,25173996,263567590,2787694596,29716508926,318719062236,3434943872470,37162689280116,403310957409646,4387917394947276,47836135613930950,522357603781540836 ⋆ a(n) = 1 ^ n + 3 ^ n + 5 ^ n + 7 ^ n + 9 ^ n + 11 ^ n. ● a(n) = 35 * a(n - 1) - 470 * a(n - 2) + 3010 * a(n - 3) - 9129 * a(n - 4) + 10395 * a(n - 5) - 3840. ● a(n) = 36 * a(n - 1) - 505 * a(n - 2) + 3480 * a(n - 3) - 12139 * a(n - 4) + 19524 * a(n - 5) - 10395 * a(n - 6); a(0)=6, a(1)=36, a(2)=286, a(3)=2556, a(4)=24310, a(5)=240276. - _ Harvey P. Dale _ , Apr 20 2015 ●

▶ [A053335] 6,36,336,6336,66336,366336,6366336,36366336,636366336,3636366336,33636366336,333636366336,3333636366336,33333636366336,633333636366336,3633333636366336,33633333636366336,336333333636366336 ⋆ a(n) contains n digits (either '3' or '6') and is divisible by 2 ^ n. ● a(n)=a(n - 1) + 10 ^ (n - 1) * (6 - 3 * [a(n - 1) / 2 ^ (n - 1) mod 2]) i.e. a(n) ends with a(n - 1); if (n - 1) - th term is divisible by 2 ^ n then n - th term begins with a 6, if not then n - th term begins with a 3. ●

▶ [A077290] 0,6,36,630,3570,61776,349866,6053460,34283340,593177346,3359417496,58125326490,329188631310,5695688818716,32257126450926,558119378907720,3160869203559480,54690003444137886,309732924822378156,5359062218146605150,30350665763389499850 ⋆ Triangular numbers that are 6 times other triangular numbers. ● a(n) = 98 * a(n - 2) - a(n - 1) + 42. - _ Vladimir Pletser _ , Feb 20 2021 ●

▶ [A362336] 1,1,1,1,1,6,37,148,449,1135,15121,172789,1207009,6106816,24748725,510855346,8524169473,84981641837,602009065729,3357322881625,93871272204481,2059974308136466,26683062726210661,243032907824598816,1725747644222610625 ⋆ a(n) = n! * Sum _{ k=0..floor(n / 5) } (n / 120) ^ k / (k! * (n - 5 * k)!). ● a(n) = n! * [x ^ n] exp(x + n * x ^ 5 / 120). ●

▶ [A047670] 6,37,158,529,1486,3653,8086,16449,31222,55941,95470,156305,246910,378085,563366,819457,1166694,1629541,2237118,3023761,4029614,5301253,6892342,8864321,11287126 ⋆ Row 6 of array in A047666. ● a(n) = (1 / 45) * (2n ^ 6 + 50n ^ 4 + 173 + 45). ●

▶ [A327611] 0,0,0,1,6,37,182,876,3920,17175,73030,306296,1266916,5198207,21180642,85909216,347179440,1399443775,5629876910,22616222616,90754709276,363889980927,1458171985402,5840531023856,23385647663560 ⋆ Number of length n reversible string structures that are not palindromic using exactly four different colors. ● a(n) = 8 * a(n - 1) - 10 * a(n - 2) - 60 * a(n - 3) + 145 * a(n - 4) + 100 * a(n - 5) - 470 * a(n - 6) + 120 * a(n - 7) + 456 * a(n - 8) - 288 * a(n - 9) for n > 9. ●

▶ [A056328] 0,0,0,1,6,37,183,877,3930,17185,73095,306361,1267266,5198557,21182343,85910917,347187210,1399451545,5629911015,22616256721,90754855026,363890126677,1458172596903,5840531635357,23385650196090 ⋆ Number of reversible string structures with n beads using exactly four different colors. ● a(n) = (S2(n,k) + A(n,k)) / 2, where k=4 is the number of colors (sets), S2 is the Stirling subset number A008277 and A(n,k) = [n>1] * (k * A(n - 2,k) + A(n - 2,k - 1) + A(n - 2,k - 2)) + [n<2 & n==k & n>=0]. ●

▶ [A244618] 1,6,37,218,1309,7810,46797,280345,1681029,10081939,60479790,362838047,2176908951,13061074143,78365313414,470188412205,2821120141002,16926689765961,101560046400158,609360004351714,3656159217328421,21936952918704867,131621710507870811,789730242509398308 ⋆ G.f.: Sum _{ n>=0 } (5 + x ^ n) ^ n * x ^ n / (1 - x) ^ (n + 1). ● a(n) - 6 ^ n ~ n / 21 * ((1 + sqrt(21)) / 2) ^ n. - _ Vaclav Kotesovec _ , Jul 02 2014 ●

▶ [A033116] 1,6,37,222,1333,7998,47989,287934,1727605,10365630,62193781,373162686,2238976117,13433856702,80603140213,483618841278,2901713047669,17410278286014,104461669716085,626770018296510,3760620109779061 ⋆ Base - 6 digits are, in order, the first n terms of the periodic sequence with initial period 1, 0. ● a(n) = 6 ^ (n + 1) / 35 - 1 / 10 - (- 1) ^ n / 14. (End) ● a(n)=floor(6 ^ (n + 1) / 35). a(n + 1)=sum { k=0..floor(n / 2) } 6 ^ (n - 2 * k). a(n + 1)=sum { k=0..n } sum { j=0..k } (- 1) ^ (j + k) * 6 ^ j. - _ Paul Barry _ , Nov 12 2003, index corrected _ R. J. Mathar _ , Jan 08 2011 ● a(n) = 5 * a(n - 1) + 6 * a(n - 2) + 1. - _ Zerinvary Lajos _ , Dec 14 2008 ● a(n) = floor(6 ^ (n + 1) / 7) / 5 = floor((6 * 6 ^ n - 1) / 35) = round((12 * 6 ^ n - 7) / 70) = round((6 * 6 ^ n - 6) / 35) = ceiling((6 * 6 ^ n - 6) / 35). a(n)=a(n - 2) + 6 ^ (n - 1), n>2. - _ Mircea Merca _ , Dec 28 2010 ●

▶ [A033124] 1,6,37,223,1338,8029,48175,289050,1734301,10405807,62434842,374609053,2247654319,13485925914,80915555485,485493332911,2912959997466,17477759984797,104866559908783,629199359452698,3775196156716189,22651176940297135,135907061641782810 ⋆ Base - 6 digits are, in order, the first n terms of the periodic sequence with initial period 1,0,1. ● a(n) = 6 * a(n - 1) + a(n - 3) - 6 * a(n - 4). ● a(n) = round((37 / 215) * 6 ^ n). - _ Tani Akinari _ , Jul 15 2014 ●

▶ [A288786] 1,6,37,225,1395,8944,59585,413117,2981310,22380814,174600298,1413841252,11868587577,103155618776,927141821215,8606806236367,82430269073469,813600584094320,8267450613029789,86406853732930699,927993270700444588,1023263650406447996 ⋆ Number of blocks of size >= four in all set partitions of n. ● a(n) = Bell(n + 1) - Sum _{ j=0..3 } binomial(n,j) * Bell(n - j). ● a(n) = Sum _{ j=0..n - 4 } binomial(n,j) * Bell(j). ●

▶ [A180032] 1,6,37,227,1394,8559,52553,322678,1981261,12165051,74694082,458625767,2815987409,17290317414,106163498933,651849716563,4002393075346,24574913392671,150891318490777,926480986202582,5688644160448349 ⋆ Eight white queens and one red queen on a 3 X 3 chessboard. G.f.: (1 + x) / (1 - 5 * x - 7 * x ^ 2). ● a(n) = 5 * a(n - 1) + 7 * a(n - 2) with a(0) = 1 and a(1) = 6. ● a(n) = ((7 + 9 * A) * A ^ (- n - 1) + (7 + 9 * B) * B ^ (- n - 1)) / 53 with A = (- 5 + sqrt(53)) / 14 and B = (- 5 - sqrt(53)) / 14. ●

▶ [A255119] 1,6,37,228,1404,8646,53244,327888,2019204,12434688,76575456,471567960,2904015888,17883548064,110130696144,678208272192,4176550921536,25720089706080,158389787869632,975398032747008,6006708734718528,36990591135528960 ⋆ Number of n - length words on { 0,1,2,3,4,5,6 } in which 0 appears only in runs of length 2. ● a(n + 3) = 6 * a(n + 2) + 6 * a(n) with n>1, a(0) = 1, a(1) = 6, a(2) = 37. ●

▶ [A005668] 0,1,6,37,228,1405,8658,53353,328776,2026009,12484830,76934989,474094764,2921503573,18003116202,110940200785,683644320912,4212806126257,25960481078454,159975692596981,985814636660340,6074863512559021,37434995712014466,230684837784645817 ⋆ Denominators of continued fraction convergents to sqrt(10). ● a(n) = 6 * a(n - 1) + a(n - 2). ● a(n) = ((- i) ^ (n - 1)) * S(n - 1, 3 * i) with S(n, x) Chebyshev's polynomials of the second kind (see A049310) and i ^ 2= - 1. ● a(n) = F(n, 6), the n - th Fibonacci polynomial evaluated at x= 6. - _ T. D. Noe _ , Jan 19 2006 ● a(n) = ((3 + sqrt(10)) ^ n - (3 - sqrt(10)) ^ n) / (2 * sqrt(10)). ● a(n) = Sum _{ i=0..floor((n - 1) / 2) } binomial(n - 1 - i,i) * 6 ^ (n - 1 - 2 * i). (End) ● a(n) = [M ^ (n + 1)] _{ 0,0 } , where M = [0,1;1,6]. - _ L. Edson Jeffery _ , Aug 28 2013 ●

▶ [A018904] 1,6,37,229,1418,8781,54377,336734,2085253,12913101,79965442,495192589,3066520913,18989683446,117595179557,728217839669,4509548979898,27925753660941,172932530727097,1070898946784974,6631629973859333,41066915083090461,254310255712336562 ⋆ Define the sequence S(a(0),a(1)) by a(n + 2) is the least integer such that a(n + 2) / a(n + 1) > a(n + 1) / a(n) for n >= 0. This is S(1,6). ● a(n) = (a(1) + 1) * a(n - 1) - (a(1) - 1) * a(n - 2) = 7 * a(n - 1) - 5 * a(n - 2). ● a(n) = (2 ^ (- 1 - n) * ((7 - sqrt(29)) ^ n * (- 5 + sqrt(29)) + (5 + sqrt(29)) * (7 + sqrt(29)) ^ n)) / sqrt(29). - _ Colin Barker _ , Jan 20 2017 ●

▶ [A192807] 0,1,6,37,230,1431,8904,55403,344732,2145013,13346834,83047505,516743378,3215312955,20006521300,124485827703,774583500376,4819661885417,29989201523742,186600684739485,1161078447443102,7224534909928031 ⋆ Coefficient of x in the reduction of the polynomial (x ^ 2 + x + 1) ^ n by x ^ 3 - > x ^ 2 + x + 1. ● a(n) = 7 * a(n - 1) - 5 * a(n - 2) + a(n - 3). ●

▶ [A076026] 1,1,6,37,230,1434,8952,55917,349374,2183230,13643972,85270626,532926716,3330739972,20816939100,130105200765,813155081070,5082210417270,31763782696740,198523522444950,1240771573465140,7754820693127020,48467623215477120,302922622226091090 ⋆ Expansion of g.f.: (1 - 4 * x * C) / (1 - 5 * x * C) where C = (1 / 2 - 1 / 2 * (1 - 4 * x) ^ (1 / 2)) / x = g.f. for Catalan numbers A000108. ● a(n) = upper left term in M ^ (n - 1), M = an infinite square production matrix as follows: ●

▶ [A161734] 1,6,37,232,1469,9354,59753,382388,2449561,15700686,100666957,645553792,4140197909,26554241874,170317866833,1092431105228,7007000115121,44944085730966,288279854661877,1849084574806552,11860409090842349,76075145687872794 ⋆ a(n) = ((2 + sqrt(2)) * (5 + sqrt(2)) ^ n + (2 - sqrt(2)) * (5 - sqrt(2)) ^ n) / 4. ● a(n) = 10 * a(n - 1) - 23 * a(n - 2). - _ R. J. Mathar _ , Jun 18 2009 ●

▶ [A081570] 1,6,37,233,1490,9633,62753,410926,2700349,17786985,117346714,774991289,5121849473,33865596822,223987930325,1481764925737,9803764203682,64870223394129,429263295428641,2840659771285310,18798621916707821 ⋆ Fifth binomial transform of F(n + 1). ● a(n) = 11 * a(n - 1) - 29 * a(n - 2), a(0)=1, a(1)=6. ● a(n) = (1 / 2 - sqrt(5) / 10) * (11 / 2 - sqrt(5) / 2) ^ n + (sqrt(5) / 10 + 1 / 2) * (sqrt(5) / 2 + 11 / 2) ^ n . ●

▶ [A122898] 1,6,37,233,1491,9660,63195,416610,2763595,18426026,123375927,829053197,5588050069,37764371676,255800207277,1736181639585,11804962371795,80394249836010,548283258074895,3744067955618403,25596986050620681 ⋆ Expansion of (sqrt(21 * x ^ 2 - 10 * x + 1) + 7 * x - 1) / (2 * x * (1 - 7 * x)). ● a(n) = Sum { k=0..n, 3 ^ (n - k)C(n,k)C(2k + 1,k + 1) } . ● a(n) = Sum { k=0..n, 5 ^ (n - k)C(n,k)C(k,floor(k / 2)) } . ● a(n) = Sum { k=0..n, sum { j=0..n, 3 ^ (n - j) * C(n,k) * C(n - k,j - k) * C(j + 1,k + 1) }} . ● a(n) = (- 1) ^ n * (GegenbauerC(n, - n,5 / 2) - GegenbauerC(n - 1, - n,5 / 2)). - _ Peter Luschny _ , May 13 2016 ●

▶ [A081912] 1,6,37,234,1512,9936,66096,443232,2985984,20155392,136048896,917070336,6167549952,41358864384,276451356672,1841557856256,12224809598976,80871817347072,533189772509184,3503818505060352,22952550207062016 ⋆ a(n) = 6 ^ n * (n ^ 2 - n + 72) / 72. ● a(n) = 6 ^ n * (n ^ 2 - n + 72) / 72. ●

▶ [A081188] 1,6,37,234,1513,9966,66637,450834,3077713,21153366,146120437,1013077434,7042713913,49054856766,342163294237,2389039544034,16692759230113,116696726720166,816114147588037,5708984335850634 ⋆ 6th binomial transform of (1,0,1,0,1,.....), A059841. ● a(n) = 12 * a(n - 1) - 35 * a(n - 2), a(0)=1, a(1)=6. ● a(n) = 5 ^ n / 2 + 7 ^ n / 2. ●

▶ [A154623] 1,1,6,37,235,1539,10392,72267,516474,3783115,28317562,215969271,1673702191,13148444197,104494340880,838670818365,6788255966595,55346471893395,454123503938490,3746885525588175,31066887028255065 ⋆ Sequence with g.f. 1 + (x / (1 - 5 * x)) * c(x / (1 - 5 * x)), c(x) the g.f. of A000108. ● a(n) = (- 1) ^ (n - 1) * (GegenbauerC(n - 1, - n + 1,7 / 2) + GegenbauerC(n - 2, - n + 1,7 / 2)) for n>=1. - _ Peter Luschny _ , May 13 2016 ●

▶ [A196834] 1,6,37,235,1540,10427,73013,529032,3967195,30785747,247126450,2050937445,17585497797,155666739742,1421428484337,13377704321695,129659127547372,1293095848212799,13259069937250169,139671750579429512,1510382932875294447,16754464511605466311 ⋆ Row sums of Sheffer triangle A193685 (5 - restricted Stirling2 numbers). ● a(0) = 1; a(n) = 5 * a(n - 1) + Sum _{ k=0..n - 1 } binomial(n - 1,k) * a(k). - _ Ilya Gutkovskiy _ , Jul 03 2020 ●

▶ [A080954] 1,6,37,236,1569,10970,81445,648240,5576545,52142030,531185925,5891873300,70946620225,923526766050,12935478240325,194062691183000,3105155646818625,52788408935369750,950195175533921125 ⋆ E.g.f. exp(5x) / (1 - x). ● a(n) = n! * Sum _{ k=0..n } 5 ^ k / k!. ● a(0)=0, a(n) = n * a(n - 1) + 5 ^ n. - _ Vincenzo Librandi _ , Nov 15 2012 ●

▶ [A271905] 1,6,37,240,1621,11256,79717,572928,4164841,30553116,225817021,1679454816,12556853401,94313192616,711189994357,5381592930816,40848410792017,310909645663332,2372280474687277,18141232682656320,139010366280363601,1067160872528170536,8206301850166625797,63203453697218605440 ⋆ Number of singular vector tuples for a general n X n X n tensor. ● a(n) satisfies the following fifth - order recurrence equation with polynomial coefficients: ●

▶ [A140712] 0,1,6,37,256,2000,17520,170520,1827840,21409920,272160000,3732220800,54925516800,863480217600,14442536908800,256086230400000,4798293147648000,94731418349568000,1965528727658496000 ⋆ Number of white corners in all permutations of { 1,2,...,n } (for definition see the Eriksson - Linusson references). ● a(n) = (n - 1)! * (binomial(n - 1,3) + 6 * binomial(n,2)]) / 6 = (n - 1)! * (n - 1) * (n ^ 2 + 13 * n + 6) / 36. ●

▶ [A079751] 0,1,6,37,260,2081,18730,187301,2060312,24723745,321408686,4499721605,67495824076,1079933185217,18358864148690,330459554676421,6278731538852000,125574630777040001,2637067246317840022,58015479418992480485,1334356026636827051156 ⋆ Operation count to create all permutations of n distinct elements using the "streamlined" version of Algorithm L (lexicographic permutation generation) from Knuth's The Art of Computer Programming, Vol. 4, chapter 7.2.1.2. Sequence gives number of cases where the j search loop runs beyond j=n - 3. ● a(3)=0, a(n) = n * a(n - 1) + 1 for n >= 4. ● a(n) = Sum _{ j=4..n } (n - j)! * binomial(n,j). - _ Zerinvary Lajos _ , Jul 31 2006 ●

▶ [A229620] 0,6,38,116,256,478,798,1236,1808,2534,3430,4516,5808,7326,9086,11108,13408,16006,18918,22164,25760,29726,34078,38836,44016 ⋆ Incorrect version of A045949. ● a(n) = (1 - (- 1) ^ n - 8 * n + 18 * n ^ 2 + 12 * n ^ 3) / 4. G.f.: - 2 * x * (2 * x + 1) * (x ^ 2 - 4 * x - 3) / ((x - 1) ^ 4 * (x + 1)). - _ Colin Barker _ , Sep 29 2013 ●

▶ [A045949] 0,6,38,116,262,496,840,1314,1940,2738,3730,4936,6378,8076,10052,12326,14920,17854,21150,24828,28910,33416,38368,43786,49692 ⋆ Number of equilateral triangles formed out of matches that can be found in a hexagonal chunk of side length n in hexagonal array of matchsticks. ● a(n) = floor(n * (14 * n ^ 2 + 9 * n + 2) / 4). ● a(n) = + 3 * a(n - 1) - 2 * a(n - 2) - 2 * a(n - 3) + 3 * a(n - 4) - a(n - 5). ● a(n) = (28 * n ^ 3 + 18 * n ^ 2 + 4 * n - 1 + (- 1) ^ n) / 8. (End) ●

▶ [A180030] 1,6,38,238,1494,9374,58822,369102,2316086,14533246,91194918,572240558,3590762134,22531735134,141384772742,887177744782,5566966905846,34932256487486,219197017684198,1375443140320878,8630791843077974 ⋆ Number of n - move paths on a 3 X 3 chessboard of a queen starting or ending in a corner or side square. ● a(n) = 5 * a(n - 1) + 8 * a(n - 2) with a(0) = 1 and a(1) = 6. ● a(n) = ((7 + 11 * A) * A ^ (- n - 1) + (7 + 11 * B) * B ^ (- n - 1)) / 57 with A = (- 5 + sqrt(57)) / 16 and B = (- 5 - sqrt(57)) / 16. ●

▶ [A135030] 0,1,6,38,240,1516,9576,60488,382080,2413456,15244896,96296288,608267520,3842197696,24269721216,153302722688,968355778560,6116740116736,38637152257536,244056393778688,1541612667187200 ⋆ Generalized Fibonacci numbers: a(n) = 6 * a(n - 1) + 2 * a(n - 2). ● a(0) = 0; a(1) = 1; a(n) = 2 * (3 * a(n - 1) + a(n - 2)). ● a(n) = 1 / (2 * sqrt(11)) * ((3 + sqrt(11)) ^ n - (3 - sqrt(11)) ^ n). ●

▶ [A162558] 1,6,38,248,1644,10984,73672,495072,3329936,22407776,150819168,1015220608,6834184384,46006990464,309717848192,2085024691712,14036454256896,94493999351296,636137999861248,4282512012883968 ⋆ a(n) = ((3 + sqrt(3)) * (5 + sqrt(3)) ^ n + (3 - sqrt(3)) * (5 - sqrt(3)) ^ n) / 6. ● a(n) = 10 * a(n - 1) - 22 * a(n - 2) for n > 1; a(0) = 1, a(1) = 6. ● a(n) = 10 * a(n - 2) - 22 * a(n - 2). ●

▶ [A215466] 0,1,6,38,252,1705,11628,79547,544824,3733234,25585230,175356611,1201893336,8237850373,56462937882,387002396990,2652553009008,18188066487757,124613506702404,854113665498719,5854182112700460 ⋆ Expansion of x * (1 - 4 * x + x ^ 2) / ((x ^ 2 - 7 * x + 1) * (x ^ 2 - 3 * x + 1)). ● a(n) = L(n) * F(3n) / 4 if n even, = F(n) * L(3n) / 4 if n odd, where L=A000032, F=A000045. ● a(n) = 10 * a(n - 1) - 23 * a(n - 2) + 10 * a(n - 3) - a(n - 4), a(0)=0, a(1)=1, a(2)=6, a(3)=38. - _ Harvey P. Dale _ , Nov 02 2015 ● a(n) = - a(- n) for all n in Z. - _ Michael Somos _ , Dec 29 2022 ●

▶ [A147957] 1,6,38,252,1732,12216,87704,637104,4663312,34298208,253025888,1870171584,13839178816,102484311936,759279663488,5626889356032,41707163713792,309171726460416,2292017151256064,16992367115418624 ⋆ a(n) = ((6 + sqrt(2)) ^ n + (6 - sqrt(2)) ^ n) / 2. ● a(n) = 12 * a(n - 1) - 34 * a(n - 2), n > 1; a(0)=1, a(1)=6. ●

▶ [A098410] 1,6,38,252,1734,12276,88796,652728,4856902,36478404,275975028,2099978568,16054486044,123213933576,948713646072,7325088811632,56692748053062,439689331938276,3416328042565124,26587566855421608,207218159714453044,1617124976299315224,12634892752595949192 ⋆ Expansion of 1 / (sqrt(1 - 4 * x) * sqrt(1 - 8 * x)). ● a(n) = Sum _{ k=0..n } 2 ^ k * binomial(2 * k, k) * binomial(2 * (n - k), n - k). ● a(n) = Sum _{ k=0..n } 4 ^ (n - k) * binomial(n,k) * binomial(2k,k). - _ Paul Barry _ , Mar 08 2005 ● a(n) = 4 ^ n * hypergeometric([- n, 1 / 2], [1], - 1). - _ Peter Luschny _ , May 19 2015 ● a(n) = Sum _{ k=0..n } 8 ^ (n - k) * (- 1) ^ k * binomial(n,k) * binomial(2 * k,k). - _ Seiichi Manyama _ , Apr 22 2019 ● a(n) = Sum _{ k=0..floor(n / 2) } 6 ^ (n - 2 * k) * binomial(n,2 * k) * binomial(2 * k,k). - _ Seiichi Manyama _ , May 04 2019 ● a(n) = (1 / Pi) * Integral _{ x = - 1..1 } (4 + 4 * x ^ 2) ^ n / sqrt(1 - x ^ 2) dx = (1 / Pi) * Integral _{ x = - 1..1 } (8 - 4 * x ^ 2) ^ n / sqrt(1 - x ^ 2) dx. (End) ●

▶ [A026940] 1,6,38,256,1805,13162,98469,751656,5831451,45847770,364498596,2925337352,23668977163,192859753310,1581188102590,13034447714688,107971181472779,898274382703314,7502546644142842,62884859093960160,528788663216036559,4459599092506030110 ⋆ a(n) = Sum _{ k=0..n - 1 } T(n,k) * T(n,k + 1),

with T given by A026300. ● a(n) = Sum _{ k=0..n } binomial(2 * n, 2 * k + 1) * binomial(2 * k + 1, k) / (k + 2)), see Amdeberhan link. - _ Michel Marcus _ , Jul 29 2015 ● a(n) = n * hypergeom([1 / 2 - n, 1 - n], [3], 4). - _ Jean - Fra ncois Alcover _ , Sep 22 2018 ●

► [A192941] 1,1,6,38,276,2276,21032,215336,2419824,29611120,391950240,55799 65600,85018056640,1380373170880,23792373137280,433881469662080,834620284 1391360,1688947620646666880,3586667489988830720,7975349681454298880 0 ★ C onstant term of the reduction by x ^ 2 - > x + 1 of the polynomial p(n,x)=(2x + 1)(2x + 2)...(2x + n). ● a(n) = 1 / 10 * (5 - sqrt(5)) * Gamma(n + 2 + sqrt(5)) / Gamma(2 + sqrt(5)) + 1 / 10 * sin(Pi * (3 + sqrt(5))) * (1 + sqrt(5)) * G amma(1 + sqrt(5)) * Gamma(n + 2 - sqrt(5)) / (Pi * (sqrt(5) - 1)). - _ Vaclav Kotesovec _ , Oct 26 2012 ●

► [A221283] 1,6,38,291,2374,20254,180184,1634372,15037909,139847905,1311179 363 ★ Number of totients up to 10 ^ n. ● a(n) is about 10 ^ n / n * 2.2655434... ^ ((log log n) ^ 2); see Theorem 1 in the Ford paper for a more precise asympto tic. ●

► [A289162] 0,0,0,6,39,106,321,644,1402,2412,4382,6842,11097,16198,24311,3376 8,47908,64056,87084,112974,148539,188034,240669,298540,373758 ★ Number of 4 - cycles in the n X n black bishop graph. ● a(n) = ((- 1 + n) * (15 - 193 * n + 162 * n ^ 2 - 68 * n ^ 3 + 12 * n ^ 4 - 15 * (- 1) ^ n * (1 - 7 * n + 2 * n ^ 2))) / 240. ● a(n) = 2 * a(n - 1) + 3 * a(n - 2) - 8 * a(n - 3) - 2 * a(n - 4) + 12 * a(n - 5) - 2 * a(n - 6) - 8 * a(n - 7) + 3 * a(n - 8) + 2 * a(n - 9) - a(n - 10). ●

► [A229600] 0,6,39,202,925,3924,15795,61182,230121,845640,3049407,10825650,3 7929141,131403708,450839115,1533738726,5178892545,17371743408,5792653755 9,192131864730,634207340493,2084322230820,6822862231779,22252658047182 ★ Number of defective 3 - colorings of an n X 2 0..2 array connected horizontally and vertically with exactly two mistakes, and colors introduced in row - major 0 ..2 order. ● a(n) = 3 ^ (n - 5) * (31 * n + 32 * n ^ 2 - 30) for n>2. ●

► [A090018] 1,6,39,252,1629,10530,68067,439992,2844153,18384894,118841823,7 68205620,4965759189,32099171994,207492309531,1341251373168,866998516760 1,56043665125110,362271946253463,2341762672896108 ★ a(n) = 6 * a(n - 1) + 3 * a(n - 2) for n > 2, a(0)=1, a(1)=6. ● a(n) = (3 + 2 * sqrt(3)) ^ n * (sqrt(3) / 4 + 1 / 2) + (1 / 2 - sqrt(3) / 4) * (3 - 2 * sqrt(3)) ^ n. ● a(n) = (- i * sqrt(3)) ^ n * ChebyshevU(n, isqrt(3)), i ^ 2= - 1. ●

► [A006256] 1,6,39,258,1719,11496,77052,517194,3475071,23366598,157206519,1 058119992,7124428836,47983020624,323240752272,2177956129818,146772161218 71,98923498131762,666819212874501,4495342330033938,30308036621747679,204 356509814519712 ★ a(n) = Sum _{ k=0..n } binomial(3k,k) * binomial(3n - 3k, n - k). ● a(n) = (3 / 4) * (27 / 4) ^ n * (1 + c / sqrt(n) + o(n ^ (- 1 / 2))) whe re c = (2 / 3) * sqrt(1 / (3 * Pi)) = 0.21715667195685329 8... More generally, a(n, m) = sum(k=0, n, C(m * k,k) * C(m * (n - k),n - k)) is asymptotic to (1 / 2) * m / (m - 1) * (m ^ m / (m - 1) ^ (m - 1)) ^ n. See A000302, A078995 for case s m=2 and 4. - _ Benoit Cloitre _ , Jan 26 2003, extended by _ Vaclav Koteso vec _ , Nov 06 2012 ● a(n) = sum(k=0, n, C(3 * k + l,k) * C(3 * (n - k) - l,n - k)) for every real number l. ● a(n) = sum(k=0, n, 2 ^ (n - k) * C(3n + 1,k)). ● a(n) = sum(k=0, n, 3 ^ (n - k) * c(2n + k,k)). (End) ● a(n) = sum(k=0, 2n, (- 3) ^ k * C(3n - k, n)). ● a(n) = sum(k=0, 2n, (- 4) ^ k * C(3n + 1, 2n - k)). ●

► [A370376] 1,1,6,39,262,1791,12372,86052,601374,4217151,29648766,20885579 1,1473509736,10408539844,73596075552,520797997464,3687846866382,261286712 96127,185209915856802,1313356295909877,9316374980571702,6610534319865440 7,469174119885678972 ★ Number of compositions of n where there are A025174 (k) sorts of part k. ● a(0) = 1; a(n) = 1 / 3 * Sum _{ k=1..n } binomial(3 * k, k) * a(n - k). ●

► [A199491] 6,39,270,1887,13206,92439,647070,4529487,31706406,221944839,155 3613870,10875297087,76127079606,532889557239,3730226900670,2611158830468 7,182781118132806,1279467826929639,8956274788507470,6269392351955228 7 ★ (11 * 7 ^ n + 1) / 2. ● a(n) = 7 * a(n - 1) - 3. ● a(n) = 8 * a(n - 1) - 7 * a(n - 2) . ●

► [A147961] 1,6,39,270,1953,14526,109863,838998,6442497,49623030,382873959,2 956927518,22848289569,176600866734,1365216845031,10554773538150,81605126 571777,630953992102374,4878478728359847,37720263000939822 ★ a(n) = ((6 + sqrt(3)) ^ n + (6 - sqrt(3)) ^ n / 2. ● a(n) = 12 * a(n - 1) - 33 * a(n - 2) for n > 1, with a(0)=1, a(1)=6. ●

► [A068765] 1,1,6,39,270,1962,14796,114831,911574,7368894,60457428,50216290 2,4214515212,35686162548,304491863448,2615468845311,22598114065254,196269 877811574,1712578870493316,15005719955119698 ★ Generalized Catalan numbe rs. ● a(n)=(3 ^ n) * p(n, - 2 / 3) with the row polynomials p(n, x) defined from array A068763. ● a(n + 1)= 3 * sum(a(k) * a(n - k), k=0..n), n>=1, a(0)=1=a (1). ●

► [A349531] 1,1,6,39,271,1986,15171,119694,968589,7997970,67132164,57113836 2,4914229293,42690269053,373915274505,3298492524831,29279961769422,261348 675838758,2344226713167048,21119556517672650,191022983002755162,17339594 71178342088,1579078726661751879 0 ★ G.f. A(x) satisfies: A(x) = 1 + x * A(x) ^ 3 / (1 - 3 * x). ● a(0) = a(1) = 1; a(n) = 3 * a(n - 1) + Sum _{ i=0..n - 1 } Sum _{ j=0..n - i - 1 } a(i) * a(j) * a(n - i - j - 1). ● a(n) = Sum _{ k=0..n } b inomial(n - 1,k - 1) * binomial(3 * k,k) * 3 ^ (n - k) / (2 * k + 1). ● a(n) = 3 ^ (n - 1) * F([4 / 3, 5 / 3, 1 - n], [2, 5 / 2], - (3 / 2) ^ 2), where F is the generalize d hypergeometric function. - _ Stefano Spezia _ , Nov 21 2021 ●

► [A006633] 1,6,39,272,1995,15180,118755,949344,7721604,63698830,531697881,4 482448656,38111876530,326439471960,2814095259675,24397023508416,21257913 2600076 ★ From generalized Catalan numbers. ● a(n) = 2 * binomial(4 * n + 5, n) / (n + 2). - _ Bruno Berselli _ , Jan 18 2014 ●

► [A153392] 1,1,6,39,272,2001,15333,121266,983274,8133564,68382628,58270048 5,5021538753,43690059657,383263396836,3386175566418,30104702903914,269125 162789764,2417709649413102,21815252320257250,197620659225838530 ★ G.f.: A (x) = F(x * G(x) ^ 3) where F(x) = G(x * F(x)) = 1 + x * F(x) ^ 3 is the g.f. o f A001764 and G(x) = F(x / G(x)) = 1 + x * G(x) ^ 2 is the g.f. of A000108 (C atalan). ● a(n) = Sum _{ k=0..n } C(3k + 1,k) / (3k + 1) * C(2n + k,n - k) * 3k / (2n + k) for n>0 with a(0)=1. ●

► [A067273] 0,1,6,39,316,3165,37986,531811,8508984,153161721,3063234430,673 91157471,1617387779316,42052082262229,1177458303342426,3532374910027279 5,1130359971208729456,3843223902109680152 1 ★ a(n) = n * (a(n - 1) * 2 + 1), a(0) = 0. ● a(n) = n * hypergeom([1,1 - n], [], - 2). - _ Peter Luschny _ , May 09 2017 ●

► [A137972] 1,1,6,39,320,2787,25788,247731,2449188,24753960,254610962,26564 96133,28046838948,299085697722,3216723340218,34852657892685,380063012970 680,4168108473073596,45941874232280862,508664757809869052 ★ G.f. satisfies A(x) = 1 + x * (1 + x * A(x) ^ 4) ^ 6. ● a(n) = Sum _{ k=0..n - 1 } C(6 * (n - k),k) / (n - k) * C(4 * k,n - k - 1) for n>0 with a(0)=1. - _ Paul D. Hanna _ , Jun 16 2009 ●

► [A246571] 1,6,39,340,3041,28718,279987,2788464,28256709,290124182,3010689 527,31516942060,332347297141,3526399820374,37616896717155,40312740846281 6,433772361557978 1,4684217287870148 6,507454305359968827,5513119883595629 556,6005037927655586185 7,6556114058021025430 86 ★ G.f.: Sum _{ n>=0 } x ^ n / (1 - x) ^ (4 * n + 3) * [Sum _{ k=0..2 * n + 1 } C(2 * n + 1,k) ^ 2 * x ^ k] ^ 2. ● a(n) = Sum _{ k=0..n } Sum _{ j=0..k } C(2 * n - k - j + 1,k) ^ 2 * C(k,j) ^ 2. ●

► [A034661] 6,39,455,6813,112931,1956669,34591115,617285253,11064693731,19 8756808749,3574014537275,64300154115093,1157115988280531,208255197937960 29,3748363227434994 35,6746846977808919333 ★ Sum of n - th powers of divisor s of 18. ● a(n) = 39 * a(n - 1) - 533 * a(n - 2) + 3285 * a(n - 3) - 9594 * a(n - 4) + 12636 * a(n - 5) - 5832 * a(n - 6) with n>6, a(0)=6, a(1)=39, a(2)=455, a(3) =6813, a(4)= 112931, a(5)=1956669, a(6)=34591115. (End) ●

► [A211065] 0,6,40,96,288,486,1056,1536,2800,3750,6120,7776,11760,14406,2060 8,24576,33696,39366,52200,60000,77440,87846,110880,124416,154128 ★ Number of 2 X 2 matrices having all terms in { 1,...,n } and odd determinant. ● a(n) = (2 * n + 1 - (- 1) ^ n) ^ 2 * (6 * n + 1 - (- 1) ^ n) * (2 * n - 1 + (- 1) ^ n) / 1 28. ● a(n) = a(n - 1) + 4 * a(n - 2) - 4 * a(n - 3) - 6 * a(n - 4) + 6 * a(n - 5) + 4 * a(n - 6) - 4 * a(n - 7) - a(n - 8) + a(n - 9) for n > 9. ●

► [A027777] 6,40,150,420,980,2016,3780,6600,10890,17160,26026,38220,54600,76 160,104040,139536,184110,239400,307230,389620,488796,607200,747500,912600,1 105650 ★ a(n) = 2 * (n + 1) * binomial(n + 2,4). ● a(n) = C(n + 1, 3) * C(n + 2, 2) - _ Zerinvary Lajos _ , May 13 2005, corrected by _ R. J. Mathar _ , Fe b 13 2016 ●

► [A227013] 1,6,40,152,413,920,1792,3173,5232,8160,12173,17512,24440,33245,44 240,57760,74165,93840,117192,144653,176680,213752,256373,305072,360400 ★ a(n) = floor(M(g(n - 1) + 1,..,g(n))), where M is the harmonic mean and g(n) = n ^ 4. ● a(n) = 47 / 9 + 14 * n + (41 * n ^ 2) / 3 + 6 * n ^ 3 + n ^ 4 - (2 / 9)Co s(2 * n * pi / 3) (conjectured). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 5 * a(n - 3) - 5 * a(n - 4) + 6 * a(n - 5) - 4 * a(n - 6) + a(n - 7) for n > 2 (conjectured). ●

► [A073773] 0,0,0,6,40,152,480,1376,3712,9600,24064,58880,141312,333824,7782 40,1794048,4096000,9273344,20840448,46530560,103284736,228065280,50121932 8,1096810496,2390753280 ★ Number of plane binary trees of size n + 2 and heig ht n. ● a(n < 3) = 0, a(n) = ((n ^ 2 - 6) * 2 ^ (n - 2)) ●

► [A001919] 6,40,155,456,1128,2472,4950,9240,16302,27456,44473,69680,10608 0,157488,228684,325584,455430,627000,850839,1139512,1507880,1973400,255645 0,3280680,4173390 ★ Eighth column of quadrinomial coefficients. ● a(n) = n(n ^ 2 - 1)(n ^ 2 - 4)(n ^ 2 + 21n + 180) / 5040. - _ Emeric Deutsch _ , Jan 27 200 5 ● a(n) = 6 * C(n,3) + 16 * C(n,4) + 15 * C(n,5) + 6 * C(n,6) + C(n,7) (see c omment in A071675). - _ Vladimir Shevelev _ and _ Peter J. C. Moses _ , J un 22 2012 ● a(3)=6, a(4)=40, a(5)=155, a(6)=456, a(7)=1128, a(8)=2472, a(9) =4950, a(10)=9240, a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8). - _ Harvey P. Dale _ , Mar 27 2013 ●

► [A292029] 1,6,40,200,1056,4928,23808,107136,494080,2173952,9744384,422256 64,185679872,795770880,3451518976,14668955648,62970789888,265876668416,1 132226150400,4755349831680,20120910954496,84141991264256,35416015110144 0,1475667296256000,6184144161734656 ★ Wiener index of the n - folded cube gr aph. ● a(n) = 2 ^ (n - 3) * n * (2 ^ (n - 1) - binomial(n - 1, floor((n - 1) / 2))). - _ Andrew Howroyd _ , Sep 08 2017 ●

► [A232568] 0,6,40,210,681,1919,4443,9481,18206,33164,56570,92996,146175,223 565,330981,479779,678508,943586,1287036,1731654,2293765,3004011,3883935,49 73645,6300906 ★ Number of non - equivalent binary n X n matrices with three pairwise nonadjacent 1's. ● a(n) = (n ^ 6 - 15 * n ^ 4 + 20 * n ^ 3 + 50 * n ^ 2 - 116 * n + 48) / 48 if n is even; a(n) = (n ^ 6 - 15 * n ^ 4 + 28 * n ^ 3 + 29 * n ^ 2 - 76 * n - 15) / 48 if n is odd. ● a(n) = (n ^ 6 - 15n ^ 4 + 28n ^ 3 + 29n ^ 2 - 76n - 15 - ((n + 1) mod 2) * (8n ^ 3 - 21n ^ 2 + 40n - 63)) / 48. - _ Wesley Ivan Hurt _ , Dec 06 2013 ●

► [A059021] 0,6,40,218,1126,5726,28992,146642,741556,3749816,18961450,95880 894,484833212,2451616864,12396892316,62686360476,316981037374,16028523154 76,8105013367472,40983964057352,207240288658392 ★ Number of 3 X n checker boards (with at least one red square) in which the set of red squares is edge - co nnected. ● a(n) = 9a(n - 1) - 26a(n - 2) + 35a(n - 3) - 22a(n - 4) - 3a(n - 5) + 1 6a(n - 6) - 9a(n - 7) + a(n - 8). - _ David Radcliffe _ , Jan 19 2001 ●

► [A065113] 6,40,238,1392,8118,47320,275806,1607520,9369318,54608392,318281 038,1855077840,10812186006,63018038200,367296043198,2140758220992,1247725 3282758,72722761475560,423859315570606,2470433131948080,1439873947611787 8,83922003724759192 ★ Sum of the squares of the a(n) - th and the (a(n) + 1)st triangular numbers (A000217) is a perfect square. ● a(n) = 6 * a(n - 1) - a(n - 2) + 4. ● a(- 1 - n) = - a(n) - 2. (End) ● a(1)=6, a(2)=40, a(3)=238, a(n) = 7 * a(n - 1) - 7 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Dec 27 2011 ● a(n) = (- 2 - (3 - 2 * sqrt(2)) ^ n * (- 1 + sqrt(2)) + (1 + sqrt(2)) * (3 + 2 * sqrt(2)) ^ n) / 2. - _ Colin Barker _ , Mar 05 2016 ●

► [A052518] 0,0,0,0,6,40,260,1848,14616,128448,1246752,13273920,153996480,19 35048960,26193473280,380120670720,5888620684800,97007636275200,169359074 5190400,31237853849395200,607035345406156800 ★ Number of pairs of cycles of cardinality at least 2. ● a(n) = 2 * (n - 2)! * ((n - 1) * (Psi(n) + gamma) - n), n>2. - _ Vladeta Jovovic _ , Sep 21 2003 ●

► [A135032] 0,1,6,40,264,1744,11520,76096,502656,3320320,21932544,144876544,956989440,6321442816,41756614656,275825459200,1821979213824,12035177119744,79498979573760,525134585921536,3468803433824256 ⋆ a(n) = 6 * a(n - 1) + 4 * a(n - 2). • a(0)=0; a(1)=1; a(n) = 2 * (3 * a(n - 1) + 2 * a(n - 2)). • a(n) = 1 / (2 * sqrt(13)) * ((3 + sqrt(13)) ^ n - (3 - sqrt(13)) ^ n). •

► [A122074] 1,6,40,268,1796,12036,80660,540548,3622516,24276516,162690580,1090281028,7306586036,48965540196,328145609300,2199088184708,14737326074356,98763106151076,661867090908820,4435543424059588,29725069786599476,199204401658077156 ⋆ a(0)=1, a(1)=6, a(n) = 7 * a(n - 1) - 2 * a(n - 2). • a(n) = 8 * a(n - 1) - 9 * a(n - 2) + 2 * a(n - 3); a(0)=1, a(1)=6, a(2)=40 (follows from the minimal polynomial x ^ 3 - 8x ^ 2 + 9x - 2 of M). • a(n) = (1 / 2 + 5 * sqrt(41) / 82) * (7 / 2 + sqrt(41) / 2) ^ n + (1 / 2 - 5 * sqrt(41) / 82) * (7 / 2 - sqrt(41) / 2) ^ n. - _ Antonio Alberto Olivares _ , Jun 06 2011 •

► [A081016] 1,6,40,273,1870,12816,87841,602070,4126648,28284465,193864606,1328767776,9107509825,62423800998,427859097160,2932589879121,20100270056686,137769300517680,944284833567073,6472224534451830 ⋆ a(n) = (Lucas(4 * n + 3) + 1) / 5, or Fibonacci(2 * n + 1) * Fibonacci(2 * n + 2), or A081015(n) / 5. • a(n) = 8 * a(n - 1) - 8 * a(n - 2) + a(n - 3). • a(n) = F(1) + F(5) + F(9) + ... + F(4 * n + 1) = F(2 * n) * F(2 * n + 3) + 1, where F(j) = Fibonacci(j). • a(n) = (1 / 5) + (2 / 5) * (((7 / 2) - (3 / 2) * sqrt(5)) ^ n + ((7 / 2) + (3 / 2) * sqrt(5)) ^ n + (1 / 5) * sqrt(5) * (((7 / 2) + (3 / 2) * sqrt(5)) ^ n - ((7 / 2) - (3 / 2) * sqrt(5)) ^ n). - _ Paolo P. Lava _ , Dec 01 2008 • a(n) = 7 * a(n - 1) - a(n - 2) - 1, n >= 2. - _ R. J. Mathar _ , Nov 07 2015 •

► [A122471] 1,6,40,277,1935,13540,94774,663411,4643869,32507074,227549508,1592846545,11149925803,78049480608,546346364242,3824424549679,26770971847737,187396802934142,1311777620538976,9182443343772813 ⋆ a(n)=7 * a(n - 1) - n for n> 0, a(0)=1. • a(n)=36 * [7 + 6 * n + 29 * 7 ^ n], with n>=0. - _ Paolo P. Lava _ , Oct 01 2008 • a(0)=1, a(1)=6, a(2)=40, a(n)=9 * a(n - 1) - 15 * a(n - 2) + 7 * a(n - 3). - _ Harvey P. Dale _ , Jun 15 2011 •

► [A178397] 0,1,6,40,280,1961,13726,96080,672560,4707921,32955446,230688120,1614816840,11303717881,79126025166,553882176160,3877175233120,27140226631841,189981586422886,1329871104960200,9309097734721400 ⋆ Partial sums of round(7 ^ n / 10). • a(n) = round((7 * 7 ^ n - 7) / 60) = round((7 * 7 ^ n + 5) / 60). • a(n) = floor((7 * 7 ^ n + 17) / 60). • a(n) = ceiling((7 * 7 ^ n - 7) / 60). • a(n) = a(n - 4) + 40 * 7 ^ (n - 3), n > 3. • a(n) = 8 * a(n - 1) - 8 * a(n - 2) + 8 * a(n - 3) - 7 * a(n - 4), n > 3. •

► [A090041] 1,6,40,280,2000,14400,104000,752000,5440000,39360000,284800000,2060800000,14912000000,107904000000,780800000000,5649920000000,40883200000000,295833600000000,2140672000000000,15490048000000000 ⋆ a(n) = 10 * a(n - 1) - 20 * a(n - 2), a(0)=1, a(1)=6. • a(n) = ((1 + sqrt(5)) * (5 + sqrt(5)) ^ n - (1 - sqrt(5)) * (5 - sqrt(5)) ^ n) / (2 * sqrt(5)). •

► [A069720] 1,6,40,280,2016,14784,109824,823680,6223360,47297536,361181184,2769055744,21300428800,164317593600,1270722723840,9848101109760,76467608616960,594748067020800,4632774416793600,36135640450990080,282202144474398720,2206307674981662720,17266755717247795200 ⋆ a(n) = 2 ^ (n - 1) * binomial(2n - 1, n). • a(n) = 2 ^ (n - 2) * binomial(2n, n). •

► [A081337] 1,6,40,288,2176,16896,133120,1056768,8421376,67239936,537395200,4297064448,34368126976,274911461376,2199157473280,17592722915328,140739635838976,1125908496777216,9007233614479360,72057731476881408 ⋆ a(n) = (8 ^ n + 4 ^ n) / 2. • a(n) = 12 * a(n - 1) - 32 * a(n - 2), a(0)=1, a(1)=6. •

► [A366199] 1,6,40,292,2308,19580,177044,1696572,17148916,182114972,2024979604,23506175868,284125820724,3567957972316,46454893734612,625979771144764,8715626185644916,125200337417147932,1853095248414187796,28225529312569364732,441925530173009732532 ⋆ Expansion of e.g.f. exp(4 * (exp(x) - 1) + 2 * x). • a(n) = exp(- 4) * Sum _{ k>=0 } 4 ^ k * (k + 2) ^ n / k!. • a(0) = 1; a(n) = 2 * a(n - 1) + 4 * Sum _{ k=1..n } binomial(n - 1,k - 1) * a(n - k). •

► [A358598] 1,6,40,300,2356,18756,149860,1198500,9587236,76696356,613567680,4908536100,39268276516,314146187556,2513169451300,20105355512100,160842843900196,1286742750808356,10293942005680420,82351536043870500,658812288347818276,5270498306776254756 ⋆ Number of genetic relatives of a person M in a genealogical tree extending back n generations and where everyone has 4 children down to the generation of M. • a(n) = 2 ^ n + 4 * (8 ^ n - 1) / 7. • a(n) = 11 * a(n - 1) - 26 * a(n - 2) + 16 * a(n - 3) for n > 2. (End) •

► [A257602] 1,6,41,156,426,951,1856,3291,5431,8476,12651,18206,25416,34581,46026,60101,77181,97666,121981,150576,183926,222531,266916,317631,375251 ⋆ Expansion of (1 + x + 21 * x ^ 2 + x ^ 3 + x ^ 4) / (1 - x) ^ 5. • a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Vincenzo Librandi _ , Jun 08 2015 •

► [A198795] 6,41,251,1511,9071,54431,326591,1959551,11757311,70543871,423263231,2539579391,15237476351,91424858111,548549148671,3291294892031,19747769352191,118486616113151,710919696678911,4265518180073471,25593109080440831 ⋆ 7 * 6 ^ n - 1. • a(n) = 6 * a(n - 1) + 5. a(n) = 7 * a(n - 1) - 6 * a(n - 2), n>1. •

► [A320090] 1,6,41,251,1546,9281,55936,335656,2015236,12091631,72557806,435346876,2612129211,15672776566,94036939331,564221643971,3385331551426,20311989308806,121871945977221,731231675909811,4387390115926096,26324340695837771,157946044538104906 ⋆ Number of primitive (=aperiodic) 6 - ary words with length less than or equal to n which are earlier in lexicographic order than any other word derived by cyclic shifts of the alphabet. • a(n) = Sum _{ j=1..n } Sum _{ d|j } 6 ^ (d - 1) * mu(j / d). •

► [A252980] 6,41,266,1247,4657,67537,433401,1481460,3510600,6637020,10878576,16235268,22707096,30294060,38996160,48813396,59745768,71793276,84955920,99233700,114626616,131134668,148757856,167496180,187349640 ⋆ Number of n X 5 nonnegative integer arrays with upper left 0 and lower right its king - move distance away minus 2 and every value increasing by 0 or 1 with every step right, diagonally se or down. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n >11. •

► [A015551] 0,1,6,41,276,1861,12546,84581,570216,3844201,25916286,174718721,1177893756,7940956141,53535205626,360916014461,2433172114896,16403612761681,110587537144566,745543286675801,5026197405777636 ⋆ Expansion of x / (1 - 6 * x - 5 * x ^ 2). • a(n) = 6 * a(n - 1) + 5 * a(n - 2). • a(n) = sqrt(14) * (3 + sqrt(14)) ^ n / 28 - sqrt(14) * (3 - sqrt(14)) ^ n / 28. - _ Paul Barry _ , Feb 13 2004 •

► [A291018] 6,41,280,1912,13056,89152,608768,4156928,28385280,193826816,1323532288,9037643776,61712891904,421401985024,2877512744960,19648886079488,134170986676224,916176804773888,6256046544781312,42718957920059392,291703291002224640 ⋆ p - INVERT of (1,1,1,1,1,...), where p(S) = 1 - 6 S + S ^ 2. • a(n) = 8 * a(n - 1) - 8 * a(n - 2) n >= 3. •

► [A049685] 1,6,41,281,1926,13201,90481,620166,4250681,29134601,199691526,1368706081,9381251041,64300051206,440719107401,3020733700601,20704416796806,141910183877041,972666870342481 ⋆ a(n) = L(4 * n + 2) / 3, where L=A000032 (the Lucas sequence). • a(n + 2) = 7a(n + 1) - a(n). • a(n) * a(n + 3) = 35 + a(n + 1) * a(n + 2). (End) • a(n) = Sum _{ k=0..n } binomial(n + k, 2k) * 5 ^ k. - _ Paul Barry _ , Aug 30 2004 • a(n) = (- 1) ^ n * U(2n, i * sqrt(5) / 2), U(n, x) Chebyshev polynomial of second kind, i=sqrt(- 1). - _ Paul Barry _ , Mar 13 2005 •

► [A370176] 1,6,41,281,1931,13271,91211,626891,4308611,29613011,203529731,1398856451,9614317091,66079041251,454160150051,3121435147811,21453571787171,147450041609891,1013421680382371,6965230331953571,47871912074015651,329022854435815331,2261368599058985891 ⋆ a(n) = floor(x * a(n - 1)) for n > 0 where x = 3 + sqrt(15), a(0) = 1. • a(n) = 7 * a(n - 1) - 6 * a(n - 3), a(0) = 1, a(1) = 6, a(2) = 41. • a(n) = 6 * a(n - 1) + 6 * a(n - 2) - 1. • a(n) = ((30 - 7 * sqrt(15)) * (3 - sqrt(15)) ^ n + (30 + 7 * sqrt(15)) * (3 + sqrt(15)) ^ n + 6) / 66. •

► [A083067] 1,6,41,286,2001,14006,98041,686286,4804001,33628006,235396041,1647772286,11534406001,80740842006,565185894041,3956301258286,27694108808001,193858761656006,1357011331592041,9499079321144286 ⋆ 6th row of number array A083064. • a(n) = (5 * 7 ^ n + 1) / 6. • a(n) = 7 * a(n - 1) - 1 with a(0)=1. - _ Vincenzo Librandi _ , Aug 08 2010 • a(n) = 8 * a(n - 1) - 7 * a(n - 2). - _ Vincenzo Librandi _ , Nov 06 2011 • a(n) = 7 ^ n - sum(7 ^ i, i=0..n - 1) for n>0. [_ Bruno Berselli _ , Jun 20 2013] •

► [A152107] 1,6,41,306,2401,19326,157481,1290666,10606081,87262326,718359401,5915180706,48713027041,401185722606,3304124833001,27212740595226,224125017319681,1845905249384166,15202987455699881,125212786737489426 ⋆ a(n) = ((6 + sqrt(5)) ^ n + (6 - sqrt(5)) ^ n) / 2. • a(n) = 12 * a(n - 1) - 31 * a(n - 2), n>1 ; a(0)=1, a(1)=6 . •

► [A143023] 1,6,41,306,2422,19980,169941,1479786,13127114,118217268,1077955034,9932655348,92342765868,865126386072,8159523358029,77411610053658,738263424935170,7073522484902820,68056887469098990,657269559836605980 ⋆ Sum of the root degrees over all non - crossing connected graphs on n nodes on a circle (by root we mean a distinguished node). • a(n) = (L(n - 2, 3n - 2, n + 1) + L(n - 3, 3n - 3, n)) / (n - 1) where L(p,q,r)=[u ^ p](1 + u) ^ q / (1 - u) ^ r = Sum _{ i=0..min(p,q) } binomial(q,i) * binomial(r + p - 1 - i, r - 1). •

► [A078009] 1,1,6,41,306,2426,20076,171481,1500666,13386206,121267476,1112674026,10318939956,96572168916,910896992856,8650566601401,82644968321226,793753763514806,7659535707782916,74225795172589006,722042370787826076 ⋆ a(0)=1, for n>=1 a(n) = Sum _{ k=0..n } 5 ^ k * N(n,k) where N(n,k) = C(n,k) * C(n,k + 1) / n are the Narayana numbers (A001263). • a(n + 1) = Sum _{ k=0..floor(n / 2) } C(n, 2 * k) * C(k) * 6 ^ (n - 2k) * 5 ^ k; - _ Paul Barry _ , May 19 2005 • a(n) = (6 * (2 * n - 1) * a(n - 1) - 16 * (n - 2) * a(n - 2)) / (n + 1) for n >= 2, a(0) = a(1) = 1. - _ Philippe Deléham _ , Aug 19 2005 • a(n) = upper left term in M ^ n, M = the production matrix: • a(n) = hypergeom([1 - n, - n], [2], 5). - _ Peter Luschny _ , Mar 19 2018 •

► [A024078] 1,6,41,316,2337,16682,117433,823200,5764289,40352878,282474249,1977325412,13841285473,96889008210,678223070105,4747561506568,33232930565505,232630513982294,1628413597904617,11398895185366284,79792266297604001,558545864083274746 ⋆ a(n) = 7 ^ n - n ^ 3. • a(n) = 11 * a(n - 1) - 34 * a(n - 2) + 46 * a(n - 3) - 29 * a(n - 4) + 7 * a(n - 5) for n>4. •

► [A095177] 1,6,41,316,2721,25946,271801,3105936,38474561,513796366,7360674441,112632827396,1833790646881,31656637715106,577636838177561,11109543835539736,224635867973671041,4764236394052127126 ⋆ E.g.f.: exp(x) / (1 - x) ^ 5. • a(n) = Sum _{ k=0..n } binomial(n, k) * (k + 4)! / 4!. • a(n) = 2F0(5, - n; ; - 1). - _ Benedict W. J. Irwin _ , May 27 2016 •

► [A199553] 6,41,321,2561,20481,163841,1310721,10485761,83886081,671088641,5368709121,42949672961,343597383681,2748779069441,21990232555521,175921860444161,1407374883553281,11258999068426241,90071992547409921 ⋆ 5 * 8 ^ n + 1. • a(n) = 8 * a(n - 1) - 7. • a(n) = 9 * a(n - 1) - 8 * a(n - 2). •

► [A005011] 1,1,6,41,331,3176,35451,447981,6282416,96546231,1611270851,28985293526,558413253581,11458179765541,249255304141006,5725640423174901,138407987170952351,3510263847256823056 ⋆ Shifts one place left under 5th - order binomial transform. • a(n) = Sum _{ m=0..n } 5 ^ (n - m) * Stirling2(n, m), n >= 0. • a(n) = upper left term in M ^ n, M = an infinite square production matrix in which a diagonal of (5,5,5,...) is appended to the right of Pascal's triangle: •

► [A097253] 0,6,42,48,294,300,336,342,2058,2064,2100,2106,2352,2358,2394,2400,14406,14412,14448,14454,14700,14706,14742,14748,16464 ⋆ Numbers whose set of base 7 digits is { 0,6 } . • a(2n) = 7 * a(n), a(2n + 1) = a(2n) + 6. •

► [A083938] 0,1,6,42,52,385,414,477,506,555,4089,4180,4388,4479,4645,5095,5186,5394,5485,5651,5969,6060,6226,6502,47363 ⋆ A014486 - indices of binary trees whose left and right subtree are identical. • a(0)=0, a(n)=A072764bi(n - 1, n - 1). •

► [A211616] 0,6,42,102,192,312,462,642,852,1092,1362,1662,1992,2352,2742,3162,3612,4092,4602,5142,5712,6312,6942,7602,8292 ⋆ Number of ordered triples (w,x,y) with all terms in {- n,... - 1,1,...,n } and - 2<=w + x + y<=2. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>4. • a(n) = 3 * (4 - 5 * n + 5 * n ^ 2) for n>1. •

► [A153786] 0,6,42,108,204,330,486,672,888,1134,1410,1716,2052,2418,2814,3240,3696,4182,4698,5244,5820,6426,7062,7728,8424 ⋆ 6 times heptagonal numbers: a(n) = 3 * n * (5 * n - 3). • a(n) = 30 * n + a(n - 1) - 24 for n>0, a(0)=0. - _

Vincenzo Librandi _ , Aug 03 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A256833] 6,42,110,210,342,506,702,930,1190,1482,1806,2162,2550,2970,3422,3906,4422,4970,5550,6162,6806,7482,8190,8930,9702 ⋆ a(n) = (4 * n + 3) * (4 * n + 2). ● a(n) = 16 * n ^ 2 + 20 * n + 6. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>2. - _ Vincenzo Librandi _ , Apr 12 2015 ●

► [A164016] 6,42,114,222,366,546,762,1014,1302,1626,1986,2382,2814,3282,3786,4326,4902,5514,6162,6846,7566,8322,9114,9942,10806 ⋆ 6 times centered hexag onal numbers: 18 * n * (n + 1) + 6. ● a(n) = a(n - 1) + 36 * n (with a(0)=6). - _ Vincenzo Librandi _ , Nov 30 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) with a(0)=6, a(1)=42, a(2)=114. - _ Harvey P. Dale _ , Dec 16 2012 ●

► [A169938] 0,0,6,42,156,420,930,1806,3192,5256,8190,12210,17556,24492,33306,44310,57840,74256,93942,117306,144780,176820,213906,256542,305256 ⋆ a(n) = n * (n + 1) * (n * (n + 1) + 1). ● a(n + 1) = a(n) + 2 * (n + 1) * (2 * (n + 1) ^ 2 + 1). - _ Robert Munafo _ , Jul 27 2010 ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Wesley Ivan Hurt _ , Jan 25 2 022 ●

► [A082986] 6,42,156,420,930,1806,3192,5256,8190,12210,17556,24492,33306,44310,57840,74256,93942,117306,144780,176820,213906,256542,305256,360600,42315 0 ⋆ Largest x such that 1 / x + 1 / y + 1 / z = 1 / n. ● a(n) >= n ^ 4 + 2n ^ 3 + 2n ^ 2 + n (cf. A169938). - _ Charles R Greathouse IV _ , Oct 17 2012. [Note this is at present only a lower bound! - _ N. J. A. Sloane _ , Jan 27 2014] ● a(n) < 3 * n ^ 4 for n>=2 (upper bound). - _ Carmine Suriano _ , Feb 20 2 014 ●

► [A062136] 1,6,42,182,693,2184,6216,15912,37854,83980,176484,352716,676270,1248072,2229096,3863080,6519591,10737090,17299646,27313650,42337659,64512240,96770544,143048880,208616044 ⋆ Twelfth column of Losanitsch's triangle A034851 (formatted as lower triangular matrix). ● a(n) = (1 / (2 * 11!)) * (n + 1) * (n + 2) * (n + 3) * (n + 4) * (n + 5) * (n + 6) * (n + 7) * (n + 8) * (n + 9) * (n + 10) * (n + 11) + (1 / 15) * (1 / 2 ^ 9) * (n + 2) * (n + 4) * (n + 6) * (n + 8) * (n + 10) * (1 / 2) * (1 + (- 1) ^ n). - _ Yosu Yurramendi _ , Jun 24 2013 ●

► [A047663] 6,42,188,644,1826,4494,9912,20040,37758,67122,113652,184652,289562,440342,651888,942480,1334262,1853754,2532396,3407124,4520978,5923742,7672616,9832920,12478830 ⋆ Row 6 of square array defined in A047662. ● a(n) = (n / 45) * (2n ^ 5 + 6n ^ 4 + 35n ^ 3 + 60n ^ 2 + 98n + 69). ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n > 7. ●

► [A082139] 1,6,42,224,1008,4032,14784,50688,164736,512512,1537536,4472832,12673024,35094528,95256576,254017536,666796032,1725825024,4410441728,11142168576,27855421440,68975329280,169303080960,412216197120 ⋆ A transform of binomial(n,5). ● a(n) = (2 ^ (n - 1) + 0 ^ n / 2) * C(n + 5, n). ● a(n) = Sum _{ j=0..n } C(n + 5, j + 5) * C(j + 5, 5) * (1 + (- 1) ^ j) / 2. ● a(n) = ceiling (binomial(n + 5,5) * 2 ^ (n - 1)). - _ Zerinvary Lajos _ , Nov 01 2006 ●

► [A054613] 0,6,42,228,1344,7800,46956,279972,1681008,10078164,60474120,362797116,2176832112,13060694088,78364444284,470185001040,2821111589856,16926659444832,101559966840108,609359740010604,3656158500550080 ⋆ a(n) = Sum _{ d|n } phi(d) * 6 ^ (n / d). ● a(n) = Sum _{ k=1..n } 6 ^ gcd(n,k). - _ Ilya Gutkovskiy _ , Apr 16 2021 ●

► [A229473] 1,6,42,248,1312,6528,31232,145408,663552,2981888,13238272,58195968,253755392,1098907648,4731174912,20266876928,86436216832,367219703808,1554778161152,6562710028288,27625229647872,115998476730368 ⋆ Number of defective 4 - colorings of an n X 2 0..3 array connected horizontally, antidiagona lly and vertically with exactly one mistake, and colors introduced in row - majo r 0..3 order. ● a(n) = 2 ^ (2 * n - 5) * (10 * n - 9) for n>2. ●

► [A141834] 6,42,252,1620,11730,95886,876792,8877672,98640990,1193556210,15624736116,220048367292,3317652307242,53319412081110,909984632851440,16436597430879696,313262209859119542,6282647653285675962 ⋆ Sum of the lengths of the cycles at a vertex of the complete graph K _ n. ● a(n) = floor(n! * e) - f loor((n - 1)! * e) - 2 * n + 1 [Hassani]. a(n) = 2 - 2 * n + (n - 1) * (n - 1)! * su m { k = 0..n - 1 } 1 / k!. E.g.f.: sum { n = 0..inf } a(n + 3) * x ^ n / n! = (6 + 12 * x - 21 * x ^ 2 + 8 * x ^ 3 + 3 * x ^ 4 - 2 * x ^ 5) * exp(x) / (1 - x) ^ 4 = 6 + 42 * x + 252 * x ^ 2 / 2! + ... ●

► [A180355] 0,6,42,258,1044,3150,7806,16842,32808,59094,100050,161106,248892,371358,537894,759450,1048656,1419942,1889658,2476194,3200100,4084206,5153742,6436458,7962744 ⋆ a(n) = n ^ 5 + 5n. ● a(n) = + 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). (End) ●

► [A105281] 0,6,42,258,1554,9330,55986,335922,2015538,12093234,72559410,435356466,2612138802,15672832818,94036996914,564221981490,3385331888946,20311991333682,121871948002098,731231688012594,4387390128075570,26324340768453426,157946044610720562 ⋆ a(0)=0; a(n)=6 * a(n - 1) + 6. ● a(n) = 6 ^ n + a (n - 1) (with a(0)=0). - _ Vincenzo Librandi _ , Nov 13 2010 ● a(n) = 7 * a(n - 1) - 6 * a(n - 2). G.f.: 6 * x / ((x - 1) * (6 * x - 1)). - _ Colin Barker _ , Jan 28 2013 ●

► [A158797] 1,6,42,258,1770,11058,74778,472866,3164874,20188050,134123514,860893314,5689339818,36681499122,241497732570,1562031700962,10255950073482,66489091308114,435703293953466,2829310581045570 ⋆ a(n) = a(n - 1) + 36 * a(n - 2), a(0)=1, a(1)=6. ● a(n) = (1 / 2) * (((1 - sqrt(145)) / 2) ^ n + ((1 + sqrt(145)) / 2) ^ n) + (11 / 290) * sqrt(145) * (((1 + sqrt(145)) / 2) ^ n - ((1 - sqrt(145)) / 2) ^ n), with n>=0 - _ Paolo P. Lava _ , Mar 30 2009 ● a(n) = (6 * i) ^ n * (ChebyshevU(n, - i / 12) - (5 * i / 6) * ChebyshevU(n - 1, - i / 12)). - _ G. C. Greubel _ , Dec 22 2021 ●

► [A105482] 1,6,42,280,1890,13104,93786,694584,5328180,42336294,348272925,2963993760,26073738236,236857536216,2219777316216,21441389281680,213260412549303,2182163481418536,22951202450444191,247914874683742728 ⋆ Number of partitions of { 1...n } containing 5 pairs of consecutive integers, where each p air is counted within a block and a string of more than 2 consecutive integers ar e counted two at a time. ● a(n) = binomial(n - 1, 5) * Bell(n - 6), the case r = 5 in the general case of r pairs: c(n, r) = binomial(n - 1, r) * B(n - r - 1). ●

► [A157335] 1,6,42,287,1968,13488,92449,633654,4343130,29768255,204034656,1398474336,9585285697,65698525542,450304393098,3086432226143,21154721189904,144996616103184,993821591532385,6811754524623510,46688460080832186,320007466041201791 ⋆ Expansion of 1 / ((1 + x) * (1 - 7 * x + x ^ 2)). ● a(n) = Sum _{ k=0..floor(n / 2) } (- 1) ^ (n - k) * U(k,7 / 2) where U(n,x) is the n - th - Chebyshev polynomial of the second kind; ● a(n) = 7 * a(n - 1) - a(n - 2) + (- 1) ^ n, n > 1. - _ Vincenzo Librandi _ , Mar 13 2011 ● a(n)= ((- 1) ^ (n + 1) / 3) * Sum _{ k=0..n + 1 } (- 1) ^ k * Fibonacci(4 * k). - _ Gary Detlefs _ , Jan 21 2013 ● a(n) = 6 * a(n - 1) + 6 * a(n - 2) - a(n - 3), with a(0)=1, a(1) =6, a(2)=42. - _ Harvey P. Dale _ , Oct 25 2014 ● a(n) = (2 ^ (- n) * (5 * (- 2) ^ n + (20 - 9 * sqrt(5)) * (7 - 3 * sqrt(5)) ^ n + (7 + 3 * sqrt(5)) ^ n * (20 + 9 * sqrt(5)))) / 45. - _ Colin Barker _ , Mar 05 2016 ●

► [A057089] 1,6,42,288,1980,13608,93528,642816,4418064,30365280,208700064,1434392064,9858552768,67757668992,465697330560,3200729997312,21998563967232,151195763787264,1039165966526976,7142170381885440 ⋆ Scaled Chebyshev U - polynomials evaluated at i * sqrt(6) / 2. Generalized Fibonacci sequence. ● a(n) = 6 * a(n - 1) + 6 * a(n - 2); a(0)=1, a(1)=6. ● a(n) = S(n, i * sqrt(6)) * (- i * sqrt(6)) ^ n with S(n, x) := U(n, x / 2), Chebyshev's polynomials of the 2n d kind, A049310. ● a(n) = - (1 / 30) * sqrt(15) * (3 - sqrt(15)) ^ (n + 1) + (1 / 30) * sqrt(15) * (3 + sqrt(15)) ^ (n + 1), with n>=0. - _ Paolo P. Lava _ , No v 20 2008 ●

► [A110711] 0,6,42,288,1992,13980,99432,715344,5196336,38056284,280658100,2082218160,15528409920,116331315360,874985339760,6604555554720,50010373864416,379760762209692,2891169309592548,22062102167330592 ⋆ Number of linea r arrangements of n blue, n red and n green items such that first and last eleme nts have the same color but there are no adjacent items of the same color. ● a(n) = 6 * Sum _{ k=0..floor(n / 2) } binomial(n - 1, k) * (binomial(n - 1, k) * binomial(2n - 1 - 2k, n + 1) + binomial(n - 1, k + 1) * binomial(2n - 2k - 2, n + 1)). ●

► [A055272] 1,6,42,294,2058,14406,100842,705894,4941258,34588806,242121642,1694851494,11863960458,83047723206,581334062442,4069338437094,28485369059658,199397583417606,1395783083923242,9770481587462694 ⋆ First differences o f 7 ^ n (A000420). ● a(n) = 6 * 7 ^ (n - 1), a(0)=1. ●

► [A155196] 1,6,42,300,2142,15294,109200,779694,5567058,39749100,283810758,2026424406,14468781600,103307895606,737624050842,5266676251500,37604357811342,268497180930894,1917084624327600,13688089551224094 ⋆ a(n)=7 * a(n - 1) + a(n - 2), n>2 ; a(0)=1, a(1)=6, a(2)=42 . ● a(n)=3 *{ [(7 / 2) + (1 / 2) * s qrt(53)] ^ (n - 1) + [(7 / 2) - (1 / 2) * sqrt(53)] ^ (n - 1) }+ (21 / 53) * sqrt(53) *{ [(7 / 2) + (1 / 2) * sqrt(53)] ^ (n - 1) - [(7 / 2) - (1 / 2) * sqrt(53)] ^ (n - 1) }+ [C(2 * n,n) mod 2], with n>=0 [From _ Paolo P. Lava _ , Jan 26 2009] ●

► [A147838] 1,6,42,300,2148,15384,110184,789168,5652240,40482912,289949856,2076701376,14873911872,106531086720,763005222528,5464855259904,39140810744064,280337354393088,2007853970680320,14380807639084032 ⋆ a(n)=8 * a(n - 1) - 6 * a(n - 2), a(0)=1, a(1)=6 . ● a(n)=(1 / 2) * [4 - sqrt(10)] ^ n + (1 / 2) * [4 + sqrt(10)] ^ n + (1 / 10) * [4 + sqrt(10)] ^ n * sqrt(10) - (1 / 10) * [4 - sqrt(10)] ^ n * sqrt(10), with n>=0 [From _ Paolo P. Lava _ , Nov 18 2008] ● a(n) = ((5 + sqrt(10)) / 10) * (4 + sqrt(10)) ^ n + ((5 - sqrt(10)) / 10) * (4 - sqrt(1 0)) ^ n [From _ Richard Choulet _ , Nov 20 2008] ●

► [A127628] 1,6,42,300,2154,15492,111492,802584,5778090,41600532,299517996,2156509416,15526797252,111792690600,804906480840,5795323452720,41726317225770,300429441596340,2163091823919900,15574260559056840,112134673904493420,807369644235408120 ⋆ G.f. 1 / (1 - 6 * x * c(x)) where c(x) is the g.f. of A00 0108. ● a(n) = 1 if n=0, Sum _{ k=1..n } C(2n - k - 1,n - k) * k * 6 ^ k / n) ot herwise; ● a(n) = Sum _{ k=0..n } C(2n,n - k) * (2k + 1) * 5 ^ k / (n + k + 1). ●

► [A111602] 1,6,42,300,2475,22050,220500,2381400,28279125,360186750,4970577150,73045872900,1150472498175,19174541636250,339663308985000,6333077180430000,124682456989715625,2572020969902133750 ⋆ Third column (m=2) of unsi gned triangle A111595. ● a(n) = (n! / 2!) * Sum _{ k=0..floor((n - 2) / 2) } bi nomial(2 * k, k) * (n - 2 * k - 1) / (4 ^ k), n >= 2. ●

► [A299916] 1,6,42,306,2250,16578,122202,900882,6641514,48963042,360969210,2661166386,19618866954,144635805954,1066295850138,7861032979794,57953746616490,427251323790882,3149816954720058,23221336706989938,171194226906268746,1262092001672539458 ⋆ a(n) = A299914(2n + 1). ● a(n) = 2 ^ (- 1 - n) * ((9 - sqrt(33)) ^ n * (- 3 + sqrt(33)) + (3 + sqrt(33)) * (9 + sqrt(33)) ^ n) / sq rt(33). ● a(n) = 9 * a(n - 1) - 12 * a(n - 2) for n>1. ●

► [A004982] 1,6,42,308,2310,17556,134596,1038312,8046918,62587140,488179692,3816677592,29897307804,234578876616,1843119744840,14499208659408,114181268192838,900017055167076,7100134546318044,56053693786721400,442824180915099060,3500419715805068760,27685137752276452920 ⋆ a(n) = (2 ^ n / n!) * P roduct _{ k=0..n - 1 } (4 * k + 3). ● a(n) = 8 ^ n * Gamma(n + 3 / 4) / (n! * Gamma(3 / 4)). - _ Vaclav Kotesovec _ , Sep 15 2013 ● a(n) = (- 8) ^ n * bin omial(- 3 / 4,n). ●

► [A093388] 1,6,42,312,2394,18756,149136,1199232,9729882,79527084,654089292,5408896752,44941609584,375002110944,3141107339328,26402533581312,222635989516122,1882882811380284,15967419789558804,135752058036988848,1156869080242393644 ⋆ (n + 1) ^ 2 * a(n + 1) = (17n ^ 2 + 17n + 6) * a(n) - 72 * n ^ 2 * a(n - 1). ● a(n) = (- 1) ^ n * Sum _{ k=0..n } binomial(n, k) * (- 8) ^ k * S um _{ j=0..n - k } binomial(n - k, j) ^ 3. - Helena Verrill (verrill(AT)math.lsu. edu), Aug 09 2004 ●

► [A162968] 1,6,42,312,2520,22320,216720,2298240,26490240,330220800,4430764800,63707212800,977642265600,15953627289600,275919291648000,5042392363008000,97102667870208000,1965528727658496000 ⋆ Number of pairs of consecutiv e non - fixed points in all permutations of { 1,2,...,n } . ● a(n) = (n - 1)! * (n ^ 2 - 3 * n + 3) (n>=2). ●

► [A153293] 1,1,6,42,317,2508,20517,172180,1474689,12843768,113444721,1014062898,9158151426,83449247979,766340138037,7085966319858,65919413472834,616559331247512,5794778945023698,54700034442193302,518375457403431600 ⋆ G. f.: A(x) = F(x * F(x) ^ 3) = F(F(x) - 1) where F(x) = 1 + x * F(x) ^ 3 is the g .f. of A001764. ● a(n) = Sum _{ k=0..n } C(3k + 1,k) / (3k + 1) * C(3n,n - k)

* k / n for n>0 with a(0)=1. • a(n) = sqrt(3) * Gamma(n + 2 / 3) * Gamma(n + 1 / 3) * hypergeom([4 / 3, 5 / 3, - n + 1], [5 / 2, 2 * n + 2], - 27 / 4) * 27 ^ n / (2 * Pi * (n + 1)!) for n >= 1. - _ Robert Israel _ , Dec 26 2017 •

► [A145301] 1,6,42,324,2628,21816,182952,1540944,13002768,109804896,927575712,7836761664,66213868608,559463573376,4727146822272,39941854665984,337487851323648,2851598575904256,24094547371141632,203586611176571904,1720202912984613888 ⋆ a(n) = 12 * a(n - 1) - 30 * a(n - 2) with a(0)=1 and a(1)=6. • a(n) = ((6 + sqrt(6)) ^ n + (6 - sqrt(6)) ^ n) / 2. •

► [A107266] 1,6,42,324,2664,22896,203256,1849392,17156448,161663040,1543053888,14887836288,144963737856,1422685140480,14058304458624,139754913276672,1396721001457152,14025182471414784,141432971217841152,1431708373864249344,14543342842406252544,148198801896234491904 ⋆ Expansion of (1 - 6 * x - sqrt((1 - 6 * x) ^ 2 - 4 * 6 * x ^ 2)) / (2 * 6 * x ^ 2). • a(n) = Sum _{ k=0..n } 1 / (k + 1) * C(k + 1,n - k + 1) * C(n,k) * 6 ^ k. •

► [A364437] 1,1,6,42,326,2712,23676,214068,1987488,18838464,181548960,1773566208,17523740592,174814263088,1758342057504,17812729393248,181581358338528,1861259423846400,19172185074938112,198354225907274496,2060279149742042112 ⋆ G.f. satisfies A(x) = 1 - x * (1 - 2 * A(x) ^ 3). • a(n) = (- 1) ^ n * Sum _{ k=0..n } (- 2) ^ k * binomial(n,k) * binomial(3 * k + 1,n) / (3 * k + 1). •

► [A165314] 1,6,42,330,2778,24234,215034,1923018,17258010,155125482,1395342906,12554940426,112981880922,1016786596650,9150878043258,82357097082954,741210652521114,6670882987788138,60037895350485690,540340851995941002 ⋆ a(0)=1, a(1)=6, a(n)=13 * a(n - 1) - 36 * a(n - 2) for n>1. • a(n) = (2 * 9 ^ n + 3 * 4 ^ n) / 5. [From _ Klaus Brockhaus _ , Sep 26 2009] •

► [A082302] 1,6,42,330,2814,25422,239442,2326434,23151030,234784662,2417832186,25216231866,265796560302,2827138163550,30306009654690,327081253546770,3551148743559270,38758882760119590,425024567305557450 ⋆ Expansion of g.f.: (1 - 5 * x - sqrt(25 * x ^ 2 - 14 * x + 1)) / (2 * x). • a(0)=1; for n > 0, a(n) = (1 / n) * Sum _{ k=0..n } 6 ^ k * C(n, k) * C(n, k - 1). • a(n) = 6 * hypergeom([1 - n, - n], [2], 6) for n > 0. - _ Peter Luschny _ , May 22 2017 •

► [A132804] 0,6,42,342,2730,21846,174762,1398102,11184810,89478486,715827882,5726623062,45812984490,366503875926,2932031007402,23456248059222,187649984473770,1501199875790166,12009599006321322,96076792050570582,768614336404564650 ⋆ A trisection of A024495. • a(n) = - (2 / 3) * (- 1) ^ n + (2 / 3) * 8 ^ n. - _ Paolo P. Lava _ , Jul 08 2008 • a(n) = Sum _{ k=0..n } binomial(3 * n + 1,3 * k + 2). (End) •

► [A156676] 6,43,242,603,1126,1811,2658,3667,4838,6171,7666,9323,11142,13123,15266,17571,20038,22667,25458,28411,31526,34803,38242,41843,45606 ⋆ a(n) = 81 * n ^ 2 - 44 * n + 6. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). •

► [A099322] 0,1,6,43,291,1992,13595,92845,633966,4329023,29560367,201850896,1378323999,9411785201,64267689006,438847231427,2996636337771,20462312853336,139725412120339,954104794142789,6515035056168654 ⋆ An inverse Catalan transform of J(3n) / J(3). • a(n) = 7a(n - 1) + a(n - 2) - 16a(n - 3) + 8a(n - 4); • a(n) = Sum _{ k=0..floor(n / 2) } binomial(n - k, k) * (- 1) ^ k * J(3n - 3k) / J(3). •

► [A015552] 0,1,6,43,300,2101,14706,102943,720600,5044201,35309406,247165843,1730160900,12111126301,84777884106,593445188743,4154116321200,29078814248401,203551699738806,1424861898171643,9974033287201500 ⋆ a(n) = 6 * a(n - 1) + 7 * a(n - 2), a(0) = 0, a(1) = 1. • a(n) = 6 * a(n - 1) + 7 * a(n - 2). • a(n) = 7 ^ (n - 1) - a(n - 1). (End) • a(n) = (7 ^ n - (- 1) ^ n) / 8. - _ Rolf Pleisch _ , Jul 06 2009 • a(n) = round(7 ^ n / 8). - _ Mircea Merca _ , Dec 28 2010 •

► [A098665] 1,6,43,332,2661,21810,181455,1526040,12939145,110413406,947052723,8157680228,70518067309,611426078346,5315138311383,46308989294640,404274406256145,3535479068797110,30966952059306555,271616893912241532,2385412594943633781,20973327081776664546 ⋆ a(n) = Sum _{ k = 0..n } binomial(n,k) * binomial(n + 1,k + 1) * 4 ^ k. • a(n) = (1 / 4) * Sum _{ k = 0..n } binomial(n,k) * binomial(2 * n - k - 1,n - k) * 3 ^ k. • a(n) = (1 / 4) * [x ^ n] ((1 + 3 * x) / (1 - x)) ^ n. •

► [A153397] 1,1,6,43,334,2717,22776,195000,1695874,14927990,132673398,1188412986,10714602196,97133633788,884716464592,8091061578807,74259516900390,683694381314696,6312247839166260,58424001667319720,541971167468786770 ⋆ G.f.: A(x) = F(x * G(x) ^ 4) = F(G(x) - 1) where F(x) = G(x / F(x) ^ 2) = 1 + x * F(x) ^ 2 is the g.f. of A000108 (Catalan) and G(x) = F(x * G(x) ^ 2) = 1 + x * G(x) ^ 4 is the g.f. of A002293. • a(n) = Sum _{ k=0..n } C(2k + 1,k) / (2k + 1) * C(4n,n - k) * k / n for n>0 with a(0)=1. •

► [A146966] 1,6,43,342,2857,24366,209539,1807854,15617617,134983638,1166892763,10088187654,87218361721,754062898686,6519422294323,56365243469982,487319675104417,4213244040623526,36426657909454219,314935817735368374 ⋆ a(n) = ((6 + sqrt(7)) ^ n + (6 - sqrt(7)) ^ n) / 2. • a(n) = 12 * a(n - 1) - 29 * a(n - 2), a(0)=1, a(1)=6. - _ Philippe Deléham _ , Nov 05 2008 •

► [A220097] 1,1,6,43,352,3114,29004,280221,2782476,28221784,291138856,3045298326,32222872906,344293297768,3709496350512,40256666304723,439645950112788,4828214610825948,53286643424088024,590705976259292856,6574347641664629388,7343397372458186608 ⋆ Number of words on { 1,1,2,2,3,3,...,n,n } avoiding the pattern 123. • a(n) = Sum _{ k=0..n } (- 1) ^ (n + k) * binomial(n,k) * Catalan(n + k). - _ Peter Luschny _ , Aug 15 2017 •

► [A000561] 6,44,145,336,644,1096,1719,2540,3586,4884,6461,8344,10560,13136,16099,19476,23294,27580,32361,37664,43516,49944,56975,64636,72954 ⋆ Number of discordant permutations. • a(n) = n * (9 * n ^ 2 - 45 * n + 58) / 2. - Barbara Haas Margolius (margolius(AT)math.csuohio.edu), Feb 17 2001 •

► [A292057] 0,6,44,164,440,970,1876,3304,5424,8430,12540,17996,25064,34034,45220,58960,75616,95574,119244,147060,179480,216986,260084,309304,365200 ⋆ Wiener index of the n X n queen graph. • a(n) = (n - 1) * n * (3 * n ^ 2 - 2 * n + 1) / 3. • a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). •

► [A203601] 1,6,44,280,1712,10336,78528,610688,4745984,28476928,173222912,1108678656,6652604416,48774012928,292681859072,1757200613376,11780162781184,70685271916544,424730711293952,3116299774853120,19823698692276224,120070359807426560,720738827865423872 ⋆ a(0)=1, a(n + 1) = (a(n) * 7) XOR a(n). • a(0)=1, a(n + 1) = (a(n) * 7) XOR a(n), where XOR is the bitwise exclusive - or operator. •

► [A156002] 0,1,6,44,311,2178,15250,106755,747288,5231022,36617161,256320132,1794240932,12559686533,87917805738,615424640176,4307972481243,30155807368710,211090651580982,1477634561066887,10343441927468220 ⋆ Partial sums of round(7 ^ n / 9). • a(n) = round((7 * 7 ^ n - 6 * n + 2) / 54) = round((7 * 7 ^ n - 6 * n - 7) / 54). • a(n) = floor((7 * 7 ^ n - 6 * n + 11) / 54). • a(n) = ceiling((7 * 7 ^ n - 6 * n - 7) / 54). • a(n) = a(n - 3) + (19 * 7 ^ (n - 2) - 1) / 3, n > 2. • a(n) = 8 * a(n - 1) - 7 * a(n - 2) + a(n - 3) - 8 * a(n - 4) + 7 * a(n - 5), n > 4. •

► [A189800] 0,1,6,44,312,2224,15840,112832,803712,5724928,40779264,290475008,2069084160,14738305024,104982503424,747801460736,5326668791808,37942424436736,270267896954880,1925146777223168,13713023838978048,97679317251653632,695780094221746176 ⋆ a(n) = 6 * a(n - 1) + 8 * a(n - 2), with a(0)=0, a(1)=1. • a(n) = (1 / 34) * sqrt(17) * ((3 + sqrt(17)) ^ n - (3 - sqrt(17)) ^ n). - _ Paolo P. Lava _ , May 31 2011 •

► [A227665] 1,6,44,320,2328,16936,123208,896328,6520712,47437640,345104904,2510609608,18264477064,132872558664,966636864776,7032203170760,51158695924872,372175277815624,2707544336559112,19697160911545032,143295215053933448,1042460827200624200 ⋆ Number of lattice paths from { n }^ 3 to { 0 }^ 3 using steps that decrement one component by 1 such that for each point (p _ 1, p _ 2,p _ 3) we have abs(p _{ i }- p _{ i + 1 }) <= 1. • a(n) = 7 * a(n - 1) + 2 * a(n - 2) for n>1, a(0)=1, a(2)=6. •

► [A102591] 1,6,44,328,2448,18272,136384,1017984,7598336,56714752,423324672,3159738368,23584608256,176037912576,1313964867584,9807567290368,73204678852608,546407161659392,4078438577864704,30441879976280064 ⋆ a(n) = Sum _{ k=0..n } binomial(2n + 1, 2k) * 3 ^ (n - k). • a(n) = 8 * a(n - 1) - 4 * a(n - 2); • a(n) = sqrt(3) * (sqrt(3) - 1) ^ (2n + 1) / 6 + sqrt(3) * (sqrt(3) + 1) ^ (2n + 1) / 6. • a(n) = 2 ^ (2 * n + 1) * Sum _{ k >= n } binomial(2 * k,2 * n) * (1 / 3) ^ (k + 1). Cf. A099156. - _ Peter Bala _ , Nov 29 2021 •

► [A082412] 1,6,44,344,2736,21856,174784,1398144,11184896,89478656,715828224,5726623744,45812985856,366503878656,2932031012864,23456248070144,187649984495616,1501199875833856,12009599006408704,96076792050745344,768614336404914176 ⋆ a(n) = (2 * 8 ^ n + 2 ^ n) / 3. • a(n) = (2 * 8 ^ n + 2 ^ n) / 3. •

► [A147688] 1,6,44,360,3088,26976,237248,2091648,18456832,162915840,1438198784,12696741888,112091336704,989587267584,8736489783296,77129433907200,680931492954112,6011553766047744,53072563389857792,468547255228956672 ⋆ a(n) = ((6 + sqrt(8)) ^ n + (6 - sqrt(8)) ^ n)) / 2. • a(n) = 12 * a(n - 1) - 28 * a(n - 2), a(0)=1, a(1)=6. •

► [A302709] 0,6,45,161,414,880,1651,2835,4556,6954,10185,14421,19850,26676,35119,45415,57816,72590,90021,110409,134070,161336,192555,228091,268324 ⋆ a(n) = Trinomial(2 * n + 1, 4) = (1 / 6) * n * (2 * n + 1) * (2 * n ^ 2 + 9 * n + 1), n >= 0. • a(n) = binomial(2 * n + 1, 2) + (2 * n + 1) * binomial(2 * n, 2) + binomial(2 * n + 1, 4) (from the trinomial definition) = (1 / 6) * n * (2 * n + 1) * (2 * n ^ 2 + 9 * n + 1). • a(n) = (1 / Pi) * Integral _{ x=0..2 } (1 / sqrt(4 - x ^ 2)) * (x ^ 2 - 1) ^ (2 * n + 1) * R(2 * (2 * n - 3), x), n >= 0, with the R polynomial coefficients given in A127672. Note that R(- n, x) = R(n, x). [Comtet, p. 77, the integral formula for q=3, n - > 2 * n + 1, k = 4, rewritten with x = 2 * cos(phi)]. •

► [A054563] 0,0,6,45,190,595,1540,3486,7140,13530,24090,40755,66066,103285,156520,230860,332520,468996,649230,883785,1185030,1567335,2047276,2643850,3378700 ⋆ a(n) = n * (n ^ 2 - 1) * (n + 2) * (n ^ 2 + 4 * n + 6) / 72. • a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7); a(2)=0, a(3)=0, a(4)=6, a(5)=45, a(6)=190, a(7)=595, a(8)=1540. - _ Harvey P. Dale _ , Sep 20 2011 • a(n) = (binomial(n + 2,3) ^ 2 - binomial(n + 2,3)) / 2, n > 0. - _ Gary Detlefs _ , Nov 23 2011 • a(n) = Sum _{ k=1..3 } (- 1) ^ (k + 1) * binomial(n + 2,3 + k) * binomial(n + 2,3 - k). - _ Gerry Martens _ , Oct 11 2022 •

► [A262415] 6,45,270,1701,10206,61965,371790,2237301,13423806,80601885,483611310,2902199301,17413195806,104483957805,626903746830,3761465527701,22568793166206,135413146417725,812478878506350,4874876757822501 ⋆ Number of (n + 1) X (3 + 1) 0..1 arrays with each row divisible by 3 and column not divisible by 3, read as a binary number with top and left being the most significant bits. • a(n) = 3 ^ (n - 1) * (2 ^ (n + 3) - 2) / 2 for n even. • a(n) = 3 ^ (n - 1) * (2 ^ (n + 3) - 4) / 2 for n odd. •

► [A214982] 0,1,6,45,300,2080,14196,97461,667590,4576825,31367160,215001216,1473620616,10100397385,69229018950,474503107365,3252291758436,22291541752096,152788493829180,1047227932532925,7177806988136070 ⋆ a(n) = (Fibonacci(5n) / Fibonacci(n) - 5) / 50. • a(n) = (Fibonacci(5n) / Fibonacci(n) - 5) / 50. • a(n) = 5 * a(n - 1) + 15 * a(n - 2) - 15 * a(n - 3) - 5 * a(n - 4) + a(n - 5), with a(1)=0, a(2)=1, a(3)=6, a(4)=45, a(5)=300. - _ Harvey P. Dale _ , Nov 03 2013 • a(n) = (1 / 2) * Fibonacci(n) ^ 2 * (Fibonacci(n) ^ 2 + (- 1) ^ n) shows that a(n) is always an integer. - _ Peter Bala _ , Nov 29 2013 •

► [A360021] 1,6,45,315,2205,15624,111888,807840,5868720,42799680,312504192,2278418688,16549827840,119567831040,858293084160,6118081708032,43298650386432,304260332175360,2123395686236160,14722247331348480,101446590051975168,695007859780878336,4735844958575001600 ⋆ Number of unordered triples of self - avoiding paths with nodes that cover all vertices of a convex n - gon; one - node paths are allowed. • a(n) = n * (n - 1) * (n - 2) * 2 ^ (n - 10) * (3 ^ (n - 4) + 3 * 2 ^ (n - 3) + 9) for n >= 4. •

► [A189801] 0,1,6,45,324,2349,17010,123201,892296,6462585,46806174,339000309,2455257420,17782547301,128792600586,932798529225,6755924580624,48930734246769,354387726706230,2566702968458301,18589707351105876,134638570822759965,975138791096512674 ⋆ a(n) = 6 * a(n - 1) + 9 * a(n - 2), with a(0)=0, a(1)=1. • a(n) = (1 / 12) * sqrt(2) * ((3 + 3 * sqrt(2)) ^ n - (3 - 3 * sqrt(2)) ^ n). - _ Paolo P. Lava _ , Jun 06 2011 •

► [A024077] 1,6,45,334,2385,16782,117613,823494,5764737,40353526,282475149,1977326622,13841287057,96889010238,678223072653,4747561509718,33232930569345,232630513986918,1628413597910125,11398895185372782 ⋆ a(n) = 7 ^ n - n

^ 2. ● a(n) = 10 * a(n - 1) - 24 * a(n - 2) + 22 * a(n - 3) - 7 * a(n - 4) for n>3. - _ Vincenzo Librandi _ , Oct 06 2014 ●

► [A095003] 1,6,45,352,2769,21798,171613,1351104,10637217,83746630,659335821,5190939936,40868183665,321754529382,2533168051389,19943589881728,157015551002433,1236180818137734,9732430994099437,76623267134657760,603253706083162641,4749406381530643366 ⋆ a(n) = 9 * a(n - 1) - 9 * a(n - 2) + a(n - 3). ● a(n + 3) = 9 * a(n + 2) - 9 * a(n + 1) + a(n); given a(1) = 1, a(2) = 6, a(3) = 45. ●

► [A004988] 1,6,45,360,2970,24948,212058,1817640,15677145,135868590,1182056733,10316131488,90266150520,791564704560,6954461332920,61199259729696,539318476367946,4758692438540700,42035116540442850,371678925199705200,3289358488017391020 ⋆ a(n) = (3 ^ n / n!) * Product _{ k=0..n - 1 } (3 * k + 2). ● a(n) = 9 ^ n * Gegenbauer _ C(n,1 / 3,1). - _ Paul Barry _ , Apr 21 2009 ● a(n) = Product _{ k=1..n } (9 - 3 / k). - _ Michel Lagneau _ , Sep 16 2012 ● a(n) = (- 9) ^ n * binomial(- 2 / 3, n). - _ R. J. Mathar _ , Sep 16 2012 ● a(n) = 9 ^ n * Gamma(n + 2 / 3) / (Gamma(2 / 3) * Gamma(n + 1)). - _ Vaclav Kotesovec _ , Feb 09 2014 ●

► [A371779] 1,6,45,365,3078,26565,232831,2063235,18435021,165780758,1498533273,13603087800,123920995101,1132284232215,10372554403620,95233251146671,876081280823430,8073359613286509,74513645742072841,68868297787611769 8,637302523872622277 ⋆ a(n) = Sum _{ k=0..floor(n / 3) } binomial(4 * n + 2,n - 3 * k). ● a(n) = [x ^ n] 1 / (((1 - x) ^ 3 - x ^ 3) * (1 - x) ^ (3 * n)). ●

► [A153399] 1,1,6,45,371,3225,29007,267239,2506605,23842644,229369064,2227345899,21801617643,214862158025,2130226863222,21231722675274,212613977684254,2138164077605865,21585420400120710,218677042735538547 ⋆ G.f.: A(x) = F(x * G(x) ^ 3) where F(x) = G(x / F(x)) = 1 + x * F(x) ^ 3 is the g.f. of A001764 and G(x) = F(x * G(x)) = 1 + x * G(x) ^ 4 is the g.f. of A002293. ● a(n) = Sum _{ k=0..n } C(3 * k + 1,k) / (3 * k + 1) * C(4 * n - k,n - k) * 3 * k / (4 * n - k) for n>0 with a(0)=1. ●

► [A025551] 1,6,45,378,3321,29646,266085,2392578,21526641,193720086,1743421725,15690618378,141215033961,1270933711326,11438398618965,102945573221778,926510115949281,8338590914403366,75047317842209805,675425859417626778 ⋆ a(n) = 3 ^ n * (3 ^ n + 1) / 2. ● a(n) = 12 * a(n - 1) - 27 * a(n - 2), a(0) = 1, a(1) = 6. ● a(n) = ((6 + sqrt(9)) ^ n + (6 - sqrt(9)) ^ n) / 2. - Al Hakanson (hawkuu(AT)gmail.com), Dec 08 2008 ● a(n) = Sum _{ k=1..3 ^ n } k. - _ Joerg Arndt _ , Sep 01 2013 ●

► [A137974] 1,1,6,45,410,4020,41826,452207,5033910,57300285,663912420,7804131660,92838682242,1115595461915,13521340799310,165104951405235,2029162664033790,25081468301798301,311593507408597920 ⋆ G.f. satisfies A(x) = 1 + x * (1 + x * A(x) ^ 5) ^ 6. ● a(n) = Sum _{ k=0..n - 1 } C(6 * (n - k),k) / (n - k) * C(5 * k,n - k - 1) for n>0 with a(0)=1. [_ Paul D. Hanna _ , Jun 16 2009] ●

► [A371541] 1,6,45,410,4110,43746,485237,5547396,64901670,773296320,9350929395,114464359296,1415620823147,17661466502796,222017667461685,2809362871991380,35755481454362355,457410181217186886,5878378983480722222,75856853080508789406 ⋆ G.f. A(x) satisfies A(x) = (1 + x * A(x) / (1 + x)) ^ 6. ● a(n) = Sum _{ k=0..n } (- 1) ^ (n - k) * binomial(n - 1,n - k) * binomial(6 * k + 6, k) / (k + 1). ●

► [A322089] 0,6,45,2073,15255,300865,2899916,22207152,273201220,7614777709,92450772693,1333177199334,4917497987408,19130217896725 6,170567771192821,48954194340319989,202511873382592260,3529594919298491465,38131258596823843197,381312585968 23843197,3813125859682384319 7,8809653000849500507259 ⋆ One of the two successive approximations up to 13 ^ n for 13 - adic integer sqrt(- 3). Here the 6 (mod 13) case (except for n = 0). ● a(n) == L(13 ^ n,6) (mod 13 ^ n) == (3 + sqrt(10)) ^ (13 ^ n) + (3 - sqrt(10)) ^ (13 ^ n) (mod 13 ^ n), where L(n,x) denotes the n - th Lucas polynomial, the n - th row polynomial of A114525. - _ Peter Bala _ , Dec 05 2022 ●

► [A079910] 1,6,46,212,738,2104,5150,11196,22162,40688,70254,115300,181346,275112,404638,579404,810450,1110496,1494062,1977588,2579554,3320600,4223646,5314012,6619538 ⋆ Solution to the Dancing School Problem with 5 girls and n + 5 boys: f(5,n). ● a(0)=1, a(1)=6, a(2)=46, a(n) = n ^ 5 - 5 * n ^ 4 + 25 * n ^ 3 - 55 * n ^ 2 + 80 * n - 46. ●

► [A155598] 1,6,46,336,2386,16776,117586,823416,5764546,40353096,282474226,1977324696,13841283106,96889002216,678223056466,4747561477176,33232930504066,232630513856136,1628413597648306,11398895184848856 ⋆ a(n) = 7 ^ n - 2 ^ n + 1. ● a(n) = 9 * a(n - 1) - 14 * a(n - 2) + 6 with a(0)=1, a(1)=6 - _ Vincenzo Librandi _ , Jul 21 2010 ● a(0)=1, a(1)=6, a(2)=46, a(n) = 10 * a(n - 1) - 23 * a(n - 2) + 14 * a(n - 3). - _ Harvey P. Dale _ , Feb 28 2013 ●

► [A190005] 0,1,6,46,336,2476,18216,134056,986496,7259536,53422176,393128416,2892992256,21289237696,156665348736,1152884469376,8483960303616,62432606515456,459435242128896,3380937517927936,24879977528856576,183089240352418816,1347335217403078656 ⋆ a(n) = 6 * a(n - 1) + 10 * a(n - 2), with a(0)=0, a(1)=1. ● a(n) = sqrt(19) * ((3 + sqrt(19)) ^ n - (3 - sqrt(19)) ^ n) / 38. - _ Paolo P. Lava _ , Jun 06 2011 ●

► [A334609] 0,6,46,339,2553,19723,155805,1253931,10249096,84864051,710429304,6003238901,51140131770,438729741450,3787208722815,32871470376123,286706337100656,2511620756461504,22089299382478728,194966351598215340,1726424465382128205 ⋆ a(n) is the total number of down - steps after the final up - step in all 3 _ 2 - Dyck paths of length 4 * n (n up - steps and 3 * n down - steps). ● a(n) = 3 * binomial(4 * (n + 1) + 3, n + 1) / (4 * (n + 1) + 3) - 9 * binomial(4 * n + 3, n) / (4 * n + 3). ●

► [A253654] 1,6,46,361,2841,22366,176086,1386321,10914481,85929526,676521726,5326244281,41933432521,330141215886,2599196294566,20463429140641,161108236830561,1268402465503846,9986111487200206,78620489432097801,618977803969582201,4873201943234559806 ⋆ Indices of pentagonal numbers (A000326) which are also centered pentagonal numbers (A005891). ● a(n) = 9 * a(n - 1) - 9 * a(n - 2) + a(n - 3). ● a(n) = (2 - (- 5 + sqrt(15)) * (4 + sqrt(15)) ^ n + (4 - sqrt(15)) ^ n * (5 + sqrt(15))) / 12. - _ Colin Barker _ , Mar 03 2016 ●

► [A084772] 1,6,46,396,3606,33876,324556,3151896,30915046,305543556,3038019876,30354866856,304523343996,3065412858696,30946859111256,313206733667376,3176825392214406,32284147284682596,328643023505612596 ⋆ Coefficients of 1 / sqrt(1 - 12 * x + 16 * x ^ 2); also, a(n) is the central coefficient of (1 + 6 * x + 5 * x ^ 2) ^ n. ● a(n) = Sum _{ k=0..n } 5 ^ k * C(n,k) ^ 2. - _ Benoit Cloitre _ , Oct 26 2003 ● a(n) = 4 ^ n * LegendreP(n, 3 / 2). - _ G. C. Greubel _ , May 31 2023 ●

► [A199563] 6,46,406,3646,32806,295246,2657206,23914846,215233606,1937102446,17433922006,156905298046,1412147682406,12709329141646,114383962274806,1029455660473246,9265100944259206,83385908498332846,750473176484995606 ⋆ 5 * 9 ^ n + 1. ● a(n) = 9 * a(n - 1) - 8. ● a(n) = 10 * a(n - 1) - 9 * a(n - 2). ●

► [A349332] 1,1,6,46,406,3901,39627,418592,4551672,50610692,572807157,6577068383,76426719408,897078662538,10620634999318,126676885170703,1520759193166329,18361269213121164,222814883564042704,2716125963857227904,33244557641365865109 ⋆ G.f. A(x) satisfies A(x) = 1 + x * A(x) ^ 5 / (1 - x). ● a(n) = Sum _{ k=0..n } binomial(n - 1,k - 1) * binomial(5 * k,k) / (4 * k + 1). ●

► [A365185] 1,1,6,46,411,3996,41062,438662,4823133,54221518,620404859,7201317005,84590041441,1003656037278,12010861830069,144804336388912,1757106190680819,21443109365898743,263009775111233392,3240530659303505547,40088688455992604594 ⋆ G.f. satisfies A(x) = 1 + x * A(x) ^ 5 * (1 + x * A(x)). ● a(n) = Sum _{ k=0..n } binomial(n + 4 * k + 1,k) * binomial(k,n - k) / (n + 4 * k + 1). ●

► [A267233] 6,47,176,470,1030,1981,3472,5676,8790,13035,18656,25922,35126,46585,60640,77656,98022,122151,150480,183470,221606,265397,315376,372100,436150 ⋆ Number of length - 4 0..n arrays with no following elements greater than or equal to the first repeated value. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

► [A027012] 1,6,47,199,661,1954,5442,14696,39065,103025,270655,709716,1859412,4869594,12750611,33383659,87401977,228824086,599072310,1568395100,4106115485,10749954101,28143749827,73681298664,192900149736 ⋆ a(n) = T(2 * n, n + 1), T given by A027011. ● a(1)=1, a(n) = Lucas(2 * n + 6) - (6 * n ^ 2 + 17 * n + 18). - _ Ralf Stephan _ , May 05 2005 ● a(n) = - 8 + (2 ^ (- 1 - n) * ((3 - sqrt(5)) ^ n * (- 15 + 7 * sqrt(5)) + (3 + sqrt(5)) ^ n * (15 + 7 * sqrt(5)))) / sqrt(5) + 13 * (1 + n) - 6 * (1 + n) * (2 + n) for n>1. ● a(n) = 6 * a(n - 1) - 13 * a(n - 2) + 13 * a(n - 3) - 6 * a(n - 4) + a(n - 5) for n>6. ●

► [A353098] 6,47,333,2334,16340,114381,800667,5604668,39232674,274628715,1922401001,13456807002,94197649008,659383543049,4615684801335,32309793609336,226168555265342,1583179886857383,11082259208001669,77575814456011670,543030701192081676 ⋆ a(1) = 6; for n>1, a(n) = 7 * a(n - 1) + 7 - n. ● a(n) = 9 * a(n - 1) - 15 * a(n - 2) + 7 * a(n - 3). ● a(n) = (5 * 7 ^ (n + 1) + 6 * n - 35) / 36. ● a(n) = Sum _{ k=0..n - 1 } (7 - n + k) * 7 ^ k. ●

► [A024076] 1,6,47,340,2397,16802,117643,823536,5764793,40353598,282475239,1977326732,13841287189,96889010394,678223072835,4747561509928,33232930569585,232630513987190,1628413597910431,11398895185373124 ⋆ 7 ^ n - n. ● a(n) = 9 * a(n - 1) - 15 * a(n - 2) + 7 * a(n - 3). - _ Vincenzo Librandi _ , Jun 16 2013 ●

► [A015553] 0,1,6,47,348,2605,19458,145403,1086456,8118169,60660030,453260039,3386820564,25306783813,189095729082,1412948996435,10557746998512,78888920951857,589468742694774,4404590586639071,32911699689476940 ⋆ Expansion of x / (1 - 6 * x - 11 * x ^ 2). ● a(n) = 6 * a(n - 1) + 11 * a(n - 2). ● a(n) = (1 / 4) * Sum _{ k=0..n } binomial(n,k) * Fibonacci(k) * 4 ^ k. - _ Benoit Cloitre _ , Oct 25 2003 ● a(n) = sqrt(5)(3 + 2 * sqrt(5)) ^ n / 20 - sqrt(5)(3 - 2 * sqrt(5)) ^ n / 20. - _ Paul Barry _ , Feb 13 2004 ●

► [A291028] 6,47,362,2787,21456,165180,1271644,9789793,75367038,580215573,4466808294,34387867640,264736107506,2038079457267,15690220398162,120791667500967,929918545909756,7159007901103540,55113853093361544,424295774604244773,3266454697733704038 ⋆ p - INVERT of the positive integers, where p(S) = 1 - 6 * S + S ^ 2. ● a(n) = 10 * a(n - 1) - 19 * a(n - 2) + 10 * a(n - 3) - a(n - 4). ●

► [A341927] 1,6,47,370,2913,22934,180559,1421538,11191745,88112422,693707631,5461548626,42998681377,338527902390,2665224537743,20983268399554,165200922658689,1300624112869958,10239791980300975,80617711729537842,634701901856001761,4996997503118476246,39341278123091808207 ⋆ Bisection of the numerators of the convergents of cf(1,4,1,6,1,6,...,6,1). ● a(0) = 1; a(1) = 6; a(n) = 8 * a(n - 1) - a(n - 2). ●

► [A369502] 1,6,47,420,4059,41316,436345,4737018,52535950,592667532,6779699073,78458218746,916886214115,10805128064100,128260666769895,1532180536574580,18405744106135914,222204347510440092,2694506677864591810,32804976554127379680,400837173223351237295 ⋆ Expansion of (1 / x) * Series _ Reversion(x / ((1 + x) ^ 2 + x) ^ 2). ● a(n) = (1 / (n + 1)) * Sum _{ k=0..n } binomial(2 * n + 2,k) * binomial(4 * n - 2 * k + 4,n - k). ●

► [A364748] 1,1,6,47,424,4159,43097,464197,5145475,58313310,672598269,7869856070,93183973405,1114471042413,13443614108307,163372291277764,1998239045199623,24580340878055298,303893356012560280,3774099648814193998,47061518776483143441 ⋆ G.f. satisfies A(x) = 1 + x * A(x) ^ 5 / (1 - x * A(x)). ● a(n) = (1 / n) * Sum _{ k=0..n - 1 } binomial(n,k) * binomial(5 * n - 4 * k,n - 1 - k) for n > 0. ●

► [A365186] 1,1,6,47,428,4241,44407,483358,5414618,62014112,722870120,8547768832,102284029963,1236274747490,15070955944288,185089043535730,2287843817573898,28440852786725695,353545599519983962,4459821165693379625,56200963128262312342 ⋆ G.f. satisfies A(x) = 1 + x * A(x) ^ 5 * (1 + x * A(x) ^ 2). ● a(n) = Sum _{ k=0..n } binomial(2 * n + 3 * k + 1,k) * binomial(k,n - k) / (2 * n + 3 * k + 1). ●

► [A153796] 0,6,48,126,240,390,576,798,1056,1350,1680,2046,2448,2886,3360,3870,4416,4998,5616,6270,6960,7686,8448,9246,10080 ⋆ 6 times octagonal numbers: a(n) = 6 * n * (3 * n - 2). ● a(n) = a(n - 1) + 36 * n - 30 (with a(0)=0). - _ Vincenzo Librandi _ , Dec 15 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>2. ●

► [A167547] 6,48,160,384,762,1336,2148,3240,4654,6432,8616,11248,14370,18024,22252,27096,32598,38800,45744,53472,62026,71448,81780,93064,105342 ⋆ The fourth row of the ED1 array A167546. ● a(n) = 7 * n ^ 3 - 7 * n ^ 2 + 14 * n - 8. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ G. C. Greubel _ , Jun 15 2016 ●

► [A244726] 0,6,48,162,384,750,1296,2058,3072,4374,6000,7986,10368,13182,16464,20250,24576,29478,34992,41154,48000,55566,63888,73002,82944 ⋆ 6 * n ^ 3. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>3. ●

► [A208536] 0,0,6,48,204,624,1554,3360,6552,11808,19998,32208,49764,74256,107562,151872,209712,283968,377910,495216,639996,816816,1030722,1287264,1592520 ⋆ Number of 5 - bead necklaces of n colors not allowing reversal, with no adjacent beads having the same color. ● a(n + 2) = delta(- n) = - delta(n) for n >= 0, where delta is the p - derivation over the integers with respect to prime p = 5. - _ Danny Rorabaugh _ , Nov 10 2017 ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. ●

► [A253947] 6,48,216,720,1980,4752,10296,20592,38610,68640,116688,190944,302328,465120,697680,1023264,1470942,2076624,2884200,3946800,5328180,7104240,9364680,12214800,15777450 ⋆ a(n) = 6 * binomial(n + 1,7). ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8). - _ Wesley Ivan Hurt _ , Sep 03 2022 ●

► [A052771] 0,0,0,6,48,240,960,3360,10752,32256,92160,253440,675840,1757184,4472832,11182080,27525120,66846720,160432128,381026304,896532480,2091909120,4844421120,11142168576,25467813888 ⋆ E.g.f.: x ^ 3 * exp(x) ^ 2. ● a(n) = n * (n - 1) * (n - 2) / 8 * 2 ^ n. - _ Vaclav Kotesovec _ , Nov 27 2012 ● a(n) = 8 * a(n - 1) - 24 * a(n - 2) + 32 * a(n - 3) - 16 * a(n - 4). - _ Chai Wah Wu _ , May 25 2016 ●

► [A056284] 0,0,0,6,48,260,1200,5106,20720,81876,318000,1223136,4675440,17815020,67769552,257700906,980240880,3731753180,14222737200,54278580036,207438938000,793940475900,3043140078000,11681057249536,44900438149296 ⋆ Number of n - bead necklaces with exactly four different colored beads. ● a(n) = (k! / n) Sum _{ d|n } phi(d) S2(n / d,k), where k=4 is the number of colors and S2 is the Stirling subset number A008277. ●

► [A340309] 0,6,48,282,1476,7302,35016,164850,767340,3546366,16315248,748378026,342621396,1566620022,7157423256,32682574050,149184117180,680813718126,3106475197248,14173073072922,64659388538916,294971717255142,1345602571317096,6138257708432850 ⋆ Number of ordered pairs of vertices which have two different shortest paths between them in the n - Hanoi graph (3 pegs, n discs) . ● a(n) = (3 / (4 * sqrt(17))) * ((sqrt(17) + 1) * P ^ n - 2 * sqrt(17) * 3 ^ n + (sqrt(17) - 1) * M ^ n). [Hinz et al.] ● a(n) = (6 / sqrt(17)) * Sum _{ k=0..n - 1 } 3 ^ k * (P ^ (n - 1 - k) - M ^ (n - 1 - k)) [Hinz et al.]. ● a(n) = 8 * a(n - 1) - 17 * a(n - 2) + 6 * a(n - 3). ●

► [A229504] 0,6,48,288,1536,7680,36864,172032,786432,3538944,15728640,69206016,301989888,1308622848,5637144576,24159191040,103079215104,438086664192,1855425871872,7834020347904,32985348833280,138538465099776 ⋆ Number of defective 3 - colorings of an n X 2 0..2 array connected diagonally and antidiagonally with exactly one mistake, and colors introduced in row - major 0..2 order. ● a(n) = 3 / 2 * (n - 1) * 4 ^ (n - 1) for n = 1..210. - _ Jérôme Germoni _ , Sep 18 2015 ●

► [A073994] 0,0,6,48,300,1800,9072,44928,252720,1555200,9722592,60217344,367960320,2213827200,13180786560,78399995904,468419708160,2810518248960,16894457846784,101554796888064,609923828966400,3659666929459200,21947538146863104,131620960833896448 ⋆ Number of strings of length n over Z _ 6 with trace 3 and subtrace 5. ● a(n; t, s) = a(n - 1; t, s) + a(n - 1; t + 5, s + 5t + 1) + a(n - 1; t + 4, s + 4t + 4) + a(n - 1; t + 3, s + 3t + 3) + a(n - 1; t + 2, s + 2t + 2) + a(n - 1; t + 1, s + t + 1) where t is the trace and s is the subtrace. ●

► [A320072] 1,6,48,336,2400,16752,117648,823200,5764752,40351200,282475248,1977309600,13841287200,96888892752,678223070400,4747560686400,33232930569600,232630508205648,1628413597910448,11398895145019200,79792266297494304,558545863800808752 ⋆ Number of length n primitive (=aperiodic or period n) 7 - ary words which are earlier in lexicographic order than any other word derived by cyclic shifts of the alphabet. ● a(n) = Sum _{ d|n } 7 ^ (d - 1) * mu(n / d). ● a(n) = 7 ^ (n - 1) - Sum _{ d<n,d|n } a(d). ●

► [A024075] 0,6,48,342,2400,16806,117648,823542,5764800,40353606,282475248,1977326742,13841287200,96889010406,678223072848,4747561509942,33232930569600,232630513987206,1628413597910448,11398895185373142 ⋆ a(n) = 7 ^ n - 1. ● a(n + 1) = 7 * a(n) + 6. - _ Reinhard Zumkeller _ , Nov 22 2009 ● a(n) = Sum _{ i=1..n } 6 ^ i * binomial(n,n - i) for n>0, a(0)=0. - _ Bruno Berselli _ , Nov 11 2015 ●

► [A052571] 0,0,0,6,48,360,2880,25200,241920,2540160,29030400,359251200,4790016000,68497228800,1046139494400,16999766784000,292919058432000,5335311421440000,102437979291648000,2067966706950144000 ⋆ E.g.f. x ^ 3 / (1 - x) ^ 2. ● a(n + 2) = n * (n + 1) * (n + 2) * n!. - _ Zerinvary Lajos _ , Nov 25 2006 ●

► [A291033] 6,48,378,2976,23430,184464,1452282,11433792,90018054,708710640,5579667066,43928625888,345849340038,2722866094416,21437079415290,168773769227904,1328753074407942,10461250826035632,82361253533877114,648428777444981280,5105068966025973126 ⋆ p - INVERT of the positive integers, where p(S) = 1 - 6 * S. ● a(n) = 8 * a(n - 1) - a(n - 2). ●

► [A155130] 1,6,48,378,2982,23520,185514,1463238,11541264,91031514,718009446,5663286720,44669073162,352326519174,2778969146352,21919069658682,172886271635238,1363637389057440,10755665624848746,84835121097343302 ⋆ a(n) = 7 * a(n - 1) + 7 * a(n - 2), n>2, a(0)=1, a(1)=6, a(2)=48. ● a(n) = 3 * (((7 + sqrt(77)) / 2) ^ (n - 1) + ((7 - sqrt(77)) / 2) ^ (n - 1)) + (27 / 77) * sqrt(77) * (((7 + sqrt(77)) / 2) ^ (n - 1) - ((7 - sqrt(77)) / 2) ^ (n - 1)) + (1 / 7) * [binomial(2 * n,n) mod 2], with n>=0. - _ Paolo P. Lava _ , Jan 26 2009 ● a(n) = (1 / 7) * [n=0] - 6 * (sqrt(7) * i) ^ (n - 2) * ChebyshevU(n, - sqrt(7) * i / 2). - _ G. C. Greubel _ , Mar 25 2021 ●

► [A083233] 1,6,48,384,3072,24576,196608,1572864,12582912,100663296,805306368,6442450944,51539607552,412316860416,3298534883328,26388279066624,211106232532992,1688849860263936,13510798882111488,108086391056891904,864691128455135232 ⋆ a(n) = (3 * 8 ^ n + 0 ^ n) / 4. ● a(n) = (3 * 8 ^ n + 0 ^ n) / 4. ● a(0) = 1, a(n + 1) = 6 * 8 ^ n. - _ Arkadiusz Wesolowski _ , Aug 15 2013 ●

► [A244038] 1,6,48,420,3840,36036,344064,3325608,32440320,318704100,3148873728,31256180280,311452237824,3113596420200,31213674823680,313672599360720,3158823892156416,31870058661517860,322076161553203200,3259691964853493400,33034843349204336640,335189468043077792760 ⋆ a(n) = 4 ^ n * binomial(3 * n / 2,n). ● a(n) = [x ^ n] 1 / sqrt(1 - 4 * x) ^ (n + 2). - _ Ilya Gutkovskiy _ , Oct 10 2017 ● a(n) = [x ^ n] ((1 + 4 * x) ^ (3 / 2)) ^ n. It follows that the Gauss congruences a(n * p ^ k) == a(n * p ^ (k - 1)) (mod p ^ k) hold for all primes p and positive integers n and k. - _ Peter Bala _ , Mar 05 2022 ●

► [A231104] 0,6,48,438,3936,35430,318864,2869782,25828032,232452294,2092070640,18828635766,169457721888,1525119496998,13726075472976,123534679256790,1111812113311104,10006309019799942,90056781178199472,810511030603795254 ⋆ Number of n X 4 0..3 arrays x(i,j) with each element horizontally or antidiagonally next to at least one element with value (x(i,j) + 1) mod 4, no adjacent elements equal, and upper left element zero. ● a(n) = (9 ^ n + 9) / 15 for n even. ● a(n) = (9 ^ n - 9) / 15 for n odd. ●

► [A188911] 1,6,48,438,4356,46056,509106,5814738,68050116,811240872,98103840 48,119990105208,1481115683754,18421300391760,230574816629310,2901721280735838,36688485233689668,465774244616805624,5934465567864915024 ⋆ Binomial convolution of the binomial coefficients bin(3n,n) (A005809). ● a(n) = Sum _{ k=0..n } binomial(n,k) * binomial(3 * k,k) * binomial(3 * n - 3 * k,n - k). ●

► [A364923] 1,1,6,48,442,4419,46626,511032,5761650,66394596,778518552,9258850440,111417705702,1354135251538,16598001854700,204945037918800,2546849778687138,31828936270676172,399777371427582024,5043824569861127808,63892650400004356776 ⋆ G.f. satisfies A(x) = 1 + x * A(x) ^ 4 / (1 - 2 * x * A(x) ^ 3) . ● a(n) = Sum _{ k=0..n } 3 ^ k * (- 2) ^ (n - k) * binomial(n,k) * binomial(3 * n + k + 1,n) / (3 * n + k + 1). ● a(n) = (1 / n) * Sum _{ k=0..n - 1 } 2 ^ k * binomial(n,k) * binomial(4 * n - k,n - 1 - k) for n > 0. ● a(n) = (1 / n) * Sum _{ k=1..n } 3 ^ (n - k) * binomial(n,k) * binomial(3 * n,k - 1) for n > 0. ●

► [A365192] 1,1,6,48,443,4445,47107,518835,5880223,68130860,803369481,9609294542,116310009888,1421951861817,17533301767624,217796367181117,2722942699583650,34236790400004432,432649744252128084,5492060945760586212,69998993052214823013 ⋆ G.f. satisfies A(x) = 1 + x * A(x) ^ 5 / (1 - x * A(x) ^ 2). ● a(n) = Sum _{ k=0..n } binomial(2 * n + 3 * k + 1,k) * binomial(n - 1,n - k) / (2 * n + 3 * k + 1). ●

► [A365187] 1,1,6,48,446,4511,48218,535800,6127598,71648868,852668952,10293847592,125759270354,1551872951050,19314892116764,242182938963024,3056337851481678,38790948190319404,494825459824571528,6340628082364678016,81577931200018721464 ⋆ G.f. satisfies A(x) = 1 + x * A(x) ^ 5 * (1 + x * A(x) ^ 3). ● a(n) = Sum _{ k=0..n } binomial(3 * n + 2 * k + 1,k) * binomial(k,n - k) / (3 * n + 2 * k + 1). ●

► [A244509] 6,48,480,2016,13200,26208,78336,123120,267168,682080,892800,1822176,2755200,3337488,4773696,7738848,11908560,13615200,19845936,25048800,28003968,38450880,46879728,62029440,87607296 ⋆ Order of GL _ 2(p), the general linear group over F _ p, where p runs through the primes. ● a(n) = (p - 1) * p * (p ^ 2 - 1) where p = prime(n). ●

► [A223270] 6,48,576,6144,67584,737280,8060928,88080384,962592768,10519314432,114957484032,1256277934080,13728862961664,150031797583872,1639577995444224,17917641486237696,195807627744116736 ⋆ Rolling cube footprints: number of 2 X n 0..5 arrays starting with 0 where 0..5 label faces of a cube and every array movement to a horizontal, diagonal or antidiagonal neighbor moves across a corresponding cube edge. ● a(n) = (sqrt(3) * (- (4 - 4 * sqrt(3)) ^ n + (4 * (1 + sqrt(3))) ^ n)) / 4. ●

► [A098306] 0,1,6,49,384,3025,23814,187489,1476096,11621281,91494150,720331921,5671161216,44648957809,351520501254,2767515052225,21788599916544,171541284280129,1350541674324486,10632792110315761,83711795208201600 ⋆ Unsigned member r= - 6 of the family of Chebyshev sequences S _ r(n) defined in A092184. ● a(n) = 8 * a(n - 1) - a(n - 2) + 2 * (- 1) ^ (n + 1), n>=2, a(0)=0, a(1)=1. ● a(n) = 7 * a(n - 1) + 7 * a(n - 2) - a(n - 3), n>=3, a(0)=0, a(1)=1, a(2)=6. ● a(n) = |u(n)| ^ 2, where { u(n) } is the Lucas sequence in the quadratic integer ring Z[sqrt(- 6)] defined by the recurrence u(0) = 0, u(1) = 1, u(n) = sqrt(- 6) * u(n - 1) - u(n - 2) for n >= 2. ● a(n) = 1 / 10 * ((4 + sqrt(15)) ^ n + (4 - sqrt(15)) ^ n - 2 * (- 1) ^ n). ● a(n) = the bottom left entry of the 2 X 2 matrix T(n, M), where M is the 2 X 2 matrix [0, 4; 1, 3] and T(n,x) denotes the Chebyshev polynomial of the first kind. ●

► [A055847] 1,6,49,392,3136,25088,200704,1605632,12845056,102760448,822083584,6576668672,52613349376,420906795008,3367254360064,26938034880512,215504279044096,1724034232352768,13792273858822144,110338190870577152 ⋆ a(0)=1, a(1)=6, a(n)=49 * 8 ^ (n - 2) if n>=2. ● a(n) = 8 * a(n - 1) + (- 1) ^ n * C(2, 2 - n). ●

► [A365193] 1,1,6,49,463,4760,51702,583712,6781774,80555066,973813974,11941861079,148191437719,1857464450449,23481830726334,299056887494427,3833349330581255,49416395972195630,640256115370243620,8332835556325119938,108890550249605779116 ⋆ G.f. satisfies A(x) = 1 + x * A(x) ^ 5 / (1 - x * A(x) ^ 3). ● a(n) = Sum _{ k=0..n } binomial(3 * n + 2 * k + 1,k) * binomial(n - 1,n - k) / (3 * n + 2 * k + 1). ●

► [A365188] 1,1,6,49,465,4807,52533,596936,6981798,83497115,1016367737,12550853210,156845913315,1979870172453,25207383853375,323325558146400,4174108907656633,54195445136831670,707225283913589280,9270735916525207605,122020617365557674605 ⋆ G.f. satisfies A(x) = 1 + x * A(x) ^ 5 * (1 + x * A(x) ^ 4). ● a(n) = Sum _{ k=0..n } binomial(4 * n + k + 1,k) * binomial(k,n - k) / (4 * n + k + 1). ●

► [A046195] 1,6,49,961,8214,70225,1385329,11844150,101263969,1997643025,17079255654,146022572641,2880599856289,24628274808486,210564448483921,4153822995125281,35513955194580726,303633788691241009,5989809878370798481,51211098762310597974 ⋆ Indices of heptagonal numbers (A000566) which are also squares (A000290). ● a(n) = + a(n - 1) + 1442 * a(n - 3) - 1442 * a(n - 4) - a(n - 6) + a(n - 7). G.f.: - x * (1 + 5 * x + 43 * x ^ 2 - 530 * x ^ 3 + 43 * x ^ 4 + 5 * x ^ 5 + x ^ 6) / ((x - 1) * (x ^ 6 - 1442 * x ^ 3 + 1)). - _ R. J. Mathar _ , Aug 01 2010 ● a(n) = 1442 * a(n - 3) - a(n - 6) - 432. - _ Ant King _ , Nov 12 2011 ●

► [A035290] 0,0,6,50,194,522,1142,2186,3810,6194,9542,14082,20066,27770,37494,49562,64322,82146,103430,128594,158082,192362,231926,277290,328994 ⋆ Number of ways to place a non - attacking white and black pawn on n X n chessboard. ● a(n) = n ^ 4 - 4 n ^ 3 + n ^ 2 + 10 n - 6. ●

► [A001303] 6,50,225,735,1960,4536,9450,18150,32670,55770,91091,143325,218400,323680,468180,662796,920550,1256850,1689765,2240315,2932776,3795000,4858750,6160050,7739550 ⋆ Stirling numbers of first kind, s(n + 3, n), negated. ● a(n) = binomial(n + 3, 4) * binomial(n + 3, 2). ● a(n) = ((n + 4)! / n!) ^ 2 / ((n + 2) * (n + 1) * 2 * 4!); ● a(n) = (n - 0) ^ 2 * (n - 1) ^ 2 * (n - 2) * (n - 3) / (2 * 4!). (End) ● a(n) = 15 * binomial(n + 5,6) - 10 * binomial(n + 4,5) + binomial(n + 3,4). ● a(n) = n * (n + 1)(n + 2) ^ 2 * (n + 3) ^ 2 / 48. - _ Jeremy Galvagni _ , Mar 03 2009 ● a(n) = (n + 3) ^ 2 / (n ^ 2 - 1) * a(n - 1), n > 1; ●

► [A308860] 0,0,6,50,379,3023,26193,248092,2565080,28836332,350847628,4598548392,64645657608,970762440048,15514297672464,262985728086144,4713910512720768,89097880064868864,1771270259515278336,36950742840576268800,807153610378856716800,18426068050750227993600 ⋆ a(n) / n! is the expected number of left - to - right maxima in the lexicographical or colexicographical ordering of all the 3 - subsets of [n] under a random permutation of [n], when the 3 - subsets hold the worst order of ranks. ● a(n) = n * a(n - 1) + (n - 1) * s(n - 1,3) + (2 n - 1) * s(n - 1,2) + (n - 2)!, with the initial condition a(3)=6, and with s(n,k) being the unsigned Stirling number of the first kind. ●

► [A199680] 6,50,446,4010,36086,324770,2922926,26306330,236756966,2130812690,19177314206,172595827850,1553362450646,13980262055810,125822358502286,1132401226520570,10191611038685126,91724499348166130,825520494133495166 ⋆ a(n) = (11 * 9 ^ n + 1) / 2. ● a(n) = 9 * a(n - 1) - 4. ● a(n) = 10 * a(n - 1) - 9 * a(n - 2). ●

► [A243667] 1,1,6,50,484,5105,56928,660112,7878940,96159476,1194532794,15053992178,191993403476,2473358617150,32137897641232,420698195672700,5542894551818268,73447821835338348,978178443083177880,13086377223959022952,175785879063917657688 ⋆ Number of Sylvester classes of 4 - packed words of degree n. ● a(n) = (- 1) ^ n * Sum _{ k=0..n } (- 2) ^ k * binomial(n,k) * binomial (4 * n + k + 1,n) / (4 * n + k + 1). ● a(n) = ((- 1) ^ n / (4 * n + 1)) * Sum _{ k=0..n } (- 2) ^ (n - k) * binomial(4 * n + 1,k) * binomial(5 * n - k,n - k). (End) ● a(n) = (1 / n) * Sum _{ k=0..n - 1 } binomial(n,k) * binomial(5 * n - k,n - 1 - k) for n > 0. - _ Seiichi Manyama _ , Aug 08 2023 ●

► [A365189] 1,1,6,50,485,5130,57391,667777,7999095,97986680,1221813880,15456556791,197887386913,2559189842240,33383097891135,438714241508615,5803049210371375,77199163872173757,1032215519193531310,13864180990526161995,186975433988014039830 ⋆ G.f. satisfies A(x) = 1 + x * A(x) ^ 5 * (1 + x * A(x) ^ 5). ● a(n) = (1 / (5 * n + 1)) * Sum _{ k=0..n } binomial(5 * n + 1,k) * binomial(k,n - k). ●

► [A125558] 1,1,6,50,490,5292,60984,736164,9202050,118195220,1551580888,20734762776,281248448936,3863302870000,53644719852000,751920156592200,10626401036545650,151269944167296900,2167317913508055000 ⋆ Central column of triangle A090181. ● a(n) = binomial(2 * n,n) ^ 2 - binomial(2 * n + 1,n) * binomial(2 * n - 1,n). - _ Jeremy Tan _ , Apr 12 2021 ●

► [A341424] 6,51,177,547,1348,2958,5574,10084,16974,27450,41970,62671,90216,128082,175867,238018,316373,414998,534094,682144,859705,1075165,1326551,1627896,1976582 ⋆ Number of positive solutions to (x _ 1) ^ 2 + (x _ 2) ^ 2 + .. . + (x _ 5) ^ 2 <= n ^ 2. ● a(n) is the coefficient of x ^ (n ^ 2) in expansion of (theta _ 3(x) - 1) ^ 5 / (32 * (1 - x)). ●

► [A050916] 1,6,51,376,2501,15626,93751,546876,3125001,17578126,97656251,537109376,2929687501,15869140626,85449218751,457763671876,2441406250001,12969970703126,68664550781251,362396240234376,1907348632812501 ⋆ a(n) = n * 5 ^ n + 1. ● a(n) = 11 * a(n - 1) - 35 * a(n - 2) + 25 * a(n - 3); a(0)=1, a(1)=6, a(2)=51. [_ Harvey P. Dale _ , Sep 15 2011] ●

► [A199685] 6,51,501,5001,50001,500001,5000001,50000001,500000001,5000000001,50000000001,500000000001,5000000000001,50000000000001,500000000000001,5000000000000001,50000000000000001,500000000000000001 ⋆ a(n) = 5 * 10 ^ n + 1. ● a(n) = 10 * a(n - 1) - 9. ● a(n) = 11 * a(n - 1) - 10 * a(n - 2). ●

► [A002295] 1,1,6,51,506,5481,62832,749398,9203634,115607310,1478314266,19180049928,251857119696,3340843549855,44700485049720,602574657427116,8175951659117794,111572030260242090,1530312970340384580,21085148778264281865,291705220704719165526 ⋆ Number of dissections of a polygon: binomial(6n,n) / (5n + 1). ● a(n) = binomial(6 * n,n - 1) / n, n >= 1, a(0)=1. From the Lagrange series of the o.g.f. A(x) with its above given implicit equation. ● a(n) = upper left term in M ^ n, M = the production matrix: ● a(n) are special values of Jacobi polynomials, in Maple notation: ● a(0) = 1; a(n) = Sum _{ i1 + i2 + . .. + i6=n - 1 } a(i1) * a(i2) * ... * a(i6) for n>=1. - _ Robert FERREOL _ , Apr 03 2015 ●

► [A292053] 0,6,52,228,708,1778,3864,7560,13656,23166,37356,57772,86268,125034,176624,243984,330480,439926,576612,745332,951412,1200738,1499784,1855640,2276040 ⋆ Wiener index of the n X n king graph. ● a(n) = (n - 1) * n * (n + 1) * (7 * n ^ 2 + 2) / 30. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). ●

► [A287082] 6,52,360,2576,18336,130624,930432,6627584,47208960,336274432,2395318272,17062105088,121535176704,865707900928,6166528819200,43924836122624,312881247289344,2228686172717056,15875167014617088,113080491469438976 ⋆ Number of edge covers on the n - web graph. ● a(n) = (3 - sqrt(17)) ^ n + (3 + sqrt(17)) ^ n. ● a(n) = 6 * a(n - 1) + 8 * a(n - 2) for n>2. - _ Colin Barker _ , May 20 2017 ● a(n) = I ^ n * 2 ^ ((3 * n + 2) / 2) * ChebyshevT(n, - 3 * I / (2 * sqrt(2))). - _ Eric W. Weisstein _ , Dec 24 2017 ●

► [A334978] 0,0,6,52,409,3208,25484,205452,1679332,13894848,116193246,980658172,8343605534,71492410640,616418176920,5344364518140,46565472754044,407529832131712,3580911446989368,31579384975219920,279414033129153065,2479725948121016040 ⋆ a(n) is the total number of down steps between the (n - 1) - th and n - th up steps in all 3 - Dyck paths of length 4 * n. A 3 - Dyck path is a nonnegative lattice path with steps (1, 3), (1, - 1) that starts and ends at y = 0. ● a(0) = 0 and a(n) = binomial(4 * n + 5, n + 1) / (4 * n + 5) - 4 * binomial(4 * n + 1, n) / (4 * n + 1) for n > 0. ●

► [A084773] 1,6,52,504,5136,53856,575296,6225792,68026624,748832256,8291791872,92255680512,1030537089024,11550176206848,129824329777152,1462841567576064,16518691986407424,186887008999047168,2117944490818011136,24038305911245635584,273199990096465494016 ⋆ Coefficients of 1 / sqrt(1 - 12 * x + 4 * x ^ 2); also, a(n) is the central coefficient of (1 + 6 * x + 8 * x ^ 2) ^ n. ● a(n) = Sum _{ k=0..floor(n / 2) } C(n, k) * C(2(n - k), n) * (- 1) ^ k * 3 ^ (n - 2 * k). (End) ● a(n) = 2 ^ n * hyper2F1(- n, - n, 1, 2). - _ Peter Luschny _ , May 20 2015 ●

► [A365194] 1,1,6,52,529,5889,69462,853013,10791018,139659604,1840435530,24611295075,333132371248,4555465710569,62839303262352,873363902976309,12218178082489873,171918448407833112,2431415226089290680,34544425914499450493,492807213597429920649 ⋆ G.f. satisfies A(x) = 1 + x * A(x) ^ 5 / (1 - x * A(x) ^ 6). ● a(n) = Sum _{ k=0..n } binomial(6 * n - k + 1,k) * binomial(n - 1, n - k) / (6 * n - k + 1). ●

► [A066357] 1,1,6,53,554,6362,77580,986253,12927170,173452334,2370742868,32892031042,462030186916,6557906929108,93909078262808,1355087936016957,19684187540818866,287612514032460070,4224238030616082948,62329883931236020470,923519220367120779820 ⋆ Number of ordered (i.e., planar) trees on 2n edges with every subtree at the root having an even number of edges. ● a(0) = 1,a(n) = (1 / n) * Sum _{ k=0..n } C(4 * n,k) * C(3 * n - k - 2,n - k - 1), n>1. - _ Paul Barry _ , Apr 09 2007 ● a(n) = ((2 ^ (4 * n)) / Gamma(1 / 2)) * ((6 * (2 * n + 1) * Gamma(2 * n + 1 / 2) / Gamma(2 * n + 3)) - 2 * Gamma(n + 1 / 2) / Gamma(n + 2)). - David Dickson (dcmd(AT)unimelb.edu.au), Nov 10 2009 ● a(n) = C(2 * n + 1) + 2 * C(2 * n) - 2 ^ (2 * n + 1) * C(n), where C(n) is the Catalan number A000108. This formula can be obtained by manipulating generating functions. The equivalence of this formula and the Barry (Apr 09 2007) sum can be established by the WZ method with a second - order operator. A combinatorial interpretation of the Barry sum would be nice. - _ David Callan _ , Apr 10 2012 ● a(n) = binomial(3 * n - 2,n - 1) * hypergeom([1 - n, - 4 * n],[2 - 3 * n], - 1) / n for n>=1. - _ Peter Luschny _ , Oct 15 2015 ● a(n) = 3 * (2 * n + 1) / (2 * n + 2) / (4 * n + 1) * binomial(4 * n + 2,2 * n + 1) - 4 ^ n / (2 * n + 1) * binomial(2 * n + 2,n + 1) [Merlini et al F _ n formula] - _ R. J. Mathar _ , Oct 01 2021 ●

► [A260955] 6,54,150,294,486,726,1014,1350,1734,2166,2646,3174,3750,4374,5046,5766,6534,7350,8214,9126,10086,11094,12150,13254,14406 ⋆ Differences of the increasing arithmetic progression a ^ 2 + a, b ^ 2 + b, c ^ 2 + c, where b = 5 * a + 2, c = 7 * a + 3 and a >= 0. ● a(n) = 24 * n ^ 2 + 24 * n + 6. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Colin Barker _ , Aug 05 2015 ● a(n) * (2 * h - 1) ^ 2 = a((2 * h - 1) * n + h - 1). For h=0, a(n) = a(- n - 1); for h=7, 169 * a(n) = a(13 * n + 6). [_ Bruno Berselli _ , Aug 05 2015] ●

► [A116138] 0,6,54,324,1620,7290,30618,122472,472392,1771470,6495390,23383404,82904796,290166786,1004423490,3443737680,11708708112,39516889878,132497807238,441659357460,1464449448420,4832683179786,15878816162154 ⋆ a(n) = 3 ^ n * n * (n + 1). ● a(n) = 9 * a(n - 1) - 27 * a(n - 2) + 27 * a(n - 3). - _ Vincenzo Librandi _ , Feb 28 2013 ●

► [A060774] 1,6,54,384,2550,16506,105840,677088,4335606,27829230,179161554,1156987728,7493841264,48672149064,316920674880,2068273848384,13525486999542,88612412883030,581503640659830,3821691744347400,25150239955660050,165713382866931570 ⋆ a(n) = number of lattice paths from (0,0,0) to (n,n,n) along the cracks on the surface of a Rubik - ized n X n X n cube so that no step increases distance from goal. ● a(n) = 6 * binomial(3n, n) - 6 * binomial(2n, n). ●

► [A125837] 0,6,54,438,3510,28086,224694,1797558,14380470,115043766,920350134,7362801078,58902408630,471219269046,3769754152374,30158033218998,241264265751990,1930114126015926,15440913008127414,123527304065019318,988218432520154550,7905747460161236406 ⋆ Numbers whose base 8 or octal representation is 6666666.....6. ● a(n) = 8 * a(n - 1) + 6 for n>1, a(1)=0. - _ Vincenzo Librandi _ , Oct 03 2010 ●

► [A353207] 1,6,54,474,3962,32306,260562,2091746,16758754,134154690,1073526594,8589199746,68716967810,549747247874,4398017264898,35184272236034,281474635791874,2251798649715714,18014394535441410,144115174507632642,1152921458282035202 ⋆ Number of edge cuts in the n - helm graph. ● a(n) = 2 + 8 ^ n - (2 - sqrt(2)) ^ n - (2 + sqrt(2)) ^ n. - _ Eric W. Weisstein _ , Mar 07 2023 ●

► [A092810] 1,6,54,486,4374,39366,354294,3188646,28697814,258280326,2324522934,20920706406,188286357654,1694577218886,15251194969974,137260754729766,1235346792567894,11118121133111046,100063090197999414,900567811781994726,8105110306037952534 ⋆ Binomial transform of a Jacobsthal trisection. ● a(n) = 2 * 9 ^ n / 3 + 0 ^ n / 3. ● a(n) = 2 * 3 ^ (2 * n - 1), for n>0. - _ Gionata Neri _ , Jun 18 2015 ●

► [A092472] 1,6,54,510,4830,45486,425502,3956238,36594558,337038702,30930925740,28302208974,258831692606,2353101799470,21397006320030,194281959853710,1761880227283710,15961196057303790,144466419007648350 ⋆ a(n)=sum(i + j + k=n,(2n)! / (i + j)! / (j + k)! / (k + i)!) 0<=i<=n, 0<=j<=n, 0<=k<=n. ● a(n) = 3 ^ (2 * n - 1) * (2 + Sum _{ k=1..n - 2 } 2 ^ (k + 2) * C(2 * k + 1,k - 1) / 3 ^ (2 * k + 2)), for n>2. - _ Vaclav Kotesovec _ , Oct 28 2012 ●

► [A228413] 1,6,54,532,4675,34425,262549,2051466,16831152,155616459,1529462564,14830618421 ⋆ Count of the first 10 ^ n primes which do not contain the digit 1. ● a(n) <= 9 ^ n. - _ Charles R Greathouse IV _ , May 21 2014 ●

► [A098658] 1,6,54,540,5670,61236,673596,7505784,84440070,956987460,10909657044,124965162504,1437099368796,16581915793800,191876454185400,2225766868550640,25874539846901190,301362287628613860 ⋆ a(n) = 3 ^ n * (2 * n)! / (n!) ^ 2. ● a(n) = [t ^ n](1 + 6 * t + 9 * t ^ 2) ^ n. ●

► [A186375] 1,6,54,588,7110,91476,1224636,16849944,236523078,3371140740,48630906324,708412918824,10403176168476,153813188724552,2287366047735480,34185974267420208,513159651195396678,7732530110414488932 ⋆ a(n) equals the sum of the squares of the expansion coefficients for (x + y + 2 * z) ^ n. ● a(n) = 4 ^ n * hypergeom([1 / 2, - n, - n], [1,1], 1). - _ Peter Luschny _ , May 24 2017 ●

► [A171681] 1,6,54,857,15058,269394,4831929,86699846,1555750918,27916779057,500946173586,8989114087586,161303106727729,2894466805243782,51939099383032278,932009322077220809,16724228697975221074 ⋆ a(n) = F(2n + 1) ^ 3 - F(3n) ^ 2 - F(6n - 2), where the F(i) are Fibonacci numbers. ● a(n) = 20 * a(n - 1) - 35 * a(n - 2) - 35 * a(n - 3) + 20 * a(n - 4) - a(n - 5). - _ R. J. Mathar _ , Nov 23 2010 ●

► [A069508] 6,55,111,1111,11111,111111,1111111,11111111,111111111,1111111111,11111111111,111111111111,1111111111111,11111111111111,111111111111111,1111111111111111,11111111111111111,111111111111111111,1111111111111111111,11111111111111111111 ★ a(1) = 6; a(n) = smallest palindromic number of the form k * a(n - 1) + 1 with k > 1. ● a(n) = { 10 ^ (n) - 1 }/ 9 for n > 2. ● a(n) = 11 * a(n - 1) - 10 * a(n - 2) for n > 3. ●

► [A061792] 6,55,153,300,496,741,1035,1378,1770,2211,2701,3240,3828,4465,5151,5886,6670,7503,8385,9316,10296,11325,12403,13530,14706 ★ 49 * (n * (n + 1) / 2) + 6. ● a(0)=6, a(1)=55, a(2)=153, a(n)=3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) [From Harvey P. Dale, Apr 11 2012] ●

► [A198855] 6,55,447,3583,28671,229375,1835007,14680063,117440511,939524095,7516192767,60129542143,481036337151,3848290697215,30786325577727,246290604621823,1970324836974591,15762598695796735,126100789566373887 ★ a(n) = 7 * 8 ^ n - 1. ● a(n) = 8 * a(n - 1) + 7. ● a(n) = 9 * a(n - 1) - 8 * a(n - 2), n > 1. ●

► [A253475] 1,6,55,540,5341,52866,523315,5180280,51279481,507614526,5024865775,49741043220,492385566421,4874114620986,48248760643435,477613491813360,4727886157490161,46801248083088246,463284594673392295,4586044698650834700,45397162391834954701 ★ Indices of centered square numbers (A001844) which are also centered hexagonal numbers (A003215). ● a(n) = 11 * a(n - 1) - 11 * a(n - 2) + a(n - 3). ● a(n) = sqrt((- 2 - (5 - 2 * sqrt(6)) ^ n - (5 + 2 * sqrt(6)) ^ n) * (2 - (5 - 2 * sqrt(6)) ^ (1 + n) - (5 + 2 * sqrt(6)) ^ (1 + n))) / (4 * sqrt(2)). - _ Gerry Martens _ , Jun 04 2015 ●

► [A079589] 1,6,55,560,5985,65780,736281,8347680,95548245,1101716330,12777711870,148902215280,1742058970275,20448884000160,240719591939480,2840671544105280,33594090947249085,398039194165652550 ★ a(n) = C(5n + 1,n). ● a(n) is asymptotic to c * sqrt(n) * (3125 / 256) ^ n with c=0.557.... [c = 5 ^ (3 / 2) / (sqrt(Pi) * 2 ^ (7 / 2)) = 0.55753878629774... - _ Vaclav Kotesovec _ , Feb 14 2019] ● a(n) = [x ^ n] 1 / (1 - x) ^ (2 * (2 * n + 1)). - _ Ilya Gutkovskiy _ , Oct 10 2017 ●

► [A371776] 1,6,55,561,6005,66080,740342,8400074,96206994,1109874635,12877808194,150122945518,1756887201266,20628519611407,242891806678851,2866906127955287,33910670558191711,401857349039547372,4770115555036932777,56706219260783415643 ★ a(n) = Sum _{ k=0..floor(n / 3) } binomial(5 * n - k + 1,n - 3 * k). ● a(n) = [x ^ n] 1 / (((1 - x) ^ 2 - x ^ 3) * (1 - x) ^ (4 * n)). ●

► [A177059] 6,56,156,306,506,756,1056,1406,1806,2256,2756,3306,3906,4556,5256,6006,6806,7656,8556,9506,10506,11556,12656,13806,15006 ★ a(n) = 25 * n ^ 2 + 25 * n + 6. ● a(n) = (5n + 2) * (5n + 3). ● a(n) = 50 * n + a(n - 1) with a(0)=6. ●

► [A053127] 6,56,252,792,2002,4368,8568,15504,26334,42504,65780,98280,142506,201376,278256,376992,501942,658008,850668,1086008,1370754,1712304,2118760,2598960,3162510 ★ Binomial coefficients C(2 * n - 4,5). ● a(n) = binomial(2 * n - 4, 5) if n >= 5 else 0. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). - _ Harvey P. Dale _ , Jun 03 2013 ● a(n) = (2 * n - 8) * (2 * n - 7) * (2 * n - 6) * (2 * n - 5) * (2 * n - 4) / 120. - _ Wesley Ivan Hurt _ , Mar 25 2020 ●

► [A277975] 1,6,56,431,2931,18556,112306,659181,3784181,21362306,119018556,656127931,3585815431,19454956056,104904174806,562667846681,3004074096681,15974044799806,84638595581056,447034835815431,2354383468627931,12367963790893556,64820051193237306 ★ a(n) = n * x ^ n + (n - 1) * x ^ (n - 1) + . . . + x + 1 for x=5. ● a(n) = 11 * a(n - 1) - 35 * a(n - 2) + 25 * a(n - 3) for n>2. ● a(n) = (21 - 5 ^ (1 + n) + 4 * 5 ^ (1 + n) * n) / 16. ●

► [A155613] 1,6,56,486,4016,32526,261416,2094966,16770656,134198046,1073682776,8589757446,68718945296,549754219566,4398041728136,35184357739926,281474933663936,2251799684545086,18014398122061496,144115186913594406 ★ 8 ^ n - 3 ^ n + 1. ● a(n) = 11 * a(n - 1) - 24 * a(n - 2) + 14 with a(0)=1, a(1)=6. - _ Vincenzo Librandi _ , Jul 21 2010 ●

► [A183586] 6,56,520,4832,44896,417152,3875968,36013568,334620160,3109124096,28888434688,268416966656,2493996949504,23172979195904,215311796961280,2000570126041088,18588302571864064,172713262087405568 ★ 1 / 24 the number of (n + 1) X 2 0..3 arrays with every 2 X 2 subblock containing exactly three distinct values. ● a(n) = ((4 - 2 * sqrt(7)) ^ n * (- 5 + 2 * sqrt(7)) + (2 * (2 + sqrt(7))) ^ n * (5 + 2 * sqrt(7))) / (6 * sqrt(7)). ●

► [A093142] 1,6,56,556,5556,55556,555556,5555556,55555556,555555556,5555555556,55555555556,555555555556,5555555555556,55555555555556,555555555555556,5555555555555556,55555555555555556,555555555555555556,5555555555555555556,55555555555555555556,555555555555555555556,5555555555555555555556 ★ Expansion of (1 - 5x) / ((1 - x)(1 - 10x)). ● a(n) = 5 * 10 ^ n / 9 + 4 / 9. ● a(n) = 10 * a(n - 1) - 4 with a(0)=1. - _ Vincenzo Librandi _ , Aug 02 2010 ● a(n) = 11 * a(n - 1) - 10 * a(n - 2), n > 1. - _ Harvey P. Dale _ , Aug 23 2014 ●

► [A099140] 1,6,56,576,6016,62976,659456,6905856,72318976,757334016,7930904576,83053510656,869747654656,9108115685376,95381425750016,998847258034176,10460064284409856,109539215284371456,1147109554861899776 ★ a(n) = 4 ^ n * T(n,3 / 2) where T is the Chebyshev polynomial of the first kind. ● a(n) = 4 ^ n * T(n, 6 / 4) where T is the Chebyshev polynomial of the first kind; ● a(n) = Sum _{ k=0..n } 5 ^ k * binomial(2n, 2k); ● a(n) = (1 + sqrt(5)) ^ (2n) / 2 + (1 - sqrt(5)) ^ (2n) / 2. ● a(n) = a(0)=1, a(1)=6, 12 * a(n - 1) - 16 * a(n - 2) for n > 1. - _ Philippe Deléham _ , Sep 08 2009 ●

► [A371739] 1,6,56,576,6196,68406,768212,8731848,100146724,1156626990,13432735556,156713948672,1835237017324,21560768699762,253994850228896,2999267652451776,35490014668470052,420718526924212654,4995548847105422048,59402743684137281920 ★ a(n) = Sum _{ k=0..n } binomial(5 * n,k). ● a(n) = [x ^ n] 1 / ((1 - 2 * x) * (1 - x) ^ (4 * n)). ●

► [A199755] 6,56,606,6656,73206,805256,8857806,97435856,1071794406,11789738456,129687123006,1426558353056,15692141883606,172613560719656,1898749167916206,20886240847078256,229748649317860806,2527235142496468856 ★ 5 * 11 ^ n + 1. ● a(n) = 11 * a(n - 1) - 10. ● a(n) = 12 * a(n - 1) - 11 * a(n - 2). ●

► [A025749] 1,1,6,56,616,7392,93632,1230592,16612992,228890112,3204461568,45445091328,651379642368,9419951751168,137262154088448,2013178259963904,29694379334467584,440175505428578304 ★ 4th - order Patalan numbers (generalization of Catalan numbers). ● a(n) := (4 ^ (n - 1) * Sum _{ k=1..n - 1 } binomial(n + k - 1,n - 1) * Sum _{ j=0..k } binomial(j,n - 3 * k + 2 * j - 1) * 4 ^ (j - k) * binomial(k,j) * 3 ^ (- n + 3 * k - j + 1) * 2 ^ (n - 3 * k + j - 1) * (- 1) ^ (n - 3 * k + 2 * j - 1)) / n. - _ Vladimir Kruchinin _ , Apr 01 2011 ●

► [A182955] 1,1,6,56,651,8671,126997,1997798,33260799,580270730,10534337521,197986746949,3837397114948,76473239154148,1563252546786254,32716989219013821,699959257347957763,15288884723649589585 ★ G.f. satisfies: A(x) = 1 + x * A(x) * A(x * A(x)) ^ 5. ● a(n,m) = Sum _{ k=0..n } m * C(n + m,k) / (n + m) * a(n - k,5k). ●

► [A053336] 6,56,656,6656,66656,566656,6566656,66566656,666566656,6666566656,56666566656,656666566656,6656666566656,66656666566656,566656666566656,6566656666566656,56566566666566656,565666566666566656 ★ a(n) contains n digits (either '5' or '6') and is divisible by 2 ^ n. ● a(n) = a(n - 1) + 10 ^ (n - 1) * (6 - [a(n - 1) / 2 ^ (n - 1) mod 2]) i.e. a(n) ends with a(n - 1); if (n - 1) - th term is divisible by 2 ^ n then n - th term begins with a 6, if not then n - th term begins with a 5. ●

► [A181430] 0,0,6,57,272,901,2376,5362,10808,19998,34602,56727,88968,134459,196924,280728,390928,533324,714510,941925,1223904,1569729,1989680,2495086,3098376 ★ Number of distinct 5 - card poker hands using n ranks and 4 unlabeled suits. ● a(n) = n * (51 * n ^ 4 - 110 * n ^ 3 + 165 * n ^ 2 - 130 * n + 24) / 120 = n * (n - 1) * (51 * n ^ 3 - 59 * n ^ 2 + 106 * n - 24) / 120. ●

► [A221575] 6,57,342,1293,3734,8991,19014,36497,64998,109059,174326,267669,397302,572903,805734,1108761,1496774,1986507,2596758,3348509,4265046,5372079,6697862,8273313,10132134 ★ Number of 0..n arrays of length 5 with each element differing from at least one neighbor by something other than 1. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>8. ●

► [A229280] 0,6,57,468,3564,25920,182736,1259712,8538048,57106944,377913600,2479113216,16144468992,104485552128,672625741824,4310029025280,27505821597696,174908814262272,1108696193630208,7007637010120704,44178581150760960,277868041444786176 ★ Number of ascending runs in { 1,...,6 }^ n. ● a(n) = 6 ^ (n - 1) * (7 * n + 5) / 2 for n>0, a(0) = 0. ●

► [A130565] 1,6,57,650,8184,109668,1533939,22137570,327203085,4928006512,75357373305,1166880131820,18259838103852,288308609783760,4587430875645660,73484989079268690,1184104656043939071 ★ Member k=6 of a family of generalized Catalan numbers. ● a(n) = binomial((k + 1) * n - 2,n) / (k * n - 1), with k=6. ● a(n) = (6 / 7) * binomial(7 * n,n) / (7 * n - 1). [_ Bruno Berselli _ , Jan 17 2014] ●

► [A004301] 0,6,58,328,1452,5610,19950,67260,218848,695038,2170626,6699696,20507988,62407890,189123286,571432036,1722945672,5187185766,15600353130,46882846680,140820504700,422822222266,1269221639358,3809241974028,11431014253872 ★ Second - order Eulerian numbers <<n,2>>. ● a(n) = Sum _{ k=0..n - 3 } (- 1) ^ (n + k) * binomial(2 * n + 1, k) * Stirling1(2 * n - k - 2, n - k - 2). - _ Johannes W. Meijer _ , Oct 16 2009 ●

► [A217399] 6,60,61,62,63,64,65,66,67,68,69,600,601,602,603,604,605,606,607,608,609,610,611,612,613 ★ Numbers starting with 6. ● a(n) = n + (53 * 10 ^ floor(log _ 10(9 * n - 8)) - 8) / 9. - _ Alan Michael Gómez Calderón _ , May 17 2023 ●

► [A007357] 6,60,90,36720,12646368,22276800,126463680,4201148160,28770487200,287704872000,1446875426304,2548696550400,14468754263040,59032517393202032,3291641594841600,8854877608980480,32916415948416000 ★ Infinitary perfect numbers. ● a(n)==0 (mod 6). Thus there are no odd infinitary perfect numbers. - _ Vladimir Shevelev _ , Mar 02 2011 ●

► [A069072] 6,60,210,504,990,1716,2730,4080,5814,7980,10626,13800,17550,21924,26970,32736,39270,46620,54834,63960,74046,85140,97290,110544,124950 ★ a(n) = (2n + 1) * (2n + 2) * (2n + 3). ● a(0)=6, a(1)=60, a(2)=210, a(3)=504, a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Harvey P. Dale _ , Dec 08 2013 ●

► [A292061] 0,0,0,6,60,300,1050,2940,7056,15120,29700,54450,94380,156156,248430,382200,571200,832320,1186056,1656990,2274300,3072300,4091010,5376756,6982800 ★ a(n) = (n - 3) * (n - 2) ^ 2 * (n - 1) ^ 2 * n / 24. ● a(n) = (n - 3) * (n - 2) ^ 2 * (n - 1) ^ 2 * n / 24. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). ●

► [A269760] 0,6,60,450,3000,18750,112500,656250,3750000,21093750,117187500,644531250,3515625000,19042968750,102539062500,549316406250,2929687500000,15563964843750,82397460937500,434875488281250 ★ Number of n X 1 0..5 arrays with some element plus some horizontally or vertically adjacent neighbor totalling five exactly once. ● a(n) = 6 * 5 ^ (n - 2) * (n - 1). ●

► [A248217] 0,6,60,504,4080,32736,262080,2097024,16776960,134217216,1073740800,8589932544,68719472640,549755805696,4398046494720,35184372056064,281474976645120,2251799813554176,18014398509219840,144115188075331584,1152921504605798400 ★ a(n) = 8 ^ n - 2 ^ n. ● a(n) = 10 * a(n - 1) - 16 * a(n - 2). ●

► [A054880] 0,6,60,546,4920,44286,398580,3587226,32285040,290565366,2615088300,23535794706,211822152360,1906399371246,17157594341220,154418349070986,1389765141638880,12507886274749926,112570976472749340,1013138788254744066,9118249094292696600,82064241848634269406,738578176637708424660 ★ a(n) = 3 * (9 ^ n - 1) / 4. ● a(n) = 9 * a(n - 1) + 6 with n > 0, a(0) = 0. - _ Vincenzo Librandi _ , Aug 07 2010 ●

► [A122653] 0,6,60,594,5880,58206,576180,5703594,56459760,558894006,5532480300,54765908994,542126609640,5366500187406,53122875264420,525862252456794,5205499649303520,51529134240578406,510085842756480540,5049329293324226994,49983207090485789400 ★ a(n) = 10 * a(n - 1) - a(n - 2) with a(0)=0, a(1)=6. ● a(n) = (1 / 4) * (5 + 2 * sqrt(6)) ^ n * sqrt(6) - (1 / 4) * sqrt(6) * (5 - 2 * sqrt(6)) ^ n, with n>=0. - _ Paolo P. Lava _ , Oct 02 2008 ●

► [A299869] 6,60,594,5945,59454,594535,5945351,59453514,594535135,5945351351,59453513510,594535135104,5945351351035,59453513510351,594535135103509,5945351351035091,59453513510350914,594535135103509135,5945351351035091350820 ★ The sum of the first n terms of the sequence is the concatenation of the first n digits of the sequence, and a(1) = 6. ● a(n) = c(n) - c(n - 1), where c(n) = concat

enation of the first n digits, c(n) ~ 0.66 * 10 ^ n, a(n) ~ 0.59 * 10 ^ n. See A300000 for the proof. - _ M. F. Hasler _ , Feb 22 2018 ●

▶ [A085364] 1,6,60,654,7458,87378,1042152,12587730,153479508,1885010946,23285957604,289018502682,3601315495050,45023019250398,564465885846216,7094214579174558,89351097367355826,1127492973620753010 ⋆ a(0)=1, for n>0: a(n) = 6 * 13 ^ (n - 1) - (1 / 2) * Sum _{ i=1..n - 1 } a(i) * a(n - i). ● a(0) = 1; a(n) = (6 / n) * Sum _{ k=0..n - 1 } (n + k) * a(k). - _ Seiichi Manyama _ , Mar 28 2023 ●

▶ [A155458] 1,1,6,61,516,4621,40626,359281,3171336,28010041,247343646,2184312901,19289468556,170344633861,1504304517066,13284442948921,117314270620176,1035996697444081,9148836950168886,80792939137115341,713478558576914196 ⋆ a(n)=6 * a(n - 1) + 25 * a(n - 2), n>2 ; a(0)=1, a(1)=1, a(2)=6 . ● a(n)=(1 / 2) *{ [3 + sqrt(34)] ^ n + [3 - sqrt(34)] ^ n }+ (3 / 68) * sqrt(34) *{ [3 + sqrt(34)] ^ n - [3 - sqrt(34)] ^ n }+ [C(2 * n,n) mod 2], with n>=0 [From _ Paolo P. Lava _ , Jan 26 2009] ●

▶ [A034659] 1,6,61,666,7321,80526,885781,9743586,107179441,1178973846,12968712301,142655835306,1569214188361,17261356071966,189874916791621,2088624084707826,22974864931786081,252723514249646886 ⋆ a(n) = (11 ^ n + 1) / 2. ● a(n) = 11 * a(n - 1) - 5 (with a(0)=1). - _ Vincenzo Librandi _ , Nov 17 2010 ●

▶ [A064088] 1,1,6,61,766,10746,161376,2537781,41260086,687927166,11698135396,202104763026,3537486504556,62595852983236,1117926476207316,20124876291104421,364797768048805926,6652740911381353206 ⋆ Generalized Catalan numbers C(5; n). ● a(n)= Sum _{ m=0..n - 1 } (n - m) * binomial(n - 1 + m, m) * (5 ^ m) / n. ● a(n) = upper left term in M ^ n, M = an infinite square production matrix as follows: ●

▶ [A198965] 6,62,566,5102,45926,413342,3720086,33480782,301327046,2711943422,24407490806,219667417262,1977006755366,17793060798302,160137547184726,1441237924662542,12971141321962886,116740271897665982,1050662440707899384 6 ⋆ 7 * 9 ^ n - 1. ● a(n) = 9 * a(n - 1) + 8. ● a(n) = 10 * a(n - 1) - 9 * a(n - 2), n>1. ●

▶ [A190726] 1,6,62,720,8806,110916,1423796,18520788,243289670,3220011684,42872967012,573608356272,7705343534716,103857425975400,1403902871946000,19024773303675420,258372666772083270,3515644245559211172,4791819351240983 1380 ⋆ Central coefficients of Riordan matrix A118384. ● a(n) = Sum _{ k=0..n } binomial(2 * n, k) * binomial(2 * n, n - k) * 2 ^ k. ● a(n) = Sum _{ k=0..n } binomial(2 * n, k) * binomial(k, n - k) * 2 ^ (n - k) * 3 ^ (2 * k - n). ●

▶ [A027811] 6,63,336,1260,3780,9702,22176,46332,90090,165165,288288,482664,779688,1220940,1860480,2767464,4029102,5753979,8075760,11157300,15195180,20424690,27125280,35626500,46314450 ⋆ a(n) = 3 * (n + 1) * binomial(n + 5,6). ● a(n) = C(n + 1, 2) * C(n + 5, 5). - _ Zerinvary Lajos _ , May 26 2005; corrected by _ R. J. Mathar _ , Feb 10 2016 ●

▶ [A027950] 1,6,63,344,1383,4685,14323,41119,113590,306605,816410,2157046,5674578,14893364,39040633,102273950,267839033,701315739,1836198205,4807389285,12586103720,32951083211,86267338468,225851160284,591286410708 ⋆ a(n) = T(2n,n + 2), T given by A027948. ● a(n) = Sum _{ j=0..n - 2 } binomial(2 * n - j, j + 5), with a(2) = 1 for n >= 2. ● a(n) = Fibonacci(2 * n + 6) - (48 + 47 * n + 23 * n ^ 2 + 4 * n ^ 3 + 4 * n ^ 4) / 6 for n >= 3. (End) ●

▶ [A053700] 6,63,364,1365,3906,9331,19608,37449,66430,111111,177156,271453,402234,579195,813616,1118481,1508598,2000719,2613660,3368421,4288306,5399043,6728904,8308825,10172526 ⋆ a(n) = 111111 in base n. ● a(n) = n ^ 5 + n ^ 4 + n ^ 3 + n ^ 2 + n + 1 = (n ^ 6 - 1) / (n - 1). ●

▶ [A053535] 1,6,63,540,4941,44226,398763,3586680,32286681,290560446,2615103063,23535750420,211822285221,1906398972666,17157595536963,154418345483760,1389765152400561,12507886242464886,112570976569604463 ⋆ Expansion of 1 / ((1 + 3 * x) * (1 - 9 * x)). ● a(n) = (3 ^ n / 4) * (3 ^ (n + 1) + (- 1) ^ n). ● a(n) = 6 * a(n - 1) + 27 * a(n - 2), with a(0)=1, a(1)=6. ●

▶ [A083225] 1,6,64,384,4096,24576,262144,1572864,16777216,100663296,1073741824,6442450944,68719476736,412316860416,4398046511104,26388279066624,281474976710656,1688849860263936,18014398509481984,108086391056891904 ⋆ a(n) = (7 * 8 ^ n + (- 8) ^ n) / 8. ● a(n) = (7 * 8 ^ n + (- 8) ^ n) / 8. ● a(n) = 64 * a(n - 2); a(0)=1, a(1)=6. - _ Harvey P. Dale _ , Apr 22 2012 ●

▶ [A320528] 0,0,0,0,0,6,64,508,3428,21132,123050,688850,3752350,20032446,105372624,548066568,2826316248,14478890712,73794322750,374602205590,1895629599050,9568906539786,48208435317284,242500368793628,1218342441784468 ⋆ Number of chiral pairs of color patterns (set partitions) in a row of length n using exactly 5 colors (subsets). ● a(n) = (S2(n,k) - A(n,k)) / 2, where k=5 is the number of colors (sets), S2 is the Stirling subset number A008277 and A(n,k) = [n>1] * (k * A(n - 2,k) + A(n - 2,k - 1) + A(n - 2,k - 2)) + [n<2 & n==k & n>=0]. ● a(n) = 13 * a(n - 1) - 48 * a(n - 2) - 36 * a(n - 3) + 551 * a(n - 4) - 683 * a(n - 5) - 1542 * a(n - 6) + 3546 * a(n - 7) + 80 * a(n - 8) - 4280 * a(n - 9) + 2400 * a(n - 10) for n>10. - _ Colin Barker _ , May 12 2020 ●

▶ [A025609] 0,1,6,64,720,9136,122016,1673344,23216640,323773696,4525272576,63308468224,886046453760,12403017773056,173632453287936,2430795572936704,34030785382318080,476428879520137216,6669991618287108096,93379806486052470784,1307316833784928665600 ⋆ Number of n - move rook paths on 8 X 8 board from given corner to adjacent corner. ● a(n) = 18 * a(n - 1) - 44 * a(n - 2) - 168 * a(n - 3) for n >= 3. ●

▶ [A117794] 0,6,66,120,276,378,630,780,1128,1326,1770,2016,2556,2850,3486,3828,4560,4950,5778,6216,7140,7626,8646,9180,10296 ⋆ Hexagonal numbers divisible by 6. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5), with a(1)=0, a(2)=6, a(3)=66, a(4)=120, a(5)=276. - _ Harvey P. Dale _ , Aug 19 2011 ● a(n) = 3 / 2 * (- 1) ^ n(- 4 n + (- 1) ^ n * (6 * n(2 * n - 5) + 19) + 5) . - _ Harvey P. Dale _ , Aug 19 2011 ●

▶ [A085025] 6,66,176,336,546,806,1116,1476,1886,2346,2856,3416,4026,4686,5396,6156,6966,7826,8736,9696,10706,11766,12876,14036,15246 ⋆ a(n) = (5 * n + 1) * (5 * n + 6). ● a(0)=6, a(1)=66, a(2)=176, a(n)=3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Mar 11 2015 ●

▶ [A175455] 1,6,66,300,8220,8820,457380,1917720,17965080,18600120,2320468920,2384502120,412970037480,422245703880,430902992520,1756076802480,516336630329520,524676485052720,1922604414193663 20,1949700602189340 00,197550649551855600,200013939369644400 ⋆ a(n) = H(n) * (lcm(1,2,...,n)) ^ 2, where H(n) = harmonic numbers (1 / 1 + 1 / 2 + ... + 1 / n). ● a(n) = (1 / 1 + 1 / 2 + ... + 1 / n) * (lcm(1,2,...,n)) ^ 2. ●

▶ [A192089] 0,0,6,66,402,2028,8790,35118,131982,475344,1658382,5651226,18912498,62418180,203768862,659487678,2119617474,6774043254,21547968726,68274910026,215609878962,678936947940,2132568719358,6683705385078,20906259913566 ⋆ Number of permutations of [n] that require a 3 - letter alphabet in order to be realized by a shift. ● a(n)=3 ^ (n - 2) + sum(psi _ 3(t) * 3 ^ (n - t - 1),t=1..n - 1) - n * sum(psi _ 2(t) * 2 ^ (n - t - 1),t=0..n - 1), where psi _ N(t) is the number of primitive words of length t over an N - letter alphabet, which is expressible in terms of the Möbius function. ●

▶ [A249639] 0,0,6,66,426,2706,16386,99186,595986,3580986,21490986,128976186,773887386,4643505066,27861211146,167168350506,1003011186666,6018073616706,36108448196946,216650728156866,1299904407916386,7799426681319186,46796560321735986 ⋆ Number of strings of length n over a 6 letter alphabet that begin with a nontrivial palindrome. ● a(0) = 0; a(1) = 0; a(n + 1) = 6 * a(n) + 6 ^ ceiling((n + 1) / 2) - a(ceiling((n + 1) / 2)) ●

▶ [A243719] 1,6,66,609,3375,14181,47485,136085,342739,784059,1653033,3267471,6107271,10901405,18683285,30934341,49659915,77611995,118386689,176753639,258774303,372270981,526962861,735113445,1011678595 ⋆ Number of inequivalent (mod D _ 8) ways to place 4 nonattacking knights on an n X n board. ● a(n) = (n ^ 8 - 54 * n ^ 6 + 144 * n ^ 5 + 1048 * n ^ 4 - 5280 * n ^ 3 - 2432 * n ^ 2 + 52800 * n - 78912 + (1 - (- 1) ^ n) / 2 * (14 * n ^ 4 - 48 * n ^ 3 - 158 * n ^ 2 + 768 * n - 723)) / 192 for n >= 6. ●

▶ [A155630] 1,6,66,666,6306,58026,527346,4766586,42981186,387158346,3485735826,31376865306,282412759266,2541798719466,22876524019506,205890058352826,1853015893884546,16677164519797386,150094566577522386 ⋆ a(n) = 9 ^ n - 4 ^ n + 1 ^ n. ● a(n) = 13 * a(n - 1) - 36 * a(n - 2) + 24 with a(0)=1, a(1)=6. - _ Vincenzo Librandi _ , Jul 21 2010 ●

▶ [A002280] 0,6,66,666,6666,66666,666666,6666666,66666666,666666666,6666666666,66666666666,666666666666,6666666666666,66666666666666,666666666666666,6666666666666666,66666666666666666,666666666666666666 ⋆ a(n) = 6 * (10 ^ n - 1) / 9. ● a(n) = 10 * a(n - 1) + 6, with a(n)=0. - _ Paolo P. Lava _ , Jan 23 2009 ● a(n) = 11 * a(n - 1) - 10 * a(n - 2) with a(0)=0, a(1)=6. (End) ● a(n) = a(n - 1) + 6 * 10 ^ (n - 1) with a(0)=0. - _ Vincenzo Librandi _ , Jul 22 2010 ●

▶ [A073549] 0,6,66,666,6666,66666,666666,6666666,66666666,666666666,6666666666,66666666666,666666666666,6666666666666,66666666666666,666666666666666,6666666666666666,66666666666666666,666666666666666666,6666666666666666666,66666666666666666666,666666666666666666666 ⋆ Number of Fibonacci numbers F(k), k <= 10 ^ n, which end in 6. ● a(n) = (10 ^ n - 10) / 15. - _ Robert Gerbicz _ , Sep 06 2002 ● a(n) = a(n - 1) + 6 * 10 ^ (n - 2), with a(1)=0. - _ Vincenzo Librandi _ , Aug 08 2010 ●

▶ [A165229] 1,6,66,756,8676,99576,1142856,13116816,150544656,1727834976,19830751776,227602011456,2612239626816,29981263453056,344101723675776,3949333103390976,45327386898637056,520232644163298816,5970827408567763456,68528533037833368576,786517432002593842176 ⋆ a(n) = 12 * a(n - 1) - 6 * a(n - 2), with a(0)=1, a(1)=6. ● a(n) = (1 / 2) * ((6 + sqrt(30)) ^ n + (6 - sqrt(30)) ^ n). - _ Paolo P. Lava _ , Sep 16 2009 ●

▶ [A127858] 6,66,786,9426,113106,1357266,16287186,195446226,2345354706,28144256466,337731077586,4052772931026,48633275172306,583599302067666,7003191624811986,84038299497743826,1008459593972925906 ⋆ Positive integers n such that r(n ^ 2)=r(n) ^ 2, where r is the cyclic replacement map of the digits d of n in base 12, that is, d - >d + 1 if d<11 and d - >0 if d=11. ● a(n) = 5 * (12 ^ n - 1) / 11 + 1. - _ Max Alekseyev _ , Jul 27 2023 ●

▶ [A173535] 1,6,66,786,9426,113106,1357266,16287186,195446226,2345354706,28144256466,337731077586,4052772931026,48633275172306,583599302067666,7003191624811986,84038299497743826,1008459593972925906,12101515127675110866 ⋆ a(n) = (1 / 11) * (5 * 12 ^ n + 6). ● a(n) = 12 * a(n - 1) - 6, a(0)=1. ●

▶ [A004355] 1,6,66,816,10626,142506,1947792,26978328,377348994,5317936260,75394027566,1074082795968,15363284301456,220495674290430,3173734438530120,45795673964460816,662252084388541314 ⋆ Binomial coefficient C(6n,n). ● a(n) = C(6 * n - 1,n - 1) * C(36 * n ^ 2,2) / (3 * n * C(6 * n + 1,3)), n>0. - _ Gary Detlefs _ , Jan 02 2014 ● a(n) = GegenbauerC(n, - 3 * n, - 1). - _ Peter Luschny _ , May 07 2016 ●

▶ [A130977] 1,6,66,876,12786,197796,3183156,52718616,892401426,15368638836,268388185596,4741271556456,84573471344916,1521119577791976,27554494253636136,502257203287150896,9205363627419463506 ⋆ G.f.: 5 / (2 + 3 * sqrt(1 - 20 * x)). ● a(n) = upper left term in M ^ n, M = an infinite square production matrix as follows: ●

▶ [A152390] 6,68,252,648,1370,2556,4368,6992,10638,15540,21956,30168,40482,53228,68760,87456,109718,135972,166668,202280,243306,290268,343712,404208,472350 ⋆ Arises in enumerating non - degenerate colorings in Brook's Theorem. ● a(n) = (n ^ 3 + 8 * n ^ 2 + 19 * n + 6) * (n + 1). ●

▶ [A128869] 6,68,683,6837,68377,683772,6837722,68377223,683772233,6837722339,68377223398,683772233983,6837722339831,68377223398316,683772233983162,6837722339831620,68377223398316206,683772233983162066 ⋆ a(n) = the largest number one can subtract from 10 ^ n such that the square of the result is strictly greater than 10 ^ (2 * n - 1). ● a(n) = floor(10 ^ n * (1 - sqrt(0.1))) That means that a(n) gives the decimal expansion of 1 - sqrt(0.1). ●

▶ [A288719] 0,6,69,399,1467,4197,10203,22047,43557,80187,139422,231228,367847,567837,849657,1239297,1767453,2470947,3393492,4586502,6109947,8033253,10436247,13410147,17058597 ⋆ Detour index of the n - triangular grid graph. ● a(n) = (n ^ 6 + 9 * n ^ 5 + 29 * n ^ 4 + 39 * n ^ 3 + 18 * n ^ 2 - 48) / 16 for n >3. - _ Andrew Howroyd _ , Jun 19 2017 ●

▶ [A198699] 6,69,699,6999,69999,699999,6999999,69999999,699999999,6999999999,69999999999,699999999999,6999999999999,69999999999999,699999999999999,6999999999999999,69999999999999999 ⋆ 7 * 10 ^ n - 1 ● a(n) = 10 * a(n - 1) + 9. a(n) = 11 * a(n - 1) - 10 * a(n - 2), n>1. ●

► [A282817] 0,0,0,6,72,375,1320,3675,8736,18522,36000,65340,112200,184041,290472,443625,658560,953700,1351296,1877922,2565000,3449355,4573800,5987751,7747872 ⋆ Number of inequivalent ways to color the faces of a cube using at mos t n colors so that no color appears more than twice. ● a(n) = (n - 2) ^ 2 * (n - 1) * n ^ 2 * (n + 5) / 24. ●

► [A177468] 1,6,72,463,4030,28908,231393,1733366,13499224,102723495,792454734,6063888364,46624820793,357473932822,2745399810920,21063557869407,161702118409342,1240928795315404,9525079068251761,73103241532364950 ⋆ Expansion of g.f.: (1 + x + 12 * x ^ 2 - 8 * x ^ 3) / (1 - 5 * x - 30 * x ^ 2 + 69 * x ^ 3 + 31 * x ^ 4 - 22 * x ^ 5) ● a(0)=1, a(1)=6, a(2)=72, a(3)=463, a(4)=4030, a(n)=5 * a(n - 1) + 30 * a(n - 2) - 69 * a(n - 3) - 31 * a(n - 4) + 22 * a(n - 5). - _ Harvey P. Dale _ , Sep 09 2014 ●

► [A052791] 0,0,0,6,72,540,3240,17010,81648,367416,1574640,6495390,25981560,101328084,386889048,1450833930,5356925280,19514513520,70252248672,250273635894,883318714920,3091615502220,10739295955080,37050571045026,127030529297232 ⋆ 3 ^ (n - 3) * n * (n - 1) * (n - 2). ● a(n) = n! * sum(i + j + k=n, ijk / (i!j!k!)) - _ Benoit Cloitre _ , Nov 11 2004 ●

► [A281774] 0,0,0,6,72,630,4680,31206,193032,1131990,6386760,35025606,188061192,993760950,5187840840,26831095206,137770476552,703455087510,3576115150920,18117222864006,91536570671112,461496288791670,2322770028381000,11675109032796006 ⋆ Number of distinct topologies on an n - set with exactly 6 open sets. ● a(n) = 3! Stirling2(n, 3) + 3 / 2 * 4! Stirling2(n, 4) + 5! Stirling2(n, 5). ● a(n) = 2 - 2 ^ (2 + n) - 7 * 2 ^ (2 * n - 1) + 5 * 3 ^ n + 5 ^ n for n>5. ● a(n) = 15 * a(n - 1) - 85 * a(n - 2) + 225 * a(n - 3) - 274 * a(n - 4) + 120 * a(n - 5) for n>5. ●

► [A036292] 0,6,72,648,5184,38880,279936,1959552,13436928,90699264,604661760,3990767616,26121388032,169789022208,1097098297344,7052774768640,45137758519296,287753210560512,1828079220031488,11577835060199424,73123168801259520,460675963447934976 ⋆ a(n) = n * 6 ^ n. ● a(n) = 12 * a(n - 1) - 36 * a(n - 2). - _ Vincenzo Librandi _ , Apr 10 2016 ●

► [A061690] 0,0,6,72,650,5400,43757,353192,2862330,23352300,191891117,1587587760,13215894133,110619113423,930376519256,7858437064232,66627124896218,566791391339532,4836144006188165,41375938305568772,354859541163656045 ⋆ Generalized Stirling numbers. ● a(n) = s(n, k) = Sum _{ pi } n! / (k(1)! * 1! ^ k(1) * k(2)! * 2! ^ k(2) * ... * k(n)! * n! ^ k(n)) * (n! / (1! ^ k(1) * 2! ^ k(2) * ... * n! ^ k(n))) ^ L, where pi runs through all partitions k(1) + 2 * k(2) + ... + n * k(n) = n such that k = k(1) + k(2) + ... + k(n), with k = 3 and L = 1. ●

► [A133678] 1,6,72,684,7128,71496,728352,7372944,74828448,758634336,7694600832,78030247104,791354717568,8025398683776,81389290240512,825402486161664,8370765107071488,84891495061218816,860921104864315392,8730969421757082624,88544502934843742208 ⋆ a(n)=6 * a(n - 1) + 42 * a(n - 2) for n>=3, a(0)=1, a(1)=6, a(2)=72 . ● a(n)=3 * [3 + sqrt(51)] ^ (n - 1) + (9 / 17) * [3 + sqrt(51)] ^ (n - 1) * sqrt(51) + 3 * [3 - sqrt(51)] ^ (n - 1) - (9 / 17) * sqrt(51) * [3 - sqrt(51)] ^ (n - 1) + (1 / 7) * [C(2 * n,n) mod 2], with n>=0 [From _ Paolo P. Lava _ , Aug 28 2008] ● a(1)=6, a(2)=72, a(n)=6 * a(n - 1) + 42 * a (n - 2). - _ Harvey P. Dale _ , Mar 25 2015 ●

► [A059410] 0,6,72,702,6480,58806,530712,4780782,43040160,387400806,3486725352,31380882462,282429005040,2541864234006,22876787671992,205891117745742,1853020145805120,16677181570526406,150094634909578632,1350851716510730622,12157665455570144400 ⋆ J _ n(9) (see A059379). ● a(n) = 9 ^ n - 3 ^ n; a(n) = 12 * a(n - 1) - 27 * a(n - 2) for n > 1. - _ Vincenzo Librandi _ , Jun 03 2011 ●

► [A099673] 6,72,738,7404,74070,740736,7407402,74074068,740740734,7407407400,74074074066,740740740732,7407407407398,74074074074064,740740740740730,7407407407407396,74074074074074062,740740740740740728 ⋆ Partial sums of rep digits of A002280. ● a(n) = (2 / 27) * (10 ^ (n + 1) - 9 * n - 10). - R. Piyo (nagoya314(AT)yahoo.com), Dec 10 2004 ●

► [A067419] 1,6,72,864,10368,124416,1492992,17915904,214990848,2579890176,30958682112,371504185344,4458050224128,53496602689536,641959232274432,7703510787293184,92442129447518208,1109305553370218496 ⋆ Fourth column of triangle A067417. ● a(n) = 6 * (3 * 4) ^ (n - 1), n >= 1, a(0)=1. ●

► [A196882] 1,1,6,72,1086,15076,182832,1957192,18583582,154252476,1166493640,8049232896,50660059120,292884155232,1582952988656,8045405614080,38559135542174,174391413419872,746859203235976,3047000304533760,11915800843394536,44815994695641600 ⋆ Number of partitions of n ^ 4 into powers of 4. ● a(n) = [x ^ (n ^ 4)] 1 / Product _{ j>=0 } (1 - x ^ (4 ^ j)). ●

► [A041063] 1,6,73,444,5401,32850,399601,2430456,29565073,179820894,2187415801,13304315700,161839204201,984339540906,11973913695073,72827821711344,885907774231201,5388274467098550,65545201379413801,398659482743581356,4849458994302390073 ⋆ Denominators of continued fraction convergents to sqrt(38). ● a(n) = 74 * a(n - 2) - a(n - 4). - _ Vincenzo Librandi _ , Dec 10 2013 ●

► [A041060] 6,73,882,10657,128766,1555849,18798954,227143297,2744518518,33161365513,400680904674,4841332221601,58496667563886,706801342988233,8540112783422682,103188154744060417,1246797969712147686 ⋆ Numerators of continued fraction convergents to sqrt(37). ● a(n) = 12 * a(n - 1) + a(n - 2), n > 1; a(0)=6, a(1)=73. ● a(n) = 3 * ((6 - sqrt(37)) ^ n + (6 + sqrt(37)) ^ n) + (1 / 2) * sqrt(37) * ((6 + sqrt(37)) ^ n - (6 - sqrt(37)) ^ n), with n >= 0. - _ Paolo P. Lava _ , Nov 28 2008 ●

► [A089926] 1,6,73,882,10657,128766,1555849,18798954,227143297,2744518518,33161365513,400680904674,4841332221601,58496667563886,706801342988233,8540112783422682,103188154744060417,1246797969712147686 ⋆ a(n) = 12 * a(n - 1) + a(n - 2), a(0)=1, a(1)=6. ● a(n) = ((6 + sqrt(37)) ^ n + (6 - sqrt(37)) ^ n) / 2; ● a(n) = Sum _{ k=0..floor(n / 2) } C(n, 2k) * 37 ^ k * 6 ^ (n - 2k). ● a(n) = T(n, 6i) * (- i) ^ n with T(n, x) Chebyshev's polynomials of the first kind (see A053120) and i ^ 2 = - 1. ●

► [A049235] 0,6,75,708,5991,47868,369315,2783448,20631126,151026498,1094965524,7878119760,56330252412,400703095284,2838060684483,20027058300144,140874026880204,988194254587242,6915098239841331,48285969880645908,336521149274459979 ⋆ Sum of balls on the lawn for the s=3 tennis ball problem. ● a(n) is asymptotic to c * sqrt(n) * (27 / 4) ^ n with c=2.4... - _ Benoit Cloitre _ , Jan 26 2003, c = 81 * sqrt(3 / Pi) / 32 = 2.4735502165085321... - _ Vaclav Kotesovec _ , Feb 07 2019 ●

► [A263228] 0,6,76,210,408,670,996,1386,1840,2358,2940,3586,4296,5070,5908,6810,7776,8806,9900,11058,12280,13566,14916,16330,17808 ⋆ a(n) = 2 * n * (16 * n - 13). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A016090] 6,76,376,9376,9376,109376,7109376,87109376,787109376,1787109376,81787109376,81787109376,81787109376,400817871093 76,740081787109376,3740081787109376,43740081787109376,743740081787109376,7743740081787109376,7743740081787109376 ⋆ a(n) = 16 ^ (5 ^ n) mod 10 ^ n: Automorphic numbers ending in digit 6, with repetitions. ● a(n) = 16 ^ (5 ^ n) mod 10 ^ n. ● a(n + 1) == 2 * a(n) - a(n) ^ 2 (mod 10 ^ (n + 1)). - _ Eric M. Schmidt _ , Jul 28 2012 ● a(n) = 6 ^ (5 ^ n) mod 10 ^ n. - _ Sylvie Gaudel _ , Feb 17 2018 ● a(2 * n) = (3 * a(n) ^ 2 - 2 * a(n) ^ 3) mod 10 ^ (2 * n). - _ Sylvie Gaudel _ , Mar 12 2018 ● a(n) = 6 ^ 5 ^ (n - 1) mod 10 ^ n. - _ M. F. Hasler _ , Jan 26 2020 ● a(n) = 2 ^ (10 ^ n) mod 10 ^ n for n >= 2. - _ Peter Bala _ , Nov 10 2022 ●

► [A181343] 6,76,386,1251,3126,6606,12426,21461,34726,53376,78706,112151,155286,209826,277626,360681,461126,581236,723426,890251,1084406,1308726,1566186,1859901,2193126 ⋆ a(n) = (35 * n ^ 4 - 35 * n ^ 3 + 55 * n ^ 2 - 25 * n + 6) / 6. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) + 140 for n > 4; a(1)=6, a(2)=76, a(3)=386, a(4)=1251. ●

► [A053337] 6,76,776,7776,67776,667776,6667776,66667776,766667776,6766667776,66766666777 6,66766666777,666766667776,7666766667776,77666766667776,777666766667776,7777666766667776,77777666766667776,777777666766667776 ⋆ a(n) contains n digits (either '6' or '7') and is divisible by 2 ^ n. ● a(n)=a(n - 1) + 10 ^ (n - 1) * (6 + [a(n - 1) / 2 ^ (n - 1) mod 2]) i.e. a(n) ends with a(n - 1); if (n - 1) - th term is divisible by 2 ^ n then n - th term begins with a 6, if not then n - th term begins with a 7. ●

► [A199026] 6,76,846,9316,102486,1127356,12400926,136410196,1500512166,16505633836,181561972206,1997181694276,21968998637046,241658985007516,2658248835082686,29240737185909556,321648109045005126,3538129199495056396 ⋆ 7 * 11 ^ n - 1. ● a(n) = 11 * a(n - 1) + 10. ● a(n) = 12 * a(n - 1) - 11 * a(n - 2), n>1. ●

► [A155643] 1,6,76,876,9376,96876,984376,9921876,99609376,998046876,9990234376,99951171876,999755859376,9998779296876,99993896484376,999969482421876,9999847412109376,99999237060546876,999996185302734376 ⋆ 10 ^ n - 5 ^ n + 1. ● a(n)=15 * a(n - 1) - 50 * a(n - 2) + 36 with a(0)=1, a(1)=6 - _ Vincenzo Librandi _ , Jul 21 2010 ●

► [A167498] 6,78,342,926,1958,3566,5878,9022,13126,18318,24726,32478,41702,52526,65078,79486,95878,114382,135126,158238,183846,212078,243062,276926,313798 ⋆ a(n) = 6 + 32 * n ^ 2 + 8 * n * (7 + 8 * n ^ 2) / 3. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + 128. ●

► [A250388] 6,78,432,1560,4350,10206,21168,40032,70470,117150,185856,283608,418782,601230,842400,1155456,1555398,2059182,2685840,3456600,4395006,5527038,6881232,8488800,10383750 ⋆ Number of length 2 + 3 0..n arrays with no four consecutive terms having the maximum of any two terms equal to the minimum of the remaining two terms. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. ●

► [A208473] 1,6,78,1100,16310,248724,3863244,60784152,965571750,15451970820,248731275364,4022998982184,65326505787452,1064336612493000,17390322931354200,284844148339840560,4675649304522319110,76895312195988615780 ⋆ Central coefficients of triangle A185384. ● a(n) = binomial(2n,n) * F(3n + 1), where F(n) are the Fibonacci numbers (A000045). ●

► [A132866] 1,6,78,1308,24942,513876,11148012,250917624,5805563310,137233668900,3299955883428,80468668049160,1985171406618156,49458290358431688,1242613072013591832,31448339835422435568 ⋆ Expansion of 1 / (1 - 6x * c(7x)), where c(x) is the g.f. of A000108. ● a(n) = 7 ^ n * Sum _{ j=0..n } (6 / 7) ^ j * j * binomial(2n - j,n) / (2n - j) for n >= 1. - _ Emeric Deutsch _ , Nov 19 2007 ●

► [A093033] 6,79,314,807,1654,2951,4794,7279,10502,14559,19546,25559,32694,41047,50714,61791,74374,88559,104442,122119,141686,163239,186874,212687,240774 ⋆ Number of interior balls in a truncated octahedral arrangement. ● a(n) = 16 * n ^ 3 - 15 * n ^ 2 + 6 * n - 1. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4); a(1)=6, a(2)=79, a(3)=314, a(4)=807. - _ Harvey P. Dale _ , Aug 11 2015 ●

► [A112462] 6,83,611,3185,13195,46228,142324,395148,1007760,2393430,5349526,11345698,22985326,44722580,83947700,152591660,269449830,463484385,778439025,1279189275,2060359665,3257868120,5064210840,7748481000,11682325200 ⋆ Absolute value of coefficient of term [x ^ (n - 6)] in characteristic polynomial of maximum matrix A of size n X n, where n >= 6. Maximum matrix A(i,j) is MAX(i,j), where indices i and j run from 1 to n. ● a(n) = ((11n + 6) / 12!) * Product _{ i= - 5..5 } (n + i). ●

► [A054605] 0,6,84,780,4200,15810,46956,118104,262800,532350,1001220,1773156,2988024,4829370,7532700,11394480,16781856,24143094,34018740,47053500,64008840,85776306,113391564,148049160,191118000 ⋆ a(n) = Sum _{ d|6 } phi(d) * n ^ (6 / d). ● a(n) = n ^ 6 + n ^ 3 + 2n ^ 2 + 2n. - _ Ralf Stephan _ , Sep 03 2003 ●

► [A212701] 6,84,882,8232,72030,605052,4941258,39530064,311299254,2421216420,18643366434,142367525496,1079620401678,8138676874188,61040076556410,457565904954528,3389758918099302,25124095510618356,185639150161791186,1367867422244777160 ⋆ Main transitions in systems of n particles with spin 3. ● a(n) = n * (b - 1) * b ^ (n - 1). For this sequence, set b=7. ● a(n) = 14 * a(n - 1) - 49 * a(n - 2). - _ Colin Barker _ , Jun 16 2015 ●

► [A248338] 0,6,84,936,9744,98976,995904,9983616,99934464,999737856,9998951424,99995805696,999983222784,9999932891136,99999731564544,999998926258176,9999995705032704,99999982820130816,999999931280523264,9999999725122093056,99999998900488372224 ⋆ 10 ^ n - 4 ^ n. ● a(n) = 14 * a(n - 1) - 40 * a(n - 2). ●

► [A155654] 1,6,86,1116,13346,153276,1724906,19207236,212679266,2347869996,25876958426,284948873556,3136251594386,34509651449916,379671469419146,4176777984431076,45946908753664706,505430101839849036 ⋆ 11 ^ n - 6 ^ n + 1.

● a(n)=17 * a(n - 1) - 66 * a(n - 2) + 50 with a(0)=1, a(1)=6 [From _ Vincenzo Librandi _ , Jul 21 2010] ●

▶ [A091881] 1,6,86,1366,21846,349526,5592406,89478486,1431655766,22906492246,366503875926,5864062014806,93824992236886,1501199875790166,24019198012642646,384307168202282326,6148914691236517206 ⋆ Expansion of (1 - 11x) / ((1 - x)(1 - 16x)). ● a(0)=1, a(1)=6, a(n) = 17 * a(n - 1) - 16 * a(n - 2) [_ Harvey P. Dale _ , Dec 15 2011] ●

▶ [A181271] 0,0,6,87,730,6236,49400,398032,3162528,25293504,201794944,1613449472,12895556096,103137221632,824854591488,6598199365632,52780897705984,422233760645120,3377782040133632,27021990036570112,216174305392852992 ⋆ Number of 3 X n binary matrices M with rows in strictly increasing order and rows of M * Mtranspose (mod 2) in strictly increasing order. ● a(n) = 14 * a(n - 1) - 36 * a(n - 2) - 216 * a(n - 3) + 1056 * a(n - 4) - 384 * a(n - 5) - 3584 * a(n - 6) + 4096 * a(n - 7) for n>9. ●

▶ [A353230] 0,6,90,1050,11130,112266,1099098,10550826,99899514,936435786,8711707290,80572452714,741766408890,6803700252810,62219207836890,567597206875050,5167463468534010,46965976868507850,426262280218695450,3864157168469020650,34994228358927126330 ⋆ Number of Condorcet voting profiles with three candidates and 2n - 1 voters where all the choices are from { 123, 231, 312 } . ● a(n) = ((17 * n - 21) * a(n - 1) - (72 * n - 108) * a(n - 2)) / (n - 1), with a(1) = 0, a(2) = 6. ●

▶ [A317487] 0,0,0,6,90,1080,12600,151200,1905120,25401600,359251200,5388768000,85621536000,1438441804800,25499650176000,475993469952000,9336794987520000,192071211171840000,4135933413900288000,93058501812756480000,2184137777840578560000,53390034569436364800000 ⋆ Number of 4 - cycles in the n - Bruhat graph. ● a(n) = n! * (n - 2) * (n - 3) / 8 for n > 1. - _ Andrew Howroyd _ , Jul 30 2018 ●

▶ [A037959] 6,90,1200,15750,211680,2963520,43545600,673596000,10977120000,188367379200,3399953356800,64457449056000,1281520880640000,26676557107200000,580481882652672000,13183287756807168000 ⋆ a(n) = n ^ 2 * (n + 1) * (n + 2)! / 48. ● a(n) = (1 / (n + 3)) * Sum _{ j=0..n } (- 1) ^ (n + j) * binomial(n,j) * j ^ (n + 3). ● a(n) = n! * StirlingS2(n + 3, n) / (n + 3). ●

▶ [A177290] 1,1,6,90,2520,113400,7484400,681080400,81729648000,12504636144000,2375880867360000,367786358267328000,47683626117839712000 ⋆ Number of permutations of 2 copies of 1..n with all adjacent differences <= 9 in absolute value. ● a(n) = (2n)! / 2 ^ n for n<=10. ●

▶ [A278683] 0,0,6,92,832,4500,18229,58881,163509,401259,898420,1861146,3625546,6694982,11829267,20099815,33036079,52700901,81916834,124362664,184907220,269726216,386776561,545930397,759628777 ⋆ Number of non - equivalent ways to place 4 non - attacking ferses on an n X n board. ● a(n) = (n ^ 8 - 30 * n ^ 6 + 48 * n ^ 5 + 328 * n ^ 4 - 1056 * n ^ 3 - 200 * n ^ 2 + 4176 * n - 4032 + IF(MOD(n, 2) = 1, 14 * n ^ 4 - 48 * n ^ 3 - 38 * n ^ 2 + 336 * n - 459)) / 192 for n>=3. ● a(n) = 4 * a(n - 1) - a(n - 2) - 16 * a(n - 3) + 19 * a(n - 4) + 20 * a(n - 5) - 45 * a(n - 6) + 45 * a(n - 8) - 20 * a(n - 9) - 19 * a(n - 10) + 16 * a(n - 11) + a(n - 12) - 4 * a(n - 13) + a(n - 14) for n>=17. ●

▶ [A221525] 0,6,94,536,1940,5368,12458,25544,47776,83240,137078,215608,326444,478616,682690,950888,1297208,1737544,2289806,2974040,3812548,4830008,6053594,7513096,9241040 ⋆ Number of 0..n arrays of length 5 with each element differing from at least one neighbor by 2 or more. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>8. ●

▶ [A321073] 0,6,94,578,3240,135009,296060,2067621,118990647,1619502814,3977450505,211476847313,782100188535,22751098825582,229887371689168,609637205272409,38204870730013268,84154600593585429,362228380008864182 6,42541704994534262193,654132609478679725103 ⋆ One of the two successive approximations up to 11 ^ n for 11 - adic integer sqrt(3). Here the 6 (mod 11) case (except for n = 0). ● a(n) == (3 + sqrt(8)) ^ (11 ^ n) + (3 - sqrt(8)) ^ (11 ^ n) (mod 11 ^ n). - _ Peter Bala _ , Dec 04 2022 ●

▶ [A336825] 1,6,95,360748 ⋆ a(n) is the smallest positive integer which is expressed by the greedy algorithm as the sum of exactly n prime - powers (including 1). ● a(1) = 1 and, for every positive integer n, a(n + 1) = a(n) + q1(n), where (q1(n), q2(n)) is the first pair of consecutive prime - powers with q2(n) - q1(n) >= a(n) + 1. ●

▶ [A179058] 0,0,6,96,600,2400,7350,18816,42336,86400,163350,290400,490776,794976,1242150,1881600,2774400,3995136,5633766,7797600,10613400,14229600,18818646,24579456,31740000 ⋆ Number of non - attacking placements of 3 rooks on an n X n board. ● a(n) = 3! * binomial(n, 3) ^ 2. ● a(n) = (n ^ 2 * (2 - 3 * n + n ^ 2) ^ 2) / 6. - _ Colin Barker _ , Jan 08 2013 ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). - _ Eric W. Weisstein _ , Sep 05 2017 ●

▶ [A303212] 0,1,6,96,600,2400,7350,18816,42336,86400,163350,290400,490776,794976,1242150,1881600,2774400,3995136,5633766,7797600,10613400,14229600,18818646,24579456,31740000 ⋆ Number of minimum total dominating sets in the n X n rook complement graph. ● a(n) = n ^ 2 * (2 - 3 * n + n ^ 2) ^ 2 / 6 for n>2. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>9. ●

▶ [A053338] 6,96,696,9696,69696,669696,6669696,96669696,696669696,9696669696,69696669696,969696669696,9969696669696,69969696669696,999696969696669696,9999696969696669696 ⋆ a(n) contains n digits (either '6' or '9') and is divisible by 2 ^ n. ● a(n)=a(n - 1) + 10 ^ (n - 1) * (6 + 3 * [a(n - 1) / 2 ^ (n - 1) mod 2]) i.e. a(n) ends with a(n - 1); if (n - 1) - th term is divisible by 2 ^ n then n - th term begins with a 6, if not then n - th term begins with a 9. ●

▶ [A115400] 0,0,0,6,96,780,4080,15330,45696,115416,257760,523710,987360,1752036,2957136,4785690,7472640,11313840,16675776,24006006,33844320,46834620,63737520,85443666,112987776 ⋆ Number of n - colorings of the octahedral graph. ● a(n) = n * (n - 1) * (n - 2) * (n ^ 3 - 9 * n ^ 2 + 29 * n - 32). ●

▶ [A139743] 0,6,96,1206,14016,157926,1755936,19409046,213968256,2355994566,25927658976,285262842486,3138184236096,34521491440806,379743730067616,4177217651837526,45949577275681536,505446265559840646,5559913498794965856,61159071374928218166 ⋆ a(n) = 11 ^ n - 5 ^ n. ● a(n) = 16 * a(n - 1) - 55 * a(n - 2). - _ Vincenzo Librandi _ , Jun 02 2011 ●

▶ [A001526] 6,104,300,594,986,1476,2064,2750,3534,4416,5396,6474,7650,8924,10296,11766,13334,15000,16764,18626,20586,22644,24800,27054,29406 ⋆ a(n) = (7 * n + 1) * (7 * n + 6). ● a(n) = 98 * n + a(n - 1) with a(0)=6. - _ Vincenzo Librandi _ , Nov 12 2010 ●

▶ [A033589] 1,6,105,440,1155,2394,4301,7020,10695,15470,21489,28896,37835,48450,60885,75284,91791,110550,131705,155400,181779,210986,243165,278460,317015 ⋆ a(n) = (2 * n - 1) * (3 * n - 1) * (4 * n - 1). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Harvey P. Dale _ , Sep 22 2014 ● a(n) = n ^ 3 * Pochhammer(2 - 1 / n, 3) = Product _{ j=2..4 } (j * n - 1). ●

▶ [A077289] 0,1,6,105,595,10296,58311,1008910,5713890,98862891,559902916,9687554415,54864771885,949281469786,5376187741821,93019896484620,526811533926580,9115000574022981,51622154137063026,893177036357767525,5058444293898249975,87522234562487194476 ⋆ Triangular numbers that are 1 / 6 of another triangular number. ● a(n) = 98 * a(n - 2) - a(n - 4) + 7. - _ Vladimir Pletser _ , Feb 19 2021 ●

▶ [A127213] 6,108,864,9072,85536,839808,8118144,78941952,765904896,7437339648,72196614144,700923912192,6804621582336,66060990332928,641332318961664,6226189565755392,60445100877152256,586813429630107648 ⋆ a(n) = 6 ^ n * Lucas(n), where Lucas = A000204. ● a(n) = Trace of matrix [({ 6,6 } , { 6,0 }) ^ n]. ● a(n) = 6 ^ n * Trace of matrix [({ 1,1 } , { 1,0 }) ^ n]. ● a(n) = 6 * a(n - 1) + 36 * a(n - 2). ●

▶ [A129003] 6,108,972,6480,36450,183708,857304,3779136,15943230,64953900,257217444,994857552,3772168218,14061928860,51656065200,187339329792,671787127926,2384960530284,8391527791740,29288988968400,101486346775506 ⋆ (n ^ 3 + n ^ 2) * 3 ^ n. ● a(n) = 12 * a(n - 1) - 54 * a(n - 2) + 108 * a(n - 3) - 81 * a(n - 4). - _ Vincenzo Librandi _ , Feb 12 2013 ●

▶ [A099138] 0,1,6,108,1080,14256,163296,2006208,23794560,287214336,3436494336,41298398208,495217981440,5944792559616,71324450021376,855971764420608,10271190988062720,123257112966660096,1479068428940476416 ⋆ a(n) = 6 ^ (n - 1) * J(n), where J(n) = A001045(n). ● a(n) = 6 ^ (n - 1) * Sum _{ k=0..floor((n - 1) / 2) } binomial(n - k - 1, k) * 2 ^ k. ● a(n) = (12 ^ n - (- 6) ^ n) / 18. ●

▶ [A041149] 1,6,109,660,11989,72594,1318681,7984680,145042921,878242206,15953402629,96598657980,1754729246269,10624974135594,193004263686961,1168650556257360,21228714276319441,128540936214174006,2334965566131451549,14138334333002883300 ⋆ Denominators of continued fraction convergents to sqrt(84). ● a(n) = 110 * a(n - 2) - a(n - 4). - _ Vincenzo Librandi _ , Dec 11 2013 ●

▶ [A059116] 0,0,6,114,978,6810,43746,271194,1653378,9998970,60229986,362088474,2174656578,13054316730,78345032226,470127588954,2820937720578,16926142884090,101558406986466,609355090964634,3656144492925378 ⋆ The sequence lambda(4,n), where lambda is defined in A055203. Number of ways of placing n identifiable positive intervals with a total of exactly four starting and / or finishing points. ● a(n) = 10 * a(n - 1) - 27 * a(n - 2) + 18 * a(n - 3) for n>3. G.f.: - 6 * x ^ 2 * (9 * x + 1) / ((x - 1) * (3 * x - 1) * (6 * x - 1)). - _ Colin Barker _ , Sep 14 2014 ●

▶ [A229582] 6,116,1620,19764,224532,2440692,25745364,265720500,2697594516,27033340788,268094978388,2636009007156,25732468879380,249667710249204,2409688805255892,23151313964420532,221538858133842324 ⋆ Number of defective 3 - colorings of an n X 4 0..2 array connected horizontally and antidiagonally with exactly one mistake, and colors introduced in row - major 0..2 order. ● a(n) = 4 * 9 ^ (n - 2) * (16 * n - 3) for n>1. ●

▶ [A271648] 6,119,2279,18042,83921,284428,782795,1859374,3957717,7738336,14140143,24449570,40377369,64143092,98567251,147171158,214284445,305160264,426098167,584574666,789381473,1050771420 ⋆ Number of permutations in S _{ 2 * n + 3 } containing the pattern 2143...(2n)(2n - 1). ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>6. ●

▶ [A268685] 6,126,630,1950,4680,9576,17556,29700,47250,71610,104346,147186,202020,270900,356040,459816,584766,733590,909150,1114470,1352736,1627296,1941660,2299500,2704650 ⋆ a(n) = 3 * (n + 1) * (n + 2) * (3 * n + 1) * (3 * n + 4) / 4. ● a(n) = Sum _{ k = 0..n } (3 * k + 1)(3 * k + 2)(3 * k + 3). ● a(n) mod 6 = 0. ●

▶ [A228290] 0,6,126,1092,5460,19530,55986,137256,299592,597870,1111110,1948716,3257436,5229042,8108730,12204240,17895696,25646166,36012942,49659540,67368420,90054426,118778946,154764792,199411800 ⋆ a(n) = n ^ 6 + n ^ 5 + n ^ 4 + n ^ 3 + n ^ 2 + n. ● a(n) = (n + 1) * (n ^ 2 + n + 1) * a(n - 1) / ((n - 1) * (n ^ 2 - 3 * n + 3)) for n>1. ● a(1) = 6, else a(n) = (n ^ 7 - n) / (n - 1). ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>6, a(0)=0, a(1)=6, a(2)=126, a(3)=1092, a(4)=5460, a(5)=19530, a(6)=55986. - _ Yosu Yurramendi _ , Sep 03 2013 ●

▶ [A095695] 6,130,1005,4830,17465,52101,135135,314985,674685,1349205,2548546,4587765,7925190,13210190,21341970,33540966,51434520,77158620,113477595,163923760,232959111,326161275,450436025 ⋆ T(n,4) diagonal of triangle in A095693. ● a(n) = ((n)(n - 1)(n - 2)(n - 3)(n ^ 4 + 2n ^ 3 - 13n ^ 2 - 54n + 136) / 384. ●

▶ [A090407] 1,6,136,2016,32896,523776,8390656,134209536,2147516416,34359607296,549756338176,8796090925056,140737496743936,2251799780130816,36028797153181696,576460751766552576,9223372039002259456 ⋆ a(n) = Sum _{ k = 0..n } C(4 * n + 1, 4 * k). ● a(0) = 1, a(1) = 6, a(n) = 12 * a(n - 1) + 64 * a(n - 2). ● a(n) = (1 / 2) * 4 ^ n * (4 ^ n + (- 1) ^ n). - _ Peter Bala _ , Feb 06 2019 ●

▶ [A003994] 6,138,1452,11444,78642,502846,3089624,18559208,110049502,647720562,3796113284,22194147996,129581349642,755982695718,4408534120368,25702339082192,149828229039030,873339353640538,5090437245730652 ⋆ Sequence b _ 4 (n) arising from homology of partitions with even number of blocks. ● a(n) = 6 * a(n - 1) - a(n - 2) - 8 * n ^ 2 + 24 * n - 10 + 3 ^ (n - 3) * (32 * n - 80), with a(1)=a(2)=0. - _ Sean A. Irvine _ , Sep 26 2015 ● a(n) = 15 * a(n - 1) - 85 * a(n - 2) + 235 * a(n - 3) - 339 * a(n - 4) + 253 * a(n - 5) - 87 * a(n - 6) + 9 *

a(n - 7) for n>9. ● a(n) = (- 12 + 16 * 3 ^ n - 3 * (3 - 2 * sqrt(2)) ^ n * (- 2 + sqrt(2)) + 6 * (3 + 2 * sqrt(2)) ^ n + 3 * sqrt(2) * (3 + 2 * sqrt(2)) ^ n - 16 * (3 + 2 * 3 ^ n) * n + 48 * n ^ 2) / 24. ●

▶ [A286446] 0,1,6,142,1280,7301,29603,96485,266636,652908,1452054,2992513,5789499,10629381,18660890,31530854,51525116,81772345,126449707,191075297,282794784,410784700,586640186,824912741,1143620051 ⋆ Number of non - equivalent ways to tile an n X n X n triangular area with four 2 X 2 X 2 triangular tiles and an appropriate number (= n ^ 2 - 16) of 1 X 1 X 1 tiles. ● a(n) = (n ^ 8 - 12 * n ^ 7 + 6 * n ^ 6 + 432 * n ^ 5 - 1249 * n ^ 4 - 5028 * n ^ 3 + 21820 * n ^ 2 + 12384 * n - 94000) / 144 + IF(MOD(n, 2) = 1, - 8 * n ^ 3 + 72 * n ^ 2 - 208 * n + 189) / 24 + IF(MOD(n, 3) = 0, - n ^ 2 + 3 * n + 7) / 9 for n >= 5. ●

▶ [A128785] 0,6,144,1944,20736,194400,1679616,13716864,107495424,816293376,6046617600,43898443776,313456656384,2207257288704,15359376162816,105791621529600,722204136308736,4891804579528704,32905425960566784 ⋆ a(n) = n ^ 2 * 6 ^ n. ● a(n) = 18 * a(n - 1) - 108 * a(n - 2) + 216 * a(n - 3). ●

▶ [A250389] 6,146,1208,5848,20518,58114,141344,306816,609846,1129986,1977272,3299192,5288374,8190994,12315904,18044480,25841190,36264882,49980792,67773272,90559238,119402338,155527840,200338240,255429590 ⋆ Number of length 3 + 3 0..n arrays with no four consecutive terms having the maximum of any two terms equal to the minimum of the remaining two terms. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

▶ [A352757] 6,151,1016,3753,10090,22331,43356,76621,126158,196575,293056,421361,587826,799363,1063460,1388181,1782166,2254631,2815368,3474745,4243706,5133771,6157036,7326173,8654430 ⋆ a(n) = (3 * (2 * n - 1) ^ 2 * ((2 * n - 1) ^ 2 + 2) + 2 * n + 1) / 2 for n > 0. ● a(n) = (3 * (2 * n - 1) ^ 2 * ((2 * n - 1) ^ 2 + 2) + 2 * n + 1) / 2. ● a(n) can be extended for negative n such that a(- n) = a(n + 1) - (2 * n + 1). ●

▶ [A147796] 6,152,940,3600,10570,26096,56952,113280,209550,365640,608036,971152,1498770,2245600,3278960,4680576,6548502,8999160,12169500,16219280,21333466,27724752,35636200,45344000,57160350 ⋆ Number of consistent sets of 3 irreflexive binary order relationships over n objects. ● a(n) = binomial(n * (n - 1), 3) - n * (n - 1) * (n * (n - 1) - 2) / 2 - 2 * binomial(n,3) = binomial(n,3) * (n ^ 3 - 5 * n - 6). - _ Petros Hadjicostas _ , Apr 10 2020 ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>8. ●

▶ [A003766] 6,152,1608,15420,127980,1003360,7432708,53294540,371397240,2537155684,17047659916,113102692016,742597784164,4835184613212,31267479066856,201066698078244,1286998671857356,8206523391863296 ⋆ Number of Hamiltonian paths in W _ 4 X P _ n. ● a(1) = 6, ● a(2) = 152, ● a(3) = 1608, ● a(4) = 15420, ● a(5) = 127980, ● a(6) = 1003360, ●

▶ [A046182] 1,6,153,638,15041,62566,1473913,6130878,144428481,600763526,14152517273,58868694718,1386802264321,5768531318886,135892469386233,565257200556158,13316075197586561,55389437123184646 ⋆ Indices of triangular numbers which are also octagonal. ● a(n) = a(n - 1) + 98 * a(n - 2) - 98 * a(n - 3) - a(n - 4) + a(n - 5). ● a(n) = 98 * a(n - 2) - a(n - 4) + 48. ● a(n) = 1 / 12 * sqrt(3)((sqrt(6) - (- 1) ^ n) * (sqrt(3) + sqrt(2)) ^ (2 * n - 1) - (sqrt(6) + (- 1) ^ n) * (sqrt(3) - sqrt(2)) ^ (2 * n - 1) - 2 * sqrt(3)). ● a(n) = floor(1 / 12 * sqrt(3) * (sqrt(6) - (- 1) ^ n) * (sqrt(3) + sqrt(2)) ^ (2 * n - 1)). ●

▶ [A157626] 6,155,504,1053,1802,2751,3900,5249,6798,8547,10496,12645,14994,17543,20292,23241,26390,29739,33288,37037,40986,45135,49484,54033,58782 ⋆ a(n) = 100n ^ 2 - 151n + 57. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A237529] 6,156,1191,5565,19620,57351,146391,336951,714555,1417515,2660196,4763226,8191911,13604220,21909810,34341666,52542036,78664446,115493685,166585755,236429886,330634821,456141681,621465825,836970225 ⋆ Number of ways to choose 4 points in an n X n X n triangular grid so that no 3 of them form a 2 X 2 X 2 subtriangle. ● a(n) = (n - 1) * (n - 2) * (n ^ 6 + 7 * n ^ 5 + 13 * n ^ 4 - 7 * n ^ 3 - 230 * n ^ 2 - 408 * n + 1152) / 384. ●

▶ [A120277] 6,160,2842,44868,681604,10248992,154149762,2327405740,35305388536,538000530912,8231764528156,126399786937760,1946868985459272,30066806831424448,465425347391123282,7219408741591089660 ⋆ Sum of all matrix elements of n X n matrix M[i,j]=(2n + i + j)! / (n + i)! / (n + j)!, i,j=1..n. ● a(n) = Sum[Sum[(2n + i + j)! / (n + i)! / (n + j)!, { i,1,n }], { j,1,n }]. ●

▶ [A134632] 0,6,176,1278,5280,15950,39456,84966,165248,297270,502800,809006,1249056,1862718,2696960,3806550,5254656,7113446,9464688,12400350,16023200,20447406,25799136,32217158,39853440 ⋆ 5 * n ^ 5 + 3 * n ^ 3 - 2 * n ^ 2. Coefficients and exponents are the prime numbers in decreasing order. ● a(n) = 5 * n ^ 5 + 3 * n ^ 3 - 2 * n ^ 2. ●

▶ [A253779] 0,6,180,540,2856,5544,16830,27060,62244,90090,175440,237456,413820,534660,860706,1074744,1630200,1983150,2872044,3422580,4776480,5597856,7579110,8760780,11565756 ⋆ Numbers c whose cubes are equal to the sum of m ^ 3 consecutive cubes for m ^ 3 not divisible by 3 (A118719). ● a(n) = (81 * n ^ 5 - 270 * n ^ 4 + 396 * n ^ 3 - 312 * n ^ 2 + 96 * n) / 64 for n even. ● a(n) = (81 * n ^ 5 - 135 * n ^ 4 + 126 * n ^ 3 - 66 * n ^ 2 - 15 * n + 9) / 64 for n odd. ●

▶ [A089905] 0,6,183,3285,47787,627789,7777791,92777793,1077777795,12277777797,137777777799,1527777777801,16777777777803,182777777777805,1977777777777807,21277777777777809,227777777777777811 ⋆ Sum of digits of numbers between 0 and (3 / 9) * (10 ^ n - 1). ● a(n) = s(3, n - 1) where s(a, k)=a * (k + 1) + a ^ 2 * sum(i=0, k, i * 10 ^ (k - i)) + sum(i=0, k, 5 * a * (9 * (k - i) + a - 1) * 10 ^ (k - i - 1)) ● a(n) = 22 * a(n - 1) - 141 * a(n - 2) + 220 * a(n - 3) - 100 * a(n - 4). - _ T. D. Noe _ , Nov 08 2006 ● a(n) = (- 11 / 9 * (- 1 + 10 ^ n) + 1 / 2 * (4 + 3 * 10 ^ n) * n). G.f.: 3 * x * (5 * x + 1) * (7 * x + 2) / ((x - 1) ^ 2 * (10 * x - 1) ^ 2). - _ Colin Barker _ , Jun 14 2013 ●

▶ [A182788] 0,0,0,6,192,1620,7680,26250,72576,172872,368640,721710,1320000,2283996,3773952,5997810,9219840,13770000,20054016,28564182,39890880,54734820,73920000,98407386,129309312 ⋆ Number of n - colorings of the 3 X 3 X 3 triangular grid. ● a(n) = n * (n - 1) * (n - 2) ^ 4. ● a(0)=0, a(1)=0, a(2)=0, a(3)=6, a(4)=192, a(5)=1620, a(6)=7680, a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). - _ Harvey P. Dale _ , Dec 10 2011 ●

▶ [A305167] 0,6,198,2076,12060,49170,158418,431544,1036728,2258910,4552350,8607060,15430740,26447850,43617450,69571440,107774832,162709686,240084342,347069580,492563340,687485634,945105282,1281400104,1715452200 ⋆ Constant term in the expansion of (Sum _{ k=0..n } k * (x ^ k + x ^ (- k))) ^ 4. ● a(n) = n * (n + 1) * (2 * n + 1) * (17 * n ^ 4 + 34 * n ^ 3 + 28 * n ^ 2 + 11 * n + 15) / 105. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n > 7. ●

▶ [A172530] 0,0,6,208,600,3252,10584,27584,61992,125300,233772,409584,682084,1089172,1678800,2510592,3657584,5208084,7267652,9961200,13435212,17860084,23432584,30378432,38955000 ⋆ Number of ways to place 3 nonattacking knights on an n X n toroidal board. ● a(n) = n ^ 2 * (n ^ 4 - 27 * n ^ 2 + 218) / 6, n >=6. ●

▶ [A201237] 0,0,6,208,1300,4908,14112,34112,73008,142700,259908,447312,734812,1160908,1774200,2635008,3817112,5409612,7518908,10270800,13812708,18316012,23978512,31027008,39720000 ⋆ Number of ways to place 3 non - attacking wazirs on an n X n toroidal board. ● a(n) = n ^ 2 * (n ^ 4 - 15 * n ^ 2 + 62) / 6, n>=4. ●

▶ [A172965] 0,0,6,240,1010,4056,12068,30000,65628,130480,240856,418968,694200,1104488,1697820,2533856,3685668,5241600,7307248,10007560,13489056,17922168,23503700,30459408,39046700 ⋆ Number of ways to place 3 nonattacking knights on an n X n cylindrical board. ● a(n) = n * (n - 3)(n ^ 4 + 3 * n ^ 3 - 18 * n ^ 2 - 18 * n + 164) / 6, n>=6. ●

▶ [A250390] 6,274,3384,21950,96866,331128,944272,2352468,5279310,10902342,21040360,38386530,66792362,111607580,180080928,281826952,429363798,638727066,930164760,1328918374,1866095154,2579636576,3515388080,4728275100 ⋆ Number of length 4 + 3 0..n arrays with no four consecutive terms having the maximum of any two terms equal to the minimum of the remaining two terms. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. ●

▶ [A128792] 0,6,288,5832,82944,972000,10077696,96018048,859963392,7346640384,60466176000,482882881536,3761479876608,28694344753152,215031266279424,1586874322944000,11555266180939776,83160677851987968 ⋆ n ^ 3 * 6 ^ n. ● a(n) = 24 * a(n - 1) - 216 * a(n - 2) + 864 * a(n - 3) - 1296 * a(n - 4). - _ Vincenzo Librandi _ , Feb 09 2013 ●

▶ [A295925] 6,336,3795,23520,102795,355656,1039626,2674440,6223140,13354440,26807781,50885016,92095185,159981360,268161060,435614256,688255506,1060829280,1599170055,2362871280,3428409831,4892775096,6877654350 ⋆ Number of bilaterally asymmetric 8 - hoops with n symbols. ● a(n) = (1 / 16) * (n ^ 3 - n ^ 2 - 2) * (n ^ 2 + n + 2) * (n + 1) * (n - 1) * n = (n ^ 8 - 4 * n ^ 5 - 3 * n ^ 4 + 2 * n ^ 2 + 4 * n) / 16. ●

▶ [A355752] 6,369,2820,10815,29538,65901,128544,227835,375870,586473,875196,1259319,1757850,2391525,3182808,4155891,5336694,6752865,8433780,10410543,12715986,15384669,18452880,21958635,25941678 ⋆ a(n) = 3 * (2 * n - 1) * (3 * (2 * n - 1) ^ 3 + 1) / 2. ● a(n) = 3 * (2 * n - 1) * (3 * (2 * n - 1) ^ 3 + 1) / 2. ● a(n) can be extended for negative n such that a(- n) = a(n + 1) - 3 * (2 * n + 1). ●

▶ [A151578] 0,6,399,9528,140571,1561900,14413894,116857368,862140162,5925941490,38576132625,240659672336,1451515055333,8520359419080,48925419854400,275923203690000,1533178869210324,8414851432723230,45712442315346915,246193095207323400,1316311515774609375 ⋆ Number of permutations of 1..n arranged in a circle with exactly 5 adjacent element pairs in decreasing order. ● a(n) = n * (5 ^ (n - 1) - n * 4 ^ (n - 1) + binomial(n,2) * 3 ^ (n - 1) - binomial(n,3) * 2 ^ (n - 1) + binomial(n,4)). (End) ●

▶ [A172227] 0,0,6,405,5024,31320,133544,446421,1258590,3126724,7042930,14669709,28658436,53069000,93909924,159819965,262913874,419816676,652912510,991835749,1475233800,2152832664,3087838016,4359706245,6067321574 ⋆ Number of ways to place 4 nonattacking wazirs on an n X n board. ● a(n) = (n ^ 8 - 30n ^ 6 + 24n ^ 5 + 323n ^ 4 - 504n ^ 3 - 1110n ^ 2 + 2760n - 1224) / 24, n>=3. ●

▶ [A331352] 0,6,405,7904,76880,486522,2300305,8806336,28725192,82626270,214744629,513368064,1144198952,2402617490,4792612545,9142333696,16768783408,29707141878,51023629173,85234690080,138859666848 ⋆ Number of chiral pairs of colorings of the edges (or triangular faces) of a regular 4 - dimensional simplex with n available colors. ● a(n) = (24 * n ^ 2 - 50 * n ^ 3 + 20 * n ^ 4 + 15 * n ^ 6 - 10 * n ^ 7 + n ^ 10) / 120. ● a(n) = 6 * C(n,2) + 387 * C(n,3) + 6320 * C(n,4) + 41350 * C(n,5) + 135792 * C(n,6) + 246540 * C(n,7) + 252000 * C(n,8) + 136080 * C(n,9) + 30240 * C(n,10), where the coefficient of C(n,k) is the number of colorings using exactly k colors. ●

▶ [A187514] 0,0,6,450,2872,8522,17564,29834,45255,63814,85511,110346,138319,169430,203679,241066,281591,325254,372055,421994,475071,531286,590639,653130,718759 ⋆ Number of 9 - step S, E, and NW - moving king's tours on an n X n board summed over all starting positions. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>10. ●

▶ [A250391] 6,514,9480,82398,457366,1886948,6308960,18038628,45704886,105193902,223903240,446650386,843619686,1520772064,2633182208,4401808232,7134239142,11250005754,17311081032,26058236134,38453958774,55732680828 ⋆ Number of length 5 + 3 0..n arrays with no four consecutive terms having the maximum of any two terms equal to the minimum of the remaining two terms. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>9. ●

▶ [A364688] 0,0,0,6,696,6720,39840,184800,736512,2644992,8801280,27624960,82790400,238977024,668688384,1822679040,4858183680,12700876800,32647938048,82682707968,206650736640,510425825280,1247438438400,3019527684096,7245593051136 ⋆ Number of 8 - cycles in the hypercube graph Q _ n. ● a(n) = 2 ^ (n - 4) * n * (n - 1) * (n - 2) * (27 * n - 79). ● a(n) = 10 * a(n - 1) - 40 * a(n - 2) + 80 * a(n - 3) - 80 * a(n - 4) + 32 * a(n - 5). ●

▶ [A242850] 0,6,780,6930,30744,96030,241956,526890,1032240,1866294,3168060,5111106,7907400,11811150,17122644,24192090,33423456,45278310,60279660,79015794,102144120,130395006,164575620,205573770,254361744 ⋆ 32 * n ^ 5 - 32 * n ^ 3 + 6 * n. ● a(n) = 2 * n * (2 * n - 1) * (2 * n + 1) * (4 * n ^ 2 - 3). ●

► [A364273] 0,6,780,7992,39339,134754,369918,873000,1844637,3581154,6501024,11174568,18356895,29024082,44412594,66061944,95860593,136095090,189502452,259325784,349373139,464079618,608572710,788740872,1011305349 ⋆ Number of chordless cycles (with length >= 4) in the complement of the n X n X n grid graph. ● a(n) = 3 / 2 * (16 - 108 * n + 155 * n ^ 2 - 57 * n ^ 3 + 3 * n ^ 4 - 6 * n ^ 5 + 3 * n ^ 6) for n > 2. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n > 2. ●

► [A250392] 6,966,26578,309452,2160160,10755158,42158796,138336744,395723154,1015071750,2382851790,5197343476,10655843900,20723014006,38504379320,68753342352,118544772606,198153311046,322179959658,510976323420 ⋆ Number of length 6 + 3 0..n arrays with no four consecutive terms having the maximum of any two terms equal to the minimum of the remaining two terms. ● a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10) for n>10. ●

► [A250393] 6,1816,74528,1162292,10203222,61304844,281731072,1060924200,3426341574,9795159264,25359512992,60478538588,134596669142,282388072596,563045400576,1073890795600,1969791998214,3490220036904,5996191000608 ⋆ Number of length 7 + 3 0..n arrays with no four consecutive terms having the maximum of any two terms equal to the minimum of the remaining two terms. ● a(n) = 11 * a(n - 1) - 55 * a(n - 2) + 165 * a(n - 3) - 330 * a(n - 4) + 462 * a(n - 5) - 462 * a(n - 6) + 330 * a(n - 7) - 165 * a(n - 8) + 55 * a(n - 9) - 11 * a(n - 10) + a(n - 11) for n>11. ●

► [A279440] 0,0,6,2040,71400,1005720,8421630,50092896,233483040,905925600,3045791430,9125544120,24868110696,62593429080,147255640350,326843422080,689604309120,1391614736256,2699616160710,5055848825400,9173923662120,16177675640280,27798546316926,46651469520480 ⋆ Number of ways to place 6 points on an n X n square grid so that no more than 2 points are on a vertical or horizontal straight line. ● a(n) = (n ^ 12 - 55 * n ^ 10 + 210 * n ^ 9 + 93 * n ^ 8 - 2220 * n ^ 7 + 5855 * n ^ 6 - 7350 * n ^ 5 + 4786 * n ^ 4 - 1440 * n ^ 3 + 120 * n ^ 2) / 720. ● a(n) = 13 * a(n - 1) - 78 * a(n - 2) + 286 * a(n - 3) - 715 * a(n - 4) + 1287 * a(n - 5) - 1716 * a(n - 6) + 1716 * a(n - 7) - 1287 * a(n - 8) + 715 * a(n - 9) - 286 * a(n - 10) + 78 * a(n - 11) - 13 * a(n - 12) +* a(n - 13). ●

► [A182789] 0,0,0,6,2112,98820,1574400,13676250,80631936,363204072,1342218240,4261697550,12000120000,30653510316,72237215232,159067919010,330577363200,653537970000,1236951760896,2253171240342,3967187906880,6776444390100,11264003520000,18268445544426 ⋆ Number of n - colorings of the 4 X 4 X 4 triangular grid. ● a(n) = n * (n - 1) * (n - 2) ^ 4 * (n ^ 4 - 9 * n ^ 3 + 31 * n ^ 2 - 49 * n + 31). ●

► [A198403] 0,6,2304,157464,5308416,121500000,2176782336,32934190464,440301256704,5355700839936,60466176000000,642717115324416,6499837226778624,63041475422674944,590045794670739456,5355700839936000000 ⋆ a(n) = 6 ^ n * n ^ 6. ● a(n) = 42 * a(n - 1) - 756 * a(n - 2) + 7560 * a(n - 3) - 45360 * a(n - 4) + 163296 * a(n - 5) - 326592 * a(n - 6) + 279936 * a(n - 7). - _ Wesley Ivan Hurt _ , Sep 04 2022 ●

► [A123659] 6,18001,4862512,269750529,6115250626,78434755921,678546021756,4399254736897,22880667197854,100011001010001,379778130741736,1283985544700161,3937524853545882,11112316748827729,29193541130581876 ⋆ a(n) = 1 + n ^ 4 + n ^ 6 + n ^ 9 + n ^ 10 + n ^ 14. ● a(n) = 1 + n ^ 4 + n ^ 6 + n ^ 9 + n ^ 10 + n ^ 14. ●

► [A182790] 0,0,0,6,32640,13638780,1034019840,29699591250,460772395776,4674233282040,34753231503360,203842711924830,991765602960000,4148317444266996,15316041761879040,50925154505624490,154877550296286720,436185098521110000,1148935457273020416 ⋆ Number of n - colorings of the 5 X 5 X 5 triangular grid. ● a(n) = n * (n - 1) * (n ^ 9 - 21 * n ^ 8 + 198 * n ^ 7 - 1102 * n ^ 6 + 3999 * n ^ 5 - 9840 * n ^ 4 + 16475 * n ^ 3 - 18177 * n ^ 2 + 12056 * n - 3686) * (n - 2) ^ 4. ●

► [A187179] 7,7,8,9,11,14,19,27,40,61,95,150,239,383,616,993,1603,2590,4187,6771,10952,17717,28663,46374,75031 ⋆ Number of nontrivial compositions of differential operations and directional derivative of the n - th order on the space R ^ 10. ● a(n) = 2 * a(n - 1) - a(n - 3). G.f.: - x * (6 * x ^ 2 + 7 * x - 7) / ((x - 1) * (x ^ 2 + x - 1)). [_ Colin Barker _ , Dec 14 2012] ●

► [A317790] 1,1,7,7,13,19,31,37,49,61,79,91,109,127,151,169,193,217,247,271,301,331,367,397,433 ⋆ a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 4) - 2 * (n - 5) + a(n - 6) for n>5, a(0)=a(1)=1, a(2)=a(3)=7, a(4)=13, a(5)=19. ● a(n) = (6 * n ^ 2 + 3 * (3 - 2 * (- 1) ^ (n / 2)) * (1 + (- 1) ^ n) + 2) / 8. (End) ●

► [A173314] 7,7,13,37,145,721,4321,30241,241921,2177281,21772801,239500801,2874009601,37362124801,523069747201,7846046208001,125536739328001,2134124568576001,38414242234368001,729870602452992001 ⋆ a(n) = 6 * n! + 1. ● a(0)=7, a(n) = n * a(n - 1) - n + 1. - _ Vincenzo Librandi _ , Sep 29 2013 ●

► [A168374] 0,7,7,14,14,21,21,28,28,35,35,42,42,49,49,56,56,63,63,70,70,77,77,84,84 ⋆ a(n) = 7 * floor(n / 2). ● a(n) = 7 * n - a(n - 1) - 7, with n>1, a(1)=0. ●

► [A309459] 0,0,0,0,0,0,0,7,7,14,20,34,47,73,98,136,178,241,305,402,500,636,782,974,1179 ⋆ Number of squarefree parts in the partitions of n into 7 parts. ● a(n) = Sum _{ o=1..floor(n / 7) } Sum _{ m=o..floor((n - o) / 6) } Sum _{ l=m..floor((n - m - o) / 5) } Sum _{ k=l..floor((n - l - m - o) / 4) } Sum _{ j=k..floor((n - k - l - m - o) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o) / 2) } (mu(i) ^ 2 + mu(j) ^ 2 + mu(k) ^ 2 + mu(l) ^ 2 + mu(m) ^ 2 + mu(o) ^ 2 + mu(n - i - j - k - l - m - o) ^ 2), where mu is the Möbius function (A008683). ●

► [A022090] 0,7,7,14,21,35,56,91,147,238,385,623,1008,1631,2639,4270,6909,11179,18088,29267,47355,76622,123977,200599,324576 ⋆ Fibonacci sequence beginning 0, 7. ● a(n) = round(((14 * phi - 7) / 5) * phi ^ n) (works for n>3). - _ Thomas Baruchel _ , Sep 08 2004 ● a(n) = 7 * F(n) = F(n + 4) + F(n - 4) for n>3. ●

► [A053416] 1,1,7,7,19,19,37,43,61,73,91,109,127,151,187,199,241,253,301,313,367,397,439,475,517 ⋆ Circle numbers (version 4): a(n)= number of points (i + j / 2,j * sqrt(3) / 2), i,j integers (triangular grid) contained in a circle of diameter n, centered at (0,0). ● a(n) / (n / 2) ^ 2 - >Pi * 2 / sqrt(3). ●

► [A094248] 1,7,7,19,49,73,193,391,751,1747,3457,7249,15649,31783,67543,141811,294001,621337,1297057,2712679,5700799,11910643,24964993,52325281,109483201 ⋆ Consider 3 X 3 matrix M = [0 1 0 / 0 0 1 / 5 2 0]; a(n) = the center term in M ^ n * [1 1 1]. ● a(n) / a(n - 1) tends to 2.0945514...; e.g. a(12) / a(11) = 7249 / 3457 = 2.0969048... ●

► [A095343] 1,1,7,7,31,49,145,289,727,1591,3775,8545,19873,45505,105127,241639,557023,1281937,2953009,6798817,15657847,36054295,83027839,191190721,440274241 ⋆ Length of n - th string generated by a Kolakoski(7,1) rule starting with a(1)=1. ● a(1) = a(2) = 1, a(n) = a(n - 1) + 3 * a(n - 2) - 3 * (- 1) ^ n. ● a(n) = 3 * (- 1) ^ n + 2 * (sqrt(3) / i) ^ n * (sqrt(3) * i * ChebyshevU(n, i / (2 * sqrt(3))) - ChebyshevU(n - 1, i / (2 * sqrt(3)))). - _ G. C. Greubel _ , Dec 26 2019 ●

► [A290683] 1,1,7,7,31,63,127,255,511,1023,2047,4095,8191,16383,32767,65535,131071,262143,524287,1048575,2097151,4194303,8388607,16777215,33554431 ⋆ Decimal representation of the diagonal from the origin to the corner of the n - th stage of growth of the two - dimensional cellular automaton defined by "Rule 929", based on the 5 - celled von Neumann neighborhood. ● a(n) = 2 ^ (1 + n) - 1 for n>3. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>5. ●

► [A112685] 1,1,1,7,7,37,49,199,319,1093,1993,6103,12151,34501,72961,196807,433807,1129957,2562649,6517399,15073159,37712293,88400593,218707783,517427551 ⋆ a(n)=5a(n - 2) + 2a(n - 3). ● a(n)=(9 / 14) * [(1 + sqrt(2)) ^ n + (1 - sqrt(2)) ^ n] + (3 / 14) * sqrt(2) * [(1 - sqrt(2)) ^ n - (1 + sqrt(2)) ^ n] - (2 / 7) * (- 2) ^ n, with n>=0 [From _ Paolo P. Lava _ , Apr 23 2010] ●

► [A286985] 7,7,39,115,343,967,2663,7203,19239,50887,133543,348179,902775,2329607,5986535,15327555,39115847,99532423,252601127,639548595,1615746455,4073951559,10253517671,25763632995,64635943783 ⋆ Number of connected dominating sets in the n - prism graph. ● a(n) = 6 * a(n - 1) - 11 * a(n - 2) + 4 * a(n - 3) + 5 * a(n - 4) - 2 * a(n - 5) - a(n - 6) for n > 6. ●

► [A020719] 7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31 ⋆ a(n) = n + 7. ● a(n) = n + 7. ● a(n) = 2 * a(n - 1) - a(n - 2). ●

► [A058367] 1,1,1,1,1,7,8,9,10,11,12,19,27,36,46,57,69,88,115,151,197,254,323,411,526 ⋆ Number of ways to cover (without overlapping) a ring lattice (necklace) of n sites with molecules that are 6 sites wide. ● a(n) = 1 + n * sum(binomial(n - 1 - 5 * i, i - 1) / i, i=1..n / 6). a(n) = a(n - 1) + a(n - 6), a(n) = 1 for n = 1..5, a(6) = 7. generating function = (x + 6 * x ^ 6) / (1 - x - x ^ 6). ●

► [A170933] 7,8,9,12,16,21,29,41,58,83,120,174,253,369,539,788,1153,1688,2472,3621,5305,7773,11390,16691,24460 ⋆ a(n) = A000930(n) + A000930(n + 3) + 4. ● a(n) = a(n - 1) + a(n - 3) - 4 for n>2. - _ Greg Dresden _ , Feb 09 2020 ●

► [A047523] 0,1,7,8,9,15,16,17,23,24,25,31,32,33,39,40,41,47,48,49,55,56,57,63,64 ⋆ Numbers that are congruent to { 0, 1, 7 } mod 8. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. ● a(n) = (24 * n - 24 + 15 * cos(2 * n * Pi / 3) + 5 * sqrt(3) * sin(2 * Pi * n / 3)) / 9. ● a(3k) = 8k - 1, a(3k - 1) = 8k - 7, a(3k - 2) = 8k - 8. (End) ●

► [A048588] 7,8,10,13,17,23,32,45,64,92,133,193,281,410,599,876,1282,1877,2749,4027,5900,8645,12668,18564,27205 ⋆ Pisot sequence L(7,8). ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) - a(n - 4) (holds at least up to n = 72000 but is not known to hold in general). ●

► [A153972] 7,8,10,14,22,38,70,134,262,518,1030,2054,4102,8198,16390,32774,65542,131078,262150,524294,1048582,2097158,4194310,8388614,16777222 ⋆ a(n) = 2 ^ n + 6. ● a(n) = 2 ^ n + 6 ● a(n) = 3 * a(n - 1) - 2 * a(n - 2). (End) ●

► [A156605] 7,8,12,28,92,348,1372,5468,21852,87388,349532,1398108,5592412,22369628,89478492,357913948,1431655772,5726623068,22906492252,91625968988,366503875932,1466015503708,5864062014812,23456248059228,93824992236892 ⋆ a(n) = (4 ^ n + 20) / 3. ● a(n) = 4 * a(n - 1) - 20, n > 0. ●

► [A228210] 7,8,13,17,32,43,83,112,217,293,568,767,1487,2008,3893,5257,10192,13763,26683,36032,69857,94333,182888,246967,478807 ⋆ x - values in the solutions to x ^ 2 - 5y ^ 2 = 44. ● a(n) = 3 * a(n - 2) - a(n - 4). ●

► [A047274] 0,1,7,8,14,15,21,22,28,29,35,36,42,43,49,50,56,57,63,64,70,71,77,78,84 ⋆ Numbers that are congruent to { 0, 1 } mod 7. ● a(n) = 7 * n - a(n - 1) - 13 for n>1, a(1)=0. - _ Vincenzo Librandi _ , Aug 05 2010 ● a(n) = 7 * n / 2 - 19 / 4 - 5 * (- 1) ^ n / 4. ●

► [A047521] 0,7,8,15,16,23,24,31,32,39,40,47,48,55,56,63,64,71,72,79,80,87,88,95,96 ⋆ Numbers that are congruent to { 0, 7 } mod 8. ● a(n) = 8 * n - a(n - 1) - 9 (with a(1)=0). - _ Vincenzo Librandi _ , Aug 06 2010 ● a(n) = 3 * (- 1) ^ n / 2 - 5 / 2 + 4 * n. ●

► [A022097] 1,7,8,15,23,38,61,99,160,259,419,678,1097,1775,2872,4647,7519,12166,19685,31851,51536,83387,134923,218310,353233 ⋆ Fibonacci sequence beginning 1, 7. ● a(n) = a(n - 1) + a(n - 2) for n>=2, a(0)=1, a(1)=7, a(- 1):=6. ● a(n) = (2 ^ (- 1 - n) * ((1 - sqrt(5)) ^ n * (- 13 + sqrt(5)) + (1 + sqrt(5)) ^ n * (13 + sqrt(5)))) / sqrt(5). - _ Herbert Kociemba _ ● a(n) = F(n - 4) + F(n - 1) + F(n + 4), ● a(n) = F(n) + F(n + 4) - F(n - 3), ●

► [A041693] 1,7,8,15,23,61,755,1571,2326,3897,6223,47458,1809627,12714847,14524474,27239321,41763795,110766911,1370966727,2852700365,4223667092,7076367457,11300034549,86176609300,3286011187949 ⋆ Denominators of continued fraction convergents to sqrt(366). ● a(n) = 1815850 * a(n - 12) - a(n - 24) for n>23. - _ Vincenzo Librandi _ , Dec 23 2013 ●

► [A042001] 1,1,7,8,15,23,107,237,818,11689,12507,274336,286843,4290138,13157257,30604652,135575865,166180517,301756382,467936899,3109377776,3577314675,160511223476,164088538151,1145042452382 ⋆ Denominators of continued fraction convergents to sqrt(523). ● a(n) = 163620601252 * a(n - 22) - a(n - 44) for n>43. [_ Bruno Berselli _ , Jan 12 2014] ●

► [A191413] 7,8,15,28,47,72,103,140,183,232,287,348,415,488,567,652,743,840,943,1052,1167,1288,1415,1548,1687 ⋆ a(n) = 3 * n ^ 2 - 2 * n + 7. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3); a(0)=7, a(1)=8, a(2)=15. ●

► [A084377] 7,8,15,34,71,132,223,350,519,736,1007,1338,1735,2204,2751,3382,4103,4920,5839,6866,8007,9268,10655,12174,13831 ⋆ a(n) = n ^ 3 + 7. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>3. - _ Vincenzo Librandi _ , Jun 10 2016 ●

► [A041675] 1,1,7,8,15,38,53,462,515,1492,2007,3499,23001,26500,977001,1003501,6998007,8001508,14999515,38000538,53000053,462000962,515001015,1492002992,2007004007 ⋆ Denominators of continued fraction convergents to sqrt(356). ● a(n) = 1000002 * a(n - 14) - a(n - 28) for n>27. - _ Vincenzo Librandi _ , Dec 22 2013 ●

► [A041098] 7,8,15,68,83,151,2197,2348,4545,20528,25073,45601,663487,709088,1372575,6199388,7571963,13771351,200370877,214142228,414513105,1872194648,2286707753,4158902401,60511341367 ⋆ Numerators of continued fraction converg ents to sqrt(57). ● a(n) = 302 * a(n - 6) - a(n - 12). G.f.: - (x ^ 11 - 7 * x ^ 10 + 8 * x ^ 9 - 15 * x ^ 8 + 68 * x ^ 7 - 83 * x ^ 6 - 151 * x ^ 5 - 83 * x ^ 4 - 68 * x ^ 3 - 15 * x ^ 2 - 8 * x - 7) / (x ^ 12 - 302 * x ^ 6 + 1). [_ Colin Barker _ , Jul 18 2012] ●

► [A041427] 1,7,8,15,113,3405,23948,27353,51301,386460,11645101,81902167,93547268,175449435,1321693313,39826248825,280105435088,319931683913,600037119001,4520191516920,13620578262660 1,957960669903127,1094166452529728,2052127122432855 ⋆ Denominators of continued fraction convergents to sqrt(229). ● a(n) = 3420 * a(n - 5) + a(n - 10) for n>9. - _ Vincenzo Librandi _ , Dec 17 2013 ●

► [A042755] 1,7,8,15,218,233,451,3390,203851,1430347,1634198,3064545,44537828,47602373,92140201,692583780,41647167001,292222752787,333869919788,626092672575,9099167335838,9725260008413,18824427344251,141496251418170,8508599512434451 ⋆ Denominators of continued fraction convergents to sqrt(908). ● a(n) = 204302 * a(n - 8) - a(n - 16) for n>15. - _ Vincenzo Librandi _ , Jan 28 2014 ●

► [A022312] 0,7,8,16,25,42,68,111,180,292,473,766,1240,2007,3248,5256,8505,13762,22268,36031,58300,94332,152633,246966,399600 ⋆ a(n) = a(n - 1) + a(n - 2) + 1 for n>1, a(0)=0, a(1)=7. ● a(n) = F(n + 2) + 6 * F(n) - 1, where F = A000045. - _ G. C. Greubel _ , Aug 25 2017 ●

► [A222624] 1,7,8,17,23,31,35,49,55,62,71,74,80,89,95,97,119,120,127,143,146,161,174,199,215 ⋆ Sequence of dimensions of a regular simplex with unit edge that has at least one inter - hypersphere with a rational radius (including the radii o f the in - hypersphere and circum - hypersphere). ● a(n)=k is the n - th occurr ence for which k=sqrt((k - j) / (2 * (k + 1) * (j + 1))) is rational for at least on e value of j in the range 0<=j<k. ●

► [A308953] 0,0,0,0,0,0,0,7,8,18,20,44,60,104,126,180,224,340,396,551,640,882,1034,1357,1536 ⋆ Sum of all the parts in the partitions of n into 7 squarefree parts . ● a(n) = n * Sum _{ o=1..floor(n / 7) } Sum _{ m=o..floor((n - o) / 6) } Su m _{ l=m..floor((n - m - o) / 5) } Sum _{ k=l..floor((n - l - m - o) / 4) } Sum _{ j=k..floor((n - k - l - m - o) / 3 } Sum _{ i=j..floor((n - j - k - l - m - o) / 2) } mu(o) ^ 2 * mu(m) ^ 2 * mu(l) ^ 2 * mu(k) ^ 2 * mu(j) ^ 2 * mu(i) ^ 2 * mu (n - i - j - k - l - m - o) ^ 2, where mu is the Möbius function (A008683). ●

► [A309482] 0,0,0,0,0,0,0,7,8,18,26,51,76,127,178,262,363,524,687,962,1249,1670,2136,2791,3499 ⋆ Sum of the squarefree parts of the partitions of n into 7 parts. ● a(n) = Sum _{ o=1..floor(n / 7) } Sum _{ m=o..floor((n - o) / 6) } Sum _{ l=m..floor((n - m - o) / 5) } Sum _{ k=l..floor((n - l - m - o) / 4) } Sum _{ j=k..floor((n - k - l - m - o) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o) / 2) } (i * mu(i) ^ 2 + j * mu(j) ^ 2 + k * mu(k) ^ 2 + l * mu(l) ^ 2 + m * mu(m) ^ 2 + o * mu(o) ^ 2 + (n - i - j - k - l - m - o) * mu(n - i - j - k - l - m - o) ^ 2), where mu is the Möbius function (A008683). ●

► [A308926] 0,0,0,0,0,0,0,7,8,18,30,55,84,143,210,315,448,646,882,1235,1640,2205,2882,3772,4824 ⋆ Sum of all the parts in the partitions of n into 7 parts. ● a(n) = n * Sum _{ o=1..floor(n / 7) } Sum _{ m=o..floor((n - o) / 6) } Sum _{ l =m..floor((n - m - o) / 5) } Sum _{ k=l..floor((n - l - m - o) / 4) } Sum _{ j=k ..floor((n - k - l - m - o) / 3 } Sum _{ i=j..floor((n - j - k - l - m - o) / 2) } 1. ●

► [A295337] 1,1,7,8,23,31,209,240,689,929,6263,7192,20647,27839,187681,215520,618721,834241,5624167,6458408,18540983,24999391,168537329,193536720,555610769 ⋆ Denominators of the convergents to sqrt(14) / 2 = A294969. ● a(n) = 30 * a(n - 4) - a(n - 8), n >= 8, with inputs a(0)..a(7). ●

► [A042391] 1,1,7,8,23,77,177,4679,9535,33284,76103,109387,732425,841812,44506649,45348461,316597415,361945876,1040489167,3483413377,8007315921,211673627323,431354570567,1505737339024,3442829248615 ⋆ Denominators of continu ed fraction convergents to sqrt(722). ● a(n) = 45239074 * a(n - 14) - a(n - 28) f or n>27. - _ Vincenzo Librandi _ , Jan 21 2014 ●

► [A042023] 1,7,8,23,100,123,469,592,2837,6266,9103,69987,3228505,22669522,25898027,74465576,323760331,398225907,1518438052,1916663959,9185093888,20286851735,29471945623,226590471096,10452633616039 ⋆ Denominators of continu ed fraction convergents to sqrt(535). ● a(n) = 3237608 * a(n - 12) - a(n - 24) fo r n>23. - _ Vincenzo Librandi _ , Jan 12 2014 ●

► [A041102] 7,8,23,169,361,530,7781,8311,24403,179132,382667,561799,8247853,8809652,25867157,189879751,405626659,595506410,8742716399,9338222809,27419162017,201272356928,429963875873 ⋆ Numerators of continued fraction conv ergents to sqrt(59). ● a(n) = 1060 * a(n - 6) - a(n - 12). G.f.: - (x ^ 11 - 7 * x ^ 10 + 8 * x ^ 9 - 23 * x ^ 8 + 169 * x ^ 7 - 361 * x ^ 6 - 530 * x ^ 5 - 361 * x ^ 4 - 169 * x ^ 3 - 23 * x ^ 2 - 8 * x - 7) / (x ^ 12 - 1060 * x ^ 6 + 1). [_ Colin Bar ker _ , Jul 18 2012] ●

► [A042875] 1,7,8,31,101,132,233,365,963,1328,2291,3619,13148,43063,56211,436540,27121691,190288377,217410068,842518581,2744965811,3587484392,6332450203,9919934595,26172319393 ⋆ Denominators of continued fraction convergents t o sqrt(969). ● a(n) = 27177902 * a(n - 16) - a(n - 32) for n > 31. - _ Vincenzo Librandi _ , Jan 31 2014 ●

► [A033044] 0,1,7,8,49,50,56,57,343,344,350,351,392,393,399,400,2401,2402,2408,2409,2450,2451,2457,2458,2744 ⋆ Sums of distinct powers of 7. ● a(n) = Sum _{ i=0..m } d(i) * 7 ^ i, where Sum _{ i=0..m } d(i) * 2 ^ i is the base - 2 rep resentation of n. ● a(2n) = 7 * a(n), a(2n + 1) = a(2n) + 1. ●

► [A041023] 1,1,7,8,55,63,433,496,3409,3905,26839,30744,211303,242047,1663585,1905632,13097377,15003009,103115431,118118440,811826071,929944511,6391493137,7321437648,50320119025 ⋆ Denominators of continued fraction convergent s to sqrt(15). ● a(n) = product { k = 1..floor((n - 1) / 2) } (6 + 4 * cos ^ 2(k * Pi / n)). ●

► [A041109] 1,1,7,8,119,127,881,1008,14993,16001,110999,127000,1888999,2015999,13984993,16000992,237998881,253999873,1761998119,2015997992,2998597007,32001967999,221997778001,253999746000,3777994222001 ⋆ Denominators of c ontinued fraction convergents to sqrt(62). ● a(n) = 126 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Dec 11 2013 ●

► [A041110] 7,8,119,127,1897,2024,30233,32257,481831,514088,7679063,8193151,122383177,130576328,1950451769,2081028097,31084845127,33165873224,495407070263,528572943487,7895428279081,8424001222568 ⋆ Numerators of continue d fraction convergents to sqrt(63). ● a(n) = 16 * a(n - 2) - a(n - 4). G.f.: (7 + 8 * x + 7 * x ^ 2 - x ^ 3) / (1 - 16 * x ^ 2 + x ^ 4). [_ Colin Barker _ , Jul 15 2012] ●

► [A041259] 1,1,7,8,183,191,1329,1520,34769,36289,252503,288792,6605927,6894719,47974241,54868960,1255091361,1309960321,9114853287,10424813608,238460752663,248885566271,1731774150289,1980659716560,45306287914609 ⋆ Denomi nators of continued fraction convergents to sqrt(141). ● a(n) = 190 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Dec 14 2013 ●

► [A041473] 1,1,7,8,247,255,1777,2032,62737,64769,451351,516120,15934951,16451071,114641377,131092448,4047414817,4178507265,29118458407,33296965672,1028027428567,1061324394239,7395973794001,8457298188240,261114919441201 ⋆ Denominators of continued fraction convergents to sqrt(252). ● a(n) = 254 * a(n - 4) - a(n - 8) for n>7. - _ Vincenzo Librandi _ , Dec 18 2013 ●

► [A041751] 1,1,7,8,311,319,2225,2544,98897,101441,707543,808984,31448935,32257919,224996449,257254368,10000662433,10257916801,71548163239,81806080040,318017920475 9,3261985284799,22752090913553,26014076198352,1011286986450929 ⋆ Denominators of continued fraction convergents to sqrt(395). ● a(n) = 318 * a(n - 4) - a(n - 8) for n>7, - _ Vincenzo Librandi _ , Dec 24 2013 ●

► [A042093] 1,1,7,8,375,383,2673,3056,143249,146305,1021079,1167384,54720743,55888127,390049505,445937632,20903180577,21349118209,148997889831,170347008040,7984960259671,8155307267711,56916803865937,65072111133648,3050233916013745 ⋆ Denominators of continued fraction convergents to sqrt(570). ● a (n) = 382 * a(n - 4) - a(n - 8) for n>7. - _ Vincenzo Librandi _ , Jan 14 2014 ●

► [A042499] 1,1,7,8,439,447,3121,3568,195793,199361,1391959,1591320,87323239,88914559,620810593,709725152,38945968801,39655693953,276880132519,316535826472,17369814762007,17686350588479 ⋆ Denominators of continued fraction convergents to sqrt(777). ● a(n) = 446 * a(n - 4) - a(n - 8). G.f.: - (x ^ 2 - x - 1) * (x ^ 4 + 8 * x ^ 2 + 1) / (x ^ 8 - 446 * x ^ 4 + 1). [_ Colin Barker _ , Jul 16 2012] ●

► [A004169] 7,9,11,13,14,18,19,21,22,23,25,26,27,28,29,31,33,35,36,37,38,39,41,42,43 ⋆ Values of m for which a regular polygon with m sides cannot be construc ted with ruler and compass. ● a(n) = n + O(log ^ 2 n). - _ Charles R Greatho use IV _ , Oct 23 2015 ●

► [A020742] 7,9,11,13,15,17,19,21,23,25,27,29,31,33,35,37,39,41,43,45,47,49,51,53,55 ⋆ Pisot sequence T(7,9). ● a(n) = 2n + 7. a(n) = 2a(n - 1) - a(n - 2). ●

► [A103621] 7,9,11,13,23,25,27,61,71,73,75,77,87,89,91,125,135,137,139,141,151,153,155,189,199 ⋆ Trajectory of 7 under repeated application of the map n − > A 102370(n). ● a(n) = a(n - 1) + a(n - 8) - a(n - 9) for n > 9. ●

► [A317633] 1,7,9,11,17,19,21,27,29,31,37,39,41,47,49,51,57,59,61,67,69,71,77,79,81 ⋆ Numbers congruent to { 1, 7, 9 } mod 10. ● a(n) = a(n - 3) + 10, a(1) = 1, a(2) = 7, a(3) = 9. ● a(n) = 2 * n + 4 * floor((n + 1) / 3) - 1. (End) ●

► [A020720] 7,9,12,16,21,28,37,49,65,86,114,151,200,265,351,465,616,816,1081,1432,1897,2513,3329,4410,5842 ⋆ Pisot sequences E(7,9), P(7,9). ● a(n) = a(n - 2) + a(n - 3) for n>=3. (Proved using the PtoRv program of Ekhad - Sloane - Zei lberger.) - N. J. A. Sloane, Sep 09 2016 ●

► [A048589] 7,9,12,16,22,31,44,63,91,132,192,280,409,598,875,1281,1876,2748,4026,5899,8644,12667,18563,27204,39868 ⋆ Pisot sequence L(7,9). ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) - a(n - 4) (holds at least up to n = 1000 but is not kno wn to hold in general). ●

► [A129069] 7,9,13,17,25,29,37,41,49,61,65,77,85,89,97,109,121,125,137,145,149,161,169,181,197 ⋆ Numbers k such that (k - 3) / 2 is prime. ● a(n) = 2 * prime(n) + 3. - _ Zak Seidov _ , May 12 2007 ●

► [A027692] 7,9,13,19,27,37,49,63,79,97,117,139,163,189,217,247,279,313,349,387,427,469,513,559,607 ⋆ a(n) = n ^ 2 + n + 7. ● a(n) = 2 * n + a(n - 1) (with a (0)=7). - _ Vincenzo Librandi _ , Aug 05 2010 ● a(n + 1) = n ^ 2 + 3 * n + 9, see A005471. - _ R. J. Mathar _ , Jun 06 2019 ●

► [A047522] 1,7,9,15,17,23,25,31,33,39,41,47,49,55,57,63,65,71,73,79,81,87,89,95,97 ⋆ Numbers that are congruent to { 1, 7 } mod 8. ● a(n) = 4n - 2 + (- 1) ^ n = a(n - 2) + 8. ● a(n) = 8 * n - a(n - 1) - 8. - _ Vincenzo Librandi _ , Aug 06 2010 ● a(n) = - a(- n + 1) = a(n - 1) + a(n - 2) - a(n - 3). ●

► [A112072] 7,9,15,17,31,33,39,41,55,57,63,65,79,81,87,89,103,105,111,113,127,129,135,137,151 ⋆ Odd numbers n for which 3 is the smallest i (>= 1) with Jacobi symbol J(i,n) getting either a value 0 or - 1. ● a(n)= - 7 + Sum _{ k=0..n }{- 2 * (k mod 4) + 2 * ((k + 1) mod 4) + 4 * ((k + 3) mod 4) } - _ Paolo P. Lava _ , Aug 29 2007 ●

► [A357500] 1,1,7,9,15,21,24,34 ⋆ Largest number of nodes of an induced path i n the n X n knight graph. ● a(n) <= (4 * (n ^ 2 + 3 * n - 2) - 1) / 7 for n >= 4. - _ Elijah Beregovsky _ , Dec 22 2022 ● a(n) = n ^ 2 / 2 + O(n) (Beluhov 2 023). - _ Pontus von Brömssen _ , Jan 30 2023 ●

► [A249333] 7,9,16,19,29,33,46,51,67,73,92,99,121,129,154,163,191,201,232,243,277,289,326,339,379 ⋆ Number of regions formed by extending the sides of a regu lar n - gon. ● a(n) = (n ^ 2 + 2) / 2, n even, and a(n) = (n ^ 2 + n + 2) / 2, n odd. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). - _ Coli n Barker _ , Dec 14 2014 ●

► [A022321] 1,7,9,17,27,45,73,119,193,313,507,821,1329,2151,3481,5633,9115,14749,23865,38615,62481,101097,163579,264677,428257 ⋆ a(n) = a(n - 1) + a(n - 2) + 1, with a(0) = 1 and a(1) = 7. ● a(n) = 2 * F(n + 2) + 4 * F(n) - 1, where F = A000045. - _ G. C. Greubel _ , Aug 25 2017 ●

► [A083582] 1,7,9,23,41,87,169,343,681,1367,2729,5463,10921,21847,43689,87383,174761,349527,699049,1398103,2796201,5592407,11184809,22369623,44739241 ⋆ a(n) = (8 * 2 ^ n - 5 * (- 1) ^ n) / 3. ● a(n) = (8 * 2 ^ n - 5(- 1) ^ n) / 3. ● a(n) = 2 ^ (n + 2)th coefficient of - eta(z) ^ 3 eta(z ^ 5) eta(z ^ 10) ^ 2 / eta(z ^ 2) ^ 2. - Kok Seng Chua (chuaks(AT)ihpc.a - star.edu.sg), Aug 30 2005 ● a(n) = a(n - 1) + 2 * a(n - 2). a(n) + a(n + 1) = 8 * A000079 = a(n + 2) - a(n). - _ Paul Curtz _ , Jul 27 2008 ●

► [A154260] 0,7,9,30,34,69,75,124,132,195,205,282,294,385,399,504,520,639,657,790,810,957,979,1140,1164 ⋆ Numbers of the form m * (4 * m +- 1) / 2. ● a(n) =

a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). • a(n) = (1 / 4) * (8 * n ^ 2 + 6 * (- 1) ^ n * n - 8 * n - 3 * (- 1) ^ n + 3). •

► [A085903] 1,1,7,9,31,49,127,225,511,961,2047,3969,8191,16129,32767,65025,131071,261121,524287,1046529,2097151,4190209,8388607,16769025,33554431 ⋆ G.f.: (1 + 2 * x ^ 2) / ((1 + x) * (1 - 2 * x) * (1 - 2 * x ^ 2)). • a(2 * n) = 2 * 4 ^ n - 1, a(2 * n + 1) = (2 ^ n - 1) ^ 2; interlaces A083420 with A060867 (squares of Mersenne numbers A000225). - _ Creighton Dement _ , May 19 2005 • a(n) = (sqrt(2) ^ n - 1) * (sqrt(2) ^ n - (- 1) ^ n)). • a(n) = Product _{ k = 1..n } (2 - exp(4 * k * Pi * i / n)). (End) •

► [A057590] 0,1,7,9,39,42,126,130,310,315,645,651,1197,1204,2044,2052,3276,3285,4995,5005,7315,7326,10362,10374,14274 ⋆ Numbers of the form k * (k ^ 3 +- 1) / 2. • a(n) = (2 * n ^ 4 + 4 * n ^ 3 + 6 * n ^ 2 + 4 * n - 7) / 64 + (- 1) ^ n * (7 - 2 * n - 2 * n ^ 2) * (1 + 2 * n) / 64. • a(n + 8) - 4 * a(n + 6) + 6 * a(n + 4) - 4 * a(n + 2) + a(n) = 12. (End) •

► [A140787] 1,1,7,9,39,57,199,313,967,1593,4551,7737,20935,36409,94663,167481,422343,757305,1864135,3378745,8155591,14913081,35418567,65244729,152859079 ⋆ Expansion of 1 / ((1 + x) * (2 * x + 1) * (- 1 + 2 * x) ^ 2). • a(n) = 2 ^ n * (n / 3 + 11 / 18) + (- 1) ^ n * (2 ^ (n - 1) - 1 / 9). •

► [A189053] 1,1,7,9,41,61,225,369,1195,2101,6227,11529,32059,61741,163727,325089,831505,1690981,4206145,8717049,21215481,44633821,106782837,227363409,536618341 ⋆ Expansion of d / dx log(1 / (1 - x / sqrt(1 - 4 * x ^ 2))). • a(n)=n * sum(k=1..n, (binomial((n - 2) / 2,(n - k) / 2) * 2 ^ (n - k - 1) * ((- 1) ^ (n - k) + 1)) / k); •

► [A299913] 0,1,1,7,9,55,73,439,585,3511,4681,28087,37449,224695,299593,1797559,2396745,14380471,19173961,115043767,153391689,920350135,1227133513,7362801079,9817068105 ⋆ a(n) = a(n - 1) + 2 * a(n - 2) if n even, or 3 * a(n - 1) + 4 * a(n - 2) if n odd, starting with 0, 1. • a(n) = (2 ^ (3 * n / 2) - 1) / 7 for n even. • a(n) = 3 * 2 ^ ((3 * (n - 1)) / 2 + 1) / 7 + 1 / 7 for n odd. • a(n) = - a(n - 1) + 8 * a(n - 2) + 8 * a(n - 3) for n>2. •

► [A226197] 1,1,7,9,56,79,470,697,4048,6196,35443,55455,313912,499178,2804012,4514873,25211936,40999516,227881004,373585604,2068564064,3414035527,18844224462,31278197839,172186125456 ⋆ Numbers of vectors with 2 * n integers such that each element is either 1 or - 1, and their sum > n. • a(n) = sum _{ k = 1 + floor(n / 2)...n } binomial(2n,n - k), sum of the n / 2 rightmost elements of row n of A094527. - _ Giovanni Resta _ , May 31 2013 •

► [A123746] 1,1,7,9,107,151,835,1241,26291,40427,207897,327615,3296959,5293843,26189947,42685049,1666461763,2749521971,13266871709,22115585443,211386315749,355490397193,1684973959237,2855358497999,53747636888759 ⋆ Numerators of partial sums of a series for 1 / sqrt(2). • a(n) = numerator(r(n)) with the rationals r(n) = Sum _{ k=0..n } (- 1) ^ k * binomial(2 * k,k) / 4 ^ k, n>=0. •

► [A079004] 7,10,10,34,106,322,970,2914,8746,26242,78730,236194,708586,2125762,6377290,19131874,57395626,172186882,516560650,1549681954,4649045866,13947137602,41841412810,125524238434,376572715306 ⋆ Least x>=3 such that F(x)==1 (mod 3 ^ n) where F(x) denotes the x - th Fibonacci number (A000045). • a(1)=7, a(2)=10, a(3)=10; for n>3, a(n) = 3 * a(n - 1) + 4. • a(n) = 4 * 3 ^ (n - 2) - 2 for n >= 3. •

► [A184114] 1,7,10,12,15,17,19,21,23,25,26,28,30,32,33,35,37,38,40,41,43,44,46,47,49 ⋆ n + floor(5 * sqrt(n - 1)); complement of A184115. • a(n) = n + floor(5 * sqrt(n - 1)) •

► [A112414] 7,10,13,16,19,22,25,28,31,34,37,40,43,46,49,52,55,58,61,64,67,70,73,76,79 ⋆ 3n + 7. • a(n) = C(1 + n,1) + C(2 + n,1) + C(4 + n,1). •

► [A212979] 1,1,1,7,10,13,19,25,34,40,49,61,70,82,94,109,124,136,154,172,190,208,226,250,271 ⋆ Number of (w,x,y) with all terms in { 0,...,n } and range=average. • a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4) + a(n - 5) - 2 * a(n - 6) + 2 * a(n - 7) - 2 * a(n - 8) + a(n - 9). •

► [A199427] 1,7,10,13,22,28,43,58,70,73,127,148,160,163,190,202,238,253,262,307,322,352,370,400,433 ⋆ Numbers n such that 4n + 1 and 8n + 3 are prime. • a(n) = intersection(A005098, A005124). •

► [A178508] 1,7,10,13,31,49,70,97,100,130,310,490,700,970,1000,1300,3100,4900,7000,9700,10000,13000,31000,49000,70000 ⋆ a(n) = 1, 7, A011557 * (period 6: repeat 10, 13, 31, 49, 70, 97). • a(n) = { 10 ^ floor[(n - 3) / 6] / 2 }*{- [(n - 1) mod 6] + 5 * [(n + 2) mod 6] + 35 * [(n + 3) mod 6] - 3 * [(n + 4) mod 6] }- 6 *{ C[2 * (n - 1),n - 1] mod 2 }- (27 / 10) * [C(n ^ 2,n + 2) mod 2], with n>=1. [_ Paolo P. Lava _ , Jul 08 2010] • a(n) = 10 ^ floor((n - 3) / 6) * (45 + 8 * cos((n - 2) * Pi) + 25 * cos((n - 2) * Pi / 3) + 19 * cos(2 * (n - 2) * Pi / 3) - 4 * sqrt(3) * (4 * sin((n - 2) * Pi / 3) + sin(2 * (n - 2) * Pi / 3))) for n>2. - _ Wesley Ivan Hurt _ , Jun 18 2016 •

► [A030123] 0,1,7,10,14,17,21,24,28,31,35,38,42,45,49,52,56,59,63,66,70,73,77,80,84 ⋆ Most likely total for a roll of n 6 - sided dice, choosing the smallest if there is a choice. • a(n) = floor(7 * n / 2) for n >= 2. • a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n >= 5. •

► [A020721] 7,10,14,20,29,42,61,89,130,190,278,407,596,873,1279,1874,2746,4024,5897,8642,12665,18561,27202,39866,58426 ⋆ Pisot sequences E(7,10), P(7,10). • a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) - a(n - 4) (holds at least up to n = 1000 but is not known to hold in general). •

► [A301451] 1,7,10,16,19,25,28,34,37,43,46,52,55,61,64,70,73,79,82,88,91,97,100,106,109 ⋆ Numbers congruent to { 1, 7 } mod 9. • a(n) = a(n - 1) + a(n - 2) - a(n - 3). • a(n) = 2 * (2 * n - 1) + (2 * n - 3 * (1 - (- 1) ^ n)) / 4. Therefore, for n even a(n) = (9 * n - 4) / 2, otherwise a(n) = (9 * n - 7) / 2. •

► [A033817] 7,10,16,21,28,36,47,62,84,117,168,248,375,578,904,1429,2276,3644,5855,9430,15212,24565,39696,64176,103783 ⋆ Convolution of natural numbers n >= 1 with Lucas numbers L(k) for k >= - 4. • a(n) = L(- 1) * (F(n + 1) - 1) + L(- 2) * F(n) - L(- 3) * n, F(n): Fibonacci (A000045), L(n): Lucas (A000032) with L(- n)=(- 1) ^ n * L(n) • a(n) = Lucas(n - 1) + 4 * n + 1. - _ G. C. Greubel _ , Jun 01 2019 •

► [A074377] 0,1,7,10,22,27,45,52,76,85,115,126,162,175,217,232,280,297,351,370,430,451,517,540,612 ⋆ Generalized 10 - gonal numbers: m * (4 * m - 3) for m = 0, +- 1, +- 2, +- 3, ... • a(2 * k) = k * (4 * k + 3); a(2 * k + 1) = (2 * k + 1) ^ 2 + k. - _ Benoit Jubin _ , Feb 05 2009 • a(n) = n ^ 2 + n - 1 / 4 + (- 1) ^ n / 4 + n * (- 1) ^ n / 2. - _ R. J. Mathar _ , Oct 08 2011 •

► [A280173] 1,7,10,25,46,97,190,385,766,1537,3070,6145,12286,24577,49150,98305,196606,393217,786430,1572865,3145726,6291457,12582910,25165825,50331646 ⋆ a(0) = 1, a(n + 1) = 2 * a(n) + periodic sequence of length 2: repeat [5, - 4]. • a(2n) = 3 * 4 ^ n - 2, a(2n + 1) = 6 * 4 ^ n + 1. • a(n + 2) = a(n) + 9 * 2 ^ n, a(0) = 1, a(1) = 7. • a(n) = 3 * 2 ^ n - 2 for n even. • a(n) = 3 * 2 ^ n + 1 for n odd. • a(n) = 2 * a(n - 1) + a(n - 2) - 2 * a(n - 3) for n>2. • a(n) = - 1 / 2 - 3 / 2 * (- 1) ^ n + 3 * 2 ^ n. - _ Paolo P. Lava _ , May 18 2017 •

► [A258284] 1,1,7,10,40,64,215,373,1076,1823,5052,8519,21279,36836,86354,148550,338354,571638,1242227,2156661,4453444,7573979,15612927,26325001,52042210 ⋆ Number of partitions of 6 copies of n into distinct parts. • a(n) = 1 / 6! * [(x * y * z * u * v * w) ^ n] Product _{ j>0 } (1 + x ^ j + y ^ j + z ^ j + u ^ j + v ^ j + w ^ j). •

► [A099579] 0,0,1,1,7,10,40,70,217,427,1159,2440,6160,13480,32689,73129,173383,392770,919480,2097790,4875913,11169283,25856071,59363920,137109280 ⋆ a(n) = Sum _{ k=0..floor(n / 2) } binomial(n - k, k - 1) * 3 ^ (k - 1). • a(n) = a(n - 1) + 6 * a(n - 2) - 3 * a(n - 3) - 9 * a(n - 4). • a(n) = (i * sqrt(3)) ^ (n - 1) * ChebyshevU(n - 1, - i / (2 * sqrt(3))) - 3 ^ ((n - 1) / 2) * (1 - (- 1) ^ n) / 2. •

► [A091901] 7,11,13,14,15,17,19,21,22,23,25,26,27,28,29,31,32,33,34,35,37,38,39,40,41 ⋆ Values of n for which sigma(n) < e ^ gamma * n * log(log(n)). • a(n) = n + 27 for n > 5039, if and only if the Riemann Hypothesis is true. -_ Charles R Greathouse IV _ , May 31 2011 •

► [A110547] 7,11,13,14,16,17,19,21,22,23,25,26,27,28,29,31,32,33,34,35,37,38,39,41,42 ⋆ Number of sides of regular polygons whose interior angles (in degrees) are not integers. • a(n)=[(n - 2) * 180)] / n •

► [A279622] 7,11,13,14,17,19,21,22,23,26,28,29,31,33,34,35,37,38,39,41,42,43,44,46,47 ⋆ Numbers with a prime factor greater than 5. • a(n) = n + O(log ^ 3 n). - _ Charles R Greathouse IV _ , Dec 22 2016 •

► [A112588] 7,11,13,17,19,21,22,23,25,26,27,29,31,32,33,34,35,37,38,39,41,43,44,45,46 ⋆ Numbers m such that phi(m) > 2 * tau(m), where phi = A000010 and tau = A000005. • a(n) = n + 27 for n >= 94. - _ Jianing Song _ , Jul 28 2018 •

► [A007775] 1,7,11,13,17,19,23,29,31,37,41,43,47,49,53,59,61,67,71,73,77,79,83,89,91 ⋆ Numbers not divisible by 2, 3 or 5. • a(n + 8) = a(n) + 30. • a(n) = a(n - 1) + a(n - 8) - a(n - 9). • a(n) = 4 * n - 3 - 2 * floor((n - 1) / 8) + (1 + (- 1) ^ floor((n - 2) / 2)) * (- 1) ^ floor((n - 2) / 4), n >= 1. - _ Timothy Hopper _ , Mar 14 2010 • a(1 - n) = - a(n). - _ Michael Somos _ , Feb 05 2011 • a(n) = 3 * (floor((5 * n - 2) / 4) - floor((n mod 8) / 6)) + (n mod 2) + floor(((n - 1) mod 8) / 7) - floor(((n - 2) mod 8) / 7) + 1. - _ Gary Detlefs _ , Jan 08 2012 • a(n) = 4 * n - 3 + 2 * (floor((n + 6) / 8) - floor((n + 4) / 8) - floor((n + 2) / 8) + floor(n / 8) - floor((n - 1) / 8)), n >= 1. From the o.g.f. given above by _ R. J. Mathar _ (with the denominator written as (1 - x ^ 8) * (1 - x)), and a two - step reduction of the floor functions. Compare with Hopper's and Detlefs's formulas above. - _ Wolfdieter Lang _ , Jan 26 2012 •

► [A103485] 7,11,13,17,23,29,39,51,67,89,117,155,205,271,359,475,629,833,1103,1461,1935,2563,3395,4497,5957 ⋆ Expansion of (7 + 4 * x - 5 * x ^ 2 - 7 * x ^ 3) / ((1 - x) * (1 - x ^ 2 - x ^ 3)). • a(n) = a(n - 1) + a(n - 2) - a(n - 4), with a(0)=7, a(1)=11, a(2)=13, a(3)=17. • a(n) = a(n - 2) + a(n - 3) - 1. - _ Greg Dresden _ , May 18 2020 •

► [A245179] 7,11,13,19,25,35,49,67,97,131,193,259,385,515,769,1027,1537,2051,3073,4099,6145,8195,12289,16387,24577 ⋆ Numbers of the form 2 ^ k + 3 or 3 * 2 ^ k + 1, k >= 2. • a(2k) = 2 ^ (k + 2) + 3, a(2k + 1) = 3 * 2 ^ (k + 1) + 1. - _ N. J. A. Sloane _ , Jul 19 2014 • a(n) = 3 * a(n - 2) - 2 * a(n - 4). G.f.: - x * (14 * x ^ 3 + 8 * x ^ 2 - 11 * x - 7) / ((x - 1) * (x + 1) * (2 * x ^ 2 - 1)). - _ Colin Barker _ , Jul 19 2014 •

► [A296716] 7,11,13,29,37,41,43,59,67,71,73,89,97,101,103,119,127,131,133,149,157,161,163,179,187 ⋆ Numbers congruent to { 7, 11, 13, 29 } mod 30. • a(n) = a(n - 1) + a(n - 4) - a(n - 5), n >= 6. • a(n) = a(n - 4) + 30. • a(n) = (- 15 + 5 * (- 1) ^ n + (3 + 9 * i) * (- i) ^ n + (3 - 9 * i) * i ^ n + 30 * n) / 4 where i =sqrt(- 1). - _ Colin Barker _ , Dec 19 2017 •

► [A131229] 1,7,11,17,21,27,31,37,41,47,51,57,61,67,71,77,81,87,91,97,101,107,111,117,121 ⋆ Numbers congruent to { 1,7 } mod 10. • a(n) = - 3 + Sum _{ k=0..n } (5 - (- 1) ^ k). - _ Paolo P. Lava _ , Nov 05 2007 • a(n) = a(n - 2) + 10 = 5 * n + ((- 1) ^ n - 7) / 2. • a(n) = 10 * n - a(n - 1) - 12 with n > 1, a(1)=1. - _ Vincenzo Librandi _ , Nov 23 2010 • a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n > 3; a(1)=1, a(2)=7, a(3)=11. - _ Harvey P. Dale _ , May 20 2012 •

► [A088981] 7,11,17,25,37,55,83,127,197,309,489,779,1247,2003,3225,5201,8397,13567,21931,35463,57357,92781,150097,242835,392887 ⋆ a(n + 2) = a(n + 1) + a(n) - [(2 * n) + 1] where a(0)=7, a(1)=11. • a(n) = [(2 * (alpha ^ (n + 3))) - (2 * (beta ^ (n + 3))) + ((2 * sqrt5) * n) + (3 * sqrt5)] / (sqrt5) where alpha = (1 + sqrt5) / 2 and beta = (1 - sqrt5) / 2. •

► [A224868] 7,11,17,26,39,58,86,127,187,275,404,593,870,1276,1871,2743,4021,5894,8639,12662,18558,27199,39863,58423,85624 ⋆ a(1) = greatest k such that H(k) - H(4) < 1 / 3 + 1 / 4; a(2) = greatest k such that H(k) - H(a(1)) < H(a(1)) - H(4); and for n > 2, a(n) = greatest k such that H(k) - H(a(n - 1) > H(a(n - 1)) - H(a(n - 2)), where H = harmonic number. • a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) - a(n - 4) (conjectured). •

► [A168489] 7,11,19,23,31,35,43,47,55,59,67,71,79,83,91,95,103,107,115,119,127,131,139,143,151 ⋆ Numbers that are congruent to { 7,11 } mod 12. • a(n) = 12 * n - a(n - 1) - 6 for n>1, a(1)=7. • a(n) = 6 * n - (- 1) ^ n. • a(n) = a(n - 1) + a(n - 2) - a(n - 3). •

► [A162857] 7,11,19,43,67,163,211,283,331,523,547,691,787,907,1051,1123,1171,1531,1723,1867,2011,2083,2251,2347,2371 ⋆ Primes of form 4p - 1, p a prime. • a(n) >> n log ^ 2 n. - _ Charles R Greathouse IV _ , Jun 14 2022 •

► [A184063] 7,11,20,34,54,81,116,160,214,279,356,446,550,669,804,956,1126,1315,1524,1754,2006,2281,2580,2904,3254 ⋆ Number of (n + 1) X 2 binary arrays with rows and columns in nondecreasing order and with no 2 X 2 subblock sum differing from a horizontal or vertical neighbor subblock sum by more than one. • a(n) = (n ^ 3 + 6 * n ^ 2 + 5 * n + 24) / 6 for n>1. • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>5. •

▶ [A081352] 1,7,11,21,29,43,55,73,89,111,131,157,181,211,239,273,305,343,379,421,461,507,551,601,649 ⋆ Main diagonal of square maze arrangement of natural numbers A081349. • a(n) = (n + 1) * (n + 2) - (- 1) ^ n = 2 * C(n + 2, 2) - (- 1) ^ n. • a(n) - 2 * a(n - 1) + 2 * a(n - 3) - a(n - 4) = 0 with n>3. [_ Bruno Berselli _ , Aug 01 2010] • a(n) = (2 * n ^ 2 + 6 * n - 2 * (- 1) ^ n + (- 1) ^ (2 * n) + 3) / 2. - _ Kritsada Moomuang _ , Oct 24 2019 •

▶ [A211433] 1,1,7,11,23,27,45,53,77,85,115,127,163,175,217,233,281,297,351,371,431,451,517,541,613 ⋆ Number of ordered triples (w,x,y) with all terms in {- n,...,0,...,n } and w + 2x + 4y=0. • a(n) = a(n - 1) + a(n - 2) - a(n - 3) + a(n - 4) - a(n - 5) - a(n - 6) + a(n - 7) for n>6. •

▶ [A210981] 0,1,7,11,23,30,48,58,82,95,125,141,177,196,238,260,308,333,387,415,475,506,572,606,678 ⋆ A062725 and positive terms of A051682 interleaved. • a(n) = (18 * n ^ 2 + 14 * n - 5 + (6 * n + 5) * (- 1) ^ n) / 16. - _ Luce ETIENNE _ , Oct 14 2014 •

▶ [A002810] 1,7,11,27,77,107,111,127,177,777,1127,1177,1777,7777,11777,27777,77777,107777,111777,127777,177777,777777,1127777,1177777,1777777 ⋆ Smallest number containing n syllables in UK English. • a(n + 12) = a(n) * 1000 + 777, as long as a(n + 12) is less than one quadrillion (whatever scale is used). - _ M. F. Hasler _ , Nov 03 2013 •

▶ [A045736] 1,7,11,27,77,111,127,177,777,1127,1177,1777,7777,11777,27777,77777,111777,127777,177777,777777,1127777,1177777,1777777,7777777,11777777 ⋆ Smallest positive integer requiring n syllables to pronounce in American English. • a(n + 11) = a(n) * 1000 + 777, as long as a(n + 11) is less than one quadrillion (whatever scale is used). - _ M. F. Hasler _ , Nov 03 2013 •

▶ [A193867] 1,7,11,29,37,67,79,121,137,191,211,277,301,379,407,497,529,631,667,781,821,947,991,1129,1177 ⋆ Odd central polygonal numbers. • a(n) = (4 * n ^ 2 + 2 * (- 1) ^ n * n - 4 * n - (- 1) ^ n + 3) / 2. • a(n) = 2 * n ^ 2 - n + 1 for n even. • a(n) = 2 * n ^ 2 - 3 * n + 2 for n odd. •

▶ [A083363] 1,7,11,30,38,69,81,124,140,195,215,282,306,385,413,504,536,639,675,790,830,957,1001,1140,1188 ⋆ Diagonal of table A083362. • a(0) = 1; a(2n - 1) = 8n ^ 2 - n (n>0); a(2n) = 8n ^ 2 + 3n (n>0). • a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). - _ Colin Barker _ , Sep 26 2014 • a(n) = (4n + 3) * (2n + 1 - (- 1) ^ n) / 4 + 0 ^ n. - _ Wesley Ivan Hurt _ , Sep 26 2014 •

▶ [A293046] 0,0,1,1,7,11,31,57,127,247,511,1013,2047,4083,8191,16369,32767,65519,131071,262125,524287,1048555,2097151,4194281,8388607 ⋆ Number of even permutations on { 1,2,...,n } with exactly 2 weak excedances. • a(n) = 2 ^ (n - 1) - 1 for even n > 0. •

▶ [A132355] 0,7,11,32,40,75,87,136,152,215,235,312,336,427,455,560,592,711,747,880,920,1067,1111,1272,1320 ⋆ Numbers of the form 9 * h ^ 2 + 2 * h, for h an integer. • a(2 * k) = k * (9 * k - 2), a(2 * k + 1) = k * (9 * k + 2). • a(n) = n ^ 2 - n + 5 * floor(n / 2) ^ 2. - _ Gary Detlefs _ , Feb 23 2010 • a(n) = + a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). • a(n) = (2 * n - 1 + (- 1) ^ n) * (9 * (2 * n - 1) + (- 1) ^ n) / 16. - _ Luce ETIENNE _ , Sep 13 2014 •

▶ [A268579] 1,7,11,41,48,120,130,262,275,485,501,807,826,1246,1268,1820,1845,2547,2575,3445,3476,4532,4566,5826,5863 ⋆ Expansion of (1 + 6 * x + x ^ 2 + 12 * x ^ 3 - 2 * x ^ 4) / ((1 - x) ^ 4 * (1 + x) ^ 3). • a(n) = Sum _{ k = 0..n } (6 * k + (- 1) ^ k + 3) * (3 * k - (- 1) ^ k * (3 * k + 1) + 5) / 16. • a(n) = 1 + (n * (6 * n ^ 2 + 27 * n + 35) - (9 * n ^ 2 + 15 * n + 2) * (- 1) ^ n + 2) / 16. •

▶ [A337099] 1,7,11,71,111,711,1111,7111,11111,71111,111111,711111,1111111,711111,11111111,71111111,111111111,711111111,1111111111,7111111111,11111111111,71111111111,111111111111,711111111111,1111111111111 ⋆ Largest positive number using exactly n segments on a calculator display (when '6' and '7' are represented using 6 resp. 3 segments). • a(n + 2) = 10 * a(n) + 1 for n >= 2. • a(2 * n) = (10 ^ n - 1) / 9 ; a(2 * n + 1) = ((10 ^ n - 1) / 9) + 6 * 10 ^ (n - 1). • a(n) = a(n - 1) + 10 * a(n - 2) - 10 * a(n - 3) for n > 4. (End) •

▶ [A062730] 7,12,14,19,21,23,32,34,45,47,60,62,77,79,96,98,117,119,140,142,165,167,192,194,221 ⋆ Rows of Pascal's triangle which contain 3 terms in arithmetic progression. • a(n)=(n ^ 2 + 8 * n + 8) / 4 for n>4 and even; a(n)=(n ^ 2 + 10 * n + 9) / 4 for n>4 and odd (conjectured). - _ Colin Barker _ , Aug 29 2013 •

▶ [A091573] 7,12,17,24,31,36,41,48,55,60,65,72,79,84,89,96,103,108,113,120,127,132,137,144,151 ⋆ Poincaré series [or Poincare series] of the preprojective algebra of an extended Dynkin diagram of type E _ 6. • a(n) = 6 * n + 6 (n odd), 6 * n + 7 (n==0 (mod 4)), 6 * n + 5 (n==2 (mod 4)). • a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4) for n>3. • a(n) = (12 + (- i) ^ n + i ^ n + 12 * n) / 2 where i = sqrt(- 1). •

▶ [A131912] 1,7,12,18,23,29,34,40,45,51,56,62,67,73,78,84,89,95,100,106,111,117,122,128,133 ⋆ Row sums of triangle A131911. • a(n) = 11 * n - a(n - 1) - 14 (with a(1)=1). - _ Vincenzo Librandi _ , Nov 23 2010 •

▶ [A247159] 7,12,18,24,36,42,54,60,72,90,96,114,126,132,144,162,180,186,204,216,222,240,252,270,294 ⋆ Sum of divisors of even semiprimes. • a(n) = 3 * prime(n) + 3 for n > 1. - _ Charles R Greathouse IV _ , Nov 22 2014 •

▶ [A190036] 7,12,18,27,39,53,69,87,107,129,153,179,207,237,269,303,339,377,417,459,503,549,597,647,699 ⋆ Number of nondecreasing arrangements of n + 2 numbers in 0..4 with the last equal to 4 and each after the second equal to the sum of one or two of the preceding three. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>4. •

▶ [A272975] 0,7,12,19,24,31,36,43,48,55,60,67,72,79,84,91,96,103,108,115,120,127,132,139,144 ⋆ Numbers that are congruent to { 0,7 } mod 12. • a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n>3. • a(n) = (12 * n - 11 + (- 1) ^ n) / 2. •

▶ [A104584] 0,1,7,12,26,35,57,70,100,117,155,176,222,247,301,330,392,425,495,532,610,651,737,782,876 ⋆ a(n) = (1 / 2) * (3 * n ^ 2 + n * (- 1) ^ n). • a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). - _ Vincenzo Librandi _ , Apr 04 2013 • a(n) = (1 / 2) * (3 * n ^ 2 + n * (- 1) ^ n). - _ Ralf Stephan _ , May 20 2007 •

▶ [A220036] 7,12,28,83,187,358,613,962,1426,2034,2823,3839,5137,6782,8850,11429,14620,18538,23313,29091,36035,44326,54164,65769,79382 ⋆ Number of 6 X n arrays of the minimum value of corresponding elements and their horizontal or diagonal neighbors in a random, but sorted with lexicographically nondecreasing rows and nonincreasing columns, 0..1 6 X n array. • a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>14. •

▶ [A198306] 7,12,37,62,187,312,937,1562,4687,7812,23437,39062,117187,195312,585937,976562,2929687,4882812,14648437,24414062,73242187,122070312,366210937,610351562,1831054687 ⋆ Moore lower bound on the order of a (6,g) - cage. • a(2 * i) = 2 * Sum _{ j=0..i - 1 } 5 ^ j = string "2" ^ i read in base 5. • a(2 * i + 1) = 5 ^ i + 2 * Sum _{ j=0..i - 1 } 5 ^ j = string "1" * "2" ^ i read in base 5. • a(n) = a(n - 1) + 5 * a(n - 2) - 5 * a(n - 3). G.f.: - x ^ 3 * (10 * x ^ 2 - 5 * x - 7) / ((x - 1) * (5 * x ^ 2 - 1)). - _ Colin Barker _ , Feb 01 2013 • a(n) = (5 ^ (n / 2) - 1) / 2 for n>2 and even. • a(n) = (3 * 5 ^ ((n - 1) / 2) - 1) / 2 for n>2 and odd. (End) •

▶ [A178681] 7,12,42,222,1302,7782,46662,279942,1679622,10077702,60466182,362797062,2176782342,13060694022,78364164102,470184984582,2821109907462,16926659444742,101559956668422,609359740010502 ⋆ a(n) = 6 ^ n + 6. • a(n) = 6 * (a(n - 1) - 5), n > 0. • a(n) = 7 * a(n - 1) - 6 * a(n - 2). •

▶ [A192779] 0,0,1,1,7,12,47,107,337,868,2520,6808,19192,52756,147185,407069,1131599,3136292,8707655,24151335,67025633,185946904,515971328,1431563056,3972149312 ⋆ Coefficient of x ^ 2 in the reduction of the n - th Fibonacci polynomial by x ^ 3 - >x ^ 2 + 3x + 1. • a(n)=a(n - 1) + 6 * a(n - 2) - a(n - 3) - 6 * a(n - 4) + a(n - 5) + a(n - 6). •

▶ [A224773] 7,13,15,19,21,23,25,27,31,33,35,37,39,43,45,47,49,53,55,57,59,61,63,67,69 ⋆ One half of the even terms of A224771. • a(n) is one half of the n - th even term of A224771. •

▶ [A045979] 1,7,13,17,19,31,37,43,47,49,59,61,67,71,73,79,91,97,101,103,107,109,127,133,137 ⋆ Bernoulli number B _{ 2n } has denominator 6. • a(n) seems to be asymptotic to c * n, 5 < c < 6. - _ Benoit Cloitre _ , Oct 19 2002 •

▶ [A288713] 1,7,13,17,23,29,33,39,43,49,55,59,65,71,75,81,85,91,97,101,107,111,117,123,127 ⋆ Positions of 1 in A288711; complement of A288712. • a(n + 1) = 2 * floor(n * phi) + 2 * n + 3, where phi = (1 + sqrt(5)) / 2. - _ Michel Dekking _ , Oct 20 2018 •

▶ [A121058] 7,13,19,22,31,37,42,43,46,47,49,61,62,67,73,79,82,91,97,103,109,118,121,122,126 ⋆ Positive integers x such that x + d + 1 is composite for all divisors d of x. • a(n)=n - th number x such that x + d + 1 is composite for all divisors d of x. •

▶ [A016921] 1,7,13,19,25,31,37,43,49,55,61,67,73,79,85,91,97,103,109,115,121,127,133,139,145 ⋆ a(n) = 6 * n + 1. • a(n) = 6 * n + 1, n >= 0 (see the name). • a(n) = 4 * (3 * n - 1) - a(n - 1) (with a(0)=1). - _ Vincenzo Librandi _ , Nov 20 2010 •

▶ [A023255] 7,13,19,31,43,73,211,223,241,307,397,409,631,661,727,757,769,829,883,1123,1741,1783,1867,2131,2143 ⋆ Primes that remain prime through 2 iterations of the function f(x) = 5x + 8. • a(n) == 1 (mod 6). - _ John Cerkan _ , Sep 14 2016 •

▶ [A373584] 1,7,13,19,31,49,67,85,109,139,169,199,235,277,319,361,409,463,517,571,631,697,763,829,901 ⋆ a(n) is equal to the number of shaded cells in a regular hexagon with side n drawn on a hexagonal grid. • a(n + 4) = a(n) + 12 * n + 18. • a(n) = 6 * ceiling(n * (n - 1) / 4) + 1. •

▶ [A265629] 7,13,19,31,157,761,3469,6883,27677 ⋆ Numbers k > 0 such that 10 ^ (k + 4) - 23 is prime. • a(n) mod 2 = 1. - _ Altug Alkan _ , Dec 14 2015 •

▶ [A005471] 7,13,19,37,79,97,139,163,313,349,607,709,877,937,1063,1129,1489,1567,1987,2557,2659,3313,3547,4297,5119 ⋆ Primes of the form m ^ 2 + 3m + 9, where m can be positive or negative. • a(n) == 1 (mod 6). - _ Zak Seidov _ , Mar 20 2010 •

▶ [A373544] 1,1,1,1,7,13,19,70,157,280,799,1894,3781,9646,23080,49159,119203,283972,627760,1487095,3518617,7945561,18620746,43801447,100117099 ⋆ Expansion of 1 / (1 - x / (1 - 9 * x ^ 3) ^ (2 / 3)). • a(n) = Sum _{ k=0..floor(n / 3) } 9 ^ k * binomial(2 * n / 3 - k - 1,k). •

▶ [A054858] 1,7,13,20,35,66,118,218,402,738,1358,2498,4594,8450,15542,28586,52578,96706,177870,327154,601730,1106754,2035638,3744122,6886514 ⋆ Number of basic blocks of size 5xn for tilings with square tiles of size up to 5 X 5. • a(n) = a(n - 1) + a(n - 2) + a(n - 3) for n>8, a(1)=1, a(2)=7, a(3)=13, a(4)=20, a(5)=35, a(6)=66, a(7)=218 •

▶ [A301691] 1,7,13,22,34,52,76,97,121,151,187,229,265,304,352,406,466,517,571,637,709,787,853,922,1006 ⋆ Partial sums of A301690. • a(n) = a(n - 1) + 2 * a(n - 5) - 2 * a(n - 6) - a(n - 10) + a(n - 11) for n > 10. •

▶ [A106349] 7,13,23,29,43,47,73,79,97,101,137,139,149,163,167,199,227,233,257,269,271,293,313,347,373 ⋆ Primes indexed by semiprimes. • a(n) = prime(semiprime(n)). •

▶ [A188557] 7,13,24,44,80,144,256,448,769,1291,2116,3384,5282,8054,12012,17548,25147,35401,49024,66868,89940,119420,156680,203304,261109 ⋆ Number of 6 X n binary arrays without the pattern 0 1 diagonally, vertically, antidiagonally or horizontally. • a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. •

▶ [A090992] 7,13,24,45,84,158,296,557,1045,1966,3691,6942,13038,24516,46055,86585,162680,305809,574624,1080106,2029680,3814941,7169145,13474502,25322375 ⋆ Number of meaningful differential operations of the n - th order on the space R ^ 7. • a(n + 4) = a(n + 3) + 3 * a(n + 2) - 2 * a(n + 1) - a(n). •

▶ [A259215] 7,13,24,45,85,162,311,601,1168,2281,4473,8802,17371,34365,68120,135253,268909,535234,1066287,2125809,4240672,8463633,16898609,33750850,67426675 ⋆ Number of (n + 1) X (1 + 1) 0..1 arrays with each 2 X 2 subblock having clockwise pattern 0000 0011 or 0101. • a(n) = 2 ^ (1 + n) + (2 ^ (- n) * ((1 - sqrt(5)) ^ n * (- 2 + sqrt(5)) + (1 + sqrt(5)) ^ n * (2 + sqrt(5)))) / sqrt(5). •

▶ [A363080] 1,7,13,25,43,61,85,115,145,181,223,265,313,367,421,481,547,613,685,763,841,925,1015,1105,1201 ⋆ Number of hexagonal lattice points within a hexagram centered at a lattice point and with outermost vertices at the six lattice points n steps outward from the central point. • a(n) = 6 * ceiling(n * (n + 1) / 3) + 1. •

▶ [A111721] 1,1,7,13,25,43,73,121,199,325,529,859,1393,2257,3655,5917,9577,15499,25081,40585,65671,106261,171937,278203,450145 ⋆ a(n) = a(n - 1) + a(n - 2) + 5 where a(0) = a(1) = 1. • a(n) = 3 / 2 ^ n * ((1 + sqrt(5)) ^ n + (1 - sqrt(

5)) ^ n) + 3 / (sqrt(5) * 2 ^ n) * ((1 + sqrt(5)) ^ n - (1 - sqrt(5)) ^ n) - 5. - _ Paolo P. Lava _ , Jul 27 2011 ●

► [A213663] 7,13,25,49,95,185,361,705,1379,2701,5297,10401,20447,40241,79281,156353,308643,609813,1205881,2386481,4726463,9367401,18577497,36865665,73199171 ⋆ Number of dominating subsets of the graph G(n) obtained by joining each vertex of the path graph P _{ n + 1 } on n + 1 vertices with an additional vertex (the join of K _ 1 and P _{ n + 1 }). ● a(1)=7, a(2)=13, a(3)=25, a(n)=a(n - 1) + a(n - 2) + a(n - 3) + 2 ^ (n - 2)for n>=4. ●

► [A060455] 1,1,1,1,1,1,1,7,13,25,49,97,193,385,769,1531,3049,6073,12097,24097,48001,95617,190465,379399,755749 ⋆ 7th - order Fibonacci numbers with a(0)=...=a(6)=1. ● a(n) = a(n - 1) + a(n - 2) + ... + a(n - 7) for n > 6, a(0)=a(1)=...=a(6)=1. ●

► [A067870] 7,13,27,33,47,53,67,73,87,93,107,113,127,133,147,153,167,173,187,193,207,213,227,233,247 ⋆ Numbers k such that k and 3 ^ k end with the same digit. ● a(2 * n + 1) = 20 * n - 13, a(2 * n) = 20 * n - 7. ● a(n) = 20 * (n - 1) - a(n - 1) for n>1, a(1)=7. - _ Vincenzo Librandi _ , Aug 08 2010 ● a(n) = - 5 - 2 * (- 1) ^ n + 10 * n for n>0. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n>3. (End) ●

► [A023243] 7,13,31,37,67,73,79,139,151,181,367,541,613,661,709,739,787,811,829,997,1087,1117,1123,1249,1327 ⋆ Primes that remain prime through 2 iterations of the function f(x) = 2x + 5. ● a(n) == 1 (mod 6). - _ John Cerkan _ , Sep 12 2016 ●

► [A298027] 1,7,13,31,43,73,91,133,157,211,241,307,343,421,463,553,601,703,757,871,931,1057,1123,1261,1333 ⋆ Partial sums of A298026. ● a(n) = (4 + 6 * n + 9 * n ^ 2) / 4 if n is even, (7 + 12 * n + 9 * n ^ 2) / 4 if n is odd. (End) ●

► [A301683] 1,7,13,31,49,67,103,133,163,217,259,301,373,427,481,571,637,703,811,889,967,1093,1183,1273,1417 ⋆ Partial sums of A301682. ● a(n) = a(n - 1) + 2 * a(n - 3) - 2 * a(n - 4) - a(n - 6) + a(n - 7) for n > 6. ●

► [A284353] 1,1,7,13,31,61,127,253,511,1021,2047,4093,8191,16381,32767,65533,131071,262141,524287,1048573,2097151,4194301,8388607,16777213,33554431 ⋆ Decimal representation of the x - axis, from the left edge to the origin, of the n - th stage of growth of the two - dimensional cellular automaton defined by "Rule 899", based on the 5 - celled von Neumann neighborhood. ● a(n) = 2 ^ (n + 1) - 1 for n even. ● a(n) = 2 ^ (n + 1) - 3 for n odd. ● a(n) = 2 * a(n - 1) + a(n - 2) - 2 * a(n - 3) for n>2. (End) ●

► [A102002] 1,7,13,31,85,199,493,1231,3013,7447,18397,45343,111925,276199,681421,1681519,4149157,10237879,25262269,62334655,153810709,379529095,936489133,2310790159,5701884805 ⋆ Weighted tribonacci (1,2,4), companion to A102001. ● a(n) = a(n - 1) + 2 * a(n - 2) + 4 * a(n - 3), a>3. a(n) = center term in M ^ n * [1 1 1], where M = the 3X3 matrix [0 1 0 / 0 0 1 / 4 2 1]; M ^ n * [1 1 1] = [a(n - 1) a(n) a(n + 1)]. ●

► [A239679] 7,13,31,91,307,1123,4291,16771,66307,263683,1051651,4200451,16789507,67133443,268484611,1073840131,4295163907,17180262403,68720263171,274879479811,1099514773507,4398052802563,17592198627331,70368769343491,281475027042307 ⋆ Least number k > 0 such that k * 2 ^ n + 1 is a cube. ● a(n) = 3 + 3 * 2 ^ n + 2 ^ (2 * n). ●

► [A061204] 1,7,13,34,40,76,82,138,159,195,201,327,333,369,405,531,537,663,669,795,831,867,873,1209,1230 ⋆ (tau<=) _ 6(n). ● a(n) = Sum _{ k=1..n } tau _{ 5 } (k) * floor(n / k), where tau _{ 5 } is A061200. - _ Enrique Pérez Herrero _ , Jan 23 2013 ●

► [A267985] 7,13,37,43,67,73,97,103,127,133,157,163,187,193,217,223,247,253,277,283,307,313,337,343,367 ⋆ Numbers congruent to { 7, 13 } mod 30. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3), n >= 4. ● a(n) = a(n - 2) + 30. ● a(n) = 10 * (3 * n - 4) - a(n - 1). ● a(n) = (30 * n - 9 * (- 1) ^ n - 25) / 2 for n>0. ● a(n) = 15 * n - 17 for n>0 and even. ● a(n) = 15 * n - 8 for n odd. ●

► [A052378] 7,13,37,97,103,223,307,457,853,877,1087,1297,1423,1483,1867,1993,2683,3457,4513,4783,5227,5647,6823,7873,8287 ⋆ Primes followed by a [4,2,4] prime difference pattern of A001223. ● a(n) is the initial prime of a [p, p + 4, p + 6, p + 6 + 4] prime - quadruple consisting of two 4 - twins: [p, p + 4] and [p + 6, p + 10]. ●

► [A023286] 7,13,43,223,757,883,2143,2269,2521,2917,3253,3967,4297,4423,6229,6427,6679,7621,7741,10429,11353,12739,14593,14929,15259 ⋆ Primes that remain prime through 3 iterations of function f(x) = 5x + 8. ● a(n) == 1 (mod 6). - _ John Cerkan _ , Sep 21 2016 ●

► [A116522] 0,1,7,13,49,55,91,127,343,349,385,421,637,673,889,1105,2401,2407,2443,2479,2695,2731,2947,3163,4459 ⋆ a(0)=1, a(1)=1, a(n)=7 * a(n / 2) for n=2,4,6,..., a(n)=6 * a((n - 1) / 2) + a((n + 1) / 2) for n=3,5,7,.... ● a(n) = Sum _{ k=0..n - 1 } 6 ^ wt(k), where wt = A000120. - _ Mike Warburton _ , Mar 14 2019 ●

► [A015441] 0,1,1,7,13,55,133,463,1261,4039,11605,35839,105469,320503,953317,2876335,8596237,25854247,77431669,232557151,697147165,2092490071,6275373061,18830313487,56482551853 ⋆ Generalized Fibonacci numbers. ● a(n) = a(n - 1) + 6 * a(n - 2). ● a(n) = (1 / 5) * ((3 ^ n) - ((- 2) ^ n)). - henryk.wicke(AT) stud.uni - hannover.de ● a(n + 1) = Sum _{ k=0..ceiling(n / 2) } 6 ^ k * binomial(n - k, k). - _ Benoit Cloitre _ , Mar 06 2004 ● a(n) = (Sum _{ 1<=k<= n, k odd } binomial(n,k) * 5 ^ (k - 1)) / 2 ^ (n - 1). - _ Vladimir Shevelev _ , Feb 05 2014 ● a(- n) = - (- 1) ^ n * a(n) / 6 ^ n for all n in Z. - _ Michael Somos _ , Mar 18 2014 ●

► [A253210] 7,13,55,349,2407,16813,117655,823549,5764807,40353613,282475255,1977326749,13841287207,96889010413,678223072855,4747561509949,33232930569607,232630513987213,1628413597910455,11398895185373149,79792266297612007,558545864083284013 ⋆ a(n) = 7 ^ n + 6. ● a(n) = 8 * a(n - 1) - 7 * a(n - 2) for n>1. ●

► [A373543] 1,1,1,7,13,64,151,634,1693,6514,18688,68239,204631,722920,2230498,7711216,24246229,82612189,263112874,887565955,2852058448,9553983613,30892668295,102975387211,334454025715 ⋆ Expansion of 1 / (1 - x / (1 - 9 * x ^ 2) ^ (2 / 3)). ● a(n) = Sum _{ k=0..floor(n / 2) } 9 ^ k * binomial(2 * n / 3 - k / 3 - 1,k). ●

► [A098478] 1,1,7,13,73,187,895,2737,11923,40333,166753,598111,2404309,8926651,35365651,134054005,527360581,2024611351,7940840719,30733601689,120439122811,468630460885,1836912780541,7173754477099,28140632060899 ⋆ Expansion of 1 / sqrt(1 - 2x - 11x ^ 2 + 12x ^ 3). ● a(n)=sum { k=0..floor(n / 2), binomial(2k, k)binomial(n - k, n - 2k)3 ^ k } . ●

► [A132373] 1,1,7,13,91,205,1435,3565,24955,65821,460747,1265677,8859739,25066621,175466347,507709165,3553964155,10466643805,73266506635,218878998733,1532152991131,4631531585341,32420721097387,98980721277613,692865048943291 ⋆ Expansion of c(6 * x ^ 2) / (1 - x * c(6 * x ^ 2)), where c(x) is the g.f. of A000108. ● a(n) = (7 * (n + 1) * a(n - 1) + 24 * (n - 2) * a(n - 2) - 168 * (n - 2) * a(n - 3)) / (n + 1). (End) ●

► [A110293] 1,7,13,97,181,1351,2521,18817,35113,262087,489061,3650401,6811741,50843527,94875313,708158977,1321442641,9863382151,18405321661,137379191137,256353060613,1913445293767,3570537526921,26650854921601,49731172316281 ⋆ a(2 * n) = A001570(n), a(2 * n + 1) = A011943(n + 1). ● a(n) = (3 - (- 1) ^ n) * ((- 3 + 2 * sqrt(3)) * (2 - sqrt(3)) ^ n + (3 + 2 * sqrt(3)) * (2 + sqrt(3)) ^ n) / (8 * sqrt(3)). ● a(n) = 14 * a(n - 2) - a(n - 4) for n>3. (End) ●

► [A198947] 1,7,13,139,259,2773,5167,55321,103081,1103647,2056453,22017619,41025979,439248733,818463127,8762957041,16328236561,174819892087,325746268093,3487634884699,6498597125299,69577877801893,129646196237887,1388069921153161,2586425327632441 ⋆ x values in the solution to 11 * x ^ 2 - 10 = y ^ 2. ● a(n + 4) = 20 * a(n + 2) - a(n) with a(1)=1, a(2)=7, a(3)=13, a(4)=139. ● a(n) = ((11 + (- 1) ^ n * t) * (10 - 3 * t) ^ floor(n / 2) + (11 - (- 1) ^ n * t) * (10 + 3 * t) ^ floor(n / 2)) / 22 with t=sqrt(11). (End). ●

► [A050946] 0,1,1,7,13,151,421,6847,25453,532231,2473141,63206287,352444093,10645162711,69251478661,2413453999327,17943523153933,708721089607591,5927841361456981,261679010699505967,2431910546406522973,11865488054256772871,121298937986272152810 1 ⋆ "Stirling - Bernoulli transform" of Fibonacci numbers. ● a(n) = Sum _{ k=0..n } (- 1) ^ (n - k) * S2(n, k) * k! * Fibonacci(k). [corrected by _ Ilya Gutkovskiy _ , Apr 04 2019] (End) ●

► [A004759] 7,14,15,28,29,30,31,56,57,58,59,60,61,62,63,112,113,114,115,116,117,118,119,120,121 ⋆ Binary expansion starts 111. ● a(2n) = 2a(n), a(2n + 1) = 2a(n) + 1 + 6[n==0]. ● a(2 ^ m + k) = 7 * 2 ^ m + k, m >= 0, 0 <= k < 2 ^ m. - _ Yosu Yurramendi _ , Aug 08 2016 ●

► [A131439] 1,7,14,18,22,26,30,34,38,42,46,50,54,58,62,66,70,74,78,82,86,90,94,98,102 ⋆ Inverse binomial transform of A131438 (assuming zero offset in both sequences) ● a(n) = 2 * a(n - 1) - a(n - 2) for n>4. G.f.: - x * (x + 1) * (3 * x ^ 2 - 4 * x - 1) / (x - 1) ^ 2. [_ Colin Barker _ , Jan 06 2013] ●

► [A213604] 1,7,14,18,24,28,35,41,42,48,55,59,65,69,76,82,83,89,96,100,106,110,117,123,124 ⋆ Cumulative sums of digital roots of A005891(n). ● a(n + 9) = - a(n) + a(n + 1) + a(n + 8), a(0)=1, a(1)=7, a(2)=14, a(3)=18, a(4)=24, a(5)=28, a(6)=35, a(7)=41, a(8)=42. ●

► [A374004] 7,14,18,25,33,40,52,59,75,82,102,109,133,140,168,175,207,214,250,257,297,304,348,355,403 ⋆ a(n) = (1 + (n + 3) ^ 2 - (n - 4) * (- 1) ^ n) / 2. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). ●

► [A102041] 7,14,18,26,32,34,38,46,52,54,58,66,72,74,78,86,92,94,98,106,112,114,118,126,132 ⋆ a(n) = a(n - 1) + last digit of a(n - 1), starting at 7. ● a(n) = 5 + (1 / 2 + i) * (- i) ^ n + (1 / 2 - i) * i ^ n + 5 * n for n>1, where i = sqrt(- 1). ● a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4). - _ Wesley Ivan Hurt _ , Apr 17 2023 ●

► [A003330] 7,14,21,28,33,35,40,42,47,49,54,56,59,61,66,68,70,73,75,77,80,84,85,87,91 ⋆ Numbers that are the sum of 7 positive cubes. ● a(n) = n + 208 for all n > 2200. - _ M. F. Hasler _ , Aug 23 2020 ●

► [A008589] 0,7,14,21,28,35,42,49,56,63,70,77,84,91,98,105,112,119,126,133,140,147,154,161,168 ⋆ Multiples of 7. ● a(n) = 7 * n = 2 * a(n - 1) - a(n - 2); G.f.: 7 * x / (x - 1) ^ 2. - _ Vincenzo Librandi _ , Dec 24 2010 ●

► [A187395] 7,14,21,28,35,42,50,57,64,71,78,85,93,100,107,114,121,128,136,143,150,157,164,171,179 ⋆ a(n) = floor(r * n), where r = 4 + sqrt(10); complement of A187396. ● a(n) = floor(r * n), where r = 4 + sqrt(10). ●

► [A020334] 7,14,21,28,35,222,259,296,333,370,407,444,481,518,555,592,629,666,703,740,777,814,851,888,925 ⋆ Numbers whose base - 6 representation is the juxtaposition of two identical strings. ● a(n) = n * 6 ^ floor(log _ 6(n) + 1) + n. - _ Ilya Gutkovskiy _ , Jan 26 2018 ●

► [A100451] 0,0,7,14,21,32,45,60,77,96,117,140,165,192,221,252,285,320,357,396,437,480,525,572,621 ⋆ a(n) = 0 for n <= 2; for n >= 3, a(n) = (n - 2) * floor((n ^ 2 - 2) / (n - 2)). ● a(n) = (n - 2) * (n + 2), n >= 5. - _ R. J. Mathar _ , Aug 17 2009 ●

► [A164005] 0,7,14,21,32,45,60,77,96,117,140,165,192,221,252,285,320,357,396,437,480,525,572,621,672 ⋆ Zero together with row 5 of the array in A163280. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3), n >= 3. ● a(n) = n * (n + 4), n >= 3. ●

► [A246172] 1,7,14,22,31,41,52,64,77,91,106,122,139,157,176,196,217,239,262,286,311,337,364,392,421 ⋆ a(n) = (n ^ 2 + 9 * n - 8) / 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) = 2 * a(n - 1) - a(n - 2) + 1. ● a(n + 1) - a(n) = n + 5. - _ Jacques ALARDET _ , Aug 04 2015 ●

► [A297663] 1,7,14,23,36,57,94,163,296,557,1074,2103,4156,8257,16454,32843,65616,131157,262234,524383,1048676,2097257,4194414,8388723,16777336 ⋆ a(n) = 5 * n + 2 ^ n. ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 2 * a(n - 3). ●

► [A089644] 7,14,28,35,49,56,70,77,91,98,112,119,133,140,154,161,175,182,196,203,217,224,238,245,259 ⋆ Numbers k such that 7 divides the numerator of B(2 * k) where B(k) = the k - th Bernoulli number. ● a(n) = 21 * (n - 1) - a(n - 1), with n>1, a(1)=7. - _ Vincenzo Librandi _ , Nov 16 2010 ●

► [A290398] 1,7,14,28,49,84,147,252,434,749,1288,2219,3822,6580,11333,19516,33607,57876,99666,171633,295568,508991,876526,1509452,2599401 ⋆ Number of tiles in distance d from a given heptagon in the truncated order - 3 tiling of the heptagonal plane (a.k.a. the "hyperbolic soccerball"). ● a(n + 4) = a(n + 3) + a(n + 2) + a(n + 1) - a(n), for n >= 1. (proved) ●

► [A196876] 1,1,1,1,1,1,1,7,14,28,56,112,224,448,896,1786,3559,7091,14127,28143,56063,111679,222463,443141,882724 ⋆ a(n) = a(n - no - 1) + ... + a(n - 1) + (n - no - 2) where no is the 'no + 1'th order of the series and 'n' is the element number, here no=6. ● a(n)=1 if n<=7, else a(n) = n - no - 2 + sum _{ i=1..no + 1 } a(n - i), no=6. ●

► [A135092] 1,7,14,28,56,112,224,448,896,1792,3584,7168,14336,28672,57344,114688,229376,458752,917504,1835008,3670016,7340032,14680064,29360128,58720256 ⋆ Binomial transform of [1, 6, 1, 6, 1, 6, ...]. • a(n) = 7 * 2 ^ (n - 1) for n>0, a(0)=1. •

► [A005009] 7,14,28,56,112,224,448,896,1792,3584,7168,14336,28672,57344,114688,229376,458752,917504,1835008,3670016,7340032,14680064,29360128,58720256,117440512 ⋆ a(n) = 7 * 2 ^ n. • a(n) = 2 * a(n - 1), for n > 0, with a(0)=7 . - _ Philippe Deléham _ , Nov 23 2008 •

► [A293359] 7,14,29,59,118,236,472,945,1891,3783,7566,15132,30265,60531,121062,242124,484249,968498,1936996,3873993,7747986,15495973,30991947,61983895,123967790 ⋆ Greatest integer k such that k / 2 ^ n < e ^ 2. • a(n) = floor(r * 2 ^ n), where r = e ^ 2. •

► [A062098] 7,14,42,168,840,5040,35280,282240,2540160,25401600,279417600,3353011200,43589145600,610248038400,9153720576000,146459529216000,2489811996672000,44816615940096000,851515702861824000 ⋆ a(n) = 7 * n!. • a(n) = n * a(n - 1), a(1) = 7. •

► [A237686] 1,7,14,50,63,105,148,364,413,491,546,798,883,1141,1400,2696,2961,3255,3382,3850,3983,4313,4620,6132,6469 ⋆ The number of P - positions in the game of Nim with up to four piles, allowing for piles of zero, such that the total number of objects in all piles doesn't exceed 2n. • a(2n + 1) = 7a(n) + a(n - 1), a(2n + 2) = a(n + 1) + 7a(n). •

► [A135536] 7,14,56,112,448,896,3584,7168,28672,57344,229376,458752,1835008,3670016,14680064,29360128,117440512,234881024,939524096,1879048192,7516192768,15032385536,60129542144,120259084288,481036337152 ⋆ a(n) = 8 * a(n - 2), with a(0) = 7, a(1) = 14. • a(n) = (7 / 4) * ((2 + sqrt(2)) + (- 1) ^ n * (2 - sqrt(2))) * (sqrt(2)) ^ (3 * n). • a(n) = 8 * a(n - 2). •

► [A110496] 7,14,63,172,666,1099,2457,3430,6084,12195,14896,25327,34461,39754,51912,74439,102690,113491,150382,178956,194509,246520,285894,352485,456337 ⋆ Least k such that prime(n) ^ 3 divides binomial(2k,k). • a(n) = (prime(n) ^ 3 + 1) / 2 for n>1. •

► [A117867] 7,14,70,126,574,1022,4606,8190,36862,65534,294910,524286,2359294,4194302,18874366,33554430,150994942,268435454,1207959550,2147483646,9663676414,17179869182,77309411326,137438953470,618475290622 ⋆ Number of palindromes (in base 8) below 8 ^ n. • a(n) = 9 * 8 ^ ((n - 1) / 2) - 2 (n odd), 2 * 8 ^ (n / 2) - 2 (n even). • a(n) = a(n - 1) + 8 * a(n - 2) - 8 * a(n - 3). • a(n) = (1 / (4 * sqrt(2))) * (- 8 * sqrt(2) + 9 * (1 - (- 1) ^ n) * 2 ^ (3 * n / 2) + (1 + (- 1) ^ n) * 2 ^ ((3 * n + 5) / 2)). •

► [A291008] 0,7,14,70,224,868,3080,11368,41216,150640,548576,2000992,7293440,26592832,96946304,353449600,1288577024,4697851648,17127165440,62441440768,227645874176,829940392960,3025756030976,11031154419712,40216845025280 ⋆ p - INVERT of (1,1,1,1,1,...), where p(S) = 1 - 7 * S ^ 2. • a(n) = 2 * a(n - 1) + 6 * a(n - 2) for n >= 3. • a(n) = (sqrt(7) * ((1 + sqrt(7)) ^ n - (1 - sqrt(7)) ^ n)) / 2. - _ Colin Barker _ , Aug 23 2017 • a(n) = 7 * i ^ (n - 1) * 6 ^ ((n - 1) / 2) * ChebyshevU(n - 1, - i / sqrt(6)). - _ G. C. Greubel _ , Jun 01 2023 •

► [A369562] 7,14,105,1001,10003,100002,1000006,10000004,100000005,1000000001,10000000003,100000000002,1000000000006,10000000000004,100000000000005,1000000000000001,10000000000000003,100000000000000002,1000000000000000006,10000000000000000004,100000000000000000005 ⋆ Smallest positive n - digit number divisible by 7. • a(n) = (floor(10 ^ (n - 1) / 7) + 1) * 7. •

► [A237054] 1,1,7,15,17,31,47,49,49,55,79,81,81,111,111,145,177,215,255,257,257,271,319,321 ⋆ a(1)=1, a(n) = (a(n - 1) + n) XOR n. • a(1)=1, then a(n) = (a(n - 1) + n) XOR n, where XOR is the bitwise exclusive - OR operator. •

► [A151971] 0,1,7,15,21,22,28,36,42,43,49,57,63,64,70,78,84,85,91,99,105,106,112,120,126 ⋆ Numbers n such that n ^ 2 - n is divisible by 21. • a(n) = (42 * n + 14 * i ^ ((n - 1) * n) - 3 * (- 1) ^ n - 3) / 8 - 7, where i=sqrt(- 1). (End) • a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. - _ Wesley Ivan Hurt _ , Jun 07 2016 •

► [A022389] 7,15,22,37,59,96,155,251,406,657,1063,1720,2783,4503,7286,11789,19075,30864,49939,80803,130742,211545,342287,553832,896119 ⋆ Fibonacci sequence beginning 7, 15. • a(n) = 7 * Fibonacci(n + 2) + Fibonacci(n) = 7 * Fibonacci(n - 1) + 15 * Fibonacci(n). - _ G. C. Greubel _ , Mar 02 2018 • a(n) = Fibonacci(n + 6) + Lucas(n - 1). - _ Greg Dresden _ and Russ Zimmerman, Mar 03 2022 •

► [A041935] 1,7,15,22,103,434,1839,2273,6385,46968,2072977,14557807,31188591,45746398,214174183,902443130,3823946703,4726389833,13276726369,97663474416,4310469600673,30270950679127,64852370958927,95123321638054,445345657511143 ⋆ Denominators of continued fraction convergents to sqrt(490). • a(n) = 2079362 * a(n - 10) - a(n - 20) for n>19. - _ Vincenzo Librandi _ , Dec 27 2013 •

► [A041092] 7,15,22,147,169,485,6959,14403,21362,142575,163937,470449,6750223,13970895,20721118,138297603,159018721,456335045,6547709351,13551753747,20099463098,134148532335,154247995433 ⋆ Numerators of continued fraction convergents to sqrt(54). • a(n) = 970 * a(n - 6) - a(n - 12). G.f.: - (x ^ 11 - 7 * x ^ 10 + 15 * x ^ 9 - 22 * x ^ 8 + 147 * x ^ 7 - 169 * x ^ 6 - 485 * x ^ 5 - 169 * x ^ 4 - 147 * x ^ 3 - 22 * x ^ 2 - 15 * x - 7) / ((x ^ 4 - 10 * x ^ 2 + 1) * (x ^ 8 + 10 * x ^ 6 + 99 * x ^ 4 + 10 * x ^ 2 + 1)). [_ Colin Barker _ , Jul 18 2012] •

► [A004215] 7,15,23,28,31,39,47,55,60,63,71,79,87,92,95,103,111,112,119,124,127,135,143,151,156 ⋆ Numbers that are the sum of 4 but no fewer nonzero squares. • a(n) = 6 * n + O(log(n)). - _ Charles R Greathouse IV _ , Dec 19 2013 •

► [A004771] 7,15,23,31,39,47,55,63,71,79,87,95,103,111,119,127,135,143,151,159,167,175,183,191,199 ⋆ a(n) = 8 * n + 7. Or, numbers whose binary expansion ends in 111. • a(n) = 2 * a(n - 1) - a(n - 2) for n >= 2. - _ Vincenzo Librandi _ , May 28 2011 • a(n) = t(t(t(n))), where t(i) = 2 * i + 1. •

► [A336819] 7,15,23,31,63,127,255,511,1023,2047,4095,8191,16383,32767,65535,131071,262143,524287,1048575,2097151,4194303,8388607,16777215,33554431,67108863 ⋆ Odd values of D > 0 for which the generalized Ramanujan - Nagell equation x ^ 2 + D = 2 ^ m has two or more solutions in the positive integers. • a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>5. • a(n) = 2 ^ (1 + n) - 1 for n>3. •

► [A056119] 0,7,15,24,34,45,57,70,84,99,115,132,150,169,189,210,232,255,279,304,330,357,385,414,444 ⋆ a(n) = n * (n + 13) / 2. • a(n) = n + a(n - 1) + 6 (with a(0)=0). - _ Vincenzo Librandi _ , Aug 07 2010 • a(n) = 7 * n - floor(n / 2) + floor(n / 2). - _ Wesley Ivan Hurt _ , Jun 15 2013 •

► [A082111] 1,7,15,25,37,51,67,85,105,127,151,177,205,235,267,301,337,375,415,457,501,547,595,645,697 ⋆ a(n) = n ^ 2 + 5 * n + 1. • a(n) = 2 * n + a(n - 1) + 4 (with a(0)=1). - _ Vincenzo Librandi _ , Aug 08 2010 • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3); a(0)=1, a(1)=7, a(2)=15. - _ Harvey P. Dale _ , Apr 22 2012 •

► [A195041] 0,1,7,15,28,43,63,85,112,141,175,211,252,295,343,393,448,505,567,631,700,771,847,925,1008 ⋆ Concentric heptagonal numbers. • a(n) = 7 * n ^ 2 / 4 + 3 * ((- 1) ^ n - 1) / 8. • a(n) = n ^ 2 + floor(3 * n ^ 2 / 4). - _ Bruno Berselli _ , Aug 08 2013 •

► [A139597] 0,7,15,30,46,69,93,124,156,195,235,282,330,385,441,504,568,639,711,790,870,957,1045,1140,1236 ⋆ A139278(n) followed by A139274(n + 1). • a(n) = (3 - 3 * (- 1) ^ n + 14 * n + 8 * n ^ 2) / 4. a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4). G.f.: x * (7 + x) / ((1 - x) ^ 3 * (1 + x)). [_ Colin Barker _ , Jul 22 2012] •

► [A210675] 0,1,7,15,30,54,94,159,265,437,716,1168,1900,3085,5003,8107,13130,21258,34410,55691,90125,145841,235992,381860,617880 ⋆ a(n)=a(n - 1) + a(n - 2) + n + 4, a(0)=0, a(1)=1. • a(n) = 3 * a(n - 1) - 2 * a(n - 2) - a(n - 3) + a(n - 4). G.f.: x * (4 * x ^ 2 - 4 * x - 1) / ((x - 1) ^ 2 * (x ^ 2 + x - 1)). - _ Colin Barker _ , May 31 2013 •

► [A293361] 7,15,30,59,118,236,473,946,1892,3783,7566,15133,30266,60531,121062,242125,484249,968498,1936997,3873993,7747987,15495974,30991948,61983895,123967790 ⋆ The integer k that minimizes |k / 2 ^ n - e ^ 2|. • a(n) = floor(1 / 2 + (e ^ 2) * 2 ^ n). •

► [A117747] 7,15,30,74,171,444,1138,3048,8175,22427,61686,171630,479411,1347609,3801522,10768832,30595671,87190791,249085662,713268978,2046679419,5884137206,16946037930,48882597264,141215566135 ⋆ Number of different configurations of cycles (loops) in graphs containing directed and undirected links. • a(n) = 3 ^ (n / 2) / 3 + (1 / (2 * n)) * Sum _{ k=0..n - 1 } 3 ^ gcd(n,k) if n is even; • a(n) = 3 ^ ((n - 1) / 2) / 2 + (1 / (2 * n)) * Sum _{ k=0..n - 1 } 3 ^ gcd(n,k) if n is odd. •

► [A078485] 0,1,1,1,7,15,31,63,127,255,511,1023,2047,4095,8191,16383,32767,65535,131071,262143,524287,1048575,2097151,4194303,8388607 ⋆ Number of irreducible indecomposable permutations of degree n. • a(n) = 2 ^ (n - 1) - 1 for n > 3. • a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n > 2. - _ Colin Barker _ , May 27 2016 •

► [A159695] 7,15,32,68,144,304,640,1344,2816,5888,12288,25600,53248,110592,229376,475136,983040,2031616,4194304,8650752,17825792,36700160,75497472,155189248,318767104 ⋆ a(0)=7, a(n) = 2 * a(n - 1) + 2 ^ (n - 1) for n > 0. • a(n) = Sum _{ k=0..n } (k + 7) * binomial(n,k). • a(n) = (14 + n) * 2 ^ (n - 1). • a(n) = 4 * a(n - 1) - 4 * a(n - 2). •

► [A271995] 7,15,33,51,83,115,165,215,287,359,457,555,683,811,973,1135,1335,1535,1777,2019,2307,2595,2933,3271,3663 ⋆ The Pnictogen sequence: a(n) = A018227(n) - 3. • a(n) = (6 * (- 7 + (- 1) ^ n) + (25 + 3 * (- 1) ^ n) * n + 12 * n ^ 2 + 2 * n ^ 3) / 12. • a(n) = (n ^ 3 + 6 * n ^ 2 + 14 * n - 18) / 6 for n even. • a(n) = (n ^ 3 + 6 * n ^ 2 + 11 * n - 24) / 6 for n odd. • a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + a(n - 4) + 2 * a(n - 5) - a(n - 6) for n>7. •

► [A048694] 1,7,15,37,89,215,519,1253,3025,7303,17631,42565,102761,248087,598935,1445957,3490849,8427655,20346159,49119973,118586105,286292183,691170471,1668633125,4028436721 ⋆ Generalized Pellian with second term equal to 7. • a(n) = ((6 + sqrt(2))(1 + sqrt(2)) ^ n - (6 - sqrt(2))(1 - sqrt(2)) ^ n) / 2 * sqrt(2). • a(n) = 2 * a(n - 1) + a(n - 2); a(0)=1, a(1)=7. • a(n) = ((1 + sqrt(18))(1 + sqrt(2)) ^ n + (1 - sqrt(18))(1 - sqrt(2)) ^ n) / 2 offset 0. a(n) = first binomial transform of 1,6,2,12,4,24. - Al Hakanson (hawkuu(AT)gmail.com), Aug 01 2009 •

► [A042287] 1,1,7,15,37,126,163,1593,1756,3349,8454,11803,150090,612163,762253,1374416,2136669,3511085,5647754,93875149,99522903,193398052,292920955,486319007,779239962 ⋆ Denominators of continued fraction convergents to sqrt(669). • a(n) = 28452235718108270 * a(n - 38) - a(n - 76) for n>75. _ Vincenzo Librandi _ , Jan 19 2014 •

► [A171064] 0,1,1,7,15,64,175,631,1905,6433,20224,66529,212625,692119,2226799,7217728,23284815,75343591,243328225,786800449,2542156800,8217744577,26556314401,85835882791,277405671375 ⋆ G.f.: - x * (x - 1) * (1 + x) / (1 - x - 7 * x ^ 2 - x ^ 3 + x ^ 4). • a(n) = + a(n - 1) + 7 * a(n - 2) + a(n - 3) - a(n - 4). •

► [A042313] 1,7,15,67,216,283,499,12758,13257,26015,91302,391223,873748,6507459,339261616,2381338771,5101939158,22789095403,73469225367,96258320770,169727546137,4339446974195,4509174520332,8848621494527,31055039003913 ⋆ Denominators of continued fraction convergents to sqrt(683). • a(n) = 340135364 * a(n - 14) - a(n - 28) for n>27. - _ Vincenzo Librandi _ , Jan 20 2014 •

► [A041413] 1,1,7,15,97,112,3233,3345,23303,49951,323009,372960,10765889,11138849,77598983,166336815,1075619873,1241956688,35850407137,37092363825,258404590087,553901543999,3581813854081,4135715398080,119381845000321 ⋆ Denominators of continued fraction convergents to sqrt(221). • a(n) = 3330 * a(n - 6) - a(n - 12). - _ Vincenzo Librandi _ , Dec 17 2013 •

► [A144536] 1,1,7,15,97,209,1351,2911,18817,40545,262087,564719,3650401,7865521,50843527,109552575,708158977,1525870529,9863382151,21252634831,137379191137,296011017105,1913445293767,4122901604639,26650854921601 ⋆ Denominators of continued fraction convergents to sqrt(3) / 2. • a(n) = 14 * a(n - 2) - a(n - 4). - _ Sergei N. Gladkovskii _ , Jun 07 2015 • a(n) = ((3 + sqrt(3)) * ((- 2 + sqrt(3)) ^ n + (2 + sqrt(3)) ^ n) - (- 3 + sqrt(3)) * ((- 2 - sqrt(3)) ^ n + (2 - sqrt(3)) ^ n)) / 12. - _ Vaclav Kotesovec _ , Jun 08 2015 • a(2 * n + 1) = 2 * a(2 * n) + a(2 * n - 1). (End) •

► [A243470] 1,7,15,112,239,1785,3809,28448,60705,453383,967471,7225680,15418831,115157497,245733825,1835294272,3916322369,29249550855,62415424079,466157519408,994730462895,7429270759673,15853271982241,118402174635360,252657621252961 ⋆ Numerators of the rational convergents to the periodic continued fraction 1 / (2 + 1 / (7 + 1 / (2 + 1 / (7 + ...)))). • a(2 * n + 1) = product { k = 1..n } (14 + 4 * cos ^ 2(k * Pi / (2 * n + 1)); • a(2 * n) = 7 * product { k = 1..n - 1 } (14 + 4 * cos ^ 2(k * Pi / (2 * n)). • a(n) = (1 / 2) * (7 * (1 + (

- 1) ^ n) * ChebyshevU((n - 2) / 2, 8) + (1 - (- 1) ^ n) * (ChebyshevU((n - 1) / 2, 8) - ChebyshevU((n - 3) / 2, 8))). - _ G. C. Greubel _ , May 21 2022 ●

▶ [A137881] 1,7,15,153,329,3359,7223,73745,158577,1619031,3481471,35544937,76433785,780369583,1678061799,17132585889,36840925793,376136519975,808822305647,8257870853561,17757249798441,181297022258367,389850673260055,3980276618830513,8558957561922769 ⋆ a(n) = sqrt(A137880(n)). ● a(2n) = (15 - sqrt(30)) / 30 * (11 + 2 * sqrt(30)) ^ n + (15 + sqrt(30)) / 30 * (11 - 2 * sqrt(30)) ^ n. [Alekseyev] ● a(2n + 1) = (15 + sqrt(30)) / 30 * (11 + 2 * sqrt(30)) ^ n + (15 - sqrt(30)) / 30 * (11 - 2 * sqrt(30)) ^ n. [Alekseyev] ●

▶ [A087485] 7,15,315,1155,815634435 ⋆ Odd numbers n such that 2n - sigma(n) = 6. ● a(3) = a(2) * 3 * 7; a(4) = a(2) * 7 * 11 with 7 = precprime(a(2) * 2 / 3), 11=nextprime(a(2) * 2 / 3); a(5) = a(4) * 547 * 1291. - _ M. F. Hasler _ , Apr 13 2015 ●

▶ [A060914] 7,16,20,21,26,32,34,45,49,50,52,54,57,58,61,70,72,79,81,86,92,94,98,103,111 ⋆ Integers i > 1 for which there are two primes p such that i is a solution mod p of x ^ 3 = 2. ● a(n) = n - th integer i such that i ^ 3 - 2 has two prime factors > i. ●

▶ [A017245] 7,16,25,34,43,52,61,70,79,88,97,106,115,124,133,142,151,160,169,178,187,196,205,214,223 ⋆ a(n) = 9 * n + 7. ● a(n) = 18 * n - a(n - 1) + 5, with a(0)=7. - _ Vincenzo Librandi _ , Dec 24 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>2. - _ Vincenzo Librandi _ , Apr 30 2015 ●

▶ [A028560] 0,7,16,27,40,55,72,91,112,135,160,187,216,247,280,315,352,391,432,475,520,567,616,667,720 ⋆ a(n) = n * (n + 6), also numbers j such that 9 * (9 + j) is a perfect square. ● a(n) = (n + 3) ^ 2 - 3 ^ 2 = n * (n + 6). ● a(n) = 2 * n + a(n - 1) + 5. - _ Vincenzo Librandi _ , Aug 05 2010 ●

▶ [A345071] 7,16,28,40,54,72,88,106,126,140,156,180,200,212,236,264,286,306,324,346,370,388,408,438,460 ⋆ Sums of two consecutive odd - indexed primes. ● a(n) = prime(2 * n - 1) + prime(2 * n + 1). ●

▶ [A133694] 1,7,16,28,43,61,82,106,133,163,196,232,271,313,358,406,457,511,568,628,691,757,826,898,973 ⋆ a(n) = (3 * n ^ 2 + 3 * n - 4) / 2. ● a(n) = a(n - 1) + 3 * n for n > 1, a(1)=1. - _ Vincenzo Librandi _ , Nov 23 2010 ●

▶ [A211784] 1,7,16,29,45,66,89,117,148,183,221,264,309,359,412,469,529,594,661,733,808,887,969,1056,1145 ⋆ n ^ 2 + floor(n ^ 2 / 2) + floor(n ^ 2 / 3). ● a(n) = a(n - 1) + a(n - 2) - a(n - 4) - a(n - 5) + a(n - 6) for n>=7. ●

▶ [A234717] 1,7,16,30,47,69,94,124,157,195,236,282,331,385,442,504,569,639,712,790,871,957,1046,1140,1237 ⋆ a(n) = floor(n / (exp(1 / (2 * n)) - 1)). ● a(n) = (1 / 4) * (8n ^ 2 - 2n - 1 + (- 1) ^ n). ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4). - _ Wesley Ivan Hurt _ , Apr 01 2022 ●

▶ [A364352] 7,16,30,49,73,102,136,175,219,268,322,381,445,514,588,667,751,840,934,1033,1137,1246,1360,1479,1603 ⋆ a(n) is equal to the number of regions into which the plane is divided by straight lines that are parallel to the sides of an equilateral triangle with side n, while the lines divide the sides of the triangle into unit segments. ● a(n) = n * (5 * n + 3) / 2 + 3; ●

▶ [A121470] 1,7,16,31,49,73,100,133,169,211,256,307,361,421,484,553,625,703,784,871,961,1057,1156,1261,1369 ⋆ Expansion of x * (1 + 5 * x + 2 * x ^ 2 + x ^ 3) / ((1 + x) * (1 - x) ^ 3). ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4) = 5 / 8 - 3n / 2 + 9n ^ 2 / 4 + 3 * (- 1) ^ n / 8. ●

▶ [A301721] 1,7,16,34,55,79,115,151,190,244,295,349,421,487,556,646,727,811,919,1015,1114,1240,1351,1465,1609 ⋆ Partial sums of A301720. ● a(n) = a(n - 1) + 2 * a(n - 3) - 2 * a(n - 4) - a(n - 6) + a(n - 7) for n>6. ●

▶ [A176449] 7,16,34,70,142,286,574,1150,2302,4606,9214,18430,36862,73726,147454,294910,589822,1179646,2359294,4718590,9437182,18874366,37748734,75497470,150994942 ⋆ a(n) = 9 * 2 ^ n - 2. ● a(n) = 2 * (a(n - 1) + 1) with a(0) = 7. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2). G.f.: (7 - 5 * x) / ((2 * x - 1) * (x - 1)). - _ R. J. Mathar _ , May 02 2010 ●

▶ [A169877] 7,16,38,100,275,784,2280,6724,19964,59536,177989,532900,1596849,4787344,14356482,43059844,129162891,387459856,1162329651,3486902500,10460557755,31381413904,94143792483,282430599364,847290450408 ⋆ Maximum number of rational points on a smooth absolutely irreducible projective curve of genus 1 over the field F _ 3 ^ n. ● a(n) = 3 ^ n + 1 + floor(2 * 3 ^ (n / 2)) if 3 does not divide floor(2 * 3 ^ (n / 2)), n is even, or n = 1. Otherwise a(n) = 3 ^ n + floor(2 * 3 ^ (n / 2)) [Deuring - Waterhouse]. - _ Robin Visser _ , Aug 17 2023 ●

▶ [A154141] 1,7,16,46,97,271,568,1582,3313,9223,19312,53758,112561,313327,656056,1826206,3823777,10643911,22286608,62037262,129895873,361579663,757088632,2107440718,4412635921 ⋆ Indices k such that 8 plus the k - th triangular number is a perfect square. ● a(n) = a(n - 1) + 6 * a(n - 2) - 6 * a(n - 3) - a(n - 4) + a(n - 5). ● a(1..4) = (1,7,16,46); a(n) = 6 * a(n - 2) - a(n - 4) + 2, for n>4. - _ Ctibor O. Zizka _ , Nov 10 2009 ●

▶ [A173661] 1,7,16,47,121,322,841,2207,5776,15127,39601,103682,271441,710647,1860496,4870847,12752041,33385282,87403801,228826127,599074576,1568397607,4106118241,10749957122,28143753121 ⋆ Logarithmic derivative of the squares of the Fibonacci numbers (A007598, with offset). ● a(n) = Lucas(n) ^ 2 for odd n, a(n) = Lucas(n) ^ 2 - 2 for even n>0. ●

▶ [A175901] 7,17,19,26,31,41,49,53,55,65,71,76,97,109,127,129,161,191,197,199,209,239,241,251,271 ⋆ Numbers n such that there exists a smaller number k such that k ^ 2 - 1 has exactly the same set of distinct prime divisors as n ^ 2 - 1 ● a (1)=7 because set of prime divisors of 7 ^ 2 - 1 is the same as for 5 ^ 2 - 1. The set is { 2,3 } . ●

▶ [A253408] 1,1,7,17,23,31,41,47,49,71,73,79,89,97,103,113,119,127,137,151,161,167,191,193,199 ⋆ Values of difference z - y that solve equation x ^ 2 + y ^ 2 = z ^ 2 + 2. ● a(n) ^ 2 mod 8 = 1. ●

▶ [A273745] 7,17,24,32,40,48,56,64,72,80,88,96,104,112,120,128,136,144,152,160,168,176,184,192,200 ⋆ First differences of number of active (ON,black) cells in n - th stage of growth of two - dimensional cellular automaton defined by ”Rule 901”, based on the 5 - celled von Neumann neighborhood. ● a(n) = 2 * a(n - 1) - a(n - 2) for n>3. ●

▶ [A183897] 1,7,17,25,34,44,55,67,80,94,109,125,142,160,179,199,220,242,265,289,314,340,367,395,424 ⋆ Number of nondecreasing arrangements of n + 3 numbers in 0..2 with each number being the sum mod 3 of three others. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>5. ●

▶ [A017353] 7,17,27,37,47,57,67,77,87,97,107,117,127,137,147,157,167,177,187,197,207,217,227,237,247 ⋆ a(n) = 10n + 7. ● a(n) = 10 * n + 7. ● a(n) = 2 * a(n - 1) - a(n - 2). (End) ●

▶ [A059845] 0,7,17,30,46,65,87,112,140,171,205,242,282,325,371,420,472,527,585,646,710,777,847,920,996 ⋆ a(n) = n * (3 * n + 11) / 2. ● a(n) = 3 * n + a(n - 1) + 4 (with a(0)=0). - _ Vincenzo Librandi _ , Aug 07 2010 ●

▶ [A056220] 1,1,7,17,31,49,71,97,127,161,199,241,287,337,391,449,511,577,647,721,799,881,967,1057,1151 ⋆ a(n) = 2 * n ^ 2 - 1. ● a(0) = - 1, ● a(n) + a(n + 1) + 1 = (2n + 1) ^ 2. - _ Doug Bell _ , Mar 09 2009 ● a(n) = a(n - 1) + 4 * n - 2 (with a(0)= - 1). - _ Vincenzo Librandi _ , Dec 25 2010 ● a(n) = Sum _{ k =0..2 } ((C(n + k,3) - (C(n + k - 1,3)) * (C(n + k,3) + C(n + k + 1,3))) - (C (n + 2,3) - C(n - 1,3)) * (C(n,3) + C(n + 3,3)), for n > 3. - _ J. M. Bergot _ , Jun 16 2014 ● a(n) = j ^ 2 + k ^ 2 - 2 or 2 * j * k if n >= 2 and j = n + sqrt(2) / 2 and k = n - sqrt(2) / 2. - _ Avi Friedlich _ , Mar 30 2015 ● a(n) * a(n + k) + 2k ^ 2 = m ^ 2 (a perfect square), m = a(n) + (2n * k), for n>=1. - _ Ezhilarasu Velayutham _ , May 13 2019 ●

▶ [A301695] 1,7,17,33,55,81,113,151,193,241,295,353,417,487,561,641,727,817,913,1015,1121,1233,1351,1473,1601 ⋆ Expansion of (1 + 5 * x + 4 * x ^ 2 + 5 * x ^ 3 + x ^ 4) / ((1 - x) ^ 2 * (1 - x ^ 3)). ● a(n) = (8 * n * (n + 1) - 2 * ((n - 1) ^ 2 mod 3) + 5) / 3. Therefore: a(3 * k + r) = 8 * k * (3 * k + 2 * r + 1) + 8 * r + (- 1) ^ r. Example: a(13) = a(3 * 4 + 1) = 8 * 4 * (3 * 4 + 2 * 1 + 1) + 8 * 1 + (- 1) ^ 1 = 487. - _ Bruno Berselli _ , Mar 26 2018 ●

▶ [A301725] 1,7,17,33,56,83,114,152,196,244,298,358,422,492,569,650,735,827,925,1027,1135,1249,1367,1491,1622 ⋆ Partial sums of A301724. ● a(n) = 3 * a(n - 1) - 4 * a(n - 2) + 4 * a(n - 3) - 4 * a(n - 4) + 4 * a(n - 5) - 4 * a(n - 6) + 4 * a(n - 7) - 4 * a(n - 8) + 4 * a(n - 9) - 3 * a(n - 10) + a(n - 11) for n>10. ●

▶ [A211476] 7,17,37,79,165,339,693,1403,2837,5707,11477,23019,46165,92459,185173,370603,741717,1483947,2968917,5938859,11879765,23761579,47527253,95058603,190125397 ⋆ Number of - 1..1 arrays x(i) of n + 1 elements i=1..n + 1 with x(i) + x(j), x(i + 1) + x(j + 1), - (x(i) + x(j + 1)), and - (x(i + 1) + x(j)) having one or three distinct values for every i<=n and j<=n. ● a(n) = (- 9 * 2 ^ (n / 2) + 17 * 2 ^ n + 1) / 3 for n even. ● a(n) = (17 * 2 ^ n - 3 * 2 ^ ((n + 3) / 2) - 1) / 3 for n odd. ●

▶ [A102770] 7,17,38,71,110,161,218,333,449,573,758,881,1010,1245,1563,1799,2043,2378,2591,2883,3278,3693,4316,4898,5201 ⋆ (p * q - 1) / 2 where p and q are consecutive odd primes. ● a(n) = (prime(n + 1) * prime(n + 2) - 1) / 2. ●

▶ [A253663] 0,0,1,7,17,38,78,127,196,296,410,564,738,958,1220,1514,1848,2235,2686,3175,3719,4365,5007,5758,6568 ⋆ Number of positive solutions to x ^ 2 + y ^ 2 + z ^ 2 <= n ^ 2. ● a(n) = [x ^ (n ^ 2)] (theta _ 3(x) - 1) ^ 3 / (8 * (1 - x)), where theta _ 3() is the Jacobi theta function. - _ Ilya Gutkovskiy _ , Apr 17 2018 ●

▶ [A322597] 1,7,17,39,81,151,257,407,609,871,1201,1607,2097,2679,3361,4151,5057,6087,7249,8551,10001,11607,13377,15319,17441 ⋆ a(n) = (4 * n ^ 3 - 6 * n ^ 2 + 20 * n + 3) / 3. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4), n >= 4. ●

▶ [A194772] 7,17,41,95,219,493,1101,2427,5311,11529,24881,53399,114083,242725,514581,1087411,2291335,4815681,10097401,21126863,44117867,91963997,191384541,397682155,825190479 ⋆ Number of lower triangles of an (n + 2) X (n + 2) 0..2 array with new values introduced in row major order 0..2 and no element unequal to more than one horizontal or vertical neighbor. ● a(n) = (- 3 * n + 2 ^ (n + 3) * (3 * n + 8) + 17) / 27 for n even. ● a(n) = (3 * n + 2 ^ (n + 3) * (3 * n + 8) + 10) / 27 for n odd. ●

▶ [A268255] 7,17,42,106,273,717,1918,5218,14413,40349,114282,326938,943257,2740797,8010982,23529346,69385813,205282157,608959218,1810358938,5391414273,16078923309,48007516942,143470822498,429083952157 ⋆ Number of length - (n + 1) 0..2 arrays with new repeated values introduced in sequential order starting with zero. ● a(n) = 2 ^ n + 3 ^ n / 2 + (3 / 4 - 1 / sqrt(2)) * (1 - sqrt(2)) ^ n + (3 / 4 + 1 / sqrt(2)) * (1 + sqrt(2)) ^ n. ●

▶ [A061722] 7,17,47,97,167,257,367,497,647,817,1007,1217,1447,1697,1967,2257,2567,2897,3247,3617,4007,4417,4847,5297,5767 ⋆ a(n) = 10 * n ^ 2 + 7. ● a(n) = 10 * n ^ 2 + 7. ●

▶ [A104164] 7,17,47,107,167,197,257,317,347,557,677,827,947,1097,1217,1307,1367,1427,1607,1847,1877,2027,2207,2267,2297 ⋆ Sophie Germain type primes where 5 * Prime[n]=2 * Prime[m] + 1. ● a(n) = If (5 * Prime[n] - 1) / 2 is prime, then a[m]=(5 * Prime[n] - 1) / 2 ●

▶ [A221591] 0,7,17,49,139,393,1113,3151,8921,25257,71507,202449,573169,1622743,4594273,13007201,36825691,104260057,295178697,835703199,2366023849,6698632793,18965016483,53693322401,152015310561 ⋆ Number of 0..2 arrays of length n with each element differing from at least one neighbor by 1 or less. ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) + a(n - 3) for n>4. ●

▶ [A045821] 1,1,1,1,7,17,49,145,415,1201,3473,10033,28999,83809,242209,700001,2023039,5846689,16897249,48833953,141132743,407881201,1178798545,3406791025,9845808799 ⋆ Numerical distance between m - th and (n + m) - th circles in a loxodromic sequence of circles in which each 4 consecutive circles touch. ● a (n) = 2(a(n - 1) + a(n - 2) + a(n - 3)) - a(n - 4). ● a(n) = Sum { v=0 to [n / 2] } binomial(n, 2v) * F(n - v - 2) where F(m) is the m - th Fibonacci number. ●

▶ [A081632] 1,7,17,55,161,487,1457,4375,13121,39367,118097,354295,1062881,3188647,9565937,28697815,86093441,258280327,774840977,2324522935,6973568801,20920706407,62762119217,188286357655,564859072961 ⋆ 2 * 3 ^ n - (- 1) ^ n. ● a(0)=1, a(1)=7, a(n)=2 * a(n - 1) + 3 * a(n - 2) [_ Harvey P. Dale _ , May 24 2011] ●

▶ [A216073] 1,7,17,71,169,703,1673,6959,16561,68887,163937,681911,1622809,6750223,16064153,66820319,159018721,661452967,1574123057,6547709351,15582211849,64815640543,154247995433,641608696079,1526897742481 ⋆ The list of the a (n) - values in the common solutions to k + 1=b ^ 2 and 6 * k + 1=a ^ 2. ● a(n) = 10 * a(n - 2) - a(n - 4). ● a(n) = a(n - 1) + 10 * a(n - 2) - 10 * a(n - 3) - a(n - 4) + a(n - 5). ● a(2 * n + 1) = ((1 + r) * (5 + 2 * r) ^ n + (1 - r) * (5 - 2 * r) ^ n) / 2 where r=sqrt(6) and 0<=n. ● a(2 * n + 2) = ((7 + 3 * r) * (5 + 2

* r) ^ n + (7 - 3 * r) * (5 - 2 * r) ^ n) / 2 where r=sqrt(6) and 0<=n. ● a(n) = - ((5 - 2 * r) ^ (1 / 4) * ((2 * r + 5) ^ ((- 1) ^ n / 4 + n / 2) * (- 1) ^ n - r * (2 * r + 5) ^ ((- 1) ^ n / 4 + n / 2)) + (2 * r + 5) ^ (1 / 4) * ((5 - 2 * r) ^ ((- 1) ^ n / 4 + n / 2) * (- 1) ^ n + (5 - 2 * r) ^ ((- 1) ^ n / 4 + n / 2) * r)) / (2 * (5 - 2 * r) ^ (1 / 4) * (2 * r + 5) ^ (1 / 4)) with r=sqrt(6) and 1<=n. - _ Alexander R. Povolotsky _ , Sep 01 2012 ● a(n) = b(n) + 7 * b(n - 1) + 7 * b(n - 2) + b(n - 3), where b(n) = (1 / 2) * (1 + (- 1) ^ n) * ChebyshevU(n / 2, 5). - _ G. C. Greubel _ , Apr 28 2022 ●

► [A165246] 7,17,117,1117,11117,111117,1111117,11111117,111111117,1111111117,11111111117,111111111117,1111111111117,11111111111117,111111111111117,1111111111111117,11111111111111117,111111111111111117 ⋆ a(n) = (10 ^ n + 53) / 9 ● a(n) = 9 * a(n - 1) - 8 * a(n - 2) + 2 * 10 ^ (n - 2) for n>2, a(1)=7, a(2)=17. [_ Vincenzo Librandi _ , Aug 02 2010] ● a(n) = 11 * a(n - 1) - 10 * a(n - 2). G.f.: - x * (60 * x - 7) / ((x - 1) * (10 * x - 1)). [_ Colin Barker _ , Jan 24 2013] ●

► [A118108] 1,7,17,119,273,1911,4369,30583,69905,489335,1118481,7829367,17895697,125269879,286331153,2004318071,4581298449,32069089143,73300775185,513105426295,1172812402961,8209686820727,18764998447377,131354989131639,300239975158033 ⋆ Decimal representation of n - th iteration of the Rule 54 elementary cellular automaton starting with a single black cell. ● a(n) = 7 * (4 ^ (n + 1) - 1) / 15 for n odd; a(n) = (4 ^ (n + 2) - 1) / 15 for n even. ● a(n) = 17 * a(n - 2) - 16 * a(n - 4) for n>3. ● a(n) = floor((16 + 12 * (n mod 2)) * 4 ^ n / 15). - _ Karl V. Keller, Jr. _ , Aug 04 2021 ●

► [A269447] 7,17,881,1351,42787,65337,2053401,3135331,98520967,150431057,4726953521,7217555911,226795248547,346292253177,10881444977241,16614810597091,522082563659527,797164616407697,25049081610680561,38247286776972871,1201833834749007907 ⋆ The first of 23 consecutive positive integers the sum of the squares of which is a square. ● a(n) = a(n - 1) + 48 * a(n - 2) - 48 * a(n - 3) - a(n - 4) + a(n - 5) for n>5. ● a(1)=7, a(2)=17, a(3)=881, a(4)=1351, a(n) = 48 * a(n - 2) - a(n - 4) + 506. - _ Daniel Mondot _ , Aug 05 2016 ●

► [A056021] 1,7,18,24,26,32,43,49,51,57,68,74,76,82,93,99,101,107,118,124,126,132,143,149,151 ⋆ Numbers k such that k ^ 4 == 1 (mod 5 ^ 2). ● a(n) = (- 25 - (- 1) ^ n + (9 - 9 * I) * (- I) ^ n + (9 + 9 * I) * I ^ n + 50 * n) / 8. - _ Colin Barker _ , Oct 16 2015 ●

► [A017473] 7,18,29,40,51,62,73,84,95,106,117,128,139,150,161,172,183,194,205,216,227,238,249,260,271 ⋆ a(n) = 11 * n + 7. ● a(n) = 2 * a(n - 1) - a(n - 2). ●

► [A156619] 7,18,32,43,57,68,82,93,107,118,132,143,157,168,182,193,207,218,232,243,257,268,282,293,307 ⋆ Numbers congruent to { 7, 18 } mod 25. ● a(n) = 2 * a(n - 1) - a(n - 2) - 3, if n is even, and a(n) = 2 * a(n - 1) - a(n - 2) + 3, if n is odd, with a(1)=7, a(2)=18. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3). ● a(n) = 25 * n / 2 - 25 / 4 - 3 * (- 1) ^ n / 4. ●

► [A033537] 0,7,18,33,52,75,102,133,168,207,250,297,348,403,462,525,592,663,738,817,900,987,1078,1173,1272 ⋆ a(n) = n * (2 * n + 5). ● a(n) = a(n - 1) + 4 * n + 3 (with a(0)=0). - _ Vincenzo Librandi _ , Nov 17 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3), n>=3, a(0)=0, a(1)=7, a(2)=18. (End) ●

► [A000566] 0,1,7,18,34,55,81,112,148,189,235,286,342,403,469,540,616,697,783,874,970,1071,1177,1288,1404 ⋆ Heptagonal numbers (or 7 - gonal numbers): n * (5 * n - 3) / 2. ● a(n) = C(n, 1) + 5 * C(n, 2). - _ Paul Barry _ , Jun 10 2003 ● a(n) = Sum _{ k = 1..n } (4 * n - 3 * k). - _ Paul Barry _ , Sep 06 2005 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for a(0) = 0, a(1) = 1, a(2) = 7. - _ Jaume Oliver Lafont _ , Dec 02 2008 ● a(n) = 2 * a(n - 1) - a(n - 2) + 5, with a(0) = 0 and a(1) = 1. - _ Mohamed Bouhamida _ , May 05 2010 ● a(n) = a(n - 1) + 5 * n - 4, with a(0) = 0. - _ Vincenzo Librandi _ , Nov 20 2010 ● a(5 * a(n) + 11 * n + 1) = a(5 * a(n) + 11 * n) + a(5 * n + 1). - _ Vladimir Shevelev _ , Jan 24 2014 ●

► [A301709] 1,7,18,34,56,84,117,155,199,249,304,364,430,502,579,661,749,843,942,1046,1156,1272,1393,1519,1651 ⋆ Partial sums of A301708. ● a(n) = ((- 1 / 8 + i / 8) * ((- 5 - 5 * i) + (- i) ^ n + i ^ (1 + n)) + (11 * n) / 4 + (11 * n ^ 2) / 4) where i=sqrt(- 1). ● a(n) = 3 * a(n - 1) - 4 * a(n - 2) + 4 * a(n - 3) - 3 * a(n - 4) + a(n - 5) for n>4. ●

► [A320281] 0,1,7,18,35,57,84,117,155,198,247,301,360,425,495,570,651,737,828,925,1027,1134,1247,1365,1488 ⋆ Terms that are on the positive x - axis of the square spiral built with 2 * k, 2 * k + 1, 2 * k + 1 for k >= 0. ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) - 2 * a(n - 4) + a(n - 5), a(0)=0, a(1)=1, a(2)=7, a(3)=18, a(4)=35. ● a(n + 2) - 2 * a(n - 1) + a(n) = period 3: repeat [5, 5, 6]. ● a(- n) = 0, 5, 15, 30, 51, 77, 108, 145, ... is the sequence of the terms on the positive y - axis. ●

► [A192751] 0,1,7,18,39,75,136,237,403,674,1115,1831,2992,4873,7919,12850,20831,33747,54648,88469,143195,231746,375027,606863,981984 ⋆ Define a pair of sequences c _ n, d _ n by c _ 0=0, d _ 0=1 and thereafter c _ n = c _{ n - 1 }+ d _{ n - 1 } , d _ n = c _{ n - 1 }+ 4 * n + 2; sequence here is c _ n. ● a(n) = 5 * Fibonacci(n + 3) - (4 * n + 10). - _ N. J. A. Sloane _ , Dec 15 2015 ●

► [A272459] 0,1,7,18,40,71,119,180,264,365,495,646,832,1043,1295,1576,1904,2265,2679,3130,3640,4191,4807,5468,6200 ⋆ The total number of different isosceles trapezoids, excluding squares, that can be drawn on an n X n square grid where the corners of each individual trapezoid lie on a lattice point. ● a(n) = (n * (- 1 - 3 * (- 1) ^ n - 12 * n + 10 * n ^ 2)) / 24. ● a(n) = (5 * n ^ 3 - 6 * n ^ 2 - 2 * n) / 12 for n even. ● a(n) = (5 * n ^ 3 - 6 * n ^ 2 + n) / 12 for n odd. ● a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + a(n - 4) + 2 * a(n - 5) - a(n - 6) for n>6. ●

► [A133673] 7,18,40,83,163,311,579,1060,1914,3419,6053,10637,18575,32262,55772,96019,164711,281635,480171,816536,1385262,2345083,3962185,6682393,11251543 ⋆ a(n) = n * L(n) + (n - 1) * L(n - 1) where L(n) is the Lucas number. ● a(n) = 2 * a(n - 1) + a(n - 2) - 2 * a(n - 3) - a(n - 4). ●

► [A356042] 1,7,18,45,72,138,189,301,403,565,688,985,1156,1462,1759,2212,2503,3115,3478,4207,4768,5506,6037,7269,7947 ⋆ a(n) = Sum _{ k=1..n } sigma _2(k) * floor(n / k). ● a(n) = Sum _{ k=1..n } Sum _{ d|k } d ^ 2 * tau(k / d) . ●

► [A220031] 7,18,55,137,302,613,1165,2094,3587,5893,9335,14323,21368,31097,44269,61792,84741,114377,152167,199805,259234,332669,422621,531922,663751 ⋆ Number of n X 7 arrays of the minimum value of corresponding elements and the ir horizontal or diagonal neighbors in a random, but sorted with lexicographically nondecreasing rows and nonincreasing columns, 0..1 n X 7 array. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>9. ●

► [A223240] 7,18,60,168,528,1536,4704,13920,42144,125664,378528,1132512,3403680,10198752,30620832,91813344,275538336,826418400,2479648416,7438158816,22316049312,66945002208,200841298080,602511311328,1807559099808 ⋆ 3 - loop graph coloring a rectangular array: number of n X 1 0..6 arrays where 0..6 label nodes of a graph with edges 0,1 1,2 2,0 0,3 3,4 4,0 0,5 5,6 6,0 and every array movement to a horizontal or vertical neighbor moves along an edge of this graph. ● a(n) = (64 * 3 ^ n - 9 * (- 2) ^ n) / 30. ●

► [A262489] 7,18,78,187,781,1860,7740,18421,76627,182358,758538,1805167,7508761,17869320,74329080,176888041,735782047,1751011098,7283491398,17333222947,72099131941,171581218380,713707828020,1698478960861,7064979148267 ⋆ The index of the first of two consecutive positive triangular numbers (A000217) the sum of which is equal to the sum of three consecutive positive triangular numbers. ● a(n) = a(n - 1) + 10 * a(n - 2) - 10 * a(n - 3) - a(n - 4) + a(n - 5) for n>5. ●

► [A030982] 0,1,1,7,18,80,284,1169,4628,19137,79165,333058,1410608,6029816,25941384,112315945,488862888,2138161043,9391903131,41414729419,183264846010,813564012660,3622193670040,16170171489820,72364908958800 ⋆ Number of noncrossing nonplanted bushes with n nodes, i.e., rooted noncrossing trees with n nodes and no nodes of degree 1. ● a(n) = 5 * Sum _{ k=2..n } ((- 1) ^ (n - k) * 2 ^ (n - k) * k * C(n,k) * C(3 * k - 2,k - 2) / (2 * k + 1)) / n. ●

► [A017605] 7,19,31,43,55,67,79,91,103,115,127,139,151,163,175,187,199,211,223,235,247,259,271,283,295 ⋆ a(n) = 12 * n + 7. ● a(n) = 2 * (12 * n + 1) - a(n - 1) = 2 * a(n - 1) - a(n - 2) with a(0) = 7, a(1) = 19. - _ Vincenzo Librandi _ , Nov 19 2010 ●

► [A298019] 1,7,19,31,55,91,115,157,217,253,313,397,445,523,631,691,787,919,991,1105,1261,1345,1477,1657,1753 ⋆ Partial sums of A298016. ● a(n) = a(n - 1) + 2 * a(n - 3) - 2 * a(n - 4) - a(n - 6) + a(n - 7) for n>6. ●

► [A374535] 0,1,7,19,31,61,133,189,213,330,510,642,786,968,1304,1664,1712,2018,2720,3100,3460,4132,4924,5476,5764 ⋆ Expansion of (x / (8 * (1 - x))) * d / dx (theta _ 3(x) ^ 4). ● a(n) = 1 / 8 * Sum _{ i,j,k,l in Z and i ^ 2 + j ^ 2 + k ^ 2 + l ^ 2 <= n } i ^ 2 + j ^ 2 + k ^ 2 + l ^ 2. ●

► [A301717] 1,7,19,37,55,85,121,157,205,253,307,373,439,511,589,673,763,859,961,1063,1177,1297,1417,1549,1681 ⋆ Partial sums of A301716. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) + a(n - 5) - a(n - 6) - a(n - 8) + a(n - 9) for n>8. ●

► [A003215] 1,7,19,37,61,91,127,169,217,271,331,397,469,547,631,721,817,919,1027,1141,1261,1387,1519,1657,1801 ⋆ Hex (or centered hexagonal) numbers: 3 * n * (n + 1) + 1 (crystal ball sequence for hexagonal lattice). ● a(n) = 3 * n * (n + 1) + 1, n >= 0 (see the name). ● a(n) = (n + 1) ^ 3 - n ^ 3 = a(- 1 - n). ● a(n) = 1 + Sum _{ j=0..n } (6 * j). E.g., a(2)=19 because 1 + 6 * 0 + 6 * 1 + 6 * 2 = 19. - Xavier Acloque, Oct 06 2003 ● a(n) = right term in M ^ n * [1 1 1], where M = the 3 X 3 matrix [1 0 0 / 2 1 0 / 3 3 1]. M ^ n * [1 1 1] = [1 2n + 1 a(n)]. E.g., a(4) = 61, right term in M ^ 4 * [1 1 1], since M ^ 4 * [1 1 1] = [1 9 61] = [1 2n + 1 a(4)]. - _ Gary W. Adamson _ , Dec 22 2004 ● a(n) = 3 * n ^ 2 + 3 * n + 1. Proof: 1) If n occurs once, it may be in 3 positions; for the two other ones, n terms are independently possible, then we have 3 * n ^ 2 different triples. 2) If the term n occurs twice, the third one may be placed in 3 positions and have n possible values, then we have 3 * n more different triples. 3) The term n may occurs 3 times in one way only that gives the formula. - Philippe Lallouet (philip.lallouet(AT)wanadoo.fr), Aug 20 2007 ● a(n) = integral((sin((n + 1 / 2)x) / sin(x / 2)) ^ 3, x=0..Pi) / Pi. - _ Yalcin Aktar _ , Dec 03 2011 ●

► [A098484] 1,1,1,1,7,19,37,61,145,397,979,2107,4591,10915,26857,63649,146347,339751,808885,1936717,4588705,10803133,25559287,60893551,145231309 ⋆ Expansion of 1 / sqrt((1 - x) ^ 2 - 12x ^ 4). ● a(n)=sum { k=0..floor(n / 2), binomial(n - 2k, k)binomial(n - 3k, k)3 ^ k } . ●

► [A213489] 1,7,19,37,64,103,154,217,295,391,505,637,790,967,1168,1393,1645,1927,2239,2581,2956,3367,3814,4297,4819 ⋆ Number of (w,x,y) with all terms in { 0,...,n } and |w - x| + |x - y| + |y - w| >= w + x + y. ● a(n) = 4 * a(n - 1) - 7 * a(n - 2) + 8 * a(n - 3) - 7 * a(n - 4) + 4 * a(n - 5) - a(n - 6). ●

► [A098481] 1,1,1,7,19,37,115,361,937,2599,7777,22195,62701,182647,531829,1534903,4461571,13034917,38015899,110994193,325011151,952442557,2792471239,8198275933,24093817531 ⋆ Expansion of 1 / sqrt((1 - x) ^ 2 - 12 * x ^ 3). ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n - k, k) * binomial(n - 2k, k) * 3 ^ k. ●

► [A051937] 1,7,19,38,65,101,147,204,273,355,451,562,689,833,995,1176,1377,1599,1843,2110,2401,2717,3059,3428,3825 ⋆ Truncated triangular pyramid numbers: a(n) = Sum _{ k=4..n } (k * (k + 1) / 2 - 9). ● a(n) = (1 / 6) * (n - 3) * (n ^ 2 + 6 * n - 34). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Vincenzo Librandi _ , Apr 28 2012 ●

► [A119327] 1,1,7,19,38,66,106,162,239,343,481,661,892,1184,1548,1996,2541,3197,3979,4903,5986,7246,8702,10374,12283 ⋆ Expansion of (1 - 4x + 12x ^ 2 - 16x ^ 3 + 8x ^ 4) / (1 - x) ^ 5. ● a(n) = Sum { j=0..n } C(4,2j) * C(n,2j). ●

► [A152728] 0,0,0,1,7,19,38,68,110,165,237,327,436,568,724,905,1115,1355,1626,1932,2274,2653,3073,3535,4040 ⋆ a(n) + a(n + 1) + a(n + 2) = n ^ 3. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + 2 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) - a(n - 5). - _ Charles R Greathouse IV _ , Jul 10 2013 ● a(3n) = n * (9n ^ 2 - 9n + 1), a(3n + 1) = n * (9n ^ 2 - 2), a(3n + 2) = n * (9n ^ 2 + 9n + 1). - _ Ralf Stephan _ , Jul 12 2013 ● a(n) = ceiling((n ^ 3 - 3 * n ^ 2 + n) / 3). - _ Robert Israel _ , Dec 01 2014 ●

► [A108766] 1,1,7,19,39,69,111,167,239,329,439,571,727,909,1119,1359,1631,1937,2279,2659,3079,3541,4047,4599,5199 ⋆ a(n) = A007290(n + 2) - 1 = 2 * C(n + 2,3) - 1. ● a(n) = n * (n + 2) * (n + 1) / 3 - 1. ●

► [A295077] 0,1,7,19,39,71,123,211,367,655,1203,2267,4359,8503,16747,33187,66015,131615,262755,524971,1049335,2097991,4195227,8389619,16778319 ⋆ a(n) = 2 * n * (n - 1) + 2 ^ n - 1. ● a(0)=0, a(1)=1, a(2)=7, a(3)=19; for n>3, a(n) = 5 * a(n - 1) - 9 * a(n - 2) + 7 * a(n - 3) - 2 * a(n - 4). ●

► [A239359] 7,19,39,77,156,266,409,599,852,1191,1635,2213,2944,3837,4910,6178,7657,9363,11312,13520,16003,18777,21858,25262,29005 ⋆ Number of n X 6 0..2

arrays with no element equal to one plus the sum of elements to its left or one plus the sum of elements above it or one plus the sum of the elements diagonally to its northwest, modulo 3. • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>17. •

▶ [A213782] 1,7,19,41,72,118,176,254,347,465,601,767,954,1176,1422,1708,2021,2379,2767,3205,3676,4202,4764,5386,6047 ⋆ Principal diagonal of the convolution array A213781. • a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + a(n - 4) + 2 * a(n - 5) - a(n - 6). • a(n) = (16 * n ^ 3 + 66 * n ^ 2 + 6 * (- 1) ^ n * n - 34 * n - 3 * (- 1) ^ n + 3) / 48. • a(n) = (8 * n ^ 3 + 33 * n ^ 2 - 14 * n) / 24 for n even. • a(n) = (8 * n ^ 3 + 33 * n ^ 2 - 20 * n + 3) / 24 for n odd. •

▶ [A067889] 7,19,41,103,137,199,307,349,491,739,823,919,1013,1061,1193,1277,1289,1409,1433,1447,1481,1543,1609,1667,1721 ⋆ Primes sandwiched between two numbers having same number of divisors. • a(n) seems curiously to be asymptotic to 25 * n * log(n). [From the number of terms up to 10 ^ 8, 10 ^ 9, 10 ^ 10 and 10 ^ 11, i.e., 306147, 2616930, 22835324 and 202105198, this constant can be estimated by 25.858..., 25.858..., 25.845... and 25.872..., respectively. - _ Amiram Eldar _ , Jun 28 2022] •

▶ [A265676] 0,1,7,19,43,67,97,139,181,229,289,349,415,493,571,655,751,847,949,1063,1177,1297,1429,1561,1699 ⋆ a(n) is the total number of petals of the Flower of Life at the n - th iteration. • a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) - 2 * a(n - 4) + a(n - 5) for n>5. •

▶ [A259486] 1,7,19,43,73,109,157,211,271,343,421,505,601,703,811,931,1057,1189,1333,1483,1639,1807,1981,2161,2353 ⋆ a(n) = 3 * n ^ 2 - 3 * n + 1 + 6 * floor((n - 1) * (n - 2) / 6). • a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) - 2 * a(n - 4) + a(n - 5), n>5. • a(n) = 4 * n ^ 2 - 6 * n + 1 if 3 divides n, 4 * n ^ 2 - 6 * n + 3 otherwise. • a(n) = 4 * n ^ 2 - 6 * n + 3 ^ sign(n mod 3). - _ Wesley Ivan Hurt _ , Jul 13 2015 •

▶ [A298034] 1,7,19,43,73,115,163,223,289,367,451,547,649,763,883,1015,1153,1303,1459,1627,1801,1987,2179,2383,2593 ⋆ Partial sums of A298033. • a(n) = (9 * n ^ 2 + 2) / 2 for n even. • a(n) = (9 * n ^ 2 + 5) / 2 for n odd. • a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4) for n>3. (End) • a(4 * k + r) = 36 * k * (2 * k + r) + a(r) for r = 0..3. Example: if n=29 then k=7 and r=1, hence a(29) = 36 * 7 * (2 * 7 + 1) + 7 = 3787. - _ Bruno Berselli _ , Jan 25 2018 •

▶ [A247905] 1,7,19,43,79,139,223,355,535,811,1183,1747,2503,3643,5167,7459,10519,15115,21247,30451,42727,61147,85711,122563,171703 ⋆ Start with a single hexagon; at n - th generation add a hexagon at each expandable vertex (this is the "vertex to side" version); a(n) is the sum of all label values at n - th generation. (See comment for construction rules.) • a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + 2 * a(n - 4). - _ Colin Barker _ , Sep 26 2014 • a(n) = 3 * 2 ^ (n / 2) * ((1 + sqrt(2)) ^ 3 + (- 1) ^ n * (1 - sqrt(2)) ^ 3) - 12 * n - 41. - _ G. C. Greubel _ , Feb 18 2022 •

▶ [A048488] 1,7,19,43,91,187,379,763,1531,3067,6139,12283,24571,49147,98299,196603,393211,786427,1572859,3145723,6291451,12582907,25165819,50331643,100663291 ⋆ a(n) = 6 * 2 ^ n - 5. • a(n) = 2 * a(n - 1) + 5, n > 0, a(0) = 1. - _ Paul Barry _ , Aug 25 2004 • a(n) = 3 * 2 ^ (1 + n) - 5. a(n) = 3 * a(n - 1) - 2 * a(n - 2). • a(n + 1) = 3 * 2 ^ n - 5 = 1 + 2 * (Sum _{ i=0..n - 1 } 3i) for n > 0. - _ Gerasimov Sergey _ and _ Alonso del Arte _ , May 03 2014 •

▶ [A143128] 1,7,19,47,77,149,205,325,442,622,754,1090,1272,1608,1968,2464,2770,3472,3852,4692,5364,6156,6708,8148,8923 ⋆ a(n) = Sum _{ k=1..n } k * sigma(k). • a(n) = Sum _{ k=1..n } k ^ 2 / 2 * floor(n / k) * floor(1 + n / k). - _ Daniel Suteu _ , May 29 2018 • a(n) = Sum _{ k=1..n } Sum _{ i=1..floor(n / k) } i * k ^ 2. - _ Wesley Ivan Hurt _ , Nov 26 2020 •

▶ [A097039] 0,1,7,19,47,102,210,413,789,1473,2703,4892,8756,15529,27331,47791,83103,143810,247814,425445,727985,1241981,2113247,3587064,6075432 ⋆ a(n) = Sum _{ i=0..n } i * L(i), where L = A000032. • a(n) = n * L(n + 2) - L(n + 3) + 4. • a(n) = 3 * a(n - 1) - a(n - 2) - 3 * a(n - 3) + a(n - 4) + a(n - 5). - _ Wesley Ivan Hurt _ , Aug 19 2022 •

▶ [A090025] 0,7,19,49,91,175,253,415,571,805,1033,1423,1723,2263,2713,3313,3913,4825,5491,6625,7513,8701,9811,11461,12637 ⋆ Number of distinct lines through the origin in 3 - dimensional cube of side length n. • a(n) = Sum _{ k=1..n } moebius(k) * ((floor(n / k) + 1) ^ 3 - 1). - _ Vladeta Jovovic _ , Dec 03 2004 • a(n) = (n + 1) ^ 3 - Sum _{ j=2..n + 1 } a(floor(n / j)). - _ Seth A. Troisi _ , Aug 29 2013 •

▶ [A100545] 7,19,50,131,343,898,2351,6155,16114,42187,110447,289154,757015,1981891,5188658,13584083,35563591,93106690,243756479,638162747,1670731762,4374032539,11451365855,29980065026,78488829223 ⋆ Expansion of (7 - 2 * x) / (1 - 3 * x + x ^ 2). • a(n - 1) = 4 * Fibonacci(2 * n) + Fibonacci(2 * n - 1) + Fibonacci(2 * n + 1). • a(n) = 3 * a(n - 1) - a(n - 2) with a(0)=7 and a(1)=19. - _ Philippe Deléham _ , Nov 16 2008 • a(n) = (2 ^ (- 1 - n) * ((3 - sqrt(5)) ^ n * (- 17 + 7 * sqrt(5)) + (3 + sqrt(5)) ^ n * (17 + 7 * sqrt(5)))) / sqrt(5). - _ Colin Barker _ , Oct 14 2015 • a(n) = Fibonacci(2 * n + 4) + Lucas(2 * n + 3). •

▶ [A229442] 7,19,60,212,753,2546,8024,23428,63430,159945,377840,841419,1777036,3578998,6908102,12834739,23041529,40103959,67871516,111976374,180501843,284848554,440842772,670138334,1001971536 ⋆ Number of n X 5 0..2 arrays with horizontal differences mod 3 never 1, vertical differences mod 3 never - 1, and rows and columns lexicographically nondecreasing. • a(n) = 11 * a(n - 1) - 55 * a(n - 2) + 165 * a(n - 3) - 330 * a(n - 4) + 462 * a(n - 5) - 462 * a(n - 6) + 330 * a(n - 7) - 165 * a(n - 8) + 55 * a(n - 9) - 11 * a(n - 10) + a(n - 11) for n>11. •

▶ [A002533] 1,1,7,19,73,241,847,2899,10033,34561,119287,411379,1419193,4895281,16886527,58249459,200931553,693110401,2390878567,8247309139,28449011113,98134567921,338514191407,1167701222419,4027973401873 ⋆ a(n) = 2 * a(n - 1) + 5 * a(n - 2). • a(n) = (1 / 2) * ((1 + sqrt(6)) ^ n + (1 - sqrt(6)) ^ n). • a(2 * n + 1) = 2 * a(n) * a(n + 1) - (- 5) ^ n. • a(n) = Sum _{ k=0..floor(n / 2) } binomial(n, 2 * k) * 6 ^ k. - _ Paul Barry _ , Jul 25 2004 •

▶ [A269784] 7,19,79,107,139,307,359,607,919,1399,1619,1979,2239,2659,3607,3779,4507,5507,6379,6607,7559,8059,8839,10799,11699 ⋆ Primes p such that 2 * p + 11 is a square. • a(n) >> n ^ 2 log n. - _ Charles R Greathouse IV _ , Aug 23 2022 •

▶ [A237436] 7,19,79,331,751,1171,7459,10651,18379,78439,78439,399499,644869,1427911,1427911,4355311,5715319,43030381,43030381,163384621 ⋆ Least prime p > prime(n + 1) such that p is a square mod the first n odd primes 3, 5, 7, 11, ..., prime(n + 1). • a(n) = a(n + 1) if and only if Legendre (a(n)|prime(n + 2)) = 1. •

▶ [A363668] 1,7,19,91,151,1135,1765,12355,28846,157917,352837,2280955,5200469,29986201,80469589,427061795,1166803399,6211188028,17672632261,89483074521,271071666724,1316291647997,4116715364329,19595444140771,63205674328876 ⋆ a(n) = Sum _{ d|n } (n / d) ^ d * binomial(d + n - 1,d). • a(n) = [x ^ n] Sum _{ k>0 } (1 / (1 - k * x ^ k) ^ n - 1). •

▶ [A084603] 1,1,7,19,91,331,1441,5797,24739,103411,441397,1876777,8047909,34533253,148803487,642228139,2778852979,12043194163,52286516821,227323871929,989675651041,4313712072241,18822940658947,82215245701519 ⋆ Coefficients of 1 / sqrt(1 - 2 * x - 11 * x ^ 2); also, a(n) is the central coefficient of (1 + x + 3 * x ^ 2) ^ n. • a(n) = Sum _{ k=0..floor(n / 2) } binomial(n - k, k) * binomial(n, k)3 ^ k. - _ Paul Barry _ , Aug 26 2004 • a(n) = (1 / Pi) * Integral _{ x =1 - 2 * sqrt(3)..1 + 2 * sqrt(3) } x ^ n / sqrt(- x ^ 2 + 2 * x + 11). - _ Paul Barry _ , Sep 16 2006 • a(n) = Sum _{ k=0..floor(n / 2) } C(n,2k) * C(2k,k) * 3 ^ k; • a(n) = Sum _{ k=0..floor(n / 2) } C(n,k) * C(n - k,k) * 3 ^ k. (End) • a(n) is also the central coefficient of (3 + x + x ^ 2) ^ n; • a(n) = Sum _{ k =0..n } 2 ^ (n - k) * C(n,k) * T(k,n), where T(k,n) is the triangle of trinomial coefficients = coefficient of x ^ n of (1 + x + x ^ 2) ^ k: A027907. (End) •

▶ [A351858] 1,1,7,19,103,376,1825,7547,35175,153838,708132,3181091,14616481,66582283,306501377,1407473269,6497464679,29991098982,138844558150,643215119214,2985368996228,13868212710623,64508509024241,300324344452479,1399598738196897 ⋆ a(n) = [x ^ n] (1 + x + x ^ 2) ^ (3 * n) / (1 + x) ^ (2 * n). • a(n) = Sum _{ k = 0..n } Sum _{ j = 0..n - k } (- 1) ^ (n - k - j) * C(n,k) * C(3 * n,j) * C(4 * n - 2 * j - k - 1,n - k - j). •

▶ [A091149] 1,1,7,19,109,421,2251,10207,53593,263305,1385263,7109323,37728901,198723565,1065245299,5706564247,30879236017,167409942289,913397457367,4996676997379,27455383898269,151263170713909,836158046041243 ⋆ Expansion of (1 - x - sqrt(1 - 2 * x - 23 * x ^ 2)) / (12 * x ^ 2). • a(n) = Sum _{ k=0..n } C(n, 2 * k) * C(k) * 6 ^ k. - _ Paul Barry _ , May 16 2005 •

▶ [A249608] 1,1,7,19,115,451,2521,11677,63379,318115,1716517,8981017,48623389,260410333,1418640055,7707719299,42263782099,231857347603,1278917211061,7065478018585,39174182961865,217591443710905,1211736702238795,6759723716824855,37785032547293245 ⋆ Expansion of e.g.f.: exp(x) * BesselI(0, 2 * x) * BesselI(0, 2 * sqrt(2) * x). • a(n) = Sum _{ k=0..n } (- 1) ^ k * C(n,k) * C(2 * k,k) * (Sum _{ j=0..n - k } C(n - k,j) ^ 2 * 2 ^ j). •

▶ [A134863] 7,20,28,41,54,62,75,83,96,109,117,130,143,151,164,172,185,198,206,219,227,240,253,261,274 ⋆ Wythoff BAB numbers. • a(n) = B(A(B(n))), n>=1, with A=A000201, the lower Wythoff sequence and B=A001950, the upper Wythoff sequence. •

▶ [A063151] 7,20,34,48,62,76,90,104,118,132,146,160,174,188,202,216,230,244,258,272,286,300,314,328,342 ⋆ Dimension of the space of weight 2n cusp forms for Gamma _ 0(83). • a(n) = 2 * a(n - 1) - a(n - 2) for n>3. • a(n) = 14 * n - 8 for n>1. •

▶ [A140676] 0,7,20,39,64,95,132,175,224,279,340,407,480,559,644,735,832,935,1044,1159,1280,1407,1540,1679,1824 ⋆ a(n) = n * (3 * n + 4). • a(n) = 3 * n ^ 2 + 4 * n. • a(n) = 6 * n + a(n - 1) + 1 for n>0, a(0)=0. - _ Vincenzo Librandi _ , Aug 03 2010 • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>2. - _ Harvey P. Dale _ , May 04 2013 •

▶ [A162024] 7,20,40,68,104,148,200,260,328,404,488,580,680,788,904,1028,1160,1300,1448,1604,1768,1940,2120,2308,2504 ⋆ Number of n X n binary arrays with rows and columns, considered as binary numbers, in nondecreasing order, and all but the outermost row or column zero. • a(n) = 4 * (2 - 2 * n + n ^ 2) for n >2. •

▶ [A011934] 0,1,7,20,44,81,135,208,304,425,575,756,972,1225,1519,1856,2240,2673,3159,3700,4300,4961,5687,6480,7344 ⋆ a(n) = |1 ^ 3 - 2 ^ 3 + 3 ^ 3 - 4 ^ 3 + .. . + (- 1) ^ (n + 1) * n ^ 3|. • a(n) = |(1 / 8) * (- 1 + (- 1) ^ n - 6 * (- 1) ^ n * n ^ 2 - 4 * (- 1) ^ n * n ^ 3)|. - _ Henry Bottomley _ , Nov 13 2000 • a(n) = Sum _{ k=1..n } floor((2 * n + 1) * k / 2). - _ Wesley Ivan Hurt _ , Apr 01 2017 •

▶ [A100206] 0,7,20,46,98,202,410,826,1658,3322,6650,13306,26618,53242,106490,212986,425978,851962,1703930,3407866,6815738,13631482,27262970,54525946,109051898 ⋆ Row sums of Clark's triangle A046902. • a(0)=0; for n>0, a(n) = 13 * 2 ^ (n - 1) - 6. - _ Max Alekseyev _ , May 12 2005 • a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n > 1. •

▶ [A047862] 1,7,20,48,108,236,508,1084,2300,4860,10236,21500,45052,94204,196604,409596,851964,1769468,3670012,7602172,15728636,32505852,67108860,138412028,285212668 ⋆ a(n) = T(5,n), array T given by A047858. • a(n) = 2 ^ (n - 1) * (n + 10) - 4. (End) • a(0)=1, a(1)=7, a(2)=20; for n>2, a(n) = 5 * a(n - 1) - 8 * a(n - 2) + 4 * a(n - 3). - _ Vincenzo Librandi _ , Sep 28 2011 • a(n) = 2 ^ (n - 1) * (n + 10) - 4. G.f.: (1 + 2 * x - 7 * x ^ 2) / ((1 - x) * (1 - 2 * x) ^ 2). - _ Colin Barker _ , Feb 18 2016 •

▶ [A048755] 1,7,20,52,129,315,764,1848,4465,10783,26036,62860,151761,366387,884540,2135472,5155489,12446455,30048404,72543268,175134945,422813163,1020761276,2464335720,5949432721 ⋆ Partial sums of A048693. • a(n)=2 * a(n - 1) + a(n - 2) + 5; a(0)=1, a(1)=6. • a(n)=[{ (6 + (7 / 2) * sqrt(2))(1 + sqrt(2)) ^ n - (6 - (7 / 2) * sqrt(2))(1 - sqrt(2)) ^ n }/ 2 * sqrt(2)] - 5 / 2. • a(0)=1, a(1)=7, a(2)=20, a(n)=3 * a(n - 1) - a(n - 2) - a(n - 3). - _ Harvey P. Dale _ , Mar 29 2013 •

▶ [A055267] 1,7,20,53,139,364,953,2495,6532,17101,44771,117212,306865,803383,2103284,5506469,14416123,37741900,98809577,258686831,677250916,1773065917,4641946835,12152774588,31816376929 ⋆ a(n) = 3 * a(n - 1) - a(n - 2) with a(0)=1, a(1)=7. • a(n) = (7 * (((3 + sqrt(5)) / 2) ^ n - ((3 - sqrt(5)) / 2) ^ n) - ((3 + sqrt(5)) / 2) ^ (n - 1) - ((3 - sqrt(5)) / 2) ^ (n - 1))) / sqrt(5). • a(n) = 5 * Fibonacci(2 * n) + Fibonacci(2 * n + 1). • a(n) = 4 * Fibonacci(2 * n - 1) + 3 * Lucas(2 * n - 1). (End) •

▶ [A147587] 7,21,35,49,63,77,91,105,119,133,147,161,175,189,203,217,231,245,259,273,287,301,315,329,343 ⋆ a(n) = 14 * n + 7. • a(n) = a(n - 1) + 14. • a(n) =

28 * n - a(n - 1) for n>0, a(0)=7. - _ Vincenzo Librandi _ , Nov 24 2010 ● a(n) = 2 * a(n - 1) - a(n - 2). (End) ●
▶ [A063292] 1,7,21,36,51,66,81,96,111,126,141,154,171,186,201,214,231,244,261,274,291,304,321,332,351 ⋆ Dimension of the space of weight n cuspidal newforms for Gamma _ 1(19). ● a(n) = a(n - 4) + a(n - 6) - a(n - 10) for n>13. ●
▶ [A024966] 0,7,21,42,70,105,147,196,252,315,385,462,546,637,735,840,952,1071,1197,1330,1470,1617,1771,1932,2100 ⋆ 7 times triangular numbers: 7 * n * (n + 1) / 2. ● a(n) = (7 / 2) * n * (n + 1). ● a(n) = a(n - 1) + 7 * n with n > 0, a(0) =0. - _ Vincenzo Librandi _ , Nov 19 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) with a(0) = 0, a(1) = 7, a(2) = 21. ● a(n) = Sum _{ i=3 * n..4 * n } i. - _ Wesley Ivan Hurt _ , Dec 22 2015 ●
▶ [A054569] 1,7,21,43,73,111,157,211,273,343,421,507,601,703,813,931,1057,1191,1333,1483,1641,1807,1981,2163,2353 ⋆ a(n) = 4 * n ^ 2 - 6 * n + 3. ● a(n + 1) = 4 * n ^ 2 + 2 * n + 1. - _ Paul Barry _ , Apr 02 2003 ● a(n) = 4 * n ^ 2 - 6 * n + 3 - 3 * 0 ^ n (with leading zero). - _ Paul Barry _ , Jun 11 2003 ● a(n) = 8 * n + a(n - 1) - 10 (with a(1)=1). - _ Vincenzo Librandi _ , Aug 07 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●
▶ [A299254] 1,7,21,45,79,122,175,237,309,391,482,583,693,813,943,1082,1231,1389,1557,1735,1922,2119,2325,2541,2767 ⋆ Coordination sequence for 3D uniform tiling formed by stacking parallel layers of the 3 ^ 4.6 2D tiling (cf. A250120). ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 5) - 2 * a(n - 6) + a(n - 7) for n>7. - _ Colin Barker _ , Feb 07 2018 ●
▶ [A287431] 7,21,45,129,373,1177,3741,12065,38949,125993,407597,1318961,4268085,13811769,44695613,144638017,468058181,1514668105,4901568589,15861809233,51329892437,166107021401,537533612125,1739495309409,5629125066853 ⋆ Number of connected dominating sets in the n - gear graph. ● a(n) = 1 + 4 * n + (1 - sqrt(5)) ^ n + (1 + sqrt(5)) ^ n. ● a(n) = 4 * a(n - 1) - a(n - 2) - 6 * a(n - 3) + 4 * a(n - 4) for n>4. (End) ●
▶ [A127736] 1,7,21,46,85,141,217,316,441,595,781,1002,1261,1561,1905,2296,2737,3231,3781,4390,5061,5797,6601,7476,8425 ⋆ a(n) = n * (n ^ 2 + 2 * n - 1) / 2. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ●
▶ [A212677] 0,0,1,7,21,46,86,144,223,327,459,622,820,1056,1333,1655,2025,2446,2922,3456,4051,4711,5439,6238,7112 ⋆ Number of (w,x,y,z) with all terms in { 1,...,n } and w + y=|x - y| + |y - z|. ● a(n)=3 * a(n - 1) - 3 * a(n - 2) + 2 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) - a(n - 6). ●
▶ [A011927] 0,0,0,0,1,7,21,49,98,177,296,465,698,1009,1413,1927,2569,3360,4320,5472,6840,8449,10327,12501,15001 ⋆ [n(n - 1)(n - 2)(n - 3) / 17]. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) + a(n - 17) - 4 * a(n - 18) + 6 * a(n - 19) - 4 * a(n - 20) + a(n - 21) for n > 20. ●
▶ [A233329] 1,7,21,51,102,186,310,490,735,1065,1491,2037,2716,3556,4572,5796,7245,8955,10945,13255,15906,18942,22386,26286,30667 ⋆ Expansion of (1 + 4 * x + x ^ 2) / ((1 + x) ^ 2 * (1 - x) ^ 5). ● a(n) = (2 * (n ^ 4 + 10 * n ^ 3 + 34 * n ^ 2 + (45 + (- 1) ^ (n + 1)) * n) + 37 + 5 * (- 1) ^ (n + 1)) / 32. ● a(n) = sum _{ j=1..n + 1 } (sum _{ i=1..j + 1 } floor(i * j / 2)). - _ Wesley Ivan Hurt _ , Nov 17 2014 ●
▶ [A001354] 1,7,21,56,147,385,1008,2639,6909,18088,47355,123977,324576,849751,2224677,5824280,15248163,39920209,104512464,273617183,716339085,1875400072,4909861131,12854183321 ⋆ Coordination sequence for hyperbolic tessellation 3 ^ 7 (from triangle group (2,3,7)). ● a(n + 1) = 3 * a(n) - a(n - 1). ● a(0)=1, and a(n) = F(2 * n + 3) + 2 * L(2 * n - 1) for n>0, where F(n) is the n - th Fibonacci number and L(n) is the n - th Lucas number. - _ Rigoberto Florez _ , Jul 30 2019 ●
▶ [A088656] 1,7,21,60,167,466,1297,3613,10060,28012,77998,217180,604723,1683804,4688422,13054548,36349377,101212019,281817012,784697597,2184929553,6083766752,16939776315,47167492325,131334221349 ⋆ a(n) = floor((2 / (exp(1) - 2)) ^ n) for n >= 2, a(1) = 1. ● a(n) = floor((2 / (exp(1) - 2)) ^ n), with a(1) = 1. ●
▶ [A005032] 7,21,63,189,567,1701,5103,15309,45927,137781,413343,1240029,3720087,11160261,33480783,100442349,301327047,903981141,2711943423,8135830269,24407490807,73222472421,219667417263,659002251789,1977006755367 ⋆ a(n) = 7 * 3 ^ n. ● a(n) = 3 * a(n - 1), a(0)=7. (End) ●
▶ [A215494] 7,21,70,245,882,3234,12005,44933,169099,638666,2417807,9167018,34790490,132119827,501941055,1907443237,7249766678,27557748813,1047596108 58,398257159370,1514069805269,5756205681709,21884262613787,83201447389466,316323894905207 ⋆ a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 7 * a(n - 3) with a(1) =7, a(2)=21, a(3)=70. ● a(n) = s(1) ^ (2n) + s(2) ^ (2n) + s(4) ^ (2n), where s (j) := 2 * Sin(2 * Pi * j / 7) (for the sums of the respective odd powers see A215493, see also A094429, A115146). For the proof of these formula see Witula - Slota's paper. ●
▶ [A146533] 1,7,21,70,245,882,3234,12012,45045,170170,646646,2469012,9464546,36402100,140408100,542911320,2103781365,8167621770,31762973550,123708423300,482462850870,1883902560540,7364346373020 ⋆ Catalan transform of A135092. ● a(n) = (7 * C(2n,n) - 5 * 0 ^ n) / 2. ●
▶ [A153497] 1,7,21,73,341,1453,5461,21157,87381,354997,1398101,5548693,22369621,89828053,357913941,1428859477,5726623061,22928862037,91625968981,366324918613,1466015503701,5865493671253,23456248059221,93813538989397 ⋆ a(n) is the number whose binary expansion is A153498(n). ● a(n) = 5 * a(n - 1) - 14 * a(n - 2) + 50 * a(n - 3) - 56 * a(n - 4) + 80 * a(n - 5) - 64 * a(n - 6). ●
▶ [A177369] 1,7,21,87,317,1215,4565,17287,65261,246671,931909,3521367,13305053,50272991,189953717,717732903,2711921613,10246881583,38717399589,146292038647 ⋆ Expansion of g.f.: (1 + 4 * x - 4 * x ^ 2) / (1 - 3 * x - 4 * x ^ 2 + 4 * x ^ 3) ● a(1)=1, a(2)=7, a(3)=21, a(n)=3 * a(n - 1) + 4 * a(n - 2) - 4 * a(n - 3). - _ Harvey P. Dale _ , May 10 2015 ●
▶ [A164544] 1,7,21,91,329,1295,4893,18851,71953,275863,1055397,4041835,15471449,59235743,226771629,868193459,3323788321,12724930855,48716379957,186507275899,714029211497,2733609354287,10465423189053,40066111858115 ⋆ a(n) = 2 * a(n - 1) + 7 * a(n - 2) for n > 1; a(0) = 1, a(1) = 7. ● a(n) = 2 * a(n - 1) + 7 * a(n - 2) for n > 1; a(0) = 1, a(1) = 7. ● a(n) = ((2 + 3 * sqrt(2)) * (1 + 2 * sqrt(2)) ^ n + (2 - 3 * sqrt(2)) * (1 - 2 * sqrt(2)) ^ n) / 4. ● a(n) / a(n - 1) ~ 1 + 2 * sqrt(2). - _ Kyle MacLean Smith _ , Dec 15 2019 ● a(n) = (i * sqrt(7)) ^ (n - 1) * (i * sqrt(7) * ChebyshevU(n, - i / sqrt(7)) + 5 * ChebyshevU(n - 1, - i / sqrt(7))). ● a(n) = Sum _{ j=0..floor(n / 2) } binomial(n - k, k) * ((7 * n - 12 * k) / (n - k)) * 7 ^ k * 2 ^ (n - 2 * k - 1). (End) ●
▶ [A001693] 1,7,21,112,588,3360,19544,117648,720300,4483696,28245840,179756976,1153430600,7453000800,48444446376,316504099520,2077057800300,13684147881600,90467419857752,599941851861744 ⋆ Number of degree - n irreducible polynomials over GF(7); dimensions of free Lie algebras. ● a(n) = (1 / n) * Sum _{ d|n } mu(d) * 7 ^ (n / d), for n>0. ●
▶ [A111878] 1,7,21,231,3003,3003,51051,969969,969969,22309287,111546435,334639305,9704539845,300840735195,300840735195,300840735195,11131107202215,11131107202215,456375395290815,19624141997505045,19624141997505045 ⋆ a(n) = A111877(n + 1) / 5. ● a(n) = (1 / 15) * denominator(digamma(n + 7 / 2) / 2 + log(2) + euler _ gamma / 2). ● a(n) = denominator(f(n + 2) / 15), where f(n) = Sum _{ j=0..n } 1 / (2 * j + 1). ● a(n) = (1 / 15) * denominator of (2 * H _{ 2 * n + 6) - H _{ n + 3 }), where H _{ n } is the n - th Harmonic number. - _ G. C. Greubel _ , Jul 24 2023 ●
▶ [A297712] 7,22,29,39,60,94,151,241,400,671,1135,1924,3277,5598,9575,16389,28067,48089,82411,141246,242102,414999,711394,1219497,2090527 ⋆ Number of irredundant sets in the n - dipyramidal graph. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - a(n - 3) + 2 * a(n - 4) - 2 * a(n - 5) + 2 * a(n - 7) - a(n - 8) for n > 11. ●
▶ [A063130] 7,22,38,54,70,86,102,118,134,150,166,182,198,214,230,246,262,278,294,310,326,342,358,374,390 ⋆ Dimension of the space of weight 2n cusp forms for Gamma _ 0(62). ● a(n) = 2 * (8 * n - 5) for n>1. ● a(n) = 2 * a(n - 1) - a(n - 2) for n>3. ●
▶ [A033954] 0,7,22,45,76,115,162,217,280,351,430,517,612,715,826,945,1072,1207,1350,1501,1660,1827,2002,2185,2376 ⋆ Second 10 - gonal (or decagonal) numbers: n * (4 * n + 3). ● a(n) = a(n - 1) + 8 * n - 1 with a(0)=0. - _ Vincenzo Librandi _ , Jul 20 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) with a(0) = 0, a(1) = 7, a(2) = 22. - _ Philippe Deléham _ , Mar 26 2013 ●
▶ [A038764] 1,7,22,46,79,121,172,232,301,379,466,562,667,781,904,1036,1177,1327,1486,1654,1831,2017,2212,2416,2629 ⋆ a(n) = (9 * n ^ 2 + 3 * n + 2) / 2. ● a(n) = binomial(n,0) + 6 * binomial(n,1) + 9 * binomial(n,2). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>2. - _ Colin Barker _ , Jan 22 2018 ● a(n) = a(n - 1) + 3 * (3 * n - 1) for n>0, a(0)=1. - _ Vincenzo Librandi _ , Nov 17 2010 ● a(n) = hypergeometric([- n, - 2], [1], 3). - _ Peter Luschny _ , Nov 19 2014 ●
▶ [A299283] 1,7,22,48,84,130,186,253,330,417,514,622,740,868,1006,1155,1314,1483,1662,1852,2052,2262,2482,2713,2954 ⋆ Coordination sequence for "svh" 3D uniform tiling. ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 4) - 2 * a(n - 5) + a(n - 6) for n>6. - _ Colin Barker _ , Feb 11 2018 ●
▶ [A223833] 7,22,48,89,149,232,342,483,659,874,1132,1437,1793,2204,2674,3207,3807,4478,5224,6049,6957,7952,9038,10219,11499 ⋆ Number of n X 3 0..1 arrays with rows and antidiagonals unimodal and columns nondecreasing. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>4. ●
▶ [A129109] 7,22,49,88,139,202,277,364,463,574,697,832,979,1138,1309,1492,1687,1894,2113,2344,2587,2842,3109,3388,3679 ⋆ Sums of three consecutive hexagonal numbers. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●
▶ [A224141] 7,22,49,92,155,242,357,504,687,910,1177,1492,1859,2282,2765,3312,3927,4614,5377,6220,7147,8162,9269,10472,11775 ⋆ Number of n X 3 0..1 arrays with rows and antidiagonals unimodal and columns nondecreasing. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>4. ●
▶ [A002412] 0,1,7,22,50,95,161,252,372,525,715,946,1222,1547,1925,2360,2856,3417,4047,4750,5530,6391,7337,8372,9500 ⋆ Hexagonal pyramidal numbers, or grengrocer's numbers. ● a(n) = n(n + 1)(4n - 1) / 6. ● a(n) = n ^ 3 - Sum _{ i=1..n - 1 } i ^ 2. - Klaus Strassburger (strass(AT)ddfi.uni - duesseldorf.de) ● a(n) = Sum _{ i=0..n - 1 } (n - i) * (n + i). - _ Jon Perry _ , Sep 26 2004 ● a(n) = Sum _{ i=0..n } (2i ^ 2 + 3i + 1), for n >= 0 (Omits the leading 0). - _ William A. Tedeschi _ , Aug 25 2010 ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4), with a(0)=0, a(1)=1, a(2)=7, a(3)=22. - _ Harvey P. Dale _ , Jul 16 2011 ● a(n) = sum a * b, where the summing is over all unordered partitions 2 * n = a + b. - _ Vladimir Shevelev _ , May 11 2012 ●
▶ [A211792] 1,7,22,51,97,164,258,382,541,741,982,1271,1611,2008,2466,2986,3577,4241,4982,5807,6715,7714,8808,10000,11297 ⋆ a(n) = Sum _{ y=1..n } Sum _{ x=1..n } floor((x ^ k + y ^ k) ^ (1 / k)) with k = 3. ● a(n) = Sum _{ y=1..n } Sum _{ x=1..n } floor((x ^ 3 + y ^ 3) ^ (1 / 3)). ● a(n) = a(n - 1) + floor ((2 * n ^ 3) ^ (1 / 3)) + 2 * Sum _{ i = 1..n - 1 } floor((n ^ 3 + i ^ 3) ^ (1 / 3)) for n >= 2 and a(1) = 1. - _ David A. Corneth _ , Sep 12 2022 ●
▶ [A184629] 1,7,22,51,100,173,274,409,583,800,1064,1382,1757,2195,2700,3276,3930,4665,5487,6400,7408,8518,9733,11059,12500 ⋆ Floor(1 /{ (5 + n ^ 4) ^ (1 / 4) }), where {} =fractional part. ● a(n)=floor(1 /{ (5 + n ^ 4) ^ (1 / 4) }), where {} =fractional part. ●
▶ [A041215] 1,1,7,22,51,532,1115,3877,24377,28254,589457,617711,4295723,13504880,31305483,326559710,684424903,2379834419,14963431417,17343265836,361828748137,379172013973,2636860831975,8289754509898,19216369851771 ⋆ Denominators of continued fraction convergents to sqrt(118). ● a(n) = 613834 * a(n - 10) - a(n - 20). - _ Vincenzo Librandi _ , Dec 13 2013 ●
▶ [A011926] 0,0,0,0,1,7,22,52,105,189,315,495,742,1072,1501,2047,2730,3570,4590,5814,7267,8977,10972,13282,15939 ⋆ a(n) = floor(n * (n - 1) * (n - 2) * (n - 3) / 16). ● a(n) = + 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 6 * a(n - 4) + 6 * a(n - 5) - 10 * a(n - 6) + 10 * a(n - 7) - 5 * a(n - 8) + a(n - 9). (End) ●
▶ [A101120] 7,22,52,112,239,494,1004,2024,4071,8166,16356,32736,65503,131038,262108,524248,1048535,2097110,4194260,8388560,16777167,33554382,67108812,134217672,268435399 ⋆ Records in A101119, which forms the nonzero differences of A006519 and A003484. ● a(n) = 2 ^ (n + 3) - 2 ^ ((n - 1)(mod 4)) - 8 * floor((n + 3) / 4). ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) + a(n - 4) - 3 * a(n - 5) + 2 * a(n - 6) for n > 6. ●
▶ [A188377] 7,22,53,106,187,302,457,658,911,1222,1597,2042,2563,3166,3857,4642,5527,6518,7621,8842,10187,11662,13273,15026,16927 ⋆ a(n) = n ^ 3 - 4n ^ 2 + 6n - 2. ● a(n + 1) = (n + 1) ^ 3 - 4 * (n + 1) ^ 2 + 6 * (n + 1) - 2 ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ●

► [A213585] 1,7,22,54,116,232,443,821,1490,2664,4710,8256,14373,24883,42878,73594,125880,214664,365087,619425,1048666,1771852,2988362,5031744,8459401 ⋆ Principal diagonal of the convolution array A213584. • a(n) = 4 * a(n - 1) - 4 * a(n - 2) - 2 * a(n - 3) + 4 * a(n - 4) + a(n - 5). • a(n) = Fibonacci(n + 4) + n * Fibonacci(n + 3) - (4 * n + 3). - _ G. C. Greubel _ , Jul 08 2019 •

► [A308579] 1,7,22,55,124,265,550,1123,2272,4573,9178,18391,36820,73681,147406,294859,589768,1179589,2359234,4718527,9437116,18874297,37748662,75497395,150994864 ⋆ a(n) = (9 * 2 ^ n - 6 * n - 10) / 2. • a(n) = (9 * 2 ^ n - 6 * n - 10) / 2. • a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 2 * a(n - 3). •

► [A085287] 1,7,22,70,211,637,1912,5740,17221,51667,155002,465010,1395031,4185097,12555292,37665880,112997641,338992927,1016978782,3050936350,9152809051,27458427157,82375281472,247125844420,741377533261 ⋆ Expansion of (1 + 4x) / ((1 - x ^ 2)(1 - 3x)). • a(n) = (- 10 - 3(- 1) ^ n + 21 * 3 ^ n) / 8. • a(n) = 2 * a(n - 1) + 3 * a(n - 2) + 5, a(0)=0, a(1)=1. [_ Zerinvary Lajos _ , Dec 14 2008] •

► [A286186] 7,22,73,268,1039,4114,16405,65560,262171,1048606,4194337,16777252,67108903,268435498,1073741869,4294967344,17179869235,68719476790,274877907001,1099511627836,4398046511167,17592186044482,70368744177733,281474976710728,1125899906842699 ⋆ Number of connected induced (non - null) subgraphs of the friendship graph with 2n + 1 nodes. • a(n) = 4 ^ n + 3 * n. • a(n) = 6 * a(n - 1) - 9 * a(n - 2) + 4 * a(n - 3) for n>3. (End) •

► [A041913] 1,1,7,22,95,117,212,1177,1389,3955,13254,17209,30463,47672,781355,125807,1713626,1839433,38502286,40341719,562944633,603286352,1166230985,1769517337,2935748322 ⋆ Denominators of continued fraction convergents to sqrt(478). • a(n) = 3234639155983486 * a(n - 36) - a(n - 72) for n>71. [_ Bruno Berselli _ , Dec 27 2013] •

► [A117110] 0,1,7,22,100,376,1552,6112,24640,98176,393472,1572352,6292480,25163776,100667392,402644992,1610629120,6442418176,25769869312,103079084032,412317122560,1649266917376,6597070815232,26388276969472 ⋆ The (1,1) - entry of the vector v[n]=Mv[n - 1], where M is the 3 x 3 matrix [[0, - 1 / r,r],[- 1 / r, - 2 / r,1],[r,1,2 + 2 / r]], r being the golden ratio and v[0] is the column matrix [0,1,1]. • a(n)= - (1 / 2) * (- 2) ^ (n - 1) + (3 / 2) * 4 ^ (n - 1) - 5 / 8 * [C(2 * n,n) mod 2], with n>=0 [From _ Paolo P. Lava _ , Oct 07 2008] •

► [A183126] 0,1,7,23,39,79,95,135,175,287,303,343,383,495,535,647,759,1087,1103,1143,1183,1295,1335,1447,1559 ⋆ Toothpick sequence with toothpicks connected by their endpoints. • a(1 + 2 ^ n) = 2 ^ (n + 2) + 4 ^ (n + 1) - 1, n >= 0. •

► [A073577] 7,23,47,79,119,167,223,287,359,439,527,623,727,839,959,1087,1223,1367,1519,1679,1847,2023,2207,2399,2599 ⋆ a(n) = 4 * n ^ 2 + 4 * n - 1. • a(n) = FrobeniusNumber(2 * n + 1, 2 * n + 3). - _ Darrell Minor _ , Jul 29 2008 • a(n) = 8 * n + a(n - 1) (with a(1)=7). - _ Vincenzo Librandi _ , Aug 08 2010 • a(n) = (2 * n + 1) + (2 * n - 1) + (2 * n + 1) * (2 * n - 1). - _ J. M. Bergot _ , Apr 17 2016 • a(n) = (2 * n + 1) ^ 2 - 2. - _ Zhandos Mambetaliyev _ , Jun 13 2017 •

► [A062725] 0,7,23,48,82,125,177,238,308,387,475,572,678,793,917,1050,1192,1343,1503,1672,1850,2037,2233,2438,2652 ⋆ Write 0,1,2,3,4,... in a triangular spiral, then a(n) is the sequence found by reading the terms along the line from 0 in the direction 0,7,... • a(n) = n * (9 * n + 5) / 2. • a(n) = 9 * n + a(n - 1) - 2 with a(0)=0. - _ Vincenzo Librandi _ , Aug 07 2010 • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). •

► [A299255] 1,7,23,50,87,135,194,263,343,434,535,647,770,903,1047,1202,1367,1543,1730,1927,2135,2354,2583,2823,3074 ⋆ Coordination sequence for 3D uniform tiling formed by stacking parallel layers of the 3.3.4.3.4 2D tiling (cf. A219529). • a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) - 2 * a(n - 4) + a(n - 5) for n>5. - _ Colin Barker _ , Feb 09 2018 •

► [A211791] 1,7,23,54,103,175,276,409,579,791,1050,1360,1724,2149,2640,3198,3832,4543,5337,6217,7192,8265,9437,10716,12103 ⋆ a(n) = Sum _{ y=1..n } Sum _{ x=1..n } floor((x ^ k + y ^ k) ^ (1 / k)) with k = 2. • a(n) = Sum _{ y=1..n } Sum _{ x=1..n } floor(sqrt(x ^ 2 + y ^ 2)). •

► [A004068] 0,1,7,23,54,105,181,287,428,609,835,1111,1442,1833,2289,2815,3416,4097,4863,5719,6670,7721,8877,10143,11524 ⋆ Number of atoms in a decahedron with n shells. • a(n) = 5 * binomial(n + 1, 3) + binomial(n, 1). • a(n) = 5 * n ^ 3 / 6 + n / 6. •

► [A261893] 1,7,23,55,109,191,307,463,665,919,1231,1607,2053,2575,3179,3871,4657,5543,6535,7639,8861,10207,11683,13295,15049 ⋆ a(n) = (n + 1) ^ 3 - n ^ 2. • a(n) = n ^ 3 + 2 * n ^ 2 + 3 * n + 1. •

► [A022815] 1,7,23,55,110,196,322,498,735,1045,1441,1937,2548,3290,4180,5236,6477,7923,9595,11515,13706,16192,18998,22150,25675 ⋆ Number of terms in 5th derivative of a function composed with itself n times. • a(n) = n * (n + 1) * (n ^ 2 + 13 * n - 2) / 24. - _ John W. Layman _ , Apr 27 2000 •

► [A172252] 1,7,23,55,119,247,503,1015,2039,4087,8183,16375,32759,65527,131063,262135,524279,1048567,2097143,4194295,8388599,16777207,33554423,67108855,134217719 ⋆ a(n) = 4 * 2 ^ n - 9. • a(n) = 2 * a(n - 1) + 9, a(1)= - 1. - _ Vincenzo Librandi _ , Mar 20 2011 •

► [A027116] 7,23,56,120,241,467,886,1660,3087,5715,10552,19452,35825,65943,121342,223240,410663,755391,1389448,2555664,4700673,8645963,15902486,29249316,53797967 ⋆ a(n) = A027113(n, n + 3). • a(n) = 3 * a(n - 1) - 2 * a(n - 2) - a(n - 4) + a(n - 5) for n>7. •

► [A058195] 1,7,23,57,118,218,370,590,895,1305,1841,2527,3388,4452,5748,7308,9165,11355,13915,16885,20306,24222,28678,33722,39403 ⋆ Areas of a sequence of right - angled figures described below. • a(n) = [(2n ^ 4 + 10n ^ 3 + 13n ^ 2 + 2n) / 24], where [] denotes floor. (For even n there is no need for truncation. For odd n the [] removes 1 / 8.) A formula without [] is (4n ^ 4 + 20n ^ 3 + 26n ^ 2 + 4n + 3 + 3(- 1) ^ (n + 1)) / 48. • a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 5 * a(n - 4) - 4 * a(n - 5) + a(n - 6) for n>6. • a(n) = (2 * n ^ 4 + 10 * n ^ 3 + 13 * n ^ 2 + 2 * n) / 24 for n even. • a(n) = (2 * n ^ 4 + 10 * n ^ 3 + 13 * n ^ 2 + 2 * n - 3) / 24 for n odd. •

► [A213770] 1,7,23,58,126,250,467,837,1457,2484,4172,6932,11429,18739,30603,49838,81002,131470,213175,345425,559461,905832,1466328,2373288,3840841 ⋆ Antidiagonal sums of the convolution array A213768. • a(n) = 4 * a(n - 1) - 5 * a(n - 2) + a(n - 3) + 2 * a(n - 4) - a(n - 5). • a(n) = 2 * Fibonacci(n + 6) + Lucas(n + 4) - n * (2 * n + 11) - 23. - _ Ehren Metcalfe _ , Jul 08 2019 •

► [A126284] 1,7,23,59,135,291,607,1243,2519,5075,10191,20427,40903,81859,163775,327611,655287,1310643,2621359,5242795,10485671,20971427,41942943,83885979,167772055 ⋆ a(n) = 5 * 2 ^ n - 4 * n - 5. • a(1) = 1; a(2) = 7; a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 2 * a(n - 3), n > 2. •

► [A077037] 7,23,61,113,211,337,509,727,997,1327,1723,2179,2741,3373,4093,4909,5827,6857,7993,9257,10639,12163,13807,15619,17573 ⋆ Largest prime < n ^ 3. • a(n) > (n - 1) ^ 3 for all large n, by Ingham's theorem (see A060199). - _ Jonathan Sondow _ , Mar 27 2014 •

► [A333187] 1,7,23,62,157,380,889,2037,4589,10205,22465,49038,106285,228985,490791,1047210,2225653,4713736,9952272,20954040,44006898,92211129,192816394,402420140,838413359 ⋆ a(n) = floor(2 ^ n cot(1 / n)). • a(n) = floor(2 ^ n cot(1 / n)). •

► [A343519] 1,7,23,64,130,287,468,864,1335,2156,3013,4790,6200,9072,11972,16440,20365,28209,33667,45014,54192,68853,80752,104964,119279 ⋆ a(n) = Sum _{ 1 <= x _ 1 <= x _ 2 <= x _ 3 <= x _ 4 <= x _ 5 <= n } gcd(x _ 1, x _ 2, x _ 3 , x _ 4, x _ 5, n). • a(n) = Sum _{ d|n } phi(n / d) * binomial(d + 4, 5). •

► [A365439] 1,7,23,64,135,282,493,864,1375,2166,3168,4715,6536,9132,12278,16525,21371,27998,35314,44995,55847,69504,84455,103882,124428 ⋆ a(n) = Sum _{ k=1..n } binomial(floor(n / k) + 4,5). • a(n) = Sum _{ k=1..n } binomial(k + 3,4) * floor(n / k). •

► [A266801] 7,23,65,653,3935,28373,190793,1317335,9003953,61779965,423273503,2901611813,19886759705,136308977303,934267517345,6403586065133,43890776239583,300832001287925,2061932830446953,14132698865151575,96866956468010513,663936003630421853 ⋆ Coefficient of x ^ 2 in the minimal polynomial of the continued fraction [1 ^ n,sqrt(3),1,1,...], where 1 ^ n means n ones. • a(n) = 5 * a(n - 1) + 15 * a(n - 2) - 15 * a(n - 3) - 5 * a(n - 4) + a(n - 5) . •

► [A198644] 7,23,71,215,647,1943,5831,17495,52487,157463,472391,1417175,4251527,12754583,38263751,114791255,344373767,1033121303,3099363911,9298091735,27894275207,83682825623,251048476871,753145430615,2259436291847 ⋆ 8 * 3 ^ n - 1. • a(n) = 3 * a(n - 1) + 2, a(0)=7. •

► [A242496] 0,1,7,23,72,204,564,1521,4059,10747,28336,74504,195576,512865,1344063,3521007,9221688,24148468,63230860,165555665,433454835,1134839091,2971111392,7778574288,20364739632 ⋆ a(n)=sum _{ j=0..n } sum _{ i=0..j } F(i) * L(j), where F(n)=A000045(n) and L(n)=A000032(n). • a(n) = L(n) * F(n + 3) - L(n + 2) + (1 - 3 * (- 1) ^ n) / 2. - _ Colin Barker _ , May 18 2014 •

► [A240526] 7,23,76,284,1072,4208,16576,65984,262912,1050368,4197376,16784384,67121152,268464128,1073790976,4295081984,17180065792,68719935488,274878693376,1099513462784,4398049656832,17592193384448,70368756760576,281475006070784,1125899957174272 ⋆ 2 ^ (n - 2) * (2 ^ (n + 4) - (- 1) ^ n + 13). • a(n) = 4 * a(n - 1) + 4 * a(n - 2) - 16 * a(n - 3) for n>2. •

► [A093069] 7,23,79,287,1087,4223,16639,66047,263167,1050623,4198399,16785407,67125247,268468223,1073807359,4295098367,17180131327,68720001023,274878955519,1099513724927,4398050705407,17592194433023,70368760954879,281475010265087,1125899973951487 ⋆ a(n) = (2 ^ n + 1) ^ 2 - 2. • a(n) = 4 ^ n + 2 ^ (n + 1) - 1. •

► [A217233] 1,1,7,23,89,329,1231,4591,17137,63953,238679,890759,3324361,12406681,46302367,172802783,644908769,2406832289,8982420391,33522849271,125108976697,466913057513,1742543253359,6503259955919,24270496570321 ⋆ Expansion of (1 - 2 * x + x ^ 2) / (1 - 3 * x - 3 * x ^ 2 + x ^ 3). • a(n) = (4 * (- 2) ^ n + (1 - sqrt(3)) ^ (2 * n + 1) + (1 + sqrt(3)) ^ (2 * n + 1)) / (6 * 2 ^ n). • a(n) = - a(- n - 1) = 3 * a(n - 1) + 3 * a(n - 2) - a(n - 3) = 4 * a(n - 1) - a(n - 2) + 4 * (- 1) ^ n. •

► [A267805] 1,7,23,103,375,1639,6007,26215,96119,419431,1537911,6710887,24606583,107374183,393705335,1717986919,6299285367,27487790695,100788565879,439804651111,1612617054071,7036874417767,25801872865143,112589990684263,412829965842295 ⋆ Decimal representation of the n - th iteration of the "Rule 214" elementary cellular automaton starting with a single ON (black) cell. • a(n) = 17 * a(n - 2) - 16 * a(n - 4) for n>3. •

► [A267926] 1,7,23,119,375,1911,6007,30583,96119,489335,1537911,7829367,24606583,125269879,393705335,2004318071,6299285367,32069089143,100788565879,513105426295,1612617054071,8209686820727,25801872865143,131354989131639,412829965842295 ⋆ Decimal representation of the n - th iteration of the "Rule 246" elementary cellular automaton starting with a single ON (black) cell. • a(n) = a(n - 1) + 16 * a(n - 2) - 16 * a(n - 3) for n>2. •

► [A154612] 7,24,41,58,75,92,109,126,143,160,177,194,211,228,245,262,279,296,313,330,347,364,381,398,415 ⋆ 17n + 7. • a(n) = 2 * a(n - 1) - a(n - 2). - _ Vincenzo Librandi _ , Feb 26 2012 •

► [A063136] 7,24,42,60,78,96,114,132,150,168,186,204,222,240,258,276,294,312,330,348,366,384,402,420,438 ⋆ Dimension of the space of weight 2n cusp forms for Gamma _ 0(68). • a(n) = 2 * a(n - 1) - a(n - 2) for n>3. • a(n) = 6 * (3 * n - 2) for n>1. •

► [A168668] 0,7,24,51,88,135,192,259,336,423,520,627,744,871,1008,1155,1312,1479,1656,1843,2040,2247,2464,2691,2928 ⋆ a(n) = n * (2 + 5 * n). • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). •

► [A212511] 0,0,0,7,24,57,135,259,432,732,1125,1638,2376,3302,4410,5915,7680,9765,12393,15447,18900,23170,27951,33348,39744 ⋆ Number of (w,x,y,z) with all terms in { 1,...,n } and w<2x and y>=3z. • a(n) = 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4) - 4 * a(n - 5) + 2 * a(n - 7) - 2 * a(n - 9) + 4 * a(n - 11) + a(n - 12) - 2 * a(n - 13) - 2 * a(n - 14) + a(n - 16). •

► [A081436] 1,7,24,58,115,201,322,484,693,955,1276,1662,2119,2653,3270,3976,4777,5679,6688,7810,9051,10417,11914,13548,15325 ⋆ Fifth subdiagonal in array of n - gonal numbers A081422. • a(n) = (n + 1) * (2 * n ^ 2 + 3 * n + 2) / 2. • a(n) = (n + 1) * T(n + 1) + n * T(n), where T( ) are triangular numbers. Binomial transform of [1, 6, 11, 6, 0, 0, 0, ...]. - _ Gary W. Adamson _ , Dec 28 2007 • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Wesley Ivan Hurt _ , Apr 14 2021 •

▶ [A008779] 1,7,24,59,120,216,357,554,819,1165,1606,2157,2834,3654,4635,5796,7157,8739,10564,12655,15036,17732,20769,24174,27975 ★ Number of n - dimensional partitions of 5. ● a(n) = (n + 1) * (n ^ 3 + 21 * n ^ 2 + 38 * n + 24) / 24. - _ M. F. Hasler _ , Sep 15 2009 ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Vincenzo Librandi _ , May 21 2015 ●

▶ [A014205] 0,1,7,24,60,125,231,392,624,945,1375,1936,2652,3549,4655,6000,7616,9537,11799,14440,17500,21021,25047,29624,34800 ★ (1 / 12) * (n + 5) * (n + 1) * n ^ 2. ● a(n) = 2 * C(n + 3,4) - C(n + 1,2). - _ Zerinvary Lajos _ , May 02 2007 ● a(0)=0, a(1)=1, a(2)=7, a(3)=24, a(4)=60, a(n)=5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Harvey P. Dale _ , Aug 10 2014 ●

▶ [A211381] 0,0,0,0,7,24,63,130,242,408,650,980,1425,2000,2737,3654,4788,6160,7812,9768,12075,14760,17875,21450,25542 ★ Number of pairs of intersecting diagonals in the exterior of a regular n - gon. ● a(n) = 1 / 24 * n * (n - 4) * (n - 6) * (2 * n - 7) for n even. ● a(n) = 1 / 24 * n * (n - 3) * (n - 5) * (2 * n - 11) for n odd. ●

▶ [A339254] 1,7,24,70,193,510,1304,3248,7920,18976,44800,104448,240896,550400,1247232,2805760,6270976,13934592,30801920,67764224,148439040,323878912,704118784,1525678080,3295674368 ★ a(n) = 6 * a(n - 1) - 12 * a(n - 2) + 8 * a(n - 3) for n >= 5, a(0) = 1, a(1) = 7, a(2) = 24, a(3) = 70, a(4) = 193. ● a(n) = [x ^ n] (5 * x ^ 4 + 2 * x ^ 3 - 6 * x ^ 2 + x + 1) / (1 - 2 * x) ^ 3. ● a(n) = n! [x ^ n] (exp(2 * x) * (18 * x ^ 2 + 52 * x + 35) - 10 * x - 19) / 16. ● a(n) = 2 ^ (n - 5) * (70 + 43 * n + 9 * n ^ 2) for n >= 2. - _ Stefano Spezia _ , Nov 29 2020 ●

▶ [A212504] 0,0,0,7,24,76,162,333,576,976,1500,2275,3240,4572,6174,8281,10752,13888,17496,21951,27000,33100,39930,48037,57024 ★ Number of (w,x,y,z) with all terms in { 1,...,n } and w<2x and y>2z. ● a(n) = 2a(n - 1) + 2a(n - 2) - 6a(n - 3) + 6a(n - 5) - 2a(n - 6) - 2a(n - 7) + a(n - 8). ●

▶ [A283457] 7,24,101,477,2411,12729,69251,385017,2175491,12444489,71865251,418096857,2446626371,14383667049,84875140451,502327573497,2980183394051,17715498038409,105478120962851,628846706246937,3753178627502531,22420395331846569 ★ Row n=5 of A144048. ● a(n) = 1 + (45 * 2 ^ (2 * n + 2) + 45 * 2 ^ (n + 2) + 40 * 3 ^ (n + 1) + 5 * 2 ^ (n + 3) * 3 ^ (n + 1) + 24 * 5 ^ (n + 1)) / 120. ● a(n) = 1 + 3 * 2 ^ (n - 1) + 3 * 2 ^ (2 * n - 1) + 3 ^ n + 5 ^ n + 6 ^ n. ● a(n) = 21 * a(n - 1) - 175 * a(n - 2) + 735 * a(n - 3) - 1624 * a(n - 4) + 1764 * a(n - 5) - 720 * a(n - 6) for n>5. (End) ●

▶ [A007750] 0,1,7,24,120,391,1921,6240,30624,99457,488071,1585080,7778520,25261831,123968257,402604224,1975713600,6416405761,31487449351,102259887960,501823476024,1629741801607,7997688167041,25973608937760 ★ Nonnegative integers n such that n ^ 2 * (n + 1) * (2 * n + 1) ^ 2 * (7 * n + 1) / 36 is a square. ● a(n) = 16 * a(n - 2) - a(n - 4) + 8. (End) ● a(2 * n) = (4 * ChebyshevU(n,8) - 11 * ChebyshevU(n - 1,8) - 4)) / 7. ● a(2 * n + 1) = (11 * ChebyshevU(n,8) - 4 * ChebyshevU(n - 1,8) - 4)) / 7. (End) ●

▶ [A140716] 7,25,31,49,55,73,79,97,103,121,127,145,151,169,175,193,199,217,223,241,247,265,271,289,295 ★ Blocky integers, i.e., integers m > 1 such that there is a run of m consecutive integer squares the average of which is a square. ● a(n) = 8 * (s - 1) + 1 for n odd, a(n) = 8 * (s - 1) + 7 for n even. - _ Artur Jasinski _ , Oct 30 2008 ● a(n) = a(n - 2) + 24 = 12n - 2 + 3 * (- 1) ^ n. (End) ● a(n) = a(n - 1) + a(n - 2) - a(n - 3). - _ Colin Barker _ , May 12 2012 ●

▶ [A075927] 7,25,42,75,385,642,1155,2184,4233,8330,16523,98305,163842,294915,557064,1081353,2129930,4227083,8421504,16810113,33587330,67141763,134250632,268468361,536903818 ★ Basis for code in A075926. ● a(n) = b(2 ^ n), where b is the Hamming code d=3. ●

▶ [A119617] 1,7,25,43,79,109,163,205,277,331,421,487,595,673,799,889,1033,1135,1297,1411,1591,1717,1915,2053,2269 ★ Integers of the form c(n) / b(n) where c(n + 1)=c(n) + (n + 1) ^ 4 with c(0)=1 and b(n + 1)=b(n) + (n + 1) ^ 2 with b(0)=1. ● a(n) = (30 * n * (n - 1) - 3 * (2 * n - 1) * (- 1) ^ n + 5) / 8. (End) ●

▶ [A179436] 7,25,52,88,133,187,250,322,403,493,592,700,817,943,1078,1222,1375,1537,1708,1888,2077,2275,2482,2698,2923 ★ a(n) = (3 * n + 7) * (3 * n + 2) / 2. ● a(n) = a(n - 1) + 9 * (n + 1) = (14 + 27 * n + 9 * n ^ 2) / 2. ● a(n) = 2 * a(n - 1) - a(n - 2) + 9. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A227776] 7,25,55,97,151,217,295,385,487,601,727,865,1015,1177,1351,1537,1735,1945,2167,2401,2647,2905,3175,3457,3751 ★ a(n) = 6 * n ^ 2 + 1. ● a(n) = 6 * n ^ 2 + 1 for n >= 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A213390] 1,7,25,55,109,181,289,421,601,811,1081,1387,1765,2185,2689,3241,3889,4591,5401,6271,7261,8317,9505,10765,12169 ★ Number of (w,x,y) with all terms in { 0,...,n } and max(w,x,y) >= 2 * min(w,x,y). ● a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + a(n - 4) + 2 * a(n - 5) - a(n - 6). ● a(n) = (6 * n ^ 3 + 24 * n ^ 2 + 21 * n + 8 + 3 * n * (- 1) ^ n) / 8. - _ Luce ETIENNE _ , Jul 17 2016 ●

▶ [A071778] 1,7,25,55,115,181,307,439,637,841,1171,1447,1915,2329,2881,3433,4249,4879,5905,6745,7861,8911,10429,11557,13297 ★ Number of ordered triples (a, b, c) with gcd(a, b, c) = 1 and 1 <= { a, b, c } <= n. ● a(n) = Sum _{ k=1..n } mu(k) * floor(n / k) ^ 3. - _ Benoit Cloitre _ , May 11 2003 ● a(n) = n ^ 3 - Sum _{ j=2..n } a(floor(n / j)). - _ Vladeta Jovovic _ , Nov 30 2004 ●

▶ [A365444] 7,25,56,92,148,202,292,364,462,552,679,823,963,1089,1269,1413,1630,1792,2040,2220,2444,2696,2966,3182,3448 ★ Partial sums of A365414. ● a(n) = (5 * Pi ^ 2 / 9) * n ^ 2 + O(n * log(n)). - _ Amiram Eldar _ , Sep 08 2023 ●

▶ [A213481] 1,7,25,59,117,202,323,482,689,945,1261,1637,2085,2604,3207,3892,4673,5547,6529,7615,8821,10142,11595,13174,14897 ★ Number of triples (w,x,y) with all terms in { 0,...,n } and |w - x| + |x - y| <= w + x + y. ● a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + a(n - 4) + 2 * a(n - 5) - a(n - 6). ● a(n) = (23 * n ^ 3 + 66 * n ^ 2 + 64 * n + 24 - (3 * n + 6) * (n mod 2)) / 24. (End) ●

▶ [A162264] 7,25,60,118,205,327,490,700,963,1285,1672,2130,2665,3283,3990,4792,5695,6705,7828,9070,10437,11935,13570,15348,17275 ★ a(n) = (2 * n ^ 3 + 5 * n ^ 2 + 7 * n) / 2. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). (End) ●

▶ [A213392] 1,7,25,61,115,199,319,469,667,919,1213,1573,2005,2491,3061,3721,4447,5275,6211,7225,8359,9619,10969,12457,14089 ★ Number of (w,x,y) with all terms in { 0,...,n } and 2 * max(w,x,y) >= 3 * min(w,x,y). ● a(n) = 2 * a(n - 1) - a(n - 2) + 2 * a(n - 3) - 4 * a(n - 4) + 2 * a(n - 5) - a(n - 6) + 2 * a(n - 7) - a(n - 8). ● a(n) = (8 * n ^ 3 + 27 * n ^ 2 + 21 * n + 6 * n * (((n + 1) mod 3) mod 2) + 7 + 2 * ((2 * n + 1) mod 3)) / 9. (End) ● a(n) = (8 * n ^ 3 + 27 * n ^ 2 + 27 * n + 9) / 9 if n == 0 (mod 3); ●

▶ [A061600] 1,1,7,25,61,121,211,337,505,721,991,1321,1717,2185,2731,3361,4081,4897,5815,6841,7981,9241,10627,12145,13801 ★ a(n) = n ^ 3 - n + 1. ● a(n) = 1 + Sum _{ k=1..n } 3 * (k - 1) * k. - _ Luce ETIENNE _ and _ Michel Marcus _ , Nov 01 2014 ●

▶ [A033814] 7,25,61,126,238,426,737,1247,2079,3432,5628,9188,14955,24293,39409,63874,103466,167534,271205,438955,710387,1149580,1860216,3010056,4870543 ★ Convolution of positive integers n with Lucas numbers L(k)(A000032) for k >= 4. ● a(n) = L(7) * (F(n + 1) - 1) + L(6) * F(n) - L(5) * n, F(n): Fibonacci (A000045) and L(n): Lucas (A000032). ● a(n) = Lucas(n + 7) - 11 * n - 29. - _ G. C. Greubel _ , Jun 01 2019 ●

▶ [A321165] 1,7,25,61,136,244,440,680,1022,1472,2198,2882,4065,5241,6681,8265,10866,13116,16726,19786,23566,27922,34270,38902,45502 ★ Sum of distinct products i * j with 1 <= i, j <= n ● a(p) = a(p - 1) + p ^ 2 * (p + 1) / 2 for prime p. - _ David A. Corneth _ , Jan 10 2019 ●

▶ [A372371] 1,1,1,7,25,61,187,666,2137,6676,22001,73217,239923,789517,2624182,8729527,29026553,96790606,323546416,1082566763,3626148425,12163438539,40847087821,137294721676,461890741843 ★ Coefficient of x ^ n in the expansion of ((1 + x + x ^ 3) ^ 2 / (1 + x)) ^ n. ● a(n) = Sum _{ k=0..floor(n / 3) } binomial(2 * n,k) * binomial(n - k,n - 3 * k). ●

▶ [A344560] 1,1,1,7,25,61,211,841,2857,9745,36421,134971,488731,1807807,6788965,25384087,95114377,359291737,1361265889,5162682775,19642369405,74960720065,286563664135,1097430871285,4211301910795 ★ a(n) = hypergeom([- n / 3, (1 - n) / 3, (2 - n) / 3], [1, 1], - 27). ● a(n) = [(x * y) ^ 0] (1 + x + y + 1 / (x * y)) ^ n. (End) ● a(n) = Sum _{ k=0..floor(n / 3) } n! / (k! ^ 3 * (n - 3 * k)!). - _ Andrew Howroyd _ , Jan 14 2023 ●

▶ [A118395] 1,1,1,7,25,61,481,2731,10417,91225,681121,3493711,33597961,303321877,1938378625,20282865331,211375647841,1607008257841,18157826367937,212200671085975,1860991143630841,22560913203079021,289933758771407521,2869267483843753147,37116733726117707025 ★ Expansion of e.g.f. exp(x + x ^ 3). ● a(n + 1) = a(n) + 3 * n * (n - 1) * a(n - 2). - _ Gheorghe Coserea _ , Aug 24 2015 ● a(n) = n! * Sum _{ k=0..floor(n / 3) } binomial(n - 2 * k,k) / (n - 2 * k)!. - _ Seiichi Manyama _ , Feb 25 2022 ●

▶ [A118396] 1,1,1,7,25,61,481,2731,10417,454105,4309921,23452111,592433161,6789801877,46254009985,893881991731,11548704851041,93501748795441,4828847934591937,83867376656907415,823025819684123641,3340921332917870142 1,6404572721676922946721 ★ Eigenvector of triangle A118394; E.g.f.: exp(Sum _{ n>=0 } x ^ (3 ^ n)). ● a(n) = Sum _{ k=0..[n / 3] } n! / k! / (n - 3 * k)! * a(k) for n>=0, with a(0)=1. ●

▶ [A330044] 1,1,1,7,25,61,841,5251,20497,423865,3780721,20292031,559501801,6487717237,44317795705,1527439916731,21798729916321,180816606476401,747834583231497 7,126737815733490295,1236785588298582841,5967719974187351646 1,1171057417377450325801 ★ Expansion of e.g.f. exp(x) / (1 - x ^ 3). ● a(0) = a(1) = a(2) = 1; a(n) = n * (n - 1) * (n - 2) * a(n - 3) + 1. ● a(n) = Sum _{ k=0..floor(n / 3) } n! / (n - 3 * k)!. ●

▶ [A185787] 1,7,25,62,125,221,357,540,777,1075,1441,1882,2405,3017,3725,4536,5457,6495,7657,8950,10381,11957,13685,15572,17625 ★ Sum of first k numbers in column k of the natural number array A000027; by antidiagonals. ● a(n)=n * (7 * n ^ 2 - 6 * n + 5) / 6. ●

▶ [A299273] 1,7,25,62,125,224,366,555,804,1121,1505,1973,2535,3183,3939,4816,5797,6910,8172,9555,11094,12811,14665,16699,18941 ★ Partial sums of A299272. ● a(n) = a(n - 1) + 3 * a(n - 3) - 3 * a(n - 4) - 3 * a(n - 6) + 3 * a(n - 7) + a(n - 9) - a(n - 10) for n>9. ●

▶ [A001845] 1,7,25,63,129,231,377,575,833,1159,1561,2047,2625,3303,4089,4991,6017,7175,8473,9919,11521,13287,15225,17343,19649 ★ Centered octahedral numbers (crystal ball sequence for cubic lattice). ● a(n) = (2 * n + 1) * (2 * n ^ 2 + 2 * n + 3) / 3. ● a(n) = a(n - 1) + 4 * n ^ 2 + 2, a(0)=1. - _ Vincenzo Librandi _ , Mar 27 2011 ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4), with a(0)=1, a(1)=7, a(2)=25, a(3)=63. - _ Harvey P. Dale _ , Jun 05 2013 ● a(n) = Sum _{ k=0..min(3,n) } 2 ^ k * binomial(3,k) * binomial(n,k). See Bump et al. - _ Tom Copeland _ , Sep 05 2014 ●

▶ [A299262] 1,7,25,65,137,249,411,631,919,1283,1733,2277,2925,3685,4567,5579,6731,8031,9489,11113,12913,14897,17075,19455,22047 ★ Partial sums of A299256. ● a(n) = (6 * n ^ 3 + 9 * n ^ 2 + 2 * n + 12) / 4 for n>0 and even. ● a(n) = (6 * n ^ 3 + 9 * n ^ 2 + 2 * n + 11) / 4 for n odd. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - 2 * a(n - 3) + 3 * a(n - 4) - a(n - 5) for n>5. ●

▶ [A001296] 0,1,7,25,65,140,266,462,750,1155,1705,2431,3367,4550,6020,7820,9996,12597,15675,19285,23485,28336,33902,40250,47450 ★ 4 - dimensional pyramidal numbers: a(n) = (3 * n + 1) * binomial(n + 2, 3) / 4. Also Stirling2(n + 2, n). ● a(n) = n * (1 + n) * (2 + n) * (1 + 3 * n) / 24. - _ T. D. Noe _ , Jan 21 2008 ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) + 3. - _ Kieren MacMillan _ , Sep 29 2008 ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Jaume Oliver Lafont _ , Nov 23 2008 ● a(n) = 1 * (1 + 2 + ... + n) + 2 * (2 + 3 + ... + n) + ... + n * n. For example, a(6) = 266 = 1(1 + 2 + 3 + 4 + 5 + 6) + 2 * (2 + 3 + 4 + 5 + 6) + 3 * (3 + 4 + 5 + 6) + 4 * (4 + 5 + 6) + 5 * (5 + 6) + 6 * (6). - _ J. M. Bergot _ , Apr 20 2017 ●

▶ [A247620] 1,7,25,67,157,343,721,1483,3013,6079,12217,24499,49069,98215,196513,393115,786325,1572751,3145609,6291331,12582781,25165687,50331505,100663147,201326437 ★ Start with a single hexagon; at n - th generation add a hexagon at each expandable vertex; a(n) is the sum of all label values at n - th generation. (See comment for construction rules.) ● a(n) = (- 11 + 3 * 2 ^ (2 + n) - 6 * n). ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 2 * a(n - 3). ●

▶ [A213569] 1,7,25,71,181,435,1009,2287,5101,11243,24553,53223,114661,245731,524257,1114079,2359261,4980699,10485721,22020055,46137301,96468947,201326545,419430351,872415181 ★ Principal diagonal of the convolution array A213568. ● a(n) = 6 * a(n - 1) - 13 * a(n - 2) + 12 * a(n - 3) - 4 * a(n - 4). ● a(n) = S

um _{ k=1..n } Sum _{ i=0..n } (n - i) * C(k,i). - _ Wesley Ivan Hurt _ , Sep 19 2017 ●

▶ [A299269] 1,7,25,73,151,277,459,699,1029,1419,1941,2517,3275,4073,5111,6167,7529,8879,10609,12289,14431,16477,19075,21523,24621 ⋆ Partial sums of A299268. ● a(n) = (20 * n ^ 3 + 33 * n ^ 2 - 2 * n + 12) / 12 for n even. ● a(n) = (20 * n ^ 3 + 27 * n ^ 2 + 28 * n + 9) / 12 for n odd. ● a(n) = a(n - 1) + 3 * a(n - 2) - 3 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) + a(n - 6) - a(n - 7) for n>6. ●

▶ [A048477] 1,7,25,73,193,481,1153,2689,6145,13825,30721,67585,147457,319489,688129,1474561,3145729,6684673,14155777,29884417,62914561,132120577,276824065,578813953,1207959553 ⋆ a(n) = T(5,n), array T given by A048472. ● a(n) = 6 * n * 2 ^ (n - 1) + 1. ● a(n) = 5 * a(n - 1) - 8 * a(n - 2) + 4 * a(n - 3) for n>2. - _ Colin Barker _ , Feb 18 2016 ●

▶ [A294837] 1,1,7,25,73,236,688,1994,5573,15272,40896,107526,277999,707209,1774067,4390665,10734216,25941541,62022609,146793160,344129900,799517074,1841734224,4208327222,9542121050 ⋆ Expansion of Product _{ k>=1 } (1 + x ^ k) ^ (k * (5 * k - 3) / 2). ● a(0) = 1 and a(n) = (1 / (2 * n)) * Sum _{ k=1..n } b(k) * a(n - k) where b(n) = Sum _{ d|n } d ^ 2 * (5 * d - 3) * (- 1) ^ (1 + n / d). - _ Seiichi Manyama _ , Nov 14 2017 ●

▶ [A117152] 0,0,1,7,25,75,195,468,1056,2280,4755,9650,19154,37328,71635,135685,254125,471317,866669,1581620,2866970,5165630,9256871,16507092,29304660 ⋆ Sum of product of Fibonacci and triangular numbers. ● a(n) = C(n,2) F(n + 2) - n F(n + 3) + F(n + 5) - 5. ●

▶ [A058481] 1,7,25,79,241,727,2185,6559,19681,59047,177145,531439,1594321,4782967,14348905,43046719,129140161,387420487,1162261465,3486784399,10460353201,31381059607,94143178825,282429536479,847288609441 ⋆ a(n) = 3 ^ n - 2. ● a(n) = 3 * a(n - 1) + 4 (with a(1)=1). - _ Vincenzo Librandi _ , Aug 07 2010 ● a(n) = 4 * a(n - 1) - 3 * a(n - 2). - _ G. C. Greubel _ , Aug 25 2016 ●

▶ [A199116] 7,25,97,385,1537,6145,24577,98305,393217,1572865,6291457,25165825,100663297,402653185,1610612737,6442450945,25769803777,103079215105,412316860417,1649267441665,6597069766657,26388279066625,105553116266497 ⋆ a(n) = 6 * 4 ^ n + 1. ● a(n) = 4 * a(n - 1) - 3. ● a(n) = 5 * a(n - 1) - 4 * a(n - 2). ●

▶ [A247173] 1,1,7,25,101,397,1583,6337,25513,103161,418727,1705129,6963165,28504981,116941727,480667137,1979039633,8160609457,33696358983,139308985465,576583448021,2388853677981,9906585874127,41118073118785,170799570803001 ⋆ Expansion of g.f. (- 1) / (2 * x ^ 2 + 2 * x) + (- 2 * x ^ 3 - 3 * x ^ 2 + 1) / (sqrt(x ^ 4 + 4 * x ^ 3 - 2 * x ^ 2 - 4 * x + 1) * (2 * x ^ 2 + 2 * x)). ● a(n) = (n + 1) * sum(k=0..n, (C(n - k - 1,k) * sum(i=0..n - k, 2 ^ i * C(k + 1,n - k - i) * C(k + i,k) * (- 1) ^ (n - k - i))) / (k + 1)). ●

▶ [A102900] 1,1,7,25,103,409,1639,6553,26215,104857,419431,1677721,6710887,26843545,107374183,429496729,1717986919,6871947673,27487790695,109951162777,439804651111,1759218604441,7036874417767,28147497671065 ⋆ a(n) = 3 * a(n - 1) + 4 * a(n - 2), a(0)=a(1)=1. ● a(n) = (2 * 4 ^ n + 3 * (- 1) ^ n) / 5. ● a(n) = ceiling(4 ^ n / 5) + floor(4 ^ n / 5) = (ceiling(4 ^ n / 5)) ^ 2 - (floor(4 ^ n / 5)) ^ 2. ● a(n) = Sum _{ k=0..n } binomial(2 * n - k, 2 * k) * 2 ^ k. - _ Paul Barry _ , Jan 20 2005 ● a(n) = upper left term in the 2 X 2 matrix [1,3; 2,2] ^ n. - _ Gary W. Adamson _ , Mar 14 2008 ● a(n) = 2 ^ (2 * n - 1) - a(n - 1), a(1)=1. - _ Ben Paul Thurston _ , Dec 27 2015; corrected by _ Klaus Purath _ , Aug 02 2020 ● a(n) = 4 * a(n - 1) + 3 * (- 1) ^ n. ●

▶ [A216688] 1,1,1,7,25,121,841,4831,40657,325585,2913841,29910871,301088041,3532945417,41595396025,531109561711,7197739614241,100211165640481,1507837436365537,23123578483200295,376697477235716281,6348741961892933401,111057167658053740201,2032230051717594032767 ⋆ Expansion of e.g.f. exp(x * exp(x ^ 2)). ● a(n)=(n! * sum(m=floor((n + 1) / 2)..n, ((2 * m - n) ^ (n - m)) / ((2 * m - n)! * (n - m)!))). [_ Vladimir Kruchinin _ , Mar 09 2013] ●

▶ [A138292] 1,1,1,7,25,121,841,9871,80977,869905,10776241,131366071,1821918121,27671299657,460068491065,8716820294911,162728020119841,3217989767498401,69343322972016097,1533322325194196455 ⋆ E.g.f. satisfies: A(x) = exp(x * A(x ^ 2)). ● a(n) = T(2 * n + 1), where T(n,m) = (1 + (- 1) ^ (n - m)) / 2 * ((n - m) / 2)! * sum(k=1..(n - m) / 2, m ^ k * T((n - m) / 2,k) / (k! * ((n - m - 2 * k) / 4)!)), n>m, T(n,n)=1. - _ Vladimir Kruchinin _ , Mar 18 2015 ●

▶ [A082651] 1,7,25,127,449,2279,8057,40895,144577,733831,2594329,13168063,46553345,236291303,835365881,4240075391,14990032513,76085065735,268985219353,1365291107839,4826743915841,24499154875367,86612405265785,439619496648767,1554196550868289 ⋆ Positive integer values of n such that 5n ^ 2 + 11 is a square. ● a(n) = 18 * a(n - 2) - a(n - 4). ●

▶ [A334651] 0,7,25,155,1195,10282,94591,910480,9054965,92310075,959473878,10129715890,108327387675,1170975480360,12773887368040,140445927510832,1554748206904325,17314584431331025,193849445090545875,2180550929942519685,24632294533221865028 ⋆ a(n) is the total number of down steps between the first and second up steps in all 4 _ 1 - Dyck paths of length 5 * n. ● a(0) = 0 and a(n) = 4 * binomial(5 * n, n) / (n + 1) - 3 * binomial(5 * n + 1, n) / (n + 1) + 8 * binomial(5 * (n - 1), n - 1) / n - 2 * [n=1] for n > 0, where [ ] is the Iverson bracket. ●

▶ [A366941] 7,25,175,625,4375,15625,109375,390625,2734375,9765625,68359375,244140625,1708984375,6103515625,42724609375,152587890625,1068115234375,3814697265625,26702880859375,95367431640625,667572021484375,2384185791015625,16689300537109375,59604644775390625,417232513427734375 ⋆ a(n) is the least k such that k == 1 (mod 6) and k has exactly n prime factors, counted with multiplicity. ● a(n) = 5 ^ n if n is even, ● a(n + 2) = 25 * a(n). ●

▶ [A191237] 1,1,1,7,25,181,1201,5251,57457,469225,4340161,50118751,412902601,5544552157,69259632625,816044592091,12518563864801,152563427413201,2401979910598657,39326158638385975,575414895837696121 ⋆ E.g.f. exp(x + x ^ 3 + x ^ 5) ● a(n)=n! * sum(k=1..n, ((- 1) ^ (n - k) + 1) * sum(binomial(j,(n - k) / 2 - j) * binomial(k,j),j,0,k) / (2 * k!)), n>0, a(0)=1. ●

▶ [A098127] 7,26,33,59,92,151,243,394,637,1031,1668,2699,4367,7066,11433,18499,29932,48431,78363,126794,205157,331951,537108,869059,1406167 ⋆ Fibonacci sequence with a(1) = 7 and a(2) = 26. ● a(n) = a(n - 1) + a(n - 2). ●

▶ [A283427] 0,1,7,26,34,55,65,91,137,152,208,251,270,315,394,471,502,591,656,685,790,864,977,1139,1227 ⋆ a(n) is the number of consecutive smallest prime totatives of primorial A002110(n). ● a(n) = pi(min(prime(n + 1) ^ 2, Product _{ k =1..n } (prime(k)))) - n. ●

▶ [A131905] 7,26,35,47,77,91,119,130,133,141,157,161,175,182,203,215,217,249,259,282,286,287,301,329,371 ⋆ Integers x such that sigma _ 2(k)=sigma _ 2(x) for some 0<k<x, where A001157=sigma _ 2 is the sum of squares of divisors. ● a(n) = n - th element of { x: there exists some k with 0<k<x and sigma _ 2(m)=sigma _ 2(n) } , where A001157=sigma _ 2 is the sum of squares of divisors. ●

▶ [A063153] 7,26,42,62,78,98,114,134,150,170,186,206,222,242,258,278,294,314,330,350,366,386,402,422,438 ⋆ Dimension of the space of weight 2n cusp forms for Gamma _ 0(85). ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n>4. ● a(n) = ((- 1) ^ n + 18 * n - 11) for n>1. ●

▶ [A063159] 7,26,46,62,82,102,118,138,158,174,194,214,230,250,270,286,306,326,342,362,382,398,418,438,454 ⋆ Dimension of the space of weight 2n cusp forms for Gamma _ 0(91). ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>5. ●

▶ [A206481] 0,1,1,7,26,57,99,159,244,353,485,647,846,1081,1351,1663,2024,2433,2889,3399,3970,4601,5291,6047,6876 ⋆ a(n) + a(n + 2) = n ^ 3. ● a(n)=(1 / 2) * ((n - 3) * n ^ 2 - 4 * cos((Pi * n) / 2) + 2). - _ Harvey P. Dale _ , Sep 14 2012 ●

▶ [A049453] 0,7,26,57,100,155,222,301,392,495,610,737,876,1027,1190,1365,1552,1751,1962,2185,2420,2667,2926,3197,3480 ⋆ Second pentagonal numbers with even index: a(n) = n * (6 * n + 1). ● a(n) = 12 * n + a(n - 1) - 5 with n>0, a(0)=0. - _ Vincenzo Librandi _ , Aug 06 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ G. C. Greubel _ , Jun 07 2017 ●

▶ [A068601] 0,7,26,63,124,215,342,511,728,999,1330,1727,2196,2743,3374,4095,4912,5831,6858,7999,9260,10647,12166,13823,15624 ⋆ a(n) = n ^ 3 - 1. ● a(n) = Sum _{ i=1..n - 1 } (i + 1) ^ 3 - i ^ 3. - _ Wesley Ivan Hurt _ , Jul 23 2014 ●

▶ [A135300] 1,7,26,63,124,215,342,511,728,999,1330,1727,2196,2743,3374,4095,4912,5831,6858,7999,9260,10647,12166,13823,15624 ⋆ Positive X - values of solutions to the equation 1! * X ^ 4 - 2! * (X + 1) ^ 3 + 3! * (X + 2) ^ 2 - (4 ^ 2) * (X + 3) + 5 ^ 2 = Y ^ 3. ● a(1) = 1 and a(n) = n ^ 3 - 1 with n >= 2. ●

▶ [A299282] 1,7,26,67,139,253,419,643,931,1295,1749,2299,2947,3705,4591,5611,6763,8059,9521,11155,12955,14933,17115,19507,22099 ⋆ Partial sums of A299281. ● a(n) = 4 * a(n - 1) - 8 * a(n - 2) + 12 * a(n - 3) - 14 * a(n - 4) + 12 * a(n - 5) - 8 * a(n - 6) + 4 * a(n - 7) - a(n - 8) for n>8. (End) ●

▶ [A006325] 0,0,1,7,26,70,155,301,532,876,1365,2035,2926,4082,5551,7385,9640,12376,15657,19551,24130,29470,35651,42757,50876 ⋆ 4 - dimensional analog of centered polygonal numbers. ● a(n) = n * (n - 1) * (n ^ 2 - n + 1) / 6. ● a(n) = ((n ^ 5 - (n - 1) ^ 5) - (n ^ 1 - (n - 1) ^ 1)) / 30 = (n ^ 5 - (n - 1) ^ 5 - 1) / 30. - Xavier Acloque, Jan 25 2003 ● a(n) = Sum _{ i=1..n - 1 } Sum _{ j=1..n - 1 } min(i,j) ^ 2. - _ Enrique Pérez Herrero _ , Jan 15 2013 [Which is just rephrasing the partial sum formula with the Murthy formula in A005900. - _ R. J. Mathar _ , Jun 14 2014] ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5), n > 4. - _ Yosu Yurramendi _ , Sep 03 2013 ●

▶ [A227021] 7,26,72,171,368,729,1343,2325,3819,6001,9082,13311,18978,26417,36009,48185,63429,82281,105340,133267,166788,206697,253859,309213,373775 ⋆ Number of n X 2 (0,1,2) arrays of permanents of 2 X 2 subblocks of some (n + 1) X 3 binary array with rows and columns of the latter in lexicographically nondecreasing order. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. ●

▶ [A180669] 0,0,1,7,26,72,171,371,760,1500,2889,5475,10266,19116,35435,65495,120832,222664,410017,754671,1388650,2554784,4699707,8644907,15901336 ⋆ a(n) = a(n - 1) + a(n - 2) + a(n - 3) + 4 * n ^ 2 - 16 * n + 18 with a(0)=0, a(1)=0 and a(2)=1. ● a(n) = a(n - 1) + a(n - 2) + a(n - 3) + 4 * (n - 2) ^ 2 + 2 with a(0)=0, a(1)=0 and a(2)=1. ● a(n) = 3 * a(n - 1) - 2a(n - 2) - a(n - 4) + a(n - 5) + 8 for n>4. ● a(n) - 4 * a(n - 1) + 5a(n - 2) - 2 * a(n - 3) + a(n - 4) - 2 * a(n - 5) + a(n - 6) = 0 for n>5. (End) ●

▶ [A078501] 1,7,26,78,211,537,1312,3112,7217,16443,36934,82002,180319,393325,852092,1835148,3932317,8388783,17825986,37748950,79692011,167772417,352321816,738197808,1543504201 ⋆ a(n) = sum(k=1,n ^ 2, A078446(k)). ● a(n) = 2 * (n - 2) * 2 ^ n + n * (n + 1) / 2 + 4 ●

▶ [A027937] 1,7,26,79,221,596,1581,4163,10926,28635,75001,196392,514201,1346239,3524546,9227431,24157781,63245948,165580101,433494395,1134903126,2971215027,7778742001,20365011024,53316291121 ⋆ a(n) = T(2 * n, n + 1), T given by A027935. ● a(n) = Fibonacci(2 * n + 3) - 2 * n - 2. ● a(n) = 5 * a(n - 1) - 8 * a(n - 2) + 5 * a(n - 3) - a(n - 4); ●

▶ [A335639] 0,0,7,26,82,180,369,648,1096,1700,2575,3690,5202,7056,9457,12320,15904,20088,25191,31050,38050,45980,55297,65736,77832 ⋆ Sum of the positive differences of the cubed parts in each partition of n into two parts. ● a(n) = Sum _{ i=1..floor((n - 1) / 2) } (n - i) ^ 3 - i ^ 3. ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 6 * a(n - 3) + 6 * a(n - 5) - 2 * a(n - 6) - 2 * a(n - 7) + a(n - 8) for n > 8. ●

▶ [A282703] 7,26,85,281,928,3065,10123,33434,110425,364709,1204552,3978365,13139647,43397306,143331565,473392001,1563507568,5163914705,17055251683,56329669754,186044260945,614462452589,2029431618712,6702757308725,22137703544887 ⋆ a(n) = 3 * a(n - 1) + a(n - 2), with a(0)=7, a(1)=26. ● a(n) = (2 ^ (- 1 - n) * ((3 - sqrt(13)) ^ n * (- 31 + 7 * sqrt(13)) + (3 + sqrt(13)) ^ n * (31 + 7 * sqrt(13)))) / sqrt(13). - _ Colin Barker _ , Feb 26 2017 ● a(n) = (a(n - 1) ^ 2 + 81 * (- 1) ^ (n - 1)) / a(n - 2), n >= 1. (End) ●

▶ [A372611] 1,7,26,90,310,1082,3844,13892,50950,189130,708876,2677452,10175356,38863780,149045960,573559240,2213551430,8563950250,33203854460,128978378620,501839077460,1955475615820,7629823818680,29805375256120,116558646378140 ⋆ Expansion of (1 + 3 * x) / ((1 - 2 * x) * sqrt(1 - 4 * x)). ● a(n) = - 2 ^ (n - 1) * 5 * i + binomial(2 * n,n) * (1 - 5 / 2 * hypergeom([1, n + 1 / 2], [n + 1], 2)). ●

▶ [A350473] 0,1,7,26,117,485,2072,8749,37107,157114,665665,2819609,11944368,50596649,214331663,907922170,3846022173,16292007901,69014058568,292348234421,1238407008795,5245976249306,22222312038857,94135224351601,398763209531232 ⋆ a(n) = Fibonacci(n + 1) ^ 3 - Fibonacci(n - 1) ^ 3. ● a(n) = 3 * a(n - 1) + 6 * a(n - 2) - 3 * a(n - 3) - a(n - 4). ● a(n) = (4 / 5) * Fibonacci(3 * n) + (- 1) ^ (n) * (3 / 5) * Fibonacci(n). ● a(n) is the numerator of the continued fra

ction [1,...,1, 2 ,1,...,1, 2 ,1,1,...,1] with the first two runs of 1's of length n - 2 an d the last run of length n - 1. For example, a(4)=117 which is the numerator of the continued fraction [1,1, 2 ,1,1, 2 ,1,1,1]. ●

▶ [A344721] 1,7,27,56,118,196,324,448,685,901,1233,1549,2019,2445,3157,3664,44 82,5262,6290,7128,8536,9598,11118,12392,14255 ⋆ a(n) = Sum _{ k=1..n } (- 1) ^ (k + 1) * floor(n / k) ^ 3. ● a(n) = Sum _{ k=1,..n } Sum _{ d|k } (- 1) ^ (k / d + 1) * (d ^ 3 - (d - 1) ^ 3). ●

▶ [A022271] 0,7,27,60,106,165,237,322,420,531,655,792,942,1105,1281,1470,167 2,1887,2115,2356,2610,2877,3157,3450,3756 ⋆ a(n) = n * (13 * n + 1) / 2. ● a(n) = 13 * n + a(n - 1) - 6 with n>0, a(0)=0. - _ Vincenzo Librandi _ , Aug 04 2 010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>2 - _ Vincenzo Librand i _ , Mar 31 2015 ●

▶ [A269449] 7,27,60,181,227,612,1085,1985,3492,9047,11161,28860,50607,91987,1 61276,416685,513883,1327652,2327541,4230121,7415908,19159167,23628161,6104 3836,107016983 ⋆ The first of 33 consecutive positive integers the sum of the sq uares of which is a square. ● a(1)=7, a(2)=27, a(3)=60, a(4)=181, a(5)=227, a(6)=612, a(7)=1085, a(8)=1985, a(9)=3492, a(10)=9047, a(11)=11161, a(12)=28 860, a(n)=46 * a(n - 6) - a(n - 12) + 704. - _ Daniel Mondot _ , Aug 08 2016 ●

▶ [A159065] 0,1,7,27,65,147,261,461,737,1143,1637,2349,3217,4401,5769,7457,943 3,11945,14753,18235,22173,26771,31801,37813,44449 ⋆ Number of crossings in a regular drawing of the complete bipartite graph K(n,n). ● a(n) = Sum((n - a) * (n - b); 1<=a<n, 1<=b<n, (a,b)=1) - Sum((n - 2 * a) * (n - 2 * b); 1<=2 * a <n, 1<=2 * b<n, (a,b)=1). a(n) = Sum(f(a,b) - g(a,b); 1<=a<n, 1<=b<n,), f(a,b) the number of irreducible fractions p / q with 1<=p<=a,1<=q<=b, g(a,b) the number of rationals admitting at least one reducible form p / q with 1 <= p <= a, 1 <= q <= b (Philippe Paclet). ●

▶ [A098931] 1,7,27,69,141,251,407,617,889,1231,1651,2157,2757,3459,4271,5201,6 257,7447,8779,10261,11901,13707,15687,17849,20201 ⋆ a(0) = 1, a(n) = 1 + 2 * 3 + 4 * 5 + 6 * 7 + ... + (2n) * (2n + 1) for n > 0. ● a(n) = 1 + 3 * n ^ 2 + n * (5 + 4 * n ^ 2) / 3. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) . - _ Vincenzo Librandi _ , Jul 28 2015 ●

▶ [A143690] 1,7,27,70,145,261,427,652,945,1315,1771,2322,2977,3745,4635,5656,6 817,8127,9595,11230,13041,15037,17227,19620,22225 ⋆ a(n) = A007318 * [1, 6, 1 4, 9, 0, 0, 0, ...]. ● a(n) = (n + 1) * (3 * n ^ 2 + 2 * n + 2) / 2. ●

▶ [A007715] 1,7,27,75,170,336,602,1002,1575,2365,3421,4797,6552,8750,11460,14 756,18717,23427,28975,35455,42966,51612,61502,72750,85475 ⋆ Number of 5 - le af rooted trees with n levels. ● a(n) = n * (n + 1) * (5 * n ^ 2 + n + 6) / 24. - _ T. D. Noe _ , Feb 09 2007 ● a(1)=1, a(2)=7, a(3)=27, a(4)=75, a(5)=170, a(n)=5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Harv ey P. Dale _ , Jul 20 2011 ●

▶ [A039623] 1,7,27,76,175,351,637,1072,1701,2575,3751,5292,7267,9751,12825,16 576,21097,26487,32851,40300,48951,58927,70357,83376,98125 ⋆ a(n) = n ^ 2 * (n ^ 2 + 3) / 4. ● a(1)=1, a(2)=7, a(3)=27, a(4)=76, a(5)=175; for n>5, a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). (End) ● a(n) = t(n - 1) * t(n) + t(n - 1) + t(n) where t=A000217. - _ J. M. Bergot _ , Apr 16 2016 ●

▶ [A005585] 1,7,27,77,182,378,714,1254,2079,3289,5005,7371,10556,14756,2019 6,27132,35853,46683,59983,76153,95634,118910,146510,179010,217035 ⋆ 5 - dime nsional pyramidal numbers: a(n) = n * (n + 1) * (n + 2) * (n + 3) * (2n + 3) / 5!. ● a(n) = 2 * C(n + 4, 5) - C(n + 3, 4). - _ Paul Barry _ , Mar 04 2003 ● a(n) = C(n + 3, 5) + C(n + 4, 5). - _ Paul Barry _ , Mar 17 2003 ● a(n) = C(n + 2, 6) - C(n, 6), n >= 4. - _ Zerinvary Lajos _ , Jul 21 2006 ● a(n) = Sum _{ k=1..n } T(k) * T(k + 1) / 3, where T(n) = n(n + 1) / 2 is a triangular n umber. - _ Alexander Adamchuk _ , May 08 2007 ● a(n - 1) = (1 / 4) * Sum _{ 1 <= x _ 1, x _ 2 <= n } |x _ 1 * x _ 2 * det V(x _ 1,x _ 2)| = (1 / 4) * Sum _{ 1 <= i,j <= n } i * j * |i - j|, where V(x _ 1,x _ 2 } is the Vandermo nde matrix of order 2. First differences of A040977. - _ Peter Bala _ , Sep 21 2007 ● a(n) = C(n + 4,4) + 2 * C(n + 4,5). - Borislav St. Borisov (b.st.borisov (AT)abv.bg), Mar 05 2009 ●

▶ [A027180] 1,7,27,79,199,459,1003,2119,4383,8947,18115,36495,73303,146971,29 4363,589207,1178959,2358531,4717747,9436255,18873351,37747627,75496267,150 993639,301988479 ⋆ a(n) = Sum _{ 0<=j<=i<=n } A027170(i, j). ● a(n) = 1 8 * 2 ^ n - 2 * n ^ 2 - 10 * n - 17. ● a(n) = 5 * a(n - 1) - 9 * a(n - 2) + 7 * a(n - 3) - 2 * a(n - 4) for n>3. ●

▶ [A338230] 0,0,1,7,27,81,213,519,1207,2725,6033,13179,28515,61257,130861,278 287,589551,1244877,2621097,5504643,11533915,24116785,50331141,104857047,21 8103207 ⋆ Number of ternary strings of length n that contain at least two 0's a nd at most one 1. ● a(n) = 2 ^ n + n * 2 ^ (n - 1) - 2 * binomial(n,2) - 2 * n - 1 . ●

▶ [A339771] 1,7,27,83,227,579,1411,3331,7683,17411,38915,86019,188419,40960 3,884739,1900547,4063235,8650755,18350083,38797315,81788931,171966467,3607 10147,754974723,1577058307 ⋆ a(n) = Sum _{ i=0..n } Sum _{ j=0..n } 2 ^ m ax(i,j). ● a(n) = (2 * n - 1) * 2 ^ (n + 1) + 3. ●

▶ [A059769] 1,7,27,83,239,659,1781,4751,12583,33175,87231,228983,600473,1573 655,4122467,10796939,28273519,74031979,193835949,507497759,1328692751,3478 637807,9107313407,23843452463,62423286769 ⋆ Frobenius number of the subse migroup of the natural numbers generated by successive pairs of Fibonacci num bers. ● a(n) = (F(n) - 1) * (F(n + 1) - 1) - 1 where F(n) is the n - th Fibonacci number. ● a(n) = F(n) * F(n + 1) - F(n + 2). - _ Clark Kimberling _ , Mar 0 5 2016 ●

▶ [A135914] 1,7,27,91,291,907,2787,8491,25731,77707,234147,704491,2117571,63 60907,19099107,57330091,172055811,516298507,1549157667,4647997291,1394504 0451,41837218507,125515849827,376555938091,1129684591491 ⋆ a(n) = 4 * 3 ^ n - 2 * 2 ^ n - 1. ● a(n) = 6 * a(n - 1) - 11 * a(n - 2) + 6 * a(n - 3). ●

▶ [A213588] 1,7,27,96,315,994,3043,9123,26909,78370,225911,645732,1832677,51 70111,14509695,40537284,112805043,312808198,864707719,2383649115,65541539 21,17980221382,49222822127,134495771976,366850762825 ⋆ Principal diagonal o f the convolution array A213587. ● a(n) = 5 * a(n - 1) - 5 * a(n - 2) - 5 * a(n - 3) + 5 * a(n - 4) - a(n - 5). ● a(n) = (n * Lucas(2 * n + 2) - Fibonacci(n) * Luc as(n - 1)) / 5. - _ G. C. Greubel _ , Jul 08 2019 ●

▶ [A054485] 1,7,27,101,377,1407,5251,19597,73137,272951,1018667,3801717,1418 8201,52951087,197616147,737513501,2752437857,10272237927,38336513851,1430 7381477,533958756057,1992761206751,7437086070947,27755583077037 ⋆ Expan sion of (1 + 3 * x) / (1 - 4 * x + x ^ 2). ● a(n) = (7 * ((2 + sqrt(3)) ^ n - (2 - s qrt(3)) ^ n) - ((2 + sqrt(3)) ^ (n - 1) - (2 - sqrt(3)) ^ (n - 1))) / 2 * sqrt(3). ● a(n) = 4 * a(n - 1) - a(n - 2), a(0)=1, a(0)=7. ● a(n) = ChebyshevU(n,2) + 3 * C hebyshev(n - 1,2) = ChebyshevT(n,2) + 5 * ChebyshevU(n - 1,2). - _ G. C. Gr eubel _ , Jan 19 2020 ●

▶ [A056120] 1,1,7,27,108,432,1728,6912,27648,110592,442368,1769472,7077888,2 8311552,113246208,452984832,1811939328,7247757312,28991029248,11596411699 2,463856467968,1855425871872 ⋆ a(n) = (3 ^ 3) * 4 ^ (n - 3) with a(0)=1, a(1) =1 and a(2)=7. ● a(n) = 4 * a(n - 1) + (- 1) ^ n * binomial(3, 3 - n). ●

▶ [A294262] 1,1,7,27,117,493,2091,8855,37513,158905,673135,2851443,1207890 9,51167077,216747219,918155951,3889371025,16475640049,69791931223,2956433 64939,1252365390981,5305104928861,22472785106427,95196245354567,40325776 6524697 ⋆ a(n) = 3 * a(n - 1) + 5 * a(n - 2) + a(n - 3), with a(0) = a(1) = 1 an d a(2) = 7, a linear recurrence which is a trisection of A005252. ● a(n) = (1 / 2 0) * (10 * (- 1) ^ n + (2 - sqrt(5)) ^ n * (5 - sqrt(5)) + (2 + sqrt(5)) ^ n * (5 + sqrt(5))). ● a(n) = 4 * a(n - 1) + a(n - 2) + 2 * (- 1) ^ n for n >= 2. ● a(n) = Sum _{ k=0..floor(3 * n / 4) } binomial(3 * n - 2 * k, 2 * k). ● a(n) = (Fibo nacci(3 * n + 1) + (- 1) ^ n) / 2. ●

▶ [A048711] 7,27,119,427,1799,6939,30583,109227,458759,1769499,7798903,2798 4299,117901063,454761243,2004318071,7158278827,30064771079,115964117019,5 11101108343,1833951035819,7726646167303 ⋆ 2nd row of Family 1 "90 X 150 ar ray": generations 0 .. n of Rule 90 starting from seed pattern 7. ● a(n) = prod uct('((bit _ i((n + 1), i) * (2 ^ (2 ^ (i + 1)))) + 1)', 'i'=0..floor _ log _ 2(n + 2)) + 2 * product('((bit _ i(n, i) * (2 ^ (2 ^ (i + 1)))) + 1)', 'i'=0..floor _ log _ 2(n + 1)); ●

▶ [A118101] 1,7,27,119,427,1879,6827,30039,109227,480599,1747627,7689559,27 962027,123032919,447392427,1968526679,7158278827,31496426839,11453246122 7,503942829399,1832519379627,8063085270359,29320310074027,12900936432571 9,469124961184427 ⋆ Decimal representation of n - th iteration of the Rule 94 e lementary cellular automaton starting with a single ON cell. ● a(0)=1, a(1)=7, a(n odd) = (10 + 11 * 4 ^ n) / 6, a(n even) = (1 + 5 * 4 ^ n) / 3. ● a(n) = (12 - (- 4) ^ n - 8 * (- 1) ^ n + 21 * 4 ^ n) / 12 for n>1. ● a(n) = 17 * a(n - 2) - 1 6 * a(n - 4) for n>5. ●

▶ [A179597] 1,7,27,137,613,2895,13355,62233,288741,1342175,6233899,2896416 9,134554277,625117807,2904117675,13491856889,62679715045,291194561919,135 2817130667,6284852732713,29197861274277,135646005392399 ⋆ Eight white kin gs and one red king on a 3 X 3 chessboard. G.f.: (1 + 5 * x + 2 * x ^ 2) / (1 - 2 * x - 11 * x ^ 2 - 6 * x ^ 3). ● a(n) = 2 * a(n - 1) + 11 * a(n - 2) + 6 * a(n - 3) with a(0) = 1, a(1) = 7 and a(2) = 27. ● a(n) = 8 * (- 1 / 2) ^ (- n + 1) / 9 + ((7 + 11 * sqrt(7)) * A ^ (- n - 1) + (7 - 11 * sqrt(7)) * B ^ (- n - 1)) / 126 wi th A = (- 2 + sqrt(7)) / 3 and B = (- 2 - sqrt(7)) / 3. ●

▶ [A193257] 7,27,169,1217,9512,78030,661458,5740303,50701542,454011971,4110 416300,37550193649,345618860220,3201414635780,29816233849000,27900725823 0819,2621647966812031,24723998785919976,233922961602470390,2219671974013 732243 ⋆ Floor((10 ^ n) / (log(10 ^ n) - 1)). ● a(n) = floor((10 ^ n) / (log(10 ^ n) - 1)). ●

▶ [A173193] 7,27,227,2227,22227,222227,2222227,22222227,222222227,222222222 7,22222222227,222222222227,2222222222227,22222222222227,222222222222227,2 222222222222227,22222222222222227,222222222222222227 ⋆ (2 * 10 ^ n + 43) / 9. ● a(n) = 10 * a(n - 1) - 43 with n>1, a(1)=7. [_ Vincenzo Librandi _ , Dec 05 2010] ● a(n) = a(n - 1) + 2 * 10 ^ (n - 1) with n>1, a(1)=7. [_ Zak Seidov _ , Dec 05 2010] ● a(n) = 11 * a(n - 1) - 10 * a(n - 2). G.f.: - x * (50 * x - 7) / ((x - 1) * (10 * x - 1)). [_ Colin Barker _ , Jan 24 2013] ●

▶ [A118120] 0,7,28,51,88,207,340,555,1248,2023,3276,7315,11832,19135,42676,69 003,111568,248775,402220,650307,1450008,2344351,3790308,8451307,13663920 ⋆ Nonnegative values x of solutions (x, y) to the Diophantine equation x ^ 2 + (x + 17) ^ 2 = y ^ 2. ● a(n) = 6 * a(n - 3) - a(n - 6) + 34 for n > 5; a(0)=0, a(1) =7, a(2)=28, a(3)=51, a(4)=88, a(5)=207. ●

▶ [A033582] 0,7,28,63,112,175,252,343,448,567,700,847,1008,1183,1372,1575,179 2,2023,2268,2527,2800,3087,3388,3703,4032 ⋆ a(n) = 7 * n ^ 2. ● a(n) = 14 * n + a(n - 1) - 7 (with a(0) = 0). - _ Vincenzo Librandi _ , Aug 05 2010 ●

▶ [A223765] 7,28,71,155,317,607,1097,1887,3112,4950,7631,11447,16763,24029,33 793,46715,63582,85324,113031,147971,191609,245627,311945,392743,490484 ⋆ N umber of n X 3 0..1 arrays with rows, columns and antidiagonals unimodal and diagonals nondecreasing. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 3 5 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>9. ●

▶ [A211899] 0,1,7,28,76,166,316,547,883,1351,1981,2806,3862,5188,6826,8821,112 21,14077,17443,21376,25936,31186,37192,44023,51751 ⋆ Number of triangular n X n X n arrays colored with integers 0 upwards introduced in row major order, with no element equal to any neighbor, and containing the value n(n + 1) / 2 - 2. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) fo r n>6. ●

▶ [A073995] 1,1,7,28,76,256,1072,4288,16576,65536,262912,1051648,4197376,167 77216,67121152,268484608,1073790976,4294967296,17180065792,68720263168,27 4878693376,1099511627776,4398049656832,17592198627328,70368756760576 ⋆ N umber of strings of length n over GF(4) with trace 0 and subtrace 0. ● a(n; t, s) = a(n - 1; t, s) + a(n - 1; t - 1, s - (t - 1)) + a(n - 1; t - 2, s - 2(t - 2)) + a(n - 1; t - 3, s - 3(t - 3)) where t is the trace and s is the subtrace. Note that all ope rations involving operands t or s are carried out over GF(4). ●

▶ [A223772] 7,28,78,180,371,707,1269,2170,3563,5650,8692,13020,19047,27281,38 339,52962,72031,96584,127834,167188,216267,276927,351281,441722,550947 ⋆ N umber of n X 3 0..1 arrays with rows and columns unimodal and antidiagonals n ondecreasing. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

▶ [A352900] 0,0,0,7,28,79,460,2486,11209,59787,361777,2167635,13577211,91919 186,650059294,4761980740,36508824672,292116858616,2424047807182,208474093 57919,185754041370693,1711253802075941,16272637412753211,159561718074359

537,1611599794862761838 ⋆ a(n) is the number of different ways to partition t he set of vertices of a convex n - gon into intersecting polygons. ● a(n) = Sum _{ k=2..floor(n / 3) } (T(n,k) - C(n + 1,k) * C(n - 2k - 1,k - 1) / (n + 1)); n > 5, where T(n,k) = k * T(n - 1,k) + C(n - 1,2) * T(n - 3,k - 1); n > 5 and 1 < k <= floor(n / 3), T(n,k) = 1 when k = 1. ●

▶ [A073363] 1,7,28,84,175,421,847,1288,1939,3780,5656,9247,15148,22099,25375,39676,54607,75208,90559,129360,166321,209832,240268,320719,399595 ⋆ Neste d floor product of n and fractions (k + 1) / k for all k>0 (mod 6), divided by 6. ● a(n)=(1 / 6)[...[[[[[[n(2 / 1)](3 / 2)](4 / 3)](5 / 4)](6 / 5)](8 / 7]...(k + 1) / k].. ., k>0 (mod 6), where [x] = floor of x; this infinite nested floor product will eve ntually level - off at a(n). ●

▶ [A247608] 1,7,28,84,195,381,662,1058,1589,2275,3136,4192,5463,6969,8730,107 66,13097,15743,18724,22060,25771,29877,34398,39354,44765 ⋆ a(n) = Sum _{ k =0..3 } binomial(6,k) * binomial(n,k). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ● a(n) = (6 + 31 * n - 15 * n ^ 2 + 20 * n ^ 3) / 6. ● a(n) = 1 + 6 * Binomial(n,1) + 15 * Binomial(n,2) + 20 * Binomial(n,3). ●

▶ [A008499] 1,7,28,84,210,462,923,1709,2975,4921,7798,11914,17640,25416,3575 7,49259,66605,88571,116032,149968,191470,241746,302127,374073,459179 ⋆ Num ber of 5 - dimensional centered tetrahedral numbers. ● a(n) = C(n, 0) + 6 * C(n, 1) + 15 * C(n, 2) + 15 * C(n, 3) + 10 * C(n, 4) + 6 * C(n, 5); a(n) = C(n + 6, 6) - C(n, 6); a(n)=(6 * n ^ 5 + 15 * n ^ 4 + 160 * n ^ 3 + 225 * n ^ 2 + 314 * n + 120) / 120. - _ Paul Barry _ , Jul 01 2003 ● a(0)=1, a(1)=7, a(2)=28, a(3)=84, a(4)=210, a(5)=462; for n>5, a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a (n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). - _ Harvey P. Dale _ , Sep 15 20 11 ●

▶ [A008489] 1,7,28,84,210,462,924,1715,2996,4977,7924,12166,18102,26208,3704 4,51261,69608,92939,122220,158536,203098,257250,322476,400407,492828 ⋆ Expa nsion of (1 - x ^ 7) / (1 - x) ^ 7. ● a(n) = 7 * n * (84 + 35 * n ^ 2 + n ^ 4) / 12 0, n>0. - _ R. J. Mathar _ , Mar 17 2011 ●

▶ [A000579] 0,0,0,0,0,0,1,7,28,84,210,462,924,1716,3003,5005,8008,12376,18564,2 7132,38760,54264,74613,100947,134596 ⋆ Figurate numbers or binomial coefficie nts C(n,6). ● a(n) = (n ^ 6 - 15 * n ^ 5 + 85 * n ^ 4 - 225 * n ^ 3 + 274 * n ^ 2 - 120 * n) / 720. ● a(n) = n(n - 1)(n - 2)(n - 3)(n - 4)(n - 5) / 720. - _ Artur Ja sinski _ , Dec 02 2007, _ R. J. Mathar _ , Jul 07 2009 ● a(0) = 0, a(1) = 0, a(2) = 0, a(3) = 0, a(4) = 0, a(5) = 0, a(6) = 1, a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). - _ Harv ey P. Dale _ , Dec 30 2012 ● a(n) = a(5 - n) for all n in Z. - _ Michael Somos _ , Oct 07 2014 ●

▶ [A290994] 0,0,0,0,0,0,1,7,28,84,210,462,924,1717,3017,5110,8568,14756,27132,5 4264,116281,257775,572264,1246784,2641366 ⋆ p - INVERT of (1,1,1,1,1,...), wh ere p(S) = 1 - S ^ 7. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a (n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + 2 * a(n - 7) for n >= 8. ●

▶ [A145135] 0,1,7,28,84,211,470,960,1836,3334,5806,9769,15973,25495,39869,612 66,92743,138587,204790,299705,434952,626669,897239,1277674,1810906 ⋆ Expan sion of x / ((1 - x - x ^ 4) * (1 - x) ^ 6). ● a(n) = 7a(n - 1) - 21a(n - 2) + 35a(n - 3) - 34a(n - 4) + 15a(n - 5) + 8a(n - 6) - 19a(n - 7) + 15a(n - 8) - 6a(n - 9) + a (n - 10). ●

▶ [A144900] 0,1,7,28,85,218,498,1045,2055,3840,6887,11945,20153,33228,53741,8 5522,134254,208344,320200,488103,738951,1112281,1666164,2485845,3696406 ⋆ Expansion of x / ((1 - x - x ^ 3) * (1 - x) ^ 6). ● a(n) = Sum _{ j=0..floor((n + 5) / 3) } binomial(n - 2 * j + 5, j + 6). ●

▶ [A054469] 1,7,28,85,218,499,1053,2092,3970,7272,12958,22596,38739,65535,109 714,182185,300620,493635,807555,1317360,2144396,3485032,5657028,9174560,14 869613 ⋆ A second - order recursive sequence. ● a(n) = a(n - 1) + a(n - 2) + (n + 2) * C(n + 3, 3) / 2; ● a(n) = a(n - 1) + a(n - 2) + (n + 1)(n + 2) ^ 2(n + 3) / 12; ● a(- n) = 0. ● a(n) = sum { C(n + 5 - i, n + 2 - 2i); i=1 to [(n + 2) / 2] }+ 2 * sum { C(n + 5 - i, n + 1 - 2i); i=1 to [(n + 1) / 2]; where [x]=greates t integer in x. ●

▶ [A156928] 1,7,28,86,227,545,1230,2664,5613,11611,23728,48106,97031,195077,3 91394,784284,1570353,3142815,6288100,12579070,25161451,50326697,10065771 8,201320336,402646197 ⋆ G.f. of the z ^ 1 coefficients of the FP1 in the second column of the A156921 matrix. ● a(n) = 5 * a(n - 1) - 9 * a(n - 2) + 7 * a(n - 3) - 2 * a(n - 4) + 2. ● a(n) = 6 * a(n - 1) - 14 * a(n - 2) + 16 * a(n - 3) - 9 * a(n - 4) + 2 * a(n - 5). ● a(n) = (9 * 2 ^ (n + 2) - (2 * n ^ 3 + 9 * n ^ 2 + 25 * n + 36)) / 6. ● a(n) = Sum _{ k=1..n + 1 } Sum _{ i=1..n + 1 } (k - 1) ^ 2 * C(n - k + 1,i). - _ Wesley Ivan Hurt _ , Sep 22 2017 ●

▶ [A117473] 7,28,88,207,555,1248,3276,7315,19135,42676,111568,248775,65030 7,1450008,3790308,8451307,22091575,49257868,128759176,287095935,75046351 5,1673317776,4374021948,9752810755,25493668207 ⋆ The values of 'a' in a ^ 2 + b ^ 2 = c ^ 2, where b - a = 17 and gcd(a, b, c) = 1. ● a(1) = 7, a(2) = 28, a(3) = 207, a(4) = 555, a(n) = 6 * a(n - 2) - a(n - 4) + 34. ●

▶ [A356038] 1,7,28,95,286,802,2143,5519,13807,33762,81060,191678,447396,1032 647,2360593,5351231,12041764,26920297,59829006,132262550,290990077,6374295 14,1390811841,3023647046,6551547161 ⋆ a(n) = Sum _{ k=1..n } binomial(n,k) * sigma _ 2(k). ● a(n) = Sum _{ i=1..n } Sum _{ j=1..n } (i ^ 2) * binomial(n,i * j). - _ Ridouane Oudra _ , Oct 25 2022 ●

▶ [A370487] 1,1,7,28,103,376,1384,5146,19303,72928,277132,1058146,4056232,15 600898,60174898,232676278,901620583,3500409328,13612702948,53017895698,20 6769793228,807386811658,3156148445578,12350146091398,48371405524648 ⋆ Nu mber of partitions of [3n] into 3 sets of size n having at least one set of consecut ive numbers whose maximum (if n>0) is a multiple of n. ● a(n) = 3 * binomial (2 * n - 1,n) - 2 for n >= 1, a(0) = 1. ● a(n) mod 2 = 1 <=> n in { A131577 } . ●

▶ [A002042] 7,28,112,448,1792,7168,28672,114688,458752,1835008,7340032,2936 0128,117440512,469762048,1879048192,7516192768,30064771072,120259084288,4 81036337152,1924145348608,7696581394432,30786325577728,123145302310912,4 92581209243648 ⋆ a(n) = 7 * 4 ^ n. ● a(n) = 4 * a(n - 1), n > 0, with a(0) = 7. ●

▶ [A037597] 1,7,28,113,455,1820,7281,29127,116508,466033,1864135,7456540,29 826161,119304647,477218588,1908874353,7635497415,30541989660,12216795864 1,488671834567,1954687338268,7818749353073,31274997412295 ⋆ Base - 4 digits are, in order, the first n terms of the periodic sequence with initial period 1,3,0. ● a(n) = floor(4 ^ (n + 1) / 9). [_ Mircea Merca _ , Dec 26 2010] ● a(n) = 4 * a(n - 1) + a(n - 3) - 4 * a(n - 4). [_ Joerg Arndt _ , Jan 08 2011] ● a(1)=1, a (2)=7, a(n) = 5 * a(n - 1) - 4 * a(n - 2) + (period 3: repeat - 3, 1, 2); a(n) = 4 * a(n) + 1 + (period 3: repeat 0, 1, 3). [_ Vincenzo Librandi _ , Jun 06 2011] ●

▶ [A290913] 0,7,28,119,532,2352,10388,45913,202916,896777,3963288,17515680,7 7410200,342112855,1511961052,6682082183,29531331004,130513137552,57680024 8892,2549157374953,11265950967908,49789649104601,220044376637232,9724818 02150208,4297864230688560 ⋆ p - INVERT of the positive integers, where p(S) = 1 - 7 * S ^ 2. ● a(n) = 4 * a(n - 1) + a(n - 2) + 4 * a(n - 3) - a(n - 4). ●

▶ [A054626] 1,7,28,119,616,3367,19684,117655,720916,4483815,28249228,179756 983,1153450872,7453000807,48444564052,316504102999,2077058521216,13684147 881607,90467424361132,599941851861751,3989613329006536,26597422099282535 ⋆ Number of n - bead necklaces with 7 colors. ● a(n) = (1 / n) * Sum _{ d|n } phi(d) * 7 ^ (n / d), n > 0. ● a(0) = 1; a(n) = (1 / n) * Sum _{ k=1..n } 7 ^ g cd(n,k). - _ Ilya Gutkovskiy _ , Apr 17 2021 ●

▶ [A220361] 1,7,28,123,515,2192,9269,39291,166396,704935,2986039,12649248,53 582777,226980767,961505180,4073002563,17253513691,73087060144,30960174970 9,1311494066355,5555578003196,23533806098447,99690802365743,422297015611 968,1788878864731825 ⋆ a(n) = Fibonacci(n) ^ 3 + (- 1) ^ n * Fibonacci(n - 2). ● a(n) = 3 * a(n - 1) + 6 * a(n - 2) - 3 * a(n - 3) - a(n - 4). G.f.: x ^ 2 * (x ^ 2 + 4 * x + 1) / ((x ^ 2 - x - 1) * (x ^ 2 + 4 * x - 1)). - _ Colin Barker _ , Sep 2 3 2014 ●

▶ [A025030] 1,7,28,140,658,3164,15106,72302,345775,1654092,7911970,3784631 4,181033035,865951710,4142180085,19813648817,94776329265,453351783116,216 8556616440,10373043626906,49618272850056,237343357526002 ⋆ Number of dist ributive lattices; also number of paths with n turns when light is reflected from 7 glass plates. ● a(n) = 4 * a(n - 1) + 6 * a(n - 2) - 10 * a(n - 3) - 5 * a(n - 4) + 6 * a(n - 5) + a(n - 6) - a(n - 7). ● a(n) is asymptotic to z(7) * w(7) ^ n where w(7) = (1 / 2) / cos(7 * Pi / 15) and z(7) is the root 1 < x < 2 of P(7, X) = 1 - 120 * X - 8100 * X ^ 2 - 57375 * X ^ 3 + 50625 * X ^ 4. - _ Benoit Cloitre _ , Oct 16 2002 ●

▶ [A370243] 1,1,7,28,143,701,3580,18376,95471,499231,2626607,13883904,736813 16,392323868,2094932728,11214085328,60157698287,323325959395,174068222182 9,9385343934124,50671846382743,273913020523933,1482311190765896,80297980 17622048,43538300361416708 ⋆ Coefficient of x ^ n in the expansion of (1 / (1 - x) * (1 + x ^ 2) ^ 2) ^ n. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(2 * n, k) * binomial(2 * n - 2 * k - 1,n - 2 * k). ●

▶ [A370103] 1,1,7,28,151,751,3976,20924,112023,602182,3260257,17724928,96766 072,529977917,2910984412,16027963528,88440034711,488918693466,27073935878 02,150146470967172,833801312284 01,463593653171495,2580426581343200,143774 74236172320 ⋆ a(n) = Sum _{ k=0..n } (- 1) ^ k * binomial(2 * n + k - 1,k) * binomial(4 * n - k - 1,n - k). ● a(n) = [x ^ n] 1 / ((1 + x) ^ 2 * (1 - x) ^ 3) ^ n . ●

▶ [A054369] 1,1,7,28,231,2100,23884,285390,3626295,47813815,650367788,90660 61200,128987761308,1866877313448,27417589615234,407771633434368,61316406 07962135,93096368350684727,1425633586192690945,2199895342796395455 4,3418 03227016091180620 ⋆ Number of unlabeled 7 - ary cacti having n polygons. ● a (n) = (1 / n) * (Sum _{ d|n } phi(n / d) * binomial(7 * d, d)) - 6 * binomial(7 * n, n) / (6 * n + 1) for n > 0. - _ Andrew Howroyd _ , May 02 2018 ●

▶ [A041088] 7,29,36,101,137,649,9223,37541,46764,131069,177833,842401,119714 47,48728189,60699636,170127461,230827097,1093435849,15538928983,632491517 81,78788080764,220825313309,299613394073 ⋆ Numerators of continued fraction convergents to sqrt(52). ● a(n) = 1298 * a(n - 6) - a(n - 12). G.f.: - (x ^ 11 - 7 * x ^ 10 + 29 * x ^ 9 - 36 * x ^ 8 + 101 * x ^ 7 - 137 * x ^ 6 - 649 * x ^ 5 - 137 * x ^ 4 - 101 * x ^ 3 - 36 * x ^ 2 - 29 * x - 7) / ((x ^ 2 - 3 * x - 1) * (x ^ 2 + 3 * x - 1) * (x ^ 4 - 3 * x ^ 3 + 10 * x ^ 2 + 3 * x + 1) * (x ^ 4 + 3 * x ^ 3 + 10 * x ^ 2 - 3 * x + 1)). [_ Colin Barker _ , Jul 18 2012] ●

▶ [A041621] 1,7,29,65,94,159,730,889,1619,4127,18127,131016,4734703,3327393 7,137830451,308934839,446765290,755700129,3469565806,4225265935,769483174 1,19614929417,86154549409,622696775280,22503238459489 ⋆ Denominators of c ontinued fraction convergents to sqrt(329). ● a(n) = 4752830 * a(n - 12) - a(n - 24) for n>23. - _ Vincenzo Librandi _ , Dec 22 2013 ●

▶ [A022272] 0,7,29,66,118,185,267,364,476,603,745,902,1074,1261,1463,1680,191 2,2159,2421,2698,2990,3297,3619,3956,4308 ⋆ a(n) = n * (15 * n - 1) / 2. ● a(n) = 15 * n + a(n - 1) - 8 for n>0, a(0)=0. - _ Vincenzo Librandi _ , Aug 04 201 0 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>2. (End) ●

▶ [A185438] 1,7,29,67,121,191,277,379,497,631,781,947,1129,1327,1541,1771,201 7,2279,2557,2851,3161,3487,3829,4187,4561 ⋆ a(n) = 8 * n ^ 2 - 2 * n + 1. ● a(n) = a(n - 1) + 16 * n - 10 (n > 0). ● a(n) = 2 * a(n - 1) - a(n - 2) + 16 (n > 1). ● a(n) = 3 * (n - 1) - 3 * a(n - 2) + a(n - 3) (n > 2). ●

▶ [A242727] 1,7,29,86,198,396,719,1203,1899,2866,4156,5840,7997,10695,14025,1 8086,22962,28764,35611,43603,52871,63554,75768,89664,105401 ⋆ Sum of the thi rd largest parts of the partitions of 4n into 4 parts. ● a(n) = 7 / 27 * n ^ 4 + 3 5 / 27 * n ^ 3 + 22 / 9 * n ^ 2 + 59 / 27 * n + O(1). - _ Ralf Stephan _ , May 26 2014 ●

▶ [A229795] 7,29,86,205,421,777,1324,2121,3235,4741,6722,9269,12481,16465,213 36,27217,34239,42541,52270,63581,76637,91609,108676,128025,149851 ⋆ Number of 2 X 2 0..n arrays with rows and columns in lexicographically nondecreasing o rder. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

▶ [A114043] 1,7,29,87,201,419,749,1283,2041,3107,4493,6395,8745,11823,15557,2 0075,25457,32087,39725,48935,59457,71555,85253,101251,119041 ⋆ Take an n X n square grid of points in the plane; a(n) = number of ways to divide the points into two sets using a straight line. ● a(n) = 4 * n ^ 2 - 6 * n + 3 + 2 * Sum _{ i=2..n - 1 } (n - i) * (2n - i) * phi(i). - _ Chai Wah Wu _ , Aug 15 2021 ●

▶ [A166189] 1,7,29,90,232,524,1072,2030,3613,6111,9905,15484,23464,34608,4984 8,70308,97329,132495,177661,234982,306944,396396,506584,641186,804349 ⋆ Nu mber of 3 X 3 X 3 triangular nonnegative integer arrays with all sums of an ele

ment and its neighbors <= n. • a(n) = (1 / 1920) * (4 * n ^ 6 + 72 * n ^ 5 + 530 * n ^ 4 + 2040 * n ^ 3 + 4296 * n ^ 2 + 4608 * n + 1905 + 15 * (- 1) ^ n). • a(2 * n + 1) = (1 / 15) * binomial(n + 2, 2) * binomial(n + 3, 2) * (8 * n ^ 2 + 32 * n + 35). • a(2 * n) = (1 / 30) * binomial(n + 2, 2) * (8 * n ^ 4 + 48 * n ^ 3 + 105 * n ^ 2 + 99 * n + 30). •

▶ [A001779] 1,7,29,91,239,553,1163,2269,4166,7274,12174,19650,30738,46782,69498,101046,144111,201993,278707,379093,508937,675103,885677,1150123,1479452 ⋆ Expansion of 1 / ((1 + x)(1 - x) ^ 8). • a(n) = (- 1) ^{ 7 - n }* Sum _{ i=0..n } ((- 1) ^ (7 - i) * binomial(7 + i,i)). - _ Sergio Falcon _ , Feb 13 2007 •

▶ [A053295] 1,7,29,92,247,591,1300,2683,5270,9955,18228,32551,56967,98086,166681,280271,467301,773906,1274856,2091266,3419252,5576298,9076280,14750858,23945893 ⋆ Partial sums of A053739. • a(n) = Sum _{ i=0..floor(n / 2) } C(n + 6 - i, n - 2i), n >= 0. • a(n) = a(n - 1) + a(n - 2) + C(n + 5,5); n >= 0; a(- 1)=0. • a(n) = Sum _{ k=1..n } C(n - k + 6,k + 5), with n>=0. - _ Paolo P. Lava _ , Apr 16 2008 •

▶ [A055798] 1,7,29,93,255,627,1419,3003,6006,11440,20878,36686,62322,102714,164730,257754,394383,591261,870067,1258675,1792505,2516085,3484845,4767165,6446700 ⋆ T(2n + 5,n), array T as in A055794. • a(n - 8) = binomial(n,8) - 2 * binomial(n - 2,7), n=8,9,10,.... - _ Milan Janjic _ , Dec 28 2007 • a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9). - _ Vincenzo Librandi _ , May 01 2012 •

▶ [A002664] 0,0,0,0,0,1,7,29,93,256,638,1486,3302,7099,14913,30827,63019,127858,258096,519252,1042380,2089605,4185195,8377705,16764265 ⋆ a(n) = 2 ^ n - C(n,0) - ... - C(n,4). • a(n) = Sum _{ k=0..n } C(n, k + 5) = Sum _{ k=5..n } C(n, k); a(n) = 2a(n - 1) + C(n - 1, 4). - _ Paul Barry _ , Aug 23 2004 • a(n) = 2 ^ n - n ^ 4 / 24 + n ^ 3 / 12 - 11 * n ^ 2 / 24 - 7 * n / 12 - 1. - _ Bruno Berselli _ , May 19 2011 [Robinson (1985) gives an alternative version of this formula, for a different offset. - _ N. J. A. Sloane _ , Oct 20 2015] •

▶ [A290901] 0,0,1,7,29,93,260,689,1845,5150,14897,43663,127451,368383,1056682,3022366,8651672,24818978,71319058,205070493,589550733,1694075057,4866102091,13975547842,40139685023 ⋆ p - INVERT of the positive integers, where p(S) = 1 - S ^ 3 - S ^ 4. • a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 57 * a(n - 3) - 71 * a(n - 4) + 57 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8). •

▶ [A227086] 7,29,99,302,842,2177,5281,12128,26548,55684,112389,219051,413531,758154,1353017,2355283,4006629,6671623,10890535,17450956,27483624,42589055,65002969,97810106,145217866 ⋆ Number of n X 3 binary arrays indicating w hether each 2 X 2 subblock of a larger binary array has lexicographically increa sing rows and columns, for some larger (n + 1) X 4 binary array with rows and columns of the latter in lexicographically nondecreasing order. • a(n) = 12 * a(n - 1) - 66 * a(n - 2) + 220 * a(n - 3) - 495 * a(n - 4) + 792 * a(n - 5) - 924 * a(n - 6) + 792 * a(n - 7) - 495 * a(n - 8) + 220 * a(n - 9) - 66 * a(n - 10) + 12 * a(n - 11) - a(n - 12) for n>12. •

▶ [A102485] 1,7,29,103,341,1087,3389,10423,31781,96367,291149,877543,2640821,7938847,23849309,71613463,214971461,645176527,1936053869,5809210183,17429727701,52293377407,156888520829,470682339703,1412080573541 ⋆ a(n) = 5 * 3 ^ n - 4 * 2 ^ n. • a(n) = 5 * a(n - 1) - 6 * a(n - 2). •

▶ [A118171] 1,7,29,115,477,1843,7645,29491,122333,471859,1957341,7549747,31317469,120795955,501079517,1932735283,8017272285,30923764531,128276356573,494780232499,2052421705181,7916483719987,32838747282909,126663739519795,525419956526557 ⋆ Decimal representation of n - th iteration of the Rule 158 elementary cellular automaton starting with a single black cell. • a(n) = (1 / 30) * (- 16 + (- 4) ^ n - 10 * (- 1) ^ n + 55 * 4 ^ n). • a(n) = 17 * a(n - 2) - 16 * a(n - 4) for n>3. • a(n) = floor(28 * 4 ^ n / 15) for even n>=0; a(n) = floor(27 * 4 ^ n / 15) for odd n. - _ Karl V. Keller, Jr. _ , Oct 09 2020 •

▶ [A072261] 7,29,117,469,1877,7509,30037,120149,480597,1922389,7689557,30758229,123032917,492131669,1968526677,7874106709,31496426837,125985707349,503942829397,2015771317589,8063085270357,32252341081429,129009364325717,516037457302869 ⋆ a(n) = 4 * a(n - 1) + 1, a(1)=7. • a(n) = 5 * a(n - 1) - 4 * a(n - 2) for n>2. (End) • a(n) = a(n - 1) + 11 * 2 ^ (2 * n - 3), for n >= 2, with a(1) = 7. - _ Wolfdieter Lang _ , Aug 16 2021 •

▶ [A037576] 1,7,29,119,477,1911,7645,30583,122333,489335,1957341,7829367,31317469,125269879,501079517,2004318071,8017272285,32069089143,128276356573,513105426295,2052421705181,8209686820727,32838747282909 ⋆ Base - 4 digits are, in order, the first n terms of the periodic sequence with initial period 1,3. • a(n) = 4 * a(n - 1) + a(n - 2) - 4 * a(n - 3). - _ Vincenzo Librandi _ , Jun 22 2012 • a(n) = (7 * 4 ^ n + 3 * (- 1) ^ n - 10) / 15. - _ Bruno Berselli _ , Jun 22 2012, corrected by _ Klaus Purath _ , Mar 18 2021. • a(n) = floor(7 * 4 ^ n / 15). - _ Karl V. Keller, Jr. _ , Mar 09 2021 • a(n) = 16 * a(n - 2) - 3 * (- 1) ^ n + 10, assuming that a(0) = 0. • a(n) = 4 * a(n - 1) + 2 + (- 1) ^ n. • a(n) = 5 * a(n - 1) - 4 * a(n - 2) + 2 * (- 1) ^ n, n > 2. (End) •

▶ [A327587] 1,1,7,29,121,649,5041,42909,364561,3515651,39916801,486821873,6227020801,86497214231,1307843292757,21004582611869,355687428096001,6390006277567483,121645100408832001,2435277595236694779,51091124681475552961,1123451899297248225431 ⋆ a(n) = n! * Sum _{ d|n } (- 1) ^ (n - d) / (n / d)! ^ d. • a(p) = p! + 1, where p is odd prime. •

▶ [A048876] 1,7,29,123,521,2207,9349,39603,167761,710647,3010349,12752043,54018521,228826127,969323029,4106118243,17393796001,73681302247,312119004989,1322157322203,5600748293801,23725150497407,100501350283429,425730551631123,1803423556807921 ⋆ a(n) = 4 * a(n - 1) + a(n - 2); a(0)=1, a(1)=7. • a(n) = ((1 + sqrt(5)) * (2 + sqrt(5)) ^ n + (1 - sqrt(5)) * (2 - sqrt(5)) ^ n) / 2. • a(n) = Fibonacci(3 * n + 7) mod Fibonacci(3 * n + 3), n > 0. • a(n) = Fibonacci(3 * n + 3) - Fibonacci(3 * n - 1). (End) • a(n) = 5 * F(2 * n) * F(n + 1) - L(n - 1) * (- 1) ^ n. - _ J. M. Bergot _ , Mar 22 2016 • a(n) = Sum _{ k=0..n } binomial(n,k) * 5 ^ floor((k + 1) / 2) * 2 ^ (n - k). - _ Tony Foster III _ , Sep 03 2017 •

▶ [A252832] 7,29,127,493,1474,3365,6211,10017,14783,20509,27195,34841,43447,53013,63539,75025,87471,100877,115243,130569,146855,164101,182307,201473,221599 ⋆ Number of n X 4 nonnegative integer arrays with upper left 0 and every value within 2 of its king move distance from the upper left and every value increasing by 0 or 1 with every step right, diagonally se or down. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>8. •

▶ [A179599] 1,7,29,143,661,3127,14669,69023,324421,1525447,7171709,33718703,158529781,745338967,3504255149,16475477183,77460472741,364185235687,1712239488989,8050200352463,37848516969301,177947153727607 ⋆ Eight white kings and one red king on a 3 X 3 chessboard. G.f.: (1 + 4 * x) / (1 - 3 * x - 8 * x ^ 2). • a(n) = 3 * a(n - 1) + 8 * a(n - 2) with a(0) = 1 and a(1) = 7. • a(n) = ((11 + 4 * A) * A ^ (- n - 1) + (11 + 4 * B) * B ^ (- n - 1)) / 41 with A = (- 3 + sqrt(41)) / 16 and B = (- 3 - sqrt(41)) / 16. •

▶ [A063128] 7,30,54,78,102,126,150,174,198,222,246,270,294,318,342,366,390,414,438,462,486,510,534,558,582 ⋆ Dimension of the space of weight 2n cusp forms for Gamma _ 0(60). • a(n) = 2 * a(n - 1) - a(n - 2) for n>3. • a(n) = 6 * (4 * n - 3) for n>1. •

▶ [A139274] 0,7,30,69,124,195,282,385,504,639,790,957,1140,1339,1554,1785,2032,2295,2574,2869,3180,3507,3850,4209,4584 ⋆ a(n) = n * (8 * n - 1). • a(n) = 16 * n + a(n - 1) - 9 (with a(0)=0). - _ Vincenzo Librandi _ , Aug 03 2010 • a(n) = (1 / 3) * Sum _{ i=n..(7 * n - 1) } i. - _ Wesley Ivan Hurt _ , Dec 04 2016 •

▶ [A086640] 7,30,71,130,207,302,415,546,695,862,1047,1250,1471,1710,1967,2242,2535,2846,3175,3522,3887,4270,4671,5090,5527 ⋆ Arrange n ^ 2 octagons that each have area 7 so that they leave (n - 1) ^ 2 square gaps each with area 2; a(n) is the total area of these polygons. • a(n) = 9n ^ 2 - 4n + 2. •

▶ [A045889] 1,7,30,102,303,825,2116,5200,12381,28779,65658,147594,327835,721069,1573056,3408084,7340265,15728895,33554710,71303470,150995271,318767457,671089020,1409286552,2952790453 ⋆ Partial sums of A045618. • a(n) = (n ^ 2 + 11 * n + 34) / 2 + (n - 2) * 2 ^ (n + 3). • a(n) = Sum _{ k=1..n + 4 } Sum _{ i=1..n + 4 } (i - k) * C(n - k + 4,i). - _ Wesley Ivan Hurt _ , Sep 19 2017 •

▶ [A038739] 1,7,30,103,314,895,2455,6590,17480,46070,121016,317342,831465,2177613,5702054,14929365,39087010,102332805,267912735,701406940,1836309856,4807524652,12586266400,32951277148,86267567969 ⋆ T(n,n - 2), array T as in A038738. • a(n) = Sum _{ k=0..n } (binomial(n + 3,k + 4) * Fibonacci(k)). - _ Vladimir Kruchinin _ , Oct 24 2016 •

▶ [A276289] 0,1,7,30,104,320,912,2464,6400,16128,39680,95744,227328,532480,1232896,2826240,6422528,14483456,32440320,72220672,159907840,352321536,772800512,1688207360,3674210304 ⋆ Expansion of x * (1 + x) / (1 - 2 * x) ^ 3. • a(n) = 6 * a(n - 1) - 12 * a(n - 2) + 8 * a(n - 3). • a(n) = Sum _{ k = 0..n } binomial(n,k) * k * (3 * k - 1) / 2. • a(n) = 2 ^ (n - 3) * n * (3 * n + 1). •

▶ [A364655] 0,0,1,7,30,106,339,1021,2956,8324,22965,62371,167306,444302,1170151,3060409,7956824,20581576,53000873,135952639,347525686,885612402,2250586811,5705067061,14429119332 ⋆ Circuit rank and corank of the n - Pell graph. • a(n) = 5 * a(n - 1) - 6 * a(n - 2) - 2 * a(n - 3) + 3 * a(n - 4) + a(n - 5). •

▶ [A368528] 0,1,7,30,106,343,1065,3244,9796,29469,88507,265642,797070,2391379,7174333,21523224,64569928,193710073,581130543,1743391990,5230176370,15690529551,47071589137,141214767940,423644304396 ⋆ a(n) = Sum _{ k=1..n } k ^ 2 * 3 ^ (n - k). • a(n) = 6 * a(n - 1) - 12 * a(n - 2) + 10 * a(n - 3) - 3 * a(n - 4). • a(n) = (3 ^ (n + 1) - (n ^ 2 + 3 * n + 3)) / 2. • a(0) = 0; a(n) = 3 * a(n - 1) + n ^ 2. •

▶ [A085277] 1,7,30,108,360,1152,3600,11088,33840,102672,310320,935568,2815920,8466192,25435440,76380048,229287600,688157712,2065062960,6196368528,18591464880,55779113232,167346776880,502059205008,1506215363760 ⋆ Expansion of (1 + x) ^ 2 / ((1 - 2x)(1 - 3x)). • a(n)=16 * 3 ^ n / 3 + 0 ^ n / 6 - 9 * 2 ^ n / 2. • a(0)=1, a(1)=7, a(2)=30, a(n)=5 * a(n - 1) - 6 * a(n - 2). - _ Harvey P. Dale _ , Sep 30 2012 •

▶ [A055269] 1,7,30,116,437,1635,6106,22792,85065,317471,1184822,4421820,16502461,61588027,229849650,857810576,3201392657,11947760055,44589647566,166410830212,621053673285,2317803862931,8650161778442,32282843250840,120481211224921 ⋆ a(n) = 4 * a(n - 1) - a(n - 2) + 3 with a(0)=1, a(1)=7. • a(n) = (((17 - 5 * (2 - sqrt(3))) * (2 + sqrt(3)) ^ n + (5 * (2 + sqrt(3)) - 17) * (2 - sqrt(3)) ^ n) / (4 * sqrt(3))) - 3 / 2. • a(n) = (5 * ChebyshevU(n, 2) - 3 * ChebyshevU(n - 1, 2) - 3) / 2. - _ G. C. Greubel _ , Mar 16 2020 •

▶ [A171472] 7,30,124,504,2032,8160,32704,130944,524032,2096640,8387584,33552384,134213632,536862720,2147467264,8589901824,34359672832,137438822400,549755551744,2199022731264,8796091973632,35184369991680 ⋆ a(n) = 6 * a(n - 1) - 8 * a(n - 2) for n > 1; a(0) = 7, a(1) = 30. • a(n) = 8 * 4 ^ n - 2 ^ n. •

▶ [A210100] 7,30,135,614,2799,12766,58231,265622,1211647,5526990,25211655,115004294,524598159,2392982206,10915714711,49792609142,227131616287,1036072863150,4726101083175,21558359689574,98339596281519,448581262028446 ⋆ Number of (n + 1) X 2 0..2 arrays with every 2 X 2 subblock having one or three distinct values, and new values 0..2 introduced in row major order. • a(n) = (1 / 2) + (2 ^ (- 2 - n) * ((5 - sqrt(17)) ^ n * (- 11 + 3 * sqrt(17)) + (5 + sqrt(17)) ^ n * (11 + 3 * sqrt(17)))) / sqrt(17). •

▶ [A171733] 1,1,1,7,31,41,137,151,391,409,889,911,1751,1777,3121,3151,5167,5201,8081,8119,12079,12121,17401,17447,24311 ⋆ a(2n)=A165568(n). a(2n + 1)=A165563(n). • a(n) = n ^ 3 / 8 + n ^ 2 / 16 - 15 / 32 + n ^ 4 / 16 + (- 1) ^ n * (n ^ 3 / 8 + 3 * n ^ 2 / 16 - n - 17 / 32). • a(n)= + a(n - 1) + 4 * a(n - 2) - 4 * a(n - 3) - 6 * a(n - 4) + 6 * a(n - 5) + 4 * a(n - 6) - 4 * a(n - 7) - a(n - 8) + a(n - 9). •

▶ [A349666] 7,31,47,71,127,151,167,239,311,431,439,479,607,631,647,727,839,911,967,991,1039,1231,1319,1399,1471 ⋆ Primes of the form 4 * k + 3 that are still a prime of the form 4 * k + 3 after 2 Collatz steps. • a(n) == 7 (mod 8). - _ Hugo Pfoertner _ , Dec 25 2021 •

▶ [A135659] 7,31,55,79,103,127,151,175,199,223,247,271,295,319,343,367,391,415,439,463,487,511,535,559,583 ⋆ a(n) = 24 * n + 7. • a(n) = 2 * a(n - 1) - a(n - 2). •

▶ [A157914] 7,31,71,127,199,287,391,511,647,799,967,1151,1351,1567,1799,2047,2311,2591,2887,3199,3527,3871,4231,4607,4999 ⋆ a(n) = 8 * n ^ 2 - 1. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). •

▶ [A304163] 7,31,73,133,211,307,421,553,703,871,1057,1261,1483,1723,1981,2257,2551,2863,3193,3541,3907,4291,4693,5113,5551 ⋆ a(n) = 9 * n ^ 2 - 3 * n + 1 with n>0. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). (End) •

► [A202254] 7,31,81,171,309,509,779,1133,1579,2131,2797,3591,4521,5601,6839,8249,9839,11623,13609,15811,18237,20901,23811,26981,30419 ⋆ Number of zero - sum - n..n arrays of 4 elements with adjacent element differences also in - n..n. ● a(n) = (22 * n ^ 3 + 33 * n ^ 2 + 26 * n + 12) / 12 for n even. ● a(n) = (22 * n ^ 3 + 33 * n ^ 2 + 26 * n + 3) / 12 for n odd. ●

► [A118934] 1,1,1,1,7,31,91,211,1681,12097,57961,209881,1874071,17842111,117303187,575683291,5691897121,65641390081,544238393041,3362783785777,3645547 3647271,485442581801311,4828464958268491,35900587138847971 ⋆ E.g.f.: exp(x + x ^ 4 / 4). ● a(n) = a(n - 1) + (n - 1) * (n - 2) * (n - 3) * a(n - 4) for n>=4, with a(0)=a(1)=a(2)=a(3)=1. ● a(n) = Sum _{ k=0..floor(n / 4) } n! / (4 ^ k * k! * (n - 4 * k)!). - _ G. C. Greubel _ , Mar 07 2021 ●

► [A118935] 1,1,1,1,7,31,91,211,1681,12097,57961,209881,1874071,17842111,117303187,575683291,26124309121,412992394081,3670397429041,23161791013777,729 420726627271,13374596287229311,143560108604864491 ⋆ E.g.f.: A(x) = exp(Sum _{ n>=0 } x ^ (4 ^ n) / 4 ^ ((4 ^ n - 1) / 3)). ● a(n) = Sum _{ k=0..[n / 4] } n! / [k! * (n - 4 * k)! * 4 ^ k] * a(k), with a(0)=1. ●

► [A226838] 1,1,1,1,7,31,91,211,1681,25537,192361,949081,4830871,85109311,951 416467,6696998491,119863554721,2004272484481,25344895874641,237953743909 297,4116426696101671,65285723209356511,903886886890585291,10132514132979 331171,165368713321379497777 ⋆ E.g.f.: exp(Sum _{ n>=1 } x ^ (n ^ 2) / n ^ n). ● a(n) == 1 (mod 6) (conjecture - valid up to n=1024; if true for n>=0, why?). ●

► [A205801] 1,1,1,1,7,31,91,211,1681,52417,461161,2427481,10744471,21964371 1,2619643027,18939628891,1410692293921,23943786881281,263853697605841,22 37281161036337,53316533506210471,900164075618402911,112651584415378908 9 1,112769404714319769571 ⋆ Expansion of e.g.f. exp(Sum _{ n>=1 } x ^ (n ^ 2) / (n ^ 2)). ● a(0) = 1; a(n) = (n - 1)! * Sum _{ k=1..floor(sqrt(n)) } a(n - k ^ 2) / (n - k ^ 2)!. - _ Seiichi Manyama _ , Apr 29 2022 ●

► [A193437] 1,1,1,1,7,31,91,931,7441,38017,507241,5864761,43501591,71305971 1,10776989587,105784464331,2052437475361,38263122487681,469863736958161,1 0518597616325617,232980391759702951,3446848352553524191,873852573308319 47851 ⋆ E.g.f.: exp(Sum _{ n>=0 } x ^ (3 * n + 1) / (3 * n + 1)). ● a(n) = a(n - 1) + (n - 3) * (n - 2) * (n - 1) * a(n - 3). - _ Vaclav Kotesovec _ , Apr 15 2020 ● a(0) = 1; a(n) = Sum _{ k=0..floor((n - 1) / 3) } binomial(n - 1,3 * k) * (3 * k)! * a(n - 3 * k - 1). - _ Ilya Gutkovskiy _ , Jul 14 2021 ●

► [A107392] 7,31,103,303,831,2175,5503,13567,32767,77823,182271,421887,96665 5,2195455,4947967,11075583,24641535,54525951,120061951,263192575,57461964 7,1249902591,2709520383,5855248383,12616466431 ⋆ Number of (inequivalent) f uzzy subgroups of the direct sum of group of integers modulo p ^ n and group o f integers modulo 2 for a prime p with (p,2) = 1. Z _{ p ^ n } + Z _ 2. ● a(n) = (2 ^ n) * (n ^ 2 + 7n + 8) - 1 for n=0..14. ●

► [A054497] 1,7,31,105,300,756,1732,3676,7330,13870,25102,43714,73612,12034 0,191620,298012,453739,677677,994565,1436435,2044328,2870296,3979768,54542 80,7394660 ⋆ Number of symmetric nonnegative integer 7 X 7 matrices with su m of elements equal to 4 * n, under action of dihedral group D _ 4. ● a(0)=1, a(1)=7, a(2)=31, a(3)=105, a(4)=300, a(5)=756, a(6)=1732, a(7)=3676, a(8)=7 330, a(9)=13870, a(10)=25102, a(11)=43714, a(12)=73612, a(n) = 7 * a(n - 1) - 18 * a(n - 2) + 14 * a(n - 3) + 25 * a(n - 4) - 63 * a(n - 5) + 36 * a(n - 6) + 36 * a(n - 7) - 63 * a(n - 8) + 25 * a(n - 9) + 14 * a(n - 10) - 18 * a(n - 11) + 7 * a (n - 12) - a(n - 13). - _ Harvey P. Dale _ , Feb 03 2012 ● a(n) = ((2835 * (401 7 + 79 * (- 1) ^ n) + 18 * (1513217 + 4095 * (- 1) ^ n) * n + 90 * (284609 + 6 3 * (- 1) ^ n) * n ^ 2 + 12771104 * n ^ 3 + 3787056 * n ^ 4 + 701400 * n ^ 5 + 81900 * n ^ 6 + 5856 * n ^ 7 + 234 * n ^ 8 + 4 * n ^ 9)) / 11612160. - _ Col in Barker _ , Jan 15 2017 ●

► [A235593] 0,0,0,1,7,31,106,301,742,1638,3312,6237,11077,18733,30394,47593,72 268,106828,154224,218025,302499,412699,554554,734965,961906 ⋆ Binomial(n - 1 ,3) + 3 * binomial(n - 1,4) + 6 * binomial(n - 1,5) + 5 * binomial(n - 1,6). ● a(n) = (720 - 2136 * n + 2450 * n ^ 2 - 1395 * n ^ 3 + 425 * n ^ 4 - 69 * n ^ 5 + 5 * n ^ 6) / 720. ●

► [A119359] 0,1,1,7,31,106,386,1499,5755,21886,83854,323302,1248534,4828916,1 8719364,72711123,282867795,1101981430,4298723990,16788997874,6564129657 8,256895812108,1006307847324,3945185527582,15478851119966 ⋆ Central coeffic ients of number triangle A119326. ● a(n) = (C(2n,n + 1) + C((n - 1) / 2) * sin (Pi * n / 2) - 2 * 0 ^ n - 2C(n - 1,n / 2) * sin(Pi * (n - 1) / 2)) / 2. ● a(n) = hy pergeom([- 1 / 2 - n / 2, 1 / 2 - n / 2, 1 - n / 2, - n / 2], [1 / 2, 1 / 2, 1], 1] - 0 ^ n. - _ Vladimir Reshetnikov _ , Oct 04 2016 ●

► [A205492] 1,7,31,109,334,937,2475,6267,15393,36976,87369,203915,471546,108 2849,2473535,5627684,12765052,28887838,65260270,147233926,331842395,747355 066,1682185342,3784718431,8512408455 ⋆ Expansion of (1 - x ^ 2 - x ^ 3 - x ^ 4 + x ^ 5) / ((1 - x) ^ 3 * (1 - x - x ^ 2) ^ 2 * (1 - 2 * x - x ^ 2 + x ^ 3)). ● a(n) = 7 * a(n - 1) - 17 * a(n - 2) + 12 * a(n - 3) + 15 * a(n - 4) - 26 * a(n - 5) + 3 * a(n - 6) + 13 * a(n - 7) - 5 * a(n - 8) - 2 * a(n - 9) + a(n - 10), n>9, { a(m) } = { 1, 7, 31, 109, 334, 937, 2475, 6267, 15393, 36976 } , m=0,...,9. ●

► [A055580] 1,7,31,111,351,1023,2815,7423,18943,47103,114687,274431,647167,1 507327,3473407,7929855,17956863,40370175,90177535,200278015,442499071,9730 78527,2130706431,4647288831,10099884031 ⋆ Björner - Welker sequence: 2 ^ n * (n ^ 2 + n + 2) - 1. ● a(n) = Sum _{ k=0..n + 1 } Sum _{ i=0..n + 1 } i ^ 2 * C(k,i). - _ Wesley Ivan Hurt _ , Sep 21 2017 ●

► [A097786] 1,7,31,113,374,1178,3618,10974,33087,99481,298729,896551,269010 8,8070884,24213332,72640812,217923405,653771355,1961315395,5883947725,1765 1844946,52955536862,158866612886,476599841258,1429799526699 ⋆ a(n)=3a(n - 1) + C(n + 3,3),n>0, a(0)=1. ● a(0)=1, a(1)=7, a(2)=31, a(3)=113, a(4)=374, a(n)=7 * a(n - 1) - 18 * a(n - 2) + 22 * a(n - 3) - 13 * a(n - 4) + 3 * a(n - 5) [Fr om Harvey P. Dale, Nov 26 2011] ●

► [A197649] 0,1,7,31,115,390,1254,3893,11789,35045,102695,297516,853932,2432 041,6881395,19361995,54214939,151164018,419910354,1162585565,3209268665,88 35468881,24266461007,66501634776,181882282200 ⋆ a(n) = Sum _{ k=0..n } k * Fibonacci(2 * k). ● a(n) = n * F(2 * n + 1) - F(2 * n), where F(n)= Fibonacc i(n). ● a(n) = ((F(2 * n + 1) * ((n - 1) * h(n - 1) - (n - 1) * h(n - 2)) - h(n) * F(2 * n)) / h(n), n > 2, where h(n) is the n - th harmonic number. ●

► [A006458] 1,7,31,115,391,1267,3979,12271,37423,113371,342091,1029799,30956 71,9298147,27914179,83777503,251394415,754292827,2263072411,6789560407,203 69288455,61108939795,183328720435,549989524879,1649974525855 ⋆ Number of elements in Z[omega] whose 'smallest algorithm' is <= n, where omega ^ 2 = - omega - 1. ● a(n + 6) - 5 * a(n + 5) + 5 * a(n + 4) + 5 * a(n + 3) - 4 * a(n + 2) - 8 * a(n + 1) + 6 * a(n) = 0. ●

► [A091344] 0,1,7,31,115,391,1267,3991,12355,37831,115027,348151,1050595,316 4071,9516787,28599511,85896835,257887111,774054547,2322950071,6970423075,2 0914414951,62749536307,188261191831,564808741315 ⋆ a(n) = 2 * 3 ^ n - 3 * 2 ^ n + 1. ● a(n) = Sum _{ i=1..n } i! * i ^ 2 * Stirling2(n,i) * (- 1) ^ (n - i). ● a(n) = 6 * a(n - 1) - 11 * a(n - 2) + 6 * a(n - 3); ● a(n) = 5 * a(n - 1) - 6 * a(n - 2) + 2, a(0)=0, a(1)=1. - _ Vincenzo Librandi _ , Nov 25 2010 ●

► [A147597] 1,7,31,119,455,1799,7175,28679,114695,458759,1835015,7340039,29 360135,117440519,469762055,1879048199,7516192775,30064771079,12025908429 5,481036337159,1924145348615,7696581394439,30786325577735,12314530231091 9,492581209243655 ⋆ a(n) is the number whose binary representation is A13814 6(n). ● a(n) = 5 * a(n - 1) - 4 * a(n - 2) for n>5. ● a(n) = 7 * 4 ^ (n - 2) + 7 fo r n>3. - _ Colin Barker _ , Nov 25 2016 ●

► [A048775] 1,7,31,121,456,1709,6427,24301,92368,352705,1352066,5200287,2005 8286,77558745,300540179,1166803093,4537567632,17672631881,68923264390,269 128937199,1052049481838,4116715363777,16123801841526,63205303218851,2479 59266474026 ⋆ Number of (partially defined) monotone maps from intervals of 1..n to 1..n. ● a(n) = (1 / 2) * Sum[Sum[(i + j)! / (i! * j!), { i,1,n }], { j,1,n }]. - _ Alexander Adamchuk _ , Jul 04 2006; corrected by _ N. J. A. Sloane _ , Jan 30 2009 ● a(n) = Sum _{ k=0..n } (n - k + 1) * C(n + k + 1,n) = [x ^ n](1 + x) ^ n * F(- n - 2, - n - 1;1;x / (1 + x)). - _ Paul Barry _ , Oct 01 2010 ● a(n) = (1 / 2) * Sum _{ k=1..n } Sum _{ i=1..n } C(k + i,i). - _ Wesley Ivan Hurt _ , Sep 19 2017 ●

► [A083420] 1,7,31,127,511,2047,8191,32767,131071,524287,2097151,8388607,33 554431,134217727,536870911,2147483647,8589934591,34359738367,13743895347 1,549755813887,2199023255551,8796093022207,35184372088831,14073748835532 7,562949953421311 ⋆ a(n) = 2 * 4 ^ n - 1. ● a(n) = (- 16 ^ n / 2) * B(2n, 1 / 4) / B(2n) where B(n, x) is the n - th Bernoulli polynomial and B(k) = B(k, 0) is the k - th Bernoulli number. ● a(n) = 5 * a(n - 1) - 4 * a(n - 2). ● a(n) = (- 4 ^ n / 2) * B(2 * n, 1 / 2) / B(2 * n). (End) ● a(n) = Stirling2(2 * (n + 1), 2). - _ Zerinvary Lajos _ , Dec 06 2006 ● a(n) = 4 * a(n - 1) + 3 with n > 0, a(0) = 1. - _ Vincenzo Librandi _ , Dec 30 2010 ● a(n) = Sum _{ i = 0..n } binomial (2n + 2, 2i). - _ Wesley Ivan Hurt _ , Mar 14 2015 ●

► [A180147] 1,7,31,139,607,2659,11623,50827,222223,971635,4248247,18574555,8 1213151,355086787,1552539271,6788138539,29679651247,129767784979,56738126 2423,2480750497147,10846539065983,47424120180835 ⋆ Eight rooks and one ber serker on a 3 X 3 chessboard. G.f.: (1 + 3 * x) / (1 - 4 * x - 3 * x ^ 2 + 6 * x ^ 3). ● a(n) = 4 * a(n - 1) + 3 * a(n - 2) - 6 * a(n - 3) with a(0)=1, a(1)=7 and a(2)=31. ● a(n) = - 1 / 2 + (7 + 6 * A) * A ^ (- n - 1) / 22 + (7 + 6 * B) * B ^ (- n - 1) / 22 with A=(- 3 + sqrt(33)) / 12 and B=(- 3 - sqrt(33)) / 12. ●

► [A255284] 1,7,31,145,601,2551,10351,42433,170761,690247,2768191,11123185,4 4543161,178525591,714455311,2860291873,11443638121,45791846887,1831846819 51,732859788625,2931560215321,11727088287031,46909200573871,187642734275 713,750576869083081 ⋆ a(n) = A255283(2 ^ n - 1). ● a(n) = 2 ^ (3 + 2 * n) / 3 - 7 ^ ((n - 1) / 2) / 6 * (11 - 11 * (- 1) ^ n + 5 * sqrt(7) + 5 * (- 1) ^ n * sqrt(7)). ● a(n) = 4 * a(n - 1) + 7 * a(n - 2) - 28 * a(n - 3) for n>2. ●

► [A005825] 0,1,7,31,145,659,3013,13739,62685,285931,1304317,5949691,271398 85,123799979,564720253,2576001179,11750565645,53600825611,244502997277,11 15313334651,5087560679725,23207176728299,105860762284093,48288945796181 9,2202725765245005 ⋆ Numerators in a worst case of a Jacobi symbol algorithm . ● a(n) = 5 * a(n - 1) - 10 * a(n - 3) + 4 * a(n - 4), by definition [_ R. J. Mat har _ , Mar 11 2009] ●

► [A086901] 1,1,7,31,145,673,3127,14527,67489,313537,1456615,6767071,3143812 9,146053729,678529303,3152278399,14644701505,68035641217,316076669383,146 8413601183,6821884412881,31692778455073,147236767058935 ⋆ a(1) = a(2) = 1; for n>2, a(n) = 4 * a(n - 1) + 3 * a(n - 2). ● a(n) = ((c + 5) * b ^ n - (b + 5) * c ^ n) / 14, where b = 2 + sqrt(7), c = 2 - sqrt(7). ● a(n) = upper left term i n the 2 X 2 matrix [1,2; 3,3] ^ (n - 1). - _ Gary W. Adamson _ , Mar 02 2008 ● a(n) = (1 / 14) * (2 - sqrt(7)) ^ n * sqrt(7) - (1 / 14) * sqrt(7) * (2 + sqrt(7)) ^ n + (1 / 2) * (2 - sqrt(7)) ^ n + (1 / 2) * (2 + sqrt(7)) ^ n, with n>=0. - _ Paolo P. Lava _ , Nov 20 2008 ●

► [A121517] 1,1,7,31,151,721,3457,16561,79351,380191,1821607,8727841,4181760 1,200360161,959983207,4599555871,22037796151,105589424881,505909328257,24 23957216401,11613876753751,55645426552351,266613256008007 ⋆ a(n) = 4 * a(n - 1) + 4 * a(n - 2) - a(n - 3); a(0)=1, a(1)=1, a(2)=7. ● a(n) = 5 * a(n - 1) - a (n - 2) + 3 * (- 1) ^ n. ● a(n) = (3 / 7) * (- 1) ^ n + (2 / 7) * [5 / 2 + (1 / 2) * sqrt(21)] ^ n + (2 / 7) * [5 / 2 - (1 / 2) * sqrt(21)] ^ n. - _ Paolo P. Lava _ , Jul 07 2008 ●

► [A199216] 7,31,151,751,3751,18751,93751,468751,2343751,11718751,58593751,2 92968751,1464843751,7324218751,36621093751,183105468751,915527343751,4577 636718751,22888183593751,114440917968751,572204589843751,286102294921875 1 ⋆ 6 * 5 ^ n + 1. ● a(n) = 5 * a(n - 1) - 4. ● a(n) = 6 * a(n - 1) - 5 * a(n - 2). ●

► [A102239] 1,7,31,157,781,3907,19531,97657,488281,2441407,12207031,6103515 7,305175781,1525878907,7629394531,38146972657,190734863281,953674316407,4 768371582031,23841857910157,119209289550781,596046447753907 ⋆ a(n) = (Su m _{ i=0..n } 5 ^ i) + 1 - (Sum _{ i=0..n } 5 ^ i) mod 2. ● a(n) = 4 * a(n - 1) + 5 * a(n - 2) - 2 (conjecture). - _ Creighton Dement _ , Apr 13 2005 ● a(n) = 5 * a(n - 1) + a(n - 2) - 5 * a(n - 3). (End) ●

► [A319457] 1,1,7,31,175,931,5209,29114,165087,940828,5396777,31090962,1798 32625,1043516371,6072302726,35420582431,207051636799,1212583329959,71131 93757656,41788933655049,245831162935825,1447891754747672,853711131544222 2,5038716265027105 5,297664212003582753 ⋆ a(n) = [x ^ n] Product _{ k>=1 } 1 / ((1 - x ^ k) * (1 - x ^ (2 * k))) ^ n. ● a(n) = [x ^ n] Product _{ k>=1 } (1 + x ^ k) ^ n / (1 - x ^ (2 * k)) ^ (2 * n). ● a(n) = [x ^ n] exp(n * Sum _{ k> =1 } (4 * sigma(k) - sigma(2 * k)) * x ^ k / k). ●

► [A155521] 0,1,1,7,31,191,1331,10655,95887,958879,10547659,126571919,1645434935,23036089103,345541336531,5528661384511,93987243536671,1691770383660095,32143637289541787,642872745790835759,13500327661607550919 ⋆ Smallest fixed point summed over all non - derangement permutations of { 1,2,...,n } . • a(n) = (n + 1) * a(n - 1) + n * (- 1) ^ (n + 1); a(0)=0. • a(n) = (n + 1)! + (- 1) ^ n - 2(n + 1) * d(n), •

► [A329944] 1,1,1,1,7,31,211,1051,10081,107857,1227241,8969401,108817831,1173362191,19426473067,320062090531,5692838161921,70426164947041,1346222143950481,21952313047471537,493701484264143751,10971915198235355071,26654279882275039533 1 ⋆ Number of permutations of [n] whose cycle lengths avoid primes. • a(n) mod 2 = 1. • a(n) mod 10 = period 5: repeat [1,1,1,1,7], g.f.: (7 * x ^ 4 + x ^ 3 + x ^ 2 + x + 1) / (1 - x ^ 5). •

► [A221875] 1,7,31,265,1177,10063,44695,382129,1697233,14510839,64450159,551029753,2447408809,20924619775,92937084583,794584521697,3529161805345,30173287204711,134015211518527,1145790329257321,5089048875898681,43509859224573487 ⋆ Numbers m such that 10 * m ^ 2 - 6 is a square. • a(n) = ((5 - t * (- 1) ^ n) * (3 + t) ^ (2 * floor(n / 2)) + (5 + t * (- 1) ^ n) * (3 - t) ^ (2 * floor(n / 2))) / 10, where t=sqrt(10). • a(n) * a(n - 3) - a(n - 1) * a(n - 2) = 36 + 12(- 1) ^ n. •

► [A013656] 0,7,32,75,136,215,312,427,560,711,880,1067,1272,1495,1736,1995,2272,2567,2880,3211,3560,3927,4312,4715,5136 ⋆ a(n) = n * (9 * n - 2). • a(n) = a(n - 1) + 18 * n - 11 with n>0, a(0)=0. - _ Vincenzo Librandi _ , Nov 22 2010 • a(0)=0, a(1)=7, a(2)=32, a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Jul 07 2012 •

► [A126562] 0,7,32,81,160,275,432,637,896,1215,1600,2057,2592,3211,3920,4725,5632,6647,7776,9025,10400,11907,13552,15341,17280 ⋆ Number of intersections of at least four edges in a cube of n X n X n smaller cubes. • a(n) = 6 * (n - 1) ^ 2 + (n - 1) ^ 3. •

► [A182820] 1,7,32,119,385,1127,3057,7799,18914,43950,98434,213486,450051,925013,1858355,3657052,7062245,13404195,25038741,46086250,83669927,149970936,265608168,465149039,806022315 ⋆ G.f.: exp(Sum _{ n>=1 } sigma(4n) * x ^ n / n). • a(n) = Sum _{ k = 0..4 * n } i ^ k * b(k) * b(4 * n - k), where b(n) := Sum _{ k = 0..n } (- 1) ^ k * p(k) * p(n - k). (End) •

► [A001794] 1,7,32,120,400,1232,3584,9984,26880,70400,180224,452608,1118208,2723840,6553600,15597568,36765696,85917696,199229440,458752000,1049624576,2387607552,5402263552,12163481600,27262976000 ⋆ Negated coefficients of Chebyshev T polynomials: [x ^ n](- T(n + 6, x)), n >= 0. • a(n) = 2 ^ (n - 2) * (n + 1) * (n + 2) * (n + 6) / 3. [See a comment in A053120 on subdiagonals. - _ Wolfdieter Lang _ , Jan 03 2020] • a(n) = Sum _{ k=0..floor((n + 6) / 2) } C(n + 6, 2 * k) * C(k, 3). - _ Paul Barry _ , May 15 2003 • a(n) = Sum _{ i =0..n + 1 } (Sum { k=0..i } (k ^ 2 * binomial(n + 1, i))). - _ Jon Perry _ , Feb 26 2004 [corrected by _ Michel Marcus _ , Mar 25 2017] • a(n) = (2 ^ (n - 1) / 3) * binomial(n + 2,2) * (n + 6). - _ Brad Clardy _ , Mar 08 2012 •

► [A178851] 0,0,1,7,32,121,412,1317,4048,12144,35904,105249,306968,892217,2585468,7468532,21500800,61688513,176477988,503906221,1438235592,4110846808,11789919200,33991337521,98657320240 ⋆ The number of length n sequences on { 0,1,2 } (ternary sequences) that contain a prime number of 2's. • a(n) = Sum Binomial(n,p) * 2 ^ (n - p) where the sum is taken over the prime numbers. •

► [A213163] 1,7,32,122,422,1376,4315,13165,39360,115860,336876,969792,2768917,7851187,22130912,62066126,173294930,481976480,1335880495,3691245145,10171349376,27957706152,76672984152,209839988352,573211991977 ⋆ Sequence of coefficients of x in marked mesh pattern generating function Q _{ n,132 }^ (3,0, - ,0)(x). • a(n) = (7 * n + 6) * F(2 * n) / 5 - (4 * n + 5) * F(2 * n + 1) / 5 + 1 , where F is Fibonacci number (A000045). •

► [A249999] 1,7,32,122,423,1389,4414,13744,42245,128771,390396,1179366,3554467,10696153,32153978,96592988,290041089,870647535,2612991160,7841070610,23527406111,70590606917,211788597942,635399348232,1906265153533 ⋆ Expansion of 1 / ((1 - x) ^ 2 * (1 - 2 * x) * (1 - 3 * x)). • a(n) = 9 / 4 - 2 ^ (n + 3) + n / 2 + 3 ^ (n + 3) / 4. - _ R. J. Mathar _ , Jan 09 2015 •

► [A050148] 1,7,32,160,832,4424,23872,130176,715520,3957448,21998176,122786976,687736896,3863423880,21758302848,122811081216,694533774336,3934558067336,22323615621280,126832567223712,721500116473664 ⋆ a(n) = T(n,n - 2), array T as in A050143. • a(n) = Sum _{ s=1..n } binomial(n,s) * binomial(s + n - 4,n - 3) = n * hypergeom([- n + 1, n - 2], [2], - 1) for n >= 3. - _ Petros Hadjicostas _ , Feb 13 2021 •

► [A024093] 1,7,32,269,3072,29643,254368,2080345,16744448,134158679,1073641824,8589773541,68719227904,549755442595,4398045973280,35184371329457,281474975662080,2251799812265391,18014398507592416,144115188073379773,1152921504603646976 ⋆ a(n) = 8 ^ n - n ^ 5. • a(n) = 14 * a(n - 1) - 63 * a(n - 2) + 140 * a(n - 3) - 175 * a(n - 4) + 126 * a(n - 5) - 49 * a(n - 6) + 8 * a(n - 7) for n > 6. •

► [A275163] 7,33,85,189,397,813,1645,3309,6637,13293,26605,53229,106477,212973,425965,851949,1703917,3407853,6815725,13631469,27262957,54525933,109051885,218103789,436207597 ⋆ a(n) = 13 * 2 ^ (n + 1) - 19. • a(0) = 7; a(n) = 2 * a(n - 1) + 19 for n>=1. •

► [A051895] 0,7,33,90,190,345,567,868,1260,1755,2365,3102,3978,5005,6195,7560,9112,10863,12825,15010,17430,20097,23023,26220,29700 ⋆ Partial sums of second pentagonal numbers with even index (A049453). • a(n) = n * (n + 1) * (4 * n + 3) / 2. • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Vincenzo Librandi _ , Apr 27 2012 •

► [A168574] 1,7,33,95,209,391,657,1023,1505,2119,2881,3807,4913,6215,7729,9471,11457,13703,16225,19039,22161,25607,29393,33535,38049 ⋆ a(n) = (4 * n + 3) * (1 + 2 * n ^ 2) / 3. • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) . • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + 16. •

► [A370214] 1,1,1,7,33,101,319,1226,4705,17017,61901,231837,872031,3260856,12220846,46062632,174030177,657910813,2490889801,9448650829,35890996733,136473161741,519476028237,1979421705602,7549358718559 ⋆ Coefficient of x ^ n in the expansion of ((1 + x) / (1 - x ^ 3) ^ 2) ^ n. • a(n) = Sum _{ k=0..floor(n / 3) } binomial(2 * n + k - 1,k) * binomial(n,n - 3 * k). •

► [A362300] 1,1,1,7,33,101,1681,14211,72577,1906633,23242401,166218911,5966236321,95016917997,873707885233,39767572858651,781865428682241,8787169718273681,48450026557770681 7,1133526693709881618 3,1505549182418340560 1,9749671976020428623221 ⋆ a(n) = n! * Sum _{ k=0..floor(n / 3) } (n / 3) ^ k * binomial(n - 2 * k,k) / (n - 2 * k)!. • a(n) = n! * [x ^ n] exp(x + n * x ^ 3 / 3). •

► [A338232] 0,0,1,7,33,121,378,1065,2803,7045,17148,40789,95373,220065,502414,1136977,2553831,5699149,12645504,27914877,61337665,134213065,292547346,635430937,1375724763 ⋆ Number of ternary strings of length n that contain at least two 0's and at most two 1's. • a(n) = 2 ^ n + n * 2 ^ (n - 1) + binomial(n,2) * 2 ^ (n - 2) - 3 * binomial(n,2) - 3 * binomial(n,3) - 2 * n - 1. •

► [A000605] 1,7,33,123,257,515,925,1419,2109,3071,4169,5575,7153,9171,11513,14147,17077,20479,24405,28671,33401,38911,44473,50883,57777 ⋆ Number of points of norm <= n in cubic lattice. • a(n) = [x ^ (n ^ 2)] theta _ 3(x) ^ 3 / (1 - x), where theta _ 3() is the Jacobi theta function. - _ Ilya Gutkovskiy _ , Apr 14 2018 •

► [A215054] 1,7,33,124,397,1125,2893,6871,15269,32065,64130,122916,226922,405218,702378,1185263,1952198,3145208,4966118,7697483,11729498,17594247,26008887,37929627,54618663 ⋆ a(n) = 1 / 11 * (binomial(n,11) - floor(n / 11)). • a(n) = 1 / 11 * (binomial(n,11) - floor(n / 11)). •

► [A114014] 1,7,33,127,529,2031,8465,32495,135441,519919,2167057,8318703,34672913,133099247,554766609,2129587951,8876265745,34073407215,142020251921,545174515439,2272324030737,8722792247023,36357184491793 ⋆ Expansion of g.f. (1 + 2 * x) ^ 4 / ((1 + x) * (1 - 16 * x ^ 2)). • a(n) = (5 * (- 4) ^ n - 8 * (- 1) ^ n + 243 * 4 ^ n) / 120 for n>1. • a(n) = 4 * a(n - 1) + (- 1) ^ n * (4 ^ (n - 1) - 1) / 3, n>2, with a(0) = 1, a(1) = 7, and a(2) = 33. •

► [A320907] 0,1,7,33,130,461,1525,4802,14577,43025,124226,352437,985821,2725858,7466185,20291193,54791842,147164525,393517477,1048395650,2784568545,7377137441,19503081602,51470797413,135641216685 ⋆ Row sums of A320906. • a(n) = 9 * a(n - 1) - 31 * a(n - 2) + 50 * a(n - 3) - 36 * a(n - 4) + 8 * a(n - 5) for n>4. •

► [A066810] 0,0,1,7,33,131,473,1611,5281,16867,52905,163835,502769,1532883,4651897,14070379,42456897,127894979,384799049,1156756443,3475250065,10436235955,31330727961,94038321227,282211432673 ⋆ Expansion of x ^ 2 / ((1 - 3 * x) * (1 - 2 * x) ^ 2). • a(n) = 3 ^ n - 2 ^ n - n * 2 ^ (n - 1). • a(n) = Sum _{ k=2 ..n } binomial(n,k)2 ^ (n - k). (End) • a(n) = 3 * a(n - 1) + (n - 1) * 2 ^ (n - 2) . (End) •

► [A262600] 0,0,0,0,1,7,33,132,484,1684,5661,18579,59917,190696,600744,1877256,5828185,17998783,55342617,169552428,517884748,1577812060,4796682165,14555626635,44100374341 ⋆ Number of Dyck paths of semilength n and height exactly 4. • a(n) = 7 * a(n - 1) - 16 * a(n - 2) + 13 * a(n - 3) - 3 * a(n - 4) for n>4. • a(n) = 2 ^ (- 1 - n) * (5 * 2 ^ n * (3 + 3 ^ n) + 3 * (- 5 + sqrt(5)) * (3 + sqrt(5)) ^ n - 3 * (3 - sqrt(5)) ^ n * (5 + sqrt(5))) / 15 for n>0. •

► [A372878] 1,7,33,133,496,1770,6142,20902,70107,232489,763927,2491107,8071234,26007364,83402988,266351548,847482277,2687729595,8499036925,26804655025,84336597636,264777690382,829636763338,2594821366338,8102197327711 ⋆ a(n) is the sum of all symmetric valleys in the set of flattened Catalan words of length n. • a(n) = (3 ^ n * (2 * n - 5) - 18 * n ^ 2 + 54 * n - 27) / 144. (End) •

► [A141291] 0,1,7,33,139,565,2271,9097,36403,145629,582535,2330161,9320667,37282693,149130799,596523225,2386092931,9544371757,38177487063,152709948289,610839793195,2443359172821,9773436691327,39093746765353 ⋆ a(n) = 4 * a(n - 1) + 2 * n - 1 • a(n) = 4 * a(n - 1) + 2 * n - 1, given a(0) = 0, a(1) = 1. • a(n) = - (5 / 9) - (2 / 3) * n + (5 / 9) * 4 ^ n, with n>=0.[_ Paolo P. Lava _ , Oct 07 2008] • a(n) = 6 * a(n - 1) - 9 * a(n - 2) + 4 * a(n - 3). G.f.: x * (1 + x) / ((1 - 4 * x) * (x - 1) ^ 2). [_ R. J. Mathar _ , Feb 02 2010] •

► [A225895] 7,33,145,545,1770,5052,12910,30055,64701,130387,248427,451117,785840,1320222,2148504,3399307,5244979,7912725,11697733,16978521,24234742,34067696,47223810,64621359,87380713 ⋆ Number of n X 3 binary arrays whose sum with another n X 3 binary array containing no more than a single 1 has rows and columns in lexicographically nondecreasing order. • a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>9. •

► [A227555] 7,33,147,585,2080,6653,19356,51827,129090,301882,668004,1407882,2841813,5519404,10355651,18833130,33296081,57369975,96549697,159011007,256713726,406881423,633961558,972192389,1468928820 ⋆ Number of n X 3 0,1 arrays indicating 2 X 2 subblocks of some larger (n + 1) X 4 binary array having nonzero determinant, with rows and columns of the latter in lexicographically nondecreasing order. • a(n) = 12 * a(n - 1) - 66 * a(n - 2) + 220 * a(n - 3) - 495 * a(n - 4) + 792 * a(n - 5) - 924 * a(n - 6) + 792 * a(n - 7) - 495 * a(n - 8) + 220 * a(n - 9) - 66 * a(n - 10) + 12 * a(n - 11) - a(n - 12) for n>12. •

► [A155603] 1,7,33,151,705,3367,16353,80311,397185,1972807,9824673,49005271,244672065,1222297447,6108298593,30531927031,152630937345,763068593287,3815084686113,19074648589591,95370918425025,476847618556327 ⋆ a(n) = 5 ^ n + 3 ^ n - 1. • a(n) = 8 * a(n - 1) - 15 * a(n - 2) - 8 with a(0)=1, a(1)=7. - _ Vincenzo Librandi _ , Jul 21 2010 •

► [A344816] 1,7,33,164,790,3946,19572,97828,488479,2442235,12207861,61039267,305179893,1525898649,7629414925,38147071306,190734961932,953674808838,4768372074464,23841860356470,119209292012746,596046459981502,2980232250997128,14901161254984784 ⋆ a(n) = Sum _{ k=1..n } floor(n / k) * 5 ^ (k - 1). • a(n) = Sum _{ k=1..n } Sum _{ d|k } 5 ^ (d - 1). • a(n) = (1 / 4) * Sum _{ k=1..n } (5 ^ floor(n / k) - 1). - _ Ridouane Oudra _ , Mar 05 2023 •

► [A275860] 1,1,7,33,164,813,4039,20063,99665,495099,2459470,12217747,60693301,301502133,1497752387,7440286381,36960623072,183606865105,912091791531,4530938620963,22508046862781,111811749387479,555439900107962,2759222392297991,13706808258965257 ⋆ floor(c * s * a(n - 1)) + floor(d * r * a(n - 2)), where r = (3 + sqrt(13)) / 2, s = r / (r - 1), c = 3, d = 1, a(0) = 1, a(1) = 1. • a(n) = floor(c * s * a(n - 1)) + floor(d * r * a(n - 2)), where r = (3 + sqrt(13)) / 2, s = r / (r - 1), c = 3, d = 1, a(0) = 1, a(1) = 1. •

► [A333565] 1,7,33,223,1537,11007,80385,595455,4456449,33615871,255148033,1946337279,14908784641,114597822463,883479412737,6828492980223,52895475040257,410544577183743,3191929428770817,24855137310736383,193811815161921 5

37,15131670099515146 23,11827298001565515777 ⋆ O.g.f.: (1 + 4 * x) / ((1 + x) * sqrt(1 - 8 * x)). ● a(n) = (2 ^ n) * binomial(2 * n,n) + 3 * sum _{ k = 0..n - 1 } (- 1) ^ (n + k + 1) * 2 ^ k * binomial(2 * k,k). ●

► [A063166] 7,34,62,90,118,146,174,202,230,258,286,314,342,370,398,426,454,482,510,538,566,594,622,650,678 ⋆ Dimension of the space of weight 2n cusp forms for Gamma _ 0(98). ● a(n) = 2 * a(n - 1) - a(n - 2) for n>3. ● a(n) = 28 * n - 22 for n>1. ●

► [A259055] 7,34,79,142,223,322,439,574,727,898,1087,1294,1519,1762,2023,2302,2599,2914,3247,3598,3967,4354,4759,5182,5623 ⋆ a(n) = 9 * n ^ 2 + 18 * n + 7. ● a(n) = 9 * (n + 1) ^ 2 - 2, n >= 0. ●

► [A195018] 0,7,34,81,148,235,342,469,616,783,970,1177,1404,1651,1918,2205,2512,2839,3186,3553,3940,4347,4774,5221,5688 ⋆ a(n) = n * (10 * n - 3). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3); a(0)=0, a(1)=7, a(2)=34. - _ Harvey P. Dale _ , May 27 2012 ●

► [A071598] 1,7,34,115,298,677,1431,2853,5401,9813,17289,29687,49901,82315,133617,213801,337742,527231,814218,1244962,1886069,2833392,4223121,6247850,9179762 ⋆ a(0) = 1; a(n) = half of the a(n - 1) - th even nontotient number. ● a(5) = 373 = 746 / 2, where 746 is the a(4)=149th term in A005277. ●

► [A219756] 0,0,0,0,1,7,34,141,537,1942,6786,23143,77513,256021,836330,2707652,8701723,27793375,88310920,279354069,880300371,2764788010,8658249900,27045078415,84287831231 ⋆ Expansion of x ^ 4 * (1 - 7 * x + 17 * x ^ 2 - 18 * x ^ 3 + 11 * x ^ 4 - 5 * x ^ 5) / ((1 - x) ^ 2 * (1 - 3 * x) ^ 2 * (1 - 3 * x + x ^ 2) ^ 2). ● a(n) = 14 * a(n - 1) - 81 * a(n - 2) + 250 * a(n - 3) - 444 * a(n - 4) + 458 * a(n - 5) - 265 * a(n - 6) + 78 * a(n - 7) - 9 * a(n - 8). - _ Vincenzo Librandi _ , Dec 15 2012 ●

► [A014915] 1,7,34,142,547,2005,7108,24604,83653,280483,930022,3055786,9964519,32285041,104029576,333612088,1065406345,3389929279,10750918570,33996147910,107218620331,337346390797,1059110761804,3318547053652,10379285465677 ⋆ a(1)=1, a(n) = n * 3 ^ (n - 1) + a(n - 1). ● a(n) = ((2 * n - 1) * 3 ^ n + 1) / 4; ● a(n) = 7 * a(n - 1) - 15 * a(n - 2) + 9 * a(n - 3); ● a(n) = 1 + 2 * 3 + 3 * 3 ^ 2 + .. + n * 3 ^ (n - 1); ● a(n) = f ^ n(n) / 2 with f(x) = 3 * x - 1. - _ Glen Gilchrist _ , Apr 10 2019 ●

► [A094256] 1,7,34,143,560,2108,7752,28101,100947,360526,1282735,4552624,16131656,57099056,201962057,714012495,2523515514,8916942687,31504028992,111295205284,393151913464,1388758662221,4905479957435,17327203698086,61202661233823 ⋆ Expansion of x / ((x - 1) * (x ^ 3 - 9 * x ^ 2 + 6 * x - 1)). ● a(n) = (2 / 9) * Sum _{ r=1..8 } sin(r * Pi / 9) * sin(7 * r * Pi / 9) * (2 * cos(r * Pi / 9)) ^ (2n + 4). ● a(n) = 7 * a(n - 1) - 15 * a(n - 2) + 10 * a(n - 3) - a(n - 4). ●

► [A005023] 7,34,143,560,2108,7752,28101,100947,360526,1282735,4552624,16131656,57099056,201962057,714012495,2523515514,8916942687,31504028992,111295205284,393151913464,1388758662221,4905479957435,17327203698086,61202661233823,216176614077600 ⋆ Number of walks of length 2n + 7 in the path graph P _ 8 from one end to the other. ● a(k) = sum(binomial(7 + 2k, 9j + k - 2) - binomial(7 + 2k, 9j + k - 1), j= - infinity..infinity) (a finite sum). ●

► [A192803] 0,0,1,7,34,144,575,2239,8632,33164,127297,488571,1875346,7199124,27637959,106107659,407374592,1564024808,6004739025,23053921567,88510638482,339817775144,1304657986015,5008956298247,19230819824088 ⋆ Coefficient of x ^ 2 in the reduction of the polynomial (x + 2) ^ n by x ^ 3 - >x ^ 2 + x + 1. ● a(n) = 7 * a(n - 1) - 15 * a(n - 2) + 11 * a(n - 3). ●

► [A052161] 1,7,34,146,599,2417,9696,38820,155325,621355,2485486,9942022,39768179,159072821,636291404,2545165752,10180663161,40722652815,162890611450,651562446010 ⋆ Partial sums of A014825, second partial sums of A002450. ● a(n) = ((2 ^ (2n + 7)) - (9 * (n ^ 2) + 51n + 74)) / 54. ● a(n) = 4a(n - 1) + C(n + 2,2); a(0)=1. ● a(n) = Sum _{ k=0..n, binomial(n + 3, k + 3)3 ^ k } . - _ Paul Barry _ , Aug 20 2004 ●

► [A080960] 1,7,34,148,616,2512,10144,40768,163456,654592,2619904,10482688,41936896,167759872,671064064,2684305408,10737319936,42949476352,171798298624,687193980928,2748777496576,10995113132032,43980458819584 ⋆ Third binomial transform of A010685 (period 2: repeat 1,4). ● a(n) = 4 * a(n - 1) + 3 * 2 ^ (n - 1). ● a(n) = (5 / 2) * 4 ^ n - (3 / 2) * 2 ^ n. ● a(n) = 6 * a(n - 1) - 8 * a(n - 2), a(0)=1, a(1)=7. - _ Harvey P. Dale _ , Nov 12 2012 ●

► [A335087] 1,7,34,150,628,2540,10024,38840,148368,560368,2096928,7786592,28726592,105390272,384788096,1398978432,5067403520,18294707968,65854095872,236421150208,846732997632,3025927678976,10792083499008,38420157773824,136547503083520 ⋆ Row sums of A335436. ● a(n) = 8 * a(n - 1) - 20 * a(n - 2) + 16 * a(n - 3) - 4 * a(n - 4), a(0)=1, a(1)=7, a(2)=34, a(3)=150 for n>=4. ● a(0)=1; a(n) = 2 * n + 1 + Sum _{ k=1..n } [(2 + sqrt(2)) ^ (k + 1) - (2 - sqrt(2)) ^ (k + 1)] * (2n - k + 1) / (4 * sqrt(2)), n>=1. ●

► [A213119] 1,7,34,151,646,2710,11236,46231,189214,771442,3136156,12720982,51507964,208260556,841065544,3393346711,13679459854,55106773786,221860011244,892741834546,3590659699444,14436037598836,58018598086264 ⋆ Number of binary arrays of length 2 * n + 1 with fewer than n ones in any length 2n subsequence (=less than 50 % duty cycle). ● a(n) = 4 ^ n - 3 * C(2 * n - 1,n). - _ Vaclav Kotesovec _ , Oct 29 2012 ●

► [A099242] 1,7,34,153,686,3088,13917,62721,282646,1273690,5739647,25864698,116554700,525233175,2366870474,10665883415,48063918336,216591552484,976031547888,4398313653120,19820223058176,89316331907533 ⋆ (6n + 5) - th terms of expansion of 1 / (1 - x - x ^ 6). ● a(n) = 7 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). ● a(n) = Sum _{ k=0..n } binomial(6 * n - 5 * (k - 1), k). ● a(n) = Sum _{ k=0..n } binomial(n + 5 * (k + 1), k + 5 * (k + 1). ● a(n) = Sum _{ k=0..n } binomial(n + 5 * (k + 1), n - k). ●

► [A055271] 1,7,34,163,781,3742,17929,85903,411586,1972027,9448549,45270718,216905041,1039254487,4979367394,23857582483,114308545021,547685142622,2624117168089,12572900697823,60240386321026,288629030907307,1382904768215509,6625894810170238,31746569282635681 ⋆ a(n) = 5 * a(n - 1) - a(n - 2) with a(0)=1, a(1)=7. ● a(n) = (7 * (((5 + sqrt(21)) / 2) ^ n - ((5 - sqrt(21)) / 2) ^ n) - (((5 + sqrt(21)) / 2) ^ (n - 1) - ((5 - sqrt(21)) / 2) ^ (n - 1))) / sqrt(21). ● a(n) = ChebyshevT(n, 5 / 2) + (9 / 2) * ChebyshevU(n - 1,5 / 2) = ChebyshevU(n, 5 / 2) + 2 * ChebyshevU(n - 1, 5 / 2). - _ G. C. Greubel _ , Mar 16 2020 ●

► [A080048] 1,7,34,182,1107,7773,62212,559948,5599525,61594835,739138086,9608795202,134523132919,2017846993897,32285551902472,548854382342168,9879378882159177,187708198761024543,3754163975220491050 ⋆ Operation count to create all permutations of n distinct elements using Algorithm L (lexicographic permutation generation) from Knuth's The Art of Computer Programming, Vol. 4, chapter 7.2.1.2. Sequence gives number of loop repetitions in reversal step. ● a(2)=1, a(n)=n * a(n - 1) + (n - 1) * floor[(n + 1) / 2] for n>=3. c = limit n - > infinity a(n) / n! = 1.54308063481524377826 = (e + 1 / e) / 2 a(n) = floor [c * n! - (n + 1) / 2] for n>=2. ●

► [A372411] 1,1,7,34,183,1001,5578,31459,179063,1026493,5918007,34277728,199309146,1162682314,6801575641,39885002534,234384591991,1379936226605,8137835460115,48062073927739,284233390132183,1682950066882489,9975692904121556,59190095764321975 ⋆ Coefficient of x ^ n in the expansion of ((1 - x + x ^ 2) ^ 2 / (1 - x) ^ 3) ^ n. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(2 * n,k) * binomial(2 * n - k - 1,n - 2 * k). ●

► [A370618] 1,1,7,34,191,1071,6154,35729,209455,1236508,7341577,43792112,262230242,1575391156,9490934411,57316715079,346875036879,2103174805035,12773139313516,77689736488088,473160660856361,2885208137132852,17612514244078288,107621658416373752 ⋆ Coefficient of x ^ n in the expansion of ((1 - x) / (1 - x - x ^ 2) ^ 2) ^ n. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(2 * n + k - 1,k) * binomial(2 * n - k - 1,n - 2 * k). ●

► [A256391] 1,7,35,79,243,319,787,1155,1859,2295,4267,4891,8295,9743,11851,14539,22191,24359,35427,39387,45915,51687,71171,76407,94911 ⋆ a(n) = number of tuples (a,b,c,d) of natural numbers a,b,c,d <= n with gcd(a,b)=gcd(b,c)=gcd(c,d)=gcd(d,a)=1. ● a(n) = sum _ a sum _ b sum _ c sum _ d mu(a) mu(b) mu(c) mu(d) [n / gcd(a,b)][n / gcd(b,c)][n / gcd(c,d)][n / gcd(d,a)], where mu is Moebius function, a,b,c,d run through natural numbers. ●

► [A152744] 0,7,35,84,154,245,357,490,644,819,1015,1232,1470,1729,2009,2310,2632,2975,3339,3724,4130,4557,5005,5474,5964 ⋆ 7 times pentagonal numbers: a(n) = 7 * n * (3 * n - 1) / 2. ● a(n) = a(n - 1) + 21 * n - 14 (with a(0)=0). - _ Vincenzo Librandi _ , Nov 26 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>2. - _ Harvey P. Dale _ , Aug 08 2013 ● a(n) = Sum _{ i = 2..8 } P(i,n), where P(i,m) = m * ((i - 2) * m - (i - 4)) / 2. - _ Bruno Berselli _ , Jul 04 2018 ●

► [A169607] 0,7,35,98,210,385,637,980,1428,1995,2695,3542,4550,5733,7105,8680,10472,12495,14763,17290,20090,23177,26565,30268,34300 ⋆ a(n) = 7 * A000330(n). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Vincenzo Librandi _ , Jul 02 2012 ●

► [A130884] 1,7,35,103,229,431,727,1135,1673,2359,3211,4247,5485,6943,8639,10591,12817,15335,18163,21319,24821,28687,32935,37583,42649 ⋆ 3n ^ 3 + 2n ^ 2 + n + 1. ● a(0)=1, a(1)=7, a(2)=35, a(3)=103, a(n)=4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) [_ Harvey P. Dale _ , Jan 17 2012] ●

► [A059595] 1,7,35,133,434,1246,3262,7890,17913,38479,78883,155141,294280,540344,963832,1674568,2841006,4715970,7673834,12259142,19254676,29768972,45355660,68164628,101143574 ⋆ Seventh column (m=6) of convolution triangle A059594(n,m). ● a(2 * k)= binomial(k + 10, 10) * (16 * k ^ 3 + 212 * k ^ 2 + 708 * k + 429) / (13 * 3 * 11); ● a(2 * k + 1)= binomial(k + 10, 10) * (16 * k ^ 3 + 316 * k ^ 2 + 1852 * k + 3003) / (13 * 3 * 11), k >= 0. ●

► [A001875] 1,7,35,140,490,1554,4578,12720,33705,85855,211519,506408,1182650,2702350,6056850,13343820,28947240,61926900,130814600,273163100,564415390,1154933230,2342193350,4710707400,9401674275 ⋆ Convolved Fibonacci numbers. ● a(n) = F’’’’’’(n + 6, 1) / 6!, i.e., 1 / 6! times the 6th derivative of the (n + 6)th Fibonacci polynomial evaluated at 1. - _ T. D. Noe _ , Jan 18 2006 ● a(n) = Sum _{ k=ceiling(n / 2)..n } (k + 1) * (k + 2) * (k + 3) * (k + 4) * (k + 5) * (k + 6) * binomial(k,n - k) / 720. - _ Vladimir Kruchinin _ , Apr 26 2011 ●

► [A094825] 1,7,35,153,624,2444,9333,35055,130207,479941,1759616,6427032,23412105,85121783,309062619,1121050449,4063463728,14721293860,53313308477,193023319071,698715633111,2528895064637,9152032060800,33118656195888 ⋆ Number of (s(0), s(1), ..., s(2n)) such that 0 < s(i) < 10 and |s(i) - s(i - 1)| = 1 for i = 1,2,...,2n, s(0) = 1, s(2n) = 7. ● a(n) = (1 / 5) * Sum _{ r=1..9 } sin(r * Pi / 10) * sin(7 * r * Pi / 10) * (2 * cos(r * Pi / 10)) ^ (2n). ● a(n) = 8 * a(n - 1) - 21 * a(n - 2) + 20 * a(n - 3) - 5 * a(n - 4). ●

► [A370391] 1,7,35,154,636,2533,9861,37810,143451,540155,2022735,7543771,28048829,104050724,385320419,1425038684,5264963100,19437087382,71715418017,264483764116,975070823122,3593840295815,13243217176106,48793364067681,179753027448972 ⋆ Expansion of (1 - 2 * x) / (1 - 9 * x + 28 * x ^ 2 - 35 * x ^ 3 + 15 * x ^ 4 - x ^ 5). ● a(n) = 9 * a(n - 1) - 28 * a(n - 2) + 35 * a(n - 3) - 15 * a(n - 4) + a(n - 5). ●

► [A005285] 1,7,35,155,649,2640,10569,41926,165425,650658,2554607,10020277,39287173,154022930,603919164,2368601685,9293159292,36476745510,143239635450,562744102479,2211876507387,8697839966552,34218338900591 ⋆ Number of permutations of (1,...,n) having n - 7 inversions (n>=7). ● a(n) = 2 ^ (2 * n - 8) / sqrt(Pi * n) * Q * (1 + O(n ^{- 1})), where Q is a digital search tree constant, Q = 0.2887880951... (see A048651). - corrected by _ Vaclav Kotesovec _ , Mar 16 2014 ●

► [A006095] 0,0,1,7,35,155,651,2667,10795,43435,174251,698027,2794155,11180715,44731051,178940587,715795115,2863245995,11453115051,45812722347,183251413675,733006703275,2932028910251,11728119835307,46912487729835 ⋆ Gaussian binomial coefficient [n,2] for q=2. ● a(n) = (2 ^ n - 1) * (2 ^ (n - 1) - 1) / 3 = 4 ^ n / 6 - 2 ^ (n - 1) + 1 / 3. ● a(n) = Stirling2(n + 1,3) + Stirling2(n + 1,4). - _ Zerinvary Lajos _ , Oct 04 2007; corrected by _ R. J. Mathar _ , Mar 19 2011 ● a(n) = 4 * a(n - 1) + 2 ^ (n - 1) - 1, n >= 2. - _ Vincenzo Librandi _ , Mar 19 2011 ● a(0) = 0, a(1) = 0, a(2) = 1, a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3). - _ Harvey P. Dale _ , Jul 22 2011 ● a(n) = Sum _{ k=0..n - 2 } 2 ^ k * C(2 * n - k - 2, k), n >= 2. - _ Johannes W. Meijer _ , Aug 19 2013 ● a(n) = Sum _{ i=0..n - 2, j=i..n - 2 } 2 ^{ i + j } = 2 ^ 0 * (2 ^ 0 + 2 ^ 1 + .. + 2 ^ (n - 2)) + 2 ^ 1 * (2 ^ 1 + 2 ^ 2 + ... + 2 ^ (n - 2)) + ... + 2 ^ (n - 2) * 2 ^ (n - 2), n>1. - _ J. M. Bergot _ , May 08 2017 ●

► [A171477] 1,7,35,155,651,2667,10795,43435,174251,698027,2794155,11180715,44731051,178940587,715795115,2863245995,11453115051,45812722347,1832514136

75,733006703275,2932028910251,11728119835307,46912487729835 ★ a(n) = 6 * a(n - 1) - 8 * a(n - 2) + 1 for n > 1; a(0) = 1, a(1) = 7. ● a(n) = (8 * 4 ^ n - 6 * 2 ^ n + 1) / 3. ●

▶ [A265612] 0,1,7,35,156,660,2717,11011,44200,176358,700910,2778446,10994920,43459650,171655785,677688675,2674776720,10555815270,41656918050,164401379610,648887951400,2561511781920,10113397410402,39937416869070,157743149913776 ★ a(n) = CatalanNumber(n + 1) * n * (1 + 3 * n) / (6 + 2 * n). ● a(n) = 2 * 4 ^ n * Gamma(3 / 2 + n) * n * (1 + 3 * n) / (sqrt(Pi) * Gamma(4 + n)). ● a(n) = (rf(5 + n, n - 1) - (n - 1) * (n - 2) * rf(5 + n, n - 3)) / (n - 1)! for n >=3, rf(n,k) the rising factorial. ● a(n) = a(n - 1) * (2 * n * (1 + 3 * n) * (1 + 2 * n) / ((n - 1) * (3 * n - 2) * (3 + n))) for n>=2. ● a(n) = [x ^ n] x * (1 + x) / (1 - x) ^ (n + 4). - _ Ilya Gutkovskiy _ , Oct 09 2017 ●

▶ [A163348] 1,7,35,161,721,3199,14147,62489,275905,1218007,5376707,23734193,104768209,462469903,2041441955,9011362409,39778080769,175588947751,775087121123,3421400092481,15102790707025,66666943594783 ★ a(n) = 6 * a(n - 1) - 7 * a(n - 2) for n > 1; a(0) = 1, a(1) = 7. ● a(n) = 6 * a(n - 1) - 7 * a(n - 2) for n > 1; a(0) = 1, a(1) = 7. ● a(n) = ((1 + 2 * sqrt(2)) * (3 + sqrt(2)) ^ n + (1 - 2 * sqrt(2)) * (3 - sqrt(2)) ^ n) / 2. ●

▶ [A291237] 7,35,162,721,3139,13504,57707,245671,1043634,4428053,18774815,79573152,337178159,1428553243,6052037010,25638260873,108608846171,460082737472,1948961747155,8255982722783,34973020586946,148148373971341,627567262233463,2658419223345984 ★ p - INVERT of (0,1,0,1,0,1,...), where p(S) = (1 - S)(1 - 2 S)(1 - 4 S). ● a(n) = 7 * a(n - 1) - 11 * a(n - 2) - 6 * a(n - 3) + 11 * a(n - 4) + 7 * a(n - 5) + a(n - 6) for n >= 7. ●

▶ [A373928] 1,7,35,168,819,4025,19796,97315,478304,2350860,11554621,56791883,279136551,1371977475,6743373646,33144194898,162906243014,800696596250,3935484773527,19343207491818,95073338508548,467292702057555,2296779231936167,11288844908179562 ★ Number of compositions of 7 * n - 2 into parts 1 and 7. ● a(n) = Sum _{ k=0..n } binomial(n + 4 + 6 * k,n - 1 - k). ● a(n) = 8 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). ● a(n) = n * (1 + n) * (2 + n) * (3 + n) * (4 + n) * hypergeom([1 - n, (5 + n) / 6, 1 + n / 6, (7 + n) / 6, (8 + n) / 6, (9 + n) / 6, (10 + n) / 6], [6 / 7, 8 / 7, 9 / 7, 10 / 7, 11 / 7, 12 / 7], - 6 ^ 6 / 7 ^ 7) / 120. - _ Stefano Spezia _ , Jun 23 2024 ●

▶ [A005055] 7,35,175,875,4375,21875,109375,546875,2734375,13671875,68359375,341796875,1708984375,8544921875,42724609375,213623046875,1068115234375,5340576171875,26702880859375,133514404296875,667572021484375,3337860107421875,16689300537109375 ★ 7 * 5 ^ n. ● a(n)=5 * a(n - 1), n>0; a(0)=7. G.f.: 7 / (1 - 5 * x). - _ Philippe Deléham _ , Nov 23 2008 ●

▶ [A051926] 1,7,35,181,933,4811,24807,127913,659561,3400911,17536203,90422365,466247117,2404121747,12396433487,63920042065,329592522065,1699486218903,8763103574515,45185411569413,232990675202677,1201375684008283,6194683683674679,31941803427179001 ★ Number of independent sets of nodes in graph C _ 4 X P _ n (n>2). ● a(n) = 5 * a(n - 1) + a(n - 2) - a(n - 3) for n>2. - _ Wayne VanWeerthuizen _ , May 04 2004 ●

▶ [A274073] 0,7,35,217,1295,7777,46655,279937,1679615,10077697,60466175,362797057,2176782335,13060694017,78364164095,470184984577,2821109907455,16926659444737,101559956668415,609359740010497,3656158440062975,21936950640377857,131621703842267135 ★ a(n) = 6 ^ n - (- 1) ^ n. ● a(n) = 5 * a(n - 1) + 6 * a(n - 2) for n>1. ●

▶ [A041603] 1,1,7,36,43,208,667,875,3292,14043,17335,100718,621643,722361,25181917,25904278,180607585,928942203,1109549788,5367141355,17210973853,22578115208,84945319477,362359393116,447304712593 ★ Denominators of continued fraction convergents to sqrt(319). ● a(n) = 25803560 * a(n - 14) - a(n - 28) for n>27. [_ Bruno Berselli _ , Dec 22 2013] ●

▶ [A063168] 7,36,66,96,126,156,186,216,246,276,306,336,366,396,426,456,486,516,546,576,606,636,666,696,726 ★ Dimension of the space of weight 2n cusp forms for Gamma _ 0(100). ● a(n) = 2 * a(n - 1) - a(n - 2) for n > 3 (conjectured). ●

▶ [A163683] 0,7,36,99,208,375,612,931,1344,1863,2500,3267,4176,5239,6468,7875,9472,11271,13284,15523,18000,20727,23716,26979,30528 ★ a(n) = n ^ 2 * (2 * n + 5). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ●

▶ [A212088] 0,0,7,36,117,292,612,1143,1963,3159,4833,7099,10080,13914,18751,24750,32085,40942,51516,64017,78667,95697,115353,137893,163584 ★ Number of (w,x,y,z) with all terms in { 1,...,n } and w<average { x,y,z } . ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 5 * a(n - 3) - 5 * a(n - 4) + 6 * a(n - 5) - 4 * a(n - 6) + a(n - 7). ●

▶ [A085354] 1,7,36,164,704,2928,11968,48448,195072,783104,3138560,12567552,50298880,201256960,805158912,3220914176,12884246528,51538231296,206155546624,824627691520,3298522300416,13194113318912,52776503607296 ★ a(n) = 3 * 4 ^ n - (n + 4) * 2 ^ (n - 1). ● a(n) = 2 * a(n - 1) + 3 * 2 ^ (2n - 1) - 2 ^ (n - 1), a(0) = 1. - _ Jean M. Morales _ , Oct 24 2013 ●

▶ [A003516] 1,7,36,165,715,3003,12376,50388,203490,817190,3268760,13037895,51895935,206253075,818809200,3247943160,12875774670,51021117810,202112640600,800472431850,3169870830126,12551759587422 ★ Binomial coefficients C(2n + 1, n - 2). ● a(n) = Sum _{ k=0,..,n - 2 } binomial(n + k + 2,k). - _ Arkadiusz Wesolowski _ , Apr 02 2012 ●

▶ [A095931] 1,7,36,165,715,3004,12393,50559,204820,826045,3321891,13333932,53457121,214146295,857417220,3431847189,13733091643,54947296924,219828275865,879415437615,3517929664756,14072420067757,56291516582931,225170873858700,900696081703825 ★ Number of walks of length 2n between two nodes at distance 4 in the cycle graph C _ 10. ● a(n) = 7 * a(n - 1) - 13 * a(n - 2) + 4 * a(n - 3). ● a(n) = 4 ^ n / (10 * Sum _{ r=0..9 } cos(4 * Pi * r / 5) * cos(Pi * r / 5) ^ (2 * n)). ● a(n) = (4 ^ n - (2 * cos(Pi / 5)) ^ (2 * n + 1) + (2 * cos(2 * Pi / 5)) ^ (2 * n + 1)) / 5. ● a(n) = (4 ^ n - ((sqrt(5) + 1) / 2) ^ (2 * n + 1) + ((sqrt(5) - 1) / 2) ^ (2 * n + 1)) / 5. ● a(n) = Sum _{ k=1..floor((n + 3) / 5) } C(2 * n + 1,n + 3 - 5 * k). (End) ●

▶ [A292486] 1,7,36,165,747,3420,15705,72063,330516,1515933,6953283,31893516,146289393,671000247,3077745156,14117009877,64751939163,297004363452,1362300384969,6248602953135,28661108314356,131462846314317,60299412604728 3,2765815028667756 ★ p - INVERT of the odd positive integers, where p(S) = 1 - S - 3 S ^ 2. ● a(n) = 5 * a(n - 1) - 4 * a(n - 2) + 9 * a(n - 3) + 3 * a(n - 4) for n >= 5. ●

▶ [A058681] 0,0,1,7,36,171,813,4012,20891,115463,677546,4211549,27640341,190891130,1382942161,10480109379,82864804268,682076675087,5832741942913,51724157711084,474869815108175,4506715736350171,44152005850890042 ★ Number of matroids of rank 2 on n labeled points. ● a(n) = B(n + 1) - 2 ^ n, B = Bell numbers (A000110). ● a(n) = Sum _{ i=2..n } binomial(n,i) * (B(i) - 1), B=Bell numbers A000110. - _ Geoffrey Critzer _ , Oct 10 2009 ●

▶ [A246417] 0,0,1,7,36,171,813,4012,25931,342263,6498746,116477549,1839530421,26071946330,339710531761,4165394873379,50578180795388,717354862704287,15348610400624113,466529833772501084,15332096138370552335 ★ Homomorphic inverse images of elementary h - ary relations. ● a(n) = sum(((- 1) ^ h / (m! * (h!) ^ m)) * sum((- 1) ^ l * binomial(h ^ m, l) * l ^ n, l=1..h ^ m), h ^ m <=k , h >= 3, m >= 1). - _ Sean A. Irvine _ , Aug 25 2014 ●

▶ [A054493] 1,7,36,175,841,4032,19321,92575,443556,2125207,10182481,48787200,233753521,1119980407,5366148516,25710762175,123187662361,590227549632,2827950085801,13549522879375,64919664311076,311048798676007,1490324329068961,7140572846668800 ★ A Pellian - related recursive sequence. ● a(n) = 5 * a(n - 1) - a(n - 2) + 2, a(0)=1, a(1)=7. ● a(n) = (1 / 3) * (- 2 + ((5 + sqrt(21)) / 2) ^ n + ((5 - sqrt(21)) / 2) ^ n). - _ Ralf Stephan _ , Apr 14 2004 ● a(n) = 6 * a(n - 1) - 6 * a(n - 2) + a(n - 3), n>=2, a(- 1):=0, a(0)=1, a(1)=7. ● a(n) = 1 / 3 * (((sqrt(7) + sqrt(3)) / 2) ^ n - ((sqrt(7) - sqrt(3)) / 2) ^ n) ^ 2. ● a(n) = bottom left entry of the 2 X 2 matrix T(n, M), where M is the 2 X 2 matrix [0, - 5 / 2; 1, 7 / 2] and T(n,x) denotes the Chebyshev polynomial of the first kind. ● a(n) = a(- 2 - n) for all n in Z. - _ Michael Somos _ , Jan 22 2017 ●

▶ [A368575] 0,1,7,36,179,965,5916,41622,333306,3000249,30003205,330036256,3960436437,51485675501,720799459394,10811991893970,172991870307396,2940861795230577,52935512314156371,1005774733968978364,20115494679379576135,422425388266971109461 ★ a(n) = n! * Sum _{ k=0..n } binomial(k + 3,4) / k!. ● a(0) = 0; a(n) = n * a(n - 1) + binomial(n + 3,4). ●

▶ [A037482] 1,7,36,182,911,4557,22786,113932,569661,2848307,14241536,71207682,356038411,1780192057,8900960286,44504801432,222524007161,1112620035807,5563100179036,27815500895182,139077504475911,695387522379557 ★ Base 5 digits are, in order, the first n terms of the periodic sequence with initial period 1,2. ● a(n) = 5a(n - 1) + a(n - 2) - 5a(n - 3). ● a(n) = (- 1) ^ n / 12 - 3 / 8 + 7 * 5 ^ n / 24. G.f. x * (1 + 2 * x) / ((x - 1) * (5 * x - 1) * (1 + x)). - _ R. J. Mathar _ , Nov 02 2011 ●

▶ [A147546] 7,36,186,1002,5622,32466,190806,1132482,6757062,40427346,242215926,1452244962,8710305702,52252317426,313485305046,1880825933442,11284697713542,67707412226706,406242150410166,2437445932037922 ★ Expansion of (7 - 41 * x + 42 * x ^ 2) / ((1 - 6 * x) * (1 - 3 * x) * (1 - 2 * x)). ● a(n)=11 * a(n - 1) - 36 * a(n - 2) + 36 * a(n - 3) = 6 * 3 ^ n - 3 * 2 ^ n + 4 * 6 ^ n. G.f.: (7 - 41 * x + 42 * x ^ 2) / ((1 - 6x)(1 - 3x)(1 - 2x)). - _ R. J. Mathar _ , Nov 09 2008 ●

▶ [A128471] 7,37,67,97,127,157,187,217,247,277,307,337,367,397,427,457,487,517,547,577,607,637,667,697,727 ★ a(n) = 30 * n + 7. ● a(n) = 2 * a(n - 1) - a(n - 2). [_ Vincenzo Librandi _ , Sep 05 2010] ●

▶ [A154105] 7,37,91,169,271,397,547,721,919,1141,1387,1657,1951,2269,2611,2977,3367,3781,4219,4681,5167,5677,6211,6769,7351 ★ a(n) = 12 * n ^ 2 + 18 * n + 7. ● a(0) = 7; for n > 0, a(n) = a(n - 1) + 24 * n + 6. ●

▶ [A082113] 1,7,37,127,337,751,1477,2647,4417,6967,10501,15247,21457,29407,39397,51751,66817,84967,106597,132127,162001,196687,236677,282487,334657 ★ a(n) = n ^ 4 + 5 * n ^ 2 + 1. ● a(n) = n ^ 4 + 5 * n ^ 2 + 1. ●

▶ [A012885] 7,37,137,9137,29137,629137,7629137,67629137,567629137,6567629137,16567629137,216567629137,6216567629137,46216567629137,646216567629137,2646216567629137,12646216567629137,31264621656762913 7,863126462165676291 37 ★ Suffixes of 3576863126462165676291 37 (all primes). ● a(n) = 3576863126462165676291 37 mod 10 ^ n. - _ José de Jesús Camacho Medina _ , Dec 21 2016 ●

▶ [A094729] 0,1,1,7,37,151,541,1807,5797,18151,55981,171007,519157,1569751,4733821,14250607,42850117,128746951,386634061,1160688607,3483638677,10454061751,31368476701,94118013007,282379204837 ★ Number of connected ordered 2 - element multiantichains on a labeled n - set. ● a(n) = 4 - 3 * 2 ^ n + 3 ^ n for n>0. ● a(n) = 6 * a(n - 1) - 11 * a(n - 2) + 6 * a(n - 3) for n>3. ●

▶ [A247308] 1,7,37,163,661,2643,10497,41511,164073,648495,2562749,10127291,40020845,158152811,624980489,2469769903,9759926065,38568829879,152414547541,602304889075,2380161078405,9405812345187,37169461719153,146884589311479,580451843386809 ★ Layer counting sequence in the order - 5 cubic honeycomb . ● a(d + 17) = 3 * a(d + 16) + 2 * a(d + 15) + 7 * a(d + 14) + a(d + 13) - 5 * a(d + 12) + 3 * a(d + 11) - 2 * a(d + 10) - 18 * a(d + 9) + 18 * a(d + 8) + 2 * a(d + 7) - 3 * a(d + 6) + 5 * a(d + 5) - a(d + 4) - 7 * a(d + 3) - 2 * a(d + 2) - 3 * a(d + 1) + a(d) (conjectured, found experimentally and tested from 19 to 135). - _ Eryk Kopczynski _ , Jul 04 2020 ●

▶ [A169726] 1,7,37,169,721,2977,12097,48769,195841,784897,3142657,12576769,50319361,201302017,805257217,3221127169,12884705281,51539214337,206157643777,824632147969,3298531737601,13194133241857,52776545550337,211106207367169,844424879800321 ★ a(n) = 3 * 2 ^ n * (2 ^ n - 1) + 1. ● a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3). ●

▶ [A172063] 1,7,37,174,771,3300,13820,57044,233108,945793,3817351,15347362,61520899,246052888,982365976,3916739872,15599504614,62076995998,246866382826,981218764540,3898442536366,15483778158792,61482966826992 ★ Expansion of (2 / (3 * sqrt(1 - 4 * z) - 1 + 4 * z)) * ((1 - sqrt(1 - 4 * z)) / (2 * z)) ^ k with k=6. ● a(n) = Sum _{ j=0..n } (- 1) ^ j * binomial(2 * n + k - j, n - j), with k=6. ●

▶ [A208737] 0,0,0,1,7,37,175,778,3325,13837,56524,227866,909832,3607294,14227447,55894252,218937532,855650749,3338323915,13007422705,50631143323,196928737582,765495534433,2974251390529,11552064922624 ★ Number of nonisomorphic graded posets with 0 and 1 and non - uniform Hasse graph of rank n, with no 3 - element antichain. ● a(n) = 10 * a(n - 1) - 36 * a(n - 2) + 57 * a(n - 3) - 39 * a(n - 4) + 9 * a(n - 5), a(1) = 0, a(2) = 0, a(3) = 1, a(4) = 7, a(5) = 37. ●

► [A005061] 0,1,7,37,175,781,3367,14197,58975,242461,989527,4017157,16245775,65514541,263652487,1059392917,4251920575,17050729021,68332056247,273715645477,1096024843375,4387586157901,17560804984807,70274600998837,281192547174175 ⋆ a(n) = 4 ^ n - 3 ^ n. ● a(n) = 4 * a(n - 1) + 3 ^ (n - 1) for n>=1. - Xavier Acloque, Oct 20 2003 ● a(n) = 2 ^ n * Sum _{ i=0...n } binomial(n,i) * (2 ^ i - 1) / 2 ^ i. - _ Geoffrey Critzer _ , May 09 2009 ● a(n) = 7 * a(n - 1) - 12 * a(n - 2) for n>=2. - _ Bruno Berselli _ , Jan 25 2011 ● a(n) = 3 * a(n - 1) + 4 ^ (n - 1) for n>=0. - _ Joe Slater _ , Jan 15 2017 ● a(n + 1) = Sum _{ k=0..n } 4 ^ (n - k) * 3 ^ k. - _ Joe Slater _ , Jan 15 2017 ● a(n) = - a(- n) * 12 ^ n for all n in Z. - _ Michael Somos _ , Jan 22 2017 ●

► [A006419] 0,1,7,37,176,794,3473,14893,63004,263950,1097790,4540386,18696432,76717268,313889477,1281220733,5219170052,21224674118,86188320962,349550141078,1416102710912,5731427140268,23177285611082,93655986978002,378195990166136 ⋆ a(n) = 2 ^ (2 * n + 1) - C(2 * n + 3,n + 1) + C(2 * n + 1,n). ● a(n) = Integral _{ x=0..4 } x ^ n * W(x) * dx, n >= 0, is the integral representation as n - th moment of a signed weight function W(x), where W(x) = W _ a(x) + W _ c(x), with W _ a(x) = 2 * Dirac(x - 4), which is the discrete (atomic) part, and W _ c(x) = (1 / (2 * Pi)) * (1 - x) * sqrt(x / (4 - x)) is the continuous part of W(x): W _ c(0) = W _ c(1) = 0, W _ c(x) > 0 for x < 1, lim _{ x - >4 } W _ c(x) = - oo. - _ Karol A. Penson _ , Jul 31 2013 [edited by _ Michel Marcus _ , Mar 14 2020] ● a(n) = Sum _{ k=0..n } binomial(2 * (n + 1), n - k - 1). - _ Vladimir Kruchinin _ , Oct 23 2016 ● a(n) = [x ^ n] x / ((1 - 2 * x) * (1 - x) ^ (n + 3)). - _ Ilya Gutkovskiy _ , Oct 25 2017 ●

► [A277178] 0,1,7,37,177,807,3579,15591,67071,285861,1209641,5089517,21314453,88918353,369734553,1533115953,6341759073,26177411943,107853629643,443633635743,1822098923943,7473806605563,30618895206483,125303348573883,512274592771083 ⋆ a(n) = Sum _{ k=0..n } k * binomial(2 * k,k) / 2. ● a(n) = binomial(2 * n,n) * (2 * n + 1 - hypergeom([1, - n], [1 / 2 - n], 1 / 4)) / 3. ●

► [A192811] 0,0,1,7,37,183,893,4351,21205,103367,503917,2456655,11976517,58387095,284644701,1387679903,6765119669,32980836455,160785858381,783851928559,3821379890981,18629722961207,90822317465149,442770585849407 ⋆ a(n) = A192809(n) / 2. ● a(n) = 7 * a(n - 1) - 12 * a(n - 2) + 8 * a(n - 3). ●

► [A226867] 7,37,187,792,2866,9136,26267,69311,170084,392159,856558,1784149,3563340,6855064,12751438,23010044,40392728,69146369,115673477,189452998,304286614,479963424,744456493,1136788693,1710732884 ⋆ Number of n X 3 (- 1,0,1) arrays of determinants of 2 X 2 subblocks of some (n + 1) X 4 binary array with rows and columns of the latter in lexicographically nondecreasing order. ● a(n) = 12 * a(n - 1) - 66 * a(n - 2) + 220 * a(n - 3) - 495 * a(n - 4) + 792 * a(n - 5) - 924 * a(n - 6) + 792 * a(n - 7) - 495 * a(n - 8) + 220 * a(n - 9) - 66 * a(n - 10) + 12 * a(n - 11) - a(n - 12) for n>13. ●

► [A057651] 1,7,37,187,937,4687,23437,117187,585937,2929687,14648437,73242187,366210937,1831054687,9155273437,45776367187,228881835937,1144409179687,5722045898437,28610229492187,143051147460937,715255737304687,3576278686523437,17881393432617187 ⋆ a(n) = (3 * 5 ^ n - 1) / 2. ● a(0)=1, a(n) = 5 * a(n - 1) + 2; a(n) = a(n - 1) + 6 * (5 ^ (n - 1)). - _ Amarnath Murthy _ , May 27 2001 ● a(n) = 6 * a(n - 1) - 5 * a(n - 2), n > 1. - _ Vincenzo Librandi _ , Oct 30 2011 ●

► [A002807] 0,0,0,1,7,37,197,1172,8018,62814,556014,5488059,59740609,710771275,9174170011,127661752406,1904975488436,30341995265036,513771331467372,9215499383109573,174548332364311563,3481204991988351553,72920994844093191553,1600596371590399671784 ⋆ a(n) = Sum _{ k=3..n } (k - 1)! * C(n,k) / 2. ● a(n) = (n - 1) * (n - 2) / 2 + n * a(n - 1) - (n - 1) * a(n - 2). - _ Vladeta Jovovic _ , Jan 22 2005 ●

► [A124610] 1,1,7,37,199,1069,5743,30853,165751,890461,4783807,25699957,138067399,741736909,3984819343,21407570533,115007491351,617852597821,3319277971807,17832095054677,95799031216999,514659346194349 ⋆ a(n) = 5 * a(n - 1) + 2 * a(n - 2), n > 1; a(0) = a(1) = 1. ● a(n) / a(n - 1) tends to (sqrt(33) + 5) / 2 = 5.37228132... - _ Gary W. Adamson _ , Mar 03 2008 ● a(n) = - (sqrt(33) / 22) * ((5 + sqrt(33)) / 2) ^ n + (1 / 2) * ((5 - sqrt(33)) / 2) ^ n + (sqrt(33) / 22) * ((5 - sqrt(33)) / 2) ^ n + (1 / 2) * ((5 + sqrt(33)) / 2) ^ n, with n>=0. - _ Paolo P. Lava _ , Jul 07 2008 ●

► [A319013] 0,1,7,37,201,1231,8653,69273,623521,6235291,68588301,823059733,10699776673,149796873591,2246953104061,35951249665201,611171244308673,11001082397556403,209020565553571981,4180411311071439981,87788637532500240001,1931350025715005280463 ⋆ a(n) is the sum over each permutation of S _ n of the least element of the descent set. ● a(n) = Sum _{ k=1..n - 1 } k ^ 2 * binomial(n, k + 1) * (n - k - 1)!. ● a(n + 1) = (n + 1) * a(n) + n ^ 2, with a(1) = 0. ●

► [A362247] 1,1,1,7,37,201,1531,12433,112729,1158769,12920311,157007841,2063354437,29052921769,436908104179,6981843029281,118083965782321,2106973566128865,39538081855597807,778216030845226561,16027517577057849181,344635879922587951321 ⋆ Expansion of e.g.f. exp(x * exp(x * (exp(x) - 1))). ● a(n) = n! * Sum _{ i=0..n } (Sum _{ j=0..n - i } i ^ j * Stirling2(n - i - j,j) / (n - i - j)!) / i!. ●

► [A126475] 1,7,37,203,1111,6083,33305,182349,998383,5466269,29928491,163862147,897165287,4912089625,26894291201,147249532159,806209189861,4414093873755,24167703582839,132321131623579,724474371929041 ⋆ Number of base 7 n - digit numbers with adjacent digits differing by three or less. ● a(n) = 5 * a(n - 1) + 3 * a(n - 2) - 2 * a(n - 3) - a(n - 4) for n>3. ●

► [A255672] 1,1,7,37,215,1251,7459,44885,272727,1668313,10263057,63423482,393440867,2448542136,15280435191,95588065737,599213418327,3763242239317,23673166664695,149138199543613,940796936557265,5941862248557566,37568309060087582,237767215209245583 ⋆ Coefficient of x ^ n in Product _{ k>=1 } 1 / (1 - x ^ k) ^ (k * n). ● a(n) = [x ^ n] exp(n * Sum _{ k>=1 } x ^ k / (k * (1 - x ^ k) ^ 2)). - _ Ilya Gutkovskiy _ , May 30 2018 ●

► [A077239] 7,37,215,1253,7303,42565,248087,1445957,8427655,49119973,2862921836,1668633125,9725506567,56684406277,330380931095,1925601180293,11223226150663,65413755723685,381259308191447,2222142093424997,12951593252358535,75487417420726213 ⋆ Bisection (odd part) of Chebyshev sequence with Diophantine property. ● a(n) = 6 * a(n - 1) - a(n - 2), a(- 1) := 5, a(0)=7. ● a(n) = (((3 - 2 * sqrt(2)) ^ n * (- 8 + 7 * sqrt(2)) + (3 + 2 * sqrt(2)) ^ n * (8 + 7 * sqrt(2)))) / (2 * sqrt(2)). - _ Colin Barker _ , Oct 12 2015 ●

► [A362087] 1,1,7,37,215,1271,7651,46614,286599,1774630,11050897,69134572,434174819,2735565574,17283825370,109466361512,694764983463,4417771590123,28137563496298,179478199605550,1146342590242465,7330598365285470,46928753892901140 ⋆ a(n) = Sum _{ k=0..n } (- 1) ^ k * binomial(- n,k) * binomial(2 * k,n - k). ● a(n) = Sum _{ k=0..n } binomial(n + k - 1,k) * binomial(2 * k,n - k). ● a(n) = [x ^ n] 1 / (1 - x * (1 + x) ^ 2) ^ n. ●

► [A347726] 1,1,1,7,37,221,1801,15709,157641,1775521,21898801,296379931,4346295757,68682481141,1163591541113,21024039322441,403559222086801,8199021870113985,175746277620520417,3963144157484213359,93778090395227788021,2323080237693908254381 ⋆ Expansion of e.g.f.: exp(x / (1 - x) ^ x). ● a(n) = n! * Sum _{ i=0..n } (- 1) ^ (n - i) * (Sum _{ j=0..n - i } i ^ j * Stirling1(n - i - j, j) / (n - i - j)!) / i!. ●

► [A361279] 1,1,7,37,241,1981,17551,171697,1860097,21609721,268697431,3566446621,50060084977,740156116597,11496472967071,186824483634601,3167058238988161,55882288483846897,1023891003620741287,19440027237549627541,381822392009503555441 ⋆ Expansion of e.g.f. exp(x * (1 + x) ^ 3). ● a(n) = n! * Sum _{ k=0..n } binomial(3 * k,n - k) / k!. ● a(0) = 1; a(n) = (n - 1)! * Sum _{ k=1..n } k * binomial(3,k - 1) * a(n - k) / (n - k)!. ●

► [A096965] 1,1,1,7,37,241,2101,18271,201097,2270017,29668681,410815351,6238931821,101560835377,1765092183037,32838929702671,644215775792401,13441862819232001,293976795292186897,6788407001443004647,163735077313046119861,4142654439686285737201 ⋆ Number of sets of even number of even lists, cf. A000262. ● a(n) = (n! * sum(m=floor((n + 1) / 2)..n, (binomial(n - 1,2 * m - n - 1)) / (2 * m - n)!)). - _ Vladimir Kruchinin _ , Mar 10 2013 ●

► [A100309] 1,7,37,259,1297,9079,47989,335923,1679617,11757319,62145829,435020803,2178463249,15249242743,80603140213,564221981491,2821109907457,19747769352199,104381066575909,730667466031363,3658979549971729 ⋆ Modulo 2 binomial transform of 6 ^ n. ● a(n) = Sum _{ k=0..n } mod(binomial(n, k), 2) * 6 ^ k. ● a(2 ^ n) = 6 ^ (2 ^ n) + 1, n>=0. ● a(4 * n + 2) = 37 * a(4 * n); ● a(8 * n + 4) = 1297 / 37 * a(8 * n + 2); ● a(16 * n + 8)= 1679617 / 47989 * a(16 * n + 6), etc. (End) ●

► [A198410] 7,37,271,2269,19927,177877,1596511,14355469,129159847,1162320517,10460530351,94143710269,847290203767,7625602267957,68630391713791,617673439330669,5559060695695687,50031545486420197,450283907053258831,4052555156505760669,36472996387631139607 ⋆ a(n) = ((3 ^ (n - 1) + 1) ^ 3 - 1) / 3 ^ n. ● a(n) = 13 * a(n - 1) - 39 * a(n - 2) + 27 * a(n - 3) for n>2. - _ Vincenzo Librandi _ , Mar 25 2014 ●

► [A089677] 0,1,1,7,37,271,2341,23647,272917,3543631,51123781,811316287,14045783797,263429174191,5320671485221,115141595488927,2657827340990677,65185383514567951,1692767331628422661,46400793659664205567,1338843898122192101557 ⋆ Exponential convolution of A000670(n), with A000670(0)=0, with the sequence of all ones alternating in sign. ● a(n)=Sum(Binomial(n, k)(- 1) ^ (n - k)Sum(i! Stirling2(k, i), i=1, ..k), k=0, .., n). ● a(n) = Sum _{ k=0..floor(n / 2) } (2 * k + 1)! * Stirling2(n, 2 * k + 1). - _ Peter Luschny _ , Sep 20 2015 ●

► [A173766] 7,37,337,3337,33337,333337,3333337,33333337,333333337,3333333337,33333333337,333333333337,3333333333337,33333333333337,333333333333337,3333333333333337,33333333333333337 ⋆ (10 ^ n + 11) / 3. ● a(n)=10 * a(n - 1) - 33 (with a(1)=7) ●

► [A000531] 1,7,38,187,874,3958,17548,76627,330818,1415650,6015316,25413342,106853668,447472972,1867450648,7770342787,32248174258,133530264682,551793690628,2276098026922,9373521044908,38546133661492 ⋆ From area of cyclic polygon of 2n + 1 sides. ● a(n) = ((2n + 1)! / ((n!) ^ 2) - 4 ^ n) / 2. - Simon Norton (simon(AT)dpmms.cam.ac.uk), May 14 2001 ● a(n - 1) = 4 ^ n * sum _{ k=0..n } binomial(2 * k + 1, k) * 4 ^ (- k) = (2 * n + 1) * (2 * n + 3) * C(n) - 2 ^ (2 * n + 1) (C(n) = Catalan); g.f.: x * c(x) / (1 - 4 * x) ^ (3 / 2), c(x): g.f. of Catalan numbers A000108. - _ Wolfdieter Lang _ ●

► [A296769] 1,7,38,187,874,3958,17548,76627,330818,1415650,6015316,25413342,106853668,447472972,1867450648,7770342787,32248174258,133530264682,551793690628,2276098026922,9373521044908,38546133661492,158301250009768,649328801880622 ⋆ Row sums of A296662. ● a(n) = 2 ^ (1 + 2 * n) * ((2 * Gamma(5 / 2 + n)) / (sqrt(Pi) * Gamma(2 + n)) - 1). ●

► [A241524] 1,7,38,188,886,4052,18156,80152,349862,1513604,6501316,27759272,117935548,498920008,2102905496,8835174960,37015522054,154690661732,645017651412,2684135346184,11149265820500,46234832784216,191441476611688,791591523218768,3268982440735836 ⋆ a(n) = 4 ^ n * (n / 4 + binomial(n + 1 / 2, 1 / 2)). ● a(n) = 4 ^ n * (n / 4 + 2 * Gamma(n + 3 / 2) / (sqrt(Pi) * Gamma(n + 1))). ●

► [A099453] 1,7,38,189,905,4256,19837,92043,426094,1970185,9104261,42057792,194257673,897167999,4143341590,19134543141,88365044497,408075336928,1884511869029,8702754376995,40189650079646,185597252410577 ⋆ Expansion of 1 / (1 - 7 * x + 11 * x ^ 2). ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n - k, k) * (- 11) ^ k * 7 ^ (n - 2k). ● a(n) = ((7 + sqrt(5)) ^ n - (7 - sqrt(5)) ^ n) / (2 ^ n * sqrt(5)), n > 0. Binomial transform of A030191 (Scaled Chebyshev U - polynomial evaluated at sqrt(5) / 2); 3rd binomial transform of Fibonacci(n). - _ Creighton Dement _ , Apr 19 2005 ● a(n) = 7 * a(n - 1) - 11 * a(n - 2), n >= 2. - _ Vincenzo Librandi _ , Mar 18 2011 ●

► [A292535] 1,7,38,189,909,4368,21093,102051,493702,2387689,11546425,55837024,270025769,1305841103,6315023830,30539305893,147687325509,714212301776,3453913488845,16703042620715,80775512179990,390628431683601,1889069687788593,9135495517900480 ⋆ p - INVERT of the squares (A000290), where p(S) = 1 + S - 2 S ^ 2. ● a(n) = 7 * a(n - 1) - 15 * a(n - 2) + 24 * a(n - 3) - 11 * a(n - 4) + 5 * a(n - 5) - a(n - 6) for n >= 7. ●

► [A346395] 0,1,7,38,192,969,5115,29322,187992,1370745,11392839,107043606,1122823944,12989320785,164040593067,2243143392138,32994768719376,519229765892241,8701862242296807,154700700117472422,2907409255935736752,57588370882960384377,1198954118077558162875 ⋆ Expanison of e.g.f. - log(1 - x) * exp(3 * x). ● a(n) = n! * Sum _{ k=0..n - 1 } 3 ^ k / ((n - k) * k!). ● a(0) = 0, a(1)

= 1, a(n) = (n + 2) * a(n - 1) - 3 * (n - 1) * a(n - 2) + 3 ^ (n - 1). - _ Seiichi Manyama _ , May 27 2022 ●

▶ [A014827] 1,7,38,194,975,4881,24412,122068,610349,3051755,15258786,76293942,381469723,1907348629,9536743160,47683715816,238418579097,1192092895503,5960464477534,29802322387690,149011611938471 ⋆ a(1)=1, a(n) = 5 * a(n - 1) + n. ● a(n) = (5 ^ (n + 1) - 4 * n - 5) / 16. ● a(n) = Sum _{ k=0..n } (n - k) * 5 ^ k = Sum _{ k=0..n } k * 5 ^ (n - k). - _ Paul Barry _ , Jul 30 2004 ● a(n) = Sum _{ k=0..n } binomial(n + 2, k + 2) * 4 ^ k [Offset 0]. - _ Paul Barry _ , Jul 30 2004 ●

▶ [A226200] 1,7,38,219,1300,7781,46662,279943,1679624,10077705,60466186,362797067,2176782348,13060694029,78364164110,470184984591,2821109907472,16926659444753,101559956668434,609359740010515,3656158440062996,21936950640377877,131621703842267158 ⋆ 6 ^ n + n. ● a(n) = 8 * a(n - 1) - 13 * a(n - 2) + 6 * a(n - 3). ●

▶ [A027482] 7,39,126,310,645,1197,2044,3276,4995,7315,10362,14274,19201,25305,32760,41752,52479,65151,79990,97230,117117,139909,165876,195300,228475 ⋆ a(n) = n * (n ^ 3 - 1) / 2. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n > 6. - _ Chai Wah Wu _ , Apr 08 2021 ●

▶ [A004057] 1,7,39,191,875,3843,16423,68887,285219,1170059,4768127,19336863,78141883,314953555,1266977751,5089412519,20422176467,81882328731,328110270895,1314184126255,5261965982571,21063553061987 ⋆ Expansion of (1 - x) / ((1 + x) * (1 - 2 * x) * (1 - 3 * x) * (1 - 4 * x)). ● a(n) = (1 / 30) * (20 * 2 ^ n - 135 * 3 ^ n + 144 * 4 ^ n + (- 1) ^ n). ●

▶ [A081898] 1,7,39,193,886,3858,16146,65502,259119,1003833,3820689,14322663,52986636,193759452,701265924,2514778812,8943620589,31569189723,110673119691,385569479997,1335567565746,4601780568342,15778086835014 ⋆ A sequence related to binomial(n + 4, 4). ● a(n) = 3 ^ n * (n ^ 4 + 42 * n ^ 3 + 515 * n ^ 2 + 2034 * n + 1944) / 1944. ●

▶ [A198767] 7,39,199,999,4999,24999,124999,624999,3124999,15624999,78124999,390624999,1953124999,9765624999,48828124999,244140624999,1220703124999,6103515624999,30517578124999,152587890624999,762939453124999 ⋆ 8 * 5 ^ n - 1. ● a(n) = 5 * a(n - 1) + 4. ● a(n) = 6 * a(n - 1) - 5 * a(n - 2), n>1. ●

▶ [A026379] 1,7,39,202,1015,5028,24731,121208,593019,2899335,14173401,69301422,338990145,1659037695,8124085575,39806373880,195160896835,957396540285,4699409632805,23080158080150,113414575414245,557601196738190 ⋆ a(n) = number of integer strings s(0),...,s(n) counted by array T in A026374 that have s(n)=3; also a(n) = T(2n - 1,n - 2). ● a(n) = [t ^ (n + 1)] { (1 + t)(1 + 3t + t ^ 2) ^ (n - 1) } . - _ Emeric Deutsch _ , Jan 30 2004 ●

▶ [A016127] 1,7,39,203,1031,5187,25999,130123,650871,3254867,16275359,81378843,406898311,2034499747,10172515119,50862608363,254313107351,1271565667827,6357828601279,31789143530683 ⋆ Expansion of 1 / ((1 - 2 * x) * (1 - 5 * x)). ● a(n) = (5 ^ (n + 1) - 2 ^ (n + 1)) / 3 = Sum _{ i=0..n } 5 ^ i * 2 ^ (n - 1) = 5 * a(n - 1) + 2 ^ n =2 * a(n - 1) + 5 ^ n. - _ Henry Bottomley _ , Apr 07 2003 ● a(n) = Sum _{ k=0..n } Sum _{ j=0..n } 5 ^ (n - j) * binomial(j, k); ● a(n) = Sum _{ k=0..n } 2 ^ k * 5 ^ (n - k) = Sum _{ k=0..n } 5 ^ k * 2 ^ (n - k). (End) ●

▶ [A099460] 1,7,39,203,1040,5313,27133,138565,707643,3613904,18456077,94254531,481354555,2458260679,12554250288,64114111901,327428500337,1672165762785,8539691368807,43611901581472,222724437852585 ⋆ A Chebyshev transform of A099459 associated to the knot 9 _ 48. ● a(n) = Sum _{ k=0..floor(n / 2) } C(n - k, k) * (- 1) ^ k * (Sum _{ j=0..n - 2 * k } C(n - 2 * k - j, j)(- 9) ^ j * 7 ^ (n - 2 * k - 2 * j)). ●

▶ [A246987] 1,7,39,206,1087,5832,31949,178486,1013667,5832452,33896809,198496866,1168995647,6913808272,41021119269,243974552846,1453712656027,8674107635292,51813825111329,309768931954426,1853203840458807,11092815661905512,66427422581744989,397927440625389606,2384420217810707987 ⋆ Expansion of (1 - 11 * x + 34 * x ^ 2 - 21 * x ^ 3 + 2 * x ^ 4) / ((1 - x) * (1 - 2 * x) * (1 - 4 * x) * (1 - 5 * x) * (1 - 6 * x)). ● a(n) = (1 - 3 * 2 ^ (2 + n) + 7 * 2 ^ (1 + 2 * n) + 3 * 5 ^ n + 6 ^ (1 + n)) / 12. - _ Colin Barker _ , Jun 06 2015 ●

▶ [A164550] 1,7,39,213,1161,6327,34479,187893,1023921,5579847,30407319,165704373,903004281,4920912567,26816462559,146136037653,796366838241,4339792916487,23649656984199,128878563155733,702322407981801 ⋆ a(n) = 6 * a(n - 1) - 3 * a(n - 2) for n > 1; a(0) = 1, a(1) = 7. ● a(n) = ((3 + 2 * sqrt(6)) * (3 + sqrt(6)) ^ n + (3 - 2 * sqrt(6)) * (3 - sqrt(6)) ^ n) / 6. ● a(n) = 3 ^ ((n - 1) / 2) * (sqrt(3) * ChebyshevU(n, sqrt(3)) + ChebyshevU(n - 1, sqrt(3))). - _ G. C. Greubel _ , Jul 16 2021 ●

▶ [A125786] 1,7,39,216,1274,8200,58017,451283,3847960,35818351,362337006,3965467281,46749441514,591291743032,7993582141984,115104783083605,1759853074058289,28485332959460764,486811835886953020 ⋆ Column 6 of table A125781. ● a(n) = Sum _{ k=0..n } [A091351 ^ 2](n + 2,k + 2) where A091351 ^ 2 is the matrix square of A091351. ●

▶ [A155589] 1,7,39,223,1311,7807,46719,280063,1679871,10078207,60467199,362799103,2176786431,13060702207,78364180479,470185017343,2821109972991,16926659575807,101559956930559,609359740534783,3656158441111551 ⋆ 6 ^ n + 2 ^ n - 1. ● a(n)=8 * a(n - 1) - 12 * a(n - 2) - 5 with a(0)=1, a(1)=7 - _ Vincenzo Librandi _ , Jul 21 2010 ●

▶ [A122884] 1,7,39,231,1339,7819,45543,265503,1547347,9018835,52565151,306373095,1785671371,10407659227,60660275799,353554011951,2060663763139,12010428632419,70001907900303,408001019031543,2378004205764667 ⋆ The (2,3) - entry in the n - th power of the 3 X 3 matrix M = [1,1,1; 4,2,1; 9,3,1]. ● a(n + 1) = 4 * a(n) + 11 * a(n - 1) - 2 * a(n - 3). ● a(n)= - (29 / 68) * sqrt(2) * [3 - 2 * sqrt(2)] ^ (n - 1) + (19 / 34) * [3 + 2 * sqrt(2)] ^ (n - 1) + (29 / 68) * [3 + 2 * sqrt(2)] ^ (n - 1) * sqrt(2) + (19 / 34) * [3 - 2 * sqrt(2)] ^ (n - 1) - (2 / 17) * (- 2) ^ (n - 1). - _ Paolo P. Lava _ , Jul 09 2008 ●

▶ [A249635] 7,40,41,96,664,6095,8419,11471,13690,38835,49832,97152 ⋆ Indices of prime Fibonacci 6 - step numbers, A001592. ● a(n) = A105758 (n) + 4. ●

▶ [A164135] 7,40,54,87,101,134,148,181,195,228,242,275,289,322,336,369,383,416,430,463,477,510,524,557,571 ⋆ Numbers k such that k ^ 2 == 2 (mod 47). ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n>3. ● a(n) = (47 + 19 * (- 1) ^ n + 94 * (n - 1)) / 4. ●

▶ [A365373] 0,0,7,40,136,356,791,1568,2856,4872,7887,12232,18304,26572,37583,51968,70448,93840,123063,159144,203224,256564,320551,396704,486680 ⋆ a(n) = n * (3 * n ^ 4 + 15 * n ^ 3 + 25 * n ^ 2 - 15 * n - 28) / 60. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n > 5. ●

▶ [A252816] 7,40,187,684,2078,5490,13015,28299,57338,109549,199168,347035,582831,947837,1498290,2309416,3480225,5139158,7450681,10622926,14916484,20654460,28233905,38138745,50954332 ⋆ Number of n X 4 nonnegative integer arrays with upper left 0 and every value within 2 of its city block distance from the upper left and every value increasing by 0 or 1 with every step right or down. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>9. ●

▶ [A081039] 1,7,40,208,1024,4864,22528,102400,458752,2031616,8912896,38797312,167772160,721420288,3087007744,13153337344,55834574848,236223201280,996432412672,4191888080896,17592186044416,73667279060992 ⋆ 4th binomial transform of (1,3,0,0,0,0,0,.....). ● a(n) = 8 * a(n - 1) - 16 * a(n - 2) with n>1, a(0)=1, a(1)=7. ● a(n) = (3 * n + 4) * 4 ^ (n - 1). ● a(n) = sum(k=0..n, (k + 1) * 3 ^ k * binomial(n, k)). ●

▶ [A083327] 0,1,7,40,217,1156,6097,31900,165697,855076,4387537,22404460,113945377,577590196,2919923377,14729076220,74167952257,372944296516,1873182473617,9399885079180,47135702874337,236224784974036 ⋆ a(n) = (5 ^ n - 4 ^ n + 3 ^ n - 2 ^ n) / 2. ● a(n) = 14 * a(n - 1) - 71 * a(n - 2) + 154 * a(n - 3) - 120 * a(n - 4), n > 3. - _ Harvey P. Dale _ , Apr 04 2013 ●

▶ [A099459] 1,7,40,217,1159,6160,32689,173383,919480,4875913,25856071,137109280,727060321,3855438727,20444528200,108412748857,574888488199,3048504677680,16165536349969,85722212350663,454565659304920 ⋆ Expansion of 1 / (1 - 7 * x + 9 * x ^ 2). ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n - k, k) * (- 9) ^ k * 7 ^ (n - 2 * k). ● a(n) = Sum { k=0..n } binomial(2 * n - k + 1, k) * 3 ^ k. - _ Paul Barry _ , Jan 17 2005 ● a(n) = 7 * a(n - 1) - 9 * a(n - 2), n >= 2. - _ Vincenzo Librandi _ , Mar 18 2011 ● a(n) = ((7 + sqrt(13)) ^ (n + 1) - (7 - sqrt(13)) ^ (n + 1)) / (2 ^ (n + 1) * sqrt(13)). - _ Rolf Pleisch _ , May 19 2011 ● a(n) = 3 ^ (n - 1) * ChebyshevU(n - 1, 7 / 6). - _ G. C. Greubel _ , Nov 18 2021 ●

▶ [A371813] 1,1,7,40,239,1461,9076,57044,361711,2309467,14827487,95630272,619111172,4021011580,26187682024,170960159100,1118406332655,7330011083079,48119501497909,316354663355384,2082573599282359,13726029056757029,90565080767425744 ⋆ a(n) = Sum _{ k=0..n } (- 1) ^ k * binomial(3 * n - k - 1,n - k). ● a(n) = [x ^ n] 1 / ((1 + x) * (1 - x) ^ (2 * n)). ● a(n) = binomial(3 * n - 1, n) * hypergeom([1, - n], [1 - 3 * n], - 1). - _ Stefano Spezia _ , Apr 07 2024 ●

▶ [A154968] 1,1,7,40,244,1456,8752,52480,314944,1889536,11337472,68024320,408146944,2448879616,14693281792,88159682560,528958111744,3173748637696,19042491891712,114254951219200,685529707577344 ⋆ a(n) = 4 * a(n - 1) + 12 * a(n - 2), n>2 with a(0)=1, a(1)=1, a(2)=7. ● a(n) = (1 / 8) * (9 * 6 ^ (n - 1) - (- 2) ^ (n - 1)) + (3 / 4) * (binomial(2 * n,n) mod 2), with n>=0. (End) ● a(n) = (6 ^ (n + 1) - (- 2) ^ (n + 1)) / 32 + (3 / 4) * [n=0]. ●

▶ [A121582] 0,1,7,40,252,1837,15259,141798,1455694,16360387,199845957,2637020884,37388864368,566971338009,9157693715407,156975522127762,2846305448882274,54432896145210943,1095019542858729769 ⋆ Number of cells in column 2 of all deco polyominoes of height n. A deco polyomino is a directed column - convex polyomino in which the height, measured along the diagonal, is attained only in the last column. ● a(1)=0, a(2)=1, a(n)=[(2n - 3)a(n - 1) - (n - 1)a(n - 2) + (n - 1)!(n - 2)(n ^ 2 - 3n + 4) / 2] / (n - 2) for n>=3. ●

▶ [A230018] 7,41,129,298,575,987,1561,2324,3303,4525,6017,7806,9919,12383,15225,18472,22151,26289,30913,36050,41727,47971,54809,62268,70375 ⋆ a(n) = (9 * n ^ 3 + 5 * n) / 2. ● a(n) = ceiling(1 / f(n)) / 2, where f(n) = (n + 1 / (3 * n)) - (n ^ 3 + n) ^ (1 / 3), n > 0. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ●

▶ [A165563] 1,7,41,151,409,911,1777,3151,5201,8119,12121,17447,24361,33151,44129,57631,74017,93671,117001,144439,176441,213487,256081,304751,360049 ⋆ a(n) = 1 + 2 * n + n ^ 2 + 2 * n ^ 3 + n ^ 4. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ●

▶ [A084779] 1,7,41,207,1313,7807,42593,232463,1290433,7604415,42034721,236031231,1363681121,7457831007,39670144513,231087069823,1291433872385,7373001299199,41437235793921,229538650588863,1268719471103233 ⋆ a(n) = sum of absolute - valued coefficients of (1 + 2 * x - 4 * x ^ 2) ^ n. ● a(n) = Sum _{ k=0..2 * n } abs(f(n, k)), where f(n, k) = (n! / (2 * n - k)!) * i * (k - n) * 2 ^ k * 5 ^ (n / 2) * LegendreP(n, n - k, 1 / sqrt(5)). - _ G. C. Greubel _ , Jun 04 2023 ●

▶ [A237664] 0,1,7,41,211,1009,4621,20593,90091,388961,1662805,7054321,29745717,124807201,521515801,2171645281,9016205851,37337699521,154277300101,636214748401,2619084047581,10765157488801,44186078238121,181135476007201,741694884711301 ⋆ Interpolation polynomial through n + 1 points (0,1), (1,1), ..., (n - 1,1) and (n,n) evaluated at 2n. ● a(n) = (2 * n)! * (n - 1) / (n!) ^ 2 + 1. ●

▶ [A191010] 1,7,41,215,1065,5079,23593,107479,482345,2139095,9395241,40936407,177167401,762356695,3264175145,13915694039,59098749993,250138895319,1055531162665,4442026976215,18647717207081,78109306037207,326510972984361,1362338887279575 ⋆ a(n) = (n * 4 ^ (n + 1) + (6 * 4 ^ (n + 1) + (- 1) ^ n) / 5) / 5. ● a(n) = (n * 4 ^ (n + 1) + (6 * 4 ^ (n + 1) + (- 1) ^ n) / 5) / 5. ● a(n) = 7 * a(n - 1) - 8 * a(n - 2) - 16 * a(n - 3) for n>2. ●

▶ [A081625] 1,7,41,223,1169,6007,30521,154063,774689,3886567,19472201,97479103,487749809,2439811927,12202248281,61020807343,305132734529,1525749766087,7629007110761,38145810394783,190731376496849 ⋆ a(n) = 2 * 5 ^ n - 3 ^ n. ● a(n) = 8 * a(n - 1) - 15 * a(n - 2), a(0)=1, a(1)=7. ●

▶ [A144635] 1,7,41,225,1195,6227,32059,163727,831505,4206145,21215481,106782837,536618341,2693492305,13507578125,67693008145,339066121115,1697664211795,8497396194275,42522326235175,212749477704695,1064285646397915,5323532330953295,26625895085494075 ⋆ a(n) = 5 ^ n * Sum _{ k=0..n } binomial(2 * k,k) / 5 ^ k. ● a(n) = 5 ^ (n + 1 / 2) - 2 ^ (n + 1) * (2 * n + 1)!! * hypergeom([1,n + 3 / 2], [n + 2], 4 / 5] / (5 * (n + 1)!). - _ Vladimir Reshetnikov _ , Oct 14 2016 ●

► [A097165] 1,7,41,227,1221,6447,33601,173467,889181,4533287,23015961,116477907,587981941,2962279327,14900875121,74862289547,375743103501,1884442140567,9445117195081,47317211944387,236952563597861 ★ Expansion of (1 - 3x) / ((1 - x)(1 - 4x)(1 - 5x)). ● a(n)=5 * 5 ^ n / 2 - 4 * 4 ^ n / 3 - 1 / 6; a(n)=sum { k=0..n, (5 ^ k + 1)4 ^ (n - k) / 2 } ; a(n)=sum { k=0..n, (4 ^ k + 2)5 ^ (n - k) / 3 } ; a(n)=10a(n - 1) - 29a(n - 2) + 20a(n - 3). ●

► [A152268] 0,1,7,41,231,1289,7175,39913,221991,1234633,6866503,38188457,212387175,1181202569,6569320583,36535623529,203194800039,1130078612041,6284991883975,34954314291497,194400264968679,1081167340448777 ★ A hidden Markov recursion involving the matrices: M0 = {{ 0, 1 } , { 1, 1 / 2 }} ; M = {{ 0 , 2 } , { 2, 1 }} ; as Mh=M0.M.(M0 + I); v[(n)=Mh.v(n - 1): first element of v . ● a(n) first element of - v(n)[[1]] / 2. ● a(n) = 7 * a(n - 1) - 8 * a(n - 2). ● a(n) = (1 / 17) * sqrt(17) * ((7 / 2 + (1 / 2) * sqrt(17)) ^ n - (7 / 2 - (1 / 2) * sqrt (17)) ^ n), with n >= 0. - _ Paolo P. Lava _ , Feb 11 2009 ●

► [A026002] 1,7,41,231,1289,7183,40081,224143,1256465,7059735,39753273,224298231,1267854873,7178461215,40704778785,231128079903,1314016698401,7478998203943,42612705597769,243025194476551,1387226559025961,7924982285747247 ★ a(n) = T(n,n + 2), where T = Delannoy triangle (A008288). ● a(n) = (1 / n) * Sum _{ k=0..n } k * binomial(n, k) * binomial(n + k, k + 1). ● a(n) = Sum _{ k=0..n } C(n, k) * C(n + 2, k) * 2 ^ k. - _ Paul Barry _ , Jan 23 2006 ● a(n) = Jacobi _ P(n, 2, 0, 3). - _ Paul Barry _ , Jan 23 2006 ● a(n) = (- 1) ^ n * ((2 * n - 1) * LegendreP(n, - 3) - LegendreP(n - 1, - 3)) / (2 * n + 2). - _ Mark van Hoeij _ , Oct 31 2011 ● a(n) = hypergeom([- n - 1, - n + 1], [1], 2). - _ Peter Luschny _ , Nov 19 2014 ● a(n + 1) = 1 / 2 ^ (n + 1) * Sum _{ k >= 2 } 1 / 2 ^ k * binomial(n + k, n) * binomial(n + k, n + 2). ●

► [A057009] 1,7,41,235,1361,7987,47321,281995,1685921,10096867,60524201,362972155,2177309681,13062280147,78368930681,470199300715,2821152888641,16926788453827,101560343826761,609360901747675,3656161925798801,21936961098633907,131621735219132441 ★ Number of conjugacy classes of subgroups of index 3 in free group of rank n. ● a(1)=1, a(2)=7, a(3)=41, a(n) = 11 * a(n - 1) - 36 * a(n - 2) + 36 * a(n - 3). [_ Harvey P. Dale _ , Nov 24 2011] ●

► [A002315] 1,7,41,239,1393,8119,47321,275807,1607521,9369319,54608393,318281039,1855077841,10812186007,63018038201,367296043199,2140758220993,12477253282759,72722761475561,423859315570607,2470433131948081,14398739476117879,83922003724759193 ★ NSW numbers: a(n) = 6 * a(n - 1) - a(n - 2); also a(n) ^ 2 - 2 * b(n) ^ 2 = - 1 with b(n) = A001653(n + 1). ● a(n) = (1 / 2) * ((1 + sqrt(2)) ^ (2 * n + 1) + (1 - sqrt(2)) ^ (2 * n + 1)). ● a(n) = (1 + sqrt(2)) / 2 * (3 + sqrt(8)) ^ n + (1 - sqrt(2)) / 2 * (3 - sqrt(8)) ^ n. - _ Ralf Stephan _ , Feb 23 2003 ● a(n) = Sum _{ k=0..n } 2 ^ k * binomial(2 * n + 1, 2 * k). - Zoltan Zachar (zachar(AT)fellner.sulinet.hu), Oct 08 2003 ● a(n) = L(n, - 6) * (- 1) ^ n, where L is defined as in A108299; see also A001653 for L(n, + 6). - _ Reinhard Zumkeller _ , Jun 01 2005 ● a(n) = Jacobi _ P(n,1 / 2, - 1 / 2,3) / Jacobi _ P(n, - 1 / 2,1 / 2,1). - _ Paul Barry _ , Feb 03 2006 ● a(n + 1) = 3 * a(n) + sqrt(8 * a(n) ^ 2 + 8), a(1)=1. - _ Richard Choulet _ , Sep 18 2007 ●

► [A292035] 1,7,41,245,1476,8897,53621,323155,1947541,11737152,70735741,426299755,2569160621,15483439097,93313311876,562366934045,3389190268241,20425473083407,123097234932601,741864297888000,4470958562003401,26944915020252607,162387648058027841,978653976900562445 ★ Linear divisibility sequence based on Salem number of order 4 (case t=7, see formula). ● a(n) = round(lambda(7) * alpha(7) ^ n) ● a(n) = 7 * a(n - 1) - 7 * a(n - 2) + 7 * a(n - 3) - a(n - 4) for n>4. ●

► [A108983] 1,7,41,247,1481,8887,53321,319927,1919561,11517367,69104201,414625207,2487751241,14926507447,89559044681,537354268087,3224125608521,19344753651127,116068521906761,696411131440567,4178466788643401 ★ Inverse binomial transform of A003950. ● a(n) = 5a(n - 1) + 6a(n - 2), a(0) = 1, a(1) = 7. ● a(2n) = 6a(2n - 1) - 1; a(2n + 1) = 6a(2n) + 1. ● a(n) = - (1 / 7) * [(- 1) ^ n - 8 * 6 ^ n], with n>=0. [_ Paolo P. Lava _ , Nov 19 2008] ●

► [A080047] 0,1,7,41,256,1807,14477,130321,1303246,14335751,172029067,2236377937,31309291196,469639368031,7514229888601,127741908106337,2299354345914202,43687732572369991,873754651447399991 ★ Operation count to create all permutations of n distinct elements using Algorithm L (lexicographic permutation generation) from Knuth's The Art of Computer Programming, Vol. 4, chapter 7.2.1.2. Sequence gives number of times l has to be repeatedly decreased in step L3. ● a(2)=0, a(n) = n * a(n - 1) + (n - 1) * (n - 2) / 2 for n>=3 c = limit n - > infinity a(n) / n! = 0.35914091422952261768 = e / 2 - 1, a(n) = floor [c * n! - (n - 1) / 2] for n>=2 ●

► [A297405] 7,42,63,292,365,438,511,2184,2457,2730,3003,3276,3549,3822,4095,16912,17969,19026,20083,21140,22197,23254,24311,25368,26425 ★ Binary "cubes"; numbers whose binary representation consists of three consecutive identical blocks. ● a(n) = n * (1 + 2 ^ p + 4 ^ p) with p = 1 + floor(log _ 2(n)). - _ Alois P. Heinz _ , Dec 29 2017 ●

► [A110451] 0,7,42,129,292,555,942,1477,2184,3087,4210,5577,7212,9139,11382,13965,16912,20247,23994,28177,32820,37947,43582,49749,56472 ★ a(n) = n * (4 * n ^ 2 + 2 * n + 1). ● a(n) = 4 * a(n - 1) - 6 * a(n - 1) + 4 * a(n - 2) - a(n - 4). ●

► [A266387] 0,0,0,0,0,7,42,147,392,882,1764,3234,5544,9009,14014,21021,30576,43316,59976,81396,108528,142443,184338,235543,297528 ★ Number of orbits of Aut(Z ^ 7) as function of the infinity norm n of the representative lattice point of the orbit, when the cardinality of the orbit is equal to 322560. ● a(n) = 7 * (n - 1) * (n - 2) * (n - 3) * (n - 4) * (n - 5) / 120. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. ●

► [A073376] 1,7,42,196,826,3150,11256,38004,122787,381997,1151458,3376968,9671284,27123292,74669472,202181112,539342181,1419492627,3690464106,9487902396,24143758254,60861096714 ★ Sixth convolution of A001045(n + 1) (generalized (1,2) - Fibonacci), n>=0, with itself. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n - k + 6, 6) * binomial(n - k, k) * 2 ^ k. ●

► [A094429] 0,7,42,196,833,3381,13377,52136,201341,773122,2958032,11291903,43042727,163918671,623875840,2373568575,9028148962,34334213564,130560389505,496440779373,1887579497489,7176808297736,27286630574917 ★ Given the 3 X 3 matrix M = [0 1 0 / 0 0 1 / 7 - 14 7], a(n) = (-) rightmost term of M ^ n * [1 1 1]. ● a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 7 * a(n - 3). ● a(n) = c(4) * (s(1)) ^ (2 * n) + c(2) * (s(4)) ^ (2 * n) + c(1) * (s(2)) ^ (2 * n) = (- 1 / sqrt(7)) * (c(1) * (s(1)) ^ (2 * n + 3) + c(2) * (s(2)) ^ (2 * n + 3) + c(3) * (s(3)) ^ (2 * n + 3)) = (- 1 / sqrt(7)) * (s(2) * (s(1)) ^ (2 * n + 2) + s(4) * (s(2)) ^ (2 * n + 2) + s(1) * (s(4)) ^ (2 * n + 2)), where c(j) := 2 * cos(2 * Pi * j / 7) and s(j) := 2 * sin(2 * Pi * j / 7) (for the sums of the respective odd powers see A217274, see also A215493 and comments to A215494). For the proof of these formulas see Witula - Slota's paper. - _ Roman Witula _ , Jul 24 2012 ●

► [A374506] 1,7,42,210,966,4158,17094,67782,261261,983983,3635632,13217568,47393892,167919948,588772152,2045481480,7048466271,24111291897,81939285582,276810647190,930096277110,3109797881190,10350813392010,34309326304890,113288127469335 ★ Expansion of 1 / (1 - 2 * x - 3 * x ^ 2) ^ (7 / 2). ● a(0) = 1, a(1) = 7; a(n) = ((2 * n + 5) * a(n - 1) + 3 * (n + 5) * a(n - 2)) / n. ● a(n) = (binomial(n + 6,3) / 20) * Sum _{ k=0..floor(n / 2) } binomial(n + 3,n - 2 * k) * binomial(2 * k + 3,k). ● a(n) = Pochhammer(n + 1, 6) * hypergeom([(1 - n) / 2, - n / 2], [4], 4) / 6!. - _ Stefano Spezia _ , Jul 10 2024 ●

► [A349427] 0,1,7,42,230,1190,5922,28644,135564,630630,2892890,13117676,58903572,262303132,1159666900,5094808200,22259364120,96773942790,418882316490,1805951924700,7758285404100,33221013445620,141830949914940,603876402587640,2564713671647400 ★ a(n) = ((n + 1) ^ 2 - 2) * binomial(2 * n - 2,n - 1) / 2. ● a(n) = n * ((n + 1) ^ 2 - 2) * Catalan(n - 1) / 2. ●

► [A200864] 1,7,42,230,1211,6237,31732,160300,806421,4046867,20278622,101525970,508028431,2541337897,12710276712,63562145240,317843011241,1589311911327,7946850122002,39735122306110,198678226618851,993398978359157,4967018427590492,24835162745336580 ★ Expansion of 1 / ((1 + x) * (1 - 3 * x) * (1 - 5 * x)). ● a(n) = (50 * 5 ^ n - 27 * 3 ^ n + (- 1) ^ n) / 24. ● a(n) = 2 * a(n - 1) + 3 * a(n - 2) + 5 ^ n for n>1, a(0)=1, a(1)=7. ● a(n) = 7 * a(n - 1) - 7 * a(n - 2) - 15 * a(n - 3) for n>2, a(0)=1, a(1)=7, a(2)=42. ●

► [A164072] 1,7,42,238,1316,7196,39144,212408,1151248,6236272,33772704,182873824,990172736,5361148352,29026768512,157158071168,850889810176,4606905485056,24942786537984,135045615513088,731165912572928 ★ a(n) = 8 * a(n - 1) - 14 * a(n - 2) for n > 1; a(0) = 1, a(1) = 7. ● a(n) = ((2 + 3 * sqrt(2)) * (4 + sqrt(2)) ^ n + (2 - 3 * sqrt(2)) * (4 - sqrt(2)) ^ n) / 4. ●

► [A111995] 1,7,42,238,1316,7196,39158,212738,1155889,6287015,34249404,186920468,1022134288,5600420336,30745867316,169116129308,931937277257,5144687596447,28449040406262,157571572143538,874089046798212 ★ Seventh convolution of Schroeder's (second problem) numbers A001003(n), n >= 0. ● a(n)= (7 / n) * Sum _{ k=1..n } binomial(n,k) * binomial(n + k + 6,k - 1). ● a(n) = 7 * hypergeom([1 - n, n + 8], [2], - 1), n >= 1, a(0)=1. ● a(n) = ((2 + sqrt(18)) * (4 + sqrt(2)) ^ n) + (2 - sqrt(18)) * (4 - sqrt(2)) ^ n) / 4 offset 0. ● a(n) = fourth binomial transform of 1,3,2,6,4,12. - Al Hakanson (hawkuu(AT)gmail.com), Aug 08 2009 ●

► [A050152] 0,1,7,42,242,1375,7773,43876,247684,1399293,7913955,44812878,254064726,1442131899,8195232633,46621424520,265490365448,1513290869881,8633347134975,49293941140402,281670686307130 ★ a(n) = T(n,n + 3), array T as in A050143. ● a(n) = Sum _{ i=0..n + 2 } 2 ^ (i - 2) * (- 1) ^ (n - i) * binomial(n,n - i + 2) * binomial(n + i - 1,n - 1)). - _ Vladimir Kruchinin _ , May 24 2014 ● a(n) = (- 1) ^ n * (n + 1) * (n / 2) * hypergeom([- n, n + 2], [3], 2). - _ Peter Luschny _ , May 24 2014 ● a(n) = Sum _{ k=0..n } (binomial(n,k) * binomial(2 * n - k + 1,n - k - 1)). - _ Vladimir Kruchinin _ , Oct 26 2016 ●

► [A053142] 0,1,7,42,246,1435,8365,48756,284172,1656277,9653491,56264670,327934530,1911342511,11140120537,64929380712,378436163736,2205687601705,12855689446495,74928449077266,436715005017102 ★ a(n) = A053141(n) / 2. ● a(n) = 6 * a(n - 1) - a(n - 2) + 1, a(0)=0, a(1)=1. ● a(n + 1) = Sum _{ k=0..n } S(k, 6) = Sum _{ k=0..n } U(n, 3), Chebyshev polynomials of 2nd kind, A049310 . ● a(n + 1) = (sqrt(2) - 1) ^ (2 * n)(5 / 8 - 7 * sqrt(2) / 16) + (sqrt(2) + 1) ^ (2 * n) * (7 * sqrt(2) / 16 + 5 / 8) - 1 / 4. (End) ● a(n) = 7 * a(n - 1) - 7 * a(n - 2) + a(n - 3). ● a(n) = - (1 / 4) + (1 - sqrt(2)) / (- 8 * sqrt(2)) * (3 - 2 * sqrt(2)) ^ n + (1 + sqrt(2)) / (8 * sqrt(2)) * (3 + 2 * sqrt(2)) ^ n. (End) ● a(n) * a(n - 2) = a(n - 1) * (a(n - 1) - 1) for n>1. - _ Robert K. Moniot _ , Sep 21 2020 ●

► [A163345] 1,7,42,252,1512,9051,54180,324345,1941660,11623500,69582660,416548125,2493614550,14927719275,89362970550,534960522600,3202475913000,19171231408875,114766238286000,687034086094125,4112845750671000 ★ Number of reduced words of length n in Coxeter group on 7 generators S _ i with relations (S _ i) ^ 2 = (S _ i S _ j) ^ 5 = I. ● a(n) = 5 * a(n - 1) + 5 * a(n - 2) + 5 * a(n - 3) + 5 * a(n - 4) - 15 * a(n - 5). - _ Wesley Ivan Hurt _ , May 10 2021 ●

► [A163923] 1,7,42,252,1512,9072,54411,326340,1957305,11739420,70410060,422301600,2532857460,15191434125,91114353750,546480693675,3277652052150,19658522431800,117906811965600,707175035973000,4241455800274875 ★ Number of reduced words of length n in Coxeter group on 7 generators S _ i with relations (S _ i) ^ 2 = (S _ i S _ j) ^ 6 = I. ● a(n) = 5 * a(n - 1) + 5 * a(n - 2) + 5 * a(n - 3) + 5 * a(n - 4) + 5 * a(n - 5) - 15 * a(n - 6). - _ Wesley Ivan Hurt _ , Apr 23 2021 ●

► [A169452] 1,7,42,252,1512,9072,54432,326592,1959552,11757312,70543872,423263232,2539579392,15237476352,91424858112,548549148672,3291294892032,19747769352192,118486616113152,710919696678912,4265518180073472 ★ Number of reduced words of length n in Coxeter group on 7 generators S _ i with relations (S _ i) ^ 2 = (S _ i S _ j) ^ 33 = I. ● a(n) = - 15 * a(n - 33) + 5 * Sum _{ k =1..32 } a(n - k). - _ Wesley Ivan Hurt _ , May 06 2021 ●

► [A003949] 1,7,42,252,1512,9072,54432,326592,1959552,11757312,70543872,423263232,2539579392,15237476352,91424858112,548549148672,3291294892032,19747769352192,118486616113152,710919696678912,4265518180073472,25593109080440832,153558654482644992 ★ Expansion of g.f.: (1 + x) / (1 - 6 * x). ● a(0)=1; for n > 0, a(n) = 7 * 6 ^ (n - 1). - _ Vincenzo Librandi _ , Nov 18 2010 ● a(0)=1, a(1)=7, a(n) = 6 * a(n - 1). - _ Vincenzo Librandi _ , Dec 10 2012 ●

► [A033133] 1,7,42,253,1519,9114,54685,328111,1968666,11811997,70871983,425231898,2551391389,15308348335,91850090010,551100540061,3306603240367,19839619442202,119037716653213,714226299919279,4285357799515674,25712146797094045,154272880782564271 ★ Base - 6 digits are, in order, the first n terms of the periodic sequence with initial period 1,1,0. ● a(n) = 6 * a(n - 1) + a(n - 3) - 6 * a(n - 4). ●

► [A152240] 1,7,42,259,1589,9758,59913,367871,2258746,13868827,85155357,522858574,3210380369,19711911863,121032221898,743144492531,4562948015941,28016751527422,172024393748697,1056239229435439,6485366903418074 ★ a(n)=5 * a(n - 1) + 7 * a(n - 2), n>1 ; a(0)=1, a(1)=7 . ● a(n)=(1 / 2) *{ [(5 / 2) - (1 / 2) * sqrt(53)] ^ n + [(5 / 2) + (1 / 2) * sqrt(53)] ^ n }+ (9 / 106) * sqrt(53) *{ [(5 / 2) + (1 / 2) * sqrt(53)] ^ n - [(5 / 2) - (1 / 2) * sqrt(53)] ^ n } , with n>= 0 [From __ Paolo P. Lava _ , Dec 12 2008] ●

► [A366222] 1,1,7,42,287,2114,16338,130802,1075355,9025656,77021482,6662675 02,5829209046,51492030953,458612500526,4113879873624,37133888342707,33704 1718357465,3074153880004188,28162578841220534,259020296989987934,2390818 256963083305 ★ G.f. A(x) satisfies A(x) = 1 + x * (1 + x) ^ 4 * A(x) ^ 3. ● a(n) = Sum _{ k=0..n } binomial(4 * k,n - k) * binomial(3 * k,k) / (2 * k + 1). ●

► [A271427] 0,7,42,301,2100,14707,102942,720601,5044200,35309407,24716584 2,1730160901,12111126300,84777884107,593445188742,4154116321201,290788142 48400,203551699738807,1424861898171642,9974033287201501,6981823301041050 0,488727631072873507,3421093417510114542 ★ a(n) = 7 ^ n - a(n - 1) for n>0, a(0)=0. ● a(n) = 6 * a(n - 1) + 7 * a(n - 2). ● a(n) = 7 * (7 ^ n - (- 1) ^ n) / 8 . ●

► [A218124] 1,7,42,336,2352,16800,117264,823536,5762400,40353264,282458400,1 977326736,13841167200,96889010400,678222249264,4747561492800,33232924804 800,232630513987200,1628413557439536,11398895185373136,7979226601513440 0,558545864082460128 ★ Number of 7 - ary sequences with primitive period n. ● a(n) = Sum _{ d|n } 7 ^ d * mu(n / d) for n>0, a(0) = 1. ●

► [A045800] 1,7,43,49,101,107,143,149,201,207,243,249,301,307,343,349,401,407,4 43,449,501,507,543,549,601 ★ 0 - ish numbers (end in 01, 07, 43, 49). ● a(n) = (50 * n - 8 * i ^ (n * (n + 1)) - 19 * (- 1) ^ n - 75) / 2, where i=sqrt(- 1). - _ B runo Berselli _ , Feb 22 2012 ●

► [A159254] 7,43,57,93,107,143,157,193,207,243,257,293,307,343,357,393,407,44 3,457,493,507,543,557,593,607 ★ Numbers whose square ends with 49. ● a(1)=7, a(2)=43, a(n) = 50 + a(n - 2). ● a(n) = (11 * (- 1) ^ n + 50 * n - 25) / 2. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3). ●

► [A301628] 7,43,61,79,97,133,151,169,187,223,241,259,277,313,331,349,367,403,4 21,439,457,493,511,529,547 ★ Numbers not divisible by 2, 3 or 5 (A007775) with digital root 7. ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. ●

► [A216301] 7,43,103,106,145,238,271,409,472,544,574,670,721,904,934,1009,118 3,1204,1261,1282,1372,1636,1669,1729,1792 ★ Numbers k such that 10k + 7 is co mposite but 10k + 1, 10k + 3, 10k + 9 are all prime. ● a(n) >> n log ^ 3 n. - _ Charles R Greathouse IV _ , Sep 07 2012 ●

► [A351936] 1,1,1,1,1,1,7,43,169,505,1261,5545,55441,442729,2540539,11381371,5 4534481,548974609,6572212921,59711454433,413207026561,2551872368305,24405 087826351,356232375255835,4526838244526137 ★ Expansion of e.g.f. exp(x / (1 - x ^ 5 / 5!)). ● a(n) = Sum _{ k=0..floor((n - 1) / 5) } (5 * k + 1)! / (5!) ^ k * binomial(n - 1,5 * k) * a(n - 1 - 5 * k) for n > 5. ●

► [A126718] 7,43,235,1171,5467,24403,105595,447091,1864027,7686163,3144095 5,127865011,517788187,2090186323,8417944315,33843570931,135890057947,5451 08340883,2185079263675,8754257900851,35058860433307,140360940805843,5618 20285607035 ★ a(n) is the number of nonnegative integers k less than 10 ^ n suc h that the decimal representation of k lacks the digits 1,2,3, at least one of digit s 4,5, at least one of digits 6,7 and at least one of digits 8,9. ● a(n) = 8 * 4 ^ n - 12 * 3 ^ n + 6 * 2 ^ n - 1. ● a(n) = 10 * a(n - 1) - 35 * a(n - 2) + 50 * a(n - 3) - 24 * a(n - 4). - _ Colin Barker _ , Feb 22 2015 ●

► [A346227] 1,1,7,43,241,1315,7525,46165,292015,1839901,11536747,72847417,46 6127719,3018752041,19678318207,128531220955,840554295625,5513681844355,36 333611660245,240480114800023,1596692607223561,10621894482682471,70761572 688601777,472172623607888563 ★ Number of n - step 6 - dimensional nonnegati ve lattice walks starting at the origin and using steps that increment all compon ents or decrement one component by 1. ● a(n) == 1 (mod 6). ●

► [A081896] 1,7,43,245,1328,6944,35328,175872,860160,4145152,19726336,92864 512,433061888,2002780160,9193914368,41926262784,190052302848,85684597555 2,3843995729920,17166984282112,76347338653696,338237264494592 ★ A sequen ce related to binomial(n + 3, 3). ● a(n) = 4 ^ n * (n ^ 3 + 33 * n ^ 2 + 254 * n + 384) / 384. ●

► [A163869] 1,7,43,249,1395,7653,41381,221399,1175027,6196725,32512401,1698 63147,884318973,4589954619,23761814955,122735222505,632698778835,32558327 30565,16728131746145,85826852897675,439793834236745,2251006269442815,115 09340056410735,58790764269668805 ★ Binomial transform of the beta numbers 1 / beta(n + 1,n + 1) (A002457). ● a(n) = hypergeom([3 / 2, - n], [1], - 4) = hy pergeom([3 / 2, n + 1], [1], 4 / 5) / (5 * sqrt(5)). - _ Vladimir Reshetnikov _ , Apr 25 2016 ●

► [A161728] 1,7,43,253,1465,8431,48403,277621,1591729,9124759,52305595,2998 22893,1718610409,9851185663,56467549987,323674986277,1855321740385,106347 99101479,60959210186827,349421293175389,2002900612974361,114807280925148 31,65808116771451955,377215468968922837 ★ a(n) = ((3 + sqrt(3)) * (4 + sqrt(3)) ^ n - (3 - sqrt(3)) * (4 - sqrt(3)) ^ n) / sqrt(12). ● a(n) = 8 * a(n - 1) - 13(n - 2) for n > 1; a(0) = 1, a(1) = 7. ●

► [A358682] 1,7,43,253,1477,8611,50191,292537,1705033,9937663,57920947,3375 88021,1967607181,11468055067,66840723223,389576284273,2270616982417,13234 125610231,77134136678971,449570694463597,2620290030102613,15272169486152 083,89012726886809887,518804191834707241 ★ Numbers k such that 8 * k ^ 2 + 8 * k - 7 is a square. ● a(n) = 7 * a(n - 1) - 7 * a(n - 2) + a(n - 3) for n > 3. ● a(n) = (3 * (3 - 2 * sqrt(2)) ^ n * (2 + sqrt(2)) + 3 * (2 - sqrt(2)) * (3 + 2 * sq rt(2)) ^ n - 4) / 8. ●

► [A271197] 1,7,43,255,1491,8659,50107,289375,1669291,9623427,55460835,3195 83823,1841526051,10612066227,61160827083,352543298751,2032480521819,11719 811413027,67592446165363,389906344880815,2249609496664531 ★ Expansion of - (sqrt(x ^ 2 - 6 * x + 1) + 3 * x - 1) / ((7 * x - 1) * sqrt(x ^ 2 - 6 * x + 1) + x ^ 2 - 6 * x + 1) / x. ● a(n) = Sum _{ k=0..n } (Sum _{ j=0..n + 1 } (binomi al(j,n - k - j) * 3 ^ (- n + k + 2 * j) * 2 ^ (n - k - j) * binomial(n + 1,j))). ●

► [A003464] 0,1,7,43,259,1555,9331,55987,335923,2015539,12093235,72559411,43 5356467,2612138803,15672832819,94036996915,564221981491,3385331888947,203 11991333683,121871948002099,731231688012595,4387390128075571 ★ a(n) = (6 ^ n - 1) / 5. ● a(n) = Sum _{ k=1..n } C(n, k) * 5 ^ (k - 1). ● a(n) = 6 * a(n - 1) + 1 with a(1)=1. - _ Vincenzo Librandi _ , Nov 17 2010 ● a(n) = 7 * a(n - 1) - 6 * a(n - 2). - _ Vincenzo Librandi _ , Nov 08 2012 ●

► [A015451] 1,1,7,43,265,1633,10063,62011,382129,2354785,14510839,89419819,5 51029753,3395598337,20924619775,128943316987,794584521697,4896450447169,3 0173287204711,185936173675435,1145790329257321 ★ a(n) = 6 * a(n - 1) + a(n - 2) for n > 1, with a(0) = a(1) = 1. ● a(n) = (1 / 10) * [3 - sqrt(10)] ^ n * sqrt (10) - (1 / 10) * [3 + sqrt(10)] ^ n * sqrt(10) + (1 / 2) * [3 + sqrt(10)] ^ n + (1 / 2) * [3 - sqrt(10)] ^ n, with n >= 0. - _ Paolo P. Lava _ , Jun 25 2008 ●

► [A126502] 1,7,43,269,1679,10483,65449,408623,2551187,15928021,99444631,62 0870267,3876326801,24201367447,151098247483,943363239389,5889771828959,36 772062710083,229581830200249,1433365791134783 ★ Number of base 7 n - digit numbers with adjacent digits differing by four or less. ● a(n) = 6 * a(n - 1) + 2 * a(n - 2) - 3 * a(n - 3) for n>2. ●

► [A286911] 1,7,43,277,1777,11407,73219,469981,3016729,19363879,124293499,7 97819173,5121067777,32871277183,210995228083,1354343064493,869330151684 1,55800847838359,358176305451691,2299073773191541,14757369859827601,9472 5087867636847 ★ Number of edge covers in the ladder graph P _ 2 x P _ n. ● a(n) = 6 * a(n - 1) + 3 * a(n - 2) - 2 * a(n - 3) for n > 3. ●

► [A277188] 1,7,43,281,1896,13112,92359,659941,4769758,34797170,255838760,1 893389720,14091400480,105385445856,791504226943,5966958725021,4513337629 7922,342400478465678,2604549070175770,19860078537996958,1517691479587380 16 ★ The binomial sum a(n) = Sum _{ k=0..n } (binomial(n,k) * binomial(n + 1,k + 1) * binomial(n + 2,k + 2)). ● a(n) = (1 / 2) * (n + 1) ^ 2 * (n + 2) * hy pergeometric({- n, - n, - n } , { 2,3 } , - 1). ●

► [A351757] 1,1,7,43,289,2239,19699,192025,2042971,23520715,291099349,38496 21019,54110928355,804827487493,12619011606775,207885167529523,3587864566 792753,64705561315720135,1216574535057705979,23797327657083197113,483390 249416359706995 ★ G.f. A(x) satisfies: A(x) = 1 + x * A(x / (1 - 3 * x)) / (1 - 3 * x) ^ 2. ● a(0) = 1; a(n) = Sum _{ k=1..n } binomial(n,k - 1) * 3 ^ (k - 1) * a(n - k). ●

► [A338675] 1,1,7,43,295,1807,12391,75895,512647,3179815,21196807,13125831 1,875934727,5416216711,35763798535,223059458311,1461247179271,90936003225 67,59586011601415,370499158291975,2411884242270727,15072418547458567,975 30161503173127,608700350537722375 ★ Expansion of Product _{ k>=1 } 1 / (1 - 6 ^ (k - 1) * x ^ k). ● a(n) = Sum _{ k=0..n } p(n,k) * 6 ^ (n - k), where p (n,k) = number of partitions of n into k parts. ●

► [A199483] 7,43,295,2059,14407,100843,705895,4941259,34588807,242121643,16 94851495,11863960459,83047723207,581334062443,4069338437095,284853690596 59,199397583417607,1395783083923243,9770481587462695,68393371112238859 ★ 6 * 7 ^ n + 1. ● a(n) = 7 * a(n - 1) - 6. ● a(n) = 8 * a(n - 1) - 7 * a(n - 2). ●

► [A331236] 0,0,1,7,43,302,2622,31129,564452,17585400,1006927107,1074580673 22 ★ Total cutting number of all simple connected graphs of order n. ● a(n) = Sum _{ G } c(G) where the sum is over all graphs G with n vertices and c(G) is the cutting number of G. ●

► [A121675] 1,1,7,43,371,3926,47622,654151,9999523,167557174,3046387103,59 616689595,1247357472869,27747682830531,653192297754076,1620670667242516 7,42235830295917512 3,115261119161103900834 ★ a(n) = [x ^ n] (1 + x * (1 + x) ^ (n + 1)) ^ n. ● a(n) = Sum _{ k=0..n } C(n,k) * C((n + 1) * k,n - k). ●

► [A023316] 7,43,883,2269,2917,7621,15541,15937,36541,38113,54787,60961,6703 3,71359,77491,79693,82531,84967,112621,129589,176461,185683,192547,239671,2 48071 ★ Primes that remain prime through 4 iterations of function f(x) = 5x + 8. ● a(n) == 1 or 19 (mod 42) for n > 1. - _ John Cerkan _ , Oct 07 2016 ●

► [A291388] 1,7,44,262,1504,8416,46208,250016,1337088,7083264,37229568,1943 83360,1009172480,5213634560,26819756032,137445318656,702021435392,3574958 587904,18156130926592,91985567678464,465004476235776,2345955741401088,11 813573860786176 ★ a(n) = (1 / 8) * A291387(n). ● a(n) = 8 * a(n - 1) - 8 * a(n - 2) - 32 * a(n - 3) - 16 * a(n - 4) for n >= 5. ●

► [A178719] 0,0,1,7,44,266,1599,9597,57586,345520,2073125,12438755,7463253 6,447795222,2686771339,16120628041,96723768254,580342609532,348205565720 1,20892333943215,125354003659300,752124021955810,4512744131734871,270764 64790409237,1624587887424554 34 ★ Partial sums of (1 / 5) * floor(6 ^ n / 7). ● a(n) = (1 / 5) * round((24 * 6 ^ n - 70 * n - 49) / 140). ● a(n) = (1 / 5) * floor ((12 * 6 ^ n - 35 * n - 12) / 70). ● a(n) = (1 / 5) * ceiling((12 * 6 ^ n - 35 * n - 37) / 70). ● a(n) = (1 / 5) * round((12 * 6 ^ n - 35 * n - 12) / 70). ● a(n) = a(n - 2) + (6 ^ (n - 1) - 1) / 5, n > 1. ● a(n) = 7 * a(n - 1) - 5 * a(n - 2) - 7 * a(n - 3) + 6 * a(n - 4), n > 3. ●

► [A218992] 7,44,272,1677,10335,63688,392464,2418473,14903303,91838292,5659 33056,3487436629,21490552831,132430753616,816075074528,5028881200785,3098 9362279239,190965054876220,1176779691536560,7251643204095581 ★ Power ceil ing sequence of 3 + sqrt(10). ● a(n) = ceiling(r * a(n - 1)), where r=3 + sqrt(1 0), a(0) = ceiling(r). ● a(n) = 7 * a(n - 1) - 5 * a(n - 2) - a(n - 3). ● a(n) = ((5 + sqrt(10)) * (3 - sqrt(10)) ^ (n + 3) + (5 - sqrt(10)) * (3 + sqrt(10)) ^ (n + 3) - 10) / 60. [__ Bruno Berselli _ , Nov 22 2012] ●

► [A190974] 0,1,7,44,273,1691,10472,64849,401583,2486836,15399937,95365379,5 90557968,3657078881,22646762327,140241941884,868459781553,5378008761451,3 3303762422392,206236293149489,1277135239934463,7908765213793796,48975680 296884257 ★ a(n) = 7 * a(n - 1) - 5 * a(n - 2), with a(0)=0, a(1)=1. ● a(n) = ((7 / 2 + 1 / 2 * sqrt(29)) ^ n - (7 / 2 - 1 / 2 * sqrt(29)) ^ n) / sqrt(29). - _ Gior gio Balzarotti _ , May 28 2011 ● a(n) = 5 ^ ((n - 1) / 2) * ChebyshevU(n - 1, 7 / (2 * sqrt(5))). ●

► [A099464] 0,1,7,44,274,1705,10609,66012,410744,2555757,15902591,98950096,6 15693474,3831006429,23837527729,148323355432,922906855808,5742568741225,3 5731770264967,222332455004452,1383410902447554,8607945812375585,53560898 629395777,333269972246340068 ★ Trisection of tribonacci numbers. ● a(n) = 7a (n - 1) - 5a(n - 2) + a(n - 3). ●

► [A355347] 1,7,44,275,1729,10948,69768,447051,2877875,18599295,120609840,7 84384692,5114119724,33417386200,218786861392,1434903854139,9425348845815,61997934676405,408323057257500,2692322893972635,17770644483690945,1174

06930477134480,776363580147660960 ⋆ a(n) = binomial(3 * n + 3,n) + binomial(3 * n + 2,n - 1) for n >= 0. ● a(n) = [x ^ n] (1 + x) / (1 - x) ^ (2 * n + 4) for n >= 0. ●

▶ [A254660] 1,7,44,278,1756,11092,70064,442568,2795536,17658352,111541184,704563808,4450465216,28111918912,177572443904,1121658501248,708509589529 6,44753892374272,282693546036224,1785669060965888,11279401457867776,7124 7746869138432 ⋆ Numbers of words on alphabet { 0,1,...,6 } with no subwords i i, where i is from { 0,1,...,4 } . ● a(n) = 6 * a(n - 1) + 2 * a(n - 2) with n>1, a(0) = 1, a(1) = 7. ● a(n) = ((3 - sqrt(11)) ^ n * (- 4 + sqrt(11)) + (3 + sqrt(11)) ^ n * (4 + sqrt(11))) / (2 * sqrt(11)). - _ Colin Barker _ , Jan 21 2017 ●

▶ [A208826] 7,45,155,415,905,1755,3085,5077,7891,11761,16887,23555,32005,42575,55545,71305,90175,112597,138931,169671,205217,246115,292805,345885,40583 5 ⋆ Number of 5 - bead necklaces labeled with numbers - n..n allowing reversal, with sum zero. ● a(n) = (23 * n ^ 4 + 46 * n ^ 3 + 58 * n ^ 2 + 44 * n + 24) / 24 for n even. ● a(n) = (23 * n ^ 4 + 46 * n ^ 3 + 58 * n ^ 2 + 26 * n + 15) / 24 for n odd. ●

▶ [A206808] 7,45,156,400,855,1617,2800,4536,6975,10285,14652,20280,27391,36225,47040,60112,75735,94221,115900,141120,170247,203665,241776,285000,333775 ⋆ Sum _{ 0<j<n } n ^ 3 - j ^ 3. ● a(n) = (3 * n ^ 4 - 2 * n ^ 3 - n ^ 2) / 4. G.f.: - x ^ 2 * (x ^ 2 + 10 * x + 7) / (x - 1) ^ 5. - _ Colin Barker _ , Jul 11 2014 ●

▶ [A278682] 0,0,7,45,225,709,1974,4524,9614,18382,33425,56895,93447,146715,224280,331814,480844,679724,945099,1288737,1733725,2296065,3006762,3886960,4977210 ⋆ Number of non - equivalent ways to place 3 non - attacking ferses on a n n X n board. ● a(n) = ((n ^ 6 - 15 * n ^ 4 + 32 * n ^ 3 + 14 * n ^ 2 - 116 * n + 96) + IF(MOD(n, 2) = 1, 8 * n ^ 3 - 9 * n ^ 2 - 20 * n + 9)) / 48. ● a(n) = 3 * a(n - 1) + a(n - 2) - 11 * a(n - 3) + 6 * a(n - 4) + 14 * a(n - 5) - 14 * a(n - 6) - 6 * a(n - 7) + 11 * a(n - 8) - a(n - 9) - 3 * a(n - 10) + a(n - 11). ● a(n) = (n ^ 6 - 15 * n ^ 4 + 32 * n ^ 3 + 14 * n ^ 2 - 116 * n + 96) / 48 for n even. ● a(n) = (n ^ 6 - 15 * n ^ 4 + 40 * n ^ 3 + 5 * n ^ 2 - 136 * n + 105) / 48 for n odd. ●

▶ [A342568] 1,7,45,239,1157,5307,23497,101467,430089,1796975,7422437,30373191,123327373,497484067,1995542913,7965875891,31663779857,125391332055,494914083229,1947613051807,7643917792917,29928228744587,116921300015417,455866012012299,1774126607984665 ⋆ 1 / a(n) is the current through the resistor at the central rung of an electrical ladder network made of 6 * n + 1 one - ohm resistors, fed by 1 volt at diametrically opposite ends of the ladder. ● a(n) = 8 * a(n - 1) - 18 * a(n - 2) + 8 * a(n - 3) - a(n - 4); a(0)=1, a(1)=7, a(2)=45, a(3)=239. ●

▶ [A236194] 1,7,45,286,1820,11628,74613,480700,3108105,20160075,131128140,854992152,5586853480,36576848168,239877544005,1575580702584,1036319450211 5,68248282427325,449972009097765,2969831763694950,19619725782651120,1297 28497393775280 ⋆ a(n) = binomial(3n + 1, n - 1). ● a(n) = [x ^ n] x / (1 - x) ^ (2 * n + 3). - _ Ilya Gutkovskiy _ , Oct 10 2017 ●

▶ [A198629] 0,1,7,45,287,1821,11487,72045,449407,2789181,17230367,105996045,649630527,3968504541,24174772447,146908944045,890924667647,539359028390 1,32604530573727,196853323284045,1187295678104767,7154833690143261 ⋆ Alternating sums of powers of 1,2,...,6, divided by 3. ● a(n)=sum(((- 1) ^ j) * j ^ n, j=1..6) / 3, n>=0. ●

▶ [A190973] 0,1,7,45,287,1829,11655,74269,473263,3015765,19217303,122458061,780337215,4972528261,31686348967,201914329725,1286654912207,81989270665 49,52245869817015,332925380452909,2121494183902303,13518757765504485,861 45327622922183 ⋆ a(n) = 7 * a(n - 1) - 4 * a(n - 2), with a(0) = 0, a(1) = 1. ● a(n) = ((7 / 2 + 1 / 2 * sqrt(33)) ^ n - (7 / 2 - 1 / 2 * sqrt(33)) ^ n) / sqrt(33). - _ Giorgio Balzarotti _ , May 28 2011 ●

▶ [A287811] 1,7,45,291,1881,12159,78597,508059,3284145,21229047,137226717,887047443,5733964809,37064931183,239591481525,1548743682699,1001123654076 9,647136502927 11,418315611378573,2704034619149571,17479154549033145,1129 87031151647583 ⋆ Number of septenary sequences of length n such that no two consecutive terms have distance 5. ● a(n) = 6 * a(n - 1) + 3 * a(n - 2), a(0)=1, a(1)=7. ●

▶ [A182556] 1,7,45,291,2033,10327,55901,377971,2580161,13329991,68092909,475337827,3047910961,21335374615,108342024605,611555770419,4227169747201,22855656310535,114836769975597,592467546841635,4147130288467697,2444987908 6004055,171122765320764253 ⋆ a(0)=1, a(n + 1) = (a(n) * 6) XOR a(n). ● a(0)=1, a(n + 1) = (a(n) * 6) XOR a(n), where XOR is the bitwise exclusive - or operator. ●

▶ [A363570] 0,1,7,45,295,1981,13545,93829,656311,4625181,32788657,233567269,1670457321,11987269477,86268665917,622391877045,4500029549911,325982835 56317,236542093805025,1719008077215205,1250940304581950 5,911438787303420 21,664816240262272237 ⋆ Expansion of (1 / sqrt(1 - 8 * x + 4 * x ^ 2) - 1 / (1 - x)) / 3. ● a(n) = Sum _{ k=1..n } binomial(n,k) ^ 2 * 3 ^ (k - 1). ● a(n) = (2 ^ n * LegendreP(n,2) - 1) / 3. ●

▶ [A219020] 1,7,45,297,2002,13630,93177,638001,4371235,29956465,205313076,1407206412,9645056785,66107994667,453110391657,3105663400665,212865298884 22,145900036590826,1000013702089545,6854195814790005,46979356835860351,3 22001301602738017,2207029753248402600,15127206968164865112 ⋆ Sum of the cubes of the first n even - indexed Fibonacci numbers divided by the sum of the first n terms. ● a(n) = 11 * a(n - 1) - 33 * a(n - 2) + 33 * a(n - 3) - 11 * a(n - 4) + a(n - 5). - _ Vaclav Kotesovec _ , May 23 2013 ●

▶ [A134437] 0,1,7,45,312,2400,20520,194040,2016000,22861440,281232000,3732220800,53169177600,809512704000,13120332825600,225573828480000,4100866818048000,78606921609216000 ⋆ Number of cells in the 2nd rows of all deco polyominoes of height n. A deco polyomino is a directed column - convex polyomino in which the height, measured along the diagonal, is attained only in the last column. ● a(n) = (1 / 4) * (3n - 2) * (n - 1) * (n - 1)!. ● a(n) = (1 / 2) * (3n - 4) * (n - 1)! + (n - 1) * a(n - 1); a(1)=0. ● a(n) = (n + 2)! * Sum _{ k=1..n } ((2 * k - 1) / (k * (k + 1) * (k + 2))). - _ Gary Detlefs _ , Sep 20 2011 ●

▶ [A018927] 0,1,7,45,313,2421,20833,198309,2073793,23664021,292834513,3907994949,55967406433,856355084661,13944569166193,240803714700069,4395998055854593,84596337986326101,1711691067680320273,36329581765125539589,807099012174816776353 ⋆ For each permutation p of { 1,2,...,n } define maxjump(p) = max(p(i) - i); a(n) is sum of maxjumps of all p. ● a(n) = Sum _{ k=0..n - 1 } k * k! * ((k + 1) ^ (n - k) - k ^ (n - k)). ●

▶ [A081894] 1,7,46,290,1775,10625,62500,362500,2078125,11796875,66406250,371093750,2060546875,11376953125,62500000000,341796875000,1861572265625,1010131835937 5,54626464843750,294494628906250,1583099365234375 ⋆ Fourth binomial transform of C(n + 2,2). ● a(n) = 5 ^ n * (n ^ 2 + 19 * n + 50) / 50. ●

▶ [A128597] 1,7,46,297,1919,12399,80241,520399,3382588,22034519,143826980,940569228,6161492611,40426009162,265617089899,1747501590554,1151058414433 7,75901841055650,501007227527884,3310076954166501 ⋆ Column 2 of triangle A128596; a(n) = coefficient of q ^ (2n + 4) in the q - analog of the even double factorials (2n + 4)!! for n>=0. ● a(n) = [q ^ (2n + 4)] Product _{ j=1..n + 2 } (1 - q ^ (2j)) / (1 - q) for n>=0. ●

▶ [A190972] 0,1,7,46,301,1969,12880,84253,551131,3605158,23582713,154263517,1009096480,6600884809,43178904223,282449675134,1847611013269,1208592806 7481,79058663432560,517152859825477,3382894028480659,22128799619888182,144752915253775297 ⋆ a(n) = 7 * a(n - 1) - 3 * a(n - 2), with a(0)=0, a(1)=1. ● a(n) = ((7 / 2 + 1 / 2 * sqrt(37)) ^ n - (7 / 2 - 1 / 2 * sqrt(37)) ^ n) / sqrt(37). - _ Giorgio Balzarotti _ , May 28 2011 ●

▶ [A254601] 1,7,46,304,2008,13264,87616,578752,3822976,25252864,166809088,1101865984,7278432256,48078057472,317582073856,2097804673024,138571563335 68,915341566693504,6046335654952 96,3993938019745792,2638216238045593 6,174268726361718784 ⋆ Numbers of n - length words on alphabet { 0,1,...,6 } with no subwords ii, where i is from { 0,1,2 } . ● a(n) = 6 * a(n - 1) + 4 * a(n - 2) with n>1, a(0) = 1, a(1) = 7. ● a(n) = ((3 - r) ^ n * (- 4 + r) + (3 + r) ^ n * (4 + r)) / (2 * r), where r=sqrt(13). - _ Colin Barker _ , Jan 22 2017 ●

▶ [A258340] 1,7,46,310,2131,14797,103216,721420,5046661,35316787,247187986,1730227330,12111325591,84778481977,593446982356,4154121702040,2907883030 90921,203551748166367,1424862043454326,9974033723049550,6981823431795465 1,48872763499550595 7 ⋆ a(n) = (7 ^ n + 3 ^ n - 2) / 8. ● a(n) = 11 * a(n - 1) - 31 * a(n - 2) + 21 * a(n - 3) with n>2, a(0)=0. - _ Bruno Berselli _ , Aug 24 2015 ●

▶ [A240722] 1,7,46,323,2326,17062,126764,950819,7184422,54604082,416990564,3197008718,24592858876,189719297068,1467180979096,11370769197347,88291427756294,686715981892666,5349188181210548,41723881423351898,32584507953813 6596 ⋆ Expansion of log'((- 1 - sqrt(1 - 8 * x) + sqrt(2 + 2 * sqrt(1 - 8 * x) + 8 * x)) / (4 * x)). ● a(n) = (n + 1) * Sum _{ k=0..n } (binomial(k + 1, n - k) * binomial(n + 2 * k + 2, n + k + 1)) / (n + k + 2)). ●

▶ [A365773] 1,1,7,46,325,2446,19234,156115,1298077,11000584,94668508,825087418,7267943962,64602794647,578726742481,5219620390558,4735745692016 5,43194134113655 2,3958215409319608,36425213089790932,336475535026075180,3118885520601252016,29000562051786329512 ⋆ Expansion of g.f. A(x) satisfying A(x) = 1 + x * A(x) / (1 - 3 * x * A(x)) ^ 2. ● a(n) = Sum { k=0..n } binomial(n + 1, n - k) / (n + 1) * binomial(2 * n - k - 1, k) * 3 ^ k. ●

▶ [A067318] 0,1,7,46,326,2556,22212,212976,2239344,25659360,318540960,4261576320,61148511360,937030429440,15275952518400,264030355814400,4823280687052800,92865738644582400,1879691760950169600,39905092126771200000,886664974825728000000 ⋆ Total number of transpositions in all permutations of n letters. ● a(n) = n! * (0 / 1 + 1 / 2 + ... + (n - 1) / n) = n! * (n - H _ n), where H _ n = Sum _{ k=1..n } 1 / k; a(1) = 0, a(2) = 1, a(n) = n * a(n - 1) + (n - 1) * (n - 1)!. ● a(n) = n * n! - abs(stirling1(n + 1, 2)) (cf. A000254). E.g.f.: (x + (1 - x) * log(1 - x)) / (1 - x) ^ 2. - _ Vladeta Jovovic _ , Feb 01 2003 ● a(n) = T(n, n - 1) for the triangle read by rows: [0, 1, 1, 2, 2, 3, 3, 4, 4, 5, 5, 6, 6, ...] DELTA [1, 1, 2, 2, 3, 3, 4, 4, 5, 5, 6, 6, ...] where DELTA is the operator defined in A084938. - _ Philippe Deléham _ , Nov 30 2003 ●

▶ [A093112] 1,7,47,223,959,3967,16127,65023,261119,1046527,4190207,16769023,67092479,268402687,1073676287,4294836223,17179607039,68718952447,2748768 58367,1099509530623,4398042316799,17592177655807,70368727400447,2814749 43156223,1125899839733759 ⋆ a(n) = (2 ^ n - 1) ^ 2 - 2. ● a(n) = (2 ^ n - 1) ^ 2 - 2. ● a(n) = 6 * a(n - 1) - 7 * a(n - 2) - 6 * a(n - 3) + 8 * a(n - 4). ●

▶ [A064385] 7,47,247,1247,6247,31247,156247,781247,3906247,19531247,97656247,488281247,2441406247,12207031247,61035156247,305175781247,1525878906247,7629394531247,38146972656247 ⋆ a(n) = 2 * 5 ^ n - 3. ● a(n) = 5 * a(n - 1) + 12. ● a(n) = 6 * a(n - 1) - 5 * a(n - 2). ●

▶ [A198845] 7,47,287,1727,10367,62207,373247,2239487,13436927,80621567,483729407,2902376447,17414258687,104485552127,626913312767,3761479876607,22568879259647,135413275557887,812479653347327,4874877920083967,292492675205 03807 ⋆ 8 * 6 ^ n - 1. ● a(n) = 6 * a(n - 1) + 5. a(n) = 7 * a(n - 1) - 6 * a(n - 2), n>1. ●

▶ [A126635] 7,47,307,1943,11827,69287,392707,2166743,11703187,62168327,325983907,1692105143,8714154547,44600020967,227161443907,1152585909143,5830444893907,29423488811207,148206112628707,745396075770743,374447495380926 7,18792450661083047 ⋆ a(n) is the number of nonnegative integers k less than 10 ^ n such that the decimal representation of k lacks the digits 1,2,3, at least one of digits 4,5 and at least one of digits 6,7,8,9. ● a(n) = 8 * 5 ^ n - 16 * 4 ^ n + 14 * 3 ^ n - 6 * 2 ^ n + 1. ●

▶ [A085352] 1,7,47,307,1967,12427,77687,481747,2968607,18202267,111166727,676765987,4109424047,24900684907,150624812567,909852391027,5489631924287,3309037943634 7,199305216071207,1199645993692867 ⋆ Expansion of (1 - 4x) / ((1 - 5x)(1 - 6x)). ● a(n) = 2 * 6 ^ n - 5 ^ n. ● a(n) = 11 * a(n - 1) - 30 * a(n - 2) for n>1. - _ Colin Barker _ , Jul 07 2020 ●

▶ [A125370] 1,7,47,307,2067,13927,93887,632947,4267107,28767367,193939727,1307475187,8814549747,59424674407,400620795167,2700848143027,1820819283398 7,1227533977190 47,827561350484207,5579135091500467 ⋆ Number of base 7 circular n - digit numbers with adjacent digits differing by 5 or less. ● a(n) = 1 + (3 - sqrt(14)) ^ n + (3 + sqrt(14)) ^ n for n>0. ● a(n) = 7 * a(n - 1) - a(n - 2) - 5 * a(n - 3) for n>3. ●

▶ [A163346] 1,7,47,309,2009,12983,83623,537621,3452881,22163527,142219007,912428949,5853252329,37546657463,240841771063,1544844588981,990908515536 1,635594260070 47,4076853014971 67,2614986216809589,16773100233661049,1075 86319349989943 ⋆ a(n) = 10 * a(n - 1) - 23 * a(n - 2) for n > 1; a(0) = 1, a(1)

= 7. • a(n) = 10 * a(n - 1) - 23 * a(n - 2) for n > 1; a(0) = 1, a(1) = 7. • a(n) = ((1 + sqrt(2)) * (5 + sqrt(2)) ^ n + (1 - sqrt(2)) * (5 - sqrt(2)) ^ n) / 2. •

▶ [A186446] 1,7,47,315,2111,14147,94807,635355,4257871,28534387,191224967,1281505995,8588092031,57553632227,385699241527,2584787426235,17322113500591,116085219651667,777952310560487,5213495734620075,34938565521219551 ⋆ Expansion of 1 / (1 - 7 * x + 2 * x ^ 2). • a(n) = ((7 + sqrt(41)) ^ (1 + n) - (7 - sqrt(41)) ^ (1 + n)) / (2 ^ (1 + n) * sqrt(41)). • a(n) = 7 * a(n - 1) - 2 * a(n - 2), with a(0)=1, a(1)=7. •

▶ [A126528] 1,7,47,317,2137,14407,97127,654797,4414417,29760487,200635007,1352612477,9118849897,61476161767,414451220087,2794088129357,18836784876577,126991149906247,856130823820367,5771740692453437,38911098273822457,262325293105201927 ⋆ Number of base 7 n - digit numbers with adjacent digits differing by five or less. • a(n) = 6 * a(n - 1) + 5 * a(n - 2), a(0) = 1, a(1) = 7 . • a(n) = (((3 - sqrt(14)) ^ n * (- 4 + sqrt(14)) + (3 + sqrt(14)) ^ n * (4 + sqrt(14)))) / (2 * sqrt(14)). - _ Colin Barker _ , Sep 08 2016 •

▶ [A214992] 7,47,323,2213,15169,103969,712615,4884335,33477731,229459781,1572740737,10779725377,73885336903,506417632943,3471038093699,23790849022949,163064905066945,1117663486445665,7660579500052711 ⋆ Power ceiling - floor sequence of (golden ratio) ^ 4. • a(n) = floor(r * a(n - 1) if n is odd and a(n) = ceiling(r * a(n - 1) if n is even, where a(0) = ceiling(r), r = (golden ratio) ^ 4 = (7 + sqrt(5)) / 2. • a(n) = 6 * a(n - 1) + 6 * a(n - 2) - a(n - 3). • a(n) = (10 * (- 2) ^ n + (10 + 3 * sqrt(5)) * (7 - 3 * sqrt(5)) ^ (n + 2) + (10 - 3 * sqrt(5)) * (7 + 3 * sqrt(5)) ^ (n + 2)) / (90 * 2 ^ n). - _ Bruno Berselli _ , Nov 14 2012 •

▶ [A098405] 1,7,47,327,2343,17127,126951,950631,7173991,54471527,415652711,3184708455,24485137255,188802730855,1459525454695,11307626564455,87775235181415,682523302202215,5315297718995815,41450938169985895,32365308264384615,252996075762604733 5 ⋆ Expansion of ((1 - sqrt(1 - 8 * x)) / ((1 - x) * (4 * x * sqrt(1 - 8 * x))). • a(n) = sum { k=0..n, Binomial(2k + 1, k) * 2 ^ k } •

▶ [A349255] 1,1,7,47,369,3113,27631,254239,2403361,23201393,227771831,2266983119,22822484497,231994748633,2377894546783,24548520253247,255026759000897,2664111200687969,27967731861910759,294900120348032623,3121862973452544433,33167268461833410569 ⋆ G.f. A(x) satisfies A(x) = 1 / ((1 + x) * (1 - 2 * x * A(x) ^ 2)). • a(n) = (- 1) ^ n + 2 * Sum _{ i=0..n - 1 } Sum _{ j=0..n - i - 1 } a(i) * a(j) * a(n - i - j - 1). • a(n) = Sum _{ k=0..n } (- 1) ^ (n - k) * binomial(n + k,n - k) * 2 ^ k * binomial(3 * k,k) / (2 * k + 1). • a(n) = (- 1) ^ n * hypergeom([1 / 3, 2 / 3, - n, n + 1], [1 / 2, 1, 3 / 2], (3 / 2) ^ 3). - _ Peter Luschny _ , Nov 12 2021 •

▶ [A173772] 7,47,447,4447,44447,444447,4444447,44444447,444444447,4444444447,44444444447,444444444447,4444444444447,44444444444447,444444444444447,4444444444444447,44444444444444447 ⋆ (4 * 10 ^ n + 23) / 9. • a(n) = 10 * a(n - 1) - 23 with n>1, a(1)=7. • a(n) = 11 * a(n - 1) - 10 * a(n - 2). G.f.: - x * (30 * x - 7) / ((x - 1) * (10 * x - 1)). [_ Colin Barker _ , Jan 24 2013] •

▶ [A081106] 1,7,48,324,2160,14256,93312,606528,3919104,25194240,161243136,1027924992,6530347008,41358864384,261213880320,1645647446016,10344069660672,64885527871488,406239826673664,2538998916710400,15843353240272896,98716277881700352,614234617930579968 ⋆ 6th binomial transform of (1,1,0,0,0,0,...). • a(n) = 12 * a(n - 1) - 36 * a(n - 2) with n > 1, a(0) = 1, a(1) = 7. • a(n) = (n + 6) * 6 ^ (n - 1). •

▶ [A289785] 1,7,48,325,2183,14588,97161,645719,4285240,28411789,188257719,1246893028,8256349457,54659946215,361825274112,2394939574997,15851402375719,104912178457996,694343294142105,4595323060281271,30412598132972936,201274210714545437 ⋆ p - INVERT of the (5 ^ n), where p(S) = 1 - S - S ^ 2. • a(n) = 11 * a(n - 1) - 29 * a(n - 2). • a(n) = (2 ^ (- n - 1) * ((11 - sqrt(5)) ^ (n + 1) * (- 7 + 2 * sqrt(5)) + (11 + sqrt(5)) ^ (n + 1) * (7 + 2 * sqrt(5)))) / (29 * sqrt(5)). - _ Colin Barker _ , Aug 11 2017 •

▶ [A164591] 1,7,48,328,2240,15296,104448,713216,4870144,33255424,227082240,1550614528,10588258304,72301150208,493703135232,3371215880192,23020101959680,157191088635904,1073367893409792,7329414438191104,50048372358250496 ⋆ a(n) = ((4 + sqrt(18)) * (4 + sqrt(8)) ^ n + (4 - sqrt(18)) * (4 - sqrt(8)) ^ n) / 8 . • a(n) = 8 * a(n - 1) - 8 * a(n - 2) for n > 1; a(0) = 1, a(1) = 7. •

▶ [A004187] 0,1,7,48,329,2255,15456,105937,726103,4976784,34111385,233802911,1602508992,10983760033,75283811239,516002918640,3536736619241,24241153416047,166151337293088,1138818207635569,7805576116155895,53500214605455696,366695926122033977 ⋆ a(n) = 7 * a(n - 1) - a(n - 2) with a(0) = 0, a(1) = 1. • a(n) = S(2 * n - 1, sqrt(9)) / sqrt(9) = S(n - 1, 7); S(n, x) := U(n, x / 2), Chebyshev polynomials of the 2nd kind, A049310. • a(n) = Sum _{ i = 0..n - 1 } C(2 * n - 1 - i, i) * 5 ^ (n - i - 1). - Mario Catalani (mario.catalani(AT)unito.it), Jul 23 2004 • a(n) = (((7 + sqrt(45)) / 2) ^ n - ((7 - sqrt(45)) / 2) ^ n) / sqrt(45). - _ Noureddine Chair _ , Aug 31 2011 • a(n) = Sum _{ k = 0..n - 1 } (- 1) ^ (n + k + 1) * 9 ^ k * binomial(n + k, 2 * k + 1). - _ Peter Bala _ , Jul 17 2023 •

▶ [A180167] 1,7,48,330,2268,15588,107136,736344,5060880,34783344,239065344,1643092128,11292944832,77616221760,533454999552,3666427327872,25199293964544,173194327754496,1190361730314240,8181336348412416,56230188472359936,386469148924634112 ⋆ a(0) = 1, a(1) = 7; a(n)= 6 * a(n - 1) + 6 * a(n - 2) for n>1. • a(n) = ((3 - sqrt(15)) ^ n * (- 4 + sqrt(15)) + (3 + sqrt(15)) ^ n * (4 + sqrt(15))) / (2 * sqrt(15)). - _ Alexander R. Povolotsky _ , Aug 22 2010, corrected by _ Colin Barker _ , May 13 2016 •

▶ [A341425] 7,48,331,1269,3698,9382,20927,42683,79844,142173,238810,387615,603589,915324,1345294,1939221,2729723,3783313,5138567,6895632,9108626,11909496,15362753,19642539,24832744 ⋆ Number of positive solutions to (x _ 1) ^ 2 + (x _ 2) ^ 2 + ... + (x _ 6) ^ 2 <= n ^ 2. • a(n) is the coefficient of x ^ (n ^ 2) in expansion of (theta _ 3(x) - 1) ^ 6 / (64 * (1 - x)). •

▶ [A084968] 7,49,77,91,119,133,161,203,217,259,287,301,329,343,371,413,427,469,497,511,539,553,581,623,637 ⋆ Multiples of 7 coprime to 30. • a(n + 8) = a(n) + 210. - _ Jianing Song _ , Nov 18 2022 •

▶ [A152777] 0,7,49,126,238,385,567,784,1036,1323,1645,2002,2394,2821,3283,3780,4312,4879,5481,6118,6790,7497,8239,9016,9828 ⋆ 7 times heptagonal numbers: 7 * n * (5 * n - 3) / 2. • a(n) = a(n - 1) + 35 * n - 28 (with a(0)=0). - _ Vincenzo Librandi _ , Dec 15 2010 •

▶ [A163827] 7,49,163,385,751,1297,2059,3073,4375,6001,7987,10369,13183,16465,20251,24577,29479,34993,41155,48001,55567,63889,73003,82945,93751 ⋆ a(n) = 6n ^ 3 + 1, solution z in Diophantine equation x ^ 3 + y ^ 3 = z ^ 3 - 2. It may be considered a Fermat near miss by 2. • a(n) = 6n ^ 3 + 1. • a(1)=7, a(2)=49, a(3)=163, a(4)=385, a(n)=4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). [_ Harvey P. Dale _ , Dec 12 2011] •

▶ [A373684] 1,1,1,7,49,181,1201,16171,122977,971209,16788961,206578351,2094314641,40260673597,694617709969,9088535091091,187060085419201,4109646055718161,68029103349383617,1498126927153125079,39199612737165358321,799248202624341298501 ⋆ Expansion of e.g.f. exp(x / (1 - x ^ 3)) / (1 - x ^ 3). • a(n) = n! * Sum _{ k=0..floor(n / 3) } binomial(n - 2 * k,k) / (n - 3 * k)!. • a(n) = = 1 (mod 6). •

▶ [A223639] 7,49,218,726,2014,4904,10797,21917,41601,74635,127636,209480,331776,509386,760991,1109703,1583723,2217045,3050206,4131082,5515730,7269276,9466849,12194561,15550533 ⋆ Number of n X 3 0..1 arrays with rows, columns, diagonals and antidiagonals unimodal. • a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. •

▶ [A223632] 7,49,229,801,2297,5699,12657,25753,48811,87253,148501,242425,381837,583031,866369,1256913,1785103,2487481,3407461,4596145,6113185,8027691,10419185,13378601,17009331 ⋆ Number of n X 3 0..1 arrays with rows, antidiagonals and columns unimodal. • a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. •

▶ [A141783] 1,7,49,231,924,3108,9324,25236,63090,147070,323554,676270,1352540,2600612,4829708,8692788,15212379,25949469,43249115,70562765,112900424,177412664,274183208,417232088,625848132 ⋆ Number of bracelets (turn over neck laces) with n beads: 1 blue, 12 green, and r = n - 13 red. • a(n) = 1 / 2 * (binomial(n - 1,12) + binomial((n - 2 + n mod 2) / 2, 6)). • a(n) = (1 / (2 * 12!)) * (n + 2) * (n + 4) * (n + 6) * (n + 8) * (n + 10) * (n + 12) * ((n + 1) * (n + 3) * (n + 5) * (n + 7) * (n + 9) * (n + 11) + 1 * 3 * 5 * 7 * 9 * 11) - (1 / 15) * (1 / 2 ^ 10) * (n ^ 5 + (65 / 2) * n ^ 4 + 400 * n ^ 3 + (4615 / 2) * n ^ 2 + 6154 * n + (11895 / 2)) * (1 / 2) * (1 - (- 1) ^ n) [_ Yosu Yurramendi _ , Jun 24 2013] •

▶ [A223615] 7,49,240,876,2582,6504,14547,29659,56161,100123,169786,276030,432888,658106,973749,1406853,1990123,2762677,3770836,5068960,6720330,8798076,11386151,14580351,18489381 ⋆ Number of n X 3 0..1 arrays with rows and columns unimodal. • a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. •

▶ [A224150] 7,49,242,930,2985,8375,21183,49365,107697,222603,439909,837071,1542126,2762572,4828665,8257309,13844903,22800305,36932600,58912756,92633675,143699769,220085207,333009601,498091361 ⋆ Number of 6 X n 0..1 arrays with rows and antidiagonals unimodal and columns nondecreasing. • a(n) = 13 * a(n - 1) - 78 * a(n - 2) + 286 * a(n - 3) - 715 * a(n - 4) + 1287 * a(n - 5) - 1716 * a(n - 6) + 1716 * a(n - 7) - 1287 * a(n - 8) + 715 * a(n - 9) - 286 * a(n - 10) + 78 * a(n - 11) - 13 * a(n - 12) + a(n - 13) for n>13. •

▶ [A094430] 7,49,245,1078,4459,17836,69972,271313,1044435,4002467,15294370,58337097,222255768,846131608,3219700183,12247849145,46582062709,177142452214,673583231587,2561162729076,9737971026812,37024601601729 ⋆ a(n) is the rightmost term of M ^ n * [1 0 0], where M is the 3 X 3 matrix [0 1 0 / 0 0 1 / 7 - 14 7]. • a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 7 * a(n - 3). •

▶ [A146884] 7,49,301,1813,10885,65317,391909,2351461,14108773,84652645,507915877,3047495269,18284971621,109709829733,658258978405,3949553870437,23697323222629,142183939335781,853103636014693,5118621816088165 ⋆ a(n) = 7 * Sum _{ k=0..n } 6 ^ k. • a(n) = (7 / 5) * (6 ^ (n + 1) - 1). • a(n) = 7 * a(n - 1) - 6 * a(n - 2). •

▶ [A113235] 1,1,1,7,49,301,2281,21211,220417,2528569,32014801,442974511,6638604721,107089487077,1849731389689,34051409587651,665366551059841,13751213558077681,299644435399909537,6864906328749052759,164941239260973870001,4146673091958686331421 ⋆ Number of partitions of { 1,..,n } into any number of lists of size not equal to 2, where a list means an ordered subset, cf. A000262. • a(n) = (2 * n - 1) * a(n - 1) - (n - 1) * n * a(n - 2) + 4 * (n - 2) * (n - 1) * a(n - 3) - 2 * (n - 3) * (n - 2) * (n - 1) * a(n - 4). •

▶ [A200783] 1,7,49,308,1946,12152,75992,474566,2964416,18514405,115637431,722234149,4510869636,28173535572,175963587528,1099016234232,6864129384252,42871313869692,267761500599901,1672358840069239,10445056851917149,65236724277810632,407449213173792062,2544806826734163992,15894107968042546424 ⋆ G.f.: 1 / (1 - 7 * x + 35 * x ^ 3 - 35 * x ^ 4 + 7 * x ^ 6 - x ^ 7). • a(n) = 7 * a(n - 1) - 35 * a(n - 3) + 35 * a(n - 4) - 7 * a(n - 6) + a(n - 7). •

▶ [A267230] 7,49,315,1981,12327,76237,469623,2884909,17686215,108259885,661872471,4042575277,24671450343,150466937773,917151735159,5587651325485,34027698639111,207144227712301,1260572274312087,7668877406965933 ⋆ Number of length - n 0..6 arrays with no following elements greater than or equal to the first repeated value. • a(n) = (- 45 * 2 ^ n - 40 * 3 ^ n - 45 * 4 ^ n - 72 * 5 ^ n + 557 * 6 ^ n + 5 * 2 ^ (1 + n) * 3 ^ n * n - 72) / 360 for n>1. •

▶ [A267469] 7,49,322,2072,13216,83972,532840,3381860,21491464,136856180,873803848,5596638788,35973158152,231118471828,1503949949896,9786663686756,63969334316680,420026972347316,2770499256109384,18356852895660164 ⋆ Number of length - n 0..6 arrays with no following elements larger than the first repeated value. • a(n) = (- 504 - 315 * 2 ^ n - 280 * 3 ^ n - 315 * 4 ^ n - 504 * 5 ^ n + 3409 * 6 ^ n + 360 * 7 ^ n + 35 * 2 ^ (1 + n) * 3 ^ n * n) / 2520. •

▶ [A126639] 7,49,331,2137,13147,77449,440251,2432857,13151707,69895849,366600571,1903222777,9802234267,50171448649,255545887291,1296626911897,6559153748827,33101134543849,166731005404411,838567970940217,4212526479343387,21141483461069449 ⋆ a(n) is the number of integers k less than 10 ^ n such that the decimal representation of k lacks the digit 1,2,3, at least one of digits 4,5, 6 and at least one of digits 7,8,9. • a(n) = 9 * 5 ^ n - 18 * 4 ^ n + 15 * 3 ^ n - 6 * 2 ^ n + 1. •

▶ [A269465] 7,49,336,2310,15834,108402,741090,5060706,34523202,235304034,1602555906,10906971810,74188793154,504367206882,3427339028610,23280526483 7

46,158079249910722,1073053862250594,7281968079533826,49404973360789410 ⋆ Number of length - n 0..6 arrays with no repeated value equal to the previous r epeated value. ● a(n) = (7 / 657) * 2 ^ (- 4 - n) * (- 73 * 3 ^ n * 4 ^ (1 + n) + (949 - 103 * sqrt(73)) * (5 - sqrt(73)) ^ n + (5 + sqrt(73)) ^ n * (949 + 103 * sqrt(73))). ●

▶ [A366925] 1,7,49,337,2323,15895,108907,743275,5076727,34593817,235848025,1605431161,10932074707,74359524127,505919033077,3439312212373,2338546409 0653,158908887045391,1079980801470055,7336154460020575,49839495892607983,338457699117215161,2298679365204410725,15606607183401398473 ⋆ a(n) = A 010575(n) / 8 for n>0. ● a(n) == 1 (mod 6). ●

▶ [A269688] 7,49,343,2387,16541,114205,786079,5396363,36961757,252671461,1724352175,11750558099,79971635933,543661764877,3692303721631,25054980870395,169888502127869,1151188506903253,7796069090763247,52769330311322051 ⋆ Number of length - n 0..6 arrays with no repeated value differing from the prev ious repeated value by plus or minus one modulo 6 + 1. ● a(n) = (- 7 * 2 ^ (1 + n) * 3 ^ n + (21 - 6 * sqrt(14)) * (3 - sqrt(14)) ^ n + 3 * (3 + sqrt(14)) ^ n * (7 + 2 * sqrt(14))) / 30. ●

▶ [A126627] 7,49,343,2401,16807,116929,803383,5432161,36120007,236404609,1525601623,9726181921,61371928807,383929313089,2384606035063,14723095123681,90457525939207,553507860826369,3375536272503703,20528377102849441,124556950506727207 ⋆ a(n) is the number of nonnegative integers k less than 10 ^ n such that the decimal representation of k lacks digits 1,2,3 and at least one of di gits 4,5,6,7,8,9. ● a(n) = 6 * 6 ^ n - 15 * 5 ^ n + 20 * 4 ^ n - 15 * 3 ^ n + 6 * 2 ^ n - 1. ●

▶ [A206453] 7,49,343,2401,16807,117649,823542,5764787,40353460,282473877,1977314738,13841186359,96888186864,678216484506,4747509626755,33232527033825,232627406762898,1628389870025548,11398715248992477,79790909854760475 ⋆ Number of 0..6 arrays of length n avoiding the consecutive pattern 0..6. ● a(n) = 7 * a(n - 1) - a(n - 7). ●

▶ [A000420] 1,7,49,343,2401,16807,117649,823543,5764801,40353607,282475249,1977326743,13841287201,96889010407,678223072849,4747561509943,33232930569601,232630513987207,1628413597910449,11398895185373143,79792266297612001,558545864083284007 ⋆ Powers of 7: a(n) = 7 ^ n. ● a(n) = 7 ^ n. ● a(0) = 1; a(n) = 7 * a(n - 1). ●

▶ [A033143] 1,7,49,344,2408,16856,117993,825951,5781657,40471600,283301200,1983108400,13881758801,97172311607,680206181249,4761443268744,33330102881208,233310720168456,1633175041179193,11432225288254351,80025577017780457,560179039124463200,3921253273871242400 ⋆ Base - 7 digits are, in order, the first n terms of the periodic sequence with initial period 1,0,0. ● a(n) = 7 * a(n - 1) + a(n - 3) - 7 * a(n - 4). ●

▶ [A351057] 1,1,1,7,49,349,2593,20755,184609,1851289,20735041,253471039,3310505425,45630322741,660993079393,10065000586507,161262522401089,2717539655666353,48053169836707969,884808313419305719,17108882037936283249,3421441759408425903497,70899449279401417765 45 ⋆ G.f. A(x) satisfies: A(x) = 1 + x + x ^ 2 * A(x / (1 - 6 * x)) / (1 - 6 * x). ● a(0) = a(1) = 1; a(n) = Sum _{ k= 0..n - 2 } binomial(n - 2,k) * 6 ^ k * a(n - k - 2). ●

▶ [A240721] 1,7,49,351,2561,18943,141569,1066495,8085505,61616127,471556097,3621830655,27902803969,215530668031,1668644405249,12944666918911,100598145875969,783027553697791,6103529011806209,47636654222999551,37222507292 1837569,2911581699143892991 ⋆ Expansion of - (4 * x + sqrt(1 - 8 * x) - 1) / (s qrt(1 - 8 * x) * (4 * x ^ 2 + x) + 8 * x ^ 2 - x). ● a(n) = Sum _{ k=0..n } (k + 1) * binomial(2 * (n + 1),n - k) * binomial(n + k + 1,n)) / (n + 1). ● a(n) = Sum _{ k=0..n } binomial(2 * (n + 1),k) * 2 ^ k * (- 1) ^ (n + k) = binomial(2 * (n + 1),n + 1) * (n + 1) * Sum _{ k=0..n } binomial(n,k) / (n + k + 2). - _ Max Alekseyev _ , Jun 16 2021 ● a(n) = C(2 * n + 2, n) * 2F1([- n, n + 2], [n + 3], - 1), 2F1 is the hypergeometric function. - _ Peter Luschny _ , Jul 16 2014 ● a(n) = 8 * Sum _{ k=0..n - 3 } a(k) * a(n - 3 - k) + 7 * Sum _{ k=0..n - 2 } a(k) * a(n - 2 - k) - Sum _{ k=0..n - 1 } a(k) * a(n - 1 - k) + 8 * a(n - 1) f or n > 2, a(0)=1, a(1)=7, a(2)=49. - _ Tani Akinari _ , Jul 16 2014 ●

▶ [A366432] 1,1,7,49,378,3136,27363,247597,2302511,21872361,211336755,2070577285,20522662832,205411356794,2073258075175,21078157565623,215658366319375,2218853063356937,22942886758494094,238284942878492146,2484736162773443446 ⋆ G.f. A(x) satisfies A(x) = 1 + x * (A(x) / (1 - x)) ^ (7 / 2). ● a(n) = S um _{ k=0..n } binomial(n + 5 * k / 2 - 1,n - k) * binomial(7 * k / 2,k) / (5 * k / 2 + 1). ●

▶ [A349781] 0,0,1,7,49,381,3331,32593,354033,4233673,55312291,784156341,11991160633,196749380413,3447839233203,64266128818921,1269511428781921,26490929023150353,582231094609675843,13442728593179726173,325265025877909014441,8230062097594150286341 ⋆ a(n) = n! * (hypergeom([1 - n], [2], - 1]) - 1) for n >= 1 and a(0) = 0. ● a(n) = (n - 1)! * (LaguerreL(n - 1, 1, - 1) - n) for n > 0. ● a(n) = n! * [x ^ n] (exp(x / (1 - x)) - 1 / (1 - x)). ●

▶ [A199554] 7,49,385,3073,24577,196609,1572865,12582913,100663297,805306369,6442450945,51539607553,412316860417,3298534883329,26388279066625,211106232532993,1688849860263937,13510798882111489,108086391056891905 ⋆ 6 * 8 ^ n + 1. ● a(n) = 8 * a(n - 1) - 7. ● a(n) = 9 * a(n - 1) - 8 * a(n - 2). ●

▶ [A366272] 1,1,7,49,399,3521,32767,316673,3147775,31977985,330544639,3465369601,36759599103,393820102657,4255079743487,46313023946753,507319247208447,5588706552643585,61875364144283647,688128167799619585,7683686768042639359 ⋆ G.f. A(x) satisfies A(x) = 1 + x * (1 + x) ^ 3 * A(x) ^ 4. ● a(n) = Su m _{ k=0..n } binomial(3 * k,n - k) * binomial(4 * k,k) / (3 * k + 1). ●

▶ [A090016] 7,49,399,3689,38087,433713,5394991,72737161,1056085191,16423175153,272275569167,4792916427369,89267526953479,1753598009244529,36232438035285807,785431570870425353,17822981129678644871 ⋆ Permanent of (0,1) - m atrix of size n X (n + d) with d=6 and n - 1 zeros not on a line. ● a(n) = (n + 5) * a(n - 1) + (n - 2) * a(n - 2), a(1)=7, a(2)=49 ●

▶ [A293475] 0,7,50,195,560,1330,2772,5250,9240,15345,24310,37037,54600,78260,109480,149940,201552,266475,347130,446215,566720,711942,885500,1091350,1333800 ⋆ a(n) = (3 * n + 4) * Pochhammer(n, 4) / 4!. ● a(n) = n * Stirling2(3 + n, 1 + n). ● a(n) = n * (24 + 62 * n + 57 * n ^ 2 + 22 * n ^ 3 + 3 * n ^ 4) / 24. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>5. (End) ●

▶ [A288787] 1,7,50,345,2392,16955,123707,932010,7260709,58509323,487593202,4199841037,37361858716,342989895895,3246458915947,31653980371254,317654338317380,3278058775976704,34757921507150964,378372365291381716,4225533329681577846,48375204740642752562 ⋆ Number of blocks of size >= five in all set partitions of n. ● a(n) = Bell(n + 1) - Sum _{ j=0..4 } binomial(n,j) * Bell(n - j). ● a(n) = Sum _{ j=0..n - 5 } binomial(n,j) * Bell(j). ●

▶ [A033117] 1,7,50,350,2451,17157,120100,840700,5884901,41194307,288360150,2018521050,14129647351,98907531457,692352720200,4846469041400,33925283289801,237476983028607,1662338881200250,11636372168401750,81454605178812251,570182236251685757,3991275653761800300 ⋆ Base 7 digits are, in order, the fi rst n terms of the periodic sequence with initial period 1,0. ● a(n) = 7 * a(n - 1) + a(n - 2) - 7 * a(n - 3). ● a(n) = (7 * 7 ^ n - 4 - 3 * (- 1) ^ n) / 48. - _ Bru no Berselli _ , Jan 19 2011 ● a(n) = (1 / 6) * floor(7 ^ (n + 1) / 8) = floor((7 * 7 ^ n - 1) / 48) = ceiling((7 * 7 ^ n - 7) / 48) = round((7 * 7 ^ n - 7) / 48) = ro und((7 * 7 ^ n - 4) / 48); a(n) = a(n - 2) + 7 ^ (n - 1), n > 2. - _ Mircea Merc a _ , Dec 28 2010 ●

▶ [A096882] 1,7,50,350,2500,17500,125000,875000,6250000,43750000,312500000,2187500000,15625000000,109375000000,781250000000,5468750000000,39062500000000,273437500000000,1953125000000000,13671875000000000,97656250000000000,683593750000000000,4882812500000000000 ⋆ Expansion of g.f. (1 + 7 * x) / (1 - 50 * x ^ 2). ● a(n) = 6 * a(n - 1) + 7 * a(n - 2) + 50 ^ floor((n - 2) / 2). ● a (n) = Sum _{ k=0..floor(n / 2) } binomial(floor(n / 2), k) * 7 ^ (n - 2 * k). ●

▶ [A033125] 1,7,50,351,2457,17200,120401,842807,5899650,41297551,289082857,2023580000,14165060001,99155420007,694087940050,4858615580351,34010309062457,238072163437200,1666505144060401,11665536008422807,81658752058959650,571611264412717551 ⋆ Base - 7 digits are, in order, the first n terms of the pe riodic sequence with initial period 1,0,1. ● a(n) = 7 * a(n - 1) + a(n - 3) - 7 * a(n - 4). ●

▶ [A054413] 1,7,50,357,2549,18200,129949,927843,6624850,47301793,337737401,2411463600,17217982601,122937341807,877779375250,6267392968557,44749530155149,319514104054600,2281348258537349,16288951913816043,116304011655249650,830417033500563593 ⋆ a(n) = 7 * a(n - 1) + a(n - 2), with a(0)=1 and a(1)= 7. ● a(n) = U(n, 7 * i / 2) * (- i) ^ n with i ^2= - 1 and Chebyshev's U(n, x / 2) = S(n, x) polynomials. See A049310. ● a(n) = F(n, 7), the n - th Fibonacci p olynomial evaluated at x=7. - _ T. D. Noe _ , Jan 19 2006 ● a(n) = (sigma ^ n - (- sigma) ^ (- n)) / (sqrt(53)) with sigma = (7 + sqrt(53)) / 2; ● a(n) = Sum _{ i=0..floor((n - 1) / 2) } binomial(n - 1 - i,i) * 7 ^ (n - 1 - 2i). (End) ● a(n) = - (7 / 106) * sqrt(53) * (7 / 2 - (1 / 2) * sqrt(53)) ^ n + (1 / 2) * (7 / 2 + (1 / 2) * sqrt(53)) ^ n + (1 / 2) * (7 / 2 - (1 / 2) * sqrt(53)) ^ n + (7 / 106) * (7 / 2 + (1 / 2) * sqrt(53)) ^ n * sqrt(53), with n >= 0. - _ Paolo P. Lava _ , Jun 25 2008 ● a(n) = ((7 + sqrt(53)) ^ n - (7 - sqrt(53)) ^ n) / (2 ^ n * sqrt(53)). O ffset 1. a(3)=50. - Al Hakanson (hawkuu(AT)gmail.com), Jan 17 2009 ●

▶ [A163458] 1,7,50,362,2644,19420,143144,1057448,7822480,57916528,429034016,3179246240,23563798336,174671207872,1294885351040,9599803144832,71171535802624,527665122707200,3912149255197184,29005176890321408 ⋆ a(n) = 12 * a(n - 1) - 34 * a(n - 2) for n > 1; a(0) = 1, a(1) = 7. ● a(n) = ((2 + sqrt(2)) * (6 + sqrt(2)) ^ n + (2 - sqrt(2)) * (6 - sqrt(2)) ^ n) / 4. ●

▶ [A081571] 1,7,50,363,2669,19814,148153,1113615,8402722,63577171,481991621,3659227062,27808295345,211479529943,1609093780114,12247558413819,93245414394973,710040492168070,5407464407991017,41185377124992351,313703861897268866,2389549742539808867 ⋆ Sixth binomial transform of F(n + 1). ● a(n) = 13 * a(n - 1) - 41 * a(n - 2), a(0)=1, a(1)=7. ● a(n) = (1 / 2 - sqrt(5) / 10) * (1 3 / 2 - sqrt(5) / 2) ^ n + (sqrt(5) / 10 + 1 / 2) * (sqrt(5) / 2 + 13 / 2) ^ n. ●

▶ [A081189] 1,7,50,364,2696,20272,154400,1188544,9228416,72147712,567104000,4476365824,35448129536,281408253952,2238205337600,17827278536704,142148043309056,1134363236564992,9057979233075200,72362273907933184 ⋆ 7th bino mial transform of (1,0,1,0,1,...), A059841. ● a(n) = 14 * a(n - 1) - 48 * a(n - 2) with n > 1, a(0)=1, a(1)=7. ● a(n) = 6 ^ n / 2 + 8 ^ n / 2. ● a(n) = 6 * a(n - 1) + 8 ^ (n - 1). ●

▶ [A108869] 1,7,50,366,2760,21576,176112,1512720,13781376,134110080,1401566976,15780033792,191537187840,2503044135936,35120982067200,527284915992578,4839379765788672,1434863826778521 60,25828564481580072 96 ⋆ E.g.f. : exp(6 x) / (1 - x). ● a(n) = n! * Sum _{ k = 0..n } 6 ^ k / k!. ● a(n) Sum _{ k = 0.. n } k! * C(n, k) * 6 ^ (n - k). ●

▶ [A053155] 0,1,7,50,397,3366,29197,253030,2170357,18385046,153927037,1275981510,10492253317,85727548726,696964520077,5644579061990,45579645264277,367223771048406,2953549834748317,23724145930814470,190373553357763237 ⋆ N umber of 3 - element intersecting families (with not necessarily distinct sets) of an n - element set. ● a(n) = (8 ^ n - 3 * 6 ^ n + 3 * 5 ^ n + 2 * 4 ^ n - 3 * 3 ^ n + 2 * 2 ^ n - 2) / 6. ● a(n) = 29 * a(n - 1) - 343 * a(n - 2) + 2135 * a(n - 3) - 7504 * a(n - 4) + 14756 * a(n - 5) - 14832 * a(n - 6) + 5760 * a(n - 7) for n > 6. - _ Wesley Ivan Hurt _ , Oct 06 2017 ●

▶ [A037677] 1,7,51,360,2521,17647,123531,864720,6053041,42371287,296599011,2076193080,14533351561,101733460927,712134226491,4984939585440,34894575098081,244262039686567,1709834277805971 ⋆ Base 7 digits are, in order, the first n terms of the periodic sequence with initial period 1,0,2,3. ● a(n) = 8a(n - 1) - 8a(n - 2) + 8a(n - 3) - 7a(n - 4). ●

▶ [A015555] 0,1,7,51,371,2699,19635,142843,1039171,7559883,54997523,400102427,2910712035,21175189099,154047747763,1120684612539,8152887783299,59311583708171,431486861523795,3139031198082907,22836192109627939 ⋆ Expansion of x / (1 - 7 * x - 2 * x ^ 2). ● a(n) = 7 * a(n - 1) + 2 * a(n - 2). ● a(n) = - (1 / 57) * sqrt(57) * (7 / 2 - (1 / 2) * sqrt(57)) ^ n + (1 / 57) * sqrt(57) * (7 / 2 + (1 / 2) * sqrt(57)) ^ n, with n>=0. - _ Paolo P. Lava _ , Jun 25 2008 ●

▶ [A162757] 1,7,51,381,2889,22095,169803,1308501,10098513,78001623,602768547,4659169005,36018666009,278471414943,2153041001019,16646935319109,128712870795681,995205584017575,7694942271953427,59497522990861149 ⋆ a(n) = 12 * a(n - 1) - 33 * a(n - 2) for n > 1; a(0) = 1, a(1) = 7. ● a(n) = ((3 + sqrt(3)) * (6 + sqrt(3)) ^ n + (3 - sqrt(3)) * (6 - sqrt(3)) ^ n) / 6. ●

► [A147958] 1,7,51,385,2993,23807,192627,1577849,13036417,108350935,904201491,7566326929,63431106929,532418131343,4472591813139,37592633210825,316085049734017,2658336935367463,22360719757645683,188108240644768801 ⋆ a(n) = ((7 + sqrt(2)) ^ n + (7 - sqrt(2)) ^ n) / 2. ● a(n) = 14 * a(n - 1) - 47 * a(n - 2), n > 1; a(0)=1, a(1)=7. ●

► [A104454] 1,7,51,385,2995,23877,194109,1602447,13389075,112935445,959783881,8206116387,70507643101,608271899515,5265458413875,45711784088145,397829544860115,3469772959954245,30319709631711225,265383615634224675,2326318766651511945,20419439617056272415 ⋆ Expansion of 1 / (sqrt(1 - 5x) * sqrt(1 - 9x)). ● a(n) = Sum _{ k=0..n } 5 ^ (n - k) * binomial(n,k) * binomial(2k,k). ● a(n) = Sum _{ k=0..n } 9 ^ (n - k) * (- 1) ^ k * binomial(n,k) * binomial(2 * k,k). - _ Seiichi Manyama _ , Apr 22 2019 ● a(n) = Sum _{ k=0..floor(n / 2) } 7 ^ (n - 2 * k) * binomial(n,2 * k) * binomial(2 * k,k). - _ Seiichi Manyama _ , May 04 2019 ●

► [A332936] 7,51,387,2943,22383,170235,1294731,9847143,74892951,569602179,4332138579,32948302095,250590001023,1905875101899,14495230812123,110244221191287,838468077093927,6377011953177555,48500691394138659,368874495293576607,2805493888166196879,21337327619448845211 ⋆ Number of blue nodes in n - th power graph W exponentiation of a cycle graph with 7 blue nodes and 1 green node. ● a(n) = 8 * a(n - 1) - 3 * a(n - 2) for n > 1. ● a(n) = ((4 - sqrt(13)) ^ n * (- 23 + 7 * sqrt(13)) + (4 + sqrt(13)) ^ n * (23 + 7 * sqrt(13))) / (2 * sqrt(13)). ●

► [A273055] 1,7,51,393,3139,25653,212941,1787607,15134931,128996853,1105350729,9513228123,82176836301,712070156203,6186675630819,53876592856681,470139239360787,4109922421017093,35986168879543609,315544068167601787,2770417140954208377,24352194654450483759 ⋆ a(n) = Sum _{ k=0..n } binomial(2 * k, k) * binomial(2 * n + 1, 2 * k). ● a(n) = 4 ^ (2 * n + 1) * JacobiP(2 * n + 1, - 2 * n - 3 / 2, - 2 * n - 3 / 2, - 1 / 2). ● a(n) = GegenbauerC(2 * n + 1, - 2 * n - 1, - 1 / 2). ● a(n) = hypergeom([- n - 1 / 2, - n], [1], 4). ● a(n) = (2 * n + 1)! * ([x ^ (2 * n + 1)] exp(x) * BesselI(0,2 * x)). ● a(n) = [x ^ (2 * n + 1)] (1 - 2 * x - 3 * x ^ 2) ^ (- 1 / 2). ● a(n) = [x ^ (2 * n + 1)] (1 + x + x ^ 2) ^ (2 * n + 1). ●

► [A019472] 0,0,1,7,51,421,3963,42253,505515,6724381,98618763,1582715773,27612565995,520631327581,10554164679243,228975516609853,5294731892093355,130015079601039901,3379132289551117323,92679942218919579133,2675254894236207563115,81073734056332364441821 ⋆ Weak preference orderings of n alternatives, i.e., orderings that have indifference between at least two alternatives. ● a(n) = Sum _{ j=0..n - 1 } Sum _{ i=0..n - 1 } (- 1) ^ (j - i) * C(j, i) * i ^ n. - _ Peter Luschny _ , Jul 22 2014 ●

► [A057675] 1,7,52,192,507,1101,2102,3662,5957,9187,13576,19372,26847,36297,48042,62426,79817,100607,125212,154072,187651,226437,270942,321702,379277 ⋆ 1 - (5 / 6) * n + (5 / 2) * n ^ 2 + (10 / 3) * n ^ 3 + n ^ 4. ● a(0)=1, a(1)=7, a(2)=52, a(3)=192, a(4)=507, a(n)=5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Harvey P. Dale _ , Apr 28 2016 ●

► [A206809] 7,52,208,608,1463,3080,5880,10416,17391,27676,42328,62608,89999,126224,173264,233376,309111,403332,519232,660352,830599,1034264,1276040,1561040,1894815 ⋆ Sum _{ 0<j<k<=n } k ^ 3 - j ^ 3. ● a(n) = (n * (- 4 - 15 * n - 5 * n ^ 2 + 15 * n ^ 3 + 9 * n ^ 4)) / 60. G.f.: x ^ 2 * (x ^ 2 + 10 * x + 7) / (x - 1) ^ 6. - _ Colin Barker _ , Jul 11 2014 ●

► [A037593] 1,7,52,365,2555,17888,125217,876519,6135636,42949453,300646171,2104523200,14731662401,103121636807,721851457652,5052960203565,35370721424955,247595049974688,1733165349822817 ⋆ Base 7 digits are, in order, the first n terms of the periodic sequence with initial period 1,0,3. ● a(n) = 7 * a(n - 1) + a(n - 3) - 7 * a(n - 4). - _ Wesley Ivan Hurt _ , Sep 04 2022 ●

► [A037684] 1,7,52,366,2563,17941,125590,879132,6153925,43077475,301542328,2110796298,14775574087,103429018609,724003130266,5068021911864,35476153383049,248333073681343,1738331515769404 ⋆ Base 7 digits are, in order, the first n terms of the periodic sequence with initial period 1,0,3,2. ● a(n) = 7a(n - 1) + a(n - 4) - 7a(n - 5) ●

► [A015559] 0,1,7,52,385,2851,21112,156337,1157695,8572876,63483217,470101147,3481157680,25778407201,190892323447,1413581485732,10467747370465,77514976050451,574008074464552,4250601449403217,31476234369216175 ⋆ Expansion of x / (1 - 7 * x - 3 * x ^ 2). ● a(n) = 7 * a(n - 1) + 3 * a(n - 2). ● a(n) = (1 / 61) * sqrt(61) * (7 / 2 + (1 / 2) * sqrt(61)) ^ n - (1 / 61) * (7 / 2 - (1 / 2) * sqrt(61)) ^ n * sqrt(61), with n >= 0. - _ Paolo P. Lava _ , Jun 25 2008 ●

► [A259554] 1,7,52,403,3206,25954,212738,1760035,14666470,122920642,1035046816,8749594462,74207078908,631140253072,5381022869822,45975731083555,393556869530630,3374504760608026,28977403637496104,249167023897718138 ⋆ a(n) = Sum _{ i=0..n } (2 ^ (i) * (- 1) ^ (i + n) * C(n,i) * C(2 * n + i - 1,n - 1)). ● a(n) = (1 / 2) * Sum _{ k = 0..n } binomial(n - 1,n - k) * binomial(2 * n + k - 1,k). - _ Vladimir Kruchinin _ , Oct 07 2016 ● a(n) = n * hypergeom([2 * n + 1, - n + 1], [2], - 1). - _ Peter Luschny _ , Oct 07 2016 ● a(n) = (1 / 2) * Sum _{ k = 0..n } (- 1) ^ (n - k) * 2 ^ k * binomial(2 * n,n - k) * binomial(2 * n + k - 1,k). ● a(n) = (1 / 2) * (- 1) ^ n * binomial(2 * n,n) * hypergeom([- n, 2 * n], [n + 1], 2). ●

► [A147962] 1,7,52,406,3292,27412,232336,1991752,17197072,149138416,1296872512,11295848032,98485736896,859191307072,7498334401792,65453881499776,571430958514432,4989154870212352,43562344091309056,380371693248558592,3321335877279603712 ⋆ a(n) = ((7 + sqrt(3)) ^ n + (7 - sqrt(3)) ^ n) / 2. ● a(0) = 1; a(1) = 7; a(n) = 14 * a(n - 1) - 46 * a(n - 2); ● a(n) = ((7 + sqrt(3)) ^ n + (7 - sqrt(3)) ^ n) / 2. (End) ●

► [A349532] 1,1,7,52,407,3329,28232,246552,2204895,20103027,186223399,1748009560,16591329652,158975004204,1535725632552,14940742412112,146259921123407,1439658075118967,14240062489572485,141469058343614452,1410975387252602527,14122900638031585153 ⋆ G.f. A(x) satisfies: A(x) = 1 + x * A(x) ^ 3 / (1 - 4 * x). ● a(0) = a(1) = 1; a(n) = 4 * a(n - 1) + Sum _{ i=0..n - 1 } Sum _{ j=0..n - i - 1 } a(i) * a(j) * a(n - i - j - 1). ● a(n) = Sum _{ k=0..n } binomial(n - 1,k - 1) * binomial(3 * k,k) * 4 ^ (n - k) / (2 * k + 1). ● a(n) = 4 ^ (n - 1) * F([4 / 3, 5 / 3, 1 - n], [2, 5 / 2], - 3 ^ 3 / 2 ^ 4), where F is the generalized hyper geometric function. - _ Stefano Spezia _ , Nov 21 2021 ●

► [A279269] 1,7,53,391,2865,20967,153413,1122471,8212705,60089287,439650773,3216759751,23535824145,172202794407,1259943234533,9218531904231,67448539061185,493495652968327,3610722528440693,26418301962683911,193292803059267825,1414250914660723047 ⋆ a(n) = floor((4 + sqrt(11)) ^ n). ● a(n) = 9 * a(n - 1) - 13 * a(n - 2) + 5 * a(n - 3) for n>2. ● a(n) = 8 * a(n - 1) - 5 * a(n - 2) + 2 for n>1. ● a(n) = (4 + sqrt(11)) ^ n + (4 - sqrt(11)) ^ n - 1. - _ Bruno Berselli _ , Dec 13 2016 ●

► [A015561] 0,1,7,53,399,3005,22631,170437,1283583,9666829,72802135,548282261,4129184367,31097419613,234198674759,1763780401765,13283257511391,100037924186797,753398499353143,5673941192219189,42731182342946895 ⋆ Expansion of x / (1 - 7 * x - 4 * x ^ 2). ● a(n) = 7 * a(n - 1) + 4 * a(n - 2). ● a(n) = - (1 / 65) * sqrt(65) * (7 / 2 - (1 / 2) * sqrt(65)) ^ n + (1 / 65) * sqrt(65) * (7 / 2 + (1 / 2) * sqrt(65)) ^ n, with n >= 0. - _ Paolo P. Lava _ , Jun 25 2008 ●

► [A163306] 1,7,53,419,3385,27631,226637,1863083,15331249,126219415,1039364261,8559569267,70494539113,580587822079,4781723152445,39382455344891,324356046412897,2671416441263143,22001959856357909,181209608597137475 ⋆ a(n) = 12 * a(n - 1) - 31 * a(n - 2) for n > 1; a(0) = 1, a(1) = 7. ● a(n) = ((5 + sqrt(5)) * (6 + sqrt(5)) ^ n + (5 - sqrt(5)) * (6 - sqrt(5)) ^ n) / 10. ●

► [A081338] 1,7,53,427,3593,31087,273533,2430547,21718673,194686807,1748275013,15714943867,141336838553,1271543265727,11441447985293,102960824836387,926586388371233,8338972319559847,75049224997132373,675435395579660107 ⋆ a(n) = (9 ^ n + 5 ^ n) / 2. ● a(n) = 14 * a(n - 1) - 45 * a(n - 2), a(0)=1, a(1)=7. ●

► [A367937] 1,7,53,431,3741,34471,335621,3438943,36954285,415187415,4864054165,59278367247,749926582717,9829744447495,133267495918885,1865916660838847,26942271261464525,400673643394972983,6129834703935247285,96368617886967750767,1555302323744129219293 ⋆ Expansion of e.g.f. exp(4 * (exp(x) - 1) + 3 * x). ● a(n) = exp(- 4) * Sum _{ k>=0 } 4 ^ k * (k + 3) ^ n / k!. ● a(0) = 1; a(n) = 3 * a(n - 1) + 4 * Sum _{ k=1..n } binomial(n - 1,k - 1) * a(n - k). ●

► [A081008] 0,7,54,376,2583,17710,121392,832039,5702886,39088168,267914295,1836311902,12586269024,86267571271,591286729878,4052739537880,27777890035287,190392490709134,1304969544928656,8944394323791463,61305790721611590,420196140727489672 ⋆ a(n) = Fibonacci(4n + 2) - 1, or Fibonacci(2n) * Lucas (2n + 2). ● a(n) = 8 * a(n - 1) - 8 * a(n - 2) + a(n - 3). ● a(n) = - 1 + (1 / 2) *{ [(7 / 2) - (3 / 2) * sqrt(5)] ^ n + [(7 / 2) + (3 / 2) * sqrt(5)] ^ n }+ (3 / 10) * sqrt(5) *{ [(7 / 2) + (3 / 2) * sqrt(5)] ^ n - [(7 / 2) - (3 / 2) * sqrt(5)] ^ n } , with n>=0. - _ Paolo P. Lava _ , Dec 01 2008 ●

► [A015562] 0,1,7,54,413,3161,24192,185149,1417003,10844766,82998377,635212469,4861479168,37206416521,284752311487,2179298263014,16678849398533,127648437104801,976933306726272,7476775332607909,57222093861886723 ⋆ Expansion of x / (1 - 7 * x - 5 * x ^ 2). ● a(n) = 7 * a(n - 1) + 5 * a(n - 2). ● a(n) = (1 / 69) * (7 / 2 + (1 / 2) * sqrt(69)) ^ n * sqrt(69) - (1 / 69) * sqrt(69) * (7 / 2 - (1 / 2) * sqrt(69)) ^ n, with n >= 0. - _ Paolo P. Lava _ , Jun 25 2008 ●

► [A152108] 1,7,54,448,3896,34832,316224,2894528,26609536,245174272,2261620224,20875015168,192738922496,1779844247552,16437306875904,151809149370368,1402086588645376,12949609668739072,119602725461950464,1104655331042787328,10202654714273202176 ⋆ a(n) = ((7 + sqrt(5)) ^ n + (7 - sqrt(5)) ^ n) / 2. ● a(n) = 14 * a(n - 1) - 44 * a(n - 2), n > 1; a(0)=1, a(1)=7. ●

► [A291703] 7,54,490,4050,32674,261954,2096770,16776450,134216194,1073738754,8589928450,68719464450,549755789314,4398046461954,35184371990530,281474976514050,2251799813292034,18014398508695554,144115188074283010,1152921504603701250 ⋆ Number of connected dominating sets in the complete tripartite graph K _{ n,n,n } . ● a(n) = 2 - 3 * 2 ^ n + 8 ^ n for n > 1. ● a(n) = 11 * a(n - 1) - 26 * a(n - 2) + 16 * a(n - 3) for n > 4. ●

► [A228415] 1,7,54,534,4909,45405,385008,3539880,32260781,294001190,2564080248,23271246324 ⋆ Count of the first 10 ^ n primes which do not contain the digit 3. ● a(n) <= 9 ^ n. - _ Charles R Greathouse IV _ , May 21 2014 ●

► [A014637] 1,7,55,81,189,235,403,469,697,783,1071,1177,1525,1651,2059,2205,2673,2839,3367,3553,4141,4347,4995,5221,5929 ⋆ Odd heptagonal numbers (A000566). ● a(n) = (1 / 8) * (1 + (- 1) ^ n + 4 * n) * (- 1 + 5 * (- 1) ^ n + 20 * n) ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) ● a(n) = 80 + 2 * a(n - 2) - a(n - 4) ●

► [A198689] 7,55,391,2743,19207,134455,941191,6588343,46118407,322828855,2259801991,15818613943,110730297607,775112083255,5425784582791,37980492079543,265863444556807,1861044111897655,13027308783283591,91191161482985143 ⋆ 8 * 7 ^ n - 1. ● a(n) = 7 * a(n - 1) + 6. a(n) = 8 * a(n - 1) - 7 * a(n - 2), n>1. ●

► [A320091] 1,7,55,391,2791,19543,137191,960391,6725143,47076343,329551591,2306861191,16148148391,113037041143,791260111543,5538820797943,38771751367543,271402259573191,1899815857483639,13298711002502839,93090977299997143,651636841100805895 ⋆ Number of primitive (=aperiodic) 7 - ary words with length less than or equal to n which are earlier in lexicographic order than any other word derived by cyclic shifts of the alphabet. ● a(n) = Sum _{ j=1..n } Sum _{ d|j } 7 ^ (d - 1) * mu(j / d). ●

► [A015564] 0,1,7,55,427,3319,25795,200479,1558123,12109735,94116883,731476591,5685037435,44184121591,343399075747,2668898259775,20742682272907,161212165468999,1252941251920435,9737861756257039,75682679805321883 ⋆ Expansion of x / (1 - 7 * x - 6 * x ^ 2). ● a(n) = 7 * a(n - 1) + 6 * a(n - 2). ● a(n) = (1 / 73) * (7 / 2 + (1 / 2) * sqrt(73)) ^ n * sqrt(73) - (1 / 73) * sqrt(73) * (7 / 2 - (1 / 2) * sqrt(73)) ^ n, with n >= 0. - _ Paolo P. Lava _ , Jun 25 2008 ●

► [A070997] 1,7,55,433,3409,26839,211303,1663585,13097377,103115431,811826071,6391493137,50320119025,396169459063,3119035553479,24556114968769,193329884196673,1522082958604615,11983333784640247,94344587318517361 ⋆ a(n) = 8 * a(n - 1) - a(n - 2), a(0)=1, a(1)=7. ● a(n) = (5 + sqrt(15)) / 10 * (4 + sqrt(15)) ^ n + (5 - sqrt(15)) / 10 * (4 - sqrt(15)) ^ n. ● a(n) * a(n + 3) = 48 + a(n + 1)a(n + 2). - _ Ralf Stephan _ , May 29 2004 ● a(n) = (- 1) ^ n * U(2n, i * sqrt(6) / 2), U(n, x) Chebyshev polynomial of second kind, i=sqrt(- 1). - _ Paul Barry _ , Mar 13 2005 ● a(n) = a(- 1 - n). ● a(n) = Jacobi _ P(n, - 1 / 2,1 / 2,4) / Jacobi _ P(n, - 1 / 2,1 / 2,1). - _ Paul Barry _ , Feb 03 2006 ●

► [A370177] 1,7,55,433,3415,26935,212449,1675687,13216951,104248465,822257911,6485544631,51154617793,403481136967,3182450283319,25101519942001,197987791577239,1561625180634679,12317290805483425,97152411902826727,766287918958171063,6044082316026984529 ⋆ a(n) = floor(x * a(n - 1)) for n > 0 where x = (7 + sqrt(77)) / 2, a(0) = 1. ● a(n) = 8 * a(n - 1) - 7 * a(n - 3) for n > 2, a(0) = 1, a(1) = 7, a(2) = 55. ● a(n) = 7 * a(n - 1) + 7 * a(n - 2) - 1. ● a(n) = (6 * (77 + 8 * sqrt(77)) * ((7 + sqrt(77)) / 2) ^ n + 6 * (77 - 8 * sqrt(77)) * ((7 - sqrt(77)) / 2) ^ n + 77) / 1001. ●

► [A083068] 1,7,55,439,3511,28087,224695,1797559,14380471,115043767,920350135,7362801079,58902408631,471219269047,3769754152375,30158033218999,241264265751991,1930114126015927,15440913008127415,123527304065019319,988218432520154551,7905747460161236407 ⋆ 7th row of number array A083064. ● a(n) = (6 * 8 ^ n + 1) / 7. ● a(n) = 8 * a(n - 1) - 1 with n>0, a(0)=1. - _ Vincenzo Librandi _ , Aug 08 2010 ● a(n) = 8 ^ n - sum(8 ^ i, i=0..n - 1) for n>0. - _ Bruno Berselli _ , Jun 20 2013 ●

► [A362299] 1,7,55,445,3625,29575,241375,1970125,16080625,131254375,1071334375,8744528125,71375265625,582584734375,4755218359375,38813412578125,316805850390625,2585857315234375,21106485396484375,172276994236328125,1406172661416015625 ⋆ Number of tilings of a 3 X 2n rectangle using dominos and 2 X 2 right triangles. ● a(n) = 10 * a(n - 1) - 15 * a(n - 2). ●

► [A097189] 1,7,55,451,3781,32131,275563,2378971,20640907,179791327,1571002291,13762897435,120832716655,1062818450155,9363143224315,82600459304203,729572125425661,6450872644562491,57092964352312951,505729048454449651 ⋆ Row sums of triangle A097186, in which the n - th row polynomial R _ n(y) is formed from the initial (n + 1) terms of g.f. A057083(y) ^ (n + 1), where R _ n(1 / 3) = 3 ^ n for all n >= 0. ● a(n) = 1 + Sum _{ m=0..n - 1 } Sum _{ k=0..n - m } C(k,n - m - k) * 3 ^ k * (- 1) ^ (n - m - k) * C(n + k,n)). - _ Vladimir Kruchinin _ , Sep 17 2019 ●

► [A224274] 1,7,55,455,3876,33649,296010,2629575,23535820,211915132,1917334783,17417133617,158753389900,1451182990950,13298522298180,122131734269895,1123787895356412,10358022441395860,95615237915961100,883829035553043580,8179808679272664720,75788358475481302185 ⋆ a(n) = binomial(4 * n,n) / 4. ● a(n) = binomial(4 * n,n) / 4. ● a(n) = binomial(4 * n - 1,n - 1). ● a(n) = 1 / 2 * [x ^ n] (C(x) ^ 2) ^ n, where C(x) = (1 - sqrt(1 - 4 * x)) / (2 * x) is the o.g.f. for the Catalan numbers A000108. Cf. A163456. ● a(n) = 1 / 5 * [x ^ n] (1 + x) / (1 - x) ^ (3 * n + 1) = 1 / 5 * [x ^ n](1 / C(- x)) ^ (5 * n), where C(x) = (1 - sqrt(1 - 4 * x)) / (2 * x) is the o.g.f. for the Catalan numbers A000108. Cf. A227726. - _ Peter Bala _ , Jul 12 2016 ●

► [A096951] 1,7,55,463,4039,35839,320503,2876335,25854247,232557151,2092490071,18830313487,169464432775,1525146340543,13726182847159,123535108753519,1111813831298023,10006315891747615,90056808665990167,810511405549580317,2945599715238808391 ⋆ Sum of odd powers of 2 and of 3 divided by 5. ● a(n) = (2 ^ (2 * n + 1) + 3 ^ (2 * n + 1)) / 5. ● a(n + 1) = 4 * a(n) + 3 ^ (2 * n + 1), a(0) = 1. - _ Reinhard Zumkeller _ , Mar 07 2008 ●

► [A152262] 1,7,55,469,4201,38647,360415,3383989,31878001,300780487,2840172775,26828857909,253476581401,2395031249527,22630944493135,213846879174229,2020725695234401,19094743928789767,180435210107977495 ⋆ a(n) = 14 * a(n - 1) - 43 * a(n - 2), n > 1; a(0)=1, a(1)=7. ● a(n) = ((7 + sqrt(6)) ^ n + (7 - sqrt(6)) ^ n) / 2. ● a(n) = m ^ n * (ChebyshevU(n, 7 / m) - (7 / m) * ChebyshevU(n - 1, 7 / m)), with m = sqrt(43). - _ G. C. Greubel _ , May 23 2023 ●

► [A078018] 1,1,7,55,469,4237,39907,387739,3858505,39130777,402972031,4202705311,44299426717,471189693925,5051001609115,54513542257795,591858123926545,6459813793353265,70837427884259575,780073647992404615 ⋆ a(n) = Sum _{ k=0..n } 6 ^ k * N(n,k), with a(0)=1, where N(n,k) = C(n,k) * C(n,k + 1) / n are the Narayana numbers (A001263). ● a(n) = (7 * (2 * n - 1) * a(n - 1) - 25 * (n - 2) * a(n - 2)) / (n + 1) for n>=2, a(0) = a(1) = 1. - _ Philippe Deléham _ , Aug 19 2005 ● a(n) = upper left term in M ^ n, M = the production matrix : ● a(n) = hypergeom([1 - n, - n], [2], 6). - _ Peter Luschny _ , Mar 19 2018 ●

► [A108628] 1,7,55,471,4251,39733,380731,3716695,36808723,368750757,3728940249,38003358693,389866749975,4022124746409,41697566691555,434124925278807,4536783726146499,47569453938399445,500266519237489357,5275183203229043221,55760274296452936741 ⋆ n - th term of the crystal ball sequence for A _{ n + 1 } lattice for n >= 0. ● a(n) = Sum _{ k = 0..n + 1 } C(n + 1, k) ^ 2 * C(n + k, k - 1). ● a(n) = Sum _{ k = 0..n } binomial(n,k) * binomial(n + 1,k) * binomial(n + k + 1,k). ● a(n - 1) = (1 / 2) * Sum _{ k = 0..floor(n / 2) } binomial(n,k) ^ 2 * binomial(3 * n - 2 * k - 1,n - 2 * k) for n >= 1. Cf. A103882. ● a(n) = Sum _{ k = 0..n } (- 1) ^ (n + k) * binomial(n + 1,k + 1) * binomial(n + k + 1,k) ^ 2. ● a(n) = hypergeom([n + 2, - n, - n - 1], [1, 1], 1). ● a(n) = (- 1) ^ n * (n + 1) * hypergeom([n + 2, n + 2, - n], [1, 2], 1). ●

► [A096307] 1,7,55,481,4645,49171,566827,7073725,95064361,1369375615,21054430591,344231563897,5964569413645,109196040092491,2106381399472435,42705264827626261,907920105215691217,20198878182718877815 ⋆ E.g.f.: exp(x) / (1 - x) ^ 6. ● a(n) = Sum _{ k = 0..n } binomial(n, k) * (k + 5)! / 5!. ● a(n) = 2F0(6, - n;; - 1). - _ Benedict W. J. Irwin _ , May 27 2016 ● a(n) = (n + 6) * a(n - 1) - (n - 1) * a(n - 2) with a(0) = 1 and a(1) = 7. Cf. A001689. ●

► [A199564] 7,55,487,4375,39367,354295,3188647,28697815,258280327,2324529955,20920706407,188286357655,1694577218887,15251194969975,137260754729767,1235346792567895,11118121133111047,100063090197999415,900567811781994727 ⋆ 6 * 9 ^ n + 1. ● a(n) = 9 * a(n - 1) - 8. ● a(n) = 10 * a(n - 1) - 9 * a(n - 2). ●

► [A097254] 0,7,56,63,448,455,504,511,3584,3591,3640,3647,4032,4039,4088,4095,28672,28679,28728,28735,29120,29127,29176,29183,32256 ⋆ Numbers whose set of base 8 digits is { 0,7 } . ● a(2n - 1) = 8 * a(n), a(2n) = 8 * a(n) + 7. ●

► [A153797] 0,7,56,147,280,455,672,931,1232,1575,1960,2387,2856,3367,3920,4515,5152,5831,6552,7315,8120,8967,9856,10787,11760 ⋆ 7 times octagonal numbers: a(n) = 7 * n * (3 * n - 2). ● a(n) = a(n - 1) + 42 * n - 35 (with a(0)=0). - _ Vincenzo Librandi _ , Nov 27 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A244727] 0,7,56,189,448,875,1512,2401,3584,5103,7000,9317,12096,15379,19208,23625,28672,34391,40824,48013,56000,64827,74536,85169,96768 ⋆ a(n) = 7 * n ^ 3. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>3. ●

► [A047664] 7,56,287,1120,3591,9912,24319,54272,112071,216952,397727,696032,1170247,1900152,2992383,4586752,6863495,10051512,14437663,20377184,28305287,38750008,52346367,69851904,92163655 ⋆ Row 7 of square array defined in A047662. ● a(n) = (n / 315) * (4 * n ^ 6 + 14 * n ^ 5 + 112 * n ^ 4 + 245 * n ^ 3 + 616 * n ^ 2 + 686 * n + 528). ●

► [A082140] 1,7,56,336,1680,7392,29568,109824,384384,1281280,4100096,12673024,38019072,111132672,317521920,889061376,2444918784,6615662592,17641766912,46425702400,120706826240,310388981760,790081044480 ⋆ A transform of binomial(n,6). ● a(n) = (2 ^ (n - 1) + 0 ^ n / 2) * C(n + 6,n). ● a(n) = Sum _{ j=0..n } C(n + 6, j + 6) * C(j + 6, 6) * (1 + (- 1) ^ j) / 2. ● a(n) = ceiling(binomial(n + 6,6) * 2 ^ (n - 1)). - _ Zerinvary Lajos _ , Nov 01 2006 ●

► [A054614] 0,7,56,357,2464,16835,118104,823585,5767328,40354335,282492280,1977326813,13841410464,96889010491,678223896728,4747561544985,33232936339456,232630513987319,1628413638500376,11398895185373269 ⋆ a(n) = Sum _{ d|n } phi(d) * 7 ^ (n / d). ● a(n) = Sum _{ k=1..n } 7 ^ gcd(n,k). - _ Ilya Gutkovskiy _ , Apr 16 2021 ●

► [A104896] 0,7,56,399,2800,19607,137256,960799,6725600,47079207,329554456,2306881199,16148168400,113037178807,791260251656,5538821761599,38771752331200,271402266318407,1899815864228856,13298711049601999,93090977347214000,651636841430498007 ⋆ a(0) = 0; a(n) = 7 * a(n - 1) + 7. ● a(n) = (7 ^ (n + 1) - 7) / 6. - _ Max Alekseyev _ , Jan 23 2006 ● a(n) = a(n - 1) + 7 ^ n with a(0)=0. - _ Vincenzo Librandi _ , Nov 13 2010 ● a(n) = 8 * a(n - 1) - 7 * a(n - 2). ●

► [A122996] 1,7,56,399,3143,22694,176701,1288707,9947056,73093699,560499443,4142090694,31606563401,234569007407,1783290614056,13277171976999,100658412065743,751239838938694,5683502030160101,42494254138156107 ⋆ Expansion of (1 + 6 * x) / (1 - x - 49 * x ^ 2). ● a(n) = a(n - 1) + 49 * a(n - 2). - _ Philippe Deléham _ , Mar 26 2009 ● a(n) = (1 / 2 + 13 * sqrt(197) / 394) * (1 / 2 + sqrt(197) / 2) ^ n + (1 / 2 - 13 * sqrt(197) / 394) * (1 / 2 - sqrt(197) / 2) ^ n. - _ Antonio Alberto Olivares _ , Jun 06 2011 ● a(n) = (7 * i) ^ n * (ChebyshevU(n, - i / 14) - (6 * i / 7) * ChebyshevU(n - 1, - i / 14)). - _ G. C. Greubel _ , Dec 23 2021 ●

► [A092318] 0,7,56,418,3091,22845,168803,1247297,9216353,68100150,503195828,3718142207,27473561357,203003686105,1500005624923,11083625711270,81897532160124,605145459495140,4471453748222756,33039822589391675 ⋆ a(n) = smallest m such that value of odd harmonic series Sum _{ j=0..m } 1 / (2j + 1) is >= n. ● a(n) = floor(exp(2 * n - gamma) / 4 + 1 / 8), for all n > 1. - _ M. F. Hasler _ and _ Robert G. Wilson v _ , Jan 22 2017 ● a(n) = floor(exp(2 * n - gamma) / 4), for all n > 1, see correction in A092315, _ Gerhard Kirchner _ , Jul 25 2020 ●

► [A092315] 1,7,56,418,3091,22845,168803,1247297,9216353,68100150,503195828,3718142207,27473561357,203003686105,1500005624923,11083625711270,81897532160124,605145459495140,4471453748222756,33039822589391675,244133102611731230,1803913190804074903 ⋆ a(n) is the smallest m such that the partial sum of the odd harmonic series Sum _{ j=0..m } 1 / (2j + 1) is > n. ● a(n) = floor(exp(2 * n - gamma) / 4 + 1 / 8) for all n >= 1 (conjectured; see also comments in A002387). - _ M. F. Hasler _ , Jan 22 2017 ● a(n) = floor(exp(2 * n - gamma) / 4). - _ Gerhard Kirchner _ , Jul 23 2020 ●

► [A057090] 1,7,56,441,3479,27440,216433,1707111,13464808,106203433,837677687,6607167840,52113918689,411047605703,3242130670744,25572247935129,201706502411111,1590910287233680,12548276562323537,98974307946900519,780658091564568392 ⋆ Scaled Chebyshev U - polynomials evaluated at i * sqrt(7) / 2. Generalized Fibonacci sequence. ● a(n) = 7 * (a(n - 1) + a(n - 2)), a(0)=1, a(1)=7. ● a(n) = S(n, i * sqrt(7)) * (- i * sqrt(7)) ^ n with S(n, x) := U(n, x / 2), Chebyshev's polynomials of the 2nd kind, A049310. ● a(n) = - (1 / 77) * (7 / 2 - (1 / 2) * sqrt(77)) ^ (n + 1) * sqrt(77) + (1 / 77) * (7 / 2 + (1 / 2) * sqrt(77)) ^ (n + 1) * sqrt(77), with n>=0. - _ Paolo P. Lava _ , Nov 20 2008 ●

► [A156362] 1,7,56,441,3528,28126,225008,1798349,14386792,115060722,920485776,7363180314,58905442512,471228010428,3769824083424,30158239367445,241265914939560,1930119075851050,15440952606808400,123527424655229966 ⋆ a(2 * n + 2) = 8 * a(2 * n + 1), a(2 * n + 1) = 8 * a(2 * n) - 7 ^ n * A000108(n), a(0)=1. ● a(n) = (8 * (n + 1) * a(n - 1) + 28 * (n - 2) * a(n - 2) - 224 * (n - 2) * a(n - 3)) / (n + 1). - _ G. C. Greubel _ , Nov 09 2022 ●

► [A055274] 1,7,56,448,3584,28672,229376,1835008,14680064,117440512,939524096,7516192768,60129542144,481036337152,3848290697216,30786325577728,246290604621824,1970324836974592,15762598695796736,126100789566373888,1008806316530991104 ⋆ First differences of 8 ^ n (A001018). ● a(n) = 7 * 8 ^ (n - 1); a(0)=1. ● a(n) = 8 * a(n - 1) + (- 1) ^ n * C(1, 1 - n). ● a(n) = 7 * Sum _{ k=0..n - 1 } a(k), for n>=1. - _ Adi Dani _ , Jun 24 2011 ●

► [A155197] 1,7,56,455,3696,30023,243880,1981063,16092384,130720135,1061853464,8625547847,70066236240,569155437767,4623309738376,37555633344775,305068376496576,2478102645317383,20129889539035640,163517218957602503 ⋆ a(n) = 8 * a(n - 1) + a(n - 2) for n>2, with a(0)=1, a(1)=7, a(2)=56. ● a(n) = (14 / 17) * sqrt(17) * ((4 + sqrt(17)) ^ (n - 1) - (4 - sqrt(17)) ^ (n - 1)) + (7 / 2) * ((4 + sqrt(17)) ^ (n - 1) + (4 - sqrt(17)) ^ (n - 1)) for n>0, a(0)=1. - _ Paolo P. Lava _ , Jan 26 2009 ●

► [A147839] 1,7,56,455,3703,30142,245357,1997219,16257472,132336715,1077228131,8768696174,71377668649,581018144623,4729519621064,38498549577215,313380308847487,2550932932586878,20764734231349493,169026077554037291 ⋆ a(n) =9 * a(n - 1) - 7 * a(n - 2), a(0)=1, a(1)=7 . ● a(n)= - (5 / 106) * sqrt(53) * [(9 / 2) - (1 / 2) * sqrt(53)] ^ n + (5 / 106) * [(9 / 2) + (1 / 2) * sqrt(53)] ^ n * sqrt(53) + (1 / 2) * [(9 / 2) + (1 / 2) * sqrt(53)] ^ n + (1 / 2) * [(9 / 2) - (1 / 2) * sqrt(53)] ^ n, with n>=0 [From _ Paolo P. Lava _ , Nov 18 2008] ● a(n)= ((53 + 5 * sqrt(53)) / 106) * (4.5 + 0.5 * sqrt(53)) ^ n + ((53 - 5 * sqrt(53)) / 106) * (4.5 - 0.5 * sqrt(53)) ^ n [From _ Richard Choulet _ , Nov 20 2008] ●

► [A024091] 1,7,56,485,4032,32643,261928,2096809,16776704,134216999,1073740824,8589933261,68719475008,549755811691,4398046508360,35184372085457,281474976706560,2251799813680335,18014398509476152 ⋆ a(n) = 8 ^ n - n ^ 3. ● a(n) = 12 * a(n - 1) - 38 * a(n - 2) + 52 * a(n - 3) - 33 * a(n - 4) + 8 * a(n - 5); a(

0)=1, a(1)=7, a(2)=56, a(3)=485, a(4)=4032. - _ Harvey P. Dale _ , Aug 22 2012 ●

▶ [A145302] 1,7,56,490,4508,42532,406112,3899224,37532432,361686640,3487250816,33630672544,324364881344,3128620091968,30177356271104,291080943932800,2807684251672832,27082179878242048,261227779725129728 ⋆ a(n) = ((7 + sqrt(7)) ^ n + (7 - sqrt(7)) ^ n) / 2. ● a(n) = 14 * a(n - 1) - 42 * a(n - 2). ●

▶ [A165322] 1,7,56,497,4711,46312,463841,4688327,47596696,484222417,4931098151,50239573832,511969798081,5217807853447,53180597695736,542036380617137,5524696422165991,56310663682250152,573949830547618721 ⋆ a(0)=1, a(1)=7, a(n)=15 * a(n - 1) - 49 * a(n - 2) for n>1. ● a(n) = ((29 - sqrt(29)) * (15 + sqrt(29)) ^ n + (29 + sqrt(29)) * (15 - sqrt(29)) ^ n) / (58 * 2 ^ n). [_ Klaus Brockhaus _ , Sep 26 2009] ●

▶ [A082305] 1,7,56,497,4760,48174,507696,5516133,61363736,695540258,8004487568,93283238986,1098653880688,13056472392796,156371970692448,1885491757551213,22870028390806296,278862330338622618 ⋆ G.f.: (1 - 6 * x - sqrt(36 * x ^ 2 - 16 * x + 1)) / (2 * x). ● a(n) = (1 / n) * Sum _{ k=0..n } 7 ^ k * C(n, k) * C(n, k - 1), a(0)=1. ●

▶ [A015565] 0,1,7,57,455,3641,29127,233017,1864135,14913081,119304647,954437177,7635497415,61083979321,488671834567,3909374676537,31274997412295,250199979298361,2001599834386887,16012798675095097,128102389400760775 ⋆ a(n) = 7 * a(n - 1) + 8 * a(n - 2), a(0) = 0, a(1) = 1. ● a(n) = (8 ^ n - (- 1) ^ n) / 9. ● a(n) = 8 ^ (n - 1) - a(n - 1). ● a(n) = round(8 ^ n / 9). - _ Mircea Merca _ , Dec 28 2010 ●

▶ [A268316] 1,1,7,57,484,4199,36938,328185,2937932,26457508,239414383,2175127695,19827974412,181266501290,1661241473220,15257624681145,140400178555644,1294141164447692,11946771748196428,110435320379615620,10221088521754 16720,9470416604629933935 ⋆ a(n) is the number of Dyck paths of length 4n and height n. ● a(n) = T(2n,n), where T(n,k) is defined by A080936. ● a(n) = binomial(4 * n,n) * 2 * (2 * n + 3) * (2 * n ^ 2 + 1) / ((3 * n + 1) * (3 * n + 2) * (3 * n + 3)). ●

▶ [A291537] 7,57,493,4053,32677,261957,2096773,16776453,134216197,1073738757,8589928453,68719464453,549755789317,4398046461957,35184371990533,281474976514053,2251799813292037,18014398508695557,144115188074283013,1152921504603701253,9223372036848484357 ⋆ a(n) = 8 ^ n - 3 * 2 ^ n + 5. ● a(n) = 8 ^ n - 3 * 2 ^ n + 5. ● a(n) = 11 * a(n - 1) - 26 * a(n - 2) + 16 * a(n - 3). ●

▶ [A082413] 1,7,57,495,4401,39447,354537,3189375,28700001,258286887,2324542617,20920765455,188286534801,1694577750327,15251196564297,137260759512735,1235346806916801,11118121176157767,100063090327139577,900567812169415215 ⋆ a(n) = (2 * 9 ^ n + 3 ^ n) / 3. ● a(n) = (2 * 9 ^ n + 3 ^ n) / 3. ●

▶ [A142990] 1,7,57,504,4896,51912,598392,7459200,100085760,1439061120,22083719040,360371773440,6232667212800,113901166310400,2193425619840000,44398776748032000,924498015750144000,20938290999865344000 ⋆ a(1) = 1, a(2) = 7, a(n + 2) = 7 * a(n + 1) + (n + 1) * (n + 3) * a(n). ● a(n) = (n + 2)! * p(n + 2) * sum { k = 1..n } (- 1) ^ (k + 1) / (k * (k + 1) * (k + 2) * p(k + 1) * p(k + 2)), where p(n) = (n ^ 2 - n + 1) / 3. Recurrence: a(1) = 1, a(2) = 7, a(n + 2) = 7 * a(n + 1) + (n + 1) * (n + 3) * a(n). The sequence b(n) := 1 / 2 * (n + 2)! * p(n + 2) satisfies the same recurrence with b(1) = 7, b(2) = 52. Hence we obtain the finite continued fraction expansion a(n) / b(n) = 1 / (7 + 1 * 3 / (7 + 2 * 4 / (7 + 3 * 5 / (7 + ... + (n - 1) * (n + 1) / 7)))), for n >=2. Lim n -> infinity a(n) / b(n) = 1 / (7 + 1 * 3 / (7 + 2 * 4 / (7 + 3 * 5 / (7 + ... + (n - 1) * (n + 1) / (7 + ...))))) = 2 * sum { k = 1..inf } (- 1) ^ (k + 1) / (k * (k + 1) * (k + 2) * p(k + 1) * p(k + 2)) = 24 * log(2) - 33 / 2. ●

▶ [A147689] 1,7,57,511,4817,46487,453321,4440527,43581217,428075431,4206226137,41336073247,406249753841,3992717550647,39241805801577,385683861645551,3790660025173057,37256202024955207,366169767317277561 ⋆ a(n) = ((7 + sqrt(8)) ^ n + (7 - sqrt(8)) ^ n) / 2. ● a(n) = 14 * a(n - 1) - 41 * a(n - 2), a(0)=1, a(1)=7. ●

▶ [A248168] 1,7,57,511,4849,47607,477609,4862319,50026977,518839783,5414767897,56795795679,598213529809,6322787125207,67026654455433,712352213507151,7587639773475777,80977812878889927,865716569022673401,9269461606674304959,99387936492243451569,1066975862517563301303 ⋆ G.f.: 1 / sqrt((1 - 3 * x) * (1 - 11 * x)). ● a(n) equals the central coefficient in (1 + 7 * x + 4 * x ^ 2) ^ n, n>=0. ● a(n) = Sum _{ k=0..n } 3 ^ (n - k) * 2 ^ k * C(n,k) * C(2 * k,k). ● a(n) = Sum _{ k=0..n } 11 ^ (n - k) * (- 2) ^ k * C(n,k) * C(2 * k,k). - _ Paul D. Hanna _ , Apr 20 2019 ●

▶ [A062192] 1,7,57,529,5509,63591,805597,11109337,165625929,2654025319,45481765921,829903882017,16062421776397,328634683136839,7086337847838789,160604998959958441,3816483607166825617 ⋆ Row sums of unsigned triangle A062138 (generalized a=5 Laguerre). ● a(n) = Sum _{ m=0..n } n! * binomial(n + 5, n - m) / m!. ● a(n) = (2 * n + 5) * a(n - 1) - (n - 1) * (n + 4) * a(n - 2). - _ Vaclav Kotesovec _ , Oct 11 2012 ● a(n) = n! * LaguerreL(n, 5, - 1). - _ G. C. Greubel _ , Mar 10 2021 ●

▶ [A015566] 0,1,7,58,469,3805,30856,250237,2029363,16457674,133467985,1082394961,8777976592,71187390793,577313524879,4681881191290,37968990062941,307919861162197,2497159938701848,20251398321372709,164234227697925595 ⋆ Expansion of x / (1 - 7 * x - 9 * x ^ 2). ● a(n) = 7 * a(n - 1) + 9 * a(n - 2). ● a(n) = - (1 / 85) * (7 / 2 - (1 / 2) * sqrt(85)) ^ n * sqrt(85) + (1 / 85) * sqrt(85) * (7 / 2 + (1 / 2) * sqrt(85)) ^ n, with n >= 0. - _ Paolo P. Lava _ , Jun 25 2008 ●

▶ [A362210] 1,1,7,58,505,4498,40576,368965,3373225,30958240,284934754,2628211291,24283705558,224677646416,2081054132179,19293026227024,178996540057615,1661743445778403,15435351753092176,143439377236572826,1333496145331028230 ⋆ Expansion of 1 / (1 - x / (1 - 9 * x) ^ (2 / 3)). ● a(n) = Sum _{ k=0..n } (- 9) ^ k * binomial(- 2 * (n - k) / 3,k) = Sum _{ k=0..n } 9 ^ (n - k) * binomial(n - k / 3 - 1,n - k). ●

▶ [A334610] 0,7,58,505,4650,44677,443238,4507461,46744100,492492330,5257084420,56734340091,618001356458,6785943435960,75033214770640,834736240994485,9336542892778440,104932793226255165,1184421713336050590,13421053387405062290,152613573227667516580 ⋆ a(n) is the total number of down - steps after the final up - step in all 4 _ 1 - Dyck paths of length 5 * n (n up - steps and 4 * n down - steps). ● a(n) = 2 * binomial(5 * (n + 1) + 2, n + 1) / (5 * (n + 1) + 2) - 4 * binomial(5 * n + 2, n) / (5 * n + 2). ●

▶ [A244469] 0,1,7,58,515,4746,44758,428772,4154403,40599130,399429602,3950996556,39255152846,391466112324,3916110379020,39281346256008,394942611929379,3978982062756090,40160256911157610,405995113593507900,4110284071450416090,41666530928566504620,422876855107176561780 ⋆ a(0) = 0, thereafter, a(n) = 2 ^ (2 * n - 1) * (binomial((3 * n - 1) / 2,n) - binomial(3 * n / 2, n) / 3). ● a(n) = (1 / n) * Sum _{ k = 0..n } k * 2 ^ (n - k) * binomial(n + k - 1,k) * binomial(2 * n - k - 1,n - k) for n >= 1. ● a(n) = [x ^ n] G(x) ^ n = [x ^ n] 1 / (1 - x * C(2 * x)) ^ n, where C(x) = (1 - sqrt(1 - 4 * x)) / (2 * x) is the g.f. of the Catalan numbers A000108 and G(x) is the g.f. of A064062. ●

▶ [A194724] 1,1,7,58,523,4966,48838,492724,5068915,52955950,560198962,5987822380,64563867454,701383563388,7668869344108,84326618668648,931894610845123,10344218506421758,115280448164645818,1289346114476360188,14467472108268263818,162816535672067515828 ⋆ Number of quaternary words either empty or beginning with the first character of the alphabet, that can be built by inserting n doublets into the initially empty word. ● a(0) = 1, a(n) = 1 / n * Sum _{ j=0..n - 1 } C(2 * n,j) * (n - j) * 3 ^ j for n>0. ●

▶ [A081343] 1,7,58,532,5128,50512,502048,5008192,50032768,500131072,5000524288,50002097152,500008388608,5000033554432,50000134217728,500000536870912,5000002147483648,50000008589934592,500000034359738368 ⋆ a(n) = (10 ^ n + 4 ^ n) / 2. ● a(n) = 14 * a(n - 1) - 40 * a(n - 2), a(0)=1, a(1)=7. ● a(n) = ((7 + sqrt(9)) ^ n + (7 - sqrt(9)) ^ n) / 2. - Al Hakanson (hawkuu(AT)gmail.com), Dec 08 2008 ●

▶ [A015568] 0,1,7,59,483,3971,32627,268099,2202963,18101731,148741747,1222209539,10042884243,82522285091,678084838067,5571816717379,45783565402323,376203124990051,3091257528953587,25400833952575619,208718412957565203,1715037230228712611,14092444741176640307 ⋆ Expansion of x / (1 - 7 * x - 10 * x ^ 2). ● a(n) = 7 * a(n - 1) + 10 * a(n - 2). ● a(n) = - (1 / 89) * (7 / 2 - (1 / 2) * sqrt(89)) ^ n * sqrt(89) + (1 / 89) * sqrt(89) * (7 / 2 + (1 / 2) * sqrt(89)) ^ n, with n >= 0. - _ Paolo P. Lava _ , Jun 25 2008 ●

▶ [A322667] 7,59,531,5099,50316,500999,5003162,50009999,500031622,5000099999,50000316227,500000999999,5000003162277,50000009999999,500000031622776,5000000099999999,50000000316227766,500000000999999999,5000000003162277660,500000000099999999999 ⋆ a(n) is the smallest positive integer k such that floor((k + 1) ^ 2 / 10 ^ n) - floor(k ^ 2 / 10 ^ n) = 2. ● a(n) = 5 * 10 ^ (n - 1) + ceiling(10 ^ (n / 2)) - 1 for n >= 2. ●

▶ [A358599] 1,7,59,563,5571,55587,555619,5555683,55555811,555556067,5555556579,55555557603,555555559651,5555555563747,55555555571939,555555555583823,5555555555621091,55555555555686627,555555555555817699,5555555555556079843,55555555555556604131 ⋆ Number of genetic relatives of a person M in a genealogical tree extending back n generations and where everyone has 5 children down to the generation of M. ● a(n) = 2 ^ n + 5 * (10 ^ n - 1) / 9. ●

▶ [A077409] 7,59,583,5771,57127,565499,5597863,55413131,548533447,5429921339,53750679943,532076878091,5267018100967,52138104131579,516114023214823,5109002128016651,50573907256951687,500630070441500219,4955726797158050503,49056637901139004811 ⋆ Bisection (even part) of Chebyshev sequence with Diophantine property. ● a(n) = 10 * a(n - 1) - a(n - 2), a(- 1)=11, a(0)=7. ●

▶ [A303120] 0,7,60,372,1300,4047,9800,22352,44280,84575,147620,251412,402220,632247,949200,1406272,2011440,2847447,3920460,5353300,7147140,9477567,12336280,15966672,20345000 ⋆ Total area of all rectangles of size p X q such that p + q = n ^ 2 and p <= q. ● a(n) = Sum _{ i=1..floor(n ^ 2 / 2) } i * (n ^ 2 - i). ● a(n) = 2 * a(n - 1) + 4 * a(n - 2) - 10 * a(n - 3) - 5 * a(n - 4) + 20 * a(n - 5) - 20 * a(n - 7) + 5 * a(n - 8) + 10 * a(n - 9) - 4 * a(n - 10) - 2 * a(n - 11) + a(n - 12) for n > 12. ● a(n) = (n ^ 2 * (- 4 + 3 * (1 + (- 1) ^ n) * n ^ 2 + 4 * n ^ 4)) / 48. ●

▶ [A015570] 0,1,7,60,497,4139,34440,286609,2385103,19848420,165175073,1374558131,11438832720,95191968481,792170939287,6592308228300,54860037930257,456535656023099,3799210009394520,31616362282015729,263105846077449823,2189520907644321780,18220810660362200513 ⋆ Expansion of x / (1 - 7 * x - 11 * x ^ 2). ● a(n) = 7 * a(n - 1) + 11 * a(n - 2). ● a(n) = (1 / 93) * (7 / 2 + (1 / 2) * sqrt(93)) ^ n * sqrt(93) - (1 / 93) * (7 / 2 - (1 / 2) * sqrt(93)) ^ n * sqrt(93), with n >= 0. - _ Paolo P. Lava _ , Jun 25 2008 ●

▶ [A290756] 7,60,499,4062,32689,261972,2096791,16776474,134216221,1073738784,8589928483,68719464486,549755789353,4398046461996,35184371990575,281474976514098,2251799813292085,18014398508695608,144115188074283067,1152921504603701310 ⋆ Number of (non - null) connected induced subgraphs of the complete tripartite graph K _{ n,n,n } . ● a(n) = 8 ^ n - 3 * 2 ^ n + 3 * n + 2. - _ Andrew Howroyd _ , Aug 10 2017 ● a(n) = 12 * a(n - 1) - 37 * a(n - 2) + 42 * a(n - 3) - 16 * a(n - 4). ●

▶ [A024090] 1,7,60,503,4080,32743,262108,2097103,16777152,134217647,1073741724,8589934471,68719476592,549755813719,4398046510908,35184372088607,281474976710400,2251799813684959,18014398509481660 ⋆ 8 ^ n - n ^ 2. ● a(n) = 11 * a(n - 1) - 27 * a(n - 2) + 25 * a(n - 3) - 8 * a(n - 4) for n>3. - _ Vincenzo Librandi _ , Oct 06 2014 ●

▶ [A135165] 0,7,61,433,2929,19657,132481,899353,6148609,42286537,292180801,2025975673,14084892289,98108111017,684321789121,4778064706393,33385475347969,233393324169097,1632227907493441,11417967508915513,79887630241419649,559022690779036777,3912205202988749761 ⋆ a(n) = 7 ^ n + 5 ^ n - 3 ^ n - 2 ^ n. ● a(n) = 7 ^ n + 5 ^ n - 3 ^ n - 2 ^ n. ● a(n) = 17 * a(n - 1) - 101 * a(n - 2) + 247 * a(n - 3) - 210 * a(n - 4) for n>3. (End) ●

▶ [A155599] 1,7,61,505,4081,32737,262081,2097025,16776961,134217217,1073740801,8589932545,68719472641,549755805697,4398046494721,35184372056065,281474976645121,2251799813554177,18014398509219841,144115188075331585 ⋆ a(n) = 8 ^ n - 2 ^ n + 1 ^ n. ● a(n) = 10 * a(n - 1) - 16 * a(n - 2) + 7 with a(0)=1, a(1)=7 - _ Vincenzo Librandi _ , Jul 21 2010 ●

▶ [A015572] 0,1,7,61,511,4309,36295,305773,2575951,21700933,182817943,1540136797,12974772895,109305051829,920832637543,7757489084749,65352415243759,550556775723301,4638126412988215,39073566199597117,329172480353038399,2773090156866434197,23361700862301500167 ⋆ Expansion of x / (1 - 7 * x - 1

2 * x ^ 2). • a(n) = 7 * a(n - 1) + 12 * a(n - 2). • a(n) = (1 / 97) * sqrt(97) * (7 / 2 + (1 / 2) * sqrt(97)) ^ n - (1 / 97) * sqrt(97) * (7 / 2 - (1 / 2) * sqrt(97)) ^ n, with n >= 0. - _ Paolo P. Lava _ , Jun 25 2008 •

► [A066443] 1,7,61,547,4921,44287,398581,3587227,32285041,290565367,2615088301,23535794707,211822152361,1906399371247,17157594341221,154418349070987,1389765141638881,12507886274749927,112570976472749341 ⋆ Number of distinct paths of length 2n + 1 along edges of a unit cube between two fixed adjacent vertices. • a(n) = (3 ^ (2 * n + 1) + 1) / 4. - _ Vladeta Jovovic _ , Dec 22 2002 • a(n) = 9 * a(n - 1) - 2. - _ Matthew Vandermast _ , Mar 30 2003 • a(n) = (- 1) ^ n times the (i, i) - th element of M ^ n (for any i), where M = ((1, 1, 1, - 2), (1, 1, - 2, 1), (1, - 2, 1, 1), (- 2, 1, 1, 1)). - _ Simone Severini _ , Nov 25 2004 • a(n) = Sum _{ k=0..n } binomial(2 * n + 1, 2 * k) * 4 ^ (n - k). - _ Paul Barry _ , Jan 22 2005 • a(n) = Sum _{ k=0..2n } (- 3) ^ k == 1 + Sum _{ k=1..n } 2 * 3 ^ (2k - 1). - _ Bob Selcoe _ , Aug 21 2016 • a(n) = 3 ^ (2 * n + 1) * a(- 1 - n) for all n in Z. - _ Michael Somos _ , Jul 02 2017 •

► [A108448] 1,7,61,575,5641,56695,579125,5984767,62390545,654862247,69111955501,73265596607,779594526361,8321683861015,89070157349221,955598531432447,10273391096237089,110647714508386375,1193641560393864605 ⋆ Number of peaks of the form ud in all paths from (0,0) to (3n,0) that stay in the first quadrant (but may touch the horizontal axis), consisting of steps u=(2,1), U=(1,2), or d=(1, - 1). • a(n) = Sum _{ k=1..n } k * C(n - 1,k - 1) * C(2 * n + k - 1,n)) / (n + k). - _ Vladimir Kruchinin _ , Mar 03 2014 • a(n) = P(n - 1,n,0,3), where P is the Jacobi Polynomial. - _ Richard Turk _ , Jun 25 2018 •

► [A218473] 1,1,7,61,591,6101,65719,729933,8297247,96044101,1128138567,13411861629,161066465583,1950996039669,23808159962839,292413627476141,3611870017079871,44838216520062117,559127724970143079,7000374603097246173,87964883375131331151 ⋆ Number of 3n - length 3 - ary words, either empty or beginning with the first letter of the alphabet, that can be built by repeatedly inserting triples of identical letters into the initially empty word. • a(n) = (1 / n) * Sum _{ j=0..n - 1 } binomial(3 * n,j) * (n - j) * 2 ^ j for n>0, a(0) = 1. •

► [A098659] 1,7,61,595,6145,65527,712909,7863667,87615745,983726695,11112210781,126142119187,1437751935361,16443380994775,188609259215725,2168833084841395,24994269200292865,288596644195946695,3337978523215692925,38666734085509918675 ⋆ Expansion of 1 / sqrt((1 - 7 * x) ^ 2 - 24 * x ^ 2). • a(n) = Sum _{ k=0..n } C(n, k) ^ 2 * 6 ^ k. • a(n) = [x ^ n] (1 + 7 * x + 6 * x ^ 2) ^ n. •

► [A199686] 7,61,601,6001,60001,600001,6000001,60000001,600000001,6000000001,60000000001,600000000001,6000000000001,60000000000001,600000000000001,6000000000000001,60000000000000001,600000000000000001 ⋆ 6 * 10 ^ n + 1. • a(n) = 10 * a(n - 1) - 9. • a(n) = 11 * a(n - 1) - 10 * a(n - 2). •

► [A364430] 1,1,7,61,603,6443,72517,846995,10170685,124780525,1557347467,19710577873,252386341335,3263626001751,42558647522697,559032393114023,7390085367865081,98242108076244665,1312529311579827631,17613845480108029957,237322279651518516019 ⋆ G.f. satisfies A(x) = 1 - x * A(x) * (1 - 2 * A(x) ^ 3). • a(n) = (- 1) ^ n * Sum _{ k=0..n } (- 2) ^ k * binomial(n,k) * binomial(n + 3 * k + 1,n) / (n + 3 * k + 1). •

► [A077642] 1,7,61,607,6077,60787,607951,6079284,60792732,607927092,6079270913,60792710227,607927101577,6079271018873,60792710185938,607927101853650 ⋆ Number of squarefree integers in the closed interval [10 ^ n, - 1 + 2 * 10 ^ n], i.e., among 10 ^ n consecutive integers beginning with 10 ^ n. • a(n) = Sum _{ j=0.. - 1 + 10 ^ n } abs(mu(10 ^ n + j)). •

► [A353099] 7,62,501,4012,32099,256794,2054353,16434824,131478591,1051828726,8414629805,67317038436,538536307483,4308290459858,34466323678857,275730589430848,2205844715446775,17646757723574190,141174061788593509,1129392494308748060 ⋆ a(1) = 7; for n>1, a(n) = 8 * a(n - 1) + 8 - n. • a(n) = 10 * a(n - 1) - 17 * a(n - 2) + 8 * a(n - 3). • a(n) = (6 * 8 ^ (n + 1) + 7 * n - 48) / 49. • a(n) = Sum _{ k=0..n - 1 } (8 - n + k) * 8 ^ k. •

► [A024089] 1,7,62,509,4092,32763,262138,2097145,16777208,134217719,1073741814,8589934581,68719476724,549755813875,4398046511090,35184372088817,281474976710640,2251799813685231,18014398509481966 ⋆ 8 ^ n - n. • a(n) = 10 * a(n - 1) - 17 * a(n - 2) + 8 * a(n - 3). - _ Vincenzo Librandi _ , Jun 17 2013 •

► [A060005] 1,1,7,62,657,7636,93846,1199892,15796439,212681976,2915017360,40536016030,570497115729,8110661588734,116307527411482,1680341334827514,24435006625667338,357366669614512168,5253165510907071170 ⋆ Number of ways of partitioning the integers { 1,2,..,4n } into two (unordered) sets such that the sums of parts are equal in both sets (parts in either set will add up to (4n) * (4n + 1) / 4). Number of solutions to { 1 +- 2 +- 3 +- ... +- 4n=0 } . • a(0)= 1 and a(n) is half the coefficient of q ^ 0 in product((q ^ (- k) + q ^ k), k=1..4 * n) for n >= 1. •

► [A161201] 1,7,63,231,3003,9009,51051,138567,2909907,7436429,37182145,91265265,882230895,2103781365,9917826435,23141595015,856239015555,1964313035685,8948537162565,20251952525805,182267572732245 ⋆ Numerators in expansion of (1 - x) ^ (- 7 / 2) • a(n) = numer(((15 + 46 * n + 36 * n ^ 2 + 8 * n ^ 3) / 15) * binomial(2 * n,n) / (4 ^ n)) •

► [A007291] 7,63,254,710,1605,3157,5628,9324,14595,21835,31482,44018,59969,79905,104440,134232,169983,212439,262390,320670,388157,465773,554484,655300,769275 ⋆ Series expansion for rectilinear polymers on square lattice. • a(n)=n(n - 1)(11n ^ 2 - 13n + 3) / 6 - _ T. D. Noe _ , Feb 09 2007 • a(2)=7, a(3)=63, a(4)=254, a(5)=710, a(6)=1605, a(n)=5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Harvey P. Dale _ , Oct 17 2012 •

► [A055405] 1,7,63,337,1319,3819,9763,21374,43774,81586,145138,243345,394696,612274,928616,1363401,1967428,2762729,3825273,5197436,6974412,9198648,12019669,15500750,19827441 ⋆ Number of points in N ^ 6 of norm <= n. • a(n) = [x ^ (n ^ 2)] (1 + theta _ 3(x)) ^ 6 / (64 * (1 - x)), where theta _ 3() is the Jacobi theta function. - _ Ilya Gutkovskiy _ , Apr 15 2018 •

► [A123009] 1,7,63,469,4025,31031,259287,2039093,16783249,133482055,1089343311,8719307317,70816436873,568878932279,4607763271335,37090594224341,299961588744097,2417362294480903,19532842437422559,157516437304409365 ⋆ Expansion of x * (1 + 5 * x) / (1 - 2 * x - 49 * x ^ 2). • a(n) = 2 * a(n - 1) + 49 * a(n - 2) for n>2. • a(n) = (7 * i) ^ (n - 2) * (5 * ChebyshevU(n - 2, - i / 7) + 7 * i * ChebyshevU(n - 1, - i / 7)). - _ G. C. Greubel _ , Jul 13 2021 •

► [A320073] 1,7,63,504,4095,32697,262143,2096640,16777152,134213625,1073741823,8589901320,68719476735,549755551737,4398046506945,35184369991680,281474976710655,2251799796875328,18014398509481983,144115187941637640,1152921504606584769 ⋆ Number of length n primitive (=aperiodic or period n) 8 - ary words which are earlier in lexicographic order than any other word derived by cyclic shifts of the alphabet. • a(n) = Sum _{ d|n } 8 ^ (d - 1) * mu(n / d). • a(n) = 8 ^ (n - 1) - Sum _{ d<n,d|n } a(d). •

► [A024088] 0,7,63,511,4095,32767,262143,2097151,16777215,134217727,1073741823,8589934591,68719476735,549755813887,4398046511103,35184372088831,281474976710655,2251799813685247,18014398509481983 ⋆ a(n) = 8 ^ n - 1. • a(n) = 8 * a(n - 1) + 7 for n>0, a(0)=0. - _ Vincenzo Librandi _ , Aug 03 2010 • a(n) = Sum _{ i=1..n } 7 ^ i * binomial(n,n - i) for n>0, a(0)=0. - _ Bruno Berselli _ , Nov 11 2015 •

► [A291034] 7,63,560,4977,44233,393120,3493847,31051503,275969680,2452675617,21798110873,193730322240,1721774789287,15302242781343,135998410242800,1208683449403857,10742152634391913,95470690260123360,848494059706718327,7540975847100341583 ⋆ p - INVERT of the positive integers, where p(S) = 1 - 7 * S. • a(n) = 9 * a(n - 1) - a(n - 2). •

► [A155132] 1,7,63,560,4984,44352,394688,3512320,31256064,278147072,2475225088,22026977280,196017618944,1744356769792,15522995109888,138138815037440,1229294481178624,10939466369728512,97350086807257088 ⋆ a(n) = 8 * a(n - 1) + 8 * a(n - 2), n > 2, a(0)=1, a(1)=7, a(2)=63. • a(n) = (35 / 24) * sqrt(6) * ((4 + 2 * sqrt(6)) ^ (n - 1) - (4 - 2 * sqrt(6)) ^ (n - 1)) + (7 / 2) * ((4 + 2 * sqrt(6)) ^ (n - 1) + (4 - 2 * sqrt(6)) ^ (n - 1)) + (1 / 8) * (binomial(2 * n,n) mod 2), with n >= 0. - _ Paolo P. Lava _ , Jan 26 2009 • a(n) = (1 / 8) * [n=0] - 7 * (2 * sqrt(2) * i) ^ (n - 2) * ChebyshevU(n, - sqrt(2) * I). - _ G. C. Greubel _ , Mar 24 2021 •

► [A270472] 1,7,63,567,5103,45927,413343,3720087,33480783,301327047,2711943423,24407490807,219667417263,1977006755367,17793060798303,160137547184727,1441237924662543,12971141321962887,116740271897665983,1050662447078993847,9455962023710944623 ⋆ Expansion of (1 - 2 * x) / (1 - 9 * x). • a(n) = 9 * a(n - 1) for n>1. • a(n) = 7 * 9 ^ (n - 1) for n>0. •

► [A159617] 1,7,64,560,4936,43456,382656,3369408,29668864,261244928,2300355072,20255449088,178356473856,1570492542976,13828748541952,121767076888576,1072202663100416,9441127931576320,83132508142305280,732011467286249472 ⋆ G.f.: (1 - x) / (1 - 8 * x - 8 * x ^ 2 + 8 * x ^ 3). • a(n) = 8 * a(n - 1) + 8 * a(n - 2) - 8 * a(n - 3) for n>2. - _ Colin Barker _ , Jul 05 2020 •

► [A098307] 0,1,7,64,567,5041,44800,398161,3538647,31449664,279508327,2484125281,22077619200,196214447521,1743852408487,15498457228864,137742262651287,1224181906632721,10879894897043200,96694872166756081 ⋆ Unsigned member r= - 7 of the family of Chebyshev sequences S _ r(n) defined in A092184. • a(n)= 9 * a(n - 1) - a(n - 2) + 2 * (- 1) ^ (n + 1), n>=2, a(0)=0, a(1)=1. • a(n)= 8 * a(n - 1) + 8 * a(n - 2) - a(n - 3), n>=3, a(0)=0, a(1)=1, a(2)=7. •

► [A055995] 1,7,64,576,5184,46656,419904,3779136,34012224,306110016,2754990144,24794911296,223154201664,2008387814976,18075490334784,162679413013056,1464114717117504,13177032454057536,118593292086517824 ⋆ a(n) = 64 * 9 ^ (n - 2), a(0)=1, a(1)=7. • a(n) = 9a(n - 1) + ((- 1) ^ n) * C(2, 2 - n). •

► [A349333] 1,1,7,64,678,7836,95838,1219527,15979551,214151601,2921712145,40444378948,566634504256,8019501351103,114484746457075,1646614155398872,23837794992712680,347081039681365623,5079306905986689309,74670702678690897079,1102218694940440851877 ⋆ G.f. A(x) satisfies A(x) = 1 + x * A(x) ^ 6 / (1 - x). • a(n) = Sum _{ k=0..n } binomial(n - 1,k - 1) * binomial(6 * k,k) / (5 * k + 1). •

► [A371780] 1,7,66,681,7337,81081,911153,10361554,118881714,1373402934,15954079557,186165866937,2180501226751,25620628577083,301858589475117,3564841627421691,42186363329210473,500142626996777355,5939062937833796486,70626949319708756435 ⋆ a(n) = Sum _{ k=0..floor(n / 3) } binomial(5 * n + 2,n - 3 * k). • a(n) = [x ^ n] 1 / (((1 - x) ^ 3 - x ^ 3) * (1 - x) ^ (4 * n)). •

► [A065097] 1,1,7,66,715,8398,104006,1337220,17678835,238819350,3282060210,45741281820,644952073662,9183676536076,131873975875180,1907493251046152,27767032438524099,406472021074865382,5979899192930226746,88366931393503350700,1311063521138246054410 ⋆ a(n) = ((2n + 1) + (2n - 1) - 1)! / ((2n + 1)! * (2n - 1)!). • a(n) = binomial(4 * n - 1, 2 * n - 1) / (2 * n + 1). • a(n) = C(2n) / 2 where C(n) is the Catalan number A000108. - _ David Callan _ , Jun 01 2006 • a(n) = hypergeometric([1 - 2 * n, - 2 * n],[2],1) / 2. - _ Peter Luschny _ , Sep 22 2014 •

► [A139783] 1,7,67,127,613,925,1495,1765,2209,2815,3403,5965,6661,8827,9115,15229,16387,18145,19153,21925,23563,24637,27031,27199,28987 ⋆ Quadruple lucky numbers (lower terms). Numbers n such that n, n + 2, n + 6, n + 8 are all Lucky numbers. • a(n) = { k such that k is in A000959 and k + 2 is in A000959 and k + 6 is in A000959 and k + 8 is in A000959 } = { k such that k is in A031158 and k + 6 is in A031158 } . •

► [A253175] 1,7,67,661,6541,64747,640927,6344521,62804281,621698287,6154178587,60920087581,603046697221,5969546884627,59092422149047,584954674605845,579045432390936 1,573195885644877 67,567405431320968307,5616734724645195301,55599941815130984701 ⋆ Indices of hexagonal numbers (A000384) which are also centered hexagonal numbers (A003215). • a(n) = 11 * a(n - 1) - 11 * a(n - 2) + a(n - 3). • a(n) = (2 + (5 - 2 * sqrt(6)) ^ n * (3 + sqrt(6)) - (- 3 + sqrt(6)) * (5 + 2 * sqrt(6)) ^ n) / 8. - _ Colin Barker _ , Mar 05 2016 •

► [A067275] 0,1,7,67,667,6667,66667,666667,6666667,66666667,666666667,6666666667,66666666667,666666666667,6666666666667,66666666666667,666666666666667,6666666666666667,66666666666666667 ⋆ Number of Fibonacci numbers A000045(k), k <= 10 ^ n, which end in 4. • a(n) = ceiling((2 / 30) * 10 ^ n) - _ Benoit Cloitre _ , Aug 27 2002 • a(n) = 10 ^ n / 15 + 1 / 3 for n>0. (End) • a(n) = 10 * a(n - 1) - 3 for n>1. - _ Vincenzo Librandi _ , Dec 07 2010 [Immediate consequence of the previous formula, _ R. J. Mathar _] •

► [A340973] 1,7,67,721,8179,95557,1137709,13725439,167204947,2052215893,25338173497,314356676179,3915672171229,48938691421627,613404577267843,7707619156442401,97058716523798227,1224551690144551237 ⋆ Generating function Sum _{ n >= 0 } a(n) * x ^ n = 1 / sqrt((1 - x) * (1 - 13 * x)). • a(n) = Sum _{ k=0..n } 3 ^ k * binomial(n,k) * binomial(2 * k,k). • a(n) = [x ^ n] (1 + 7 * x + 9 * x ^ 2) ^ n. •

► [A199756] 7,67,727,7987,87847,966307,10629367,116923027,1286153287,14147686147,155624547607,1711870023667,18830570260327,207136272863587,2278499001499447,25063489016493907,275698379181432967,3032682170995762627 ⋆ a(n) = 6 * 11 ^ n + 1. • a(n) = 11 * a(n - 1) - 10. • a(n) = 12 * a(n - 1) - 11 * a(n - 2). •

► [A243675] 1,1,7,67,741,8909 ⋆ Number of hypoplactic classes of 3 - parking functions of length n. • a(n) = Sum _{ i=0..n } Sum _{ j=0..i } (- 2) ^ (n - i) * binomial(i,j) * binomial(3i + j, n) * binomial(n + 1,i) / (n + 1) (conjectured). - _ Michael D. Weiner _ , May 25 2017 •

► [A253386] 7,67,967,3967,93967,693967,7693967,87693967,687693967,1687693967,91687693967,991687693967,3991687693967 ⋆ Suffixes of 3991687693967 (left - truncatable prime). • a(n) = 3991687693967 mod 10 ^ n for 1 <= n <= 13. - _ Mikk Heidemaa _ , Oct 07 2017 •

► [A087567] 1,7,68,609,5555,50456,458737,4169823,37904764,344559985,3132110411,28471412592,258809985953,2352626740919,21385776919540,194400346514241,1767132187070947,16063531893267208,146020234807218449,1327348749622606095,12065825708695393196 ⋆ a(n) = (1 / 5) * Sum _{ k=0..n } binomial(n,k) * Fibonacci(k) * 5 ^ k. • a(n) = 7 * a(n - 1) + 19 * a(n - 2). • a(n) = - (7 / 50) * (7 / 2 - (5 / 2) * sqrt(5)) ^ n * sqrt(5) + (7 / 50) * sqrt(5) * (7 / 2 + (5 / 2) * sqrt(5)) ^ n + (1 / 2) * (7 / 2 - (5 / 2) * sqrt(5)) ^ n + (1 / 2) * (7 / 2 + (5 / 2) * sqrt(5)) ^ n, with n >= 0. - _ Paolo P. Lava _ , Jun 25 2008 •

► [A219330] 7,69,693,6932,69315,693147,6931472,69314718,693147181,6931471806,69314718056,693147180560,6931471805600,69314718055995,693147180559945,6931471805599453,69314718055994531,693147180559945310,693147180559945309 4,69314718055994530942 ⋆ Number of random selections (with replacement) needed from a normal population to assure a greater than one - half chance that the selected group contains the top 10th percentile individual, top 1st percentile individual, the 0.1 percentile, 0.01 percentile etc... • a(n) = ceiling((log(2)) / (log(10 ^ n / (10 ^ n - 1)))). •

► [A122010] 0,1,7,69,725,7679,81411,863197,9152557,97045551,1028984651,10910437661,115684573269,1226616283615,13005947679667,137903497048317,1462205981952029,15503931223058927,164389891941523323 ⋆ G.f. x ^ 2 * (1 - 5 * x) / (1 - 12 * x + 15 * x ^ 2 - 2 * x ^ 3). • a(n)= 12 * a(n - 1) - 15 * a(n - 2) + 2 * a(n - 3). •

► [A025757] 1,1,7,69,783,9597,123495,1643397,22413183,311466829,4392857431,62702224213,903886452975,13138698859677,192337495360071,2832859169364261,41946319269028191,624009420903043821 ⋆ 4th - order Vatalan numbers (generalization of Catalan numbers). • a(n) = Sum _{ m=1..n - 1 } (m / n * 4 ^ (n - m)) * Sum _{ k=1..n - m } binomial(n + k - 1,n - 1) * Sum _{ j=0..k } binomial(j,n - m - 3 * k + 2 * j) * 4 ^ (j - k) * binomial(k,j) * 3 ^ (- n + m + 3 * k - j) * 2 ^ (n - m - 3 * k + j) * (- 1) ^ (n - m - 3 * k + 2 * j) + 1. - _ Vladimir Kruchinin _ , Feb 08 2011 •

► [A217400] 7,70,71,72,73,74,75,76,77,78,79,700,701,702,703,704,705,706,707,708,709,710,711,712,713 ⋆ Numbers starting with 7. • a(n) = n + (62 * 10 ^ floor (log _ 10(9 * n - 8)) - 8) / 9. - _ Alan Michael Gómez Calderón _ , May 17 2023 •

► [A003363] 7,70,133,196,259,322,385,448,735,798,861,924,987,1050,1113,1463,1526,1589,1652,1715,1778,2191,2254,2317,2380 ⋆ Numbers that are the sum of 7 positive 6th powers. • a(n) == 0 (mod 7). - _ Joerg Arndt _ , Nov 08 2022 •

► [A015251] 1,7,70,610,5551,49777,448540,4035220,36321901,326882347,2941985410,26477735830,238300021051,2144698993717,19302294530680,173720640014440,1563485792415001,14071372034879887 ⋆ Gaussian binomial coefficient [n,2] for q = - 3. • a(n) = 10 * a(n - 1) - 9 * a(n - 2) + (- 1) ^ n * 3 ^ (n - 2), n >= 4. - _ Vincenzo Librandi _ , Mar 20 2011 • a(n) = 7 * a(n - 1) + 21 * a(n - 2) - 27 * a(n - 3), n >= 3. - _ Vincenzo Librandi _ , Mar 20 2011 • a(n) = (1 / 96) * (2 * (- 1) ^ n * 3 ^ n - 3 + 9 ^ n). - _ R. J. Mathar _ , Mar 21 2011 •

► [A299870] 7,70,693,6936,69363,693624,6936243,69362433,693624324,6936243243,69362432430,693624324303,6936243243024,69362432430242,693624324302427,6936243243024273,69362432430242733,693624324302427324,6936243243024273243,69362432430242732426,693624324302427324262,6936243243024273242622 ⋆ The sum of the first n terms of the sequence is the concatenation of the first n digits of the sequence, and a(1) = 7. • a(n) = c(n) - c(n - 1), where c(n) = concatenation of the first n digits, c(n) ~ 0.77 * 10 ^ n, a(n) ~ 0.69 * 10 ^ n. See A300000 for the proof. - _ M. F. Hasler _ , Feb 22 2018 •

► [A196662] 1,7,70,700,7000,70000,700000,7000000,70000000,700000000,7000000000,70000000000,700000000000,7000000000000,70000000000000,700000000000000,7000000000000000,70000000000000000,700000000000000000,7000000000000000000 ⋆ Expansion of (1 - 3x) / (1 - 10x). • a(0) = 1, a(n) = 7 * 10 ^ (n - 1) for n>0. •

► [A198966] 7,71,647,5831,52487,472391,4251527,38263751,344373767,3099363911,27894275207,251048476871,2259436291847,20334926626631,183014339639687,1647129056757191,14824161510814727,133417453597332551,1200757082375992967 ⋆ a(n) = 8 * 9 ^ n - 1. • a(n) = 9 * a(n - 1) + 8. a(n) = 10 * a(n - 1) - 9 * a(n - 2), n>1. •

► [A334135] 1,7,71,769,8449,93127,1027207,11332097,125019649,1379271559,15216755911,167878292737,1852111179521,20433349871431,225430197438727,2487050546734081,27438295728380929,302712011022644999,3339659377008916807,36844671993005504257,406487518942362537217 ⋆ Number of dimer tilings of a 2 * n x 4 Moebius strip. • a(n) ^ 2 = 4 ^ n * Resultant(U(2 * n,x), 1 + 2 * x ^ 2 + 1 / 2 * x ^ 4), where U(n,x) is a Chebyshev polynomial of the second kind and i = sqrt(- 1). • a(n) = 14 * a(n - 1) - 34 * a(n - 2) + 14 * a(n - 3) - a(n - 4) for n > 3. •

► [A052390] 1,7,71,956,15116,254397,4318511,72331966,1188180386,19152566087,303768582701,4755204310776,73675434833456,1132450098258577,17301032324486891,263098797953058386,3987051131522775326 ⋆ Number of 4 - element intersecting families (with not necessarily distinct sets) whose union is an n - element set. • a(n) = (15 ^ n - 6 * 11 ^ n + 12 * 9 ^ n - 8 ^ n - 10 * 7 ^ n + 15 * 6 ^ n - 24 * 5 ^ n + 19 * 4 ^ n + 5 * 3 ^ n - 11 * 2 ^ n + 6) / 4!. •

► [A373685] 1,1,1,7,73,301,1561,32131,306097,2062873,43102801,720515071,7245589561,136364378437,3259345980073,47903339552251,873735377165281,25383884535029041,515592396859327777,10003196649764818423,316630570292623967401,835922451308598587094 1 ⋆ Expansion of e.g.f. exp(x / (1 - x ^ 3) ^ 2) / (1 - x ^ 3). • a(n) = n! * Sum _{ k=0..floor(n / 3) } binomial(2 * n - 5 * k,k) / (n - 3 * k)!. • a(n) == 1 (mod 6). •

► [A117982] 1,7,73,511,3577,37303,262657,1838599,19173961,134217727,939524089,9797894071,68585258497,480096809479,5006723870281,35253225520639,246772578644473,2573485463006647,18014398643699713,126100790505897991 ⋆ Trisection of A117981. • a(n)=sum { k=0..3n, (- 1) ^ (3n - k) * L(C(3n,k) / 3) * 2 ^ k } where L(j / p) is the Legendre symbol of j and p. •

► [A050917] 1,7,73,649,5185,38881,279937,1959553,13436929,90699265,604661761,3990767617,26121388033,169789022209,1097098297345,7052774768641,45137758519297,287753210560513,1828079220031489,11577835060199425,73123168801259521,460675963447934977 ⋆ a(n) = n * 6 ^ n + 1. • a(0)=1, a(1)=7, a(2)=73, a(n)=13 * a(n - 1) - 48 * a(n - 2) + 36 * a(n - 3). - _ Harvey P. Dale _ , Feb 20 2013 •

► [A155614] 1,7,73,703,6481,58807,530713,4780783,43040161,387400807,3486725353,31380882463,282429005041,2541864234007,22876787671993,205891117745743,1853020145805121,16677181570526407,150094634909578633 ⋆ 9 ^ n - 3 ^ n + 1. • a(n) = 12 * a(n - 1) - 27 * a(n - 2) + 16 with a(0)=1, a(1)=7. - _ Vincenzo Librandi _ , Jul 21 2010 •

► [A099141] 1,7,73,847,10033,119287,1419193,16886527,200931553,2390878567,28449011113,338514191407,4027973401873,47928772841047,570303484727833,6786029465163487,80746825394092993,960804818888214727 ⋆ a(n) = 5 ^ n * T(n,7 / 5) where T is the Chebyshev polynomial of the first kind. • a(n) = 5 ^ n * T(n, 7 / 5) where T is the Chebyshev polynomial of the first kind; • a(n) = Sum _{ k=0..n } 6 ^ k * binomial(2n, 2k); • a(n) = (1 + sqrt(6)) ^ (2n) / 2 + (1 - sqrt(6)) ^ (2n) / 2. • a(0)=1, a(1)=7, a(n) = 14 * a(n - 1) - 25 * a(n - 2) for n > 1. - _ Philippe Deléham _ , Sep 08 2009 •

► [A157706] 7,75,385,1365,3850,9282,19950,39270,72105,125125,207207,329875,507780,759220,1106700,1577532,2204475,3026415,4089085,5445825,7158382,9297750,11945050,15192450,19144125 ⋆ The z ^ 2 coefficients of the polynomials in the GF1 denominators of A156921. • a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) • a(n) = 1 / 18 * n ^ 6 + 1 / 6 * n ^ 5 + 1 / 72 * n ^ 4 - 1 / 4 * n ^ 3 - 5 / 72 * n ^ 2 + 1 / 12 * n •

► [A180356] 0,7,76,747,4120,15655,46692,117691,262192,531495,1000060,1771627,2986056,4826887,7529620,11390715,16777312,24137671,34012332,47045995,64000120,85766247,113380036,148036027,191103120 ⋆ n ^ 6 + 6n • a(n) = + 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). G.f.: x * (- 7 - 27 * x - 362 * x ^ 2 - 242 * x ^ 3 - 87 * x ^ 4 + 5 * x ^ 5) / (x - 1) ^ 7. [From _ R. J. Mathar _ , Sep 24 2010] •

► [A139264] 7,77,147,217,287,357,427,497,567,637,707,777,847,917,987,1057,1127,1197,1267,1337,1407,1477,1547,1617,1687 ⋆ a(n) = 70 * n - 63. • a(n) = a(n - 1) + 70. • a(n) = 70 * n - 63, with n >= 1. - _ Paolo P. Lava _ , Sep 06 2010 •

► [A228414] 0,7,77,697,6497,55552,512100,4710641,42205969,341224891,2787791578,22971326749 ⋆ Count of the first 10 ^ n primes which do not contain the digit 2. • a(n) < 9 ^ n. - _ Charles R Greathouse IV _ , May 21 2014 •

► [A191465] 0,7,77,721,6545,59017,531377,4782841,43046465,387419977,3486783377,31381057561,282429532385,2541865820137,22876792438577,205891132061881,1853020188786305,16677181699535497,150094635296736977,1350851717672467801 ⋆ 9 ^ n - 2 ^ n. • a(n) = 11 * a(n - 1) - 18 * a(n - 2). •

► [A229281] 0,7,77,735,6517,55223,453789,3647119,28824005,224827239,1735205101,13276336703,100843663893,761270796055,5716451614013,42728053589487,318086621166181,2359538070441671,17447288549040525,128644674234925471,946108300385970869 ⋆ Number of ascending runs in { 1,...,7 }^ n. • a(n) = 7 ^ (n - 1) * (4 * n + 3) for n>0, a(0) = 0. •

► [A002281] 0,7,77,777,7777,77777,777777,7777777,77777777,777777777,7777777777,77777777777,777777777777,7777777777777,77777777777777,777777777777777,7777777777777777,77777777777777777,777777777777777777 ⋆ a(n) = 7(10 ^ n - 1) / 9. • a(n) = 10 * a(n - 1) + 7 with n>0, a(0)=0. - _ Paolo P. Lava _ , Jan 23 2009 • a(n) = a(n - 1) + 7 * 10 ^ (n - 1) with n>0, a(0)=0; also: a(n) = 11 * a(n - 1) - 10 * a(n - 2) with n>1, a(0)=0, a(1)=7. - _ Vincenzo Librandi _ , Jul 22 2010 •

► [A210406] 7,78,864,9576,106128,1176192,13035456,144468864,1601114112,17744767488,196661044224,2179547652096,24155409051648,267708662341632,2966951532036096,32882019268460544,364423611069038592 ⋆ Number of (n + 1) X 2 0..3 arrays with every 2 X 2 subblock having three or four distinct values, and new values 0..3 introduced in row major order. • a(n) = ((5 - sqrt(37)) ^ n * (- 11 + 2 * sqrt(37)) + (5 + sqrt(37)) ^ n * (11 + 2 * sqrt(37))) / (6 * sqrt(37)). •

► [A133272] 1,7,78,924,11005,131131,1562562,18619608,221872729,2643853135,31504364886,375408525492,4473397941013,53305366766659,635191003258890,7568986672340016,90192649064821297,1074742802105515543 ⋆ Indices of centered heptagonal numbers (A069099) which are also heptagonal numbers (A000566). • a(n + 2) = 12 * a(n + 1) - a(n) - 5. • a(n + 1) = 6 * a(n) - 2.5 + 0.5 * (140 * a(n) ^ 2 - 140 * a(n) + 49) ^ 0.5. • a(n) = (1 / 2) + (1 / 4) * [6 - sqrt(35)] ^ (n - 1) + (1 / 20) * sqrt(35) * [6 + sqrt(35)] ^ (n - 1) + (1 / 4) * [6 + sqrt(35)] ^ (n - 1) - (1 / 20) * [6 - sqrt(35)] ^ (n - 1) * sqrt(35), with n>=1 - _ Paolo P. Lava _ , Jul 14 2008 • a(n) = 13 * a(n - 1) - 13 * a(n - 2) + a(n - 3). - _ Colin Barker _ , Jan 06 2015 •

► [A079590] 1,7,78,969,12650,169911,2324784,32224114,450978066,6358402050,90177170226,1285063345176,18385569737808,263926640438545,3799541229226200,54834293825867556,793067310934426018 ⋆ C(6n + 1,n). • a(n) is asymptotic to c * sqrt(n) * (46656 / 3125) ^ n with c= 0.5243... [c = 2 * 3 ^ (3 / 2) / (5 ^ (3 / 2) * sqrt(Pi)) = 0.52442324668419795386... - _ Vaclav Kotesovec _ , Feb 14 2019] •

► [A079911] 1,7,79,478,2108,7364,21652,55532,127604,268108,523244,960212,1672972,2788724,4475108,6948124,10480772,15412412,22158844,31223108,43207004,58823332,78908852,104437964,136537108 ⋆ Solution to the Dancing School Problem with 6 girls and n + 6 boys: f(6,n). ● a(0)=1, a(2)=7, a(3)=79, a(n)=n ^ 6 - 9 * n ^ 5 + 60 * n ^ 4 - 225 * n ^ 3 + 555 * n ^ 3 - 774 * n + 484. ●

► [A198973] 7,79,799,7999,79999,799999,7999999,79999999,799999999,7999999999,79999999999,799999999999,7999999999999,79999999999999,799999999999999,7999999999999999,79999999999999999,799999999999999999 ⋆ 8 * 10 ^ n - 1. ● a(n) = 10 * a(n - 1) + 9. ● a(n) = 11 * a(n - 1) - 10 * a(n - 2), n>1. ●

► [A127859] 7,79,943,11311,135727,1628719,19544623,234535471,2814425647,33773107759,405277293103,4863327517231,58359930206767,700319162481199,8403829949774383,100845959397292591,1210151512767511087 ⋆ a(n) = r(A127858(n)), where r if the cyclic replacement map of the digits d of n in base 12 defined by d - >d + 1 if d<11 and d - >0 if d=11. ● a(n) = 6 * (12 ^ n - 1) / 11 + 1. - _ Max Alekseyev _ , Jul 27 2023 ●

► [A083226] 1,7,81,567,6561,45927,531441,3720087,43046721,301327047,3486784401,24407490807,282429536481,1977006755367,22876792454961,160137547184727,1853020188851841,12971141321962887,150094635296999121 ⋆ a(n) = (8 * 9 ^ n + (- 9) ^ n) / 9. ● a(n) = (8 * 9 ^ n + (- 9) ^ n) / 9. ● a(n) = 81 * a(n - 2); a(0)=1, a(1)=7. - _ Harvey P. Dale _ , May 24 2012 ●

► [A053128] 7,84,462,1716,5005,12376,27132,54264,100947,177100,296010,475020,736281,1107568,1623160,2324784,3262623,4496388,6096454,8145060,10737573,13983816,18009460,22957480,28989675 ⋆ Binomial coefficients C(2 * n - 5,6). ● a(n) = binomial(2 * n - 5, 6) if n >= 6 else 0. ● a(n) = (n - 5) * (n - 4) * (n - 3) * (2 * n - 9) * (2 * n - 7) * (2 * n - 5) / 90. - _ Wesley Ivan Hurt _ , Mar 25 2020 ●

► [A027819] 7,84,504,2100,6930,19404,48048,108108,225225,440440,816816,1447992,2469012,4069800,6511680,10147368,15444891,23015916,33649000,48348300,68378310,95315220,131105520,178132500,239291325 ⋆ a(n) = 7 * (n + 1) * binomial(n + 6,7) / 2. ● a(n) = C(n + 1,2) * C(n + 6,6). - _ Zerinvary Lajos _ , May 26 2005 ●

► [A269895] 0,7,84,756,6048,45360,326592,2286144,15676416,105815808,705438720,4655895552,30474952704,198087192576,1279948013568,8228237230080,52660718272512,335712078987264,2132759090036736,13507474236899328 ⋆ Number of n X 1 0..6 arrays with some element plus some horizontally or vertically adjacent neighbor totalling six exactly once. ● a(n) = 7 * 6 ^ (n - 2) * (n - 1). ●

► [A099674] 7,84,861,8638,86415,864192,8641969,86419746,864197523,8641975300,86419753077,864197530854,8641975308631,86419753086408,864197530864185,8641975308641962,86419753086419739,864197530864197516 ⋆ Partial sums of repdigits of A002281. ● a(n) = (7 / 81) * (10 ^ (n + 1) - 9 * n - 10). - R. Piyo (nagoya314(AT)yahoo.com), Dec 10 2004 ●

► [A058795] 7,85,301,751,1555,2857,4825,7651,11551,16765,23557,32215,43051,56401,72625,92107,115255,142501,174301,211135,253507,301945,357001,419251,489295 ⋆ Row 4 of A007754. ● a(n) = n ^ 4 + 10 * n ^ 3 + 32 * n ^ 2 + 35 * n + 7. ●

► [A155459] 1,1,7,85,847,8989,93415,977509,10205503,106628845,1113800023,11635238581,121543470895,1269672885181,13263275148487,138551149905925,1447335954687007,15119193079422349,157938445924688695 ⋆ a(n)=7 * a(n - 1) + 36 * a(n - 2), n>2 ; a(0)=1, a(1)=1, a(2)=7 . ● a(n)=(7 / 386) * sqrt(193) *{ [(7 / 2) + (1 / 2) * sqrt(193)] ^ n - [(7 / 2) - (1 / 2) * sqrt(193)] ^ n }+ (1 / 2) *{ [(7 / 2) - (1 / 2) * sqrt(193)] ^ n + [(7 / 2) + (1 / 2) * sqrt(193)] ^ n }+ [C(2 * n,n) mod 2], with n>=0 [From _ Paolo P. Lava _ , Jan 26 2009] ●

► [A155631] 1,7,85,937,9745,98977,995905,9983617,99934465,999737857,9998951425,99995805697,999983222785,9999932891137,99999731564545,999999892625817 7,999995705032705,9999998280130817,999999931280523265 ⋆ 10 ^ n - 4 ^ n + 1 ^ n ● a(n)=14 * a(n - 1) - 40 * a(n - 2) + 27 with a(0)=1, a(1)=7 - _ Vincenzo Librandi _ , Jul 21 2010 ●

► [A064089] 1,1,7,85,1279,21517,387607,7312789,142648495,2853691357,58226571271,1207062556261,25351452769567,538285926177325,11535690316148215,249189167966657845,5420206822556721295 ⋆ Generalized Catalan numbers C(6; n). ● a(n) = Sum _{ m=0..n - 1 } (n - m) * binomial(n - 1 + m, m) * (6 ^ m) / n. ●

► [A254473] 7,87,335,847,1719,3047,4927,7455,10727,14839,19887,25967,33175,41607,51359,62527,75207,89495,105487,123279,142967,164647,188415,214367,242599 ⋆ 24 - hedral numbers: a(n) = (2 * n + 1) * (8 * n ^ 2 + 14 * n + 7). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ●

► [A173812] 7,87,887,8887,88887,888887,8888887,88888887,888888887,8888888887,88888888887,888888888887,8888888888887,88888888888887,888888888888887,8888888888888887,88888888888888887,888888888888888887 ⋆ (8 * 10 ^ n - 17) / 9 for n>0. ● a(n) = 10 * a(n - 1) + 17 with n>0, a(0)= - 1. ● a(n) = 11 * a(n - 1) - 10 * a(n - 2). - _ Vincenzo Librandi _ , Jul 05 2012 ●

► [A199027] 7,87,967,10647,117127,1288407,14172487,155897367,1714871047,18863581527,207499396807,2282493364887,25107427013767,276181697151447,3037998668665927,33417985355325207,367597838908577287,4043576227994350167 ⋆ 8 * 11 ^ n - 1. ● a(n) = 11 * a(n - 1) + 10. ● a(n) = 12 * a(n - 1) - 11 * a(n - 2), n>1. ●

► [A155465] 7,88,555,3276,19135,111568,650307,3790308,22091575,128759176,750463515,4374021948,25493668207,148587987328,866034255795,5047617547476,29419671029095,171470408627128,999402780733707,5824946275775148 ⋆ a(n) = 7 * a(n - 1) - 7 * a(n - 2) + a(n - 3) for n > 2; a(0) = 7, a(1) = 88, a(2) = 555. ● a(n) = 6 * a(n - 1) - a(n - 2) + 34 for n > 1; a(0) = 7, a(1) = 88. ● a(n) = ((31 + 25 * sqrt(2)) * (3 + 2 * sqrt(2)) ^ n + (31 - 25 * sqrt(2)) * (3 - 2 * sqrt(2)) ^ n - 34) / 4. ●

► [A053302] 7,89,887,9551,31397,492113,4652353,47326693,436273009,4302407359,42652618343,738832927927,7177162611713,90874329411493,218209405436543,1693182318746371 ⋆ Largest n - digit prime at the start of a record in the RECORDS transform of the prime gaps. ● a(n) = { max p: p in A002386; p< 10 ^ n } . - _ R. J. Mathar _ , Feb 01 2008 ●

► [A107109] 7,89,983,9941,99929,999931,9999929,99999827,999999739,9999999769,99999999763,999999999697,9999999999443,99999999999503,999999999999353,9999999999999431,99999999999999251,999999999999999463,9999999999999999343,99999999999999999199 ⋆ n - th largest n - digit prime. ● a(n) = prime[pi[10 ^ n] - n + 1] ●

► [A062747] 1,7,89,1447,26713,532391,11165785,242851751,5427716185,123901026215,2876525797465,67710590623655,1612262780199001,38764533106581415,939825790848884825,22950405085586497447 ⋆ Row sums of (unsigned) staircase array A062746. ● a(n)=N(3; k, x= - 1), with the polynomials N(3; k, x) from the staircase array A062746. ●

► [A085026] 7,91,247,475,775,1147,1591,2107,2695,3355,4087,4891,5767,6715,7735,8827,9991,11227,12535,13915,15367,16891,18487,20155,21895 ⋆ a(n) = (6 * n + 1) * (6 * n + 7). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). G.f.: (7 + 70 * x - 5 * x ^ 2) / (1 - x) ^ 3. - _ Colin Barker _ , Oct 28 2012 ●

► [A181475] 1,7,91,397,1141,2611,5167,9241,15337,24031,35971,51877,72541,98827,131671,172081,221137,279991,349867,432061,527941,638947,766591,912457,1078201 ⋆ a(n) = 3 * n ^ 4 + 6 * n ^ 3 - 3 * n + 1. ● a(n) = a(- n - 1) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) + 6 * 12. ● a(n) = 7 * (3 * n ^ 2 + 3 * n - 1) * sum(k ^ 6, k=1..n) / (5 * sum(k ^ 4, k=1..n)), n>0. - _ Gary Detlefs _ , Oct 18 2011 ●

► [A249640] 0,0,7,91,679,5005,35287,248731,1742839,12211675,85493527,598537051,4189841719,29329466845,205306842727,1437151921051,10060067469319,70420500427165,492943531132087,3450604914906331,24154234601326039,169079643588071965 ⋆ Number of strings of length n over a 7 - letter alphabet that begin with a nontrivial palindrome. ● a(0) = 0; a(1) = 0; a(n + 1) = 7 * a(n) + 7 ^ ceiling((n + 1) / 2) - a(ceiling((n + 1) / 2)). ●

► [A248226] 0,7,91,973,9919,99757,999271,9997813,99993439,999980317,9999940951,99999822853,999999468559,9999998405677,99999995217031,999999985651093,9999999956953279,99999999870859837,999999999612579511,9999999998837738533,9999999999613215599 ⋆ a(n) = 10 ^ n - 3 ^ n. ● a(n) = 13 * a(n - 1) - 30 * a(n - 2). ●

► [A027955] 1,7,92,591,2683,9955,32551,98086,280271,773906,2091266,5576298,14750858,38839257,101995694,267462041,700813797,1835540197,4806538617,12585017712,32949712457,86265626164,225849041524,591283811748,1548005222980 ⋆ a(n) = T(2n + 1, n + 3), T given by A027948. ● a(n) = Sum _{ j=0..n - 2 } binomial(2 * n - j + 1, j + 6) for n >= 3. ● a(n) = Fibonacci(2 * n + 8) - (630 + 607 * n + 295 * n ^ 2 + 90 * n ^ 3 + 20 * n ^ 4 + 8 * n ^ 5) / 30 for n >= 3. (End) ●

► [A132114] 1,7,94,856,2995,56902,413893,1527982,47859601,702710533,1373798194,8537856169,38139946795,565726979662,4367588800693,15840612137503,125269482488011,770614773688678,6470285143034935,54544210069919254 ⋆ Multiply previous term by 7 and reverse. ● a(n) = reverse(7 * a(n - 1)) with a(1) = 1. ●

► [A015225] 1,7,95,161,525,715,1547,1925,3417,4047,6391,7337,10725,12051,16675,18445,24497,26775,34447,37297,46781,50267,61755,65941,79625 ⋆ Odd hexagonal pyramidal numbers. ● a(n) = a(n - 1) + 3 * a(n - 2) - 3 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) + a(n - 6) - a(n - 7). ● a(n) = 3 * a(n - 2) - 3 * a(n - 4) + a(n - 6) + 256. ● a(n) = (8 * n - 2 * (- 1) ^ n - 7) * (1 + (- 1) ^ n - 4 * n) * (3 + (- 1) ^ n - 4 * n) / 24. ●

► [A222834] 7,96,216,600,1536,4056,10584,27744,72600,190104,497664,1302936,3411096,8930400,23380056,61209816,160249344,419538264,1098365400,2875557984,7528308504,19709367576,51599794176,135090015000,353670250776 ⋆ Number of n X 4 0..3 arrays with no element equal to another at a city block distance of exactly two, and new values 0..3 introduced in row major order. ● a(n) = (3 / 5) * 2 ^ (2 - n) * ((- 1) ^ n * 2 ^ (2 + n) + (3 - sqrt(5)) ^ (1 + n) + (3 + sqrt(5)) ^ (1 + n)) for n>1. ●

► [A219088] 0,7,97,525,1845,5032,11602,23730,44370,77378,127628,201135,305175,448403,640973,894660,1222981,1641308,2166998,2819506,3620506,4594013,5766503,7167031,8827351 ⋆ Floor((n + 1 / 2) ^ 5). ● a(n) = [(n + 1 / 2) ^ 5]. ●

► [A173833] 7,97,997,9997,99997,999997,9999997,99999997,999999997,9999999997,99999999997,999999999997,9999999999997,99999999999997,999999999999997,9999999999999997,99999999999999997 ⋆ 10 ^ n - 3. ● a(n) = 10 * a(n - 1) + 27 with n>1, a(1)=7. ●

► [A155644] 1,7,97,1207,14017,157927,1755937,19409047,213968257,2355994567,25927658977,285262842487,3138184236097,34521491440807,379743730067617,4177217651837527,45949577275681537,505446265559840647 ⋆ 11 ^ n - 5 ^ n + 1. ● a(n)=16 * a(n - 1) - 55 * a(n - 2) + 40 with a(0)=1, a(1)=7 - _ Vincenzo Librandi _ , Jul 21 2010 ● a(0)=1, a(1)=7, a(2)=97, a(n)=17 * a(n - 1) - 71 * a(n - 2) + 55 * a(n - 3) [From Harvey P. Dale, Jul 11 2011] ●

► [A036293] 0,7,98,1029,9604,84035,705894,5764801,46118408,363182463,2824752490,21750594173,166095446412,1259557135291,9495123019886,71213422649145,531726889113616,3954718737782519,29311444762388082,216579008522089717 ⋆ a(n) = n * 7 ^ n. ● a(0)=0, a(1)=7, a(n) = 14 * a(n - 1) - 49 * a(n - 2). - _ Harvey P. Dale _ , Aug 08 2011 ●

► [A133679] 1,7,98,1078,13034,151606,1791146,21027958,247499882,2910064822,34230447146,402576760054,4734942360554,55688895086902,654979037799338,7703431389461878,90602845842996074,1065612078710837686,12533043918183643946 ⋆ a(n) = 7 * a(n - 1) + 56 * a(n - 2) for n>=3, a(0)=1, a(1)=7, a(2)=98. ● a(n) = (7 / 26) * sqrt(273) * (7 / 2 + (1 / 2) * sqrt(273)) ^ (n - 1) - (7 / 26) * sqrt(273) * (7 / 2 - (1 / 2) * sqrt(273)) ^ (n - 1) + (7 / 2) * (7 / 2 - (1 / 2) * sqrt(273)) ^ (n - 1) + (7 / 2) * (7 / 2 + (1 / 2) * sqrt(273)) ^ (n - 1) + (1 / 8) * (binomial(2 * n,n) mod 2), with n>=0. [_ Paolo P. Lava _ , Aug 28 2008] ●

► [A238472] 7,99,476,1463,3510,7192,13209,22386,35673,54145,79002,111569,153296,205758,270655,349812,445179,558831,692968,849915,1032122,1242164,1482741,1756678,2066925 ⋆ a(n) = binomial(5 * n + 7, 4) / 5 for n >= 0. ● a(n) = binomial(5 * n + 7, 4) / 5 for n >= 0. ●

► [A041087] 1,7,99,700,9899,69993,989801,6998600,98970201,699790007,9896030299,69972002100,989504059699,6996500419993,98940509939601,699580069997200,9893061489900401,69951010499300007,989207208480100499,6994401469860003

500,98910827786520149499 ⋆ Denominators of continued fraction convergents t o sqrt(51). ● a(n) = 100 * a(n - 2) - a(n - 4). - _ Vincenzo Librandi _ , Dec 11 2013 ●

▶ [A297151] 0,7,100,1128,11552,112160,1052544,9646336,86877184,772010496,67 87635200,59163619328,512002867200,4404129513472,37687664508928,321065313 239040,2724508666953728,23040146455789568,194245982204461056,16331624284 77865984,136973534731278745 60 ⋆ a(n) = Sum _{ i=0..n } Sum _{ j=0..n } S um _{ k=0..n } binomial(n,i) * binomial(n,j) * binomial(n,k) * max(i,j,k). ● a(n) = n * 2 ^ (3 * n - 1) + 3 * n * 2 ^ (n - 2) * binomial(2 * n, n). ●

▶ [A267234] 7,103,564,1980,5375,12327,25088,46704,81135,133375,209572,31714 8,464919,663215,924000,1260992,1689783,2227959,2895220,3713500,4707087,590 2743,7329824,9020400,11009375 ⋆ Number of length - 5 0..n arrays with no follo wing elements greater than or equal to the first repeated value. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n >6. ●

▶ [A139742] 0,7,105,1267,14385,160027,1767465,19470787,214293345,235768554 7,25936376025,285307476307,3138411599505,34522645035067,379749565147785,4 177247095673827,45949725568604865,505447011319424587,555991724477275474 5,61159090173536639347 ⋆ a(n) = 11 ^ n - 4 ^ n. ● a(n) = 15 * a(n - 1) - 44 * a (n - 2). - _ Vincenzo Librandi _ , Jun 02 2011 ●

▶ [A067420] 1,7,105,1575,23625,354375,5315625,79734375,1196015625,17940234 375,269103515625,4036552734375,60548291015625,908224365234375,1362336547 8515625,20435048217773437 5,3065257232666015625 ⋆ Fifth column of triangle A 067417. ● a(n) = 7 * (3 * 5) ^ (n - 1), n >= 1, a(0)=1. ●

▶ [A112463] 7,111,930,5480,25500,99756,341088,1046520,2936070,7638950,1863 1932,42969336,94348300,198354300,401166000,783610920,1483311285,272881372 5,4891144350,8560278000,14656684680,24591569640,40493836800,65527390800,1 04329399500 ⋆ Absolute value of coefficient of term [x ^ (n - 7)] in characteristi c polynomial of maximum matrix A of size n X n, where n >= 7. Maximum ma trix A(i,j) is MAX(i,j), where indices i and j run from 1 to n. ● a(n) = ((13 * n + 7) / 14!) * Product _{ i= - 6..6 } (n + i). ●

▶ [A094219] 0,0,0,0,7,112,1092,8400,56100,341088,1939938,10498488,54679625,2 76276000,1362040680,6580248480,31256180280,146350008000,676868787000,3097 351569312,14042319855102,63144549413792,281895309883000 ⋆ Number of per mutations of length n with exactly 3 occurrences of the pattern 2 - 13. ● a(n) = (1 / 3) * binomial(n + 2,2) * binomial(2 * n,n - 5). ●

▶ [A212702] 7,112,1344,14336,143360,1376256,12845056,117440512,1056964608,9 395240960,82678120448,721554505728,6253472382976,53876069761024,46179488 3665920,3940649673949184,33495522228568064,283726776524341248,2395915001 761103872,20176126330619822080 ⋆ Main transitions in systems of n particles w ith spin 7 / 2. ● a(n) = n * (b - 1) * b ^ (n - 1). For this sequence, set b=8. ● a (n) = 16 * a(n - 1) - 64 * a(n - 2). - _ Colin Barker _ , Jun 16 2015 ●

▶ [A152927] 7,113,1815,29153,468263,7521361,120810039,1940481985,311685217 99,500636830769 ⋆ Number of sets (in the Hausdorff metric geometry) at each l ocation between two sets defining a polygonal configuration consisting of k 4 - g onal polygonal components chained with string components of length 1 as k vari es. ● a(n) = 16 * a(n - 1) + a(n - 2) for n>2. ●

▶ [A127877] 7,115,297,1237,2171,5527,8221,16441,22335,38731,49697,78445,9678 7,142927,171381,240817,282551,382051,440665,577861,657387,840775,945677,118 4617,1319791 ⋆ Integers of the form (x ^ 4) / 24 + (x ^ 3) / 6 + (x ^ 2) / 2 + x + 1 with x > 0. ● a(n) = (11 + 5 * (- 1) ^ n + 16 * (2 + (- 1) ^ n) * n + 18 * (3 + (- 1) ^ n) * n ^ 2 + 36 * (1 + (- 1) ^ n) * n ^ 3 + 54 * n ^ 4) / 16. ● a(n) = (27 * n ^ 4 + 36 * n ^ 3 + 36 * n ^ 2 + 24 * n + 8) / 8 for n even. ● a(n) = (27 * n ^ 4 + 18 * n ^ 2 + 8 * n + 3) / 8 for n odd. ● a(n) = a(n - 1) + 4 * a (n - 2) - 4 * a(n - 3) - 6 * a(n - 4) + 6 * a(n - 5) + 4 * a(n - 6) - 4 * a(n - 7) - a(n - 8) + a(n - 9) for n>9. ●

▶ [A057769] 1,7,119,527,1519,3479,6887,12319,20447,32039,47959,69167,96719,1 31767,175559,229439,294847,373319,466487,576079,703919,851927,1022119,1216 607,1437599 ⋆ a(n) = 4 * n ^ 4 + 8 * n ^ 3 - 4 * n - 1 = (2 * n ^ 2 - 1) * (2 * n ^ 2 + 4 * n + 1). ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5); a(0)= - 1, a(1)=7, a(2)=119, a(3)=527, a(4)=1519. - _ Harvey P. Dale _ , Oct 20 2011 ●

▶ [A007751] 0,7,120,1921,30624,488071,7778520,123968257,1975713600,3148744 9351,501823476024,7997688167041,127461187196640,2031381306979207,3237463 9724470680,515962854284551681,8223031028828356224 ⋆ Even bisection of A00 7750. ● a(n) = 16 * a(n - 1) - a(n - 2) + 8. ● a(n) = - 4 / 7 + (2 / 7) * ((8 - 3 * sqrt(7)) ^ n + (8 + 3 * sqrt(7)) ^ n + (sqrt(7) / 14) * ((8 + 3 * sqrt(7)) ^ n - (8 - 3 * sqrt(7)) ^ n), with n>=0 - _ Paolo P. Lava _ , Jun 19 2008 ● a(n) = (4 * ChebyshevU(n,8) - 11 * ChebyshevU(n - 1,8) - 4) / 7. - _ G. C. Greubel _ , Feb 10 2020 ●

▶ [A180583] 1,7,126,1484,18452,229698,2861964,35663964,444486280,553993179 6,69048910000,860620499760,10726732430288,133697577587000,16664018980583 52,20769976722986288,258876295158900832 ⋆ Number of Hamiltonian cycles in C _ 7 X P _ n. ● a(1) = 1, ● a(2) = 7, ● a(3) = 126, ● a(4) = 1484, ● a(5) = 1 8452, ● a(6) = 229698, ●

▶ [A053716] 7,127,1093,5461,19531,55987,137257,299593,597871,1111111,194871 7,3257437,5229043,8108731,12204241,17895697,25646167,36012943,49659541,673 68421,90054427,118778947,154764793,199411801,254313151 ⋆ a(n) = 1111111 in base n. ● a(n) = n ^ 6 + n ^ 5 + n ^ 4 + n ^ 3 + n ^ 2 + n + 1 = (n ^ 7 - 1) / (n - 1). ●

▶ [A064754] 7,127,1535,16383,163839,1572863,14680063,134217727,1207959551,1 0737418239,94489280511,824633720831,7146825580543,61572651155455,5277655 81332479,45035996273704 95,38280596832649215,324259173170675711 ⋆ a(n) = n * 8 ^ n - 1. ● a(n) = 17 * a(n - 1) - 80 * a(n - 2) + 64 * a(n - 3); a(1)=7, a(2)=1 27, a(3)=1535. - _ Harvey P. Dale _ , May 20 2013 ●

▶ [A367247] 0,7,131,1609,16415,150817,1296191,10641169,84520175,654958177,4 980233951,37312922929,276288797135,2026564724737,14750977566911,10669581 8055889,767748717541295,5500729672814497,39270143125479071,2795117319511 44049,1984459091985376655,14059238393314971457 ⋆ a(n) is the number of n - digit numbers whose difference between the largest and smallest digits is equal to 6. ● a(n) = 27 * 7 ^ (n - 1) - 47 * 6 ^ (n - 1) + 4 * 5 ^ n. ● a(n) = 21 * a(n - 1) - 146 * a(n - 2) + 336 * a(n - 3) for n > 3. ●

▶ [A110111] 0,1,7,133,1330,18430,210490,2673223,31940881,394918819,47887793 80,58709030380,715296121540,8745656280829,106717441265323,13036673663288 17,159155567209095 10,194371775990116810 ⋆ Sequence associated to the recurr ence b(n) = b(n - 1) + 3 * b(n - 2). ● a(n) = 7 * a(n - 1) + 84 * a(n - 2) - 189 * a(n - 3) - 729 * a(n - 4) for n >= 4. ● a(n) = b(n) * b(n + 1) * b(n + 2) / 4, w here b(n) = (((1 + sqrt(13)) / 2) ^ n - ((1 - sqrt(13)) / 2) ^ n) / sqrt(13). [Cor rected by _ Petros Hadjicostas _ , Dec 26 2019] ●

▶ [A001533] 7,135,391,775,1287,1927,2695,3591,4615,5767,7047,8455,9991,1165 5,13447,15367,17415,19591,21895,24327,26887,29575,32391,35335,38407 ⋆ a(n) = (8 * n + 1) * (8 * n + 7). ● a(n) = 128 * n + a(n - 1) with a(0)=7. - _ Vincenz o Librandi _ , Nov 12 2010 ● a(2 * n) = (a(n + 1) - a(n - 1)) * n + 7. (End) ●

▶ [A082162] 1,7,139,5711,408354,45605881,7390305396,1647470410551,48529276 3088275,183049273155939442,8621140069327246 1866 ⋆ Number of deterministic completely defined initially connected acyclic automata with 3 inputs and n tra nsient unlabeled states (and a unique absorbing state). ● a(n) = c _ 3(n) / (n - 1)! where c _ 3(n) = T _ 3(n, 1) - sum(binomial(n - 1, j - 1) * T _ 3(n - j, j + 1) * c _ 3(j), j=1..n - 1) and T _ 3(0, k) = 1, T _ 3(n, k) = sum(binomial(n, i) * (- 1) ^ (n - i - 1) * (i + k) ^ (3 * n - 3 * i) * T _ 3(i, k), i=0..n - 1), n>0. ●

▶ [A085708] 0,7,140,2100,28000,350000,4200000,49000000,560000000,630000000 0,70000000000,770000000000,8400000000000,91000000000000,980000000000000,1 05000000000000000 ⋆ Arithmetic derivative of 10 ^ n. ● a(n) = 7 * n * 10 ^ (n - 1). ●

▶ [A054606] 0,7,140,2205,16408,78155,279972,823585,2097200,4783023,1000006 0,19487237,35831880,62748595,105413588,170859465,268435552,410338775,6122 20140,893871853,1280000120,1801088667,2494358020,3404825585 ⋆ a(n) = Sum _{ d|7 } phi(d) * n ^ (7 / d). ● a(n) = n ^ 7 + 6n. ●

▶ [A104240] 0,7,144,504,9727,187560,654840,12626287,243453384,849982464,163 88911447,316002305520,1103276584080,21272794432567,410170749112224,14320 52156154024,27612070784561167,532401316345361880,1858802595411339720,358 40446605565962847 ⋆ Nonnegative integers n such that 13 * n ^ 2 + 13 * n + 1 is a square. ● a(0)=0, a(1)=7, a(2)=144, a(3)=504, a(4)=9727, a(6)=187560 an d then a(n) = 1298 * a(n - 3) + 648 - a(n - 6). - _ Pierre CAMI _ , Apr 05 200 5 ● a(n) = a(n - 1) + 1298 * a(n - 3) - 1298 * a(n - 4) - a(n - 6) + a(n - 7). - _ Bruno Berselli _ , Feb 19 2013 ●

▶ [A114485] 7,158,2568,35660,456574,5565709,65657059,756570556,856570552 3,95657055186,1056570551816,11565705518103,125657055180974,1356570551809 682,14565705518096756,155657055180967490 ⋆ Number of decimal digits in !(10 ^ n), where !x is the subfactorial. ● a(n) = 10 ^ n * (n - 1 / log(10)) + n / 2 + O(1). [_ Arkadiusz Wesolowski _ , Jan 20 2012] ●

▶ [A061010] 1,7,158,2568,35660,456574,5565709,65657060,756570557,856570552 3,95657055187,1056570551816,11565705518104,125657055180975,1356570551809 683,14565705518096757,155657055180967491 ⋆ Number of digits in (10 ^ n)!. ● a(n) = 1 + floor(log((10 ^ n)!) / (log(10))), and using Stirling's approximation: ● a(n) = 1 + delta(n,0) + floor((- 2 * 10 ^ n + log(2) + (1 + 2 * 10 ^ n) * n * log(10) + log(Pi)) / (2 * log(10))). (End) ● a(n) = 10 ^ n * (n - 1 / log(10)) + n / 2 + O(1). [_ Arkadiusz Wesolowski _ , Jan 21 2012] ●

▶ [A239575] 0,0,7,176,1976,12565,57275,207018,634166,1711262,4181915,942865 7,19892816,39684027,75473209,137721045,242391212,413215132,684733527,11061 94950,1746637600,2701244609,4099429895,6114748948,8977257362 ⋆ Number of non - equivalent (mod D _ 3) ways to place 5 indistinguishable points on a tria ngular grid of side n so that no two of them are adjacent. ● a(n) = (n ^ 10 + 5 * n ^ 9 - 130 * n ^ 8 - 310 * n ^ 7 + 7465 * n ^ 6 - 1336 * n ^ 5 - 202980 * n ^ 4 + 464160 * n ^ 3 + 1783424 * n ^ 2 - 8360064 * n + 9192960) / 23040 + IF(MO D(n,2) = 1) * (25 * n ^ 4 - 94 * n ^ 3 - 418 * n ^ 2 + 2053 * n - 1779) / 1536. ●

▶ [A128786] 0,7,196,3087,38416,420175,4235364,40353607,368947264,326864216 7,28247524900,239256535903,1993145356944,16374242758783,132931722278404,1 068201339737175,8507630225817856,67230218542302823,527606005722985476 ⋆ n ^ 2 * 7 ^ n. ● a(n) = 21 * a(n - 1) - 147 * a(n - 2) + 343 * a(n - 3). - _ Vince nzo Librandi _ , Feb 06 2013 ●

▶ [A243144] 0,7,204,1891,10846,46068,159830,477033,1268614,3075291,6911894,1 4580293,29145928,55620816,101945063,180327134,309087474 ⋆ Number of inequ ivalent (mod D _ 3) ways to place 5 points on a triangular grid of side n so that they are not vertices of an equilateral triangle of any orientation. ● a(n) = (n ^ 10 + 5 * n ^ 9 - 30 * n ^ 8 - 150 * n ^ 7) / 23040 + O(n ^ 6). ●

▶ [A202655] 0,0,0,7,223,2429,15045,66122,230074,675798,1745318,4073993,87647 53,17630795,33522531,60756612,105666148,177293340,288246972,455749371,7028 98611,1060173961,1567213681,2274896558,3247759614 ⋆ Number of ways to pla ce 4 nonattacking semi - queens on an n X n board. ● a(n) = n ^ 8 / 24 - 2 * n ^ 7 / 3 + 41 * n ^ 6 / 9 - 257 * n ^ 5 / 15 + 341 * n ^ 4 / 9 - 97 * n ^ 3 / 2 + 2 341 * n ^ 2 / 72 - 87 * n / 10 + (n / 2 - 1 / 2) * floor(n / 2). ●

▶ [A210248] 7,241,967,15787,111577,1587499,25230061,118194961,188698981,76 1453863 ⋆ Smallest prime = 1 mod 6 sandwiched by n smaller and n larger pri mes = 5 mod 6. ● a(n) = (smallest p(m) = 1 mod 6) such that all 2 * n primes p(m - n..m - 1) and p(m + 1..m + n) = 5 mod 6. ●

▶ [A228291] 0,7,254,3279,21844,97655,335922,960799,2396744,5380839,1111111 0,21435887,39089244,67977559,113522234,183063615,286331152,435984839,64823 2974,943531279,1347368420,1891142967,2613136834,3559590239,4785883224 ⋆ a(n) = Sum _{ k=1..7 } n ^ k. ● a(1) = 7, else a(n) = (n ^ 8 - n) / (n - 1). ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) with n > 7, a(0)=0, a(1)=7, a(2)=254, a(3)= 3279, a(4)=21844, a(5)=97655, a(6)=335922, a(7)=960799. - _ Yosu Yurramen di _ , Sep 03 2013 ●

▶ [A128793] 0,7,392,9261,153664,2100875,25412184,282475249,2951578112,2941 7779503,282475249000,2631821894933,23917744283328,212865155864179,186104 4111897656,16023020096057625,136122083613085696 ⋆ n ^ 3 * 7 ^ n. ● a(n) = 2 8 * a(n - 1) - 294 * a(n - 2) + 1372 * a(n - 3) - 2401 * a(n - 4). - _ Vincenzo Lib randi _ , Feb 09 2013 ●

► [A175601] 7,637,6937,69937,699937,6999937,69999937,699999937,6999999937,69999999937,699999999937,6999999999937,69999999999937,699999999999937,6999999999999937,69999999999999937 ⋆ 7 * (10 ^ n - 9). ● a(n) = 11 * a(n - 1) - 10 * a(n - 2). - _ Vincenzo Librandi _ , Aug 23 2014 ●
► [A151579] 0,7,960,38637,882340,14413894,188690976,2112659718,2107870111 2,192648942945,1644431982848,13295963811083,102911255502876,768689550213 368,5575887557096640,39473882067826332,273820542615005232,18671564450484 32043,12548621876834960064 ⋆ Number of permutations of 1..n arranged in a ci rcle with exactly 6 adjacent element pairs in decreasing order. ● a(n) = n * (6 ^ (n - 1) - n * 5 ^ (n - 1) + binomial(n,2) * 4 ^ (n - 1) - binomial(n,3) * 3 ^ (n - 1) + binomial(n,4) * 2 ^ (n - 1) - binomial(n,5)). (End) ●
► [A242851] 1,7,2911,40391,242047,950599,2883167,7338631,16451071,3348928 7,63202399,112211527,189447551,306634951,478821727,724955399,1068505087,15 38129671,2168392031,3000519367,4083209599,5473483847,7237584991,945192231 1,12204062207 ⋆ 64 * n ^ 6 - 80 * n ^ 4 + 24 * n ^ 2 - 1. ● a(n) = (8 * n ^ 3 - 4 * n ^ 2 - 4 * n + 1) * (8 * n ^ 3 + 4 * n ^ 2 - 4 * n - 1). ●
► [A023344] 7,7621,15937,382933,462271,518803,866941,1025407,1142503,14273 47,1742473,1980067,2343619,2910031,3015283,4344121,4352269,4544209,508189 3,5116543,5127043,5482531,5484379,5501473,5648221 ⋆ Primes that remain pri me through 5 iterations of function f(x) = 5x + 8. ● a(n) == 19 (mod 42) for n > 1. - _ John Cerkan _ , Oct 22 2016 ●
► [A068251] 7,38960,11043135,715016960,19498281250,301435761312,312039283 0170,23965758136320,146127409139745,741378459250000,3237913809747617,124 85709312410880,43342515673364180,137520873034108480,403684061693062500,1 10713326566454067 2,2859892150083272715 ⋆ 1 / 24 the number of colorings of a 4 X 4 octagonal array with n colors. ● a(n) = (n ^ 16 - 42 * n ^ 15 + 825 * n ^ 14 - 10054 * n ^ 13 + 85011 * n ^ 12 - 528254 * n ^ 11 + 2491825 * n ^ 10 - 908 4089 * n ^ 9 + 25795983 * n ^ 8 - 57031153 * n ^ 7 + 97292827 * n ^ 6 - 125639 547 * n ^ 5 + 118705077 * n ^ 4 - 77301243 * n ^ 3 + 30931875 * n ^ 2 - 570904 2 * n) / 24. (End) ●
► [A109300] 1,1,7,999999991 ⋆ a(n) = number of positive integers whose rote h eight in gammas is n. ● a(n) is defined by the recursion a(n + 1) = (b(n) + 1) ^ b(n) - b(n), where a(0) = 1 and b(n) = Sum _ [0, n] a(i). ●
► [A187107] 8,8,9,10,12,15,20,28,41,62,96,151,240,384,617,994,1604,2591,4188,67 72,10953,17718,28664,46375,75032 ⋆ Number of nontrivial compositions of differ ential operations and directional derivative of the n - th order on the space R ^ 9. ● a(n) = 2 * a(n - 1) - a(n - 3). G.f.: - x * (7 * x ^ 2 + 8 * x - 8) / ((x - 1) * (x ^ 2 + x - 1)). [_ Colin Barker _ , Dec 14 2012] ●
► [A329822] 8,8,12,12,14,16,18,20,22,24,26,28,30,32,34,36,38,40,42,44,46,48,50,5 2,54 ⋆ The minimum weight of a Boolean function of algebraic degree at most n - 3 whose support contains n linearly independent elements. ● a(n) = 2 * a(n - 1) - a(n - 2) for n>7. ●
► [A168337] 1,8,8,15,15,22,22,29,29,36,36,43,43,50,50,57,57,64,64,71,71,78,78,85,8 5 ⋆ a(n) = 1 + 7 * floor(n / 2). ● a(n) = 7 * n - a(n - 1) - 5, with n>1, a(1)=1. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3). ● a(n) = (14 * n + 7 * (- 1) ^ n - 3) / 4. (End) ●
► [A229554] 8,8,15,43,169,841,5041,35281,282241,2540161,25401601,279417601,3 353011201,43589145601,610248038401,9153720576001,146459529216001,2489811 996672001,44816615940096001,851515702861824001,17030314057236480001,3576 36595201966080001 ⋆ a(n) = 7 * n! + 1. ● a(0)=8, a(n) = n * a(n - 1) - n + 1. ●
► [A168397] 0,8,8,16,16,24,24,32,32,40,40,48,48,56,56,64,64,72,72,80,80,88,88,96,9 6 ⋆ a(n) = 8 * floor(n / 2). ● a(n) = 8 * n - a(n - 1) - 8, with n>1, a(1)=0. ● a(n) = 4 * n + 2 * (- 1) ^ n - 2. - _ Paolo P. Lava _ , Nov 27 2009 ●
► [A309461] 0,0,0,0,0,0,0,0,8,8,16,23,39,54,84,113,165,214,294,377,504,634,820,10 20,1292 ⋆ Number of squarefree parts in the partitions of n into 8 parts. ● a(n) = Sum _{ p=1..floor(n / 8) } Sum _{ o=p..floor((n - p) / 7) } Sum _{ m=o..f loor((n - o - p) / 6) } Sum _{ l=m..floor((n - m - o - p) / 5) } Sum _{ k=l..flo or((n - l - m - o - p) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p) / 2) } (mu(i) ^ 2 + mu(j) ^ 2 + mu(k) ^ 2 + mu(l) ^ 2 + mu(m) ^ 2 + mu(o) ^ 2 + mu(p) ^ 2 + mu(n - i - j - k - l - m - o - p) ^ 2), where mu is the Möbius function (A008683). ●
► [A022091] 0,8,8,16,24,40,64,104,168,272,440,712,1152,1864,3016,4880,7896,127 76,20672,33448,54120,87568,141688,229256,370944 ⋆ Fibonacci sequence beginni ng 0, 8. ● a(n) = round((16phi - 8) / 5 phi ^ n) (works for n>4). - _ Thomas Baruchel _ , Sep 08 2004 ● a(n) = 8 * F(n) = F(n + 4) + F(n) + F(n - 4) for n >3, where F=A000045. ●
► [A135405] 0,1,8,8,17,19,30,34,47,53,68,76,93,103,122,134,155,169,192,208,233,2 51,278,298,327 ⋆ Sequence where the sum of each pair of consecutive elements i s a square. ● a(n) = (n + 2) * (n + 1) / 2 + 2 * (- 1) ^ n for n>0. ● a(n) = (- 4 * (- 1) ^ n + n + n ^ 2) / 2 for n>1. ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4) for n>4. ●
► [A053596] 0,0,8,8,32,56,136,160,280,360,552,672,912,1088,1472,1736,2176,251 2,3112,3544,4224,4776,5616,6272,7208 ⋆ Open 3 - dimensional ball numbers (ver sion 4): a(n) is the number of integer points (i,j,k) contained in an open ball of diameter n, centered at (1 / 2, 1 / 2, 1 / 2). ● a(n) = [x ^ (n ^ 2)] theta _ 2(x ^ 4) ^ 3 / (1 - x). - _ Ilya Gutkovskiy _ , Nov 23 2021 ●
► [A164683] 1,8,8,64,64,512,512,4096,4096,32768,32768,262144,262144,2097152,2 097152,16777216,16777216,134217728,134217728,1073741824,1073741824,858993 4592,8589934592,68719476736,68719476736 ⋆ a(n) = 8 * a(n - 2) for n > 2; a(1) = 1, a(2) = 8. ● a(n) = 2 ^ (1 / 4 * (6 * n - 3 + 3 * (- 1) ^ n)). ●
► [A320304] 8,9,9,10,10,11,12,12,13,14,15,15,16,17,18,19,21,22,23,24,26,28,29,31,3 3 ⋆ a(n) is the frequency of MIDI note number n in Hertz, rounded to the near est integer. ● a(n) = round(6.875 * 2 ^ (n / 12 + 1 / 4)). ●
► [A020722] 8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,3 1,32 ⋆ a(n) = n + 8. ● a(n) = n + 8. ● a(n) = 2 * a(n - 1) - a(n - 2). ●
► [A294238] 0,0,0,0,0,0,0,8,9,10,11,12,13,14,15,32,34,54,57,60,63,66,69,96,100 ⋆ S um of the parts in the partitions of n into two parts with smaller part nonsquar efree. ● a(n) = n * Sum _{ i=1..n } (1 - mu(i) ^ 2), where mu is the Möbius fu nction (A008683). ●
► [A058366] 1,1,1,1,1,1,8,9,10,11,12,13,14,22,31,41,52,64,77,91,113,144,185,237,3 01 ⋆ Number of ways to cover (without overlapping) a ring lattice (necklace) of n sites with molecules that are 7 sites wide. ● a(n) = 1 + n * sum(binomial(n - 1 - 6 * i, i - 1) / i, i=1..n / 7). a(n) = a(n - 1) + a(n - 7), a(n) = 1 for n = 1..6, a(7) = 8. generating function = (x + 7 * x ^ 7) / (1 - x - x ^ 7). ●
► [A209724] 8,9,10,12,14,18,22,30,38,54,70,102,134,198,262,390,518,774,1030,154 2,2054,3078,4102,6150,8198 ⋆ 1 / 4 the number of (n + 1) X 6 0..2 arrays with e very 2 X 2 subblock having distinct clockwise edge differences. ● a(n) = 3 * 2 ^ (n / 2 - 1) + 6 for n even. ● a(n) = 2 ^ ((n + 1) / 2) + 6 for n odd. ●
► [A164276] 0,1,8,9,10,14,15,16,20,21,22,24,25,26,27,28,32,33,34,35,36,38,39,40,4 4 ⋆ The non - isolated nonprimes. ● a(n) = n + n / log n + O(n / (log n) ^ 2) by Brun's theorem. - _ Charles R Greathouse IV _ , Mar 15 2011 ●
► [A054966] 0,1,8,9,10,17,18,19,26,27,28,35,36,37,44,45,46,53,54,55,62,63,64,71,7 2 ⋆ Numbers that are congruent to { 0, 1, 8 } mod 9. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. ● a(n) = 3 * n - 3 + 2 * cos(2 * n * Pi / 3) + 2 * sin(2 * n * Pi / 3) / sqrt(3). ● a(3k) = 9k - 1, a(3k - 1) = 9k - 8, a(3k - 2) = 9k - 9. (E nd) ●
► [A048000] 0,0,0,0,0,0,0,0,0,0,0,8,9,10,50,55,60,180,195,210,490,525,560,1240,13 26 ⋆ Number of nonempty subsets of { 1,2,...,n } in which exactly 4 / 5 of the e lements are <= n / 3. ● a(n) = Sum _{ k=1..floor(n / 5) } binomial(floor(n / 3), 4 * k) * binomial(ceiling(2 * n / 3), k). - _ Robert Israel _ , Feb 05 2017 ●
► [A308602] 8,9,11,13,15,17,19,21,23,25,27,29,31,33,35,37,39,41,43,45,47,49,51,5 3,55 ⋆ Number of (not necessarily maximal) cliques in the n - cycle graph. ● a(n) = 2 * n + 1 for n > 3. ●
► [A048590] 8,9,11,14,18,24,32,43,58,79,108,148,203,279,384,529,729,1005,1386,1 912,2638,3640,5023,6932,9567 ⋆ Pisot sequence L(8,9). ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 4) - a(n - 5) for n > 5 (holds at least up to n = 1000 but is not kn own to hold in general). ●
► [A168415] 8,9,11,15,23,39,71,135,263,519,1031,2055,4103,8199,16391,32775,655 43,131079,262151,524295,1048583,2097159,4194311,8388615,16777223 ⋆ a(n) = 2 ^ n + 7. ● a(n) = 2 * a(n - 1) - 7, n>1. ●
► [A174041] 8,9,14,15,20,21,26,27,32,33,38,39,44,45,50,51,56,57,62,63,68,69,74,7 5,80 ⋆ Composites of the form 6n + 2 or 6n + 3. ● a(2n - 1) = 6n + 2, a(2n) = 6n + 3. ●
► [A175859] 8,9,14,15,24,25,32,33,38,39,54,55,62,63,74,75,90,91,92,93,98,99,114,1 15,116 ⋆ a(n) = numbers k in increasing order such that A175856(m) = k has no solution for any m, where A175856(m): a(m) = m for m = noncomposites, a(m) = previous term - 1 for m = composites. ● a(2k) = a(2k - 1) + 1 for k >= 1. ●
► [A047393] 0,1,8,9,16,17,24,25,32,33,40,41,48,49,56,57,64,65,72,73,80,81,88,89,9 6 ⋆ Numbers that are congruent to { 0, 1 } mod 8. ● a(n) = 8 * n - a(n - 1) - 1 5 for n>1, a(1)=0. - _ Vincenzo Librandi _ , Aug 05 2010 ● a(n) = 4 * n - 11 / 2 - 3 * (- 1) ^ n / 2. ●
► [A145820] 8,9,16,25,40,89,144,233,520,841,1360,3033,4904,7929,17680,28585,4 6216,103049,166608,269369,600616,971065,1570000,3500649,5659784 ⋆ Numbers n such that 17, n, n + 1 are the sides of a Heron triangle, i.e., a triangle with in teger sides and integer area. ● a(n) = a(n - 1) + 6 * a(n - 3) - 6 * a(n - 4) - a(n - 6) + a(n - 7), with a(1)=8, a(2)=9, a(3)=16, a(4)=25, a(5)=40, a(6)=89, a(7) =144 ●
► [A274406] 0,8,9,17,18,26,27,35,36,44,45,53,54,62,63,71,72,80,81,89,90,98,99,10 7,108 ⋆ Numbers m such that 9 divides m * (m + 1). ● a(n) = (18 * n + 7 * (- 1) ^ n - 11) / 4. Therefore: a(2 * m) = 9 * m - 1, a(2 * m + 1) = 9 * m. It follo ws that a(j) + a(k) and a(j) * a(k) belong to the sequence if j and k are not bot h even. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3). ● a(2 * r + 1) + a(2 * r + s + 1) = a(4 * r + s + 1) and a(2 * r) + a(2 * r + 2 * s + 1) = a(4 * r + 2 * s). A par ticular case provided by these identities: a(n) = a(n - 2 * floor(n / 6)) + a(2 * f loor(n / 6) + 1). ●
► [A022098] 1,8,9,17,26,43,69,112,181,293,474,767,1241,2008,3249,5257,8506,137 63,22269,36032,58301,94333,152634,246967,399601 ⋆ Fibonacci sequence beginni ng 1, 8. ● a(n) = a(n - 1) + a(n - 2) for n>1, a(0)=1, a(1)=8, and a(- 1):=7. ● a(n) = ((1 + sqrt(5)) ^ n - (1 - sqrt(5)) ^ n) / (2 ^ n * sqrt(5)) + 3.5 * ((1 + sq rt(5)) ^ (n - 1) - (1 - sqrt(5)) ^ (n - 1)) / (2 ^ (n - 2) * sqrt(5)) for n>0. - Al H akanson (hawkuu(AT)gmail.com), Jan 14 2009 ● a(n) = 2 ^ (- 1 - n) * ((1 - sqr t(5)) ^ n * (- 15 + sqrt(5)) + (1 + sqrt(5)) ^ n * (15 + sqrt(5))) / sqrt(5). - _ Herbert Kociemba _ , Dec 18 2011 ● a(n) = Lucas(n + 5) + Lucas(n - 1) - 3 * Lucas(n + 2). - _ Bruno Berselli _ , Dec 29 2016, corrected by _ Greg Dresde n _ , Mar 02 2022 ● a(n) = Lucas(n + 3) - Lucas(n - 2). - _ Greg Dresden _ a nd Michael Nyc, Mar 02 2022 ●
► [A041307] 1,1,8,9,17,26,69,302,371,1415,3201,39827,82855,288392,371247,1773 380,3918007,5691387,9609394,15300781,116714861,132015642,3285090269,341710 5911,27204831646 ⋆ Denominators of continued fraction convergents to sqrt(16 6). ● a(n) = 3401805130 * a(n - 22) - a(n - 44) for n>43. [_ Bruno Berselli _ , Dec 15 2013] ●
► [A042289] 1,1,8,9,17,26,147,1496,7627,9123,16750,25873,197861,223734,11384 561,11608295,92642626,104250921,196893547,301144468,1702615887,1732730333 8,88339132577,105666435915,194005568492 ⋆ Denominators of continued fractio n convergents to sqrt(670). ● a(n) = 11582422 * a(n - 14) - a(n - 28) for n>27. - _ Vincenzo Librandi _ , Jan 19 2014 ●
► [A042727] 1,1,8,9,17,77,1095,1172,3439,4611,8050,20711,28761,49472,127705,1 77177,2608183,10609909,13218092,23828001,180014099,203842100,12002855899,1 2206697999,97449741892 ⋆ Denominators of continued fraction convergents to s qrt(893). ● a(n) = 12182869998 * a(n - 22) - a(n - 44) for n>43. - _ Vincenzo Librandi _ , Jan 27 2014 ●
► [A041551] 1,8,9,17,145,4947,39721,44668,84389,719780,24556909,197175052,22 1731961,418907013,3572988065,121900501223,978776997849,1100677499072,2079 454496921,17736313474440,605114112627881,4858649214497488,54637633271253 69,10322412541622857 ⋆ Denominators of continued fraction convergents to sqr t(293). ● a(n) = 4964 * a(n - 5) + a(n - 10) for n>9. - _ Vincenzo Librandi _ , Dec 20 2013 ●
► [A022313] 0,8,9,18,28,47,76,124,201,326,528,855,1384,2240,3625,5866,9492,153 59,24852,40212,65065,105278,170344,275623,445968 ⋆ a(n) = a(n - 1) + a(n - 2)

+ 1, with a(0) = 0 and a(1) = 8. • a(n) = F(n + 2) + 7 * F(n) - 1, where F = A000045. - _ G. C. Greubel _ , Aug 25 2017 •

► [A326444] 0,0,0,0,0,0,0,0,0,8,9,20,22,48,65,112,135,208,255,378,456,640,756,1034,1219,1632 ★ Sum of all the parts in the partitions of n into 8 squarefree parts. • a(n) = n * Sum _{ p=1..floor(n / 8) } Sum _{ o=p..floor((n - p) / 7) } Sum _{ m=o..floor((n - o - p) / 6) } Sum _{ l=m..floor((n - m - o - p) / 5) } Sum _{ k=l..floor((n - l - m - o - p) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p) / 2) } mu(p) ^ 2 * mu(o) ^ 2 * mu(m) ^ 2 * mu(l) ^ 2 * mu(k) ^ 2 * mu(j) ^ 2 * mu(i) ^ 2 * mu(n - i - j - k - l - m - o - p) ^ 2, where mu is the Möbius function (A008683). •

► [A309484] 0,0,0,0,0,0,0,0,8,9,20,29,56,83,138,193,299,408,594,789,1115,1462,1977,2551,3382 ★ Sum of the squarefree parts of the partitions of n into 8 parts. • a(n) = Sum _{ p=1..floor(n / 8) } Sum _{ o=p..floor((n - p) / 7) } Sum _{ m=o..floor((n - o - p) / 6) } Sum _{ l=m..floor((n - m - o - p) / 5) } Sum _{ k=l..floor((n - l - m - o - p) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p) / 2) } (i * mu(i) ^ 2 + j * mu(j) ^ 2 + k * mu(k) ^ 2 + l * mu(l) ^ 2 + m * mu(m) ^ 2 + o * mu(o) ^ 2 + p * mu(p) ^ 2 + (n - i - j - k - l - m - o - p) * mu(n - i - j - k - l - m - o - p) ^ 2), where mu is the Möbius function (A008683). •

► [A308989] 0,0,0,0,0,0,0,0,8,9,20,33,60,91,154,225,352,493,720,988,1400,1869,2552,3358,4464 ★ Sum of all the parts in the partitions of n into 8 parts. • a(n) = n * Sum _{ p=1..floor(n / 8) } Sum _{ o=p..floor((n - p) / 7) } Sum _{ m=o..floor((n - o - p) / 6) } Sum _{ l=m..floor((n - m - o - p) / 5) } Sum _{ k=l..floor((n - l - m - o - p) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p) / 2) } 1. •

► [A081351] 1,8,9,24,25,48,49,80,81,120,121,168,169,224,225,288,289,360,361,440,441,528,529,624,625 ★ First row in square maze array of natural numbers A081349. • a(n) = (n + 1) * (n + 2) - (n + 1) * (- 1) ^ n = 2 * C(n + 2,2) - C(n + 1,1) * (- 1) ^ n. •

► [A041134] 8,9,26,35,61,340,1421,7445,8866,16311,41488,57799,966272,1024071,3014414,4038485,7052899,39302980,164264819,860627075,1024891894,1885518969,4795929832,6681448801,111699110648 ★ Numerators of continued fraction convergents to sqrt(76). • a(n) = 115598 * a(n - 12) - a(n - 24). G.f.: - (x ^ 23 - 8 * x ^ 22 + 9 * x ^ 21 - 26 * x ^ 20 + 35 * x ^ 19 - 61 * x ^ 18 + 340 * x ^ 17 - 1421 * x ^ 16 + 7445 * x ^ 15 - 8866 * x ^ 14 + 16311 * x ^ 13 - 41488 * x ^ 12 - 57799 * x ^ 11 - 41488 * x ^ 10 - 16311 * x ^ 9 - 8866 * x ^ 8 - 7445 * x ^ 7 - 1421 * x ^ 6 - 340 * x ^ 5 - 61 * x ^ 4 - 35 * x ^ 3 - 26 * x ^ 2 - 9 * x - 8) / ((x ^ 12 - 340 * x ^ 6 + 1) * (x ^ 12 + 340 * x ^ 6 + 1)). [_ Colin Barker _ , Jul 19 2012] •

► [A041317] 1,8,9,26,61,87,148,531,3334,10533,13867,24400,62667,149734,212401,1848942,48284893,388128086,436412979,1260954044,2958321067,4219275111,7177596178,25752063645,161689978048 ★ Denominators of continued fraction convergents to sqrt(172). • a(n) = 48497294 * a(n - 16) - a(n - 32) for n>31. [_ Bruno Berselli _ , Dec 15 2013] •

► [A042311] 1,8,9,26,139,304,1659,3622,5281,45870,2390521,19170038,21560559,62291156,333016339,728323834,3974635509,8677594852,12652230361,109895437740,5727214992841,45927615380468,51654830373309,149237276127086,797841211008739 ★ Denominators of continued fraction convergents to sqrt(682). • a(n) = 2395802 * a(n - 10) - a(n - 20) for n>19. - _ Vincenzo Librandi _ , Jan 20 2014 •

► [A217843] 0,1,8,9,27,35,36,64,91,99,100,125,189,216,224,225,341,343,405,432,440,441,512,559,684 ★ Numbers which are the sum of one or more consecutive nonnegative cubes. • a(n) >> n ^ 2. Probably a(n) ~ kn ^ 2 for some k but I cannot prove this. - _ Charles R Greathouse IV _ , Aug 07 2013 • a(n) is of the form [x * (x + 2 * k + 1) * (x * (x + 2 * k + 1) + 2 * k * (k + 1))] / 4, sum of n consecutive cubes starting from (k + 1) ^ 3. - _ Lamine Ngom _ , Apr 15 2021 •

► [A041136] 8,9,35,79,272,351,5888,6239,24605,55449,190952,246401,4133368,4379769,17272675,38925119,134048032,172973151,2901618448,3074591599,12125393245,27325378089,94101527512 ★ Numerators of continued fraction convergents to sqrt(77). • a(n) = 702 * a(n - 6) - a(n - 12). G.f.: - (x ^ 11 - 8 * x ^ 10 + 9 * x ^ 9 - 35 * x ^ 8 + 79 * x ^ 7 - 272 * x ^ 6 - 351 * x ^ 5 - 272 * x ^ 4 - 79 * x ^ 3 - 35 * x ^ 2 - 9 * x - 8) / ((x ^ 4 - 9 * x ^ 2 + 1) * (x ^ 8 + 9 * x ^ 6 + 80 * x ^ 4 + 9 * x ^ 2 + 1)). [_ Colin Barker _ , Jul 18 2012] •

► [A041915] 1,1,8,9,35,79,1694,3467,12095,15562,121029,136591,5857851,5994442,47818945,53813387,209259106,472331599,10128222685,20728776969,72314553592,93043330561,723617867519,816661198080,35023388186879 ★ Denominators of continued fraction convergents to sqrt(479). • a(n) = 5978880 * a(n - 12) - a(n - 24) for n>23. - _ Vincenzo Librandi _ , Dec 27 2013 •

► [A129548] 1,1,8,9,36,43,120,147,329,406,784,966,1680,2058,3312,4026,6105,7359,10648,12727,17732,21021,28392,33397,43953 ★ Measures of entanglement in 3-qbits. • a(n) = [x ^ (2n)] (1 + x ^ 4) * (1 + x ^ 4 + x ^ 8) / ((1 - x ^ 2) * (1 - x ^ 4) ^ 5 * (1 - x ^ 6)). • a(n) = (2 * n + 3 + (- 1) ^ n) * (2 * n + 7 + (- 1) ^ n) * (2 * n + 11 + (- 1) ^ n) * (2 * n ^ 3 + 27 * n ^ 2 + 169 * n + 387 - 3 * (n ^ 2 - 5 * n - 31) * (- 1) ^ n) / 184320. - _ Luce ETIENNE _ , Oct 15 2015. • a(n) = (n ^ 6 + 24 * n ^ 5 + 280 * n ^ 4 + 1920 * n ^ 3 + 7504 * n ^ 2 + 14976 * n + 11520) / 11520 (n even). • a(n) = (n ^ 6 + 24 * n ^ 5 + 235 * n ^ 4 + 1200 * n ^ 3 + 3319 * n ^ 2 + 4536 * n + 2205) / 11520 (n odd). • a(n) = 2 * a(n - 1) + 4 * (n - 2) - 10 * a(n - 3) - 5 * a(n - 4) + 20 * a(n - 5) - 20 * a(n - 7) + 5 * a(n - 8) + 10 * a(n - 9) - 4 * a(n - 10) - 2 * a(n - 11) + a(n - 12) for n>11. - _ Wesley Ivan Hurt _ , Oct 15 2015 •

► [A042847] 1,1,8,9,53,168,389,2502,5393,18681,98798,117479,921151,1038630,6323895 1,64277581,513182018,577459599,3400480013,10778899638,24958279289,160528575372,346015430033,1198574865471,6338889757388 ★ Denominators of continued fraction convergents to sqrt(954). • a(n) = 64160102 * s(n - 14) - a(n - 28) for n>27. - _ Vincenzo Librandi _ , Jan 30 2014 •

► [A042873] 1,8,9,62,71,630,39131,313678,352809,2430532,2783341,24697260,1534013461,12296804948,13830818409,95281715402,109112533811,968181985890,60136395658991,482059347257818,542195742916809,3735233804758672,4277429547675481,37954670186162520 ★ Denominators of continued fraction convergents to sqrt(968). • a(n) = 39202 * a(n - 6) - a(n - 12) for n > 11. - _ Vincenzo Librandi _ , Jan 31 2014 •

► [A033045] 0,1,8,9,64,65,72,73,512,513,520,521,576,577,584,585,4096,4097,4104,4105,4160,4161,4168,4169,4608 ★ Sums of distinct powers of 8. • a(n) = Sum _{ i=0..m } d(i) * 8 ^ i, where Sum _{ i=0..m } d(i) * 2 ^ i is the base - 2 representation of n. • a(2n) = 8 * a(n), a(2n + 1) = a(2n) + 1. •

► [A256162] 1,8,9,98,99,998,999,9998,9999,99998,99999,999998,999999,9999998,9999999,99999998,99999999,999999998,999999999,9999999998,9999999999,99999999998,99999999999,999999999998,999999999999 ★ Positive integers a(n) such that number of digits in decimal expansion of a(n) ^ a(n) is divisible by a(n). • a(n) = 10 ^ floor(n / 2) - 2 * floor(n / 2) + n - 2 = 10 ^ floor(n / 2) - (1 + (- 1) ^ n) / 2 - 1 for n>1, a(1) = 1. •

► [A041141] 1,1,8,9,152,161,1279,1440,24319,25759,204632,230391,3890888,4121279,32739841,36861120,622517761,659378881,5238169928,5897548809,995989508 72,105496499681,838074448639,943570948320,15935209621759 ★ Denominators of continued fraction convergents to sqrt(79). • a(n) = 160 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Dec 11 2013 •

► [A041142] 8,9,152,161,2728,2889,48952,51841,878408,930249,15762392,16692641,282844648,299537289,5075441272,5374978561,91075098248,96450076809,1634276327192,1730726404001,29325898791208,31056625195209,526231901914552,557288527109761 ★ Numerators of continued fraction convergents to sqrt(80). • a(n) = 18 * a(n - 2) - a(n - 4). • a(n) = (- 3 * (- 2 - sqrt(5)) ^ (n + 1) + 5 * (2 - sqrt(5)) ^ (n + 1) - 3 * (- 2 + sqrt(5)) ^ (n + 1) + 5 * (2 + sqrt(5)) ^ (n + 1)) / 4. - _ Colin Barker _ , Mar 27 2016 • a(n) = (5 - 3 * (- 1) ^ (n + 1)) * Lucas(3 * (n + 1)) / 4. - _ Ehren Metcalfe _ , Apr 15 2019 •

► [A041605] 1,1,8,9,314,323,2575,2898,101107,104005,829142,933147,32556140,33489287,266981149,300470436,10482975973,10783446409,85967100836,96750547245,3375485707166,3472236254411,27681139488043,31153375742454,108689591473147 9 ★ Denominators of continued fraction convergents to sqrt(320). • a(n) = 322 * a(n - 4) - a(n - 8) for n>7. - _ Vincenzo Librandi _ , Dec 21 2013 •

► [A020744] 8,10,12,14,16,18,20,22,24,26,28,30,32,34,36,38,40,42,44,46,48,50,52,54,56 ★ Pisot sequences P(8,10), T(8,10). • a(n) = 2n + 8. a(n) = 2a(n - 1) - a(n - 2). •

► [A184116] 8,10,13,15,17,19,21,23,24,26,28,30,31,33,35,36,38,39,41,42,44,45,47,49,50 ★ a(n) = n + floor(5 * sqrt(n + 1)). • a(n) = n + floor(5 * sqrt(n + 1)). •

► [A167487] 8,10,13,17,22,28,35,43,52,62,73,85,98,112,127,143,160,178,197,217,238,260,283,307,332 ★ a(n) = n * (n + 3) / 2 + 8. • a(n) = n + a(n - 1) + 1 with n>1, a(1)=10. • a(n) = Sum _{ i=n - 5..n + 7 } i * (i + 1) / 26. - _ Bruno Berselli _ , Oct 20 2016 •

► [A275627] 8,10,13,17,22,28,36,46,59,76,98,126,162,208,267,343,441,567,729,937,1204,1547,1988,2555,3284 ★ Expansion of (6 * x ^ 5 + 5 * x ^ 4 + 4 * x ^ 3 + 3 * x ^ 2 + 2 * x + 8) / (1 - x - x ^ 6). • a(n) = a(n - 1) + a(n - 6) for n>5. - _ Colin Barker _ , Aug 21 2016 •

► [A048591] 8,10,13,17,23,32,45,64,92,133,193,281,410,599,876,1282,1877,2749,4027,5900,8645,12668,18564,27205,39869 ★ Pisot sequence L(8,10). • a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) - a(n - 4) (holds at least up to n = 1000 but is not known to hold in general). •

► [A027693] 8,10,14,20,28,38,50,64,80,98,118,140,164,190,218,248,280,314,350,388,428,470,514,560,608 ★ a(n) = n ^ 2 + n + 8. • a(n) = 2 * n + a(n - 1) (with a(0)=8). - _ Vincenzo Librandi _ , Aug 05 2010 • a(0)=8, a(1)=10, a(2)=14, a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Dec 13 2011 •

► [A058633] 0,1,8,10,15,23,39,42,61,67,81,90,99,116,133,137,149,169,189,196,203,218,233,243,266 ★ Partial sums of the Collatz sequence. • a(n) = Sum(i from 0 to n) Collatz(i) a(n) = a(n - 1) + Collatz(n) •

► [A165143] 8,10,16,20,22,32,40,48 ★ Length of longest cyclic knight path on an n X n chessboard that is determined (up to starting point and direction) by the fields visited. • a(n) = n ^ 2 / 2 + O(n) (Beluhov 2023). •

► [A155966] 8,10,16,26,40,58,80,106,136,170,208,250,296,346,400,458,520,586,656,730,808,890,976,1066,1160 ★ a(n) = 2 * n ^ 2 + 8. • a(n) = a(- n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). •

► [A319293] 1,8,10,17,19,26,27,28,35,37,44,46,53,55,62,64,71,73,80,82,89,91,98,100,107 ★ Numbers of the form 27 ^ i * (9 * j +- 1). • a(n) = 13 * n / 3 + O(log(n)). •

► [A056020] 1,8,10,17,19,26,28,35,37,44,46,53,55,62,64,71,73,80,82,89,91,98,100,107,109 ★ Numbers that are congruent to +- 1 mod 9. • a(1) = 1; a(n) = 9(n - 1) - a(n - 1). - _ Rolf Pleisch _ , Jan 31 2008 [Offset corrected by _ Jon E. Schoenfield _ , Dec 22 2008] • a(n) = (1 / 4) * (- 9 + 5 * (- 1) ^ n + 18 * n). - _ Paolo P. Lava _ , Apr 26 2010 • a(n) = a(n - 2) + 9, for n > 2. •

► [A143617] 0,8,10,18,20,28,68,88,108,188,200,208,288,688,888,1088,1888,2008,2088,2888,6888,8888,10888,18888,20088 ★ Where record values occur in A010371. • a(n + 7) = 10 * a(n) + 8 for n > 4. • a(n) = a(n - 1) + 10 * a(n - 7) - 10 * a(n - 8). - _ Wesley Ivan Hurt _ , Jul 03 2020 •

► [A153382] 0,8,10,18,30,48,80,128,210,338,550,888,1440,2328,3770,6098,9870,15968,25840,41808,67650,109458,177110,286568,463680 ★ a(n)=a(n - 1) + 2a(n - 2) - a(n - 3) - a(n - 4), a(0)=0,a(1)=8,a(2)=10,a(3)=18. • a(n)= - 1 + (- 1) ^ n + 2 * sqrt(5) *{ [(1 / 2) + (1 / 2) * sqrt(5)] ^ n - [(1 / 2) - (1 / 2) * sqrt(5)] ^ n }, with n>=0 [From _ Paolo P. Lava _ , Jan 09 2009] •

► [A236653] 1,8,10,19,26,28,37,44,46,55,62,64,73,80,82,91,98,100,109,116,118,127,134,136,145 ★ Positive integers n such that n ^ 3 divided by the digital root of n is a cube. • a(n) = a(n - 1) + a(n - 3) - a(n - 4). •

► [A022322] 1,8,10,19,30,50,81,132,214,347,562,910,1473,2384,3858,6243,10102,16346,26449,42796,69246,112043,181290,293334,474625 ★ a(n) = a(n - 1) + a(n - 2) + 1, with a(0) = 1 and a(1) = 8. • a(n) = 2 * F(n + 2) + 5 * F(n) - 1, where F = A000045. - _ G. C. Greubel _ , Aug 25 2017 •

► [A259713] 1,8,10,26,46,98,190,386,766,1538,3070,6146,12286,24578,49150,98306,196606,393218,786430,1572866,3145726,6291458,12582910,25165826,50331646 ★ a(n) = 3 * 2 ^ n - 2 * (- 1) ^ n. • a(n) = a(n - 1) + 2 * a(n - 2) for n>1, a(0)=1, a(1)=8. • a(n) = 2 * a(n - 1) - 6 * (- 1) ^ n for n>0, a(0)=1. •

► [A024869] 8,10,27,32,61,70,114,128,190,210,293,320,427,462,596,640,804,858,1055,1120,1353,1430,1702,1792,2106 ★ a(n) = s(1)t(n) + s(2)t(n - 1) + ... + s(k)t

(n - k + 1), where k = floor(n / 2), s = natural numbers >= 2, t = natural n umbers >= 3. ● a(n) = (4 * n ^ 3 + 3 * ((- 1) ^ n + 13) * n ^ 2 + 4 * (6 * (- 1) ^ n + 17) * n + 42 * ((- 1) ^ n - 1)) / 48. ● a(n) = (2 * n ^ 3 + 21 * n ^ 2 + 46 * n) / 24 for n even. ● a(n) = (2 * n ^ 3 + 18 * n ^ 2 + 22 * n - 42) / 24 f or n odd. ●

▶ [A212767] 1,1,8,10,29,35,72,84,145,165,256,286,413,455,624,680,897,969,1240,1 330,1661,1771,2168,2300,2769 ⋆ Number of (w,x,y,z) with all terms in { 0,...,n } , w even, x even, and w + x=y + z. ● a(n) = a(n - 1) + 3 * a(n - 2) - 3 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) + a(n - 6) - a(n - 7). ● a(n) = (4 * n ^ 3 + 15 * n ^ 2 + 20 * n + 12 + 3 * (n ^ 2 + 4 * n + 4) * (- 1) ^ n) / 24. - _ Luce ETIEN NE _ , Jun 03 2014 ●

▶ [A122195] 8,11,13,14,18,19,22,23,30,31,36,38,49,51,59,62,80,83,96,101,130,135,1 56,164,211 ⋆ Numbers that are the sum of exactly 3 sets of Fibonacci numbers. ● a(n) = a(n - 4) + a(n - 8) + 1. ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) + a(n - 8) - a(n - 9). - _ G. C. Greubel _ , Jul 13 2019 ●

▶ [A363364] 0,0,0,0,0,8,11,14,17,20 ⋆ Least nonnegative integer k such that all non - bipartite graphs with n nodes and at least k edges are weakly pancyclic. ● a(n) <= floor(n ^ 2 / 4) - n + 59 (Bollobás and Thomason, 1999). ●

▶ [A061570] 0,1,8,11,14,17,20,23,26,29,32,35,38,41,44,47,50,53,56,59,62,65,68,71,7 4 ⋆ a(1)=0, a(2)=1, a(n)=3 * n - 1 for n >= 3. ● a(1)=0, a(2)=1, a(3)=8, a(4) =11, a(n)=2 * a(n - 1) - a(n - 2). - _ Harvey P. Dale _ , Dec 12 2011 ●

▶ [A063724] 0,0,0,8,11,15,18,21,24,27,30,33,36,39,42,45,48,51,54,57,60,63,66,69,7 2 ⋆ Consider problem of placing N queens on an n X n board so that each quee n attacks precisely 4 others. Sequence gives maximal number of queens. ● a(1) =a(2)=a(3)=0, a(4)=8, a(5)=11, a(n) = 3n - 3 for n >= 6. ● a(n) = 2 * a(n - 1) - a(n - 2) for n >= 8. ●

▶ [A306277] 1,8,11,18,21,28,31,38,41,48,51,58,61,68,71,78,81,88,91,98,101,108,11 1,118,121 ⋆ Numbers congruent to 1 or 8 mod 10. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n>3. ●

▶ [A243520] 0,8,11,19,22,30,33,41,44,52,55,63,66,74,77,85,88,96,99,107,110,118,1 21,129,132 ⋆ Numbers that are congruent to { 0, 8 } mod 11. ● a(n) = - 5 / 4 * (- 1) ^ n + 11 * n / 2 + 5 / 4. ● a(n) = 5 * n + 2 * (n mod 2) + ceiling(n / 2). ●

▶ [A129730] 8,11,20,26,35,48,110,159,231,339,814,1215,1826,2757,6765,10303,157 44,24133,60020,92490,142850,221086,554694,861613,1340498 ⋆ Upper limit palin dromic complexity sequence involving Fibonacci numbers. ● a(n) = ceiling(16 * Fibonacci(n + 1 + floor((n + 1) / 4)) / (n + 1)). ●

▶ [A195160] 0,1,8,11,25,30,51,58,86,95,130,141,183,196,245,260,316,333,396,415,4 85,506,583,606,690 ⋆ Generalized 11 - gonal (or hendecagonal) numbers: m * (9 * m - 7) / 2 with m = 0, 1, - 1, 2, - 2, 3, - 3, ... ● a(n) = (18 * n * (n + 1) + 5 * (2 * n + 1) * (- 1) ^ n - 5) / 16. ●

▶ [A192427] 0,1,1,8,11,45,80,251,517,1432,3195,8317,19360,48827,116213,28836 0,694331,1708397,4138480,10138363,24636645,60217912,146570491,357833309,87 1703360 ⋆ Coefficient of x in the reduction by x ^ 2 - > x + 1 of the polynomial p(n,x) defined below in Comments. ● a(n) = a(n - 1) + 5 * a(n - 2) - 2 * a(n - 3) - 4 * a(n - 4). ● a(n) = Sum _{ k=0..n } T(n, k) * Fibonacci(k), where T(n, k) = [x ^ k] ((x + sqrt(x ^ 2 + 8)) ^ n + (x - sqrt(x ^ 2 + 8)) ^ n) / 2 ^ n. - _ G. C. Greubel _ , Jul 13 2023 ●

▶ [A258285] 1,1,8,11,52,91,326,567,1925,3361,10114,17998,50084,89303,236472,4 14418,1036205,1872828,4394636,7781405,18111119,31868623,70513669,12572851 0,269084037 ⋆ Number of partitions of 7 copies of n into distinct parts. ● a(n) = 1 / 7! * [Product _{ i=1..7 } x _ i ^ n] Product _{ j>0 } (1 + Sum _{ i=1 ..7 } x _ i ^ j). ●

▶ [A111087] 1,8,12,16,18,20,24,27,28,30,32,36,40,42,44,45,48,50,52,54,56,60,63,6 4,66 ⋆ Neither primes nor semiprimes. ● a(n) = n + O(n log log n / log n). - _ Charles R Greathouse IV _ , Nov 13 2016 ●

▶ [A192544] 8,12,16,20,24,28,32,36,40,44,48,52,56,60,64,68,72,76,80,84,88,92,96,1 00,104 ⋆ Number bases n such that all integers m having the commuting proper ty r(m) ^ 2=r(m ^ 2), where r is cyclic replacement of digits d - >(d + 1) mod n, are of the form m=A ^ k * B, where B=n / 2, A=B - 1, and 0<=k<=n - 3. ● a(n) = 2 * a(n - 1) - a(n - 2) for n > 2. ●

▶ [A302139] 8,12,16,20,24,32,64,120,128,256,512,600,1024,2048,4096,8192,1638 4,32768,65536,131072,262144,524288,1048576,2097152,4194304 ⋆ Numbers k suc h that A111336(k) = 4. ● a(n) = 2 ^ (n - 3) for n >= 13. ●

▶ [A078609] 8,12,16,21,25,29,34,38,42,47,51,55,60,64,68,73,77,81,86,90,94,99,10 3,107,112 ⋆ Least positive integer x such that 2 * x ^ n>(x + 3) ^ n. ● a(n) = ceiling(3 / (2 ^ (1 / n) - 1)). For most n, a(n) = floor(3n / log(2) - 1 / 2), but t here are exceptions, starting with n=32 and n=52113. ●

▶ [A276403] 8,12,18,27,36,48,72,108,162,243,324,432,648,972,1458,2187,2916,388 8,5832,8748,13122,19683,26244,34992,52488 ⋆ a(n) = if n mod 6 = 0 then 4 * 3 ^ ((n - 6) / 3) elif n mod 6 = 1 then 2 ^ 4 * 3 ^ ((n - 10) / 3) elif n mod 6 = 2 the n 2 ^ 3 * 3 ^ ((n - 8) / 3) elif n mod 6 = 3 then 2 ^ 2 * 3 ^ ((n - 6) / 3) elif n m od 6 = 4 then 2 * 3 ^ ((n - 4) / 3) otherwise 3 ^ ((n - 2) / 3). ● a(n) = 9 * a(n - 6) for n > 13. ●

▶ [A033477] 8,12,18,27,45,75,125,175,245,343,539,847,1331,1573,1859,2197,287 3,3757,4913,5491,6137,6859,8303,10051,12167 ⋆ Products p ^ 3 or p ^ 2 * q, whe re { p,q } are consecutive primes. ● a(3k + 2) = a(3k + 1) ^ 2 / a(3k). (End) ●

▶ [A105936] 8,12,18,30,42,52,68,78,138,172,186,222,258,268,410,434,508,548,61 8,668,762,772,786,892,906 ⋆ Numbers that are the product of exactly 3 primes a nd are of the form prime(n) + prime(n + 1). ● a(n) is equal to the product of 3 primes if the arithmetic mean of prime(n) and prime(n + 1) is a semiprime. ●

▶ [A168670] 1,8,12,19,23,30,34,41,45,52,56,63,67,74,78,85,89,96,100,107,111,118,1 22,129,133 ⋆ Numbers that are congruent to { 1, 8 } mod 11. ● a(n) = (- 15 + 3 * (- 1) ^ n + 22 * n) / 4. a(n) = a(n - 1) + a(n - 2) - a(n - 3). G.f.: x * (1 + 7 * x + 3 * x ^ 2) / ((1 - x) ^ 2 * (1 + x)). [_ Colin Barker _ , May 15 2012, modified Jul 07 2015] ●

▶ [A232867] 8,12,19,30,45,64,87,114,145,180,219,262,309,360,415,474,537,604,67 5,750,829,912,999,1090,1185 ⋆ Positions of the negative integers in the sequence (or tree) of complex numbers generated by these rules: 0 is in S, and if x is in S , then x + 1 and i * x are in S, where duplicates are deleted as they occur. ● a(n + 1) = 2 * n ^ 2 + n + 9 for n >= 1 (conjectured). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n >= 5 (conjectured). ●

▶ [A258848] 8,12,20,32,80,208,512,2304,12288,81920,622592,4931584,38944768,2 78380544,2122727424,17483677696,128412352512,1348723408896,147688679669 76,188484960780288,2416519442792448,30543291749302272,37587719206836633 6,6101345960934506496 ⋆ The n - th pi - based arithmetic derivative of 2 ^ 3. ● a(n) = A258851 ^ n(2 ^ 3). ●

▶ [A072902] 1,8,12,21,24,28,33,40,44,56,57,60,65,69,76,77,85,88,92,93,104,105,12 0,124,129 ⋆ Nonprime numbers m such that the discriminant of the quadratic fi eld Q(sqrt(m)) equals m. ● a(n) appears to be asymptotic to C * n with C = 3. 91... . ●

▶ [A241482] 8,12,24,60,60,364,984,1596,1596,1596,3705,58444,84396,164620,172 236,369105,369105,731676,731676,3442296,3442296,32169916,32169916,4797386 4,47973864 ⋆ Least fundamental discriminant D > 1 such that the first n prime s p have (D / p) >= 0. ● a(n) > prime(n) ^ (4 * sqrt(e) + o(1)). - _ Charles R Greathouse IV _ , Apr 23 2014 ●

▶ [A210982] 0,1,8,12,26,33,54,64,92,105,140,156,198,217,266,288,344,369,432,46 0,530,561,638,672,756 ⋆ Zero together with A126264 and positive terms of A051 624 interleaved. ● a(n) = (10 * n ^ 2 + 8 * n - 3 + (4 * n + 3) * (- 1) ^ n) / 8. - _ Luce ETIENNE _ , Oct 14 2014 ●

▶ [A132356] 0,8,12,36,44,84,96,152,168,240,260,348,372,476,504,624,656,792,82 8,980,1020,1188,1232,1416,1464 ⋆ a(2 * k) = k * (10 * k + 2), a(2 * k + 1) = 10 * k ^ 2 + 18 * k + 8, with k >= 0. ● a(n) = 10 * x ^ 2 - 2 * x, where x = floor (n / 2) * (- 1) ^ n for n >= 1. - _ William A. Tedeschi _ , Sep 12 2010 ● a(n) = ((2 * n + 1 - (- 1) ^ n) * (10 * (2 * n + 1) - 2 * (- 1) ^ n)) / 16. - _ Luce E TIENNE _ , Sep 13 2014 ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n > 4. - _ Chai Wah Wu _ , May 24 2016 ● a(n) = n ^ 2 + n + 6 * ceiling(n / 2) ^ 2. - _ Ridouane Oudra _ , Aug 06 2022 ●

▶ [A162466] 1,8,12,96,144,1152,1728,13824,20736,165888,248832,1990656,29859 84,23887872,35831808,286654464,429981696,3439853568,5159780352,4127824281 6,61917364224,495338913792,743008370688,5944066965504 ⋆ a(n) = 12 * a(n - 2) for n > 2; a(1) = 1, a(2) = 8. ● a(n) = (5 - (- 1) ^ n) * 2 ^ (1 / 2 * (2 * n - 3 + (- 1) ^ n)) * 3 ^ (1 / 4 * (2 * n - 5 + (- 1) ^ n)). ●

▶ [A098664] 1,1,8,12,96,160,1280,2240,17920,32256,258048,473088,3784704,7028 736,56229888,105431040,843448320,1593180160,12745441280,24216338432,19373 0707456,369849532416,2958796259328,5671026163712,45368209309696 ⋆ E.g.f. B esselI(0,4x) + BesselI(1,4x) / 2. ● a(n)=binomial(n, floor(n / 2))4 ^ floor(n / 2). ●

▶ [A204221] 0,1,8,13,17,24,45,56,64,77,112,129,141,160,209,232,248,273,336,365,3 85,416,493,528,552 ⋆ Integers of the form (n ^ 2 - 1) / 15. ● a(- 1 - n) = a(n). ● a(n) = (30 * n - 10 * i ^ (n(n - 1)) + 3 * (- 1) ^ n + 7) * (30 * n - 10 * i ^ (n (n - 1)) + 3 * (- 1) ^ n + 23) / 960, where i=sqrt(- 1). - _ Bruno Berselli _ , Nov 28 2012 ●

▶ [A224251] 8,13,18,23,48,73,98,123,248,373,498,623,1248,1873,2498,3123,6248,9 373,12498,15623,31248,46873,62498,78123,156248 ⋆ Numbers, a(n) where binom ial(a(n), 5n - 1) == 0 (mod 5) and binomial(a(n), k) != 0 (mod 5) for k != 5n - 1. ● a(n) = 5 * (n + 1) - 2, for n <= 4; a(5) = (5 ^ 2) * 2 - 2; a(n)= a(n - 1) + 5 * a(n - 4) - 5 * a(n - 5) for n>=6. ●

▶ [A219721] 1,8,13,20,22,29,34,41,43,50,55,62,64,71,76,83,85,92,97,104,106,113,1 18,125,127 ⋆ Expansion of (1 + 7 * x + 5 * x ^ 2 + 7 * x ^ 3 + x ^ 4) / (1 - x - x ^ 4 + x ^ 5). ● a(n) = - a(- n - 1) = (42 * n - 6 * i ^ (n * (n - 1)) - 7 * (- 1) ^ n + 5) / 8 + 2, where i=sqrt(- 1). ●

▶ [A229446] 8,13,22,37,60,93,138,197,272,365,478,613,772,957,1170,1413,1688,19 97,2342,2725,3148,3613,4122,4677,5280 ⋆ Number of 3 X n 0..2 arrays with hori zontal differences mod 3 never 1, vertical differences mod 3 never - 1, and rows and columns lexicographically nondecreasing. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>4. ●

▶ [A246639] 8,13,28,68,173,448,1168,3053,7988,20908,54733,143288,375128,9820 93,2571148,6731348,17622893,46137328,120789088,316229933,827900708,2167472 188,5674515853,14856075368,38893710248 ⋆ Sequence a(n) = 3 + 5 * A001519(n + 1) appearing in a certain three circle touching problem, together with A246 638. ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) + a(n - 3), n >=1, a(- 2) = 13, a(- 1) = 8, a(0) = 8. ● a(n) = 2 ^ (- 1 - n) * (3 * 2 ^ (1 + n) - (3 - sqrt(5)) ^ n * (- 5 + sqrt(5)) + (3 + sqrt(5)) ^ n * (5 + sqrt(5))). - _ Colin Barker _ , Nov 02 20 16 ●

▶ [A287922] 8,13,29,53,125,173,293,365,533,845,965,1373,1685,1853,2213,2813,34 85,3725,4493,5045,5333,6245,6893,7925,9413 ⋆ a(n) = prime(1) ^ 2 + prime(n) ^ 2. ● a(n) = 4 + prime(n) ^ 2. ●

▶ [A321483] 8,13,29,55,113,223,449,895,1793,3583,7169,14335,28673,57343,1146 89,229375,458753,917503,1835009,3670015,7340033,14680063,29360129,5872025 5,117440513 ⋆ a(n) = 7 * 2 ^ n + (- 1) ^ n. ● a(n) = a(n - 1) + 2 * a(n - 2). ● a(n) = 2 * a(n - 1) + 3 * (- 1) ^ n for n>0, a(0)=8. ● a(2 * k) = 7 * 4 ^ k + 1, a(2 * k + 1) = 14 * 4 ^ k - 1. ● a(n) + a(n + 1) = 21 * 2 ^ n. ●

▶ [A354595] 0,1,8,13,32,41,72,85,128,145,200,221,288,313,392,421,512,545,648,68 5,800,841,968,1013,1152 ⋆ a(n) = n ^ 2 + 4 * floor(n / 2) ^ 2. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5), n >= 5. ●

▶ [A360790] 8,13,41,53,137,173,305,397,533,877,977,1373,1697,1885,2245,2813,35 17,3737,4493,5077,5345,6277,6953,7937,9413 ⋆ Squared length of diagonal of rig ht trapezoid with three consecutive prime length sides. ● a(n) = prime(n) ^ 2 + (prime(n + 2) - prime(n + 1)) ^ 2. ●

▶ [A096229] 0,8,14,18,20,190,198,204,208,210,580,588,594,598,600,1170,1178,118 4,1188,1190,1960,1968,1974,1978,1980 ⋆ 0 * 9, 1 * 8, 2 * 7, 3 * 6, 4 * 5; 10 * 19, 11 * 18, ..., 14 * 15; 20 * 29, 21 * 28, ..., 24 * 25; 30 * 39, ... ● a(n) = (floor(n / 5) * 10 + (n mod 5)) * (floor(n,5) * 10 + 9 - (n mod 5)) - _ Colin Barker _ , F eb 21 2013 ●

▶ [A345089] 8,14,20,27,36,44,53,63,70,78,90,100,106,118,132,143,153,162,173,18 5,194,204,219,230,237 ⋆ Averages of two consecutive odd - indexed odd primes. ● a(n) = (prime(2 * n + 1) + prime(2 * n + 3)) / 2. ●

▶ [A063216] 1,8,14,22,28,35,42,49,55,63,69,76,83,90,96,104,110,117,124,131,137,1 45,151,158,165 ⋆ Dimension of the space of weight 2n cuspidal newforms for Ga

mma _ 0(49). • a(n) = a(n - 2) + a(n - 3) - a(n - 5). G.f.: x * (1 + 8 * x + 13 * x ^ 2 + 13 * x ^ 3 + 6 * x ^ 4) / ((1 - x) ^ 2 * (1 + x) * (1 + x + x ^ 2)). [_ Colin Barker _ , Sep 27 2012] •

▶ [A238290] 0,8,14,22,28,36,42,50,56,64,70,78,84,92,98,106,112,120,126,134,140,148,154,162,168 ⋆ a(n + 1) = a(n) + 6 + 2 * (n - 2 * floor(n / 2)) for n > 0, a(0) = 0. • a(n) = floor((2 * n + 1) / 4) + 2 * floor((2 * n + 1) / 2) + 3 * floor(3 * (2 * n + 1) / 4). • a(n) = 8 * floor((n + 1) / 2) + 6 * floor(n / 2). •

▶ [A100315] 1,8,14,22,34,54,90,158,290,550,1066,2094,4146,8246,16442,32830,65602,131142,262218,524366,1048658,2097238,4194394,8388702,16777314 ⋆ Number of 3 X n 0 - 1 matrices avoiding simultaneously the right angled numbered polyomino patterns (ranpp) (00;1), (01;0), (10;0) and (01;1). • a(n) = 2 ^ n + 4 * n + 2 for n>0, a(0)=1. • a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 2 * a(n - 3) for n > 3. •

▶ [A248427] 8,14,24,36,48,64,80,100,120,144,168,196,224,256,288,324,360,400,440,484,528,576,624,676,728 ⋆ Circumference of the (n,n) - knight graph. • a(n) = (- 1 + (- 1) ^ n + 2 * n ^ 2) / 2 for n>4. • a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4) for n>8. •

▶ [A090993] 8,14,24,42,72,126,216,378,648,1134,1944,3402,5832,10206,17496,30618,52488,91854,157464,275562,472392,826686,1417176,2480058,4251528 ⋆ Number of meaningful differential operations of the n - th order on the space R ^ 8. • a(n + 4) = 4 * a(n + 2) - 3 * a(n). • a(n) = 3 * a(n - 2). • a(n) = (11 + 3 * (- 1) ^ n) * 3 ^ floor((n - 1) / 2). - _ Ralf Stephan _ , Jul 19 2013 •

▶ [A211525] 8,14,24,44,80,152,288,560,1088,2144,4224,8384,16640,33152,66048,131840,263168,525824,1050624,2100224,4198400,8394752,16785408,33566720,67125248 ⋆ Number of - 1..1 arrays x(i) of n + 1 elements i=1..n + 1 with set { t,u, v in 0,1 } ((x[i + t] + x[j + u] + x[k + v]) * (- 1) ^ (t + u + v)) having two or four distinct values for every i,j,k<=n. • a(n) = 3 * 2 ^ (n / 2) + 2 ^ (n + 1) for n even. • a(n) = 2 ^ (n + 1) + 2 ^ ((n + 3) / 2) for n odd. •

▶ [A187062] 0,0,8,14,26,42,64,90,134,172,232,300,378,464,584,690,834,990,1160,1342,1574,1784,2048,2328,2626 ⋆ Expansion of 2 * x ^ 2 * (4 + 7 * x + 5 * x ^ 2 - x ^ 3 - 4 * x ^ 4 + 6 * x ^ 6 + 4 * x ^ 7 - x ^ 8 - 2 * x ^ 9) / ((1 + x) ^ 2 * (1 + x + x ^ 2) ^ 2 * (1 - x) ^ 4) . • a(n) = 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4) - 4 * a(n - 5) - a(n - 6) + 2 * a(n - 7) + 2 * a(n - 8) - a(n - 10) . •

▶ [A236332] 1,8,14,36,63,112,172,260,365,504,666,868,1099,1376,1688,2052,2457,2920,3430,4004,4631,5328,6084,6916,7813 ⋆ The number of orbits of 4 - tuples of the dihedral group of order 2n acting on { 1,2,...,n } . • a(n) = (9 + 7 * (- 1) ^ n + 2 * n ^ 3) / 4. • a(n) = (n - 2) * (n ^ 2 + 2 * n + 4) / 2 + 8 for even n . • a(n) = (n - 1) * (n ^ 2 + n + 1) / 2 + 1 for odd n. •

▶ [A220037] 8,14,36,119,297,626,1165,1963,3088,4630,6711,9492,13175,18010,24304,32431,42843,56082,72793,93738,119811,152054,191674,240061,298807 ⋆ Number of 7 X n arrays of the minimum value of corresponding elements and their horizontal or diagonal neighbors in a random, but sorted with lexicographically nondecreasing rows and nonincreasing columns, 0..1 7 X n array. • a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>16. •

▶ [A198307] 8,14,50,86,302,518,1814,3110,10886,18662,65318,111974,391910,671846,2351462,4031078,14108774,24186470,84652646,145118822,507915878,870712934,3047495270,5224277606,18284971622 ⋆ Moore lower bound on the order of a (7,g) - cage. • a(2 * i) = 2 * Sum _{ j=0..i - 1 } 6 ^ j = string "2" ^ i read in base 6. • a(2 * i + 1) = 6 ^ i + 2 * Sum _{ j=0..i - 1 } 6 ^ j = string "1" * "2" ^ i read in base 6. • a(n) = a(n - 1) + 6 * a(n - 2) - 6 * a(n - 3) for n>5. • a(n) = 2 * (6 ^ (n / 2) - 1) / 5 for n>2 and even. • a(n) = (7 * 6 ^ (n / 2 - 1 / 2) - 2) / 5 for n>2 and odd. (End) •

▶ [A003331] 8,15,22,29,34,36,41,43,48,50,55,57,60,62,64,67,69,71,74,76,78,81,83,85,86 ⋆ Numbers that are the sum of 8 positive cubes. • a(n) = 142 + n for all n > 478. - _ M. F. Hasler _ , Aug 13 2020 •

▶ [A016993] 1,8,15,22,29,36,43,50,57,64,71,78,85,92,99,106,113,120,127,134,141,148,155,162,169 ⋆ a(n) = 7 * n + 1. • a(n) = 7 * n + 1. •

▶ [A373511] 1,1,1,1,1,1,1,1,8,15,22,29,36,43,50,253,505,806,1156,1555,2003,2500,9906,20105,33440 ⋆ Expansion of 1 / (1 - x / (1 - 49 * x ^ 7) ^ (1 / 7)). • a(7 * n) = 50 ^ (n - 1) for n > 0. • a(n) = Sum _{ k=0..floor(n / 7) } 49 ^ k * binomial(n / 7 - 1,k). •

▶ [A318111] 1,1,1,8,15,26,42,64,93,130,176,232,299,378,470,576,697,834,988,1160,1351,1562,1794,2048,2325 ⋆ Number of maximal 1 - intersecting families of 2 - sets of [n] = { 1,2,...,n } . • a(n) = n * (8 - 3 * n + n ^ 2) / 6 for n>3. • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>7. •

▶ [A240522] 8,15,28,45,77,117,176,221,304,391,475,667,775,1073,1271,1591,1927,2107,2491,2891,3233,3953,4331,4891,5609 ⋆ S _ 5 sequence in partition of integers > 1 described in A240521. • a(n)=q _ n * q _ (n + 2), where q _ n is the n - th term of A050376. •

▶ [A188558] 8,15,28,52,96,176,320,576,1024,1793,3084,5200,8584,13866,21920,33932,51480,76627,112028,161052,227920,317860,437280,593960,797264 ⋆ Number of 7 X n binary arrays without the pattern 0 1 diagonally, vertically, antidiagonally or horizontally. • a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. •

▶ [A123526] 1,1,1,1,1,1,1,1,8,15,29,57,113,225,449,897,1793,3578,7141,14253,28449,56785,113345,226241,451585 ⋆ Octanacci numbers. • a(n)=1 for 1 <= n <= 8, a(n) = a(n - 1) + a(n - 2) + ... + a(n - 8) for n > 8. •

▶ [A083686] 8,15,29,57,113,225,449,897,1793,3585,7169,14337,28673,57345,114689,229377,458753,917505,1835009,3670017,7340033,14680065,29360129,58720257,117440513 ⋆ a(0) = 8; for n>0, a(n) = 2 * a(n - 1) - 1. • a(n) = 7 * 2 ^ n + 1 . - David Brotherton (dbroth01(AT)aol.com), Jul 29 2003 • a(n) = 3 * a(n - 1) - 2 * a(n - 2), n>1. - _ Vincenzo Librandi _ , Nov 03 2011 •

▶ [A293360] 8,15,30,60,119,237,473,946,1892,3784,7567,15133,30266,60532,121063,242125,484250,968499,1936997,3873994,7747987,15495974,30991948,61983896,123967791 ⋆ Least integer k such that k / 2 ^ n > e ^ 2. • a(n) = ceiling(r * 2 ^ n), where r = e ^ 2. • a(n) = A068459n) + 1. •

▶ [A197602] 8,15,37,76,140,234,364,536,756,1030,1364,1764,2236,2786,3420,4144,4964,5886,6916,8060,9324,10714,12236,13896,15700 ⋆ Floor((n + 1 / n) ^ 3). • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>7. •

▶ [A275277] 1,1,1,1,8,15,43,113,295,778,2045,5377,14141,37185,97784,257139,676187,1778141,4675903,12296026,32334345,85028273,223595289,587979169,1546184200 ⋆ a(n) = a(n - 1) + 3 * a(n - 2) + 3 * a(n - 3) + a(n - 4), where a(0) = a(1) = a(2) = a(3) = 1. • a(n) = a(n - 1) + 3 * a(n - 2) + 3 * a(n - 3) + a(n - 4), where a(0) = a(1) = a(2) = a(3) = 1. •

▶ [A362906] 1,1,8,15,50,99,232,429,835,1430,2480,3978,6372,9690,14640,21318,30789,43263,60280,82225,111254,148005,195416,254475,329095 ⋆ Number of n element multisets of length 3 vectors over GF(2) that sum to zero. • a(n) = binomial(n + 7, 7) / 8 for odd n; • a(n) = (binomial(n + 7, 7) + 7 * binomial(n / 2 + 3, 3)) / 8 for even n. •

▶ [A161342] 0,1,8,15,64,71,120,169,512,519,568,617,960,1009,1352,1695,4096,4103,4152,4201,4544,4593,4936,5279,7680 ⋆ Number of "ON" cubic cells at n - th stage in simple 3 - dimensional cellular automaton: a(n) = A160428(n) / 8. • a(2 ^ n) = 2 ^ (3n). •

▶ [A015442] 0,1,1,8,15,71,176,673,1905,6616,19951,66263,205920,669761,2111201,6799528,21577935,69174631,220220176,704442593,2245983825,7177081976,22898968751,73138542583,233431323840 ⋆ Generalized Fibonacci numbers: a(n) = a(n - 1) + 7 * a(n - 2), a(0)=0, a(1)=1. • a(n) = (((1 + sqrt(29)) / 2) ^ (n + 1) - ((1 - sqrt(29)) / 2) ^ (n + 1)) / sqrt(29). • a(n) = 8 * a(n - 2) + 7 * a(n - 3) with characteristic polynomial x ^ 3 - 8 * x - 7. - _ Roger L. Bagula _ , May 30 2007 • a(n) = (Sum _{ 1<=k<=n, k odd } C(n,k) * 29 ^ ((k - 1) / 2)) / 2 ^ (n - 1). - _ Vladimir Shevelev _ , Feb 05 2014 •

▶ [A253211] 8,15,71,519,4103,32775,262151,2097159,16777223,134217735,1073741831,8589934599,68719476743,549755813895,4398046511111,35184372088839,281474976710663,2251799813685255,18014398509481991,144115188075855879,1152921504606846983 ⋆ a(n) = 8 ^ n + 7. • a(n) = 9 * a(n - 1) - 8 * a(n - 2) for n>1 . •

▶ [A132374] 1,1,8,15,120,274,2192,5531,44248,118686,949488,2654646,21237168,61189668,489517344,1443039123,11544312984,34648845862,277190766896,844131474530,6753051796240,20813234394492,166505875155936,518373091849502 ⋆ Expansion of c(7 * x ^ 2) / (1 - x * c(7 * x ^ 2)), where c(x) is the g.f. of A000108. • a(n) = 4 * (2 * (n + 1) * a(n - 1) + 7 * (n - 2) * a(n - 2) - 56 * (n - 2) * a(n - 3)) / (n + 1). •

▶ [A247061] 1,8,16,17,24,32,33,40,48,49,56,64,65,72,80,81,88,96,97,104,112,113,120,128,129 ⋆ Dynamic Betting Game D(n,5,1). • a(n) = a(n - 1) + a(n - 3) - a(n - 4). - _ Colin Barker _ , Sep 11 2014 •

▶ [A078131] 8,16,24,27,32,35,40,43,48,51,54,56,59,62,64,67,70,72,75,78,80,81,83,86,88 ⋆ Numbers which can be written as sum of cubes > 1. • a(n) = n + 83 for n >= 72. - _ Robert Israel _ , Apr 05 2020 •

▶ [A008590] 0,8,16,24,32,40,48,56,64,72,80,88,96,104,112,120,128,136,144,152,160,168,176,184,192 ⋆ Multiples of 8. • a(n) = (2 * n + 1) ^ 2 - (2 * n - 1) ^ 2. - Xavier Acloque, Oct 22 2003 • a(n) = 8 * n = 2 * a(n - 1) - a(n - 2). • a(n) = Sum _{ k=1..4n } (i ^ k + 1) * (i ^ (4n - k) + 1), where i=sqrt(- 1). - _ Bruno Berselli _ , Mar 19 2012 • a(n) = (n + 2) ^ 2 - (n - 2) ^ 2 = 4 * (n + 2) + 4 * (n - 2), as exemplified below. - _ Peter M. Chema _ , Apr 03 2016 •

▶ [A022144] 1,8,16,24,32,40,48,56,64,72,80,88,96,104,112,120,128,136,144,152,160,168,176,184,192 ⋆ Coordination sequence for root lattice B _ 2. • a(n) = [x ^ (2 * n)] ((1 + x) / (1 - x)) ^ 2. • a(n) = (2 * n + 1) ^ 2 - (2 * n - 1) ^ 2. Binomial transform of [1, 7, 1, - 1, 1, - 1, 1, ...]. - _ Gary W. Adamson _ , Dec 27 2007 • a(n) = 0 ^ n + 8 * n. - _ Vincenzo Librandi _ , Aug 21 2011 •

▶ [A186544] 8,16,24,32,40,48,56,64,72,80,88,96,104,112,120,129,137,145,153,161,169,177,185,193,201 ⋆ a(n) = floor((Pi - 2) * n / (Pi - 3)); complement of A187320. • a(n) = floor((Pi - 2) * n / (Pi - 3)). •

▶ [A020335] 8,16,24,32,40,48,350,400,450,500,550,600,650,700,750,800,850,900,950,1000,1050,1100,1150,1200,1250 ⋆ Numbers whose base - 7 representation is the juxtaposition of two identical strings. • a(n) = n * 7 ^ floor(log _ 7(n) + 1) + n. - _ Ilya Gutkovskiy _ , Jan 26 2018 •

▶ [A182767] 8,16,25,33,41,50,58,67,75,83,92,100,109,117,125,134,142,151,159,167,176,184,192,201,209 ⋆ Beatty sequence for 1 + e ^ 2. • a(n)=floor(n * (1 + e ^ 2)) = floor(n + n * A072334). •

▶ [A302537] 1,8,16,25,35,46,58,71,85,100,116,133,151,170,190,211,233,256,280,305,331,358,386,415,445 ⋆ a(n) = (n ^ 2 + 13 * n + 2) / 2. • a(n) = binomial(n + 1, 2) + 6 * n + 1 = binomial(n, 2) + 7 * n + 1. • a(n) = a(n - 1) + n + 6. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n >= 3, where a(0) = 1, a(1) = 8 and a(2) = 16. • a(n) = 2 * a(n - 1) - a(n - 2) + 1. •

▶ [A332918] 8,16,29,51,85,136,206,301,423,577,768,998,1272,1594,1969,2399,2889,3443,4066,4760,5530,6380,7315,8337,9451 ⋆ Average number of binary strings of length n with Levenshtein distance <= 3 from a uniform randomly sampled binary string of this length, rounded to nearest integer. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 4) - 3 * a(n - 5) + 3 * a(n - 6) - a(n - 7) for n>16. •

▶ [A018922] 8,16,31,60,116,224,432,833,1606,3096,5968,11504,22175,42744,82392,158816,306128,590081,1137418,2192444,4226072,8146016,15701951,30266484,58340524 ⋆ Define the generalized Pisot sequence T(a(0),a(1)) by: a(n + 2) is the greatest integer such that a(n + 2) / a(n + 1) < a(n + 1) / a(n). This is T(8, 16). • a(n) = 2 * a(n - 1) - a(n - 5). •

▶ [A259751] 8,16,32,40,56,64,80,88,104,112,128,136,152,160,176,184,200,208,224,232,248,256,272,280,296 ⋆ Numbers that are congruent to { 8, 16 } mod 24. • a(n) = 8 * A001651. - _ Danny Rorabaugh _ , Oct 22 2015 • a(n) = 12 * n - 2 * (- 1) ^ n - 6. • a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n>3. •

▶ [A139598] 0,8,16,32,48,72,96,128,160,200,240,288,336,392,448,512,576,648,720,800,880,968,1056,1152,1248 ⋆ A035008(n) followed by A139098(n + 1). • a(n) = (1 - (- 1) ^ n + 4 * n + 2 * n ^ 2). • a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4). •

▶ [A137243] 8,16,32,48,80,96,144,176,224,256,336,368,464,512,576,640,768,816,960,1024,1120,1200,1376,1440,1600 ⋆ Number of coprime pairs (a,b) with - n <= a,b <= n. • a(n) = a(n - 1) + 8 * EulerPhi(n), with a(1)=8. - _ Juan M. Marquez _ , Apr 24 2015 •

▶ [A146541] 1,8,16,32,64,128,256,512,1024,2048,4096,8192,16384,32768,65536,131072,262144,524288,1048576,2097152,4194304,8388608,16777216,33554432,67108864 ⋆ Binomial transform of A010688. • a(0)=1, a(n) = 2 ^ (n + 2) for n>0. •

► [A271994] 8,16,34,52,84,116,166,216,288,360,458,556,684,812,974,1136,1336,1536,1778,2020,2308,2596,2934,3272,3664 ⋆ The chalcogen sequence (a(n) = A018227(n) - 2). • a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + a(n - 4) + 2 * a(n - 5) - a(n - 6) for n>7. • a(n) = (2 * n ^ 3 + 12 * n ^ 2 + 25 * n + (- 1) ^ n * 3 * (n + 2) - 30) / 12. - _ Ilya Gutkovskiy _ , May 29 2016 •

► [A366511] 8,16,35,80,188,451,1100,2720,6803,17176,43700,111875,287828,743416,1926035,5001920,13014188,33909571,88452380,230923280,603268883,1576786216,4122895460,10783511555,28210861988 ⋆ a(n) = Lucas(2 * n) + 2 ^ (n + 1) + 1. • a(n) = 6 * a(n - 1) - 12 * a(n - 2) + 9 * a(n - 3) - 2 * a(n - 4). •

► [A197986] 8,16,37,77,141,235,364,536,756,1030,1364,1764,2236,2786,3420,4144,4964,5886,6916,8060,9324,10714,12236,13896,15700 ⋆ Round((n + 1 / n) ^ 3). • a(1)= 8, a { 2 } =16, a(3)=37, a(4)=77, a(5)=141, a(6)=235, a(7)=364, a(8)=536, a(9)=756, a(10)=1030, a(n)=4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) [From Harvey P. Dale, Apr 05 2012] •

► [A108576] 0,0,0,0,0,0,0,0,0,8,16,40,64,96,128,184,240,320,400,504,608,744,880,1056,1232 ⋆ Number of 3 X 3 magic squares (with distinct positive entries) having all entries < n. • a(n) is given by a quasipolynomial of period 12. •

► [A297619] 0,0,8,16,48,96,224,448,960,1920,3968,7936,16128,32256,65024,130048,261120,522240,1046528,2093056,4190208,8380416,16769024,33538048,67092480 ⋆ a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 4 * a(n - 3), a(1) = 0, a(2) = 0, a(3) = 8. • a(n) = 2 ^ (n + 1) - 2 ^ (floor(n / 2) + 2). • a(n) = 2 * (n - 1) + 2 * a(n - 2) - 4 * a(n - 3). •

► [A212764] 0,1,8,16,54,81,192,256,500,625,1080,1296,2058,2401,3584,4096,5832,6561,9000,10000,13310,14641,19008,20736,26364 ⋆ Number of (w,x,y,z) with all terms in { 0,...,n } , w, x and y odd, and z odd. • a(n) = a(n - 1) + 4 * a(n - 2) - 4 * a(n - 3) - 6 * a(n - 4) + 6 * a(n - 5) + 4 * a(n - 6) - 4 * a(n - 7) - a(n - 8) + a(n - 9). • a(n) = (2 * n ^ 4 + 10 * n ^ 3 + 18 * n ^ 2 + 12 * n + 1 + (2 * n ^ 3 + 6 * n ^ 2 + 4 * n - 1) * (- 1) ^ n) / 32. - _ Luce ETIENNE _ , May 12 2015 •

► [A331419] 0,0,0,0,0,0,8,16,80,160,480,960,2240,4480,8960,17920,32256,64512,107520,215040,337920,675840,1013760,2027520,2928640 ⋆ a(n) is the number of subsets of { 1..n } that contain exactly 4 odd numbers. • a(n) = binomial((n + 1) / 2, 4) * 2 ^ ((n - 1) / 2), n odd; • a(n) = binomial((n / 2), 4) * 2 ^ (n / 2), n even. • a(n) = 10 * a(n - 2) - 40 * a(n - 4) + 80 * a(n - 6) - 80 * a(n - 8) + 32 * a(n - 10) for n>10. (End) •

► [A117868] 8,16,88,160,808,1456,7288,13120,65608,118096,590488,1062880,5314408,9565936,47829688,86093440,430467208,774840976,3874204888,6973568800,34867844008,62762119216,313810596088,564859072960,2824295364808 ⋆ Number of palindromes (in base 9) below 9 ^ n. • a(n) = 10 * 9 ^ ((n - 1) / 2) - 2 (n odd), 2 * 9 ^ (n / 2) - 2 (n even). • a(1)=0, a(2)=8, a(3)=16, a(n)=a(n - 1) + 9 * a(n - 2) - 9 * a(n - 3). - _ Harvey P. Dale _ , Jul 17 2012 • a(n) = 8 * 3 ^ (n - 1) + 2 * (- 3) ^ (n - 1) - 2. - _ Robert Israel _ , Apr 26 2015 •

► [A291001] 0,8,16,88,288,1192,4400,17144,65088,250184,955984,3663256,14018400,53679592,205487984,786733112,3011882112,11530896008,44144966800,169006205656,647027178912,2477097797416,9483385847216,36306456276344,138996613483200 ⋆ p - INVERT of (1,1,1,1,1,...), where p(S) = 1 - 8 * S ^ 2. • a(n) = 2 * a(n - 1) + 7 * a(n - 2) for n >= 3. • a(n) = sqrt(2) * ((1 + 2 * sqrt(2)) ^ n - (1 - 2 * sqrt(2)) ^ n). - _ Colin Barker _ , Aug 23 2017 •

► [A062508] 8,16,88,736,6568,59056,531448,4782976,43046728,387420496,3486784408,31381059616,282429536488,2541865828336,22876792454968,205891132094656,1853020188851848,16677181699666576,150094635296999128 ⋆ a(n) = 3 ^ (2n) + 7. • a(0)=8, a(1)=16, a(n)=10 * a(n - 1) - 9 * a(n - 2). - _ Harvey P. Dale _ , May 13 2012 •

► [A107906] 1,8,16,128,256,2048,4096,32768,65536,524288,1048576,8388608,16777216,134217728,268435456,2147483648,4294967296,34359738368,68719476736,549755813888,1099511627776,8796093022208,17592186044416 ⋆ Expansion of (1 + 8x) / (1 - 16x ^ 2). • a(n) = ((1 + sqrt(4)) * (2 * sqrt(4)) ^ n + (1 - sqrt(4)) * (- 2 * sqrt(4)) ^ n) / 2; • a(n) = 3 * 4 ^ n / 2 - (- 4) ^ n / 2. • a(2n) = 16 ^ n, a(2n + 1) = 8 * 16 ^ n. •

► [A022390] 8,17,25,42,67,109,176,285,461,746,1207,1953,3160,5113,8273,13386,21659,35045,56704,91749,148453,240202,388655,628857,1017512 ⋆ Fibonacci sequence beginning 8, 17. • a(n) = 8 * Fibonacci(n + 2) + Fibonacci(n). - _ Michel Marcus _ , Mar 03 2018 •

► [A041831] 1,1,8,17,25,42,67,913,2806,6525,15856,85805,101661,187466,851525,8702716,35662389,44365105,80027494,444502575,969032644,2382567863,8116736233,107900138892,116016875125 ⋆ Denominators of continued fraction convergents to sqrt(436). • a(n) = 316141343972498 * a(n - 30) - a(n - 60) for n>59. - _ Vincenzo Librandi _ , Dec 25 2013 •

► [A041122] 8,17,25,67,92,251,4108,8467,12575,33617,46192,126001,2062208,4250417,6312625,16875667,23188292,63252251,1035224308,2133700867,3168925175,8471551217,11640476392,31752504001 ⋆ Numerators of continued fraction convergents to sqrt(70). • a(n) = 502 * a(n - 6) - a(n - 12). G.f.: - (x + 1) * (x ^ 10 - 9 * x ^ 9 + 26 * x ^ 8 - 51 * x ^ 7 + 118 * x ^ 6 - 210 * x ^ 5 - 41 * x ^ 4 - 51 * x ^ 3 - 16 * x ^ 2 - 9 * x - 8) / (x ^ 12 - 502 * x ^ 6 + 1). [_ Colin Barker _ , Jul 18 2012] •

► [A277052] 8,17,26,35,43,52,61,70,79,87,96,105,114,123,131,140,149,158,166,175,184,193,202,210,219 ⋆ a(n) = n + floor(n / (2 / sqrt(Pi) - 1)). • a(n) = n + floor(n / (2 / sqrt(Pi) - 1)). •

► [A017257] 8,17,26,35,44,53,62,71,80,89,98,107,116,125,134,143,152,161,170,179,188,197,206,215,224 ⋆ a(n) = 9n + 8. • a(n) = 18 * n - a(n - 1) + 7. - _ Vincenzo Librandi _ , Nov 19 2010 • a(0)=8, a(1)=17, a(n) = 2 * a(n - 1) - a(n - 2). G.f.: (8 + x) / (1 - x) ^ 2. - _ Colin Barker _ , Jan 24 2012 •

► [A056121] 0,8,17,27,38,50,63,77,92,108,125,143,162,182,203,225,248,272,297,323,350,378,407,437,468 ⋆ a(n) = n * (n + 15) / 2. • a(n - 15) = binomial(n,2) - 7 * n. - _ Zerinvary Lajos _ , Nov 26 2006 • a(n) = a(n - 1) + n + 7 (with a(0)=0). - _ Vincenzo Librandi _ , Aug 07 2010 • a(n) = 8 * n - floor(n / 2) + floor(n ^ 2 / 2). - _ Wesley Ivan Hurt _ , Jun 15 2013 •

► [A028884] 1,8,17,28,41,56,73,92,113,136,161,188,217,248,281,316,353,392,433,476,521,568,617,668,721 ⋆ a(n) = (n + 3) ^ 2 - 8. • a(n) = a(n - 1) + 2 * n + 5 (with a(0) = 1). - _ Vincenzo Librandi _ , Aug 05 2010 • a(n) = 2 * a(n - 1) - a(n - 2) + 2, n >= 2. •

► [A099358] 1,8,17,30,43,61,68,87,105,106,122,140,162,184,202,227,246,273,283,290,317,339,370,397,422 ⋆ a(n) = sum of digits of k ^ 4 as k runs from 1 to n. • a(n) = a(n - 1) + sum of decimal digits of n ^ 4. • a(n) = sum(k=1, n, sum(m=0, floor(log(k ^ 4)), floor(10((k ^ 4) / (10 ^ (((floor(log(k ^ 4)) + 1)) - m)) - floor((k ^ 4) / (10 ^ (((floor(log(k ^ 4)) + 1)) - m))))))). •

► [A077221] 0,1,8,17,32,49,72,97,128,161,200,241,288,337,392,449,512,577,648,721,800,881,968,1057,1152 ⋆ a(0) = 0 and then alternately even and odd numbers in increasing order such that the sum of any two successive terms is a square. • a(2n) = 8 * n ^ 2, a(2n + 1) = 8 * n(n + 1) + 1. • a(n) = 2 * n ^ 2 + 4 * n + 1 [+ 1 if n is odd] with a(0)=1. • a(n) = 2 * n ^ 2 + ((- 1) ^ n - 1) / 2. - _ Omar E. Pol _ , Sep 28 2011 •

► [A106648] 8,17,32,53,80,113,152,197,248,305,368,437,512,593,680,773,872,977,1088,1205,1328,1457,1592,1733,1880 ⋆ a(n) = 3 * n ^ 2 + 6 * n + 8. • a(0)=8, a(1)=17, a(2)=32, a(n)=3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Sep 20 2012 •

► [A159696] 8,17,36,76,160,336,704,1472,3072,6400,13312,27648,57344,118784,245760,507904,1048576,2162688,4456448,9175040,18874368,38797312,79691776,163577856,335544320 ⋆ a(0)=8, a(n) = 2 * a(n - 1) + 2 ^ (n - 1) for n > 0. • a(n) = Sum _{ k=0..n } (k + 8) * binomial(n,k). • a(n) = (16 + n) * 2 ^ (n - 1). • a(n) = 4 * a(n - 1) - 4 * a(n - 2). •

► [A188129] 8,17,41,113,353,1217,4481,17153,67073,265217,1054721,4206593,16801793,67158017,268533761,1073938433,4295360513,17180655617,68721049601,274881052673,1099517919233,4398059094017,17592211210241,70368794509313,281475077373953 ⋆ a(n) = (2 ^ n + 3) ^ 2 - 8. • a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3). G.f.: - (34 * x ^ 2 - 39 * x + 8) / ((x - 1) * (2 * x - 1) * (4 * x - 1)). [_ Colin Barker _ , Nov 11 2012] •

► [A048695] 1,8,17,42,101,244,589,1422,3433,8288,20009,48306,116621,281548,679717,1640982,3961681,9564344,23090369,55745082,134580533,324906148,784392829,1893691806,4571776441 ⋆ Generalized Pellian with second term equal to 8. • a(n) = 2 * a(n - 1) + a(n - 2); a(0)=1, a(1)=8. • a(n) = ((7 + sqrt(2))(1 + sqrt(2)) ^ n - (7 - sqrt(2))(1 - sqrt(2)) ^ n) / 2 * sqrt(2). •

► [A153873] 8,17,44,116,305,800,2096,5489,14372,37628,98513,257912,675224,1767761,4628060,12116420,31721201,83047184,217420352,569213873,1490221268,3901449932,10214128529,26740935656,70008678440 ⋆ a(n) = 9 * Fibonacci(2n + 1) - 1. • a(n) = 3 * a(n - 1) - a(n - 2) + 1. • a(n) = 4 * a(n - 1) - 4 * a(n - 2) + a(n - 3). • a(n) = 3 * a(n - 1) - 3 * a(n - 3) + a(n - 4). • a(n) = - 1 + (9 / 2) * (((3 / 2) + (1 / 2) * sqrt(5)) ^ n + ((3 / 2) - (1 / 2) * sqrt(5)) ^ n) + (9 / 10) * sqrt(5) * (((3 / 2) + (1 / 2) * sqrt(5)) ^ n - ((3 / 2) - (1 / 2) * sqrt(5)) ^ n), with n>=0. _ Paolo P. Lava _ , Jan 20 2009 •

► [A171065] 0,1,1,8,17,81,224,881,2737,9928,32481,113761,380800,1313441,4441121,15215688,51677297,176530481,600723424,2049428881,6980069457,23799693448,81088954561,276417142721,941948403200 ⋆ G.f. - x * (x - 1) * (1 + x) / (1 - x - 8 * x ^ 2 - x ^ 3 + x ^ 4). • a(n)= + a(n - 1) + 8 * a(n - 2) + a(n - 3) - a(n - 4). • a(n) = (T(n,alpha) - T(n,beta)) / (alpha - beta), where alpha = (1 + sqrt(41)) / 4 and beta = (1 - sqrt(41)) / 4 and T(n,x) denotes the Chebyshev polynomial of the first kind. • a(n) = the bottom left entry of the 2 X 2 matrix T(n, M), where M is the 2 X 2 matrix [0, 5 / 2; 1, 1 / 2]. • a(n) = U(n - 1,i * (1 + sqrt(2)) / 2) * U(n - 1,i * (1 + sqrt(2)) / 2), where U(n,x) denotes the Chebyshev polynomial of the second kind. •

► [A041537] 1,1,8,17,127,144,4735,4879,38888,82655,617473,700128,23021569,23721697,189073448,401868593,3002153599,3404022192,111930863743,11533488595,919275065288,1953885016511,14596470180865,16550355197376,544207836496897 ⋆ Denominators of continued fraction convergents to sqrt(285). • a(n) = 4862 * a(n - 6) - a(n - 12) for n>11. - _ Vincenzo Librandi _ , Dec 19 2013 •

► [A153315] 1,8,17,144,305,2584,5473,46368,98209,832040,1762289,14930352,31622993,267914296,567451585,4807526976,10182505537,86267571272,182717648081,1548008755920,3278735159921,27777890035288,58834515230497,498454011879264,1055742538989025 ⋆ Denominators of continued fraction convergents to sqrt(5 / 4). • a(n) = (3 - (- 1) ^ n) * Fibonacci(3 * (n + 1)) / 4. - _ Ehren Metcalfe _ , Apr 04 2019 •

► [A171607] 8,18,24,32,50,64,72,81,98,128,160,162,192,200,242,288,324,338,375,384,392,450,512,578,648 ⋆ Expressible as A * B ^ A in a nontrivial way. • a(n) = 2n ^ 2 - O(n ^ (5 / 3)). - _ Charles R Greathouse IV _ , Feb 19 2017 •

► [A017365] 8,18,28,38,48,58,68,78,88,98,108,118,128,138,148,158,168,178,188,198,208,218,228,238,248 ⋆ a(n) = 10n + 8. • a(n) = 2 * a(n - 1) - a(n - 2). - _ Vincenzo Librandi _ , May 29 2011 •

► [A352735] 8,18,28,38,58,68,78,80,81,82,83,85,86,87,88,89,98,108,118,128,138,158,168,178,180 ⋆ Lucky numbers in Chinese: Numbers whose decimal expansion contains 8 but not 4. • a(n) n ^ k where k = A154160 = 1.047951637.... •

► [A028563] 0,8,18,30,44,60,78,98,120,144,170,198,228,260,294,330,368,408,450,494,540,588,638,690,744 ⋆ a(n) = n * (n + 7). • a(n) = 2 * n + a(n - 1) + 6. - _ Vincenzo Librandi _ , Aug 05 2010 •

► [A211526] 8,18,32,60,104,192,344,648,1208,2328,4472,8760,17144,33912,67064,133368,265208,528888,1054712,2106360,4206584,8407032,16801784,33591288,67158008 ⋆ Number of - 1..1 arrays x(i) of n + 1 elements i=1..n + 1 with set { t ,u,v in 0,1 } ((x[i + t] + x[j + u] + x[k + v]) * (- 1) ^ (t + u + v)) having two, four or five distinct values for every i,j,k<=n. • a(n) = 9 * 2 ^ (n / 2) + 2 ^ (n + 1) - 8 for n even. • a(n) = 2 * (2 ^ n + 3 * 2 ^ ((n + 1) / 2) - 4) for n odd. •

► [A134062] 1,8,18,38,78,158,318,638,1278,2558,5118,10238,20478,40958,81918,163838,327678,655358,1310718,2621438,5242878,10485758,20971518,41943038,83886078 ⋆ Row sums of triangle A134061. • a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n >2. •

► [A067563] 8,18,40,63,110,156,238,285,368,522,620,777,902,1032,1175,1378,1593,1708,2010,2272,2409,2686,2905,3204,3686 ⋆ Product of n - th prime number and n - th composite number. • a(n) = prime(n) * composite(n). •

► [A153388] 8,18,48,128,338,888,2328,6098,15968,41808,109458,286568,750248,1964178,5142288,13462688,35245778,92274648,241578168,632459858,1655801408,4334944368,11349031698,29712150728,77787420488 ⋆ Second bisection of A15338

2. ● a(n) = 2 ^ (- n) * (- 2 ^ (1 + n) - (3 - sqrt(5)) ^ n * (- 5 + sqrt(5)) + (3 + sqrt(5)) ^ n * (5 + sqrt(5))). - _ Colin Barker _ , Nov 03 2016 ●

▶ [A173734] 8,18,118,1118,11118,111118,1111118,11111118,111111118,1111111118,11111111118,111111111118,1111111111118,11111111111118,111111111111118,1111111111111118,11111111111111118 ⋆ (10 ^ n + 62) / 9 for n>0. ● a(n) = a(n - 1) + 10 ^ (n - 1)= 10 * a(n - 1) - 62 with n>0, a(0)=7. ● a(n) = 11 * a(n - 1) - 10 * a(n - 2). - _ Vincenzo Librandi _ , Jul 05 2012 ●

▶ [A171371] 8,18,172,1176,8432,60000,427456,3044736,21688064,154486272,1100422144,7838423040,55833915392,397710876672,2832936583168,20179306512384,143739331739648,1023870442536960,7293137309138944,51949787395129344,370043822843887616 ⋆ a(n) = 6 * a(n - 1) + 8 * a(n - 2) with a(1) = 8, a(2) = 18. ● a(n) = ((77 * sqrt(17) - 255) * (sqrt(17) + 3) ^ n - (77 * sqrt(17) + 255) * (3 - sqrt(17)) ^ n) / 136. ●

▶ [A092692] 0,1,1,8,18,184,660,8448,42000,648576,4142880,74972160,586776960,12174658560,113020427520,2643856588800,28432576972800,740051782041600,9056055981772800,259500083163955200,3562946373482496000 ⋆ Expansion of e.g.f. - log(1 - x) / (1 - x ^ 2). ● a(n) = n! * Sum _{ k=1..n } (- 1) ^ (n - k) * Harmonic(k). - _ Vladeta Jovovic _ , Aug 14 2005 ●

▶ [A017485] 8,19,30,41,52,63,74,85,96,107,118,129,140,151,162,173,184,195,206,217,228,239,250,261,272 ⋆ a(n) = 11 * n + 8. ● a(n) = 22 * n + 5 - a(n - 1), with n>0, a(0)=8. - _ Vincenzo Librandi _ , Dec 24 2010 ● a(n) = 2 * a(n - 1) - a(n - 2). ●

▶ [A140672] 0,8,19,33,50,70,93,119,148,180,215,253,294,338,385,435,488,544,603,665,730,798,869,943,1020 ⋆ a(n) = n * (3 * n + 13) / 2. ● a(n) = (3 * n ^ 2 + 13 * n) / 2. ● a(n) = 3 * n + a(n - 1) + 5 for n>0, a(0)=0. - _ Vincenzo Librandi _ , Aug 03 2010 ● a(0)=0, a(1)=8, a(2)=19; for n>2, a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Dec 16 2011 ●

▶ [A289877] 1,8,19,36,60,93,136,191,259,342,441,558,694,851,1030,1233,1461,1716,1999,2312,2656,3033,3444,3891,4375 ⋆ Number of maximal cliques in the n - triangular honeycomb queen graph. ● a(n) = (2 * n * (22 - n + 2 * n ^ 2) - 95 - (- 1) ^ n) / 16. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - 2 * a(n - 3) + 3 * a(n - 4) - a(n - 5). ●

▶ [A192975] 1,1,8,19,41,78,141,245,416,695,1149,1886,3081,5017,8152,13227,21441,34734,56245,91053,147376,238511,385973,624574,1010641 ⋆ Constant term of the reduction by x ^ 2 - > x + 1 of the polynomial p(n,x) defined at Comments. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - a(n - 3) + a(n - 4). ● a(n) = Fibonacci(n + 3) + 3 * Lucas(n + 2) - 2 * (2 * n + 5). - _ G. C. Greubel _ , Jul 24 2019 ●

▶ [A156198] 8,19,41,85,173,349,701,1405,2813,5629,11261,22525,45053,90109,180221,360445,720893,1441789,2883581,5767165,11534333,23068669,46137341,92274685,184549373 ⋆ a(n) = 2 * a(n - 1) + 3 with n>1, a(1)=8. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) = 11 * 2 ^ (n - 1) - 3. [_ R. J. Mathar _ , Feb 19 2009] ●

▶ [A153026] 0,8,19,45,80,136,207,305,424,576,755,973,1224,1520,1855,2241,2672,3160,3699,4301,4960,5688,6479,7345,8280 ⋆ a(1)=0, a(n) = n ^ 3 - a(n - 1). ● a(n)= - 1 / 8 + 3 * n ^ 2 / 4 + n ^ 3 / 2 + 9 * (- 1) ^ n / 8. (End) ●

▶ [A017617] 8,20,32,44,56,68,80,92,104,116,128,140,152,164,176,188,200,212,224,236,248,260,272,284,296 ⋆ a(n) = 12 * n + 8. ● a(n) = 2 * a(n - 1) - a(n - 2). - _ Vincenzo Librandi _ , Jun 08 2011 ●

▶ [A363518] 1,8,20,32,50,80,116,152,194,248,308,368,434,512,596,680,770,872,980,1088,1202,1328,1460,1592,1730 ⋆ Concentric square numbers on the faces of a n n X n X n cube. ● a(n) = 6 * A194274 - 12 * n + 8, where n>1. ● a(n) = 3 * a(n - 1) - 4 * a(n - 2) + 4 * a(n - 3) - 3 * a(n - 4) + a(n - 5) for n > 6. (End) ●

▶ [A038522] 1,1,8,20,32,52,68,76,96,96,120,120,148,148,176,176,204,204,232,232,260,260,288,288,316 ⋆ On a (2n + 1) X (2n + 1) board, let m(i) be the number of squares that are i knight's moves from center; sequence gives max m(i) for i > = 0. ● a(n) = 28 * floor(n / 2) - 20 for n >= 10. - _ Andrew Howroyd _ , Feb 28 2020 ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n > 12. (End) ●

▶ [A139570] 0,8,20,36,56,80,108,140,176,216,260,308,360,416,476,540,608,680,756,836,920,1008,1100,1196,1296 ⋆ a(n) = 2 * n * (n + 3). ● a(n) = a(n - 1) + 4 * n + 4 (with a(0)=0). - _ Vincenzo Librandi _ , Nov 24 2010 ●

▶ [A265207] 1,8,20,36,60,92,140,204,300,428,620,876,1260,1772,2540,3564,5100,7148,10220,14316,20460,28652,40940,57324,81900 ⋆ Draw a square and follow these steps: Take a square and place at its edges isosceles right triangles with the edge as hypotenuse. Draw a square at every new edge of the triangles. Repeat for all the new squares of the same size. New figures are only placed on empty space. The structure is symmetric about the first square. The sequence gives the numbers of squares of equal size in successive rings around the center. ● a(0)=1, ● a(1)=8, ● a(2)=20, and thereafter ● a(n)=2 * a(n - 2) + 20. ● a(n)=4 * sum _{ k=1 }^{ [(n + 1) / 2] } (2 ^ k) + 6 * sum _{ k=1 }^{ [n / 2] } (2 ^ k). ● a(n) = (- 20 + 2 ^ (1 / 2 * (- 1 + n)) * (10 - 10 * (- 1) ^ n + 7 * sqrt(2) + 7 * (- 1) ^ n * sqrt(2))) for n>1. ●

▶ [A004118] 0,8,20,36,64,80,112,140,172,216,244,280,324,364,408 ⋆ Maximal excess of a Hadamard matrix of order 4n. ● a(n / 4) <= n(2m + 1) + 8[n / 4(n / 4 - 1) / (2(2m + 1))], if 4m ^ 2<=n / 4<=4m ^ 2 + 2m + 1 or 4m ^ 2 + 6m + 3<=n / 4<=4(m + 1) ^ 2, ● a(n / 4) <= 8[nm / 4 + 1 / 2[n / 4(n / 4 - 1) / (2m)] - (n + 4) / 8] + n + 4, if 4m ^ 2 + 2m + 1<n / 4<=4m ^ 2 + 4m + 1, ● a(n / 4)<=8[nm / 4 + 1 / 2[n / 4(n / 4 - 1) / (2(m + 1))] + (n - 4) / 8] + n + 4, if 4m ^ 2 + 4m + 1<=n / 4<4m ^ 2 + 6m + 3. ●

▶ [A006416] 1,8,20,38,63,96,138,190,253,328,416,518,635,768,918,1086,1273,1480,1708,1958,2231,2528,2850,3198,3573 ⋆ Number of loopless rooted planar maps with 3 faces and n vertices and no isthmuses. Also a(n)=T(4,n - 3), array T as in A049600. ● a(n - 3) = (1 / 6) * n ^ 3 - (1 / 2) * n ^ 2 - (8 / 3) * n + 6, n=6,7,... - _ Milan Janjic _ , Nov 09 2007 ● a(2)=1, a(3)=8, a(4)=20, a(5)=38, a(n)=4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Harvey P. Dale _ , Aug 25 2013 ● a(n + 2) = Hyper2F1([- 3, n], [1], - 1). - _ Peter Luschny _ , Aug 02 2014 ● a(n) = binomial(n + 3, 3) - 3 * (n + 1). - _ Robert H Cowen _ , Jun 23 2018 ●

▶ [A295933] 8,20,55,160,475,1420,4255,12760,38275,114820,344455,1033360,3100075,9300220,27900655,83701960,251105875,753317620,2259952855,6779858560,20339575675,61018727020,183056181055,549168543160,1647505629475 ⋆ Number of (not necessarily maximal) cliques in the n - Sierpinski sieve graph. ● a(n) = 5 * (3 + 7 * 3 ^ (n - 1)) / 6 for n > 1. ● a(n) = 4 * a(n - 1) - 3 * a(n - 2) for n > 1. ●

▶ [A360222] 0,8,20,56,92,152,212,296,380,488,596,728,860,1016,1172,1352,1532,1736,1940,2168,2396,2648,2900,3176,3452 ⋆ a(n) is the number of permutable pieces in a standard n X n X n Rubik's cube. ● a(n) = 8 + 12 * (n - 2) + 6 * ((n - 2) ^ 2 - (n mod 2)) for n > 1, a(1) = 0. ●

▶ [A212758] 1,8,20,57,118,172,299,468,594,865,1196,1424,1893,2440,2800,3521,4338,4860,5887,7028,7742,9129,10648,11584,13385 ⋆ Number of (w,x,y,z) with all terms in { 0,...,n } and w=[R / 2], where R=max { w,x,y,z }- min { w,x,y,z } and [ ]=floor. ● a(n)=a(n - 1) + 3 * a(n - 3) - 3 * a(n - 4) - 3 * a(n - 6) + 3 * a(n - 7) + a(n - 9) - a(n - 10). ●

▶ [A003685] 1,8,20,62,132,336,688,1578,3190,6902,13878,29038,58238,119518,239390,485822,972414,1960830,3923326,7882494,15768574,31616510,63240702,126655486,253327358 ⋆ Number of Hamiltonian paths in P _ 3 X P _ n. ● a(n) = 3 * a(n - 1) + 2 * a(n - 2) - 12 * a(n - 3) + 4 * a(n - 4) + 12 * a(n - 5) - 8 * a(n - 6), n>8. ● a(2 * m) = 121 * 2 ^ (2 * m - 4) - 4 * m * 2 ^ m - 25 * 2 ^ (m - 2) - 2, m > 1. ● a(2 * m + 1) = 121 * 2 ^ (2 * m - 3) - 31 * m * 2 ^ (m - 2) - 23 * 2 ^ (m - 1) - 2, m > 0. ● a(n) = 8 * a(n - 2) - 20 * a(n - 4) + 16 * a(n - 6) + 6, n > 8. (End) ●

▶ [A365606] 8,20,84,500,3540,26996,212052,1684724,13442772,107437172,859182420,6872514548,54977282004,439809752948,3518452514388,28147543587572,225180119118036,1801440264196724,14411520047331156,115292154179921396,922337214843187668,7378697662956950900,59029581136289955924 ⋆ Number of degree 2 vertices in the n - Sierpinski carpet graph. ● a(n) = (1 / 10) * 8 ^ n + (16 / 15) * 3 ^ n + 4. ● a(n) = 8 * a(n - 1) - 16 * 3 ^ (n - 2) - 28. ●

▶ [A094253] 1,8,20,120,496,2304,10240,46208,207360,932352,4189184,18827264,84606976,380223488,1708703744,7678853120,34508439552,155079540736,696921096192,3131935031296,14074788184064,63251524091904 ⋆ Let M be the 3 X 3 Matrix [- 4 4 8 / 1 0 0 / 0 1 0], a(n) = absolute value of the center term of M ^ n * [1 1 1]. ● a(n) / a(n - 1) tends to 1 / cos(3 * Pi / 7) = 4.4939592074... ● a(n) = 4 * a(n - 1) + 4 * a(n - 2) - 8 * a(n - 3), n > 4. ●

▶ [A134862] 8,21,29,42,55,63,76,84,97,110,118,131,144,152,165,173,186,199,207,220,228,241,254,262,275 ⋆ Wythoff ABB numbers. ● a(n) = A(B(B(n))), n>=1, with A=A000201, the lower Wythoff sequence and B=A001950, the upper Wythoff sequence. ●

▶ [A224039] 8,21,37,58,85,119,161,212,273,345,429,526,637,763,905,1064,1241,1437,1653,1890,2149,2431,2737,3068,3425 ⋆ Number of 3 X n 0..1 arrays with anti diagonals unimodal and rows and diagonals nondecreasing. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>5. ●

▶ [A000567] 0,1,8,21,40,65,96,133,176,225,280,341,408,481,560,645,736,833,936,1045,1160,1281,1408,1541,1680 ⋆ Octagonal numbers: n * (3 * n - 2). Also called star numbers. ● a(n) = n * (3 * n - 2). ● a(n) = (3n - 2) * (3n - 1) * (3n) / ((3n - 1) + (3n - 2) + (3n)), i.e., (the product of three consecutive numbers) / (their sum). a(1) = 1 * 2 * 3 / (1 + 2 + 3), a(2) = 4 * 5 * 6 / (4 + 5 + 6), etc. - _ Amarnath Murthy _ , Aug 29 2002 ● a(n) = Sum _{ k=1..n } (5 * n - 4 * k). - _ Paul Barry _ , Sep 06 2005 ● a(n) = C(n + 1,2) + 5 * C(n,2). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3), a(0)=0, a(1)=1, a(2)=8. - _ Jaume Oliver Lafont _ , Dec 02 2008 ● a(n) = a(n - 1) + 6 * n - 5 (with a(0)=0). - _ Vincenzo Librandi _ , Nov 20 2010 ●

▶ [A137742] 1,8,21,40,66,100,143,196,260,336,425,528,646,780,931,1100,1288,1496,1725,1976,2250,2548,2871,3220,3596 ⋆ a(n) = (n - 1) * (n + 4) * (n + 6) / 6 for n>1, a(1)=1. ● a(n) = + 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ● a(n) = binomial(n + 4,3) - 2 * (n + 4) for n>1. - _ Michael Chu _ , Dec 09 2021 ●

▶ [A275874] 0,8,21,40,66,100,143,196,260,336,425,528,646,780,931,1100,1288,1496,1725,1976,2250,2548,2871,3220,3596 ⋆ a(n) = (n - 4) * (n + 1) * (n + 3) / 6. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n > 7. ●

▶ [A180672] 0,8,21,42,76,131,220,364,597,974,1584,2571,4168,6752,10933,17698,28644,46355,75012,121380,196405,317798,514216,832027,1346256 ⋆ a(n) = Fibonacci(n + 7) - Fibonacci(7). ● a(n) = F(n + 7) - F(7) with F = A000045. ● a(n) = a(n - 1) + a(n - 2) + 13 for n>1, a(0)=0, a(1)=8, and where 13 = F(7). ● a(n) = (- 13 + (2 ^ (- 1 - n) * ((1 - sqrt(5)) ^ n * (- 29 + 13 * sqrt(5)) + (1 + sqrt(5)) ^ n * (29 + 13 * sqrt(5)))) / sqrt(5)). ● a(n) = 2 * a(n - 1) - a(n - 3) for n>2. (End) ●

▶ [A138179] 1,8,21,48,85,144,217,320,441,600,781,1008,1261,1568,1905,2304,2737,3240,3781,4400,5061,5808,6601,7488,8425 ⋆ Wiener index of the prism graph Y _ n on 2n nodes. ● a(2n + 1) = (2n + 1)(2n ^ 2 + 4 * n + 1); a(2n)=4n ^ 2 * (n + 1). ● a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + a(n - 4) + 2 * a(n - 5) - a(n - 6). ●

▶ [A067334] 8,21,50,105,210,404,758,1395,2530,4535,8052,14184,24820,43185,74770,128901,221382,378940,646690,1100655,1868738,3165811,5352360,9032400,15216800 ⋆ Convolution of Fibonacci F(n + 1), n>=0, with F(n + 6), n>=0. ● a(0)=8, a(1)=21, a(2)=50, a(3)=105, a(n)=2 * a(n - 1) + a(n - 2) - 2 * a(n - 3) - a(n - 4) [From Harvey P. Dale, Apr 07 2012] ●

▶ [A227653] 8,21,54,138,352,897,2285,5820,14823,37752,96148,244872,623645,1588311,4045140,10302237,26237926,66823230,170186624,433434405,1103878665,2811378360,7160069791,18235396608,46442241368 ⋆ a(1) = least k such that 1 / 2 + 1 / 3 < H(k) - H(3); a(2) = least k such that H(a(1)) - H(3) < H(k) - H(a(1)), and for n > 2, a(n) = least k such that H(a(n - 1)) - H(a(n - 2) > H(k) - H(a(n - 1)), where H = harmonic number. ● a(n) = 3 * a(n - 1) - a(n - 2) - a(n - 4) (conjectured).G.f.: (8 - 3 x - x ^ 2 - 3 x ^ 3) / (1 - 3 x + x ^ 2 + x ^ 4) (conjectured). ●

▶ [A296198] 0,1,8,21,55,104,197,318,514,755,1110,1531,2113,2786,3675,4684,5972,7413,9204,11185,13595,16236,19393,22826,26870 ⋆ Harary index of the n X n black bishop graph. ● a(n) = (- 15 + 20 * n - 30 * n ^ 2 + 16 * n ^ 3 + 6 * n ^ 4 - 3 * (- 1) ^ n * (2 * n ^ 2 + 4 * n - 5)) / 96. ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 6 * a(n - 3) + 6 * a(n - 5) - 2 * a(n - 6) - 2 * a(n - 7) + a(n - 8). ●

▶ [A080144] 0,8,21,63,165,440,1152,3024,7917,20735,54285,142128,372096,974168,2550405,6677055,17480757,45765224,119814912,313679520,821223645,2149991423,5628750621,14736260448,38580030720 ⋆ a(n) = F(4) * F(n) * F(n + 1) + F(5

) * F(n + 1) ^ 2 if n odd, a(n) = F(4) * F(n) * F(n + 1) + F(5) * F(n + 1) ^ 2 - F(5) if n even, where F(n) is the n - th Fibonacci number (A000045). • a(n) = (2 * Lucas(2 * n + 6) + 11 * (- 1) ^ (n + 1) - 25) / 10. - _ Ehren Metcalfe _ , Aug 21 2017 • a(n) = (2 * Fibonacci(n + 3) ^ 2 - 5 - 3 * (- 1) ^ n) / 2. - _ G. C. Greubel _ , Jul 23 2019 •

► [A241522] 1,8,21,64,89,168,301,512,561,712,965,1344,1801,2408,3165,4096,4193,4488,4981,5696,6585,7720,9101,10752,12433 ⋆ The number of P - positions in the game of Nim with up to 4 piles, allowing for piles of zero, such that the number of objects in each pile does not exceed n. • a(2 ^ n - 1) = 2 ^ (3 * n). •

► [A156304] 1,1,8,21,77,199,661,1663,4852,12382,33289,82877,213026,518109,1279852,3053404,7312985,17093793,39952528,91661695,209709116,473095589,1062567288,2359804486,5214774263 ⋆ G.f.: A(x) = exp(Sum _{ n>=1 } sigma(n ^ 3) * x ^ n / n), a power series in x with integer coefficients. • a(n) = (1 / n) * Sum _{ k=1..n } sigma(k ^ 3) * a(n - k) for n>0, with a(0)=1. •

► [A054855] 1,1,8,21,93,314,1213,4375,16334,59925,221799,817280,3018301,11134189,41096528,151643937,559640289,2065192514,7621289593,28124714395,103789150046,383013144129,1413437041011,5216013647648,19248692843977 ⋆ Number of ways to tile a 5 X n area with 1 X 1 and 2 X 2 tiles. • a(n) = b(1)a(n - 1) + b(2)a(n - 2) + ... + b(n)a(0), where a(0)=a(1)=1 and b(1)=1, b(2)=7, b(n)= F(n + 1)of A000045 (Fibonacci numbers) for n>2. • a(n) = 2 * a(n - 1) + 7 * a(n - 2) - 2 * a(n - 3) - 3 * a(n - 4). - Keith Schneider (kschneid(AT)bulldog.unca.edu), Apr 02 2006 •

► [A069099] 1,8,22,43,71,106,148,197,253,316,386,463,547,638,736,841,953,1072,1198,1331,1471,1618,1772,1933,2101 ⋆ Centered heptagonal numbers. • a(n) = (7 * n ^ 2 - 7 * n + 2) / 2. • a(n) = 1 + Sum _{ k=1..n } 7 * k. - Xavier Acloque, Oct 26 2003 • a(n) = 7 * n + a(n - 1) - 7 (with a(1)=1). - _ Vincenzo Librandi _ , Aug 08 2010 • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3); a(0)=1, a(1)=8, a(2)=22. - _ Harvey P. Dale _ , Jun 04 2011 • a(n) = 2 * a(n - 1) - a(n - 2) + 7. - _ Ant King _ , Jun 17 2012 • a(n) == 1 (mod 7) for all n. •

► [A048489] 1,8,22,50,106,218,442,890,1786,3578,7162,14330,28666,57338,114682,229370,458746,917498,1835002,3670010,7340026,14680058,29360122,58720250,117440506 ⋆ a(n) = 7 * 2 ^ n - 6. • a(n) = 2 * a(n - 1) + 6 with n>0, a(0)=1. - _ Vincenzo Librandi _ , Aug 06 2010 •

► [A211479] 8,22,58,150,382,962,2402,5958,14702,36130,88498,216198,527038,1282562,3116738,7565190,18345422,44452642,107643922,260526918,630270622,1524213890,3684989858,8906776518,21523708718 ⋆ Number of - 1..1 arrays x(i) of n + 1 elements i=1..n + 1 with x(i) + x(j), x(i + 1) + x(j + 1), - (x(i) + x(j + 1)), and - (x(i + 1) + x(j)) having two, three or four distinct values for every i<=n and j<=n. • a(n) = - 3 * 2 ^ n + (3 - 2 * sqrt(2)) * (1 - sqrt(2)) ^ n + (1 + sqrt(2)) ^ n * (3 + 2 * sqrt(2)). •

► [A126362] 1,8,22,62,176,502,1436,4116,11814,33942,97582,280676,807574,2324116,6689624,19257202,55439298,159611886,459545688,1323132230,3809653732,10969153364,31583803574,90940708414,261850874726 ⋆ Number of base 8 n - digit numbers with adjacent digits differing by one or less. • a(n) = e ^ T A ^ (n - 1) e for n>=1, where A is the 8 X 8 matrix with 1 on the main diagonal and first super - and subdiagonals, 0 elsewhere, and e the column vector (1,1,1,1,1,1,1,1). Barker's conjecture follows from the fact that (A ^ 4 - 5 * A ^ 3 + 6 * A ^ 2 + A - 2 * I) * e = 0. (End) •

► [A199110] 8,22,64,190,568,1702,5104,15310,45928,137782,413344,1240030,3720088,11160262,33480784,100442350,301327048,903981142,2711943424,8135830270,24407490808,73222472422,219667417264,659002251790,1977006755368 ⋆ a(n) = 7 * 3 ^ n + 1. • a(n) = 3 * a(n - 1) - 2. • a(n) = 4 * a(n - 1) - 3 * a(n - 2). •

► [A083098] 1,1,8,22,92,316,1184,4264,15632,56848,207488,756064,2757056,10050496,36643328,133589632,487039232,1775616256,6473467904,23600633344,86042074112,313687948288,1143628341248,4169384372224,15200538791936 ⋆ a(n) = 2 * a(n - 1) + 6 * a(n - 2). • a(n) = (1 + sqrt(7)) ^ n / 2 + (1 - sqrt(7)) ^ n / 2. •

► [A164131] 8,23,39,54,70,85,101,116,132,147,163,178,194,209,225,240,256,271,287,302,318,333,349,364,380 ⋆ Numbers k such that k ^ 2 == 2 (mod 31). • a(n) = a(n - 1) + a(n - 2) - a(n - 3). • a(n) = (31 + (- 1) ^ (n - 1) + 62(n - 1)) / 4. • a(n) = 31 * (n - 1) - a(n - 1) with n>1, a(1)=8. - _ Vincenzo Librandi _ , Nov 30 2010 •

► [A033951] 1,8,23,46,77,116,163,218,281,352,431,518,613,716,827,946,1073,1208,1351,1502,1661,1828,2003,2186,2377 ⋆ Write 1,2,... in clockwise spiral; sequence gives numbers on positive x axis. • a(n) = 4 * n ^ 2 + 3 * n + 1. • a(n) = a(n - 1) + 8 * n - 1 (with a(0)=1). - _ Vincenzo Librandi _ , Nov 17 2010 • a(0)=1, a(1)=8, a(2)=23, a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Feb 07 2015 •

► [A027054] 1,8,23,52,107,210,401,754,1405,2604,4811,8872,16343,30086,55365,101862,187385,344688,634015,1166172,2144963,3945242,7256473,13346778,24548597 ⋆ a(n) = T(n, n + 3), T given by A027052. • a(n) = 3 * a(n - 1) - 2 * a(n - 2) - a(n - 4) + a(n - 5) for n>6. •

► [A048467] 1,8,23,55,123,267,571,1211,2555,5371,11259,23547,49147,102395,212987,442363,917499,1900539,3932155,8126459,16777211,34603003,71303163,146800635,301989883 ⋆ a(n) = T(6,n), array T given by A047858. • a(n) = 5 * a(n - 1) - 8 * a(n - 2) + 4 * a(n - 3). - _ Harvey P. Dale _ , Jul 07 2011 • a(n) = 2 ^ (n - 1) * (n + 12) - 5. - _ Vincenzo Librandi _ , Sep 28 2011 •

► [A048770] 1,8,23,60,149,364,883,2136,5161,12464,30095,72660,175421,423508,1022443,2468400,5959249,14386904,34733063,83853036,202439141,488731324,1179901795,2848534920,6876971641 ⋆ Partial sums of A048694. • a(n) = ((7 + 4 * sqrt(2)) * (1 + sqrt(2)) ^ n - (7 - 4 * sqrt(2)) * (1 - sqrt(2)) ^ n) / (2 * sqrt(2)) - 3. • a(n) = 2 * a(n - 1) + a(n - 2) + 6 with n>1, a(0)=1, a(1)=8. • a(n) = 3 * a(n - 1) - a(n - 2) - a(n - 3). G.f.: (1 + 5 * x) / ((1 - x) * (1 - 2 * x - x ^ 2)). - _ Colin Barker _ , Jun 23 2012 •

► [A055273] 1,8,23,61,160,419,1097,2872,7519,19685,51536,134923,353233,924776,2421095,6338509,16594432,43444787,113739929,297775000,779585071,2040980213,5343355568,13989086491,36623903905 ⋆ a(n) = 3 * a(n - 1) - a(n - 2) with a(0) = 1, a(1) = 8. • a(n) = (8 * (((3 + sqrt(5)) / 2) ^ n - ((3 - sqrt(5)) / 2) ^ n) - (((3 + sqrt(5)) / 2) ^ (n - 1) - ((3 - sqrt(5)) / 2) ^ (n - 1))) / sqrt(5). • a(n) = Fibonacci(2n + 2) + 5 * Fibonacci(2n), • a(n) = 3 * Fibonacci(2n + 2) - Fibonacci(2n - 3). (End) • a(n) = ChebyshevT(n, 3 / 2) + (13 / 2) * ChebyshevU(n - 1, 3 / 2) = ChebyshevU(n, 3 / 2) + 5 * ChebyshevU(n - 1, 3 / 2). - _ G. C. Greubel _ , Jan 17 2020 •

► [A036562] 1,8,23,77,281,1073,4193,16577,65921,262913,1050113,4197377,16783361,67121153,268460033,1073790977,4295065601,17180065793,68719869953,274878693377,1099513200641,4398049656833,17592192335873,70368756760577 ⋆ a(n) = 4 ^ (n + 1) + 3 * 2 ^ n + 1. • a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3), for n>=3. - _ Wesley Ivan Hurt _ , Apr 26 2021 •

► [A140403] 0,0,0,0,8,24,32,56,72,96,128,160,192,232,272,320,368,424,472,536,600,664,736,808,880 ⋆ Expansion of 8 * x ^ 4 / ((1 - x) ^ 2 * (1 - x ^ 3)) + 8 * x ^ 5 / ((1 - x) * (1 - x ^ 2) * (1 - x ^ 5)). • a(0)=0, a(1)=0, a(2)=0, a(3)=0, a(4)=8, a(5)=24, a(6)=32, a(7)=56, a(8)=72, a(9)=96, a(n)=a(n - 2) + a(n - 3) - a(n - 7) - a(n - 8) + a(n - 10). [_ Harvey P. Dale _ , Mar 22 2012] •

► [A108578] 0,0,0,0,8,24,32,56,80,104,136,176,208,256,304,352,408,472,528,600,672,744,824,912,992 ⋆ Number of 3 X 3 magic squares with magic sum 3n. • a(n) = a(n - 1) + a(n - 2) - a(n - 4) - a(n - 5) + a(n - 6). - _ Vincenzo Librandi _ , Sep 01 2018 •

► [A051062] 8,24,40,56,72,88,104,120,136,152,168,184,200,216,232,248,264,280,296,312,328,344,360,376,392 ⋆ a(n) = 16 * n + 8. • a(n) = 32 * n - a(n - 1) for n>0, a(0)=8. - _ Vincenzo Librandi _ , Aug 06 2010 • a(- 1 - n) = - a(n). - _ Michael Somos _ , Jun 02 2014 •

► [A033996] 0,8,24,48,80,120,168,224,288,360,440,528,624,728,840,960,1088,1224,1368,1520,1680,1848,2024,2208,2400 ⋆ 8 times triangular numbers: a(n) = 4 * n * (n + 1). • a(n) = 4 * n ^ 2 + 4 * n = (2 * n + 1) ^ 2 - 1. • a(n) = a(n - 1) + 8 * n (with a(0)=0). - _ Vincenzo Librandi _ , Nov 17 2010 • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Wesley Ivan Hurt _ , Mar 25 2015 •

► [A319576] 0,0,8,24,48,112,312,840,2016,4320,8424,15224,25872,41808,64792,96936,140736,199104,275400,373464,497648,652848,844536,1078792,1362336 ⋆ a(n) = (4 / 15) * n * (n - 1) * (n ^ 3 - 9 * n ^ 2 + 26 * n - 9). • a(n) = [x ^ 5] JacobiTheta3(x) ^ n. • a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>5. •

► [A064225] 1,8,24,49,83,126,178,239,309,388,476,573,679,794,918,1051,1193,1344,1504,1673,1851,2038,2234,2439,2653 ⋆ a(n) = (9 * n ^ 2 + 5 * n + 2) / 2. • a(n) = 9 * n + a(n - 1) - 2, with n>0, a(0) = 1. - _ Vincenzo Librandi _ , Aug 07 2010 • a(0)=1, a(1)=8, a(2)=24, a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Sep 13 2011 •

► [A054275] 1,8,24,52,90,140,200,272,354,448,552,668,794,932,1080,1240,1410,1592,1784,1988,2202,2428,2664,2912,3170 ⋆ Susceptibility series H _ 2 for 2 - dimensional Ising model (divided by 2). • a(n) = (11 * n ^ 2 + 4) / 2 for n>0 and even. • a(n) = (11 * n ^ 2 + 5) / 2 for n odd. • a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4) for n>4. (End) •

► [A256857] 0,1,8,24,52,95,156,238,344,477,640,836,1068,1339,1652,2010,2416,2873,3384,3952,4580,5271,6028,6854,7752 ⋆ a(n) = n * (n ^ 2 + 3 * n - 2) / 2. • a(n) = Sum _{ i=1..n } (n - i - 1) mod (n + 1). - _ Wesley Ivan Hurt _ , Sep 15 2017 •

► [A212972] 1,8,24,53,100,168,261,384,540,733,968,1248,1577,1960,2400,2901,3468,4104,4813,5600,6468,7421,8464,9600,10833 ⋆ Number of (w,x,y) with all terms in { 0,...,n } and w<floor((x + y) / 3)). • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + 2 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) - a(n - 6). •

► [A152134] 8,24,54,102,174,270,396,556,756,996,1282,1618,2010,2458,2968,3544,4192,4912,5710,6590,7558,8614,9764,11012,12364 ⋆ Maximal length of rook tour on an n X n + 3 board. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 4) - 3 * a(n - 5) + 3 * a(n - 6) - a(n - 7). - _ Vincenzo Librandi _ , Dec 19 2012 •

► [A011925] 0,0,0,0,1,8,24,56,112,201,336,528,792,1144,1601,2184,2912,3808,4896,6201,7752,9576,11704,14168,17001 ⋆ a(n) = floor(n * (n - 1) * (n - 2) * (n - 3) / 15). • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) + a(n - 5) - 4 * a(n - 6) + 6 * a(n - 7) - 4 * a(n - 8) + a(n - 9). •

► [A159741] 8,24,56,120,248,504,1016,2040,4088,8184,16376,32760,65528,131064,262136,524280,1048568,2097144,4194296,8388600,16777208,33554424,67108856,134217720,268435448 ⋆ a(n) = 8 * (2 ^ n - 1). • a(n) = 3 * a(n - 1) - 2 * a(n - 2). • a(n) = 8 * (2 ^ n - 1). • a(n) = Sum _{ i=3..(n + 2) } 2 ^ i. • a(n) = Sum _{ i=1..n } 2 ^ (i + 2). • a(n) = a(n - 1) + 2 ^ (n + 2) for n >= 2. (End) •

► [A099041] 1,8,24,58,128,270,556,1130,2280,4582,9188,18402,36832,73694,147420,294874,589784,1179606,2359252,4718546,9437136,18874318,37748684,75497418,150994888 ⋆ Number of 3 X n 0 - 1 matrices avoiding simultaneously the right angled numbered polyomino patterns (ranpp) (00;1), (10;0) and (10;1). • a(n) = 9 * 2 ^ n - 2 * n - 8. •

► [A129959] 1,1,8,24,59,115,202,322,485,693,956,1276,1663,2119,2654,3270,3977,4777,5680,6688,7811,9051,10418,11914,13549 ⋆ A129957(n) - n * (n - 1) / 2. • a(n) = (1 + (- 1) ^ n + n - n ^ 2 + 2 * n ^ 3) / 2. G.f.: (1 - 2 * x + 7 * x ^ 2 + 4 * x ^ 3 + 2 * x ^ 4) / ((1 - x) ^ 4 * (1 + x)). [_ Colin Barker _ , Sep 10 2012] •

► [A177719] 0,0,8,24,60,112,212,344,548,800,1196,1672,2284,2992,3988,5128,6556,8160,10180,12424,15068,17968,21604,25576,30092 ⋆ Number of line segments connecting exactly 3 points in an n X n grid of points • a(n) = Sum _{- n < i,j < n; gcd(i,j)=2 } (n - |i|) * (n - |j|) / 2. For n>1, a(n) = 2 * (n * (n - 2) + Sum _{ i,j=1..n - 1; gcd(i,j)=2 } (n - i) * (n - j)). - _ Max Alekseyev _ , Jul 08 2019 • a(n) = 4 * ((n - 1) * (n - 2) + Sum _{ i=2..floor(n / 2) } (n - 2 * i) * (n - i) * phi(i)). - _ Chai Wah Wu _ , Aug 18 2021 •

► [A060602] 8,24,62,148,338,752,1646,3564,7658,16360,34790,73700,155618,327648,688094,1441756,3014618,6291416,13107158,27262932,56623058,117440464,243269582,503316428,1040187338 ⋆ Number of tilings of the d - dimensional zonotope constructed from d + 3 vectors. • a(n) = 2 * (- 3 + 7 * 2 ^ n + (- 1 + 2 ^ n) * n). •

► [A083583] 1,8,24,72,216,648,1944,5832,17496,52488,157464,472392,1417176,4251528,12754584,38263752,114791256,344373768,1033121304,3099363912,9298091736,27894275208,83682825624,251048476872,753145430616 ⋆ a(n) = (8 * 3 ^ n - 5 * 0 ^ n) / 3. • a(n) = (8 * 3 ^ n - 5 * 0 ^ n) / 3. •

► [A005051] 8,24,72,216,648,1944,5832,17496,52488,157464,472392,1417176,4251528,12754584,38263752,114791256,344373768,1033121304,3099363912,9298091736,27894275208,83682825624,251048476872,753145430616,2259436291848 ⋆ a(n)

= 8 * 3 ^ n. ● a(n) = 3 * a(n - 1). G.f.: 8 / (1 - 3 * x). - _ Colin Barker _ , Jul 02 2012 ●

▶ [A221906] 1,8,24,76,272,1044,4120,16412,65568,262180,1048616,4194348,16777264,67108916,268435512,1073741884,4294967360,17179869252,68719476808,274877907020,1099511627856,4398046511188 ⋆ 4 ^ n + 4 * n. ● a(n) = 6 * a(n - 1) - 9 * a(n - 2) + 4 * a(n - 3). ●

▶ [A063515] 1,8,24,104,216,384,1080,2160,4896,13656,32552,51312,137160,287408,573600,1999872,3034368,4778400,11098080,20984560,49533120,137218560,294000768,417361152,958698064 ⋆ Sum of divisors of Woodall (or Riesel) numbers; sigma(A003261(n)); sigma(n * 2 ^ n - 1). ● a(n) = sigma(n * 2 ^ n - 1). ●

▶ [A246030] 1,8,24,112,416,1728,6784,27392,109056,437248,1746944,6991872,27959296,111853568,447381504,1789591552,7158235136,28633202688,114532286464,458130194432,1832518680576,7330078916608,29320307277824,117281245888512,469124949999616 ⋆ a(n) = (5 * 2 ^ (2 * n) + (- 2) ^ (n + 1)) / 3. ● a(0)=1, a(1)=8; thereafter a(n)=2 * a(n - 1) + 8 * a(n - 2). ●

▶ [A279483] 0,0,0,8,24,144,240,672,960,2000,2640,4680,5880,9408,11424,17024,20160,28512,33120,45000,51480,67760,76560,98208,109824 ⋆ Number of 2 X 2 matrices with entries in { 0,1,...,n } and odd determinant with no entry repeated. ● a(n) = (3 * n ^ 4 - 8 * n ^ 3 - 12 * n ^ 2 + 32 * n) / 8 for n even. ● a(n) = (3 * n ^ 4 - 4 * n ^ 3 - 10 * n ^ 2 + 4 * n + 7) / 8 for n odd. ● a(n) = a(n - 1) + 4 * a(n - 2) - 4 * a(n - 3) - 6 * a(n - 4) + 6 * a(n - 5) + 4 * a(n - 6) - 4 * a(n - 7) - a(n - 8) + a(n - 9) for n>8. ●

▶ [A105063] 0,0,8,24,560,1616,36984,106664,2440416,7038240,161030504,464417208,10625572880,30644497520,701126779608,2022072419144,46263741881280,133426135166016,3052705837384904,8804102848537944,201432321525522416 ⋆ a(1)=0, a(2)=0, a(3)=8, a(4)=24, a(n) = 32 + 66 * a(n - 2) - a(n - 4) for n > 4. ● a(n) = a(n - 1) + 66 * a(n - 2) - 66 * a(n - 3) - a(n - 4) + a(n - 5). ● a(n) = (1 / 4) * (- 32 * [n=0] - 2 + i ^ n * ((23 + 11 * (- 1) ^ n) * ChebyshevU(n, 4 * I) - i * (187 + 89 * (- 1) ^ n) * ChebyshevU(n - 1, 4 * I))). - _ G. C. Greubel _ , Mar 13 2023 ●

▶ [A188819] 8,25,48,81,120,169,224,289,360,441,528,625,728,841,960,1089,1224,1369,1520,1681,1848,2025,2208,2401,2600 ⋆ Number of n X 3 binary arrays without the pattern 0 1 diagonally or antidiagonally. ● a(n) = (2 + 8 * n + 8 * n ^ 2) / 2 for n even. ● a(n) = (8 * n + 8 * n ^ 2) / 2 for n odd. ●

▶ [A273743] 1,8,25,49,81,121,169,225,289,361,441,529,625,729,841,961,1089,1225,1369,1521,1681,1849,2025,2209,2401 ⋆ Number of active (ON,black) cells in n - th stage of growth of two - dimensional cellular automaton defined by "Rule 901", based on the 5 - celled von Neumann neighborhood. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>4. ●

▶ [A204467] 1,8,25,50,85,128,181,242,313,392,481,578,685,800,925,1058,1201,1352,1513,1682,1861,2048,2245,2450,2665 ⋆ Number of 3 - element subsets that can be chosen from { 1,2,...,6 * n + 3 } having element sum 9 * n + 6. ● a(n) = 1 + floor((3 + 9 / 2 * n) * n). ● a(n) = (6 * n * (3 * n + 2) + (- 1) ^ n + 3) / 4. - _ Bruno Berselli _ , Jan 17 2012 ● a(0)=1, a(1)=8, a(2)=25, a(3)=50, a(n)=2 * a(n - 1) - 2 * a(n - 3) + a(n - 4). - _ Harvey P. Dale _ , May 25 2015 ●

▶ [A062728] 0,8,25,51,86,130,183,245,316,396,485,583,690,806,931,1065,1208,1360,1521,1691,1870,2058,2255,2461,2676 ⋆ Second 11 - gonal (or hendecagonal) numbers: a(n) = n * (9 * n + 7) / 2. ● a(n) = n * (9 * n + 7) / 2. ● a(n) = 9 * n + a(n - 1) - 1 (with a(0)=0). - _ Vincenzo Librandi _ , Aug 07 2010 ●

▶ [A273982] 1,8,25,52,89,136,193,260,337,424,521,628,745,872,1009,1156,1313,1480,1657,1844,2041,2248,2465,2692,2929 ⋆ Number of little cubes visible around a n n X n X n cube with a face on a table. ● a(n) = 5 * n ^ 2 - 8 * n + 4. ● a(n) = n ^ 3 - (n - 2) ^ 3 - (n - 2) ^ 2. - _ Joerg Arndt _ , Jun 06 2016 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n > 3. - _ Wesley Ivan Hurt _ , Oct 06 2017 ● a(n) = n ^ 2 + 4 * (n - 1) ^ 2. - _ Leo Tavares _ , Mar 24 2022 ●

▶ [A131423] 1,8,25,56,105,176,273,400,561,760,1001,1288,1625,2016,2465,2976,3553,4200,4921,5720,6601,7568,8625,9776,11025 ⋆ a(n) = n * (n + 2) * (2 * n - 1) / 3. Also, row sums of triangle A131422. ● a(n) = n * (n + 2) * (2 * n - 1) / 3. - _ Emeric Deutsch _ , Sep 06 2008 ● a(n) = a(n - 1) + 2 * n ^ 2 - 1. ● a(1)=0, a(2)=1, a(3)=8, a(4)=25; for n>4, a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Harvey P. Dale _ , Feb 03 2012 ● a(n) = (1 / 2) * trinomial(2 * n, 3) = (1 / 2) * trinomial(2 * n, 4 * n - 3)), for n >= 1, with the trinomial ir regular triangle A027907. a(n) = (1 / (2 * Pi)) * Integral _{ x=0..2 } (1 / sqrt (4 - x ^ 2)) * (x ^ 2 - 1) ^ (2 * n) * R(2 * (2 * n - 3), x), with the R polynomial coefficients given in A127672 and R(- m, x) = R(m, x) [Comtet, p. 77, the integral formula for q = 3, n - > 2 * n, k = 3, rewritten with x = 2 * cos(phi)]. For the odd numbered rows of column k=3 see A030440. - _ Wolfdieter Lang _ , Apr 27 2018 ●

▶ [A270867] 1,8,25,58,113,196,313,470,673,928,1241,1618,2065,2588,3193,3886,4673,5560,6553,7658,8881,10228,11705,13318,15073 ⋆ a(n) = n ^ 3 + 2 * n ^ 2 + 4 * n + 1. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ●

▶ [A360201] 1,8,25,58,117,218,387,666,1123,1868,3079,5044,8229,13388,21741,35262,57145,92558,149863,242590,392631,635408,1028235,1663848,2692297 ⋆ Number of induced paths in the n - ladder graph P _ 2 X P _ n. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - a(n - 3) + a(n - 4) for n > 4. ●

▶ [A011924] 0,0,0,0,1,8,25,60,120,216,360,565,848,1225,1716,2340,3120,4080,5245,6644,8305,10260,12540,15180,18216 ⋆ Floor[n(n - 1)(n - 2)(n - 3) / 14]. ● a(n) = + 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) + a(n - 7) - 4 * a(n - 8) + 6 * a(n - 9) - 4 * a(n - 10) + a(n - 11). G.f.: x ^ 4 * (x ^ 6 + 4 * x ^ 5 - x ^ 4 + 4 * x ^ 3 - x ^ 2 + 4 * x + 1) / ((1 - x) ^ 5 * (x ^ 6 + x ^ 5 + x ^ 4 + x ^ 3 + x ^ 2 + x + 1)). - _ R. J. Mathar _ , Apr 15 2010 ●

▶ [A169831] 1,8,25,62,139,296,613,1250,2527,5084,10201,20438,40915,81872,163789,327626,655303,1310660,2621377,5242814,10485691,20971448,41942965,83886002,167772079 ⋆ a(n) = 5 * 2 ^ (n + 1) - 3 * (n + 3). ● a(n) - 4 * a(n - 1) + 5 * a(n - 2) - 2 * a(n - 3) = 0, with n>2. (End) ● a(n) = 2 * a(n - 1) + 3(n + 1) with a(0)=1. [_ Vincenzo Librandi _ , Jun 03 2010] ●

▶ [A295911] 8,25,76,229,688,2065,6196,18589,55768,167305,501916,1505749,4517248,13551745,40655236,121965709,365897128,1097691385,3293074156,9879222469,29637667408,88913002225,266739006676,800217020029,2400651060088 ⋆ Number of (not necessarily maximal) cliques in the n - Hanoi graph. ● a(n) = (17 * 3 ^ n - 3) / 6. ● a(n) = 4 * a(n - 1) - 3 * a(n - 2). ●

▶ [A035073] 8,25,78,245,775,2450,7746,24495,77460,244949,774597,2449490,7745967,24494898,77459667,244948975,774596670,2449489743,7745966693,24494897428,77459666925,244948974279,774596669242,2449489742784,7745966692415 ⋆ a(n) is root of square starting with digit 6: first term of runs. ● a(n) = ceiling(sqrt(6 * 10 ^ n)), n > 0. ●

▶ [A275151] 8,25,128,729,4232,24649,143648,837225,4879688,28440889,165765632,966152889,5631151688,32820757225,191293391648,1114939592649,6498344164232,37875125392729,220752408192128,1286639323760025,7499083534368008,43707861882448009,254748087760320032,1484780664679472169 ⋆ a(1) = 8; a(n) = 3 * a(n - 1) + 2 * sqrt(2 * a(n - 1) * (a(n - 1) - 7)) - 7 for n > 1. ● a(n) = 3 * a(n - 1) + 2 * sqrt(2 * a(n - 1) * (a(n - 1) - 7)) - 7, for n > 1, with a(1)=8. ● a(n) = (14 + (11 - 6 * sqrt(2)) * (3 + 2 * sqrt(2)) ^ n + (3 - 2 * sqrt(2)) ^ n * (11 + 6 * sqrt(2))) / 4. ● a(n) = 7 * a(n - 1) - 7 * a(n - 2) + a(n - 3) for n > 3. ●

▶ [A347677] 1,8,26,55,96,149,214,291,380,481,594,719,856,1005,1166,1339,1524,1721,1930,2151,2384,2629,2886,3155,3436 ⋆ Number of Baxter matrices of size 3 X n that contain n + 2 1's. ● a(n) = 6 * n ^ 2 - 13 * n + 11 for n >= 3. - _ George Spahn _ , Oct 20 2021 ●

▶ [A005897] 1,8,26,56,98,152,218,296,386,488,602,728,866,1016,1178,1352,1538,1736,1946,2168,2402,2648,2906,3176,3458 ⋆ a(n) = 6 * n ^ 2 + 2 for n > 0, a(0)= 1. ● a(0) = 1, a(n) = (n + 1) ^ 3 - (n - 1) ^ 3. - Ilya Nikulshin (ilyanik(AT)gmail.com), Aug 11 2009 ● a(0)=1, a(1)=8, a(2)=26, a(3)=56; for n>3, a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Oct 25 2011 ●

▶ [A215097] 0,1,8,26,56,99,160,244,352,485,648,846,1080,1351,1664,2024,2432,2889,3400,3970,4600,5291,6048,6876,7776 ⋆ a(n) = n ^ 3 - a(n - 2) for n >= 2 and a(0)=0, a(1)=1. ● a(n) = (n * (n ^ 2 - 3) - (1 - (- 1) ^ n) * i ^ (n + 1)) / 2, where i=sqrt(- 1). - _ Bruno Berselli _ , Aug 07 2012 ●

▶ [A111694] 0,8,26,57,104,170,258,371,512,684,890,1133,1416,1742,2114,2535,3008,3536,4122,4769,5480,6258,7106,8027,9024 ⋆ a(1) = 1 + 2 - 3 = 0, a(2) = 4 + 5 + 6 - 7 = 8, a(3) = 8 + 9 + 10 + 11 - 12 = 26, a(4) = 13 + 14 + 15 + 16 + 17 - 18 = 57, ... ● a(n) = (n - 1) * (n ^ 2 + 5 * n + 2) / 2. ●

▶ [A129111] 8,26,59,107,170,248,341,449,572,710,863,1031,1214,1412,1625,1853,2096,2354,2627,2915,3218,3536,3869,4217,4580 ⋆ Sums of three consecutive heptagonal numbers. ● a(n) = (15 / 2) * n ^ 2 + (21 / 2) * n + 8. ●

▶ [A002413] 0,1,8,26,60,115,196,308,456,645,880,1166,1508,1911,2380,2920,3536,4233,5016,5890,6860,7931,9108,10396,11800 ⋆ Heptagonal (or 7 - gonal) pyramidal numbers: a(n) = n * (n + 1) * (5 * n - 2) / 6. ● a(n) = n * (n + 1) * (5 * n - 2) / 6. ● a(n) = a(n - 1) + n * (5 * n - 3) / 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + 5. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) ● a(n) = binomial(n + 2, 3) + 4 * binomial(n + 1, 3) = (5 * n - 2) * binomial(n + 1, 2) / 3. ● a(n) = Sum _{ i=0..n - 1 } (n - i) * (5 * i + 1), with a(0)=0. - _ Bruno Berselli _ , Feb 10 2014 ●

▶ [A218325] 8,26,60,196,308,456,880,1166,1508,2380,2920,3536,5016,5890,6860,9108,10396,11800,14976,16758,18676,22940,25296,27808,33320 ⋆ Even heptagonal pyramidal numbers. ● a(n) = a(n - 1) + 3 * a(n - 3) - 3 * a(n - 4) - 3 * a(n - 6) + 3 * a(n - 7) + a(n - 9) - a(n - 10). ● a(n) = 3 * a(n - 3) - 3 * a(n - 6) + a(n - 9) + 320. ● a(n) = (phi(n) + 3) * (phi(n) + 12)(5 * phi(n) - 3) / 4374, where phi(n) = 12 * n - 3 * cos(2 * n * pi / 3) + sqrt(3) * sin(2 * n * pi / 3). ●

▶ [A363288] 1,8,26,61,119,206,328,491,701,964,1286,1673,2131,2666,3284,3991,4793,5696,6706,7829,9071,10438,11936,13571,15349 ⋆ a(n) = (2 * n ^ 3 - n ^ 2 + 3 * n - 2) / 2. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ●

▶ [A250352] 8,26,62,122,212,338,506,722,992,1322,1718,2186,2732,3362,4082,4898,5816,6842,7982,9242,10628,12146,13802,15602,17552 ⋆ Number of length 3 arrays x(i), i=1..3 with x(i) in i..i + n and no value appearing more than 2 times. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>4. ●

▶ [A213039] 0,1,8,26,63,124,208,335,504,702,973,1304,1664,2133,2680,3250,3971,4788,5616,6643,7784,8918,10305,11824,13312 ⋆ n ^ 3 - [n / 3] ^ 3, where [] = floor. ● a(n) = a(n - 1) + 3 * a(n - 3) - 3 * a(n - 4) - 3 * a(n - 6) + 3 * a(n - 7) + a(n - 9) - a(n - 10). ●

▶ [A213769] 1,8,26,63,136,272,521,968,1762,3159,5600,9840,17169,29784,51418,88399,151432,258592,440345,747960,1267586,2143783,3618816,6098208,10260001 ⋆ Principal diagonal of the convolution array A213768. ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) - 2 * a(n - 3) + 4 * a(n - 4) - a(n - 6). ●

▶ [A301647] 0,8,26,64,124,216,342,512,728,1000,1330,1728,2196,2744,3374,4096,4912,5832,6858,8000,9260,10648,12166,13824,15624 ⋆ a(n) = n ^ 3 - (n mod 2). ● a(n) = (2 n ^ 3 + (- 1) ^ n - 1) / 2. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - 2 * a(n - 3) + 3 * a(n - 4) - a(n - 5). ●

▶ [A027004] 1,8,26,73,196,518,1361,3568,9346,24473,64076,167758,439201,1149848,3010346,7881193,20633236,54018518,141422321,370248448,969323026,2537720633,6643838876,17393795998,45537549121 ⋆ a(n) = T(2 * n + 1,n + 1), T given by A026998. ● a(n) = Fibonacci(2 * n + 3) + 2 * Fibonacci(2 * n + 2) - 3. ● a(n) = 2 ^ (- n) * (- 3 * 2 ^ n - (3 - sqrt(5)) ^ n * (- 2 + sqrt(5)) + (2 + sqrt(5)) * (3 + sqrt(5)) ^ n). ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) + a(n - 3) for n>2. ●

▶ [A140788] 8,26,98,386,1538,6146,24578,98306,393218,1572866,6291458,25165826,100663298,402653186,1610612738,6442450946,25769803778,103079215106,412316860418,1649267441666,6597069766658,26388279066626 ⋆ a(n) = 6 * 4 ^ n + 2. ● a(n) = 5 * a(n - 1) - 4 * a(n - 2). ●

▶ [A082573] 1,8,26,105,526,3157,22100,176801,1591210,15912101,175033112,2100397345,27305165486,382272316805,5734084752076,91745356033217,1559671052564690,28074078946164421,533407499977124000,10668149999542480001 ⋆ a(1)= 1, a(n)=ceiling(n * (a(n - 1) + 3 / a(n - 1))). ● a(n)=floor(n! * (exp(1) + 5 / 3)) ●

▶ [A000810] 1,1,8,26,352,1936,38528,297296,7869952,78098176,2583554048,31336418816,1243925143552,17831101321216,825787662368768,13658417358350336,722906928498737152,13551022195053101056 ⋆ Expansion of e.g.f. (sin x + cos x) / cos 3x. ● a(n) = | 3 ^ n * 2 ^ (n + 1) * lerchphi(- 1, - n,1 / 3) |. - _ Peter Luschny _ , Apr 27 2013 ● a(n) = (- 1) ^ floor(n / 2) * 3 ^ n * skp(n, 1 / 3), where skp(n,x) are the Swiss - Knife polynomials A153641. - _ Peter Luschny _ , Apr 19 2014 ●

► [A086213] 1,8,27,36,71,134,241,446,821,1508,2775,5104,9387,17266,31757,58410,107433,197600,363443,668476,1229519,2261438,4159433,7650390,14071261 ⋆ Tribonacci numbers that start with first three cubes. • a(n) = a(n - 1) + a(n - 2) + a(n - 3). •
► [A063142] 8,27,45,65,83,103,121,141,159,179,197,217,235,255,273,293,311,331,349,369,387,407,425,445,463 ⋆ Dimension of the space of weight 2n cusp forms for Gamma _ 0(74). • a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n>4. • a(n) = ((- 1) ^ n + 38 * n - 23) / 2 for n>1. •
► [A144619] 8,27,46,65,84,103,122,141,160,179,198,217,236,255,274,293,312,331,350,369,388,407,426,445,464 ⋆ a(n) = 19n + 8. • a(n) = 2 * a(n - 1) - a(n - 2). - _ Vincenzo Librandi _ , May 14 2012 •
► [A063144] 8,27,47,67,87,107,127,147,167,187,207,227,247,267,287,307,327,347,367,387,407,427,447,467,487 ⋆ Dimension of the space of weight 2n cusp forms for Gamma _ 0(76). • a(n) = 2 * a(n - 1) - a(n - 2) for n>3. • a(n) = 20 * n - 13 for n>1. •
► [A223950] 8,27,54,96,157,241,352,494,671,887,1146,1452,1809,2221,2692,3226,3827,4499,5246,6072,6981,7977,9064,10246,11527 ⋆ Number of 3 X n 0..1 arrays with diagonals and antidiagonals unimodal and rows nondecreasing. • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>5. •
► [A224134] 8,27,58,106,175,269,392,548,741,975,1254,1582,1963,2401,2900,3464,4097,4803,5586,6450,7399,8437,9568,10796,12125 ⋆ Number of 3 X n 0..1 arrays with rows nondecreasing and antidiagonals unimodal. • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>5. •
► [A213488] 0,1,8,27,61,113,189,295,434,609,826,1091,1407,1777,2207,2703,3268,3905,4620,5419,6305,7281,8353,9527,10806 ⋆ Number of (w,x,y) with all terms in { 0,...,n } and |w - x| + |x - y| + |y - w| < w + x + y. • a(n) = 4 * a(n - 1) - 7 * a(n - 2) + 8 * a(n - 3) - 7 * a(n - 4) + 4 * a(n - 5) - a(n - 6). •
► [A151675] 8,27,63,122,210,333,497,708,972,1295,1683,2142,2678,3297,4005,4808,5712,6723,7847,9090,10458,11957,13593,15372,17300 ⋆ Row sums of A154685. • a(n)=n * (2 * n ^ 2 + 5 * n + 9) / 2 = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). G.f.: x * (8 - 5 * x + 3 * x ^ 2) / (x - 1) ^ 4. [From _ R. J. Mathar _ , May 31 2009] •
► [A093322] 1,8,27,64,100,199,390,753,1442,2784,5369,10348,19943,38444,74104,142839,275330,530717,1022990,1971876,3800913,7326496,14122275,27221560,52471244 ⋆ Tetranacci numbers starting with first four cubes. • a(n) = a(n - 1) + a(n - 2) + a(n - 3) + a(n - 4). •
► [A213491] 1,8,27,64,125,204,305,420,569,714,909,1096,1327,1550,1833,2086,2411,2706,3071,3402,3815,4176,4635,5038,5533 ⋆ Number of (w,x,y) with all terms in { 0,...,n } and the numbers w,x,y,|w - x|,|x - y| not distinct. • a(n) = a(n - 2) + a(n - 3) + a(n - 4) - a(n - 5) - a(n - 6) - a(n - 7) + a(n - 9). •
► [A254521] 1,8,27,64,125,216,343,504,729,1000,1331,1728,2197,2744,3375,4032,4913,5832,6859,8000,9261,10648,12167,13608,15625 ⋆ Coefficients of the Dirichlet series zeta(s - 3) / zeta(3s - 3). • a(n) = n ^ 3 * Sum _{ d ^ 3 | n } (moebius(d) / d ^ 6). •
► [A000578] 0,1,8,27,64,125,216,343,512,729,1000,1331,1728,2197,2744,3375,4096,4913,5832,6859,8000,9261,10648,12167,13824 ⋆ The cubes: a(n) = n ^ 3. • a(n) = lcm(n, (n - 1) ^ 2) - (n - 1) ^ 2. E.g.: lcm(1, (1 - 1) ^ 2) - (1 - 1) ^ 2 = 0, lcm(2, (2 - 1) ^ 2) - (2 - 1) ^ 2 = 1, lcm(3, (3 - 1) ^ 2) - (3 - 1) ^ 2 = 8, ... - _ Mats Granvik _ , Sep 24 2007 • a(n) = binomial(n + 2,3) + 4 * binomial(n + 1,3) + binomial(n,3).[Worpitzky's identity for cubes. See. e.g., Graham et al., eq. (6.37). - _ Wolfdieter Lang _ , Jul 17 2019] • a(n) = n + 6 * binomial(n + 1,3) = binomial(n,1) + 6 * binomial(n + 1,3). - _ Ron Knott _ , Jun 10 2019 • a(n) = 1 + 7 * (n - 1) + 6 * (n - 1) * (n - 2) + (n - 1) * (n - 2) * (n - 3). - _ Antonio Alberto Olivares _ , Apr 03 2013 • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + 6. - _ Ant King _ Apr 29 2013 • a(k) = det(S(4,k,(1,1, - 1))) = k * b(k) ^ 2, where b(1)=1, b(2)=2, b(k) = 2 * b(k - 1) - b(k - 2) = b(2) * b(k - 1) - b(k - 2). - _ Ryan Stees _ , Dec 14 2014 •
► [A352049] 0,8,27,64,125,224,343,512,756,1008,1331,1792,2197,2752,3527,4096,4913,6056,6859,8064,9631,10656,12167,14336,15750 ⋆ Sum of the cubes of the divisor complements of the odd proper divisors of n. • a(n) = n ^ 3 * Sum _{ d|n, d<n, d odd } 1 / d ^ 3. •
► [A212745] 1,8,27,83,162,277,495,730,1025,1513,1988,2547,3413,4212,5119,6471,7678,9017,10963,12662,14517,17165,19440,21895,25353 ⋆ Number of (w,x,y,z) with all terms in { 0,...,n } and w=max { w,x,y,z }- 2 * min { w,x,y,z } . • a(n)=a(n - 1) + 3 * a(n - 3) - 3 * a(n - 4) - 3 * a(n - 6) + 3 * a(n - 7) + a(n - 9) - a(n - 10). •
► [A229423] 8,27,83,222,524,1116,2187,4005,6936,11465,18219,27992,41772,60770,86451,120567,165192,222759,296099,388482,503660,645912,820091,1031673,1286808 ⋆ Number of n X 3 0..2 arrays with horizontal differences mod 3 never 1, vertical differences mod 3 never - 1, rows lexicographically nondecreasing, and columns lexicographically nonincreasing. • a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. •
► [A166867] 0,1,8,27,84,237,644,1695,4376,11129,28000,69859,173180,427141,1049308,2569447,6275584,15295377,37215864,90426155,219466276,532154909,1289368500,3122076719,7555891560 ⋆ a(n) = Pell(n + 3) - Jacobsthal(n + 4). • a(n) = 3 * a(n - 1) + a(n - 2) - 5 * a(n - 3) - 2 * a(n - 4). - _ G. C. Greubel _ , May 25 2016 •
► [A056570] 0,1,1,8,27,125,512,2197,9261,39304,166375,704969,2985984,12649337,53582633,226981000,961504803,4073003173,17253512704,73087061741,309601747125,1311494070536,5555577996431,23533806109393,99690802348032 ⋆ Third power of Fibonacci numbers (A000045). • a(n) = (Fibonacci(3n) - 3(- 1) ^ n * Fibonacci(n)) / 5. - _ Ralf Stephan _ , May 14 2004 • a(n) = F(n - 2) * F(n + 1) ^ 2 + F(n - 1) * (- 1) ^ n. - _ J. M. Bergot _ , Mar 17 2016 • a(n) = ((- 3 * (1 / 2 * (- 1 - sqrt(5))) ^ n - (2 - sqrt(5)) ^ n + 3 * (1 / 2 * (- 1 + sqrt(5))) ^ n + (2 + sqrt(5)) ^ n)) / (5 * sqrt(5)). - _ Colin Barker _ , Jun 04 2016 • a(n) = F(n - 1) * F(n) * F(n + 1) + F(n) * (- 1) ^ (n - 1). - _ Tony Foster III _ , Apr 11 2018 •
► [A033580] 0,8,28,60,104,160,228,308,400,504,620,748,888,1040,1204,1380,1568,1768,1980,2204,2440,2688,2948,3220,3504 ⋆ Four times second pentagonal numbers: a(n) = 2 * n * (3 * n + 1). • a(n) = a(n - 1) + 12 * n - 4 (with a(0)=0). - _ Vincenzo Librandi _ , Aug 05 2010 •
► [A299289] 1,8,28,60,106,164,236,320,418,528,652,788,938,1100,1276,1464,1666,1880,2108,2348,2602,2868,3148,3440,3746 ⋆ Coordination sequence for "tsi" 3D uniform tiling. • a(n) = (13 * n ^ 2 + 4) / 2 for n>0 and even. • a(n) = (13 * n ^ 2 + 3) / 2 for n odd. • a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4) for n>4. •
► [A212515] 0,0,0,8,28,63,150,280,468,780,1200,1728,2508,3458,4620,6160,8000,10125,12852,15960,19530,23870,28798,34272,40848 ⋆ Number of (w,x,y,z) with all terms in { 1,...,n } and w<=2x and y>=3z. • a(n) = 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4) - 4 * a(n - 5) + 2 * a(n - 7) - 2 * a(n - 9) + 4 * a(n - 11) + a(n - 12) - 2 * a(n - 13) - 2 * a(n - 14) + a(n - 16). •
► [A007331] 0,1,8,28,64,126,224,344,512,757,1008,1332,1792,2198,2752,3528,4096,4914,6056,6860,8064,9632,10656,12168,14336 ⋆ Fourier coefficients of E _{ infinity,4 } . • a(n) = Sum _{ 0<d|n, n / d odd } d ^ 3. [Glaisher] •
► [A350144] 1,8,28,65,127,225,353,522,759,1037,1369,1803,2273,2827,3539,4260,5078,6095,7123,8301,9709,11103,12623,14449,16312 ⋆ a(n) = Sum _{ k=1..n } floor(n / (2 * k - 1)) ^ 3. • a(n) = Sum _{ k=1..n } Sum _{ d|k, k / d odd } d ^ 3 - (d - 1) ^ 3. •
► [A100182] 1,8,28,68,135,236,378,568,813,1120,1496,1948,2483,3108,3830,4656,5593,6648,7828,9140,10591,12188,13938,15848,17925 ⋆ Structured tetragonal anti - prism numbers. • a(n) = (1 / 6) * (7 * n ^ 3 - 3 * n ^ 2 + 2 * n). [Corrected by _ Luca Colucci _ , Mar 01 2011] • a(n) = binomial(n,3) + n ^ 3. - _ Pedro Caceres _ , Jul 28 2019 •
► [A321237] 1,8,28,68,148,308,628,1268,2548,5108,10228,20468,40948,81908,163828,327668,655348,1310708,2621428,5242868,10485748,20971508,41943028,83886068,167772148 ⋆ Start with a square of dimension 1 X 1, and repeatedly append along the squares of the previous step squares with half their side length that do not overlap with any prior square; a(n) gives the number of squares appended at n - th step. • a(n) = 4 * (2 ^ (n - 1) + 3 * (2 ^ (n - 2) - 1)) for any n > 1. • a(n) = 5 * 2 ^ n - 12 for n>1. • a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>3. •
► [A105636] 0,1,8,28,72,153,288,496,800,1225,1800,2556,3528,4753,6272,8128,10368,13041,16200,19900,24200,29161,34848,41328,48672 ⋆ Transform of n ^ 3 by the Riordan array (1 / (1 - x ^ 2), x). • a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 5 * a(n - 4) - 4 * a(n - 5) + a(n - 6). • a(n) = (2 * n ^ 4 + 8 * n ^ 3 + 8 * n ^ 2 - 1 + (- 1) ^ n) / 16. • a(n) = Sum _{ k=0..floor((n - 1) / 2) } (n - 2 * k) ^ 3. • a(n + 1) = Sum _{ k=0..n } k ^ 3 * (1 - (- 1) ^ (n + k - 1)) / 2. •
► [A212565] 0,0,1,8,28,74,159,304,528,860,1325,1960,2796,3878,5243,6944,9024,11544,14553,18120,22300,27170,32791,39248,46608 ⋆ Number of (w,x,y,z) with all terms in { 1,...,n } and w + x>=2y + 2z. • a(n) = 3 * a(n - 1) - a(n - 2) - 5 * a(n - 3) + 5 * a(n - 4) + a(n - 5) - 3 * a(n - 6) + a(n - 7). • a(n) = 1 / 96 * (14 * n ^ 4 - 12 * n ^ 3 - 8 * n ^ 2 - 6 * ((- 1) ^ n - 1) * n + 3 * ((- 1) ^ n - 1)). •
► [A209408] 0,0,0,0,0,8,28,74,175,377,799,1673,3471,7192,14784,30208,61440,124416,251328,506712,1020015,2051015,4119775,8268215,16582735 ⋆ Number of subsets of { 1,...,n } containing { a,a + 4 } for some a. • a(n) = 2 ^ n - Product _{ i=0..3 } Fibonacci(floor((n + i) / 4) + 2). • a(n) = 3 * a(n - 1) - a(n - 2) - 2 * a(n - 3) - 2 * a(n - 4) + 6 * a(n - 5) - 2 * a(n - 6) - 4 * a(n - 7) + 2 * a(n - 8) - 6 * a(n - 9) + 2 * a(n - 10) + 4 * a(n - 11) + a(n - 12) - 3 * a(n - 13) + a(n - 14) + 2 * a(n - 15). •
► [A134638] 1,8,28,76,182,406,868,1808,3706,7522,15176,30508,61198,122606,245452,491176,982658,1965658,3931696,7863812,15728086,31456678,62913908,125828416,251657482 ⋆ Row sums of triangle A134637. • a(n) = - 8 + 15 * 2 ^ (n - 1) - 5 * n - n ^ 2. • a(n) = 5 * a(n - 1) - 9 * a(n - 2) + 7 * a(n - 3) - 2 * a(n - 4) for n>4. •
► [A212516] 0,0,0,8,28,88,186,378,660,1104,1700,2575,3660,5148,6972,9310,12096,15616,19656,24624,30330,37100,44770,53845,63888 ⋆ Number of (w,x,y,z) with all terms in { 1,...,n } and w>2x and y<3z. • a(n) = 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4) - 4 * a(n - 5) + 2 * a(n - 7) - 2 * a(n - 9) + 4 * a(n - 11) + a(n - 12) - 2 * a(n - 13) - 2 * a(n - 14) + a(n - 16). •
► [A054857] 1,1,8,28,117,472,1916,7765,31497,127707,517881,2100025,8515772,34532063,140030059,567832091,2302600696,9337214060,37863085664,153537580071,622606110920,2524713292359,10237896957896,41515420557135 ⋆ Number of ways to tile a 5 X n region with square tiles of size up to 5 X 5. • a(n) = b(1)a(n - 1) + b(2)a(n - 2) + ... + b(n)a(0), a(0)=a(1)=1, b(n) as defined in A054858. • a(n) = 2 * a(n - 1) + 7 * a(n - 2) + 6 * a(n - 3) - a(n - 4) - 5 * a(n - 5) - 2 * a(n - 6) - 3 * a(n - 7) - a(n - 8). - _ R. J. Mathar _ , Nov 02 2008 •
► [A241893] 0,0,0,8,28,120,460,1848,7308,29240,116620,466488,1864588,7458360,29827980,119311928,477225868,1908903480,7635526540,30542106168,122168075148,488672300600,1954687804300 ⋆ The total number of rectangles appearing in the Thue - Morse sequence logical matrices (1, 0 version) after n stages. • a(n) = (3 * 2 ^ n + 2 * 4 ^ n - (- 1) ^ n * (2 ^ n + 12) - 28) / 18, n>0. - _ R. J. Mathar _ , May 04 2014 •
► [A110046] 1,8,28,144,656,3200,15296,73984,356608,1722368,8313856,40144896,193826816,935886848,4518821888,21818834944,105350496256,508677324800,2456110759936,11859152338944,57261050298368,276480810549248 ⋆ Expansion of (1 + 4 * x - 12 * x ^ 2 - 16 * x ^ 3) / ((2 * x + 1) * (2 * x - 1) * (4 * x ^ 2 + 4 * x - 1)). • a(n) = ((2 - 2 * sqrt(2)) ^ (1 + n) + 2 * (- (- 2) ^ n + 2 ^ n + 2 ^ n * (1 + sqrt(2)) ^ (1 + n))) / 4. • a(n) = 4 * a(n - 1) + 8 * a(n - 2) - 16 * a(n - 3) - 16 * a(n - 4) for n>3. •
► [A027380] 1,8,28,168,1008,6552,43596,299592,2096640,14913024,107370900,780903144,5726600880,42288908760,314146029564,2345624803704,17592184995840,132458812569720,1000799909722368,7585009898729256 ⋆ Number of irreducible polynomials of degree n over GF(8); dimensions of free Lie algebras. • a(n) = Sum _{ d|n } mu(d) * 8 ^ (n / d) / n for n > 0. - _ Andrew Howroyd _ , Oct 13 2017 •
► [A226744] 8,28,169,1218,9512,78030,661459,5740304,50701542,454011971,4110416301,37550193650,345618860221,3201414635781,29816233849001,279007258230820,2621647966812031,24723998785919976,233922961602470391,2219671974013732243 ⋆ Round((10 ^ n) / (log(10 ^ n) - 1)). • a(n) = round((10 ^ n) / (log(10 ^ n) - 1)). •

► [A228281] 8,28,337,2448,21166,172082,1428523,11771298,97268701,802886174,6629901197,54739811878,451976078779,3731849749697,30812948919061,254414847888742,2100639733295629,17344457600010491,143208852222784259 ★ Number of nX6 binary arrays with top left value 1 and no two ones adjacent horizontally, vertically or nw - se diagonally. ● a(n) = a(n - 1) + 42 * a(n - 2) + 147 * a(n - 3) + 70 * a(n - 4) - 478 * a(n - 5) - 449 * a(n - 6) + 1199 * a(n - 7) + 732 * a(n - 8) - 2727 * a(n - 9) + 659 * a(n - 10) + 3827 * a(n - 11) - 5776 * a(n - 12) + 3926 * a(n - 13) - 1152 * a(n - 14) - 148 * a(n - 15) + 154 * a(n - 16) + 32 * a(n - 17) - 29 * a(n - 18) - 6 * a(n - 19) + 3 * a(n - 20) + a(n - 21) ●

► [A037157] 8,29,71,147,278,498,862,1459,2433,4017,6588,10756,17508,28441,46139,74783,121138,196150,317530,513935,831733,1345949,2177976,3524232,5702528 ★ Convolution of natural numbers n >= 1 with Fibonacci numbers F(k), for k >= 6. ● a(n) = Fibonacci(n + 10) - (47 + 13 * n). ●

► [A100178] 1,8,29,72,145,256,413,624,897,1240,1661,2168,2769,3472,4285,5216,6273,7464,8797,10280,11921,13728,15709,17872,20225 ★ Structured hexagonal diamond numbers (vertex structure 5). ● a(n) = (1 / 6) * (8 * n ^ 3 - 6 * n ^ 2 + 4 * n). ●

► [A106113] 0,0,0,1,8,29,72,146,261,428,659,967,1366,1871,2498,3264,4187,5286,6581,8093,9844,11857,14156,16766,19713 ★ 5th diagonal of triangle in A059317. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n > 7. ●

► [A362153] 1,8,29,73,151,276,463,729,1093,1576,2201,2993,3979,5188,6651,8401,10473,12904,15733,19001,22751,27028,31879,37353,43501 ★ Number of skew shapes in a 3 X n rectangle with no empty rows or columns. ● a(n) = (n ^ 4 + 8 * n ^ 3 + 11 * n ^ 2 - 20 * n + 12) / 12. ● a(n) = [x ^ n] (- 3 * x ^ 4 + 11 * x ^ 3 - 13 * x ^ 2 + 4 * x - 1) / (x - 1) ^ 5. - _ Peter Luschny _ , Apr 10 2023 ●

► [A299260] 1,8,29,74,153,275,450,687,996,1387,1869,2452,3145,3958,4901,5983,7214,8603,10160,11895,13817,15936,18261,20802,23569 ★ Partial sums of A299254. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 5) - 3 * a(n - 6) + 3 * a(n - 7) - a(n - 8) for n>7. ● a(n) = (1 / 5) * (8 * n ^ 3 + 12 * n ^ 2 + 14 * n + 5 + [n == 1 (mod 5)] - [n == 3 (mod 5)]). - _ Eric Simon Jacob _ , Feb 14 2023 ●

► [A290312] 1,8,29,75,160,301,518,834,1275,1870,2651,3653,4914,6475,8380,10676,13413,16644,20425,24815,29876,35673,42274,49750,58175 ★ Third diagonal sequence of the Sheffer triangle A094816 (special Charlier). ● a(n) = (24 + 70 * n + 69 * n ^ 2 + 26 * n ^ 3 + 3 * n ^ 4) / 24. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n > 4. ●

► [A048478] 1,8,29,85,225,561,1345,3137,7169,16129,35841,78849,172033,372737,802817,1720321,3670017,7798785,16515073,34865153,73400321,154140673,322961409,675282945,1409286145 ★ a(n) = T(6,n), array T given by A048472. ● a(n) = 7 * n * 2 ^ (n - 1) + 1. ● a(n) = 5 * a(n - 1) - 8 * a(n - 2) + 4 * a(n - 3) for n>2. G.f.: (1 + 3 * x - 3 * x ^ 2) / ((1 - x) * (1 - 2 * x) ^ 2). - _ Colin Barker _ , Feb 18 2016 ●

► [A001360] 1,8,29,85,232,617,1625,4264,11173,29261,76616,200593,525169,1374920,3599597,9423877,24672040,64592249,169104713,442721896,1159060981,3034461053,7944322184,20798505505,54451194337 ★ Crystal ball sequence for hyperbolic tessellation 3 ^ 7 (from triangle group (2,3,7)). ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) + a(n - 3). G.f.: (1 + 4 * x + x ^ 2) / ((1 - x) * (1 - 3 * x + x ^ 2)): partial sums of A001354. - _ Colin Barker _ , Mar 16 2012 ●

► [A294838] 1,1,8,29,89,301,915,2763,8040,22910,63776,174174,467448,1233836,3209679,8234149,20857621,52206847,129227514,316543962,767767628,1844925743,4394337797,10379319118,24320964976 ★ Expansion of Product _{ k>=1 } (1 + x ^ k) ^ (k * (3 * k - 2)). ● a(0) = 1 and a(n) = (1 / n) * Sum _{ k=1..n } b(k) * a(n - k) where b(n) = Sum _{ d|n } d ^ 2 * (3 * d - 2) * (- 1) ^ (1 + n / d). - _ Seiichi Manyama _ , Nov 14 2017 ●

► [A116952] 1,8,29,92,281,848,2549,7652,22961,68888,206669,620012,1860041,5580128,16740389,50221172,150663521,451990568,1355971709,4067915132,12203745401,36611236208,109833708629,329501125892,988503377681 ★ a(n) = 3 * a(n - 1) + 5 with a(0) = 1. ● a(n) = (7 / 2)3 ^ n - (5 / 2). [_ Emeric Deutsch _] ● a(n) = 4 * a(n - 1) - 3 * a(n - 2). G.f.: (4 * x + 1) / ((x - 1) * (3 * x - 1)). - _ Colin Barker _ , Jul 18 2013 ●

► [A199207] 8,29,113,449,1793,7169,28673,114689,458753,1835009,7340033,29360129,117440513,469762049,1879048193,7516192769,30064771073,120259084289,481036337153,1924145348609,7696581394433,30786325577729 ★ a(n) = 7 * 4 ^ n + 1. ● a(n) = 4 * a(n - 1) - 3. ● a(n) = 5 * a(n - 1) - 4 * a(n - 2). ●

► [A088131] 1,1,8,29,115,452,1779,7001,27552,108429,426715,1679308,6608803,26008497,102354680,402809917,1585231171,6238570004,24551470099,96620649225,380244026896,1496424637485,5889077900715,23176067575964 ★ a(n) equals the square of the n - th partial sum added to twice the n - th partial sum of the squares, divided by a(n - 1), for all n>=1, with a(0)=1, a(1)=1. ● a(n)=4a(n - 1) - a(n - 3) for n>3; G.f.: A(x)=(1 - 3x + 4x ^ 2 - 2x ^ 3) / (1 - 4x + x ^ 3). ●

► [A072264] 1,1,8,29,127,526,2213,9269,38872,162961,683243,2864534,12009817,50352121,211105448,885076949,3710758087,15557659006,65226767453,273468597389,1146539629432,4806961875241,20153583772883,84495560694854,354254600948977 ★ a(n) = 3 * a(n - 1) + 5 * a(n - 2), with a(0)=1, a(1)=1. ● a(n) = (1 / 2) * (((3 / 2) + (1 / 2) * sqrt(29)) ^ n + ((3 / 2) - (1 / 2) * sqrt(29)) ^ n) + (1 / 58) * sqrt(29) * (((3 / 2) - (1 / 2) * sqrt(29)) ^ n - ((3 / 2) + (1 / 2) * sqrt(29)) ^ n). - _ Paolo P. Lava _ , Mar 31 2009 ● a(n) = 5 ^ ((n - 1) / 2) * (sqrt(5) * Fibonacci(n + 1, 3 / sqrt(5)) - 2 * Fibonacci(n, 3 / sqrt(5))). - _ G. C. Greubel _ , Jan 14 2020 ●

► [A110527] 0,1,8,29,128,537,2280,9653,40896,173233,733832,3108557,13168064,55780809,236291304,1000946021,4240075392,17961247585,76085065736,322301510525,1365291107840,5783465941881,24499154875368 ★ a(n + 3) = 3 * a(n + 2) + 5 * a(n + 1) + a(n), a(0) = 0, a(1) = 1, a(2) = 8. ● a(n) = - (1 / 2) * (2 - sqrt(5)) ^ n + (- 1) ^ n - (1 / 2) * (2 + sqrt(5)) ^ n + (2 / 5) * (2 + sqrt(5)) ^ n * sqrt(5) - (2 / 5) * (2 - sqrt(5)) ^ n * sqrt(5), with n >= 0. - _ Paolo P. Lava _ , Oct 02 2008 ●

► [A092277] 0,8,30,66,116,180,258,350,456,576,710,858,1020,1196,1386,1590,1808,2040,2286,2546,2820,3108,3410,3726,4056 ★ a(n) = 7 * n ^ 2 + n. ● a(n) = a(n - 1) + 14 * n - 6 with n>0, a(0)=0. - _ Vincenzo Librandi _ , Nov 17 2010 ●

► [A131769] 8,30,72,160,352,768,1664,3584,7680,16384,34816,73728,155648,327680,688128,1441792,3014656,6291456,13107200,27262976 ★ Number of connected components in the double Bruhat cells for simple Lie groups of type B _ n (or C _ n). ● a(2) = 8, a(3) = 30 and a(n) = (n + 5) * 2 ^ (n - 1) for n >= 4. ●

► [A055832] 8,30,73,145,255,413,630,918,1290,1760,2343,3055,3913,4935,6140,7548,9180,11058,13205,15645,18403,21505,24978,28850,33150 ★ T(n,n - 5), where T is the array in A055830. ● a(n) = (n - 3) * (n - 4) * (n ^ 2 + 13 * n + 6) / 24, n>4, sign corrected Mar 13 2016. ●

► [A100175] 1,8,30,76,155,276,448,680,981,1360,1826,2388,3055,3836,4740,5776,6953,8280,9766,11420,13251,15268,17480,19896,22525 ★ Structured triakis tetrahedral numbers (vertex structure 4). ● a(n) = (3 * n ^ 3 - 3 * n ^ 2 + 2 * n) / 2. ●

► [A063489] 1,8,30,77,159,286,468,715,1037,1444,1946,2553,3275,4122,5104,6231,7513,8960,10582,12389,14391,16598,19020,21667,24549 ★ a(n) = (2 * n - 1) * (5 * n ^ 2 - 5 * n + 6) / 6. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4), with a(1)=1, a(2)=8, a(3)=30, a(4)=77. - _ Harvey P. Dale _ , Aug 20 2012 ●

► [A299284] 1,8,30,78,162,292,478,731,1061,1478,1992,2614,3354,4222,5228,6383,7697,9180,10842,12694,14746,17008,19490,22203,25157 ★ Partial sums of A299283. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 4) - 3 * a(n - 5) + 3 * a(n - 6) - a(n - 7) for n>6. ●

► [A002417] 1,8,30,80,175,336,588,960,1485,2200,3146,4368,5915,7840,10200,13056,16473,20520,25270,30800,37191,44528,52900,62400,73125 ★ 4 - dimensional figurate numbers: a(n) = n * binomial(n + 2, 3). ● a(n) = n ^ 2 * (n + 1) * (n + 2) / 6. ● a(n) = C(n + 2, 2) * n ^ 2 / 3. - _ Paul Barry _ , Jun 26 2003 ● a(n) = C(n + 3, n) * C(n + 1, 1). - _ Zerinvary Lajos _ , Apr 27 2005 ● a(n) = (binomial(n + 3,n - 1) - binomial(n + 2,n - 2)) * (binomial(n + 1,n - 1) - binomial(n,n - 2)). - _ Zerinvary Lajos _ , May 12 2006 ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5), n>5. - _ Wesley Ivan Hurt _ , Aug 01 2015 ●

► [A213776] 1,8,30,81,184,376,717,1304,2294,3941,6656,11104,18361,30168,49342,80441,130840,212472,344645,558600,904886,1465293,2372160,3839616,6214129 ★ Antidiagonal sums of the convolution array A213774. ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + a(n - 3) + 2 * a(n - 4) - a(n - 5). ● a(n) = 6 * Fibonacci(n + 6) - Lucas(n + 5) - 2 * n * (2 * n + 9) - 37. - _ Ehren Metcalfe _ , Jul 10 2019 ●

► [A343520] 1,8,30,93,214,506,930,1818,3065,5247,8018,13080,18576,28104,39300,56184,74629,104978,134614,182897,232258,304098,376762,492068,594635 ★ a(n) = Sum _{ 1 <= x _ 1 <= x _ 2 <= x _ 3 <= x _ 4 <= x _ 5 <= x _ 6 <= n } gcd(x _ 1, x _ 2, x _ 3 , x _ 4, x _ 5, x _ 6, n). ● a(n) = Sum _{ d|n } phi(n / d) * binomial(d + 5, 6). ●

► [A163613] 1,8,30,104,356,1216,4152,14176,48400,165248,564192,1926272,6576704,22454272,76663680,261746176,893657344,3051137024,10417233408,35566659584,121432171520,414595366912,1415517124608,4832877764608 ★ a(n) = ((1 + 3 * sqrt(2)) * (2 + sqrt(2)) ^ n + (1 - 3 * sqrt(2)) * (2 - sqrt(2)) ^ n) / 2. ● a(n) = 4 * a(n - 1) - 2 * a(n - 2) for n > 1; a(0) = 1, a(1) = 8. ●

► [A022273] 0,8,31,69,122,190,273,371,484,612,755,913,1086,1274,1477,1695,1928,2176,2439,2717,3010,3318,3641,3979,4332 ★ a(n) = n * (15 * n + 1) / 2. ● a(n) = 15 * n + a(n - 1) - 7 for n>0, a(0)=0. - _ Vincenzo Librandi _ , Aug 04 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) - a(n - 3) for n>2. - _ Vincenzo Librandi _ , Mar 31 2015 ●

► [A115293] 1,8,31,80,160,272,416,592,800,1040,1312,1616,1952,2320,2720,3152,3616,4112,4640,5200,5792,6416,7072,7760,8480 ★ Row sums of correlation triangle for (1 + x) ^ 3 / (1 - x). ● a(n) = Sum _{ k = 0..n } binomial(5,n - k) * binomial(k + 2,k). ●

► [A212579] 0,1,8,31,80,171,308,509,780,1137,1584,2143,2812,3615,4552,5645,6892,8321,9924,11731,13736,15967,18416,21117,24056 ★ Number of (w,x,y,z) with all terms in { 1,...,n } and min { |w - x|,|w - y| } =min { |x - y|,|x - z| } . ● a(n) = a(n - 1) + 2 * a(n - 2) - a(n - 3) - 2 * a(n - 4) - a(n - 5) + 2 * a(n - 6) + a(n - 7) - a(n - 8). ●

► [A115004] 1,8,31,80,179,332,585,948,1463,2136,3065,4216,5729,7568,9797,12456,15737,19520,24087,29308,35315,42120,50073,58920,69025 ★ a(n) = Sum _{ i=1..n, j=1..n, gcd(i,j)=1 } (n + 1 - i) * (n + 1 - j). ● a(n) = Sum _{ i=1..n, j=1..n, gcd(i,j)=1 } (n + 1 - i) * (n + 1 - j). ● a(n) = n ^ 2 + Sum _{ i=2..n } (n + 1 - i) * (2n + 2 - i) * phi(i). - _ Chai Wah Wu _ , Aug 15 2021 ●

► [A299261] 1,8,31,81,168,303,497,760,1103,1537,2072,2719,3489,4392,5439,6641,8008,9551,11281,13208,15343,17697,20280,23103,26177 ★ Partial sums of A299255. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + 2 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) - a(n - 6) for n>5. ● a(n) = - a(- 1 - n) for all n in Z. - _ Michael Somos _ , Oct 03 2018 ●

► [A005338] 1,8,31,85,190,360,610,956,1415,2005,2745,3655,4756,6070,7620,9430,11525,13931,16675,19785,23290,27220,31606,36480,41875 ★ Number of ways in which n identical balls can be distributed among 5 boxes in a row such that each pair of adjacent boxes contains at least 4 balls. ● a(n) = (n ^ 4 + 10 * n ^ 3 - 445 * n ^ 2 + 2690 * n - 1656) / 24 for n > 9. - _ Colin Barker _ , May 10 2012 ●

► [A006322] 1,8,31,85,190,371,658,1086,1695,2530,3641,5083,6916,9205,12020,15436,19533,24396,30115,36785,44506,53383,63526,75050,88075 ★ 4 - dimensional analog of centered polygonal numbers. ● a(n) = 5 * C(n + 2, 4) + C(n + 1, 2) = (C(5 * n + 4, 4) - 1) / 5 ^ 3 = n * (n + 1) * (5 * n ^ 2 + 5 * n + 2) / 24. ● a(n) = (((n + 1) ^ 5 - n ^ 5) - ((n + 1) ^ 3 - n ^ 3)) / 24. - Xavier Acloque, Jan 14 2003, corrected by _ Eric Rowland _ , Aug 15 2017 ● a(n) = Sum _{ i=1..n } Sum _{ j=1..n } i * min(i,j). - _ Enrique Pérez Herrero _ , Jan 30 2013 ●

► [A213764] 1,8,31,90,225,516,1123,2366,4885,9960,20151,40578,81481,163340,327115,654726,1310013,2620656,5242015,10484810,20970481,41941908,83884851,167770830,335542885 ★ Antidiagonal sums of the convolution array A213762. ● a(n) = - 10 + 5 * 2 ^ (n + 1) - 7 * n - 2 * n ^ 2. ● a(n) = 5 * a(n - 1) - 9 * a(n - 2) + 7 * a(n - 3) - 2 * a(n - 4). ●

► [A335606] 1,8,31,95,269,721,1866,4728,11804,29162,71502,174342,423341,1024786,2474934,5966625,14365256,34550674,83035396,199440433,478814076,1149133511,2757142136,6613933242,15863281135 ★ The number of fixed n - ominoes wit

h a convex hull of width 3. ● a(n)= 5 * a(n - 1) - 6 * a(n - 2) - 4 * a(n - 3) + 8 * a(n - 4) + a(n - 5) + 2 * a(n - 6) - 8 * a(n - 7) - a(n - 9) + 9 * a(n - 10) - 2 * a (n - 11) - a(n - 12) - 3 * a(n - 13) + a(n - 14). ●

▶ [A055845] 1,8,31,116,433,1616,6031,22508,84001,313496,1169983,4366436,16295761,60816608,226970671,847066076,3161293633,11798108456,44031140191,164326452308,613274669041,2288772223856 ⋆ a(n) = 4 * a(n - 1) - a(n - 2) with a(0) =1, a(1)=8. ● a(n) = (8 * ((2 + sqrt(3)) ^ n - (2 - sqrt(3)) ^ n) - ((2 + sqrt(3)) ^ (n - 1) - (2 - sqrt(3)) ^ (n - 1))) / (2 * sqrt(3)). ● a(n) = ChebyshevU(n,2) + 4 * ChebyshevU(n - 1,2). ●

▶ [A232621] 1,8,31,175,1015,5911,34447,200767,1170151,6820135,39750655,231683791,1350352087,7870428727,45872220271,267362892895,1558305137095,9082467929671,52936502440927,308536546715887,1798282777854391,10481160120410455,61088677944608335 ⋆ The number of vertically fault - free domino tilings of t he 5 X (2n) board. ● a(n) = 6 * a(n - 1) - a(n - 2) - 4, n>=4. - _ R. J. Mathar _ , Nov 07 2015 ● a(n) = 1 + (3 / 2) * (3 - 2 * sqrt(2)) ^ n * (2 + sqrt(2)) + (3 - 3 / sqrt(2)) * (3 + 2 * sqrt(2)) ^ n for n>1. - _ Colin Barker _ , Mar 05 2016 ●

▶ [A018842] 1,8,32,68,96,120,148,176,204,232,260,288,316,344,372,400,428,456,484,512,540,568,596,624,652 ⋆ Number of squares on infinite chessboard at n kni ght's moves from center. ● a(n) = 28 * n - 20, n >= 5. ●

▶ [A139098] 0,8,32,72,128,200,288,392,512,648,800,968,1152,1352,1568,1800,2048,2312,2592,2888,3200,3528,3872,4232,4608 ⋆ a(n) = 8 * n ^ 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Wesley Ivan Hurt _ , Dec 03 2021 ●

▶ [A130809] 8,32,80,160,280,448,672,960,1320,1760,2288,2912,3640,4480,5440,6528,7752,9120,10640,12320,14168,16192,18400,20800,23400 ⋆ If X _ 1, ..., X _ n i s a partition of a 2n - set X into 2 - blocks then a(n) is equal to the number of 3 - subsets of X containing none of X _ i, (i=1,...,n). ● a(n) = (4 / 3) * n * (n - 1) * (n - 2). ● a(n) = C(n,n - 3) * 8, n >= 3. - _ Zerinvary Lajos _ , Dec 07 2007 ●

▶ [A008412] 1,8,32,88,192,360,608,952,1408,1992,2720,3608,4672,5928,7392,9080,11008,13192,15648,18392,21440,24808,28512,32568,36992 ⋆ Coordination seque nce for 4 - dimensional cubic lattice (points on surface of 4 - dimensional cross - polytope). ● a(n) = 8 * n * (n ^ 2 + 2) / 3 for n>1. ● a(n) = 2 * d * Hypergeo metric2F1(1 - d, 1 - n, 2, 2) where d=4, for n>=1. - _ Shel Kaphan _ , Feb 14 2023 ●

▶ [A132117] 1,8,32,90,205,406,728,1212,1905,2860,4136,5798,7917,10570,13840,17816,22593,28272,34960,42770,51821,62238,74152,87700,103025 ⋆ Binomial trans form of [1, 7, 17, 17, 6, 0, 0, 0, ...]. ● a(n) = (4 * n + 6 * n ^ 2 + 8 * n ^ 3 + 6 * n ^ 4) / 24. - _ Alois P. Heinz _ , Aug 07 2008 ●

▶ [A159941] 8,32,92,212,416,728,1172,1772,2552,3536,4748,6212,7952,9992,12356,15068,18152,21632,25532,29876,34688,39992,45812,52172,59096 ⋆ Number of t risubstituted linear alkanes of composition C _ n H _ (2n - 1) XYZ. ● a(n) = (4 * n ^ 3 - 18 * n ^ 2 + 38 * n - 28) where n is the number of carbons. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Wesley Ivan Hurt _ , Ma y 28 2021 ●

▶ [A241204] 1,8,32,96,256,640,1536,3584,8192,18432,40960,90112,196608,425984,917504,1966080,4194304,8912896,18874368,39845888,83886080,176160768,369098752,771751936,1610612736 ⋆ Expansion of (1 + 2 * x) ^ 2 / (1 - 2 * x) ^ 2. ● a(n) = 2 ^ (2 + n) * n for n>0. - _ Colin Barker _ , Apr 23 2014 ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) for n>2. - _ Colin Barker _ , Apr 23 2014 ●

▶ [A357285] 0,0,0,0,0,0,0,8,32,104,304,792,1920,4520,10192,22392,48416,102856,215664,448792,925632,1897064,3872016,7868344,15936096 ⋆ a(n) = number of su bsets S of { 1,2,...,n } having more than 2 elements such that (sum of least thre e elements of S) < max(S). ● a(n) = 4 * a(n - 1) - 3 * a(n - 2) - 2 * a(n - 3) - 6 * a(n - 4) + 8 * a(n - 5) + 24 * a(n - 6) - 40 * a(n - 7). ●

▶ [A100312] 1,8,32,104,304,832,2176,5504,13568,32768,77824,182272,421888,966656,2195456,4947968,11075584,24641536,54525952,120061952,263192576,574619648,1249902592,2709520384,5855248384 ⋆ Number of 3 X n binary matrices avoi ding simultaneously the right angled numbered polyomino patterns (ranpp) (10 ;0) and (01;1). ● a(n) = 2 ^ (n - 1) * (n ^ 2 + 5 * n + 2). ●

▶ [A302507] 0,8,32,104,320,968,2912,8744,26240,78728,236192,708584,2125760,6377288,19131872,57395624,172186880,516560648,1549681952,4649045864,13947137600,41841412808,125524238432,376572715304,1129718145920 ⋆ a(n) = 4 * (3 ^ n - 1). ● a(n) = 4 * a(n - 1) - 3 * a(n - 2). ●

▶ [A318944] 0,0,0,0,1,8,32,114,376,1177,3549,10406,29861,84249,234502,645625,1761765,4772534,12851261,34434561,91890118,244385617,648139821,1714976054,4529163125 ⋆ Number of Dyck paths with n nodes and altitude 4. ● a(n) = 9 * a (n - 1) - 31 * a(n - 2) + 50 * a(n - 3) - 36 * a(n - 4) + 8 * a(n - 5) for n>9. - _ Colin Barker _ , Apr 11 2019 ●

▶ [A234272] 1,8,32,120,448,1672,6240,23288,86912,324360,1210528,4517752,16860480,62924168,234836192,876420600,3270846208,12206964232,45557010720,170021078648,634527303872,2368088136840,8837825243488,32983212837112,123095026104960 ⋆ G.f.: (1 + 4 * x + x ^ 2) / (1 - 4 * x + x ^ 2). ● a(n) = 4 * a(n - 1) - a(n - 2) for n>2. ● a(n) = 4 * (- (2 - sqrt(3)) ^ n + (2 + sqrt(3)) ^ n) / sqrt(3) for n>1. ●

▶ [A081654] 1,8,32,128,512,2048,8192,32768,131072,524288,2097152,8388608,33554432,134217728,536870912,2147483648,8589934592,34359738368,137438953472,549755813888,2199023255552,8796093022208,35184372088832 ⋆ a(n) = 2 * 4 ^ n - 0 ^ n. ● a(0)=1, a(n) = 2 * 4 ^ n, n>0 ●

▶ [A290915] 0,8,32,144,672,3096,14272,65824,303552,1399848,6455520,29770160,137287520,633112632,2919650688,13464207936,62091296128,286339090504,1320476135328,6089483698896,28082152132128,129503141377112,597214328432960,2754102721315680 ⋆ p - INVERT of the positive integers, where p(S) = 1 - 8 * S ^ 2. ● a(n) = 4 * a(n - 1) + 2 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ●

▶ [A086348] 1,8,32,168,784,3840,18432,89216,430336,2078720,10035200,48457728,233967616,1129709568,5454692352,26337640448,127169265664,614027755520,2964787822592,14315262836736 ⋆ On a 3 X 3 board, number of n - move routes o f chess king ending in the central square. ● a(n) = (1 / 16)(4(- 2) ^ (n + 1) + (2 + sqrt(8)) ^ (n + 2) + (2 - sqrt(8)) ^ (n + 2)). ● a(n) = 2 * a(n - 1) + 12 * a(n - 2) + 8 * a(n - 3) with a(0)=1, a(1)=8 and a(2)=32. ●

▶ [A022274] 0,8,33,75,134,210,303,413,540,684,845,1023,1218,1430,1659,1905,2168,2448,2745,3059,3390,3738,4103,4485,4884 ⋆ a(n) = n * (17 * n - 1) / 2. ● a(n) = 17 * n + a(n - 1) - 9 for n>0, a(0)=0. - _ Vincenzo Librandi _ , Aug 04 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>2. (End) ●

▶ [A118312] 1,8,33,76,129,196,277,372,481,604,741,892,1057,1236,1429,1636,1857,2092,2341,2604,2881,3172,3477,3796,4129 ⋆ Number of squares on infinite ches sboard that a knight can reach in n moves from a fixed square. ● a(n) = - 3 + 4 * n + 7 * n ^ 2 + 4 * sign((n - 2) * (n - 1)). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Jul 09 2012 ●

▶ [A212679] 0,1,8,33,80,165,288,469,704,1017,1400,1881,2448,3133,3920,4845,5888,7089,8424,9937,11600,13461,15488,17733,20160 ⋆ Number of (w,x,y,z) with all terms in { 1,...,n } and |x - y|=|y - z|. ● a(n)=2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + a(n - 4) + 2 * a(n - 5) - a(n - 6). ●

▶ [A212133] 0,1,8,33,88,185,336,553,848,1233,1720,2321,3048,3913,4928,6105,7456,8993,10728,12673,14840,17241,19888,22793,25968 ⋆ Number of (w,x,y,z) with all terms in { 1,...,n } and median=mean. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ● a(n) = n * (2 * n ^ 2 - 3 * n + 2). - _ J. M. Bergot _ , Jun 22 2012 ●

▶ [A212574] 0,1,8,33,88,197,380,673,1104,1721,2560,3681,5128,6973,9268,12097,15520,19633,24504,30241,36920,44661,53548,63713,75248 ⋆ Number of (w,x,y,z) w ith all terms in { 1,...,n } and |w - x|>=|x - y| + |y - z|. ● a(n) = 3 * a(n - 1) - a * (n - 2) - 5 * a(n - 3) + 5 * a(n - 4) + a(n - 5) - 3 * a(n - 6) + a(n - 7). ●

▶ [A210698] 1,8,33,90,209,528,889,1432,2673,3802,5297,8448,11025,14216,20625,25546,31393,42768,51145,60824,79233,92394,107297,135168,154657 ⋆ Number of 2 X 2 matrices having all terms in { 1,...,n } and determinant = 0 (mod 3). ● a(n) = a(n - 1) + 4 * a(n - 3) - 4 * a(n - 4) - 6 * a(n - 6) + 6 * a(n - 7) + 4 * a(n - 9) - 4 * a(n - 10) - a(n - 12) + a(n - 13) for n > 13. ● a(n) = r ^ 4 + 4 * r ^ 3 * s + 4 * r ^ 3 * t + 4 * r ^ 2 * s ^ 2 + 8 * r ^ 2 * s * t + 4 * r ^ 2 * t ^ 2 + s ^ 4 + 6 * s ^ 2 * t ^ 2 + t ^ 4. ●

▶ [A014820] 1,8,33,96,225,456,833,1408,2241,3400,4961,7008,9633,12936,17025,22016,28033,35208,43681,53600,65121,78408,93633,110976,130625 ⋆ a(n) = (1 / 3) * (n ^ 2 + 2 * n + 3) * (n + 1) ^ 2. ● a(n - 1) = C(n + 3,4) + 3 C(n + 2,4) + 3 C(n + 1,4) + C(n,4). ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5), with n > 4, a(0)=1, a(1)=8, a(2)=33, a(3)=96, a(4)=225. - _ Yosu Yurramendi _ , Sep 03 2013 ●

▶ [A051836] 0,1,8,33,98,238,504,966,1716,2871,4576,7007,10374,14924,20944,28764,38760,51357,67032,86317,109802,138138,172040,212290,259740 ⋆ a(n) = n * (n + 1) * (n + 2) * (n + 3) * (3 * n + 2) / 120. ● a(n) = C(n + 4, n) * (3n + 5) / 5. ●

▶ [A278670] 1,8,33,99,245,532,1050,1926,3333,5500,8723,13377,19929,28952,41140,57324,78489,105792,140581,184415,239085,306636,389390,489970,611325 ⋆ Nu mber of n X 2 0..1 arrays with rows in nondecreasing lexicographic order and c olumns in nonincreasing lexicographic order, but with exactly one mistake. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

▶ [A070051] 8,33,117,384,1194,3558,10238,28606,77950,207870,543998,1400318,3552254,8894462,22011902,53903358,130744318,314376190,749928446,1775894526,4177264638,9764863998,22695378942,52466548734,120686903294 ⋆ Number of Bottleneck - Monge matrices with 3 rows. In the formula below, P=3. ● a(N) = a(3, N), where a(P, N) is defined recursively in A070050. ●

▶ [A087235] 8,33,120,360,1134,3094,8472,24300,64720,175197,481452,1304719,3524654,9560100,25874784,70119985,189969354,514278263,1394199300,3779856633,10246936436,27788573803,75370126416,204475055200,554805820556 ⋆ a(n) is t he largest number in the set of solutions to n=x / pi(x), where pi(x)=A000720(x). ● a(n) = Max { x; n * pi(x)=x } . ●

▶ [A212404] 8,33,132,527,2104,8402,33560,134075,535728,2140910,8556568,34201078,136713872,546528612,2184925808,8735357267,34925461088,139642914902,558353310488,2232601256162,8927375430608,35698163696252,142750104755408 ⋆ Number of binary arrays of length 2 * n + 2 with no more than n ones in any le ngth 2n subsequence (=50 % duty cycle) ● a(n) = 2 ^ (2 * n + 1) + C(2 * n - 2 ,n). - _ Vaclav Kotesovec _ , Oct 28 2012 ●

▶ [A048877] 1,8,33,140,593,2512,10641,45076,190945,808856,3426369,14514332,61483697,260449120,1103280177,4673569828,19797559489,83863807784,355252790625,1504874970284,6374752671761 ⋆ a(n) = 4 * a(n - 1) + a(n - 2); a(0)=1, a(1) =8. ● a(n) = ((6 + sqrt(5)) * (2 + sqrt(5)) ^ n - (6 - sqrt(5)) * (2 - sqrt(5)) ^ n) / (2 * sqrt(5)). ● a(n)=4 * a(n - 1) + a(n - 2); a(0)=1, a(1)=8. ●

▶ [A154516] 8,34,78,140,220,318,434,568,720,890,1078,1284,1508,1750,2010,2288,2584,2898,3230,3580,3948,4334,4738,5160,5600 ⋆ a(n) = 9n ^ 2 - n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Jan 30 2012 ●

▶ [A212744] 1,8,34,83,181,314,532,791,1177,1604,2206,2843,3709,4598,5776,6959,8497,10016,11962,13859,16261,18578,21484,24263,27721 ⋆ Number of (w,x,y,z) with all terms in { 0,...,n } and w=max { w,x,y,z }- min { w,x,y,z } ; i.e., the r ange of (w,x,y,z) is its first term. ● a(n) = a(n - 1) + 3 * a(n - 2) - 3 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) + a(n - 6) - a(n - 7). ● a(n) = (30 * n ^ 3 + 3 * ((- 1) ^ n + 15) * n ^ 2 + 3 * ((- 1) ^ n + 15) * n + (- 1) ^ n + 15) / 16. ● a(n) = (15 * n ^ 3 + 24 * n ^ 2 + 24 * n + 8) / 8 for n even. ● a(n) = (15 * n ^ 3 + 21 * n ^ 2 + 21 * n + 7) / 8 for n odd. ●

▶ [A208639] 8,34,95,225,494,1042,2149,4375,8840,17784,35687,71509,143170,286510,573209,1146627,2293484,4587220,9174715,18349729,36699782,73399914,146800205,293600815,587202064 ⋆ Number of 4 X n 0..1 arrays with new values 0..1 introduced in row major order and no element equal to more than one of its im mediate leftward or upward or right - upward antidiagonal neighbors. ● a(n) = (- 42 + 35 * 2 ^ n - 13 * n - n ^ 2) / 2 for n>1. ●

▶ [A066804] 1,8,34,100,235,476,868,1464,2325,3520,5126,7228,9919,13300,17480,22576,28713,36024,44650,54740,66451,79948,95404,113000,132925 ⋆ Sum of dia gonal elements and those below it for a square matrix of integers, starting with 1. ● a(n) = n * (n + 1) * (2 * n ^ 2 - n + 2) / 6. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5), with n>4, a(0)=1, a(1)=8, a(2)= 34, a(3)=100, a(4)=235. [_ Yosu Yurramendi _ , Sep 03 2013] ●

► [A033455] 1,8,34,104,259,560,1092,1968,3333,5368,8294,12376,17927,25312,34952,47328,62985,82536,106666,136136,171787,214544,265420,325520,396045 ⋆ Convolution of nonzero squares A000290 with themselves. ● a(n) = Sum _{ k=1..n + 1 } k ^ 2 * (n + 1 - k) ^ 2. - _ Kolosov Petro _ , Feb 07 2019 ●

► [A172202] 0,0,8,34,105,248,490,858,1379,2080,2988,4130,5533,7224,9230,11578,14295,17408,20944,24930,29393,34360,39858,45914,52555 ⋆ Number of ways to place 3 nonattacking kings on a 3 X n board. ● a(n) = (n - 2) * (9 * n ^ 2 - 45 * n + 70) / 2, n>=2. ●

► [A053298] 1,8,34,107,281,654,1397,2801,5353,9859,17643,30869,53062,89951,150833,250780,414210,680665,1114160,1818310,2960806,4813018,7814074,12674542,20544191 ⋆ Partial sums of A027964. ● a(n) = 3 * F(n + 10) + F(n + 9) - (3 * n ^ 4 + 58 * n ^ 3 + 489 * n ^ 2 + 2234 * n + 4752) / 24, where F(.) are the Fibonacci numbers (A000045). ● a(n) = a(n - 1) + a(n - 2) + (3 * n + 4) * C(n + 3, 3) / 4. ●

► [A082840] 1,1,8,34,131,493,1844,6886,25703,95929,358016,1336138,4986539,18610021,69453548,259204174,967363151,3610248433,13473630584,50284273906,187663465043,700369586269,2613814880036,9754889933878,36405744855479 ⋆ a(n) = 4 * a(n - 1) - a(n - 2) + 3, with a(0) = - 1, a(1) = 1. ● a(n) = - 3 / 2 + (1 / 12) * ((a - 2 * b + 5) * a ^ n + (b - 2 * a + 5) * b ^ n), with a = 2 + sqrt(3), b = 2 - sqrt(3):. ●

► [A126395] 1,8,34,150,668,2986,13362,59816,267802,1199022,5368412,24036226,107618586,481846232,2157395218,9659418342,43248619100,193639305850,866991400098,3881825980040,17380302665002,77817738944382 ⋆ Number of base 8 n - digit numbers with adjacent digits differing by two or less. ● a(n) = 5 * a(n - 1) - a(n - 2) - 6 * a(n - 3) for n>3. ●

► [A335749] 1,8,34,152,676,3008,13384,59552,264976,1179008,5245984,23341952,103859776,462123008,2056211584,9149092352,40708792576,181133355008,805951005184,3586070730752,15956184933376,70996881195008,315899894646784,1405593340977152,6254173153202176 ⋆ a(n) = n! * [x ^ n] exp(2 * x) * (y * sinh(x * y) + cosh(x * y)) and y = sqrt(6). ● a(n) = 4 * a(n - 1) + 2 * a(n - 2). (End) ●

► [A252934] 8,34,153,711,3067,10920,30818,70640,138558,242764,391450,592808,855030,1186308,1594834,2088800,2676398,3365820,4165258,5082904,6126950,7305588,8627010,10099408,11730974 ⋆ Number of n X 4 nonnegative integer arrays with upper left 0 and every value within 3 of its king move distance from the upper left and every value increasing by 0 or 1 with every step right, diagonally se or down. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>10. ●

► [A136016] 8,35,80,143,224,323,440,575,728,899,1088,1295,1520,1763,2024,2303,2600,2915,3248,3599,3968,4355,4760,5183,5624 ⋆ a(n) = 9 * n ^ 2 - 1. ● a(n) = a(- n) for all n in Z. Sum _{ n in Z } 1 / a(n) = - Pi / 3 ^ (3 / 2) = - A073010. - _ Michael Somos _ , May 21 2023 ●

► [A303383] 0,1,8,35,91,216,405,748,1196,1925,2800,4131,5643,7840,10241,13616,17200,22113,27216,34075,41075,50336,59653,71820,83916 ⋆ Total volume of all cubes with side length q such that n = p + q and p <= q. ● a(n) = Sum _{ i=1..floor(n / 2) } (n - i) ^ 3. ● a(n) = (30 * (n - 2) * (n + 1) * (n ^ 2 - n + 2) + (2 * n - 1) * (2 * n ^ 2 - 2 * n - 1) * (- 1) ^ n + 119) / 128. Therefore: ● a(n) = n ^ 2 * (3 * n - 2) * (5 * n - 6) / 64 for n even; ● a(n) = (n - 1) ^ 2 * (3 * n - 1) * (5 * n + 1) / 64 for n odd. (End) ● a(n) = a(n - 1) + 4 * a(n - 2) - 4 * a(n - 3) - 6 * a(n - 4) + 6 * a(n - 5) + 4 * a(n - 6) - 4 * a(n - 7) - a(n - 8) + a(n - 9). - _ Wesley Ivan Hurt _ , Apr 23 2021 ●

► [A212903] 1,8,35,94,209,398,697,1130,1743,2568,3661,5060,6833,9024,11711,14946,18817,23382,28741,34958,42143,50368,59753,70376,82369 ⋆ Number of (w,x,y,z) with all terms in { 0,...,n } and |w - x|<=|x - y|<=|y - z|. ● a(n) = 2 * a(n - 1) + a(n - 2) - 3 * a(n - 3) - a(n - 4) + a(n - 5) + 3 * a(n - 6) - a(n - 7) - 2 * a(n - 8) + a(n - 9). ●

► [A168566] 0,8,35,99,224,440,783,1295,2024,3024,4355,6083,8280,11024,14399,18495,23408,29240,36099,44099,53360,64008,76175,89999,105624 ⋆ a(n) = (n - 1) * (n + 2) * (n ^ 2 + n + 2) / 4. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ●

► [A212674] 0,1,8,35,104,247,504,925,1568,2501,3800,5551,7848,10795,14504,19097,24704,31465,39528,49051,60200,73151,88088,105205,124704 ⋆ Number of (w,x,y,z) with all terms in { 1,...,n } and w > |x - y| + |y - z|. ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 5 * a(n - 4) - 4 * a(n - 5) + a(n - 6). ●

► [A244882] 1,8,35,110,280,616,1218,2220,3795,6160,9581,14378,20930,29680,41140,55896,74613,98040,127015,162470,205436,257048,318550,391300,476775 ⋆ Expansion of (1 + 2 * x + 2 * x ^ 2) / (1 - x) ^ 6. ● a(n) = (24 + 62 * n + 63 * n ^ 2 + 33 * n ^ 3 + 9 * n ^ 4 + n ^ 5) / 24. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>5. ●

► [A040977] 1,8,35,112,294,672,1386,2640,4719,8008,13013,20384,30940,45696,65892,93024,128877,175560,235543,311696,407330,526240,672750,851760,1068795 ⋆ a(n) = binomial(n + 5,5) * (n + 3) / 3. ● a(n - 3) = Sum _{ i + j + k=n } i * j * k ^ 2. - _ Benoit Cloitre _ , Nov 01 2002 ● a(n) = 2 * binomial(n + 6, 6) - binomial(n + 5, 5). - _ Paul Barry _ , Mar 04 2003 ● a(n - 3) = 1 / (1! * 2! * 3!) * Sum _{ 1 <= x _ 1, x _ 2, x _ 3 <= n } |det V(x _ 1,x _ 2,x _ 3)| = 1 / 12 * Sum _{ 1 <= i,j,k <= n } |(i - j)(i - k)(j - k)|, where V(x _ 1,x _ 2,x _ 3 } is the Vandermonde matrix of order 3. - _ Peter Bala _ , Sep 13 2007 ● a(n) = binomial(n + 5,5) + 2 * binomial(n + 5,6). - Borislav St. Borisov (b.st.borisov(AT)abv.bg), Mar 05 2009 ● a(n) = (n + 1) * (n + 2) * (n + 3) ^ 2 * (n + 4) * (n + 5) / 360. - _ Wesley Ivan Hurt _ , May 05 2015 ●

► [A292479] 0,1,8,35,120,392,1336,4725,16792,59191,207536,727440,2553264,8968569,31502248,110627195,388451624,1364010648,4789766120,16819647565,590633332152,207403715119,728306773600,2557481457440,8980717116000 ⋆ p - INVERT of the positive squares, where p(S) = 1 - S ^ 2. ● a(n) = 6 * a(n - 1) - 14 * a(n - 2) + 22 * a(n - 3) - 14 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n >= 7. ●

► [A094616] 1,8,35,126,417,1324,4111,12602,38333,116040,350187,1054678,3172249,9533156,28632263,85962354,258018165,774316672,2323474339,6971471630,20916512081,62753730588,188269580415,564825518506,1694510109997 ⋆ Row sums of A094615. ● a(n) = 2(a(n - 1) + 3 ^ n) + n - 1, a(0)=1. ● a(n) = 2 * 3 ^ (n + 1) - 2 ^ (n + 2) - n - 1. - _ Benoit Cloitre _ , May 23 2004 ●

► [A114569] 8,35,143,575,2303,9215,36863,147455,589823,2359295,9437183,37748735,150994943,603979775,2415919103,9663676415,38654705663,154618822655,618475290623,2473901162495,9895604649983,39582418599935 ⋆ a(n) = 9 * 4 ^ n - 1. ● a(n) = 4 * a(n - 1) + 3, n>0; a(0)=8. ● a(n) = 5 * a(n - 1) - 4 * a(n - 2), n >1; a(0)=8, a(1)=35. ●

► [A000426] 0,1,1,1,8,35,211,1459,11584,103605,1030805,11291237,135015896,1749915271,24435107047,365696282855,5839492221440,99096354764009,1780930394412009,33789956266629001,674939337282352360,14157377139256183723,311135096550816014651 ⋆ Coefficients of ménage hit polynomials. ● a(n) = Sum _{ k =2..n } (- 1) ^ k * (2n - k - 1)! * (n - k)! / ((2n - 2k)! * (k - 2)!). ● a(n) = ((2 * n - 5) * a(n - 1) + (5 * n - 11) * a(n - 2) + (5 * n - 14) * a(n - 3) + (2 * n - 5) * a(n - 4) + 2 * a(n - 5)) / 2 for n >= 6. ● a(n) = round((exp(- 2) * (8 * BesselK(n,2) - (4 * n - 10) * BesselK(n - 1,2)))) for n > 6. - _ Mark van Hoeij _ , Jun 09 2019 ● a(n) + 2 * a(n + p) + a(n + 2 * p) is divisible by p for any prime p. - _ Mark van Hoeij _ , Jun 13 2019 ●

► [A200312] 1,1,8,35,266,1680,12804,93093,726440,5635058,45063668,362121760,2955642508,24284658100,201428123040,1680921310635,14119413718770,119205791509200,1011387051005100,8617021562542470,73704123363739440,632601537174078420 ⋆ a(n) = A000108(n) * A006130(n), where A000108 is the Catalan numbers and A006130(n) = A006130(n - 1) + 3 * A006130(n - 2). ● a(n) = (((1 + sqrt(13)) / 2) ^ (n + 1) - ((1 - sqrt(13)) / 2) ^ (n + 1)) / sqrt(13) * binomial (2 * n + 1,n) / (2 * n + 1). - _ Paul D. Hanna _ , Sep 25 2012 ●

► [A139608] 8,36,64,92,120,148,176,204,232,260,288,316,344,372,400,428,456,484,512,540,568,596,624,652,680 ⋆ a(n) = 28 * n + 8. ● a(n) = 2 * a(n - 1) - a(n - 2); a(0)=8, a(1)=36. - _ Harvey P. Dale _ , Dec 14 2012 ●

► [A224159] 8,36,89,187,373,702,1252,2130,3479,5486,8391,12497,18181,25906,36234,49840,67527,90242,119093,155367,200549,256342,324688,407790,508135 ⋆ Number of 3 X n 0..1 arrays with diagonals and rows unimodal and antidiagonals nondecreasing. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>9. ●

► [A035006] 0,8,36,96,200,360,588,896,1296,1800,2420,3168,4056,5096,6300,7680,9248,11016,12996,15200,17640,20328,23276,26496,30000 ⋆ Number of possible rook moves on an n X n chessboard. ● a(n) = (n - 1) * 2 * n ^ 2. ● a(n) = Sum _{ j=1..n } ((n + j - 1) ^ 2 - (n - j + 1) ^ 2). - _ Zerinvary Lajos _ , Sep 13 2006 ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4); a(1)=0, a(2)=8, a(3)=36, a(4)=96. - _ Harvey P. Dale _ , May 12 2012 ●

► [A032768] 0,8,36,100,224,432,756,1232,1900,2808,4004,5544,7488,9900,12852,16416,20672,25704,31600,38456,46368,55440,65780,77500,90720 ⋆ a(n) = floor(n(n + 1)(n + 2)(n + 3)(n + 4) / (n + (n + 1) + (n + 2) + (n + 3) + (n + 4))). ● a(n) = floor(n(n + 1)(n + 3)(n + 4) / 5). [_ Bruno Berselli _ , Jun 20 2012] ●

► [A224410] 8,36,100,228,465,879,1568,2668,4362,6890,10560,15760,22971,32781,45900,63176,85612,114384,150860,196620,253477,323499,409032,512724,637550 ⋆ Number of 3 X n 0..1 arrays with rows unimodal and antidiagonals nondecreasing. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

► [A006636] 8,36,102,231,456,819,1372,2178,3312,4862,6930,9633,13104,17493,22968,29716,37944,47880,59774,73899,90552,110055,132756,159030,189280 ⋆ From generalized Catalan numbers. ● a(n) = (n + 1) * (n + 2) * (n + 4) * (n + 8) * (n + 15) / 120. ●

► [A325656] 0,1,8,36,104,245,492,896,1504,2385,3600,5236,7368,10101,13524,17760,22912,29121,36504,45220,55400,67221,80828,96416,114144 ⋆ a(n) = (1 / 24) * n * ((4 * n + 3) * (2 * n ^ 2 + 1) - 3 * (- 1) ^ n). ● a(n) = a(n) = 3 * a(n - 1) - a(n - 2) - 5 * a(n - 3) + 5 * a(n - 4) + a(n - 5) - 3 * a(n - 6) + a(n - 7) for n > 6. ● a(n) = (1 / 12) * n ^ 2 * (4 * n ^ 2 + 3 * n + 2) if n is even. ● a(n) = (1 / 12) * n * (n + 1) * (4 * n ^ 2 - n + 3) if n is odd. ●

► [A092365] 1,8,36,112,275,576,1078,1856,2997,4600,6776,9648,13351,18032,23850,30976,39593,49896,62092,76400,93051,112288,134366,159552,188125 ⋆ Coefficient of X ^ 2 in expansion of (1 + n * X + n * X ^ 2) ^ n. ● a(n) = n ^ 2 * (binomial(n, 2) + 1). ●

► [A331999] 8,36,120,252,550,936,1666,2280,3312,5220,6820,9324,11726,14448,17625,22048,27081,30744,38190,45440,50589,59092,66815,76896,92150 ⋆ a(n) is the product of n, the n - th prime and the n - th composite number. ● a(n) = n * prime(n) * composite(n). ●

► [A008500] 1,8,36,120,330,792,1716,3431,6427,11404,19328,31494,49596,75804,112848,164109,233717,326656,448876,607412,810510,1067760,1390236,1790643,2283471 ⋆ 6 - dimensional centered tetrahedral numbers. ● a(- 1 - n) = a(n). ●

► [A008490] 1,8,36,120,330,792,1716,3432,6434,11432,19412,31704,50058,76728,114564,167112,238722,334664,461252,625976,837642,1106520,1444500,1865256,2384418 ⋆ Expansion of (1 - x ^ 8) / (1 - x) ^ 8. ● a(n) = (180 + 469 * n ^ 2 + 70 * n ^ 4 + n ^ 6) / 90 for n>0. - _ Colin Barker _ , Jan 06 2017 ●

► [A000580] 1,8,36,120,330,792,1716,3432,6435,11440,19448,31824,50388,77520,116280,170544,245157,346104,480700,657800,888030,1184040,1560780,2035800,2629575 ⋆ a(n) = binomial coefficient C(n,7). ● a(n) = (n ^ 7 - 21 * n ^ 6 + 175 * n ^ 5 - 735 * n ^ 4 + 1624 * n ^ 3 - 1764 * n ^ 2 + 720 * n) / 5040. ● a(n + 4) = (1 / 3!) * (d ^ 3 / dx ^ 3)S(n,x)| _{ x=2 } , n >= 3. One sixth of third derivative of Chebyshev S - polynomials evaluated at x=2. See A049310. - _ Wolfdieter Lang _ , Apr 04 2007 ● a(n) = n(n - 1)(n - 2)(n - 3)(n - 4)(n - 5)(n - 6) / 7!. - _ Artur Jasinski _ , Dec 02 2007, _ R. J. Mathar _ , Jul 07 2009 ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) with a(7)=1, a(8)=8, a(9)=36, a(10)=120, a(11)=330, a(12)=792, a(13)=1716, a(14)=3432. - _ Harvey P. Dale _ , Nov 28 2011 ●

► [A290995] 0,0,0,0,0,0,0,1,8,36,120,330,792,1716,3432,6436,11456,19584,32640,54264,93024,170544,341088,735472,1653632 ⋆ p - INVERT of (1,1,1,1,1,...), where p(S) = 1 - S ^ 8. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) for n >= 9. ●

► [A145136] 0,1,8,36,120,331,801,1761,3597,6931,12737,22506,38479,63974,103843,165109,257852,396439,601229,900934,1335886,1962555,2859794,4137468,5948374 ⋆ Expansion of x / ((1 - x - x ^ 4) * (1 - x) ^ 7). ● a(n) = 8a(n - 1) - 28a(n - 2) + 56a(n - 3) - 69a(n - 4) + 49a(n - 5) - 7a(n - 6) - 27a(n - 7) + 34a(n - 8) - 21

a(n - 9) + 7a(n - 10) - a(n - 11), with a(0)=0, a(1)=1, a(2)=8, a(3)=36, a(4)=120, a(5)=331, a(6)=801, a(7)=1761, a(8)=3597, a(9)=6931, a(10)=12737 ●

► [A290892] 0,0,0,1,8,36,120,331,808,1852,4248,10312,26968,74012,204968,558253,1483336,3860588,9938488,25570103,66214096,172926104,454504816,1197527184,3152221296 ⋆ p - INVERT of the positive integers, where p(S) = 1 - S ^ 4. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 69 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8). ●

► [A144901] 0,1,8,36,121,339,837,1882,3937,7777,14664,26609,46762,79990,133731,219253,353507,561851,882051,1370154,2109105,3221386,4887550,7373395,11069801 ⋆ Expansion of x / ((1 - x - x ^ 3) * (1 - x) ^ 7). ● a(n) = Sum _{ j=0..floor((n + 6) / 3) } binomial(n - 2 * j + 6, j + 7). ●

► [A054470] 1,8,36,121,339,838,1891,3983,7953,15225,28183,50779,89518,155053,264767,446952,747572,1241207,2048762,3366122,5510518,8995550,14652578,23827138,38696751 ⋆ Partial sums of A054469. ● a(n) = a(n - 1) + a(n - 2) + (2n + 5) * C(n + 4, 4) / 5; a(- n)=0. ● a(n) = sum { C(n + 6 - i, n + 2 - 2i); i=1 to [(n + 2) / 2] }+ 2 * sum { C(n + 6 - i, n + 1 - 2i); i=1 to [(n + 1) / 2]; where [x]=greatest integer in x. ●

► [A213581] 1,8,36,124,367,988,2498,6048,14197,32576,73472,163508,360027,785908,1703294,3669240,7863393,16776120,35650300,75495980,159381831,335542348,704640826,1476392464,3087004877 ⋆ Antidiagonal sums of the convolution array A213571. ● a(n) = 8 * a(n - 1) - 26 * a(n - 2) + 44 * a(n - 3) - 41 * a(n - 4) + 20 * a(n - 5) - 4 * a(n - 6). ● a(n) = 8 + (n - 2) * 2 ^ (n + 2) - (n - 2) * n * (n + 5) / 6. - _ Bruno Berselli _ , Jul 09 2012 ●

► [A210379] 0,8,36,128,300,648,1176,2048,3240,5000,7260,10368,14196,19208,25200,32768,41616,52488,64980,80000,97020,117128,139656,165888,195000 ⋆ Number of 2 X 2 matrices with all terms in { 0,1,...,n } and odd trace. ● a(n) = (n + 1) ^ 2 * ((n + 1) ^ 2 - (2 * n + 1 - (- 1) ^ n) ^ 2 / 16 - (2 * n + 3 + (- 1) ^ n) ^ 2 / 16). ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 6 * a(n - 3) + 6 * a(n - 5) - 2 * a(n - 6) - 2 * a(n - 7) + a(n - 8) for n > 7. ●

► [A014477] 1,8,36,128,400,1152,3136,8192,20736,51200,123904,294912,692224,1605632,3686400,8388608,18939904,42467328,94633984,209715200,462422016,1015021568,2218786816,4831838208,10485760000 ⋆ Expansion of (1 + 2 * x) / (1 - 2 * x) ^ 3. ● a(1)=1, a(n) = 2a(n - 1) + (2n - 1) * 2 ^ (n - 1). - _ Jon Perry _ , Feb 06 2004 ● a(n) = sum of (n + 1) - th row of the triangle in A118416. - _ Reinhard Zumkeller _ , Apr 27 2006 ● a(n) = Sum _{ j=0..n } binomial(n,j) * n * j. - _ Zerinvary Lajos _ , Oct 19 2006 ●

► [A083597] 1,8,36,148,596,2388,9556,38228,152916,611668,2446676,9786708,39146836,156587348,626349396,2505397588,10021590356,40086361428,160345445716,641381782868,2565527131476,10262108525908,41048434103636 ⋆ a(n) = (7 * 4 ^ n - 4) / 3. ● a(n) = (7 * 4 ^ n - 4) / 3. ● a(n) = 4 * a(n - 1) + 4, n > 0. - _ Gary Detlefs _ , Jun 23 2010 ● a(0)=1, a(1)=8, a(n) = 5 * a(n - 1) - 4 * a(n - 2). - _ Harvey P. Dale _ , Jul 23 2011 ●

► [A178744] 0,0,1,8,36,149,604,2424,9705,38832,155340,621373,2485508,9942048,39768209,159072856,636291444,2545165797,10180663212,40722652872,162890611513,651562446080,2606249784348,10424999137421,41699996549716 ⋆ Partial sums of floor(4 ^ n / 9). ● a(n) = round((8 * 4 ^ n - 24 * n - 17) / 54). ● a(n) = floor(4 * (4 ^ n - 3 * n - 1) / 27). ● a(n) = ceiling((4 * 4 ^ n - 12 * n - 13) / 27). ● a(n) = round(4 * (4 ^ n - 3 * n - 1) / 27). ● a(n) = a(n - 3) + (7 * 4 ^ (n - 2) - 4) / 3 , n > 3. ● a(n) = 5 * a(n - 1) - 4 * a(n - 2) + a(n - 3) - 5 * a(n - 4) + 4 * a(n - 5), n > 5. ●

► [A164545] 1,8,36,176,848,4096,19776,95488,461056,2226176,10748928,51900416,250597376,1209991168,5842354176,28209381376,136206942208,657665294336,3175488946176,15332616962048,74032423632896,357460162379776 ⋆ a(n) = 4 * a(n - 1) + 4 * a(n - 2) for n > 1; a(0) = 1, a(1) = 8. ● a(n) = 4 * a(n - 1) + 4 * a(n - 2) for n > 1; a(0) = 1, a(1) = 8. ● a(n) = ((2 + 3 * sqrt(2)) * (2 + 2 * sqrt(2)) ^ n + (2 - 3 * sqrt(2)) * (2 - 2 * sqrt(2)) ^ n) / 4. ● a(n) = (2 * i) ^ n * (ChebyshevU(n, - i) - 2 * i * ChebyshevU(n - 1, - i)). - _ G. C. Greubel _ , Jul 17 2021 ●

► [A199310] 8,36,176,876,4376,21876,109376,546876,2734376,13671876,68359376,341796876,1708984376,8544921876,42724609376,213623046876,1068115234376,5340576171876,26702880859376,133514404296876,667572021484376 ⋆ 7 * 5 ^ n + 1. ● a(n) = 5 * a(n - 1) - 4. ● a(n) = 6 * a(n - 1) - 5 * a(n - 2). ●

► [A054627] 1,8,36,176,1044,6560,43800,299600,2097684,14913200,107377488,780903152,5726645688,42288908768,314146329192,2345624810432,17592187093524,132458812569728,1000799924679192,7585009898729264,57646075284033552,439208192231379680 ⋆ Number of n - bead necklaces with 8 colors. ● a(n) = (1 / n) * Sum _{ d|n } phi(d) * 8 ^ (n / d), n > 0. ● a(0) = 1; a(n) = (1 / n) * Sum _{ k=1..n } 8 ^ gcd(n,k). - _ Ilya Gutkovskiy _ , Apr 17 2021 ●

► [A341543] 8,36,200,1156,6728,39204,228488,1331716,7761800,45239076,263672648,1536796804,8957108168,52205852196,304278005000,1773462177796,10336495061768,60245508192804,351136554095048,2046573816377476,11928306344169800 ⋆ a(n) = sqrt(Product _{ j=1..n } Product _{ k=1..2 } (4 * sin((2 * j - 1) * Pi / (2 * n)) ^ 2 + 4 * sin((2 * k - 1) * Pi / 2) ^ 2)). ● a(n) = 7 * a(n - 1) - 7 * a(n - 2) + a(n - 3). ● a(n) = 6 * a(n - 1) - a(n - 2) - 8. ●

► [A030112] 1,8,36,204,1086,5916,31998,173502,940005,5094220,27604798,149590922,810627389,4392774126,23804329059,128995094597,699021261776,3787979292364,20526967746120,111235140046330,602780523265720,3266453022809170,17700829632401740,95920366069513405 ⋆ Number of distributive lattices; also number of paths with n turns when light is reflected from 8 glass plates. ● a(n) = 4 * a(n - 1) + 10 * a(n - 2) - 10 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) + 7 * a(n - 6) - a(n - 7) - a(n - 8). - _ Benoit Cloitre _ , Oct 09 2002 ● a(n) is asymptotic to z(8) * w(8) ^ n where w(8)=(1 / 2) / cos(8 * Pi / 17) and z(8) is the root 1< x<2 of P(8, X) = 1 + 204 * X - 12138 * X ^ 2 - 324258 * X ^ 3 + 4593655 * X ^ 4 + 36916282X ^ 5 - 168962983 * X ^ 6 - 410338673 * X ^ 7 + 410338673 * X ^ 8. - _ Benoit Cloitre _ , Oct 16 2002 ●

► [A032794] 8,36,224,756,1232,2808,5544,7488,12852,20672,25704,38456,55440,65780,90720,122148,140616,183744,236096,266112,334628,415584,461168,563472,681912 ⋆ Positive integers of the form n(n + 1)(n + 2)(n + 3)(n + 4) / (n + (n + 1) + (n + 2) + (n + 3) + (n + 4)) that are a multiple of n. ● a(n) = a(n - 1) + 4 * a(n - 3) - 4 * a(n - 4) - 6 * a(n - 6) + 6 * a(n - 7) + 4 * a(n - 9) - 4 * a(n - 10) - a(n - 12) + a(n - 13) for n>13. ●

► [A244870] 1,8,37,121,318,717,1446,2678,4639,7614,11955,18087,26516,37835,52732,71996,96525,127332,165553,212453,269434,338041,419970,517074,631371 ⋆ Number of magic labelings with magic sum n of 2nd graph shown in link. ● a(n) = 7 * n ^ 5 / 120 + 7 * n ^ 4 / 16 + 35 * n ^ 3 / 24 + 21 * n ^ 2 / 8 + 149 * n / 60 + (- 1) ^ n / 32 + 31 / 32. [_ Bruno Berselli _ , Jul 08 2014] ●

► [A052387] 0,1,8,37,127,358,876,1926,3894,7359,13156,22451,36829,58396,89896,134844,197676,283917,400368,555313,758747,1022626,1361140,1791010,2331810 ⋆ Number of 3 X n binary matrices such that any 2 rows have a common 1, up to column permutations. ● a(n) = n * (n + 1) * (n + 2) * (n + 3) * (n ^ 3 + 22 * n ^ 2 + 53 * n + 134) / 5040. ●

► [A001780] 1,8,37,128,367,920,2083,4352,8518,15792,27966,47616,78354,125136,194634,295680,439791,641784,920491,1299584,1808521,2483624,3369301,4519424,5998876 ⋆ Expansion of 1 / ((1 + x)(1 - x) ^ 9). ● a(n) = 431 * n / 168 + (- 1) ^ n / 512 + 391 * n ^ 3 / 288 + 26011 * n ^ 2 / 10080 + 797 * n ^ 4 / 1920 + 11 * n ^ 5 / 144 + n ^ 6 / 120 + n ^ 7 / 2016 + n ^ 8 / 80640 + 511 / 512. - R. J. Mathar, Mar 15 2011 ●

► [A053296] 1,8,37,129,376,967,2267,4950,10220,20175,38403,70954,127921,226007,392688,672959,1140260,1914166,3189022,5280288,8699540,14275838,23352118,38102976,62048869 ⋆ Partial sums of A053295. ● a(n) = Sum _{ i=0..floor(n / 2) } C(n + 7 - i, n - 2i), n >= 0. ● a(n) = a(n - 1) + a(n - 2) + C(n + 6,6); n >= 0; a(- 1)=0. ● a(n) = Sum _{ k=1..n } C(n - k + 7,k + 6), with n>=0. - _ Paolo P. Lava _ , Apr 16 2008 ●

► [A055799] 1,8,37,130,385,1012,2431,5434,11440,22880,43758,80444,142766,245480,410210,667964,1062347,1653608,2523675,3782350,5574855,8090940,11575785,16342950,22789650 ⋆ T(2n + 6,n), array T as in A055794. ● a(n - 9) = binomial(n,9) - 2 * binomial(n - 2,8), n=9, 10, ... - _ Milan Janjic _ , Dec 28 2007 ● a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10). - _ Vincenzo Librandi _ , May 01 2012 ●

► [A035038] 0,0,0,0,0,0,1,8,37,130,386,1024,2510,5812,12911,27824,58651,121670,249528,507624,1026876,2069256,4158861,8344056,16721761 ⋆ a(n) = 2 ^ n - C(n,0) - C(n,1) - ... - C(n,5). ● a(n) = Sum _{ k=0..n } C(n, k + 6) = Sum _{ k=6..n } C(n, k). ● a(n) = 2 * a(n - 1) + C(n - 1, 5). (End) ●

► [A163832] 0,8,38,102,212,380,618,938,1352,1872,2510,3278,4188,5252,6482,7890,9488,11288,13302,15542,18020,20748,23738,27002,30552 ⋆ a(n) = n * (2 * n ^ 2 + 5 * n + 1). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ●

► [A139798] 8,38,111,256,511,924,1554,2472,3762,5522,7865,10920,14833,19768,25908,33456,42636,53694,66899,82544,100947,122452,147430,176280,209430 ⋆ Coefficient of x ^ 5 in (1 - x - x ^ 2) ^ (- n). ● a(n) = n(n + 1)(n + 2)(n ^ 2 + 27n + 132) / 5! ●

► [A034009] 1,8,38,140,443,1268,3384,8584,20965,49744,115402,262996,590831,1311900,2884956,6293040,13633305,29362200,62916910,134220380,285215651,603983108,1275072128,2684358680,5637149133 ⋆ Convolution of A000295(n + 2) (n >=0) with itself. ● a(n) = (n - 3) * 2 ^ (n + 4) + binomial(n + 3,3) + 4 * (binomial(n + 1,2) + 4 * n + 12) ● a(n) = binomial(n + 3,3) * hypergeom([2, - n],[- n - 3],2). - _ Peter Luschny _ , Sep 19 2014 ● a(n) = Sum _{ k=0..n + 4 } Sum _{ i=0..n + 4 } (i - k) * C(n - k + 4,i + 2). - _ Wesley Ivan Hurt _ , Sep 19 2017 ●

► [A156934] 1,8,38,144,487,1552,4796,14592,44061,132568,398210,1195280,3586659,10760992,32284216,96854144,290564217,871694760,2615086750,7845263120,23535792671,70607381808 ⋆ G.f. of the z ^ 1 coefficients of the FP2 in the second column of the A156925 matrix ● a(n)=6 * a(n - 1) - 12 * a(n - 2) + 10 * a(n - 3) - 3 * a(n - 4) + 2 ● a(n)=7 * a(n - 1) - 18 * a(n - 2) + 22 * a(n - 3) - 13 * a(n - 4) + 3 * a(n - 5) ● a(n):= - 1 / 6 * n ^ 3 - n ^ 2 - 7 / 3 * n - 9 / 4 + 9 / 4 * 3 ^ n ●

► [A007786] 1,8,38,184,976,5382,29739,163496,896476,4913258,26932712,147657866,809563548,4438573234,24335048679,133419610132,731487691902,4010463268476,21987818897998,120550710615560,660932932108467 ⋆ Number of noninterseccting rook paths joining opposite corners of 4 X n board. ● a(n) = 12 * a(n - 1) - 54 * a(n - 2) + 124 * a(n - 3) - 133 * a(n - 4) - 16 * a(n - 5) + 175 * a(n - 6) - 94 * a(n - 7) - 69 * a(n - 8) + 40 * a(n - 9) + 12 * a(n - 10) - 4 * a(n - 11) - a(n - 12). ●

► [A101374] 0,1,8,39,124,305,636,1183,2024,3249,4960,7271,10308,14209,19124,25215,32656,41633,52344,64999,79820,97041,116908,139679,165624 ⋆ a(n) = n * (n ^ 3 - n + 2) / 2. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>4. - _ Harvey P. Dale _ , Sep 28 2012 ●

► [A060446] 0,1,8,39,136,377,888,1855,3536,6273,10504,16775,25752,38233,55160,77631,106912,144449,191880,251047,324008,413049,520696,649727,803184 ⋆ Number of ways to color vertices of a pentagon using <= n colors, allowing rotations and reflections. ● a(n) = (n ^ 5 + 5 * n ^ 3 + 4 * n) / 10. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). - _ Eric W. Weisstein _ , Apr 11 2018 ●

► [A055581] 1,8,39,150,501,1524,4339,11762,30705,77808,192495,466926,1114093,2621420,6094827,14024682,31981545,72351720,162529255,362807270,805306341,1778384868,3909091299,8556380130,18656264161 ⋆ Fifth column of triangle A055252. ● a(n) = (n ^ 2 - n + 4)2 ^ (n + 1) - 7 - n - _ Emeric Deutsch _ , May 21 2003 ● a(0)=1, a(1)=8, a(2)=39, a(3)=150, a(4)=501, a(n) = 8 * a(n - 1) - 25 * a(n - 2) + 38 * a(n - 3) - 28 * a(n - 4) + 8 * a(n - 5). [_ Harvey P. Dale _ , Nov 07 2011] ●

► [A097787] 1,8,39,152,526,1704,5322,16296,49383,148864,447593,1344144,4034252,12105136,36318468,108959280,326882685,980654040,2941969435,8825917160,26477762106,79433298968,238299911854,714899753112,2144699279811 ⋆ a(n)=3a(n - 1) + C(n + 4,4),n>0, a(0)=1. ● a(n)=3 ^ (n + 5) / 32 - (2n ^ 4 + 32n ^ 3 + 196n ^ 2 + 556n + 633) / 96; ● a(n)=sum { k=0..n, binomial(n + 5, k + 5)2 ^ k } . ●

► [A144414] 1,8,39,166,677,2724,10915,43682,174753,699040,2796191,11184798,44739229,178956956,715827867,2863311514,11453246105,45812984472,183251937943,733007751830,2932031007381,11728124029588,46912496118419 ⋆ a(n) = 2 * (

4 ^ n - 1) / 3 - n. ● a(1)=1, a(2)=8, a(3)=39, a(n) = 6 * a(n - 1) - 9 * a(n - 2) + 4 * a(n - 3). - _ Harvey P. Dale _ , Mar 17 2015 ●

▶ [A305075] 8,40,72,104,136,168,200,232,264,296,328,360,392,424,456,488,520,552,584,616,648,680,712,744,776 ⋆ a(n) = 32 * n - 24 (n>=1). ● a(n) = 2 * a(n - 1) - a(n - 2) for n>2. ●

▶ [A014642] 0,8,40,96,176,280,408,560,736,936,1160,1408,1680,1976,2296,2640,3008,3400,3816,4256,4720,5208,5720,6256,6816 ⋆ Even octagonal numbers: a(n) = 4 * n * (3 * n - 1). ● a(n) = a(n - 1) + 24 * n - 16 (with a(0)=0). - _ Vincenzo Librandi _ , Nov 20 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ G. C. Greubel _ , Jun 07 2017 ●

▶ [A143943] 8,40,114,248,460,768,1190,1744,2448,3320,4378,5640,7124,8848,10830,13088,15640,18504,21698,25240,29148,33440,38134,43248,48800 ⋆ The Wiener index of a chain of n squares joined at vertices (i.e., joined like <><><>...<>; here <> is a square!). ● a(n) = n * (2 + 3 * n + 3 * n ^ 2). ●

▶ [A105374] 0,8,40,120,272,520,888,1400,2080,2952,4040,5368,6960,8840,11032,13560,16448,19720,23400,27512,32080,37128,42680,48760,55392 ⋆ a(n) = 4 * n ^ 3 + 4 * n. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Vincenzo Librandi _ , Jun 26 2012 ●

▶ [A191903] 0,8,40,128,312,648,1200,2048,3280,5000,7320,10368,14280,19208,25312,32768,41760,52488,65160,80000,97240,117128,139920,165888,195312 ⋆ Number of compositions of odd natural numbers into 4 parts <= n. ● a(n) = ((n + 1) ^ 4 - (1 + (- 1) ^ n) / 2) / 2. ● a(n) = floor((n + 1) ^ 4 / 2). - _ Wesley Ivan Hurt _ , Jun 14 2013 ●

▶ [A125198] 1,8,40,144,417,1032,2272,4568,8545,15072,25320,40824,63553,95984,141184,202896,285633,394776,536680,718784,949729,1239480,1599456,2042664,2583841 ⋆ Number of magical labelings of the octahedral graph of magic sum n. ● a(n) = (15 * (31 + (- 1) ^ n) + 1152 * n + 1216 * n ^ 2 + 720 * n ^ 3 + 250 * n ^ 4 + 48 * n ^ 5 + 4 * n ^ 6) / 480. ● a(n) = 6 * a(n - 1) - 14 * a(n - 2) + 14 * a(n - 3) - 14 * a(n - 5) + 14 * a(n - 6) - 6 * a(n - 7) + a(n - 8) for n>7. ●

▶ [A001789] 1,8,40,160,560,1792,5376,15360,42240,112640,292864,745472,1863680,4587520,11141120,26738688,63504384,149422080,348651520,807403520,1857028096,4244635648,9646899200,21810380800,49073356800 ⋆ a(n) = binomial(n,3) * 2 ^ (n - 3). ● a(n) = Sum _{ i=3..n } binomial(i,3) * binomial(n,i). Example: for n=6, a(6) = 1 * 20 + 4 * 15 + 10 * 6 + 20 * 1 = 160. - _ Bruno Berselli _ , Mar 23 2018 ●

▶ [A364619] 0,0,1,8,40,164,601,2048,6632,20680,62633,185352,538272,1538892,4341905,12112960,33464240,91666192,249215921,673049800,1806888568,4824913652,12821690281,33922774464,89391291480 ⋆ Number of 4 - cycles in the n - Pell graph. ● a(n) = 6 * a(n - 1) - 9 * a(n - 2) - 4 * a(n - 3) + 9 * a(n - 4) + 6 * a(n - 5) + a(n - 6). ●

▶ [A113071] 1,8,40,168,648,2376,8424,29160,99144,332424,1102248,3621672,11809800,38263752,123294312,395392104,1262703816,4017693960,12741829416,40291730856,127073920392,399817944648,1255242384360,3933092804328 ⋆ Expansion of ((1 + x) / (1 - 3 * x)) ^ 2. ● a(n) = (8 * 3 ^ n * (2 * n + 1) + 0 ^ n) / 9 = (4 * 3 ^ n * (4 * n + 2) + 0 ^ n) / 9; ● a(n) = Sum _{ k=0..n } C(n, k) * Sum _{ j=0..k } (j + 1) * 4 ^ j. ●

▶ [A165665] 1,8,40,176,736,3008,12160,48896,196096,785408,3143680,12578816,50323456,201310208,805273600,3221159936,12884770816,51539345408,206157905920,824632672256,3298532786176,13194135339008,52776549744640 ⋆ a(n) = (3 * 2 ^ n - 2) * 2 ^ n. ● a(n) = 6 * a(n - 1) - 8 * a(n - 2) for n > 1; a(0) = 1, a(1) = 8. ●

▶ [A155616] 1,8,40,188,880,4148,19720,94508,456160,2215268,10814200,53022428,260917840,1287811988,6371951080,31591319948,156882857920,780119322308,3883416742360,19348364235068,96466943268400,481235204714228 ⋆ 5 ^ n + 4 ^ n - 1. ● a(n) = 9 * a(n - 1) - 20 * a(n - 2) - 12 with a(0)=1, a(1)=8 - _ Vincenzo Librandi _ , Jul 21 2010 ●

▶ [A128625] 1,8,40,200,1000,5000,25000,125000,625000,3125000,15625000,78125000,390625000,1953125000,9765625000,48828125000,244140625000,1220703125000,6103515625000,30517578125000,152587890625000,762939453125000,3814697265625000,19073486328125000 ⋆ Expansion of (1 + 3x) / (1 - 5x). ● a(n) = (8 / 5) * 5 ^ n - (3 / 5) * 0 ^ n; ● a(0)=1, a(n) = Sum _{ k=0..n } ((n + k) / n) * binomial(n,k) * 2 ^ (n - k) * 3 ^ k, n > 0. ●

▶ [A037703] 1,8,40,202,1011,5058,25290,126452,632261,3161308,15806540,79032702,395163511,1975817558,9879087790,49395438952,246977194761,1234885973808,6174429869040,30872149345202,154360746726011,771803733630058 ⋆ Base 5 digits are, in order, the first n terms of the periodic sequence with initial period 1,3,0,2. ● a(n) = 5 * a(n - 1) + a(n - 4) - 5 * a(n - 5). - _ Wesley Ivan Hurt _ , Jun 26 2022 ●

▶ [A068774] 0,0,0,8,40,240,1120,4480,17280,65280,253440,1015808,4126720,16773120,67624960,270499840,1077903360,4294901760,17146183680,68585259008,274608947200,1099510579200,4400191897600,17600767590400,70385915658240 ⋆ Number of strings over Z _ 4 of length n with trace 0 and subtrace 2. ● a(n; t, s) = a(n - 1; t, s) + a(n - 1; t + 3, s + 3t + 1) + a(n - 1; t + 2, s + 2t) + a(n - 1; t + 1, s + t + 1) where t is the trace and s is the subtrace. ●

▶ [A343868] 0,0,0,8,40,338,1512,11368,84960,828972,7291900,85823668,958954152,12930529446,176651211776,2631044069296,41847091313152 ⋆ Number of semi cyclic Latin squares of order n with the first row in ascending order. ● a(n) >= 2 * ((n - 1)! - phi(n)). ●

▶ [A326286] 1,8,41,90,671,6788,31803,119486,746315,1959108,17687917,168219722,1612302467,6734874480,30113355681,146636111898,714115126295,4578149141156,16402101919131,158506042034472,1074010290985493,7994020873236474,64888090981118585,366989246419220666,1682317245914363391 ⋆ a(n) equals the coefficient of x ^ (n * (n + 1)) in Sum _{ m>=0 } (m + 1) * x ^ m * (1 + x ^ m) ^ m / (1 + x ^ (m + 1)) ^ (m + 2) for n >= 0. ● a(n) = [x ^ (n * (n + 1))] Sum _{ k>=0 } (k + 1) * x ^ k * (1 + x ^ k) ^ k / (1 + x ^ (k + 1)) ^ (k + 2). ● a(n) = [x ^ (n * (n + 1))] Sum _{ k>=0 } (k + 1) * (- x) ^ k * (1 - x ^ k) ^ k / (1 - x ^ (k + 1)) ^ (k + 2). ● a(n) = [x ^ (n * (n + 1))] Sum _{ m>=0 } (m + 1) * x ^ m * Sum _{ k=0..m } binomial(m,k) * (x ^ m - x ^ k) ^ (m - k). ● a(n) = [x ^ (n * (n + 1))] Sum _{ m>=0 } (m + 1) * x ^ m * Sum _{ k=0..m } binomial(m,k) * (- 1) ^ k * (x ^ m + x ^ k) ^ (m - k). ● a(n) = [x ^ (n * (n + 1))] Sum _{ m>=0 } (m + 1) * x ^ m * Sum _{ k=0..m } binomial(m,k) * (- 1) ^ k * Sum _{ j=0..m - k } binomial(m - k,j) * x ^ ((m - k) * (m - j)). ●

▶ [A171714] 1,8,41,128,313,648,1201,2048,3281,5000,7321,10368,14281,19208,25313,32768,41761,52488,65161,80000,97241,117128,139921,165888,195313 ⋆ a(n) = ceiling((n + 1) ^ 4 / 2). ● a(n) = 1 / 2 * ((n + 1) ^ 4 + ((1 + (- 1) ^ n) * 1 / 2) ^ 4). ● a(n) = + 4 * a(n - 1) - 5 * a(n - 2) + 5 * a(n - 4) - 4 * a(n - 5) + 1 * a(n - 6). ● a(n) = (n + 1) ^ 4 - floor((n + 1) ^ 4 / 2). - _ Bruno Berselli _ , Jan 18 2017 ●

▶ [A304160] 1,8,41,142,377,836,1633,2906,4817,7552,11321,16358,22921,31292,41777,54706,70433,89336,111817,138302,169241,205108,246401,293642,347377 ⋆ a(n) = n ^ 4 - 3 * n ^ 3 + 6 * n ^ 2 - 5 * n + 2 (n >= 1). ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

▶ [A133106] 1,8,41,168,602,1968,6021,17512,48950,132496,349258,900368,2277556,5667936,13906221,33695208,80746846,191601872,450642654,1051472048,2435679852,5605044640,12820922530,29164511376,66004709148 ⋆ Number of Ferrers diagrams with a single Ferrers puncture with the same orientation inscribed strictly inside with half - perimeter = n. ● a(n) = [(2 * n ^ 2 - 16 * n + 6) * a(n - 1) + (4 * n ^ 2 - 68 * n + 240) * a(n - 2) - (8 * n ^ 2 - 88 * n + 240) * a(n - 3)] / (n ^ 2 - 14 * n + 48) with a(6)=0, a(7)=0, a(8)=1. ●

▶ [A176177] 0,1,8,41,176,689,2552,9113,31712,108257,364136,1210505,3985808,13020305,42249560,136314617,437641664,1399018433,4455335624,14140847849,44747066480,141214768241,444565011128,1396457152601,4377657815456 ⋆ a(n) = 2 * n * 3 ^ (n - 1) - (3 ^ n - 1) / 2. ● a(n) = 7 * a(n - 1) - 15 * a(n - 2) + 9 * a(n - 3) for n>2. - _ Vincenzo Librandi _ , Jun 17 2014 ●

▶ [A368529] 0,1,8,41,180,745,3016,12113,48516,194145,776680,3106841,12427508,49710201,198841000,795364225,3181457156,12725828913,50903315976,203613264265,814453057460,3257812230281,13031248921608,52124995686961,208499982748420 ⋆ a(n) = Sum _{ k=1..n } k ^ 2 * 4 ^ (n - k). ● a(n) = 7 * a(n - 1) - 15 * a(n - 2) + 13 * a(n - 3) - 4 * a(n - 4). ● a(n) = (5 * 4 ^ (n + 1) - (9 * n ^ 2 + 24 * n + 20)) / 27. ● a(0) = 0; a(n) = 4 * a(n - 1) + n ^ 2. ●

▶ [A273145] 1,8,41,193,833,3457,14081,56833,228353,915457,3665921,14671873,58703873,234848257,939458561,3757965313 ⋆ Number of active (ON,black) cells at stage 2 ^ n - 1 of the two - dimensional cellular automaton defined by ”Rule 597”, based on the 5 - celled von Neumann neighborhood. ● a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3) for n>4. ●

▶ [A037577] 1,8,41,208,1041,5208,26041,130208,651041,3255208,16276041,81380208,406901041,2034505208,10172526041,50862630208,254313151041,1271565755208,6357828776041,31789143880208,158945719401041,794728597005208 ⋆ Base 5 digits are, in order, the first n terms of the periodic sequence with initial period 1,3. ● a(n) = (5 ^ n - 2) / 3 for n odd ; a(n) = (5 ^ n - 1) / 3 for n even. - _ Ctibor O. Zizka _ , Apr 15 2008 ● a(n) = floor(5 ^ n / 3). - _ Gary Detlefs _ , Sep 06 2010 ● a(n) = 5 * a(n - 1) + a(n - 2) - 5 * a(n - 3). - _ Charles R Greathouse IV _ , Jan 15 2011 ●

▶ [A051737] 1,8,41,227,1234,6743,36787,200798,1095851,5980913,32641916,178150221,972290957,5306478436,28961194501,158061670175,862654025422,4708111537971,25695485730239,140238391149386,765379824048327,4177217595760125,22798023012345528,124424893212114297 ⋆ Number of 4 X n (0,1) - matrices with no consecutive 1’s in any row or column. ● a(n) = 4 * a(n - 1) + 9 * a(n - 2) - 5 * a(n - 3) - 4 * a(n - 4) + a(n - 5); ● a(n) = 2 * a(n - 1) + 18 * a(n - 2) + 9 * a(n - 3) - 23 * a(n - 4) - 2 * a(n - 5) + 6 * a(n - 6) - a(n - 7). ●

▶ [A228480] 8,41,386,3084,25699,211588,1748684,14433982,119188751,984088952,8125411159,67089476825,553940891394,4573752281524,37764327367307,311810620896975,2574542371273857,21257353083201847,175516652771106311 ⋆ Number of nX6 binary arrays with top left value 1 and no two ones adjacent horizontally, vertically or antidiagonally. ● a(n) = a(n - 1) + 42 * a(n - 2) + 147 * a(n - 3) + 70 * a(n - 4) - 478 * a(n - 5) - 449 * a(n - 6) + 1199 * a(n - 7) + 732 * a(n - 8) - 2727 * a(n - 9) + 659 * a(n - 10) + 3827 * a(n - 11) - 5776 * a(n - 12) + 3926 * a(n - 13) - 1152 * a(n - 14) - 148 * a(n - 15) + 154 * a(n - 16) + 32 * a(n - 17) - 29 * a(n - 18) - 6 * a(n - 19) + 3 * a(n - 20) + a(n - 21) ●

▶ [A292059] 1,8,42,104,251,464,852,1360,2165,3160,4606,6328,8687,11424,15016,19104,24297,30120,37330,45320,55011,65648,78332,92144,108381 ⋆ Wiener index of the n X n white bishop graph. ● a(n) = (3 + 2 * n - 6 * n ^ 2 - 8 * n ^ 3 + 6 * n ^ 4 + 3 * (- 1) ^ n * (- 1 - 2 * n + 2 * n ^ 2)) / 24. ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 6 * a(n - 3) + 6 * a(n - 5) - 2 * a(n - 6) - 2 * a(n - 7) + a(n - 8). ●

▶ [A027903] 0,8,42,120,260,480,798,1232,1800,2520,3410,4488,5772,7280,9030,11040,13328,15912,18810,22040,25620,29568,33902,38640,43800 ⋆ n * (n + 1) * (3 * n + 1). ● a(n) = n(n + 1)(3n + 1). ● a(n) = 3n ^ 3 + 4n ^ 2 + n. ●

▶ [A212337] 1,8,42,184,731,2736,9844,34448,118101,398584,1328606,4384392,14348911,46633952,150663528,484275616,1549681961,4939611240,15690529810,49686677720,156905298051,494251688848,1553362450652,4871909504304,15251194969981 ⋆ Expansion of 1 / (1 - 4 * x + 3 * x ^ 2) ^ 2. ● a(n) = 1 + n * (1 + 9 * 3 ^ n) / 4. - _ Bruno Berselli _ , May 11 2012 ●

▶ [A093381] 1,8,42,186,766,3058,12062,47426,186606,735858,2909182,11528866,45781646,182104658,725311902,2891845506,11539011886,46070609458,184025468222,735329653346,2938999333326,11749034250258,46975237266142 ⋆ Expansion of (1 - 2 * x - 3 * x ^ 2 - 4 * x ^ 3) / ((1 - x) * (1 - 2 * x) * (1 - 3 * x) * (1 - 4 * x)). ● a(n) = 4 / 3 - 5 * 2 ^ n + 2 * 3 ^ n + 8 * 4 ^ n / 3; ● a(n) = 10 * a(n - 1) - 35 * a(n - 2) + 50 * a(n - 3) - 24 * a(n - 4), n > 3. - _ Harvey P. Dale _ , May 29 2013 ●

▶ [A097788] 1,8,42,188,787,3204,12900,51720,207045,828400,3313886,13255908,53024087,212096908,848388312,3393554064,13574217225,54296870040,217187481490,868749927500,3474999711771,13899998849108,55599995398732 ⋆ a(n)=4a(n - 1) + C(n + 3,3),n>0, a(0)=1. ● a(0)=1, a(1)=8, a(2)=42, a(3)=188, a(4)=787, a(n)=8 * a(n - 1) - 22 * a(n - 2) + 28 * a(n - 3) - 17 * a(n - 4) + 4 * a(n - 5). - _ Harvey P. Dale _ , May 04 2014 ●

▶ [A171478] 1,8,42,190,806,3318,13462,54230,217686,872278,3492182,13974870,55911766,223671638,894735702,3579041110,14316361046,57265837398,229064136022,916258116950,3665035613526,14660148745558,58640607565142 ⋆ a(n) = 6 * a(n - 1) - 8 * a(n - 2) + 2 for n > 1; a(0) = 1, a(1) = 8. ● a(n) = (10 * 4 ^ n - 9

* 2 ^ n + 2) / 3. ● a(0)=1, a(1)=8, a(2)=42, a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3). - _ Harvey P. Dale _ , May 04 2012 ●

► [A276265] 1,8,42,204,972,4608,21816,103248,488592,2312064,10940832,5177260 8,244990656,1159308288,5485905792,25959585024,122842075392,581294942208,2750717200896,13016533552128,61594898107392,291470187331584,1379251735345152,6526689288081408,30884625316417536 ★ Expansion of (1 + 2 * x) / (1 - 6 * x + 6 * x ^ 2). ● a(n) = 6 * a(n - 1) - 6 * a(n - 2). ● a(n) = ((- 5 + sqrt(3)) * (3 - sqrt(3)) ^ n + (5 + sqrt(3)) * (3 + sqrt(3)) ^ n) / (2 * sqrt(3)). ●

► [A204565] 8,42,256,1682,11448,79162,551216,3849762,26922088,188375882,1318394976,9228056242,64594267928,452153498202,3165055355536,22155330093122,155087138464968,1085609452694122,7599264619176896,53194847685192402 ★ Number of (n + 1) X 2 0..3 arrays with every 2 X 2 subblock having equal diagonal elements or equal antidiagonal elements, and new values 0..3 introduced in row major order. ● a(n) = 1 / 3 + 3 ^ n + (2 * 7 ^ n) / 3. ●

► [A094865] 0,0,0,1,8,43,196,820,3264,12597,47652,177859,657800,2417416,8844448,32256553,117378336,426440955,1547491404,5610955132,20332248992,73645557469,266668876540,965384509651,3494279574288 ★ Expansion of x ^ 3 / ((1 - 3 * x + x ^ 2) * (1 - 5 * x + 5 * x ^ 2)). ● a(n) = (1 / 5) * Sum _{ r=1..9 } sin(r * Pi / 10) * sin(4 * r * Pi / 5) * (2 * cos(r * Pi / 10)) ^ (2 * n + 1). ● a(n) = 8 * a(n - 1) - 21 * a(n - 2) + 20 * a(n - 3) - 5 * a(n - 4). ● a(n) = 2 ^ (- 2 - n) * (- (3 - sqrt(5)) ^ n * (- 1 + sqrt(5)) + (5 - sqrt(5)) ^ n * (1 + sqrt(5)) - (1 + sqrt(5)) * (3 + sqrt(5)) ^ n + (- 1 + sqrt(5)) * (5 + sqrt(5)) ^ n) / sqrt(5). - _ Colin Barker _ , Apr 27 2016 ●

► [A005024] 8,43,196,820,3264,12597,47652,177859,657800,2417416,8844448,32256553,117378336,426440955,1547491404,5610955132,20332248992,73645557469,266668876540,965384509651,3494279574288,12646311635088,45764967830976 ★ Number of walks of length 2n + 8 in the path graph P _ 9 from one end to the other. ● a(n) = 8 * a(n - 1) - 21 * a(n - 2) + 20 * a(n - 3) - 5 * a(n - 4). (End) ● a(k) = sum(binomial(8 + 2k, 10j + k - 2) - binomial(8 + 2k, 10j + k - 1), j= - infinity..infinity) (a finite sum). ●

► [A171479] 1,8,43,197,841,3473,14113,56897,228481,915713,3666433,14672897,58705921,234852353,939466753,3757981697,15032156161,60129083393,240517251073,962070839297,3848287027201,15393155448833,61572636475393 ★ a(n) = 6 * a(n - 1) - 8 * a(n - 2) + 3 for n > 1; a(0) = 1, a(1) = 8. ● a(n) = (2 - 7 * 2 ^ n + 7 * 4 ^ n) / 2. ●

► [A227209] 1,8,43,198,849,3516,14311,57746,231997,930024,3724179,14904894,59635945,238576532,954371647,3817617642,15270732693,61083455040,244334868715,977341571990,3909370482241,15637490317548 ★ Expansion of 1 / ((1 - x) ^ 2 * (1 - 2x) * (1 - 4x)). ● a(n) = (4 ^ (n + 3) - 9 * 2 ^ (n + 3) + 6 * n + 26) / 18. ●

► [A099253] 1,8,43,211,1030,5055,24851,122166,600470,2951330,14505951,71297834,350434385,1722411860,8465785506,41609980404,204516223418,1005212819668,4940697593195,24283905085013,119357243593561,586649945651116 ★ (7 * n + 6) - th terms of expansion of 1 / (1 - x - x ^ 7). ● a(n) = 8 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). ● a(n) = Sum _{ k=0..n } binomial(7 * n - 6 * (k - 1), k). ● a(n) = Sum _{ k=0..n } binomial(n + 6 * (k + 1), k + 6 * (k + 1)). ● a(n) = Sum _{ k=0..n } binomial(n + 6 * (k + 1), n - k). ●

► [A239033] 8,43,212,806,2592,7265,18362,42809,93464,193157,380900,721154,1317296,2330727,4007402,6713945,10985936,17591423,27613220,42554102,64469600,96133733,141243690,204670193,292761032 ★ Number of 6 X n 0..2 arrays with no element equal to the sum of elements to its left or one plus the sum of the elements above it, modulo 3. ● a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10) for n>12. ●

► [A117617] 1,8,43,218,1093,5468,27343,136718,683593,3417968,17089843,85449218,427246093,2136230468,10681152343,53405761718,267028808593,1335144042968,6675720214843,33378601074218,166893005371093 ★ a(n) = 5 * a(n - 1) + 3 with a(0) = 1. ● a(n) = - (3 / 4) + (7 / 4) * 5 ^ n, with n>=0. - _ Paolo P. Lava _ , Jul 07 2008 ● a(n) = 6 * a(n - 1) - 5 * a(n - 2), a(0) = 1, a(1) = 8. - _ Philippe Deléham _ , Feb 22 2014 ●

► [A111365] 1,1,8,43,239,1324,7337,40657,225296,1248451,6918143,38336068,212434769,1177182049,6523214552,36147618907,200307738191,1109981547676,6150830952953,34084099407793,188872989897824,1046617247712499 ★ a(n) = 5 * a(n - 1) + 3 * a(n - 2) where a(0) = a(1) = 1. ● a(n)=(1 / 2) * [5 / 2 - (1 / 2) * sqrt(37)] ^ n - (3 / 74) * [5 / 2 + (1 / 2) * sqrt(37)] ^ n * sqrt(37) + (3 / 74) * [5 / 2 - (1 / 2) * sqrt(37)] ^ n * sqrt(37) + (1 / 2) * [5 / 2 + (1 / 2) * sqrt(37)] ^ n, with n>=0 [From _ Paolo P. Lava _ , Aug 01 2008] ●

► [A199321] 8,43,253,1513,9073,54433,326593,1959553,11757313,70543873,423263233,2539579393,15237476353,91424858113,548549148673,3291294892033,19747769352193,118486616113153,710919696678913,4265518180073473,25593109080440833 ★ 7 * 6 ^ n + 1. ● a(n) = 6 * a(n - 1) - 5. ● a(n) = 7 * a(n - 1) - 6 * a(n - 2). ●

► [A188148] 0,8,44,104,188,296,428,584,764,968,1196,1448,1724,2024,2348,2696,3068,3464,3884,4328,4796,5288,5804,6344,6908 ★ Number of 3 - step self - avoiding walks on an n X n square summed over all starting positions. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>4. ●

► [A316466] 0,8,44,108,200,320,468,644,848,1080,1340,1628,1944,2288,2660,3060,3488,3944,4428,4940,5480,6048,6644,7268,7920 ★ a(n) = 2 * n * (7 * n - 3). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A100583] 0,8,44,124,268,492,816,1256,1832,2560,3460,4548,5844,7364,9128,11152,13456,16056,18972,22220,25820,29788,34144,38904,44088 ★ Number of triangles in an n X n grid of squares with diagonals. ● a(n) = (12 * n ^ 3 + 18 * n ^ 2 + 4 * n + (- 1) ^ n - 1) / 4. (For a proof see the Richeson link.) ● a(n) = 4 * Sum { i=1 to n } (i ^ 2 + (n + 1 - i) * (n + 1 - round(i / 2))). ●

► [A036464] 0,0,8,44,140,340,700,1288,2184,3480,5280,7700,10868,14924,20020,26320,34000,43248,54264,67260,82460,100100,120428,143704,170200 ★ Number of ways to place two nonattacking queens on an n X n board. ● a(n) = C(n, 3) * (3 * n - 1). ● a(n) = 2 * sum _{ i=1..n - 2 } i(i + 1) ^ 2. - _ Wesley Ivan Hurt _ , Mar 18 2014 ●

► [A000938] 0,0,8,44,152,372,824,1544,2712,4448,6992,10332,15072,21012,28688,38520,50880,65480,83640,104676,130264,160556,195848,235600,282840 ★ Number of collinear point - triples in an n X n grid. ● a(n) = 2 * Sum(Sum((n - k + 1) * (n - m + 1) * gcd(k - 1, m - 1), k, 2, n), m, 2, n) - n ^ 2(n ^ 2 - 1) / 6. - _ Ignacio Larrosa Cañestro _ , May 23 2010 ●

► [A165618] 0,8,44,164,494,1286,3002,6434,12869,24309,43757,75581,125969,203489,319769,490313,735470,1081574,1562274,2220074,3108104,4292144,5852924,7888724,10518299 ★ a(n) = binomial(n + 8,8) - 1. ● a(n) = Sum _{ r=1..n } binomial(8,r) * binomial(n,r). ● a(n) = n(n + 9)(n ^ 6 + 27n ^ 5 + 303n ^ 4 + 1809n ^ 3 + 6168n ^ 2 + 11772n + 12176) / 40320. ●

► [A059596] 1,8,44,184,654,2040,5772,15048,36693,84448,184976,387872,782680,1525920,2884560,5302368,9502014,16635792,28509272,47902192,79030348,128192240,204676056,322002576,499629966 ★ Eighth column (m=7) of convolution triangle A059594(n,m). ● a(2 * k)=binomial(k + 11, 11) * (16 * k ^ 4 + 384 * k ^ 3 + 2936 * k ^ 2 + 7584 * k + 4095) / (15 * 7 * 13 * 3); ● a(2 * k + 1)= binomial(k + 12, 12) * 8 * (2 * k + 5) * (2 * k + 13) * (2 * k + 21) / (15 * 7 * 13), k >= 0. ●

► [A181358] 8,44,188,764,3068,12284,49148,196604,786428,3145724,12582908,50331644,201326588,805306364,3221225468,12884901884,51539607548,206158430204,824633720828,3298534883324,13194139533308,52776558133244,211106232532988,844424930131964 ★ Number of twiddle factors in the first stage of a Pease Radix 4 Fast Fourier Transform. ● a(n) = 4 * (3 * 4 ^ n - 1). ● a(n) = 5 * a(n - 1) - 4 * a(n - 2) for n>1. ●

► [A283077] 1,8,44,192,726,2464,7704,22527,62329,164516,416948,1019690,2416246,5565864,12498215,27421815,58903768,124088548,256749822,522450250,1046735092,2066948472,4026431543,7743987036,14715788745 ★ Expansion of Product _{ n>=1 } (1 - x ^ (7 * n)) / (1 - x ^ n) ^ 8 in powers of x. ● a(n) = (1 / n) * Sum _{ k=1..n } sigma(7 * k) * a(n - k). - _ Seiichi Manyama _ , Mar 05 2017 ●

► [A073380] 1,8,44,200,810,3032,10716,36248,118435,376240,1167720,3553840,10636180,31375440,91392040,263266512,750922021,2123059448,5955034740,16584106040,45884989054,126202397032 ★ Third convolution of A000129(n + 1) (generalized (2,1) - Fibonacci, called Pell numbers), n>=0, with itself. ● a(n) = Sum _{ k=0..floor(n / 2) } 2 ^ (n - 2 * k) * binomial(n - k + 3, 3) * binomial(n - k, k). ● a(n) = F'''(n + 4, 2) / 6, that is, 1 / 6 times the 3rd derivative of the (n + 4)th Fibonacci polynomial evaluated at x=2. - _ T. D. Noe _ , Jan 19 2006 ●

► [A272417] 1,8,44,204,876,3628,14764,59564,239276,959148,3840684,15370924,61500076,246033068,984197804,3936922284 ★ Number of active (ON,black) cells at stage 2 ^ n - 1 of the two - dimensional cellular automaton defined by "Rule 469", based on the 5 - celled von Neumann neighborhood. ● a(n) = (4 / 3 - 2 ^ (2 + n) + (11 * 4 ^ n) / 3). ● a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3) for n>2. ●

► [A370568] 1,8,44,207,896,3689,14706,57361,220363,837430,3157440,11835916,44176890,164355675,609981045,2259680355,8359285126,30890694534,114059719703,420887785505,1552362630016,5723494732725,21096366345741,77742879583057,286445422547405 ★ Expansion of (1 - x) / (1 - 9 * x + 28 * x ^ 2 - 35 * x ^ 3 + 15 * x ^ 4 - x ^ 5). ● a(n) = 9 * a(n - 1) - 28 * a(n - 2) + 35 * a(n - 3) - 15 * a(n - 4) + a(n - 5) for n>=5. ●

► [A100575] 0,0,1,8,44,208,912,3840,15808,64256,259328,1042432,4180992,16748544,67047424,268304384,1073463296,4294377472,17178624000,68716855296,274872401920,1099500093440,4398022393856,17592135712768,70368639320064 ★ Half the number of permutations of 0..n with exactly two maxima. ● a(n) = Sum _{ k=0..n } (- 1) ^ k * 3 ^ (n - k) * binomial(n, k) * floor(k / 2). (End) ● a(n) = 4 ^ (n - 1) - (n + 1) * 2 ^ (n - 2). - Bruno Petazzoni (bruno(AT)enix.org), Apr 18 2007 ● a(n + 1) = Sum _{ k=0..n } k * 2 ^ (2 * n - 1 - k). - _ Philippe Deléham _ , Oct 29 2013 ●

► [A271005] 1,8,44,208,928,3904,16000,64768,260608,1045504,4188160,16764928,67084288,268386304,1073643520,4294770688 ★ Number of active (ON,black) cells at stage 2 ^ n - 1 of the two - dimensional cellular automaton defined by "Rule 245", based on the 5 - celled von Neumann neighborhood. ● a(n) = 6 * a(n - 1) - 8 * a(n - 2) for n>4. ●

► [A371963] 0,0,0,0,1,8,44,209,924,3927,16303,66691,270181,1087371,4356131,17394026,69289961,275543036,1094352236,4342295396,17218070066,68239187876,270351828476,1070824260326,4240695090452 ★ a(n) is the sum of all valleys in the set of Catalan words of length n. ● a(n) = Sum _{ i=1..n - 1 } binomial(2 * (n - i) - 1,n - i - 3). ●

► [A265613] 0,1,8,44,210,935,4004,16744,68952,281010,1136960,4576264,18349630,73370115,292746300,1166182800,4639918800,18443677230,73261092240,290845019400,1154169552900,4578702310182,18159992594568,72014135814704,285542883894800 ★ a(n) = CatalanNumber(n + 1) * n * (3 * n ^ 2 + 5 * n + 2) / ((4 + n) * (3 + n)). ● a(n) = (4 ^ (n + 1) * n * (n + 1) * (3 * n + 2) * Gamma(n + 3 / 2)) / (sqrt(Pi) * Gamma(n + 5)). ● a(n) = (rf(n + 6, n - 1) - (n - 1) * (n - 2) * rf(n + 6, n - 3)) / (n - 1)! for n>=3, rf(n,k) the rising factorial. ● a(n) = a(n - 1) * ((2 * (n + 1)) * (3 * n + 2) * (1 + 2 * n) / ((n - 1) * (3 * n - 1) * (4 + n))) for n>=2. ● a(n) = [x ^ n] x * (1 + x) / (1 - x) ^ (n + 5). - _ Ilya Gutkovskiy _ , Oct 09 2017 ●

► [A292487] 1,8,44,212,1020,4980,24348,118868,580156,2831924,13824092,67481876,329408892,1607991540,7849328028,38316090836,187038012604,913016364980,4456842098396,21755843899028,106200025265148,518409923170932,2530591191342108,12352949840710484 ★ p - INVERT of the odd positive integers, where p(S) = 1 - S - 4 S ^ 2. ● a(n) = 5 * a(n - 1) - 3 * a(n - 2) + 11 * a(n - 3) + 4 * a(n - 4) for n >= 5. ●

► [A270935] 1,8,44,220,956,3964,16124,65020,261116,1046524,4190204,16769020,67092476,268402684,1073676284,4294836220 ★ Number of active (ON,black) cells at stage 2 ^ n - 1 of the two - dimensional cellular automaton defined by "Rule 221", based on the 5 - celled von Neumann neighborhood. ● a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3) for n>4. ●

► [A198768] 8,44,224,1124,5624,28124,140624,703124,3515624,17578124,87890624,439453124,2197265624,10986328124,54931640624,274658203124,1373291015624,6866455078124,34332275390624,171661376953124,858306884765624 ★ a(n) = 9

* 5 ^ n - 1. ● a(n) = 5 * a(n - 1) + 4. ● a(n) = 6 * a(n - 1) - 5 * a(n - 2), n > 1. ●

▶ [A082762] 1,8,44,232,1216,6368,33344,174592,914176,4786688,25063424,131233792,687149056,3597959168,18839158784,98643116032,516502061056,2704439902208,14160631169024,74146027405312,388233639755776,2032817728913408,1064397181445734 4 ★ Trinomial transform of Lucas numbers (A000032). ● a(n) = Sum _{ k=0..2 * n } Trinomial(n,k) * Lucas(k + 1), where Trinomial(n,k) = trinomial coefficients (A027907). ● a(n) = 2 ^ n * Lucas(2 * n + 1), where Lucas = A000032. ● a(0) = 1, a(1) = 8, a(n + 1) = 6 * a(n) - 4 * a(n - 1). (End) ● a(n) = ((1 + sqrt(5)) * (3 + sqrt(5)) ^ n + (1 - sqrt(5)) * (3 - sqrt(5)) ^ n) / 2. ●

▶ [A155604] 1,8,44,242,1376,8018,47384,282122,1686176,10097378,60525224,362974202,2177313776,13062288338,78368947064,470199333482,2821152954176,16926788584898,101560344088904,609360902271962,3656161926847376 ★ 6 ^ n + 3 ^ n - 1. ● a(n)=9 * a(n - 1) - 18 * a(n - 2) - 10 with a(0)=1, a(1)=8 - _ Vincenzo Librandi _ , Jul 21 2010 ●

▶ [A126476] 1,8,44,252,1446,8300,47642,273466,1569700,9010108,51718192,296863410,1704001644,9781001986,56143138234,322262685896,1849793972828,10617852738356,60946677537854,349835093256180,2008060117756986 ★ Number of base 8 n - digit numbers with adjacent digits differing by three or less. ● a(n) = 6 * a(n - 1) - a(n - 2) - 3 * a(n - 3) + a(n - 4) for n>4. ●

▶ [A210378] 1,8,45,128,325,648,1225,2048,3321,5000,7381,10368,14365,19208,25425,32768,41905,52488,65341,80000,97461,117128,140185,165888,195625 ★ Number of 2 X 2 matrices with all terms in { 0,1,...,n } and even trace. ● a(n) = (n + 1) ^ 2 * ((2 * n + 1 - (- 1) ^ n) ^ 2 + (2 * n + 3 + (- 1) ^ n) ^ 2) / 16. ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 6 * a(n - 3) + 6 * a(n - 5) - 2 * a(n - 6) - 2 * a(n - 7) + a(n - 8) for n > 7. ●

▶ [A128091] 1,8,45,160,425,936,1813,3200,5265,8200,12221,17568,24505,33320,44325,57856,74273,93960,117325,144800,176841,213928,256565,305280,360625 ★ Row sums of unsigned A128090. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3 - 5 * a(n - 4) + a(n - 5), a(1) = 1, a(2) = 8, a(3) = 45, a(4) = 160, a(5) = 425. - _ Philippe Deléham _ , Mar 16 2014 ●

▶ [A026015] 1,8,45,219,987,4248,17748,72675,293436,1172908,4653935,18366075,72186075,282861360,1105877880,4316224860,16825024134,65525448960,2550246934 34,992116674142,3858537980286,15004402265424,58343871881400 ★ a(n) = number of (s(0), s(1), ..., s(2n)) such that s(i) is a nonnegative integer and |s(i) - s(i - 1)| = 1 for i = 1,2,...,n, s(0) = 2, s(2n) = 8. Also a(n) = T(2n,n - 3), where T is the array defined in A026009. ● a(n) = f(n) - f(n - 1), where f(n) = Sum _{ j=0..n - 3 } C(n - j - 3) * (C(j + 7) - 6 * C(j + 6) + 10 * C(j + 5) - 4 * C(j + 4)) and C(n) are the Catalan numbers. (End) ● a(n) = C(n + 5) - 8 * C(n + 4) + 22 * C(n + 3) - 25 * C(n + 2) + 11 * C(n + 1) - C(n). ● a(n) = (9 / 20) * (binomial(n,3) / binomial(n + 6,5)) * (3 * n ^ 2 + 3 * n + 20) * C(n). (End) ●

▶ [A002696] 1,8,45,220,1001,4368,18564,77520,319770,1307504,5311735,21474180,86493225,347373600,1391975640,5567902560,22239974430,88732378800,353697121050,1408831480056,5608233007146,22314239266528,88749815264600,352870329957600,1402659561581460 ★ Binomial coefficients C(2n,n - 3). ● a(n) = Sum _{ k=0..n } C(n, k) * C(n, k + 3). - _ Hermann Stamm - Wilbrandt _ , Aug 17 2015 ●

▶ [A016208] 1,8,45,220,1001,4368,18565,77540,320001,1309528,5326685,21572460,87087001,350739488,1410132405,5662052980,22712782001,91044838248,364760483725,1460785327100,5848371485001,23409176469808,93683777468645,374876324642820,1499928942876001 ★ Expansion of 1 / ((1 - x) * (1 - 3 * x) * (1 - 4 * x)). ● a(n) = 16 * 4 ^ n / 3 + 1 / 6 - 9 * 3 ^ n / 2. - _ Paul Barry _ , Jun 25 2003 ● a(0) = 0, a(1) = 8, a(n) = 7 * a(n - 1) - 12 * a(n - 2) + 1. - _ Vincenzo Librandi _ , Feb 10 2011 ● a(0) = 1, a(1) = 8, a(2) = 45, a(n) = 8 * a(n - 1) - 19 * a(n - 2) + 12 * a(n - 3). - _ Harvey P. Dale _ , Apr 09 2012 ●

▶ [A317405] 1,8,45,224,1045,4680,20377,86912,364905,1513160,6211909,25290720,102251773,410963336,1643288625,6541692416,25939798993,102503274120,403800061789,1586318259680,6216231359205,24304019419592,94826736906697,369285078314880,1435615286196025 ★ a(n) = n * A001353(n). ● a(n) = ((((- (2 - sqrt(3)) ^ n + (2 + sqrt(3)) ^ n) * n)) / (2 * sqrt(3)). ● a(n) = 8 * a(n - 1) - 18 * a(n - 2) + 8 * a(n - 3) - a(n - 4) for n>4. ●

▶ [A368576] 0,1,8,45,236,1306,8088,57078,457416,4118031,41182312,453008435,5436105588,70669378832,989371312216,14840569694868,237449115133392,4036634957288013,72659429231210568,1380529155393034441,27610583107860731324,579822245265075410934 ★ a(n) = n! * Sum _{ k=0..n } binomial(k + 4,5) / k!. ● a(0) = 0; a(n) = n * a(n - 1) + binomial(n + 4,5). ●

▶ [A190048] 8,46,150,370,770,1428,2436,3900,5940,8690,12298,16926,22750,29960,38760,49368,62016,76950,94430,114730,138138,164956,195500,230100,269100 ★ Expansion of (8 + 6 * x) / (1 - x) ^ 5 ● a(n) = 8 * binomial(n + 4,4) + 6 * binomial(n + 3,4). ● a(n) = (7 * n ^ 4 + 58 * n ^ 3 + 173 * n ^ 2 + 218 * n + 96) / 12. ●

▶ [A212673] 0,0,8,46,152,378,792,1476,2528,4060,6200,9090,12888,17766,23912,31528,40832,52056,65448,81270,99800,121330,146168,174636,207072 ★ Number of (w,x,y,z) with all terms in { 1,...,n } and w<=|x - y| + |y - z|. ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 5 * a(n - 4) - 4 * a(n - 5) + a(n - 6). ● a(n) = (- 1 + (- 1) ^ n - 8 * n ^ 2 + 10 * n ^ 4) / 16. [_ Colin Barker _ , Jun 10 2012] ●

▶ [A027650] 1,8,46,230,1066,4718,20266,85310,354106,1455278,5938186,24104990,97478746,393095438,1581931306,6356390270,25511588986,102304505198,409992599626,1642294397150,6576150108826,26325519044558,105364834103146,421647614381630,1687155299822266 ★ Poly - Bernoulli numbers B _ n ^ (k) with k= - 3. ● a(n) = 6 * 4 ^ n - 6 * 3 ^ n + 2 ^ n. - _ Vladeta Jovovic _ , Nov 14 2003 ●

▶ [A172064] 1,8,46,230,1068,4744,20476,86662,361711,1494384,6126818,24972326,101320712,409609664,1651162688,6640469816,26655382802,106830738224,427612715516,1709790470780,6830461107736,27266848437608 ★ Expansion of (2 / (3 * sqrt(1 - 4 * z) - 1 + 4 * z)) * ((1 - sqrt(1 - 4 * z)) / (2 * z)) ^ k with k=7. ● a(n) = Sum _{ j=0..n } (- 1) ^ j * binomial(2 * n + k - j, n - j), with k=7. ●

▶ [A182542] 1,8,46,232,1093,4944,21778,94184,401930,1698160,7119516,29666704,123012781,508019104,2091005866,8582372584,35141476126,143595498544,585720020356,2385430111024,9701814930466,39411044641888,159926316674356,648348726966672,2626193752638388 ★ Second diagonal of triangle in A145879. ● a(n) = 2 * Sum _{ i=0..n - 1 } 4 ^ i * C(2 * (n - i),n - i - 2)) / (n - i). - _ Vladimir Kruchinin _ , Mar 29 2019 ● a(n) = 4 ^ (n - 1) - C(2 * n,n) * n / (n + 1). - _ Vladimir Kruchinin _ , Jun 08 2020 ●

▶ [A052244] 1,8,46,240,1215,6096,30508,152576,762925,3814680,19073466,95367408,476837131,2384185760,11920928920,59604644736,298023223833,1490116119336,7450580596870,37252902984560,186264514923031,931322574615408,4656612873077316,23283064365386880 ★ Partial sums of A014827. ● a(n) = ((5 ^ (n + 3)) - (8 * (n ^ 2) + 44 * n + 61)) / 64. ● a(n) = 5a(n - 1) + C(n + 2, 2), n >= 0 ; a(- 1)=0. ●

▶ [A083421] 1,8,46,242,1234,6218,31186,156122,780994,3905738,19530226,976542024882771542441398058,12207014866,61035123482,305175715714,1525878775178,7629394269106,38146972131962,190734862232674 ★ a(n)=2 * 5 ^ n - 2 ^ n. ● a(0)=1, a(1)=8, a(n)=7 * a(n - 1) - 10 * a(n - 2). - _ Harvey P. Dale _ , Dec 03 2015 ●

▶ [A081279] 1,8,47,238,1101,4788,19899,79866,311769,1189728,4454919,16415622,59659173,214229772,761200659,2679525522,9353893041,32409397944,111534054111,381480041502,1297471217661,4390248981348,14785128121707 ★ Binomial transform of Chebyshev coefficients A001794. ● a(n) = (2 * n ^ 3 + 30 * n ^ 2 + 103 * n + 81) * 3 ^ (n - 4). ● a(n) = 12 * a(n - 1) - 54 * a(n - 2) + 108 * a(n - 3) + 8 * 1a(n - 4), a(0)=1, a(1)=8, a(2)=47, a(3)=238. ●

▶ [A099110] 1,8,47,238,1113,4956,21379,90266,375485,1545544,6313671,25650534,103792417,418745972,1685723723,6775136242,27197312709,109079641440,437189912335,1751374038590,7013340021161,28076893083148 ★ Expansion of 1 / ((1 + x) * (1 - 2x) * (1 - 3x) * (1 - 4x)). ● a(n) = (1 / 60) (80 * 2 ^ n - 405 * 3 ^ n + 384 * 4 ^ n + (- 1) ^ n). ● a(n) = 8 * a(n - 1) - 17 * a(n - 2) - 2 * a(n - 3) + 24 * a(n - 4), n >= 4. - _ Vincenzo Librandi _ , Mar 22 2011 ●

▶ [A029760] 1,8,47,244,1186,5536,25147,112028,491870,2135440,9188406,39249768,166656772,704069248,2961699667,12412521388,51854046982,216013684528,897632738722,3721813363288,15401045060572,63616796642368,262357557683422,1080387930269464 ★ A sum with next - to - central binomial coefficients of even order, Catalan related. ● a(n) = 4 ^ (n + 1) * Sum _{ k=1..n + 1 } binomial(2k, k - 1) / 4 ^ k = ((n + 3) ^ 2) * C(n + 2) / 2 - 2 ^ (2 * n + 3), C = Catalan. Also a(n + 1)=4 * a(n) + binomial(2(n + 2), n + 1). ●

▶ [A016198] 1,8,47,250,1281,6468,32467,162590,813461,4068328,20343687,101722530,508620841,2543120588,12715635707,63578244070,317891351421,1589457019248,7947285620527,39736429151210,198682147853201,993410743460308,4967053725690147,24835268645227950 ★ Expansion of 1 / ((1 - x)(1 - 2x)(1 - 5x)). ● a(n) = (25 * 5 ^ n - 16 * 2 ^ n + 3) / 12. - _ Bruno Berselli _ , Feb 09 2011 ● a(n) = [(5 ^ 0 - 2 ^ 0) + (5 ^ 1 - 2 ^ 1) + ... + (5 ^ n - 2 ^ n)] / 3. - r22lou(AT)cox.net, Nov 14 2005 ● a(0)=1, a(n)=5 * a(n - 1) + 2 ^ (n + 1) - 1. - _ Vincenzo Librandi _ , Feb 07 2011 ●

▶ [A014524] 0,1,8,47,264,1480,8305,46616,261663,1468752,8244304,46276385,259755560,1458042831,8184190168,45938958232,257861540369,1447411446840,8124514782015,45603992276896,255981331487648 ★ Number of Hamiltonian paths from NW to SW corners in a grid with 2n rows and 4 columns. ● a(n) = 7 * a(n - 1) - 9 * a(n - 2) + 7 * a(n - 3) - a(n - 4). G.f.: x * (x + 1) / (x ^ 4 - 7 * x ^ 3 + 9 * x ^ 2 - 7 * x + 1). - _ Colin Barker _ , May 20 2013 ●

▶ [A054488] 1,8,47,274,1597,9308,54251,316198,1842937,10741424,62605607,364892218,2126747701,12395593988,72246816227,421085303374,2454265004017,14304504720728,83372763320351,485932075201378,2832219687887917 ★ Expansion of (1 + 2 * x) / (1 - 6 * x + x ^ 2). ● a(n) = 6 * a(n - 1) - a(n - 2), a(0)=1, a(1)=8. ● a(n) = ((3 + 2 * sqrt(2)) ^ (n + 1) - (3 - 2 * sqrt(2)) ^ (n + 1) + 2 * ((3 + 2 * sqrt(2)) ^ n - (3 - 2 * sqrt(2)) ^ n)) / (4 * sqrt(2)). ● a(n) = (Pell(2 * n + 2) + 2 * Pell(2 * n)) / 2 = (Pell - Lucas(2 * n + 1) + Pell(2 * n)) / 2. - _ G. C. Greubel _ , Jan 19 2020 ●

▶ [A139279] 8,48,88,128,168,208,248,288,328,368,408,448,488,528,568,608,648,688,728,768,808,848,888,928,968 ★ a(n) = 40 * n - 32. ● a(n) = a(n - 1) + 40. ●

▶ [A067239] 1,8,48,120,224,360,528,728,960,1224,1520,1848,2208,2600,3024,3480,3968,4488,5040,5624,6240,6888,7568,8280,9024 ★ a(0)=1, a(n) = 8n * (2n - 1). ● a(n) = a(n - 1) + 32 * n - 24 (with a(1)=8). - _ Vincenzo Librandi _ , Dec 15 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>3. ●

▶ [A152750] 0,8,48,120,224,360,528,728,960,1224,1520,1848,2208,2600,3024,3480,3968,4488,5040,5624,6240,6888,7568,8280,9024 ★ Eight times hexagonal numbers: 8 * n * (2 * n - 1). ● a(n) = a(n - 1) + 32 * n - 24 (with a(0)=0). - _ Vincenzo Librandi _ , Nov 26 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>2. ●

▶ [A280056] 0,0,0,8,48,144,360,720,1344,2240,3600,5400,7920,11088,15288,20384,26880,34560,44064,55080,68400,83600,101640,121968,145728 ★ Number of 2 X 2 matrices with entries in { 0,1,...,n } and even trace with no entries repeated. ● a(n) = (1 / 4) * (n - 3) * (n - 2) * (2 * n ^ 2 - 4 * n + 1 - (- 1) ^ n) for n>=0. ● a(n) = (n ^ 4 - 3 * n ^ 3 + 2 * n ^ 2) / 2 for n even. ● a(n) = (n ^ 4 - 3 * n ^ 3 + n ^ 2 + 3 * n - 2) / 2 for n odd. ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 6 * a(n - 3) + 6 * a(n - 5) - 2 * a(n - 6) - 2 * a(n - 7) + a(n - 8) for n>7. ●

▶ [A035471] 1,8,48,152,352,680,1168,1848,2752,3912,5360,7128,9248,11752,14672,18040,21888,26248,31152,36632,42720,49448,56848,64952,73792 ★ Coordination sequence for lattice D *_ 4 (with edges defined by l _ 1 norm = 1). ● a(m) = (Sum _{ k=0..n } 2 ^ k * binomial(n, k) * binomial(m - 1, k - 1)) + 2 ^ n * binomial((n + 2 * m) / 2 - 1, n - 1); with n=4. ● a(n) = (16 * n ^ 3 + 8 * n) / 3, n > 0. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4); a(0)=1, a(1)=8, a(2)=48, a(3)=152, a(4)=352. - _ Harvey P. Dale _ , Oct 20 2015 ●

▶ [A212571] 0,0,8,48,168,428,916,1728,2992,4840,7440,10960,15608,21588,29148,38528,50016,63888,80472,100080,123080,149820,180708,216128,256528 ★ Number of (w,x,y,z) with all terms in { 1,...,n } and |w - x|<|x - y| + |y - z|. ● a(n) = 3 * a(n - 1) - a(n - 2) - 5 * a(n - 3) + 5 * a(n - 4) + a(n - 5) - 3 * a(n - 6) + a(n - 7). ● a(n) = 1 / 48 * (38 * n ^ 4 - 20 * n ^ 3 - 32 * n ^ 2 + 2 * (3 * (- 1) ^ n + 13) * n + 3 * ((- 1) ^ n - 1)). ●

▶ [A247727] 8,48,168,440,960,1848,3248,5328,8280,12320,17688,24648,33488,44520,58080,74528,94248,117648,145160,177240,214368,257048,305808,361200,423800 ★ Number of length 1 + 3 0..n arrays with no disjoint pairs in any consecutiv

e four terms having the same sum. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

► [A093199] 1,8,48,200,675,1904,4736,10608,21925,42328,77328,134680,225351,364000,570368,869856,1295433,1888296,2700400,3795176,5250795,7160912,9638784,12818000,16857581 ⋆ Number of 4 X 4 magic squares with line sum n. ● a(n) = 4 * a(n - 1) - 2 * a(n - 2) - 12 * a(n - 3) + 17 * a(n - 4) + 8 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) + 17 * a(n - 8) - 12 * a(n - 9) - 2 * a(n - 10) + 4 * a(n - 11) - a(n - 12) for n > 11. - _ Chai Wah Wu _ , Jan 15 2019 ●

► [A271061] 1,8,48,224,960,3968,16128,65024,261120,1046528,4190208,16769024,67092480,268402688,1073676288,4294836224 ⋆ Number of active (ON,black) cells at stage 2 ^ n - 1 of the two - dimensional cellular automaton defined by "Rule 261", based on the 5 - celled von Neumann neighborhood. ● a(n) = 6 * a(n - 1) - 8 * a(n - 2) for n>2. ●

► [A211012] 0,0,8,48,224,960,3968,16128,65024,261120,1046528,4190208,16769024,67092480,268402688,1073676288,4294836224,17179607040,68718952448,274876858368,1099509530624,4398042316800,17592177655808,70368727400448,281474943156224 ⋆ Total area of all squares and rectangles after 2 ^ n stages in the toothpick structure of A139250, assuming the toothpicks have length 2. ● a(n) = 6 * a(n - 1) - 8 * a(n - 2) for n>2. - _ Colin Barker _ , Mar 30 2016 ●

► [A073390] 1,8,48,240,1080,4512,17856,67776,248880,889600,3109376,10664448,35989248,119761920,393676800,1280157696,4122985728,13165099008,41713192960,131243970560,410315433984,1275348344832 ⋆ Third convolution of A002605(n) (generalized (2,2) - Fibonacci), n >= 0, with itself. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n - k + 3, 3) * binomial(n - k, k) * 2 ^ (n - k). ●

► [A225977] 8,48,252,1178,4722,16361,49811,135672,336189,768900,1642668,3310404,6343682,11635425,20537903,35044430,58024377,93522432,147134436,226473606,341742522,506427905,738136947,1059595772,1499832509 ⋆ Number of n X 3 binary arrays whose sum with another n X 3 binary array containing no more than two 1s has rows and columns in lexicographically nondecreasing order. ● a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10) for n >11. ●

► [A292536] 1,8,48,255,1310,6773,35260,183740,956765,4980320,25924725,134956612,702554244,3657326875,19039098206,99112598721,515954630808,2685927132776,13982245762937,72787973059648,378915453775913,1972536332660240,10268516498713448 ⋆ p - INVERT of the squares (A000290), where p(S) = 1 + S - 3 S ^ 2. ● a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 26 * a(n - 3) - 10 * a(n - 4) + 5 * a(n - 5) - a(n - 6) for n >= 7. ●

► [A242668] 1,8,48,256,1279,6132,28576,130432,585985,2599952,11419808,49743104,215163647,925163500,3957669648,16854677312,71498512897,302248757272,1273756836176,5353050574336,22440215412223,93856659402724,391745066819136,1631995960879872 ⋆ Expansion of 1 / (1 - 8 * x + 16 * x ^ 2 + x ^ 4 - 4 * x ^ 5). ● a(n) = 8 * a(n - 1) - 16 * a(n - 2) - a(n - 4) + 4 * a(n - 5) for n>4. ● a(n) = 4 * a(n - 1) - a(n - 4) + 4 ^ n for n>3 (see References, p. 229). ● a(3k): 1, 256, 28576, 2599952, 215163647, 16854677312, 1273756836176, ... has g.f. (1 + 128 * x - 48 * x ^ 2 + 4 * x ^ 3) / ((1 - 64 * x) * (1 - 64 * x + 48 * x ^ 2 - 12 * x ^ 3 + x ^ 4)); ● a(3k + 1): 8, 1279, 130432, 11419808, 925163500, 71498512897, ... has g.f. (8 + 255 * x - 128 * x ^ 2 + 16 * x ^ 3) / ((1 - 64 * x) * (1 - 64 * x + 48 * x ^ 2 - 12 * x ^ 3 + x ^ 4)); ● a(3k + 2): 48, 6132, 585985, 49743104, 3957669648, 302248757272, ... has g.f. (48 - 12 * x + x ^ 2) / ((1 - 64 * x) * (1 - 64 * x + 48 * x ^ 2 - 12 * x ^ 3 + x ^ 4)). ●

► [A002697] 0,1,8,48,256,1280,6144,28672,131072,589824,2621440,11534336,50331648,218103808,939524096,4026531840,17179869184,73014444032,309237645312,1305670057984,5497558138880,23089744183296 ⋆ a(n) = n * 4 ^ (n - 1). ● a(n) = n * 4 ^ (n - 1). ● a(n) = Sum _{ k=0..n } k * binomial(2 * n, 2 * k). - _ Benoit Cloitre _ , Jul 30 2003 ● a(n) = Sum _{ k=0..n } 4 ^ (n - k) * binomial(n - k + 1, k) * binomial(1, (k + 1) / 2) * (1 - (- 1) ^ k) / 2. - _ Paul Barry _ , Oct 15 2004 ● a(0) = 0, a(n) = 4 * a(n - 1) + 4 ^ (n - 1). - _ Vincenzo Librandi _ , Dec 31 2010 ● a(n + 1) is the convolution of A000984 with A002457. - _ Rui Duarte _ , Oct 08 2011 ● a(0) = 0, a(1) = 1, a(n) = 8 * a(n - 1) - 16 * a(n - 2). - _ Harvey P. Dale _ , Jan 18 2012 ●

► [A006321] 1,8,48,264,1408,7432,39152,206600,1093760,5813000,31019568,166188552,893763840,4823997960,26124870640,141926904328,773293020928,4224773978632,23139861329456,127039971696392,698993630524032,3853860616119048,21288789223825648 ⋆ Royal paths in a lattice. ● a(n) = (4 / n) * sum(binomial(n, j) * binomial(n + 3 + j, n - 1), j=0..n) (n>0). - _ Emeric Deutsch _ , Aug 19 2004 ●

► [A081554] 0,8,48,280,1632,9512,55440,323128,1883328,10976840,63977712,372889432,2173358880,12667263848,73830224208,430314081400,2508054264192,14618011503752,85200014758320,496582077046168,2894292447518688 ⋆ a(n) = sqrt(2) * ((3 + 2 * sqrt(2)) ^ n - (3 - 2 * sqrt(2)) ^ n). ● a(0)=0, a(1)=8, a(n) = 6 * a(n - 1) - a(n - 2) for n>1. - _ Philippe Deléham _ , Sep 19 2009 ●

► [A270576] 1,8,48,288,1728,10368,62208,373248,2239488,13436928,80621568,483729408,2902376448,17414258688,104485552128,626913312768,3761479876608,22568879259648,135413275557888,812479653347328,4874877920083968,29249267520503808,175495605123022848 ⋆ Expansion of (1 + 2 * x) / (1 - 6 * x). ● a(n) = 6 * a(n - 1) for n>1. ● a(n) = 8 * 6 ^ (n - 1) for n>0. ●

► [A180031] 1,8,48,304,1904,11952,74992,470576,2952816,18528688,116265968,729559344,4577924464,28726097072,180253881072,1131078181936,7097421958256,44535735246768,279458051899888,1753576141473584 ⋆ Number of n - move paths on a 3 X 3 chessboard of a queen starting or ending in the central square. ● a(n) = 5 * a(n - 1) + 8 * a(n - 2) with a(0) = 1 and a(1) = 8. ● a(n) = ((A + 11) * A ^ (- n - 1) + (B + 11) * B ^ (- n - 1)) / 57 with A = (- 5 + sqrt(57)) / 16 and B = (- 5 - sqrt(57)) / 16. ●

► [A203799] 1,1,1,8,48,312,2280,18720,171360,1733760,19232640,232243200,3033676800,42631142400,641383142400,10287038361600,175228365312000,3159341273088000,60111175348224000,1203646256676864000,25302180885037056000,557134559872450560000,12823826485099069440000 ⋆ G.f.: Sum _{ n>=0 } (n - 2 * x) ^ n * x ^ n / (1 + n * x - 2 * x ^ 2) ^ n. ● a(n) = (n ^ 2 + n - 4) / 2 * (n - 1)!, for n>1 with a(0)=a(1)=1. ●

► [A095897] 1,8,48,320,1888,11648,69504,419840,2515456,15116288,90667008,544194560,3264913408,19591036928,117544157184,705277460480,4231648116736,25389989101568,152339800915968,914039609753600,5484236586876928 ⋆ Expansion of x * (1 + 4 * x - 4 * x ^ 2) / ((1 + 2 * x) * (1 - 6 * x) * (1 - 8 * x ^ 2)). ● a(n + 4) = 4 * a(n + 3) + 20 * a(n + 2) - 32 * a(n + 1) - 96 * a(n) for n > 4. ● a(n) = 2 ^ (n - 2) * (3 ^ n - 1 + ((- 1) ^ n - 1) * (sqrt(2) ^ (n - 1) - 1)). ● a(2k + 1) = 2 ^ (2k - 1) * (3 * 9 ^ k - 2 * 2 ^ k + 1), a(2k) = 4 ^ (k - 1) * (9 ^ k - 1). (End) ●

► [A172111] 0,0,0,8,48,368,3408,36848,454608,6294128,96556368,1624775408,29744591568,588384837488,12503968334928,284065406275568,6869235761650128,176150548586638448,4774198652678411088 ⋆ a(n) is the number of ordered partitions of { 1, 1, 1, 1, 2, 3, ..., n - 3 } . ● a(n) = Sum _{ m=1..n } Sum _{ j=0..m } binomial(m,j) * binomial(j + 3,4) * (- 1) ^ (m - j) * j ^ (n - 4), for n>=4, with a(n) = 0 for n < 4. ●

► [A165506] 1,8,48,400,2288,20112,108016,1018256,5030640,51991696,229724144,2681810832,10182741232,139998665360,430234843632,7409690416528,16683460826864,398259202498704,536014603805680,21766500736121744 ⋆ a(0) = 1, a(1) = 8, a(n) = 56 * a(n - 2) - a(n - 1). ● a(n) = (16 * 7 ^ n - (- 8) ^ n) / 15. - _ Klaus Brockhaus _ , Sep 26 2009 ●

► [A344321] 1,1,8,49,246,1157,5248,23256,101398,436865,1865136,7906054,33319388,139754994,583859968,2430991670,10092510630,41794856985,172699266480,712220712390,2932169392020,12052941519030,49475929052160,202838118604680 ⋆ a(n) = 2 ^ (2 * n - 5) * binomial(n - 5 / 2, - 1 / 2) * (36 * n ^ 4 - 78 * n ^ 3 + 54 * n ^ 2 - 48 * n + 24) / ((n + 1) * n * (n - 1)) for n >= 2 and otherwise 1. ● a(n) = (3 * n - 2) * (1 / n + 1 / 2) * binomial(2 * n - 2,n - 1) + 6 * (n - 2) * binomial(2 * n - 4,n - 2) + (n - 1) * (3 * n - 8) / (2 * (2 * n - 3)) * binomial(2 * n - 2,n - 1) + 2 Sum _{ k=1..2n - 6 } binomial(k,n - 1) * (n + 1 + k) for n >= 3. ●

► [A081901] 1,8,49,262,1286,5944,26262,111996,464103,1877904,7446735,29021490,111405780,422003520,1579757580,5851519704,21468622077,78087814776,281798184573,1009617794334,3593281988754,12710491403112,44705999907666 ⋆ A sequence related to binomial(n + 5, 5). ● a(n) = 3 ^ n * (n ^ 5 + 65 * n ^ 4 + 1385 * n ^ 3 + 11575 * n ^ 2 + 35574 * n + 29160) / 29160. ●

► [A005059] 0,1,8,49,272,1441,7448,37969,192032,966721,4853288,24325489,121804592,609554401,3049366328,15251614609,76272421952,381405156481,1907154922568,9536162033329,47681972428112,238413348924961,1192077204978008,5960417405949649 ⋆ a(n) = (5 ^ n - 3 ^ n) / 2. ● a(n) = 8 * a(n - 1) - 15 * a(n - 2). - _ Paul Barry _ , Mar 03 2003 ● a(n) = Sum _{ k=1..n } 2 ^ (k - 1) * 3 ^ (n - k) * binomial(n,k). - _ Zerinvary Lajos _ , Sep 24 2006 ● a(n) = (r ^ n - s ^ n) / (r - s) with r=5 and s=3. - _ Sture Sjöstedt _ , Oct 17 2012 ● a(n) = Sum _{ k=0..n - 1 } 3 ^ k * 5 ^ (n - k - 1) for n>0, a(0)=0. - _ Bruno Berselli _ , Aug 07 2013 ●

► [A200660] 0,1,8,49,284,1658,9974,62375,406832,2769493,19668054,145559632,1121153604,8974604065,74553168520,641808575961,5718014325296,52653303354906,500515404889978,4905937052293759,49530189989912312,514541524981377909,5494885265473192914 ⋆ Sum of the number of arcs describing the set partitions of { 1,2,...,n } . ● a(n) = Sum _{ k=1..n } Stirling2(n,k) * k * (n - k). - _ Ilya Gutkovskiy _ , Apr 06 2021 ●

► [A001108] 0,1,8,49,288,1681,9800,57121,332928,1940449,11309768,65918161,384199200,2239277041,13051463048,76069501249,443365544448,2584123765441,15061377048200,87784138523761,511643454094368,2982076586042449,17380816062160328,101302819786919521 ⋆ a(n) - th triangular number is a square: a(n + 1) = 6 * a(n) - a(n - 1) + 2, with a(0) = 0, a(1) = 1. ● a(0) = 0, a(n + 1) = 3 * a(n) + 1 + 2 * sqrt(2 * a(n) * (a(n) + 1)). - _ Jim Nastos _ , Jun 18 2002 ● a(n) = floor((1 / 4) * (3 + 2 * sqrt(2)) ^ n). - _ Benoit Cloitre _ , Sep 04 2002 ● a(n) = 7 * a(n - 1) - 7 * a(n - 2) + a(n - 3). - _ Antonio Alberto Olivares _ , Oct 23 2003 ● a(n) = Sum _{ r=1..n } 2 ^ (r - 1) * binomial(2n, 2r). - _ Lekraj Beedassy _ , Aug 21 2004 ● a(n + 1) ^ 2 + a(n) ^ 2 + 1 = 6 * a(n + 1) * a(n) + 2 * a(n + 1) + 2 * a(n). - _ Charlie Marion _ , Sep 28 2011 ●

► [A115598] 1,8,49,288,1681,9800,57121,332928,1940449,11309768,65918161,384199200,2239277041,13051463048,76069501249,443365544448,2584123765441,15061377048200,87784138523761,511643454094368,2982076586042449,17380816062160328,101302819786919521 ⋆ Consider all Pythagorean triples (X,X + 1,Z) ordered by increasing Z; sequence gives Z - (X + 1) values. ● a(n) = (- 2 + (3 - 2 * sqrt(2)) ^ n + (3 + 2 * sqrt(2)) ^ n) / 4. ● a(n) = 7 * a(n - 1) - 7 * a(n - 2) + a(n - 3). ●

► [A261668] 1,8,49,294,1791,11087,69497,439790,2803657,17978388,115837591,749321715,4863369655,31655226107,206549749929,1350638103790,8848643946549,58069093513634,381650672631329,2511733593767294,16550500379912639,109176697072162079,720921085149563159 ⋆ Number of admissible words of Type G arising in study of q - analogs of multiple zeta values. ● a(n) = Sum _{ 1<=d, k<=n } Sum _{ x1 + · · · + xd=d + k - 1 and x1,...,xd>=1 } x1 * x2 * ... * xd. See Proposition 10.8 p. 28 of Zhao link. - _ Michel Marcus _ , Sep 06 2015 ● a(n) = Sum _{ d=1..n } binomial(2d + n - 1,n - 1). Also, a(n) is the coefficient of x ^ (2n) in ((1 + x) ^ (- n - 1) - 1) / (1 - x), or the coefficient of x ^ n in ((1 + x) ^ (3n + 1) - (1 + x) ^ (n + 1)) / (2 + x). - _ Max Alekseyev _ , Sep 14 2015 ●

► [A097204] 0,0,1,8,49,294,1893,13572,109345,985898,9863077,108503064,1302057249,16926789294,236975148421,3554627439308,56874039487681,966858672273618,17403456103022277,330665665961879712,6613313319247031425,138879579704207582870 ⋆ Binomial transform of A033312. ● a(n) = Sum _{ k=0...n } (P(n, k) - binomial(n,k)). ● a(n) = exp(1) * Gamma(n + 1, 1) - 2 ^ n and a(n) ~ exp(1) * n! - 2 ^ n. - _ Peter Luschny _ , Sep 02 2014 ●

► [A037483] 1,8,49,296,1777,10664,63985,383912,2303473,13820840,82925041,497550248,2985301489,17911808936,107470853617,644825121704,3868950730225,23213704381352,139282226288113,835693357728680,5014160146372081 ⋆ Base 6 digits are, in order, the first n terms of the periodic sequence with initial period 1,2. ● a(n) = 6a(n - 1) + a(n - 2) - 6a(n - 3). ●

► [A033463] 1,8,50,248,1048,3952,13696,44480,137216,406016,1160704,3223552,8734720,23171072,60342272,154615808,390529024,973864960,2400845824,5857869824,14159446016,33935065088,80698408960,190534647808,446911479808 ⋆ EXP

CONV of squares A000290 with themselves. ● a(n) = 2 ^ (n - 4) * (n ^ 4 + 6 * n ^ 3 + 19 * n ^ 2 + 22 * n + 16). E.g.f.: (1 + 3 * x + x ^ 2) ^ 2 * exp(2 * x). O.g.f.: (1 - 2 * x + 10 * x ^ 2 - 12 * x ^ 3 + 8 * x ^ 4) / (1 - 2 * x) ^ 5. Recurrence: a(n) = 10 * a(n - 1) - 40 * a(n - 2) + 80 * a(n - 3) - 80 * a(n - 4) + 32 * a(n - 5). a(n) = Sum _{ k=0..n } binomial(n, k) * (k + 1) ^ 2 * (n - k + 1) ^ 2. - _ Vladeta Jovovic _ , Sep 17 2003 ●

▶ [A030279] 1,8,50,276,1397,6672,30565,135668,587426,2493056,10407393,42848800,174348417,702245128,2803634370,11106624804,43697519013,170871040752,664492915061,2571316718500,9905232077842,38000679280352,145240335213857,553203971301184,2100403987129441 ⋆ COMPOSE squares with squares. ● a(n) = 12 * a(n - 1) - 54 * a(n - 2) + 115 * a(n - 3) - 132 * a(n - 4) + 108 * a(n - 5) - 59 * a(n - 6) + 24 * a(n - 7) - 6 * a(n - 8) + a(n - 9). - _ Wesley Ivan Hurt _ , Apr 23 2021 ●

▶ [A081675] 0,1,8,50,286,1566,8358,43870,227606,1170926,5985958,30454590,154371126,780246286,3934789958,19808175710,99577765846,500036345646,2508771728358,12578218511230,63028531771766,315692415197006 ⋆ Generalized Poly - Bernoulli numbers. ● a(n) = (4 * 5 ^ n - 3 * 4 ^ n - 2 ^ n) / 6. ●

▶ [A081180] 0,1,8,50,288,1604,8800,47944,260352,1411600,7647872,41420576,224294400,1214467136,6575615488,35602384000,192760455168,1043650265344,5650555750400,30593342288384,165638957801472,896804870374400 ⋆ 4th binomial transform of (0,1,0,2,0,4,0,8,0,16,...). ● a(n) = 8a(n - 1) - 14a(n - 2), a(0)=0, a(1)=1. ● a(n) = ((4 + sqrt(2)) ^ n - (4 - sqrt(2)) ^ n / (2 * sqrt(2)). ● a(n) = Sum _{ k=0..n } C(n,2k + 1) 2 ^ k * 4 ^ (n - 2k - 1). ●

▶ [A061801] 1,8,50,302,1814,10886,65318,391910,2351462,14108774,84652646,507915878,3047495270,18284971622,109709829734,658258978406,3949553870438,23697323222630,142183939335782,853103636014694 ⋆ a(n) = (7 * 6 ^ n - 2) / 5. ● a(n) = 6 * a(n - 1) + 2, a(0) = 1. - _ Philippe Deléham _ , Feb 23 2014 ●

▶ [A180029] 1,8,50,316,1996,12608,79640,503056,3177616,20071808,126786080,800860096,5058732736,31954116608,201842165120,1274961223936,8053451673856,50870632491008,321330698293760,2029725454744576 ⋆ Eight white queens and one red queen on a 3 X 3 chessboard. G.f.: (1 + 2 * x) / (1 - 6 * x - 2 * x ^ 2). ● a(n) = 6 * a(n - 1) + 2 * a(n - 2) with a(0) = 1 and a(1) = 8. ● a(n) = ((5 - 4 * A) * A ^ (- n - 1) + (5 - 4 * B) * B ^ (- n - 1)) / 22 with A = (- 3 + sqrt(11)) / 2 and B = (- 3 - sqrt(11)) / 2. ●

▶ [A357479] 0,0,0,1,8,50,320,2275,18256,164388,1644000,18084165,217010200,2821132886,39495860768,592437911975,9479006592160,161143112067400,2900576017214016,55110944327067273,1102218886541346600,23146596617368279930,509225125582102160000 ⋆ a(n) = (n! / 6) * Sum _{ k=0..n - 3 } 1 / k!. ● a(n) = n! * Sum _{ k=0..n } binomial(k,3) / k!. ● a(0) = 0; a(n) = n * a(n - 1) + binomial(n,3). ●

▶ [A103458] 1,8,50,344,2402,16808,117650,823544,5764802,40353608,282475250,1977326744,13841287202,96889010408,678223072850,4747561509944,33232930569602,232630513987208,1628413597910450,11398895185373144 ⋆ a(n) = 7 ^ n + 1 - 0 ^ n. ● a(n) = Sum _{ k=0..n } binomial(n, k) * 0 ^ (k(n - k)) * 7 ^ k. ● a(n) = 7 * a(n - 1) - 6, with a(1)=8. - _ Vincenzo Librandi _ , Dec 29 2010 ●

▶ [A100310] 1,8,50,400,2402,19216,120100,960800,5764802,46118416,288240100,2305920800,13847054404,110776435232,692352720200,5538821761600,33232930569602,265863444556816,1661646528480100,13293172227840800 ⋆ Modulo 2 binomial transform of 7 ^ n. ● a(n) = Sum _{ k=0..n } mod(binomial(n, k), 2) * 7 ^ k. ● a(2 ^ n) = 7 ^ (2 ^ n) + 1, n>=0. ● a(2 ^ t * n + 2 ^ (t - 1)) = 48 * (7 ^ (2 ^ (t - 1) + 1)) / (7 ^ (2 ^ (t - 1)) - 1) * a(2 ^ t * n + 2 ^ (t - 1) - 2), t>=2. ● a(4 * n + 2) = 50 * a(4 * n); ● a(8 * n + 4) = 1201 / 25 * a(8 * n + 2); ● a(16 * n + 8)= 2882401 / 60050 * a(16 * n + 6), etc. (End) ●

▶ [A054620] 0,1,8,51,208,629,1560,3367,6560,11817,20008,32219,49776,74269,107576,151887,209728,283985,377928,495235,640016,816837,1030744,1287287,1592544 ⋆ Number of ways to color vertices of a pentagon using <= n colors, allowing only rotations. ● a(n) = (n ^ 5 + 4 * n) / 5 = n * (n ^ 2 - 2 * n + 2) * (n ^ 2 + 2 * n + 2) / 5. ● a(n) = - a(- n). - _ Bruno Berselli _ , Aug 31 2011 ●

▶ [A082135] 0,1,8,51,304,1765,10104,57239,321248,1787337,9864040,54035707,294031632,1590368429,8556082136,45812239455,244255416256,1297362967441,6867617339592,36243304518083,190746485895920,1001394643462773 ⋆ Expansion of e.g.f. x * exp(4 * x) * cosh(x). ● a(n) = n * (3 ^ (n - 1) + 5 ^ (n - 1)) / 2. ●

▶ [A153594] 1,8,51,304,1769,10200,58603,336224,1927953,11052712,63358307,363181200,2081791609,11932977272,68400527259,392075513536,2247397253921,12882196355400,73841406542227,423262699717616,2426163312691977,13906891405206808 ⋆ a(n) = ((4 + sqrt(3)) ^ n - (4 - sqrt(3)) ^ n) / (2 * sqrt(3)). ● a(n) = 8 * a(n - 1) - 13 * a(n - 2) for n > 1; a(0)=0, a(1)=1. - _ Philippe Deléham _ , Jan 01 2009 ●

▶ [A344055] 0,1,8,51,304,1770,10224,58947,340064,1964862,11374000,65966318,383289504,2230877428,13005037920,75923905635,443837331648,2597761611894,15221636471088,89283411393018,524194439193120,3080311943546124,18115458433730592,106618075368243534 ⋆ a(n) = 2 ^ n * n! * [x ^ n](exp(2 * x) * BesselI(1, x)). ● a(n) = [x ^ n] (1 / (2 * x)) * (1 - (4 * x - 1) / (sqrt((6 * x - 1) * (2 * x - 1)))). ●

▶ [A014829] 1,8,51,310,1865,11196,67183,403106,2418645,14511880,87071291,522427758,3134566561,18807399380,112844396295,677066377786,4062398266733,24374389600416,146246337602515,877478025615110 ⋆ a(1)=1, a(n) = 6 * a(n - 1) + n. ● a(n) = (6 ^ (n + 1) - 5 * n - 6) / 25. - _ Rolf Pleisch _ , Oct 25 2010 ● a(n) = 8 * a(n - 1) - 13 * a(n - 2) + 6 * a(n - 3) for n>3. ●

▶ [A348312] 0,1,8,51,312,1965,13248,97839,800208,7260921,72806040,801515979,9620317512,125071036389,1751016829968,26265324194055,420245416687392,7144172815479921,128595113003161512,2443307154421058019,48866143111666389720,1026189005418216656541,22576158119430894214368 ⋆ a(n) = n! * Sum _{ k=0..n - 1 } 3 ^ k / k!. ● a(0) = 0; a(n) = n * (a(n - 1) + 3 ^ (n - 1)). ●

▶ [A226199] 1,8,51,346,2405,16812,117655,823550,5764809,40353616,282475259,1977326754,13841287213,96889010420,678223072863,4747561509958,33232930569617,232630513987224,1628413597910467,11398895185373162,79792266297612021 ⋆ 7 ^ n + n. ● a(n) = 9 * a(n - 1) - 15 * a(n - 2) + 7 * a(n - 3). ●

▶ [A035288] 0,8,52,184,480,1040,1988,3472,5664,8760,12980,18568,25792,34944,46340,60320,77248,97512,121524,149720,182560,220528,264132,313904,370400 ⋆ Number of ways to place a non - attacking white and black bishop on n X n chess board. ● a(n) = (3 * n ^ 4 - 4 * n ^ 3 + 3 * n ^ 2 - 2 * n) / 3. ● a(1)=0, a(2)=8, a(3)=52, a(4)=184, a(5)=480, a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Harvey P. Dale _ , Nov 19 2011 ●

▶ [A024179] 8,52,189,526,1242,2609,5024,9043,15411,25108,39392,59842,88414,127496,179963,249241,339377,455103,601915,786146,1015050,1296888,1641014,2057967,2559573 ⋆ Integer part of ((4th elementary symmetric function of 2,3,...,n + 4) / (2 + 3 + ... + n + 4)). ● a(n) = floor(1 / 2880 n (n + 1) (n + 2) (15 n ^ 4 + 330 n ^ 3 + 2765 n ^ 2 + 10482 n + 15208) / (n + 6)). - _ Muniru A Asiru _ , May 20 2018 ●

▶ [A323940] 0,1,8,52,244,1093,4490,17952,69304,262385,973916,3562532,12856716,45880933,162085694,567578784,1971766704,6801381633,23309759728,79421199860,269160256356,907726205221,3047449152562,10188384019072,33930769372904 ⋆ Number of nonisomorphic systems (isomers) for the unsymmetrical schemes (group C _ s) for unbranched tri - 4 - catafusenes as a function of the number of hexagons (see Cyvin et al. (1996) for precise definition). ● a(n) = (1 / 8) * (1 - (- 1) ^ n) * ((n - 1) - (n + 3) * 3 ^ ((n - 5) / 2)) + (1 / 8) * (n ^ 2 + 11 * n + 12) * (n - 2) * 3 ^ (n - 6) - (1 / 4) * binomial(n, 3) for n >= 3. - _ Petros Hadjicostas _ , May 26 2019 ●

▶ [A073377] 1,8,52,264,1194,4872,18516,66264,226083,740608,2344232,7202416,21562164,63090288,180884088,509245776,1410356133,3848340312,10359516684,27544099704,72406891326,188356187448 ⋆ Seventh convolution of A001045(n + 1) (generalized (1,2) - Fibonacci), n>=0, with itself. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n - k + 7, 7) * binomial(n - k, k) * 2 ^ k. ●

▶ [A153336] 1,8,52,296,1556,7768,37416,175568,807604,3657464,16357496,72407728,317777032,1384524656,5994736336,25816193952,110652549620,472302724408,2008499580504,8513063608304,35975584631128,151621915797840 ⋆ Number of zig - zag paths from top to bottom of a 2n by 2n square whose color is that of the top right corner ● a(n) = (2n + 1)2 ^ (2n - 2) - 2(2n - 1)binomial(2n - 2,n - 1). ●

▶ [A257285] 1,8,52,308,1732,9428,50212,263348,1365892,7026068,35916772,182729588,926230852,4681485908,23608756132,118849087028,597466660612,3000218204948,15052630632292,75469311591668,378171191679172,1894154493279188,9483966605929252 ⋆ a(n) = 4 * 5 ^ n - 3 * 4 ^ n. ● a(n) = 9 * a(n - 1) - 20 * a(n - 2). - _ Vincenzo Librandi _ , May 04 2015 ●

▶ [A111996] 1,8,52,312,1802,10200,57092,317544,1760035,9738160,53844184,297717712,1646893140,9116815952,50514367512,280173703472,1555632093093,8647009926904,48117998453036,268057662257096,1494927614877214 ⋆ Eighth convolution of Schroeder's (second problem) numbers A001003(n), n>=0. ● a(n)= (8 / n) * Sum _{ k=1,..,n } binomial(n,k) * binomial(n + k + 7,k - 1). ● a(n) = 8 * hypergeom([1 - n, n + 9], [2], - 1), n>=1, a(0)=1. ●

▶ [A016129] 1,8,52,320,1936,11648,69952,419840,2519296,15116288,90698752,544194560,3265171456,19591036928,117546237952,705277460480,4231664828416,25389989101568,152339934871552,914039609753600 ⋆ Expansion of 1 / ((1 - 2x)(1 - 6x)). ● a(n) = (6 ^ (n + 1) - 2 ^ (n + 1)) / 4. (End) ● a(n - 1) = ((4 + sqrt4) ^ n - (4 - sqrt4) ^ n) / 4 in Fibonacci form. - Al Hakanson (hawkuu(AT)gmail.com), Dec 31 2008 ● a(n) = 8 * a(n - 1) - 12 * a(n - 2). - _ Philippe Deléham _ , Jan 01 2009 ● a(n) = det(|ps(i + 2,j + 1)|, 1 <= i,j <= n), where ps(n,k) are Legendre - Stirling numbers of the first kind (A129467). - _ Mircea Merca _ , Apr 06 2013 ●

▶ [A006631] 1,8,52,320,1938,11704,70840,430560,2629575,16138848,99522896,616480384,3834669566,23944995480,150055305008,943448717120,5949850262895,37628321318280,238591135349700,1516500543586560,9660632784642840,61670325204822048,394451619337629792 ⋆ From generalized Catalan numbers. ● a(n) = 8 * binomial(3 * n + 8, n) / (3 * n + 8). - _ Andrew Howroyd _ , Nov 06 2017 ●

▶ [A126503] 1,8,52,348,2322,15500,103462,690610,4609826,30770620,205394096,1371006978,9151480836,61086196378,407750773322,2721739165358,18167627307952,121269034961780,809471627267722,5403228578160660 ⋆ Number of base 8 n - digit numbers with adjacent digits differing by four or less. ● a(n) = 6 * a(n - 1) + 5 * a(n - 2) - 3 * a(n - 3) - 2 * a(n - 4) for n>3. ●

▶ [A155590] 1,8,52,350,2416,16838,117712,823670,5765056,40354118,282476272,1977328790,13841291296,96889018598,678223089232,4747561542710,33232930635136,232630514118278,1628413598172592,11398895185897430 ⋆ a(n) = 7 ^ n + 2 ^ n - 1 ^ n. ● a(n) = 9 * a(n - 1) - 14 * a(n - 2) - 6 with a(0)=1, a(1)=8 - _ Vincenzo Librandi _ , Jul 21 2010 ●

▶ [A212754] 0,8,53,184,472,1008,1905,3296,5336,8200,12085,17208,23808,32144,42497,55168,70480,88776,110421,135800,165320,199408,238513,283104,333672 ⋆ Number of (w,x,y,z) with all terms in { 0,...,n } and at least one of these conditions holds: w<R, x>R, y>R, z>R, where R = max { w,x,y,z } - min { w,x,y,z } . ● a(n)=4 * a(n - 1) - 5 * a(n - 2) + 5 * a(n - 4) - 4 * a(n - 5) + a(n - 6). ●

▶ [A099622] 0,1,8,53,316,1785,9744,51997,273092,1417889,7299160,37334661,190028748,963565513,4871514656,24572321645,123720601684,622038982257,3123938806632,15674669614549,78593250398300,393845861293721 ⋆ a(n) = Sum _{ k=0..floor(n / 2) } binomial(n - k, k - 1) * 4 ^ (n - k - 1) * (5 / 4) ^ k. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n - k, k - 1) * 4 ^ (n - k - 1) * (5 / 4) ^ k. ● a(n) = 8 * a(n - 1) - 11 * a(n - 2) - 20 * a(n - 3). ● a(n) = (1 / 30) * (5 ^ (n + 2) - 6 * 4 ^ (n + 1) - (- 1) ^ n). ●

▶ [A198846] 8,53,323,1943,11663,69983,419903,2519423,15116543,90699263,544195583,3265173503,19591041023,117546246143,705277476863,4231664861183,25389989167103,152339935002623,914039610015743,5484237660094463,32905425960566783 ⋆ 9 * 6 ^ n - 1. ● a(n) = 6 * a(n - 1) + 5. a(n) = 7 * a(n - 1) - 6 * a(n - 2), n>1. ●

▶ [A091870] 0,1,8,53,336,2105,13144,81997,511392,3189169,19888040,124023461,773419248,4823095913,30077155576,187563189565,1169656805184,7294059356257,45486249993032,283655347025429,1768894026280080 ⋆ A trinomial transform of Fibonacci(3n). ● a(n) = sqrt(5) * ((4 + sqrt(5)) ^ n - (4 - sqrt(5)) ^ n) / 10. ● a(n) = Sum _{ i=0..n } Sum _{ j=0..n } (n! / (i! * j! * (n - i - j)!)) * Fibonacci(3 * i) / 2. ●

▶ [A054418] 1,8,53,352,2345,15624,104093,693504,4620369,30782536,205084165,1366343392,9103063929,60647838152,404057392237,2691973550848,179348818699

85,119488539398536,796074997934037,5303733776692576 ⋆ Number of connected 3 X n binary matrices with rightmost column [1,1,1]', divided by 4. • a(n) = 7 * a(n - 1) - 3 * a(n - 2) + 5 * a(n - 3). •

▶ [A350236] 1,8,54,160,425,864,1666,2816,4617,7000,10406,14688,20449,27440,36450,47104,60401,75816,94582,116000,141561,170368,204194,241920,285625 ⋆ a(n) is the sum of the entries in an n X n X n 3D matrix whose elements start at 1 in the corner cells and increase by 1 with each step towards the center. • a(n) = (3 / 4) * n ^ 2 * (n ^ 2 - 2 / 3 * n + (n mod 2)). • a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 6 * a(n - 3) + 6 * a(n - 5) - 2 * a(n - 6) - 2 * a(n - 7) + a(n - 8) for n > 8. (End) •

▶ [A037966] 0,1,8,54,320,1750,9072,45276,219648,1042470,4862000,22355476,101582208,457002364,2038517600,9026235000,39710085120,173712232710,756088415280,3276123843300,14138105520000,60790319209620,260516811228960,1113068351807880,4742456099097600 ⋆ a(n) = n ^ 2 * binomial(2 * n - 2, n - 1). • a(n) = Sum _{ k=0..n } k ^ 2 * binomial(n,k) ^ 2. - _ Paul Barry _ , Mar 04 2003 •

▶ [A091433] 8,54,330,1902,10554,57054,302730,1584462,8208474,42195774,215618730,1096731822,5558447994,28092104094,141662102730,713123219982,3584886057114,18001567510014,90316558634730,452818194072942 ⋆ a(n)=2 * 3 ^ n - 18 * 4 ^ n + 24 * 5 ^ n. • a(n)=Sum(i!i ^ 2 Stirling2[n, i - 2](- 1) ^ (n + 2 - i), i=2, .., n + 2) •

▶ [A081899] 1,8,54,332,1921,10644,57072,298176,1525248,7665664,37953536,185499648,896466944,4289462272,20343422976,95718211584,447146360832,2075274510336,9574555844608,43933220470784,200579267690496 ⋆ A sequence related to binomial(n + 4, 4). • a(n) = 4 ^ n * (n ^ 4 + 58 * n ^ 3 + 971 * n ^ 2 + 5114 * n + 6144) / 6144. •

▶ [A154235] 1,8,54,352,2276,14688,94744,611072,3941136,25418368,163935584,1057300992,6819052096,43979406848,283644733824,1829363802112,11798463078656,76094066608128,490767902078464,3165202550546432 ⋆ a(n) = ((4 + sqrt(6)) ^ n - (4 - sqrt(6)) ^ n) / (2 * sqrt(6)). • a(n) = 8 * a(n - 1) - 10 * a(n - 2) for n > 1, where a(0)=0, a(1)=1. •

▶ [A289796] 1,8,54,361,2420,16227,108802,729512,4891347,32796280,219897701,1474404984,9885824398,66284043461,444431768220,2979896612959,19980083465882,133965632756376,898234023419479,6022621953315440,40381430948778393,270755823312682408 ⋆ a(n) = (1 / 3) * A289795(n). • a(n) = 7 * a(n - 1) - 3 * a(n - 2) + 7 * a(n - 3) - a(n - 4). •

▶ [A201640] 1,8,54,368,2550,17952,128086,924128,6729858,49395440,364979560,2712343680,20257516240,151957919232,1144281700110,8646263301056,65531851263978,498047725561104,3794627850238756,28976634967413920,221728252767064596,1699859618636556608 ⋆ a(n) = Sum _{ k=1..n } k * binomial(n, k) ^ 3 * (n ^ 2 + n - k * n - k + k ^ 2) / ((n - k + 1) ^ 2 * n). • a(n) = h(1, 1, n) + (n - 1) * h(1, 2, n), where h(a, b, n) = hypergeom([- n, - n, 1 - n], [a, b], - 1). • a(n) = (8 * n * (3 * n - 1) * (n - 1) * (n - 2) * a(n - 2) + n * (21 * n ^ 3 - 25 * n ^ 2 - 2 * n + 8) * a(n - 1)) / ((n - 1) * (n + 1) ^ 2 * (3 * n - 4)) for n >= 3. (End) •

▶ [A002775] 0,1,8,54,384,3000,25920,246960,2580480,29393280,362880000,4829932800,68976230400,1052366515200,17086945075200,294226732800000,5356234211328000,102793666719744000,2074369080655872000,43913881247588352000,973160803270656000000,22531105497723863040000 ⋆ a(n) = n ^ 2 * n!. • a(n) = 2 * n! * Sum _{ j=1..n } Sum _{ i=1..n } i / (i + j). •

▶ [A244501] 1,8,55,248,820,2212,5163,10815,20833,37540,64067,104518,164150,249568,368935,532197,751323,1040560,1416703,1899380,2511352,3278828,4231795,5404363,6835125 ⋆ Number of ways to place 3 points on an n X n X n triangular grid so that no pair of them has distance sqrt(3). • a(n) = 1 / 48 * n ^ 6 + 1 / 16 * n ^ 5 - 13 / 16 * n ^ 4 + 61 / 48 * n ^ 3 + 247 / 24 * n ^ 2 - 293 / 6 * n + 6 for n >= 3. •

▶ [A013698] 1,8,55,364,2380,15504,100947,657800,4292145,28048800,183579396,1203322288,7898654920,51915526432,341643774795,2250829575120,14844575908435,97997533741800,647520696018735,4282083008118300 ⋆ a(n) = binomial(3 * n + 2, n - 1). • a(n) = Sum _{ k=0..n - 1 } binomial(2 * n + k + 2,k). - _ Arkadiusz Wesolowski _ , Apr 02 2012 • a(n + 1) = (3 * n + 5) * (3 * n + 4) * (3 * n + 3) * a(n) / ((2 * n + 5) * (2 * n + 4) * n). - _ Robert Israel _ , Aug 09 2015 •

▶ [A154245] 1,8,55,368,2449,16280,108199,719072,4778785,31758632,211059991,1402652240,9321678001,61949553848,411701328775,2736064645568,18183205205569,120841059834440,803079631825399,5337067516093232 ⋆ a(n) = ((4 + sqrt(7)) ^ n - (4 - sqrt(7)) ^ n) / (2 * sqrt(7)). • a(n) = 8 * a(n - 1) - 9 * a(n - 2) for n > 1, with a(0)=0, a(1)=1. • a(n) = b such that (3 ^ (n - 1) / 2) * Integral _{ x=0..Pi / 2 } (sin(n * x)) / (4 / 3 - cos(x)) dx = c + b * log(2). - _ Francesco Daddi _ , Aug 02 2011 •

▶ [A033890] 1,8,55,377,2584,17711,121393,832040,5702887,39088169,267914296,1836311903,12586269025,86267571272,591286729879,4052739537881,27777890035288,190392490709135,1304969544928657,8944394323791464,61305790721611591,420196140727489673 ⋆ a(n) = Fibonacci(4 * n + 2). • a(n) = 7 * a(n - 1) - a(n - 2), n > 1; a(0)=1, a(1)=8. • a(n) = ((7 + 3 * sqrt(5)) ^ n - (7 - 3 * sqrt(5)) ^ n + 2 * ((7 + 3 * sqrt(5)) ^ (n - 1) - ((7 - 3 * sqrt(5)) ^ (n - 1)))) / (3 * (2 ^ n) * sqrt(5)). - _ Gregory V. Richardson _ , Oct 13 2002 • a(n) = L(n, - 7) * (- 1) ^ n, where L is defined as in A108299; see also A049685 for L(n, + 7). - _ Reinhard Zumkeller _ , Jun 01 2005 • a(n + 1) = 8 * a(n) - 8 * a(n - 1) + a(n - 2); a(1)=1, a(2)=8, a(3)=55. - _ Sture Sjöstedt _ , May 27 2009 • a(n)=b such that (- 1) ^ n * Integral _{ 0..Pi / 2 } (cos((2 * n + 1) * x)) / (3 / 2 - sin(x)) dx = c + b * log(3). - _ Francesco Daddi _ , Aug 01 2011 •

▶ [A108984] 1,8,55,386,2701,18908,132355,926486,6485401,45397808,317784655,2224492586,15571448101,109000136708,763000956955,5341006698686,37387046890801,261709328235608,1831965297649255,12823757083544786 ⋆ Inverse binomial transform of A003951. • a(n) = 6a(n - 1) + 7a(n - 2), a(0) = 1, a(1) = 8. • a(2n) = 7a(2n - 1) - 1; a(2n + 1) = 7a(2n) + 1. • a(n)= - (1 / 8) * [(- 1) ^ n - 9 * 7 ^ n], with n>=0 [From _ Paolo P. Lava _ , Nov 19 2008] •

▶ [A230963] 8,55,549,5280,44403,325008,2685304,27358559,241709752,1870181225,12766175931,138963670560,1291487885997,10519458225072,74032715923371,690521409218881,6773980286782088,57975621715535095,433109386513469096,3345582274543898400 ⋆ Values of y such that x ^ 2 + y ^ 2 = 73 ^ n with x and y coprime and 0 < x < y. • a(n) = max(abs(Re((3 + 8i) ^ n)), abs(Im((3 + 8i) ^ n))). • a(n) = abs(Im(3 + 8i) ^ n) if and only if 1 / 4 < frac(n * arctan(8 / 3) / Pi) < 3 / 4.(End) •

▶ [A267522] 8,56,176,400,760,1288,2016,2976,4200,5720,7568,9776,12376,15400,18880,22848,27336,32376,38000,44240,51128,58696,66976,76000,85800 ⋆ a(n) = 4 * (n + 1) * (n + 2) * (4 * n + 3) / 3. • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). •

▶ [A307813] 0,8,56,352,1760,8192,35712,151040,624128,2547712,10311680,41541632,166846464,668991488,2679603200,10726801408,42925948928,171746263040,687078899712,2748525314048 ⋆ a(n) = (5 / 32) * 4 ^ n - floor((n ^ 2 + 1) / 2) * 2 ^ (n - 2). • a(n) = 5 / 32 * 4 ^ n - floor((n ^ 2 + 1) / 2) * 2 ^ (n - 2). • a(n) = 2 ^ (n - 5) * (5 * 2 ^ n - 4 * n ^ 2 + 2 (- 1) ^ n - 2). • a(n) = 8 * a(n - 1) - 16 * a(n - 2) - 16 * a(n - 3) + 80 * a(n - 4) - 64 * a(n - 5). •

▶ [A291387] 8,56,352,2096,12032,67328,369664,2000128,10696704,56666112,297836544,1555066880,8073379840,41709076480,214558048256,1099562549248,5616171483136,28599668703232,145249047412736,735884541427712,3720035809886208,18767645931208704 ⋆ p - INVERT of (1,1,0,0,0,0,...), where p(S) = (1 - 4 S) ^ 2. • a(n) = 8 * a(n - 1) - 8 * a(n - 2) - 32 * a(n - 3) - 16 * a(n - 4) for n >= 5. •

▶ [A081626] 1,8,56,368,2336,14528,89216,543488,3293696,19893248,119883776,721399808,4336787456,26054279168,156459892736,939296227328,5637924847616,33836139020288,203051193860096,1218444602114048 ⋆ 2 * 6 ^ n - 4 ^ n. • a(n) = 10 * a(n - 1) - 24 * a(n - 2), a(0)=1, a(1)=8. •

▶ [A057084] 1,8,56,384,2624,17920,122368,835584,5705728,38961152,266043392,1816657920,12404916224,84706066432,578409201664,3949625081856,26969727041536,184160815677440,1257528709087232,8586943147278336 ⋆ Scaled Chebyshev U - polynomials evaluated at sqrt(2). • a(n) = 8 * (a(n - 1) - a(n - 2)), a(- 1)= 0, a(0)=1. • a(n) = S(n, 2 * sqrt(2)) * (2 * sqrt(2)) ^ n with S(n, x) := U(n, x / 2), Chebyshev's polynomials of the 2nd kind, A049310. • a(n) = - (1 / 8) * [4 - 2 * sqrt(2)] ^ (n + 1) * sqrt(2) + (1 / 8) * sqrt(2) * [4 + 2 * sqrt(2)] ^ (n + 1), with n>=0. [_ Paolo P. Lava _ , Nov 20 2008] •

▶ [A101596] 1,8,56,384,2640,18304,128128,905216,6449664,46305280,334721024,2434334720,17801072640,130809692160,965500108800,7154863964160,53214300733440,397094950010880,2972195534929920,22308469918924800 ⋆ G.f.: c(2 * x) ^ 4, where c(x) is the g.f. of A000108. • a(n) = ((8 * n + 12) / (3 * n + 12)) * ((3 * n + 3) / (n + 3)) * 2 ^ n * C(n + 1), where C(n) and the Catalan numbers of A000108. •

▶ [A092521] 1,8,56,385,2640,18096,124033,850136,5826920,39938305,273741216,1876250208,12860010241,88143821480,604146740120,4140883359361,28382036775408,194533374068496,1333351581704065,9138927697859960 ⋆ a(n) = 8 * a(n - 1) - 8 * a(n - 2) + a(n - 3). • a(n) = 7 * a(n - 1) - a(n - 2) + 1, n>=2, a(0):=0, a(1)=1. • a(n) = - 1 / 5 + (3 / 5) * (7 / 2 - (3 / 2) * sqrt(5)) ^ n - (4 / 15) * (7 / 2 - (3 / 2) * sqrt(5)) ^ n * sqrt(5) + (4 / 15) * sqrt(5) * (7 / 2 + (3 / 2) * sqrt(5)) ^ n + (3 / 5) * (7 / 2 + (3 / 2) * sqrt(5)) ^ n. - _ Paolo P. Lava _ , Jul 08 2008 • a(n) = (1 / 3) * Sum _{ k=0..n } Fibonacci(4 * k). - _ Gary Detlefs _ , Dec 07 2010 •

▶ [A063812] 1,8,56,392,2736,19096,133288,930328,6493536,45323816,316352792,2208090536,15412109328,107573992120,750848799112,5240801312824,36579932515008,255321921769544,1782105084785144,12438800833105352 ⋆ Growth series for fundamental group of orientable closed surface of genus 2. • a(n) = 6 * a(n - 1) + 6 * a(n - 2) + 6 * a(n - 3) - a(n - 4) for n>4. - _ Colin Barker _ , Jun 13 2019 •

▶ [A163347] 1,8,56,392,2744,19180,134064,937104,6550320,45786384,320044452,2237094216,15637173048,109303031880,764022547512,5340478146444,37329666414768,260932440209616,1823904280240560,12748996716570576 ⋆ Number of reduced words of length n in Coxeter group on 8 generators S _ i with relations (S _ i) ^ 2 = (S _ i S _ j) ^ 5 = I. • a(n) = 6 * a(n - 1) + 6 * a(n - 2) + 6 * a(n - 3) + 6 * a(n - 4) - 21 * a(n - 5). - _ Wesley Ivan Hurt _ , May 10 2021 •

▶ [A163924] 1,8,56,392,2744,19208,134428,940800,6584256,46080384,322496832,2257016832,15795891636,110548662840,773682621768,5414672451384,37894967433288,265210605012024,1856095143363468,12990012903371952 ⋆ Number of reduced words of length n in Coxeter group on 8 generators S _ i with relations (S _ i) ^ 2 = (S _ i S _ j) ^ 6 = I. • a(n) = - 21 * a(n - 6) + 6 * Sum _{ k=1..5 } a(n - k). - _ Wesley Ivan Hurt _ , May 11 2021 •

▶ [A164373] 1,8,56,392,2744,19208,134456,941164,6587952,46114320,322790832,2259469968,15815828784,110707574544,774930433956,5424354927432,37969377752376,265777897314888,1860391054122552,13022357800350024 ⋆ Number of reduced words of length n in Coxeter group on 8 generators S _ i with relations (S _ i) ^ 2 = (S _ i S _ j) ^ 7 = I. • a(n) = - 21 * a(n - 7) + 6 * Sum _{ k=1..6 } a(n - k). - _ Wesley Ivan Hurt _ , May 11 2021 •

▶ [A003950] 1,8,56,392,2744,19208,134456,941192,6588344,46118408,322828856,2259801992,15818613944,110730297608,775112083256,5425784582792,37980492079544,265863444556808,1861044111897656,13027308783283592,91191161482985144,638338130380896008 ⋆ Expansion of g.f.: (1 + x) / (1 - 7 * x). • a(n) = 8 * 7 ^ (n - 1) for n>=1, a(0)=1 . • a(0)=1, a(1)=8, a(n) = 7 * a(n - 1). - _ Vincenzo Librandi _ , Dec 10 2012 •

▶ [A033134] 1,8,56,393,2752,19264,134849,943944,6607608,46253257,323772800,2266409600,15864867201,111054070408,777378492856,5441649449993,38091546149952,266640823049664,1866485761347649,13065400329433544,91457802306034808,640204616142243657 ⋆ Base - 7 digits are, in order, the first n terms of the periodic sequence with initial period 1,1,0. • a(n) = 7 * a(n - 1) + a(n - 3) - 7 * a(n - 4). • a(n) = floor((28 / 171) * 7 ^ n). - _ Tani Akinari _ , Jul 16 2014 •

▶ [A087290] 8,56,488,4376,39368,354296,3188648,28697816,258280328,2324522936,20920706408,188286357656,1694577218888,15251194969976,137260754729768,1235346792567896,11118121133111048,100063090197999416,900567811781994728,8105110306037952536 ⋆ Number of pairs of polynomials (f,g) in GF(3)[x] satisfying deg(f) <= n, deg(g) <= n and gcd(f,g) = 1. • a(n) = 2 * 3 ^ (2 * n + 1) + 2. • a(n) = 10 * a(n - 1) - 9 * a(n - 2), a(0)=8, a(1)=56. - _ Harvey P. Dale _ , Mar 07 2012 •

▶ [A218125] 1,8,56,504,4032,32760,261576,2097144,16773120,134217216,1073709000,8589934584,68719210560,549755813880,4398044413896,35184372055560,2814

74959933440,2251799813685240,18014398375002624,144115188075855864,115292 1503533101120 ⋆ Number of 8 - ary sequences with primitive period n. ● a(n) = Sum _{ d|n } 8 ^ d * mu(n / d) for n>0, a(0) = 1. ●

▶ [A346228] 1,1,8,57,372,2332,14960,102173,732124,5306652,38253888,27535296 0,1996376544,14642264736,108536296800,809764874325,6057499056204,45368515 203628,340472040666080,2563725956556584,19381407270110656,14703687791262 3840,111835518722065785 6 ⋆ Number of n - step 7 - dimensional nonnegative la ttice walks starting at the origin and using steps that increment all components or decrement one component by 1. ● a(n) == 1 (mod 7). ●

▶ [A108666] 0,1,8,57,384,2505,16008,100849,628736,3888657,23900040,14614647 3,889928064,5399971161,32668236552,197123362785,1186790473728,71310323343 69,42773183020296,256161548120857,1531966218561920,9150330147133161,5459 1847064667528,325361790187810257 ⋆ Number of (1, 1) - steps in all Delannoy paths of length n. ● a(n) = Sum _{ k=1..n } k * binomial(n, k) * binomial(2 * n - k, n). ● a(n) = n ^ 2 * hypergeom([- n + 1, - n + 1], [2], 2). - _ Peter Lusc hny _ , Jan 20 2020 ●

▶ [A164031] 1,8,57,386,2549,16612,107493,692854,4456201,28626368,183771057,1 179304106,7566306749,48539073052,311365675293,1997258072734,128111701956 01,82174766283128,527090748332457,3380887858812626 ⋆ a(n) = ((2 + 3 * sqrt(2)) * (5 + sqrt(2)) ^ n + (2 - 3 * sqrt(2)) * (5 - sqrt(2)) ^ n) / 4. ● a(n) = 10 * a(n - 1) - 23 * a(n - 2) for n > 1; a(0) = 1, a(1) = 8. ●

▶ [A023000] 0,1,8,57,400,2801,19608,137257,960800,6725601,47079208,32955445 7,2306881200,16148168401,113037178808,791260251657,5538821761600,38771752 331201,271402266318408,1899815864228857,13298711049602000 ⋆ a(n) = (7 ^ n - 1) / 6. ● a(n) = 8 * a(n - 1) - 7 * a(n - 2). ● a(n) = 6 * a(n - 1) + 7 * a(n - 2) + 2, a(0)=0, a(1)=1. ● a(n) = 7 * a(n - 1) + a(n - 2) - 7 * a(n - 3) = 9 * a(n - 1) - 15 * a(n - 2) + 7 * a(n - 3), a(0)=0, a(1)=1, a(2)=8. Observation by G. Detl efs. See the W. Lang comment and link. (End) ● a(n) = 7 * a(n - 1) + 1 (with a(0)=0). - _ Vincenzo Librandi _ , Nov 19 2010 ● a(n) = a(n - 1) + 7 ^ (n - 1), with a(0)=0, n >= 1. - See a _ Wolfdieter Lang _ comment above, May 02 20 12 ●

▶ [A097114] 1,8,57,400,3193,20000,176457,1000000,9646393,50000000,52267325 7,2500000000,28110989593,125000000000,1502438490057,6250000000000,7986948 6012793,312500000000000,4226104814626857,15625000000000000 ⋆ Expansion of (1 + 8x - 42x ^ 2 - 392x ^ 3) / (1 - 99x ^ 2 + 2450x ^ 4). ● a(n) = 99 * a(n - 2) - 2450 * a(n - 4); ● a(n) = (4 + 2 * sqrt(50) / 25) * (sqrt(50)) ^ n + (4 - 2 * sqr t(50) / 25) * (- sqrt(50)) ^ n - 7 ^ (n + 1) * (1 + (- 1) ^ n) / 2; ● a(n) = Sum _{ k=0..n } binomial(floor(n / 2), floor(k / 2)) * 7 ^ k. ●

▶ [A015453] 1,1,8,57,407,2906,20749,148149,1057792,7552693,53926643,3850391 94,2749201001,19629446201,140155324408,1000716717057,7145172343807,510169 23123706,364263634209749,2600862362591949,18570300172353392 ⋆ Generalized Fibonacci numbers. ● a(n) = 7 * a(n - 1) + a(n - 2). ● a(n) = (5 / 106) * sqrt(5 3) * (7 / 2 - (1 / 2) * sqrt(53)) ^ n + (1 / 2) * (7 / 2 + (1 / 2) * sqrt(53)) ^ n + (1 / 2) * (7 / 2 - (1 / 2) * sqrt(53)) ^ n - (5 / 106) * (7 / 2 + (1 / 2) * sqrt(5 3)) ^ n * sqrt(53), with n >= 0. - _ Paolo P. Lava _ , Jun 25 2008 ●

▶ [A281355] 1,8,57,419,3092,22846,168804,1247298,9216354,68100151,50319582 9,3718142208,27473561358,203003686106,1500005624924,11083625711271,818975 32160125,605145459495141,4471453748222757,33039822589391676 ⋆ a(n) = A09 2318(n) + 1: Number of terms of the odd harmonic series 1 + 1 / 3 + 1 / 5 + 1 / 7 + ... required to reach a sum >= n. ● a(n) = floor(exp(2 * n - gamma) / 4 + 1), for all given values a(n) > 1. - _ M. F. Hasler _ and _ Robert G. Wilson v _ , Jan 23 2017 [corrected by _ Gerhard Kirchner _ , Jul 25 2020] ●

▶ [A338676] 1,1,8,57,449,3193,25145,178809,1391314,9996498,76955586,5522575 46,4255024523,30502987019,232969386483,1682476714724,12762937304013,9201 9035596293,698222541789109,5030814634614406,37955614705675479,2747416449 61416648,206191692676160414 4,149099438492535370 57 ⋆ Expansion of Product _{ k>=1 } 1 / (1 - 7 ^ (k - 1) * x ^ k). ● a(n) = Sum _{ k=0..n } p(n,k) * 7 ^ (n - k), where p(n,k) = number of partitions of n into k parts. ●

▶ [A199555] 8,57,449,3585,28673,229377,1835009,14680065,117440513,93952409 7,7516192769,60129542145,481036337153,3848290697217,30786325577729,246290 604621825,1970324836974593,15762598695796737,126100789566373889 ⋆ 7 * 8 ^ n + 1. ● a(n) = 8 * a(n - 1) - 7. ● a(n) = 9 * a(n - 1) - 8 * a(n - 2). ●

▶ [A081897] 1,8,58,396,2595,16500,102500,625000,3753125,22250000,130468750,7 57812500,4365234375,24960937500,141796875000,800781250000,4498291015625,2 5146484375000,139953613281250,775756835937500 ⋆ A sequence related to bino mial(n + 3, 3). ● a(n) = 5 ^ n * (n ^ 3 + 42 * n ^ 2 + 407 * n + 750) / 750. ●

▶ [A162272] 1,8,58,404,2764,18752,126712,854576,5758096,38780288,26112476 8,1758081344,11836068544,79682895872,536435450752,3611330798336,243117280 66816,163668003104768,1101822013577728,7417524067472384,4993515637601382 4,336166034275745792,2263086902485153792 ⋆ a(n) = ((1 + sqrt(3)) * (5 + sqr t(3)) ^ n + (1 - sqrt(3)) * (5 - sqrt(3)) ^ n) / 2. ● a(n) = 10 * a(n - 1) - 22 * a(n - 2) for n >= 2; a(0)=1, a(1)=8. (End) ●

▶ [A037532] 1,8,58,407,2850,19952,139665,977656,6843594,47905159,335336114,2 347352800,16431469601,115020287208,805142010458,5635994073207,3945195851 2450,276163709587152,1933145967110065 ⋆ Base 7 digits are, in order, the first n terms of the periodic sequence with initial period 1,1,2. ● a(n) = (29 * 7 ^ n + 7 * sqrt(3) * sin(2 * Pi * n / 3) + 9 * cos(2 * Pi * n / 3) - 38) / 171. - _ Ilya Gutkovskiy _ , Apr 27 2016 ●

▶ [A062236] 1,8,58,408,2831,19496,133638,913200,6226591,42387168,288194424,1 957583712,13286865060,90126841064,611029568078,4140789069408,28050809681 679,189964288098632,1286119453570746,8705397371980728 ⋆ Sum of the levels of all nodes in all noncrossing trees with n edges. ● a(n) = Sum _{ i=0..n - 1 } C(3 * i - 1,i) * C(3 * (n - i),n - i - 1). - _ Vladimir Kruchinin _ , Jun 09 2020 ● a(n) = 2 ^ (n - 2) * (3 * n - 1) * hypergeometric([- 3 * n, 1 - n, - n + 4 / 3], [- n, - n + 1 / 3], - 1 / 2). The a(n) are values of the polynomials A358091. - _ Pe ter Luschny _ , Oct 28 2022 ●

▶ [A178730] 0,1,8,58,408,2859,20016,140116,980816,6865717,48060024,33642017 4,2354941224,16484588575,115392120032,807744840232,5654213881632,39579497 171433,277056480200040,1939395361400290,13575767529802040,95030372708614 291,665212608960300048,4656488262722100348,32595417839054702448 ⋆ Partial sums of floor(7 ^ n / 8) / 6. ● a(n) = a(n - 2) + (7 ^ (n - 1) - 1) / 6, n > 2. ● a (n) = 8 * a(n - 1) - 6 * a(n - 2) - 8 * a(n - 3) + 7 * a(n - 4), n > 4. ● a(n) = (7 ^ (n + 1) - 24 * n + 9 * (- 1) ^ n - 16) / 288. - _ Bruno Berselli _ , Jan 11 201 1 ●

▶ [A190978] 0,1,8,58,416,2980,21344,152872,1094912,7842064,56167040,4022839 36,2881269248,20636450368,147803987456,1058613197440,7582081654784,543049 74053632,388947302500352,2785748575681024,19952304790446080,142903946869 482496,1023517746213183488 ⋆ a(n) = 8 * a(n - 1) - 6 * a(n - 2), with a(0)=0, a (1)=1. ● a(n) = ((4 + sqrt(10)) ^ n - (4 - sqrt(10)) ^ n) / (2 * sqrt(10)). - _ Gi orgio Balzarotti _ , May 28 2011 ● a(n) = 6 ^ ((n - 1) / 2) * ChebyshevU(n - 1, 4 / sqrt(6)). ●

▶ [A254663] 1,8,58,422,3070,22334,162478,1182014,8599054,62557406,45509995 0,3310814462,24085901134,175222936862,1274732360302,9273572395838,6746447 1491470,490798445231966,3570518059606702,25975223307710846,1889675992731 89326,1374723641527746974 ⋆ Numbers of n - length words on alphabet { 0,1,... ,7 } with no subwords ii, where i is from { 0,1,...,5 } . ● a(n) = 7 * a(n - 1) + 2 * a(n - 2) with n>1, a(0) = 1, a(1) = 8. ● a(n) = 2 ^ (- 1 - n) * ((7 - r) ^ n * (- 9 + r) + (7 + r) ^ n * (9 + r)) / r, where r=sqrt(57). - _ Colin Barker _ , Ja n 22 2017 ●

▶ [A126529] 1,8,58,426,3124,22914,168066,1232708,9041498,66316346,48640808 4,3567639634,26167436306,191929340708,1407737135338,10325278224266,757324 41613044,555471977422754,4074200053901346,29882886543125508 ⋆ Number of base 8 n - digit numbers with adjacent digits differing by five or less. ● a(n) = 7 * a(n - 1) + 3 * a(n - 2) - 4 * a(n - 3) for n>2. ●

▶ [A190977] 0,1,8,59,432,3161,23128,169219,1238112,9058801,66279848,4849447 79,3548158992,25960548041,189943589368,1389745974739,10168249851072,74397 268934881,544336902223688,3982708873115099,29139986473802352,21320634742 4843321,155995084702934808 ⋆ a(n) = 8 * a(n - 1) - 5 * a(n - 2), with a(0)=0, a(1)=1. ● a(n) = ((4 + sqrt(11)) ^ n - (4 - sqrt(11)) ^ n) / (2 * sqrt(11)). - _ Giorgio Balzarotti _ , May 28 2011 ● a(n) = 5 ^ ((n - 1) / 2) * ChebyshevU(n - 1, 4 / sqrt(5)). ●

▶ [A254662] 1,8,59,437,3236,23963,177449,1314032,9730571,72056093,53358436 4,3951258827,29259564881,216670730648,1604473809179,11881328856197,879827 23420916,651523050515003,4824609523867769,35726835818619392,264561679301 939051,1959112262569431533 ⋆ Numbers of words on alphabet { 0,1,...,7 } with no subwords ii, where i is from { 0,1,...,4 } . ● a(n) = 7 * a(n - 1) + 3 * a(n - 2) with n>1, a(0) = 1, a(1) = 8. ● a(n) = (2 ^ (- 1 - n) * ((7 - sqrt(61)) ^ n * (- 9 + sqrt(61)) + (7 + sqrt(61)) ^ n * (9 + sqrt(61)))) / sqrt(61). - _ Colin Bark er _ , Sep 08 2016 ●

▶ [A268599] 0,0,0,0,0,0,8,60,294,1180,4200,13776,42560,125568,357120,985600,26 52672,6988800,18077696,46018560,115507200,286326784,701890560,1703411712,4 096655360 ⋆ Expansion of 2 * x ^ 6 * (4 - 10 * x + 7 * x ^ 2) / (1 - 2 * x) ^ 5. ● a(n) = 2 ^ (n - 10) * (n - 5) * (n - 4) * (n ^ 2 + 3 * n + 10) for n>3. - _ Coli n Barker _ , Feb 08 2016 ●

▶ [A054401] 0,8,60,368,2100,11528,61740,325088,1690980,8717048,44633820,227 363408,1153594260,5835080168,29443836300,148292923328,745759583940,374597 7788888,18798608421180,94267920012848,472439111692020,2366593604971208 ⋆ 5 ^ n - 4 ^ n - 1. ● a(1)=0, a(2)=8, a(3)=60, a(n)=10 * a(n - 1) - 29 * a(n - 2) + 20 * a(n - 3). - _ Harvey P. Dale _ , Aug 27 2013 ●

▶ [A159727] 8,60,400,2500,15000,87500,500000,2812500,15625000,85937500,4687 50000,2539062500,13671875000,73242187500,390625000000,2075195312500,10986 328125000,57983398437500,305175781250000,1602172851562500 ⋆ Number of pe rmutations of 4 indistinguishable copies of 1..n arranged in a circle with exactly 1 local maximum. ● a(n) = (4 * n) * (4 + 1) ^ (n - 2). ● a(n) = 10 * a(n - 1) - 25 * a(n - 2) for n>3. (End) ●

▶ [A126640] 8,60,422,2784,17318,102600,584942,3237504,17516438,93136440,488 625662,2537103024,13068059558,66890498280,340713533582,1728792901344,8745 409322678,44134458900120,222306845468702,1118087142184464,56166915142017 98,28188613237893960 ⋆ a(n) is the number of integers k less than 10 ^ n such t hat the decimal representation of k lacks the digit 1 and 2, at least one of digits 3,4, at least one of digits 5,6 and at least one of digits 7,8,9. ● a(n) = 12 * 5 ^ n - 24 * 4 ^ n + 19 * 3 ^ n - 7 * 2 ^ n + 1. ●

▶ [A093132] 1,8,60,440,3200,23200,168000,1216000,8800000,63680000,46080000 0,3334400000,24128000000,174592000000,1263360000000,9141760000000,6615040 0000000,478668800000000,3463680000000000,25063424000000000 ⋆ Third binom ial transform of Fibonacci(3n + 2). ● a(n) = ((5 + 3 * sqrt(5)) * (5 + sqrt(5)) ^ n + (5 - 3 * sqrt(5)) * (5 - sqrt(5)) ^ n) / 10. ● a(2 * n) = 4 ^ n * 5 ^ n * Fib onacci(2 * n + 2), a(2 * n + 1) = 2 ^ (2 * n + 1) * 5 ^ n * Lucas(2 * n + 3). - _ G. C. Greubel _ , Dec 27 2019 ●

▶ [A285391] 1,8,60,444,3276,24156,178092,1312956,9679500,71360028,52608625 2,3878455932,28593068364,210796144092,1554048476460,11456882559036,844633 61313804,622687661115804,4590628614276588,33843405595099644,249503106984 577740,1839407095720003932 ⋆ Start with a single cell at coordinates (0, 0), the n iteratively subdivide the grid into 3 X 3 cells and remove the cells whose sum of modulo 2 coordinates is 2; a(n) is the number of cells after n iterations. ● a(0) = 1, a(1) = 8, a(n) = 9 * a(n - 1) - 12 * a(n - 2). ● a(n) = (2 ^ (- 1 - n) * ((9 - sqrt(33)) ^ n * (- 7 + sqrt(33)) + (7 + sqrt(33)) * (9 + sqrt(33)) ^ n)) / sqrt (33). - _ Colin Barker _ , Apr 18 2017 ● a(n) = (2 * sqrt(3)) ^ (n - 1) * (2 * s qrt(3) * ChebyshevU(n, 9 / (4 * sqrt(3))) - ChebyshevU(n - 1, 9 / (4 * sqrt(3)))). - _ G. C. Greubel _ , Dec 11 2021 ●

▶ [A099156] 0,1,8,60,448,3344,24960,186304,1390592,10379520,77473792,578272 256,4316282880,32217174016,240472260608,1794909388800,13397386067968,9999 9450988544,746406063636480,5571250705137664,41584381386555392 ⋆ a(n) = 2 ^ (n - 1) * ChebyshevU(n - 1, 2). ● a(n) = 8 * a(n - 1) - 4 * a(n - 2). ● a(n) = s qrt(3) / 12 * ((1 + sqrt(3)) ^ (2 * n) - (sqrt(3) - 1) ^ (2 * n)). ● a(n) = Sum _{ k=0..n } binomial(2 * n, 2 * k + 1) * 3 ^ k / 2. ● a(n) = 2 ^ (n - 1) * U(n - 1, 4 / 2) where U is the Chebyshev polynomial of the second kind. ● a(n) = 2 ^ (2 * n - 1) * Sum _{ k >= n } binomial(2 * k,2 * n - 1) * (1 / 3) ^ (k + 1). Cf. A102591. - _ Peter Bala _ , Nov 29 2021 ●

► [A245391] 1,8,60,448,3360,25344,192192,1464320,11202048,85995520,662165504,5112102912,39557939200,306726174720,2382605107200,18537602088960,144438816276480,1126891074355200,8802271391907840,68829791335219200,538749548542033920,4220762508660572160 ⋆ a(n) = 2 ^ n * binomial(2 * (n + 1), n). • a(n) = 2 ^ (3 * n + 2) * (n + 1 / 2)! / (sqrt(Pi) * (n + 2) * n!). • a(n) = (4 * (2 * n + 1) * (n + 1)) / (n * (n + 2)) * a(n - 1) for n >= 1. •

► [A254658] 1,8,60,452,3404,25636,193068,1454020,10950412,82468964,621084396,4677466628,35226603980,265296094372,1997979076524,15047037913156,1133211816981888,8534364235399400,64273396915723320,484051235351660840,3645452235124519160,27454370587278277748 ⋆ Numbers of words on alphabet { 0,1,...,7 } with no subwords ii, where i is from { 0,1,2,3 } . • a(n) = 7 * a(n - 1) + 4 * a(n - 2) with n>1, a(0) = 1, a(1) = 8. • a(n) = (2 ^ (- 1 - n) * ((7 - sqrt(65)) ^ n * (- 9 + sqrt(65)) + (7 + sqrt(65)) ^ n * (9 + sqrt(65)))) / sqrt(65). - _ Colin Barker _ , Jan 21 2017 •

► [A366216] 1,1,8,60,520,4886,48384,497460,5259872,56834345,624819148,6966612604,78592083420,895432704860,10288759392156,119089472755860,1387274092156508,16251727492295812,191342076640423136,2262894045516407118,26869820052175649836 ⋆ G.f. A(x) satisfies A(x) = 1 + x * (1 + x) ^ 4 * A(x) ^ 4. • a(n) = Sum _{ k=0..n } binomial(4 * k,n - k) * binomial(4 * k,k) / (3 * k + 1). •

► [A317774] 8,60,532,5100,50317,501000,5003163,50010000,500031623,5000100000,50000316228,500001000000,5000003162278,50000010000000,500000031622777,5000000100000000,50000000316227767,500000001000000000,5000000003162277661,50000000010000000000 ⋆ a(n) = A322667(n) + 1. • a(n) = 5 * 10 ^ (n - 1) + ceiling(10 ^ (n / 2)) for n >= 2. •

► [A071401] 0,8,61,207,490,958,1655,2628,3924,5586,7663,10200,13242,16836,21028,25863,31388,37649,44691,52561,61305,70968,81597,93237,105935 ⋆ Rounded volume of a regular dodecahedron with edge length n. • a(n) = round(n ^ 3 * (15 + 7 * sqrt(5)) / 4) •

► [A081907] 1,8,61,450,3240,22896,159408,1096416,7464960,50388480,337602816,2247326208,14874679296,97955205120,642150789120,4192482779136,27270729105408,176789554200576,1142549512519680,7363096858460160 ⋆ A sequence related to binomial(n + 2, 2). • a(n) = 6 ^ n * (n ^ 2 + 23 * n + 72) / 72. •

► [A190976] 0,1,8,61,464,3529,26840,204133,1552544,11807953,89805992,683024077,5194774640,39509124889,300488675192,2285382026869,17381590189376,132196575434401,1005427832907080,7646832936953437,58158379996906256,442326411643897 37 ⋆ a(n) = 8 * a(n - 1) - 3 * a(n - 2), with a(0)=0, a(1)=1. • a(n) = ((4 + sqrt(13)) ^ n - (4 - sqrt(13)) ^ n) / (2 * sqrt(13)). - _ Giorgio Balzarotti _ , May 28 2011 • a(n) = 3 ^ ((n - 1) / 2) * ChebyshevU(n - 1, 4 / sqrt(3)). •

► [A254602] 1,8,61,467,3574,27353,209341,1602152,12261769,93843143,718210846,5496691637,42067895689,321958728008,2464050574501,18858147661547,144327286503334,1104581743831073,8453708639334181,64698869194494632,495160627558133329,3789618738879406463 ⋆ Numbers of n - length words on alphabet { 0..7 } with no subwords ii, where i is from { 0..2 } . • a(n) = 7 * a(n - 1) + 5 * a(n - 2) with n>1, a(0) = 1, a(1) = 8. • a(n) = (2 ^ (- 1 - n) * ((7 - sqrt(69)) ^ n * (- 9 + sqrt(69)) + (7 + sqrt(69)) ^ n * (9 + sqrt(69)))) / sqrt(69). - _ Colin Barker _ , Sep 08 2016 •

► [A363571] 0,1,8,61,480,3881,31976,266981,2251136,19124881,163452168,1403748941,12104113632,104723793721,908680775528,7904234296181,68905275700736,601832985410081,5265459181363976,46137526574521181,404821208100919520,3556361565584509001 ⋆ Expansion of (1 / sqrt(1 - 10 * x + 9 * x ^ 2) - 1 / (1 - x)) / 4. • a(n) = Sum _{ k=1..n } binomial(n,k) ^ 2 * 4 ^ (k - 1). • a(n) = (3 ^ n * LegendreP(n,5 / 3) - 1) / 4. •

► [A269607] 8,62,222,572,1220,2298,3962,6392,9792,14390,20438,28212,38012,50162,65010,82928,104312,129582,159182,193580,233268,278762,330602,389352,455600 ⋆ Number of length - 4 0..n arrays with no repeated value differing from the previous repeated value by one or less. • a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. •

► [A198690] 8,62,440,3086,21608,151262,1058840,7411886,51883208,363182462,2542277240,17795940686,124571584808,872001093662,6104007655640,42728053589486,299096375126408,2093674625884862,14655722381194040,102590056668358286 ⋆ 9 * 7 ^ n - 1. • a(n) = 7 * a(n - 1) + 6. a(n) = 8 * a(n - 1) - 7 * a(n - 2), n >1. •

► [A126628] 8,62,470,3506,25718,184682,1294910,8867186,59423078,390804602,2529567950,16157024066,102070798838,639011269322,3970835898590,24524390352146,150705922308998,922285972770842,5624983337550830,34210314230099426,207580309651649558 ⋆ a(n) is the number of nonnegative integers k less than 10 ^ n such that the decimal representation of k lacks digits 1 and 2, at least one of digits 3,4 and at least one of digits 5,6,7,8,9. • a(n) = 10 * 6 ^ n - 25 * 5 ^ n + 30 * 4 ^ n - 20 * 3 ^ n + 7 * 2 ^ n - 1. • a(n) = 21 * a(n - 1) - 175 * a(n - 2) + 735 * a(n - 3) - 1624 * a(n - 4) + 1764 * a(n - 5) - 720 * a(n - 6). - _ Wesley Ivan Hurt _ , Jun 22 2022 •

► [A085353] 1,8,62,470,3506,25838,188642,1367150,9849986,70629518,504484322,3591856430,25505792066,180717326798,1278081981602,9024938035310,63644751231746,448334368529678,3155267239152482,22188430630735790 ⋆ Expansion of (1 - 5x) / ((1 - 6x)(1 - 7x)). • a(n) = 2 * 7 ^ n - 6 ^ n. •

► [A125396] 1,8,62,470,3650,28358,220394,1712894,13312610,103465622,804135002,6249738734,48572981138,377509300358,2934002989322,22803076727390,177225555027650,1377397345557878,10705134749071034,83200327316844494 ⋆ Number of base 8 circular n - digit numbers with adjacent digits differing by 6 or less. • a(n) = 1 + ((7 - sqrt(73)) / 2) ^ n + ((7 + sqrt(73)) / 2) ^ n for n>0. • a(n) = 8 * a(n - 1) - a(n - 2) - 6 * a(n - 3) for n>3. •

► [A163444] 1,8,62,472,3556,26624,198584,1477792,10981648,81534848,605042144,4488320896,33288417856,246858103808,1830491038592,13572716933632,100635907891456,746158518953984,5532281359138304,41017986665224192 ⋆ a(n) = 12 * a(n - 1) - 34 * a(n - 2) for n > 1; a(0) = 1, a(1) = 8. • a(n) = ((1 + sqrt(2)) * (6 + sqrt(2)) ^ n + (1 - sqrt(2)) * (6 - sqrt(2)) ^ n) / 2. •

► [A190975] 0,1,8,62,480,3716,28768,222712,1724160,13347856,103334528,799980512,6193175040,47945439296,371177164288,2873526435712,22245857157120,172219804385536,1333266720770048,10321694157389312,79907019817574400,618612770225816576 ⋆ a(n) = 8 * a(n - 1) - 2 * a(n - 2), with a(0)=0, a(1)=1. • a(n) = ((4 + sqrt(14)) ^ n - (4 - sqrt(14)) ^ n) / (2 * sqrt(14)). - _ Giorgio Balzarotti _ , May 28 2011 •

► [A287815] 1,8,62,482,3746,29114,226274,1758602,13667858,106226618,825593474,6416514026,49869159026,387583197338,3012297335522,23411580532682,181954847741906,1414153417389434,10990803008177474,85420541561578922,663888608980117298,5159743512230294618 ⋆ Number of octonary sequences of length n such that no two consecutive terms have distance 7. • a(n) = 7 * a(n - 1) + 6 * a(n - 2), a(0)=1, a(1)=8. •

► [A081107] 1,8,63,490,3773,28812,218491,1647086,12353145,92236816,686011319,5084554482,37569208117,276825744020,2034669218547,14920907602678,109193914728689,797590333670424,5815762849680175,42338753545671674,307770170005074861,2234183456333136028 ⋆ 7th binomial transform of (1,1,0,0,0,0,...). • a(n) = 14 * a(n - 1) - 49 * a(n - 2) with n > 1, a(0) = 1, a(1) = 8. • a(n) = (n + 7) * 7 ^ (n - 1). •

► [A164592] 1,8,63,494,3869,30292,237147,1856506,14533561,113775008,890679543,6972620294,54584650709,427311962092,3345180558867,26187502233106,205006952830321,1604881990340408,12563701705288623,98354023217099294,769957303181086349 ⋆ a(n) = 10 * a(n - 1) - 17 * a(n - 2) for n > 1; a(0) = 1, a(1) = 8. • a(n) = 10 * a(n - 1) - 17 * a(n - 2) for n > 1; a(0) = 1, a(1) = 8. • a(n) = ((4 + sqrt(18)) * (5 + sqrt(8)) ^ n + (4 - sqrt(18)) * (5 - sqrt(8)) ^ n) / 8. •

► [A001090] 0,1,8,63,496,3905,30744,242047,1905632,15003009,118118440,929944511,7321437648,57641556673,453811015736,3572846569215,28128961537984,221458845734657,1743541804339272,13726875588979519,108071462907496880,850844827670995521,6698687158460467288 ⋆ a(n) = 8 * a(n - 1) - a(n - 2); a(0) = 0, a(1) = 1. • a(n) = S(2 * n - 1, sqrt(10)) / sqrt(10) = S(n - 1, 8); S(n, x) := U(n, x / 2), Chebyshev polynomials of 2nd kind, A049310, with S(- 1, x) := 0. • a(n) = ((4 + sqrt(15)) ^ n - (4 - sqrt(15)) ^ n) / (2 * sqrt(15)). • a(n) = 7 * (a(n - 1) + a(n - 2)) - a(n - 3). • a(n) = 9 * (a(n - 1) - a(n - 2)) + a(n - 3). (End) • a(- n) = - a(n). - _ Michael Somos _ , Apr 05 2008 • a(n) = Sum _{ k = 0..n - 1 } binomial(n + k, 2 * k + 1) * 6 ^ k = Sum _{ k = 0..n - 1 } (- 1) ^ (n + k + 1) * binomial(n + k, 2 * k + 1) * 10 ^ k. - _ Peter Bala _ , Jul 17 2023 •

► [A118719] 0,1,8,64,125,343,512,1000,1331,2197,2744,4096,4913,6859,8000,10648,12167,15625,17576,21952,24389,29791,32768,39304,42875 ⋆ Cubes for which the digital root is also a cube. • a(n) = (floor(3 * n / 2) - 2) ^ 3 for n >= 2. - _ Nathaniel Johnston _ , May 05 2011 •

► [A153808] 0,8,64,168,320,520,768,1064,1408,1800,2240,2728,3264,3848,4480,5160,5888,6664,7488,8360,9280,10248,11264,12328,13440 ⋆ 8 times octagonal numbers: 8 * n * (3 * n - 2). • a(n) = a(n - 1) + 48 * n - 40 (with a(0)=0). - _ Vincenzo Librandi _ , Nov 27 2010 • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). •

► [A016743] 0,8,64,216,512,1000,1728,2744,4096,5832,8000,10648,13824,17576,21952,27000,32768,39304,46656,54872,64000,74088,85184,97336,110592 ⋆ Even cubes: a(n) = (2 * n) ^ 3. • a(n) = (2 * n) ^ 3 = 8 * n ^ 3. •

► [A086114] 8,64,216,528,1080,1968,3304,5216,7848,11360,15928,21744,29016,37968,48840,61888,77384,95616,116888,141520,169848,202224,239016,280608,327400 ⋆ Number of 4 X n (0,1) matrices such that each row and each column is non decreasing or nonincreasing. • a(n) = 2 / 3 * n * (n ^ 3 + 6 * n ^ 2 + 11 * n - 6). More generally, number of m X n (0, 1) matrices such that each row and each column is increasing or decreasing is 2 * n * (2 * binomial(n + m - 1, n) - m) = 4 / Beta(m, n) - 2 * m * n. •

► [A223670] 8,64,292,948,2527,5913,12577,24821,46068,81198,136930,222250,348885,531823,789879,1146307,1629458,2273484,3119088,4214320,5615419,7387701,9606493,12358113,15740896 ⋆ Number of 3 X n 0..1 arrays with rows, diagonals and antidiagonals unimodal. • a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>8. •

► [A223681] 8,64,316,1118,3177,7745,16857,33615,62518,109838,184042,296260,460799,695703,1023359,1471149,2072148,2865868,3899048,5226490,6911941,9029021,11662197,14907803,18875106 ⋆ Number of 3 X n 0..1 arrays with rows and antidiagonals unimodal. • a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. •

► [A344854] 0,0,0,8,64,320,2240,17920,121856,831488,6215680,46069760,333639680,2468257792,18538397696,138630955008,1038902624256,7848847736832,59474614157312,451122104369152,3432752856694784,26200670667276288,200322520455315456,1534319564383322112 ⋆ The number of equilateral triangles with vertices from the vertices of the n - dimensional hypercube. • a(n) = 2 ^ n * Sum _{ k=1..floor(n / 3) } n! / (6 * (n - 3 * k)! * k! ^ 3). - _ Drake Thomas _ , May 30 2021 • a(n) = 2 ^ n * (hypergeom([- n / 3, (1 - n) / 3, (2 - n) / 3], [1, 1], - 27) - 1) / 6. - derived from Drake Thomas's formula by _ Peter Luschny _ , May 31 2021 • a(n) = (n! / 3!) * [x ^ n] Exp(2 * x, 1) * (Exp(2 * x, 3) - 1). - _ Peter Luschny _ , Jun 01 2021 •

► [A223564] 8,64,448,3136,21952,153664,1075648,7529536,52706752,368947264,2582630848,18078415936,126548911552,885842380864,6200896666048,43406276662336,303843936636352,2126907556454464,14888352895181248 ⋆ Number of nX30..1 arrays with antidiagonals unimodal • a(n) = product { (1 + (i * (i + 1) / 2)) ^ 2 , i=1..(min(n,3) - 1) } * (1 + (min(n,3) * (min(n,3) + 1) / 2)) ^ (max(n,3) - min(n,3) + 1) • a(n) = 7 * a(n - 1) for n>2 •

► [A146885] 8,64,456,3200,22408,156864,1098056,7686400,53804808,376633664,2636435656,18455049600,129185347208,904297430464,6330082013256,44310574092800,310174018649608,2171218130547264,15198526913830856 ⋆ a(n) = 8 * Sum _{ k=0..n } 7 ^ k. • a(n) = (4 / 3) * (7 ^ (n + 1) - 1). • a(n) = 8 * a(n - 1) - 7 * a(n - 2). •

► [A267231] 8,64,476,3472,25088,180292,1291052,9222184,65755592,468196540,3330042548,23664113536,168042120176,1192574364148,8459259667964,59977781663128,425093823838040,3011867733313516,21333411555220100 ⋆ Number of length - n 0..7 arrays with no following elements greater than or equal to the first repeated value. • a(n) = (- 7 * (70 + 21 * 2 ^ (1 + n) + 35 * 3 ^ n + 35 * 2 ^ (1 + n) * 3 ^ n + 35 * 4 ^ n + 42 * 5 ^ n - 627 * 7 ^ n) + 60 * 7 ^ n * n) / 2940 for n>1. •

► [A267470] 8,64,484,3592,26440,193852,1418740,10378144,75944464,556295860,4080955516,29994246136,220942982968,1631599880428,12082194095812,89736369169168,668588308469152,4997804102441956,37486765952804428 ⋆ Number of

length - n 0..7 arrays with no following elements larger than the first repeated value. ● a(n) = (- 980 - 147 * 2 ^ (2 + n) - 245 * 2 ^ (1 + 2 * n) - 490 * 3 ^ n - 245 * 2 ^ (2 + n) * 3 ^ n - 588 * 5 ^ n + 7818 * 7 ^ n + 735 * 8 ^ n + 120 * 7 ^ n * n) / 5880. ●

► [A268943] 8,64,504,3928,30344,232696,1773384,13443064,101433800,762265720,5707893576,42605289208,317113497800,2354253598072,17437541654088,1288850632918 96,9507912050636 24,7001691181273720,51477520840048968 ⋆ Number of length - n 0..7 arrays with no repeated value unequal to the previous repeated value plus one mod 7 + 1. ● a(n) = (- 272 * 7 ^ n + (153 - 37 * sqrt(17)) * (3 - sqrt(17)) ^ n + (3 + sqrt(17)) ^ n * (153 + 37 * sqrt(17))) / 34. ●

► [A269677] 8,64,504,3936,30504,234912,1799256,13716480,104139336,787814400,5940850872,44672407968,335060917608,2507328861024,18723903210264,139560051510336,1038430145451144,7714504288777152,57228077709064056 ⋆ Number of length - n 0..7 arrays with no repeated value differing from the previous repeated value by other than plus or minus one modulo 7 + 1. ● a(n) = (- 216 * 7 ^ n + (140 - 98 * sqrt(2)) * (3 - 3 * sqrt(2)) ^ n + 14 * (3 * (1 + sqrt(2))) ^ n * (10 + 7 * sqrt(2))) / 63. ●

► [A269466] 8,64,504,3976,31304,246232,1934856,15190840,119174216,934305400,7320389832,57325443448,448697920328,3510562344184,27455875247304,214658236385656,1677757456358984,13109740539632632,102412911071378376 ⋆ Number of length - n 0..7 arrays with no repeated value equal to the previous repeated value. ● a(n) = 2 * (- 92 * 7 ^ n + (345 - 67 * sqrt(23)) * (3 - sqrt(23)) ^ n + (3 + sqrt(23)) ^ n * (345 + 67 * sqrt(23))) / 1127. ●

► [A126629] 8,64,506,3916,29498,215524,1527506,10528876,70841738,467044084,3027621506,19356463036,122355512378,766290978244,4762898595506,29420807536396,180813134269418,1106606890266004,6749433735297506,41050188511748956,249087606867080858 ⋆ a(n) is the number of nonnegative integers k less than 10 ^ n such that the decimal representation of k lacks digits 1 and 2, at least one of digits 3,4,5 and at least one of digits 6,7,8,9. ● a(n) = 12 * 6 ^ n - 30 * 5 ^ n + 34 * 4 ^ n - 21 * 3 ^ n + 7 * 2 ^ n - 1. ●

► [A269689] 8,64,512,4080,32416,256880,2031072,16027696,126262688,993181680,7802084704,61219340720,479867497248,3758025752944,29406845849312,229946299629360,1796916741666976,14034055973604080,109551619154344032 ⋆ Number of length - n 0..7 arrays with no repeated value differing from the previous repeated value by plus or minus one modulo 7 + 1. ● a(n) = (2 ^ (1 - n) * (- 73 * 2 ^ (2 + n) * 7 ^ n - 7 * (7 - sqrt(73)) ^ n * (- 73 + 9 * sqrt(73)) + 7 * (7 + sqrt(73)) ^ n * (73 + 9 * sqrt(73)))) / 1533. ●

► [A125908] 8,64,512,4096,32768,262144,2092112,16595776,130437728,1013866624,7788438512,59145432256,444357721088,3306242197504,24389881261712,178578361769536,1299058046034848,9397253451942784,67653687455953712,485065987257543616 ⋆ a(n) is the number of nonnegative integers k less than 10 ^ n such that the decimal representation of k lacks the digits 1 and 2 and at least one of digits 3,4,5,6,7,8,9. ● a(n) = 7 * 7 ^ n - 21 * 6 ^ n + 35 * 5 ^ n - 35 * 4 ^ n + 21 * 3 ^ n - 7 * 2 ^ n + 1. ●

► [A206454] 8,64,512,4096,32768,262144,2097152,16777215,134217712,1073741632,8589932544,68719456256,549755617280,4398044676096,35184355311616,281474825715713,2251798471507992,18014386698322304,144115084996645888,1152920611253710848,9223364340274069504 ⋆ Number of 0..7 arrays of length n avoiding the consecutive pattern 0..7. ● a(n) = 8 * a(n - 1) - a(n - 8). ● a(n) = Sum _{ i=0..floor(n / 8) } (- 1) ^ i * 8 ^ (n - 8 * i) * binomial(n - 7 * i,i). ●

► [A001018] 1,8,64,512,4096,32768,262144,2097152,16777216,134217728,1073741824,8589934592,68719476736,549755813888,4398046511104,35184372088832,281474976710656,2251799813685248,18014398509481984,144115188075855872,1152921504606846976,9223372036854775808,73786976294838206464,590295810358705651712,4722366482869645213696 ⋆ Powers of 8: a(n) = 8 ^ n. ● a(n) = 8 ^ n. ● a(0) = 1; a(n) = 8 * a(n - 1) for n > 0. ● a(n) = (- 1) ^ n * (1 + sqrt(- 3)) ^ (3 * n) (see Nunn, p. 9). ● a(n) = (- 1) ^ n * Sum _{ k=0..floor(3 * n / 2) } (- 3) ^ k * binomial(3 * n, 2 * k) (see Nunn, p. 9). (End) ●

► [A033144] 1,8,64,513,4104,32832,262657,2101256,16810048,134480385,1075843080,8606744640,68853957121,550831656968,4406653255744,35253226045953,282025808367624,2256206466940992,18049651735527937,144397213884223496,1155177711073787968 ⋆ Base 8 digits are, in order, the first n terms of the periodic sequence with initial period 1,0,0. ● a(n) = 8 * a(n - 1) + a(n - 3) - 8 * a(n - 4). ● a(n) = round((64 / 511) * 8 ^ n). - _ Tani Akinari _ , Jul 15 2014 ●

► [A344054] 0,0,1,8,64,540,4920,48720,524160,6108480,76809600,1037836800,15008716800,231437606400,3792255667200,65819609856000,1206547550208000,23297526540288000,472708591939584000,10055994967130112000,223826984752250880000,5202760944485744640000,126075414965721661440000,3179798058882852126720000,83346901966165164687360000 ⋆ a(n) = Sum _{ k = 0..n } E1(n, k) * k ^ 2, where E1 are the Eulerian numbers A173018. ● a(n) = n! * [x ^ n] x ^ 2 * (- x ^ 2 + x - 3) / (6 * (x - 1) ^ 3). ● a(n) = Sum _{ k=0..n } Sum _{ j=0..k } (- 1) ^ j * binomial(n + 1, j) * k ^ 2 * (k + 1 - j) ^ n. ● a(n) = ((n - 3) * (n - 1) * (23 * n - 44) * a(n - 2) + ((159 - 7 * n) * n - 286) * a(n - 1)) / (16 * (n - 2)) for n >= 3. ●

► [A199567] 8,64,568,5104,45928,413344,3720088,33480784,301327048,2711943424,24407490808,219667417264,1977006755368,17793060798304,160137547184728,1441237924662544,12971141321962888,116740271897665984,1050662440707899384 8 ⋆ 7 * 9 ^ n + 1. ● a(n) = 9 * a(n - 1) - 8. ● a(n) = 10 * a(n - 1) - 9 * a(n - 2). ●

► [A366497] 1,1,8,64,596,6028,64352,713812,8146490,95040886,1128369960,13588883712,165598378308,2038279921692,25303322898120,316443054086214,3983011314348183,50418720131975193,641444450506307160,8197477211343267688,105185927879224420064 ⋆ G.f. A(x) satisfies A(x) = 1 + x * (1 + x) ^ (7 / 2) * A(x) ^ (9 / 2). ● a(n) = Sum _{ k=0..n } binomial(7 * k / 2,n - k) * binomial(9 * k / 2,k) / (7 * k / 2 + 1). ●

► [A061435] 8,64,729,9261,97336,970299,9938375,99897344,997002999,9993948264,99961946721,999700029999,9999516957184,99994258523375,999970000299999,9999934692543307,99999429057832312,999997000002999999 ⋆ a(n) is the largest n - digit cube. ● a(n) = (ceiling(10 ^ (n / 3)) - 1) ^ 3. - Antonio G. Astudillo (afg _ astudillo(AT)lycos.com), Mar 30 2003 ●

► [A288788] 1,8,65,502,3851,29921,237426,1932529,16173029,139320277,1235847277,11288120480,106132359679,1026681599731,10212591089574,104393925768077,1095895294558168,11806719056706773,130457490607638988,1477428802636263486,17138268233851671782 ⋆ Number of blocks of size >= 6 in all set partitions of n. ● a(n) = Bell(n + 1) - Sum _{ j=0..5 } binomial(n,j) * Bell(n - j). ● a(n) = Sum _{ j=0..n - 6 } binomial(n,j) * Bell(j). ●

► [A033118] 1,8,65,520,4161,33288,266305,2130440,17043521,136348168,1090785345,8726282760,69810262081,558482096648,4467856773185,35742854185480,285942833483841,2287542667870728,18300341342965825,146402730743726600 ⋆ Base 8 digits are, in order, the first n terms of the periodic sequence with initial period 1,0. ● a(n) = 8 * a(n - 1) + a(n - 2) - 8 * a(n - 3). ● a(n) = 2 ^ (3 * n + 3) / 63 - 1 / 14 - (- 1) ^ n / 18. - _ R. J. Mathar _ , Jan 08 2011 ● a(n) = floor(8 ^ (n + 1) / 9) / 7 = floor((8 * 8 ^ n - 1) / 63) = round((8 * 8 ^ n - 8) / 63) = round((16 * 8 ^ n - 9) / 63) = ceiling((8 * 8 ^ n - 8) / 63). a(n) = a(n - 2) + 8 ^ (n - 1), n > 2. - _ Mircea Merca _ , Dec 28 2010 ●

► [A033126] 1,8,65,521,4168,33345,266761,2134088,17072705,136581641,1092653128,8741225025,69929800201,559438401608,4475507212865,35804057702921,286432461623368,2291459692986945,18331677543895561,146653420351164488,1173227362809315905,9385818902474527241 ⋆ Base 8 digits are, in order, the first n terms of the periodic sequence with initial period 1,0,1. ● a(n) = 8 * a(n - 1) + a(n - 3) - 8 * a(n - 4). ● a(n) = floor((65 / 511) * 8 ^ n). - _ Tani Akinari _ , Jul 15 2014 ●

► [A041025] 1,8,65,528,4289,34840,283009,2298912,18674305,151693352,1232221121,10009462320,81307919681,660472819768,5365090477825,43581196642368,354014663616769,2875698505576520,23359602708228929,189752520171407952,1541379764079492545 ⋆ Denominators of continued fraction convergents to sqrt(17). ● a(n) = ((- i) ^ n) * S(n, 8 * i), with S(n, x) := U(n, x / 2) Chebyshev's polynomials of the second kind and i ^ 2 = - 1. See A049310. ● a(n) = F(n, 8), the n - th Fibonacci polynomial evaluated at x=8. - _ T. D. Noe _ , Jan 19 2006 ● a(n) = ((4 + sqrt(17)) ^ n - (4 - sqrt(17)) ^ n) / (2 * sqrt(17)); ● a(n) = Sum _{ i=0..floor((n - 1) / 2) } binomial(n - 1 - i,i) * 8 ^ (n - 1 - 2i). (End) ● a(n) = 8 * a(n - 1) + a(n - 2), n > 1; a(0)=1, a(1)=8. - _ Philippe Deléham _ , Nov 20 2008 ● a(p) == ((p - 1) / 2)) (mod p) for odd primes p. - _ Gary W. Adamson _ , Feb 22 2009 ●

► [A163459] 1,8,65,534,4421,36796,307357,2573586,21584425,181223408,1522659737,12799736142,107631298349,905250578212,7614837072565,64060941839946,538955843348689,4534517540404184,38152320928270193,321010168596786054 ⋆ a(n) = 14 * a(n - 1) - 47 * a(n - 2) for n > 1; a(0) = 1, a(1) = 8. ● a(n) = ((2 + sqrt(2)) * (7 + sqrt(2)) ^ n + (2 - sqrt(2)) * (7 - sqrt(2)) ^ n) / 4. ●

► [A081190] 1,8,65,536,4481,37928,324545,2803256,24405761,213887048,1884629825,16679193176,148135411841,1319377419368,11777507763905,105319346802296,943126559710721,8454906106826888,75861524447454785,681125306429182616 ⋆ 8th binomial transform of (1,0,1,0,1,.....), A059841. ● a(n) = 16 * a(n - 1) - 63 * a(n - 2), a(0)=1, a(1)=8. ● a(n) = 7 ^ n / 2 + 9 ^ n / 2. ●

► [A024105] 1,8,65,648,6305,58424,530145,4780568,43042625,387413928,3486774401,31381044968,282429515745,2541865799768,22876792416545,205891132044024,1853020188786305,16677181699583048,150094635296894145 ⋆ a(n) = 9 ^ n - n ^ 4. ● a(n) = 14 * a(n - 1) - 55 * a(n - 2) + 100 * a(n - 3) - 95 * a(n - 4) + 46 * a(n - 5) - 9 * a(n - 6); a(0)=1, a(1)=8, a(2)=65, a(3)=648, a(4)=6305, a(5)=58424. - _ Harvey P. Dale _ , Oct 07 2013 ●

► [A041114] 8,65,1048,8449,136232,1098305,17709112,142771201,2302048328,18559157825,299248573528,2412547746049,38900012510312,313612647828545,5056702377767032,40767231669964801,657332409097203848,5299426504447595585 ⋆ Numerators of continued fraction convergents to sqrt(66). ● a(n) = 16 * a(n - 1) + a(n - 2) for n>=2 even and a(n) = 8 * a(n - 1) + a(n - 2) for n >= 2 odd. - _ Nathaniel Johnston _ , Jun 26 2011 ● a(n) = 130 * a(n - 2) - a(n - 4). ●

► [A008893] 0,8,66,258,710,1590,3108,5516,9108,14220,21230,30558,42666,58058,77280,100920,129608,164016,204858,252890,308910,373758,448316,533508,630300 ⋆ Number of equilateral triangles formed by triples of points taken from a hexagonal chunk of side n in the hexagonal lattice. ● a(n) = n * (n + 1) * (7 * n ^ 2 + 7 * n + 2) / 4. ●

► [A121782] 0,8,66,288,900,2280,4998,9856,17928,30600,49610,77088,115596,168168,238350,330240,448528,598536,786258,1018400,1302420,1646568,2059926,2552448,3135000 ⋆ Series expansion for mean - squared radius of gyration of rectangles on square lattice. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. ●

► [A190331] 0,1,8,66,544,4484,36960,304648,2511104,20698128,170607232,1406254112,11591247360,95542487104,787522391552,6491264106624,53505157636096,441023789302016,3635200629688320,29963652616110592,246979622188261376,2035764282738312192 ⋆ a(n) = 8 * a(n - 1) + 2 * a(n - 2), with a(0)=0, a(1)=1. ● a(n) = (1 / 12) * sqrt(2) * ((4 + 3 * sqrt(2)) ^ n - (4 - 3 * sqrt(2)) ^ n). - _ Paolo P. Lava _ , Nov 18 2011 ●

► [A162758] 1,8,66,556,4748,40896,354136,3076688,26783376,233439616,2036119328,17767448256,155082786496,1353856391168,11820181297536,103205144171776,901143678718208,7868574870153216,68707438961107456,599949701428456448 ⋆ a(n) = 14 * a(n - 1) - 46 * a(n - 2) for n > 1; a(0) = 1, a(1) = 8. ● a(n) = ((3 + sqrt(3)) * (7 + sqrt(3)) ^ n + (3 - sqrt(3)) * (7 - sqrt(3)) ^ n) / 6. ●

► [A147959] 1,8,66,560,4868,43168,388872,3545536,32618512,302072960,2810819616,26244590336,245642629184,2303117466112,21620036448384,203127300275200,1909594544603392,17959620096591872,168959059780059648 ⋆ a(n) = ((8 + sqrt(2)) ^ n + (8 - sqrt(2)) ^ n) / 2. ● a(n) = 16 * a(n - 1) - 62 * a(n - 2), n > 1; a(0)=1, a(1)=8. ●

► [A247112] 0,8,67,267,746,1690,3333,5957,9892,15516,23255,33583,47022,64142,85561,111945,144008,182512,228267,282131,345010,417858,501677,597517,706476 ⋆ Floor of sums of the cubes of the non - integer square roots of n, as partitioned by the integer roots: floor(sum(j from n ^ 2 + 1 to (n + 1) ^ 2 - 1, j ^ (3 / 2))). ● a(n) = floor(sum(j = n ^ 2 + 1..(n + 1) ^ 2 - 1, j ^ (3 / 2))). ● a(n) = n * (4 * n ^ 3 + 6 * n ^ 2 + 5 * n + 1) / 2. ●

► [A228419] 1,8,67,539,5034,45549,416913,3570781,32517377,294828478,2681147149,23720397369 ⋆ Count of the first 10 ^ n primes which do not contain the di

git 7. • a(n) <= 9 ^ n. - _ Charles R Greathouse IV _ , May 21 2014 •
► [A015574] 0,1,8,67,560,4681,39128,327067,2733920,22852561,191022248,1596735667,13346952080,111565823641,932567445368,7795237033867,65159598607040,544662499957921,4552778795484488,38056217863749667,318108079296450800,2659033287962855401,22226590541592195608 ★ Expansion of x / (1 - 8 * x - 3 * x ^ 2). • a(n) = 8 * a(n - 1) + 3 * a(n - 2). • a(n) = (1 / 38) * sqrt(19) * (4 + sqrt(19)) ^ n - (1 / 38) * sqrt(19) * (4 - sqrt(19)) ^ n, with n >= 0. - _ Paolo P. Lava _ , Jun 25 2008 •
► [A152055] 1,8,67,584,5257,48488,455131,4324328,41426257,399036104,3857575987,37380013448,362768079961,3524108459048,34256882467147,33313950347242 4,324056222506281 7,315274858891872 08,306765478498163491 ★ a(n) = ((8 + sqrt(3)) ^ n + (8 - sqrt(3)) ^ n / 2. • a(n) = 16 * a(n - 1) - 61 * a(n - 2), n > 1; a(0)=1, a(1)=8. •
► [A190510] 0,1,8,68,576,4880,41344,350272,2967552,25141504,2130022 40,1804583936,15288680448,129527779328,1097376956416,9297126768640,78766521974784,667320682872832,5653631550881792,47898335138545664,405801207311892480,3438002999049322496 ★ a(n) = 8 * a(n - 1) + 4 * a(n - 2), with a(0)=0, a(1)=1. • a(n) = (1 / 20) * sqrt(5) * ((4 + 2 * sqrt(5)) ^ n - (4 - 2 * sqrt(5)) ^ n). - _ Paolo P. Lava _ , Jun 01 2011 •
► [A282563] 1,8,68,596,5300,47444,425972,3829652,34450484,309988820,2789637236,25105686548,225946984628,2033506084436,18301487651060,164713120424084,1482417010074932,13341748795707092,120075721981494644,1080681429113975060 ★ One third of the number of edges in the metrically regular triangulation of the n - th approximation of the Koch snowflake fractal. • a(n + 1) = (1 / 5) * (4 * 9 ^ n + 4 ^ n) for all n > 0. • a(1)=1, a(2)=8, a(3)=68, a(n) = 13 * a(n - 1) - 36 * a(n - 2) for n > 2. •
► [A163307] 1,8,68,600,5408,49312,452416,4164096,38391040,354254336,3270354944,30197778432,278873280512,2575523676160,23786907123712,219693657980928,2029087298289664,18740701224894464,173089976023777280 ★ a(n) = 14 * a(n - 1) - 44 * a(n - 2) for n > 1; a(0) = 1, a(1) = 8. • a(n) = ((5 + sqrt(5)) * (7 + sqrt(5)) ^ n + (5 - sqrt(5)) * (7 - sqrt(5)) ^ n) / 10. •
► [A152105] 1,8,68,608,5648,53888,523328,5139968,50839808,505038848,5030233088,50181398528,501088391168,5006530347008,50039182082048,500235092492288,5001410554953728,50008463329722368,500050779978334208 ★ a(n) = ((8 + sqrt4) ^ n + (8 - sqrt4) ^ n) / 2. • a(n) = 16 * a(n - 1) - 60 * a(n - 2), n > 1; a(0)=1, a(1)=8. •
► [A068766] 1,1,8,68,608,5664,54528,538944,5441024,55889408,582348800,6140864512,65414742016,702897995776,7609805045760,82929151328256,908978855215104,10014523823357952,110840574196580352,1231847926116384768 ★ Generalized Catalan numbers. • a(n)=(4 ^ n) * p(n, - 3 / 4) with the row polynomials p(n, x) defined from array A068763. • a(n + 1)= 4 * sum(a(k) * a(n - k), k=0..n), n>=1, a(0)=1=a(1). • a(n) = 2 ^ n * GegenbauerC(n - 1, - n, - 2) / (2 * n) for n>=1. - _ Peter Luschny _ , May 09 2016 •
► [A015575] 0,1,8,69,592,5081,43608,374269,3212192,27568881,236612008,2030740469,17428983792,149585572681,1283829500408,11018563866669,94567658435392,811634086816481,6965910986708808,59785458327752869,513113221555566992,4403833064083300281,37796230620444237208 ★ Expansion of x / (1 - 8 * x - 5 * x ^ 2). • a(n) = 8 * a(n - 1) + 5 * a(n - 2). • a(n) = (1 / 42) * (4 + sqrt(21)) ^ n * sqrt(21) - (1 / 42) * sqrt(21) * (4 - sqrt(21)) ^ n, with n >= 0. - _ Paolo P. Lava _ , Jun 25 2008 •
► [A228421] 1,8,69,620,5010,45732,418142,3785060,32579606,296601070,2683254222,24354108057 ★ Count of the first 10 ^ n primes which do not contain the digit 9. • a(n) <= 9 ^ n. - _ Charles R Greathouse IV _ , May 21 2014 •
► [A152109] 1,8,69,632,6041,59368,593469,5992792,60870001,620345288,6334194549,64746740792,662230374281,6775628281768,69338460425709,709653298187032,7263483605875681,74346193100976008,760993556868950949 ★ a(n) = ((8 + sqrt(5)) ^ n + (8 - sqrt(5)) ^ n) / 2. • a(n) = 16 * a(n - 1) - 59 * a(n - 2), n > 1; a(0)=1, a(1)=8. •
► [A124152] 0,8,70,360,1292,3640,8658,18200,34840,61992,104030,166408,255780,380120,548842,772920,1065008,1439560,1912950,2503592,3232060,4121208,5196290,6485080,8017992 ★ a(n) = Fibonacci(6, n). • a(n) = n * (3 + 4 * n ^ 2 + n ^ 4). • a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>5. •
► [A293069] 0,0,0,0,8,70,418,2156,10388,48342,220746,996996,4472564,19975774,88948426,395220140,1753302020,7768999014,34394485578,152166756084,672863006900,2974140030862,13142067477610,58058237351324,256439661695684 ★ Sum of values of vertices of type E at level n of the hyperbolic Pascal pyramid PP _ (4,5). • a(n) = 13 * a(n - 1) - 65 * a(n - 2) + 159 * a(n - 3) - 200 * a(n - 4) + 122 * a(n - 5) - 28 * a(n - 6), n >= 7. •
► [A190560] 0,1,8,70,608,5284,45920,399064,3468032,30138640,261917312,2276170336,19780866560,171903954496,1493916835328,12982758409600,112825568288768,980501096767744,8520962183874560,74050704051602944,643531405516070912,5592555468438184960 ★ a(n) = 8 * a(n - 1) + 6 * a(n - 2), with a(0)=0, a(1)=1. • a(n) = (1 / 44) * sqrt(22) * ((4 + sqrt(22)) ^ n - (4 - sqrt(22)) ^ n). - _ Paolo P. Lava _ , Jun 01 2011 •
► [A152263] 1,8,70,656,6436,64928,665560,6883136,71527696,745221248,7774933600,81176105216,847871534656,8857730451968,92547138221440,967005845328896,10104359508418816,105583413105625088,1103281758201710080 ★ a(n) = ((8 + sqrt(6)) ^ n + (8 - sqrt(6)) ^ n) / 2. • a(n) = 16 * a(n - 1) - 58 * a(n - 2), n > 1; a(0)=1, a(1)=8. •
► [A198856] 8,71,575,4607,36863,294911,2359295,18874367,150994943,1207959551,9663676415,77309411327,618475290623,4947802324991,39582418599935,316659348799487,2533274790395903,20266198323167231,162129586585337855 ★ a(n) = 9 * 8 ^ n - 1. • a(n) = 8 * a(n - 1) + 7. • a(n) = 9 * a(n - 1) - 8 * a(n - 2), n >1. •
► [A320092] 1,8,71,575,4670,37367,299510,2396150,19173302,153386927,1227128750,9817030070,78536506805,628292058542,5026338565487,40210708557167,321685685267822,2573485482143150,20587883991625133,164703071933262773,1317624576539847542 ★ Number of primitive (=aperiodic) 8 - ary words with length less than or equal to n which are earlier in lexicographic order than any other word derived by cyclic shifts of the alphabet. • a(n) = Sum _{ j=1..n } Sum _{ d|j } 8 ^ (d - 1) * mu(j / d). •
► [A015576] 0,1,8,71,624,5489,48280,424663,3735264,32854753,2889848722,25418622247,22357792080,196655372369,1729747523512,15214567794679,133824775022016,1177100174738881,10353574823065160,91068299807693447,801021422223003696,7045649476437883697,61972345767064095448 ★ Expansion of x / (1 - 8 * x - 7 * x ^ 2). • a(n) = 8 * a(n - 1) + 7 * a(n - 2). • a(n) = (1 / 46) * (4 + sqrt(23)) ^ n * sqrt(23) - (1 / 46) * (4 - sqrt(23)) ^ n * sqrt(23), with n >= 0. - _ Paolo P. Lava _ , Jun 25 2008 •
► [A070998] 1,8,71,631,5608,49841,442961,3936808,34988311,310957991,2763633608,24561744481,218292066721,1940066856008,17242309637351,153240719880151,1361924169284008,12104076803675921,107574767063799281,956068826770517608 ★ a(n) = 9 * a(n - 1) - a(n - 2) for n > 0, a(0)=1, a(- 1)=1. • a(n) * a(n + 3) = 63 + a(n + 1) * a(n + 2). - _ Ralf Stephan _ , May 29 2004 • a(n) = (- 1) ^ n * U(2n, i * sqrt(7) / 2), U(n, x) Chebyshev polynomial of second kind, i=sqrt(- 1). - _ Paul Barry _ , Mar 13 2005 • a(n) = (1 / 2) * (9 / 2 + (1 / 2) * sqrt(77)) ^ (n + 1) + (1 / 22) * (9 / 2 - (1 / 2) * sqrt(77)) ^ (n + 1) * sqrt(77) - (1 / 22) * (9 / 2 + (1 / 2) * sqrt(77)) ^ (n + 1) * sqrt(77) + (1 / 2) * (9 / 2 - (1 / 2) * sqrt(77)) ^ (n + 1). - _ Paolo P. Lava _ , Nov 20 2008 •
► [A370178] 1,8,71,631,5615,49967,444655,3956975,35213039,313360111,2788585199,24815562479,220833181423,1965189951215,17488185061103,155627000985423,1384921481277167,12324387851005679,109674474658262767,975990900074147567,8685322997859282671 ★ a(n) = floor(x * a(n - 1)) for n > 0 where x = 4 + 2 * sqrt(6), a(0) = 1. • a(n) = 9 * a(n - 1) - 8 * a(n - 3) for n>2, a(0) = 1, a(1) = 8, a(2) = 71. • a(n) = 8 * a(n - 1) + 8 * a(n - 2) - 1. • a(n) = (7 * (8 - 3 * sqrt(6)) * (4 - 2 * sqrt(6)) ^ n + 7 * (8 + 3 * sqrt(6)) * (4 + 2 * sqrt(6)) ^ n + 8) / 120. •
► [A187709] 1,8,71,638,5741,51668,465011,4185098,37665881,338992928,3050936351,27458427158,247125844421,2224132599788,20017193398091,180154740582818,1621392665245361,14592533987208248,131332805884874231,1181995252963868078,10637957276674812701,95741615490073314308,861674539410659828771 ★ a(n) = (7 * 9 ^ n + 1) / 8. • a(n) = (7 * 9 ^ n + 1) / 8. • a(n) = + 10 * a(n - 1) - 9 * a(n - 2). • a(n) = 8 * Sum _{ i=0..n - 1 } a(i) - n + 1. • a(n) = 9 ^ n - Sum _{ i=0..n - 1 } 9 ^ i for n>0. - _ Bruno Berselli _ , Jun 20 2013 •
► [A152265] 1,8,71,680,6833,70568,739607,7811336,82823777,879934280,9357993191,99571637096,1059740581649,11280265991912,120079042716599,1278289521926600,13608126915979457,144867527905855112 ★ a(n) = ((8 + sqrt(7)) ^ n + (8 - sqrt(7)) ^ n) / 2. • a(n) = 16 * a(n - 1) - 57 * a(n - 2), n > 1; a(0)=1, a(1)=8. •
► [A081178] 1,1,8,71,680,6882,72528,788019,8766248,99362894,1143498224,13326176998,156950554384,1865210341828,22338852956064,269355965364459,3267146912972328,39837475762660374,488032452193307568 ★ a(0)=1; for n>=1, a(n) = sum(7 ^ k * N(n,k), k=0..n), where N(n,k)=(1 / n) * C(n,k) * C(n,k + 1) are the Narayana numbers (A001263). • a(n) = (8(2n - 1)a(n - 1) - 36(n - 2)a(n - 2)) / (n + 1) for n>=2, a(0)=a(1)=1. - _ Philippe Deléham _ , Aug 19 2005 • a(n) = hypergeom([1 - n, - n], [2], 7). - _ Peter Luschny _ , Mar 19 2018 •
► [A096341] 1,8,71,694,7421,86276,1084483,14665106,212385209,3280842496,53862855551,936722974958,17205245113141,332864226563324,6766480571358971,144202473398010826,3215159679583864433 ★ E.g.f.: exp(x) / (1 - x) ^ 7. • a(n) = Sum _{ k = 0..n } binomial(n, k) * (k + 6)! / 6!. • a(n) = 2F0(7, - n;; - 1). - _ Benedict W. J. Irwin _ , May 27 2016 • a(n) = (n + 7) * a(n - 1) - (n - 1) * a(n - 2) with a(0) = 1 and a(1) = 8. •
► [A199687] 8,71,701,7001,70001,700001,7000001,70000001,700000001,7000000001,70000000001,700000000001,7000000000001,70000000000001,700000000000001,7000000000000001,70000000000000001 ★ 7 * 10 ^ n + 1. • a(n) = 10 * a(n - 1) - 9. • a(n) = 11 * a(n - 1) - 10 * a(n - 2). •
► [A097255] 0,8,72,80,648,656,720,728,5832,5840,5904,5912,6480,6488,6552,6560,52488,52496,52560,52568,53136,53144,53208,53216,58320 ★ Numbers whose set of base 9 digits is { 0,8 } . • a(2n) = 9 * a(n), a(2n + 1) = a(2n) + 8. •
► [A254371] 0,8,72,288,800,1800,3528,6272,10368,16200,24200,34848,48672,66248,88200,115200,147968,187272,233928,288800,352800,426888,512072,609408,720000 ★ Sum of cubes of the first n even numbers (A016743). • a(n) = 2 * n ^ 2 * (n + 1) ^ 2. •
► [A143945] 0,8,72,320,1000,2520,5488,10752,19440,33000,53240,82368,123032,178360,252000,348160,471648,627912,823080,1064000,1358280,1714328,2141392,2649600,3250000 ★ Wiener index of the grid P _ n x P _ n, where P _ n is the path graph on n vertices. • a(n) = n ^ 3 * (n ^ 2 - 1) / 3. • a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6), a(2)=8, a(3)=72, a(4)=320, a(5)=1000, a(6)=2520, a(7)=5488. - _ Harvey P. Dale _ , Feb 07 2014 •
► [A082141] 1,8,72,480,2640,12672,54912,219648,823680,2928640,9957376,32587776,103194624,317521920,952565760,2794192896,8033304576,22682271744,63006310400,172438323200,465583472640,1241555927040,3273192898560 ★ A transform of C(n,7). • a(n) = (2 ^ (n - 1) + 0 ^ n / 2) * C(n + 7,n). • a(n) = Sum _{ j=0..n } C(n + 7, j + 7) * C(j + 7, 7) * (1 + (- 1) ^ j) / 2. • a(n) = ceiling(binomial(n + 7,7) * 2 ^ (n - 1)). - _ Zerinvary Lajos _ , Nov 01 2006 •
► [A304826] 8,72,520,3656,25608,179272,1254920,8784456,61491208,430438472,3013069320,21091485256,147640396808,1033482777672,7234379443720,50640656106056,354484592742408,2481392149196872,17369745044378120,121588215310646856,851117507174528008,5957822550221696072 ★ a(n) = 32 * 7 ^ n / 21 - 8 / 3, n>=1. • a(n) = 8 * a(n - 1) - 7 * a(n - 2) for n>2. •
► [A054615] 0,8,72,528,4176,32800,262800,2097200,16781472,134218800,1073774880,8589934672,68719748256,549755813984,4398048608688,35184372156480,281474993496384,2251799813685376,18014398644225456,144115188075856016 ★ a(n) = Sum _{ d|n } phi(d) * 8 ^ (n / d). • a(n) = Sum _{ k=1..n } 8 ^ gcd(n,k). - _ Ilya Gutkovskiy _ , Apr 16 2021 •
► [A052379] 8,72,584,4680,37448,299592,2396744,19173960,153391688,1227133512,9817068104,78536544840,628292358728,5026338869832,40210710958664,321685687669320,2573485501354568,20587884010836552,164703072086692424,1317624

576693539400,1054099661354831520 8 ⋆ Number of integers from 1 to 10 ^ (n + 1) - 1 that lack 0 and 1 as a digit. • a(n) = (8 ^ (n + 2) - 1) / 7 - 1. • a(n) = 8 * a(n - 1) + 8. • a(n) = Sum _{ k=1..n } 8 ^ k. - corrected by _ Michel Marcus _ , Sep 25 2014 • a(n) = 9 * a(n - 1) - 8 * a(n - 2); a(0)=8, a(1)=72. - _ Harvey P. Dale _ , Sep 22 2013 •

▶ [A158798] 1,8,72,584,5192,42568,374856,3099208,27089992,225439304,1959198792,16387314248,141776036936,1190564148808,10264230512712,864603360364 24,743371088849992,6276832595181128,53852582281580616,45556986837317280 8,3902135134394332232 ⋆ a(n) = a(n - 1) + 64 * a(n - 2), a(0)=1, a(1)=8. • a(n) = (1 / 2) * (((1 + sqrt(257)) / 2) ^ n + ((1 - sqrt(257)) / 2) ^ n) + (15 / 514) * sqrt(257) * (((1 + sqrt(257)) / 2) ^ n - ((1 - sqrt(257)) / 2) ^ n), with n>=0. - _ Paolo P. Lava _ , Mar 30 2009 • a(n) = (8 * i) ^ n * (ChebyshevU(n, - i / 16) - (7 * i / 8) * ChebyshevU(n - 1, - i / 16)). - _ G. C. Greubel _ , Dec 22 2021 •

▶ [A057091] 1,8,72,640,5696,50688,451072,4014080,35721216,317882368,2828828672,25173688320,224020135936,1993550594048,17740565839872,157872931471360,1404907978489856,12502247279689728,111257242065436672,990075914761011200,8810665254611582976 ⋆ Scaled Chebyshev U - polynomials evaluated at i * sqrt(2). Generalized Fibonacci sequence. • a(n) = 8 * (a(n - 1) + a(n - 2)), a(- 1)=0, a(0)=1. • a(n) = S(n, i * 2 * sqrt(2)) * (- i * 2 * sqrt(2)) ^ n with S(n, x) := U(n, x / 2), Chebyshev's polynomials of the 2nd kind, A049310. • a(n) = - (1 / 6) * sqrt(6) * (4 - 2 * sqrt(6)) ^ n + (1 / 2) * (4 + 2 * sqrt(6)) ^ n + (1 / 6) * (4 + 2 * sqrt(6)) ^ n * sqrt(6) + (1 / 2) * (4 - 2 * sqrt(6)) ^ n, with n >= 0. - _ Paolo P. Lava _ , Jul 08 2008 •

▶ [A055275] 1,8,72,648,5832,52488,472392,4251528,38263752,344373768,3099363912,27894275208,251048476872,2259436291848,20334926626632,183014339639688,1647129056757192,14824161510814728,133417453597332552,1200757082375992968,10806813741383936712,97261323672455430408,875351913052098873672 ⋆ First differences of 9 ^ n (A001019). • a(n) = 8 * 9 ^ (n - 1); a(0)=1. • a(n) = 9a(n - 1) + (- 1) ^ n * C(1,1 - n). •

▶ [A155198] 1,8,72,656,5976,54440,495936,4517864,41156712,374928272,3415511160,31114528712,283446269568,2582130954824,23522624862984,214285754721680,1952094417358104,17783135510944616,162000314015859648 ⋆ a(n)=9 * a(n - 1) + a(n - 2), n>2 ; a(0)=1, a(1)=8, a(2)=72 . • a(n)=4 *{ [(9 / 2) - (1 / 2) * sqrt(85)] ^ (n - 1) + [(9 / 2) + (1 / 2) * sqrt(85)] ^ (n - 1) }+ (36 / 85) * sqrt(85) *{ [(9 / 2) + (1 / 2) * sqrt(85)] ^ (n - 1) - [(9 / 2) - (1 / 2) * sqrt(85)] ^ (n - 1) }+ [C(2 * n,n) mod 2], with n>=0 [From _ Paolo P. Lava _ , Jan 26 2009] •

▶ [A147840] 1,8,72,656,5984,54592,498048,4543744,41453056,378180608,3450181632,31476371456,287162261504,2619811643392,23900818341888,218049690271744,1989290355982336,18148506037649408,165570737528635392 ⋆ a(n)=10 * a(n - 1) - 8 * a(n - 2), a(0)=1, a(1)=8 . • a(n)=(1 / 2) * (5 + sqrt(17)) ^ n - (3 / 34) * sqrt(17) * [5 - sqrt(17)] ^ n + (1 / 2) * [5 - sqrt(17)] ^ n + (3 / 34) * [5 + sqrt(17)] ^ n * sqrt(17), with n>=0 [From _ Paolo P. Lava _ , Nov 18 2008] • a(n)= ((17 + 3 * sqrt(17)) / 34) * (5 + sqrt(17)) ^ n + ((17 - 3 * sqrt(17)) / 34) * (5 - sqrt(17)) ^ n [From _ Richard Choulet _ , Nov 20 2008] •

▶ [A078995] 1,8,72,664,6184,57888,543544,5113872,48180456,454396000,4288773152,40503496536,382701222296,3617396099936,34203591636048,323492394385824,3060238763412072,28955508198895584,274018698082833760,2593539713410178528,24550565251665845664 ⋆ a(n) = Sum _{ k=0..n } C(4 * k,k) * C(4 * (n - k),n - k). • a(n) = 2 / 3 * (256 / 27) ^ n * (1 + c / sqrt(n) + o(n ^- 1 / 2)) where c = 2 / 3 * sqrt(2 / (3 * Pi)) = 0.307105910641187... More generally, a(n, m) =sum(k=0, n, binomial(m * k, k) * binomial(m * (n - k), n - k)) is asymptotic to 1 / 2 * m / (m - 1) * (m ^ m / (m - 1) ^ (m - 1)) ^ n. See A000302, A006256 for cases m=2 and 3. - _ Benoit Cloitre _ , Jan 26 2003, corrected and extended by _ Vaclav Kotesovec _ , Nov 06 2012 • a(n) = sum(k=0,n,binomial(4 * k + l,k) * binomial(4 * (n - k) - l,n - k)) for every real number l. - _ Rui Duarte _ and António Guedes de Oliveira, Feb 16 2013 • a(n) = sum(k=0,n,3 ^ (n - k) * binomial(4n + 1,k)). - _ Rui Duarte _ and António Guedes de Oliveira, Feb 17 2013 • a(n) =sum(k=0,n,4 ^ (n - k) * binomial(3n + k,k)). - _ Rui Duarte _ and António Guedes de Oliveira, Feb 17 2013 •

▶ [A082414] 1,8,72,688,6752,67008,668032,6672128,66688512,666754048,6667016192,66668064768,666672259072,6666689036288,66666756145152,666666702458060 8,6666668098322432,66666672393289728,666666689573158912,6666666758292635648 ⋆ a(n) = (2 * 10 ^ n + 4 ^ n) / 3. • a(n) = (2 * 10 ^ n + 4 ^ n) / 3. •

▶ [A145303] 1,8,72,704,7232,76288,815616,8777728,94769152,1024753664,11088986112,120037572608,1299617939456,14071782965248,152369922834432,1649898919297024,17865667030024192,193456332999753728 ⋆ a(n) = ((8 + sqrt(8)) ^ n + (8 - sqrt(8)) ^ n) / 2. • a(n) = 16 * a(n - 1) - 56 * a(n - 2). •

▶ [A098411] 1,8,72,704,7264,77568,847104,9394176,105334272,1190899712,13551235072,154997784576,1780378353664,20522842062848,237284128064988 2,2750571189633024,31956067676454912,371997834879172608,4337957919010062336,50664706036388069376,592558533060795039744 ⋆ Expansion of 1 / (sqrt(1 - 4x)sqrt(1 - 12x)). • a(n) = Sum _{ k=0..n } 3 ^ k * binomial(2k, k) * binomial(2(n - k), n - k). • a(n) = 4 ^ n * hypergeometric([- n, 1 / 2], [1], - 2). - _ Peter Luschny _ , May 19 2015 •

▶ [A165323] 1,8,72,712,7496,81864,911944,10263752,116119368,1317149128,14959895624,170020681416,1932918264136,21978286879688,249924108049992,2842099476549832,32320548186147656,367554952665320904 ⋆ a(0)=1, a(1)=8, a(n)=17 * a(n - 1) - 64 * a(n - 2) for n>1. • a(n) = ((33 - sqrt(33)) * (17 + sqrt(33)) ^ n + (33 + sqrt(33)) * (17 - sqrt(33)) ^ n) / (66 * 2 ^ n). [_ Klaus Brockhaus _ , Sep 28 2009] •

▶ [A082366] 1,8,72,712,7560,84616,985032,11814728,145043208,1813915912,23029334856,296050614216,3846007927944,50412893051784,665925356663496,8855844075949128,118467982501096968,1593108078166843912 ⋆ G.f.: (1 - 7 * x - sqrt(49 * x ^ 2 - 18 * x + 1)) / (2 * x). • a(0)=1; a(n) = (1 / n) * Sum _{ k=0..n } 8 ^ k * C(n, k) * C(n, k - 1) for n > 0. •

▶ [A015577] 0,1,8,73,656,5905,53144,478297,4304672,38742049,348678440,3138105961,28242953648,254186582833,2287679245496,20589113209465,185302018885184,1667718169966657,15009463529699912,135085171767299209,1215766545905692880,10941898913151235921 ⋆ a(n + 1) = 8 * a(n) + 9 * a(n - 1), a(0) = 0, a(1) = 1. • a(n) = (9 ^ n - (- 1) ^ n) / 10. (End) • a(n) = 9 ^ (n - 1) - a(n - 1). - _ Emeric Deutsch _ , Apr 01 2004 • a(n) = round(9 ^ n / 10). - _ Mircea Merca _ , Dec 28 2010 •

▶ [A082764] 1,8,73,674,6229,57572,532117,4918166,45456841,420141248,3883214593,35891157194,331729069789,3066052597532,28338422486797,261921856685246,2420849609444881,22375043097652088,206804483710406713 ⋆ Trinomial transform of the Pell numbers (A000129). • a(n) = Sum[Trinomial[n, k] Pell[k], { k, 0, 2n }] where Trinomial[n, k] = trinomial coefficients (A027907) •

▶ [A152429] 1,8,73,728,7633,82088,893593,9782648,107374753,1179950408,12973595113,142680249368,1569336258673,17261966423528,189877968549433,2088639343496888,22974941225731393,252723895719373448 ⋆ a(n) = (11 ^ n + 5 ^ n) / 2. • a(n) = 16 * a(n - 1) - 55 * a(n - 2), with a(0)=1, a(1)=8. • a(n) = ((8 + sqrt(9)) ^ n + (8 - sqrt(9)) ^ n) / 2. - Al Hakanson (hawkuu(AT)gmail.com), Dec 08 2008 •

▶ [A190953] 0,1,8,74,672,6116,55648,506344,4607232,41921296,381442688,3470754464,31580462592,287351245376,2614614588928,23790429165184,216469579210752,1969660925337856,17921983194810368,163072474811861504,1483799630442995712,13501121791662580736 ⋆ a(n) = 8 * a(n - 1) + 10 * a(n - 2), with a(0)=0, a(1)=1. • a(n) = 1 / 52 * sqrt(26) * ((4 + sqrt(26)) ^ n - (4 - sqrt(26)) ^ n). - _ Paolo P. Lava _ , Jun 01 2011 •

▶ [A337370] 1,8,74,736,7606,80464,864772,9400192,103061158,1137528688,12623082284,140697113792,1574005263676,17663830073504,198760191043784,2241743315230208,25335473017856774,286850379192127664,3252960763923781276,36942512756224955456,420084161646913792724 ⋆ Expansion of sqrt(2 / ((1 - 12 * x + 4 * x ^ 2) * (1 - 2 * x + sqrt(1 - 12 * x + 4 * x ^ 2)))). • a(n) = Sum _{ k=0..n } 2 ^ (n - k) * binomial(2 * k,k) * binomial(2 * n + 1,2 * k). • a(0) = 1, a(1) = 8 and n * (2 * n + 1) * (4 * n - 3) * a(n) = (4 * n - 1) * (24 * n ^ 2 - 12 * n - 4) * a(n - 1) - 4 * (n - 1) * (2 * n - 1) * (4 * n + 1) * a(n - 2) for n > 1. - _ Seiichi Manyama _ , Aug 29 2020 •

▶ [A288487] 1,8,75,400,1445,4056,9583,20000,38025,67240,112211,178608,273325,404600,582135,817216,1122833,1513800,2006875,2620880,3376821,4298008,5410175,6741600,8323225 ⋆ Cuboids that fit in square rings from A288486 obtaining a fifth power. • a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). •

▶ [A123003] 8,75,463,2394,11274,50265,216581,912648,3788560,15565095,63484779,257591862,1041276566,4197718965,16888451857,67845945636,272258886492,1091657974275,4374492890615,17521540911570,70156842333538,280839342481425,1123993155149853 ⋆ Expansion of g.f.: (8 - 29 * x + 24 * x ^ 2) / ((1 - 4 * x) * (1 - 3 * x) * (1 - 2 * x) ^ 2 * (1 - x) ^ 2). • a(n) = (2 * (n + 1) + 1 - 16 * (n - 1) * 2 ^ n - 243 * 3 ^ n + 64 * 4 ^ (n + 1)) / 4. - _ Greg Dresden _ , Jun 21 2021 •

▶ [A015578] 0,1,8,75,688,6329,58200,535219,4921952,45263025,416245672,3827858651,35201571600,323719017961,2976969431288,27376664647875,251759980927168,2315223158543969,21291145058550600,195796615212388459,1800575517343164272,16558366906081587225,152273265939427504792 ⋆ Expansion of x / (1 - 8 * x - 11 * x ^ 2). • a(n) = 8 * a(n - 1) + 11 * a(n - 2). • a(n) = - (1 / 18) * sqrt(3) * (4 - 3 * sqrt(3)) ^ n + (1 / 18) * sqrt(3) * (4 + 3 * sqrt(3)) ^ n, with n > = 0. - _ Paolo P. Lava _ , Jun 25 2008 •

▶ [A145600] 1,8,75,784,8820,104544,1288287,16359200,212751396,2821056160,38013731756,519227905728,7174705330000,100136810390400,1409850293610375,20002637245262400,285732116760449700 ⋆ a(n) is the number of walks from (0,0) to (0,1) that remain in the upper half - plane y >= 0 using (2 * n - 1) unit steps either up (U), down (D), left (L) or right (R). • a(n) = 1 / n * binomial(2 * n,n + 1) * binomial(2 * n,n - 1). •

▶ [A094735] 0,1,1,8,75,796,8051,73788,623155,4965836,38028051,283400668,2072874035,14966280876,107083717651,761327161148,5388524417715,38017832427916,267623218488851,1880883687651228,13203904989574195,92616374066478956,649261556308773651 ⋆ Number of connected 3 - element multiantichains on a labeled n - set. • a(n) = (7 ^ n - 6 * 5 ^ n + 20 * 3 ^ n + 3 * 4 ^ n - 39 * 2 ^ n + 35) / 6, n > 0. - _ Benedict W. J. Irwin _ , May 25 2016 •

▶ [A239549] 0,1,8,76,704,6544,60800,564928,5249024,48771328,453158912,4210527232,39122124800,363503325184,3377492099072,31381976694784,291585718747136,2709269470314496,25173184387481600,233896708743626752,2173251882598793216 ⋆ Expansion of x / (1 - 8 * x - 12 * x ^ 2). • a(n) = 8 * a(n - 1) + 12 * a(n - 2) for n > 1 and a(0)=0, a(1)=1. • a(n) = (1 / (4 * sqrt(7))) * ((4 + 2 * sqrt(7)) ^ n - (4 - 2 * sqrt(7)) ^ n). • a(n + 1) = b(n) = sum(binomial(n - k, k) * 8 ^ (n - 2 * k) * 12 ^ k, k = 0..floor(n / 2)), n>=0, b(- 1) := 0. From Morse code counting, with n - 2 * k the number of dots and k the number of dashes for code length n. See the comment and example for b(3) = S(3) above. - _ Wolfdieter Lang _ , Mar 26 2014 •

▶ [A083234] 1,8,76,752,7504,75008,750016,7500032,75000064,750000128,7500000256,75000000512,750000001024,7500000002048,75000000004096,750000000008192,7500000000016384,75000000000032768,750000000000065536 ⋆ a(n) = (3 * 10 ^ n + 2 ^ n) / 4. • a(n) = (3 * 10 ^ n + 2 ^ n) / 4. • a(n) = 12 * a(n - 1) - 20 * a(n - 2). - _ Wesley Ivan Hurt _ , Apr 24 2021 •

▶ [A024103] 1,8,77,720,6545,59024,531405,4782920,43046657,387420408,3486784301,31381059488,282429536337,2541865828160,22876792454765,205891132094424,1853020188851585,16677181699666280,150094635296998797 ⋆ a(n) = 9 ^ n - n ^ 2. • a(n) = 12 * a(n - 1) - 30 * a(n - 2) + 28 * a(n - 3) - 9 * a(n - 4) for n>3. - _ Vincenzo Librandi _ , Oct 06 2014 •

▶ [A187638] 1,1,1,8,77,824,9448,113728,1419349,18215576,239034104,3194168768,43331889928,595375647424,8270102936896,115966112244224,1639592525879333,23350785267093848,334714889445506584,4825695011761675456,69936530485677013528 ⋆ A convolution of binomial coefficients. • a(n) = (1 / 8) * sum(C(2k,k) ^ 2 / (2k - 1) * C(2n - 2k,n - k) ^ 2 / (2n - 2k - 1), k=0..n) for n >= 1. •

▶ [A155600] 1,8,78,722,6546,59018,531378,4782842,43046466,387419978,3486783378,31381057562,282429532386,2541865820138,22876792438578,205891132061882,1853020188786306,16677181699535498,150094635296736978 ⋆ a(n) = 9 ^ n - 2 ^ n + 1 ^ n. • a(n) = 11 * a(n - 1) - 18 * a(n - 2) + 8 with a(0)=1, a(1)=8 - _ Vincenzo Librandi _ , Jul 21 2010 •

► [A199758] 1,8,78,848,9318,102488,1127358,12400928,136410198,1500512168,16505633838,181561972208,1997181694278,21968998637048,241658985007518,2658248835082688,29240737185909558,321648109045005128,3538129199495056398 ★ 7 * 11 ^ n + 1 ● a(n) = 11 * a(n - 1) - 10. ● a(n) = 12 * a(n - 1) - 11 * a(n - 2). ●

► [A353100] 8,79,717,6458,58126,523137,4708235,42374116,381367044,3432303395,30890730553,278016574974,2502149174762,22519342572853,202674083155671,1824066748401032,16416600735609280,147749406620483511,1329744659584351589,1196770193625916429 0 ★ a(1) = 8; for n>1, a(n) = 9 * a(n - 1) + 9 - n. ● a(n) = 11 * a(n - 1) - 19 * a(n - 2) + 9 * a(n - 3). ● a(n) = (7 * 9 ^ (n + 1) + 8 * n - 63) / 64. ● a(n) = Sum _{ k=0..n - 1 } (9 - n + k) * 9 ^ k. ●

► [A024102] 1,8,79,726,6557,59044,531435,4782962,43046713,387420480,3486784391,31381059598,282429536469,2541865828316,22876792454947,205891132094634,1853020188851825,16677181699666552,150094635296999103 ★ a(n) = 9 ^ n - n . ● a(n) = 11 * a(n - 1) - 19 * a(n - 2) + 9 * a(n - 3). - _ Vincenzo Librandi _ , Jun 17 2013 ●

► [A217401] 8,80,81,82,83,84,85,86,87,88,89,800,801,802,803,804,805,806,807,808,809,810,811,812,813 ★ Numbers starting with 8. ● a(n) = n + (71 * 10 ^ floor (log _ 10(9 * n - 8)) - 8) / 9. - _ Alan Michael Gómez Calderón _ , May 17 2023 ●

► [A144410] 8,80,224,440,728,1088,1520,2024,2600,3248,3968,4760,5624,6560,7568,8648,9800,11024,12320,13688,15128,16640,18224,19880,21608 ★ a(n) = 4 * (3 * n + 1) * (3 * n + 2). ● a(n) = a(m) + 36 * (n - m) * (n + m + 1). For m = n - 1, a(n) = a(n - 1) + 72 * n. - _ Bruno Berselli _ , Sep 29 2017 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3), n >= 3. - _ Klaus Purath _ , Jul 05 2020 ●

► [A188149] 0,8,80,232,456,752,1120,1560,2072,2656,3312,4040,4840,5712,6656,7672,8760,9920,11152,12456,13832,15280,16800,18392,20056 ★ Number of 4 - step self - avoiding walks on an n X n square summed over all starting positions. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>5. ●

► [A100431] 8,80,336,960,2200,4368,7840,13056,20520,30800,44528,62400,85176,113680,148800,191488,242760,303696,375440,459200,556248,667920,795616,940800,1105000 ★ Bisection of A002417. ● a(n) = (4 / 3) * (2 * n ^ 4 + 11 * n ^ 3 + 22 * n ^ 2 + 19 * n + 6). - _ Ralf Stephan _ , May 15 2007 ● a(n) = (8 / 3) * binomial(n + 2, 2) * binomial(2 * n + 3, 2). ●

► [A173116] 0,8,80,360,1088,2600,5328,9800,16640,26568,40400,59048,83520,114920,154448,203400,263168,335240,421200,522728,641600,779688,938960,1121480,1329408 ★ a(n) = sinh(2 * arcsinh(n)) ^ 2 = 4 * n ^ 2 * (n ^ 2 + 1). ● a(n) = a(- n) = (2 * n) ^ 2 + (2 * n ^ 2) ^ 2 = (2 * n ^ 2 + 1) ^ 2 - 1. - _ Michael Somos _ , Jul 05 2018 ●

► [A102698] 8,80,368,1264,3448,7792,16176,30696,54216,90104,143576,220328,326680,471232,664648,916344,1241856,1655208,2172584,2812664,3598664,4553800,5702776,7075264,8705088 ★ Number of equilateral triangles with coordinates (x,y,z) in the set { 0, 1,...,n } . ● a(n) approximately equals n ^ 4.989; also lim log(a(n)) / log(n) exists. - _ Eugen J. Ionascu _ , Dec 09 2006 ●

► [A159710] 0,0,0,0,8,80,528,2912,14592,69120,316160,1413632,6223872,27103232,117067776,502456320,2145517568,9122349056,38644678656,163186343936,687144960000,2886107922432,12094385684480,50577004298240,211105074905088 ★ Number of permutations of 1..n arranged in a circle with exactly 2 local maxima. ● a(n) = 2 ^ (- 5 + n) * (4 + 2 ^ n - 4 * n) * n for n>1. - _ Colin Barker _ , Oct 26 2015 ●

► [A145729] 0,8,80,664,5344,42792,342384,2739128,21913088,175304776,1402438288,11219506392,89756051232,718048409960,5744387279792,45955098238456,367640785907776,2941126287262344,23529010298098896,188232082384791320 ★ Partial sums of A052379. ● a(n) = 10 * a(n - 1) - 17 * a(n - 2) + 8 * a(n - 3). G.f.: - 8 * x / ((x - 1) ^ 2 * (8 * x - 1)). - _ Colin Barker _ , Oct 27 2014 ●

► [A320074] 1,8,80,720,6560,58960,531440,4782240,43046640,387413920,3486784400,31380999840,282429536480,2541865296880,22876792448320,205891127316680,1853020188851840,16677181656560880,150094635296999120,1350851717285570880,12157665459056397280 ★ Number of length n primitive (=aperiodic or period n) 9 - ary words which are earlier in lexicographic order than any other word derived by cyclic shifts of the alphabet. ● a(n) = Sum _{ d|n } 9 ^ (d - 1) * mu(n / d). ● a(n) = 9 ^ (n - 1) - Sum _{ d<n,d|n } a(d). ●

► [A024101] 0,8,80,728,6560,59048,531440,4782968,43046720,387420488,3486784400,31381059608,282429536480,2541865828328,22876792454960,205891132094648,1853020188851840,16677181699666568,150094635296999120 ★ a(n) = 9 ^ n - 1 . ● a(n) = 9 * a(n - 1) + 8 for n>0, a(0)=0. - _ Vincenzo Librandi _ , Nov 19 2010 ● a(0)=0, a(1)=8; for n>1, a(n) = 10 * a(n - 1) - 9 * a(n - 2). - _ Harvey P. Dale _ , Apr 14 2015 ● a(n) = Sum _{ i=1..n } 8 ^ i * binomial(n,n - i) for n>0, a(0)=0. - _ Bruno Berselli _ , Nov 11 2015 ●

► [A291181] 8,80,792,7840,77608,768240,7604792,75279680,745192008,7376640400,73021211992,722835479520,7155333583208,70830500352560,701149669942392,6940666199071360,68705512320771208,680114457008640720,6732439057765635992,66644276120647719200 ★ p - INVERT of the positive integers, where p(S) = 1 - 8 * S. ● a(n) = 10 * a(n - 1) - a(n - 2). ●

► [A155144] 1,8,80,792,7848,77760,770472,7634088,75641040,749476152,7426054728,73579777920,729052493832,7223690445768,71574686456400,709185392119512,7026840707183208,69624234893724480,689859680408169192 ★ a(n) = 9 * a(n - 1) + 9 * a(n - 2), n>2; a(0)=1, a(1)=8, a(2)=80. ● a(n) = 4 * (((9 + 3 * sqrt(13)) / 2) ^ (n - 1) + ((9 - 3 * sqrt(13)) / 2) ^ (n - 1)) + (44 / 39) * sqrt(13) * (((9 + 3 * sqrt(13)) / 2) ^ (n - 1) - ((9 - 3 * sqrt(13)) / 2) ^ (n - 1)) + (1 / 9) * [binomial(2 * n,n) mod 2], with n>=0. - _ Paolo P. Lava _ , Jan 26 2009 ● a(n) = (1 / 9) * [n=0] - 8 * 3 ^ (n - 2) * ChebyshevU(n, - 3 * i / 2). ● a(n) = (1 / 9) * [n=0] + 8 * 3 ^ (n - 2) * Fibonacci(n + 1, 3). (End) ●

► [A299871] 8,80,792,7927,79272,792713,7927135,79271352,792713513,7927135135,79271351350,792713513502,7927135135013,79271351350135,792713513501345,79271351350134555,792713513501345513,7927135135013455134,79271351350134551344,792713513501345513442,7927135135013455134424 ★ The sum of the first n terms of the sequence is the concatenation of the first n digits of the sequence, and a(1) = 8. ● a(n) = c(n) - c(n - 1), where c(n) = concatenation of the first n digits, c(n) ~ 0.88 * 10 ^ n, a(n) ~ 0.79 * 10 ^ n. See A300000 for the proof. - _ M. F. Hasler _ , Feb 22 2018 ●

► [A346178] 1,8,80,800,8000,80000,800000,8000000,80000000,800000000,8000000000,80000000000,800000000000,8000000000000,80000000000000,800000000000000,8000000000000000,80000000000000000,800000000000000000,8000000000000000000,80000000000000000000 ★ Expansion of (1 - 2 * x) / (1 - 10 * x). ● a(n) = 8 * 10 ^ (n - 1), n>0. ●

► [A102592] 1,8,80,832,8704,91136,954368,9994240,104660992,1096024064,11477712896,120196169728,1258710630400,13181388849152,138037296103424,1445545331654656,15137947242201088,158526641599938560 ★ a(n) = Sum _{ k=0..n } binomial(2n + 1, 2k) * 5 ^ (n - k). ● a(n) = 12 * a(n - 1) - 16 * a(n - 2); ● a(n) = sqrt(5) * (sqrt(5) - 1) ^ (2n + 1) / 10 + sqrt(5) * (sqrt(5) + 1) ^ (2n + 1) / 10. ● a(n) = Sum _{ k=0..n } binomial(2n + 1, k + 1) * 5 ^ k. - _ Paul Barry _ , May 27 2005 ●

► [A233123] 1,8,80,896,10496,124928,1495040,17924096,215023616,2580021248,30959206400,371506282496,4458058612736,53496636243968,641959366492160,7703511324164096,92442131595001856,1109305561960153088 ★ Number of n X 2 0..5 arrays with no element x(i,j) adjacent to itself or value 5 - x(i,j) horizontally or vertically, top left element zero, and 1 appearing before 2 3 and 4, and 2 appearing before 3 in row major order (unlabelled 6 - colorings with no clashing color pairs). ● a(n) = 2 ^ (2 * n - 3) * (3 ^ n + 3) / 3. ●

► [A053175] 1,8,80,896,10816,137728,1823744,24862720,346498048,4911669248,70560071680,1024576061440,15008466534400,221460239482880,3287994183188480,49074667327062016,735814252604162048 ★ Catalan - Larcombe - French sequence. ● a(n) * n ^ 2 = a(n - 1) * 8 * (3 * n ^ 2 - 3 * n + 1) - a(n - 2) * 128 * (n - 1) ^ 2. - _ Michael Somos _ , Apr 01 2003 ● a(n) = 2 ^ n * sum _{ k=0 }^ n C(n,k) * C(2k,k) * C(2(n - k),n - k), where C(n,k)=n! / (k!(n - k)!. This formula has been proved via the Zeilberger algorithm (both sides of the equality satisfy the same recurrence relation). a(n) / 2 ^ n also has another expression: sum _{ k=0 }^{ floor(n / 2) } C(n,2k) * C(2k,k) ^ 2 * 4 ^ (n - 2k). - _ Zhi - Wei Sun _ , Mar 21 2013 ● a(n) = (- 1) ^ n * Sum _{ k=0..n } C(2k,k) * C(2(n - k),n - k) * C(k,n - k) * (- 4) ^ k. I have proved this new formula via the Zeilberger algorithm. - _ Zhi - Wei Sun _ , Nov 19 2014 ●

► [A002072] 1,8,80,4374,9800,123200,336140,11859210,11859210,177182720,1611308699,3463199999,63927525375,421138799639,1109496723125,1453579866024,20628591204480,31887350832896,31887350832896,119089041053696,2286831727304144,959146873735190937 5,959146873735190937 5,959146873735190937 5,959146873735190937 5,959146873735190937 5,959146873735190937 5 ★ a(n) = smallest number m such that for all k > m, either k or k + 1 has a prime factor > prime(n). ● a(n) < 10 ^ n / n except for n=4. (Conjectured, from experimental data.) - _ M. F. Hasler _ , Jan 16 2015 ●

► [A264185] 8,81,720,7056,70560,705600,7056000,70560000,705600000,7056000000,70560000000,705600000000,7056000000000,70560000000000,705600000000000,7056000000000000,70560000000000000,705600000000000000 ★ Number of (n + 1) X (3 + 1) arrays of permutations of 0..n * 4 + 3 with each element having index change +- (.,.) 0,0 1, - 1 or 2,2. ● a(n) = 441 * 2 ^ n * 5 ^ (n - 4) for n>3. ●

► [A098308] 0,1,8,81,800,7921,78408,776161,7683200,76055841,752875208,7452696241,73774087200,730288175761,7229107670408,71560788528321,708378777612800,7012226987599681,69413891098384008,687126683996240401 ★ Unsigned member r= - 8 of the family of Chebyshev sequences S _ r(n) defined in A092184. ● a(n)= 10 * a(n - 1) - a(n - 2) + 2 * (- 1) ^ (n + 1), n>=2, a(0)=0, a(1)=1. ● a(n)= 9 * a(n - 1) + 9 * a(n - 2) - a(n - 3), n>=3, a(0)=0, a(1)=1, a(2)=8. ● a(x)=1 / 12(2 * (- 1) ^ x + (5 + 2 * Sqrt[6])(5 - 2 * Sqrt[6]) ^ x + (5 - 2 * Sqrt[6])(5 + 2 * Sqrt[6]) ^ x). - _ Harvey P. Dale _ , Aug 11 2013 ●

► [A055996] 1,8,81,810,8100,81000,810000,8100000,81000000,810000000,8100000000,81000000000,810000000000,8100000000000,81000000000000,810000000000000,8100000000000000,81000000000000000 ★ a(n) = 81 * 10 ^ (n - 2), a(0)=1, a(1)=8. ● a(n)=10a(n - 1) + [(- 1) ^ n] * C(2, 2 - n). G.f.(x)=(1 - x) ^ 2 / (1 - 10x). ●

► [A207994] 8,81,853,9075,96831,1034073,11045757,117997043,1260537911,13466147569,143857201093,1536809621307,16417559602831,175386899980873,1873638094198285,20015860487662275,213827138093982759 ★ Number of nX5 0..2 arrays with new values 0..2 introduced in row major order and no element equal to any horizontal or vertical neighbor (colorings ignoring permutations of colors). ● a(n) = 16 * a(n - 1) - 65 * a(n - 2) + 92 * a(n - 3) - 48 * a(n - 4) + 8 * a(n - 5). ●

► [A356829] 0,0,8,82,512,2644,12364,54598,232772,970520,3988624,16239066,65709256,264814140,1064414100,4271035662,17118683020,68563527616,274481537112,1098506723042,4395504614544,17585769696164,70352578566620,281434319454038,1125797816327892 ★ Number of vertex cuts in the n - Möbius ladder. ● a(n) = 4 ^ n + n - LucasL(n, 2) - 3 * n * Fibonacci(n, 2). ● a(n) = 10 * a(n - 1) - 35 * a(n - 2) + 48 * a(n - 3) - 11 * a(n - 4) - 22 * a(n - 5) + 7 * a(n - 6) + 4 * a(n - 7). ●

► [A179980] 1,8,83,826,8265,82644,826447,8264462,82644629,826446280,8264462811,82644628098,826446280993,8264462809916,82644628099175,826446280991734,8264462809917357,82644628099173552,826446280991735539 ★ a(n)=10 * a(n - 1) +/- n ● a(n)= + 8 * a(n - 1) + 19 * a(n - 2) + 10 * a(n - 3). G.f.: - x / ((10 * x - 1) * (1 + x) ^ 2). a(n) = (10 ^ (n + 1) - 11 * n * (- 1) ^ n - 10 * (- 1) ^ n) / 121. [From _ R. J. Mathar _ , Aug 06 2010] ●

► [A093103] 1,8,85,848,8569,86360,870829,8780192,88528945,892615592,90000325819074518808 0,914962188841,9225346460408,93016977648925,937868096859968,945630130550716 9,953456404781166 80,961347451240583989 ★ a(n + 2) = 8 * a(n + 1) + 21 * a(n), with a(1)=1, a(2)=8. ● a(n) = (1 / 2) * ((4 + sqrt(37)) ^ n + (4 - sqrt(37)) ^ n +) + (2 / 37) * sqrt(37) * ((4 + sqrt(37)) ^ n - (4 + sqrt(37)) ^ n), with n>=0 - _ Paolo P. Lava _ , Jul 08 2008 ● a(n) = (i * sqrt(21)) ^ n * ChebyshevU(n, - 4 * i / sqrt(21)). - _ G. C. Greubel _ , Feb 09 2023 ●

► [A180582] 1,8,86,776,7010,63674,578090,5247824,47640092,432480632,3926091512,35641352528,323554871864,2937255393440,26664624744320,242063463190976,2197470272854016,19948799940346880,181096701955896896,1644009442040416928,14924441010395894048,135485194778650515104 ★ Number of Hamiltonian cycles in C _ 6 X P _ n. ● a(1) = 1, a(2) = 8, a(3) = 86, a(4) = 776, a(5) = 7010, a(6) = 63674, a(7) = 578090, a(8) = 5247824 and a(n) = - 12 * a(n - 7) - 32 * a(n - 6) - 36 * a(n - 5) - 28 * a(n - 4) + 10 * a(n - 3) + 9 * a(n - 1), n>8. ●

► [A268052] 1,8,86,1082,14554,200818,2796826,39082562,546791114,7653252338,107136417466,1499864270242,20997871916074,293969067496658,4115561248327706,57617828993493122,806649463493495434 ⋆ Number of n X 4 0..2 arrays with new values introduced in each row and column in sequential order starting with zero. ● a(n) = (105 * 2 ^ n + 196 * 5 ^ n + 25 * 2 ^ (1 + n) * 7 ^ n) / 1890 . ●

► [A239753] 1,1,8,87,1312,24685,564336,15168811 ⋆ Number of pairs of functions (f,g) on a set of n elements into itself satisfying f(x) = g(f(g(x)). ● a(n) <= n ^ 2n. - _ Charles R Greathouse IV _ , Mar 26 2014 ●

► [A284069] 8,88,89,98,888,889,898,899,988,989,998,8888,8889,8898,8899,8988,8989,8998,8999,9888,9889,9898,9899,9988,9989 ⋆ Numbers whose smallest decimal digit is 8. ● a(2 * j + 2 ^ (m + 1) - m - 3) = 10 * a(j + 2 ^ m - m - 1) + 8 for j =1..2 ^ m - 1. ● a(2 * j + 2 ^ (m + 1) - m - 2) = 10 * a(j + 2 ^ m - m - 1) + 9 for j=1..2 ^ m - 1. ● a(2 ^ (m + 1) - m - 2) = 10 ^ m - 2. (End) ●

► [A271939] 8,88,776,6424,52040,418264,3351944,26833048,214716872,1717892440,13743611912,109950312472,879606751304,7036866765016,56294972383880,450359893862296,3602879495272136,28823036995298392,230584299061751048,1844674401792100120 ⋆ Number of edges in the n - th order Sierpinski carpet graph. ● a(n) = 8 * (8 ^ n - 3 ^ n) / 5. ● a(n) = 8 * a(n - 1) + 8 * 3 ^ (n - 1). - _ Allan Bickle _ , Nov 27 2022 ●

► [A053376] 8,88,888,1888,81888,181888,8181888,18181888,118181888,8118181888,88118181888,888118181888,8888118181888,88888118181888,888888118181888,1888888118181888,81888888118181888,181888888118181888 ⋆ a(n) contains n digits (either '1' or '8') and is divisible by 2 ^ n. ● a(n)=a(n - 1) + 10 ^ (n - 1) * (8 - 7 * [a(n - 1) / 2 ^ (n - 1) mod 2]) i.e. a(n) ends with a(n - 1); if (n - 1) - th term is divisible by 2 ^ n then n - th term begins with an 8, if not then n - th term begins with a 1. ●

► [A053377] 8,88,888,3888,33888,333888,3333888,83333888,383333888,3383333888,33383333888,833383333888,8833383333888,88833383333888,888833383333888,8888833383333888,88888833383333888,888888833383333888 ⋆ a(n) contains n digits (either '3' or '8') and is divisible by 2 ^ n. ● a(n)=a(n - 1) + 10 ^ (n - 1) * (8 - 5 * [a(n - 1) / 2 ^ (n - 1) mod 2]) i.e. a(n) ends with a(n - 1); if (n - 1) - th term is divisible by 2 ^ n then n - th term begins with an 8, if not then n - th term begins with a 3. ●

► [A053378] 8,88,888,5888,85888,885888,8885888,58885888,558885888,8558885888,85558885888,858558885888,5858558885888,85858558885888,585858558885888,5585858558885888,55585858558885888,555585858558885888 ⋆ a(n) contains n digits (either '5' or '8') and is divisible by 2 ^ n. ● a(n)=a(n - 1) + 10 ^ (n - 1) * (8 - 3 * [a(n - 1) / 2 ^ (n - 1) mod 2]) i.e. a(n) ends with a(n - 1); if (n - 1) - th term is divisible by 2 ^ n then n - th term begins with an 8, if not then n - th term begins with a 5. ●

► [A053379] 8,88,888,7888,77888,877888,7877888,87877888,787877888,8787877888,88787877888,888787877888,8888787877888,88888787877888,888888787877888,8888888787877888,88888888787877888,888888888787877888 ⋆ a(n) contains n digits (either '7' or '8') and is divisible by 2 ^ n. ● a(n)=a(n - 1) + 10 ^ (n - 1) * (8 - [a(n - 1) / 2 ^ (n - 1) mod 2]) i.e. a(n) ends with a(n - 1); if (n - 1) - th term is divisible by 2 ^ n then n - th term begins with an 8, if not then n - th term begins with a 7. ●

► [A002282] 0,8,88,888,8888,88888,888888,8888888,88888888,888888888,8888888888,88888888888,888888888888,8888888888888,88888888888888,888888888888888,8888888888888888,88888888888888888,888888888888888888 ⋆ a(n) = 8 * (10 ^ n - 1) / 9. ● a(n) = 10 * a(n - 1) + 8, with a(0)=0. - _ Paolo P. Lava _ , Jan 23 2009 ● a(n) = 11a(n - 1) - 10a(n - 2), with a(0)=0, a(1)=8. ● a(n) = a(n - 1) + 8 * 10 ^ (n - 1), with a(0)=0. - _ Vincenzo Librandi _ , Jul 22 2010 ● a(n) = floor(8 * 10 ^ n / 9). (End) ●

► [A053380] 8,88,888,9888,89888,989888,9989888,89989888,989989888,8989989888,98989989888,898989989888,8898989989888,98898989989888,898898989989888,8988989989989888,98998989989989888,899998989989989888 ⋆ a(n) = Fibonacci(5 * n + 1). ● a(n) = 11 * a(n - 1) + a(n - 2). [corrected by _ Philippe Deléham _ , Nov 16 2008] ● a(n) = Sum _{ k=0..5 * n } binomial(k, 5 * n - k). ● a(n) = - (1 / 10) * ((11 / 2) - (5 / 2) * sqrt(5)) ^ n * sqrt(5) + (1 / 2) * ((11 / 2) - (5 / 2) * sqrt(5)) ^ n + (1 / 10) * sqrt(5) * ((11 / 2) + (5 / 2) * sqrt(5)) ^ n + (1 / 2) * ((11 / 2) + (5 / 2) * sqrt(5)) ^ n. - _ Paolo P. Lava _ , Nov 19 2008 ●

► [A116149] 8,91,405,1196,2800,5643,10241,17200,27216,41075,59653,83916,114920,153811,201825,260288,330616,414315,512981,628300,762048,916091,1092385,1292976,1520000 ⋆ a(n) = sum of n consecutive cubes after n ^ 3. ● a(n) = n ^ 2 * (1 + 3 * n) * (3 + 5 * n) / 4. ● a(n) = Sum _{ k=(n + 1)..2 * n } k ^ 3. ●

► [A190943] 0,1,8,91,944,10009,105560,1114723,11767904,124240753,1311659432,13847775787,146197010960,1543466033929,16295047567352,172033963454899,1816237991957696,19174820948943841,202436993374408520,2137216112616751867 ⋆ a(n) = 8 * a(n - 1) + 27 * a(n - 2), with a(0)=0, a(1)=1. ● a(n) = ((4 + sqrt(43)) ^ n - (4 - sqrt(43)) ^ n) / (2 * sqrt(43)). ●

► [A187157] 0,0,8,92,248,476,776,1148,1592,2108,2696,3356,4088,4892,5768,6716,7736,8828,9992,11228,12536,13916,15368,16892,18488 ⋆ Number of 4 - step one space at a time bishop's tours on an n X n board summed over all starting positions. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>5. ●

► [A155615] 1,8,92,974,9920,99758,999272,9997814,99993440,999980318,9999940952,99999822854,999999468560,9999998405678,99999995217032,999999985651094,9999999956953280,99999999870859838,999999999612579512 ⋆ a(n) = 10 ^ n - 3 ^ n + 1. ● a(n) = 13 * a(n - 1) - 30 * a(n - 2) + 18 with a(0)=1, a(1)=8. - _ Vincenzo Librandi _ , Jul 21 2010 ●

► [A133271] 1,8,92,1093,13021,155156,1848848,22031017,262523353,3128249216,37276467236,444189357613,5292995824117,63071760531788,751568130557336,8955745806156241,106717381543317553,1271652832713654392 ⋆ Indices of 7 - gonal numbers which are also centered 7 - gonal numbers. ● a(n + 2)=12 * a(n + 1) - a(n) - 3 ; a(n + 1)=6 * a(n) - 1.5 + 0.5 * (140 * a(n) ^ 2 - 84 * a(n) - 7) ^ 0 .5 ● a(n)=3 / 10 + (7 / 20) * [6 - sqrt(35)] ^ (n - 1) + (1 / 20) * sqrt(35) * [6 + sqrt(35)] ^ (n - 1) + (7 / 20) * [6 + sqrt(35)] ^ (n - 1) - (1 / 20) * [6 - sqrt(35)] ^ (n - 1) * sqrt(35), with n>=1 - _ Paolo P. Lava _ , Jul 08 2008 ● a(1)=1, a(2)=8, a(3)=92, a(n)=13 * a(n - 1) - 13 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Mar 24 2013 ●

► [A099142] 1,8,92,1184,15632,207488,2757056,36643328,487039232,6473467904,86042074112,1143628341248,15200538791936,202038000386048,2685388609667072,35692849740775424,474411605904392192 ⋆ a(n) = 6 ^ n * T(n, 4 / 3) where T is the Chebyshev polynomial of the first kind. ● a(n) = 6 ^ n * T(n, 8 / 6) where T is the Chebyshev polynomial of the first kind. ● a(n) = Sum _{ k=0..n } 7 ^ k * binomial(2n, 2k). ● a(n) = (1 + sqrt(7)) ^ (2 * n) / 2 + (1 - sqrt(7)) ^ (2 * n) / 2. ● a(0)=1, a(1)=8, a(n) = 16 * a(n - 1) - 36 * a(n - 2) for n > 1. - _ Philippe Deléham _ , Sep 08 2009 ●

► [A007556] 1,1,8,92,1240,18278,285384,4638348,77652024,1329890705,23190029720,410333440536,7349042994488,132969010888280,2426870706415800,44627576949364104,826044435409399800,15378186970730687400 ⋆ Number of 8 - ary trees with n vertices. ● a(0) = 1; a(n) = Sum _{ i1 + i2 + .. i8 = n - 1 } a(i1) * a(i2) * ... * a(i8) for n >= 1. - _ Robert FERREOL _ , Apr 01 2015 ● a(n) = binomial(8 * n, n - 1) / n for n >= 1, a(0) = 1 (from the Lagrange series of the o.g.f. A(x) with its above given implicit equation). ● a(n) are special values of Jacobi polynomials, in Maple notation: ●

► [A087579] 1,8,93,976,10505,112344,1203397,12885152,137979729,1477507240,15821470061,169419470448,1814178395353,19426591805816,208023907911765,2227562425662784,23853192734743457,255424852222168392,2735141407084907389,29288451971122142480 ⋆ a(n)=(1 / 6) * sum(k=0,n,binomial(n,k) * Fibonacci(k) * 6 ^ k). ● a(n)=8 * a(n - 1) + 29 * a(n - 2) ● a(n)=(1 / 2) * [4 - 3 * sqrt(5)] ^ n - (2 / 15) * [4 - 3 * sqrt(5)] ^ n * sqrt(5) + (2 / 15) * [4 + 3 * sqrt(5)] ^ n * sqrt(5) + (1 / 2) * [4 + 3 * sqrt(5)] ^ n, with n>=0 - _ Paolo P. Lava _ , Jun 25 2008 ●

► [A214385] 8,94,456,1506,3976,9044,18480,34812,61512,103202,165880,257166,386568,565768,808928,1133016,1558152,2107974,2810024,3696154,4802952,6172188,7851280,9893780,12359880 ⋆ Number of 3 X 3 X 3 triangular 0..n arrays with no element lying outside the (possibly reversed) range delimited by its sw and se neighbors, and no element equal to its horizontal neighbors. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

► [A121161] 0,8,94,997,10013,100052,999587,9998539,99998243,1000001596,10000042120 ⋆ a(n) is the nearest integer to log(lcm(1,2,3,...,10 ^ n)). ● a(n) = Sum _{ i=1..PrimePi(10 ^ n) } log(p _ i ^ e _ i), where e is the maximum exponent such that p ^ e < 10 ^ n. - _ Robert G. Wilson v _ , Aug 16 2006 ●

► [A098269] 1,8,94,1232,16966,240368,3468844,50712992,748553926,11131168688,166498969924,2502416381792,37759888297756,571681667171168,8679980422677784,132116085646644032,2015249400937940806 ⋆ a(n) = 2 ^ n * P _ n(4), 2 ^ n times the Legendre polynomial of order n at 4. ● a(n) = Sum _{ k=0..floor(n / 2) } (- 1) ^ k * binomial(n, k) * binomial(2(n - k), n) * 4 ^ (n - 2k). ● a(n) = Sum _{ k=0..n } binomial(n,k) ^ 2 * 3 ^ k * 5 ^ (n - k). - _ Paul D. Hanna _ , Sep 29 2012 ●

► [A116144] 0,8,96,768,5120,30720,172032,917504,4718592,23592960,115343360,553648128,2617245696,12213813248,56371445760,257698037760,1168231104512,5257039970304,23502061043712,104453604638720,461794883665920 ⋆ a(n) = 4 ^ n * n * (n + 1). ● a(n) = 12 * a(n - 1) - 48 * a(n - 2) + 64 * a(n - 3). - _ Vincenzo Librandi _ , Feb 28 2013 ●

► [A099675] 8,96,984,9872,98760,987648,9876536,98765424,987654312,9876543200,98765432088,987654320976,9876543209864,98765432098752,987654320987640,9876543209876528,98765432098765416,987654320987654304 ⋆ Partial sums of repdigits of A002282. ● a(n) = (8 / 81) * (10 ^ (n + 1) - 9 * n - 10). - R. Piyo (nagoya314(AT)yahoo.com), Dec 10 2004 ●

► [A060458] 8,96,992,9984,99968,999936,9999872,99999744,999999488,9999998976,99999997952,999999995904,9999999991808,99999999983616,999999999967232,9999999999934464,99999999999868928,999999999999737856 ⋆ Maximal value seen in the final n decimal digits of 2 ^ j for all values of j. ● a(n) = 10 ^ n - 2 ^ n = 2 ^ n * (5 ^ n - 1). ● a(n) = 12 * a(n - 1) - 20 * a(n - 2); O.g.f.:1 / (1 - 10x) - 1 / (1 - 2x). - _ Geoffrey Critzer _ , Dec 15 2011 ● a(n) = f(n,0); Given f(x,y) =sum { j=0..x + y - 1 } (2 ^ (3 * x - 2 * j) * binomial(x,j)). - _ R. J. Cano _ , May 15 2014 ●

► [A173834] 1,8,96,994,9992,99990,999988,9999986,99999984,999999982,9999999980,99999999978,999999999976,9999999999974,99999999999972,999999999999970,9999999999999968,99999999999999966,999999999999999964 ⋆ a(n)=10 ^ n - 2 * n ● a(n) = 10 * a(n - 1) + 18 * n - 38 = 12 * a(n - 1) - 21 * a(n - 2) + 10 * a(n - 3). - _ Vincenzo Librandi _ , Jul 15 2012 ●

► [A099150] 8,98,998,9998,99998,999998,9999998,99999998,999999998,9999999998,99999999998,999999999998,9999999999998,99999999999998,999999999999998,9999999999999998,99999999999999998,999999999999999998,9999999999999999998 ⋆ Positive integers k such that f(k) + f(k)=concatenation of k and k, where f(k)=k(k + 3) / 2 (A000096). ● a(n) = 11 * a(n - 1) - 10 * a(n - 2) for n > 2. ●

► [A199029] 8,98,1088,11978,131768,1449458,15944048,175384538,1929229928,21221529218,233436821408,2567805035498,28245855390488,310704409295378,341

7748502249168,37595233524740858,413547568772149448,4549023256493643938 ⋆ a(n) = 9 * 11 ^ n - 1. ● a(n) = 11 * a(n - 1) + 10. ● a(n) = 12 * a(n - 1) - 11 * a(n - 2). ●

▶ [A286841] 0,8,99,1958,28322,228249,2827300,55922199,808904403,9781942334,52199939826,603633907222,11356596271444,11356596271444,182860723582496 2,37264994707118563,651495710876207647,5974828584341646375,49226908181248336040 ⋆ One of the two successive approximations up to 13 ^ n for 13 - adic integer sqrt(- 1). Here the 8 (mod 13) case (except for n=0). ● a(0) = 0 and a(1) = 8, a(n) = a(n - 1) + 4 * (a(n - 1) ^ 2 + 1) mod 13 ^ n for n > 1. ● a(n) = = L(13 ^ n,8) (mod 13 ^ n) == (4 + sqrt(17)) ^ (13 ^ n) + (4 - sqrt(17)) ^ (13 ^ n) (mod 13 ^ n), where L(n,x) denotes the n - th Lucas polynomial of A114525. - _ Peter Bala _ , Nov 20 2022 ●

▶ [A083227] 1,8,100,800,10000,80000,1000000,8000000,100000000,800000000,1000000000,80000000000,1000000000000,8000000000000,100000000000000,800000000000000,1000000000000000,8000000000000000 ⋆ a(n) = (9 * 10 ^ n + (- 10) ^ n) / 10. ● a(n) = (9 * 10 ^ n + (- 10) ^ n) / 10. ●

▶ [A229282] 0,8,100,1088,11008,106496,999424,9175040,82837504,738197504,6509559808,56908316672,493921239040,4260607557632,36558761623552,312261302288384,2656420092706816,22517998136852480,190277084256403456,1603281467343896576,13474770085092524032 ⋆ Number of ascending runs in { 1,...,8 }^n. ● a(n) = 2 ^ (3 * n - 4) * (9 * n + 7) for n>0, a(0) = 0. ●

▶ [A208705] 8,100,1268,16084,204020,2587924,32826932,416398420,5281871732,66998738836,849856117940,10780134577876,136742325040628,1734529687216660,22001916633654068,279086797488636244 ⋆ Number of n X 4 0..1 arrays with new values 0..1 introduced in row major order and no element equal to more than two of its immediate leftward or upward or right - upward antidiagonal neighbors. ● a(n) = (2 ^ (- 1 - n) * ((13 - 3 * sqrt(17)) ^ n * (- 1 + sqrt(17)) + (1 + sqrt(17)) * (13 + 3 * sqrt(17)) ^ n)) / sqrt(17). ●

▶ [A164760] 8,104,670,3096,11786,39564,121678,350992,964338,2550356,6541846,16366616,40107066,96586332,229176926,536895520,1243957122,2854431844,6494293670,14664265256,32889555658,73320539244,162562734830 ⋆ Number of n X 3 1..4 arrays with all 1s connected, all 2s connected, all 3s connected, all 4s connected, 1 in the upper left corner, 2 in the upper right corner, 3 in the lower left corner, 4 in the lower right corner, and with no element having more than 3 neighbors with the same value. ● a(n) = (- 4236 + 4281 * 2 ^ n - 4 * (421 + 339 * 2 ^ n) * n + 6 * (- 32 + 25 * 2 ^ n) * n ^ 2 - 32 * n ^ 3) / 6. ●

▶ [A335608] 8,104,896,6800,49208,349304,2459696,17261600,120962408,847130504,5931094496,41521204400,290659059608,2034645303704,14242612785296,99698576475200,697890896260808,4885238856628904,34196679744812096,239376781458914000,1675637539948086008 ⋆ Number of sets (in the Hausdorff metric geometry) at each location between two sets defined by a complete bipartite graph K(3,n) (with n at least 2) missing one edge. ● a(n) = 3 * 7 ^ (n - 1) - 5 * 3 ^ (n - 1) + 2. ● a(n) = 11 * a(n - 1) - 31 * a(n - 2) + 21 * a(n - 3) for n > 4. (End) ●

▶ [A001657] 1,8,104,1092,12376,136136,1514513,16776144,186135312,2063912136,22890661872,253854868176,2815321003313,31222272414424,346260798314872,3840089017377228,42587248616222024,472299787252290712,5237885063192296801,58089034826620525728 ⋆ Fibonomial coefficients: column 5 of A010048. ● a(n) = Fibonacci(n + 3) * (Fibonacci(n + 3) ^ 4 - 1) / 30. - _ Gary Detlefs _ , Apr 24 2012 ● a(n) = a(- 6 - n) * (- 1) ^ n for all n in Z. - _ Michael Somos _ , Sep 19 2014 ●

▶ [A055406] 1,8,106,702,3390,11496,33792,83877,191433,394251,766518,1397065,2446316,4076126,6601783,10324698,15776495,23436651,34198045,48828417,68680634,94868383,129404333,173984393,231540046 ⋆ Number of points in N ^ 7 of norm <= n. ● a(n) = [x ^ (n ^ 2)] (1 + theta _ 3(x)) ^ 7 / (128 * (1 - x)), where theta _ 3() is the Jacobi theta function. - _ Ilya Gutkovskiy _ , Apr 15 2018 ●

▶ [A155632] 1,8,106,1268,14386,160028,1767466,19470788,214293346,2357685548,25936376026,285307476308,3138411599506,34522645035068,379749565147786,4177247095673828,45949725568604866,505447011319424588 ⋆ a(n) = 11 ^ n - 4 ^ n + 1 ^ n. ● a(n)=15 * a(n - 1) - 44 * a(n - 2) + 30 with a(0)=1, a(1)=8 - _ Vincenzo Librandi _ , Jul 21 2010 ●

▶ [A129278] 1,8,106,1558,23589,360499,5530445,85040656,1310211074,20223812711,312728963211,4844238210807,75161494829564,1167972975649534,18175688264003359,283219807758089612,4418626917709277371 ⋆ Column 2 of triangle A129276; a(n) is the coefficient of q ^ (2n + 2) in the squared q - factorial of n + 2. ● a(n) = [q ^ (2n + 2)] Product _{ i=1..n + 2 } { (1 - q ^ i) / (1 - q) }^2. ●

▶ [A187288] 0,8,108,328,672,1128,1696,2376,3168,4072,5088,6216,7456,8808,10272,11848,13536,15336,17248,19272,21408,23656,26016,28488,31072 ⋆ Number of 3 - step one or two space at a time rook's tours on an n X n board summed over all starting positions. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>6. ●

▶ [A270111] 0,8,112,1176,10976,96040,806736,6588344,52706752,415065672,3228288560,24857821912,189823367328,1439493868904,10851569165584,81386768741880,607687873272704,4519678557465736,33498794014157808,247518866882388248 ⋆ Number of n X 1 0..7 arrays with some element plus some horizontally or vertically adjacent neighbor totalling seven exactly once. ● a(n) = 8 * 7 ^ (n - 2) * (n - 1). ●

▶ [A139741] 0,8,112,1304,14560,160808,1770832,19484984,214352320,2357928008,25937365552,285311493464,3138427845280,34522710549608,379749828800272,4177248155066744,45949729820525440,505447028370153608,5559917313104810992,61159090447252284824 ⋆ a(n) = 11 ^ n - 3 ^ n. ● a(n) = 14 * a(n - 1) - 33 * a(n - 2). [_ Vincenzo Librandi _ , Jun 02 2011] ●

▶ [A155460] 1,1,8,113,1296,15905,190744,2305297,27788832,335270209,4043814440,48778755761,588376953648,7097174661473,85607868020536,1032624502576465,12455781553617984,150244853055190657,1812292120568806472 ⋆ a(n)=8 * a(n - 1) + 49 * a(n - 2), n>2 ; a(0)=1, a(1)=1, a(2)=8 . ● a(n)=(1 / 2) *{ [4 - sqrt(65)] ^ (n - 1) + [4 + sqrt(65)] ^ (n - 1) }+ (2 / 65) * sqrt(65) *{ [4 + sqrt(65)] ^ (n - 1) - [4 - sqrt(65)] ^ (n - 1) }+ [C(2 * n,n) mod 2], with n>=0 [From _ Paolo P. Lava _ , Jan 26 2009] ●

▶ [A064090] 1,1,8,113,1982,38886,817062,17981769,409186310,9549411950,227307541448,5497312072330,134696099554276,3336563455537768,8341922622733072,21022748630707710 33,53347639317495439302 ⋆ Generalized Catalan numbers C(7; n). ● a(n) = Sum _{ m=0..n - 1 } (n - m) * binomial(n - 1 + m, m) * (7 ^ m) / n. ●

▶ [A062126] 8,114,667,2504,7191,17266,36482,70050,124882,209834,335949,516700,768233,1109610,1563052,2154182,2912268,3870466,5066063,6540720,8340715,10517186,13126374,16229866,19894838 ⋆ Sixth column of A046741. ● a(n) = (320 + 1114 * n + 1515 * n ^ 2 + 1125 * n ^ 3 + 405 * n ^ 4 + 81 * n ^ 5) / 40. ●

▶ [A046914] 0,8,117,1340,14211,146078,1480437,14902280,149511591,1497558338,14987792457,149938963820,1499694822171,14998474116998,149992370597277,1499961853010960,14999809265103951,149999046325618058,1499995231628286897 ⋆ Sum of aliquot factors (divisors excluding the number itself) of 10 ^ n. ● a(n) = (2 ^ (n + 1) - 1) * (5 ^ (n + 1) - 1) / 4 - 10 ^ n. - _ Giovanni Resta _ , Jul 24 2015 ●

▶ [A086302] 8,120,528,1520,3480,6888,12320,20448,32040,47960,69168,96720,131768,175560,229440,294848,373320,466488,576080,703920,851928,1022120,1216608,1437600,1687400 ⋆ a(n) = 4 * n ^ 4 + 24 * n ^ 3 + 48 * n ^ 2 + 36 * n + 8. ● a(n) = 4 * (n + 1) * (n + 2) * (n ^ 2 + 3 * n + 1). - _ Bruno Berselli _ , Mar 26 2012 ●

▶ [A053129] 8,120,792,3432,11440,31824,77520,170544,346104,657800,1184040,2035800,3365856,5379616,8347680,12620256,18643560,26978328,38320568,53524680,73629072,99884400,133784560,177100560,231917400 ⋆ Binomial coefficients C(2 * n - 6,7). ● a(n) = binomial(2 * n - 6, 7) if n >= 7 else 0. ● a(n) = (n - 6) * (n - 5) * (n - 4) * (n - 3) * (2 * n - 11) * (2 * n - 9) * (2 * n - 7) / 315. - _ Wesley Ivan Hurt _ , Mar 25 2020 ●

▶ [A249641] 0,0,8,120,1016,8520,68552,551496,4415048,35344632,282781304,2262444024,18099745784,144799511928,1158397641080,9267193490808,74137560288632,593100581182152,4744804748330312,37958438777603016,303667511011784688,2429340094421767752 ⋆ Number of strings of length n over an 8 - letter alphabet that begin with a nontrivial palindrome. ● a(0) = 0; a(1) = 0; a(n + 1) = 8 * a(n) + 8 ^ ceiling((n + 1) / 2) - a(ceiling((n + 1) / 2)). ●

▶ [A165231] 1,8,120,1856,28736,444928,6888960,106663936,1651511296,25570869248,395921817600,6130182127616,94915539501056,1469607174995968,22754390483927040,352313390342864896,5454979121614422016 ⋆ a(0)=1, a(1)=8, a(n)=16 * a(n - 1) - 8 * a(n - 2) for n>1 . ● a(n) = (1 / 2) * ((8 + 2 * sqrt(14)) ^ n + (8 - 2 * sqrt(14)) ^ n), n>=0 [From Paolo P. Lava, Sep 16 2009] ●

▶ [A004381] 1,8,120,2024,35960,658008,12271512,231917400,4426165368,85113005120,1646492110120,32006008361808,624668654531480,12233149001721760,240260199935164200,4730523156632595024 ⋆ Binomial coefficient C(8n,n). ● a(n) = C(8 * n - 1,n - 1) * C(64 * n ^ 2,2) / (3 * n * C(8 * n + 1,3)), n>0. - _ Gary Detlefs _ , Jan 02 2014 ●

▶ [A016791] 8,125,512,1331,2744,4913,8000,12167,17576,24389,32768,42875,54872,68921,85184,103823,125000,148877,175616,205379,238328,274625,314432,357911,405224 ⋆ a(n) = (3 * n + 2) ^ 3. ● a(0)=8, a(1)=125, a(2)=512, a(3)=1331, a(n)=4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Harvey P. Dale _ , Feb 20 2013 ●

▶ [A110272] 0,1,8,125,1728,24389,343000,4826809,67917312,955671625,13447314152,189218084021,2662500456000,37464224551181,527161643971768,7417727240640625,104375343011770368,1468672529408250769 ⋆ a(n) = Pell(n) ^ 3. ● a(n) = 12 * a(n - 1) + 30 * a(n - 2) - 12 * a(n - 3) - a(n - 4). ● a(n) = (Pell(3 * n) - 3 * (- 1) ^ n * Pell(n)) / 8. ●

▶ [A215040] 1,8,125,2197,39304,704969,12649337,226981000,4073003173,73087061741,1311494070536,23533806109393,422297015640625,7577812474746632,135978327528030989,2440032083025183109,43784599166913148552 ⋆ a(n) = F(2 * n + 1) ^ 3, n>=0, with F = A000045 (Fibonacci). ● a(n) = F(2 * n + 1) ^ 3, n>=0, with F=A000045. ● a(n) = (12 * F(2 * n + 1) + F(6 * (n + 1)) - F(6 * n)) / 20, n>=0. ●

▶ [A236549] 8,126,1052,11170,112828,1159416,11869768,121668290,1246778828,12777339246,130942887644,1341919081864,13752130924072,140933387857374,1444301049348172,14801358544973954,151685974693256396,1554494806744974072,15930636349271455016 ⋆ The number of independent sets in L(J _ n), the line graph of the flower snark graph J _ n. ● a(n) is tr(A ^ n), where A is a 20 X 20 matrix relating independent sets of { a _ j,...,f _ j } to independent sets of { a _ k,...,f _ k } , k=j + 1 (mod n). ●

▶ [A001081] 1,8,127,2024,32257,514088,8193151,130576328,2081028097,33165873224,528572943487,8424001222568,134255446617601,2139663144659048,34100354867927167,543466014742175624,8661355881006882817 ⋆ a(n) = 16 * a(n - 1) - a(n - 2). ● a(n) = ((8 + 3 * sqrt(7)) ^ n + (8 - 3 * sqrt(7)) ^ n) / 2. ● a(n) = 16 * a(n - 1) - a(n - 2) with a(1)=1 and a(2)=8. - _ Sture Sjöstedt _ , Nov 18 2011 ● a(n) = (- i) ^ n * Lucas(n, 16 * i) / 2, where i = sqrt(- 1). - _ G. C. Greubel _ , Jun 06 2019 ●

▶ [A036294] 0,8,128,1536,16384,163840,1572864,14680064,134217728,1207959552,10737418240,94489280512,824633720832,7146825580544,61572651155456,527765581332480,4503599627370496,38280596832649216,324259173170675712,2738188573441261568,23058430092136939520 ⋆ a(n) = n * 8 ^ n. ● a(n) = 16 * a(n - 1) - 64 * a(n - 2). - _ Vincenzo Librandi _ , Aug 09 2017 ●

▶ [A133680] 1,8,128,1600,22016,291328,3915776,52301824,700350464,9368535040,125373513728,1677522632704,22447074050048,300358221955072,4019055107244032,53778232838717440,719597830431309824 ⋆ a(n)=8 * a(n - 1) + 72 * a(n - 2) for n>=3, a(0)=1, a(1)=8, a(2)=128 . ● a(n)=4 * [4 + 2 * sqrt(22)] ^ (n - 1) + 4 * [4 - 2 * sqrt(22)] ^ (n - 1) + (12 / 11) * [4 + 2 * sqrt(22)] ^ (n - 1) * sqrt(22) - (12 / 11) * [4 - 2 * sqrt(22)] ^ (n - 1) * sqrt(22) + (1 / 9) * [C(2 * n,n) mod 2], with n>=0 [From _ Paolo P. Lava _ , Aug 28 2008] ●

▶ [A013777] 8,128,2048,32768,524288,8388608,134217728,2147483648,34359738368,549755813888,8796093022208,140737488355328,2251799813685248,36028797018963968,576460752303423488,9223372036854775808 ⋆ a(n) = 2 ^ (4 * n + 3). ● a(n) = 16 * a(n - 1); a(0)=8. ●

▶ [A027951] 1,8,129,967,4950,20175,70954,226007,672959,1914166,5280288,14275838,38102976,100888126,265838881,698489013,1832277574,4802042229,12578921258,32941567397,86254888591,225835057708,591265802288,1547982265500,4052

706300752 ⋆ a(n) = T(2n,n + 3), T given by A027948. ● a(n) = Sum _{ j=0..n - 3 } binomial(2 * n - j, j + 7), with a(3) = 1 for n >= 3. ● a(n) = Fibonacci(2 * n + 8) - (8 * n ^ 6 - 12 * n ^ 5 + 110 * n ^ 4 + 255 * n ^ 3 + 872 * n ^ 2 + 1827 * n + 1890) / 90 for n >= 4. (End) ●

► [A041115] 1,8,129,1040,16769,135192,2179841,17573920,283362561,2284474408,36834953089,296964099120,4788260539009,38603048411192,622437035118081,501809932935584 0,80912026304811521,652314309767848008,1051794098259037969 49 ⋆ Denominators of continued fraction convergents to sqrt(66). ● a(n) = 16 * a(n - 1) + a(n - 2) for n >= 2 even and a(n) = 8 * a(n - 1) + a(n - 2) for n >= 2 odd. - _ Nathaniel Johnston _ , Jun 26 2011 ● a(n) = 130 * a(n - 2) - a(n - 4). ●

► [A187609] 0,0,0,8,130,500,1274,2372,3953,5920,8273,11012,14137,17648,21545,25828,30497,35552,40993,46820,53033,59632,66617,73988,81745 ⋆ Number of 5 - step one space for components leftwards or up, two space for components rightwards or down asymmetric quasi - bishop's tours (antidiagonal moves become knight moves) on an n X n board summed over all starting positions. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>10. ●

► [A079912] 1,8,133,1044,5794,24720,86608,260720,693552,1666000,3675680,7549488,14591440,26770832,46955760,79197040,129067568,204062160,314062912,471875120,693838800,1000520848,1417492880,1976199792,2714924080 ⋆ Solution to the Dancing School Problem with 7 girls and n + 7 boys: f(7,n). ● a(0) = 1, a(1) = 8, a(2) = 133, a(3) = 1044, a(4) = 5794; for n>4, a(n) = n ^ 7 - 14 * n ^ 6 + 126 * n ^ 5 - 700 * n ^ 4 + 2625 * n ^ 3 - 6342 * n ^ 2 + 9072 * n - 5840. ●

► [A221545] 8,134,1276,6311,22466,64047,156098,338711,672066,1242191,2167442,3605703,5762306,8898671,13341666,19493687,27843458,38977551,53592626,72508391,96681282,127218863,165394946,212665431,270684866 ⋆ Number of 0..n arrays of length 7 with each element differing from at least one neighbor by some thing other than 1, starting with 0. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>10. ●

► [A061996] 0,0,0,8,140,964,3920,11860,29708,65240,129984,240240,418220,693308,1103440,1696604,2532460,3684080,5239808,7305240,10005324,13486580,17919440,23500708,30456140 ⋆ Number of ways to place 3 nonattacking kings on an n X n board. ● a(n) = (n - 1) * (n - 2) * (n ^ 4 + 3 * n ^ 3 - 20 * n ^ 2 - 30 * n + 132) / 6, n >= 1. ●

► [A180357] 0,8,142,2208,16412,78160,279978,823592,2097208,4783032,10000070,19487248,35831892,62748608,105413602,170859480,268435568,410338792,612220158,893871872,1280000140,1801088688,2494358042 ⋆ a(n) = n ^ 7 + 7 * n. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n > 7. ●

► [A112464] 8,143,1343,8823,45543,196707,739347,2483547,7599867,21492097,56794705,141485305,334639305,755863605,1638428805,3422280285,6912424485,13541987610,25799313210,47907161610,86882479530,154161302130,268050218130,457369908930,766795640130 ⋆ Absolute value of coefficient of term [x ^ (n - 8)] in characteristic polynomial of maximum matrix A of size n X n, where n >= 8. Maximum matrix A(i,j) is MAX(i,j), where indices i and j run from 1 to n. ● a(n) = ((15n + 8) / 16!) * Product _{ i= - 7..7 } (n + i). ●

► [A275139] 8,144,528,2320,9744,41360,175120,741904,3142672,13312656,56393232,238885648,1011935760,4286628752,18158450704,76920431632,325840177168,1380281140368,5846964738576,24768140094736,104919525117456 ⋆ Number of n X 5 0..2 arrays with no element equal to any value at offset (- 2, - 2) (- 1, - 2) or (0, - 1) and new values introduced in order 0..2. ● a(n) = 8 * (2 * (- 1) ^ n - (2 * ((2 - sqrt(5)) ^ n - (2 + sqrt(5)) ^ n)) / sqrt(5)) for n>1. ●

► [A212703] 8,144,1944,23328,262440,2834352,29760696,306110016,3099363912,30993639120,306837027288,3012581722464,29372671794024,284688972772848,2745215094595320,26354064908115072,252010745683850376,2401514164751985936,28143845651438866392 ⋆ Main transitions in systems of n particles with spin 4. ● a(n) = n * (b - 1) * b ^ (n - 1). For this sequence, set b=9. ● a(n) = 18 * a(n - 1) - 81 * a(n - 2). - _ Colin Barker _ , Jun 16 2015 ●

► [A065409] 1,8,144,2432,40000,649728,10486784,168681472,2708038656,43425996800,695894425600,11146676797440,178493059563520,2857665426882560,45744737668300800,732196083173687296,11718755500209471488 ⋆ Fennessey - Larcombe - French sequence. ● a(n) = 8 ^ n * 4F3([5 / 4, 1 / 2, (1 / 2) - n / 2, - n / 2], [1, 1, 1 / 4] | 1). ● a(n) * (n ^ 3 - n ^ 2) = a(n - 1) * (8 - 32 * n ^ 2 + 24 * n ^ 3) + a(n - 2) * (256 * n ^ 2 - 128 * n ^ 3). - _ Michael Somos _ , Mar 04 2003 ● a(n) = 2 ^ n * Sum _{ k=0..n } (4 * k ^ 2 - 2 * k - 1) / (2 * k - 1) * binomial(n, k) * binomial(2 * n - 2 * k, n - k) * binomial(2 * k, k). - _ Vladeta Jovovic _ , Jun 02 2005 ●

► [A067421] 1,8,144,2592,46656,839808,15116544,272097792,4897760256,88159684608,1586874322944,28563737812992,514147280633856,9254651051409408,166583718925369344,2998506940656648192 ⋆ Sixth column of triangle A067417. ● a(n) = 8 * (3 * 6) ^ (n - 1), n >= 1, a(0)=1. ●

► [A105046] 0,1,8,145,505,9728,187561,654841,12626288,243453385,849982465,16388911448,316002305521,1103276584081,21272794432568,410170749112225,1432052156154025,27612070784561168,532401316345361881,1858802595411339721,35840446605565962848 ⋆ a(n) = 1298 * a(n - 3) - a(n - 6) - 648, for n>6, with a(0)=0, a(1)=1, a(2)=8, a(3)=145, a(4)=505, a(5)=9728, a(6)=187561. ● a(n) = 1298 * a(n - 3) - a(n - 6) - 648 for n > 6. ●

► [A089669] 0,8,155,2286,29296,344140,3807774,40327280,413058080,4120742808,40242188170,386141947972,3650905945872,34087726136672,314844824466704,2880757518523200,26141327872575616,235490128979282224,2107598857648209954,18752794473550896332 ⋆ a(n) = S3(n,1), where S3(n, t) = Sum _{ k=0..n } k ^ t * (Sum _{ j=0..k } binomial(n,j)) ^ 3. ● a(n) = Sum _{ k=0..n } k * (Sum _{ j=0..k } binomial(n,j)) ^ 3. - _ G. C. Greubel _ , May 26 2022 ●

► [A064755] 8,161,2186,26243,295244,3188645,33480782,344373767,3486784400,34867844009,345191655698,3389154437771,33044255768276,320275094369453,3088366981419734,29648323021629455,283512088894331672,2701703435345984177 ⋆ a(n) = n * 9 ^ n - 1. ● a(n) = 19 * a(n - 1) - 99 * a(n - 2) + 81 * a(n - 3) for n > 3. ●

► [A221022] 8,168,3474,62944,1038208,16735744,268269568,4294303744,68716822528,1099501010944,17592143577088,281474806841344,4503598947893248,72057591320018944,1152921493735211008,18446744030223007744 ⋆ Equals one maps: number of n X 4 binary arrays indicating the locations of corresponding elements equal to exactly one of their horizontal, vertical and antidiagonal neighbors in a random 0..3 n X 4 array. ● a(n) = 16 ^ n - 81 * 2 ^ (2 * n - 3) for n>3. ●

► [A001534] 8,170,494,980,1628,2438,3410,4544,5840,7298,8918,10700,12644,14750,17018,19448,22040,24794,27710,30788,34028,37430,40994,44720,48608 ⋆ a(n) = (9 * n + 1) * (9 * n + 8). ● a(n) = 162 * n + a(n - 1) with a(0)=8. - _ Vincenzo Librandi _ , Nov 12 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) with a(0)=8, a(1)=170, a(2)=494. - _ Harvey P. Dale _ , Aug 20 2011 ●

► [A220749] 8,176,3778,65084,1048014,16776688,268434892,4294966696,68719476100,1099511627104,17592186043708,281474976709912,4503599627369716,72057594037927120,1152921504606846124,18446744073709550728 ⋆ Equals one maps: number of n X 4 binary arrays indicating the locations of corresponding elements equal to exactly one of their horizontal and vertical neighbors in a random 0..3 n X 4 array. ● a(n) = - 312 + 16 ^ n - 36 * n for n>5. ●

► [A221589] 8,180,3760,64324,1043774,16758008,268358624,4294659968,68718247424,1099506710528,17592166375424,281474898034688,4503599312666624,72057592779112448,1152921499571585024,18446744053568503808 ⋆ Equals one maps: number of n X 4 binary arrays indicating the locations of corresponding elements equal to exactly one of their king - move neighbors in a random 0..3 n X 4 array. ● a(n) = 16 ^ n - 2401 * 2 ^ (2 * n - 9) for n>4. ●

► [A129004] 8,192,2304,20480,153600,1032192,6422528,37748736,212336640,1153433600,6090129408,31406948352,158779572224,789200240640,3865470566400,18691697672192,89369679495168,423037098786816 ⋆ (n ^ 3 + n ^ 2) * 4 ^ n. ● a(1)=8, a(2)=192, a(3)=2304, a(4)=20480, a(n)=16 * a(n - 1) - 96 * a(n - 2) + 256 * a(n - 3) - 256 * a(n - 4). [_ Harvey P. Dale _ , May 12 2011] ●

► [A016827] 8,216,1000,2744,5832,10648,17576,27000,39304,54872,74088,97336,125000,157464,195112,238328,287496,343000,405224,474552,551368,636056,729000,830584,941192 ⋆ a(n) = (4n + 2) ^ 3. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Wesley Ivan Hurt _ , Mar 08 2022 ●

► [A239222] 1,8,216,1000,2744,8000,13824,74088,125000,216000,512000,1000000,1061208,2000376,2299968,2744000,4741632,5832000,8000000,8242408,8489664,9261000,10941048,12812904,13824000 ⋆ Cubes that are divisible by each of their nonzero digits. ● a(n) = A239221 ^ (n) ^ 3. - _ Michel Marcus _ , Mar 19 2014 ●

► [A267235] 8,223,1790,8274,27854,76237,180292,382404,745548,1359083,2345266,3866486,6133218,9412697,14038312,20419720,29053680,40535607,55571846,74992666,99765974,131011749,170017196,218252620,277388020 ⋆ Number of length - 6 0..n arrays with no following elements greater than or equal to the first repeated value. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

► [A145418] 0,1,8,236,1696,32675,301384,4638576,49483138,681728204,7837276902,102283239429,1220732524976,15513067188008,188620289493918,2365714170297014,29030309635705054,361749878496079778,4459396682866920534,55391169255983979555,684363209103066303906 ⋆ Number of Hamiltonian cycles in P _ 8 X P _ n. ● a(1) = 0, ● a(2) = 1, ● a(3) = 8, ● a(4) = 236, ● a(5) = 1696, ● a(6) = 32675, ●

► [A221466] 8,240,1944,8960,30000,81648,192080,405504,787320,1430000,2459688,4043520,6397664,9796080,14580000,21168128,30067560,41885424,57341240,77280000,102685968,134697200,174620784,223948800,284375000 ⋆ Number of 0..n arrays of length 7 with each element unequal to at least one neighbor, starting with 0. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

► [A221518] 0,8,248,2088,9940,33860,92934,219352,463208,898020,1626970,2789864,4570812,7206628,10995950,16309080,23598544,33410372,46396098,63325480,85099940,112766724,147533782,190785368,244098360 ⋆ Number of 0..n arrays of length 7 with each element differing from at least one neighbor by 2 or more, starting with 0. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>10. ●

► [A347107] 0,0,8,251,2555,15055,63655,214918,616326,1561110,3586110,7612385,15139553,28506101,51229165,88438540,147420940,238291788,374813076,575377095,864177095,1272587195,1840775123,2619572626,3672629650 ⋆ a(n) = Sum _{ 1 <= i < j <= n } j ^ 3 * i ^ 3. ● a(n) = Sum _{ j=2..n } Sum _{ i=1..j - 1 } j ^ 3 * i ^ 3. ● a(n) = n * (n + 1) * (n - 1) * (21 * n ^ 5 + 36 * n ^ 4 - 21 * n ^ 3 - 48 * n ^ 2 + 8) / 672 (from the generalized form of Faulhaber's formula). ●

► [A053717] 1,8,255,3280,21845,97656,335923,960800,2396745,5380840,11111111,21435888,39089245,67977560,113522235,183063616,286331153,435984840,648232975,943531280,1347368421,1891142968,2613136835,3559590240,4785883225 ⋆ a(n) = n ^ 7 + n ^ 6 + n ^ 5 + n ^ 4 + n ^ 3 + n ^ 2 + n + 1. ● a(n) = (n ^ 8 - 1) / (n - 1) for n != 1. ●

► [A128787] 0,8,256,4608,65536,819200,9437184,102760448,1073741824,10871635968,107374182400,1039382085632,9895604649984,92908732547072,862017116176384,7916483719987200,72057594037927936,650770146155036672 ⋆ n ^ 2 * 8 ^ n. ● a(n) = 24 * a(n - 1) - 192 * a(n - 2) + 512 * a(n - 3). - _ Vincenzo Librandi _ , Feb 06 2013 ●

► [A089670] 0,8,283,6044,101360,1470640,19361174,237684384,2768042208,30935313600,334481353690,3519672963752,36206551801264,365363625058432,3626585989411280,35485636769545600,342894590805622656,3276865150482420480,31008279252965786178 ⋆ a(n) = S3(n,2), where S3(n, t) = Sum _{ k=0..n } k ^ t * (Sum _{ j=0..k } binomial(n,j)) ^ 3. ● a(n) = Sum _{ k=0..n } k ^ 2 * (Sum _{ j=0..k } binomial(n,j)) ^ 3. - _ G. C. Greubel _ , May 26 2022 ●

► [A060859] 8,288,675,9800,235224,332928,1825200,11309768,384199200,592192224,4931691075,13051463048,221322261600,443365544448,865363202000,8192480787000,13325427460800,15061377048200,511643454094368 ⋆ Powerful numbers of the form k ^ 2 - 1 such that k ^ 2 is also powerful. ● a(n) = k ^ 2 - 1 and a(n) + 1 = k ^ 2 are consecutive powerful numbers. ●

► [A187289] 0,8,288,1256,3084,5712,9120,13288,18216,23904,30352,37560,45528,54256,63744,73992,85000,96768,109296,122584,136632,151440,167008,183336,200424 ⋆ Number of 4 - step one or two space at a time rook's tours on an n X n

board summed over all starting positions. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>8. •
► [A054607] 0,8,288,6672,65840,391320,1681008,5767328,16781472,43053480,100010240,214373808,430002768,815759672,1475827920,2562941760,4295033408,6975841608,11020066272,16983694160,25600160880,37823054808,54876108848 ⋆ a(n) = Sum _{ d|8 } phi(d) * n ^ (8 / d). • a(n) = n ^ 8 + n ^ 4 + 2 * n ^ 2 + 4 * n. - _ Seiichi Manyama _ , Jul 11 2021 •
► [A016875] 8,343,1728,4913,10648,19683,32768,50653,74088,103823,140608,185193,238328,300763,373248,456533,551368,658503,778688,912673,1061208,1225043,1404928,1601613,1815848 ⋆ (5n + 2) ^ 3. • a(0)=8, a(1)=343, a(2)=1728, a(3)=4913, a(n)=4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Harvey P. Dale _ , Apr 30 2013 •
► [A187049] 0,0,8,456,2896,9216,20648,37472,59524,86656,118868,156160,198532,245984,298516,356128,418820,486592,559444,637376,720388,808480,901652,999904,1103236 ⋆ Number of 5 - step one or two space at a time bishop's tours on an n X n board summed over all starting positions. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>10. •
► [A054326] 8,480,12672,219648,2928640,32587776,317521920,2794192896,22682271744,172438323200,1241555927040,8538764083200,56469693136896,361019918516224,2240813287342080,13550896696786944,80073480481013760 ⋆ Eighth unsigned column of Lanczos triangle A053125 (decreasing powers). • a(0)=8, a(1)=480, a(2)=12672, a(3)=219648, a(4)=2928640, a(5)=32587776, a(6)=317521920, a(7)=2794192896, a(n) = 32 * a(n - 1) - 448 * a(n - 2) + 3584 * a(n - 3) - 17920 * a(n - 4) + 57344 * a(n - 5) - 114688 * a(n - 6) + 131072 * a(n - 7) - 65536 * a(n - 8). - _ Harvey P. Dale _ , Oct 23 2012 •
► [A030654] 8,497,9352,81473,451976,1863793,6230792,17817857,45159688,103980401,221416328,441884737,834981512,1505831153,2608352776,4361946113,7072141832,11155800817,17171487368,25855681601 ⋆ n ^ 4 * a(n) is the number of spheres in complex projective space tangent to 4 smooth surfaces of degree n in general position. • a(n) = n ^ 8 + 4 * n ^ 6 - 2 * n ^ 4 + 4 * n ^ 2 + 1. • a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9); a(1)=8, a(2)=497, a(3)=9352, a(4)=81473, a(5)=451976, a(6)=1863793, a(7)=6230792, a(8)=17817857, a(9)=45159688. - _ Harvey P. Dale _ , Apr 10 2012 •
► [A228292] 0,8,510,9840,87380,488280,2015538,6725600,19173960,48427560,111111110,235794768,469070940,883708280,1589311290,2745954240,4581298448,7411742280,11668193550,17927094320,26947368420,39714002328,57489010370,81870575520,114861197400 ⋆ a(n) = Sum _{ k=1..8 } n ^ k. • a(1) = 8, else a(n) = (n ^ 9 - n) / (n - 1). • a(0)=0, a(1)=8, a(2)=510, a(3)=9840, a(4)=87380, a(5)=488280, a(6)=2015538, a(7)=6725600, a(8)=19173960, a(n)=9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9). - _ Harvey P. Dale _ , Jan 28 2014 •
► [A016935] 8,512,2744,8000,17576,32768,54872,85184,125000,175616,238328,314432,405224,512000,636056,778688,941192,1124864,1331000,1560896,1815848,2097152,2406104,2744000,3112136 ⋆ a(n) = (6 * n + 2) ^ 3. • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Wesley Ivan Hurt _ , Oct 02 2020 •
► [A128794] 0,8,512,13824,262144,4096000,56623104,719323136,8589934592,97844723712,1073741824000,11433202941952,118747255799808,1207813523111936,12068239626469376,118747255799808000,1152921504606846976 ⋆ n ^ 3 * 8 ^ n. • a(n) = 32 * a(n - 1) - 384 * a(n - 2) + 2048 * a(n - 3) - 4096 * a(n - 4). - _ Vincenzo Librandi _ , Feb 10 2013 •
► [A272357] 0,8,520,4056,15656,42880,95808,187040,331696,547416,854360,1275208,1835160,2561936,3485776,4639440,6058208,7779880,9844776,12295736,15178120,18539808,22431200,26905216,32017296 ⋆ a(n) = n * (105 * n ^ 3 - 210 * n ^ 2 + 147 * n - 34). • a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5), for n>4. •
► [A270871] 8,691,5030,25511,100372,324323,898706,2206135,4914656,10116467,19506238,35604071,62028140,103822051,167841962,263208503,401828536,599891795,874047446,1251165607,1760188868,2437578851,3327462850,4482785591,5966571152 ⋆ a(n) = n ^ 7 + 6 * n ^ 6 + 26 * n ^ 5 + 73 * n ^ 4 + 152 * n ^ 3 + 222 * n ^ 2 + 203 * n + 8. • a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8). •
► [A001547] 8,792,4320,12650,27840,51948,87032,135150,198360,278720,378288,499122,643280,812820,1009800,1236278,1494312,1785960,2113280,2478330,2883168,3329852,3820440,4356990,4941560 ⋆ a(n) = (7 * n + 1) * (7 * n + 2) * (7 * n + 4). • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4); a(0)=8, a(1)=792, a(2)=4320, a(3)=12650. - _ Harvey P. Dale _ , Jan 12 2013 •
► [A017187] 8,1331,8000,24389,54872,103823,175616,274625,405224,571787,778688,1030301,1331000,1685159,2097152,2571353,3112136,3723875,4410944,5177717,6028568,6967871,8000000,9129329 ⋆ a(n) = (9 * n + 2) ^ 3. • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4); a(0)=8, a(1)=1331, a(2)=8000, a(3)=24389. - _ Harvey P. Dale _ , Jan 27 2014 •
► [A114617] 1,8,1520,50624,62000,103040,199808,221840,269360,463760,690560,848240,986048,1252160,1418480,2169728,2692880,2792240,3448448,3721040,3932288,5574320,5716880,6066368,6890624 ⋆ Numbers k such that k and k + 1 are both refactorable numbers. • a(n) mod tau(a(n)) = 0 and (a(n) + 1) mod tau(a(n) + 1) = 0 where tau(n) is the number of divisors of n. - _ Walter Kehowski _ , Jun 19 2006 •
► [A242852] 0,8,10864,235416,1905632,9409960,34356048,102213944,262184896,600940872,1260879920,2463542488,4538833824,7960697576,13389885712,21724469880,34158739328,52251130504,78001833456,113940720152,163226239840,229755926568,318289163984,434582852536 ⋆ 128 * n ^ 7 - 192 * n ^ 5 + 80 * n ^ 3 - 8 * n. • a(n) = 8 * n * (2 * n ^ 2 - 1) * (8 * n ^ 4 - 8 * n ^ 2 + 1). •
► [A160743] 0,8,17593,389112,3169562,15694600,57385803,170880248,438565492,1005601032,2110507325,4124403448,7599974478,13331249672,22425272527,36386743800,57216718568,87526438408,130667379777,190878599672,273452459650,384919809288,533255710163 ⋆ 8 * P _ 7(n), 8 times the Legendre Polynomial of order 7 at n. • a(n) = n * (429 * n ^ 6 - 693 * n ^ 4 + 315 * n ^ 2 - 35) / 2. - _ Vaclav Kotesovec _ , Jul 31 2013 • a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n >7. •
► [A123651] 8,141485,130914100,17251189841,764209065776,16940083223773,2327293811651 65,2252358161564225,16679754951397336,100010100010101101,505481836542757988,2218718842990269265,8650720586711446400 ⋆ a(n) = 1 + n ^ 2 + n ^ 3 + n ^ 5 + n ^ 7 + n ^ 11 + n ^ 13 + n ^ 17. • a(n) = 1 + n ^ 2 + n ^ 3 + n ^ 5 + n ^ 7 + n ^ 11 + n ^ 13 + n ^ 17 = 100010100010101101 (base n) = +/- (n ^ 2 + 1) * (n ^ 15 - n ^ 13 + 2n ^ 11 - n ^ 9 + n ^ 7 + n ^ 3 + 1). •
► [A275485] 1,1,1,1,9,9,9,9,21,25,25,25,37,45,49,49,69,69,77,81,101,109,117,117,141 ⋆ Number of integer lattice points from an n X n square in R ^ 2 centered at the origin that are closer (measured using the Euclidean metric) to the origin than to any of the four sides of the square. • a(n) = (2 * floor(n * (sqrt(2) - 1) / 2) + 1) ^ 2 + 4 * Sum _{ i=ceiling(- n * (sqrt(2) - 1) / 2)..floor(n * (sqrt(2) - 1) / 2) } ceiling(n / 4 - i ^ 2 / n) - 1 - floor(n * (sqrt(2) - 1) / 2). •
► [A305503] 0,0,0,0,0,0,0,0,0,0,0,0,0,9,9,10,11,12,13,14,15,16,17,18 ⋆ Largest cardinality of subsets A of { 0,1,...,n - 1 } with |A + A| > |A - A|. • a(n) = n - 7 (conjectured) for all n > 15. • a(n) = 2 * a(n - 1) - a(n - 2) for n>17. •
► [A168419] 0,9,9,18,18,27,27,36,36,45,45,54,54,63,63,72,72,81,81,90,90,99,99,108,108 ⋆ a(n) = 9 * floor(n / 2). • a(n) = 9 * n - a(n - 1) - 9, with n>1, a(1)=0. • a(n) = (9 / 4) * (- 1 + (- 1) ^ n + 2 * n). - _ Paolo P. Lava _ , Nov 27 2009 • a(n) = a(n - 1) + a(n - 2) - a(n - 3). - _ Vincenzo Librandi _ , Sep 19 2013 •
► [A309463] 0,0,0,0,0,0,0,0,0,9,9,18,26,44,61,95,128,187,252,343,446,600,765,995,1256 ⋆ Number of squarefree parts in the partitions of n into 9 parts. • a(n) = Sum _{ q=1..floor(n / 9) } Sum _{ p=q..floor((n - q) / 8) } Sum _{ o=p..floor((n - p - q) / 7) } Sum _{ m=o..floor((n - o - p - q) / 6) } Sum _{ l=m..floor((n - m - o - p - q) / 5) } Sum _{ k=l..floor((n - l - m - o - p - q) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p - q) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p - q) / 2) } (mu(q) ^ 2 + mu(p) ^ 2 + mu(o) ^ 2 + mu(m) ^ 2 + mu(l) ^ 2 + mu(k) ^ 2 + mu(j) ^ 2 + mu(i) ^ 2 + mu(n - i - j - k - l - m - o - p - q) ^ 2), where mu is the Möbius function (A008683). •
► [A022092] 0,9,9,18,27,45,72,117,189,306,495,801,1296,2097,3393,5490,8883,14373,23256,37629,60885,98514,159399,257913,417312 ⋆ Fibonacci sequence beginning 0, 9. • a(n) = round((18phi - 9) / 5 phi ^ n) (works for n>4) - _ Thomas Baruchel _ , Sep 08 2004 • a(n) = 9F(n) = F(n + 4) + F(n + 1) + F(n - 2) + F(n - 4), n>3. •
► [A053456] 0,1,1,9,9,21,25,37,45,69,69,97,109,137,145,177,193,225,249,293,305,349,373,421,437 ⋆ Open disk numbers (version 1): a(n) is the number of points (i,j), i,j, integers, contained in an open disk of diameter n, centered at (0,0). • a(n) / (n / 2) ^ 2 - >Pi. •
► [A341538] 1,1,9,9,41,105,233,233,745,1769,1769,1769,9961,9961,9961,75497,206569,206569,206569,1255145,1255145,5449449,13838057,30615273,64169705 ⋆ One of the two successive approximations up to 2 ^ n for 2 - adic integer sqrt(17). This is the 1 (mod 4) case. • a(2) = 1; for n >= 3, a(n) = a(n - 1) if a(n - 1) ^ 2 - 17 is divisible by 2 ^ (n + 1), otherwise a(n - 1) + 2 ^ (n - 1). •
► [A095344] 1,1,9,9,49,81,281,601,1729,4129,11049,27561,71761,182001,469049,1197049,3073249,7861441,20154441,51600201,132217969,338618769,867490649,2221965721,5691928321 ⋆ Length of n - th string generated by a Kolakoski(9,1) rule starting with a(1)=1. • a(1) = a(2) = 1; for n>1, a(n) = a(n - 1) + 4 * a(n - 2) - 4 * (- 1) ^ n. • a(n) = 5 * a(n - 2) + 4 * a(n - 3). - _ Colin Barker _ , Mar 25 2012 • a(n) = 2 * (- 1) ^ n + (2 ^ (- 1 - n) * (- (- 7 + sqrt(17)) * (1 + sqrt(17)) ^ n - (1 - sqrt(17)) ^ n * (7 + sqrt(17)))) / sqrt(17). - _ Colin Barker _ , Apr 20 2016 • a(n) = 2 * (- 1) ^ n - 2 ^ n * (Fibonacci(n + 1, 1 / 2) - 2 * Fibonacci(n, 1 / 2)) = 2 * (- 1) ^ n - (2 / I) ^ n * (ChebyshevU(n, I / 4) - 2 * I * ChebyshevU(n - 1, I / 4)). - _ G. C. Greubel _ , Dec 26 2019 •
► [A323210] 1,9,9,81,225,1089,3969,16641,65025,263169,1046529,4198401,16769025,67125249,268402689,1073807361,4294836225,17180131329,68718952449,274878955521,1099509530625,4398050705409,17592177655809,70368760954881,281474943156225 ⋆ a(n) = 9 * J(n) ^ 2 where J(n) are the Jacobsthal numbers A001045 with J(0) = 1. • a(n) = Product _{ k=1..n } T(n, k) where T(n, k) = t(n,k) * conjugate(t(n,k)) and t(n,k) = 3 * cos(Pi * k / n) - i * sin(Pi * k / n), i is the imaginary unit. • a(n) = [x ^ n] (8 * x ^ 3 - 24 * x ^ 2 + 6 * x + 1) / ((4 * x - 1) * (2 * x + 1) * (x - 1)). • a(n) = n! [x ^ n] (1 + exp(x) - 2 * exp(- 2 * x) + exp(4 * x)). • a(n) = 3 * a(n - 1) + 6 * a(n - 2) - 8 * a(n - 3) for n >= 4. • a(n) = 4 ^ n - 2 * (- 2) ^ n + 1, n>0. - _ R. J. Mathar _ , Mar 06 2022 •
► [A353182] 9,9,252,333,7704,11430,245520,388485,8018280,13221234,266135472,451623042,8935693776,15488764524,302623991712,533189070405,10317992397480,18416195186490,353689409441520,637974569854998,12177584747670384,22158431087271444,420819143651579232,771390571080374658 ⋆ Number of n - digit numbers in which more than half of the digits are the same. • a(n) = Sum _{ k=floor(n / 2) + 1..n } C(n,k) * 9 ^ (n - k + 1) (thanks to _ Zhao Hui Du _ for help in the derivation of this formula). • a(n + 3) = (- (5400 + 8280 * n + 2880 * n ^ 2) * a(n) + (360 + 828 * n + 288 * n ^ 2) * a(n + 1) + (228 + 310 * n + 80 * n ^ 2) * a(n + 2)) / (21 + 31 * n + 8 * n ^ 2)) (thanks to _ Xianwen Wang _ for help in the derivation of this formula). •
► [A171738] 0,9,9,252,819,11754,72585,803448,6978159,73047510,744922341,8023947732,88219609227,993117723282,11397388906305,132852212160624,1568346473860839,18699577205645646,224600363892164061,2711096523623447820,32815659723020049411,397495008150096639114 ⋆ Number of n - digit terms in A115853. • a(n) = 9 * Sum _{ k=0..10 } (- 1) ^ k * 9! / (10 - k)! * C(n,k) * (10 - k) ^ (n - k) for n >= 10, where 0 ^ 0 = 1. •
► [A124116] 1,1,9,9,559,847,15127,54621,54621,5893321,167459299,3595903759,3595903759,1040749968601,688840705177051,430442854738298199 ⋆ a(n) the smallest positive integer such that a(n) + 10 ^ k is prime for k=1,2...n. • a(n) == 0 (mod 7) for n > 5. •
► [A020723] 9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33 ⋆ n + 9. • a(n) = n + 9. a(n) = 2a(n - 1) - a(n - 2). •
► [A058365] 1,1,1,1,1,1,1,9,10,11,12,13,14,15,16,25,35,46,58,71,85,100,116,141,176 ⋆ Number of ways to cover (without overlapping) a ring lattice (necklace) of n sites with molecules that are 8 sites wide. • a(n) = 1 + n * sum(binomial(n -

1 - 7 * i, i - 1) / i, i=1..n / 8). a(n) = a(n - 1) + a(n - 8), a(n) = 1 for n = 1..7, a(8) = 9. generating function = (x + 8 * x ^ 8) / (1 - x - x ^ 8). ●

▶ [A121816] 9,10,11,12,13,14,16,17,19,20,22,23,25,26,28,29,31,32,34,35,37,38,40,41,43 ⋆ Conjectured chromatic number of the square of an outerplanar graph G ^ 2 as a function of the maximum degree of a vertex of G. ● a(n) = n + 5 if 4 <= n <= 7; a(n) = floor(3 * n / 2) + 1 if n >= 8. ● a(n) = (3 + (- 1) ^ n + 6 * n) / 4 for n>7. a(n) = a(n - 1) + a(n - 2) - a(n - 3). G.f.: x ^ 4 * (x ^ 6 - 8 * x ^ 2 + x + 9) / ((x - 1) ^ 2 * (x + 1)). - _ Colin Barker _ , Apr 30 2013 ●

▶ [A054967] 0,1,9,10,11,19,20,21,29,30,31,39,40,41,49,50,51,59,60,61,69,70,71,79,80 ⋆ Numbers that are congruent to { 0, 1, 9 } mod 10. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. - _ Vincenzo Librandi _ , Feb 24 2016 ● a(n) = (30 * n - 30 + 21 * cos(2 * n * Pi / 3) + 7 * sqrt(3) * sin(2 * n * Pi / 3)) / 9. ● a(3k) = 10k - 1, a(3k - 1) = 10k - 9, a(3k - 2) = 10k - 10. (End) ●

▶ [A356659] 9,10,12,14,15,16,18,20,21,22,24,25,26,27,28,30,32,33,35,36,39,40,42,44,45 ⋆ Numbers k that can be written as the sum of 9 divisors of k (not necessarily distinct). ● a(n + t) = a(n) + s for some finite t and s. - _ David A. Corneth _ , Oct 08 2022 ●

▶ [A048592] 9,10,12,15,19,25,33,44,59,80,109,149,204,280,385,530,730,1006,1387,1913,2639,3641,5024,6933,9568 ⋆ Pisot sequence L(9,10). ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 4) - a(n - 5) (holds at least up to n = 1000 but is not known to hold in general). ●

▶ [A242475] 9,10,12,16,24,40,72,136,264,520,1032,2056,4104,8200,16392,32776,65544,131080,262152,524296,1048584,2097160,4194312,8388616,16777224 ⋆ a(n) = 2 ^ n + 8. ● a(n) = 2 * a(n - 1) - 8 = 3 * a(n - 1) - 2 * a(n - 2). ●

▶ [A247512] 9,10,13,20,35,64,119,224,428,821,1576,3030,5828,11215,21584,41545,79968,153931,296306,570371,1097933,2113463,4068308,7831289,15074840 ⋆ The curvature (rounded down) of touching circles inscribed in a special way in the smaller segment of circle of radius 10 / 9 divided by a chord of length 4 / 3. ● a(n) = floor(r(n)) with the rational curvatures r(n) satisfying the one step nonlinear recurrence relation r(n) = (11 * r(n - 1) - 9 + 20 * sqrt((r(n - 1) - 9) * r(n - 1) / 10)) / 9 with input r(0) = 9. (In the link r(n) is called b'(n).) ●

▶ [A090570] 0,1,9,10,18,19,27,28,36,37,45,46,54,55,63,64,72,73,81,82,90,91,99,100,108 ⋆ Numbers that are congruent to { 0, 1 } mod 9. ● a(n) = 9 * n - a(n - 1) - 17 (with a(1)=0). - _ Vincenzo Librandi _ , Nov 16 2010 ● a(n) = 9 * n / 2 - 25 / 4 - 7 * (- 1) ^ n / 4. ●

▶ [A022099] 1,9,10,19,29,48,77,125,202,327,529,856,1385,2241,3626,5867,9493,15360,24853,40213,65066,105279,170345,275624,445969 ⋆ Fibonacci sequence beginning 1, 9. ● a(n) = a(n - 1) + a(n - 2), n>=2, a(0)=1, a(1)=9. a(- 1):=8. ● a(n + 1) = ((1 + sqrt(5)) ^ n - (1 - sqrt(5)) ^ n) / (2 ^ n * sqrt(5)) + 4 * ((1 + sqrt(5)) ^ (n - 1) - (1 - sqrt(5)) ^ (n - 1)) / (2 ^ (n - 2) * sqrt(5)). - Al Hakanson (hawkuu(AT)gmail.com), Jan 14 2009 ● a(n) = Lucas(n + 3) + Fibonacci(n - 4). - _ Greg Dresden _ and Mary Beth Pittman, Mar 12 2022 ●

▶ [A042113] 1,9,10,19,29,48,77,279,3146,3425,13421,30267,195023,420313,1455962,1876275,22094987,68161236,90256223,158417459,248673682,407091141,655764823,6308974548,303486543127 ⋆ Denominators of continued fraction convergents to sqrt(581). ● a(n) = 304142307950 * a(n - 24) - a(n - 48) for n>47. - _ Vincenzo Librandi _ , Jan 15 2014 ●

▶ [A042613] 1,1,9,10,19,29,164,193,743,2422,3165,5587,14339,77282,168903,246185,415088,1491449,4889435,6380884,36793855,43174739,79968594,123143333,1065115258 ⋆ Denominators of continued fraction convergents to sqrt(835). ● a(n) = 68672711612 * a(n - 26) - a(n - 52) for n>51. - _ Vincenzo Librandi _ , Jan 25 2014 ●

▶ [A041691] 1,9,10,19,181,6897,62254,69151,131405,1251796,47699653,430548673,478248326,908796999,8657421317,329890807045,2977674684722,3307565491767,6285240176489,59874727080168,2281524869222873,20593598550086025,2287512341898 8 ⋆ Denominators of continued fraction convergents to sqrt(365). ● a(n) = 6916 * a(n - 5) + a(n - 10) for n>9. - _ Vincenzo Librandi _ , Dec 23 2013 ●

▶ [A022314] 0,9,10,20,31,52,84,137,222,360,583,944,1528,2473,4002,6476,10479,16956,27436,44393,71830,116224,188055,304280,492336 ⋆ a(n) = a(n - 1) + a(n - 2) + 1, with a(0) = 0, a(1) = 9. ● a(n) = - 1 + (1 / 2) * ((1 + sqrt(5)) / 2) ^ n + (19 / 10)sqrt(5) * ((1 + sqrt(5)) / 2) ^ n - (19 / 10) * sqrt(5) * ((1 - sqrt(5)) / 2) ^ n + (1 / 2) * ((1 - sqrt(5)) / 2) ^ n, obtained using PURRS. - _ Alexander R. Povolotsky _ , Apr 22 2008 ● a(n) = F(n + 2) + 8 * F(n) - 1, where A000045. - _ G. C. Greubel _ , Aug 25 2017 ●

▶ [A326523] 0,0,0,0,0,0,0,0,0,0,9,10,22,24,52,70,120,144,221,288,418,500,714,858,1173,1392 ⋆ Sum of all the parts in the partitions of n into 9 squarefree parts. ● a(n) = n * Sum _{ q=1..floor(n / 9) } Sum _{ p=q..floor((n - q) / 8) } Sum _{ o=p..floor((n - p - q) / 7) } Sum _{ m=o..floor((n - o - p - q) / 6) } Sum _{ l=m..floor((n - m - o - p - q) / 5) } Sum _{ k=l..floor((n - l - m - o - p - q) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p - q) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p - q) / 2) } mu(q) ^ 2 * mu(p) ^ 2 * mu(o) ^ 2 * mu(m) ^ 2 * mu(l) ^ 2 * mu(k) ^ 2 * mu(j) ^ 2 * mu(i) ^ 2 * mu(n - i - j - k - l - m - o - p - q) ^ 2, where mu is the Möbius function (A008683). ●

▶ [A309485] 0,0,0,0,0,0,0,0,0,9,10,22,32,61,90,149,208,321,455,653,877,1244,1649,2238,2921 ⋆ Sum of the squarefree parts of the partitions of n into 9 parts. ● a(n) = Sum _{ q=1..floor(n / 9) } Sum _{ p=q..floor((n - q) / 8) } Sum _{ o=p..floor((n - p - q) / 7) } Sum _{ m=o..floor((n - o - p - q) / 6) } Sum _{ l=m..floor((n - m - o - p - q) / 5) } Sum _{ k=l..floor((n - l - m - o - p - q) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p - q) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p - q) / 2) } (q * mu(q) ^ 2 + p * mu(p) ^ 2 + o * mu(o) ^ 2 + m * mu(m) ^ 2 + l * mu(l) ^ 2 + k * mu(k) ^ 2 + j * mu(j) ^ 2 + i * mu(i) ^ 2 + (n - i - j - k - l - m - o - p - q) * mu(n - i - j - k - l - m - o - p - q) ^ 2), where mu is the Möbius function (A008683). ●

▶ [A326464] 0,0,0,0,0,0,0,0,0,0,9,10,22,36,65,98,165,240,374,540,779,1080,1533,2068,2829,3768 ⋆ Sum of all the parts in the partitions of n into 9 parts. ● a(n) = n * Sum _{ q=1..floor(n / 9) } Sum _{ p=q..floor((n - q) / 8) } Sum _{ o=p..floor((n - p - q) / 7) } Sum _{ m=o..floor((n - o - p - q) / 6) } Sum _{ l=m..floor((n - m - o - p - q) / 5) } Sum _{ k=l..floor((n - l - m - o - p - q) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p - q) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p - q) / 2) } 1. ●

▶ [A322465] 0,9,10,31,32,65,66,111,112,169,170,239,240,321,322,415,416,521,522,639,640,769,770,911,912 ⋆ Numbers on the 0 - 9 - 10 - line in a spiral on an equilateral triangular lattice. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n>4. ●

▶ [A271062] 1,9,10,58,59,179,180,404,405,765,766,1294,1295,2023,2024,2984,2985,4209,4210,5730,5731,7579,7580,9788,9789 ⋆ Partial sums of the number of active (ON,black) cells in n - th stage of growth of two - dimensional cellular automaton defined by "Rule 261", based on the 5 - celled von Neumann neighborhood. ● a(n) = a(n - 1) + 3 * a(n - 2) - 3 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) + a(n - 6) - a(n - 7) for n > 6. ●

▶ [A167708] 9,10,66,105,959,1530,2441,22335,35634,326050,520191,829930,7593834,12115455,110856041,176863410,282173759,2581881225,4119219066,37690727890,60133039209,95938248130,877832022666,1400522366985 ⋆ Numbers k such that (k ^ 2 - 81) / 19 is a square. ● a(n + 10) = 340 * a(n + 5) - a(n). ●

▶ [A135332] 1,9,10,74,75,291,292,804,805,1805,1806,3534,3535,6279,6280,10376,10377,16209,16210,24210,24211,34859,34860,48684,48685 ⋆ a(1)=1; for n>1, a(n) = a(n - 1) + n ^ 0 if n odd, a(n) = a(n - 1) + n ^ 3 if n is even. ● a(n) = a(n - 1) + 4 * a(n - 2) - 4 * a(n - 3) - 6 * a(n - 4) + 6 * a(n - 5) + 4 * a(n - 6) - 4 * a(n - 7) - a(n - 8) + a(n - 9). ● a(n) = (1 / 16) * (5 - 5 * (- 1) ^ n + 4 * (- 1) ^ n * n ^ 3 + 4 * n ^ 3 + 6 * (- 1) ^ n * n ^ 2 + 2 * n ^ 2 + 8 * n + 2 * n ^ 4), with n>=1. - _ Paolo P. Lava _ , Mar 02 2009 ●

▶ [A033046] 0,1,9,10,81,82,90,91,729,730,738,739,810,811,819,820,6561,6562,6570,6571,6642,6643,6651,6652,7290 ⋆ Sums of distinct powers of 9. ● a(n) = Sum _{ i=0..m } d(i) * 9 ^ i, where Sum _{ i=0..m } d(i) * 2 ^ i is the base - 2 representation of n. ● a(2n) = 9 * a(n), a(2n + 1) = a(2n) + 1. ●

▶ [A041039] 1,1,9,10,89,99,881,980,8721,9701,86329,96030,854569,950599,8459361,9409960,83739041,93149001,828931049,922080050,8205571449,9127651499,81226783441,90354434940,804062262961 ⋆ Denominators of continued fraction convergents to sqrt(24). ● a(n) = Product _{ k = 1..floor((n - 1) / 2) } (8 + 4 * cos ^ 2(k * Pi / n)). ●

▶ [A041177] 1,1,9,10,189,199,1781,1980,37421,39401,352629,392030,7409169,7801199,69818761,77619960,1466978041,1544598001,13823762049,15368360050,290454242949,305822602999,2737035066941,3042857669940,57508473125861 ⋆ Denominators of continued fraction convergents to sqrt(98). ● a(n) = 198 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Dec 12 2013 ●

▶ [A041415] 1,1,9,10,289,299,2681,2980,86121,89101,798929,888030,25663769,26551799,238078161,264629960,7647717041,7912347001,70946493049,78858840050,2278994014449,2357852854499,21141816850441,23499669704940,679132568588761 ⋆ Denominators of continued fraction convergents to sqrt(222). ● a(n) = 298 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Dec 17 2013 ●

▶ [A041753] 1,1,9,10,389,399,3581,3980,154821,158801,1425229,1584030,61618369,63202399,567237561,630439960,24523956041,25154396001,225759124049,250913520050,9760472885949,10011386405999,89851564133941,99862950539940,3884643684651661 ⋆ Denominators of continued fraction convergents to sqrt(396). ● a(n) = 398 * a(n - 4) - a(n - 8) for n>7. - _ Vincenzo Librandi _ , Dec 24 2013 ●

▶ [A042191] 1,1,9,10,489,499,4481,4980,243521,248501,2231529,2480030,121272969,123752999,1111296961,1235049960,60393695041,61628745001,553423655049,615052400050,30075938857449,30690991257499,275603868917441,306294860174940,14977757157314561 ⋆ Denominators of continued fraction convergents to sqrt(620). ● a(n) = 498 * a(n - 4) - a(n - 8). - _ Wesley Ivan Hurt _ , Apr 16 2023 ●

▶ [A263772] 9,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34 ⋆ Perimeters of integer - sided scalene triangles. ● a(n) = n + 9 for n > 1. ●

▶ [A123760] 9,11,13,15,18,22,26,30,36,44,52,60,72,88,104,120,144,176,208,240,288,352,416,480,576 ⋆ Numbers whose binary expansion is 1xy100...0 where x,y = 0 or 1. ● a(n) = 2 * a(n - 4) for n > 4. ●

▶ [A214865] 9,11,13,15,25,27,29,31,41,43,45,47,57,59,61,63,73,75,77,79,89,91,93,95,105 ⋆ n such that n XOR 9 = n - 9. ● a(n) = 4 * n + 6 + (- 1) ^ n + 2 * (- 1) ^ ((2 * n + (- 1) ^ n - 1) / 4) for n>=0. ● a(n + 4) = a(n) + 16. - _ Alexander R. Povolotsky _ , Mar 15 2013 ●

▶ [A373627] 1,1,1,1,9,11,13,15,81,109,141,177,729,1041,1429,1901,6561,9759,13981,19419,59049,90483,133893,192327,531441 ⋆ Expansion of 1 / ((1 - 8 * x ^ 4) * (1 - x / (1 - 8 * x ^ 4) ^ (1 / 4))). ● a(4 * n) = 9 ^ n for n >= 0. ● a(n) = Sum _{ k=0..floor(n / 4) } 8 ^ k * binomial(n / 4,k). ● a(n) == 1 (mod 2). ●

▶ [A117675] 9,11,13,20,23,29,47,64,70,88,121,126,145,148,153,174,190,195 ⋆ Primes indices both at the end and beginning of sequences of primes where consecutive Goldbach primes produce a fourth prime Prime(n) + Prime(n + 1) + Prime(n + 2) = Prime(m): A072225: replicating prime sequences of length more than one (index both at the end and beginning of a replicating sequence). ● a(n) = A072225[n]: { Prime[n] } Intersection m: { Prime[m] } ●

▶ [A183980] 9,11,14,20,30,50,86,158,294,566,1094,2150,4230,8390,16646,33158,66054,131846,263174,525830,1050630,2100230,4198406,8394758,16785414 ⋆ 1 / 4 the number of (n + 1) X 4 binary arrays with all 2 X 2 subblock sums the same. ● a(n) = (3 * 2 ^ (n / 2) + 2 ^ n + 12) / 2 for n even. ● a(n) = 2 ^ ((n - 5) / 2 + 3) + 2 ^ (n - 1) + 6 for n odd. ●

▶ [A027694] 9,11,15,21,29,39,51,65,81,99,119,141,165,191,219,249,281,315,351,389,429,471,515,561,609 ⋆ a(n) = n ^ 2 + n + 9. ● a(0) = 9, a(n) = a(n - 1) + 2n. - _ Vincenzo Librandi _ , Feb 07 2011 ●

▶ [A339048] 9,11,17,27,41,59,81,107,137,171,209,251,297,347,401,459,521,587,657,731,809,891,977,1067,1161 ⋆ a(n) = 2 * n ^ 2 + 9. ● a(n) = 2 * n ^ 2 + 9, n >= 0. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3), for n >= 3. ●

▶ [A090771] 1,9,11,19,21,29,31,39,41,49,51,59,61,69,71,79,81,89,91,99,101,109,111,119,121 ⋆ Numbers that are congruent to { 1, 9 } mod 10. ● a(n) = 10 * n - a(n - 1) - 10 (with a(1) = 1). - _ Vincenzo Librandi _ , Nov 16 2010 ●

▶ [A299250] 9,11,21,29,39,41,51,59,69,71,81,89,99,101,111,119,129,131,141,149,159,161,171,179,189 ⋆ Numbers congruent to { 9, 11, 21, 29 } mod 30. ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n > 5. ● a(n) = a(n - 4) + 30. ●

► [A022323] 1,9,11,21,33,55,89,145,235,381,617,999,1617,2617,4235,6853,11089,17943,29033,46977,76011,122989,199001,321991,520993 ⋆ a(n) = a(n - 1) + a(n - 2) + 1, with a(0) = 1 and a(1) = 9. ● a(n) = 2 * F(n + 2) + 6 * F(n) - 1, where F = A000045. - _ G. C. Greubel _ , Aug 25 2017 ●
► [A106525] 9,11,21,43,57,119,249,331,693,1451,1929,4039,8457,11243,23541,49291,65529,137207,287289,381931,799701,1674443,2226057,4660999,9759369 ⋆ Values of x in x ^ 2 - 49 = 2 * y ^ 2. ● a(n) = 6 * a(n - 3) - a(n - 6). ●
► [A359925] 1,9,11,89,91,109,111,889,891,909,911,1089,1091,1109,1111,8889,8891,8909,8911,9089,9091,9109,9111,10889,10891 ⋆ Numbers with easy multiplication table - the first 9 multiples of these numbers can be derived by either incrementing or decrementing the corresponding digits from the previous multiple. ● a(n) = 10 * a(floor(n / 2)) + 2 * (n mod 2) - 1 for n>0, a(0)=0. - _ Alois P. Heinz _ , Jan 25 2023 ●
► [A050435] 9,12,15,16,18,21,24,25,26,28,32,33,34,36,38,39,40,42,45,48,49,50,51,52,55 ⋆ a(n) = composite(composite(n)), where composite = A002808, composite numbers. ● a(n) = n + 2n / log n + O(n / log ^ 2 n). - _ Charles R Greathouse IV _ , Jun 25 2017 ●
► [A199593] 9,12,17,19,22,26,29,31,32,39,40,41,42,45,48,49,52,54,57,59,62,63,68,69,70 ⋆ Numbers n such that 3n - 2, 3n - 1 and 3n are all composite. ● a(n) = n + 3n / log n + o(n / log n). - _ Charles R Greathouse IV _ , Oct 27 2013, corrected Aug 07 2016 ●
► [A153973] 9,12,18,30,54,102,198,390,774,1542,3078,6150,12294,24582,49158,98310,196614,393222,786438,1572870,3145734,6291462,12582918,25165830,50331654 ⋆ a(n) = 3 * a(n - 1) - 2 * a(n - 2), with a(1) = 9, a(2) = 12. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2), with a(1) = 9, a(2) = 12. - _ Harvey P. Dale _ , May 09 2012 ● a(n) = (3 / 2) * (4 + 2 ^ n). ●
► [A072702] 9,12,18,51,69,72,78,111,129,132,138,171,189,192,198,231,249,252,258,291,309,312,318,351,369 ⋆ Last digit of F(n) is 4 where F(n) is the n - th Fibonacci number. ● a(n) = (- 60 + 6 * (- 1) ^ n + (9 + 21 * i) * (- i) ^ n + (9 - i * 21) * i ^ n + 60 * n) / 4 where i=sqrt(- 1). - _ Colin Barker _ , Oct 16 2015 ●
► [A195162] 0,1,9,12,28,33,57,64,96,105,145,156,204,217,273,288,352,369,441,460,540,561,649,672,768 ⋆ Generalized 12 - gonal numbers: k * (5 * k - 4) for k = 0, +- 1, +- 2, ... ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). ● a(n) = (10 * n * (n + 1) + 3 * (2 * n + 1) * (- 1) ^ n - 3) / 8. ● a(n) = a(- n - 1). (End) ●
► [A024312] 9,12,31,38,70,82,130,148,215,240,329,362,476,518,660,712,885,948,1155,1230,1474,1562,1846,1948,2275 ⋆ a(n) = s(1) * s(n) + s(2) * s(n - 1) + ... + s(k) * s(n + 1 - k), where k = floor((n + 1) / 2)), s = (natural numbers >= 3). ● a(n) = ((75 + 182 * n + 63 * n ^ 2 + 4 * n ^ 3) - 3 * (25 + 10 * n + n ^ 2) * (- 1) ^ n) / 48. ● a(n) = (- 60 - 18 * n + (14 + 3 * n) * f(n) + 3 * (4 + n) * f(n) ^ 2 - 2 * f(n) ^ 3) / 6, where f(n) = floor((n + 5) / 2). (End) ●
► [A341208] 9,12,43,101,276,711,1873,4892,12819,33549,87844,229967,602073,1576236,4126651,10803701,28284468,74049687,193864609,507544124,1328767779,3478759197,9107509828,23843770271,62423801001 ⋆ a(n) = F(n + 4) * F(n + 1) - 4 * (- 1) ^ n where F(n) = A000045(n) are the Fibonacci numbers. ● a(n) = F(n + 4) * F(n + 1) - 4 * (- 1) ^ n for n > 0. ●
► [A140145] 1,9,12,76,81,297,304,816,825,1825,1836,3564,3577,6321,6336,10432,10449,16281,16300,24300,24321,34969,34992,48816,48841 ⋆ a(1)=1, a(n)=a(n - 1) + n ^ 1 if n odd, a(n)=a(n - 1) + n ^ 3 if n is even. ● a(n)=a(n - 1) +{ [1 - (- 1) ^ n] / 2 }* n +{ [1 + (- 1) ^ n] / 2 }* n ^ 3, with a(1)=1 a(n)=(3 / 16) - (1 / 4) * (- 1) ^ n * n - (3 / 16) * (- 1) ^ n + (1 / 4) * (- 1) ^ n * n ^ 3 + (1 / 4) * n ^ 3 + (3 / 8) * (- 1) ^ n * n ^ 2 + (3 / 8) * n ^ 2 + (1 / 4) * n + (1 / 8) * n ^ 4, with n>=1 - _ Paolo P. Lava _ , Jun 06 2008 ● a(n)=a(n - 1) + 4a(n - 2) - 4a(n - 3) - 6a(n - 4) + 6a(n - 5) + 4a(n - 6) - 4a(n - 7) - a(n - 8) + a(n - 9). G.f.: - x * (1 + 8 * x - x ^ 2 + 32 * x ^ 3 - x ^ 4 + 8 * x ^ 5 + x ^ 6) / ((1 + x) ^ 4 * (x - 1) ^ 5). [From _ R. J. Mathar _ , Feb 22 2009] ●
► [A294357] 9,13,17,21,25,27,29,33,37,39,45,47,51,53,63,65,71,77,83,89,95,101,107,113,119 ⋆ Smallest odd number that can be expressed in more ways by sums of 3 odd primes p + q + r with p <= q <= r than any smaller odd number. ● a(1)=9 because 9 = 3 + 3 + 3 is the smallest number that can be represented as sum of 3 odd primes. ●
► [A263941] 1,9,13,18,22,27,31,36,40,45,49,54,58,63,67,72,76,81,85,90,94,99,103,108,112 ⋆ Minimal most likely sum for a roll of n 8 - sided dice. ● a(n) = floor(9 * n / 2) = (18 * n + (- 1) ^ n - 1) / 4 with n>1, a(1)=1. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n>4. ●
► [A026045] 9,13,19,28,39,53,70,91,117,147,182,222,268,321,380,446,519,600,690,788,895,1011,1137,1274,1421 ⋆ a(n) = (d(n) - r(n)) / 5, where d = A026043 and r is the periodic sequence with fundamental period (0,2,3,0,0). ● a(n)=(n + 5) * (2 * n ^ 2 + 11 * n + 54) / 30 - (1 + (- 1 / 2 - 1 / 10 * 5 ^ (1 / 2)) * cos(2 * n * Pi / 5) + (1 / 10 * (3 * (5 - 5 ^ (1 / 2)) ^ (1 / 2) + 2 * (5 + 5 ^ (1 / 2)) ^ (1 / 2)) * 2 ^ (1 / 2)) * sin(2 * n * Pi / 5) + (1 / 10 * 5 ^ (1 / 2) - 1 / 2) * cos(4 * n * Pi / 5) + (1 / 10 * (2 * (5 - 5 ^ (1 / 2)) ^ (1 / 2) - 3 * (5 + 5 ^ (1 / 2)) ^ (1 / 2)) * 2 ^ (1 / 2)) * sin(4 * n * Pi / 5)) / 5 [From _ Richard Choulet _ , Dec 14 2008] ●
► [A219257] 0,9,13,40,48,93,105,168,184,265,285,384,408,525,553,688,720,873,909,1080,1120,1309,1353,1560,1608 ⋆ Numbers k such that 11 * k + 1 is a square. ● a(n) = a(- n + 1) = (22 * n * (n - 1) + 7 * (- 1) ^ n * (2 * n - 1) - 1) / 8 + 1 = (1 / 176) * (22 * n + 7 * (- 1) ^ n - 15) * (22 * n + 7 * (- 1) ^ n - 7). ●
► [A160117] 0,1,9,13,41,49,101,113,189,205,305,325,449,473,621,649,821,853,1049,1085,1305,1345,1589,1633,1901 ⋆ Number of "ON" cells after n - th stage in simple 2 - dimensional cellular automaton (see Comments for precise definition). ● a(2n) = 5 + 2n(7n - 5) for n>=1, a(2n + 1) = 5 + 2n(7n - 3) for n>=1. - _ Nathaniel Johnston _ , Nov 06 2010 ●
► [A287005] 9,13,49,129,361,989,2689,7233,19273,50925,133585,348225,902825,2329661,5986593,15327617,39115913,99532493,252601201,639548673,1615746537,4073951645,10253517761,25763633089,64635943881 ⋆ Number of connected dominating sets on the n - Moebius ladder. ● a(n) = (1 - 5 * n) * LucasL(n, 2) + 2 * (8 * Fibonacci(n, 2) + 1) * n - 1. ● a(n) = 6 * a(n - 1) - 11 * a(n - 2) + 4 * a(n - 3) + 5 * a(n - 4) - 2 * a(n - 5) - a(n - 6). ●
► [A270936] 1,9,13,57,66,182,191,411,420,776,785,1309,1318,2042,2051,3007,3016,4236,4245,5761,5770,7614,7623,9827,9836 ⋆ Partial sums of the number of active (ON,black) cells in n - th stage of growth of two - dimensional cellular automaton defined by "Rule 221", based on the 5 - celled von Neumann neighborhood. ● a(n) = (33 * (- 1 + (- 1) ^ n) + (46 - 24 * (- 1) ^ n) * n - 12 * (- 2 + (- 1) ^ n) * n ^ 2 + 8 * n ^ 3) / 12 for n>1. ● a(n) = (4 * n ^ 3 + 6 * n ^ 2 + 11 * n) / 6 for n>1 and even. ● a(n) = (4 * n ^ 3 + 18 * n ^ 2 + 35 * n - 33) / 6 for n>1 and odd. ● a(n) = a(n - 1) + 3 * a(n - 2) - 3 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) + a(n - 6) - a(n - 7) for n>8. ●
► [A271006] 1,9,13,57,70,182,207,415,452,792,841,1345,1406,2106,2179,3107,3192,4380,4477,5957,6066,7870,7991,10151,10284 ⋆ Partial sums of the number of active (ON,black) cells in n - th stage of growth of two - dimensional cellular automaton defined by "Rule 245", based on the 5 - celled von Neumann neighborhood. ● a(n) = 1 / 4 * (71 - 7 * (- 1) ^ n) - (25 * n) / 6 - (- 3 + (- 1) ^ n) * n ^ 2 + (2 * n ^ 3) / 3 for n>4. ● a(n) = (4 * n ^ 3 + 12 * n ^ 2 - 25 * n + 96) / 6 for n>4 and even. ● a(n) = (4 * n ^ 3 + 24 * n ^ 2 - 25 * n + 117) / 6 for n>4 and odd. ● a(n) = a(n - 1) + 3 * a(n - 2) - 3 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) + a(n - 6) - a(n - 7) for n>9. ●
► [A271052] 1,9,13,57,70,186,199,419,432,788,801,1325,1338,2062,2075,3031,3044,4264,4277,5793,5806,7650,7663,9867,9880 ⋆ Partial sums of the number of active (ON,black) cells in n - th stage of growth of two - dimensional cellular automaton defined by "Rule 253", based on the 5 - celled von Neumann neighborhood. ● a(n) = (8 * n ^ 3 + 12 * n ^ 2 + 46 * n - 48) / 12 for n>1 and even. ● a(n) = (8 * n ^ 3 + 36 * n ^ 2 + 94 * n - 138) / 12 for n>1 and odd. ● a(n) = a(n - 1) + 3 * a(n - 2) - 3 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) + a(n - 6) - a(n - 7) for n>8. ●
► [A305650] 1,1,9,13,61,117,421,949,2997,7381,21781,56277,160213,424789,1186389,3189589,8817493,23883093,65663317,178568533,489512277,1334064469,3651347797,9962435925,27244344661 ⋆ a(n) = - 1 / 3 * (u ^ n - 1) * (v ^ n - 1) with u = 1 + sqrt(3), v = 1 - sqrt(3). ● a(n) = a(n - 1) + 6 * a(n - 2) - 2 * a(n - 3) - 4 * a(n - 4) for n > 4. ●
► [A099580] 0,0,1,1,9,13,65,117,441,909,2929,6565,19305,45565,126881,309141,833049,2069613,5467345,13745797,35877321,90860509,235418369,598860405,1544728185 ⋆ a(n) = Sum _{ k=0..floor(n / 2) } binomial(n - k, k - 1) * 4 ^ (k - 1). ● a(n) = a(n - 1) + 8 * a(n - 2) - 4 * a(n - 3) - 16 * a(n - 4). ● a(n) = (4 * (2 / i) ^ (n - 1) * ChebyshevU(n - 1, i / 4) - 2 ^ n * (1 - (- 1) ^ n)) / 4. ●
► [A258286] 1,1,9,13,66,111,475,852,3128,5668,19011,34804,108328,195267,567674,1059291,2849122,5212695,13785287,25156313,62613272,115799409,277245609,508970856,1196118973 ⋆ Number of partitions of 8 copies of n into distinct parts. ● a(n) = 1 / 8! * [Product _{ i=1..8 } x _ i ^ n] Product _{ j>0 } (1 + Sum _{ i=1..8 } x _ i ^ j). ●
► [A327896] 9,14,19,23,27,31,35,39,43,47,51,54,58,62,65,69,73,76,80,83,87,90,94,97,101 ⋆ a(n) is the minimum number of tiles needed for constructing a polyiamond with n holes. ● a(n) = 3 * (n + k(n)) + 1 + ceiling(2 * n / k(n)), where k(n) = floor((3 + sqrt(3 * (3 + 8 * n))) / 6). ●
► [A184218] 0,0,0,0,9,14,20,27,35,44,54,65,77,90,104,119,135,152,170,189,209,230,252,275,299 ⋆ a(n) = largest k such that A000217(n + 1) = A000217(n) + (A000217(n) mod k), or 0 if no such k exists. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n > 7. ●
► [A070552] 9,14,21,25,33,34,38,57,85,86,93,94,118,121,122,133,141,142,145,158,177,201,202,205,213 ⋆ Semiprimes k such that k + 1 is also a semiprime. ● a(n) >> n log n since either n or n + 1 is in A100484. - _ Charles R Greathouse IV _ , Jul 21 2015 ●
► [A272566] 1,9,14,58,71,183,208,416,453,793,842,1346,1407,2107,2180,3108,3193,4381,4478,5958,6067,7871,7992,10152,10285 ⋆ Partial sums of the number of active (ON,black) cells in n - th stage of growth of two - dimensional cellular automaton defined by "Rule 501", based on the 5 - celled von Neumann neighborhood. ● a(n) = 1 / 4 * (75 - 7 * (- 1) ^ n) - (25 * n) / 6 - (- 3 + (- 1) ^ n) * n ^ 2 + (2 * n ^ 3) / 3 for n>4. ● a(n) = (4 * n ^ 3 + 12 * n ^ 2 - 25 * n + 102) / 6 for n>4 and even. ● a(n) = (4 * n ^ 3 + 24 * n ^ 2 - 25 * n + 123) / 6 for n>4 and odd. ● a(n) = a(n - 1) + 3 * a(n - 2) - 3 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) + a(n - 6) - a(n - 7) for n>9. ●
► [A070876] 9,15,18,30,36,60,72,120,144,240,288,480,576,960,1152,1920,2304,3840,4608,7680,9216,15360,18432,30720,36864 ⋆ Binary expansion is 1xx100...0 where xx = 00 or 11. ● a(n) = 3 * (4 - (- 1) ^ n) * 2 ^ ((2 * n + (- 1) ^ n - 1) / 4). Therefore: a(n) = 9 * 2 ^ (n / 2) for n even, otherwise a(n) = 15 * 2 ^ ((n - 1) / 2). ● a(n) = 2 * a(n - 2) for n>1. (End) ●
► [A007962] 9,15,21,29,39,47,57,65,71,93,99,115,129,137,143,149,183,189,205,219,225,241,251,269,287 ⋆ a(n) is the largest odd number k such that 9, 11, ..., k are sums of 3 of first n odd primes. ● a(n) << n log n. - _ Charles R Greathouse IV _ , Sep 19 2012 ●
► [A274757] 0,9,15,42,54,99,117,180,204,285,315,414,450,567,609,744,792,945,999,1170,1230,1419,1485,1692,1764 ⋆ Numbers k such that 6 * k + 1 is a triangular number (A000217). ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n>5. ● a(n) = 3 * (2 * n - 1) * (2 * n + (- 1) ^ n - 1) / 4. Therefore: ● a(n) = 3 * n * (2 * n - 1) / 2 for n even, ● a(n) = 3 * (n - 1) * (2 * n - 1) / 2 for n odd. ●
► [A355654] 0,1,9,15,271,313,481,511,33279,34785,39993,40719,61455,61689,65409,65535,16842751,17039233,17809657,17821711,20455183,20479033,20842465,20939263,31457791 ⋆ For any number n with runs in binary expansion (r _ w, ..., r _ 0), let p(n) be the polynomial of a single indeterminate x where the coefficient of x ^ e is r _ e for e = 0..w and otherwise 0, and let q be the inverse of p; a(n) = q(p(n) ^ 2). ● a(2 ^ n - 1) = 2 ^ (n ^ 2) - 1. ●
► [A072836] 0,9,16,20,21,24,25,29,36,40,41,44,45,49,56,60,61,64,65,69,76,80,81,84,85 ⋆ Exponents occurring in expansion of F _ 10(q ^ 2). ● a(n) = 20 * floor((n - 1) / 6) + 9,16,20,21,24,25 for n == 1,2,3,4,5,0 (mod 6) respectively, for n>0. - _ Jerzy R Borysowicz _ , Oct 23 2022 ●
► [A003332] 9,16,23,30,35,37,42,44,49,51,56,58,61,63,65,68,70,72,75,77,79,82,84,86,87 ⋆ Numbers that are the sum of 9 positive cubes. ● a(n) = 114 + n for all n > 357. - _ M. F. Hasler _ , Aug 13 2020 ●

► [A151973] 0,1,9,16,24,25,33,40,48,49,57,64,72,73,81,88,96,97,105,112,120,121,129,136,144 ⋆ Numbers n such that n ^ 2 - n is divisible by 24. ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. G.f.: x ^ 2 * (8 * x ^ 3 + 7 * x ^ 2 + 8 * x + 1) / ((x - 1) ^ 2 * (x + 1) * (x ^ 2 + 1)). - _ Colin Barker _ , Nov 29 2012 ● a(n) = (12 * n + 3 * i ^ (n * (n - 1)) - 2 * (- 1) ^ n - 17) / 2, where i=sqrt(- 1). - _ Bruno Berselli _ , Nov 29 2012 ●

► [A026062] 9,16,25,36,51,68,88,111,137,168,202,240,282,328,380,436,497,563,634,712,795,884,979,1080,1189 ⋆ a(n) = (d(n) - r(n)) / 5, where d = A026060 and r is the periodic sequence with fundamental period (0,0,1,4,0). ● a(n)=(n + 5) * (n ^ 2 + 25 * n + 54) / 30 - 1 / 5 * (1 + (- 1 / 2 - 1 / 2 * 5 ^ (1 / 2)) * cos(2 * n * Pi / 5) + (- 3 / 10 * 2 ^ (1 / 2) * (5 - 5 ^ (1 / 2)) ^ (1 / 2)) * sin(2 * n * Pi / 5) + (- 1 / 2 + 1 / 2 * 5 ^ (1 / 2)) * cos(4 * n * Pi / 5) + (3 / 10 * 2 ^ (1 / 2) * (5 + 5 ^ (1 / 2)) ^ (1 / 2)) * sin(4 * n * Pi / 5)) - _ Richard Choulet _ , Dec 14 2008 ●

► [A076621] 9,16,36,81,144,225,324,441,676,900,1156,1521,1764,2025,2500,3136,3600,4096,4761,5184,5776,6561,7396,8649,9801 ⋆ Least square greater than the product of two successive primes. ● a(n) = ((prime(n) + prime(n + 1)) / 2) ^ 2 for n > 1. ●

► [A303692] 0,0,9,16,50,72,147,192,324,400,605,720,1014,1176,1575,1792,2312,2592,3249,3600,4410,4840,5819,6336,7500 ⋆ a(n) = n ^ 2 * (2 * n - 3 - (- 1) ^ n) / 4. ● a(n) = Sum _{ i=1..floor((n - 1) / 2) } n ^ 2. ● a(n) = n ^ 2 * floor((n - 1) / 2). ●

► [A198308] 9,16,65,114,457,800,3201,5602,22409,39216,156865,274514,1098057,1921600,7686401,13451202,53804809,94158416,376633665,659108914,2636435657,4613762400,18455049601,32296336802,129185347209 ⋆ Moore lower bound on the order of an (8,g) - cage. ● a(2 * i) = 2 Sum _{ j=0..i - 1 } 7 ^ j = string "2" ^ i read in base 7. ● a(2 * i + 1) = 7 ^ i + 2 Sum _{ j=0..i - 1 } 7 ^ j = string "1" * "2" ^ i read in base 7. ● a(n) = a(n - 1) + 7 * a(n - 2) - 7 * a(n - 3) for n>5. ● a(n) = (7 ^ (n / 2) - 1) / 3 for n even. ● a(n) = (4 * 7 ^ (n / 2 - 1 / 2) - 1) / 3 for n odd. (End) ●

► [A017077] 1,9,17,25,33,41,49,57,65,73,81,89,97,105,113,121,129,137,145,153,161,169,177,185,193 ⋆ a(n) = 8 * n + 1. ● a(n) = 2 * a(n - 1) - a(n - 2). - _ Vincenzo Librandi _ , Mar 14 2014 ●

► [A004768] 9,17,25,33,41,49,57,65,73,81,89,97,105,113,121,129,137,145,153,161,169,177,185,193,201 ⋆ Binary expansion ends 001. ● a(n) = 8 * n + 9. ● a(n) = 2 * a(n - 1) - a(n - 2); a(0)=9, a(1)=17. - _ Harvey P. Dale _ , May 10 2015 ●

► [A342434] 1,9,17,26,37,47 ⋆ Solution to stepping stone puzzle on a hexagonal board (See Comments). ● a(n) >= 5n - 4. This is seen by constructing the pattern linked above, titled "Illustration for lower bound". ●

► [A352789] 1,1,1,9,17,27,101,239,473,1315,3281,7267,18265,45459,106225,258907,637113,1523443,3685617,8994971,21700329,52459491,127466145,308440011,746105881 ⋆ Number of ways to tile a 3 X n strip with squares and P - shaped heptominoes. ● a(n) = a(n - 1) + 8 * a(n - 3) + 2 * a(n - 5). ●

► [A285009] 9,17,28,42,59,79,102,128,157,189,224,262,303,347,394,444,497,553,612,674,739,807,878,952,1029 ⋆ Subset sums (see Comments). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3), for n > 5. ● a(n) = (8 + (n - 2) * (3 * n + 1)) / 2, for n > 2. ●

► [A188559] 9,17,32,60,112,208,384,704,1280,2304,4097,7181,12381,20965,34831,56751,90683,142163,218790,330818,491870,719790,1037650,1474930,2068890 ⋆ Number of 8 X n binary arrays without the pattern 0 1 diagonally, vertically, antidiagonally or horizontally. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>9. ●

► [A090994] 9,17,32,61,116,222,424,813,1556,2986,5721,10982,21053,40416,77505,148785,285380,547810,1050876,2017126,3869845,7427671,14250855,27351502,52479500 ⋆ Number of meaningful differential operations of the n - th order on the space R ^ 9. ● a(k + 5) = a(k + 4) + 4 * a(k + 3) - 3 * a(k + 2) - 3 * a(k + 1) + a(k). ●

► [A275543] 1,1,9,17,33,49,73,97,129,161,201,241,289,337,393,449,513,577,649,721,801,881,969,1057,1153 ⋆ A081585 and A069129 interleaved. ● a(n) = (2 * n ^ 2 + (- 1) ^ n). ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4) for n > 3. ●

► [A097478] 9,17,35,53,85,117 ⋆ Atomic numbers of halogens in the periodic table. ● a(1) = 9; a(n) = a(n - 1) + 2 * (ceiling(n / 2) + 1) ^ 2, 2 <= n <= 6. ●

► [A121955] 0,9,17,72,209,711,2250,7357,23693,76848,248413,804307,2602122,8421705,27251521,88190472,285386041,923535567,2988612714,9671371877,31297187845,101279874144,327748481957,1060616489147,3432226859754 ⋆ Expansion of x ^ 2 * (9 + 8 * x - 8 * x ^ 2) / ((1 + x - x ^ 2) * (1 - 2 * x - 4 * x ^ 2)). ● a(n) = a(n - 1) + 7 * a(n - 2) + 2 * a(n - 3) - 4 * a(n - 4). - _ R. J. Mathar _ , Apr 04 2009 ● a(n) = ((- 1) ^ n * Fibonacci(n + 2) + 2 ^ n * (5 * Fibonacci(n + 1) - 4 * Fibonacci(n))) / 3. - _ G. C. Greubel _ , Oct 07 2019 ●

► [A116526] 0,1,9,17,81,89,153,217,729,737,801,865,1377,1441,1953,2465,6561,6569,6633,6697,7209,7273,7785,8297,12393 ⋆ a(0)=1, a(1)=1, a(n) = 9 * a(n / 2) for even n >= 2, and a(n) = 8 * a((n - 1) / 2) + a((n + 1) / 2) for odd n >= 3. ● a(n) = Sum _{ k=0..n - 1 } 8 ^ wt(k), where wt = A000120. - _ Mike Warburton _ , Mar 14 2019 ●

► [A015443] 1,1,9,17,89,225,937,2737,10233,32129,113993,371025,1282969,4251169,14514921,48524273,164643641,552837825,1869986953,6292689553,21252585177,71594101601,241614783017,814367595825,2747285859961 ⋆ Generalized Fibonacci numbers: a(n) = a(n - 1) + 8 * a(n - 2). ● a(n) = (((1 + sqrt(33)) / 2) ^ (n + 1) - ((1 - sqrt(33)) / 2) ^ (n + 1)) / sqrt(33). ● a(n) = (Sum _{ 1<=k<= n + 1, k odd } C(n + 1,k) * 33 ^ ((k - 1) / 2)) / 2 ^ n. - _ Vladimir Shevelev _ , Feb 05 2014 ●

► [A253212] 9,17,89,737,6569,59057,531449,4782977,43046729,387420497,3486784409,31381059617,282429536489,2541865828337,22876792454969,205891132094657,1853020188851849,16677181699666577,150094635296999129,1350851717672992097,12157665459056928809 ⋆ a(n) = 9 ^ n + 8. ● a(n) = 10 * a(n - 1) - 9 * a(n - 2) for n>1. ●

► [A121442] 1,1,9,17,97,241,1097,3169,12801,40225,152265,501489,1831649,6192785,22176137,76079553,269472001,932011841,3281180297,11399814865,39998425697,139315579185,487901595593,1701743382561,5953542163713 ⋆ Expansion of (1 - x ^ 2) / (1 - x - 9 * x ^ 2 + x ^ 3). ● a(0)=a(1)=1, a(2)=9, a(n + 1) = a(n) + 9 * a(n - 1) - a(n - 2) for n>=2. ●

► [A049440] 9,17,105,1313,21385,374833,6688617,119863873,2150198793,38580909137,692294282601,12422665840481,222915477614473,4000055027956849,71778071199324777,1288005210351490177 ⋆ Fib(3n) ^ 2 - 2 * Fib(3n) + 4 * Fib(3n + 1) + 5. ● a(n) = 22a(n - 1) - 71a(n - 2) - 36a(n - 3) + 73a(n - 4) + 14a(n - 5) - a(n - 6). ●

► [A132375] 1,1,9,17,153,353,3177,8113,73017,198401,1785609,5060433,45543897,133071009,1197639081,3581326065,32231934585,98156060225,883404542025,2730108129937,24570973169433,76862217117665,691759954058985 ⋆ Expansion of c(8 * x ^ 2) / (1 - x * c(8 * x ^ 2)), where c(x) is the g.f. of A000108. ● a(n) = (9 * (n + 1) * a(n - 1) + 32 * (n - 2) * a(n - 2) - 288 * (n - 2) * a(n - 3)) / (n + 1). ●

► [A046412] 9,18,22,27,36,42,44,45,54,63,66,72,78,81,84,88,90,99,108,110,111,117,126,132,135 ⋆ Lengths of nonsquarefree repunits. ● a(n)=k where (10 ^ k - 1) / 9 is not squarefree. - _ Ray Chandler _ , Aug 10 2003 ●

► [A102042] 9,18,26,32,34,38,46,52,54,58,66,72,74,78,86,92,94,98,106,112,114,118,126,132,134 ⋆ a(n) = a(n - 1) + last digit of a(n - 1), starting at 9. ● a(n) = 10 + (1 - i / 2) * (- i) ^ n + (1 + i / 2) * i ^ n + 5 * n for n>1, where i = sqrt(- 1). - _ Colin Barker _ , Oct 19 2015 ●

► [A008591] 0,9,18,27,36,45,54,63,72,81,90,99,108,117,126,135,144,153,162,171,180,189,198,207,216 ⋆ Multiples of 9: a(n) = 9 * n. ● a(n) = 9 * n = 2 * a(n - 1) - a(n - 2). ●

► [A217373] 9,18,27,36,45,54,63,72,90,99,108,117,126,135,144,153,171,180,189,198,207,216,225,234,252 ⋆ Numbers n the representation of which in base 3 ends in 2 * k or 2 * k + 1 zeros, where k is odd. ● a(n) / (10 * n) tends to 1, as n goes to infinity. ●

► [A020336] 9,18,27,36,45,54,63,520,585,650,715,780,845,910,975,1040,1105,1170,1235,1300,1365,1430,1495,1560,1625 ⋆ Numbers whose base - 8 representation is the juxtaposition of two identical strings. ● a(n) = n * 8 ^ floor(log _ 8(n) + 1) + n. - _ Ilya Gutkovskiy _ , Jan 26 2018 ●

► [A194152] 9,18,28,37,47,56,66,75,85,94,104,113,123,132,142,151,161,170,179,189,198,208,217,227,236 ⋆ Beatty sequence for 5 + 2 * sqrt(5); complement of A194151. ● a(n) = floor(n * (5 + 2 * sqrt(5))). - _ Vincenzo Librandi _ , Oct 25 2011 ●

► [A349417] 9,18,32,52,79,114,158,212,277,354,444,548,667,802,954,1124,1313,1522,1752,2004,2279,2578,2902,3252,3629 ⋆ a(n) is the Wiener index of a sling on n + 1 vertices. ● a(n) = n ^ 3 / 6 + n ^ 2 / 2 - 2n / 3 + 2. ●

► [A139591] 0,1,9,18,34,51,75,100,132,165,205,246,294,343,399,456,520,585,657,730,810,891,979,1068,1164 ⋆ A139275(n) followed by 18 - gonal number A051870(n + 1). ● a(n) = 2 * n ^ 2 + (7 / 2) * n + (3 / 4) * ((- 1) ^ n - 1). - _ Sean A. Irvine _ , Jul 14 2022 ●

► [A051063] 9,18,36,45,63,72,90,99,117,126,144,153,171,180,198,207,225,234,252,261,279,288,306,315,333 ⋆ 27 * n + 9 or 27 * n + 18. ● a(n)=27 * n - a(n - 1) for n>0, a(0)=9. [_ Vincenzo Librandi _ , Aug 06 2010] ●

► [A005010] 9,18,36,72,144,288,576,1152,2304,4608,9216,18432,36864,73728,147456,294912,589824,1179648,2359296,4718592,9437184,18874368,37748736,75497472,150994944 ⋆ a(n) = 9 * 2 ^ n. ● a(n) = 9 * 2 ^ n. ● a(n) = 2 * a(n - 1), n>0; a(0)=9. - _ Philippe Deléham _ , Nov 23 2008 ●

► [A086500] 1,9,18,50,75,147,196,324,405,605,726,1014,1183,1575,1800,2312,2601,3249,3610,4410,4851,5819,6348,7500,8125 ⋆ Group the natural numbers such that the n - th group sum is divisible by the n - th triangular number: (1), (2, 3, 4), (5, 6, 7), (8, 9, 10, 11, 12), (13, 14, 15, 16, 17), (18, 19, 20, 21, 22, 23, 24), ... Sequence contains the group sum. ● a(n) = n * (n + 1) * (2 * n + 1 + (- 1) ^ n) / 4. - _ Wesley Ivan Hurt _ , Sep 19 2014 ● a(n) = a(n - 1) + 3 * a(n - 2) - 3 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) + a(n - 6) - a(n - 7) for n>7. - _ Colin Barker _ , Sep 19 2014 ●

► [A232921] 9,18,54,144,396,1080,2952,8064,22032,60192,164448,449280,1227456,3353472,9161856,25030656,68385024,186831360,510432768,1394528256,3809922048,10408900608,28437645312,77693091840,212261474304 ⋆ Number of 2 X n 0..2 arrays with no element x(i,j) adjacent to value 2 - x(i,j) horizontally, diagonally or antidiagonally. ● a(n) = (- 3) * (sqrt(3) * ((1 - sqrt(3)) ^ n - (1 + sqrt(3)) ^ n)) / 2. ●

► [A140149] 1,9,18,82,107,323,372,884,965,1965,2086,3814,3983,6727,6952,11048,11337,17169,17530,25530,25971,36619,37148,50972,51597 ⋆ a(1)=1, a(n)=a(n - 1) + n ^ 2 if n odd, a(n)=a(n - 1) + n ^ 3 if n is even. ● a(n) = a(n - 1) +{ [1 - (- 1) ^ n] / 2 }* n ^ 2 +{ [1 + (- 1) ^ n] / 2 }* n ^ 3, with a(1)=1 a(n)= (1 / 16) - (1 / 4) * (- 1) ^ n * n - (1 / 16) * (- 1) ^ n + (1 / 4) * (- 1) ^ n * n ^ 3 + (5 / 12) * n ^ 3 + (1 / 8) * (- 1) ^ n * n ^ 2 + (3 / 8) * n ^ 2 + (1 / 12) * n + (1 / 8) * n ^ 4, with n>=1. - _ Paolo P. Lava _ , Jun 06 2008 ● a(n) = a(n - 1) + 4 * a(n - 2) - 4 * a(n - 3) - 6 * a(n - 4) + 6 * a(n - 5) + 4 * a(n - 6) - 4 * a(n - 7) - a(n - 8) + a(n - 9). (End) ●

► [A050250] 9,18,108,198,1098,1998,10998,19998,109998,199998,1099998,1999998,10999998,19999998,109999998,199999998,1099999998,1999999998,10999999998,19999999998,109999999998,199999999998,1099999999998,1999999999998,10999999999998 ⋆ Number of nonzero palindromes less than 10 ^ n. ● a(2 * k) = 2 * 10 ^ k - 2, a(2 * k + 1) = 11 * 10 ^ k - 2. - _ Sascha Kurz _ , Apr 14 2002 ● a(n) = Sum _{ i=1..n } 9 * 10 ^ floor((i - 1) / 2). ● a(n) = 9 * Sum _{ i=1..n } 10 ^ floor((i - 1) / 2). (End) ● a(n) = (1 / 2) * 10 ^ ((2 * n + (- 1) ^ n - 1) / 4) * (13 - 9 * (- 1) ^ n) - 2. (End) ● a(1)=9, a(2)=18, a(3)=108; for n>3, a(n) = a(n - 1) + 10 * a(n - 2) - 10 * a(n - 3). - _ Harvey P. Dale _ , Jan 29 2012 ● a(n) = 10 * a(n - 2) + 18. - _ R. J. Mathar _ , Nov 07 2015 ●

► [A050685] 0,0,9,18,189,360,2799,5238,36189,67140,435699,804258,5021289,9238320,56191599,103144878,615724389,1128303900,6641519499,12154735098,70773675489,129392615880,746963079399,1364533542918,7822667714589 ⋆ Number of nonzero palindromes < 10 ^ n and containing at least one digit '0'. ● a(n) = a(n - 1) + 19 * a(n - 2) - 19 * a(n - 3) - 90 * a(n - 4) + 90 * a(n - 5). ● a(n) = (1 / (4 * sqrt(10))) * (4 * sqrt(10) * (1 + (- 1) ^ n) * (10) ^ (n / 2) + 22 * (1 - (- 1) ^ n) * (10) ^ (n / 2) + sqrt(10) * (1 + ((- 1) ^ n - 4) * 3 ^ (n + 1))). ● a(

2 * n) = (1 / 4) * (1 + 8 * (10) ^ n - 9 ^ (1 + n)), n>=1. ● a(2 * n + 1) = (1 / 20) * (5 + 22 * (10) ^ (n + 1) - 25 * 9 ^ (n + 1)), n>=0. (End) ●

▶ [A133361] 1,9,18,261,9432,88848,236997,3792312,80803143,782822727,3454045407,36680468013,711212421033,7929871190046,41401704886317,35867934351627 3,7546461904118223,70046073175181976,487736675856414036,4236277072800369834,60582330255639462183 ⋆ Multiply by 9 and reverse. ● a(n) = reverse(9 * a (n - 1)) where a(1) = 1. ●

▶ [A353183] 9,18,270,603,8307,19737,265257,653742,8672022,21893256,28802872 8,739651770,9675345546,25164110070,327788101782,860977172187,111789695696 67,29595164756157,383284574197677,1021259144052675,13198843891723059,353 57274978994503,456176418630573735,1227566989710948393 ⋆ Number of numb ers < 10 ^ n in which more than half of the digits are the same. ● a(n) = Sum _{ m=1..n } Sum _{ k=floor(m / 2) + 1..m } C(m,k) * 9 ^ (m - k + 1). ● a(n + 4) = ((16560 + 14040 * n + 2880 * n ^ 2) * a(n) - (18036 + 15444 * n + 3168 * n ^ 2) * a(n + 1) + (858 + 934 * n + 208 * n ^ 2) * a(n + 2) + (678 + 517 * n + 88 * n ^ 2) * a(n + 3)) / (60 + 47 * n + 8 * n ^ 2). ● a(n + 5) = - ((1440 + 720 * n) * a(n) + (- 3024 - 1152 * n) * a(n + 1) + (1668 + 448 * n) * a(n + 2) + (- 28 - 4 * n) * a(n + 3) + (- 61 - 13 * n) * a(n + 4)) / (5 + n). ●

▶ [A357773] 9,19,21,25,39,43,45,51,53,57,79,87,91,93,103,107,109,115,117,121,15 9,175,183,187,189 ⋆ Odd numbers with two zeros in their binary expansion. ● a ((n - 1) * (n - 2) * (n - 3) / 6 - (i - 1) * (i - 2) / 2 - (j - 1)) = 2 ^ n - 2 ^ i - 2 ^ j - 1 for 1 <= j < i <= n - 2. - _ Robert Israel _ , Oct 13 2022 ●

▶ [A041156] 9,19,28,47,75,197,3621,7439,11060,18499,29559,77617,1426665,2930947,4357612,7288559,11646171,30580901,562102389,1154785679,1716888068,2871673747,4588561815,12048797377,221466914601 ⋆ Numerators of continued fracti on convergents to sqrt(88). ● a(n) = 394 * a(n - 6) - a(n - 12). G.f.: - (x ^ 11 - 9 * x ^ 10 + 19 * x ^ 9 - 28 * x ^ 8 + 47 * x ^ 7 - 75 * x ^ 6 - 197 * x ^ 5 - 75 * x ^ 4 - 47 * x ^ 3 - 28 * x ^ 2 - 19 * x - 9) / (x ^ 12 - 394 * x ^ 6 + 1). [_ Coli n Barker _ , Jul 18 2012] ●

▶ [A041369] 1,9,19,28,75,178,965,4038,5003,9041,122536,131577,254113,1148029,5994258,13136545,32267348,45403893,123075134,1153080099,32409317906,292836941253,618083200412,910920141665,2439923483742 ⋆ Denominators of contin ued fraction convergents to sqrt(199). ● a(n) = 32532393040 * a(n - 20) - a(n - 40) for n>39. [_ Bruno Berselli _ , Dec 16 2013] ●

▶ [A042523] 1,9,19,28,159,187,346,1225,5246,6471,31130,37601,181534,582203,763737,1345940,7493437,8839377,25172191,235389096,13206961567,119098043199,251403047965,370501091164,2103908503785 ⋆ Denominators of continued fractio n convergents to sqrt(790). ● a(n) = 13232133758 * a(n - 20) - a(n - 40) for n> 39. - _ Vincenzo Librandi _ , Jan 23 2014 ●

▶ [A037085] 0,9,19,29,39,49,59,69,78,88,98,108,118,128,138,148,157,167,177,187,1 97,207,217,227,236 ⋆ Beatty sequence for Pi ^ 2. ● a(n) = floor(n * Pi ^ 2). ●

▶ [A017377] 9,19,29,39,49,59,69,79,89,99,109,119,129,139,149,159,169,179,189,19 9,209,219,229,239,249 ⋆ a(n) = 10 * n + 9. ● a(n) = 10 * n + 9; a(n) = 2 * a(n - 1) - a(n - 2). - _ Vincenzo Librandi _ , May 29 2011 ●

▶ [A330171] 9,19,30,40,51,60,70,81,91,102,112,121,132,142,153,163,174,183,193,2 04,214,225,235,244,255 ⋆ a(n) = n + floor(ns / r) + floor(nt / r), where r = sqr t(2) - 1, s = sqrt(2), t = sqrt(2) + 1. ● a(n) = n + floor(ns / r) + floor(nt / r), where r = sqrt(2) - 1, s = sqrt(2), t = sqrt(2) + 1. ●

▶ [A056126] 0,9,19,30,42,55,69,84,100,117,135,154,174,195,217,240,264,289,315,3 42,370,399,429,460,492 ⋆ a(n) = n * (n + 17) / 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ● a(n) = a(n - 1) + n + 8 (with a(0)=0). - _ Vincenzo Librandi _ , Aug 07 2010 ● a(n) = 9 * n - floor(n / 2) + floor(n ^ 2 / 2). - _ Wesley Iva n Hurt _ , Jun 15 2013 ●

▶ [A190576] 1,9,19,31,45,61,79,99,121,145,171,199,229,261,295,331,369,409,451,4 95,541,589,639,691,745 ⋆ a(n) = n ^ 2 + 5 * n - 5. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3); a(1)=1, a(2)=9, a(3)=19. - _ Harvey P. Dale _ , May 28 2015 ●

▶ [A195042] 0,1,9,19,36,55,81,109,144,181,225,271,324,379,441,505,576,649,729,8 11,900,991,1089,1189,1296 ⋆ Concentric 9 - gonal numbers. ● a(n) = (9 * n ^ 2 + 5 / 2 * ((- 1) ^ n - 1)) / 4. ●

▶ [A159697] 9,19,40,84,176,368,768,1600,3328,6912,14336,29696,61440,126976,26 2144,540672,1114112,2293760,4718592,9699328,19922944,40894464,83886080,171 966464,352321536 ⋆ a(0)=9, a(n) = 2 * a(n - 1) + 2 ^ (n - 1) for n > 0. ● a(n) = Sum _{ k=0..n } (k + 9) * binomial(n,k). ● a(n) = (18 + n) * 2 ^ (n - 1). ● a(n) = 4 * a(n - 1) - 4 * a(n - 2). ● a(0)=9, a(1)=19, a(n) = 4 * a(n - 1) - 4 * a(n - 2). - _ Harvey P. Dale _ , Mar 24 2013 ●

▶ [A048696] 1,9,19,47,113,273,659,1591,3841,9273,22387,54047,130481,315009,76 0499,1836007,4432513,10701033,25834579,62370191,150574961,363520113,877615 187,2118750487,5115116161 ⋆ Generalized Pellian with second term equal to 9. ● a(n) = 2 * a(n - 1) + a(n - 2); a(0)=1, a(1)=9. ● a(n) = ((4 * sqrt(2) + 1)(1 + sqrt(2)) ^ n - (4 * sqrt(2) - 1)(1 - sqrt(2)) ^ n) / 2. ●

▶ [A308025] 0,0,9,19,55,87,168,234,378,490,715,885,1209,1449,1890,2212,2788,32 04,3933,4455,5355,5995,7084,7854,9150 ⋆ a(n) = n * (2 * n - 3 - (- 1) ^ n) * (5 * n - 2 + (- 1) ^ n) / 16. ● a(n) = Sum _{ i=1..floor((n - 1) / 2) } i ^ 2 + 2 * (n - i) ^ 2. ● a(n) = a(n - 1) + 3 * a(n - 2) - 3 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) + a(n - 6) - a(n - 7). ●

▶ [A334640] 0,0,9,19,72,324,1595,8307,44982,250648,1427679,8274825,4864431 0,289334160,1738043892,10529070020,64252519830,394601627376,243705892687 1,15126463230165,94306717535940,590318477063700,3708527622652755,2337458 7898663155,147770791807427880 ⋆ a(n) is the total number of down steps betw een the 2nd and 3rd up steps in all 2 - Dyck paths of length 3 * n. A 2 - Dyck p ath is a nonnegative lattice path with steps (1, 2), (1, - 1) that starts and ends a t y = 0. ● a(0) = a(1) = 0 and a(n) = 2 * Sum _{ j=1..2 } binomial(3 * j + 1,j) * binomial(3 * (n - j),n - j) / ((3 * j + 1) * (n - j + 1)) for n > 1. ●

▶ [A171066] 0,1,1,9,19,100,279,1189,3781,14661,49600,184141,641421,2333629,82 40959,29700900,105561739,378777169,1350292761,4835148121,17260998400,6174 8847081,220582688041,788748162049,2818480203099 ⋆ G.f. - x * (x - 1) * (1 + x) / (1 - x - 9 * x ^ 2 - x ^ 3 + x ^ 4). ● a(n)= + a(n - 1) + 9 * a(n - 2) + a(n - 3) - a(n - 4) ●

▶ [A041677] 1,1,9,19,161,180,6641,6821,61209,129239,1095121,1224360,4517208 1,46396441,416343609,879083659,7449012881,8328096540,307260488321,3155885 84861,2831969167209,5979526919279,50668184521441,56647711440720,20899857 96387361 ⋆ Denominators of continued fraction convergents to sqrt(357). ● a(n) = 6802 * a(n - 6) - a(n - 12) for n>11. - _ Vincenzo Librandi _ , Dec 22 2013 ●

▶ [A153316] 1,9,19,161,341,2889,6119,51841,109801,930249,1970299,16692641,35 355581,299537289,634430159,5374978561,11384387281,96450076809,20428454089 9,1730726404001,3665737348901,31056625195209,65778987739319,557288527109 761,1180356041958841 ⋆ Numerators of continued fraction convergents to sqrt(5 / 4). ● a(n) = ((5 * (- 2 + sqrt(5)) ^ n - 2 * sqrt(5) * (- 2 + sqrt(5)) ^ n + 1 5 * (2 + sqrt(5)) ^ n + 6 * sqrt(5) * (2 + sqrt(5)) ^ n + 3 * (2 - sqrt(5)) ^ n * (- 5 + 2 * sqrt(5)) - (- 2 - sqrt(5)) ^ n * (5 + 2 * sqrt(5)))) / (8 * sqrt(5)). ● a(n) = 18 * a(n - 2) - a(n - 4) for n > 3. ● a(n) = (3 - (- 1) ^ n) * Lucas(3 * (n + 1)) / 8. - _ Ehren Metcalfe _ , Apr 04 2019 ●

▶ [A041160] 9,19,351,721,13329,27379,506151,1039681,19220409,39480499,72986 9391,1499219281,27715816449,56930852179,1052471155671,2161873163521,39966 188099049,82094249361619,1517662676608191 ⋆ Numerators of continued fracti on convergents to sqrt(90). ● a(n) = (2 + (- 1) ^ n) * ((3 - sqrt(10)) ^ (n + 1) + (3 + sqrt(10)) ^ (n + 1)) / 2. [_ Bruno Berselli _ , Oct 30 2013] ●

▶ [A094196] 1,9,20,25,44,76,121,197,304,353,540,856,1301,2053,3112,3597,5448,8 576,12981,20425,30908,35709,54032,84996,128601 ⋆ Indices of the start of a stri ng of 24 consecutive squares whose sum is a square. ● a(0)=1, a(1)=9, a(2)=20, a(3)=25, a(4)=44, a(5)=76, a(6)=121, a(7)=197, a(8)=304, a(9)=353, a(10)=54 0, a(11)=856, a(12)=1301; thereafter a(n) = a(n - 1) + 10 * a(n - 6) - 10 * a(n - 7) - a(n - 12) + a(n - 13). - _ Harvey P. Dale _ , Oct 10 2011 ● a(1)=1, a(2)=9 , a(3)=20, a(4)=25, a(5)=44, a(6)=76, a(7)=121, a(8)=197, a(9)=304, a(10)=35 3, a(11)=540, a(12)=856; a(n)=10 * a(n - 6) - a(n - 12) + 92 for n>12. - _ Dan iel Mondot _ , Aug 05 2016 ●

▶ [A028566] 0,9,20,33,48,65,84,105,128,153,180,209,240,273,308,345,384,425,46 8,513,560,609,660,713,768 ⋆ a(n) = n * (n + 8). ● a(n) = (n + 4) ^ 2 - 4 ^ 2 = n * (n + 8), n >= 0. ● a(n) = 2 * n + a(n - 1) + 7. - _ Vincenzo Librandi _ , Aug 05 2010 ●

▶ [A128153] 1,9,20,37,58,85,116,153,194,241,292,349,410 ⋆ The number of regul ar pentagons found by constructing n equally - spaced points on each side of the pentagon and drawing lines parallel to the pentagon sides, as well as lines conne cting vertices. ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4) for n > 4 (conjectu red). ●

▶ [A053795] 9,21,27,33,39,49,51,57,63,69,77,81,87,91,93,99,111,117,119,121,123,1 29,133,141,143 ⋆ Composite numbers ending in 1, 3, 7 or 9. ● a(n) = 2.5n + 2.5 n / log n + O(n / log ^ 2 n). - _ Charles R Greathouse IV _ , Jan 30 2018 ●

▶ [A106214] 9,21,27,48,51,72,75,81,96,105,114,117,123,126,132,135,147,156,159,1 77,180,189,198,201,207 ⋆ Positions n where A083349(n) = 2 (mod 3). ● a(n) = 0 (mod 3) for n>=0. ●

▶ [A017629] 9,21,33,45,57,69,81,93,105,117,129,141,153,165,177,189,201,213,22 5,237,249,261,273,285,297 ⋆ a(n) = 12 * n + 9. ● a(n) = 6 * (4 * n + 1) - a(n - 1) (with a(0)=9). - _ Vincenzo Librandi _ , Dec 17 2010 ●

▶ [A226355] 1,9,21,33,49,61,81,93,113,129,149,161,189,201,221,241,265,277,305,3 17,345,365,385,397,433 ⋆ Number of ordered pairs (i,j) with |i| * |j| <= n. ● a(n) = 1 + 4n + 4 * Sum _{ k=1..n } tau(k), where tau(k) is the number of divi sors of k. - _ Lorenz H. Menke, Jr. _ , Mar 15 2016 ●

▶ [A332019] 1,9,21,35,48,60,72,84,96,108,120,132,144,156,168,180,192,204,216,22 8,240,252,264,276,288 ⋆ The number of cells added in the n - th generation of th e following procedure: start by coloring any triangle on the snub square tiling, then repeatedly color every cell that shares a vertex with a colored cell. ● a(n) = 12 * (n - 1) for n > 4. ● a(n) = 2 * a(n - 1) - a(n - 2) for n > 6. ●

▶ [A140673] 0,9,21,36,54,75,99,126,156,189,225,264,306,351,399,450,504,561,62 1,684,750,819,891,966,1044 ⋆ a(n) = 3 * n * (n + 5) / 2. ● a(n) = 3 * n + a(n - 1) + 6 for n>0, a(0)=0. - _ Vincenzo Librandi _ , Aug 03 2010 ●

▶ [A059993] 1,9,21,37,57,81,109,141,177,217,261,309,361,417,477,541,609,681,75 7,837,921,1009,1101,1197,1297 ⋆ Pinwheel numbers: a(n) = 2 * n ^ 2 + 6 * n + 1. ● a(n) = 4 * n + a(n - 1) + 4 for n>0, a(0)=1. - _ Vincenzo Librandi _ , Au g 07 2010 ● a(n) = 2 * a(n - 1) - a(n - 2) + 4. - _ Vincenzo Librandi _ , Mar 01 2013 ● a(n) = Hyper2F1([- 2, n], [1], - 2). - _ Peter Luschny _ , Aug 02 2014 ●

▶ [A173391] 9,21,45,105,273,765,2229,6609,19737,59109,177213,531513,159440 1,4783053,14348997,43046817,129140265,387420597,1162261581,3486784521,1046 0353329,31381059741,94143178965,282429536625,847288609593 ⋆ a(n) = 6n + 3 ^ n. ● a(n) = 5 * a(n - 1) - 7 * a(n - 2) + 3 * a(n - 3). ●

▶ [A259243] 9,21,48,111,255,588,1353,3117,7176,16527,38055,87636,201801,464 709,1070112,2464239,5674575,13067292,30091017,69292893,159565944,36744462 3,846142455,1948476324,4486903689 ⋆ Number of (n + 1) X (1 + 1) 0..1 arrays with each 2 X 2 subblock having clockwise pattern 0000 0011 or 0111. ● a(n) = (2 ^ (- n) * ((1 - sqrt(13)) ^ n * (- 7 + 2 * sqrt(13)) + (1 + sqrt(13)) ^ n * (7 + 2 * sqrt(13)))) / sqrt(13). ●

▶ [A160414] 0,1,9,21,49,61,97,133,225,237,273,309,417,453,561,669,961,973,100 9,1045,1153,1189,1297,1405,1729 ⋆ Number of ”ON” cells at n - th stage in simp le 2 - dimensional cellular automaton (same as A160410, but a(1) = 1, not 4). ● a(2 ^ k) = (2 ^ (k + 1) - 1) ^ 2. - _ Omar E. Pol _ , Jan 05 2013 ●

▶ [A127989] 9,21,57,129,249,429,681,1017,1449,1989,2649,3441,4377,5469,6729,8 169,9801,11637,13689,15969,18489,21261,24297,27609,31209 ⋆ a(n) = 2 * n ^ 3 - 2 * n + 9. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Wesl ey Ivan Hurt _ , Oct 11 2021 ●

▶ [A137340] 1,9,21,69,201,609,1821,5469,16401,49209,147621,442869,1328601,39 85809,11957421,35872269,107616801,322850409,968551221,2905653669,87169610 01,26150883009,78452649021,235357947069,706073841201 ⋆ a(n) = 2 * a(n - 1) + 3 * a(n - 2), with a(0) = 1, a(1) = 9. ● a(n) = (5 * 3 ^ n - 3 * (- 1) ^ n) / 2. ● a(2 * n) = (5 * 9 ^ n - 3) / 2. ● a(2 * n + 1) = (15 * 9 ^ n + 3) / 2. ● a(n) = 20 * 3 ^ (n - 2) + a(n - 2), n > 1. ●

▶ [A130861] 0,9,22,39,60,85,114,147,184,225,270,319,372,429,490,555,624,697,77 4,855,940,1029,1122,1219,1320 ⋆ a(n) = (n - 1) * (2 * n + 5). ● a(n) = 3 * (n + 1) * (Sum _{ k=1..n } k ^ 2 - 1) / (Sum _{ k=1..n } k) = (- 1 + n) * (5 + 2 * n). ● a(n) = a(n - 1) + 4 * n + 1 for n>1, a(1)=0. - _ Vincenzo Librandi _

, Nov 23 2010 ● a(n) = n * (2n + 7) with offset 0. - _ Michel Marcus _ , Jan 28 2015 ●

▶ [A131895] 1,9,22,40,63,91,124,162,205,253,306,364,427,495,568,646,729,817,910,1008,1111,1219,1332,1450,1573 ⋆ a(n) = (n + 2) * (5 * n + 1) / 2. ● a(n) = a(n - 1) + 5 * n + 3 (with a(0)=1). - _ Vincenzo Librandi _ , Nov 23 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3); a(0)=1, a(1)=9, a(2)=22. - _ Harvey P. Dale _ , Sep 11 2015 ●

▶ [A323221] 1,9,22,41,67,101,144,197,261,337,426,529,647,781,932,1101,1289,1497,1726,1977,2251,2549,2872,3221,3597 ⋆ a(n) = n * (n + 5) * (n + 7) / 6 + 1. ● a(n) = Sum _{ (j1,...,jn) in I(n) } C(j1) * C(j2) * ... * C(jn). ● a(n) = [x ^ n] (3 * x ^ 3 - 8 * x ^ 2 + 5 * x + 1) / (x - 1) ^ 4. ● a(n) = n! [x ^ n] exp(x) * (x ^ 3 + 15 * x ^ 2 + 48 * x + 6) / 6. ● a(n) = a(n - 1) * (n * (n + 5) * (n + 7) + 6) / (n * (n + 2) * (n + 7) - 18) for n > 0. ●

▶ [A287497] 1,9,22,53,166,432,1212,3341,9175,25364,69829,192560,530830,1463170,4033687,11119101,30651528,84495213,232922084,642082488,1769987094,4879211973,13450215173,37077354584,102208799091 ⋆ Number of maximal matchings in the n - web graph. ● a(n) = a(n - 1) + 4 * a(n - 2) + 3 * a(n - 3) - 2 * a(n - 4) + a(n - 6). ●

▶ [A327150] 1,1,1,9,22,77,400,2624,20747,183544,1826374,20045348,240262047,3120641718,43665293393,654731266933,10472819759734,178001257647196,3203520381407270,60859480965537820,1217072840308660049 ⋆ Number of orbits of the direct square of the alternating group A _ n ^ 2 where A _ n acts by conjugati on. ● a(n) = (n! / 2) * Sum _{ K conjugacy class in A _ n } 1 / |K|. ●

▶ [A302906] 0,9,23,42,66,95,129,168,212,261,315,374,438,507,581,660,744,833,927,1026,1130,1239,1353,1472,1596 ⋆ a(0) = 0; for n > 0, a(n) = a(n - 1) + 5 * n + 4. ● a(n) = n * (5 * n + 13) / 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>2. (End) ●

▶ [A144390] 1,9,23,43,69,101,139,183,233,289,351,419,493,573,659,751,849,953,1063,1179,1301,1429,1563,1703,1849 ⋆ a(n) = 3 * n ^ 2 - n - 1. ● a(n + 1) = a(n) + 6 * n + 2; see A016933. ● a(n) = 3 * n ^ 2 - n - 1. - _ Paolo P. Lava _ , Oct 06 2008 ●

▶ [A212676] 0,0,1,9,23,52,92,155,234,344,475,645,841,1084,1358,1687,2052,2480,2949,3489,4075,4740,5456,6259,7118 ⋆ Number of (w,x,y,z) with all terms in { 1,. ..,n } and w + x=|x - y| + |y - z|. ● a(n)=2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + a(n - 4) + 2 * a(n - 5) - a(n - 6). ●

▶ [A266238] 1,1,9,23,151,361,2409,5783,38551,92521,616809,1480343,9868951,23685481,157903209,378967703,2526451351,6063483241,40423221609,9701573186 3,646771545751,1552251709801,10348344732009,24836027356823,1655735157121 51 ⋆ a(n + 1) = 2 ^ (2 * n - 1) + (- 1) ^ n * a(n), a(1) = 1. ● a(n) = ((7 + 7 * i) * (- i) ^ n + (7 - 7 * i) * i ^ n + (- 1) ^ (1 + n) * 4 ^ n + 4 ^ (1 + n)) / 34 where i=sqrt(- 1). ● a(n) = 15 * a(n - 2) + 16 * a(n - 4) for n > 4. [Proved by _ Iain Fox _ , Dec 21 2017] (End) ●

▶ [A121453] 9,24,33,48,69,84,93,108,129,144,153,168,189,204,213,228,249,264,273,288,309,324,333,348,369 ⋆ Numbers m such that (m mod k) > (m + 2 mod k) with least value of k = 5. ● a(n) = 3 * (sin((n * Pi) / 2) - cos((n * Pi) / 2) + 5 * n - 3). ● a(1)=9, a(2)=24, a(3)=33, a(4)=48, a(n)=2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4). Empirical G.f.: 3 * x * (3 + 2 * x + x ^ 2 + 4 * x ^ 3) / (1 - 2 * x + 2 * x ^ 2 - 2 * x ^ 3 + x ^ 4). [Colin Barker, Jan 25 2012] ●

▶ [A293846] 9,24,39,60,105,156,231,396,585,864,1479,2184,3225,5520,8151,12036,20601,30420,44919,76884,113529,167640,286935,423696,625641 ⋆ Numbers suc h that k is the altitude of a Heronian triangle with sides m - 13, m, m + 13. ● a (n) = 4 * a(n - 3) - a(n - 6), a(1)=9, a(2)=24, a(3)=39, a(4)=60, a(5)=105, a(6) =156. ●

▶ [A067725] 0,9,24,45,72,105,144,189,240,297,360,429,504,585,672,765,864,969,1080,1197,1320,1449,1584,1725,1872 ⋆ a(n) = 3 * n ^ 2 + 6 * n. ● a(n) = a(n - 1) + 6 * n + 3, with n>0, a(0)=0. - _ Vincenzo Librandi _ , Aug 08 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A001106] 0,1,9,24,46,75,111,154,204,261,325,396,474,559,651,750,856,969,1089,1216,1350,1491,1639,1794,1956 ⋆ 9 - gonal (or enneagonal or nonagonal) numb ers: a(n) = n * (7 * n - 5) / 2. ● a(n) = (7 * n - 5) * n / 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3), a(0) = 0, a(1) = 1, a(2) = 9. - _ Jaume Oliver Lafont _ , Dec 02 2008 ● a(n) = 2 * a(n - 1) - a(n - 2) + 7. - _ Mohamed Bouhamida _ , May 05 2010 ● a(n) = a(n - 1) + 7 * n - 6 (with a(0) = 0). - _ Vincenzo Lib randi _ , Nov 12 2010 ● a(7 * a(n) + 22 * n + 1) = a(7 * a(n) + 22 * n) + a(7 * n + 1). - _ Vladimir Shevelev _ , Jan 24 2014 ●

▶ [A023551] 9,24,46,76,115,164,224,296,381,480,594,724,871,1036,1220,1424,1649,1896,2166,2460,2779,3124,3496,3896,4325 ⋆ Self - convolution of natural numb ers >= 3. ● a(n) = n * (n ^ 2 + 15 * n + 38) / 6. - Robert Lester (RobertLester(AT)Earthlink.net), Jan 31 2005 ●

▶ [A258438] 0,1,9,24,64,117,189,280,456,657,889,1152,1464,1813,2205,2640,3376,4161,5001,5896,6864,7893,8989,10152,11448 ⋆ Sum _{ i=1..n } Sum _{ j=1.. n } (i OR j), where OR is the binary logical OR operator. ● a(2 ^ k) = (3 * 8 ^ k + 5 * 4 ^ k) / 4 - 2 ^ k. - _ Giovanni Resta _ , May 30 2015 ● a(2 ^ k - 1) = 2 ^ (k - 2) * (4 - 7 * 2 ^ k + 3 * 4 ^ k). - _ Enrique Pérez Herrero _ , Jun 10 2015 ●

▶ [A280609] 9,25,27,49,121,125,169,243,289,343,361,529,841,961,1331,1369,1681,1849,2187,2197,2209,2809,3125,3481,3721 ⋆ Odd prime powers with prime exp onents. ● a(n) = p ^ q, where p, q are primes and p > 2. ●

▶ [A016754] 1,9,25,49,81,121,169,225,289,361,441,529,625,729,841,961,1089,1225,1369,1521,1681,1849,2025,2209,2401 ⋆ Odd squares: a(n) = (2n + 1) ^ 2. Also centered octagonal numbers. ● a(n) = 4 * n * (n + 1) + 1 = 4 * n ^ 2 + 4 * n + 1. - _ Artur Jasinski _ , Mar 27 2008 ● a(n) = a(n - 1) + 8 * n with n>0, a(0)=1. - _ Vincenzo Librandi _ , Aug 01 2010 ● a(n + 1) = a(n) + 4 + 4 * sqrt (a(n)). ● a(n - 1) = a(n) + 4 - 4 * sqrt(a(n)). ● a(n + 1) = 2 * a(n) - a(n - 1) + 8. ● a(n + 1) = 3 * a(n) - 3 * a(n - 1) + a(n - 2). ●

▶ [A239745] 0,9,25,54,108,211,411,804,1582,3129,6213,12370,24672,49263,98431,196752,393378,786613,1573065,3145950,6291700,12583179,25166115,50331964,100663638 ⋆ a(n) = (3 * 2 ^ (n + 2) + n * (n + 5)) / 2 - 6. ● a(n) = 5 * a(n - 1) - 9 * a(n - 2) + 7 * a(n - 3) - 2 * a(n - 4). ●

▶ [A048490] 1,9,25,57,121,249,505,1017,2041,4089,8185,16377,32761,65529,131065,262137,524281,1048569,2097145,4194297,8388601,16777209,33554425,67108857,134217721 ⋆ a(n) = T(7,n), array T given by A048483. ● a(n) = 8 * 2 ^ n - 7. - _ Ralf Stephan _ , Jan 09 2009 ● a(n) = 2 * a(n - 1) + 7 for n > 0, a(0)=1. - _ Vincenzo Librandi _ , Aug 06 2010 ● a(n) = 3 * a(n - 1) - 2 * a(n - 2). ●

▶ [A209530] 9,25,65,193,513,1537,4097,12289,32769,98305,262145,786433,2097153,6291457,16777217,50331649,134217729,402653185,1073741825,3221225473,8589934593,25769803777,68719476737,206158430209,549755813889 ⋆ Half the numbe r of (n + 1) X 3 0..2 arrays with every 2 X 2 subblock having exactly two distin ct clockwise edge differences. ● a(n) = 3 * 2 ^ ((3 * (n - 1)) / 2 + 3 / 2) + 1 for n even. ● a(n) = 2 ^ ((3 * (n - 1)) / 2 + 3) + 1 for n odd. ●

▶ [A199111] 9,25,73,217,649,1945,5833,17497,52489,157465,472393,1417177,4251529,12754585,38263753,114791257,344373769,1033121305,3099363913,9298091737,27894275209,83682825625,251048476873,753145430617,2259436291849 ⋆ a(n) = 8 * 3 ^ n + 1. ● a(n) = 3 * a(n - 1) - 2. ● a(n) = 4 * a(n - 1) - 3 * a(n - 2). ●

▶ [A322939] 1,1,1,9,25,81,273,889,2921,9601,31521,103529,340025,1116721,3667633,12045529,39560841,129928801,426722241,1401474249,4602830425,15116972561,49648333393,163058906169,535530702761 ⋆ a(n) = [x ^ n] (4 * x ^ 2 + x - 1) / (4 * x ^ 3 + 3 * x ^ 2 + 2 * x - 1). ● a(n) = 4 * a(n - 3) + 3 * a(n - 2) + 2 * a(n - 1) for n >= 3. ●

▶ [A141583] 1,1,1,9,25,81,289,961,3249,11025,37249,126025,426409,1442401,4879681,16507969,55845729,188925025,639128961,2162157001,7314525625,24744863025,83711270241,283193201281,958035736849 ⋆ Squares of tribonacci numbers A 000213. ● a(n) = 2 * a(n - 1) + 3 * a(n - 2) + 6 * a(n - 3) - a(n - 4) - a(n - 6). ●

▶ [A083672] 1,1,9,25,97,321,1097,3641,12033,39361,127945,413337,1328609,4251521,13551753,43046713,136314625,430467201,1355971721,4261625369,13366006881,41841412801,130754415049,407953774905,1270932914177 ⋆ Binomial transfor m of 1,8,48,256,1280,6144,... (cf. A002697). ● a(n) = (1 / 6) * ((n + 3) * 3 ^ n + (3 * n + 3) * (- 1) ^ n). ●

▶ [A083100] 1,9,25,113,401,1593,5993,23137,88225,338409,1294393,4957649,18976049,72655641,278143625,1064876737,4076758849,15607654857,59752621657,228758827313,875786006225,3352883803641,12836269650857,49142725927201 ⋆ a(n) = 2 * a(n - 1) + 7 * a(n - 2). ● a(n) = (1 / 2) * (1 - 2 * sqrt(2)) ^ n + sqrt(2) * (1 + 2 * sqrt(2)) ^ n - (1 - 2 * sqrt(2)) ^ n * sqrt(2) + (1 / 2) * (1 + 2 * sqrt(2)) ^ n, with n >= 0. - _ Paolo P. Lava _ , Jun 10 2008 ● a(n) = binomial transf orm of 1,8,8,64,64,512. - Al Hakanson (hawkuu(AT)gmail.com), Aug 17 2009 ●

▶ [A084058] 1,1,9,25,113,401,1593,5993,23137,88225,338409,1294393,4957649,18976049,72655641,278143625,1064876737,4076758849,15607654857,59752621657,228758827313,875786006225,3352883803641,12836269650857,49142725927201 ⋆ a(n) = 2 * a(n - 1) + 7 * a(n - 2) for n>1, a(0)=1, a(1)=1. ● a(n) = ((1 + sqrt(8)) ^ n + (1 - sqrt(8)) ^ n) / 2. ●

▶ [A139818] 0,1,1,9,25,121,441,1849,7225,29241,116281,466489,1863225,7458361,29822521,119311929,477204025,1908903481,7635439161,30542106169,122167725625,488672300601,1954686406201,7818751217209,31274993684025 ⋆ Squares of Jacobsthal numbers. ● a(n) = 3a(n - 1) + 6a(n - 2) - 8a(n - 3). ● a(n) = 1 / 9 - (2 / 9) * (- 2) ^ n + (1 / 9) * 4 ^ n, with n>=0. - _ Paolo P. Lava _ , Jun 12 2008 ●

▶ [A084605] 1,1,9,25,145,561,2841,12489,60705,281185,1353769,6418809,30917041,148331665,716698425,3462260265,16786700865,81464917185,396215601225,1929237099225,9408084660945,45928695279345,224476389327705 ⋆ G.f.: 1 / (1 - 2x - 15x ^ 2) ^ (1 / 2); also, a(n) is the central coefficient of (1 + x + 4x ^ 2) ^ n. ● a(n) is also the central coefficient of (4 + x + x ^ 2) ^ n; a(n) = Sum _{ k=0 ..n } 3 ^ (n - k) C(n,k) T(k,n), where T(k,n) is the triangle of trinomial coefficie nts = Coefficient of x ^ n of (1 + x + x ^ 2) ^ k : A027907. - _ N - E. Fahssi _ , Mar 30 2008 ● a(n) = (1 / Pi) * integral(x= - 2..2, (2 * x + 1) ^ n / sqrt((2 - x) * (2 + x))). - _ Peter Luschny _ , Sep 12 2011 ● a(n) = 2 ^ n * Gegenbaue rC(n, - n, - 1 / 4). - _ Peter Luschny _ , May 08 2016 ● a(n) = hypergeom([1 / 2 - n / 2, - n / 2], [1], 16). - _ Peter Luschny _ , Mar 18 2018 ● a(n) = Sum _{ k=0..n } (- 3) ^ (n - k) * 2 ^ k * binomial(n,k) * binomial(2 * k,k). - _ Pau l D. Hanna _ , Dec 09 2018 ● a(n) = Sum _{ k=0..n } 5 ^ (n - k) * (- 2) ^ k * binomial(n,k) * binomial(2 * k,k). - _ Seiichi Manyama _ , May 01 2019 ●

▶ [A372382] 1,1,9,25,169,651,3801,17053,93225,450844,2396859,12043494,63354649,324888305,1704137493,8839907475,46383701545,242285478474,1273274074020,6681277302239,35178613785819,185187072845569,976888169385302,5154978257816280,27240094648199961 ⋆ Coefficient of x ^ n in the expansion of ((1 + x + x ^ 2) ^ 4 / (1 + x) ^ 3) ^ n. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial (4 * n,k) * binomial(n - k,n - 2 * k). ●

▶ [A051515] 9,25,196,324,1089,1521,3600,4624,9025,11025,19044,22500,35721,41209,61504,69696,99225,110889,152100,168100,223729,245025,318096,345744,439569 ⋆ (Terms in A014738) / 4. ● a(n) = a(n - 1) + 4 * a(n - 2) - 4 * a(n - 3) - 6 * a(n - 4) + 6 * a(n - 5) + 4 * a(n - 6) - 4 * a(n - 7) - a(n - 8) + a(n - 9) for n > 9 . ●

▶ [A330395] 1,9,26,51,85,129,184,251,331,425,534,659,801,961,1140,1339,1559,1801,2066,2355,2669,3009,3376,3771,4195 ⋆ Number of nontrivial equivalence class es of S _ n under the { 1234,3412 } pattern - replacement equivalence. ● a(n) = (n ^ 3 + 6 * n ^ 2 - 55 * n + 54) / 6 for n >= 7. ● a(n) = 4 * a(n - 1) - 6 * a (n - 2) + 4 * a(n - 3) - a(n - 4) for n>10. ●

▶ [A081267] 1,9,26,52,87,131,184,246,317,397,486,584,691,807,932,1066,1209,1361,1522,1692,1871,2059,2256,2462,2677 ⋆ Diagonal of triangular spiral in A05168 2. ● a(n) = C(n, 0) + 8 * C(n, 1) + 9 * C(n, 2). ● a(n) = (9 * n ^ 2 + 7 * n + 2) / 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3), for n > 2. a(n) = right ter m in M ^ n * [1 1 1], where M = the 3 X 3 matrix [1 0 0 / 3 1 0 / 5 3 1]. M ^ n * [1 1 1] = [1 3n + 1 a(n)]. - _ Gary W. Adamson _ , Dec 22 2004 ● a(n) = 9 * n + a(n - 1) - 1 with n > 0, a(0)=1. - _ Vincenzo Librandi _ , Aug 08 2010 ●

▶ [A052153] 1,9,26,54,95,151,224,316,429,565,726,914,1131,1379,1660,1976,2329,2721,3154,3630,4151,4719,5336,6004,6725 ⋆ Rhombi (in 3 different orientation s) in a rhombus with 60 - degree acute angles. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Vincenzo Librandi _ , Jun 22 2012 ●

▶ [A048468] 1,9,26,62,138,298,634,1338,2810,5882,12282,25594,53242,110586,229370,475130,983034,2031610,4194298,8650746,17825786,36700154,75497466,15518

9242,318767098 ⋆ a(n) = T(7,n), array T given by A047858. ● a(n) = 2 ^ (n - 1) * (n + 14) - 6. a(0)=1, a(1)=9, a(2)=26, a(n) = 5 * a(n - 1) - 8 * a(n - 2) + 4 * a(n - 3). - _ Vincenzo Librandi _ , Sep 28 2011 ● a(n) = 2 ^ (n - 1) * (n + 14) - 6. G.f.: (1 + 4 * x - 11 * x ^ 2) / ((1 - x) * (1 - 2 * x) ^ 2). - _ Colin Barker _ , Feb 18 2016 ●

▶ [A048771] 1,9,26,68,169,413,1002,2424,5857,14145,34154,82460,199081,480629,1160346,2801328,6763009,16327353,39417722,95162804,229743337,554649485,1339042314,3232734120,7804510561 ⋆ Partial sums of A048695. ● a(n)=2 * a(n - 1) + a(n - 1) + 7; a(0)=1, a(1)=9. ● a(0)=1, a(1)=9, a(2)=26, a(n)=3 * a(n - 1) - a(n - 2) - a(n - 3). - _ Harvey P. Dale _ , May 01 2013 ●

▶ [A055849] 1,9,26,69,181,474,1241,3249,8506,22269,58301,152634,399601,1046169,2738906,7170549,18772741,49147674,128670281,336863169,881919226,2308894509,6044764301,15825398394,41431430881 ⋆ a(n) = 3 * a(n - 1) - a(n - 2) with a(0)=1, a(1)=9. ● a(n) = (9 * (((3 + sqrt(5)) / 2) ^ n - ((3 - sqrt(5)) / 2) ^ n) - (((3 + sqrt(5)) / 2) ^ (n - 1) - ((3 - sqrt(5)) / 2) ^ (n - 1))) / sqrt(5). ● a(n) = L(2 * n - 1) + 2 * L(2 * n + 1), where L(n) is the n - th Lucas number. - _ Rigoberto Florez _ , Dec 24 2018 ● a(n) = Fibonacci(2 * n + 2) + 6 * Fibonacci(2 * n). - _ G. C. Greubel _ , Jan 16 2020 ●

▶ [A235163] 9,26,75,217,629,1826,5307,15438,44941,130900,381444,1111926,3242224,9455987,27583372,80472698,234799873,685149328,1999414181,5835044495,17029601028,49702671494,145066398937,423412132499,1235854038791 ⋆ Number of positive integers with n digits in which adjacent digits differ by at most 1. ● a(n) = Sum _{ r=0..9 } u(n,r) where u(n,r) = 0 if r<0 or r>9, u(1,0) = 0, u(1,r) = 1 for 1<=r<=9, and otherwise u(n,r) = u(n - 1,r - 1) + u(n - 1,r) + u(n - 1,r + 1). ●

▶ [A353238] 9,27,36,81,144,216,225,243,324,441,576,729,900,1089,1296,1521,1728,1764,2025,2187,2304,2601,2916,3249,3375 ⋆ Perfect powers that are divisible by 3. ● a(n) has the form (3 * m) ^ k for some positive integer m := m(n) and some k > 1. ●

▶ [A027468] 0,9,27,54,90,135,189,252,324,405,495,594,702,819,945,1080,1224,1377,1539,1710,1890,2079,2277,2484,2700 ⋆ 9 times the triangular numbers A000217. ● a(n) = (9 / 2) * n * (n + 1). ● a(n) = 9 * C(n, 1) + 9 * C(n, 2) (binomial transform of (0, 9, 9, 0, 0, ...)). - _ Paul Barry _ , Mar 15 2003 ● a(- 1 - n) = a(n). ● a(n) = 9 * C(n + 1,2), n>=0. - _ Zerinvary Lajos _ , Aug 06 2008 ● a(n) = a(n - 1) + 9 * n (with a(0)=0). - _ Vincenzo Librandi _ , Nov 19 2010 ●

▶ [A112524] 1,9,27,59,109,181,279,407,569,769,1011,1299,1637,2029,2479,2991,3569,4217,4939,5739,6621,7589,8647,9799,11049 ⋆ a(n) = a(n - 1) + 2 * n ^ 2 with a(1) = 1. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4), a(1)=1, a(2)=9, a(3)=27, a(4)=59. - _ Harvey P. Dale _ , Dec 03 2012 ●

▶ [A011923] 0,0,0,0,1,9,27,64,129,232,387,609,913,1320,1848,2520,3360,4393,5649,7155,8944,11049,13504,16347,19617 ⋆ [n(n - 1)(n - 2)(n - 3) / 13]. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) + a(n - 13) - 4 * a(n - 14) + 6 * a(n - 15) - 4 * a(n - 16) + a(n - 17) for n > 16. ●

▶ [A319085] 1,9,27,75,125,269,367,623,866,1266,1508,2372,2710,3494,4394,5674,6252,8196,8918,11318,13082,15018,16076,20684,22559 ⋆ a(n) = Sum _{ k=1..n } k ^ 2 * tau(k), where tau is A000005. ● a(n) = Sum _{ k=1..n } k ^ 2 * Bernoulli(3, floor(1 + n / k)) / 3, where Bernoulli(n,x) are the Bernoulli polynomials. - _ Daniel Suteu _ , Nov 08 2018 ● a(n) = Sum _{ k=1..n } Sum _{ i=1..floor(n / k) } i ^ 2 * k ^ 2. - _ Wesley Ivan Hurt _ , Nov 26 2020 ●

▶ [A328604] 1,9,27,135,513,2241,9099,38367,158625,662553,2752731,11468439,47711457,198638865,826680843,3441111471,14322350529,59614704297,248130563355,1032793465383,4298762000961,17892665190369,74474188389387,309982363492095,1290232422488673 ⋆ G.f.: (1 + 7 * x) / (1 - 2 * x - 9 * x ^ 2). ● a(n) = 2 * a(n - 1) + 9 * a(n - 2) for n>1. - _ Colin Barker _ , Oct 21 2019 ● a(n) / a(n - 1) ~ 1 + sqrt(10). ●

▶ [A124396] 1,9,27,729,6561,6561,177147,1594323,4782969,387420489,3486784401,10460353203,282429536481,2541865828329,2541865828329,22876792454961,205891132094649,617673396283947,5003154509899970 7,450283905890997363 ⋆ Denominators of partial sums of a series for 3 / sqrt(5) = (3 / 5) * sqrt(5). ● a(n) = denominator(r(n)) with the rationals r(n) = Sum _{ k=0..n } binomial(2 * k,k) / 9 ^ k in lowest terms. ●

▶ [A063155] 9,28,48,68,88,108,128,148,168,188,208,228,248,268,288,308,328,348,368,388,408,428,448,468,488 ⋆ Dimension of the space of weight 2n cusp forms for Gamma _ 0(87). ● a(n) = 4 * (5 * n - 3) for n>1. ● a(n) = 2 * a(n - 1) - a(n - 2) for n>3. ●

▶ [A135705] 0,9,28,57,96,145,204,273,352,441,540,649,768,897,1036,1185,1344,1513,1692,1881,2080,2289,2508,2737,2976 ⋆ a(n) = 10 * binomial(n,2) + 9 * n. ● a(n) = n * (5 * n + 4). (End) ● a(n) = a(n - 1) + 10 * n - 1 (with a(0)=0). - _ Vincenzo Librandi _ , Nov 24 2009 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A294287] 0,0,9,28,100,198,441,720,1296,1900,3025,4140,6084,7938,11025,13888,18496,22680,29241,35100,44100,52030,64009,74448,90000 ⋆ Sum of the cubes of the parts in the partitions of n into two distinct parts. ● a(n) = Sum _{ i=1..floor((n - 1) / 2) } i ^ 3 + (n - i) ^ 3. ● a(n) = (1 / 16) * (n ^ 2 * (4 - (9 + (- 1) ^ n) * n + 4 * n ^ 2)). ● a(n) = a(n - 1) + 4 * a(n - 2) - 4 * a(n - 3) - 6 * a(n - 4) + 6 * a(n - 5) + 4 * a(n - 6) - 4 * a(n - 7) - a(n - 8) + a(n - 9) for n>9. ●

▶ [A085292] 1,9,28,119,451,1782,6931,27119,105868,413649,1615681,6311522,24654241,96306849,376200748,1469546399,5740457491,22423834422,87593763331,342165736199,1336595027068,5221113899769,20395130698081,79669083012482 ⋆ Product of Lucas (A000204) and a Pell companion series (A001333). ● a(n) = 2 * a(n - 1) + 7 * a(n - 2) + 2 * a(n - 3) - a(n - 4). G.f.: - x * (2 * x ^ 3 - 3 * x ^ 2 - 7 * x - 1) / (x ^ 4 - 2 * x ^ 3 - 7 * x ^ 2 - 2 * x + 1). - _ Colin Barker _ , Oct 15 2013 ●

▶ [A226976] 1,9,28,133,539,2322,9773,41501,175636,744273,3152359,13354306,56568617,239630337,1015087436,4299984173,18215017507,77160064914,326855259829,1384581132277,5865179743556,24845300179929,105246380344463,445830821750018,1888569667033489 ⋆ Fibonacci(n) ^ 3 + Fibonacci(n + 2) ^ 3 ● a(n) = 3a(n - 1) + 6a(n - 2) - 3a(n - 3) - a(n - 4) ●

▶ [A042501] 1,1,9,28,149,177,1388,9893,11281,66298,210175,1747698,1957873,107472840,109430713,982918544,3058186345,16273850269,19332036614,1515981065 67,1080518782583,1232116889150,7241103228333,22955426574149,190884515821525 ⋆ Denominators of continued fraction convergents to sqrt(778). ● a(n) = 109220538 * a(n - 13) + a(n - 26) for n>25. - _ Vincenzo Librandi _ , Jan 23 2014 ●

▶ [A041154] 9,28,513,1567,28719,87724,1607751,4910977,90005337,274926988,5038691121,15391000351,282076697439,861621092668,15791256365463,48235390189057,884028279768489,2700320229494524,49489792410669921 ⋆ Numerators of continued fraction convergents to sqrt(87). ● a(n) = 56 * a(n - 2) - a(n - 4). [_ Bruno Berselli _ , Oct 29 2013] ●

▶ [A136392] 1,9,29,61,105,161,229,309,401,505,621,749,889,1041,1205,1381,1569,1769,1981,2205,2441,2689,2949,3221,3505 ⋆ a(n) = 6 * n ^ 2 - 10 * n + 5. ● a(n) = n * (3n - 2) + (n - 1) * (3n - 5), n > 1. ● a(n) = a(n - 1) + 12 * n - 16 (with a(1)=1). - _ Vincenzo Librandi _ , Nov 24 2010 ●

▶ [A162263] 9,29,66,126,215,339,504,716,981,1305,1694,2154,2691,3311,4020,4824,5729,6741,7866,9110,10479,11979,13616,15396,17325 ⋆ a(n) = (2 * n ^ 3 + 5 * n ^ 2 + 11 * n) / 2. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). (End) ●

▶ [A331390] 1,9,29,68,134,237,388,600,887,1265,1751,2364,3124,4053,5174,6512,8093,9945,12097,14580,17426,20669,24344,28488,33139 ⋆ Number of binary matrices with 3 distinct columns and any number of nonzero rows with n ones in every column and rows in nonincreasing lexicographic order. ● a(n) = round(((n + 2) / 2) ^ 4) - 3 * (n + 1) + 2. ●

▶ [A273146] 1,9,29,70,127,231,347,540,733,1045,1337,1794,2203,2835,3383,4216,4921,5985,6869,8190,9271,10879,12179,14100,15637 ⋆ Partial sums of the number of active (ON,black) cells in n - th stage of growth of two - dimensional cellular automaton defined by ”Rule 597”, based on the 5 - celled von Neumann neighborhood. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - 2 * a(n - 6) + 2 * a(n - 7) + a(n - 8) - a(n - 9) for n>8. ●

▶ [A193004] 1,1,9,29,75,165,331,623,1123,1963,3357,5651,9405,15525,25477,41633,67831,110281,179031,290339,470511,762111,1234009,1997639,3233305 ⋆ Constant term of the reduction by x ^ 2 - >x + 1 of the polynomial p(n,x) defined at Comments. ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + a(n - 3) + 2 * a(n - 4) - a(n - 5). ●

▶ [A198645] 9,29,89,269,809,2429,7289,21869,65609,196829,590489,1771469,5314409,15943229,47829689,143489069,430467209,1291401629,3874204889,11622614669,34867844009,104603532029,313810596089,941431788269,2824295364809 ⋆ a(n) = 10 * 3 ^ n - 1. ● a(n) = 3 * a(n - 1) + 2, a(0)=9. ●

▶ [A035075] 9,29,90,283,895,2829,8945,28285,89443,282843,894428,2828428,8944272,28284272,89442720,282842713,894427191,2828427125,8944271910,28284271248,89442719100,282842712475,894427191000,2828427124747 ⋆ a(n) = ceiling(sqrt(8 * 10 ^ n)). ● a(n) = ceiling(sqrt(8 * 10 ^ n)), n > 0. ●

▶ [A103535] 9,29,99,354,1290,4762,17663,65733,244923,913383,3407329,12713796,47443092,177050612,660741597,2465886087,9202736493,34344949105,128176812671,478361888166,1785269817246,6662715837966,24865590090907,92799638767689,346332952127775 ⋆ Number of nets in a regular right prism. ● a(n) = 1 / (8 * sqrt(3)) * (2 * sqrt(3) * n + sqrt(3) * (2 + sqrt(3)) ^ n + (2 + sqrt(3)) ^ floor(n / 2) * (4 + 2 * sqrt(3)) + (2 - sqrt(3)) ^ floor(n / 2) * (2 * sqrt(3) - 4) + sqrt(3) * ((2 - sqrt(3)) ^ n - 2)) for n >= 3 odd; a(n) = 1 / 24 * (6 * n + 3 * (2 + sqrt(3)) ^ n + 4 * sqrt(3) * (2 + sqrt(3)) ^ (n / 2) - 4 * sqrt(3) * (2 - sqrt(3)) ^ (n / 2) + 3 * (2 - sqrt(3)) ^ n - 6) for n >= 4 even. - _ Humberto Bortolossi _ , Mar 31 2017 ●

▶ [A183245] 9,29,112,436,1708,6724,26572,105316,418348,1664644,6632332,26450596,105566188,421556164,1684098892,6730018276,26900941228,107546369284,430013290252,1719536600356,6876596719468,27501737832004,109993004190412 ⋆ Number of permutations of 1..2 * n + 2 with each element displaced by at least n. ● a(n) = 7 * a(n - 1) - 12 * a(n - 2) for n>3. ●

▶ [A173262] 9,29,229,2229,22229,222229,2222229,22222229,222222229,2222222229,22222222229,222222222229,2222222222229,22222222222229,222222222222229,2222222222222229,22222222222222229,222222222222222229 ⋆ a(n) = (2 * 10 ^ n + 61) / 9 ● a(n)= 11 * a(n - 1) - 10 * a(n - 2). G.f.: x * (- 9 + 70 * x) / ((10 * x - 1) * (1 - x)). [From _ R. J. Mathar _ , Feb 21 2010] ● a(n)=10 * a(n - 1) - 61, (with a(1)=9) [From _ Vincenzo Librandi _ , Feb 24 2010] ●

▶ [A063150] 9,30,50,72,92,114,134,156,176,198,218,240,260,282,302,324,344,366,386,408,428,450,470,492,512 ⋆ Dimension of the space of weight 2n cusp forms for Gamma _ 0(82). ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n>4. ● a(n) = ((- 1) ^ n + 42 * n - 25) / 2 for n>1. ●

▶ [A295867] 0,9,30,60,120,189,432,630,825,1122,1404,2205,2760,3264,3978,4617,6300,7392,8349,9660,10800,13689,15498,17052,19140 ⋆ Numbers of the form A000217(n) * A007494(n) that are divisible by 3. ● a(n) = a(n - 1) + 3 * a(n - 5) - 3 * a(n - 6) - 3 * a(n - 10) + 3 * a(n - 11) + a(n - 15) - a(n - 16) for n>15. ●

▶ [A195319] 0,9,30,63,108,165,234,315,408,513,630,759,900,1053,1218,1395,1584,1785,1998,2223,2460,2709,2970,3243,3528 ⋆ Three times second hexagonal numbers: 3 * n * (2 * n + 1). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>2. - _ Harvey P. Dale _ , Oct 13 2013 ●

▶ [A000439] 9,30,69,133,230,369,560,814,1143,1560,2079,2715,3484,4403,5490,6764,8245,9954,11913,14145,16674,19525,22724,26298,30275 ⋆ Powers of rooted tree enumerator. ● a(n) = (n ^ 4 + 18 * n ^ 3 + 83 * n ^ 2 + 114 * n) / 24. - _ Philippe Delêham _ , Feb 13 2004 ●

▶ [A002414] 1,9,30,70,135,231,364,540,765,1045,1386,1794,2275,2835,3480,4216,5049,5985,7030,8190,9471,10879,12420,14100,15925 ⋆ Octagonal pyramidal numbers: a(n) = n * (n + 1) * (2 * n - 1) / 2. ● a(n) = odd numbers * triangular numbers = (2 * n - 1) * binomial(n + 1,2). - Xavier Acloque, Oct 27 2003 ● a(n) = a(n - 1) + n * (3 * n - 2). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + 6. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ● a(n) = Sum _{ i=0..n - 1 } (n - i) * (6 * i + 1), with a(0)=0. - _ Bruno Berselli _ , Feb 10 2014 ●

▶ [A344522] 1,9,30,76,141,267,400,624,885,1249,1590,2208,2689,3411,4248,5248,6081,7485,8530,10248,11889,13687,15228,17988,20053 ⋆ a(n) = Sum _{ 1 <= i, j, k <= n } gcd(i,j,k). ● a(n) = Sum _{ k=1..n } phi(k) * floor(n / k) ^ 3. ●

▶ [A291919] 0,1,9,30,78,175,351,644,1100,1773,2725,4026,5754,7995,10843,14400,18776,24089,30465,38038,46950,57351,69399,83260,99108 ⋆ Number of (undire

cted) paths in the n - wheel graph. ● a(n) = (n - 1) * (2 * n ^ 3 - 12 * n ^ 2 + 43 * n - 48) / 6. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ●

► [A212517] 0,0,0,9,30,92,198,396,684,1152,1760,2650,3780,5292,7140,9555,12376,15936,20088,25110,30870,37800,45540,54692,64944 ⋆ Number of (w,x,y,z) with all terms in { 1,...,n } and w>2x and y<=3z. ● a(n) = 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4) - 4 * a(n - 5) + 2 * a(n - 7) - 2 * a(n - 9) + 4 * a(n - 11) + a(n - 12) - 2 * a(n - 13) - 2 * a(n - 14) + a(n - 16). ●

► [A266397] 0,0,9,31,70,130,215,329,476,660,885,1155,1474,1846,2275,2765,3320,3944,4641,5415,6270,7210,8239,9361,10580 ⋆ Number of orbits of Aut(Z ^ 7) as function of the infinity norm n of the representative lattice point of the orbit, when the cardinality of the orbit is equal to 26880. ● a(n) = (4 * n ^ 3 + 3 * n ^ 2 - 37 * n + 30) / 6. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>4. ●

► [A168297] 1,1,9,31,73,141,241,379,561,793,1081,1431,1849,2341,2913,3571,4321,5169,6121,7183,8361,9661,11089,12651,14353 ⋆ a(n) = n ^ 3 + (1 - n) ^ 2. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ G. C. Greubel _ , Jul 17 2016 ●

► [A004126] 0,1,9,31,74,145,251,399,596,849,1165,1551,2014,2561,3199,3935,4776,5729,6801,7999,9330,10801,12419,14191,16124 ⋆ a(n) = n * (7 * n ^ 2 - 1) / 6. ● a(n) = C(2 * n + 1,3) - C(n + 1,3), n>=0. - _ Zerinvary Lajos _ , Jan 21 2007 ●

► [A177342] 1,9,31,75,149,261,419,631,905,1249,1671,2179,2781,3485,4299,5231,6289,7481,8815,10299,11941,13749,15731,17895,20249 ⋆ a(n) = (4 * n ^ 3 - 3 * n ^ 2 + 5 * n - 3) / 3. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ●

► [A224000] 9,31,76,155,281,469,736,1101,1585,2211,3004,3991,5201,6665,8416,10489,12921,15751,19020,22771,27049,31901,37376,43525,50401 ⋆ Number of 2 X n 0..2 arrays with antidiagonals unimodal and rows and diagonals nondecreasing. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

► [A321598] 1,9,31,89,176,375,589,1049,1516,2384,3147,4823,5916,8437,10406,14105,16474,22380,25271,33264,37810,47683,52901,68183,73301 ⋆ a(n) = Sum _{ d|n } d * binomial(d + 2,3). ● a(n) = (2 * sigma _ 2(n) + 3 * sigma _ 3(n) + sigma _ 4(n)) / 6. ●

► [A140323] 1,9,31,129,511,2049,8191,32769,131071,524289,2097151,8388609,33554431,134217729,536870911,2147483649,8589934591,34359738369,137438953471,549755813889,2199023255551,8796093022209,35184372088831,140737488355329,562949953421311 ⋆ First differences of A140322. ● a(n + 1) - 4 * a(n) = period 2: repeat [5, - 5]. ● a(n) = 30 * 4 ^ (n - 3) + a(n - 2), n>2. ● a(n + 2) = 3 * a(n + 1) + 4 * a(n). ●

► [A155098] 9,32,50,73,91,114,132,155,173,196,214,237,255,278,296,319,337,360,378,401,419,442,460,483,501 ⋆ Numbers k such that k ^ 2 == - 1 (mod 41). ● a(n) = 9 * (- 1) ^ (n + 1) + 41 * floor(n / 2). ● a(n) = a(n - 2) + 41 for all n > 2. (End) ●

► [A063134] 9,32,56,80,104,128,152,176,200,224,248,272,296,320,344,368,392,416,440,464,488,512,536,560,584 ⋆ Dimension of the space of weight 2n cusp forms for Gamma _ 0(66). ● a(n) = 2 * a(n - 1) - a(n - 2) for n>3. ● a(n) = 8 * (3 * n - 2) for n>1. ●

► [A027620] 9,32,75,144,245,384,567,800,1089,1440,1859,2352,2925,3584,4335,5184,6137,7200,8379,9680,11109,12672,14375,16224,18225 ⋆ a(n) = n + (n + 1) ^ 2 + (n + 2) ^ 3. ● a(n) = (n + 1) * (n + 3) ^ 2. - _ Zerinvary Lajos _ , Sep 24 2006, corrected Dec 21 2010 ● a(n) = coefficient of x ^ 3 in the Maclaurin expansion of - 1 / ((n + 3) * x ^ 2 + (n + 3) * x + 1). - _ Francesco Daddi _ , Aug 04 2011 ●

► [A051662] 1,9,32,78,155,271,434,652,933,1285,1716,2234,2847,3563,4390,5336,6409,7617,8968,10470,12131,13959,15962,18148,20525 ⋆ House numbers: a(n) = (n + 1) ^ 3 + Sum _{ i=1..n } i ^ 2. ● a(n) = (n + 1) * (8 * n ^ 2 + 13 * n + 6) / 6. ● a(0)=1, a(1)=9, a(2)=32, a(3)=78, a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Harvey P. Dale _ , Jun 23 2011 ●

► [A326247] 0,0,1,9,32,80,165,301,504,792,1185,1705,2376,3224,4277,5565,7120,8976,11169,13737,16720,20160,24101,28589,33672 ⋆ Number of labeled n - vertex 2 - edge multigraphs that are neither crossing nor nesting. ● a(n) = (n * (12 - 19 * n + 6 * n ^ 2 + n ^ 3)) / 12. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>4. ●

► [A362526] 1,9,32,88,217,507,1150,2562,5639,12301,26644,57372,122917,262191,557114,1179718,2490451,5242977,11010160,23068800,48234641,100663459,209715382,436207818,905969887 ⋆ a(n) = 2 ^ n * (n + 2) + (n - 7) * n / 2 - 2. ● a(n) = 7 * a(n - 1) - 19 * a(n - 2) + 25 * a(n - 3) - 16 * a(n - 4) + 4 * a(n - 5). ●

► [A046895] 1,9,33,65,89,137,233,297,321,425,569,665,761,873,1065,1257,1281,1425,1737,1897,2041,2297,2585,2777,2873 ⋆ Sizes of successive clusters in Z ^ 4 lattice. ● a(n) = Pi ^ 2 / 2 * n ^ 2 + O(n (log n) ^ (2 / 3)) using a result of Walfisz. - _ Charles R Greathouse IV _ , Feb 18 2015 ●

► [A165392] 1,9,33,65,101,146,199,260,329,406,491,584,685,794,911,1036,1169,1310,1459,1616,1781,1954,2135,2324,2521 ⋆ Number of slanted 2 X n (i=1..2) X (j=i..n + i - 1) 1..4 arrays with all 1s connected, all 2s connected, all 3s connected, all 4s connected, 1 in the upper left corner, 2 in the upper right corner, 3 in the lower left corner, 4 in the lower right corner, and with no element having more than 2 neighbors with the same value. ● a(n) = 4 * n ^ 2 - 7 * n - 1 for n>5. ●

► [A145923] 9,33,65,105,153,209,273,345,425,513,609,713,825,945,1073,1209,1353,1505,1665,1833,2009,2193,2385,2585,2793 ⋆ Second bisection of A061041: a(n) = A061041(2n + 1) = (2n + 1) * (2n + 9). ● a(n) = 9 + 4 * n ^ 2 + 20 * n. - _ Paolo P. Lava _ , Oct 28 2008 ●

► [A081585] 1,9,33,73,129,201,289,393,513,649,801,969,1153,1353,1569,1801,2049,2313,2593,2889,3201,3529,3873,4233,4609 ⋆ Third row of Pascal - (1,3,1) array A081578. ● a(n) = 8 * n ^ 2 + 1. ● a(n) = a(n - 1) + 16 * n - 8 with a(0)=1. - _ Vincenzo Librandi _ , Aug 08 2010 ●

► [A273316] 1,9,33,81,161,281,449,673,961,1321,1761,2289,2913,3641,4481,5441,6529,7753,9121,10641,12321,14169,16193,18401,20801 ⋆ Partial sums of the number of active (ON,black) cells in n - th stage of growth of two - dimensional cellular automaton defined by "Rule 645", based on the 5 - celled von Neumann neighborhood. ● a(n) = (4 * n ^ 3 + 12 * n ^ 2 + 8 * n + 3) / 3. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>3. ●

► [A101990] 1,1,9,33,81,225,729,2241,6561,19521,59049,177633,531441,1592865,4782969,14353281,43046721,129127041,387420489,1162300833,3486784401,10460235105,31381059609,94143533121,282429536481 ⋆ a(1) = a(2) = 1, a(3) = 9; for n > 3, a(n) = 3 * a(n - 1) - 3 * a(n - 2) + 9 * a(n - 3). ● a(n) = first term in M ^ n * [1 0 0] ^ T, where M = the 3 X 3 matrix [1 0 2 / 2 1 0 / 0 2 1] and T denotes transpose. [Edited by _ Michel Marcus _ , Dec 20 2019] ● a(n) = 2 ^ n * n! * [x ^ n] (exp(3 * x / 2) + 2 * cos(sqrt(3) * x / 2)) / 3. - _ Peter Luschny _ , Aug 01 2012 ● a(n) = 3 ^ (n / 2 - 1) * ((- i) ^ n + i ^ n + 3 ^ (n / 2)) where i = sqrt(- 1). - _ Colin Barker _ , Sep 23 2016 ● a(n) = 3 ^ (n / 2 - 1) * (2 * cos(n * Pi / 2) + 3 ^ (n / 2)). ● a(n) = 3 ^ (n - 1) for odd n and 3 ^ (n - 1) - 2 * (- 3) ^ (n / 2 - 1) for even n. ●

► [A005920] 1,9,33,82,165,291,469,708,1017,1405,1881,2454,3133,3927,4845,5896,7089,8433,9937,11610,13461,15499,17733,20172,22825 ⋆ Tricapped prism numbers. ● a(n) = (1 / 2) * (3 * n ^ 3 + 7 * n ^ 2 + 6 * n + 2). - _ Ralf Stephan _ , Apr 20 2004 ● a(0)=1, a(1)=9, a(2)=33, a(3)=82, a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Harvey P. Dale _ , Sep 25 2012 ●

► [A048479] 1,9,33,97,257,641,1537,3585,8193,18433,40961,90113,196609,425985,917505,1966081,4194305,8912897,18874369,39845889,83886081,176160769,369098753,771751937,1610612737 ⋆ a(n) = T(7,n), array T given by A048472. ● a(n) = 8 * n * 2 ^ (n - 1) + 1. ● a(n) = 5 * a(n - 1) - 8 * a(n - 2) + 4 * a(n - 3) for n>2. G.f.: (1 + 4 * x - 4 * x ^ 2) / ((1 - x) * (1 - 2 * x) ^ 2). - _ Colin Barker _ , Feb 18 2016 ● a(n) = Sum _{ k=0..n + 2 } Sum _{ i=0..n + 2 } C(n + 1,i) - C(k,i). - _ Wesley Ivan Hurt _ , Sep 21 2017 ●

► [A036543] 1,9,33,105,321,969,2913,8745,26241,78729,236193,708585,2125761,6377289,19131873,57395625,172186881,516560649,1549681953,4649045865,13947137601,41841412809,125524238433,376572715305,1129718145921 ⋆ a(n) = T(3,n), array T given by A048471. ● a(n) = 4 * 3 ^ n - 3; ● a(n) = 4 * a(n - 1) - 3 * a(n - 2); a(0)=1, a(1)=9. - _ Harvey P. Dale _ , Aug 16 2011 ● a(n) = 3 * a(n - 1) + 6. - _ Vincenzo Librandi _ , Nov 11 2011 ●

► [A140413] 1,1,9,33,145,609,2585,10945,46369,196417,832041,3524577,14930353,63245985,267914297,1134903169,4807526977,20365011073,86267571273,365435296161,1548008755921,6557470319841,27777890035289,117669030460993,498454011879265 ⋆ a(2n) = A000045(6n) + 1, a(2n + 1) = A000045(6n + 3) - 1. ● a(n) = + 3 * a(n - 1) + 5 * a(n - 2) + a(n - 3). - _ R. J. Mathar _ , Dec 17 2010 ● a(n) = ((- 1) ^ n + (- (2 - sqrt(5)) ^ n + (2 + sqrt(5)) ^ n) / sqrt(5)). - _ Colin Barker _ , Jun 06 2017 ●

► [A097804] 9,33,153,753,3753,18753,93753,468753,2343753,11718753,58593753,292968753,1464843753,7324218753,36621093753,183105468753,915527343753,4577636718753,22888183593753,114440917968753,572204589843753,2861022949218753,14305114746093753 ⋆ a(n) = 3 * (2 * 5 ^ n + 1). ● a(0)=9, a(1)=33, a(n) = 6 * a(n - 1) - 5 * a(n - 2) for n > 1. - _ Harvey P. Dale _ , Dec 17 2012 ●

► [A139275] 0,9,34,75,132,205,294,399,520,657,810,979,1164,1365,1582,1815,2064,2329,2610,2907,3220,3549,3894,4255,4632 ⋆ a(n) = n * (8 * n + 1). ● a(n) = 8 * n ^ 2 + n. ● a(n) = 16 * n + a(n - 1) - 7 with n>0, a(0)=0. - _ Vincenzo Librandi _ , Aug 03 2010 ●

► [A236370] 1,9,34,81,163,282,454,678,973,1335,1786,2319,2959,3696,4558,5532,6649,7893,9298,10845,12571,14454,16534,18786,21253 ⋆ Sum of the largest parts in the partitions of 3n into 3 parts. ● a(n) = 3n * (n ^ 2 - floor(n ^ 2 / 4)) - Sum _{ i=1..n } (2 * i ^ 2 - floor(i ^ 2 / 4)) - Sum _{ i=1..floor((n - 1) / 2) } (n + i) * (n - 2i). ● a(n) = (- 1 + (- 1) ^ n - (1 + 3 * (- 1) ^ n) * n - 6 * n ^ 2 + 22 * n ^ 3) / 16. ● a(n) = Sum _{ j=0..n - 2 } (Sum _{ i=n + 1 + floor(j / 2) - floor(1 / j + 1)..n + 2 * (j + 1) } i), n > 1. - _ Wesley Ivan Hurt _ , Feb 10 2014 ● a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + a(n - 4) + 2 * a(n - 5) - a(n - 6). - _ Wesley Ivan Hurt _ , Nov 19 2021 ●

► [A273744] 1,9,34,83,164,285,454,679,968,1329,1770,2299,2924,3653,4494,5455,6544,7769,9138,10659,12340,14189,16214,18423,20824 ⋆ Partial sums of the number of active (ON,black) cells in n - th stage of growth of two - dimensional cellular automaton defined by "Rule 901", based on the 5 - celled von Neumann neighborhood. ● a(n) = n * (11 + 12 * n + 4 * n ^ 2) / 3 for n>0. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>4. ●

► [A100179] 1,9,34,86,175,311,504,764,1101,1525,2046,2674,3419,4291,5300,6456,7769,9249,10906,12750,14791,17039,19504,22196,25125 ⋆ Structured heptagonal diamond numbers (vertex structure 5). ● a(n) = (1 / 6) * (10 * n ^ 3 - 9 * n ^ 2 + 5 * n). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Harvey P. Dale _ , Oct 28 2018 ●

► [A326278] 0,0,1,9,34,90,195,371,644,1044,1605,2365,3366,4654,6279,8295,10760,13736,17289,21489,26410,32130,38731,46299,54924 ⋆ Number of n - vertex, 2 - edge multigraphs that are not nesting. Number of n - vertex, 2 - edge multigraphs that are not crossing. ● a(n) = (n * (3 - 4 * n + n ^ 3)) / 6 . ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>4. ●

► [A147691] 0,1,9,34,91,192,353,584,903,1318,1849,2502,3299,4244,5361,6652,8143,9834,11753,13898,16299,18952,21889,25104,28631 ⋆ G.f.: x * (1 + x + x ^ 2) * (1 + 6 * x + 8 * x ^ 2 + 4 * x ^ 3 - x ^ 4) / ((1 + x) ^ 2 * (1 - x) ^ 4). ● a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + a(n - 4) + 2 * a(n - 5) - a(n - 6), n> 7. ● a(n) = (3 * n * (6 * n ^ 2 - 12 * n + 13) + (n - 2) * (- 1) ^ n - 6) / 8 for n>1, a(0)=0, a(1)=1. [_ Bruno Berselli _ , Dec 11 2012] ●

► [A154393] 1,9,34,182,836,4025,19001,90358,428481,2034035,9651787,45806244,217378076,1031612713,4895689348,23233383508,110258103799,523249458736,2483172990911,11784338112247,55924666344750,265400424550505,1259504788813791,5977203382848010 ⋆ Empirically good sequence of increments for shell sort algorithm. ● a(n) = floor(fibonacci(n + 1) ^ (1 + sqrt(5))). ●

► [A022275] 0,9,35,78,138,215,309,420,548,693,855,1034,1230,1443,1673,1920,2184,2465,2763,3078,3410,3759,4125,4508,4908 ⋆ a(n) = n * (17 * n + 1) / 2. ● a(n) = 17 * n + a(n - 1) - 8 for n>0, a(0)=0. - _ Vincenzo Librandi _ , Aug 04 2010 ● a(0)=0, a(1)=9, a(2)=35; for n>2, a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , May 06 2013 ●

► [A071398] 0,9,35,78,139,217,312,424,554,701,866,1048,1247,1464,1697,1949,2217,2503,2806,3126,3464,3819,4192,4581,4988 ⋆ Rounded total surface area of a re

gular icosahedron with edge length n. ● a(n) = round(5 * n ^ 2 * sqrt(3)). ●
► [A005898] 1,9,35,91,189,341,559,855,1241,1729,2331,3059,3925,4941,6119,7471,9009,10745,12691,14859,17261,19909,22815,25991,29449 ⋆ Centered cube numbers: n ^ 3 + (n + 1) ^ 3. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). (End) ●
► [A002418] 0,1,9,35,95,210,406,714,1170,1815,2695,3861,5369,7280,9660,12580,16116,20349,25365,31255,38115,46046,55154,65550,77350 ⋆ 4 - dimensional figurate numbers: a(n) = (5 * n - 1) * binomial(n + 2,3) / 4. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Harvey P. Dale _ , Oct 16 2012 ● a(n) = Sum _{ i=0..n } (n - i) * Sum _{ j=i..n } j. - _ J. M. Bergot _ , May 30 2017 ●
► [A077115] 0,1,9,36,64,144,225,361,529,729,1024,1369,1764,2209,2809,3481,4096,5041,5929,6889,8100,9409,10816,12321,13924 ⋆ Least integer square >= n ^ 3. ● a(n) = ceiling(n ^ (3 / 2)) ^ 2. - _ Benoit Cloitre _ , Nov 01 2002 ●
► [A016766] 0,9,36,81,144,225,324,441,576,729,900,1089,1296,1521,1764,2025,2304,2601,2916,3249,3600,3969,4356,4761,5184 ⋆ a(n) = (3 * n) ^ 2. ● a(n) = a(n - 1) + 9 * (2 * n - 1) for n>0, a(0)=0. - _ Vincenzo Librandi _ , Nov 19 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3), n>3. ●
► [A162258] 1,9,36,86,165,279,434,636,891,1205,1584,2034,2561,3171,3870,4664,5559,6561,7676,8910,10269,11759,13386,15156,17075 ⋆ a(n) = (2 * n ^ 3 + 5 * n ^ 2 - 9 * n) / 2. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). (End) ●
► [A027602] 9,36,99,216,405,684,1071,1584,2241,3060,4059,5256,6669,8316,10215,12384,14841,17604,20691,24120,27909,32076,36639,41616,47025 ⋆ a(n) = n ^ 3 + (n + 1) ^ 3 + (n + 2) ^ 3. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - 1 * a(n - 4) for n>=4. ● a(n) = 3 * n ^ 3 + 9 * n ^ 2 + 15 * n + 9. ●
► [A187607] 0,0,9,36,100,196,324,484,676,900,1156,1444,1764,2116,2500,2916,3364,3844,4356,4900,5476,6084,6724,7396,8100 ⋆ Number of 3 - step one space for components leftwards or up, two space for components rightwards or down asymmetric quasi - bishop's tours (antidiagonal moves become knight moves) on an n X n board summed over all starting positions. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>6. ●
► [A000537] 0,1,9,36,100,225,441,784,1296,2025,3025,4356,6084,8281,11025,14400,18496,23409,29241,36100,44100,53361,64009,76176,90000 ⋆ Sum of first n cubes; or n - th triangular number squared. ● a(n) = Sum (Sum (1 + Sum (6 * n))), rephrasing the formula in A000578. - Xavier Acloque, Jan 21 2003 ● a(n) = Sum _{ i=1..n } Sum _{ j=1..n } i * j, row sums of A127777. - _ Alexander Adamchuk _ , Oct 24 2004 ● a(n) = Sum _{ i=1..n } J _ 3(i) * floor(n / i), where J _ 3 is A059376. - _ Enrique Pérez Herrero _ , Feb 26 2012 ● a(n) = Sum _{ i=1..n } Sum _{ j=1..n } Sum _{ k=1..n } max(i,j,k). - _ Enrique Pérez Herrero _ , Feb 26 2013 ● a(n) = - Sum _{ j=1..3 } j * s(n + 1,n + 1 - j) * S(n + 3 - j,n), where s(n,k) and S(n,k) are the Stirling numbers of the first kind and the second kind, respectively. - _ Mircea Merca _ , Jan 25 2014 ● a(n) = (Bernoulli(4, n + 1) - Bernoulli(4, 1)) / 4, n >= 0, with the Bernoulli polynomial B(4, x) from row n=4 of A053382 / A053383. See, e.g., the Ash - Gross reference, p. 62, eq. (6.3) for k=3. - _ Wolfdieter Lang _ , Mar 12 2017 ●
► [A193007] 0,1,1,9,36,108,268,591,1201,2303,4232,7534,13096,22357,37649,62749,103772,170616,279300,455747,741905,1205651,1956816,3173114,5142096 ⋆ Coefficient of x in the reduction by x ^ 2 - >x + 1 of the polynomial p(n,x) defined at Comments. ● a(n)=5 * a(n - 1) - 9 * a(n - 2) + 6 * a(n - 3) + a(n - 4) - 3 * a(n - 5) + a(n - 6). ●
► [A168569] 0,9,36,117,360,1089,3276,9837,29520,88569,265716,797157,2391480,7174449,21523356,64570077,193710240,581130729,1743392196,5230176597,15690529800,47071589409,141214768236,423644304717,1270932914160 ⋆ a(n) = 9 * (3 ^ n - 1) / 2. ● a(n) = 4 * a(n - 1) - 3 * a(n - 2). - _ Robert Israel _ , Sep 24 2014 ●
► [A213283] 0,1,9,36,118,315,711,1414,2556,4293,6805,10296,14994,21151,29043,38970,51256,66249,84321,105868,131310,161091,195679,235566,281268 ⋆ Number of 4 - length words w over n - ary alphabet such that for every prefix z of w we have # (z,a _ i) = 0 or # (z,a _ i) >= # (z,a _ j) for all j>i and # (z,a _ i) counts the occurrences of the i - th letter in z. ● a(n) = n * (- 9 + 17 * n - 8 * n ^ 2 + 2 * n ^ 3) / 2. ●
► [A023872] 1,1,9,36,136,477,1703,5746,19099,61622,195366,607069,1856516,5586870,16579850,48549116,140438966,401592524,1136121837,3181700219,8825733603,24261363403,66124058839,178757752892,479513547399 ⋆ Expansion of Product _{ k>=1 } (1 - x ^ k) ^ (- k ^ 3). ● a(n) = (1 / n) * Sum _{ k=1..n } sigma _ 4(k) * a(n - k). - _ Seiichi Manyama _ , Mar 04 2017 ●
► [A002063] 9,36,144,576,2304,9216,36864,147456,589824,2359296,9437184,37748736,150994944,603979776,2415919104,9663676416,38654705664,154618822656,618475290624,2473901162496,9895604649984,39582418599936,158329674399744,633318697598976 ⋆ a(n) = 9 * 4 ^ n. ● a(n) = 4 * a(n - 1), n > 0; a(0)=9. ● a(n) = 2 ^ (2 * n + 3) + 2 ^ (2 * n). - _ Andres Cicuttin _ , Apr 26 2016 ●
► [A073984] 0,1,9,36,210,1296,7056,40824,262440,1700352,10478160,62355744,367960320,2176782336,12958657344,77716392192,468205557120,2821109907456,16960580969472,101758315958784,609954817881600,3656220357427200,21926486787222528,131557435432187904 ⋆ Number of strings of length n over Z _ 6 with trace 2 and subtrace 1. ● a(n; t, s) = a(n - 1; t, s) + a(n - 1; t + 5, s + 5t + 1) + a(n - 1; t + 4, s + 4t + 4) + a(n - 1; t + 3, s + 3t + 3) + a(n - 1; t + 2, s + 2t + 2) + a(n - 1; t + 1, s + t + 1) where t is the trace and s is the subtrace. ●
► [A027381] 1,9,36,240,1620,11808,88440,683280,5380020,43046640,348672528,2852823600,23535749880,195528140640,1634056262280,13726075468992,115813759112820,981010688215680,8338590828280440,71097458824894320 ⋆ Number of irreducible polynomials of degree n over GF(9); dimensions of free Lie algebras. ● a(n) = Sum _{ d|n } mu(d) * 9 ^ (n / d) / n for n > 0. - _ Andrew Howroyd _ , Oct 13 2017 ●
► [A273220] 9,37,81,141,217,309,417,541,681,837,1009,1197,1401,1621,1857,2109,2377,2661,2961,3277,3609,3957,4321,4701,5097 ⋆ a(n) = 8n ^ 2 - 12n + 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>4. ●
► [A022276] 0,9,37,84,150,235,339,462,604,765,945,1144,1362,1599,1855,2130,2424,2737,3069,3420,3790,4179,4587,5014,5460 ⋆ a(n) = n * (19 * n - 1) / 2. ● a(n) = 19 * n + a(n - 1) - 10 for n>0, a(0)=0. - _ Vincenzo Librandi _ , Aug 04 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>2. (End) ●
► [A299290] 1,9,37,97,203,367,603,923,1341,1869,2521,3309,4247,5347,6623,8087,9753,11633,13741,16089,18691,21559,24707,28147,31893 ⋆ Partial sums of A299289. ● a(n) = (12 + 34 * n + 39 * n ^ 2 + 26 * n ^ 3) / 12 for n even. ● a(n) = (9 + 34 * n + 39 * n ^ 2 + 26 * n ^ 3) / 12 for n odd. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - 2 * a(n - 3) + 3 * a(n - 4) - a(n - 5) for n>4. ●
► [A165394] 1,9,37,105,241,481,869,1457,2305,3481,5061,7129,9777,13105,17221,22241,28289,35497,44005,53961,65521,78849,94117,111505,131201 ⋆ Number of slanted 2 X n (i=1..2) X (j=i..n + i - 1) 1..4 arrays with all 1s connected, all 2s connected, all 3s connected, all 4s connected, 1 in the upper left corner, 2 in the upper right corner, 3 in the lower left corner, 4 in the lower right corner, and with no element having more than 3 neighbors with the same value. ● a(n) = (15 - 20 * n + 11 * n ^ 2 - 4 * n ^ 3 + n ^ 4) / 3. ●
► [A213570] 1,9,37,110,272,598,1213,2323,4265,7588,13184,22500,37881,63125,104381,171602,280896,458330,746085,1212415,1967761,3190824,5170752,8375400,13561777 ⋆ Antidiagonal sums of the convolution array A213566. ● a(n) = 5 * a(n - 1) - 9 * a(n - 2) + 6 * a(n - 3) + a(n - 4) - 3 * a(n - 5) + a(n - 6). ● a(n) = Fibonacci(n + 9) + Lucas(n + 8) - n * (n ^ 2 + 9 * n + 39) - 81. - _ Ehren Metcalfe _ , Jul 10 2019 ● a(n) = Sum _{ k=1..n } k ^ 3 * Fibonacci(n + 1 - k). - _ Greg Dresden _ , Feb 27 2022 ●
► [A257448] 1,9,37,111,283,657,1441,3051,6319,12909,26149,52695,105859,212225,425161,851043,1702903,3406725,6814477,13630095,27261451,54524289,109050097,218101851,436205503 ⋆ a(n) = 13 * (2 ^ n - 1) - 3 * n ^ 2 - 9 * n. ● a(n) = 5 * a(n - 1) - 9 * a(n - 2) + 7 * a(n - 3) - 2 * a(n - 4) for n>4. - _ Ray Chandler _ , Jul 25 2015 ●
► [A048878] 1,9,37,157,665,2817,11933,50549,214129,907065,3842389,16276621,68948873,292072113,1237237325,5241021413,22201322977,94046313321,398386576261,1687592618365,7148757049721,30282620817249 ⋆ Generalized Pellian with second term of 9. ● a(n) = ((7 + sqrt(5))(2 + sqrt(5)) ^ n - (7 - sqrt(5))(2 - sqrt(5)) ^ n) / 2 * sqrt(5). ●
► [A370244] 1,1,9,37,221,1176,6759,38368,222189,1290367,7551534,44367918,261789647,1549582126,9198837384,54740021712,326445873389,1950448508265,11673082484595,69965814023259,419923664517546,2523379461715576,15180084331541402,91411979525372616 ⋆ Coefficient of x ^ n in the expansion of (1 / (1 - x) * (1 + x ^ 2) ^ 3) ^ n. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(3 * n,k) * binomial(2 * n - 2 * k - 1,n - 2 * k). ●
► [A370269] 1,1,9,37,233,1251,7461,43219,257769,1534096,9224259,55607850,336885029,2046705428,12472585155,76185639162,466380345065,2860318763352,17571932737128,108111252582449,666049600308483,4108363051479346,25369393216077370 ⋆ Coefficient of x ^ n in the expansion of 1 / ((1 - x) * (1 - x ^ 2) ^ 3) ^ n. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(3 * n + k - 1,k) * binomial(2 * n - 2 * k - 1,n - 2 * k). ●
► [A071229] 0,1,9,38,102,215,391,644,988,1437,2005,2706,3554,4563,5747,7120,8696,10489,12513,14782,17310,20111,23199,26588,30292 ⋆ a(n) = n * (14 * n ^ 2 - 21 * n + 13) / 6. ● a(n) = + 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - 1 * a(n - 4). ●
► [A071238] 0,1,9,38,110,255,511,924,1548,2445,3685,5346,7514,10283,13755,18040,23256,29529,36993,45790,56070,67991,81719,97428,115300 ⋆ a(n) = n * (n + 1) * (2 * n ^ 2 + 1) / 6. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n > 4, a(0)=0, a(1)=1, a(2)=9, a(3)=38, a(4)=110. - _ Yosu Yurramendi _ , Sep 03 2013 ●
► [A213583] 1,9,38,120,327,819,1948,4482,10085,22341,48930,106236,229075,491175,1048184,2227782,4718097,9960921,20970910,44039520,92273951,192937179,402652308,838859850,1744829437 ⋆ Principal diagonal of the convolution array A213582. ● a(n) = 7 * a(n - 1) - 19 * a(n - 2) + 25 * a(n - 3) - 16 * a(n - 4) + 4 * a(n - 5). ● a(n) = (n + 1) * (2 ^ (n + 2) - 3 * n - 4) / 2. - _ Colin Barker _ , Nov 04 2017 ●
► [A343521] 1,9,38,130,334,846,1722,3572,6513,11806,19458,32948,50400,79290,117092,174256,245173,354249,480718,670420,891690,1203578,1560802,2076496,2630915 ⋆ a(n) = Sum _{ 1 <= x _ 1 <= x _ 2 <= x _ 3 <= x _ 4 <= x _ 5 <= x _ 6 <= x _ 7 <= n } gcd(x _ 1, x _ 2, x _ 3 , x _ 4, x _ 5, x _ 6, x _ 7, n). ● a(n) = Sum _{ d|n } phi(n / d) * binomial(d + 6, 7). ●
► [A158447] 9,39,89,159,249,359,489,639,809,999,1209,1439,1689,1959,2249,2559,2889,3239,3609,3999,4409,4839,5289,5759,6249 ⋆ a(n) = 10 * n ^ 2 - 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●
► [A281381] 0,9,39,102,210,375,609,924,1332,1845,2475,3234,4134,5187,6405,7800,9384,11169,13167,15390,17850,20559,23529,26772,30300 ⋆ a(n) = n * (n + 1) * (4 * n + 5) / 2. ● a(n) = 2 * n ^ 3 + 9 * n ^ 2 / 2 + 5 * n / 2. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>3. (End) ●
► [A299280] 1,9,39,107,233,413,699,1047,1557,2129,2927,3779,4929,6117,7683,9263,11309,13337,15927,18459,21657,24749,28619,32327,36933 ⋆ Partial sums of A299279. ● a(n) = (5 * n ^ 3 + 8 * n ^ 2 + 6 * n - 6) / 2 for n>0 and even. ● a(n) = (5 * n ^ 3 + 7 * n ^ 2 + 5 * n + 1) / 2 for n odd. ● a(n) = a(n - 1) + 3 * a(n - 2) - 3 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) + a(n - 6) - a(n - 7) for n>7. ●
► [A139594] 0,1,9,39,116,275,561,1029,1744,2781,4225,6171,8724,11999,16121,21225,27456,34969,43929,54511,66900,81291,97889,116909,138576 ⋆ Number of different n X n symmetric matrices with nonnegative entries summing to 4. Also number of symmetric oriented graphs with 4 arcs on n points. ● a(n) = coefficient of x ^ 4 in 1 / ((1 - x) ^ n * (1 - x ^ 2) ^ binomial(n,2)). ● a(n) = (n ^ 2 * (7 + 5 * n ^ 2)) / 12. G.f.: x * (1 + x) * (1 + 3 * x + x ^ 2) / (1 - x) ^ 5. [_ Colin Barker _ , Mar 18 2012] ●
► [A034263] 1,9,39,119,294,630,1218,2178,3663,5863,9009,13377,19292,27132,37332,50388,66861,87381,112651,143451,180642,225170,278070,340470,413595 ⋆ a(n) = binomial(n + 4,4) * (4 * n + 5) / 5. ● a(n) = (n + 1) * (n + 2) * (n + 3) * (n + 4) * (4 * n + 5) / 120. - _ Emeric Deutsch _ and Ben Creech (mathroxmysox(AT)yahoo.com), Nov 17 2005, corrected by _ Eric Rowland _ , Aug 15 2017 ●
► [A126396] 1,9,39,175,793,3611,16475,75229,343633,1569883,7172423,32769925,149723361,684077955,3125520983,14280373781,65246447425,298108406323,136

2045450407,6223131628517,28433241805745,129910355608771 ⋆ Number of base 9 n - digit numbers with adjacent digits differing by two or less. ● a(n) = 6 * a(n - 1) - 5 * a(n - 2) - 8 * a(n - 3) + 4 * a(n - 4) + 2 * a(n - 5) for n>5. ●

▶ [A173764] 9,39,339,3339,33339,333339,3333339,33333339,333333339,3333333339,33333333339,333333333339,3333333333339,33333333333339,333333333333339,3333333333333339,33333333333333339,333333333333333339 ⋆ (3 * 10 ^ n + 51) / 9 for n>0. ● a(n) = 10 * a(n - 1) - 51 with n>0, a(0)=6. ● a(n) = 11 * a(n - 1) - 10 * a(n - 2). - _ Vincenzo Librandi _ , Jul 05 2012 ●

▶ [A063164] 9,40,72,104,136,168,200,232,264,296,328,360,392,424,456,488,520,552,584,616,648,680,712,744,776 ⋆ Dimension of the space of weight 2n cusp forms for Gamma _ 0(96). ● a(n) = 2 * a(n - 1) - a(n - 2) for n > 3. ● a(n) = 8 * (4 * n - 3) for n > 1. ●

▶ [A165372] 9,40,104,168,232,296,360,424,488,552,616,680,744,808,872,936,1000,1064,1128,1192,1256,1320,1384,1448,1512 ⋆ Number of slanted n X 3 (i=1..n) X (j=i..3 + i - 1) 1..4 arrays with all 1s connected, all 2s connected, all 3s connected, all 4s connected, 1 in the upper left corner, 2 in the upper right corner, 3 in the lower left corner, and 4 in the lower right corner. ● a(n) = 8 * (8 * n - 19) for n>2. ●

▶ [A287324] 0,1,9,40,120,280,552,968,1560,2360,3400,4712,6328,8280,10600,13320,16472,20088,24200,28840,34040,39832,46248,53320,61080 ⋆ a(n) = A008412(n - 1) + A008412(n - 2) for n>1, a(0)=0, a(1)=1. ● a(n) = 8 * (n - 1) * ((n - 1) ^ 2 + 2) / 3 + 8 * (n - 2) * ((n - 2) ^ 2 + 2) / 3 = 8 * (2 * n - 3) * (n ^ 2 - 3 * n + 5) / 3 for n>2, a(0)=0, a(1)=1, a(2)=9. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>6. - _ Colin Barker _ , Jun 05 2017 ●

▶ [A006414] 1,9,40,125,315,686,1344,2430,4125,6655,10296,15379,22295,31500,43520,58956,78489,102885,133000,169785,214291,267674,331200,406250,494325 ⋆ Number of nonseparable toroidal tree - rooted maps with n + 2 edges and n + 1 vertices. ● a(n) = (n + 1) * (n + 2) ^ 3 * (n + 3) / 24. - _ N. J. A. Sloane _ , Apr 02 2004 ● a(n) = (n + 2) ^ 3 * ((n + 2) ^ 2 - 1) / 24. - _ Paul Richards _ , Mar 04 2007 ● a(n) = (Sum _{ k=0..n + 1 } k * (n + 1) * ((n + 1) ^ 2 - k ^ 2)) / 6 for n > 0, which is the sum of all areas of Pythagorean triangles with arms 2 * k * (n + 1) and (n + 1) ^ 2 - k ^ 2 with hypotenuse k ^ 2 + (n + 1) ^ 2. - _ J. M. Bergot _ , May 12 2014 ● a(n) = binomial(n + 5, 5) + 3 * binomial(n + 4, 5) + binomial(n + 3, 5) = ((n + 2) / 2) * (binomial(n + 4, 4) + binomial(n + 3, 4)), for n >= 0. See a comment above on the sequence b(n) = a(n - 2) = n ^ 3 * (n ^ 2 - 1) / 4!. - _ Wolfdieter Lang _ , Jul 19 2019 ●

▶ [A213758] 1,9,40,130,355,871,1994,4360,9245,19205,39356,79934,161415,324755,651870,1306596,2616609,5237265,10479280,20964090,41934571,83876479,167761330,335532160,671075045 ⋆ Antidiagonal sums of the convolution array A213756. ● a(n) = (1 / 6) * (- 120 + 15 * 2 ^ (n + 3) - 81 * n - 21 * n ^ 2 - 4 * n ^ 3). ● a(n) = 6 * a(n - 1) - 14 * a(n - 2) + 16 * a(n - 3) - 9 * a(n - 4) + 2 * a(n - 5). ●

▶ [A243718] 1,9,40,195,618,1751,4075,8794,17015,31268,53666,88781,140200,215405,320013,465436,659965,920114,1257580,1695303,2249206,2950131,3819135,4896590,6209683 ⋆ Number of inequivalent (mod D _ 8) ways to place 3 nonattacking knights on an n X n board. ● a(n) = (n ^ 6 - 27 * n ^ 4 + 80 * n ^ 3 + 158 * n ^ 2 - 1028 * n + 1200 + (1 - (- 1) ^ n) / 2 * (8 * n ^ 3 - 9 * n ^ 2 - 44 * n + 45)) / 48 for n >= 4. ●

▶ [A086349] 1,9,40,200,952,4624,22272,107648,519552,2509056,12113920,58492928,282425344,1363677184,6584401920,31792332800,153506906112,741197021184,3578815578112,17280050659328,83435464425472 ⋆ On a 3 X 3 board, the number of n - move paths for a chess king. ● a(n) = 2 * a(n - 1) + 12 * a(n - 2) + 8 * a(n - 3) for n>3. G.f.: (1 + x) * (1 + 6 * x + 4 * x ^ 2) / ((1 + 2 * x) * (1 - 4 * x - 4 * x ^ 2)). [Colin Barker, Apr 12 2012] ●

▶ [A159754] 9,41,59,91,109,141,159,191,209,241,259,291,309,341,359,391,409,441,459,491,509,541,559,591,609 ⋆ Numbers n with property that n ^ 2 ends with 81. ● a(1) = 9, a(2) = 41, a(n) = a(n - 2) + 50, n=3,4,... ● a(n) = (1 / 2) * (50 * n - 25 + 7 * (- 1) ^ n), n=1,2,... ● a(n) = a(n - 1) + a(n - 2) - a(n - 3). G.f.: x * (9 * x ^ 2 + 32 * x + 9) / ((x - 1) ^ 2 * (x + 1)). - _ Colin Barker _ , Jul 04 2014 ●

▶ [A322055] 1,9,41,73,145,185,321,385,577,649,881,993,1297,1401,1729,1889,2305,2441,2865,3073,3601,3769,4289,4545,5185 ⋆ Number of ON cells after n generations of two - dimensional automaton based on knight moves (see Comments for definition; here a cell is turned ON if 1 or 2 neighbors are ON). ● a(n) = a(n - 1) + 2 * a(n - 4) - 2 * a(n - 5) - a(n - 8) + a(n - 9) for n>8. ●

▶ [A198943] 1,9,41,79,351,1559,3001,13329,59201,113959,506151,2248079,4327441,19220409,85367801,164328799,729869391,3241728359,6240166921,27715816449,123100309841,236962014199,1052471155671,4674570045599,8998316372641 ⋆ y - values in the solution to 10 * x ^ 2 - 9 = y ^ 2. ● a(n + 6) = 38 * a(n + 3) - a(n) with a(1)=1, a(2)=9, a(3)=41, a(4)=79, a(5)=351. ●

▶ [A018836] 1,9,41,109,205,325,473,649,853,1085,1345,1633,1949,2293,2665,3065,3493,3949,4433,4945,5485,6053,6649,7273,7925 ⋆ Number of squares on infinite chessboard at <= n knight's moves from a fixed square. ● a(n) = 1 - 6 * n + 14 * n ^ 2 + 4 * sign(n * (n - 1) * (n - 3)). - _ Zak Seidov _ , Mar 01 2005 ●

▶ [A373517] 1,1,1,1,9,41,121,1401,11761,61489,864081,10597841,81833401,1350154521,21715461769,225232218121,4267472824161,84597818284001,1111699778741281,23801969674626849,558853937533757161,8943028907965939081,213696639293901810201 ⋆ Expansion of e.g.f. exp(x / (1 - x ^ 3) ^ (1 / 3)). ● a(n) = n! * Sum _{ k=0..floor(n / 3) } binomial(n / 3 - 1,k) / (n - 3 * k)!. ●

▶ [A274323] 1,1,9,41,129,313,649,1201,2049,3281,5001,7321,10369,14281,19209,25313,32769,41761,52489,65161,80001,97241,117129,139921,165889 ⋆ Number of partitions of n ^ 4 into at most two parts. ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 5 * a(n - 4) - 4 * a(n - 5) + a(n - 6) for n>5. ● a(n) = (3 + (- 1) ^ n + 2 * n ^ 4) / 4. ● a(n) = 1 + floor(n ^ 4 / 2). - _ Alois P. Heinz _ , Oct 13 2016 ●

▶ [A297740] 1,9,41,129,321,625,997,1413,1885,2425,3033,3709,4453,5265,6145,7093,8109,9193,10345,11565,12853,14209,15633,17125,18685 ⋆ The number of distinct positions on an infinite chessboard reachable by the (2,3) - leaper in <= n moves. ● a(n) = 34 * n ^ 2 + 30 * n + 9 for n >= 6. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>9. ●

▶ [A297741] 1,9,41,129,321,681,1289,2121,3081,4121,5233,6445,7777,9233,10813,12517,14345,16297,18373,20573,22897,25345,27917,30613,33433 ⋆ The number of distinct positions on an infinite chessboard reachable by the (3,4) - leaper in <= n moves. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>13. ●

▶ [A001846] 1,9,41,129,321,681,1289,2241,3649,5641,8361,11969,16641,22569,29961,39041,50049,63241,78889,97281,118721,143529,172041,204609,241601 ⋆ Centered 4 - dimensional orthoplex numbers (crystal ball sequence for 4 - dimensional cubic lattice). ● a(n) = (2 * n ^ 4 + 4 * n ^ 3 + 10 * n ^ 2 + 8 * n + 3) / 3. - S. Bujnowski & B. Dubalski (slawb(AT)atr.bydgoszcz.pl), Mar 07 2002 ● a(n) = Sum _{ i=0..n } 8 * i * (i ^ 2 + 2) / 3; ● a(n) = Sum _{ k=0..min(4,n) } 2 ^ k * binomial(4,k) * binomial(n,k). See Bump et al. - _ Tom Copeland _ , Sep 05 2014 ●

▶ [A271663] 1,9,41,131,336,742,1470,2682,4587,7447,11583,17381,25298,35868,49708,67524,90117,118389,153349,196119,247940,310178,384330,472030,575055 ⋆ Convolution of nonzero squares (A000290) with nonzero pentagonal numbers (A000326). ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). ● a(n) = (n + 1) * (n + 2) * (n + 3) * (6 * n ^ 2 + 19 * n + 20) / 120. ●

▶ [A056243] 1,9,41,146,456,1312,3568,9312,23552,58112,140544,334336,784384,1818624,4173824,9494528,21430272,48037888,107020288,237109248,522715136,1147142144,2507145216,5458886656,11844714496 ⋆ Third diagonal of triangle A056242. ● a(n) = Sum _{ 0<=j<=n - 3 } (- 1) ^ (n - 3 - j) * binomial(n - 3, j) * binomial(n + 2j - 1, 2j), for n>=3. - Pab Ter (pabrlos2(AT)yahoo.com), Nov 06 2005 ●

▶ [A083584] 1,9,41,169,681,2729,10921,43689,174761,699049,2796201,11184809,44739241,178956969,715827881,2863311529,11453246121,45812984489,183251937961,733007751849,2932031007401,11728124029609,46912496118441 ⋆ a(n) = (8 * 4 ^ n - 5) / 3. ● a(n) = (8 * 4 ^ n - 5) / 3. ● a(0)=1, a(1)=9, a(n) = 5 * a(n - 1) - 4 * a(n - 2). - _ Harvey P. Dale _ , Oct 23 2011 ● a(n) = 4 * a(n - 1) + 5, a(0) = 1. - _ Philippe Deléham _ , Feb 24 2014 ● a(n + 1) = 2 ^ (2 ^ n + 1) + a(n), a(1)=1. - _ Ben Paul Thurston _ , Dec 27 2015 ●

▶ [A199311] 9,41,201,1001,5001,25001,125001,625001,3125001,15625001,78125001,390625001,1953125001,9765625001,48828125001,244140625001,1220703125001,6103515625001,30517578125001,152587890625001,762939453125001 ⋆ 8 * 5 ^ n + 1. ● a(n) = 5 * a(n - 1) - 4. ● a(n) = 6 * a(n - 1) - 5 * a(n - 2). ●

▶ [A062783] 0,9,42,99,180,285,414,567,744,945,1170,1419,1692,1989,2310,2655,3024,3417,3834,4275,4740,5229,5742,6279,6840 ⋆ a(n) = 3 * n * (4 * n - 1). ● a(n) = 24 * n + a(n - 1) - 15 with n>0, a(0)=0. - _ Vincenzo Librandi _ , Aug 07 2010 ●

▶ [A027441] 0,1,9,42,130,315,651,1204,2052,3285,5005,7326,10374,14287,19215,25320,32776,41769,52497,65170,80010,97251,117139,139932,165900 ⋆ a(n) = (n ^ 4 + n) / 2 (Row sums of an n X n X n magic cube, when it exists). ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Wesley Ivan Hurt _ , Aug 13 2014 ● a(n) = (Sum _{ i=1..n ^ 3 } i) / n ^ 2, for n > 0. - _ Wesley Ivan Hurt _ , Aug 13 2014 ● a(n) = (n + 1) * (a(n - 1) / (n - 1) + n * (n - 1)), a(0)=0, a(1)=1. - _ Vladimir Kruchinin _ , Oct 10 2018 ●

▶ [A292481] 0,0,1,9,42,139,381,984,2685,8061,25434,79695,242577,721584,2131785,6333633,18984618,57194883,172319157,517851144,1552599333,4651054101,13939132698,41810229351,125475990057 ⋆ p - INVERT of the odd positive integers, where p(S) = 1 - S ^ 3. ● a(n) = 6 * a(n - 1) - 25 * a(n - 2) + 21 * a(n - 3) - 12 * a(n - 4) + 9 * a(n - 5) for n >= 6. ●

▶ [A051923] 1,9,42,140,378,882,1848,3564,6435,11011,18018,28392,43316,64260,93024,131784,183141,250173,336490,446292,584430,756470,968760,1228500,1543815 ⋆ Partial sums of A051836. ● a(n) = binomial(n + 5, 5) * (n + 2) / 2. ●

▶ [A180670] 0,0,1,9,42,140,383,925,2056,4316,8705,17069,32810,62192,116743,217673,404000,747496,1380177,2544865,4688186,8631620,15886111,29230725,53776968 ⋆ a(n) = a(n - 1) + a(n - 2) + a(n - 3) + (8 * n ^ 3 - 48 * n ^ 2 + 112 * n - 96) / 3 with a(0)=0, a(1)=0 and a(2)=1. ● a(n) = a(n - 1) + a(n - 2) + a(n - 3) + (8 * n ^ 3 - 48 * n ^ 2 + 112 * n - 96) / 3 with a(0)=0, a(1)=0 and a(2)=1. ●

▶ [A268262] 9,42,143,378,837,1634,2907,4818,7553,11322,16359,22922,31293,41778,54707,70434,89337,111818,138303,169242,205109,246402,293643,347378,408177 ⋆ Number of length - (3 + 1) 0..n arrays with new repeated values introduced in sequential order starting with zero. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

▶ [A268622] 9,42,174,666,2430,8586,29646,100602,336798,1115370,3661038,11927898,38618046,124357194,398580750,1272269754,4046391774,12827922858,40550011182,127848761370,402142467582,1262215953162,3954013510734 ⋆ Number of n X 2 0..2 arrays with some element plus some horizontally or vertically adjacent neighbor totalling two no more than once. ● a(n) = 2 * 3 ^ (n - 2) * (5 + 8 * n) for n>1. ●

▶ [A007227] 9,42,236,1287,7314,41990,245256,1448655,8649823,52106040,316360752,1933910820,11893566078,73537906926,456864894288,2850557192175,17854854154215,112230508880490,707714010205020,4475876883386895 ⋆ Number of distinct perforation patterns for deriving (v,b) = (n + 2,n) punctured convolutional codes from (3,1). ● a(n) = (1 / n) * Sum _{ k|gcd(n + 2,n) } phi(k) * binomial(3 * n / k, (n + 2) / k). ● a(n) = (1 / n) * (binomial(3 * n, n + 2) + [(n mod 2) = 0] * binomial(3 * n / 2, (n / 2) + 1)), where [ ] is the Iverson bracket. (End) ●

▶ [A185918] 1,9,43,101,183,289,419,573,751,953,1179,1429,1703,2001,2323,2669,3039,3433,3851,4293,4759,5249,5763,6301,6863 ⋆ a(n) = 12 * n ^ 2 - 2 * n - 1. ● a(n) = a(n - 1) + 24 * n - 14. ● a(n) = 2 * a(n - 1) - a(n) + 24. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A244869] 1,9,43,143,379,859,1738,3226,5597,9197,14453,21881,32095,45815,63876,87236,116985,154353,200719,257619,326755,410003,509422,627262,765973 ⋆ Number of magic labelings with magic sum n of first graph shown in link. ● a(n) = (15 * (63 + (- 1) ^ n) + 2592 * n + 2880 * n ^ 2 + 1660 * n ^ 3 + 510 * n ^ 4 + 68 * n ^ 5) / 960. ● a(n) = 5 * a(n - 1) - 9 * a(n - 2) + 5 * a(n - 3) + 5 * a(n - 4) - 9 * a(n - 5) + 5 * a(n - 6) - a(n - 7) for n>6. ●

▶ [A281773] 0,0,1,9,43,165,571,1869,5923,18405,56491,172029,521203,1573845,4742011,14266989,42882883,128812485,386765131,1160950749,3484162963,1045511

0325,31370573851,94122207309,282387593443 ⋆ Number of distinct topologies o n an n - set that have exactly 4 open sets. ● a(n) = 6 * a(n - 1) - 11 * a(n - 2) + 6 * a(n - 3) for n>3. ● a(n) = 2 - 5 * 2 ^ (n - 1) + 3 ^ n for n>0. (End) ●

▶ [A110125] 1,1,1,9,43,213,1507,12537,114325,1144221,12512373,148351881,1892798733,25816700309,374406371121,5748436717505,93098093268755,1585364420710205,28305454044441843,528500175862180033,10295596472841577779 ⋆ Row s ums of a scaled Legendre triangle. ● a(n)=sum { k=0..n, 2 ^ (n - k) * Legendre P(n - k, k) } . ●

▶ [A275793] 9,43,249,1451,8457,49291,287289,1674443,9759369,56881771,331531257,1932305771,11262303369,65641514443,382586783289,2229879185291,12996688328457,75750250785451,441504816384249,2573278647520043,14998167068736009,87415723764896011 ⋆ The x members of the positive proper solutions (x = x1 (n), y = y1(n)) of the first class for the Pell equation x ^ 2 - 2 * y ^ 2 = + 7 ^ 2. ● a(n) = 6 * a(n - 1) - a(n - 2) for n >= 1, with a(- 1) = 11 and a(0) = 9. ● a(n) = (((3 - 2 * sqrt(2)) ^ n * (- 8 + 9 * sqrt(2)) + (3 + 2 * sqrt(2)) ^ n * (8 + 9 * sqrt(2)))) / (2 * sqrt(2)). - _ Colin Barker _ , Sep 28 2016 ●

▶ [A050486] 1,9,44,156,450,1122,2508,5148,9867,17875,30888,51272,82212,127908,193800,286824,415701,591261,826804,1138500,1545830,2072070,2744820,3596580,4665375 ⋆ a(n) = binomial(n + 6,6) * (2n + 7) / 7. ● a(n) = 2 * C(n + 7, 7) - C(n + 6, 6). - _ Paul Barry _ , Mar 04 2003 ● a(n) = C(n + 6,6) + 2 * C(n + 6,7). - Borislav St. Borisov (b.st.borisov(AT)abv.bg), Mar 05 2009 ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>7. - _ Wesley Ivan Hurt _ , Jan 01 2016 ●

▶ [A213755] 1,9,44,160,491,1355,3486,8546,20245,46773,106048,236980,523535,1145935,2489202,5372534,11532633,24639513,52426420,111146280,234877811,494924179,1040183174,2181033290,4563397341 ⋆ Antidiagonal sums of the convoluti on array A213753. ● a(n) = (1 / 6) * (84 - 21 * 2 ^ (n + 2) + 23 * n + 9 * n * 2 ^ (n + 2) - 3 * n ^ 2 - 2 * n ^ 3). ● a(n) = 8 * a(n - 1) - 26 * a(n - 2) + 44 * a (n - 3) - 41 * a(n - 4) + 20 * a(n - 5) - 4 * a(n - 6). ●

▶ [A084903] 1,9,44,170,576,1792,5248,14688,39680,104192,267264,672256,1662976,4055040,9764864,23257088,54853632,128253952,297533440,685375488,1568669696,3569352704,8078229504,18192793600,40785412096 ⋆ Binomial transform of p ositive cubes. ● a(n) = 2 ^ (n - 3) * (n ^ 3 + 9n ^ 2 + 18n + 8). ● a(n) = Sum _{ k=0..n } C(n, k) * (1 + k) ^ 3. ●

▶ [A349878] 0,1,9,44,178,689,2723,11304,49772,232657,1151781,6018628,33087022,190780001,1150653679,7241710656,47454745496,323154695841,2282779990113,16700904488284,126356632389834,987303454928465,7957133905608283,66071772829246808 ⋆ Expansion of Sum _{ k>=0 } k ^ 3 * x ^ k / (1 - k * x). ● a(n) = Sum _{ k=0..n } k ^ (n - k + 3). ●

▶ [A099867] 1,9,44,211,1011,4844,23209,111201,532796,2552779,12231099,58602716,280782481,1345309689,6445765964,30883520131,147971834691,708975653324,3396906431929,16275556506321,77980876099676,373628823992059,1790163243860619,8577187395311036 ⋆ a(n) = 5 * a(n - 1) - a(n - 2) for n>1, a(0)=1, a(1) =9. ● a(n) = 2 ^ (- 1 - n) * ((5 - sqrt(21)) ^ n * (- 13 + sqrt(21)) + (5 + sqrt(21)) ^ n * (13 + sqrt(21))) / sqrt(21). - _ Colin Barker _ , Mar 31 2017 ●

▶ [A228603] 9,44,212,1024,4944,23872,115264,556544,2687232,12975104,62649344,302497792,1460588544,7052345344,34051735552,164416323584,793872236544,3833154240512,18508105908224,89365040594944,431492586012672,2083430506430464,10059692369772544 ⋆ a(1) = 9, a(2) = 44, a(n) = 4 * (a(n - 1) + a(n - 2)) (n >=3). ● a(n) = (8 - 5 * sqrt(2)) * (2 - 2 * sqrt(2)) ^ (n) / 8 + (8 + 5 * sqrt(2)) * (2 + 2 * sqrt(2)) ^ (n) / 8. ●

▶ [A297491] 9,44,234,664,2628,4354,9774,13660,24264,48690,59488,101194,137718,158884,207504,297594,410580,453778,601324,715608,777814,985840,1143324,1409670,1825054 ⋆ a(n) = (1 / 2) * Sum _{ |k|<=2 * sqrt(p) } k ^ 4 * H(4 * p - k ^ 2) where H() is the Hurwitz class number and p is n - th prime. ● a(n) = b (prime(n)). ●

▶ [A104470] 1,1,1,9,44,270,1938,15764,143776,1453302,16128420,194980478,2550746400,35904118874,541097840528,8693290587030,148324680742912,2678504175897990,51039398650102776,1023458322628129882 ⋆ Tribonacci equivalent of mo usetrap sequence (A002467). ● a(0) = a(1) = a(2) = 1; for n>2 a(n) = n * (a(n - 1) + a(n - 2) + a(n - 3)). ●

▶ [A152996] 0,9,45,108,198,315,459,630,828,1053,1305,1584,1890,2223,2583,2970,3384,3825,4293,4788,5310,5859,6435,7038,7668 ⋆ 9 times pentagonal numbers: 9 * n * (3 * n - 1) / 2. ● a(0)=0, a(1)=9, a(2)=45, a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Jan 14 2016 ●

▶ [A220443] 0,9,45,126,270,495,819,1260,1836,2565,3465,4554,5850,7371,9135,11160,13464,16065,18981,22230,25830,29799,34155,38916,44100 ⋆ a(n) = Sum _{ i =1..n } (3i) ^ 2. ● a(n) = (3 * n * (1 + 3 * n + 2 * n ^ 2)) / 2. G.f.: 9 * x * (x + 1) / (x - 1) ^ 4. - _ Colin Barker _ , Jul 22 2013 ●

▶ [A289721] 1,9,45,135,306,585,999,1575,2340,3321,4545,6039,7830,9945,12411,15255,18504,22185,26325,30951,36090,41769,48015,54855,62316 ⋆ Let a(0)=1. Th en a(n) = sums of consecutive strings of positive integers of length 3 * n, starti ng with the integer 2. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n > 4. ●

▶ [A212089] 0,1,9,45,139,333,684,1258,2133,3402,5167,7542,10656,14647,19665,25875,33451,42579,53460,66304,81333,98784,118903,141948,168192 ⋆ Number of (w,x,y,z) with all terms in { 1,...,n } and w>=average { x,y,z } . ● a(n) = 4 * a (n - 1) - 6 * a(n - 2) + 5 * a(n - 3) - 5 * a(n - 4) + 6 * a(n - 5) - 4 * a(n - 6) + a (n - 7). ●

▶ [A095166] 1,9,45,155,420,966,1974,3690,6435,10615,16731,25389,37310,53340,74460,101796,136629,180405,234745,301455,382536,480194,596850,735150,897975 ⋆ Group the natural numbers >= 1 so that the n - th group contains n(n + 1) / 2 numbers and obtain the group sum. ● a(n) = (2 * (n - 1) ^ 5 + 15 * (n - 1) ^ 4 + 44 * (n - 1) ^ 3 + 69 * (n - 1) ^ 2 + 62 * (n - 1) + 24) / 24. [corrected by _ Georg Fischer _ , May 08 2021] ●

▶ [A247609] 1,9,45,165,495,1231,2639,5055,8885,14605,22761,33969,48915,68355,93115,124091,162249,208625,264325,330525,408471,499479,604935,726295,865085 ⋆ a(n) = Sum _{ k=0..4 } binomial(8,k) * binomial(n,k). ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ● a(n) = (12 - 58 * n + 217 * n ^ 2 - 98 * n ^ 3 + 35 * n ^ 4) / 12. ● a(n) = 1 + 8 * Binomial(n, 1) + 28 * Binomial(n, 2) + 56 * Binomial(n, 3) + 70 * Binomial(n, 4). ●

▶ [A008491] 1,9,45,165,495,1287,3003,6435,12870,24309,43749,75537,125805,202995,318483,487311,729036,1068705,1537965,2176317,3032523,4166175,5649435,7568955,10027986 ⋆ Expansion of (1 - x ^ 9) / (1 - x) ^ 9. ● a(n) = n * (3044 + 1869 * n ^ 2 + 126 * n ^ 4 + n ^ 6) / 560 for n>0. - _ Colin Barker _ , Jan 06 2017 ●

▶ [A000581] 1,9,45,165,495,1287,3003,6435,12870,24310,43758,75582,125970,203490,319770,490314,735471,1081575,1562275,2220075,3108105,4292145,5852925,7888725,10518300 ⋆ a(n) = binomial coefficient C(n,8). ● a(n) = n(n - 1)(n - 2)(n - 3)(n - 4)(n - 5)(n - 6)(n - 7) / 8!. - _ Artur Jasinski _ , Dec 02 2007 ●

▶ [A306939] 1,9,45,165,495,1287,3003,6435,12870,24311,43776,75753,127110,209475,346104,591261,1081575,2163150,4686826,10656387,24582663,56191734,125640180,273241161,577147212 ⋆ Expansion of 1 / ((1 - x) ^ 9 - x ^ 9). ● a(n) = Su m _{ k=0..floor(n / 9) } binomial(n + 8,9 * k + 8). ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + 2 * a(n - 9) for n > 8. ●

▶ [A145137] 0,1,9,45,165,496,1297,3058,6655,13586,26323,48829,87308,151282,255125,420234,678086,1074525,1675754,2576688,3912574,5875129,8734923,12872391,18820765 ⋆ Expansion of x / ((1 - x - x ^ 4) * (1 - x) ^ 8). ● a(n) = [9, - 36, 84, - 125, 118, - 56, - 20, 61, - 55, 28, - 8, 1] * [a(n - 1), ..., a(n - 12)]. ●

▶ [A144902] 0,1,9,45,166,505,1342,3224,7161,14938,29602,56211,102973,182963,316694,535947,889454,1451305,2333356,3703510,5812615,9034001,13921551,21294946,32364747 ⋆ Expansion of x / ((1 - x - x ^ 3) * (1 - x) ^ 8). ● a(n) = Sum _{ j=0..floor((n + 7) / 3) } binomial(n - 2 * j + 7, j + 8). ●

▶ [A036826] 0,1,9,45,173,573,1725,4861,13053,33789,84989,208893,503805,1196029,2801661,6488061,14876669,33816573,76283901,170917885,380633085,843055101,1858076669,4076863485,8908701693 ⋆ a(n) = A036800(n) / 2. ● a(n) = 2 ^ n * (n ^ 2 - 2 * n + 3) - 3. ● a(n) = Sum _{ k=0..n } k ^ 2 * 2 ^ (k - 1). (End) ● a(n) = 7 * a(n - 1) - 18 * a(n - 2) + 20 * a(n - 3) - 8 * a(n - 4). - _ Harvey P. D ale _ , Mar 04 2015 ●

▶ [A124647] 1,9,45,189,729,2673,9477,32805,111537,373977,1240029,4074381,13286025,43046721,138706101,444816117,1420541793,4519905705,14334558093,45328197213,142958160441,449795187729,1412147682405,4424729404869,13839047287569 ⋆ a(n) = (2n + 1) * 3 ^ n. ● a(n) = 6 * a(n - 1) - 9 * a(n - 2) for n > 1; a(0) = 1, a(1) = 9. - _ Klaus Brockhaus _ , Sep 23 2009 ●

▶ [A270567] 1,9,45,225,1125,5625,28125,140625,703125,3515625,17578125,8789062 5,439453125,2197265625,10986328125,54931640625,274658203125,1373291015625,6866455078125,34332275390625,171661376953125,858306884765625,4291534423828125,21457672119140625 ⋆ Expansion of (1 + 4 * x) / (1 - 5 * x). ● a(n) = 5 * a(n - 1) for n>1. ● a(n) = 9 * 5 ^ (n - 1) for n>0. ●

▶ [A054628] 1,9,45,249,1665,11817,88725,683289,5381685,43046889,348684381,2852823609,23535840225,195528140649,1634056945605,13726075481049,115813764494505,981010688215689,8338590871415805,71097458824894329,607883273127192897 ⋆ Number of n - bead necklaces with 9 colors. ● a(n) = (1 / n) * Sum _{ d|n } phi(d) * 9 ^ (n / d), n > 0. ● a(0) = 1; a(n) = (1 / n) * Sum _{ k=1..n } 9 ^ gcd(n,k). - _ Ilya Gutkovskiy _ , Apr 17 2021 ●

▶ [A001556] 9,45,285,2025,15333,120825,978405,8080425,67731333,574304985,4914341925,42364319625,367428536133,3202860761145,28037802953445,246324856379625,2170706132009733,19179318935377305,169842891165484965,1506994510201252425 ⋆ a(n) = 1 ^ n + 2 ^ n + ... + 9 ^ n. ● a(n) = sum _{ j=1..9 } j ^ n, n>=0. ●

▶ [A260513] 1,9,46,164,460,1091,2289,4376,7779,13045,20856,32044,47606,68719,96755,133296,180149,239361,313234,404340,515536,649979,811141,1002824,1229175 ⋆ a(n) = (8 * n + 13 * n ^ 3 + 3 * n ^ 5) / 24; also the sum of triangular numbers taken in successive groups of increasing size (see Example). ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) f or n>6. - _ Colin Barker _ , Aug 07 2015 ●

▶ [A001781] 1,9,46,174,541,1461,3544,7896,16414,32206,60172,107788,186142,311278,505912,801592,1241383,1883167,2803658,4103242,5911763,8395387,11764688,16284112,22282988 ⋆ Expansion of 1 / ((1 + x) * (1 - x) ^ 10). ● a(n) = + 9 * a(n - 1) - 35 * a(n - 2) + 75 * a(n - 3) - 90 * a(n - 4) + 42 * a(n - 5) + 42 * a(n - 6) - 90 * a(n - 7) + 75 * a(n - 8) - 35 * a(n - 9) + 9 * a(n - 10) - a(n - 11). - _ R. J. Mathar _ , Mar 22 2011 ●

▶ [A053308] 1,9,46,175,551,1518,3785,8735,18955,39130,77533,148487,276408,502415,895103,1568062,2708322,4622488,7811510,13091798,21791338,36067176,59419294,97522270,159571139 ⋆ Partial sums of A053296. ● a(n) = Sum _{ i=0..floor(n / 2) } C(n + 8 - i, n - 2i), n >= 0. ● a(n) = a(n - 1) + a(n - 2) + C(n + 7,7); n >= 0; a(- 1)=0. ● a(n) = Sum _{ k=1..n } C(n - k + 8,k + 7), with n >=0. - _ Paolo P. Lava _ , Apr 16 2008 ●

▶ [A201458] 1,9,46,175,551,1520,3811,8921,19922,43211,92363,196608,419295,897565,1926458,4135255,8854359,18875392,40024059,84417521,177221602,370688979,773342163,1610612736,3350668423 ⋆ Expansion of 1 / ((1 - 2 * x) * (1 - 3 * x + 3 * x ^ 2) * (1 - 4 * x + 6 * x ^ 2 - 4 * x ^ 3)). ● a(n) = 9 * a(n - 1) - 35 * a(n - 2) + 76 * a(n - 3) - 98 * a(n - 4) + 72 * a(n - 5) - 24 * a(n - 6) for a(- 5)=a(- 4)=a(- 3)=a(- 2)=a(- 1)=0, a(0)=1. ● a(n) = 8 * 2 ^ n * (n + 1) + 2 * ((1 - i) ^ (n - 1) + (1 + i) ^ (n - 1)) + ((3 + i * sqrt(3)) / 2) ^ (n + 4) + ((3 - i * sqr t(3)) / 2) ^ (n + 4), where i=sqrt(- 1). ●

▶ [A035039] 0,0,0,0,0,0,0,1,9,46,176,562,1586,4096,9908,22819,50643,109294,230964,480492,988116,2014992,4084248,8243109,16587165 ⋆ a(n) = 2 ^ n - C(n,0) - C(n,1) - ... - C(n,6). ● a(n) = Sum _{ k=0..n } , C(n, k + 7) = Sum _{ k=7.. n } C(n, k); a(n) = 2a(n - 1) + C(n - 1, 6). - _ Paul Barry _ , Aug 23 2004 ●

▶ [A213749] 1,9,46,180,603,1827,5164,13878,35905,90189,221274,532584,1261687,2949255,6815896,15597738,35389629,79691985,178258150,396361980,876609811,1929380139,4227858756,9227469150,20065550713 ⋆ Antidiagonal sums of the c onvolution array A213747. ● a(n) = 9 * a(n - 1) - 33 * a(n - 2) + 63 * a(n - 3) - 66 * a(n - 4) + 36 * a(n - 5) - 8 * a(n - 6). ● a(n) = (1 / 2) * ((1 + n) * (4 - 2 ^ (2 + n) + n + 2 ^ (1 + n) * n)). - _ Colin Barker _ , Oct 30 2017 ●

▶ [A085385] 0,1,9,46,184,640,2032,6048,17152,46848,124160,321024,813056,2023424,4960256,12001280,28704768,67960832,159449088,371064832,857210880,19671

28576,4486856704,10177478656,22968008704 ⋆ Binomial transform of hexagonal pyramidal numbers A002412. ● a(n) = n * 2 ^ n(2n ^ 2 + 9n + 1) / 4!. ●

► [A081193] 1,9,46,204,856,3504,14176,57024,228736,916224,3667456,14674944,58710016,234860544,939483136,3758014464,15032221696,60129214464,240517513216,962071363584,3848288075776,15393157545984,61572640669696 ⋆ a(n) = 6 * a(n - 1) - 8 * a(n - 2) for n>1, a(0)=1, a(1)=9. ● a(n) = 7 * 4 ^ n / 2 - 5 * 2 ^ n / 2. ●

► [A370622] 1,1,9,46,293,1806,11538,74173,482157,3154645,20762014,137270376,911111522,6067104434,40514133081,271195540971,1819188150365,12225956834430,82301499780885,554850642658483,3745615502285478,25315915432984852,171292993893095996 ⋆ Coefficient of x ^ n in the expansion of ((1 - x) ^ 2 / (1 - x - x ^ 2) ^ 3) ^ n. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(3 * n + k - 1,k) * binomial(2 * n - k - 1,n - 2 * k). ●

► [A100790] 1,9,47,183,560,1426,3164,6322,11643,20095,32901,51569,77922,114128,162730,226676,309349,414597,546763,710715,911876,1156254,1450472,1801798,2218175 ⋆ First differences of A047780. ● a(0)=1, a(1)=9, a(2)=47, a(3)=183, a(4)=560, a(5)=1426, a(n)= 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). - _ Harvey P. Dale _ , Dec 18 2013 ●

► [A055250] 1,9,47,187,630,1898,5282,13866,34831,84575,199977,462973,1053804,2365704,5250660,11543700,25177005,54539205,117456115,251676495,536892146,1140875254,2415947382,5100306062,10737455195 ⋆ Seventh column of triangle A055249. ● a(n) = Sum _{ k=0..n + 5 } Sum _{ i=0..n + 5 } (i - k) * C(n - k + 5,i + 3). - _ Wesley Ivan Hurt _ , Sep 19 2017 ●

► [A038740] 1,9,47,188,643,1993,5798,16193,44068,118013,312974,825277,2169045,5690426,14913861,39066661,102306471,267879086,701364436,1836256726,4807458872,12586185670,32951178868,86267449214,225851287529 ⋆ T(n,n - 3), array T as in A038738. ● a(3)=1, a(4)=9, a(5)=47, a(6)=188, a(7)=643, a(8)=1993, a (9)=5798, a(10)=16193, a(n)=9 * a(n - 1) - 34 * a(n - 2) + 71 * a(n - 3) - 90 * a (n - 4) + 71 * a(n - 5) - 34 * a(n - 6) + 9 * a(n - 7) - a (n - 8) [From Harvey P. Dale, Jan 06 2012] ●

► [A163614] 1,9,47,219,985,4377,19367,85563,377809,1667913,7362815,32501499,143469289,633305241,2795546423,12340141851,54472026145,240451163913,1061402800463,4685258655387,20681732329081,91293583386777 ⋆ a(n) = ((1 + 3 * sqrt(2)) * (3 + sqrt(2)) ^ n + (1 - 3 * sqrt(2)) * (3 - sqrt(2)) ^ n) / 2. ● a(n) = 6 * a(n - 1) - 7 * a(n - 2) for n > 1; a(0) = 1, a(1) = 9. ●

► [A341757] 0,9,48,94,239,486,944,2393,4886,9444,23936,48886,94444,239393,488886,944444,2393936,4888886,9444444,23939393,48888886,94444444,239393936,488888886,944444444 ⋆ Indices of records in A341755 (= length of chain of (k,k + 1) sharing a digit with k + (k + 1), starting at n). ● a(3n + 1) = 9 * 10 ^ n + 4 * (10 ^ n - 1) / 9 (= 94...4 with n '4's), and ● a(3n + 3) = 48...86 with n '8's, fo r n >= 1. ●

► [A286437] 0,9,48,153,372,765,1404,2373,3768,5697,8280,11649,15948,21333,27972,36045,45744,57273,70848,86697,105060,126189,150348,177813,208872 ⋆ Number of ways to tile an n X n X n triangular area with two 2 X 2 X 2 triangular til es and an appropriate number (= n ^ 2 - 8) of 1 X 1 X 1 tiles. ● a(n) = (n ^ 4 - 6 * n ^ 3 + 5 * n ^ 2 + 30 * n - 54) / 2, n>=3. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>7. ●

► [A073979] 0,0,9,48,180,972,7056,48384,297432,1762560,10349856,60466176,356638464,2139830784,12958657344,78399995904,472093588224,2832129868032,16960580969472,101565116448768,608764662139392,3652526115938304,21926115464435712,131621703842267136 ⋆ Number of strings of length n over Z _ 6 with tra ce 1 and subtrace 2. ● a(n; t, s) = a(n - 1; t, s) + a(n - 1; t + 5, s + 5t + 1) + a (n - 1; t + 4, s + 4t + 4) + a(n - 1; t + 3, s + 3t + 3) + a(n - 1; t + 2, s + 2t + 2) + a(n - 1; t + 1, s + t + 1) where t is the trace and s is the subtrace. ●

► [A055582] 1,9,48,198,699,2223,6562,18324,49029,126837,319332,786258,1900351,4521771,10616598,24641280,56622825,128974545,291503800,654311070,1459617411,3238002279,7147093578,15703473708,34359737869 ⋆ Sixth column of triangl e A055252. ● a(n)= (n ^ 2 - 3 * n + 8) * (2 ^ (n + 3) - 1) / 2 - 9 * (n + 3). [_ Yahia Kahloune _ , Aug 11 2013] ●

► [A264273] 9,48,256,1280,6400,32000,160000,800000,4000000,20000000,100000000,500000000,2500000000,12500000000,62500000000,312500000000,1562500000000,7812500000000,39062500000000,195312500000000,976562500000000 ⋆ Number of (2 + 1) X (n + 1) arrays of permutations of 0..n * 3 + 2 with each element h aving index change +- (.,.) 0,0 1,0 or 1,2. ● a(n) = 256 * 5 ^ (n - 3) for n>2. ●

► [A226751] 1,1,9,48,289,1761,10932,68664,435201,2777763,17829489,114968052,744178716,4832624044,31469746632,205422018288,1343734578561,8806130111847,57805893969531,380013533789928,2501507255441049,16486378106441697,108773240389894056 ⋆ G.f.: 1 / (1 + 6 * x * G(x) - 7 * x * G(x) ^ 2), where G(x) = 1 + x * G(x) ^ 3 is the g.f. of A001764. ● a(n) = Sum _{ k=0..n } C(2 * k, n - k) * C(3 * n - 2 * k, k). ● a(n) = Sum _{ k=0..n } C(n + 2 * k, n - k) * C(2 * n - 2 * k, k). ● a(n) = Sum _{ k=0..n } C(2 * n + 2 * k, n - k) * C(n - 2 * k, k). ● a(n) = Sum _{ k=0..n } C(3 * n + 2 * k, n - k) * C(- 2 * k, k). ●

► [A028375] 1,9,49,81,121,169,289,361,441,529,729,841,961,1089,1369,1521,1681,1849,2209,2401,2601,2809,3249,3481,3721 ⋆ Squares of (odd numbers not divis ible by 5). ● a(n) = a(n - 1) + 2 * a(n - 4) - 2 * a(n - 5) - a(n - 8) + a(n - 9). - _ R. J. Mathar _ , Sep 22 2009 ●

► [A016838] 9,49,121,225,361,529,729,961,1225,1521,1849,2209,2601,3025,3481,3969,4489,5041,5625,6241,6889,7569,8281,9025,9801 ⋆ a(n) = (4n + 3) ^ 2. ● a(n + 1) = a(n) + 16 + 8 * sqrt(a(n)). ● a(n + 1) = 2 * a(n) - a(n - 1) + 32 = 3 * a(n) - 3 * a(n - 1) + a(n - 2). ● a(n - 1) * a(n + 1) = (a(n) - 16) ^ 2; a(n + 1) - a(n - 1) = 16 * sqrt(a(n)). ●

► [A014730] 1,9,49,121,841,2209,15129,39601,271441,710649,4870849,12752041,87403801,228826129,1568397609,4106118241,28143753121,73681302249,505019158609,1322157322201,9062201101801,23725150497409,162614600673849,425730551631121,2918000611027441 ⋆ Squares of odd Lucas numbers. ● a(n) = 17 * a(n - 2) + 17 * a(n - 4) - a(n - 6). - _ R. J. Mathar _ , Feb 10 2012 ●

► [A212503] 0,1,9,49,144,361,729,1369,2304,3721,5625,8281,11664,16129,21609,28561,36864,47089,59049,73441,90000,109561,131769,157609,186624 ⋆ Number of (w,x,y,z) with all terms in { 1,...,n } and w<2x and y<2z. ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 6 * a(n - 3) + 6 * a(n - 5) - 2 * a(n - 6) - 2 * a(n - 7) + a(n - 8). ●

► [A273374] 9,49,169,289,529,729,1089,1369,1849,2209,2809,3249,3969,4489,5329,5929,6889,7569,8649,9409,10609,11449,12769,13689,15129 ⋆ Squares ending in digit 9. ● a(n) = 6 + (50 * (n - 1) * n - 5 * (2 * n - 1) * (- 1) ^ n + 1) / 2. ●

► [A058031] 1,1,9,49,169,441,961,1849,3249,5329,8281,12321,17689,24649,33489,44521,58081,74529,94249,117649,145161,177241,214369,257049,305809 ⋆ a(n) = n ^ 4 - 2 * n ^ 3 + 3 * n ^ 2 - 2 * n + 1, the Alexander polynomial for reef an d granny knots. ● a(n) = (n ^ 2 - n + 1) ^ 2. - _ Carmine Suriano _ , Feb 16 2012 ● a(n) = (n - 2) * (n - 1) * n * (n + 1) + (2 * n - 1) ^ 2. - _ Charlie Marion _ , Apr 11 2013 ● a(n) = (n * (n - 1)) ^ 2 + (n - 1) ^ 2 + n ^ 2, sum of three sq uares. - _ Carmine Suriano _ , Jun 16 2014 ● a(n) = (n - 1) ^ 4 + 2 * (n - 1) ^ 3 + 3 * (n - 1) ^ 2 + 2 * (n - 1) + 1. - _ Bruce J. Nicholson _ , Apr 07 2017 ●

► [A228212] 9,49,199,665,2059,6305,19171,58025,175099,527345,1586131,4766585,14316139,42981185,129009091,387158345,1161737179,3485735825,10458256051,31376865305,94134790219,282412759265,847255055011,2541798719465 ⋆ Number of second differences of arrays of length n + 2 of numbers in 0..2. ● a(n) = 3 ^ (2 + n) - 2 ^ (2 + n) for n>3. ●

► [A027608] 1,9,49,209,769,2561,7937,23297,65537,178177,471041,1216513,3080193,7667713,18808833,45547521,109051905,258473985,607125505,1414529025,3271557121,7516192769,17163091969 ⋆ Expansion of 1 / ((1 - x) * (1 - 2 * x) ^ 4). ● a(n - 1) = 1 + (n - 1) * 2 ^ (n + 1) + ((n ^ 3 - 7 * n + 6) * 2 ^ (n - 1)) / 3, n >= 1. - Roger Voles, Dec 07 2004, index corrected by _ R. J. Mathar _ , Mar 14 2011 ● a(n) = 1 + n * 2 ^ (n + 2) + (((n + 1) ^ 3 - 7 * (n + 1) + 6) * 2 ^ n) / 3 = (n / 3) * (n ^ 2 + 3 * n + 8) * 2 ^ n + 1, n >= 0. - _ Daniel Forgues _ , Nov 01 2012 ●

► [A060867] 1,9,49,225,961,3969,16129,65025,261121,1046529,4190209,16769025,67092481,268402689,1073676289,4294836225,17179607041,68718952449,274876858369,1099509530625,4398042316801,17592177655809,70368727400449,281474943156225,1125899839733761 ⋆ a(n) = (2 ^ n - 1) ^ 2. ● a(n) = sum _{ j=1..n } sum _{ k=1..n } binomial(n + j,n - k). - _ Yalcin Aktar _ , Dec 28 2011 ●

► [A192814] 1,1,1,9,49,225,1041,4873,22817,106753,499425,2336585,10931921,51145825,239289457,1119533257,5237818689,24505519873,114650876097,536402551689,2509598769265,11741342323937,54932733173713,257006830281609 ⋆ Consta nt term in the reduction of the polynomial (2 * x + 1) ^ n by x ^ 3 - > x ^ 2 + x + 1. See Comments. ● a(n) = 5 * a(n - 1) - 3 * a(n - 2) + 7 * a(n - 3). ●

► [A081655] 1,9,49,249,1249,6249,31249,156249,781249,3906249,19531249,97656249,488281249,2441406249,12207031249,61035156249,305175781249,1525878906249,7629394531249,38146972656249,190734863281249 ⋆ 2 * 5 ^ n - 1. ● a(n) = 5 * a(n - 1) + 4, with a(0)=1. - _ Vincenzo Librandi _ , Aug 01 2010 ●

► [A123270] 1,1,9,49,281,1601,9129,52049,296761,1692001,9647049,55003249,313604441,1788035201,10194593769,58125109649,331403923321,1889520055201,10773215969289,61424160067249,350213664213401,1996764961336001 ⋆ a(0)=1, a(1) =1, a(n) = 5 * a(n - 1) + 4 * a(n - 2). ● a(n) = (1 / 2) * (5 / 2 - (1 / 2) * sqrt(41)) ^ n - (3 / 82) * sqrt(41) * (5 / 2 + (1 / 2) * sqrt(41)) ^ n + (3 / 82) * sqrt (41) * (5 / 2 - (1 / 2) * sqrt(41)) ^ n + (1 / 2) * (5 / 2 + (1 / 2) * sqrt(41)) ^ n , with n >= 0. - _ Paolo P. Lava _ , Jul 07 2008 ●

► [A114040] 1,9,49,281,1633,9513,55441,323129,1883329,10976841,63977713,372889433,2173358881,12667263849,73830224209,430314081401,2508054264193,14618011503753,85200014758321,496582077046169,2894292447518689,16869172608065961,98320743200877073 ⋆ a(0) = 1, a(1) = 9, a(n) = 6 * a(n - 1) - a(n - 2) - 4. ● a(n)=1 - sqrt(2) * [3 - 2 * sqrt(2)] ^ n + [3 + 2 * sqrt(2)] ^ n * sqrt(2), with n>=0 - _ Paolo P. Lava _ , Jun 25 2008 ●

► [A090390] 1,1,9,49,289,1681,9801,57121,332929,1940449,11309769,65918161,384199201,2239277041,13051463049,76069501249,443365544449,2584123765441,15061377048201,87784138523761,511643454094369,2982076586042449,17380816062160329,101302819786919521,590436102659356801 ⋆ Repeatedly multiply (1,0,0) b y ([1,2,2],[2,1,2],[2,2,3]); sequence gives leading entry. ● a(n) = (((1 + sqrt(2)) ^ (2 * n) + (1 - sqrt(2)) ^ (2 * n)) + 2 * (- 1) ^ n) / 4 - Lambert Klasen (lambert.klasen(AT)gmx.net), Oct 09 2005 ● a(n) = 5 * a(n - 1) + 5 * a(n - 2) - a(n - 3), with a(0)=1, a(1)=1, a(2)=9. - _ Harvey P. Dale _ , May 20 2012 ●

► [A199411] 9,49,289,1729,10369,62209,373249,2239489,13436929,80621569,483729409,2902376449,17414258689,104485552129,626913312769,3761479876609,22568879259649,135413275557889,812479653347329,4874877920083969,29249267520503809 ⋆ 8 * 6 ^ n + 1. ● a(n) = 6 * a(n - 1) - 5. ● a(n) = 7 * a(n - 1) - 6 * a(n - 2). ●

► [A286810] 1,9,49,324,2209,15129,103684,710649,4870849,33385284,228826129,1568397609,10749957124,73681302249,505019158609,3461452808004,23725150497409,162614600673849,1114577054219524,7639424778862809,52361396397820129,358890350005878084,2459871053643326449,16860207025497407049 ⋆ Number of non - attacking bishop positions on a cylindrical 2 X 2n chessboard. ● a(n) = 8 * a(n - 1) - 8 * a(n - 2) + a(n - 3) for n>3. - _ Colin Barker _ , May 21 2017 ●

► [A066558] 9,49,333,2499,19999,166666,1428571,12499999,111111111,999999999,9090909090,83333333333,769230769230,7142857142857,66666666666666,624999999999999,5882352941176470,55555555555555555,526315789473684210 ⋆ a(n) = A066557(n) / n. ● a(n) = floor((10 ^ n - 1) / n). ●

► [A168597] 1,1,9,49,361,2601,19881,154449,1225449,9853321,80156209,658076409,5444816521,45343869481,379735715529,3195538786449,27004932177129,229066136374761,1949470542590481,16640188083903609,142415188146838161 ⋆ Squar es of the central trinomial coefficients (A002426). ● a(n) = (- 1) ^ n * hyperge om([1 / 2, - n],[1],4) * hypergeom([(1 - n) / 2, - n / 2],[1],4). - _ Peter Luschny _ , Nov 10 2014 ● a(n) = Sum _{ k = 0..n } (- 3) ^ (n - k) * binomial(2 * k,k) * binomial(n,k) * binomial(n + k,k). ●

► [A169724] 9,49,361,3025,26569,237169,2128681,19140625,172213129,1549760689,13947373801,125524947025,1129720271689,10167469690609,91507188951721,823564585774225,7412080927594249,66708727315226929,600378542737678441,5403406875341014225 ⋆ (2 * 3 ^ (n - 1) + 1) ^ 2. ● a(n)= + 13 * a(n - 1) - 39 * a(n - 2) + 27 * a(n - 3). G.f.: x * (- 9 + 68 * x - 75 * x ^ 2) / ((x - 1) * (3 * x - 1) * (9 * x - 1)). [_ R. J. Mathar _ , Apr 26 2010] ●

► [A084367] 0,9,50,147,324,605,1014,1575,2312,3249,4410,5819,7500,9477,11774,14415,17424,20825,24642,28899,33620,38829,44550,50807,57624 ⋆ a(n) = n * (2

* n + 1) ^ 2. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Vincenzo Librandi _ , Jul 04 2012 ●

▶ [A006974] 1,9,50,220,840,2912,9408,28800,84480,239360,658944,1770496,4659200,12042240,30638080,76873728,190513152,466944000,1133117440,2724986880,6499598336,15386804224,36175872000,84515225600,196293427200 ★ Coefficients of Chebyshev T polynomials: a(n) = A053120(n + 8, n), n >= 0. ● a(n) = Sum _{ k=0..floor((n + 8) / 2) } C(n + 8, 2k) * C(k, 4). - _ Paul Barry _ , May 15 2003 ● a(n) = 2 ^ (n - 3) * binomial(n + 3, 3) * (n + 8). - _ Brad Clardy _ , Mar 08 2012 [See a comment in A053120 on subdiagonals. - _ Wolfdieter Lang _ , Jan 03 2020] ●

▶ [A222993] 9,50,222,867,3123,10660,35064,112373,353517,1097430,3374226,10302919,31301991,94757960,286108908,862258905,2595165345,7803321850,23447714310,70422834731,211436276379,634661150700,1904721649632,5715708452797 ★ Number of n X 2 0..2 arrays with successive rows and columns fitting to straight lines with nondecreasing slope, with a single point array taken as having zero slope ● a(n) = (- 13 - 2 ^ (6 + n) + 3 ^ (4 + n) - 2 * (1 + 2 ^ (4 + n)) * n) / 4 . ●

▶ [A171480] 1,9,50,232,996,4124,16780,67692,271916,1089964,4364460,17467052,69886636,279583404,1118407340,4473776812,17895402156,71582198444,286329973420,1145322252972,4581293730476,18325184359084,73300756310700 ★ a(n) = 6 * a(n - 1) - 8 * a(n - 2) + 4 for n > 1; a(0) = 1, a(1) = 9. ● a(n) = (25 * 4 ^ n - 27 * 2 ^ n + 8) / 6. ●

▶ [A257589] 1,9,50,245,1134,5082,22308,96525,413270,1755182,7407036,31097794,130007500,541574100,2249204040,9316746045,38504502630,158814867750,653887380300,2688007311990,11034286426020,45238127719980,185252191371000,757818686552850,3097059857724924 ★ a(n) = (2n + 1) ^ 2 * Catalan(n). ● a(n) = (n + 1 / 2) * (2 * n + 2)! / (n + 1)! ^ 2. - _ Peter Luschny _ , Feb 15 2023 ●

▶ [A330805] 0,9,51,166,410,855,1589,2716,4356,6645,9735,13794,19006,25571,33705,43640,55624,69921,86811,106590,129570,156079,186461,221076,260300 ★ Number of squares and rectangles in the interior of the square with vertices (n,0), (0,n), (- n,0) and (0, - n) in a square (x,y) - grid. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ● a(n) = n * (n + 1) * (4 * n ^ 2 + 12 * n + 11) / 6. ●

▶ [A054549] 1,9,51,219,786,2466,6974,18126,43929,100321,217683,451707,901128,1735752,3239928,5878328,10393902,17950878,30340682,50273658,81787476,130811124,205935756,319456044,488764246 ★ Number of symmetric nonnegative integer 9 X 9 matrices with sum of elements equal to 4 * n, under action of dihedral group D _ 4. ● a(n) = ((85135050 * (256719 + 5425 * (- 1) ^ n) + 1890 * (30592018355 + 141137997 * (- 1) ^ n) * n + 9 * (7020005494399 + 6456074625 * (- 1) ^ n) * n ^ 2 + 15288 * (2534162507 + 393525 * (- 1) ^ n) * n ^ 3 + 455 * (33274853083 + 654885 * (- 1) ^ n) * n ^ 4 + 126126 * (31995443 + 45 * (- 1) ^ n) * n ^ 5 + 763179408992 * n ^ 6 + 104737240608 * n ^ 7 + 10538322080 * n ^ 8 + 777020244 * n ^ 9 + 41479438 * n ^ 10 + 1559376 * n ^ 11 + 39130 * n ^ 12 + 588 * n ^ 13 + 4 * n ^ 14)) / 22317642547200. - _ Colin Barker _ , Jan 15 2017 ●

▶ [A220236] 9,51,231,975,3999,16191,65151,261375,1047039,4191231,16771071,67096575,268410879,1073692671,4294868991,17179672575,68719083519,274877120511,1099510054911,4398043365375,17592179752959,70368731594751,281474951544831,1125899856510975 ★ Binary palindromic numbers with only two 0 bits, both in the middle. ● a(n) = 2 ^ (2 * n + 2) - 2 ^ (n + 1) - 2 ^ n - 1. ● a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3). G.f.: 3 * x * (4 * x - 3) / ((x - 1) * (2 * x - 1) * (4 * x - 1)). - _ Colin Barker _ , May 31 2013 ●

▶ [A345954] 0,0,0,1,9,51,233,939,3489,12259,41385,135675,435185,1373139,4279161,13210219,40490817,123438531,374772041,1134343131,3425442705,10326135475,31088506905,93507741771,281053804769 ★ a(n) is the number of ternary strings of length n with at least three 0's. ● a(n) = 3 ^ n - (2 ^ (n - 3)) * (n ^ 2 + 3 * n + 8). ●

▶ [A246178] 1,9,51,234,951,3573,12707,43398,143682,464148,1469778,4578102,14063653,42695127,128301453,382144446,1129360689,3314619171,9668400839,28045947996,80949547380,232589050920,665532883380,1897176603420,5389368930505 ★ Expansion of 1 / (1 - 3 * x + x ^ 2) ^ 3. ● a(n) = (2 * (25 + 39 * n + 20 * n ^ 2) * F(2 * n + 1) + (38 + 51 * n + 25 * n ^ 2) * F(2 * n)) / 50, where F = A000045. - _ Emanuele Munarini _ , Mar 08 2018 ● a(n) = 9 * a(n - 1) - 30 * a(n - 2) + 45 * a(n - 3) - 30 * a(n - 4) + 9 * a(n - 5) - a(n - 6). - _ Wesley Ivan Hurt _ , Sep 30 2020 ●

▶ [A213164] 1,9,51,235,966,3702,13546,47994,166095,564679,1893285,6277677,20626588,67260540,217924068,702199684,2251881645,7191492885,22882022695,72568700415,229473998466,723725687314,2277088137966,7148997642270,22400192612251 ★ Sequence of coefficients of x in marked mesh pattern generating function Q _{ n,132 }^ (4,0, - ,0)(x). ● a(n) = ((2 * n - 11) * 3 ^ (n - 2) + 2 * n ^ 2 - 2 * n + 3) / 16 ●

▶ [A155617] 1,9,51,279,1551,8799,50751,296319,1745151,10339839,61514751,366991359,2193559551,13127802879,78632599551,471258726399,2825404874751,16943839313919,101628676145151,609634617917439,3657257951690751 ★ 6 ^ n + 4 ^ n - 1. ● a(n) = 10 * a(n - 1) - 24 * a(n - 2) - 15, n>1 - _ Gary Detlefs _ , Jun 21 2010 ● a(n) = 11 * a(n - 1) - 34 * a(n - 2) + 24 * a(n - 3). - _ Vincenzo Librandi _ , Feb 16 2013 ●

▶ [A126477] 1,9,51,301,1787,10619,63111,375091,2229307,13249619,78747531,468026571,2781660187,16532466059,98258743211,583989138891,3470869901227,20628701920939,122604233247851,728683659684651 ★ Number of base 9 n - digit numbers with adjacent digits differing by three or less. ● a(n) = 7 * a(n - 1) - 6 * a(n - 2) - 2 * a(n - 3) + 2 * a(n - 4) for n>4. ●

▶ [A275861] 1,1,9,51,305,1813,10784,64144,381543,2269503,13499513,80298135,477631347,2841058559,16899254596,100520563016,597918892325,3556555903317,21155193548465,125835844069155,748499871500621,4452245397810113,26482955892270832 ★ a(n) = floor(c * s * a(n - 1)) + floor(d * r * a(n - 2)), where r = 2 + sqrt(5), s = r / (r - 1), c = 4, d = 1, a(0) = 1, a(1) = 1. ● a(n) = floor(c * s * a(n - 1)) + floor(d * r * a(n - 2)), where r = 2 + sqrt(5), s = r / (r - 1), c = 4, d = 1, a(0) = 1, a(1) = 1. ●

▶ [A210054] 9,51,323,2187,15435,111659,819243,6058155,44991659,334914219,2496201387,18617371307,138903833259,1036559854251,7736058194603,57739004914347,430954921634475,3216631813810859,24009028665518763,179204877435185835 ★ Number of (n + 1) X 2 0..3 arrays with every 2 X 2 subblock having one, two or four distinct values, and new values 0..3 introduced in row major order. ● a(n) = (1 / 3) + 4 ^ n - (1 / 6) * (4 - 2 * sqrt(3)) ^ n * (- 2 + sqrt(3)) + (1 / 3) * 2 ^ (- 1 + n) * (2 + sqrt(3)) ^ (1 + n). ●

▶ [A181161] 1,1,9,51,1275,8415,115005,805035,45886995,331406075,4838528695,35629165845,1056998586735,7886835608715,118302534130725,891212423784795,1078367032779601 95,818290277815109715 ★ Numerator in abs(binomial(- 1 / 8,n)). ● a(n) = 2 ^ (e _ 2((2 * n)!) - n) / n! * Product[8k + 1, { k,0,n - 1 }] where e e _ 2((2n)!) is the highest power of 2 that divides (2 * n)! (sequence A005187) ●

▶ [A163941] 1,9,52,246,1039,4083,15274,55152,193957,668397,2266816,7589418,25143355,82571751,269173078,871958244,2809322833,9008574945,28768068460,91532284830,290283189991,917912770779,2894936303362 ★ Fourth right hand column of triangle A163940. ● a(n) = (1 / 4) * (2 ^ (n + 5) + (2 * n - 3) * 3 ^ (n + 2) - 1). ● a(n) = 9 * a(n - 1) - 29 * a(n - 2) + 39 * a(n - 3) - 18 * a(n - 4). ●

▶ [A292488] 1,9,52,261,1323,6814,35077,180261,926348,4761289,24472527,125783886,646502873,3322895889,17079026852,87782799261,451186103523,2319006747614,11919233055677,61262485125261,314876977751548,1618404981969089,8318279426249127 ★ p - INVERT of the odd positive integers, where p(S) = 1 - S - 5 S ^ 2. ● a(n) = 5 * a(n - 1) - 2 * a(n - 2) + 13 * a(n - 3) + 5 * a(n - 4) for n > = 5. ●

▶ [A094793] 9,53,181,465,1001,1909,3333,5441,8425,12501,17909,24913,33801,44885,58501,75009,94793,118261,145845,178001,215209,257973,306821,362305,425001 ★ a(n) = (1 / n!) * A001688(n). ● a(n) = n ^ 4 + 6 * n ^ 3 + 17 * n ^ 2 + 20 * n + 9. ● a(n) = Sum _{ i=0..4 } (- 1) ^ i * binomial(4,i) * (n - i)! / (n - 4)!. - Fiona T. Brunk (fbrunk(AT)mcs.st - and.ac.uk), May 23 2006 ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Fung Lam _ , Apr 17 2014 ●

▶ [A005025] 9,53,260,1156,4845,19551,76912,297275,1134705,4292145,16128061,60304951,224660626,834641671,3094322026,11453607152,42344301686,156404021389,577291806894,2129654436910,7853149169635,28949515515376,106692395098433,393137817645838 ★ Random walks. ● a(n) = 9 * a(n - 1) - 28 * a(n - 2) + 35 * a(n - 3) - 15 * a(n - 4) + a(n - 5). (End) ● a(k) = Sum _{ j= - infinity..infinity } (binomial(9 + 2 * k, 11j + k - 2) - binomial(9 + 2 * k, 11j + k - 1)) (a finite sum). ●

▶ [A334977] 0,1,9,53,299,1692,9690,56221,330165,1959945,11745435,70974252,432019844,2646716264,16307880462,100996570221,628356589721,3925544432355,24616047166095,154886752443885,977595783524955,6187863825170160,39269844955755960,249819662230403148 ★ a(n) is the total number of down steps between the (n - 1) - th and n - th up steps in all 2 _ 1 - Dyck paths of length 3 * n. A 2 _ 1 - Dyck path is a lattice path with steps (1, 2), (1, - 1) that starts and ends at y = 0 and stays above the line y = - 1. ● a(0) = 0 and a(n) = 2 * binomial(3 * n + 5, n + 1) / (3 * n + 5) - 6 * binomial(3 * n + 2, n) / (3 * n + 2) for n > 0. ●

▶ [A038761] 1,9,53,309,1801,10497,61181,356589,2078353,12113529,70602821,411503397,2398417561,13979001969,81475594253,474874563549,2767771787041,16131756158697,94022765165141,548004834832149 ★ a(n) = 6 * a(n - 1) - a(n - 2), n >= 2, a(0)=1, a(1)=9. ● a(n) = { 9 * ([3 + 2 * sqrt(2)] ^ n - [3 - 2 * sqrt(2)] ^ n) - ([3 + 2 * sqrt(2)] ^ (n - 1) - [3 - 2 * sqrt(2)] ^ (n - 1)) }/ (4 * sqrt(2)). ● a(n) = third binomial transform of 1,6,8,48,64,384. - Al Hakanson (hawkuu(AT)gmail.com), Aug 15 2009 ● a(n) = irrational part of z(n) = (3 + sqrt(2)) * (3 + 2 * sqrt(2)) ^ n, n >= 0. z(n) gives only part of the general positive solutions to the Pell equation x ^ 2 - 2 * y ^ 2 = 7). See the Nagell reference in A038762 on how to find z(n), and a comment above. - _ Wolfdieter Lang _ , Feb 05 2015 ●

▶ [A003698] 1,9,53,341,2169,13825,88093,561357,3577121,22794425,145252485,925589701,5898117961,37584466929,239498796653,1526153708861,9725080775409,61970950592425,394896331045333,2516390514947637 ★ Number of 2 - factors in C _ 4 X P _ n. ● a(n) = 6 * a(n - 1) + 3 * a(n - 2) - 4 * a(n - 3), n>3. ●

▶ [A152994] 0,9,54,135,252,405,594,819,1080,1377,1710,2079,2484,2925,3402,3915,4464,5049,5670,6327,7020,7749,8514,9315,10152 ★ Nine times hexagonal numbers: a(n) = 9 * n * (2 * n - 1). ● a(n) = a(n - 1) + 36 * n - 27 for n>0, a(0)=0. - _ Vincenzo Librandi _ , Dec 15 2010 ● a(n) = Sum _{ i = 2..10 } P(i,n), where P(i,m) = m * ((i - 2) * m - (i - 4)) / 2. - _ Bruno Berselli _ , Jul 04 2018 ●

▶ [A073974] 0,1,9,54,210,1008,6300,40824,262440,1679616,10478160,62868960,369476640,2176782336,12958657344,77751944064,468205557120,2820249944064,16957996040448,101758315958784,609954817881600,3656158440062976,21926486787222528,131558920723335168 ★ Number of strings of length n over Z _ 6 with trace 0 and subtrace 3. ● a(n; t, s) = a(n - 1; t, s) + a(n - 1; t + 5, s + 5t + 1) + a(n - 1; t + 4, s + 4t + 4) + a(n - 1; t + 3, s + 3t + 3) + a(n - 1; t + 2, s + 2t + 2) + a(n - 1; t + 1, s + t + 1) where t is the trace and s is the subtrace. ●

▶ [A223927] 9,54,218,698,1915,4690,10511,21919,43045,80334,143496,246728,410255,662242,1041133,1598477,2402305,3541126,5128614,7309062,10263683,14217842,19449307,26297611,35174621 ★ Number of n X 2 0..2 arrays with rows, columns and antidiagonals unimodal and diagonals nondecreasing. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>9. ●

▶ [A289254] 0,9,54,243,1008,4077,16362,65511,262116,1048545,4194270,16777179,67108824,268435413,1073741778,4294967247,17179869132,68719476681,274877906886,1099511627715,4398046511040,17592186044349,70368744177594,281474976710583,1125899906842548 ★ a(n) = 4 ^ n - 3 * n - 1. ● a(n) = 4 ^ n - 3 * n - 1. ● a(n) = 6 * a(n - 1) - 9 * a(n - 2) + 4 * a(n - 2). ●

▶ [A059597] 1,9,54,246,945,3177,9648,26928,70092,171820,399960,889560,1900380,3915900,7811280,15129168,28526562,52480242,94386908,166242780,287179794,487227906,812840976,1334891664,2160134700 ★ Ninth column (m=8) of convolution triangle A059594(n,m). ● a(2 * k)= binomial(k + 13, 13) * (8 * k ^ 4 + 190 * k ^ 3 + 1414 * k ^ 2 + 3488 * k + 1785) / (17 * 15 * 7); ● a(2 * k + 1)= b

inomial(k + 13, 13) * (8 * k ^ 4 + 258 * k ^ 3 + 2842 * k ^ 2 + 12192 * k + 16 065) / (17 * 15 * 7), k >= 0. ●

► [A027472] 1,9,54,270,1215,5103,20412,78732,295245,1082565,3897234,1381746 6,48361131,167403915,573956280,1951451352,6586148313,22082967873,7360989 2910,244074908070,805447196631,2646469360359,8661172452084,2824295364810 0,91789599356325 ⋆ Third convolution of the powers of 3 (A000244). ● a(n) = 3 ^ (n - 3) * binomial(n - 1, 2). ●

► [A276602] 0,9,54,315,1836,10701,62370,363519,2118744,12348945,71974926,41 9500611,2445028740,14250671829,83059002234,484103341575,2821561047216,164 45262941721,95850016603110,558654836676939,3256079003458524,189778191840 74205,110610836100986706 ⋆ Values of k such that k ^ 2 + 10 is a triangular nu mber (A000217). ● a(n) = (9 / (4 * sqrt(2)) * ((3 - 2 * sqrt(2)) * (3 + 2 * sqrt (2)) ^ n - (3 + 2 * sqrt(2)) * (3 - 2 * sqrt(2)) ^ n)). ● a(n) = 6 * a(n - 1) - a(n - 2) for n>2. ●

► [A016269] 1,9,55,285,1351,6069,26335,111645,465751,1921029,7859215,319642 05,129442951,522538389,2104469695,8460859965,33972448951,136276954149,546 269553775,2188563950925,8764714059751,35090233104309,140455067207455,562 102681589085,2249257981411351 ⋆ Number of monotone Boolean functions of n variables with 2 mincuts. Also number of Sperner systems with 2 blocks. ● a(n) = (2 ^ n) * (2 ^ n - 1) / 2 - 3 ^ n + 2 ^ n. ● a(n) = Sum _{ 0<=i,j,k,<=n, i + j + k=n } 2 ^ i * 3 ^ j * 4 ^ k. - _ Hieronymus Fischer _ , Jun 25 2007 ● a(n) = 2 ^ (n + 1) * (1 + 2 ^ (n + 2)) - 3 ^ (n + 2). - _ Hieronymus Fischer _ , Jun 25 2007 ● a(n) = 3 * StirlingS2(n + 1,4) + StirlingS2(n + 1,3). - _ Ross L a Haye _ , Jan 10 2008 ● a(n) = binomial(2 ^ n,2) - (3 ^ n - 2 ^ n). - _ Ross L a Haye _ , Jan 26 2016 ●

► [A362365] 1,9,55,322,1946,11664,69980,419912,2519416,15116544,90699280,54 4195552,3265173536,19591041024,117546246080,705277476992,4231664861056,25 389989167104,152339935002880,914039610015232,5484237660094976,3290542596 0566784,197432555763399680 ⋆ The sum of the coefficients of x ^ k in the expa nsion of (x + x ^ 2 + x ^ 3 + x ^ 4 + x ^ 5 + x ^ 6) ^ n with k divisible by 4. ● a(n) = (1 / 4) * 6 ^ n + (2 ^ (n / 2 - 1)) * cos(3 * Pi * n / 4). ● a(n) = (1 / 4) * (6 ^ n + (- 1 + i) ^ n + (- 1 - i) ^ n), where i is the imaginary unit. ● a(n) = 4 * a(n - 1) + 10 * a(n - 2) + 12 * a(n - 3). ●

► [A037578] 1,9,55,333,1999,11997,71983,431901,2591407,15548445,93290671,55 9744029,3358464175,20150785053,120904710319,725428261917,4352569571503,26 115417429021,156692504574127,940155027444765,5640930164668591 ⋆ Base 6 di gits are, in order, the first n terms of the periodic sequence with initial period 1 ,3. ● a(n):=5 * a(n - 1) + 6 * a(n - 2) + 4, a(0)=0, a(1)=1. [_ Zerinvary Lajos _ , Dec 14 2008] ● a(n)= 6 * a(n - 1) + a(n - 2) - 6 * a(n - 3). a(n) = 9 * 6 ^ n / 35 - 2 / 5 + (- 1) ^ n / 7. [_ R. J. Mathar _ , Oct 05 2009] ●

► [A362088] 1,1,9,55,369,2526,17577,123810,879921,6297643,45325764,32772047 1,2378598885,17319785588,126463925310,925620561780,6789081127137,49887667 836693,367189338574827,2706613194698783,19977334121704344,14762815069129 7100 ⋆ a(n) = Sum _{ k=0..n } (- 1) ^ k * binomial(- n,k) * binomial(3 * k,n - k). ● a(n) = Sum _{ k=0..n } binomial(n + k - 1,k) * binomial(3 * k,n - k). ● a(n) = [x ^ n] 1 / (1 - x * (1 + x) ^ 3) ^ n. ●

► [A242604] 0,9,56,195,504,1085,2064,3591,5840,9009,13320,19019,26376,35685,4 7264,61455,78624,99161,123480,152019,185240,223629,267696,317975,375024 ⋆ a (n) = (n - 1) * (n ^ 3 + 1) = n ^ 4 - n ^ 3 + n - 1, for n >= 1. ● a(n) = (n - 1) * (n ^ 3 + 1) = n ^ 4 - n ^ 3 + n - 1, n >= 1. ●

► [A172065] 1,9,56,297,1444,6656,29618,128603,548591,2309467,9624964,397998 13,163556776,668796712,2723729944,11055878188,44753742226,180746332690,72 8571706240,2932018571370,11783070278816,47297147250204 ⋆ Expansion of (2 / (3 * sqrt(1 - 4 * z) - 1 + 4 * z)) * ((1 - sqrt(1 - 4 * z)) / (2 * z)) ^ k with k=8. ● a(n) = Sum _{ j=0..n } (- 1) ^ j * binomial(2 * n + k - j, n - j), with k=8. ●

► [A002055] 1,9,56,300,1485,7007,32032,143208,629850,2735810,11767536,50220 040,212952285,898198875,3771484800,15775723920,65770848990,273420862110,1 133802618000,4691140763400,19371432850770,79850555673174 ⋆ Number of dia gonal dissections of a convex n - gon into n - 4 regions. ● a(n) = binomial(n - 3, 2) * binomial(2 * n - 6, n - 5) / (n - 4). ●

► [A064838] 0,1,9,57,210,585,1355,2769,5156,8945,14669,22985,34678,50681,7207 9,100129,136264,182113,239505,310489,397338,502569,628947,779505,957548 ⋆ a (n) = A064837(n) / 2. ● a(n) = 5 * a(n - 1) - 9 * a(n - 2) + 5 * a(n - 3) + 5 * a (n - 4) - 9 * a(n - 5) + 5 * a(n - 6) - a(n - 7) for n > 6. ●

► [A045720] 1,9,57,312,1578,7599,35401,161052,719790,3173090,13836426,5980 3104,256596276,1094249019,4642178601,19605872724,82483419846,34583904809 4,1445715336366,6027524015664,25070662980876,104056307673654 ⋆ 3 - fold con volution of A001700(n), n >= 0. ● a(n) = (n + 5) * binomial(2 * (n + 3), n + 3) / 4 - 3 * 2 ^ (2 * n + 3); ●

► [A014916] 1,9,57,313,1593,7737,36409,167481,757305,3378745,14913081,6524 4729,283348537,1222872633,5249404473,22429273657,95443717689,40468136300 1,1710351420985,7207909559865,30297653743161,127054676987449 ⋆ a(1)=1, a(n) = n * 4 ^ (n - 1) + a(n - 1). ● a(n) = (1 / 9) * (1 + 4 ^ n * (3 * n - 1)). - _ Paolo P. Lava _ , Jan 13 2009 ● a(1)=1, a(2)=9, a(n) = 8 * a(n - 1) - 16 * a(n - 2) + 1. - _ Vincenzo Librandi _ , Oct 23 2012 ●

► [A045635] 0,0,1,9,57,315,1629,8127,39718,191754,919035,4385799,20879100,99 276840,471848195,2242864575,10665998760,50757180840,241743946635,11524348 18755,5499250360025,26268118117731,125602004765391 ⋆ Catafusenes (see refer ences for precise definition). ● a(n) = (3 / (n + 1)) * Sum _{ m=0..n - 2 } C(n + 1,m) * C(2 * n - 2 * m + 2,n - m - 2). - _ Vladimir Kruchinin _ Oct 18 2022 ●

► [A080961] 1,9,57,321,1713,8889,45417,230001,1158753,5820009,29178777,1461 30081,731358993,3658920729,18300980937,91524036561,457677578433,228856007 9049,1144331695589 7,572181344614 41,286095321353073 ⋆ Fourth binomial tran sform of A010686 (period 2: repeat 1,5). ● a(n) = 5 * a(n - 1) + 4 * 3 ^ (n - 1). ● a(n) = 3 * 5 ^ n - 2 * 3 ^ n. ● a(n) = 8 * a(n - 1) - 15 * a(n - 2) for n > 1. - _ Wesley Ivan Hurt _ , Dec 08 2016 ●

► [A262490] 9,57,337,1969,11481,66921,390049,2273377,13250217,77227929,4501 17361,2623476241,15290740089,89120964297,519435045697,3027489309889,17645 500813641,102845515571961,599427592618129,3493720040136817,2036289264820 2777,118683635849079849 ⋆ The index of the first of two consecutive positive tr iangular numbers (A000217) the sum of which is equal to the sum of four conse cutive positive triangular numbers. ● a(n) = 7 * a(n - 1) - 7 * a(n - 2) + a(n - 3) for n>3. ● a(n) = - 1 + (1 - 1 / sqrt(2)) * (3 - 2 * sqrt(2)) ^ n + (1 + 1 / sqr t(2)) * (3 + 2 * sqrt(2)) ^ n. - _ Colin Barker _ , Mar 05 2016 ●

► [A180028] 1,9,57,369,2385,15417,99657,644193,4164129,26917353,173996505,1 124731089,7270376049,46996449561,303789825513,1963728301761,126937389271 05,82053620627913,530402941628793,3428578511656497 ⋆ Eight white queens a nd one red queen on a 3 X 3 chessboard. G.f.: (1 + 3 * x) / (1 - 6 * x - 3 * x ^ 2). ● a(n) = 6 * a(n - 1) + 3 * a(n - 2) with a(0) = 1 and a(1) = 9. ● a(n) = ((1 - A) * A ^ (- n - 1) + (1 - B) * B ^ (- n - 1)) / 4 with A=(- 1 + 2 * sqrt(3) / 3) and B=(- 1 - 2 * sqrt(3) / 3). ●

► [A155605] 1,9,57,369,2481,17049,118377,825729,5771361,40373289,282534297,1 977503889,13841818641,96890604729,678227855817,4747575858849,33232973616 321,232630643127369,1628413985330937,11398896347634609 ⋆ 7 ^ n + 3 ^ n - 1. ● a(n)=10 * a(n - 1) - 21 * a(n - 2) - 12 with a(0)=1, a(1)=9 - _ Vincenzo Libra ndi _ , Jul 21 2010 ● a(0)=1, a(1)=9, a(2)=57, a(n)=11 * a(n - 1) - 31 * a(n - 2) + 21 * a(n - 3). - _ Harvey P. Dale _ , Nov 09 2012 ●

► [A199485] 9,57,393,2745,19209,134457,941193,6588345,46118409,322828857,22 59801993,15818613945,110730297609,775112083257,5425784582793,37980492079 545,265863444556809,1861044111897657,13027308783283593,91191161482985145 ⋆ 8 * 7 ^ n + 1. ● a(n) = 7 * a(n - 1) - 6. ● a(n) = 8 * a(n - 1) - 7 * a(n - 2). ●

► [A102303] 1,9,57,401,2801,19609,137257,960801,6725601,47079209,329554457,2 306881201,16148168401,113037178809,791260251657,5538821761601,3877175233 1201,271402266318409,1899815864228857,13298711049602001,9309097734721400 1,651636841430498009 ⋆ a(n) = (1 / 6) * (7 ^ (n + 1) - 3 * (- 1) ^ n + 2). ● a(n) = Sum[7 ^ i, { i, 0, n }] + 1 - Mod[Sum[7 ^ i, { i, 0, n }], 2] ● a(n) = 7 * a(n - 1) + a(n - 2) - 7 * a(n - 3) for n > 2. ●

► [A099624] 0,0,1,9,58,318,1591,7503,33976,149436,643261,2724357,11395654,47 210154,194121811,793526571,3228811492,13090123272,52917410041,21343724614 5,859342367890,3455021317590,13875655896751,55677180731079 ⋆ a(n) = Sum _{ k=0..floor(n / 2) } C(n - k,k + 2) * 3 ^ (n - k - 2) * (4 / 3) ^ k. ● a(n) = 9 * a(n - 1) - 23 * a(n - 2) + 3 * a(n - 3) + 36 * a(n - 4). ●

► [A026377] 1,9,58,330,1770,9198,46928,236736,1185645,5909805,29362806,1455 70230,720606705,3563543025,17610412600,86989143480,429579843435,212109931 2195,10472653252550,51708363376950,255326054688320 ⋆ a(n) = number of int eger strings s(0),...,s(n) counted by array T in A026374 that have s(n)=4; also a (n) = T(2n,n - 2). ● a(n) = [t ^ (n + 2)](1 + 3t + t ^ 2) ^ n. ● a(n) = Sum _{ j=ceiling((n + 2) / 2)..n } (3 ^ (2j - n - 2) * binomial(n, j) * binomial(j, n + 2 - j)). (End) ● a(n) = Sum _{ k=0..n } binomial(n, k) * binomial(2k, k + 2). (En d) ●

► [A198847] 9,59,359,2159,12959,77759,466559,2799359,16796159,100776959,604 661759,3627970559,21767823359,130606940159,783641640959,4701849845759,282 11099074559,169266594447359,1015599566684159,6093597400104959,3656158440 0629759 ⋆ a(n) = 10 * 6 ^ n - 1. ● a(n) = 6 * a(n - 1) + 5. ● a(n) = 7 * a(n - 1) - 6 * a(n - 2), n > 1. ●

► [A118674] 0,9,60,93,140,429,620,893,2576,3689,5280,15089,21576,30849,8802 0,125829,179876,513093,733460,1048469,2990600,4274993,6111000,17430569,249 16560 ⋆ Nonnegative values x of solutions (x, y) to the Diophantine equation x ^ 2 + (x + 31) ^ 2 = y ^ 2. ● a(n) = 6 * a(n - 3) - a(n - 6) + 62 for n > 6; a(1) =0, a(2)=9, a(3)=60, a(4)=93, a(5)=140, a(6)=429. ●

► [A268972] 9,60,240,912,3312,11664,40176,136080,454896,1504656,4933872,160 61328,51963120,167226768,535692528,1709114256,5433452784,17218688400,5441 1055344,171498136464,539289320688,1692252695952,5299912289520 ⋆ Number o f 2 X n 0..2 arrays with some element plus some horizontally or antidiagonally a djacent neighbor totalling two not more than once. ● a(n) = 16 * 3 ^ (n - 3) * (4 * n + 3) for n>2. ●

► [A288962] 0,1,9,60,250,765,1911,4144,8100,14625,24805,39996,61854,92365,133 875,189120,261256,353889,471105,617500,798210,1018941,1285999,1606320,1987 500 ⋆ Number of 4 - cycles in the n X n rook graph. ● a(n) = n * binomial(n,2) * (n ^ 2 - 4 * n + 5) / 2. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 1 5 * a(n - 4) + 6 * a(n - 5) - a(n - 6). ●

► [A268965] 9,60,336,1728,8448,39936,184320,835584,3735552,16515072,7235174 4,314572800,1358954496,5838471168,24964497408,106300440576,450971566080,1 906965479424,8040178778112,33809982554112,141836999983104 ⋆ Number of n X 2 0..2 arrays with some element plus some horizontally or antidiagonally adja cent neighbor totalling two not more than once. ● a(n) = 4 ^ (n - 1) * (6 * n + 3). ●

► [A081904] 1,9,60,344,1794,8754,40636,181380,784251,3302451,13598280,54922 860,218131380,853586100,3296508840,12581531064,47510175861,177681098205,6 58665849636,2422018974096,8840103322374,32044237392726 ⋆ A sequence relat ed to binomial(n + 6, 6). ● a(n) = 3 ^ n * (n ^ 6 + 93 * n ^ 5 + 3055 * n ^ 4 + 44055 * n ^ 3 + 282424 * n ^ 2 + 720132 * n + 524880) / 524880. ●

► [A085373] 1,9,60,350,1890,9702,48048,231660,1093950,5080790,23279256,1054 62084,473227300,2106121500,9307051200,40873466520,178520875830,7759240681 50,3357800061000,14473885526100,62168784497820,266168518910580 ⋆ a(n) = b inomial(2n + 1, n + 1) * binomial(n + 2, 2). ● a(n - 1) = Sum _{ 1<=i1<=i2 <=...<=in<=n } (i1 + i2 + ... + in). ●

► [A241976] 0,9,60,357,2088,12177,70980,413709,2411280,14053977,81912588,47 7421557,2782616760,16218279009,94527057300,550944064797,3211137331488,187 15879924137,109084142213340,635788973355909,3705649697922120,21598109214 176817,125883005587138788 ⋆ Values of k such that k ^ 2 + (k + 3) ^ 2 is a squ are. ● a(n) = 7 * a(n - 1) - 7 * a(n - 2) + a(n - 3). ● a(n) = - 3 * (2 + (3 - 2 * s qrt(2)) ^ n * (1 + sqrt(2)) - (- 1 + sqrt(2)) * (3 + 2 * sqrt(2)) ^ n) / 4. - _ Co lin Barker _ , Apr 13 2017 ●

► [A082150] 0,0,1,9,60,360,2040,11088,58240,297216,1480320,7223040,3463680 0,163657728,763549696,3523645440,16107110400,73016672256,328570011648,146 8890021888,6528375193600,28862235279360,126993714118656 ⋆ A transform of C(n,2). ● a(n) = C(n, 2) * (2 ^ (n - 2) + 4 ^ (n - 2)) / 2. ● a(n) = 2 ^ (n - 4) * (2 ^ (n - 2) + 1) * (n - 1) * n. (End) ●

► [A030507] 9,61,243,732,1837,4056,8136,15149,26571,44374,71125,110094,165376,242014,346136,485103,667662,904109,1206463,1588650,2066688,2658897,3386099,4271843,5342629 ⋆ Graham - Sloane - type lower bound on the size of a ternary (n,3,7) constant - weight code. ● a(n) = ceiling (binomial (n, w) * 2 ^ w / (2 * n + 1)) for w = 7. ●

► [A172208] 1,9,61,260,927,2578,5965,12066,22135,37678,60457,92488,136043,193650,268093,362412,479903,624118,798865,1008208,1256467,1548218,1888293,2281780,2734023 ⋆ Number of ways to place 4 nonattacking bishops on a 4 X n board. ● a(n) = (32 * n ^ 4 - 336 * n ^ 3 + 1702 * n ^ 2 - 4701 * n + 5844) / 3, n >=9. ●

► [A005060] 0,1,9,61,369,2101,11529,61741,325089,1690981,8717049,44633821,227363409,1153594261,5835080169,29443836301,148292923329,745759583941,3745977788889,18798608421181,94267920012849 ⋆ a(n) = 5 ^ n - 4 ^ n. ● a(n) = 5 * a(n - 1) + 4 ^ (n - 1). - Xavier Acloque, Oct 20 2003 ● a(n) = 9 * a(n - 1) - 20 * a(n - 2), a(0)=0, a(1)=1. - _ Vincenzo Librandi _ , Jan 28 2011 ●

► [A190666] 1,9,61,377,2241,13073,75517,433905,2485825,14218905,81270333,464387817,2653649025,15167050785,86716873725,495998874593,2838240338817,16248650965289,93065296937533,533285164334169,3057236753252161,17534423944871729,100609937775369981 ⋆ Number of walks from (0,0) to (n + 3,n) which take steps from { E, N, NE } . ● a(n) = Sum _{ k=0..n } C(n,k) * C(n + k + 3, k + 3) = A113139 (n + 3,3). - _ Alois P. Heinz _ , Jun 01 2011 ● a(n) = (1 / 2 ^ (n + 1)) * Sum _{ k >= 3 } (1 / 2 ^ k) * binomial(n + k, k) * binomial(n + k, n + 3). ● a(n) = (- 1) ^ n * Sum _{ k = 0..n } (- 2) ^ k * binomial(n,k) * binomial(n + k + 3,k). ● a(n) = (- 1) ^ n * hypergeom([- n, n + 4], [1], 2). - _ Peter Luschny _ , Mar 02 2017 ●

► [A016200] 1,9,61,381,2317,13965,83917,503757,3023053,18139341,108838093,653032653,3918204109,23509241037,141055478989,846332939469,5077997767885,30467986869453,182807921741005,1096847531494605 ⋆ Expansion of 1 / ((1 - x)(1 - 2x)(1 - 6x)). ● a(n) = (9 * 6 ^ n - 5 * 2 ^ n + 1) / 5. - _ Bruno Berselli _ , Feb 09 2011 ● a(0)=1, a(n) = 6 * a(n - 1) + 2 ^ (n + 1) - 1. - _ Vincenzo Librandi _ , Feb 09 2011 ● a(n) = Sum _{ k=0..n } 2 ^ (n - 1 - k) * (3 ^ (n + 1 - k) - 1). - _ J. M. Bergot _ , Feb 06 2018 ●

► [A200674] 0,1,9,61,385,2365,14353,86605,521089,3130909,18798577,112830829,677103073,4062972733,24378899281,146276584333,877669071937,5266043129437,31596344870065,189578327500717,1137470739845281,6824826763594621,40948967555136529 ⋆ Eccentricity of Tower of Hanoi graph H _ n ^{ 3 } (divided by 3). ● a(n) = - 2 * 3 ^ (n - 2) + 14 * 6 ^ n / 45 - 1 / 5, n>0. - _ R. J. Mathar _ , Dec 13 2011 ●

► [A162769] 1,9,61,389,2441,15249,95141,593389,3700561,23077209,143911501,897442709,5596515161,34900251489,217640345141,1357219994749,8463716161441,52780309349289,329141597018461,2052549373305509 ⋆ a(n) = ((1 + sqrt(5)) * (4 + sqrt(5)) ^ n + (1 - sqrt(5)) * (4 - sqrt(5)) ^ n) / 2. ● a(n) = 8 * a(n - 1) - 11 * a(n - 2) for n > 1; a(0) = 1, a(1) = 9. ●

► [A126504] 1,9,61,429,3011,21141,148433,1042167,7317185,51374875,360709449,2532586341,17781606753,124846894103,876565722303,6154478019155,43211363078111,303392406838867,2130156189729353,14956094122197975 ⋆ Number of base 9 n - digit numbers with adjacent digits differing by four or less. ● a(n) = 7 * a(n - 1) + a(n - 2) - 6 * a(n - 3) + a(n - 5) for n>5. ●

► [A025014] 1,1,9,61,489,3951,32661,273127,2306025,19610233,167729959,1441383219,12434998005,107632809909,934263293679,8129320828911,70886845397481,619288973447049,5419332253680705,47494787636620701,416800775902696839 ⋆ Central "nonomial" coefficient: largest coefficient of (1 + x + ... + x ^ 8) ^ n . ● a(n + 4) + 8 * (4 * n + 19) * (5 * n + 19) * (5 * n + 14) * (5 * n + 9) * (2 * n + 9) * (4 * n + 17) * (4 * n + 13) * (4 * n + 9) * (5 * n + 18) * (n + 5) * a(n + 5) = 0. - _ Doron Zeilberger _ , Apr 02 2013. ●

► [A081574] 0,1,9,62,387,2305,13392,76733,436149,2467414,13919895,78398189,441105696,2480385673,13942462833,78354837710,440286745563,2473838793577,13899100976496,78088971710501,438717826841085 ⋆ Fourth binomial transform of Fibonacci numbers F(n). ● a(n) = 9 * a(n - 1) - 19 * a(n - 1), a(0)=0, a(1)=1. ● a(n) = ((sqrt(5) / 2 + 9 / 2) ^ n - (9 / 2 - sqrt(5) / 2) ^ n) / sqrt(5). ●

► [A084151] 0,0,1,9,62,390,2359,14007,82412,482652,2820061,16457397,95983370,559619970,3262267891,19015581699,110836005272,646014798840,3765295834489,21945889348257,127910427675542,745517838966462 ⋆ Binomial transform of a Pell convolution. ● a(n) = ((3 + sqrt(8)) ^ n + (3 - sqrt(8)) ^ n - 2 * 3 ^ n) / 16. ●

► [A346396] 0,1,9,62,390,2384,14680,93680,635824,4697664,38442112,351331584,3582715136,40476303360,501863078912,6767130867712,98464775493632,1536203429306368,25564684461735936,451816479967608832,8448863295040978944,166627401783086415872,3455980532191764676608 ⋆ Expansion of e.g.f. - log(1 - x) * exp(4 * x). ● a(n) = n! * Sum _{ k=0..n - 1 } 4 ^ k / ((n - k) * k!). ● a(0) = 0, a(1) = 1, a(n) = (n + 3) * a(n - 1) - 4 * (n - 1) * a(n - 2) + 4 ^ (n - 1). - _ Seichi Manyama _ , May 27 2022 ●

► [A269641] 9,63,221,567,1209,2279,3933,6351,9737,14319,20349,28103,37881,50007,64829,82719,104073,129311,158877,193239,232889,278343,330141,388847,455049 ⋆ Number of length - 4 0..n arrays with no repeated value differing from the previous repeated value by other than plus two or minus 1. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

► [A269410] 9,63,222,570,1215,2289,3948,6372,9765,14355,20394,28158,37947,50085,64920,82824,104193,129447,159030,193410,233079,278553,330372,389100,455325 ⋆ Number of length - 4 0..n arrays with no repeated value greater than or equal to the previous repeated value. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

► [A073378] 1,9,63,345,1665,7227,29073,109791,394020,1354210,4486482,14397318,44932446,136817370,407566350,1190446866,3415935699,9645169743,26836557825,73670997015,199751003991,535449185469 ⋆ Eighth convolution of A001045(n + 1) (generalized (1,2) - Fibonacci), n>=0, with itself. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n - k + 8, 8) * binomial(n - k, k) * 2 ^ k. ●

► [A111997] 1,9,63,399,2403,14067,80949,460845,2605590,14666470,82320714,461238282,2581644378,14442658074,80785970838,451934259654,2528977211775,14157983986839,79302044283297,444448115168049,2492468172937125 ⋆ Ninth convolution of Schroeder's (second problem) numbers A001003(n), n>=0. ● a(n) = (9 / n) * Sum _{ k=1,..,n } binomial(n,k) * binomial(n + k + 8,k - 1). ● a(n) = 9 * hypergeom([1 - n, n + 10], [2], - 1), n>=1, a(0)=1. ●

► [A016137] 1,9,63,405,2511,15309,92583,557685,3352671,20135709,120873303,725416965,4353033231,26119793709,156723545223,940355620245,5642176768191,33853189749309,203119525916343,1218718317759525 ⋆ Expansion of 1 / ((1 - 3x)(1 - 6x)). ● a(n) = - 3 ^ n + 2 * 6 ^ n. ● a(n) = 9 * a(n - 1) - 18 * a(n - 2), n >= 2. - _ Vincenzo Librandi _ , Mar 14 2011 ●

► [A037691] 1,9,63,444,3109,21765,152355,1066488,7465417,52257921,365805447,2560638132,17924466925,125471268477,878298879339,6148092155376,43036645087633,301256515613433,2108795609294031,14761569265058220,103330984855407541,723316893987852789 ⋆ Base - 7 digits are, in order, the first n terms of the periodic sequence with initial period 1,2,0,3. ● a(n) = 7 * a(n - 1) + a(n - 4) - 7 * a(n - 5). ● a(n) = 1 / 200 * (25 * (- 1) ^ n - (6 - 8 * i) * (- i) ^ n - (6 + 8 * i) * i ^ n + 37 * 7 ^ n - 50) where i=sqrt(- 1). ●

► [A206816] 1,9,63,447,3447,29367,276327,2856807,32250087,395130087,5225062887,74201293287,1126567808487,18213512883687,312440245683687,5668674457011687,108462341176755687,2182831421832627687,46096712669420979687 ⋆ Sum _{ 0<j<n } (n! - j!). ● a(n) = n * n! - p(n), where p(n) is the n - th partial sum of (j!). ● a(n) = t(n) - t(n - 1), where t = A206817. ●

► [A165510] 1,9,63,585,3951,38169,246303,2501865,15231951,164902329,931798143,10941169545,56148296751,731615910489,3311061455583,49365284099625,189031140702351,3365269314470649,10244972816098623,232054417825788105 ⋆ a(0)=1, a(1)=9, a(n) = 72 * a(n - 2) - a(n - 1). ● a(n) = (18 * 8 ^ n - (- 9) ^ n) / 17. - _ Klaus Brockhaus _ , Sep 26 2009 ●

► [A016886] 9,64,169,324,529,784,1089,1444,1849,2304,2809,3364,3969,4624,5329,6084,6889,7744,8649,9604,10609,11664,12769,13924,15129 ⋆ a(n) = (5 * n + 3) ^ 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>2. ●

► [A099761] 0,9,64,225,576,1225,2304,3969,6400,9801,14400,20449,28224,38025,50176,65025,82944,104329,129600,159201,193600,233289,278784,330625,389376 ⋆ a(n) = (n * (n + 2)) ^ 2. ● a(n) = (determinant [T(n - 1) T(n) ; T(n + 1) T(n + 2)]) ^ 2 where T is A000217. - _ J. M. Bergot _ , May 17 2012 and _ Bernard Schott _ , Aug 06 2019 ●

► [A181888] 0,0,9,64,259,784,1974,4368,8778,16368,28743,48048,77077,119392,179452,262752,375972,527136,725781,983136,1312311,1728496,2249170,2894320,3686670 ⋆ Second column of triangle in A182971. ● a(1)=0, a(2)=0, a(3)=0, a(4)=9, a(5)=64, a(6)=259, a(7)=784, a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). - _ Harvey P. Dale _ , Jul 03 2013 ●

► [A000846] 0,1,9,64,425,2751,17640,112848,722601,4638205,29860259,192831288,1248973544,8112024844,52820112480,344712308064,2254247833257,14768735480505,96917273443305,636948624057900,4191706659276675,27618897144488595,182181063882796680 ⋆ a(n) = C(3n,n) - C(2n,n). ● a(n) = Sum _{ k = 1..n } binomial(n,k) * binomial(2 * n,n - k). - _ Vladimir Kruchinin _ , Nov 12 2014 ●

► [A049684] 0,1,9,64,441,3025,20736,142129,974169,6677056,45765225,313679521,2149991424,14736260449,101003831721,692290561600,4745030099481,32522920134769,222915410843904,1527884955772561,10472279279564025 ⋆ a(n) = Fibonacci(2n) ^ 2. ● a(n) = 8 * a(n - 1) - 8 * a(n - 2) + a(n - 3) with n>2, a(0)=0, a(1)=1, a(2)=9. ● a(n) = 1 / 5 * (- 2 + ((7 + sqrt(45)) / 2) ^ n + ((7 - sqrt(45)) / 2) ^ n). - _ Ralf Stephan _ , Apr 14 2004 ● a(n) = F(2 * n - 1) * F(2 * n + 1) - 1. - _ Bruno Berselli _ , Feb 12 2015 ● a(n) = Sum _{ i=1..n } F(4 * i - 2) for n>0. [_ Bruno Berselli _ , Aug 25 2015] ●

► [A037484] 1,9,64,450,3151,22059,154414,1080900,7566301,52964109,370748764,2595241350,18166689451,127166826159,890167783114,6231174481800,43618221372601,305327549608209,2137292847257464 ⋆ Base 7 digits are, in order, the first n terms of the periodic sequence with initial period 1,2. ● a(n) = 7a(n - 1) + a(n - 2) - 7a(n - 3). ● a(n) = (- 1) ^ n / 16 - 1 / 4 + 3 * 7 ^ n / 16. G.f. x * (1 + 2 * x) / ((x - 1) * (7 * x - 1) * (1 + x)). - _ R. J. Mathar _ , Nov 02 2011 ●

► [A212668] 9,65,201,449,841,1409,2185,3201,4489,6081,8009,10305,13001,16129,19721,23809,28425,33601,39369,45761,52809,60545,69001,78209,88201 ⋆ a(n) = (16 / 3) * (n + 1) * n * (n - 1) + 8 * n ^ 2 + 1. ● a(n) = 2 / (2 * n + 1) * Sum _{ i=1..n } tan ^5(Pi * i / (2 * n + 1)) * sin(2 * Pi * i / (2 * n + 1)). ●

► [A351530] 0,0,1,9,65,421,2569,15085,86241,483429,2669305,14564061,78699089,421880725,2246459881,11894065549,62665617345,328756309701,1718275598809,8951067087165,46492068009521,240846026714869,1244719810538185,6419100507215341 ⋆ The number of quinary strings of length n containing 00. ● a(n) = 9 * a(n - 1) - 16 * a(n - 2) - 20 * a(n - 3). - _ Wesley Ivan Hurt _ , Jun 22 2022 ●

► [A081040] 1,9,65,425,2625,15625,90625,515625,2890625,16015625,87890625,478515625,2587890625,13916015625,74462890625,396728515625,2105712890625,11138916015625,58746337890625,308990478515625,1621246337890625 ⋆ 5th binomial transform of (1,4,0,0,0,0,...). ● a(n) = 10 * a(n - 1) - 25 * a(n - 2), a(0)=1, a(1)=9. ● a(n) = (4n + 5) * 5 ^ (n - 1). ● a(n) = Sum _{ k=0..n } (k + 1) * 4 ^ k * binomial(n, k). ●

► [A102902] 1,9,65,441,2929,19305,126881,833049,5467345,35877321,235418369,1544728185,10135859761,66507086889,436390025825,2863396842201,18788331166609,123280631024265,808912380552641,5307721328585529 ⋆ a(n) = 9 * a(n - 1) - 16 * a(n - 2), with a(0) = 1, a(1) = 9. ● a(n) = Sum _{ k=0..n } binomial(2 * n - k + 1, k) * 4 ^ k. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n - k, k) * (- 16) ^ k * 9 ^ (n - 2 * k). ● a(n) = (1 / sqrt(17)) * (((9 + sqrt(17)) / 2) ^ (n + 1) - ((9 - sqrt(17)) / 2) ^ (n + 1)), with n >= 0. - _ Paolo P. Lava _ , Jun 16 2008 ● a(n) = 4 ^ n * ChebyshevU(n, 9 / 8). - _ G. C. Greubel _ , Dec 09 2022 ●

► [A127534] 0,1,9,65,442,2940,19380,127281,834900,5476185,35937525,236030652,1551652424,10210456360,67254204696,443410005585,2926078447656,19325957314755,127746785056275,845069382939705,5594334252541650 ⋆ Number of jumps in all even trees with 2n edges. ● a(n)=(n - 1)(4n - 3)C(3n,n) / [3(2n + 1)(3n - 1)]. ●

► [A238275] 1,9,65,457,3201,22409,156865,1098057,7686401,53804809,376633665,2636435657,18455049601,129185347209,904297430465,6330082013257,44310574092801,310174018649609,2171218130547265,15198526913830857,106389688396814

6001,744727818777712009 ⋆ a(n) = (4 * 7 ^ n - 1) / 3. ● a(n) = 7 * a(n - 1) + 2 , a(0) = 1. ● a(n) = 8 * a(n - 1) - 7 * a(n - 2), a(0) = 1, a(1) = 9. ●

► [A287816] 1,9,65,471,3413,24733,179233,1298853,9412437,68209395,494295113,3582023557,25957960001,188110345129,1363185009337,9878634630295,71587804656589,518777540353453,3759441118026705,27243657291488469,197427447142906157,1430703538380753875 ⋆ Number of nonary sequences of length n such that no two consecutive terms have distance 1. ● a(n) = 9 * a(n - 1) - 11 * a(n - 2) - 15 * a(n - 3) + 19 * a(n - 4) + a(n - 5), a(0)=1, a(1)=9, a(2)=65, a(3)=471, a(4)=3413. ●

► [A154996] 1,1,9,65,505,3825,29225,222625,1697625,12940625,98655625,752090625,5733565625,43709640625,333219515625,2540290390625,19365842265625,147635019140625,1125491941015625,8580160087890625,65410639259765625 ⋆ a(n) = 5 * a(n - 1) + 20 * a(n - 2), n>2 ; a(0)=1, a(1)=1, a(2)=9. ● a(n) = (1 / 2) *{ ((5 - sqrt(105)) / 2) ^ (n - 1) + ((5 + sqrt(105)) / 2) ^ (n - 1) } + (13 / 210) * sqrt(105) *{ ((5 + sqrt(105)) / 2) ^ (n - 1) - ((5 - sqrt(105)) / 2) ^ (n - 1) } + (4 / 5) * (binomial(2 * n,n) mod 2), with n>=0. - _ Paolo P. Lava _ , Jan 20 2009 ●

► [A103459] 1,9,65,513,4097,32769,262145,2097153,16777217,134217729,1073741825,8589934593,68719476737,549755813889,4398046511105,35184372088833,281474976710657,2251799813685249,18014398509481985,144115188075855873 ⋆ a(n) = 8 ^ n + 1 - 0 ^ n. ● a(n) = Sum _{ k=0..n } binomial(n, k) * 0 ^ (k(n - k)) * 8 ^ k. ● a(n) = 8 * a(n - 1) - 7, with a(1)=9. - _ Vincenzo Librandi _ , Dec 29 2010 ● a(n) = 9 * a(n - 1) - 8 * a(n - 2); a(0)=1, a(1)=9, a(2)=65. - _ Harvey P. Dale _ , Oct 21 2011 ●

► [A100311] 1,9,65,585,4097,36873,266305,2396745,16777217,150994953,1090519105,9814671945,68736258049,618626322441,4467856773185,40210710958665,281474976710657,2533274790395913,18295873486192705,164662861375734345 ⋆ Modulo 2 binomial transform of 8 ^ n. ● a(n) = Sum _{ k=0..n } (binomial(n, k) mod 2) * 8 ^ k. ● a(2 ^ n) = 8 ^ (2 ^ n) + 1, n >= 0. ● a(2 ^ t * n + 2 ^ (t - 1)) = 63 * (8 ^ (2 ^ (t - 1) + 1)) / (8 ^ (2 ^ (t - 1)) - 1) * a(2 ^ t * n + 2 ^ (t - 1) - 2), t >= 2. ● a(4 * n + 2) = 65 * a(4 * n); ● a(8 * n + 4) = 4097 / 65 * a(8 * n + 2); ● a(16 * n + 8) = (16777217 / 266305) * a(16 * n + 6), etc. (End) ●

► [A051375] 0,0,9,66,345,1590,6909,29106,120465,493230,2005509,8116746,32744985,131801670,529647309,2125861986,8525167905,34165634910,136857036309,548010848826,2193789933225,8780396200950,35137287916509 ⋆ Number of Boolean functions of n variables and rank 3 from Post class F(5,inf). ● a(n) = (4 ^ n - 3 ^ n - 3 * 2 ^ n + 5) / 2. ● a(n) = Sum _{ j=1..n } (- 1) ^ (j + 1) * C(n, j) * C(2 ^ (n - j) - 1, k - 1) (with k=3). ● a(n) = 10 * a(n - 1) - 35 * a(n - 2) + 50 * a(n - 3) - 24 * a(n - 4). ●

► [A081902] 1,9,66,434,2661,15525,87240,475920,2534400,13227520,67866624,343105536,1712390144,8449622016,41273524224,199782039552,959119884288,4570314964992,21629992173568,101729521631232,475697692803072 ⋆ A sequence related to binomial(n + 5, 5). ● a(n) = 4 ^ n * (n ^ 5 + 90 * n ^ 4 + 2635 * n ^ 3 + 29850 * n ^ 2 + 121024 * n + 122880) / 122880. ●

► [A002695] 1,9,66,450,2955,18963,119812,748548,4637205,28537245,174683718,1064611782,6464582943,39132819495,236256182280,1423046656008,8554078990377,51327262010673,307488810131530,1839455028693450 ⋆ P _ n'(3), where P _ n is n - th Legendre polynomial. ● a(n) = Gegenbauer _ C(n,3 / 2,3). - _ Paul Barry _ , Apr 20 2009 ● a(n) = Sum _{ i=1..n + 1 } i * binomial(n + i + 1,i) * binomial(n + 1,i) / 2. - _ Gerry Martens _ , Apr 08 2018 ●

► [A003408] 1,9,66,455,3060,20349,134596,888030,5852925,38567100,254186856,1676056044,11058116888,73006209045,482320623240,3188675231420,21094923659355,139646485582065,925029565741050,6131164307078475,40661170824914640,269807672771096460 ⋆ a(n) = binomial(3n + 6, n). ● a(n) = Sum _{ k=0..n } binomial(2 * n + k + 5,k). - _ Arkadiusz Wesolowski _ , Apr 02 2012 ●

► [A037698] 1,9,66,462,3235,22647,158532,1109724,7768069,54376485,380635398,2664447786,18651134503,130557941523,913905590664,6397339134648,44781373942537,313469617597761,2194287323184330 ⋆ Base 7 digits are, in order, the first n terms of the periodic sequence with initial period 1,2,3,0. ● a(n) = 7 * a(n - 1) + a(n - 4) - 7 * a(n - 5). ● a(n) = (11 * 7 ^ (n + 1) + (7 - (- 1) ^ n) * (25 + 8 * i ^ (n(n + 1))) - 275) / 400 where i=sqrt(- 1). - _ Bruno Berselli _ , Dec 19 2011 ●

► [A014830] 1,9,66,466,3267,22875,160132,1120932,7846533,54925741,384480198,2691361398,18839529799,131876708607,923136960264,6461958721864,45233711053065,316635977371473,2216451841600330 ⋆ a(1)=1; for n > 1, a(n) = 7 * a(n - 1) + n. ● a(n) = (7 ^ (n + 1) - 6 * n - 7) / 36. - _ Rolf Pleisch _ , Oct 19 2010 ● a(1)=1, a(2)=9, a(3)=66; for n > 3, a(n) = 9 * a(n - 1) - 15 * a(n - 2) + 7 * a(n - 3). - _ Harvey P. Dale _ , Jul 22 2013 ● a(n) = Sum _{ i=0..n - 1 } 6 ^ i * binomial(n + 1,n - 1 - i). - _ Bruno Berselli _ , Nov 13 2015 ●

► [A134432] 0,1,9,66,490,3915,34251,328804,3452436,39456405,488273005,6510306726,93097386174,1421850988831,23105078568495,398118276872520,7251440043035176,139227648826275369,2810658160680434001,59519819873232720010,1319356007189991960210 ⋆ Sum of entries in all the arrangements of the set { 1,2,...,n } (to n=0 there corresponds the empty set). ● a(n) = (d / dt)P[n](t) evaluated at t=1; here P[n](t)=Q[n](t,1) where the polynomials Q[n](t,x) are defined by Q[0]=1 and Q[n]=Q[n - 1] + xt ^ n (d / dx)xQ[n - 1]. (Q[n](t,x) is the bivariate generating polynomial of the arrangements of { 1,2,...,n } , where t (x) marks the sum (number) of the entries; for example, Q[2](t,x) = 1 + tx + t ^ 2 * x + 2t ^ 3 * x ^ 2, corresponding to: empty, 1, 2, 12 and 21, respectively.) ● a(n) = ((n + 1) / 2) * Sum _{ j=0..n } j * j! * binomial(n, j). ●

► [A098107] 1,9,66,500,4110,37044,365904,3945024,46195920,584575200,7955893440,115942544640,1802051072640,29763892972800,520699560192000,9619862405529600,187181055358617600,3826464958007193600 ⋆ Sum of all matrix elements M(i,j) = n! * (i / j), (i,j = 1..n). ● a(n) = n! * Sum[Sum[(i / j), { i, 1, n }], { j , 1, n }]. ● a(n) = (- 1) ^ (n + 1) * (n * (n + 1) / 2) * Stirling1(n + 1, 2). ●

► [A226201] 1,9,66,515,4100,32773,262150,2097159,16777224,134217737,1073741834,8589934603,68719476748,549755813901,4398046511118,35184372088847,281474976710672,2251799813685265,18014398509482002,144115188075855891,1152921504606846996 ⋆ 8 ^ n + n. ● a(n) = 10 * a(n - 1) - 17 * a(n - 2) + 8 * a(n - 3). ●

► [A255877] 1,9,67,221,519,1009,1739,2757,4111,5849,8019,10669,13847,17601,21979,27029,32799,39337,46691,54909,64039,74129,85227,97381,110639 ⋆ a(n) = (2 n - 2) ^ 3 + (2n - 2) - 1. ● a(n) = (2 * n - 2) ^ 3 + (2 * n - 2) - 1. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>4. - _ Vincenzo Librandi _ , Mar 17 2015 ●

► [A163349] 1,9,67,463,3089,20241,131363,848087,5459521,35089209,225323107,1446179263,9279361169,59531488641,381889579523,2449671556487,15713255235841,100790106559209,646496195167747,4146789500815663 ⋆ a(n) = 10 * a(n - 1) - 23 * a(n - 2) for n > 1; a(0) = 1, a(1) = 9. ● a(n) = 10 * a(n - 1) - 23 * a(n - 2) for n > 1; a(0) = 1, a(1) = 9. ● a(n) = ((1 + 2 * sqrt(2)) * (5 + sqrt(2)) ^ n + (1 - 2 * sqrt(2)) * (5 - sqrt(2)) ^ n) / 2. ●

► [A016130] 1,9,67,477,3355,23517,164683,1152909,8070619,56494845,395464939,2768256621,19377800443,135644611293,949512295435,6646586100813,46526102771227,325682719529661,2279779036969771 ⋆ Expansion of 1 / ((1 - 2x)(1 - 7x)) . ● a(n) = (7 ^ (n + 1) - 2 ^ (n + 1)) / 5. - Lambert Klasen (lambert.klasen(AT)gmx.net), Feb 06 2005 ● a(n) = 7 * a(n - 1) + 2 ^ n, a(0)=1. - _ Vincenzo Librandi _ , Jun 24 2013 ●

► [A115202] 1,9,67,477,3363,23741,168451,1202685,8641539,62470141,454164483,3319054333,24371503107,179736723453,1330803769347,9889323810813,73733148770307,551423090098173,4135500638060547 ⋆ Fifth column of triangle A115193 (called C(1,2)). ● a(n) = (- 1) ^ n * 8 ^ (n + 2) * (binomial(1 / 2, n + 3) * Hypergeometric2F1(1,n + 5 / 2; n + 4; - 8) + 20 * binomial(1 / 2, n + 4) * Hypergeometric2F1(1,n + 7 / 2; n + 5; - 8) + 32 * binomial(1 / 2, n + 5) * Hypergeometric2F1(1,n + 9 / 2; n + 6; - 8)). - _ G. C. Greubel _ , Feb 04 2016 ●

► [A287817] 1,9,67,501,3747,28025,209609,1567743,11725731,87701095,655949055,4906086571,36694443381,274451368893,2052723708275,15353082914309,114831408642039,858866749063989,6423783365292409,48045861327359751,359352839194448551,2687733333725785179 ⋆ Number of nonary sequences of length n such that no two consecutive terms have distance 2. ● a(n) = 8 * a(n - 1) - 1 * a(n - 2) - 23 * a(n - 3) + 10 * a(n - 4) + a(n - 5), a(0)=1, a(1)=9, a(2)=67, a(3)=501, a(4)=3747. ●

► [A155592] 1,9,67,519,4111,32799,262207,2097279,16777471,134218239,1073742847,8589936639,68719480831,549755822079,4398046527487,35184372121599,281474976776191,2251799813816319,18014398509744127,144115188076380159 ⋆ 8 ^ n + 2 ^ n - 1 ^ n. ● a(n)=10 * a(n - 1) - 16 * a(n - 2) - 7 with a(0)=1, a(1)=9 - _ Vincenzo Librandi _ , Jul 21 2010 ●

► [A194650] 0,0,9,68,215,504,1001,1784,2943,4580,6809,9756,13559,18368,24345,31664,40511,51084,63593,78260,95319,115016,137609,163368,192575 ⋆ Number of ways to place 2 nonattacking kings on an n X n cylindrical chessboard. ● a(n) = 1 / 2 * n * (n ^ 3 - 9 * n + 6), n>=3. ●

► [A121633] 0,0,1,9,68,527,4408,40303,403046,4393339,51955528,663383135,9102982354,133668773755,2092209897524,34783032728383,612234346270510,11375905660965179,222544581264066400,4572536725690159999,98456173247669999978,2217126753620449439515 ⋆ Sum of the bottom levels of the last column over all deco polyominoes of height n. A deco polyomino is a directed column - convex polyomino in which the height, measured along the diagonal, is attained only in the last column. ● a(1)=0; a(n) = n * a(n - 1) + (n - 1)! - 1 for n>=2. ●

► [A198691] 9,69,489,3429,24009,168069,1176489,8235429,57648009,403536069,2824752489,19773267429,138412872009,968890104069,6782230728489,47475615099429,332329305696009,2326305139872069,16284135979104489,113988951853731429 ⋆ 10 * 7 ^ n - 1. ● a(n) = 7 * a(n - 1) + 6. a(n) = 8 * a(n - 1) - 7 * a(n - 2), n>1. ●

► [A125372] 1,9,69,489,3773,29359,229371,1793675,14030597,109759917,858660839,6717419531,52551380915,411117567181,3216236722495,25161121675789,196839383096437,1539905230937741,12046919094905577,94244929368967819 ⋆ Number of base - 9 circular n - digit numbers with adjacent digits differing by 5 or less . ● a(n) = 9 * a(n - 1) - 6 * a(n - 2) - 26 * a(n - 3) + 5 * a(n - 4) + 17 * a(n - 5) - a(n - 6) - 3 * a(n - 7) for n > 7. - _ Wesley Ivan Hurt _ , Oct 08 2017 ●

► [A165147] 1,9,69,501,3561,25089,176109,1234221,8643921,60520569,423683349,2965901541,20761665081,145332718449,1017332217789,7121335090461,49849374331041,348945706410729,2442620203155429,17098342196928981 ⋆ a(n) = (3 * 7 ^ n - 3 ^ n) / 2. ● a(n) = 10 * a(n - 1) - 21 * a(n - 2) for n > 1; a(0) = 1, a(1) = 9. ●

► [A299915] 0,1,9,69,513,3789,27945,206037,1518993,11198493,82558521,608644773,4487100705,33080169069,243876313161,1797924789621,13254807348657,97718168662461,720405829778265,5311034444054853,39154440039154497,288657547023732237,2128064642743736169 ⋆ a(n) = A299914(2n). ● a(n) = (- ((9 - sqrt(33)) / 2) ^ n + ((9 + sqrt(33)) / 2) ^ n) / sqrt(33). ● a(n) = 9 * a(n - 1) - 12 * a(n - 2) for n>1. ●

► [A126530] 1,9,69,541,4231,33101,258953,2025831,15848391,123984439,969949627,7588067405,59362636295,464403174075,3633098554089,28422297349753,222352070721709,1739494972761653,13608340819322255,106460175369651261 ⋆ Number of base 9 n - digit numbers with adjacent digits differing by five or less. ● a(n) = 7 * a(n - 1) + 7 * a(n - 2) - 4 * a(n - 3) - 3 * a(n - 4) for n>3. ●

► [A167534] 9,70,88,149,167,228,246,307,325,386,404,465,483,544,562,623,641,702,720,781,799,860,878,939,957 ⋆ a(n) = 79 * n - a(n - 1) for n>0, a(0)=9. ● a(n) = (79 / 4) - (43 / 4) * (- 1) ^ n + (79 / 2) * n, with a(0)=9. [_ Paolo P. Lava _ , Nov 10 2009] ●

► [A110201] 1,9,70,535,3906,29274,215900,1628175,12197570,92830430,704127060,5400199350,41331491124,318871044756,2456608834680,19039140186495,147401590706370,1146463189301430,8909683732878500,69495629981713650 ⋆ a(n) = sum of squares of numbers < 2 ^ n having exactly [n / 2] + 1 ones in their binary expansion. ● a(n) = (4 ^ n - 1) / 3 * C(n - 2, n \ 2) + (2 ^ n - 1) ^ 2 * C(n - 2, n \ 2 - 1). ●

► [A045739] 1,9,70,535,4101,31633,245512,1915875,15020545,118231212,933812892,7397179309,58746824150,467602683135,3729318261224,29795160492299,238421091129957,1910544426355420,15329353155160880,123138401704273620 ⋆ Number of edges in all noncrossing forests on n nodes on a circle. ● a(n) = Sum _{ k =1..n - 1 } k * binomial(n, k + 1) * binomial(n + 2 * k - 1, k) / (n + k). ●

► [A081900] 1,9,71,519,3606,24150,157250,1001250,6259375,38534375,234140625,1406640625,8367187500,49335937500,288632812500,1676757812500,9678955078125,55548095703125,317108154296875,1801483154296875 ⋆ A sequence related to binomial(n + 4, 4). ● a(n) = 5 ^ n * (n ^ 4 + 74 * n ^ 3 + 1571 * n ^ 2 + 10354 * n + 15000) / 15000. ●
► [A164551] 1,9,71,539,4041,30169,224911,1675899,12485681,93014729,692919351,5161913659,38453668921,286460329689,2133983587391,15897089609819,118425207937761,882207376791049,6571994817093031,48958008011900379 ⋆ a(n) = 10 * a(n - 1) - 19 * a(n - 2) for n > 1; a(0) = 1, a(1) = 9. ● a(n) = ((3 + 2 * sqrt(6)) * (5 + sqrt(6)) ^ n + (3 - 2 * sqrt(6)) * (5 - sqrt(6)) ^ n) / 6. ●
► [A178869] 0,1,9,71,549,4231,32589,250991,1933029,14887351,114655869,883029311,6800705109,52376052871,403377424749,3106636294031,23925952398789,184267208648791,1419145353851229,10929636098173151,84175271345046069 ⋆ a(n) = 9 * a(n - 1) - 10 * a(n - 2); a(0)=0, a(1)=1. ● a(n) = 9a(n - 1) - 10a(n - 2), a(0)=0, a(1)=1. [_ Harvey P. Dale _ , May 06 2011] ● a(n) = 1 / sqrt(41) * ((9 / 2 + 1 / 2 * sqrt(41)) ^ n - (9 / 2 - 1 / 2 * sqrt(41)) ^ n). - _ Paolo P. Lava _ , Jun 06 2011 ●
► [A057080] 1,9,71,559,4401,34649,272791,2147679,16908641,133121449,1048062951,8251382159,64962994321,511452572409,4026657584951,31701808107199,249587807272641,1965000650073929,15470417393318791,121798338496476399 ⋆ Even - indexed Chebyshev U - polynomials evaluated at sqrt(10) / 2. ● a(n) = 8 * a(n - 1) - a(n - 2), a(- 1)= - 1, a(0)=1. ● a(n) = (((4 + sqrt(15)) ^ (n + 1) - (4 - sqrt(15)) ^ (n + 1)) + ((4 + sqrt(15)) ^ n - (4 - sqrt(15)) ^ n)) / (2 * sqrt(15)). - _ Gregory V. Richardson _ , Oct 13 2002 ● a(n) = Jacobi _ P(n,1 / 2, - 1 / 2,4) / Jacobi _ P(n, - 1 / 2,1 / 2,1); - _ Paul Barry _ , Feb 03 2006 ● a(n + 1) = 4 * a(n) + sqrt(5 * (3 * a(n) ^ 2 + 2)). - _ Richard Choulet _ , Aug 30 2007 ●
► [A064201] 0,9,72,189,360,585,864,1197,1584,2025,2520,3069,3672,4329,5040,5805,6624,7497,8424,9405,10440,11529,12672,13869,15120 ⋆ 9 times octagonal numbers: a(n) = 9n(3n - 2). ● a(n) = 9 * (n - 2) * (3 * n - 8), with offset 2. ● a(n) = a(n - 1) + 54 * n - 45, with n>0, a(0)=0. - _ Vincenzo Librandi _ , Dec 15 2010 ●
► [A244728] 0,9,72,243,576,1125,1944,3087,4608,6561,9000,11979,15552,19773,24696,30375,36864,44217,52488,61731,72000,83349,95832,109503,124416 ⋆ a(n) = 9 * n ^ 3. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>3. ●
► [A073988] 0,0,9,72,300,1296,7056,42336,262440,1658880,10349856,62355744,367960320,2173796352,12958657344,77787495936,468419708160,2821109907456,16960580969472,101763485816832,609954817881600,3656096522698752,21926115464435712,131557435432187904 ⋆ Number of strings of length n over Z _ 6 with trace 2 and subtrace 5. ● a(n; t, s) = a(n - 1; t, s) + a(n - 1; t + 5, s + 5t + 1) + a(n - 1; t + 4, s + 4t + 4) + a(n - 1; t + 3, s + 3t + 3) + a(n - 1; t + 2, s + 2t + 2) + a(n - 1; t + 1, s + t + 1) where t is the trace and s is the subtrace. ●
► [A162755] 1,9,72,540,4032,29988,223020,1658160,12328596,91662732,681510816,5067014148,37673118252,280098623952,2082525799284,15483523651596,115119584685504,855911035979748,6363675682412076,47313758657548656 ⋆ Number of reduced words of length n in Coxeter group on 9 generators S _ i with relations (S _ i) ^ 2 = (S _ i S _ j) ^ 3 = I. ● a(0)=1, a(1)=9, a(2)=72, a(3)=540, a(n)=7 * a(n - 1) + 7 * a(n - 2) - 28 * a(n - 3). - _ Harvey P. Dale _ , Jun 15 2011 ●
► [A045993] 1,9,72,566,4436,34748,272160,2131624,16695344,130761488,1024151680,8021372768,62825089344,492059397056,3853913344512,30184665012864,236412685103872,1851634187563264,14502390863865856,113585794743350784 ⋆ Expansion of (1 - x) / (1 - 10 * x + 18 * x ^ 2 - 8 * x ^ 3). ● a(n) = 10 * a(n - 1) - 18 * a(n - 2) + 8 * a(n - 3); a(0)=1, a(1)=9, a(2)=72. - _ Harvey P. Dale _ , Mar 12 2013 ●
► [A057085] 0,1,9,72,567,4455,34992,274833,2158569,16953624,133155495,1045816839,8213952096,64513217313,506693386953,3979621526760,31256353258263,245490585583527,1928108090927376,15143557548094641,118939045114505385,934159388097696696 ⋆ a(n) = 9 * a(n - 1) - 9 * a(n - 2) for n>1, with a(0)=0, a(1)=1. ● a(n) = S(n, 3) * 3 ^ n with S(n, x) := U(n, x / 2), Chebyshev's polynomials of the 2nd kind, A049310. ● a(n) = (1 / 3) * Sum _{ k=0..n } binomial(n, k) * Fibonacci(4 * k). - _ Benoit Cloitre _ , Jun 21 2003 ● a(n) = (sqrt(5) / 15) * (((9 + 3 * sqrt(5)) / 2) ^ n - ((9 - 3 * sqrt(5)) / 2) ^ n). - _ Paolo P. Lava _ , Jun 16 2008 ●
► [A076765] 1,9,72,568,4473,35217,277264,2182896,17185905,135304345,1065248856,8386686504,66028243177,519839258913,4092685828128,32221647366112,253680493100769,1997222297440041,15724097886419560,123795560793916440 ⋆ Partial sums of Chebyshev sequence S(n,8) = U(n,4) = A001090(n + 1). ● a(n + 3) = 9 * a(n + 2) - 9 * a(n + 1) + a(n); initial values: a(0) = 1, a(1) = 9, a(2) = 72 ● a(n) = Sum _{ k=0..n } S(k, 8) with S(k, x) = U(k, x / 2) Chebyshev's polynomials of the second kind. ● a(n) = 8 * a(n - 1) - a(n - 2) + 1; a(- 1)=0, a(0)=1. ● a(n) = (S(n + 1, 8) - S(n, 8) - 1) / 6, n >= 0. ● a(n) = - 1 / 6 + (7 / 12) * (4 - sqrt(15)) ^ n - (3 / 20) * (4 - sqrt(15)) ^ n * sqrt(15) + (7 / 12) * (4 + sqrt(15)) ^ n + (3 / 20) * sqrt(15) * (4 + sqrt(15)) ^ n. - _ Paolo P. Lava _ , Jun 25 2008 ●
► [A163391] 1,9,72,576,4608,36828,294336,2352420,18801216,150264576,1200956652,9598382640,76712967828,613111567824,4900159716480,39163451657148,313005296651040,2501626174048260,19993698450611424,159795249138713664 ⋆ Number of reduced words of length n in Coxeter group on 9 generators S _ i with relations (S _ i) ^ 2 = (S _ i S _ j) ^ 5 = I. ● a(n) = 7 * a(n - 1) + 7 * a(n - 2) + 7 * a(n - 3) + 7 * a(n - 4) - 28 * a(n - 5). - _ Wesley Ivan Hurt _ , May 10 2021 ●
► [A163953] 1,9,72,576,4608,36864,294876,2358720,18867492,150921792,1207229184,9656672256,77244089580,617878417968,4942433025684,39534710232528,316239654648960,2529613056079872,20234471292326844,161856307428494112 ⋆ Number of reduced words of length n in Coxeter group on 9 generators S _ i with relations (S _ i) ^ 2 = (S _ i S _ j) ^ 6 = I. ● a(n) = - 28 * a(n - 6) + 7 * Sum _{ k=1..5 } a(n - k). - _ Wesley Ivan Hurt _ , May 11 2021 ●
► [A164375] 1,9,72,576,4608,36864,294912,2359260,18873792,150988068,1207886400,9662946048,77302407168,618409967616,4947205424364,39577048871472,316611634855572,2532855030486480,20262535861599360,162097851871033344 ⋆ Number of reduced words of length n in Coxeter group on 9 generators S _ i with relations (S _ i) ^ 2 = (S _ i S _ j) ^ 7 = I. ● a(n) = - 28 * a(n - 7) + 7 * Sum _{ k=1..6 } a(n - k). - _ Wesley Ivan Hurt _ , May 11 2021 ●
► [A169358] 1,9,72,576,4608,36864,294912,2359296,18874368,150994944,1207959552,9663676416,77309411328,618475290624,4947802324992,39582418599936,316659348799488,2533274790395904,20266198323167232,162129586585337856 ⋆ Number of reduced words of length n in Coxeter group on 9 generators S _ i with relations (S _ i) ^ 2 = (S _ i S _ j) ^ 31 = I. ● a(n) = - 28 * a(n - 31) + 7 * Sum _{ k=1..30 } a(n - k). - _ Wesley Ivan Hurt _ , Apr 26 2021 ●
► [A003951] 1,9,72,576,4608,36864,294912,2359296,18874368,150994944,1207959552,9663676416,77309411328,618475290624,4947802324992,39582418599936,316659348799488,2533274790395904,20266198323167232,162129586585337856,1297036692682702848 ⋆ Expansion of g.f.: (1 + x) / (1 - 8 * x). ● a(0) = 1; for n>0, a(n) = 9 * 8 ^ (n - 1). - _ Vincenzo Librandi _ , Nov 18 2010 ● a(0) = 1, a(1) = 9, a(n) = 8 * a(n - 1). - _ Vincenzo Librandi _ , Dec 10 2012 ●
► [A001809] 0,0,1,9,72,600,5400,52920,564480,6531840,81648000,1097712000,15807052800,242853811200,3966612249600,68652904320000,1255367393280000,24186745110528000,489781588488192000,10400656084955136000,231125690776780800000,5364548928029491200000 ⋆ a(n) = n! * n(n - 1) / 4. ● a(n) = a(n - 1) * n ^ 2 / (n - 2), n > 2; a(2)=1. ● a(n) = n * a(n - 1) + (n - 1)! * n * (n - 1) / 2, a(1) = 0, a(2) = 1; a(n) = sum (first n! terms of A034968); a(n) = sum of the rises j of permutations (p(j)<p(j + 1)). - Claude Lenormand (claude.lenormand(AT)free.fr), Feb 02 2001 ●
► [A218126] 1,9,72,720,6480,59040,530640,4782960,43040160,387419760,3486725280,31381059600,282428998560,2541865828320,22876787671920,205891132034880,1853020145805120,16677181699666560,150094634909047920,1350851717672992080,12157665455570137920 ⋆ Number of 9 - ary sequences with primitive period n. ● a(n) = Sum _{ d|n } 9 ^ d * mu(n / d) for n>0, a(0) = 1. ●
► [A096129] 1,9,73,289,801,1801,3529,6273,10369,16201,24201,34849,48673,66249,88201,115201,147969,187273,233929,288801,352801,426889,512073,609409,720001 ⋆ Middle term of a triple of consecutive numbers which are sums of two squares. ● a(n)=1 + 2 * n ^ 2 + 4 * n ^ 3 + 2 * n ^ 4. G.f.: - (x ^ 4 + 4 * x ^ 3 + 38 * x ^ 2 + 4 * x + 1) / (x - 1) ^ 5. [_ Colin Barker _ , Jul 28 2012] ●
► [A291700] 1,1,1,1,1,1,1,1,9,73,361,1321,3961,10297,24025,51481,103081,196521,368425,720937,1589161,4069801,11511721,33341353,94142313 ⋆ Number of ways of writing n as a sum of n nonnegative cubes. ● a(n) = [x ^ n] (Sum _{ k>=0 } x ^ (k ^ 3)) ^ n. ●
► [A126641] 9,73,537,3625,22809,135913,777177,4308265,23329689,124104553,651267417,3382100905,17421964569,89180975593,454265623257,2304999893545,11660373751449,58845428989033,296407578308697,1490778208598185,7488908074594329,37584775814704873 ⋆ a(n) is the number of integers k less than 10 ^ n such that the decimal representation of k lacks the digit 1, at least one of digits 2,3, at least one of digits 4,5, at least one of digits 6,7 and at least one of digits 8,9. ● a(n) = 16 * 5 ^ n - 32 * 4 ^ n + 24 * 3 ^ n - 8 * 2 ^ n + 1. ●
► [A346229] 1,1,9,73,545,3881,27761,208593,1655241,13490897,110135641,895031361,7279880713,59647817713,493774294393,4125976137817,34688652854097,292496479087385,2469649871976929,20883345481893257,177031405058676369,1505681846157691769 ⋆ Number of n - step 8 - dimensional nonnegative lattice walks starting at the origin and using steps that increment all components or decrement one component by 1. ● a(n) == 1 (mod 8). ●
► [A164588] 1,9,73,577,4529,35481,277817,2174993,17027041,133295529,1043495593,8168931937,63949894289,500627099961,3919122796697,30680567267633,240180585132481,1880236207775049,14719292130498313,115228905772807297,902061091509601649 ⋆ a(n) = ((3 + sqrt(18)) * (5 + sqrt(8)) ^ n + (3 - sqrt(18)) * (5 - sqrt(8)) ^ n) / 6. ● a(n) = 10 * a(n - 1) - 17 * a(n - 2) for n > 1; a(0) = 1, a(1) = 9. ●
► [A023001] 0,1,9,73,585,4681,37449,299593,2396745,19173961,153391689,1227133513,9817068105,78536544841,628292358729,5026338869833,40210710958665,321685687669321,2573485501354569,20587884010836553,164703072086692425 ⋆ a(n) = (8 ^ n - 1) / 7. ● a(0) = 0, a(n) = 8 * a(n - 1) + 1 for n>0. ● a(n) = 7 * a(n - 1) + 8 * a(n - 2) + 2, a(0)=0, a(1)=1. ● a(n) = 8 * a(n - 1) + a(n - 2) - 8 * a(n - 3) = 9 * a(n - 1) - 8 * a(n - 2), a(0)=0, a(1)=1, a(2)=9. Observation by _ Gary Detlefs _ . See the W. Lang comment and link. (End) ● a(n) = Sum _{ k=0..n - 1 } 8 ^ k. - _ Doug Bell _ , May 26 2017 ●
► [A015454] 1,1,9,73,593,4817,39129,317849,2581921,20973217,170367657,1383914473,11241683441,91317382001,741780739449,6025563297593,48946287120193,397595860259137,3229713169193289,26235301213805449,213112122879636881 ⋆ Generalized Fibonacci numbers. ● a(n) = 8 * a(n - 1) + a(n - 2). ● a(n) = (3 / 34) * sqrt(17) * [4 - sqrt(17)] ^ n - (3 / 34) * [4 + sqrt(17)] ^ n * sqrt(17) + (1 / 2) * [4 + sqrt(17)] ^ n + (1 / 2) * [4 - sqrt(17)] ^ n, with n>=0. - _ Paolo P. Lava _ , Nov 21 2008 ●
► [A365774] 1,1,9,73,625,5681,53945,528697,5307489,54298849,564079337,5934390441,63098046929,676976915473,7319925023897,79684985945753,872620958369473,9606337027601345,106249046704511945,1180096759408431881,13156993620315230001,147193406523115480049 ⋆ Expansion of g.f. A(x) satisfying A(x) = 1 + x * A(x) / (1 - 4 * x * A(x)) ^ 2. ● a(n) = Sum { k=0..n } binomial(n + 1, n - k) / (n + 1) * binomial(2 * n - k - 1, k) * 4 ^ k. ●
► [A086226] 0,0,1,9,73,637,6220,68414,844067,11589987,175612351,2912695193,52502754076,1022091626496,21372127906257,477737240288353,11368449905784189,286935157928114989,7656210527253978232 ⋆ Number of permutations of length n containing exactly one occurrence of the pattern 1 - 32. ● a(0)=0; a(n)=a(n - 1) + sum(k=1, n - 1, binomial(n, k) * a(k) + binomial(n - 1, k - 1) * B(k))) where B(k) is the k - th Bell number. ●
► [A338677] 1,1,9,73,649,5257,46729,378505,3331721,27219593,237491849,1938544265,16925054601,138041874057,1196384310921,9820024329865,84609648809609,693596417152649,5977550934234761,48976660041553545,419984680697190025,3455551232025810569,29494747047731910281 ⋆ Expansion of Product _{ k>=1 } 1 / (1 - 8 ^ (k - 1) * x ^ k). ● a(n) = Sum _{ k=0..n } p(n,k) * 8 ^ (n - k), where p(n,k) = number of partitions of n into k parts. ●

► [A199677] 9,73,649,5833,52489,472393,4251529,38263753,344373769,3099363913,27894275209,251048476873,2259436291849,20334926626633,183014339639689,1647129056757193,14824161510814729,133417453597332553,1200757082375992969 ⋆ 8 * 9 ^ n + 1. • a(n) = 9 * a(n - 1) - 8. • a(n) = 10 * a(n - 1) - 9 * a(n - 2). •

► [A178827] 0,1,9,74,594,4755,38043,304348,2434788,19478309,155826477,1246611822,9972894582,79783156663,638265253311,5106122026496,40848976211976,326791809695817,2614334477566545,20914675820532370,167317406564258970,1338539252514071771,10708314020112574179,85666512160900593444,685332097287204747564 ⋆ Partial sums of floor(8 ^ n / 9) / 7. • a(n) = a(n - 2) + (8 ^ (n - 1) - 1) / 7, n > 2. • a(n) = 9 * a(n - 1) - 7 * a(n - 2) - 9 * a(n - 3) + 8 * a(n - 4), n > 4. •

► [A190984] 0,1,9,74,603,4909,39960,325277,2647773,21553018,175442751,1428113633,11624923440,94627515529,770273175681,6270065972426,51038681522067,415457671891621,3381848276370120,27528430784089733,224082939122216757,1824047436611322682 ⋆ a(n) = 9 * a(n - 1) - 7 * a(n - 2), with a(0)=0, a(1)=1. • a(n) = (1 / 53) * sqrt(53) * ((9 / 2 + (1 / 2) * sqrt(53)) ^ n - (9 / 2 - (1 / 2) * sqrt(53)) ^ n). - _ Paolo P. Lava _ , May 31 2011 •

► [A028991] 1,9,75,111,261,325,559,651,969,1089,1491,1639,2125,2301,2871,3075,3729,3961,4699,4959,5781,6069,6975,7291,8281 ⋆ Odd 9 - gonal (or enneagonal) numbers. • a(n) = (28 * n ^ 2 + 4 * n + 1 + (14 * n + 1) * (- 1) ^ n) / 2. • a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n>4. - _ Colin Barker _ , May 30 2015 •

► [A102094] 9,75,245,567,1089,1859,2925,4335,6137,8379,11109,14375,18225,22707,27869,33759,40425,47915,56277,65559,75809,87075,99405,112847,127449 ⋆ a(n) = (2 * n - 1) * (2 * n + 1) ^ 2. • a(1)=9, a(2)=75, a(3)=245, a(4)=567, a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). •

► [A321234] 1,9,75,245,2835,7623,39039,96525,1859715,4387955,20369349,46646691,422524375,947754675,4217257575,9316746045,327288272355,714666904875,3105965056425,6720018279975,57930003736605,124404851229945,532600050191625,1136728029829275,19356624110780775 ⋆ Denominator of series expansion of the hypergeometric series 3F2([1 / 2, 1, 1], [3 / 2, 3 / 2], x). • a(n) = numerator (binomial(2 * n, n) / 4 ^ n) * (2 * n + 1) ^ 2. - _ G. C. Greubel _ , Dec 07 2018 •

► [A339483] 0,9,75,294,810,1815,3549,6300,10404,16245,24255,34914,48750,66339,88305,115320,148104,187425,234099,288990,353010,427119,512325,609684,720300 ⋆ Number of regular polygons that can be drawn with vertices on a centered hexagonal grid with side length n. • a(n) = (1 / 2) * (n + 1) * n * (2 * n + 1) ^ 2. •

► [A274311] 0,0,9,75,331,1055,2745,6209,12670,23886,42285,71115,114609,178165,268541,394065,564860,793084,1093185,1482171,1979895,2609355,3397009,4373105,5572026 ⋆ a(n) = 15 * binomial(n,6) - 6 * binomial(n - 2,4) + binomial(n - 4,4). • a(n) = (240 + 452 * n - 220 * n ^ 2 - 101 * n ^ 3 + 75 * n ^ 4 - 15 * n ^ 5 + n ^ 6) / 48 for n>3. • a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>8. •

► [A190983] 0,1,9,75,621,5139,42525,351891,2911869,24095475,199388061,1649919699,13652948925,112977022131,934875505629,7736017417875,64014903727101,529718029036659,4383372838967325,36272047376485971,300148189354569789,2483701419932212275 ⋆ a(n) = 9 * a(n - 1) - 6 * a(n - 2), with a(0)=0, a(1)=1. • a(n) = (1 / sqrt(57)) * ((9 / 2 + (1 / 2) * sqrt(57)) ^ n - (9 / 2 - (1 / 2) * sqrt(57)) ^ n). - _ Paolo P. Lava _ , May 31 2011 •

► [A254664] 1,9,75,627,5241,43809,366195,3060987,25586481,213874809,1787757915,14943687747,124912775721,1044133269009,8727804479235,72954835640907,609822098564961,5097441295442409,42608996659234155,356164297160200467 ⋆ Numbers of words on alphabet { 0,1,...,8 } with no subwords ii, where i is from { 0,1,...,5 } . • a(n) = 8 * a(n - 1) + 3 * a(n - 2) with n>1, a(0) = 1, a(1) = 9. • a(n) = ((1 + t) * (4 - t) ^ (n + 1) + (- 1 + t) * (4 + t) ^ (n + 1)) / (6 * t), where t=sqrt(19). [_ Bruno Berselli _ , Feb 04 2015] •

► [A223204] 9,75,657,5763,50553,443451,3889953,34122675,299324169,2625672171,23032401201,202040266467,1772297595801,15546597829275,136374785271873,1196279871788307,10493769275551017,92051363736382539,807474735076340817 ⋆ Rolling icosahedron face footprints: number of n X 3 0..19 arrays starting with 0 where 0..19 label faces of an icosahedron and every array movement to a horizontal or vertical neighbor moves across an icosahedral edge. • a(n) = (3 * 2 ^ (- 1 - n) * ((9 - sqrt(73)) ^ n * (3 + sqrt(73)) + (- 3 + sqrt(73)) * (9 + sqrt(73)) ^ n)) / sqrt(73). •

► [A136659] 1,9,75,660,6300,65520,740880,9072000,119750400,1696464000,25686460800,414096883200,7083236160000,128152088064000,2445351068160000,49084865077248000,1033983353475072000,22808456326656000000 ⋆ Unsigned third column (k=2) of triangle A136656 divided by 4. • a(n) = (n + 4)! / 2 * sum((k + 1)! / (k + 4)!,k=1..n), with offset 1. [_ Gary Detlefs _ , Jul 27 2010] • a(n) = (1 / 48) * (n + 8) * (n + 1) * (n + 3)!. [_ Gary Detlefs _ , Aug 03 2010] •

► [A056329] 0,0,0,0,1,9,76,542,3523,21393,123680,690550,3756151,20042589,105394296,548123982,2826435403,14479204833,73794961960,374603884910,1895632969351,9568915372269,48208452866816 ⋆ Number of reversible string structures with n beads using exactly five different colors. • a(n) = (S2(n,k) + A(n,k)) / 2, where k=5 is the number of colors (sets), S2 is the Stirling subset number A008277 and A(n,k) = [n>1] * (k * A(n - 2,k) + A(n - 2,k - 1) + A(n - 2,k - 2)) + [n <2 & n==k & n>=0]. •

► [A190982] 0,1,9,76,639,5371,45144,379441,3189249,26806036,225308079,1893742531,15917142384,133785568801,1124484407289,9451431821596,79440464357919,667707020113291,5612160859230024,47170912632503761,396477409396383729,3332442121404934756 ⋆ a(n) = 9 * a(n - 1) - 5 * a(n - 2), with a(0)=0, a(1)=1. • a(n) = (1 / 61) * sqrt(61) * ((9 / 2 + (1 / 2) * sqrt(61)) ^ n - (9 / 2 - (1 / 2) * sqrt(61)) ^ n). - _ Paolo P. Lava _ , May 31 2011 •

► [A282327] 1,9,77,534,3320,18933,100770,506697,2428161,11161765,49469005,212246744,884491121,3589900607,14223638534,55122970206,209307080221,779837798559,2854660220661,10278494869342,36439277959593,127311828611819,438712861233581 ⋆ Expansion of exp(Sum _{ n>=1 } sigma _ 3(2 * n) * x ^ n / n) in powers of x. • a(n) = (1 / n) * Sum _{ k=1..n } sigma _ 3(2 * k) * a(n - k). - _ Seiichi Manyama _ , Mar 04 2017 •

► [A126631] 9,77,633,5021,38409,283277,2019033,13963901,94144809,621444077,4031587833,25787305181,163054382409,1021372934477,6349128459033,39222102764861,241061530639209,1475385002210477,8998880800344633,54732125638998941 ⋆ a(n) is the number of nonnegative integers k less than 10 ^ n such that the decimal representation of k lacks the digit 1, at least one of digits 2,3, at least one of digits 4,5 and at least one of digits 6,7,8,9. • a(n) = 16 * 6 ^ n - 40 * 5 ^ n + 44 * 4 ^ n - 26 * 3 ^ n + 8 * 2 ^ n - 1. •

► [A190981] 0,1,9,77,657,5605,47817,407933,3480129,29689429,253284345,2160801389,18434075121,157263470533,1341634934313,11445660526685,97644405002913,833017002919477,7106575406263641,60627110644694861,517217694177199185,4412450805016013221 ⋆ a(n) = 9 * a(n - 1) - 4 * a(n - 2), with a(0)=0, a(1)=1. • a(n) = (1 / 65) * sqrt(65) * ((9 / 2 + (1 / 2) * sqrt(65)) ^ n - (9 / 2 - (1 / 2) * sqrt(65)) ^ n). - _ Paolo P. Lava _ , May 31 2011 •

► [A254659] 1,9,77,661,5673,48689,417877,3586461,30781073,264180889,2267352477,19459724261,167014556473,1433415073089,12302393367077,105586222302061,906201745251873,7777545073525289,66751369314461677,572898679883319861,4916946285638867273 ⋆ Numbers of words on alphabet { 0,1,...,8 } with no subwords ii, where i is from { 0,1,2,3 } . • a(n) = 8 * a(n - 1) + 5 * a(n - 2) with n>1, a(0) = 1, a(1) = 9. • a(n) = ((4 - r) ^ n * (- 5 + r) + (4 + r) ^ n * (5 + r)) / (2 * r), where r=sqrt(21). - _ Colin Barker _ , Jan 22 2017 •

► [A046196] 1,9,77,1519,12987,111035,2190397,18727245,160112393,3158550955,27004674303,230881959671,4554628286713,38940721617681,332931625733189,6567770830889191,56152493568021699,480087173425298867,9470720983513926709,80971856784365672277 ⋆ Indices of square numbers which are also heptagonal . • a(n + 6) = 1442 * a(n + 3) - a(n) with • a(- 2)= - 77; a(- 1)= - 9; a(0)= - 1; a(1)=1; a(2)=9; a(3)=77; • a(3 * k + 1) = (7 * (A - B) / sqrt(10) + 2 * (A + B)) / 4; • a(3 * k + 2) = (57 * (A - B) / sqrt(10) + 18 * (A + B)) / 4; • a(3 * k) = (7 * (A - B) / sqrt(10) - 2 * (A + B)) / 4; •

► [A190980] 0,1,9,78,675,5841,50544,437373,3784725,32750406,283399479,2452344093,21220898400,183631053321,1589016784689,13750257902238,118985270766075,1029616663187961,8909594156393424,77097497417976933,667148694292612125,5773045756379578326 ⋆ a(n) = 9 * a(n - 1) - 3 * a(n - 2), with a(0)=0, a(1)=1. • a(n) = (1 / 69) * sqrt(69) * ((9 / 2 + 1 / 2 * sqrt(69)) ^ n - (9 / 2 - 1 / 2 * sqrt(69)) ^ n). - _ Paolo P. Lava _ , May 31 2011 •

► [A254657] 1,9,78,678,5892,51204,444984,3867096,33606672,292055952,2538087648,22057036896,191684821056,1665820789824,14476675244928,125808326698368,1093326665056512,9501463280642304,82571666235477504,717582109567673856,6236086873954255872 ⋆ Numbers of words on alphabet { 0,1,...,8 } with no subwords ii, where i is from { 0,1,2 } . • a(n) = 8 * a(n - 1) + 6 * a(n - 2) with n>1, a(0) = 1, a(1) = 9. • a(n) = (((4 - sqrt(22)) ^ n * (- 5 + sqrt(22)) + (4 + sqrt(22)) ^ n * (5 + sqrt(22)))) / (2 * sqrt(22)). - _ Colin Barker _ , Nov 16 2016 •

► [A357281] 1,9,79,355,1077,2581,5299,9759,16585,26497,40311,58939,83389,114765,154267,203191,262929,334969,420895,522387,641221,779269,938499,1120975,1328857 ⋆ The numbers of a square spiral with 1 in the center, lying at integer points of the right branch of the parabola y=n ^ 2. • a(n) = 4 * n ^ 4 + 3 * n ^ 2 + n + 1. •

► [A172203] 0,0,9,79,454,1566,4103,9009,17484,30984,51221,80163,120034,173314,242739,331301,442248,579084,745569,945719,1183806,1464358,1792159,2172249,2609924 ⋆ Number of ways to place 4 nonattacking kings on a 4 X n board. • a(n) = (64n ^ 4 - 720n ^ 3 + 3347n ^ 2 - 7569n + 6894) / 6, n>=3. •

► [A198857] 9,79,639,5119,40959,327679,2621439,20971519,167772159,1342177279,10737418239,85899345919,687194767359,5497558138879,43980465111039,351843720888319,2814749767106559,22517998136852479,180143985094819839 ⋆ a(n) = 10 * 8 ^ n - 1. • a(n) = 8 * a(n - 1) + 7. • a(n) = 9 * a(n - 1) - 8 * a(n - 2), n>1. •

► [A126632] 9,79,669,5431,42189,314119,2251629,15625591,105563469,697683559,4529641389,28986744151,183339095949,1148652643399,7141191155949,44118519949111,271168742599629,1659705919705639,10123331198091309,61571999920648471 ⋆ a(n) is the number of nonnegative integers k less than 10 ^ n such that the decimal representation of k lacks the digit 1, at least one of digits 2,3, at least one of digits 4,5,6 and at least one of digits 7,8,9. • a(n) = 18 * 6 ^ n - 45 * 5 ^ n + 48 * 4 ^ n - 27 * 3 ^ n + 8 * 2 ^ n - 1. •

► [A125909] 9,79,681,5791,48729,405919,3340521,27094111,216288249,1699187359,13147825161,100334472031,756309350169,5639967562399,41669245538601,305413957523551,2223312590034489,16091187568891039,115885120813664841,831075819022712671 ⋆ a(n) is the number of nonnegative integers k less than 10 ^ n such that the decimal representation of k lacks the digit 1, at least one of the digits 2,3 and at least one of digits 4,5,6,7,8,9. • a(n) = 12 * 7 ^ n - 36 * 6 ^ n + 55 * 5 ^ n - 50 * 4 ^ n + 27 * 3 ^ n - 8 * 2 ^ n + 1. •

► [A125421] 1,9,79,681,5987,52649,463087,4073225,35827395,315131721,2771845519,24380686185,214448408099,1886252068073,16591155401263,145933007686601,1283602149301635,11290348248219273,99308001030865615 ⋆ Number of base 9 circular n - digit numbers with adjacent digits differing by 7 or less. • a(n) = 1 + (4 - sqrt(23)) ^ n + (4 + sqrt(23)) ^ n for n>0. • a(n) = 9 * a(n - 1) - a(n - 2) - 7 * a(n - 3) for n>3. •

► [A163445] 1,9,79,683,5849,49785,422087,3569323,30132433,254095881,2141117983,18033145355,151831489769,1278083025081,10757082331991,90529250469067,761826636963361,6410698145440905,53943922098894703,453912096548803307 ⋆ a(n) = 14 * a(n - 1) - 47 * a(n - 2) for n > 1; a(0) = 1, a(1) = 9. • a(n) = ((1 + sqrt(2)) * (7 + sqrt(2)) ^ n + (1 - sqrt(2)) * (7 - sqrt(2)) ^ n) / 2. •

► [A190979] 0,1,9,79,693,6079,53325,467767,4103253,35993743,315737181,2769647143,24295349925,213118855039,1869478995501,16399073249431,143852701253877,1261876164786031,11069180080566525,97098868395526663,851751455398606917,7471565361796408927 ⋆ a(n) = 9 * a(n - 1) - 2 * a(n - 2), with a(0)=0, a(1)=1. • a(n) = ((9 / 2 + 1 / 2 * sqrt(73)) ^ n - (9 / 2 - 1 / 2 * sqrt(73)) ^ n) / sqrt(79). - _ Giorgio Balzarotti _ , May 27 2011 • a(n) = 2 ^ ((n - 1) / 2) * ChebyshevU(n - 1, 9 * x / (2 * sqrt(2))). •

► [A254598] 1,9,79,695,6113,53769,472943,4159927,36590017,321839625,2830847119,24899654327,219013164449,1926402895881,16944315318191,149039342816695,1310924949760897,11530674997804041,101421874630758607,892089722030697143,7846670898660887393,69017995243501979145 ⋆ Numbers of n - length words on alphabet { 0,1,...,8 } with no subwords ii, for i from { 0,1 } . ● a(n) = 8 * a(n - 1) + 7 * a(n - 2) with n>1, a(0) = 1, a(1) = 9. ● a(n) = (((4 - sqrt(23)) ^ n * (- 5 + sqrt(23)) + (4 + sqrt(23)) ^ n * (5 + sqrt(23)))) / (2 * sqrt(23)). - _ Colin Barker _ , Sep 08 2016 ●

► [A181279] 0,0,9,79,766,6060,49928,395024,3170784,25244608,201926272,1612664064,12897654272,103124642816,824888150016,6597998055424,52781434593280,422230539485184,3377790630133760,27021938497224704,216174442832068608 ⋆ Number of 3 X n binary matrices M with rows in strictly increasing order and rows of M * Mtranspose (mod 2) in strictly decreasing order. ● a(n) = 14 * a(n - 1) - 36 * a(n - 2) - 216 * a(n - 3) + 1056 * a(n - 4) - 384 * a(n - 5) - 3584 * a(n - 6) + 4096 * a(n - 7) for n>9. ●

► [A173808] 9,79,779,7779,77779,777779,7777779,77777779,777777779,7777777779,77777777779,777777777779,7777777777779,77777777777779,777777777777779,7777777777777779 ⋆ (7 * 10 ^ n + 11) / 9 for n>0. ● a(n) = 10 * a(n - 1) - 11 with n>0, a(0)=2. ● a(n) = 11 * a(n - 1) - 10 * a(n - 2). - _ Vincenzo Librandi _ , Jul 05 2012 ●

► [A081108] 1,9,80,704,6144,53248,458752,3932160,33554432,285212672,2415919104,20401094656,171798691840,1443109011456,12094627905536,101155069755392,844424930131968,7036874417766400,58546795155816448,486388759756013568 ⋆ 8th binomial transform of (1,1,0,0,0,0,...). ● a(n) = 16 * a(n - 1) - 64 * a(n - 2), a(0) = 1, a(1) = 9. ● a(n) = (n + 8) * 8 ^ (n - 1). ●

► [A176174] 1,9,80,710,6300,55900,496000,4401000,39050000,346490000,3074400000,27279100000,242047000000,2147679000000,19056320000000,169086410000000,1500300900000000,13312144900000000,118118440000000000 ⋆ Starting with 1, multiply the n - th term by 10, then subtract the sum of all terms up to and including the n - th, to make the (n + 1)th term. ● a(n + 1) = 10 * a(n) - sum(k= 1..n - 1, a(k)). ● a(n)= 10 * a(n - 1) - 10 * a(n - 2). G.f.: x * (1 - x) / (1 - 10 * x + 10 * x ^ 2). [_ R. J. Mathar _ , Apr 14 2010] ●

► [A018913] 0,1,9,80,711,6319,56160,499121,4435929,39424240,350382231,3114015839,27675760320,245967827041,2186034683049,19428344320400,172669064200551,1534593233484559,13638670037160480,121213437100959761 ⋆ a(n) = 9 * a(n - 1) - a(n - 2) for n>1, a(0)=0, a(1)=1. ● a(n) = S(2 * n - 1, sqrt(11)) / sqrt(11) = S(n - 1, 9); S(n, x) := U(n, x / 2), Chebyshev polynomials of 2nd kind, A049310. S(- 1, x) := 0. ● a(n) = (((9 + sqrt(77)) / 2) ^ n - ((9 - sqrt(77)) / 2) ^ n) / sqrt(77). - _ Barry E. Williams _ , Aug 21 2000 ● a(n) = Sum _{ k = 0..n - 1 } binomial(n + k, 2 * k + 1) * 7 ^ k = Sum _{ k = 0..n - 1 } (- 1) ^ (n + k + 1) * binomial(n + k, 2 * k + 1) * 11 ^ k. - _ Peter Bala _ , Jul 17 2023 ●

► [A208502] 9,81,126,324,828,2124,5436,13932,35676,91404,234108,599724,1536156,3935052,10079676,25819884,66138588,169418124,433972476,1111644972,2847534876,7294114764,18684254268,47860713324,122597730396 ⋆ Number of 4 X n 0..1 arrays avoiding 0 0 0 and 0 0 1 horizontally and 0 1 0 and 1 1 1 vertically. ● a(n) = (9 * 2 ^ (- 6 - n) * ((1 - sqrt(17)) ^ n * (- 109 + 27 * sqrt(17)) + (1 + sqrt(17)) ^ n * (109 + 27 * sqrt(17)))) / sqrt(17) for n>2. ●

► [A016946] 9,81,225,441,729,1089,1521,2025,2601,3249,3969,4761,5625,6561,7569,8649,9801,11025,12321,13689,15129,16641,18225,19881,21609 ⋆ a(n) = (6 * n + 3) ^ 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A208114] 9,81,225,625,1225,2401,3969,6561,9801,14641,20449,28561,38025,50625,65025,83521,104329,130321,159201,194481,233289,279841,330625,390625,455625 ⋆ Number of n X 4 0..1 arrays avoiding 0 0 0 and 0 1 0 horizontally and 0 0 1 and 0 1 1 vertically. ● a(n) = n ^ 4 + 4 * n ^ 3 + 6 * n ^ 2 + 4 * n + 1 for n even. ● a(n) = n ^ 4 + 4 * n ^ 3 + 4 * n ^ 2 for n odd. ●

► [A208556] 9,81,225,1089,3969,16641,65025,263169,1046529,4198401,16769025,67125249,268402689,1073807361,4294836225,17180131329,68718952449,274878955521,1099509530625,4398050705409,17592177655809,70368760954881 ⋆ Number of 4 X n 0..1 arrays avoiding 0 0 0 and 0 0 1 horizontally and 0 0 1 and 0 1 1 vertically. ● a(n) = (2 ^ (n + 1) + 1) ^ 2 for n even. ● a(n) = (2 ^ (n + 1) - 1) ^ 2 for n odd. ●

► [A207020] 9,81,252,558,1035,1719,2646,3852,5373,7245,9504,12186,15327,18963,23130,27864,33201,39177,45828,53190,61299,70191,79902,90468,101925 ⋆ Number of n X 4 0..1 arrays avoiding 0 0 0 and 0 1 1 horizontally and 0 0 1 and 1 0 1 vertically. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>4. ●

► [A207165] 9,81,261,603,1161,1989,3141,4671,6633,9081,12069,15651,19881,24813,30501,36999,44361,52641,61893,72171,83529,96021,109701,124623,140841 ⋆ Number of n X 4 0..1 arrays avoiding 0 0 0 and 1 0 1 horizontally and 0 0 1 and 1 0 1 vertically. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>4. ●

► [A209646] 9,81,270,630,1215,2079,3276,4860,6885,9405,12474,16146,20475,25515,31320,37944,45441,53865,63270,73710,85239,97911,111780,126900,143325 ⋆ Number of n X 4 0..1 arrays avoiding 0 0 1 and 1 0 0 horizontally and 0 0 1 and 1 0 1 vertically. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>4. ●

► [A207107] 9,81,271,643,1271,2239,3641,5581,8173,11541,15819,21151,27691,35603,45061,56249,69361,84601,102183,122331,145279,171271,200561,233413,270101 ⋆ Number of n X 4 0..1 arrays avoiding 0 0 0 and 0 1 1 horizontally and 0 0 1 and 1 1 0 vertically. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

► [A207064] 9,81,288,720,1485,2709,4536,7128,10665,15345,21384,29016,38493,50085,64080,80784,100521,123633,150480,181440,216909,257301,303048,354600,412425 ⋆ Number of n X 4 0..1 arrays avoiding 0 0 1 and 0 1 0 horizontally and 0 0 1 and 1 0 1 vertically. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

► [A207399] 9,81,289,729,1521,2809,4761,7569,11449,16641,23409,32041,42849,56169,72361,91809,114921,142129,173889,210681,253009,301401,356409,418609,488601 ⋆ Number of n X 4 0..1 arrays avoiding 0 0 1 and 0 1 1 horizontally and 0 0 1 and 1 1 0 vertically. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

► [A208138] 9,81,324,900,2025,3969,7056,11664,18225,27225,39204,54756,74529,99225,129600,166464,210681,263169,324900,396900,480249,576081,685584,810000,950625 ⋆ Number of n X 4 0..1 arrays avoiding 0 0 1 and 0 1 1 horizontally and 0 0 1 and 1 0 1 vertically. ● a(n) = 9 * (n ^ 2 * (1 + n) ^ 2) / 4. ●

► [A208079] 9,81,441,2601,15129,88209,514089,2996361,17464041,101787921,593263449,3457792809,20153493369,117463167441,684625511241,3990289900041,23257113888969,135552393433809,790057246713849,4604791086849321 ⋆ Number of 4 X n 0..1 arrays avoiding 0 0 0 and 0 0 1 horizontally and 0 0 0 and 0 1 0 vertically. ● a(n) = (9 / 4) * (2 * (- 1) ^ n + (3 - 2 * sqrt(2)) ^ n + (3 + 2 * sqrt(2)) ^ n). ●

► [A223719] 9,81,484,2116,7396,21904,57121,134689,292681,594441,1140624,2085136,3655744,6180196,10118761,16104169,24990001,37908649,56340036,82192356,117896164,166513216,231861529,318658201,432681601 ⋆ Number of n X 2 0..2 arrays with rows, antidiagonals and columns unimodal. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>9. ●

► [A343462] 9,81,525,3105,18939,114381,693129,4195557,25405586,153820395,931359050,5639156409,34143908573,206733865761,1251728824798,7578945799704,45888871327435,277847147039527,1682304127857000,10185986079451152,61673933253012813,373422269794761171,2260990733622821388 ⋆ Number of n - digit positive integers that undulate. ● a(n) = 45 * a(n - 2) - 330 * a(n - 4) + 924 * a(n - 6) - 1287 * a(n - 8) + 1001 * a(n - 10) - 455 * a(n - 12) + 120 * a(n - 14) - 17 * a(n - 16) + a(n - 18) for n >= 20. - _ Michael S. Branicky _ , Apr 17 2021 ● a(n) = 5 * a(n - 1) + 10 * a(n - 2) - 20 * a(n - 3) - 15 * a(n - 4) + 21 * a(n - 5) + 7 * a(n - 6) - 8 * a(n - 7) - a(n - 8) + a(n - 9) for n > 10. ●

► [A073531] 9,81,648,4536,27216,136080,544320,1632960,3265920,3265920 ⋆ Number of n - digit positive integers with all digits distinct. ● a(n) = 9 * 9! / (10 - n)!. ●

► [A125910] 9,81,723,6381,55539,475461,3993243,32857101,264890019,2094889941,16282118763,124625344221,941303216499,7029057066021,51980086628283,38122720718174 1,2776407821318979,20100192515299701,144786930345697803,1038495372200033661 ⋆ a(n) is the number of nonnegative integers k less than 10 ^ n such that the decimal representation of k lacks the digit 1, at least one of digits 2,3,4 and at least one of digits 5,6,7,8,9. ● a(n) = 15 * 7 ^ n - 45 * 6 ^ n + 65 * 5 ^ n - 55 * 4 ^ n + 28 * 3 ^ n - 8 * 2 ^ n + 1. ●

► [A125947] 9,81,729,6513,57369,495921,4194969,34689393,280607769,2224214961,17313344409,132651929073,1002605145369,7490229758001,55407572177049,406450276733553,2960529995462169,21435301615525041,154414691892116889,1107604165960750833 ⋆ a(n) is the number of nonnegative integers k less than 10 ^ n such that the decimal representation of k lacks the digit 1, at least one of digits 2,3,4,5 and at least one of digits 6,7,8,9. ● a(n) = 16 * 7 ^ n - 48 * 6 ^ n + 68 * 5 ^ n - 56 * 4 ^ n + 28 * 3 ^ n - 8 * 2 ^ n + 1. ●

► [A125630] 9,81,729,6561,59049,531441,4782969,43006401,385606089,3440214801,30482931609,267934415841,2334817386729,20170171738161,172797111134649,1468818073594881,12396189742824969,103943773544221521,866556801437680089,7187319207979903521 ⋆ a(n) is the number of integers k less than 10 ^ n such that the decimal representation of k lacks the digit 1 and at least one of digits 2,3,4,5,6,7,8,9. ● a(n) = 8 * 8 ^ n - 28 * 7 ^ n + 56 * 6 ^ n - 70 * 5 ^ n + 56 * 4 ^ n - 28 * 3 ^ n + 8 * 2 ^ n - 1. ●

► [A100062] 9,81,729,6561,59049,531441,4782969,43046721,387420489,3486784401,31381059609,282429536481,2541865828329,22876792454961,205891132094649,1853020188851841,16677181699666569,150094635296999121 ⋆ Denominator of the probability that an integer n occurs in the cumulative sums of the decimal digits of a random real number between 0 and 1. ● a(n) = 9 ^ n. - _ Max Alekseyev _ , Mar 03 2007 ● a(n) = 9 * a(n - 1), n>1; a(1)=9. ●

► [A001019] 1,9,81,729,6561,59049,531441,4782969,43046721,387420489,3486784401,31381059609,282429536481,2541865828329,22876792454961,205891132094649,1853020188851841,16677181699666569,150094635296999121,1350851717672992089,12157665459056928801 ⋆ Powers of 9: a(n) = 9 ^ n. ● a(n) = 9 ^ n. ● a(0) = 1, a(n) = 9 * a(n - 1) for n > 0. ● a(n) = det(|v(i + 2,j)|, 1 <= i,j <= n), where v(n,k) are central factorial numbers of the first kind with odd indices. - _ Mircea Merca _ , Apr 04 2013 ●

► [A158779] 1,9,81,729,7290,66339,597780,5380749,53210439,488460618,4410495198,39713589387,388827279666,3593617394364,32530876388442,293091736356549,2844187518245175,26421911242667379,239856991227235341 ⋆ Expansion of (1 + 8 * x + 72 * x ^ 2 + 648 * x ^ 3) / (1 - x - 6561 * x ^ 4). ● a(n)= a(n - 1) + 6561 * a(n - 4). [From R. J. Mathar, Mar 31 2009] ●

► [A033145] 1,9,81,730,6570,59130,532171,4789539,43105851,387952660,3491573940,31424165460,282817489141,2545357402269,22908216620421,206173949583790,1855565546254110,16700089916286990,150300809246582911,1352707283219246199,12174365548973215791 ⋆ Base 9 digits are, in order, the first n terms of the periodic sequence with initial period 1,0,0. ● a(n) = + 9 * a(n - 1) + a(n - 3) - 9 * a(n - 4). G.f.: x / ((x - 1) * (9 * x - 1) * (1 + x + x ^ 2)). - _ R. J. Mathar _ , Jan 08 2011 ● a(n) = floor((81 / 728) * 9 ^ n). - _ Tani Akinari _ , Jul 18 2014 ●

► [A158762] 1,9,81,738,6642,59787,544644,4901805,44129367,401947281,3617545212,32572255824,296637113061,2669762715372,24041811608757,218918218136841,1970298831114945,17745398880920694,161561679852872034 ⋆ Expansion of (1 + 9 * x + 80 * x ^ 2) / (1 - x ^ 2 - 729 * x ^ 3). ● a(n)=a(n - 2) + 729 * a(n - 3). [From R. J. Mathar, Mar 26 2009] ●

► [A101601] 1,9,81,756,7290,72171,729729,7505784,78298974,826489170,8811646074,94753804536,1026499549140,11192793160815,122744496427425,1352917116177840,14979996753469110,166542316847391870,1858400773709785470,20806975169765062200,233671377667405024620 ⋆ G.f.: c(3x) ^ 3, c(x) the g.f. of A000108. ● a(n) = (3 * n + 3) / (n + 3) * 3 ^ n * C(n + 1). ●

► [A199689] 9,81,801,8001,80001,800001,8000001,80000001,800000001,8000000001,80000000001,800000000001,8000000000001,80000000000001,800000000000001,8000000000000001,80000000000000001 ⋆ a(n) = 8 * 10 ^ n + 1. ● a(n) = 10 * a(n - 1) - 9. ● a(n) = 11 * a(n - 1) - 10 * a(n - 2). ●

► [A366273] 1,1,9,81,849,9681,116601,1459809,18809121,247782369,3322209001,45187029809,621970864241,8647376531249,121261376439641,1713085987837889,24358211622230081,348325689458584769,5006342381846708681,72279683684984063249,1047789195353379807121 ⋆ G.f. A(x) satisfies A(x) = 1 + x * (1 + x) ^ 4 * A(x) ^ 5. • a(n) = Sum _{ k=0..n } binomial(4 * k,n - k) * binomial(5 * k,k) / (4 * k + 1). •

► [A061433] 9,81,961,9801,99856,998001,9998244,99980001,999950884,9999800001,99999515529,999998000001,9999995824729,99999980000001,999999961946176,9999999800000001,99999999989350756,999999998000000001 ⋆ Largest n - digit square. • a(n) = (ceiling(10 ^ (n / 2)) - 1) ^ 2. - Antonio G. Astudillo (afg _ astudillo(AT)lycos.com), Mar 30 2003 •

► [A371640] 9,81,2187,6561,59049,1594323,4782969,43046721,3486784401,348678440 1,31381059609,847288609443,2541865828329,22876792454961,617673396283947,1853020188851841,16677181699666569,135085171767299208 9,1350851717672992089,12157665459056928801,328256967394537077627 ⋆ a(n) = 3 ^ (2 * n + valuation(n, 3)) = 3 ^ A371638(n). • a(n) = denominator(Voronoi(3, 2 * n)) where Voronoi(c, n) = ((c ^ n - 1) * Bernoulli(n)) / (n * c ^ (n - 1)). •

► [A288789] 1,9,82,701,5897,49854,427597,3740609,33479542,307119477,2890138160,27911144971,276632735047,2813333368854,29349063282197,313940448544057,3441759044602385,38652680805862224,444450158120668786,5229815283321976222,62942722623990478840 ⋆ Number of blocks of size >= 7 in all set partitions of n. • a(n) = Bell(n + 1) - Sum _{ j=0..6 } binomial(n,j) * Bell(n - j). • a(n) = Sum _{ j=0..n - 7 } binomial(n,j) * Bell(j). •

► [A033119] 1,9,82,738,6643,59787,538084,4842756,43584805,392263245,3530369206,31773322854,285959905687,2573639151183,23162752360648,208464771245832,1876182941212489,16885646470912401,151970818238211610 ⋆ Base - 9 digits are, in order, the first n terms of the periodic sequence with initial period 1,0. • a(n) = round((9 * 9 ^ n - 9) / 80) = round((9 * 9 ^ n - 5) / 80) = floor((9 * 9 ^ n - 1) / 80) = ceiling((9 * 9 - 9) / 80); a(n) = a(n - 2) + 9 ^ (n - 1), n > 1. - _ Mircea Merca _ , Dec 28 2010 • a(n) = 9 * a(n - 1) + a(n - 2) - 9 * a(n - 3). (End) •

► [A033127] 1,9,82,739,6651,59860,538741,4848669,43638022,392742199,3534679791,31812118120,286309063081,2576781567729,23191034109562,208719306986059,1878473762874531,16906263865870780,152156374792837021,1369407373135533189,12324666358219798702 ⋆ Base 9 digits are, in order, the first n terms of the periodic sequence with initial period 1,0,1. • a(n) = 9 * a(n - 1) + a(n - 3) - 9 * a(n - 4). • a(n) = floor((41 / 364) * 9 ^ n). - _ Kevin Ryde _ , Apr 26 2023 •

► [A361715] 0,1,9,82,745,6876,64764,621860,6070761,60085720,601493134,6078225792,61907445340,634751002718,6545478537810,67830084149832,705950951578089,7375212511115184,77310175072063914,812839577957617640,8569327793354169870,90562666708303706642,959212007563384494522,10180245921386807485152 ⋆ a(n) = Sum _{ k = 0..n - 1 } binomial(n,k) ^ 2 * binomial(n + k - 1,k). • a(n) = hypergeom([- n, - n, n], [1, 1], 1) - binomial(2 * n - 1, n). This is another way to write the first formula. - _ Peter Luschny _ , Mar 27 2023 •

► [A099371] 0,1,9,82,747,6805,61992,564733,5144589,46866034,426938895,3889316089,35430783696,322766369353,2940328107873,26785719340210,244011802169763,2222891938868077,20250039251982456,184473245206710181,1680509246112374085,15309056460218076946 ⋆ Expansion of g.f.: x / (1 - 9 * x - x ^ 2). • a(n) = 9 * a(n - 1) + a(n - 2), n >= 2, a(0)=0, a(1)=1. • a(n) = (- i) ^ (n - 1) * S(n - 1, 9 * i) with S(n, x) Chebyshev's polynomials of the second kind (see A049310) and i ^ 2= - 1. • a(n) = (ap ^ n - am ^ p) / (ap - am) with ap:= (9 + sqrt(85)) / 2 and am:= (9 - sqrt(85)) / 2 = - 1 / ap (Binet form). • a(n) = Sum _{ k =0..floor((n - 1) / 2) } binomial(n - 1 - k, k) * 9 ^ (n - 1 - 2 * k) n >= 1. • a(n) = F(n, 9), the n - th Fibonacci polynomial evaluated at x=9. - _ T. D. Noe _ , Jan 19 2006 • a(n) = ((9 + sqrt(85)) ^ n - (9 - sqrt(85)) ^ n) / (2 ^ n * sqrt(85)). Offset 1. a(3)=82. - Al Hakanson (hawkuu(AT)gmail.com), Jan 12 2009 •

► [A334611] 0,9,82,747,7065,69098,694272,7127865,74468546,789265125,8466019380,91736269053,1002710879409,11042713886256,122413333216960,1364880618458565,15296452128008100,172218124701600741,1946960139291303222,22092883135853433030,251545025683283255770 ⋆ a(n) is the total number of down - steps after the final up - step in all 4 _ 2 - Dyck paths of length 5 * n (n up - steps and 4 * n down - steps). • a(n) = 3 * binomial(5 * (n + 1) + 3, n + 1) / (5 * (n + 1) + 3) - 9 * binomial(5 * n + 3, n) / (5 * n + 3). •

► [A163460] 1,9,82,754,6980,64932,606152,5672648,53180944,499190928,4689836320,44087543584,414630845504,3900665825856,36703540792448,345415371476096,3251026414485760,30600669600254208,288047075905950208 ⋆ a(n) = 16 * a(n - 1) - 62 * a(n - 2) for n > 1; a(0) = 1, a(1) = 9. • a(n) = ((2 + sqrt(2)) * (8 + sqrt(2)) ^ n + (2 - sqrt(2)) * (8 - sqrt(2)) ^ n) / 4. •

► [A060531] 1,9,82,756,7048,66384,631072,6048576,58388608,567108864,5536870912,54294967296,534359738368,5274877906944,52199023255552,517592186044416,5140737488355328,51125899906842624,509007199254740992,5072057594037927936,50576460752303423488 ⋆ 9th binomial transform of (1,0,1,0,1,...), A059841. • a(n) = (8 ^ n + 10 ^ n) / 2 = 2 ^ (n - 1) * (4 ^ n + 5 ^ n). • a(n) = 18 * a(n - 1) - 80 * a(n - 2), a(0) = 1, a(1) = 9. • a(n) = 8 * a(n - 1) + 10 ^ (n - 1), a(1) = 9. •

► [A248848] 1,9,82,765,7129,66420,618841,5765805,53720578,500519961,4663394209,43449307200,404821512289,3771762252921,35141883671458,327420421855365,3050608602778201,28422823459498740,264818270254044889,2467338136208552925,22988434568917776562,214185529001504000169 ⋆ Norm of coefficients in the expansion of 1 / (1 - 3 * x - I * x ^ 2), where I ^ 2= - 1. • a(n) = 9 * a(n - 1) + 2 * a(n - 2) + 9 * a(n - 3) - a(n - 4). - _ Vaclav Kotesovec _ , Nov 09 2014 • a(n) = (T(n,a) - T(n,b)) / (a - b), where T(n,x) denotes the Chebyshev polynomial of the first kind and where a = (9 + sqrt(97)) / 4 and b = (9 - sqrt(97)) / 4 denote the roots of the quadratic equation x ^ 2 - 9 / 2 * x - 1 = 0. • a(n) = the bottom left entry of the 2 X 2 matrix 2 * T(n,1 / 2 * M), where M is the 2 X 2 matrix [0, 4; 1, 9]. See A100047. (End) •

► [A045741] 1,9,82,765,7266,69930,679764,6659037,65635570,650194974,6467730204,64562259762,646399361076,6488447895540,65276186864232,657998685456093,6644370824416530,67198463606576790,680568874690989900 ⋆ Number of edges in all noncrossing connected graphs on n nodes on a circle. • a(n) = Sum _{ k = n - 1 .. 2 * n } (k * binomial(3 * n - 3, n + k) * binomial(k - 1, k - n + 1)) / (n - 1). • a(n) = 1 mod 3 if n in A103457; a(n) = 0 mod 3 otherwise [Eu et al.]. - _ R. J. Mathar _ , Feb 27 2008 •

► [A015579] 0,1,9,83,765,7051,64989,599003,5521005,50887051,469025469,4323003323,39845080845,367251734251,3384955769949,31199105398043,287561860122285,2650454951896651,24429218287314429,225163874489623163,2075333306981237325,19128327511810382251 ⋆ Expansion of g.f. x / (1 - 9 * x - 2 * x ^ 2). • a(n) = 9 * a(n - 1) + 2 * a(n - 2). • a(n) = (1 / 89) * sqrt(89) * (((9 / 2) + (1 / 2) * sqrt(89)) ^ n - ((9 / 2) - (1 / 2) * sqrt(89)) ^ n), with n>=0. - _ Paolo P. Lava _ , Jan 13 2009 •

► [A162759] 1,9,83,779,7401,70897,682891,6601539,63968273,620798489,6030711171,58622670907,570089353081,5545446723969,53951697045563,524954902566899,5108224921291041,49709349684075817,483747874746459571 ⋆ a(n) = 16 * a(n - 1) - 61 * a(n - 2) for n > 1; a(0) = 1, a(1) = 9. • a(n) = ((3 + sqrt(3)) * (8 + sqrt(3)) ^ n + (3 - sqrt(3)) * (8 - sqrt(3)) ^ n) / 6. •

► [A147960] 1,9,83,783,7537,73809,733139,7365591,74662657,762046137,78184805 63,80531005311,831898131121,8612216940609,89299952572403,927034007995143,9631915890692737,100138799400852969,1041577033850627219 ⋆ a(n) = ((9 + sqrt(2)) ^ n + (9 - sqrt(2)) ^ n) / 2. • a(n) = 18 * a(n - 1) - 79 * a(n - 2), n > 1; a(0)=1, a(1)=9. •

► [A181353] 0,1,9,84,783,7299,68040,634257,5912433,55114668,513769311,4789267803,44644718160,416170266849,3879466556121,36163709805636,337111787919087,3142497220688691,29293810349955480,273071784811665393,2545527494354854977,23728962803628690972 ⋆ a(n) = 9 * a(n - 1) + 3 * a(n - 2); a(0) = 0, a(1) = 1. • a(n) = ((9 + sqrt(93)) ^ n - (9 - sqrt(93)) ^ n) / (2 ^ n * sqrt(93)). - _ Rolf Pleisch _ , May 14 2011 •

► [A152056] 1,9,84,810,8028,81324,837648,8734392,91882512,972602640,10340011584,110257202592,1178108743104,12605895573696,135013638364416,1446985635811200,15514677652177152,166399318145915136 ⋆ a(n) = ((9 + sqrt(3)) ^ n + (9 - sqrt(3)) ^ n) / 2. • a(n) = 18 * a(n - 1) - 78 * a(n - 2), n > 1; a(0)=1, a(1)=9. •

► [A228417] 1,9,85,708,6635,60640,535534,4737129,43297195,392641522,3536880527,31067514571 ⋆ Count of the first 10 ^ n primes which do not contain the digit 5. • a(n) <= 9 ^ n. - _ Charles R Greathouse IV _ , May 21 2014 •

► [A015580] 0,1,9,85,801,7549,71145,670501,6319089,59553805,561260601,5289560629,49851088065,469818035101,4427766668169,41729172153925,393273616058001,3706379233137709,34930507562471385,329200084994793301,3102522795203025249,29239505496806400445 ⋆ Expansion of x / (1 - 9 * x - 4 * x ^ 2). • a(n) = 9 * a(n - 1) + 4 * a(n - 2). • a(n) = (1 / 97) * sqrt(97) *{ [(9 / 2) + (1 / 2) * sqrt(97)] ^ n - [(9 / 2) - (1 / 2) * sqrt(97)] ^ n } , with n>=0. - _ Paolo P. Lava _ , Jan 13 2009 •

► [A163308] 1,9,85,829,8249,83073,842477,8578325,87547057,894631737,9148831429,93598030381,957787431785,9802315116081,100327583381981,1026904742262917,10511148456669793,107590995513204585 ⋆ a(n) = 16 * a(n - 1) - 59 * a(n - 2) for n > 1; a(0) = 1, a(1) = 9. • a(n) = ((5 + sqrt(5)) * (8 + sqrt(5)) ^ n + (5 - sqrt(5)) * (8 - sqrt(5)) ^ n) / 10. •

► [A108427] 1,9,85,833,8361,85305,880685,9173505,96220561,1014889769,10753517061,114375683009,1220435354425,13058529727833,140059477112925,1505357362548737,16209464357137953,174827809500822345,1888383038494338485,20424130116241366593,221164921352046545609,2397512484385887298681 ⋆ Number of peaks of the form Ud in all paths from (0,0) to (3n,0) that stay in the first quadrant (but may touch the horizontal axis), consisting of steps u=(2,1), U=(1,2), or d=(1, - 1). • a(n) = (1 / n) * Sum _{ k=0..n } k * binomial(n, k) * binomial(3n - k, n - 1). • a(n) = binomial(3 * n - 1, n - 1) * hypergeom([1 - n, - 2 * n], [1 - 3 * n], - 1). - _ Peter Luschny _ , Oct 06 2015 • a(n) = hypergeom([- n, n, - n + 1], [1 / 2, 1], 1). - _ Peter Luschny _ , Mar 14 2018 • a(n) = P(n - 1, n + 1, 0, 3), where P is the Jacobi Polynomial. - _ Richard Turk _ , Jun 25 2018 •

► [A152106] 1,9,85,837,8521,88929,944605,10155357,110061841,1199150649,13109949925,143644498677,1576134831961,17309800577169,190214028328045,2090997865462797,22991481397070881,252839829506640489 ⋆ a(n) = (11 ^ n + 7 ^ n) / 2. • a(n) = ((9 + sqrt(4)) ^ n + (9 - sqrt(4)) ^ n) / 2. • a(n) = 18 * a(n - 1) - 77 * a(n - 2), n > 1; a(0)=1, a(1)=9. •

► [A015581] 0,1,9,86,819,7801,74304,707741,6741189,64209406,611590599,5825362421,55486214784,528502745161,5033955780369,47948115749126,456702820643979,4350065964541441,41434107784092864,394657299879542981,3759086237836351149,3580506263992487524 6 ⋆ a(n) = 9 * a(n - 1) + 5 * a(n - 2). • a(n) = (1 / 101) * sqrt(101) * (((9 / 2) + (1 / 2) * sqrt(101)) ^ n - ((9 / 2) - (1 / 2) * sqrt(101)) ^ n). - _ Paolo P. Lava _ , Jan 13 2009 •

► [A152261] 1,9,86,864,9016,96624,1054016,11628864,129214336,1442064384,16136869376,180866755584,2029199527936,22779718078464,255815761289216,2873425129242624,32279654468386816,362653470608523264 ⋆ a(n) = ((9 + sqrt(5)) ^ n + (9 - sqrt(5)) ^ n) / 2. • a(n) = 18 * a(n - 1) - 76 * a(n - 2), n > 1; a(0)=1, a(1)=9. • a(n) = m ^ n * (ChebyshevU(n, 9 / m) - (9 / m) * ChebyshevU(n - 1, 9 / m)), where m = 2 * sqrt(19). - _ G. C. Greubel _ , May 23 2023 •

► [A153191] 0,1,9,87,837,8055,77517,745983,7178949,69086439,6648516456398183439,615727608215925434980235702332097133,54876252562335,5281002656438135082159906168327,4890804074937821,470665326181410351 ⋆ a(n) = 9 * a(n - 1) + 6 * a(n - 2); a(0)=0, a(1)=1. • a(n) = ((9 + sqrt(105)) ^ n - (9 - sqrt(105)) ^ n) / (2 ^ n * sqrt(105)), with n >= 0. - _ Paolo P. Lava _ , Dec 22 2008 •

► [A223277] 9,87,849,8295,81057,792087,7740273,75637959,739134273,7222821495,70581425169,689721818919,6739962906081,65862930139863,643612676665521,6289384281642375,61459874978079873,600586013379170103 ⋆ Rolling icosahedron face footprints: number of n X 3 0..19 arrays starting with 0 where 0..19 label faces of an icosahedron and every array movement to a horizontal, diagonal or antidiagonal neighbor moves across an icosahedral edge. • a(n) = (2 ^ (- 1 - n) * ((11 - sqrt(73)) ^ n * (- 7 + sqrt(73)) + (7 + sqrt(73)) * (11 + sqrt(73)) ^ n)) / sqrt(73). •

► [A152264] 1,9,87,891,9513,104409,1165887,13155291,149353713,1701720009,19429431687,222100769691,2540606477913,29073358875609,332774973917487,3809447614844091,43611934023382113,499306241307571209 ⋆ a(n) = ((9 + sqrt(6))

^ n + (9 - sqrt(6)) ^ n) / 2. ● a(n) = 18 * a(n - 1) - 75 * a(n - 2), n > 1; a(0)= 1, a(1)=9. ●

► [A015583] 0,1,9,88,855,8311,80784,785233,7632585,74189896,721137159,7009563703,681340334440,6622732468 81,6437397456009,62572489832248,608214190682295,5911935144966391,57464915639473584,558567786770026993,54293644904065 58025,527742549210492 11176 ★ a(0) = 0, a(1) = 1; for n >= 2, a(n) = 9 * a(n - 1) + 7 * a(n - 2). ● a(n) = (1 / 109) * sqrt(109) * (((9 + sqrt(109)) / 2) ^ n - ((9 - sqrt(109)) / 2) ^ n), with n >= 0. - _ Paolo P. Lava _ , Jan 13 2009 ●

► [A152266] 1,9,88,918,10012,112284,1280224,14735016,170493712,1978495632,22996386688,267526283616,3113740490176,36250383835584,422090112767488,4915093625981568,57237016922874112,666549376289097984 ★ a(n) = ((9 + sqrt(7)) ^ n + (9 - sqrt(7)) ^ n) / 2. ● a(n) = 18 * a(n - 1) - 74 * a(n - 2), n > 1; a(0)= 1, a(1)=9. ●

► [A231155] 9,88,999,9999,77777,999999,9999999,88888888,999999999,9999999999,77777777777,999999999999,9999999999999,88888888888888,999999999999999,999999999999999,7777777777777777,99999999999999999,999999999999999999 ★ Largest k such that no sum of digits is divisible by n (zeros not allowed in the digits of k). ● a(n) consists of n - 1 digits of d where d is the largest digit such that GCD(n,d)=1. ●

► [A055410] 1,9,89,425,1281,3121,6577,11833,20185,32633,49689,72465,102353,140945,190121,250553,323721,411913,519025,643441,789905,961721,1156217,1380729,1638241 ★ Number of points in Z ^ 4 of norm <= n. ● a(n) = [x ^ (n ^ 2)] theta _ 3(x) ^ 4 / (1 - x), where theta _ 3() is the Jacobi theta function. - _ Ilya Gutkovskiy _ , Apr 14 2018 ●

► [A133486] 9,89,789,6789,56789,456789,3456789,23456789,123456789,9123456789,89123456789,789123456789,6789123456789,56789123456789,456789123456789,3456789123456789,23456789123456789,123456789123456789,9123456789123456789,89123456789123456789 ★ a(n) = Sum _{ k = 0 to n - 1 } (subtract k modulo 9 from 9, multiply this by k - th power of 10). ● a(n) = sum(0 to n - 1, ((9 - (k % 9)) * 10 ^ k)). ●

► [A198967] 9,89,809,7289,65609,590489,5314409,47829689,430467209,3874204889,34867844009,313810596089,2824295364809,25418658283289,228767924549609,2058911320946489,18530201888518409,166771816996665689,1500946352969991209 ★ 10 * 9 ^ n - 1. ● a(n) = 9 * a(n - 1) + 8. a(n) = 10 * a(n - 1) - 9 * a(n - 2), n>1. ●

► [A320093] 1,9,89,809,7369,66329,597769,5380009,48426649,435840569,3922624969,35303624809,317733161289,2859598458169,25736390906489,231627518218169,2084647707070009,18761829363630889,168856464660630009,1519708181946200889,13677373641002598169 ★ Number of primitive (=aperiodic) 9 - ary words with length less than or equal to n which are earlier in lexicographic order than any other word derived by cyclic shifts of the alphabet. ● a(n) = Sum _{ j=1..n } Sum _{ d|j } 9 ^ (d - 1) * mu(j / d). ●

► [A015584] 0,1,9,89,873,8569,84105,825497,8102313,79524793,780541641,7661073113,75193991145,738034505209,7243862476041,71099038326041,697842244742697,6849372509292601,67227090541574985,659838794948515673,6476365878869240937,63566003269411293817 ★ Expansion of x / (1 - 9 * x - 8 * x ^ 2). ● a(n) = 9 * a(n - 1) + 8 * a(n - 2). ● a(n) = (- ((9 - sqrt(113)) / 2) ^ n + ((9 + sqrt(113)) / 2) ^ n) / sqrt(113). - _ Colin Barker _ , May 16 2017 ●

► [A072256] 1,1,9,89,881,8721,86329,854569,8459361,83739041,828931049,8205571449,81226783441,804062262961,7959395846169,78789896198729,779939566141121,7720605765212481,76426118085983689,756540575094624409 ★ a(n) = 10 * a(n - 1) - a(n - 2) for n > 1, a(0) = a(1) = 1. ● a(n) = (3 - sqrt(6)) / 6 * (5 + 2 * sqrt(6)) ^ n + (3 + sqrt(6)) / 6 * (5 - 2 * sqrt(6)) ^ n. ● a(n) = U(n - 1, 5) - U(n - 2, 5) = T(2 * n - 1, sqrt(3)) / sqrt(3) with Chebyshev's U - and T - polynomials and U(- 1, x) := 0, U(- 2, x) := - 1, T(- 1, x) := x. ● a(n) * a(n + 3) = 80 + a(n + 1) * a(n + 2). - _ Ralf Stephan _ , May 29 2004 ● a(n) = L(n - 1,10), where L is defined as in A108299; see also A054320 for L(n, - 10). - _ Reinhard Zumkeller _ , Jun 01 2005 ● a(n) = ceiling(((3 - sqrt(6)) * (5 + 2 * sqrt(6)) ^ n) / 6). - _ Paul Weisenhorn _ , May 23 2020 ●

► [A138288] 1,9,89,881,8721,86329,854569,8459361,83739041,828931049,8205571449,81226783441,804062262961,7959395846169,78789896198729,779939566141121,7720605765212481,76426118085983689,756540575094624409,7488979632860260401,741332557535079760 1,73384357790221953560 9 ★ a(n) = A054320(n) - A001078(n). ● a(n) = 10 * a(n - 1) - a(n - 2). a(- 1) = a(0) = 1. ● a(- 1 - n) = a(n). (End) ● a(n) = sqrt(2 + (5 - 2 * sqrt(6)) ^ (1 + 2 * n) + (5 + 2 * sqrt(6)) ^ (1 + 2 * n)) / (2 * sqrt(3)). - _ Gerry Martens _ , Jun 04 2015 ●

► [A370179] 1,9,89,881,8729,86489,856961,8491049,84132089,833608241,8259662969,81839440889,810891934721,8034582380489,79609268836889,788794660956401,7815635368139609,77439870261864089,767299550670033281,7602654788387076329,753295890151139864 89 ★ a(n) = floor(x * a(n - 1)) for n > 0 where x = (9 + 3 * sqrt(13)) / 2, a(0) = 1. ● a(n) = 10 * a(n - 1) - 9 * a(n - 3) for n > 2, a(0) = 1, a(1) = 9, a(2) = 89. ● a(n) = 9 * a(n - 1) + 9 * a(n - 2) - 1. ●

► [A059482] 1,9,89,889,8889,88889,888889,8888889,88888889,888888889,8888888889,88888888889,888888888889,8888888888889,88888888888889,888888888888889,8888888888888889,88888888888888889,888888888888888889,8888888888888888889,88888888888888888889 ★ a(0)=1, a(n) = a(n - 1) + 8 * 10 ^ (n - 1). ● a(n) = (10 ^ n) * (1000 / 1125) + (1 / 9). ● a(n) = 10 * a(n - 1) - 1 with n > 0, a(0)=1. - _ Vincenzo Librandi _ , Aug 07 2010 ● a(n) = 10 ^ n - Sum _{ i=0..n - 1 } 10 ^ i for n > 0. - _ Bruno Berselli _ , Jun 20 2013 ●

► [A109002] 9,89,899,8999,89999,899999,8999999,89999999,899999999,8999999999,89999999999,899999999999,8999999999999,89999999999999,899999999999999 ★ Maximal difference between two n - digit numbers. ● a(n) = (10 ^ n - 1) - 10 ^ (n - 1), n > 1. ● a(n + 1) = 10 * a(n) + 9. - _ Reinhard Zumkeller _ , May 28 2010 ●

► [A142991] 1,9,89,936,10560,127800,1657080,22965120,339252480,5326819200,88651670400,1559600179200,28929882240000,564490975104000,11560712397696000,247991610230784000,5561409662613504000 ★ a(1) = 1, a(2) = 9, a(n + 2) = 9 * a(n + 1) + (n + 1) * (n + 3) * a(n). ● a(n) = (n + 2)! * p(n + 2) * sum { k = 1..n } (- 1) ^ (k + 1) / (k * (k + 1) * (k + 2) * p(k + 1) * p(k + 2)), where p(n) = (2 * n ^ 3 - 3 * n ^ 2 + 7 * n - 3) / 15. Recurrence: a(1) = 1, a(2) = 9, a(n + 2) = 9 * a(n + 1) + (n + 1) * (n + 3) * a(n). The sequence b(n) := 1 / 2 * (n + 2)! * p(n + 2) satisfies the same recurrence with b(1) = 9, b(2) = 84. Hence we obtain the finite continued fraction expansion a(n) / b(n) = 1 / (9 + 1 * 3 / (9 + 2 * 4 / (9 + 3 * 5 / (9 + ... + (n - 1) * (n + 1) / 9)))), for n >=2. Lim n - > infinity a(n) / b(n) = 1 / (9 + 1 * 3 / (9 + 2 * 4 / (9 + 3 * 5 / (9 + ... + (n - 1) * (n + 1) / (9 + ...))))) = 2 * sum { k = 1..inf } (- 1) ^ (k + 1) / (k * (k + 1) * (k + 2) * p(k + 1) * p(k + 2)) = 167 / 6 - 40 * log(2). ●

► [A152267] 1,9,89,945,10513,120249,1397033,16368417,192648097,2272771305,26846572409,317325998097,3752068179889,44372429376921,524802751652681,6207262185233025,73420118463548737,868431992821866441 ★ a(n) = ((9 + sqrt(8)) ^ n + (9 - sqrt(8)) ^ n) / 2. ● a(n) = 18 * a(n - 1) - 73 * a(n - 2), n > 1; a(0)= 1, a(1)=9. ●

► [A082147] 1,1,9,89,945,10577,123129,1476841,18130401,226739489,2878668857,37006326777,480750990993,6301611631473,83240669582937,1106980509493641,14808497812637121,199138509770855489,2690461489090104009 ★ a(0)=1; for n >= 1, a(n) = Sum _{ k=0..n } 8 ^ k * N(n,k) where N(n,k) = (1 / n) * C(n,k) * C(n,k + 1) are the Narayana numbers (A001263). ● a(n) = (9(2n - 1)a(n - 1) - 49(n - 2)a(n - 2)) / (n + 1) for n >= 2, a(0) = a(1) = 1. - _ Philippe Deléham _ , Aug 19 2005 ● a(n) = upper left term in M ^ n, M = the production matrix : ● a(n) = hypergeom([1 - n, - n], [2], 8). - _ Peter Luschny _ , Mar 19 2018 ●

► [A095722] 1,9,89,961,11265,142601,1940089,28245729,438351041,7226001865,126122874201,2324074591169,45094140207169,919088049256521,19633713260950265,438708172312264801,10234490436580101249 ★ E.g.f.: exp(x) / (1 - x) ^ 8. ● a(n) = Sum _{ k = 0..n } binomial(n, k) * (k + 7)! / 7!. ● a(n) = 2F0(8, - n;; - 1). - _ Benedict W. J. Irwin _ , May 27 2016 ●

► [A199759] 9,89,969,10649,117129,1288409,14172489,155897369,1714871049,18863581529,207499396809,2282493364889,25107427013769,276181697151449,3037998668665929,33417985355325209,367597838908577289,4043576227994350169 ★ 8 * 11 ^ n + 1. ● a(n) = 11 * a(n - 1) - 10. ● a(n) = 12 * a(n - 1) - 11 * a(n - 2). ●

► [A217402] 9,90,91,92,93,94,95,96,97,98,99,900,901,902,903,904,905,906,907,908,909,910,911,912,913 ★ Numbers starting with 9. ● a(n) = n + (80 * 10 ^ floor (log _ 10(9 * n - 8)) - 8) / 9. - _ Alan Michael Gómez Calderón _ , May 17 2023 ●

► [A097256] 0,9,90,99,900,909,990,999,9000,9009,9090,9099,9900,9909,9990,9999,90000,90009,90090,90099,90900,90909,90990,90999,99000 ★ Numbers whose set of base 10 digits is { 0,9 } . ● a(2n) = 10 * a(n), a(2n + 1) = a(2n) + 9. ●

► [A140160] 1,9,90,154,779,995,3396,3908,10469,11469,26110,27838,56399,59143,109768,113864,197385,203217,333538,341538,536019,546667,826508,840332,1230957 ★ a(1)=1, a(n) = a(n - 1) + n ^ 4 if n odd, a(n) = a(n - 1) + n ^ 3 if n is even. ● a(n) = a(n - 1) + ((1 - (- 1) ^ n) / 2) * n ^ 4 + ((1 + (- 1) ^ n) / 2) * n ^ 3, with a(1)=1. ● a(n) = 1 / 16 + (1 / 4) * (- 1) ^ n * n - (1 / 16) * (- 1) ^ n - (1 / 4) * (- 1) ^ n * n ^ 3 + (5 / 12) * n ^ 3 + (3 / 8) * (- 1) ^ n * n ^ 2 + (1 / 8) * n ^ 2 - (1 / 60) * n + (1 / 10) * n ^ 5 - (1 / 4) * (- 1) ^ n * n ^ 4 + (3 / 8) * n ^ 4, with n >= 1. (End) ●

► [A165135] 9,90,252,1872,4464,29250,62946,393912,809442,4945140,9899910,59366286,116999892,692936460,1349989992,7919601912,15299999856,8909913096 0,170999999838,989995038012,1889999872488,10889990099100,20699999999802,118799939782206,224999999981964 ★ The number of n - digit positive papaya numbers. ● a(n) = 9 * R(n,10) / 10 - Sum _{ d|n,d<n } phi(n / d) * a(d) where R(2 * k,r)=k * (r + 1) * r ^ k, R(2 * k + 1,r)=(2 * k + 1) * r ^ (k + 1). - _ Andrew Howroyd _ , Mar 29 2016 ●

► [A054616] 0,9,90,747,6660,59085,532350,4783023,43053480,387422001,3486843810,31381059699,282430082700,2541865828437,22876797238470,205891132215735,1853020231912080,16677181699666713,150094635685484490,1350851717672992251 ★ a(n) = Sum _{ d|n } phi(d) * 9 ^ (n / d). ● a(n) = Sum _{ k=1..n } 9 ^ gcd(n,k). - _ Ilya Gutkovskiy _ , Apr 16 2021 ●

► [A052386] 0,9,90,819,7380,66429,597870,5380839,48427560,435848049,3922632450,35303692059,317733228540,2859599056869,25736391511830,231627523606479,2084647712458320,18761829412124889,168856464709124010,1519708182382116099,13677373641439044900 ★ Number of integers from 1 to 10 ^ n - 1 that lack 0 as a digit. ● a(n) = 9 * a(n - 1) + 9. ● a(n) = 10 * a(n - 1) - 9 * a(n - 2). G.f.: 9 * x / ((x - 1) * (9 * x - 1)). - _ Colin Barker _ , Sep 26 2013 ●

► [A158609] 1,9,90,819,8109,74448,731277,6761565,65995002,613681767,5959276929,55667500056,538368931305,5047436435841,48655319871546,457497671174667,4398578580769893,41455889945917920,397740754988279253 ★ Expansion of (1 + 8 * x) / (1 - x - 81 * x ^ 2). ● a(n) = a(n - 1) + 81 * a(n - 2), a(0)=1, a(1)=9. - _ Philippe Deléham _ , Mar 26 2009 ●

► [A227713] 1,9,90,836,6856,49787,326618,1977322,11244976,60908337,317509874,1605448440,7920487752,38297112551,182108066522,853884638758,3956279351760,18143381822941,82466719670866,371917534537524,1665777832832136,7415146800493139 ★ The Wiener index of the tree g[n] (n>=0) defined recursively in the following manner: denoting by P[n] the path on n vertices, we define g[0] = P[2] while g[n] (n>=1) is the tree obtained by identifying the roots of 2 copies of g[n - 1] and one of the end - vertices of P[n + 1]; the root of g[n] is defined to be the other end - vertex of P[n + 1]. ● a(n) = 80 + 128 * n / 3 + 19 * n ^ 2 / 2 + 5 * n ^ 3 / 6 + 2 ^ n * (- 64 + 38 * n + 21 * n ^ 2 / 2 + 3 * n ^ 3 / 2) + 4 ^ n * (- 15 - 27 * n / 2 + 9 * n ^ 2 / 2). ●

► [A057092] 1,9,90,891,8829,87480,866781,8588349,85096170,843160671,8354311569,82777250160,820184055561,8126651751489,80521522263450,797833566134451,7905195795581109,78327264255440040,776092140459190341,7689774642431673429,76192801046017773930 ★ Scaled Chebyshev U - polynomials evaluated at i * 3 / 2. Generalized Fibonacci sequence. ● a(n) = 9 * (a(n - 1) + a(n - 2)), a(- 1)=0, a(0)=1. ● a(n) = S(n, i * 3) * (- i * 3) ^ n with S(n, x) := U(n, x / 2), Chebyshev's polynomials of the 2nd kind, A049310. ● a(n) = (1 / 39) * [(9 / 2) + (3 / 2) * sqrt(13)] ^ (n + 1) * sqrt(13) - (1 / 39) * sqrt(13) * [(9 / 2) - (3 / 2) * sqrt(13)] ^ (n + 1), with n>=0. - _ Paolo P. Lava _ , Nov 20 2008 ●

► [A299872] 9,90,891,8918,89181,891802,8918027,89180271,891802702,8918027027,89180270270,891802702701,8918027027002,89180270270027,891802702700263,8918027027002637,89180270270026371,891802702700263702,891802702700263702

7,89180270270026370262,89180270270026370262,89180270270026370262226 ⋆ The sum of the first n terms of the sequence is the concatenation of the first n digits of the sequence, and a(1) = 9. ● a(n) = c(n) - c(n - 1), where c(n) = concatenation of the first n digits; c(n) ~ 0.99 * 10 ^ n, a(n) ~ 0.89 * 10 ^ n. See A300000 for the proof. - _ M. F. Hasler _ , Feb 22 2018 ●

► [A052268] 9,90,900,9000,90000,900000,9000000,90000000,900000000,9000000000,90000000000,900000000000,9000000000,900000000000,9000000000000,90000000000000,900000000000000,9000000000000000 ⋆ First differences of 10 ^ n (A011557). ● a(n) = 9 * 10 ^ (n - 1), n >= 1. ● a(n) = 10 * a(n - 1) for n > 1. (End) ●

► [A155199] 1,9,90,909,9180,92709,936270,9455409,95490360,964359009,9739080450,98355163509,993290715540,10031262318909,101305913904630,1023090401365209,1033220992755720,1043451896769324 09,1053784106696880810,10642186256645740509,107475646673154285900 ⋆ a(n) = 10 * a(n - 1) + a(n - 2), n > 2 ; a(0) = 1, a(1) = 9, a(2) = 90. ● a(n) = (9 / 2) * ((5 + sqrt(26)) ^ (n - 1) + (5 - sqrt(26)) ^ (n - 1)) + (45 / 52) * sqrt(26) * ((5 + sqrt(26)) ^ (n - 1) - (5 - sqrt(26)) ^ (n - 1)) + (C(2 * n,n) mod 2). - _ Paolo P. Lava _ , Jan 26 2009 ●

► [A147841] 1,9,90,909,9189,92898,939177,9494865,95990922,970446357,9810991629,99186890706,1002756873105,10137643587801,102489267607866,10361431513 96317,1047517125688869 3,105901595463208770,1070641008783298233,108239367 37447401633,1094275350328717338 66,1106287454724562457829,11184314186674341431325 ⋆ a(n) = 11 * a(n - 1) - 9 * a(n - 2) with a(0)=1, a(1)=9. ● a(n) = ((85 - 7 * sqrt(85)) / 170) * ((11 - sqrt(85)) / 2) ^ n + ((85 + 7 * sqrt(85)) / 170) * ((11 + sqrt(85)) / 2) ^ n, with n>=0. - _ Paolo P. Lava _ , Nov 18 2008 ● a(n) = 3 ^ n * (ChebyshevU(n, 11 / 6) - (2 / 3) * ChebyshevU(n - 1, 11 / 6)). - _ G. C. Greubel _ , May 28 2020 ●

► [A036258] 1,9,90,945,9700,98475,992250,9961125,99805000,999024375,9995118750,99975590625,999877937500,9999389671875,99996948281250,999984741328125,999992370625000,9999961853859375,99999809265234375 0,9999990463259765625,99999952316289062500 ⋆ Number of inequivalent strings of n digits, when 2 strings are equivalent if turning 1 upside down gives the other. ● a(n + 1) = (1 / 10) *{ 10 ^ n - 5 ^ n + (4 - (- 1) ^ n) * 5 ^ [n / 2] } (De Bruijn) ● a(n) = 5 ^ ((n - 1) / 2 + 1 / 2) / 2 - 5 ^ n / 2 + 10 ^ n for n even. ● a(n) = 3 * 5 ^ ((n - 1) / 2) / 2 - 5 ^ n / 2 + 10 ^ n for n odd. ● a(n) = 15 * a(n - 1) - 45 * a(n - 2) - 75 * a(n - 3) + 250 * a(n - 4) for n>3. ●

► [A143079] 1,9,90,972,11016,128304,1516320,18055872,215830656,2584929024,30988915200,371685583872,4459138615296,53503133036544,641998414356480,7703745879785472,92443540002471936,1109314016699940864 ⋆ a(n) = ((9 + sqrt(9)) ^ n + (9 - sqrt(9)) ^ n) / 2. ● a(n) = 18 * a(n - 1) - 72 * a(n - 2). ● a(n) = 6 ^ n * (2 ^ n + 1) / 2. ● a(n) = (12 ^ n + 6 ^ n) / 2. ●

► [A165324] 1,9,90,981,11349,136170,1667961,20661489,257463450,3218224941,40291734429,504866733930,6328837455921,79353706214169,995084584139610,12478956895304901,156498329695484709,1962672755694512490 ⋆ a(0)=1, a(1)=9, a(n)= 19 * a(n - 1) - 81 * a(n - 2) for n>1. ● a(n) = ((37 - sqrt(37)) * (19 + sqrt(37)) ^ n + (37 + sqrt(37)) * (19 - sqrt(37)) ^ n) / (74 * 2 ^ n). [From _ Klaus Brockhaus _ , Sep 28 2009] ●

► [A082367] 1,9,90,981,11430,140058,1782900,23369805,313426350,4281280686,59360821740,833312907522,11820849447420,169182862497108,2440064033240040,35428651752626109,517446157031236350 ⋆ G.f.: (1 - 8 * x - sqrt(64 * x ^ 2 - 20 * x + 1)) / (2 * x). ● a(0)=1; for n > 0, a(n) = (1 / n) * Sum _{ k=0..n } 9 ^ k * C(n, k) * C(n, k - 1). ●

► [A015585] 0,1,9,91,909,9091,90909,909091,9090909,90909091,909090909,9090909091,90909090909,909090909091,9090909090909,90909090909091,909090909090909,9090909090909091,90909090909090909,909090909090909091,9090909090909090909,90909090909090909091 ⋆ a(n) = 9 * a(n - 1) + 10 * a(n - 2). ● a(n) = 9 * a(n - 1) + 10 * a(n - 2). ● a(n) = 10 ^ (n - 1) - a(n - 1). ● a(n) = round(10 ^ n / 11). ● a(n) = (10 ^ n - (- 1) ^ n) / 11. ●

► [A109108] 1,9,91,919,9281,93729,946571,9559439,96540961,974969049,9846231451,99437283559,1004219067041,10141627953969,102420498606731,1034346614021279,10445886638819521,105493213002216489 ⋆ a(n) = 10a(n - 1) + a(n - 2), a(0)=1, a(1)=9. ● a(n) = (1 / 2 / sqrt(26))((sqrt(26) + 4)(5 + sqrt(26)) ^ n + (sqrt(26) - 4)(5 - sqrt(26)) ^ n). ●

► [A163456] 1,9,91,969,10626,118755,1344904,15380937,177232627,2054455634,23930713170,279871768995,3284214703056,38650751381832,456002537343216,5391644226101705,63871405575418665,757929628541719755 ⋆ a(n) = binomial(5 * n,n) / 5. ● a(n) = (5 * n - 1)! / (4 * n! * (4 * n - 1)!). ● a(n) = binomial(5 * n,n) / 5. - _ Gary Detlefs _ , Aug 03 2013 ● a(n) = (1 / 3) * [x ^ n] (C(x) ^ 3) ^ n, where C(x) = (1 - sqrt(1 - 4 * x)) / (2 * x) is the o.g.f. for the Catalan numbers A000108. Cf. A224274. ● a(n) = 1 / 6 * [x ^ n] (1 + x) / (1 - x) ^ (4 * n + 1). ● a(n) = 1 / 6 * [x ^ n] (1 / C(- x) ^ 6) ^ n. Cf. A227726. (End) ● a(n) = 5 * (5 * n - 4) * (5 * n - 3) * (5 * n - 2) * (5 * n - 1) * a(n - 1) / (8 * n * (4 * n - 3) * (2 * n - 1) * (4 * n - 1)). (End) ●

► [A164913] 1,9,92,917,9175,91742,917433,9174309,91743124,917431185,9174311939,91743119246,917431192693,9174311926553,91743119266140,917431192660413,9174311926605727,91743119266054686,917431192660551041,9174311926605503645 ⋆ Expansion of x / (1 - 9 * x - 11 * x ^ 2 + 10 * x ^ 3). ● a(n) = + 9 * a(n - 1) + 11 * a(n - 2) - 10 * a(n - 3). [Joerg Arndt, May 14 2011] ● a(n)=10 * a(n - 1) + F(n) for n=odd and a(n)=10 * a(n - 1) - F(n) for n=even, with a(0)= 0 and F(n) is the n - th Fibonacci number ●

► [A015587] 0,1,9,92,927,9355,94392,952433,9610209,96968644,978430095,9872525939,99615464496,1005136965793,10142002801593,102334531838060,1032572817360063,10418835206459227,105127817849093736,1060757547912895121,10703223927556087185,107997348375046630996 ⋆ Expansion of x / (1 - 9 * x - 11 * x ^ 2). ● a(n) = 9 * a(n - 1) + 11 * a(n - 2). ● a(n) = - (1 / 25) * [(9 - 5 * sqrt(5)) / 2] ^ n * sqrt(5) + (1 / 25) * [(9 + 5 * sqrt(5)) / 2] ^ n * sqrt(5), with n>=0. - _ Paolo P. Lava _ , Aug 06 2008 ●

► [A024117] 1,9,92,973,9936,99875,999784,9999657,99999488,999999271,9999999000,99999998669,999999998272,9999999997803,99999999997256,999999999996625,9999999999995904,99999999999995087,999999999999994168,9999999999999993141,99999999999999992000 ⋆ a(n) = 10 ^ n - n ^ 3. ● a(n) = 14 * a(n - 1) - 46 * a(n - 2) + 64 * a(n - 3) - 41 * a(n - 4) + 10 * a(n - 5) for n>4. ●

► [A076456] 9,93,390,1110,2535,5019,8988,14940,23445,35145,50754,71058,96915,129255,169080,217464,275553,344565,425790,520590,630399,756723,901140,1065300,1250925 ⋆ Sum of numbers that can be written as t * n + u * (n + 1) for nonnegative integers t,u in exactly three ways. ● a(n) = n * (n + 1) * (6 * n ^ 2 + 4 * n - 1) / 2. ●

► [A082724] 1,9,93,1005,11001,120849,1328853,14615925,160770801,1768465689,19453083213,213983797245,2353821415401,25892034506529,284812376383173,3132936130648965,34462297408440801,379085271406755369 ⋆ a(n) = (3 * 11 ^ n + 3 ^ n) / 4. ● a(n) = (3 * 11 ^ n + 3 ^ n) / 4. ●

► [A000562] 9,95,420,1225,2834,5652,10165,16940,26625,39949,57722,80835,110260,147050,192339,247342,313355,391755,484000,591629,716262,859600,1023425,1209600,1420069 ⋆ Number of discordant permutations. ● a(n) = 27 / 8n ^ 4 - 135 / 4n ^ 3 + 921 / 8n ^ 2 - 539 / 4n, n>4. (End) ●

► [A052389] 0,1,9,95,1286,20681,360964,6452825,114920766,2018035121,34864971944,593281456505,9965368457746,165615181710161,2728984827320124,44665923097267385,727216852411490726,11791672548220250801 ⋆ Number of 4 - element intersecting families (with not necessarily distinct sets) of an n - element set. ● a(n) = (16 ^ n - 6 * 12 ^ n + 12 * 10 ^ n - 9 ^ n - 10 * 8 ^ n + 15 * 7 ^ n - 24 * 6 ^ n + 19 * 5 ^ n + 5 * 4 ^ n - 11 * 3 ^ n + 6 * 2 ^ n - 6) / 24. ●

► [A090448] 9,96,500,1800,5145,12544,27216,54000,99825,174240,290004,463736,716625,1075200,1572160,2247264,3148281,4332000,5865300,7826280,10305449,13406976,17250000,21970000,27720225 ⋆ Fourth column (m=3) of triangle A090447. ● a(n) = (n ^ 3 * (n - 1) ^ 2 * (n - 2) ^ 1) / (1! * 2! * 3!) for n >= 3. ● a(n) = (n ^ 6 - 4 * n ^ 5 + 5 * n ^ 4 - 2 * n ^ 3) / 12. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). - _ Wesley Ivan Hurt _ , May 04 2021 ●

► [A024116] 1,9,96,991,9984,99975,999964,9999951,99999936,999999919,9999999900,99999999879,999999999856,9999999999831,99999999999804,999999999997775,9999999999999744,99999999999999711,999999999999999676 ⋆ a(n) = 10 ^ n - n ^ 2. ● a(n) = 13 * a(n - 1) - 33 * a(n - 2) + 31 * a(n - 3) - 10 * a(n - 4) for n >3. - _ Vincenzo Librandi _ , Oct 06 2014 ●

► [A284668] 9,97,871,6171,77031,837799,8400511,63728127,670617279,9780657630,75128138247,989345275647,7887663552367,80867137596217,942488749153153,7579309213675935,93571393692802302,931386509544713451 ⋆ Numbers that have the largest Collatz total stopping time of all numbers below 10 ^ n. The smallest number is chosen in case of ties. ● a(n) = max { i } (steps(i) for i in range from 1 to 10 ^ n - 1). ●

► [A155601] 1,9,97,993,9985,99969,999937,9999873,99999745,999999489,9999998977,99999997953,999999995905,9999999991809,99999999983617,999999999967233,9999999999934465,99999999999868929,999999999999737857,9999999999999475713,99999999999998951425 ⋆ a(n) = 10 ^ n - 2 ^ n + 1 ^ n. ● a(n) = 12 * a(n - 1) - 20 * a(n - 2) + 9 with a(0)=1, a(1)=9. - _ Vincenzo Librandi _ , Jul 21 2010 ●

► [A180675] 1,1,1,9,97,1041,11169,119833,1285697,13794337,148000449,1587907625,17036776865,182788823089,1961154631009,21041371248697,225754408665729,2422135536207937,25987269043538817,278819307278968905 ⋆ The Ca3 sums of the Pell - Jacobsthal triangle A013609. ● a(n) = 11 * a(n - 1) - 3 * a(n - 2) + a(n - 3) with a(0)=1, a(1)=1 and a(2)=1. ●

► [A083077] 1,9,97,1065,11713,128841,1417249,15589737,171487105,1886358153,20749939681,228249336489,2510742701377,27618169715145,303799866866593,3341798535532521,36759783890857729,404357622799435017 ⋆ Fifth row of number array A083075. ● a(n) = (4 * 11 ^ n + 1) / 5. ● a(n) = 11 * a(n - 1) - 2, a(n) = 12 * a(n - 1) - 11 * a(n - 2). - _ Vincenzo Librandi _ , Nov 10 2011 ●

► [A076758] 0,9,98,516,1870,5369,13132,28560,56772,105105,183678,306020,489762,757393,1137080,1663552,2379048,3334329,4589754,6216420,8297366,10928841,14221636,18302480,23315500 ⋆ a(n) = n * (n + 1) ^ 2 * (2 + n) * (3 + 2 * n) * (19 + 8 * n) / 180. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). - _ Wesley Ivan Hurt _ , May 24 2021 ●

► [A057933] 9,98,987,9876,98765,987654,9876543,98765432,987654320,9876543209,98765432098,987654320987,9876543209876,98765432098765,987654320987654,9876543209876543,98765432098765432,987654320987654320 ⋆ Floor[(80 / 81) * 10 ^ n]. ● a(n)=10 * a(n - 1) - (n % 9) + 10 * (n % 9!=0). ●

► [A064617] 9,98,987,9876,98765,987654,9876543,98765432,987654321,9876543210,98765432099,987654320988,9876543209877,98765432098766,987654320987655,9876543209876544,98765432098765433,987654320987654322,9876543209876543211,98765432098765432100,987654320987654320989 ⋆ a(n) = (10 ^ n - 1) * (80 / 81) + n / 9. ● a(n) = 12 * a(n - 1) - 21 * a(n - 2) + 10 * a(n - 3). ●

► [A024115] 1,9,98,997,9996,99995,999994,9999993,99999992,999999991,9999999990,99999999989,999999999988,9999999999987,99999999999986,999999999999985,9999999999999984,99999999999999983,999999999999999982 ⋆ 10 ^ n - n. ● a(n) = 12 * a(n - 1) - 21 * a(n - 2) + 10 * a(n - 3). - _ Vincenzo Librandi _ , Jun 17 2013 ●

► [A066557] 9,98,999,9996,99995,999996,9999997,99999992,999999999,9999999990,99999999990,999999999996,9999999999990,99999999999998,999999999999990,9999999999999984,99999999999999990,999999999999999990,9999999999999999990,99999999999999999980 ⋆ Largest n - digit multiple of n. ● a(n) = floor((10 ^ n - 1) / n) * n. ●

► [A139280] 9,99,189,279,369,459,549,639,729,819,909,999,1089,1179,1269,1359,1449,1539,1629,1719,1809,1899,1989,2079,2169 ⋆ a(n) = 90 * n - 81. ● a(n) = a(n - 1) + 90. ● a(n) = 90 * n - 81, with n>=1. - _ Paolo P. Lava _ , Sep 06 2010 ●

► [A320075] 1,9,99,990,9999,99891,999999,9999000,99999900,999989991,9999999999,99999899010,999999999999,9999998999991,99999999989901,999999990000000,9999999999999999,99999999899900100,999999999999999999,9999999998999999010,99999999999998999901 ⋆ Number of length n primitive (=aperiodic or period n) 10 - ary words which are earlier in lexicographic order than any other word derived by cyclic shifts of the alphabet. ● a(n) = Sum _{ d|n } 10 ^ (d - 1) * mu(n / d). ● a(n) = 10 ^ (n - 1) - Sum _{ d<n,d|n } a(d). ●

► [A103456] 1,9,99,999,9999,99999,999999,9999999,99999999,999999999,9999999999,99999999999,999999999999,9999999999999,99999999999999,999999999999999,9999999999999999,99999999999999999

9,9999999999999999,99999999999999999,999999999999999999 ⋆ a(n) = 0 ^ n + 10 ^ n - 1. ● a(n) = Sum _{ k = 0..n } (2 * 0 ^ (n - k) - 1) * 0 ^ (k * (n - k)) * 10 ^ k. ● a(n) = 10 * a(n - 1) + 9 - 10 * (binomial(2 * (n - 1), n - 1) mod 2), wi th a(0) = 1 - _ Paolo P. Lava _ , Jun 04 2009 ●

▶ [A002283] 0,9,99,999,9999,99999,999999,9999999,99999999,999999999,9999999999,99999999999,999999999999,9999999999999,99999999999999,999999999999999,9999999999999999,99999999999999999,999999999999999999,9999999999999999999,999999999999999999999,9999999999999999999999,999999999999999999999999 ⋆ a(n) = 10 ^ n - 1. ● a(n) = 10 * a(n - 1) + 9, with a(0)=0. - _ Paolo P. Lava _ , Jan 23 2009 ● a(n) = a(n - 1) + 9 * 10 ^ (n - 1) with a(0)=0; Also: a(n) = 11 * a(n - 1) - 10 * a(n - 2) with a(0)=0, a(1)=9. - _ Vincenzo Librandi _ , Jul 22 2010 ● a(n) = Sum _{ k=1..n } 9 * 10 ^ k. - _ Carauleanu Marc _ , Sep 03 20 16 ●

▶ [A155157] 1,9,99,1080,11790,128700,1404900,15336000,167409000,1827450000,19948590000,217760400000,2377089900000,25948503000000,283255929000000,3092044320000000,33753002490000000,368450468100000000 ⋆ a(n) = 10 * a(n - 1) + 10 * a(n - 2), with a(0)=1, a(1)=9, a(2)=99. ● a(n) = (9 / 2) *{ (5 - sqrt(3 5)) ^ (n - 1) + (5 + sqrt(35)) ^ (n - 1) } + (27 / 35) * sqrt(35) *{ (5 + sqrt(35)) ^ (n - 1) - (5 - sqrt(35)) ^ (n - 1) } + (1 / 10) * (binomial(2 * n,n) mod 2), wit h n>=0. - _ Paolo P. Lava _ , Jan 26 2009 ● a(n) = (1 / 10) * ([n=0] + 9 * (- i * sqrt(10)) ^ n * ChebyshevU(n, i * sqrt(10) / 2)). (End) ●

▶ [A017018] 9,100,289,576,961,1444,2025,2704,3481,4356,5329,6400,7569,8836,10 201,11664,13225,14884,16641,18496,20449,22500,24649,26896,29241 ⋆ a(n) = (7 * n + 3) ^ 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3); a(0)=9, a(1)=100, a (2)=289. - _ Harvey P. Dale _ , Jul 19 2014 ●

▶ [A092936] 1,9,100,1089,11881,129600,1413721,15421329,168220900,1835008569,20016873361,218350598400,2381839709041,25981886201049,283418908502500,3091626107326449,33724468272088441,367877524885646400 ⋆ Area of n - th triple of hexagons around a triangle. ● a(n) = 10 * (a(n - 1) + a(n - 2)) - a(n - 3). ● a(n) = ((3 - sqrt(13)) ^ n - (3 + sqrt(13)) ^ n) ^ 2 / (13 * 4 ^ n). ● a(n + 1) = 11 * a(n) - a(n - 1) + 2 * (- 1) ^ n. ● a(n + 1) = (1 + (- 1) ^ n) / 2 + 9 * Sum _{ k=1..n } (k * a(n + 1 - k)). (End) ●

▶ [A056002] 1,9,100,1100,12100,133100,1464100,16105100,177156100,1948717100,21435888100,235794769100,2593742460100,28531167061100,313842837672100,3452271214393100,37974983358324100,417724816941565100 ⋆ a(n) = (10 ^ 2) * 1 1 ^ (n - 2); a(0)=1, a(1)=9. ● a(n)=11a(n - 1) + [(- 1) ^ n] * C(2, 2 - n). G.f.(x)=(1 - x) ^ 2 / (1 - 11x). ●

▶ [A101563] 1,9,101,1009,10001,99909,1000001,10001009,100000101,999990009,10000000001,100000100909,1000000000001,9999999000009,100000000010101,1000000010001009,10000000000000001,99999999900099909 ⋆ a(n)=(- 1) ^ n * coeffic ient of x ^ n in sum { k>=1,x ^ (k - 1) / (1 + 10x ^ k) } . ● a(n)=sum { k=0.. n, (- 1) ^ (n - k) * if(mod(n + 1, k + 1)=0, 1, 0) * 10 ^ k } ●

▶ [A099676] 9,108,1107,11106,111105,1111104,11111103,111111102,1111111101,11111111100,111111111099,1111111111098,11111111111097,111111111111096,1111111111111095,11111111111111094,111111111111111093,1111111111111111092,11111111111111111091 ⋆ Partial sums of repdigits of A002283. ● a(n) = (10 / 9) * (10 ^ n - 1) - n. - R. Piyo (nagoya314(AT)yahoo.com), Dec 10 2004 ● a(n) = 12 * a(n - 1) - 21 * a(n - 2) + 10 * a(n - 3). ●

▶ [A268839] 9,108,1197,13176,144945,1594404,17538453,192922992,2122152921,23343682140,256780503549,2824585539048,31070440929537,341774850224916,3759523352474085,41354756877214944,454902325649364393,5003925582143008332,55043181403573091661 ⋆ a(n) = Sum _{ j=1..10 ^ n - 1 } 2 ^ f(j) where f(j) is t he number of zero digits in the decimal representation of j. ● a(n) = 11 * a(n - 1) + 9. - _ Vincenzo Librandi _ , Feb 15 2016 ●

▶ [A199030] 9,109,1209,13309,146409,1610509,17715609,194871709,2143588809,23579476909,259374246009,2853116706109,31384283767209,345227121439309,3797498335832409,41772481694156509,459497298635721609,5054470284992937709 ⋆ a(n) = 10 * 11 ^ n - 1. ● a(n) = 11 * a(n - 1) + 10. ● a(n) = 12 * a(n - 1) - 11 * a(n - 2). ●

▶ [A155624] 1,9,113,1305,14561,160809,1770833,19484985,214352321,2357928009,25937365553,285311493465,3138427845281,34522710549609,379749828800273,4177248155066745,45949729820525441,505447028370153609 ⋆ 11 ^ n - 3 ^ n + 1. ● a(n)=14 * a(n - 1) - 33 * a(n - 2) + 20 with a(0)=1, a(1)=9 - _ Vincenzo Libr andi _ , Jul 21 2010 ●

▶ [A165224] 1,9,113,1593,23137,338409,4957649,72655641,1064876737,156076548 57,2287588273 13,33528838036 41,49142725927201,720277760311209,10557006115168913,154732499817791193,2267891697076964737 ⋆ a(0)=1, a(1)=9, a(n) = 1 8 * a(n - 1) - 49 * a(n - 2) for n > 1. ● a(n) = 7 ^ n * T(n,9 / 7) where T is the Chebyshev polynomial of the first kind; ● a(n) = (1 + sqrt(8)) ^ (2n) / 2 + (1 - sqrt(8)) ^ (2n) / 2. ● a(n) = ((9 - 4 * sqrt(2)) ^ n + (9 + 4 * sqrt(2)) ^ n) / 2. - _ Klaus Brockhaus _ , Sep 25 2009 ●

▶ [A243676] 1,1,9,113,1649,26225 ⋆ Number of hypoplactic classes of 4 - parkin g functions of length n. ● a(n + 1) = Sum _{ i=0..n } Sum _{ j=0..i } (- 2) ^ (n - i) * binomial(i,j) * binomial(4 * i + j, n) * binomial(n + 1,i) / (n + 1) (conj ectured). - _ Michael D. Weiner _ , May 25 2017 ● a(n) = Sum _{ i=1..n } bi nomial(4 * n, i - 1) * binomial(n, i) * 2 ^ (i - 1) / n (conjectured). - _ Michael D. Weiner _ , Jul 24 2019 ●

▶ [A362576] 0,9,114,908,5985,35505,196602,1036992,5277357,26134385,126677826,603492444,2834183937,13150592889,60391598610,274863240992,1241212143357,5566202141193,24807561785514,109950785325900,484883791129185,2128652665933409,9306262365861834 ⋆ Number of vertex cuts in the n X n rook complem ent graph. ● a(n) = 2 * n * (2 ^ n - n - 1) + n ^ 2 * (2 ^ (n - 1) - 1) ^ 2 + bino mial(n,2) ^ 2. ●

▶ [A223499] 9,115,1519,20115,266419,3528715,46737819,619042315,8199214219,108598575915,1438387920619,19051445129515,252336352607019,3342194485203115,44267359266773419,586321084882796715 ⋆ Petersen graph (3,1) coloring a rec tangular array: number of n X 3 0..5 arrays where 0..5 label nodes of a graph w ith edges 0,1 0,3 3,5 3,4 1,2 1,4 4,5 2,0 2,5 and every array movement to a horiz ontal, diagonal or antidiagonal neighbor moves along an edge of this graph, wit h the array starting at 0. ● a(n) = (13 + (13 - 2 * sqrt(39)) * (7 - sqrt(39)) ^ n + (7 + sqrt(39)) ^ n * (13 + 2 * sqrt(39))) / 39. ●

▶ [A292350] 0,9,116,670,2580,7735,19544,43596,88440,166485,295020,497354,804076,1254435,1897840,2795480,4022064,5667681,7839780,10665270,14292740,18894799,24670536,31848100,40687400 ⋆ Number of Lyndon words (aperiodic neckla ces) with 6 beads of n colors. ● a(n) = (n ^ 6 - n ^ 3 - n ^ 2 + n) / 6. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

▶ [A253655] 9,116,2580,19544,295020,804076,4022064,7839780,24670536,99133020,147912160,427612404,791672280,1053546956,1796518224,3694034916,7030054140,8586690620,15076346164,21349986840,25222305336,40514492720,54489965796,82830096360,138828513824 ⋆ Number of monic irreducible polynomials of deg ree 6 over GF(prime(n)). ● a(n) = (p ^ 6 - p ^ 3 - p ^ 2 + p) / 6, where p = pr ime(n). ●

▶ [A139740] 0,9,117,1323,14625,161019,1771497,19487043,214358625,2357947179,25937423577,285311668563,3138428372625,34522712135739,379749833566857,4177248169382883,45949729863506625,505447028499162699,5559917313491969337,61159090448414022003 ⋆ a(n) = 11 ^ n - 2 ^ n. ● a(n) = 13 * a(n - 1) - 22 * a (n - 2). - _ Vincenzo Librandi _ , Jun 02 2011 ●

▶ [A130652] 9,119,1329,14639,161049,1771559,19487169,214358879,2357947689,25937424599,285311670609,3138428376719,34522712143929,379749833583239,4177248169415649,45949729863572159,505447028499293769 ⋆ a(n) = 11 ^ n - 2. ● a (n) = 11 * a(n - 1) + 20; a(1)=9. - _ Vincenzo Librandi _ , Jun 08 2011 ●

▶ [A167593] 9,120,952,5664,27888,120064,467712,1686528,5719296,18450432,57108480,170713088,495366144,1401028608,3874881536,10508304384,28005433344,73485778944,190154539008,485895438336,1227495571456 ⋆ The third left hand c olumn of triangle A167591. ● a(n) = 2 ^ n * (7 * n ^ 5 - 40 * n ^ 4 + 110 * n ^ 3 - 155 * n ^ 2 + 78 * n) / 240. ● a(n) = 12 * a(n - 1) - 60 * a(n - 2) + 160 * a(n - 3) - 240 * a(n - 4) + 192 * a(n - 5) - 64 * a(n - 6). ● a(n) - 11 * a(n - 1) + 50 * a(n - 2) - 120 * a(n - 3) + 160 * a(n - 4) - 112 * a(n - 5) + 32 * a(n - 6) = 7 * 2 ^ (n - 2). ●

▶ [A017102] 9,121,361,729,1225,1849,2601,3481,4489,5625,6889,8281,9801,11449,13225,15129,17161,19321,21609,24025,26569,29241,32041,34969,38025 ⋆ a(n) = (8n + 3) ^ 2. ● a(0)=9, a(1)=121, a(2)=361, a(n)=3 * a(n - 1) - 3 * a(n - 2) + a (n - 3). - _ Harvey P. Dale _ , Feb 23 2014 ●

▶ [A302941] 9,121,1296,14161,154449,1684804,18378369,200477281,2186871696,23855111401,260219353689,2838557779204,30963916217529,337764520613641,3684445810532496,40191139395243841,438418087537149729,4782407823513403204,52168067971110285489 ⋆ Number of total dominating sets in the 2n - crossed pri sm graph. ● a(n) = 10 * a(n - 1) + 10 * a(n - 2) - a(n - 3) for n > 3. ●

▶ [A084769] 1,9,121,1809,28401,458649,7544041,125700129,2114588641,35836273449,610897146201,10463745263409,179939616743121,3104680678772409,53721299280288201,931852905510160449,16198821321758152641 ⋆ P _ n(9), where P _ n is n - th Legendre polynomial; also, a(n) = central coefficient of (1 + 9 * x + 20 * x ^ 2) ^ n. ● a(n) = Sum _{ k=0..n } C(n, k) * C(n + k, k)4 ^ k. (End) ● a(n) = Sum _{ k=0..n } binomial(n,k) ^ 2 * 4 ^ k * 5 ^ (n - k). - _ Paul D. Hanna _ , Sep 29 2012 ● a(n) = hypergeom([- n, n + 1], [1], - 4). - _ Peter Lu schny _ , May 23 2014 ●

▶ [A320529] 0,0,0,0,0,0,9,124,1300,11316,89513,660978,4658738,31711638,210332227,1367416232,8752773288,55343303064,346540112781,2153037307846,13292835205606,81652655795106,499484899831775,3045117929546220,18513208314957356 ⋆ Number of chiral pairs of color patterns (set partitions) in a row of length n u sing exactly 6 colors (subsets). ● a(n) = (S2(n,k) - A(n,k)) / 2, where k=6 is th e number of colors (sets), S2 is the Stirling subset number A008277 and A(n,k) = [n>1] * (k * A(n - 2,k) + A(n - 2,k - 1) + A(n - 2,k - 2)) + [n<2 & n==k & n>=0]. ●

▶ [A320646] 0,0,0,0,0,0,0,9,125,1054,7928,54383,356594,2259504,14008733,85422360,514773336,3074341497,18238301412,107649939612,632987843336,3711471738408,21716706883190,126879832615600,740528154956264 ⋆ Number of chiral pair s of color patterns (set partitions) in a cycle of length n using exactly 6 colors (s ubsets). ● a(n) = - Ach(n,k) / 2 + (1 / 2n) * Sum _{ d|n } phi(d) * A(d,n / d, k), where k=5 is number of colors or sets, Ach(n,k) = [n>=0 & n<2 & n==k] + [n>1] * (k * Ach(n - 2,k) + Ach(n - 2,k - 1) + Ach(n - 2,k - 2)), and A(d,n,k) = [n==0 & k==0] + [n>0 & k>0] * (k * A(d,n - 1,k) + Sum _{ j|d } A(d,n - 1,k - j)). ●

▶ [A229283] 0,9,126,1539,17496,190269,2007666,20726199,210450636,2109289329,20920706406,205720279659,2008387814976,19487638017189,188098071296346,1807266603941919,17294855095950516,164918796807813849,1567655079768657486,14859368894402912979 ⋆ Number of ascending runs in { 1,...,9 }^ n. ● a(n) = 9 ^ (n - 1) * (5 * n + 4) for n>0, a(0) = 0. ●

▶ [A064746] 1,9,129,1537,16385,163841,1572865,14680065,134217729,1207959553,10737418241,94489280513,824633720833,7146825580545,61572651155457,527765581332481,4503599627370497,38280596832649217,324259173170675713 ⋆ a(n) = n * 8 ^ n + 1. ● a(n) = 17 * a(n - 1) - 80 * a(n - 2) + 64 * a(n - 3), a(0)=1, a (1)=9, a(2)=129. - _ Harvey P. Dale _ , Jul 24 2012 ●

▶ [A232950] 9,129,1881,27441,400329,5840289,85202361,1242993681,18133691049,264547403649,3859408908441,56303849204721,821401284620169,11983196174074209,174819534903392121,2550393846506436561 ⋆ Number of n X 3 0..3 arrays with no element x(i,j) adjacent to value 3 - x(i,j) horizontally, diagonally or anti diagonally, and top left element zero. ● a(n) = (2 ^ (- 1 - n) * ((15 - sqrt(201)) ^ n * (- 3 + sqrt(201)) + (3 + sqrt(201)) * (15 + sqrt(201)) ^ n)) / sqrt(201). ●

▶ [A200407] 1,9,131,209,3051,44539,71059,1037331,15143129,24159851,352689489,5148619321,8214278281,119913388929,1750515426011,2792830455689,40770199546371,59517009622441 9,949554140655979,13861747932377211,202356082200876449,322845614992577171 ⋆ The x - values in the solution to 19 * x ^ 2 - 18 = y ^ 2. ● a(n)=340 * a(n - 3) + a(n - 6), a(1)=1, a(2)=9, a(3)=131, a(4)=209, a(5) =3051, a(6)=44539. ●

▶ [A282820] 0,0,0,9,132,720,2580,7245,17304,36792,71640,130185,223740,367224,579852,885885,1315440,1905360,2700144,3752937,5126580,6894720,9142980,11970189,15489672 ⋆ Number of inequivalent ways to color the edges of a tetrahe

dron using at most n colors so that no color appears more than twice. • a(n) = (n - 2) * n * (n - 1) * (n ^ 3 + 3 * n ^ 2 - 10 * n - 6) / 12. • a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>6. (End) •

► [A110273] 1,9,133,1853,26117,367389,5169809,72744121,1023588937,14402985777,202665398173,2851718540021,40126725007181,564625868522949,7944888884612393,111793070252410993,1573047872420021137 ⋆ a(n) = Pell(n) ^ 3 + Pell(n + 1) ^ 3. • a(n) = 12 * a(n - 1) + 30 * a(n - 2) - 12 * a(n - 3) - a(n - 4). •

► [A218326] 1,9,135,231,765,1045,2275,2835,5049,5985,9471,10879,15925,17901,24795,27435,36465,39865,51319,55575,69741,74949,92115,98371,118825 ⋆ Odd octagonal pyramidal numbers • a(n) = a(n - 1) + 3 * a(n - 2) - 3 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) + a(n - 6) - a(n - 7). • a(n) = 3 * a(n - 2) - 3 * a(n - 4) + a(n - 6) + 384. • a(n) = (4 * n - (- 1) ^ n - 1) * (4 * n - (- 1) ^ n - 3) * (4 * n - (- 1) ^ n - 4) / 8. •

► [A367246] 0,9,139,1419,12079,92859,669319,4617699,30878959,201792939,1295974999,8212422579,51499341439,320287850619,1978857202279,12161478061059,74421280021519,453832688077899,2759692966903159,16742329188365139,101377580843991199,612894508749226779,3700556151386869639 ⋆ a(n) is the number of n - digit numbers whose difference between the largest and smallest digits is equal to 5. • a(n) = 29 * 6 ^ (n - 1) - 49 * 5 ^ (n - 1) + 5 * 4 ^ n. • a(n) = 15 * a(n - 1) - 74 * a(n - 2) + 120 * a(n - 3) for n > 3. •

► [A017198] 9,144,441,900,1521,2304,3249,4356,5625,7056,8649,10404,12321,14400,16641,19044,21609,24336,27225,30276,33489,36864,40401,44100,47961 ⋆ a(n) = (9 * n + 3) ^ 2. • a(0)=9, a(1)=144, a(2)=441, a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Dec 25 2015 •

► [A325173] 9,144,1089,5184,18225,51984,127449,278784,558009,1040400,1830609,3069504,4941729,7683984,11594025,17040384,24472809,34433424,47568609,64641600,86545809,114318864,149157369,192432384,245705625 ⋆ Perfect squares of the form a + b ^ 2 + c ^ 3, where a,b,c are consecutive numbers. • a(n) = n ^ 2 * (2 + n ^ 2) ^ 2. • a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. •

► [A274502] 0,0,9,153,972,3996,12690,33858,79596,169884,335907,624195,1101672,1861704,3031236,4779108,7325640,10953576,16020477,22972653,32360724,44856900,61274070,82586790,109954260 ⋆ a(n) = 90 * binomial(n - 1,7) + 9 * binomial(n - 1,6). • a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>11. • a(n) = (n - 1) * (n - 2) * (n - 3) * (n - 4) * (n - 5) * (n - 6) * (10 * n - 63) / 560. - _ Wesley Ivan Hurt _ , Jun 25 2016 •

► [A249642] 0,0,9,153,1449,13617,123129,1113273,10024569,90266553,812444409,7312407993,65812080249,592312391937,5330815197129,47977369796313,431796361188969,3886167547854657,34975508227845849,314779576724952633,2833016193198913689,25497145762858874817 ⋆ Number of strings of length n over a 9 - letter alphabet that begin with a nontrivial palindrome. • a(0) = 0; a(1) = 0; a(n + 1) = 9 * a(n) + 9 ^ ceiling((n + 1) / 2) - a(ceiling((n + 1) / 2)) •

► [A093849] 9,153,2097,26496,319995,3749994,42999985,484999992,5399999991,59499999990,649999999935,7049999999988,75999999999924,814999999999941,8699999999999985,92499999999999984,979999999999999902 ⋆ Row sums of triangle A093846. • a(n) = n * (2 * 10 ^ (n - 1) - 2 + (n + 1) * floor(9 * 10 ^ (n - 1) / n)) / 2. •

► [A165232] 1,9,153,2673,46737,817209,14289129,249849441,4368687777,76387735017,1335661040313,23354409110481,408358414625841,7140261781270809,124849486331241993 ⋆ a(0)=1, a(1)=9, a(n)=18 * a(n - 1) - 9 * a(n - 2) for n>1 . • a(n)=(1 / 2) *{ [9 - 6 * sqrt(2)] ^ n + [9 + 6 * sqrt(2)] ^ n } , with n>=0 [From _ Paolo P. Lava _ , Sep 16 2009] •

► [A208545] 0,0,9,156,1170,5580,19995,58824,149796,341640,714285,1391940,2559414,4482036,7529535,12204240,19173960,29309904,43730001,63847980,91428570,128649180,178168419,243201816,327605100 ⋆ Number of 7 - bead necklaces of n colors allowing reversal, with no adjacent beads having the same color. • a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. •

► [A020523] 1,9,161,1665,14849,124929,1024001,8290305,66715649,535298049,4288675841,34334572545,274777243649,2198620602369,17590575431681,140731045904385,1125874137038849,9007096175525889,72057181721067521,576459103035981825 ⋆ a(n) = 3rd Euler polynomial evaluated at 2 ^ n and multiplied by 4. • a(n) = 4 * 8 ^ n - 6 * 4 ^ n + 1. • a(n) = 13 * a(n - 1) - 44 * a(n - 2) + 32 * a(n - 3) for n>2. - _ Colin Barker _ , May 04 2015 •

► [A023039] 1,9,161,2889,51841,930249,16692641,299537289,5374978561,96450076809,1730726404001,31056625195209,557288527109761,10000136862780489,179445175002939041,3220013013190122249,57780789062419261441 ⋆ a(n) = 18 * a(n - 1) - a(n - 2). • a(n) = ((9 + 4 * sqrt(5)) ^ n + (9 - 4 * sqrt(5)) ^ n) / 2. • a(n) = cosh(2 * n * arcsinh(2)). - _ Herbert Kociemba _ , Apr 24 2008 • a(n) = hypergeom([n, - n], [1 / 2], - 4). - _ Peter Luschny _ , Jul 26 2020 • a(n) = cosh(6 * n * arccsch(2)). - _ Peter Luschny _ , May 25 2022 •

► [A084874] 0,0,9,162,2025,21870,219429,2112642,19847025,183642390,1682955549,15327821322,139038251625,1257873017310,11360034454869,102475388237202,923689006041825,8321664254958630,74945757885541389,674816499677616282 ⋆ Number of (k,m,n) - antichains of multisets with k=3 and m=2. • a(n) = (1 / 2!) * (9 ^ n - 2 * 6 ^ n + 3 ^ n). •

► [A158749] 0,9,162,2187,26244,295245,3188646,33480783,344373768,3486784401,34867844010,345191655699,3389154437772,33044255768277,320275094369454,3088366981419735,29648323021629456,283512088894331673 ⋆ a(n) = n * 9 ^ n. • a(n) = n * 9 ^ n. •

► [A133681] 1,9,162,2268,34992,519048,7820712,117100728,1757770632,26359001208,395430367752,5931183418488,88969383864072,1334530962440568,20018023209731592,300269995507235448,4504052048440962312 ⋆ a(n)=9 * a(n - 1) + 90 * a(n - 2) for n>=3, a(0)=1, a(1)=9, a(2)=162 . • a(n)= - (9 / 7) * (- 6) ^ (n - 1) + (72 / 7) * 15 ^ (n - 1) + (1 / 10) * [C(2 * n,n) mod 2], with n>=0 [From _ Paolo P. Lava _ , Aug 28 2008] •

► [A053130] 9,165,1287,6435,24310,75582,203490,490314,1081575,2220075,4292145,7888725,13884156,23535820,38608020,61523748,95548245,145008513,215553195,314457495,450978066,636763050,886322710,1217566350,1652411475 ⋆ Binomial coefficients C(2 * n - 7,8). • a(n) = binomial(2 * n - 7, 8) if n >= 8 else 0. •

► [A119032] 0,9,170,3059,54900,985149,17677790,317215079,5692193640,102142270449,1832868674450,32889493869659,590178020979420,10590314883759909,190035489886698950,3410048503076821199,61190837565496082640 ⋆ a(n + 2)=18a(n + 1) - a(n) + 8. • a(n + 1) = 9 * a(n + 1) + 4 + (80 * a(n) ^ 2 + 80 * a(n) + 25) ^ 0.5. • a(n) = - (1 / 2) - (1 / 8) * sqrt(5) *{ [9 - 4 * sqrt(5)] ^ n - [9 + 4 * sqrt(5)) ^ n }+ (1 / 4) *{ [9 - 4 * sqrt(5)] ^ n + [9 + 4 * sqrt(5)] ^ n } , with n>=0. [_ Paolo P. Lava _ , Nov 25 2008] • a(n) = ((sqrt(5) + 2) / 8) * (9 + 4 * sqrt(5)) ^ n + ((- sqrt(5) + 2) / 8) * (9 - 4 * sqrt(5)) ^ n - 0.5 [From _ Richard Choulet _ , Nov 26 2008] •

► [A055407] 1,9,171,1420,8262,33044,111155,312913,793049,1807754,3834490,7601982,14333819,25683401,44367189,73913316,119544010,187884853,288597817,433331391,638511294,923461382,1314459790,1842974369,2550288371 ⋆ Number of points in N ^ 8 of norm <= n. • a(n) = [x ^ (n ^ 2)] (1 + theta _ 3(x)) ^ 8 / (256 * (1 - x)), where theta _ 3() is the Jacobi theta function. - _ Ilya Gutkovskiy _ , Apr 15 2018 •

► [A027956] 1,9,175,1518,8735,39130,148487,502415,1568062,4622488,13091798,36067176,97522270,260459265,690141333,1819657318,4783398669,12551942930,32903246829,86201363911,225761428636,591165917888,1547848480940,4052529200192,10609936578716 ⋆ a(n) = T(2n + 1, n + 4), T given by A027948. • a(n) = Sum _{ j=0..n - 3 } binomial(2 * n - j + 1, j + 8) for n >= 4. • a(n) = Fibonacci(2 * n + 10) - (34650 + 33360 * n + 16065 * n ^ 2 + 5089 * n ^ 3 + 1260 * n ^ 4 + 280 * n ^ 5 + 16 * n ^ 7) / 630 for n >= 4. •

► [A212704] 9,180,2700,36000,450000,5400000,63000000,720000000,8100000000,90000000000,990000000000,10800000000000,117000000000000,1260000000000000,13500000000000000,144000000000000000,1530000000000000000,16200000000000000000 ⋆ a(n) = 9 * n * 10 ^ (n - 1). • a(n) = n * (b - 1) * b ^ (n - 1) with b =10. •

► [A033713] 0,9,189,2889,38889,488889,5888889,68888889,788888889,8888888889,98888888889,1088888888889,11888888888889,128888888888889,1388888888888889,14888888888888889,158888888888888889 ⋆ Number of zeros in numbers 1 to 999..9 (n digits). • a(n) = (1 / 9) * ((n - 1) * (10 ^ n) - n * 10 ^ (n - 1) + 1); g.f.: (9 * x ^ 2) / ((1 - x)(1 - 10x) ^ 2). - Stephen G. Penrice (spenrice(AT)ets.org), Oct 01 2000 • a(n) = Sum _{ i=1..n } 9 * i * 10 ^ (i - 1). • a(1)=0, a(2)=9, a(3)=189, a(n)=21 * a(n - 1) - 120 * a(n - 2) + 100 * a(n - 3). [From Harvey P. Dale, Jan 24 2012] •

► [A067422] 1,9,189,3969,83349,1750329,36756909,771895089,16209796869,340405734249,7148520419229,150118928803809,3152497504879989,66202447602479769,1390251399652075149,29195279392693578129 ⋆ Seventh column of triangle A067417. • a(n) = 9 * (3 * 7) ^ (n - 1), n >= 1, a(0)=1. •

► [A017426] 9,196,625,1296,2209,3364,4761,6400,8281,10404,12769,15376,18225,21316,24649,28224,32041,36100,40401,44944,49729,54756,60025,65536,71289 ⋆ (11n + 3) ^ 2. • a(0)=9, a(1)=196, a(2)=625, a(n)=3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Nov 02 2013 •

► [A001535] 9,209,609,1209,2009,3009,4209,5609,7209,9009,11009,13209,15609,18209,21009,24009,27209,30609,34209,38009,42009,46209,50609,55209,60009 ⋆ a(n) = (10n + 1) * (10n + 9). • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3); a(0)=9, a(1)=209, a(2)=609. - _ Harvey P. Dale _ , Oct 15 2014 •

► [A079913] 1,9,221,2227,15458,80196,334072,1173240,3598120,9856552,24553080,56423032,121013800,244555560,469343992,860997880,1517994792,2583928360,4262971000,6839066232,10699415080,16362861352,24513820920,36042440440,52091711272 ⋆ Solution to the Dancing School Problem with 8 girls and n + 8 boys: f(8,n). • a(0)=1, a(1)=9, a(2)=221, a(3)=2227, a(4)=15459, a(5)=80196, for n >= 6, a(n)= n ^ 8 - 20 * n ^ 7 + 238 * n ^ 6 - 1820 * n ^ 5 + 9625 * n ^ 4 - 35000 * n ^ 3 + 84448 * n ^ 2 - 122240 * n + 80680. • a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9), for n>8. - _ Wesley Ivan Hurt _ , Sep 17 2015 •

► [A120319] 9,225,441,1089,1521,2025,2601,3249,4761,5625,6561,7569,8649,12321,15129,16641,19881,25281,31329,33489,35721,40401,45369,47961,50625 ⋆ RF(3): refactorable numbers with smallest prime factor 3. • a(n) = odd square, 3 is the smallest prime factor and refactorable. •

► [A017558] 9,225,729,1521,2601,3969,5625,7569,9801,12321,15129,18225,21609,25281,29241,33489,38025,42849,47961,53361,59049,65025,71289,77841,84681 ⋆ a(n) = (12 * n + 3) ^ 2. • a(n) = a(n - 1) + 288 * n - 72, n >= 1. - _ Vincenzo Librandi _ , Mar 20 2011 •

► [A152101] 9,231,3999,65151,1047039,16771071,268410879,4294868991,68719083519,1099510054911,17592179752959,281474951544831,4503599526707199,72057593635274751,1152921502996234239,18446744067267100671 ⋆ a(n)=16 ^ n - 3 * 2 ^ (2 * n - 1) - 1. • a(n)=16 ^ n - 3 * 2 ^ (2 * n - 1) - 1=(2 ^ (2 * n - 1) - 1) * (2 ^ (2 * n + 1) + 1). •

► [A135099] 1,9,252,316,3441,3657,20464,20976,80025,81025,242076,243804,615097,617841,1377216,1381312,2801169,2807001,5283100,5291100,9375201,9385849,15822192,15836016,25601641 ⋆ a(1)=1, a(n) = a(n - 1) + n ^ 5 if n odd, a(n) = a(n - 1) + n ^ 3 if n is even. • a(n) = (1 / 48) * (9 * (1 - (- 1) ^ n) + 4 * n ^ 2 * (n + 1) ^ 2 * (n ^ 2 + n + 1) - •

► [A001823] 0,9,259,1974,8778,28743,77077,179452,375972,725781,1312311,2249170,3686670,5818995,8892009,13211704,19153288,27170913,37808043,51708462,69627922,92446431,121181181,157000116,201236140 ⋆ Central factorial numbers: column 2 in triangle A008956. • a(n) = n * (n - 1) * (2 * n + 1) * (2 * n - 1) * (2 * n - 3) * (10 * n + 7) / 90. • a(1)=0, a(2)=9, a(3)=259, a(4)=1974, a(5)=8778, a(6)=28743, a(7)=77077, a(n)=7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). - _ Harvey P. Dale _ , Jun 09 2013 •

► [A088672] 1,9,265,27713,10363361,13906734081 ⋆ Number of n X n (0,1) - matrices with zero permanent. • a(n) is asymptotic to n * (2 ^ (n ^ 2 - n + 1)). [Everett and Stein] •

► [A180358] 0,9,272,6585,65568,390665,1679664,5764857,16777280,43046793,100000080,214358969,429981792,815730825,1475789168,2562890745,4294967424,6975757577,11019960720,16983563193,25600000160,37822859529,54875873712 ⋆ n ^

8 + 8n ● a(n)= + 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9). G.f.: x * (- 9 - 191 * x - 4461 * x ^ 2 - 15339 * x ^ 3 - 15899 * x ^ 4 - 4125 * x ^ 5 - 303 * x ^ 6 + 7 * x ^ 7) / (x - 1) ^ 9 . [From _ R. J. Mathar _ , Sep 19 2010] ●

▶ [A279449] 0,0,9,306,4361,34059,185181,777280,2710074,8181558,22067973,54285858,123791067,264749849,536146569,1035584592,1919530804,3430908108,5937810417,9984193986,16358592141,26181281511,41019234245,63028246512,95136210222 ⋆ Number of nonequivalent ways to place 5 points on an n X n square grid so that no more than 2 points are on a vertical or horizontal straight line. ● a(n) = (n ^ 10 - 30 * n ^ 8 + 90 * n ^ 7 - 27 * n ^ 6 - 218 * n ^ 5 + 340 * n ^ 4 - 340 * n ^ 3 + 376 * n ^ 2 - 192 * n) / 960 + IF(MOD(n, 2) = 1, 2 * n ^ 5 - 9 * n ^ 4 + 14 * n ^ 3 - 6 * n ^ 2 - 4 * n + 3) / 64. ● a(n) = 5 * a(n - 1) - 4 * a(n - 2) - 20 * a(n - 3) + 40 * a(n - 4) + 16 * a(n - 5) - 100 * a(n - 6) + 44 * a(n - 7) + 110 * a(n - 8) - 110 * a(n - 9) - 44 * a(n - 10) + 100 * a(n - 11) - 16 * a(n - 12) - 40 * a(n - 13) + 20 * a(n - 14) + 4 * a(n - 15) - 5 * a(n - 16) + a(n - 17). ●

▶ [A152437] 0,1,9,307,2610,88741,754299,25646167,217992420,7411742281,62999809389,2141993519227,18206944913430,619036127056621,5261807079981279,178901440719363487,1520662246114589640,51702516367896047761 ⋆ (17 ^ n - 1) / (2 ^ (5 - (n % 2))). ● a(n) = (- 1) * ((- 3 + (- 1) ^ n) * (- 1 + 17 ^ n)) / 64. ● a(n) = 290 * a(n - 2) - 289 * a(n - 4). ●

▶ [A128788] 0,9,324,6561,104976,1476225,19131876,234365481,2754990144,31381059609,348678440100,3797108212689,40669853253264,429575324987601,4483851321172356,46325504721296025,474373168346071296 ⋆ a(n) = n ^ 2 * 9 ^ n. ● a(n) = 27 * a(n - 1) - 243 * a(n - 2) + 729 * a(n - 3). - _ Vincenzo Librandi _ , Feb 07 2013 ●

▶ [A041619] 1,9,325,2934,105949,956475,34539049,311807916,11259624025,101648424141,3670602893101,33137074462050,1196605283526901,10802584626204159,390089651826876625,3521609451068093784 ⋆ Denominators of continued fraction convergents to sqrt(328). ● a(n) = 326 * a(n - 2) - a(n - 4). ●

▶ [A244503] 9,339,3606,24474,121077,475353,1568712,4524540,11722134,27828138,61442460,127616970,251577939,474068124,858822579,1502804622,2549955858,4209357693,6778862319,10675429650,16473604089,24953782251,37162160802,54484513344,78736227726 ⋆ Number of ways to place 5 points on an n X n X n triangular grid so that no pair of them has distance sqrt(3). ● a(n) = 1 / 3840 * n ^ 10 + 1 / 768 * n ^ 9 - 13 / 384 * n ^ 8 - 7 / 384 * n ^ 7 + 1589 / 768 * n ^ 6 - 24619 / 3840 * n ^ 5 - 1561 / 32 * n ^ 4 + 20965 / 64 * n ^ 3 - 11101 / 240 * n ^ 2 - 85143 / 20 * n + 9711 for n >= 7. ●

▶ [A151632] 0,9,405,6750,83736,922347,9639783,98361900,992660346,9967494609,99857394225,999379243674,9997315646220,99988457276295,999950607877131,99997895466036 72,999991066468037 58,999996220428781005,999998405708139890 1,99999932929790707494 ⋆ Number of permutations of 3 indistinguishable copies of 1..n with exactly 2 adjacent element pairs in decreasing order. ● a(n) = 10 ^ n - (3 * n + 1) * 4 ^ n + 3 * n * (3 * n + 1) / 2. - _ Andrew Howroyd _ , May 06 2020 ● a(n) = 21 * a(n - 1) - 153 * a(n - 2) + 503 * a(n - 3) - 786 * a(n - 4) + 576 * a(n - 5) - 160 * a(n - 6) for n>6. ●

▶ [A267236] 9,479,5646,34396,143695,469623,1291052,3121008,6830757,13811655,26179802,47028540,80733835,133317583,212873880,330063296,498680193,736298127,1064998374,1512186620,2111502855,2903829511,3938402884 ⋆ Number of length - 7 0..n arrays with no following elements greater than or equal to the first repeated value. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. ●

▶ [A102909] 1,9,511,9841,87381,488281,2015539,6725601,19173961,48427561,111111111,235794769,469070941,883708281,1589311291,2745954241,4581298449,7411742281,11668193551,17927094321,26947368421,39714002329,57489010371,81870575521,114861197401 ⋆ a(n) = Sum _{ j=0..8 } n ^ j. ● a(n) = (n ^ 2 + n + 1) * (n ^ 6 + n ^ 3 + 1) and so is never prime. - _ Jonathan Vos Post _ , Dec 21 2012 ● a(n) = (n ^ 9 - 1) / (n - 1) with a(1) = 9. - _ L. Edson Jeffery _ and _ M. F. Hasler _ , Dec 30 2012 ●

▶ [A054608] 0,9,540,19755,262296,1953405,10078164,40354335,134218800,387422001,1000002060,2357950419,5159783880,10604503845,20661052356,38443366215,68719485024,118587886425,198359302140,322687711611,512000016120 ⋆ a(n) = Sum _{ d|9 } phi(d) * n ^ (9 / d). ● a(n) = n ^ 9 + 2 * n ^ 3 + 6 * n. - _ Seiichi Manyama _ , Jul 11 2021 ●

▶ [A291910] 0,0,9,576,6900,44100,196245,686784,2023056,5232600,12224025,26310240,52936884,100663836,182452725,317318400,532407360,865571184,1368508041,2110550400,3183182100,4705372980,6829824309,9750223296,13709610000 ⋆ Number of 4 - cycles in the n X n rook complement graph. ● a(n) = (n - 2) * (n - 1) ^ 2 * n ^ 2 * (- 4 + 5 * n - 4 * n ^ 2 + n ^ 3) / 8. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9). ●

▶ [A128795] 0,9,648,19683,419904,7381125,114791256,1640558367,22039921152,282429536481,3486784401000,41768190339579,488038239039168,5584479224838813,62773918496412984,694882570819440375 ⋆ n ^ 3 * 9 ^ n. ● a(n) = 36 * a(n - 1) - 486 * a(n - 2) + 2916 * a(n - 3) - 6561 * a(n - 4). - _ Vincenzo Librandi _ , Feb 10 2013 ●

▶ [A120816] 9,716,20466,365996,4939341,55098294,535240680,4680045630,37665984798,283492037268,2018852205700,13724440760376,89682252682256,566388685336800,3472428372731880,20740959695100150,121059468257664984 ⋆ Number of permutations of length n with exactly 8 occurrences of the pattern 2 - 13. ● a(n) = (- 7983360 - 12956832n + 10475400n ^ 2 + 3647724n ^ 3 - 416326n ^ 4 - 249417n ^ 5 - 19971n ^ 6 + 2646n ^ 7 + 576n ^ 8 + 39n ^ 9 + n ^ 10) / (40320 (n + 8)(n + 9)(n + 10))Binomial[2n, n - 7]; generating function = x ^ 7 C ^ 15(29 - 65536C + 499576C ^ 2 - 1679496C ^ 3 + 3298054C ^ 4 - 4270444C ^ 5 + 3911698C ^ 6 - 2671744C ^ 7 + 1439239C ^ 8 - 659504C ^ 9 + 279446C ^ 10 - 112922C ^ 11 + 41165C ^ 12 - 12362C ^ 13 + 2816C ^ 14 - 448C ^ 15 + 44C ^ 16 - 2C ^ 17) / (2 - C) ^ 15, where C=(1 - Sqrt[1 - 4x]) / (2x) is the Catalan function. ●

▶ [A228293] 0,9,1022,29523,349524,2441405,12093234,47079207,153391688,435848049,1111111110,2593742459,5628851292,11488207653,22250358074,41189313615,73300775184,125999618777,210027483918,340614792099,538947368420,833994048909,1264758228162 ⋆ a(n) = Sum _{ k=1..9 } n ^ k. ● a(1) = 9, else a(n) = (n ^ 10 - n) / (n - 1). ● a(0)=0, a(1)=9, a(2)=1022, a(3)=29523, a(4)=349524, a(5)=2441405, a(6)=12093234, a(7)=47079207, a(8)=153391688, a(9)=435848049, a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10). - _ Harvey P. Dale _ , Dec 12 2013 ●

▶ [A054344] 9,1064,21656,197484,1143366,4927524,17240292,51631617,137044523,330284988,735542444,1533609350,3024043008,5684167992,10249533240,17821214019,30006185613,49097892704,78305096016 ⋆ Number of ways of covering a 2 n X 2n lattice with 2n ^ 2 dominoes of which exactly 6 are horizontal (or vertical) dominoes. ● a(n) = (1 / 720) * n * (n + 1) * (120 * n ^ 7 - 300 * n ^ 6 - 70 * n ^ 5 + 363 * n ^ 4 + 416 * n ^ 3 - 231 * n ^ 2 - 394 * n - 264). ●

▶ [A229151] 0,9,3584,124659,1572864,11328125,57106944,224827239,738197504,2109289329,5400000000,12647173979,27518828544,56285419749,109208390144,202468359375,360777252864,620842412249,1035876294144,1681372741059,2662400000000,4122691670349 ⋆ a(n) = n ^ 8 * (5 * n + 4). ● a(0)=0, a(1)=9, a(2)=3584, a(3)=124659, a(4)=1572864, a(5)=11328125, a(6)=57106944, a(7)=224827239, a(8)=738197504, a(9)=2109289329, a(n)= 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10). - _ Harvey P. Dale _ , Feb 11 2015 ●

▶ [A162013] 0,9,3748,163160,2549775,22768402,141820764,685234196,2738273230,9438613635,28894483904,80240970524,205377597269,490460693060,1103418293480,2356809738456,4809498575164,9426116131517,17820475867500 ⋆ The sequence of the absolute values of the a(n - 3) coefficients of A162011 ● a(n) = (280 * n ^ 12 + 1680 * n ^ 11 - 252 * n ^ 10 - 16660 * n ^ 9 - 13758 * n ^ 8 + 63408 * n ^ 7 + 68705 * n ^ 6 - 104265 * n ^ 5 - 111657 * n ^ 4 + 66997 * n ^ 3 + 56682 * n ^ 2 - 11160 * n) / 45360 ●

▶ [A242853] 1,9,40545,1372105,15003009,93149001,409389409,1423656585,4178507265,10783446409,25154396001,54085723209,108742564225,206671502025,374437978209,651009141001,1092011153409,1775000307465,2805897612385,4326746846409,6524966384001,9644275432009 ⋆ 256 * n ^ 8 - 448 * n ^ 6 + 240 * n ^ 4 - 40 * n ^ 2 + 1. ● a(n) = (2 * n - 1) * (2 * n + 1) * (8 * n ^ 3 - 6 * n - 1) (8 * n ^ 3 - 6 * n + 1). ●

▶ [A159344] 1,1,1,9,237675,777739016577752714 ⋆ Number of Hamiltonian cycles in the n - hypercube up to automorphism. ● a(n) < n ^ (2 ^ n). ●

▶ [A097041] 1,1,1,10,10,19,100,109,271,1009,1252,3448,10333,14716,41365,107713,173809,479998,1143226,2044279,5463208,12333313,23861719,61502185,134861536 ⋆ Expansion of (1 + x) / (1 - x ^ 2 - 9 * x ^ 3). ● a(n) = a(n - 2) + 9 * a(n - 3). ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(floor((n - k) / 2), k) * 9 ^ k. ●

▶ [A168461] 0,10,10,20,20,30,30,40,40,50,50,60,60,70,70,80,80,90,90,100,100,110,110,120,120 ⋆ a(n) = 10 * floor(n / 2). ● a(n) = 10 * n - a(n - 1) - 10, with n>1, a(1)=0. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3). - _ Vincenzo Librandi _ , Sep 19 2013 ● a(n) = (5 / 2) * (2 * n + (- 1) ^ n - 1). ●

▶ [A309464] 0,0,0,0,0,0,0,0,0,0,10,10,20,29,49,68,106,143,209,282,394,510,692,888,1165 ⋆ Number of squarefree parts in the partitions of n into 10 parts. ● a(n) = Sum _{ r=1..floor(n / 10) } Sum _{ q=r..floor((n - r) / 9) } Sum _{ p=q..floor((n - q - r) / 8) } Sum _{ o=p..floor((n - p - q - r) / 7) } Sum _{ m=o..floor((n - o - p - q - r) / 6) } Sum _{ l=m..floor((n - m - o - p - q - r) / 5) } Sum _{ k=l..floor((n - l - m - o - p - q - r) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p - q - r) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p - q - r) / 2) } (mu(r) ^ 2 + mu(q) ^ 2 + mu(p) ^ 2 + mu(o) ^ 2 + mu(m) ^ 2 + mu(l) ^ 2 + mu(k) ^ 2 + mu(j) ^ 2 + mu(i) ^ 2 + mu(n - i - j - k - l - m - o - p - q - r) ^ 2), where mu is the Möbius function (A008683). ●

▶ [A022093] 0,10,10,20,30,50,80,130,210,340,550,890,1440,2330,3770,6100,9870,15970,25840,41810,67650,109460,177110,286570,463680 ⋆ Fibonacci sequence beginning 0, 10. ● a(n) = 10 * F(n) = F(n + 4) + F(n + 2) + F(n - 2) + F(n - 4) for n>3, where F=A000045. ● a(n) = round((4 * phi - 2) * phi ^ n) for n>4. - _ Thomas Baruchel _ , Sep 08 2004 ● a(n) = F(n + 5) + F(n - 5) - 5 * F(n) for n>0. - _ Bruno Berselli _ , Dec 29 2016 ● a(n) = Lucas(n + 3) + Lucas(n - 3), where Lucas(- i) = (- 1) ^ i * Lucas(i) for the negative indices. - _ Bruno Berselli _ , Jun 13 2017 ●

▶ [A361037] 10,10,25,84,330,1430,6630,32300,163438,852150,4552275,24812400,137547000,773564328,4405019090,25357898940,147375745990,863805209750,5101386767295,30332569967700,181465130121450,1091677288630950 ⋆ a(n) = 20 * (3 * n)! / ((2 * n)! * (n + 2)!). ● a(n) = 10 * binomial(3 * n,n) - 7 * binomial(3 * n,n + 1) + binomial(3 * n,n + 2). Thus a(n) is an integer. ●

▶ [A285613] 1,10,10,100,1100,11000,111000,1110000,11110000,111100000,1111100000,11111000000,111111000000,1111110000000,11111110000000,1111111000000000,111111111000000000,1111111110000000000,11111111110000000000,111111111110000000000 ⋆ Binary representation of the diagonal from the origin to the corner of the n - th stage of growth of the two - dimensional cellular automaton defined by "Rule 62", based on the 5 - celled von Neumann neighborhood. ● a(n) = (10 ^ n - 10 ^ (n / 2)) / 9 for n>1 and even. ● a(n) = (10 ^ n - 10 ^ (n / 2 + 1 / 2)) / 9 for n>1 and odd. ● a(n) = 10 * a(n - 1) + 10 * a(n - 2) - 100 * a(n - 3) for n>2. ●

▶ [A001637] 10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34 ⋆ Numbers with an even number of digits. ● a(n) = n + (100 ^ floor(log _ 100(110 * n)) - 1) / 11. - _ Kevin Ryde _ , Nov 10 2022 ●

▶ [A174140] 10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,35,36,37,38,39,40,41,42,43,44 ⋆ Numbers congruent to k mod 25, where 10 <= k <= 24. ● a(n + 15) = a(n) + 25 for n >= 1. ● a(n) = a(n - 1) + a(n - 15) - a(n - 16) for n>16. ●

▶ [A131835] 1,10,11,12,13,14,15,16,17,18,19,100,101,102,103,104,105,106,107,108,109,110,111,112,113 ⋆ Numbers starting with 1. ● a(n) = n + (8 * 10 ^ floor(log _ 10(9 * n - 8)) - 8) / 9. - _ Alan Michael Gómez Calderón _ , May 16 2023 ●

▶ [A058364] 1,1,1,1,1,1,1,1,10,11,12,13,14,15,16,17,18,28,39,51,64,78,93,109,126 ⋆ Number of ways to cover (without overlapping) a ring lattice (necklace) of n sites with molecules that are 9 sites wide. ● a(n) = 1 + n * sum(binomial(n - 1 - 8 * i, i - 1) / i, i=1..n / 9). a(n) = a(n - 1) + a(n - 9), a(n) = 1 for n = 1..8, a(9) = 10. generating function = (x + 9 * x ^ 9) / (1 - x - x ^ 9). ●

► [A112654] 0,1,10,11,12,21,22,23,32,33,34,43,44,45,54,55,56,65,66,67,76,77,78,87,88 ⋆ Numbers k such that k ^ 3 == k (mod 11). ● a(n) = a(n - 1) + a(n - 3) - a(n - 4). ● a(n) = (11 / 3) * n + (8 / 9) * i * sqrt(3) * ((- 1 / 2 + (1 / 2) * i * sqrt(3)) ^ n - (- 1 / 2 - (1 / 2) * i * sqrt(3)) ^ n), where i=sqrt(- 1). - _ Paolo P. Lava _ , Apr 11 2012 ●

► [A153194] 10,11,13,14,38,40,44,46,84,87,93,96,148,152,160,164,230,235,245,250,330,336,348,354,448 ⋆ Numbers such that the numerator of floor(sqrt(n)) / n, when reduced to its lowest terms, is equal to 3. ● a(n + 4) = 2 * a(n) - a(n - 4) + 18 if n>0. - _ Michael Somos _ , Mar 28 2014 ●

► [A290745] 10,11,13,16,20,25,31,38,46,55,64,74,85,97,110,124,139,155,172,190,208,227,247,268,290 ⋆ Maximum number of distinct Lyndon factors that can appear in words of length n over an alphabet of size 10. ● a(n) = binomial(n + 1,2) - (s - p) * binomial(m + 1,2) - p * binomial(m + 2,2) + s where s=10, m=floor(n / s), p=n - m * s. - _ Andrew Howroyd _ , Aug 14 2017 ●

► [A188165] 10,11,13,17,25,41,73,137,265,521,1033,2057,4105,8201,16393,32777,65545,131081,262153,524297,1048585,2097161,4194313,8388617,16777225 ⋆ 2 ^ n + 9. ● a(n) = 2 * a(n - 1) - 9 = 3 * a(n - 1) - 2 * a(n - 2). ●

► [A298365] 10,11,14,15,16,18,20,21,22,23,24,25,26,28,29,30,32,33,34,35,36,37,38,39,40 ⋆ Numbers k such that there exists at least one odd pseudoprime of order k. ● a(n) = min { k: k>a(n - 1) and M(k) has a composite divisor d and ran k(d)=k and d==1 (mod k) } for n = 1,2,3,... where M(k):=2 ^ k - 1. ●

► [A214864] 10,11,14,15,26,27,30,31,42,43,46,47,58,59,62,63,74,75,78,79,90,91,94,95,106 ⋆ Numbers n such that n XOR 10 = n - 10. ● a(n) = 4 * n + 6 + (3 * (- 1) ^ n + 1) / 2 + 2 * (- 1) ^ ((2 * n - 1 + (- 1) ^ n) / 4) for n >= 0. ● a(n) = 16 * floor(n / 4) + ((n - 1) mod 2) + 4 * floor(((n - 1) mod 4) + 10. - _ Gary Detlefs _ , Oct 26 2013 ●

► [A197652] 0,1,10,11,20,21,30,31,40,41,50,51,60,61,70,71,80,81,90,91,100,101,110,111,120 ⋆ Numbers that are congruent to 0 or 1 mod 10. ● a(n) = a(n - 2) + 10. ● a(n) = 5 * n - 7 - 2 * (- 1) ^ n. (End) ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n>3. (End) ●

► [A022100] 1,10,11,21,32,53,85,138,223,361,584,945,1529,2474,4003,6477,10480,16957,27437,44394,71831,116225,188056,304281,492337 ⋆ Fibonacci sequence beginning 1, 10. ● a(n)= a(n - 1) + a(n - 2) for n>=2, a(0)=1, a(1)=10, a(- 1):=9. ● a(n)=sum { k=0..n, Fib(n - k + 1)(9 * binomial(1, k) - 8 * binomial(0, k)) } . - _ Paul Barry _ , May 05 2005 ● a(n) = ((1 + sqrt5) ^ n - (1 - sqrt5) ^ n) / (2 ^ n * sqrt5) + 4.5 * ((1 + sqrt5) ^ (n - 1) - (1 - sqrt5) ^ (n - 1)) / (2 ^ (n - 2) * sqrt5). Offset 1. a(3)=11. - Al Hakanson (hawkuu(AT)gmail.com), Jan 14 2009 ●

► [A041475] 1,1,10,11,21,32,85,117,904,3733,8370,20473,49316,217737,1573475,1791212,5155899,6947111,12103010,19050121,183554099,202604220,6261680699,6464284919,64440244970 ⋆ Denominators of continued fraction convergents to sqrt(253). ● a(n) = 6445234798 * a(n - 22) - a(n - 44) for n>43. [_ Bruno Berselli _ , Dec 18 2013] ●

► [A041202] 10,11,21,53,74,127,2614,2741,5355,13451,18806,32257,663946,696203,1360149,3416501,4776650,8193151,168639670,176832821,345472491,867777803,1213250294,2081028097,42833812234 ⋆ Numerators of continued fraction convergents to sqrt(112). ● a(n) = 254 * a(n - 6) - a(n - 12). G.f.: - (x ^ 11 - 10 * x ^ 10 + 11 * x ^ 9 - 21 * x ^ 8 + 53 * x ^ 7 - 74 * x ^ 6 - 127 * x ^ 5 - 74 * x ^ 4 - 53 * x ^ 3 - 21 * x ^ 2 - 11 * x - 10) / ((x ^ 6 - 16 * x ^ 3 + 1) * (x ^ 6 + 16 * x ^ 3 + 1)). [_ Colin Barker _ , Jul 19 2012] ●

► [A041200] 10,11,21,137,158,295,6058,6353,12411,80819,93230,174049,3574210,3748259,7322469,47683073,55005542,102688615,2108777842,2211466457,4320244299,28132932251,32453176550,60586108801 ⋆ Numerators of continued fraction convergents to sqrt(111). ● a(n) = 590 * a(n - 6) - a(n - 12). G.f.: - (x ^ 11 - 10 * x ^ 10 + 11 * x ^ 9 - 21 * x ^ 8 + 137 * x ^ 7 - 158 * x ^ 6 - 295 * x ^ 5 - 158 * x ^ 4 - 137 * x ^ 3 - 21 * x ^ 2 - 11 * x - 10) / (x ^ 12 - 590 * x ^ 6 + 1). [_ Colin Barker _ , Jul 19 2012] ●

► [A041847] 1,10,11,21,221,9303,93251,102554,195805,2060604,86741173,869472334,956213507,1825685841,19213071917,808774706355,8106960135467,8915734841822,17022694977289,179142684614712,7541015448795193,75589297172566642,83130312621361835 ⋆ Denominators of continued fraction convergents to sqrt(445). ● a(n) = 9324 * a(n - 5) + a(n - 10) for n>9. - _ Vincenzo Librandi _ , Dec 25 2013 ●

► [A022315] 0,10,11,22,34,57,92,150,243,394,638,1033,1672,2706,4379,7086,11466,18553,30020,48574,78595,127170,205766,332937,538704 ⋆ a(n) = a(n - 1) + a(n - 2) + 1, with a(0) = 0 and a(1) = 10. ● a(n) = F(n + 2) + 9 * F(n) - 1, where F = A000045. - _ G. C. Greubel _ , Aug 25 2017 ●

► [A326627] 0,0,0,0,0,0,0,0,0,0,10,11,24,26,56,75,128,153,234,304,460,546,770,943,1296 ⋆ Sum of all the parts in the partitions of n into 10 squarefree parts. ● a(n) = n * Sum _{ r=1..floor(n / 10) } Sum _{ q=r..floor((n - r) / 9) } Sum _{ p=q..floor((n - q - r) / 8) } Sum _{ o=p..floor((n - p - q - r) / 7) } Sum _{ m=o..floor((n - o - p - q - r) / 6) } Sum _{ l=m..floor((n - m - o - p - q - r) / 5) } Sum _{ k=l..floor((n - l - m - o - p - q - r) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p - q - r) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p - q - r) / 2) } mu(r) ^ 2 * mu(q) ^ 2 * mu(p) ^ 2 * mu(o) ^ 2 * mu(m) ^ 2 * mu(l) ^ 2 * mu(k) ^ 2 * mu(j) ^ 2 * mu(i) ^ 2 * mu(n - i - j - k - l - m - o - p - q - r) ^ 2, where mu is the Möbius function (A008683). ●

► [A309486] 0,0,0,0,0,0,0,0,0,0,10,11,24,35,66,97,160,223,343,485,714,952,1357,1808,2469 ⋆ Sum of the squarefree parts of the partitions of n into 10 parts. ● a(n) = Sum _{ r=1..floor(n / 10) } Sum _{ q=r..floor((n - r) / 9) } Sum _{ p=q..floor((n - q - r) / 8) } Sum _{ o=p..floor((n - p - q - r) / 7) } Sum _{ m=o..floor((n - o - p - q - r) / 6) } Sum _{ l=m..floor((n - m - o - p - q - r) / 5) } Sum _{ k=l..floor((n - l - m - o - p - q - r) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p - q - r) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p - q - r) / 2) } (r * mu(r) ^ 2 + q * mu(q) ^ 2 + p * mu(p) ^ 2 + o * mu(o) ^ 2 + m * mu(m) ^ 2 + l * mu(l) ^ 2 + k * mu(k) ^ 2 + j * mu(j) ^ 2 + i * mu(i) ^ 2 + (n - i - j - k - l - m - o - p - q - r) * mu(n - i - j - k - l - m - o - p - q - r) ^ 2), where mu is the Möbius function (A008683). ●

► [A326588] 0,0,0,0,0,0,0,0,0,0,10,11,24,39,70,105,176,255,396,570,840,1155,1650,2231,3072 ⋆ Sum of all the parts in the partitions of n into 10 parts. ● a(n) = n * Sum _{ r=1..floor(n / 10) } Sum _{ q=r..floor((n - r) / 9) } Sum _{ p=q..floor((n - q - r) / 8) } Sum _{ o=p..floor((n - p - q - r) / 7) } Sum _{ m=o..floor((n - o - p - q - r) / 6) } Sum _{ l=m..floor((n - m - o - p - q - r) / 5) } Sum _{ k=l..floor((n - l - m - o - p - q - r) / 4) } Sum _{ j=k..floor((n - k - l - m - o - p - q - r) / 3) } Sum _{ i=j..floor((n - j - k - l - m - o - p - q - r) / 2) } 1. ●

► [A041485] 1,10,11,32,107,460,1487,3434,4921,52644,1689529,16947934,18637463,54222860,181306043,779447032,2519647139,5818741310,8338388449,89202625800,2862822414049,28717426766290,31580249180339,91877925126968,307214024561243 ⋆ Denominators of continued fraction convergents to sqrt(259). ● a(n) = 1694450 * a(n - 10) - a(n - 20) for n>19. - _ Vincenzo Librandi _ , Dec 18 2013 ●

► [A041206] 10,11,32,331,694,1025,21194,22219,65632,678539,1422710,2101249,43447690,45548939,134545568,1391004619,2916554806,4307559425,89067743306,93375302731,275818348768,2851558790411 ⋆ Numerators of continued fraction convergents to sqrt(114). ● a(n) = 2050 * a(n - 6) - a(n - 12). G.f.: - (x ^ 11 - 10 * x ^ 10 + 11 * x ^ 9 - 32 * x ^ 8 + 331 * x ^ 7 - 694 * x ^ 6 - 1025 * x ^ 5 - 694 * x ^ 4 - 331 * x ^ 3 - 32 * x ^ 2 - 11 * x - 10) / (x ^ 12 - 2050 * x ^ 6 + 1). [_ Colin Barker _ , Jul 19 2012] ●

► [A042413] 1,10,11,54,65,119,3159,3278,6437,29026,35463,383656,20752887,207912526,228665413,1122574178,1351239591,2473813769,65670397585,68144211354,133814608939,603402647110,737217256049,7975575207600,431418278466449 ⋆ Denominators of continued fraction convergents to sqrt(734). ● a(n) = 20788350 * a(n - 12) - a(n - 24) for n>23. - _ Vincenzo Librandi _ , Jan 21 2014 ●

► [A041212] 10,11,54,119,530,649,13510,14159,70146,154451,687950,842401,17535970,18378371,91049454,200477279,892958570,1093435849,22761675550,23855111399,118182121146,260219353691,1159059535910 ⋆ Numerators of continued fraction convergents to sqrt(117). ● a(n) = 1298 * a(n - 6) - a(n - 12). ●

► [A007088] 0,1,10,11,100,101,110,111,1000,1001,1010,1011,1100,1101,1110,1111,10000,10001,10010,10011,10100,10101,10110,10111,11000 ⋆ The binary numbers (or binary words, or binary vectors, or binary expansion of n): numbers written in base 2. ● a(n) = Sum _{ i=0..m } d(i) * 10 ^ i, where Sum _{ i=0..m } d(i) * 2 ^ i is the base 2 representation of n. ● a(n) = (1 / 2) * Sum _{ i>=0 } (1 - (- 1) ^ floor(n / 2 ^ i)) * 10 ^ i. - _ Benoit Cloitre _ , Nov 20 2001 ● a(2n) = 10 * a(n), a(2n + 1) = a(2n) + 1. ● a(n) = Sum _{ k=0..floor(log _ 2(n)) } floor((Mod(n / 2 ^ k, 2))) * (10 ^ k). - _ José de Jesús Camacho Medina _ , Jul 24 2014 ●

► [A204009] 0,1,10,11,100,101,110,1000,1001,1010,1011,10000,10001,10010,10011,10100,100000,100001,100010,100011,100100,100101,1000000,1000001,1000010 ⋆ a(n) is a binary vector for selecting distinct terms from A000124 that when summed give n; it uses the greedy algorithm. ● a(n) x A000124 = n, where x is the inner product and the binary vector is in ascending powers of 2 with infinite trailing zeros. ●

► [A309761] 1,10,11,100,110,111,1000,1100,1110,1111,10000,11000,11100,11110,11111,100000,110000,111000,111100,111110,111111,1000000,1100000,1110000,1111000 ⋆ Numbers that are sums of consecutive powers of 10. ● a(i * (i - 1) / 2 + j) = (10 ^ i - 10 ^ (i - j)) / 9 for 1<=j<=i. - _ Robert Israel _ , Aug 16 2019 ●

► [A203075] 0,1,10,11,101,110,111,1010,1011,1101,1110,1111,10001,10010,10011,10101,10110,10111,11010,11011,11101,11110,11111,100111,101010 ⋆ Write n as a sum of distinct terms from A203074; if there is more than one way, choose the smallest binary number. ● a(n) x A203074 = n, where x is the inner product and the binary vector a(n) is in ascending powers of 2 with infinite trailing zeros. ●

► [A094026] 0,1,10,11,110,111,1110,1111,11110,11111,111110,111111,1111110,1111111,11111110,11111111,111111110,111111111,1111111110,1111111111,11111111110,11111111111,111111111110,111111111111,1111111111110 ⋆ Expansion of x(1 + 10x) / ((1 - x ^ 2)(1 - 10x ^ 2)). ● a(n) = 10 ^ (n / 2)(5 / 9 + sqrt(10) / 18 + (5 / 9 - sqrt(10) / 18)(- 1) ^ n) - (- 1) ^ n / 2 - 11 / 18. ●

► [A041217] 1,1,10,11,230,241,2399,2640,55199,57839,575750,633589,13247530,13881119,138177601,152058720,3179352001,3331410721,33162048490,36493459211,763031232710,799524691921,7958753459999,8758278151920,183124316498399 ⋆ Denominators of continued fraction convergents to sqrt(119). ● a(n) = 240 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Dec 13 2013 ●

► [A041218] 10,11,230,241,5050,5291,110870,116161,2434090,2550251,53439110,55989361,1173226330,1229215691,25757540150,26986755841,565492656970,592479412811,12415080913190,13007560326001 ⋆ Numerators of continued fraction convergents to sqrt(120). ● a(n) = 22 * a(n - 2) - a(n - 4). G.f.: (10 + 11 * x + 10 * x ^ 2 - x ^ 3) / (1 - 22 * x ^ 2 + x ^ 4). [_ Colin Barker _ , Jul 15 2012] ●

► [A041917] 1,1,10,11,472,483,4819,5302,227503,232805,2322748,2555553,109655974,112211527,1119559717,1231771244,52853951965,54085723209,539625460846,593711184055,25475495191156,26069206375211,2600983525680 55,28616755894 3266,12279135828185227 ⋆ Denominators of continued fraction convergents to sqrt(480). ● a(n) = 482 * a(n - 4) - a(n - 8). G.f.: - (x ^ 2 - x - 1) * (x ^ 4 + 11 * x ^ 2 + 1) / ((x ^ 4 - 22 * x ^ 2 + 1) * (x ^ 4 + 22 * x ^ 2 + 1)). [_ Colin Barker _ , Jul 16 2012] ●

► [A079026] 10,12,13,15,16,19,20,21,23,25,27,28,29,31,32,35,37,39,40,41,43,44,45,47,49 ⋆ Numbers that can be represented as 2 * p + 3 * q, where p and q are prime. ● a(n) = 2 * p + 3 * q, for some primes p and q. ● a(n) > 3n + O(n / log n). - _ Charles R Greathouse IV _ , Dec 04 2012 ●

► [A187710] 10,12,16,22,30,40,52,66,82,100,120,142,166,192,220,250,282,316,352,390,430,472,516,562,610 ⋆ a(n) = n ^ 2 + n + 10. ● a(0)=10, a(1)=12, a(2)=16; for n>2, a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Jan 18 2014 ● a(n) = Sum _{ i=n - 5..n + 5 } i * (i + 1) / 11. (End) ●

► [A270819] 0,0,0,0,10,12,16,36,44,84,90,144,160,210,230,312,406,420,528,560,576,702,820,880,1056 ⋆ a(n) is the number of arithmetic progressions of length 3 among the quadratic residues modulo prime(n). ● a(n) = (prime(n) - 1) * floor((prime(n) - 2) / 8). ●

► [A255845] 10,12,18,28,42,60,82,108,138,172,210,252,298,348,402,460,522,588,658,732,810,892,978,1068,1162 ⋆ a(n) = 2 * n ^ 2 + 10. ● a(n) = a(- n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). (End) ●

► [A346678] 10,12,20,30,40,50,60,62,70,80,88,90,110,112,120,130,138,140,150,160,162,170,180,188,190 ⋆ Positive numbers whose squares end in exactly two identical digits. • a(n + 63) = a(n) + 500. •

► [A082927] 10,12,21,23,32,34,43,45,54,56,65,67,76,78,87,89,98,100,101,102,103,104,105,106,107 ⋆ Numbers in which at least one pair of adjacent digits differ by 1. • a(n) = n + O(x ^ 0.915), where the exponent is the log(k) / log(10) with k the largest root of x ^ 5 - 9x ^ 4 + 4x ^ 3 + 21x ^ 2 - 9x - 5. - _ Charles R Greathouse IV _ , Mar 11 2014 •

► [A175885] 1,10,12,21,23,32,34,43,45,54,56,65,67,76,78,87,89,98,100,109,111,120,122,131,133 ⋆ Numbers that are congruent to { 1, 10 } mod 11. • a(n) = (22 * n + 7 * (- 1) ^ n - 11) / 4. • a(n) = - a(- n + 1) = a(n - 2) + 11 = a(n - 1) + a(n - 2) - a(n - 3). •

► [A022324] 1,10,12,23,36,60,97,158,256,415,672,1088,1761,2850,4612,7463,12076,19540,31617,51158,82776,133935,216712,350648,567361 ⋆ a(n) = a(n - 1) + a(n - 2) + 1, with a(0) = 1 and a(1) = 10. • a(n) = 2 * F(n + 2) + 7 * F(n) - 1, where F = A000045. - _ G. C. Greubel _ , Aug 25 2017 •

► [A248336] 0,10,12,1000,1022,100000,100222,10000000,10002222,1000000000,1000022222,100000000000,100000222222,10000000000000,10000002222222,1000000000000000,1000000022222222,100000000000000000,100000000222222222,1000000000000000000 ⋆ Smallest number m such that the Levenshtein distance of m and its reversal equals n. • a(2 * k) = 10 ^ (2 * k - 1) + 2 * (10 ^ k - 1) / 9; a(2 * k + 1) = 10 ^ (2 * k + 1). •

► [A373278] 1,1,1,10,13,16,100,148,205,1000,1606,2410,10000,17005,27070,100000,177421,295648,1000000,1833178,3168538,10000000,18811948,33503020,100000000 ⋆ Expansion of 1 / ((1 - 9 * x ^ 3) * (1 - x / (1 - 9 * x ^ 3) ^ (1 / 3))). • a(3 * n) = 10 ^ n for n >= 0. • a(n) = Sum _{ k=0..floor(n / 3) } 9 ^ k * binomial(n / 3,k). • a(n) == 1 (mod 3). •

► [A129075] 10,13,19,25,37,43,55,61,73,91,97,115,127,133,145,163,181,187,205,217,223,241,253,271,295 ⋆ Numbers n such that (n - 4) / 3 is prime. • a(n) = 3 * prime(n) + 4. - Zak Seidov, May 12 2007 •

► [A220045] 10,13,25,50,90,152,249,397,618,941,1403,2050,2938,4134,5717,7779,10426,13779,17975,23168,29530,37252,46545,57641,70794 ⋆ Number of 2 X n arrays of the minimum value of corresponding elements and their horizontal, diagonal or antidiagonal neighbors in a random, but sorted with lexicographically non decreasing rows and nonincreasing columns, 0..3 2 X n array. • a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>10. •

► [A195313] 0,1,10,13,31,36,63,70,106,115,160,171,225,238,301,316,388,405,486,505,595,616,715,738,846 ⋆ Generalized 13 - gonal numbers: m * (11 * m - 9) / 2 with m = 0, 1, - 1, 2, - 2, 3, - 3, ... • a(n) = (22 * n * (n + 1) + 7 * (2 * n + 1) * (- 1) ^ n - 7) / 16. •

► [A069960] 1,10,13,45,106,289,745,1962,5125,13429,35146,92025,240913,630730,1651261,4323069,11317930,29630737,77574265,203092074,531701941,1392013765,3644339338,9541004265,24978673441 ⋆ Define C(n) by the recursion C(0) = 3 * i where i ^ 2 = - 1, C(n + 1) = 1 / (1 + C(n)), then a(n) = 3 * (- 1) ^ n / Im(C(n)) where Im(z) denotes the imaginary part of the complex number z. • a(n) = 2 * a(n - 1) + 2 * a(n - 2) - a(n - 3). • a(n) = (2 ^ (- 1 - n) * (- (- 1) ^ n * 2 ^ (5 + n) - (3 - sqrt(5)) ^ n * (- 21 + sqrt(5)) + (3 + sqrt(5)) ^ n * (21 + sqrt(5)))) / 5. - _ Colin Barker _ , Sep 30 2016 •

► [A219715] 10,13,45,125,283,561,1030,1776,2916,4610,7073,10587,15513,22303,31512,43810,59994,81000,107915,141989,184647,237501,302362,381252,476416 ⋆ Number of 2 X n arrays of the minimum value of corresponding elements and their horizontal or antidiagonal neighbors in a random, but sorted with lexicographically nondecreasing rows and nonincreasing columns, 0..3 2 X n array. • a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>10. •

► [A154142] 0,10,13,63,80,370,469,2159,2736,12586,15949,73359,92960,427570,541813,2492063,3157920,14524810,18405709,84656799,107276336,493415986,625252309,2875839119,3644237520 ⋆ Indices k such that 9 plus the k - th triangular number is a perfect square. • a(n) = a(n - 1) + 6 * a(n - 2) - 6 * a(n - 3) - a(n - 4) + a(n - 5). • a(1..4) = (0,10,13,63); a(n) = 6 * a(n - 2) - a(n - 4) + 2, for n > 4. - _ Ctibor O. Zizka _ , Nov 10 2009 •

► [A307589] 10,14,15,20,21,28,30,40,42,45,50,55,56,60,63,65,70,75,77,80,84,85,90,91,95 ⋆ Numbers m such that 1 < gcd(m, 35) < m and m does not divide 35 ^ e for e >= 0. • a(n) = 35n / 11 + O(log ^ 2 n). - _ Charles R Greathouse IV _ , Sep 07 2022 •

► [A063920] 10,14,20,28,40,56,80,112,160,224,320,448,640,896,1280,1792,2560,3584,5120,7168,10240,14336,20480,28672,40960 ⋆ Numbers k such that k = 2 * phi(k) + phi(phi(k)). • a(n) = (12 - 2 * (- 1) ^ n) * 2 ^ floor(n / 2). - _ Ralf Stephan _ , Jul 19 2013 •

► [A168671] 1,10,14,23,27,36,40,49,53,62,66,75,79,88,92,101,105,114,118,127,131,140,144,153,157 ⋆ Numbers that are congruent to { 1, 10 } mod 13. • a(n) = (26 * n + 5 * (- 1) ^ n - 17) / 4. • a(n) = a(n - 2) + 13 = a(n - 1) + a(n - 2) - a(n - 3). (End) •

► [A074778] 10,14,30,36,42,50,54,70,74,90,98,100,108,110,114,126,130,134,150,154,162,170,174,178,180 ⋆ Numbers k such that 2 ^ k + 1 and F(k) are not relatively prime, where F(k) denotes the k - th Fibonacci number. • a(n) seems to be asymptotic to c * n with c=5.8... •

► [A162899] 1,10,14,30,39,64,80,116,141,190,226,290,339,420,484,584,665,786,886,1030,1151,1320,1464,1660,1829 ⋆ Partial sums of [A052938(n) ^ 2]. • a(n) = (60 - 36 * (- 1) ^ n + (109 - 9 * (- 1) ^ n) * n + 24 * n ^ 2 + 2 * n ^ 3) / 24. G.f.: (4 * x ^ 4 - 4 * x ^ 3 - 7 * x ^ 2 + 8 * x + 1) / ((x - 1) ^ 4 * (x + 1) ^ 2). - _ Colin Barker _ , Jul 18 2013 •

► [A115391] 0,1,10,14,30,55,104,140,204,285,406,506,650,819,1044,1240,1496,1785,2146,2470,2870,3311,3840,4324,4900 ⋆ a(0)=0; then a(4 * k + 1)=a(4 * k) + (4 * k + 1) ^ 2, a(4 * k + 2)=a(4 * k + 1) + (4 * k + 3) ^ 2, a(4 * k + 3)=a(4 * k + 2) + (4 * k + 2) ^ 2, a(4 * k + 4)=a(4 * k + 3) + (4 * k + 4) ^ 2. • a(n) = (2 * n + 1) * (2 * n * (n + 1) + 3 * (1 + cos(n * Pi) - 2 * cos(n * Pi / 2))) / 12. - _ Luce ETIENNE _ , Feb 01 2017 •

► [A164765] 1,10,14,30,66,91,140,221,285,385,529,650,819,1044,1240,1496,1820,2109,2470,2911,3311,3795,4371,4900,5525 ⋆ Partial sums of [A080782 ^ 2]. • a(n) = (n(n + 1) + 6 - 8 * sin ^ 2(Pi * (n + 1) / 3)) * (2n + 1) / 6. • a(n) = 2 * a(n - 1) - a(n - 2) + 2 * a(n - 3) - 4 * a(n - 4) + 2 * a(n - 5) - a(n - 6) + 2 * a(n - 7) - a(n - 8) for n>8. •

► [A116955] 1,10,14,30,66,130,230,374,570,826,1150,1550,2034,2610,3286,4070,4970,5994,7150,8446,9890,11490,13254,15190,17306 ⋆ a(n + 1) = a(n) + (if a(n) is odd then (next odd square) else (next even square)), a(0) = 1. • a(n) = 2 * (15 + n - 3 * n ^ 2 + 2 * n ^ 3) / 3 for n>0. G.f.: - (9 * x ^ 4 - 30 * x ^ 3 + 20 * x ^ 2 - 6 * x - 1) / (x - 1) ^ 4. - _ Colin Barker _ , Jul 18 2013 •

► [A258287] 1,1,10,14,82,145,652,1198,4880,9095,33810,61933,212087,405116,1261067,2366558,7163718,13477035,37969720,72363916,194919282 ⋆ Number of partitions of 9 copies of n into distinct parts. • a(n) = 1 / 9! * [Product _{ i=1..9 } x _ i ^ n] Product _{ j>0 } (1 + Sum _{ i=1..9 } x _ i ^ j). •

► [A109373] 10,15,22,26,34,35,39,58,86,87,94,95,119,122,123,134,142,143,146,159,178,202,203,206,214 ⋆ Semiprimes of the form semiprime + 1. • a(n) is in this sequence iff a(n) is in A001358 and (a(n) - 1) is in A001358. •

► [A231643] 10,15,25,45,85,165,325,645,1285,2565,5125,10245,20485,40965,81925,163845,327685,655365,1310725,2621445,5242885,10485765,20971525,41943045,83886085 ⋆ a(n) = 5 * 2 ^ n + 5. • a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>1, a(0)=10, a(1)=15. - _ Philippe Deléham _ , Nov 15 2013 •

► [A254362] 10,15,27,57,135,345,927,2577,7335,21225,62127,183297,543735,1618905,4832127,14447217,43243335,129533385,388206927,1163834337,3489930135,10466644665,31393642527,94168344657,282479868135 ⋆ a(n) = 3 * 2 ^ n + 3 ^ n + 6. • a(n) = 6 * a(n - 1) - 11 * a(n - 2) + 6 * a(n - 3). - _ Colin Barker _ , Jan 30 2015 •

► [A271743] 10,15,29,63,149,375,989,2703,7589,21735,63149,185343,547829,1627095,4848509,14479983,43308869,129664455,388469069,1164358623,3490978709,10468741815,31397836829,94176733263,282496645349 ⋆ Number of set partitions of [n] such that 4 is the largest element of the last block. • a(n) = 4 + 2 ^ (n - 2) + 3 ^ (n - 4) for n>4. • a(n) = 6 * a(n - 1) - 11 * a(n - 2) + 6 * a(n - 3) for n >7. •

► [A276914] 0,1,10,15,36,45,78,91,136,153,210,231,300,325,406,435,528,561,666,703,820,861,990,1035,1176 ⋆ Subsequence of triangular numbers obtained by adding a square and two smaller triangles, a(n) = n ^ 2 + 2 * A000217(A052928(n)). • a(n) = n * (2 * n + (- 1) ^ n). • a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n>4. • a(n) = n * (2 * n + 1) for n even. • a(n) = n * (2 * n - 1) for n odd. (End) •

► [A003333] 10,17,24,31,36,38,43,45,50,52,57,59,62,64,66,69,71,73,76,78,80,83,85,87,88 ⋆ Numbers that are the sum of 10 positive cubes. • a(n) = n + 99 for all n > 275. - _ M. F. Hasler _ , Aug 13 2020 •

► [A164285] 10,17,31,59,115,227,451,899,1795,3587,7171,14339,28675,57347,114691,229379,458755,917507,1835011,3670019,7340035,14680067,29360131,58720259,117440515 ⋆ a(n) = 7 * 2 ^ n + 3. • a(n) = 2 * a(n - 1) - 3. • a(n) = 3 * a(n - 1) - 2 * a(n - 2). •

► [A058621] 0,1,1,10,17,126,262,1716,3985,24310,60626,352716,925190,5200300,14168988,77558760,217721745,1166803110,3355615450,17672631900,51855874642,269128937220,803232328548,4116715363800,12467572005382 ⋆ a(n) = 1 / 2 * binomial(2 * n,n) - (1 + (- 1) ^ n) / 4 * (binomial(n,floor(n / 2))) ^ 2. • a(n) = Sum _{ i=0..(n - 1) / 2 } binomial(n,i) ^ 2 (see Equation 2 in section 4.2.5 of Prudnikov et al. reference). •

► [A245578] 1,10,18,22,32,38,50,58,72,82,98,110,128,142,162,178,200,218,242,262,288,310,338,362,392 ⋆ The number of permutations of { 0,0,1,1,...,n - 1,n - 1 } that begin with 0 and in which adjacent elements are adjacent mod n. • a(n) = (3 + 5 * (- 1) ^ n + 8 * n + 2 * n ^ 2) / 4 if n>2. - _ Peter Luschny _ , Jul 26 2014 •

► [A190038] 10,18,30,47,72,107,151,203,263,331,407,491,583,683,791,907,1031,1163,1303,1451,1607,1771,1943,2123,2311 ⋆ Number of nondecreasing arrangements of n + 2 numbers in 0..6 with the last equal to 6 and each after the second equal to the sum of one or two of the preceding three. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>8. •

► [A090995] 10,18,32,58,104,188,338,610,1098,1980,3566,6428,11580,20870,37602,67762,122096,220018,396448,714388,1287266,2319594,4179738,7531660,13571542 ⋆ Number of meaningful differential operations of the n - th order on the space R ^ 10. • a(k + 6) = 5 * a(k + 4) - 6 * a(k + 2) + a(k). • a(n) = a(n - 1) + 2 * a(n - 2) - a(n - 3). •

► [A198309] 10,18,82,146,658,1170,5266,9362,42130,74898,337042,599186,2696338,4793490,21570706,38347922,172565650,306783378,1380525202,2454267026,11044201618,19634136210,88353612946,157073089682,706828903570 ⋆ Moore lower bound on the order of a (9,g) - cage. • a(2 * i) = 2 Sum _{ j=0..i - 1 } 8 ^ j = s tring "2" ^ i read in base 8. • a(2 * i + 1) = 8 ^ i + 2 Sum _{ j=0..i - 1 } 8 ^ j = string "1" * "2" ^ i read in base 8. • a(n) = a(n - 1) + 8 * a(n - 2) - 8 * a(n - 3) for n>5. • a(n) = 2 * (2 ^ (3 * n / 2) - 1) / 7 for n even. • a(n) = (9 * 2 ^ ((3 * (n - 1)) / 2) - 2) / 7 for n odd. (End) •

► [A358985] 10,18,180,342,3420,6498,64980,123462,1234620,2345778,23457780,44569782,445697820,846825858,8468258580,16089691302,160896913020,305704134738,3057041347380,5808378560022,58083785600220,110359192640418,1103591926404180,2096824660167942 ⋆ a(n) is the number of numbers of the form k + reverse(k) for at least one n - digit number k. • a(2n + 1) = 10 * a(2n) for n > 0. - _ Chai Wah Wu _ , Dec 09 2022 • a(2n) = 19 * a(2n - 2) for n > 1. - _ Robert G. Wilson v _ , Dec 10 2022 • a(2n + 1) = 19 * a(n - 2). - _ Wesley Ivan Hurt _ , Mar 17 2023 •

► [A240022] 10,18,270,360,4500,5400,63000,72000,810000,900000,9900000,10800000,117000000,126000000,1350000000,1440000000,15300000000,16200000000,171000000000,180000000000,1890000000000,1980000000000,20700000000000,2160000000000 ⋆ Total number of digits in palindromes with n digits. • a(n) = 20 * a(n - 2) - 100 * a(n - 4) for n>5. G.f.: 2 * x * (50 * x ^ 4 + 35 * x ^ 2 + 9 * x + 5) / (10 * x ^ 2 - 1) ^ 2. - _ Colin Barker _ , Mar 31 2014 •

► [A017173] 1,10,19,28,37,46,55,64,73,82,91,100,109,118,127,136,145,154,163,172,181,190,199,208,217 ⋆ a(n) = 9 * n + 1. • a(n) = 2 * a(n - 1) - a(n - 2) with a

(0)=1, a(1)=10. - _ Vincenzo Librandi _ , Aug 01 2010 ●
▶ [A083705] 10,19,37,73,145,289,577,1153,2305,4609,9217,18433,36865,73729,147457,294913,589825,1179649,2359297,4718593,9437185,18874369,37748737,75497473,150994945 ⋆ a(n) = 2 * a(n - 1) - 1 with a(0) = 10. ● a(n) = 1 + 9 * 2 ^ n = 3 * a(n - 1) - 2 * a(n - 2). ●
▶ [A070199] 10,19,109,199,1099,1999,10999,19999,109999,199999,1099999,1999999,10999999,19999999,109999999,199999999,1099999999,1999999999,10999999999,19999999999,109999999999,199999999999,1099999999999,1999999999999,10999999999999 ⋆ Number of palindromes of length <= n. ● a(n) = a(n - 1) + 10 * a(n - 2) - 10 * a(n - 3). ● a(n) = (- 2 * sqrt(10) + 10 ^ (n / 2) * (11 + 2 * sqrt(10) + (- 1) ^ n * (- 11 + 2 * sqrt(10)))) / (2 * sqrt(10)). - _ Harvey P. Dale _ , Mar 18 2016 ● a(n) = 2 ^ (n / 2 + 1) * 5 ^ (n / 2) - 1 for n even. ● a(n) = 11 * 10 ^ ((n - 1) / 2) - 1 for n odd. (End) ●
▶ [A015445] 1,1,10,19,109,280,1261,3781,15130,49159,185329,627760,2295721,7945561,28607050,100117099,357580549,1258634440,4476859381,15804569341,56096303770,198337427839,703204161769,2488241012320 ⋆ Generalized Fibonacci numbers: a(n) = a(n - 1) + 9 * a(n - 2). ● a(n) = (((1 + sqrt(37)) / 2) ^ (n + 1) - ((1 - sqrt(37)) / 2) ^ (n + 1)) / sqrt(37). ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n - k, k) * 9 ^ k. - _ Paul Barry _ , Jul 20 2004 ● a(n) = Sum _{ k=0..n } binomial((n + k) / 2, (n - k) / 2) * (1 + (- 1) ^ (n - k)) * 3 ^ (n - k) / 2 } . - _ Paul Barry _ , Aug 28 2005 ● a(n) = (1 / 37) * (1 / 2 + (1 / 2) * sqrt(37)) ^ n * sqrt(37) - (1 / 37) * (1 / 2 - (1 / 2) * sqrt(37)) ^ n * sqrt(37). - _ Paolo P. Lava _ , Oct 01 2008 (May produce sequence with a different offset.) ● a(n) = (- 703 * (1 / 2 - sqrt(37) / 2) ^ n + 199 * sqrt(37) * (1 / 2 - sqrt(37) / 2) ^ n - 333 * (1 / 2 + sqrt(37) / 2) ^ n + 171 * sqrt(37) * (1 / 2 + sqrt(37) / 2) ^ n) / (74 * (5 * sqrt(37) - 14)). - _ Alexander R. Povolotsky _ , Oct 13 2010 ● a(n) = Sum _{ 1<=k<=n + 1, k odd } C(n + 1,k) * 37 ^ ((k - 1) / 2)) / 2 ^ n. - _ Vladimir Shevelev _ , Feb 05 2014 ●
▶ [A253213] 10,19,109,1009,10009,100009,1000009,10000009,100000009,1000000009,10000000009,100000000009,1000000000009,10000000000009,100000000000009,1000000000000009,10000000000000009,100000000000000009,1000000000000000009,10000000000000000009 ⋆ a(n) = 10 ^ n + 9. ● a(n) = 11 * a(n - 1) - 10 * a(n - 2) for n>1. ●
▶ [A293929] 0,10,19,118,3187,3014173,3003344034004 ⋆ Smallest number in base 10 that cannot be collapsed to a single digit using fewer than n plus signs. ● a(n) <= ((a(n - 1) - 1) ^ 2) / 3 + a(n - 2) for n > 1 (conjectured). This would provide a relatively tight upper bound on a(n). If the Demers - Stauduhar conjecture in the Comments turns out to be true, this upper bound will always be an integer. - _ Simon Demers _ , Nov 29 2017 ●
▶ [A121725] 1,1,10,19,190,442,4420,11395,113950,312814,3128140,8960878,8960878,264735892,2647358920,8006545891,80065458910,246643289830,246643289830,771158322533 8,77115832253380,244082045341036,244082045341036,78053018 02531534 ⋆ Generalized central coefficients for k=3. ● a(n) = (1 / Pi) * 18 * 6 ^ n * Integral _{ x= - 1..1 } x ^ n * sqrt(1 - x ^ 2) / (10 - 6 * x) dx. ●
▶ [A361337] 0,10,20,25,30,40,45,50,52,54,55,56,58,59,60,65,69,70,78,80,85,87,90,95,96 ⋆ Numbers that reach 0 after a suitable series of split - and - multiply operations (see Comments for precise definition). ● a(2894 + k) = 3112 + k for all k >= 0 (conjectured). - _ M. F. Hasler _ , Apr 05 2023 ●
▶ [A179819] 10,20,25,35,45,50,60,70,75,85,95,100,110,120,125,135,145,150,160,170,175,185,195,200,210 ⋆ Monetary amounts in U.S. cents such that the smallest number of coins summing to the amount uses only denominations of 10 cents and above. ● a(n) = + a(n - 1) + a(n - 3) - a(n - 4). ●
▶ [A063117] 1,10,20,28,38,48,56,66,76,84,94,104,112,122,132,140,150,160,168,178,188,196,206,216,224 ⋆ Dimension of the space of weight 2n cusp forms for Gamma _ 0(49). ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>5. ●
▶ [A011540] 0,10,20,30,40,50,60,70,80,90,100,101,102,103,104,105,106,107,108,109,110,120,130,140,150 ⋆ Numbers that contain a digit 0. ● a(n) <= 10 * (n - 1), equality holds for 1 <= n <= 11. ● a(n) <= 9 * n, for n <> 11. ● a(n) < n + 10 * n ^ log _ 10(9). ● a(n) < n + 2 * n ^ log _ 10(9), for n > 6 * 10 ^ 8. ● a(n) > n + 9 ^ log _ 10(9) / 8 * n ^ log _ 10(9). ● a(n) = n + O(n ^ log _ 10(9)) = n * (1 + O(1 / n ^ 0.04575749056...)). ●
▶ [A008592] 0,10,20,30,40,50,60,70,80,90,100,110,120,130,140,150,160,170,180,190,200,210,220,230,240 ⋆ Multiples of 10: a(n) = 10 * n. ● a(n) = 2 * a(n - 1) - a(n - 2) for n>1. (End) ● a(n) = Sum _{ i=2n - 2..2n + 2 } i. - _ Wesley Ivan Hurt _ , Apr 11 2016 ●
▶ [A043489] 0,10,20,30,40,50,60,70,80,90,101,102,103,104,105,106,107,108,109,110,120,130,140,150,160 ⋆ Numbers having one 0 in base 10. ● a(1 + Sum _{ j=1..n } j * 9 ^ j) = 10 * (10 ^ n - 1). ● a(2 + Sum _{ j=1..n } j * 9 ^ j) = 10 ^ (n + 1) + (10 ^ n - 1) / 9 = (91 * 10 ^ n - 1) / 9. ● a((9 ^ (n + 1) - 1) / 8 + 1 + Sum _{ j=1..n } j * 9 ^ j) = 10 * (10 ^ (n + 1) - 1) / 9, where Sum _{ j=1..n } j * 9 ^ j = (1 - (n + 1) * 9 ^ n + n * 9 ^ (n + 1)) * 9 / 64. ● a(n + 1) = a(n) + 10 + (10 ^ j - 1) / 9, if i = 0. ● a(n + 1) = a(n) + 1 + (10 ^ (j - 1) - 1) / 9, if i = j > 0. ● a(n + 1) = a(n) + 1 + (10 ^ j - 1) / 9, if i > j. ●
▶ [A020337] 10,20,30,40,50,60,70,80,738,820,902,984,1066,1148,1230,1312,1394,1476,1558,1640,1722,1804,1886,1968,2050 ⋆ Numbers whose base - 9 representation is the juxtaposition of two identical strings. ● a(n) = n * 9 ^ floor(log _ 9(n) + 1) + n. - _ Ilya Gutkovskiy _ , Jan 26 2018 ●
▶ [A345069] 10,20,32,48,66,80,96,114,132,150,168,190,208,220,244,270,290,314,336,354,374,392,422,452,468 ⋆ Sums of two consecutive even - indexed primes. ● a(n) = prime(2 * n) + prime(2 * n + 2). ●
▶ [A172172] 0,1,10,20,39,68,116,193,318,520,847,1376,2232,3617,5858,9484,15351,24844,40204,65057,105270,170336,275615,445960,721584 ⋆ Sums of NW - SE diagonals of triangle A172171. ● a(n) = a(n - 1) + a(n - 2) + 9 with a(0)=0 and a(1)=1. ● a(n) = 2 * a(n - 1) - a(n - 3), a(0)=0, a(1)=1, a(2)=10 (Observation by G. Detlefs). ● a(n) = - 9 + ((11 + 9 * sqrt(5)) * (1 + sqrt(5)) ^ n - (11 - 9 * sqrt(5)) * (1 - sqrt(5)) ^ n) / (2 ^ (n + 1) * sqrt(5)). - _ Colin Barker _ , Jul 13 2017 ● a(n) = Fibonacci(n + 3) + 7 * Fibonacci(n + 1) - 9. - _ G. C. Greubel _ , Apr 25 2022 ●
▶ [A327692] 10,20,46,104,240,544,1256,2848,6576,14912,34432,78080,180288,408832,944000,2140672,4942848,11208704,25881088,58689536,135515136,307302400,709566464,1609056256,3715338240 ⋆ Number of length - n phone numbers that can be dialed by a chess knight on a 0 - 9 keypad that starts on any number and takes n - 1 steps. ● a(n) = 6 * a(n - 2) - 4 * a(n - 4) for n>6. ●
▶ [A254030] 10,20,50,146,470,1610,5750,21146,79430,303050,1169750,4554746,17852390,70322090,278050550,1102537946,4381257350,17438542730,69495104150,277204002746,1106488342310,4418973508970,17654960746550 ⋆ a(n) = 1 * 4 ^ n + 2 * 3 ^ n + 3 * 2 ^ n + 4 * 1 ^ n. ● a(n) = (x + 1) * (Bernoulli(n + 1, x + 1) - Bernoulli(n + 1, 1)) / (n + 1) - (Bernoulli(n + 2, x + 1) - Bernoulli(n + 2, 1)) / (n + 2) at x = 4. ● a(n) = 1 / 3! * Sum _{ k = 0..n } (- 1) ^ (k + n) * (k + 5)! * Stirling2(n,k) / ●
▶ [A294473] 0,0,10,20,60,92,182,248,408,520,770,940,1300,1540,2030,2352,2992,3408,4218,4740,5740,6380,7590,8360,9800 ⋆ Sum of the areas of the squares on the sides of the distinct rectangles that can be made with positive integer sides such that L + W = n, W < L. ● a(n) = 2 * Sum _{ i=1..floor((n - 1) / 2) } i ^ 2 + (n - i) ^ 2. ● a(n) = n * (8 * n ^ 2 - 18 * n + 4) / 12 for n even. ● a(n) = n * (8 * n ^ 2 - 12 * n + 4) / 12 for n odd. ● a(n) = a(n - 1) + 3 * a(n - 2) - 3 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) + a(n - 6) - a(n - 7) for n > 7. ●
▶ [A276764] 10,20,74,100,202,244,394,452,650,724,970,1060,1354,1460,1802,1924,2314,2452,2890,3044,3530,3700,4234,4420,5002 ⋆ 1 ^ 2 + 3 ^ 2, 2 ^ 2 + 4 ^ 2, 5 ^ 2 + 7 ^ 2, 6 ^ 2 + 8 ^ 2, ... ● a(n) = (2n - 1 - ((n + 1) mod 2)) ^ 2 + (2n + (n mod 2)) ^ 2. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n>5. ● a(n) = 8 * n ^ 2 - 8 * n + 4 for n even. ● a(n) = 8 * n ^ 2 + 2 for n odd. ●
▶ [A215878] 10,20,80,100,460,620,2780,3700,16660,22220,99980,133300,599860,799820,3599180,4798900,21595060,28793420,129570380,172760500,777422260,1036563020,4664533580,6219378100,27987201460 ⋆ Lengths of loops in the P2 Penrose tiling. ● a(n) = 3 * a(n - 1) + 2 * a(n - 2) if n is odd. a(n) = 2 * a(n - 1) - 3 * a(n - 2) if n is even. - _ R. J. Mathar _ , Jun 18 2014 ● a(n) = - 5 * (- 6 ^ ((n - 1) / 2) * (9 + 2 * sqrt(6) + (- 1) ^ n * (2 * sqrt(6) - 9)) + 4 * (cos(n * Pi / 2) + sin(n * Pi / 2))) / 7. - _ Benedict W. J. Irwin _ , Nov 01 2016 ●
▶ [A161999] 0,1,1,10,20,101,301,1030,4040,10601,51001,110050,620060,1151501,7352101,12135070,85656080,128702801,985263601,1372684090,11225320100,14712104501,126965305501,158346365110,1427999420120 ⋆ For n even a(n) = a(n - 1) + 10 * a(n - 2), for n odd a(n) = a(n - 3) + 10 a(n - 2); with a(1) = 0, a(2) = 1. ● a(n)=20 * a(n - 2) - 99 * a(n - 4). G.f.: - x ^ 2 * (- 1 - x + 10 * x ^ 2) / ((3 * x - 1) * (3 * x + 1) * (11 * x ^ 2 - 1)). [From _ R. J. Mathar _ , Jul 13 2009] ●
▶ [A185691] 10,21,31,52,83,135,218,353,571,924,1495,2419,3914,6333,10247,16580,26827,43407,70234,113641,183875,297516,481391,778907,1260298 ⋆ Fibonacci sequence with initial terms 10 and 21. ● a(n + 2) = a(n + 1) + a(n) with a(0) = 10, a(1) = 21. ● a(n) = 11 * Fibonacci(n) + 10 * Fibonacci(n + 1). ● a(n) = 9 * Fibonacci(n + 2) + Lucas(n + 1). ●
▶ [A041192] 10,21,31,300,331,962,19571,40104,59675,577179,636854,1850887,37654594,77160075,114814669,1110492096,1225306765,3561105626,72447419285,148455944196,220903363481,2136586215525,2357489579006 ⋆ Numerators of continued fraction convergents to sqrt(107). ● a(n) = 1924 * a(n - 6) - a(n - 12). G.f.: - (x ^ 11 - 10 * x ^ 10 + 21 * x ^ 9 - 31 * x ^ 8 + 300 * x ^ 7 - 331 * x ^ 6 - 962 * x ^ 5 - 331 * x ^ 4 - 300 * x ^ 3 - 31 * x ^ 2 - 21 * x - 10) / (x ^ 12 - 1924 * x ^ 6 + 1). [_ Colin Barker _ , Jul 19 2012] ●
▶ [A017509] 10,21,32,43,54,65,76,87,98,109,120,131,142,153,164,175,186,197,208,219,230,241,252,263,274 ⋆ a(n) = 11 * n + 10. ● a(n) = 2 * a(n - 1) - a(n - 2). (End) ●
▶ [A051942] 0,10,21,33,46,60,75,91,108,126,145,165,186,208,231,255,280,306,333,361,390,420,451,483,516 ⋆ a(n) = n * (n + 1) / 2 - 45. ● a(n) = (n ^ 2 + n - 90) / 2 = (n - 9) * (n + 10) / 2 = n * (n + 1) / 2 - 45. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3), n>=13. ● a(n) = n + a(n - 1) (with a(9) = 0). - _ Vincenzo Librandi _ , Aug 06 2010 ●
▶ [A195142] 0,1,10,21,40,61,90,121,160,201,250,301,360,421,490,561,640,721,810,901,1000,1101,1210,1321,1440 ⋆ Concentric 10 - gonal numbers. ● a(n) = - a(n - 1) + 5 * n ^ 2 - 5 * n + 1, a(0)=0. - _ Vincenzo Librandi _ , Sep 27 2011 ● a(n) = a(- n) = (10 * n ^ 2 + 3 * (- 1) ^ n - 3) / 4. ● a(n) = a(n - 2) + 10 * (n - 1). (End) ● a(n) = 2 * a(n - 1) + 0 * a(n - 2) - 2 * a(n - 3) + a(n - 4); a(0)=0, a(1)=1, a(2)=10, a(3)=21. - _ Harvey P. Dale _ , Sep 29 2011 ●
▶ [A086225] 10,21,43,87,175,351,703,1407,2815,5631,11263,22527,45055,90111,180223,360447,720895,1441791,2883583,5767167,11534335,23068671,46137343,92274687,184549375 ⋆ a(n) = 11 * 2 ^ n - 1. ● a(n) = 2 * a(n - 1) + 1. ●
▶ [A219884] 10,21,47,129,292,600,1158,2148,3863,6784,11679,19763,32938,54144,87860,140803,222883,348483,538145,820756,1236342,1839593,2704258,3928566,5641847 ⋆ Number of 3 X n arrays of the minimum value of corresponding elements and their horizontal, diagonal or antidiagonal neighbors in a random, but sorted with lexicographically nondecreasing rows and nonincreasing columns, 0..2 3 X n array. ● a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10) for n>16. ●
▶ [A042309] 1,10,21,52,73,125,323,2063,14764,46355,107474,153829,2568738,2722567,8013872,26764183,195363153,1198943101,2593249355,3792192456,6385441811,16563076078,39511593967,411679015748,21446820412863 ⋆ Denominators of continued fraction convergents to sqrt(681). ● a(n) = 21486332006830 * a(n - 24) - a(n - 48) for n>47. - _ Vincenzo Librandi _ , Jan 20 2014 ●
▶ [A048697] 1,10,21,52,125,302,729,1760,4249,10258,24765,59788,144341,348470,841281,2031032,4903345,11837722,28578789,68995300,166569389,402134078,970837545,2343809168,5658455881 ⋆ Generalized Pellian with second term equal to 10. ● a(n) = 2 * a(n - 1) + a(n - 2); a(0)=1, a(1)=10. ● a(n) = ((9 + sqrt(2)) (1 + sqrt(2)) ^ n - (9 - sqrt(2))(1 - sqrt(2)) ^ n) / 2 * sqrt(2). ●
▶ [A171067] 0,1,1,10,21,121,340,1561,5061,20890,72721,285121,1028160,3931201,14425201,54480250,201635301,756931801,2813339860,10529812921,39218508021,146573045290,546474598561,2040893746561,7612994269440 ⋆ G.f. - x * (x - 1) * (1 + x) / ((x ^ 2 + 3 * x + 1) * (x ^ 2 - 4 * x + 1)). ● a(n)= + a(n - 1) + 10 * a(n - 2) + a(n - 3) - a(n - 4). ●
▶ [A041833] 1,1,10,21,199,220,8999,9219,91970,193159,1830401,2023560,82772801,84796361,845940050,1776676461,16836028199,18612704660,761344214599,7799

56919259,7780956487930,16341869895119,154857785544001,171199655439120,7002844003108801 ⋆ Denominators of continued fraction convergents to sqrt(437). ● a(n) = 9198 * a(n - 6) - a(n - 12) for n>11. - _ Vincenzo Librandi _ , Dec 25 2013 ●

▶ [A041198] 10,21,430,881,18050,36981,757670,1552321,31804090,65160501,1335014110,2735188721,56038788530,114812765781,2352294104150,4819400974081,9874031358770,20230002814562 1,414474087649819 0,849178178114200 1,173980376499338210,356452534779818421 ⋆ Numerators of continued fraction convergents to sqrt(110). ● a(0)=10, a(1)=21, a(2)=430, a(3)=881, a(n)=42 * a(n - 2) - a(n - 4). - _ Harvey P. Dale _ , Mar 04 2015 ●

▶ [A109326] 1,10,21,1022,101023,1000101024 ⋆ Smallest positive number that requires n steps to be represented as a sum of palindromes using the greedy algorithm. ● a(n) = Sum _{ 0 <= k <= n - 3 } 10 ^ (2 ^ k + 1) + n - 82, for n > 2 (conjectured). - _ M. F. Hasler _ , Sep 08 2015 ●

▶ [A217573] 10,22,34,47,60,72,84,98,110,122,135,148,160,172,186,198,210,223,236,248,260,274,286,298,311 ⋆ Number of integers between - (2 * n + 1) * Pi and (2 * n + 2) * Pi. ● a(n) = floor((2 * n + 1) * Pi) + floor((2 * n + 2) * Pi) + 1. ●

▶ [A211482] 1,10,22,35,50,62,80,92,104,116,128,140,152,164,176,188,200,212,224,236,248,260,272,284,296 ⋆ Number of ordered triples (w,x,y) with all terms in {- n,...,0,...,n } and w * x + w * y + x * y=w * x * y. ● a(n) = 12 * n + 8 for n >5. ● a(n) = 2 * a(n - 1) - a(n - 2) for n>7. ●

▶ [A028569] 0,10,22,36,52,70,90,112,136,162,190,220,252,286,322,360,400,442,486,532,580,630,682,736,792 ⋆ a(n) = n * (n + 9). ● a(n) = 2 * n + a(n - 1) + 8. - _ Vincenzo Librandi _ , Aug 05 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Wesley Ivan Hurt _ , Sep 26 2014 ●

▶ [A079861] 10,22,48,104,224,480,1024,2176,4608,9728,20480,43008,90112,188416,393216,819200,1703936,3538944,7340032,15204352,31457280,65011712,134217728,276824064,570425344 ⋆ a(n) is the number of occurrences of 7's in the palindromic compositions of 2 * n - 1, or also, the number of occurrences of 8's in the palindromic compositions of 2 * n. ● a(n) = (2 + n) * 2 ^ (n - 8). ● a(n) = 4 * a(n - 1) - 4 * a(n - 2). - _ Colin Barker _ , Dec 16 2014 ●

▶ [A014008] 10,22,48,105,230,504,1104,2418,5296,11600,25408,55652,121896,266992,584800,1280904,2805600,6145184,13459968,29481744,64574688,141439744,309799425,678562341,1486274065 ⋆ Pisot sequence E(10,22), a(n) = floor(a(n - 1) ^ 2 / a(n - 2) + 1 / 2). ● a(n) = floor(r * s ^ n + 1 / 2), where r = 9.99722327450628273875296... and s = 2.190327955501779639125414331914732185635456648747673678481473094... . - _ Benoit Cloitre _ , Apr 21 2003 ●

▶ [A354879] 0,1,10,22,63,131,276,567,1170,2164,4021,7441,13500,24362,43865,77904,137326,242183,425850,744892 ⋆ a(n) is the index of the Stieltjes constant at the beginning of the last set of exactly n successive constants of the same sign. ● a(n) = last occurrence n in A114524 after recounting index of A114524 on index of the first Stieltjes gamma in set. ●

▶ [A140674] 0,10,23,39,58,80,105,133,164,198,235,275,318,364,413,465,520,578,639,703,770,840,913,989,1068 ⋆ a(n) = n * (3 * n + 17) / 2. ● a(n) = (3 * n ^ 2 + 17 * n) / 2. ● a(n) = 3 * n + a(n - 1) + 7 (with a(0)=0). - _ Vincenzo Librandi _ , Aug 03 2010 ●

▶ [A156202] 10,23,49,101,205,413,829,1661,3325,6653,13309,26621,53245,106493,212989,425981,851965,1703933,3407869,6815741,13631485,27262973,54525949,109051901,218103805 ⋆ a(n) = 2 * a(n - 1) + 3 for n > 1, a(1) = 10. ● a(n) = - 3 + 13 * 2 ^ (n - 1). ● a(n) = 3 * a(n - 1) - 2 * a(n - 2). - _ Vincenzo Librandi _ , May 02 2012 ●

▶ [A219940] 10,23,64,196,459,918,1660,2802,4499,6952,10416,15208,21715,30402,41820,56614,75531,99428,129280,166188,211387,266254,332316,411258,504931 ⋆ Number of 2 X n arrays of the minimum value of corresponding elements and their horizontal or diagonal neighbors in a random, but sorted with lexicographically nondecreasing rows and nonincreasing columns, 0..3 2 X n array. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>8. ●

▶ [A164578] 10,23,65,94,168,213,319,380,518,595,765,858,1060,1169,1403,1528,1794,1935,2233,2390,2720,2893,3255,3444,3838 ⋆ Integers of the form (k + 1) * (2 k + 1) / 12. ● a(n) = + a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). G.f. x * (- 10 - 13 * x - 22 * x ^ 2 - 3 * x ^ 3) / ((1 + x) ^ 2 * (x - 1) ^ 3). - _ R. J. Mathar _ , Jan 25 2011 ● a(n) = (24 * n ^ 2 + 6 * n - (- 1) ^ n * (8 * n + 1) + 1) / 4. ● a(n) = (12 * n ^ 2 - n) / 2 for n even. ● a(n) = (12 * n ^ 2 + 7 * n + 1) / 2 for n odd. ●

▶ [A219472] 10,23,68,211,547,1248,2663,5432,10666,20206,36984,65512,112528,187831,305340,484415,751481,1141999,1702831,2495049,3597241,5109370,7157245,9897666,13524308 ⋆ Number of 2 X n arrays of the minimum value of corresponding elements and their horizontal or antidiagonal neighbors in a random, but sorted with lexicographically nondecreasing rows and columns, 0..3 2 X n array. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>12. ●

▶ [A101156] 10,24,34,58,92,150,242,392,634,1026,1660,2686,4346,7032,11378,18410,29788,48198,77986,126184,204170,330354,534524,864878,1399402 ⋆ a(n) = 2 * Fibonacci(n) + 8 * Fibonacci(n - 5). ● a(n) = a(n - 1) + a(n - 2). ●

▶ [A067728] 10,24,42,64,90,120,154,192,234,280,330,384,442,504,570,640,714,792,874,960,1050,1144,1242,1344,1450 ⋆ a(n) = 2 * n ^ 2 + 8 * n. ● a(n + 1) = 2 * n * n + 12 * n + 10. - _ Frank Ellermann _ ● a(n) = Sum _{ k=0..n } Sum _{ j=4..n } (j - k), n >= 4. - _ Zerinvary Lajos _ , May 11 2007 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Jul 08 2012 ●

▶ [A269457] 10,25,45,70,100,135,175,220,270,325,385,450,520,595,675,760,850,945,1045,1150,1260,1375,1495,1620,1750 ⋆ a(n) = 5 * (n + 1) * (n + 4) / 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A163631] 1,10,25,46,71,98,131,166,205,250,299,350,405,462,525,590,659,734,811,892,977,1064,1155,1248,1343 ⋆ Partial sums of the odd nonprimes, A014076. ● a(n) = Sum _{ x= 1st odd nonprime..n - th odd nonprime } x. ●

▶ [A100536] 1,10,25,46,73,106,145,190,241,298,361,430,505,586,673,766,865,970,1081,1198,1321,1450,1585,1726,1873 ⋆ a(n) = 3 * n ^ 2 - 2. ● a(n) = a(n - 1) + 6 * n - 3 for n>1. - _ Vincenzo Librandi _ , Nov 17 2010 ● a(T(n) + 1) = T(n + 1) ^ 2 + T(n) ^ 2 + T(n - 1) ^ 2, where T = A000217. - _ Bruno Berselli _ , May 14 2014 ● a(n + 1) = binomial(n,0) + 9 * binomial(n,1) + 6 * binomial(n, 2). - _ Philippe Deléham _ , Mar 16 2014 ● a(n) = floor(1 / (n * tan(1 / n) - 1)). - _ Clark Kimberling _ , Dec 02 2014 ●

▶ [A072277] 10,25,51,91,148,225,325,451,606,793,1015,1275,1576,1921,2313,2755,3250,3801,4411,5083,5820,6625,7501,8451,9478 ⋆ Smallest integer > 1 which is both n - gonal and centered n - gonal. ● a(n) = (n ^ 3 - n ^ 2 + 2) / 2. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4), with a(3)=10, a(4)=25, a(5)=51, a(6)=91. - _ Harvey P. Dale _ , Aug 19 2011 ●

▶ [A137930] 0,1,10,25,56,101,170,261,384,537,730,961,1240,1565,1946,2381,2880,3441,4074,4777,5560,6421,7370,8405,9536 ⋆ The sum of the principal diagonals of an n X n spiral. ● a(n) = mod(n ^ (n + 1),n + 1) + floor(n / 2) ^ 2 * (6 - 4(- 1) ^ n) + [16 * floor(n / 2) ^ 3 + floor(n / 2) * (14 - 12(- 1) ^ n)] / 3 ● a(n) = 2 * n ^ 3 / 3 + n ^ 2 / 2 + 4 * n / 3 + 3 * ((- 1) ^ n - 1) / 4. (End) ●

▶ [A071289] 0,1,10,25,68,117,222,325,520,697,1010,1281,1740,2125,2758,3277,4112,4785,5850,6697,8020,9061,10670,11925,13848 ⋆ a(n) = n * (n ^ 2 + 1) if n is even, otherwise (n - 1 / 2) * (n ^ 2 + 1). ● a(n) = a(n - 1) + 3 * a(n - 2) - 3 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) + a(n - 6) - a(n - 7). ● a(n) = (n ^ 2 + 1) * (4 * n - 1 + (- 1) ^ n) / 4. - _ Wesley Ivan Hurt _ , May 15 2021 ●

▶ [A248833] 10,25,160,1225,9610,75625,595360,4687225,36902410,290532025,2287353760,18008298025,141779030410,1116223945225,8788012531360,69187876305625,544714997913610,4288532107003225,33763541858112160,265819802758940250,2092798480205040010,16476539238882426025 ⋆ The curvature of touching circles inscribed in a special way in the larger segment of circle of radius 1 / 6 divided by a chord of length sqrt(8 / 75). ● a(n) = 9 * a(n - 1) - 9 * a(n - 2) + a(n - 3). ● a(n) = 5 * (2 + (4 - sqrt(15)) ^ n + (4 + sqrt(15)) ^ n) / 2. - _ Colin Barker _ , Mar 03 2016 ●

▶ [A124870] 1,10,25,500,2500,25000,31250,1250000,6250000,62500000,78125000,312500000,15625000000,156250000000,195312500000,7812500000000,39062500000000,390625000000000,488281250000000,19531250000000000 ⋆ Denominator of real part of (2 * omega) ^ (- n) where omega = (- 1 + i * 3) / 2. ● a(n) = denominator(Re(1 / (- 1 + i * 3) ^ n)). ● a(n) = 2500 * a(n - 4) for n>6. ●

▶ [A046961] 1,10,26,29,70,73,117,161,183,893,1603,2313,3023,3733,4443,5153,5863,6573,7283,7993,8703,9413,10123,10833,11543 ⋆ Bessel function Y _ 0(n) is a monotonically decreasing positive sequence. ● a(n) = 2 * a(n - 1) - a(n - 2) for n > 9. ●

▶ [A067264] 10,26,33,35,49,57,69,88,90,96,136,142,160,178,198,201,206,209,215,216,253,262,265,276,302 ⋆ Numbers n such that prime(n + 1) - prime(n)=bigomega(n). ● a(n) seems to be asymptotic to c * n * log(n) with c=2.2... ●

▶ [A339977] 10,26,34,50,58,74,82,90,106,122,130,146,170,178,194,202,218,226,234,250,274,290,298,306,314 ⋆ Sums of two distinct odd squares. ● a(n) == 2 (mod 8). - _ Hugo Pfoertner _ , Mar 29 2021 ●

▶ [A080059] 1,10,26,38,54,64,80,98,115,126,136,147,158,171,181,196,206,226,243,257,267,279,293,306,324 ⋆ Greedy powers of (1 / zeta(3)): sum _{ n=1..inf } (1 / zeta(3)) ^ a(n) = 1, where 1 / zeta(3) = .83190737258070746868... ● a(n)= sum _{ k=1..n } floor(g _ k) where g _ 1=1, g _{ n + 1 } =log _ x(x ^ frac(g _ n) - x) (n>0) at x=(1 / zeta(3)) and frac(y) = y - floor(y). See A077468 for mathematica program by _ Robert G. Wilson v _ . ●

▶ [A113770] 1,10,26,42,58,74,90,106,122,138,154,170,186,202,218,234,250,266,282,298,314,330,346,362,378 ⋆ Partial sums of A113311(n) ^ 2. ● a(n) = 7 * 0 ^ n + 2 * (8 * n - 3). ● a(n) = sum { k=0..n, (4 - C(1, k) - 2 * C(0, k)) ^ 2 } . ● a(0)=1, a(1)=10, a(2)=26, a(n) = 2 * a(n - 1) - a(n - 2). [_ Harvey P. Dale _ , Aug 19 2011] ●

▶ [A198017] 1,10,26,49,79,116,160,211,269,334,406,485,571,664,764,871,985,1106,1234,1369,1511,1660,1816,1979,2149 ⋆ a(n) = n * (7 * n + 11) / 2 + 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) = 2 * a(n - 1) - a(n - 2) + 7. ●

▶ [A242719] 10,26,50,170,170,362,362,842,842,1370,1370,1850,1850,2210,3722,3722,3722,4892,5042,7082,7922,7922,7922,10610,10610 ⋆ Smallest even k such that lpf(k - 3) > lpf(k - 1) >= prime(n), where lpf=least prime factor (A020639). ● a(n) = prime(n) ^ 2 + 1 for and only for numbers n>=2 which are in A137291. - _ Vladimir Shevelev _ , Sep 04 2014 ●

▶ [A259290] 10,26,66,170,434,1114,2850,7306,18706,47930,122754,314474,805490,2063386,5285346,13538890,34680274,88835834,227556930,582900266,1493127986,3824729050,9797240994,25096157194,64285121170 ⋆ Number of (n + 1) X (1 + 1) 0..1 arrays with each 2 X 2 subblock having clockwise pattern 0001 0101 or 0111. ● a(n) = (2 ^ (1 - n) * ((1 - sqrt(17)) ^ n * (- 4 + sqrt(17)) + (1 + sqrt(17)) ^ n * (4 + sqrt(17)))) / sqrt(17). ●

▶ [A005970] 1,10,26,75,196,520,1361,3570,9346,24475,64076,167760,439201,1149850,3010346,7881195,20633236,54018520,141422321,370248450,969323026,2537720635,6643838876,17393796000,45537549121 ⋆ Partial sums of squares of Lucas numbers. ● a(n) = Sum _{ k=1..n } L(k), where L(K) is the k - th Lucas number (A000032). ● a(n) = 3 * a(n - 1) - 3 * a(n - 3) + a(n - 4), for n > 4. ● a(n) = L(n) * L(n + 1) - 2. (End) ●

▶ [A368502] 1,1,1,1,10,26,76,232,764,12644,61136,312676,1680592,9467680,55704104,341185496,6631556521,49294051497,380306658250,3039453750685,25120541332271,214363100120051,1885987611214092,17085579637664715,159185637725413675 ⋆ Number of partitions of an n - set into blocks of size <= sqrt(n). ● a(n) = n! * [x ^ n] exp(Sum _{ 1 <= j <= sqrt(n) } x ^ j / j!). ●

▶ [A321311] 10,26,79,252,796,2468,7564,23012,69676,210308,633484,1905572,5726956,17201348,51645004,155016932,465214636,1395971588,4188570124,12567021092,37703684716,113116297028,339359376844,1018099102052,3054339249196 ⋆ Number of linear chord diagrams having n + 2 chords and minimal chord length n. ● a(n) = 5 * a(n - 1) - 6 * a(n - 2) for n > 5. ●

▶ [A221568] 0,10,26,100,342,1210,4240,14898,52306,183684,645006,2264978,7953568,27929338,98075178,344395620,1209361446,4246729738,14912591664,52366268642,183886620962,645726538244,2267499179678,7962430263202,27960449231680 ⋆ Number of 0..3 arrays of length n with each element differing from at least one neighbor by something other than 1. ● a(n) = 3 * a(n - 1) + 2 * a(n - 2) - a(n - 3) + a(n - 4). ●

▶ [A001107] 0,1,10,27,52,85,126,175,232,297,370,451,540,637,742,855,976,1105,1242,1387,1540,1701,1870,2047,2232 ⋆ 10 - gonal (or decagonal) numbers: a(n) =

n * (4 * n - 3). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>2, a(0)=0, a(1)=1, a(2)=10. - _ Jaume Oliver Lafont _ , Dec 02 2008 ● a(n) = 8 * n + a(n - 1) - 7 for n>0, a(0)=0. - _ Vincenzo Librandi _ , Jul 10 2010 ● a(n) = 8 + 2 * a(n - 1) - a(n - 2). - _ Ant King _ , Sep 04 2011 ● a(8 * a(n) + 29 * n + 1) = a(8 * a(n) + 29 * n) + a(8 * n + 1). - _ Vladimir Shevelev _ , Jan 24 2014 ●

► [A060544] 1,10,28,55,91,136,190,253,325,406,496,595,703,820,946,1081,1225,1378,1540,1711,1891,2080,2278,2485,2701 ⋆ Centered 9 - gonal (also known as non agonal or enneagonal) numbers. Every third triangular number, starting with a(1)=1. ● a(n) = C(3 * n, 3) / n = (3 * n - 1) * (3 * n - 2) / 2. ● a(1 - n) = a(n). ● a(n) = C(n - 1, 0) + 9 * C(n - 1, 1) + 9 * C(n - 1, 2); binomial transform of (1, 9, 9, 0, 0, 0, ...). ● a(n - 1) = Pochhammer(4,3 * n) / (Pochhammer(2,n) * Pochhammer(n + 1,2 * n)). ● a(n - 1) = 1 / Hypergeometric([- 3 * n,3 * n + 3,1],[3 / 2,2],3 / 4). - _ Peter Luschny _ , Jan 09 2012 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A048491] 1,10,28,64,136,280,568,1144,2296,4600,9208,18424,36856,73720,147448,294904,589816,1179640,2359288,4718584,9437176,18874360,37748728,75497464,150994936 ⋆ a(n) = T(8,n), array T given by A048483. ● a(n) = 9 * 2 ^ n - 8. - _ Ralf Stephan _ ● a(n) = 2 * a(n - 1) + 8, with a(0)=1. - _ Vincenzo Librandi _ , Aug 06 2010 ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) with a(0)=1, a(1)=10. - _ Philippe Deléham _ , Apr 15 2013 ●

► [A116973] 1,10,28,91,271,820,2458,7381,22141,66430,199288,597871,1793611,5380840,16142518,48427561,145282681,435848050,1307544148,3922632451,11767897351,35303692060,105911076178,317733228541,953199685621 ⋆ If n mod 2 = 0 then (3 ^ (n + 3) - 19) / 8 else (3 ^ (n + 3) - 1) / 8. ● a(n):=2 * a(n - 1) + 3 * a(n - 2) + 5, a(0)=1; a(1)=1. [From _ Zerinvary Lajos _ , Dec 14 2008] ● a(n) = (3 ^ (n + 3) - 19 ^ ((n + 1) mod 2))) / 8. - _ Wesley Ivan Hurt _ , Nov 13 2013 ●

► [A003665] 1,1,10,28,136,496,2080,8128,32896,130816,524800,2096128,8390656,33550336,134225920,536854528,2147516416,8589869056,34359869440,137438691328,549756338176,2199022206976,8796095119360,35184367894528,140737496743936 ⋆ a(n) = 2 ^ (n - 1) * (2 ^ n + (- 1) ^ n). ● a(n) = 2 * a(n - 1) + 8 * a(n - 2), a(0)=a(1)=1. ● a(n) = (4 ^ n + (- 2) ^ n) / 2. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n, 2 * k) * 9 ^ k. ● a(n) = ((1 + sqrt(9)) ^ n + (1 - sqrt(9)) ^ n) / 2. - Al Hakanson (hawkuu(AT)gmail.com), Dec 08 2008 ●

► [A332432] 10,28,141,509,1597,4606,12544,32774,82965,204856,495752,1179957,2769577,6423997,14748718,33560981,75773263,169897572,378594174,838980348,1849932688,4060585522,8876163946,19329419393,41947233974 ⋆ a(n) = [2 ^ n / (1 - cos(1 / n))] - [2 ^ n / (- 1 + cot(1 / n))], where [ ] = floor. ● a(n) = [2 ^ n / (1 - cos(1 / n))] - [2 ^ n / (- 1 + cot(1 / n))], where [ ] = floor. ●

► [A079273] 1,10,29,58,97,146,205,274,353,442,541,650,769,898,1037,1186,1345,1514,1693,1882,2081,2290,2509,2738,2977 ⋆ Octo numbers (a polygonal sequence): a(n) = 5 * n ^ 2 - 6 * n + 2 = (n - 1) ^ 2 + (2 * n - 1) ^ 2. ● a(n) = 10 * n + a(n - 1) - 11 for n > 1, a(1)=1. - _ Vincenzo Librandi _ , Aug 08 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3), with a(1) = 1, a(2) = 10, a(3) = 29. - _ Harvey P. Dale _ , May 03 2011 ●

► [A048469] 1,10,29,69,153,329,697,1465,3065,6393,13305,27641,57337,118777,245753,507897,1048569,2162681,4456441,9175033,18874361,38797305,79691769,163577849,335544313 ⋆ a(n) = T(8,n), array T given by A047858. ● a(n) = 2 ^ (n - 1) * (n + 16) - 7. a(0)=1, a(1)=10, a(2)=29, a(n) = 5 * a(n - 1) - 8 * a(n - 2) + 4 * a(n - 3). - _ Vincenzo Librandi _ , Sep 28 2011 ● a(n) = 2 ^ (n - 1) * (n + 16) - 7. G.f.: (1 + 5 * x - 13 * x ^ 2) / ((1 - x) * (1 - 2 * x) ^ 2). - _ Colin Barker _ , Feb 18 2016 ●

► [A048772] 1,10,29,76,189,462,1121,2712,6553,15826,38213,92260,222741,537750,1298249,3134256,7566769,18267802,44102381,106472572,257047533,620567646,1498182833 ⋆ Partial sums of A048696. ● a(n)=2 * a(n - 1) + a(n - 2) + 8; a(0)=1, a(1)=10. ● a(n)=[{ (9 + 5 * sqrt(2))(1 + sqrt(2)) ^ n - (9 - 5 * sqrt(2))(1 - sqrt(2)) ^ n }/ 2 * sqrt(2)] - 4. ● a(0)=1, a(1)=10, a(2)=29, a(n)=3 * a(n - 1) - a(n - 2) - a(n - 3). - _ Harvey P. Dale _ , Apr 20 2012 ●

► [A055850] 1,10,29,77,202,529,1385,3626,9493,24853,65066,170345,445969,1167562,3056717,8002589,20951050,54850561,143600633,375951338,984253381,2576808805,6746173034,17661710297,46238957857 ⋆ a(n) = 3 * a(n - 1) - a(n - 2) with a(0)=1, a(1)=10. ● a(n) = (10 * (((3 + sqrt(5)) / 2) ^ n - ((3 - sqrt(5)) / 2) ^ n) - (((3 + sqrt(5)) / 2) ^ (n - 1) - ((3 - sqrt(5)) / 2) ^ (n - 1))) / sqrt(5). ● a(n) = Lucas(2n + 1) + 6 * Fibonacci(2n). ● a(n) = Fibonacci(2 * n + 2) + 7 * Fibonacci(2 * n). - _ G. C. Greubel _ , Jan 16 2020 ●

► [A301571] 0,10,29,84,247,734,2193,6568,19691,59058,177157,531452,1594335,4782982,14348921,43046736,129140179,387420506,1162261485,3486784420,10460353223,31381059630,94143178849,282429536504,847288609467 ⋆ Number of vertices at distance 2 from a given vertex in the n - Keller graph. ● a(n) = 3 ^ n + n - 1 for n > 1. - _ Andrew Howroyd _ , Mar 23 2018 ● a(n) = 5 * a(n - 1) - 7 * a(n - 2) + 3 * a(n - 3) for n>4. ●

► [A027979] 1,10,29,97,297,904,2685,7876,22823,65533,186691,528370,1486969,4164382,11613137,32264089,89339325,246645436,679111413,1865340568,5112351131,13983383605,38177371159,104055773542,283171508977 ⋆ a(n) = Sum _{ k=0..n } T(n,k) * T(n,2n - k), T given by A027960. ● a(n) = (n + 1) * Lucas(2 * n) + 3 * Fibonacci(2 * n) - (- 1) ^ n. - _ G. C. Greubel _ , Oct 01 2019 ●

► [A318624] 0,1,10,30,55,91,138,190,253,327,406,496,597,703,820,948,1081,1225,1380,1540,1711,1893,2080,2278,2487 ⋆ Number of 3 - member subsets of [3 * n] whose elements sum to a multiple of n. ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) - 2 * a(n - 4) + a(n - 5) for n>5. ●

► [A124080] 0,10,30,60,100,150,210,280,360,450,550,660,780,910,1050,1200,1360,1530,1710,1900,2100,2310,2530,2760,3000 ⋆ 10 times triangular numbers: a(n) = 5 * n * (n + 1). ● a(n) = 10 * C(n,2), n >= 1. ● a(n) = 5 * n * (n + 1), n >= 0. - _ Zerinvary Lajos _ , Mar 06 2007 ● a(n) = 10 * n + a(n - 1) (with a(0) = 0). - _ Vincenzo Librandi _ , Nov 12 2009 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3), a(0) = 0, a(1) = 10, a(2) = 30. - _ Harvey P. Dale _ , Jul 21 2011 ●

► [A307307] 0,10,30,112,300,840,2044,4864,10944,23960,50908,105840,215748,432656,855240,1669568,3223404,6162552,11678540,21957440,40988976,76019944,140155100,256995936,468887700 ⋆ a(n) is the forgotten index of the Lucas cube Lambda(n). ● a(n) = 4 * a(n - 1) - 2 * a(n - 2) - 8 * a(n - 3) + 5 * a(n - 4) + 8 * a(n - 5) - 2 * a(n - 6) - 4 * a(n - 7) - a(n - 8) for n>11. ●

► [A063154] 10,31,53,75,97,119,141,163,185,207,229,251,273,295,317,339,361,383,405,427,449,471,493,515,537 ⋆ Dimension of the space of weight 2n cusp forms for Gamma _ 0(86). ● a(n) = 2 * a(n - 1) - a(n - 2) for n>3. ● a(n) = 22 * n - 13 for n>1. ●

► [A211013] 0,10,31,63,106,160,225,301,388,486,595,715,846,988,1141,1305,1480,1666,1863,2071,2290,2520,2761,3013,3276 ⋆ Second 13 - gonal numbers: a(n) = n * (11 * n + 9) / 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) with a(0) = 0, a(1) = 10, a(2) = 31. - _ Philippe Deléham _ , Mar 27 2013 ●

► [A085473] 1,10,31,64,109,166,235,316,409,514,631,760,901,1054,1219,1396,1585,1786,1999,2224,2461,2710,2971,3244,3529 ⋆ a(n) = 6 * n ^ 2 + 3 * n + 1. ● a(n) = binomial(2 * n + 3,3) - binomial(2 * n,3). ● a(n) = 12 * n + a(n - 1) - 3 for n>0, a(0)=1. - _ Vincenzo Librandi _ , Aug 08 2010 ● a(0)=1, a(1)=10, a(2)=31; for n>2, a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Nov 15 2011 ●

► [A051943] 0,10,31,64,110,170,245,336,444,570,715,880,1066,1274,1505,1760,2040,2346,2679,3040,3430,3850,4301,4784,5300 ⋆ Truncated triangular pyramid numbers: a(n) = Sum _{ k=9..n } (k * (k + 1) / 2 - 45). ● a(n) = (n + 20) * (n - 8) * (n - 9) / 6. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Vincenzo Librandi _ , Jun 18 2012 ●

► [A192023] 1,10,31,68,125,206,315,456,633,850,1111,1420,1781,2198,2675,3216,3825,4506,5263,6100,7021,8030,9131,10328,11625 ⋆ The Wiener index of the comb - shaped graph | _ | _ |...| _ | with 2n (n>=1) nodes. The Wiener index of a connected graph is the sum of the distances between all unordered pairs of vertices in the graph. ● a(n) = n * (2 * n ^ 2 + 6 * n - 5) / 3. ●

► [A163655] 0,10,31,69,130,220,345,511,724,990,1315,1705,2166,2704,3325,4035,4840,5746,6759,7885,9130,10500,12001,13639,15420 ⋆ a(n) = n * (2 * n ^ 2 + 5 * n + 13) / 2. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ●

► [A111500] 1,10,31,72,137,234,367,544,769,1050,1391,1800,2281,2842,3487,4224,5057,5994,7039,8200,9481,10890,12431,14112,15937 ⋆ Number of squares in an n X n grid of squares with diagonals. ● a(n) = n ^ 3 + n ^ 2 / 2 - 1 / 4 + 1 / 4 * (- 1) ^ n. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - 2 * a(n - 3) + 3 * a(n - 4) - a(n - 5) for n>4. - _ Colin Barker _ , May 28 2015 ●

► [A342362] 1,10,31,76,145,254,399,600,849,1170,1551,2020,2561,3206,3935,4784,5729,6810,7999,9340,10801,12430,14191,16136,18225 ⋆ Expansion of the o.g.f. (1 + 8 * x + 10 * x ^ 2 + 8 * x ^ 3 + x ^ 4) / ((1 - x) ^ 4 * (1 + x) ^ 2). ● a(n) = (n + 1) / 4 * (5 - (- 1) ^ n) - 7 * binomial(n + 2, 2) + 7 * binomial(n + 3, 3). ● a(n) = (n + 1) * (14 * (n + 1) ^ 2 - 3 * (- 1) ^ n + 1) / 12. - _ Bruno Berselli _ , Mar 09 2021 ●

► [A042849] 1,1,10,31,196,227,423,2342,28527,144977,173504,318481,2084390,6571651,61229249,67800900,4129283249,4197084149,41903040590,129906205919,821340276104,951246482023,1772586758127,9814180272658,119542750030023 ⋆ Denominators of continued fraction convergents to sqrt(955). ● a(n) = 4190512498 * a(n - 16) - a(n - 32) for n>31. - _ Vincenzo Librandi _ , Jan 31 2014 ●

► [A337148] 10,32,56,712,920,1130,1342,1556,1772,1990,21110,23132,25156,27182,29210,31240,33272,35306,37342,39380,41420,43462,45506,47552,49600 ⋆ Concatenation of sum n + (n + 1) and product n * (n + 1) in decimal. ● a(n) = (2n + 1) * 10 ^ b + n ^ 2 + n, where b is length of n ^ 2 + n. ●

► [A202804] 0,10,32,66,112,170,240,322,416,522,640,770,912,1066,1232,1410,1600,1802,2016,2242,2480,2730,2992,3266,3552 ⋆ a(n) = n * (6 * n + 4). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Dec 28 2015 ●

► [A350108] 1,10,32,87,153,309,443,722,1005,1443,1785,2605,3087,3951,4875,6154,6988,8809,9855,12057,13853,16001,17543,21347,23478 ⋆ a(n) = Sum _{ k=1..n } k * floor(n / k) ^ 3. ● a(n) = Sum _{ k=1..n } k * Sum _{ d|k } (d ^ 3 - (d - 1) ^ 3) / d. ●

► [A198646] 10,32,98,296,890,2672,8018,24056,72170,216512,649538,1948616,5845850,17537552,52612658,157837976,473513930,1420541792,4261625378,12784876136,38354628410,115063885232,345191655698,1035574967096,3106724901290 ⋆ a(n) = 11 * 3 ^ n - 1. ● a(n) = 3 * a(n - 1) + 2, a(0)=10. ● a(n) = 4 * a(n - 1) - 3 * a(n - 2). - _ Wesley Ivan Hurt _ , Oct 02 2021 ●

► [A063160] 10,33,57,81,105,129,153,177,201,225,249,273,297,321,345,369,393,417,441,465,489,513,537,561,585 ⋆ Dimension of the space of weight 2n cusp forms for Gamma _ 0(92). ● a(n) = 2 * a(n - 1) - a(n - 2) for n>3. ● a(n) = 3 * (8 * n - 5) for n>1. ●

► [A299287] 1,10,33,72,126,196,281,382,498,630,777,940,1118,1312,1521,1746,1986,2242,2513,2800,3102,3420,3753,4102,4466 ⋆ Coordination sequence for "tcd" 3D uniform tiling. ● a(n) = (31 * n ^ 2 + 8) / 4 for even n>0. ● a(n) = (31 * n ^ 2 + 9) / 4 for odd n>0. ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4) for n>4. ●

► [A299285] 1,10,33,73,128,199,285,388,506,640,789,955,1136,1333,1545,1774,2018,2278,2553,2845,3152,3475,3813,4168,4538 ⋆ Coordination sequence for "tea" 3D uniform tiling. ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 4) - 2 * a(n - 5) + a(n - 6) for n>6. ●

► [A081437] 1,10,33,76,145,246,385,568,801,1090,1441,1860,2353,2926,3585,4336,5185,6138,7201,8380,9681,11110,12673,14376,16225 ⋆ Diagonal in array of n - gonal numbers A081422. ● a(n) = n ^ 3 + 4 * n ^ 2 + 4 * n + 1. ● a(0)=1, a(1)=10, a(2)=33, a(3)=76; for n>3, a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Harvey P. Dale _ , Jan 24 2012 ●

► [A162433] 1,10,33,76,157,264,425,626,897,1230,1629,2174,2653,3448,4119,4978,6197,7114,8457,9870,11477,13070,15001,17104,19181 ⋆ Row 4 of table A162430. ● a(n) = Sum _{ m=n(n + 1) / 2..n(n + 1) / 2 + n } [x ^ m] S(x) ^ 4 for n>=0 where S(x) = Sum _{ n>=0 } x ^ (n(n + 1) / 2). ●

► [A094170] 0,0,1,10,33,88,187,360,625,1024,1581,2350,3361,4680,6343,8428,10977,14080,17785,22194,27361,33400,40371,48400,57553 ⋆ Number of quasi - triomnoes in an n X n bounding box. ● a(n) = (1 / 32) * (6 * n ^ 4 - 12 * n ^ 3 + 32 * n ^ 2 - 58 * n + 29 - (6 * n - 3) * (- 1) ^ n). - _ Ralf Stephan _ , Dec 03 2004 ●

► [A211033] 1,10,33,152,297,528,1217,1834,2673,4744,6385,8448,13073,16506,20625,29336,35545,42768,57457,67642,79233,102152,117729,135168,168929 ⋆ Numbe

r of 2 X 2 matrices having all elements in { 0,1,...,n } and determinant = 0 (mod 3). ● a(n) = a(n - 1) + 4 * a(n - 3) - 4 * a(n - 4) - 6 * a(n - 6) + 6 * a(n - 7) + 4 * a(n - 9) - 4 * a(n - 10) - a(n - 12) + a(n - 13) for n > 12. ● a(n) = r ^ 4 + 4 * r ^ 3 * s + 4 * r ^ 3 * t + 4 * r ^ 2 * s ^ 2 + 8 * r ^ 2 * s * t + 4 * r ^ 2 * t ^ 2 + s ^ 4 + 6 * s ^ 2 * t ^ 2 + t ^ 4. ●

► [A322412] 10,34,54,78,91,115,135,159,183,203,227,240,264,284,308,328,352,365,389,409,433,457,477,501,514 ⋆ Compound tribonacci sequence with a(n) = A278041(A278040(n)), for n >= 0. ● a(n) = C(A(n)) = C(A(n) + 1) - 6 = 4 * A(n) + 3 * B(n) + 2 * (n + 3). for n >= 0, where A = A278040, B = A278039 and C = A278041. For a proof see the W. Lang link in A278040, Proposition 9, eq. (54). ●

► [A008527] 1,10,34,74,130,202,290,394,514,650,802,970,1154,1354,1570,1802,2050,2314,2594,2890,3202,3530,3874,4234,4610 ⋆ Coordination sequence for body - centered tetragonal lattice. ● a(0) = 1; a(n) = 8 * n ^ 2 + 2 for n>0. ● a(n) = (2n + 1) ^ 2 + (2n - 1) ^ 2 for n>0. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>3. ●

► [A366415] 10,34,78,222,362,938,1326,3246,4242,10002,12438,28566,34330,77338,90654,201246,231458,507938,575526,1251366,1400874,3022890,3350574,7184430,7897138 ⋆ a(n) is the number of exterior top arches (no covering arch) for semi - meanders in generation n + 1 that are generated by semi - meanders with n top arches and floor(n / 2) exterior top arches using the exterior arch splitting algorithm. ● a(2 * n) = (3 * n - 1) * ((2 * n - 4) * 2 ^ (n - 1) + 2) - (3 * n - 3) * ((2 * n - 5) * 2 ^ (n - 1) + 2) + a(2 * n - 1); ● a(2 * n + 1) = 3 * n * ((2 * n - 3) * 2 ^ n + 2) - 3 * n * ((2 * n - 4) * 2 ^ (n - 1) + 2) + a(2 * n). ●

► [A007584] 0,1,10,34,80,155,266,420,624,885,1210,1606,2080,2639,3290,4040,4896,5865,6954,8170,9520,11011,12650,14444,16400 ⋆ 9 - gonal (or enneagonal) pyramidal numbers: a(n) = n * (n + 1) * (7 * n - 4) / 6. ● a(n) = (7 * n - 4) * binomial(n + 1, 2) / 3. ● a(n) = a(n - 1) + n * (7 * n - 5) / 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + 7. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ● a(n) = binomial(n + 2,3) + 6 * binomial(n + 1,3). (End) ● a(n) = Sum _{ i = 0..n - 1 } (n - i) * (7 * i + 1) for n>0. - _ Bruno Berselli _ , Feb 10 2014 ●

► [A218329] 10,34,80,266,420,624,1210,1606,2080,3290,4040,4896,6954,8170,9520,12650,14444,16400,20826,23310,25984,31930,35216,38720,46410 ⋆ Even 9 - gonal (nonagonal) pyramidal numbers. ● a(n) = a(n - 1) + 3 * a(n - 3) - 3 * a(n - 4) - 3 * a(n - 6) + 3 * a(n - 7) + a(n - 9) - a(n - 10). ● a(n) = 3 * a(n - 3) - 3 * a(n - 6) + a(n - 9) + 448. ● a(n) = phi(n) * (phi(n) + 9) * (7 * phi(n) - 36) / 4374, where phi(n) = 3 + 12 * n - 3 * cos(2 * n * Pi / 3) + sqrt(3) * sin(2 * n * Pi / 3). ●

► [A009924] 1,10,34,82,142,218,322,434,562,722,886,1066,1282,1498,1730,2002,2270,2554,2882,3202,3538,3922,4294,4682,5122 ⋆ Coordination sequence for CaF2(1), F position. ● a(n) = a(n - 1) + 2 * a(n - 3) - 2 * a(n - 4) - a(n - 6) + a(n - 7). - _ Wesley Ivan Hurt _ , Mar 17 2023 ●

► [A020877] 10,34,106,344,1102,3546,11394,36628,117730,378426,1216378,3909832,12567446,40395794,129844994,417363332,1341539194,4312135922,13860583626,44552347608,143205490526,460308235562,1479577849602,4755836293844,15286778495570 ⋆ Number of matchings in Moebius ladder M _ n. ● a(n) = 2 * a(n - 1) + 4 * a(n - 2) - a(n - 4). - _ Eric W. Weisstein _ , Oct 03 2017 [Corrected by _ Altug Alkan _ , Apr 06 2018] ●

► [A001446] 10,34,136,520,2080,8224,32896,131200,524800,2097664,8390656,33556480,134225920,536879104,2147516416,8589967360,34359869440,137439084544,549756338176,2199023779840,8796095119360 ⋆ a(n) = (4 ^ n + 4 ^ [n / 2]) / 2. ● a(n) = 4 * a(n - 1) + 4 * a(n - 2) - 16 * a(n - 3) for n > 4. - _ Chai Wah Wu _ , Sep 10 2020 ●

► [A272365] 10,34,250,1954,15370,120994,952570,7499554,59043850,464851234,3659766010,28813276834,226846448650,1785958312354,14060820050170,110700602088994,871543996661770,6861651371205154,54021666972979450,4253116844126304 34,3348471808328064010,26362462782211881634 ⋆ a(n) = 9a(n - 1) - 9a(n - 2) + a(n - 3). ● a(n) = 9a(n - 1) - 9a(n - 2) + a(n - 3). ● a(n) = 2 * (2 * (4 + sqrt(15)) * (4 - sqrt(15)) ^ n - 2 * (sqrt(15) - 4) * (4 + sqrt(15)) ^ n + 1). (End) ●

► [A254674] 1,10,34,601,2089,37234,129466,2307889,8024785,143051866,497407186,8866907785,30831220729,549605230786,1911038277994,34066657400929,118453542014881,2111583153626794,7342208566644610,130884088867460281,455098477589950921 ⋆ Indices of heptagonal numbers (A000566) which are also centered triangular numbers (A005448). ● a(n) = a(n - 1) + 62 * a(n - 2) - 62 * a(n - 3) - a(n - 4) + a(n - 5). ●

► [A000447] 0,1,10,35,84,165,286,455,680,969,1330,1771,2300,2925,3654,4495,5456,6545,7770,9139,10660,12341,14190,16215,18424 ⋆ a(n) = 1 ^ 2 + 3 ^ 2 + 5 ^ 2 + 7 ^ 2 + ... + (2 * n - 1) ^ 2 = n * (4 * n ^ 2 - 1) / 3. ● a(n) = - a(- n) for all n in Z. ● a(n + 1) = (2 * n + 1) * (2 * n + 2)(2 * n + 3) / 6. - _ Valentin Bakoev _ , Mar 03 2009 ● a(0)=0, a(1)=1, a(2)=10, a(3)=35, a(n)=4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Harvey P. Dale _ , May 25 2012 ● a(n) = v(n,n - 1), where v(n,k) is the central factorial numbers of the first kind with odd indices. - _ Mircea Merca _ , Jan 25 2014 ●

► [A052472] 0,10,35,84,168,300,495,770,1144,1638,2275,3080,4080,5304,6783,8550,10640,13090,15939,19228,23000,27300,32175,37674,43848 ⋆ Number of independent components for a Weyl tensor in n dimensions. ● a(n) = n * (n + 1) * (n + 2) * (n - 3) / 12 for n >= 3. ● a(n) = 2 * C(n,4) - C(n,3), n>=5. - _ Zerinvary Lajos _ , Nov 25 2006 ●

► [A331429] 0,0,10,35,91,189,351,594,946,1430,2080,2925,4005,5355,7021,9044,11476,14364,17766,21735,26335,31625,37675,44550,52326 ⋆ Expansion of x ^ 2 * (10 - 5 * x + x ^ 2) / ((1 - x) ^ 4 * (1 - x ^ 2)). ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 5 * a(n - 4) - 4 * a(n - 5) + a(n - 6) for n>5. - _ Vincenzo Librandi _ , Jan 17 2020 ● a(n) = (n * (n + 3) * (n ^ 2 + 3 * n - 2) + 4 * (- 1) ^ n - 4) / 8. Therefore: ● a(n) = n * (n + 3) * (n ^ 2 + 3 * n - 2) / 8 if n is even, ● a(n) = n * (n + 3) * (n ^ 2 + 3 * n - 2) / 8 - 1 if n is odd. (End) ●

► [A272352] 10,35,91,210,456,957,1969,4004,8086,16263,32631,65382,130900,261953,524077,1048344,2096898,4194027,8388307,16776890,33554080,67108485,134217321,268435020,536870446 ⋆ a(n) is the number of ways of putting n labeled balls into 2 indistinguishable boxes such that each box contains at least 3 balls. ● a(n) = (2 ^ n - 2 - 2 * n - 2 * binomial(n, 2)) / 2. ● a(n) = 5 * a(n - 1) - 9 * a(n - 2) + 7 * a(n - 3) - 2 * a(n - 4), for n > 3. ●

► [A048507] 1,10,35,101,269,685,1693,4093,9725,22781,52733,120829,274429,618493,1384445,3080189,6815741,15007741,32899069,71827453,156237821,338690045,731906045,1577058301,3388997629 ⋆ a(n) = T(2,n), array T given by A048505. ● a(n) = (n ^ 2 + 9 * n + 16) * 2 ^ (n - 2) - 3. - _ Ralf Stephan _ , Feb 05 2004 ● a(n) = 7 * a(n - 1) - 18 * a(n - 2) + 20 * a(n - 3) - 8 * a(n - 4). - _ Colin Barker _ , Nov 27 2014 ●

► [A221907] 1,10,35,140,645,3150,15655,78160,390665,1953170,9765675,48828180,244140685,1220703190,6103515695,30517578200,152587890705,762939453210,3814697265715,19073486328220,95367431640725,476837158203230 ⋆ a(n) = 5 ^ n + 5 * n. ● a(n) = 7 * a(n - 1) - 11 * a(n - 2) + 5 * a(n - 3). ●

► [A271912] 0,10,36,68,108,150,200,252,312,374,444,516,596,678,768,860,960,1062,1172,1284,1404,1526,1656,1788,1928 ⋆ Number of ways to choose three distinct points from a 3 X n grid so that they form an isosceles triangle. ● a(n) = (- 3 * (47 + (- 1) ^ n) + 64 * n + 10 * n ^ 2) / 4 for n>2. ● a(n) = (5 * n ^ 2 + 32 * n - 72) / 2 for n>2 and even. ● a(n) = (5 * n ^ 2 + 32 * n - 69) / 2 for n>2 and odd. ●

► [A033585] 0,10,36,78,136,210,300,406,528,666,820,990,1176,1378,1596,1830,2080,2346,2628,2926,3240,3570,3916,4278,4656 ⋆ a(n) = 2 * n * (4 * n + 1). ● a(n) = 16 * n + a(n - 1) - 6 with a(0) = 0. - _ Vincenzo Librandi _ , Aug 05 2010 ●

► [A050509] 1,10,36,88,175,306,490,736,1053,1450,1936,2520,3211,4018,4950,6016,7225,8586,10108,11800,13671,15730,17986,20448,23125 ⋆ House numbers (version 2): a(n) = (n + 1) ^ 3 + (n + 1) * Sum _{ i=0..n } i. ● a(n) = (1 / 2) * (3 * n + 2) * (n + 1) ^ 2. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4); a(0)=1, a(1)=10, a(2)=36, a(3)=88. - _ Harvey P. Dale _ , Jun 26 2011 ● a(n) = Sum _{ i=0..n } (n + 1) * (3 * i + 1). - _ Bruno Berselli _ , Sep 08 2015 ●

► [A051959] 1,10,36,104,273,686,1688,4112,9969,24114,58268,140728,339809,820438,1980784,4782112,11545121,27872474,67290196,162453000,392196337,946845822,2285888136 ⋆ Expansion of (1 + 6x) / ((1 - 2x - x ^ 2)(1 - x) ^ 2). ● a(n) = 2a(n - 1) + a(n - 2) + (7n + 1); a(0)=1, a(1)=10. ● a(n) = ((((25 / 2) + 17 * sqrt(2) / 2)(1 + sqrt(2)) ^ n - ((25 / 2) - 17 * sqrt(2) / 2)(1 - sqrt(2)) ^ n) / 2 * sqrt(2)) - (7n + 15) / 2 ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) + a(n - 4). ●

► [A169880] 10,36,148,676,3237,15876,78685,391876,1955920,9771876,48842100,244171876,1220773003,6103671876,30517927510,152588671876,762941200054,3814701171876,19073495062765,95367451171876,476837201876328,2384185888671876,11920929173444139,59604645263671876 ⋆ Maximum number of rational points on a smooth absolutely irreducible projective curve of genus 1 over the field F _ 5 ^ n. ● a(n) = 5 ^ n + 1 + floor(2 * 5 ^ (n / 2)) if 5 does not divide floor(2 * 5 ^ (n / 2)), n is even, or n = 1. Otherwise a(n) = 5 ^ n + floor(2 * 5 ^ (n / 2)) [Deuring - Waterhouse]. - _ Robin Visser _ , Aug 17 2023 ●

► [A247792] 1,10,37,82,145,226,325,442,577,730,901,1090,1297,1522,1765,2026,2305,2602,2917,3250,3601,3970,4357,4762,5185 ⋆ a(n) = 9 * n ^ 2 + 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>2. - _ Wesley Ivan Hurt _ , Jun 25 2016 ●

► [A372373] 1,1,1,10,37,91,334,1366,4645,15967,59951,220782,792946,2906554,10770082,39629440,145966549,540943231,2006762563,7443051014,27661527427,102980882455,383639407570,1430429881122,5339465251426 ⋆ Coefficient of x ^ n in the expansion of ((1 + x + x ^ 3) ^ 3 / (1 + x) ^ 2) ^ n. ● a(n) = Sum _{ k=0..floor(n / 3) } binomial(3 * n,k) * binomial(n - k,n - 3 * k). ●

► [A096000] 1,10,37,92,185,326,525,792,1137,1570,2101,2740,3497,4382,5405,6576,7905,9402,11077,12940,15001,17270,19757,22472,25425 ⋆ Cupolar numbers: a(n) = (n + 1) * (5 * n ^ 2 + 7 * n + 3) / 3. ● a(n) = (1 / 2) * (Q(n) + 3n ^ 2 + 3n + 1), where Q(n) are the cuboctahedral numbers, A005902. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4), n>4. - _ Wesley Ivan Hurt _ , May 23 2015 ●

► [A047672] 1,10,37,94,193,346,565,862,1249,1738,2341,3070,3937,4954,6133,7486,9025,10762,12709,14878,17281,19930,22837,26014,29473 ⋆ Row 3 of square array defined in A047671. ● a(n) = 2n ^ 3 - 3n ^ 2 + 4n - 2. ●

► [A200872] 10,37,94,195,356,595,932,1389,1990,2761,3730,4927,6384,8135,10216,12665,15522,18829,22630,26971,31900,37467,43724,50725,58526 ⋆ Number of 0..n arrays x(0..3) of 4 elements without any interior element greater than both neighbors or less than both neighbors. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

► [A212755] 1,10,37,96,205,386,665,1072,1641,2410,3421,4720,6357,8386,10865,13856,17425,21642,26581,32320,38941,46530,55177,64976,76025 ⋆ Number of (w,x,y,z) with all terms in { 0,...,n } and |w - x|=max { w,x,y,z }- min { w,x,y,z } . ● a(n)=5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ●

► [A048480] 1,10,37,109,289,721,1729,4033,9217,20737,46081,101377,221185,479233,1032193,2211841,4718593,10027009,21233665,44826625,94371841,198180865,415236097,868220929,1811939329 ⋆ a(n) = T(8,n), array T given by A048472. ● a(n) = 9 * n * 2 ^ (n - 1) + 1. ● a(0)=1, a(1)=10, a(2)=37, a(n) = 5 * a(n - 1) - 8 * a(n - 2) + 4 * a(n - 3). - _ Harvey P. Dale _ , Jul 09 2014 ●

► [A116970] 1,10,37,118,361,1090,3277,9838,29521,88570,265717,797158,2391481,7174450,21523357,64570078,193710241,581130730,1743392197,5230176598,15690529801,47071589410,141214768237,423644304718,1270932914161 ⋆ a(n) = (3 ^ n - 7) / 2. ● a(n) = 3 * a(n - 1) + 7 with n > 2, a(2)=1. - _ Vincenzo Librandi _ , Aug 02 2010 ● a(2)=1, a(3)=10; for n > 3, a(n) = 4 * a(n - 1) - 3 * a(n - 2). - _ Harvey P. Dale _ , Jan 17 2013 ● a(2) = 1; a(n) = a(n - 1) + 3 ^ (n - 1) for n > 2. - ●

► [A355044] 10,37,130,453,1584,5577,19786,70720,254524,921842,3357908,12294995,45229500,167093505,619689690,2306312580,8611143420,32246815350,121085968380,455817192090,1719872196432,6503354706762,24640476660420,93534587913648,355675196682904 ⋆ Number of coalescent histories for matching gene trees and species trees with n leaves and a 5 - leaf seed tree. ● a(n) = ((23 * n ^ 2 - 131 * n + 180) / (4 * (2n - 3) * (2n - 5))) * (2n - 2)! / ((n - 1)! * n!). ●

► [A373577] 1,1,1,10,37,136,1261,6616,45865,479872,3206521,31165696,356045581,3082798720,37528974757,443190912256,4792765859281,69943918698496,875123733523825,11059833224507392,179428023035501941,2557848382674927616,37699

048392962570461 ⋆ Expansion of e.g.f. exp(x * (1 + x ^ 2) ^ (3 / 2)). • a(n) = n! * Sum _{ k=0..floor(n / 2) } binomial(3 * n / 2 - 3 * k,k) / (n - 2 * k)!. • a(n) == 1 mod 9. •

► [A199208] 10,37,145,577,2305,9217,36865,147457,589825,2359297,9437185,37748737,150994945,603979777,2415919105,9663676417,38654705665,154618822657,618475290625,2473901162497,9895604649985,39582418599937 ⋆ a(n) = 9 * 4 ^ n + 1. • a(n) = 4 * a(n - 1) - 3. • a(n) = 5 * a(n - 1) - 4 * a(n - 2). •

► [A110528] 1,10,37,162,681,2890,12237,51842,219601,930250,3940597,16692642,70711161,299537290,1268860317,5374978562,22768774561,96450076810,408569081797,1730726404002,7331474697801,31056625195210 ⋆ a(n + 3) = 3 * a(n + 2) + 5 * a(n + 1) + a(n), a(0) = 1, a(1) = 10, a(2) = 37. • a(n) = (2 - sqrt(5)) ^ n - (- 1) ^ n + (2 + sqrt(5)) ^ n + (1 / 2) * (2 + sqrt(5)) ^ n * sqrt(5) - (1 / 2) * (2 - sqrt(5)) ^ n * sqrt(5), with n >= 0. - _ Paolo P. Lava _ , Oct 02 2008 •

► [A137280] 1,10,37,181,802,3673,16633,75610,343261,1559053,7079986,32153329,146019889,663132970,3011538133,13676545189,62110402498,282067023817,1280973888937,5817390833530,26418989723149,119978705004157 ⋆ a(n) = 3 * a(n - 1) + 7 * a(n - 2). • a(1) = 1, a(2) = 10, a(n), n>2 = 3 * a(n - 1) + 7 * a(n - 2). a(n) = upper left term in [1,3; 3,2] ^ n • a(n)= - 17 / 74 * (3 / 2 - 1 / 2 * sqrt(37)) ^ n * sqrt(37) + 1 / 2 * (3 / 2 - 1 / 2 * sqrt(37)) ^ n + 17 / 74 * sqrt(37) * (3 / 2 + 1 / 2 * sqrt(37)) ^ n + 1 / 2 * (3 / 2 + 1 / 2 * sqrt(37)) ^ n, with n>=0 - _ Paolo P. Lava _ , Jun 03 2008 •

► [A373619] 1,1,1,10,37,316,2341,21736,237385,2611792,35911081,476570656,7654975021,121021831360,2196593121997,40464132512896,817485662059921,17159299818547456,382733978898335185,8982388245979044352,219867829220866999861,5684505550914409716736 ⋆ Expansion of e.g.f. exp(x / (1 - x ^ 2) ^ (3 / 2)). • a(n) = n! * Sum _{ k=0..floor(n / 2) } binomial(3 * n / 2 - 2 * k - 1,k) / (n - 2 * k)!. • a(n) == 1 mod 9. •

► [A154517] 10,38,84,148,230,330,448,584,738,910,1100,1308,1534,1778,2040,2320,2618,2934,3268,3620,3990,4378,4784,5208,5650 ⋆ a(n) = 9 * n ^ 2 + n. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Jan 31 2012 •

► [A257051] 0,0,0,10,38,98,208,390,670,1078,1648,2418,3430,4730,6368,8398,10878,13870,17440,21658,26598,32338,38960,46550,55198 ⋆ a(n) = cpg(n, 3) + cpg(n, 4) + ... + cpg(n, n) where cpg(n, m) is the m - th n - th - order centered polygonal number. • a(n) = (n ^ 4 - n ^ 2 - 12) / 6 for n>1. • a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>6. •

► [A027982] 1,10,38,108,270,632,1426,3148,6854,14784,31674,67508,143278,303016,638882,1343388,2817942,5898128,12320650,25689988,53477246,111148920,230686578,478150508,989855590 ⋆ Sum { (k + 1) * T(n,2n - k) } , 0<=k<=2n, T given by A027960. • a(n) = (- 10 + 11 * 2 ^ n + 2 * (- 3 + 2 ^ n) * n). • a(n) = 6 * a(n - 1) - 13 * a(n - 2) + 12 * a(n - 3) - 4 * a(n - 4). •

► [A064603] 1,10,38,111,237,489,833,1418,2175,3309,4641,6685,8883,11979,15507,20188,25102,31915,38775,47973,57605,69593,81761,98141,113892 ⋆ Partial sums of A001158: Sum _{ j=1..n } sigma _ 3(j). • a(n) = Sum _{ k=1..n } ((1 / 2) * floor(n / k) * floor(1 + n / k)) ^ 2. - _ Daniel Suteu _ , Nov 07 2018 • a(n) = Sum _{ k=1..n } k ^ 3 * floor(n / k). - _ Daniel Suteu _ , Nov 08 2018 •

► [A164298] 1,10,38,132,452,1544,5272,18000,61456,209824,716384,2445888,8350784,28511360,97343872,332352768,1134723328,3874187776,13227304448,45160842240,154188760064,526433355776,1797355902976,6136556900352 ⋆ a(n) = ((1 + 4 * sqrt(2)) * (2 + sqrt(2)) ^ n + (1 - 4 * sqrt(2)) * (2 - sqrt(2)) ^ n) / 2. • a(n) = 4 * a(n - 1) - 2 * a(n - 2) for n > 1; a(0)=1, a(1)=10. •

► [A156674] 10,39,59,88,108,137,157,186,206,235,255,284,304,333,353,382,402,431,451,480,500,529,549,578,598 ⋆ Numbers k such that k ^ 2 - 2 == 0 (mod 49). • a(n) = a(n - 1) + a(n - 2) - a(n - 3) = 49 * n / 2 - 49 / 4 + 9 * (- 1) ^ n / 4. •

► [A022277] 0,10,39,87,154,240,345,469,612,774,955,1155,1374,1612,1869,2145,2440,2754,3087,3439,3810,4200,4609,5037,5484 ⋆ a(n) = n * (19 * n + 1) / 2. • a(n) = 19 * n + a(n - 1) - 9 for n>0, a(0)=0. - _ Vincenzo Librandi _ , Aug 04 2010 • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>2. - _ Vincenzo Librandi _ , Mar 31 2015 •

► [A059722] 0,1,10,39,100,205,366,595,904,1305,1810,2431,3180,4069,5110,6315,7696,9265,11034,13015,15220,17661,20350,23299,26520 ⋆ a(n) = n * (2 * n ^ 2 - 2 * n + 1). • a(n) = Sum _{ j=1..n } ((n + j - 1) ^ 2 - j ^ 2 + 1). - _ Zerinvary Lajos _ , Sep 13 2006 •

► [A210376] 0,0,10,40,85,140,206,284,375,480,600,736,889,1060,1250,1460,1691,1944,2220,2520,2845,3196,3574,3980,4415 ⋆ Number of 2 X 2 matrices with all terms in { 0,1,...,n } and (sum of terms) = n + 4. • a(n) = (- 270 + 107 * n + 18 * n ^ 2 + n ^ 3) / 6 for n>2. • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>4. •

► [A033583] 0,10,40,90,160,250,360,490,640,810,1000,1210,1440,1690,1960,2250,2560,2890,3240,3610,4000,4410,4840,5290,5760 ⋆ a(n) = 10 * n ^ 2. • a(n) = 20 * n + a(n - 1) - 10 for n>0, a(0)=0. - _ Vincenzo Librandi _ , Aug 05 2010 •

► [A071233] 0,10,40,102,208,370,600,910,1312,1818,2440,3190,4080,5122,6328,7710,9280,11050,13032,15238,17680,20370,23320,26542,30048 ⋆ a(n) = 2 * (n - 1) * (n ^ 2 + 1). • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). •

► [A063490] 1,10,40,105,219,396,650,995,1445,2014,2716,3565,4575,5760,7134,8711,10505,12530,14800,17329,20131,23220,26610,30315,34349 ⋆ a(n) = (2 * n - 1) * (7 * n ^ 2 - 7 * n + 6) / 6. • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). •

► [A002419] 1,10,40,110,245,476,840,1380,2145,3190,4576,6370,8645,11480,14960,19176,24225,30210,37240,45430,54901,65780,78200,92300,108225 ⋆ 4 - dimensional figurate numbers: a(n) = (6 * n - 2) * binomial(n + 2,3) / 4. • a(n) = (3 * n - 1) * binomial(n + 2, 3) / 2. • a(n) = (3 * n ^ 4 + 8 * n ^ 3 + 3 * n ^ 2 - 2 * n) / 12. - _ Chai Wah Wu _ , Jan 24 2016 •

► [A227056] 10,40,124,329,777,1673,3341,6269,11164,19018,31186,49477,76259,114579,168299,242249,342398,476044,652024,880945,1175437,1550429,2023449,2614949,3348656 ⋆ Number of n X 2 - 2..2 arrays of 2 X 2 subblock diagonal sums minus antidiagonal sums for some (n + 1) X 3 binary array with rows and columns of the latter in lexicographically nondecreasing order. • a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. •

► [A027981] 1,10,40,124,340,868,2116,4996,11524,26116,58372,129028,282628,614404,1327108,2850820,6094852,12976132,27525124,58195972,122683396,257949700,541065220,1132462084,2365587460 ⋆ Sum { (k + 1) * T(n,k) } , 0<=k<=2n, T given by A027960. • a(2n + 1) = 6(4n + 1) * 4 ^ n + 4. - _ Ralf Stephan _ , Mar 22 2004 • a(n) = 4 + 3 * 2 ^ n * (2 * n - 1). G.f. (- 1 - 5 * x + 2 * x ^ 2) / ((x - 1) * (- 1 + 2 * x) ^ 2). - _ R. J. Mathar _ , May 22 2013 • a(0)=1, a(1)=10, a(2)=40, a(n)=5 * a(n - 1) - 8 * a(n - 2) + 4 * a(n - 3). - _ Harvey P. Dale _ , Apr 17 2015 •

► [A002066] 10,40,160,640,2560,10240,40960,163840,655360,2621440,10485760,41943040,167772160,671088640,2684354560,10737418240,42949672960,171798691840,687194767360,2748779069440,10995116277760,43980465111040,175921860444160,703687441776640 ⋆ a(n) = 10 * 4 ^ n. • a(n) = 4 * a(n - 1), n > 0; a(0)=10. •

► [A054885] 0,0,0,10,40,260,1240,6510,32240,162760,812240,4069010,20337240,101725260,508587240,2543131510,12715462240,63578287760,317890462240,1589457194010,7947281087240,39736429850260 ⋆ Number of walks of length n along the edges of an icosahedron between two opposite vertices. • a(n) = (5 ^ n + 5 * (- 1) ^ n - 3 * (1 + (- 1) ^ n) * sqrt(5) ^ n) / 12. • a(n) = 4 * a(n - 1) + 10 * a(n - 2) - 20 * a(n - 3) - 25 * a(n - 4). - _ François Marques _ , Jul 10 2021 •

► [A253674] 1,10,40,931,3871,91180,379270,8934661,37164541,875505550,3641745700,85790609191,356853914011,8406604195120,34968041827330,823761420512521,3426511245164281,80720212606031890,335763133984272160,7909757073970612651,32901360619213507351 ⋆ Indices of centered octagonal numbers (A016754) which are also centered triangular numbers (A005448). • a(n) = a(n - 1) + 98 * a(n - 2) - 98 * a(n - 3) - a(n - 4) + a(n - 5). •

► [A022278] 0,10,41,93,166,260,375,511,668,846,1045,1265,1506,1768,2051,2355,2680,3026,3393,3781,4190,4620,5071,5543,6036 ⋆ a(n) = n * (21 * n - 1) / 2. • a(n) = 21 * n + a(n - 1) - 11 for n > 0, a(0)=0. - _ Vincenzo Librandi _ , Aug 04 2010 •

► [A266396] 0,0,0,10,41,105,215,385,630,966,1410,1980,2695,3575,4641,5915,7420,9180,11220,13566,16245,19285,22715,26565,30866 ⋆ Number of orbits of Aut(Z ^ 7) as function of the infinity norm n of the representative lattice point of the orbit, when the cardinality of the orbit is equal to 80640. • a(n) = (n ^ 4 + 30 * n ^ 3 - 205 * n ^ 2 + 390 * n - 216) / 24. • a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. •

► [A006323] 1,10,41,115,260,511,910,1506,2355,3520,5071,7085,9646,12845,16780,21556,27285,34086,42085,51415,62216,74635,88826,104950,123175 ⋆ 4 - dimensional analog of centered polygonal numbers. • a(n) = 7 * C(n + 2, 4) + C(n + 1, 2). •

► [A178073] 1,10,41,116,265,526,945,1576,2481,3730,5401,7580,10361,13846,18145,23376,29665,37146,45961,56260,68201,81950,97681,115576,135825 ⋆ Partial sums of sequence A177342. • a(n) = n * (n ^ 3 + n ^ 2 + 2 * n - 1) / 3. • a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) with n>5. •

► [A294604] 10,41,120,283,566,1029,1738,2745,4150,6049,8504,11661,15646,20525,26496,33715,42246,52345,64198,77861,93654,111793,132320,155625,181954 ⋆ Number of ordinary double points of a family of threefolds. • a(n) = (1 / 18) * (7 * n ^ 4 - 24 * n ^ 3 + 39 * n ^ 2 - 36 * n + 18) if n is divisible by 3; a(n) = (1 / 18) * (7 * n ^ 4 - 24 * n ^ 3 + 37 * n ^ 2 - 30 * n + 10) otherwise. For n = 3, 4, 5, ... • a(n) = 2 * a(n - 1) - a(n - 2) + 3 * a(n - 3) - 6 * a(n - 4) + 3 * a(n - 5) - 3 * a(n - 6) + 6 * a(n - 7) - 3 * a(n - 8) + a(n - 9) - 2 * a(n - 10) + a(n - 11) for n > 10. •

► [A211064] 1,10,41,160,337,810,1345,2560,3761,6250,8521,12960,16801,24010,30017,40960,49825,65610,78121,100000,117041,146410,168961,207360,236497 ⋆ Number of 2 X 2 matrices having all terms in { 1,...,n } and even determinant. • a(n) = n ^ 4 - (2 * n + 1 - (- 1) ^ n) ^ 2 * (6 * n + 1 - (- 1) ^ n) * (2 * n - 1 + (- 1) ^ n) / 128. • a(n) = a(n - 1) + 4 * a(n - 2) - 4 * a(n - 3) - 6 * a(n - 4) + 6 * a(n - 5) + 4 * a(n - 6) - 4 * a(n - 7) - a(n - 8) + a(n - 9) for n > 9. •

► [A048879] 1,10,41,174,737,3122,13225,56022,237313,1005274,4258409,18038910,76414049,323695106,1371194473,5808472998,24605086465,104228818858,441520361897,1870310266446,7922761427681,33561355977170,142168185336361,602234097322614 ⋆ Generalized Pellian with second term of 10. • a(n) = ((8 + sqrt(5)) * (2 + sqrt(5)) ^ n - (8 - sqrt(5)) * (2 - sqrt(5)) ^ n)2 * sqrt(5). • a(n) = 4 * a(n - 1) + a(n - 2); a(0)=1, a(1)=10. •

► [A041188] 10,41,830,3361,68050,275561,5579270,22592641,457432090,1852321001,37503852110,151867729441,3074858440930,12451301493161,252100888304150,1020854854709761,20669197982499370,83697646784707241 ⋆ Numerators of continued fraction convergents to sqrt(105). • a(n) = 82 * a(n - 2) - a(n - 4). [_ Bruno Berselli _ , Oct 30 2013] •

► [A163815] 0,10,42,108,220,390,630,952,1368,1890,2530,3300,4212,5278,6510,7920,9520,11322,13338,15580,18060,20790,23782,27048,30600 ⋆ a(n) = n * (2 * n ^ 2 + 5 * n + 3). • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). •

► [A108678] 1,10,42,120,275,546,980,1632,2565,3850,5566,7800,10647,14210,18600,23936,30345,37962,46930,57400,69531,83490,99452,117600,138125 ⋆ a(n) = (n + 1) ^ 2 * (n + 2) * (2 * n + 3) / 6. • a(n) = (1 / 3) * binomial(n + 2, 2) * binomial(2 * n + 3, 2). •

► [A226988] 10,42,120,313,729,1556,3099,5818,10384,17744,29198,46489,71907,108408,159749,230640,326914,455716,625712,847319,1132957,1497324,1957695,2534246,3250404 ⋆ Number of n X 2 0..4 arrays of sums of 2 X 2 subblocks of some (n + 1) X 3 binary array with rows and columns of the latter in lexicographically nondecreasing order. • a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>12. •

► [A244802] 1,10,43,100,181,286,415,568,745,946,1171,1420,1693,1990,2311,2656,3025,3418,3835,4276,4741,5230,5743,6280,6841 ⋆ The 60 - degree spoke (or ray) of a hexagonal spiral of Ulam. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>3. •

► [A336288] 1,10,43,116,245,446,735,1128,1641,2290,3091,4060,5213,6566,8135,9936,11985,14298,16891,19780,22981,26510,30383,34616,39225 ⋆ Numbers of squares formed by this procedure on n - th step: Step 1, draw a unit square. Step n, draw a unit square with center in every intersection of lines of the figure in ste

p n - 1. ● a(n) = (8 * n ^ 3 - 12 * n ^ 2 + 7 * n) / 3. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>4. ●

▶ [A251936] 10,43,120,265,506,875,1408,2145,3130,4411,6040,8073,10570,13595,17216,21505,26538,32395,39160,46921,55770,65803,77120,89825,104026 ⋆ Number of length 2 + 2 0..n arrays with the sum of the maximum minus the median of adjacent triples multiplied by some arrangement of +- 1 equal to zero. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

▶ [A187673] 1,10,43,125,290,581,1050,1758,2775,4180,6061,8515,11648,15575,20420,26316,33405,41838,51775,63385,76846,92345,110078,130250,153075 ⋆ Partial sums of the tricapped prism numbers A005920. ● a(n) = (n + 2) * (n + 1) * (9 * n ^ 2 + 19 * n + 12) / 24. ●

▶ [A198695] 10,43,175,703,2815,11263,45055,180223,720895,2883583,11534335,46137343,184549375,738197503,2952790015,11811160063,47244640255,188978561023,755914244095,3023656976383,12094627905535,48378511622143 ⋆ 11 * 4 ^ n - 1 ● a(n) = 4 * a(n - 1) + 3. a(n) = 5 * a(n - 1) - 4 * a(n - 2), n>1. ●

▶ [A227728] 10,43,179,740,3054,12599,51971,214376,884278,3647546,15045706,62061794,255997704,1055960840,4355715996,17966823308,74111062350,305699536774,1260975134078,5201376179830,21455073484758,88499689759294,365050956038686,1505792854949114 ⋆ a(1) = greatest k such that H(k) - H(2) < 1 / 1 + 1 / 2; a(2) = greatest k such that H(k) - H(a(1)) < H(a(1)) - H(2); and for n>2, a(n) = greatest k such that H(k) - H(a(n - 1) < H(a(n - 1)) - H(a(n - 2)), where H = harmonic number. ● a(n) = 5 * a(n - 1) - 4 * a(n - 2) + 2 * a(n - 3) - 2 * a(n - 4) + 2 * a(n - 5) - 2 * a(n - 6) + 2 * a(n - 7) - 2 * a(n - 8) + 2 * a(n - 9) - 2 * a(n - 10) (conjectured). ●

▶ [A126964] 0,10,44,102,184,290,420,574,752,954,1180,1430,1704,2002,2324,2670,3040,3434,3852,4294,4760,5250,5764,6302,6864 ⋆ a(n) = 2 * n * (6 * n - 1). ● a(n) = 24 * n + a(n - 1) - 14 for n>0, a(0)=0. - _ Vincenzo Librandi _ , Nov 23 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n > 2, a(0)=0, a(1)=10, a(2)=44. ● a(n) = Sum _{ i=n..5 * n - 1 } i. - _ Wesley Ivan Hurt _ , Dec 04 2016 ●

▶ [A257052] 0,0,0,10,44,123,274,530,930,1519,2348,3474,4960,6875,9294,12298,15974,20415,25720,31994,39348,47899,57770,69090,81994 ⋆ a(n) = cpg(3, n) + cpg(4, n) + ... + cpg(n, n) where cpg(m, n) is the n - th m - th - order centered polygonal number. ● a(n) = (n ^ 4 - 7 * n ^ 2 + 10 * n - 8) / 4 for n>1. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>6. ●

▶ [A008532] 1,10,44,126,280,530,900,1414,2096,2970,4060,5390,6984,8866,11060,13590,16480,19754,23436,27550,32120,37170,42724,48806,55440 ⋆ Coordination sequence for 4 - dimensional I - centered cubic orthogonal lattice. ● a(n) = 4 * n ^ 3 + 6 * n, n >= 1. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>4. - _ Colin Barker _ , Mar 03 2015 ●

▶ [A085582] 0,1,10,44,130,313,640,1192,2044,3305,5078,7524,10750,14993,20388,27128,35448,45665,57922,72636,89970,110297,133976,161440,192860 ⋆ The number of rectangles (orthogonal or not) with corners on an n X n grid of points. ● a(n) = n * (n - 1) ^ 2 * (2n - 1) / 6 + 2 * Sum _{ a,b>0, 0<s<r<n, gcd(r,s)=1 } max(n - a * s - b * r,0) * max(n - a * r - b * s,0). - _ David Radcliffe _ , Feb 06 2020 ●

▶ [A058310] 1,10,44,133,319,656,1210,2059,3293,5014,7336,10385,14299,19228,25334,32791,41785,52514,65188,80029,97271,117160,139954,165923,195349 ⋆ (1 / 2) * (n ^ 2 + n + 2) * (n ^ 2 + 3 * n + 1). ● a(n) = sum(i, i = n..(n + 1) ^ 2). ●

▶ [A005720] 1,10,44,135,336,728,1428,2598,4455,7282,11440,17381,25662,36960,52088,72012,97869,130986,172900,225379,290444,370392,467820,585650,727155 ⋆ Quadrinomial coefficients. ● a(n)= binomial(n + 1, 3) * (n ^ 3 + 15 * n ^ 2 + 86 * n - 120) / 120, n >= 2. ● a(0)=1, a(1)=10, a(2)=44, a(3)=135, a(4)=336, a(5)=728, a(6)=1428, a(n)=7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). - _ Harvey P. Dale _ , Jun 23 2011 ● a(n) = binomial(n,2) + 7 * binomial(n,3) + 10 * binomial(n,4) + 5 * binomial(n,5) + binomial(n,6) (see comment in A071675). - _ Vladimir Shevelev _ and _ Peter J. C. Moses _ , Jun 22 2012 ●

▶ [A126397] 1,10,44,200,918,4236,19598,90790,420870,1951636,9051480,41983154,194736668,903293618,4190003458,19435777562,90155141564,418195731384,1939853565942,8998257693932,41739569773726,193614349514214 ⋆ Number of base 10 n - digit numbers with adjacent digits differing by two or less. ● a(n) = 7 * a(n - 1) - 11 * a(n - 2) + a(n - 4) for n>4. ●

▶ [A164607] 1,10,44,216,1040,5024,24256,117120,565504,2730496,13184000,63657984,307367936,1484103680,7165886464,34599960576,167063388160,806653394944,3894867132416,18806082109440,90803796967424,438439516307456 ⋆ a(n) = 4 * a(n - 1) + 4 * a(n - 2) for n > 1; a(0) = 1, a(1) = 10. ● a(n) = 4 * a(n - 1) + 4 * a(n - 2) for n > 1; a(0) = 1, a(1) = 10. ● a(n) = ((2 + 4 * sqrt(2)) * (2 + 2 * sqrt(2)) ^ n + (2 - 4 * sqrt(2)) * (2 - 2 * sqrt(2)) ^ n) / 4. ●

▶ [A160970] 0,1,10,44,341,1495,11584,50786,393515,1725229,13367926,58607000,454115969,1990912771,15426575020,67632427214,524049434711,2297511612505,17802254205154,78047762397956,604752593540525,2651326409917999,20543785926172696,90067050174814010 ⋆ Indices of square numbers that are also 18 - gonal numbers. ● a(n) = 34 * a(n - 2) - a(n - 4), n>5. - _ R. J. Mathar _ , Oct 04 2009 ●

▶ [A245871] 10,45,100,193,318,493,712,993,1330,1741,2220,2785,3430,4173,5008,5953,7002,8173,9460,10881,12430,14125,15960,17953,20098 ⋆ Number of length 2 + 2 0..n arrays with some pair in every consecutive three terms totalling exactly n. ● a(n) = 1 + 4 * n + 7 * n ^ 2 + n ^ 3 for n even. ● a(n) = - 2 + 4 * n + 7 * n ^ 2 + n ^ 3 for n odd. ●

▶ [A105938] 10,45,126,280,540,945,1540,2376,3510,5005,6930,9360,12376,16065,20520,25840,32130,39501,48070,57960,69300,82225,96876,113400,131950 ⋆ a(n) = binomial(n + 2,2) * binomial(n + 5,2). ● a(0)=10, a(1)=45, a(2)=126, a(3)=280, a(4)=540; for n>4, a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Harvey P. Dale _ , Sep 05 2013 ●

▶ [A037270] 0,1,10,45,136,325,666,1225,2080,3321,5050,7381,10440,14365,19306,25425,32896,41905,52650,65341,80200,97461,117370,140185,166176 ⋆ a(n) = n ^ 2 * (n ^ 2 + 1) / 2. ● a(n) = a(n - 1) + n ^ 3 + (n - 1) ^ 3. ● a(n) = Sum _{ k=0..n ^ 2 } k. - _ William A. Tedeschi _ , Feb 27 2008 ● a(n) = (1 / 8) * sinh(2 * arcsinh(n)). - _ Artur Jasinski _ , Feb 10 2010 ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) n>4, a(0)=0, a(1)=1, a(2)=10, a(3)=45, a(4)=136. - _ Yosu Yurramendi _ , Sep 02 2013 ●

▶ [A005714] 1,10,45,141,357,784,1554,2850,4917,8074,12727,19383,28665,41328,58276,80580,109497,146490,193249,251713,324093,412896,520950,651430,807885 ⋆ Coefficient of x ^ 6 in expansion of (1 + x + x ^ 2) ^ n. ● a(n) = binomial(n, 3) * (n ^ 3 + 18 * n ^ 2 + 17 * n - 120) / 120. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). _ Vincenzo Librandi _ , Jun 16 2012 ● a(n) = binomial(n,3) + 6 * binomial(n,4) + 5 * binomial(n,5) + binomial(n,6) (see our comment in A026729). - _ Vladimir Shevelev _ and _ Peter J. C. Moses _ , Jun 22 2012 ● a(n) = GegenbauerC(N, - n, - 1 / 2) where N = 6 if 6<n else 2 * n - 6. - _ Peter Luschny _ , May 10 2016 ●

▶ [A141499] 0,1,10,45,190,780,3160,12720,51040,204480,818560,3275520,13104640,52423680,209704960,838840320,3355402240,13421690880,53686927360,214748037120,858992803840,3435972526080,13743892725760,54975576145920,219902315069440 ⋆ a(0)=0; a(1)=1; a(n) = triangular number at index 5 * 2 ^ (n - 2) - 1. ● a(n)=5 * 2 ^ (- 5 + n) * (- 4 + 5 * 2 ^ n) for n>1. a(n)=6 * a(n - 1) - 8 * a(n - 2) for n>3. G.f.: x * (1 + 4 * x - 7 * x ^ 2) / ((1 - 2 * x) * (1 - 4 * x)). [_ Colin Barker _ , Aug 16 2012] ●

▶ [A061772] 10,45,300,2250,18000,150000,1285714,11250000,100000000,900000000,8181818181,75000000000,692307692307,6428571428572,60000000000000,562500000000000,5294117647058823,50000000000000,473684210526315789,4500000000000000,42857142857142857143 ⋆ a(n) is the number of n - digit multiples of n. ● a(n) = floor((9 * 10 ^ (n - 1) / n) or floor((9 * 10 ^ (n - 1)) / n) + 1. ● a(1)=10; a(n) = floor((10 ^ n - 1) / n) - floor((10 ^ (n - 1) - 1) / n) for n > 1. - _ Jon E. Schoenfield _ , Dec 02 2021 ●

▶ [A032165] 10,45,330,2475,19998,166485,1428570,12498750,111111000,999989991,9090909090,83333249175,769230769230,7142856428565,66666666659934,624999993750000,5882352941176470,55555555499944500 ⋆ Number of aperiodic necklaces of n beads of 10 colors. ● a(n) = Sum _{ d|n } mu(d) * 10 ^ (n / d) / n. ●

▶ [A124174] 0,1,10,45,351,1540,11935,52326,405450,1777555,13773376,60384555,467889345,2051297326,15894464365,69683724540,539943899076,2367195337045,18342198104230,80414957735001,623094791644755,2731741367653000,21166880717817451,92798791542467010 ⋆ Sophie Germain triangular numbers tr: 2 * tr + 1 is also a triangular number. ● a(n) = 35 * (a(n - 2) - a(n - 4)) + a(n - 6). ● a(n) = - 11 / 32 + (- 3 - 2 * sqrt(2)) ^ n / 64 + (5 * (3 - 2 * sqrt(2)) ^ n) / 32 + (- 3 - 2 * sqrt(2)) ^ n / (32 * sqrt(2)) - (5 * (3 - 2 * sqrt(2)) ^ n) / (32 * sqrt(2)) + (- 3 + 2 * sqrt(2)) ^ n / 64 - (- 3 + 2 * sqrt(2)) ^ n / (32 * sqrt(2)) + (5 * (3 + 2 * sqrt(2)) ^ n) / 32 + (5 * (3 + 2 * sqrt(2)) ^ n) / (32 * sqrt(2)); ● a(n) = 34 * a(n - 2) - a(n - 4) + 11. - _ Kieren MacMillan _ , Nov 08 2008 ● a(n) = a(n - 1) + 34 * a(n - 2) - 34 * a(n - 3) - a(n - 4) + a(n - 5) with a(0)=0, a(1)=1, a(2)=10, a(3)=45, a(4)=351. - _ Harvey P. Dale _ , Sep 28 2011 ● a(n + 2) = 1 / 2 * ((3 / 2 * sqrt(8 * a(n) + 1) + sqrt(16 * a(n) + 9) - 1 / 2) * (3 / 2 * sqrt(8 * a(n) + 1) + sqrt(16 * a(n) + 9) + 1 / 2)); a(0) = 0, a(1) = 1. - _ Raphie Frank _ , Jan 29 2013 ●

▶ [A248575] 0,10,46,128,272,498,822,1264,1840,2570,3470,4560,5856,7378,9142,11168,13472,16074,18990,22240,25840,29810,34166,38928,44112 ⋆ Rounded sums of the non - integer cube roots of n, as partitioned by the integer roots: round[sum(j from n ^ 3 + 1 to (n + 1) ^ 3 - 1, j ^ (1 / 3))]. ● a(n) = round[sum(j from n ^ 3 + 1 to (n + 1) ^ 3 - 1, j ^ (1 / 3))]. ● a(n) = ((n + 1) * a(n - 2) + 3 * a(n - 1) - 30) / (n - 2) - 20. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - 2 * a(n - 3) + 3 * a(n - 4) - a(n - 5), for n > 5. This implies that the digital roots (A010888) of the terms are cyclic with a period of eighteen. - _ Ivan N. Ianakiev _ , Dec 13 2014 ● a(n) = (1 - (- 1) ^ n + 8 * n + 18 * n ^ 2 + 12 * n ^ 3) / 4. - _ Colin Barker _ , Dec 30 2014 ●

▶ [A081583] 1,10,46,136,307,586,1000,1576,2341,3322,4546,6040,7831,9946,12412,15256,18505,22186,26326,30952,36091,41770,48016,54856,62317 ⋆ Third row of Pascal - (1,2,1) array A081577. ● a(n) = (2 + 9 * n + 9 * n ^ 3) / 2. ● a(n) = hypergeommetric2F1([- n, - 3], [1], 3). - _ Peter Luschny _ , Nov 19 2014 ●

▶ [A213834] 1,10,46,140,335,686,1260,2136,3405,5170,7546,10660,14651,19670,25880,33456,42585,53466,66310,81340,98791,118910,141956,168200,197925 ⋆ Antidiagonal sums of the convolution array A213833. ● a(n) = n * (n + 1) * (3 * n ^ 2 - 2 * n + 2) / 6. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ●

▶ [A024166] 0,1,10,46,146,371,812,1596,2892,4917,7942,12298,18382,26663,37688,52088,70584,93993,123234,159334,203434,256795,320804,396980,486980 ⋆ a(n) = Sum _{ 1 <= i < j <= n } (j - i) ^ 3. ● a(n) = n * (n + 1) * (n + 2) * (3 * n ^ 2 + 6 * n + 1) / 60. (End) ● a(n) = Sum _{ k=0..n } k ^ 3 * (n + 1 - k). - _ Paul Barry _ , Sep 14 2003; edited by _ Jon E. Schoenfield _ , Dec 29 2014 ● a(n) = Sum _{ i=1..n } binomial(i + 1, 2) ^ 2. - _ André F. Labossière _ , Jul 03 2003 ● a(n) = 2 * n * (n + 1) * (n + 2) * ((n + 1) ^ 2 + 2 * n * (n + 2)) / 5!. This sequence could be obtained from the general formula a(n) = n * (n + 1) * (n + 2) * (n + 3) * ... * (n + k) * (n * (n + k) + (k - 1) * k / 6) / ((k + 3)! / 6) at k=2. - _ Alexander R. Povolotsky _ , May 17 2008 ● a(n) = (6 * n ^ 2 + 12 * n + 2) * (n + 2)! / (120 * (n - 1)!), n > 0. - _ Gary Detlefs _ , Mar 01 2013 ● a(n) = Sum _{ i=1..n } Sum _{ j=1..n } i * j * (n - max(i, j) + 1). - _ Melvin Peralta _ , May 12 2016 ●

▶ [A096045] 1,10,46,190,766,3070,12286,49150,196606,786430,3145726,12582910,50331646,201326590,805306366,3221225470,12884901886,51539607550,206158430206,824633720830,3298534883326,13194139533310,52776558133246 ⋆ a(n) = B(2 * n, 2) / B(2 * n) (see formula section). ● a(n) = B(2 * n, 2) / B(2 * n), where B(n, p) = Sum _{ i=0..n } p ^ i * Sum _{ j=0..i } binomial(n,j) * B(j))) with B(k) = k - th Bernoulli number. ● a(n) = 3 * 4 ^ n - 2. ● a(n) = 5 * a(n - 1) - 4 * a(n - 2). ● a(n) = 4 * a(n - 1) + 6. First differences give A002063. - _ Paul Curtz _ , Jul 07 2008 ●

▶ [A199313] 10,46,226,1126,5626,28126,140626,703126,3515626,17578126,87890626,439453126,2197265626,10986328126,54931640626,274658203126,1373291015626,6866455078126,34332275390626,171661376953126,858306884765626 ⋆ 9 * 5 ^ n + 1. ● a(n) = 5 * a(n - 1) - 4. ● a(n) = 6 * a(n - 1) - 5 * a(n - 2). ●

▶ [A003765] 1,10,46,238,1170,5882,29278,146382,730434,3647994,18212046,90936494,454029874,2266968122,11318785790,56514147406,282171551586,1408866513

082,7034386262766,35122279177902 ⋆ Number of Hamiltonian cycles in W _ 4 X P _ n. • a(1) = 1, • a(2) = 10, • a(3) = 46, • a(4) = 238, • a(5) = 1170, • a (6) = 5882 and •

► [A138041] 1,10,46,244,1252,6472,33400,172432,890128,4595104,23721184,122455360,632148544,3263326336,16846196608,86964744448,448936157440,2317533096448,11963749330432,61760195900416,318823279584256 ⋆ a(1) = 1, a(2) = 10; for n>2, a(n + 1) = 4 * a(n) + 6 * a(n - 1). Also a(n) = upper left term in the 2 X 2 matrix [1,3; 3,3]. • a(n) / a(n - 1) tends to (2 + sqrt(10)) = 5.16227766... (a root of x ^ 2 - 4 * x - 6 and an eigenvalue of the matrix). • a(n) mod 9 == 1 . • a(n)=(1 / 2) * (2 + sqrt(10)) ^ n - (13 / 20) * (2 - sqrt(10)) ^ n * sqrt(10) + (13 / 20) * (2 + sqrt(10)) ^ n * sqrt(10) + (1 / 2) * (2 - sqrt(10)) ^ n. - _ Paolo P. Lava _ , Jun 03 2008 •

► [A253477] 1,10,46,1045,5005,114886,550450,12636361,60544441,1389884770,6659338006,152874688285,732466636165,16814825826526,80564670640090,1849477966229521,8861381303773681,203425761459420730,9746713787444647662237498428257005072 5 ⋆ Indices of centered heptagonal numbers (A069099) which are also centered triangular numbers (A005448). • a(n) = a(n - 1) + 110 * a(n - 2) - 110 * a(n - 3) - a(n - 4) + a(n - 5). •

► [A213575] 1,10,47,158,441,1098,2539,5590,11909,24818,50967,103662,209521,421786,846947,1697990,3400893,6807618,13622095,27252190,54513641,109037930,218088027,436189878,872395381 ⋆ Antidiagonal sums of the convolution array A213573. • a(n) = 6 * a(n - 1) - 14 * a(n - 2) + 16 * a(n - 3) - 9 * a(n - 4) + 2 * a(n - 5). • a(n) = 2 ^ n * Sum _{ k=0..n } k ^ p * q ^ k, for p=3, q=1 / 2. • a(n) = 2 ^ (n + 1) * 13 - (n ^ 3 + 6 * n ^ 2 + 18 * n + 26). (End) • a(n) = 2 * a(n - 1) + n ^ 3. - _ Sochima Everton, Biereagu _ , Jul 14 2019 •

► [A195023] 0,10,48,114,208,330,480,658,864,1098,1360,1650,1968,2314,2688,3090,3520,3978,4464,4978,5520,6090,6688,7314,7968 ⋆ a(n) = 14 * n ^ 2 - 4 * n. • a (n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). •

► [A277229] 0,1,10,48,158,413,924,1848,3396,5841,9526,14872,22386,32669,46424,64464,87720,117249,154242,200032,256102,324093,405812,503240,618540 ⋆ Convolution of the odd - indexed triangular numbers (A000384(n + 1)) and the squares (A000290). • a(n) = binomial(n + 2, 3) * (4 * n ^ 2 + 3 * n + 3) / 10 = n * (n + 1) * (n + 2) * (4 * n ^ 2 + 3 * n + 3) / 60. • a(n) = 6 * a(n - 1) - 15 * a (n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>5. - _ Colin Barker _ , Oct 21 2016 •

► [A271638] 1,10,48,170,512,1398,3580,8770,20808,48206,109652,245850,544864,1196134,2605164,5636210,12124280,25952382,55312516,117440650,248512656,524288150,1103102108,2315255970,4848615592 ⋆ The total sum of the cubes of all parts of all compositions of n. • a(n) = (13 * n - 36) * 2 ^ (n - 1) + 6 * n + 18 . •

► [A084857] 0,1,10,48,176,560,1632,4480,11776,29952,74240,180224,430080,1011712,2351104,5406720,12320768,27852800,62521344,139460608,309329920,682622976,1499463680,3279945728,7147094016 ⋆ Inverse binomial transform of n ^ 2 * 3 ^ (n - 1). • a(n)=n(3n - 1)2 ^ (n - 2). •

► [A349948] 0,10,48,190,720,2698,10080,37630,140448,524170,1956240,7300798,27246960,101687050,379501248,1416317950,5285770560,19726764298,73621286640,274758382270,1025412242448,3826890587530,14282150107680,53301709843198,198924689265120 ⋆ Tetrahedral - sided isosceles Heron triangle pairs. • a(n + 2) = 4 * a(n + 1) - a(n) + 8. • a(n) = 5 * a(n - 1) - 5 * a(n - 2) + a(n - 3) for n > 3. • a(n) = (2 + sqrt(3)) ^ n + (2 - sqrt(3)) ^ n - 4. (End) •

► [A330170] 10,48,250,1392,8050,47448,282250,1686432,10097890,60526248,362976250,2177317872,13062296530,78368963448,470199366250,2821153019712,16926788715970,101560344351048,609360902796250,3656161927895952,21936961102828210 ⋆ a(n) = 2 ^ n + 3 ^ n + 6 ^ n - 1. • a(n) = 12 * a(n - 1) - 47 * a(n - 2) + 72 * a(n - 3) - 36 * a(n - 4) for n>5. •

► [A370216] 1,1,1,10,49,151,532,2353,9745,37675,150851,624603,2561476,10426625,42800031,176797510,730069649,3016004001,12492387775,51845882845,215363387699,895504027855,3728271696139,15538300424315,64812978200068 ⋆ Coefficient of x ^ n in the expansion of ((1 + x) / (1 - x ^ 3) ^ 3) ^ n. • a(n) = Sum _{ k=0..floor(n / 3) } binomial(3 * n + k - 1,k) * binomial(n,n - 3 * k). •

► [A307904] 1,1,1,10,49,151,901,5881,28225,165565,1158601,6993196,44201521,320103070,2200745821,15118248601,113390231809,845797019077,6250243032145,48718551529210,384815404148401,3021055319338813,24492293678972725,20230320112530356 5,1669594463059152961 ⋆ Coefficient of x ^ n in (1 + x + n * x ^ 3) ^ n. • a(n) = Sum _{ k=0..floor(n / 3) } n ^ k * binomial(n,3 * k) * binomial(3 * k,k). •

► [A271662] 1,10,49,164,434,980,1974,3648,6303,10318,16159,24388,35672,50792,70652,96288,128877,169746,220381,282436,357742,448316,556370,684320,834795 ⋆ Convolution of nonzero pentagonal numbers (A000326) with themselves. • a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). • a(n) = (n + 1) * (n + 2) * (n + 3) * (9 * n ^ 2 + 21 * n + 20) / 120 . •

► [A051947] 1,10,49,168,462,1092,2310,4488,8151,14014,23023,36400,55692,82824,120156,170544,237405,324786,437437,580888,761530,986700,1264770,1605240,2018835 ⋆ Partial sums of A034263. • a(n) = C(n + 5, 5) * (2n + 3) / 3. •

► [A253221] 10,49,263,1249,3568,3568,47698,213155,538444,1039060,1719174,2579462,3619974,4840710,6241670,7822854,9584262,11525894,13647750,15949830,18432134,21094662,23937414,26960390,30163590 ⋆ Number of n X 6 nonnegative integer arrays with upper left 0 and lower right its king - move distance away minus 2 and every value within 2 of its king move distance from the upper left and every value increasing by 0 or 1 with every step right, diagonally se or down. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n > 13. •

► [A153780] 0,10,50,120,220,350,510,700,920,1170,1450,1760,2100,2470,2870,3300,3760,4250,4770,5320,5900,6510,7150,7820,8520 ⋆ 10 times pentagonal numbers : a(n) = 5 * n * (3 * n - 1). • a(n) = 30 * n + a(n - 1) - 20 for n>0, a(0) = 0. - _ Vincenzo Librandi _ , Aug 03 2010 • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). •

► [A008413] 1,10,50,170,450,1002,1970,3530,5890,9290,14002,20330,28610,39210,52530,69002,89090,113290,142130,176170,216002,262250,315570,376650,446210 ⋆ Coordination sequence for 5 - dimensional cubic lattice. • a(n) = (4 / 3) * n ^ 4 + (20 / 3) * n ^ 2 + 2 for n > 0. - _ Michael De Vlieger _ , Oct 04 2016 • a(n) = 2 * d * Hypergeometric2F1(1 - d, 1 - n, 2, 2) where d=5, for n>=1. •

► [A006542] 1,10,50,175,490,1176,2520,4950,9075,15730,26026,41405,63700,95200,138720,197676,276165,379050,512050,681835,896126,1163800,1495000,1901250,2395575 ⋆ a(n) = binomial(n,3) * binomial(n - 1,3) / 4. • a(n) = C(n, 3) * C(n - 1, 3) / 4 = n * (n - 1) ^ 2 * (n - 2) ^ 2 * (n - 3) / 144. • a(n) = Sum(Sum(Sum(Sum(1 + Sum(5 * n))))) = Sum (A006414). - Xavier Acloque, Oct 08 2003 • a(n) = C(n, 6) + 3 * C(n + 1, 6) + C(n + 2, 6). - _ Mike Zabrocki _ , Aug 26 2004 • a(n) = C(n - 2, n - 4) * C(n - 1, n - 3) * C(n, n - 2) / 18. - _ Zerinvary Lajos _ , Jul 29 2005 • a(n) = C(n,4) * C(n,3) / n. - _ Mitch Harris _ , Jul 06 2006 • a(n + 2) = (1 / 4) * Sum _{ 1 <= x _ 1, x _ 2 <= n } x _ 1 * x _ 2 * (det V(x _ 1,x _ 2)) ^ 2 = (1 / 4) * Sum _{ 1 <= i,j <= n } i * j * (i - j) ^ 2, where V(x _ 1,x _ 2 } is the Vandermonde matrix of order 2. - _ Peter Bala _ , Sep 21 2007 •

► [A237655] 1,10,50,175,510,1376,3625,9500,24875,65125,170500,446375,1168625,3059500,8009875,20970125,54900500,143731375,376293625,98514950025791548 75,6752315125,17677790500,46281056375,121165378625 ⋆ G.f.: exp(Sum _{ n>=1 } 5 * Fibonacci(n - 2) * Fibonacci(n + 2) * x ^ n / n). • a(n) = 3 * a(n - 1) - a(n - 2), n>=8. - _ Fung Lam _ , May 19 2014 •

► [A095687] 0,10,50,250,1250,6250,31250,156250,781250,3906250,19531250,97656250,488281250,2441406250,12207031250,61035156250,305175781250,1525878906250,7629394531250,38146972656250,190734863281250 ⋆ Numbers n such that n - th Pisano number = 6 * n. • a(0) = 0, a(1) = 10, a(n) = 5 * a(n - 1); a(n) = sgn(n) * 2 * 5 ^ n [From _ Carl R. White _ , Sep 22 2009] •

► [A154410] 10,50,280,1640,9760,58400,350080,2099840,12597760,75584000,453498880,2720983040,16325877760,97955225600,587731271680,3526387466240,21158324469760,126949946163200,761699675668480,4570198051389440,27421188303093760 ⋆ a(n) = 5 * (3 * 6 ^ n + 2 ^ n) / 2. • a(n) = 8 * a(n - 1) - 12 * a(n - 2). • a(n) = 6 * a(n - 1) - 10 * 2 ^ (n - 1). •

► [A216156] 10,50,500,5000,50000,500000,5000000,50000000,500000000,5000000000,50000000000,500000000000,5000000000000,50000000000000,500000000000000,5000000000000000,50000000000000000 ⋆ Periods of powers of 11 mod 10 ^ n. • a(n) = 5 * 10 ^ (n - 1), n >= 2. •

► [A143855] 1,10,51,124,229,366,535,736,969,1234,1531,1860,2221,2614,3039,3496,3985,4506,5059,5644,6261,6910,7591,8304,9049 ⋆ Ulam's spiral (ESE spoke). • a(n) = 16 * n ^ 2 - 39 * n + 24. - _ R. J. Mathar _ , Sep 08 2008 •

► [A077044] 0,1,10,51,155,381,780,1451,2460,3951,6000,8801,12435,17151,23030,30381,39280,50101,62910,78151,95875,116601,140360,167751,198780 ⋆ Largest coefficient in expansion of (1 + x + x ^ 2 + ... + x ^ (n - 1)) ^ 5 = ((1 - x ^ n) / (1 - x)) ^ 5, i.e., the coefficient of x ^ floor(5 * (n - 1) / 2) and of x ^ ceiling(5 * (n - 1) / 2); also number of compositions of floor(5 * (n + 1) / 2) into exactly 5 positive integers each no more than n. • a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 6 * a(n - 3) + 6 * a(n - 5) - 2 * a(n - 6) - 2 * a(n - 7) + a(n - 8). •

► [A069038] 0,1,10,51,180,501,1182,2471,4712,8361,14002,22363,34332,50973,73542,103503,142544,192593,255834,334723,432004,550725,694254,866295,1070904 ⋆ Expansion of x * (1 + x) ^ 4 / (1 - x) ^ 6. • a(n) = n * (2 * n ^ 4 + 10 * n ^ 2 + 3) / 15. - _ Jonathan Vos Post _ , Nov 16 2004 • a(n) = C(n + 4,5) + 4 * C (n + 3,5) + 6 * C(n + 2,5) + 4 * C(n + 1,5) + C(n,5). • a(n) = 10 * a(n - 1) / (n - 1) + a(n - 2) for n > 1. - _ Seiichi Manyama _ , Jun 06 2018 •

► [A213563] 1,10,51,182,518,1260,2730,5412,9999,17446,29029,46410,71708,107576,157284,224808,314925,433314,586663,782782,1030722,1340900,1725230,2197260,2772315 ⋆ Antidiagonal sums of the convolution array A213561. • a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). •

► [A224327] 1,10,51,212,805,2910,10199,34984,118089,393650,1299067,4251516,13817453,44641030,143489055,459165008,1463588497,4649045850,14721978563,46490458660,146444944821,460255540910,1443528741991,4518872583672 ⋆ Number of idempotent n X n 0..2 matrices of rank n - 1. • a(n) = n * (2 * 3 ^ (n - 1) - 1). • a(n) = 8 * a(n - 1) - 22 * a(n - 2) + 24 * a(n - 3) - 9 * a(n - 4). •

► [A041186] 10,51,1030,5201,105050,530451,10714070,54100801,1092730090,5517751251,111447755110,562756526801,11366578291130,57395647982451,1159279537940150,5853793337683201,118235146291604170,597029524795704051,12058825642205685190 ⋆ Numerators of continued fraction convergents to sqrt(104). • a (n) = 102 * a(n - 2) - a(n - 4). [_ Bruno Berselli _ , Oct 30 2013] •

► [A028994] 0,10,52,126,232,370,540,742,976,1242,1540,1870,2232,2626,3052,3510,4000,4522,5076,5662,6280,6930,7612,8326,9072 ⋆ Even 10 - gonal (or decagonal) numbers. • a(n) = 2 * n * (8 * n - 3). - _ Omar E. Pol _ , Aug 19 2011 •

► [A257042] 0,10,52,144,304,550,900,1372,1984,2754,3700,4840,6192,7774,9604,11700,14080,16762,19764,23104,26800,30870,35332,40204,45504 ⋆ a(n) = (3 * n + 7) * n ^ 2. • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>3. - _ Vincenzo Librandi _ , Apr 15 2015 •

► [A092966] 0,10,52,149,324,600,1000,1547,2264,3174,4300,5665,7292,9204,11424,13975,16880,20162,23844,27949,32500,37520,43032,49059,55624 ⋆ Number of interior balls in a truncated tetrahedral arrangement. • a(n) = (1 / 6) * (n - 1) * (23 * n ^ 2 - 19 * n + 6). • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a (n - 4); a(0)=0, a(1)=10, a(2)=52, a(3)=149. - _ Harvey P. Dale _ , Jun 15 2011 •

► [A050494] 1,10,52,192,570,1452,3300,6864,13299,24310,42328,70720,114036,178296,271320,403104,586245,836418,1172908,1619200,2203630,2960100,3928860,5157360,6701175 ⋆ Partial sums of A051923. • a(n)=C(n + 6, 6) * (3n + 7) / 7. •

► [A302302] 0,10,53,153,334,620,1035,1603,2348,3294,4465,5885,7578,9568,11879,14535,17560,20978,24813,29089,33830,39060,44803,51083,57924 ⋆ Number of triples (i,j,k) such that i + j + k > 0 with - n <= i,j,k <= n. • a(n) = n * (3 + 9 * n + 8 * n ^ 2) / 2. •

► [A216938] 10,53,200,606,1572,3630,7656,15015,27742,48763,82160,133484,210120,321708,480624,702525,1006962,1418065,1965304,2684330,3617900,4816890,6341400,8261955,10660806 ⋆ Number of side - 2 hexagonal 0..n arrays with values nondecreasing E, SW and SE • a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. •

► [A292058] 0,10,54,168,400,810,1470,2464,3888,5850,8470,11880,16224,21658,28350,36480,46240,57834,71478,87400,105840,127050,151294,178848,210000 ⋆ Wiener index of the n X n rook complement graph. ● a(n) = (n - 1) * n ^ 2 * (n + 3) / 2. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ●

► [A152762] 0,0,1,1,10,54,204,243,1594,4210,18484,62174,275828,1131980,7434360,10522755,72469530,268486410,1442238420,4284331050,18146556060,62021100660,248289237960,798007353390,2832660378756 ⋆ Sum of proper divisors of Catalan number A000108(n). ● a(n) = sigma(binomial(2n,n) / (n + 1)) - binomial(2n,n) / (n + 1), where sigma(m) is the sum of the divisors of m. - _ Emeric Deutsch _ , Dec 24 2008 ●

► [A053347] 1,10,54,210,660,1782,4290,9438,19305,37180,68068,119340,201552,329460,523260,810084,1225785,1817046,2643850,3782350,5328180,7400250,10145070,13741650,18407025 ⋆ a(n) = binomial(n + 7, 7) * (n + 4) / 4. ● a(n) = 2 * C(n + 8, 8) - C(n + 7, 7). - _ Paul Barry _ , Mar 04 2003 ● a(n) = C(n + 7, 7) + 2 * C(n + 7, 8). - Borislav St. Borisov (b.st.borisov(AT)abv.bg), Mar 05 2009 ● a(n) = (n ^ 8 + 32 * n ^ 7 + 434 * n ^ 6 + 3248 * n ^ 5 + 14609 * n ^ 4 + 40208 * n ^ 3 + 65596 * n ^ 2 + 57312 * n + 20160) / 20160. - _ Chai Wah Wu _ , Jan 24 2016 ●

► [A058645] 0,1,10,54,224,800,2592,7840,22528,62208,166400,433664,1105920,2768896,6823936,16588800,39845888,94699520,222953472,520486912,1205862400,2774532096,6343884800,14422114304,32614907904 ⋆ a(n) = 2 ^ (n - 3) * n ^ 2 * (n + 3). ● a(n) = Sum _{ k=0..n } k ^ 3 * binomial(n, k): binomial transform of A000578. ●

► [A213120] 1,10,54,252,1110,4748,19964,83024,342678,1406748,5751636,23443240,95319484,386805112,1567130168,6340730552,25626393878,103472018492,417449893988,1682982404072,6780908053268,27306234108392,109907864408648 ⋆ Number of binary arrays of length 2 * n + 2 with fewer than n ones in any length 2n subsequence (=less than 50 % duty cycle). ● a(n) = 2 ^ (2 * n + 1) - (15 * n - 8) * C(2 * n - 2,n - 1) / n. - _ Vaclav Kotesovec _ , Oct 29 2012 ●

► [A198770] 10,54,274,1374,6874,34374,171874,859374,4296874,21484374,107421874,537109374,2685546874,13427734374,67138671874,335693359374,1678466796874,8392333984374,41961669921874,209808349609374,1049041748046874 ⋆ 11 * 5 ^ n - 1. ● a(n) = 5 * a(n - 1) + 4. ● a(n)= = 6 * a(n - 1) - 5 * a(n - 2), n>1. ●

► [A337898] 1,10,55,200,560,1316,2730,5160,9075,15070,23881,36400,53690,77000,107780,147696,198645,262770,342475,440440,559636,703340,875150,1079000,1319175 ⋆ Number of achiral colorings of the 6 square faces of a cube or the 6 vertices of a regular octahedron using n or fewer colors. ● a(n) = n * (n + 1) * (n + 2) * (3 * n ^ 2 - 3 * n + 4) / 24. ● a(n) = 1 * C(n,1) + 8 * C(n,2) + 28 * C(n,3) + 36 * C(n,4) + 15 * C(n,5), where the coefficient of C(n,k) is the number of achiral colorings using exactly k colors. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). - _ Wesley Ivan Hurt _ , Sep 30 2020 ●

► [A244871] 1,10,55,217,672,1755,4030,8386,16135,29140,49941,81915,129430,198037,294652,427780,607725,846846,1159795,1563805,2078956,2728495,3539130,4541382,5769907 ⋆ Number of magic labelings with magic sum n of 3rd graph shown in link. ● a(n) = n ^ 6 / 48 + 3 * n ^ 5 / 16 + 77 * n ^ 4 / 96 + 2 * n ^ 3 + 37 * n ^ 2 / 12 - n * (- 1) ^ n / 32 + 89 * n / 32 - 3 * (- 1) ^ n / 64 + 67 / 64. [_ Bruno Berselli _ , Jul 08 2014] ●

► [A070212] 1,10,55,220,715,2001,4995,11385,24090,47905,90376,162955,282490,473110,768570,1215126,1875015,2830620,4189405,6089710,8707501,12264175,17035525,23361975,31660200 ⋆ Number of 5 X 5 pandiagonal magic squares with sum n. ● a(n) = (1 / 8064) * (n + 4) * (n + 3) * (n + 2) * (n + 1) * (n ^ 2 + 5n + 8) * (n ^ 2 + 5n + 42). ●

► [A008502] 1,10,55,220,715,2002,5005,11440,24310,48619,92368,167905,293710,496705,815188,1302499,2031535,3100240,4638205,6814522,9847045,14013220,19662655,27231610,37259596 ⋆ 8 - dimensional centered tetrahedral numbers. ● a(n) = 1 + n * (n + 1) * (3 * n ^ 6 + 9 * n ^ 5 + 509 * n ^ 4 + 1003 * n ^ 3 + 11464 * n ^ 2 + 10964 * n + 36528) / 13440. - _ R. J. Mathar _ , Nov 02 2011 ●

► [A008492] 1,10,55,220,715,2002,5005,11440,24310,48620,92377,167950,293875,497200,816475,1305502,2037970,3113110,4662515,6858280,9922627,14139190,19866145,27551380,37749910 ⋆ Expansion of (1 - x ^ 10) / (1 - x) ^ 10. ● a(n) = (8064 + 26060 * n ^ 2 + 5985 * n ^ 4 + 210 * n ^ 6 + n ^ 8) / 4032 for n>0. - _ Colin Barker _ , Jan 06 2017 ●

► [A000582] 1,10,55,220,715,2002,5005,11440,24310,48620,92378,167960,293930,497420,817190,1307504,2042975,3124550,4686825,6906900,10015005,14307150,20160075,28048800,38567100 ⋆ a(n) = binomial coefficient C(n,9). ● a(n + 8) = n(n + 1)(n + 2)(n + 3)(n + 4)(n + 5)(n + 6)(n + 7)(n + 8) / 9!. - _ Artur Jasinski _ , Dec 02 2007; _ R. J. Mathar _ , Jul 07 2009 ●

► [A290893] 0,0,0,0,1,10,55,220,715,2003,5025,11650,25850,57475,134883,345090,952195,2722455,7765010,21615771,58293475,152593575,390679925,988851150,2502813930 ⋆ p - INVERT of the positive integers, where p(S) = 1 - S ^ 5. ● a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 253 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10). ●

► [A337631] 0,1,10,55,228,801,2526,7387,20440,54229,139218,348111,851916,2047945,4849606,11337667,26214336,60030909,136314810,307232695,687865780,1530920881,3388997550,7465861035,16374562728 ⋆ a(n) is the sum of the squares of diameters of all nonempty subsets of { 1,2,...,n } . ● a(n) = 8 * a(n - 1) - 25 * a(n - 2) + 38 * a(n - 3) - 28 * a(n - 4) + 8 * a(n - 5) for n > 4. ● a(n) = 2 ^ (n + 1) * (n ^ 2 - 4 * n + 8) - 3 * n - 16. (End) ●

► [A249460] 0,0,0,1,10,55,230,770,2156,5250,11460,22935,42790,75361,126490,203840,317240,479060,704616,1012605,1425570,1970395,2678830,3588046,4741220 ⋆ Number of proper colorings of the cube with at most n colors under rotational symmetry. ● a(n) = (n * (n - 1) * (n - 2) * (n ^ 3 - 9 * n ^ 2 + 29 * n - 32) + 3 * n * (n - 1) * (n - 2) ^ 2) / 24 = (n - 2) * (n - 1) * n * (n ^ 3 - 9 * n ^ 2 + 32 * n - 38) / 24. ●

► [A202481] 1,10,55,231,833,2720,8280,23920,66352,178176,465920,1191680,2991360,7389184,17999872,43315200,103116800,243138560,568393728,1318518784,3037265920,6952058880,15820390400,35809918976,80659611648 ⋆ Column k = 3 of triangular array in A165241. ● a(n) = 2 ^ n * (n + 3) * (3 * n + 2) * (3 * n + 5) / 32 for n>0. - _ Bruno Berselli _ , Dec 21 2011 ●

► [A169720] 1,10,55,253,1081,4465,18145,73153,293761,1177345,4713985,18865153,75479041,301953025,1207885825,4831690753,19327057921,77308821505,309236465665,1236948221953,4947797606401,19791199862785,79164818325505,316659311050753,1266637319700481 ⋆ a(n) = (3 * 2 ^ (n - 1) - 1) * (3 * 2 ^ n - 1). ● a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3). - _ Vincenzo Librandi _ , Dec 03 2012 ●

► [A357668] 0,1,1,10,55,307,2026,14779,114157,933616,8110261,74525167,719925328,7279859485,76855303981,845280487018,9663800287483,114601481983855,1407040763488354,17856103120048783,233883061849700137,3157648445216335528,43887908697233605489 ⋆ Expansion of e.g.f. sinh(3 * (exp(x) - 1)) / 3. ● a(n) = Sum _{ k=0..floor((n - 1) / 2) } 9 ^ k * Stirling2(n,2 * k + 1). ● a(n) = (Bell _ n(3) - Bell _ n(- 3)) / 6, where Bell _ n(x) is n - th Bell polynomial. ●

► [A188168] 1,1,10,55,325,1900,11125,65125,381250,2231875,13065625,76487500,447765625,2621265625,15345156250,89832109375,525886328125,3078592187500,18022392578125,105504923828125,617636582031250,3615707529296875,21166720556640625 ⋆ a(0) = a(1) = 1; a(n) = 5 * a(n - 1) + 5 * a(n - 2). ● a(n) = 1 / 5 2 ^- n (- (5 - 3 Sqrt[5]) ^ n (2 + Sqrt[5]) + (- 2 + Sqrt[5]) (5 + 3 Sqrt[5]) ^ n) ●

► [A199413] 10,55,325,1945,11665,69985,419905,2519425,15116545,90699265,544195585,3265173505,19591041025,117546246145,705277476865,4231664861185,25389989167105,152339935002625,914039610015745,5484237660094465,32905425960566785 ⋆ 9 * 6 ^ n + 1. ● a(n) = 6 * a(n - 1) - 5. ● a(n) = 7 * a(n - 1) - 6 * a(n - 2). ●

► [A054629] 1,10,55,340,2530,20008,166870,1428580,12501280,111111340,1000010044,9090909100,83333418520,769230769240,7142857857190,66666666680272,625000006251280,5882352941176480,55555555611222370,526315789473684220 ⋆ Number of n - bead necklaces with 10 colors. ● a(0) = 1; a(n) = (1 / n) * Sum _{ k=1..n } 10 ^ gcd(n,k). - _ Ilya Gutkovskiy _ , Apr 17 2021 ●

► [A001557] 10,55,385,3025,25333,220825,1978405,18080425,167731333,1574304985,14914341925,142364319625,1367428536133,13202860761145,128037802953445,1246324856379625,12170706132009733,119179318935377305,1169842891165484965,11506994510201252425 ⋆ a(n) = 1 ^ n + 2 ^ n + ... + 10 ^ n. ● a(n) = Sum _{ j=1..10 } j ^ n, n >= 0. ●

► [A228888] 10,56,165,364,680,1140,1771,2600,3654,4960,6545,8436,10660,13244,16215,19600,23426,27720,32509,37820,43680,50116,57155,64824,73150 ⋆ a(n) = binomial(3 * n + 2, 3). ● a(n) = binomial(3 * n + 2, 3) = 1 / 6 * (3 * n) * (3 * n + 1) * (3 * n + 2). ●

► [A137931] 0,10,56,170,384,730,1240,1946,2880,4074,5560,7370,9536,12090,15064,18490,22400,26826,31800,37354,43520,50330,57816,66010,74944 ⋆ Sum of the principal diagonals of a 2n X 2n square spiral. ● a(n) = - 1 + n + Sum _{ k=0..2n } (2k ^ 2 - k + 1) = n - 1 + (2 * n + 1) * (8 * n ^ 2 - n + 3) / 3. ● a(n) = 2 * n ^ 2 + 2 * n + (16 * n ^ 3 + 2 * n) / 3 = 2 * n * (8 * n ^ 2 + 3 * n + 4) / 3. ●

► [A053493] 1,10,56,214,641,1620,3616,7340,13825,24510,41336,66850,104321,157864,232576,334680,471681,652530,887800,1189870,1573121,2054140,2651936,3388164,4287361 ⋆ Number of symmetric 4 X 4 matrices of nonnegative integers with every row and column adding to n. ● a(0)=1, a(1)=10, a(2)=56, a(3)=214, a(4)=641, a(5)=1620, a(6)=3616, a(7)=7340, a(n) = 6 * a(n - 1) - 14 * a(n - 2) + 14 * a(n - 3) - 14 * a(n - 5) + 14 * a(n - 6) - 6 * a(n - 7) + a(n - 8). - _ Harvey P. Dale _ , Oct 31 2011 ● a(n) = (9 * (31 + (- 1) ^ n) + 768 * n + 928 * n ^ 2 + 624 * n ^ 3 + 238 * n ^ 4 + 48 * n ^ 5 + 4 * n ^ 6) / 288. - _ Colin Barker _ , Jan 14 2017 ●

► [A198833] 1,10,56,220,680,1771,4060,8436,16215,29260,50116,82160,129766,198485,295240,428536,608685,848046,1161280,1565620,2081156,2731135,3542276,4545100,5774275 ⋆ The number of inequivalent ways to color the vertices of a regular octahedron using at most n colors. ● a(n) = n * (n + 1) * (n ^ 2 + n + 2) * (n ^ 2 + n + 4) / 48. ● a(n) = 1 * C(n,1) + 8 * C(n,2) + 29 * C(n,3) + 52 * C(n,4) + 45 * C(n,5) + 15 * C(n,6), where the coefficient of C(n,k) is the number of unoriented colorings using exactly k colors. ●

► [A268462] 0,0,0,0,10,56,224,768,2400,7040,19712,53248,139776,358400,901120,2228224,5431296,13074432,31129600,73400320,171573248,397934592,916455424,2097152000,4771020800 ⋆ Expansion of (2 x ^ 4 * (5 - 12 * x + 8 * x ^ 2)) / (1 - 2 * x) ^ 4. ● a(n) = 8 * a(n - 1) - 24 * a(n - 2) + 32 * a(n - 3) - 16 * a(n - 4) for n>3. - _ Vincenzo Librandi _ , Feb 05 2016 ● a(n) = 2 ^ (n - 4) * (n - 3) * (n + 1) * (n + 2) / 3 for n>2. - _ Colin Barker _ , Feb 08 2016 ●

► [A053309] 1,10,56,231,782,2300,6085,14820,33775,72905,150438,298925,575333,1077748,1972851,3540913,6249235,10871723,18683233,31775031,53566369,89633545,149052839,246575109,406146248 ⋆ Partial sums of A053308. ● a(n) = Sum _{ i=0..floor(n / 2) } C(n + 9 - i, n - 2i), n >= 0. ● a(n) = a(n - 1) + a(n - 2) + C(n + 8,8); n >= 0; a(- 1)=0. ● a(n) = Sum _{ k=1..n } C(n - k + 9,k + 8), with n>=0. - _ Paolo P. Lava _ , Apr 16 2008 ●

► [A035040] 0,0,0,0,0,0,0,0,1,10,56,232,794,2380,6476,16384,39203,89846,199140,430104,910596,1898712,3913704,7997952,16241061 ⋆ a(n) = 2 ^ n - C(n,0) - C(n,1) - ... - C(n,7). ● a(n) = sum _{ k=0..n } C(n, k + 8) = sum _{ k=8..n } C(n, k); a(n) = 2a(n - 1) + C(n - 1, 7). - _ Paul Barry _ , Aug 23 2004 ●

► [A087076] 0,1,10,56,240,880,2912,8960,26112,72960,197120,518144,1331200,3354624,8314880,20316160,49020928,116981760,276430848,647495680,1504706560,3471835136,7958691840,18136170496,41104179200 ⋆ Sums of the squares of the elements in the subsets of the integers 1 to n. ● a(n) = 2 ^ (n - 2) * n * (n + 1) * (2 * n + 1) / 3. ● a(n) = 8 * a(n - 1) - 24 * a(n - 2) + 32 * a(n - 3) - 16 * a(n - 4). - _ Matthew House _ , Feb 13 2017 ● a(n) = (1 / 2) * Sum _{ k=0..n } Sum _{ i=0..n } i ^ 2 * C(n,k). - _ Wesley Ivan Hurt _ , Sep 21 2017 ●

► [A014483] 1,10,56,240,880,2912,8960,26112,72960,197120,518144,1331200,3354624,8314880,20316160,49020928,116981760,276430848,647495680,1504706560,3471835136,7958691840,18136170496,41104179200,92694118400 ⋆ Expansion of (1 + 2 * x) / (1 - 2 * x) ^ 4. ● a(n) = 8 * a(n - 1) - 24 * a(n - 2) + 32 * a(n - 3) - 16 * a(n - 4) for n>3. ● a(n) = (2 ^ (n - 1) * (6 + 13 * n + 9 * n ^ 2 + 2 * n ^ 3)) / 3. (End) ● a(n) = (1 / 2) * Sum _{ k=0..n + 1 } Sum _{ i=0..n + 1 } (n - i + 1) ^ 2 * C(n + 1,k). - _ Wesley Ivan Hurt _ , Sep 21 2017 ●

► [A116971] 10,56,242,988,3974,15920,63706,254852,1019438,4077784,16311170,65244716,260978902,1043915648,4175662634,16702650580,66810602366,267242409512,1068969638098,4275878552444,17103514209830,68414056839376 ★ a(n) = (35 * 2 ^ ((2 * (3 * n + 2) + 2) / 3) - 2 * (3 * n + 2) - 46) / 9. ● a(n) = 6 * a(n - 1) - 9 * a(n - 2) + 4 * a(n - 3). G.f.: 2 * (5 - 2 * x - 2 * x ^ 2) / ((1 - x) ^ 2 * (1 - 4 * x)). [_ Colin Barker _ , Sep 09 2012] ●

► [A047780] 0,1,10,57,240,800,2226,5390,11712,23355,43450,76351,127920,205842,319970,482700,709376,1018725,1433322,1980085,2690800,3602676,4758930,6209402,8011200 ★ Number of inequivalent ways to color faces of a cube using at most n colors. ● a(n) = (n ^ 6 + 3 * n ^ 4 + 12 * n ^ 3 + 8 * n ^ 2) / 24 = n + 8 * C(n, 2) + 30 * C(n, 3) + 68 * C(n, 4) + 75 * C(n, 5) + 30 * C(n, 6). Each term of the RHS indicates the number of ways to use n colors to color the cube faces (octahedron vertices) with exactly 1, 2, 3, 4, 5, or 6 colors. ●

► [A055251] 1,10,57,244,874,2772,8054,21920,56751,141326,341303,804276,1858080,4223784,9474444,21018144,46195149,100734354,218190469,469866964,1006759110,2147634364,4563581746,9663887808,20401343003 ★ Eighth column of triangle A055249. ● a(n) = Sum _{ k=0..n + 6 } Sum _{ i=0..n + 6 } (i - k) * C(n - k + 6,i + 4). - _ Wesley Ivan Hurt _ , Sep 19 2017 ● a(n) = (1 / 120) * (38520 - 75 * 2 ^ (9 + n) + 2 * (9637 + 15 * 2 ^ (8 + n)) * n + 4285 * n ^ 2 + 525 * n ^ 3 + 35 * n ^ 4 + n ^ 5). - _ Colin Barker _ , Sep 20 2017 ●

► [A006529] 0,1,10,57,272,885,2226,4725,8912,15417,24970,38401,56640,80717,111762,151005,199776,259505,331722,418057,520240,640101,779570,940677,1125552 ★ (25 * n ^ 4 - 120 * n ^ 3 + 209 * n ^ 2 - 108 * n) / 6. ● a(0)=0, a(1)=1, a(2)=10, a(3)=57, a(4)=272, a(n)=5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) [From Harvey P. Dale, Oct 30 2011] ●

► [A337001] 0,1,10,57,292,1585,9726,68425,547912,4931937,49320370,542525401,6510306540,84633987217,1184875823782,17773137360105,284370197765776,4834293362023105,87017280516421722,1653328329812019577,33066566596240399540,694397898521048399601 ★ a(n) = n! * Sum _{ k=0..n } k ^ 3 / k!. ● a(0) = 0; a(n) = n * (n ^ 2 + a(n - 1)). ●

► [A246754] 1,10,57,387,2890,22934,189482,1611056,13993960,123579654,1105747503,10000000000,91239358932,838673386122,7758099162327,72158973089377,674359248152535,6328590417713813,59611349660814244,563355446524384647,5339735395113038337 ★ Least positive number k such that k ^ k is at least 10 ^ n digits long. ● a(n) = ceiling(exp(W(10 ^ n * log(10)))) for n > 0. - _ Charles R Greathouse IV _ , Nov 16 2014 ●

► [A060157] 0,10,58,236,836,2766,8814,27472,84472,257522,780770,2358708,7108908,21392278,64307926,193185944,580082144,1741295034,5225982282,15682141180,47054812180,141181213790,423577195838,1270798696416 ★ Number of permutations of [n] with 3 sequences. ● a(n) = 11 / 2 - n - 2 ^ (n + 1) + (1 / 2) * 3 ^ n. ●

► [A126478] 1,10,58,350,2130,12990,79258,483646,2951370,18010366,109906170,670689902,4092809194,24975905246,152412637946,930080892110,5675713495690,34635399953406,211358612597658,1289792038765742 ★ Number of base 10 n - digit numbers with adjacent digits differing by three or less. ● a(n) = 7 * a(n - 1) - 4 * a(n - 2) - 10 * a(n - 3) + 6 * a(n - 4) for n>4. ●

► [A045950] 0,10,59,177,394,740,1245,1939,2852,4014,5455,7205,9294,11752,14609,17895,21640,25874,30627,35929,41810,48300,55429,63227,71724 ★ Triangles in Star of David matchstick arrangement of side n. ● a(n) = n * (10 * n ^ 2 + 9 * n + 1) / 2. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Colin Barker _ , Dec 02 2014 ●

► [A054489] 1,10,59,344,2005,11686,68111,396980,2313769,13485634,78600035,458114576,2670087421,15562409950,90704372279,528663823724,3081278570065,17959007596666,104672767009931,610077594462920 ★ Expansion of (1 + 4 * x) / (1 - 6 * x + x ^ 2). ● a(n) = 6 * a(n - 1) - a(n - 2), a(0)=1, a(1)=10. ● a(n) = (10 * ((3 + 2 * sqrt(2)) ^ n - (3 - 2 * sqrt(2)) ^ n) - ((3 + 2 * sqrt(2)) ^ (n - 1) - (3 - 2 * sqrt(2)) ^ (n - 1))) / (4 * sqrt(2)). ● a(n) = ChebyshevU(n,3) + 4 * ChebyshevU(n - 1,3). ● a(n) = (Pell(2 * n + 2) + 4 * Pell(2 * n)) / 2 = (Pell - Lucas(2 * n + 1) + 3 * Pell(2 * n)) / 2. ●

► [A144560] 0,10,60,150,280,450,660,910,1200,1530,1900,2310,2760,3250,3780,4350,4960,5610,6300,7030,7800,8610,9460,10350,11280 ★ Ten times hexagonal numbers: 10 * n * (2 * n - 1). ● a(n) = a(n - 1) + 40 * n - 30 (with a(0)=0). - _ Vincenzo Librandi _ , Dec 14 2010 ●

► [A266732] 0,10,60,210,560,1260,2520,4620,7920,12870,20020,30030,43680,61880,85680,116280,155040,203490,263340,336490,425040,531300,657800,807300,982800 ★ a(n) = 10 * binomial(n + 4, 5). ● a(n) = n * (1 + n) * (2 + n) * (3 + n) * (4 + n) / 12. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n > 5. ●

► [A349415] 10,60,245,840,2604,7560,20955,56100,146146,372372,931385,2293200,5569880,13368528,31751223,74709900,174324430,403700220,928512277,2122315800,4823447300,10905187800,24536675475,54962156340,122607890874 ★ Number of ways an n - set can be written as the union of 2 sets each with 4 or more elements and whose intersection contains exactly 3 elements. ● a(n) = Sum _{ j=4..n / 2 + 1 } binomial(n,j) * binomial(j,3), n even. ● a(n) = (Sum _{ j=4..ceiling(n / 2) } binomial(n,j) * binomial(j,3)) + (1 / 2) * binomial(n,ceiling(n / 2) + 1) * binomial(ceiling(n / 2) + 1,3), n odd. ● a(n) = binomial(n,3) * Stirling2(n - 3,2). ● a(n) = 12 * a(n - 1) - 62 * a(n - 2) + 180 * a(n - 3) - 321 * a(n - 4) + 360 * a(n - 5) - 248 * a(n - 6) + 96 * a(n - 7) - 16 * a(n - 8). - _ Wesley Ivan Hurt _ , Dec 03 2021 ●

► [A228581] 0,0,0,1,10,60,246,777,2044,4704,9780,18777,33814,57772,94458,148785,226968,336736,487560,690897,960450,1312444,1765918,2343033,3069396 ★ The number of binary pattern classes in the (2,n) - rectangular grid with 6 '1's and (2n - 6) '0's: two patterns are in same class if one of them can be obtained by a reflection or 180 - degree rotation of the other. ● a(n) = (1 / 4) * (binomial(2 * n,6) + 3 * binomial(n,3)). ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) with n>6, a(0)=a(1)=a(2)=0, a(3)=1, a(4)=10, a(5)=60, a(6)=246. ●

► [A241929] 1,10,60,264,930,2766,7205,16880,36279,72610,136906,245400,421200,696294,1113915,1731296,2622845,3883770,5634184,8023720,11236686,15497790,21078465,28303824,37560275 ★ Number of inequivalent colorings of the Fano plane with n colors. ● a(n) = n * (n ^ 2 + 6) * (n ^ 4 + 15 * n ^ 2 + 8) / 168. ●

► [A003472] 1,10,60,280,1120,4032,13440,42240,126720,366080,1025024,2795520,7454720,19496960,50135040,127008768,317521920,784465920,1917583360,4642570240,11142168576,26528972800,62704844800,147220070400 ★ a(n) = 2 ^ (n - 4) * C(n,4). ● a(n) = Sum _{ i=4..n } binomial(i,4) * binomial(n,i). Example: for n=7, a(7) = 1 * 35 + 5 * 21 + 15 * 7 + 35 * 1 = 280. - _ Bruno Berselli _ , Mar 23 2018 ●

► [A112502] 1,10,60,282,1149,4272,14932,49996,162369,515886,1613316,4987542,15290461,46592452,141350412,427459320,1289718225,3884883570,11688205420,35135919730,105558754461,316995030840,951656181540 ★ Third column of triangle A112500. ● a(n) = - 81 / 8 - (11 / 4) * (n + 1) - (1 / 2) * binomial(n + 2, 2) - 16 * (n + 1) * 2 ^ n + (243 / 8) * 3 ^ n, n>=0 (from partial fractions for g.f.). ●

► [A292489] 1,10,60,312,1656,8928,48024,257904,1385352,7442784,39985272,214811280,1154025000,6199749504,33306803352,178933509936,961281138888,5164272731808,27743925989304,149048175357648,800728728609384,4301739993919680,23110157427289560 ★ p - INVERT of the odd positive integers, where p(S) = 1 - S - 6 S ^ 2. ● a(n) = 5 * a(n - 1) - a(n - 2) + 16 * a(n - 3) + 6 * a(n - 4) for n >= 5. ●

► [A083585] 1,10,60,320,1640,8280,41560,208120,1041240,5207480,26039960,130204920,651034840,3255194680,16276014360,81380153720,406900932440,2034504989880,10172525604760,50862629334520,254313149294040 ★ (8 * 5 ^ n - 5 * 2 ^ n) / 3. ● a(n) = (8 * 5 ^ n - 5 * 2 ^ n) / 3. ●

► [A155633] 1,10,60,340,1920,10900,62280,358060,2070240,12030820,70231800,411625180,2420922960,14281397140,84467679720,500702562700,2973697798080,17689598897860,105374653934040,628433226338620 ★ 6 ^ n + 5 ^ n - 1. ● a(n)=11 * a(n - 1) - 30 * a(n - 2) - 20 with a(0)=1, a(1)=10 - _ Vincenzo Librandi _ , Jul 21 2010 ●

► [A281863] 1,10,60,600,3600,36000,216000,2160000,12960000,129600000,777600000,7776000000,46656000000,466560000000,2799360000000,27993600000000,167961600000000,1679616000000000,10077696000000000,100776960000000000,604661760000000000 ★ Alternating powers of 60 and 10 times powers of 60. ● a(2 * n) = 60 ^ (n / 2), a(2 * n + 1) = 10 * 60 ^ ((n - 1) / 2), n >= 0. ● a(n) = 60 * a(n - 2) for n>1. ●

► [A301383] 1,10,61,358,2089,12178,70981,413710,2411281,14053978,81912589,477421558,2782616761,16218279010,94527057301,550944064798,3211137331489,18715879924138,109084142213341,635788973355910,3705649697922121,21598109214176818,125883005587138789,733699924308655918 ★ Expansion of (1 + 3 * x - 2 * x ^ 2) / (1 - 7 * x + 7 * x ^ 2 - x ^ 3). ● a(n) = 7 * a(n - 1) - 7 * a(n - 2) + a(n - 3) = 6 * a(n - 1) - a(n - 2) + 2. ● a(n) = (3 / 4) * ((1 + sqrt(2)) ^ (2 * n + 1) + (1 - sqrt(2)) ^ (2 * n + 1)) - 1 / 2. ●

► [A289799] 1,10,62,377,2232,13015,75898,444014,2601503,15244128,89303905,523084546,3063814838,17945741321,105115487400,615706236199,3606449444722,21124456768934,123734572586495,724763983514112,4245239506761217,24866107799273146,145650985218990062 ★ p - INVERT of (n ^ 3), where p(S) = 1 - S - S ^ 2. ● a(n) = 9 * a(n - 1) - 27 * a(n - 2) + 55 * a(n - 3) - 36 * a(n - 4) + 55 * a(n - 5) - 27 * a(n - 6) + 9 * a(n - 7) - a(n - 8). ●

► [A268945] 10,63,220,565,1206,2275,3928,6345,9730,14311,20340,28093,37870,49995,64816,82705,104058,129295,158860,193221,232870,278323,330120,388825,455026 ★ Number of length - 4 0..n arrays with no repeated value unequal to the previous repeated value plus one mod n + 1. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

► [A077616] 1,10,63,324,1485,6318,25515,99144,373977,1377810,4979799,17714700,62178597,215765046,741360195,2525407632,8537599665,28669116186,95692860783,317684800980,1049522104701,3451916556990,11307641812443 ★ Binomial transform of n ^ 2 * 2 ^ n / 2. ● a(n) = n * (2 * n + 1) * 3 ^ (n - 2). - _ Paul Barry _ , Jul 24 2003 ●

► [A101467] 10,63,841,9279,96601,983583,9919561,99602559,998026681,9990174303,99950992681,999755323839,9998777694361,99993891685023,999996946804020 1,9999847368997119,99999236931275641,999996184915051743,9999980925350886121,99999904629080526399 ★ Number of distinct n - term ratios x _ 1 : x _ 2 : ... : x _ n where each x _ i is in the range [1 - 10]. ● a(1) = 10; for n>1, a(n) = 10 ^ n - 5 ^ n - 3 ^ n - 2 ^ n + 1. ● a(n + 4) = - 300 * a(n) + 340 * a(n + 1) - 131 * a(n + 2) + 20 * a(n + 3) + 72 for n >= 2. - _ Robert Israel _ , Dec 02 2014 ● a(n) = 21 * a(n - 1) - 151 * a(n - 2) + 471 * a(n - 3) - 640 * a(n - 4) + 300 * a(n - 5) for n > 6. - _ Chai Wah Wu _ , Apr 15 2021 ●

► [A269538] 10,64,222,568,1210,2280,3934,6352,9738,14320,20350,28104,37882,50008,64830,82720,104074,129312,158878,193240,232890,278344,330142,388848,455050 ★ Number of length - 4 0..n arrays with no repeated value differing from the previous repeated value by other than one. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

► [A367591] 1,10,64,334,1549,6652,27064,105796,401041,1483606,5380840,19198306,67559437,234963352,808919632,2760370984,9346519297,31429487170,105039380080,349114288150,1154561484781,3801030845140,12462203297224,40705156945324,132494756301649 ★ Expansion of 1 / ((1 - x) * (1 - 3 * x) ^ 3). ● a(n) = (2 * n ^ 2 + 4 * n + 3) * 3 ^ (n + 1) - 1) / 8. ●

► [A155618] 1,10,64,406,2656,17830,121744,839926,5830336,40615750,283523824,1981521046,13858064416,96956119270,678491508304,4748635251766,33237225536896,232647693856390,1628482317387184,11399170063280086 ★ a(n) = 7 ^ n + 4 ^ n - 1 ^ n. ● a(n) = 11 * a(n - 1) - 28 * a(n - 2) - 18 with a(0)=1, a(1)=10 [_ Vincenzo Librandi _ , Jul 21 2010] ● a(0)=1, a(1)=10, a(2)=64, a(n) = 12 * a(n - 1) - 39 * a(n - 2) + 28 * a(n - 3). - _ Harvey P. Dale _ , Feb 04 2014 ●

► [A199487] 10,64,442,3088,21610,151264,1058842,7411888,51883210,363182464,2542277242,17795940688,124571584810,872001093664,6104007655642,42728053589488,299096375126410,2093674625884864,14655722381194042,102590056668358288 ★ 9 * 7 ^ n + 1. ● a(n) = 7 * a(n - 1) - 6. ● a(n) = 8 * a(n - 1) - 7 * a(n - 2). ●

► [A210369] 1,10,65,160,457,810,1681,2560,4481,6250,9841,12960,18985,24010,33377,40960,54721,65610,84961,100000,126281,146410,181105,207360,252097 ★ Nu

mber of 2 X 2 matrices with all terms in { 0,1,...,n } and even determinant. ● a(n) = (13 + 3 * (- 1) ^ n + 4 * (13 + 3 * (- 1) ^ n) * n + 2 * (37 + 7 * (- 1) ^ n) * n ^ 2 + 4 * (11 + (- 1) ^ n) * n ^ 3 + 10 * n ^ 4) / 16. ● a(n) = ((n + 1) ^ 2 - ceiling(n / 2) ^ 2) ^ 2 + ceiling(n / 2) ^ 4. - _ Andrew Howroyd _ , Apr 28 2020 ●

► [A059598] 1,10,65,320,1320,4752,15400,45760,126500,328680,809380,1901120,4282200,9289840,19482200,39619008,78337930,150954980,284060810,522920640,943206264,1669294000,2902420600,4963400000 ⋆ Tenth column (m=9) of convolution triangle A059594(n,m). ● a(2 * k)= binomial(n + 14, 14) * (2 * n + 15) * (8 * n ^ 4 + 240 * n ^ 3 + 2185 * n ^ 2 + 5775 * n + 2907) / (19 * 9 * 17 * 15); ● a(2 * k + 1)= binomial(k + 15, 15) * 2 * (8 * k ^ 4 + 256 * k ^ 3 + 2767 * k ^ 2 + 11504 * k + 14535) / (17 * 9 * 19), k >= 0 ●

► [A169797] 1,10,65,340,1550,6412,24650,89440,309605,1030490,3317445,10377180,31655820,94451520,276313200,794169792,2246410560,6262748160,17230138880,46831339520,125870737408,334826700800,882159984640,2303540756480,5965195018240 ⋆ Expansion of ((1 - x) / (1 - 2x)) ^ 10. ● a(n) = 2 ^ (n - 17) * (n + 11) * (n ^ 8 + 124 * n ^ 7 + 5986 * n ^ 6 + 143944 * n ^ 5 + 1836529 * n ^ 4 + 12358156 * n ^ 3 + 42005484 * n ^ 2 + 64730736 * n + 33747840) / 2835, n > 0. - _ R. J. Mathar _ , Mar 14 2011 ●

► [A073381] 1,10,65,340,1555,6482,25235,93200,330070,1129580,3756950,12197320,38787770,121148300,372476410,1129367632,3382133695,10016694470,29370557375,85341915260,245939376949,703423066190 ⋆ Fourth convolution of A000129 (n + 1) (generalized (2,1) - Fibonacci, called Pell numbers), n>=0, with itself. ● a(n) = Sum _{ k=0..floor(n / 2) } 2 ^ (n - 2 * k) * binomial(n - k + 4, 4) * binomial(n - k, k). ● a(n) = F''''(n + 5, 2) / 4!, that is, 1 / 4! times the 4th derivative of the (n + 5)th Fibonacci polynomial evaluated at x=2. - _ T. D. Noe _ , Jan 19 2006 ●

► [A092441] 1,10,65,346,1637,7218,30529,126034,513125,2072698,8335505,33439914,133972165,536346850,2146369793,8587575586,34354757957,137428468074,549733794193,2198977118650,8795996553701,35184170762770 ⋆ Sequence arising from enumeration of domino tilings of Aztec Pillow - like regions. ● a(n) = 2 ^ (2n + 3) - 2 ^ (n + 2) - 2(n + 2)(2 ^ (n + 1) - 1) + (n + 1) ^ 2. ●

► [A000453] 1,10,65,350,1701,7770,34105,145750,611501,2532530,10391745,42355950,171798901,694337290,2798806985,11259666950,45232115901,181509070050,727778623825,2916342574750,11681056634501,46771289738810,187226356946265,749329038535350 ⋆ Stirling numbers of the second kind, S(n,4). ● a(n) = (4 ^ n - 4 * 3 ^ n + 6 * 2 ^ n - 4) / 24. - _ Kevin Nowaczyk _ , Aug 02 2007 ● a(n) = det(|s(i + 4,j + 3)|, 1 <= i,j <= n - 4), where s(n,k) are Stirling numbers of the first kind. - _ Mircea Merca _ , Apr 06 2013 ● a(n) = 10 * a(n - 1) - 35 * a(n - 2) + 50 * a(n - 3) - 24 * a(n - 4). - _ Wesley Ivan Hurt _ , Oct 10 2021 ●

► [A346954] 1,10,65,350,1736,9030,60355,561550,6188996,69919850,781211795,8854058850,106994019406,1433756147470,21287253921635,339206526695750,5630710652048216,96341917117951890,1708973354556320875,31787270786739738250,623964823224788294426 ⋆ E.g.f.: - log(1 - (exp(x) - 1) ^ 4 / 4!). ● a(n) = Stirling2(n,4) + (1 / n) * Sum _{ k=1..n - 1 } binomial(n,k) * Stirling2(n - k,4) * k * a(k). ●

► [A291231] 10,65,360,1831,8830,41104,186710,833401,3672840,16034303,69506930,299700192,1287010850,5509712833,23531008200,100312445063,427025155250,1815832379312,7714875191470,32756357939033,139008007848360,589672772732671,2500620567692890 ⋆ p - INVERT of (0,1,0,1,0,1,...), where p(S) = (1 - S)(1 - 2 S)(1 - 3 S)(1 - 4 S). ● a(n) = 10 * a(n - 1) - 31 * a(n - 2) + 20 * a(n - 3) + 40 * a(n - 4) - 20 * a(n - 5) - 31 * a(n - 6) - 10 * a(n - 7) - a(n - 8) for n >= 7. ●

► [A198848] 10,65,395,2375,14255,85535,513215,3079295,18475775,110854655,665127935,3990767615,23944605695,143667634175,862005805055,5172034830335,31032208982015,186193253892095,1117159523352575,6702957140115455,40217742840692735 ⋆ 11 * 6 ^ n - 1. ● a(n) = 6 * a(n - 1) + 5. a(n) = 7 * a(n - 1) - 6 * a(n - 2), n>1. ●

► [A262342] 10,65,442,3026,20737,142130,974170,6677057,45765226,313679522,2149991425,14736260450,101003831722,692290561601,4745030099482,32522920134770,222915410843905,1527884955772562,10472279279564026,71778070001175617,491974210728665290,3372014050994814 10 ⋆ Area of Lewis Carroll's paradoxical F(2n + 1) X F(2n + 3) rectangle. ● a(n) = Fibonacci(2n + 1) * Fibonacci(2n + 3) = Fibonacci(2n + 2) ^ 2 + 1 for n > 0. ● a(n) = 8 * a(n - 1) - 8 * a(n - 2) + a(n - 3). ● a(3 * k - 2) mod 2 = 0; a(3 * k - 1) mod 2 = 1; a(3 * k) mod 2 = 0, k > 0. - _ Altug Alkan _ , Oct 17 2015 ●

► [A269679] 10,66,224,570,1212,2282,3936,6354,9740,14322,20352,28106,37884,50010,64832,82722,104076,129314,158880,193242,232892,278346,330144,388850,455052 ⋆ Number of length - 4 0..n arrays with no repeated value differing from the previous repeated value by other than plus or minus one modulo n + 1. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>6. ●

► [A269468] 10,66,228,580,1230,2310,3976,6408,9810,14410,20460,28236,38038,50190,65040,82960,104346,129618,159220,193620,233310,278806,330648,389400,455650 ⋆ Number of length - 4 0..n arrays with no repeated value equal to the previous repeated value. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

► [A024391] 10,66,231,595,1275,2415,4186,6786,10440,15400,21945,30381,41041,54285,70500,90100,113526,141246,173755,211575,255255,305371,362526,427350,500500 ⋆ 2nd elementary symmetric function of the first n + 1 positive integers congruent to 2 mod 3. ● a(n) = n * (n + 1) * (3 * n + 2) * (3 * n + 5) / 8. ●

► [A080421] 1,10,66,360,1755,7938,34020,139968,557685,2165130,8227494,30705480,112842639,409209570,1466777160,5203870272,18294856425,63795240522,220829678730,759344158440,2595329855811,8821564534530,29832927334956 ⋆ (n + 1)(n + 2)(n + 9)3 ^ n / 18. ● a(0)=1, a(1)=10, a(2)=66, a(3)=360, a(n) = 12 * a(n - 1) - 54 * a(n - 2) + 108 * a(n - 3) - 81 * a(n - 4). - _ Harvey P. Dale _ , Mar 21 2012 ●

► [A004310] 1,10,66,364,1820,8568,38760,170544,735471,3124550,13123110,54627300,225792840,927983760,3796297200,15471286560,62852101650,254661927156,1029530696964,4154246671960,16735679449896,67327446062800,270533919634160,1085929983159840,4355031703297275 ⋆ Binomial coefficient C(2n,n - 4). ● a(n) = Sum _{ k=0..n } C(n, k) * C(n, k + 4). - _ Hermann Stamm - Wilbrandt _ , Aug 17 2015 ●

► [A033504] 1,10,66,372,1930,9516,45332,210664,960858,4319100,19188796,84438360,368603716,1598231992,6889682280,29551095248,126193235194,536799072924,2275560109868,9616650989560,40527780684972,170368957887656 ⋆ a(n) / 4 ^ n is the expected number of tosses of a coin required to obtain n + 1 heads or n + 1 tails. ● a(n - 1) = 4 ^ (n - 1) * b(n, n), where b(n, m) = b(n - 1, m) / 2 + b(n, m - 1) / 2 + 1; b(n, 0)=b(0, n)=0. ● a(n) = Sum _{ k=0..n, l=0..n } 2 ^ (2n - k - l) binomial(k + l, k). ● a(n) = (2n + 1) * Sum _{ 0<=i,j<=n } binomial(2n, i + j) / (i + j + 1). - _ Benoit Cloitre _ , Mar 05 2005 ● a(n) = (n + 1) * (2 ^ (2 * n + 1) - binomial(2 * n + 1,n + 1)). - _ Vladeta Jovovic _ , Aug 23 2007 ●

► [A163615] 1,10,66,388,2180,12008,65544,356240,1932304,10471072,56716320,307135552,1663055936,9004549760,48753614976,263965223168,1429171175680,7737856281088,41894453789184,226825642378240,1228082785977344 ⋆ a(n) = ((1 + 3 * sqrt(2)) * (4 + sqrt(2)) ^ n + (1 - 3 * sqrt(2)) * (4 - sqrt(2)) ^ n) / 2. ● a(n) = 8 * a(n - 1) - 14 * a(n - 2) for n > 1; a(0) = 1, a(1) = 10. ●

► [A086443] 0,0,1,10,67,376,1909,9094,41479,183412,792697,3367618,14120011,58605808,241331965,987648382,4022338063,16318934764,66007533313,266354656186,1072779614035,4314363685480,17330677214341,69552836627830 ⋆ Expansion of x ^ 2 / ((1 - 4 * x) * (1 - 3 * x) ^ 2). ● a(n) = 4 ^ n - 3 ^ n - n * 3 ^ (n - 1). ●

► [A172066] 1,10,67,376,1912,9142,41941,186880,815083,3498146,14827487,62236064,259187048,1072567256,4415408372,18098359424,73915594466,300958990724,1222228100590,4952609171080,20030298812596,80876902778482 ⋆ Expansion of (2 / (3 * sqrt(1 - 4 * z) - 1 + 4 * z)) * ((1 - sqrt(1 - 4 * z)) / (2 * z)) ^ k with k=9. ● a(n) = Sum _{ j=0..n } (- 1) ^ j * binomial(2 * n + k - j,n - j), with k=9. ●

► [A192021] 0,1,10,68,392,2064,10272,49216,229504,1048832,4719104,20972544,92276736,402657280,1744838656,7516209152,32212287488,137439019008,584115683328,2473901424640,10445360988160,43980466159616,184717955563520,774056190148608 ⋆ The Wiener index of the binomial tree of order n. ● a(n) = 2 ^ (n - 1) * (1 + 2 ^ n * (n - 1)). ● a(n) = 10 * a(n - 1) - 32 * a(n - 2) + 32 * a(n - 3). ●

► [A104598] 1,10,68,394,2092,10516,50920,239962,1107836,5033020,22572376,100168260,440604088,1923626344,8344694224,35998921978,154546983580,660652406572,2813422792696,11940478362796,50522190460072 ⋆ Expansion of (1 - z - sqrt(1 - 4z)) / (1 - 4z) ^ 2. ● a(n) = 2 ^ (2 * n - 2) * (3 * n + 4) - (n + 1) * C(2 * n + 1,n). - _ Vaclav Kotesovec _ , Oct 28 2012 ●

► [A081656] 1,10,68,424,2576,15520,93248,559744,3358976,20154880,120931328,725592064,4353560576,26121379840,156728311808,940369936384,5642219749376,33853318758400,203119913074688,1218719479496704 ⋆ 2 * 6 ^ n - 2 ^ n. ● a(0)=1, a(2)=10; for n>2, a(n) = 8 * a(n - 1) - 12 * a(n - 2). - _ Vincenzo Librandi _ , Aug 10 2013 ●

► [A081280] 1,10,69,398,2057,9858,44685,194022,813969,3319866,13224789,51635070,198148761,749016882,2794021533,10300389462,37575535905,135782112618,486470994021,1729358969454,6104068084521,21404982017250,74609825192109 ⋆ Binomial transform of Chebyshev coefficients A006974. ● a(n) = (n ^ 4 + 24 * n ^ 3 + 164 * n ^ 2 + 378 * n + 243) * 3 ^ (n - 5). ● a(n) = 15 * a(n - 1) - 90 * a(n - 2) + 270a * (n - 3) - 405 * a(n - 4) + 243 * a(n - 5). ●

► [A038806] 0,1,10,69,406,2186,11124,54445,259006,1205790,5519020,24918306,111250140,492051124,2159081192,9409526397,40766269774,175707380630,753876367356,3221460111958,13716223138388,58210889582796 ⋆ Convolution of A008549 with A000302 (powers of 4). ● a(n) = (n + 3) * 4 ^ n - (n + 2) * binomial(2 * n + 3, n + 1) / 2. ● a(n + 1), n >= 0 is convolution of A000346 with itself; a(n + 1), n >= 0 is convolution of Catalan numbers A000108 C(n + 1), n >= 0 with A002697; a(- 1)=0. ●

► [A016273] 1,10,69,410,2261,11970,61909,315850,1598421,8050130,40425749,202656090,1014866581,5079099490,25409813589,127092049130,635589254741,3178333432050,15892828897429,79467630222970,397348609370901,1986774423719810,9933966253389269 ⋆ Expansion of 1 / ((1 - 2x)(1 - 3x)(1 - 5x)). ● a(n) = Sum _{ 0<=i,j,k,<=n, i + j + k=n } 2 ^ i * 3 ^ j * 5 ^ k. - _ Hieronymus Fischer _ , Jun 25 2007 ● a(n) = (2 ^ (n + 3) + 5 ^ (n + 2) - 3 ^ (n + 3)) / 6. - _ Hieronymus Fischer _ , Jun 25 2007 ● a(n) = ((5 ^ n - 2 ^ n) / 3 - (3 ^ n - 2 ^ n)) / 2 , n >= 2. - _ Zerinvary Lajos _ , Jun 05 2009 ● a(n) = 10 * a(n - 1) - 31 * a(n - 2) + 30 * a(n - 3), n >= 3. ● a(n) = 8 * a(n - 1) - 15 * a(n - 2) + 2 ^ n, a(0)=1, a(1)=10. (End) ●

► [A271040] 0,0,0,0,0,0,10,70,280,840,2100,4620,9240,17160,30030,50050,80080,123760,185640,271320,387600,542640,746130,1009470,1345960 ⋆ Number of different 3 against 3 matches given n players. ● a(n) = n * (n - 1) * (n - 2) * (n - 3) * (n - 4) * (n - 5) / 72. ● a(n) = binomial(n,3) * binomial(n - 3,3) / 2. - _ Jorg Arndt _ , Mar 29 2016 ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>6. ●

► [A005567] 10,70,308,1092,3414,9834,26752,69784,176306,434382,1048812,2490636,5833006,13500754,30933368,70255008,158335434,354419190,788529700,1744831060,3841983110,8422163130,18387829488 ⋆ Number of walks on square lattice. ● a(n) = 26 + 11 * n + n ^ 2 + (- 16 + 24 * n + 8 * n ^ 2) * 2 ^ n. - Fitted by _ John W. Layman _ ●

► [A073391] 1,10,70,400,2020,9352,40600,167680,665440,2555840,9551936,34880000,124853120,439228160,1521839360,5202292736,17571249920,58712184320,194280061440,637228462080,2073332481024,6696470231040 ⋆ Fourth convolution of A002605(n) (generalized (2,2) - Fibonacci), n >= 0, with itself. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n - k + 4, 4) * binomial(n - k, k) * 2 ^ (n - k). ●

► [A002802] 1,10,70,420,2310,12012,60060,291720,1385670,6466460,29745716,135207800,608435100,2714556600,12021607800,52895074320,231415950150,1007340018300,4365140079300,18839025605400,81007810103220,347176329013800,1483389769422600 ⋆ a(n) = (2 * n + 3)! / (6 * n! * (n + 1)!). ● a(n - 1) = (1 / 4) * Sum _{ k=1..n } k * (k + 1) * binomial(2 * k, k). - _ Benoit Cloitre _ , Mar 20 2004 ● a(n) = ((2n + 3)(2n + 1) / (3 * 1)) * binomial(2n, n). ● a(n) = binomial(2n + 4, 4) * binomial(2n, n) / binomial(n + 2, 2). ● a(n) = binomial(n + 2, 2) * binomial(2n + 4, n + 2) / binomial(4, 2). ● a(n) = binomial(2n + 4, n + 2

) * (n + 2) * (n + 1) / 12. (End) ● a(n) = 4 ^ n * hypergeom([- n, - 3 / 2], [1], 1). - _ Peter Luschny _ , Apr 26 2016 ●

► [A101029] 1,10,70,420,4620,60060,60060,408408,7759752,38798760,892371480,4461857400,13385572200,55454513400,1719089915400,3438179830800,24067258815600,890488576177200,890488576177200,36510031623265200,1569931359800403600,15699313598004036 00,1569931359800403600,7378677391061896920 0 ★ Denominator of partial sums of a certain series. ● a(n) = denominator(s(n)) with s(n)=3 * sum(1 / ((2 * k - 1) * k * (2 * k + 1)), k=1..n). See A101028 for more information. ● a(n) = 1 / 3 * Denominator[Sum[Sum[1 / (i + j - 1), { i,1,n + 1 }], { j,1,n + 1 }] - Sum[Sum[1 / (i + j - 1), { i,1,n }], { j,1,n }]]. a(n) = 1 / 3 * Denominator[H(2n + 1) + H(2n) - 2H(n)], where H(n) = Sum[1 / k, (k, 1, n }] is a Harmonic numbe r, H[n] = A001008 / A002805. - _ Alexander Adamchuk _ , Apr 11 2006 ●

► [A005465] 0,0,1,10,70,431,2534,14820,88267,542912,3475978,23253693,1627234 44,1190464900,9092400633,72370378750,599168889634,5150536258735,458910286 09826,423144495659912,403184243550617 1,396452796562838 20,401806832058661 334,419263136879201 5237,4499265590895922 0440 ★ Number of n - dimensional hypotheses allowing for conditional independence. ● a(n) = Sum _{ j=0..n } (binomial(n,j) * 2 ^ j * Bell(n - j)) - 3 ^ n [Good, Iranian J. Sci. Tech., pg. 80, e q (10)]. ● a(n) = Bell(n + 2) - Bell(n + 1) - 3 ^ n. (End) ●

► [A229702] 1,10,70,440,2675,16106,96720,580440,3482805,20897050,125382586,7 52295880,4513775735,27082654970,162495930500,974975583816,5849853503865,3 5099121024330,210594726147310,1263568356885400,7581410141314171 ★ Expans ion of 1 / ((1 - x) ^ 4 * (1 - 6x)). ● a(n) = (6 ^ (n + 4) - (1 + 5 * C(n + 4,1) + 25 * C(n + 4,2) + 125 * C(n + 4,3))) / 625 = (6 ^ (n + 5) - (125 * n ^ 3 + 120 0 * n ^ 2 + 3805 * n + 4026)) / 3750. ●

► [A037705] 1,10,70,492,3445,24118,168826,1181784,8272489,57907426,40535198 2,2837463876,19862247133,139035729934,973250109538,6812750766768,47689255 367377,333824787571642,2336773513001494,16357414591010460,11450190213707 3221,80151331495951255 0 ★ Base - 7 digits are, in order, the first n terms of the periodic sequence with initial period 1,3,0,2. ● a(n) = 7 * a(n - 1) + a(n - 4) - 7 * a(n - 5). ● a(n) = 1 / 200 * (25 * (- 1) ^ n - (8 + 6 * i) * (- i) ^ n - (8 - 6 * i) * i ^ n + 41 * 7 ^ n - 50) where i=sqrt(- 1). ●

► [A126505] 1,10,70,510,3720,27142,198034,1444904,10542368,76919662,5612244 22,4094828862,29876859864,217988781808,1590498774316,11604663002012,84670 422615182,617775842744470,4507441679052256,32887382581680414 ★ Number o f base 10 n - digit numbers with adjacent digits differing by four or less. ● a(n) = 7 * a(n - 1) + 3 * a(n - 2) - 6 * a(n - 3) - a(n - 4) + a(n - 5) for n>5. ●

► [A016218] 1,10,71,440,2541,14070,75811,400900,2091881,10808930,55442751,2 82806160,1436400421,7271480590,36715316891,185008240220,930767824161,4676 745613050,23475354034231,117743274047080,590182385739101,295677599071031 0,14807336201610771 ★ Expansion of 1 / ((1 - x) * (1 - 4 * x) * (1 - 5 * x)). ● a(n) = a(n - 1) + 5 ^ (n + 1) - 4 ^ (n + 1), n >= 1. ● a(n) = 9 * a(n - 1) - 20 * a (n - 2) + 1, n >= 2. (End) ● a(n) = 1 / 12 - 4 ^ (n + 2) / 3 + 5 ^ (n + 2) / 4. - _ R. J. Mathar _ , Mar 15 2011 ●

► [A016098] 0,0,0,0,1,10,71,448,2710,16285,99179,619784,4005585,26901537,1882 24882,1373263700,10444784477,82735225014,681599167459,5830974941867,51717 594114952,474845349889731,4506624255883683,44151662795470696,44595757939 0657965 ★ Number of crossing set partitions of { 1,2,...,n } . ● a(n) = Sum _{ k=0..n } S2(n,k) - binomial(2 * n,n) / (n + 1); S2(n,k) Stirling numbers of the s econd kind. ●

► [A129275] 1,10,71,474,3103,20190,131204,853176,5555674,36237258,23676312 5,1549496420,10156512792,66669881442,438226458380,2884072387268,190024797 73355,125335000366692,827479642104143,5468060901435850 ★ Column 1 of tria ngle A129274; a(n) is the coefficient of q ^ (n + 2) in the squared q - factorial o f n + 2. ● a(n) = [q ^ (n + 2)] Product _{ i=1..n + 2 } { (1 - q ^ i) / (1 - q) }^ 2. ●

► [A037579] 1,10,71,500,3501,24510,171571,1201000,8407001,58849010,41194307 1,2883601500,20185210501,141296473510,989075314571,6923527202000,48464690 414001,339252832898010,2374769830286071,16623388812002500,11636372168401 7501,814546051788122510 ★ Base 7 digits are, in order, the first n terms of the periodic sequence with initial period 1,3. ● a(n) = (5 * 7 ^ n - 3 * (- 1) ^ (n - 1) - 8) / 24. a(n) = 7 * a(n - 1) + a(n - 2) - 7 * a(n - 3). G.f.: x * (3 * x + 1) / ((x - 1) * (x + 1) * (7 * x - 1)). - _ Colin Barker _ , Dec 27 2012; corrected Apr 30 2014 ●

► [A271035] 10,72,294,896,2268,5040,10164,19008,33462,56056,90090,139776,210 392,308448,441864,620160,854658,1158696,1547854,2040192,2656500,3420560,43 59420,5503680,6887790 ★ Number of 3 X 3 X 3 triangular 0..n arrays with some element less than a w, nw or ne neighbor exactly once. ● a(n) = 7 * a(n - 1) - 2 1 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

► [A228316] 0,10,72,448,1450,4482,10388,23552,45360,86250,147620,250560,3951 22,619458,919800,1359872,1928208,2725002,3725520,5080000,6742890,8931010,1 1568172,14957568,18980000 ★ The hyper - Wiener index of the Cartesian produ ct of the cycles C(n) and C(n) (a Torus Grid Graph). ● a(n) = n ^ 2 * (n ^ 2 - 1) * (7 * n ^ 2 + 12 * n - 3) / 96 if n is odd; a(n) = n ^ 4 * (7 * n ^ 2 + 12 * n + 8) / 96 if n is even. ●

► [A228310] 10,72,448,2560,13824,71680,360448,1769472,8519680,40370176,1887 43680,872415232,3992977408,18119393280,81604378624,365072220160,162349763 7888,7181185318912,31610959298560,138538465099776,604731395276800,263003 1813640192 ★ The hyper - Wiener index of the hypercube graph Q(n) (n>=2). ● a(n) = 4 ^{ n - 2 }* n * (3 + n). ●

► [A164546] 1,10,72,496,3392,23168,158208,1080320,7376896,50372608,34396569 6,2348744704,16038232064,109515898880,747821334528,5106443485184,34868977 205248,238100269760512,1625850340442112,11102000565452800 ★ a(n) = 8 * a(n - 1) - 8 * a(n - 2) for n > 1; a(0) = 1, a(1) = 10. ● a(n) = 8 * a(n - 1) - 8 * a(n - 2) for n > 1; a(0) = 1, a(1) = 10. ● a(n) = ((2 + 3 * sqrt(2)) * (4 + 2 * sqrt (2)) ^ n + (2 - 3 * sqrt(2)) * (4 - 2 * sqrt(2)) ^ n) / 4. ● a(n) = 2 * (2 * sqrt(2)) ^ (n - 1) * (sqrt(2) * chebyshev _ U(n, sqrt(2)) + chebyshev _ U(n - 1, sqrt(2))). - _ G. C. Greubel _ , Jul 17 2021 ●

► [A037712] 1,10,72,504,3529,24706,172944,1210608,8474257,59319802,41523861 6,2906670312,20346692185,142426845298,996987917088,6978915419616,48852407 937313,341966855561194,2393767988928360,16756375922498520,11729463145748 9641,821062420202427490 ★ Base - 7 digits are, in order, the first n terms of the periodic sequence with initial period 1,3,2,0. ● a(n) = 8 * a(n - 1) - 8 * a(n - 2) + 8 * a(n - 3) - 7 * a(n - 4). ● a(n) = 1 / 100 * ((2 - 11 * i) * (- i) ^ n + (2 + 1 1 * i) * i ^ n + 3 * 7 ^ (n + 1) - 25) where i=sqrt(- 1). ●

► [A138782] 1,10,72,528,4200,36720,352800,3709440,42456960,526176000,702535 6800,100590336000,1538074137600,25020169574400,431532541440000,786696899 7888000,1511671594080000 0,3053932257632256000 ★ a(n) = n * (3 * n - 1) * n! / 2. ● a(n)=Sum((n + j - 1)n!, j=1..n). ●

► [A155606] 1,10,72,538,4176,33010,262872,2099338,16783776,134237410,107380 0872,8590111738,68720008176,549757408210,4398051294072,35184386437738,281 475019757376,2251799942825410,18014398889602472,144115189238117338 ★ a(n) = 8 ^ n + 3 ^ n - 1. ● a(n) = 11 * a(n - 1) - 24 * a(n - 2) - 14 with a(0)=1, a(1)=10. - _ Vincenzo Librandi _ , Jul 21 2010 ●

► [A016211] 1,10,73,478,2989,18298,110881,668566,4021237,24156946,14503024 9,870447214,5223480445,31343274154,188066819377,1128422439622,67705992078 13,40623788957122,243743314873465 ★ Expansion of 1 / ((1 - x)(1 - 3x)(1 - 6x)). ● a(n) = 9 * a(n - 1) - 18 * a(n - 2) + 1. - _ Vincenzo Librandi _ , Feb 10 2011 ● a(n) = 2 * 6 ^ (n + 1) / 5 - 3 ^ (n + 1) / 2 + 1 / 10. - _ R. J. Mathar _ , Fe b 10 2011 ● a(n) = Sum _{ k=0...n } 2 ^ (k - 1) * (3 ^ (n + 1) - 3 ^ k). - _ J. M. Bergot _ , Feb 06 2018 ●

► [A200580] 0,1,10,73,490,3246,21814,150535,1072786,7915081,60512348,479371 384,3932969516,33392961185,293143783762,2658128519225,24872012040510,2399 16007100054,2383444110867378,24363881751014383,256034413642582418,276370 8806499744097 ★ Sum of dimension exponents of supercharacter of unipotent u pper triangular matrices. ● a(n) = - 2 * B(n + 2) + (n + 4) * B(n + 1) where B(i) = Bell numbers A000110. [Chern et al.] - _ N. J. A. Sloane _ , Jun 10 201 3 [for offset 2] ●

► [A206817] 1,10,73,520,3967,33334,309661,3166468,35416555,430546642,565560 9529,79856902816,1206424711303,19419937594990,331860183278677,6000534640 290364,114462875817046051,2297294297649673738,48394006967070653425 ★ Su m _{ 0<j<k<=n } (k! - j!). ● a(n) = a(n - 1) + (n - 1)s(n) - p(n - 1), where s (n) = n! and p(k) = 1! + 2! + ... + k!. ●

► [A199556] 10,73,577,4609,36865,294913,2359297,18874369,150994945,1207959 553,9663676417,77309411329,618475290625,4947802324993,39582418599937,3166 59348799489,2533274790395905,20266198323167233,162129586585337857 ★ 9 * 8 ^ n + 1. ● a(n) = 8 * a(n - 1) - 7. ● a(n) = 9 * a(n - 1) - 8 * a(n - 2). ●

► [A279284] 0,1,10,74,469,2662,14115,71360,348143,1652200,7669883,34969286,1 57060011,696514465,3055404733,13277356490,57222978070,244831062184,104076 0406476,4398642943496,18493603597214,77388169532299,322451025667910,1338 291853544522,5534486308363461 ★ Self - composition of the pentagonal number s; g.f.: A(x) = G(G(x)), where G(x) = g.f. of A000326. ● a(n) = 12 * a(n - 1) - 51 * a(n - 2) + 91 * a(n - 3) - 75 * a(n - 4) + 66 * a(n - 5) - 28 * a(n - 6) + 15 * a(n - 7) - 3 * a(n - 8) + a(n - 9). ●

► [A103434] 0,1,10,74,515,3540,24276,166405,1140574,7817630,53582855,367262 376,2517253800,17253514249,118257345970,810547907570,5555578007051,380784 98141820,260993908985724,1788878864758285,12261158144322310 ★ a(n) = Sum _{ i=1..n } Fibonacci(2i) ^ 2. ● a(n) = (1 / 5) * (Fibonacci(4n + 2) - 2n - 1). ● a(n) = Sum _{ i=0..2n } (- 1) ^ i * Fibonacci(i) * Fibonacci(i + 1). - _ Rigo berto Florez _ , May 04 2019 ●

► [A027778] 10,75,315,980,2520,5670,11550,21780,38610,65065,105105,163800,2 47520,364140,523260,736440,1017450,1382535,1850695,2443980,3187800,411125 0,5247450,6633900,8312850 ★ a(n) = 5 * (n + 1) * binomial(n + 2, 5) / 2. ● a(n) = binomial(n + 1, 4) * binomial(n + 2, 2). - _ Zerinvary Lajos _ , Apr 28 20 05, corrected by _ R. J. Mathar _ , Feb 13 2016 ●

► [A073379] 1,10,75,440,2255,10362,43945,174460,656370,2359500,8158722,2727 5040,88524930,279892380,864508590,2614740216,7759693095,22634343270,64990 287285,183929970840,513661549401,1416970676550 ★ Ninth convolution of A001 045(n + 1) (generalized (1,2) - Fibonacci), n>=0, with itself. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n - k + 9, 9) * binomial(n - k, k) * 2 ^ k. ●

► [A283238] 1,10,75,447,2335,10977,47667,193775,745819,2738568,9653342,3282 1384,108061167,345622069,1076767956,3275039352,9743874779,28405248949,812 56123017,228383836091,631427595230,1718990010867,4612234492354,122065980 44861,31889379237288 ★ Expansion of exp(Sum _{ n>=1 } sigma _ 2(3 * n) * x ^ n / n) in powers of x. ● a(n) = (1 / n) * Sum _{ k=1..n } sigma _ 2(3 * k) * a(n - k). - _ Seiichi Manyama _ , Mar 04 2017 ●

► [A291003] 10,75,490,2956,16944,93800,506600,2687256,14064904,72873880,374 671560,1914880856,9741440264,49378177560,249583291720,1258711575256,6336 814854024,31857331730840,159980377179080,802678826106456,402450808984218 4,20167014882109720 ★ p - INVERT of (1,1,1,1,1,...), where p(S) = (1 - S)(1 - 2 * S)(1 - 3 * S)(1 - 4 * S). ● a(n) = 14 * a(n - 1) - 71 * a(n - 2) + 154 * a(n - 3) - 120 * a(n - 4) for n >= 5. ● a(n) = (- 2 ^ n + 16 * 3 ^ (1 + n) - 243 * 4 ^ n + 256 * 5 ^ n) / 6. - _ Colin Barker _ , Aug 23 2017 ●

► [A053464] 0,1,10,75,500,3125,18750,109375,625000,3515625,19531250,1074218 75,585937500,3173828125,17089843750,91552734375,488281250000,259399414062 5,13732910156250,72479248046875,381469726562500 ★ a(n) = n * 5 ^ (n - 1). ● a(n) = Sum _{ k=0..n } 5 ^ (n - k) * binomial(n - k + 1, k) * binomial(1, (k + 1) / 2) * (1 - (- 1) ^ k) / 2. - _ Paul Barry _ , Oct 15 2004 ● a(n) = 10 * a(n - 1) - 25 * a(n - 2); n>1; a(0)=0, a(1)=1. ● a(n) = - 25 ^ n * a(- n) for all n in Z . - _ Michael Somos _ , Jun 26 2017 ●

► [A111998] 1,10,75,500,3135,18962,112125,653200,3766950,21571500,12292064 2,697994760,3953743250,22357130700,126273263510,712639689168,401997563585 5,22671014908550,127846248597125,720994336613980 ★ Tenth convolution of Sc hroeder's (second problem) numbers A001003(n), n>=0. ● a(n) = (10 / n) * S um _{ k=1,..,n } binomial(n,k) * binomial(n + k + 9,k - 1). ● a(n) = 10 * hyp ergeom([1 - n, n + 11], [2], - 1), n>=1, a(0)=1. ●

► [A346842] 1,10,75,520,3556,24626,174805,1279240,9677151,75750752,61365683 6,5142797660,44557627661,398786697398,3683575764083,35084121263136,344242

894197456,3476490965903174,36104281709286841,385257741260565844,422053724645701968 7,4743205543048210688 0 ⋆ E.g.f.: exp(exp(x) - 1) * (exp(x) - 1) ^ 3 / 3!. • a(n) = Sum _{ k=0..n } Stirling2(n,k) * binomial(k,3). • a(n) = Sum _{ k=0..n } binomial(n,k) * Stirling2(k,3) * Bell(n - k). • a(n) = (Bell(n + 3) - 6 * Bell(n + 2) + 8 * Bell(n + 1) - Bell(n)) / 6. - _ Vaclav Kotesovec _ , Aug 06 2021 •

► [A081017] 0,10,75,520,3570,24475,167760,1149850,7881195,54018520,370248450,2537720635,17393796000,119218851370,817138163595,5600748293800,38388099893010,263115950957275,1803423556807920,12360848946698170 ⋆ a(n) = Lucas(4n + 1) - 1, or 5 * Fibonacci(2n) * Fibonacci(2n + 1). • a(n) = 8 * a(n - 1) - 8 * a(n - 2) + a(n - 3). • a(n) = - 1 + (1 / 2) * (((7 / 2) - (3 / 2) * sqrt(5)) ^ n + ((7 / 2) + (3 / 2) * sqrt(5)) ^ n) + (1 / 2) * sqrt(5) * (((7 / 2) + (3 / 2) * sqrt(5)) ^ n - ((7 / 2) - (3 / 2) * sqrt(5)) ^ n). - _ Paolo P. Lava _ , Dec 01 2008 •

► [A357480] 0,0,0,0,1,10,75,560,4550,41076,410970,4521000,54252495,705283150,9873965101,148109477880,2369751647900,40285778016680,725144004303300,13777736081766576,275554721635336365,5786649154342069650,127306281395525539615,2928044472097087420000 ⋆ a(n) = (n! / 24) * Sum _{ k=0..n - 4 } 1 / k! . • a(n) = n! * Sum _{ k=0..n } binomial(k,4) / k!. • a(0) = 0; a(n) = n * a(n - 1) + binomial(n,4). •

► [A025015] 1,1,10,75,670,6000,55252,512365,4816030,45433800,432457640,4123838279,39581170420,380242296850,3671331273480,35460394945125,343900019857310,3335361909606710,32458256583753952,315825118347405835 ⋆ Central deca nomial coefficients: largest coefficient of (1 + x + ... + x ^ 9) ^ n. • a(n) = Sum _{ k=0..floor(9 * n / 20) } (- 1) ^ (k) * binomial(n, k) * binomial(n + floor(9 * n / 2) - 10 * k - 1, n - 1). - _ Warut Roonguthai _ , Jun 08 2006 •

► [A228416] 1,10,75,721,6637,60605,514809,4730382,43254591,392344689,3421561753,31049600245 ⋆ Count of the first 10 ^ n primes which do not contain the digit 4. • a(n) <= 9 ^ n. - _ Charles R Greathouse IV _ , May 21 2014 •

► [A061319] 0,1,10,76,430,1870,6601,19810,52326,124785,273790,560626,1083160,1991626,3509065,5957260,9789076,15628185,24317226,36975520,55067530,80483326,115632385,163552126,228032650 ⋆ Column 4 of A061315. • a(n) = n * (n + 1) * (n ^ 2 + n + 4) * (n ^ 4 + 2 * n ^ 3 + 5 * n ^ 2 + 4 * n + 36) / 576 . _ R. J. Mathar _ , Aug 11 2012 •

► [A016149] 1,10,76,520,3376,21280,131776,807040,4907776,29708800,179301376,1080002560,6496792576,39047864320,234555621376,1408407470080,8454739787776,50745618595840,304542431051776 ⋆ Expansion of 1 / ((1 - 4 * x) * (1 - 6 * x)). • a(n) = 10 * a(n - 1) - 24 * a(n - 2) for n>1, a(0)=1. - _ Barry E. Williams _ , Jan 13 2000 • a(n) = ((6 ^ (n + 1)) - 4 ^ (n + 1)) / 2. - _ Barry E. Williams _ , Jan 13 2000 • a(n) = sum(k=0..n, 6 ^ k * 4 ^ (n - k)). [_ Bruno Berselli _ , Aug 07 2013] •

► [A081199] 0,1,10,76,520,3376,21280,131776,807040,4907776,29708800,179301376,1080002560,6496792576,39047864320,234555621376,1408407470080,8454739787776,50745618595840,304542431051776,1827529464217600 ⋆ 5th binomial transform of (0,1,0,1,...), A000035. • a(n) = 10 * a(n - 1) - 24 * a(n - 2) with n>1, a(0)=0, a(1)=1. • a(n) = 6 ^ n / 2 - 4 ^ n / 2. •

► [A198692] 10,76,538,3772,26410,184876,1294138,9058972,63412810,443889676,3107227738,21750594172,152254159210,1065779114476,7460453801338,52223176609372,365562236265610,2558935653859276,17912549577014938 ⋆ a(n) = 11 * 7 ^ n - 1. • a(n) = 7 * a(n - 1) + 6. a(n) = 8 * a(n - 1) - 7 * a(n - 2), n>1. •

► [A215465] 0,1,10,76,540,3751,25840,177451,1217160,8344876,57202750,392089501,2687463360,18420257701,126254611990,865362736876,5931286406640,40653646980451,278644255208560,1909856172864751,13090349042248500 ⋆ a(n) = (Lucas(4n) - Lucas(2n)) / 4. • a(n) = 10 * a(n - 1) - 23 * a(n - 2) + 10 * a(n - 3) - a(n - 4). - _ G. C. Greubel _ , Jun 02 2016 • a(n) = 2 ^ (- 2 - n) * ((7 - 3 * sqrt(5)) ^ n - (3 - sqrt(5)) ^ n - (3 + sqrt(5)) ^ n + (7 + 3 * sqrt(5)) ^ n). - _ Colin Barker _ , Jun 02 2016 • a(n) = a(- n) for all n in Z. - _ Michael Somos _ , Dec 29 2022 •

► [A107903] 1,10,76,568,4240,31648,236224,1763200,13160704,98232832,733219840,5472827392,40849739776,304906608640,2275853910016,16987204845568,126794223124480,946404965613568,7064062832410624,52726882796830720 ⋆ Generalized NSW numbers. • a(n) = Sum _{ k=0..n } binomial(2 * n + 1, 2 * k) * 3 ^ k. • a(n) = 8 * a(n - 1) - 4 * a(n - 2); a(0) = 1, a(1) = 10. - _ Lekraj Beedassy _ , Apr 19 2020 •

► [A081678] 0,1,10,77,538,3581,23170,147197,923338,5738621,35418130,217421117,1329029338,8096512061,49190221090,298195475837,1804438818538,10902948379901,65799224576050,396702889799357,2389754663090938 ⋆ a(n) = (4 * 6 ^ n - 3 * 5 ^ n - 3 ^ n) / 6. • a(n) = 14 * a(n - 1) - 63 * a(n - 2) + 90 * a(n - 3); a(0)=0, a(1)=1, a(2)=10. - _ Harvey P. Dale _ , Jul 25 2011 •

► [A081182] 0,1,10,77,540,3629,23870,155233,1003320,6462841,41552050,266875157,1713054420,10992415589,70523904230,452413483753,2902085040240,18615340276081,119405446835290,765901642003037,4912691142818700 ⋆ 5th binomial transform of (0,1,0,2,0,4,0,8,0,16,...). • a(n) = 10a(n - 1) - 23a(n - 2), a(0)=0, a(1)=1. • a(n) = ((5 + sqrt(2)) ^ n - (5 - sqrt(2)) ^ n / (2 * sqrt(2)). • a(n) = Sum _{ k=0..n } C(n,2k + 1) 2 ^ k * 5 ^ (n - 2k - 1). •

► [A127536] 0,1,10,77,546,3740,25194,168245,1118260,7413705,49085400,324794316,2148789800,14217578856,94096891658,622997471685,4126520887720,27345271410275,181295437422330,1202538435463365,7980245606038650 ⋆ Sum of jump - lengths of all even trees with 2n edges. • a(n) = (n - 1)(2n - 1)C(3n,n) / [3(n + 1) / (2n + 1)]. •

► [A016201] 1,10,77,554,3909,27426,192109,1345018,9415637,65910482,461375421,3229632042,22607432485,158252043778,1107764339213,7754350440026,54280453211253,379963172740914,2659742209710685 ⋆ Expansion of 1 / ((1 - x)(1 - 2x)(1 - 7x)). • a(n) = (49 * 7 ^ n - 24 * 2 ^ n + 5) / 30. - _ Bruno Berselli _ , Feb 09 2011 • a(0)=1, a(n) = 7 * a(n - 1) + 2 ^ (n + 1) - 1. - _ Vincenzo Librandi _ , Feb 09 2011 •

► [A082136] 0,1,10,78,560,3880,26400,177632,1185280,7853184,51699200,338331136,2201948160,14258137088,91894620160,589744496640,3770069811200,24015941435392,152494553825280,965472423378944,6096346179174400 ⋆ Expansion of e.g.f. x * exp(5 * x) * cosh(x). • a(n) = n * (4 ^ (n - 1) + 6 ^ (n - 1)) / 2. •

► [A153596] 1,10,78,560,3884,26520,179752,1214080,8186256,55152800,371430368,2500942080,16837952704,113358801280,763153053312,5137636904960,34587001876736,232842006858240,1567506027294208,10552536122060800,71040228620135424 ⋆ a(n) = ((5 + sqrt(3)) ^ n - (5 - sqrt(3)) ^ n) / (2 * sqrt(3)). • a(n) = 10 * a(n - 1) - 22 * a(n - 2) for n > 1; a(0)=0, a(1)=1. - _ Philippe Deléham _ , Jan 01 2009 •

► [A348314] 0,1,10,78,568,4120,30864,244720,2088832,19389312,196514560,2173194496,26128665600,339890756608,4759410116608,71395178280960,1142340032364544,19419853564641280,349557673401188352,6641597100292636672,132831947503410872320,2789470920661372502016 ⋆ a(n) = n! * Sum _{ k=0..n - 1 } 4 ^ k / k!. • a(0) = 0; a(n) = n * (a(n - 1) + 4 ^ (n - 1)). •

► [A006469] 10,79,340,1071,2772,6258,12768,24090,42702,71929,116116,180817,273000,401268,576096,810084,1118226,1518195,2030644,2679523,3492412,4500870,5740800,7252830,9082710 ⋆ Number of rooted toroidal maps with 2 faces, n vertices and no isthmuses. • a(n) = (n * (474 + 1247 * n + 1215 * n ^ 2 + 545 * n ^ 3 + 111 * n ^ 4 + 8 * n ^ 5)) / 360. • a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. •

► [A081905] 1,10,79,552,3567,21810,127905,725820,4009920,21664000,114840064,598865920,3078537216,15626600448,78431059968,389685706752,1918516592640,9367021682688,45387134009344,218388081147904 ⋆ A sequence related to binomial(n + 6, 6). • a(n) = 4 ^ n * (n ^ 6 + 129 * n ^ 5 + 5845 * n ^ 4 + 115215 * n ^ 3 + 993874 * n ^ 2 + 3308616 * n + 2949120) / 2949120. • a(n) = 28 * a(n - 1) - 336 * a(n - 2) + 2240 * a(n - 3) - 8960 * a(n - 4) + 21504 * a(n - 5) - 28672 * a(n - 6) + 16384 * a(n - 7); a(0)=1, a(1)=10, a(2)=79, a(3)=552, a(4)=3567, a(5)=21810, a(6)=127905. - _ Harvey P. Dale _ , Aug 14 2014 •

► [A016138] 1,10,79,580,4141,29230,205339,1439560,10083481,70604050,494287399,3460188940,24221854021,169554572470,1186886790259,8308221880720,58157596211761,407103302622490,2849723505777919 ⋆ Expansion of 1 / ((1 - 3x)(1 - 7x)). • a(n) = (7 ^ (n + 1) - 3 ^ (n + 1)) / 4. - Lambert Klasen (lambert.klasen(AT)gmx.net), Feb 05 2005 • a(n) = ((5 + sqrt4) ^ n - (5 - sqrt4) ^ n) / 4 in Fibonacci form. Offset 1. a(3)=79. - Al Hakanson (hawkuu(AT)gmail.com), Dec 31 2008 • a(n) = 10 * a(n - 1) - 21 * a(n - 2). - _ Philippe Deléham _ , Jan 01 2009 •

► [A077245] 1,10,79,622,4897,38554,303535,2389726,18814273,148124458,1166181391,9181326670,72284431969,569094129082,4480468600687,35274654676414,277716768610625,2186459495808586,17213959197658063 ⋆ Bisection (even part) of Chebyshev sequence with Diophantine property. • a(n)= 8 * a(n - 1) - a(n - 2), a(- 1) := - 2, a(0)=1. • a(n)=(1 / 2) * [4 - sqrt(15)] ^ n - (1 / 5) * [4 - sqrt(15)] ^ n * sqrt(15) + (1 / 2) * [4 + sqrt(15)] ^ n + (1 / 5) * sqrt(15) * [4 + sqrt(15)] ^ n, with n>=0 - _ Paolo P. Lava _ , Jul 08 2008 •

► [A244729] 0,10,80,270,640,1250,2160,3430,5120,7290,10000,13310,17280,21970,27440,33750,40960,49130,58320,68590,80000,92610,106480,121670,138240 ⋆ 10 * n ^ 3. • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>3. •

► [A000575] 10,80,365,1246,3535,8800,19855,41470,81367,151580,270270,464100,771290,1245488,1960610,3016820,4547840,6729800,9791859,14028850,19816225,27627600,38055225,51833730,69867525 ⋆ Tenth column of quintinomial coefficients. • a(n) = 10 * C(n + 3,3) + 40 * C(n + 3,4) + 65 * C(n + 3,5) + 56 * C(n + 3,6) + 28 * C(n + 3,7) + 8 * C(n + 3,8) + C(n + 3,9) (see comment in A213887). - _ Vladimir Shevelev _ and _ Peter J. C. Moses _ , Jun 22 2012 • a(n) = Sum _{ k=1..10 } (- 1) ^ k * binomial(10,k) * a(n - k), a(0)=10. - _ G. C. Greubel _ , Aug 03 2015 • a(n) = [x ^ 9] (1 + x + x ^ 2 + x ^ 3 + x ^ 4) ^ (n + 3). - _ Joerg Arndt _ , Aug 04 2015 •

► [A036070] 1,10,80,560,3584,21504,122880,675840,3604480,18743296,95420416,477102080,2348810240,11408506880,54760833024,260113956864,1224065679360,5712306503680,26456998543360,121702193299456 ⋆ Expansion of (- 1 + 1 / (1 - 4 * x) ^ 4) / (16 * x); related to A038846. • a(n) = 4 ^ (n - 1) * binomial(n + 4, 3); G.f. (- 1 + (1 - 4 * x) ^ (- 4)) / (x * 4 ^ 2). •

► [A374511] 1,10,80,560,3640,22512,134400,781440,4451040,24939200,137865728,753625600,4080643840,21916106240,116877312000,619457482752,3265293719040,17128725519360,89462514606080,465434423336960,2412895587536896,12468681310412800,64242981906022400 ⋆ Expansion of 1 / (1 - 4 * x - 4 * x ^ 2) ^ (5 / 2). • a(0) = 1, a(1) = 10; a(n) = (2 * (2 * n + 3) * a(n - 1) + 4 * (n + 3) * a(n - 2)) / n. • a(n) = (binomial(n + 4,2) / 6) * Sum _{ k=0..floor(n / 2) } 2 ^ (n - k) * binomial(n + 2,n - 2 * k) * binomial(2 * k + 2,k). • a(n) = 2 ^ (n - 3) * Pochhammer(n + 1, 4) * hypergeom([(1 - n) / 2, - n / 2], [3], 2) / 3. - _ Stefano Spezia _ , Jul 10 2024 •

► [A257286] 1,10,80,580,3980,26380,170780,1087180,6835580,42575980,263268380,1618672780,9907349180,60420657580,367406757980,2228854610380,13495197974780,81581539411180,492540994279580,2970504754739980,17899322473752380 ⋆ a(n) = 5 * 6 ^ n - 4 * 5 ^ n. • a(n) = 11 a(n - 1) - 30 a(n - 2). •

► [A093145] 0,1,10,80,600,4400,32000,232000,1680000,12160000,88000000,636800000,4608000000,33344000000,241280000000,1745920000000,12633600000000,91417600000000,661504000000000,4786688000000000,34636800000000000 ⋆ Third binomial transform of Fibonacci(3n) / Fibonacci(3). • a(n) = ((5 + sqrt(5)) ^ n - (5 - sqrt(5)) ^ n) / (2 * sqrt(5)). • a(n) = Sum _{ k=0..n } binomial(n, 2 * k + 1) * 5 ^ (n - k - 1). • a(n) = 10 * a(n - 1) - 20 * a(n - 2), n > 1; a(0)=0, a(1)=1. - _ Zerinvary Lajos _ , Apr 26 2009 •

► [A341917] 1,10,80,610,4625,35322,272800,2132310,16861455,134781350,1088074064,8863227100,72789560025,602232150810,5016320750400,42041168169712,354326295908580,3001705818071400,25549873091193600,218426240780417250,1874878554813727815,16153461053030605590 ⋆ Number of strong triangulations of a fixed pentagon with n interior nodes. • a(n) = 60 * (13 * n + 9) * (4 * n + 5)! / ((3 * n + 9)! * (n - 1)!). •

► [A369474] 0,0,0,0,1,10,80,611,4602,34791,265606,2054034,16094883,127693729,1024649237,8306343347,67952829212,560471786912,4656785469564,38948533963500,327715193729107,2772468576820531 ⋆ Number of chiral pairs of polyominoes composed of n pentachoral cells of the hyperbolic regular tiling with Schläfli symbol { 3,3,3,oo } . • a(n) = h(4,n) - H(4,n) in Table 8 of Hering link. •

► [A126531] 1,10,80,660,5430,44692,367826,3027314,24915652,205062892,1687725824,13890462738,114322452324,940906242802,7743925534706,63734705924048,5

24554726284436,4317234336897124,35532064407664766,292438978880594940 ⋆ Number of base 10 n - digit numbers with adjacent digits differing by five or less. ● a(n) = 8 * a(n - 1) + 3 * a(n - 2) - 9 * a(n - 3) - a(n - 4) + 2 * a(n - 5) for n> 4. ●

► [A165511] 1,10,80,820,6380,67420,506780,5561020,40049180,460442620,3143983580,38295852220,244662669980,3201964029820,18817676268380,2693590864154 20,1424231777738780,2281808599649020,10536277399684118 0 ⋆ a(0)=1, a(1)=1 0, a(n) = 90 * a(n - 2) - a(n - 1). ● a(n) = (20 * 9 ^ n - (- 10) ^ n) / 19. - _ Klaus Brockhaus _ , Sep 26 2009 ●

► [A154236] 1,10,81,620,4661,34830,259741,1935640,14421321,107436050,800355401,5962269060,44415937981,330876267670,2464859855061,18361949464880,1367 87157402641,1018994534193690,7590989351286721,56548997363187100 ⋆ a(n) = ((5 + sqrt(6)) ^ n - (5 - sqrt(6)) ^ n) / (2 * sqrt(6)). ● a(n) = 10 * a(n - 1) - 1 9 * a(n - 2) for n > 1, with a(0)=0, a(1)=1. ●

► [A037485] 1,10,81,650,5201,41610,332881,2663050,21304401,170435210,136348 1681,10907853450,87262827601,698102620810,5584820966481,44678567731850,35 7428541854801,2859428334838410 ⋆ Base 8 digits are, in order, the first n terms of the periodic sequence with initial period 1,2. ● a(n) = 8 * a(n - 1) + a(n - 2) - 8 * a(n - 3). ●

► [A363559] 1,10,81,757,6561,59454,531496,4788072,43046721,387480753,348678 4492,31381709148,282429556893,2541872737062,22876792457796,2058912041345 65,1853020188851841,16677182431460826,150094635300957591,135085172503398 1380,1215766545905693447 1 ⋆ Expansion of g.f. A(x) = Sum _{ n= - oo.. + oo } x ^ n * (3 + x ^ n) ^ (2 * n). ● a(2 ^ n) = 9 ^ (2 ^ n) for n > 0 (conjecture). ● a(p) = p * 3 ^ (p - 1) + 9 ^ p for primes p > 3 (conjecture). ●

► [A154246] 1,10,82,640,4924,37720,288568,2206720,16872976,129008800,986374 432,7541585920,57661119424,440862647680,3370726327168,25771735613440,197 044282245376,1506551581411840,11518718733710632,88069258871603200 ⋆ a(n) = ((5 + sqrt(7)) ^ n - (5 - sqrt(7)) ^ n) / (2 * sqrt(7)). ● a(n) = 10 * a(n - 1) - 18 * a(n - 2) for n > 1, with a(0)=0, a(1)=1. ●

► [A238276] 1,10,82,658,5266,42130,337042,2696338,21570706,172565650,138052 5202,11044201618,88353612946,706828903570,5654631228562,45237049828498,36 1896398627986,2895171189023890,23161369512191122,185290956097528978,1482 327648780231826 ⋆ a(n) = (9 * 8 ^ n - 2) / 7. ● a(n) = 8 * a(n - 1) + 2, a(0) = 1. ● a(n) = 9 * a(n - 1) - 8 * a(n - 2), a(0) = 1, a(1) = 10. ●

► [A103460] 1,10,82,730,6562,59050,531442,4782970,43046722,387420490,348678 4402,31381059610,282429536482,2541865828330,22876792454962,2058911320946 50,1853020188851842,16677181699666570,150094635296999122 ⋆ a(n) = 9 ^ n + 1 - 0 ^ n. ● a(n) = Sum _{ k=0..n } binomial(n, k) * 0 ^ (k * (n - k)) * 9 ^ k. ● a(n) = 9 * a(n - 1) - 8, with a(1)=10. - _ Vincenzo Librandi _ , Dec 29 2010 ●

► [A154340] 1,10,83,660,5189,40670,318487,2493480,19520521,152816050,119631 1643,9365243580,73315137869,573942237830,4493065034527,35173632302160,275 354217434641,2155590425209690,16874882555708003,132103788328515300 ⋆ a(n) = ((5 + 2 * sqrt(2)) ^ n - (5 - 2 * sqrt(2)) ^ n) / (4 * sqrt(2)). ● a(n) = 10 * a(n - 1) - 17 * a(n - 2) for n > 1, with a(0)=0, a(1)=1. - _ Philippe Deléham _ , Jan 12 2009 ●

► [A037608] 1,10,83,665,5322,42579,340633,2725066,21800531,174404249,139523 3994,11161871955,89294975641,714359805130,5714878441043,45719027528345,36 57522202676 2,292601776181409 9,2340814209451279 3,187265136756102346,1498 121094048818771 ⋆ Base 8 digits are, in order, the first n terms of the periodic sequence with initial period 1,2,3. ● a(n) = 8 * a(n - 1) + a(n - 3) - 8 * a(n - 4). - _ Colin Barker _ , Nov 28 2014 ●

► [A014831] 1,10,83,668,5349,42798,342391,2739136,21913097,175304786,140243 8299,11219506404,89756051245,718048409974,5744387279807,45955098238472,36 7640785907793,2941126287262362,23529010298098915,188230820384791340,1505 856659078330741 ⋆ a(1)=1; for n>1, a(n) = 8 * a(n - 1) + n. ● a(n) = (8 ^ (n + 1) - 7 * n - 8) / 49. - _ Rolf Pleisch _ , Oct 21 2010 ● a(n) = Sum _{ i=0..n - 1 } 7 ^ i * binomial(n + 1,n - 1 - i). [_ Bruno Berselli _ , Nov 13 2015] ● a(n) = 10 * a(n - 1) - 17 * a(n - 2) + 8 * a(n - 3) for n>3. ●

► [A226202] 1,10,83,732,6565,59054,531447,4782976,43046729,387420498,348678 4411,31381059620,282429536493,2541865828342,22876792454975,2058911320946 64,1853020188851857,16677181699666586,150094635296999139 ⋆ 9 ^ n + n. ● a(n) = 11 * a(n - 1) - 19 * a(n - 2) + 9 * a(n - 3). ●

► [A267031] 0,10,84,286,680,1330,2300,3654,5456,7770,10660,14190,18424,2342 6,29260,35990,43680,52394,62196,73150,85320,98770,113564,129766,147440 ⋆ a(n) = (32 * n ^ 3 - 2 * n) / 3. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>3. - _ Colin Barker _ , Jan 10 2016 ● a(n) = binomial(4 * n + 1, 3). - _ Michel Marcus _ , Mar 05 2022 ●

► [A289163] 0,0,0,10,84,322,1172,2780,7016,13532,27720,47318,84796,133294,217 756,322392,492240,696216,1009680,1377474,1918500,2541946,3426852,4431988,5 816888 ⋆ Number of 5 - cycles in the n X n black bishop graph. ● a(n) = (- 16 5 - 282 * n + 972 * n ^ 2 - 730 * n ^ 3 + 280 * n ^ 4 - 68 * n ^ 5 + 8 * n ^ 6 - 5 * (- 1) ^ n * (- 33 - 26 * n + 96 * n ^ 2 - 46 * n ^ 3 + 6 * n ^ 4)) / 240. ● a(n) = 2 * a(n - 1) + 4 * a(n - 2) - 10 * a(n - 3) - 5 * a(n - 4) + 20 * a(n - 5) - 20 * a(n - 7) + 5 * a(n - 8) + 10 * a(n - 9) - 4 * a(n - 10) - 2 * a(n - 11) + a(n - 12). ●

► [A090763] 1,10,84,660,5005,37128,271320,1961256,14060475,100150050,709634 640,5006710800,35197176924,246681069040,1724337127920,12025860872784,8370 2724824775,581558091471630,4034231805704100,27945630038703300 ⋆ a(n) = (3 * n + 3)! / (3 * n! * (2 * n + 2)!). ● a(n) = 1 / (Integral _{ x=0..1 } (x ^ (2 / 3) - x) ^ n dx). ● a(n) = 1 / (Integral _{ x=0..1 } (x - x ^ 1.5) ^ n dx). ● a(n) = 1 / (2 * Beta(2n,n)). [_ Enrique Pérez Herrero _ , May 17 2009] ● a(1) = 1 ; a(n) = a(n - 1) * 2 * binomial(3n,3) / binomial(2n,3). - _ Enrique Pérez Herrero _ , May 19 2009 ● a(n) = (1 / 2) * Sum { j=1,n } (j * binomial(2n,j) * binomial(n,j)). - _ Enrique Pérez Herrero _ , May 22 2009 ●

► [A016131] 1,10,84,680,5456,43680,349504,2796160,22369536,178956800,143165 5424,11453245440,91625967616,733007749120,5864062009344,46912496107520,37 5299968925696,3002399751536640,24019198012555264,192153584100966400 ⋆ Expansion of 1 / ((1 - 2x)(1 - 8x)). ● a(n) = binomial(2 ^ n,2) * (2 ^ n + 1) / 3, n >= 1. - _ Zerinvary Lajos _ , Jan 07 2008 ● a(n - 1) = ((5 + sqrt 9) ^ n - (5 - sqrt 9) ^ n) / 6. - Al Hakanson (hawkuu(AT)gmail.com), Jan 07 2009 ● a(n) = Sum _{ i=1...(2 ^ n - 1) } i * (i + 1) / 2. - _ Ctibor O. Zizka _ , Mar 03 2009 ● a(0) = 1, a(n) = 8 * a(n - 1) + 2 ^ n. - _ Vincenzo Librandi _ , Feb 09 2011 ● a(n) = 10 * a(n - 1) - 16 * a(n - 2), n > 1. - _ Vincenzo Librandi _ , Feb 09 2011 ●

► [A287826] 1,10,84,708,5968,50308,424080,3574860,30134944,254028100,21413 77008,18051134892,152165391616,1282706408548,10812811724688,911486031525 24,7683540662872 00,6476983198439812,5459893191635947 2,4602518294513027 6,4387977821320347 4880 ⋆ Number of sequences over the alphabet { 0,1,...,9 } such that no two consecutive terms have distance 2. ● a(n) = 10 * a(n - 1) - 13 * a(n - 2) - 2a(n - 3), a(0)=1, a(1)=10, a(2)=84. ●

► [A335647] 1,10,84,715,6188,54264,480700,4292145,38567100,348330136,315946 1968,28760021745,262596783764,2403979904200,22057981462440,2028024650472 45,1867897112363100,17231414395464984,159186450151978480,147247466390580 0940,1363621940567552952 0 ⋆ a(n) = binomial(4 * n + 1,n + 1). ● a(n) = Sum _{ k=0..n + 1 } C(n + 1,k) * C(3 * n,k). ●

► [A155593] 1,10,84,736,6576,59080,531504,4783096,43046976,387421000,348678 5424,31381061656,282429540576,2541865836520,22876792471344,2058911321274 16,1853020188917376,16677181699797640,150094635297261264 ⋆ a(n) = 9 ^ n + 2 ^ n - 1. ● a(n) = 11 * a(n - 1) - 18 * a(n - 2) - 8 with a(0)=1, a(1)=10. - _ Vincenzo Librandi _ , Jul 21 2010 ●

► [A291389] 10,85,650,4700,32750,222375,1481250,9721875,63062500,40517500 0,2582687500,16353078125,102955156250,644991640625,4023367968750,25002220 312500,154848222656250,956155732421875,5888138769531250,3617158506835937 5,22171477695312500 0 ⋆ p - INVERT of (1,1,0,0,0,0,...), where p(S) = (1 - 5 S) ^ 2. ● a(n) = 10 * a(n - 1) - 15 * a(n - 2) - 50 * a(n - 3) - 25 * a(n - 4) for n >= 5. ●

► [A081903] 1,10,85,660,4830,33876,230030,1522400,9866375,62828750,39414687 5,2440812500,14944687500,90590625000,544242187500,3243437500000,191891113 28125,112777832031250,658804931640625,3827075195312500 ⋆ A sequence related to binomial(n + 5, 5). ● a(n) = 5 ^ n * (n ^ 5 + 115 * n ^ 4 + 4285 * n ^ 3 + 61325 * n ^ 2 + 309274 * n + 375000) / 375000. ●

► [A361285] 0,0,1,10,85,695,5600,45080,364854,2973270,24382875,200967250,16 62197251,13772638789,114126098450,944285871200,7791140945180,64038240953 196,523977421054245,4266101869823850,34554155058753505,27841727238772331 5,223175518489938320,1779974165962151324 0 ⋆ Number of unordered triples of self - avoiding paths whose sets of nodes are disjoint subsets of a set of n points on a circle; one - node paths are allowed. ● a(n) = (n * (n - 1) * (n - 2) / 384) * (7 ^ (n - 3) + 9 * 5 ^ (n - 3) + 3 ^ n + 27). ●

► [A038235] 1,10,85,707,5864,48620,403104,3342081,27708726,229729153,19046 52103,15791202736,130922641160,1085461206128,8999406210929,7461281130275 4,618604325665341,5128761469382475,42521840081752984,352542596245147348 ⋆ Bottom line of 4 - wave sequence A038197, also bisection of A006357. ● a(n) = 10a(n - 1) - 15a(n - 2) + 7a(n - 3) - a(n - 4). ●

► [A000454] 1,10,85,735,6769,67284,723680,8409500,105258076,1414014888,2031 3753096,310989260400,5056995703824,87077748875904,1583313975727488,30321 254007719424,610116075740491776 ⋆ Unsigned Stirling numbers of first kind s(n,4). ● a(n) is coefficient of x ^ (n + 4) in (- log(1 - x)) ^ 4, multiplied by (n + 4)! / 4!. ● a(n) = (h(n - 1, 1) ^ 3 - 3 * h(n - 1, 1) * h(n - 1, 2) + 2 * h(n - 1, 3)) * (n - 1)! / 3!, where h(n, r) = Sum _{ i=1..n } 1 / i ^ r. - Klaus Strassburger, 2000 ● a(n) = det(|S(i + 4,j + 3)|, 1 <= i,j <= n - 4), where S(n,k) are Stirling numbers of the second kind. - _ Mircea Merca _ , Apr 06 2013 ● a(n) = y(n) * n! / 24, where y(0) = y(1) = y(2) = y(3) = 0, y(4) = 1 and n ^ 4 * y(n) + (- 1 - 5 * n - 10 * n ^ 2 - 10 * n ^ 3 - 4 * n ^ 4) * y(n + 1) + (1 + n) * (2 + n) * (7 + 12 * n + 6 * n ^ 2) * y(n + 2) - 2 * (1 + n) * (2 + n) * (3 + n) * (3 + 2 * n) * y(3 + n) + (1 + n) * (2 + n) * (3 + n) * (4 + n) * y(n + 4) = 0. - _ Benedict W. J. Irwin _ , Jul 12 2016 ● a(n) = 2 * (2 * n - 5) * a(n - 1) - (6 * n ^ 2 - 36 * n + 55) * a(n - 2) + (2 * n - 7) * (2 * n ^ 2 - 14 * n + 25) * a(n - 3) - (n - 4) ^ 4 * a(n - 4). ● a(n) = (n - 4)! + 3 * (n - 2) * a(n - 1) - (3 * n ^ 2 - 15 * n + 19) * a(n - 2) + (n - 3) ^ 3 * a(n - 3) for n >= 4. (End) ●

► [A163412] 1,10,86,692,5380,41032,309464,2318480,17299984,128771488,957058 400,7106470208,52737656896,391231895680,2901702413696,21518544511232,1595 64652069120,1183145311447552,8772545567020544,65043606215029760 ⋆ a(n) = 12 * a(n - 1) - 34 * a(n - 2) for n>1, a(0)=1, a(1)=10. ● a(n) = ((1 + 2 * sqrt(2)) * (6 + sqrt(2)) ^ n + (1 - 2 * sqrt(2)) * (6 - sqrt(2)) ^ n) / 2. ●

► [A198858] 10,87,703,5631,45055,360447,2883583,23068671,184549375,1476395 007,11811160063,94489280511,755914244095,6047313952767,48378511622143,387 028092977151,3096224743817215,24769797950537727,198158383604301823 ⋆ a(n) = 11 * 8 ^ n - 1. ● a(n) = 8 * a(n - 1) + 7. a(n) = 9 * a(n - 1) - 8 * a(n - 2), n >1. ●

► [A165148] 1,10,88,736,6016,48640,391168,3137536,25133056,201195520,161008 8448,12882804736,103070826496,824600166400,6596935548928,52776021262336,4 22210317582336,3377691130593280,27021563404484608,216172644674830336 ⋆ a(n) = (3 * 8 ^ n - 4 ^ n) / 2. ● a(n) = 12 * a(n - 1) - 32 * a(n - 2) for n > 1; a(0) = 1, a(1) = 10. ●

► [A057081] 1,10,89,791,7030,62479,555281,4935050,43860169,389806471,346439 8070,30789776159,273643587361,2432002510090,21614379003449,1920974085209 51,1707262297685110,15173263270645039,134852107138120241 ⋆ Even indexed Chebyshev U - polynomials evaluated at sqrt(11) / 2. ● a(n) = 9 * a(n - 1) - a(n - 2), a(- 1)= - 1, a(0)=1. ● a(n) = L(n, - 9) * (- 1) ^ n, where L is defined as in A108299; see also A070998 for L(n, + 9). - _ Reinhard Zumkeller _ , Jun 01 2005 ●

► [A202919] 1,10,90,534,2310,8012,23661,61830,146718,321970,662233,1289652,2 396745,4277352,7367630,12299364,19968183,31619610,48956236,74269690,110601 480,161937204,233439075,331722170,465180300 ⋆ Number of n X 3 nonnegative integer arrays with each row and column increasing from zero by 0, 1, 2 or 3. ● a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10) for n>10. ●

► [A228418] 1,10,90,719,6696,60845,554933,4742037,43331008,392875212,357326 8469,31207451849 ⋆ Count of the first 10 ^ n primes which do not contain the d

igit 6. ● a(n) <= 9 ^ n. - _ Charles R Greathouse IV _ , May 21 2014 ●
► [A159733] 10,90,720,5400,38880,272160,1866240,12597120,83980800,554273280,3627970560,23581808640,152374763520,979552051200,6269133127680,39965723688960,253899891671040,1608032647249920,10155995666841600 ★ Number of permutations of 5 indistinguishable copies of 1..n arranged in a circle with exactly 1 local maximum. ● a(n) = (copies * n) * (copies + 1) ^ (n - 2) where copies=5. ● a(n) = 12 * a(n - 1) - 36 * a(n - 2) for n>3. (End) ● a(n) = 5 * n * 6 ^ (n - 2). ●
► [A291392] 1,10,90,765,6264,49968,390960,3013740,22958640,173225952,1296640224,9640743120,71270772480,524277204480,3840015361536,28018969060032,203753553511680,1477232299307520,10681095982072320,77040637862485248,554445497303525376 ★ a(n) = (1 / 12) * A291391(n). ● a(n) = 12 * a(n - 1) - 24 * a(n - 2) - 72 * a(n - 3) - 36 * a(n - 4) for n >= 5. ●
► [A331323] 1,10,90,772,6430,52524,423220,3375880,26720118,210195100,1645295212,12825551160,99633196780,771702434104,5961969066600,45958506432016,353585912577190,2715647948258940,20824876515839932,159474192002499160,1219708190630800836,9318143974952519080 ★ a(n) = [x ^ n] (1 - 2 * x) / (1 - 8 * x + 4 * x ^ 2) ^ (3 / 2). ● a(n) = (10 * n * a(n - 1) + 20 * (1 - n) * a(n - 2) + 8 * (n - 1) * a(n - 3)) / n. ● a(n) = 2 ^ (n - 1) * (n + 1) * (n * hypergeom([1 - n, n + 2], [2], - 1 / 2) + 2 * hypergeom([- n, n + 1], [1], - 1 / 2)). ● a(n) = Sum _{ k=0..n } 3 ^ k * (k + 1) * binomial(n + 1,k + 1) ^ 2. - _ Seiichi Manyama _ , Jan 20 2020 ● a(n) = (n + 1) ^ 2 * hypergeom([- n, - n], [2], 3). - _ Peter Luschny _ , Jan 20 2020 ●
► [A004985] 1,10,90,780,6630,55692,464100,3845400,31724550,260846300,2138939660,17500415400,142920059100,1165348174200,9489263704200,77179344794160,627082176452550,5090431785320700,41289057814267900,334658679126171400,2710735300921988340,21944047674130381800 ★ a(n) = (2 ^ n / n!) * Product _{ k=0..n - 1 } (4 * k + 5). ● a(n) = 8 ^ n * binomial(1 / 4 + n, 1 / 4). ●
► [A164552] 1,10,90,780,6660,56520,478440,4045680,34194960,288969120,2441780640,20632294080,174334109760,1473040494720,12446462643840,105166336884480,888602163298560,7508235853048320,63440765337623040,536042108460026880 ★ a(n) = 12 * a(n - 1) - 30 * a(n - 2) for n > 1; a(0) = 1, a(1) = 10. ● a(n) = ((3 + 2 * sqrt(6)) * (6 + sqrt(6)) ^ n + (3 - 2 * sqrt(6)) * (6 - sqrt(6)) ^ n) / 6. ●
► [A057086] 1,10,90,800,7100,63000,559000,4960000,44010000,390500000,3464900000,30744000000,272791000000,2420470000000,21476790000000,190563200000000,1690864100000000,15003009000000000,133121449000000000,1181184400000000000,10480629510000000000 ★ Scaled Chebyshev U - polynomials evaluated at sqrt(10) / 2. ● a(n) = 10 * (a(n - 1) - a(n - 2)), a(- 1)=0, a(0)=1. ● a(n) = S(n, sqrt(10)) * (sqrt(10)) ^ n with S(n, x) := U(n, x / 2), Chebyshev's polynomials of the 2nd kind, A049310. ● a(n) = (sqrt(15) / 30) * ((5 + sqrt(15)) ^ (n + 1) - (5 - sqrt(15)) ^ (n + 1)), with n>=0. - _ Paolo P. Lava _ , Nov 20 2008 ●
► [A092420] 1,10,90,801,7120,63280,562401,4998330,44422570,394804801,3508820640,31184580960,277152408001,2463187091050,21891531411450,194560595612001,1729153829096560,15367823866257040,136581260967216801 ★ a(n + 2) = 9 * a(n + 1) - a(n) + 1, with a(1)=1, a(2)=10. ● a(n) = 10 * a(n - 1) - 10 * a(n - 2) + a(n - 3), n >= 3; a(0)=0, a(1)=1, a(2)=10. ● a(n) = (S(n,9) - S(n - 1,9) - 1) / 7, n >= 1. ● a(n) = - 1 / 7 + (4 / 7) * (9 / 2 + (1 / 2) * sqrt(77)) ^ n - (5 / 77) * (9 / 2 - (1 / 2) * sqrt(77)) ^ n * sqrt(77) + (5 / 77) * (9 / 2 + (1 / 2) * sqrt(77)) ^ n * sqrt(77) + (4 / 7) * (9 / 2 - (1 / 2) * sqrt(77)) ^ n, with n >= 0. - _ Paolo P. Lava _ , Jun 16 2008 ●
► [A162983] 1,10,90,810,7245,64800,579600,5184000,46366380,414707040,3709193760,33175513440,296726124240,2653957198080,23737339710720,212309865780480,1898927161041600,16984252473131520,151909371770042880 ★ Number of reduced words of length n in Coxeter group on 10 generators S _ i with relations (S _ i) ^ 2 = (S _ i S _ j) ^ 4 = I. ● a(n) = 8 * (a(n - 1) + a(n - 2) + a(n - 3)) - 36 * a(n - 4). ●
► [A163397] 1,10,90,810,7290,65565,589680,5303520,47699280,429001920,3858394860,34701968160,312105587040,2807042441760,25246223065440,227061682284240,2042167156174080,18367021030590720,165190915209012480 ★ Number of reduced words of length n in Coxeter group on 10 generators S _ i with relations (S _ i) ^ 2 = (S _ i S _ j) ^ 5 = I. ● a(n) = 8 * a(n - 1) + 8 * a(n - 2) + 8 * a(n - 3) + 8 * a(n - 4) - 36 * a(n - 5). - _ Wesley Ivan Hurt _ , May 10 2021 ●
► [A163954] 1,10,90,810,7290,65610,590445,5313600,47818800,430336800,3872739600,34852032000,313644670380,2822589491040,25401392681760,228595320793440,2057202978723360,18513432737727840,166608348947205840 ★ Number of reduced words of length n in Coxeter group on 10 generators S _ i with relations (S _ i) ^ 2 = (S _ i S _ j) ^ 6 = I. ● a(n) = - 36 * a(n - 6) + 8 * Sum _{ k=1..5 } a(n - k). - _ Wesley Ivan Hurt _ , May 11 2021 ●
► [A003952] 1,10,90,810,7290,65610,590490,5314410,47829690,430467210,3874204890,34867844010,313810596090,2824295364810,25418658283290,228767924549610,2058911320946490,18530201888518410,166771816996665690,1500946352969991210,13508517176729920890 ★ Expansion of g.f.: (1 + x) / (1 - 9 * x). ● a(n) = (10 * 9 ^ n - 0 ^ n) / 9. Binomial transform is A000042. - _ Paul Barry _ , Jan 29 2004 ●
► [A033136] 1,10,90,811,7300,65700,591301,5321710,47895390,431058511,3879526600,34915739400,314241654601,2828174891410,25453574022690,229082166204211,2061739495837900,18555655462541100,167000899162869901,1503008092465829110,13527072832192461990 ★ Base 9 digits are, in order, the first n terms of the periodic sequence with initial period 1,1,0. ● a(n) = round((45 / 364) * 9 ^ n). - _ Tani Akinari _ , Jul 15 2014 ● a(n + 1) = 9 * a(n) if n == 2 (mod 3), 9 * a(n) + 1 otherwise. - _ Robert Israel _ , Jul 15 2014 ●
► [A063945] 10,90,900,9000,90000,900000,9000000,90000000,900000000,9000000000,90000000000,900000000000,9000000000000,90000000000000,900000000000000,9000000000000000,90000000000000000,900000000000000000,9000000000000000000,90000000000000000000 ★ Number of nonnegative integers with n digits. ● a(1) = 10, a(2) = 90, a(n) = a(n - 1) * 10 for n>2. ●
► [A218127] 1,10,90,990,9900,99990,998910,9999990,99990000,999999000,9999899910,99999999990,999998990100,9999999999990,99999989999910,9999999998990010,9999999900000000,99999999999999990,999999998999001000,999999999999999990,999999999999999990100 ★ Number of 10 - ary sequences with primitive period n. ● a(n) = Sum _{ d|n } 10 ^ d * mu(n / d) for n>0, a(0) = 1. ●
► [A346230] 1,1,10,91,766,6130,48628,399403,3459646,31119382,283230172,2571653926,23283756892,211338730900,1932349078216,17832773405035,165944764694782,1552985405704558,14576920303430476,137021547292573186,1289614077968369716,12160967374482417964 ★ Number of n - step 9 - dimensional nonnegative lattice walks starting at the origin and using steps that increment all components or decrement one component by 1. ● a(n) == 1 (mod 9). ●
► [A231412] 1,10,91,819,7122,61702,557224,5062320,45002763,395879190,3579400605,32487367715 ★ Count of the first 10 ^ n primes which do not contain the digit 0. ● a(n) <= 9 ^ n. - _ Charles R Greathouse IV _ , May 21 2014 ●
► [A002452] 0,1,10,91,820,7381,66430,597871,5380840,48427561,435848050,3922632451,35303692060,317733228541,2859599056870,25736391511831,231627523606480,2084647712458321,18761829412124890,168856464709124011,1519708182382116100,13677373641439044901,123096362772951404110 ★ a(n) = (9 ^ n - 1) / 8. ● a(n) = 9 * a(n - 1) + 1; a(1) = 1. ● a(n) = 10 * a(n - 1) - 9 * a(n - 2). - _ Ant King _ , Jan 05 2011 ● a(n) = det(|v(i + 2,j + 1)|, 1 <= i,j <= n - 1), where v(n,k) are central factorial numbers of the first kind with odd indices (A008956) and n > 0. - _ Mircea Merca _ , Apr 06 2013 ● a(n) = Sum _{ k=0..n - 1 } 9 ^ k. - _ Doug Bell _ , May 26 2017 ●
► [A096261] 1,10,91,828,7534,68552,623756,5675568,51642104,469892512,4275561136,38903414208,353982925023,3220897542254,29307009588171,266665052127080,2426390512890816,22077774624328776,200886102122914612 ★ Number of n - tuples of 0,1,2,3,4,5,6,7,8,9 without consecutive digits. ● a(n) = 10 * a(n - 1) - 9 * a(n - 2) + 8 * a(n - 3) - 7 * a(n - 4) + 6 * a(n - 5) - 5 * a(n - 6) + 4 * a(n - 7) - 3 * a(n - 8) + 2 * a(n - 9) - 1 * a(n - 10), a(0)=1, a(n)=0, for n<0. ●
► [A015455] 1,1,10,91,829,7552,68797,626725,5709322,52010623,473804929,4316254984,39320099785,358197153049,3263094477226,29726047448083,270797521509973,2466903741037840,22472931190850533 ★ a(n) = 9 * a(n - 1) + a(n - 2) for n>1; a(0) = a(1) = 1. ● a(n) = round(1 / 2 * (9 / 2 - 1 / 2 * sqrt(85)) ^ n + 7 / 170 * sqrt(85) * (9 / 2 - 1 / 2 * sqrt(85)) ^ n - 7 / 170 * sqrt(85) * (9 / 2 + 1 / 2 * sqrt(85)) ^ n + 1 / 2 * (9 / 2 + 1 / 2 * sqrt(85)) ^ n). - _ Alexander R. Povolotsky _ , Jun 13 2008 ●
► [A051789] 0,0,1,10,91,861,8646,91806,1021735,11817091,141044410,1727867505,21634392066,275949833550,3576313319580,46995004939590,625082396235615,8403885722249655,114069363630025650,1561609590480856455,21543838440848427990,299299110934736706690 ★ a(n) = C(n) * (C(n) - 1) / 2, where C(n) are the Catalan numbers (A000108). ● a(n) = binomial(binomial(2 * n,n) / (n + 1),2). - _ Zerinvary Lajos _ , May 29 2006 ●
► [A338678] 1,1,10,91,901,8191,81091,737191,7239142,66288142,646149322,5912729632,57664985653,527352541453,5111015223223,46998961540624,453182267869615,4163124744738505,40151590267580785,368699990679135946,3540322181970716707,32632895079429817528,312061810101214595698 ★ Expansion of Product _{ k>=1 } 1 / (1 - 9 ^ (k - 1) * x ^ k). ● a(n) = Sum _{ k=0..n } p(n,k) * 9 ^ (n - k), where p(n,k) = number of partitions of n into k parts. ●
► [A227512] 10,92,318,760,1490,2581,4103,6129,8731,11981,15952,20714,26340,32902,40472,49123,58925,69951,82273,95963,111094,127736,145962,165844,187454 ★ Floor(- 1 / n + 1 / log((2n + 1) / (2n - 1))). ● a(n) = 12 * n ^ 3 - floor(9 * n / 5) - 1. (conjectured, based on computations by _ Peter J. C. Moses _ , Jul 14 2013) ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 5) - 3 * a(n - 6) + 3 * a(n - 7) - a(n - 8) (conjectured; verified up to n = 100000). ●
► [A227513] 10,92,319,761,1491,2581,4103,6130,8732,11982,15952,20714,26341,32903,40473,49123,58925,69952,82274,95964,111094,127736,145963,165845,187455 ★ Round(- 1 / n + 1 / log((2n + 1) / (2n - 1))). ● a(n) = 12 * n ^ 3 - round(9 * n / 5) (conjectured, based on computations by _ Peter J. C. Moses _ , Jul 14 2013). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 5) - 3 * a(n - 6) + 3 * a(n - 7) - a(n - 8) (conjectured; verified up to n = 100000). ●
► [A228420] 1,10,92,816,6712,60867,555878,5026796,43410238,395243878,3576361255,32461990759 ★ Count of the first 10 ^ n primes which do not contain the digit 8. ● a(n) <= 9 ^ n. - _ Charles R Greathouse IV _ , May 21 2014 ●
► [A190990] 0,1,10,92,840,7664,69920,637888,5819520,53092096,484364800,4418911232,40314193920,367790649344,3355392942080,30611604226048,279272898723840,2547836153430016,23244178344509440,212059094217654272,1934637515420467200,17649902400463437824 ★ a(n) = 10 * a(n - 1) - 8 * a(n - 2), with a(0)=0, a(1)=1. ● a(n) = (sqrt(17) / 34) * ((5 + sqrt(17)) ^ n - (5 - sqrt(17)) ^ n). - _ Paolo P. Lava _ , May 31 2011 ●
► [A287829] 1,10,92,848,7816,72040,663992,6120008,56408056,519912520,4792028792,44168084168,407096815096,3752207504200,34584061167992,318760965520328,2938016812018936,27079673239211080,249593092776937592,2300497181470860488,21203660818791619576 ★ Number of sequences over the alphabet { 0,1,..., 9 } such that no two consecutive terms have distance 6. ● a(n) = 9 * a(n - 1) + 2 * a(n - 2), a(0)=1, a(1)=10. ● a(n) = ((1 - 11 / sqrt(89)) / 2) * ((9 - sqrt(89)) / 2) ^ n + ((1 + 11 / sqrt(89)) / 2) * ((9 + sqrt(89)) / 2) ^ n. ●
► [A103944] 1,10,93,836,7355,63750,546553,4646920,39250935,329789450,2758868981,22995369996,191074697203,1583463268366,13092015636465,108024564809744,889730213085167,7316434446188562,60078376613838829,492692533579612180 ★ Number of rooted unicursal n - edge maps in the plane (planar with a distinguished outside face). ● a(n)=n * binomial(2n, n)sum _{ i=0..n - 2 } binomial(n - 2, i)(1 / (n + 1 + i) + n / (n + 2 + i)), for n>1. ●
► [A190989] 0,1,10,93,860,7949,73470,679057,6276280,58009401,536160050,4955534693,45802226580,423333522949,3912719643430,36163861773657,334249580232560,3089348769910001,28553740637472090,263911964985350893,2439243465391204300,22545050899014586749 ★ a(n) = 10 * a(n - 1) - 7 * a(n - 2), with a(0)=0, a(1)=1. ● a(n) = (sqrt(2) / 12) * ((5 + 3 * sqrt(2)) ^ n - (5 - 3 * sqrt(2)) ^ n). - _ Paolo P. Lava _ , May 31 2011 ●
► [A126633] 10,94,832,6946,54880,412714,2975752,20722306,140285200,928323034,6031661272,38617025266,244322679520,1531014308554,9519483716392,58816232361826,361524350929840,2212804949145274,13497228660885112 ★ a(n) is the number of nonnegative integers k less than 10 ^ n such that the decimal representation of k lacks at least one of digits 1, 2, at least one of digits 3,4, at least o

ne of digits 5,6 and at least one of digits 7,8,9. • a(n) = 24 * 6 ^ n - 60 * 5 ^ n + 62 * 4 ^ n - 33 * 3 ^ n + 9 * 2 ^ n - 1. •

► [A190988] 0,1,10,94,880,8236,77080,721384,6751360,63185296,591344800,5534336224,51795293440,484746917056,4536697409920,42458492596864,397364741509120,3718896459510016,34804776146045440,325734382703394304,3048515170157670400,28530745405356338176 ⋆ a(n) = 10 * a(n - 1) - 6 * a(n - 2), with a(0)=0, a(1)=1. • a(n) = (1 / 38) * sqrt(19) * ((5 + sqrt(19)) ^ n - (5 - sqrt(19)) ^ n). - _ Paolo P. Lava _ , May 31 2011 • a(n) = 6 ^ ((n - 1) / 2) * ChebyshevU(n - 1, 5 / sqrt(6)). •

► [A287830] 1,10,94,886,8350,78694,741646,6989590,65872894,620814406,5850821230,55140648694,519669123166,4897584703270,46156938822094,435002788211926,4099652849195710,38636886795609094,364130592557264686,3431722880197818550,32342028292009425694 ⋆ Number of sequences over the alphabet { 0,1,..., 9 } such that no two consecutive terms have distance 7. • a(n) = 9 * a(n - 1) + 4 * a(n - 2), a(0)=1, a(1)=10. • a(n) = ((1 - 11 / sqrt(97)) / 2) * ((9 - sqrt(97)) / 2) ^ n + ((1 + 11 / sqrt(97)) / 2) * ((9 + sqrt(97)) / 2) ^ n. •

► [A190987] 0,1,10,95,900,8525,80750,764875,7245000,68625625,650031250,6157184375,58321687500,552430953125,5232701093750,49564856171875,469485056250000,4447026281640625,42122837535156250,398993243943359375,3779318251757812500,35798216297861328125 ⋆ a(n) = 10 * a(n - 1) - 5 * a(n - 2), with a(0)=0, a(1)=1. • a(n) = (1 / 20) * sqrt(5) * ((5 + 2 * sqrt(5)) ^ n - (5 - 2 * sqrt(5)) ^ n). - _ Paolo P. Lava _ , May 31 2011 •

► [A197083] 0,10,96,445,1431,3681,8141,16142,29466,50412,81862,127347,191113,278187,394443,546668,742628,991134,1302108,1686649,2157099,2727109,3411705,4227354,5192030 ⋆ Number of solutions to a + b + c=d + e + f with 0<a<=n, 0<=b,c,d,e,f<=n. • a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>5, a(0)=0, a(1)=10,a(2)=96, a(3)=445, a(4)=1431, a(5)=3681. • a(n) = (66 * n ^ 5 + 275 * n ^ 4 + 440 * n ^ 3 + 325 * n ^ 2 + 94 * n) / 120 = n * (n + 1) * (66 * n ^ 3 + 209 * n ^ 2 + 231 * n + 94) / 120. •

► [A125945] 10,96,892,8076,71500,619236,5241652,43355436,350740540,2780210676,21641505412,165814383996,1253254845580,9362782430916,69259450905172,508062802935756,3700662365318620,26794126632247956,193018363703408932,1384505203965202716 ⋆ a(n) is the number of nonnegative integers k less than 10 ^ n such that the decimal representation of k lacks at least one of digits 1,2, at least one of digits 3,4 and at least one of digits 5,6,7,8,9. • a(n) = 20 * 7 ^ n - 60 * 6 ^ n + 85 * 5 ^ n - 70 * 4 ^ n + 34 * 3 ^ n - 9 * 2 ^ n + 1. •

► [A190986] 0,1,10,96,920,8816,84480,809536,7757440,74336256,712332800,6825982976,65410498560,626801053696,6006368542720,57556481212416,551539337953280,5285167454683136,50645517195018240,485314502131449856,4650562952534425600,44564371516818456576 ⋆ a(n) = 10 * a(n - 1) - 4 * a(n - 2), with a(0)=0, a(1)=1. • a(n) = (1 / 42) * sqrt(21) * ((5 + sqrt(21)) ^ n - (5 - sqrt(21)) ^ n). - _ Paolo P. Lava _ , May 31 2011 •

► [A287831] 1,10,96,924,8892,85572,823500,7924932,76265388,733938084,7063035084,67970944260,654116708844,6294876045156,60578584659468,582976518206148,5610260171812140,53990200655546148,519573366930788172,500010150631037 0436,48118353758378062956 ⋆ Number of sequences over the alphabet { 0,1,..., 9 } such that no two consecutive terms have distance 8. • a(n) = 9 * a(n - 1) + 6 * a(n - 2), a(0)=1, a(1)=10. • a(n) = ((1 - 11 / sqrt(105)) / 2) * ((9 - sqrt(105)) / 2) ^ n + ((1 + 11 / sqrt(105)) / 2) * ((9 + sqrt(105)) / 2) ^ n. •

► [A190985] 0,1,10,97,940,9109,88270,855373,8288920,80323081,778364050,7542671257,73091620420,708288190429,6863607043030,66511205859013,644521237461040,6245678757033361,60523223857950490,586495202308404817,5683382351510196700,5507433790817655254 9 ⋆ a(n) = 10 * a(n - 1) - 3 * a(n - 2), with a(0)=0, a(1)=1. • a(n) = (1 / 44) * sqrt(22) * ((5 + sqrt(22)) ^ n - (5 - sqrt(22)) ^ n). - _ Paolo P. Lava _ , May 31 2011 •

► [A198968] 10,98,890,8018,72170,649538,5845850,52612658,473513930,4261625378,38354628410,345191655698,3106724901290,27960524111618,251644717004570,2264802453041138,20383222077370250,183448998696332258,1651040988266990330 ⋆ 11 * 9 ^ n - 1. • a(n) = 9 * a(n - 1) + 8. a(n) = 10 * a(n - 1) - 9 * a(n - 2), n>1. •

► [A125946] 10,98,940,8798,80140,709238,6096100,50950718,415060060,3305238278,25807024660,198131841038,1499550640780,11213044626518,82997777543620,609099122145758,4437879770746300,32138240678881958,231547934781860980,1661033550903240878 ⋆ a(n) is the number of nonnegative integers k less than 10 ^ n such that the decimal representation of k lacks at least one of digits 1,2, at least one of digits 3,4,5 and at least one of digits 6,7,8,9. • a(n) = 24 * 7 ^ n - 72 * 6 ^ n + 98 * 5 ^ n - 76 * 4 ^ n + 35 * 3 ^ n - 9 * 2 ^ n + 1. •

► [A125880] 10,98,946,9026,85330,800738,7463746,69054146,633214450,5746812578,51574432546,457575310466,4014480866770,34850492651618,299615359353346,2553264555537986,21587837904314290,181256003521421858,1512536914179602146,12553861394003656706 ⋆ a(n) is the number of nonnegative integers k less than 10 ^ n such that the decimal representation of k lacks at least one of the digits 1,2 and at least one of the digits 3,4,5,6,7,8,9. • a(n) = 14 * 8 ^ n - 49 * 7 ^ n + 91 * 6 ^ n - 105 * 5 ^ n + 77 * 4 ^ n - 35 * 3 ^ n + 9 * 2 ^ n - 1. •

► [A125445] 1,10,98,946,9282,91090,894050,8775154,86128770,845360146,8297271458,81438324274,799323090114,7845414405202,77003314367714,755793144551026,7418164815909030,72809828499516562,714633775022856482 ⋆ Number of base 10 circular n - digit numbers with adjacent digits differing by 8 or less. • a(n) = 1 + ((9 - sqrt(113)) / 2) ^ n + ((9 + sqrt(113)) / 2) ^ n for n>0. • a(n) = 10 * a(n - 1) - a(n - 2) - 8 * a(n - 3) for n>3. •

► [A163446] 1,10,98,948,9092,86696,823432,7799760,73743376,696308896,6568853024,61930496832,583619061824,5498214185600,51787045136512,4877034426769 92,45924582843681 28,432417191039165 44,407135092031840768 ⋆ a(n) = 16 * a(n - 1) - 62 * a(n - 2) for n > 1; a(0) = 1, a(1) = 10. • a(n) = ((1 + sqrt(2)) * (8 + sqrt(2)) ^ n + (1 - sqrt(2)) * (8 - sqrt(2)) ^ n) / 2. •

► [A190869] 0,1,10,98,960,9404,92120,902392,8839680,86592016,848240800,8309223968,81395758080,797339132864,7810599812480,76511319859072,749491998965760,7341897349939456,71919989501463040,704516100314751488,6901321024144588800,676041780408163850 24 ⋆ a(n) = 10 * a(n - 1) - 2 * a(n - 2), a(0)=0, a(1)=1. • a(n) = ((5 + sqrt(23)) ^ n - (5 - sqrt(23)) ^ n) / (2 * sqrt(23)). •

► [A254599] 1,10,98,962,9442,92674,909602,8927810,87627106,860066434,8441614754,82855064258,813228496354,7981896981250,78342900802082,768941283068738,7547214754035298,74076463050867586,727065885490090658,7136204673817756610,70042369148280534754 ⋆ Numbers of words on alphabet { 0,1,...,9 } with no subwords ii, for i from { 0,1 } . • a(n) = 9 * a(n - 1) + 8 * a(n - 2) with n>1, a(0) = 1, a(1) = 10. • a(n) = (2 ^ (- 1 - n) * ((9 - r) ^ n * (- 11 + r) + (9 + r) ^ n * (11 + r))) / r, where r=sqrt(113). - _ Colin Barker _ , Jan 22 2017 •

► [A081109] 1,10,99,972,9477,91854,885735,8503056,81310473,774840978,7360989291,69735688020,659002251789,6213449802582,58462914051567,549043018919064,5147278302366225,48178524910147866,450283905890997363 ⋆ 9th binomial transform of (1,1,0,0,0,0,0,...). • a(n) = 18 * a(n - 1) - 81 * a(n - 2), a(0) = 1, a(1) = 10. • a(n) = (n + 9) * 9 ^ (n - 1). •

► [A004189] 0,1,10,99,980,9701,96030,950599,9409960,93149001,922080050,9127651499,90354434940,894416697901,8853812544070,87643708742799,867583274883920,8588189040096401,85014307126080090,841554882220704499,8330534515080964900,82463790268588944501,816307368170808480110 ⋆ a(n) = 10 * a(n - 1) - a(n - 2); a(0) = 0, a(1) = 1. • a(n) = S(2 * n - 1, sqrt(12)) / sqrt(12) = S(n - 1, 10); S(n, x) := U(n, x / 2), Chebyshev polynomials of 2nd kind, A049310. S(- 1 , x) := 0. • a(n) = ((5 + 2 * sqrt(6)) ^ n - (5 - 2 * sqrt(6)) ^ n) / (4 * sqrt(6)) . • a(- n) = - a(n). - _ Michael Somos _ , Sep 05 2006 • a(n) = 9 * (a(n - 1) + a(n - 2)) - a(n - 3). • a(n) = 11 * (a(n - 1) - a(n - 2)) + a(n - 3). • a(n) = 10 * a(n - 1) - a(n - 2). (End) •

► [A322054] 10,99,981,9720,96309,954261,9455130,93684519,928256841,9197472240,91131561729,902961305721,8946835807050,88648174014939,878355088397901,8703029361715560,86232460051021149,854419404714630381,8465866782890863770 ⋆ Number of decimal strings of length n that do not contain a specific string xx (where x is a single digit). • a(n) = 9 * a(n - 1) + 9 * a(n - 2) for n >= 3. •

► [A179558] 10,99,985,9825,98125,980625,9803125,98015625,980078125,9800390625,98001953125,980009765625,9800048828125,98000244140625,980001220703125,9800006103515625,98000030517578125,980000152587890625,9800000762939453125,98000003814697265625 ⋆ a(1)=10; a(n) = a(n - 1) * 10 - 5 ^ (n - 2). • a(n) = (1 / 50) * (49 * 10 ^ n + 2 * 5 ^ n). - _ Paolo P. Lava _ , Aug 26 2010, edited by _ Robert Israel _ , Mar 02 2023 • a(n) = 15 * a(n - 1) - 50 * a(n - 2) for n > 2. •

► [A179556] 10,99,988,9876,98752,987504,9875008,98750016,987500032,9875000064,98750000128,987500000256,9875000000512,98750000001024,987500000002048,9875000000004096,98750000000008192,987500000000016384,9875000000000032768,98750000000000065536 ⋆ a(1) = 10; a(n) = a(n - 1) * 10 - 2 ^ (n - 2). • a(n) = (1 / 80) * (5 * 2 ^ n + 79 * 10 ^ n). - _ Paolo P. Lava _ , Aug 26 2010 • a(n) = 12 * a(n - 1) - 20 * a(n - 2) for n > 2. •

► [A179477] 10,99,988,9877,98766,987655,9876544,98765433,987654322,98765432 11,98765432100,987654320989,9876543209878,98765432098767,987654320987656,9876543209876545,98765432098765434,987654320987654323,9876543209876543212,98765432098765432101 ⋆ Antonym of A014824: each term is 10 times the previous term minus n. • a(n) = 12 * a(n - 1) - 21 * a(n - 2) + 10 * a(n - 3) for n >2. • a(n) = (10 + 2 ^ (5 + n) * 5 ^ (2 + n) + 9 * n) / 81. - _ Colin Barker _ , Mar 25 2017 •

► [A179555] 10,99,989,9889,98889,988889,9888889,98888889,988888889,9888888889,98888888889,988888888889,9888888888889,98888888888889,988888888888889,9888888888888889,98888888888888889,988888888888888889,9888888888888888889 ⋆ a(1)=10; a(n) = a(n - 1) * 10 - 1. • a(n) = (1 / 90) * (10 + 89 * 10 ^ n) with n>=1. - _ Paolo P. Lava _ , Aug 26 2010 • a(n) = 11 * a(n - 1) - 10 * a(n - 2) for n>2. •

► [A179557] 10,99,991,9909,99091,990909,9909091,99090909,990909091,9909090909,99090909091,990909090909,9909090909091,99090909090909,990909090909091,9909090909090909,99090909090909091,990909090909090909,9909090909090909091,99090909090909090909 ⋆ a(1)=10; a(n)=a(n - 1) * 10 -/+ 1 (alternating) • a(n)=(1 / 11) * [(- 1) ^ (n - 1) + 109 * 10 ^ (n - 1)], with n>=1. [_ Paolo P. Lava _ , Aug 26 2010] • a(1)=10, a(2)=99, a(n)=9 * a(n - 1) + 10 * a(n - 2). - _ Harvey P. Dale _ , Jul 21 2014 •

► [A300000] 1,10,99,999,9990,99900,999000,9990000,99900000,999000000,9990000000,99899999991,998999999919,9989999999190,99899999991900,998999999918991,9989999999189910,99899999991899109,998999999918991090,9989999999189910900,99899999991899108991,998999999918991089910,9989999999189910899100 ⋆ The sum of the first n terms of the sequence is the concatenation of the first n digits of the sequence, with a(1) = 1. • a(n) = c(n) - c(n - 1), where c(n) is the concatenation of the first n digits. c(n) ~ 1.1 * 10 ^ (n - 1), and a(n) ~ 0.999 * 10 ^ (n - 1). - _ M. F. Hasler _ , Feb 22 2018 •

► [A007924] 0,1,10,100,101,1000,1001,10000,10001,10010,10100,100000,100001,1000000,1000001,1000010,1000100,10000000,10000001,100000000,100000001,100000010,100000100,1000000000,1000000001 ⋆ The number n written using the greedy algorithm in the base where the values of the places are 1 and primes. • a(n) is the binary representation of b(n) = 2 ^ pi(n) + b(n - p(pi(n))) for n > 0 and a(0) = b(0)= 0, where pi(k) = number of primes <= k (A000720) and p(k) = k - th prime (A008578). - _ Frank Ellermann _ , Dec 18 2001 •

► [A276349] 10,100,110,1000,1100,1110,10000,11000,11100,11110,100000,110000,111000,111100,111110,1000000,1100000,1110000,1111000,1111100,1111110,10000000,11000000,11100000,11110000 ⋆ Numbers consisting of a nonempty string of 1's followed by a nonempty string of 0's. • a((m ^ 2 - m) / 2 + j) = 10 ^ (m + 1) * (1 - 10 ^ (- j)) / 9 for m>=1, 1<=j<=m. •

► [A208375] 10,100,240,420,640,900,1200,1540,1920,2340,2800,3300,3840,4420,5040,5700,6400,7140,7920,8740,9600,10500,11440,12420,13440 ⋆ Number of n X 4 0..1 arrays avoiding 0 0 0 and 1 1 1 horizontally and 0 0 1 and 1 0 1 vertically. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>4. •

► [A208065] 10,100,240,576,1008,1764,2688,4096,5760,8100,10800,14400,18480,23716,29568,36864,44928,54756,65520,78400,92400,108900,126720,147456,169728 ⋆ Number of n X 4 0..1 arrays avoiding 0 0 0 and 1 1 1 horizontally and 0 0 1 a

nd 0 1 1 vertically. ● a(n) = n ^ 2 * (n + 8) ^ 2 / 4 for n>1 and even. ● a(n) = (n - 1) * (n + 1) * (n + 7) * (n + 9) / 4 for n>1 and odd. ●

▶ [A207449] 10,100,330,760,1450,2460,3850,5680,8010,10900,14410,18600,23530,29260,35850,43360,51850,61380,72010,83800,96810,111100,126730,143760,162250 ★ Number of n X 4 0..1 arrays avoiding 0 0 0 and 0 0 1 horizontally and 0 0 1 and 1 0 1 vertically. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>4. ●

▶ [A207255] 10,100,370,940,1950,3560,5950,9320,13890,19900,27610,37300,49270,63840,81350,102160,126650,155220,188290,226300,269710,319000,374670,437240,507250 ★ Number of 4 X n 0..1 arrays avoiding 0 0 1 and 1 0 1 horizontally and 0 1 0 and 1 0 1 vertically. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

▶ [A208283] 10,100,378,984,2090,3900,6650,10608,16074,23380,32890,45000,60138,78764,101370,128480,160650,198468,242554,293560,352170,419100,495098,580944,677450 ★ Number of n X 4 0..1 arrays avoiding 0 0 0 and 0 0 1 horizontally and 0 0 1 and 1 1 0 vertically. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

▶ [A086115] 10,100,390,1080,2470,4980,9170,15760,25650,39940,59950,87240,123630,171220,232410,309920,406810,526500,672790,849880,1062390,1315380,1614370,1965360,2374850 ★ Number of 5 X n (0,1) matrices such that each row and each column is nondecreasing or nonincreasing. ● a(n) = 1 / 6 * n * (n ^ 4 + 10 * n ^ 3 + 35 * n ^ 2 + 50 * n - 36). More generally, number of m X n (0, 1) matrices such that each row and each column is increasing or decreasing is 2 * n * (2 * binomial(n + m - 1, n) - m) = 4 / Beta(m, n) - 2 * m * n. ●

▶ [A222716] 0,10,100,460,1460,3710,8120,15960,28920,49170,79420,122980,183820,266630,376880,520880,705840,939930,1232340,1593340,2034340,2567950,3208040,3969800,4869800 ★ Numbers which are both the sum of n + 1 consecutive triangular numbers and the sum of the n - 1 immediately following triangular numbers. ● a(n) = T(n ^ 2 - n - 1) + T(n ^ 2 - n) + ... + T(n ^ 2 - 1) = T(n ^ 2) + T(n ^ 2 + 1) + ... + T(n ^ 2 + n - 2), where T = A000217. ● a(n) = (3 * n ^ 5 - 5 * n ^ 3 + 2 * n) / 6 = (n - 1) * n * (n + 1) * (3 * n ^ 2 - 2) / 6. ● a(n) = TP(n ^ 2 - 1) - TP(n ^ 2 - n - 2) = TP(n ^ 2 + n - 2) - TP(n ^ 2 - 1) = TP(n - 1) * (3 * n ^ 2 - 2), where TP = A000292. [_ Jonathan Sondow _ , Mar 04 2013] ●

▶ [A364342] 10,100,475,1675,4954,12952,30817,67987,140907,277033,520565,940455,1641355,2778305,4576113,7354549,11560664,17809754,26936719,40059819,58659104,84672094,120609609,169694999,236030401 ★ a(n) is the number of base - 10 nonbouncy numbers below 10 ^ n. ● a(1) = 10, a(2) = 100. For n > 2, a(n) = binomial(n + 9, n) + (n + 1) * binomial(n + 10, n + 1) / 10 - 10 * n - 1. ●

▶ [A334612] 0,10,100,955,9296,92704,944636,9801929,103262436,1101802764,11883775540,129365990061,1419569592748,15686292728288,174399501150236,1949516926153045,21898270953801720,247045453792464294,2797968888077323968,31801559116255638374,362622937212800684560 ★ a(n) is the total number of down - steps after the final up - step in all 4 _ 3 - Dyck paths of length 5 * n (n up - steps and 4 * n down - steps). ● a(n) = 4 * binomial(5 * (n + 1) + 4, n + 1) / (5 * (n + 1) + 4) - 16 * binomial(5 * n + 4, n) / (5 * n + 4). ●

▶ [A125948] 10,100,982,9388,86950,778780,6748822,56713708,463661830,3700940860,28941318262,222422713228,1684544507110,12602134130140,93308618633302,684912371803948,4990975002030790,36147245625290620,260449744313893942 ★ a(n) is the number of nonnegative integers k less than 10 ^ n such that the decimal representation of k lacks at least one of digits 1,2,3, at least one of digits 4,5,6 and at least one of digits 7,8,9. ● a(n) = 27 * 7 ^ n - 81 * 6 ^ n + 108 * 5 ^ n - 81 * 4 ^ n + 36 * 3 ^ n - 9 * 2 ^ n + 1. ●

▶ [A125897] 10,100,994,9796,95650,924820,8845714,83575396,778945090,7156197940,64800104434,578648865796,5100362368930,44424892053460,3828393506911 54,32680625409529 96,27665402010407170,232490197792427380,194131587449826 9874 ★ a(n) is the number of nonnegative integers k less than 10 ^ n such that the decimal representation of k lacks at least one of the digits 1,2,3 and at least one of the digits 4,5,6,7,8,9. ● a(n) = 18 * 8 ^ n - 63 * 7 ^ n + 111 * 6 ^ n - 120 * 5 ^ n + 83 * 4 ^ n - 36 * 3 ^ n + 9 * 2 ^ n - 1. ●

▶ [A125904] 10,100,1000,9976,98920,971440,9420400,90005176,846101080,7822770880,71163913600,637585923976,5633160763240,49148451899920,424055315011600,3623013325068376,30689130457473400,258015134469182560,21551431294587 30400 ★ a(n) is the number of nonnegative integers k less than 10 ^ n such that the decimal representation of k lacks at least one of the digits 1,2,3,4 and at least one of the digits 5,6,7,8,9. ● a(n) = 20 * 8 ^ n - 70 * 7 ^ n + 120 * 6 ^ n - 125 * 5 ^ n + 84 * 4 ^ n - 36 * 3 ^ n + 9 * 2 ^ n - 1. ●

▶ [A125858] 10,100,1000,10000,100000,1000000,10000000,100000000,999637120,9980041600,99381289600,985729744000,9726841354240,95404977568000,929690189228800,8999055703648000,86532737999167360,826798452380099200,7852626768025993600 ★ a(n) is the number of nonnegative integers k less than 10 ^ n such that the decimal representation of k lacks at least one of digits 1,2,3,4,5,6,7,8,9. ● a(n) = 9 * 9 ^ n - 36 * 8 ^ n + 84 * 7 ^ n - 126 * 6 ^ n + 126 * 5 ^ n - 84 * 4 ^ n + 36 * 3 ^ n - 9 * 2 ^ n + 1. ●

▶ [A178501] 0,1,10,100,1000,10000,100000,1000000,10000000,100000000,1000000000,10000000000,100000000000,1000000000000,10000000000000,100000000000000,1000000000000000,10000000000000000,100000000000000000 ★ Zero followed by powers of ten. ● a(n) = (10 ^ n - 0 ^ n) / 10. E.g.f.: exp(5 * x) * sinh(5x) / 5. Binomial transform of A015577. - _ Paul Barry _ , Jul 09 2003 ●

▶ [A011557] 1,10,100,1000,10000,100000,1000000,10000000,100000000,1000000000,10000000000,100000000000,1000000000000,10000000000000,100000000000000,1000000000000000,10000000000000000,100000000000000000 ★ Powers of 10: a(n) = 10 ^ n. ● a(n) = 10 ^ n. ● a(n) = 10 * a(n - 1). ●

▶ [A267044] 1,10,100,1000,10001,100010,1000101,10001010,100010101,1000101010,10001010101,100010101010,1000101010101,10001010101010,100010101010101,1000101010101010,10001010101010101,100010101010101010 ★ Binary representation of the column of the ” Rule 91” elementary cellular automaton starting with a single ON (black) cell. ● a(n) = (- 550 + 450 * (- 1) ^ n + 9901 * 10 ^ n) / 9900 for n>1. ● a(n) = 10 * a(n - 1) + a(n - 2) - 10 * a(n - 3) for n>4. [Typo corrected by _ Karl V. Keller, Jr. _ , Mar 16 2022] ●

▶ [A266445] 1,10,100,1000,10001,100010,1000101,10001010,100010101,1000101011,10001010110,100010101100,1000101011000,10001010110001,100010101100010,1000101011000101,10001010110001010,100010101100010101,1000101011000101010,10001010110001010101 ★ Binary representation of the middle column of the ” Rule 25” elementary cellular automaton starting with a single ON (black) cell. ● a(n) = (- 9 * (- 1) ^ n + 9901000008901 * 2 ^ (n - 10) * 5 ^ (n - 11) - 11) / 198 for n>10. ●

▶ [A281146] 1,10,100,1000,10100,101000,1010100,10101000,101010100,1010101000,10101010100,101010101000,1010101010100,10101010101000,101010101010100,1010101010101000,10101010101010100,101010101010101000 ★ Binary representation of the x - axis, from the origin to the right edge, of the n - th stage of growth of the two - dimensional cellular automaton defined by ”Rule 515”, based on the 5 - celled von Neumann neighborhood. ● a(n) = 100 * (10 ^ n - 1) / 99 for n>1 and even. ● a(n) = 100 * (10 ^ n - 10) / 99 for n>1 and odd. ● a(n) = 10 * a(n - 1) + a(n - 2) - 10 * a(n - 3) for n>2. ●

▶ [A033146] 1,10,100,1001,10010,100100,1001001,10010010,100100100,1001001001,10010010010,100100100100,1001001001001,10010010010010,100100100100100,1001001001001001,10010010010010010 ★ Decimal expansion of a(n) is given by the first n terms of the periodic sequence with initial period 1,0,0. ● a(n) = 10 * a(n - 1) + a(n - 3) - 10 * a(n - 4). ● a(n) = Sum _{ k=0..floor(n / 3) } 10 ^ (n - 3k), with offset 0. ● a(n) = Sum _{ k=0..n } 10 ^ k * (cos(2 * Pi * (n - k) / 3 + Pi / 3) / 3 + sqrt(3) * sin(2 * Pi * (n - k) / 3 + Pi / 3) / 3 + 1 / 3)), with offset 0. (End) ● a(n) = 10 * a(n - 1) + (1 / 9) * ((n mod 3) + 4 * ((n + 1) mod 3) - 2 * ((n + 2) mod 3)), with a(0)=0. - _ Paolo P. Lava _ , Jul 30 2009 ● a(n) = - (1 / 27) + (1000 / 999) * 10 ^ n + (5 / 333) * i * sqrt(3) * ((- 1 / 2 - (1 / 2) * i * sqrt(3)) ^ n - (- 1 / 2 + (1 / 2) * i * sqrt(3)) ^ n) + (2 / 111) * ((- 1 / 2 - (1 / 2) * i * sqrt(3)) ^ n + (- 1 / 2 + (1 / 2) * i * sqrt(3)) ^ n), where i=sqrt(- 1). - _ Paolo P. Lava _ , Jul 30 2009 ● a(n) = round((100 / 999) * 10 ^ n). - _ Tani Akinari _ , Jul 15 2014 ●

▶ [A266071] 1,10,100,1001,10010,100101,1001010,10010101,100101010,1001010101,10010101010,100101010101,1001010101010,10010101010101,100101010101010,1001010101010101,10010101010101010,100101010101010101 ★ Binary representation of the middle column of the ” Rule 3” elementary cellular automaton starting with a single ON (black) cell. ● a(n) = floor(991 * 10 ^ n / 990). - _ Karl V. Keller, Jr. _ , Oct 09 2021 ●

▶ [A262863] 1,10,100,1001,10011,100110,1001100,10011001,100110011,1001100110,10011001100,100110011001,1001100110011,10011001100110,100110011001100,1001100110011001,10011001100110011,100110011001100110,1001100110011001100 ★ Binary representation of the middle column of the ” Rule 147” elementary cellular automaton starting with a single ON (black) cell. ● a(n) = 11 * a(n - 1) - 11 * a(n - 2) + 11 * a(n - 3) - 10 * a(n - 4) for n>3. ● a(n) = floor(100100 * 10 ^ n / 99990). - _ Karl V. Keller, Jr. _ , Aug 21 2021 ●

▶ [A267156] 1,10,100,1001,10011,100111,1001111,10011111,100111111,1001111111,10011111110,100111111101,1001111111010,10011111110101,100111111101010,1001111111010101,10011111110101010,100111111101010101 ★ Binary representation of the middle column of the ” Rule 107” elementary cellular automaton starting with a single ON (black) cell. ● a(n) = (- 9 * (- 1) ^ n + 9910999999 * 2 ^ (n - 7) * 5 ^ (n - 8) - 11) / 198 for n>7. ● a(n) = 10 * a(n - 1) + a(n - 2) - 10 * a(n - 3) for n>4. ●

▶ [A267524] 1,10,100,1001,10011,100111,1001111,10011111,100111111,1001111111,10011111111,100111111111,1001111111111,10011111111111,100111111111111,1001111111111111,10011111111111111,100111111111111111 ★ Binary representation of the middle column of the ” Rule 139” elementary cellular automaton starting with a single ON (black) cell. ● a(n) = 11 * a(n - 1) - 10 * a(n - 2) for n > 3. [n range correction - _ Karl V. Keller, Jr. _ , Apr 08 2022] ●

▶ [A277865] 1,10,100,1011,10000,101111,1000000,10111111,100000000,1011111111,10000000000,101111111111,1000000000000,10111111111111,100000000000000,1011111111111111,10000000000000000,101111111111111111 ★ Binary representation of the x - axis, from the origin to the right edge, of the n - th stage of growth of the two - dimensional cellular automaton defined by ”Rule 3”, based on the 5 - celled von Neumann neighborhood. ● a(n) = (- 10 - (- 10) ^ n + 10 * (- 1) ^ n + 181 * 10 ^ n) / 180. (End) ●

▶ [A283214] 1,10,100,1011,10001,101110,1000100,10111011,100010001,1011101110,10001000100,101110111011,1000100010001,10111011101110,100010001000100,1011101110111011,10001000100010001,101110111011101110,100010001000100010,1011101110111011101110 ★ Binary representation of the x - axis, from the left edge to the origin, of the n - th stage of growth of the two - dimensional cellular automaton defined by ”Rule 597”, based on the 5 - celled von Neumann neighborhood. ● a(n) = 100 * a(n - 2) + a(n - 4) - 100 * a(n - 6) for n>5. ●

▶ [A283355] 1,10,100,1011,10001,101110,1000110,10111110,100011110,1011111110,10001111110,101111111110,1000111111110,10111111111110,100011111111110,1011111111111110,10001111111111110,101111111111111110,1000111111111111110,10111111111111111110 ★ Binary representation of the x - axis, from the left edge to the origin, of the n - th stage of growth of the two - dimensional cellular automaton defined by ”Rule 621”, based on the 5 - celled von Neumann neighborhood. ● a(n) = (- 20000 - 99 * (- 10) ^ n + 18101 * 10 ^ n) / 18000 for n>4. ● a(n) = a(n - 1) + 100 * a(n - 2) - 100 * a(n - 3) for n>5. ●

▶ [A199763] 10,100,1090,11980,131770,1449460,15944050,175384540,1929229930,21221529220,233436821410,2567805035500,28245855390490,310704409295380,3417748502249170,37595233524740860,413547568772149450,4549023256493643940 ★ a(n) = 9 * 11 ^ n + 1. ● a(n) = 11 * a(n - 1) - 10. ● a(n) = 12 * a(n - 1) - 11 * a(n - 2). ●

▶ [A097178] 1,10,100,1110,10000,122110,1000000,13333110,100000000,1446644110,10000000000,156111055110,1000000000000,16767216566110,100000000000000,1793488873177110,10000000000000000,191142376190888110 ★ Expansion of (1 + 10 * x - 101 * x ^ 2 - 900 * x ^ 3) / ((1 - 100 * x ^ 2) * (1 - 101 * x ^ 2)). ● a(n

) = (55 / sqrt(101)) * ((sqrt(101)) ^ n - (- sqrt(101)) ^ n) + 10 ^ n * (11 * (- 1) ^ n - 9) / 2. ● a(n) = 201 * a(n - 2) - 10100 * a(n - 4). ●

▶ [A283352] 1,10,100,1110,11100,111110,1111100,11111110,111111100,1111111110,11111111100,111111111110,1111111111100,11111111111110,111111111111100,1111111111111110,11111111111111100,111111111111111110,1111111111111111110 ⋆ Binary representation of the x - axis, from the origin to the right edge, of the n - th stage of growth of the two - dimensional cellular automaton defined by "Rule 619", based on the 5 - celled von Neumann neighborhood. ● a(n) = 10 * (10 ^ n - 10) / 9 for n>0 and even. ● a(n) = 10 * (10 ^ n - 1) / 9 for n odd. ● a(n) = 10 * a(n - 1) + a(n - 2) - 10 * a(n - 3) for n>3. ●

▶ [A288790] 1,10,101,947,8670,79249,730745,6838642,65197797,634656360,6316333291,64318009411,670336612614,7151290120037,78085166445577,872478836270306,9972817907218608,116575837400037486,1393037460835481622,17010118386233081680,212160149063581345610 ⋆ Number of blocks of size >= eight in all set partitions of n. ● a(n) = Bell(n + 1) - Sum _{ j=0..7 } binomial(n,j) * Bell(n - j). ● a(n) = Sum _{ j=0..n - 8 } binomial(n,j) * Bell(j). ●

▶ [A280371] 1,10,101,1000,10000,101000,1010100,10000010,100000001,1010000000,10101000000,100000100000,1000000000000,10100000000000,101010000000000,1000001000000000,10000000000000000,101000000000000000,1010100000000000000,10000010000000000000 ⋆ Binary representation of the x - axis, from the left edge to the origin, of the n - th stage of growth of the two - dimensional cellular automaton defined by "Rule 260", based on the 5 - celled von Neumann neighborhood. ● a(n) = 10000 * a(n - 4) for n>3. ●

▶ [A123522] 0,10,101,1002,10003,100004,1000005,10000006,100000007,1000000008,10000000009,100000000010,1000000000011,10000000000012,100000000000013,1000000000000014,10000000000000015,100000000000000016 ⋆ Not of the form n + [log _ 10 n]. ● a(n) = 10 ^ n + n - 1. ● a(n) = 12 * a(n - 1) - 21 * a(n - 2) + 10 * a(n - 3). (End) ●

▶ [A266612] 1,10,101,1010,10100,101001,1010010,10100101,101001010,1010010101,10100101010,101001010101,1010010101010,10100101010101,101001010101010,1010010101010101,10100101010101010,101001010101010101,1010010101010101010,10100101010101010101 ⋆ Binary representation of the middle column of the "Rule 41" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = (- 9 * (- 1) ^ n + 99991 * 2 ^ (n - 2) * 5 ^ (n - 3) - 11) / 198 for n>2. ● a(n) = 10 * a(n - 1) + a(n - 2) - 10 * a(n - 3) for n>2. ●

▶ [A267588] 1,10,101,1010,10100,101001,1010011,10100111,101001111,1010011111,10100111111,101001111111,1010011111111,10100111111111,101001111111111,1010011111111111,10100111111111111,101001111111111111,1010011111111111111 ⋆ Binary representation of the middle column of the "Rule 169" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = 11 * a(n - 1) - 10 * a(n - 2) for n>3. ●

▶ [A267514] 1,10,101,1010,10101,101010,1010100,10101001,101010010,1010100101,10101001010,101010010101,1010100101010,10101001010100,101010010101001,1010100101010010,10101001010100101,101010010101001010,1010100101010010101,10101001010100101010 ⋆ Binary representation of the middle column of the "Rule 137" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = 10 * a(n - 1) + a(n - 7) - 10 * a(n - 8) for n>7. ●

▶ [A056830] 0,1,10,101,1010,10101,101010,1010101,10101010,101010101,1010101010,10101010101,101010101010,1010101010101,10101010101010,101010101010101,1010101010101010,10101010101010101,101010101010101010 ⋆ Alternate digits 1 and 0. ● a(n) = + 10 * a(n - 1) + a(n - 2) - 10 * a(n - 3). ● a(n) = floor(10 ^ (n + 1) / (10 ^ 2 - 1)) = a(n - 2) + 10 ^ (n - 1) = 10 * a(n - 1) + (1 - (- 1) ^ n) / 2. ● a(n + 1) = Sum _{ k=0..floor(n / 2) } 10 ^ (n - 2 * k). ● a(n + 1) = Sum _{ k=0..n } Sum _{ j=0..k } (- 1) ^ (j + k) * 10 ^ j. ● a(n) = 9 * a(n - 1) + 10 * a(n - 2) + 1. ● a(n) = 10 ^ (n + 1) / 99 - (- 1) ^ n / 22 - 1 / 18. (End) ●

▶ [A266247] 1,10,101,1010,10101,101011,1010110,10101101,101011010,1010110101,10101101010,101011010101,1010110101010,10101101010101,101011010101010,1010110101010101,10101101010101010,101011010101010101,1010110101010101010,10101101010101010101 ⋆ Binary representation of the middle column of the "Rule 9" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = (- 45000 * (- 1) ^ n + 1000009 * 10 ^ n - 55000) / 990000 for n > 3. ● a(n) = 10 * a(n - 1) + a(n - 2) - 10 * a(n - 3) for n > 6. ● a(n) = floor((100000 * 10 ^ n / 9 + 100001 * 10 ^ n) / 110000). - _ Karl V. Keller, Jr. _ , Dec 15 2021 ●

▶ [A267879] 1,10,101,1010,10101,101011,1010111,10101111,101011111,1010111111,10101111111,101011111111,1010111111111,10101111111111,101011111111111,1010111111111111,10101111111111111,101011111111111111,1010111111111111111 ⋆ Binary representation of the middle column of the "Rule 233" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = 11 * a(n - 1) - 10 * a(n - 2) for n>4. ●

▶ [A284179] 1,10,101,1010,10111,101111,1010111,10101011,101111101,1011111110,10101111111,101010111111,1011111011111,10111111111111,101011111111111,1010101111111111,10111110111111111,101111111111111111,1010111111111111111,10101011111111111111 ⋆ Binary representation of the x - axis, from the left edge to the origin, of the n - th stage of growth of the two - dimensional cellular automaton defined by "Rule 813", based on the 5 - celled von Neumann neighborhood. ● a(n) = a(n - 1) + 10000 * a(n - 4) - 10000 * a(n - 5) for n>10. ●

▶ [A096883] 1,10,101,1010,10201,102010,1030301,10303010,104060401,1040604010,10510100501,105101005010,1061520150601,10615201506010,107213535210701,1072135352107010,10828567056280801,108285670562808010 ⋆ Expansion of (1 + 10x) / (1 - 101x ^ 2). ● a(n)=9a(n - 1) + 10a(n - 2) + 101 ^ floor((n - 2) / 2); a(n)=sum { k=0..floor(n / 2), binomial(floor(n / 2), k)10 ^ (n - 2k) } . ●

▶ [A266720] 1,10,101,1011,10110,101101,1011010,10110101,101101010,1011010101,10110101010,101101010101,1011010101010,10110101010101,101101010101010,1011010101010101,10110101010101010,101101010101010101,1011010101010101010,10110101010101010101 ⋆ Binary representation of the middle column of the "Rule 59" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = (- 450 * (- 1) ^ n + 10009 * 10 ^ n - 550) / 9900 for n>1. ● a(n) = 10 * a(n - 1) + a(n - 2) - 10 * a(n - 3) for n>4. ● a(n) = floor(10009 * 10 ^ n / 9900). - _ Karl V. Keller, Jr. _ , Oct 17 2021 ●

▶ [A033128] 1,10,101,1011,10110,101101,1011011,10110110,101101101,1011011011,10110110110,101101101101,1011011011011,10110110110110,101101101101101,1011011011011011,10110110110110110,101101101101101101,1011011011011011011,10110110110110110110 ⋆ Decimal expansion of a(n) is given by the first n terms of the periodic sequence with initial period 1,0,1. ● a(n) = 10 * a(n - 1) + (1 / 9) *{- (n mod 3) + 5 * [(n + 1) mod 3] + 2 * [(n + 2) mod 3] } , with a(0)=0. - _ Paolo P. Lava _ , Jul 30 2009 ● a(n) = 10 * a(n - 1) + a(n - 3) - 10 * a(n - 4). G.f.: x * (1 + x ^ 2) / ((x - 1) * (10 * x - 1) * (1 + x + x ^ 2)). - _ R. J. Mathar _ , Oct 05 2009 ● a(n) = floor((101 / 999) * 10 ^ n). - _ Tani Akinari _ , Jul 22 2015 ●

▶ [A267623] 1,10,101,1011,10111,101111,1011111,10111111,101111111,1011111111,10111111111,101111111111,1011111111111,10111111111111,101111111111111,1011111111111111,10111111111111111,101111111111111111,1011111111111111111,10111111111111111111 ⋆ Binary representation of the middle column of the "Rule 187" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = 11 * a(n - 1) - 10 * a(n - 2) for n>2. ●

▶ [A041041] 1,10,101,1020,10301,104030,1050601,10610040,107151001,1082120050,10928351501,110365635060,1114584702101,11256212656070,113676711262801,1148023325284080,11593909964103601,117087122966320090,1182465139627304501,11941738519239365100 ⋆ Denominators of continued fraction convergents to sqrt(26). ● a(n) = 10 * a(n - 1) + a(n - 2), n>=1; a(- 1):=0, a(0)=1. ● a(n) = S(n, 10 * i) * (- i) ^ n where i ^ 2:= - 1 and S(n, x)=U(n, x / 2) Chebyshev's polynomials of the second kind. See A049310. ● a(n) = (ap ^ (n + 1) - am ^ (n + 1)) / (ap - am) with ap = 5 + sqrt(26), am = - 1 / ap = 5 - sqrt(26). ● a(n) = F(n + 1, 10), the (n + 1) - th Fibonacci polynomial evaluated at x=10. - _ T. D. Noe _ , Jan 19 2006 ● a(n) = Sum _{ i=0..floor(n / 2) } binomial(n - i,i) * 10 ^ (n - 2 * i). - _ Sergio Falcon _ , Sep 24 2007 ●

▶ [A163461] 1,10,101,1028,10525,108238,1116809,11551760,119703769,1242078802,12900820685,134090546972,1394465011381,14507216994070,150967169994161,1571338917363368,16357694083001905,170302719022328218 ⋆ a(n) = 18 * a(n - 1) - 79 * a(n - 2) for n > 1; a(0) = 1, a(1) = 10. ● a(n) = ((2 + sqrt(2)) * (9 + sqrt(2)) ^ n + (2 - sqrt(2)) * (9 - sqrt(2)) ^ n) / 4. ●

▶ [A081192] 1,10,101,1030,10601,110050,1151501,12135070,128702801,1372684090,14712104501,158346365110,1710428956601,18532288986130,201313313019101,2191569650755150,23901375026212001,261062105099480170 ⋆ 10th binomial transform of (1,0,1,0,1,.....), A059841. ● a(n) = 20 * a(n - 1) - 99 * a(n - 2), a(0)=1, a(1)=10. ● a(n) = 9 ^ n / 2 + 11 ^ n / 2. ● a(n) = Sum _{ k=0..floor(n / 2) } C(n,2 * k) * 10 ^ (n - 2 * k). ●

▶ [A290070] 1,10,101,1100,11101,111100,1111101,11111100,111111101,1111111100,11111111101,111111111100,1111111111101,11111111111100,111111111111101,1111111111111100,11111111111111101,111111111111111100,1111111111111111101,11111111111111111100 ⋆ Binary representation of the diagonal from the corner to the origin of the n - th stage of growth of the two - dimensional cellular automaton defined by "Rule 641", based on the 5 - celled von Neumann neighborhood. ● a(n) = 10 * a(n - 1) + a(n - 2) - 10 * a(n - 3) for n>4. ●

▶ [A290192] 1,10,101,1101,11100,111101,1111100,11111101,111111100,1111111101,11111111100,111111111101,1111111111100,11111111111101,111111111111100,1111111111111101,11111111111111100,111111111111111101,1111111111111111100 ⋆ Binary representation of the diagonal from the corner to the origin of the n - th stage of growth of the two - dimensional cellular automaton defined by "Rule 705", based on the 5 - celled von Neumann neighborhood. ● a(n) = 10 * a(n - 1) + a(n - 2) - 10 * a(n - 3) for n > 5 (conjectured). ●

▶ [A290412] 1,10,101,1110,11001,111111,1110000,11111111,111100000,1111111111,11111000000,111111111111,1111110000000,11111111111111,111111100000000,1111111111111111,11111111000000000,111111111111111111 ⋆ Binary representation of the diagonal from the corner to the origin of the n - th stage of growth of the two - dimensional cellular automaton defined by "Rule 785", based on the 5 - celled von Neumann neighborhood. ● a(n) = 10 * a(n - 1) + 11 * a(n - 2) - 110 * a(n - 3) - 10 * a(n - 4) + 100 * a(n - 5) for n>6. ●

▶ [A290525] 1,10,101,1111,11000,111111,1110000,11111111,111100000,1111111111,11111000000,111111111111,1111110000000,11111111111111,111111100000000,1111111111111111,11111111000000000,111111111111111111 ⋆ Binary representation of the diagonal from the corner to the origin of the n - th stage of growth of the two - dimensional cellular automaton defined by "Rule 833", based on the 5 - celled von Neumann neighborhood. ● a(n) = 10 * a(n - 1) + 11 * a(n - 2) - 110 * a(n - 3) - 10 * a(n - 4) + 100 * a(n - 5) for n>4. ●

▶ [A290813] 1,10,101,1111,11100,111111,1111100,11111111,111111100,1111111111,11111111100,111111111111,1111111111100,11111111111111,111111111111100,1111111111111111,11111111111111100,111111111111111111 ⋆ Binary representation of the diagonal from the corner to the origin of the n - th stage of growth of the two - dimensional cellular automaton defined by "Rule 961", based on the 5 - celled von Neumann neighborhood. ● a(n) = 10 * (10 ^ n - 10) / 9 for n>2 and even. ● a(n) = (10 ^ (n + 1) - 1) / 9 for n>2 and odd. ● a(n) = 10 * a(n - 1) + a(n - 2) - 10 * a(n - 3) for n>5. ●

▶ [A290834] 1,10,101,1111,11100,111111,1111111,11111111,111111111,1111111111,11111111111,111111111111,1111111111111,11111111111111,111111111111111,1111111111111111,11111111111111111,111111111111111111,1111111111111111111 ⋆ Binary representation of the diagonal from the corner to the origin of the n - th stage of growth of the two - dimensional cellular automaton defined by "Rule 969", based on the 5 - celled von Neumann neighborhood. ● a(n) = (10 ^ (1 + n) - 1) / 9 for n>4. ● a(n) = 11 * a(n - 1) - 10 * a(n - 2) for n>6. ●

▶ [A108892] 10,101,1211,14321,150145,1163512,4340370,8144773,8144773 ⋆ Successive base conversions of prior base representations. ● a(1) = 10; for n>1: a(n) = the base (10) interpretation of a(n - 1), represented in base (n + 1). ●

▶ [A162849] 0,1,10,101,2010,10201,303010,1040201,40703010,107050201,5140803010,11112050201,625200803010,1162613050201,74146210803010,12251331305020

1,86397542108030 10,129927934130502 01,993903552108030 10 ⋆ Pairs of number s that add up to the 'backward decimal expansion' of fraction 1 / 109 and whos e difference is the 'backward decimal expansion' of fraction 1 / 89. ● a(n) = 201 * a(n - 2) - 10100 * a(n - 4) + 9900 * a(n - 6). ●

▶ [A041182] 10,101,2030,20401,410050,4120901,82828070,832401601,1673086009 0,168141002501,3379550910110,33963650103601,682652552982130,686048917992 4901,1378924361514801 50,1385784850694726401 ⋆ Numerators of continued fra ction convergents to sqrt(102). ● a(n) = 202 * a(n - 2) - a(n - 4). [_ Bruno Be rselli _ , Oct 30 2013] ●

▶ [A053041] 1,10,102,1000,10000,100002,1000006,10000000,100000008,100000000 0,10000000010,100000000008,1000000000012,10000000000004,100000000000005,1 000000000000000,10000000000000016,100000000000000008,100000000000000001 8,1000000000000000000 ⋆ Smallest n - digit number divisible by n. ● a(n) = n * ceiling(10 ^ (n - 1) / n). - _ Vladeta Jovovic _ , Dec 27 2001 ●

▶ [A037503] 1,10,102,1021,10210,102102,1021021,10210210,102102102,102102102 1,10210210210,102102102102,1021021021021,10210210210210,102102102102102,1 021021021021021 ⋆ Decimal expansion of a(n) is given by the first n terms of th e periodic sequence with initial period 1,0,2. ● a(n) = 10 * a(n - 1) + (1 / 3) * (- (n mod 3) + 2 * ((n + 1) mod 3) + 2 * ((n + 2) mod 3)), with a(0)=0. - _ Pa olo P. Lava _ , Jul 30 2009 ● a(n) = 10 * a(n - 1) + a(n - 3) - 10 * a(n - 4). - _ Wesley Ivan Hurt _ , Sep 22 2020 ●

▶ [A037680] 1,10,102,1023,10231,102310,1023102,10231023,102310231,102310231 0,10231023102,102310231023,1023102310231,10231023102310,102310231023102,1 023102310231023 ⋆ Decimal expansion of a(n) is given by the first n terms of th e periodic sequence with initial period 1,0,2,3. ● a(n) = 10 * a(n - 1) + (1 / 4) * (- ((n + 1) mod 4) + 2 * ((n + 2) mod 4) + 3 * ((n + 3) mod 4)), with a(0)=0. - _ Paolo P. Lava _ , Jul 30 2009 ●

▶ [A191014] 0,1,10,102,1040,10604,108120,1102408,11240320,114608016,1168560 800,11914824032,121485361920,1238683267264,12629803396480,12877540049932 8,1313013611786240,13387686918861056,136502896412183040,1391804337959552 512,14191049172419891200 ⋆ a(n) = 10 * a(n - 1) + 2 * a(n - 2), with a(0)=0, a (1)=1. ● a(n) = (1 / 18) * sqrt(3) * ((5 + 3 * sqrt(3)) ^ n - (5 - 3 * sqrt(3)) ^ n). - _ Paolo P. Lava _ , May 31 2011 ●

▶ [A162666] 1,10,102,1060,11204,120200,1306008,14340560,158822416,177107344 0,19856872032,223572243520,2525471411264,28599348360320,324490768902528,3 687079238739200,41941489422336256,474496023050283520 ⋆ a(n) = 20 * a(n - 1) - 98 * a(n - 2) for n > 1; a(0) = 1, a(1) = 10. ● a(n) = ((10 + sqrt(2)) ^ n + (10 - sqrt(2)) ^ n) / 2. ●

▶ [A037687] 1,10,103,1032,10321,103210,1032103,10321032,103210321,103210321 0,10321032103,103210321032,1032103210321,10321032103210,103210321032103,1 032103210321032 ⋆ Decimal expansion of a(n) is given by the first n terms of th e periodic sequence with initial period 1,0,3,2. ● a(n) = 10 * a(n - 1) + (1 / 2) * ((n mod 4) - ((n + 1) mod 4) + ((n + 2) mod 4) + ((n + 3) mod 4)), with a(0) =0. - _ Paolo P. Lava _ , Jul 30 2009 ●

▶ [A015588] 0,1,10,103,1060,10909,112270,1155427,11891080,122377081,1259444 050,12961571743,133394049580,1372825211029,14128434259030,14540281822338 7,1496413485010960,15400343304779761,158492673502830490,1631127764942644 183,16786755669934933300 ⋆ Expansion of x / (1 - 10 * x - 3 * x ^ 2). ● a(n) = 10 * a(n - 1) + 3 * a(n - 2). ● a(n) = - (1 / 28) * [5 - 2 * sqrt(7)] ^ n * sqrt(7) + (1 / 28) * [5 + 2 * sqrt(7)] ^ n * sqrt(7), with n>=0. - _ Paolo P. Lava _ , Jul 15 2008 ●

▶ [A162667] 1,10,103,1090,11809,130450,1463527,16616890,190375681,219567529 0,25447064743,295960791730,3450850554529,40308814292770,471443782066087,5 518920654923050,64648366238050561,757632021233475370 ⋆ a(n) = 20 * a(n - 1) - 97 * a(n - 2) for n > 1; a(0) = 1, a(1) = 10. ● a(n) = ((10 + sqrt(3)) ^ n + (10 - sqrt(3)) ^ n) / 2. ●

▶ [A190954] 0,1,10,104,1080,11216,116480,1209664,12562560,130464256,1354892 800,14070785024,146127421440,1517557354496,15760083230720,16367106172518 4,1699750950174720,17652193748647936,183320941287178240,1903818187866374 144,19771465643812454400 ⋆ a(n) = 10 * a(n - 1) + 4 * a(n - 2), with a(0)=0, a (1)=1. ● a(n) = (1 / 58) * sqrt(29) * ((5 + sqrt(29)) ^ n - (5 - sqrt(29)) ^ n). - _ Paolo P. Lava _ , Jun 01 2011 ●

▶ [A163309] 1,10,104,1112,12112,133504,1482560,16539776,185041408,207372236 8,23263855616,261146501120,2932583993344,32939377795072,370032416817152,4 157190790283264,46706970546995200,524778969784385536 ⋆ a(n) = 18 * a(n - 1) - 76 * a(n - 2) for n > 1; a(0) = 1, a(1) = 10. ● a(n) = ((5 + sqrt(5)) * (9 + s qrt(5)) ^ n + (5 - sqrt(5)) * (9 - sqrt(5)) ^ n) / 10. ●

▶ [A163165] 1,10,104,1120,12416,140800,1624064,18964480,223379456,264699904 0,31495553024,375799152640,4492409962496,53771480596480,644158255529984,7 721102973337600,92582866935873536,1110431453277061120 ⋆ a(n) = 20 * a(n - 1) - 96 * a(n - 2) for n > 1; a(0) = 1, a(1) = 10. ● a(n) = (12 ^ n + 8 ^ n) / 2. ●

▶ [A300850] 0,0,10,105,840,5775,36036,210210,1166880,6235515,32332300,16360 1438,811246800,3954828150,19001896200,90162058500,423160594560,1967035576 275,9066060164700,41468830753350,188390256054000,850582006083810,3818939 619151800,17058982348359900 ⋆ Number of 6 - cycles in the n - odd graph. ● a(n) = binomial(2 * n - 1, n - 1) * n * (n - 1) ^ 2 / 12 for n > 2. - _ Andrew Ho wroyd _ , Mar 13 2018 ●

▶ [A360276] 0,0,10,105,1015,9625,90972,861420,8191920,78309000,752317280,72 57522272,70223986560,680703296000,6601793730560,63984047339520,619018056 228864,5972223901440000,57415027394027520,549677356175073280,52383671689 66328320,4967882378255892 4800,46878394406976225 2800 ⋆ Number of unorder ed quadruples of self - avoiding paths with nodes that cover all vertices of a con vex n - gon; one - node paths are allowed. ● a(n) = (1 / 3) * n * (n - 1) * (n - 2) * (n - 3) * 2 ^ (n - 15) * (4 ^ (n - 4) + 12 * 3 ^ (n - 4) + 54 * 2 ^ (n - 4) + 10 8) for n != 4. ●

▶ [A190955] 0,1,10,105,1100,11525,120750,1265125,13255000,138875625,1455031 250,15244690625,159722062500,1673444078125,17533051093750,18369773132812 5,192464256875 0000,2016491434414 0625,21127235628515 6250,2213548134572265 625,23191843127148437500 ⋆ a(n) = 10 * a(n - 1) + 5 * a(n - 2), with a(0)=0, a (1)=1. ● a(n) = (1 / 60) * sqrt(30) * ((5 + sqrt(30)) ^ n - (5 - sqrt(30)) ^ n). - _ Paolo P. Lava _ , Jun 01 2011 ●

▶ [A163166] 1,10,105,1150,13025,151250,1787625,21383750,257850625,312555625 0,38015315625,463378468750,5656114390625,69101333281250,844695798515625,1 0329298308593750,126339685312890625,1545511221941406250 ⋆ a(n) = 20 * a(n - 1) - 95 * a(n - 2) for n > 1; a(0) = 1, a(1) = 10. ● a(n) = ((10 + sqrt(5)) ^ n + (10 - sqrt(5)) ^ n) / 2. ●

▶ [A068767] 1,1,10,105,1150,13050,152500,1825625,22293750,276758750,3483287 500,44352006250,570333187500,7396680812500,96638930625000,12707963647656 25,168065453398437 50,2234002402460937 50 ⋆ Generalized Catalan numbers. ● a(n) = (5 ^ n) * p(n, - 4 / 5) with the row polynomials p(n, x) defined from arr ay A068763. ● a(n + 1) = 5 * sum(a(k) * a(n - k), k=0..n), n>=1, a(0)=1=a(1). ●

▶ [A190956] 0,1,10,106,1120,11836,125080,1321816,13968640,147617296,1559984 800,16485551776,174215426560,1841067576256,19455968321920,205606088676736, 2172796696698880,22961603499049216,242652815170685440,2564297772701149 696,27098894618035609600 ⋆ a(n) = 10 * a(n - 1) + 6 * a(n - 2), with a(0)=0, a (1)=1. ● a(n) = (1 / 62) * sqrt(31) * ((5 + sqrt(31)) ^ n - (5 - sqrt(31)) ^ n). - _ Paolo P. Lava _ , Jun 01 2011 ●

▶ [A015589] 0,1,10,107,1140,12149,129470,1379743,14703720,156695401,1669880 050,17795668307,189645843420,2021028112349,21537802027430,22952521706074 3,2446016784799440,26066844367419601,277790561167792090,2960373522249858 107,31548269150673125700 ⋆ Expansion of x / (1 - 10 * x - 7 * x ^ 2). ● a(n) = 10 * a(n - 1) + 7 * a(n - 2). ● a(n) = (1 / 16) * [5 + 4 * sqrt(2)] ^ n * sqrt(2) - (1 / 16) * sqrt(2) * [5 - 4 * sqrt(2)] ^ n, with n>=0. - _ Paolo P. Lava _ , Jul 15 2008 ●

▶ [A163192] 1,10,107,1210,14249,172450,2123843,26439010,331262801,41664280 90,52521121307,662944613770,8374427993849,105834710796370,13378724124994 43,169148201459264 50,213874268556080801 ⋆ a(n) = 20 * a(n - 1) - 93 * a(n - 2) for n > 1; a(0) = 1, a(1) = 10. ● a(n) = ((10 + sqrt(7)) ^ n + (10 - sqrt(7)) ^ n) / 2. ●

▶ [A177060] 10,108,304,598,990,1480,2068,2754,3538,4420,5400,6478,7654,8928,1 0300,11770,13338,15004,16768,18630,20590,22648,24804,27058,29410 ⋆ a(n) = (7 * n + 2) * (7 * n + 5) = 49 * n ^ 2 + 49 * n + 10. ● a(n) = 98 * n + a(n - 1) w ith a(0) = 10. ●

▶ [A157084] 0,10,108,1078,10680,105730,1046628,10360558,102558960,10152290 50,10049731548,99482086438,984771132840,9748229241970,96497521286868,9552 26983626718,9455572314980320 ⋆ Consider all consecutive integer Pythagorean quintuples (X, X + 1, X + 2, Z - 1, Z) ordered by increasing Z; sequence gives X values. ● a(n) = 11 * a(n - 1) - 11 * a(n - 2) + a(n - 3). ● a(n) = (1 / 2 + sqr t(6) / 4) * (5 + 2 * sqrt(6)) ^ n - (sqrt(6) / 4 - 1 / 2) * (5 - 2 * sqrt(6)) ^ n - 1. (End) ●

▶ [A190957] 0,1,10,108,1160,12464,133920,1438912,15460480,166116096,1784844 800,19177376768,206052526080,2213944274944,23787862958080,25559018378035 2,2746204741468160,29506768884924416,317037326780989440,3406427418889289 728,36600572803140812800 ⋆ a(n) = 10 * a(n - 1) + 8 * a(n - 2), with a(0)=0, a (1)=1. ● a(n) = (1 / 66) * sqrt(33) * ((5 + sqrt(33)) ^ n - (5 - sqrt(33)) ^ n). - _ Paolo P. Lava _ , Jun 01 2011 ●

▶ [A198700] 10,109,1099,10999,109999,1099999,10999999,109999999,109999999 9,10999999999,109999999999,1099999999999,10999999999999,109999999999999,1 099999999999999,10999999999999999,109999999999999999 ⋆ 11 * 10 ^ n - 1. ● a (n) = 10 * a(n - 1) + 9. a(n) = 11 * a(n - 1) - 10 * a(n - 2), n>1. ●

▶ [A320094] 1,10,109,1099,11098,110989,1110988,11109988,111109888,111109987 9,11111099878,111110998888,1111110998887,11111109998878,111111109998779,1 111111099988779,11111111099988778,111111110999888878,11111111099988887 7,1111111110999988887 ⋆ Number of primitive (=aperiodic) 10 - ary words wi th length less than or equal to n which are earlier in lexicographic order than a ny other word derived by cyclic shifts of the alphabet. ● a(n) = Sum _{ j=1..n } Sum _{ d|j } 10 ^ (d - 1) * mu(j / d). ●

▶ [A015591] 0,1,10,109,1180,12781,138430,1499329,16239160,175885561,1905008 050,20633050549,223475577940,2420453234341,26215812544870,28394220455776 9,3075364358481520,33309123425835121,360769513484684890,3907477245679364 989,42321698078155813900 ⋆ Expansion of x / (1 - 10 * x - 9 * x ^ 2). ● a(n) = 10 * a(n - 1) + 9 * a(n - 2). ● a(n) = (1 / 68) * sqrt(34) * ((5 + sqrt(34)) ^ n - (5 - sqrt(34)) ^ n), with n >= 0. - _ Paolo P. Lava _ , Jan 13 2009 ● a(n) = (- 3 * i) ^ (n - 1) * ChebyshevU(n - 1, - 5 * i / 3). - _ G. C. Greubel _ , Feb 13 2021 ●

▶ [A078922] 1,10,109,1189,12970,141481,1543321,16835050,183642229,200322946 9,21851881930,238367471761,2600190307441,28363725910090,309400794703549,3 375045015828949,36816094379414890,401601993157734841 ⋆ a(n) = 11 * a(n - 1) - a(n - 2) with a(1)=1, a(2) = 10. ● a(1)=1, a(2)=10 and for n > 2, a(n) = cei ling(g * f ^ n) where f = (11 + sqrt(117)) / 2 and g = (1 - 3 / sqrt(13)) / 2. - _ Benoit Cloitre _ , Jan 12 2003 ● a(n) * a(n + 3) = 99 + a(n + 1) * a(n + 2). - _ Ralf Stephan _ , May 29 2004 ● a(n) = S(n - 1, 11) - S(n - 2, 11) = T(2 * n - 1, sqrt(13) / 2) / (sqrt(13) / 2). ● a(n + 1) = ((- 1) ^ n) * S(2 * n, i * 3), n > = 0, with the imaginary unit i and S(n, x) = U(n, x / 2) Chebyshev's polynomi als of the second kind, A049310. ●

▶ [A199760] 1,10,109,1198,13177,144946,1594405,17538454,192922993,212215292 2,23343682141,256780503550,2824585539049,31070440929538,341774850224917,3 759523352474086,41354756877214945,454902325649364394,500392558214300833 3 ⋆ (9 * 11 ^ n + 1) / 10. ● a(n) = 12 * a(n - 1) - 11 * a(n - 2). ● a(n) = 11 * a (n - 1) - 1. ● a(n) = 11 ^ n - sum(11 ^ i, i=0..n - 1) for n>0. [_ Bruno Berselli _ , Jun 20 2013] ●

▶ [A082181] 1,1,10,109,1270,15562,198100,2596645,34825150,475697854,6595646 860,92590323058,1313427716380,18798095833012,271118225915560,39365168614 02901,574940174479151 50,844109420603623030 ⋆ a(0) = 1, for n>=1, a(n) = S um _{ k=0..n } 9 ^ k * N(n,k), where N(n,k) = (1 / n) * C(n,k) * C(n,k + 1) are the Narayana numbers (A001263). ● a(n) = (10 * (2 * n - 1) * a(n - 1) - 64 * (n - 2) * a(n - 2)) / (n + 1) for n>=2, a(0)=a(1)=1. - _ Philippe Deléham _

, Aug 19 2005 ● a(n) = hypergeom([1 - n, - n], [2], 9). - _ Peter Luschny _ , Mar 19 2018 ●

► [A095740] 1,10,109,1288,16417,224686,3288205,51263164,848456353,148621090 42,274743964621,5346258202000,109249238631169,2339328151461718,52384307 381414317,1224472783033479556,29826054965115774145 ⋆ E.g.f.: exp(x) / (1 - x) ^ 9. ● a(n) = Sum _{ k = 0..n } binomial(n, k) * (k + 8)! / 8!. ● a(n) = 2F0 (9, - n;; - 1). - _ Benedict W. J. Irwin _ , May 27 2016 ● a(n) = ((n ^ 8 + 28 * n ^ 7 + 350 * n ^ 6 + 2492 * n ^ 5 + 10899 * n ^ 4 + 29596 * n ^ 3 + 48082 * n ^ 2 + 42048 * n + 14833) * Gamma(n + 1,1) * e + n ^ 7 + 28 * n ^ 6 + 349 * n ^ 5 + 2465 * n ^ 4 + 10579 * n ^ 3 + 27501 * n ^ 2 + 40132 * n + 25487) / 40320. - _ Robert Israel _ , May 27 2016 ●

► [A097257] 0,10,110,120,1210,1220,1320,1330,13310,13320,13420,13430,14520,1 4530,14630,14640,146410,146420,146520,146530,147620,147630,147730,147740,15 9720 ⋆ Numbers whose set of base 11 digits is { 0,A } , where A base 11 = 10 b ase 10. ● a(2n) = 11 * a(n), a(2n + 1) = a(2n) + 10. ●

► [A158492] 10,110,410,910,1610,2510,3610,4910,6410,8110,10010,12110,14410,1 6910,19610,22510,25610,28910,32410,36110,40010,44110,48410,52910,57610 ⋆ a(n) = 100 * n ^ 2 + 10. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). (End) ●

► [A249845] 10,110,560,1920,5170,11830,24080,44880,78090,128590,202400,3068 00,450450,643510,897760,1226720,1645770,2172270,2825680,3627680,4602290,57 75990,7177840,8839600,10795850 ⋆ Number of length 1 + 4 0..n arrays with no five consecutive terms having the maximum of any two terms equal to the mini mum of the remaining three terms. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. ●

► [A110251] 1,10,110,910,9910,109110,909110,10009910,110910910,889111110,99 00110110,111108908910,901089008910,10089889910110,109110889111110,889091 091110910,10090010109909910,110010900901009110 ⋆ A Jacobi transform of 10 ^ n. ● a(n)=sum { k=0..n, Jacobi(k, 2n - 2k + 1) * 10 ^ k } ●

► [A113705] 1,10,110,1010,10110,100010,1001110,10000010,100010110,100000101 0,10000100110,100000000010,1000001011110,10000000000010,100000010000110,1 000000000101010,10000000100010110,100000000000000010,100000000100100111 0,1000000000000000010,10000000010000110110 ⋆ Inverse Moebius transform of powers of 10. ● a(n) = Sum _{ k=0..n } if(mod(n, k)=0, 10 ^ k, 0). ●

► [A054617] 0,10,110,1020,10120,100040,1001220,10000060,100010240,100000206 0,10000100440,100000000100,1000001022240,10000000000120,100000010000660,1 000000000204080,10000000100020480,100000000000000160,100000000100200266 0 ⋆ a(n) = Sum _{ d|n } phi(d) * 10 ^ (n / d). ● a(n) = Sum _{ k=1..n } 10 ^ gcd(n,k). - _ Ilya Gutkovskiy _ , Apr 16 2021 ●

► [A289405] 1,10,110,1100,11100,111000,1111000,11110000,111110000,111110000 0,11111100000,111111000000,1111111000000,11111110000000,111111110000000,1 111111100000000,11111111100000000,111111111000000000,11111111111000000000 0,1111111111000000000 ⋆ Binary representation of the diagonal from the origi n to the corner of the n - th stage of growth of the two - dimensional cellular au tomaton defined by "Rule 566", based on the 5 - celled von Neumann neighbor hood. ● a(n) = 10 * a(n - 1) + 10 * a(n - 2) - 100 * a(n - 3) for n>2. ●

► [A285768] 1,10,110,1100,11110,110990,1111110,11110000,111111000,111109999 0,11111111110,111110998900,1111111111110,11111109999990,111111111099890,1 111111100000000,11111111111111110,111111110999889000,111111111111111110 0,1111111110999998900,11111111111110999890 ⋆ Moebius transform of repun its (A002275). ● a(n) = Sum _{ d|n } mu(n / d) * (10 ^ d - 1) / 9, where mu() is the Moebius function (A008683). ●

► [A105279] 0,10,110,1110,11110,111110,1111110,11111110,111111110,111111111 0,11111111110,111111111110,1111111111110,11111111111110,111111111111110,1 111111111111110,11111111111111110,111111111111111110,11111111111111111 0,1111111111111111110 ⋆ a(0)=0; a(n) = 10 * a(n - 1) + 10. ● a(n) = (10 / 9) * (10 ^ n - 1), with n>=0. ● a(n) = Sum _{ k=1..n } 10 ^ k. ●

► [A057093] 1,10,110,1200,13100,143000,1561000,17040000,186010000,203050000 ,22165100000,241956000000,2641211000000,28831670000000,314728810000000,3 435604800000000,37503336100000000,409389409000000000,4468924510000000000 0,48783168600000000000 ⋆ Scaled Chebyshev U - polynomials evaluated at i * s qrt(10) / 2. Generalized Fibonacci sequence. ● a(n) = 10 * (a(n - 1) + a(n - 2)) , a(- 1)=0, a(0)=1. ● a(n) = S(n, i * sqrt(10)) * (- i * sqrt(10)) ^ n with S(n, x) := U(n, x / 2), Chebyshev's polynomials of the 2nd kind, A049310. ● a(n) = - (1 / 70) * (5 - sqrt(35)) ^ (n + 1) * sqrt(35) + (1 / 70) * sqrt(35) * (5 + sqrt(3 5)) ^ (n + 1), with n>=0. - _ Paolo P. Lava _ , Nov 20 2008 ●

► [A055276] 1,10,110,1210,13310,146410,1610510,17715610,194871710,214358881 0,23579476910,259374246010,2853116706110,31384283767210,345227121439310,3 797498335832410,41772481694156510,459497298635721610 ⋆ First differences of 11 ^ n (A001020). ● a(n) = 11a(n - 1) + ((- 1) ^ n) * C(1, 1 - n). ● a(n) = 10 * 11 ^ (n - 1); a(0)=1. ●

► [A143749] 0,1,10,110,1310,16610,221010,3051510,43357110,630098810,9324499 610,140046944510,2129440330510,32716182966610,507115641523810,7920881045 935110,124548017695545510,1969917348711212010 ⋆ Series reversion of x * (1 - x) / (1 + 9 * x). ● a(n + 1) = 0 ^ n + (1 / (n + 0 ^ n)) * Sum _{ k=0..n, C(n, k) * C(n,k - 1) * 10 ^ k. ● a(n) = 9 * a(n - 1) + Sum _{ k=1..n - 1 } a(k) * a(n - k) if n>1. - _ Michael Somos _ , Jul 23 2011 ●

► [A284352] 1,10,111,1011,11111,101111,1111111,10111111,111111111,101111111 1,11111111111,101111111111,1111111111111,10111111111111,111111111111111,1 01111111111111,11111111111111111,101111111111111111,11111111111111111111 1,1011111111111111111 ⋆ Binary representation of the x - axis, from the origin to the right edge, of the n - th stage of growth of the two - dimensional cellular automaton defined by "Rule 899", based on the 5 - celled von Neumann neighb orhood. ● a(n) = (- 20 + 9 * (- 10) ^ n + 191 * 10 ^ n) / 180. ● a(n) = a(n - 1) + 100 * a(n - 2) - 100 * a(n - 3) for n>2. ●

► [A290232] 1,10,111,1100,11111,111000,1111111,11110000,111111111,111110000 0,11111111111,111111000000,1111111111111,11111110000000,111111111111111,1 111111100000000,11111111111111111,111111111000000000,11111111111111111111 1,1111111110000000000 ⋆ Binary representation of the diagonal from the corn er to the origin of the n - th stage of growth of the two - dimensional cellular au tomaton defined by "Rule 773", based on the 5 - celled von Neumann neighbor hood. ● a(n) = (10 ^ (n + 1) - 1) / 9 for n even. ● a(n) = (10 ^ (n + 1) - 10 ^ ((n + 1) / 2)) / 9 for n odd. ● a(n) = 10 * a(n - 1) + 11 * a(n - 2) - 110 * a(n - 3) - 10 * a(n - 4) + 100 * a(n - 5) for n>4. ●

► [A289096] 1,10,111,1110,11101,111110,1111101,11111110,111111101,111111111 0,11111111101,111111111110,1111111111101,11111111111110,111111111111101,1 111111111111110,11111111111111101,111111111111111110,11111111111111111 0,1111111111111111110 ⋆ Binary representation of the diagonal from the corne r to the origin of the n - th stage of growth of the two - dimensional cellular aut omaton defined by "Rule 545", based on the 5 - celled von Neumann neighborh ood. ● a(n) = 10 * a(n - 1) + a(n - 2) - 10 * a(n - 3) for n > 5 (conjectured). ●

► [A290680] 1,10,111,1110,11111,111111,1111111,11111111,111111111,111111111 1,11111111111,111111111111,1111111111111,11111111111111,111111111111111,1 111111111111111,11111111111111111,111111111111111111,11111111111111111111 1,1111111111111111111 ⋆ Binary representation of the diagonal from the corn er to the origin of the n - th stage of growth of the two - dimensional cellular au tomaton defined by "Rule 929", based on the 5 - celled von Neumann neighbor hood. ● a(n) = (10 ^ (1 + n) - 1) / 9 for n>3. ● a(n) = 11 * a(n - 1) - 10 * a(n - 2) for n>5. ●

► [A015592] 0,1,10,111,1220,13421,147630,1623931,17863240,196495641,2161452 050,23775972551,261535698060,2876892678661,31645819465270,34810401411797 1,38291441552976 80,42120585708274481 ⋆ a(n) = 10 * a(n - 1) + 11 * a(n - 2). ● a(n) = 11 ^ (n - 1) - a(n - 1). G.f.: x / (1 - 10x - 11x ^ 2). - _ Emeric Deutsc h _ , Apr 01 2004 ● a(n) = - (1 / 12) * (- 1) ^ n + (1 / 12) * 11 ^ n, with n> =0. - _ Paolo P. Lava _ , Jul 15 2008 ●

► [A014484] 1,10,112,1440,21120,349440,6451200,131604480,2941747200,715309 05600,1880240947200,53137244160000,1606870263398400,51776930709504000,17 71128125457920 00,64103411041173504000 ⋆ Expansion of (1 + 2x) / (1 - 2x) ^ 4 (E.g.f.). ● a(n) = (n + 1)(n + 2)(2n + 3) / 6 * 2 ^ n * n!. - _ Ralf Stephan _ , Mar 24 2004 ●

► [A024130] 1,10,113,1304,14577,160926,1771345,19486828,214358369,235794696 2,25937423601,285311669280,3138428374993,34522712141734,379749833580497,4 177248169412276,45949729863568065,505447028499288858,555991731349222564 9,61159090448414539432 ⋆ a(n) = 11 ^ n - n ^ 3. ● a(n) = 15 * a(n - 1) - 50 * a (n - 2) + 70 * a(n - 3) - 45 * a(n - 4) + 11 * a(n - 5) for n>4. ●

► [A079678] 1,10,115,1360,16265,195660,2361925,28577440,346316645,42017448 70,51023399190,620022989200,7538489480075,91696845873760,111579468803692 0,1358150865497856 0,165357977228808925,2013721466517360650 ⋆ a(n) = a(n,m) = sum(k=0,n,binomial(m * k,k) * binomial(m * (n - k),n - k)) for m=5. ● a(n) = 5 / 8 * (3125 / 256) ^ n * (1 + c / sqrt(n) + o(n ^- 1 / 2)) where c=0.356... ● a(n) = sum(k=0,n,binomial(5 * k + l,k) * binomial(5 * (n - k) - l,n - k)) for e very real number l. - _ Rui Duarte _ and António Guedes de Oliveira, Feb 16 2013 ● a(n) = sum(k=0,n,4 ^ (n - k) * binomial(5n + 1,k)). - _ Rui Duarte _ a nd António Guedes de Oliveira, Feb 17 2013 ● a(n) = sum(k=0,n,5 ^ (n - k) * b inomial(4n + k,k)). - _ Rui Duarte _ and António Guedes de Oliveira, Feb 17 2013 ●

► [A155622] 1,10,118,1324,14626,161020,1771498,19487044,214358626,235794718 0,25937423578,285311668564,3138428372626,34522712135740,379749833566858,4 177248169382884,45949729863506626,505447028499162700 ⋆ a(n) = 11 ^ n - 2 ^ n + 1. ● a(n) = 13 * a(n - 1) - 22 * a(n - 2) + 10 for n>1, a(0)=1, a(1)=10. - _ Vincenzo Librandi _ , Jul 21 2010 ●

► [A024128] 1,10,119,1328,14637,161046,1771555,19487164,214358873,235794768 2,25937424591,285311670600,3138428376709,34522712143918,379749833583227,4 177248169415636,45949729863572145,505447028499293754 ⋆ a(n) = 11 ^ n - n. ● a(n) = 13 * a(n - 1) - 23 * a(n - 2) + 11 * a(n - 3). - _ Vincenzo Librandi _ , Jun 17 2013 ●

► [A300522] 10,120,455,1140,2300,4060,6545,9880,14190,19600,26235,34220,436 80,54740,67525,82160,98770,117480,138415,161700,187460,215820,246905,28084 0,317750 ⋆ a(n) = (5 * n + 3) * (5 * n + 4) * (5 * n + 5) / 6. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ●

► [A024127] 0,10,120,1330,14640,161050,1771560,19487170,214358880,235794769 0,25937424600,285311670610,3138428376720,34522712143930,379749833583240,4 177248169415650,45949729863572160,505447028499293770 ⋆ a(n) = 11 ^ n - 1. ● a(n) = 11 * a(n - 1) + 10 for n>0, a(0)=0. - _ Vincenzo Librandi _ , Nov 19 2010 ● a(n) = Sum _{ i=1..n } 10 ^ i * binomial(n,n - i) for n>0, a(0)=0. - _ Bruno Berselli _ , Nov 11 2015 ●

► [A027770] 10,121,792,3718,14014,45045,128128,330616,787644,1755182,369512 0,7407036,14226212,26313518,47070144,81719000,138105110,227779695,36744708 0,580870290,901350450,1374917115,2064391680,3054514320,4458356760 ⋆ a(n) = (n + 1) * binomial(n + 1, 10). ● a(n) = C(n + 1, 10) * C(n + 1, 1). - _ Zerinv ary Lajos _ , Jun 08 2005, corrected by _ R. J. Mathar _ , Feb 13 2016 ●

► [A202808] 1,10,121,1177,8232,43483,185051,666610,2105474,5980085,1556051 9,37618385,85418437,183739050,377000959,742024924,1407514167,2583094972,46 01680965,7980089529,13504273038,22347278077,36230162235,57638635054 ⋆ Nu mber of n X 4 nonnegative integer arrays with each row and column increasing from zero by 0, 1 or 2. ● a(n) = 13 * a(n - 1) - 78 * a(n - 2) + 286 * a(n - 3) - 7 15 * a(n - 4) + 1287 * a(n - 5) - 1716 * a(n - 6) + 1716 * a(n - 7) - 1287 * a(n - 8) + 715 * a(n - 9) - 286 * a(n - 10) + 78 * a(n - 11) - 13 * a(n - 12) + a(n - 13) for n>13. ●

► [A098309] 0,1,10,121,1440,17161,204490,2436721,29036160,345997201,4122930 250,49129165801,585427059360,6975995546521,83126519498890,99054223844016 1,118033380341783040,1406500218629563 21,1675996882013692810,1997131256230 1357401,2379797538656025 96000 ⋆ Unsigned member r = - 10 of the family of C hebyshev sequences S _ r(n) defined in A092184. ● a(n) = 12 * a(n - 1) - a(n - 2) + 2 * (- 1) ^ (n + 1), n>=2, a(0)=0, a(1)=1. ● a(n) = 11 * a(n - 1) + 11 * a(n - 2) - a(n - 3), n>=3, a(0)=0, a(1)=1, a(2)=10. ● a(n) = (- 2 * (- 1) ^ n + (6 - sqrt(35)) ^ n + (6 + sqrt(35)) ^ n) / 14. - _ Colin Barker _ , Jan 31 2017 ●

► [A056116] 1,10,121,1452,17424,209088,2509056,30108672,361304064,43356487 68,52027785216,624333422592,7492001071104,89904012853248,107884815423897 6,129461778508677 12,155354134210412544 ⋆ a(n) = 121 * 12 ^ (n - 2), a(0)=1, a (1)=10. ● a(n) = 12 * a(n - 1) + (- 1) ^ n * C(2, 2 - n). ●

► [A173044] 10,135,740,2545,6750,15155,30280,55485,95090,154495,240300,360425,524230,742635,1028240,1395445,1860570,2441975,3160180,4037985,5100590,6375715,7893720,9687725,11793730 ⋆ Product plus sum of five consecutive nonnegative numbers. ● a(n) = n * (n + 1) * (n + 2) * (n + 3) * (n + 4) + n + (n + 1) + (n + 2) + (n + 3) + (n + 4). ● a(n) = (n + 2) * (n ^ 4 + 8 * n ^ 3 + 19 * n ^ 2 + 12 * n + 5) = n ^ 5 + 10 * n ^ 4 + 35 * n ^ 3 + 50 * n ^ 2 + 29 * n + 10. - _ Bruno Berselli _ , Jun 25 2012 ●

► [A240917] 0,10,136,1378,12880,117370,1060696,9559378,86073760,774781930,6973391656,62761587778,564857478640,5083726873690,45753570561016,411782221142578,3706040248563520,33354363011912650,300189269431736776,2701703431859199778 ⋆ a(n) = 2 * 3 ^ (2 * n) - 3 * 3 ^ n + 1. ● a(n) = 1 - 3 ^ (1 + n) + 2 * 9 ^ n. ● a(n) = 13 * a(n - 1) - 39 * a(n - 2) + 27 * a(n - 3). ●

► [A221576] 10,141,1210,5913,20944,59705,145800,317233,631328,1170369,2047960,3416105,5473008,8471593,12728744,18635265,26666560,37394033,51497208,69776569,93167120,122752665,159780808,205678673,262069344 ⋆ Number of 0..n arrays of length 6 with each element differing from at least one neighbor by something other than 1. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>10. ●

► [A095889] 10,148,1260,8160,44790,220180,1001000,4295168,17633122,69921460,269652100,1016524352,3760334958,13690636212,49172875520,174559419680,613383654170,2136135472020,7380351046300,25319087913760,86308819112550,292526411823828,986294675689560 ⋆ Number of permutations of [n] with exactly 3 descents which avoid the pattern 4321. ● a(n) = (n * (27 + 81 * 2 ^ n - 115 * 3 ^ n + 3 * (27 * 2 ^ n + 2 * 3 ^ n) * n + (- 27 + 3 ^ n) * n ^ 2)) / 162. - _ Colin Barker _ , May 03 2019 ●

► [A098270] 1,10,148,2440,42256,752800,13660480,251113600,4660568320,87140108800,1638884021248,30970912737280,587599919386624,11185644310405120,213540626285805568,4086692369433395200,78378887309200261120 ⋆ a(n) = 2 ^ n * P _ n(5), 2 ^ n times the Legendre polynomial of order n at 5. ● a(n) = Sum _{ k=0..floor(n / 2) } (- 1) ^ k * binomial(n,k) * binomial(2 * (n - k), n) * 5 ^ (n - 2 * k). ● a(n) = (1 / 3) * Sum _{ k >= n } binomial(k,n) ^ 2 * (2 / 3) ^ k . ● a(n) = (4 ^ n) * Sum _{ k = 0..n } binomial(n,k) ^ 2 * (3 / 2) ^ k. ● a(n) = (1 / 3) * (2 / 3) ^ n * hypergeometric2F1([n + 1, n + 1], [1], 2 / 3). ● a(n) = (4 ^ n) * hypergeometric2F1([- n, - n], [1], 3 / 2) ● a(n) = [x ^ n] ((2 * x - 2) * (3 - 2 * x)) ^ n. ●

► [A116156] 0,10,150,1500,12500,93750,656250,4375000,28125000,175781250,1074218750,6445312500,38085937500,222167968750,1281738281250,7324218750000,41503906250000,233459472656250,1304626464843750,7247924804687500 ⋆ a(n) = 5 ^ n * n * (n + 1). ● a(n) = 15 * a(n - 1) - 75 * a(n - 2) + 125 * a(n - 3). - _ Vincenzo Librandi _ , Feb 28 2013 ●

► [A025750] 1,1,10,150,2625,49875,997500,20662500,439078125,9513359375,209293906250,4661546093750,104884787109375,2380077861328125,54401779687500000,1251240932812500000,28934946571289062500 ⋆ 5th - order Patalan numbers (generalization of Catalan numbers). ● a(n) = (sum(k=0..n - 1, (- 1) ^ (n - k - 1) * binomial(n + k - 1,n - 1) * sum(j=0..k, 2 ^ j * binomial(k,j) * sum(i=j..n - k + j - 1, binomial(j,i - j) * binomial(k - j,n - 3 * (k - j) - i - 1) * 5 ^ (3 * (k - j) + i))))) / n, n>0, a(0)=1. - _ Vladimir Kruchinin _ , Dec 10 2011 ● a(n) = ((- 5) ^ (n - 1) * sum(k=1..n, (5) ^ (n - k) * stirling1(n,k))) / n!, n>0, a(0)=1. - _ Vladimir Kruchinin _ , Mar 19 2013 ●

► [A269608] 10,154,804,2692,7030,15630,31024,56584,96642,156610,243100,364044,528814,748342,1035240,1403920,1870714,2453994,3174292,4054420,5119590,6397534,7918624,9715992,11825650 ⋆ Number of length - 5 0..n arrays with no repeated value differing from the previous repeated value by one or less. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. ●

► [A064747] 1,10,163,2188,26245,295246,3188647,33480784,344373769,3486784402,34867844011,345191655700,3389154437773,33044255768278,320275094369455,3088366981419736,29648323021629457,283512088894331674,2701703435345984179 ⋆ a(n) = n * 9 ^ n + 1. ● a(n) = 19 * a(n - 1) - 99 * a(n - 2) + 81 * a(n - 3); a(0)=1, a(1)=10, a(2)=163. - _ Harvey P. Dale _ , Jan 16 2016 ●

► [A078516] 0,10,174,2298,27258,305574,3309444,35022618,364559760,3748221288,38170570414,385768464918,3874673308452,38718126671076,385227806897448,3818752082440794,37735160423265504,371852044352248824,3655440051907792536,35857177310350860328 ⋆ Sum of balls on the lawn for the s=4 tennis ball problem. ● a(n) is asymptotic to c * sqrt(n) * (256 / 27) ^ n with c=2.8... - _ Benoit Cloitre _ , Jan 26 2003 ●

► [A049380] 1,10,175,3500,74375,1636250,36815625,841500000,19459687500,454059375000,10670395312500,252209343750000,5989971914062500,142837791796875000,3417904303710937500,82029703289062500000 ⋆ Expansion of (1 - 25 * x) ^ (- 2 / 5). ● a(n) = (5 ^ n / n!) * Product _{ k=0..n - 1 } (5 * k + 2). ● a(n + 1) = (10 + 25 * n) * a(n) / (n + 1). - _ Robert Israel _ , Sep 04 2018 ● a(n) = (- 25) ^ n * binomial(- 2 / 5,n). - _ Peter Luschny _ , Oct 23 2018 ●

► [A095807] 1,10,181,2620,33571,402130,4619161,51572440,564151951,6077367550,64696307941,682266771460,7140400943131,74263608488170,768372476393521,7915352287541680,81238170587875111 ⋆ Number of integers from 0 to 10 ^ n - 1 whose decimal digits include at least one 0. ● a(n) = 10 ^ n + 9 / 8 - 9 ^ (1 + n) / 8. ● a(n) = 20 * a(n - 1) - 109 * a(n - 2) + 90 * a(n - 3); a(0)=1, a(1)=10, a(2)=181. - _ Harvey P. Dale _ , Jun 20 2015 ●

► [A006409] 10,190,1568,8344,33580,111100,317680,811096,1891318,4094090,8328320,16071120,29636984,52540472,89974880,149432720,241497410,380839382,587453856,888181800,1318560100,1925051700,2767711440,3923348520,5489251950 ⋆ Number of nonseparable rooted toroidal maps with n + 4 edges and n + 1 vertices. ● a(n) = 10 * binomial(n + 4, 6) + 120 * binomial(n + 4, 7) + 328 * binomial(n + 4, 8) + 232 * binomial(n + 4, 9) [From Walsh]. - _ Sean A. Irvine _ , Apr 03 2017 ● a(n) = binomial(n + 4, 6) * (29 * n ^ 3 + 108 * n ^ 2 - 11 * n - 12) / 63. - _ Andrew Howroyd _ , Apr 05 2021 ●

► [A249643] 0,0,10,190,1990,20710,207910,2087110,20879110,208870390,2088783190,20888623990,208887031990,2088878232790,20888790240790,208887981528790,2088879894408790,20888799735217510,208887998143304710,2088879989344263910,20888799901353855910 ⋆ Number of strings of length n over a 10 - letter alphabet that begin with a nontrivial palindrome. ● a(0) = 0; a(1) = 0; a(n + 1) = 10 * a(n) + 10 ^ ceiling((n + 1) / 2) - a(ceiling((n + 1) / 2)). ●

► [A134633] 0,10,192,1314,5344,16050,39600,85162,165504,297594,503200,809490,1249632,1863394,2697744,3807450,5255680,7114602,9465984,12401794,16024800,20449170,25801072,32219274,39855744 ⋆ 5 * n ^ 5 + 3 * n ^ 3 + 2 * n ^ 2. Coefficients and exponents are the prime numbers in decreasing order. ● a(n) = 5 * n ^ 5 + 3 * n ^ 3 + 2 * n ^ 2. ● a(0)=0, a(1)=10, a(2)=192, a(3)=1314, a(4)=5344, a(5)=16050, a(n)= 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). - _ Harvey P. Dale _ , Apr 25 2012 ●

► [A249846] 10,198,1500,6916,23526,65226,156184,335016,659682,1213102,2109492,3501420,5587582,8621298,12919728,18873808,26958906,37746198,51914764,70264404,93729174,123391642,160497864,206473080,262938130 ⋆ Number of length 2 + 4 0..n arrays with no five consecutive terms having the maximum of any two terms equal to the minimum of the remaining three terms. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

► [A126431] 0,10,200,3000,40000,500000,6000000,70000000,800000000,9000000000,100000000000,1100000000000,12000000000000,130000000000000,1400000000000000,15000000000000000,160000000000000000 ⋆ a(n) = n * 10 ^ n. ● a(0)=0, a(1)=10; for n>1, a(n) = 20 * a(n - 1) - 100 * a(n - 2). - _ Harvey P. Dale _ , Mar 30 2012 ●

► [A211912] 0,1,10,214,1946,10431,40561,127275,342434,820396,1794811,3649471,6986365,12714404,22162596,37221766,60519231,95631155,147337624,221925796,327546796,474632341,676377395 ⋆ Number of lower triangular n X n arrays colored with integers 0 upwards introduced in row major order, with no element equal to any horizontal, vertical, diagonal or antidiagonal neighbor, and containing the value n(n + 1) / 2 - 3. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>10. ●

► [A278125] 10,215,665,1565,3365,6965,14165,28565,57365,114965,230165,460565,921365,1842965,3686165,7372565,14745365,29490965,58982165,117964565,235929365,471858965,943718165,1887436565,3774873365 ⋆ a(n) = 225 * 2 ^ n - 235. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2). ●

► [A053131] 10,220,2002,11440,48620,167960,497420,1307504,3124550,6906900,14307150,28048800,52451256,94143280,163011640,273438880,445891810,708930508,1101716330,1677106640,2505433700,3679075400,5317936260,7575968400,10648873950 ⋆ Binomial coefficients C(2 * n - 8,9). ● a(n) = binomial(2 * n - 8, 9) if n >= 9 else 0. ●

► [A027952] 1,10,231,2300,14820,72905,298925,1077748,3540913,10871723,31775031,89633545,246575109,666605513,1781049298,4721874921,12456394685,32758238316,85985810716,225446971141,590714939822,1547211717890,4051642877482,10608719012366,27775885869046 ⋆ a(n) = T(2n,n + 4), T given by A027948. ● a(n) = Sum _{ j=0..n - 3 } binomial(2 * n - j, j + 9), with a(4) = 1. ● a(n) = Fibonacci(2 * n + 10) - (138600 + 133530 * n + 63999 * n ^ 2 + 20286 * n ^ 3 + 5929 * n ^ 4 + 616 * n ^ 6 - 96 * n ^ 7 + 16 * n ^ 8) / 2520. ●

► [A006423] 10,240,2246,12656,52164,173776,495820,1256992,2902702,6214208,12494482,23827440,43430088,76120288,128926232,211867328,338940050,529346384,809006814,1212404336,1784810764,2584951600,3688170980,5190163680,7211346870 ⋆ Number of rooted toroidal maps with 3 faces and n vertices and without separating cycles or isthmuses. ● a(n) = n * (n + 1) * (n + 2) * (n + 3) * (29 * n ^ 5 + 762 * n ^ 4 + 5111 * n ^ 3 + 7902 * n ^ 2 + 8 * n + 5088) / 45360. - _ Andrew Howroyd _ , Apr 04 2021 ●

► [A128013] 10,250,3750,42500,406250,3468750,27343750,203125000,1441406250,9863281250,65527343750,424804687500,2697753906250,16833496093750,103454589843750,627441406250000,3761291503906250,22315979003906250 ⋆ a(n) = (n ^ 3 + n) * 5 ^ n. ● a(n) = 20 * a(n - 1) - 150 * a(n - 2) + 500 * a(n - 3) - 625 * a(n - 4). - _ Vincenzo Librandi _ , Feb 23 2013 ●

► [A001536] 10,252,736,1462,2430,3640,5092,6786,8722,10900,13320,15982,18886,22032,25420,29050,32922,37036,41392,45990,50830,55912,61236,66802,72610 ⋆ a(n) = (11n + 1) * (11n + 10). ● a(n) = 242 * n + a(n - 1) with a(0)=10. - _ Vincenzo Librandi _ , Nov 12 2010 ●

► [A361559] 0,10,258,1740,20070,48510,196920,350370,937860,3075030,4322160,10641330,17925180,22825110,35827560,65816010,113180910,133937670,215070570,288148140,331474860,493573080,633015810,899599140,1387338960 ⋆ a(n) = Sum _{ k=1..prime(n) - 1 } floor(k ^ 5 / prime(n)). ● a(n) = (p - 2) * (p - 1) * (p + 1) * (2 * p ^ 2 - 2 * p + 3) / 12 where p=prime(n). ●

► [A369423] 0,10,264,2052,9280,30750,83160,194824,410112,794610,1441000,2475660,4065984,6428422,9837240,14634000,21237760,30155994,41996232,57478420,77448000,102889710,134942104,174912792,224294400 ⋆ Number of 3 X 3 Fishburn matrices with entries in the set { 0,1,...,n } . ● a(n) = n ^ 3 * (n + 1) * (n ^ 2 + 3 * n + 1) = n ^ 6 + 4 * n ^ 5 + 4 * n ^ 4 + n ^ 3. ●

► [A055408] 1,10,265,2780,19250,91067,349122,1115334,3134307,7903501,18286018,39418159,79946582,154050794,283766861,503208408,861586362,1432132554,2314882321,3655071196,5640732550,8538547541,12683700617,18541085573 ⋆ Number of points in N ^ 9 of norm <= n. ● a(n) = [x ^ (n ^ 2)] (1 + theta _ 3(x)) ^ 9 / (512 * (1 - x)), where theta _ 3() is the Jacobi theta function. - _ Ilya Gutkovskiy _ , Apr 15 2018 ●

► [A089906] 0,10,270,4650,66430,864210,10641990,126419770,1464197550,16641975330,186419753110,2064197530890,22641975308670,246419753086450,2664197530864230,28641975308642010,306419753086419790 ⋆ Sum of digits of numbers between 0 and (4 / 9) * (10 ^ n - 1). ● a(n) = s(4, n - 1) where s(a, k)=a * (k + 1) + a ^ 2 * sum(i=0, k, i * 10 ^ (k - i)) + sum(i=0, k, 5 * a * (9 * (k - i) + a - 1) * 10 ^ (k - i - 1)). ● a(n) = (2 * (- 55 * (- 1 + 10 ^ n) + 9 * (10 + 9 * 10 ^ n) * n)) / 81. G.f.: 10 * x * (12 * x ^ 2 + 5 * x + 1) / ((x - 1) ^ 2 * (10 * x - 1) ^ 2). - _ Colin Barker _ , Jun 14 2013 ●

► [A221526] 0,10,274,2172,9982,33380,90684,212812,447962,867012,1569640,2691164,4410102,6956452,10620692,15763500,22826194,32341892,44947392,61395772,82569710,109495524,143357932,185515532,237517002 ⋆ Number of 0..n arrays of length 6 with each element differing from at least one neighbor by 2 or more.

● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>10. ●

► [A129005] 0,10,300,4500,50000,468750,3937500,30625000,225000000,1582031250,10742187500,70898437500,457031250000,2888183593750,17944335937500,109863281250000,664062500000000,3968811035156250,23483276367187500 ⋆ (n ^ 3 + n ^ 2) * 5 ^ n. ● a(n) = 20 * a(n - 1) - 150 * a(n - 2) + 500 * a(n - 3) - 625 * a(n - 4). - _ Vincenzo Librandi _ , Feb 12 2013 ●

► [A180584] 1,10,318,6114,126426,2588218,53055038,1087362018,22286085818,456763781330,9361593883038,191870363459178,3932475321605194,80597971743535618,1651894168575456078,33856364932336405826 ⋆ Number of Hamiltonian cycles in C _ 8 X P _ n. ● a(1) = 1, ● a(2) = 10, ● a(3) = 318, ● a(4) = 6114, ● a(5) = 126426, ● a(6) = 2588218, ●

► [A249847] 10,359,4064,25206,108250,363349,1022672,2522796,5618202,11530915,22141328,40225250,69742218,116180113,186961120,291914072,443818218,659023455,958152064,1366886990,1916851706,2646586701,3602627632 ⋆ Number of length 3 + 4 0..n arrays with no five consecutive terms having the maximum of any two terms equal to the minimum of the remaining three terms. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. ●

► [A079914] 1,10,364,4664,40296,253072,1249768,5112544,17990600,56010096,157175032,403579328,959942664,2136701200,4488418616,8961185952,17105944648,31378295984,55549351800,95256535936,158727963272,257719103568 ⋆ Solution to the Dancing School Problem with 9 girls and n + 9 boys: f(9,n). ● a(0)=1, a(1)=10, a(2)=364, a(3)=4664, a(4)=40296, a(5)=253072, a(6)=1249768, for n >= 7: a(n)=n ^ 9 - 27n ^ 8 + 414n ^ 7 - 4158n ^ 6 + 29421n ^ 5 - 148743n ^ 4 + 530796n ^ 3 - 1276992n ^ 2 + 1866384n - 1255608. ●

► [A180359] 0,10,530,19710,262180,1953170,10077750,40353670,134217800,387420570,1000000090,2357947790,5159780460,10604499490,20661046910,38443359510,68719476880,118587876650,198359290530,322687697950,512000000180 ⋆ n ^ 9 + 9n ● a(n)= + 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10). G.f.: 10 * x * (1 + 43 * x + 1486 * x ^ 2 + 8773 * x ^ 3 + 15682 * x ^ 4 + 8773 * x ^ 5 + 1486 * x ^ 6 + 43 * x ^ 7 + x ^ 8) / (x - 1) ^ 10. [From _ R. J. Mathar _ , Sep 19 2010] ●

► [A322654] 1,1,10,573,136528,115511945,365045461056 ⋆ Number of binary operations on an n - set that satisfy (ab)c = (ac)b for all a,b,c. ● a(n) = Sum _{ k=1..n } k! * Stirling2(n,k) * c(n,k), where c(n,k) is the number of sets of k distinct functions from { 1..n } to itself that are mutually commutative. ●

► [A249848] 10,653,11052,92190,499654,2029683,6712760,19039308,47942370,109802473,232780196,462822282,871727454,1567698415,2708846832,4520158424,7314465594,11518015365,17701260700,26615543606,39236378742,56814086571 ⋆ Number of length 4 + 4 0..n arrays with no five consecutive terms having the maximum of any two terms equal to the minimum of the remaining three terms. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>9. ●

► [A166507] 0,10,1023,2676,16867,111688,1522828,11386882,112273999,1212143716,11232152998,121321194596 ⋆ Least n - comma number: smallest nonnegative integer that occurs in the sequence S[k + 1]=S[k] + 10 * last _ digit(S[k - 1]) + first _ digit(S[k]) for at least n different splittings a(n)=concat(S[0],S[1]). ● a(k) >= [10 ^ k / 9] * 10 = (10 ^ (k + 1) - 1) / 9 - 1. ●

► [A103623] 1,10,1023,29524,349525,2441406,12093235,47079208,153391689,435848050,1111111111,2593742460,5628851293,11488207654,22250358075,41189313616,73300775185,125999618778,210027483919,340614792100,538947368421,833994048910,1264758228163 ⋆ n ^ 9 + n ^ 8 + n ^ 7 + n ^ 6 + n ^ 5 + n ^ 4 + n ^ 3 + n ^ 2 + n + 1. ● a(n) = (n ^ 10 - 1) / (n - 1) with a(1) = 10. - _ Arkadiusz Wesolowski _ , Mar 30 2013 ●

► [A249849] 10,1189,30080,337396,2307418,11342301,44075760,143723664,409195002,1045765501,2447657872,5325777236,10897117738,21155986693,39251185824,69997645248,120555724842,201316479477,327036629344,518272784212 ⋆ Number of length 5 + 4 0..n arrays with no five consecutive terms having the maximum of any two terms equal to the minimum of the remaining three terms. ● a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10) for n>10. ●

► [A361495] 10,1370,70138,1159994,12654010,116939450,1003021498,8303802554,67568410810,545138438330,4379550748858,35110336483514,281178729140410,2250614613070010,18009657286316218,144096222341746874,1152845639987482810 ⋆ Number of magic quad squares that can be formed using cards from Quads - 2 ^ n deck, where the first row and column are fixed. ● a(n) = 10 + 85 * (2 ^ n - 16) + 43 * (2 ^ n - 16) * (2 ^ n - 32) + (2 ^ n - 16) * (2 ^ n - 32) * (2 ^ n - 64). ●

► [A228294] 0,10,2046,88572,1398100,12207030,72559410,329554456,1227133512,3922632450,11111111110,28531167060,67546215516,149346699502,311505013050,617839704240,1172812402960,2141993519226,3780494710542,6471681049900,10778947368420,17513875027110 ⋆ a(n) = Sum _{ k=1..10 } n ^ k. ● a(1) = 10, else a(n) = (n ^ 11 - n) / (n - 1). ●

► [A249850] 10,2163,81816,1234328,10653298,63374127,289372688,1084868616,3492375066,9959590531,25736172264,61283393808,136218299906,285494859439,568743409824,1083950013296,1986962835498,3518666938611,6042075583672 ⋆ Number of length 6 + 4 0..n arrays with no five consecutive terms having the maximum of any two terms equal to the minimum of the remaining three terms. ● a(n) = 11 * a(n - 1) - 55 * a(n - 2) + 165 * a(n - 3) - 330 * a(n - 4) + 462 * a(n - 5) - 462 * a(n - 6) + 330 * a(n - 7) - 165 * a(n - 8) + 55 * a(n - 9) - 11 * a(n - 10) + a(n - 11) for n>11. ●

► [A249851] 10,3966,223505,4527441,49270055,354521087,1901506446,8194431990,29822392392,94893269020,270701817639,705393878111,1703213060445,3853520547653,8242557895820,16788311912316,32753314777686 ⋆ Number of length 7 + 4 0..n arrays with no five consecutive terms having the maximum of any two terms equal to the minimum of the remaining three terms. ● a(n) = 12 * a(n - 1) - 66 * a(n - 2) + 220 * a(n - 3) - 495 * a(n - 4) + 792 * a(n - 5) - 924 * a(n - 6) + 792 * a(n - 7) - 495 * a(n - 8) + 220 * a(n - 9) - 66 * a(n - 10) + 12 * a(n - 11) - a(n - 12) for n>12. ●

► [A242854] 0,10,151316,7997214,118118440,922080050,4878316860,19828978246,66593931344,193501094490,501827040100,1187422368110,2605282707576,5365498355074,10470873504140,19508549760150,34910198169760,60297759323306,100934312212404,164302439443390 ⋆ a(n) = 512 * n ^ 9 - 1024 * n ^ 7 + 672 * n ^ 5 - 160 * n ^ 3 + 10 * n. ● a(n) = 2 * n * (4 * n ^ 2 - 2 * n - 1) * (4 * n ^ 2 + 2 * n - 1) * (16 * n ^ 4 - 20 * n ^ 2 + 5). ●

► [A168459] 1,11,11,21,21,31,31,41,41,51,51,61,61,71,71,81,81,91,91,101,101,111,111,121,121 ⋆ a(n) = (10 * n + 5 * (- 1) ^ n - 3) / 2. ● a(n) = 10 * n - a(n - 1) - 8 with n>1, a(1)=1. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3). (End) ● a(n) = 1 + 10 * floor(n / 2). - _ Vincenzo Librandi _ , Sep 19 2013 ●

► [A022345] 0,11,11,22,33,55,88,143,231,374,605,979,1584,2563,4147,6710,10857,17567,28424,45991,74415,120406,194821,315227,510048 ⋆ Fibonacci sequence beginning 0, 11. ● a(n) = 11 * F(n) = F(n + 4) + F(n + 2) + F(n) + F(n - 2) + F(n - 4) with n > 3 and F = A000045. ● a(n) = Fibonacci(n + 5) - Fibonacci(n - 5), where Fibonacci(- 5.. - 1) = 5, - 3, 2, - 1, 1. - _ Bruno Berselli _ , May 22 2015 ●

► [A124297] 1,11,11,31,61,151,361,911,2311,5951,15401,40051,104401,272611,712531,1863551,4875781,12760031,33398201,87424711,228859951,599129311,1568486161,4106261531,10750188961 ⋆ a(n) = 5 * F(n) ^ 2 + 5 * F(n) + 1, where F(n) = Fibonacci(n). ● a(n) = 5 * Fibonacci(n) ^ 2 + 5 * Fibonacci(n) + 1. ●

► [A266705] 1,11,11,45,101,281,719,1899,4955,12989,33989,89001,232991,609995,1596971,4180941,10945829,28656569,75023855,196415019,514221179,1346248541,3524524421,9227324745,24157449791 ⋆ Coefficient of x ^ 2 in minimal polynomial of the continued fraction [1 ^ n,sqrt(5),1,1,1,...], where 1 ^ n means n ones. ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - a(n - 3) for n > 3. ● a(n) = (2 ^ (- n) * (- 23 * (- 2) ^ n - (3 - sqrt(5)) ^ n * (- 9 + sqrt(5)) + (3 + sqrt(5)) ^ n * (9 + sqrt(5)))) / 5 for n>0. - _ Colin Barker _ , Sep 29 2016 ●

► [A277953] 1,11,11,111,1011,10111,101011,1010111,10101011,101010111,1010101011,10101010111,101010101011,1010101010111,10101010101011,1010101010101011,101010101010111,1010101010101011,10101010101010111,101010101010101011,1010101010101010111 ⋆ Binary representation of the x - axis, from the origin to the right edge, of the n - th stage of growth of the two - dimensional cellular automaton defined by "Rule 14", based on the 5 - celled von Neumann neighborhood. ● a(n) = 10 * a(n - 1) + a(n - 2) - 10 * a(n - 3) for n>2. ● a(n) = (539 - 450 * (- 1) ^ n + 10 ^ (1 + n)) / 99. (End) ●

► [A268922] 0,1,11,11,261,2136,2136,64636,220886,1392761,7252136,46314636,241627136,974049011,2194752136,8298267761,99851002136,710202564636,710202564636,1215429436151 1,31227780689636 ⋆ One of the two successive approximations up to 5 ^ n for the 5 - adic integer sqrt(- 4). These are the 1 mod 5 numbers, except for n = 0. ● a(n) == Lucas(5 ^ n) (mod 5 ^ n). - _ Peter Bala _ , Nov 10 2022 ●

► [A092805] 1,11,11,1011,11011,11011,1011011,11011011,11011011,1011011011,11011011011,1011011011011,11011011011011,11011011011011011,1101101101101011,11011011011011011 ⋆ Expansion of (1 + 10x) / ((1 - x)(1 - 1000x ^ 3)). ● a(n)=10 ^ (n + 1)(cos(2 * pi * n / 3) / 37 + 11 * sqrt(3)sin(2 * pi * n / 3) / 333 + 2 / 27) - 11 / 999 ●

► [A038687] 11,12,13,14,15,16,17,18,19,21,22,23,24,25,26,27,28,29,31,32,33,34,35,36,37 ⋆ Concatenate i >= 1 and j >= 1, then sort. ● a(n) = n + O(log n). - _ Charles R Greathouse IV _ , Jan 13 2015 ●

► [A111019] 1,11,12,13,29,30,31,35,36,37,83,84,85,89,90,91,107,108,109,119,120,121,245,246,247 ⋆ Indices of Catalan numbers that are == 1 mod 3 (cf. A000108). ● a(3k) = a(3k - 1) + 1 and a(3k + 1) = a(3k - 1) + 2 for k >= 1. - _ Robert Israel _ , Jun 30 2020 ●

► [A061082] 11,12,13,104,105,106,107,108,109,1010,1011,1012,1013,1014,1015,1016,1017,1018,1019,1020,1021,1022,1023,1024,1025 ⋆ a(n) = A053061(n) / n. ● a(n) = 10 ^ floor(1 + 2log _ 10 n) + n. - _ Charles R Greathouse IV _ , Sep 20 2012 ●

► [A246139] 11,12,14,18,26,42,74,138,266,522,1034,2058,4106,8202,16394,32778,65546,131082,262154,524298,1048586,2097162,4194314,8388618,16777226 ⋆ 2 ^ n + 10. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2). ●

► [A098752] 1,11,12,21,101,102,201,1001,1002,2001,10001,10002,20001,100001,100002,200001,1000001,1000002,2000001,10000001,10000002,20000001,100000001,100000002,200000001 ⋆ a(1) = 1 and a(n + 1) is the least number > a(n) that begins with the last digit of a(n) and doesn't end with 0. ● a(n) = 11 * a(n - 3) - 10 * a(n - 6) for n > 7. ● a(n) = (1 - sign((n - 1) mod 3)) * 10 ^ floor(n / 3) + 10 ^ floor((n + 1) / 3) - sign(n mod 3) + 2, for n > 1. - _ Wesley Ivan Hurt _ , Mar 06 2022 ●

► [A112651] 0,1,11,11,12,22,23,33,34,44,45,55,56,66,67,77,78,88,89,99,100,110,111,121,122,132 ⋆ Numbers k such that k ^ 2 == k (mod 11). ● a(n) = 11 * n - a(n - 1) - 21 (with a(1)=0). - _ Vincenzo Librandi _ , Nov 13 2010 ● a(n) = 11 * n / 2 - 31 / 4 - 9 * (- 1) ^ n / 4. ●

► [A022101] 1,11,12,23,35,58,93,151,244,395,639,1034,1673,2707,4380,7087,11467,18554,30021,48575,78596,127171,205767,332938,538705 ⋆ Fibonacci sequence beginning 1, 11. ● a(n) = a(n - 1) + a(n - 2), n>=2, a(0)=1, a(1)=11. a(- 1)=10. ● a(n - 1) = ((1 + sqrt5) ^ n - (1 - sqrt5) ^ n) / (2 ^ n * sqrt5) + 5 * ((1 + sqrt5) ^ (n - 1) - (1 - sqrt5) ^ (n - 1)) / (2 ^ (n - 2) * sqrt5). - Al Hakanson (hawkuu(AT)gmail.com), Jan 14 2009 ●

► [A042633] 1,11,12,23,35,58,93,151,395,546,941,1487,2428,3915,6343,73688,4280247,47156405,51436652,98593057,150029709,248622766,398652475,647275241,1693202957 ⋆ Denominators of continued fraction convergents to sqrt(846). ● a(n) = 4286590 * a(n - 16) - a(n - 32) for n>31. - _ Vincenzo Librandi _ , Jan 26 2014 ●

► [A042019] 1,11,12,23,265,12213,134608,146821,281429,3242540,149438269,1647063499,1796501768,3443565267,39675719705,1828526671697,20153469108372,21981995780069,42135464888441,485472109552920,2237385250432276 1,24659784965710329 1,268971702161426052 ⋆ Denominators of continued fraction convergents to sqrt(533). ● a(n) = 12236 * a(n - 5) + a(n - 10) for n>9. - _ Vincenzo Librandi _ , Jan 12 2014 ●

► [A022316] 0,11,12,24,37,62,100,163,264,428,693,1122,1816,2939,4756,7696,12453,20150,32604,52755,85360,138116,223477,361594,585072 ⋆ a(n) = a(n - 1) + a(n - 2) + 1, with a(0) = 0 and a(1) = 11. ● a(n) = F(n + 2) + 10 * F(n) - 1, where F = A000045. - _ G. C. Greubel _ , Aug 25 2017 ●
► [A172173] 0,1,1,11,12,32,44,85,129,223,352,584,936,1529,2465,4003,6468,10480,16948,27437,44385,71831,116216,188056,304272 ⋆ Sums of NE - SW diagonals of triangle A172171. ● a(n) = a(n - 1) + 2 * a(n - 2) - a(n - 3) - a(n - 4) for n> 3. ● a(n) = (2 ^ (- 1 - n) * (- 45 * ((- 2) ^ n + 2 ^ n) + (45 - 7 * sqrt(5)) * (1 + sqrt(5)) ^ n + (1 - sqrt(5)) ^ n * (45 + 7 * sqrt(5)))) / 5. - _ Colin Barker _ , Jul 13 2017 ● a(n) = Fibonacci(n + 1) + 8 * Fibonacci(n - 1) - 9 * ((1 + (- 1) ^ n) / 2). - _ G. C. Greubel _ , Apr 25 2022 ●
► [A041256] 11,12,59,71,1621,1692,8389,10081,230171,240252,1191179,1431431,32682661,34114092,169139029,203253121,4640707691,4843960812,24016550939,28860511751,658947809461,687808321212 ⋆ Numerators of continued fraction convergents to sqrt(140). ● a(n) = 142 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Nov 01 2013 ●
► [A041258] 11,12,83,95,2173,2268,15781,18049,412859,430908,2998307,3429215,78441037,81870252,569662549,651532801,14903384171,15554916972,108232886003,123787802975,2831564551453,2955352354428 ⋆ Numerators of continued fraction convergents to sqrt(141). ● a(n) = 190 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Nov 01 2013 ●
► [A164854] 1,1,11,12,113,125,1138,1263,11401,12664,114065,126729,1140794,1267523,11408317,12675840,114084157,126759997,1140844154,1267604151,11408448305,12676052456,114084500761,126760553217,1140845053978 ⋆ Diagonal sum of generalized Pascal triangle; (10 ^ n,1). ● a(n) = a(n - 1) + 11 * a(n - 2) - 10 * a(n - 3) - 10 * a(n - 4). - _ Wesley Ivan Hurt _ , Apr 21 2021 ●
► [A033047] 0,1,11,12,121,122,132,133,1331,1332,1342,1343,1452,1453,1463,1464,14641,14642,14652,14653,14762,14763,14773,14774,15972 ⋆ Sums of distinct powers of 11. ● a(n) = Sum _{ i=0..m } d(i) * 11 ^ i, where Sum _{ i=0..m } d(i) * 2 ^ i is the base - 2 representation of n. ● a(2n) = 11 * a(n), a(2n + 1) = a(2n) + 1. ●
► [A094624] 0,1,11,12,121,122,1221,1222,12221,12222,122221,122222,1222221,1222222,12222221,12222222,122222221,122222222,1222222221,1222222222,12222222221,12222222222,122222222221,122222222222,1222222222221 ⋆ Expansion of x * (1 + 11 * x + x ^ 2) / ((1 - x) * (1 + x) * (1 - 10 * x ^ 2)). ● a(n) = 10 ^ (n / 2) * (11 / 18 + 11 * sqrt(10) / 180 - (11 * sqrt(10) / 180 - 11 / 18)(- 1) ^ n) - 13 / 18 - (- 1) ^ n / 2. ● a(n) = 11 * a(n - 2) - 10 * a(n - 4) for n > 3. ●
► [A249312] 1,11,12,122,134,1354,1488,15028,16516,166796,183312,1851272,2034584,20547304,22581888,228054928,250636816,2531186096,2781822912,28093683872,30875506784,311812345504,342687852288,3460811307328,3803499159616 ⋆ Expansion of x * (1 + 11 * x - 10 * x ^ 3) / (1 - 12 * x ^ 2 + 10 * x ^ 4). ● a(1)=1, a(2)=11, a(3)=12, a(4)=122, a(n)=12 * a(n - 2) - 10 * a(n - 4). - _ Harvey P. Dale _ , Feb 02 2015 ●
► [A041059] 1,1,11,12,131,143,1561,1704,18601,20305,221651,241956,2641211,2883167,31472881,34356048,375033361,409389409,4468927451,4878316860,53252096051,58130412911,634556225161 ⋆ Denominators of continued fraction convergents to sqrt(35). ● a(n) = Product _{ k = 1..floor((n - 1) / 2) } (10 + 4 * cos ^ 2(k * Pi / n)). ●
► [A041260] 11,12,131,143,3277,3420,37477,40897,937211,978108,10718291,11696399,268039069,279735468,3065393749,3345129217,76658236523,80003365740,876691893923,956695259663,21923987606509,22880682866172 ⋆ Numerators of continued fraction convergents to sqrt(142). ● a(n) = 286 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Nov 01 2013 ●
► [A041261] 1,1,11,12,275,287,3145,3432,78649,82081,899459,981540,22493339,23474879,257242129,280717008,6433016305,6713733313,73570349435,80284082748,1839820169891,1920104252639,21040862696281,22960966948920,526182135572521 ⋆ Denominators of continued fraction convergents to sqrt(142). ● a(n) = 286 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Dec 14 2013 ●
► [A041262] 11,12,275,287,6589,6876,157861,164737,3782075,3946812,90611939,94558751,2170904461,2265463212,52011095125,54276558337,1246095378539,1300371936876,29854277989811,31154649926687 ⋆ Numerators of continued fraction convergents to sqrt(143). ● a(n) = 24 * a(n - 2) - a(n - 4). - _ Vincenzo Librandi _ , Nov 01 2013 ●
► [A041607] 1,1,11,12,419,431,4729,5160,180169,185329,2033459,2218788,77472251,79691039,874382641,954073680,33312887761,34266961441,375982502171,410249463612,14324464264979,14734713728591,161671601550889,176406315279480,6159486321053209 ⋆ Denominators of continued fraction convergents to sqrt(321). ● a(n) = 430 * a(n - 4) - a(n - 8) for n>7. - _ Vincenzo Librandi _ , Dec 21 2013 ●
► [A042097] 1,1,11,12,563,575,6313,6888,323161,330049,3623651,3953700,185493851,189447551,2079969361,2269416912,106473147313,108742564225,11938987895 63,1302641353788,61115401063811,62418042417599,685295825239801,747713867657400,35080133737480201 ⋆ Denominators of continued fraction convergents to sqrt(572). ● a(n) = 574 * a(n - 4) - a(n - 8) for n>7. - _ Vincenzo Librandi _ , Jan 14 2014 ●
► [A320427] 11,13,14,16,17,19,21,23,24,26,27,29,31,33,34,36,37,39,41,43,44,46,47,49,51 ⋆ a(n) = floor(3 * n / 2) + ceiling(n / 6) + 9. ● a(n) = - floor((n mod 2) / 2 - 5 * n / 3) + 9. ● a(n) = ceiling(5 * n / 3 - 3 / 5 * (n mod 2)) + 9. ●
► [A008364] 1,11,13,17,19,23,29,31,37,41,43,47,53,59,61,67,71,73,79,83,89,97,101,103,107 ⋆ 11 - rough numbers: not divisible by 2, 3, 5 or 7. ● a(n) = a(n - 1) + a(n - 48) - a(n - 49). - _ Charles R Greathouse IV _ , Dec 21 2011 ● a(n) = 35 * n / 8 + O(1). - _ Charles R Greathouse IV _ , Sep 14 2015 ●
► [A230462] 1,11,13,17,19,29,31,41,43,47,49,59,61,71,73,77,79,89,91,101,103,107,109,119,121 ⋆ Numbers congruent to { 1, 11, 13, 17, 19, or 29 } mod 30. ● a(n) = a(n - 1) + a(n - 6) - a(n - 7) for n>7; a(n) = a(n - 6) + 30 for n>6. ● a(n) = (30 * n - 15 - 6 * cos(n * Pi / 3) + 6 * cos(2 * n * Pi / 3) + 9 * cos(n * Pi) + 6 * sqrt(3) * sin(n * Pi / 3) - 2 * sqrt(3) * sin(2 * n * Pi / 3)) / 6. ● a(6k) = 30k - 1, a(6k - 1) = 30k - 11, a(6k - 2) = 30k - 13, a(6k - 3) = 30k - 17, a(6k - 4) = 30k - 19, a(6k - 5) = 30k - 29. (End) ● a(n) = 5 * n + ceiling(7 / 79 - ((((14654 / 4883) ^ n mod 6) mod 5) + n mod 3 + 1) mod 7). - _ Mikk Heidemaa _ , Dec 13 2017 ● a(n + 6) = a(n) + 30. - _ David A. Corneth _ , Jan 15 2018 ●
► [A045798] 11,13,17,19,31,33,37,39,51,53,57,59,71,73,77,79,91,93,97,99,111,113,117,119,131 ⋆ Oddish numbers (prime to 10 and 10's digit is odd). ● a(n) = 5n + O(1). - _ Charles R Greathouse IV _ , Feb 07 2017 ● a(n + 4) = a(n) + 20. This confirms Barker's conjecture. - _ Robert Israel _ , Mar 27 2017 ●
► [A088265] 11,13,17,19,101,103,107,109,1001,1003,1007,1009,10001,10003,10007,10009,100001,100003,100007,100009,1000001,1000003,1000007,1000009,10000001 ⋆ Numbers of the form 10 ^ n + 1, 3, 7, or 9 for n>=1. ● a(4n + r) = 10 ^ (n + 1) + k, (r, k) = (1, 1), (2, 3), (3, 7) or (4, 9). ●
► [A048058] 11,13,17,23,31,41,53,67,83,101,121,143,167,193,221,251,283,317,353,391,431,473,517,563,611 ⋆ a(n) = n ^ 2 + n + 11. ● a(n) = 2 * n + a(n - 1) (with a(0)=11). - _ Vincenzo Librandi _ , Aug 06 2010 ●
► [A091998] 1,11,13,23,25,35,37,47,49,59,61,71,73,83,85,95,97,107,109,119,121,131,133,143,145 ⋆ Numbers that are congruent to { 1, 11 } mod 12. ● a(n) = 12 * n - a(n - 1) - 12 (with a(1)=1). - _ Vincenzo Librandi _ , Nov 16 2010 ● a(n) = 6 * n + 2 * (- 1) ^ n - 3. ● a(n) - a(n - 1) - a(n - 2) + a(n - 3) = 0 for n > 3. ● a(n) = a(n - 2) + 12 for n > 2. ●
► [A208296] 11,13,23,25,35,37,47,59,61,73,83,85,95,107,119,121,133,143,145,157,167,179,193,203,205 ⋆ Smallest positive nontrivial odd solution of the congruence x ^ 2 == 1 (mod A001748(n + 2)), n >= 1. ● a(n) = sqrt(8 * T(K(n)) + 1), with the triangular numbers T = A000217, and K(n) = prime(n + 2) - 1 if the prime prime(n + 2) is of the form 6 * k + 1, i.e., from A002476, and K(n) = prime(n + 2) if prime(n + 2) is of the form 6 * k - 1, i.e. from A007528. ●
► [A022325] 1,11,13,25,39,65,105,171,277,449,727,1177,1905,3083,4989,8073,13063,21137,34201,55339,89541,144881,234423,379305,613729 ⋆ a(n) = a(n - 1) + a(n - 2) + 1, with a(0) = 1 and a(1) = 11. ● a(n) = 2 * F(n + 2) + 8 * F(n) - 1, where F = A000045. - _ G. C. Greubel _ , Aug 25 2017 ●
► [A295340] 11,13,26,28,41,43,56,58,71,73,86,88,101,103,116,118,131,133,146,148,161,163,176,178,191 ⋆ Numbers congruent to 11 or 13 mod 15. ● a(n) = (1 / 4) * (- 1) ^ n * (3 * (- 1) ^ n * (10 * n + 1) - 11) for n > 0. ● a(n) = (15 * n - 4) / 2 for n even. ● a(n) = (15 * n + 7) / 2 for n odd. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n > 3. ● a(n) = (1 / 4) * (33 + 11 * (- 1) ^ (n - 1) + 30 * (n - 1)). - _ Paolo P. Lava _ , Dec 11 2017 ● a(n) = ceiling(15 * n / 2) + 5 * (n mod 2) - 2 for n > 0. - _ Mikk Heidemaa _ , Sep 06 2018 ●
► [A154292] 11,13,46,50,105,111,188,196,295,305,426,438,581,595,760,776,963,981,1190,1210,1441,1463,1716,1740,2015 ⋆ Integers of the form m * (6 * m -+ 1) / 2. ● a(n) = (12 * n ^ 2 - 10 * (- 1) ^ n * n + 12 * n - 5 * (- 1) ^ n + 5) / 4. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n>5. ●
► [A334930] 1,11,13,91,109,731,877,5851,7021,46811,56173,374491,449389,2995931,3595117,23967451,28760941,191739611,230087533,1533916891,1840700269,12271335131,14725602157,98170681051,117804817261 ⋆ Numbers that generate rotationally symmetrical XOR - triangles featuring singleton zero bits in a hexagonal arrangement. ● a(n) = - (4 / 7) - (1 / 7) * (- 1) ^ (n - 1) + ((6 + 10 * sqrt(2)) / 7) * (2 * sqrt(2)) ^ (n - 1) + ((6 - 10 * sqrt(2)) / 7) * (- 2 * sqrt(2)) ^ (n - 1) - _ Alejandro J. Becerra Jr. _ , May 31 2020 ●
► [A094621] 0,11,13,141,143,1441,1443,14441,14443,144441,144443,1444441,1444443,14444441,14444443,144444441,144444443,1444444441,1444444443,14444444441,14444444443,144444444441,144444444443,1444444444441 ⋆ Expansion of x * (11 + 13 * x + 20 * x ^ 2) / ((x - 1) * (1 + x) * (10 * x ^ 2 - 1)). ● a(n) = 10 ^ (n / 2) * ((11 * sqrt(10) / 20 - 1) + (13 / 18 - 13 * sqrt(10) / 18) * (- 1) ^ n + 31 * sqrt(10) / 180 + 31 / 18) + (- 1) ^ n - 22 / 9. ●
► [A093605] 0,1,1,11,13,211,271,1919,2597,67843,95259,588933,850251,10098967,14904091,85806311,128927573,5792144099,8834766227,48605936617,75096287791,812156618077,1268822838961,6760265315081,10665172132163 ⋆ Numbers of sqrt(2) term in expected number of complex eigenvalues in an n X n real matrix with entries chosen from a standard normal distribution. ● a(n + 1) = Sum _{ k=0..floor(n / 2) } ((C(2 * (n - 2 * k),n - 2 * k) * 16 ^ k) / Sum _{ k=0..n, mod(C(n,k),2)). - _ Paul Barry _ , Oct 26 2007 ●
► [A111070] 11,13,311,313,131111,131113,313331,313333,1131131,1131133,3331331,3331333,3333131,3333133,3333311,3333313,111113111,111113113,113331311,113331313,331313111,331313113,331331111,331331113,333331331 ⋆ Twin prime pairs using digits 1 and 3 only. ● a(2k) = a(2k - 1) + 2. ●
► [A106389] 1,11,14,24,27,37,40,50,53,63,66,76,79,89,92,102,105,115,118,128,131,141,144,154,157 ⋆ Numbers j such that 6j ^ 2 + 6j + 1 = 13k. ● a(n) = (- 15 + 7 * (- 1) ^ n + 26 * n) / 4. G.f.: x * (2 * x ^ 2 + 10 * x + 1) / ((x - 1) ^ 2 * (x + 1)). - _ Colin Barker _ , Apr 16 2014 ●
► [A195818] 0,1,11,14,34,39,69,76,116,125,175,186,246,259,329,344,424,441,531,550,650,671,781,804,924 ⋆ Generalized 14 - gonal numbers: m * (6 * m - 5), m = 0, + 1, - 1, + 2, - 2, + 3, - 3,... ● a(n) = (3 * n * (n + 1) + (2 * n + 1) * (- 1) ^ n - 1) / 2. - _ Vincenzo Librandi _ , Sep 30 2011 ●
► [A061087] 11,14,109,116,1025,1036,1049,1064,1081,10100,10121,10144,10169,10196,10225,10256,10289,10324,10361,10400,10441,100484,100529,100576,100625 ⋆ a(n) = A061086(n) / n. ● a(n) = { n concatenated with n ^ 3 }/ n. ●
► [A211322] 11,15,21,31,47,73,115,183,293,471,759,1225,1979,3199,5173,8367,13535,21897,35427,57319,92741,150055,242791,392841,635627 ⋆ Number of (n + 1) X (n + 1) - 3..3 symmetric matrices with every 2 X 2 subblock having sum zero and one or two distinct values. ● a(n) = 5 + (2 ^ (1 - n) * ((1 - sqrt(5)) ^ n * (- 2 + sqrt(5)) + (1 + sqrt(5)) ^ n * (2 + sqrt(5)))) / sqrt(5). ●
► [A228205] 11,15,24,41,80,141,249,440,869,1536,2715,4799,9479,16755,29616,52349,103400,182769,323061,571040,1127921,1993704,3524055,6229091,12303731 ⋆ x - values in the solution to x ^ 2 - 13y ^ 2 = 108. ● a(n) = 11 * a(n - 4) - a(n - 8). ●
► [A214863] 11,15,27,31,43,47,59,63,75,79,91,95,107,111,123,127,139,143,155,159,171,175,187,191,203 ⋆ Numbers n such that n XOR 11 = n - 11. ● a(n)= 1 + 8 * n - 2 * (- 1) ^ n. ●
► [A097512] 11,15,34,87,227,594,1555,4071,10658,27903,73051,191250,500699,1310847,3431842,8984679,23522195,61581906,161223523,422088663,1105042466,2893038735,7574073739,19829182482,51913473707 ⋆ a(n) = 6 * Lucas(2n) - Fibonacci(2n + 2). ● a(n + 1) / a(n) approaches the golden ratio phi + 1 = (3 + sqrt(5

)) / 2. ● a(n) = 3 * a(n - 1) - a(n - 2) with a(0)=11 and a(1)=15. ● a(n) = (11 / 2) * (((3 + sqrt(5)) / 2) ^ n + ((3 - sqrt(5)) / 2) ^ n) - (3 * sqrt(5) / 10) * (((3 + sqrt(5)) / 2) ^ n + ((3 - sqrt(5) / 2) ^ n), with n>=0. - _ Paolo P. Lava _ , Nov 19 2008 ● a(n) = 4 * Fibonacci(2n + 1) + 7 * Fibonacci(2n - 1) = 4 * Lucas(2n) + 3 * Fibonacci(2n - 1). - _ Ron Knott _ , Jul 01 2013 ●

► [A219389] 0,11,15,48,56,111,123,200,216,315,335,456,480,623,651,816,848,1035,1071,1280,1320,1551,1595,1848,1896 ⋆ Numbers k such that 13 * k + 1 is a square. ● a(n) = a(- n + 1) = (26 * n * (n - 1) + 9 * (- 1) ^ n * (2 * n - 1) + 1) / 8 + 1. ●

► [A074197] 1,11,16,18,39,44,53,57,74,102,110,111,116,125,147,152,155,160,201,218,246,273,287,289,290 ⋆ Let b(1) = n, b(k + 1) = b(k) / 2 + k if b(k) is even, b(k + 1) = b(k) - k otherwise; sequence gives values of b(1) = n such that b(k) = 2k - 4 for k large enough. ● a(n) / (n * log(n)) seems bounded and maybe a(n) is asymptotic to c * n * log(n) where 3 < c < 5. ●

► [A258588] 1,11,16,22,27,33,38,44,49,55,60,66,71,77,82,88,93,99,104,110,115,121,126,132,137 ⋆ Minimal most likely sum for a roll of n 10 - sided dice. ● a(n) = floor(11 * n / 2) = (22 * n + (- 1) ^ n - 1) / 4 with n>1, a(1)=1. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n>4. ●

► [A128835] 11,16,32,37,38,40,53,58,74,79,80,82,95,100,116,121,122,124,137,142,158,163,164,166,179 ⋆ Numbers n such that n ^ n == 2 (mod 7), or 7 divides n ^ n - 2. ● a(1)=11, a(2)=16, a(3)=32, a(4)=37, a(5)=38, a(6)=40; n>=7: a(n)=a(n - 6) + 42. ●

► [A184064] 11,16,36,73,134,225,354,529,758,1049,1410,1849,2374,2993,3714,4545,5494,6569,7778,9129,10630,12289,14114,16113,18294 ⋆ Number of (n + 1) X 3 binary arrays with rows and columns in nondecreasing order and with no 2 X 2 subblock sum differing from a horizontal or vertical neighbor subblock sum by more than one. ● a(n) = (4 * n ^ 3 - 15 * n ^ 2 + 74 * n - 93) / 3 for n>3. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>7. ●

► [A085487] 1,11,16,71,151,506,1261,3791,10096,29051,79531,224786,622441,1746371,4858576,13590431,37883311,105835466,295252021,824429351,2300689456,6422836211,17926283491,50040464546,139671882001 ⋆ a(n) = p ^ n + q ^ n, p = (1 + sqrt(21)) / 2, q = (1 - sqrt(21)) / 2. ● a(n) = n * sum(k=1..n, (C(k,n - k) * 1 ^ (2 * k - n) * (5) ^ (n - k)) / k). - _ Dmitry Kruchinin _ , May 16 2011 ● a(n) = a(n - 1) + 5a(n - 2), n>1. ● a(n) = [x ^ n] ((1 + x + sqrt(1 + 2 * x + 21 * x ^ 2)) / 2) ^ n. - _ Peter Bala _ , Jun 23 2015 ●

► [A258288] 1,1,11,16,99,174,875,1657,7352,13655,55787,107946,393317,751343,2624771,5056414,16243829,31688464,96658985 ⋆ Number of partitions of 10 copies of n into distinct parts. ● a(n) = 1 / 10! * [Product _{ i=1..10 } x _ i ^ n] Product _{ j>0 } (1 + Sum _{ i=1..10 } x _ i ^ j). ●

► [A184551] 0,11,17,22,28,39,45,50,56,67,73,78,84,95,101,106,112,123,129,134,140,151,157,162,168 ⋆ Super - birthdays (falling on the same weekday), version 3 (birth within 2 and 3 years after a February 29). ● a(n) = + 1 * a(n - 1) + 1 * a(n - 4) - 1 * a(n - 5). (End) ●

► [A190039] 11,17,22,31,43,60,80,100,120,140,160,180,200,220,240,260,280,300,320,340,360,380,400,420,440 ⋆ Number of nondecreasing arrangements of n + 2 numbers in 0..7 with the last equal to 7 and each after the second equal to the sum of one or two of the preceding three. ● a(n) = 2 * a(n - 1) - a(n - 2) for n>7. ●

► [A128464] 11,17,29,41,47,59,71,77,89,101,107,119,131,137,149,161,167,179,191,197,209,221,227,239,251 ⋆ Numbers that are congruent to { 11, 17, 29 } mod 30. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>4. ● a(n) = 10 * n - 1 + 4 * sin(2 * n * Pi / 3) / sqrt(3). ● a(3k) = 30k - 1, a(3k - 1) = 30k - 13, a(3k - 2) = 30k - 19. (End) ●

► [A111255] 11,17,29,41,67,73,89,97,107,127,151,157,181,191,271,307,337,347,389,409,439,461,491,499,547 ⋆ Primes in A111254. ● a(n) = If Prime[n + 2] + Prime[n] is prime then Prime[n + 2] + Prime[n] ●

► [A271999] 1,11,17,35,53,85,117,167,217,289,361,459,557,685,813,975,1137,1337,1537,1779,2021,2309,2597,2935,3273 ⋆ Halogen sequence: a(n) = A018227(n) - 1. ● a(n) = (1 / 12) * (2 * n ^ 3 + 12 * n ^ 2 + 28 * n - 12) for n>2 and even. ● a(n) = (1 / 12) * (2 * n ^ 3 + 12 * n ^ 2 + 22 * n - 24) for n>2 and odd. ● a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + a(n - 4) + 2 * a(n - 5) - a(n - 6) for n>8. ●

► [A003334] 11,18,25,32,37,39,44,46,51,53,58,60,63,65,67,70,72,74,77,79,81,84,86,88,89 ⋆ Numbers that are the sum of 11 positive cubes. ● a(n) = n + 92 for all n > 229. - _ M. F. Hasler _ , Aug 25 2020 ●

► [A004769] 11,19,27,35,43,51,59,67,75,83,91,99,107,115,123,131,139,147,155,163,171,179,187,195,203 ⋆ Numbers whose binary expansion ends in 011. ● a(n) = 8 * n + 11. - _ Vincenzo Librandi _ , Jul 12 2011 ● a(n) = 2 * a(n - 1) - a(n - 2). ●

► [A271779] 11,19,37,71,127,211,329,487,691,947,1261,1639,2087,2611,3217,3911,4699,5587,6581,7687,8911,10259,11737,13351,15107 ⋆ a(n) = n ^ 3 + 2 * n ^ 2 + 5 * n + 11. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>3. ●

► [A034844] 11,19,41,61,89,101,109,149,181,191,199,401,409,419,449,461,491,499,601,619,641,661,691,809,811 ⋆ Primes with only nonprime decimal digits. ● a(n) >> n ^ 1.285. [_ Charles R Greathouse IV _ , Feb 20 2012] ●

► [A167535] 11,19,41,149,181,251,449,491,499,641,811,1009,1289,1361,1699,2251,2549,4001,4289,4441,4729,6449,6481,6761,7841 ⋆ Primes which are the concatenation of two squares (in decimal notation). ● a(n) = m ^ 2 * 10 ^ k + n ^ 2 for a k - digit square number n ^ 2. ●

► [A265802] 1,11,19,59,145,389,1009,2651,6931,18155,47521,124421,325729,852779,2232595,5845019,15302449,40062341,104884561,274591355,718889491,1882077131,4927341889,12899948549,33772503745 ⋆ Coefficient of x ^ 2 in minimal polynomial of the continued fraction [1 ^ n,4,1,1,1,...], where 1 ^ n means n ones. ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - a(n - 3) for n>3. ● a(n) = (2 ^ (- n) * (- 13 * (- 2) ^ n + 3 * (3 - sqrt(5)) ^ (1 + n) + 3 * (3 + sqrt(5)) ^ (1 + n))) / 5. - _ Colin Barker _ , Oct 20 2016 ● a(n) = 6 * Fibonacci(n + 1) ^ 2 - 5 * (- 1) ^ n = (6 * Lucas(2 * n + 2) - 13 * (- 1) ^ n) / 5. - _ G. C. Greubel _ , Dec 11 2019 ●

► [A106231] 11,19,77,199,409,731,1189,1807,2609,3619,4861,6359,8137,10219,12629,15391,18529,22067,26029,30439,35321,40699,46597,53039,60049 ⋆ Least j > 1 such that j ^ 2 = (4 * n ^ 2 + 2) * (k ^ 2) + (4 * n ^ 2 + 2) * k + 1. ● a(1) = 11, a(n) = 4 * n ^ 3 - 4 * n ^ 2 + 2 * n - 1 for n > 1, k sequence = A106232. ●

► [A199338] 1,11,19,89,151,701,1189,5519,9361,43451,73699,342089,580231,2693261,4568149,21203999,35964961,166938731,283151539,1314305849,2229247351,10347508061,17550827269,81465758639,138177370801 ⋆ y - values in the solution to 15 * x ^ 2 - 14 = y ^ 2. ● a(n + 4) = 8 * a(n + 2) - a(n) with a(1)=1, a(2)=11, a(3)=19, a(4)=89. ●

► [A257401] 0,11,20 ⋆ God's number for a Rubik's cube of size n X n X n (using the half turn metric). ● a(n) = Theta(n ^ 2 / log(n)) [Demaine et al.]. ●

► [A102815] 11,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43 ⋆ "False so far" sequence. ● a(n) = n + 19 for n > 81, see comments. - _ Charles R Greathouse IV _ , Dec 19 2022 ●

► [A100038] 11,20,33,50,71,96,125,158,195,236,281,330,383,440,501,566,635,708,785,866,951,1040,1133,1230,1331 ⋆ Positions of occurrences of the natural numbers as third subsequence in A100035. ● a(n) = 2 * n ^ 2 + 3 * n + 6 (conjecture d). - _ Ralf Stephan _ , May 15 2007 ●

► [A160843] 0,1,11,20,35,52,75,100,131,164,203,244,291,340,395,452,515,580,651,724,803,884,971,1060,1155 ⋆ Number of lines through at least 2 points of a 3 X n grid of points. ● a(n) = 2 * n ^ 2 + 3 - n mod 2. ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4) for n > 5. - _ Colin Barker _ , May 24 2015 ●

► [A164576] 1,11,20,46,63,105,130,188,221,295,336,426,475,581,638,760,825,963,1036,1190,1271,1441,1530,1716,1813 ⋆ Integer averages of the set of the first positive squares up to some n ^ 2. ● a(n) = 1 / 4 * (12 * n ^ 2 - 6 * n + (- 1) ^ n * (4 * n - 1) + 1). - _ Colin Barker _ , Dec 26 2015 ●

► [A198310] 11,20,101,182,911,1640,8201,14762,73811,132860,664301,1195742,5978711,10761680,53808401,96855122,484275611,871696100,4358480501,7845264902,39226324511,70607384120,353036920601,635466457082,3177332285411 ⋆ Moore lower bound on the order of a (10,g) - cage. ● a(2i) = 2 * Sum _{ j=0..i - 1 } 9 ^ j = string "2" ^ i read in base 9. ● a(2i + 1) = 9 ^ i + 2 * Sum _{ j=0..i - 1 } 9 ^ j = string "1" * "2" ^ i read in base 9. ● a(n) = (- 3 - (- 3) ^ n + 4 * 3 ^ n) / 12. ● a(n) = a(n - 1) + 9 * a(n - 2) - 9 * a(n - 3). ●

► [A017281] 1,11,21,31,41,51,61,71,81,91,101,111,121,131,141,151,161,171,181,191,201,211,221,231,241 ⋆ a(n) = 10 * n + 1. ● a(n) = 20 * n - a(n - 1) - 8, with a(0)=1. - _ Vincenzo Librandi _ , Nov 20 2010 ● a(n) = 2 * a(n - 1) - a(n - 2), for n > 2. - _ Wesley Ivan Hurt _ , Jun 17 2015 ●

► [A081927] 1,11,21,31,41,51,61,71,81,109,137,165,193,257,294,376,467,567,676,785,894,1399,1778,1986,2887 ⋆ n - th positive integer whose digits sum up to n. ● a(9 * k - j) = (12 - j) * 10 ^ (k - 1) - 10 ^ (k - 10) - 10 ^ (j + k - 45) - 1 for j=2..9, k >= 45 - j. ● a(9 * k - 1) = 2 * 10 ^ k - 10 ^ (k - 9) - 10 ^ (k - 35) - 1, k >= 35. (End) ●

► [A129638] 11,21,40,77,148,286,552,1069,2068,4010,7768,15074,29225,56736,110055,213705,414676,805314,1562977,3035514,5892257,11443768,22215753,43146726,83766396 ⋆ Number of meaningful differential operations of the k - th order on the space R ^ 11. ● a(k + 6) = a(k + 5) + 5 * a(k + 4) - 4 * a(k + 3) - 6 * a(k + 2) + 3 * a(k + 1) + a(k). ●

► [A116525] 0,1,11,21,121,131,231,331,1331,1341,1441,1541,2541,2641,3641,4641,14641,14651,14751,14851,15851,15951,16951,17951,27951 ⋆ a(0)=1, a(1)=1, a(n) = 11 * a(n / 2) for even n, and a(n) = 10 * a((n - 1) / 2) + a((n + 1) / 2) for odd n >= 3. ● a(n) = Sum _{ k=0..n - 1 } 10 ^ wt(k), where wt = A000120. - _ Mike Warburton _ , Mar 14 2019 ●

► [A094623] 0,1,11,21,121,221,1221,2221,12221,22221,122221,222221,1222221,2222221,12222221,22222221,122222221,222222221,1222222221,2222222221,12222222221,22222222221,122222222221,222222222221,1222222222221 ⋆ Expansion of x * (1 + 10 * x) / ((1 - x) * (1 - 10 * x ^ 2)). ● a(n) = (10 ^ (n / 2) / 2) * (11 / 9 + 2 * sqrt(10) / 9 - (2 * sqrt(10) / 9 - 11 / 9) * (- 1) ^ n) - 11 / 9. ●

► [A015446] 1,1,11,21,131,341,1651,5061,21571,72181,287891,1009701,3888611,13985621,52871731,192727941,721445251,2648724661,9863177171,36350423781,134982195491,498486433301,1848308388211,6833172721221 ⋆ Generalized Fibonacci numbers: a(n) = a(n - 1) + 10 * a(n - 2). ● a(n) = (((1 + sqrt(41)) / 2) ^ (n + 1) - ((1 - sqrt(41)) / 2) ^ (n + 1)) / sqrt(41). ● a(n) = Sum _{ k=0..n } binomial((n + k) / 2, k) * (1 + (- 1) ^ (n - k)) * 10 ^ ((n - k) / 2) / 2. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n - k, k) * 10 ^ k. (End) ● a(n) is the entry (M ^ n) _ 1,1 where the matrix M = [1,2;5,0]. - _ Simone Severini _ , Jun 22 2006 ● a(n) = (sum { 1<=k<=n + 1, k odd } C(n + 1,k) * 41 ^ ((k - 1) / 2)) / 2 ^ n. - _ Vladimir Shevelev _ , Feb 05 2014 ●

► [A092806] 1,11,21,1031,14041,60051,1170061,17385071,108756081,1445344091,21412220101,168765465111,1888849170121,26593883436131,243049333374141,2540104369105151,33511642426760161,336206996880480171,3450730536835416181,42888724689051729191 ⋆ Expansion of (1 + 8x - 9x ^ 2) / (1 - 3x + 3x ^ 2 - 1001x ^ 3). ● a(n) = 91 ^ (n / 2) * (cos(n * arccot(- 4 * sqrt(3) / 15)) / 3 + sqrt(3) * sin(n * arccot(- 4 * sqrt(3) / 15)) / 3) + 2 * 11 ^ n / 3. ●

► [A164006] 0,11,22,27,44,50,66,84,104,126,150,176,204,234,266,300,336,374,414,456,500,546,594,644,696 ⋆ Zero together with row 6 of the array in A163280. ● a(n) = n * (n + 5) for n > 4. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n > 7. ●

► [A008593] 0,11,22,33,44,55,66,77,88,99,110,121,132,143,154,165,176,187,198,209,220,231,242,253,264 ⋆ Multiples of 11. ● a(n) = 11 * n. ●

► [A020338] 11,22,33,44,55,66,77,88,99,1010,1111,1212,1313,1414,1515,1616,1717,1818,1919,2020,2121,2222,2323,2424,2525 ⋆ Doublets: base - 10 representation is the juxtaposition of two identical strings. ● a(n) = n || n. (Where "||" denotes "concatenate". See link "Concatenation".) - _ Halfdan Skjerning _ , Apr 01 2018 ●

► [A338754] 0,11,22,33,44,55,66,77,88,99,1100,1111,1122,1133,1144,1155,1166,1177,1188,1199,2200,2211,2222,2233,2244 ⋆ Duplicate each decimal digit of n, so 0 - > 00, ..., 9 - > 99. ● a(n) = Sum _{ i=0..k } 11 * d[i] * 100 ^ i where the decimal expansion of n is n = Sum _{ i=0..k } d[i] * 10 ^ i with digits 0 <= d[i] <= 9. ●

► [A059544] 11,22,33,44,55,66,77,89,100,111,122,133,144,155,167,178,189,200,211,222,233,245,256,267,278 ⋆ Beatty sequence for log(3) / (log(3) - 1). ● a(n) = floor(n * log(3) / (log(3) - 1)). - _ Michel Marcus _ , Jan 05 2015 ●
► [A026037] 11,22,40,67,105,156,222,305,407,530,676,847,1045,1272,1530,1821,2147,2510,2912,3355,3841,4372,4950,5577,6255 ⋆ a(n) = dot _ product(1,2,...,n) * (3,4,...,n,1,2). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Vincenzo Librandi _ , Jun 20 2012 ●
► [A005015] 11,22,44,88,176,352,704,1408,2816,5632,11264,22528,45056,90112,180224,360448,720896,1441792,2883584,5767168,11534336,23068672,46137344,92274688,184549376 ⋆ a(n) = 11 * 2 ^ n. ● a(n) = 2 * a(n - 1), n>0; a(0)=11. - _ Philippe Deléham _ , Nov 23 2008 ●
► [A094620] 0,11,22,141,242,1441,2442,14441,24442,144441,244442,1444441,2444442,14444441,24444442,144444441,244444442,1444444441,2444444442,144444444441,244444444442,1444444444441,2444444444442 ⋆ Expansion of x * (11 + 22 * x + 20 * x ^ 2) / ((1 - x) * (1 + x) * (1 - 10 * x ^ 2)). ● a(n) = 10 ^ (n / 2) * (11 / 9 + 13 * sqrt(10) / 18 + (11 / 9 - 13 * sqrt(10) / 18) * (- 1) ^ n) + (- 1) ^ n / 2 - 53 / 18. ● a(n) = 11 * a(n - 2) - 10 * a(n - 4) for n > 3. ●
► [A077431] 11,22,303,404,505,606,707,8008,9009,10010,11011,12012,13013,14014,15015,16016,17017,18018,19019,20020,21021,22022,230023,240024,250025 ⋆ n repeated in decimal representation, but separated by enough zeros that the square has the pattern (n ^ 2)(2n ^ 2)(n ^ 2). ● a(n) = n * (1 + 10 ^ (1 + floor(log _ 10(2 * n ^ 2)))). ●
► [A097657] 11,23,34,57,91,148,239,387,626,1013,1639,2652,4291,6943,11234,18177,29411,47588,76999,124587,201586,326173,527759,853932,1381691 ⋆ Fibonacci sequence with first two terms 11 and 23. ● a(n) = a(n - 1) + a(n - 2) for n > 1, a(0) = 11, a(1) = 23. ● a(n) = h * Fibonacci(n + k) + Fibonacci(n + k - h) with h=7, k=3. - _ Bruno Berselli _ , Feb 20 2017 ●
► [A041549] 1,11,23,34,125,1034,3227,4261,11749,133500,4550749,50191739,104934227,155125966,570312125,4717622966,14723181023,19440803989,53604789001,609093483000,20762783211001,228999708804011,478762200819023,707761909623034,2602047929688125 ⋆ Denominators of continued fraction convergents to sqrt(292). ● a(n) = 4562498 * a(n - 10) - a(n - 20) for n>19. - _ Vincenzo Librandi _ , Dec 20 2013 ●
► [A017653] 11,23,35,47,59,71,83,95,107,119,131,143,155,167,179,191,203,215,227,239,251,263,275,287,299 ⋆ a(n) = 12 * n + 11. ● a(n) = 2 * a(n - 1) - a(n - 2). - _ Vincenzo Librandi _ , Jun 08 2011 ●
► [A180316] 0,11,23,36,40,55,61,78,86,95,105,116,128,131,145,150,166,173,181,190,200,211,223,236,240 ⋆ Concatenation of n and A008954(n). ● a(n) = a(n - 1) + a(n - 5) - a(n - 6) - a(n - 10) + a(n - 11) + a(n - 15) - a(n - 16) for n > 15. ●
► [A101859] 0,11,23,36,50,65,81,98,116,135,155,176,198,221,245,270,296,323,351,380,410,441,473,506,540 ⋆ a(n) = 11 + (23 * n) / 2 + n ^ 2 / 2. ● a(n) = n + a(n - 1) + 11 (with a(- 1)=0). - _ Vincenzo Librandi _ , Nov 16 2010 ● a(n) = 11 * n - floor(n / 2) + floor(n ^ 2 / 2). - _ Wesley Ivan Hurt _ , Jun 15 2013 ● a(- 1)=0, a(0)=11, a(1)=23, a(n)=3 * a(n - 1) - 3 * a(n - 2) + a (n - 3). - _ Harvey P. Dale _ , May 01 2016 ● a(n + 1) = n * (n + 21) / 2. - _ Wolfdieter Lang _ , Oct 28 2020 ●
► [A275591] 1,11,23,37,53,71,91,113,137,163,191,221,253,287,323,361,401,443,487,533,581,631,683,737,793 ⋆ a(n) = n ^ 2 + 9 * n + 1. ● a(n) = a(- n - 9) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Colin Barker _ , Aug 03 2016 ● a(n) + a(- n) = (n - 1) ^ 2 + (n + 1) ^ 2. ●
► [A195043] 0,1,11,23,44,67,99,133,176,221,275,331,396,463,539,617,704,793,891,991,1100,1211,1331,1453,1584 ⋆ Concentric 11 - gonal numbers. ● a(n) = 11 * n ^ 2 / 4 + 7 * ((- 1) ^ n - 1) / 8. ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4). ●
► [A267437] 11,23,67,151,275,487,963,2039,4211,8327,16291,32407,65363,131623,263043,524087,1046579,2095559,4196707,8394199,16778003,33544039,67096899,134226551,268468211 ⋆ A linear recurrence related to the elliptic curves y ^ 2 = x ^ 3 - 35 * a ^ 2 * x - 98 * a ^ 3 with a = - 1, - 5, - 6, - 17, or - 111. ● a(n) = 4 * a(n - 1) - 7 * a(n - 2) + 8 * a(n - 3) - 4 * a(n - 4). ● a(n) = 1 + 2 ^ (2 + n) + 2 * (1 / 2 - (i * sqrt(7)) / 2) ^ n + 2 * (1 / 2 + (i * sqrt(7)) / 2) ^ n where i=sqrt(- 1). - _ Colin Barker _ , Jul 02 2017 ●
► [A195463] 11,23,71,263,1031,4103,16391,65543,262151,1048583,4194311,16777223,67108871,268435463,1073741831,4294967303,17179869191,68719476743,274877906951,1099511627783,4398046511111,17592186044423,70368744177671,281474976710663 ⋆ a(n) = 4 ^ (n + 1) + 7. ● a(n) = 4 ^ (n + 1) + 7. ● a(n + 1) = 4 * a(n) - 21. (End) ●
► [A060160] 1,11,23,79,223,703,2175,6911,22015,70655,227327,733183,2367487,7651327,24739839,80019455,258867199,837550079,2710044671,8769241087,28376563711,91825897471,297149661183,961586135039,3111737360383 ⋆ a(n) = 2 ^ n - 1 + Fibonacci(n - 1) * 2 ^ (n + 1). ● a(n) = 5 * a(n - 1) - 4 * a(n - 2) - 8 * a(n - 3) + 8 * a(n - 4). ●
► [A081981] 11,23,101,113,131,167,211,233,263,269,311,359,383,431,443,727,863,1013,1021,1031,1061,1103,1163,1201,1217 ⋆ Primes p such that p + 1 is divisible by every nonzero digit of p. ● a(n) = 576n log n + O(n ^ 0.955), since primes = 2519 mod 2520 are all in this sequence, and almost all (in the sense of natural density) terms of this sequence are of that form. - _ Charles R Greathouse IV _ , Sep 06 2022 ●
► [A041238] 11,23,103,1156,4727,10610,238147,486904,2185763,24530297,100306951,225144199,5053479329,10332102857,46381890757,520532901184,21285134954 93,4777559892170,107234831123233 ⋆ Numerators of continued fraction convergents to sqrt(131). ● a(n) = 21220 * a(n - 6) - a(n - 12). G.f.: - (x ^ 11 - 11 * x ^ 10 + 23 * x ^ 9 - 103 * x ^ 8 + 1156 * x ^ 7 - 4727 * x ^ 6 - 10610 * x ^ 5 - 4727 * x ^ 4 - 1156 * x ^ 3 - 103 * x ^ 2 - 23 * x - 11) / (x ^ 12 - 21220 * x ^ 6 + 1). [_ Colin Barker _ , Jul 19 2012] ●
► [A106388] 11,23,131,167,383,443,767,851,1283,1391,1931,2063,2711,2867,3623,3803,4667,4871,5843,6071,7151,7403,8591,8867,10163 ⋆ Numbers k such that 11k = 6j ^ 2 + 6j + 1. ● a(1)=11, a(2)=23; if n odd a(n)=a(n - 1) + 54 * (n - 1), if n even a(n)=a(n - 1) + 12 * (n - 1). ● a(n) = (66 * n * (n - 1) - 21 * (2 * n - 1) * (- 1) ^ n + 23) / 4. ● a(n) - a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) + a(n - 4) - a(n - 5) = 0 for n>5. ●
► [A171068] 0,1,1,11,23,144,407,2003,6601,28897,103104,425569,1582009,6337475,24062039,94930704,364368599,1426330907,5505254161,21464332033,83084090112,323270665729,1253154734833,4870751815931,18895640474711 ⋆ G.f. - x * (x - 1) * (1 + x) / (1 - x - 11 * x ^ 2 - x ^ 3 + x ^ 4). ● a(n)= + a(n - 1) + 11 * a(n - 2) + a(n - 3) - a(n - 4). ●
► [A042005] 1,1,11,23,241,264,11857,12121,133067,278255,2915617,3193872,143445985,146639857,1609844555,3366328967,35273134225,38639463192,173540951467,177404897865,1947589929332 3,40725847564511,426734374938433,467460222502944 ⋆ Denominators of continued fraction convergents to sqrt(525). ● a(n) = 12098 * a(n - 6) - a(n - 12) for n>11. - _ Vincenzo Librandi _ , Jan 12 2014 ●
► [A063307] 1,11,24,36,48,60,72,82,96,106,120,132,144,152,168,178,192,202,216,224,240,248,264,274,288 ⋆ Dimension of the space of weight n cuspidal newforms for Gamma _ 1(34). ● a(n) = a(n - 4) + a(n - 6) - a(n - 10) for n>13. ●
► [A098603] 0,11,24,39,56,75,96,119,144,171,200,231,264,299,336,375,416,459,504,551,600,651,704,759,816 ⋆ a(n) = n * (n + 10). ● a(n) = (n + 5) ^ 2 - 5 ^ 2 = n * (n + 10), n>=0. ● a(n) = a(n - 1) + 2 * n + 9, (with a(0)=0). - _ Vincenzo Librandi _ , Nov 17 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3), with a(0)=0, a(1)=11, a(2)=24. - _ Harvey P. Dale _ , Jul 26 2014 ●
► [A053061] 11,24,39,416,525,636,749,864,981,10100,11121,12144,13169,14196,15225,16256,17289,18324,19361,20400,21441,22484,23529,24576,25625 ⋆ a(n) is the decimal concatenation of n and n ^ 2. ● a(n) = n * (10 ^ floor(2 * log _ 10(n) + 1) + n). - _ Henry Bottomley _ , May 18 2000 ●
► [A055820] 1,11,24,43,69,103,146,199,263,339,428,531,649,783,934,1103,1291,1499,1728,1979,2253,2551,2874,3223,3599 ⋆ a(n) = T(n,n - 3), array T as in A055818. ● a(n) = (n ^ 3 + 3 * n ^ 2 - 10 * n - 6) / 6, for n>3, with a(3) = 1. ●
► [A140675] 0,11,25,42,62,85,111,140,172,207,245,286,330,377,427,480,536,595,657,722,790,861,935,1012,1092 ⋆ a(n) = n * (3 * n + 19) / 2. ● a(n) = (3 * n ^ 2 + 19 * n) / 2. ● a(n) = 3 * n + a(n - 1) + 8 for n>0, a(0)=0. - _ Vincenzo Librandi _ , Aug 03 2010 ●
► [A161532] 1,11,25,43,65,91,121,155,193,235,281,331,385,443,505,571,641,715,793,875,961,1051,1145,1243,1345 ⋆ a(n) = 2n ^ 2 + 8n + 1. ● a(n) = a(n - 1) + 4 * n + 6 (with a(0)=1). - _ Vincenzo Librandi _ , Nov 30 2010 ●
► [A354383] 11,26,37,63,100,163,263,426,689,1115,1804,2919,4723,7642,12365,20007,32372,52379,84751,137130,221881,359011,580892,939903,1520795 ⋆ Fibonacci sequence beginning 11, 26. ● a(n) = F(n - 4) + L(n + 1) + F(n + 7). ● a(n) = 2 * F(n - 1) + 3 * F(n + 4) + 11 * F(n). ● a(n) = 3 * F(n + 5) - 2 * F(n - 3). ● a(n) = L(n - 3) + L(n + 6) - 3 * F(n + 2), where L(n) is the n - th Lucas number and F(n) is the n - th Fibonacci number. ● a(n) = 11 * F(n - 1) + 26 * F(n). - _ Chai Wah Wu _ , Aug 07 2022 ●
► [A139576] 0,11,26,45,68,95,126,161,200,243,290,341,396,455,518,585,656,731,810,893,980,1071,1166,1265,1368 ⋆ a(n) = n(2n + 9). ● a(n) = 2 * n ^ 2 + 9 * n. ● a(n) = a(n - 1) + 4 * n + 7 (with a(0)=0). - _ Vincenzo Librandi _ , Nov 24 2010 ●
► [A238147] 1,11,26,126,191,341,516,1516,2081,2731,3206,4706,5631,7381,9256,19256,24821,30471,33946,40446,44171,48921,52796,67796,76221 ⋆ The number of P - positions in the game of Nim with up to five piles, allowing for piles of zero, such that the total number of objects in all piles doesn't exceed 2n. ● a(2n + 1) = 11a(n) + 5a(n - 1), a(2n + 2) = a(n + 1) + 15a(n). ●
► [A106839] 11,27,43,59,75,91,107,123,139,155,171,187,203,219,235,251,267,283,299,315,331,347,363,379,395 ⋆ Numbers congruent to 11 mod 16. ● a(n) = 11 + 16 * n; ● a(n) = 32 * n - a(n - 1) + 6, a(0)=11. (End) ●
► [A140677] 0,11,28,51,80,115,156,203,256,315,380,451,528,611,700,795,896,1003,1116,1235,1360,1491,1628,1771,1920 ⋆ a(n) = n * (3 * n + 8). ● a(n) = 3 * n ^ 2 + 8 * n. ● a(n) = 6 * n + a(n - 1) + 5, with a(0)=0. - _ Vincenzo Librandi _ , Aug 03 2010 ●
► [A264443] 0,11,28,52,84,125,176,238,312,399,500,616,748,897,1064,1250,1456,1683,1932,2204,2500,2821,3168,3542,3944 ⋆ a(n) = n * (n + 5) * (n + 10) / 6. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>3. - _ Vincenzo Librandi _ , Nov 16 2015 ●
► [A349660] 11,28,54,128,180,302,378,548,864,990,1400,1718,1890,2252,2856,3534,3780,4550,5108,5400,6314,6968,8004,9498,10298 ⋆ Numbers which are the sum of a prime and the square of the next prime. ● a(n) = prime(n) + prime(n + 1) ^ 2. ●
► [A061086] 11,28,327,464,5125,6216,7343,8512,9729,101000,111331,121728,132197,142744,153375,164096,174913,185832,196859,208000,219261,2210648,2312167,2413824,2515625 ⋆ a(n) is the concatenation of n with n ^ 3. ● a(n) = n * 10 ^ floor(1 + log _ 10(n ^ 3)) + n ^ 3, with n >= 1. - _ Paolo P. Lava _ , Nov 14 2008 ●
► [A201633] 11,28,424,1001,14453,34054,491026,1156883,16680479,39300016,566645308,1335043709,19249260041,45352186138,653908196134,1540639285031,22213629408563,52336383504964,754609491695056,1777896399883793,25634509088223389,60396141212544046 ⋆ Numbers k such that Sum _{ j=0..3 } (k + j) ^ 2 is a triangular number. ● a(n + 4) = 34 * a(n - 2) - a(n - 4) + 48; r=sqrt(2). ● a(n + 5) = a(n + 4) + 34 * a(n + 3) - 34 * a(n + 2) - a(n + 1) + a(n). ● a(n + 1) = (k1 * e1 + k2 * e2 ^ n + k3 * e3 ^ n + k4 * e4 ^ n + k5 * e5 ^ n) / 16 for k1= - 24, k2=70 + 50r, k3=30 + 21r, k4=70 - 50r, k5=30 - 21r. ●
► [A301621] 11,29,47,83,101,119,137,173,191,209,227,263,281,299,317,353,371,389,407,443,461,479,497,533,551 ⋆ Numbers not divisible by 2, 3 or 5 (A007775) with digital root 2. ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. ●
► [A082108] 1,11,29,55,89,131,181,239,305,379,461,551,649,755,869,991,1121,1259,1405,1559,1721,1891,2069,2255,2449 ⋆ a(n) = 4 * n ^ 2 + 6 * n + 1. ● a(n) = a(n - 1) + 8 * n + 2. - _ Vincenzo Librandi _ , Aug 08 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). (End) ●
► [A088460] 11,29,137,239,641,1151,1931,2339,3851,4091,5639,6359,8231,9011,9431,11351,12161,14561,15731,17837,20441,25931,26951,29207,33767 ⋆ Lower twin primes with lower twin prime index. ● a(n) == 5 (mod 6). ●
► [A249993] 1,1,11,29,147,525,2227,8653,35123,139469,559923,2235597,8950579,35785933,143176499,572640461,2290692915,9162509517,36650562355,14660120

0845,586406900531,2345623407821,9382502019891,37529991302349,150119998763827 ⋆ Expansion of 1 / ((1 + x) * (1 + 2 * x) * (1 - 4 * x)). ● a(n) = (2 ^ (3 + 2 * n) + (5 * 2 ^ (1 + n) - 3) * (- 1) ^ n) / 15. _ Colin Barker _ , Dec 28 2014 ● a(n) = a(n - 1) + 10 * a(n - 2) + 8 * a(n - 3). - _ Colin Barker _ , Dec 28 2014 ●

▶ [A352432] 1,1,11,29,165,593,2773,11093,48605,201829,864901,3638261,15472261,65377669,277294885,1173523013,4972873413,21056700293,89200845765,377774394309,1600161267781,6777276186821,28705824305861,121582507360709 ⋆ Number of tilings of a 4 X n rectangle using dominoes and 2 X 2 tiles. ● a(n) = 3 * a(n - 1) + 10 * a(n - 2) - 18 * a(n - 3) - 14 * a(n - 4) + 20 * a(n - 5). ●

▶ [A051682] 0,1,11,30,58,95,141,196,260,333,415,506,606,715,833,960,1096,1241,1395,1558,1730,1911,2101,2300,2508 ⋆ 11 - gonal (or hendecagonal) numbers: a(n) = n * (9 * n - 7) / 2. ● a(n) = n * (9 * n - 7) / 2. ● a(n) = 9 * n + a(n - 1) - 8 (with a(0)=0). - _ Vincenzo Librandi _ , Aug 06 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3); a(0)=0, a(1)=1, a(2)=11. - _ Harvey P. Dale _ , May 07 2012 ● a(9 * a(n) + 37 * n + 1) = a(9 * a(n) + 37 * n) + a(9 * n + 1). - _ Vladimir Shevelev _ , Jan 24 2014 ● a(n + y) - a(n - y - 1) = (a(n + x) - a(n - x - 1)) * (2 * y + 1) / (2 * x + 1), 0 <= x < n, y <= x, a(0)=0. - _ Gionata Neri _ , May 03 2015 ●

▶ [A062786] 1,11,31,61,101,151,211,281,361,451,551,661,781,911,1051,1201,1361,1531,1711,1901,2101,2311,2531,2761,3001 ⋆ Centered 10 - gonal numbers. ● a(n) = 5 * n * (n - 1) + 1. ● a(n) = 10 * n + a(n - 1) - 10; a(1)=1. - _ Vincenzo Librandi _ , Aug 07 2010 ● a(n) = a(n - 2) + 10 * (2 * n - 3). ● a(n) = 2 * a(n - 1) - a(n - 2) + 10. ●

▶ [A139634] 1,11,31,71,151,311,631,1271,2551,5111,10231,20471,40951,81911,163831,327671,655351,1310711,2621431,5242871,10485751,20971511,41943031,83886071,167772151 ⋆ 10 * 2 ^ (n - 1) - 9. ● a(n) = 2 * a(n - 1) + 9, with n>1, a(1)=1. - _ Vincenzo Librandi _ , Nov 24 2010 ● a(n) = 3 * a(n - 1) - 2 * a(n - 2). G.f.: x * (8 * x + 1) / ((x - 1) * (2 * x - 1)). - _ Colin Barker _ , Oct 10 2013 ●

▶ [A250461] 11,31,85,233,637,1741,4757,12997,35509,97013,265045,724117,1978325,5404885,14766421,40342613,110218069,301121365,822678869,2247600469,6140558677,16776318293,45833753941,125220144469,342107796821 ⋆ Number of (n + 1)X(1 + 1) 0..1 arrays with nondecreasing min(x(i,j),x(i,j - 1)) in the i direction and nondecreasing min(x(i,j),x(i - 1,j)) in the j direction. ● a(n) = (- 2 + (13 - 7 * sqrt(3)) * (1 - sqrt(3)) ^ n + (1 + sqrt(3)) ^ n * (13 + 7 * sqrt(3))) / 6. ●

▶ [A199112] 11,31,91,271,811,2431,7291,21871,65611,196831,590491,1771471,5314411,15943231,47829691,143489071,430467211,1291401631,3874204891,11622614671,34867844011,104603532031,313810596091,941431788271,2824295364811 ⋆ a(n) = 10 * 3 ^ n + 1. ● a(n) = 3 * a(n - 1) - 2. ● a(n) = 4 * a(n - 1) - 3 * a(n - 2). ●

▶ [A124296] 1,1,1,11,31,101,281,781,2101,5611,14851,39161,102961,270281,708761,1857451,4865911,12744061,33372361,87382901,228792301,599019851,1568309051,4105974961,10749725281 ⋆ a(n) = 5 * F(n) ^ 2 - 5 * F(n) + 1, where F(n) = Fibonacci(n). ● a(n) = 5 * Fibonacci(n) ^ 2 - 5 * Fibonacci(n) + 1. ●

▶ [A272263] 1,1,11,31,111,351,1151,3711,12031,38911,125951,407551,1318911,4268031,13811711,44695551,144637951,468058111,1514668031,4901568511,15861809151,51329892351,166107021311,537533612031,1739495309311 ⋆ a(n) = numerator of A000032(n) - 1 / 2 ^ n. ● a(n) = (- 1 + (1 - sqrt(5)) ^ n + (1 + sqrt(5)) ^ n). ● a(n) = 3 * a(n - 1) + 2 * a(n - 2) - 4 * a(n - 3) for n>2. ●

▶ [A094622] 0,11,31,141,341,1441,3441,14441,34441,144441,344441,1444441,3444441,14444441,34444441,144444441,344444441,1444444441,3444444441,14444444441,34444444441,144444444441,344444444441,1444444444441 ⋆ Expansion of x * (11 + 20 * x) / ((1 - x) * (1 - 10 * x ^ 2)). ● a(n) = (10 ^ (n / 2) * (31 + 13 * sqrt(10) + (31 - 13 * sqrt(10)) * (- 1) ^ n) / 2 - 31) / 9. ●

▶ [A001604] 11,31,151,911,5951,40051,272611,1863551,12760031,87424711,599129311,4106261531,28144128251,192901135711,1322159893351,9062207833151,62113268013311,425730597768451,2918000731816531,20000274041790911,137083916295800111,939587136717207031,6440026032054760351 ⋆ Odd - indexed terms of A124297. ● a(n) = (5 + sqrt(5)) / 2 * ((3 + sqrt(5)) / 2) ^ n + (5 - sqrt(5)) / 2 * ((3 - sqrt(5)) / 2) ^ n + (3 + sqrt(5)) / 2 * ((7 + 3 * sqrt(5)) / 2) ^ n + (3 - sqrt(5)) / 2 * ((7 - 3 * sqrt(5)) / 2) ^ n + 3. [_ Tim Monahan _ , Aug 15 2011] ●

▶ [A002535] 1,1,11,31,161,601,2651,10711,45281,186961,781451,3245551,13524161,56258281,234234011,974792551,4057691201,16888515361,70296251531,292589141311,1217844546401,5068991364601,21098583646811,87818089575031,365523431971361 ⋆ a(n) = 2 * a(n - 1) + 9 * a(n - 2), with a(0)=a(1)=1. ● a(n) = ((1 + sqrt(10)) ^ n + (1 - sqrt(10)) ^ n) / 2. ●

▶ [A098264] 1,1,11,31,211,851,4901,22961,124531,623011,3313201,17086301,90453661,473616781,2509264811,13250049551,70368250451,373539254611,1989045489281,10597110956861,56566637447401,302196871378601,1616570627763311,8654955238504531,46384344189261661 ⋆ G.f.: 1 / (1 - 2x - 19x ^ 2) ^ (1 / 2). ● a(n) = sum { k=0..floor(n / 2), binomial(n, k) * binomial(n - k, k) * 5 ^ k } . ● a(n) = sum { k=0..floor(n / 2), binomial(n, 2k) * binomial(2k, k) * 5 ^ k } . ●

▶ [A023279] 11,31,211,1151,3181,5051,5261,6101,6661,9391,9551,10501,11701,13171,15901,16481,19531,22051,24181,26261,27031,28351,28591,28661,29411 ⋆ Primes that remain prime through 3 iterations of function f(x) = 3x + 8. ● a(n) = = 1 (mod 10). - _ John Cerkan _ , Sep 16 2016 ●

▶ [A195857] 1,11,32,76,168,360,760,1592,3320,6904,14328,29688,61432,126968,262136,540664,1114104,2293752,4718584,9699320,19922936,40894456,83886072,171966456,352321528 ⋆ a(n) = T(9, n), array T given by A047858. ● a(n) = 2 ^ (n - 1) * (n + 18) - 8. ● a(0)=1, a(1)=11, a(2)=32, a(n) = 5 * a(n - 1) - 8 * a(n - 2) + 4 * a(n - 3). ●

▶ [A048773] 1,11,32,84,209,511,1240,3000,7249,17507,42272,102060,246401,594871,1436152,3467184,8370529,20208251,48787040,117782340,284351729,686485807,1657323352,4001132520,9659588401 ⋆ Partial sums of A048697. ● a(n) = 2 * a(n - 1) + a(n - 2) + 9; a(0)=1, a(1)=11. ● a(n) = (((10 + (11 / 2) * sqrt(2)) * (1 + sqrt(2)) ^ n - (10 - (11 / 2) * sqrt(2)) * (1 - sqrt(2)) ^ n) / 2 * sqrt(2)) - 9 / 2. ● a(n) = 3 * a(n - 1) - a(n - 2) - a(n - 3). - _ Wesley Ivan Hurt _ , May 21 2021 ●

▶ [A056123] 1,11,32,85,223,584,1529,4003,10480,27437,71831,188056,492337,1288955,3374528,8834629,23129359,60553448,158530985,415039507,1086587536,2844723101,7447581767,19498022200,51046484833 ⋆ a(n) = 3 * a(n - 1) - a(n - 2) with a(0)=1, a(1)=11. ● a(n) = { 11 * [((3 + sqrt(5)) / 2) ^ n - ((3 - sqrt(5)) / 2) ^ n] - [((3 + sqrt(5)) / 2) ^ (n - 1) - ((3 - sqrt(5)) / 2) ^ (n - 1)] }/ sqrt(5). ● a(n) = 6 * Lucas(2n + 1) - Fibonacci(2n + 5). ● a(n) = Fibonacci(2 * n + 2) + 8 * Fibonacci(2 * n). ●

▶ [A152740] 0,11,33,66,110,165,231,308,396,495,605,726,858,1001,1155,1320,1496,1683,1881,2090,2310,2541,2783,3036,3300 ⋆ 11 times triangular numbers. ● a(n) = a(n - 1) + 11 * n with n>0, a(0)=0. - _ Vincenzo Librandi _ , Nov 26 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>2, a(0)=0, a(1)=11, a(2)=33. ● a(n) = Sum _{ i=5n..6n } i. - _ Wesley Ivan Hurt _ , Dec 22 2015 ●

▶ [A080859] 1,11,33,67,113,171,241,323,417,523,641,771,913,1067,1233,1411,1601,1803,2017,2243,2481,2731,2993,3267,3553 ⋆ a(n) = 6 * n ^ 2 + 4 * n + 1. ● a(n) = C(4,0) + C(4,1)n + C(4,2)n ^ 2. ● a(n) = 12 * n + a(n - 1) - 2 with n > 0, a(0)=1. - _ Vincenzo Librandi _ , Aug 08 2010 ● a(n) = (n + 1) ^ 4 mod n ^ 3 for n >= 7. - _ J. M. Bergot _ , Aug 14 2017 ●

▶ [A163673] 0,11,33,72,134,225,351,518,732,999,1325,1716,2178,2717,3339,4050,4856,5763,6777,7904,9150,10521,12023,13662,15444 ⋆ a(n) = n * (2 * n ^ 2 + 5 * n + 15) / 2. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ●

▶ [A120354] 11,33,99,297,891,2673,8019,24057,72171,216513,649539,1948617,5845851,17537553,52612659,157837977,473513931,1420541793,4261625379,12784876137,38354628411,115063885233,345191655699,1035574967097,3106724901291 ⋆ a(n) = 11 * 3 ^ n. ● a(n) = 3 * a(n - 1), n > 0; a(0)=11. ●

▶ [A328606] 1,11,33,187,737,3531,15169,69179,305217,1371403,6100193,27285819,121673761,543491531,2425394433,10829195707,48337730177,215796613131,963308258209,4300379260859,19197149362017,85698470593483,382565584169153,1707814344866619,7623850115593921 ⋆ Expansion of (1 + 9 * x) / (1 - 2 * x - 11 * x ^ 2). ● a(n) = 2 * a(n - 1) + 11 * a(n - 2) for n>1. - _ Colin Barker _ , Oct 21 2019 ● a(n) / a(n - 1) ~ 1 + 2 * sqrt(3). ●

▶ [A063162] 11,34,58,82,106,130,154,178,202,226,250,274,298,322,346,370,394,418,442,466,490,514,538,562,586 ⋆ Dimension of the space of weight 2n cusp forms for Gamma _ 0(94). ● a(n) = 2 * a(n - 1) - a(n - 2) for n>3. ● a(n) = 24 * n - 14 for n>1. ●

▶ [A211014] 0,11,34,69,116,175,246,329,424,531,650,781,924,1079,1246,1425,1616,1819,2034,2261,2500,2751,3014,3289,3576 ⋆ Second 14 - gonal numbers: n * (6 * n + 5). ● a(n) = - 2 * Sum _{ k=0..n - 1 } binomial(6 * n + 5, 6 * k + 8) * Bernoulli(6 * k + 8)). - _ Michel Marcus _ , Jan 11 2016 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A041539] 1,1,11,34,113,260,893,2939,30283,33222,1093387,1126609,12359477,38205040,126974597,292154234,1003437299,3302466131,34028098609,37330564740,1228606170289,1265936735029,13887973520579,42929857296766,1426775454 10877 ⋆ Denominators of continued fraction convergents to sqrt(286). ● a(n) = 1123670 * a(n - 10) - a(n - 20) for n>19. - _ Vincenzo Librandi _ , Dec 19 2013 ●

▶ [A118554] 0,11,35,56,104,147,204,336,455,731,980,1311,2079,2772,4380,5831,7760,12236,16275,25647,34104,45347,71435,94976,149600 ⋆ a(n) = 6 * a(n - 5) - a(n - 10) + 98 with a(0)=0, a(1)=11, a(2)=35, a(3)=56, a(4)=104, a(5)=147, a(6)=204, a(7)=336, a(8)=455, a(9)=731. ● a(n) = a(n - 1) + 6 * a(n - 5) - 6 * a(n - 6) - a(n - 10) + a(n - 11) with a(0)=0, a(1)=11, a(2)=35, a(3)=56, a(4)=104, a(5)=147, a(6)=204, a(7)=336, a(8)=455, a(9)=731, a(10)=980. - _ Harvey P. Dale _ , Aug 19 2011 ●

▶ [A348845] 11,35,59,83,107,131,155,179,203,227,251,275,299,323,347,371,395,419,443,467,491,515,539,563,587 ⋆ Part two of the trisection of A017101: a(n) = 11 + 24 * n. ● a(n) = 2 * a(n - 1) - a(n - 2), for n >= 1, with a(- 1) = - 13, a(0) = 11. ●

▶ [A003777] 1,11,35,79,149,251,391,575,809,1099,1451,1871,2365,2939,3599,4351,5201,6155,7219,8399,9701,11131,12695,14399,16249 ⋆ a(n) = n ^ 3 + n ^ 2 - 1. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n > 4. - _ Wesley Ivan Hurt _ , Oct 08 2017 ●

▶ [A224790] 11,35,251,2195,19691,177155,1594331,14348915,129140171,1162261475,10460353211,94143178835,847288609451,7625597484995,68630377364891,617673396283955,5559060566555531,50031545098999715,450283905890997371,4052555153018976275 ⋆ a(n) = 3 * 9 ^ n + 8. ● a(n) = 10 * a(n - 1) - 9 * a(n - 2). ●

▶ [A123749] 1,11,35,965,8755,8783,237449,2138185,6415985,519743405,4677875401,14033861347,378916960525,3410263045325,3410267502725,30692424759805,276231889624955,828695755304725,6712435920472725,604119244624305025 ⋆ Numerators of partial sums of a series for 3 / sqrt(5) = (3 / 5) * sqrt(5). ● a(n) = numerator(r(n)) with the rationals r(n) = Sum _{ k=0..n } binomial(2 * k,k) / 9 ^ k in lowest terms. ●

▶ [A093500] 11,36,76,131,201,286,386,501,631,776,936,1111,1301,1506,1726,1961,2211,2476,2756,3051,3361,3686,4026,4381,4751 ⋆ a(n) = (15 * n ^ 2 + 5 * n + 2) / 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). G.f.: x * (11 + 3 * x + x ^ 2) / (1 - x) ^ 3. - _ Colin Barker _ , Apr 30 2012 ●

▶ [A081438] 1,11,36,82,155,261,406,596,837,1135,1496,1926,2431,3017,3690,4456,5321,6291,7372,8570,9891,11341,12926,14652,16525 ⋆ Diagonal in array of n - gonal numbers A081422. ● a(n) = (2 * n ^ 3 + 9 * n ^ 2 + 9 * n + 2) / 2. ● a(n) = (n + 1) * (2 * n ^ 2 + 7 * n + 2) / 2. ● a(n) - 4 * a(n - 1) + 6 * a(n - 2) - 4 * a(n - 3) + a(n - 4) = 0, with n>3. ●

▶ [A191296] 11,36,140,540,2108,8316,33020,131580,525308,2099196,8392700,33562620,134234108,536903676,2147549180,8590065660,34360000508,137439477756,549756862460,2199025352700,8796097216508,35184380477436,140737505132540,562949986975740,2251799880794108 ⋆ Least k such that k - 1 and k + 1 in binary representation have same number n of 0's as 1's. ● a(n) = 2 * (2 ^ (n - 1) + 2) * (2 ^ (n - 1) - 1) for n>=3. - _ Nathaniel Johnston _ , May 30 2011 ● a(0)=11, a(1)=36, a(2)=140, a(3)=540, a(n)=7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3). - _ Harvey P. Dale _ , Jun 10 2011 ●

▶ [A188135] 1,11,37,79,137,211,301,407,529,667,821,991,1177,1379,1597,1831,2081,2347,2629,2927,3241,3571,3917,4279,4657 ⋆ a(n) = 8 * n ^ 2 + 2 * n + 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A217947] 11,37,87,172,305,501,777,1152,1647,2285,3091,4092,5317,6797,8565,10656,13107,15957,19247,23020,27321,32197,37697,43872,50775 ⋆ a(n) = (n + 1) * (n ^ 3 + 15 * n ^ 2 + 74 * n + 132) / 12. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) n>4. - _ Vincenzo Librandi _ , Dec 12 2014 ●

► [A124479] 0,1,11,37,88,175,311,511,792,1173,1675,2321,3136,4147,5383,6875,8656,10761,13227,16093,19400,23191,27511,32407,37928 ⋆ From the game of Quod: number of "squares" on an n X n array of points with the four corner points deleted. ● a(n) = (n ^ 4 - n ^ 2 - 48 * n + 84) / 12. ●

► [A306423] 11,37,124,420,1441,5005,17576,62322,222870,802978,2912168,106234 70,38956365,143521725,530985360,1971965490,7348812570,27472909590,103002205800,387205269360,1459146890058,5511120747282,20858962792624,79103096214100 ⋆ Number of coalescent histories for pseudocaterpillar gene trees G and caterpillar species trees S. ● a(n) = (19 * n - 40) * (n - 3) * (2 * n - 2)! / (4 * n! * (n - 1)! * (2 * n - 3) * (2 * n - 5)). ● a(n) = (19 * n - 40) * (n - 3) * C(n - 1) / ((2 * n - 3) * (2 * n - 5)), where C(n) is the Catalan numbers A000108. ●

► [A063146] 11,38,66,94,122,150,178,206,234,262,290,318,346,374,402,430,458,486,514,542,570,598,626,654,682 ⋆ Dimension of the space of weight 2n cusp forms for Gamma _ 0(78). ● a(n) = 2 * a(n - 1) - a(n - 2) for n>3. ● a(n) = 28 * n - 18 for n>1. ●

► [A139276] 0,11,38,81,140,215,306,413,536,675,830,1001,1188,1391,1610,1845,2096,2363,2646,2945,3260,3591,3938,4301,4680 ⋆ a(n) = n * (8 * n + 3). ● a(n) = 8 * n ^ 2 + 3 * n. ● a(n) = 16 * n + a(n - 1) - 5 (with a(0)=0). - _ Vincenzo Librandi _ , Aug 03 2010 ●

► [A007585] 0,1,11,38,90,175,301,476,708,1005,1375,1826,2366,3003,3745,4600,5576,6681,7923,9310,10850,12551,14421,16468,18700 ⋆ 10 - gonal (or decagonal) pyramidal numbers: a(n) = n * (n + 1) * (8 * n - 5) / 6. ● a(n) = (8 * n - 5) * binomial(n + 1, 2) / 3. ● a(n) = (8 * n ^ 3 + 3 * n ^ 2 - 5 * n) / 6. - _ Vincenzo Librandi _ , Aug 01 2010 ● a(0)=0, a(1)=1, a(2)=11, a(3)=38, a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Harvey P. Dale _ , Dec 20 2011 ● a(n) = a(n - 1) + n * (4 * n - 3). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + 8. ● a(n) = binomial(n + 2,3) + 7 * binomial(n + 1,3). ●

► [A024202] 1,11,38,96,205,385,662,1068,1635,2401,3410,4706,6339,8365,10840,13826,17391,21603,26536,32270,38885,46467,55108,64900,75941 ⋆ a(n) = [(3rd elementary symmetric function of S(n)) / (first elementary symmetric function of S(n))], where S(n) = { first n + 2 odd positive integers } . ● a(n) = (n ^ 4 + 4 * n ^ 3 + 4 * n ^ 2 + n - 4) / 6 if n == 1 (mod 3). ●

► [A213775] 1,11,38,97,213,432,833,1555,2838,5097,9045,15904,27761,48171,83174,143009,244997,418384,712465,1210195,2050966,3468681,5855333,9867072,16600993 ⋆ Principal diagonal of the convolution array A213774. ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) - 2 * a(n - 3) + 4 * a(n - 4) - a(n - 6). ●

► [A045801] 11,39,73,77,111,139,173,177,211,239,273,277,311,339,373,377,411,439,473,477,511,539,573,577,611 ⋆ 1 - ish numbers (end in 11, 39, 73, 77). ● a(n) = (50 * n - 12 * i ^ (n * (n - 1)) - 9 * (- 1) ^ n - 25) / 2, where i=sqrt(- 1). - _ Bruno Berselli _ , Feb 23 2012 ●

► [A162261] 0,11,39,90,170,285,441,644,900,1215,1595,2046,2574,3185,3885,4680,5576,6579,7695,8930,10290,11781,13409,15180,17100 ⋆ a(n) = (2 * n ^ 3 + 5 * n ^ 2 - 7 * n) / 2. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). (End) ●

► [A004188] 0,1,11,39,94,185,321,511,764,1089,1495,1991,2586,3289,4109,5055,6136,7361,8739,10279,11990,13881,15961,18239,20724 ⋆ a(n) = n * (3 * n ^ 2 - 1) / 2. ● a(n) = C(2 * n + 1,3) + C(n + 1,3), n >= 0. - _ Zerinvary Lajos _ , Jan 21 2007 ●

► [A347477] 0,1,11,39,99,223,475,983,2003,4047,8139,16327,32707,65471,131003,262071,524211,1048495,2097067,4194215,8388515,16777119,33554331,67108759,134217619 ⋆ Number of total dominating sets in the complement graph of the n - cycle. ● a(n) = 2 ^ n - 4 * n - 1 for n > 4. ●

► [A343124] 0,1,11,39,114,273,571,1086,1925,3206,5101,7800,11533,16575,23252,31911,42987,56943,74304,95662,121682,153060,190614,235200,287758 ⋆ Total number of partitions of k * n into 3 parts for k = 1..n. ● a(n) = Sum _{ k=1..n } Sum _{ j=1..floor(k * n / 3) } Sum _{ i=j..floor((k * n - j) / 2) } 1. ●

► [A147296] 0,11,40,87,152,235,336,455,592,747,920,1111,1320,1547,1792,2055,2336,2635,2952,3287,3640,4011,4400,4807,5232 ⋆ a(n) = n * (9 * n + 2). ● a(n) = n * (9 * n + 2), as conjectured by V. Librandi. - From M. F. Hasler, Mar 01 2009 ● a(n) = floor((3 * n + 1 / 3) ^ 2). - _ Reinhard Zumkeller _ , Apr 14 2010 ●

► [A337130] 0,0,0,11,40,99,203,370,621,980,1474,2133,2990,4081,5445,7124,9163,11610,14516,17935,21924,26543,31855,37926,44825 ⋆ a(n) is the sum of all products of pairs of numbers joined by the diagonals of an n - gon when its vertices are numbered from 1 to n in order. ● a(n) = 3 * binomial(n + 1, 4) - n = (n - 2) * (n - 1) * n * (n + 1) / 8 - n for n>=3; a(1) = a(2) = 0. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>7. ●

► [A059142] 11,40,105,242,523,1092,2237,4534,9135,18344,36769,73626,147347,294796,589701,1179518,2359159,4718448,9437033,18874210,37748571,75497300,150994765,301989702,603979583 ⋆ A hierarchical sequence (S(W2 { 3 }*) - see A059126). ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 2 * a(n - 3) for n > 2. ● a(n) = (- 25 + 9 * 2 ^ (2 + n) - 7 * n). ●

► [A056124] 1,11,40,117,319,848,2233,5859,15352,40205,105271,275616,721585,1889147,4945864,12948453,33899503,88750064,232350697,608302035,1592555416,4169364221,10915537255,28577247552,74816205409 ⋆ a(n) = 3 * a(n - 1) - a(n - 2) + 8 with a(0)=1, a(1)=11. ● a(n) = (19 * (((3 + sqrt(5)) / 2) ^ n - ((3 - sqrt(5)) / 2) ^ n) - 9 * (((3 + sqrt(5)) / 2) ^ (n - 1) - ((3 - sqrt(5)) / 2) ^ (n - 1))) / sqrt(5) - 8. ● a(n) = Fibonacci(2 * n + 5) + 2 * Lucas(2 * n) - 8. ● a(n) = Fibonacci(2 * n + 2) + 8 * Fibonacci(2 * n + 1) - 8. ●

► [A356043] 1,11,40,123,250,540,885,1553,2339,3609,4942,7349,9548,12998,16681,22030,26945,34805,41666,52207,62212,75542,87711,107083,122961 ⋆ a(n) = Sum _{ k=1..n } sigma _ 3(k) * floor(n / k). ● a(n) = Sum _{ k=1..n } Sum _{ d|k } d ^ 3 * tau(k / d). ●

► [A192820] 11,41,59,97,149,151,227,229,233,239,263,307,367,373,401,409,569,571,587,593,599,641,643,647,653 ⋆ 2 - Ramanujan primes: the interval (x / 2,x] has at least n Ramanujan primes for x >= a(n) but not for x = a(n) - 1. ● a(n) < p(8n) for n >= 5315 (Paksoy 2012). ●

► [A128467] 11,41,71,101,131,161,191,221,251,281,311,341,371,401,431,461,491,521,551,581,611,641,671,701,731 ⋆ a(n) = 30 * n + 11. ● a(n) = 30 * n + 11. (End) ●

► [A158187] 1,11,41,91,161,251,361,491,641,811,1001,1211,1441,1691,1961,2251,2561,2891,3241,3611,4001,4411,4841,5291,5761 ⋆ a(n) = 10 * n ^ 2 + 1. ● a(n) = a(- n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). (End) ●

► [A027086] 11,41,108,246,517,1035,2010,3828,7199,13429,24920,46090,85065,156791,288758,531528,978099,1799521,3310404,6089406,11200845,20602307,37894354,69699452,128198215 ⋆ a(n) = A027082(n, n + 4). ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 2 * a(n - 3) - a(n - 4) + 2 * a(n - 5) - a(n - 6) for n>9. ●

► [A356125] 1,11,41,125,255,555,905,1585,2404,3704,5046,7566,9776,13276,17176,22632,27562,35752,42630,53550,64050,77470,89660,110060,126335 ⋆ a(n) = Sum _{ k=1..n } k * sigma _ 2(k). ● a(n) = Sum _{ k=1..n } k ^ 3 * binomial(floor(n / k) + 1,2). ●

► [A288795] 11,41,143,497,1751,6281,22943,85217,321191,1225721,4725743,18371537,71891831,282784361,1116788543,4424107457,17567289671,69881738201,278364691343,1109971980977,4429427570711,17686329223241,70651173714143,282322265320097,1128441772670951 ⋆ a(n) = 4 ^ n + 3 ^ (n + 1) - 2. ● a(n) = 4 ^ n + 3 ^ (n + 1) - 2. ● a(n) = 8 * a(n - 1) - 19 * a(n - 2) + 12 * a(n - 3). ●

► [A213659] 11,41,155,593,2291,8921,34955,137633,543971,2156201,8565755,34085873,135812051,541653881,2161832555,8632981313,34488878531,137826373961,550918075355,2202510039953,8806553375411,35215753148441,140831631534155 ⋆ a(n) = 3 ^ n + 2 ^ (2 * n + 1). ● a(n) = 3 ^ n + 2 ^ (2 * n + 1). ●

► [A199209] 11,41,161,641,2561,10241,40961,163841,655361,2621441,10485761,41943041,167772161,671088641,2684354561,10737418241,42949672961,171798691841,687194767361,2748779069441,10995116277761,43980465111041 ⋆ a(n) = 10 * 4 ^ n + 1. ● a(n) = 4 * a(n - 1) - 3. ● a(n) = 5 * a(n - 1) - 4 * a(n - 2). ●

► [A156733] 1,1,11,41,176,606,2391,8091,28636,95056,316048,1014240,3237325,10082015,31109500,94352346,283209381,838650191,2458835711,7127912979,20471486368,58224189612,164181018330,458982667630,1273039111210 ⋆ Euler transform of n * A065958(n). ● a(n) = (1 / n) * Sum _{ k=1..n } sigma _ 2(k ^ 2) * a(n - k) for n>0, with a(0) = 1. ●

► [A082424] 1,1,11,41,320,1917,14582,100562,688427,4380888,26324611,148136566,785175771,3925637781,18586683128,83578440418,358079558873,1465784048253,5748270468573,21649265291143,78483868584001 ⋆ Coefficient of s(2n) in s(n,n) * s(n,n) * s(n,n) * s(n,n) * s(n,n) * s(n,n), where s(n,n) is the Schur function indexed by two parts of size n, s(2n) is the Schur function corresponding to the trivial representation and * represents the inner or Kronecker product. ● a(n) = Sum _{ gamma } Chi ^{ (n, n) } (gamma) ^ 6 / z(gamma) the sum is over all partitions gamma of 2n Chi ^ lambda(gamma) is the value of the symmetric group character z(gamma) is the size of the stablizer of the conjugacy class of symmetric group indexed by the partition gamma ●

► [A153173] 11,41,341,2161,15251,103361,711491,4868641,33391061,228811001,1568437211,10749853441,73681573691,505018447961,3461454668501,23725145626561,162614613425891,1114577020834241,7639424866266611 ⋆ a(n) = L(5 * n) / L(n) where L(n) = Lucas number A000204(n). ● a(n) = 5 * a(n - 1) + 15 * a(n - 2) - 15 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ● a(n) = Lucas(2 * n) ^ 2 - (- 1) ^ n * Lucas(2 * n) - 1 (Carlitz, Problem B - 185). ● a(n) = (Lucas(2 * n) - 3 * (- 1) ^ n) ^ 2 + (- 1) ^ n * (5 * Fibonacci(n)) ^ 2 (Carlitz, Problem B - 186). (End) ●

► [A063152] 11,42,74,106,138,170,202,234,266,298,330,362,394,426,458,490,522,554,586,618,650,682,714,746,778 ⋆ Dimension of the space of weight 2n cusp forms for Gamma _ 0(84). ● a(n) = 2 * a(n - 1) - a(n - 2) for n>3. ● a(n) = 32 * n - 22 for n>1. ●

► [A055437] 11,42,93,164,255,366,497,648,819,1010,1221,1452,1703,1974,2265,2576,2907,3258,3629,4020,4431,4862,5313,5784,6275 ⋆ a(n) = 10 * n ^ 2 + n. ● a(n) = Sum _{ i=0..2 * n } (- 1) ^ i * (2 * n + i) ^ 2. ● a(n) = Sum _{ i=1..2 * n } (- 1) ^ i * (4 * n + i) ^ 2. (End) ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>3. ● a(n) = (1 / 5) * Sum _{ i=0..10 * n } i. (End) ●

► [A055436] 11,42,93,164,255,366,497,648,819,10010,12111,14412,16913,19614,22515,25616,28917,32418,36119,40020,44121,48422,52923,57624,62525 ⋆ a(n) = concatenation of n ^ 2 and n. ● a(n) = n ^ 2 * floor(log _ 10(n) + 1) + n. ●

► [A213772] 1,11,42,106,215,381,616,932,1341,1855,2486,3246,4147,5201,6420,7816,9401,11187,13186,15410,17871,20581,23552,26796,30325 ⋆ Principal diagonal of the convolution array A213771. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ●

► [A027978] 1,11,42,145,473,1484,4529,13543,39870,115937,333781,953056,2702497,7618115,21365778,59657329,165926609,459905588,1270819025,3501855007,9625627686,26398369601,72248624077,197361589960,538199264833 ⋆ a(n) = self - convolution of row n of array T given by A027960. ● a(n) = 5 * a(n - 1) - 5 * a(n - 2) - 5 * a(n - 3) + 5 * a(n - 4) - a(n - 5). ● a(n) = 2 * (n + 1) * Lucas(2 * n) + Fibonacci(2 * n - 4). - _ G. C. Greubel _ , Oct 01 2019 ●

► [A022279] 0,11,43,96,170,265,381,518,676,855,1055,1276,1518,1781,2065,2370,2696,3043,3411,3800,4210,4641,5093,5566,6060 ⋆ a(n) = n * (21 * n + 1) / 2. ● a(n) = 21 * n + a(n - 1) - 10 for n>0, a(0)=0. - _ Vincenzo Librandi _ , Aug 04 2010 ● a(0)=0, a(1)=11, a(2)=43; for n>2, a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , May 06 2014 ●

► [A213763] 1,11,43,127,331,807,1891,4319,9691,21463,47059,102351,221131,475079,1015747,2162623,4587451,9699255,20447155,42991535,90177451,188743591,394264483,822083487,1711275931 ⋆ Principal diagonal of the convolution array A213762. ● a(n) = - 1 + 2 ^ n - 4 * n + n * 2 ^ (n + 1). ● a(n) = 6 * a(n - 1) - 13 * a(n - 2) + 12 * a(n - 3) - 4 * a(n - 4). ●

► [A033584] 0,11,44,99,176,275,396,539,704,891,1100,1331,1584,1859,2156,2475,2816,3179,3564,3971,4400,4851,5324,5819,6336 ⋆ a(n) = 11 * n ^ 2. ● a(n) = 22 * n + a(n - 1) - 11 (with a(0)=0) - _ Vincenzo Librandi _ , Aug 05 2010 ●

► [A111080] 11,44,110,220,385,616,924,1320,1815,2420,3146,4004,5005,6160,7480,8976,10659,12540,14630,16940,19481,22264,25300,28600,32175 ⋆ Sum of numbers under a triangle on a spiral staircase of width 10. ● a(n) = 11n(n ^ 2 + 3n

+ 2) / 6. - _ Charles R Greathouse IV _ , Jun 22 2013 ● a(n) = (11 * (1 + n) * (2 + n) * (3 + n)) / 6. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ●

▶ [A299288] 1,11,44,116,242,438,719,1101,1599,2229,3006,3946,5064,6376,7897,9643,11629,13871,16384,19184,22286,25706,29459,33561,38027 ★ Partial sums of A299287. ● a(n) = (62 * n ^ 3 + 93 * n ^ 2 + 82 * n + 24) / 24 for n even. ● a(n) = (62 * n ^ 3 + 93 * n ^ 2 + 82 * n + 27) / 24 for n odd. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - 2 * a(n - 3) + 3 * a(n - 4) - a(n - 5) for n>4. ●

▶ [A299286] 1,11,44,117,245,444,729,1117,1623,2263,3052,4007,5143,6476,8021,9795,11813,14091,16644,19489,22641,26116,29929,34097,38635 ★ Partial sums of A299285. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 4) - 3 * a(n - 5) + 3 * a(n - 6) - a(n - 7) for n>6. ●

▶ [A022816] 1,11,44,121,271,532,952,1590,2517,3817,5588,7943,11011,14938,19888,26044,33609,42807,53884,67109,82775,101200,122728,147730,176605 ★ Number of terms in 6th derivative of a function composed with itself n times. ● a(n) = n * (n + 1) * (n ^ 3 + 24 * n ^ 2 + 81 * n - 46) / 120. G.f.: x * (1 + 5 * x - 7 * x ^ 2 + 2 * x ^ 3) / (x - 1) ^ 6. - _ R. J. Mathar _ , Sep 15 2009 ●

▶ [A120537] 1,11,44,145,431,1216,3329,8955,23836,63041,166079,436480,1145441,3003211,7869644,20614545,53988271,141373376,370169249,969194875,2537513276,6643503361,17393253119,45536670720,119217430081 ★ Sum of all matrix elements of n X n matrix M[i,j] = Lucas[i + j - 1], (i,j = 1..n), where Lucas[n] = A000032[n] = Fibonacci[n - 1] + Fibonacci[n + 1]. ● a(n) = Sum[Sum[Fibonacci[i + j - 2] + Fibonacci[i + j], { i,1,n }], { j,1,n }]. a(n) = Lucas[2n + 3] - 2 * Lucas[n + 3] + 4, where Lucas[k] = Fibonacci[k - 1] + Fibonacci[k + 1]. ●

▶ [A002089] 11,44,176,704,2816,11264,45056,180224,720896,2883584,11534336,46137344,184549376,738197504,2952790016,11811160064,47244640256,188978561024,755914244096,3023656976384,12094627905536,48378511622144,193514046488576,774056185954304 ★ a(n) = 11 * 4 ^ n. ● a(n) = 4 * a(n - 1); a(0)=11. ●

▶ [A042521] 1,11,45,56,101,258,875,1133,15604,47945,63549,175043,3214323,6603689,9818012,36057725,478568437,514626162,2022446923,4559520008,6581966931,11141486939,51147914687,573768548496,32182186630463 ★ Denominators of continued fraction convergents to sqrt(789). ● a(n) = 32233334545150 * a(n - 24) - a(n - 48) for n>47. - _ Vincenzo Librandi _ , Jan 23 2014 ●

▶ [A022280] 0,11,45,102,182,285,411,560,732,927,1145,1386,1650,1937,2247,2580,2936,3315,3717,4142,4590,5061,5555,6072,6612 ★ a(n) = n * (23 * n - 1) / 2. ● a(n) = 23 * n + a(n - 1) - 12 for n>0, a(0)=0. - _ Vincenzo Librandi _ , Aug 04 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). (End) ●

▶ [A154106] 11,45,103,185,291,421,575,753,955,1181,1431,1705,2003,2325,2671,3041,3435,3853,4295,4761,5251,5765,6303,6865,7451 ★ a(n) = 12 * n ^ 2 + 22 * n + 11. ● a(0) = 11; for n > 0, a(n) = a(n - 1) + 24 * n + 10. ●

▶ [A051740] 1,11,45,125,280,546,966,1590,2475,3685,5291,7371,10010,13300,17340,22236,28101,35055,43225,52745,63756,76406,90850,107250,125775 ★ Partial sums of A007584. ● a(n) = binomial(n + 3, 3) * (7 * n + 4) / 4. ● a(n) = (7 * n + 4) * binomial(n + 3, 3) / 4. ●

▶ [A072262] 11,45,181,725,2901,11605,46421,185685,742741,2970965,11883861,47535445,190141781,760567125,3042268501,12169074005,48676296021,1947051840 85,778820736341,3115282945365,12461131781461,49844527125845 ★ a(n) = 4 * a(n - 1) + 1, a(1)=11. ● a(n) = (17 * 2 ^ (2 * n - 1) - 1) / 3. ●

▶ [A063158] 11,46,82,118,154,190,226,262,298,334,370,406,442,478,514,550,586,622,658,694,730,766,802,838,874 ★ Dimension of the space of weight 2n cusp forms for Gamma _ 0(90). ● a(n) = 2 * a(n - 1) - a(n - 2) for n>3. ● a(n) = 36 * n - 26 for n>1. ●

▶ [A081587] 1,11,46,106,191,301,436,596,781,991,1226,1486,1771,2081,2416,2776,3161,3571,4006,4466,4951,5461,5996,6556,7141 ★ Third row of Pascal - (1,4,1) array A081579. ● a(n) = (2 - 5 * n + 25 * n ^ 2) / 2. ● a(n) = a(n - 1) + 25 * n - 15 with a(0)=1. - _ Vincenzo Librandi _ , Aug 08 2010 ●

▶ [A223834] 11,46,118,249,471,824,1356,2123,3189,4626,6514,8941,12003,15804,20456,26079,32801,40758,50094,60961,73519,87936,104388,123059,144141 ★ Number of n X 4 0..1 arrays with rows and antidiagonals unimodal and columns nondecreasing. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>6. ●

▶ [A359096] 1,11,46,121,252,455,746,1141,1656,2307,3110,4081,5236,6591,8162,9965,12016,14331,16926,19817,23020,26551,30426,34661,39272 ★ The sum of the numbers on the perimeter of the n X n diamond frame, located at the top of the numerical pyramid containing the positive integers in natural order. ● a(n) = (8 * n ^ 3 - 12 * n ^ 2 + 13 * n - 9) / 3, where n > 1. ●

▶ [A224142] 11,46,124,272,526,930,1536,2404,3602,5206,7300,9976,13334,17482,22536,28620,35866,44414,54412,66016,79390,94706,112144,131892,154146 ★ Number of n X 4 0..1 arrays with rows and antidiagonals unimodal and columns nondecreasing. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>6. ●

▶ [A006324] 1,11,46,130,295,581,1036,1716,2685,4015,5786,8086,11011,14665,19160,24616,31161,38931,48070,58730,71071,85261,101476,119900,140725 ★ a(n) = n * (n + 1) * (2 * n ^ 2 + 2 * n - 1) / 6. ● a(n) = 8 * C(n + 2, 4) + C(n + 1, 2). ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Wesley Ivan Hurt _ , May 02 2021 ●

▶ [A361888] 1,1,1,11,46,415,3265,30955,299500,3173626,33576266,386672861,4340714886,52846226091,620906440961,7857161332715,95704821415240,1246162831674580,15624127945644100,207990691516965886,2669841775757784796,36176886727828945286,473508685502539872586 ★ a(n) = S(5,n) / S(1,n), where S(r,n) = Sum _{ k = 0..floor(n / 2) } (binomial(n,k) - binomial(n,k - 1)) ^ r. ● a(n) = 1 / binomial(n,floor(n / 2)) * Sum _{ k = 0..floor(n / 2) } ((n - 2 * k + 1) / (n - k + 1) * binomial(n,k)) ^ 5. ●

▶ [A158463] 1,11,47,107,191,299,431,587,767,971,1199,1451,1727,2027,2351,2699,3071,3467,3887,4331,4799,5291,5807,6347,6911 ★ a(n) = 12 * n ^ 2 - 1. ● a(- n) = a(n). ●

▶ [A267614] 1,1,11,47,191,767,3071,12287,49151,196607,786431,3145727,12582911,50331647,201326591,805306367,3221225471,12884901887,51539607551,206158430207,824633720831,3298534883327,13194139533311,52776558133247,211106232532991 ★ Decimal representation of the n - th iteration of the "Rule 185" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = 5 * a(n - 1) - 4 * a(n - 2) for n>3. ●

▶ [A117066] 1,11,48,140,325,651,1176,1968,3105,4675,6776,9516,13013,17395,22800,29376,37281,46683,57760,70700,85701,102971,122728,145200,170625 ★ Partial sums of cupolar numbers (1 / 3) * (n + 1) * (5 * n ^ 2 + 7 * n + 3) (A096000). ● a(n) = Sum _{ i=1..n } (1 / 3) * (i + 1) * (5 * i ^ 2 + 7 * i + 3). ● a(n) = Sum _{ i=1..n } (1 / 2) * (Q(i) + 3 * i ^ 2 + 3 * i + 1), where Q(i) are the cuboctahedral numbers (A005902). ● a(n) = n ^ 2 * (n + 1) * (5 * n + 1) / 12. - _ Vaclav Kotesovec _ , Jan 03 2017 ●

▶ [A042984] 1,11,48,140,326,657,1197,2024,3231,4927,7238,10308,14300,19397,25803,33744,43469,55251,69388,86204,106050,129305,156377,187704,223755 ★ Number of n - dimensional partitions of 6. ● a(n) = (n + 1) * (n + 4) * (n ^ 3 + 40 * n ^ 2 + 61 * n + 30) / 120. - _ Robert Israel _ , Jul 06 2016 ●

▶ [A364579] 0,0,1,11,48,140,329,668,1223,2074,3316,5060,7434,10584,14675,19892,26441,34550,44470,56476,70868,87972,108141,131756,159227 ★ Fifth Lie - Betti number of a path graph on n vertices. ● a(1) = a(2) = 0, a(3) = 1, a(4) = 11, a(n) = (n ^ 5 + 30 * n ^ 4 - 145 * n ^ 3 - 270 * n ^ 2 + 2424 * n - 3360) / 120 for n >= 5. ●

▶ [A008780] 1,11,48,141,331,672,1232,2094,3357,5137,7568,10803,15015,20398,27168,35564,45849,58311,73264,91049,112035,136620,165232,198330,236405 ★ a(n) = (n - dimensional partitions of 6) + C(n,4) + C(n,3). ● a(n) = (120 + 404 * n + 490 * n ^ 2 + 255 * n ^ 3 + 50 * n ^ 4 + n ^ 5) / 120. ●

▶ [A295420] 1,11,49,131,441,1499,5041,17155,58081,196331,664225,2246915,7601049,25714875,86992929,294294531,995591809,3368061131,11394068049,38545859971,130399709881,441139059867,1492362754129,5048627019523,17079382863841 ★ Number of total dominating sets in the n - Moebius ladder. ● a(n) = 3 * a(n - 1) + 4 * a(n - 3) - 2 * a(n - 4) + 10 * a(n - 5) + 4 * a(n - 6) - a(n - 8) - a(n - 9) for n > 9. (End) ●

▶ [A241406] 11,50,72,111,133,172,194,233,255,294,316,355,377,416,438,477,499,538,560,599,621,660,682,721,743 ★ Numbers n such that n ^ 2 == - 1 (mod 61). ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n>2. ● a(n) = a(n - 2) + 61 for all n >2. ● a(n) = - 11 * (- 1) ^ n + 61 * floor(n / 2). ●

▶ [A185019] 0,11,50,117,212,335,486,665,872,1107,1370,1661,1980,2327,2702,3105,3536,3995,4482,4997,5540,6111,6710,7337,7992 ★ a(n) = n * (14 * n - 3). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n >= 3. - _ Wesley Ivan Hurt _ , Dec 18 2020 ●

▶ [A212560] 0,1,11,50,150,355,721,1316,2220,3525,5335,7766,10946,15015,20125,26440,34136,43401,54435,67450,82670,100331,120681,143980,170500 ★ Number of (w,x,y,z) with all terms in { 1,...,n } and w + x<=y + z. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ● a(n) = (n + 2 * n ^ 3 + 3 * n ^ 4) / 6. - _ Clark Kimberling _ , Jul 10 2012 ●

▶ [A341735] 0,1,11,50,154,375,781,1456,2500,4029,6175,9086,12926,17875,24129,31900,41416,52921,66675,82954,102050,124271,149941,179400,213004 ★ a(n) = A007678(2 * n + 1). ● a(n) = n * (2 * n - 1) * (2 * n ^ 2 - n + 5) / 6. (End) ●

▶ [A340130] 1,11,50,157,398,876,1742,3208,5561,9179,14548,22281,33138,48048,68132,94728,129417,174051,230782,302093,390830,500236,633986,796224,991601 ★ Number of convex polygons on the lines of a triangular grid with edge length n. ● a(n) = (n * (n + 2) * (2 * n ^ 4 + 32 * n ^ 3 + 201 * n ^ 2 + 138 * n - 48) - h) / 960 with h = 0 for even n and h = 15 for odd n. ● a(n) = 6 * a(n - 1) - 14 * a(n - 2) + 14 * a(n - 3) - 14 * a(n - 5) + 14 * a(n - 6) - 6 * a(n - 7) + a(n - 8) for n > 8. (End) ●

▶ [A185505] 1,11,51,156,375,771,1421,2416,3861,5875,8591,12156,16731,22491,29625,38336,48841,61371,76171,93500,113631,136851,163461,193776,228125 ★ a(n) = (7 * n ^ 4 + 5 * n ^ 2) / 12. ● a(n) = (7 * n ^ 4 + 5 * n ^ 2) / 12. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n > 5. ●

▶ [A051843] 0,1,11,51,161,406,882,1722,3102,5247,8437,13013,19383,28028,39508,54468,73644,97869,128079,165319,210749,265650,331430,409630,501930 ★ Partial sums of A002419. ● a(n) = C(n + 3,4) * (6 * n - 1) / 5 ● a(n) = n * (n + 1) * (n + 2) * (n + 3) * (6n - 1) / 120. - Derek I. Thomas (dithom02(AT)louisville.edu), Jun 30 2007 ●

▶ [A107464] 11,51,175,527,1471,3903,9983,24831,60415,144383,339967,790527,1818623,4145151,9371647,21037055,46923775,104071167,229638143,504365055,1103101951,2403336191,5217714175,11291066367,24360517631 ★ Number of fuzzy subgroups of rank 3 cyclic group of order (p ^ n) * q * r where p, q and r are three distinct prime. ● a(n) = 2 ^ (n + 1) * (n ^ 2 + 6n + 6) - 1. ●

▶ [A027942] 1,11,51,176,530,1490,4043,10773,28445,74770,196116,513876,1345861,3524111,9226935,24157220,63245318,165579398,433493615,1134902265,2971214081,7778740966,20365009896,53316289896,139583861065 ★ a(n) = T(2n + 1, n + 2), T given by A027935. ● a(n) = Fibonacci(2 * n + 5) - 2 * n ^ 2 - 5 * n - 5. ●

▶ [A321421] 1,11,51,211,851,3411,13651,54611,218451,873811,3495251,13981011,55924051,223696211,894784851,3579139411,14316557651,57266230611,229064922451,916259689811,3665038759251,14660155037011,58640620148051,234562480592211,938249922368851 ★ a(n) = 10 * (4 ^ n - 1) / 3 + 1. ● a(n) = 4 * a(n - 1) + 7, a(0) = 1 for n > 0. ● a(n) = 5 * a(n - 1) - 4 * a(n - 2), a(0) = 1, a(1) = 11, n > 1. ● a(n) = a(n - 1) + 10 * 4 ^ (n - 1), a(0) = 1, n > 0. ●

▶ [A207361] 0,1,11,53,173,448,994,1974,3606,6171,10021,15587,23387,34034,48244,66844,90780,121125,159087,206017,263417,332948,416438,515890,633490 ★ Displacement under constant discrete unit surge. ● a(n) = Sum _{ 0<=i<=j<=n } i ^ 2 * j. - _ Robert FERREOL _ , May 24 2022 ●

▶ [A252833] 11,53,288,1474,6068,18528,42738,79563,129173,191583,266793,354803,455613,569223,695633,834843,986853,1151663,1329273,1519683,1722893,1938903,2167713,2409323,2663733 ★ Number of n X 5 nonnegative integer arrays with upper left 0 and every value within 2 of its king move distance from the upper left and every value increasing by 0 or 1 with every step right, diagonally se or down. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>10. ●

▶ [A059135] 11,54,161,396,887,1890,3917,7992,16163,32526,65273,130788,261839,523962,1048229,2096784,4193915,8388198,16776785,33553980,67108391,134217234,268434941,536870376,1073741267 ★ A hierarchical sequence (S(W2 { 3 } c) - see A059126). ● a(n) = - 53 + 2 ^ (6 + n) - 21 * n. ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 2 * a(n - 3) for n > 2. ●

► [A213840] 1,11,54,170,415,861,1596,2724,4365,6655,9746,13806,19019,25585,33720,43656,55641,69939,86830,106610,129591,156101,186484,221100,260325 ⋆ a(n) = n * (1 + n) * (3 - 4 * n + 4 * n ^ 2) / 6. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ●

► [A153449] 0,11,55,132,242,385,561,770,1012,1287,1595,1936,2310,2717,3157,3630,4136,4675,5247,5852,6490,7161,7865,8602,9372 ⋆ 11 times pentagonal numbers: 11 * n * (3n - 1) / 2. ● a(n) = 33 * n + a(n - 1) - 22 (with a(0)=0). - _ Vincenzo Librandi _ , Aug 03 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A072025] 1,11,55,181,461,991,1891,3305,5401,8371,12431,17821,24805,33671,44731,58321,74801,94555,117991,145541,177661,214831,257555,306361,361801 ⋆ a(n) = n ^ 4 + 2 * n ^ 3 + 4 * n ^ 2 + 3 * n + 1 = ((n + 1) ^ 5 + n ^ 5) / (2 * n + 1). ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>4. ●

► [A098992] 0,0,1,11,55,190,526,1254,2682,5280,9735,17017,28457,45838,71500,108460,160548,232560,330429,461415,634315,859694,1150138,1520530,1988350 ⋆ Number of permutations of [n] with exactly 2 descents which avoid the pattern 1324. ● a(n) = (n * (- 540 + 476 * n + 469 * n ^ 2 - 490 * n ^ 3 + 70 * n ^ 4 + 14 * n ^ 5 + n ^ 6)) / 5040. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. ●

► [A032166] 11,55,440,3630,32208,295020,2783880,26793030,261994040,2593726344,25937424600,261535549220,2655593241840,27124986721140,27848321128355 2,2871858103075830,29732178147017280 ⋆ Number of aperiodic necklaces of n beads of 11 colors. ● a(n) = Sum _{ d|n } mu(d) * 11 ^ (n / d) / n. ●

► [A223766] 11,56,155,361,782,1601,3141,5907,10678,18618,31422,51505,82243,128276,195884,293448,432009,625939,893739,1258980,1751404,2408203,3275495,4410017,5881056 ⋆ Number of n X 4 0..1 arrays with rows, columns and antidiagonals unimodal and diagonals nondecreasing ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>13. ●

► [A223773] 11,56,180,461,1040,2164,4246,7950,14308,24877,41945,68796,110045,172055,263449,395731,584031,847990,1212802,1710431,2381022,3274526,4452560,5990524,7979998 ⋆ Number of n X 4 0..1 arrays with rows and columns unimodal and antidiagonals nondecreasing. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>10. ●

► [A079547] 0,1,11,56,192,517,1183,2408,4488,7809,12859,20240,30680,45045,64351,89776,122672,164577,217227,282568,362768,460229,577599,717784,883960 ⋆ a(n) = ((n ^ 6 - (n - 1) ^ 6) - (n ^ 2 - (n - 1) ^ 2)) / 60. ● a(n + 1) = Sum _{ i=1..n } (i ^ 2 + i ^ 4) / 2 = n * (2 * n + 1) * (n + 1) * (3 * n ^ 2 + 3 * n + 4) / 60. - _ Vladeta Jovovic _ , Mar 17 2006 ● a(n) = Sum _{ i=1..n - 1 } Sum _{ j=1..n - 1 } min(i,j) ^ 3. - _ Enrique Pérez Herrero _ , Jan 16 2013 ●

► [A051946] 1,11,56,196,546,1302,2772,5412,9867,17017,28028,44408,68068,101388,147288,209304,291669,399399,538384,715484,938630,1216930,1560780,1981980,2493855 ⋆ Expansion of g.f.: (1 + 4 * x) / (1 - x) ^ 7. ● a(n) = binomial(n + 5,5) * (5 * n + 6) / 6. ● a(n) = (n + 1) * (n + 2) * (n + 3) * (n + 4) * (n + 5) * (5 * n + 6) / 720. - _ Emeric Deutsch _ , Jun 18 2005 ●

► [A211614] 0,1,11,57,160,344,633,1051,1622,2370,3319,4493,5916,7612,9605,11919,14578,17606,21027,24865,29144,33888,39121,44867,51150 ⋆ Number of ordered triples (w,x,y) with all terms in {- n,... - 1,1,...,n } and w + x + y>2. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>5. ● a(n) = (8 * n ^ 3 - 15 * n ^ 2 + 15 * n - 12) / 2 for n>1. ●

► [A244497] 1,11,57,197,533,1223,2494,4654,8105,13355,21031,31891,46837,66927,93388,127628,171249,226059,294085,377585,479061,601271,747242,920282,1123993 ⋆ Number of magic labelings of the prism graph I X C _ 5 with magic sum n. ● a(n) = (3 * (63 + (- 1) ^ n) + 576 * n + 720 * n ^ 2 + 460 * n ^ 3 + 150 * n ^ 4 + 20 * n ^ 5) / 192. ● a(n) = 5 * a(n - 1) - 9 * a(n - 2) + 5 * a(n - 3) + 5 * a(n - 4) - 9 * a(n - 5) + 5 * a(n - 6) - a(n - 7) for n>6. ●

► [A101094] 1,11,57,203,574,1386,2982,5874,10791,18733,31031,49413,76076,113764,165852,236436,330429,453663,612997,816431,1073226,1394030,1791010,2277990,2870595 ⋆ a(n) = n * (n + 1) * (n + 2) * (n + 3) * (1 + 3 * n + n ^ 2) / 120. ● a(k) = MagicNKZ(3,k,7) where MagicNKZ(n,k,z) = Sum _{ j=0..k + 1 } (- 1) ^ j * binomial(n + 1 - z,j) * (k - j + 1) ^ n. (Cf. A101104.) - _ Danny Rorabaugh _ , Apr 23 2015 ●

► [A187693] 0,0,1,11,57,229,815,2715,8701,27233,83979,256519,778745,2354637,7100743,21375923,64275189,193120441,579951107,1741032927,5225458033,15681092645,47052715071,141177019531,423568807277 ⋆ G.f.: x ^ 2 * (1 + 4 * x - 3 * x ^ 2) / ((1 - x) ^ 2 * (1 - 2 * x) * (1 - 3 * x)). ● a(n) = n + (7 + 3 ^ (n + 1) - 9 * 2 ^ n) / 2, n>0. - _ R. J. Mathar _ , Mar 18 2011 ●

► [A289255] 1,11,57,247,1013,4083,16369,65519,262125,1048555,4194281,16777191,67108837,268435427,1073741793,4294967263,17179869149,68719476699,274877906905,1099511627735,4398046511061,17592186044371,70368744177617,281474976710607,1125899906842573 ⋆ a(n) = 4 ^ n - 2 * n - 1. ● a(n) = 4 ^ n - 2 * n - 1. ● a(n) = 6 * a(n - 1) - 9 * a(n - 2) + 4 * a(n - 3). ●

► [A275795] 11,57,331,1929,11243,65529,381931,2226057,12974411,75620409,440748043,2568867849,14972459051,87265886457,508622859691,2964471271689,17278204770443,100704757350969,586950339335371,3420997278661257,199390333326 32171,1162132027171317 69 ⋆ The x members of the positive proper solutions (x = x2(n), y = y2(n)) of the second class for the Pell equation x ^ 2 - 2 * y ^ 2 = + 7 ^ 2. ● a(n) = 6 * a(n - 1) - a(n - 2), n >= 1, with a(- 1) = 9 and a(0) = 11. ● a(n) = (((3 - 2 * sqrt(2)) ^ n * (- 12 + 11 * sqrt(2)) + (3 + 2 * sqrt(2)) ^ n * (12 + 11 * sqrt(2)))) / (2 * sqrt(2)). - _ Colin Barker _ , Sep 28 2016 ●

► [A290360] 0,1,11,58,206,571,1337,2772,5244,9237,15367,24398,37258,55055,79093,110888,152184,204969,271491,354274,456134,580195,729905,909052,1121780 ⋆ Number of 6 - leaf rooted trees with n levels. ● a(n) = (4 * n ^ 5 + 5 * n ^ 4 + 10 * n ^ 3 + 10 * n ^ 2 + n) / 30. ●

► [A356039] 1,11,58,243,866,2804,8485,24387,67333,180086,469338,1196976,2996956,7385837,17954243,43125267,102494548,241309031,563341508,1305142418,3002938045,6866090880,15609292379,35299794600,79443050541 ⋆ a(n) = Sum _{ k=1..n } binomial(n,k) * sigma _ 3(k). ● a(n) = Sum _{ i=1..n } Sum _{ j=1..n } (i ^ 3) * binomial(n,i * j). - _ Ridouane Oudra _ , Oct 31 2022 ●

► [A164299] 1,11,59,277,1249,5555,24587,108637,479713,2117819,9348923,41268805,182170369,804140579,3549650891,15668921293,69165971521,305313380075,1347718479803,5949117218293,26260673951137,115920223178771 ⋆ a(n) = ((1 + 4 * sqrt(2)) * (3 + sqrt(2)) ^ n + (1 - 4 * sqrt(2)) * (3 - sqrt(2)) ^ n) / 2. ● a(n) = 6 * a(n - 1) - 7 * a(n - 2) for n > 1; a(0) = 1, a(1) = 11. ●

► [A253207] 11,59,359,1799,7091,22995,64143,159093,359348,752180,1478204,2754752,4906202,8402522,13907394,22337388,34933761,53348561,79746821,116926733,168459797,238853045,333735545,460071495,626402322 ⋆ a(n) = number of permutations of (1,2,...,n) producible by an ordered quadruple of distinct transpositions. ● a(n) = n! * (1 / (384 * (n - 8)!) + 1 / (24 * (n - 7)!) + 13 / (72 * (n - 6)!) + 1 / (5 * (n - 5)!) + 1 / (8 * (n - 4)!) + 1 / (3 * (n - 3)!)) for n>=8. ●

► [A050483] 1,11,60,228,690,1782,4092,8580,16731,30745,53768,90168,145860,228684,348840,519384,756789,1081575,1519012,2099900,2861430,3848130,5112900,6718140,8736975 ⋆ Partial sums of A051947. ● a(n) = C(n + 6, 6) * (4n + 7) / 7. ●

► [A066999] 1,11,60,244,857,2787,8704,26624,80601,242803,729740,2190948,6575041,19727867,59186976,177565024,532699985,1598105787,4794324220,14382980660,43148951241,129446864371,388340605280,1165021829664 ⋆ a(n) = 3 ^ n * Sum _{ i=1..n } i ^ 3 / 3 ^ i. ● a(n) = (11 * 3 ^ (n + 1) - 4 * n ^ 3 - 18 * n ^ 2 - 36 * n - 33) / 8. - _ Vaclav Kotesovec _ , Nov 28 2012 ●

► [A222408] 1,11,61,211,551,1201,2311,4061,6661,10351,15401,22111,30811,41861,55651,72601,93161,117811,147061,181451,221551,267961,321311,382261,451501 ⋆ Partial sums of A008531, or crystal ball sequence for { A _ 4 }* lattice. ● a(n) = (4 + 10 * n + 15 * n ^ 2 + 10 * n ^ 3 + 5 * n ^ 4) / 4. G.f.: - (x ^ 4 + 6 * x ^ 3 + 16 * x ^ 2 + 6 * x + 1) / (x - 1) ^ 5. [_ Colin Barker _ , Mar 08 2013] ●

► [A001847] 1,11,61,231,681,1683,3653,7183,13073,22363,36365,56695,85305,124515,177045,246047,335137,448427,590557,766727,982729,1244979,1560549,1937199,2383409 ⋆ Crystal ball sequence for 5 - dimensional cubic lattice. ● a(n) = (4 * n ^ 5 + 10 * n ^ 4 + 40 * n ^ 3 + 50 * n ^ 2 + 46 * n + 15) / 15. - S. Bujnowski & B. Dubalski (slawb(AT)atr.bydgoszcz.pl), Mar 07 2002 ● a(n) = Sum _{ k=0..min(5,n) } 2 ^ k * binomial(5,k) * binomial(n,k). See Bump et al. - _ Tom Copeland _ , Sep 05 2014 ●

► [A115565] 11,61,281,911,2311,4961,9461,16531,27011,41861,62161,89111,124031,168361,223661,291611,374011,472781,589961,727711,888311,1074161,1287781,1531811,1809011 ⋆ a(n) = 5 * n ^ 4 - 10 * n ^ 3 + 20 * n ^ 2 - 15 * n + 11. ● a(1 - n) = a(n) = 5 * (n ^ 2 - n) ^ 2 + 15 * (n ^ 2 - n) + 11. - _ Michael Somos _ , May 15 2006 ● a(1)=11, a(2)=61, a(3)=281, a(4)=911, a(5)=2311, a(n)=5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Harvey P. Dale _ , Oct 03 2011 ●

► [A137410] 1,1,11,61,311,1561,7811,39061,195311,976561,4882811,24414061,122070311,610351561,3051757811,15258789061,76293945311,381469726561,1907348632811,9536743164061,47683715820311,238418579101561,1192092895507811,5960464477539061,29802322387695311 ⋆ a(n) = (5 ^ n - 3) / 2. ● a(n) = (5 ^ n - 3) / 2. ● a(n) = 6 * a(n - 1) - 5 * a(n - 2). ● a(n) = 5 * a(n - 1) + 6, a(1) = 1. - _ Philippe Deléham _ , Feb 24 2014 ●

► [A199414] 11,61,361,2161,12961,77761,466561,2799361,16796161,100776961,604661761,3627970561,21767823361,130606940161,783641640961,4701849845761,28211099074561,169266594447361,1015599566684161,6093597400104961,36561584400629761 ⋆ 10 * 6 ^ n + 1. ● a(n) = 6 * a(n - 1) - 5. ● a(n) = 7 * a(n - 1) - 6 * a(n - 2). ●

► [A156095] 1,11,61,361,2311,15401,104401,712531,4875781,33398201,228859951,1568486161,10750188961,73681909211,505020747661,3461456968201,23725161388951,162614629188281,1114577128871281,7639424974303651,52361396909490901 ⋆ 5 F(2n) (F(2n) + 1) + 1 where F(n) denotes the n - th Fibonacci number. ● a(n)=((2 * sqrt(5)) / 2) * (((3 + sqrt(5)) / 2) ^ n - ((3 - sqrt(5)) / 2) ^ n) + ((7 + 3 * sqrt(5)) / 2) ^ n + ((7 - 3 * sqrt(5)) / 2) ^ n - 1. - _ Tim Monahan _ , Aug 15 2011 ●

► [A092164] 1,11,61,371,2221,13331,79981,479891,2879341,17276051,103656301,621937811,3731626861,22389761171,134338567021,806031402131,4836188412781,29017130476691,174102782860141,1044616697160851 ⋆ Let M = 2 X 2 matrix [1 2 / 5 4]; a(n) = (1,1) entry of M ^ n. ● a(n) = (2 * 6 ^ n + 5 * (- 1) ^ n) / 7. ● a(n)=5 * a(n - 1) + 6 * a(n - 2). G.f.: x * (1 + 6 * x) / ((1 + x) * (1 - 6 * x)). - _ R. J. Mathar _ , Apr 20 2009 ●

► [A354336] 1,11,61,401,2731,18701,128161,878411,6020701,41266481,282844651,1938646061,13287677761,91075098251,624238009981,4278590971601,29325898791211,201002700566861,1377693005176801,9442848335670731,64722245344518301,443612869075957361 ⋆ a(n) is the integer w such that (L(2 * n) ^ 2, - L(2 * n - 1) ^ 2, - w) is a primitive solution to the Diophantine equation 2 * x ^ 3 + 2 * y ^ 3 + z ^ 3 = 125, where L(n) is the n - th Lucas number (A000032). ● a(n) = Lucas(4 * n + 1) + 1 - Lucas(2 * n - 1) ^ 2. ● a(n) = 8 * a(n - 1) - 8 * a(n - 2) + a(n - 3). ●

► [A191596] 1,11,62,242,743,1925,4396,9108,17469,31471,53834,88166,139139,212681,316184,458728,651321,907155,1241878,1673882,2224607,2918861,3785156,4856060,6168565 ⋆ Expansion of (1 + x) ^ 4 / (1 - x) ^ 7. ● a(n) = (n + 1) * (n + 2) * (2 * n ^ 4 + 12 * n ^ 3 + 40 * n ^ 2 + 66 * n + 45) / 90. ● a(n) = a(- n - 3) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). ●

► [A053367] 1,11,63,255,825,2277,5577,12441,25740,50050,92378,163098,277134,455430,726750,1129854,1716099,2552517,3725425,5344625,7548255,10508355,14437215,19594575,26295750 ⋆ Partial sums of A050494. ● a(n) = binomial(n + 7, 7) * (3n + 8) / 8. ●

► [A285361] 0,1,11,64,282,1071,3729,12310,39296,122773,378279,1154988,3505542,10598107,31957661,96200098,289255020,869075073,2609845875,7834779640,23514823730,70565441671,211738266921,635298685614,1906063827672 ⋆ The number of tight 3 X n pavings. ● a(n) = (1 / 4) * (3 ^ (n + 3) - 5 * 2 ^ (n + 4) + 4 * n ^ 2 + 26 * n + 53). - _ Hugo Pfoertner _ , Mar 14 2018 ●

► [A332750] 11,65,265,1005,3749,13927,51683,191735,711243,2638305,9786545,36302213,134659381,499505271,1852863915,6873009871,25494729643,94570101217,350798151929,1301249991357,4826854219941,17904723777319,66415748007763,246362448161159,913856392265003 ⋆ The number of flips to go from Hamilto

nian cycle alpha _ n to beta _ n in the Cameron graph of size n using Thomason's algorithm. • a(n) = 4 * a(n - 1) - a(n - 2) - a(n - 4) - a(n - 6) for n>6. - _ Colin Barker _ , Feb 22 2020 •

▶ [A054333] 1,11,65,275,935,2717,7007,16445,35750,72930,140998,260338,461890,791350,1314610,2124694,3350479,5167525,7811375,11593725,16921905,24322155,34467225,48208875,66615900 ⋆ 1 / 256 of tenth unsigned column of triangle A053120 (T - Chebyshev, rising powers, zeros omitted). • a(n) = 2 * C(n + 9, 9) - C(n + 8, 8). - _ Paul Barry _ , Mar 04 2003 • a(n) = C(n + 8,8) + 2 * C(n + 8,9). - Borislav St. Borisov (b.st.borisov(AT)abv.bg), Mar 05 2009 •

▶ [A054490] 1,11,65,379,2209,12875,75041,437371,2549185,14857739,86597249,504725755,2941757281,17145817931,99933150305,582453083899,3394785353089,19786259034635,115322768854721,672150354093691,3917579355707425,22833325780150859 ⋆ Expansion of (1 + 5 * x) / (1 - 6 * x + x ^ 2). • a(n) = 6 * a(n - 1) - a(n - 2) for n>1, a(0)=1, a(1)=11. • a(n) = (11 * ((3 + 2 * sqrt(2)) ^ n - (3 - 2 * sqrt(2)) ^ n) - ((3 + 2 * sqrt(2)) ^ (n - 1) - (3 - 2 * sqrt(2)) ^ (n - 1))) / (4 * sqrt(2)). • a(n) = Pell(2 * n + 1) + 3 * Pell(2 * n). • a(n) = ChebyshevU(n,3) + 5 * ChebyshevU(n - 1,3). •

▶ [A154617] 0,11,66,165,308,495,726,1001,1320,1683,2090,2541,3036,3575,4158,4785,5456,6171,6930,7733,8580,9471,10406,11385,12408 ⋆ Eleven times hexagonal numbers: 11 * n * (2 * n - 1). • a(n) = a(n - 1) + 44 * n - 33 (With a(0)=0). - _ Vincenzo Librandi _ , Dec 15 2010 •

▶ [A063842] 1,11,66,276,900,2451,5831,12496,24651,45475,79376,132276,211926,328251,493725,723776,1037221,1456731,2009326,2726900,3646776,4812291,6273411,8087376,10319375 ⋆ Number of colorings of K _ 4 using at most n colors. • a(n) = (1 / 4!) * (n ^ 6 + 6 * n ^ 5 + 24 * n ^ 4 + 56 * n ^ 3 + 83 * n ^ 2 + 70 * n + 24). •

▶ [A247610] 1,11,66,286,1001,3003,7798,17858,36873,70003,124130,208110,333025,512435,762630,1102882,1555697,2147067,2906722,3868382,5070009,6554059,8367734,10563234,13198009 ⋆ a(n) = Sum _{ k=0..5 } binomial(10,k) * binomial(n,k). • a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). • a(n) = (20 + 508 * n - 925 * n ^ 2 + 820 * n ^ 3 - 245 * n ^ 4 + 42 * n ^ 5) / 20. •

▶ [A008503] 1,11,66,286,1001,3003,8008,19448,43758,92378,184755,352705,646580,1143780,1960255,3265757,5303727,8416837,13079352,19937632,29860259,43999449,63865594,91416974 ⋆ 9 - dimensional centered tetrahedral numbers. • a(n) = (2 * n + 1) * (5 * n ^ 8 + 20 * n ^ 7 + 1370 * n ^ 6 + 4040 * n ^ 5 + 56549 * n ^ 4 + 106388 * n ^ 3 + 425916 * n ^ 2 + 373392 * n + 362880) / 362880. [_ Bruno Berselli _ , Mar 22 2012] •

▶ [A008493] 1,11,66,286,1001,3003,8008,19448,43758,92378,184756,352715,646635,1144000,1960970,3267759,5308732,8428277,13103662,19986252,29952637,44167409,64159524,91914394,129984074 ⋆ Expansion of (1 - x ^ 11) / (1 - x) ^ 11. • a(n) = 11 * n * (193248 + 152900 * n ^ 2 + 16401 * n ^ 4 + 330 * n ^ 6 + n ^ 8) / 362880 for n>0. - _ Colin Barker _ , Jan 06 2017 • a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10). - _ Wesley Ivan Hurt _ , Jun 07 2021 •

▶ [A001287] 1,11,66,286,1001,3003,8008,19448,43758,92378,184756,352716,646646,1144066,1961256,3268760,5311735,8436285,13123110,20030010,30045015,44352165,64512240,92561040,131128140 ⋆ a(n) = binomial coefficient C(n,10). • a(n + 9) = n(n + 1)(n + 2)(n + 3)(n + 4)(n + 5)(n + 6)(n + 7)(n + 8)(n + 9) / 10!. - _ Artur Jasinski _ , Dec 02 2007; _ R. J. Mathar _ , Jul 07 2009 •

▶ [A000460] 1,11,66,302,1191,4293,14608,47840,152637,478271,1479726,4537314,13824739,41932745,126781020,382439924,1151775897,3464764515,10414216090,31284590870,93941852511,282010106381,846416194536,2540053889352,7621839388981 ⋆ Eulerian numbers (Euler's triangle: column k=3 of A008292, column k =2 of A173018). • a(n + 2) = 3 ^ (n + 2) - (n + 3) * 2 ^ (n + 2) + (1 / 2) * (n + 2) * (n + 3). - _ Randall L Rathbun _ , Jan 22 2002 • a(n) = 3 ^ n - (n + 1) * 2 ^ n + (1 / 2) * n * (n + 1). - _ Gary Detlefs _ , Nov 11 2011 •

▶ [A292490] 1,11,68,365,2019,11328,63321,353483,1974124,11026373,61584323,343956104,1921047729,10729356747,59925127764,334691142941,1869302113507,10440343236752,58310941508105,325675681470731,1818949357172988,10159115194159989,56740239146359107 ⋆ p - INVERT of the odd positive integers, where p(S) = 1 - S - 7 S ^ 2. • a(n) = 5 * a(n - 1) + 17 * a(n - 3) + 7 * a(n - 4) for n >= 5. •

▶ [A293550] 0,1,11,69,354,1650,7293,31213,130832,540702,2212550,8989090,36327810,146228940,586823265,2349424125,9389012160,37467344310,149345215290,594753416790,2366845396500,9413555798556,37423053793026,148719333293394,590842248405024 ⋆ a(n) = Sum _{ k=0..n } k ^ 3 * binomial(2 * n - k,n). • a(n) = [x ^ n] x * (1 + 4 * x + x ^ 2) / (1 - x) ^ (n + 5). • a(n) = 2 ^ (2 * n + 1) * n ^ 2 * (13 * n + 7) * Gamma(n + 3 / 2) / (sqrt(Pi) * Gamma(n + 5)). •

▶ [A173200] 0,11,70,225,524,1015,1746,2765,4120,5859,8030,10681,13860,17615,21994,27045,32816,39355,46710,54929,64060,74151,85250,97405,110664 ⋆ Solutions y of the Mordell equation y ^ 2 = x ^ 3 - 3a ^ 2 - 1 for a = 0,1,2, ... (solutions x are given by A053755). • a(n) = 8 * n ^ 3 - 24 * n ^ 2 + 27 * n - 11. • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Vincenzo Librandi _ , Jul 02 2012 •

▶ [A211386] 1,11,71,351,1471,5503,18943,61183,187903,553983,1579007,4374527,11829247,31326207,81461247,208470015,525991935,1310457855,3228041215,7870611455,19012780031,45541752831,108246597631,255466668031,598980165631 ⋆ Expansion of 1 / ((1 - 2 * x) ^ 5 * (1 - x)). • a(n) = 2 ^ n * (24 + 18 * n + 23 * n ^ 2 + 6 * n ^ 3 + n ^ 4) / 12 - 1. • a(0)=1, a(1)=11, a(2)=71, a(3)=351, a(4)=1471, a(5)=5503, a(n)=11 * a(n - 1) - 50 * a(n - 2) + 120 * a(n - 3) - 160 * a(n - 4) + 112 * a(n - 5) - 32 * a(n - 6). - _ Harvey P. Dale _ , Mar 02 2015 •

▶ [A164559] 1,11,71,431,2591,15551,93311,559871,3359231,20155391,120932351,725594111,4353564671,26121388031,156728328191,940369969151,5642219814911,33853318889471,203119913336831,1218719480020991 ⋆ a(n) = 6 ^ n / 3 - 1. • a(n) = 6 * a(n - 1) + 5 for n > 2; a(1) = 1, a(2) = 11. •

▶ [A123362] 1,1,11,71,481,3241,21851,147311,993121,6695281,45137291,304300151,2051487361,13830424921,93239986331,628592042591,4237752187201,28569473336161,192605600952971,1298480972398631,8753913839156641 ⋆ a(0) = 1, a(1) = 1, a(n) = 6 * a(n - 1) + 5 * a(n - 2) for n > 1. • a(n) = (1 / 2) * (3 + sqrt(14)) ^ n + (1 / 2) * (3 - sqrt(14)) ^ n - (1 / 14) * (3 + sqrt(14)) ^ n * sqrt(14) + (1 / 14) * (3 - sqrt(14)) ^ n * sqrt(14), with n >= 0. - _ Paolo P. Lava _ , Jun 25 2008 •

▶ [A199488] 11,71,491,3431,24011,168071,1176491,8235431,57648011,403536071,2824752491,19773267431,138412872011,968890104071,6782230728491,47475615099431,332329305696011,2326305139872071,16284135979104491,113988951853731431 ⋆ 10 * 7 ^ n + 1. • a(n) = 7 * a(n - 1) - 6. • a(n) = 8 * a(n - 1) - 7 * a(n - 2). •

▶ [A103998] 1,11,71,539,4271,34276,276119,2226851,17965151,144948419,1169523076,9436433171,76139155439,614339685971,4956888901511,39995380044004,322708555336511,2603821045832171,21009309912323639 ⋆ Number of dimer tilings of a 4 x 2n Moebius strip. • a(0)=1, a(1)=11, a(2)=71, a(3)=539, a(4)=4271, a(n)=11 * a(n - 1) - 25 * a(n - 2) + 11 * a(n - 3) - a(n - 4). - _ Harvey P. Dale _ , Jun 15 2011 •

▶ [A258402] 0,11,72,243,608,1275,2376,4067,6528,9963,14600,20691,28512,38363,50568,65475,83456,104907,130248,159923,194400,234171,279752,331683,390528 ⋆ a(n) = (n ^ 2 + 4 * n + 6) * n ^ 2. • a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Vincenzo Librandi _ , Jun 06 2015 •

▶ [A006975] 1,11,72,364,1568,6048,21504,71808,228096,695552,2050048,5870592,16400384,44843008,120324096,317521920,825556992,2118057984,5369233408,13463453696,33426505728,82239815680,200655503360,485826232320 ⋆ Negated coefficients of Chebyshev T polynomials: a(n) = - A053120(n + 10, n), n >= 0. • a(n) = 2 ^ (n - 4) * (n + 1)(n + 2)(n + 3)(n + 4)(n + 10) / 15. - _ Paul Barry _ , Feb 19 2003 • a(n) = sum { k=0..floor((n + 10) / 2), C(n + 10, 2k)C(k, 5) } . - _ Paul Barry _ , May 15 2003 • a(n) = binomial transform of b(n)= (2 * n ^ 5 + 10 * n ^ 4 + 30 * n ^ 3 + 50 * n ^ 2 + 43 * n + 15) / 15 offset 0. a(3) = 364. - Al Hakanson (hawkuu(AT)gmail.com), Jun 01 2009 • a(n) = 2 ^ (n - 1) / 5 * Binomial(n + 4,4) * (n + 10). - _ Brad Clardy _ , Mar 10 2012 •

▶ [A163775] 1,11,73,403,2021,9567,43611,193683,844213,3629083,15437951,65143503,273148279,1139548469,4734740493,19606960755,80969809797,333601494651 ⋆ Row sums of triangle A163772. • a(n) = Sum _{ k=0..n } Sum _{ i=k..n } (- 1) ^ (n - i) * binomial(n - k,n - i) * (2i + 1) $ where i $ denotes the swinging factorial of i (A056040). •

▶ [A155634] 1,11,73,467,3025,19931,133273,901667,6155425,42306731,292240873,2026154867,14085427825,98109713531,684326588473,4778079088067,33385518460225,233393453440331,1632228295176073,11417968671701267 ⋆ 7 ^ n + 5 ^ n - 1. • a(n)=12 * a(n - 1) - 35 * a(n - 2) - 24 with a(0)=1, a(1)=11 [From _ Vincenzo Librandi _ , Jul 21 2010] •

▶ [A282816] 0,0,1,11,76,340,1135,3101,7336,15576,30405,55495,95876,158236,251251,385945,576080,838576,1193961,1666851,2286460,3087140,4108951,5398261,7008376 ⋆ Number of inequivalent ways to color the faces of a cube using at most n colors so that no two opposite sides have the same color. • a(n) = n * (n - 1) * (n ^ 4 - 2 * n ^ 3 + n ^ 2 + 8) / 24. •

▶ [A056914] 1,11,76,521,3571,24476,167761,1149851,7881196,54018521,370248451,2537720636,17393796001,119218851371,817138163596,5600748293801,38388099893011,263115950957276,1803423556807921,12360848946698171 ⋆ a(n) = Lucas(4 * n + 1). • a(n) = 7 * a(n - 1) - a(n - 2), with a(0)=1, a(1)=11. • a(n) = (11 * (((7 + 3 * sqrt(5)) / 2) ^ n - ((7 - 3 * sqrt(5)) / 2) ^ n) - (((7 + 3 * sqrt(5)) / 2) ^ (n - 1) - ((7 - 3 * sqrt(5)) / 2) ^ (n - 1))) / 3 * sqrt(5). •

▶ [A218395] 11,77,143,1529,2849,30503,56837,608531,1133891,12140117,22620983,242193809,451285769,4831736063,9003094397,96392527451,179610602171,1923018812957,3583208949023,38363983731689,71484568378289,765356655820823,1426108158616757 ⋆ Numbers whose square is the sum of the squares of 11 consecutive integers. • a(n) = 20 * a(n - 2) - a(n - 4); b(n) = 20 * b(n - 2) - b(n - 4); • a(n) = 10 * a(n - 2) + 33 * b(n - 2); b(n) = 3 * a(n - 2) + 10 * b(n - 2). • a(n) = a(n - 1) + 20 * a(n - 2) - 20 * a(n - 3) - a(n - 4) + a(n - 5). • a(2 * n) = ((11 + r) * s ^ n + (11 - r) * t ^ n) / 2. • a(2 * n + 1) = ((77 + 23 * r) * s ^ n + (77 - 23 * r) * t ^ n) / 2. •

▶ [A208599] 11,77,291,791,1761,3431,6077,10021,15631,23321,33551,46827,63701,84771,110681,142121,179827,224581,277211,338591,409641,491327,584661,690701,810551 ⋆ Number of 5 - bead necklaces labeled with numbers - n..n not allowing reversal, with sum zero. • a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. •

▶ [A059625] 1,11,77,407,1793,6875,23661,74503,217789,597311,1549977,3830619,9065485,20635967,45353033,96542523,199597519,401741989,788857795,1513922905,2844244975,5238604085,9471346755 ⋆ Eleventh column (m=10) of convolution triangle A059594. • a(2 * k) = binomial(k + 16, 16) * (128 * k ^ 5 + 4768 * k ^ 4 + 62272 * k ^ 3 + 336488 * k ^ 2 + 673644 * k + 305235) / (17 * 9 * 19 * 5 * 21); a(2 * k + 1) = binomial(k + 16, 16) * (128 * k ^ 5 + 6112 * k ^ 4 + 107968 * k ^ 3 + 860312 * k ^ 2 + 2975580 * k + 3357585) / (17 * 9 * 19 * 5 * 21), k >= 0. •

▶ [A172067] 1,11,79,468,2486,12323,58277,266492,1188679,5202523,22436251,95630272,403770544,1691678428,7042481236,29161852240,120212658034,493656394350,2020590599710,8247228533780,33579755528278,136434358356201 ⋆ Expansion of (2 / (3 * sqrt(1 - 4 * z) - 1 + 4 * z)) * ((1 - sqrt(1 - 4 * z)) / (2 * z)) ^ k with k=10. • a(n) = Sum _{ j=0..n } (- 1) ^ j * binomial(2 * n + k - j,n - j), with k=10. •

▶ [A101028] 1,11,79,479,5297,69071,69203,471181,8960447,44831407,1031626241,5160071143,15484789693,64166447971,1989542332021,3979714828967,27861681000449,103099680301097 3,1031094241305773,42278288849598913,1818093633186492859,1818204269645957299,8546015119904057 3933 ⋆ Numerator of partial sums of a certain series. First member (m = 2) of a family. • a(n) = numerator(s(n)) with s(n) = 6 * Sum _{ k = 1..n } (1 / ((2 * k - 1) * (2 * k) * (2 * k + 1)). •

▶ [A337929] 1,11,79,545,3739,25631,175681,1204139,8253295,56568929,387729212,657535551,18215019649,124847601995,855718194319,5865179758241,40200540113371,275538601035359,1888569667134145,12944449068903659,88722573815191471,608113567637436641 ⋆ Numbers w such that (F(2 * n - 1) ^ 2, - F(2 * n) ^ 2, w) are primitive solutions of the Diophantine equation 2 * x ^ 3 + 2 * y ^ 3

+ z ^ 3 = 1, where F(n) is the n - th Fibonacci number (A000045). ● a(n) = (2 * F(2 * n) ^ 6 - 2 * F(2 * n - 1) ^ 6 + 1) ^ (1 / 3). ● a(n) = 8 * a(n - 1) - 8 * a(n - 2) + a(n - 3) for n>3. ●

▶ [A155619] 1,11,79,575,4351,33791,266239,2113535,16842751,134479871,1074790399,8594128895,68736253951,549822922751,4398314946559,35185445830655,281479271677951,2251816993554431,18014467228958719,144115462953762815 ⋆ 8 ^ n + 4 ^ n - 1 ^ n ● a(n)=12 * a(n - 1) - 32 * a(n - 2) - 21 with a(0)=1, a(1)=11 [From _ Vincenzo Librandi _ , Jul 21 2010] ● a(0)=1, a(1)=11, a(2)=79, a(n)=13 * a(n - 1) - 44 * a(n - 2) + 32 * a(n - 3). - _ Harvey P. Dale _ , Jun 19 2013 ●

▶ [A021024] 1,11,80,490,2751,14721,76630,392480,1990901,10041031,50466780,253122870,1267989451,6347088941,31756902530,158848951660,794438206401,3972771638451,19865600535880,99333230758850,496681840129751,2483456263849561,12417422517238830 ⋆ Expansion of 1 / ((1 - x)(1 - 2x)(1 - 3x)(1 - 5x)). ● a(n) = stirling2(n + 4,4) + stirling2(n + 4,5). - _ Zerinvary Lajos _ , Oct 04 2007 ● a(0)=1, a(1)=11, a(2)=80, a(3)=490; for n>3, a(n) = 11 * a(n - 1) - 41 * a(n - 2) + 61 * a(n - 3) - 30 * a(n - 4). - _ Vincenzo Librandi _ , Jul 05 2013 ● a(n) = 8 * a(n - 1) - 15 * a(n - 2) + 2 ^ n - 1. - _ Vincenzo Librandi _ , Jul 05 2013 ● a(n) = (5 ^ (n + 3) - 6 * 3 ^ (n + 3) + 8 * 2 ^ (n + 3) - 3) / 24. [_ Yahia K ahloune _ , Jul 07 2013] ●

▶ [A252817] 11,81,468,2078,7564,23664,65711,165685,385736,839799,1726761,3379640,6336411,11439478,19972358,33843927,55832593,89905021,141626554,218683266,331538662,494251420,725484265,1049738089,1498849798 ⋆ Number of n X 5 nonnegative integer arrays with upper left 0 and every value within 2 of its ci ty block distance from the upper left and every value increasing by 0 or 1 with every step right or down. ● a(n) = 11 * a(n - 1) - 55 * a(n - 2) + 165 * a(n - 3) - 330 * a(n - 4) + 462 * a(n - 5) - 462 * a(n - 6) + 330 * a(n - 7) - 165 * a(n - 8) + 55 * a(n - 9) - 11 * a(n - 10) + a(n - 11) for n>11. ●

▶ [A323223] 0,1,11,81,501,2811,14823,74883,366603,1752273,8218733,37964449,173172249,781607349,3496163949,15517771749,68412846069,299828796219,1307168814519,5672308893819,24511334499219,105519144602439,452695473616239,1936085243038839,8256615564926439 ⋆ a(n) = [x ^ n] x / ((1 - x) * (1 - 4 * x) ^ (5 / 2)). ● a(n) = ((5 * n + 1) * a(n - 1) - (4 * n + 2) * a(n - 2)) / (n - 1) for n > = 2. ● a(n) = - (- 4) ^ n * binomial(- 5 / 2, n) * hypergeom([1, n + 5 / 2], [n + 1], 4) - i * sqrt(3) / 27. ●

▶ [A181989] 1,11,81,621,4741,36211,276561,2112241,16132281,123210611,941023441,7187084861,54891500621,419234905211,3201914754721,24454686308481,186773143027761,1426483517982011,10894795654704401,83209214029813101,635511992964231701,4853735225243983011 ⋆ Number of independent sets of nodes in gr aph C _ 5 x P _ n (n >= 0). ● a(n) = 7 * a(n - 1) + 5 * a(n - 2) - a(n - 3) wit h a(0)=1, a(1)=11, a(2)=81. ●

▶ [A199557] 11,81,641,5121,40961,327681,2621441,20971521,167772161,1342177281,10737418241,85899345921,687194767361,5497558138881,43980465111041,351843720888321,2814749767106561,22517998136852481,180143985094819841 ⋆ 10 * 8 ^ n + 1. ● a(n) = 8 * a(n - 1) - 7. ● a(n) = 9 * a(n - 1) - 8 * a(n - 2). ●

▶ [A003730] 1,11,81,666,5431,44466,364061,2981201,24412606,199912706,1637069691,13405842666,109779463516,898976005896,7361648869421,60284005131851,493661316969811,4042556485091321,33104199931650186 ⋆ Number of 2 - factors in C _ 5 X P _ n. ● a(n) = 9a(n - 1) - 4a(n - 2) - 22a(n - 3) + 3a(n - 4), n>4. ●

▶ [A334340] 1,11,81,699,5441,43723,349201,2796731,22364481,178965195,1435713521,11453377723,91624653121,733009857227,5864040961041,46912529804475,375299632087361,3002400290556619,24019192622879761,192153592724761787,1537228586572923201,12297829520450964171,98382633680004977681 ⋆ Decimal repr esentation of n - th iteration of the one - dimensional cellular automaton define d by Rule 434, based on the 4 - celled von Neumann neighborhood starting wit h a single black cell. ● a(n) = (1428 + 7 * (- 4) ^ n + 2278 * (- 1) ^ n + (1800 + 360 * i) * (- i) ^ n + (1800 - 360 * i) * i ^ n - 3 * 4 ^ n + 85 * 8 ^ n) / 510 w here i = sqrt(- 1). ●

▶ [A335332] 1,11,81,699,5441,43723,349265,2797243,22368577,178961099,1431651409,11453263547,91625951553,733007821515,5864061944913,46912496398011,375299968667969,3002399752698571,24019198011524177,192153584105615035,1537228672804655425,12297829382490929867 ⋆ Decimal representation of n - th iter ation of the one - dimensional cellular automaton defined by Rule 954, based on the 4 - celled von Neumann neighborhood starting with a single black cell. ● a(n) = 8 * a(n - 1) + 4 * a(n - 2) - 32 * a(n - 3) + a(n - 4) - 8 * a(n - 5) - 4 * a(n - 6) + 32 * a(n - 7) for n>9. - _ Colin Barker _ , Jun 11 2020 ●

▶ [A111334] 11,81,765,7581,75703,756903,7568866,75688472,756884504,7568844796,75688447681,756884476508,7568844764750,75688447647137,756884476470980,7568844764709381,75688447647093366,756884476470933182 ⋆ a(n) is the small est integer k such that the difference between the arithmetic and geometric me ans of the first k positive integers is larger than 10 ^ n. ● a(n) = Min _{ k: (k + 1) / 2 - (k!) ^ (1 / k) > 10 ^ n } . ●

▶ [A261391] 0,11,82,393,1364,3775,8886,18557,35368,62739,105050,167761,257532,382343,551614,776325,1069136,1444507,1918818,2510489,3240100,4130511,5206982,6497293,8031864 ⋆ a(n) = n ^ 5 + 5 * n ^ 3 + 5 * n. ● a(n) = ((n + sqrt(n ^ 2 + 4)) / 2) ^ 5 - 1 / ((n + sqrt(n ^ 2 + 4)) / 2) ^ 5. ● a(n) = - a(- n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) . - _ Colin Barker _ , Aug 18 2015 ●

▶ [A016282] 1,11,83,535,3171,17871,97483,520055,2731091,14179231,72992283,373347975,1900290211,9635660591,48715157483,245723238295,1237206060531,6220389909951,31239388241083,156746696495015,785932504682051,39384586143353 11,197274774395710 83 ⋆ Expansion of 1 / ((1 - 2 * x) * (1 - 4 * x) * (1 - 5 * x)). ● a(n) = (2 / 3) * 2 ^ n - 8 * (4) ^ n + (25 / 3) * 5 ^ n. - _ Antonio Alberto Ol ivares _ , May 12 2012 ●

▶ [A244975] 0,1,11,84,598,4199,29409,205882,1441196,10088397,70618807,494331680,3460321794,24222252595,169555768205,1186890377478,8308232642392,58157628496793,407103399477603,2849723796343276,19948066574402990,139636466020820991,977455262145747001 ⋆ (7 ^ n - 2 * n - 1) / 4. ● a(n) = 9 * a(n - 1) - 15 * a(n - 2) + 7 * a(n - 3). - _ Robert Israel _ , Jul 09 2014 ●

▶ [A295168] 1,11,85,521,2869,15017,76717,387425,1945957,9749753,48793309,244064849,1220539285,6103163369,30516824461,152586284993,762936045253,3814690056665,19073471123773,95367399659057,476837091094261,2384185650506441,11920928661476845 ⋆ Chromatic invariant of the 2n - crossed prism graph. ● a(n) = 5 ^ n - 2 ^ (n - 1) * (3 * n + 1). ● a(n) = 9 * a(n - 1) - 24 * a(n - 2) + 20 * a(n - 3). ●

▶ [A001240] 1,11,85,575,3661,22631,137845,833375,5019421,30174551,181222405,1087861775,6528756781,39177307271,235078159765,1410511939775,8463200647741,50779591044791,304678708005925 ⋆ Expansion of 1 / ((1 - 2x)(1 - 3x)(1 - 6x)). ● a(n) = 11a(n - 1) - 36a(n - 2) + 36a(n - 3). - _ John W. Layman _ ● a(n) = (6 ^ n - 2 * 3 ^ n + 2 ^ n) / 2. Also - x ^ 2 / 6 * Beta(x, 4) = Sum _{ n>= 0 } a(n) * (- x / 6) ^ n. Thus x ^ 2 * Beta(x, 4) = x - 11 / 6 * x ^ 2 + 85 / 36 * x ^ 3 - 575 / 216 * x ^ 4 + 3661 / 1296 * x ^ 5 - ... . - _ Vladeta Jovovic _ , Aug 09 2002 ● a(n) = Sum _{ 0<=i,j,k,<=n, i + j + k=n } 2 ^ i * 3 ^ j * 6 ^ k. - _ Hieronymus Fischer _ , Jun 25 2007 ● a(n) = 2 ^ n + 3 ^ (n + 1) * (2 ^ n - 1). - _ Hieronymus Fischer _ , Jun 25 2007 ● a(n) = Sum _{ k = 0..n - 1 } 2 ^ (n - 2 - k) * (3 ^ n - 3 ^ k). - _ J. M. Bergot _ , Feb 05 2018 ●

▶ [A082365] 1,11,85,683,5461,43691,349525,2796203,22369621,178956971,1431655765,11453246123,91625968981,733007751851,5864062014805,46912496118443,375299968947541,3002399751580331,24019198012642645,192153584101141163 ⋆ A Jacobsthal number sequence. ● a(n) = (4 * 8 ^ n - (- 1) ^ n) / 3. ● a(0)=1, a(1)=11, a(n + 1) = 7 * a(n) + 8 * a(n - 1) for n>=1 . ●

▶ [A014917] 1,11,86,586,3711,22461,131836,756836,4272461,23803711,131225586,717163086,3890991211,20980834961,112533569336,600814819336,3194808959961,16927719116211,89406967163086,470876693725586 ⋆ a(1)=1, a(n) = n * 5 ^ (n - 1) + a(n - 1). ● a(n) = (1 / 16) * (1 + 5 ^ n * (4 * n - 1)). - _ Paolo P. La va _ , Jan 13 2009 ● a(n) = 10 * a(n - 1) - 25 * a(n - 2) + 1; a(1)=1, a(2)=11. ● a(n) = 11 * a(n - 1) - 35 * a(n - 2) + 25 * a(n - 3); a(1)=1, a(2)=11, a(3)=86. - _ Harvey P. Dale _ , May 06 2013 ● a(n) = 5 ^ n * Sum _{ k=1..n } (Sum _{ j=1..k } 1 / x ^ j) = ((4 * n - 1) * 5 ^ n + 1) / 4 ^ 2. See the general comm ent above, and the first formula. -_ Gary Detlefs _ , Aug 31 2021 [Edited by _ Wolfdieter Lang _ , Nov 30 2021] ●

▶ [A080962] 1,11,86,596,3896,24656,153056,938816,5714816,34616576,209010176,1259303936,7576795136,45544656896,273603485696,1642963091456,9863147257856,59200358383616,355288049647616,2132071895269376 ⋆ 5th binomial transfo rm of the periodic sequence (1,6,1,1,6,1...). ● a(n) = 6 * a(n - 1) + 5 * 4 ^ (n - 1). ● a(n) = (7 / 2) * 6 ^ n - (5 / 2) * 4 ^ n. ●

▶ [A016222] 1,11,87,607,3983,25263,157039,964079,5871855,35580655,214882031,1294884591,7791677167,46839541487,281395162863,1689802632943,10144542420719,60890161016559,365432592068335 ⋆ Expansion of 1 / ((1 - x)(1 - 4x)(1 - 6x)). ● a(n) = (1 / 15) - (8 / 3) * 4 ^ n + (18 / 5) * 6 ^ n. - _ Antonio Alberto O livares _ , Feb 07 2010 ● a(0) = 1, a(1) = 11, a(n) = 10 * a(n - 1) - 24 * a(n - 2) + 1. - _ Vincenzo Librandi _ , Feb 10 2011 ● a(0) = 1, a(1) = 11, a(2) = 87, a(n) = 11 * a(n - 1) - 34 * a(n - 2) + 24 * a(n - 3). - _ Harvey P. Dale _ , Nov 04 2011 ●

▶ [A081013] 0,11,87,608,4179,28655,196416,1346267,9227463,63245984,433494435,2971215071,20365011072,139583862443,956722026039,6557470319840,44945570212851,308061521170127,2111485077978048,14472334024676219 ⋆ a(n) = Fibon acci(4 * n + 3) - 2, or Fibonacci(2 * n) * Lucas(2 * n + 3). ● a(n) = 8 * a(n - 1) - 8 * a(n - 2) + a(n - 3). ● a(n) = - 2 + [(7 / 2) - (3 / 2) * sqrt(5)] ^ n + [(7 / 2) + (3 / 2) * sqrt(5)] ^ n + (2 / 5) * sqrt(5) * [(7 / 2) + (3 / 2) * sqrt(5)] ^ n - [(7 / 2) - (3 / 2) * sqrt(5)] ^ n } , with n>=0. - _ Paolo P. Lava _ , Dec 01 2008 ● a(n) = 7 * a(n - 1) - a(n - 2) + 10, n>=2. - _ R. J. Mathar _ , Nov 07 2015 ● a(n) = (Sum _{ i=1..2n - 1 } binomial(2n - 1 + i,2n - 1 - i)) - 1. (End) ●

▶ [A163616] 1,11,87,617,4169,27499,179103,1158553,7466161,48014891,308427207,1979929577,12705470009,81516319819,522937387983,3354498523993,21517425316321,138020787111371,885307088838327,5678592784821737 ⋆ a(n) = ((1 + 3 * sqrt(2)) * (5 + sqrt(2)) ^ n + (1 - 3 * sqrt(2)) * (5 - sqrt(2)) ^ n) / 2. ● a(n) = 10 * a(n - 1) - 23 * a(n - 2) for n > 1; a(0) = 1, a(1) = 11. ●

▶ [A192827] 11,88,231,440,715,1056,1463,1936,2475,3080,3751,4488,5291,6160,7095,8096,9163,10296,11495,12760,14091,15488,16951,18480,20075 ⋆ Molecular top ological indices of the gear graphs ● a(n) = 11 * n * (3 * n - 2). ●

▶ [A173731] 0,0,1,11,88,638,4466,30856,212135,1455685,9981840,68428140,469043796,3214953456,22035826813,151036348463,1035219958696,7095506886986,48633337477670,333337879614520,2284731883069955,15659785467455305 ⋆ a(n) = a(n - 1) * (11 * a(n - 1) - a(n - 2)) / (a(n - 1) + 4 * a(n - 2)), a(0) = a(1) = 0, a(2) = 1. ● a(n) = 11 * a(n - 1) - 33 * a(n - 2) + 33 * a(n - 3) - 11 * a(n - 4) + a(n - 5). ● a(n) = (12 + Fibonacci(4 * n + 1) + Fibonacci(4 * n + 3) - 15 * Fibonac ci[2 * n + 1]) / 60. (End) ●

▶ [A081657] 1,11,89,659,4721,33371,234569,1644899,11523041,80687531,564891449,3954476339,27682042961,193776426491,1356441362729,9495108670979,66465818092481,465260898834251,3256826808400409,22797789208484819 ⋆ 2 * 7 ^ n - 3 ^ n. ● a(0)=0, a(1)=11; for n>1, a(n) = 10 * a(n - 1) - 21 * a(n - 2). - _ Vinc enzo Librandi _ Aug 10 2013 ●

▶ [A037580] 1,11,89,715,5721,45771,366169,2929355,23434841,187478731,1499829849,11998638795,95989110361,767912882891,6143303063129,49146424505035,393171396040281,3145371168322251,25162969346578009,201303754772624075,1610430038180992601 ⋆ Base 8 digits are, in order, the first n terms of the periodic sequence with initial period 1,3. ● a(n) = (11 * 8 ^ n + 7 * (- 1) ^ n - 18) / 63. a(n) = 8 * a(n - 1) + a(n - 2) - 8 * a(n - 3). G.f.: x * (3 * x + 1) / ((x - 1) * (x + 1) * (8 * x - 1)). [_ Colin Barker _ , Dec 27 2012] ●

▶ [A155607] 1,11,89,755,6641,59291,532169,4785155,43053281,387440171,3486843449,31381236755,282430067921,2541867422651,22876797237929,205891146443555,1853020231898561,16677181828806731,150094635684419609 ⋆ 9 ^ n + 3 ^ n - 1. ● a(n)=12 * a(n - 1) - 27 * a(n - 2) - 16 with a(0)=1, a(1)=11 - _ Vincenzo L ibrandi _ , Jul 21 2010 ●

▶ [A110252] 1,11,89,989,11111,89911,1008989,10900889,89108911,1011011011,10990909889,91109889089,989010989011,10890899089111,91011088899089,1001009008989989,11111111111111111,88909110109088911 ⋆ A Jacobi transform of 10 ^ n. ● a(n)=sum { k=0..n, Jacobi(n, 2n - 2k + 1) * 10 ^ k } ●

▶ [A199394] 11,90,357,996,2255,4446,7945,13192,20691,31010,44781,62700,85527,114086,149265,192016,243355,304362,376181,460020,557151,668910,796697,941

976,1106275 ⋆ The number of ways to color the vertices of all (11) simple unlab eled graphs on 4 nodes using at most n colors. ● a(n)= 8 * n ^ 4 / 3 + 4 * n ^ 3 + 10 * n ^ 2 / 3 + n. ●

▶ [A171470] 11,90,372,1512,6096,24480,98112,392832,1572096,6289920,2516275 2,100657152,402640896,1610588160,6442401792,25769705472,103079018496,4123 16467200,1649266655232,6597068193792,26388275920896 ⋆ a(n) = 6 * a(n - 1) - 8 * a(n - 2) for n > 2; a(0) = 11, a(1) = 90, a(2) = 372. ● a(n) = 24 * 4 ^ n - 3 * 2 ^ n for n > 0. ●

▶ [A016212] 1,11,90,670,4811,34041,239380,1678940,11762421,82366471,5766538 70,4036842810,28258696831,197813269301,1384700059560,9692921940280,678505 18152041,474953820774531,3324677326552450,23272743029259350,162909206434 992051,1140364460735474161 ⋆ Expansion of 1 / ((1 - x) * (1 - 3 * x) * (1 - 7 * x)). ● a(0)=1, a(1)=11, a(n) = 10 * a(n - 1) - 21 * a(n - 2) + 1. - _ Vincenzo Li brandi _ , Feb 10 2011 ● a(n) = (7 ^ (n + 2) - 3 ^ (n + 3) + 2) / 24. - _ Yahia Kahloune _ , May 06 2013 ● a(n) = 11 * a(n - 1) - 31 * a(n - 2) + 21 * a(n - 3). - _ Matthew House _ , Jan 13 2017 ●

▶ [A293611] 0,11,91,406,1316,3486,8022,16632,31812,57057,97097,158158,24824 8,377468,558348,806208,1139544,1580439,2154999,2893814,3832444,5011930,647 9330,8288280,10499580 ⋆ a(n) = (25 * n + 41) * Pochhammer(n, 5) / 6!. ● a(n) = (n * (984 + 2650 * n + 2685 * n ^ 2 + 1285 * n ^ 3 + 291 * n ^ 4 + 25 * n ^ 5)) / 720. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 2 1 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>6. ●

▶ [A005062] 0,1,11,91,671,4651,31031,201811,1288991,8124571,50700551,313968 931,1932641711,11839990891,72260648471,439667406451,2668522016831,1616371 9991611,97745259402791,590286253682371 ⋆ a(n) = 6 ^ n - 5 ^ n. ● a(n) = 11 * a(n - 1) - 30 * a(n - 2), n > 1; a(0)=0, a(1)=1. - _ Philippe Deléham _ , Jan 01 2009 ● a(n) = - (30) ^ n * a(- n) for all n in Z. - _ Michael Somos _ , Jul 14 20 18 ●

▶ [A245599] 1,11,91,731,5851,46811,374491,2995931,23967451,191739611,153391 6891,12271335131,98170681051,785365448411,6282923587291,50263388698331,40 2107109586651,3216856876693211,25734855013545691,205878840108365531,1647 030720866924251,1317624576693594011 ⋆ Numbers m with A030101(m) XOR A030109(m) = m for the binary representation of m. ● a(n) = 1(011) ^ (n - 1) i n binary representation. ● a(n) = (5 * 8 ^ n - 12) / 28. - _ Giovanni Resta _ , Apr 25 2020 ● a(n) = 9 * a(n - 1) - 8 * a(n - 2) for n>2. ●

▶ [A199678] 11,91,811,7291,65611,590491,5314411,47829691,430467211,3874204 891,34867844011,313810596091,2824295364811,25418658283291,22876792454961 1,2058911320946491,18530201888518411,166771816996665691,1500946352969991 211 ⋆ 10 * 9 ^ n + 1. ● a(n) = 9 * a(n - 1) - 8. ● a(n) = 10 * a(n - 1) - 9 * a(n - 2). ●

▶ [A117611] 1,11,91,1001,11011,91091,999001,10989011,90909091,1000000001,11 000000011,91000000091,1001000001001,11011000011011,91091000091091,999001 000999001,10989011010989011,90909091090909091,999999999000000001 ⋆ Legen dre - binomial transform of 10 ^ n for p=3. ● a(n)=sum { k=0..n, L(C(n,k) / 3) * 10 ^ k } where L(j / p) is the Legendre symbol of j and p. ●

▶ [A081575] 0,1,11,92,693,4955,34408,234793,1584891,10624804,70911005,47190 1739,3134499984,20794349393,137837343787,913174649260,6047638172037,40041 955063867,265079998713464,1754663288995961,11613976216265115 ⋆ Fifth bino mial transform of Fibonacci numbers F(n). ● a(n) = 11 * a(n - 1) - 29 * a(n - 2) , a(0)=0, a(1)=1. ● a(n) = ((sqrt(5) / 2 + 11 / 2) ^ n - (11 / 2 - sqrt(5) / 2) ^ n) / sqrt(5). ●

▶ [A016150] 1,11,93,715,5261,37851,269053,1899755,13363821,93808891,6577108 13,4608169995,32273967181,225984879131,1582162589373,11076211867435,77537 778039341,542781626144571,3799540102488733 ⋆ Expansion of 1 / ((1 - 4x)(1 - 7x)). ● a(n) = (7 ^ (n + 1) - 4 ^ (n + 1)) / 3. - _ Barry E. Williams _ , Jan 13 2000 ● a(n) = 11 * a(n - 1) - 28 * a(n - 2) for n>0, a(0)=1. - _ Barry E. Willia ms _ , Jan 13 2000 ● a(n) = Sum _{ k=0..n } 7 ^ k * 4 ^ (n - k). - _ Bruno B erselli _ , Aug 07 2013 ●

▶ [A115203] 1,11,93,723,5437,40323,297469,2191875,16164861,119443459,884719 613,6570430467,48927031293,365303660547,2734459846653,20518848036867,1543 28140087293,1163305103130627,8787088644243453 ⋆ Sixth column of triangle A 115193 (called C(1,2)). ● a(n) = (- 1) ^ (n + 1) * 2 ^ (10 + 3 * n) * (binomial(1 / 2,n + 4) * Hypergeometric2F1(1, 7 / 2 + n, 5 + n, - 8) + 7 * binomial(1 / 2 ,n + 5) * Hypergeometric2F1(1, 9 / 2 + n, 6 + n, - 8) + 8 * binomial(1 / 2,n + 6) * Hypergeometric2F1(1, 11 / 2 + n, 7 + n, - 8)). - _ G. C. Greubel _ , Feb 04 2016 ●

▶ [A164547] 1,11,93,743,5849,45859,359157,2811967,22014001,172336571,134912 7693,10561555223,82680381449,647257375699,5067007272357,39666697336687,31 0527849736801,2430944642644331,19030472980917693,148978670884223303 ⋆ a(n) = 10 * a(n - 1) - 17 * a(n - 2) for n > 1; a(0) = 1, a(1) = 11. ● a(n) = 10 * a (n - 1) - 17 * a(n - 2) for n > 1; a(0) = 1, a(1) = 11. ● a(n) = ((2 + 3 * sqrt(2)) * (5 + 2 * sqrt(2)) ^ n + (2 - 3 * sqrt(2)) * (5 - 2 * sqrt(2)) ^ n) / 4. ● a(n) = (17) ^ ((n - 1) / 2) * (sqrt(17) * ChebyshevU(n, 5 / sqrt(17)) + ChebyshevU(n - 1, 5 / sqrt(17))). - _ G. C. Greubel _ , Jul 17 2021 ●

▶ [A016203] 1,11,95,775,6231,49911,399415,3195575,25565111,204521911,163617 7335,13089422775,104715390391,837723139511,6701785148855,53614281256375,4 28914250182071,3431314001718711,27450512014273975 ⋆ Expansion of 1 / ((1 - x)(1 - 2x)(1 - 8x)). ● a(n) = (4 * 8 ^ (n + 1) - 7 * 2 ^ (n + 1) + 3) / 21. - _ Mi tch Harris _ , Jun 27 2005 - corrected by _ Yahia Kahloune _ , May 06 2013 ● a(0) = 1, a(n) = 8 * a(n - 1) + 2 ^ (n + 1) - 1. - _ Vincenzo Librandi _ , Feb 0 9 2011 ●

▶ [A241606] 1,11,95,781,6336,51205,413351,3335651,26915305,217172736,175229 6281,14138673395,114079985111,920471087701,7426955448000,59925473898301,4 83517428660911,3901330906652795,31478457514091281,253988526230055936 ⋆ A linear divisibility sequence of the fourth order related to A003779. ● a(n) = (T (n,alpha) - T(n,beta)) / (alpha - beta), n >= 1, where alpha = 1 / 4 * (11 + sq rt(29)), beta = 1 / 4 * (11 - sqrt(29)) and where T(n,x) denotes the Chebyshev polynomial of the first kind. ● a(n)= U(n - 1,1 / 4 * (7 - sqrt(5))) * U(n - 1,1 / 4 * (7 + sqrt(5))), n >= 1, where U(n,x) denotes the Chebyshev polynomial of the second kind. ● a(n) = the bottom left entry of the 2X2 matrix T(n,M), whe re M is the 2 X 2 matrix [0, - 23 / 4; 1, 11 / 2]. ● a(n) = 11 * a(n - 1) - 25 * a(n - 2) + 11 * a(n - 3) - a(n - 4). - _ Vaclav Kotesovec _ , Apr 28 2014 ●

▶ [A081041] 1,11,96,756,5616,40176,279936,1912896,12877056,85660416,5643509 76,3688436736,23944605696,154551545856,992612745216,6347497291776,4043590 8673536,256721001578496,1624959306694656,10257555623510016 ⋆ 6th binomial transform of (1,5,0,0,0,0,0,0,...). ● a(n) = 12 * a(n - 1) - 36 * a(n - 2) for n>1, a (0)=1, a(1)=9. ● a(n) = (5 * n + 6) * 6 ^ (n - 1). ● a(n) = Sum _{ k=0..n } (k + 1) * 5 ^ k * binomial(n, k). ●

▶ [A154997] 1,1,11,96,906,8316,77076,711936,6583896,60861456,562685616,5201 957376,48092312736,444612597696,4110444968256,38001047740416,35131963549 0176,3247949245153536,30027284535626496,277602184568365056 ⋆ a(n) = 6 * a (n - 1) + 30 * a(n - 2), n>2; a(0)=1, a(1)=1, a(2)=11. ● a(n) = (4 / 39) * sqrt(39) *{ (3 + sqrt(39)) ^ (n - 1) - (3 - sqrt(39)) ^ (n - 1) } + (1 / 2) *{ (3 + sqrt (39)) ^ (n - 1) + (3 - sqrt(39)) ^ (n - 1) } + (5 / 6) * (binomial(2 * n,n) mod 2) , with n>=0. - _ Paolo P. Lava _ , Jan 20 2009 ●

▶ [A016140] 1,11,97,803,6505,52283,418993,3354131,26839609,214736555,171795 1489,13743789059,109950843913,879608345627,7036871547985,56294986732787,4 50359936909017,3602879624412299,28823037382718881 ⋆ Expansion of 1 / ((1 - 3x)(1 - 8x)). ● a(n) = (8 ^ (n + 1) - 3 ^ (n + 1)) / 5. ● a(n) = 11a(n - 1) - 24a (n - 2). ● a(n) = 3a(n - 1) + 8 ^ n. ● a(n) = 8a(n - 1) + 3 ^ n. ● a(n) = Sum _{ i=0..n } 3 ^ i * 8 ^ (n - i). ●

▶ [A190870] 0,1,11,99,847,7139,59895,501787,4201967,35182323,294562279,2466 173963,20647543455,172867150819,1447292702999,12117142414971,10144812709 8703,849352264956371,7111016118348615,59535427472794603,4984473475970711 03,4173141419166300867 ⋆ a(n) = 11 * a(n - 1) - 22 * a(n - 2), a(0)=0, a(1)=1. ● a(n) = ((11 + sqrt(33)) ^ n - (11 - sqrt(33)) ^ n) / (2 ^ n * sqrt(33)). ●

▶ [A098611] 0,11,99,1001,9999,100001,999999,10000001,99999999,1000000001,99 99999999,100000000001,999999999999,10000000000001,99999999999999,1000000 000000001,9999999999999999,100000000000000001,999999999999999999,1000000 0000000000001 ⋆ a(n) = 10 ^ n - (- 1) ^ n. ● a(n) = 9 * a(n - 1) + 10 * a(n - 2) . (End) ●

▶ [A090337] 1,11,99,1089,9801,107811,970299,10673289,96059601,1056655611,95 09900499,104608905489,941480149401,10356281643411,93206534790699,1025271 882697689,9227446944279201,101501916387071211,913517247483640899,1004868 9722320049889 ⋆ Let b(0) = 1, b(n) = b(n - 1) + (- 1) ^ (n - 1) * b(n - 1) / 10; sequence gives numerator of b(n). ● a(n) = 99 ^ (n / 2) if n is even else 11 * 99 ^ ((n - 1) / 2). a(n) = 99 * a(n - 2). G.f.: (1 + 11 * x) / (1 - 99 * x ^ 2). - _ Ph ilippe Deléham _ , Jan 28 2004 ● a(2n) = a(2n - 1) * 11 = 11 * 99 ^ (n - 1) . a(2n + 1)= a(2n) * 9 = 99 ^ n . G.f.: x * (1 + 11x) / (1 - 99 * x ^ 2) . - _ Philip pe Deléham _ , Jan 28 2004 ● a(n)= - (5 / 33) * (- 1) ^ n * 99 ^ [(1 / 4) * (- 1) ^ n] * 99 ^ (1 / 2) * n * 11979 ^ (1 / 4) + (2 / 11) * 99 ^ [(1 / 4) * (- 1) ^ n] * 99 ^ (1 / 2) * n * 11979 ^ (1 / 4), with n>=0 [From _ Paolo P. Lava _ , No v 20 2008] ●

▶ [A120655] 1,11,100,368,1696,6656,27520,109568,441856,1765376,7075840,2829 5168,113238016,452919296,1811906560,7247495168,28990898176,115963068416,4 63855943680,1855421677568,7421701390336,29686797172736 ⋆ Expansion of (1 - x) * (1 + 8 * x + 60 * x ^ 2) / ((1 - 2 * x) * (1 + 2 * x) * (1 - 4 * x)). ● a(n) = 3 * (- 2) ^ n - 5 * 2 ^ n + 27 * 4 ^ (n - 1) for n>0. ● a(n) = 4 * a(n - 1) + 4 * a(n - 2) - 16 * a(n - 3) for n>3. ●

▶ [A081906] 1,11,100,820,6290,46006,324556,2225060,14902075,97873625,632200 000,4025225000,25307562500,157349687500,968628125000,5909609375000,357634 08203125,214838427734375,1281885742187500,7601284179687500 ⋆ A sequence r elated to binomial(n + 6, 6). ● a(n) = 5 ^ n * (n ^ 6 + 165 * n ^ 5 + 9535 * n ^ 4 + 238575 * n ^ 3 + 2590024 * n ^ 2 + 10661700 * n + 11250000) / 1125000 0. ●

▶ [A098296] 0,1,11,100,891,7921,70400,625681,5560731,49420900,439227371,390 3625441,34693401600,308336988961,2740339499051,24354718502500,2164521270 23451,1923714424708561,17096977695353600,151949084833473841 ⋆ Member r= 11 of the family of Chebyshev sequences S _ r(n) defined in A092184. ● a(n) = 9 * a(n - 1) - a(n - 2) + 2, n >= 2, a(0)=0, a(1)=1. ● a(n) = 10 * a(n - 1) - 10 * a(n - 2) + a(n - 3), n >= 3, a(0)=0, a(1)=1, a(2)=11. ●

▶ [A037486] 1,11,100,902,8119,73073,657658,5918924,53270317,479432855,43148 95696,38834061266,349506551395,3145558962557,28310030663014,254790275967 128,2293112483704153 ⋆ Base 9 digits are, in order, the first n terms of the peri odic sequence with initial period 1,2. ● a(n) = 9 * a(n - 1) + a(n - 2) - 9 * a(n - 3). ●

▶ [A280606] 1,11,100,1110,10001,111001,1000001,11100001,100000001,111000000 1,10000000001,111000000001,1000000000001,11100000000001,100000000000001,1 110000000000001,10000000000000001,111000000000000001,1000000000000000 1,11100000000000000001 ⋆ Binary representation of the x - axis, from the left e dge to the origin, of the n - th stage of growth of the two - dimensional cellular automaton defined by ”Rule 294”, based on the 5 - celled von Neumann neighb orhood. ● a(n) = (200 - 11 * (- 10) ^ n + 211 * 10 ^ n) / 200 for n>3. ● a(n) = a(n - 1) + 100 * a(n - 2) - 100 * a(n - 3) for n>4. ●

▶ [A281214] 1,11,100,1110,10001,111011,1000100,11101110,100010001,111011101 1,10001000100,111011101110,1000100010001,11101110111011,100010001000100,1 110111011101110,10001000100010001,111011101110111011,1000100010001000100 0,11101110111011101110 ⋆ Binary representation of the x - axis, from the left e dge to the origin, of the n - th stage of growth of the two - dimensional cellular automaton defined by ”Rule 342”, based on the 5 - celled von Neumann neighb orhood. ● a(n) = 100 * a(n - 2) + a(n - 4) - 100 * a(n - 6) for n>5. ●

▶ [A285474] 1,11,100,1111,10000,111111,1000000,11111111,100000000,111111111 1,10000000000,111111111111,1000000000000,11111111111111,100000000000000,1 11111111111111,1000000000000000,111111111111111111,10000000000000000 0,1111111111111111111 ⋆ Binary representation of the diagonal from the origi n to the corner of the n - th stage of growth of the two - dimensional cellular au tomaton defined by ”Rule 3”, based on the 5 - celled von Neumann neighborho od. ● a(n) = (- 1 - (- 10) ^ n + (- 1) ^ n + 19 * 10 ^ n) / 18. ● a(n) = 101 * a(n - 2) - 100 * a(n - 4) for n>3. ●

► [A163146] 1,11,101,871,7321,60851,503261,4152751,34231921,282047771,2323383701,19137123511,157620587401,1298196219971,10692116430221,880613143435 51,7252808162785761,59734612087790 51,49197849458990021,405196896035729671 ⋆ a(n) = 12 * a(n - 1) - 31 * a(n - 2) for n > 1; a(0) = 1, a(1) = 11. ● a(n) = ((1 + sqrt(5)) * (6 + sqrt(5)) ^ n + (1 - sqrt(5)) * (6 - sqrt(5)) ^ n) / 2. ●

► [A138894] 1,11,101,911,8201,73811,664301,5978711,53808401,484275611,4358480501,39226324511,353036920601,3177332285411,28595990568701,257363915118311,2316275236064801,20846477124583211,187618294121248901 ⋆ Expansion of (1 + x) / (1 - 10 * x + 9 * x ^ 2). ● a(n) = (5 / 4) * 9 ^ n - 1 / 4. ●

► [A122105] 0,0,0,1,11,101,932,9080,94852,1066644,12905784,167622984,2330016768,34551794304,544873631616,9110134903680,161038110977280,3001678242428160,58853489050759680,1211082030609016320,26101332373130496000,588033071962511616000 ⋆ Sum of the bottom levels of all columns in all deco polyominoes of height n. A deco polyomino is a directed column - convex polyomino in which the height, measured along the diagonal, is attained only in the last column. ● a(n) = n![n - H(n) - (H(n)) ^ 2 / 2 + (1 / 2)Sum(1 / j ^ 2, j=1..n)], where H(n)=Sum(1 / j, j=1..n). - _ Emeric Deutsch _ , Apr 06 2008 ●

► [A000533] 1,11,101,1001,10001,100001,1000001,10000001,100000001,1000000001,10000000001,100000000001,1000000000001,10000000000001,100000000000001,1000000000000001,10000000000000001 ⋆ a(0)=1; a(n) = 10 ^ n + 1, n >= 1. ● a(n) = 10 ^ n + 1 - 0 ^ n. - _ Reinhard Zumkeller _ , Jun 10 2003 ● a(n) = Sum _{ k=0..n } binomial(n, k) * 0 ^ (k(n - k)) * 10 ^ k. (End) ●

► [A147759] 1,11,101,1001,10101,101101,1010101,10100101,101010101,1010110101,10101010101,101010010101,1010101010101,10101011010101,101010101010101,1010101001010101,10101010101010101,101010101101010101 ⋆ Palindromes formed from the reflected decimal expansion of the infinite concatenation of 1's and 0's. ● a(n) = 11 * a(n - 1) - 20 * a(n - 2) + 110 * a(n - 3) - 100 * a(n - 4). G.f.: x / ((1 - x) * (1 - 10 * x) * (1 + 10 * x ^ 2)). [_ R. J. Mathar _ , Feb 20 2009] ●

► [A147757] 1,11,101,1001,10101,101101,1011101,10111101,101111101,1011111101,10111111101,101111111101,1011111111101,10111111111101,101111111111101,1011111111111101,10111111111111101,101111111111111101 ⋆ Palindromes formed from the reflected decimal expansion of the concatenation of 1, 0 and infinite digits 1. ● a(n) = 11 * a(n - 1) - 10 * a(n - 2) for n>2. _ Wesley Ivan Hurt _ , Dec 06 2015 ●

► [A164046] 11,101,1010,10010,100100,1000100,10001000,100001000,1000010000,10000010000,100000100000,1000000100000,10000001000000,100000001000000,1000000010000000,10000000010000000,100000000100000000,1000000000100000000,10000000000100000000,100000000001000000000 ⋆ A001445 written in base 2. ● a(n) = 10 * a(n - 1) + 10 * a(n - 2) - 100 * a(n - 3) for n > 3. ●

► [A283582] 1,11,101,1011,10101,101011,1000101,11011011,100000101,1100011011,10100010101,101101101011,1010001010101,10110110101011,101000101000101,1011011011011011,10100010100000101,101101101000011011,101000101010001010 1,10110110101101101011 ⋆ Binary representation of the x - axis, from the origin to the right edge, of the n - th stage of growth of the two - dimensional cellular automaton defined by "Rule 646", based on the 5 - celled von Neumann neighborhood. ● a(n) = 100 * a(n - 2) + a(n - 8) - 100 * a(n - 10) for n>11. ●

► [A266508] 1,11,101,1011,10101,101011,1010101,10101011,101010101,1010101011,10101010101,101010101011,1010101010101,10101010101011,101010101010101,1010101010101011,10101010101010101,101010101010101011,1010101010101010101,10101010101010101011 ⋆ Binary representation of the n - th iteration of the "Rule 28" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = (44 - 45 * (- 1) ^ n + 10 ^ (2 + n)) / 99. ● a(n) = 10 * a(n - 1) + a(n - 2) - 10 * a(n - 3) for n>2. ● a(n) = floor((100 * 10 ^ n + 89) / 99). - _ Karl V. Keller, Jr. _ , Sep 04 2021 ●

► [A283645] 1,11,101,1011,10101,101011,1011101,10110011,101110101,1011001011,101111011,1011111101,10111011101,1011001101101,10110111011101,1011001110110011,101110111011101101,1011001110110011101,10110111011101101101,101100111011001011,1011011101101101101,10110011101101101101,1011001110110011101101 ⋆ Binary representation of the x - axis, from the origin to the right edge, of the n - th stage of growth of the two - dimensional cellular automaton defined by "Rule 694", based on the 5 - celled von Neumann neighborhood. ● a(n) = 100 * a(n - 2) + a(n - 8) - 100 * a(n - 10) for n>11. ●

► [A283713] 1,11,101,1011,10101,101011,1011101,10110011,101111101,1011111011,10111111101,101111110011,1011111111101,10111111111101,1011111111111101,101111111111101,10111111111111101,1011111111111111101,101111111111111101,1011111111111111101,10111111111111111101,101111111111111111101,1011111111111111111101,10111111111111111111101,101111111111111111111101,1011111111111111111111101,10111111111111111111111101,101111111111111111111111101,1011111111111111111111111101,10111111111111111111111111101,101111111111111111111111111101,1011111111111111111111111111101,10111111111111111111111111111101,101111111111111111111111111111101,1011111111111111111111111111111101,10111111111111111111111111111111101,101111111111111111111111111111111101,1011111111111111111111111111111111101,10111111111111111111111111111111111101,101111111111111111111111111111111111101,1011111111111111111111111111111111111101,10111111111111111111111111111111111111101,101111111111111111111111111111111111111101,1011111111111111111111111111111111111111101,10111111111111111111111111111111111111111101,101111111111111111111111111111111111111111101,1011111111111111111111111111111111111111111101,10111111111111111111111111111111111111111111101,101111111111111111111111111111111111111111111101,1011111111111111111111111111111111111111111111101,10111111111111111111111111111111111111111111111101,101111111111111111111111111111111111111111111111101,1011111111111111111111111111111111111111111111111101,10111111111111111111111111111111111111111111111111101,101111111111111111111111111111111111111111111111111101,1011111111111111111111111111111111111111111111111111101,10111111111111111111111111111111111111111111111111111101,101111111111111111111111111111111111111111111111111111101,1011111111111111111111111111111111111111111111111111111101,10111111111111111111111111111111111111111111111111111111101,101111111111111111111111111111111111111111111111111111111101,1011111111111111111111111111111111111111111111111111111111101,10111111111111111111111111111111111111111111111111111111111101,101111111111111111111111111111111111111111111111111111111111101,1011111111111111111111111111111111111111111111111111111111111101,10111111111111111111111111111111111111111111111111111111111111101,101111111111111111111111111111111111111111111111111111111111111101,1011111111111111111111111111111111111111111111111111111111111111101,10111111111111111111111111111111111111111111111111111111111111111101,101111111111111111111111111111111111111111111111111111111111111111101,1011111111111111111111111111111111111111111111111111111111111111111101,10111111111111111111111111111111111111111111111111111111111111111111101,101111111111111111111111111111111111111111111111111111111111111111111101,1011111111111111111111111111111111111111111111111111111111111111111111101,10111111111111111111111111111111111111111111111111111111111111111111111101,101111111111111111111111111111111111111111111111111111111111111111111111101,1011111111111111111111111111111111111111111111111111111111111111111111111101,10111111111111111111111111111111111111111111111111111111111111111111111111101,101111111111111111111111111111111111111111111111111111111111111111111111111101,1011111111111111111111111111111111111111111111111111111111111111111111111111101,10111111111111111111111111111111111111111111111111111111111111111111111111111101,101111111111111111111111111111111111111111111111111111111111111111111111111111101,1011111111111111111111111111111111111111111111111111111111111111111111111111111101,10111111111111111111111111111111111111111111111111111111111111111111111111111111101,101111111111111111111111111111111111111111111111111111111111111111111111111111111101,1011111111111111111111111111111111111111111111111111111111111111111111111111111111101,10111111111111111111111111111111111111111111111111111111111111111111111111111111111101,101111111111111111111111111111111111111111111111111111111111111111111111111111111111101,1011111111111111111111111111111111111111111111111111111111111111111111111111111111111101,10111111111111111111111111111111111111111111111111111111111111111111111111111111111111101,101111111111111111111111111111111111111111111111111111111111111111111111111111111111111101,1011111111111111111111111111111111111111111111111111111111111111111111111111111111111111101,10111111111111111111111111111111111111111111111111111111111111111111111111111111111111111101,101111111111111111111111111111111111111111111111111111111111111111111111111111111111111111101,1011111111111111111111111111111111111111111111111111111111111111111111111111111111111111111101,10111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111101,101111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111101,1011111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111101,10111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111101,101111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111101,1011111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111101,10111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111101,101111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111101,1011111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111101,10111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111101,101111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111101,1011111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111101,10111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111101,101111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111101,1011111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111101,10111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111101,101111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111101,1011111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111101,10111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111101,101111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111101,1011111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111101,10111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111101,101111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111101,1011111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111101,10111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111101,101111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111101,1011111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111101,10111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111101,101111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111101,1011111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111101,10111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111101,101111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111101,1011111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111101,10111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111101,101111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111101,1011111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111101,10111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111101,101111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111101,1011111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111101,10111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111101,101111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111101,1011111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111101,10111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111101,101111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111101,1011111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111101,101111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111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1111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111101,10111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111111101,101101,1011101,101101,1011101,101101,1011101,101101,1011101,101101,1011101,101101,1011101,101101,1011101,101101,1011101,101101,1011101,101101,1011101,101101,1011101,101101,1011101,101101,1011101,101101,1011101,101101,1011101,1011101,101101,1011101,1011101,101101,1011101,1011101,101101,1011101,1011101,101101,101101,101101,1011101,1011101,1011101,101101,101101,1011101,101101,1011101,1011101,101101,1011101,1011101,101101,1011101,101101,1011101,101101,101111

0000000000032767,10000000000065535,100000000000131071 ⋆ 10 ^ n + 2 ^ n - 1. ● a(n)=12 * a(n - 1) - 20 * a(n - 2) - 9 with a(0)=1, a(1)=11 - _ Vincenzo Librandi _ , Jul 21 2010 ● a(0)=1, a(1)=11, a(2)=103, a(n)=13 * a(n - 1) - 32 * a(n - 2) + 20 * a(n - 3). - _ Harvey P. Dale _ , Mar 07 2015 ●

► [A077250] 11,103,1019,10087,99851,988423,9784379,96855367,958769291,9490837543,93949606139,930005223847,9206102632331,91131021099463,902104108362299,8929910062523527,88396996516872971,875040055106206183,8662003554545188859,8574499549034568240 7 ⋆ Bisection (odd part) of Chebyshev sequence with Diophantine property. ● a(n) = 10 * a(n - 1) - a(n - 2), a(- 1)=7, a(0)=11. ●

► [A163933] 11,105,510,1750,4830,11466,24360,47520,86625,149435,246246,390390,598780,892500,1297440,1844976,2572695,3525165,4754750,6322470,8298906,10765150,13813800,17550000,22092525 ⋆ Third right hand column of triangle A163932 ● a(n) = (n - 2) * (n - 1) * stirling1(n + 1,n - 1) / 2 ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n > 9. - _ Chai Wah Wu _ , Jan 25 2021 ●

► [A359987] 1,11,105,919,7713,63351,514321,4148839,33347041,267489431,2143168305,17160184519,137349160833,1099102033911,8794224638161,70360221445159,562911076526881,4503422288363351,36027988077717105,288226686123491719,2305826176955087553,18446667292472959671 ⋆ Number of edge cuts in the n - ladder graph P _ 2 X P _ n. ● a(n) = 13 * a(n - 1) - 42 * a(n - 2) + 16 * a(n - 3) for n > 3. ●

► [A287834] 1,11,105,1005,9621,92105,881753,8441329,80811789,773639469,7406320733,70903294113,678781988705,6498216958121,62209699634757,595555173609653,5701457600593525,54582044135967257,522532964509030377,5002390498942001761,47889630709552579709 ⋆ Number of words of length n over the alphabet { 0,1,...,10 } such that no two consecutive terms have distance 3. ● a(n) = 10 * a(n - 1) - 2 * a(n - 2) - 21 * a(n - 3) + 10 * a(n - 4), a(0)=1, a(1)=11, a(2)=105, a(3)=1005, a(4)=9621. ●

► [A365775] 1,1,11,106,1061,11226,124026,1414211,16515981,196551736,2375042076,29062573926,359407971786,4484868410231,56399986492661,71406782506442 6,9094408567049701,116436367409647736,1497734068943432856,19346547929074098836,250851388061224003276 ⋆ Expansion of g.f. A(x) satisfying A(x) = 1 + x * A(x) / (1 - 5 * x * A(x)) ^ 2. ● a(n) = Sum { k=0..n } binomial(n + 1, n - k) / (n + 1) * binomial(2 * n - k - 1, k) * 5 ^ k. ●

► [A163413] 1,11,107,981,8705,75763,651547,5560797,47228449,399840827,3378034475,28499963781,240231872609,2023747918819,17041572850843,143465867727309,1207568224192705,10163059355514347,85527124440143723 ⋆ a(n) = 14 * a(n - 1) - 47 * a(n - 2) for n > 1; a(0) = 1, a(1) = 11. ● a(n) = ((1 + 2 * sqrt(2)) * (7 + sqrt(2)) ^ n + (1 - 2 * sqrt(2)) * (7 - sqrt(2)) ^ n) / 2. ●

► [A165149] 1,11,109,1031,9529,87011,789349,7135391,64374769,580154171,5225293789,47047175351,423522234409,3812188390931,34312136924629,308821439352911,2779453989332449,25015391079773291,225140045596865869,2026268039766324071,18236450504869572889,164128245278689437251 ⋆ a(n) = (3 * 9 ^ n - 5 ^ n) / 2. ● a(n) = 14 * a(n - 1) - 45 * a(n - 2) for n > 1; a(0) = 1, a(1) = 11. ●

► [A054320] 1,11,109,1079,10681,105731,1046629,10360559,102558961,1015229051,10049731549,99482086439,984771132841,9748229241971,96497521286869,955226983626719,9455772314980321,93602496166176491,926569189346784589,9172089397301669399,90794324783669909401 ⋆ Expansion of g.f.: (1 + x) / (1 - 10 * x + x ^ 2). ● a(n) = 10 * a(n - 1) - a(n - 2). ● a(n) = (sqrt(6) - 2) / 4 * (5 + 2 * sqrt(6)) ^ (n + 1) - (sqrt(6) + 2) / 4 * (5 - 2 * sqrt(6)) ^ (n + 1). ● a(n) = L(n, - 10) * (- 1) ^ n, where L is defined as in A108299; see also A072256 for L(n, + 10). - _ Reinhard Zumkeller _ , Jun 01 2005 ●

► [A094703] 1,11,109,1103,11113,112067,1129909,11392679,114869521,1158202427,11677879357,117745285823,1187197753081,11970233026931,120693017030149,1216919029806743,12269905596087073,123714544394638187,1247384372674934029,12577080413686874159 ⋆ a(n) = 8 * a(n - 1) + 21 * a(n - 2), with a(1)=1, a(2)=11. ● a(n) = (1 / 2) * ((4 + sqrt(37)) ^ n + (4 - sqrt(37)) ^ n) + (7 / 74) * sqrt(37) * ((4 + sqrt(37)) ^ n - (4 - sqrt(37)) ^ n), with n>=0. - _ Paolo P. Lava _ , Jul 08 2008 ●

► [A132123] 0,11,110,469,1356,3135,6266,11305,18904,29811,44870,65021,91300,124839,166866,218705,281776,357595,447774,554021,678140,822031,987690,1177209,1392776 ⋆ a(n) = n * (2 * n + 1) * (6 * n ^ 2 + 4 * n + 1) / 3. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5); a(0)=0, a(1)=11, a(2)=110, a(3)=469, a(4)=1356. - _ Harvey P. Dale _ , Jun 02 2015 ●

► [A190871] 0,1,11,110,1089,10769,106480,1052821,10409751,102926230,1017681269,10062305429,99490865760,983714163641,9726456276691,96170163243550,950880776635449,9401816747310889,92960295677429840,919143268231308461,9088012698092664831 ⋆ a(n) = 11 * a(n - 1) - 11 * a(n - 2), a(0)=0, a(1)=1. ● a(n) = ((11 + sqrt(77)) ^ n - (11 - sqrt(77)) ^ n) / (2 ^ n * sqrt(77)). ●

► [A097784] 1,11,110,1090,10791,106821,1057420,10467380,103616381,1025696431,10153347930,100507782870,994924480771,9848737024841,97492445767640,965075720651560,9553264760747961,94567571886828051,936122454107532550,926665696918849 7450 ⋆ Partial sums of Chebyshev sequence S(n,10) = U(n,5) = A004189(n + 1). ● a(n) = 11 * a(n - 1) - 11 * a(n - 2) + a(n - 3) with n >= 2, a(- 1)=0, a(0)=1, a(1)=11. ● a(n) = 10 * a(n - 1) - a(n - 2) + 1 with n >= 1, a(- 1)=0, a(0)=1. ● a(n) = (S(n + 1, 10) - S(n, 10) - 1) / 8. ● a(n) = (- 6 + (27 - 11 * sqrt(6)) * (5 - 2 * sqrt(6)) ^ n + (5 + 2 * sqrt(6)) ^ n * (27 + 11 * sqrt(6))) / 48. - _ Colin Barker _ , Mar 05 2016 ●

► [A162987] 1,11,110,1100,10945,108900,1083555,10781100,107269470,1067306625,10619454780,105661128375,1051303881870,10460231387100,104076892111005,1035541095642900,103033952975848 95,102516409155629700 ⋆ Number of reduced words of length n in Coxeter group on 11 generators S _ i with relations (S _ i) ^ 2 = (S _ i S _ j) ^ 4 = I. ● a(n) = 9 * (a(n - 1) + a(n - 2) + a(n - 3) - 5 * a(n - 4)). ●

► [A163404] 1,11,110,1100,11000,109945,1098900,10983555,109781100,1097266500,10967222970,109617836625,1095634704780,10950913128375,109454819042250,1094005337374620,10934627535602100,109292043884611005 ⋆ Number of reduced words of length n in Coxeter group on 11 generators S _ i with relations (S _ i) ^ 2 = (S _ i S _ j) ^ 5 = I. ● a(n) = 9 * a(n - 1) + 9 * a(n - 2) + 9 * a(n - 3) + 9 * a(n - 4) - 45 * a(n - 5). - _ Wesley Ivan Hurt _ , May 10 2021 ●

► [A163955] 1,11,110,1100,11000,110000,1099945,10998900,109983555,1099781100,10997266500,109967220000,1099617752970,10995633086625,109950886704780,1099454428128375,10993999919042250,109934555837535000 ⋆ Number of reduced words of length n in Coxeter group on 11 generators S _ i with relations (S _ i) ^ 2 = (S _ i S _ j) ^ 6 = I. ● a(n) = - 45 * a(n - 6) + 9 * Sum _{ k=1..5 } a(n - k). - _ Wesley Ivan Hurt _ , May 11 2021 ●

► [A164590] 1,11,110,1100,11000,110000,1100000,10999945,109998900,1099983555,10999781100,109997266500,1099967220000,10999617750000,109995633002970,1099950885086625,10999454401704780,109993999528128375 ⋆ Number of reduced words of length n in Coxeter group on 11 generators S _ i with relations (S _ i) ^ 2 = (S _ i S _ j) ^ 7 = I. ● a(n) = - 45 * a(n - 7) + 9 * Sum _{ k=1..6 } a(n - k). - _ Wesley Ivan Hurt _ , May 11 2021 ●

► [A003953] 1,11,110,1100,11000,110000,1100000,11000000,110000000,1100000000,11000000000,110000000000,1100000000000,11000000000000,110000000000000,1100000000000000,11000000000000000 ⋆ Expansion of g.f.: (1 + x) / (1 - 10 * x). ● a(0) = 1, a(n) = 10 ^ n + 10 ^ (n - 1) = 11 * 10 ^ (n - 1) for n >= 1. - _ Jaroslav Krizek _ , Aug 17 2009 ●

► [A278664] 1,11,110,1100,11000,110010,1100110,11000100,110000100,1100100100,11001110100,110001010100,1100001010100,11001001010100,110011101010100,1100010101010100,11000101010101010100,110011101010101010 0,1100010101010101010100 ⋆ Binary representation of the x - axis, from the left edge to the origin, of the n - th stage of growth of the two - dimensional cellular automaton defined by "Rule 62", based on the 5 - celled von Neumann neighborhood. ● a(n) = a(n - 1) + 10000 * a(n - 4) - 10000 * a(n - 5) for n>7. ●

► [A259661] 1,11,110,1100,11001,110011,1100110,11001100,110011001,1100110011,11001100110,110011001100,1100110011001,11001100110011,110011001100110,1100110011001100,11001100110011001,110011001100110011,1100110011001100110 0,1100110011001100110011 ⋆ Binary representation of the middle column of the " Rule 54" elementary cellular automaton starting with a single ON cell. ● a(n) = 11 * a(n - 1) - 11 * a(n - 2) + 11 * a(n - 3) - 10 * a(n - 4) for n>3. ●

► [A267538] 1,11,110,1100,11001,110011,1100111,11001111,110011111,1100111111,11001111111,110011111111,1100111111111,11001111111111,110011111111111,1100111111111111,11001111111111111,110011111111111111,1100111111111111111 ⋆ Binary representation of the middle column of the " Rule 143" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = 11 * a(n - 1) - 10 * a(n - 2) for n > 4. [n range correction by _ Karl V. Keller, Jr. _ , Apr 23 2022] ●

► [A266219] 1,11,110,1101,11010,110101,1101010,11010101,110101010,1101010101,11010101010,110101010101,1101010101010,11010101010101,110101010101010,1101010101010101,11010101010101010,110101010101010101 0,1101010101010101010 ⋆ Binary representation of the middle column of the " Rule 7" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = 1 / 198 * (- 9 * (- 1) ^ n + 109 * 2 ^ (n + 1) * 5 ^ n - 11). ● a(n) = 10 * a(n - 1) + a(n - 2) - 10 * a(n - 3) for n>2. ●

► [A033137] 1,11,110,1101,11011,110110,1101101,11011011,110110110,1101101101,11011011011,110110110110,1101101101101,11011011011011,110110110110110,1101101101101101 ⋆ Decimal expansion of a(n) is given by the first n terms of the periodic sequence with initial period 1,1,0. ● a(n) = 10 * a(n - 1) + (1 / 9) *{ 5 * (n mod 3) + 2 * [(n + 1) mod 3] - [(n + 2) mod 3] } , with a(0)=0. [_ Paolo P. Lava _ , Jul 30 2009] ●

► [A266680] 1,11,110,1101,11011,110111,1101111,11011111,110111111,1101111111,11011111111,110111111111,1101111111111,11011111111111,110111111111111,1101111111111111,11011111111111111,110111111111111111 ⋆ Binary representation of the middle column of the " Rule 175" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = 11 * a(n - 1) - 10 * a(n - 2) for n > 3. ●

► [A277952] 1,11,110,1110,11010,111010,1101010,11101010,110101010,1110101010,11010101010,111010101010,1101010101010,11101010101010,110101010101010,1110101010101010,11010101010101010,111010101010101010 0,1110101010101010101 0 ⋆ Binary representation of the x - axis, from the left edge to the origin, of the n - th stage of growth of the two - dimensional cellular automaton defined by "Rule 14", based on the 5 - celled von Neumann neighborhood. ● a(n) = a(n - 1) + 100 * a(n - 2) - 100 * a(n - 3) for n>2. ● a(n) = (- 200 - 9 * (- 10) ^ n + 2189 * 10 ^ n) / 1980. (End) ●

► [A282482] 1,11,110,1111,11000,111110,1100011,11111110,110000011,1111101110,11000111011,111111101110,1100000111011,11111011101110,110001110111011,1111111011101110,11000011101110111011,1111111011011101110 ⋆ Binary representation of the x - axis, from the left edge to the origin, of the n - th stage of growth of the two - dimensional cellular automaton defined by "Rule 478", based on the 5 - celled von Neumann neighborhood. ● a(n) = a(n - 2) + 10000 * a(n - 4) - 10000 * a(n - 6) for n>6. ●

► [A282121] 1,11,110,1111,11010,111111,1101010,11111111,110101010,1111111111,11010101010,111111111111,1101010101010,11111111111111,110101010101010,1111111111111111,11010101010101010,111111111111111111 ⋆ Binary representation of the x - axis, from the left edge to the origin, of the n - th stage of growth of the two - dimensional cellular automaton defined by "Rule 430", based on the 5 - celled von Neumann neighborhood. ● a(n) = (- 21 - (- 10) ^ n + (- 1) ^ n + 219 * 10 ^ n) / 198. ● a(n) = 101 * a(n - 2) - 100 * a(n - 4) for n>3. ●

► [A285541] 1,11,110,1111,11100,111111,1111000,11111111,111110000,1111111111,11111100000,111111111111,1111111000000,11111111111111,111111110000000,1111111111111111,11111111100000000,111111111111111111,1111111111000000000,1111111111111111111 ⋆ Binary representation of the diagonal from the origin to the corner of the n - th stage of growth of the two - dimensional cellular automaton defined by "Rule 35", based on the 5 - celled von Neumann neighborhood. ● a(n) = (- 1 + (- 1) ^ n + 2 ^ (2 + n) * 5 ^ (1 + n) - 10 ^ (n / 2) - (- 1) ^ n * 10 ^ (n / 2)) / 18. ●

► [A282912] 1,11,111,1011,10011,110111,1101111,11011011,110110011,1101110111,11011101111,110111011011,1101110110011,11011101110111,110111011101111,1101110111011011,11011101110110011,110111011101110111,1101110111011101110111

1,11011101110111011011 ⋆ Binary representation of the x - axis, from the origin to the right edge, of the n - th stage of growth of the two - dimensional cellular automaton defined by "Rule 526", based on the 5 - celled von Neumann neighborhood. ● a(n) = 10 * a(n - 1) + a(n - 4) - 10 * a(n - 5) for n>5. ●

▶ [A283586] 1,11,111,1011,10111,101011,1000111,11011011,110110111,110110101,11011000111,110111011011,1101010110111,11010101101011,110101011000111,110101111011011,1101010111011111,11010101101101011,110101011101100011,11010101110111011011 ⋆ Binary representation of the x - axis, from the origin to the right edge, of the n - th stage of growth of the two - dimensional cellular automaton defined by "Rule 654", based on the 5 - celled von Neumann neighborhood. ● a(n) = 10 * a(n - 1) + a(n - 8) - 10 * a(n - 9) for n>12. ●

▶ [A284541] 1,11,111,1011,10111,101011,1000111,11011011,111110111,111110101,11111000111,111111011011,1111111110111,11111111101011,111111111000111,111111111011011,1111111111110111,111111111111101011,11111111111100011,1111111111111011011 ⋆ Binary representation of the x - axis, from the origin to the right edge, of the n - th stage of growth of the two - dimensional cellular automaton defined by "Rule 974", based on the 5 - celled von Neumann neighborhood. ● a(n) = 10 * a(n - 1) + a(n - 4) - 10 * a(n - 5) for n>8. ●

▶ [A267051] 1,11,111,1011,10111,101011,1010111,10101011,101010111,1010101011,10101010111,101010101011,1010101010111,10101010101011,101010101010111,1010101010101011,10101010101010111,101010101010101011 ⋆ Binary representation of the n - th iteration of the "Rule 92" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = (539 + 450 * (- 1) ^ n + 10 ^ (2 + n)) / 99 for n>0. ● a(n) = 10 * a(n - 1) + a(n - 2) - 10 * a(n - 3) for n>3. ●

▶ [A101680] 1,11,111,1011,10111,111011,1100111,10001011,100010111,1100111011,11101100111,101110001011,1011000010111,11100000111011,110000001100111,1000000010001011,10000000100010111,110000001100111011 ⋆ A modular binomial transform of 10 ^ n. ● a(n)=sum { k=0..n, mod(binomial(2n - k, k), 2)10 ^ k } ●

▶ [A346231] 1,1,11,111,1041,9271,81101,725021,6794611,66508821,665254791,6674936601,66755513931,666897563121,6686651885691,67529142206631,687755702224881,7056692549851951,72780288870993221,752810967999798491,7798329264904129201,80874531810513679011 ⋆ Number of n - step 10 - dimensional nonnegative lattice walks starting at the origin and using steps that increment all components or decrement one component by 1. ● a(n) == 1 (mod 10). ●

▶ [A164553] 1,11,111,1081,10361,98571,934471,8844041,83634321,790586731,7471938431,70611908601,667273367881,6305515080491,59584456307991,563045239850761,5320501736667041,50276078999755851,475083531319899151 ⋆ a(n) = 14 * a(n - 1) - 43 * a(n - 2) for n > 1; a(0) = 1, a(1) = 11. ● a(n) = ((3 + 2 * sqrt(6)) * (7 + sqrt(6)) ^ n + (3 - 2 * sqrt(6)) * (7 - sqrt(6)) ^ n) / 6. ●

▶ [A282911] 1,11,111,1101,11001,111011,1111011,11011011,110011011,1110110111,11110111011,110110111011,1100110111011,11101110111011,111011011011,1101101110111011,11001101110111011,111011101110111011,11101101110101011,1101101110101011,11101101110101011,111000110111010101,11011011101110101011 ⋆ Binary representation of the x - axis, from the left edge to the origin, of the n - th stage of growth of the two - dimensional cellular automaton defined by "Rule 526", based on the 5 - celled von Neumann neighborhood. ● a(n) = a(n - 1) + 10000 * a(n - 4) - 10000 * a(n - 5) for n>5. ●

▶ [A283585] 1,11,111,1101,11101,1110001,11011011,111011011,1101011011,11100011011,110110111011,1110110101011,11101011010101,1110001101010111,1101101110101011,11101101110101011,11101101110101011,111000110111010101,11011011101110101011 ⋆ Binary representation of the x - axis, from the left edge to the origin, of the n - th stage of growth of the two - dimensional cellular automaton defined by "Rule 654", based on the 5 - celled von Neumann neighborhood. ● a(n) = a(n - 1) + 100000000 * a(n - 8) - 100000000 * a(n - 9) for n>12. ●

▶ [A284540] 1,11,111,1101,11101,110101,1110001,11011011,111011111,1101011111,11100011111,110110111111,1110111111111,11010111111111,111000111111111,1101101111111111,11101111111111111,110100111111111111,1110001111111111111,11011011111111111111 ⋆ Binary representation of the x - axis, from the left edge to the origin, of the n - th stage of growth of the two - dimensional cellular automaton defined by "Rule 974", based on the 5 - celled von Neumann neighborhood. ● a(n) = a(n - 1) + 10000 * a(n - 4) - 10000 * a(n - 5) for n>8. ●

▶ [A110437] 1,11,111,1101,11111,111111,1101001,11111111,111111111,1101100101,11111111111,111101111011,1101101101101,11111111111111,111111111111111,1101101101001101,11110101101110011,111111111111111111 ⋆ A weighted sum of Jacobi function values. ● a(n) = Sum _{ k=0..n } abs(Jacobi(n - k, 2k + 1)) * 10 ^ k. ●

▶ [A266790] 1,11,111,1110,11101,111010,1110101,11101010,111010100,1110101001,11101010011,111010100111,1110101001110,11101010011101,111010100111010101,1110101001110101010,11101010011101010101,111010100111010101010,1110101001110101010101 ⋆ Binary representation of the middle column of the "Rule 61" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = (- 9 * (- 1) ^ n + 1098999991099 * 2 ^ (n - 9) * 5 ^ (n - 10) - 11) / 198 for n>9. ●

▶ [A266592] 1,11,111,1110,11101,111010,1110101,11101010,111010101,1110101010,11101010101,111010101010,1110101010101,11101010101010,111010101010101,1110101010101010,11101010101010101,111010101010101010,1110101010101010101 ⋆ Binary representation of the middle column of the "Rule 37" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = (45 * (- 1) ^ n + 1099 * 10 ^ n - 55) / 990 for n>0. ● a(n) = 10 * a(n - 1) + a(n - 2) - 10 * a(n - 3) for n>3. ●

▶ [A267209] 1,11,111,1110,11101,111011,1110110,11101101,111011011,1110110110,11101101101,111011011011,1110110110110,11101101101101,111011011011011,1110110110110110,11101101101101101,111011011011011011,1110110110110110110 ⋆ Binary representation of the middle column of the "Rule 109" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = 10 * a(n - 1) + a(n - 3) - 10 * a(n - 4) for n>3. ●

▶ [A110444] 1,11,111,1110,11101,111011,1110111,11101110,111011100,1110111001,11101110011,111011100110111,1101110011101110,11101110011011101,111011100110111011101110 ⋆ Binary expansion of A074988. ● a(n)=sum { k=0..n, abs(mu(n - k + 1)) * 10 ^ k } ●

▶ [A265380] 1,11,111,1110,11101,111011,1110111,11101110,111011101,1110111011,111011101110,11101110111,1110111011101,11101110111011,111011101110111,11101110111011101,1110111011101110,11101110111011101,111011101110111011,11101110111011101110 ⋆ Binary representation of the middle column of the "Rule 158" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = 10 * a(n - 1) + a(n - 4) - 10 * a(n - 5) for n>4. ●

▶ [A138144] 1,11,111,1111,11011,110011,1100011,11000011,110000011,1100000011,11000000011,110000000011,1100000000011,11000000000011,110000000000011,1100000000000011,11000000000000011 ⋆ Palindromes formed from the reflected decimal expansion of the concatenation of 1, 1 and infinite 0's. ● a(n) = 11 + 11 * 10 ^ (n - 2) for n>3. a(n) = 11 * a(n - 1) - 10 * a(n - 2). G.f.: - x * (10 * x ^ 2 - 1) * (10 * x ^ 2 + 1) / ((x - 1) * (10 * x - 1)). - _ Colin Barker _ , Sep 15 2013 ●

▶ [A138145] 1,11,111,1111,11111,111111,1110111,11100111,111000111,1110001111,11100000111,111000000111,1110000000111,11100000000111,111000000000111,1110000000000111,11100000000000111 ⋆ Palindromes formed from the reflected decimal expansion of the concatenation of 1, 1, 1 and infinite 0's. ● a(n) = 111 + 111 * 10 ^ (n - 3) for n>5. a(n) = 11 * a(n - 1) - 10 * a(n - 2). G.f.: - x * (10 * x ^ 2 - 1) * (100 * x ^ 4 + 10 * x ^ 2 + 1) / ((x - 1) * (10 * x - 1)). - _ Colin Barker _ , Sep 15 2013 ●

▶ [A267257] 1,11,111,1111,11111,111111,1111111,11111111,111111110,1111111101,11111111010,111111110101,1111111101010,11111111010101,111111110101010,1111111101010101,11111111010101010,111111110101010101,1111111101010101010 ⋆ Binary representation of the middle column of the "Rule 111" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = (- 9 * (- 1) ^ n + 109999999 * 2 ^ (n - 5) * 5 ^ (n - 6) - 11) / 198 for n>5. ●

▶ [A000042] 1,11,111,1111,11111,111111,1111111,11111111,111111111,1111111111,11111111111,111111111111,1111111111111,11111111111111,111111111111111,1111111111111111,11111111111111111,111111111111111111,1111111111111111111 ⋆ Unary representation of natural numbers. ● a(n) = (10 ^ n - 1) / 9. ● a(n) = 10 * a(n - 1) + 1, n > 1, a(1)=1. [Offset 1.] ● a(n) = Sum _{ k=0..n } binomial(n + 1, k + 1) * 9 ^ k. [Offset 0.] (End) ● a(2n) - 2 * a(n) = (3 * a(n)) ^ 2. - _ Amarnath Murthy _ , Jul 21 2003 ● a(n) is the binary representation of the n - th Mersenne number (A000225). - _ Ross La Haye _ , Sep 13 2003 ● a(n) = 11 * a(n - 1) - 10 * a(n - 2). - _ Wesley Ivan Hurt _ , May 28 2021 ●

▶ [A002275] 0,1,11,111,1111,11111,111111,1111111,11111111,111111111,1111111111,11111111111,111111111111,1111111111111,11111111111111,111111111111111,1111111111111111,11111111111111111,111111111111111111,1111111111111111111 ⋆ Repunits: (10 ^ n - 1) / 9. Often denoted by R _ n. ● a(n) = 10 * a(n - 1) + 1, a(0)=0. ● a(n) = 11 * a(n - 1) - 10 * a(n - 2), a(0)=0, a(1)=1. - _ Lekraj Beedassy _ , Jun 07 2006 ● a(n) = a(n - 1) + 10 ^ (n - 1) with a(0)=0. - _ Vincenzo Librandi _ , Jul 22 2010 ● a(n) = Sum _{ k=0..n - 1 } 10 ^ k. - _ Torlach Rush _ , Nov 03 2020 ●

▶ [A097115] 1,11,111,1111,12211,112211,1333311,11333311,144664411,1144664411,15611105511,115611105511,1676721656611,11676721656611,179348887317711,1179348887317711,19114237619088811,119114237619088811,203053799952796991,1203053799952796991,12030537999527969911,215084337952324961011 ⋆ Expansion of (1 + 11 * x - 90 * x ^ 2 - 1100 * x ^ 3) / (1 - 201 * x ^ 2 + 10100 * x ^ 4). ● a(n) = 201 * a(n - 2) - 10100 * a(n - 4); ● a(n) = (11 / 2 + 11 * sqrt(101) / 202) * sqrt(101) ^ n + (11 / 2 - 11 * sqrt(101) / 202) * (- sqrt(101)) ^ n - 10 ^ (n + 1) * (1 + (- 1) ^ n) / 2; ● a(n) = Sum _{ k=0..n } binomial(floor(n / 2), floor(k / 2)) * 10 ^ k. ●

▶ [A015456] 1,1,11,111,1121,11321,114331,1154631,11660641,117761041,1189271051,12010471551,121293986561,1224950337161,12370797358171,124932923918871,1261700036546881,12741933289387681,128681032930423691,1299552262593624591,13124203658866669601 ⋆ Generalized Fibonacci numbers. ● a(n) = 10 * a(n - 1) + a(n - 2). ● a(n) = (1 / 2) * [5 + sqrt(26)] ^ n - (1 / 13) * [5 + sqrt(26)] ^ n * sqrt(26) + (1 / 2) * [5 - sqrt(26)] ^ n + (1 / 13) * sqrt(26) * [5 - sqrt(26)] ^ n, with n>=0. - _ Paolo P. Lava _ , Jul 15 2008 ●

▶ [A338679] 1,1,11,111,1211,12211,133211,1343211,14553211,147653211,1589753211,16120753211,173641753211,1759951753211,18855161753211,192028261753211,2048080361753211,20841811361753211,222333332361753211,2261780642361753211,24033895852361753211,245331468952361753211 ⋆ Expansion of Product _{ k>=1 } 1 / (1 - 10 ^ (k - 1) * x ^ k). ● a(n) = Sum _{ k=0..n } p(n,k) * 10 ^ (n - k), where p(n,k) = number of partitions of n into k parts. ●

▶ [A199764] 11,111,1211,13311,146411,1610511,17715611,194871711,2143588811,23579476911,259374246011,2853116706111,31384283767211,345227121439311,3797498335832411,41772481694156511,459497298635721611,5054470284992937711 ⋆ 10 * 11 ^ n + 1. ● a(n) = 11 * a(n - 1) - 10. ● a(n) = 12 * a(n - 1) - 11 * a(n - 2). ●

▶ [A097177] 1,11,111,1221,11221,133331,1133331,14466441,114466441,1561110551,11561110551,167672165661,1167672165661,17934888731771,117934888731771,1911423761908881,11911423761908881,203053799952796991 ⋆ a(n) = Sum _{ k=0..n } binomial(floor((n + 1) / 2), floor((k + 1) / 2)) * 10 ^ k. ● a(n) = (11 / 20) * ((1 - sqrt(101)) * (- sqrt(101)) ^ n + (1 + sqrt(101)) * (sqrt(101)) ^ n) - 5 * (10 ^ n - (- 10) ^ n) - 1 / 10. ● a(n) = a(n - 1) + 201 * a(n - 2) - 201 * a(n - 3) - 10100 * a(n - 4) + 10100 * a(n - 5). ●

▶ [A037535] 1,11,112,1121,11211,112112,1121121,11211211,112112112,1121121121,11211211211,112112112112,1121121121211,11211211211211,112112112112112,1121121121121121 ⋆ Decimal expansion of a(n) is given by the first n terms of the periodic sequence with initial period 1,1,2. ● a(n) = 10 * a(n - 1) + (1 / 9) * ((n mod 3) + 4 * ((n + 1) mod 3) + 7 * ((n + 2) mod 3)), with a(0)=0. - _ Paolo P. Lava _ , Jul 30 2009 ●

▶ [A104720] 1,11,112,1122,11223,112233,1122334,11223344,112233445,1122334455,11223344556,112233445566,1122334455667,11223344556677,112233445566778,1122334455667788,11223344556677889,112233445566778899,1122334455667789000,11223344556677890010,112233445566778900111,1122334455667789001121 ⋆ Ex

pansion of 1 / ((1 - x)(1 - x ^ 2)(1 - 10x)). ● a(n) = 1000 * 10 ^ n / 891 + (- 1) ^ n / 44 - (18n + 47) / 324. ● a(n) = floor((2 * 10 ^ (n + 3) - 99n) / 1782). - _ Hieronymus Fischer _ , Dec 05 2006 ● a(n) = 10 * a(n - 1) + (2 * n + 3 + (- 1) ^ n) / 4, a(0)=1, a(1)=11. - _ Vincenzo Librandi _ , Mar 22 2011 ●

► [A094704] 0,1,11,112,1123,11235,112358,1123593,11235951,112359544,1123595495,11235955039,112359550534,1123595505573,11235955056107,112359550561680,1123595505617787,1123595505617467,1123595505617254 ⋆ Convolution of Fibonacci(n) and 10 ^ n. ● a(n) = (1 / 89) * (10 ^ (n + 1) - 5 * (((1 + sqrt(5)) / 2) ^ n + ((1 - sqrt(5)) / 2) ^ n) - (6 / sqrt(5)) * (((1 + sqrt(5)) / 2) ^ n - ((1 - sqrt(5)) / 2) ^ n)). ● a(n) = 10 * a(n - 1) + Fibonacci(n) for n >= 1. - _ Mark Dols _ , Aug 31 2009 ● a(n) = 11 * a(n - 1) - 9 * a(n - 2) - 10 * a(n - 3), n > 2. - _ Harvey P. Dale _ , Mar 18 2013 ● a(n) = (1 / 89) * (10 ^ (n + 1) - Fibonacci(n + 3) - 8 * Fibonacci(n + 1)). - _ G. C. Greubel _ , Feb 09 2023 ●

► [A190872] 0,1,11,112,1133,11455,115808,1170793,11836451,119663824,1209774005,12230539639,123647969984,1250052813073,12637749213947,127764766035760,1291672683467837,13058516623824367,132018628710857504,1334678266205013241,13493293269857428115 ⋆ a(n) = 11 * a(n - 1) - 9 * a(n - 2), a(0)=0, a(1)=1. ● a(n) = ((11 + sqrt(85)) ^ n - (11 - sqrt(85)) ^ n) / (2 ^ n * sqrt(85)). ● a(n) = (L ^ n - H ^ n) / (L - H) where L = (11 + sqrt(85)) / 2 and H = (11 - sqrt(85)) / 2. [Heuberger and Wagner lemma 6.2 (2)] - _ Kevin Ryde _ , Apr 11 2020 ●

► [A024145] 1,11,112,1485,19712,245707,2978208,35815001,429948928,5159721303,61917264224,743008209637,8916100199424,106993205007779,1283918464011040,15407021573826993,184884258893987840 ⋆ a(n) = 12 ^ n - n ^ 5. ● a(n) = 18 * a(n - 1) - 87 * a(n - 2) + 200 * a(n - 3) - 255 * a(n - 4) + 186 * a(n - 5) - 73 * a(n - 6) + 12 * a(n - 7); a(0)=1, a(1)=11, a(2)=112, a(3)=1485, a(4)=19712, a(5)=245707, a(6)=2978208. - _ Harvey P. Dale _ , Jul 19 2011 ●

► [A287838] 1,11,115,1205,12625,132275,1385875,14520125,152130625,1593906875,16699721875,174966753125,1833166140625,19206495171875,201230782421875,2108340300078125,22089556912890625,231437270629296875,2424820490857421875,25405391261720703125 ⋆ Number of words of length n over the alphabet { 0,1,...,10 } such that no two consecutive terms have distance 8. ● a(n) = (((5 - sqrt(30)) ^ n * (- 6 + sqrt(30)) + (5 + sqrt(30)) ^ n * (6 + sqrt(30)))) / (2 * sqrt(30)). - _ Colin Barker _ , Nov 25 2017 ●

► [A287839] 1,11,117,1247,13289,141619,1509213,16083463,171399121,1826575451,19465548357,207441511727,2210673955769,23558830139779,251063019088173,2675542001860183,28512861152219041,303857405535211691,3238164083417650197,34508642672922983807 ⋆ Number of words of length n over the alphabet { 0,1,...,10 } such that no two consecutive terms have distance 9. ● a(n) = (((5 - 4 * sqrt(2)) ^ n * (- 3 + 2 * sqrt(2)) + (3 + 2 * sqrt(2)) * (5 + 4 * sqrt(2)) ^ n)) / (4 * sqrt(2)). - _ Colin Barker _ , Nov 25 2017 ●

► [A268344] 0,1,11,118,1265,13561,145376,1558453,16706855,179100046,1919979941,20582479213,220647331520,2365373209081,25357163305331,271832676713398,2914087954129385,31239469465229041,334891900255131296,3590092494410757133 ⋆ a(n) = 11 * a(n - 1) - 3 * a(n - 2) for n>1, a(0)=0, a(1)=1. ● a(n) = (((11 + sqrt(109)) / 2) ^ n - ((11 - sqrt(109)) / 2) ^ n) / sqrt(109). ●

► [A125468] 1,11,119,1271,13763,149051,1614359,17485031,189379523,2051160491,22216020599,240620650391,2606150689283,28227092746331,305726283666839,3311306671385351,35864603266855043,388447792711018571 ⋆ Number of base 11 circular n - digit numbers with adjacent digits differing by 9 or less. ● a(n) = 1 + (5 - sqrt(34)) ^ n + (5 + sqrt(34)) ^ n for n>0. ● a(n) = 11 * a(n - 1) - a(n - 2) - 9 * a(n - 3) for n>3. ●

► [A163447] 1,11,119,1273,13513,142667,1500479,15737929,164744881,1722211467,17983160807,187650088633,1957031891641,20402217047531,212634387415919,2215643826731593,23083472275311073,240466638643803467 ⋆ a(n) = 18 * a(n - 1) - 79 * a(n - 2) for n > 1; a(0) = 1, a(1) = 11. ● a(n) = ((1 + sqrt(2)) * (9 + sqrt(2)) ^ n + (1 - sqrt(2)) * (9 - sqrt(2)) ^ n) / 2. ●

► [A254600] 1,11,119,1289,13961,151211,1637759,17738489,192124721,2080893611,22538058599,244108628489,2643928812281,28636265779211,310158017102639,3359306563039289,36384487784316641,394078636910520011,4268246759164049879,46229175323835178889 ⋆ Numbers of words on alphabet { 0,1,...,10 } with no subwords ii, for i from { 0,1 } . ● a(n) = 10 * a(n - 1) + 9 * a(n - 2) with n>1, a(0) = 1, a(1) = 11. ● a(n) = ((5 - sqrt(34)) ^ n * (- 6 + sqrt(34)) + (5 + sqrt(34)) ^ n * (6 + sqrt(34))) / (2 * sqrt(34)). - _ Colin Barker _ , Jan 21 2017 ● a(n) = (- 3 * i) ^ (n - 1) * (ChebyshevU(n - 1, 5 * i / 3) - 3 * i * ChebyshevU(n, 5 * i / 3)). - _ G. C. Greubel _ , Feb 13 2021 ●

► [A274119] 11,120,435,1064,2115,3696,5915,8880,12699,17480,23331,30360,38675,48384,59595,72416,86955,103320,121619,141960,164451,189200,216315,245904,278075 ⋆ a(n) = (Product _{ i=0..4 } (i * n + 2) - Product _{ i=0..4 } (- i * n - 1)) / (4 * n + 3). ● a(n) = B(4,n,2,1) = (Product _{ i=0..4 } (i * n + 2) - Product _{ i=0..4 } (- i * n - 1)) / (4 * n + 3), n >= 0. - _ Hong - Chang Wang _ , Jun 14 2016 ● a(n) = 11 + 42 * n + 49 * n ^ 2 + 18 * n ^ 3. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>3. ●

► [A081122] 1,11,120,1300,14000,150000,1600000,17000000,180000000,1900000000,20000000000,210000000000,2200000000000,23000000000000,240000000000000,2500000000000000,26000000000000000,270000000000000000 ⋆ 10th binomial transform of (1,1,0,0,0,0,...). ● a(n) = 20 * a(n - 1) - 100 * a(n - 2), a(0) = 1, a(1) = 11. ● a(n) = (n + 10) * 10 ^ (n - 1). ●

► [A004190] 1,11,120,1309,14279,155760,1699081,18534131,202176360,2205405829,24057287759,262424759520,2862615066961,31226340977051,340627135680600,3715672151509549,40531766530924439,442133759688659280 ⋆ Expansion of 1 / (1 - 11 * x + x ^ 2). ● a(n) = S(2 * n + 1, sqrt(13)) / sqrt(13) = S(n, 11); S(n, x) := U(n, x / 2), Chebyshev polynomials of 2nd kind, A049310. ● a(n) = ((11 + 3 * sqrt(13)) ^ (n + 1) - (11 - 3 * sqrt(13)) ^ (n + 1)) / (2 ^ (n + 1) * 3 * sqrt(13)). - _ Rolf Pleisch _ , May 22 2011 ● a(n) = - a(- 2 - n) for all n in Z. - _ Michael Somos _ , Jul 14 2018 ●

► [A084969] 11,121,143,187,209,253,319,341,407,451,473,517,583,649,671,737,781,803,869,913,979,1067,1111,1133,1177 ⋆ Numbers whose smallest prime factor is 11. ● a(n) = a(n - 48) + 2310 = a(n - 1) + a(n - 48) - a(n - 49). - _ Charles R Greathouse IV _ , Nov 19 2014 ●

► [A223640] 11,121,726,2962,9808,28450,74599,179991,404599,855417,1714062,3275798,6002946,10596004,18086161,29953249,48273537,75902131,116695104,175776840,259858436,377613366,540116971,761356699,1058820379 ⋆ Number of n X 4 0..1 arrays with rows, columns, diagonals and antidiagonals unimodal. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>13. ●

► [A223633] 11,121,801,3712,13599,42109,114713,282273,639165,1350228,2689169,5091414,9224755,16081503,27096217,44293439,70470225,109418622,166193601,247432316,361730919,520085521,736404249,1028097709,1416755525 ⋆ Number of n X 4 0..1 arrays with rows, antidiagonals and columns unimodal. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>11. ●

► [A223616] 11,121,876,4466,17594,57238,160883,403159,921181,1951247,3879910,7312800,13164932,22776596,38059285,61676477,97264447,149698645,225411536,332768158,482506014,688246274,967083623,1340262451,1833947441 ⋆ Number of n X 4 0..1 arrays with rows and columns unimodal. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>9. ●

► [A068179] 1,11,121,971,6721,43331,269641,1648091,9981841,60176051,361921561,2174145611,13052763361,78340331171,470113403881,2820895001531,16926014399281,101558020876691,609353931324601,3656141011383851 ⋆ Product _{ i=1..3 } (i + x) / Product _ (i=1..3 } (i - x) = Sum _{ n>=0 } (a(n) / b(n)) * x ^ n. ● a(n) = 5 * 2 ^ (n + 1) + 6 ^ (n + 1) - 5 * 3 ^ (n + 1). ● a(n) / b(n) = 12 - 30 / 2 ^ n + 20 / 3 ^ n. ●

► [A106473] 1,11,121,1111,12321,111111,1214121,11311311,121252121,1111111111,12341614321,111111111111,1212127212121,11315311351311,121412181214121,1111111111111111,12321612921612321,111111111111111111 ⋆ Rows of A003989 expressed as base 10 numbers. ● a(n) = sum { k=0..n, GCD(n - k + 1, k + 1) * 10 ^ k } . ●

► [A132583] 11,121,1221,12221,122221,1222221,12222221,122222221,1222222221,12222222221,122222222221,1222222222221,12222222222221,122222222222221,1222222222222221,12222222222222221 ⋆ a(n) = n 2's sandwiched between two 1's. ● a(0) = 11; a(n) = 10 * a(n - 1) + 11. - _ Jonathan Vos Post _ , Nov 24 2007 [corrected by _ Jon E. Schoenfield _ , Jan 28 2018] ● a(n) = 20 * (10 ^ n - 1) / 9 + 10 ^ (n + 1) + 1, with n >= 0. - _ Paolo P. Lava _ , Dec 19 2007 ●

► [A059734] 1,11,121,1331,14641,150051,1650561,17155171,188606881,1964664691,10500200501,115502205511,1260524250621,13865766756831,141412323214141,1555535555355551,16000880008800061,176008680086800671 ⋆ Carryless 11 ^ n base 10; a(n) is carryless sum of 10 * a(n - 1) and a(n - 1). ● a(n)=Sum[Mod[Binomial[n, m], 10] * 10 ^ m, { m, 0, n }]. - _ Roger L. Bagula _ and _ Gary W. Adamson _ , Sep 14 2008 ●

► [A001020] 1,11,121,1331,14641,161051,1771561,19487171,214358881,2357947691,25937424601,285311670611,3138428376721,34522712143931,379749833583241,4177248169415651,45949729863572161,505447028499293771,5559917313492231481,61159090448414546291 ⋆ Powers of 11: a(n) = 11 ^ n. ● a(n) = 11 * a(n - 1), n > 0; a(0)=1. - _ Philippe Deléham _ , Nov 23 2008 ●

► [A214993] 11,121,1341,14871,164921,1829001,20283931,224952241,2494758581,27667296631,306835021521,3402852533361,37738212888491,418523194306761,4641493350262861,51474950047198231,570865943869443401,6331000332611075641,70211869602591275451 ⋆ Power floor sequence of (golden ratio) ^ 5. ● a(n) = [x * a(n - 1)], where x=((1 + sqrt(5)) / 2) ^ 5, a(0) = [x]. ● a(n) = 1 (mod 10). ● a(n) = 12 * a(n - 1) - 10 * a(n - 2) - a(n - 3). ● a(n) = (1 / 55) * (5 + (300 - 134 * sqrt(5)) * ((11 - 5 * sqrt(5)) / 2) ^ n + 2 * (11 / 2 + (5 * sqrt(5)) / 2) ^ n * (150 + 67 * sqrt(5))). - _ Colin Barker _ , Nov 13 2017 ●

► [A288791] 1,11,122,1245,12325,121136,1195147,11915997,120572790,1241499241,13030331671,139549798524,1525923634907,17041290249637,194394900237176,2264977282222371,26951265841776186,327445918493429897,4060993235341162405,51396034231430455550 ⋆ Number of blocks of size >= nine in all set partitions of n. ● a(n) = Bell(n + 1) - Sum _{ j=0..8 } binomial(n,j) * Bell(n - j). ● a(n) = Sum _{ j=0..n - 9 } binomial(n,j) * Bell(j). ●

► [A049666] 0,1,11,122,1353,15005,166408,1845493,20466831,226980634,2517253805,27916772489,309601751184,3433536035513,38078498141827,422297015595610,4683345669693537,51939099382224517,576013438874163224 ⋆ a(n) = Fibonacci(5 * n) / 5. ● a(n) = 11 * a(n - 1) + a(n - 2) for n > 1, a(0)=0, a(1)=1. With a=golden ratio and b=1 - a, a(n) = (a ^ (5n) - b ^ (5n)) / (5 * sqrt(5)). - Mario Catalani (mario.catalani(AT)unito.it), Jul 24 2003 ● a(n) = F(n, 11), the n - th Fibonacci polynomial evaluated at x=11. - _ T. D. Noe _ , Jan 19 2006 ● a(n) = ((11 + sqrt(125)) ^ n - (11 - sqrt(125)) ^ n) / (2 ^ n * sqrt(125)). - Al Hakanson (hawkuu(AT)gmail.com), Jan 12 2009 ● a(n) = F(n) + (- 1) ^ n * 5 * F(n) ^ 3 + 5 * F(n) ^ 5, n >= 0. See the D. Jennings formula given in a comment on A111125, where also the reference is given. - _ Wolfdieter Lang _ , Aug 31 2012 ● a(- n) = - (- 1) ^ n * a(n). - _ Michael Somos _ , May 28 2014 ●

► [A163462] 1,11,122,1362,15284,172204,1946248,22048968,250247056,2844142256,32358633632,368446731552,4197788535104,47847991009984,545576543759488,6222427756211328,70982053835796736,809843156607224576 ⋆ a(n) = 20 * a(n - 1) - 98 * a(n - 2) for n > 1; a(0) = 1, a(1) = 11. ● a(n) = ((2 + sqrt(2)) * (10 + sqrt(2)) ^ n + (2 - sqrt(2)) * (10 - sqrt(2)) ^ n) / 4. ●

► [A015593] 0,1,11,123,1375,15371,171831,1920883,21473375,240048891,2683484551,29998427843,335349675375,3748843284811,41907975483671,468485416890003,5237155536757375,58545681738111131,654476810192737191,7316336275596331363 ⋆ a(n) = 11 * a(n - 1) + 2 * a(n - 2). ● a(n) = - (1 / 129) * (11 / 2 - (1 / 2) * sqrt(129)) ^ n * sqrt(129) + (1 / 129) * (11 / 2 + (1 / 2) * sqrt(129)) ^ n * sqrt(129), with n >= 0. - _ Paolo P. Lava _ , Jul 09 2008 ●

► [A015594] 0,1,11,124,1397,15739,177320,1997737,22507067,253570948,2856801629,32185530763,362611243280,4085280268369,46025916681899,518540924305996,5842027917411653,65817929864446171,741523312261142840,8354210224465909753 ⋆ a(n) = 11 * a(n - 1) + 3 * a(n - 2). ● a(n) = (1 / 133) * (11 / 2 + (1 / 2) * sqrt(133)) ^ n * sqrt(133) - (1 / 133) * sqrt(133) * (11 / 2 - (1 / 2) * sqrt(133)) ^ n. - _ Paolo P. Lava _ , Jul 09 2008 ●

► [A015596] 0,1,11,125,1419,16109,182875,2076061,23568171,267554125,3037368059,34481265149,391443388875,4443802338221,50447599275931,572698801388125,6501477212373099,73807044541656589,837883398807714875,9511945650510489 81 ⋆ a(n) = 11 a(n - 1) + 4 a(n - 2). • a(n) = - (1 / 137) * (11 / 2 - (1 / 2) * sqrt(137)) ^ n * sqrt(137) + (1 / 137) * (11 / 2 + (1 / 2) * sqrt(137)) ^ n * sqrt(137). - _ Paolo P. Lava _ , Jul 09 2008 •

► [A163310] 1,11,125,1455,17225,206275,2489125,30186375,367260625,4477506875,54660378125,667844409375,8164152265625,99837826421875,1221162063203125,14938647753984375,182762559075390625,2236079644879296875 ⋆ a(n) = 20 * a(n - 1) - 95 * a(n - 2) for n > 1; a(0) = 1, a(1) = 11. • a(n) = ((5 + sqrt(5)) * (10 + sqrt(5)) ^ n + (5 - sqrt(5)) * (10 - sqrt(5)) ^ n) / 10. •

► [A015597] 0,1,11,126,1441,16481,188496,2155861,24656951,282005766,32253481 81,36888858821,421904187936,4825390361401,55188814915091,631203915873006,7219187149178521,82567078220328761,944333796169508976,10800507148966242541 ⋆ a(n) = 11 a(n - 1) + 5 a(n - 2). • a(n) = (1 / 141) * (11 / 2 + (1 / 2) * sqrt(141)) ^ n * sqrt(141) - (1 / 141) * sqrt(141) * (11 / 2 - (1 / 2) * sqrt(141)) ^ n. - _ Paolo P. Lava _ , Jul 09 2008 •

► [A015598] 0,1,11,127,1463,16855,194183,2237143,25773671,296933239,3420907655,39411583639,454052865959,5231051027383,60265878496967,694310969630935,7999015936922087,92155041123928567,1061699547984746759,12231625274575785751 ⋆ a(n) = 11 * a(n - 1) + 6 * a(n - 2). • a(n) = - (1 / 145) * sqrt(145) * (11 / 2 - (1 / 2) * sqrt(145)) ^ n + (1 / 145) * sqrt(145) * (11 / 2 + (1 / 2) * sqrt(145)) ^ n. - _ Paolo P. Lava _ , Jul 09 2008 •

► [A015601] 0,1,11,128,1485,17231,199936,2319913,26918595,312343936,36242134 61,42052755623,487949806080,5661817156241,65695637361211,762284731067008,8845001503265565,102631009653390271,1190856116710151936,13817834351385403193 ⋆ a(n) = 11 * a(n - 1) + 7 * a(n - 2). • a(n) = - (1 / 149) * (11 / 2 - (1 / 2) * sqrt(149)) ^ n * sqrt(149) + (1 / 149) * (11 / 2 + (1 / 2) * sqrt(149)) ^ n * sqrt(149). - _ Paolo P. Lava _ , Jul 09 2008 •

► [A015602] 0,1,11,129,1507,17609,205755,2404177,28091987,328245273,3835433899,44815735073,523656556995,6118748007529,71495480538779,835400269986801,9761366814165043,114058237115709881,1332731542786129035,15572512867573098433 ⋆ a(n) = 11 a(n - 1) + 8 a(n - 2). • a(n) = (1 / 51) * sqrt(17) * (11 / 2 + (3 / 2) * sqrt(17)) ^ n - (1 / 51) * (11 / 2 - (3 / 2) * sqrt(17)) ^ n * sqrt(17). - _ Paolo P. Lava _ , Jul 09 2008 •

► [A015603] 0,1,11,130,1529,17989,211640,2489941,29294111,344644690,4054738589,47703926689,561235840880,6602929589881,77683348056611,913943194931650,1075252527675649,12650326679871898 9,148830866227672772 0,17509924686232475821 ⋆ a(n) = 11 * a(n - 1) + 9 * a(n - 2). • a(n) = - (1 / 157) * sqrt(157) * (11 / 2 - (1 / 2) * sqrt(157)) ^ n + (1 / 157) * sqrt(157) * (11 / 2 + (1 / 2) * sqrt(157)) ^ n. - _ Paolo P. Lava _ , Jul 09 2008 •

► [A185127] 11,131,1331,13331,133331,1333331,13333331,133333331,1333333331,13333333331,133333333331,1333333333331,13333333333331,133333333333331,1333333333333331,13333333333333331,133333333333333331,1333333333333333331,13333333333333333331,133333333333333333331 ⋆ a(n) = n 3's sandwiched between two 1's. • a(0)=11; for n>0, a(n) = 10 * a(n - 1) + 21. • a(n) = (40 * 10 ^ n - 7) / 3 (see PARI code by _ Charles R Greathouse IV _). • a(n) = ((2 * 10 ^ (n + 1) - 2) / 3) ^ 2 - ((2 * 10 ^ (n + 1) - 5) / 3) ^ 2. - _ Bruno Berselli _ , Feb 17 2015 • a(n) = 11 * a(n - 1) - 10 * a(n - 2). - _ Wesley Ivan Hurt _ , Apr 21 2021 •

► [A302759] 1,11,131,1365,12883,113935,967455,8013983,65410751,529283583,4261449727,34213027327,274240586751,2196272295935,17580376055807,140687025184767,1125685164621823,9006288735567871,72053745778425855,576444534576513023,4611617848860868607 ⋆ Number of total dominating sets in the n - Andrasfai graph. • a(n) = (8 ^ (n + 1) + (2 ^ n * (n - 2) - 4 ^ (n + 1)) * (3 * n - 1)) / 16 - 1 for n > 1. • a(n) = 23 * a(n - 1) - 210 * a(n - 2) + 996 * a(n - 3) - 2664 * a(n - 4) + 4032 * a(n - 5) - 3200 * a(n - 6) + 1024 * a(n - 7) for n > 8. •

► [A015606] 0,1,11,131,1551,18371,217591,2577211,30525231,361549651,4282298471,50720779691,600751561311,7115474971331,84277740297751,998209892988571,11823086225851791,140036047414255411,1658627383815327431,19645261696111155851 ⋆ a(n) = 11 * a(n - 1) + 10 * a(n - 2). • a(n) = (1 / 161) * (11 / 2 + (1 / 2) * sqrt(161)) ^ n * sqrt(161) - (1 / 161) * sqrt(161) * (11 / 2 - (1 / 2) * sqrt(161)) ^ n, with n >= 0. - _ Paolo P. Lava _ , Jul 09 2008 • a(n) = 11 * a(n - 1) + 10 * a(n - 2), with a(0)=0, a(1)=1. - _ Harvey P. Dale _ , Feb 02 2015 •

► [A077417] 1,11,131,1561,18601,221651,2641211,31472881,375033361,4468927451,53252096051,634556225161,7561422605881,90102515045411,1073668757939051,12793922580223201,152453402204739361,1816646903876649131,21647309444315050211 ⋆ Chebyshev T - sequence with Diophantine property. • a(n) = 12 * a(n - 1) - a(n - 2), a(- 1)=1, a(0)=1. • a(n) = (ap ^ (2 * n + 1) + am ^ (2 * n + 1)) / sqrt(14) with ap := (sqrt(7) + sqrt(5)) / sqrt(2) and am := (sqrt(7) - sqrt(5)) / sqrt(2). • a(n) * a(n + 3) = 120 + a(n + 1) * a(n + 2). - _ Ralf Stephan _ , May 29 2004 •

► [A097258] 0,11,132,143,1584,1595,1716,1727,19008,19019,19140,19151,20592,20603,20724,20735,228096,228107,228228,228239,229680,229691,229812,229823,247104 ⋆ Numbers whose set of base 12 digits is { 0,B } , where B base 12 = 11 base 10. • a(2n) = 12 * a(n), a(2n + 1) = a(2n) + 11. •

► [A158536] 11,132,495,1100,1947,3036,4367,5940,7755,9812,12111,14652,17435,20460,23727,27236,30987,34980,39215,43692,48411,53372,58575,64020,69707 ⋆ a(n) = 121 * n ^ 2 + 11. • a(n)= 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). •

► [A105280] 0,11,132,1463,16104,177155,1948716,21435887,235794768,2593742459,28531167060,313842837671,3452271214392,37974983358323,417724816941564,4594972986357215,50544702849929376,555991731349223147,6115909044841454628,67274999493256000919 ⋆ a(0)=0; a(n) = 11 * a(n - 1) + 11. • a(n) = (11 / 10)(11 ^ n - 1), with n>=0. - _ Paolo P. Lava _ , Jul 09 2008 • a(n) = 11 ^ n + a(n - 1) (with a(0)=0). - _ Vincenzo Librandi _ , Nov 13 2010 •

► [A196731] 1,11,132,1584,19008,228096,2737152,32845824,394149888,4729798656,56757583872,681091006464,8173092077568,98077104930816,1176925259169792,14123103110037504,169477237320450048 ⋆ Expansion of (1 - x) / (1 - 12 * x). • a(n + 1) = 12 * a(n) for n > 0. - _ M. F. Hasler _ , Oct 05 2011 •

► [A015609] 0,1,11,133,1595,19141,229691,2756293,33075515,396906181,4762874171,57154490053,685853880635,8230246567621,98762958811451,1185155505737413,14221866068848955,170662392826187461 ⋆ a(n) = 11 * a(n - 1) + 12 * a(n - 2). • a(n) = 12 ^ (n - 1) - a(n - 1). • a(n) = (1 / 13) * (12 ^ n - (- 1) ^ n), with n >= 0. - _ Paolo P. Lava _ , Jul 09 2008 •

► [A367245] 0,11,135,1103,7551,46871,273735,1534943,8366031,44674151,2349829 35,1222071983,6301114911,32274971831,164471580135,834802180223,4223960206191,21320114811911,107403378865335,540232762595663,2714041233191871,13621757688226391,68315120054438535 ⋆ a(n) is the number of n - digit numbers whose difference between the largest and smallest digits is equal to 4. • a(n) = 29 * 5 ^ (n - 1) - 47 * 4 ^ (n - 1) + 2 * 3 ^ (n + 1). • a(n) = 12 * a(n - 1) - 47 * a(n - 2) + 60 * a(n - 3) for n > 3. •

► [A057718] 1,11,136,1787,24376,341048,4859968,70223483,1025790616,15116164136,224365547968,3350371999928,50287277411008,758124098549696,11473331826459136,174221578556572283,2653437885092286808,40520013896165905928 ⋆ A036917 / 8 (omitting leading term of A036917). • a(n) = (1 / 8) * sum(binomial(2k,k) ^ 2 * binomial(2n - 2k,n - k) ^ 2, k=0..n) for n >= 1. - _ Emanuele Munarini _ , Mar 12 2011 •

► [A141907] 1,11,141,1111,16661,172271,1016101,17399371,128404821,1302442031,16784848761,131546645131,1860584850681,19465322356491,129218121812921,1955997557995591,14000280008200041,154002080080200451 ⋆ a(n) = sum(mod(sum((- 1) ^ j * binomial(n + 1, j) * (k + 1 - j) ^ n, j=0..k + 1), 10) * 10 ^ k, k=0..n - 1). • a(n)=Sum[Mod[Sum[(- 1) ^ j Binomial[n + 1, j](k + 1 - j) ^ n, { j, 0, k + 1 }], 10] * 10 ^ k, { k, 0, n - 1 }]. •

► [A205084] 11,141,1441,14441,144441,1444441,14444441,144444441,1444444441,14444444441,144444444441,1444444444441,14444444444441,144444444444441,1444444444444441,14444444444444441,144444444444444441,1444444444444444441 ⋆ a(n)=n 4's sandwiched between two 1's. • a(0)=11, a(n)=10 * a(n - 1) + 31. • a(n) = (130 * 10 ^ n - 31) / 9 (see PARI's code by Charles R Greathouse IV). •

► [A083078] 1,11,141,1831,23801,309411,4022341,52290431,679775601,8837082811,114882076541,1493466995031,19415070935401,252395922160211,3281146988082741,42654910845075631,554513840985983201 ⋆ 6th row of number array A083075. • a(n) = (5 * 13 ^ n + 1) / 6. • a(n) = 13 * a(n - 1) - 2; a(n) = 14 * a(n - 1) - 13 * a(n - 2). - _ Vincenzo Librandi _ , Nov 11 2011 •

► [A024141] 1,11,142,1725,20732,248827,2985978,35831801,429981688,5159780343,61917364214,743008370677,8916100448244,106993205379059,1283918464548850,15407021574586353,184884258895036400 ⋆ a(n) = 12 ^ n - n. • a(n) = 14 * a(n - 1) - 25 * a(n - 2) + 12 * a(n - 3). - _ Vincenzo Librandi _ , Jun 17 2013 •

► [A024140] 0,11,143,1727,20735,248831,2985983,35831807,429981695,5159780351,61917364223,743008370687,8916100448255,106993205379071,1283918464548863,15407021574586367,184884258895036415 ⋆ a(n) = 12 ^ n - 1. • a(n) = 12 * a(n - 1) + 11 for n>0, a(0)=0. [_ Vincenzo Librandi _ , Nov 18 2010] • a(n) = Sum _{ i=1..n } 11 ^ i * binomial(n,n - i) for n>0, a(0)=0. [_ Bruno Berselli _ , Nov 11 2015] •

► [A098310] 0,1,11,144,1859,24025,310464,4012009,51845651,669981456,8657913275,111882891121,1445819671296,18683772835729,241443227193179,3120078180675600,40319573121589619,521034372399989449 ⋆ Unsigned member r= - 11 of the family of Chebyshev sequences S _ r(n) defined in A092184. • a(n)= 13 * a(n - 1) - a(n - 2) + 2 * (- 1) ^ (n + 1), n>=2, a(0)=0, a(1)=1. • a(n)= 12 * a(n - 1) + 12 * a(n - 2) - a(n - 3), n>=3, a(0)=0, a(1)=1, a(2)=11. •

► [A293610] 0,11,146,896,3696,11886,32172,76692,165792,331617,622622,1109108,1889888,3100188,4920888,7589208,11410944,16774359,24165834,34187384,47576144,65225930,88210980,117811980,155544480 ⋆ a(n) = (15 * n ^ 2 + 35 * n + 16) * Pochhammer(n, 5) / 6!. • a(n) = (n * (384 + 1640 * n + 2670 * n ^ 2 + 2135 * n ^ 3 + 891 * n ^ 4 + 185 * n ^ 5 + 15 * n ^ 6)) / 720. • a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>7. •

► [A205085] 11,151,1551,15551,155551,1555551,15555551,155555551,1555555551,15555555551,155555555551,1555555555551,15555555555551,155555555555551,1555555555555551,15555555555555551,155555555555555551,1555555555555555551 ⋆ a(n) = n 5's sandwiched between two 1's. • a(0)=11, a(n) = 10 * a(n - 1) + 41. • a(n) = (140 * 10 ^ n - 41) / 9 (see PARI code by _ Charles R Greathouse IV _). • a(n) = 11 * a(n - 1) - 10 * a(n - 2). - _ Vincenzo Librandi _ , Jan 23 2012 •

► [A122769] 1,11,153,2131,29681,413403,5757961,80198051,1117014753,15558008491,216695104121,3018173449203,42037733184721,585510091136891,8155103542731753,113585939507107651,1582048049556775361 ⋆ Numbers k such that k ^ 2 is of the form 3 * m ^ 2 + 2 * m + 1 (A056109). • a(0) = 1, a(1) = 11, a(n) = 14 * a(n - 1) - a(n - 2), and • a(n) = ((3 - b) * (7 - 4 * b) ^ n + (3 + b) * (7 + 4 * b) ^ n) / 6, b = sqrt(3). • a(n) = - (1 / 6) * sqrt(3) * (7 - 4 * sqrt(3)) ^ n + (1 / 6) * sqrt(3) * (7 + 4 * sqrt(3)) ^ n + (1 / 2) * (7 + 4 * sqrt(3)) ^ n + (1 / 2) * (7 - 4 * sqrt(3)) ^ n. - _ Paolo P. Lava _ , Aug 06 2008 •

► [A205086] 11,161,1661,16661,166661,1666661,16666661,166666661,1666666661,16666666661,166666666661,1666666666661,16666666666661,166666666666661,1666666666666661,16666666666666661,166666666666666661,1666666666666666661 ⋆ a(n) = n 6's sandwiched between two 1's. • a(n) = 10 * a(n - 1) + 51; a(0) = 11. • a(n) = 11 * a(n - 1) - 10 * a(n - 2). - _ Vincenzo Librandi _ , Jan 22 2012 • a(n) = (50 * 10 ^ n - 17) / 3. - _ Paolo P. Lava _ , Jan 30 2012 •

► [A362501] 11,169,1699,14989,125495,1026273,8299403,66752053,535443679,4289258377,34336902707,274786564317,2198657885063,17590724562481,140731642427611,1125876523131781,9007105719897647,72057219898554585,576459255745930115,4611680032197414445 ⋆ Number of vertex cuts in the n - alkane graph. • a(n) = 4 * 8 ^ n - (49 * 4 ^ n + 6 * n - 13) / 9. - _ Andrew Howroyd _ , Apr 23 2023 • a(n) = 14 * a(n - 1) - 57 * a(n - 2) + 76 * a(n - 3) - 32 * a(n - 4) for n >= 5. - _ Pontus von Brömssen _ , Apr 23 2023 •

► [A205087] 11,171,1771,17771,177771,1777771,17777771,177777771,1777777771,17777777771,177777777771,1777777777771,17777777777771,177777777777771,1777777777777771,17777777777777771,177777777777777771 ⋆ a(n)=n 7's sandwiched between two 1's. • a(0)=1, a

(n) = 10 * a(n - 1) + 61. ● a(n) = (160 * 10 ^ n - 61) / 9 (see PARI's code by Charles R Greathouse IV). ●

▶ [A064182] 0,11,171,2126,24300,266400,2853708,30130317,315037281,3271067968,33787242719,347589015681,3564432632541,36457601891708,372096179850464,3790896863469849,38562555830676602,391760068087338367,3975390700617058183,40066272402579605194 ★ Sum _{ k <= 10 ^ n } number of distinct primes dividing k (A001221). ● a(n) = Sum _{ k, 1, limit } , PrimePi(10 ^ n / k); which seems to be about 10 ^ n / 2. ●

▶ [A025758] 1,1,11,171,3056,58916,1191376,24896436,532911346,11617952106,256966100966,5750337968926,129926216608236,2959472057112396,67877180959091156,1566072624078270516,36319953436423545851 ★ 5th - order Vatalan numbers (generalization of Catalan numbers). ● a(n) = sum(m=1..n - 1, 5 ^ (n - m) * m / n * sum(k=1..n - m, binomial(n + k - 1,n - 1) * sum(i=0..k, binomial(k,i) * 2 ^ (k - i) * sum(j=0..i, binomial(j, - 3 * i + n - m - k + 2 * j) * (- 1) ^ (j - i) * 5 ^ (j - i) * (- 2) ^ (3 * i - n + m + k - j) * binomial(i,j))))) + 1. - _ Vladimir Kruchinin _ , Feb 09 2011 ●

▶ [A243677] 1,11,171,3101,61381 ★ Number of hypoplactic classes of 5 - parking functions of length n. ● a(n) = Sum _{ i=0..n } Sum _{ j=0..i } (- 2) ^ (n - i) * binomial(i,j) * binomial(5i + j, n) * binomial(n + 1,i) / (n + 1) (conjectured). - _ Michael D. Weiner _ , May 25 2017 ●

▶ [A218330] 1,11,175,301,1005,1375,3003,3745,6681,7923,12551,14421,21125,23751,32915,36425,48433,52955,68191,73853,92701,99631,122475,130801,158025 ★ Odd decagonal pyramidal numbers. ● a(n) = a(n - 1) + 3 * a(n - 2) - 3 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) + a(n - 6) - a(n - 7). ● a(n) = 3 * a(n - 2) - 3 * a(n - 4) + a(n - 6) + 512. ● a(n) = (16 * n - 4 * (- 1) ^ n - 17) * (4 * n - (- 1) ^ n - 3) * (4 * n - (- 1) ^ n - 1) / 24. ●

▶ [A003729] 11,176,2911,48301,801701,13307111,220880176,3666315811,60855946601,1010127453401,16766766924211,278305942640176,4619507031938711,76677648402694901,1272746577484955101,21125893715367851311 ★ Number of perfect matchings (or domino tilings) in graph C _{ 5 } X P _{ 2n } . ● a(n) = 19a(n - 1) - 41a(n - 2) + 19a(n - 3) - a(n - 4), n>4. ●

▶ [A205088] 11,181,1881,18881,188881,1888881,18888881,188888881,1888888881,18888888881,188888888881,1888888888881,18888888888881,188888888888881,1888888888888881,18888888888888881,188888888888888881,1888888888888888881,18888888888888888881,188888888888888888881,1888888888888888888881 ★ a(n)=n 8's sandwiched between two 1's. ● a(0) = 11 , a(n) = 10 * a(n - 1) + 71. ● a(n) = 1 / 9 * (17 * 10 ^ (n + 1) - 71). [From Alexander R. Povolotsky, Jan 25 2012] ●

▶ [A185123] 11,191,1991,19991,199991,1999991,19999991,199999991,1999999991,19999999991,199999999991,1999999999991,19999999999991,199999999999991,1999999999999991,19999999999999991,199999999999999991,1999999999999999991,19999999999999999991,199999999999999999991,1999999999999999999991 ★ a(n) = n 9's sandwiched between two 1's. ● a(n) = 20 * 10 ^ n - 9. - _ Charles R Greathouse IV _ , Jan 20 2012 ● a(0)=11, a(n) = 10 * a(n - 1) + 81. ●

▶ [A243646] 0,0,0,0,11,196,1195,4544,13215,32276,69671,137120,251139,434180,715891,1134496,1738295,2587284,3754895,5329856,7418171,10145220,13657979,18127360,23750671 ★ Number of ways three L - tiles can be placed on an n X n square. ● a(n) = (n ^ 6 - 6 * n ^ 5 - 6 * n ^ 4 + 88 * n ^ 3 - 73 * n ^ 2 - 310 * n + 426) / 6 for n>=4, a(n) = 0 for n<4. ●

▶ [A179339] 11,221,461,1091,1571,2621,3341,4811,5771,7661,8861,11171,12611,15341,17021,20171,22091,25661,27821,31811,34211,38621,41261,46091,48971 ★ Positive integers of the form (30 * m ^ 2 + 1) / 11. ● a(n) = (330 * n * (n - 1) + 45 * (2 * n - 1) * (- 1) ^ n + 89) / 4. ● a(n) = a(- n + 1) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). ●

▶ [A055411] 1,11,221,1343,5913,16875,42205,89527,176377,313259,532509,853399,1322921,1961211,2846933,4005143,5554265,7491355,9977557,13065527,16907817,21524019,27179909,33921671,42036401 ★ Number of points in Z ^ 5 of norm <= n. ● a(n) = [x ^ (n ^ 2)] theta _ 3(x) ^ 5 / (1 - x), where theta _ 3() is the Jacobi theta function. - _ Ilya Gutkovskiy _ , Apr 14 2018 ●

▶ [A015287] 1,11,231,3311,56287,875007,14208447,225683007,3624203583,57881286463,926949282623,14824402656063,237244744338239,3795481554332479,60731179948567359,971671079497526079,15546959673214593855 ★ Gaussian binomial coefficient [n,4] for q = - 2. ● a(n) = (1 - 2 ^ (2n - 5) * (15 - 2 ^ (2n - 1)) - (- 1) ^ n * 5 * 2 ^ (n - 3) * (1 - 2 ^ (2n - 3))) / 1215. - _ Bruno Berselli _ , Oct 30 2012 ●

▶ [A219089] 0,11,244,1838,8303,27680,75418,177978,377149,735091,1340095,2313060,3814697,6053445,9294114,13867245,20179187,28722900,40089475,54980371,74220378,98771297,129746337,168425239,216270112 ★ Floor((n + 1 / 2) ^ 6). ● a(n) = [(n + 1 / 2) ^ 6]. ●

▶ [A003389] 11,266,521,776,1031,1286,1541,1796,2051,2306,2561,2816,6571,6826,7081,7336,7591,7846,8101,8356,8611,8866,9121,13131,13386 ★ Numbers that are the sum of 11 positive 8th powers. ● a(n) > 8n / 3. (Work mod 32.) - _ Charles R Greathouse IV _ , May 04 2015 ●

▶ [A243210] 0,11,266,2344,12907,53307,180876,530654,1391647,3335627,7426885,15544434,30867669,58574800,106838511,188190111,321383808,533857914 ★ Number of inequivalent (mod D _ 3) ways to place 5 points on a triangular grid of side n so that no three of them are vertices of an equilateral triangle with sides parallel to the grid. ● a(n) = (n ^ 10 + 5 * n ^ 9 - 10 * n ^ 8 - 195 * n ^ 7) / 23040 + O(n ^ 6) ●

▶ [A001538] 11,299,875,1739,2891,4331,6059,8075,10379,12971,15851,19019,22475,26219,30251,34571,39179,44075,49259,54731,60491,66539,72875,79499,86411 ★ a(n) = (12n + 1) * (12n + 11). ● a(n) = 288 * n + a(n - 1) with a(0)=11. - _ Vincenzo Librandi _ , Nov 12 2010 ●

▶ [A055409] 1,11,396,5258,43154,241283,1053323,3813001,11887373,33107532,83570177,195642892,427116918,883782766,1736506732,3275680338,5938894018,10431199387,17749369808,29449543675,47615028191,75399727379 ★ Number of points in N ^ 10 of norm <= n. ● a(n) = [x ^ (n ^ 2)] (1 + theta _ 3(x)) ^ 10 / (1024 * (1 - x)), where theta _ 3() is the Jacobi theta function. - _ Ilya Gutkovskiy _ , Apr 15 2018 ●

▶ [A237695] 0,11,1160 ★ Maximum length of a +- 1 sequence of discrepancy n. ● a(n) exists for all n (Tao, 2015). - _ Jeppe Stig Nielsen _ , Jul 18 2021 ●

▶ [A060885] 1,11,2047,88573,1398101,12207031,72559411,329554457,1227133513,3922632451,11111111111,28531167061,67546215517,149346699503,311505013051,617839704241,1172812402961,2141993519227,3780494710543,6471681049901 ★ a(n) = Sum _{ j=0..10 } n ^ j. ● a(n) = n ^ 10 + n ^ 9 + n ^ 8 + n ^ 7 + n ^ 6 + n ^ 5 + n ^ 4 + n ^ 3 + n ^ 2 + n + 1. ●

▶ [A243130] 1,11,564719,46611179,929944511,9127651499,58130412911,276182038859,1061324394239,3472236254411,10011386405999,26069206375211,62418042417599,139296285729899,292810020137711,584605483663499,1116034330278911,2048348816684939,3630829342034159 ★ 1024 * n ^ 10 - 2304 * n ^ 8 + 1792 * n ^ 6 - 560 * n ^ 4 + 60 * n ^ 2 - 1. ● a(n) = (32 * n ^ 5 - 16 * n ^ 4 - 32 * n ^ 3 + 12 * n ^ 2 + 6 * n - 1) * (32 * n ^ 5 + 16 * n ^ 4 - 32 * n ^ 3 - 12 * n ^ 2 + 6 * n + 1). ●

▶ [A347849] 11,25658441,93625991,226449521,2843348351,4090833821,1342107628 1,18856092371,26092031081,54270148391,66449431661,111422173391,124168028051,280837571081,875319936761,1247050623431,3589081520021,6363702282011,7479508339601,10804857261041,15199582184861 ★ Primes at lower end of record gaps between prime octuplets given by A347848. ● a(n) == 11 (mod 210). ●

▶ [A302341] 12,12,12,12,16,16,18,20,22,22,24,26,28,30,32,32,36,36,38,40,42,42,44,46,48 ★ Triameter of the n X n knight graph. ● a(n) = 20 + a(n - 12) for n > 25. - _ Andrew Howroyd _ , Apr 06 2018 ● a(n) = 20 * k + a(n - 12 * k) for n > 12 * k + 5. - _ Eric W. Weisstein _ , Apr 15 2018 ● a(n) = a(n - 1) + a(n - 12) - a(n - 13) for n > 19. - _ Eric W. Weisstein _ , Apr 14 2018 ●

▶ [A064161] 12,12,20,42,66,78,102,114,138,174,186,222,246,258,282,318,354,366,402,426,438,474,498,534,582 ★ Least abundant number divisible by the n - th prime number. ● a(n) = 6 * prime(n) for n>=4. - Jose Brox (tautocrona(AT)terra.es), Mar 24 2003 ●

▶ [A022346] 0,12,12,24,36,60,96,156,252,408,660,1068,1728,2796,4524,7320,11844,19164,31008,50172,81180,131352,212532,343884,556416 ★ Fibonacci sequence beginning 0, 12. ● a(n) = 12 * F(n) = F(n + 5) + F(n - 1) + F(n - 3) + F(n - 6) for n > 5, where F=A000045. ● a(n) = F(n + 6) + F(n - 6) - 6 * F(n). - _ Bruno Berselli _ , Dec 29 2016 ●

▶ [A133894] 12,13,14,15,28,29,30,31,44,45,46,47,60,61,62,63,76,77,78,79,92,93,94,95,108 ★ Numbers m such that binomial(m + 4,m) mod 4 = 0. ● a(n)=4n + 12 - 3 * (n mod 4). ● a(n) = 4 * n + 3 * ((1 - i) * i ^ n + (1 + i) * (- i) ^ n + (- 1) ^ n + 5) / 2, where i=sqrt(- 1). - _ Bruno Berselli _ , Apr 08 2011 ●

▶ [A209725] 12,13,14,16,18,22,26,34,42,58,74,106,138,202,266,394,522,778,1034,1546,2058,3082,4106,6154,8202 ★ 1 / 4 the number of (n + 1) X 7 0..2 arrays with every 2 X 2 subblock having distinct clockwise edge differences. ● a(n) = 3 * 2 ^ (n / 2 - 1) + 10 for n even. ● a(n) = 2 ^ ((n + 1) / 2) + 10 for n odd. ●

▶ [A226099] 12,13,15,17,22,23,25,27,32,33,35,37,42,43,45,47,52,53,55,57,62,63,65,67,72 ★ Positive integers that yield a prime when their most significant (i.e., leftmost) decimal digit is removed. ● a(n) = a(n - 4) + 10 for 4 < n < 41, i.e., 20 < a(n) < 110; a(n) = a(n - 25) for 61 < n < 287, i.e., 200 < a(n) < 1100, etc. (End) ●

▶ [A267615] 12,13,15,19,27,43,75,139,267,523,1035,2059,4107,8203,16395,32779,65547,131083,262155,524299,1048587,2097163,4194315,8388619,16777227 ★ a(n) = 2 ^ n + 11. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>1, a(0)=12, a(1)=13. ●

▶ [A241748] 12,13,16,21,28,37,48,61,76,93,112,133,156,181,208,237,268,301,336,373,412,453,496,541,588 ★ a(n) = n ^ 2 + 12. ● a(n) = a(- n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) = a(n - 1) + 2 * n - 1. ●

▶ [A022102] 1,12,13,25,38,63,101,164,265,429,694,1123,1817,2940,4757,7697,12454,20151,32605,52756,85361,138117,223478,361595,585073 ★ Fibonacci sequence beginning 1, 12. ● a(n) = a(n - 1) + a(n - 2), n>=2, a(0)=1, a(1)=12. a(- 1):=11. ● a(n) = ((1 + sqrt5) ^ n - (1 - sqrt5) ^ n) / (2 ^ n * sqrt5) + 5.5 * ((1 + sqrt5) ^ (n - 1) - (1 - sqrt5) ^ (n - 1)) / (2 ^ (n - 2) * sqrt5). Offset 1. a(3)=13. - Al Hakanson (hawkuu(AT)gmail.com), Jan 14 2009 ●

▶ [A041294] 12,13,25,38,215,253,468,721,17772,18493,36265,54758,310055,364813,674868,1039681,25627212,26666893,52294105,78960998,447099095,526060093,973159188,1499219281,36954421932 ★ Numerators of continued fraction convergents to sqrt(160). ● a(n) = 1442 * a(n - 8) - a(n - 16). - _ Wesley Ivan Hurt _ , Mar 01 2023 ●

▶ [A022317] 0,12,13,26,40,67,108,176,285,462,748,1211,1960,3172,5133,8306,13440,21747,35188,56936,92125,149062,241188,390251,631440 ★ a(n) = a(n - 1) + a(n - 2) + 1, with a(0) = 0 and a(1) = 12. ● a(n) = F(n + 2) + 11 * F(n) - 1, where F = A000045. - _ G. C. Greubel _ , Aug 25 2017 ●

▶ [A322462] 0,1,12,13,36,37,72,73,120,121,180,181,252,253,336,337,432,433,540,541,660,661,792,793,936 ★ Numbers on the 0 - 1 - 12 line in a spiral on a grid of equilateral triangles. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n>4. - _ Colin Barker _ , Dec 09 2018 ●

▶ [A371704] 12,13,49,51,111,114,198,202,310,315 ★ Heights at which a Minecraft boat - drop will break up. ● a(n) = (50 * n ^ 2 + 50 * n + 23 - 23 * (- 1) ^ n * (1 + 2 * n)) / 16. - _ Robert P. P. McKone _ , Apr 03 2024 ●

▶ [A033048] 0,1,12,13,144,145,156,157,1728,1729,1740,1741,1872,1873,1884,1885,20736,20737,20748,20749,20880,20881,20892,20893,22464 ★ Sums of distinct powers of 12. ● a(n) = Sum _{ i=0..m } d(i) * 12 ^ i, where Sum _{ i=0..m } d(i) * 2 ^ i is the base - 2 representation of n. ● a(2n) = 12 * a(n), a(2n + 1) = a(2n) + 1. ●

▶ [A041309] 1,1,12,13,324,337,4031,4368,108863,113231,1354404,1467635,36577644,38045279,455075713,493120992,12289979521,12783100513,152904085164,165687185677,4129396541412,4295083727089,51375317539391,55670401266480,138746947934911 ★ Denominators of continued fraction convergents to sqrt(167). ● a(n) = 336 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Dec 15 2013 ●

▶ [A255842] 12,14,20,30,44,62,84,110,140,174,212,254,300,350,404,462,524,590,660,734,812,894,980,1070,1164 ★ a(n) = 2 * n ^ 2 + 12. ● a(n) = a(- n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A175886] 1,12,14,25,27,38,40,51,53,64,66,77,79,90,92,103,105,116,118,129,131,142,144,155,157 ★ Numbers that are congruent to { 1, 12 } mod 13. ● a(n) = (26 * n + 9 * (- 1) ^ n - 13) / 4. ● a(n) = - a(- n + 1) = a(n - 1) + a(n - 2) - a(n - 3). ● a(n) = a(n - 2) + 13. ●

► [A022326] 1,12,14,27,42,70,113,184,298,483,782,1266,2049,3316,5366,8683,14050,22734,36785,59520,96306,155827,252134,407962,660097 ⋆ a(n) = a(n - 1) + a(n - 2) + 1, with a(0) = 1 and a(1) = 12. ● a(n) = 2 * F(n + 2) + 9 * F(n) - 1, where F = A000045. - _ G. C. Greubel _ , Aug 25 2017 ● a(n) = 2 * a(n - 1) - a(n - 3). - _ Wesley Ivan Hurt _ , Apr 11 2022 ●

► [A330197] 0,0,0,12,14,32,54,80,110,168,208,280,360,448,544,684,798,960,1134,1320,1518,1776,2000,2288,2592 ⋆ Number of scalene triangles whose vertices are the vertices of a regular n - gon. ● a(n) = C(n,3) - n * (n - 1) / 2 if n mod 6 = 1 or 5; C(n,3) - n * (n - 2) / 2 if n mod 6 = 2 or 4; C(n,3) - n * (3 * n - 7) / 6 if n mod 6 = 3; C(n,3) - n * (3 * n - 10) / 6 otherwise [C(n,k) denoting binomial coefficients]. ● a(n) = 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4) - 4 * a(n - 5) - a(n - 6) + 2 * a(n - 7) + 2 * a(n - 8) - a(n - 10) for n>12. - _ Colin Barker _ , Jan 08 2020 ●

► [A196224] 12,15,19,44,51,63,76,83,108,112,115,140,143,147,172,179,204,211,236,240,243,255,268,271,275 ⋆ Numbers n such that n ^ 2 + n is not of the form x ^ 2 + y ^ 2 + z ^ 2. ● a(n) = 12n + O(log(n)). - _ David W. Wilson _ , Oct 21 2011 ●

► [A296796] 12,15,33,63,72,132,240,273,495,897,1020,1848,3348,3807,6897,12495,14208,25740,46632,53025,96063,174033,197892,358512,649500 ⋆ Numbers k such that k is the altitude of a Heronian triangle with sides m - 11, m, m + 11. ● a(n) = 4 * a(n - 3) - a(n - 6) for n>5. ●

► [A277082] 0,1,12,15,37,42,75,82,126,135,190,201,267,280,357,372,460,477,576,595,705,726,847,870,1002 ⋆ Generalized 15 - gonal (or pentadecagonal) numbers: n * (13 * n - 11) / 2, n = 0, + 1, - 1, + 2, - 2, + 3, - 3, ... ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). ● a(n) = (26 * n ^ 2 + 26 * n + 9 * (- 1) ^ n * (2 * n + 1) - 9) / 16. ●

► [A087098] 0,1,12,15,37,44,77,92,136,167,222,285,351,478,555,810,898,1409,1508,2531,2641,4688,4809,8904,9036 ⋆ Partial sums of A087100. ● a(n) = a(n - 1) + 4 * a(n - 2) - 4 * a(n - 3) - 5 * a(n - 4) + 5 * a(n - 5) + 2 * a(n - 6) - 2 * a(n - 7) for n > 6. ●

► [A024875] 12,15,38,45,82,94,148,166,240,265,362,395,518,560,712,764,948,1011,1230,1305,1562,1650,1948,2050,2392 ⋆ a(n) = s(1)s(n) + s(2)s(n - 1) + ... + s(k)s(n - k + 1), where k = floor(n / 2), s = natural numbers >= 3. ● a(n) = (4 * n ^ 3 + 3 * ((- 1) ^ n + 19) * n ^ 2 + 2 * (15 * (- 1) ^ n + 61) * n + 75 * ((- 1) ^ n - 1)) / 48. ● a(n) = (2 * n ^ 3 + 30 * n ^ 2 + 76 * n) / 24 for n even. ● a(n) = (2 * n ^ 3 + 27 * n ^ 2 + 46 * n - 75) / 24 for n odd. (End) ●

► [A219390] 0,12,16,52,60,120,132,216,232,340,360,492,516,672,700,880,912,1116,1152,1380,1420,1672,1716,1992,2040 ⋆ Numbers k such that 14 * k + 1 is a square. ● a(n) = a(- n + 1) = (14 * n * (n - 1) + 5 * (- 1) ^ n * (2 * n - 1) + 1) / 4 + 1. ●

► [A155096] 12,17,41,46,70,75,99,104,128,133,157,162,186,191,215,220,244,249,273,278,302,307,331,336,360 ⋆ Numbers k such that k ^ 2 == - 1 (mod 29). ● a(n) = 12 * (- 1) ^ (n + 1) + 29 [n / 2]. ● a(n) = a(n - 2) + 29 for all n > 2. (End) ●

► [A007624] 12,18,20,24,28,30,32,40,42,44,45,48,50,52,54,56,60,63,66,68,70,72,75,76,78 ⋆ Numbers m such that the product of proper divisors of m = m ^ k, k >1. ● a(n) = n + O(n / log n). - _ Charles R Greathouse IV _ , Oct 23 2015 ●

► [A177425] 12,18,20,24,28,40,44,45,48,50,52,54,56,63,68,72,75,76,80,88,92,96,98,99,104 ⋆ Integers with multiple and strictly distinct powers. ● a(n) << n log n. - _ Charles R Greathouse IV _ , Mar 25 2014 ●

► [A005101] 12,18,20,24,30,36,40,42,48,54,56,60,66,70,72,78,80,84,88,90,96,100,102,104,108 ⋆ Abundant numbers (sum of divisors of m exceeds 2m). ● a(n) is asymptotic to C * n with C=4.038... (Deléglise, 1998). - _ Benoit Cloitre _ , Sep 04 2002 ●

► [A280014] 12,18,22,28,42,48,52,58,72,78,82,88,102,108,112,118,132,138,142,148,162,168,172,178,192 ⋆ Numbers m == +- 2 (mod 10) but not m == 2 (mod 6). ● a(n + 4) = a(n) + 30. ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. ●

► [A143800] 0,12,19,24,28,31,34,36,38,40,42,43,44,46,47,48,49,50,51,52,53,54,54,55,56 ⋆ In acoustics, using 12 - tone equal temperament, the rounded number of semitones in the interval perceived when a vibrating string is divided into n congruent segments. ● a(n) = round(log _ 2(n) * 12). ●

► [A344444] 0,12,19,24,28,31,34,36,38,40,42,43,45,46,47,48,49,50,51,52,53,54,55,55,56 ⋆ Completely additive with a(2) = 12, a(3) = 19; for prime p > 3, a(p) = ceiling((a(p - 1) + a(p + 1)) / 2). ● a(n * k) = a(n) + a(k). ●

► [A272100] 12,19,44,51,76,83,108,115,140,147,172,179,204,211,236,243,268,275,300,307,332,339,364,371,396 ⋆ Integers n that are the sum of three nonzero squares while n * (n + 1) is not. ● a(n) = (32 * n - 17 - 9 * (- 1) ^ n) / 2. ● a(n) = 16 * n - 13 for n even. ● a(n) = 16 * n - 4 for n odd. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n>3. ●

► [A035511] 12,20,25,38,46,59,72,80,93,109,114,127,135,148,164,169,182,198,203,216,224,237,253,258,271 ⋆ 3rd column of Inverse Stolarsky array. ● a(n) = (2 * round(n * tau) + 1) + 3 * (floor((round(n * tau) + 1 / 2) * tau) + 1) for n > 0 and a(0)=12, tau = (1 + sqrt(5)) / 2. - C. Ronaldo (aga _ new _ ac(AT)hotmail.com), Jan 01 2005 ●

► [A026041] 12,20,32,49,72,102,140,187,244,312,392,485,592,714,852,1007,1180,1372,1584,1817,2072,2350,2652,2979,3332 ⋆ a(n) = d(n) / 2, where d = A026040. ● a(n) = n * (n ^ 2 - 3 * n + 14) / 6. - _ Vincenzo Librandi _ , Oct 17 2013 ●

► [A082296] 12,20,34,42,56,64,78,86,100,108,122,130,144,152,166,174,188,196,210,218,232,240,254,262,276 ⋆ Solutions to 13 ^ x + 17 ^ x == 19 mod 23. ● a(n) = (- 1 - 3 * (- 1) ^ n + 22 * n) / 2. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n >3. ●

► [A229355] 12,20,44,122,392,1370,5024,18962,72872,283370,1110704,4377602,17320952,68727770,273267584,1088189042,4338210632,17309402570,69107683664,276041741282,1103001557912,4408513155770,17623579686944,70462912522322,281757456578792 ⋆ Total sum of n - th powers of parts in all partitions of 4. ● a(n) = 7 + 3 * 2 ^ n + 3 ^ n + 4 ^ n. ●

► [A137480] 12,21,48,84,192,336,768,1344,3072,5376,12288,21504,49152,86016,196608,344064,786432,1376256,3145728,5505024,12582912,22020096,50331648,88080384,201326592 ⋆ a(n)=4a(n - 2). ● a(n) = - (9 / 4) * sqrt(2) * (1 / 2) ^ (- 1 / 2 * (- 1) ^ n) * (- 2) ^ n + (33 / 4) * 2 ^ n * sqrt(2) * (1 / 2) ^ (- (1 / 2) * (- 1) ^ n) - _ Alexander R. Povolotsky _ , Apr 25 2008 ●

► [A098955] 1,12,22,32,42,52,62,72,82,92,103,113,123,133,143,153,163,173,183,193,203,213,223,233,243 ⋆ Numbers with property that the last digit is the length of the number (written in base 10). ● a(n) = 10(n - 1) + 2 = 10n - 8 for n=2,...,10, ● a(n) = 10(n - 1) + 3 = 10n - 7 for n=11,...,100, ● a(n) = 10(n - 1) + 4 = 10n - 6 for n=101,...,1000, and so on, ● a(n) = 10(n - 1) + k + 1 = 10n - (9 - k) for 10 ^ (k - 1) < n <= 10 ^ k, up to ● a(n) = 10(n - 1) + 9 = 10n - 1 for n=10 ^ 7 + 1,...,10 ^ 8. - _ M. F. Hasler _ , Jan 06 2013 ●

► [A285470] 12,22,32,42,52,62,72,82,92,120,121,122,123,124,125,126,127,128,129,220,221,222,223,224,225 ⋆ Numbers k where "2" appears as the second digit of the decimal representation. ● a(10 * n + j) = 10 * a(n) + j for 0<=j<=9 and n >= 1. ●

► [A014633] 0,12,22,70,92,176,210,330,376,532,590,782,852,1080,1162,1426,1520,1820,1926,2262,2380,2752,2882,3290,3432 ⋆ Even pentagonal numbers. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). ● a(n) = 48 + 2 * a(n - 2) - a(n - 4). ● a(n) = 1 / 8 * (1 - 3 * (- 1) ^ (n + 1) + 12 * (n + 1)) * (1 - (- 1) ^ (n + 1) + 4 * (n + 1)).(End) ●

► [A228157] 12,23,34,45,56,67,78,89,101,112,123,134,145,156,167,178,189,201,212,223,234,245,256,267,278 ⋆ Numbers n which are anagrams of n + 9. ● a(n) = a(n - 1) + a(n - 9) - a(n - 10) for n > 10. ●

► [A127421] 1,12,23,34,45,56,67,78,89,910,1011,1112,1213,1314,1415,1516,1617,1718,1819,1920,2021,2122,2223,2324,2425 ⋆ Numbers whose decimal expansion is a concatenation of 2 consecutive increasing nonnegative numbers. ● a(n) = n * 10 ^ (1 + floor(log(n + 1))) + n + 1, with n >= 0. - _ Paolo P. Lava _ , May 09 2008 ●

► [A001704] 12,23,34,45,56,67,78,89,910,1011,1112,1213,1314,1415,1516,1617,1718,1819,1920,2021,2122,2223,2324,2425,2526 ⋆ a(n) = n concatenated with n + 1. ● a(n) = n * 10 ^ (1 + floor(log(n + 1))) + n + 1, with n >= 1. - _ Paolo P. Lava _ , May 09 2008 ●

► [A341740] 12,23,37,54,74,97,123,152,184,219,257,298,342,389,439,492,548,607,669,734,802,873,947,1024,1104 ⋆ a(n) is the maximum value of the magic constant in a normal magic triangle of order n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n > 5. ● a(n) = (3 * n ^ 2 + n - 6) / 2 for n > 2. ●

► [A083683] 12,23,45,89,177,353,705,1409,2817,5633,11265,22529,45057,90113,180225,360449,720897,1441793,2883585,5767169,11534337,23068673,46137345,92274689,184549377 ⋆ a(n) = 11 * 2 ^ n + 1. ● a(n) = 2 * a(n - 1) - 1. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2), n>1. - _ Vincenzo Librandi _ , Nov 03 2011 ●

► [A294139] 0,0,12,23,70,105,210,282,468,590,880,1065,1482,1743,2310,2660,3400,3852,4788,5355,6510,7205,8602,9438,11100 ⋆ Sum of the areas of the distinct rectangles (and the areas of the squares on their sides) with positive integer sides such that L + W = n, W < L. ● a(n) = Sum _{ i=1..floor((n - 1) / 2) } 2 * i ^ 2 + 2 * (n - i) ^ 2 + i * (n - i). ● a(n) = n * (6 * n - 1) * (n - 2) / 8 for n even. ● a(n) = n * (3 * n - 1) * (n - 1) / 4 for n odd. ● a(n) = a(n - 1) + 3 * a(n - 2) - 3 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) + a(n - 6) - a(n - 7) for n > 7. ●

► [A015447] 1,1,12,23,155,408,2113,6601,29844,102455,430739,1557744,6295873,23431057,92685660,350427287,1369969547,5224669704,20294334721,77765701465,301003383396,1156426099511,4467463316867,17188150411488 ⋆ Generalized Fibonacci numbers: a(n) = a(n - 1) + 11 * a(n - 2). ● a(n) = (((1 + 3 * sqrt(5)) / 2) ^ (n + 1) - ((1 - 3 * sqrt(5)) / 2) ^ (n + 1)) / (3 * sqrt(5)). ● a(n - 1) = (1 / 3) * (- 1) ^ n * Sum _{ i=0..n } (- 3) ^ i * Fibonacci(i) * C(n, i). - _ Benoit Cloitre _ , Mar 06 2004 ● a(n) = (Sum _{ 1<=k<=n + 1, k odd } C(n + 1,k) * 45 ^ ((k - 1) / 2)) / 2 ^ n. - _ Vladimir Shevelev _ , Feb 05 2014 ●

► [A119588] 12,24,25,36,48,50,56,60,72,75,84,91,96,100,108,110,112,120,132,144,150,153,156,168,175 ⋆ Numbers n such that the number of divisors of Fibonacci(n), tau(Fibonacci(n)), is not a perfect power of 2. ● a(n) = { k: tau(Fibonacci(k)) != 2 ^ i for all i } . ●

► [A008594] 0,12,24,36,48,60,72,84,96,108,120,132,144,156,168,180,192,204,216,228,240,252,264,276,288 ⋆ Multiples of 12: a(n) = 12 * n. ● a(n) = 12 * n. a(n) = 2 * a(n - 1) - a(n - 2) for n>1. G.f.: 12 * x / (1 - x) ^ 2. - _ Vincenzo Librandi _ , Jun 11 2011 ●

► [A019550] 12,24,36,48,510,612,714,816,918,1020,1122,1224,1326,1428,1530,1632,1734,1836,1938,2040,2142,2244,2346,2448,2550 ⋆ a(n) is the concatenation of n and 2n. ● a(n) = n * 10 ^ floor(log _ 10(2 * n) + 1) + 2 * n. - _ Paolo P. Lava _ , Mar 24 2010 ● a(n + 2) - 2 * a(n + 1) + a(n) = 45 * 10 ^ (2 * k + 1) if n = 5 * 10 ^ k - 2, 90 * 10 ^ k - 450 * 10 ^ (2 * k) if n = 5 * 10 ^ k - 1, 0 otherwise. (End) ●

► [A081808] 12,24,48,96,192,384,768,1536,3072,6144,12288,24576,49152,98304,196608,393216,786432,1572864,3145728,6291456,12582912,25165824,50331648,100663296,201326592 ⋆ Numbers n such that the largest prime power in the factorization of n equals phi(n). ● a(n) = 3 * 2 ^ (n + 1). ●

► [A260261] 0,1,12,24,48,97,188,199,211,233,255,277,299,322,355,388,422,466,511,566,622,688,755,833,922 ⋆ Concatenation of their first digits yields the difference of two subsequent terms, a(1)=1. This is the lexicographically first infinite sequence with this property. ● a(10 ^ 7)=178567225. ●

► [A056490] 0,0,0,0,0,12,24,132,240,900,1560,4980,8400,24612,40824,113652,186480,502500,818520,2158260,3498000,9087012,14676024,37728372,60780720 ⋆ Number of periodic palindromes using exactly four different symbols. ● a(n) = (k! / 2) * (S2(floor((n + 1) / 2),k) + S2(ceiling((n + 1) / 2),k)), with k=4 different colors used and where S2(n,k) is the Stirling subset number A008277. - _ Robert A. Russell _ , Jun 05 2018 ●

► [A042851] 1,1,12,25,37,62,99,161,1226,9969,11195,32359,75913,108272,292457,400729,5902663,6303392,18509447,24812839,68135125,161083089,229218214,194828801,14193019821 ⋆ Denominators of continued fraction convergents to sqrt(956). ● a(n) = 153518047257598 * a(n - 32) - a(n - 64) for n>63. - _ Vincenzo Librandi _ , Jan 31 2014 ●

► [A041280] 12,25,37,99,235,569,804,2177,53052,108281,161333,430947,1023227,2477401,3500628,9478657,230988396,471455449,702443845,1876343139,4455130123,10786603385,15241733508,41270070401,1005723423132 ⋆ Numerators of con

tinued fraction convergents to sqrt(153). ● a(n) = 4354 * a(n - 8) - a(n - 16). - _ Wesley Ivan Hurt _ , Oct 19 2021 ●

▶ [A132754] 0,12,25,39,54,70,87,105,124,144,165,187,210,234,259,285,312,340,369,399,430,462,495,529,564 ⋆ a(n) = n * (n + 23) / 2. ● a(n) = n * (n + 23) / 2. ● a(n) = n + a(n - 1) + 11, with a(0)=0. - _ Vincenzo Librandi _ , Aug 03 2010 ● a(0)=0, a(1)=12, a(2)=25, a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Jun 21 2011 ● a(n) = 12 * n - floor(n / 2) + floor(n ^ 2 / 2) . - _ Wesley Ivan Hurt _ , Jun 15 2013 ●

▶ [A363378] 12,25,41,68,105,152,210,280,363,460,572,700,845,1008,1190,1392,1615,1860,2128,2420,2737,3080,3450,3848,4275 ⋆ Third Lie - Betti number of a cycle graph on n vertices. ● a(3) = 12, a(4) = 25, a(5) = 41, a(n) = n * (n + 11) * (n - 2) / 6 for n >= 6. ●

▶ [A224669] 12,25,41,70,115,189,308,501,813,1318,2135,3457,5596,9057,14657,23718,38379,62101,100484,162589,263077,425670,688751,1114425,1803180 ⋆ Number of (n + 1) X 2 0..2 matrices with each 2 X 2 subblock idempotent. ● a(n) = -4 + (2 ^ (- 1 - n) * ((1 - sqrt(5)) ^ n * (- 19 + 13 * sqrt(5)) + (1 + sqrt(5)) ^ n * (19 + 13 * sqrt(5)))) / sqrt(5). ●

▶ [A195143] 0,1,12,25,48,73,108,145,192,241,300,361,432,505,588,673,768,865,972,1081,1200,1321,1452,1585,1728 ⋆ a(n) = n - th concentric 12 - gonal number. ● a(n) = 3 * n ^ 2 + (- 1) ^ n - 1. ● a(n) = - a(n - 1) + 6 * n ^ 2 - 6 * n + 1. (End) ● a(n) = Sum _{ k=1..n } (2 * (- 1) ^ (n - k + 1) + 3 * (2 * k - 1)), n>0 , a(0) = 0. - _ L. Edson Jeffery _ , Sep 14 2014 ●

▶ [A280321] 1,12,25,49,81,121,169,225,289,361,441,529,625,729,841,961,1089,1225,1369,1521,1681,1849,2025,2209,2401 ⋆ Number of 2 X 2 matrices with all elements in { 0,..,n } having determinant = n * permanent. ● a(n + 1) = (((n - 2) * a(n)) / (n - 1)) + ((12 * (n) ^ 2 - 12 * (n) + 1) / (n - 1)) for n>=1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>4. ●

▶ [A198274] 12,25,51,103,207,415,831,1663,3327,6655,13311,26623,53247,106495,212991,425983,851967,1703935,3407871,6815743,13631487,27262975,54525951,109051903,218103807 ⋆ a(n) = 13 * 2 ^ n - 1. ● a(n + 1) = 2 * a(n) + 1. ●

▶ [A229447] 12,25,53,109,212,387,665,1083,1684,2517,3637,5105,6988,9359,12297,15887,20220,25393,31509,38677,47012,56635,67673,80259,94532 ⋆ Number of 4 X n 0..2 arrays with horizontal differences mod 3 never 1, vertical differences mod 3 never - 1, and rows and columns lexicographically nondecreasing. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

▶ [A292493] 1,1,12,25,61,266,963,3053,10220,35413,120345,405682,1376119,4676201,15859212,53768225,182400581,618792826,2098887003,7119249973,24149097580,81915342653,277858469505,942504046562,3197013067439 ⋆ p - INVERT of the odd positive integers, where p(S) = 1 + S - 3 S ^ 2. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) + 11 * a(n - 3) + a(n - 4) for n >= 5. ●

▶ [A041284] 12,25,112,249,6088,12425,55788,124001,3031812,6187625,27782312,61752249,1509836288,3081424825,13835535588,30752496001,751895439612,1534543375225,6890068940512,15314681256249 ⋆ Numerators of continued fraction convergents to sqrt(155). ● a(n) = 498 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Nov 01 2013 ●

▶ [A171069] 0,1,1,12,25,169,480,2521,8425,38988,142129,615889,2352000,9845809,38543569,158429388,628446025,2558296441,10219534560,41389108489,165953373625,670283913612,2692893971041,10860865199521,43679923392000 ⋆ G.f. - x * (x - 1) * (1 + x) / (1 - x - 12 * x ^ 2 - x ^ 3 + x ^ 4). ● a(n)= + a(n - 1) + 12 * a(n - 2) + a(n - 3) - a(n - 4). ●

▶ [A041286] 12,25,612,1249,30588,62425,1528788,3120001,76408812,155937625,3818911812,7793761249,190869181788,389532124825,9539640177588,19468812480001,476791139697612,973051091875225,23830017344703012 ⋆ Numerators of continued fraction convergents to sqrt(156). ● a(n) = 50 * a(n - 2) - a(n - 4). - _ Vincenzo Librandi _ , Nov 01 2013 ● a(n) = (12 + sqrt(13) + (12 - sqrt(13)) * (- 1) ^ n) * cosh(n * arccosh(25) / 2) / 2 + sqrt(3) * (1 + sqrt(13) + (sqrt(13) - 1) * (- 1) ^ n) * sinh(n * arccosh(25) / 2). - _ Stefano Spezia _ , Jul 05 2022 ●

▶ [A184826] 12,26,40,53,67,81,96,109,123,137,150,164,179,192,205,219,233,246,261,275,289,302,316,330,344 ⋆ a(n) = n + floor(n * t) + floor(n * t ^ 2) + floor(n * t ^ 3) where t is the tetranacci constant. ● a(n) = n + floor(n * q / p) + floor(n * r / p) + floor(n * s / p), where p=t, q=t ^ 2, r=t ^ 3, s=t ^ 4, and t is the tetranacci constant. ●

▶ [A119412] 0,12,26,42,60,80,102,126,152,180,210,242,276,312,350,390,432,476,522,570,620,672,726,782,840 ⋆ a(n) = n * (n + 11). ● a(n) = 2 * a(n - 1) - a(n - 2) + 2 with a(0)=0, a(1)=12. - _ Vincenzo Librandi _ , Aug 01 2010 ●

▶ [A105814] 12,26,42,60,80,102,126,152,180,1110,1232,1356,1482,1610,1740,1872,2006,2142,2280,2420,2562,2706,2852,3000,3150 ⋆ a(n) = n ^ 2 + (n concatenated with n). ● a(n) = n ^ 2 + n * (1 + 10 ^ (1 + floor(log _ 10(n)))). - _ Robert Israel _ , Jul 30 2015 ●

▶ [A151542] 0,12,27,45,66,90,117,147,180,216,255,297,342,390,441,495,552,612,675,741,810,882,957,1035,1116 ⋆ Generalized pentagonal numbers: a(n) = 12 * n + 3 * n * (n - 1) / 2. ● a(n) = a(n - 1) + 3 * n + 9 (with a(0)=0). - _ Vincenzo Librandi _ , Nov 26 2010 ● a(n) = 3 * n * (n + 7) / 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A184838] 12,28,42,58,72,88,103,117,132,147,162,178,192,208,221,237,252,267,282,297,312,328,341,357,371 ⋆ a(n) = n + floor(n * t) + floor(n * t ^ 2) + floor(n * t ^ 3) + floor(n / t), where t is the pentanacci constant. ● a(n) = n + floor(n * p / q) + floor(n * r / q) + floor(n * s / q) + floor(n * u / q), where p=t, q=t ^ 2, r=t ^ 3, s=t ^ 4, u=t ^ 5, and t is the pentanacci constant. ●

▶ [A097427] 12,28,78,153,380,530,907,1134,1661,2642,3019,4300,5281,5808,6939,8824,10935,11689,14102,15836,16741,19606,21642,24884,29559 ⋆ Integer part of the area of circles with prime radii. ● a(n) = floor(Pi * prime(n) ^ 2). - _ Michel Marcus _ , Mar 11 2015 ●

▶ [A144565] 12,30,35,57,110,130,170,190,230,290,310,370,410,430,447,453,459,561,567,671,730,779,783,789,897 ⋆ a(n) is the smallest composite number > a(n - 1) that contains the n - th prime as a substring. ● a(n) <= 10 * n. [_ Reinhard Zumkeller _ , May 16 2010] ●

▶ [A019557] 1,12,30,48,66,84,102,120,138,156,174,192,210,228,246,264,282,300,318,336,354,372,390,408,426 ⋆ Coordination sequence for G _ 2 lattice. ● a(n) = 18 * n - 6, n >= 1; G.f.: (1 + 10 * x + 7 * x ^ 2) / (1 - x) ^ 2. ●

▶ [A131874] 1,12,30,55,87,126,172,225,285,352,426,507,595,690,792,901,1017,1140,1270,1407,1551,1702,1860,2025,2197 ⋆ a(n) = (7 * n ^ 2 + 15 * n + 2) / 2. ● a(n) = a(n - 1) + 7 * n + 4, (with a(0)=1). - _ Vincenzo Librandi _ , Nov 23 2010 ● a(n) = (2 + 15 * n + 7 * n ^ 2) / 2; ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3); ●

▶ [A111396] 0,12,30,55,88,130,182,245,320,408,510,627,760,910,1078,1265,1472,1700,1950,2223,2520,2842,3190,3565,3968 ⋆ a(n) = n * (n + 7) * (n + 8) / 6. ● a(n) = binomial(n + 8,3) - 2 * binomial(n + 8,2). - _ Zerinvary Lajos _ , Nov 25 2006, corrected by _ R. J. Mathar _ , Mar 15 2011 ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Vincenzo Librandi _ , Jun 27 2012 ●

▶ [A120090] 12,30,56,90,132,154,182,208,234,240,306,340,374,380,408,418,456,462,494,546,552,598,644,650,690 ⋆ Numbers whose square is the perimeter of a primitive Pythagorean triangle. ● a(n) = 2 * u * v, where u=sqrt(j / 2) and v=sqrt(j + k) { for coprime pairs(j,k) j>k with odd k such that pairs (u,v) are coprime with v odd } . ●

▶ [A280344] 0,12,30,56,90,132,182,240,306,380,462,552,650,756,870,992,1122,1260,1406,1560,1722,1892,2070,2256,2450 ⋆ Number of 2 X 2 matrices with all elements in { 0,...,n } with determinant = permanent ^ n. ● a(n) = (((n - 2) * a(n - 1)) / (n - 4)) - (6 * (3 * (n - 1) + 1) / (n - 4)) for n>=4. ● a(n) = 2 + 6 * n + 4 * n ^ 2 for n>0. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>3. ● a(n) = (2 * n + 1) * (2 * n + 2), n>0. ● a(n) = 2 * ((n + 1) ^ 2 + ((n + 1) * n)), n>0. ●

▶ [A301775] 0,12,30,74,200,522,1362,3572,9350,24474,64080,167762,439202,1149852,3010350,7881194,20633240,54018522,141422322,370248452,969323030,2537720634,6643838880,17393796002,45537549122 ⋆ Number of odd chordless cycles in the (2n + 1) - web graph. ● a(n) = 2 * a(n - 1) + a(n - 2) + 2 * a(n - 3) - a(n - 4) for n > 5. ●

▶ [A242371] 12,32,40,72,84,128,144,200,220,288,312,392,420,512,544,648,684,800,840,968,1012,1152,1200,1352,1404 ⋆ Modified eccentric connectivity index of the cycle graph with n vertices, C[n]. ● a(n) = 2 * n * (n - 1) if n is odd; and a(n) = 2 * n ^ 2 if n is even (n>2). ●

▶ [A305074] 12,32,52,72,92,112,132,152,172,192,212,232,252,272,292,312,332,352,372,392,412,432,452,472,492 ⋆ a(n) = 20 * n - 8 (n>=1). ● a(n) = 2 * a(n - 1) - a(n - 2) for n>2. ●

▶ [A166959] 12,32,56,76,100,120,144,164,188,208,232,252,276,296,320,340,364,384,408,428,452,472,496,516,540 ⋆ Numbers congruent to (12,32) mod 44. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3). ● a(n) = 22 * n - (- 1) ^ n - 11. ●

▶ [A134582] 0,12,32,60,96,140,192,252,320,396,480,572,672,780,896,1020,1152,1292,1440,1596,1760,1932,2112,2300,2496 ⋆ a(n) = (2 * n) ^ 2 - 4. ● a(n) = a(n - 1) + 8 * n - 4 (with a(1)=0). - _ Vincenzo Librandi _ , Nov 23 2010 ●

▶ [A081268] 1,12,32,61,99,146,202,267,341,424,516,617,727,846,974,1111,1257,1412,1576,1749,1931,2122,2322,2531,2749 ⋆ Diagonal of triangular spiral in A051682. ● a(n) = C(n, 0) + 11C(n, 1) + 9C(n, 2); binomial transform of (1, 11, 9, 0, 0, 0, ...). ● a(n) = (9n ^ 2 + 13n + 2) / 2. ● a(n) = 9 * n + a(n - 1) + 2 (with a(0)=1). - _ Vincenzo Librandi _ , Aug 08 2010 ●

▶ [A183682] 12,32,80,208,528,1360,3472,8912,22800,58448,149648,383440,982032,2515792,6443920,16507088,42282768,108311120,277442192,710686672,1820455440,4663202128,11945023888,30597832400,78377927952 ⋆ Number of (n + 1) X 3 binary arrays with every 2 X 2 subblock nonsingular. ● a(n) = (2 ^ (- 1 - n) * ((1 - sqrt(17)) ^ n * (- 19 + 5 * sqrt(17)) + (1 + sqrt(17)) ^ n * (19 + 5 * sqrt(17)))) / sqrt(17). ●

▶ [A194644] 12,32,90,256,732,2102,6060,17536,50922,148352,433500,1270246,3731532,10987232,32418810,95835136,283784412,841611542,2499330540,7431221056,22118855562,65898914432,196498594140,586358987206,1750864725132 ⋆ Number of ways to place 2n nonattacking kings on a 4 X 2n cylindrical chessboard. ● a(n) = 2 * 3 ^ n + 2 * ((3 + sqrt(5)) / 2) ^ n + 2 * ((3 - sqrt(5)) / 2) ^ n. ●

▶ [A102091] 12,32,108,392,1452,5408,20172,75272,280908,1048352,3912492,14601608,54493932,203374112,759002508,2832635912,10571541132,39453528608,147242573292,549516764552,2050824484908,7653781175072,28564300215372,106603419686408,397849378530252 ⋆ Number of perfect matchings in the C _{ 2n } X P _ 3 graph (C _{ 2n } is the cycle graph on 2n vertices and P _ 3 is the path graph on 3 vertices). ● a(n) = 5 * a(n - 1) - 5 * a(n - 2) + a(n - 3) with a(1)=12 , a(2)=32 and a(3)=108. ● a(n) = 2 * (2 + (2 - sqrt(3)) ^ n + (2 + sqrt(3)) ^ n). - _ Colin Barker _ , Nov 03 2016 ●

▶ [A372026] 12,33,51,86,116,147,178,210,242,274,306,338,370,402,434,466,498,530,562,594,626,658,690,722,754 ⋆ Minimum second Zagreb index of maximal 2 - degenerate graphs with n vertices. ● a(n) = 32 * n - 110 for n>8. ● a(n) = 2 * a(n - 1) - a(n - 2) for n > 10. ●

▶ [A063296] 1,12,33,55,77,99,121,143,165,187,209,229,253,275,297,317,341,361,385,405,429,449,473,491,517 ⋆ Dimension of the space of weight n cuspidal newforms for Gamma _ 1(23). ● a(n) = a(n - 4) + a(n - 6) - a(n - 10) for n>13. ●

▶ [A372027] 12,33,61,96,135,181,233,291,355,425,501,583,671,765,865,971,1083,1201,1325,1455,1591,1733,1881,2035,2195 ⋆ Maximum second Zagreb index of maximal outerplanar graphs with n vertices. ● a(n) = 3 * n ^ 2 + n - 19 when n is not 3 or 6. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n > 9. ●

▶ [A051624] 0,1,12,33,64,105,156,217,288,369,460,561,672,793,924,1065,1216,1377,1548,1729,1920,2121,2332,2553,2784 ⋆ 12 - gonal (or dodecagonal) numbers: a(n) = n * (5 * n - 4). ● a(n) = Sum _{ k=0..n - 1 } 10 * k + 1. - _ Klaus Brockhaus _ , Nov 20 2008 ● a(n) = 10 * n + a(n - 1) - 9 (with a(0)=0). - _ Vincenzo Librandi _ , Aug 06 2010 ● a(10 * a(n) + 46 * n + 1) = a(10 * a(n) + 46 * n) + a(10 * n + 1). - _ Vladimir Shevelev _ , Jan 24 2014 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3), a(0)=0, a(1)=1, a(2)=12. - _ G. C. Greubel _ , Jul 31 2015 ● a(n) + 4 * (n - 1) ^ 2 = (3 * n - 2) ^ 2. Let P(k,n) be the n - th k - gonal number. Then, in general, P(4k,n) + (k - 1) ^ 2 * (n - 1) ^ 2 = (k * n - k + 1) ^ 2. - _ Charlie Marion _ , Feb 04 2020 ● a(n) = (3 * n - 2) ^ 2 - (2 * n - 2) ^ 2 . In general, if we let P(k,n) = the n - th k - gonal number, then P(4k,n) = (k * n - (k - 1)) ^ 2 - ((k - 1) * n - (k - 1)) ^ 2. - _ Charlie Marion _ , Nov 11 2021 ●

▶ [A118337] 0,12,33,69,133,252,460,832,1525,2737,4905,8944,16008,28644,52185,93357,167005,304212,544180,973432,1773133,3171769,5673633,10334632,18486

480 ⋆ Nonnegative values x of solutions (x, y) to the Diophantine equation x ^ 2 + (x + 23) ^ 2 = y ^ 2. ● a(n) = 6 * a(n - 3) - a(n - 6) + 46 for n > 6; a(1)= 0, a(2)=12, a(3)=33, a(4)=69, a(5)=133, a(6)=252. ●

▶ [A117476] 12,33,133,252,832,1525,4905,8944,28644,52185,167005,304212,973432,1773133,5673633,10334632,33068412,60234705,192736885,351073644,1123352944,2046207205,6547380825,11926169632,38160932052 ⋆ The values of a in a ^ 2 + b ^ 2 = c ^ 2 where b - a = 23 and gcd(a,b,c)=1. ● a(1)=12, a(2)=33, a(3)=133 , a(4)=252, a(n) = 6 * a(n - 2) - a(n - 4) + 46. ●

▶ [A141694] 12,34,56,78,100,122,144,166,188,210,232,254,276,298,320,342,364,386,408,430,452,474,496,518,540 ⋆ a(n) = 22 * n + 12. ● a(n) = 2 * a(n - 1) - a(n - 2). ●

▶ [A069125] 1,12,34,67,111,166,232,309,397,496,606,727,859,1002,1156,1321,1497,1684,1882,2091,2311,2542,2784,3037,3301 ⋆ a(n) = (11 * n ^ 2 - 11 * n + 2) / 2. ● a(n) = 1 + Sum _{ j=0..n - 1 } (11 * j). - Xavier Acloque, Oct 22 2003 ● a(n) = 11 * n + a(n - 1) - 11 with n>1, a(1)=1. - _ Vincenzo Librandi _ , Aug 08 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3); a(0)=1, a(1)=12, a(2)=34 . - _ Harvey P. Dale _ , Jun 25 2011 ●

▶ [A142245] 0,12,34,68,124,214,360,596,978,1596,2596,4214,6832,11068,17922,29012,46956,75990,122968,198980,321970,520972,842964,1363958,2206944 ⋆ Expansion of 2 * x * (6 + 5 * x) / ((1 - x) * (1 - x - x ^ 2)). ● a(n) = (1 / 5) * (- 110 + (55 - 23 * sqrt(5)) * ((1 - sqrt(5)) / 2) ^ n + ((1 + sqrt(5)) / 2) ^ n * (55 + 23 * sqrt(5))). - _ Colin Barker _ , Nov 13 2017 ●

▶ [A139635] 1,12,34,78,166,342,694,1398,2806,5622,11254,22518,45046,90102,180214,360438,720886,1441782,2883574,5767158,11534326,23068662,46137334,92274678,184549366 ⋆ Binomial transform of [1, 11, 11, 11, ...]. ● a(n) = 11 * 2 ^ (n - 1) - 10. - _ Emeric Deutsch _ , May 03 2008 ● a(n) = 2 * a(n - 1) + 10, with n > 1, a(1)=1. - _ Vincenzo Librandi _ , Nov 24 2010] ● a(n) = 3 * a(n - 1) - 2 * a(n - 2). ●

▶ [A199114] 12,34,100,298,892,2674,8020,24058,72172,216514,649540,1948618,5845852,17537554,52612660,157837978,473513932,1420541794,4261625380,12784876138,38354628412,115063885234,345191655700,1035574967098,3106724901292 ⋆ a(n) = 11 * 3 ^ n + 1. ● a(n) = 3 * a(n - 1) - 2. ● a(n) = 4 * a(n - 1) - 3 * a(n - 2). ●

▶ [A083101] 1,12,34,188,716,3312,13784,60688,259216,1125312,4842784,20938688,90305216,389997312,1683046784,7266066688,31362601216,135385869312,584397750784,2522654194688,10889285897216,47005113741312 ⋆ a(n) = 2 * a(n - 1) + 10 * a(n - 2). ● a(n) = (1 / 2) * (1 + sqrt(11)) ^ n - (1 / 2) * sqrt(11) * (1 - sqrt(11)) ^ n + (1 / 2) * (1 - sqrt(11)) ^ n + (1 / 2) * (1 + sqrt(11)) ^ n * sqrt(11), with n >= 0. - _ Paolo P. Lava _ , Jun 10 2008 ●

▶ [A133294] 1,1,12,34,188,716,3312,13784,60688,259216,1125312,4842784,20938688,90305216,389997312,1683046784,7266066688,31362601216,135385869312,584397750784,2522654194688,10889285897216,47005113741312 ⋆ a(n) = 2 * a(n - 1) + 10 * a(n - 2), a(0)=1, a(1)=1. ● a(n) = (1 / 2) * (1 + sqrt(11)) ^ n + (1 / 2) * (1 - sqrt(11)) ^ n. - _ Paolo P. Lava _ , Jun 10 2008 ●

▶ [A280364] 0,12,35,56,99,132,195,240,323,380,483,552,675,756,899,992,1155,1260,1443,1560,1763,1892,2115,2256,2499 ⋆ Number of 2 X 2 matrices with all elements in { 0,...,n } with permanent = determinant ^ n. ● a(n - 1) = (((- 2 * (n - 1) - 1) * a(n - 1)) / (2 * (n - 1) - 1)) + 8 * (n - 1) ^ 2 + 10 * (n - 1) + 3 for n>=2, with a(0)=0. ● a(n) = 4 * n ^ 2 + 8 * n + 3 for n>0 and even. ● a(n) = 4 * n ^ 2 + 6 * n + 2 for n odd. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n>5. ●

▶ [A033570] 1,12,35,70,117,176,247,330,425,532,651,782,925,1080,1247,1426,1617,1820,2035,2262,2501,2752,3015,3290,3577 ⋆ Pentagonal numbers with odd index: a(n) = (2 * n + 1) * (3 * n + 1). ● a(n) = a(n - 1) + 12 * n - 1 for n > 0, a(0)=1. - _ Vincenzo Librandi _ , Nov 17 2010 ● a(n) = Sum _{ i=1..2 * (n + 1) - 1 } 4 * (n + 1) - 2 - i. - _ Wesley Ivan Hurt _ , Mar 18 2014 ●

▶ [A163661] 0,12,35,75,138,230,357,525,740,1008,1335,1727,2190,2730,3353,4065,4872,5780,6795,7923,9170,10542,12045,13685,15468 ⋆ a(n) = n * (2 * n ^ 2 + 5 * n + 17) / 2. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ●

▶ [A142074] 12,35,81,147,213,321,411,477,589,677,783,873,987,1113,1179,1257,1447,1539,1667,1797,1909,2001,2127,2201,2457 ⋆ Prime number superposition a(n) = 10 * A008578(2n - 1) + A008578(2n). ● a(n) = 10 * prime(2n - 2) + prime(2n - 1), n>1. ●

▶ [A195858] 1,12,35,83,183,391,823,1719,3575,7415,15351,31735,65527,135159,278519,573431,1179639,2424823,4980727,10223607,20971511,42991607,88080375,180355063,369098743 ⋆ a(n) = T(10, n), array T given by A047858. ● a(n) = 2 ^ (n - 1) * (n + 20) - 9. ● a(0)=1, a(1)=12, a(2)=35, a(n) = 5 * a(n - 1) - 8 * a(n - 2) + 4 * a(n - 3). ●

▶ [A322411] 12,36,56,80,93,117,137,161,185,205,229,242,266,286,310,330,354,367,391,411,435,459,479,503,516 ⋆ Compound tribonacci sequence with a(n) = A278040(A278041(n)), for n >= 0. ● a(n) = A(C(n)) = A(C(n) + 1) - 2 = 4 * A(n) + 3 * B(n) + 2 * n + 8, for n >= 0, with A = A278040 and C = A278041. For a proof see the W. Lang link in A278040, Proposition 9, eq. (50). ●

▶ [A063298] 1,12,36,59,82,105,128,151,174,197,220,244,266,289,312,336,358,382,404,428,450,474,496,521,542 ⋆ Dimension of the space of weight n cuspidal newforms for Gamma _ 1(25). ● a(n) = a(n - 4) + a(n - 6) - a(n - 10) for n>13. ●

▶ [A073762] 12,36,60,84,108,132,156,180,204,228,252,276,300,324,348,372,396,420,444,468,492,516,540,564,588 ⋆ a(n) = 24 * n - 12. ● a(n) = 24 * n - 12. - _ Max Alekseyev _ , Mar 03 2007 ●

▶ [A371912] 12,36,66,102,144,192,246,306,372,444,522,606,696,792,894,1002,1116,1236,1362,1494,1632,1776,1926,2082,2244 ⋆ Maximum Zagreb index of maximal 3 - degenerate graphs with n vertices. ● a(n) = 3 * (n - 1) ^ 2 + 9 * (n - 3). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n > 5. - _ Chai Wah Wu _ , Apr 16 2024 ●

▶ [A049598] 0,12,36,72,120,180,252,336,432,540,660,792,936,1092,1260,1440,1632,1836,2052,2280,2520,2772,3036,3312,3600 ⋆ 12 times triangular numbers. ● a(n) = 6 * n * (n + 1). ● a(n) = 12 * n + a(n - 1) (with a(0)=0). - _ Vincenzo Librandi _ , Aug 06 2010 ●

▶ [A342914] 1,12,36,73,123,186,262,351,453,568,696,837,991,1158,1338,1531,1737,1956,2188,2433,2691,2962,3246,3543,3853 ⋆ Number of grid points covered by a truncated triangle drawn on the hexagonal lattice with the short sides having length n and the long sides length 2 * n. ● a(n) = (13 * n ^ 2 + 9 * n + 2) / 2. ●

▶ [A152135] 12,36,74,134,216,328,470,650,868,1132,1442,1806,2224,2704,3246,3858,4540,5300,6138,7062,8072,9176,10374,11674,13076 ⋆ Maximal length of rook tour on an n X n + 4 board. ● a(n) = + 3 * a(n - 1) - 2 * a(n - 2) - 2 * a(n - 3) + 3 * a(n - 4) - a(n - 5). ● a(n) = 19 * n / 3 + 3 / 2 + 2 * n ^ 3 / 3 + 4 * n ^ 2 + (- 1) ^ n / 2. (End) ●

▶ [A212963] 0,0,0,12,36,84,156,264,408,600,840,1140,1500,1932,2436,3024,3696,4464,5328,6300,7380,8580,9900,11352,12936 ⋆ a(n) = number of ordered triples (w,x,y) such that w,x,y are all in { 0,...,n } and the numbers |w - x|, |x - y|, |y - w| are distinct. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - 2 * a(n - 3) + 3 * a(n - 4) - a(n - 5). ● a(n) = (2 * n ^ 3 - 3 * n ^ 2 - 2 * n + 3 * (n mod 2)) / 2. - _ Ayoub Saber Rguez _ , Dec 06 2021 ●

▶ [A172218] 1,12,36,100,213,408,712,1148,1745,2528,3524,4760,6263,8060,10178,12644,15485,18728,22400,26528,31139,36260,41918,48140,54953 ⋆ Number of ways to place 3 nonattacking nightriders on a 3 X n board. ● a(n) = (9n ^ 3 - 57 n ^ 2 + 210n - 344) / 2, n>=8. ●

▶ [A172212] 1,12,36,100,233,456,796,1280,1935,2788,3866,5196,6805,8720,10968,13576,16571,19980,23830,28148,32961,38296,44180,50640,57703 ⋆ Number of ways to place 3 nonattacking knights on a 3 X n board. ● a(n) = (9n ^ 3 - 45n ^ 2 + 122n - 144) / 2, n>=4. ●

▶ [A058880] 12,36,104,352,1172,4119,14572,52492,190652,699266,2581112,9587602,35791472,134219859,505290272,1908881998,7233629132,27487817244,104715393912,399822505942,1529755308212,5864062368274,22517998136936 ⋆ a(n) = (1 / (2n)) * Sum _{ d|n } phi(d) * 2 ^ (2n / d) + (2 ^ ((n - 4) / 2), if n is even). ● a(n) = (1 / (2n)) * Sum _{ d|n } phi(d) * 2 ^ (2n / d) + (2 ^ ((n - 4) / 2), if n is even). - _ Amiram Eldar _ , Aug 28 2019 ●

▶ [A238923] 12,36,144,540,2052,7776,29484,111780,423792,1606716,6091524,23094720,87558732,331960356,1258557264,4771552860,18090330372,68585649696,260027940204,985840769700,3737606129712,14170340698236,53723840483844 ⋆ Number of (n + 1) X (1 + 1) 0..3 arrays with no element greater than all horizontal neighbors or equal to all vertical neighbors. ● a(n) = (- 4) * (sqrt(3 / 7) * ((3 - sqrt(21)) / 2) ^ n - ((3 + sqrt(21)) / 2) ^ n)). ●

▶ [A005892] 1,12,37,76,129,196,277,372,481,604,741,892,1057,1236,1429,1636,1857,2092,2341,2604,2881,3172,3477,3796,4129 ⋆ Truncated square numbers: 7 * n ^ 2 + 4 * n + 1. ● a(n) = a(n - 1) + 14 * n - 3 (with a(0)=1). - _ Vincenzo Librandi _ , Nov 18 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A266398] 0,0,12,37,76,130,200,287,392,516,660,825,1012,1222,1456,1715,2000,2312,2652,3021,3420,3850,4312,4807,5336 ⋆ Number of orbits of Aut(Z ^ 7) as function of the infinity norm n of the representative lattice point of the orbit, when the cardinality of the orbit is equal to 13440. ● a(n) = (n ^ 3 + 30 * n ^ 2 - 97 * n + 66) / 6. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>4. ●

▶ [A041278] 12,37,900,2737,66588,202501,4926612,14982337,364502700,1108490437,26968273188,82013310001,1995287713212,6067876449637,147624322504500,448940843963137,10922204577619788,33215554576822501,808095514421359812,2457502097840901937 ⋆ Numerators of continued fraction convergents to sqrt(152). ● a(0)=12, a(1)=37, a(2)=900, a(3)=2737; for n>3, a(n)=74 * a(n - 2) - a(n - 4). [_ Harvey P. Dale _ , May 19 2011] ●

▶ [A212510] 0,0,0,0,12,38,81,185,336,549,900,1365,1944,2794,3822,5070,6720,8680,10935,13821,17100,20853,25410,30569,36288 ⋆ Number of (w,x,y,z) with all terms in { 1,...,n } and w<2x and y>3z. ● a(n) = 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4) - 4 * a(n - 5) + 2 * a(n - 7) - 2 * a(n - 9) + 4 * a(n - 11) + a(n - 12) - 2 * a(n - 13) - 2 * a(n - 14) + a(n - 16). ●

▶ [A213490] 0,0,0,0,0,12,38,92,160,286,422,632,870,1194,1542,2010,2502,3126,3788,4598,5446,6472,7532,8786,10092 ⋆ Number of (w,x,y) with all terms in { 0,..., n } and the numbers w,x,y,|w - x|,|x - y| distinct. ● a(n) = a(n - 1) + a(n - 2) - 2 * a(n - 5) + a(n - 8) + a(n - 9) - a(n - 10). ●

▶ [A154266] 12,39,66,93,120,147,174,201,228,255,282,309,336,363,390,417,444,471,498,525,552,579,606,633,660 ⋆ a(n) = 27 * n + 12. ● a(n) = 2 * a(n - 1) - a(n - 2). - _ Vincenzo Librandi _ , Feb 02 2012 ●

▶ [A236267] 1,12,39,82,141,216,307,414,537,676,831,1002,1189,1392,1611,1846,2097,2364,2647,2946,3261,3592,3939,4302,4681 ⋆ a(n) = 8n ^ 2 + 3n + 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Colin Barker _ , Jan 21 2014 ●

▶ [A033586] 0,12,40,84,144,220,312,420,544,684,840,1012,1200,1404,1624,1860,2112,2380,2664,2964,3280,3612,3960,4324,4704 ⋆ a(n) = 4 * n * (2 * n + 1). ● a(n) = 16 * n + a(n - 1) - 4 (with a(0)=0). - _ Vincenzo Librandi _ , Aug 05 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n >= 3. - _ Harvey P. Dale _ , May 10 2011 ● a(n) = Sum _{ i=3n..5n } i. ●

▶ [A211786] 1,12,40,96,187,324,514,768,1093,1500,1996,2592,3295,4116,5062,6144,7369,8748,10288,12000,13891,15972,18250,20736,23437 ⋆ n ^ 3 + floor(n ^ 3 / 2). ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - 2 * a(n - 3) + 3 * a(n - 4) - a(n - 5). ● a(n) = floor(3 * n ^ 3 / 2) = (6 * n ^ 3 + (- 1) ^ n - 1) / 4. [_ Bruno Berselli _ , May 06 2012] ●

▶ [A350124] 1,12,40,121,207,473,649,1142,1611,2401,2853,4647,5285,6879,8759,11452,12558,16739,18127,23353,27129,31171,33219,43573,47524 ⋆ a(n) = Sum _{ k=1..n } k ^ 2 * floor(n / k) ^ 3. ● a(n) = Sum _{ k=1..n } k ^ 2 * Sum _{ d|k } (d ^ 3 - (d - 1) ^ 3) / d ^ 2. ●

▶ [A228203] 12,40,220,768,14808,51700,285520,996852,19220772,67106560,370604740,1293913128,24948547248,87104263180,481044667000,1679498243292,32383195107132,113061266501080,624395607161260,2179987425879888,42033362300510088,146753436814138660 ⋆ x - values in the solution to x ^ 2 - 13y ^ 2 = 27. ● a(n) = 1298 * a(n - 4) - a(n - 8). ●

▶ [A270700] 12,42,78,114,150,186,222,258,294,330,366,402,438,474,510,546,582,618,654,690,726,762,798,834,870 ⋆ Triangular Star of David numbers (the figurate number of triangles framing a hexagram: a(0) = 12; thereafter a(n) = 36 * n + 6). ● a(0) = 12; thereafter, a(n) = 36 * n + 6. ● a(n) = 2 * a(n - 1) - a(n - 2) for n>2. - _ Colin Barker _ , Mar 22 2016 ●

► [A045945] 0,12,42,90,156,240,342,462,600,756,930,1122,1332,1560,1806,2070,2352,2652,2970,3306,3660,4032,4422,4830,5256 ⋆ Hexagonal matchstick numbers: a(n) = 3 * n * (3 * n + 1). ● a(n) = a(n - 1) + 6 * (3 * n - 1) (with a(0)=0). - _ Vincenzo Librandi _ , Nov 18 2010 ●

► [A009948] 1,12,42,96,170,264,378,516,674,852,1050,1272,1514,1776,2058,2364,2690,3036,3402,3792,4202,4632,5082,5556,6050 ⋆ Coordination sequence for alpha - Nd, Position Nd1. ● a(n) = (5 - (- 1) ^ n + 2 * (- i) ^ n + 2 * i ^ n + 42 * n ^ 2) / 4 for n>0, where i=sqrt(- 1). ● a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 4) - 2 * a(n - 5) + a(n - 6) for n>6. ●

► [A193068] 12,42,98,188,320,502,742,1048,1428,1890,2442,3092,3848,4718,5710,6832,8092,9498,11058,12780,14672,16742,18998,21448,24100 ⋆ Generating primitive Pythagorean triangles by using (n, n + 1) gives perimeters for each n. This sequence list the sum of these perimeters for each n triangles. ● a(n) = n * (4 * n ^ 2 + 15 * n + 17) / 3. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Vincenzo Librandi _ , Jul 04 2012 ●

► [A007586] 0,1,12,42,100,195,336,532,792,1125,1540,2046,2652,3367,4200,5160,6256,7497,8892,10450,12180,14091,16192,18492,21000 ⋆ 11 - gonal (or hendecagonal) pyramidal numbers: n * (n + 1) * (3 * n - 2) / 2. ● a(0)=0, a(1)=1, a(2)=12, a(3)=42; for n>3, a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Harvey P. Dale _ , Apr 09 2012 ● a(n) = Sum _{ i=0..n - 1 } (n - i) * (9 * i + 1), with a(0)=0. - _ Bruno Berselli _ , Feb 10 2014 ●

► [A228391] 1,12,42,100,196,339,538,804,1145,1570,2090,2714,3451,4310,5301,6433,7717,9160,10774,12566,14547,16725,19111,21714,24543 ⋆ Volume of elliptic cone (rounded down) with semi - minor axis = height = n and semi - major axis = 3 * n / 2. ● a(n) = floor(Pi * n ^ 3 / 2). ●

► [A334277] 12,42,156,582,2172,8106,30252,112902,421356,1572522,5868732,21902406,81740892,305061162,1138503756,4248953862,15857311692,59180292906,220863859932,824275146822,3076236727356,11480671762602,42846450323052,159905129529606,596774067795372 ⋆ Perimeters of almost - equilateral Heronian triangles. ● a(n) = 3 * ((2 + sqrt(3)) ^ n + (2 - sqrt(3)) ^ n). ● a(n) = 4 * a(n - 1) - a(n - 2). (End) ●

► [A122973] 1,12,42,162,642,2562,10242,40962,163842,655362,2621442,10485762,41943042,167772162,671088642,2684354562,10737418242,42949672962,171798691842,687194767362,2748779069442,10995116277762,43980465111042,175921860444162,703687441776642 ⋆ Number of vertices on the surface of an icosahedron. ● a(n) = 1 if n=0, 10 * 4 ^ (n - 1) + 2 otherwise. ●

► [A074356] 0,0,0,0,12,42,180,561,1833,5373,15798,44367,123561,336243,906054,2408094,6344832,16561824,42922602,110472933,282678423,719404803,1822117962,4594816221,11540742615 ⋆ Coefficient of q ^ 2 in nu(n), where nu(0)=1, nu(1)=b and, for n>=2, nu(n)=b * nu(n - 1) + lambda * (1 + q + q ^ 2 + ... + q ^ (n - 2)) * nu(n - 2) with (b,lambda)=(1,3). ● a(n) = 3 * a(n - 1) + 6 * a(n - 2) - 17 * a(n - 3) - 18 * a(n - 4) + 27 * a(n - 5) + 27 * a(n - 6) for n>7. ●

► [A062749] 12,43,108,228,431,753,1239,1944,2934,4287,6094,8460,11505,15365,20193,26160,33456,42291,52896,65524,80451,97977,118427,142152,169530 ⋆ Sixth column (r=5) of FS(3) staircase array A062745. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>5. ●

► [A296181] 12,44,95,166,256,367,497,647,816,1006,1215,1444,1692,1961,2249,2557,2884,3231,3598,3985,4392,4818,5264,5730,6215 ⋆ First point of the discrete Theodorus spiral in the fourth quadrant for the n - th revolution, for n >= 1. ● a(n) is the smallest index k for which KIV(k) = n, with KIV(k):= floor((phi(k) - 3 * Pi / 2) / (2 * Pi)) + 1, for k >= 1, where phi(k) is the polar angle of the point z _ k = sqrt(n) * exp(i * phi(k)) of the (outer) discrete Theodorus spiral. ●

► [A007899] 1,12,44,96,170,264,380,516,674,852,1052,1272,1514,1776,2060,2364,2690,3036,3404,3792,4202,4632,5084,5556,6050 ⋆ Coordination sequence for hexagonal close - packing. ● a(n) = floor(21 * n ^ 2 / 2) + 2, for n>= 1. ● a(0)=1, a(1)=12, a(2)=44, a(3)=96, a(4)=170, a(n)=2 * a(n - 1) - 2 * a(n - 3) + a(n - 4) . - _ Harvey P. Dale _ , Feb 15 2014 ● a(n) = (21 / 2) * n ^ 2 + 7 / 4 + (1 / 4) * (- 1) ^ n - 0 ^ n. - _ Eric Simon Jacob _ , Feb 12 2023 ●

► [A100156] 1,12,44,108,215,376,602,904,1293,1780,2376,3092,3939,4928,6070,7376,8857,10524,12388,14460,16751,19272,22034,25048,28325 ⋆ Structured truncated tetrahedral numbers. ● a(n) = (1 / 6) * (11 * n ^ 3 - 3 * n ^ 2 - 2 * n). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4); a(0)=1, a(1)=12, a(2)=44, a(3)=108. ●

► [A350116] 0,12,45,110,220,390,637,980,1440,2040,2805,3762,4940,6370,8085,10120,12512,15300,18525,22230,26460,31262,36685,42780,49600 ⋆ Number of ways to partition the set of vertices of a convex { n + 8 }- gon into 3 non - intersecting polygons. ● a(n) = n * (n + 1) * (n + 7) * (n + 8) / 12. ●

► [A015237] 0,1,12,45,112,225,396,637,960,1377,1900,2541,3312,4225,5292,6525,7936,9537,11340,13357,15600,18081,20812,23805,27072 ⋆ a(n) = (2 * n - 1) * n ^ 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + 12, a(0)=1, a(1)=1, a(2)=12. - _ G. C. Greubel _ , Jul 31 2015 ● a(n) = Sum _{ i=0..n - 1 } n * (4 * i + 1) for n>0. - _ Bruno Berselli _ , Sep 08 2015 ● a(n) = Sum _{ i=n ^ 2 - n + 1..n ^ 2 + n - 1 } i. - _ Wesley Ivan Hurt _ , Dec 27 2016 ●

► [A199211] 12,45,177,705,2817,11265,45057,180225,720897,2883585,11534337,46137345,184549377,738197505,2952790017,11811160065,47244640257,188978561025,755914244097,3023656976385,12094627905537,48378511622145 ⋆ a(n) = 11 * 4 ^ n + 1. ● a(n) = 4 * a(n - 1) - 3. ● a(n) = 5 * a(n - 1) - 4 * a(n - 2). ●

► [A331764] 0,1,12,45,225,396,960,1377,2541,5292,6525,11340,15600,18081,23805,34476,47937,53100,70785,84525,92016,117117,136161,168432,218880 ⋆ a(n) = ((p - 1) ^ 3 - (p - 1) ^ 2) / 4 where p is the n - th prime. ● a(n) == 0 (mod 3) for n >= 3. - _ Hugo Pfoertner _ , Aug 23 2021 ●

► [A100183] 1,12,46,116,235,416,672,1016,1461,2020,2706,3532,4511,5656,6980,8496,10217,12156,14326,16740,19411,22352,25576,29096,32925 ⋆ Structured hexagonal anti - prism numbers. ● a(n) = (1 / 6) * (13 * n ^ 3 - 9 * n ^ 2 + 2 * n). [Corrected by _ Luca Colucci _ , Mar 01 2011] ●

► [A022281] 0,12,47,105,186,290,417,567,740,936,1155,1397,1662,1950,2261,2595,2952,3332,3735,4161,4610,5082,5577,6095,6636 ⋆ a(n) = n * (23 * n + 1) / 2. ● a(n) = 23 * n + a(n - 1) - 11 for n>0, a(0)=0. - _ Vincenzo Librandi _ , Aug 04 2010 ●

► [A244803] 1,12,47,106,189,296,427,582,761,964,1191,1442,1717,2016,2339,2686,3057,3452,3871,4314,4781,5272,5787,6326,6889 ⋆ The 360 degree spoke (or ray) of a hexagonal spiral of Ulam. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>3. ●

► [A024183] 12,47,119,245,445,742,1162,1734,2490,3465,4697,6227,8099,10360,13060,16252,19992,24339,29355,35105,41657,49082,57454,66850,77350 ⋆ Second elementary symmetric function of 3,4,...,n + 3. ● a(n) = n * (n + 1) * (3 * n ^ 2 + 35 * n + 106) / 24. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Colin Barker _ , Aug 15 2014 ●

► [A051673] 0,1,12,47,120,245,436,707,1072,1545,2140,2871,3752,4797,6020,7435,9056,10897,12972,15295,17880,20741,23892,27347,31120 ⋆ Cubic star numbers: a(n) = n ^ 3 + 4 * Sum _{ i=0..n - 1 } i ^ 2. ● a(n) = n * (n * (7 * n - 6) + 2) / 3. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4); a(0)=0, a(1)=1, a(2)=12, a(3)=47. - _ Harvey P. Dale _ , Jul 22 2011 ●

► [A213493] 0,0,0,0,0,0,12,48,96,204,300,480,684,972,1260,1692,2124,2700,3288,4044,4812,5784,6744,7932,9144 ⋆ Number of (w,x,y) with all terms in { 0,...,n } and the numbers w,x,y,|w - x|,|x - y|,|y - w| distinct. ● a(n) = a(n - 1) + a(n - 2) - 2a(n - 5) + a(n - 8) + a(n - 9) - a(n - 10). ●

► [A135453] 0,12,48,108,192,300,432,588,768,972,1200,1452,1728,2028,2352,2700,3072,3468,3888,4332,4800,5292,5808,6348,6912 ⋆ a(n) = 12 * n ^ 2. ● a(n) = a(n - 1) + 24 * n - 12, n>0. - _ Vincenzo Librandi _ , Nov 24 2010 ●

► [A280058] 0,0,0,12,48,120,240,420,672,1008,1440,1980,2640,3432,4368,5460,6720,8160,9792,11628,13680,15960,18480,21252,24288 ⋆ Number of 2 X 2 matrices with entries in { 0,1,...,n } with determinant = permanent with no entries repeated. ● a(n) = 2 * ((n + 1) ^ 3 - 6 * (n + 1) ^ 2 + 11 * (n + 1) - 6), for n>0. ● a(n) == 12 (mod 12). ● a(n) = 2 * n * (n - 1) * (n - 2). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). (End) ●

► [A006564] 1,12,48,124,255,456,742,1128,1629,2260,3036,3972,5083,6384,7890,9616,11577,13788,16264,19020,22071,25432,29118,33144,37525 ⋆ Icosahedral numbers: a(n) = n * (5 * n ^ 2 - 5 * n + 2) / 2. ● a(n) = C(n + 2,3) + 8 * C(n + 1,3) + 6 * C(n,3). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) with a(0)=1, a(1)=12, a(2)=48, a(3)=124. - _ Harvey P. Dale _ , May 26 2011 ●

► [A292022] 12,48,132,288,540,912,1428,2112,2988,4080,5412,7008,8892,11088,13620,16512,19788,23472,27588,32160,37212,42768,48852,55488,62700 ⋆ a(n) = 4n(n ^ 2 + 2). ● a(n) = 4 * n * (n ^ 2 + 2). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ●

► [A059162] 12,48,144,384,960,2304,5376,12288,27648,61440,135168,294912,638976,1376256,2949120,6291456,13369344,28311552,59768832,125829120,264241152,553648128,1157627904,2415919104,5033164800 ⋆ A hierarchical sequence (S(W'2 { 3 }* c) - see A059126). ● a(n) = 3 * (2 ^ (2 + n) * (1 + n)). ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) for n>1. ●

► [A161171] 0,0,12,48,174,238,318,414,526,654,798,958,1134,1326,1534 ⋆ Erroneous version of A035008. ● a(n)= 8 (n - 4) ^ 2 + (n - 2) 16 + 46 + (n - 2) 24 for n > 4 ●

► [A221908] 1,12,48,234,1320,7806,46692,279978,1679664,10077750,60466236,362797122,2176782408,13060694094,78364164180,470184984666,2821109907552,16926659444838,101559956668524,609359740010610 ⋆ 6 ^ n + 6 * n. ● a(n) = 8 * a(n - 1) - 13 * a(n - 2) + 6 * a(n - 3). ●

► [A242026] 0,12,48,240,960,4032,16128,65280,261120,1047552,4190208,16773120,67092480,268419072,1073676288,4294901760,17179607040,68719214592,274876858368,1099510579200,4398042316800,17592181850112,70368727400448,281474959933440,1125899839733760 ⋆ Number of non - palindromic n - tuples of 4 distinct elements. ● a(n) = 2 ^ (n - 1) * (2 ^ (n + 1) + (- 1) ^ n - 3). ● a(n) = 4 * a(n - 1) + 4 * a(n - 2) - 16 * a(n - 3). - _ Colin Barker _ , Aug 12 2014 ●

► [A077612] 0,0,0,12,48,720,4320,60480,483840,7257600,72576000,1197504000,14370048000,261534873600,3661488230400,73229764608000,1171676233728000,25609494822912000,460970906812416000,10948059036794880000,218961180735897600000,5620003638888038400000 ⋆ Number of adjacent pairs of form (even,even) among all permutations of { 1,2,...,n } . ● a(n) = floor(n / 2) * floor(n / 2 - 1) * (n - 1)!. Proof: There are floor(n / 2) * floor(n / 2 - 1) pairs (r, s) with r and s even and distinct. For each pair, there are n - 1 places it can occur in a permutation and (n - 2)! possible arrangements of the other numbers. ●

► [A022282] 0,12,49,111,198,310,447,609,796,1008,1245,1507,1794,2106,2443,2805,3192,3604,4041,4503,4990,5502,6039,6601,7188 ⋆ a(n) = n * (25 * n - 1) / 2. ● a(n) = 25 * n + a(n - 1) - 13 for n>0, a(0)=0. - _ Vincenzo Librandi _ , Aug 04 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Wesley Ivan Hurt _ , Apr 23 2021 ●

► [A252178] 12,49,132,285,536,917,1464,2217,3220,4521,6172,8229,10752,13805,17456,21777,26844,32737,39540,47341,56232,66309,77672,90425,104676 ⋆ Number of length 2 + 2 0..n arrays with the sum of the maximum minus the minimum of adjacent triples multiplied by some arrangement of +- 1 equal to zero. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

► [A218832] 0,1,12,49,132,289,552,961,1560,2401,3540,5041,6972,9409,12432,16129,20592,25921,32220,39601,48180,58081,69432,82369,97032 ⋆ Number of positive integer solutions to the Diophantine equation x + y + 2z = n ^ 2. ● a(n) = floor(n ^ 4 / 4 - n ^ 2 + 1). ● a(n) = (7 + (- 1) ^ n - 8 * n ^ 2 + 2 * n ^ 4) / 8. ●

► [A307921] 12,49,136,297,556,937,1464,2161,3052,4161,5512,7129,9036,11257,13816,16737,20044,23761,27912,32521,37612,43209,49336,56017,63276 ⋆ Number of (undirected) paths in the n - book graph. ● a(n) = 4 * n ^ 3 + n ^ 2 + 6 * n + 1. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ●

► [A288516] 1,12,49,146,373,872,1929,4118,8589,17644,35889,72538,146021,293200,587801,1177278,2356541,4715412,9433537,18870210,37744021,75492152,150988969,301983206,603972333 ⋆ Number of (undirected) paths in the ladder graph P _ 2 X P _ n. ● a(n) = 18 * (2 ^ n - 1) - n * (n ^ 2 + 9 * n + 41) / 3. - _ Eric W. Weisstein _ , Jun 30 2017 ● a(n) = 6 * a(n - 1) - 14 * a(n - 2) + 16 * a(n - 3) - 9 * a(n - 4) + 2 * a(n - 5) for n > 5. ● a(n) = 18 * (2 ^ n - 1) - (41 * n) / 3 - 3 * n ^ 2 - n ^ 3 / 3. - _ Colin Barker _ , Jun 11 2017 ●

► [A041274] 12,49,1188,4801,116412,470449,11407188,46099201,1117788012,4517251249,109531817988,442644523201,10733000374812,43374646022449,1051724504913588,4250272665676801,103058268481156812,416483346590304049 ⋆ Numer

ators of continued fraction convergents to sqrt(150). ● a(n) = 9602 * a(n - 4) - a(n - 8) = 98 * a(n - 2) - a(n - 4). - _ Vincenzo Librandi _ and _ Bruno Berselli _ , Nov 01 2013 ●

▶ [A110907] 1,12,50,108,194,300,434,588,770,972,1202,1452,1730,2028,2354,2700,3074,3468,3890,4332,4802,5292,5810,6348,6914 ⋆ Number of points in the standard root system version of the D _ 3 (or f.c.c.) lattice having L _ infinity norm n. ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4), n>4. ● a(n) = 1 + (- 1) ^ n + 12 * n ^ 2, n>0. ●

▶ [A009930] 1,12,50,110,216,356,528,704,968,1230,1514,1838,2276,2562,3074,3540,3998,4490,5244,5570,6374,7052,7662,8300,9438 ⋆ Coordination sequence for MgCu2, Cu position. ● a(n) = - 3 * a(n - 1) - 4 * a(n - 2) - a(n - 3) + 6 * a(n - 4) + 11 * a(n - 5) + 9 * a(n - 6) - 9 * a(n - 8) - 11 * a(n - 9) - 6 * a(n - 10) + a(n - 11) + 4 * a(n - 12) + 3 * a(n - 13) + a(n - 14) for n>15. ●

▶ [A066644] 12,50,113,201,314,452,615,804,1017,1256,1520,1809,2123,2463,2827,3216,3631,4071,4536,5026,5541,6082,6647,7238,7853 ⋆ a(n) = floor(surface area of a sphere with radius n). ● a(n) = floor(4 * Pi * n ^ 2). ●

▶ [A063491] 1,12,50,133,279,506,832,1275,1853,2584,3486,4577,5875,7398,9164,11191,13497,16100,19018,22269,25871,29842,34200,38963,44149 ⋆ a(n) = (2 * n - 1) * (3 * n ^ 2 - 3 * n + 2) / 2. ● a(n) = + 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - 1 * a(n - 4) n > 3, a(1)=1, a(2)=12, a(3)=50, a(4)=133. - _ Yosu Yurramendi _ , Sep 04 2013 ●

▶ [A083559] 1,12,50,134,280,507,834,1277,1855,2586,3489,4580,5878,7401,9168,11195,13501,16104,19023,22274,25876,29847,34206,38969,44155 ⋆ Nearest integer to 1 / (Sum _{ k>=n } 1 / k ^ 4). ● a(n) = floor(3 * n ^ 3 - 9 / 2 * n ^ 2 + 15 / 4 * n - 3 / 4) for n > 3. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 4) - 3 * a(n - 5) + 3 * a(n - 6) - a(n - 7). - _ Wesley Ivan Hurt _ , Apr 20 2021 ●

▶ [A051797] 1,12,50,140,315,616,1092,1800,2805,4180,6006,8372,11375,15120,19720,25296,31977,39900,49210,60060,72611,87032,103500,122200,143325 ⋆ Partial sums of A007585. ● a(n) = binomial(n + 3,3) * (2 * n + 1) = (n + 1) * (n + 2) * (n + 3) * (2 * n + 1) / 6. ●

▶ [A268351] 0,12,51,117,210,330,477,651,852,1080,1335,1617,1926,2262,2625,3015,3432,3876,4347,4845,5370,5922,6501,7107,7740 ⋆ a(n) = 3 * n * (9 * n - 1) / 2. ● a(n) = binomial(9 * n,2) / 3. ●

▶ [A200887] 12,51,144,325,636,1127,1856,2889,4300,6171,8592,11661,15484,20175,25856,32657,40716,50179,61200,73941,88572,105271,124224,145625,169676 ⋆ Number of 0..n arrays x(0..3) of 4 elements without any interior element greater than both neighbors. ● a(n) = (1 + n) ^ 2 * (3 + 5 * n + n ^ 2) / 3. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

▶ [A236770] 0,1,12,51,145,330,651,1162,1926,3015,4510,6501,9087,12376,16485,21540,27676,35037,43776,54055,66045,79926,95887,114126,134850 ⋆ a(n) = n * (n + 1) * (3 * n ^ 2 + 3 * n - 2) / 8. ● a(n) = a(- n - 1) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ●

▶ [A054410] 1,12,52,148,328,620,1052,1652,2448,3468,4740,6292,8152,10348,12908,15860,19232,23052,27348,32148,37480,43372,49852,56948,64688 ⋆ Susceptibility series H _ 3 for 2 - dimensional Ising model (divided by 2). ● a(n) = 2 * n * (11 + 7 * n ^ 2) / 3 for n>0. ● a(0)=1, a(1)=12, a(2)=52, a(3)=148, a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>4. (End) ●

▶ [A185355] 0,1,12,52,150,345,686,1232,2052,3225,4840,6996,9802,13377,17850,23360,30056,38097,47652,58900,72030,87241,104742,124752,147500 ⋆ Number of n X n symmetric (0,1) - matrices containing four ones. ● a(n) = Sum _{ k=0..2 } C(C(n,2),k) * C(n,4 - 2 * k). ● a(n) = n ^ 2 * (n - 1) * (5 * n - 7) / 12. ●

▶ [A339029] 1,12,52,168,497,1412,3879,10360,27016,69024,173264,428288,1044480,2516992,6001408,14174208,33191936,77127680,177967104,408027136,930021376,2108424192,4756275200,10680270848,23880794112 ⋆ Expansion of (1 + 4 * x - 20 * x ^ 2 + 8 * x ^ 3 + 33 * x ^ 4 - 4 * x ^ 5 - 33 * x ^ 6) / (1 - 2 * x) ^ 4. ● a(n) = 2 ^ (n - 7) * (588 + 367 * n + 84 * n ^ 2 + 9 * n ^ 3) for n >= 3. ●

▶ [A223249] 12,52,236,1076,4908,22388,102124,465844,2124972,9693172,44215916,201693236,920034348,4196785268,19143857644,87325717684,398340873132,1817052930292,8288582905196,37808808665396,172466877516588 ⋆ Two - loop graph coloring a rectangular array: number of n X 2 0..4 arrays where 0..4 label nodes of a graph with edges 0,1 1,2 2,0 0,3 3,4 4,0 and every array movement to a horizontal or vertical neighbor moves along an edge of this graph. ● a(n) = (2 ^ (1 - n) * ((5 - sqrt(17)) ^ n * (- 1 + sqrt(17)) + (1 + sqrt(17)) * (5 + sqrt(17)) ^ n)) / sqrt(17). ●

▶ [A253130] 12,53,152,345,676,1197,1968,3057,4540,6501,9032,12233,16212,21085,26976,34017,42348,52117,63480,76601,91652,108813,128272,150225,174876 ⋆ Number of length 2 + 2 0..n arrays with the sum of medians of adjacent triples multiplied by some arrangement of +- 1 equal to zero. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

▶ [A213549] 1,12,53,155,360,721,1302,2178,3435,5170,7491,10517,14378,19215,25180,32436,41157,51528,63745,78015,94556,113597,135378,160150,188175 ⋆ Principal diagonal of the convolution array A213548. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ● a(n) = (11 * n ^ 4 + 14 * n ^ 3 + n ^ 2 - 2 * n) / 24 = n * (n + 1) * (11 * n ^ 2 + 3 * n - 2) / 24. ●

▶ [A372025] 12,54,120,210,324,462,624,810,1020,1254,1512,1794,2100,2430,2784,3162,3564,3990,4440,4914,5412,5934,6480,7050,7644 ⋆ Maximum second Zagreb index of maximal 3 - degenerate graphs with n vertices. ● a(n) = 3 * (n - 1) ^ 2 + 9 * (n - 3) * (n - 1). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n > 5. ●

▶ [A060785] 0,12,54,126,228,360,522,714,936,1188,1470,1782,2124,2496,2898,3330,3792,4284,4806,5358,5940,6552,7194,7866,8568 ⋆ a(n) = 3 * (n - 2) * (5 * n - 11). ● a(n) = 30 * n + a(n - 1) - 78 with n>2, a(2)=0. - _ Vincenzo Librandi _ , Aug 07 2010 ●

▶ [A059986] 0,12,54,144,300,540,882,1344,1944,2700,3630,4752,6084,7644,9450,11520,13872,16524,19494,22800,26460,30492,34914,39744,45000 ⋆ Number of rods required to make a 3 - D cube of side length n. ● a(n) = 3 * n * (n + 1) ^ 2. - Neven Juric (neven.juric(AT)apis - it.hr), Sep 28 2005 ● a(n) = a(n - 1) + 9 * n ^ 2 + 3 * n. ● a(n) = (n - 1) * t(n + 1) + n * (t(n) + t(n + 1)) + (n + 1) * (t(n - 1) + t(n) + t(n + 1)), where t = A000217. - _ J. M. Bergot _ , May 30 2017 ●

▶ [A088941] 0,12,54,154,349,685,1217,2009,3134,4674,6720,9372,12739,16939,22099,28355,35852,44744,55194,67374,81465,97657,116149,137149,160874 ⋆ a(n)=12 * sum(1<=i<=j<=k<=n,i * j / k). ● a(n)=(n / 24) * (9 * n ^ 3 + 58 * n ^ 2 + 123 * n + 98). ●

▶ [A019582] 0,0,1,12,54,160,375,756,1372,2304,3645,5500,7986,11232,15379,20580,27000,34816,44217,55404,68590,84000,101871,122452,146004 ⋆ a(n) = n * (n - 1) ^ 3 / 2. ● a(n + 1) = Sum _{ k=0..n } n ^ 2(n - k) = n ^ 3 * (n + 1) / 2. - _ Paul Barry _ , Sep 02 2003 ●

▶ [A143856] 1,12,55,130,237,376,547,750,985,1252,1551,1882,2245,2640,3067,3526,4017,4540,5095,5682,6301,6952,7635,8350,9097 ⋆ Ulam's spiral (ENE spoke). ● a(n) = 16 * n ^ 2 - 37 * n + 22. - _ R. J. Mathar _ , Sep 08 2008 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Jul 10 2012 ●

▶ [A343539] 1,12,55,203,684,2189,6773,20460,60707,177631,513996,1473817,4194025,11858508,33345679,93320819,260079468,722163365,1998685277,5515470636,15180186491,41680890247,114197428620,312260427313,852296004049 ⋆ a(n) = (2 * n + 1) * Lucas(2 * n + 1). ● a(n) = 6 * a(n - 1) - 11 * a(n - 2) + 6 * a(n - 3) - a(n - 4). - _ Wesley Ivan Hurt _ , Apr 19 2021 ●

▶ [A229424] 12,55,222,754,2204,5700,13345,28794,58053,110550,200533,348855,585211,950897,1502166,2314261,3486210,5146473,7459536,10633552,14929134,20669410,28251455,38159220,50978083 ⋆ Number of n X 4 0..2 arrays with horizontal differences mod 3 never 1, vertical differences mod 3 never - 1, rows lexicographically nondecreasing, and columns lexicographically nonincreasing. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>9. ●

▶ [A104188] 0,12,56,132,240,380,552,756,992,1260,1560,1892,2256,2652,3080,3540,4032,4556,5112,5700,6320,6972,7656,8372,9120 ⋆ a(n) = 4n * (4n - 1). ● a(n) = (4(n - 1)!) / ((4(n - 1)) - 2)!). ● a(n) = 32 * n + a(n - 1) - 20 (with a(0)=0). - _ Vincenzo Librandi _ , Nov 13 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A035005] 0,12,56,152,320,580,952,1456,2112,2940,3960,5192,6656,8372,10360,12640,15232,18156,21432,25080,29120,33572,38456,43792,49600 ⋆ Number of possible queen moves on an n X n chessboard. ● a(n) = (n - 1) * 2 * n ^ 2 + (4 * n ^ 3 - 6 * n ^ 2 + 2 * n) / 3. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4); a(0)=0, a(1)=12, a(2)=56, a(3)=152. - _ Harvey P. Dale _ , Aug 24 2011 ● a(n) = 2 * n * (1 - 6 * n + 5 * n ^ 2) / 3. ●

▶ [A212507] 0,1,12,56,168,399,810,1480,2496,3965,6000,8736,12312,16891,22638,29744,38400,48825,61236,75880,93000,112871,135762,161976,191808 ⋆ Number of (w,x,y,z) with all terms in { 1,...,n } and w<2x and y<=2z. ● a(n) = 3 * a(n - 1) - a(n - 2) - 5 * a(n - 3) + 5 * a(n - 4) + a(n - 5) - 3 * a(n - 6) + a(n - 7). ● a(n) = (2 * n * (9 * n ^ 3 + 6 * n ^ 2 + 1) - (2 * n - 1) * (- 1) ^ n - 1) / 32. [_ Bruno Berselli _ , May 31 2012] ●

▶ [A212508] 0,1,12,56,168,418,837,1554,2640,4209,6375,9373,13176,18161,24402,32110,41472,52948,66339,82384,101100,122801,147741,176665,209088 ⋆ Number of (w,x,y,z) with all terms in { 1,...,n } and w<2x and y<3z. ● a(n)=2a(n - 2) + 2a(n - 3) - a(n - 4) - 4a(n - 5) + 2a(n - 7) - 2a(n - 9) + 4a(n - 11) + a(n - 12) - 2a(n - 13) - 2a(n - 14) + a(n - 16). ●

▶ [A331771] 0,12,56,172,400,836,1496,2564,4080,6212,8984,12788,17488,23644,31112,40148,50912,64172,79448,97868,118912,143108,170504,202500,238080 ⋆ a(n) = Sum _{- n<i<n, - n<j<n, gcd { i,j } =1 } (n - |i|) * (n - |j|). ● a(n) = 4 * (n - 1) * (2n - 1) + Sum _{ i=2..n - 1 } (n - i) * (2 * n - i) * phi(i)). - _ Chai Wah Wu _ , Aug 17 2021 ●

▶ [A035289] 0,12,56,192,504,1100,2112,3696,6032,9324,13800,19712,27336,36972,48944,63600,81312,102476,127512,156864,191000,230412,275616,327152,385584 ⋆ Number of ways to place a non - attacking white and black knight on n X n chessboard. ● a(n) = n ^ 4 - 9 n ^ 2 + 24 n - 16. ●

▶ [A275505] 12,56,232,988,4180,17712,75024,317812,1346268,5702888,24157816,102334156,433494436,1836311904,7778742048,32951280100,139583862444,591286729880,2504730781960,10610209857724,44945570212852 ⋆ Number of 5 X n 0..2 arrays with no element equal to any value at offset (- 2, - 1) (- 2,0) or (- 1, - 1) and new values introduced in order 0..2. ● a(n) = (10 * (- 1) ^ n + (15 - 7 * sqrt(5)) * (2 - sqrt(5)) ^ n + (2 + sqrt(5)) ^ n * (15 + 7 * sqrt(5))) / 10. ●

▶ [A199316] 12,56,276,1376,6876,34376,171876,859376,4296876,21484376,107421876,537109376,2685546876,13427734376,67138671876,335693359376,1678466796876,8392333984376,41961669921876,209808349609376,1049041748046876 ⋆ 11 * 5 ^ n + 1. ● a(n) = 5 * a(n - 1) - 4. ● a(n) = 6 * a(n - 1) - 5 * a(n - 2). ●

▶ [A204674] 1,12,57,160,345,636,1057,1632,2385,3340,4521,5952,7657,9660,11985,14656,17697,21132,24985,29280,34041,39292,45057,51360,58225 ⋆ a(n) = 4 * n ^ 3 + 5 * n ^ 2 + 2 * n + 1. ● a(n) = (4 * n ^ 2 + n + 1) * (n + 1). ●

▶ [A212682] 0,1,12,57,168,395,792,1435,2400,3789,5700,8261,11592,15847,21168,27735,35712,45305,56700,70129,85800,103971,124872,148787,175968 ⋆ Number of (w,x,y,z) with all terms in { 1,...,n } and |x - y|>=|y - z|. ● a(n)=3 * a(n - 1) - a(n - 2) - 5 * a(n - 3) + 5 * a(n - 4) + a(n - 5) - 3 * a(n - 6) + a(n - 7). ●

▶ [A212134] 0,1,12,57,172,405,816,1477,2472,3897,5860,8481,11892,16237,21672,28365,36496,46257,57852,71497,87420,105861,127072,151317,178872 ⋆ Number of (w,x,y,z) with all terms in { 1,...,n } and median<=mean. ● a(n) = n * (n ^ 3 + 2 * n ^ 2 - 3 * n + 2) / 2. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ●

▶ [A071270] 0,1,12,57,176,425,876,1617,2752,4401,6700,9801,13872,19097,25676,33825,43776,55777,70092,87001,106800,129801,156332,186737,221376 ⋆ a(n) = n ^ 2 * (2 * n ^ 2 + 1) / 3. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5), with n>4, a(0)=0, a(1)=1, a(2)=12, a(3)=57, a(4)=176. [_ Yosu Yurramendi _ , Sep 03 2013] ●

▶ [A051877] 1,12,57,182,462,1008,1974,3564,6039,9724,15015,22386,32396,45696,63036,85272,113373,148428,191653,244398,308154,384560,475410,582660,708435 ⋆ Partial sums of A051740. ● a(n) = C(n + 4, 4) * (7 * n + 5) / 5. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). ● a(n) = (n + 1) * (n + 2) * (n + 3) * (n + 4) * (7 * n + 5) / 120. (End) ●

▶ [A121693] 0,0,1,12,57,216,741,2412,7617,23616,72381,220212,666777,2012616,6062421,18236412,54807537,164619216,494250861,1483539012,4452189897,13359715416,40085437701,120268896012,360831853857 ⋆ Number of deco polyominoes

of height n and vertical height 3 (i.e., having 3 rows). ● a(n) = 23 * 3 ^ (n - 3) / 2 + 3 / 2 - 3 * 2 ^ (n - 1) for n >= 3. ●

▶ [A190297] 1,12,57,245,1005,4063,16327,65435,261965,1048259,4193742,16776218,67107091,268432305,1073736223,4294957340,17179851485,68719445272,274877851009,1099511528337,4398046334325,17592185730143,70368743618958,281474975717403,1125899905076842 ⋆ Bisection of A013697. ● a(n) = floor(1 / (zeta(2 n) - 1)). ●

▶ [A167533] 12,59,83,130,154,201,225,272,296,343,367,414,438,485,509,556,580,627,651,698,722,769,793,840,864 ⋆ a(n) = 71 * n - a(n - 1) for n>0, a(0)=12. ● a(n) = (71 / 4) - (23 / 4) * (- 1) ^ n + (71 / 2) * n, with n(0)=12. - _ Paolo P. Lava _ , Nov 10 2009 ●

▶ [A158443] 12,60,140,252,396,572,780,1020,1292,1596,1932,2300,2700,3132,3596,4092,4620,5180,5772,6396,7052,7740,8460,9212,9996 ⋆ a(n) = 16 * n ^ 2 - 4. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A153792] 0,12,60,144,264,420,612,840,1104,1404,1740,2112,2520,2964,3444,3960,4512,5100,5724,6384,7080,7812,8580,9384,10224 ⋆ 12 times pentagonal numbers: a(n) = 6 * n * (3 * n - 1). ● a(n) = 36 * n + a(n - 1) - 24 (with a(0)=0). - _ Vincenzo Librandi _ , Aug 03 2010 ● a(0)=0, a(1)=12, a(2)=60; for n>2, a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Mar 11 2012 ●

▶ [A033486] 0,12,60,180,420,840,1512,2520,3960,5940,8580,12012,16380,21840,28560,36720,46512,58140,71820,87780,106260,127512,151800,179400,210600 ⋆ a(n) = n * (n + 1) * (n + 2) * (n + 3) / 2. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) with a(0) = 0, a(1) = 12, a(2) = 60, a(3) = 180, a(4) = 420. - _ Harvey P. Dale _ , Feb 04 2015 ●

▶ [A112415] 12,60,180,420,840,1512,2520,3960,5940,8580,12012,16380,21840,28560,36720,46512,58140,71820,87780,106260,127512,151800,179400,210600,245700 ⋆ a(n) = C(1 + n,1) * C(2 + n,1) * C(4 + n,2). ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5); a(0)=12, a(1)=60, a(2)=180, a(3)=420, a(4)=840. - _ Harvey P. Dale _ , Jul 24 2011 ●

▶ [A213818] 1,12,60,190,465,966,1792,3060,4905,7480,10956,15522,21385,28770,37920,49096,62577,78660,97660,119910,145761,175582,209760,248700,292825 ⋆ Antidiagonal sums of the convolution array A213773. ● a(n) = (2 * n - n ^ 2 + 3 * n ^ 4) / 4. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ●

▶ [A004302] 0,1,12,60,200,525,1176,2352,4320,7425,12100,18876,28392,41405,58800,81600,110976,148257,194940,252700,323400,409101,512072,634800,780000 ⋆ a(n) = n ^ 2 * (n + 1) ^ 2 * (n + 2) / 12. ● a(n) = C(n, 2) * C(n + 1, 3). (End) ● a(n) = 3 * C(n,3) ^ 2 / n, n>= 2. - _ Zerinvary Lajos _ , May 09 2008 ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>5. - _ Harvey P. Dale _ , Oct 19 2014 ● a(n) = Sum _{ k=0..n } Sum _{ i=0..n } i * C(k + 1,k - 1). - _ Wesley Ivan Hurt _ , Sep 21 2017 ● a(n) = Sum _{ i=0..n } (n + 2) * (n - i) ^ 3 / 3. - _ Bruno Berselli _ , Oct 31 2017 ●

▶ [A277106] 12,60,204,636,1932,5820,17484,52476,157452,472380,1417164,4251516,12754572,38263740,114791244,344373756,1033121292,3099363900,9298091724,27894275196,83682825612,251048476860,753145430604,2259436291836,6778308875532 ⋆ a(n) = 8 * 3 ^ n - 12. ● a(n) = 4 * a(n - 1) - 3 * a(n - 2). ●

▶ [A000554] 12,60,210,630,1736,4536,11430,28050,67452,159588,372554,859950,1965840,4456176,10026702,22412970,49806980,110100060,242220594,530578950,1157627352,2516581800,5452594550,11777604930,25367149836 ⋆ Number of labeled trees of diameter 3 with n nodes. ● a(n) = n(n - 1) * S2(n - 2, 2) where S2(n, k) denotes the Stirling numbers of 2nd kind. - Victor Adamchik (adamchik(AT)cs.cmu.edu), Jul 19 2001 ● a(n) = Sum _{ k=1..n - 3 } binomial(n,2) * binomial(n - 2,k). The sum gives the number of Prüfer sequences with exactly 2 distinct digits. - _ Geoffrey Critzer _ , Sep 17 2016 ● a(n) = (2 ^ n - 8) * (n - 1) * n / 8. - _ Colin Barker _ , Sep 18 2016 ●

▶ [A120571] 12,60,220,612,1404,2812,5100,8580,13612,20604,30012,42340,58140,78012,102604,132612,168780,211900,262812,322404,391612,471420,562860,667012,785004 ⋆ 2n ^ 4 + 6n ^ 2 + 4 = 2(n ^ 2 + 1)(n ^ 2 + 2). ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n > 5. ●

▶ [A086950] 0,1,12,60,224,720,2112,5824,15360,39168,97280,236544,565248,1331200,3096576,7127040,16252928,36765696,82575360,184287232,408944640,902823936,1983905792,4341104640,9462349824 ⋆ Binomial transform of decagonal numbers A001107. ● a(n) = n * 2 ^ n * (2 * n - 1) / 2. ● a(0)=0, a(1)=1, a(2)=12, a(n)=6 * a(n - 1) - 12 * a(n - 2) + 8 * a(n - 3). - _ Harvey P. Dale _ , Dec 13 2015 ●

▶ [A373134] 0,0,0,0,12,60,300,1260,5096,19656,73800,270600,974292,3454308,12090260,41850900,143489040,487862736,1646537040,5520741840,18402473180,61018726860,201361799100,661617339900,2165293112952 ⋆ Expansion of e.g.f. (1 / 2) * (x ^ 2 * exp(x)) * (sinh(x)) ^ 2. ● a(n) = binomial(n,2) * (3 ^ (n - 2) + (- 1) ^ n - 2) / 4. ●

▶ [A114307] 12,60,300,3000,30000,300000,3000000,30000000,300000000,3000000000,30000000000,300000000000,3000000000000,30000000000000,300000000000000,3000000000000000,30000000000000000,300000000000000000,3000000000000000000 ⋆ Length of the cycle for Lucas numbers mod 10 ^ n. ● a(1)=12, a(2)=60, a(n)=3 * 10 ^ (n - 1) for n>2. ● a(n)=lcm(3 * 2 ^ (n - 1),4 * 5 ^ (n - 1)). In particular, for n>=3, a(n) = 3 * 10 ^ (n - 1). - _ Max Alekseyev _ , May 17 2006 ●

▶ [A304205] 12,61,110,159,208,257,306,355,404,453,502,551,600,649,698,747,796,845,894,943,992,1041,1090,1139,1188 ⋆ Numbers k such that 24 * k + 6 is congruent to 0 (mod 49). ● a(n) = a(n - 1) + a(n - 2) - a(n - 3). ● a(n) = 49 * n - 37. - _ Bruno Berselli _ , May 11 2018 ●

▶ [A240002] 12,61,190,526,1262,2766,5647,10878,19971,35180,59780,98414,157524,245879,375214,560995,823326,1188015,1687817,2363873,3267365,4461408,6023201,8046460,10644157 ⋆ Number of 3 X n 0..3 arrays with no element equal to one plus the sum of elements to its left or two plus the sum of the elements above it or one plus the sum of the elements diagonally to its northwest, modulo 4. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>15. ●

▶ [A114241] 1,12,61,206,546,1232,2478,4572,7887,12892,20163,30394,44408,63168,87788,119544,159885,210444,273049,349734,442750,554576,687930,845780,1031355 ⋆ a(n) = (n + 1) * (n + 2) * (n + 3) * (11 * n ^ 2 + 29 * n + 20) / 120. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n > 5. ●

▶ [A177677] 12,62,147,266,419,607,828,1084,1375,1699,2057,2450,2877,3338,3833,4362,4926,5523,6155,6821,7521,8256,9024,9827,10664 ⋆ The maximum integer dimension in which the volume of the hypersphere of radius n remains larger than 1. ● a(n) = max { d: Pi ^ d / 2 * n ^ d / Gamma(1 + d / 2) > 1 } . ●

▶ [A267472] 12,62,204,515,1096,2072,3592,5829,8980,13266,18932,26247,35504,47020,61136,78217,98652,122854,151260,184331,222552,266432,316504,373325,437476 ⋆ Number of length - 4 0..n arrays with no following elements larger than the first repeated value. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

▶ [A212509] 0,1,12,63,180,437,891,1628,2736,4392,6600,9646,13608,18669,24990,32955,42432,54033,67797,84010,102900,125118,150282,179444,212544 ⋆ Number of (w,x,y,z) with all terms in { 1,...,n } and w<2x and y<=3z. ● a(n) = 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4) - 4 * a(n - 5) + 2 * a(n - 7) - 2 * a(n - 9) + 4 * a(n - 11) + a(n - 12) - 2 * a(n - 13) - 2 * a(n - 14) + a(n - 16). ●

▶ [A212249] 0,1,12,63,202,496,1034,1923,3289,5280,8062,11820,16761,23110,31111,41030,53151,67777,85233,105862,130026,158109,190513,227659,269990 ⋆ Number of (w,x,y,z) with all terms in { 1,...,n } and 3w<x + y + z + n. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 5 * a(n - 3) - 5 * a(n - 4) + 6 * a(n - 5) - 4 * a(n - 6) + a(n - 7). ● a(n) = (59 * n ^ 4 - 10 * n ^ 3 + 5 * n ^ 2 - 6 * n - 8 * ((((n + 1) mod 3) + (- 1) ^ ((n + 1) mod 3)) * (- 1) ^ (n mod 3))) / 72. [_ Bruno Berselli _ , Jun 05 2012] ●

▶ [A309372] 0,1,12,63,208,525,1116,2107,3648,5913,9100,13431,19152,26533,35868,47475,61696,78897,99468,123823,152400,185661,224092,268203,318528 ⋆ a(n) = n ^ 2 - n ^ 3 + n ^ 4. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

▶ [A085463] 1,12,63,219,594,1365,2786,5202,9063,14938,23529,35685,52416,74907,104532,142868,191709,253080,329251,422751,536382,673233,836694,1030470,1258595 ⋆ Number of 5 - tuples (v1,v2,v3,v4,v5) of nonnegative integers less than n such that v1<=v4, v1<=v5, v2<=v4, v2<=v5 and v3<=v4. ● a(n) = n + 10 * binomial(n, 2) + 30 * binomial(n, 3) + 35 * binomial(n, 4) + 14 * binomial(n, 5). ● a(n) = n * (n + 1) * (2 * n + 1) * (7 * n ^ 2 + 7 * n + 6) / 120. ●

▶ [A258617] 0,12,64,180,384,700,1152,1764,2560,3564,4800,6292,8064,10140,12544,15300,18432,21964,25920,30324,35200,40572,46464,52900,59904 ⋆ a(n) = (4 * n + 8) * n ^ 2. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Vincenzo Librandi _ , Jun 06 2015 ●

▶ [A304833] 12,65,124,189,260,337,420,509,604,705,812,925,1044,1169,1300,1437,1580,1729,1884,2045,2212,2385,2564,2749,2940 ⋆ a(n) = 3 * n ^ 2 + 38 * n - 76 (n>=2). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>4. ●

▶ [A223234] 12,65,785,7445,75665,753005,7540985,75377045,753868865,7538393405,75384819785,753845540645,7538463378065,75384609865805,753846170402585,7538461488792245,75384615533623265,753846153399130205 ⋆ Rolling icosahedron footprints: number of 2 X n 0..11 arrays starting with 0 where 0..11 label vertices of an icosahedron and every array movement to a horizontal, diagonal or antidiagonal neighbor moves along an icosahedral edge. ● a(n) = (- 25 * (- 1) ^ n * 3 ^ (1 + n) + 49 * 10 ^ n) / 65 for n>1. ●

▶ [A289223] 0,0,12,66,204,480,960,1722,2856,4464,6660,9570,13332,18096,24024,31290,40080,50592,63036,77634,94620,114240,136752,162426,191544 ⋆ Number of ways to select 2 disjoint point triples from an n X n X n triangular point grid, each point triple forming an 2 X 2 X 2 triangle. ● a(n) = (n ^ 4 - 4 * n ^ 3 - 7 * n ^ 2 + 46 * n - 48) / 2 for n>=2. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>6. ●

▶ [A271870] 1,12,66,236,651,1512,3108,5832,10197,16852,26598,40404,59423,85008,118728,162384,218025,287964,374794,481404,610995,767096,953580,1174680,1435005 ⋆ Convolution of nonzero hexagonal numbers (A000384) with themselves. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). ● a(n) = (n + 1) * (n + 2) * (n + 3) * (4 * n ^ 2 + 6 * n + 5) / 30. ●

▶ [A114243] 1,12,66,245,714,1764,3864,7722,14355,25168,42042,67431,104468,157080,230112,329460,462213,636804,863170,1152921,1519518,1978460,2547480,3246750,4099095 ⋆ a(n) = (n + 1) * (n + 2) ^ 2 * (n + 3) * (n + 4) * (3 * n + 5) / 240. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). - _ Wesley Ivan Hurt _ , May 03 2015 ●

▶ [A032167] 12,66,572,5148,49764,497354,5118828,53745120,573308736,6191711526,67546215516,743008120140,8230246567620,91708459194066,1027134771622388,11555266154065920,130506535690613940 ⋆ Number of aperiodic necklaces of n beads of 12 colors. ● a(n) = Sum _{ d|n } mu(d) * 12 ^ (n / d) / n. ●

▶ [A091074] 12,67,79,146,225,371,596,967,1563,2530,4093,6623,10716,17339,28055,45394,73449,118843,192292,311135,503427,814562,1317989,2132551,3450540 ⋆ Fibonacci sequence beginning 12, 67. ● a(n) = (61 * sqrt(5) / 5 + 6) * (1 / 2 + sqrt(5) / 2) ^ n + (- 61 * sqrt(5) / 5 + 6) * (1 / 2 - sqrt(5) / 2) ^ n. - _ Antonio Alberto Olivares _ , May 23 2013 ●

▶ [A212687] 0,1,12,67,212,527,1096,2045,3496,5621,8580,12591,17852,24627,33152,43737,56656,72265,90876,112891,138660,168631,203192,242837,287992 ⋆ Number of (w,x,y,z) with all terms in { 1,...,n } and 2|w - x|<n + |y - z|. ● a(n) = 3 * a(n - 1) - a(n - 2) - 5 * a(n - 3) + 5 * a(n - 4) + a(n - 5) - 3 * a(n - 6) + a(n - 7). ●

▶ [A117088] 1,12,67,342,1717,8592,42967,214842,1074217,5371092,26855467,134277342,671386717,3356933592,16784667967,83923339842,419616699217,2098083496092,10490417480467,52452087402342,262260437011717,1311302185058592,6556510925292967 ⋆ a(n) = (11 * 5 ^ n - 7) / 4. ● a(n) = 5 * a(n - 1) + 7 with a(0) = 1. ● a(n) = 6 * a(n - 1) - 5 * a(n - 2), a(0) = 1, a(1) = 12. - _ Philippe Deléham _ , Feb 22 2014 ● a(n) = (11 * 5 ^ n - 7) / 4. - _ Ralf Stephan _ , Feb 23 2014 ●

▶ [A199415] 12,67,397,2377,14257,85537,513217,3079297,18475777,110854657,665127937,3990767617,23944605697,143667634177,862005805057,5172034830337,31032208982017,186193253892097,1117159523352577,6702957140115457,402177428

40692737 ⋆ 11 * 6 ^ n + 1. ● a(n) = 6 * a(n - 1) - 5. ● a(n) = 7 * a(n - 1) - 6 * a(n - 2). ●

▶ [A059585] 0,0,12,68,235,636,1478,3088,5958,10800,18612,30756,49049,75868,114270,168128,242284,342720,476748,653220,882759,1178012,1553926,2028048,2620850 ⋆ Number of labeled 3 - node T _ 0 - hypergraphs with n hyperedges (empty hyperedges and multiple hyperedges included). ● a(n) = binomial(n + 7, n) - 3 * binomial(n + 3, n) + 2 * binomial(n + 1, n) = n * (n - 1) * (n + 1) * (n ^ 4 + 28 * n ^ 3 + 323 * n ^ 2 + 1988 * n + 4572) / 5040. ●

▶ [A213547] 1,12,68,260,777,1960,4368,8856,16665,29524,49764,80444,125489,189840,279616,402288,566865,784092,1066660,1429428,1889657,2467256,3185040,4069000,5148585 ⋆ Antidiagonal sums of the convolution array A213505. ● a(n) = (n ^ 6 + 6 * n ^ 5 + 15 * n ^ 4 + 20 * n ^ 3 + 14 * n ^ 2 + 4 * n) / 60. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). ● a(n) = a(- 2 - n) and a(n - 1) = (n ^ 6 - n ^ 2) / 60 for all n in Z. - _ Michael Somos _ , Oct 08 2017 ●

▶ [A050484] 1,12,68,264,810,2112,4884,10296,20163,37180,65208,109616,177684,279072,426360,635664,927333,1326732,1865116,2580600,3519230,4736160,6296940,8278920,10772775 ⋆ Partial sums of A051946. ● a(n) = C(n + 6, 6) * (5n + 7) / 7. ●

▶ [A238536] 1,12,68,504,3355,23256,158717,1089648,7463884,51170460,350695511,2403786672,16475579353,112925875764,774003961940,5305106018016,36361727272627,249227013404808,1708227291909269,11708364225400920,80250321774226396,550043889533755332,3770056901455017263 ⋆ A fourth - order linear divisibility sequence related to the Fibonacci numbers: a(n) = (1 / 2) * Fibonacci(3 * n) * Lucas(n). ● a(n) = (1 / 2) * Fibonacci(2 * n) * Fibonacci(3 * n) / Fibonacci(n). ● a(n) = (1 / (2 * sqrt(5))) * (((7 + 3 * sqrt(5)) / 2) ^ n - ((7 - 3 * sqrt(5)) / 2) ^ n + (- 1) ^ n * ((3 + sqrt(5)) / 2) ^ n - (- 1) ^ n * ((3 - sqrt(5)) / 2) ^ n). ● a(n) = (1 / 2) * (Fibonacci(4 * n) + (- 1) ^ n * Fibonacci(2 * n)). - _ Ralf Stephan _ , Mar 01 2014 ●

▶ [A212753] 0,12,69,228,568,1192,2225,3816,6136,9380,13765,19532,26944,36288,47873,62032,79120,99516,123621,151860,184680,222552,265969,315448,371528 ⋆ Number of (w,x,y,z) with all terms in { 0,...,n } and at least one of these conditions holds: w<R, x<R, y>R, z>R, where R = max { w,x,y,z } - min { w,x,y,z } . ● a(n)=4 * a(n - 1) - 5 * a(n - 2) + 5 * a(n - 4) - 4 * a(n - 5) + a(n - 6). ●

▶ [A210427] 0,1,12,69,260,751,1812,3843,7400,13221,22252,35673,54924,81731,118132,166503,229584,310505,412812,540493,698004,890295,1122836,1401643,1733304 ⋆ Number of semistandard Young tableaux over all partitions of 5 with maximal element <= n. ● a(n) = n * (12 + (35 + 13 * n ^ 2) * n ^ 2) / 60. ●

▶ [A101097] 1,12,69,272,846,2232,5214,11088,21879,40612,71643,121056,197132,310896,476748,713184,1043613,1497276,2110273,2926704,3999930,5393960,7184970,9462960,12333555 ⋆ a(n) = n * (n + 1) * (n + 2) * (n + 3) * (n + 4) * (2 + 4 * n + n ^ 2) / 840. ● a(n) = n * (n + 1) * (n + 2) * (n + 3) * ... * (n + k) * (n * (n + k) + (k - 1) * k / 6) / ((k + 3)! / 6) for k=4. - _ Alexander R. Povolotsky _ , May 17 2008 ●

▶ [A169725] 12,70,532,4510,39772,355510,3192292,28708750,258313132,2324621350,20921001652,188287243390,1694579876092,15251202941590,137260778644612,1235346864312430,11118121348344652,100063090843700230,900567813719097172,8105110311849259870 ⋆ a(n) = 3 ^ (n - 1) * (6 * 3 ^ (n - 1) + 5) + 1. ● a(n) = 13 * a(n - 1) - 39 * a(n - 2) + 27 * a(n - 3). ●

▶ [A362518] 1,12,71,354,1617,7020,29563,122214,499493,2026848,8186895,32969754,132508729,531842196,2132610467,8545773774,34228238925,137046552264,548583066679,2195514451074,8785586531681,35152894560252,140643143849931,562667104454454,2250951652660597 ⋆ Number of vertex cuts in the n - helm graph. ● a(n) = (2 ^ n - 1) * (1 + 2 ^ (n + 1) - n) - 3 ^ n. ● a(n) = 13 * a(n - 1) - 67 * a(n - 2) + 175 * a(n - 3) - 244 * a(n - 4) + 172 * a(n - 5) - 48 * a(n - 6). ●

▶ [A143698] 0,12,72,180,336,540,792,1092,1440,1836,2280,2772,3312,3900,4536,5220,5952,6732,7560,8436,9360,10332,11352,12420,13536 ⋆ 12 times hexagonal numbers: 12 * n * (2 * n - 1). ● a(n) = a(n - 1) + 48 * n - 36, with a(0)=0. - _ Vincenzo Librandi _ , Dec 14 2010 ●

▶ [A304164] 12,72,186,354,576,852,1182,1566,2004,2496,3042,3642,4296,5004,5766,6582,7452,8376,9354,10386,11472,12612,13806,15054,16356 ⋆ a(n) = 27 * n ^ 2 - 21 * n + 6 (n>=1). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n > 3. (End) ●

▶ [A199531] 12,72,212,464,860,1432,2212,3232,4524,6120,8052,10352,13052,16184,19780,23872,28492,33672,39444,45840,52892,60632,69092,78304,88300 ⋆ Number of - n..n arrays x(0..3) of 4 elements with zero sum and no two consecutive zero elements. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n> 4. ●

▶ [A047928] 0,12,72,240,600,1260,2352,4032,6480,9900,14520,20592,28392,38220,50400,65280,83232,104652,129960,159600,194040,233772,279312,331200,390000 ⋆ a(n) = n * (n - 1) ^ 2 * (n - 2). ● a(n) = floor((n - 1) ^ 6 / ((n - 1) ^ 2 + 1)). - _ Gary Detlefs _ , Feb 11 2010 ● a(n) = (n - 1) ^ 4 - (n - 1) ^ 2. - _ Katherine E. Stange _ , Mar 31 2022 ●

▶ [A300847] 0,0,0,0,0,12,72,252,672,1512,3024,5544,9504,15444,24024,36036,52416,74256,102816,139536,186048,244188,316008,403788,510048 ⋆ a(n) = 12 * binomial(n, 5). ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) + 6 * a(n - 4) - a(n - 5). ● a(n) = (n - 4) * (n - 3) * (n - 2) * (n - 1) * n / 10. ●

▶ [A008533] 1,12,72,272,762,1752,3512,6372,10722,17012,25752,37512,52922,72672,97512,128252,165762,210972,264872,328512,403002,489512,589272,703572,833762 ⋆ Coordination sequence for { A _ 5 }* lattice. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. - _ Colin Barker _ , Mar 03 2015 ●

▶ [A010024] 1,12,72,292,862,2052,4212,7772,13242,21212,32352,47412,67222,92692,124812,164652,213362,272172,342392,425412,522702,635812,766372,916092,1086762 ⋆ Coordination sequence for squashed { D _ 5 }* lattice, perhaps the smallest example of a "non - superficial" lattice. ● a(n) = 10 / 3 * n ^ 4 - 5 / 3 * n ^ 3 + 20 / 3 * n ^ 2 + 5 / 3 * n + 2 for n>0 (from Maple section). ●

▶ [A008414] 1,12,72,292,912,2364,5336,10836,20256,35436,58728,93060,142000,209820,301560,423092,581184,783564,1038984,1357284,1749456,2227708,2805528,3497748,4320608 ⋆ Coordination sequence for 6 - dimensional cubic lattice. ● a(n) = 4 * n * (2 / 15 * n ^ 4 + 4 / 3 * n ^ 2 + 23 / 15) for n > 0. - S. Bujnowski (slawb(AT)atr.bydgoszcz.pl), Nov 26 2002 ●

▶ [A052181] 1,12,72,300,990,2772,6864,15444,32175,62920,116688,206856,352716,581400,930240,1449624,2206413,3287988,4807000,6906900,9768330,13616460,18729360,25447500,34184475 ⋆ Partial sums of A050483. ● a(n) = (n + 2) * C(n + 7, 7) / 2. ● a(n) = C(n + 2, 2) * C(n + 7, 6) / 7. - _ Zerinvary Lajos _ , Jul 29 2005 ●

▶ [A035472] 1,12,72,356,1296,3708,8920,18900,36384,65004,109416,175428,270128,402012,581112,819124,1129536,1527756,2031240,2659620,3434832,4381244,5525784,6898068,8530528 ⋆ Coordination sequence for lattice D *_ 6 (with edges defined by l _ 1 norm = 1). ● a(m) = Sum _{ k=0..n } 2 ^ k * binomial(n, k) * binomial(m - 1, k - 1) + 2 ^ n * binomial((n + 2 * m) / 2 - 1, n - 1); with n=6. ●

▶ [A088166] 12,72,504,3410,23184,159094,1089648,7465176,51170460,350713222,2403763488,16475700746,112925875764,774004377960,5305106018016,36361732975514,249227005939632,1708227330997438,11708364225400920 ⋆ Smallest integer divisible by Fibonacci(2n) such that the second partial quotient in the continued fraction expansion of a(n) / phi is 2 (phi is the golden ratio), n >= 2. ● a(n) = Fibonacci(2n) * ceiling(Lucas(2n) / 2). ●

▶ [A303505] 0,0,0,12,72,612,3552,34632,247824,3047544,26502624,396071604,4055072664,71316639036,839706878016,16982482829136,225984627860256,5165674068939696,76644407669629248,1953726395279874588,31974794507569558248,899186672783502993108,16089847137602083031328 ⋆ Number of odd chordless cycles in the n - triangular (Johnson) graph. ● a(n) = Sum _{ k=2, ceiling(n / 2) - 1 } binomial(n, 2 * k + 1) * (2 * k)! / 2. - _ Andrew Howroyd _ , Apr 28 2018 ●

▶ [A320660] 12,72,672,6048,55488,511872,4738560,43943424,407890944,3787941888,35186122752,326885842944,3037038034944,28217571901440,262178452930560,2436006721486848,22634041833160704,210303674768424960,1954034324430913536,18155901427591938048 ⋆ Number of business cards required to build an origami level n Jerusalem cube. ● a(n) = (3 / 14) * (7 * (2 - 2 * sqrt(2)) ^ n + 7 * (2 + 2 * sqrt(2)) ^ n + (21 - 5 * sqrt(7)) * (4 - 2 * sqrt(7)) ^ n + (21 + 5 * sqrt(7)) * (4 + 2 * sqrt(7)) ^ n). ● a(n) = 12 * a(n - 1) - 16 * a(n - 2) - 80 * a(n - 3) - 48 * a(n - 4), n > 4. ●

▶ [A069039] 0,1,12,73,304,985,2668,6321,13504,26577,48940,85305,142000,227305,351820,528865,774912,1110049,1558476,2149033,2915760,3898489,5143468,6704017,8641216 ⋆ Expansion of x(1 + x) ^ 5 / (1 - x) ^ 7. ● a(n) = (n ^ 2) * (2 * n ^ 4 + 20 * n ^ 2 + 23) / 45. - _ Jonathan Vos Post _ , Nov 16 2004 ● a(n) = 12 * a(n - 1) / (n - 1) + a(n - 2) for n > 1. - _ Seiichi Manyama _ , Jun 06 2018 ●

▶ [A041270] 12,73,1764,10657,257532,1555849,37597908,227143297,5489037036,33161365513,801361809348,4841332221601,116993335127772,706801342988233,17080225566845364,103188154744060417,2493595939424295372 ⋆ Numerators of continued fraction convergents to sqrt(148). ● a(n) = 146 * a(n - 2) - a(n - 4). - _ Vincenzo Librandi _ , Nov 01 2013 ●

▶ [A292532] 0,0,1,12,75,329,1158,3606,10971,35601,126168,467541,1722714,6173070,21563906,74452230,257613930,899546303,3166966692,11185908147,39459021883,138761604786,486746839758,1705955898935,5982257083623 ⋆ p - INVERT of the squares (A000290), where p(S) = 1 - S ^ 3. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 85 * a(n - 3) - 123 * a(n - 4) + 129 * a(n - 5) - 83 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n >= 10. ●

▶ [A053310] 1,12,75,330,1155,3432,9009,21450,47190,97240,189618,352716,629850,1085280,1812030,2941884,4657983,7210500,10935925,16280550,23828805,34337160,48774375,68368950,94664700 ⋆ a(n) = (n + 3) * binomial(n + 8, 8) / 3. ● a(n) = binomial(n + 8,n + 2) * binomial(n + 3,n) / 28. - _ Zerinvary Lajos _ , May 12 2006 ●

▶ [A368530] 0,1,12,75,364,1581,6540,26503,106524,426825,1708300,6834531,27339852,109361605,437449164,1749800031,6999204220,27996821793,111987293004,447949178875,1791796723500,7167186903261,28668747623692,114674990506935,458699962041564 ⋆ a(n) = Sum _{ k=1..n } k ^ 3 * 4 ^ (n - k). ● a(n) = 8 * a(n - 1) - 22 * a(n - 2) + 28 * a(n - 3) - 17 * a(n - 4) + 4 * a(n - 5). ● a(n) = (11 * 4 ^ (n + 1) - (9 * n ^ 3 + 36 * n ^ 2 + 60 * n + 44)) / 27. ● a(0) = 0; a(n) = 4 * a(n - 1) + n ^ 3. ●

▶ [A006235] 1,12,75,384,1805,8100,35287,150528,632025,2620860,10759331,43804800,177105253,711809364,2846259375,11330543616,44929049777,177540878700,699402223099,2747583822720,10766828545725,42095796462852,164244726238343,639620518118400 ⋆ Complexity of doubled cycle (regarding case n = 2 as a multigraph). ● a(n) = (1 / 2) * n * (- 2 + (2 - sqrt(3)) ^ n + (2 + Sqrt(3)) ^ n) (Kreweras). - _ Eric W. Weisstein _ , Jul 15 2011 ● a(n) = 10a(n - 1) - 35a(n - 2) + 52a(n - 3) - 35a(n - 4) + 10a(n - 5) - a(n - 6), n>5. ● a(k) = det(S(4,k,(1, - 1,1))) = k * b(k) ^ 2, where b(1)=1, b(2)=sqrt(6), b(k)=sqrt(6) * b(k - 1) - b(k - 2) = b(2) * b(k - 1) - b(k - 2). - _ Ryan Stees _ , Dec 14 2014 ●

▶ [A054334] 1,12,77,352,1287,4004,11011,27456,63206,136136,277134,537472,999362,1790712,3105322,5230016,8580495,13748020,21559395,33153120,50075025,74397180,108864405,157073280,223689180 ⋆ 1 / 512 of 11th unsigned column of triangle A053120 (T - Chebyshev, rising powers, zeros omitted). ● a(n) = 2 * binomial(n + 10, 10) - binomial(n + 9, 9). - _ Paul Barry _ , Mar 04 2003 ● a(n) = binomial(n + 9,9) + 2 * binomial(n + 9,10). - Borislav St. Borisov (b.st.borisov(AT)abv.bg), Mar 05 2009 ● a(n) = binomial(n + 9,9) * (n + 5) / 5. - _ Antal Pinter _ , Dec 27 2015 ●

▶ [A210695] 0,1,12,77,456,2665,15540,90581,527952,3077137,17934876,104532125,609257880,3551015161,20696833092,120629983397,703083067296,4097868420385,23884127455020,139206896309741,811357250403432,4728936606110857,27562262386261716 ⋆ a(n) = 6 * a(n - 1) - a(n - 2) + 6 with n>1, a(0)=0, a(1)=1. ● a(n) = ((1 - 2 * sqrt(2)) * (1 - sqrt(2)) ^ (2n - 1) + (1 + 2 * sqrt(2)) * (1 + sqrt(2)) ^ (2n - 1) - 6) / 4. [_ Bruno Berselli _ , Jun 26 2012] ●

▶ [A304503] 12,78,198,372,600,882,1218,1608,2052,2550,3102,3708,4368,5082,5850,6672,7548,8478,9462,10500,11592,12738,13938,15192,16500 ⋆ a(n) = 3 * (n + 1) * (9 * n + 4). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>3. ●

▶ [A008504] 1,12,78,364,1365,4368,12376,31824,75582,167960,352716,705431,1352066,2496066,4457036,7724795,13033527,21461804,34565466,54551718,84504355,128671764,192831288,284745682 ⋆ 10 - dimensional centered tetrahedral num

bers. ● a(n) = 1 + 11 * n * (n + 1) * (n ^ 8 + 4 * n ^ 7 + 416 * n ^ 6 + 1234 * n ^ 5 + 28019 * n ^ 4 + 53986 * n ^ 3 + 395644 * n ^ 2 + 368856 * n + 966240) / 3628800. - _ Bruno Berselli _ , Mar 22 2012 ●

► [A008494] 1,12,78,364,1365,4368,12376,31824,75582,167960,352716,705432,1352077,2496132,4457322,7725796,13036530,21469812,34584914,54595476,84596733,128856520,193184004,285392328,415873822 ⋆ Expansion of (1 - x ^ 12) / (1 - x) ^ 12. ● a(n) = (604800 + 2286636 * n ^ 2 + 696905 * n ^ 4 + 39963 * n ^ 6 + 495 * n ^ 8 + n ^ 10) / 302400 for n>0. ●

► [A001288] 1,12,78,364,1365,4368,12376,31824,75582,167960,352716,705432,1352078,2496144,4457400,7726160,13037895,21474180,34597290,54627300,84672315,129024480,193536720,286097760,417225900 ⋆ a(n) = binomial(n,11). ● a(n + 10) = n(n + 1)(n + 2)(n + 3)(n + 4)(n + 5)(n + 6)(n + 7)(n + 8)(n + 9)(n + 10) / 11!. - _ Artur Jasinski _ , Dec 02 2007; _ R. J. Mathar _ , Jul 07 2009 ●

► [A290894] 0,0,0,0,0,1,12,78,364,1365,4368,12377,31848,75882,170560,370266,803712,1827099,4531980,12346791,35783396,105681186,308229948,873545479,2392395276 ⋆ p - INVERT of the positive integers, where p(S) = 1 - S ^ 6. ● a(n) = 12 * a(n - 1) - 66 * a(n - 2) + 220 * a(n - 3) - 495 * a(n - 4) + 792 * a(n - 5) - 923 * a(n - 6) + 792 * a(n - 7) - 495 * a(n - 8) + 22 * a(n - 9) - 66 * a(n - 10) + 12 * a(n - 11) - a(n - 12). ●

► [A227707] 12,78,444,2328,11568,55392,258240,1180032,5309184,23594496,103812096,452990976,1962946560,8455741440,36238835712,154618920960,657130192896,2783139201024,11751031308288,49478024822784,207807007959392,870813215490048,3641582523777024,15199648767541248 ⋆ The terminal Wiener index of the dendrimer D _ n defined pictorially in Fig. 1 of the Heydari et al. reference. ● a(n) = 3 * 2 ^ n + 9 * 4 ^ n * (n + 1). ●

► [A199492] 12,78,540,3774,26412,184878,1294140,9058974,63412812,443889678,3107227740,21750594174,152254159212,1065779114478,7460453801340,52223176609374,365562236265612,2558935653859278,17912549577014940 ⋆ 11 * 7 ^ n + 1. ● a(n) = 7 * a(n - 1) - 6. ● a(n) = 8 * a(n - 1) - 7 * a(n - 2). ●

► [A061593] 12,79,408,1847,7698,30319,114606,419933,1501674,5266069,18174084,61892669,208424880,695179339,2299608732,7552444115,24648046806,79994460139,258339007890,830619734681,2660070154542,8488515938929,27000079296648,85629004867577 ⋆ Number of ways to place 2n nonattacking kings on a 4 X 2 n chessboard. ● a(n) = 9 * a(n - 1) - 28 * a(n - 2) + 33 * a(n - 3) - 9 * a(n - 4); a(1)=12, a(2)=79, a(3)=408, a(4)=1847. ● a(n) = (17 * n - 109) * 3 ^ n + 2 * Fibonacci(2 * n + 10). ●

► [A058962] 1,12,80,448,2304,11264,53248,245760,1114112,4980736,22020096,96468992,419430400,1811939328,7784628224,33285996544,141733920768,601295421440,2542620639232,10720238370816,45079976738816,189115999977472,791648371998720 ⋆ a(n) = 2 ^ (2 * n) * (2 * n + 1). ● a(n) = 4((2n + 1) / (2n - 1)) * a(n - 1) = 4 * a(n - 1) + 2 ^ (2n + 1) = 8 * a(n - 1) - 16 * a(n - 2). - _ Jaume Oliver Lafont _ , Dec 09 2008 ● a(n) = - a(- 1 - n) * 4 ^ (2 * n + 1) for all n in Z. - _ Michael Somos _ , Jun 18 2017 ● a(n) = Sum _{ k = 0..n } (2 * k + 1) ^ 2 * binomial(2 * n + 1, n - k). - _ Peter Bala _ , Feb 25 2019 ●

► [A007010] 1,12,81,372,1332,3984,10420,24540,53145,107436,205065,372792,649936,1092672,1779408,2817288,4350105,6567660,9716905,14114892,20163924,28368912,39357396,53902212,72947329 ⋆ Number of 4 - voter voting schemes with n linearly ranked choices. ● a(n) = (n ^ 8 + 16 * n ^ 7 + 106 * n ^ 6 + 376 * n ^ 5 + 784 * n ^ 4 + 1024 * n ^ 3 + 864 * n ^ 2 + 384 * n) / 3840 for n even. ● a(n) = (n ^ 8 + 16 * n ^ 7 + 106 * n ^ 6 + 376 * n ^ 5 + 784 * n ^ 4 + 1024 * n ^ 3 + 894 * n ^ 2 + 504 * n + 135) / 3840 for n odd. ●

► [A069996] 1,12,81,432,2025,8748,35721,139968,531441,1968300,7144929,25509168,89813529,312487308,1076168025,3673320192,12440502369,41841412812,139858796529,464904586800,1537671920841,5062810950252,16600580533161 ⋆ Number of spanning trees on the bipartite graph K _{ 3,n } . ● a(n) = n ^ 2 * 3 ^ (n - 1). ● a(n) = 9 * a(n - 1) - 27 * a(n - 2) + 27 * a(n - 3). G.f.: x * (1 + 3 * x) / (1 - 3 * x) ^ 3. - _ Colin Barker _ , Aug 10 2012 ●

► [A164300] 1,12,82,488,2756,15216,83144,452128,2453008,13294272,72012064,389976704,2111644736,11433484032,61904845952,335169991168,1814692086016,9825156811776,53195565289984,288012326955008 ⋆ a(n) = ((1 + 4 * sqrt(2)) * (4 + sqrt(2)) ^ n + (1 - 4 * sqrt(2)) * (4 - sqrt(2)) ^ n) / 2. ● a(n) = 8 * a(n - 1) - 14 * a(n - 2) for n > 1; a(0) = 1, a(1) = 12. ●

► [A102105] 1,12,83,486,2645,13872,71303,362346,1829225,9198612,46150523,231225006,1157542205,5791962552,28972567343,144901100466,724620293585,3623445841692,18118262329763,90594411012726,452981353155365,2264934660052032,11324756983085783 ⋆ a(n) = (19 * 5 ^ n - 16 * 3 ^ n + 1) / 4. ● a(n) = 9 * a(n - 1) - 23 * a(n - 2) + 15 * a(n - 3), a(0)=1,a(1)=12,a(2)=83 (derived from the minimal polynomial of the matrix M). ●

► [A298977] 12,84,120,588,840,4116,5880,28812,41160,201684,288120,1411788,2016840,9882516,14117880,69177612,98825160,484243284,691776120,3389702988,4842432840,23727920916,33897029880,166095446412,237279209160 ⋆ Base - 7 complementary numbers: n equals the product of the 7 complement (7 - d) of its base - 7 digits d. ● a(n + 2) = 7 a(n) for all n >= 1. ● a(n) = 12 * 7 ^ (n / 2) for n>1 and even. ● a(n) = 120 * 7 ^ ((n - 3) / 2) for n>1 and odd. ●

► [A085409] 0,12,84,270,624,1200,2052,3234,4800,6804,9300,12342,15984,20280,25284,31050,37632,45084,53460,62814,73200,84672,97284,111090,126144 ⋆ Sum of three solutions of the Diophantine equation x ^ 2 - y ^ 2 = z ^ 3. ● a(n) = 9 * n ^ 3 + 3 * n ^ 2. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>3. ●

► [A303916] 0,0,12,84,324,924,2184,4536,8568,15048,24948,39468,60060,88452,126672,177072,242352,325584,430236,560196,719796,913836,1147608,1426920,1758120 ⋆ Constant term in the expansion of (Sum _{ k=0..n } k * (x ^ k + x ^ (- k))) ^ 3. ● a(n) = (n - 1) * n * (n + 1) * (n + 2) * (2 * n + 1) / 10. ●

► [A054849] 1,12,84,448,2016,8064,29568,101376,329472,1025024,3075072,8945664,25346048,70189056,190513152,508035072,1333592064,3451650048,8820883456,22284337152,55710842880,137950658560,338606161920 ⋆ a(n) = 2 ^ (n - 5) * binomial(n,5). Number of 5D hypercubes in an n - dimensional hypercube. ● a(n) = Sum _{ i=5..n } binomial(i,5) * binomial(n,i). Example: for n=8, a(8) = 1 * 56 + 6 * 28 + 21 * 8 + 56 * 1 = 448. - _ Bruno Berselli _ , Mar 23 2018 ●

► [A155645] 1,12,84,558,3696,24582,164304,1103478,7444416,50431302,342941424,2340123798,16018069536,109949704422,756587236944,5217746494518,36054040477056,249557173431942,1729973554578864,12008254925383638 ⋆ 7 ^ n + 6 ^ n - 1. ● a(n)=13 * a(n - 1) - 42 * a(n - 2) - 30 with a(0)=1, a(1)=12 - _ Vincenzo Librandi _ , Jul 21 2010 ● a(0)=1, a(1)=12, a(2)=84, a(n)=14 * a(n - 1) - 55 * a(n - 2) + 42 * a(n - 3) [From Harvey P. Dale, May 08 2012] ●

► [A118017] 12,84,3612,6526884,21300113901612 ⋆ Largest denominators in even Egyptian fraction representation of 1. ● a(n + 1) = 1 / 2 * a(n) ^ 2 + a(n). ●

► [A283119] 1,12,86,469,2141,8594,31247,104945,330094,982284,2786861,7584060,19893185,50494558,124437410,298555264,699017259,1600364304,3589048673,7896510620,17067607791,36283650153,75947406513,156672628539,318804641925 ⋆ Expansion of exp(Sum _{ n>=1 } sigma(6 * n) * x ^ n / n) in powers of x. ● a(n) = (1 / n) * Sum _{ k=1..n } sigma(6 * k) * a(n - k). - _ Seiichi Manyama _ , Mar 05 2017 ●

► [A046023] 0,1,12,87,416,1475,4236,10437,22912,45981,85900,151371,254112,409487,637196,962025,1414656,2032537,2860812,3953311,5373600,7196091,9507212,12406637,16008576 ⋆ Number of ways to color edges of a tetrahedron using <= n colors. ● a(n) = (n ^ 6 + 3 * n ^ 4 + 8 * n ^ 2) / 12. ●

► [A369421] 0,0,0,1,12,87,494,2421,10752,44515,174930,660465,2416580,8622879,30147798,103653613,351451656,1177793499,3908152538,12858800745,42001844940,136331670295,440083517790,1413758295141,4522328690192 ⋆ Expansion of o.g.f. x ^ 3 / ((1 - 2 * x) ^ 3 * (1 - 3 * x) ^ 2). ● a(n) = 12 * a(n - 1) - 57 * a(n - 2) + 134 * a(n - 3) - 156 * a(n - 4) + 72 * a(n - 5), n >= 5, a(0)=a(1)=a(2)=0, a(3)=1, a(4)=12. ● a(n) = Sum _{ k=2..n - 2 } k * 3 ^ (k - 1) * (n - k,2) * 2 ^ (n - k - 2). ● a(n) = 3 ^ n * (n - 8) + 2 ^ (n - 2) * (n ^ 2 + 9 * n + 32). - _ Stefano Spezia _ , Jan 23 2024 ●

► [A137207] 12,87,584,3835,25008,162792,1060048,6910695,45119100,295038315,1932260256,12673336052,83236707232,547388545740,3604063891104,237556304074079,156740823815940,1035157282013085,6842413166034600 ⋆ Number of exceptional sets of roots of type D _ n. Also the number of unordered factorizations of the Coxeter element. ● a(n) = (2 * (n - 1) / (2 * n - 1)) * binomial(3 * n - 3,n - 1) - binomial(3 * n - 5,n - 2) + 4 * binomial(3 * n - 3,n - 3). ● a(n) = (16 * n ^ 2 - 41 * n + 24) / (n * (2 * n - 1)) * binomial(3 * n - 5,n - 2). ●

► [A164608] 1,12,88,608,4160,28416,194048,1325056,9048064,61784064,421888000,2880831488,19671547904,134325731328,917233467392,6263261888512,42768227368960,292039723843584,1994171971796992,13617057983627264 ⋆ Expansion of (1 + 4 * x) / (1 - 8 * x + 8 * x ^ 2). ● a(n) = 8 * a(n - 1) - 8 * a(n - 2) for n > 1; a(0) = 1, a(1) = 12. ● a(n) = ((2 + 4 * sqrt(2)) * (4 + 2 * sqrt(2)) ^ n + (2 - 4 * sqrt(2)) * (4 - 2 * sqrt(2)) ^ n) / 4. ●

► [A081009] 1,12,88,609,4180,28656,196417,1346268,9227464,63245985,433494436,2971215072,20365011073,139583862444,956722026040,6557470319841,44945570212852,308061521170128,2111485077978049,14472334024676220,99194853094755496 ⋆ a(n) = Fibonacci(4n + 3) - 1, or Fibonacci(2n + 2) * Lucas(2n + 1). ● a(n) = 8 * a(n - 1) - 8 * a(n - 2) + a(n - 3). ● a(n) = - 1 + [(7 / 2) - (3 / 2) * sqrt(5)] ^ n + [(7 / 2) + (3 / 2) * sqrt(5)] ^ n + (2 / 5) * sqrt(5) *{ [(7 / 2) + (3 / 2) * sqrt(5)] ^ n - [(7 / 2) - (3 / 2) * sqrt(5)] ^ n } , with n>=0. - _ Paolo P. Lava _ , Dec 01 2008 ●

► [A155635] 1,12,88,636,4720,35892,277768,2175276,17167840,136170852,1083507448,8638762716,68963617360,550976517012,4404150026728,35214889666956,281627564601280,2252562753138372,18018213206747608,144134261562183996 ⋆ 8 ^ n + 5 ^ n - 1. ● a(n)=13 * a(n - 1) - 40 * a(n - 2) - 28 with a(0)=1, a(1)=12 - _ Vincenzo Librandi _ , Jul 21 2010 ●

► [A359311] 0,0,0,0,0,0,1,12,89,528,2755,13244,60214,263121,1116791,4637476,18936940,76327705,304520286,1205152900,4738962369,18540020091,72240167011,280579954028,1087033982059 ⋆ Number of Catalan paths (nonnegative, starting and ending at 0, step +/- 1) of 2 * n steps which reach at least 6 at some point. ● a(n) = Sum _{ k >= 1 } binomial(2 * (n + 1), (n + 1) + 7 * k) - 4 * binomial(2 * n, n + 7 * k). ●

► [A199558] 12,89,705,5633,45057,360449,2883585,23068673,184549377,1476395009,11811160065,94489280513,755914244097,6047313952769,48378511622145,387028092977153,3096224743817217,24769797950537729,198158383604301825 ⋆ 11 * 8 ^ n + 1. ● a(n) = 8 * a(n - 1) - 7. ● a(n) = 9 * a(n - 1) - 8 * a(n - 2). ●

► [A084485] 1,12,90,522,2595,11673,49014,195828,753813,2819475,10308144,36998118,130786695,456452493,1575799290,5389290792,18281487081,61569776727,206040460212,685584843450,2269566343611,7478425876977,24538396875870,80206515476892,261239771497725 ⋆ Number of 3 X n 0 - 1 matrices which have n + 2 1's and have no zero rows or zero columns. ● a(n) = n * (4 * (3 * n - 1) * 3 ^ n - 9 * (n - 1) * 2 ^ n) / 24. - _ Vladeta Jovovic _ , May 28 2003 ●

► [A130072] 0,12,90,528,2850,14832,75810,383808,1932930,9705552,48648930,243605088,1219100610,6098716272,30503196450,152544778368,762810181890,3814309582992,19072323542370,95363943807648,476826695752770,2384154405761712,11920834803510690 ⋆ a(n) = 5 ^ n - 3 ^ n - 2 ^ n. ● a(n) = 5 ^ n - 3 ^ n - 2 ^ n. ●

► [A073382] 1,12,90,532,2709,12432,52808,211248,805374,2951576,10465476,36079848,121412942,400054032,1293997416,4117416496,12910964103,39956039172,122193599822,369685154076,1107503284923,3288114790112 ⋆ Fifth convolution of A000129(n + 1) (generalized (2,1) - Fibonacci, called Pell numbers), n>=0, with itself. ● a(n) = Sum _{ k=0..floor(n / 2) } 2 ^ (n - 2 * k) * binomial(n - k + 5, 5) * binomial(n - k, k). ● a(n) = F’’’’(n + 6, 2) / 5!, that is, 1 / 5! times the 5th derivative of the (n + 6)th Fibonacci polynomial evaluated at x=2. - _ T. D. Noe _ , Jan 19 2006 ●

► [A036216] 1,12,90,540,2835,13608,61236,262440,1082565,4330260,16888014,64481508,241805655,892820880,3252418920,11708708112,41712272649,147219785820,515269250370,1789882659180,6175095174171,21171754882872 ⋆ Expansion of 1 / (1 - 3 * x) ^ 4; 4 - fold convolution of A000244 (powers of 3). ● a(n) = 3 ^ n * binomial(n + 3, 3). ●

► [A002544] 1,12,90,560,3150,16632,84084,411840,1969110,9237800,42678636,194699232,878850700,3931426800,17450721000,76938289920,337206098790,1470171918600,6379820115900,27569305764000,118685861314020,509191949220240,2177742427450200,9287309860732800 ⋆ a(n) = binomial(2 * n + 1,n) * (n + 1) ^ 2.

● a(n - 1) = sum(i _ 1 + i _ 2 + ... + i _ n) where the sum is over 0 <= i _ 1 <= i _ 2 <= ... <= i _ n <= n; a(n) = (n + 1) ^ 2 C(2n + 1, n). - _ David Callan _ , Nov 20 2003 ● a(n) = (n + 1) ^ 2 * binomial(2 * n + 2,n + 1) / 2. - _ Zerinvary Lajos _ , May 31 2006 ●

▶ [A093801] 1,12,90,594,3726,22842,138510,835434,5025726,30193722,181280430,1088036874,6529284126,39178893402,235082926350,1410526255914,8463243628926,50779720053882,304679095164270,1828076895508554,10968468346620126 ★ a(n) = b(n) * Integral _{ x=0..1 / (4 ^ n) } (1 - sqrt(x)) dx, where b(n) = 3 * 24 ^ n. ● a(n) = 3 * 6 ^ n - 2 * 3 ^ n. - _ R. J. Mathar _ , Nov 24 2008 ● a(n) = 9 * a(n - 1) - 18 * a(n - 2), n > 1; a(0)=1, a(1)=12. ●

▶ [A004311] 1,12,91,560,3060,15504,74613,346104,1562275,6906900,30045015,129024480,548354040,2310789600,9669554100,40225345056,166509721602,686353797976,2818953098830,11541847896480,47129212243960,191991813933920,780512175396135,3167295784216200 ★ Binomial coefficient C(2n,n - 5). ● a(n) = Sum { k=0..n } C(n, k) * C(n, k + 5). - _ Hermann Stamm - Wilbrandt _ , Aug 17 2015 ●

▶ [A160869] 1,12,91,600,3751,22932,138811,836400,5028751,30203052,181308931,1088123400,6529545751,39179682372,235085301451,1410533397600,8463265086751,50779784492892,304679288612371,1828077476115000,10968470088963751,65810836228506612 ★ a(n) = sigma(6 ^ (n - 1)). ● a(n) = 12 * a(n - 1) - 47 * a(n - 2) + 72 * a(n - 3) - 36 * a(n - 4). - _ Colin Barker _ , Nov 24 2014 ●

▶ [A298397] 0,12,92,176,376,532,852,1080,1520,1820,2380,2752,3432,3876,4676,5192,6112,6700,7740,8400,9560,10292,11572,12376,13776 ★ Pentagonal numbers divisible by 4. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). ● a(n) = 8 * n * (3 * n - 7) - (6 * n - 7) * (- 1) ^ n + 33. ● a(n) = 24 * n ^ 2 - 62 * n + 40 for n even. ● a(n) = 24 * n ^ 2 - 50 * n + 26 for n odd. (End) ●

▶ [A045894] 1,12,94,608,3525,19044,97954,486000,2345930,11081880,51447036,235454848,1064832173,4767347796,21160397050,93223960784,408037319262,1775744775592,7688699122724,33140226601920,142262721338146 ★ 4 - fold convolution of A001700(n), n >= 0. ● a(n) = (n + 11) * 4 ^ (n + 2) - (n + 5) * binomial(2 * (n + 4), n + 4) / 2; ●

▶ [A038836] 1,12,95,624,3682,20264,106203,536840,2639230,12692360,59957846,279081152,1282981380,5835994768,26305678739,117635236344,522394992358,2305593653960,10120007354562,44201842781536,192208416186716 ★ Convolution of Catalan numbers { 1,2,5,14,... } with A002802 (5 - fold convoluted central binomial coefficients). ● a(n) = binomial(n + 5, 2) * binomial(2 * (n + 3), n + 2) / 6 - (n + 3) * 2 ^ (2 * n + 3); G.f. c(x) ^ 2 / (1 - 4 * x) ^ (5 / 2), where c(x) = g.f. for Catalan numbers A000108; ●

▶ [A021074] 1,12,95,630,3801,21672,119155,639210,3370301,17549532,90541815,463889790,2364180001,11999840592,60714998075,306438236370,1543644296901,7764034206852,39003422447935 ★ Expansion of 1 / ((1 - x)(1 - 2x)(1 - 4x)(1 - 5x)). ● a(0)=1, a(1)=12, a(2)=95, a(3)=630, a(n)=12 * a(n - 1) - 49 * a(n - 2) + 78 * a(n - 3) - 40 * a(n - 4). [_ Harvey P. Dale _ , Oct 01 2011] ● a(n) = (5 ^ (n + 3) - 2 * 4 ^ (n + 3) + 2 * 2 ^ (n + 3) - 1) / 12. [_ Yahia Kahloune _ , Apr 29 2013] ● a(0)=1, a(1)=12; for n>1, a(n) = 9 * a(n - 1) - 20 * a(n - 2) + 2 ^ n - 1. - _ Vincenzo Librandi _ , Jul 05 2013 ●

▶ [A192848] 12,96,300,672,1260,2112,3276,4800,6732,9120,12012,15456,19500,24192,29580,35712,42636,50400,59052,68640,79212,90816,103500,117312,132300 ★ Molecular topological indices of the graph join C _ n + C _ n of cycle graphs. ● a(n) = 4 * n * (2 + n) * (- 1 + 2 * n). ●

▶ [A120658] 0,12,96,370,1654,6660,28020,115190,478786,1979288,8203968,33961066,140672814,582515628,2412508492,9990776222,41375626970,171349445760,709617513368,2938760897682,12170404119878,50401719145492 ★ Expansion of 2 * x * (6 + 30 * x - 13 * x ^ 2 - 70 * x ^ 3) / ((1 - x) * (1 + 2 * x) * (1 - 4 * x - 3 * x ^ 2 + 10 * x ^ 3)). ● a(n) = 3 * a(n - 1) + 9 * a(n - 2) - 15 * a(n - 3) - 16 * a(n - 4) + 20 * a(n - 5) for n >= 5. ● a(n) = 2 * a(n - 1) + 11 * a(n - 2) - 4 * a(n - 3) - 20 * a(n - 4) - 94 for n >= 4. ● a(n) = 4 * a(n - 1) + 3 * a(n - 2) - 10 * a(n - 3) - (2 / 3) * (47 + 28 * (- 2) ^ (n - 3)) for n >= 3. (End) ●

▶ [A138162] 12,96,526,2593,12165,55482,248509,1099255,4817998,20968680,90747564,390927869,1677551078,7174848666,30598014925,130155932685,552386655300,2339526458640,9890067346740,41737405295250,175859194700958 ★ Number of permutations of { 1,2,...,n } containing exactly 4 occurrences of the 132 pattern. ● a(n) = (n ^ 9 + 102n ^ 8 - 282n ^ 7 - 12264n ^ 6 + 32589n ^ 5 + 891978n ^ 4 - 7589428n ^ 3 + 25452024n ^ 2 - 39821760n + 23950080)(2n - 12)! / [24n!(n - 6)!] for n>=6, a(5)=12. ●

▶ [A073392] 1,12,96,616,3444,17472,82432,367488,1565280,6421376,25525248,98773248,373450112,1383674880,5036089344,18041821184,63727070976,222249968640,766234140672,2614196680704,8834194123776 ★ Fifth convolution of A002605(n) (generalized (2,2) - Fibonacci), n >= 0, with itself. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n - k + 5, 5) * binomial(n - k, k) * 2 ^ (n - k). ●

▶ [A038845] 1,12,96,640,3840,21504,114688,589824,2949120,14417920,69206016,327155712,1526726656,7046430720,32212254720,146028888064,657129996288,2937757630464,13056700579840,57724360458240,253987186016256 ★ 3 - fold convolution of A000302 (powers of 4). ● a(n) = (n + 2) * (n + 1) * 2 ^ (2 * n - 1). ● a(n) = binomial(n + 2,n) * 4 ^ n. - _ Rui Duarte _ , Oct 08 2011 ●

▶ [A270568] 1,12,96,768,6144,49152,393216,3145728,25165824,201326592,1610612736,12884901888,103079215104,824633720832,6597069766656,52776558133248,422212465065984,3377699720527872,27021597764222976,216172782113783808,1729382256910270464 ★ Expansion of (1 + 4 * x) / (1 - 8 * x). ● a(n) = 8 * a(n - 1) for n>1. ● a(n) = 12 * 8 ^ (n - 1) for n>0. ●

▶ [A155620] 1,12,96,792,6816,60072,535536,4799352,43112256,387682632,3487832976,31385253912,282446313696,2541932937192,22877060890416,205892205836472,1853024483819136,16677198879535752,150094704016475856 ★ 9 ^ n + 4 ^ n - 1. ● a(n)=13 * a(n - 1) - 36 * a(n - 2) - 24 with a(0)=1, a(1)=12 [From _ Vincenzo Librandi _ , Jul 21 2010] ● a(0)=1, a(1)=12, a(2)=96, a(n)=14 * a(n - 1) - 49 * a(n - 2) + 36 * a(n - 3). - _ Harvey P. Dale _ , Feb 02 2015 ●

▶ [A016753] 1,12,97,660,4081,23772,133057,724260,3863761,20308332,105558817,544039860,2785713841,14192221692,72020501377,364354427460,1838822866321,9262446387852,46585947584737 ★ Expansion of 1 / ((1 - 3 * x) * (1 - 4 * x) * (1 - 5 * x)). ● a(n) = 5 ^ (n + 2) / 2 - 4 ^ (n + 2) + 3 ^ (n + 2) / 2. - _ Paul Barry _ , May 13 2003 ● a(n) = 9 * a(n - 1) - 20 * a(n - 2) + 3 ^ n, n >= 2. - _ Vincenzo Librandi _ , Mar 20 2011 ●

▶ [A021029] 1,12,97,672,4333,26964,164809,998184,6017605,36192156,217414561,1305276336,7834033117,47011340388,282089500153,1692601439928,10155802087669,60935393132460,365614101138385 ★ Expansion of 1 / ((1 - x) * (1 - 2 * x) * (1 - 3 * x) * (1 - 6 * x)). ● a(n) = (- 1 + 5 * 2 ^ (n + 2) - 5 * 3 ^ (n + 2) + 6 ^ (n + 2)) / 10. - _ Bruno Berselli _ , Sep 02 2011 ●

▶ [A128594] 1,12,97,696,4784,32230,214978,1426566,9441417,62405645,412278981,2723566163,17996243101,118957645301,786700165122,5205396517853,34461624895701,228274455988134,1512920531980961,10032446308837778 ★ Column 2 of triangle A128592; a(n) = coefficient of q ^ (2n + 6) in the q - analog of the odd double factorials (2n + 5)!! for n>=0. ● a(n) = [q ^ (2n + 6)] Product _{ j=1..n + 3 } (1 - q ^ (2j - 1)) / (1 - q) for n>=0. ●

▶ [A004058] 1,12,99,686,4305,25368,143263,785202,4211229,22226204,115899147,598832598,3072304873,15676477920,79649367351,403336249274,2037103422837,10267399442916,51665107485475 ★ Expansion of (1 - x) / ((1 + x) * (1 - 2 * x) * (1 - 3 * x) * (1 - 4 * x) * (1 - 5 * x)). ● a(n) = (1 / 180) * (2500 * 5 ^ n - 3456 * 4 ^ n + 1215 * 3 ^ n - 80 * 2 ^ n + (- 1) ^ n). ●

▶ [A016283] 0,0,1,12,100,720,4816,30912,193600,1194240,7296256,44301312,267904000,1615810560,9728413696,58504691712,351565004800,2111537479680,12677814747136,76101248090112,456744927232000 ★ a(n) = 6 ^ n / 8 - 4 ^ (n - 1) + 2 ^ (n - 3). ● a(n) =((6 ^ n - 2 ^ n) / 4 - (4 ^ n - 2 ^ n) / 2) / 2 , n >= 0. - _ Zerinvary Lajos _ , Jun 05 2009 ●

▶ [A199681] 12,100,892,8020,72172,649540,5845852,52612660,473513932,4261625380,38354628412,345191655700,3106724901292,27960524111620,251644717004572,2264802453041140,20383222077370252,183448998696332260 ★ 11 * 9 ^ n + 1. ● a(n) = 9 * a(n - 1) - 8. ● a(n) = 10 * a(n - 1) - 9 * a(n - 2). ●

▶ [A109020] 0,1,12,101,760,5481,38852,273421,1918320,13441361,94128892,659020341,4613496680,32295539641,226071966132,1582513328861,11077621999840,77543440092321,542804338926572,3799631147326981,26597420355811800,186181949464251401,1303273667170466212 ★ (2 * 7 ^ n - 3 * 3 ^ n + 1) / 6. ● a(0)=0, a(1)=1, a(2)=12, a(n)=11 * a(n - 1) - 31 * a(n - 2) + 21 * a(n - 3) – From _ Harvey P. Dale _ , Aug 10 2012 ●

▶ [A304504] 12,102,273,525,858,1272,1767,2343,3000,3738,4557,5457,6438,7500,8643,9867,11172,12558,14025,15573,17202,18912,20703,22575,24528 ★ a(n) = 3 * (3 * n + 1) * (9 * n + 8) / 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n >3. ●

▶ [A082151] 0,0,1,12,102,760,5295,35364,228956,1445616,8936685,54252220,324214242,1911205608,11132579003,64170616020,366497915640,2076171038176,11676266706969,65242364726124,362433045180830,2002838101907160,11015341078090503,60321223747375492 ★ A transform of C(n,2). ● a(n) = C(n, 2) * (3 ^ (n - 2) + 5 ^ (n - 2)) / 2. ● a(n) = x ^ 2 * (76 * x ^ 3 - 51 * x ^ 2 + 12 * x - 1) / ((1 - 3 * x) ^ 3 * (5 * x - 1) ^ 3). ●

▶ [A133384] 12,102,1002,10002,100002,1000002,10000002,100000002,1000000002,10000000002,100000000002,1000000000002,10000000000002,100000000000002,1000000000000002,10000000000000002 ★ Numbers with n 0's between 1 and 2. ● a(n) = 10 ^ n + 2 for n >= 1. - _ Paolo P. Lava _ , Dec 19 2007 ● a(n) = 10 ^ (n + 1) + 2. - _ Vincenzo Librandi _ , Aug 10 2011 ● a(n) = 11 * a(n - 1) - 10 * a(n - 2); a(0)=12, a(1)=102. - _ Harvey P. Dale _ , Oct 03 2013 ●

▶ [A016228] 1,12,103,774,5425,36456,238267,1527258,9651829,60352380,374321311,2306963022,14146953913,86407602384,526075008835,3194597025666,19358317017277,117103576420068,707389830102439,4268180838524790,25728294320699521,154965812371951032 ★ Expansion of 1 / ((1 - x) * (1 - 5 * x)(1 - 6 * x)). ● a(n) = (1 / 20) - (25 / 4) * 5 ^ n + (36 / 5) * 6 ^ n. [_ Antonio Alberto Olivares _ , Feb 06 2010] ● a(0)=1, a(1)=12, a(n)=11 * a(n - 1) - 30 * a(n - 2) + 1. - _ Vincenzo Librandi _ , Feb 10 2011 ●

▶ [A016276] 1,12,103,786,5713,40656,286651,2012862,14109205,98822460,691932319,4844053578,33909961177,237374494824,1661635779907,11631493440534,81420583092829,569944468808148,3989612443394215 ★ Expansion of 1 / ((1 - 2x)(1 - 3x)(1 - 7x)). ● a(n) = 4 * 2 ^ n / 5 - 9 * 3 ^ n / 4 + 49 * 7 ^ n / 20. - _ Antonio Alberto Olivares _ , Feb 03 2010 ● a(n) = 12 * a(n - 1) - 41 * a(n - 2) + 42 * a(n - 3), n >= 3. ● a(n) = 10 * a(n - 1) - 21 * a(n - 2) + 2 ^ n, a(0)=1, a(1)=12. ●

▶ [A266959] 1,12,103,1004,10005,100006,1000007,10000008,100000009,1000000010,10000000011,100000000012,1000000000013,10000000000014,100000000000015,1000000000000016,10000000000000017,100000000000000018,1000000000000000019,10000000000000000020 ★ Smallest n - digit number ending in n. ● a(n) = n + 10 ^ (n - 1) for n>1 with a(1) = 1. ● a(n) = 12 * a(n - 1) - 21 * a(n - 2) + 10 * a(n - 3) for n>3. ●

▶ [A173835] 1,12,104,1006,10008,100010,1000012,10000014,100000016,1000000018,10000000020,100000000022,1000000000024,10000000000026,100000000000028,1000000000000030,10000000000000032,100000000000000034 ★ 10 ^ n + 2 * n. ● a(n) = 11 * a(n - 1) - 10 * a(n - 2) - 18. - _ Vincenzo Librandi _ , Jul 06 2012 ●

▶ [A334168] 1,12,104,1006,10009,100011,1000013,10000016,100000018,1000000020,10000000023,100000000025,1000000000027,10000000000029,100000000000032,1000000000000034,10000000000000036,100000000000000039,1000000000000000041,10000000000000000043 ★ Numbers m whose leading digit and the other decimal digits appear respectively before and directly after the decimal point of its m - th root. ● a(n + 1) = floor((10 ^ (n / 10 ^ n)) * 10 ^ n) (conjectured). ● a(n) = 10 ^ (n - 1) + floor((n - 1) * log(10)) (conjectured). - _ David A. Corneth _ , Apr 19 2020 ●

▶ [A004321] 1,12,105,816,5985,42504,296010,2035800,13884156,94143280,635745396,4280561376,28760021745,192928249296,1292706174900,8654327655120,57902201338905,387221678682300,2588713818544245 ★ Binomial coefficient C(3n, n - 3). ● a(n) = binomial(3n, n - 3), n > 2. - _ Wesley Ivan Hurt _ , Feb 04 2014 ●

▶ [A016223] 1,12,105,820,6081,43932,312985,2212740,15576561,109385452,767096265,5375266260,37649233441,263634112572,1845796701945,12922008569380,90459786608721,633241412753292,4432781515242025,31029837110570100,217210325789494401,1520478144588475612 ★ Expansion of 1 / ((1 - x)(1 - 4x)(1 - 7x)). ●

a(n) = (1 / 18) - (16 / 9) * 4 ^ (n - 1) + (49 / 18) * 7 ^ (n - 1). - _ Antonio Alberto Olivares _ , Feb 07 2010 ● a(0)=1, a(1)=12, a(n) = 11 * a(n - 1) - 28 * a(n - 2) + 1. - _ Vincenzo Librandi _ , Feb 10 2011 ●

▶ [A090816] 1,12,105,840,6435,48048,352716,2558160,18386775,131231100,931395465,6580248480,46312074900,324897017760,2272989850440,15863901576864,11048759676870 3,76809559250970 0,5330949171823275,36945070220658600,255702514854135195,1767643865751234240 ⋆ a(n) = (3 * n + 1)! / ((2 * n)! * n!). ● a(n) = Sum _{ j=0..n } j * binomial(n,j) * binomial(2 * n - 1,j). - _ Zerinvary Lajos _ , Jul 31 2006 ●

▶ [A144133] 1,12,106,828,6051,42408,288788,1925736,12637733,81897876,525360702,3341936196,21109664455,132544828560,827948567080,5148653356944,31891223012553,196848686563164,1211273655997202,7432579805359884 ⋆ Gegenbauer polynomial C _ n ^ 2(3). ● a(- 4 - n) = - a(n). ● a(n + 4) - 12 * a(n + 3) + 38 * a(n + 2) - 12 * a(n + 1) + a(n) = 0. (End) ●

▶ [A321672] 0,0,12,108,480,1500,3780,8232,16128,29160,49500,79860,123552,184548,267540,378000,522240,707472,941868,1234620,1596000,2037420,2571492,3212088,3974400 ⋆ Number of chiral pairs of rows of length 5 using up to n colors. ● a(n) = (n ^ 5 - n ^ 3) / 2. ●

▶ [A037972] 0,1,12,108,800,5250,31752,181104,988416,5212350,26741000,134132856,660284352,3199016548,15288882000,72209880000,337535723520,1563410094390,7182839945160,32761238433000,148450107960000,668693511305820,2995943329133040,13356820221694560 ⋆ a(n) = n ^ 2 * (n + 1) * binomial(2 * n - 2, n - 1) / 2. ● a(n) = Sum _{ k=0..n } k ^ 3 * (C(n,k)) ^ 2. [heruneedollar (heruneedollar(AT)gmail.com), Mar 20 2010] ●

▶ [A053469] 1,12,108,864,6480,46656,326592,2239488,15116544,100776960,667127936,4353564672,28298170368,182849716224,1175462461440,7522959753216,47958868426752,304679870005248,1929639176699904,12187194800209920,76779327241322496,482612914088312832 ⋆ a(n) = n * 6 ^ (n - 1). ● a(n) = 12 * a(n - 1) - 36 * a(n - 2), n>=3. ●

▶ [A140317] 1,12,108,1008,10000,100008,1000041,10000000,100000008,1000000000,10000000109,100000000080,1000000000116,10000000000144,100000000000125,1000000000000000,10000000000000152,100000000000000008 ⋆ Smallest n - digit number divisible by n ^ 2. ● a(n) = n ^ 2 * ceiling(10 ^ (n - 1) / n ^ 2). - _ Michel Marcus _ , Aug 25 2020 ●

▶ [A155608] 1,12,108,1026,10080,100242,1000728,10002186,100006560,1000019682,10000059048,100000177146,1000000531440,10000001594322,100000004782968,1000000014348906,10000000043046720,100000000129140162 ⋆ 10 ^ n + 3 ^ n - 1. ● a(n) = 13 * a(n - 1) - 30 * a(n - 2) - 18 with a(0)=1, a(1)=12. - _ Vincenzo Librandi _ , Jul 21 2010 ●

▶ [A016161] 1,12,109,888,6841,51012,372709,2687088,19200241,136354812,964249309,6798573288,47834153641,336059778612,2358521965909,16540171339488,115933787267041,812299450322412,5689910849522509 ⋆ Expansion of 1 / ((1 - 5x)(1 - 7x)). ● a(n) = 7 * a(n - 1) + 5 ^ n. - _ Vincenzo Librandi _ , Feb 09 2011 ●

▶ [A081200] 0,1,12,109,888,6841,51012,372709,2687088,19200241,136354812,964249309,6798573288,47834153641,336059778612,2358521965909,16540171339488,115933787267041,812299450322412,5689910849522509,39848449432985688 ⋆ 6th binomial transform of (0,1,0,1,0,1,...), A000035. ● a(n) = 12 * a(n - 1) - 35 * a(n - 2), a(0) = 0, a(1) = 1. ● a(n) = 7 ^ n / 2 - 5 ^ n / 2. ● a(n) = Sum _{ k=0..n - 1 } 7 ^ k * 5 ^ (n - k - 1), with a(0)=0. - _ Reinhard Zumkeller _ , Aug 01 2010 ●

▶ [A016214] 1,12,109,912,7417,59700,478693,3832824,30672433,245408988,1963360477,15707149536,125657993449,1005266339076,8042137887061,64337124619848,514697061528865,4117576685941164,32940614068660045 ⋆ Expansion of 1 / ((1 - x)(1 - 3x)(1 - 8x)). ● a(n) = 11 * a(n - 1) - 24. ● a(n) = (2 * 8 ^ (n + 2) - 7 * 3 ^ (n + 2) + 5) / 70. - _ Yahia Kahloune _ , May 19 2013 ●

▶ [A037581] 1,12,109,984,8857,79716,717445,6457008,58113073,523017660,4707158941,42364430472,381279874249,3431518868244,30883669814197,277953028327776,2501577254949985,22514195294549868,202627757650948813,1823649818858539320,16412848369726853881 ⋆ Base 9 digits are, in order, the first n terms of the periodic sequence with initial period 1,3. ● a(n) = (3 ^ (1 + 2 * n) + 2 * (- 1) ^ n - 5) / 20. a(n) = 9 * a(n - 1) + a(n - 2) - 9 * a(n - 3). G.f.: x * (3 * x + 1) / ((x - 1) * (x + 1) * (9 * x - 1)). [_ Colin Barker _ , Dec 27 2012] ●

▶ [A177071] 12,110,306,600,992,1482,2070,2756,3540,4422,5402,6480,7656,8930,10302,11772,13340,15006,16770,18632,20592,22650,24806,27060,29412 ⋆ a(n) = (7 * n + 3) * (7 * n + 4). ● a(n) = 98 * n + a(n - 1) with n>0, a(0)=12. ● a(0)=12, a(1)=110, a(2)=306, a(n)=3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A081183] 0,1,12,110,912,7204,55440,420344,3159168,23618320,176008128,1309074656,9724619520,72186895936,535605687552,3972913788800,29464372088832,218493396246784,1620132103941120,12012809774902784,89069225764835328 ⋆ 6th binomial transform of (0,1,0,2,0,4,0,8,0,16,...). ● a(n) = 12 * a(n - 1) - 34 * a(n - 2) with n > 1, a(0)=0, a(1)=1. ● a(n) = ((6 + sqrt(2)) ^ n - (6 - sqrt(2)) ^ n) / (2 * sqrt(2)). ● a(n) = Sum _{ k=0..n } C(n,2k + 1) * 2 ^ k * 6 ^ (n - 2k - 1). ●

▶ [A000559] 1,12,110,945,8092,70756,638423,5971350,57996774,585092607,6128147610,66579524648,749542556193,8733648533696,105203108066962,1308549777461505,16787682400875456,221901108871482760,3018891886411332135,42230736603244134242 ⋆ Generalized Stirling numbers of second kind. ● a(n) = Sum _{ k=0..n } Stirling2(n,k) * Stirling2(k,3). ●

▶ [A037714] 1,12,110,990,8911,80202,721820,6496380,58467421,526206792,4735861130,42622750170,383604751531,3452442763782,31071984874040,279647863866360,2516830774797241,22651476973175172,203863292758576550,1834769634827188950 ⋆ Base 9 digits are, in order, the first n terms of the periodic sequence with initial period 1,3,2,0. ● a(n) = 10 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 9 * a(n - 4). - _ Wesley Ivan Hurt _ , Sep 05 2022 ●

▶ [A153597] 1,12,111,936,7569,59940,469503,3656016,28378593,219894588,1702241487,13170376440,101870548209,787824155988,6092161780959,47107744223904,364251591915201,2816463543593580,21777259989921327,168383822940467784 ⋆ a(n) = ((6 + sqrt(3)) ^ n - (6 - sqrt(3)) ^ n) / (2 * sqrt(3)). ● a(n) = 12 * a(n - 1) - 33 * a(n - 2) for n>1; a(0)=0, a(1)=1. - _ Philippe Deléham _ , Jan 01 2009 ●

▶ [A199691] 12,111,1101,11001,110001,1100001,11000001,110000001,1100000001,11000000001,110000000001,1100000000001,11000000000001,110000000000001,1100000000000001,11000000000000001,110000000000000001 ⋆ 11 * 10 ^ n + 1. ● a(n) = 10 * a(n - 1) - 9. ● a(n) = 11 * a(n - 1) - 10 * a(n - 2). ●

▶ [A016152] 0,1,12,112,960,7936,64512,520192,4177920,33488896,268173312,2146435072,17175674880,137422176256,1099444518912,8795824586752,70367670435840,562945658454016,4503582447501312,36028728299487232 ⋆ a(n) = 4 ^ (n - 1) * (2 ^ n - 1). ● a(n) = ((8 ^ (n + 1)) - 4 ^ (n + 1)) / 4. ● a(n) = 12a(n - 1) - 32a(n - 2), n>0; a(0)=1. (End) ● a(n) = - 4 ^ (n - 1) + 2 * 8 ^ (n - 1). ●

▶ [A153882] 1,12,113,984,8305,69156,572417,4725168,38957089,321004860,2644388561,21781512072,179402099473,1477598319444,12169714749665,100231029093216,825511191878977,6798972400658028,55996821859648049,461193717895377720 ⋆ a(n) = ((6 + sqrt(5)) ^ n - (6 - sqrt(5)) ^ n) / (2 * sqrt(5)). ● a(n) = 12 * a(n - 1) - 31 * a(n - 2) for n>1, with a(0)=0, a(1)=1. ● a(n) = 12 * a(n - 1) - 31 * a(n - 2). - _ G. C. Greubel _ , Aug 31 2016 ●

▶ [A257287] 1,12,114,978,7926,61962,472614,3541578,26190726,191733162,1392520614,10049975178,72163811526,516030592362,3677517616614,26134444136778,185292033880326,1311149786699562,9262681804120614,65346572412186378 ⋆ a(n) = 6 * 7 ^ n - 5 * 6 ^ n. ● a(n) = 13 * a(n - 1) - 42 * a(n - 2). - _ Vincenzo Librandi _ , May 04 2015 ●

▶ [A331515] 1,12,114,1000,8430,69384,561988,4499856,35719830,281634760,2208564732,17242680624,134118558028,1039939550160,8041848166920,62042202765856,477670318108902,3670988584476744,28166853684793420,215807899372086000,1651323989374972836 ⋆ Expansion of 1 / (1 - 8 * x + 4 * x ^ 2) ^ (3 / 2). ● a(n) = Sum _{ k=1..n + 1 } 2 ^ (n - k) * k * binomial(n + 1,k) * binomial(n + 1 + k,k). ● a(n) = ((n + 2) / 2) * Sum _{ k=0..n } 3 ^ k * binomial(n + 1,k) * binomial(n + 1,k + 1). ●

▶ [A154237] 1,12,114,1008,8676,73872,626184,5298048,44791056,378551232,3198883104,27030060288,228394230336,1929828955392,16306120554624,137778577993728,1164159319286016,9836554491620352,83113874320863744,702269857101754368 ⋆ a(n) = ((6 + sqrt(6)) ^ n - (6 - sqrt(6)) ^ n) / (2 * sqrt(6)). ● a(n) = 12 * a(n - 1) - 30 * a(n - 2) for n > 1, with a(0)=0, a(1)=1. ●

▶ [A333299] 1,12,114,1068,10011,93840,879624,8245296,77288598,724477008,6791000856 ⋆ Number of canonical sequences of moves of length n for the Rubik cube puzzle using the quarter - turn metric. ● a(n) = 8 * a(n - 1) + 12 * a(n - 2) + 8 * a(n - 3) + 2 * a(n - 4) for n>4. ●

▶ [A154247] 1,12,115,1032,9049,78660,681499,5896848,50998705,440975868,3812747971,32964675480,285006414601,2464101386292,21304030612075,184189427142432,1592456237959009,13767981468377580,119034546719719699 ⋆ a(n) = ((6 + sqrt(7)) ^ n - (6 - sqrt(7)) ^ n) / (2 * sqrt(7)). ● a(n) = 12 * a(n - 1) - 29 * a(n - 2) for n > 1, with a(0)=0, a(1)=1. ●

▶ [A016204] 1,12,115,1050,9481,85392,768655,6918150,62263861,560375772,5043383995,45390460050,408514148641,3676627354152,33089646220135,297806816046750,2680261344551821,24122352101228532,217101168911581075 ⋆ Expansion of 1 / ((1 - x)(1 - 2x)(1 - 9x)). ● a(n) = (81 * 9 ^ n - 32 * 2 ^ n + 7) / 56. - _ Bruno Berselli _ , Feb 09 2011 ● a(n) = 9 * a(n - 1) + 2 ^ (n + 1) - 1. - _ Vincenzo Librandi _ , Feb 09 2011 ● a(0)=1, a(1)=12, a(2)=115, a(n) = 12 * a(n - 1) - 29 * a(n - 2) + 18 * a(n - 3). - _ Harvey P. Dale _ , Jun 05 2012 ●

▶ [A304827] 12,116,844,5940,41612,291316,2039244,14274740,99923212,699462516,4896237644,34273663540,239915644812,1679409513716,11755866596044,82291066172340,576037463206412,4032262242444916,28225835697114444,197580849879801140,1383065949158608012,9681461644110256116 ⋆ a(n) = 52 * 7 ^ n / 21 - 16 / 3 (n>=1). ● a(n) = 8 * a(n - 1) - 7 * a(n - 2) for n>2. ●

▶ [A154346] 1,12,116,1056,9424,83520,738368,6521856,57587968,508443648,4488860672,39629905920,349870722224,3088811900928,27269361188864,240745601040384,2125405099196416,18763984361226240,165656469557215232 ⋆ a(n) = 12 * a(n - 1) - 28 * a(n - 2) for n > 1, with a(0)=1, a(1)=12. ● a(n) = 12 * a(n - 1) - 28 * a(n - 2) for n > 1. - _ Philippe Deléham _ , Jan 12 2009 ● a(n) = ((6 + 2 * sqrt(2)) ^ n - (6 - 2 * sqrt(2)) ^ n) / (4 * sqrt(2)). ●

▶ [A016142] 1,12,117,1080,9801,88452,796797,7173360,64566801,581120892,5230147077,47071500840,423644039001,3812797945332,34315186290957,308836690967520,2779530261754401,25015772484929772,225141952751788437 ⋆ Expansion of 1 / ((1 - 3x)(1 - 9x)). ● a(n) = (1 / 6) * (9 ^ (n + 1) - 3 ^ (n + 1)). ● a(n - 1) = Sum _{ i=1..n } binomial(n, i) * 3 ^ (n - i) * 6 ^ (i - 1). - Sam Handler (sam _ 5 _ 5 _ 5 _ 0(AT)yahoo.com), Jun 29 2004 ● a(n) = 12 * a(n - 1) - 27 * a(n - 2), a(0)=1, a(1)=12. - _ Vincenzo Librandi _ , Mar 14 2011 ●

▶ [A077251] 1,12,119,1178,11661,115432,1142659,11311158,111968921,1108378052,10971811599,108609737938,1075125567781,10642645939872,105351333830939,1042870692369518,10323355589864241,102190685206272892,1011583496472864679,10013644279522373898 ⋆ Bisection (even part) of Chebyshev sequence with Diophantine property. ● a(n) = 10 * a(n - 1) - a(n - 2), a(- 1)= - 2, a(0)=1. ●

▶ [A133386] 0,0,0,0,12,120,750,3780,16856,69552,272250,1026300,3762132,13498056,47615750,165683700,570024240,1942538592,6566094450,22038141420,73510278380,243854707320,804962754750,2645408201700,8658857196552 ⋆ Number of forests of labeled rooted trees with n nodes, containing exactly 2 trees of height one, all others having height zero. ● a(n) = n * (n - 1) * Stirling2(n - 1,3). ● a(0)=0, a(1)=0, a(2)=0, a(3)=0, a(4)=12, a(5)=120, a(6)=750, a(7)=3780, a(8)=16856, a(n)=18 * a(n - 1) - 141 * a(n - 2) + 630 * a(n - 3) - 1767 * a(n - 4) + 3222 * a(n - 5) - 3815 * a(n - 6) + 2826 * a(n - 7) - 1188 * a(n - 8) + 216 * a(n - 9). - _ Harvey P. Dale _ , May 02 2015 ●

▶ [A305624] 0,0,0,12,120,780,4188,20400,93120,409140,1748220,7337232,30386160,124696740,508250988,2061566400,8331954240,33585590580,135115594140,542784981552,2178107091600,8733341736900,34996103558988,140172672276000,561255446475360 ⋆ Number of chiral pairs of rows of n colors with exactly 4 different colors. ● a(n) = (k! / 2) * (S2(n,k) - S2(ceiling(n / 2),k)), with k=4 colors used and where S2(n,k) is the Stirling subset number A008277. ●

▶ [A056311] 0,0,0,12,120,780,4212,20424,93360,409380,1749780,7338792,30394560,124705140,508291812,2061607224,8332140720,33585777060,135116412660,542785800072,2178110589600,8733345234900 ⋆ Number of reversible strings with n

beads using exactly four different colors. • a(n) = k! (S2(n,k) + S2(ceiling(n / 2),k)) / 2, where k=4 is the number of colors and S2 is the Stirling subset number. - _ Robert A. Russell _ , Sep 25 2018 •

▶ [A059155] 12,120,1008,8160,65472,524160,4194048,33553920,268434432,2147481600,17179865088,137438945280,1099511611392,8796092989440,70368744112128,562949953290240,4503599627108352,36028797018439680,28823037615066368,230584300921159680 0,1844674407370535731 2 ⋆ A hierarchical sequence (S(W' 2 { 3 } c) - see A059126). • a(n) = 2 ^ (n + 2) * (4 ^ (n + 1) - 1). - _ Peter Luschny _ , May 08 2014 •

▶ [A291391] 12,120,1080,9180,75168,599616,4691520,36164880,275503680,2078711424,15559682688,115688917440,855249269760,6291326453760,46080184338432,336227628720384,2445042642140160,17726787591690240,128173151784867840,924487654349822976 ⋆ p - INVERT of (1,1,0,0,0,0,...), where p(S) = (1 - 6 S) ^ 2. • a(n) = 12 * a(n - 1) - 24 * a(n - 2) - 72 * a(n - 3) - 36 * a(n - 4) for n >= 5. •

▶ [A115902] 1,12,120,1120,10080,88704,768768,6589440,56010240,472975360,3972993024,33228668928,276905574400,2300446310400,19060840857600,157569617756160,1299949346488320,10705465206374400,88022713919078400,722712809019801600,5926245033962373120 ⋆ Expansion of (1 - 8 * x) ^ (- 3 / 2). • a(n) = Jacobi _ P(n,1 / 2,1 / 2,1) * 8 ^ n. • a(n) = 2 ^ n * (2 * n + 1) * binomial(2 * n,n). •

▶ [A277491] 1,12,120,1128,10344,93864,847848,7642920,68835432,619715496,5578225896,50207178792,451877192040,4066945060008,36602706866664,329425167106344,2964829725182568,26683480411545000,240151375243512552,2161362583350043176,19452264074784109416 ⋆ Number of triangles in the standard triangulation of the n - th approximation of the Koch snowflake fractal. • a(n) = 13 * a(n - 1) - 36 * a(n - 2) for n>1, a(0)=1, a(1)=12. • a(n) = (8 * 9 ^ n - 3 * 4 ^ n) / 5. •

▶ [A266393] 12,120,1152,11520,122400,1391040,16934400,220631040,3069964800,45505152000,716586393600,11955879936000,210797108121600,3917792406528000,76577410990080000,1570715682471936000,33740509429186560000 ⋆ Number of permutations of n letters that contain exactly 3 distinguishable A's, 2 distinguishable B's and n - 5 distinguishable other letters, where no A's are adjacent and no B's are adjacent. • a(n) = (n - 3)! * (n ^ 3 - 11 * n ^ 2 + 44 * n - 64). •

▶ [A004291] 1,12,120,1188,11760,116412,1152360,11407188,112919520,1117788012,11064960600,109531817988,1084253219280,10733000374812,106245750528840,1051724504913588,10410999298607040,103058268481156812,1020171685512961080,10098658586648453988 ⋆ Expansion of (1 + 2 * x + x ^ 2) / (1 - 10 * x + x ^ 2). • a(n) = sqrt(3 / 2) * (- (5 - 2 * sqrt(6)) ^ n + (5 + 2 * sqrt(6)) ^ n) for n > 0. - _ Colin Barker _ , Jan 25 2016 •

▶ [A037511] 1,12,120,1201,12012,120120,1201201,12012012,120120120,1201201201,12012012012,120120120120,1201201201201,120120120120120,1201201201201201 ⋆ Decimal expansion of a(n) is given by the first n terms of the periodic sequence with initial period 1,2,0. • a(n) = 10 * a(n - 1) + (n mod 3), with a(0)=0. - _ Paolo P. Lava _ , Jul 30 2009 •

▶ [A037694] 1,12,120,1203,12031,120312,1203120,12031203,120312031,1203120312,12031203120,120312031203,1203120312031,12031203120312,120312031203120,1203120312031203,12031203120312031,120312031203120312,1203120312031203120,12031203120312031203 ⋆ Decimal expansion of a(n) is given by the first n terms of the periodic sequence with initial period 1,2,0,3. • a(n) = 10 * a(n - 1) + (1 / 4) * (- 2 * (n mod 4) + 3 * ((n + 1) mod 4) + 3 * ((n + 3) mod 4)), with a(0)=0. - _ Paolo P. Lava _ , Jul 30 2009 •

▶ [A098297] 0,1,12,121,1200,11881,117612,1164241,11524800,114083761,1129312812,11179044361,110661130800,1095432263641,10843661505612,107341182792481,1062568166419200,10518340481399521,104120836647576012 ⋆ Member r=12 of the family of Chebyshev sequences S _ r(n) defined in A092184. • a(n) = 10 * a(n - 1) - a(n - 2) + 2, n >= 2, a(0)=0, a(1)=1. • a(n) = 11 * a(n - 1) - 11 * a(n - 2) + a(n - 3), n >= 3, a(0)=0, a(1)=1, a(2)=12. •

▶ [A037543] 1,12,121,1211,12112,121121,1211211,12112112,121121121,1211211211,121121121121,1211211211211,12112112112112,121121121121121,1211211211211211 ⋆ Decimal expansion of a(n) is given by the first n terms of the periodic sequence with initial period 1,2,1. • a(n) = 10 * a(n - 1) + (1 / 9) * (7 * (n mod 3) + ((n + 1) mod 3) + 4 * ((n + 2) mod 3)), with a(0)=0. - _ Paolo P. Lava _ , Jul 30 2009 •

▶ [A037487] 1,12,121,1212,12121,121212,1212121,12121212,121212121,1212121212,12121212121,121212121212,1212121212121,12121212121212,121212121212121,1212121212121212,12121212121212121,121212121212121212,1212121212121212121 ⋆ Decimal expansion of a(n) is given by the first n terms of the periodic sequence with initial period 1,2. • a(n) = 10 * a(n - 1) + (1 / 2) * (3 + (- 1) ^ n), with a(0)=0. Closed form: a(n)= - (1 / 6) + (1 / 22) * (- 1) ^ n + (4 / 33) * 10 ^ n, with n>=1. - _ Paolo P. Lava _ , Jul 30 2009, typo corrected by _ M. F. Hasler _ , Jan 13 2013 • a(n) = floor((4 / 33) * 10 ^ n). - _ Hieronymus Fischer _ , Jan 03 2013 • a(n) = 10 * a(n - 1) + a(n - 2) - 10 * a(n - 3). G.f.: x * (2 * x + 1) / ((x - 1) * (x + 1) * (10 * x - 1)). - _ Colin Barker _ , Apr 30 2014 •

▶ [A037551] 1,12,122,1221,12212,122122,1221221,12212212,122122122,1221221221,122122122122,1221221221221,12212212212212,122122122122122,1221221221221221 ⋆ Decimal expansion of a(n) is given by the first n terms of the periodic sequence with initial period 1,2,2. • a(n) = 10 * a(n - 1) + (1 / 9) * (5 * (n mod 3) + 2 * ((n + 1) mod 3) + 8 * ((n + 2) mod 3)), with a(0)=0. - _ Paolo P. Lava _ , Jul 30 2009 • a(1)=1, a(2)=12, a(3)=122, a(4)=1221, a(n) = 10 * a(n - 1) + a(n - 3) - 10 * a(n - 4). - _ Harvey P. Dale _ , Jan 20 2015 •

▶ [A090843] 1,12,122,1222,12222,122222,1222222,12222222,122222222,1222222222,12222222222,122222222222,1222222222222,12222222222222,122222222222222,1222222222222222,12222222222222222,122222222222222222,1222222222222222222 ⋆ Number of nodes on a tree with degree 11 interior nodes and degree 1 boundary nodes. • a(n) = (11 * 10 ^ n - 2) / 9. • a(n) = 10 * a(n - 1) + 2, a(0) = 1. - _ Philippe Deléham _ , Feb 23 2014 • a(n) = 11 * a(n - 1) - 10 * a(n - 2), a(0) = 1, a(1) = 12. - _ Philippe Deléham _ , Feb 23 2014 •

▶ [A113574] 1,12,122,1224,12242,122424,1224242,12242424,122424244,1224242444,12242424442,122424244424,1224242444242,12242424442424,122424244424244,1224242444242444,12242424442424442,122424244424244424 ⋆ a(n) is the least n - digit number whose k - th digit is prime if k is prime, composite if k is composite, and 1 if k=1. • a(n + 1) = a(n)||2 if n + 1 is prime, otherwise a(n + 1) = a(n)||4 where || is concatenation. •

▶ [A037701] 1,12,123,1230,12301,123012,1230123,12301230,123012301,1230123012,12301230123,123012301230,1230123012301,12301230123012,123012301230123,1230123012301230,12301230123012301,123012301230123012,1230123012301230123,12301230123012301230 ⋆ Decimal expansion of a(n) is given by the first n terms of the periodic sequence with initial period 1,2,3,0. • a(n) = 10 * a(n - 1) + (n mod 4), with a(0)=0. - _ Paolo P. Lava _ , Jul 30 2009 • a(0)=1, a(1)=12, a(2)=123, a(3)=1230, a(4)=12301, a(n) = 10 * a(n - 1) + a(n - 4) - 10 * a(n - 5). - _ Harvey P. Dale _ , Jun 07 2011 •

▶ [A037610] 1,12,123,1231,12312,123123,1231231,12312312,123123123,1231231231,123123123123,1231231231231,12312312312312,123123123123123,1231231231231231,1231231231231231,12312312312312312,123123123123123123,1231231231231231231 ⋆ Decimal expansion of a(n) is given by the first n terms of the periodic sequence with initial period 1,2,3. • a(n) = 10 * a(n - 1) + ((n + 2) mod 3) + 1, with a(0)=0. - _ Paolo P. Lava _ , Jul 30 2009 • a(n) = floor((41 / 333) * 10 ^ n). - _ Hieronymus Fischer _ , Jan 03 2013 • a(n) = 10 * a(n - 1) + a(n - 3) - 10 * a(n - 4). • a(n) = (41 * 10 ^ n - 27 * n - 50 + 90 * floor(n / 3) - 9 * floor((n - 1) / 3)) / 333. - _ Bruno Berselli _ , Sep 13 2018 •

▶ [A057137] 0,1,12,123,1234,12345,123456,1234567,12345678,123456789,1234567890,12345678901,123456789012,1234567890123,12345678901234,123456789012345,1234567890123456,12345678901234567,123456789012345678 ⋆ Concatenate next digit at right hand end (where the next digit after 9 is again 0). • a(n) = 10 * a(n - 1) + (n mod 10). - _ Paolo P. Lava _ , Feb 01 2008 • a(n) = floor((137174210 / 1111111111) * 10 ^ n). - _ Hieronymus Fischer _ , Jan 03 2013, corrected by _ M. F. Hasler _ , Jan 13 2013 •

▶ [A252043] 1,12,123,1234,12345,123456,1234567,12345678,123456789,1234567891,12345678910,123456789101,1234567891011,12345678910111,123456789101112,1234567891011121,12345678910111213,123456789101112131,1234567891011121314 ⋆ a(n) is the concatenation of first n terms of A033307. • a(n) = floor(C * 10 ^ n) with C the Champernowne constant, 0.123456789101112131415..., A033307. •

▶ [A014824] 0,1,12,123,1234,12345,123456,1234567,12345678,123456789,1234567900,12345679011,123456790122,1234567901233,12345679012344,123456790123455,1234567901234566,12345679012345677,123456790123456788,1234567901234567899,12345679012345679010 ⋆ a(0) = 0; for n>0, a(n) = 10 * a(n - 1) + n. • a(n) = (10 ^ n - 1) * (10 / 81) - n / 9. - _ Henry Bottomley _ , Jul 04 2000 • a(n) / 10 ^ n converges to 10 / 81 = 0.123456790123456790... • a(n) = 12 * a(n - 1) - 21 * a(n - 2) + 10 * a(n - 3), n>2. - _ Wesley Ivan Hurt _ , Sep 15 2015 • a(n) = Sum _{ i=0..n } 9 ^ i * binomial(n + 1,n - 1 - i). [_ Bruno Berselli _ , Nov 13 2015] •

▶ [A226737] 1,12,123,1334,14645,161056,1771567,19487178,214358889,2357947700,25937424611,285311670622,3138428376733,34522712143944,379749833583255,4177248169415666,45949729863572177,505447028499293788,5559917313492231499,61159090448414546310 ⋆ 11 ^ n + n. • a(n) = 13 * a(n - 1) - 23 * a(n - 2) + 11 * a(n - 3). •

▶ [A163147] 1,12,124,1208,11456,107232,997184,9242368,85517056,790574592,7305293824,67488831488,623410712576,5758241390592,53185308114944,491231692423168,4537090136866816,41905067449516032,387038978271084544 ⋆ a(n) = 14 * a(n - 1) - 44 * a(n - 2) for n > 1; a(0) = 1, a(1) = 12. • a(n) = ((1 + sqrt(5)) * (7 + sqrt(5)) ^ n + (1 - sqrt(5)) * (7 - sqrt(5)) ^ n) / 2. •

▶ [A016134] 1,12,124,1248,12496,124992,1249984,12499968,124999936,1249999872,12499999744,124999999488,1249999998976,12499999997952,124999999995904,1249999999991808,12499999999983616,124999999999967232 ⋆ Expansion of 1 / ((1 - 2x)(1 - 10x)). • a(n) = 125 * 10 ^ (n - 2) - 2 ^ (n - 2) = a(n - 1) * 10 + 2 ^ n. - _ Henry Bottomley _ , Jun 06 2000 • a(n) = (5 * 10 ^ n - 2 ^ n) / 4. - _ Michael Somos _ , Dec 03 2016 •

▶ [A155595] 1,12,124,1338,14656,161082,1771624,19487298,214359136,2357948202,25937425624,285311672658,3138428380816,34522712152122,379749833599624,4177248169448418,45949729863637696,505447028499424842 ⋆ 11 ^ n + 2 ^ n - 1. • a(n)=13 * a(n - 1) - 22 * a(n - 2) - 10 with a(0)=1, a(1)=12 - _ Vincenzo Librandi _ , Jul 21 2010 •

▶ [A178626] 1,12,125,1262,12649,126560,1265769,12658098,126581965,1265822028,12658226021,126582274070,1265822774161,12658227822392,126582278418945,1265822784660282,12658227847739509,126582278480139300 ⋆ Convolution of Pell(n) and 10 ^ n. • a(n) = 10 * a(n - 1) + Pell(n) with a(1)= Pell(1) = 1. • a(n) = + 12 * a(n - 1) - 19 * a(n - 2) - 10 * a(n - 3). • a(n) = (2 ^ (3 + n) * 5 ^ (1 + n) + (1 - sqrt(2)) ^ n * (- 20 + 11 * sqrt(2)) - (1 + sqrt(2)) ^ n * (20 + 11 * sqrt(2))) / 316. - _ Colin Barker _ , Jan 29 2019 •

▶ [A223322] 12,125,1625,21125,274625,3570125,46411625,603351125,7843564625,101966340125,1325562421625,17232311481125,224020049254625,2912260640310125,37859388324031625,492172048212411125 ⋆ Rolling icosahedron footprints: number of 2 X n 0..11 arrays starting with 0 where 0..11 label vertices of an icosahedron and every array movement to a horizontal or antidiagonal neighbor moves along an icosahedral edge. • a(n) = 125 * 13 ^ (n - 2) for n>1. •

▶ [A159736] 12,126,1176,10290,86436,705894,5647152,44471322,345888060,2663338062,20338217928,154231485954,1162668124884,8720010936630,65109414993504,484251274014186,3589156501516908,26519878594541598,195409631749253880 ⋆ Number of permutations of 6 indistinguishable copies of 1..n arranged in a circle with exactly 1 local maximum. • a(n) = (copies * n) * (copies + 1) ^ (n - 2). • a(n) = 6 * n * 7 ^ (n - 2). • a(n) = 14 * a(n - 1) - 49 * a(n - 2). •

▶ [A004991] 1,12,126,1260,12285,117936,1120392,10563696,99034650,924323400,8596207620,79710288840,737320171770,6806032354800,62712726697800,576957085619760,5300793224131545,48642573115560060,445890253559300550,4083416006279910300,37363256457461179245,341606916182502210240 ⋆ a(n) = (3 ^ n / n!) * Product _{ k=0..n - 1 } (3 * k + 4). • a(n) = (3 ^ (2 * n)) / (Integral _{ x=0..1 } (1 - x ^ 3) ^ n dx). - Al Hakanson (hawkuu(AT)excite.com), Dec 04 2003 •

► [A101602] 1,12,126,1296,13365,138996,1459458,15466464,165297834,1780130520,19301700924,210564010080,2309623985565,25458117777540,281857732537050,3133071216411840,34953325758094590,391242268149428520,4392583646950402020,49454259823789423200 ⋆ G.f.: c(3x) ^ 4, c(x) the g.f. of A000108. ● a(n)=(((8 n + 12) / (3n + 12))((3n + 3) / (n + 3))3 ^ n * C(n + 1). ●

► [A215774] 0,12,127,742,3157,10857,31899,82929,195459,425139,864864,1662661,3045406,5349526,9059946,14858646,23684298,36804558,55902693,83180328,121478203,174416935,246559885,343600335,472575285 ⋆ Number of undirected labeled graphs on n + 4 nodes with exactly n cycle graphs as connected components . ● a(n) = n * (n + 1) * (n + 2) * (n + 3) * (n + 4) * (15 * n ^ 3 + 30 * n ^ 2 + 245 * n + 286) / 5760. ●

► [A099157] 0,1,12,128,1344,14080,147456,1544192,16171008,169345024,1773404160,18571329536,194481487872,2036636581888,21327935176704,223349036810240,2338941478895616,24493713157783552,256501494231072768 ⋆ a(n) = 4 ^ (n - 1) * U(n - 1, 3 / 2) where U is the Chebyshev polynomial of the second kind. ● a(n) = 12 * a(n - 1) - 16 * a(n - 2). ● a(n) = sqrt(5) / 20 * ((sqrt(5) + 1) ^ (2 * n) - (sqrt(5) - 1) ^ (2 * n)). ● a(n) = Sum _{ k=0..n } binomial(2 * n, 2 * k + 1) * 5 ^ k / 2. ● a(n) = 2 ^ (2 * n - 1) * sinh(2 * n * arccsch(2)) / sqrt(5). - _ Federico Provvedi _ , Feb 02 2021 ●

► [A163414] 1,12,130,1336,13316,130224,1257992,12053984,114868240,1090544832,10326886432,97616403328,921595494464,8693310905088,81954053824640,772279585078784,7275322024132864,68523818111241216,645311124283621888 ⋆ a(n) = 16 * a(n - 1) - 62 * a(n - 2) for n>1, a(0)=1, a(1)=12. ● a(n) = ((1 + 2 * sqrt(2)) * (8 + sqrt(2)) ^ n + (1 - 2 * sqrt(2)) * (8 - sqrt(2)) ^ n) / 2. ●

► [A097783] 1,12,131,1429,15588,170039,1854841,20233212,220710491,2407582189,26262693588,286482047279,3125039826481,34088956044012,371853476657651,4056299287190149,44247438682433988,482665526219583719,5265073349732986921,5743314132084327412 ⋆ Chebyshev polynomials S(n,11) + S(n - 1,11) with Diophantine property. ● a(n) = S(n, 11) + S(n - 1, 11) = S(2 * n, sqrt(13)), with S(n, x)=U(n, x / 2) Chebyshev's polynomials of the 2nd kind, A049310. S(- 1, x) = 0 = U(- 1, x). ● a(n) = (- 2 / 3) * i * ((- 1) ^ n) * T(2 * n + 1, 3 * i / 2) with the imaginary unit i and Chebyshev's polynomials of the first kind. See the T - triangle A053120. ● a(n) = 11 * a(n - 1) - a(n - 2) with a(0)=1 and a(1)=12. - _ Philippe Deléham _ , Nov 17 2008 ●

► [A305261] 12,132,372,852,1812,3732,7572,15252,30612,61332,122772,245652,491412,982932,1965972,3932052,7864212,15728532,31457172,62914452,125829012,251658132,503316372,1006632852,2013265812 ⋆ a(n) = 120 * 2 ^ n - 108. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n > 1. ●

► [A111085] 1,12,132,847,3921,14286,43687,116757,280656,619219,1273125,2467302,4547458,8027223,13648170,22454470,35884827,55883718,85034962,126719913,185303679,266351932,376882089,525651699,723488194 ⋆ Number of semi - magic 3 - dimensional hypercubes with 27 entries and magic sum n. ● a(n) = 81 * (- 1) ^ n / 256 + 513 * n ^ 3 / 160 + 3653 * n ^ 2 / 1120 + 27 * (- 1) ^ n * n / 128 + 1341 * n ^ 4 / 640 + 297 * n ^ 5 / 320 + 87 * n ^ 6 / 320 + 27 * n ^ 7 / 560 + 9 * n ^ 8 / 2240 + 175 / 256 + 9087 * n / 4480. - _ R. J. Mathar _ , Nov 04 2011 ●

► [A002721] 1,12,132,847,3921,14506,45402,124707,308407,699766,1477686,2936517,5540107,9993192,17333536,29048541,47220357,74703832,115341952,174223731,257989821,375191422,536708382,756232687,1050823851 ⋆ Number of 3 X 3 X 3 arrays M _ ijk (1 <= i,j,k <= 3) with entries satisfying 0 <= M _ ijk <= n and all line sums equal to n. ● a(n) = (1 / 4032) * m * (m * (m * (31 * m + 1004) + 6820) + 4272) + 1, where m = n * (n + 1) (from the Bell reference). - _ Sean A. Irvine _ , Jul 01 2014 ●

► [A165150] 1,12,132,1392,14352,146112,1476672,14860032,149160192,1494961152,14969766912,149818601472,1498911608832,14993469652992,149960817917952,149976490750771 2,149985894450462 72,1499915366702776 32,149994922002166579 2,1499969532012999475 2,1499981719207799685 12 ⋆ a(n) = (3 * 10 ^ n - 6 ^ n) / 2. ● a(n) = 16 * a(n - 1) - 60 * a(n - 2) for n > 1; a(0) = 1, a(1) = 12. ●

► [A190873] 0,1,12,132,1440,15696,171072,1864512,20321280,221481216,2413919232,26309256192,286744043520,3125217447936,34061680852992,371237560860672,4046110560092160,44098475990777856,480628385168228352,5238358910129405952,57092766299534131200 ⋆ a(n) = 12 * a(n - 1) - 12 * a(n - 2), a(0)=0, a(1)=1. ● a(n) = 2 ^ (n - 2) * ((3 + sqrt(6)) ^ n - (3 - sqrt(6)) ^ n) / sqrt(6). ●

► [A097826] 1,12,132,1441,15720,171480,1870561,20404692,222581052,2427986881,26485274640,288910034160,3151525101121,34377866078172,375005001758772,4090677153268321,44622443684192760,486756203372852040,5309695793417179681,57919897524216124452 ⋆ Partial sums of Chebyshev sequence S(n,11) = U(n,11 / 2) = A004190(n). ● a(n) = 12 * a(n - 1) - 12 * a(n - 2) + a(n - 3) with n >= 2, a(- 1)=0, a(0)=1, a(1)=12. ● a(n) = 11 * a(n - 1) - a(n - 2) + 1 with n >= 1, a(- 1)=0, a(0)=1. ● a(n) = (S(n + 1, 11) - S(n, 11) - 1) / 9. ● a(n) = (2 ^ (- n) * (- 13 * 2 ^ n + (65 - 18 * sqrt(13)) * (11 - 3 * sqrt(13)) ^ n + (11 + 3 * sqrt(13)) ^ n * (65 + 18 * sqrt(13)))) / 117. - _ Colin Barker _ , Mar 06 2016 ●

► [A163432] 1,12,132,1452,15972,175626,1931160,21234840,233496120,2567499000,28231951770,310435603500,3413517587700,37534684133100,412727480315700,4538308419052650,49902767052699000,548725632894681000 ⋆ Number of reduced words of length n in Coxeter group on 12 generators S _ i with relations (S _ i) ^ 2 = (S _ i S _ j) ^ 5 = I. ● a(n) = 10 * a(n - 1) + 10 * a(n - 2) + 10 * a(n - 3) + 10 * a(n - 4) - 55 * a(n - 5). - _ Wesley Ivan Hurt _ , May 10 2021 ●

► [A163957] 1,12,132,1452,15972,175692,1932546,21257280,233822160,2571956640,28290564720,311185670400,3422926421970,37650915208500,414146038003500,4555452101075700,50108275682741100,551172361422635700 ⋆ Number of reduced words of length n in Coxeter group on 12 generators S _ i with relations (S _ i) ^ 2 = (S _ i S _ j) ^ 6 = I. ● a(n) = - 55 * a(n - 6) + 10 * Sum _{ k=1..5 } a(n - k). - _ Wesley Ivan Hurt _ , May 11 2021 ●

► [A063813] 1,12,132,1452,15972,175692,1932600,21258468,233841708,2572242948,28294498188,311237563428,3423592114800,37659281352252,414249543874452,4556716921788252,50123577472433652,551355956878070652,6064878177383077800 ⋆ Growth series for fundamental group of orientable closed surface of genus 3. ● a(n) = 10 * a(n - 1) + 10 * a(n - 2) + 10 * a(n - 3) + 10 * a(n - 4) + 10 * a(n - 5) - a(n - 6) for n>6. ●

► [A164601] 1,12,132,1452,15972,175692,1932612,21258666,233844600,2572282680,28295022360,311244287640,3423676622520,37660326891000,414262320281370,4556871492422700,50125432079728500,551378055176107500 ⋆ Number of reduced words of length n in Coxeter group on 12 generators S _ i with relations (S _ i) ^ 2 = (S _ i S _ j) ^ 7 = I. ● a(n) = - 55 * a(n - 7) + 10 * Sum _{ k=1..6 } a(n - k). - _ Wesley Ivan Hurt _ , May 11 2021 ●

► [A003954] 1,12,132,1452,15972,175692,1932612,21258732,233846052,2572306572,28295372292,311249095212,3423740047332,37661140520652,414272545727172,4556998002998892,50126978032987812 ⋆ Expansion of g.f.: (1 + x) / (1 - 11 * x). ● a(0) = 1; for n>0, a(n) = 12 * 11 ^ (n - 1). - _ Vincenzo Librandi _ , Nov 18 2010 ● a(0) = 1, a(1)=12, a(n) = 11 * a(n - 1). - _ Vincenzo Librandi _ , Dec 10 2012 ●

► [A016123] 1,12,133,1464,16105,177156,1948717,21435888,235794769,2593742460,28531167061,313842837672,3452271214393,37974983358324,417724816941565,4594972986357216,50544702849929377,555991731349223148 ⋆ a(n) = (11 ^ (n + 1) - 1) / 10. ● a(n) = Sum _{ k=0..n } 11 ^ k = (11 ^ (n + 1) - 1) / 10. ● a(0)=1, a(n) = 11 * a(n - 1) + 1. - _ Vincenzo Librandi _ , Feb 05 2011 ● a(0)=0, a(1)=1, a(n) = 12 * a(n - 1) - 11 * a(n - 2). - _ Harvey P. Dale _ , Apr 05 2012 ●

► [A015457] 1,1,12,133,1475,16358,181413,2011901,22312324,247447465,2744234439,30434026294,337518523673,3743137786697,41512034177340,460375513737437,5105642685289147,56622445051918054,627952538256387741,6964100365872183205,77233056562850402996 ⋆ Generalized Fibonacci numbers. ● a(n) = 11 * a(n - 1) + a(n - 2). ● a(n) = (9 / 50) * (11 / 2 - (5 / 2) * sqrt(5)) ^ n * sqrt(5) + (1 / 2) * (11 / 2 - (5 / 2) * sqrt(5)) ^ n - (9 / 50) * sqrt(5) * (11 / 2 + (5 / 2) * sqrt(5)) ^ n + (1 / 2) * (11 / 2 + (5 / 2) * sqrt(5)) ^ n, with n>=0. - _ Paolo P. Lava _ , Jul 09 2008 ●

► [A214994] 12,134,1487,16492,182900,2028393,22495224,249475858,2766729663,30683502152,340285253336,3773821288849,41852319430676,464149335026286,5147495004719823,57086594386944340,633100033261107564,7021186960259127545,77866156596111510560 ⋆ Power ceiling sequence of (golden ratio) ^ 5. ● a(n) = ceiling(x * a(n - 1)), x=((1 + sqrt(5)) / 2) ^ 5, a(0) = ceiling(x). ● a(n) = 12 * a(n - 1) - 10 * a(n - 2) - a(n - 3). ● a(n) = (1 / 550) * (- 50 + (3325 - 1487 * sqrt(5)) * ((11 - 5 * sqrt(5)) / 2) ^ n + ((11 + 5 * sqrt(5)) / 2) ^ n * (3325 + 1487 * sqrt(5))). - _ Colin Barker _ , Nov 13 2017 ●

► [A059517] 0,0,12,138,1056,7050,44472,273378,1659936,10018650,60289032,362265618,2175188016,13055911050,78349815192,470141937858,2820980767296,16926272024250,101558794406952,609356253226098,3656147979709776,21936919259318250,131621609699088312 ⋆ The sequence A059515(3,n). Number of ways of placing n identifiable nonnegative intervals with a total of exactly three starting and / or finishing points. ● a(n) = 10 * a(n - 1) - 27 * a(n - 2) + 18 * a(n - 3) for n>3. - _ Colin Barker _ , Sep 13 2014 ●

► [A056330] 0,0,0,0,0,1,12,142,1346,11511,89974,662674,4662574,31724735,210361046,1367510326,8752976610,55343947975,346541488998,2153041587538,13292844257198,81652683550119,499484958151630 ⋆ Number of reversible string structures with n beads using exactly six different colors. ● a(n) = (S2(n,k) + A(n,k)) / 2, where k=6 is the number of colors (sets), S2 is the Stirling subset number A008277 and A(n,k) = [n>1] * (k * A(n - 2,k) + A(n - 2,k - 1) + A(n - 2,k - 2)) + [n<2 & n==k & n>=0]. ●

► [A163448] 1,12,142,1664,19364,224208,2586488,29757376,341671696,3917211072,44860395232,513321219584,5870105658944,67096633659648,766662318616448,8757776273683456,100022618249257216,1142190290164165632 ⋆ a(n) = 20 * a(n - 1) - 98 * a(n - 2) for n > 1; a(0) = 1, a(1) = 12. ● a(n) = ((1 + sqrt(2)) * (10 + sqrt(2)) ^ n + (1 - sqrt(2)) * (10 - sqrt(2)) ^ n) / 2. ● a(n) = (31 * (10 - sqrt(2)) ^ n - 41 * sqrt(2) * (10 - sqrt(2)) ^ n + 49 * (10 + sqrt(2)) ^ n + 49 * sqrt(2) * (10 + sqrt(2)) ^ n) / (98 * (10 + sqrt(2))). - _ Harvey P. Dale _ , Nov 14 2011 ●

► [A172210] 1,12,143,770,3368,12632,38566,98968,222351,450682,843169,1479116,2460912,3917228,6006056,8917888,12878847,18153806,25049515,33917724,45158308,59222392,76615476,97900560,123701269 ⋆ Number of ways to place 5 nonattacking bishops on a 5 X n board. ● a(n) = (625n ^ 5 - 11250n ^ 4 + 98875n ^ 3 - 515250n ^ 2 + 1566016n - 2194944) / 24, n>=16. ●

► [A207400] 12,144,612,1782,4212,8692,16284,28362,46652,73272,110772,162174,231012,321372,437932,586002,771564,1001312,1282692,1623942,2034132,2523204,3102012,3782362,4577052 ⋆ Number of n X 5 0..1 arrays avoiding 0 0 1 and 0 1 1 horizontally and 0 0 1 and 1 1 0 vertically. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. ●

► [A208139] 12,144,720,2400,6300,14112,28224,51840,89100,145200,226512,340704,496860,705600,979200,1331712,1779084,2339280,3032400,3880800,4909212,6144864,7617600,9360000,11407500 ⋆ Number of n X 5 0..1 arrays avoiding 0 0 1 and 0 1 1 horizontally and 0 0 1 and 1 0 1 vertically. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. ●

► [A001021] 1,12,144,1728,20736,248832,2985984,35831808,429981696,5159780352,61917364224,743008370688,8916100448256,106993205379072,1283918464548864,15407021574586368,184884258895036416,2218611106740436992 ⋆ Powers of 12. ● a(n) = 12 * a(n - 1). - _ Zerinvary Lajos _ , Apr 27 2009 ● a(n) = det(|ps(i + 2, j)|, 1 <= i, j <= n), where ps(n, k) are Legendre - Stirling numbers of the first kind. - _ Mircea Merca _ , Apr 04 2013 ●

► [A174227] 1,1,12,145,1764,21602,266232,3301349,41178660,516512462,6513158376,82542517386,1051024082472,13442267711940,172638285341040,2225824753934445,28802104070304420,373966734921011990 ⋆ Expansion of - (10 * x + sqrt((1 - 10 * x) * (1 - 14 * x))) / (2 * x). ● a(n) = sqrt(5 / 7) * 10 ^ n * (6 * hypergeom([1 / 2, n + 1],[1],2 / 7) - 7 * hypergeom([1 / 2, n],[1],2 / 7)) / (n + 1) for n > 0. - _ Mark van Hoeij _ , Jul 02 2010 ●

► [A015610] 0,1,12,149,1848,22921,284292,3526109,43734768,542447761,6728046972,83448802469,1035025864488,12837554386201,159225781956852,1974897155413229,24494894774743008,303813223073982241,3768233150761501932,46737863924507934389 ⋆ a(n) = 12 * a(n - 1) + 5 * a(n - 2) for n >= 2, a(0) = 0, a(1) = 1. ● a(n) = (1 / 82) * sqrt(41) * ((6 + sqrt(41)) ^ n - (6 - sqrt(41)) ^ n). - _ Paolo P. Lava _ , Jan 13 2009 ●

► [A141326] 12,150,738,2316,5640,11682,21630,36888,59076,90030,131802,186660,257088,345786,455670,589872,751740,944838,1172946,1440060,1750392,2108370,2518638,2986056,3515700 ⋆ Subsequence of 'Fermat near misses' which is generated by a simple formula based on the cubic binomial expansion along with formulas for the corresponding terms in the expression, x ^ 3 + y ^ 3 = z ^ 3 + 1 . ● a(n) = 9 * n ^ 4 + 3 * n, with b(n) = 9 * n ^ 4 and c(n) = 9 * n ^ 3 + 1 we have 1 + a(n) ^ 3 = b(n) ^ 3 + c(n) ^ 3. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ● a(n) = 3 * (n + 3 * n ^ 4). ●

► [A305544] 0,0,0,0,12,150,1200,7845,46280,254676,1344900,6892425,34646220,171715050,843004688,4110478470,19950471120,96525524140,466068873900,2247609721431,10832163963860,52194011649150,251522234238000,1212501695554920,5848043487355752 ⋆ Number of chiral pairs of color loops of length n with exactly 5 different colors. ● a(n) = - (k! / 4) * (S2(floor((n + 1) / 2),k) + S2(ceiling((n + 1) / 2),k)) + (k! / (2n)) * Sum _{ d|n } phi(d) * S2(n / d,k), with k=5 different colors used and where S2(n,k) is the Stirling subset number A008277. ●

► [A056345] 0,0,0,0,12,150,1200,7905,46400,255636,1346700,6901725,34663020,171786450,843130688,4110958530,19951305240,96528492700,466073976900,2247627076731,10832193571460,52194109216950 ⋆ Number of bracelets of length n using exactly five different colored beads. ● a(n) = (k! / 4) * (S2(floor((n + 1) / 2),k) + S2(ceiling((n + 1) / 2),k)) + (k! / 2n) * Sum _{ d|n } phi(d) * S2(n / d,k), where k=5 is the number of colors and S2 is the Stirling subset number A008277. ●

► [A068768] 1,1,12,150,1944,25992,356832,5008824,71629920,1040509152,15315578496,227981324736,3426473187072,51929043390720,792725911280640,12178706839758720,188158789025809920,2921622674591946240 ⋆ Generalized Catalan numbers. ● a(n) = (6 ^ n) * p(n, - 5 / 6) with the row polynomials p(n, x) defined from array A068763. ● a(n + 1) = 6 * sum(a(k) * a(n - k), k=0..n), n>=1, a(0)=1=a(1). ●

► [A015611] 0,1,12,151,1896,23809,298980,3754423,47145936,592032193,7434407868,93357119767,1172326292280,14721415345729,184863268194708,2321409125756599,29150952386442144,366061292517601921,4596792176916318060,5772393517061903016 7 ⋆ a(n) = 12 * a(n - 1) + 7 * a(n - 2). ● a(n) = (1 / 86) * sqrt(43) * ((6 + sqrt(43)) ^ n - (6 - sqrt(43)) ^ n). - _ Paolo P. Lava _ , Jan 13 2009 ●

► [A015612] 0,1,12,155,1992,25609,329220,4232339,54409488,699469585,8992139388,115599838091,1486111590360,19104937303321,245606475133812,3157432011942275,40590855369779232,521822016568715809,6708363607892161260,8624040547696180901 9 ⋆ a(n) = 12 * a(n - 1) + 11 * a(n - 2). ● a(n) = (1 / 94) * (6 + sqrt(47)] ^ n * sqrt(47) - (1 / 94) * sqrt(47) * (6 - sqrt(47)) ^ n, with n >= 0. - _ Paolo P. Lava _ , Aug 06 2008 ●

► [A082173] 1,1,12,155,2124,30482,453432,6936799,108507180,1727970542,27924685416,456820603086,7550600079672,125905525750500,2115511349837040,35782547891727495,608787760350045420,10411451736723707990 ⋆ a(0)=1; for n >= 1 , a(n) = Sum _{ k=0..n } 11 ^ k * N(n,k) where N(n,k) = (1 / n) * C(n,k) * C(n,k + 1) are the Narayana numbers (A001263). ● a(n) = (12 * (2n - 1) * a(n - 1) - 100 * (n - 2) * a(n - 2)) / (n + 1) for n >= 2, a(0) = a(1) = 1. - _ Philippe Deléham _ , Aug 19 2005 ● a(n) = upper left term in M ^ n, M = the production matrix: ● a(n) = hypergeom([1 - n, - n], [2], 11). - _ Peter Luschny _ , Mar 19 2018 ●

► [A097259] 0,12,156,168,2028,2040,2184,2196,26364,26376,26520,26532,28392,28404,28548,28560,342732,342744,342888,342900,344760,344772,344916,344928,369096 ⋆ Numbers whose set of base 13 digits is { 0,C } , where C base 13 = 12 base 10. ● a(2n) = 13 * a(n), a(2n + 1) = a(2n) + 12. ●

► [A158546] 12,156,588,1308,2316,3612,5196,7068,9228,11676,14412,17436,20748,24348,28236,32412,36876,41628,46668,51996,57612,63516,69708,76188,82956 ⋆ a(n) = 144 * n ^ 2 + 12. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A269642] 12,159,796,2637,6876,15307,30444,55641,95212,154551,240252,360229,523836,741987,1027276,1394097,1858764,2439631,3157212,4034301,5096092,6370299,7887276,9680137,11784876 ⋆ Number of length - 5 0..n arrays with no repeated value differing from the previous repeated value by other than plus two or minus 1. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. ●

► [A269411] 12,159,804,2670,6960,15477,30744,56124,95940,155595,241692,362154,526344,745185,1031280,1399032,1864764,2446839,3165780,4044390,5107872,6383949,7902984,9698100,11805300 ⋆ Number of length - 5 0..n arrays with no repeated value greater than or equal to the previous repeated value. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. ●

► [A098400] 1,12,160,2240,32256,473088,7028736,105431040,1593180160,24216338432,369849532416,5671026163712,87246556364800,1346089726771200,20819521107394560,322702577164615680,5011381198321090560 ⋆ a(n) = 4 ^ n * binomial(2n + 1, n). ● a(n) = 4 ^ n * hypergeom([1 - n, - n],[2],1) * (2 * n + 1). - _ Peter Luschny _ , Sep 22 2014 ●

► [A046174] 0,1,12,165,2296,31977,445380,6203341,86401392,1203416145,16761424636,233456528757,3251629977960,45289363162681,630799454299572,8785902997031325,122371842504138976,1704419892060914337 ⋆ Indices of pentagonal numbers which are also triangular. ● a(n) = 14 * a(n - 1) - a(n - 2) - 2; g.f.: x * (1 - 3 * x) / ((1 - x) * (1 - 14 * x + x ^ 2)). - _ Warut Roonguthai _ , Jan 05 2001 ● a(n + 1) = 7 * a(n) - 1 + 2 * sqrt(12 * a(n) ^ 2 - 4 * a(n) + 1). - _ Richard Choulet _ , Sep 19 2007 ● a(n) = 1 / 6 - (1 / 12) * sqrt(3) * ((7 - 4 * sqrt(3)) ^ n - (7 + 4 * sqrt(3)) ^ n) - (1 / 12) * ((7 + 4 * sqrt(3)) ^ n + (7 - 4 * sqrt(3)) ^ n), with n >= 0. - _ Paolo P. Lava _ , Nov 25 2008 ● a(n + 1) = 15 * a(n) - 15 * a(n - 1) + a(n - 2), a(1)=1, a(2)=12, a(3)=165. - _ Sture Sjöstedt _ , May 29 2009 ●

► [A099745] 0,0,0,0,12,168,1409,9187,51362,258674,1207855,5326205,22459080,91368900,360977373,1391835607,5257593566,19515948358,71358739003,257521313441,918732810340,3244576312440,11355547678665,39423281302875,135876498446042 ⋆ Number of permutations of [n] with exactly 2 valleys which avoid the permutation 1324. ● a(n) = (162 * (- 239 * 2 ^ n + 80 * 3 ^ (1 + n)) - (9909 * 2 ^ n + 6128 * 3 ^ n) * n - 24 * (27 * 2 ^ n - 2 * 3 ^ n) * n ^ 2 + (27 * 2 ^ n + 32 * 3 ^ n) * n ^ 3) / 2592. - _ Colin Barker _ , Feb 14 2017 ●

► [A268899] 12,168,1584,12960,98496,715392,5038848,34712064,235146240,1572120576,10400182272,68205846528,444063596544,2873352683520,18493942726656,118486616113152,756057455198208,4807171282305024,30467987000524800 ⋆ Number of n X 3 0..2 arrays with some element plus some horizontally or antidiagonally adjacent neighbor totalling two exactly once. ● a(n) = 2 ^ (n + 1) * 3 ^ (n - 1) * (4 * n - 1). ●

► [A079679] 1,12,168,2424,35400,520236,7674144,113482584,1681028136,24932533800,370144424376,5499182587416,81748907485248,1215834858032820,18090048027643200,269246037610828656,4008495234662771688 ⋆ a(n) = a(n,m) = Sum _{ k=0..n } binomial(m * k,k) * binomial(m * (n - k),n - k) for m=6. ● a(n) = 3 / 5 * (46656 / 3125) ^ n * (1 + c / sqrt(n) + o(n ^- 1 / 2)) where c=0.388... ● a(n) = sum(k=0,n,binomial(6 * k + l,k) * binomial(6 * (n - k) - l,n - k)) for every real number l. - _ Rui Duarte _ and António Guedes de Oliveira, Feb 16 2013 ● a(n) = sum(k=0,n,5 ^ (n - k) * binomial(6n + 1,k)). - _ Rui Duarte _ and António Guedes de Oliveira, Feb 17 2013 ● a(n) = sum(k=0,n,6 ^ (n - k) * binomial(5n + k,k)) - _ Rui Duarte _ and António Guedes de Oliveira, Feb 17 2013 ●

► [A099270] 0,1,12,169,2352,32761,456300,6355441,88519872,1232922769,17172398892,239180661721,3331356865200,46399815451081,646266059449932,9001325016847969,125372284176421632,1746210653453054881 ⋆ Unsigned member r= - 1 2 of the family of Chebyshev sequences S _ r(n) defined in A092184. ● a(n) = 13 * a(n - 1) + 13 * a(n - 2) - a(n - 3), n>=3, a(0)=0, a(1)=1, a(2)=12. ● a(n) = 14 * a(n - 1) - a(n - 2) - 2 * (- 1) ^ n, a(0)=0, a(1)=1. a(- n)=a(n). ●

► [A120662] 0,12,173,861,4979,25545,132419,670689,3390203,17039337,85505555,428366577,2144524907,10730349369,53675623811,268448345025,1342455212891,6712910908041,33566470310387,167838076383633 ⋆ Expansion of x * (12 + 101 * x - 189 * x ^ 2) / ((1 + 2 * x) * (1 - 3 * x) * (1 - 5 * x)). ● a(n) = 6 * a(n - 1) + a(n - 2) - 30 * a(n - 3) for n>3. ●

► [A099930] 1,12,174,2436,34307,482664,6791772,95567064,1344731653,18921807828,266250046986,3746422451772,52716164405255,741777274044560,10437534301224120,146867252940711408,2066579075472320521 ⋆ a(n) = Pell(n) * Pell(n - 1) * Pell(n - 2) / 10. ● a(n) = 12 * a(n - 1) + 30 * a(n - 2) - 12 * a(n - 3) - a(n - 4); a(3)=1, a(4)=12, a(5)=174, a(6)=2436. - _ Harvey P. Dale _ , Feb 26 2012 ●

► [A227714] 1,12,178,2688,35995,407992,3952943,33615105,257526804,1815863659,11982128854,74936243346,448516091145,2588488505682,14488775962673,79019272700951,421449109356322,2204733396548381,11340131754176896,57464577063754608 ⋆ The hyper - Wiener index of the tree g[n] (n>=0) defined recursively in the following manner: denoting by P[n] the path on n vertices, we define g[0] =P[2] while g[n] (n>=1) is the tree obtained by identifying the roots of 2 copies of g[n - 1] and one of the end - vertices of P[n + 1]; the root of g[n] is defined to be the other end - vertex of P[n + 1]. ● a(n) = - 2026 - 14671 * n / 12 - 8077 * n ^ 2 / 24 - 605 * n ^ 3 / 12 - 83 * n ^ 4 / 24 + 2 ^ n * (2961 / 2 - 9783 * n / 20 - 1049 * n ^ 2 / 8 - 147 * n ^ 3 / 8 + 9 * n ^ 4 / 8 + 21 * n ^ 5 / 40) + 4 ^ n * (1093 / 2 - 279 * n / 4 + 51 * n ^ 2 / 2 - 27 * n ^ 3 / 2 + 9 * n ^ 4 / 4). ●

► [A130550] 1,12,180,1008,8400,118800,75675600,302702400,15437822400,2666532960 0,3226504881600,5708431713600,964724959598400,964724959598400,4662837304725600 0,340112838697632000,98292610383615648000 ⋆ Denominators of partial sums for a series for 2 * Zeta(2) / 3 = (Pi ^ 2) / 9. ● a(n) = denominator (r(n)), n>=1. ●

► [A073975] 0,0,0,12,180,1440,9072,54432,308448,1700352,9722592,58335552,356638464,2173796352,13144674816,78940272384,472093588224,2821539889152,16894457846784,101366747080704,608795590588416,3656220357427200,21947538146863104,131685228881178624 ⋆ Number of strings of length n over Z _ 6 with trace 0 and subtrace 4. ● a(n; t, s) = a(n - 1; t, s) + a(n - 1; t + 5, s + 5t + 1) + a(n - 1; t + 4, s + 4t + 4) + a(n - 1; t + 3, s + 3t + 3) + a(n - 1; t + 2, s + 2t + 2) + a(n - 1; t + 1, s + t + 1) where t is the trace and s is the subtrace. ●

► [A239294] 0,1,12,189,2808,42201,632772,9492309,142382448,2135743281,32036129532,480542002029,7208129853288,108121948330761,1621829223367092,24327438355289349,364911575314991328,5473673629767916641,82105104446389609452 ⋆ a(n) = (15 ^ n - (- 3) ^ n) / 18. ● a(n) = 12 * a(n - 1) + 45 * a(n - 2), for n>=2, a(0)=0, a(1)=1. ●

► [A086948] 12,192,1992,19992,199992,1999992,19999992,199999992,1999999992,19999999992,199999999992,1999999999992,19999999999992,199999999999992,1999999999999992,19999999999999992 ⋆ a(n) = k where R(k + 8) = 2. ● a(n) = 2 * (10 ^ n - 4). ● a(n) = 11 * a(n - 1) - 10 * a(n - 2) for n > 2. ●

► [A115865] 1,12,198,3672,71766,1444392,29623644,615614256,12918175974,273112332552,5808412280628,124127223181776,2663248527920124,57334738304731536,1237861064261885688,26791929483836768352 ⋆ a(n) = Legendre _ P(n,2) * 6 ^ n. ● a(n) = Jacobi _ P(n,0,0,sqrt(4)) * (3 * sqrt(4)) ^ n. ●

► [A036240] 0,0,12,200,2280,22420,205212,1806000,15522960,131383340,1100093412,9138243400,75445046040,619838752260,5072272077612,41371548418400,336519691295520,2730963319321180,22119245290765812,178854325039467000,1444135501669535400 ⋆ Number of 3 - way interactions when 3 subsets of power set on { 1..n } are chosen at random; number of Boolean functions of n variables and rank 3 from Post class F(8,inf). ● a(n) = (8 ^ n - 7 ^ n - 3 * 4 ^ n + 3 * 3 ^ n + 2 * 2 ^ n - 2) / 6. ● a(n) = 25 * a(n - 1) - 241 * a(n - 2) + 1135 * a(n - 3) - 2734 * a(n - 4) + 3160 * a(n - 5) - 1344 * a(n - 6). - _ Wesley Ivan Hurt _ , Oct 23 2014 ●

► [A151590] 0,12,207,1392,7455,36540,171591,785856,3538215,15727740,69204927,301988592,1308621327,5637142812,24159189015,103079212800,438086661591,1855425868956,7834020344655,32985348829680,138538465095807,580542139461372,2427721674124647 ⋆ Number of permutations of 3 indistinguishable copies of 1..n arranged in a circle with exactly 2 adjacent element pairs in decreasing order. ● a(n) = n * ((3 / 2) * 4 ^ n - 9 * n) for n > 1. - _ Andrew Howroyd _ , May 04 2020 ● a(n) = 11 * a(n - 1) - 43 * a(n - 2) + 73 * a(n - 3) - 56 * a(n - 4) + 16 * a(n - 5) for n>6. ●

► [A116164] 0,12,216,2592,25920,233280,1959552,15676416,120932352,906992640,6651279360,47889211392,339578044416,2377046310912,16456474460160,112844

396298240,767341894828032,5179557790089216,34733505180598272 ⋆ a(n) = 6 ^ n * n * (n + 1). ● a(n) = 18 * a(n - 1) - 108 * a(n - 2) + 216 * a(n - 3). - _ Vincenzo Librandi _ , Feb 28 2013 ●

▶ [A098647] 1,12,224,4608,96256,2015232,42205184,883949568,18513657856,387755016192,8121246285824,170093589823488,3562486393470976,74613683694600192,1562729279488262144,32730226951263879168 ⋆ Trace sequence associated to the 4 X 4 Krawtchouk matrix and its transpose. ● a(n) = ((12 + 4 * sqrt(5)) ^ n + (12 - 4 * sqrt(5)) ^ n) / 2. ● a(n) = 2 ^ (n - 1) * ((sqrt(5) - 1) ^ (2 * n) + (sqrt(5) + 1) ^ (2 * n)). ●

▶ [A089343] 0,12,231,3735,52239,672243,8222247,97222251,1122222255,12722222259,142222222263,1572222222267,17222222222271,187222222222275,2022222222222279,21722222222222283,232222222222222287,2472222222222222291,26222222222222222295 ⋆ Sum of all digits in all even numbers from 0 to 6(10 ^ (k + 1) - 1) / 9 (with (k + 1) 6's). ● a(k + 1) = 3((10 ^ k)(110 * 3 + 405k - 135) - 3(18 k + 29) + 162k + 216) / 81. ● a(n) = (- 7 / 9 * (- 1 + 10 ^ n) + 1 / 2 * (8 + 3 * 10 ^ n) * n). ● a(n) = 22 * a(n - 1) - 141 * a(n - 2) + 220 * a(n - 3) - 100 * a(n - 4) for n>3. ●

▶ [A133285] 1,12,253,5544,121705,2671956,58661317,1287877008,28274632849,620754045660,13628314371661,299202162130872,6568819252507513,144214821393034404,3166157251394249365,69511244709280451616 ⋆ Indices of the centered 12 - gonal numbers which are also 12 - gonal number, or numbers X such that 120 * X ^ 2 - 120 * X + 36 is a square. ● a(n + 2) = 22 * a(n + 1) - a(n) - 10 ; a(n + 1)=11 * a(n) - 5 + (120 * a(n) ^ 2 - 120 * a(n) + 36) ^ 0.5 ● a(n) = (1 / 2) + (1 / 4) * [11 + 2 * sqrt(30)] ^ n + (1 / 20) * [11 + 2 * sqrt(30)] ^ n * sqrt(30) + (1 / 4) * [11 - 2 * sqrt(30)] ^ n - (1 / 20) * sqrt(30) * [11 - 2 * sqrt(30)] ^ n, with n>=0. - _ Paolo P. Lava _ , Aug 06 2008 ●

▶ [A120813] 0,0,0,0,0,12,352,5392,59670,541044,4285127,30772896,205200710,1291195620,7754735430,44827592160,251003101440,1368033658992,7285815623268,38033923266368,195107105534280,985573624414808,4911044001390648 ⋆ Number of permutations of length n with exactly 5 occurrences of the pattern 2 - 13. ● a(n) = ((n + 4)(- 108 - 192 n + 3 n ^ 2 + 8 n ^ 3 + n ^ 4)) / (120(n + 7))binomial[2n, n - 6]; generating function = x ^ 6 C ^ 13 (- 14 - 540C + 1519C ^ 2 - 1517C ^ 3 + 616C ^ 4 + 70C ^ 5 - 199C ^ 6 + 97C ^ 7 - 22C ^ 8 + 2C ^ 9) / (2 - C) ^ 9, where C=(1 - Sqrt[1 - 4x]) / (2x) is the Catalan function. ●

▶ [A269609] 12,376,2878,12570,40288,105892,242226,499798,952180,1702128,2888422,4693426,7351368,11157340,16477018,23757102,33536476,46458088,63281550,84896458,112336432,146793876,189635458,242418310,306906948 ⋆ Number of length - 6 0..n arrays with no repeated value differing from the previous repeated value by one or less. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

▶ [A003772] 12,408,6648,90672,1103088,12509256,135409896,1419480288,14545113696,146607233784,1460033574744,14411647534224,141321405768144,1379055205227432,13408489143753672,130019327919243840,1258252792162873152,12158637295940721240 ⋆ Number of Hamiltonian paths in K _ 4 X P _ n. ● a(1) = 12, ● a(2) = 408, ● a(3) = 6648, ● a(4) = 90672, ● a(5) = 1103088, ● a(6) = 12509256, ●

▶ [A129006] 12,432,7776,103680,1166400,11757312,109734912,967458816,8162933760,66512793600,526781325312,4074936532992,30901602041856,230390642442240,1692665944473600,12277470317248512,88052482431516672 ⋆ (n ^ 3 + n ^ 2) * 6 ^ n. ● a(n) = 24 * a(n - 1) - 216 * a(n - 2) + 864 * a(n - 3) - 1296 * a(n - 4). - _ Vincenzo Librandi _ , Feb 12 2013 ●

▶ [A281780] 0,0,0,0,12,660,20400,445620,7977732,126860580,1873839000,26381789940,359484471852,4784481401700,62538498859200,805447464281460,10241415118476372,128722997969290020,1600670708273985000,19705915838479512180,240330009637668935292 ⋆ Number of distinct topologies on an n - set that have exactly 12 open sets. ● a(n) = 1 / 2 * 4! Stirling2(n, 4) + 9 / 2 * 5! Stirling2(n, 5) + 16 * 6! Stirling2(n, 6) + 295 / 12 * 7! Stirling2(n, 7) + 85 / 4 * 8! Stirling2(n, 8) + 49 / 4 * 9! Stirling2(n, 9) + 9 / 2 * 10! Stirling2(n, 10) + 11! * Stirling2(n, 11). ●

▶ [A201246] 0,0,12,780,16286,159452,992412,4567836,16959488,53617596,149618794,377841356,879314442,1911495356,3922051616,7657895196,14321764860,25791609308,44921419134,75946019596,125016699158,200899440924,315872975684,486869916572,736910896536 ⋆ Number of ways to place 5 non - attacking ferses on an n X n board. ● a(n) = n ^ 10 / 120 - 5n ^ 8 / 12 + 2n ^ 7 / 3 + 191n ^ 6 / 24 - 24n ^ 5 - 661n ^ 4 / 12 + 880n ^ 3 / 3 - 937n ^ 2 / 15 - 1176n + 1436, n>=4. ●

▶ [A022347] 0,13,13,26,39,65,104,169,273,442,715,1157,1872,3029,4901,7930,12831,20761,33592,54353,87945,142298,230243,372541,602784 ⋆ Fibonacci sequence beginning 0, 13. ● a(n) = 13 * Fibonacci(n). - _ G. C. Greubel _ , Aug 25 2017 ●

▶ [A241749] 13,14,17,22,29,38,49,62,77,94,113,134,157,182,209,238,269,302,337,374,413,454,497,542,589 ⋆ a(n) = n ^ 2 + 13. ● a(n) = a(- n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) = a(n - 1) + 2 * n - 1. ●

▶ [A293817] 13,14,19,26,37,62,91,134,229,338,499,854,1261,1862,3187,4706,6949,11894,17563,25934,44389,65546,96787,165662,244621 ⋆ Numbers k such that m =2 * k is the middle side in a Heronian triangle with sides m - 13, m , m + 13. ● a(n) = 4 * a(n - 3) - a(n - 6), a(1)= 13, a(2)= 14, a(3)= 19, a(4)= 26, a(5)= 37, a(6)= 62. ●

▶ [A296795] 13,14,22,38,43,77,139,158,286,518,589,1067,1933,2198,3982,7214,8203,14861,26923,30614,55462,100478,114253,206987,374989 ⋆ Numbers k such that m = 2 * k is the middle side in a Heronian triangle with sides m - 11, m, m + 11. ● a(n) = 4 * a(n - 3) - a(n - 6) for n>5. ●

▶ [A112653] 0,1,13,14,26,27,39,40,52,53,65,66,78,79,91,92,104,105,117,118,130,131,143,144,156 ⋆ a(n) squared is congruent to a(n) (mod 13). ● a(n) = (11 * (- 1 + (- 1) ^ n) + 26 * n) / 4. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n > 2. ●

▶ [A022103] 1,13,14,27,41,68,109,177,286,463,749,1212,1961,3173,5134,8307,13441,21748,35189,56937,92126,149063,241189,390252,631441 ⋆ Fibonacci sequence beginning 1, 13. ● a(n) = a(n - 1) + a(n - 2) for n>=2, a(0)=1, a(1)=13, and a(- 1):=12. ● a(n) = ((1 + sqrt(5)) ^ n - (1 - sqrt(5)) ^ n) / (2 ^ n * sqrt(5)) + 6 * ((1 + sqrt(5)) ^ (n - 1) - (1 - sqrt(5)) ^ (n - 1)) / (2 ^ (n - 2) * sqrt(5)) for n >0. - Al Hakanson (hawkuu(AT)gmail.com), Jan 14 2009 ● a(n) = Lucas(n + 5) - 5 * Lucas(n). - _ Bruno Berselli _ , Dec 30 2016 ●

▶ [A041340] 13,14,27,95,217,312,841,1153,3147,10594,13741,24335,646451,670786,1317237,4622497,10562231,15184728,40931687,56116415,153164517,515609966,668774483,1184384449,31462770157 ⋆ Numerators of continued fraction convergents to sqrt(184). ● a(n) = 48670 * a(n - 12) - a(n - 24). - _ Wesley Ivan Hurt _ , Jun 22 2022 ●

▶ [A033049] 0,1,13,14,169,170,182,183,2197,2198,2210,2211,2366,2367,2379,2380,28561,28562,28574,28575,28730,28731,28743,28744,30758 ⋆ Sums of distinct powers of 13. ● a(n) = Sum _{ i=0..m } d(i) * 13 ^ i, where Sum _{ i=0..m } d(i) * 2 ^ i is the base - 2 representation of n. ● a(2n) = 13 * a(n), a(2n + 1) = a(2n) + 1. ●

▶ [A041083] 1,1,13,14,181,195,2521,2716,35113,37829,489061,526890,6811741,7338631,94875313,102213944,1321442641,1423656585,18405321661,19828978246,256353060613,276182038859,3570537526921,3846719565780,49731172316281 ⋆ Denominators of continued fraction convergents to sqrt(48). ● a(n) = 14 * a(n - 2) - a(n - 4). ● a(n) = Product _{ k = 1..floor((n - 1) / 2) } (12 + 4 * cos ^ 2(k * Pi / n)). ●

▶ [A041361] 1,1,13,14,377,391,5069,5460,147029,152489,1976897,2129386,57340933,59470319,770984761,830455080,22362816841,23193271921,300682079893,323875351814,8721441227057,9045316578871,117265240173509,126310556752380,3401339715735389 ⋆ Denominators of continued fraction convergents to sqrt(194). ● a(n) = 390 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Dec 16 2013 ●

▶ [A041835] 1,1,13,14,573,587,7617,8204,335777,343981,4463549,4807530,196764749,201572279,2615632097,2817204376,115303807137,118121011513,1532755945293,1650876956806,67567834217533,69218711174339,898192368309601,967411079483940 ⋆ Denominators of continued fraction convergents to sqrt(438). ● a(n) = 586 * a(n - 4) - a(n - 8) for n>7. - _ Vincenzo Librandi _ , Dec 25 2013 ●

▶ [A180642] 13,15,16,20,21,24,25,26,28,29,30,33,36,42,44,50,53,58,66,69,92,106,138,141,149 ⋆ Numbers k such that phi(k) / 4 is a prime, where phi is the Euler totient function. ● a(n) >> n log ^ 2 n. - _ Charles R Greathouse IV _ , Feb 04 2013 ●

▶ [A113801] 1,13,15,27,29,41,43,55,57,69,71,83,85,97,99,111,113,125,127,139,141,153,155,167,169 ⋆ Numbers that are congruent to { 1, 13 } mod 14. ● a(n) = 14 * (n - 1) - a(n - 1), n>1. - _ R. J. Mathar _ , Jan 30 2010 ● a(n) = - a(- n + 1) = (14 * n + 5 * (- 1) ^ n - 7) / 2. ● a(n) = a(n - 2) + 14 for n>2. ● a(0)=1, a(1)=13, a(2)=15, a(n)=a(n - 1) + a(n - 2) - a(n - 3). - _ Harvey P. Dale _ , May 11 2011 ●

▶ [A274978] 0,1,13,16,40,45,81,88,136,145,205,216,288,301,385,400,496,513,621,640,760,781,913,936,1080 ⋆ Integers of the form m * (m + 6) / 7. ● a(n) = (14 * (n - 1) * n - 5 * (2 * n - 1) * (- 1) ^ n - 5) / 8. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n >= 6. - _ Wesley Ivan Hurt _ , Dec 18 2020 ●

▶ [A008365] 1,13,17,19,23,29,31,37,41,43,47,53,59,61,67,71,73,79,83,89,97,101,103,107,109 ⋆ 13 - rough numbers: positive integers that have no prime factors less than 13. ● a(n) = a(n - 1) + a(n - 480) - a(n - 481). - _ Charles R Greathouse IV _ , Mar 21 2023 ●

▶ [A049482] 13,17,19,23,29,31,41,47,53,59,61,67,71,73,83,97,101,103,107,127,137,149,157,163 ⋆ Primes p such that p + 210 is also prime. ● a(n) >> n log ^ 2 n. - _ Charles R Greathouse IV _ , Feb 23 2017 ●

▶ [A156666] 13,17,19,23,29,37,47,59,67,79,89,103,107,109,113,127,137,139,149,157,167,179,223,227,229 ⋆ Primes where the last digit is greater than any other digit. ● a(n) >> n ^ k where k = log 10 / log 9 = 1.04795.... - _ Charles R Greathouse IV _ , Feb 23 2017 ●

▶ [A168447] 13,17,19,23,31,43,47,67,71,79,83,103,107,139,179,191,223,227,251,263,283,359,367,431,439 ⋆ Primes p such that floor(p / 6) is also prime. ● a(n) >> n log ^ 2 n. - _ Charles R Greathouse IV _ , Feb 23 2017 ●

▶ [A141076] 13,17,23,29,37,41,43,59,67,71,73,89,97,103,107,131,149,157,167,173,179,181,197,199,211 ⋆ Primes of form 2 * 3 * 5 * 7 * 11 - p, where p is prime. ● a(n) + a(229 - n) = 2 * 3 * 5 * 7 * 11. ●

▶ [A211490] 13,17,23,33,49,75,117,185,295,473,761,1227,1981,3201,5175,8369,13537,21899,35429,57321,92743,150057,242793,392843,635629 ⋆ Number of (n + 1) X (n + 1) - 4..4 symmetric matrices with every 2 X 2 subblock having sum zero and one or two distinct values. ● a(n) = 7 + (2 ^ (1 - n) * ((1 - sqrt(5)) ^ n * (- 2 + sqrt(5)) + (1 + sqrt(5)) ^ n * (2 + sqrt(5)))) / sqrt(5). ●

▶ [A129070] 13,17,25,33,49,57,73,81,97,121,129,153,169,177,193,217,241,249,273,289,297,321,337,361,393 ⋆ Numbers n such that (n - 5) / 4 is prime. ● a(n) = 4 * prime(n) + 5. - Zak Seidov, May 12 2007 ●

▶ [A155923] 13,17,25,53,85,137,305,493,797,1777,2873,4645,10357,16745,27073,60365,97597,157793,351833,568837,919685,2050633,3315425,5360317,11951965 ⋆ Positive numbers y such that y ^ 2 is of the form x ^ 2 + (x + 17) ^ 2 with integer x. ● a(n) = 6 * a(n - 3) - a(n - 6) for n > 6; a(1) = 13, a(2) = 17, a(3) = 25, a(4) = 53, a(5) = 85, a(6) = 137. ●

▶ [A283358] 1,1,1,13,17,29,49,125,241,509,1009,2045,4081,8189,16369,32765,65521,131069,262129,524285,1048561,2097149,4194289,8388605,16777201 ⋆ Decimal representation of the x - axis, from the origin to the right edge, of the n - th stage of growth of the two - dimensional cellular automaton defined by "Rule 621", based on the 5 - celled von Neumann neighborhood. ● a(n) = 2 ^ n - 15 for n>4 and even. ● a(n) = 2 ^ n - 3 for n>4 and odd. ● a(n) = 2 * a(n - 1) + a(n - 2) - 2 * a(n - 3) for n>5. ●

▶ [A248474] 13,17,43,47,73,77,103,107,133,137,163,167,193,197,223,227,253,257,283,287,313,317,343,347,373 ⋆ Numbers congruent to 13 or 17 mod 30. ● a(n) = (- 15 - 11 * (- 1) ^ n + 30 * n) / 2. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3). ●

▶ [A214393] 13,17,53,73,125,161,229,281,365,433,533,617,733,833,965,1081,1229,1361,1525,1673,1853,2017,2213,2393,2605 ⋆ Numbers of the form (4k + 3) ^ 2 + 4 or (4k + 5) ^ 2 - 8. ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4). ● a(n) = 4 * n * (n + 3) + 6 * (- 1) ^ n + 7. ●

▶ [A131019] 13,18,24,30,36,44,51,60,69,76,84,92,101,110,120,129,136,145,153,162,174,185,195,204,210 ⋆ Semiperimeters of quadrilaterals whose sides are 4 cons

ecutive odd primes. • a(n) = (prime(n) + prime(n + 1) + prime(n + 2) + prime(n + 3)) / 2 for n>1. •

▶ [A037158] 13,18,28,35,44,52,61,70,80,91,104,120,141,170,212,275,372,524,765,1150,1768,2763,4368,6960,11149 ⋆ Convolution of natural numbers n >= 1 with Fibonacci numbers F(k), for k >= - 7, with F(- n)=(- 1) ^ (n + 1) * F(n). • a(n) = F(n - 3) + (11 + 8 * n); G.f. (13 - 21 * x) / ((1 - x - x ^ 2) * (1 - x) ^ 2); 11=L(5) Lucas number; •

▶ [A274407] 13,19,23,26,29,39,46,49,59,69,79,89,101,102,104,105,148,167,201,202,204,205,208,257,301 ⋆ Numbers n with the property that when divided by their last digit the remainder of the division is their penultimate digit. • a(n) = a(n - 1134) + 12600. - _ Charles R Greathouse IV _ , Jun 20 2016 • a(n) = 100n / 9 + O(1), in particular |a(n) - 100n / 9| <= 192. - _ Charles R Greathouse IV _ , Jun 20 2016 •

▶ [A258589] 1,13,19,26,32,39,45,52,58,65,71,78,84,91,97,104,110,117,123,130,136,143,149,156,162 ⋆ Minimal most likely sum for a roll of n 12 - sided dice. • a(n) = floor(13 * n / 2) = (26 * n + (- 1) ^ n - 1) / 4 with n>1, a(1)=1. • a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n>4. •

▶ [A343034] 1,13,19,487,721,18493,27379,702247,1039681,26666893,39480499,1012639687,1499219281,38453641213,56930852179,1460225726407,2161873163521,55450123962253,82094249361619,2105644484839207,3117419602578001,79959040299927613,118379850648602419,3036337886912410087 ⋆ Positive numbers m such that m ^ 2 with last digit z deleted is still a perfect square k ^ 2, and z divides m - k. • a(n + 4) = 38 * a(n + 2) - a(n), a(1) = 1, a(2) = 13, a(3)= 19, a(4) = 487. •

▶ [A302390] 13,20,25,32,36,44,48,56,60,68,72,80,84,92,96,104,108,116,120,128,132,140,144,152,156 ⋆ Triameter of the n - cube - connected cycle graph. • a(2n) = 12 * n - 4, a(2n + 1) = 12 * n for n > 2. - _ Andrew Howroyd _ , Apr 15 2018 •

▶ [A164483] 13,20,30,44,64,92,131,186,263,370,520,730,1022,1430,2001,2796,3905,5456,7618,10632,14844,20720,28911,40350,56315 ⋆ Number of binary strings of length n with no substrings equal to 0001 0111 or 1010. • a(n) = 2 * a(n - 1) - a(n - 2) + 2 * a(n - 3) - 3 * a(n - 4) + a(n - 6). - _ Wesley Ivan Hurt _ , Apr 23 2021 •

▶ [A164468] 13,20,30,45,67,99,146,215,316,464,681,999,1465,2148,3149,4616,6766,9917,14535,21303,31222,45759,67064,98288,144049 ⋆ Number of binary strings of length n with no substrings equal to 0001, 0100, or 1110. • a(n) = a(n - 1) + a(n - 3) + 2 for n>6. - _ Greg Dresden _ , Feb 09 2020 •

▶ [A164464] 13,20,31,47,70,104,154,227,334,491,721,1058,1552,2276,3337,4892,7171,10511,15406,22580,33094,48503,71086,104183,152689 ⋆ Number of binary strings of length n with no substrings equal to 0001, 0100, or 0111. • a(n) = a(n - 1) + a(n - 3) + 3 for n>6. - _ Greg Dresden _ , Feb 09 2020 •

▶ [A164469] 13,20,32,51,81,128,201,316,497,781,1227,1927,3026,4752,7462,11717,18398,28888,45359,71221,111828,175587,275698,432887,679697 ⋆ Number of binary strings of length n with no substrings equal to 0001 0101 or 0110. • a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) - a(n - 4) + a(n - 5) - a(n - 6). - _ Wesley Ivan Hurt _ , Apr 25 2023 •

▶ [A282844] 13,21,31,39,55,61,73,87,97,113,119,139,151,163,179,193,209,215,229,253,261,277,287,301,323 ⋆ n - th even semiprime plus n - th odd semiprime. • a(n) = A100484 (n) + A046315 (n). •

▶ [A164452] 13,21,32,48,70,101,144,204,287,402,561,781,1085,1505,2085,2886,3992,5519,7627,10537,14554,20099,27753,38318,52901 ⋆ Number of binary strings of length n with no substrings equal to 0001 0010 or 1101. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 4) - 2 * a(n - 5) + a(n - 6). - _ Wesley Ivan Hurt _ , Nov 17 2022 •

▶ [A164485] 13,21,33,53,85,137,221,357,577,933,1509,2441,3949,6389,10337,16725,27061,43785,70845,114629,185473,300101,485573,785673,1271245 ⋆ Number of binary strings of length n with no substrings equal to 0001, 1000 or 1001. • a(n) = 4 * Fibonacci(n) + 1. - _ Bruno Berselli _ , Jul 26 2017 • a(n) = 1 - (4 * (((1 - sqrt(5)) / 2) ^ n - ((1 + sqrt(5)) / 2) ^ n)) / sqrt(5) for n>3. • a(n) = 2 * a(n - 1) - a(n - 3) for n>6. •

▶ [A164426] 13,21,34,53,81,124,188,282,422,630,936,1387,2053,3033,4473,6591,9704,14274,20983,30832,45283,66481,97576,143181,210054 ⋆ Number of binary strings of length n with no substrings equal to 0000 0011 or 0101. • a(n) = a(n - 1) + 2 * a(n - 3) - a(n - 5) - a(n - 6) - a(n - 7). - _ Wesley Ivan Hurt _ , Aug 19 2022 •

▶ [A164481] 13,21,34,53,84,131,204,318,493,766,1188,1842,2857,4428,6865,10641,16493,25565,39623,61414,95187,147531,228662,354404,549295 ⋆ Number of binary strings of length n with no substrings equal to 0001 0110 or 1101. • a(n) = 2 * a(n - 1) - a(n - 3) - a(n - 4) + 2 * a(n - 5) - a(n - 6). - _ Wesley Ivan Hurt _ , Jan 16 2022 •

▶ [A164459] 13,21,35,58,96,159,264,439,730,1215,2023,3369,5612,9349,15576,25952,43241,72050,120054,200043,333329,555423,925499,1542157,2569695 ⋆ Number of binary strings of length n with no substrings equal to 0001 0011 or 1100 • a(0)=13, a(1)=21, a(2)=35, a(3)=58, a(4)=96, a(5)=159, a(6)=264, a(n)= 2 * a(n - 1) - 2 * a(n - 4) + a(n - 5) - a(n - 6) + a(n - 7) [From Harvey P. Dale, May 06 2011] •

▶ [A164477] 13,21,35,59,100,170,289,492,838,1428,2434,4149,7073,12058,20557,35047,59751,101869,173676,296100,504821,860670,1467358,2501702,4265158 ⋆ Number of binary strings of length n with no substrings equal to 0001 0110 or 1000. • a(n) = 2 * a(n - 1) - a(n - 3) + a(n - 5) - a(n - 6). - _ Wesley Ivan Hurt _ , Oct 02 2021 •

▶ [A164495] 13,22,37,62,105,178,301,508,857,1446,2441,4122,6961,11754,19845,33504,56565,95502,161245,272246,459657,776074,1310301,2212276,3735153 ⋆ Number of binary strings of length n with no substrings equal to 0010 0101 or 1011 • a(4)=13, a(5)=22, a(6)=37, a(7)=62, a(8)=105, a(9)=178, a(n)=2 * a(n - 1) - a(n - 2) + a(n - 4) + a(n - 6). - _ Harvey P. Dale _ , Mar 07 2015 •

▶ [A342253] 13,23,31,37,41,43,47,53,61,71,83,97,113,131,151,173,197,223,251,281,313,347,383,421,461 ⋆ a(n) = (n - 6) * sqrt((n - 5) ^ 2) + 2 * n + 31. • a(n) = (n - 6) * sqrt((n - 5) ^ 2) + 2 * n + 31. • a(n) = - n ^ 2 + 13 * n + 1 for n <= 5, •

▶ [A164434] 13,23,40,70,122,213,372,650,1135,1982,3462,6047,10561,18445,32216,56268,98275,171643,299787,523599,914499,1597232,2789674,4872353,8509886 ⋆ Number of binary strings of length n with no substrings equal to 0000 0101 or 1010. • a(n) = a(n - 1) + 2 * a(n - 3) + a(n - 4) - a(n - 6) - a(n - 7). - _ Wesley Ivan Hurt _ , May 20 2021 •

▶ [A259216] 13,23,40,71,127,230,421,779,1456,2747,5227,10022,19345,37559,73288,143615,282439,557126,1101709,2183123,4333408,8613683,17141395,34143686,68062297 ⋆ Number of (n + 1) X (2 + 1) 0..1 arrays with each 2 X 2 subblock having clockwise pattern 0000 0011 or 0101. • a(n) = 3 * a(n - 1) - a(n - 2) - 2 * a(n - 3). • a(n) = 2 ^ (1 + n) + (3 * 2 ^ (- n) * ((1 - sqrt(5)) ^ n * (- 2 + sqrt(5)) + (1 + sqrt(5)) ^ n * (2 + sqrt(5)))) / sqrt(5). •

▶ [A213655] 13,23,41,77,141,259,477,877,1613,2967,5457,10037,18461,33955,62453,114869,211277,388599,714745,1314621,2417965,4447331,8179917,15045213,27672461 ⋆ Number of dominating subsets of the theta - graph TH(2,2,n) (n>=1). A tribonacci sequence with initial values 13, 23, and 41. • a(n) = a(n - 1) + a(n - 2) + a(n - 3) for n>=4; a(1)=13, a(2)=23, a(3)=41. •

▶ [A213665] 13,23,43,79,145,267,491,903,1661,3055,5619,10335,19009,34963,64307,118279,217549,400135,735963,1353647,2489745,4579355,8422747,15491847,28493949 ⋆ Number of dominating subsets of the graph G(n) obtained by joining a vertex with two consecutive vertices of the cycle graph C _ n (n >=3). • a(3)=13, a(4)=23, a(5)=43, a(n)=a(n - 1) + a(n - 2) + a(n - 3) for n>=6 •

▶ [A104342] 13,24,35,46,57,68,79 ⋆ Numbers n such that (digital reversal of n) - n = 18. • a(n)=11n + 2, n=1, ..., 7. •

▶ [A266912] 13,24,35,46,57,68,79,102,113,124,135,146,157,168,179,202,213,224,235,246,257,268,279,302,313 ⋆ Numbers n which are anagrams of n + 18. • a(n) = a(n - 1) + a(n - 8) - a(n - 9) for n > 9. •

▶ [A032607] 13,24,35,46,57,68,79,810,911,1012,1113,1214,1315,1416,1517,1618,1719,1820,1921,2022,2123,2224,2325,2426,2527 ⋆ Concatenation of n and n + 2 or { n,n + 2 } . • a(n) = n * floor(log _ 10(n + 2) + 1) + n + 2, with n >= 1. - _ Paolo P. Lava _ , Oct 09 2008 •

▶ [A190040] 13,24,40,65,105,164,246,349,472,617,786,981,1204,1457,1742,2061,2416,2809,3242,3717,4236,4801,5414,6077,6792 ⋆ Number of nondecreasing arrangements of n + 2 numbers in 0..8 with the last equal to 8 and each after the second equal to the sum of one or two of the preceding three. • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>6. •

▶ [A017533] 1,13,25,37,49,61,73,85,97,109,121,133,145,157,169,181,193,205,217,229,241,253,265,277,289 ⋆ a(n) = 12 * n + 1. • a(n) = 12 * n + 1, n >= 0. • a(n) = 24 * n - 10 - a(n - 1), (with a(0)=1). - _ Vincenzo Librandi _ , Dec 24 2010 •

▶ [A309809] 13,25,37,49,511,613,715,817,919,1021,1123,1225,1327,1429,1531,1633,1735,1837,1939,2041,2143,2245,2347,2449,2551 ⋆ a(n) is the concatenation of n and 2n + 1. • a(n) = n * 10 ^ (ceiling(log _ 10(2 * n + 1))) + 2 * n + 1. •

▶ [A026058] 13,25,41,63,90,123,162,209,263,325,395,475,564,663,772,893,1025,1169,1325,1495,1678,1875,2086,2313,2555 ⋆ a(n) = (d(n) - r(n)) / 2, where d = A026057 and r is the periodic sequence with fundamental period (0,0,1,0). • a(n) = - 0.125 - 0.125 * (- 1) ^ n + 0.25 * cos(n * Pi / 2) + (n + 4) * (n ^ 2 + 20 * n + 39) / 12. [_ Richard Choulet _ , Dec 13 2008] •

▶ [A163551] 1,1,1,1,1,1,1,1,1,1,1,1,1,13,25,49,97,193,385,769,1537,3073,6145,12289,24577 ⋆ 13th - order Fibonacci numbers: a(n) = a(n - 1) + ... + a(n - 13) with a(1)=...=a(13)=1. • a(n) = a(n - 1) + a(n - 2) + ... + a(n - 13) for n > 12, a(0)=a(1)=...=a(12)=1. •

▶ [A298037] 1,13,25,61,85,145,181,265,313,421,481,613,685,841,925,1105,1201,1405,1513,1741,1861,2113,2245,2521,2665 ⋆ Partial sums of A298036. • a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). (End) •

▶ [A116524] 0,1,13,25,169,181,325,469,2197,2209,2353,2497,4225,4369,6097,7825,28561,28573,28717,28861,30589,30733,32461,34189,54925 ⋆ a(0)=1, a(1)=1, a(n) = 13 * a(n / 2) for n=2,4,6,..., a(n) = 12 * a((n - 1) / 2) + a((n + 1) / 2) for n=3,5,7,.... • a(n) = Sum _{ k=0..n - 1 } 12 ^ wt(k), where wt = A000120. - _ Mike Warburton _ , Mar 14 2019 •

▶ [A053404] 1,1,13,25,181,481,2653,8425,40261,141361,624493,2320825,9814741,37664641,155441533,607417225,2472715621,9761722321,39434309773,156574977625,629786694901,2508686426401,10066126765213,40170363882025 ⋆ Expansion of 1 / ((1 + 3 * x) * (1 - 4 * x)). • a(n) = ((4 ^ (n + 1)) - (- 3) ^ (n + 1)) / 7. • a(n) = a(n - 1) + 12 * a(n - 2), n > 1; a(0)=1, a(1)=1. • a(n) = (sum _{ 1<=k<=n + 1, k odd } C(n + 1,k) * 7 ^ (k - 1)) / 2 ^ n. - _ Vladimir Shevelev _ , Feb 05 2014 •

▶ [A164007] 0,13,26,33,52,55,78,91,112,135,160,187,216,247,280,315,352,391,432,475,520,567,616,667,720 ⋆ Zero together with row 7 of the array in A163280. • a(n) = n * (n + 6), n >= 7. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3), n >= 7. •

▶ [A008595] 0,13,26,39,52,65,78,91,104,117,130,143,156,169,182,195,208,221,234,247,260,273,286,299,312 ⋆ Multiples of 13. • a(n) = 13 * n = 2 * a(n - 1) - a(n - 2). G.f.: 13x / (x - 1) ^ 2. - _ Vincenzo Librandi _ , Dec 24 2010 •

▶ [A019551] 13,26,39,412,515,618,721,824,927,1030,1133,1236,1339,1442,1545,1648,1751,1854,1957,2060,2163,2266,2369,2472,2575 ⋆ a(n) is the concatenation of n and 3n. • a(n) = n * 10 ^ floor(log _ 10(3 * n) + 1) + 3 * n. - _ Paolo P. Lava _ , Mar 24 2010 •

▶ [A005029] 13,26,52,104,208,416,832,1664,3328,6656,13312,26624,53248,106496,212992,425984,851968,1703936,3407872,6815744,13631488,27262976,54525952,109051904,218103808 ⋆ 13 * 2 ^ n. • a(n) = 2 * a(n - 1), n>0; a(0)=13. G.f.: 13 / (1 - 2 * x). - _ Philippe Deléham _ , Nov 23 2008 •

▶ [A041765] 1,13,27,40,147,187,708,895,2498,33369,1337258,17417723,36172704,53590427,196943985,250534412,948547221,1199081633,3346710487,44706317964,179159942904 7,23335498895575,48462597220197,71798096115772,26385688556 7513 ⋆ Denominators of continued fraction convergents to sqrt(403). • a(n) = 1339756 * a(n - 10) - a(n - 20) for n>19. - _ Vincenzo Librandi _ , Dec 24 2013 •

▶ [A358053] 13,27,41,55,69,83,97,111,125,139,153,167,181,195,209,223,237,251,265,279,293,307,321,335,349 ⋆ a(n) = 14 * n - 1. • a(n) = 14 * n - 1. •

▶ [A132755] 0,13,27,42,58,75,93,112,132,153,175,198,222,247,273,300,328,357,387,418,450,483,517,552,588 ⋆ a(n) = n * (n + 25) / 2. • a(n) = n + a(n - 1) + 12

(with a(0)=0). - _ Vincenzo Librandi _ , Aug 03 2010 ● a(n) = 13 * n - floor(n / 2) + floor(n ^ 2 / 2). - _ Wesley Ivan Hurt _ , Jun 15 2013 ● a(0)=0, a(1)=13, a(2)=27; for n>2, a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Aug 09 2014 ●

► [A195045] 0,1,13,27,52,79,117,157,208,261,325,391,468,547,637,729,832,937,1053,1171,1300,1431,1573,1717,1872 ★ Concentric 13 - gonal numbers. ● a(n) = 13 * n ^ 2 / 4 + 9 * ((- 1) ^ n - 1) / 8. ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4) for n>3. - _ Wesley Ivan Hurt _ , Nov 22 2015 ●

► [A041336] 13,27,715,1457,38597,78651,2083523,4245697,112471645,229188987,6071385307,12371959601,327742334933,667856629467,17692014701075,36051886031617,955041051523117,1946133989077851,51554524767547243,105055183524172337,2782989296396028005 ★ Numerators of continued fraction convergents to sqrt(182). ● a(0)=13, a(1)=27, a(2)=715, a(3)=1457, a(n)=54 * a(n - 2) - a(n - 4). - _ Harvey P. Dale _ , Mar 27 2015 ●

► [A098847] 0,13,28,45,64,85,108,133,160,189,220,253,288,325,364,405,448,493,540,589,640,693,748,805,864 ★ a(n) = n * (n + 12). ● a(n) = (n + 6) ^ 2 - 6 ^ 2 = n * (n + 12), n>=0. ● a(n) = 2 * n + a(n - 1) + 11 (with a(0)=0). - _ Vincenzo Librandi _ , Nov 17 2010 ● a(0)=0, a(1)=13, a(2)=28, a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , May 24 2012 ●

► [A026054] 13,28,50,80,119,168,228,300,385,484,598,728,875,1040,1224,1428,1653,1900,2170,2464,2783,3128,3500,3900,4329 ★ dot product (n,n - 1,...2,1).(3,4,...,n,1,2). ● a(n) = n * (n ^ 2 + 9 * n - 10) / 6. ●

► [A082285] 13,29,45,61,77,93,109,125,141,157,173,189,205,221,237,253,269,285,301,317,333,349,365,381,397 ★ a(n) = 16n + 13. ● a(n) = 16 * n + 13. ● a(n) = 32 * n - a(n - 1) + 10; a(0)=13. - _ Vincenzo Librandi _ , Oct 10 2011 ●

► [A243138] 13,29,47,67,89,113,139,167,197,229,263,299,337,377,419,463,509,557,607,659,713,769,827,887,949 ★ a(n) = n ^ 2 + 15 * n + 13. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>2. ●

► [A195878] 1,13,29,209,463,3331,7379,53087,117601,846061,1874237,13483889,29870191,214896163,476048819,3424854719,7586910913,54582779341,120914525789,869899614737,1927045501711,13863811056451,30711813501587,2209510772884 79,489461970523681 ★ y - values in the solution to 7 * x ^ 2 - 6 = y ^ 2. ● a(n + 4) = 16 * a(n + 2) - a(n) with a(1)=1, a(2)=13, a(3)=29, a(4)=209. ● a(n) = ((- (- 1) ^ n + t) * (8 + 3 * t) ^ floor(n / 2) - ((- 1) ^ n + t) * (8 - 3 * t) ^ floor(n / 2)) / 2 with t=sqrt(7). ●

► [A139577] 0,13,30,51,76,105,138,175,216,261,310,363,420,481,546,615,688,765,846,931,1020,1113,1210,1311,1416 ★ a(n) = n * (2 * n + 11). ● a(n) = 2 * n ^ 2 + 11 * n. ● a(n) = a(n - 1) + 4 * n + 9 (with a(0)=0). - _ Vincenzo Librandi _ , Nov 24 2010 ●

► [A023274] 13,31,37,67,73,181,367,541,661,997,1087,1117,1327,1861,2179,2293,2473,2713,2719,3271,3727,4363,5281,5443,5749 ★ Primes that remain prime through 3 iterations of function f(x) = 2x + 5. ● a(n) == 1 (mod 6). - _ John Cerkan _ , Sep 16 2016 ●

► [A063305] 1,13,31,49,67,85,103,121,139,157,175,193,211,229,247,265,283,301,319,337,355,373,391,409,427 ★ Dimension of the space S _ n ^{ new } (Gamma _ 1(32)) of weight n cuspidal newforms for Gamma _ 1(32). ● a(n) = 2 * a(n - 1) - a(n - 2) for n>4. G.f.: x ^ 2 * (- 1 + 15 * x + 4 * x ^ 2) / (1 - x) ^ 2. [_ Colin Barker _ , Sep 28 2012] ●

► [A301622] 13,31,49,67,103,121,139,157,193,211,229,247,283,301,319,337,373,391,409,427,463,481,499,517,553 ★ Numbers not divisible by 2, 3 or 5 (A007775) with digital root 4. ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. ●

► [A166143] 1,13,31,55,85,121,163,211,265,325,391,463,541,625,715,811,913,1021,1135,1255,1381,1513,1651,1795,1945 ★ a(n) = 3 * n ^ 2 + 3 * n - 5. ● a(n) = a(n - 1) + 6 * n, a(1)=1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). (End) ●

► [A160772] 13,31,91,133,241,307,463,757,871,1261,1561,1723,2071,2653,3307,3541,4291,4831,5113,6007,6643,7657,9121,9901,10303 ★ Number of nodes (or order) of a graph model obtained using an automata scheme on sets of order prime(n) >= 5 and in which all not halt states are linked by arcs (edges). ● a(n) = (prime(n) - 2) * (prime(n) - 1) + 1. ●

► [A023304] 13,31,181,541,661,1087,1861,2179,2719,3727,7459,8089,8707,9109,10639,17341,19333,22501,23293,29287,32797,39847,40387,42703,46591 ★ Primes that remain prime through 4 iterations of function f(x) = 2x + 5. ● a(n) == 1 (mod 6). - _ John Cerkan _ , Sep 27 2016 ●

► [A212757] 1,1,13,32,56,80,177,213,297,472,580,688,1037,1169,1385,1872,2124,2376,3133,3421,3829,4784,5240,5696,7017 ★ Number of (w,x,y,z) with all terms in { 0,...,n } and 2w=max { w,x,y,z }- min { w,x,y,z } . ● a(n)= - a(n - 1) + a(n - 2) + 4 * a(n - 3) + 3 * a(n - 4) - 3 * a(n - 5) - 6 * a(n - 6) - 3 * a(n - 7) + 3 * a(n - 8) + 4 * a(n - 9) + a(n - 10) - a(n - 11) - a(n - 12). ●

► [A140678] 0,13,32,57,88,125,168,217,272,333,400,473,552,637,728,825,928,1037,1152,1273,1400,1533,1672,1817,1968 ★ a(n) = n * (3 * n + 10). ● a(n) = 3 * n ^ 2 + 10 * n. ● a(n) = 6 * n + a(n - 1) + 7, with a(0)=0. - _ Vincenzo Librandi _ , Aug 03 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3), with a(0)=0, a(1)=13, a(2)=32. - _ Harvey P. Dale _ , Jun 05 2012 ●

► [A082109] 1,13,33,61,97,141,193,253,321,397,481,573,673,781,897,1021,1153,1293,1441,1597,1761,1933,2113,2301,2497 ★ Third row of number array A082105. ● a(n) = 4 * n ^ 2 + 8 * n + 1. ● a(n) = a(n - 1) + 8 * n + 4, with a(0)=1. - _ Vincenzo Librandi _ , Aug 08 2010 ●

► [A204707] 13,33,81,209,529,1361,3473,8913,22801,58449,149649,383441,982033,2515793,6443921,16507089,42282769,108311121,277442193,710686673,1820455441,4663202129,11945023889,30597832401,78377927953 ★ Number of (n + 1) X 30..1 arrays with the permanents of all 2 X 2 subblocks equal and nonzero. ● a(n) = 1 + (2 ^ (- 1 - n) * ((1 - sqrt(17)) ^ n * (- 19 + 5 * sqrt(17)) + (1 + sqrt(17)) ^ n * (19 + 5 * sqrt(17)))) / sqrt(17). ●

► [A164539] 1,13,33,157,545,2189,8193,31709,120769,463501,1772385,6789277,25985249,99495437,380887617,1458243293,5582699905,21373102861,81825105057,313261930141,1199299595681,4591432702349,17577962574465,67295954065373 ★ a(n) = 2 * a(n - 1) + 7 * a(n - 2) for n > 1; a(0) = 1, a(1) = 13. ● a(n) = 2 * a(n - 1) + 7 * a(n - 2) for n > 1; a(0) = 1, a(1) = 13. ● a(n) = ((1 + 3 * sqrt(2)) * (1 + 2 * sqrt(2)) ^ n + (1 - 3 * sqrt(2)) * (1 - 2 * sqrt(2)) ^ n) / 2. ●

► [A134864] 13,34,47,68,89,102,123,136,157,178,191,212,233,246,267,280,301,322,335,356,369,390,411,424,445 ★ Wythoff BBB numbers. ● a(n) = B(B(B(n))), n >=1, with B=A001950, the upper Wythoff sequence. ●

► [A081271] 1,13,34,64,103,151,208,274,349,433,526,628,739,859,988,1126,1273,1429,1594,1768,1951,2143,2344,2554,2773 ★ Vertical of triangular spiral in A051682. ● a(n) = binomial(n, 0) + 12 * binomial(n, 1) + 9 * binomial(n, 2). ● a(n) = (9 * n ^ 2 + 15 * n + 2) / 2. ● a(0) = 1, a(n) = a(n - 1) + 9 * n + 3 for n > 0 - _ Gerald McGarvey _ , Aug 18 2004 ●

► [A180673] 0,13,34,68,123,212,356,589,966,1576,2563,4160,6744,10925,17690,28636,46347,75004,121372,196397,317790,514208,832019,1346248,2178288 ★ a(n) = Fibonacci(n + 8) - Fibonacci(8). ● a(n) = F(n + 8) - F(8) with F(n) the Fibonacci numbers A000045. ● a(n) = a(n - 1) + a(n - 2) + 21 for n>1, a(0)=0, a(1)=13, and where 21 = F(8). ● a(n) = (- 21 + (2 ^ (- 1 - n) * ((1 - sqrt(5)) ^ n * (- 47 + 21 * sqrt(5)) + (1 + sqrt(5)) ^ n * (47 + 21 * sqrt(5)))) / sqrt(5)). ● a(n) = 2 * a(n - 1) - a(n - 3) for n>2. (End) ●

► [A214729] 0,13,34,102,267,712,1864,4893,12810,33550,87835,229968,602064,1576237,4126642,10803702,28284459,74049688,193864600,507544125,1328767770,3478759198,9107509819,23843770272,62423800992 ★ Member m=6 of the m - family of sums b(m,n) = Sum _{ k=0..n } F(k + m) * F(k), m >= 0, n >= 0, with the Fibonacci numbers F. ● a(n) = (9 * (- 1) ^ (n + 1) - 20 + Lucas(2 * n + 7)) / 5. - _ Ehren Metcalfe _ , Aug 21 2017 ● a(n) = (2 ^ (- 1 - n) * (- 2 ^ (1 + n) * (20 + 9 * (- 1) ^ n) + (29 - 13 * sqrt(5)) * (3 - sqrt(5)) ^ n + (3 + sqrt(5)) ^ n * (29 + 13 * sqrt(5)))) / 5. ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4) for n>3. ●

► [A063300] 1,13,35,56,77,99,120,141,163,184,205,227,248,269,291,312,333,355,376,397,419,440,461,483,504 ★ Dimension of the space of weight n cuspidal newforms for Gamma _ 1(27). ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>6. ●

► [A221592] 0,13,35,169,651,2715,11011,45099,184063,752155,3072247,12550859,51270383,209444163,855592375,3495156539,14277953839,58326437619,238267540647,973339457803,3976159254687,16242886662499,66353319815959,271057918757755,1107290419059023 ★ Number of 0..4 arrays of length n with each element differing from at least one neighbor by 1 or less. ● a(n) = 3 * a(n - 1) + 4 * a(n - 2) + 6 * a(n - 4) + 4 * a(n - 5) + 4 * a(n - 6). ●

► [A101103] 1,13,36,60,84,108,132,156,180,204,228,252,276,300,324,348,372,396,420,444,468,492,516,540,564 ★ Partial sums of A101104. First differences of A005914. ● a(n) = 2 * a(n - 1) - a(n - 2), n > 4. ● a(n) = 24 * n - 36, n >= 3. ● a(n) = Sum _{ j=0..n } (- 1) ^ j * binomial(3, j) * (n - j) ^ 4. [Indices shifted, Nov 01 2010] ●

► [A051865] 0,1,13,36,70,115,171,238,316,405,505,616,738,871,1015,1170,1336,1513,1701,1900,2110,2331,2563,2806,3060 ★ 13 - gonal (or tridecagonal) numbers: a(n) = n * (11 * n - 9) / 2. ● a(n) = 11 * n + a(n - 1) - 10 with n > 0, a(0) = 0. - _ Vincenzo Librandi _ , Aug 06 2010 ● a(11 * a(n) + 56 * n + 1) = a(11 * a(n) + 56 * n) + a(11 * n + 1). - _ Vladimir Shevelev _ , Jan 24 2014 ●

► [A220462] 13,37,41,67,73,97,127,137,173,179,181,211,229,239,263,307,311,347,367,379,431,433,443,449,479 ★ Chebyshev numbers C _ v(n) for v=3 / 2: a(n) is the smallest number such that if x>=a(n), then theta(x) - theta(2 * x / 3)>=n * log(x), where theta(x) = sum _{ prime p<=x } log p. ● a(n)<=prime(4 * (n + 1)). ●

► [A045809] 13,37,59,91,113,137,159,191,213,237,259,291,313,337,359,391,413,437,459,491,513,537,559,591,613 ★ 9 - ish numbers (end in 13, 37, 59, 91). ● a(n) = (50 * n + 4 * i ^ (n * (n - 1)) + 3 * (- 1) ^ n - 25) / 2, where i=sqrt(- 1). - _ Bruno Berselli _ , Feb 22 2012 ●

► [A003154] 1,13,37,73,121,181,253,337,433,541,661,793,937,1093,1261,1441,1633,1837,2053,2281,2521,2773,3037,3313,3601 ★ Centered 12 - gonal numbers. Also star numbers: 6 * n * (n - 1) + 1. ● a(n) = 1 + Sum _{ j=0..n } (12 * j). E.g., a(2)=37 because 1 + 12 * 0 + 12 * 1 + 12 * 2 = 37. - _ Xavier Acloque _ , Oct 06 2003 ● a(n) = numerator in B _ 2(x) = (1 / 2)x ^ 2 - (1 / 2)x + 1 / 12 = Bernoulli polynomial of degree 2. - _ Gary W. Adamson _ , May 30 2005 ● a(n) = 12 * (n - 1) + a(n - 1), with n>1, a(1)=1. - _ Vincenzo Librandi _ , Aug 08 2010 ●

► [A222964] 0,13,37,76,124,189,261,352,448,565,685,828,972,1141,1309,1504,1696,1917,2133,2380,2620,2893,3157,3456,3744 ★ Numbers k such that 25 * k + 36 is a square. ● a(n) = (50 * n * (n - 1) + (2 * n - 1) * (- 1) ^ n + 1) / 8. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). ●

► [A163675] 0,13,37,78,142,235,363,532,748,1017,1345,1738,2202,2743,3367,4080,4888,5797,6813,7942,9190,10563,12067,13708,15492 ★ a(n) = n * (2 * n ^ 2 + 5 * n + 19) / 2. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ●

► [A139697] 1,13,37,85,181,373,757,1525,3061,6133,12277,24565,49141,98293,196597,393205,786421,1572853,3145717,6291445,12582901,25165813,50331637,100663285,201326581 ★ Binomial transform of [1, 12, 12, 12, ...]. ● a(n) = 12 * 2 ^ (n - 1) - 11. - _ Emeric Deutsch _ , May 05 2008 ● a(n) = 2 * a(n - 1) + 11 (with a(1)=1). - _ Vincenzo Librandi _ , Nov 24 2010 ● a(n) = 3 * 2 ^ (n + 1) - 11. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2). ●

► [A298683] 1,1,1,13,37,169,577,2269,8245,31225,115633,433357,1613701,6029641,22488481,83957053,313274197,1169270809,4363546897,16285441069,60777168805,226825331305,846519962113,3159262905757,11790514883701 ★ Start with the square tile of the Shield tiling and recursively apply the substitution rule. a(n) is the number of squares after n iterations. ● a(n) = (1 / 13) * (- 13 + (- 1) ^ (1 + n) * 2 ^ (2 + n) + (15 - 7 * sqrt(3)) * (2 + sqrt(3)) ^ n + (2 - sqrt(3)) ^ n * (15 + 7 * sqrt(3))). ● a(n) = 3 * a(n - 1) + 5 * a(n - 2) - 9 * a(n - 3) + 2 * a(n - 4) for n>3. ● a(n) = ((15 - 7 * sqrt(3)) * (2 + sqrt(3)) ^ n + (2 - sqrt(3)) ^ n * (15 + 7 * sqrt(3)) - 4 * (- 2) ^ n) / 13 - 1. - _ Bruno Berselli _ , Jan 25, 2018 ●

► [A090042] 1,1,13,37,217,841,4069,17389,79537,350353,1575613,7005109,31341961,139740121,624241813,2785624957,12437909857,55517694241,247852396909,1106399430469,4939175226937,22048744189033,98428415874373,439393017828109,1961498610274321 ★ a(n) = 2 * a(n - 1) + 11 * a(n - 2) for n > 1, a(0) = a(1) = 1. ● a(n) = ((1 + 2 * sqrt(3)) ^ n + (1 - 2 * sqrt(3)) ^ n) / 2. ● a(n) = (i * sqrt(11)) ^ n * (S(n, - 2 * i / sqrt(11)) + (i / sqrt(11)) * S(n - 1, - 2 * i / sqrt(11))), n >= 0, with Chebyshev S polynomials (coefficients in A049310), with S(-

2, x) = - 1, S(- 1, x) = 0 and i = sqrt(- 1). Via Cayley - Hamilton. See the _ Gary W. Adamson _ comment above or the Mathematica program of _ Robert G. Wilson v _ with another matrix. (End) ● a(n) = [x ^ n] (x + sqrt(1 + 12 * x ^ 2)) ^ n. ●

▶ [A098265] 1,1,13,37,289,1201,7741,38053,227137,1207009,6995053,38591653,221446369,1245188881,7130897437,40516456357,232260610177,1327920945601,762728509306 9,43787832627493,252042452907169,1451244932278129,8370001674641917,48303478743113893,279083099450496961 ⋆ G.f. : 1 / (1 - 2x - 23x ^ 2) ^ (1 / 2). ● a(n) = sum { k=0..floor(n / 2), binomial(n, k) * binomial(n - k, k) * 6 ^ k } . ● a(n) = sum { k=0..floor(n / 2), binomial(n, 2k) * binomial(2k, k) * 6 ^ k } . ●

▶ [A152741] 0,13,39,78,130,195,273,364,468,585,715,858,1014,1183,1365,1560,1768,1989,2223,2470,2730,3003,3289,3588,3900 ⋆ 13 times triangular numbers. ● a(n) = a(n - 1) + 13 * n (with a(0)=0). - _ Vincenzo Librandi _ , Nov 26 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>2. ● a(n) = Sum _{ i=6n..7n } i. (End) ●

▶ [A168235] 13,39,79,133,201,283,379,489,613,751,903,1069,1249,1443,1651,1873,2109,2359,2623,2901,3193,3499,3819,4153,4501 ⋆ 1 + 5 * n + 7 * n ^ 2. ● a(1) =13, a(2)=39, a(3)=79, a(n)=3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Feb 07 2015 ●

▶ [A258597] 13,39,117,351,1053,3159,9477,28431,85293,255879,767637,2302911,6908733,20726199,62178597,186535791,559607373,1678822119,5036466357,15109399071,45328197213,135984591639,407953774917,1223861324751,3671583974253 ⋆ a(n) = 13 * 3 ^ n. ● a(n) = 3 * a(n - 1). ●

▶ [A041324] 13,40,53,199,5227,15880,21107,79201,2080333,6320200,8400533,31521799,827967307,2515423720,3343391027,12545596801,329528907853,1001132320360,1330661228213,4993116004999,131151677358187,398448148079560,529599825437747 ⋆ Numerators of continued fraction convergents to sqrt(176). ● a(n) = 398 * a(n - 4) - a(n - 8) for n > 7. - _ Wesley Ivan Hurt _ , Oct 15 2017 ●

▶ [A041755] 1,1,13,40,173,1597,1770,5137,6907,18951,25858,44809,115476,160285,436046,596331,5803025,23808431,77228318,950548247,1027776565,40006057717,41033834282,532412069101,1638270041585 ⋆ Denominators of continued fraction convergents to sqrt(397). ● a(n) = 40956605964 * a(n - 21) + a(n - 42) for n >41. - _ Vincenzo Librandi _ , Dec 24 2013 ●

▶ [A102083] 1,13,41,85,145,221,313,421,545,685,841,1013,1201,1405,1625,1861,2113,2381,2665,2965,3281,3613,3961,4325,4705 ⋆ a(n) = 8 * n ^ 2 + 4 * n + 1. ● a(n) = 4 * (4 * n - 1) + a(n - 1) (with a(0)=1). - _ Vincenzo Librandi _ , Nov 16 2010 ●

▶ [A167585] 13,41,93,169,269,393,541,713,909,1129,1373,1641,1933,2249,2589,2953,3341,3753,4189,4649,5133,5641,6173,6729,7309 ⋆ a(n) = 12 * n ^ 2 - 8 * n + 9. ● a(n) = a(n - 1) + 24 * n - 20, with a(1)=13. - _ Vincenzo Librandi _ , Dec 03 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ G. C. Greubel _ , Jun 17 2016 ●

▶ [A305155] 13,41,97,209,433,881,1777,3569,7153,14321,28657,57329,114673,229361,458737,917489,1834993,3670001,7340017,14680049,29360113,58720241,117440497,234881009,469762033 ⋆ a(n) = 28 * 2 ^ n - 15. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>1. ●

▶ [A028468] 1,1,13,41,281,1183,6728,31529,167089,817991,4213133,21001799,106912793,536948224,2720246633,13704300553,69289288909,349519610713,1765722581057,8911652846951,45005025662792,227191499132401,1147185247901449,5791672851807479 ⋆ Number of perfect matchings in graph P _{ 6 } X P _{ n } . ● a(1) = 1, ● a(2) = 13, ● a(3) = 41, ● a(4) = 281, ● a(5) = 1183, ● a(6) = 6728, ●

▶ [A139277] 0,13,42,87,148,225,318,427,552,693,850,1023,1212,1417,1638,1875,2128,2397,2682,2983,3300,3633,3982,4347,4728 ⋆ a(n) = n * (8 * n + 5). ● a(n) = 8 * n ^ 2 + 5n. ● a(n) = 16 * n + a(n - 1) - 3 for n>0, a(0)=0. - _ Vincenzo Librandi _ , Aug 03 2010 ●

▶ [A162265] 1,13,42,94,175,291,448,652,909,1225,1606,2058,2587,3199,3900,4696,5593,6597,7714,8950,10311,11803,13432,15204,17125 ⋆ a(n) = (2 * n ^ 3 + 5 * n ^ 2 - 5 * n) / 2. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Vincenzo Librandi _ , Mar 05 2012 ●

▶ [A146507] 1,13,43,55,85,97,127,139,169,181,211,223,253,265,295,307,337,349,379,391,421,433,463,475,505 ⋆ Numbers congruent to { 1, 13 } mod 42. ● a(2k - 1) = 42 * (k - 1) + 1, a(2k) = 42 * (k - 1) + 13, where k>0. ●

▶ [A082369] 13,43,73,103,133,163,193,223,253,283,313,343,373,403,433,463,493,523,553,583,613,643,673,703,733 ⋆ Numbers congruent to 13 mod 30. ● a(n) = 30n + 13. ●

▶ [A187677] 13,43,89,151,229,433,701,859,1033,1223,1429,1889,2143,2699,3001,3319,4003,4751,5563,7873,10009,11173,11779,12401,13693 ⋆ Primes of the form 8 k ^ 2 + 6k - 1 for positive k. ● a(n) = 2((2n - 1) ^ 2 - n) - 1 (or, find the number in the corresponding spot in the better - known Ulam spiral, double it and subtract 1). ●

▶ [A082040] 1,13,43,91,157,241,343,463,601,757,931,1123,1333,1561,1807,2071,2353,2653,2971,3307,3661,4033,4423,4831,5257 ⋆ a(n) = 9 * n ^ 2 + 3 * n + 1. ● a(n) = 18 * n + a(n - 1) - 6 with n>0, a(0)=1. - _ Vincenzo Librandi _ , Aug 08 2010 ●

▶ [A023262] 13,43,103,139,199,349,397,577,727,733,829,967,1039,1303,1567,1597,1753,2131,2161,2311,2707,2719,2857,3109,3319 ⋆ Primes that remain prime through 2 iterations of the function f(x) = 8 * x + 5. ● a(n) == 1 (mod 6). - _ John Cerkan _ , Sep 16 2016 ●

▶ [A243894] 13,43,149,317,853,1277,2281,2957,4507,7433,8693,12671,15887,17839,21701,28099,35407,38327,46997,53359,56911,67511,75289,87541,105173 ⋆ a(n) = prime(k + 1) with k = n ^ 2 + prime(n) ^ 2. ● a(n) = prime((n ^ 2 + prime(n) ^ 2) + 1). ●

▶ [A063650] 1,1,13,43,269,1213,6427,31387,159651,795611,4005785,20064827,100764343,505375405,2536323145,12724855013,63851706457,320373303983,1607526474153,8065864257905,40471399479495,203068825478591,1018918472214687,5112520236292975,25652573037707685 ⋆ Number of ways to tile a 6 X n rectangle with 1 X 1 and 2 X 2 tiles. ● a(n) = 2a(n - 1) + 16a(n - 2) + a(n - 3) - 27a(n - 4) + a(n - 5) + 4a(n - 6) - Keith Schneider (kschneid(AT)bulldog.unca.edu), Apr 02 2006 ●

▶ [A033652] 13,44,88,176,847,1595,7546,14003,44044,88088,176176,847847,1596595,7553546,14007103,44177144,88354288,176599676,853595347,1597190705,6668108656,13236127322,35608290553,71117571206 ⋆ Trajectory of 13 under map x - >x + (x - with - digits - reversed). ● a(n + 1) = a(n) + { a(n) reversed } . ●

▶ [A226514] 13,44,99,184,305,468,679,944,1269,1660,2123,2664,3289,4004,4815,5728,6749,7884,9139,10520,12033,13684,15479,17424,19525 ⋆ Column 3 of array in A226513. ● a(n) = (n + 1) * (n ^ 2 + 8 * n + 13). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Vincenzo Librandi _ , Jun 17 2013 ●

▶ [A159742] 13,44,108,236,492,1004,2028,4076,8172,16364,32748,65516,131052,262124,524268,1048556,2097132,4194284,8388588,16777196,33554412,67108844,134217708,268435436,536870892 ⋆ If an array is made of columns of - nacci sequences (Fibonacci, tribonacci, etc.), all starting with 1,1,2,..., the NW - to - SE diagonals can be extended by computation. This sequence is diagonal 6. See A159741 for details. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2), n>3. ● a(n) = 16 * 2 ^ n - 20, n>1. (End) ●

▶ [A098385] 13,44,132,368,976,2496,6208,15104,36096,84992,197632,454656,1036288,2342912,5259264,11730944,26017792,57409536,126091264,275775488,600834048,1304428544,2822766592,6090129408,13103005696 ⋆ Ordered factorizations over hook - type prime signatures with exactly three distinct primes (third column of A098348). ● a(n) = 2 ^ n * (n ^ 2 + 8 * n + 13). - _ James Rayman _ , Mar 27 2021 ●

▶ [A254675] 1,13,44,776,2697,48069,167140,2979472,10359953,184679165,642149916,11447128728,39802934809,709537301941,2467139808212,43979865591584,152922865174305,2726042129376237,9478750500998668,168970632155735080,587529608196743081 ⋆ Indices of centered triangular numbers (A005448) which are also heptagonal numbers (A000566). ● a(n) = a(n - 1) + 62 * a(n - 2) - 62 * a(n - 3) - a(n - 4) + a(n - 5). ●

▶ [A007587] 0,1,13,46,110,215,371,588,876,1245,1705,2266,2938,3731,4655,5720,6936,8313,9861,11590,13510,15631,17963,20516,23300 ⋆ 12 - gonal (or dodecagonal) pyramidal numbers: n(n + 1)(10n - 7) / 6. ● a(n) = (10 * n - 7) * binomial(n + 1, 2) / 3. ● a(n) = Sum _{ k=0..n } k * (5 * k - 4). - _ Klaus Brockhaus _ , Nov 20 2008 ● a(n) = Sum _{ i=0..n - 1 } (n - i) * (10 * i + 1), with a(0)=0. - _ Bruno Berselli _ , Feb 10 2014 ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Wesley Ivan Hurt _ , Oct 23 2014 ●

▶ [A004467] 0,1,13,47,114,225,391,623,932,1329,1825,2431,3158,4017,5019,6175,7496,8993,10677,12559,14650,16961,19503,22287,25324 ⋆ a(n) = n * (11 * n ^ 2 - 5) / 6. ● a(0)=0, a(1)=1, a(2)=13, a(3)=47; for n>3, a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Harvey P. Dale _ , Sep 22 2013 ●

▶ [A353965] 1,1,13,47,259,1189,5877,28167,136723,660173,3194613,15445007,74699811,361230229,1746933205,8448061879,40854753875,197572345789,955455626773,4620559362303,22344915889827,108059470995013,522573007884725,2527150465444071,12221238828079379 ⋆ Number of tilings of a 3 X n rectangle using 2 X 2 and 1 X 1 tiles and right trominoes. ● a(n) = 3 * a(n - 1) + 9 * a(n - 2) - a(n - 3) + 2 * a(n - 4). ●

▶ [A135712] 1,13,48,118,235,411,658,988,1413,1945,2596,3378,4303,5383,6630,8056,9673,11493,13528,15790,18291,21043,24058,27348,30925 ⋆ a(n) = (4 * n ^ 3 + 11 * n ^ 2 + 9 * n + 2) / 2. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ● a(n) = ((2 * n + 1) * (2 * n + 3) * (4 * n + 3) - 1) / 8 = (n + 1) * (4 * n ^ 2 + 7 * n + 2) / 2, for n >= 0. See the Conway and Guy reference. - _ Wolfdieter Lang _ , Apr 16 2020 ●

▶ [A027980] 1,13,48,176,580,1844,5667,17047,50404,147090,424686,1215528,3453733,9752641,27393240,76587284,213260152,591707612,1636514439,4513276555,12414985996,34071252918,93305816418,255027755856,695815086025 ⋆ a(n) = Sum _{ k=0..n - 1 } T(n,k) * T(n,2n - k), T given by A027960. ● a(n) = (n + 1) * Lucas(2 * n) - Fibonacci(2 * n + 1) - (- 1) ^ n. - _ G. C. Greubel _ , Oct 01 2019 ●

▶ [A158480] 1,13,49,109,193,301,433,589,769,973,1201,1453,1729,2029,2353,2701,3073,3469,3889,4333,4801,5293,5809,6349,6913 ⋆ a(n) = 12 * n ^ 2 + 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A274974] 1,13,49,117,225,381,593,869,1217,1645,2161,2773,3489,4317,5265,6341,7553,8909,10417,12085,13921,15933,18129,20517,23105 ⋆ Centered octahemioctahedral numbers: a(n) = (4 * n ^ 3 + 24 * n ^ 2 + 8 * n + 3) / 3. ● a(n) = (4 * n ^ 3 + 24 * n ^ 2 + 8 * n + 3) / 3. ●

▶ [A319086] 1,13,49,161,311,743,1135,2095,3148,4948,6400,10432,12798,17502,22902,30838,36040,48676,55896,72696,86808,104232,116928,151488,170863 ⋆ a(n) = Sum _{ k=1..n } k ^ 2 * sigma(k), where sigma is A000203. ● a(n) = Sum _{ k=1..n } ((k / 2) * floor(n / k) * floor(1 + n / k)) ^ 2. - _ Daniel Suteu _ , Nov 07 2018 ●

▶ [A289999] 13,49,217,937,3913,16009,64777,260617,1045513,4188169,16764937,67084297,268386313,1073643529,4294770697,17179475977,68718690313,274876334089,1099508482057,4398040219657,17592173461513,70368719011849,281474926379017,1125899806179337,4503599426043913 ⋆ Sierpinski cuboctahedral numbers: a(n) = 16 * 4 ^ n - 12 * 2 ^ n + 9. ● a(n) = - 3 * 2 ^ (n + 2) + 2 ^ (2n + 4) + 9. ● a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3) for n>2. ●

▶ [A373578] 1,1,1,13,49,241,2401,13021,128353,1346689,10615681,140431501,1544877841,17576665393,264566466529,3226728670621,48376006929601,766753039205761,11052669865900033,197019825098096269,3271213100827557361,56597110823949654001 ⋆ Expansion of e.g.f. exp(x * (1 + x ^ 2) ^ 2). ● a(n) = n! * Sum _{ k=0..floor(2 * n / 5) } binomial(2 * n - 4 * k,k) / (n - 2 * k)!. ● a(n) == 1 mod 12. ●

▶ [A320469] 1,1,13,49,277,1321,6733,33409,167557,836761,4185853,20925169,104634037,523153801,2615801773,13078943329,65394847717,326973976441,1634870406493,8174350983889,40871757016597,204358780888681,1021793912832013,5108969547382849,25544847770468677 ⋆ a(n) = 3 * a(n - 1) + 10 * a(n - 2), n >= 2; a(0)=1, a(1)=1. ● a(n) = (4 * (- 2) ^ n + 3 * 5 ^ n) / 7. ●

▶ [A373620] 1,1,1,13,49,481,3841,38221,464353,5368609,82042561,1151767981,20242097041,342921513793,6705416722369,133590317946541,2880298682358721,65597610230669761,1556262483879791233,39569880403136366029,1030778206965 4

03668721 ⋆ Expansion of e.g.f. exp(x / (1 - x ^ 2) ^ 2). ● a(n) = n! * Sum _{ k =0..floor(n / 2) } binomial(2 * n - 3 * k - 1,k) / (n - 2 * k)!. ● a(n) == 1 mod 1 2. ●

▶ [A274784] 1,1,13,49,661,4021,49141,382033,4387909,39174421,435947953,4223039173,46369242349,472149790477,5166034019173,54291944826769,594930602047909,6384197552441317,70225109775221041,764509591210501189,8448837429195472441,92938878099911462521,1032029676943832312473 ⋆ Diagonal of the rational function 1 / (1 - (wxyz + wxy + wxz + wyz + xz + yz)). ● a(n) = Sum _{ i = 0..floor(n / 2) } Sum _{ j = 0..floor(n / 2) - i } (n + i + j)! / ((n - 2 * i - 2 * j)! * (i + j)! * i! ^ 2 * j! ^ 2). - _ Peter Bala _ , Mar 16 2023 ●

▶ [A050410] 0,1,13,50,126,255,451,728,1100,1581,2185,2926,3818,4875,6111,7540,9176,11033,13125,15466,18070,20951,24123,27600,31396 ⋆ Truncated square pyramid numbers: a(n) = Sum _{ k = n..2 * n - 1 } k ^ 2. ● a(n) = n * (7 * n - 1) * (2 * n - 1) / 6. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4); a(0)=0, a(1)=1, a(2)=13, a(3)=50. - _ Harvey P. Dale _ , Feb 29 2012 ●

▶ [A121991] 0,1,13,50,148,393,993,2450,5976,14497,35077,84770,204748,494409,1193721,2882018,6957936,16798081,40554301,97906898,236368324,570643785,1377656145,3325956338,8029569096 ⋆ a(n) = 3 * a(n - 1) - a(n - 2) - a(n - 3) + 12. ● a(n) = ((11 - 7 * sqrt(2)) * (1 - sqrt(2)) ^ n + (1 + sqrt(2)) ^ n * (11 + 7 * sqrt(2)) - 24 * n - 22) / 4 . ●

▶ [A121990] 1,13,50,149,409,1090,2873,7541,19762,51757,135521,354818,928945,2432029,6367154,16669445,43641193,114254146,299121257,783109637,2050207666,5367513373,14052332465,36789484034,96316119649 ⋆ Expansion of x * (1 + 9 * x + 2 * x ^ 2) / ((1 - x) * (1 - 3 * x + x ^ 2)). ● a(n) = 3 * a(n - 1) - a(n - 2) + 12. ● a(n) = (1 / 10) * (- 120 + (65 - 11 * sqrt(5)) * ((1 / 2) * (3 - sqrt(5))) ^ n + ((1 / 2) * (3 + sqrt(5))) ^ n * (65 + 11 * sqrt(5))). ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) + a(n - 3). ● a(n) = 12 * Fibonacci(2 * n - 1) + Fibonacci(2 * n - 3) - 12. - _ G. C. Greubel _ , Nov 21 2019 ●

▶ [A022283] 0,13,51,114,202,315,453,616,804,1017,1255,1518,1806,2119,2457,2820,3208,3621,4059,4522,5010,5523,6061,6624,7212 ⋆ a(n) = n * (25 * n + 1) / 2. ● a(n) = a(n - 1) + 25 * n - 12 for n>0, a(0)=0. - _ Vincenzo Librandi _ , Aug 04 2010 ● a(0)=0, a(1)=13, a(2)=51; for n>2, a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , May 04 2014 ●

▶ [A152742] 0,13,52,117,208,325,468,637,832,1053,1300,1573,1872,2197,2548,2925,3328,3757,4212,4693,5200,5733,6292,6877,7488 ⋆ 13 times the squares: a(n) = 13 * n ^ 2. ● a(n) = a(n - 1) + 26 * n - 13 (with a(0)=0). - _ Vincenzo Librandi _ , Nov 26 2010 ● a(0)=0, a(1)=13, a(2)=52, a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Feb 18 2015 ●

▶ [A213837] 1,13,52,134,275,491,798,1212,1749,2425,3256,4258,5447,6839,8450,10296,12393,14757,17404,20350,23611,27203,31142,35444,40125 ⋆ Principal diagonal of the convolution array A213836. ● a(n) = n * (5 - 15 * n + 16 * n ^ 2) / 6 . ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ●

▶ [A022284] 0,13,53,120,214,335,483,658,860,1089,1345,1628,1938,2275,2639,3030,3448,3893,4365,4864,5390,5943,6523,7130,7764 ⋆ a(n) = n * (27 * n - 1) / 2. ● a(n) = a(n - 1) + 27 * n - 14 for n>0, a(0)=0. - _ Vincenzo Librandi _ , Aug 04 2010 ●

▶ [A156156] 13,53,305,1777,10357,60365,351833,2050633,11951965,69661157,406014977,2366428705,13792557253,80388914813,468540931625,2730856674937,15916599117997,92768738033045,540695829080273,3151406236448593 ⋆ a(n) = 6 * a(n - 1) - a(n - 2) for n > 2; a(1) = 13, a(2) = 53. ● a(n) = ((50 + 31 * sqrt(2)) * (3 - 2 * sqrt(2)) ^ n + (50 - 31 * sqrt(2)) * (3 + 2 * sqrt(2)) ^ n) / 4. ●

▶ [A254895] 1,13,53,1241,5161,121573,505693,11912881,49552721,1167340733,4855660933,114387478921,475805218681,11208805593493,46624055769773,1098348560683361,4568681660219041,107626950141375853,447684178645696213,10546342765294150201 ⋆ Indices of octagonal numbers (A000567) that are also centered square numbers (A001844). ● a(n) = a(n - 1) + 98 * a(n - 2) - 98 * a(n - 3) - a(n - 4) + a(n - 5). ●

▶ [A195024] 0,13,54,123,220,345,498,679,888,1125,1390,1683,2004,2353,2730,3135,3568,4029,4518,5035,5580,6153,6754,7383,8040 ⋆ a(n) = n * (14 * n - 1). ● a(n) = 14 * n ^ 2 - n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A071230] 0,1,13,54,142,295,531,868,1324,1917,2665,3586,4698,6019,7567,9360,11416,13753,16389,19342,22630,26271,30283,34684,39492 ⋆ a(n) = n * (6 * n ^ 2 - 7 * n + 3) / 2. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ●

▶ [A158485] 13,55,125,223,349,503,685,895,1133,1399,1693,2015,2365,2743,3149,3583,4045,4535,5053,5599,6173,6775,7405,8063,8749 ⋆ a(n) = 14 * n ^ 2 - 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A274973] 1,13,55,139,277,481,763,1135,1609,2197,2911,3763,4765,5929,7267,8791,10513,12445,14599,16987,19621,22513,25675,29119,32857 ⋆ Centered cubohemioctahedral numbers: a(n) = 2 * n ^ 3 + 9 * n ^ 2 + n + 1. ● a(n) = 2 * n ^ 3 + 9 * n ^ 2 + n + 1. ●

▶ [A005902] 1,13,55,147,309,561,923,1415,2057,2869,3871,5083,6525,8217,10179,12431,14993,17885,21127,24739,28741,33153,37995,43287,49049 ⋆ Centered icosahedral (or cuboctahedral) numbers, also crystal ball sequence for f.c.c. lattice. ● a(n) = (2 * n + 1) * (5 * n ^ 2 + 5 * n + 3) / 3. ● a(- 1 - n) = - a(n). - _ Michael Somos _ , Jun 03 2012 ●

▶ [A051798] 1,13,55,155,350,686,1218,2010,3135,4675,6721,9373,12740,16940,22100,28356,35853,44745,55195,67375,81466,97658,116150,137150,160875 ⋆ a(n) = (n + 1) * (n + 2) * (n + 3) * (9n + 4) / 24. ● a(n) = C(n + 3, 3) * (9 * n + 4) / 4. ● a(0)=1, a(1)=13, a(2)=55, a(3)=155, a(4)=350, a(n)=5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Harvey P. Dale _ , Aug 19 2012 ●

▶ [A206372] 13,55,223,895,3583,14335,57343,229375,917503,3670015,14680063,58720255,234881023,939524095,3758096383,15032385535,60129542143,240518168575,962072674303,3848290697215,15393162788863,61572651155455,246290604621823,985162418487295 ⋆ a(n) = 14 * 4 ^ n - 1. ● a(n) = 7 * 2 ^ (2 * n + 1) - 1. ●

▶ [A290396] 13,55,277,1513,8593,49825,292417,1729153,10275073,61254145,365945857,2189371393,13111037953,78565515265,470990340097,2824331231233,16939544543233,101611496669185,609565899227137,3656983075356673,21940249178406913,131634897988091905,789782999624318977 ⋆ a(n) = 3 * 2 ^ n + 3 * 4 ^ n + 6 ^ (n + 1) + 1. ● a(n) = 3 * 2 ^ n + 3 * 4 ^ n + 6 ^ (n + 1) + 1. ● a(n) = 13 * a(n - 1) - 56 * a(n - 2) + 92 * a(n - 3) - 48 * a(n - 4) for n>3. ●

▶ [A264853] 0,1,13,56,160,365,721,1288,2136,3345,5005,7216,10088,13741,18305,23920,30736,38913,48621,60040,73360,88781,106513,126776,149800 ⋆ a(n) = n * (n + 1) * (5 * n ^ 2 + 5 * n - 4) / 12. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Vincenzo Librandi _ , Nov 27 2015 ●

▶ [A007202] 1,13,57,153,323,587,967,1483,2157,3009,4061,5333,6847,8623,10683,13047,15737,18773,22177,25969,30171,34803,39887,45443,51493 ⋆ Crystal ball sequence for hexagonal close - packing. ● a(n) = 7 * (2 * n + 1) * (2 * n ^ 2 + 2 * n + 1) / 8 + (- 1) ^ n / 8. - _ R. J. Mathar _ , Mar 24 2011 ● a(0)=1, a(1)=13, a(2)=57, a(3)=153, a(4)=323, a(n)=3 * a(n - 1) - 2 * a(n - 2) - 2 * a(n - 3) + 3 * a(n - 4) - a(n - 5). [_ Harvey P. Dale _ , Jul 15 2011] ●

▶ [A212405] 13,57,236,959,3872,15586,62632,251419,1008536,4043582,16206152,64933782,260114976,1041797124,4171943056,16704821779,66880877896,267747443494,1071808583176,4290243456514,17172082337536,68729504287324 ⋆ Number of binary arrays of length 2 * n + 3 with no more than n ones in any length 2n subsequence (=50 % duty cycle) ● a(n) = 2 ^ (2 * n + 2) - (3 * n + 1) / n * C(2 * n - 2,n - 1), for n>1. - _ Vaclav Kotesovec _ , Oct 28 2012 ●

▶ [A055833] 13,58,162,361,701,1239,2044,3198,4797,6952,9790,13455,18109,23933,31128,39916,50541,63270,78394,96229,117117,141427,169556,201930,239005 ⋆ T(n,n - 6), where T is the array in A055830. ● a(n) = (n - 5) * (n - 4) * (n ^ 3 + 19 * n ^ 2 + 6 * n - 156) / 120. (End) ●

▶ [A103220] 0,1,13,58,170,395,791,1428,2388,3765,5665,8206,11518,15743,21035,27560,35496,45033,56373,69730,85330,103411,124223,148028,175100 ⋆ a(n) = n * (n + 1) * (3 * n ^ 2 + n - 1) / 6. ● a(n) = Sum _{ i=1..n } Sum _{ j=1..n } max(i,j) ^ 2. - _ Enrique Pérez Herrero _ , Jan 15 2013 ● a(n) = a(n - 1) + (2 * n - 1) * n ^ 2 with a(0)=0, see A015237. - _ J. M. Bergot _ , Jun 10 2017 ● a(n) = Sum _{ k=1..n } k * C(2 * k,2). ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). (End) ●

▶ [A086221] 13,58,244,1000,4048,16288,65344,261760,1047808,4192768,16774144,67102720,268423168,1073717248,4294918144,17179770880,68719280128,274877513728,1099510841344,4398044938240,17592182898688,70368737886208 ⋆ Bisection of A086652. ● a(n) = 2 ^ (2n + 2) - 3 * 2 ^ (n - 1). ● a(n + 1) = 4 * a(n) + 3 * 2 ^ n. ●

▶ [A163833] 0,13,59,156,322,575,933,1414,2036,2817,3775,4928,6294,7891,9737,11850,14248,16949,19971,23332,27050,31143,35629,40526,45852 ⋆ a(n) = n * (6 * n ^ 2 + 15 * n + 5) / 2. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ●

▶ [A213567] 1,13,59,183,476,1108,2409,4993,10007,19559,37504,70832,132145,244029,446763,811847,1465676,2630836,4697945,8350305,14779671,26058903,45784224,80179968,139995361 ⋆ Principal diagonal of the convolution array A213566. ● a(n) = 6 * a(n - 1) - 12 * a(n - 2) - 5 * a(n - 3) + 12 * a(n - 4) - 12 * a(n - 5) - 3 * a(n - 6) + 6 * a(n - 7) - a(n - 9). ● a(n) = (2 * n + 3) * Fibonacci(n + 3) + (n ^ 2 + 2) * Fibonacci(n + 2) - 4 * (n ^ 2 + 2 * n + 2). - _ G. C. Greubel _ , Jul 26 2019 ●

▶ [A228282] 13,60,1034,10414,126119,1428523,16566199,190540884,2197847780,25325358687,291935092921,3364727410265,38782728207101,447011297075966,5152298718205939,59385855860517581,684486816741728022 ⋆ Number of nX7 binary arrays with top left value 1 and no two ones adjacent horizontally, vertically or nw - se diagonally. ● a(n) = a(n - 1) + 85 * a(n - 2) + 432 * a(n - 3) + 192 * a(n - 4) - 3711 * a(n - 5) - 5096 * a(n - 6) + 21164 * a(n - 7) + 27340 * a(n - 8) - 112654 * a(n - 9) - 37244 * a(n - 10) + 477721 * a(n - 11) - 464722 * a(n - 12) - 897815 * a(n - 13) + 3102284 * a(n - 14) - 4149918 * a(n - 15) + 2761082 * a(n - 16) - 138325 * a(n - 17) - 1353257 * a(n - 18) + 942033 * a(n - 19) + 64683 * a(n - 20) - 365483 * a(n - 21) + 80904 * a(n - 22) + 92350 * a(n - 23) - 27097 * a(n - 24) - 23292 * a(n - 25) + 2585 * a(n - 26) + 5635 * a(n - 27) + 1405 * a(n - 28) - 561 * a(n - 29) - 545 * a(n - 30) - 173 * a(n - 31) - 14 * a(n - 32) + 5 * a(n - 33) + a(n - 34) ●

▶ [A081589] 1,13,61,145,265,421,613,841,1105,1405,1741,2113,2521,2965,3445,3961,4513,5101,5725,6385,7081,7813,8581,9385,10225 ⋆ Third row of Pascal - (1,5,1) array A081580. ● a(n) = 1 - 6 * n + 18 * n ^ 2. ●

▶ [A127876] 1,13,61,172,373,691,1153,1786,2617,3673,4981,6568,8461,10687,13273,16246,19633,23461,27757,32548,37861,43723,50161,57202,64873 ⋆ Integers of the form (x ^ 3) / 6 + (x ^ 2) / 2 + x + 1. ● a(n) = (9 * n ^ 3 - 18 * n ^ 2 + 15 * n - 4) / 2. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>4. ●

▶ [A357964] 1,1,1,1,13,61,181,1261,12601,77113,481321,6102361,63041221,492260341,6041807773,87670198981,945716793841,11365316711281,193962371184721,2824572189001393,36983289122143741,658584258052917421,1207364179011193441,18587625757234699741 ⋆ Expansion of e.g.f. exp((exp(x ^ 3) - 1) / x ^ 2). ● a(n) = n! * Sum _{ k=0..floor(n / 3) } Stirling2(n - 2 * k,n - 3 * k) / (n - 2 * k)!. ●

▶ [A353223] 1,1,1,1,13,61,181,2101,19321,107353,1338121,18021961,153519301,2162889301,37434929533,437750929981,7054260835441,146656527486001,2197288472426641,40414798347009553,970905798377330941,17791752518018762221,370864149434372540101 ⋆ Expansion of e.g.f. (1 - x ^ 3) ^ (- 1 / x ^ 2). ● a(0) = 1; a(n) = (n - 1)! * Sum _{ k=1..floor((n + 2) / 3) } (3 * k - 2) / k * a(n - 3 * k + 2) / (n - 3 * k + 2)!. ● a(n) = n! * Sum _{ k=0..floor(n / 3) } |Stirling1(n - 2 * k,n - 3 * k)| / (n - 2 * k)!. ●

▶ [A302560] 1,13,61,185,440,896,1638,2766,4395,6655,9691,13663,18746,25130,33020,42636,54213,68001,84265,103285,125356,150788,179906,213050,250575 ⋆ Partial sums of icosahedral numbers (A006564). ● a(n) = n * (2 - 3 * n + 10 * n ^ 2 + 15 * n ^ 3) / 24. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

▶ [A141725] 1,13,61,253,1021,4093,16381,65533,262141,1048573,4194301,16777213,67108861,268435453,1073741821,4294967293,17179869181,68719476733,274877906941,1099511627773,4398046511101,17592186044413,70368744177661 ⋆ a(n) = 4 ^ (n + 1) - 3. ● a(n) = 4 * a(n - 1) + 9 for n>0, a(0)=1. ● a(n) = 4 ^ n - 3 , with offset 1. - _ Omar E. Pol _ , Aug 22 2011 ● a(n) = 5 * a(n - 1) - 4 * a(n - 2) for n>1, a(0)=1, a(1)=13. - _ Harvey P. Dale _ , Sep 25 2011 ●

► [A122885] 1,13,61,385,2185,12853,74677,435721,2538625,14798077,86245741,502684561,2929845241,17076419653,99528607141,580095354265,3381043256305,19706164707853,114855943942237,669429501042721 ★ The (3,3) - entry in the n - th power of the 3 X 3 matrix M = [1,1,1; 4,2,1; 9,3,1]. ● a(n + 1) = 4 * a(n) + 11 * a(n - 1) - 2 * a(n - 2). ● a(n) = - (45 / 68) * sqrt(2) * [3 - 2 * sqrt(2)] ^ (n - 1) + (33 / 34) * [3 + 2 * sqrt(2)] ^ (n - 1) + (45 / 68) * [3 + 2 * sqrt(2)] ^ (n - 1) * sqrt(2) + (33 / 34) * [3 - 2 * sqrt(2)] ^ (n - 1) - (16 / 17) * (- 2) ^ (n - 1), with n>=1. - _ Paolo P. Lava _ , Jul 09 2008 ●

► [A268201] 0,13,62,171,364,665,1098,1687,2456,3429,4630,6083,7812,9841,12194,14895,17968,21437,25326,29659,34460,39753,45562,51911,58824 ★ a(n) = 4 * n ^ 3 - 6 * n ^ 2 + 3 * n - 1. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>4. - _ Wesley Ivan Hurt _ , Apr 17 2016 ●

► [A213843] 1,13,62,190,455,931,1708,2892,4605,6985,10186,14378,19747,26495,34840,45016,57273,71877,89110,109270,132671,159643,190532,225700,265525 ★ Antidiagonal sums of the convolution array A213841. ● a(n) = n * (1 + n) * (1 - 2 * n + 4 * n ^ 2) / 6. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ●

► [A175109] 1,13,63,171,365,665,1099,1687,2457,3429,4631,6083,7813,9841,12195,14895,17969,21437,25327,29659,34461,39753,45563,51911,58825 ★ a(n) = ((2 * n + 1) ^ 3 + (- 1) ^ n) / 2. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - 2 * a(n - 3) + 3 * a(n - 4) - a(n - 5). ●

► [A051878] 1,13,63,203,518,1134,2226,4026,6831,11011,17017,25389,36764,51884,71604,96900,128877,168777,217987,278047,350658,437690,541190,663390,806715 ★ Partial sums of A051797. ● a(n) = binomial(n + 4, 4) * (8 * n + 5) / 5. ●

► [A054477] 1,13,64,307,1471,7048,33769,161797,775216,3714283,17796199,85266712,408537361,1957420093,9378563104,44935395427,215298414031,1031556674728,4942484959609,23680868123317,113461855656976,543628410161563,2604680195150839,12479772565592632 ★ A Pellian - related sequence. ● a(n) = 5a(n - 1) - a(n - 2); a(0)=1, a(1)=13. ● a(n) = (2 ^ (- 1 - n) * ((5 - sqrt(21)) ^ n * (- 21 + sqrt(21)) + (5 + sqrt(21)) ^ n * (21 + sqrt(21)))) / sqrt(21). - _ Colin Barker _ , May 26 2016 ●

► [A169883] 13,64,381,2500,17066,118336,825358,5769604,40366312,282508864,1977415678,13841522500,96889632947,678224719936,4747565867723,33232942099204,232630544491667,1628413678617664,11398895398904361,79792266862562500,558545865578002528,3909821052537641536 ★ Maximum number of rational points on a smooth absolutely irreducible projective curve of genus 1 over the field F _ 7 ^ n. ● a(n) = 7 ^ n + 1 + floor(2 * 7 ^ (n / 2)) if 7 does not divide floor(2 * 7 ^ (n / 2)), n is even, or n = 1. Otherwise a(n) = 7 ^ n + floor(2 * 7 ^ (n / 2)) [Deuring - Waterhouse]. - _ Robin Visser _ , Aug 17 2023 ●

► [A153793] 0,13,65,156,286,455,663,910,1196,1521,1885,2288,2730,3211,3731,4290,4888,5525,6201,6916,7670,8463,9295,10166,11076 ★ 13 times pentagonal numbers: a(n) = 13 * n * (3 * n - 1) / 2. ● a(n) = 39 * n + a(n - 1) - 26 (with a(0)=0). - _ Vincenzo Librandi _ , Aug 03 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>2. ●

► [A086689] 1,13,67,227,602,1358,2730,5034,8679,14179,22165,33397,48776,69356,96356,131172,175389,230793,299383,383383,485254,607706,753710,926510,1129635 ★ a(n) = Sum _{ i=1..n } i ^ 2 * t(i), where t = A000217. ● a(n) = n * (n + 1) * (n + 2) * (12 * n ^ 2 + 9 * n - 1) / 120. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). - _ Wesley Ivan Hurt _ , Nov 19 2014 ● a(n) = Sum _{ i=1..n } (i * Sum _{ k=1..i } i * k). - _ Wesley Ivan Hurt _ , Nov 19 2014 ●

► [A213355] 13,67,59899999 ★ Smallest prime p whose k - fold digit sum s(s(..s(p)..)) is also prime for all k < n, but whose n - fold digit sum is not prime. ● a(n) <= s(a(n + 1)). (Proof: a(n) and s(a(n + 1)) share the same property, but a(n) is minimal.) ●

► [A258618] 0,13,68,189,400,725,1188,1813,2624,3645,4900,6413,8208,10309,12740,15525,18688,22253,26244,30685,35600,41013,46948,53429,60480 ★ a(n) = (4 * n + 9) * n ^ 2. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Vincenzo Librandi _ , Jun 06 2015 ●

► [A093119] 13,68,222,555,1171,2198,3788,6117,9385,13816,19658,27183,36687,48490,62936,80393,101253,125932,154870,188531,227403,271998,322852,380525,445601 ★ Number of convex polyominoes with a 3 X n + 1 minimal bounding rectangle. ● a(n) = ((3 * n + 2) * C(2n + 4, 4) - 4 * n * C(n + 2, n) ^ 2) / (n + 2), n>0. ● a(n) = (6 * n ^ 4 + 20 * n ^ 3 + 27 * n ^ 2 + 19 * n + 6) / 6. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

► [A085461] 1,13,70,246,671,1547,3164,5916,10317,17017,26818,40690,59787,85463,119288,163064,218841,288933,375934,482734,612535,768867,955604,1176980,1437605 ★ Number of 5 - tuples (v1,v2,v3,v4,v5) of nonnegative integers less than n such that v1 <= v5, v2 <= v5, v2 <= v4 and v3 <= v4. ● a(n) = n + 11 * binomial(n, 2) + 34 * binomial(n, 3) + 40 * binomial(n, 4) + 16 * binomial(n, 5) = 1 / 30 * n * (n + 1) * (2 * n + 1) * (2 * n ^ 2 + 2 * n + 1). ●

► [A050403] 1,13,70,252,714,1722,3696,7260,13299,23023,38038,60424,92820,138516,201552,286824,400197,548625,740278,984676,1292830,1677390,2152800,2735460,3443895 ★ Partial sums of A051877. ● a(n) = C(n + 5, 5) * (7 * n + 6) / 6. ●

► [A060103] 1,13,71,259,742,1806,3906,7722,14223,24739,41041,65429,100828,150892,220116,313956,438957,602889,814891,1085623,1427426,1854490,2383030,3031470,3820635 ★ Fourth column (m=3) of triangle A060102. ● a(n)=(4 * n ^ 2 + 20 * n + 15) * binomial(n + 4, 4) / 15. ● a(0)=1, a(1)=13, a(2)=71, a(3)=259, a(4)=742, a(5)=1806, a(6)=3906, a(n)=7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). - _ Harvey P. Dale _ , Dec 16 2012 ●

► [A106173] 0,0,0,0,1,13,72,255,691,1574,3177,5867,10121,16543,25882,39051,57147,81472,113555,155175,208385,275537,359308,462727,589203 ★ 7th diagonal of triangle in A059317. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n > 10. ●

► [A060886] 1,1,13,73,241,601,1261,2353,4033,6481,9901,14521,20593,28393,38221,50401,65281,83233,104653,129961,159601,194041,233773,279313,331201 ★ a(n) = n ^ 4 - n ^ 2 + 1. ● a(n) = Phi _ 12(n), where Phi _ k is the k - th cyclotomic polynomial. ● a(n) = (n ^ 2 - 1 / 2) ^ 2 + 3 / 4. - _ Alonso del Arte _ , Dec 20 2015 ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5), for n>4. - _ Vincenzo Librandi _ , Dec 20 2015 ●

► [A081586] 1,13,73,245,593,1181,2073,3333,5025,7213,9961,13333,17393,22205,27833,34341,41793,50253,59785,70453,82321,95453,109913,125765,143073 ★ Fourth row of Pascal - (1,3,1) array A081578. ● a(n) = (3 + 28 * n - 24 * n ^ 2 + 32 * n ^ 3) / 3. ● a(0)=1, a(1)=13, a(2)=73, a(3)=245, a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). (End) ●

► [A143008] 1,13,73,253,661,1441,2773,4873,7993,12421,18481,26533,36973,50233,66781,87121,111793,141373,176473,217741,265861,321553,385573,458713,541801 ★ Crystal ball sequence for the A2 x A2 lattice. ● a(0)=1, a(1)=13, a(2)=73, a(3)=253, a(4)=661, a(n)=5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Harvey P. Dale _ , Jun 14 2011 ●

► [A006230] 1,13,73,301,1081,3613,11593,36301,111961,342013,1038313,3139501,9467641,28501213,85700233,257493901,773268121,2321377213,6967277353,20908123501,62736953401,188236026013,564758409673,1694375892301,5083329003481 ★ Bitriangular permutations. ● a(n) = 12 * (3 - 3 * 2 ^ (n - 2) + 3 ^ (n - 2)) / 6 + 1. ● a(n) = 6 * a(n - 1) - 11 * a(n - 2) + 6 * a(n - 3) for n>6 ●

► [A020527] 1,13,73,337,1441,5953,24193,97537,391681,1569793,6285313,25153537,100638721,402604033,1610514433,6442254337,25769410561,103078428673,412315287553,1649264295937,6597063475201 ★ 2nd Bernoulli polynomial evaluated at powers of 2 (multiplied by 6). ● a(n) = 6 * (4 ^ n - 2 ^ n) + 1. - _ Ralf Stephan _ , Apr 06 2004 ●

► [A220414] 13,73,425,2477,14437,84145,490433,2858453,16660285,97103257,565959257,3298652285,19225954453,112057074433,653116492145,3806641878437,22186734778477,129313766792425,753695865976073,4392861429064013,25603472708408005,149227974821384017 ★ a(n) = 6 * a(n - 1) - a(n - 2), with a(1) = 13, a(2) = 73. ● a(n) = 1 / 4 * (sqrt(2) * ((3 - 2 * sqrt(2)) ^ n - (3 + 2 * sqrt(2)) ^ n) + 10 * ((3 + 2 * sqrt(2)) ^ n + (3 - 2 * sqrt(2)) ^ n)). - _ Paolo P. Lava _ , Feb 01 2013 ● a(n) = 13 * S(n - 1, 6) - 5 * S(n - 2, 6), n >= 1, with Chebyshev's S - polynomials evaluated at x = 6 (see A049310). ● a(n) = 6 * a(n - 1) - a(n - 2), n >= 2, with a(0) = 5 and a(1) = 13. ● a(n) = irrational part of z(n), where z(n) = (- 1 + 5 * sqrt(2)) * (3 + 2 * sqrt(2)) ^ n, n >= 1. (End) ●

► [A051361] 0,0,0,13,75,263,720,1688,3550,6882,12516,21615,35761,57057,88244,132834,195260,281044,396984,551361,754167,1017355,1355112,1784156,2324058 ★ A class of Boolean functions of n variables and rank 3. ● a(n) = n * (n - 1) * (n - 2) * (n ^ 4 + 31 * n ^ 3 + 287 * n ^ 2 + 1499 * n + 2922) / 7!. ● a(0)=0, a(1)=0, a(2)=0, a(3)=13, a(4)=75, a(5)=263, a(6)=720, a(7)=1688, a(n)=8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) [From Harvey P. Dale, Jul 19 2011] ●

► [A034265] 1,13,76,300,930,2442,5676,12012,23595,43615,76648,129064,209508,329460,503880,751944,1097877,1571889,2211220,3061300,4177030,5624190,7480980,9839700,12808575 ★ a(n) = binomial(n + 6,6) * (6 * n + 7) / 7. ● a(0)=1, a(1)=13, a(2)=76, a(3)=300, a(4)=930, a(5)=2442, a(6)=5676, a(7)=12012, a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8). - _ Harvey P. Dale _ , Jul 29 2014 ●

► [A182077] 13,76,435,2461,13971,79197,449188,2547179,14445169,81917079,464547653,2634418076,14939621779,84721638085,480451043995,2724607324221,15451075136020,87622065595371,496899168779481,2817883624638175,15980039054921477,90621786488479756 ★ Number of independent sets of nodes in the generalized Petersen graph G(2n + 1,2) (n>=1). ● a(n) = 3 * a(n - 1) + 15 * a(n - 2) + 3 * a(n - 3) - 13 * a(n - 4) + 4 * a(n - 5) with a(0)=13,a(1)=76,a(2)=435,a(3)=2461,a(4)=13971. ●

► [A072474] 1,13,77,294,855,2071,4403,8492,15189,25585,41041,63218,94107,136059,191815,264536,357833,475797,623029,804670,1026431,1294623,1616187,1998724,2450525 ★ Sum of next n squares. ● a(n) = k(k + 1)(2k + 1) / 6 - r(r + 1)(2r + 1) / 6, where k = n(n + 1) / 2 and r = n(n - 1) / 2. ● a(n) = (n / 12) * (3 n ^ 2 + 1) * (n ^ 2 + 2). - _ Benoit Cloitre _ , Jun 26 2002 ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n > 6. - _ Jinyuan Wang _ , May 25 2020 ●

► [A194713] 0,13,78,195,364,585,858,1183,1560,1989,2470,3003,3588,4225,4914,5655,6448,7293,8190,9139,10140,11193,12298,13455,14664 ★ 13 times hexagonal numbers: 13 * n * (2 * n - 1). ● a(n) = a(n - 1) + 52 * n - 39, a(0)=0. - _ Vincenzo Librandi _ , Oct 03 2011 ●

► [A060216] 13,78,728,7098,74256,804076,8964072,101962770,1178277464,13785812040,162923672184,1941506688940,23298085122480,281241165925044,3412392867581152,41588538022965570 ★ Number of orbits of length n under the full 13 - shift (whose periodic points are counted by A001022). ● a(n) = (1 / n) * Sum _{ d|n } mu(d) 13 ^ (n / d). ●

► [A081584] 1,13,79,307,886,2086,4258,7834,13327,21331,32521,47653,67564,93172,125476,165556,214573,273769,344467,428071,526066,640018,771574,922462,1094491 ★ Fourth row of Pascal - (1,2,1) array A081577. ● a(n) = (8 + 6 * n + 81 * n ^ 2 - 18 * n ^ 3 + 27 * n ^ 4) / 8. ●

► [A339851] 1,13,80,549,3851,26499,183521,1269684,8782833,60764640,420375910,2908245096,20119820809,139192751951,962962619849,6661962019139,46088745527485,318850883829314,2205872265781839,15260652269262421,105576152878533354,730396306808551777,5053023343572544589 ★ Number of Hamiltonian circuits within parallelograms of size 4 X n on the triangular lattice. ● a(n) = 3 * a(n - 1) + 21 * a(n - 2) + 44 * a(n - 3) - 5 * a(n - 4) - 47 * a(n - 5) - 26 * a(n - 6) + 83 * a(n - 7) - 81 * a(n - 8) + 39 * a(n - 9) - 10 * a(n - 10) + a(n - 11) for n > 12. ●

► [A052255] 1,13,81,345,1155,3267,8151,18447,38610,75790,140998,250614,428298,707370,1133730,1769394,2696727,4023459,5888575,8469175,11988405,16724565,23021505,31300425 ★ Partial sums of A050484. ● a(n) = (5n + 8) * C(n + 7, 7) / 8. ●

► [A362545] 1,13,81,477,2785,16237,94641,551613,3215041,18738637,109216785,636562077,3710155681,21624372013,126036076401,734592086397,4281516441985,24954506565517,145445522951121,847718631141213,4940866263896161,28797478952235757,167844007449518385,978266565744874557,5701755387019728961 ★ Number of odd chordless cycles of length >4 in the (2n + 1) - flower snark. ● a(n) = LucasL(2 n + 1, 2) - 1. ● a(n) = 7 * a(n - 1) - 7 * a(n - 1) + a(n - 2). ●

► [A101102] 1,13,82,354,1200,3432,8646,19734,41613,82225,153868,274924,472056,782952,1259700,1972884,3016497,4513773,6624046,9550750,13550680,18944640,26129610,35592570,47926125 ★ Fifth partial sums of cubes (A000578). ● a(n) = n * (n + 1) * (n + 2) * (n + 3) * (n + 4) * (n + 5) * (10 + 3 * n * (n + 5)) / 20160. ●

► [A213572] 1,13,82,406,1809,7659,31588,128476,518611,2084809,8361918,33497010,134094757,536608663,2146926472,8588754808,34357247847,137433710421,549744803650,2199000186670,8796044787481,35184271425283 ★ Principal diagonal of the convolution array A213571. ● a(n) = (2 ^ (n + 2) * (2 ^ n - 1) - (2 ^ (n + 1) + n + 1) * n) / 2. ● a(n) = 11 * a(n - 1) - 47 * a(n - 2) + 101 * a(n - 3) - 116 * a(n - 4) + 68 * a(n - 5) - 16 * a(n - 6). ●

► [A001848] 1,13,85,377,1289,3653,8989,19825,40081,75517,134245,227305,369305,579125,880685,1303777,1884961,2668525,3707509,5064793,6814249,9041957,11847485,15345233,19665841 ★ Crystal ball sequence for 6 - dimensional cubic lattice. ● a(n) = (4 / 45) * n ^ 6 + (4 / 15) * n ^ 5 + (14 / 9) * n ^ 4 + (8 / 3) * n ^ 3 + (196 / 45) * n ^ 2 + (46 / 15) * n + 1. - S. Bujnowski & B. Dubalski (slawb(AT)atr.bydgoszcz.pl), Nov 25 2002 ● a(n) = Sum _{ k=0..min(6,n) } 2 ^ k * binomial(6,k) * binomial(n,k). See Bump et al. - _ Tom Copeland _ , Sep 05 2014 ●

► [A055843] 1,13,85,385,1375,4147,11011,26455,58630,121550,238238,445094,797810,1379210,2309450,3759074,5965487,9253475,14060475,20967375,30735705,44352165,63081525,88529025,122713500 ★ Expansion of (1 + 3 * x) / (1 - x) ^ 10. ● a(n) = (4 * n + 9) * binomial(n + 8, 8) / 9. ● a(n) = 4 * binomial(n + 9,9) - 3 * binomial(n + 8,8). - _ G. C. Greubel _ , Jan 21 2020 ●

► [A233325] 1,13,85,517,3109,18661,111973,671845,4031077,24186469,145118821,870712933,5224277605,31345665637,188073993829,1128443962981,6770663777893,40623982667365,243743896004197,1462463376025189,8774780256151141,52648681536906853 ★ (2 * 6 ^ (n + 1) - 7) / 5. ● a(n) = 7 * a(n - 1) - 6 * a(n - 2) for n>1, a(0)=1, a(1)=13. ● a(n) = 6 * a(n - 1) + 7 for n>0, a(0)=1. ●

► [A003764] 1,13,85,673,5021,38237,289089,2191309,16594837,125714929,952245373,7213225309,54639088433,413885098253,3135127983381,23748220228801,179889887447581,1362644200671133,10321865130390817 ★ Number of 2 - factors in W _ 4 X P _ n. ● a(1) = 1, ● a(2) = 13, ● a(3) = 85, ● a(4) = 673, ● a(5) = 5021 and ● a(n) = 6a(n - 1) + 16a(n - 2) - 29a(n - 3) - 16a(n - 4) + 16a(n - 5). ●

► [A228481] 13,88,1181,13050,152373,1748684,20185842,232542935,2680777055,30897168815,356129525933,4104762592860,47311923541451,545321432832844,6285425006257311,72446383973495105,835023655383918595 ★ Number of nX7 binary arrays with top left value 1 and no two ones adjacent horizontally, vertically or antidiagonally. ● a(n) = a(n - 1) + 85 * a(n - 2) + 432 * a(n - 3) + 192 * a(n - 4) - 3711 * a(n - 5) - 5096 * a(n - 6) + 21164 * a(n - 7) + 27340 * a(n - 8) - 112654 * a(n - 9) - 37244 * a(n - 10) + 477721 * a(n - 11) - 464722 * a(n - 12) - 897815 * a(n - 13) + 3102284 * a(n - 14) - 4149918 * a(n - 15) + 2761082 * a(n - 16) - 138325 * a(n - 17) - 1353257 * a(n - 18) + 942033 * a(n - 19) + 64683 * a(n - 20) - 365483 * a(n - 21) + 80904 * a(n - 22) + 92350 * a(n - 23) - 27097 * a(n - 24) - 23292 * a(n - 25) + 2585 * a(n - 26) + 5635 * a(n - 27) + 1405 * a(n - 28) - 561 * a(n - 29) - 545 * a(n - 30) - 173 * a(n - 31) - 14 * a(n - 32) + 5 * a(n - 33) + a(n - 34) ●

► [A057788] 1,13,90,442,1729,5733,16744,44200,107406,243542,520676,1058148,2057510,3848222,6953544,12183560,20764055,34512075,56071470,89224590,139299615,213696795,322561200,479634480,703323660 ★ Expansion of (1 + x) / (1 - x) ^ 12. ● a(n) = 2 * C(n + 11, 11) - C(n + 10, 10). - _ Paul Barry _ , Mar 04 2003 ● a(n) = C(n + 10,10) + 2 * C(n + 10,11). - Borislav St. Borisov (b.st.borisov(AT)abv.bg), Mar 05 2009 ● a(n) = C(n + 10,10) * (2n + 11) / 11. - _ Antal Pinter _ , Dec 27 2015 ● a(n) = 12 * a(n - 1) - 66 * a(n - 2) + 220 * a(n - 3) - 495 * a(n - 4) + 792 * a(n - 5) - 924 * a(n - 6) + 792 * a(n - 7) - 495 * a(n - 8) + 220 * a(n - 9) - 66 * a(n - 10) + 12 * a(n - 11) - a(n - 12) for n >11. - _ Vincenzo Librandi _ , Feb 14 2016 ● a(n) = (2 * n + 11) * binomial(n + 10, 10) / 11. - _ G. C. Greubel _ , Dec 02 2018 ●

► [A247611] 1,13,91,455,1820,6188,18564,49596,119139,260743,527065,996205,1778966,3027038,4942106,7785882,11891061,17673201,25643527,36422659,50755264,69525632,93774176,124714856,163753527 ★ a(n) = Sum _{ k=0..6 } binomial(12,k) * binomial(n,k). ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). ● a(n) = (120 - 8042 * n + 20581 * n ^ 2 - 17380 * n ^ 3 + 7645 * n ^ 4 - 1518 * n ^ 5 + 154 * n ^ 6) / 120. ●

► [A008505] 1,13,91,455,1820,6188,18564,50388,125970,293930,646646,1352078,2704155,5200287,9657609,17383405,30419935,51889747,86474661,141070137,225666870,354523390,547707394,833099722 ★ 11 - dimensional centered tetrahedral numbers. ● a(n) = (2 * n + 1) * (3 * n ^ 10 + 15 * n ^ 9 + 1835 * n ^ 8 + 7250 * n ^ 7 + 195629 * n ^ 6 + 561575 * n ^ 5 + 4970585 * n ^ 4 + 9013640 * n ^ 3 + 28095948 * n ^ 2 + 23681520 * n + 19958400) / 19958400. - _ Bruno Berselli _ , Mar 22 2012 ●

► [A008495] 1,13,91,455,1820,6188,18564,50388,125970,293930,646646,1352078,2704156,5200299,9657687,17383769,30421300,51894115,86487037,141101961,225742452,354691350,548060110,833805154,1250325622 ★ Expansion of (1 - x ^ 13) / (1 - x) ^ 13. ● a(n) = 13 * n * (19056960 + 18128396 * n ^ 2 + 2641925 * n ^ 4 + 88803 * n ^ 6 + 715 * n ^ 8 + n ^ 10) / 39916800 for n>0. ●

► [A010965] 1,13,91,455,1820,6188,18564,50388,125970,293930,646646,1352078,2704156,5200300,9657700,17383860,30421755,51895935,86493225,141120525,225792840,354817320,548354040,834451800,1251677700 ★ a(n) = binomial(n,12). ● a(n + 11) = n(n + 1)(n + 2)(n + 3)(n + 4)(n + 5)(n + 6)(n + 7)(n + 8)(n + 9)(n + 10)(n + 11) / 12!. - _ Artur Jasinski _ , Dec 02 2007, _ R. J. Mathar _ , Jul 07 2009 ●

► [A090020] 0,1,13,91,529,2851,14833,75811,383809,1932931,9705553,48648931,243605089,1219100611,6098716273,30503196451,152544778369,762810181891,3814309582993,19072323542371,95363943807649,476826695752771 ★ Number of distinct lines through the origin in the n - dimensional lattice of side length 4. ● a(n) = 5 ^ n - 3 ^ n - 2 ^ n + 1. ●

► [A153703] 1,13,94,526,2551,11299,47020,186988,718429,2686729,9831658,35340826,125154355,437641663,1513809688,5187129880,17627632249,59469045061,199327841590,664232428390,2201904349231,7264715299483,23865295832644,78091766836996 ★ Partial sums of A069996. ● a(n) = (3 ^ n * (n ^ 2 - n + 1) - 1) / 2. ● a(n) = 10 * a(n - 1) - 36 * a(n - 2) + 54 * a(n - 3) - 27a(n - 4) for n>4. ●

► [A211388] 1,13,97,545,2561,10625,40193,141569,471041,1496065,4571137,13516801,38862849,109051905,299565057,807600129,2141192193,5592842241,14413725697,36698062849,92408905729,230359564289,568965726209,1393398120449 ★ Expansion of 1 / ((1 - 2 * x) ^ 6 * (1 - x)). ● a(n) = 1 + 2 ^ (n - 2) * n * (n ^ 4 + 10 * n ^ 3 + 55 * n ^ 2 + 110 * n + 184) / 15. - _ Bruno Berselli _ , Feb 08 2013 ●

► [A049294] 1,13,97,625,3841,23233,139777,839425,5038081,30231553,181395457,1088385025,6530334721,39182057473,235092443137,1410554855425,8463329525761,50779977940993,304679869218817,1828079218458625 ★ Number of subgroups of index 3 in free group of rank n + 1. ● a(n) = 3 * 6 ^ n - 3 * 2 ^ n + 1. ●

► [A198480] 1,13,97,685,4801,33613,235297,1647085,11529601,80707213,564950497,3954653485,27682574401,193778020813,1356446145697,9495123019885,66465861139201,465261027974413,3256827195820897,22797790370746285 ★ a(n) = 2 * 7 ^ n - 1. ● a(n) = 7 * a(n - 1) + 6, n>0. ● a(n) = 8 * a(n - 1) - 7 * a(n - 2). - _ Vincenzo Librandi _ , Jul 06 2012 ●

► [A006976] 1,13,98,560,2688,11424,44352,160512,549120,1793792,5637632,17145856,50692096,146227200,412778496,1143078912,3111714816,8341487616,22052208640,57567870976,148562247680,379364311040,959384125440 ★ Coefficients of Chebyshev T polynomials: a(n) = A053120(n + 12, n), n >= 0. ● a(n) = 2 ^ n * binomial(n + 5, 5) * (n + 12) / 12. [See a comment in A053120 on subdiagonal sequences. - _ Wolfdieter Lang _ , Jan 03 2020] ● a(n) = Sum _{ k = 0..floor((n + 12) / 2) } C(n + 12,2 * k) * C(k,6). - _ Paul Barry _ , May 15 2003 ●

► [A155646] 1,13,99,727,5391,40543,308799,2377087,18456831,144295423,1134207999,8952731647,70896259071,562816507903,4476410675199,35654557073407,284296086618111,2268726473129983,18115958466150399,144724547815866367 ★ a(n) = 8 ^ n + 6 ^ n - 1. ● a(n) = 14 * a(n - 1) - 48 * a(n - 2) - 35 with a(0)=1, a(1)=13. [_ Vincenzo Librandi _ , Jul 21 2010] ● a(0)=1, a(1)=13, a(2)=99, a(n) = 15 * a(n - 1) - 62 * a(n - 2) + 48 * a(n - 3). [_ Harvey P. Dale _ , Jul 17 2011] ●

► [A369418] 0,0,0,1,13,102,626,3311,15843,70540,297520,1203165,4705145,17905154,66617502,243210523,873775999,3096218184,10841220092,37566155945,128982711285,439276114270,1485248520010,4989336819591,16662822558683 ★ Expansion of o.g.f. x ^ 3 / ((1 - 2 * x) ^ 2 * (1 - 3 * x) ^ 3). ● a(n) = 13 * a(n - 1) - 67 * a(n - 2) + 171 * a(n - 3) - 216 * a(n - 4) + 108 * a(n - 5), n >= 5, a(0)=a(1)=a(2)=0, a(3)=1, a(4)=13. ● a(n) = Sum _{ k=2..n - 2 } k * 2 ^ (k - 1) * (n - k, 2) * 3 ^ (n - k - 2). ● a(n) = 3 ^ (n - 1) * (n ^ 2 - 11 * n + 42) / 2 - 2 ^ n * (n + 7). - _ Stefano Spezia _ , Jan 23 2024 ●

► [A228213] 13,103,625,3151,14053,58975,242461,989527,4017157,16245775,65514541,263652487,1059392917,4251920575,17050729021,68332056247,273715645477,1096024843375,4387586157901,17560804984807,70274600998837 ★ Number of second differences of arrays of length n + 2 of numbers in 0..3. ● a(n) = 4 ^ (2 + n) - 3 ^ (2 + n) for n>5. ●

► [A216179] 13,103,1003,10003,100003,1000003,10000003,100000003,1000000003,10000000003,100000000003,1000000000003,10000000000003,100000000000003,1000000000000003,10000000000000003,100000000000000003,1000000000000000003 ★ a(n) = 10 ^ n + 3. ● a(n) = 10a(n - 1) - 27 with n > 1, a(1) = 13. ●

► [A129762] 1,13,104,615,3149,14912,67537,297945,1293832,5564911,23795465,101383680,431003105,1829784725,7761645928,32906509335,139466630773,590979780544,2503927125041,10608105770625,44940061502216 ★ Sum of all elements of n X n X n cubic array M[i,j,k] = Fibonacci[i + j + k - 2]. ● a(n) = Sum[Sum[Sum[Fibonacci[i + j + k - 2], { i,1,n }], { j,1,n }], { k,1,n }]. ● a(n) = Fibonacci[3n + 4] - 3 * Fibonacci[2n + 4] + 3 * Fibonacci[n + 4] - 3. ● a(n) = 9 * a(n - 1) - 26 * a(n - 2) + 24 * a(n - 3) + 6 * a(n - 4) - 14 * a(n - 5) + a(n - 6) + a(n - 7). - _ Joerg Arndt _ , Apr 21 2011 ●

► [A283121] 1,13,104,633,3224,14404,58151,216294,751582,2464860,7689669,22961822,65955677,182985947,492016590,1285829996,3274100475,8139933477,19795490575,47165634583,110259083454,253208634687,571880965638,1271549402110,2785836824325 ★ Expansion of exp(Sum _{ n>=1 } sigma(9 * n) * x ^ n / n) in powers of x. ● a(n) = (1 / n) * Sum _{ k=1..n } sigma(9 * k) * a(n - k). - _ Seiichi Manyama _ , Mar 05 2017 ●

► [A080422] 1,13,105,675,3780,19278,91854,415530,1804275,7577955,30961359,123589557,483611310,1860043500,7046907660,26344593252,97328636181,355781149065,1288173125925,4623863536215,16466920464456,58222325927898 ★ (n + 1)(n + 2)(n + 3)(n + 12)3 ^ n / 72. ● a(0)=1, a(1)=13, a(2)=105, a(3)=675, a(4)=3780; for n>4, a(n)=15 * a(n - 1) - 90 * a(n - 2) + 270 * a(n - 3) - 405 * a(n - 4) + 243 * a(n - 5). [_ Harvey P. Dale _ , Oct 22 2011] ●

► [A155636] 1,13,105,853,7185,62173,547065,4861093,43437345,389373613,3496550025,31429887733,282673677105,2543086531453,22882895970585,205921649672773,1853172776742465,16677944639119693,150098449994264745 ★ 9 ^ n + 5 ^ n - 1. ● a(n)=14 * a(n - 1) - 45 * a(n - 2) - 32 with a(0)=1, a(1)=13 - _ Vincenzo Librandi _ , Jul 21 2010 ●

► [A164301] 1,13,107,771,5249,34757,226843,1469019,9472801,60940573,391531307,2513679891,16131578849,103501150997,663985196443,4259325491499,27321595396801,175251467663533,1124117982508907,7210396068827811,46249247090573249,296653361322692837 ★ a(n) = ((1 + 4 * sqrt(2)) * (5 + sqrt(2)) ^ n + (1 - 4 * sqrt(2)) * (5 - sqrt(2)) ^ n) / 2. ● a(n) = 10 * a(n - 1) - 23 * a(n - 2) for n > 1; a(0) = 1, a(1) = 13. ●

► [A084901] 0,1,13,108,736,4480,25344,136192,704512,3538944,17367040,83623936,396361728,1853882368,8573157376,39258685440,178241142784,803158884352,3594887626752,15994458210304,70781061038080,311711546474496 ★ a(n) = 4 ^ (n - 2) * n * (5 * n + 3) / 2. ● a(n) = 12 * a(n - 1) - 48 * a(n - 2) + 64 * a(n - 3). - _ Wesley Ivan Hurt _ , May 28 2021 ●

► [A367592] 1,13,109,749,4589,26093,140781,730605,3679725,18097645,87303661,414459373,1941186029,8987616749,41199871469,187228759533,844358755821,3782116386285,16838816966125,74563177424365,328550363440621,1441256130749933,6296699479008749 ★ Expansion of 1 / ((1 - x) * (1 - 4 * x) ^ 3). ● a(n) = ((9 * n ^ 2 + 21 * n + 14) * 4 ^ (n + 1) - 2) / 54. ●

► [A021344] 1,13,110,770,4851,28623,161680,885940,4749701,25058033,130616850,674656710,3460370551,17652592243,89673093620,454027521080,2292850387401,11555296775253,58141244359990 ⋆ Expansion of 1 / ((1 - x)(1 - 3x)(1 - 4x)(1 - 5x)). ● a(0)=1, a(1)=13, a(2)=110, a(3)=770; for n>3, a(n) = 13 * a(n - 1) - 59 * a(n - 2) + 107 * a(n - 3) - 60 * a(n - 4). - _ Vincenzo Librandi _ , Jul 09 2013 ● a(0)=1, a(1)=13; for n>1, a(n) = 9 * a(n - 1) - 20 * a(n - 2) + (3 ^ n - 1) / 2. - _ Vincenzo Librandi _ , Jul 09 2013 ●

► [A099111] 1,13,112,798,5103,30471,173734,958936,5170165,27396369,143295516,742128114,3814432987,19490910907,99140278258,502476527532,2539579950369,12806979393285,64472086878760,324111808432390 ⋆ Expansion of 1 / ((1 + x) * (1 - 2 * x) * (1 - 3 * x) * (1 - 4 * x) * (1 - 5 * x)). ● a(n) = (1 / 360) * (6250 * 5 ^ n - 9216 * 4 ^ n + 3645 * 3 ^ n - 320 * 2 ^ n + (- 1) ^ n). ●

► [A021076] 1,13,113,833,5649,36561,230161,1424401,8720657,53021969,320925969,1936736529,11665150225,70169841937,421734846737,2533272326417,15211087073553,91312335163665,548057262395665 ⋆ Expansion of 1 / ((1 - x)(1 - 2x)(1 - 4x)(1 - 6x)). ● a(n) = - (1 / 15) + 2 ^ n - (16 / 3) * 4 ^ n + (27 / 5) * 6 ^ n. [_ Antonio Alberto Olivares _ , May 22 2012] ● a(0)=1, a(1)=13, a(2)=113, a(3)=833, a(n)=13 * a(n - 1) - 56 * a(n - 2) + 92 * a(n - 3) - 48 * a(n - 4) From _ Harvey P. Dale _ , Jul 19 2012 ● a(0)=1, a(1)=13; for n>1, a(n) = 10 * a(n - 1) - 24 * a(n - 2) + 2 ^ n - 1. - _ Vincenzo Librandi _ , Jul 05 2013 ●

► [A164609] 1,13,113,909,7169,56237,440497,3448941,27000961,211377613,1654759793,12954178509,101410868609,793887651437,6214891748017,48652827405741,380875114341121,2981653077513613,23341653831337073,182728435995639309 ⋆ a(n) = 10 * a(n - 1) - 17 * a(n - 2) for n > 1; a(0) = 1, a(1) = 13. ● a(n) = 10 * a(n - 1) - 17 * a(n - 2) for n > 1; a(0) = 1, a(1) = 13. ● a(n) = ((2 + 4 * sqrt(2)) * (5 + 2 * sqrt(2)) ^ n + (2 - 4 * sqrt(2)) * (5 - 2 * sqrt(2)) ^ n) / 4. ●

► [A287471] 13,115,666,3234,14379,60981,251968,1026124,4145241,16670823,66879606,267944070,1072693399,4292739241,17175150780,68709515472,274856935653,1099467587835,4397954236690,17591993106730,70368341524803,281474137850205,1125898162012536 ⋆ Number of connected dominating sets in the n - crown graph. ● a(n) = (2 ^ n - n - 1) ^ 2 - n * (n - 1) / 2. - _ Andrew Howroyd _ , Jun 03 2017 ● a(n) = 11 * a(n - 1) - 47 * a(n - 2) + 101 * a(n - 3) - 116 * a(n - 4) + 68 * a(n - 5) - 16 * a(n - 6) for n>8. ●

► [A016765] 1,13,115,865,5971,39193,249355,1555105,9573091,58428073,354585595,2143759345,12928070611,77832076153,468051849835,2812563019585,16892428846531,101422905135433,608811146458075,3653962903591825,21928165007708851,131586550851237913 ⋆ Expansion of 1 / ((1 - 3 * x) * (1 - 4 * x) * (1 - 6 * x)). ● a(n) = 6 ^ (n + 1) - 2 ^ (2 * n + 3) + 3 ^ (n + 1). - _ Vincenzo Librandi _ , Mar 20 2011 ● a(n) = 10 * a(n - 1) - 24 * a(n - 2) + 3 ^ n, n >= 2. - _ Vincenzo Librandi _ , Mar 20 2011 ●

► [A155621] 1,13,115,1063,10255,101023,1004095,10016383,100065535,1000262143,10001048575,100004194303,1000016777215,10000067108863,100000268435455,1000000073741823,10000000294967295,100000017179869183 ⋆ 10 ^ n + 4 ^ n - 1 ^ n ● a(n)=14 * a(n - 1) - 40 * a(n - 2) - 27 with a(0)=1, a(1)=13 [From _ Vincenzo Librandi _ , Jul 21 2010] ●

► [A021034] 1,13,116,902,6615,47271,333922,2346784,16455989,115278449,807210768,5651264346,39561225523,276935720347,1938571500254,13570064940788,94990648033617,664935116841765,4654547560235980 ⋆ Expansion of 1 / ((1 - x)(1 - 2x)(1 - 3x)(1 - 7x)). ● a(0)=1, a(1)=13; for n>1, a(n) = 10 * a(n - 1) - 21 * a(n - 2) + 2 ^ n - 1. - _ Vincenzo Librandi _ , Jul 05 2013 ● a(0)=1, a(1)=13, a(2)=116, a(3)=902; for n>3, a(n) = 13 * a(n - 1) - 53 * a(n - 2) + 83 * a(n - 3) - 42 * a(n - 4). - _ Vincenzo Librandi _ , Jul 05 2013 ● a(n) = (7 ^ (n + 3) - 15 * 3 ^ (n + 3) + 24 * 2 ^ (n + 3) - 10) / 120. [_ Yahia Kahloune _ , Jul 07 2013] ●

► [A016295] 1,13,117,905,6461,43953,289717,1868425,11861421,74423393,462815717,2858273145,17556537181,107373722833,654414852117,3977351721065,24118423433741,145982106270273,882250466222917 ⋆ Expansion of 1 / ((1 - 2x)(1 - 5x)(1 - 6x)). ● a(n) = 13 * a(n - 1) - 52 * a(n - 2) + 60 * a(n - 3), n >= 3. ● a(n) = 11 * a(n - 1) - 30 * a(n - 2) + 2 ^ n, n >= 2. - _ Vincenzo Librandi _ , Mar 16 2011 ● a(n) = 7 * a(n - 1) - 10 * a(n - 2) + 6 ^ n, n >= 2. - _ Vincenzo Librandi _ , Mar 16 2011 ● a(n) = 8 * a(n - 1) - 12 * a(n - 2) + 5 ^ n, n >= 2. - _ Vincenzo Librandi _ , Mar 16 2011 ● a(n) = - 5 ^ (n + 2) / 3 + 9 * 6 ^ n + 2 ^ n / 3. - _ R. J. Mathar _ , Mar 18 2011 ●

► [A367244] 0,13,119,733,3815,18133,81599,354493,1504055,6278053,25904879,106011853,431253095,1746686773,7051884959,28403182813,114200118935,4585635 56293,1839545301839,7374058107373,29543870469575,118318410678613,4737024 58475519,1896096339905533,7588244995073015 ⋆ a(n) is the number of n - digit numbers whose difference between the largest and smallest digits is equal to 3. ● a(n) = 27 * 4 ^ (n - 1) - 41 * 3 ^ (n - 1) + 7 * 2 ^ n. ● a(n) = 9 * a(n - 1) - 26 * a(n - 2) + 24 * a(n - 3) for n > 3. ●

► [A016285] 1,13,119,953,7167,52185,373423,2646601,18657023,131122937,919956687,6448083369,45170133919,316325146969,2214812883311,15505837634057,108549453307455,759880532759481,5319301168007695 ⋆ Expansion of 1 / ((1 - 2x)(1 - 4x)(1 - 7x)). ● a(n) = (2 / 5) * 2 ^ n - (8 / 3) * 4 ^ n + (49 / 15) * 7 ^ n. - _ Antonio Alberto Olivares _ , Feb 06 2010 ● a(n) = 13 * a(n - 1) - 50 * a(n - 2) + 56 * a(n - 3). - _ Vincenzo Librandi _ , Jun 25 2013 ●

► [A253512] 0,13,120,847,5460,33883,206640,1249807,7528620,45260803,271831560,1631788567,9793126980,58765944523,352617206880,2115767844127,12694800840540,76169386305043,457018061484600,2742113599608487,16452697289220300,98716230809062363 ⋆ a(n) = (2 ^ n - 1) * (3 ^ (n + 2) - 1) / 2. ● a(n) = 12 * a(n - 1) - 47 * a(n - 2) + 72 * a(n - 3) - 36 * a(n - 4) for n > 4. - _ Colin Barker _ , Jan 09 2015 ●

► [A014918] 1,13,121,985,7465,54121,380713,2620201,17736745,118513705,783641641,5137206313,33435376681,216285092905,1391747554345,8914707307561,56873575734313,361553445739561,2291192622439465,14478387422649385 ⋆ a(1)=1, a(n) = n * 6 ^ (n - 1) + a(n - 1). ● a(n) = (1 / 25) * (1 - 6 ^ n * (5 * n - 1)). - _ Paolo P. Lava _ , Jan 13 2009 ● a(1)=1, a(2)=13, a(n) = 12 * a(n - 1) - 36 * a(n - 2) + 1. - _ Vincenzo Librandi _ , Oct 23 2012 ●

► [A081033] 1,13,121,997,7729,57853,423721,3059797,21887329,155555053,1100604121,7762822597,54632726929,383893932253,2694581744521,18898693305397,132473958606529,928233237589453,6502210299844921,45538360282508197 ⋆ 6th binomial transform of the periodic sequence (1,7,1,1,7,1...). ● a(n) = 7 * a(n - 1) + 6 * 5 ^ (n - 1). ● a(n) = 4 * 7 ^ n - 3 * 5 ^ n. ●

► [A317483] 0,0,1,13,121,1081,10081,100801,1088641,12700801,159667201,2155507201,31135104001,479480601601,7846046208001,135998134272001,2489811996672001,48017802792960001,973160803270656001,20679667069501440001,459818479545384960001,10678006913887272960001 ⋆ Circuit rank of the n - Bruhat graph. ● a(n) = (n - 3) * n! / 2 + 1. (End) ●

► [A096053] 1,13,121,1093,9841,88573,797161,7174453,64570081,581130733,5230176601,47071589413,423644304721,3812798742493,34315188682441,308836698141973,2779530283277761,25015772549499853,225141952945498681 ⋆ a(n) = (3 * 9 ^ n - 1) / 2. ● a(n) = Sum _{ k=0..n } binomial(2n + 1, 2k) * 4 ^ k; ● a(n) = ((1 + sqrt(4)) * (5 + 2 * sqrt(4)) ^ n + (1 - sqrt(4)) * (5 - 2 * sqrt(4)) ^ n) / 2. (End) ● a(n - 1) = (- 9 ^ n / 3) * B(2n,1 / 3) / B(2n) where B(n,x) is the n - th Bernoulli polynomial and B(k)=B(k,0) is the k - th Bernoulli number. ● a(n) = 10 * a(n - 1) - 9 * a(n - 2). ● a(n) = 9 * a(n - 1) + 4. - _ Vincenzo Librandi _ , Nov 01 2011 ●

► [A016230] 1,13,122,1010,7851,58863,431572,3118660,22318901,158673713,1122923022,7921496310,55755649951,391815428563,2750337394472,19290508733960,135224296001001,947523746323413,6637434595845922 ⋆ Expansion of 1 / ((1 - x)(1 - 5x)(1 - 7x)). ● a(0)=1, a(1)=13, a(n)=12 * a(n - 1) - 35 * a(n - 2) + 1. - _ Vincenzo Librandi _ , Feb 10 2011 ● a(n) = (2 * 7 ^ (n + 2) - 3 * 5 ^ (n + 2) + 1) / 24. - _ Yahia Kahloune _ , Aug 13 2013 ●

► [A327961] 0,1,13,122,1028,8328,66576,530464,4227136,33718400,269222144,2151154176,17196647424,137514452992,1099847176192,8797569425408,70375186644992,562977870741504,4503719886520320,36029312415170560,288232575175229440,2305852355063054336 ⋆ Sum of products of n - bit numbers with their n - bit reverse. ● a(n + 1) = 4 * a(n) + 2 ^ (3n) + 2 ^ (2n - 1) - 2 ^ (n - 1). ● a(n) = n * 2 ^ (2 * n - 3) + 2 ^ (3n - 2) + 2 ^ (n - 2) - 2 ^ (2n - 1). ● a(n) = 2 ^ (n - 3) * (2 * (2 ^ n - 1) ^ 2 + 2 ^ n * n). ● a(n) = 18 * a(n - 1) - 112 * a(n - 2) + 288 * a(n - 3) - 256 * a(n - 4) for n>3. ●

► [A115204] 1,13,123,1037,8291,64509,494595,3761661,28486659,215277565,1625688067,12277764093,92783468547,701828038653,5314762113027,40297495658493,305941006516227,2325794003091453,17704219384479747 ⋆ Seventh column of triangle A115193 (called C(1,2)). ● a(n) = (- 1) ^ n * 2 ^ (8 + 3 * n) * (Binomial[1 / 2, 4 + n] * Hypergeometric2F1[1, 7 / 2 + n, 5 + n, - 8] + 4 * (9 * Binomial[1 / 2, 5 + n] * Hypergeometric2F1[1, 9 / 2 + n, 6 + n, - 8] + 36 * Binomial[1 / 2, 6 + n] * Hypergeometric2F1[1, 11 / 2 + n, 7 + n, - 8] + 32 * Binomial[1 / 2, 7 + n] * Hypergeometric2F1[1, 13 / 2 + n, 8 + n, - 8])). - _ G. C. Greubel _ , Feb 04 2016 ●

► [A016277] 1,13,123,1049,8603,69489,557971,4470073,35779755,286296065,2290543619,18324876297,146600596507,1172809538641,9382490625267,75059967983321,600479872875659,4803839370163617,38430716123046115 ⋆ Expansion of 1 / ((1 - 2x)(1 - 3x)(1 - 8x)). ● a(n) = 2 * 2 ^ n / 3 - 9 * 3 ^ n / 5 + 32 * 8 ^ n / 15. - _ Antonio Alberto Olivares _ , Feb 06 2010 ● a(n) = 13 * a(n - 1) - 46 * a(n - 2) + 48 * a(n - 3), n>=3. ● a(n) = 11 * a(n - 1) - 24 * a(n - 2) + 2 ^ n, a(0)=1, a(1)=13. (End) ●

► [A016224] 1,13,125,1085,9021,73533,593725,4771645,38260541,306433853,2452868925,19628543805,157050720061,1256495238973,10052319825725,80419990261565,643365648715581,5146948096216893,41175676395704125 ⋆ Expansion of 1 / ((1 - x)(1 - 4x)(1 - 8x)). ● a(n) = (1 / 21) - (4 / 3) * 4 ^ n + (16 / 7) * 8 ^ n. - _ Antonio Alberto Olivares _ , Feb 07 2010 ● a(0)=1, a(1)=13, a(n) = 12 * a(n - 1) - 32 * a(n - 2) + 1. - _ Vincenzo Librandi _ , Feb 10 2011 ● a(0)=1, a(1)=13, a(2)=125, a(n) = 13 * a(n - 1) - 44 * a(n - 2) + 32 * a(n - 3). - _ Harvey P. Dale _ , Aug 16 2012 ●

► [A016169] 0,1,13,127,1105,9031,70993,543607,4085185,30275911,222009073,1614529687,11664504865,83828316391,599858908753,4277376525367,30411820662145,215703854542471,1526853641242033,10789535445362647 ⋆ a(n) = 7 ^ n - 6 ^ n. ● a(0)=0, a(n) = 7 * a(n - 1) + 6 ^ (n - 1). [_ Vincenzo Librandi _ , Feb 09 2011] ● a(0)=0, a(1)=1, a(n) = 13 * a(n - 1) - 42 * a(n - 2). [_ Vincenzo Librandi _ , Feb 09 2011] ●

► [A076457] 13,129,534,1510,3435,6783,12124,20124,31545,47245,68178,95394,130039,173355,226680,291448,369189,461529,570190,696990,843843,1012759,1205844,1425300,1673425 ⋆ Sum of numbers that can be written as t * n + u * (n + 1) for nonnegative integers t,u in exactly four ways. ● a(n) = n * (n + 1) * (8 * n ^ 2 + 6 * n - 1) / 2. ●

► [A016162] 1,13,129,1157,9881,82173,673009,5462197,44088201,354658733,2847035489,22825112037,182845036921,1463980998493,11717951503569,93774129606677,750345624744041,6003527937405453,48032038196509249 ⋆ Expansion of 1 / ((1 - 5x)(1 - 8x)). ● a(n) = (8 ^ (n + 1) - 5 ^ (n + 1)) / 3. - Lambert Klasen (lambert.klasen(AT)gmx.net), Feb 05 2005 ● a(0)=1, a(n) = 8 * a(n - 1) + 5 ^ n. - _ Vincenzo Librandi _ , Feb 09 2011 ● a(0)=1, a(1)=13, a(n)=13 * a(n - 1) - 40 * a(n - 2). - _ Harvey P. Dale _ , Feb 02 2015 ●

► [A155623] 1,13,129,1357,14721,161293,1772289,19489357,214365441,2357967373,25937483649,285311847757,3138428908161,34522713738253,379749838366209,4177248183764557,45949729906618881,505447028628433933 ⋆ a(n) = 11 ^ n + 3 ^ n - 1. ● a(n) = 14 * a(n - 1) - 33 * a(n - 2) - 20 for n>1, a(0)=1, a(1)=13 - _ Vincenzo Librandi _ , Jul 21 2010 ●

► [A006100] 1,13,130,1210,11011,99463,896260,8069620,72636421,653757313,5883904390,52955405230,476599444231,4289397389563,38604583680520,347441274648040,3126971536402441 ⋆ Gaussian binomial coefficient [n,2] for q=3. ● a(n) = (9 ^ n - 4 * 3 ^ n + 3) / 48. - _ Mitch Harris _ , Mar 23 2008 ● a(n) = 4 * a(n - 1) - 3 * a(n - 2) + 9 ^ (n - 2), n>=4. - _ Vincenzo Librandi _ , Mar 20 2011 ●

► [A037603] 1,13,130,1301,13013,130130,1301301,13013013,130130130,1301301301,13013013013,130130130130,1301301301301,13013013013013,130130130130130,1301301301301301 ⋆ Decimal expansion of a(n) is given by the first n terms of the periodic sequence with initial period 1,3,0. ● a(n) = 10 * a(n - 1) + (1 / 9) * (13 * (n mod 3) - 2 * ((n + 1) mod 3) + ((n + 2) mod 3)), with a(0)=0. - _ Paolo P. Lava _ , Jul 30 2009 ● a(n) = 10 * a(n - 1) + a(n - 3) - 10 * a(n - 4). G.f.:

x * (1 + 3 * x) / ((x - 1) * (10 * x - 1) * (1 + x + x ^ 2)). - _ R. J. Mathar _ , Aug 03 2009 ●

► [A037708] 1,13,130,1302,13021,130213,1302130,13021302,130213021,1302130213,13021302130,130213021302,1302130213021,13021302130213,130213021302130,1302130213021302 ⋆ Decimal expansion of a(n) is given by the first n terms of the periodic sequence with initial period 1,3,0,2. ● a(n) = 10 * a(n - 1) + (1 / 4) * (3 * (n mod 4) + 2 * ((n + 1) mod 4) - ((n + 2) mod 4), with a(0)=0. - _ Paolo P. Lava _ , Jul 30 2009 ●

► [A037582] 1,13,131,1313,13131,131313,1313131,13131313,131313131,1313131313,13131313131,131313131313,1313131313131,13131313131313,131313131313131,1313131313131313,13131313131313131,131313131313131313,1313131313131313131 ⋆ Decimal expansion of a(n) is given by the first n terms of the periodic sequence with initial period 1,3. ● a(n) = 10 * a(n - 1) + 2 + (- 1) ^ n, with a(0)=0. Closed form: a(n) = - (2 / 9) + (1 / 11) * (- 1) ^ n + (13 / 99) * 10 ^ n, with n>=1. - _ Paolo P. Lava _ , Jul 30 2009 ●

► [A293580] 13,132,924,5546,30720,162396,834004,4204080,20932656,103365416,507538320,2482394448,12108785680,58954149792,286654114176,1392524616032,6760326357888,32804684941248,159135076864576,771789378620928,3742512930335232,18145949724380288 ⋆ Number of compositions of n where each part i is marked with a word of length i over a ternary alphabet whose letters appear in alphabetical order and all three letters occur at least once in the composition. ● a(n) = 12 * a(n - 1) - 52 * a(n - 2) + 102 * a(n - 3) - 96 * a(n - 4) + 44 * a(n - 5) - 8 * a(n - 6). ●

► [A161498] 1,13,132,1261,11809,109824,1018849,9443629,87504516,810723277,7510988353,69584925696,644660351425,5972359368781,55329992188548,512595960817837,4748863783286881,43995092132369664,407585519020921249 ⋆ Expansion of x * (1 - x) * (1 + x) / (1 - 13 * x + 36 * x ^ 2 - 13 * x ^ 3 + x ^ 4). ● a(n) = 13 * a(n - 1) - 36 * a(n - 2) + 13 * a(n - 3) - a(n - 4). ● a(n) = (T(n,alpha) - T(n,beta)) / (alpha - beta), where alpha = 1 / 4 * (13 + sqrt(33)), beta = 1 / 4 * (13 - sqrt(33)) and where T(n,x) denotes the Chebyshev polynomial of the first kind. ● a(n) = U(n - 1,1 / 2 * (4 + sqrt(3))) * U(n - 1,1 / 2 * (4 - sqrt(3))) for n >= 1, where U(n,x) denotes the Chebyshev polynomial of the second kind. ● a(n) = bottom left entry of the 2 X 2 matrix T(n, M), where M is the 2 X 2 matrix [0, - 17 / 2; 1, 13 / 2]. ●

► [A037715] 1,13,132,1320,13201,132013,1320132,13201320,132013201,1320132013,13201320132,132013201320,1320132013201,13201320132013,132013201320132,1320132013201320 ⋆ Decimal expansion of a(n) is given by the first n terms of the periodic sequence with initial period 1,3,2,0. ● a(n) = 10 * a(n - 1) + (1 / 4) * (3 * (n mod 4) + 2 * ((n + 1) mod 4) - ((n + 2) mod 4)), with a(0)=0. - _ Paolo P. Lava _ , Jul 30 2009 ● a(n) = 11 * a(n - 1) - 11 * a(n - 2) + 11 * a(n - 3) - 10 * a(n - 4). - _ Wesley Ivan Hurt _ , Sep 06 2022 ●

► [A037617] 1,13,132,1321,13213,132132,1321321,13213213,132132132,1321321321,13213213213,132132132132,1321321321321,132132132132132,1321321321321321 ⋆ Decimal expansion of a(n) is given by the first n terms of the periodic sequence with initial period 1,3,2. ● a(n)=10 * a(n - 1) +{ (n mod 3) + [(n + 2) mod 3] } , with a(0)=0 [From _ Paolo P. Lava _ , Jul 30 2009] ●

► [A332243] 13,133,373,733,1213,1813,2533,3373,4333,5413,6613,7933,9373,10933,12613,14413,16333,18373,20533,22813,25213,27733,30373,33133,36013 ⋆ Starhex honeycomb numbers: a(n) = 13 + 60 * n + 60 * n ^ 2. ● a(n) = 12 * (5 * n * (n + 1) + 1) + 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 2) for n > 2. (End) ●

► [A081042] 1,13,133,1225,10633,88837,722701,5764801,45294865,351652861,2703691669,20620693177,156208812697,1176509412085,8816899947037,65787638066353,488998835524129,3622389432086509,26752509108528805,197038045347164329 ⋆ 7th binomial transform of (1,6,0,0,0,0,0,0,...). ● a(n) = 14 * a(n - 1) - 49 * a(n - 2) for n>1, a(0)=1, a(1)=13. ● a(n) = (6 * n + 7) * 7 ^ (n - 1). ● a(n) = Sum _{ k=0..n } (k + 1) * 6 ^ k * binomial(n, k). ●

► [A187732] 0,1,13,133,1274,11942,111098,1030791,9554727,88535307,820278004,7599523660,70405203700,652259875085,6042764572481,55982252063633,518638725390318,4804846035350514,44513730857759982,412390365056271763,3820524794586339931,35394642842712164887,327908025365023678952 ⋆ Expansion of x / (x ^ 4 - 13x ^ 3 + 36x ^ 2 - 13x + 1). ● a(0)=0, a(1)=1, a(2)=13, a(3)=133, a(n)=13 * a(n - 1) - 36 * a(n - 2) + 13 * a(n - 3) - a(n - 4). - _ Harvey P. Dale _ , Mar 10 2015 ●

► [A031138] 1,13,133,1321,13081,129493,1281853,12689041,125608561,1243396573,12308357173,121840175161,1206093394441,11939093769253,118184844298093,1169909349211681,11580908647818721,114639177128975533,1134810862641936613,11233469449290390601 ⋆ Numbers k such that 1 ^ 5 + 2 ^ 5 + ... + k ^ 5 is a square. ● a(n) = 11 * (a(n - 1) - a(n - 2)) + a(n - 3). ● a(n) = - 1 / 2 + ((3 - sqrt(6)) / 4) * (5 + 2 * sqrt(6)) ^ n + ((3 + sqrt(6)) / 4) * (5 - 2 * sqrt(6)) ^ n. ● a(n) ^ 2 + (a(n) + 1) ^ 2 = (b(n) - 1) ^ 2 + b(n) ^ 2 + (b(n) + 1) ^ 2 = c(n) = 3 * d(n) + 2; where b(n) is A054320, c(n) is A007667 and d(n) is A006061. ●

► [A097166] 1,13,133,1333,13333,133333,1333333,13333333,133333333,1333333333,13333333333,133333333333,1333333333333,13333333333333,133333333333333,1333333333333333,13333333333333333,133333333333333333,1333333333333333333,13333333333333333333,133333333333333333333 ⋆ Expansion of (1 + 2 * x) / ((1 - x) * (1 - 10 * x)). ● a(n) = (4 * 10 ^ n - 1) / 3. ● a(n) = 10 * a(n - 1) + 3, n>0. a(n) = 11 * a(n - 1) - 10 * a(n - 2), n>1. - _ Vincenzo Librandi _ , Nov 01 2011 ●

► [A154999] 1,1,13,133,1477,15925,173509,1883413,20471269,222402229,2416608901,26257155925,285297665317,3099884206069,33681691385797,365966976355477,3976399872691813,43205412115772725,469446679463465221 ⋆ a(n) = 7 * a(n - 1) + 42 * a(n - 2), n>2; a(0)=1, a(1)=1, a(2)=13. ● a(n) = (19 / 434) * sqrt(217) * (((7 + sqrt(217)) / 2) ^ (n - 1) - ((7 - sqrt(217)) / 2) ^ (n - 1)) + (1 / 2) * (((7 + sqrt(217)) / 2) ^ (n - 1) + ((7 - sqrt(217)) / 2) ^ (n - 1)) + (6 / 7) * (C(2 * n,n) mod 2), with n >= 0. - _ Paolo P. Lava _ , Jan 20 2009 ●

► [A179619] 1,13,135,1357,13579,135801,1358023,13580245,135802467,1358024689,13580246911,135802469133,1358024691355,13580246913577,135802469135799,1358024691358021,13580246913580243,135802469135802465,1358024691358024687,13580246913580246909 ⋆ a(1)=1, a(n + 1) = 10 * a(n) + 2 * n - 1 ● a(n) = (11 / 81) * (10 ^ n - 1) - (2 / 9) * n, with n>=1. - _ Paolo P. Lava _ , Aug 26 2010 ● a(1)=1, a(2)=13, a(3)=135, a(n) = 12 * a(n - 1) - 21 * a(n - 2) + 10 * a(n - 3). - _ Harvey P. Dale _ , Aug 16 2012 ●

► [A052262] 0,1,13,136,1370,13715,137171,1371738,13717416,137174205,1371742105,13717421116,137174211238,1371742112471,13717421124815,137174211248270,1371742112482836,13717421124828513,137174211248285301,1371742112482853200,13717421124828532210 ⋆ Partial sums of A014824. ● a(n) = 100 * (10 ^ n - 1) / 729 - 10 * n / 81 - binomial(n + 1, 2) / 9. ● a(n) = 10 * a(n - 1) + binomial(n + 1,2). ●

► [A016205] 1,13,137,1385,13881,138873,1388857,13888825,138888761,1388888633,13888888377,138888887865,1388888886841,13888888884793,138888888880697,1388888888872505,13888888888856121,138888888888823353 ⋆ Expansion of 1 / ((1 - x)(1 - 2x)(1 - 10x)). ● a(n) = (25 * 10 ^ n - 9 * 2 ^ n + 2) / 18. - _ Bruno Berselli _ , Feb 09 2011 ● a(n) = 10 * a(n - 1) + 2 ^ (n + 1) - 1 if n > 0; a(0)=1. - _ Vincenzo Librandi _ , Feb 09 2011 ●

► [A023329] 13,139,293,1889,2939,3719,6089,7741,12823,19753,21391,22861,28513,36721,37967,40949,60899,76519,83621,101747,121687,127549,128239,142099,149197 ⋆ Primes that remain prime through 4 iterations of function f(x) = 10x + 9. ● a(n) == 9 or 13 (mod 14). - _ John Cerkan _ , Oct 09 2016 ●

► [A016145] 1,13,139,1417,14251,142753,1428259,14284777,142854331,1428562993,14285688979,142857066937,1428571200811,14285713602433,142857140807299,1428571422421897,14285714267265691,142857142801797073 ⋆ Expansion of 1 / ((1 - 3x)(1 - 10x)). ● a(n) = (10 ^ (n + 1) - 3 ^ (n + 1)) / 7 = 10 * a(n - 1) + 3 ^ n = 3 * a(n - 1) + 10 ^ n. - _ Henry Bottomley _ , Jul 25 2001 ● a(n) = 13 * a(n - 1) - 30 * a(n - 2), n >= 2. - _ Vincenzo Librandi _ , Mar 14 2011 ●

► [A045742] 0,1,13,141,1456,14778,149031,1499773,15089932,151927854,1531242362,15451614738,156114597744,1579223536788,15993825704427,162159485143581,1645827425223220,16720488433727910,170023231905932790 ⋆ Number of interior faces in all noncrossing connected graphs on n nodes on a circle. ● a(n) = Sum _{ k=1..n - 2 } k * binomial(n + k - 2, k) * binomial(3 * n - 3, n - 2 - k) / (n - 1). ●

► [A122011] 0,1,13,141,1499,15899,168585,1787533,18953419,200965203,2130856217,22593703397,239563527915,2540118496459,26933156445577,285575226955869,3027985613779691,32106065273909411,340424149534129305 ⋆ G.f. x ^ 2 * (1 + x) / (1 - 12 * x + 15 * x ^ 2 - 2 * x ^ 3). ● a(n)= 12 * a(n - 1) - 15 * a(n - 2) + 2 * a(n - 3). ●

► [A266806] 13,143,527,4859,30119,214847,1450643,10000367,68393039,469166939,3214686407,22036489343,151033273907,1035215971919,7095427362959,48632909524667,333334588608743,2284710128883647,15659633909836499,107332733533045679,735669484346002127 ⋆ Coefficient of x ^ 2 in the minimal polynomial of the continued fraction [1 ^ n,sqrt(6),1,1,...], where 1 ^ n means n ones. S ● a(n) = 5 * a(n - 1) + 15 * a(n - 2) - 15 * a(n - 3) - 5 * a(n - 4) + a(n - 5) . ●

► [A098298] 0,1,13,144,1573,17161,187200,2042041,22275253,242985744,2650567933,28913261521,315395308800,3440435135281,37529391179293,409382867836944,4465682155027093,48713120837461081,531378647057044800,5796451996790031721,63229593317633304133 ⋆ Member r=13 of the family of Chebyshev sequences S _ r(n) defined in A092184. ● a(n) = 11 * a(n - 1) - a(n - 2) + 2, n >= 2, a(0)=0, a(1)=1. ● a(n) = 12 * a(n - 1) - 12 * a(n - 2) + a(n - 3), n >= 3, a(0)=0, a(1)=1, a(2)=13. ●

► [A199023] 1,13,145,1597,17569,193261,2125873,23384605,257230657,2829537229,31124909521,342374004733,3766114052065,41427254572717,455699800299889,5012697803298781,55139675836286593,606536434199152525 ⋆ (6 * 11 ^ n - 1) / 5. ● a(n) = 11 * a(n - 1) + 2. ● a(n) = 12 * a(n - 1) - 11 * a(n - 2), n>1. ●

► [A014881] 1,13,146,1610,17715,194871,2143588,23579476,259374245,2853116705,31384283766,345227121438,3797498335831,41772481694155,459497298635720,5054470284992936,55599173134922313,611590904484145461,6727499949325600090 ⋆ a(1)=1, a(n) = 11 * a(n - 1) + n. ● a(n) = - 11 / 100 + 11 / 100 * 11 ^ n - 1 / 10 * n, with n>=1. - _ Paolo P. Lava _ , Jan 14 2009 ● a(n) = 13 * a(n - 1) - 23 * a(n - 2) + 11 * a(n - 3), with a(1)=1, a(2)=13, a(3)=146. - _ Vincenzo Librandi _ , Oct 20 2012 ●

► [A051524] 0,1,13,146,1650,19524,245004,3272688,46536624,703404576,11277554400,191338156800,3427105248000,64651956364800,1281740285145600,26648514872985600,579892995734169600,13183403757582643200 ⋆ Second unsigned column of triangle A051338. ● a(n) = n! * [5]h(n), where [k]h(n) denotes the k - th successive summation of h(n) from 0 to n. - _ Gary Detlefs _ , Jan 04 2011 ●

► [A016135] 1,13,147,1625,17891,196833,2165227,23817625,261994131,2881935953,31701296507,348714263625,3835856903971,42194425951873,464138685486987,5105525540389625,56160780944351411,617768590387996593,6795454494268224667,74749999436950995625 ⋆ Expansion of 1 / ((1 - 2 * x) * (1 - 11 * x)). ● a(n) = (11 ^ (n + 1) - 2 ^ (n + 1)) / 9. - _ Zerinvary Lajos _ , Jun 05 2009 ● a(n) = 13 * a(n - 1) - 22 * a(n - 2). - _ Vincenzo Librandi _ , Jun 02 2011 ●

► [A090667] 1,1,13,149,1490,13624,117920,987568,8111200,65866496,531372800,4270866688,34254920192,274425014272,2197077311488,17583865032704,140702055981056,1125749585477632,9006563605151744,72054913990721536,576449482336632832,4611638739487686656 ⋆ Number of compositions of 3n with each part less than or equal to n. ● a(n) = 2 ^ (3n - 1) - (2n + 1) * 2 ^ (2n - 2) + (n + 2) * (n - 1) * 2 ^ (n - 4), n>0. ●

► [A163148] 1,13,149,1617,17081,177893,1838509,18920457,194255281,1991777533,20407378949,209003188737,2140015661801,21909062453333,224284075207069,2295910518566457,23501807859846241,240570205162118893 ⋆ a(n) = 16 * a(n - 1) - 59 * a(n - 2) for n > 1; a(0) = 1, a(1) = 13. ● a(n) = ((1 + sqrt(5)) * (8 + sqrt(5)) ^ n + (1 - sqrt(5)) * (8 - sqrt(5)) ^ n) / 2. ●

► [A097168] 1,13,151,1693,18571,200473,2137591,22571653,236478211,2461637233,25488068431,262725949213,2697866876251,27614135219593,281860550309671,2870078286120373,29164037908416691,295809674509083553 ⋆ Expansion of (1 - 7x) / ((1 - x)(1 - 9x)(1 - 10x). ● a(n) = 10 * 10 ^ n / 3 - 9 * 9 ^ n / 4 - 1 / 12. ● a(n) = 20 * a(n - 1) - 109 * a(n - 2) + 90 * a(n - 3). ●

► [A305262] 13,153,433,993,2113,4353,8833,17793,35713,71553,143233,286593,573313,1146753,2293633,4587393,9174913,18349953,36700033,73400193,146800513,293601153,587202433,1174404993,2348810113 ⋆ a(n) = 140 * 2 ^ n - 127. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>1. ●

► [A204766] 13,154,180,321,347,488,514,655,681,822,848,989,1015,1156,1182,1323,1349,1490,1516,1657,1683,1824,1850,1991,2017 ⋆ a(n) = 167 * (n - 1) - a(n - 1) with n>1, a(1)=13. ● a(n) = (- 167 + 115 * (- 1) ^ n + 334 * n) / 4. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3). ●

► [A163415] 1,13,155,1763,19489,211525,2267819,24110267,254827105,2682176797,28147841051,294769171955,3082165652161,32192217154453,335968822259435,3504253645468043,36535028659929409,380794477886753965 ⋆ a(n) = 18 * a(n - 1) - 79 * a(n - 2) for n>1, a(0)=1, a(1)=13. ● a(n) = ((1 + 2 * sqrt(2)) * (9 + sqrt(2)) ^ n + (1 - 2 * sqrt(2)) * (9 - sqrt(2)) ^ n) / 2. ●

► [A077416] 1,13,155,1847,22009,262261,3125123,37239215,443745457,5287706269,63008729771,750817050983,8946795882025,106610733533317,1270382006517779,15137973344680031,180385298129642593 ⋆ Chebyshev S - sequence with Diophantine property. ● a(n) = 12 * a(n - 1) - a(n - 2), a(- 1)= - 1, a(0)=1. ● a(n) = (ap ^ (2 * n + 1) - am ^ (2 * n + 1)) / (ap - am) with ap := (sqrt(7) + sqrt(5)) / sqrt(2) and am := (sqrt(7) - sqrt(5)) / sqrt(2). ● a(n) = Sum _{ k=0..n } (- 1) ^ k * binomial(2 * n - k,k) * 14 ^ (n - k). ●

► [A097827] 1,13,156,1860,22165,264121,3147288,37503336,446892745,5325209605,63455622516,756142260588,9010251504541,107366875793905,12793922580223220,152453402204739 36,181664690387664913 ⋆ Partial sums of Chebyshev sequence S(n,12)= U(n,6)=A004191(n). ● a(n) = 13 * a(n - 1) - 13 * a(n - 2) + a(n - 3) with n>=2, a(- 1)=0, a(0)=1, a(1)=13. ● a(n) = 12 * a(n - 1) - a(n - 2) + 1 with n>=1, a(- 1)=0, a(0)=1. ● a(n) = (S(n + 1, 12) - S(n, 12) - 1) / 10. ●

► [A163438] 1,13,156,1872,22464,269490,3232944,38784174,465276240,5581708704,66961236342,803303685756,9636871221978,115609188148740,1386911174446512,16638146470934274,199600322709006648 ⋆ Number of reduced words of length n in Coxeter group on 13 generators S _ i with relations (S _ i) ^ 2 = (S _ i S _ j) ^ 5 = I. ● a(n) = 11 * a(n - 1) + 11 * a(n - 2) + 11 * a(n - 3) + 11 * a(n - 4) - 66 * a(n - 5). - _ Wesley Ivan Hurt _ , May 10 2021 ●

► [A163958] 1,13,156,1872,22464,269568,3234738,38815920,465779886,5589224784,67069091232,804809820672,9657486564726,115887063443580,1390611458122458,16686937868633604,200238458992414128 ⋆ Number of reduced words of length n in Coxeter group on 13 generators S _ i with relations (S _ i) ^ 2 = (S _ i S _ j) ^ 6 = I. ● a(n) = - 66 * a(n - 6) + 11 * Sum _{ k=1..5 } a(n - k). - _ Wesley Ivan Hurt _ , May 11 2021 ●

► [A164610] 1,13,156,1872,22464,269568,3234816,38817714,465811632,5589728430,67076607312,804917681568,9658992904704,115907683567104,1390889427339126,16690639822542972,200287278204994266 ⋆ Number of reduced words of length n in Coxeter group on 13 generators S _ i with relations (S _ i) ^ 2 = (S _ i S _ j) ^ 7 = I. ● a(n) = - 66 * a(n - 7) + 11 * Sum _{ k=1..6 } a(n - k). - _ Wesley Ivan Hurt _ , May 11 2021 ●

► [A165151] 1,13,157,1825,20761,233173,2598517,28818985,318655921,3516744733,38764899277,426978842545,4700721921481,51735623710693,569285638838437,6263498473368505,68907978330073441,758054227491947053,8339061763439391997,91732936225029132865,1009085096265691207801 ⋆ a(n) = (3 * 11 ^ n - 7 ^ n) / 2. ● a(n) = 18 * a(n - 1) - 77 * a(n - 2) for n > 1; a(0) = 1, a(1) = 13. ●

► [A016125] 1,13,157,1885,22621,271453,3257437,39089245,469070941,5628851293,67546215517,810554586205,9726655034461,116719860413533,1400638324962397,16807659899548765,201691918794585181 ⋆ Expansion of 1 / ((1 - x) * (1 - 12 * x)). ● a(n) = (12 ^ (n + 1) - 1) / 11. ● a(n) = 12 * a(n - 1) + 1 for n>0, a(0)=1. - _ Vincenzo Librandi _ , Nov 19 2010 ● a(n) = Sum _{ i=0...n } 11 ^ i * binomial(n + 1,n - i). - _ Bruno Berselli _ , Nov 11 2015 ●

► [A084328] 0,1,13,158,1911,23105,279344,3377317,40832337,493669894,5968552915,72160819061,872436565728,10547906344793,127525980259301,1541810773578190,18640754273664159,225369887048273977 ⋆ a(0)=0, a(1)=1; a(n) = 13 * a(n - 1) - 11 * a(n - 2). ● a(n) = (1 / 5) * Sum _{ k=0..n } binomial(n, k) * F(5 * k) where F(k) denotes the k - th Fibonacci number. ● a(n) = - (1 / 25) * (13 / 2 - (5 / 2) * sqrt(5)) ^ n * sqrt(5) + (1 / 25) * sqrt(5) * (13 / 2 + (5 / 2) * sqrt(5)) ^ n, with n >= 0. - _ Paolo P. Lava _ , Jun 19 2008 ●

► [A205163] 13,159,2277,33831,506493,7594479,113908437,1708600311,25628925933,384433652799,5766504083397,86497559125191,1297463380500573,19461950688376719,291929260268255157,4378938903851640471 ⋆ Number of (n + 1) X 2 0..3 arrays with every 2 X 2 subblock having unequal diagonal elements or unequal antidiagonal elements, and new values 0..3 introduced in row major order. ● a(n) = 3 ^ (n - 1) * (2 * 5 ^ n + 3). ●

► [A118673] 0,13,160,213,280,1113,1420,1809,6660,8449,10716,38989,49416,62629,227416,288189,365200,1325649,1679860,2128713,7726620,9791113,12407220,45034213,57066960 ⋆ Positive solutions x to the equation x ^ 2 + (x + 71) ^ 2 = y ^ 2. ● a(n) = 6 * a(n - 3) - a(n - 6) + 142 with a(0)=0, a(1)=13, a(2)=160, a(3)=213, a(4)=280, a(5)=1113. ●

► [A216300] 13,160,376,391,421,547,586,712,745,748,754,808,883,985,1006,1210,1291,1333,1375,1462,1513,1588,1702,1798,2203 ⋆ Numbers k such that 10k + 3 is composite but 10k + 1, 10k + 7, 10k + 9 are all prime. ● a(n) >> n log ^ 3 n. - _ Charles R Greathouse IV _ , Sep 07 2012 ●

► [A090134] 1,13,163,2353,40501,818821,18929023,489586273,13960500553,434386210141,14631135248731,529904353497553,20518350666873853,845225716194722773,36884609685305102071 ⋆ a(n) = (6 * n! / (n + 5)) * binomial(n + 5,n - 1) * 6F6(- n + 1, 1 / 5 * n + 1, 1 / 5 * n + 9 / 5, 1 / 5 * n + 8 / 5, 1 / 5 * n + 7 / 5, 1 / 5 * n + 6 / 5; 7 / 6, 4 / 3, 3 / 2, 5 / 3, 11 / 6, 2; - 3125 / 46656), where 6F6(;;) is the generalized hypergeometric series. ● a(n) = (7 * n - 6) * a(n - 1) - (n - 1) * (21 * n - 47) * a(n - 2) + 35 * (n - 3) * (n - 2) * (n - 1) * a(n - 3) - 35 * (n - 4) * (n - 3) * (n - 2) * (n - 1) * a(n - 4) + 21 * (n - 5) * (n - 4) * (n - 3) * (n - 2) * (n - 1) * a(n - 5) - 7 * (n - 6) * (n - 5) * (n - 4) * (n - 3) * (n - 2) * (n - 1) * a(n - 6) + (n - 7) * (n - 6) * (n - 5) * (n - 4) * (n - 3) * (n - 2) * (n - 1) * a(n - 7). - _ Vaclav Kotesovec _ , Jul 05 2018 ●

► [A078362] 1,13,168,2171,28055,362544,4685017,60542677,782369784,10110264515,130651068911,1688353631328,21817946138353,281944946167261,3643466354036040,47083117656301259,608437063177880327 ⋆ A Chebyshev S - sequence with Diophantine property. ● a(n) = 13 * a(n - 1) - a(n - 2), n >= 1; a(- 1)=0, a(0)=1. ● a(n) = S(2 * n + 1, sqrt(15)) / sqrt(15) = S(n, 13), where S(n, x) = U(n, x / 2), Chebyshev polynomials of the 2nd kind, A049310. ● a(n) = (ap ^ (n + 1) - am ^ (n + 1)) / (ap - am) with ap = (13 + sqrt(165)) / 2 and am = (13 - sqrt(165)) / 2. ●

► [A084970] 13,169,221,247,299,377,403,481,533,559,611,689,767,793,871,923,949,1027,1079,1157,1261,1313,1339,1391,1417 ⋆ Numbers whose smallest prime factor is 13. ● a(n) = a(n - 480) + 30030 = a(n - 1) + a(n - 480) - a(n - 481). - _ Charles R Greathouse IV _ , Nov 19 2014 ●

► [A207166] 13,169,624,1612,3445,6513,11284,18304,28197,41665,59488,82524,111709,148057,192660,246688,311389,388089,478192,583180,704613,844129,1003444,1184352,1388725 ⋆ Number of n X 5 0..1 arrays avoiding 0 0 0 and 1 0 1 horizontally and 0 0 1 and 1 0 1 vertically. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

► [A207302] 13,169,665,1759,3773,7093,12169,19515,29709,43393,61273,84119,112765,148109,191113,242803,304269,376665,461209,559183,671933,800869,947465,1113259,1299853 ⋆ Number of n X 5 0..1 arrays avoiding 0 0 0 and 1 0 1 horizontally and 0 0 1 and 1 1 0 vertically. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

► [A207108] 13,169,677,1835,4047,7837,13863,22931,36009,54241,78961,111707,154235,208533,276835,361635,465701,592089,744157,925579,1140359,1392845,1687743,2030131,2425473 ⋆ Number of n X 5 0..1 arrays avoiding 0 0 0 and 0 1 1 horizontally and 0 0 1 and 1 1 0 vertically. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. ●

► [A053153] 0,0,13,170,1605,13390,104993,794010,5867245,42681830,307120473,2192847250,15570312485,110116458270,776528783953,5464646634890,38398786511325,269529019274710,1890415785439433,13251574765596930 ⋆ Number of 3 - element intersecting families whose union is an n - element set. ● a(n) = 1 / 3! * (7 ^ n - 3 * 5 ^ n + 3 * 4 ^ n - 4 * 3 ^ n + 3 * 2 ^ n + 2). ●

► [A140455] 0,1,13,170,2223,29069,380120,4970629,64998297,849948490,11114328667,145336221161,1900485203760,24851643870041,324971855514293,4249485765555850,55568286807740343,726637214266180309 ⋆ 13 - Fibonacci sequence. ● a(n) = 13 * a(n - 1) + a(n - 2). ● a(n - r) * a(n + r) - a(n) ^ 2 = (- 1) ^ (n + 1 - r) * a(r) ^ 2. ● a(n) = Sum _{ i=0..floor((n - 1) / 2) } binomial(n,2i + 1) * 13 ^ (n - 1 - 2 * i) * (13 ^ 2 + 4) ^ i / 2 ^ (n - 1). ● a(n) = ((13 + sqrt(173)) ^ n - (13 - sqrt(173)) ^ n) / (2 ^ n * sqrt(173)). - Al Hakanson (hawkuu(AT)gmail.com), Jan 12 2009 ●

► [A349247] 1,13,177,1777,15173,135173,3397973,13535137,135157537,1193111377,11979759377,119595919137,1195991117973,11979931335173,119777591993777,1199999593111377,11977793913551137,119593573333335733,1195935733333335733,11977593393931151137,119759371717733717537 ⋆ Least n - digit number k with only odd digits such that the k - th triangular number also has only odd digits. ● a(n) = min { k in A347475 | k >= 10 ^ (n - 1) } . ●

► [A122571] 1,1,13,181,2521,35113,489061,6811741,94875313,1321442641,18405321661,256353060613,3570537526921,49731172316281,692665874901013,9647591076297901,134373609193269601,1871582937629476513 ⋆ a(1)=a(2)=1, a(n) = 14 * a(n - 1) - a(n - 2). ● a(n) = (1 / 4) * sqrt(3) * (7 - 4 * sqrt(3)) ^ n - (1 / 4) * sqrt(3) * (7 + 4 * sqrt(3)) ^ n + (1 / 2) * (7 + 4 * sqrt(3)) ^ n + (1 / 2) * (7 - 4 * sqrt(3)) ^ n, with n >= 0. - _ Paolo P. Lava _ , Jun 19 2008 ● a(n) = (1 / 4) * sqrt(2 + (2 - sqrt(3)) ^ (4 * n - 2) + (2 + sqrt(3)) ^ (4 * n - 2)). - _ Gerry Martens _ , Jun 03 2015 ●

► [A097260] 0,13,182,195,2548,2561,2730,2743,35672,35685,35854,35867,38220,38233,38402,38415,499408,499421,499590,499603,501956,501969,502138,502151,535080 ⋆ Numbers whose set of base 14 digits is { 0,D } , where D base 14 = 13 base 10. ● a(2n) = 14 * a(n), a(2n + 1) = a(2n) + 13. ●

► [A158548] 13,182,689,1534,2717,4238,6097,8294,10829,13702,16913,20462,24349,28574,33137,38038,43277,48854,54769,61022,67613,74542,81809,89414,97357 ⋆ a(n) = 169 * n ^ 2 + 13. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A000563] 13,192,1085,3880,10656,24626,50380,94128,163943,270004,424839,643568,944146,1347606,1878302,2564152,3436881,4532264,5890369,7555800,9577940,12011194,14915232,18355232,22402123 ⋆ Number of discordant permutations. ● a(n) = 81 / 40n ^ 5 - 135 / 4n ^ 4 + 1719 / 8n ^ 3 - 2487 / 4n ^ 2 + 3463 / 5n, n>4. (End) ●

► [A099271] 0,1,13,196,2925,43681,652288,9740641,145457325,2172119236,32436331213,484372848961,7233156403200,108012973199041,1612961441582413,24086408650537156,359683168316474925,5371161116096586721 ⋆ Unsigned member r = - 13 of the family of Chebyshev sequences S _ r(n) defined in A092184. ● a(n)= 15 * a(n - 1) - a(n - 2) + 2 * (- 1) ^ (n + 1), n>=2, a(0)=0, a(1)=1. ● a(n) = 14 * a(n - 1) + 14 * a(n - 2) - a(n - 3), n>=3, a(0)=0, a(1)=1, a(2)=13. ●

► [A015253] 1,13,221,3485,55965,894621,14317213,229062301,3665049245,58640578205,938250090141,15011998086813,240191982810781,3843071671285405,61489146955314845,983826350426044061,15741221610252678813 ⋆ Gaussian binomial coefficient [n,2] for q = - 4. ● a(2) = 1, a(3) = 13, a(4) = 221 a(n) = 13 * (n - 1) + 52 * a(n - 2) - 64 * a(n - 3). - _ Vincenzo Librandi _ , Oct 27 2012 ●

► [A051180] 0,0,0,13,222,2585,25830,238833,2111382,18142585,152937510,1271964353,10476007542,85662034185,696700867590,5643519669073,45575393343702,367206720319385,2953481502692070,23723872215168993,190372457332919862 ⋆ Number of 3 - element intersecting families of an n - element set. ● a(n) = (1 / 3!) * (8 ^ n - 3 * 6 ^ n + 3 * 5 ^ n - 4 * 4 ^ n + 3 * 3 ^ n + 2 * 2 ^ n - 2). ● a(0)=0, a(1)=0, a(2)=0, a(3)=13, a(4)=222, a(5)=2585, a(6)=25830, a(n) = 29 * a(n - 1) - 343 * a(n - 2) + 2135 * a(n - 3) - 7504 * a(n - 4) + 14756 * a(n - 5) - 14832 * a(n - 6) + 5760 * a(n - 7). - _ Harvey P. Dale _ , Jul 07 2013 ●

► [A062127] 13,223,1577,7018,23431,64316,153190,327718,644573,1185025,2061259,3423422,5467399,8443318,12664784,18518842,26476669,37104995,51078253,69191458,92373815,121703056,158420506,203946878,259898797 ⋆ Seventh column of A046741. ● a(n) = (81 * n ^ 6 + 567 * n ^ 5 + 2205 * n ^ 4 + 4545 * n ^ 3 + 5674 * n ^ 2 + 3728 * n + 1040) / 80. ●

► [A133284] 1,13,277,6073,133321,2926981,64260253,1410798577,30973308433,680001986941,14929070404261,327759546906793,7195780961545177,157979421607087093,3468351494394370861,76145753455069071841 ⋆ Indices of the 12 - gonal numbers which are also centered 12 - gonal number or numbers X such that 30 * X ^ 2 - 24 * X + 3 is a square. ● a(n + 2)=22 * a(n + 1) - a(n) - 8 ; a(n + 1) =11 * a(n) - 4 + 2 * (30 * a(n) ^ 2 - 24 * a(n) + 3) ^ 0.5 ● a(n)=(2 / 5) + (3 /

10) * [11 + 2 * sqrt(30)] ^ n + (1 / 20) * [11 + 2 * sqrt(30)] ^ n * sqrt(30) + (3 / 10) * [11 - 2 * sqrt(30)] ^ n - (1 / 20) * sqrt(30) * [11 - 2 * sqrt(30)] ^ n, with n>=0 [From _ Paolo P. Lava _ , Aug 06 2008] ●

► [A023357] 13,293,6089,12823,37967,40949,121687,192037,243487,379679,409499,471841,1006193,1217131,1397311,1438793,1503613,1541063,1754591,2058629,2088421,2346791,2360357,2428243,2458609 ⋆ Primes that remain prime through 5 iterations of the function f(x) = 10x + 9. ● a(n) == 13 (mod 14). - _ John Cerkan _ , Aug 26 2016 ●

► [A217674] 13,313,613,3613,4513,21013,52813,86113,99013,148513,165313,241513,255613,332113,787513,800113,904513,1073113,1720513,2279113,2679613,2940313,3471613,4307113,4605613 ⋆ Primes p = a ^ 2 + b ^ 2 such that (x - a) ^ 2 + (y - b) ^ 2 = 2 and q - p = 4, where q = x ^ 2 + y ^ 2 is prime, assuming that a > b > 0 and x > y > 0. ● a(n) == 13 (mod 300). ●

► [A284824] 1,1,1,13,401,93151,88853970,482430702570 ⋆ Number of partitions of n copies of n ^ 2 into distinct parts. ● a(n) = 1 / n! * [Product _{ i=1..n } x _ i ^ (n ^ 2)] Product _{ j>0 } (1 + Sum _{ i=1..n } x _ i ^ j). ●

► [A055412] 1,13,485,4197,23793,84769,252673,622573,1395261,2787125,5260181,9249417,15637897,25112577,39258381,59174749,87380293,125264525,176663297,244000537,332379769,444344469,587923621,766764301,990981473 ⋆ Number of points in Z ^ 6 of norm <= n. ● a(n) = [x ^ (n ^ 2)] theta _ 3(x) ^ 6 / (1 - x), where theta _ 3() is the Jacobi theta function. - _ Ilya Gutkovskiy _ , Apr 14 2018 ●

► [A023332] 13,541,1087,1861,3727,23293,40387,87643,98899,109111,115153,116329,119101,131617,133597,163909,197521,214021,215389,218227,238207,263239,294751,489901,493693 ⋆ Primes that remain prime through 5 iterations of function f(x) = 2x + 5. ● a(n) == 1 (mod 6). - _ John Cerkan _ , Oct 09 2016 ●

► [A076461] 13,571,5306,26470,93455,264313,640276,1383276,2736465,5047735,8796238,14621906,23357971,36066485,54076840,79027288,112909461,158115891,217490530,294382270,392701463,516979441,672431036,865020100,1101528025 ⋆ Sum of squares of numbers that can be written as t * n + u * (n + 1) for nonnegative integers t,u in exactly two ways. ● a(n) = n * (n + 1) * (25 * n ^ 4 + 26 * n ^ 3 - 6 * n ^ 2 - 7 * n + 1) / 6. ●

► [A289225] 0,13,859,9585,56520,231635,749223,2051819,4965960,10924065,22268395,42654733,77575104,135020535,226306535,367085655,578573168,889013589,1335417435,1965599305,2840550040,4037177403,5651451399,7801992035,10634139000 ⋆ Number of ways to select 4 disjoint point triples from an n X n X n triangular point grid, each point triple forming a 2 X 2 X 2 triangle. ● a(n) = (n ^ 8 - 8 * n ^ 7 - 50 * n ^ 6 + 556 * n ^ 5 + 231 * n ^ 4 - 12388 * n ^ 3 + 17914 * n ^ 2 + 86648 * n - 198528) / 24. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>12. ●

► [A270872] 13,2278,19439,117910,550009,2072078,6584443,18269614,45445445,103390294,218437543,433677158,816642289,1469399230,2541499379,4246292158,6881138173,10852102214,16703746015,25154681014,37139581673,53858400238,76833564139,107975977550 ⋆ a(n) = n ^ 8 + 7 * n ^ 7 + 34 * n ^ 6 + 111 * n ^ 5 + 275 * n ^ 4 + 511 * n ^ 3 + 703 * n ^ 2 + 623 * n + 13. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9). ●

► [A187592] 0,0,13,2792,27252,103108,246792,458018,732810,1069534,1468190,1928778,2451298,3035750,3682134,4390450,5160698,5992878,6886990,7843034,8861010,9940918,11082758,12286530,13552234 ⋆ Number of 9 - step E, S, NW and NE - moving king's tours on an n X n board summed over all starting positions. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>10. ●

► [A134159] 13,3433,31591,130351,370273,846613,1679323,3013051,5017141,7885633,11837263,17115463,23988361,32748781,43714243,57226963,73653853,93386521,116841271,144459103,176705713,214071493,257071531,306245611 ⋆ a(n) = 13 + 165 * n + 756 * n ^ 2 + 1470 * n ^ 3 + 1029 * n ^ 4. ● a(n) = (3 * (7 * n + 2) ^ 4 + 6 * (7 * n + 2) ^ 3 - 3 * (7 * n + 2) + 1) / 7. ● a(n) = (Sum _{ k=1..7n + 2 } k ^ 6) / (Sum _{ k=1..7n + 2 } k ^ 2). ●

► [A060887] 1,13,8191,797161,22369621,305175781,2612138803,16148168401,78536544841,317733228541,1111111111111,3452271214393,9726655034461,25239592216021,61054982558011,139013933454241,300239975158033,619036127056621 ⋆ a(n) = Sum _{ j=0..12 } n ^ j. ● a(n) = n ^ 12 + n ^ 11 + n ^ 10 + n ^ 9 + n ^ 8 + n ^ 7 + n ^ 6 + n ^ 5 + n ^ 4 + n ^ 3 + n ^ 2 + n + 1. ● a(n) = (n ^ 13 - 1) / (n - 1) with a(1) = 13 = lim _{ x - >1 } a(x). - _ M. F. Hasler _ , Dec 31 2012 ●

► [A022104] 1,14,15,29,44,73,117,190,307,497,804,1301,2105,3406,5511,8917,14428,23345,37773,61118,98891,160009,258900,418909,677809 ⋆ Fibonacci sequence beginning 1, 14. ● a(n)= a(n - 1) + a(n - 2), n>=2, a(0)=1, a(1)=14. a(- 1):=13 . ●

► [A041398] 14,15,29,44,117,395,512,2443,22499,24942,47441,262147,833882,11936495,36643367,195153330,231796697,426950027,4074346940,16724337787,20798684727,79120391968,179039468663 ⋆ Numerators of continued fraction converge nts to sqrt(214). ● a(n) = 1390718379850 * a(n - 26) - a(n - 52) for n>51. [_ Bruno Berselli _ , Nov 16 2013] ●

► [A041919] 1,1,14,15,29,44,205,864,1069,1933,3002,40959,43961,1887321,1931282,26993987,28925269,55919256,84844525,395297356,1666033949,2061331305,3727365254,5788696559,78980420521 ⋆ Denominators of continued fraction converge nts to sqrt(481). ● a(n) = 1928280 * a(n - 13) + a(n - 26) for n>25. - _ Vincenzo Librandi _ , Dec 27 2013 ●

► [A041929] 1,14,15,44,191,235,426,1513,3452,18773,22225,152123,174348,326471,7030239,7356710,14386949,93678404,108065353,634005169,1376075691,4762232242,6138307933,10900540175,49740468633 ⋆ Denominators of continued fraction convergents to sqrt(487). ● a(n) = 103812147681136 * a(n - 28) - a(n - 56) for n >55. - _ Vincenzo Librandi _ , Dec 27 2013 ●

► [A041410] 14,15,74,89,2566,2655,13186,15841,456734,472575,2347034,2819609,81296086,84115695,417758866,501874561,14470246574,14972121135,743587311 14,89330852249,2575622594086,2664953446335 ⋆ Numerators of continued fraction convergents to sqrt(220). ● a(n) = 178 * a(n - 4) - a(n - 8). G.f.: - (x ^ 7 - 1 4 * x ^ 6 + 15 * x ^ 5 - 74 * x ^ 4 - 89 * x ^ 3 - 74 * x ^ 2 - 15 * x - 14) / (x ^ 8 - 178 * x ^ 4 + 1). [_ Colin Barker _ , Jul 16 2012] ●

► [A041412] 14,15,104,223,1442,1665,48062,49727,346424,742575,4801874,5544449,160046446,165590895,1153591816,2472774527,15990238978,18463013505,532954617118,551417630623,3841460400856,8234338432335,53247490994866,61481829427201,1774738714956494 ⋆ Numerators of continued fraction convergents to sqrt(221). ● a(n) = 3330 * a(n - 6) - a(n - 12). - _ Wesley Ivan Hurt _ , May 24 2021 ●

► [A033050] 0,1,14,15,196,197,210,211,2744,2745,2758,2759,2940,2941,2954,2955,38416,38417,38430,38431,38612,38613,38626,38627,41160 ⋆ Numbers whose set of base 14 digits is { 0,1 } . ● a(n) = Sum _{ i=0..m } d(i) * 14 ^ i, where Sum _{ i=0..m } d(i) * 2 ^ i is the base - 2 representation of n. ● a(2n) = 14 * a(n), a(2n + 1) = a(2n) + 1. ●

► [A041416] 14,15,209,224,6481,6705,93646,100351,2903474,3003825,41953199,44957024,1300749871,1345706895,18794939506,20140646401,582733038734,602873685135,8420090945489,9022964630624 ⋆ Numerators of continued fraction convergents to sqrt(223). ● a(0)=14, a(1)=15, a(2)=209, a(3)=224, a(4)=6481, a(5)=6705, a(6)=93646, a(7)=100351, a(n)=448 * a(n - 4) - a(n - 8). - _ Harvey P. Dale _ , Jan 10 2016 ●

► [A041417] 1,1,14,15,434,449,6271,6720,194431,201151,2809394,3010545,87104654,90115199,1258602241,1348717440,39022690561,40371408001,563850994574,604222402575,17482078266674,18086300669249,252603986966911,27069028763616 0,7831932040779391 ⋆ Denominators of continued fraction convergents to sqrt(223). ● a(n) = 448 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Dec 17 2013 ●

► [A255846] 14,16,22,32,46,64,86,112,142,176,214,256,302,352,406,464,526,592,662,736,814,896,982,1072,1166 ⋆ a(n) = 2 * n ^ 2 + 14. ● a(n) = a(- n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A228207] 14,16,26,34,64,86,166,224,434,586,1136,1534,2974,4016,7786,10514,20384,27526,53366,72064,139714,188666,365776,493934,957614 ⋆ x - values in the solution to x ^ 2 - 20y ^ 2 = 176. ● a(n) = 3 * a(n - 2) - a(n - 4). ●

► [A175887] 1,14,16,29,31,44,46,59,61,74,76,89,91,104,106,119,121,134,136,149,151,164,166,179,181 ⋆ Numbers that are congruent to { 1, 14 } mod 15. ● a(n) = (30 * n + 11 * (- 1) ^ n - 15) / 4. ● a(n) = - a(- n + 1) = a(n - 1) + a(n - 2) - a(n - 3). ●

► [A067844] 14,16,34,36,54,56,74,76,94,96,114,116,134,136,154,156,174,176,194,196,214,216,234,236,254 ⋆ Numbers k such that k and 2 ^ k end with the same digit. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3). ● a(n) = 10 * n - 4 * (- 1) ^ n. (End) ●

► [A303305] 0,1,14,17,43,48,87,94,146,155,220,231,309,322,413,428,532,549,666,685,815,836,979,1002,1158 ⋆ Generalized 17 - gonal (or heptadecagonal) numbers : m * (15 * m - 13) / 2 with m = 0, + 1, - 1, + 2, - 2, + 3, - 3, ... ● a(n) = a(- n - 1) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). ● a(n) = (30 * n * (n + 1) + 11 * (2 * n + 1) * (- 1) ^ n - 11) / 16. Therefore: ● a(n) = n * (15 * n + 26) / 8, if n is even, or (n + 1) * (15 * n - 11) / 8 otherwise. ●

► [A165719] 14,17,45,50,92,99,155,164,234,245,329,342,440,455,567,584,710,729,869,890,1044,1067,1235,1260,1442 ⋆ Integers of the form k * (k + 9) / 8. ● a(n)= a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). - R. J. Mathar, Sep 25 2009 ● a(n)= 2 * n ^ 2 + 6 * n + 9 / 4 - 3 * (- 1) ^ n * (2 * n + 3) / 4. - R. J. Mathar, Sep 25 2009 ●

► [A154146] 0,14,17,87,104,510,609,2975,3552,17342,20705,101079,120680,589134,703377,3433727,4099584,20013230,23894129,116645655,139265192,679860702,811697025 ⋆ Numbers k such that 16 plus the k - th triangular number is a perfect square. ● a(n) = + a(n - 1) + 6 * a(n - 2) - 6 * a(n - 3) - a(n - 4) + a(n - 5). ●

► [A241199] 14,19,31,38,54,63,83,94,118,131,159,174,206,223,259,278,318,339,383,406,454,479,531,558,614 ⋆ Numbers n such that 4 consecutive terms of binomial(n,k) satisfy a quadratic relation for 0 <= k <= n / 2. ● a(n) = (55 - 7 * (- 1) ^ n - 2 * (- 21 + (- 1) ^ n) * n + 6 * n ^ 2) / 8. G.f.: - x * (6 * x ^ 4 - 3 * x ^ 3 - 16 * x ^ 2 + 5 * x + 14) / ((x - 1) ^ 3 * (x + 1) ^ 2). - _ Colin Barker _ , Apr 18 2014 and Apr 29 2015 ● a(2 * k - 1) = 3 * k ^ 2 + 8 * k + 3, a(2 * k) = 3 * k ^ 2 + 10 * k + 6. - _ Robert Israel _ , Apr 28 2015 ●

► [A074851] 14,20,21,33,34,35,38,39,44,45,50,51,54,55,56,57,62,68,74,75,76,85,86,87,91 ⋆ Numbers k such that k and k + 1 both have exactly 2 distinct prime factors. ● a(n) seems to be asymptotic to c * n * log(n) ^ 2 with c=0.13... ●

► [A224771] 14,21,26,29,30,35,38,41,42,45,46,49,50,53,54,59,61,62,65,66,69,70,74,75,77 ⋆ Numbers that are the sum of 3 distinct and primitive nonzero squares . ● a(n) is the n - th largest number m which satisfies: m = a ^ 2 + b ^ 2 + c ^ 2, with integers a, b, and c, 0 < a < b < c, and gcd(a,b,c) = 1. Such a solution is denoted by the triple (a, b, c). ●

► [A253810] 0,14,21,33,38,80,84 ⋆ The life of Diophantus. ● a(0): birth (all numbers a(n) in years), a(1): boyhood ended, a(2): beard started to grow, a(3): marriage, a(4): birth of son, a(5): death of son, a(6): death of Diophantus. ●

► [A199250] 1,1,14,21,424,571,14160,18157,508802,635901,19257756,23709063,756845422,922808863,30595342532,37055004573,1264116241990,1523501274001,53146116905514,63810625823521,2266270709962148,2712945090726795 ⋆ Number of nX2 0..3 arrays with values 0..3 introduced in row major order, the number of instances of each value within one of each other, and no element equal to any horizontal or vertical neighbor. ● a(2 * n) = coefficient of x ^ n * y ^ n * z ^ n * t ^ (2 * n) in t * x * y * (1 + t * z) / (2 * (1 - t * (x + y + z + x * y + x * z + y * z) - 7 * t ^ 2 * x * y * z)). ● a(2 * n + 1) = coefficient of x ^ (n + 1) * y ^ (n + 1) * z ^ (n + 1) * t ^ (2 * n + 1) in t * x * y * (1 + t * z) * (x + y + z + x * y + x * z + y * z) / (2 * (1 - t * (x + y + z + x * y + x * z + y * z) - 7 * t ^ 2 * x * y * z)) for n>0. ●

► [A259750] 14,22,38,46,62,70,86,94,110,118,134,142,158,166,182,190,206,214,230,238,254,262,278,286,302 ⋆ Numbers that are congruent to { 14, 22 } mod 24. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n>3. ●

► [A026065] 14,23,36,51,69,90,114,143,175,211,251,295,345,399,458,522,591,667,748,835,928,1027,1134,1247,1367 ⋆ a(n) = (d(n) - r(n)) / 5, where d = A026063 and r is the periodic sequence with fundamental period (1,4,0,0,0). ● a(n) = (n + 6) * (n ^ 2 + 30 * n + 71) / 30 - 1 / 5 * (1 + 2 / 5 * 5 ^ (1 / 2) * cos(2 * n * Pi / 5) + 2 / 5 * 2 ^ (1 / 2) * (5 + 5 ^ (1 / 2)) ^ (1 / 2) * sin(2 * n * Pi / 5) - 2 /

5 * 5 ^ (1 / 2) * cos(4 * n * Pi / 5) + 2 / 5 * 2 ^ (1 / 2) * (5 - 5 ^ (1 / 2)) ^ (1 / 2) * sin(4 * n * Pi / 5)). - _ Richard Choulet _ , Dec 14 2008 ●

▶ [A032608] 14,25,36,47,58,69,710,811,912,1013,1114,1215,1316,1417,1518,1619,1720,1821,1922,2023,2124,2225,2326,2427,2528 ⋆ Concatenation of n and n + 3. ● a(n) = n * 10 ^ floor(log _ 10(n + 3) + 1) + n + 3, with n >= 1. - _ Paolo P. Lava _ , Oct 09 2008 ●

▶ [A164398] 14,25,45,82,150,275,505,928,1706,3137,5769,10610,19514,35891,66013,121416,223318,410745,755477,1389538,2555758,4700771,8646065,15902592,29249426 ⋆ Number of binary strings of length n with no substrings equal to 0001 or 1000. ● a(n) = a(n - 1) + a(n - 2) + a(n - 3) - 2. - _ Greg Dresden _ , Feb 09 2020 ● a(n) = 2 * a(n - 1) - a(n - 4). - _ Wesley Ivan Hurt _ , Apr 26 2021 ●

▶ [A079505] 14,25,61,121,211,337,505,721,991,1321,1717,2185,2731,3361,4081,4897,5815,6841,7981,9241,10627,12145,13801,15601,17551 ⋆ The last number for which a determinant of base - n numbers is nonzero. ● a(n) = n ^ 3 - n + 1 (except for n=2, a(2)=14). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n > 6. ●

▶ [A199405] 1,14,25,155,274,1691,2989,18446,32605,201215,355666,2194919,3879721,23942894,42321265,261176915,461654194,2849003171,5035874869,31077857966,54932969365,339007434455,599226788146,3698003921039,6536561700241 ⋆ y - values in the solution to 13 * x ^ 2 - 12 = y ^ 2. ● a(n + 4) = 11 * a(n + 2) - a(n) with a(1)=1, a(2)=14, a(3)=25, a(4)=155. ● a(n) = 2 ^ (- 1 - n) * (2 * (3 - sqrt(13)) ^ n + (- 3 - sqrt(13)) ^ n * (- 3 + sqrt(13)) - 3 * (- 3 + sqrt(13)) ^ n - sqrt(13) * (- 3 + sqrt(13)) ^ n + 2 * (3 + sqrt(13)) ^ n). - _ Colin Barker _ , Mar 27 2016 ●

▶ [A190991] 1,14,27,40,53,66,79,92,105,118,131,144,157,170,183,196,209,222,235,248,261,274,287,300,313 ⋆ a(n) = 13 * n + 1. ● a(n) = 2 * a(n - 1) - a(n - 2). - _ Vincenzo Librandi _ , Jun 11 2011 ●

▶ [A168596] 14,27,53,105,209,417,833,1665,3329,6657,13313,26625,53249,106497,212993,425985,851969,1703937,3407873,6815745,13631489,27262977,54525953,109051905,218103809 ⋆ a(n) = 2 * a(n - 1) - 1 with a(0)=14. ● a(n) = 13 * 2 ^ n + 1. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2). (End) ●

▶ [A008596] 0,14,28,42,56,70,84,98,112,126,140,154,168,182,196,210,224,238,252,266,280,294,308,322,336 ⋆ Multiples of 14. ● a(n) = 14n = 2 * a(n - 1) - a(n - 2). G.f.: 14x / (x - 1) ^ 2. - _ R. J. Mathar _ , Jun 23 2009 ●

▶ [A077265] 14,28,52,94,170,312,584,1114,2158,4228,8348,16566,32978,65776,131344,262450,524630,1048956,2097572,4194766,8389114,16777768,33555032,67109514,134218430 ⋆ Number of cycles in the n - th order prism graph. ● a(n) = 2 ^ n + n * (n - 1). - _ Eric W. Weisstein _ , Dec 16 2013 ● a(n) = 5 * a(n - 1) - 9 * a(n - 2) + 7 * a(n - 3) - 2 * a(n - 4). - _ Colin Barker _ , May 06 2014 ●

▶ [A067295] 14,28,76,227,715,2333,7810,26663,92456,324700,1152464,4127294,14895145,54115895,197764350,726473055,2680979820,9934884960,36953107320,137913387450,516295313430,1938260223354 ⋆ Fourth column of triangle A028364. ● a(n)= (3 * (31 * n ^ 3 + 163 * n ^ 2 + 254 * n + 112) / (8 * (2 * n + 1) * (2 * n + 3) * (2 * n + 5))) * C(n + 3). ●

▶ [A212890] 0,14,28,152,276,702,1128,2144,3160,5150,7140,10584,14028,19502,24976,33152,41328,52974,64620,80600,96580,117854,139128,166752,194376 ⋆ Number of (w,x,y,z) with all terms in { 0,...,n } and odd range. ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 6 * a(n - 3) + 6 * a(n - 5) - 2 * a(n - 6) - 2 * a(n - 7) + a(n - 8). ●

▶ [A019552] 14,28,312,416,520,624,728,832,936,1040,1144,1248,1352,1456,1560,1664,1768,1872,1976,2080,2184,2288,2392,2496,25100 ⋆ a(n) is the concatenation of n and 4n. ● a(n) = n * 10 ^ floor(log _ 10(4 * n) + 1) + 4 * n, with n >= 1. - _ Paolo P. Lava _ , Mar 24 2010 ●

▶ [A132756] 0,14,29,45,62,80,99,119,140,162,185,209,234,260,287,315,344,374,405,437,470,504,539,575,612 ⋆ a(n) = n * (n + 27) / 2. ● a(n) = n + a(n - 1) + 13 (with a(0)=0). - _ Vincenzo Librandi _ , Aug 03 2010 ● a(n) = 14 * n - floor(n / 2) + floor(n ^ 2 / 2). - _ Wesley Ivan Hurt _ , Jun 15 2013 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n > 2. ●

▶ [A192836] 14,29,48,83,126,193,272,383,510,677,864,1099,1358,1673,2016,2423,2862,3373,3920,4547,5214,5969,6768,7663,8606 ⋆ Molecular topological indices of the pan graphs. ● a(n) = (1 / 4) * (26 + 27 * n + 4 * n ^ 2 + 2 * n ^ 3 + (- 1) ^ n * (2 + n)). ●

▶ [A195145] 0,1,14,29,56,85,126,169,224,281,350,421,504,589,686,785,896,1009,1134,1261,1400,1541,1694,1849,2016 ⋆ Concentric 14 - gonal numbers. ● a(n) = (14 * n ^ 2 + 5 * (- 1) ^ n - 5) / 4; ● a(n) = a(- n) = - a(n - 1) + 7 * n ^ 2 - 7 * n + 1. (End) ●

▶ [A196305] 14,29,59,119,239,479,959,1919,3839,7679,15359,30719,61439,122879,245759,491519,983039,1966079,3932159,7864319,15728639,31457279,62914559,125829119,251658239 ⋆ a(n) = 15 * 2 ^ n - 1. ● a(n) = 15 * 2 ^ n - 1. ● a(n) = 2 * a(n - 1) + 1. ● a(n) = 3 * a(n - 2) - 2 * a(n - 2). (End) ●

▶ [A063311] 1,14,30,45,60,75,90,103,120,133,150,165,180,191,210,223,240,253,270,281,300,311,330,343,360 ⋆ Dimension of the space of weight n cuspidal newforms for Gamma _ 1(38). ● a(n) = a(n - 4) + a(n - 6) - a(n - 10) for n>13. ●

▶ [A132759] 0,14,30,48,68,90,114,140,168,198,230,264,300,338,378,420,464,510,558,608,660,714,770,828,888 ⋆ a(n) = n * (n + 13). ● a(n) = 2 * n + a(n - 1) + 12 (with a(0)=0). - _ Vincenzo Librandi _ , Aug 03 2010 ●

▶ [A027575] 14,30,54,86,126,174,230,294,366,446,534,630,734,846,966,1094,1230,1374,1526,1686,1854,2030,2214,2406,2606 ⋆ a(n) = n ^ 2 + (n + 1) ^ 2 + (n + 2) ^ 2 + (n + 3) ^ 2. ● a(n) = 4 * n ^ 2 + 12 * n + 14. - Al Hakanson (hawkuu (AT)gmail.com), May 20 2009 ● a(n) = a(n - 1) + 8 * (n + 1) for n>0, a(0)=14. - _ Vincenzo Librandi _ , Nov 19 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Wesley Ivan Hurt _ , Apr 16 2021 ●

▶ [A228124] 1,14,30,91,140,285,385,650,819,1240,1496,2109,2470,3311,3795,4900,5525,6930,7714,9455,10416,12529,13685,16206,17575 ⋆ Number of blocks in a Steiner Quadruple System of order A047235(n + 1). ● a(n) = (n * (1 + 3 * n) * (1 + 3 * (- 1) ^ n + 6 * n)) / 16. ● a(n) = a(n - 1) + 3 * a(n - 2) - 3 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) + a(n - 6) - a(n - 7). ●

▶ [A293391] 1,14,30,105,248,264,418,714,1485,3080,3135,3596,3828,3956,4064,5396,6678,8636,10098,12648,20026,20790,21318,22152,23374 ⋆ Integers n such that sigma(n) / phi(n) is a perfect square. ● a(n) = sigma(n) / phi(n) = m ^ 2, for some integer m. ●

▶ [A015222] 14,30,140,204,506,650,1240,1496,2470,2870,4324,4900,6930,7714,10416,11440,14910,16206,20540,22140,27434,29370,35720,38024,45526 ⋆ Even square pyramidal numbers. ● a(n) = (3 + 4 * n - (- 1) ^ n) * (2 + 4 * n - (- 1) ^ n) * (1 + 4 * n - (- 1) ^ n) / 24. ● a(n) = 3 * a(n - 2) - 3 * a(n - 4) + a(n - 6) + 128. (End) ●

▶ [A156203] 14,31,65,133,269,541,1085,2173,4349,8701,17405,34813,69629,139261,278525,557053,1114109,2228221,4456445,8912893,17825789,35651581,7130316 5,142606333,285212669 ⋆ a(n) = 2 * a(n - 1) + 3 for n>1, a(1)=14. ● a(n) = 17 * 2 ^ (n - 1) - 3. ●

▶ [A120711] 0,14,32,150,492,1894,6724,24854,89972,329238,1197972,4372054,15930580,58096214,211770452,772129110,2814859092,10262536534,37414140244,136403674454,497291840852,1813006427478,6609762501972,24097566365014 ⋆ Expansion of 2 * x * (7 + 16 * x - 2 * x ^ 2 - 14 * x ^ 3) / (1 - 11 * x ^ 2 - 12 * x ^ 3 + 10 * x ^ 4 + 12 * x ^ 5). ● a(n) = 11 * a(n - 2) + 12 * a(n - 3) - 10 * a(n - 4) - 12 * a(n - 5). ●

▶ [A116150] 1,14,33,130,341,1134,3193,10010,29181,89254,264353,799890,2386021,7185374,21501513,64613770,193622861,581305494,1743042673,5230875650,15689131701,47074385614,141209175833,423655489530,1270910544541 ⋆ a(n) = Sum _{ j=1..n } (3 ^ j + (- 2) ^ j). ● a(n) = (9 * 3 ^ n + 4 * (- 2) ^ n - 13) / 6. ● a(n) = 2 * a(n - 1) + 5 * a(n - 2) - 6 * a(n - 3). ●

▶ [A178933] 1,1,14,35,205,521,2507,6709,26712,73834,262431,724537,2384988,6552033,20289864,55244988,163342701,439201501,1251532060,3321188863,9177476977,24028568664,64709650590,167153761523,440300702427 ⋆ Generating function exp(sum(n>=1, sigma(n) ^ 3 * x ^ n / n)). ● a(0)=0 and a(n)=1 / n * sum (k=1,n,sigma(k) ^ 3 * a(n - k)) for n>0. ●

▶ [A182753] 1,14,35,490,1225,17150,42875,600250,1500625,21008750,52521875,735306250,1838265625,25735718750,64339296875,900750156250,2251875390625,31526255468750,78815638671875,1103418941406250,2758547353515625,38619662949218750,96549157373046875 ⋆ Expansion of (1 + 14 * x) / (1 - 35 * x ^ 2). ● a(2n) = 14 * a(2n - 1), a(2n + 1) = 5 / 2 * a(2n). ● a(2n) = 14 * 35 ^ (n - 1), a(2n + 1) = 35 ^ n. ●

▶ [A051866] 0,1,14,39,76,125,186,259,344,441,550,671,804,949,1106,1275,1456,1649,1854,2071,2300,2541,2794,3059,3336 ⋆ 14 - gonal (or tetradecagonal) numbers: a(n) = n * (6 * n - 5). ● a(n) = 12 * n + a(n - 1) - 11, with n > 0, a(0)=0. - _ Vincenzo Librandi _ , Aug 06 2010 ● a(12 * a(n) + 67 * n + 1) = a(12 * a(n) + 67 * n) + a(12 * n + 1). - _ Vladimir Shevelev _ , Jan 24 2014 ●

▶ [A162266] 14,39,81,146,240,369,539,756,1026,1355,1749,2214,2756,3381,4095,4904,5814,6831,7961,9210,10584,12089,13731,15516,17450 ⋆ a(n) = (2 * n ^ 3 + 5 * n ^ 2 + 21 * n) / 2. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). (End) ●

▶ [A069126] 1,14,40,79,131,196,274,365,469,586,716,859,1015,1184,1366,1561,1769,1990,2224,2471,2731,3004,3290,3589,3901 ⋆ Centered 13 - gonal numbers. ● a(n) = (13n ^ 2 - 13n + 2) / 2. ● a(n) = 13 * n + a(n - 1) - 13 (with a(1)=1). - _ Vincenzo Librandi _ , Aug 08 2010 ●

▶ [A125816] 1,1,14,40,248,976,4928,21568,102272,463360,2153984,9868288,45584384,209588224,966189056,4447436800,20489142272,94347526144,434564759552,2001299832832,9217376780288,42450351554560,195509224472576 ⋆ a(n) = ((1 + sqrt(13)) ^ n + (1 - sqrt(13)) ^ n) / 2. ● a(n) = 2 * a(n - 1) + 12 * a(n - 2), with a(0)=a(1)=1. ●

▶ [A199710] 1,1,14,41,223,979,3878,20483,70897,408073,1329734,7964417,25250959,154039339,482301806,2967115019,9237038497,57046572241,177128072702,1095861584537,3398526529663,21043253658307,65224098543926,404010494645843,1251923775716881 ⋆ Expansion of (1 + x - 14 * x ^ 2 + 13 * x ^ 3) / (1 - 28 * x ^ 2 + 169 * x ^ 4). ● a(n) = ((1 + 3 * sqrt(3)) ^ n + (1 - 3 * sqrt(3)) ^ n) / (2 * 2 ^ floor(n / 2)). ● a(n) = 28 * a(n - 2) - 169 * a(n - 4). ●

▶ [A005587] 0,14,42,90,165,275,429,637,910,1260,1700,2244,2907,3705,4655,5775,7084,8602,10350,12350,14625,17199,20097,23345,26970 ⋆ a(n) = n * (n + 5) * (n + 6) * (n + 7) / 24. ● a(n) = C(7 + n, 4) - C(7 + n, 3). - _ Zerinvary Lajos _ , Dec 09 2005 ●

▶ [A212514] 0,0,0,0,14,42,90,200,364,585,960,1440,2052,2926,4004,5280,7000,9000,11340,14280,17670,21483,26180,31416,37296 ⋆ Number of (w,x,y,z) with all terms in { 1,...,n } and w<=2x and y>3z. ● a(n) = 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4) - 4 * a(n - 5) + 2 * a(n - 7) - 2 * a(n - 9) + 4 * a(n - 11) + a(n - 12) - 2 * a(n - 13) - 2 * a(n - 14) + a(n - 16). ●

▶ [A292051] 0,1,14,42,124,251,506,852,1432,2165,3270,4606,6484,8687,11634,15016,19376,24297,30462,37330,45740,55011,66154,78332,92744 ⋆ Wiener index of the n X n black bishop graph. ● a(n) = (3 - 10 * n + 6 * n ^ 2 - 8 * n ^ 3 + 6 * n ^ 4 - 3 * (- 1) ^ n * (1 - 2 * n + 2 * n ^ 2)) / 24. ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 6 * a(n - 3) + 6 * a(n - 5) - 2 * a(n - 6) - 2 * a(n - 7) + a(n - 8). ●

▶ [A120714] 0,14,42,232,974,4522,20180,91422,411782,1858856,8384078,37827386,170648724,769875718,3473203086,15669055544,70689396502,318908566562,1438725432052,6490672907694,29282051536966,132103184740456 ⋆ Expansion of 2 * x ^ 2 * (7 + 14 * x + 4 * x ^ 2) / ((1 + x - x ^ 2) * (1 - 2 * x - 10 * x ^ 2 - 6 * x ^ 3)). ● a(n) = 15 * a(n - 2) + 26 * a(n - 3) - 3 * a(n - 4) - 24 * a(n - 5) - 2 * a(n - 6) + 6 * a(n - 7). ●

▶ [A033587] 0,14,44,90,152,230,324,434,560,702,860,1034,1224,1430,1652,1890,2144,2414,2700,3002,3320,3654,4004,4370,4752 ⋆ a(n) = 2 * n * (4 * n + 3). ● a(n) = 16 * n + a(n - 1) - 2 with a(0)=0. - _ Vincenzo Librandi _ , Aug 05 2010 ●

▶ [A189807] 14,44,94,158,238,330,434,550,678,818,970,1134,1310,1498,1698,1910,2134,2370,2618,2878,3150,3434,3730,4038,4358 ⋆ Number of right triangles on an (n + 1) X 3 grid. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>6. ●

▶ [A090197] 1,14,45,100,185,306,469,680,945,1270,1661,2124,2665,3290,4005,4816,5729,6750,7885,9140,10521,12034,13685,15480,17425 ⋆ a(n) = n ^ 3 + 6 * n ^ 2 + 6 * n + 1. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Vincenzo Librandi _ , Jun 24 2012 ●

▶ [A121202] 0,14,48,254,1824,13742,102096,745502,5374272,38400590,272709744,1928498750,13597146720,95668307438,672119557392,4717043931998,33080342679168,231867574534286,1624598900645040,11379821699045246 ⋆ a(n) = 12 * n + 7 ^ n - 5 ^ n. ● a(n) = 14 * a(n - 1) - 60 * a(n - 2) + 82 * a(n - 3) - 35 * a(n - 4). - _ Vincenzo Librandi _ , Feb 27 2013 ●

▶ [A005914] 1,14,50,110,194,302,434,590,770,974,1202,1454,1730,2030,2354,2702,3074,3470,3890,4334,4802,5294,5810,6350,6914 ⋆ Number of points on surface of hexagonal prism: 12 * n ^ 2 + 2 for n > 0 (coordination sequence for W(2)). ● a(n) = (2n - 1) ^ 2 + (2n) ^ 2 + (2n + 1) ^ 2 for n > 0. - _ Bruno Berselli _ , Jan 30 2012 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3); a(0)=1, a(1)=14, a(2)=50, a(3)=110. - _ Harvey P. Dale _ , Oct 09 2012 ●

▶ [A050441] 0,1,14,50,120,235,406,644,960,1365,1870,2486,3224,4095,5110,6280,7616,9129,10830,12730,14840,17171,19734,22540,25600 ⋆ Partial sums of A051865. ● a(n) = n * (n + 1) * (11 * n - 8) / 6. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Bruno Berselli _ , Aug 19 2010 ● a(n) = Sum _{ i=0..n - 1 } (n - i) * (11 * i + 1), with a(0)=0. - _ Bruno Berselli _ , Feb 10 2014 ●

▶ [A205354] 14,50,194,770,3074,12290,49154,196610,786434,3145730,12582914,50331650,201326594,805306370,3221225474,12884901890,51539607554,206158430210,824633720834,3298534883330,13194139533314,52776558133250 ⋆ Number of (n + 1) X 2 0..2 arrays with every 2 X 2 subblock having the same number of equal diagonal or antidiagonal elements, and new values 0..2 introduced in row major order. ● a(n) = 2 + 3 * 4 ^ n. ●

▶ [A281699] 14,50,218,938,3914,16010,64778,260618,1045514,4188170,16764938,67084298,268386314,1073643530,4294770698,17179475978,68718690314,274876334090,1099508482058,4398040219658,17592173461514,70368719011850,281474926379018,1125899806179338,4503599426043914 ⋆ Sierpinski stellated octahedron numbers: a(n) = 2 * (- 3 * 2 ^ (n + 1) + 2 ^ (2n + 3) + 5). ● a(n) = 8 * (2 ^ (2 * n + 1) + 2) - 6 * (2 ^ (n + 1) + 1). ● a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3) for n>2. ●

▶ [A244804] 1,14,51,112,197,306,439,596,777,982,1211,1464,1741,2042,2367,2716,3089,3486,3907,4352,4821,5314,5831,6372,6937 ⋆ The 300 - degree spoke (or ray) of a hexagonal spiral of Ulam. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>3. ●

▶ [A059997] 14,51,120,230,390,609,896,1260,1710,2255,2904,3666,4550,5565,6720,8024,9486,11115,12920,14910,17094,19481,22080,24900,27950 ⋆ a(n) = (n / 2) * (n + 1) * (3 * n + 11). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ●

▶ [A007588] 0,1,14,51,124,245,426,679,1016,1449,1990,2651,3444,4381,5474,6735,8176,9809,11646,13699,15980,18501,21274,24311,27624 ⋆ Stella octangula numbers: a(n) = n * (2 * n ^ 2 - 1). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4), n>3. - _ Harvey P. Dale _ , Sep 16 2011 ●

▶ [A214659] 0,1,14,53,132,265,466,749,1128,1617,2230,2981,3884,4953,6202,7645,9296,11169,13278,15637,18260,21161,24354,27853,31672 ⋆ a(n) = n * (7 * n ^ 2 - 3 * n - 1) / 3. ● a(n) = (7 * n ^ 3 - 3 * n ^ 2 - n) / 3. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). (End) ●

▶ [A299646] 1,14,54,135,271,476,764,1149,1645,2266,3026,3939,5019,6280,7736,9401,11289,13414,15790,18431,21351,24564,28084,31925,36101 ⋆ a(n) = Sum _{ k = n..2 * n + 1 } k ^ 2. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ● a(n) = (n + 2) * (14 * n ^ 2 + 11 * n + 3) / 6. Therefore: ● a(6 * k + r) = 504 * k ^ 3 + 18 * (14 * r + 13) * k ^ 2 + (42 * r ^ 2 + 78 * r + 25) * k + a(r), with 0 <= r <= 5. Example: for r=5, a(6 * k + 5) = (6 * k + 7) * (84 * k ^ 2 + 151 * k + 68). ●

▶ [A006597] 0,1,14,54,136,275,486,784,1184,1701,2350,3146,4104,5239,6566,8100,9856,11849,14094,16606,19400,22491,25894,29624,33696 ⋆ a(n) = n ^ 2 * (5 * n - 3) / 2. ● a(n) = (1 / 6) * (15 * n ^ 3 - 9 * n ^ 2). - James A. Record (james.record(AT)gmail.com), Nov 07 2004 ● a(n) = Sum _{ i=0..n - 1 } n * (5 * i + 1) for n>0. [_ Bruno Berselli _ , Sep 08 2015] ●

▶ [A022285] 0,14,55,123,218,340,489,665,868,1098,1355,1639,1950,2288,2653,3045,3464,3910,4383,4883,5410,5964,6545,7153,7788 ⋆ a(n) = n * (27 * n + 1) / 2. ● a(n) = a(n - 1) + 27 * n - 13 for n>0, a(0)=0. - _ Vincenzo Librandi _ , Aug 04 2010 ● a(0)=0, a(1)=14, a(2)=55; for n>2, a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). -_ Harvey P. Dale _ , Sep 20 2011 ● a(n) = 12 / (n + 2)! * Sum _{ j=0..n } (- 1) ^ (n - j) * binomial(n,j) * (j + n) ^ (n + 2). - _ Vladimir Kruchinin _ , Jun 04 2013 ●

▶ [A100157] 1,14,55,140,285,506,819,1240,1785,2470,3311,4324,5525,6930,8555,10416,12529,14910,17575,20540,23821,27434,31395,35720,40425 ⋆ Structured rhombic dodecahedral numbers (vertex structure 9). ● a(n) = (16 * n ^ 3 - 12 * n ^ 2 + 2 * n) / 6. ● a(n) = binomial(2n + 1,3) + binomial(2n,3). - _ John Molokach _ , Jul 10 2013 ● a(n) = sum((n + i) ^ 2, i= - (n - 1)..(n - 1)). - _ Bruno Berselli _ , Jul 24 2014 ●

▶ [A144555] 0,14,56,126,224,350,504,686,896,1134,1400,1694,2016,2366,2744,3150,3584,4046,4536,5054,5600,6174,6776,7406,8064 ⋆ a(n) = 14 * n ^ 2. ● a(n) = a(n - 1) + 14 * (2 * n - 1), with a(0) = 0. - _ Vincenzo Librandi _ , Nov 25 2010 ●

▶ [A192846] 14,56,126,256,430,696,1022,1472,1998,2680,3454,4416,5486,6776,8190,9856,11662,13752,15998,18560,21294,24376,27646,31296,35150 ⋆ Molecular topological indices of the sunlet graphs. ● a(n) = n * (2 * n * (n + 3) + (- 1) ^ n + 7). ●

▶ [A115129] 14,56,146,311,586,1015,1652,2562,3822,5522,7766,10673,14378,19033,24808,31892,40494,50844,63194,77819,95018,115115,138460,165430,196430 ⋆ Partial sums of A005587. Fourth column of triangle A115127. ● a(0)=14, a(1)=56, a(2)=146, a(3)=311, a(4)=586, a(5)=1015, a(n)= 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). - _ Harvey P. Dale _ , Apr 24 2016 ●

▶ [A281200] 1,14,56,168,448,1120,2688,6272,14336,32256,71680,157696,344064,745472,1605632,3440640,7340032,15597568,33030144,69730304,146800640,308281344,645922816,1350565888,2818572288 ⋆ Number of n X 3 0..1 arrays with no element equal to more than one of its horizontal and antidiagonal neighbors, with the exception of exactly one element, and with new values introduced in order 0 sequentially upwards. ● a(n) = 7 * 2 ^ (n - 1) * (n - 1) for n>1. ●

▶ [A022286] 0,14,57,129,230,360,519,707,924,1170,1445,1749,2082,2444,2835,3255,3704,4182,4689,5225,5790,6384,7007,7659,8340 ⋆ a(n) = n * (29 * n - 1) / 2. ● a(n) = 29 * n + a(n - 1) - 15 for n>0, a(0)=0. - _ Vincenzo Librandi _ , Aug 04 2010 ●

▶ [A005915] 1,14,57,148,305,546,889,1352,1953,2710,3641,4764,6097,7658,9465,11536,13889,16542,19513,22820,26481,30514,34937,39768,45025 ⋆ Hexagonal prism numbers: a(n) = (n + 1) * (3 * n ^ 2 + 3 * n + 1). ● a(n)=(n + 1) ^ 3 + 6 * (n * (n + 1) * (2 * n + 1) / 6). - Klaus Strassburger (strass(AT)ddfi.uni - duesseldorf.de) ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4); a(0)=1, a(1)=14, a(2)=57, a(3)=148. - _ Harvey P. Dale _ , Jun 25 2011 ●

▶ [A212675] 0,1,14,57,158,353,688,1217,2004,3121,4650,6681,9314,12657,16828,21953,28168,35617,44454,54841,66950,80961,97064,115457,136348 ⋆ Number of (w,x,y,z) with all terms in { 1,...,n } and w >= |x - y| + |y - z|. ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 5 * a(n - 4) - 4 * a(n - 5) + a(n - 6). ●

▶ [A143861] 1,14,59,136,245,386,559,764,1001,1270,1571,1904,2269,2666,3095,3556,4049,4574,5131,5720,6341,6994,7679,8396,9145 ⋆ Ulam's spiral (NNE spoke). ● a(n) = 16 * n ^ 2 - 35 * n + 20. - _ R. J. Mathar _ , Sep 08 2008 ●

▶ [A100174] 1,14,59,156,325,586,959,1464,2121,2950,3971,5204,6669,8386,10375,12656,15249,18174,21451,25100,29141,33594,38479,43816,49625 ⋆ Structured tetrakis hexahedral numbers (vertex structure 5). ● a(n) = (1 / 6) * (20 * n ^ 3 - 24 * n ^ 2 + 10 * n). ●

▶ [A062022] 0,1,14,59,256,581,1298,2287,4004,7329,11338,17915,26660,36637,49406,67239,91252,117585,151730,191819,235112,289013,350842,425919,521300 ⋆ a(n) = Sum _{ k=1..n } Sum _{ j=1..k } (prime(k) - prime(j)) ^ 2. ● a(n) = a(n - 1) + n * prime(n) ^ 2 + Sum _{ k=1..n } prime(k) * (prime(k) - 2 * prime(n)), with a(0) = a(1) = 0. ●

▶ [A277986] 14,60,134,208,282,356,430,504,578,652,726,800,874,948,1022,1096,1170,1244,1318,1392,1466,1540,1614,1688,1762 ⋆ a(n) = 74 * n - 14. ● a(n) = 2 * a(n - 1) - a(n - 2). - _ Vincenzo Librandi _ , Nov 13 2016 ●

▶ [A158058] 14,60,138,248,390,564,770,1008,1278,1580,1914,2280,2678,3108,3570,4064,4590,5148,5738,6360,7014,7700,8418,9168,9950 ⋆ a(n) = 16 * n ^ 2 - 2 * n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A100171] 1,14,60,160,335,606,994,1520,2205,3070,4136,5424,6955,8750,10830,13216,15929,18990,22420,26240,30471,35134,40250,45840,51925 ⋆ Structured triakis octahedral numbers (vertex structure 4). ● a(n)=(1 / 6) * (21 * n ^ 3 - 27 * n ^ 2 + 12 * n). ● a(0)=1, a(1)=14, a(2)=60, a(3)=160, a(n)=4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Harvey P. Dale _ , Jun 28 2011 ●

▶ [A063492] 1,14,60,161,339,616,1014,1555,2261,3154,4256,5589,7175,9036,11194,13671,16489,19670,23236,27209,31611,36464,41790,47611,53949 ⋆ a(n) = (2 * n - 1) * (11 * n ^ 2 - 11 * n + 6) / 6. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>4. - _ Wesley Ivan Hurt _ , Dec 16 2015 ●

▶ [A051799] 1,14,60,170,385,756,1344,2220,3465,5170,7436,10374,14105,18760,24480,31416,39729,49590,61180,74690,90321,108284,128800,152100,178425 ⋆ Partial sums of A007587. ● a(n) = C(n + 3, 3) * (5 * n + 2) / 2 = (n + 1) * (n + 2) * (n + 3) * (5 * n + 2) / 12. ●

▶ [A164540] 1,14,60,296,1424,6880,33216,160384,774400,3739136,18054144,87173120,420909056,2032328704,9812951040,47381118976,228776280064,1104629596160,5333623504896,25753012404224,124346543636480,600398224162816 ⋆ a(n) = 4 * a(n - 1) + 4 * a(n - 2) for n > 1; a(0) = 1, a(1) = 14. ● a(n) = 4 * a(n - 1) + 4 * a(n - 2) for n > 1; a(0) = 1, a(1) = 14. ● a(n) = ((1 + 3 * sqrt(2)) * (2 + 2 * sqrt(2)) ^ n + (1 - 3 * sqrt(2)) * (2 - 2 * sqrt(2)) ^ n) / 2. ●

▶ [A140184] 1,14,60,360,1904,10528,57280,313472,1711872,9355776,51117056,279316480,1526198272,8339333120,45566902272,248982306816,1360464379904,7433716105216,40618579197952,221944046157824,1212724817166336,6626451640025088,36207605093236736 ⋆ a(n) = 2 * a(n - 1) + 16 * a(n - 2) + 16 * a(n - 3). ● a(n) - 2 * a(n - 1) + 16 * a(n - 2) + 16 * a(n - 3); for n>3, given a(1) = 1, a(2) = 14, a(3) = 60. Term (1,1) of X ^ n, where X = the 3x3 matrix [1,2,3; 2,0,2; 3,2,1]. ● a(n) = (2 / 3) * [2 + 2 * sqrt(3)] ^ n * sqrt(3) + [2 + 2 * sqrt(3)] ^ n + [2 - 2 * sqrt(3)] ^ n - (- 2) ^ n - (2 / 3) * sqrt(3) * [2 - 2 * sqrt(3)] ^ n, with n>= 0 - _ Paolo P. Lava _ , Jun 06 2008 ●

▶ [A264854] 0,1,14,61,175,400,791,1414,2346,3675,5500,7931,11089,15106,20125,26300,33796,42789,53466,66025,80675,97636,117139,139426,164750 ⋆ a(n) = n * (n + 1) * (11 * n ^ 2 + 11 * n - 10) / 24. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Vincenzo Librandi _ , Nov 27 2015 ●

▶ [A307253] 0,0,14,62,166,346,624,1020,1556,2252,3130,4210,5514,7062,8876,10976,13384,16120,19206,22662,26510,30770,35464,40612,46236 ⋆ Number of triangles larger than size=1 in a matchstick - made hexagon with side length n. ● a(n) = floor(n * (14 * n ^ 2 + 9 * n + 2) / 4) - 6 * n ^ 2. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - 2 * a(n - 3) + 3 * a(n - 4) - a(n - 5) for n>4. - _ Colin Barker _ , Apr 02 2019 ●

▶ [A003695] 1,14,62,276,1006,3610,12010,38984,122188,375122,1128446,3342794,9767588,28217820,80709424,228864620,644060262,1800346140,5002457832,13825549136,38026348240,104133664506,284037629690,771953153918,2091075938320 ⋆ Number of Hamiltonian paths in P _ 4 X P _ n. ● a(1) = 1, ● a(2) = 14, ● a(3) = 62, ● a(4) = 276, ● a(5) = 1006, ● a(6) = 3610, ●

▶ [A050492] 1,14,63,172,365,666,1099,1688,2457,3430,4631,6084,7813,9842,12195,14896,17969,21438,25327,29660,34461,39754,45563,51912,58825 ⋆ Thickened cube numbers: a(n) = n * (n ^ 2 + (n - 1) ^ 2) + (n - 1) * 2 * n * (n - 1). ● a(n) = n * (4 * n ^ 2 - 6 * n + 3). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4); a(1)=1, a(2)=14, a(3)=63, a(4)=172. - _ Harvey P. Dale _ , Oct 02 2011 ● a(n) = ((2n - 1) ^ 3 + 1) / 2. - _ Dave Durgin _ , May 07 2014 ●

▶ [A255499] 0,1,14,63,184,425,846,1519,2528,3969,5950,8591,12024,16393,21854,28575,36736,46529,58158,71839,87800,106281,127534,151823,179424 ⋆ a(n) = (n ^ 4 + 2 * n ^ 3 - n ^ 2) / 2. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Vincenzo Librandi _ , Sep 05 2015 ● a(n) = Sum _{ k=n..n + n ^ 2 - 1 } k (the sum of the first n ^ 2 integers starting with n). - _ Matthew Niemiro _ , Jun 26 2020 ●

▶ [A221909] 1,14,63,364,2429,16842,117691,823592,5764857,40353670,282475319,1977326820,13841287285,96889010498,678223072947,4747561510048,33232930569713,232630513987326,1628413597910575 ⋆ 7 ^ n + 7 * n. ● a(n) = 9 * a(n - 1) - 15 * a(n - 2) + 7 * a(n - 3). ●

▶ [A074354] 0,0,0,0,0,14,64,218,692,1982,5496,14562,37692,95142,236032,576074,1387780,3304078,7787656,18190386,42151116,96972534,221651472,503650970,1138286740 ⋆ Coefficient of q ^ 3 in nu(n), where nu(0)=1, nu(1)=b and, for n>

=2, nu(n)=b * nu(n - 1) + lambda * (1 + q + q ^ 2 + ... + q ^ (n - 2)) * nu(n - 2) with (b,lambda)=(1,2). • a(n) = 4 * a(n - 1) + 2 * a(n - 2) - 20 * a(n - 3) - a(n - 4) + 40 * a(n - 5) + 8 * a(n - 6) - 32 * a(n - 7) - 16 * a(n - 8) for n>10. •

► [A212743] 0,14,64,224,528,1134,2064,3584,5680,8750,12720,18144,24864,33614,44128,57344,72864,91854,113760,140000,169840,204974,244464,290304,341328 ⋆ Number of (w,x,y,z) with all terms in { 0,...,n } and max { w,x,y,z } >2 * min { w,x,y,z } . • a(n)=2 * a(n - 1) + 2 * a(n - 2) - 6 * a(n - 3) + 6 * a(n - 5) - 2 * a(n - 6) - 2 * a(n - 7) + a(n - 8). •

► [A213757] 1,14,65,214,597,1518,3649,8462,19157,42646,93777,204294,441781,949598,2030849,4324510,9174069,19397574,40893265,85981910,180353621,377485774,788527425,1644165294,3422550037 ⋆ Principal diagonal of the convolution array A213756. • a(n) = - 2 + 2 ^ (n + 1) - 6 * n + n * 2 ^ (n + 2) - 3 * n ^ 2. • a(n) = 7 * a(n - 1) - 19 * a(n - 2) + 25 * a(n - 3) - 16 * a(n - 4) + 4 * a(n - 5). •

► [A064096] 1,14,67,190,413,766,1279,1982,2905,4078,5531,7294,9397,11870,14743,18046,21809,26062,30835,36158,42061,48574,55727,63550,72073 ⋆ Fifth diagonal of triangle A064094. • a(n) = 1 + 3 * n + 5 * n ^ 2 + 5 * n ^ 3. Fourth row polynomial (n=3) of Catalan triangle A009766. • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Wesley Ivan Hurt _ , Nov 17 2022 •

► [A250141] 14,67,204,485,986,1799,3032,4809,7270,10571,14884,20397,27314,35855,46256,58769,73662,91219,111740,135541,162954,194327,230024,270425,315926 ⋆ Number of length 2 + 2 0..n arrays with the medians of every three consecutive terms nondecreasing. • a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. •

► [A347673] 1,14,69,203,463,903,1585,2579,3963,5823,8253,11355,15239,20023,25833,32803,41075,50799,62133,75243,90303,107495,127009,149043,173803 ⋆ Number of Baxter matrices of size 3 X n. • a(n) = 1 / 3 * n ^ 4 + 3 * n ^ 3 - 16 / 3 * n ^ 2 + 2 * n + 3 for n >= 3. •

► [A249708] 14,69,208,485,966,1729,2864,4473,6670,9581,13344,18109,24038,31305,40096,50609,63054,77653,94640,114261,136774,162449,191568,224425,261326 ⋆ Number of length 2 + 3 0..n arrays with every four consecutive terms having the maximum of some two terms equal to the minimum of the remaining two terms. • a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. •

► [A008354] 0,1,14,69,216,525,1086,2009,3424,5481,8350,12221,17304,23829,32046,42225,54656,69649,87534,108661,133400,162141,195294,233289,276576 ⋆ a(n) = (5 * n ^ 2 + 1) * n ^ 2 / 6. • a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>4, a(0)=0, a(1)=1, a(2)=14, a(3)=69, a(4)=216. - _ Harvey P. Dale _ , Feb 12 2015 •

► [A051879] 1,14,69,224,574,1260,2478,4488,7623,12298,19019,28392,41132,58072,80172,108528,144381,189126,244321,311696,393162,490820,606970,744120,904995 ⋆ Partial sums of A051798. • a(n) = C(n + 4, 4) * (9n + 5) / 5. •

► [A212751] 1,14,70,198,477,924,1696,2768,4405,6510,9486,13134,18025,23828,31312,39984,50841,63198,78310,95270,115621,138204,164880,194208,228397 ⋆ Number of (w,x,y,z) with all terms in { 0,...,n } and at least one of these conditions holds: w=R, x=R, y=R, z<R, where R = max { w,x,y,z } - min { w,x,y,z } . • a(n)=2 * a(n - 1) + 2 * a(n - 2) - 6 * a(n - 3) + 6 * a(n - 5) - 2 * a(n - 6) - 2 * a(n - 7) + a(n - 8). •

► [A212749] 1,14,70,222,537,1116,2056,3512,5605,8550,12486,17694,24325,32732,43072,55776,71001,89262,110710,135950,165121,198924,237480,281592,331357 ⋆ Number of (w,x,y,z) with all terms in { 0,...,n } and at least one of these conditions holds: w=R, x<R, y<R, z<R, where R = max { w,x,y,z } - min { w,x,y,z } . • a(n)=2 * a(n - 1) + 2 * a(n - 2) - 6 * a(n - 3) + 6 * a(n - 5) - 2 * a(n - 6) - 2 * a(n - 7) + a(n - 8). •

► [A201106] 0,1,14,70,230,595,1316,2604,4740,8085,13090,20306,30394,44135,62440,86360,117096,156009,204630,264670,338030,426811,533324,660100,809900 ⋆ a(n) = binomial(n ^ 2,3) / (2 * n). • a(n) = (n - 1) * n * (n ^ 3 + n ^ 2 - 2 * n - 2) / 12. •

► [A245951] 14,71,196,453,834,1435,2216,3305,4630,6351,8364,10861,13706,17123,20944,25425,30366,36055,42260,49301,56914,65451,74616,84793,95654 ⋆ Number of length 1 + 3 0..n arrays with some pair in every consecutive four terms totalling exactly n. • a(n) = 1 + 5 * n + 3 * n ^ 2 + 6 * n ^ 3 for n even. • a(n) = 4 + n + 3 * n ^ 2 + 6 * n ^ 3 for n odd. •

► [A212572] 0,1,14,71,220,533,1094,2015,3416,5449,8270,12071,17044,23421,31430,41343,53424,67985,85326,105799,129740,157541,189574,226271,268040 ⋆ Number of (w,x,y,z) with all terms in { 1,...,n } and |w - x| <= |x - y| + |y - z|. • a(n) = 3 * a(n - 1) - a(n - 2) - 5 * a(n - 3) + 5 * a(n - 4) + a(n - 5) - 3 * a(n - 6) + a(n - 7). • a(n) = 1 / 48 * (38 * n ^ 4 + 20 * n ^ 3 - 32 * n ^ 2 - 2 * (3 * (- 1) ^ n - 11) * n + 3 * ((- 1) ^ n - 1)). •

► [A186707] 1,14,71,224,547,1134,2101,3584,5741,8750,12811,18144,24991,33614,44297,57344,73081,91854,114031,140000,170171,204974,244861,290304,341797 ⋆ Partial sums of A007202 (crystal ball sequence for hexagonal close - packing). • a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 5 * a(n - 4) - 4 * a(n - 5) + a(n - 6) = 7 * n * (n ^ 3 / 8 + n ^ 2 / 2 + 3 * n / 4 + 1 / 2) + (15 + (- 1) ^ n) / 16. •

► [A212752] 0,14,71,238,580,1224,2265,3896,6236,9550,13975,19854,27336,36848,48545,62944,80200,100926,125271,153950,187100,225544,269401,319608,376260 ⋆ Number of (w,x,y,z) with all terms in { 0,...,n } and at least one of these conditions holds: w<R, x<R, y<R, z>R, where R=max { w,x,y,z }- min { w,x,y,z } . • a(n)=2 * a(n - 1) + 2 * a(n - 2) - 6 * a(n - 3) + 6 * a(n - 5) - 2 * a(n - 6) - 2 * a(n - 7) + a(n - 8). •

► [A074086] 0,0,0,0,0,14,71,282,997,3298,10439,32012,95834,281494,814131,2324422,6564135,18362810,50947395,140329400,384031508,1044880222,2828084399,7618214354,20432838121 ⋆ Coefficient of q ^ 3 in nu(n), where nu(0)=1, nu(1)=b and, for n>=2, nu(n)=b * nu(n - 1) + lambda * (1 + q + q ^ 2 + ... + q ^ (n - 2)) * nu(n - 2) with (b,lambda)=(2,1). • a(n) = 8a(n - 1) - 20a(n - 2) + 8a(n - 3) + 26a(n - 4) - 8a(n - 5) - 20a(n - 6) - 8a(n - 7) - a(n - 8) for n>=11. •

► [A212750] 1,14,72,216,529,1070,1984,3336,5345,8070,11816,16624,22897,30646,40384,52080,66369,83166,103240,126440,153681,184734,220672,261176,307489 ⋆ Number of (w,x,y,z) with all terms in { 0,...,n } and at least one of these conditions holds: w=R, x=R, y<R, z<R, where R = max { w,x,y,z } - min { w,x,y,z } . • a(n)=2 * a(n - 1) + 2 * a(n - 2) - 6 * a(n - 3) + 6 * a(n - 5) - 2 * a(n - 6) - 2 * a(n - 7) + a(n - 8). •

► [A365670] 0,1,14,72,257,873,2838,9085,28979,92145,292832,930124,2953569,9376798,29760901,94434276,299569798,950072891,3012393832,9549260877,30264906899,95902117819,303839485659,962486295193,3048497625289 ⋆ Number of perfect powers k which are not prime powers, and 1 < k < 10 ^ n. • a(n) = card({ k: 1 < k < 10 ^ n and k in A131605 }). •

► [A279447] 0,1,14,73,301,890,2321,5166,10654,20055,35880,60511,98419,153608,233331,343820,496076,699261,969234,1318885,1770185,2340646,3059749,3950618,5051786 ⋆ Number of nonequivalent ways to place 3 points on an n X n square grid so that no more than 2 points are on a vertical or horizontal straight line. • a(n) = (n ^ 6 - 5 * n ^ 4 + 14 * n ^ 3 - 14 * n ^ 2 + 4 * n) / 48 + IF(MOD(n, 2) = 1, 2 * n ^ 3 - 3 * n ^ 2 + 1) / 16. • a(n) = 3 * a(n - 1) + a(n - 2) - 11 * a(n - 3) + 6 * a(n - 4) + 14 * a(n - 5) - 14 * a(n - 6) - 6 * a(n - 7) + 11 * a(n - 8) - a(n - 9) - 3 * a(n - 10) + a(n - 11). •

► [A213284] 0,1,14,74,276,895,2506,6104,13224,26061,47590,81686,133244,208299,314146,459460,654416,910809,1242174,1663906,2193380,2850071,3655674,4634224,5812216 ⋆ Number of 5 - length words w over n - ary alphabet such that for every prefix z of w we have # (z,a _ i) = 0 or # (z,a _ i) >= # (z,a _ j) for all j>i and # (z,a _ i) counts the occurrences of the i - th letter in z. • a(n) = n * (94 - 204 * n + 155 * n ^ 2 - 45 * n ^ 3 + 6 * n ^ 4) / 6. •

► [A108650] 1,14,75,260,700,1596,3234,6000,10395,17050,26741,40404,59150,84280,117300,159936,214149,282150,366415,469700,595056,745844,925750,1138800,1389375 ⋆ a(n) = (n + 1) ^ 2 * (n + 2) * (n + 3) * (3 * n + 4) / 24. • a(n) = (n + 1) * Stirling2(n + 3,n + 1). (End) • a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>5. •

► [A296996] 0,1,14,75,310,911,2373,5254,10824,20305,36300,61081,99294,154735,234955,345836,498848,702609,973674,1324135,1776950,2348511,3069649,3961970,5065800 ⋆ Number of nonequivalent (mod D _ 8) ways to place 3 points on an n X n point grid so that no point is equally distant from two other points on the same row or the same column. • a(n) = (n ^ 6 - 3 * n ^ 4 + 5 * n ^ 3 - 4 * n ^ 2 + 4n) / 48 + (n == 1 mod 2) * (8 * n ^ 3 - 18n ^ 2 + 7 * n) / 48. • a(n) = (n ^ 6 - 3 * n ^ 4 + 5 * n ^ 3 - 4 * n ^ 2 + 4 * n) / 48 for n even. • a(n) = (n ^ 6 - 3 * n ^ 4 + 13 * n ^ 3 - 22 * n ^ 2 + 11 * n) / 48 for n odd. • a(n) = 3 * a(n - 1) + a(n - 2) - 11 * a(n - 3) + 6 * a(n - 4) + 14 * a(n - 5) - 14 * a(n - 6) - 6 * a(n - 7) + 11 * a(n - 8) - a(n - 9) - 3 * a(n - 10) + a(n - 11) for n>11. •

► [A270704] 0,14,76,186,344,550,804,1106,1456,1854,2300,2794,3336,3926,4564,5250,5984,6766,7596,8474,9400,10374,11396,12466,13584 ⋆ Even 14 - gonal (or tetradecagonal) numbers. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). • a(n) = 2 * n * (12 * n - 5). •

► [A152100] 1,14,76,218,472,870,1444,2226,3248,4542,6140,8074,10376,13078,16212,19810,23904,28526,33708,39482,45880,52934,60676,69138,78352 ⋆ G.f.: 1 - 2 * x * (- 7 - 10 * x + x ^ 2) / (x - 1) ^ 4. • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4), n > 4. a(n) = 2 * n * (8 * n ^ 2 + 12 * n + 1) / 3, n > 0. - _ R. J. Mathar _ , Sep 22 2009 •

► [A173962] 14,76,234,536,1030,1764,2786,4144,5886,8060,10714,13896,17654,22036,27090,32864,39406,46764,54986,64120,74214,85316,97474,110736,125150 ⋆ Averages of two consecutive odd cubes; a(n) = (n ^ 3 + (n + 2) ^ 3) / 2. • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Colin Barker _ , Jan 17 2015 •

► [A269495] 14,77,250,617,1286,2389,4082,6545,9982,14621,20714,28537,38390,50597,65506,83489,104942,130285,159962,194441,234214,279797,331730,390577,456926 ⋆ Number of length - 4 0..n arrays with no repeated value differing from the previous repeated value by one. • a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. •

► [A085462] 1,14,77,273,748,1729,3542,6630,11571,19096,30107,45695,67158,96019,134044,183260,245973,324786,422617,542717,688688,864501,1074514,1323490,1616615 ⋆ Number of 5 - tuples (v1,v2,v3,v4,v5) of nonnegative integers less than n such that v1<=v4, v1<=v5, v2<=v4 and v3<=v4. • a(n) = n + 12 * binomial(n, 2) + 38 * binomial(n, 3) + 45 * binomial(n, 4) + 18 * binomial(n, 5). • a(n) = n * (n + 1) * (2 * n + 1) * (3 * n + 1) * (3 * n + 2) / 120. • a(n) = sum(i=1..n, sum(j=1..n, i ^ 2 * Min(i,j))). - _ Enrique Pérez Herrero _ , Jan 30 2013 •

► [A050404] 1,14,77,280,798,1932,4158,8184,15015,26026,43043,68432,105196,157080,228684,325584,454461,623238,841225,1119272,1469930,1907620,2448810,3112200,3918915 ⋆ Partial sums of A051878. • a(n) = binomial(n + 5, 5) * (4 * n + 3) / 3. •

► [A058895] 0,0,14,78,252,620,1290,2394,4088,6552,9990,14630,20724,28548,38402,50610,65520,83504,104958,130302,159980,194460,234234,279818,331752 ⋆ a(n) = n ^ 4 - n. • a(n) = floor(n ^ 7 / (n ^ 3 + 1)). - _ Gary Detlefs _ , Feb 11 2010 • a(n) ^ 3 = (a(n) / n) ^ 4 + (a(n) / n) ^ 3. - _ Vincenzo Librandi _ , Feb 23 2012 • a(n) = 14 * C(n,2) + 36 * C(n,3) + 24 * C(n,4). - _ Dennis P. Walsh _ , Mar 21 2013 •

► [A082971] 1,14,82,410,1918,8657,38225,166322,716170,3059864,12994936,54924212,231235054,970347575,4060697955,16952812170,70629116910,293720506860,1219498444500,5055891511980,20933654593020,86571545598642,357628915621698,1475896409177780 ⋆ Number of permutations of { 1,2,...,n } containing exactly 3 occurrences of the 132 pattern. • a(n) = (2 * n - 9)! / n! / 6 / (n - 5)! * (n ^ 6 + 51 * n ^ 5 - 407 * n ^ 4 - 99 * n ^ 3 + 7750 * n ^ 2 - 22416 * n + 20160). • a(n) = (n ^ 6 + 51n ^ 5 - 407n ^ 4 - 99n ^ 3 + 7750n ^ 2 - 22416n + 20160)(2n - 9)! / [6 n!(n - 5)! for n>=5; a(4)=1. G.f.=(1 / 2)(P(x) + Q(x) / (1 - 4x) ^ (5 / 2), where P(x)=2x ^ 3 - 5x ^ 2 + 7x - 2, Q(x)= - 22x ^ 6 - 106x ^ 5 + 292x ^ 4 - 302x ^ 3 + 135x ^ 2 - 27x + 2. - _ Emeric Deutsch _ , Mar 27 2008 •

► [A176010] 14,83,111,180,208,277,305,374,402,471,499,568,596,665,693,762,790,859,887,956,984,1053,1081,1150,1178 ⋆ Positive numbers k such that k ^ 2 == 2 (mod 97). • a(n) = (- 97 + 41 * (- 1) ^ n + 194 * n) / 4. • a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n > 3; a(1)=14, a(2)=83, a(3)=111. • a(n) = a(n - 1) + 69 for n even, a(n) = a(n - 1) + 28 for n odd, a(1)=14. •

► [A033276] 0,14,84,300,825,1925,4004,7644,13650,23100,37400,58344,88179,129675,186200,261800,361284,490314,655500,864500,1126125,1450449,1848924,2334

500,2921750 ⋆ Number of diagonal dissections of an n - gon into 4 regions. ● a(n) = binomial(n + 2, 3) * binomial(n - 3, 3) / 4. ●

▶ [A006858] 0,1,14,84,330,1001,2548,5712,11628,21945,38962,65780,106470,166257,251720,371008,534072,752913,1041846,1417780,1900514,2513049,3281916,4237520,5414500 ⋆ Expansion of x * (1 + x) * (1 + 6 * x + x ^ 2) / (1 - x) ^ 7. ● a(n) = (n + 1) * binomial(2 * n + 4, 5) / 12. - _ Philippe Deléham _ , Mar 06 2004 ● a(n) = a(- 2 - n) for all n in Z. - _ Michael Somos _ , Jun 27 2023 ●

▶ [A054149] 1,14,84,410,1820,7648,31008,122584,475600,1818656,6874560,2574262495645888,353032960,1295729664,4732541824,17211685120,62362187264,225201546240,810825419264,2911520685056,10429433085952 ⋆ T(2n - 1,n), array T as in A054144. ● a(n) = 8 * a(n - 1) - 20 * a(n - 2) + 16 * a(n - 3) - 4 * a(n - 4). ●

▶ [A273182] 14,84,490,2856,16646,97020,565474,3295824,19209470,111960996,652556506,3803378040,22167711734,129202892364,753049642450,4389094962336,25581520131566,149100025827060,869018634830794,5065011783157704,29521052064115430,172061300601534876 ⋆ a(n) is the second number in a triple consisting of 3 numbers, which when squared are part of a right diagonal of a magic square of squares. ● a(0)=14, a(1)= 84, a(n + 1)= a(n) * 6 - a(n - 1). ●

▶ [A341854] 14,84,504,3192,21252,147420,1057224,7791168,58727214,451137596,3521923944,27878644080,223353322920,1808402199660,14778966163752,121784464712064,1011022286145816,8449458780183120,71042841567457760,600615322603936920,5103281457829103220 ⋆ Number of triangulations of a fixed hexagon with n internal nodes. ● a(n) = 1008 * binomial(4 * n + 7, n) / ((3 * n + 8) * (3 * n + 9)). ●

▶ [A272103] 1,14,85,320,910,2156,4494,8520,15015,24970,39611,60424,89180,127960,179180,245616,330429,437190,569905,733040,931546,1170884,1457050,1796600,2196675 ⋆ Convolution of nonzero heptagonal numbers (A000566) with themselves. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). ● a(n) = (n + 1) * (n + 2) * (n + 3) * (5 * n ^ 2 + 5 * n + 4) / 24. ●

▶ [A244865] 1,14,85,336,1023,2610,5860,11942,22555,40068,67677,109578,171157,259196,382096,550116,775629,1073394,1460845,1958396,2589763,3382302,4367364,5580666,7062679 ⋆ Number of 3 X 3 symmetric matrices with row and column sums <= n. ● a(n) = (15 * (127 + (- 1) ^ n) + 6432 * n + 8936 * n ^ 2 + 6480 * n ^ 3 + 2570 * n ^ 4 + 528 * n ^ 5 + 44 * n ^ 6) / 1920. ● a(n) = 6 * a(n - 1) - 14 * a(n - 2) + 14 * a(n - 3) - 14 * a(n - 5) + 14 * a(n - 6) - 6 * a(n - 7) + a(n - 8) for n>7. ●

▶ [A059600] 1,14,85,344,1086,2892,6798,14520,28743,53482,94523,159952,260780,411672,631788,945744,1384701,1987590,2802481,3888104,5315530,7170020,9553050,12584520,16405155 ⋆ Expansion of (1 + 6 * x + x ^ 2) / (1 - x) ^ 8. ● a(n) = binomial(n + 5, 5) * (4 * n ^ 2 + 24 * n + 21) / 21. ●

▶ [A372148] 1,14,86,374,1382,4694,15206,47894,148262,453974,1380326,4177814,12607142,37968854,114201446,343194134,1030762022,3094645334,9288654566,27875400854,83645076902,250972979414,752994435686,2259134301974 ⋆ a(n) = A371764(n, 2). ● a(n) = 2 * (4 * 3 ^ n - 9 * 2 ^ n + 7) - [n = 1]. - _ Hugo Pfoertner _ , Apr 20 2024 ●

▶ [A213121] 1,14,86,424,1926,8404,35836,150604,626726,2589844,10646676,43594464,177950236,724578824,2944375096,11944652884,48388816486,195794585044,791434666276,3196307541904,12898839944116,52019043912664 ⋆ Number of binary arrays of length 2 * n + 3 with fewer than n ones in any length 2n subsequence (=less than 50 % duty cycle). ● a(n) = 2 ^ (2 * n + 2) - 5 * (7 * n - 4) * C(2 * n - 2,n - 1) / n. - _ Vaclav Kotesovec _ , Oct 29 2012 ●

▶ [A202785] 14,87,340,1001,2442,5215,10088,18081,30502,48983,75516,112489,162722,229503,316624,428417,569790,746263,964004,1229865,1551418,1936991,2395704,2937505,3573206 ⋆ Number of 3 X 3 0..n arrays with row and column sums equal. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. ●

▶ [A114242] 1,14,90,385,1274,3528,8568,18810,38115,72358,130130,223587,369460,590240,915552,1383732,2043621,2956590,4198810,5863781,8065134,10939720,14651000,19392750,25393095 ⋆ a(n) = (n + 1)(n + 2) ^ 2 * (n + 3) ^ 2 * (n + 4)(2n + 5) / 720. ● a(n - 2) = (1 / 6) * Sum _{ 1 <= x _ 1, x _ 2 <= n } (x _ 1) ^ 2 * x _ 2 * (det V(x _ 1,x _ 2)) ^ 2 = 1 / 6 * sum { 1 <= i,j <= n } i ^ 2 * j * (i - j) ^ 2, where V(x _ 1,x _ 2 } is the Vandermonde matrix of order 2. - _ Peter Bala _ , Sep 21 2007 ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8). - _ Harvey P. Dale _ , Aug 21 2013 ●

▶ [A054487] 1,14,90,390,1320,3762,9438,21450,45045,88660,165308,294372,503880,833340,1337220,2089164,3187041,4758930,6970150,10031450,14208480,19832670,27313650,37153350,49961925 ⋆ a(n) = (3 * n + 4) * binomial(n + 7, 7) / 4. ● a(n) = 6 * binomial(n + 8, 8) - 5 * binomial(n + 7, 7). ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9). - _ Wesley Ivan Hurt _ , Jun 07 2021 ●

▶ [A220892] 1,14,91,364,1085,2666,5719,11096,19929,33670,54131,83524,124501,180194,254255,350896,474929,631806,827659,1069340,1364461,1721434,2149511,2658824,3260425 ⋆ G.f.: (1 + 8 * x + 22 * x ^ 2 + 8 * x ^ 3 + x ^ 4) / (1 - x) ^ 6. ● a(n) = (n + 1) * (n ^ 2 + 3 * n + 3) * (n ^ 2 + n + 1) / 3. [_ Colin Barker _ , Jan 03 2013] ●

▶ [A224328] 1,14,93,508,2555,12282,57337,262136,1179639,5242870,23068661,100663284,436207603,1879048178,8053063665,34359738352,146028888047,618475290606,2611340115949,10995116277740,46179488366571,193514046488554 ⋆ Number of idempotent n X n 0..3 matrices of rank n - 1 ● a(n) = n * (2 * 4 ^ (n - 1) - 1). ● a(n) = 10 * a(n - 1) - 33 * a(n - 2) + 40 * a(n - 3) - 16 * a(n - 4). ●

▶ [A241205] 0,0,1,14,95,436,1554,4632,12078,28380,61347,123838,236093,428792,746980,1255008,2042652,3232584,4989381,7530270,11137819,16174796,23101430,32495320,45074250 ⋆ Sum of x * y ^ 2 * z ^ 3 for positive integers x,y,z with x + y + z = n. ● a(n) = n ^ 2 * (n - 1) * (n - 2) * (n + 2) * (n + 1) * (3 * n ^ 2 + 1) / 10080. - corrected by _ Eric Rowland _ , Aug 15 2017 ●

▶ [A055844] 1,14,95,440,1595,4862,13013,31460,70070,145860,286858,537472,965770,1673140,2806870,4576264,7272991,11296450,17185025,25654200,37642605,54367170,77388675,108689100,150762300 ⋆ a(n) = (5 * n + 9) * binomial(n + 8, 8) / 9. ● a(n) = (5 * n + 9) * binomial(n + 8, 8) / 9. ● a(n) = 5 * binomial(n + 9, 9) - 4 * binomial(n + 8, 8). ●

▶ [A254469] 1,14,96,450,1650,5082,13728,33462,75075,157300,311168,586092,1058148,1841100,3100800,5073684,8090181,12603954,19228000,28778750,42329430,61274070,87403680,122996250,170922375 ⋆ Sixth partial sums of cubes (A000578). ● a(n) = n * (1 + n) ^ 2 * (2 + n) * (3 + n) * (4 + n) * (5 + n) ^ 2 * (6 + n) / 60480. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) + n ^ 3. ●

▶ [A008534] 1,14,98,462,1596,4410,10374,21658,41272,73206,122570,195734,300468,446082,643566,905730,1247344,1685278,2238642,2928926,3780140,4818954,6074838,7580202,9370536 ⋆ Coordination sequence for { A _ 6 }* lattice. ● a(n) = (7 / 6) * n * (n ^ 2 + 2) * (n ^ 2 + 3) for n>0, a(0)=1. - _ Bruno Berselli _ , Feb 28 2013 ●

▶ [A008415] 1,14,98,462,1666,4942,12642,28814,59906,115598,209762,361550,596610,948430,1459810,2184462,3188738,4553486,6376034,8772302,11879042,15856206,20889442,27192718,35011074 ⋆ Coordination sequence for 7 - dimensional cubic lattice. ● a(n) = 4 * n * n * (2 * n * n + 7) * (n * n + 14) / 45 + 2 - 0 ^ n. - _ George F. Johnson _ , Feb 21 2013 ●

▶ [A099193] 0,1,14,99,476,1765,5418,14407,34232,74313,149830,284075,511380,880685,1459810,2340495,3644272,5529233,8197758,11905267,16970060,23784309,32826266,44673751,60018984 ⋆ a(n) = n * (4 * n ^ 6 + 70 * n ^ 4 + 196 * n ^ 2 + 45) / 315. ● a(n) = n * (4 * n ^ 6 + 70 * n ^ 4 + 196 * n ^ 2 + 45) / 315. ● a(n) = 14 * a(n - 1) / (n - 1) + a(n - 2) for n > 1. - _ Seiichi Manyama _ , Jun 06 2018 ●

▶ [A244883] 1,14,100,472,1691,4988,12744,29160,61149,119482,220220,386464,650455,1056056,1661648,2543472,3799449,5553510,7960468,11211464,15540019,21228724,28616600,38107160,50177205 ⋆ Expansion of (1 + 6 * x + 16 * x ^ 2 + 8 * x ^ 3 + x ^ 4) / (1 - x) ^ 8. ● a(n) = ((n + 1) * (n + 2) * (n + 3) * (n * (n + 4) * (n * (16 * n + 57) + 137) + 420)) / 2520. - _ Todd Silvestri _ , Nov 16 2014 ●

▶ [A266561] 1,14,104,546,2275,8008,24752,68952,176358,419900,940576,1998724,4056234,7904456,14858000,27041560,47805615,82317690,138389160,227613750,366913365,580610160,903171360,1382805840,2086129500 ⋆ 12 - dimensional square numbers. ● a(n) = binomial(n + 11,11) * (n + 6) / 6. ● a(n) = 2 * binomial(n + 12,12) - binomial(n + 11,11). ● a(n) = binomial(n + 11,11) + 2 * binomial(n + 11,12) for n>0. ●

▶ [A131709] 1,14,104,904,8004,71004,630004,5590004,49600004,440100004,3905000004,34649000004,307440000004,2727910000004,24204700000004,214767900000004,1905632000000004,16908641000000004,150030090000000004,1331214490000000004,11811844000000000004,104806295100000000004,929944511000000000004,8251382159000000000004,73214376480000000000004 ⋆ Number of partitions into "bus routes" of an n X 1 grid. ● a(n) = Product _{ v _ i } m _ i + Sum _{ c _ j } (se _ j - 1) * (Product _{ v _ k E (G _ n - c _ j) } m _ k - { number of partitions of (G _ n - c _ i) which has cycles }) where: ●

▶ [A139614] 14,105,196,287,378,469,560,651,742,833,924,1015,1106,1197,1288,1379,1470,1561,1652,1743,1834,1925,2016,2107,2198 ⋆ a(n) = 91 * n + 14. ● a(n) = 2 * a(n - 1) - a(n - 2); a(0)=14, a(1)=105. - _ Harvey P. Dale _ , Feb 25 2015 ●

▶ [A008506] 1,14,105,560,2380,8568,27132,77520,203490,497420,1144066,2496144,5200300,10400599,20058286,37442055,67863355,119757470,206244507,347346468,573088920,927780270,1475840380,2309645534,3559971156 ⋆ 12 - dimensional centered tetrahedral numbers. ● a(n) = 1 + 13 * n * (n + 1) * (n ^ 10 + 5 * n ^ 9 + 864 * n ^ 8 + 3426 * n ^ 7 + 136197 * n ^ 6 + 396621 * n ^ 5 + 5502866 * n ^ 4 + 10348684 * n ^ 3 + 56939592 * n ^ 2 + 51830784 * n + 114341760) / 479001600. - _ Bruno Berselli _ , Mar 22 2012 ●

▶ [A010966] 1,14,105,560,2380,8568,27132,77520,203490,497420,1144066,2496144,5200300,10400600,20058300,37442160,67863915,119759850,206253075,347373600,573166440,927983760,1476337800,2310789600,3562467300 ⋆ a(n) = binomial(n,13). ● a(n + 12) = n(n + 1)(n + 2)(n + 3)(n + 4)(n + 5)(n + 6)(n + 7)(n + 8)(n + 9)(n + 10)(n + 11)(n + 12) / 13!. - _ Artur Jasinski _ , Dec 02 2007; _ R. J. Mathar _ , Jul 07 2009 ● a(n) = n / (n - 13) * a(n - 1), n > 13. - _ Vincenzo Librandi _ , Mar 26 2011 ●

▶ [A290895] 0,0,0,0,0,0,1,14,105,560,2380,8568,27132,77521,203518,497826,1148126,2527609,5401676,11508168,25437917,60978022,162008098,468103230,1409724358 ⋆ p - INVERT of the positive integers, where p(S) = 1 - S ^ 7. ● a(n) = 14 * a(n - 1) - 91 * a(n - 2) + 364 * a(n - 3) - 1001 * a(n - 4) + 2002 * a(n - 5) - 3003 * a(n - 6) + 3433 * a(n - 7) - 3003 * a(n - 8) + 2002 * a(n - 9) - 1001 * a(n - 10) + 364 * a(n - 11) - 91 * a(n - 12) + 14 * a(n - 13) - a(n - 14). ●

▶ [A002409] 1,14,112,672,3360,14784,59136,219648,768768,2562560,8200192,25346048,76038144,222265344,635043840,1778122752,4889837568,13231325184,35283533824,92851404800,241413652480,620777963520,1580162088960 ⋆ a(n) = 2 ^ n * C(n + 6,6). Number of 6D hypercubes in an (n + 6) - dimensional hypercube. ● a(n) = Sum _{ i=6..n + 6 } binomial(i,6) * binomial(n + 6,i). Example: for n=5, a(5) = 1 * 462 + 7 * 330 + 28 * 165 + 84 * 55 + 210 * 11 + 462 * 1 = 14784. - _ Bruno Berselli _ , Mar 23 2018 ●

▶ [A155655] 1,14,112,854,6496,49574,379792,2920694,22542016,174571334,1356217072,10567261334,82560763936,646644824294,5076269583952,39931933598774,314707907280256,2484430327672454,19642812107392432,155514083261229014 ⋆ 8 ^ n + 7 ^ n - 1 ^ n. ● a(n)=15 * a(n - 1) - 56 * a(n - 2) - 42 with a(0)=1, a(1)=14 - _ Vincenzo Librandi _ , Jul 21 2010 ●

▶ [A007817] 1,14,113,720,4033,20864,102356,483680,2223482,10009570,44330931,193798624,838329841,3595080184,15305823256,64766503744,272635026526,1142528179324,4769415499234,19842220567264,82303947852506,340491603805344,1405318295426488,5788074933453632,23794580648906708 ⋆ Number of abstract simplicial 2 - complexes on { 1,2,3,...,n + 4 } which triangulate a Moebius band in such a way that all vertices lie on the boundary and are traversed in the order 1,2,3,... as one goes around the boundary. ● a(n) = 4 ^ (n - 1) - 2 * (29 * n ^ 3 - 77 * n ^ 2 + 106 * n - 88) * binomial(2 * n - 5,n - 1) / ((n - 3) * (n + 1) * (n + 2)). - _ Mark van Hoeij _ , Oct 30 2011 ●

► [A071573] 1,14,114,594,2532,9658,34066,113930,366358,1141614,3465398,10291022,29988178,85961454,242870564,677436550,1867877934 ⋆ a(1) = 1; a(n) = a(n - 1) - th nontotient number. ● a(3)=114 is the 14th = a(2) - th term in A005277. ●

► [A155647] 1,14,116,944,7856,66824,578096,5062904,44726336,397498184,3547250576,31743856664,284606318816,2554926522344,22955156619056,206361317079224,1855841298759296,16694108359111304,150196195253667536 ⋆ a(n) = 9 ^ n + 6 ^ n - 1 ^ n. ● a(n) = 15 * a(n - 1) - 54 * a(n - 2) - 40 with a(0)=1, a(1)=14. - _ Vincenzo Librandi _ , Jul 21 2010 ● a(0)=1, a(1)=14, a(2)=116, a(n) = 16 * a(n - 1) - 69 * a(n - 2) + 54 * a(n - 3). - _ Harvey P. Dale _ , Dec 04 2012 ●

► [A073383] 1,14,119,784,4396,22008,101220,435696,1777986,6943244,26129950,95282992,338108876,1171554776,3975215844,13239402960,43364985867,139925413866,445409413421,1400429394784,4353771487912 ⋆ Sixth convolution of A000129(n + 1) (generalized (2,1) - Fibonacci, called Pell numbers), n>=0, with itself. ● a(n) = Sum _{ k=0..floor(n / 2) } 2 ^ (n - 2 * k) * binomial(n - k + 6, 6) * binomial(n - k, k). ● a(n) = F’’’’’’(n + 7, 2) / 6!, that is, 1 / 6! times the 6th derivative of the (n + 7) - th Fibonacci polynomial evaluated at x=2. - _ T. D. Noe _ , Jan 19 2006 ●

► [A268446] 1,14,119,798,4655,24794,123970,592020,2731365,12271350,53993940,233646504,997490844,4211628008,17620076360,73153696336,301758997386,1237956266316,5054988087457,20558563992050,83322650532485,336691526641470,1356968880100470,5456577564869340,21898107332699325 ⋆ Number of North - East lattice paths from (0,0) to (n,n) that cross the diagonal y = x horizontally exactly three times. ● a(n) = 14 * binomial(2 * n + 1, n - 6) / (n + 8). ●

► [A002056] 1,14,120,825,5005,28028,148512,755820,3730650,17978180,84987760,395482815,1816357725,8250123000,37119350400,165645101160,733919156190,3231337461300,14147884842000,61636377252450,267325773340626,1154761882042824,4969989654817600 ⋆ Number of diagonal dissections of a convex n - gon into n - 5 regions. ● a(n) = binomial(n - 3, 3) * binomial(2n - 7, n - 6) / (n - 5). ●

► [A163942] 1,14,121,834,5037,27918,145777,728858,3526933,16640262,76952793,350167122,1572467389,6984206846,30735634369,134202204426,582040933605,2509672804470,10766469841705,45982221941570,195609944400781 ⋆ Fifth right hand column of triangle A163940. ● a(n) = (1 / 18) * (3 ^ (n + 6) + (3 * n - 10) * 4 ^ (n + 3) - 9 * 2 ^ (n + 3) + 1). ● a(n) = 14 * a(n - 1) - 75 * a(n - 2) + 190 * a(n - 3) - 224 * a(n - 4) + 96 * a(n - 5). ●

► [A167567] 0,14,124,601,2120,6096,15168,33858,69432,132990,240812,415987,690352,1106768,1721760,2608548,3860496,5595006,7957884,11128205,15323704,20806720,27890720,36947430,48414600 ⋆ The fourth left hand column of triangle A167565. ● a(n) = (27 * n ^ 7 - 287 * n ^ 6 + 1113 * n ^ 5 - 1925 * n ^ 4 + 1428 * n ^ 3 - 308 * n ^ 2 - 48 * n) / 7!. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8). ● a(n) - 7 * a(n - 1) + 21 * a(n - 2) - 35 * a(n - 3) + 35 * a(n - 4) - 21 * a(n - 5) + 7 * a(n - 6) - a(n - 7) = 27. ●

► [A147590] 1,14,124,1016,8176,65504,524224,4194176,33554176,268434944,2147482624,17179867136,137438949376,1099511619584,8796093005824,70368744144896,562949953355776,4503599627239424,36028797018701824,288230376151187456 ⋆ Numbers whose binary representation is the concatenation of 2n - 1 digits 1 and n - 1 digits 0. ● a(n) = 10 * a(n - 1) - 16 * a(n - 2). ●

► [A212234] 14,124,1113,10002,89911,808403,7269626,65380788,588072207,5289869433,47586806448,428105244789,3851528519268,34652238703192,311776035394625,2805210936456962,25240510718260791,227111596463339585 ⋆ Number of 0..2 arrays of length 1 + 2 * n with sum no more than 2 * n in any length 2n subsequence (=50 % duty cycle) ● a(n) = [x ^ (2 * n)] (1 + z + z ^ 2) ^ (2 * n - 1) * (1 + 3 * z + 5 * z ^ 2) / (1 - z). - _ Robert Israel _ , Mar 06 2018 ●

► [A155637] 1,14,124,1124,10624,103124,1015624,10078124,100390624,1001953124,10009765624,100048828124,1000244140624,10001220703124,100006103515624,1000030517578124,10000152587890624,100000762939453124 ⋆ 10 ^ n + 5 ^ n - 1. ● a(n)=15 * a(n - 1) - 50 * a(n - 2) - 36 with a(0)=1, a(1)=14 - _ Vincenzo Librandi _ , Jul 21 2010 ● a(0)=1, a(1)=14, a(2)=124, a(n)=16 * a(n - 1) - 65 * a(n - 2) + 50 * a(n - 3) [From Harvey P. Dale, Oct 17 2011] ●

► [A041001] 1,14,125,906,5810,34364,191901,1026610,5312230,26767940,131990066,639210404,3048892740,14354652152,66828135005,308078809794,1408022619806,6385966846580,28765327498278,128777533131500 ⋆ Convolution of A000108(n + 1), n >= 0, (Catalan numbers) with A038845 (3 - fold convolution of powers of 4). ● a(n) = (n + 3) * (3 * (n + 6) * 2 ^ (2 * n + 3) - (n + 4) * binomial(2 * n + 7, n + 3)) / 12; G.f. (c(x) ^ 2) / (1 - 4 * x) ^ 3, where c(x) = g.f. for Catalan numbers. ●

► [A025211] 1,14,125,910,5901,35574,204205,1132670,6129101,32566534,170691885,885423630,4556561101,23305343894,118631189165,601616805790,3042056477901,15346559343654,77279066272045,388583895311150,1951684190615501,9793511186181814,49108010998116525 ⋆ Expansion of 1 / ((1 - 2x)(1 - 3x)(1 - 4x)(1 - 5x)). ● a(n) = 3 ^ (n + 3) / 2 - 2 * 4 ^ (n + 2) - 2 ^ (n + 2) / 3 + 5 ^ (n + 3) / 6. - _ R. J. Mathar _ , Mar 22 2011 ●

► [A073393] 1,14,126,896,5488,30240,153888,735744,3344544,14581952,61378240,250693632,997593856,3880249856,14791776768,55385874432,204082373376,741186464256,2656771815936,9410113241088 ⋆ Sixth convolution of A002605(n) (generalized (2,2) - Fibonacci), n >= 0, with itself. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n - k + 6, 6) * binomial(n - k, k) * 2 ^ (n - k). ● a(0)=1, a(1)=14, a(2)=126, a(3)=896, a(4)=5488, a(5)=30240, a(6)=153888, a(7)=735744, a(8)=3344544, a(9)=14581952, a(10)=61378240, a(11)=250693632, a(12)=997593856, a(13)=3880249856, a(n) = 14 * a(n - 1) - 70 * a(n - 2) + 112 * a(n - 3) + 196 * a(n - 4) - 728 * a(n - 5) - 168 * a(n - 6) + 1920 * a(n - 7) + 336 * a(n - 8) - 2912 * a(n - 9) - 1568 * a(n - 10) + 1792 * a(n - 11) + 2240 * a(n - 12) + 896 * a(n - 13) + 128 * a(n - 14). - _ Harvey P. Dale _ , Jan 24 2013 ●

► [A020918] 1,14,126,924,6006,36036,204204,1108536,5819814,29745716,148728580,730122120,3528923580,16830250920,79342611480,370265520240,1712478031110,7857252142740,35794148650260 ⋆ Expansion of 1 / (1 - 4 * x) ^ (7 / 2). ● a(n) = ((2n + 5)(2n + 3)(2n + 1) / (5 * 3 * 1)) * binomial(2n, n). ● a(n) = binomial(2n + 6, 6) * binomial(2n, n) / binomial(n + 3, 3). ● a(n) = binomial(n + 3, 3) * binomial(2n + 6, n + 3) / binomial(6, 3). (End) ● a(n) = 4 ^ n * hypergeom([- n, - 5 / 2], [1], 1). - _ Peter Luschny _ , Apr 26 2016 ●

► [A021354] 1,14,129,994,6965,46158,295513,1850618,11423709,69851782,424437377,2568196722,15496267333,93328343486,561380193321,3373943212906,20266372059437,121689277194870,730500423652945 ⋆ Expansion of 1 / ((1 - x)(1 - 3x)(1 - 4x)(1 - 6x)). ● a(0)=1, a(1)=14; for n>1, a(n) = 10 * a(n - 1) - 24 * a(n - 2) + (3 ^ n - 1) / 2. - _ Vincenzo Librandi _ , Jul 09 2013 ● a(0)=1, a(1)=14, a(2)=129, a(3)=994; for n>3, a(n) = 14 * a(n - 1) - 67 * a(n - 2) + 126 * a(n - 3) - 72 * a(n - 4). - _ Vincenzo Librandi _ , Jul 09 2013 ●

► [A021114] 1,14,131,1036,7497,51450,341167,2209592,14071013,88494406,551310123,3409583268,20966120449,128339843282,782754695399,4760106416464,28878529850205,174860636120478,1057111102343395 ⋆ Expansion of 1 / ((1 - x)(1 - 2x)(1 - 5x)(1 - 6x)). ● a(0)=1, a(1)=14; for n>1, a(n) = 11 * a(n - 1) - 30 * a(n - 2) + 2 ^ n - 1. - _ Vincenzo Librandi _ , Jul 07 2013 ● a(0)=1, a(1)=14, a(2)=131, a(3)=1036; for n>2, a(n) = 14 * a(n - 1) - 65 * a(n - 2) + 112 * a(n - 3) - 60 * a(n - 4). - _ Vincenzo Librandi _ , Jul 07 2013 ● a(n) = (3 * 6 ^ (n + 3) - 5 ^ (n + 4) + 5 * 2 ^ (n + 3) - 3) / 60. [_ Yahia Kahloune _ , Jul 07 2013] ●

► [A113976] 14,133,616,2128,6664,20272,61096,183568,550984,1653232,4959976,14880208,44640904,133922992,401769256,1205308048,3615924424,10847773552,32543320936,97629963088,292889889544,878669668912 ⋆ a(n) = 4 * a(n - 1) - 3 * a(n - 2), for n>3, with a(0) = 14, a(1) = 133, a(2) = 616, and a(3) = 2128. ● a(n) = 28 * (3 ^ (n + 1) - 5), n>1. ●

► [A017269] 1,14,133,1070,7861,54614,365653,2385950,15282421,96547814,603612373,3743478830,23070427381,141471930614,864083198293,5260771611710,31946034826741,193583363883014,1171036345331413 ⋆ Expansion of 1 / ((1 - 3x)(1 - 5x)(1 - 6x)). ● a(n) = 14 * a(n - 1) - 63 * a(n - 2) + 90 * a(n - 3). ● a(n) = 11 * a(n - 1) - 30 * a(n - 2) + 3 ^ n. (End) ● a(n) = (2 * 6 ^ (n + 2) - 3 * 5 ^ (n + 2) + 3 ^ (n + 2)) / 6. - _ Yahia Kahloune _ , Aug 12 2013 ●

► [A021079] 1,14,133,1086,8253,60438,433861,3080462,21737485,152860422,1072817109,7520900478,52691034397,369016181366,2583829064677,18089666698734,126639120006189,886519652765670,6205820820773365 ⋆ Expansion of 1 / ((1 - x)(1 - 2x)(1 - 4x)(1 - 7x)). ● a(n) = - (1 / 18) + (4 / 5) * 2 ^ n - (32 / 9) * 4 ^ n + (343 / 90) * 7 ^ n. [_ Antonio Alberto Olivares _ , May 22 2012] ● a(0)=1, a(1)=14; for n>1, a(n) = 11 * a(n - 1) - 28 * a(n - 2) + 2 ^ n - 1. - _ Vincenzo Librandi _ , Jul 06 2013 ● a(0)=1, a(1)=14, a(2)=133, a(3)=1086; for n>3, a(n) = 14 * a(n - 1) - 63 * a(n - 2) + 106 * a(n - 3) - 56 * a(n - 4). - _ Vincenzo Librandi _ , Jul 06 2013 ●

► [A164598] 1,14,134,1132,9028,69848,531224,3999856,29936656,223244768,1661090912,12342768832,91636134976,679979479424,5044125163904,37410199666432,277422140424448,2057118896434688,15253073982785024,113094845314640896 ⋆ a(n) = 12 * a(n - 1) - 34 * a(n - 2), for n > 1, with a(0) = 1, a(1) = 14. ● a(n) = ((1 + 4 * sqrt(2)) * (6 + sqrt(2)) ^ n + (1 - 4 * sqrt(2)) * (6 - sqrt(2)) ^ n) / 2. ●

► [A016801] 1,14,135,1120,8621,63714,460195,3280340,23204841,163423414,1147981055,8052113160,56430306661,395275799114,2767989986715,19380181827580,135678323522081,949816596710814,6648989892621175 ⋆ Expansion of 1 / ((1 - 3x)(1 - 4x)(1 - 7x)). ● a(n) = 14 * a(n - 1) - 61 * a(n - 2) + 84 * a(n - 3); a(0)=1, a(1)=14, a(2)=135. - _ Harvey P. Dale _ , May 10 2012 ● a(n) = 9 * 3 ^ n / 4 - 16 * 4 ^ n / 3 + 49 * 7 ^ n / 12. - _ R. J. Mathar _ , Jun 23 2013 ● a(n) = 11 * a(n - 1) - 28 * a(n - 2) + 3 ^ n. - _ Vincenzo Librandi _ , Jun 26 2013 ●

► [A004004] 0,1,14,135,1228,11069,99642,896803,8071256,72641337,653772070,5883948671,52955538084,476599842805,4289398585298,38604587267739,347441285409712,3126971568687473 ⋆ a(n) = (3 ^{ 2n + 1 } - 8 * n - 3) / 16. ● a(n) = 11 * a(n - 1) - 19 * a(n - 2) + 9 * a(n - 3). - _ Johannes W. Meijer _ , Jun 27 2009 ● a(n) = a(n - 1) + (3 ^ (2 * n - 1) - 1) / 2. - _ Lechoslaw Ratajczak _ , Jul 06 2016 ●

► [A155625] 1,14,136,1394,14896,162074,1775656,19503554,214424416,2358209834,25938473176,285315864914,3138445153936,34522779252794,379750102018696,4177249243157474,45949734158539456,505447045679162954 ⋆ 11 ^ n + 4 ^ n - 1. ● a(n)=15 * a(n - 1) - 44 * a(n - 2) - 30 with a(0)=1, a(1)=14 - _ Vincenzo Librandi _ , Jul 21 2010 ●

► [A016296] 1,14,137,1162,9165,69342,511393,3709874,26619989,189594790,1343438889,9485451066,66805055773,469669890158,3297861746225,23135894831938,162205576930917,1136710604184246,7963332057891001 ⋆ Expansion of 1 / ((1 - 2x)(1 - 5x)(1 - 7x)). ● a(n - 2) = ((7 ^ n - 2 ^ n) / 5 - (5 ^ n - 2 ^ n) / 3) / 2. - _ Zerinvary Lajos _ , Jun 05 2009 ● a(n) = 14 * a(n - 1) - 59 * a(n - 2) + 70 * a(n - 3), n >= 3. - _ Vincenzo Librandi _ , Mar 16 2011 ● a(n) = 12 * a(n - 1) - 35 * a(n - 2) + 2 ^ n, n >= 2. - _ Vincenzo Librandi _ , Mar 16 2011 ●

► [A021044] 1,14,137,1186,9789,79278,637249,5107322,40887077,327183142,2617726761,20942603058,167543199565,1340352738206,10722843363473,85782811346794,686262684222453,5490102054386070,43920818177432185,351366550647536930,2810932420866630941 ⋆ Expansion of 1 / ((1 - x)(1 - 2x)(1 - 3x)(1 - 8x)). ● a(n) = - (1 / 14) + (4 / 3) * 2 ^ n - (27 / 10) * 3 ^ n + (256 / 105) * 8 ^ n. - _ Antonio Alberto Olivares _ , May 12, 2012 ● a(0)=1, a(1)=14; for n>1, a(n) = 11 * a(n - 1) - 24 * a(n - 2) + 2 ^ n - 1. - _ Vincenzo Librandi _ , Jul 05 2013 ● a(0)=1, a(1)=14, a(2)=137, a(3)=1186; for n>3, a(n) = 14 * a(n - 1) - 59 * a(n - 2) + 94 * a(n - 3) - 48 * a(n - 4). - _ Vincenzo Librandi _ , Jul 05 2013 ●

► [A374513] 1,14,140,1176,8904,62832,421344,2718144,17008992,103847744,621292672,3654187264,21182563584,121263109632,686660004864,3851149940736,21416533501440,118199459288064,647926485764096,3529938203545600,19124354344775680 ⋆ Expansion of 1 / (1 - 4 * x - 4 * x ^ 2) ^ (7 / 2). ● a(0) = 1, a(1) = 14; a(n) = (2 * (2 * n + 5) * a(n - 1) + 4 * (n + 5) * a(n - 2)) / n. ● a(n) = (binomial(n + 6,3) / 20) * Sum _{ k=0..floor(n / 2) } 2 ^ (n - k) * binomial(n + 3,n - 2 * k) * binomial(2 * k + 3,k). ● a(n) = 2 ^ (n - 4) * Pochhammer(n + 1, 6) * hypergeom([(1 - n) / 2, - n / 2], [4], 2) / 45. - _ Stefano Spezia _ , Jul 10 2024 ●

► [A016290] 1,14,140,1240,10416,85344,690880,5559680,44608256,357389824,2861214720,22898104320,183218384896,1465881288704,11727587164160,93822844764160,750591347982336,6004765143465984,48038258586419200,384306184466432000,3074455146595352576,24595649968853745664 ⋆ Expansion of 1 / ((1 - 2x)(1 - 4x)(1 - 8x)). ● a(n) = (2 ^ n - 6 * 4 ^ n + 8 * 8 ^ n) / 3. - _ James R. Budden

hagen _ , Dec 14 2003 ● a(n) = Sum _{ 0<=i,j,k,<=n; i + j + k=n } 2 ^ i * 4 ^ j * 8 ^ k. - _ Hieronymus Fischer _ , Jun 25 2007 ● a(n) = 14 * a(n - 1) - 56 * a(n - 2) + 64 * a(n - 3) for n >= 3. ● a(n) = 12 * a(n - 1) - 32 * a(n - 2) + 2 ^ n with a(0)=1, a(1)=14. (End) ●

► [A016241] 1,14,141,1246,10277,81270,624877,4710062,34985973,256995046,1871524733,13536029598,97364345989,697223254742,4974599780109,35386420442254,251090274984725,1777943916226758,12567479361589405,88703587219138430,625312500662044581 ★ Expansion of 1 / ((1 - x) * (1 - 6 * x) * (1 - 7 * x)). ● a(0)=1, a(1)=14, a(n) = 13 * a(n - 1) - 42 * a(n - 2) + 1. - _ Vincenzo Librandi _ , Feb 10 2011 ● a(n) = (1 - 6 ^ (n + 2) + 5 * 7 ^ (n + 1)) / 30. - _ Vladimir Joseph Stephan Orlovsky _ , Jul 21 2011 ● a(0)=1, a(1)=14, a(2)=141, a(n) = 14 * a(n - 1) - 55 * a(n - 2) + 42 * a(n - 3). - _ Harvey P. Dale _ , Aug 05 2011 ●

► [A039916] 1,14,141,1415,14159,141592,1415926,14159265,141592653,1415926535,14159265358,141592653589,1415926535897,14159265358979,141592653589793,1415926535897932,14159265358979323,141592653589793238 ★ Concatenation of the decimal digits of Pi - 3. ● a(n) = floor((Pi - 3) * 10 ^ n). G.f.: (f(x) - 3 * x) / (x - 10 * x ^ 2) where f(x) is the G.f. of A000796. - _ Robert Israel _ , Oct 06 2014 ●

► [A241217] 1,14,142,1428,14285,142857,1428571,14285714,142857142,1428571428,14285714285,142857142857,1428571428571,14285714285714,142857142857142,1428571428571428,14285714285714285,142857142857142857,1428571428571428571,14285714285714285714 ★ Largest number that when multiplied by 7 produces an n - digit number. ● a(n) = floor(10 ^ n / 7). - _ Michel Marcus _ , Apr 21 2014 ●

► [A238473] 14,143,612,1771,4095,8184,14763,24682,38916,58565,84854,119133,162877,217686,285285,367524,466378,583947,722456,884255,1071819,1287748,1534767,1815726,2133600 ★ a(n) = binomial(5 * n + 8, 4) / 5 for n >= 0. ● a(n) = binomial(5 * n + 8, 4) / 5 = (5 * n + 8) * (5 * n + 7) * (5 * n + 6) * (n + 1) / 4! for n >= 0. ●

► [A016233] 1,14,143,1300,11181,93354,766363,6228560,50316761,404975494,3252010983,26077123020,208922159941,1672903158434,13390854662003,107164984268680,857510609012721,6861038546418174,54893076742927423 ★ Expansion of 1 / ((1 - x)(1 - 5x)(1 - 8x)). ● a(n) = (1 / 28) - (5 / 12) * 5 ^ n + (8 / 21) * 8 ^ n. - _ Antonio Alberto Olivares _ , Feb 06 2010 ● a(0)=1, a(1)=14, a(n) = 13 * a(n - 1) - 40 * a(n - 2) + 1. - _ Vincenzo Librandi _ , Feb 10 2011 ● a(0)=1, a(1)=14, a(2)=143, a(n) = 14 * a(n - 1) - 53 * a(n - 2) + 40 * a(n - 3). - _ Harvey P. Dale _ , Dec 26 2015 ●

► [A099914] 1,14,144,1444,14444,144444,1444444,14444444,144444444,1444444444,14444444444,144444444444,1444444444444,14444444444444,144444444444444,1444444444444444,14444444444444444 ★ Expansion of (1 + 3x) / ((1 - x)(1 - 10x)). ● a(n)=10 ^ n * 13 / 9 - 4 / 9; a(n)=11a(n - 1) - 10a(n - 2), a(0)=1, a(1)=14. ●

► [A016278] 1,14,145,1370,12541,113534,1023865,9221090,83008981,747138854,6724424785,60520350410,544684739821,4902167424974,44119521140905,397075733249330,3573681728253061,32163135941435894,289468224634660225 ★ Expansion of 1 / ((1 - 2x)(1 - 3x)(1 - 9x)). ● a(n) = 14 * a(n - 1) - 51 * a(n - 2) + 54 * a(n - 3); a(n) = (4 / 7) * 2 ^ (n - 1) + (- 3 / 2) * 3 ^ (n - 1) + (27 / 14) * 9 ^ (n - 1). - _ Antonio Alberto Olivares _ , Apr 21 2008, Apr 22 2008 ●

► [A027473] 1,14,147,1372,12005,100842,823543,6588344,51883209,403536070,3107227739,23727920916,179936733613,1356446145698,10173346092735,75960984159088,564959819683217,4187349251769726,30939858360298531 ★ Second column of A027466. ● a(n) = n * 7 ^ (n - 1). ● a(n) = 14 * a(n - 1) - 49 * a(n - 2) with a(1) = 1, a(2) = 14. ●

► [A002451] 1,14,147,1408,13013,118482,1071799,9668036,87099705,784246870,7059619931,63542171784,571901915677,5147206719578,46325218390143,416928397167052,3752361301126529,33771274616631006,303941563175648035,2735474435084708240,24619271381777877861 ★ Expansion of 1 / ((1 - x) * (1 - 4 * x) * (1 - 9 * x)). ● a(n) = 1 / 24 - 4 ^ (n + 2) / 15 + 9 ^ (n + 2) / 40. - _ Antonio Alberto Olivares _ , Feb 03 2010 ● a(n) = 13 * a(n - 1) - 36 * a(n - 2) + 1, n >= 2. - _ Vincenzo Librandi _ , Mar 23 2011 ●

► [A016170] 1,14,148,1400,12496,107744,908608,7548800,62070016,506637824,4113568768,33271347200,268347559936,2159841173504,17357093552128,139326933401600,1117436577120256,8956419276406784,71752914167922688 ★ Expansion of 1 / ((1 - 6x)(1 - 8x)). ● a(n) = Sum _{ k=1..n } 2 ^ (n - 1) * 3 ^ (n - k) * binomial(n,k). - _ Zerinvary Lajos _ , Sep 24 2006 ● a(n) = 8 * a(n - 1) + 6 ^ n. [_ Vincenzo Librandi _ , Feb 09 2011] ● a(0)=1, a(1)=14, a(n) = 14 * a(n - 1) - 48 * a(n - 2) [_ Harvey P. Dale _ , Dec 08 2011] ●

► [A081201] 0,1,14,148,1400,12496,107744,908608,7548800,62070016,506637824,4113568768,33271347200,268347559936,2159841173504,17357093552128,139326933401600,1117436577120256,8956419276406784,71752914167922688,574632673083392000,4600717543107198976 ★ 7th binomial transform of (0,1,0,1,0,1,....), A000035. ● a(n) = 14 * a(n - 1) - 48 * a(n - 2) with n>1, a(0)=0, a(1)=1. ● a(n) = 8 ^ n / 2 - 6 ^ n / 2. ●

► [A081184] 0,1,14,149,1428,12989,114730,995737,8548008,72872473,618458246,5233409213,44200191420,372832446869,3142245259426,26468308629121,222870793614672,1876180605036721,15791601170624510,132901927952017253 ★ 7th binomial transform of (0,1,0,2,0,4,0,8,0,16,...). ● a(n) = 14 * a(n - 1) - 47 * a(n - 2), a(0)=0, a(1)=1. ● a(n) = ((7 + sqrt(2)) ^ n - (7 - sqrt(2)) ^ n) / (2 * sqrt(2)). ● a(n) = Sum _{ k=0..n } C(n,2 * k + 1) * 2 ^ k * 7 ^ (n - 2 * k - 1). ●

► [A032343] 0,1,14,149,1506,15085,150886,1508909,15089154,150891621,1508916310,15089163221,150891632354,1508916323709,15089163237286,150891632373085,1508916323731106,15089163237311349,150891632373113814 ★ a(n) = 10 * a(n - 1) + n ^ 2, a(0)=0. ● a(n) =(10 ^ n - 1) * (110 / 729) - n ^ 2 / 9 - n * (20 / 81). ●

► [A153598] 1,14,150,1456,13484,121800,1084936,9586304,84301200,739246816,6471600224,56597049600,494665084096,4321846895744,37751262672000,329712720203776,2879419999940864,25145094869798400,219578008179897856,1917417750507843584 ★ a(n) = ((7 + sqrt(3)) ^ n - (7 - sqrt(3)) ^ n) / (2 * sqrt(3)). ● a(n) = 14 * a(n - 1) - 46 * a(n - 2) for n>1; a(0)=0, a(1)=1. - _ Philippe Deléham _ , Jan 01 2009 ●

► [A262183] 0,1,14,150,1520,15235,152406,1524144,15241560,152415765,1524157870,15241578986,152415790224,1524157902695,15241579027510,152415790275780,1524157902758616,15241579027587129,152415790275872430,1524157902758725630,15241579027587257840 ★ a(0) = 0, a(n) = 10 * a(n - 1) + n * (n + 1) * (n + 2) / 6. ● a(n) = (1 / 9 ^ 4) * 10 ^ (n + 3) - (243 * n ^ 3 + 1539 * n ^ 2 + 3096 * n + 2000) / 13122. ● a(n) = 14 * a(n - 1) - 46 * a(n - 2) + 64 * a(n - 3) - 41 * a(n - 4) + 10 * a(n - 5) for n>4. - _ Colin Barker _ , Sep 20 2015 ●

► [A357484] 1,14,150,1536,15594,158050,1601356,16223814,164366170,1665216896,16870539234,170917714410,1731590444316,17542976546494,177730263461890,1800609290091936,18242215773029194,184814350419581330,1872379131238643436,18969325721395559574 ★ Number of linearity regions of a max - pooling function with a 3 by n input and 2 by 2 pooling windows. ● a(n) = 13 * a(n - 1) - 31 * a(n - 2) + 20 * a(n - 3) - 4 * a(n - 4) for n>= 5. ●

► [A016163] 1,14,151,1484,13981,128954,1176211,10664024,96366841,869254694,7833057871,70546348964,635161281301,5717672234834,51465153629131,463216900240304,4169104690053361,37522705149933374,337708161046665991 ★ Expansion of 1 / ((1 - 5x)(1 - 9x)). ● a(n) = ((7 + sqrt4) ^ n - (7 - sqrt4) ^ n) / 4. Offset 1. a(3)=151. - Al Hakanson (hawkuu(AT)gmail.com), Dec 31 2008 ● a(n) = 14 * a(n - 1) - 45 * a(n - 2). - _ Philippe Deléham _ , Jan 01 2009 ● a(0)=1, a(n) = 9 * a(n - 1) + 5 ^ n. - _ Vincenzo Librandi _ , Feb 09 2011 ●

► [A153884] 1,14,152,1512,14480,136192,1269568,11781504,109080064,1008734720,9322763264,86134358016,795679428608,7349600247808,67884508610560,627000709644288,5791091556155392,53487250561826816,494013479394738176 ★ a(n) = ((7 + sqrt(5)) ^ n - (7 - sqrt(5)) ^ n) / (2 * sqrt(5)). ● a(n) = 14 * a(n - 1) - 44 * a(n - 2) for n>1, with a(0)=0, a(1)=1. ●

► [A154239] 1,14,153,1540,14981,143514,1365013,12939080,122451561,1157941414,10945762673,103449196620,977620957741,9238377953714,87299590169133,824944010358160,7795333767741521,73662080302980414,696069772228840393 ★ a(n) = ((7 + sqrt(6)) ^ n - (7 - sqrt(6)) ^ n) / (2 * sqrt(6)). ● a(n) = 14 * a(n - 1) - 43 * a(n - 2)for n>1, with a(0)=0, a(1)=1. ●

► [A016215] 1,14,153,1570,15821,158574,1586833,15871610,158725941,1587288934,15872977913,158730044850,1587301245661,15873014848094,158730155655393,1587301578077290,15873015845342981,158730158647140054,158730158705253127 3,15873015872268704930 ★ Expansion of 1 / ((1 - x)(1 - 3x)(1 - 10x)). ● a(0)=1, a(1)=14, a(n)=13 * a(n - 1) - 30 * a(n - 2) + 1. - _ Vincenzo Librandi _ , Feb 10 2011 ● a(n) = (1 / 18) - (9 / 14) * (3) ^ n + (100 / 63) * (10) ^ n. _ Antonio Alberto Olivares _ , May 12, 2012 ●

► [A154248] 1,14,154,1568,15484,150920,1462552,14137088,136492048,1317130976,12707167648,122580846080,1182430803904,11405635719296,110016806306176,1061198588076032,10236074368205056,98734700455677440 ★ a(n) = ((7 + sqrt(7)) ^ n - (7 - sqrt(7)) ^ n) / (2 * sqrt(7)). ● a(n) = 14 * a(n - 1) - 42 * a(n - 2) for n>1, with a(0)=0, a(1)=1. ●

► [A154347] 1,14,155,1596,15989,158410,1562191,15375864,151212265,1486561286,14612155139,143621159220,1411597868381,13873902629314,136359124206775,1340197731092976,13172044142823889,129460511024722430 ★ a(n) = ((7 + 2 * sqrt(2)) ^ n - (7 - 2 * sqrt(2)) ^ n) / (4 * sqrt(2)). ● a(n) = 14 * a(n - 1) - 41 * a(n - 2) for n>1, with a(0)=0, a(1)=1. - _ Philippe Deléham _ , Jan 12 2009 ●

► [A016157] 1,14,156,1624,16496,165984,1663936,16655744,166622976,1666491904,16665967616,166663870464,1666655481856,16666621927424,166666487709696,1666665950838784,16666663803355136,166666655213420544 ★ Expansion of 1 / ((1 - 4x)(1 - 10x)). ● a(n) = ((7 + sqrt(9)) ^ (n + 1) - (7 - sqrt(9)) ^ (n + 1)) / 6. - Al Hakanson (hawkuu(AT)gmail.com), Jan 07 2009 ● a(n) = 14 * a(n - 1) - 40 * a(n - 2), n >= 2. - _ Vincenzo Librandi _ , Mar 18 2011 ● a(n) = 10 * a(n - 1) + 4 ^ n = 4 * a(n - 1) + 10 ^ n, n >= 1. - _ Vincenzo Librandi _ , Mar 18 2011 ● a(n) = (5 * 10 ^ n - 2 * 4 ^ n) / 3. - _ Bruno Berselli _ , Mar 19 2011 ●

► [A122187] 1,14,157,1782,20216,229347,2601899,29518061,334876920,3799116465,43100270734,488964567014,5547212203625,62932092237197,713952898856653,8099663044168346,91889172989041221,1042465602157270162 ★ First row sum of the matrix M ^ n, where M is the 3 X 3 matrix [[6, 5, 3], [5, 4, 2], [3, 2, 1]] (n>= 0). ● a(n) = 11a(n - 1) + 4a(n - 2) - a(n - 3), a(0)=1, a(1)=14, a(2)=157 (derived from the minimal polynomial of the matrix M). ●

► [A268946] 14,159,788,2615,6834,15239,30344,55503,95030,154319,239964,359879,523418,741495,1026704,1393439,1858014,2438783,3156260,4033239,5094914,6368999,7885848,9678575,11783174 ★ Number of length - 5 0..n arrays with no repeated value unequal to the previous repeated value plus one mod n + 1. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. ●

► [A229611] 1,14,160,1770,19485,214356,2357944,25937420,285311665,3138428370,34522712136,379749833574,4177248169405,45949729863560,505447028499280,5559917313492216,61159090448414529,672749994932559990,7400249944258160080,81402749386839761090 ★ Expansion of 1 / ((1 - x) ^ 3 * (1 - 11x)) ● a(n) = (11 ^ (n + 3) - (1 + 10 * C(n + 3,1) + 100 * C(n + 3,2))) / 1000 = (11 ^ (n + 3) - (50 * n ^ 2 + 260 * n + 331)) / 1000. ● a(n) = 14 * a(n - 1) - 36 * a(n - 2) + 34 * a(n - 3) - 11 * a(n - 4). - _ Vincenzo Librandi _ , Sep 27 2013 ●

► [A016206] 1,14,161,1786,19677,216510,2381737,26199362,288193493,3170129446,34871425953,383585689578,4219442593549,46413868545422,510552554032409,5616078094422034,61776859038773445,679545449426770038 ★ Expansion of 1 / ((1 - x) * (1 - 2x) * (1 - 11x)). ● a(n) = (121 * 11 ^ n - 40 * 2 ^ n + 9) / 90. - _ Bruno Berselli _ , Feb 09 2011 ● a(n) = 11 * a(n - 1) + 2 ^ (n + 1) - 1, a(0)=1. - _ Vincenzo Librandi _ , Feb 09 2011 ● a(n) = 14 * a(n - 1) - 35 * a(n - 2) + 22 * a(n - 3); a(0)=1, a(1)=14, a(2)=161. - _ Harvey P. Dale _ , Nov 02 2011 ●

► [A161158] 1,14,161,1792,19809,218638,2412353,26614784,293628097,3239445006,35739069409,394290020096,4349990523425,47991114171406,529460241815169,5841251080892416,64443392518654337,710969410782059534 ★ a(n) = A003696(n + 1) / A001353(n + 1). ● a(n) = 14 * a(n - 1) - 34 * a(n - 2) + 14 * a(n - 3) - a(n - 4). ● a(n) = (1 / sqrt(17)) * (T(n,(7 + sqrt(17)) / 2) - T(n,(7 - sqrt(17)) / 2)), where T(n,x) is the Chebyshev polynomial of the first kind. ● a(n) = the bottom left entry of the 2 X 2 matrix T(n,M), where M is the 2 X 2 matrix [0, - 8; 1, 7]. ● a(n) = U(n - 1,1 / 2 * (4 + sqrt(2))) * U(n - 1,1 / 2 * (4 - sqrt(2))), where U(n,x) is the Chebyshev polynomial of the second kind. ●

► [A016146] 1,14,163,1820,20101,221354,2435623,26794040,294741001,3242170694,35663936683,392303480660,4315338818701,47468728600034,522156019383343,5743716227565680,63180878546269201,694989664138101374 ★ Expansion of 1 / ((1 - 3x)(1 - 11x)). ● a(n) = 14 * a(n - 1) - 33 * a(n - 2), n >= 2. - _ Vincenzo Librandi _ , Mar 14 2011 ● a(n) = (- 3 ^ (n + 1) + 11 ^ (n + 1)) / 8. - _ R. J. Mathar _ , Mar 15 2011 ●

► [A269539] 14,164,804,2648,6890,15324,30464,55664,95238,154580,240284,360264,523874,742028,1027320,1394144,1858814,2439684,3157268,4034360,5096154,6370364,7887344,9680208,11784950 ★ Number of length - 5 0..n arrays with no repeated value differing from the previous repeated value by other than one. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. ●

► [A159738] 14,168,1792,17920,172032,1605632,14680064,132120576,1174405120,10334765056,90194313216,781684047872,6734508720128,57724360458240,492581209243648,4186940278571008,35465847065542656,299489375220137984 ★ Number of permutations of 7 indistinguishable copies of 1..n arranged in a circle with exactly 1 local maximum. ● a(n) = (copies * n) * (copies + 1) ^ (n - 2). ● a(n) = 7 * n * 8 ^ (n - 2). ● a(n) = 16 * a(n - 1) - 64 * a(n - 2). ●

► [A098299] 0,1,14,169,2016,24025,286286,3411409,40650624,484396081,5772102350,68780832121,819597883104,9766393765129,116377127298446,1386759133816225,16524732478496256,196910030608138849 ★ Member r=14 of the family of Chebyshev sequences S _ r(n) defined in A092184. ● a(n) = 12 * a(n - 1) - a(n - 2) + 2, n>=2, a(0)=0, a(1)=1. ● a(n) = 13 * a(n - 1) - 13 * a(n - 2) + a(n - 3), n>=3, a(0)=0, a(1)=1, a(2)=14. ●

► [A099158] 0,1,14,171,2044,24341,289674,3446911,41014904,488035881,5807129734,69098919251,822206626164,9783419785021,116412711336194,1385192464081191,16482376713731824,196123462390215761 ★ a(n) = 5 ^ (n - 1) * U(n - 1, 7 / 5) where U is the Chebyshev polynomial of the second kind. ● a(n) = 14 * a(n - 1) - 25 * a(n - 2). ● a(n) = sqrt(6) * (sqrt(6) + 1) ^ (2 * n) / 24 - sqrt(6) * (sqrt(6) - 1) ^ (2 * n) / 24. ● a(n) = Sum _{ k=0..n } binomial(2n, 2k + 1) * 6 ^ k / 2. ● a(n) = 5 ^ (n - 1) * U(n - 1, 7 / 5), where U is the Chebyshev polynomial of the second kind. ●

► [A014882] 1,14,171,2056,24677,296130,3553567,42642812,511713753,6140565046,73686780563,884241366768,10610896401229,127330756814762,1527969081777159,18335628981325924,220027547775911105,2640330573310933278,31683966879731199355 ★ a(1) = 1, a(n) = 12 * a(n - 1) + n. ● a(n) = - 12 / 121 + 12 / 121 * 12 ^ n - 1 / 11 * n, with n>=1. - _ Paolo P. Lava _ , Jan 14 2009 ● a(n) = 14 * a(n - 1) - 25 * a(n - 2) + 12 * a(n - 3), with a(1)=1, a(2)=14, a(3)=171. - _ Vincenzo Librandi _ , Oct 20 2012 ●

► [A016136] 1,14,172,2072,24880,298592,3583168,42998144,515977984,6191736320,74300836864,891610044416,10699320537088,128391846453248,1540702157455360,18488425889497088,221861110674030592 ★ Expansion of 1 / ((1 - 2 * x) * (1 - 12 * x)). ● a(n) = (12 ^ n - 2 ^ n) / 10 for n>0. [_ Zerinvary Lajos _ , Jun 05 2009] ● a(n) = 2 ^ n * (6 ^ (n + 1) - 1) / 5 = 14 * a(n - 1) - 24 * a(n - 2). - _ Vincenzo Librandi _ , Oct 09 2011 ● a(n) = Sum _{ i=0..n } 2 ^ (n + i) * 3 ^ i. [_ Bruno Berselli _ , Aug 28 2013] ●

► [A269680] 14,174,820,2670,6918,15358,30504,55710,95290,154638,240348,360334,523950,742110,1027408,1394238,1858914,2439790,3157380,4034478,5096278,6370494,7887480,9680350,11785098 ★ Number of length - 5 0..n arrays with no repeated value differing from the previous repeated value by other than plus or minus one modulo n + 1. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>7. ●

► [A269469] 14,174,852,2780,7170,15834,31304,56952,97110,157190,243804,364884,529802,749490,1036560,1405424,1872414,2455902,3176420,4056780,5122194,6400394,7921752,9719400,11829350 ★ Number of length - 5 0..n arrays with no repeated value equal to the previous repeated value. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. ●

► [A177072] 14,176,500,986,1634,2444,3416,4550,5846,7304,8924,10706,12650,14756,17024,19454,22046,24800,27716,30794,34034,37436,41000,44726,48614 ★ a(n) = (9 * n + 2) * (9 * n + 7). ● a(n) = 162 * n + a(n - 1) with n > 0, a(0)=14. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). (End) ●

► [A097828] 1,14,182,2353,30408,392952,5077969,65620646,847990430,10958254945,141609323856,1829962955184,23647909093537,305592855260798,3949059209296838,51032176865598097,659469240043478424 ★ Partial sums of Chebyshev sequence S(n,13)= U(n,13 / 2)=A078362(n). ● a(n) = 14 * a(n - 1) - 14 * a(n - 2) + a(n - 3) with n>=2, a(- 1)=0, a(0)=1, a(1)=14. ● a(n) = 13 * a(n - 1) - a(n - 2) + 1 with n>=1, a(- 1)=0, a(0)=1. ● a(n) = (S(n + 1, 13) - S(n, 13) - 1) / 11. ●

► [A163439] 1,14,182,2366,30758,399763,5195736,67529280,877681896,11407280976,148261073142,1926957516120,25044775341768,325508355356184,4230650423530440,54986001777229068,714656161291232160 ★ Number of reduced words of length n in Coxeter group on 14 generators S _ i with relations (S _ i) ^ 2 = (S _ i S _ j) ^ 5 = I. ● a(n) = 12 * a(n - 1) + 12 * a(n - 2) + 12 * a(n - 3) + 12 * a(n - 4) - 78 * a(n - 5). - _ Wesley Ivan Hurt _ , May 10 2021 ●

► [A163959] 1,14,182,2366,30758,399854,5198011,67572960,878433192,11419432752,148450042104,1929816959616,25087183842630,326127713832648,4239586491528024,55113665158705608,716465177275138200 ★ Number of reduced words of length n in Coxeter group on 14 generators S _ i with relations (S _ i) ^ 2 = (S _ i S _ j) ^ 6 = I. ● a(n) = - 78 * a(n - 6) + 12 * Sum _{ k=1..5 } a(n - k). - _ Wesley Ivan Hurt _ , May 11 2021 ●

► [A164618] 1,14,182,2366,30758,399854,5198102,67575235,878476872,11420184048,148462193880,1930005936768,25090043590248,326170130032656,4240206014105334,55122604391319192,716592897791781192 ★ Number of reduced words of length n in Coxeter group on 14 generators S _ i with relations (S _ i) ^ 2 = (S _ i S _ j) ^ 7 = I. ● a(n) = - 78 * a(n - 7) + 12 * Sum _{ k=1..6 } a(n - k). - _ Wesley Ivan Hurt _ , May 11 2021 ●

► [A166379] 1,14,182,2366,30758,399854,5198102,67575326,878479238,11420230094,148462991222,1930018885795,25090245514152,326173191668688,4240251491494200,55123269386840928,716602501995344328 ★ Number of reduced words of length n in Coxeter group on 14 generators S _ i with relations (S _ i) ^ 2 = (S _ i S _ j) ^ 11 = I. ● a(n) = - 78 * a(n - 11) + 12 * Sum _{ k=1..10 } a(n - k). - _ Wesley Ivan Hurt _ , May 06 2021 ●

► [A169267] 1,14,182,2366,30758,399854,5198102,67575326,878479238,11420230094,148462991222,1930018885886,25090245516518,326173191714734,4240251492291542,55123269399790046,716602502197270598 ★ Number of reduced words of length n in Coxeter group on 14 generators S _ i with relations (S _ i) ^ 2 = (S _ i S _ j) ^ 29 = I. ● a(n) = - 78 * a(n - 29) + 12 * Sum _{ k=1..28 } a(n - k). - _ Wesley Ivan Hurt _ , Apr 05 2023 ●

► [A091030] 1,14,183,2380,30941,402234,5229043,67977560,883708281,11488207654,149346699503,1941507093540,25239592216021,328114698808274,4265491084507563,55451384098598320,720867993281778161 ★ Partial sums of powers of 13 (A001022). ● a(n) = Sum _{ k=0..n - 1 } 13 ^ k = (13 ^ n - 1) / 12. ● a(n) = 13 * a(n - 1) + 1 for n>1, a(1)=1. - _ Vincenzo Librandi _ , Feb 05 2011 ● a(n) = Sum _{ k=0...n - 1 } 12 ^ k * binomial(n,n - 1 - k). - _ Bruno Berselli _ , Nov 12 2015 ●

► [A209647] 14,196,798,2156,4690,8904,15386,24808,37926,55580,78694,108276,145418,191296,247170,314384,394366,488628,598766,726460,873474,1041656,1232938,1449336,1692950 ★ Number of n X 5 0..1 arrays avoiding 0 0 1 and 1 0 0 horizontally and 0 0 1 and 1 0 1 vertically. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

► [A207388] 14,196,834,2356,5348,10570,18972,31710,50162,75944,110926,157248,217336,293918,390040,509082,654774,831212,1042874,1294636,1591788,1940050,2345588,2815030,3355482 ★ Number of n X 5 0..1 arrays avoiding 0 0 1 and 0 1 0 horizontally and 0 0 1 and 1 1 0 vertically. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. ●

► [A207935] 14,196,844,2422,5594,11256,20568,34986,56294,86636,128548,184990,259378,355616,478128,631890,822462,1056020,1339388,1680070,2086282,2566984,3131912,3791610,4557462 ★ Number of n X 5 0..1 arrays avoiding 0 0 1 and 1 0 0 horizontally and 0 0 1 and 1 1 0 vertically. ● a(n) = (30 - 149 * n + 10 * n ^ 2 + 250 * n ^ 3 + 65 * n ^ 4 + 4 * n ^ 5) / 15. ●

► [A207065] 14,196,896,2688,6398,13132,24304,41664,67326,103796,154000,221312,309582,423164,566944,746368,967470,1236900,1561952,1950592,2411486,2954028,3588368,4325440,5176990 ★ Number of n X 5 0..1 arrays avoiding 0 0 1 and 0 1 0 horizontally and 0 0 1 and 1 0 1 vertically. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. ●

► [A068769] 1,1,14,203,3038,46746,736764,11853051,194053622,3224557406,54265836548,923218762270,15854602773100,274500192707860,4786546243533432,83989334625037947,1481965556616225702 ★ Generalized Catalan numbers. ● a(n) = (7 ^ n) * p(n, - 6 / 7) with the row polynomials p(n, x) defined from array A068763. ● a(n + 1) = 7 * sum(a(k) * a(n - k), k=0..n), n>=1, a(0)=1=a(1). ●

► [A109764] 0,14,204,1240,4900,14910,38024,85344,173880,328350,583220,984984,1594684,2490670,3771600,5559680,8004144,11284974,15616860,21253400,28491540,37676254,49205464,63535200,81185000 ★ Sum of the first n ^ 2 squares. ● a(n) = n ^ 2 * (n ^ 2 - 1) * (2 * n ^ 2 - 1) / 6. G.f.: 2 * x ^ 2 * (1 + x) * (7 * x ^ 2 + 46 * x + 7) / (1 - x) ^ 7. [From _ R. J. Mathar _ , Jun 28 2010] ●

► [A097261] 0,14,210,224,3150,3164,3360,3374,47250,47264,47460,47474,50400,50414,50610,50624,708750,708764,708960,708974,711900,711914,712110,712124,756000 ★ Numbers whose set of base 15 digits is { 0,E } , where E base 15 = 14 base 10. ● a(2n) = 15 * a(n), a(2n + 1) = a(2n) + 14. ●

► [A158555] 14,210,798,1778,3150,4914,7070,9618,12558,15890,19614,23730,28238,33138,38430,44114,50190,56658,63518,70770,78414,86450,94878,103698,112910 ★ a(n) = 196 * n ^ 2 + 14. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A097183] 1,14,210,3220,49910,778596,12198004,191682920,3019005990,47633205620,752604648796,11904837171864,188493255221180,2986893121197160,47363590921840680,751502309293205456,11930099160029636614 ★ Main diagonal of triangle A097181, in which the n - th row polynomial R _ n(y) is formed from the initial (n + 1) terms of g.f. A097182(y) ^ (n + 1), where R _ n(1 / 2) = 8 ^ n for all n>=0. ● a(n) = (n + 1) * 16 ^ n * Gamma(n + 7 / 8) / (Gamma(7 / 8) * Gamma(n + 2)). - _ Vaclav Kotesovec _ , Feb 09 2014 ●

► [A079563] 1,14,231,3934,67851,1177974,20531770,358788696,6281076123,110103674128,1931983053056,33926800240578,596145343139514,10480467311987778,184327560283768776,3243034966775972144,57074433199551436347 ★ a(n) = a(n, m) = Sum _{ k=0..n } binomial(m * k,k) * binomial(m * (n - k),n - k) for m=7 . ● a(n) = (7 / 12) * (823543 / 46656) ^ n * (1 + c / sqrt(n) + o(n ^ - 1 / 2)) where c=0.41... ● a(n) = Sum _{ k=0..n } binomial(7 * k + x,k) * binomial(7 * (n - k) - x,n - k) for any real x. ● a(n) = Sum _ (k=0..n } 6 ^ (n - k) * binomial(7n + 1,k). ● a(n) = Sum _{ k=0..n } 7 ^ (n - k) * binomial(6n + k,k). (End) ●

► [A305862] 14,234,1826,10770,55154,260274,1167026,5059890,21442994,89438514,368866226,1509026610,6137242034,24853275954,100327829426,404059098930,1624486948274,6522713868594,26165182536626,104883769004850,420204307937714,1682825158192434,6737324873467826 ★ a(n) = 384 * 4 ^ n - 576 * 3 ^ n + 220 * 2 ^ n - 14. ● a(n) = 10 * a(n - 1) - 35 * a(n - 2) + 50 * a(n - 3) - 24 * a(n - 4). ●

► [A215544] 0,14,275,1260,3705,8602,17199,31000,51765,81510,122507,177284,248625,339570,453415,593712,764269,969150,1212675,1499420,1834217,2222154,2668575,3179080,3759525 ★ Number of standard Young tableaux of shape [4n,4]. ● a(n) = (4 * n - 3) * (4 * n + 3) * (2 * n + 1) * (n + 1) / 3 for n>0, a(0) = 0. ●

► [A279113] 0,0,1,14,277,2154,10855,39926,120961,315150,737089,1577406,3150841,5934034,10651567,18332614,30452605,49011606,76753681,117268590,175315789,256949306,369978631,524114454,731604457 ★ Number of non - equivalent ways to place 4 non - attacking kings on an n X n board. ● a(n) = (n ^ 8 - 54 * n ^ 6 + 72 * n ^ 5 + 1024 * n ^ 4 - 2640 * n ^ 3 - 4928 * n ^ 2 + 21888 * n - 17280 + IF(MOD(n, 2) = 1, 14 * n ^ 4 - 72 * n ^ 3 + 154 * n ^ 2 - 240 * n - 51)) / 192 for n>=3. ● a(n) = 4 * a(n - 1) - a(n - 2) - 16 * a(n - 3) + 19 * a(n - 4) + 20 * a(n - 5) - 45 * a(n - 6) + 45 * a(n - 8) - 20 * a(n - 9) - 19 * a(n - 10) + 16 * a(n - 11) + a(n - 12) - 4 * a(n - 13) + a(n - 14) for n>=17. ●

► [A181192] 1,14,290,6392,141696,3142704,69705920,1546100352,34293030016,760631058944,16871055411200,374205743270912,8300010573582336,184097055591849984,4083335265314938880,90569764059295875072 ★ Number of n X 5 matrices containing a permutation of 1..n * 5 in increasing order rowwise, columnwise,

diagonally and (downwards) antidiagonally. • a(n) = 2 ^ (n - 2) + ((11 - 5 * sqrt(5)) ^ n * (2 + sqrt(5)) + (- 2 + sqrt(5)) * (11 + 5 * sqrt(5)) ^ n) / (4 * sqrt(5)). •

▶ [A116165] 0,14,294,4116,48020,504210,4941258,46118408,415065672,3631824630,31072277390,261007130076,2159240803356,17633799894074,142426845298290,1139414762386320,9039357114931472,71184937280085342,556917450485373558 ⋆ a(n) = 7 ^ n * n * (n + 1). • a(n) = 21 * a(n - 1) - 147 * a(n - 2) + 343 * a(n - 3). - _ Vincenzo Librandi _ , Feb 28 2013 •

▶ [A129007] 14,588,12348,192080,2521050,29647548,322828856,3320525376,32686421670,310722773900,2871078430836,25910889640272,229239398622962,1993975834176060,17091221435794800,144629713838903552 ⋆ (n ^ 3 + n ^ 2) * 7 ^ n. • a(1)=14, a(2)=588, a(3)=12348, a(4)=192080, a(n)=28 * a(n - 1) - 294 * a(n - 2) + 1372 * a(n - 3) - 2401 * a(n - 4). - _ Harvey P. Dale _ , Nov 21 2012 •

▶ [A269610] 14,902,10192,58280,229754,714874,1886252,4405772,9366790,18476654,34284584,60459952,102126002,166254050,262123204,401850644,600997502,879255382,1261218560,1777246904,2464424554,3367619402,4540648412 ⋆ Number of length - 7 0..n arrays with no repeated value differing from the previous repeated value by one or less. • a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. •

▶ [A337961] 0,14,3720,132184,1987720,17935806,114638048,570597216,2348263008,8320953630,26126986952,74247445272,194049316552,472265688622,1080900468480,2345089916288,4854316187136,9638888023278,18442173583176 ⋆ Number of chiral pairs of colorings of the 12 pentagonal faces of a regular dodecahedron or the 12 vertices of a regular icosahedron using n or fewer colors. • a(n) = (n - 1) * n ^ 2 * (n + 1) * (n ^ 8 + n ^ 6 - 14 * n ^ 4 + 44) / 120. • a(n) = 14 * C(n,2) + 3678 * C(n,3) + 117388 * C(n,4) + 1363860 * C(n,5) + 7918056 * C(n,6) + 26332992 * C(n,7) + 53428032 * C(n,8) + 67359600 * C(n,9) + 51559200 * C(n,10) + 21954240 * C(n,11) + 3991680 * C(n,12), where the coefficient of C(n,k) is the number of chiral pairs of colorings using exactly k colors. •

▶ [A157824] 14,4063,15312,33761,59410,92259,132308,179557,234006,295655,364504,440553,523802,614251,711900,816749,928798,1048047,1174496,1308145,1448994,1597043,1752292,1914741,2084390 ⋆ 3600n ^ 2 - 6751n + 3165. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). •

▶ [A104376] 1,14,16383,2391484,89478485,1525878906,15672832819,113037178808,628292358729,2859599056870,11111111111111,37974983358324,116719860413533,328114698808274,854769755812155,2085209001813616,4803839602528529,10523614159962558,22047845151887119 ⋆ a(n) = Sum _{ j=0..13 } n ^ j. • a(n) = n ^ 13 + n ^ 12 + n ^ 11 + n ^ 10 + n ^ 9 + n ^ 8 + n ^ 7 + n ^ 6 + n ^ 5 + n ^ 4 + n ^ 3 + n ^ 2 + n ^ 1 + 1. •

▶ [A022349] 0,15,15,30,45,75,120,195,315,510,825,1335,2160,3495,5655,9150,14805,23955,38760,62715,101475,164190,265665,429855,695520 ⋆ Fibonacci sequence beginning 0, 15. • a(n) = Lucas(n + 4) - Lucas(n - 4), where Lucas(i) for i = 0..3 gives 7, - 4, 3, - 1. (End) •

▶ [A241750] 15,16,19,24,31,40,51,64,79,96,115,136,159,184,211,240,271,304,339,376,415,456,499,544,591 ⋆ a(n) = n ^ 2 + 15. • a(n) = a(- n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) = a(n - 1) + 2 * n - 1. •

▶ [A022105] 1,15,16,31,47,78,125,203,328,531,859,1390,2249,3639,5888,9527,15415,24942,40357,65299,105656,170955,276611,447566,724177 ⋆ Fibonacci sequence beginning 1, 15. • a(n)= a(n - 1) + a(n - 2), n>=2, a(0)=1, a(1)=15. a(- 1):=14. •

▶ [A041456] 15,16,31,47,78,125,328,453,2593,3046,5639,53797,59436,410413,469849,4639054,5108903,9747957,53848688,63596645,181041978,244638623,425680601,670319224,1095999825 ⋆ Numerators of continued fraction convergents to sqrt(244). • a(n) = 3532638098 * a(n - 26) - a(n - 52) for n>51. [_ Bruno Berselli _ , Nov 16 2013] •

▶ [A041458] 15,16,31,47,360,2207,15809,18016,33825,51841,1589055,1640896,3229951,4870847,37325880,228826127,1639108769,1867934896,3507043665,5374978561,164756400495,170131379056,334887779551,505019158607,3870021889800 ⋆ Numerators of continued fraction convergents to sqrt(245). • a(n) = 103682 * a(n - 10) - a(n - 20). - _ Wesley Ivan Hurt _ , May 07 2021 •

▶ [A042867] 1,15,16,31,481,29853,448276,478129,926405,14374204,892127053,1339627999,14288407052,27684687051,429558712817,26660324881705,40033443193839392,426994756820097,827329188758489,1283693258819743 2,7967171496569992 73,11963594177443186527 ⋆ Denominators of continued fraction convergents to sqrt(965). • a(n) = 29884 * a(n - 5) + a(n - 10) for n > 9. - _ Vincenzo Librandi _ , Dec 25 2013 •

▶ [A033051] 0,1,15,16,225,226,240,241,3375,3376,3390,3391,3600,3601,3615,3616,50625,50626,50640,50641,50850,50851,50865,50866,54000 ⋆ Numbers whose set of base 15 digits is { 0,1 } . • a(n) = Sum _{ i=0..m } d(i) * 15 ^ i, where Sum _{ i=0..m } d(i) * 2 ^ i is the base - 2 representation of n. • a(2n) = 15 * a(n), a(2n + 1) = a(2n) + 1. •

▶ [A041111] 1,1,15,16,239,255,3809,4064,60705,64769,967471,1032240,15418831,16451071,245733825,262184896,3916322369,4178507265,62415424079,66593931344,994730462895,1061324394239,15853271982241 ⋆ Denominators of continued fraction convergents to sqrt(63). • a(n) = 16 * a(n - 2) - a(n - 4). •

▶ [A041476] 15,16,239,255,7889,8144,121905,130049,4023375,4153424,62171311,66324735,2051913361,2118238096,31707246705,33825484801,1046471790735,1080297275536,16170633648239,17250930923775,533698561361489,550949492285264,8246991453355185 ⋆ Numerators of continued fraction convergents to sqrt(254). • a(n) = 510 * a(n - 4) - a(n - 8). - _ Wesley Ivan Hurt _ , Apr 18 2022 •

▶ [A041477] 1,1,15,16,495,511,7649,8160,252449,260609,3900975,4161584,128748495,132910079,1989489601,2122399680,65661480001,67783879681,1014635795535,1082419675216,33487226052015,34569645727231,517462266233249,552031911960480,17078419625047649 ⋆ Denominators of continued fraction convergents to sqrt(254). • a(n) = 510 * a(n - 4) - a(n - 8) for n>7. - _ Vincenzo Librandi _ , Dec 18 2013 •

▶ [A041478] 15,16,495,511,15825,16336,505905,522241,16173135,16695376,517034415,533729791,16528928145,17062657936,528408666225,545471324161,16892548391055,17438019715216,540033139847535 ⋆ Numerators of continued fraction convergents to sqrt(255). • a(n) = 32 * a(n - 2) - a(n - 4). G.f.: - (x ^ 3 - 15 * x ^ 2 - 16 * x - 15) / (x ^ 4 - 32 * x ^ 2 + 1). [_ Colin Barker _ , Jul 16 2012] •

▶ [A042099] 1,1,15,16,751,767,11489,12256,575265,587521,8800559,9388080,440652239,450040319,6741216705,7191257024,337539039809,344730296833,5163763195471,5508493492304,258554463841455,264062957333759,3955435866514081,4219498823847840 ⋆ Denominators of continued fraction convergents to sqrt(573). • a(n) = 766 * a(n - 4) - a(n - 8) for n>7. - _ Vincenzo Librandi _ , Jan 14 2014 •

▶ [A183981] 15,17,20,26,36,56,92,164,300,572,1100,2156,4236,8396,16652,33164,66060,131852,263180,525836,1050636,2100236,4198412,8394764,16785420 ⋆ 1 / 4 the number of (n + 1) X 5 binary arrays with all 2 X 2 subblock sums the same. • a(n) = 3 * 2 ^ (n / 2 - 1) + 2 ^ (n - 1) + 12 for n even. • a(n) = 2 ^ (n - 1) + 2 ^ ((n + 1) / 2) + 12 for n odd. •

▶ [A374005] 15,17,26,32,41,51,60,74,83,101,110,132,141,167,176,206,215,249,258,296,305,347,356,402,411 ⋆ a(n) = (1 + (n + 4) ^ 2 + (n - 5) * (- 1) ^ n) / 2. • a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). •

▶ [A157716] 0,15,17,62,66,141,147,252,260,395,405,570,582,777,791,1016,1032,1287,1305,1590,1610,1925,1947,2292,2316 ⋆ One - eighth of triangular numbers (integers only). • a(n) = (2 * n - 1 + 7 / 8 * (- 1) ^ n) ^ 2 - 1 / 64. - _ Robert Israel _ , Apr 20 2014 • a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). - _ Wesley Ivan Hurt _ , Nov 10 2020 •

▶ [A113968] 0,0,1,1,15,17,239,273,3823,4369,61167,69905,978671,1118481,15658735,17895697,250539759,286331153,4008636143,4581298449,64138178287,73300775185,1026210852591,1172812402961,16419373641455 ⋆ a(0) = 0 and a(n) = (5 * (- 4) ^ n + 16 * (- 1) ^ n + 9 * 4 ^ n) / 240 for n >= 1. • a(n) = (5 * (- 4) ^ n + 16 * (- 1) ^ n + 9 * 4 ^ n) / 240 for n>0. •

▶ [A274979] 0,1,15,18,46,51,93,100,156,165,235,246,330,343,441,456,568,585,711,730,870,891,1045,1068,1236 ⋆ Integers of the form m * (m + 7) / 8. • a(n) = (8 * (n - 1) * n - 3 * (2 * n - 1) * (- 1) ^ n - 3) / 4. • a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n >= 6. - _ Wesley Ivan Hurt _ , Dec 18 2020 •

▶ [A219394] 0,15,19,64,72,147,159,264,280,415,435,600,624,819,847,1072,1104,1359,1395,1680,1720,2035,2079,2424,2472 ⋆ Numbers k such that 17 * k + 1 is a square. • a(n) = a(- n + 1) = (34 * n * (n - 1) + 13 * (- 1) ^ n * (2 * n - 1) + 5) / 8 + 1. •

▶ [A273061] 15,21,25,30,34,37,41,44,47,50,53,56,59,62,64,67,70,72,75,77,80,82,85,87,90 ⋆ Nearest integer to the França - Leclair approximation 2 * Pi * (n - 11 / 8) / LambertW((n - 11 / 8) / exp(1)) of the Riemann zeta zeros. • a(n) = round(2 * Pi * (n - 11 / 8) / LambertW((n - 11 / 8) / exp(1))). • a(n) = round(2 * Pi * exp(1) * exp(LambertW((n - 11 / 8) / exp(1)))). - _ Mats Granvik _ , Feb 27 2017 • a(n) = round(2 * Pi * exp(1 + LambertW((8 * (n - 3 / 2) + 1) / (8 * e)))) after the formula in MathWorld. - _ Mats Granvik _ , Feb 25 2017 •

▶ [A026048] 15,21,28,39,52,68,88,111,140,173,211,255,304,361,424,494,572,657,752,855,967,1089,1220,1363,1516 ⋆ (d(n) - r(n)) / 5, where d = A026046 and r is the periodic sequence with fundamental period (1,0,4,0,0). • a(n)=(n + 6) * (n ^ 2 + 6 * n + 38) / 15 - 1 / 5 * (1 - 2 / 5 * 5 ^ (1 / 2) * cos(2 * n * Pi / 5) + 2 / 5 * 2 ^ (1 / 2) * (5 - 5 ^ (1 / 2)) ^ (1 / 2) * sin(2 * n * Pi / 5) + 2 / 5 * 5 ^ (1 / 2) * cos(4 * n * Pi / 5) - 2 / 5 * 2 ^ (1 / 2) * (5 + 5 ^ (1 / 2)) ^ (1 / 2) * sin(4 * n * Pi / 5)) [From _ Richard Choulet _ , Dec 14 2008] •

▶ [A184041] 15,21,31,51,87,159,295,567,1095,2151,4231,8391,16647,33159,66055,131847,263175,525831,1050631,2100231,4198407,8394759,16785415,33566727,67125255 ⋆ 1 / 9 the number of (n + 1) X 3 0..2 arrays with all 2 X 2 subblocks having the same four values. • a(n) = 3 * 2 ^ (n / 2) + 2 ^ (n + 1) + 7 for n even. • a(n) = 2 ^ (n + 1) + 2 ^ ((n + 3) / 2) + 7 for n odd. •

▶ [A254365] 15,21,35,69,155,381,995,2709,7595,21741,63155,185349,547835,1627101,4848515,14479989,43308875,129664461,388469075,1164358629,3490978715,10468741821,31397836835,94176733269,282496645355 ⋆ a(n) = 2 ^ (n + 2) + 3 ^ n + 10. • a(n) = 6 * a(n - 1) - 11 * a(n - 2) + 6 * a(n - 3). - _ Colin Barker _ , Jan 30 2015 •

▶ [A317793] 1,15,22,177,406,2445,7162,36177,121486,554325,2009602,8656377,32761366,136617405,529712842,2169039777,8525430046,34553579685,136858084882,551499730377,2193794127526,8811785649165,35137304693722,140878711512177,562526325893806 ⋆ a(n) = (4 ^ n + (- 3) ^ n + 2 ^ n + (- 1) ^ n) / 2. • a(n) = (4 ^ n + (- 3) ^ n + 2 ^ n + (- 1) ^ n) / 2 for n > 0. • a(n) = 2 * a(n - 1) + 13 * a(n - 2) - 14 * a(n - 3) - 24 * a(n - 4) for n>4. •

▶ [A242412] 15,23,39,63,95,135,183,239,303,375,455,543,639,743,855,975,1103,1239,1383,1535,1695,1863,2039,2223,2415 ⋆ a(n) = (2n - 1) ^ 2 + 14. • a(n) = 4 * n ^ 2 - 4 * n + 15. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). G.f.: - x * (15 * x ^ 2 - 22 * x + 15) / (x - 1) ^ 3. - _ Colin Barker _ , May 14 2014 •

▶ [A195036] 0,15,23,53,69,114,138,198,230,305,345,435,483,588,644,764,828,963,1035,1185,1265,1430,1518,1698,1794 ⋆ Vertex number of a square spiral in which the length of the first two edges are the legs of the primitive Pythagorean triple [15, 8, 17]. The edges of the spiral have length A195035. • a(n) = (2 * n * (23 * n + 53) - (14 * n + 37) * (- 1) ^ n + 37) / 16. • a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). (End) •

▶ [A173035] 0,15,24,28,32,36,40,44,48,52,56,60,64,68,72,76,80,84,88,92,96,100,104,108,112 ⋆ Cat years in human years: a(0) = 0, a(1) = 15, a(2) = 24, a(n) = a(n - 1) + 4 for n >= 3. • a(n) = 4 * (n + 4) - 16 * [n=0] - 5 * [n=1]. •

▶ [A079721] 15,24,34,51,72,76,88,102,110,131,153,162,173,189,255,324,342,353,374,545,705,721,736,741,747 ⋆ Interemirp sequence: average of emirp pairs, analogous to interprimes. • a(n) = (x(n) + x(n + 1)) / 2 where x(n) is the n - th emirp number •

▶ [A154150] 1,15,24,94,145,551,848,3214,4945,18735,28824,109198,168001,636455,979184,3709534,5707105,21620751,33263448,126014974 ⋆ Numbers k such that 24 plus the k - th triangular number is a perfect square. • a(n) = + a(n - 1) + 6 * a(n - 2) - 6 * a(n - 3) - a(n - 4) + a(n - 5). •

▶ [A167709] 0,1,15,24,220,351,560,5124,8175,74801,119340,190399,1742145,2779476,25432120,40575249,64735100,592324176,945013665,8646845999,13795465320,22009743601,201388477695,321301866624,2939902207540 ⋆ Numbers y such th

at 19 * y ^ 2 + 81 is a square. • a(n + 10) = 340 * a(n + 5) - a(n). • a(n + 5) = 170 * a(n) + 39 * sqrt(19 * a(n) ^ 2 + 81). •

► [A032609] 15,26,37,48,59,610,711,812,913,1014,1115,1216,1317,1418,1519,1620,1721,1822,1923,2024,2125,2226,2327,2428,2529 ⋆ Concatenation of n and n + 4 or { n,n + 4 } . • a(n) = n * 10 ^ floor(log _ 10(n + 4) + 1) + n + 4, with n >= 1. - _ Paolo P. Lava _ , Oct 09 2008 •

► [A096022] 15,27,39,51,75,87,99,111,135,147,159,171,195,207,219,231,255,267,279,291,315,327,339,351,375 ⋆ Numbers that are congruent to { 15, 27, 39, 51 } mod 60. • a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. • a(n) = 3 * (10 * n - 3 - i ^ (2 * n) - (1 - i) * i ^ (- n) - (1 + i) * i ^ n) / 2 where i=sqrt(- 1). (End) •

► [A227804] 15,27,48,85,150,264,464,815,1431,2512,4409,7738,13580,23832,41823,73395,128800,226029,396654,696080,1221536,2143647,3761839,6601568,11584945 ⋆ a(1) = greatest k such that H(k) - H(8) < H(8) - H(4); a(2) = greatest k s uch that H(k) - H(a(1)) < H(a(1)) - H(8), and for n > 2, a(n) = greatest k suc h that H(k) - H(a(n - 1) > H(a(n - 1)) - H(a(n - 2)), where H = harmonic num ber. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + 2 * a(n - 3) - a(n - 4) (conjectured). •

► [A106499] 15,28,40,45,66,77,84,91,104,120,126,144,153,170,187,190,198,209,220,228,231,260,273,276,286 ⋆ Ordered perimeter of primitive integer - sided trian gle one of whose angles is twice another. • a(n)=s * (r + s), where r<s<2r and (r, s)=1. •

► [A131877] 1,15,29,43,57,71,85,99,113,127,141,155,169,183,197,211,225,239,253,267,281,295,309,323,337 ⋆ a(n) = 14 * n + 1. • a(n) = 14 * n + 1. •

► [A014095] 1,1,15,29,135,310,870,1830,3993,7535,14157,24427,41535,66812,105740,160956,241281,351405,504811,709225,984423,1342418,1811250,2408770,3173625 ⋆ Molien series for real extraspecial group 2 ^{ 1 + 2 * 3 } of degree 8 and o rder 128 formed from tensor products of Pauli matrices (0,1, 1,0) and (1,0, 0, - 1). • a(n) = n * (n + 1) * (n + 2) * (2 * n * (n + 2) * (2 * n ^ 2 + 4 * n - 1) - 735 * (- 1) ^ n + 915) / 10080. - _ Bruno Berselli _ , Jan 31 2013 • a(n) = 4 * a(n - 1) - 2 * a(n - 2) - 12 * a(n - 3) + 17 * a(n - 4) + 8 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) + 17 * a(n - 8) - 12 * a(n - 9) - 2 * a(n - 10) + 4 * a(n - 11) - a (n - 12); a(0)=1, a(1)=1, a(2)=15, a(3)=29, a(4)=135, a(5)=310, a(6)=870, a(7)=1830, a(8)=3993, a(9)=7535, a(10)=14157, a(11)=24427. - _ Harvey P. Dale _ , Nov 13 2013 •

► [A192356] 0,1,1,15,29,211,561,3095,9829,46971,164921,728575,2707629,11450531,43942081,181348455,708653429,2884834891,11388676041,46006694735,182670807229,734751144051,2926800830801,11743814559415,46865424529029 ⋆ Coeffici ents of x in the reduction of the polynomial p(n,x) = ((x + 2) ^ n + (x - 2) ^ n) / 2 by x ^ 2 - >x + 2. • a(n) = (4 ^ n - (- 3) ^ n - 1 + 2 ^ n * delta(n,0)) / 6, with delta(n,0) = 1 if n=0, 0 otherwise. (End) •

► [A348556] 15,30,31,47,60,61,62,63,79,94,95,111,120,121,122,123,124,125,126,127,143,158,159,175,188 ⋆ Binary expansion contains 4 adjacent 1's. • a(n + 1) < = a(n) + 16. •

► [A330175] 15,30,46,61,78,93,109,124,141,156,172,187,204,219,235,250,267,282,297,313,328,345,360,376,391 ⋆ a(n) = n + floor(ns / r) + floor(nt / r), where r = sqrt(5) - 2, s = sqrt(5) - 1, t = sqrt(5). • a(n) = n + floor(ns / r) + floor(nt / r), where r = sqrt(5) - 2, s = sqrt(5) - 1, t = sqrt(5). •

► [A110286] 15,30,60,120,240,480,960,1920,3840,7680,15360,30720,61440,122880,245760,491520,983040,1966080,3932160,7864320,15728640,31457280,62914560,125829120,251658240 ⋆ a(n) = 15 * 2 ^ n. • a(n) = 2 * a(n - 1) (with a(0)=15). - _ Vincenzo Librandi _ , Dec 26 2010 •

► [A127526] 15,30,91,229,612,1593,4183,10942,28659,75021,196420,514225,1346271,3524574,9227467,24157813,63245988,165580137,433494439,1134903166,2971215075,7778742045,20365011076,53316291169,139583862447 ⋆ Sequence related to fifth roots of certain Fibonacci fractions. • a(n) = 3 * a(n - 1) - 3 * a(n - 3) + * a(n - 4) for n > 4. - _ Jinyuan Wang _ , Mar 10 2020 •

► [A319282] 15,31,47,63,79,95,111,127,143,159,175,191,207,223,239,240,255,271,287,303,319,335,351,367,383 ⋆ Numbers of the form 16 ^ i * (16 * j + 15). • a(n) = 15 * n + O(log(n)). •

► [A125169] 15,31,47,63,79,95,111,127,143,159,175,191,207,223,239,255,271,287,303,319,335,351,367,383,399 ⋆ a(n) = 16 * n + 15. • a(n) = 2 * a(n - 1) - a(n - 2) ; a(0)=15, a(1)=31. - _ Harvey P. Dale _ , Jan 03 2012 •

► [A249452] 15,31,47,63,95,127,191,255,383,511,767,1023,1535,2047,3071,4095,6143,8191,12287,16383,24575,32767,49151,65535,98303 ⋆ Numbers n such that A2 49441(n) = 3. • a(n) has either form 2 ^ k - 1 or 3 * 2 ^ m - 1, k, m >= 4 (cf. A000225, A055010). Since, for •

► [A132757] 0,15,31,48,66,85,105,126,148,171,195,220,246,273,301,330,360,391,423,456,490,525,561,598,636 ⋆ a(n) = n * (n + 29) / 2. • a(n) = n + a(n - 1) + 1 4 with n>0, a(0)=0. - _ Vincenzo Librandi _ , Aug 03 2010 • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). • a(n) = 15n - floor(n / 2) + floor(n ^ 2 / 2). - _ Wesley Ivan Hurt _ , Jun 15 2013 •

► [A195046] 0,1,15,31,60,91,135,181,240,301,375,451,540,631,735,841,960,1081,1215,1351,1500,1651,1815,1981,2160 ⋆ Concentric 15 - gonal numbers. • a(n) = 1 5 * n ^ 2 / 4 + 11 * ((- 1) ^ n - 1) / 8. • a(0)=0, a(1)=1, a(2)=15, a(3)=31, a(n)=2 * a(n - 1) - 2 * a(n - 3) + a(n - 4). •

► [A042853] 1,1,15,31,449,480,29249,29729,445455,920639,13334401,14255040,868636801,882891841,13229122575,27341136991,396005040449,423346177440,25796775686849,26220121864289,392878481786895,811977085438079,11760557677920001,12572534763358080 ⋆ Denominators of continued fraction convergents to sqr t(957). • a(n) = 29698 * a(n - 6) - a(n - 12) for n>11. - _ Vincenzo Librandi _ , Dec 25 2013 •

► [A098848] 0,15,32,51,72,95,120,147,176,207,240,275,312,351,392,435,480,527,576,627,680,735,792,851,912 ⋆ a(n) = n * (n + 14). • a(n) = (n + 7) ^ 2 - 7 ^ 2 = n * (n + 14), n>=0. • a(n) = 2 * n + a(n - 1) + 13 (with a(0)=0). - _ Vinc enzo Librandi _ , Nov 16 2010 • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). •

► [A336625] 0,15,32,527,1104,17919,37520,608735,1274592,20679087,43298624,702480239,1470878640,23863649055,49966575152,810661587647,1697392676544,27538630330959,57661384427360,935502769664975,1958789677853712,31779555538278207,66541187662598864,1079569385531794079,2260441590850507680 ⋆ Indice s of triangular numbers that are eight times other triangular numbers. • a(n) = 34 * a(n - 2) - a(n - 4) + 16, for n>=2 with a(2)=15, a(1)=0, a(0)= - 1, a(- 1) = - 16. • a(n) = a(n - 1) + 34 * a(n - 2) - 34 * a(n - 3) - a(n - 4) + a(n - 5), for n>=3 with a(3)=32, a(2)=15, a(1)=0, a(0)= - 1, a(- 1)= - 16. • a(n) = ((sqrt(2) + 1) ^ (2 * n + 1) * (3 - sqrt(2) * (- 1) ^ n) - (sqrt(2) - 1) ^ (2 * n + 1) * (3 + sqrt(2) * (- 1) ^ n) - 2) / 4. - _ Vaclav Kotesovec _ , Sep 08 2020 • a(n) = ((3 - sqrt(2)) * (1 + sqrt(2)) ^ (2 * n + 1) + (3 + sqrt(2)) * (1 - sqrt(2)) ^ (2 * n + 1)) / 4 - 1 / 2 for even n. • a(n) = ((3 + sqrt(2)) * (1 + sqrt(2)) ^ (2 * n + 1) + (3 - sqrt(2)) * (1 - sqrt(2)) ^ (2 * n + 1)) / 4 - 1 / 2 for odd n. (End) •

► [A228318] 15,33,59,93,135,185,243,309,383,465,555,653,759,873,995,1125,1263,1409,1563,1725,1895,2073,2259,2453,2655 ⋆ The Wiener index of the graph ob tained by applying Mycielski's construction to the star graph K(1,n). • a(n) = 4n ^ 2 + 6n + 5. •

► [A228321] 15,33,62,103,156,221,298,387,488,601,726,863,1012,1173,1346,1531,1728,1937,2158,2391,2636,2893,3162,3443,3736 ⋆ The Wiener index of the graph obtained by applying Mycielski's construction to the path graph on n vertices (n>=2). • a(2)=15; a(n) = 6n ^ 2 - 13n + 18 (n>=3). •

► [A277385] 15,33,65,105,153,209,273,345,425,513,609,713,825,945,1073,1209,1353,1505,1665,1833,2009,2193,2385,2585,2793 ⋆ Records in A277384. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>4. • a(n) = 4 * n ^ 2 + 12 * n - 7 for n> 1. •

► [A211327] 15,33,69,143,293,595,1205,2427,4885,9803,19669,39403,78933,157995,316245,632747,1266005,2532523,5066069,10133163,20268373,40538795,81081685,162167467,324343125 ⋆ Number of (n + 1) X (n + 1) - 3..3 symmetric matric es with every 2 X 2 subblock having sum zero and one, three or four distinct va lues. • a(n) = (- 9 * 2 ^ (n / 2) + 29 * 2 ^ n + 1) / 3 for n even. • a(n) = (- 3 * 2 ^ (n / 2 + 3 / 2) + 29 * 2 ^ n - 1) / 3 for n odd. •

► [A139578] 0,15,34,57,84,115,150,189,232,279,330,385,444,507,574,645,720,799,882,969,1060,1155,1254,1357,1464 ⋆ a(n) = n(2n + 13). • a(n) = 2 * n ^ 2 + 13 * n. • a(n) = a(n - 1) + 4 * n + 11 (with a(0)=0). - _ Vincenzo Librandi _ , N ov 24 2010 •

► [A254031] 15,35,105,371,1449,6035,26265,117971,542409,2538515,12044025,57756371,279305769,1359736595,6654800985,32708239571,161307227529,797687136275,3953299529145,19626731023571,97576919443689,485664640673555 ⋆ a(n) = 1 * 5 ^ n + 2 * 4 ^ n + 3 * 3 ^ n + 4 * 2 ^ n + 5 * 1 ^ n. • a(n) = (x + 1) * (Bernoulli(n + 1, x + 1) - Bernoulli(n + 1, 1)) / (n + 1) - (Bernoulli(n + 2, x + 1) - Bernoulli(n + 2, 1)) / (n + 2) at x = 5. • a(n) = (1 / 4!) * Sum _{ k = 0..n } (- 1) ^ (k + n) * (k + 6)! * Stirling2(n,k) / •

► [A067707] 15,36,63,96,135,180,231,288,351,420,495,576,663,756,855,960,1071,1188,1311,1440,1575,1716,1863,2016,2175 ⋆ a(n) = 3 * n ^ 2 + 12 * n. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Jul 07 2012 •

► [A166146] 1,15,36,64,99,141,190,246,309,379,456,540,631,729,834,946,1065,1191,1324,1464,1611,1765,1926,2094,2269 ⋆ a(n) = (7 * n ^ 2 + 7 * n - 12) / 2. • a(n) = a(n - 1) + 7n, a(1)=1. • a(n) = - 6 + (7 / 2) * n ^ 2 + (7 / 2) * n, a(1)=1 . - _ Paolo P. Lava _ , Nov 10 2009 • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3), a(1)=1, a(2)=15, a(3)=36. •

► [A293156] 15,36,99,292,876,2628,7884,23652,70956,212868,638604,1915812,5747436,17242308,51726924,155180772,465542316,1396626948,4189880844,12569642532,37708927596,113126782788,339380348364,1018141045092,3054423135276 ⋆ Number of linear chord diagrams with n + 2 chords such that every chord has l ength at least n. • a(n) = 292 * 3 ^ (n - 4) for n>3. • a(n) = 3 * a(n - 1) for n >4. •

► [A082112] 1,15,37,67,105,151,205,267,337,415,501,595,697,807,925,1051,1185,1327,1477,1635,1801,1975,2157,2347,2545 ⋆ a(n) = 4 * n ^ 2 + 10 * n + 1. • a(n) = a(n - 1) + 8 * n + 6 (with a(0)=1). - _ Vincenzo Librandi _ , Aug 08 2010 • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Wesley Ivan Hurt _ , Dec 22 2021 •

► [A321383] 1,15,37,79,123,193,259,357,445,571,681,835,967,1149,1303,1513,1689,1927,2125,2391,2611,2905,3147,3469,3733 ⋆ Numbers k such that the concaten ation k21 is a square. • a(n) = a(- n + 1) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). • a(n) = 2 * a(n - 2) - a(n - 4) + 50. • a(n) = (50 * (n - 1) * n + 3 * (2 * n - 1) * (- 1) ^ n + 11) / 8. Therefore: • a(n) = (25 * n ^ 2 - 22 * n + 4) / 4 for even n; • a(n) = (25 * n ^ 2 - 28 * n + 7) / 4 for odd n. •

► [A055131] 15,39,51,87,111,123,159,183,219,267,291,303,327,339,411,447,471,519,543,579,591,687,699,723,771 ⋆ Those composite s for which A055095[s] = 2. • a(n) = 3 * ((4 * A005098[n]) + 1) = 3 * A002144[n] ??? (Conjecture, not yet pr oved) •

► [A126950] 1,15,39,89,161,271,415,609,849,1151,1511,1945,2449,3039,3711,4481,5345,6319,7399,8601,9921,11375,12959,14689,16561 ⋆ a(1) = 1; for n>1, a(n) = the smallest number p > a(n - 1) such that (a(n - 1) + p) / 2 is a cube. • a(n) = ((2 * n + 1) * (2 * n ^ 2 + 2 * n - 1) + 5 * (- 1) ^ n) / 4; a(n) = a(n - 1) + 2n ^ 3; G.f. = (1 - 2 * x + 14 * x ^ 2 - 2 * x ^ 3 + x ^ 4) / ((1 + x)(1 - x) ^ 4). •

► [A067724] 15,40,75,120,175,240,315,400,495,600,715,840,975,1120,1275,1440,1615,1800,1995,2200,2415,2640,2875,3120,3375 ⋆ a(n) = 5 * n ^ 2 + 10 * n. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Jul 08 2012 •

► [A005337] 15,40,76,124,185,260,350,456,579,720,880,1060,1261,1484,1730,2000,2295,2616,2964,3340,3745,4180,4646,5144,5675 ⋆ Number of ways in which n i dentical balls can be distributed among 4 boxes in a row such that each pair of adjacent boxes contains at least 4 balls. • a(n) = (546 - 169 * n + 6 * n ^ 2 + n ^ 3) / 6. [_ Colin Barker _ , Jul 08 2012] •

► [A239325] 1,15,41,79,129,191,265,351,449,559,681,815,961,1119,1289,1471,1665,1871,2089,2319,2561,2815,3081,3359,3649 ⋆ a(n) = 6 * n ^ 2 + 8 * n + 1. • a(0) = 1, a(1) = 15, a(2) = 41; for n>2, a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). • a(n) = C(n,0) + 14 * C(n,1) + 12 * C(n,2). •

► [A154267] 15,42,69,96,123,150,177,204,231,258,285,312,339,366,393,420,447,474,501,528,555,582,609,636,663 ⋆ a(n) = 27 * n + 15. • a(n) = 2 * a(n - 1) - a(n - 2). - _ Vincenzo Librandi _ , Feb 02 2012 •

► [A051867] 0,1,15,42,82,135,201,280,372,477,595,726,870,1027,1197,1380,1576,1785,2007,2242,2490,2751,3025,3312,3612 ⋆ 15 - gonal (or pentadecagonal) numb ers: n(13n - 11) / 2. • a(n) = 13 * n + a(n - 1) - 12 (with a(0)=0) - _ Vincenzo Librandi _ , Aug 06 2010 • a(0)=0, a(1)=1, a(2)=15, a(n)=3 * a(n - 1) - 3 * a(

n - 2) + a(n - 3). - _ Harvey P. Dale _ , Feb 29 2012 ● a(13 * a(n) + 79 * n + 1) = a(13 * a(n) + 79 * n) + a(13 * n + 1). - _ Vladimir Shevelev _ , Jan 24 2 014 ●

▶ [A069127] 1,15,43,85,141,211,295,393,505,631,771,925,1093,1275,1471,1681,190 5,2143,2395,2661,2941,3235,3543,3865,4201 ⋆ Centered 14 - gonal numbers. ● a(n) = 7 * n ^ 2 - 7 * n + 1. ● a(n) = 14 * n + a(n - 1) - 14 (with a(1)=1). - _ V incenzo Librandi _ , Aug 08 2010 ●

▶ [A173873] 1,15,43,99,211,435,883,1779,3571,7155,14323,28659,57331,114675,22 9363,458739,917491,1834995,3670003,7340019,14680051,29360115,58720243,1174 40499,234881011 ⋆ a(n) = 2 * a(n - 1) + 13, a(1)=1. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2). - _ Vincenzo Librandi _ , Jul 15 2012 ● a(n) = 7 * 2 ^ n - 13. - _ Fab io Visonà _ , Apr 08 2022 ●

▶ [A133343] 1,1,15,43,281,1121,5895,26363,129361,601441,2884575,13587883,646 75241,305992961,1452764055,6883436603,32652805921,154790287681,7340670523 35,3480407844523,16503687369401,78252676717601 ⋆ a(n) = 2 * a(n - 1) + 13 * a(n - 2), for n>1, a(0)=1, a(1)=1. ● a(n) = (1 / 2) * ((1 - sqrt(14)) ^ n + (1 + sqrt(14)) ^ n). - _ Paolo P. Lava _ , Jun 10 2008 ● a(n) = (b * i) ^ (n - 1) * (b * i * ChebyshevU(n, - i / b) - ChebyshevU(n - 1, - i / b)), with b = sqrt(13). - _ G. C. Greubel _ , Oct 15 2022 ●

▶ [A292018] 1,15,44,88,147,221,310,414,533,667,816,980,1159,1353,1562,1786,202 5,2279,2548,2832,3131,3445,3774,4118,4477 ⋆ Wiener index for the n - Andrasfai graph. ● a(n) = (5 * n - 4) * (3 * n - 1) / 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A194715] 0,15,45,90,150,225,315,420,540,675,825,990,1170,1365,1575,1800,204 0,2295,2565,2850,3150,3465,3795,4140,4500 ⋆ 15 times triangular numbers. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>2. ● a(n) = Sum _{ i=7n..8n } i. (End) ●

▶ [A014634] 1,15,45,91,153,231,325,435,561,703,861,1035,1225,1431,1653,1891,21 45,2415,2701,3003,3321,3655,4005,4371,4753 ⋆ a(n) = (2 * n + 1) * (4 * n + 1). ● a(n) = a(n - 1) + 16 * n - 2 (with a(0)=1). - _ Vincenzo Librandi _ , Nov 20 2010 ●

▶ [A127069] 15,45,153,561,2145,8385,33153,131841,525825,2100225,8394753,33 566721,134242305,536920065,2147581953,8590131201,34360131585,13743973990 5,549757386753,2199026401281,8796099313665,35184384671745 ⋆ Number of lin es in a Pauli graph of order n. ● a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3) for n>4. ● a(n) = (2 + 3 * 2 ^ n + 4 ^ n) / 2 for n>1. ●

▶ [A139278] 0,15,46,93,156,235,330,441,568,711,870,1045,1236,1443,1666,1905,21 60,2431,2718,3021,3340,3675,4026,4393,4776 ⋆ a(n) = n * (8 * n + 7). ● a(n) = 8 * n ^ 2 + 7 * n. ● a(n) = 16 * n + a(n - 1) - 1 (with a(0)=0). - _ Vincenzo Li brandi _ , Aug 03 2010 ●

▶ [A166118] 15,47,111,239,495,1007,2031,4079,8175,16367,32751,65519,131055,2 62127,524271,1048559,2097135,4194287,8388591,16777199,33554415,67108847,13 4217711,268435439,536870895 ⋆ Fixed points of the mapping f(x) = (x + 2 ^ x) mod (17 + x). ● a(n) = 2 * a(n - 1) + 17, a(1) = 15. ● a(n) = 16 * 2 ^ n - 17. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2), a(1)=15, a(2)=47. ●

▶ [A065906] 15,48,55,197,206,221,235,283,297,408,444,472,489,577,578,623,641,6 77,701,703,763,854,930,1049,1081 ⋆ Integers i > 1 for which there are three pri mes p such that i is a solution mod p of x ^ 4 = 2. ● a(n) = n - th integer i suc h that i ^ 4 - 2 has three prime factors > i. ●

▶ [A370912] 0,15,48,105,192,315,480,693,960,1287,1680,2145,2688,3315,4032,484 5,5760,6783,7920,9177,10560,12075,13728,15525,17472 ⋆ a(n) = n * (n + 2) * (n + 4). ● a(n) = 8 * Pochhammer(n / 2, 3). ● a(n) = [x ^ n] 3 * x * (x ^ 2 - 4 * x + 5) / (x - 1) ^ 4. ●

▶ [A272039] 1,15,49,103,177,271,385,519,673,847,1041,1255,1489,1743,2017,231 1,2625,2959,3313,3687,4081,4495,4929,5383,5857 ⋆ a(n) = 10 * n ^ 2 + 4 * n + 1 . ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A228219] 15,49,103,177,271,385,519,673,847,1041,1255,1489,1743,2017,2311,2 625,2959,3313,3687,4081,4495,4929,5383,5857,6351 ⋆ Number of second differen ces of arrays of length 4 of numbers in 0..n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>3. ●

▶ [A199899] 15,49,111,209,351,545,799,1121,1519,2001,2575,3249,4031,4929,595 1,7105,8399,9841,11439,13201,15135,17249,19551,22049,24751 ⋆ Number of - n.. n arrays x(0..3) of 4 elements with zero sum, and adjacent elements not both st rictly positive and not both strictly negative. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>4. ●

▶ [A029941] 1,15,50,225,590,1485,3130,6435,11931,21450,36220,59670,94140,145 350,217500,319770,458981,648945,900350,1233375,1663850,2220075,2924870,381 7125,4928511 ⋆ Number of symmetric types of (4,2n) - hypergraphs under actio n of complementing group C(4,2). ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) - 4 * a(n - 3) + 11 * a(n - 4) - 8 * a(n - 5) + 8 * a(n - 7) - 10 * a(n - 8) + 8 * a(n - 10) - 10 * a(n - 12) + 8 * a(n - 13) - 8 * a(n - 15) + 11 * a(n - 16) - 4 * a(n - 17) - 4 * a(n - 18) + 4 * a(n - 19) - a(n - 20). - _ Wesley Ivan Hurt _ , May 24 2021 ●

▶ [A211563] 15,51,171,512,1345,3145,6676,13091,24047,41835,69525,111126,1717 61,257857,377350,539905,757151,1042931,1413567,1888140,2488785,3241001,417 3976,5320927,6719455 ⋆ Number of nonnegative integer arrays of length n + 3 with new values 0 upwards introduced in order, and containing the value n - 1. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

▶ [A295339] 15,52,108,184,279,394,530,684,859,1053,1267,1501,1755,2028,2321,2 634,2966,3318,3690,4082,4493,4925,5375,5846,6336 ⋆ Least k for the inner Theo dorus spiral to complete n revolutions. ● a(n) = - 1 + first position of n in the s equence ●

▶ [A193608] 15,52,125,246,427,680,1017,1450,1991,2652,3445,4382,5475,6736,817 7,9810,11647,13700,15981,18502,21275,24312,27625,31226,35127 ⋆ The consecuti ve squares of numbers multiplied by their next consecutive integer. ● a(n) = (n + 2) * (n ^ 2 + (n + 1) ^ 2). ●

▶ [A063436] 0,15,54,117,204,315,450,609,792,999,1230,1485,1764,2067,2394,274 5,3120,3519,3942,4389,4860,5355,5874,6417,6984 ⋆ Write 1,2,3,4,... counterclock wise in a hexagonal spiral around 0 starting left down, then a(n) is the sequence found by reading from 0 in the vertical upward direction. ● a(n) = 24 * n + a(n - 1) - 9 (with a(0)=0). - _ Vincenzo Librandi _ , Aug 07 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A172073] 0,1,15,54,130,255,441,700,1044,1485,2035,2706,3510,4459,5565,684 0,8296,9945,11799,13870,16170,18711,21505,24564,27900 ⋆ a(n) = (4 * n ^ 3 + n ^ 2 - 3 * n) / 2. ● a(n) = n * (n + 1) * (4 * n - 3) / 2. ● a(0)=0, a(1)=1, a(2)= 15, a(3)=54; for n > 3, a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) . - _ Harvey P. Dale _ , Jan 29 2013 ● a(n) = Sum _{ i=0..n - 1 } (n - i) * (12 * i + 1), with a(0)=0. - _ Bruno Berselli _ , Feb 10 2014 ●

▶ [A059145] 15,54,141,324,699,1458,2985,6048,12183,24462,49029,98172,19646 7,393066,786273,1572696,3145551,6291270,12582717,25165620,50331435,1006630 74,201326361,402652944,805306119 ⋆ A hierarchical sequence (S(W3 { 2,2 }* cc) - see A059126). ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 2 * a(n - 3) for n > 2. ●

▶ [A179741] 1,15,55,119,207,319,455,615,799,1007,1239,1495,1775,2079,2407,275 9,3135,3535,3959,4407,4879,5375,5895,6439,7007 ⋆ a(n) = (2 * n + 1) * (6 * n - 1). ● a(n) = a(n - 1) + 24 * n + 16. ● a(n) = 2 * a(n - 1) - a(n - 2) + 16. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A144312] 0,15,55,120,210,325,465,630,820,1035,1275,1540,1830,2145,2485,285 0,3240,3655,4095,4560,5050,5565,6105,6670,7260 ⋆ a(n) = 5 * n * (5 * n + 1) / 2 . ● a(n) = a(n - 1) + 25 * n - 10 (with a(0) = 0). - _ Vincenzo Librandi _ , No v 25 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n > 2. (End) ●

▶ [A062025] 0,1,15,55,134,265,461,735,1100,1569,2155,2871,3730,4745,5929,729 5,8856,10625,12615,14839,17310,20041,23045,26335,29924 ⋆ a(n) = n * (13 * n ^ 2 - 7) / 6. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ●

▶ [A228322] 15,56,232,1008,4432,19328,82944,349952,1454848,5978112,2435276 8,98594816,397479936,1597865984,6411452416,25695289344,102901940224,41189 9002880,1648290693120,6594803793920,26383058206720,105541162500096,42218 5252421632 ⋆ The Wiener index of the graph obtained by applying Mycielski's construction to the hypercube graph Q(n) (n>=1). ● a(n) = 6 * 2 ^ (2 * n) - 2 ^ (n - 2) * (4 + 12 * n + n ^ 2 + n ^ 3). ●

▶ [A158482] 15,57,127,225,351,505,687,897,1135,1401,1695,2017,2367,2745,315 1,3585,4047,4537,5055,5601,6175,6777,7407,8065,8751 ⋆ a(n) = 14 * n ^ 2 + 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A022287] 0,15,59,132,234,365,525,714,932,1179,1455,1760,2094,2457,2849,327 0,3720,4199,4707,5244,5810,6405,7029,7682,8364 ⋆ a(n) = n * (29 * n + 1) / 2. ● a(n) = 29 * n + a(n - 1) - 14 for n>0, a(0)=0. - _ Vincenzo Librandi _ , Aug 04 2010 ●

▶ [A064761] 0,15,60,135,240,375,540,735,960,1215,1500,1815,2160,2535,2940,337 5,3840,4335,4860,5415,6000,6615,7260,7935,8640 ⋆ a(n) = 15 * n ^ 2. ● a(n) = a (n - 1) + 30 * n - 15 for n>0, a(0)=0. - _ Vincenzo Librandi _ , Dec 15 2010 ●

▶ [A005945] 0,1,15,60,154,315,561,910,1380,1989,2755,3696,4830,6175,7749,957 0,11656,14025,16695,19684,23010,26691,30745,35190,40044 ⋆ Number of n - step mappings with 4 inputs. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Vincenzo Librandi _ , Jun 18 2012 ●

▶ [A022288] 0,15,61,138,246,385,555,756,988,1251,1545,1870,2226,2613,3031,348 0,3960,4471,5013,5586,6190,6825,7491,8188,8916 ⋆ a(n) = n * (31 * n - 1) / 2. ● a(n) = 31 * n + a(n - 1) - 16 for n>0, a(0)=0. - _ Vincenzo Librandi _ , Aug 0 4 2010 ● a(0)=0, a(1)=15, a(2)=61; for n>2, a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Mar 31 2014 ●

▶ [A072201] 15,61,245,981,3925,15701,62805,251221,1004885,4019541,16078165,6 4312661,257250645,1029002581,4116010325,16464041301,65856165205,263424660 821,1053698643285,4214794573141,16859178292565 ⋆ a(n) = 4 * a(n - 1) + 1, a(1) = 15. ● a(n) = (23 * 4 ^ n - 2) / 6. ● a(n) = 5 * a(n - 1) - 4 * a(n - 2). ●

▶ [A157446] 15,62,141,252,395,570,777,1016,1287,1590,1925,2292,2691,3122,358 5,4080,4607,5166,5757,6380,7035,7722,8441,9192,9975 ⋆ a(n) = 16 * n ^ 2 - n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Jan 26 2 012 ●

▶ [A220084] 1,15,62,162,335,601,980,1492,2157,2995,4026,5270,6747,8477,1048 0,12776,15385,18327,21622,25290,29351,33825,38732,44092,49925 ⋆ a(n) = (n + 1) * (20 * n ^ 2 + 19 * n + 6) / 6. ● a(0)=1, a(1)=15, a(2)=62, a(3)=162; for n >3, a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Harvey P. Da le _ , Dec 23 2012 ●

▶ [A104473] 15,63,168,360,675,1155,1848,2808,4095,5775,7920,10608,13923,1795 5,22800,28560,35343,43263,52440,63000,75075,88803,104328,121800,141375 ⋆ a(n) = binomial(n + 2,2) * binomial(n + 6,2). ● a(n) = (1 / 4) * (n + 1) * (n + 2) * (n + 5) * (n + 6). ● a(n) = Sum _{ i=1..n + 1 } i * (i + 2) * (i + 4). - _ Br uno Berselli _ , Apr 28 2014 ●

▶ [A347478] 15,64,256,1024,4096,16384,65536,262144,1048576,4194304,1677721 6,67108864,268435456,1073741824,4294967296,17179869184,68719476736,274877 906944,1099511627776,4398046511104,17592186044416,70368744177664,2814749 76710656,1125899906842624 ⋆ Number of total dominating sets in the n - alkan e graph. ● a(n) = 4 ^ (n + 1) for n > 1. ●

▶ [A364401] 15,65,174,365,661,1085,1660,2409,3355,4521,5930,7605,9569,11845,1 4456,17425,20775,24529,28710,33341,38445,44045,50164,56825,64051 ⋆ a(n) is th e number of regions into which three - dimensional Euclidean space is divided b y n planes parallel to each face of a regular tetrahedron with edge length n, divi ding the edges into unit segments. ● a(n) = (23 * n ^ 3 + 39 * n ^ 2 + 22 * n + 6) / 6. ●

▶ [A005917] 1,15,65,175,369,671,1105,1695,2465,3439,4641,6095,7825,9855,1220 9,14911,17985,21455,25345,29679,34481,39775,45585,51935,58849 ⋆ Rhombic do decahedral numbers: a(n) = n ^ 4 - (n - 1) ^ 4. ● a(n) = (2 * n - 1) * (2 * n ^ 2 - 2 * n + 1). ● a(n) = sum of the next (2 * n - 1) odd numbers; i.e., group the o dd numbers so that the n - th group contains (2 * n - 1) elements like this: (1), (3, 5, 7), (9, 11, 13, 15, 17), (19, 21, 23, 25, 27, 29, 31), ... E.g., a(3) = 65 becaus e 9 + 11 + 13 + 15 + 17 = 65. - Xavier Acloque, Oct 11 2003 ● a(n) = 2 * n - 1 + 12 * Sum _{ i = 1..n } (i - 1) ^ 2. - Xavier Acloque, Oct 16 2003 ● a(n) = (4 * binomial(n,2) + 1) * sqrt(8 * binomial(n,2) + 1). - _ Paul Barry _ , Mar 1 4 2004 ●

▶ [A152729] 0,0,1,15,65,176,384,736,1281,2079,3201,4720,6720,9296,12545,1657 5,21505,27456,34560,42960,52801,64239,77441,92576,109824 ⋆ a(n) = (n - 2) ^ 4 - a(n - 1) - a(n - 2), with a(1) = a(2) = 0. ● a(n) = - 1 / 3 + (4 / 3) * (n - 1) ^

3 + (2 / 3) * (n - 1) ^ 2 - (4 / 3) * (n - 1) - ((1 / 6) * i) * sqrt(3) * (- 1 / 2 + (1 / 2) * i * sqrt(3)) ^ (n - 1) + (1 / 6) * (- 1 / 2 - (1 / 2) * i * sqrt(3)) ^ (n - 1) + (1 / 3) * (n - 1) ^ 4 + (1 / 6) * (- 1 / 2 + (1 / 2) * i * sqrt(3)) ^ (n - 1) + (1 / 6) * i * sqrt(3) * (- 1 / 2 - (1 / 2) * i * sqrt(3)) ^ (n - 1) with n >= 0 and i= sqrt(- 1). - _ Paolo P. Lava _ , Dec 19 2008 ● a(n) = a(2 - n) for all n in Z. - _ Michael Somos _ , Sep 02 2018 ●

▶ [A055268] 1,15,65,185,420,826,1470,2430,3795,5665,8151,11375,15470,20580,26860,34476,43605,54435,67165,82005,99176,118910,141450,167050,195975 ⋆ a(n) = (11 * n + 4) * C(n + 3, 3) / 4. ● a(n) = 11 * binomial(n + 4,4) - 10 * binomial(n + 3,3). ●

▶ [A090026] 0,15,65,225,529,1185,2065,3745,5841,9105,13025,19105,25521,35361,45825,59905,75425,96865,117841,147505,177041,214961,254401,306321,355249 ⋆ Number of distinct lines through the origin in 4 - dimensional cube of side length n. ● a(n) = (n + 1) ^ 4 - 1 - Sum _{ j=2..n + 1 } a(floor(n / j)). - _ Chai Wah Wu _ , Mar 30 2021 ●

▶ [A062392] 0,1,15,66,190,435,861,1540,2556,4005,5995,8646,12090,16471,21945,28680,36856,46665,58311,72010,87990,106491,127765,152076,179700 ⋆ a(n) = n ^ 4 - (n - 1) ^ 4 + (n - 2) ^ 4 - ... 0 ^ 4. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n > 4. - _ Harvey P. Dale _ , Oct 19 2011 ●

▶ [A085474] 1,15,69,195,425,791,1325,2059,3025,4255,5781,7635,9849,12455,15485,18971,22945,27439,32485,38115,44361,51255,58829,67115,76145 ⋆ C(2 * n + 4, 4) - C(2 * n,4). ● a(n) = (16 * n ^ 3 + 12 * n ^ 2 + 14 * n + 3) / 3. ●

▶ [A053134] 1,15,70,210,495,1001,1820,3060,4845,7315,10626,14950,20475,27405,35960,46376,58905,73815,91390,111930,135751,163185,194580,230300,270725 ⋆ Binomial coefficients C(2 * n + 4,4). ● a(n) = (1 / 6) * (n + 1) * (n + 2) * (2 * n + 1) * (2 * n + 3). - _ Gerry Martens _ , Oct 13 2022 ●

▶ [A253476] 1,15,70,1596,7645,175491,840826,19302360,92483161,2123084055,10172306830,233519943636,1118861268085,25685070715851,123064567182466,282512425879992 0,1353598352880312 1,3107379833972752 95,14888351236011607 90,34178353049441482476 ⋆ Indices of centered triangular numbers (A005448) which are also centered heptagonal numbers (A069099). ● a(n) = a(n - 1) + 110 * a(n - 2) - 110 * a(n - 3) - a(n - 4) + a(n - 5). ●

▶ [A126274] 1,15,72,220,525,1071,1960,3312,5265,7975,11616,16380,22477,30135,39600,51136,65025,81567,101080,123900,150381,180895,215832,255600,300625 ⋆ Partial sum of A005915. ● a(n) = Sum _{ i=0..n } (i + 1) * (3 * i ^ 2 + 3 * i + 1). ● a(n) = (3 * n ^ 4 + 6 * n ^ 3 + 3 * n ^ 2) / 4 + 2 * n ^ 3 + 5 * n ^ 2 + 4 * n + 1. ● a(n) = (1 / 4) * (n + 1) ^ 2 * (n + 2) * (3 * n + 2). - _ N - E. Fahssi _ , May 03 2008 ● a(n) = Sum _{ i=1..n } Sum _{ j=1..n } Sum _{ k=1..n } max(i,j,k). - _ Enrique Pérez Herrero _ , Feb 26 2013 ●

▶ [A212562] 0,1,15,73,228,551,1137,2097,3568,5701,8675,12681,17940,24683,33173,43681,56512,71977,90423,112201,137700,167311,201465,240593,285168 ⋆ Number of (w,x,y,z) with all terms in { 1,...,n } and w + x<2y + 2z. ● a(n) = 3 * a(n - 1) - a(n - 2) - 5 * a(n - 3) + 5 * a(n - 4) + a(n - 5) - 3 * a(n - 6) + a(n - 7). ● a(n) = 1 / 96 * (82 * n ^ 4 + 12 * n ^ 3 + 8 * n ^ 2 + 6 * ((- 1) ^ n - 1) * n - 3 * (- 1) ^ n + 3). ●

▶ [A022817] 1,15,74,237,599,1301,2541,4586,7785,12583,19536,29327,42783,60893,84827,115956,155873,206415,269686,348081,444311,561429,702857,872414,1074345 ⋆ Number of terms in 7th derivative of a function composed with itself n times. ● a(n) = n / 720 * (n ^ 5 + 39 * n ^ 4 + 355 * n ^ 3 + 645 * n ^ 2 - 356 * n + 36). ●

▶ [A317657] 15,75,95,115,175,195,215,275,295,315,375,395,415,475,495,515,575,595,615,675,695,715,775,795,815 ⋆ Numbers congruent to { 15, 75, 95 } mod 100. ● a(n) = a(n - 3) + 100, a(1) = 15, a(2) = 75, a(3) = 95. ● a(n) = a(n - 1) + a(n - 3) - a(n - 4), n>4. ● a(n) = 100 * n / 3 - 80 * sin(2 * n * Pi / 3) / (3 * sqrt(3)) - 5. ●

▶ [A296193] 0,1,15,75,162,1317,2610,20505,40212,315957,622350,4917585,9739512,77326797,153754290,1224577065,2440906812,19477524837,38880209430,310591650945,620507282112,4959998206077,9913902403770,79274639451225,158494393505412 ⋆ Numerators of Harary index for the n - Mycielski graph. ● a(n) = ((3 + (- 1) ^ n) * (432 - 135 * 2 ^ (n + 2) + 112 * 3 ^ n + 81 * 4 ^ n)) / 1152 for n > 3. ● a(n) = 30 * a(n - 2) - 273 * a(n - 4) + 820 * a(n - 6) - 576 * a(n - 8) for n > 11. ●

▶ [A135916] 0,0,15,75,222,510,1005,1785,2940,4572,6795,9735,13530,18330,24297,31605,40440,51000,63495,78147,95190,114870,137445,163185,192372 ⋆ (n ^ 4 - 10 * n ^ 2 + 15 * n - 6) / 2. ● a(1)=0, a(2)=0, a(3)=15, a(4)=75, a(5)=222, a(n)=5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Harvey P. Dale _ , Aug 12 2013 ●

▶ [A266395] 0,0,0,0,15,75,225,525,1050,1890,3150,4950,7425,10725,15015,20475,27300,35700,45900,58140,72675,89775,109725,132825,159390 ⋆ Number of orbits of Aut(Z ^ 7) as function of the infinity norm n of the representative lattice point of the orbit, when the cardinality of the orbit is equal to 161280. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

▶ [A051880] 1,15,75,245,630,1386,2730,4950,8415,13585,21021,31395,45500,64260,88740,120156,159885,209475,270655,345345,435666,543950,672750,824850,1003275 ⋆ a(n) = binomial(n + 4,4) * (2 * n + 1). ● a(n) = C(n + 4, 4) * (2n + 1). ●

▶ [A000477] 0,1,15,76,275,720,1666,3440,6129,11250,17545,28896,41405,65072,85950,128960,162996,238545,286995,404600,482160,662112,756470,1042560,1150625 ⋆ a(n) = Sum _{ k=1..n - 1 } k ^ 2 * sigma(k) * sigma(n - k). ● a(n) = Sum _{ k=1..n - 1 } k ^ 2 * sigma(k) * sigma(n - k). - _ Sean A. Irvine _ , Nov 14 2010 ● a(n) = (n ^ 2 / 24 - n ^ 3 / 6) * sigma _ 1(n) + (n ^ 2 / 8) * sigma _ 3(n). - _ Ridouane Oudra _ , Sep 15 2020 ●

▶ [A041430] 15,76,2295,11551,348825,1755676,53019105,266851201,8058555135,40559626876,1224847361415,6164796433951,186168740379945,937008498333676,28296423690390225,142419126950284801,4300870232198934255 ⋆ Numerators of continued fraction convergents to sqrt(231). ● a(n) = 152 * a(n - 2) - a(n - 4). G.f.: - (x ^ 3 - 15 * x ^ 2 - 76 * x - 15) / (x ^ 4 - 152 * x ^ 2 + 1). [_ Colin Barker _ , Jul 15 2012] ●

▶ [A257925] 1,15,77,247,609,1271,2365,4047,6497,9919,14541,20615,28417,38247,50429,65311,83265,104687,129997,159639,194081,233815,279357,331247,390049 ⋆ a(n) = (n ^ 2 - n + 1) * (n ^ 2 + n - 1). ● a(n) = (n ^ 2 - n + 1) * (n ^ 2 + n - 1). ●

▶ [A180579] 15,78,189,348,555,810,1113,1464,1863,2310,2805,3348,3939,4578,5265,6000,6783,7614,8493,9420,10395,11418,12489,13608,14775 ⋆ The Wiener index of the Dutch windmill graph D(5,n) (n>=1). ● a(n) = 3n(8n - 3). ●

▶ [A081591] 1,15,78,190,351,561,820,1128,1485,1891,2346,2850,3403,4005,4656,5356,6105,6903,7750,8646,9591,10585,11628,12720,13861 ⋆ Third row of Pascal - (1,6,1) array A081581. ● a(n) = (2 - 21 * n + 49 * n ^ 2) / 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3); a(0)=1, a(1)=15, a(2)=78. - _ Harvey P. Dale _ , Aug 03 2012 ●

▶ [A269620] 15,78,249,612,1275,2370,4053,6504,9927,14550,20625,28428,38259,50442,65325,83280,104703,130014,159657,194100,233835,279378,331269,390072,456375 ⋆ Number of length - 4 0..n arrays with no repeated value differing from the previous repeated value by other than plus two, zero or minus 1. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

▶ [A269436] 15,78,250,615,1281,2380,4068,6525,9955,14586,20670,28483,38325,50520,65416,83385,104823,130150,159810,194271,234025,279588,331500,390325,456651 ⋆ Number of length - 4 0..n arrays with no repeated value greater than the previous repeated value. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

▶ [A212746] 1,15,79,225,529,975,1711,2625,3985,5535,7711,10065,13249,16575,20959,25425,31201,36975,44335,51585,60721,69615,80719,91425,104689 ⋆ Number of (w,x,y,z) with all terms in { 0,...,n } and at least one of them is the range of { w,x,y,z } . ● a(n) = a(n - 1) + 3 * a(n - 2) - 3 * a(n - 3) - 3 * a(n - 5) + 3 * a(n - 6) + a(n - 7) - a(n - 8). ● a(n) = (3 * n * (10 * n ^ 2 + n + (- 1) ^ n * (n - 1) + 9) + 2 * ((- 1) ^ n + 1)) / 4. ● a(n) = (15 * n ^ 3 + 3 * n ^ 2 + 12 * n + 2) / 2 for n even. ● a(n) = (15 * n ^ 3 + 15 * n) / 2 for n odd. ●

▶ [A212741] 1,15,79,239,593,1199,2239,3759,6049,9119,13391,18815,25969,34719,45823,59039,75329,94319,117199,143439,174481,209615,250559,296399,349153 ⋆ Number of (w,x,y,z) with all terms in { 0,...,n } and max { w,x,y,z } >=2 * min { w,x,y,z } . ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 6 * a(n - 3) + 6 * a(n - 5) - 2 * a(n - 6) - 2 * a(n - 7) + a(n - 8). ●

▶ [A082540] 1,15,79,239,607,1199,2303,3823,6223,9279,13919,19183,27007,35743,47519,60735,78719,97103,122447,148527,181839,216959,262543,306863,365343 ⋆ Number of ordered quadruples (a,b,c,d) with gcd(a,b,c,d)=1 (1 <= { a,b,c,d } <= n). ● a(n) = Sum _{ k=1..n } mu(k) * floor(n / k) ^ 4. ● a(n) is asymptotic to c * n ^ 4 with c=0.92393.... ●

▶ [A372952] 1,15,79,239,621,1185,2395,3823,6397,9315,14631,18881,28549,35925,49059,61167,83505,95955,130303,148419,189205,219465,279819,302017,388121 ⋆ a(n) = Sum _{ 1 <= x _ 1, x _ 2, x _ 3 <= n } n / gcd(x _ 1, x _ 2, x _ 3, n). ● a(n) = Sum _{ d|n } mu(n / d) * n / d * sigma _ 4(d). ●

▶ [A269657] 1,15,79,253,621,1291,2395,4089,6553,9991,14631,20725,28549,38403,50611,65521,83505,104959,130303,159981,194461,234235,279819,331753,390601 ⋆ Number of length - 4 0..n arrays with no adjacent pair x,x + 1 repeated. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ● a(n) = (n + 1) ^ 4 - n, cf. comment, confirming the above conjectured formulas. - _ M. F. Hasler _ , Feb 29 2020 ●

▶ [A180577] 15,80,195,360,575,840,1155,1520,1935,2400,2915,3480,4095,4760,5475,6240,7055,7920,8835,9800,10815,11880,12995,14160,15375 ⋆ The Wiener index of the windmill graph D(6,n). The windmill graph D(m,n) is the graph obtained by taking n copies of the complete graph K _ m with a vertex in common (i.e., a bouquet of n pieces of K _ m graphs). ● a(n) = 5n(5n - 2). ●

▶ [A059377] 1,15,80,240,624,1200,2400,3840,6480,9360,14640,19200,28560,36000,49920,61440,83520,97200,130320,149760,192000,219600,279840,307200,390000 ⋆ Jordan function J _ 4(n). ● a(n) = Sum _{ d|n } d ^ 4 * mu(n / d). - _ Benoit Cloitre _ , Apr 05 2002 ● a(n) = Sum _{ k=1..n } gcd(k,n) ^ 4 * cos(2 * Pi * k / n). - _ Enrique Pérez Herrero _ , Jan 18 2013 ● a(n) = n ^ 4 * Product _{ distinct primes p dividing n } (1 - 1 / p ^ 4). - _ Tom Edgar _ , Jan 09 2015 ●

▶ [A050149] 1,15,80,432,2352,12896,71136,394400,2196128,12273648,68811184,386838480,2179890000,12309739968,69641542848,394643939904,2239678552640,12727572969680,72415319422992,412470467298032 ⋆ a(n) = T(n,n - 3), array T as in A050143. ● a(n) = Sum _{ s=1..n } binomial(n,s) * binomial(s + n - 5,n - 4) = n * hypergeom([- n + 1, n - 3], [2], - 1) for n >= 4 and a(1) = 1. - _ Petros Hadjicostas _ , Feb 14 2021 ●

▶ [A358917] 0,1,15,80,609,4015,27936,190385,1307775,8956144,61405905,420831071,2884553280,19770670945,135511114479,928804587920,6366127657281,4363407158657 5,299072419071840,2049872742473489,14050037090947935,96300386075488816,660052667580788145 ⋆ a(n) = Fibonacci(n + 1) ^ 4 - Fibonacci(n - 1) ^ 4. ● a(n) = 4 * a(n - 1) + 19 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n > 3. (End) ●

▶ [A344722] 1,15,81,240,610,1230,2336,3840,6371,9455,14097,19615,27441,36205,48849,61874,79860,99470,124816,150846,186498,221646,267232,313840,373059 ⋆ a(n) = Sum _{ k=1..n } (- 1) ^ (k + 1) * floor(n / k) ^ 4. ● a(n) = Sum _{ k=1,..n } Sum _{ d|k } (- 1) ^ (k / d + 1) * (d ^ 4 - (d - 1) ^ 4). ●

▶ [A309336] 0,1,15,81,240,625,1215,2401,3840,6561,9375,14641,19440,28561,36015,50625,61440,83521,98415,130321,150000,194481,219615,279841,311040 ⋆ a(n) = n ^ 4 if n odd, 15 * n ^ 4 / 16 if n even. ● a(n) = n ^ 4 * (31 - (- 1) ^ n) / 32. ● a(n) = Sum _{ d|n, n / d odd } J _ 4(d). ●

▶ [A266288] 1,15,81,241,624,1215,2402,3855,6561,9360,14640,19521,28562,36030,50544,61681,83520,98415,130322,150384,194562,219600,279840,312255,390001 ⋆ Expansion of a(q) ^ 2 * (c(q) / 3) ^ 3 in powers of q where a(), c() are cubic AGM theta functions. ● a(n) is multiplicative with a(p ^ e) = ((p ^ 4) ^ (e + 1) - s ^ (e + 1)) / (p ^ 4 - s) where s = 0 if p = 3, s = 1 if p == 1 (mod 3), s = -1 if p == 2 (mod 3). ●

▶ [A213552] 1,15,81,281,756,1722,3486,6462,11187,18337,28743,43407,63518,90468,125868,171564,229653,302499,392749,503349,637560,798974,991530,1219530,1487655 ⋆ Principal diagonal of the convolution array A213551. ● a(n) = n * (1

+ n) * (2 + n)(- 3 + 7 * n + 16 * n ^ 2) / 120. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). ●

▶ [A334244] 1,15,81,959,5185,61391,331857,3929023,21238849,251457487,1359286353,16093279167,86994326593,1029969866703,5567636901969,65918071468991,356328761726017,4218756574015439,22805040750465105,270000420736988095,1459522608029766721,17280026927167238095 ⋆ Decimal representation of n - th iteration of the one - dimensional cellular automaton defined by Rule 950, based on the 4 - celled von Neumann neighborhood starting with a single black cell. ● a(n) = (- 1040 + 130 * (- 1) ^ n - (504 + 504 * i) * (- i) ^ n - (504 - 504 * i) * i ^ n + 1607 * 2 ^ (3 * n) + 311 * (- 1) ^ n * 2 ^ (3 * n)) / 8190 where i = sqrt(- 1). ● a(n) = ((1607 + 311 * (- 1) ^ n) * 8 ^ n - (1040 - 130 * (- 1) ^ n) - 1008 * sqrt(2) * cos((2 * n - 1) * Pi / 4)) / 8190. ● a(n) = 64 * a(n - 2) + a(n - 4) - 64 * a(n - 6) for n>6. - _ Colin Barker _ , Jun 10 2020 ●

▶ [A065103] 1,15,82,241,626,1230,2400,3855,6643,9390,14641,19762,28560,36000,51332,61681,83520,99645,130320,150866,196800,219615,279842,316110,391251 ⋆ A level 11 weight 5 form. ● a(n) = Sum _{ d | n } Kronecker(d / 11) * (n / d) ^ 4 ●

▶ [A279395] 1,15,82,271,626,1230,2402,4367,6643,9390,14642,22222,28562,36030,51332,69903,83522,99645,130322,169646,196964,219630,279842,358094,391251 ⋆ a(n) = Sum _{ d >= 1, d divides n } (- 1) ^ (n - d) * d ^ 4. ● a(n) = Sum _{ d >= 1, d divides n } (- 1) ^ (n - d) * d ^ 4. ●

▶ [A252935] 15,83,494,3067,17962,86488,320270,917811,2127013,4211511,7437417,12070971,18378413,26625983,37079921,50006467,65671861,84342343,106284153,131763531,161046717,194399951,232089473,274381523,321542341 ⋆ Number of n X 5 nonnegative integer arrays with upper left 0 and every value within 3 of its king move distance from the upper left and every value increasing by 0 or 1 with every step right, diagonally se or down. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>12. ●

▶ [A108674] 1,15,84,300,825,1911,3920,7344,12825,21175,33396,50700,74529,106575,148800,203456,273105,360639,469300,602700,764841,960135,1193424,1470000,1795625 ⋆ a(n) = (n + 1) ^ 2 * (n + 2) ^ 2 * (2 * n + 3) / 12. ● a(n) = Sum _{ j=1..n + 1 } j ^ 2 Sum _{ i=1..n + 1 } i. - _ Alexander Adamchuk _ , Jun 25 2006 ●

▶ [A050405] 1,15,84,308,882,2142,4620,9108,16731,29029,48048,76440,117572,175644,255816,364344,508725,697851,942172,1253868,1647030,2137850,2744820,3488940,4393935 ⋆ Partial sums of A051879. ● a(n) = binomial(n + 5, 5) * (3 * n + 2) / 2. ●

▶ [A160747] 1,15,85,295,771,1681,3235,5685,9325,14491,21561,30955,43135,58605,77911,101641,130425,164935,205885,254031,310171,375145,449835,535165,632101 ⋆ Expansion of (1 + 10 * x + 20 * x ^ 2 + 10 * x ^ 3 + x ^ 4) / (1 - x) ^ 5. ● a(n) = 1 + 7 * n * (n + 1) * (n ^ 2 + n + 2) / 4. - _ R. J. Mathar _ , Dec 16 2009 ●

▶ [A064058] 1,15,85,320,951,2415,5475,11385,22110,40612,71214,120055,195650,309570,477258,718998,1061055,1537005,2189275,3070914,4247617,5800025,7826325,10445175,13798980 ⋆ Ninth column of quintinomial coefficients. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) with a(0)=1, a(1)=15, a(2)=85, a(3)=320, a(4)=951, a(5)=2415, a(6)=5475, a(7)=11385, a(8)=22110. [From Harvey P. Dale, Oct 30 2011] ● a(n) = C(n + 2,2) + 12 * C(n + 2,3) + 31 * C(n + 2,4) + 35 * C(n + 2,5) + 21 * C(n + 2,6) + 7 * C(n + 2,7) + C(n + 2,8) (see comment in A213887). - _ Vladimir Shevelev _ and _ Peter J. C. Moses _ , Jun 22 2012 ●

▶ [A138322] 1,15,85,575,3725,24375,159125,1039375,6788125,44334375,289553125,1891109375,12351078125,80666484375,526843203125,3440880859375,22472836328125,146772990234375,958593314453125,6260696474609375 ⋆ a(n) = 5 * a(n - 1) + 10 * a(n - 2). ● a(n), n>1 = 5 * a(n - 1) + 10 * a(n - 2), given a(0) = 1, a(1) = 15. [a(n), a(n + 1)] = the 2 X 2 matrix [0,1; 10,5] ^ n * [1,15] ● a(n)=5 / 26 * sqrt(65) * (5 / 2 + 1 / 2 * sqrt(65)) ^ n + 1 / 2 * (5 / 2 - 1 / 2 * sqrt(65)) ^ n - 5 / 26 * (5 / 2 - 1 / 2 * sqrt(65)) ^ n * sqrt(65) + 1 / 2 * (5 / 2 + 1 / 2 * sqrt(65)) ^ n, where n>=0 - _ Paolo P. Lava _ , Jun 03 2008 ●

▶ [A206170] 15,85,641,5257,44585,385465,3375401,29817817,264999305,2364834745,21162573161,189737549977,1703284356425,15303437762425,137574211418921,1237227532571737,11129405572871945,100130796836040505 ⋆ Number of 2 X (n + 1) 0..3 arrays with every 2 X 2 subblock in a row having an equal number of equal diagonal or equal antidiagonal elements, adjacent rows differing in this number, and new values 0..3 introduced in row major order. ● a(n) = (9 + 3 * 2 ^ n + 2 ^ (1 + n) * 3 ^ n + 2 * 9 ^ n) / 3. ●

▶ [A164541] 1,15,89,519,3025,17631,102761,598935,3490849,20346159,118586105,691170471,4028436721,23479449855,136848262409,797610124599,4648812485185,27095264786511,157922776233881,920441392616775 ⋆ a(n) = 6 * a(n - 1) - a(n - 2) for n > 1; a(0) = 1, a(1) = 15. ● a(n) = 6 * a(n - 1) - a(n - 2) for n > 1; a(0) = 1, a(1) = 15. ● a(n) = ((1 + 3 * sqrt(2)) * (3 + 2 * sqrt(2)) ^ n + (1 - 3 * sqrt(2)) * (3 - 2 * sqrt(2)) ^ n) / 2. ●

▶ [A316224] 0,15,90,273,612,1155,1950,3045,4488,6327,8610,11385,14700,18603,23142,28365,34320,41055,48618,57057,66420,76755,88110,100533,114072 ⋆ a(n) = n * (2 * n + 1) * (4 * n + 1). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ●

▶ [A151974] 0,15,90,315,840,1890,3780,6930,11880,19305,30030,45045,65520,92820,128520,174420,232560,305235,395010,504735,637560,796950,986700,1210950,1474200 ⋆ a(n) = n * (n + 1) * (n + 2) * (n + 3) * (n + 4) / 8. ● a(n) = n * (n + 1) * (n + 2) * (n + 3) * (n + 4) / 8. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). - _ Eric W. Weisstein _ , Aug 14 2017 ●

▶ [A328994] 1,15,90,340,975,2331,4900,9360,16605,27775,44286,67860,100555,144795,203400,279616,377145,500175,653410,842100,1072071,1349755,1682220,2077200,2543125 ⋆ a(n) = n ^ 2 * (1 + n) * (1 + n ^ 2) / 4. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). ●

▶ [A001297] 0,1,15,90,350,1050,2646,5880,11880,22275,39325,66066,106470,165620,249900,367200,527136,741285,1023435,1389850,1859550,2454606,3200450,4126200,5265000 ⋆ Stirling numbers of the second kind S(n + 3, n). ● a(n) = (binomial(n + 4, n - 1) - binomial(n + 3, n - 2)) * (binomial(n + 2, n - 1) - binomial(n + 1, n - 2)). - _ Zerinvary Lajos _ , May 12 2006 ● a(n) = binomial(n + 1, 2) * binomial(n + 3, 4). - _ Vladimir Shevelev _ , Dec 18 2011 ● a(n) = Sum _{ k=1..n } Sum _{ i=1..n } i * C(k + 2,k - 1). - _ Wesley Ivan Hurt _ , Sep 21 2017 ● a(n) = Sum _{ 0<=i<=j<=k<=n } i * j * k. - _ Robert FERREOL _ , May 25 2022 ●

▶ [A005716] 1,15,90,357,1107,2907,6765,14355,28314,52624,93093,157950,258570,410346,633726,955434,1409895,2040885,2903428,4065963,5612805,7646925,10293075,13701285,18050760 ⋆ Coefficient of x ^ 8 in expansion of (1 + x + x ^ 2) ^ n ● a(n) = binomial(n + 1, 5) * (n ^ 2 + 23 * n - 84) * (n + 10) / 336, n >= 4. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9). _ Vincenzo Librandi _ , Jun 16 2012 ● a(n) = binomial(n,4) + 10 * binomial(n,5) + 15 * binomial(n,6) + 7 * binomial(n,7) + binomial(n,8) (see our comment in A026729). - _ Vladimir Shevelev _ and _ Peter J. C. Moses _ , Jun 22 2012 ● a(n) = GegenbauerC(N, - n, - 1 / 2) where N = 8 if 8<n else 2 * n - 8. - _ Peter Luschny _ , May 10 2016 ●

▶ [A292055] 0,1,15,90,435,1926,8175,33930,139035,565326,2287335,9224370,37116435,149110326,598350495,2399080410,9613258635,38503648926,154166045655,617117746050,2469830101635,9883394613126,39545794780815,158219815525290,632989146141435 ⋆ Wiener index of the n - Mycielski graph. ● a(n) = (216 - 27 * 2 ^ (n + 3) - 56 * 3 ^ n + 81 * 4 ^ n) / 144 for n > 1. ● a(n) = 10 * a(n - 1) - 35 * a(n - 2) + 50 * a(n - 3) - 24 * a(n - 4). ●

▶ [A320524] 0,15,90,630,3780,23220,139320,839160,5034960,30229200,181375200,1088367840,6530207040,39181942080,235091652480,1410554113920,8463324683520,50779973295360,304679839772160,1828079189798400,10968475138790400,65810851739735040,394865110438410240,2369190668072417280,14215144008434503680 ⋆ Number of chiral pairs of a row of n colors using 6 or fewer colors. ● a(n) = (k ^ n - k ^ ceiling(n / 2)) / 2, where k=6 is maximum number of colors. ●

▶ [A237516] 1,15,91,325,861,1891,3655,6441,10585,16471,24531,35245,49141,66795,88831,115921,148785,188191,234955,289941,354061,428275,513591,611065,721801 ⋆ Pyramidal centered square numbers. ● a(n) = 2n ^ 4 - 4n ^ 3 + 5n ^ 2 - 3n + 1. ● a(n) = Sum _{ i = 1..(2n(n + 1) + 1) } i. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Colin Barker _ , Jan 17 2015 ●

▶ [A367243] 0,15,91,381,1375,4605,14791,46341,142975,436845,1326391,4010901,12096175,36415485,109500391,329009061,988042975,2966160525,8902544791,26715760821,80163535375,240523111965,721634347591,2165033066181,6495359245375 ⋆ a(n) is the number of n - digit numbers whose difference between the largest and smallest digits is equal to 2. ● a(n) = (46 * 3 ^ n - 93 * 2 ^ n + 48) / 6. ● a(n) = 6 * a(n - 1) - 11 * a(n - 2) + 6 * a(n - 3) for n > 3. ●

▶ [A052226] 1,15,92,372,1170,3102,7260,15444,30459,56485,99528,167960,273156,430236,658920,984504,1438965,2062203,2903428,4022700,5492630,7400250,9849060,12961260,16880175 ⋆ Partial sums of A050404. ● a(n) = (8 * n + 7) * C(n + 6, 6) / 7. ●

▶ [A289705] 0,0,15,96,330,855,1866,3624,6468,10818,17193,26208,38598,55209,77028,105168,140904,185652,241011,308736,390786,489291,606606,745272,908076 ⋆ Number of 4 - cycles in the n - triangular honeycomb queen graph. ● a(n) = (24 * n ^ 5 + 170 * n ^ 4 - 660 * n ^ 3 + 160 * n ^ 2 + 606 * n - 165 + (- 1) ^ n * (165 - 30 * n)) / 320. ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) - 4 * a(n - 3) + 10 * a(n - 4) - 4 * a(n - 5) - 4 * a(n - 6) + 4 * a(n - 7) - a(n - 8). ●

▶ [A000973] 1,15,99,429,1430,3978,9690,21318,43263,82225,148005,254475,420732,672452,1043460,1577532,2330445,3372291,4790071,6690585,9203634,12485550,16723070,22137570,28989675 ⋆ Fermat coefficients. ● a(n) = binomial(2 * n - 8, 7) / 8. ●

▶ [A034266] 0,1,15,99,435,1485,4257,10725,24453,51480,101530,189618,338130,579462,959310,1540710,2408934,3677355,5494401,8051725,11593725,16428555,22940775,31605795,43006275 ⋆ Partial sums of A027818. ● a(n) = (7 * n + 1) * binomial(n + 6, 7) / 8. ●

▶ [A319777] 1,15,100,436,1459,4069,9929,21871,44426,84494,152171,261749,432906,692102,1074198,1624314,2399943,3473337,4934182,6892578,9482341,12864643,17232007,22812673,29875352 ⋆ a(n) is the number of equivalence classes of triples of sets each with n or fewer elements where two triples are equivalent if the number of elements in all intersections is the same. ● a(n) = 7 * a(n - 1) - 20 * a(n - 2) + 28 * a(n - 3) - 14 * a(n - 4) - 14 * a(n - 5) + 28 * a(n - 6) - 20 * a(n - 7) + 7 * a(n - 8) - a(n - 9) for n>8. ●

▶ [A085465] 1,15,102,442,1443,3885,9100,19188,37269,67771,116754,192270,304759,467481,696984,1013608,1442025,2011815,2758078,3722082,4951947,6503365,8440356,10836060,13773565 ⋆ Number of monotone n - weightings of complete bipartite digraph K(3,3). ● a(n) = n + 13 * binomial(n, 2) + 60 * binomial(n, 3) + 120 * binomial(n, 4) + 108 * binomial(n, 5) + 36 * binomial(n, 6) = 1 / 20 * n * (n + 1) * (n ^ 2 + 1) * (n ^ 2 + 2 * n + 2) = Sum _{ i=1..n } ((n + 1 - i) ^ 3 - (n - i) ^ 3) * i ^ 3. More generally, number of monotone n - weightings of complete bipartite digraph K(s, t) is Sum _{ i=1..n } ((n + 1 - i) ^ s - (n - i) ^ s) * i ^ t = Sum _{ i=1..n } ((n + 1 - i) ^ t - (n - i) ^ t) * i ^ s. ●

▶ [A061550] 15,105,315,693,1287,2145,3315,4845,6783,9177,12075,15525,19575,24273,29667,35805,42735,50505,59163,68757,79335,90945,103635,117453,132447 ⋆ a(n) = (2n + 1) * (2n + 3) * (2n + 5). ● a(n)=(- 1) ^ (n + 1) * (4 * n ^ 2 + 12 * n + 7) / Integral _{ x=0..Pi / 2 } (cos((2 * n + 3) * x)) * (sin(x)) ^ 2 dx. - _ Francesco Daddi _ , Aug 03 2011 ●

▶ [A090454] 15,105,396,1110,2600,5390,10220,18096,30345,48675,75240,112710,164346,234080,326600,447440,603075,801021,1049940,1359750,1741740,2208690,2774996,3456800,4272125 ⋆ Fourth column (m=5) of array A090452. ● a(n)= (n + 9) * (n + 6) * (n + 2) * (n + 1) * (n ^ 2 + 15 * n + 20) / 144, ●

▶ [A240440] 0,0,15,105,420,1260,3150,6930,13860,25740,45045,75075,120120,185640,278460,406980,581400,813960,1119195,1514205,2018940,2656500,3453450,4440150,5651100 ⋆ Number of ways to place 3 points on a triangular grid of side n so that they are not vertices of an equilateral triangle of any orientation. ● a(n) = (n + 3) * (n + 2) * (n + 1) * n * (n - 1) * (n - 2) / 48. ● a(n) = 7 * a(n - 1) -

21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. - _ Wesley Ivan Hurt _ , Dec 03 2015 ●

► [A006857] 1,15,105,490,1764,5292,13860,32670,70785,143143,273273,496860,866320,1456560,2372112,3755844,5799465,8756055,12954865,18818646,26883780,37823500,52474500,71867250,97260345 ⋆ a(n) = binomial(n + 5,5) * binomial(n + 5,4) / (n + 5). ● a(n) = (4 + n)! * (5 + n)! / (2880 * n! * (n + 1)!). ● a(n) = C(n + 5,8) + 6 * C(n + 6,8) + 6 * C(n + 7,8) + C(n + 8,8). ● a(n) = C(n + 4, 4) * C(n + 5,4) / 5. ● a(n)= C(n + 4,4) ^ 2 - C(n + 4,3) * C(n + 4,5). - _ Gary Detlefs _ , Dec 05 2011 ●

► [A000478] 15,105,490,1918,6825,22935,74316,235092,731731,2252341,6879678,20900922,63259533,190957923,575363776,1731333808,5205011031,15638101281,46962537810,140988276150,423174543025,1269959836015,3810785476980,11434235478348,34306598748315 ⋆ Number of ways of placing n labeled balls into 3 indistinguishable boxes with at least 2 balls in each box. ● a(n) = (1 + n + n ^ 2) / 2 - (1 / 2 + n / 4) * 2 ^ n + 3 ^ n / 6. - Michael Steyer (m.steyer(AT)osram.de), Jan 09 2005 ● a(n) = 10 * a(n - 1) - 40 * a(n - 2) + 82 * a(n - 3) - 91 * a(n - 4) + 52 * a(n - 5) - 12 * a(n - 6), n > 11. - _ Harvey P. Dale _ based on Michael Steyer's formula, Jul 17 2011 ● a(n) = 3 * a(n - 1) + (2 ^ (n - 3) - n + 1) * (n - 1), a(n)=0, n < 6. - _ Vladimir Kruchinin _ , Oct 04 2018 ●

► [A055848] 1,15,105,495,1815,5577,15015,36465,81510,170170,335478,629850,1133730,1967070,3304290,5393454,8580495,13339425,20309575,30341025,44549505,64382175,91695825,128849175,178811100 ⋆ Expansion of (1 + 5 * x) / (1 - x) ^ 10. ● a(n)=(2n + 3) * C(n + 8, 8) / 3. G.f.(x)=(1 + 5x) / (1 - x) ^ 10. ●

► [A202493] 1,15,105,532,2241,8361,28610,91740,279624,818272,2315712,6372480,17123840,45082368,116596224,296879104,745543680,1849344000,4536958976,11020075008,26526547968,63329075200,150057123840 ⋆ Column k = 4 of triangular array in A165241. ● a(n) = 2 ^ n * (n + 4) * (27 * n ^ 3 + 126 * n ^ 2 + 169 * n + 62) / 256 for n>0. - _ Bruno Berselli _ , Dec 21 2011 ●

► [A266503] 0,0,0,0,0,15,105,735,4095,26775,162855,1105335,7187895,51126075,356831475,2676468795,19890931515,156769986555,1232704469115,10178240218875,84190426730235,725667326178795 ⋆ Number of symmetric difference - closed 4 - sets consisting of sets consisting of an even number of pairwise disjoint 2 - subsets of { 1,2,...,n } . ● a(n) = n! * sum(sum(sum((2 ^ (k - 2 * i - 2 * j)) / (k! * (2 * i - k)! * (2 * j - k)! * (n - 4 * i - 4 * j + 2 * k)! * (delta(i, j) + delta(i, k) + 1)!), k=max(i, 2 * i + 2 * j - [n / 2])..min(2 * j, [1 / 4 * (4 * i + 4 * j - 1)])), j =1..i), i=1..[n / 2]). ●

► [A319588] 0,15,105,2016,11628,203203,1152921,19968040,113108320,1957220895,11084786065,191793185496,1086209028828,18793829460003,106437529743441,1841604033412080,10429792989769440,180458406785594575,1022013288177368025,17683082313822046576 ⋆ First of three consecutive triangular numbers that add up to a perfect square. ● a(n) = a(n - 1) + 108 * a(n - 2) - 108 * a(n - 3) - 982 * a(n - 4) + 982 * a(n - 5) + 108 * a(n - 6) - 108 * a(n - 7) - a(n - 8) + a(n - 9) for n>9. ●

► [A293263] 1,15,106,582,2952,14488,69982,335356,1600624,7624266,36279784,172546968,820420150,3900386212,18541702744,88140749906,418982915000,1991645550032,9467293435654,45002706816100,213919774521224,1016864234903874,4833646472767104 ⋆ Number of fixed polyominoes without holes that have a width of n and height of 3. ● a(n) = 10 * a(n - 1) - 34 * a(n - 2) + 49 * a(n - 3) - 29 * a(n - 4) + 2 * a(n - 5) + 10 * a(n - 6) - 5 * a(n - 7) - 2 * a(n - 8) for n > 9. ●

► [A243212] 0,15,107,428,1282,3198,7022,14020,26000,45445,75665,120960,186802,280028,409052,584088,817392,1123515,1519575,2025540,2664530,3463130,4451722,5664828,7141472 ⋆ Number of ways to place 3 points on a triangular grid of side n so that no three of them are vertices of an equilateral triangle with sides parallel to the grid. ● a(n) = C(n * (n + 1) / 2, 3) - floor((n - 1) * (n + 1) * (2 * n - 1) / 8). ● a(n) = (- 3 + 3 * (- 1) ^ n + 20 * n + 8 * n ^ 2 - 23 * n ^ 3 - 3 * n ^ 4 + 3 * n ^ 5 + n ^ 6) / 48. - _ Colin Barker _ , Jun 09 2014 ●

► [A365929] 0,0,15,108,396,1050,2295,4410,7728,12636,19575,29040,41580,57798,78351,103950,135360,173400,218943,272916,336300,410130,495495,593538,705456 ⋆ Number of intersections formed within a triangle by placing n points "in general position" on each of the three sides and connecting each point to each of the points on the other two sides using straight lines. ● a(n) = (3 / 4) * n ^ 2 * (3 * n ^ 2 - 4 * n + 1). ●

► [A290361] 0,1,15,111,518,1789,5026,12166,26328,52221,96613,168861,281502,450905,697984,1048972,1536256,2199273,3085467,4251307,5763366,7699461,10149854,13218514,17024440 ⋆ Number of 7 - leaf rooted trees with n levels. ● a(n) = (61 * n ^ 6 + 69 * n ^ 5 + 145 * n ^ 4 + 195 * n ^ 3 + 154 * n ^ 2 + 96 * n) / 6!. ●

► [A254869] 1,15,111,561,2211,7293,21021,54483,129558,286858,598026,1184118,2242266,4083366,7184166,12257850,20348031,32951985,52179985,80958735,123288165,184562235,271965915,394962165,565884540 ⋆ Seventh partial sums of cubes (A000578). ● a(n) = n * (1 + n) * (2 + n) * (3 + n) * (4 + n) * (5 + n) * (6 + n) * (7 + n) * (7 + 7 * n + n ^ 2) / 604800. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) + n ^ 3. ●

► [A222410] 1,15,113,575,2171,6581,16955,38613,79885,153091,275661,471395,771863,1217945,1861511,2767241,4014585,5699863,7938505,10867431,14647571,19466525,25541363,33121565,42492101 ⋆ Partial sums of A008534, or crystal ball sequence for { A _ 6 }* lattice. ● a(n) = 1 + (7 / 36) * n * (n + 1) * (n ^ 4 + 2 * n ^ 3 + 8 * n ^ 2 + 7 * n + 18). [_ Bruno Berselli _ , Feb 28 2013] ●

► [A001849] 1,15,113,575,2241,7183,19825,48639,108545,224143,433905,795455,1392065,2340495,3800305,5984767,9173505,13726991,20103025,28875327,40754369,56610575,77500017,104692735,139703809 ⋆ Crystal ball sequence for 7 - dimensional cubic lattice. ● a(n) = (8 * n ^ 7 + 28 * n ^ 6 + 224 * n ^ 5 + 490 * n ^ 4 + 1232 * n ^ 3 + 1372 * n ^ 2 + 1056 * n + 315) / 315. - _ Johannes W. Meijer _ , Jul 14 2013 ●

► [A233326] 1,15,113,799,5601,39215,274513,1921599,13451201,94158415,659108913,4613762399,32296336801,226074357615,1582520503313,11077643523199,77543504662401,542804532636815,3799631728457713,26597422099203999,186181954694428001 ⋆ a(n) = (7 ^ (n + 1) - 4) / 3. ● a(n) = 8 * a(n - 1) - 7 * a(n - 2) for n>1, a(0)=1, a(1)=15. ● a(n) = 7 * a(n - 1) + 8 for n>0, a(0)=1. ●

► [A244872] 1,15,114,569,2138,6562,17329,40765,87512,174452,327137,582784,993895,1632561,2595510,4009958,6040323,8895861,12839284,18196419,25366968,34836428,47189231,63123163,83465122 ⋆ Number of magic labelings with magic sum n of 4th graph shown in link. ● a(n) = 17 * n ^ 7 / 1440 + 119 * n ^ 6 / 960 + 28 * n ^ 5 / 45 + 721 * n ^ 4 / 384 + 5243 * n ^ 3 / 1440 + 721 * n ^ 2 / 160 + 129 * n / 40 + (- 1) ^ n / 256 + 255 / 256. [_ Bruno Berselli _ , Jul 08 2014] ●

► [A091347] 0,1,15,115,675,3451,16275,72955,316275,1340251,5590035,23054395,94314675,383578651,1553331795,6270493435,25253701875,101530450651,407669649555,1635323974075,6555235693875,26262769508251,105176572911315,421082805640315,1685460823266675 ⋆ a(n) = 6 * 4 ^ n - 12 * 3 ^ n + 7 * 2 ^ n - 1. ● a(n) = Sum _{ i=1..n } i! * i ^ 3 * Stirling2(n, i) * (- 1) ^ (n - i). ●

► [A328725] 1,1,15,115,1255,13671,160461,1936425,24071895,305313415,3939158905,51521082405,681635916325,9105864515125,122657982366375,1664151758259915,22720725637684215,311933068664333175,4303704125389134825,59640225721889127525,829774531966386480705 ⋆ Constant term in the expansion of (1 + x + y + z + 1 / x + 1 / y + 1 / z + x * y + y * z + z * x + 1 / (x * y) + 1 / (y * z) + 1 / (z * x) + x * y * z + 1 / (x * y * z)) ^ n. ● a(n) = Sum _{ i=0..n } (- 1) ^ (n - i) * binomial(n,i) * Sum _{ j=0..i } binomial(i,j) ^ 4. ●

► [A331211] 1,15,117,891,6777,51543,392013,2981475,22675761,172461663,1311666021,9975943179,75872547369,577052549415,4388802753213,33379264377459,253867706760033,1930803860947887,14684827767302997,111686210555580315,849435201142733529,6460422977475127287 ⋆ Number of green nodes in n - th power graph W exponentiation of a cycle graph with 7 blue nodes and one green node. ● a(n) = 8 * a(n - 1) - 3 * a(n - 2) for n>1. ● a(n) = ((4 - sqrt(13)) ^ n * (- 11 + sqrt(13)) + (4 + sqrt(13)) ^ n * (11 + sqrt(13))) / (2 * sqrt(13)). ●

► [A196506] 0,15,120,435,1128,2415,4560,7875,12720,19503,28680,40755,56280,75855,100128,129795,165600,208335,258840,318003,386760,466095,557040,660675,778128 ⋆ a(n) = 1 * 3 * 5 + 3 * 5 * 7 + 5 * 7 * 9 + ... (n terms). ● a(n) = ((4n ^ 2 - 1) * (2n + 3) * (2n + 5) + 15) / 8 = Sum _{ i=1..n } (2i - 1) * (2i + 1) * (2i + 3). ● a(n) = 2 n ^ 4 + 8 n ^ 3 + 7 n ^ 2 - 2 n. - _ Harvey P. Dale _ , Mar 14 2015, corrected by _ Eric Rowland _ , Aug 15 2017 ●

► [A027484] 15,120,510,1560,3885,8400,16380,29520,49995,80520,124410,185640,268905,379680,524280,709920,944775,1238040,1599990,2042040,2576805,3218160,3981300,4882800,5940675 ⋆ a(n) = n * (n ^ 4 - 1) / 2. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n > 7. ●

► [A247612] 1,15,120,680,3060,11628,38760,116280,316767,788161,1805100,3840420,7660250,14446134,25947612,44668692,74091645,118941555,185495056,281936688,418766304,609260960,869994720,1221419808,1688512539 ⋆ a(n) = Sum _{ k =0..7 } binomial(14,k) * binomial(n,k). ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8). ● a(n) = (1680 + 386012 * n - 958048 * n ^ 2 + 943761 * n ^ 3 - 455455 * n ^ 4 + 123123 * n ^ 5 - 17017 * n ^ 6 + 1144 * n ^ 7) / 1680. ●

► [A010967] 1,15,120,680,3060,11628,38760,116280,319770,817190,1961256,4457400,9657700,20058300,40116600,77558760,145422675,265182525,471435600,818809200,1391975640,2319959400,3796297200,6107086800,9669554100 ⋆ a(n) = binomial coefficient C(n,14). ● a(n + 13) = n(n + 1)(n + 2)(n + 3)(n + 4)(n + 5)(n + 6)(n + 7)(n + 8)(n + 9)(n + 10)(n + 11)(n + 12)(n + 13) / 14!. - _ Artur Jasinski _ , Dec 02 2007, _ R. J. Mathar _ , Jul 07 2009 ● a(n) = n / (n - 14) * a(n - 1), n > 14. - _ Vincenzo Librandi _ , Mar 26 2011 ●

► [A081079] 0,15,120,840,5775,39600,271440,1860495,12752040,87403800,599074575,4106118240,28143753120,192900153615,1322157322200,9062201101800,62113250390415,425730551631120,2918000611027440,20000273725560975 ⋆ Lucas(4n + 2) - 3, or 5 * Fibonacci(2n) * Fibonacci(2n + 2). ● a(n) = 8a(n - 1) - 8a(n - 2) + a(n - 3). ● a(n) = - 3 + (3 / 2) *{ [(7 / 2) - (3 / 2) * sqrt(5)] ^ n + [(7 / 2) + (3 / 2) * sqrt(5)] ^ n }+ (1 / 2) * sqrt(5) *{ [(7 / 2) + (3 / 2) * sqrt(5)] ^ n - [(7 / 2) - (3 / 2) * sqrt(5)] ^ n } , with n>=0. - _ Paolo P. Lava _ , Dec 01 2008 ●

► [A357602] 0,0,0,1,15,121,1026,8696,81515,827282,9200052 ⋆ a(n) is the number of n - gons in A000940 that are asymmetric. ● a(p) = ((((p - 1)! + 1) / p) + p - 2 - (2 ^ ((p - 1) / 2) * ((p - 1) / 2)!)) / 4 for prime p. See A007619. ●

► [A171220] 1,15,125,875,5625,34375,203125,1171875,6640625,37109375,205078125,1123046875,6103515625,32958984375,177001953125,946044921875,5035400390625,26702880859375,141143798828125,743865966796875,3910064697265625,20503997802734375,107288360595703125 ⋆ a(n) = (2n + 1) * 5 ^ n. ● a(n) = 10 * a(n - 1) - 25 * a(n - 2). ●

► [A027779] 15,126,588,2016,5670,13860,30492,61776,117117,210210,360360,594048,946764,1465128,2209320,3255840,4700619,6662502,9287124,12751200,17267250,23088780,30515940,39901680,51658425 ⋆ a(n) = 3 * (n + 1) * binomial(n + 2,6). ● a(n) = C(n + 1, 5) * C(n + 2, 2). - _ Zerinvary Lajos _ , May 13 2005; corrected by _ R. J. Mathar _ , Feb 10 2016 ●

► [A337958] 1,15,126,700,2850,9261,25480,61776,135675,275275,523446,943020,1623076,2686425,4298400,6677056,10104885,14942151,21641950,30767100,43008966,59208325,80378376,107730000,142699375 ⋆ Number of achiral colorings of the 8 cubic facets of a tesseract or of the 8 vertices of a hyperoctahedron. ● a(n) = binomial(binomial(n + 1,2) + 3,4) - binomial(binomial(n,2),4). ● a(n) = n ^ 2 * (n + 1) ^ 2 * (n + 3) * (n ^ 2 - 2n + 4) / 48. ● a(n) = 1 * C(n,1) + 13 * C(n,2) + 84 * C(n,3) + 282 * C(n,4) + 465 * C(n,5) + 360 * C(n,6) + 105 * C(n,7), where the coefficient of C(n,k) is the number of achiral colorings using exactly k colors. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n > 8. ●

► [A337957] 1,15,126,715,3060,10626,31465,82251,194580,424270,864501,1663740,3049501,5359095,9078630,14891626,23738715,36890001,56031760,83369265,121747626,174792640,247073751,344291325,473490550 ⋆ Number of unoriented colorings of the 8 cubic facets of a tesseract or of the 8 vertices of a hyperoctahedron. ● a(n) = binomial(binomial(n + 1,2) + 3,4). ● a(n) = n * (n + 1) * (n ^ 2 + n + 2) * (n ^ 2 + n + 4) * (n ^ 2 + n + 6) / 384. ● a(n) = 1 * C(n,1) + 13 * C(n,2) + 84 * C(n,3) + 297 * C(n,4) + 600 * C(n,5) + 690 * C(n,6) + 420 * C(n,7) + 105 * C(n,8), where the coefficient of C(n,k) is the number of unoriented colorings using exactly k colors. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n -

3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 8) for n > 8. ●

▶ [A337956] 1,15,126,730,3270,11991,37450,102726,253485,573265,1205556,2384460,4475926,8031765,13858860,23106196,37372545,58837851,90421570,135971430,200486286,290376955,413769126,580852650,804281725 ★ Number of oriented colorings of the 8 cubic facets of a tesseract or of the 8 vertices of a hyperoctahedron. ● a(n) = binomial(binomial(n + 1,2) + 3,4) + binomial(binomial(n,2),4). ● a(n) = n * (n + 1) * (n ^ 6 - n ^ 5 + 7 * n ^ 4 + 29 * n ^ 3 + 16 * n ^ 2 - 4 * n + 48) / 192. ● a(n) = 1 * C(n,1) + 13 * C(n,2) + 84 * C(n,3) + 312 * C(n,4) + 735 * C(n,5) + 1020 * C(n,6) + 735 * C(n,7) + 210 * C(n,8), where the coefficient of C(n,k) is the number of oriented colorings using exactly k colors. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 8) for n > 8. ●

▶ [A198850] 1,15,127,1023,8191,65535,524287,4194303,33554431,268435455,2147483647,17179869183,137438953471,1099511627775,8796093022207,70368744177663,562949953421311,4503599627370495,36028797018963967 ★ 2 * 8 ^ n - 1 ● a(n) = 8 * a(n - 1) + 7. a(n) = 9 * a(n - 1) - 8 * a(n - 2), n>1. ●

▶ [A283120] 1,15,128,815,4289,19663,81057,306799,1081986,3594142,11338690,34193246,99080387,277046893,750192227,1973050940,5053026949,12628736331,30859262181,73849589786,173333118663,399528823032,905418038792,2019454523623,4437187104779 ★ Expansion of exp(Sum _{ n>=1 } sigma(8 * n) * x ^ n / n) in powers of x. ● a(n) = (1 / n) * Sum _{ k=1..n } sigma(8 * k) * a(n - k). - _ Seiichi Manyama _ , Mar 05 2017 ●

▶ [A127595] 0,1,15,128,945,6655,46080,317057,2176335,14925184,102320625,701373311,4807434240,32951037313,225850798095,1548007091840,10610205501105,72723448842367,498453982018560,3416454544730369,23416728143799375 ★ a(n) = F(4n) - 2F(2n) where F(n) = Fibonacci numbers A000045. ● a(2n) = 5 * (F(2n)) ^ 3 * L(2n), a(2n + 1) = F(2n + 1) * L(2n + 1) ^ 3. ● a(n) = [(Phi ^ (2n)) - 1] ^ 2 * [(Phi ^ (4n)) - 1] / [sqrt(5) * (Phi ^ (4n))]. ● a(n) = - a(- n) for all n in Z. - _ Michael Somos _ , Dec 30 2022 ●

▶ [A156922] 1,15,129,877,5280,29658,159742,838038,4323003,22057825,111750519,563535483,2833221970,14216330916,71243079660,356731958812,1785306330981,8931761831331,44675371382365 ★ Third right hand column (n - m=2) of the A156920 triangle ● a(n) = 14 * a(n - 1) - 75 * a(n - 2) + 196 * a(n - 3) - 263 * a(n - 4) + 174 * a(n - 5) - 45 * a(n - 6) ● a(n) = (4 * n ^ 2 - 108 * n * 3 ^ n + 24 * n - 378 * 3 ^ n + 375 * 5 ^ n + 35) / 32 ●

▶ [A155656] 1,15,129,1071,8961,75855,649089,5606511,48811521,427774095,3769259649,33358386351,296270823681,2638754838735,23555015527809,210638693604591,1886253119421441,16909812213653775,151723048894909569 ★ 9 ^ n + 7 ^ n - 1. ● a(n)=16 * a(n - 1) - 63 * a(n - 2) - 48 with a(0)=1, a(1)=15 - _ Vincenzo Librandi _ , Jul 21 2010 ●

▶ [A244878] 1,15,130,760,3355,12043,36935,100135,245870,556580,1177295,2351165,4469610,8141210,14284170,24247962,39970575,64178685,100639000,154470030,232524589,343854445,500269705,717006745,1013519780 ★ Number of 6 X 6 traceless symmetric magic squares with magic sum n. ● a(n) = (945 * (507 + 5 * (- 1) ^ n) + 1480896 * n + 2062800 * n ^ 2 + 1747040 * n ^ 3 + 989100 * n ^ 4 + 383628 * n ^ 5 + 100800 * n ^ 6 + 17160 * n ^ 7 + 1710 * n ^ 8 + 76 * n ^ 9) / 483840. - _ Colin Barker _ , Jan 12 2017 ●

▶ [A369416] 0,0,0,0,1,15,132,890,5091,26025,122590,542700,2288565,9282275,36469704,139556910,522324343,1918424685,6933067554,24707355200,86980866345,302944443975,1045165002220,3575578524450,12140493868491 ★ Expansion of o.g.f. x ^ 4 / ((1 - 2 * x) ^ 3 * (1 - 3 * x) ^ 3). ● a(n) = 15 * a(n - 1) - 93 * a(n - 2) + 305 * a(n - 3) - 558 * a(n - 4) + 540 * a(n - 5) - 216 * a(n - 6), n >= 6, a(0)=a(1)=a(2)=a(3)=0, a(4)=1, a(5)=15. ● a(n) = Sum _{ k=2..n - 2 } C(k,2) * 2 ^ (k - 2) * C(n - k,2) * 3 ^ (n - k - 2). ● a(n) = 3 ^ n * (n ^ 2 / 6 - 17 * n / 6 + 15) - 2 ^ n * (n ^ 2 / 4 + 13 * n / 4 + 15). - _ Robert Israel _ , Jan 22 2024 ●

▶ [A228583] 0,0,0,0,1,15,135,777,3270,11034,31650,80190,184239,391105,777777,1464255,2630940,4540836,7567380,12228780,19229805,29512035,44313643,65239845,94345218 ★ The number of binary pattern classes in the (2,n) - rectangular grid with 8 '1's and (2n - 8) '0's: two patterns are in same class if one of them can be obtained by a reflection or 180 - degree rotation of the other. ● a(n) = (1 / 4) * (binomial(2 * n,8) + 3 * binomial(n,4)). ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) n>8, with a(0)=0, a(1)=0, a(2)=0, a(3)=1, a(4)=15, a(5)=135, a(6)=777, a(7)=3270, a(8)=11034. ●

▶ [A027630] 1,15,135,870,3992,14142,41400,104870,237288,490654,942888,1705510,2932344,4829246,7664856,11782374,17612360,25686558,36652744,51290598,70528600,95461950,127371512,167743782,218291880 ★ Molien series for Gamma _ 3(2). ● a(n) = 2 * (3060 - 6138 * n + 5933 * n ^ 2 - 3120 * n ^ 3 + 1100 * n ^ 4 - 192 * n ^ 5 + 32 * n ^ 6) / 45 for n>2. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>9. (End) ●

▶ [A027629] 1,15,135,870,3993,14157,41535,105740,241281,504811,984423,1811250,3173625,5334057,8649279,13593624,20785985,31020615,45302023,64884222,91314585,126482565,172673535,232628004,309606465 ★ Molien series for complex 8 - dimensional group N _ 3 of order 2 ^ (2.3 + 2), a central extension of an extraspecial 2 - group. ● a(n) = (630 + 2376 * n + 2891 * n ^ 2 + 1673 * n ^ 3 + 980 * n ^ 4 + 644 * n ^ 5 + 224 * n ^ 6 + 32 * n ^ 7) / 630. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>7. (End) ●

▶ [A155648] 1,15,135,1215,11295,107775,1046655,10279935,101679615,1010077695,10060466175,100362797055,1002176782335,10013060694015,100078364164095,1000470184984575,10002821109907455,100016926659444735 ★ a(n) = 10 ^ n + 6 ^ n - 1. ● a(n) = 16 * a(n - 1) - 60 * a(n - 2) - 45; a(0)=1, a(1)=15. - _ Vincenzo Librandi _ , Jul 21 2010 ● a(n) = 17 * a(n - 1) - 76 * a(n - 2) + 60 * a(n - 3); a(0)=1, a(1)=15, a(2)=135. - _ Harvey P. Dale _ , Mar 30 2014 ●

▶ [A030056] 1,15,136,969,5985,33649,177100,888030,4292145,20160075,92561040,417225900,1852482996,8122425444,35240152720,151532656696,646626422970,2741188875414,11554258485616,48459472266975 ★ a(n) = binomial(2 * n + 1, n - 6). ● a(n + 1) = a(n) * (2 * n + 2) * (2 * n + 3) / ((n - 5) * (n + 8)). - _ Chai Wah Wu _ , Jan 26 2016 ●

▶ [A175707] 1,15,139,862,4079,15791,52450,154279,411180,1009741,2314278,5000125,10264997,20152950,38037517,69323949,122448455,210271756,351989816,575711716,921889652,1447822620,2233501928,3389114724,5064582169 ★ Number of ways to put n copies of 1,2,3,4 into sets. ● a(n) = (5382 * n ^ 11 + 236808 * n ^ 10 + 4643760 * n ^ 9 + 53507520 * n ^ 8 + 402098796 * n ^ 7 + 2067612624 * n ^ 6 + 7421736960 * n ^ 5 + 18616942080 * n ^ 4 + 32101468047 * n ^ 3 + 36555545268 * n ^ 2 + 25131098880 * n + 8024016000 + 7016625 * (- 1) ^ n * n ^ 3 + 84199500 * (- 1) ^ n * n ^ 2 + 359251200 * (- 1) ^ n * n + 538876800 * (- 1) ^ n) / (2 ^ 11 * 3 ^ 7 * 5 ^ 2 * 7 * 11) + 5 / 3 ^ 6 * (- 1) ^ n * (sin(n * Pi / 3) / sqrt(3) + cos(n * Pi / 3)). ●

▶ [A123955] 0,0,0,0,1,15,139,1029,6691,40041,226435,1230009,6487195,33464145,169720915,849504825,4208146411,20674387905,100901918659,489826044489,2367517203931,11402423910801,54755709794995,262308279256089 ★ Expansion of g.f.: x ^ 5 / ((1 - 3 * x) * (1 - 2 * x) * (1 - 4 * x) * (1 - 6 * x + 6 * x ^ 2)). ● a(n) = 15 * a(n - 1) - 86 * a(n - 2) + 234 * a(n - 3) - 300 * a(n - 4) + 144 * a(n - 5). ●

▶ [A027802] 15,140,700,2520,7350,18480,41580,85800,165165,300300,520520,866320,1392300,2170560,3294600,4883760,7088235,10094700,14132580,19481000,26476450,35521200,47092500,61752600,80159625 ★ a(n) = 5 * (n + 1) * binomial(n + 4,6). ● a(n) = C(n + 1, 3) * C(n + 4, 4) - _ Zerinvary Lajos _ , May 10 2005; corrected by _ R. J. Mathar _ , Feb 10 2016 ●

▶ [A000481] 1,15,140,1050,6951,42525,246730,1379400,7508501,40075035,210766920,1096190550,5652751651,28958095545,147589284710,749206090500,3791262568401,19137821912055,96416888184100,485000783495250,2436684974110751,12230196160292565,61338207158409090 ★ Stirling numbers of the second kind, S(n,5). ● a(n) = sum(sum(binomial(k,r) * (15) ^ (k - r) * sum((- 85) ^ (r - m) * binomial(r,m) * sum(binomial(m,j) * binomial(j,n - m - k - j - r) * (225) ^ (m - j) * (- 274) ^ (r + m + k + 2 * j - n) * (120) ^ (n - m - k - j - r),j,0,m),m,0,r),r,0,k),k,1,n), n>0. - _ Vladimir Kruchinin _ , Aug 30 2010 ● a(n) = det(|s(i + 5,j + 4)|, 1 <= i,j <= n - 5), where s(n,k) are Stirling numbers of the first kind. - _ Mircea Merca _ , Apr 06 2013 ●

▶ [A346955] 1,15,140,1050,6951,42651,253660,1594230,12463451,134921787,1806513072,25539589530,355175465191,4797717669123,63797550625676,860468791681686,12275324511112971,192498455326842819,3353266112959628272,63379650000684213834 ★ E.g.f.: - log(1 - (exp(x) - 1) ^ 5 / 5!). ● a(n) = Stirling2(n,5) + (1 / n) * Sum _{ k=1..n - 1 } binomial(n,k) * Stirling2(n - k,5) * k * a(k). ●

▶ [A096046] 1,15,141,1275,11481,103335,930021,8370195,75331761,677985855,6101872701,54916854315,494251688841,4448265199575,40034386796181,360309481165635,3242785330490721,29185067974416495,262665611769748461 ★ a(n) = B(2n,3) / B(2n) (see comment). ● a(n) = (1 / 4) * (7 * 9 ^ n - 3). ● a(n) = 10 * a(n - 1) - 9 * a(n - 2); a(0)=1, a(1)=15. ●

▶ [A093117] 1,15,141,1443,14505,146343,1475349,14875995,149990289,1512318207,15248341725,153745416147,1550178505401,15630081782295,157594402871781,1588986940402443,16021377983526945,161539749616666863,1628766934587400749,16422470218649210115 ★ a(n) = 8 * a(n - 1) + 21 * a(n - 2), with a(1)=1, a(2)=15. ● a(n) = (1 / 2) * ((4 + sqrt(37)) ^ n + (4 - sqrt(37)) ^ n) + (11 / 74) * sqrt(37) * ((4 + sqrt(37)) ^ n - (4 - sqrt(37)) ^ n), with n>=0 - _ Paolo P. Lava _ , Jul 08 2008 ●

▶ [A177065] 15,143,399,783,1295,1935,2703,3599,4623,5775,7055,8463,9999,11663,13455,15375,17423,19599,21903,24335,26895,29583,32399,35343,38415 ★ a(n) = (8 * n + 3) * (8 * n + 5). ● a(n) = 128 * n + a(n - 1) with n>0, a(0)=15. ● a(0)=15, a(1)=143, a(2)=399, a(n)=3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Mar 13 2013 ●

▶ [A071700] 15,143,3599,5183,11663,32399,36863,51983,57599,97343,121103,176399,186623,359999,435599,685583,1040399,1065023,1192463,1327103,1742399,2039183,2108303,2214143,2585663 ★ Product of twin primes of form (4 * k + 3,4 * (k + 1) + 1), k>=0. ● a(n) >> n ^ 2 log ^ 4 n. - _ Charles R Greathouse IV _ , Jul 03 2013 ●

▶ [A206810] 15,145,670,2146,5501,12131,23996,43716,74667,121077,188122,282022,410137,581063,804728,1092488,1457223,1913433,2477334,3166954,4002229,5005099,6199604,7611980,9270755 ★ Sum _{ 0<j<n } (n ^ 4 - j ^ 4). ● a(n) = n ^ 5 - p(n), where p(n) is the n - th partial sum of (j ^ 4). ● a(n) = t(n) - t(n - 1), where t = A206811. ● a(n) = (n - 10 * n ^ 3 - 15 * n ^ 4 + 24 * n ^ 5) / 30. G.f.: x ^ 2 * (x ^ 3 + 25 * x ^ 2 + 55 * x + 15) / (x - 1) ^ 6. - _ Colin Barker _ , Jul 11 2014 ●

▶ [A025440] 1,15,145,1155,8281,55755,360865,2276835,14126761,86681595,527948785,3199656915,19327384441,116486845035,701025539905,4214614099395,25321657045321,152066219226075,912943584910225,5479850073412275,32887865154533401,197362281160304715 ★ Expansion of 1 / ((1 - 2x)(1 - 3x)(1 - 4x)(1 - 6x)). ● a(n) = - 2 ^ n + 9 * 3 ^ n - 16 * 4 ^ n + 9 * 6 ^ n. - _ R. J. Mathar _ , Jun 30 2013 ● a(n) = 15 * a(n - 1) - 80 * a(n - 2) + 180 * a(n - 3) - 144 * a(n - 4). - _ Vincenzo Librandi _ , Jul 03 2015 ● a(n) = 3 ^ n - 2 ^ n + 10 * a(n - 1) - 24 * a(n - 2). - _ Vincenzo Librandi _ , Jul 03 2015 ●

▶ [A155638] 1,15,145,1455,15265,164175,1787185,19565295,214749505,2359900815,25947190225,285360498735,3138672517345,34523932847055,379755937098865,4177278686993775,45949882451462785,505447791438746895 ★ a(n) = 11 ^ n + 5 ^ n - 1 ^ n. ● a(n) = 16 * a(n - 1) - 55 * a(n - 2) - 40 with a(0)=1, a(1)=15 - _ Vincenzo Librandi _ , Jul 21 2010 ●

▶ [A069417] 1,15,147,1231,9539,70679,509019,3596367,25070707,173088903,1186544331,8090866303,54950124515,372067098167,2513408596923,16948369098159,114128268554323,767705581586151,5159843165163435,34657637020377055,232672006452068291,1561421588852637335 ★ Number of 3 X n binary arrays with a path of adjacent 1's and no path of adjacent 0's from top row to bottom row. ● a(n) = 13 * a(n - 1) - 48 * a(n - 2) + 40 * a(n - 3) - 8 * a(n - 4) for n > 4. ●

▶ [A021414] 1,15,148,1218,9079,63693,429346,2815296,18097717,114645531,718257904,4461736734,27532164115,169004094729,1033087293022,6293858904732,38239893731473,231823257614487,1402859602945900 ★ Expansion of 1 / ((1 - x)(1 - 3x)(1 - 5x)(1 - 6x)). ● a(0)=1, a(1)=15, a(2)=148, a(3)=1218, a(n)=15 * a(n - 1

) - 77 * a(n - 2) + 153 * a(n - 3) - 90 * a(n - 4). - _ Harvey P. Dale _ , Mar 31 2013 ● a(n) = (8 * 6 ^ (n + 3) - 15 * 5 ^ (n + 3) + 10 * 3 ^ (n + 3) - 3) / 120. - _ Yahia Kahloune _ , May 07 2013 ● a(0)=1, a(1)=15; for n>1, a(n) = 11 * a(n - 1) - 30 * a(n - 2) + (3 ^ n - 1) / 2. - _ Vincenzo Librandi _ , Jul 09 2013 ●

▶ [A085375] 1,15,150,1225,8820,58212,360360,2123550,12033450,66050270,353068716,1845586470,9464546000,47738754000,237329805600,1164893795820,5653161067950,27157342385250,129275302348500,610315506350550,2859764086899720,13308425945529000 ⋆ a(n) = binomial(2 * n + 1, n + 1) * binomial(n + 4, 4). ● a(n + 1) = a(n) * 2 * (n + 5) * (2 * n + 3) / ((n + 1) * (n + 2)). - _ Chai Wah Wu _ , Jan 26 2016 ●

▶ [A081135] 0,0,1,15,150,1250,9375,65625,437500,2812500,17578125,107421875,644531250,3808593750,22216796875,128173828125,732421875000,4150390625000,23345947265625,130462646484375,724792480468750 ⋆ 5th binomial transform of (0,0,1,0,0,0, ...). ● a(n) = 15 * a(n - 1) - 75 * a(n - 2) + 125 * a(n - 3), a(0)=a(1)=0, a(2)=1. ● a(n) = 5 ^ (n - 2) * binomial(n, 2). ●

▶ [A084902] 0,1,15,150,1250,9375,65625,437500,2812500,17578125,107421875,644531250,3808593750,22216796875,128173828125,732421875000,4150390625000,23345947265625,130462646484375,724792480468750,4005432128906250 ⋆ a(n) = 5 ^ (n - 1) * n * (n + 1) / 2. ● a(n) = 15 * a(n - 1) - 75 * a(n - 2) + 125 * a(n - 3). - _ Wesley Ivan Hurt _ , May 17 2021 ●

▶ [A021364] 1,15,150,1270,9891,73605,533800,3814140,27018981,190442395,1338423450,9390536610,65820843271,461096642385,3229086629100,22609268456680,158287591978761,1108104188689575,7757094081310750 ⋆ Expansion of 1 / ((1 - x)(1 - 3x)(1 - 4x)(1 - 7x)). ● a(n) = 15 * a(n - 1) - 75 * a(n - 2) + 145 * a(n - 3) - 84 * a(n - 4), with a(0)=1, a(1)=15, a(2)=150, a(3)=1270. [_ Harvey P. Dale _ , Jun 09 2011] ● a(n) = (7 ^ (n + 3) - 2 * 4 ^ (n + 4) + 3 ^ (n + 5) - 2) / 72. [_ Yahia Kahloune _ , Jun 26 2013] ● a(0)=1, a(1)=15; for n>1, a(n) = 11 * a(n - 1) - 28 * a(n - 2) + (3 ^ n - 1) / 2. - _ Vincenzo Librandi _ , Jul 09 2013 ●

▶ [A016103] 1,15,151,1275,9751,70035,481951,3216795,20991751,134667555,852639151,5343198315,33212784151,205111785075,1260114546751,7708980203835,46999640806951,285743822630595,1733261544204751 ⋆ Expansion of 1 / ((1 - 4x)(1 - 5x)(1 - 6x)). ● a(n) = 2 ^ (3 + 2 * n) + 2 ^ (1 + n) * 3 ^ (2 + n) - 5 ^ (2 + n). - _ Andi Fugard _ , Jul 22 2008 ● a(n) = 15 * a(n - 1) - 74 * a(n - 2) + 120 * a(n - 3). - _ Vincenzo Librandi _ , Jun 24 2013 ●

▶ [A021124] 1,15,152,1314,10479,79821,591214,4301088,30921077,220515867,1563954756,11049405822,77854461595,547524351753,3845386097978,26981280929916,189186857860833,1325897462045079,9289229519936080 ⋆ Expansion of 1 / ((1 - x)(1 - 2x)(1 - 5x)(1 - 7x)). ● a(0)=1, a(1)=15, a(2)=152, a(3)=1314; for n>3, a(n) = 15 * a(n - 1) - 73 * a(n - 2) + 129 * a(n - 3) - 70 * a(n - 4). - _ Vincenzo Librandi _ , Jul 07 2013 ● a(0)=1, a(1)=15]; for n>1, a(n) = 12 * a(n - 1) - 35 * a(n - 2) + 2 ^ n - 1. - _ Vincenzo Librandi _ , Jul 07 2013 ● a(n) = (2 * 7 ^ (n + 3) - 5 ^ (n + 4) + 2 ^ (n + 6) - 5) / 120. - _ Yahia Kahloune _ , Jul 07 2013 ●

▶ [A010035] 1,15,153,1431,13041,117855,1062153,9563751,86086881,774821295,6973509753,62761942071,564858541521,5083730062335,45753580126953,411782249840391,3706040334656961,33354363270192975,300189270206577753,2701703434183722711,24315330914627073201 ⋆ a(n) = 2 * 3 ^ (2 * n) - 3 ^ n. ● a(n) = 12 * a(n - 1) - 27 * a(n - 2). G.f.: (3 * x + 1) / ((3 * x - 1) * (9 * x - 1)). - _ Colin Barker _ , Oct 01 2014 ●

▶ [A334356] 0,1,15,154,1115,5955,24836,85260,251154,655005,1548085,3374646,6876805,13237679,24271170,42667640,72305556,118640025,189179979,294066610,446766495,664893691,971175920,1394580804,1971618950 ⋆ Number of nonequivalent proper colorings of the vertices of a cube using at most n colors up to rotations and reflections of the cube. ● a(n) = n * (n - 1) * (n ^ 6 - 11 * n ^ 5 + 61 * n ^ 4 - 195 * n ^ 3 + 384 * n ^ 2 - 428 * n + 216) / 48. ●

▶ [A017389] 1,15,154,1350,10891,83685,623764,4558380,32875381,234980955,1669192174,11806149810,83252603071,585817587825,4115974729384,28888095527640,202598073849961,1420093671872295,9950191865139394 ⋆ Expansion of 1 / ((1 - 3x)(1 - 5x)(1 - 7x)). ● a(n) = 15 * a(n - 1) - 71 * a(n - 2) + 105 * a(n - 3). ● a(n) = 12 * a(n - 1) - 35 * a(n - 2) + 3 ^ n. (End) ● a(n) = (7 ^ (n + 2) - 2 * 5 ^ (n + 2) + 3 ^ (n + 2)) / 8. - _ Yahia Kahloune _ , Aug 13 2013 ●

▶ [A346843] 1,15,155,1400,11991,101031,853315,7300260,63641006,567304452,5181338526,48538121450,466611951261,4603782469653,46613101232933,484188586821376,5157850655391981,56321812548867229,630125374420189131,7219368394888423554,84658119388335562972 ⋆ E.g.f.: exp(exp(x) - 1) * (exp(x) - 1) ^ 4 / 4!. ● a(n) = Sum _{ k=0..n } Stirling2(n,k) * binomial(k,4). ● a(n) = Sum _{ k=0..n } binomial(n,k) * Stirling2(k,4) * Bell(n - k). ● a(n) = (Bell(n) - 24 * Bell(n + 1) + 29 * Bell(n + 2) - 10 * Bell(n + 3) + Bell(n + 4)) / 24. - _ Vaclav Kotesovec _ , Aug 06 2021 ●

▶ [A341918] 1,15,155,1410,12165,102548,856205,7128420,59386655,495973610,4156326090,34965061950,295326872685,2504471904060,21322339850120,182220932483936,1562911922345700,13451387178653575,116149864521206475,1006036370555080950,8739349976276626707,76128234963921173340 ⋆ Number of strong triangulations of a fixed hexagon with n interior nodes. ● a(n) = 120 * (67 * n ^ 2 + 138 * n + 68) * (4 * n + 7)! / ((3 * n + 12)! * (n - 1)!). ●

▶ [A099915] 1,15,155,1555,15555,155555,1555555,15555555,155555555,1555555555,15555555555,155555555555,1555555555555,15555555555555,155555555555555,1555555555555555,15555555555555555,155555555555555555 ⋆ Expansion of (1 + 4x) / ((1 - x)(1 - 10x)). ● a(n)=10 ^ n * 14 / 9 - 5 / 9; a(n)=11a(n - 1) - 10a(n - 2), a(0)=1, a(1)=15. ●

▶ [A016304] 1,15,157,1419,11869,94731,733069,5551323,41378557,304766187,2224062061,16112628987,116053574365,831966057483,5941308640333,42294437942811,300292730428093,2127439102098219,15044413649559085 ⋆ Expansion of 1 / ((1 - 2 * x) * (1 - 6 * x) * (1 - 7 * x)). ● a(n) = (7 ^ (n + 2) - 2 ^ (n + 2)) / 5 - (6 ^ (n + 2) - 2 ^ (n + 2)) / 4. - _ Zerinvary Lajos _ , Jun 05 2009 [corrected by _ Joerg Arndt _ , Aug 25 2011] ● a(0)=1, a(1)=15, a(2)=157, a(n) = 15 * a(n - 1) - 68 * a(n - 2) + 84 * a(n - 3); ● a(0)=1, a(1)=15, a(n) = 13 * a(n - 1) - 42 * a(n - 2) + 2 ^ n. (End) ●

▶ [A016849] 1,15,157,1431,12229,101199,823789,6649287,53436757,428483583,3431885821,27471332343,219836173285,1758953038767,14072683703053,112585721544999,900702823089013,7205690916768351,57645801049792285 ⋆ Expansion of 1 / ((1 - 3x)(1 - 4x)(1 - 8x)). ● a(n) = 15 * a(n - 1) - 68 * a(n - 2) + 96 * a(n - 3); a(0)=1, a(1)=15, a(2)=157. - _ Harvey P. Dale _ , Mar 23 2012 ● a(n) = 9 * 3 ^ n / 5 - 4 * 4 ^ n + 16 * 8 ^ n / 5. - _ R. J. Mathar _ , Jun 23 2013 ● a(n) = 12 * a(n - 1) - 32 * a(n - 2) + 3 ^ n. - _ Vincenzo Librandi _ , Jun 26 2013 ●

▶ [A300077] 1,15,157,1570,15707,157079,1570796,15707963,157079632,1570796326,15707963267,157079632679,1570796326794,15707963267948,157079632679489,1570796326794896,15707963267948966,157079632679489661,9,1570796326794896619 2 ⋆ Decimal expansion of Pi / 2 truncated to n places. ● a(n) = floor((1 / 2) * Pi * 10 ^ n), Pi = 3.14159265... ●

▶ [A016297] 1,15,159,1475,12831,107835,888679,7239555,58567311,471793355,3790622199,30406356435,243657749791,1951296498075,15620544499719,125015218606115,1000376061956271,8004280061317995,64040598319145239 ⋆ Expansion of 1 / ((1 - 2x)(1 - 5x)(1 - 8x)). ● a(n) = 15 * a(n - 1) - 66 * a(n - 2) + 80 * a(n - 3), n >= 3. ● a(n) = 13 * a(n - 1) - 40 * a(n - 2) + 2 ^ n, n >= 2. (End) ● a(n) = 4 * 8 ^ (n + 1) / 9 + 2 ^ (n + 1) / 9 - 5 ^ (n + 2) / 9. - _ R. J. Mathar _ , Mar 18 2011 ●

▶ [A206811] 15,160,830,2976,8477,20608,44604,88320,162987,284064,472186,754208,1164345,1745408,2550136,3642624,5099847,7013280,9490614,12657568,16659797,21664896,27864500,35476480,44747235 ⋆ Sum _{ 0<j<k<=n } (k ^ 4 - j ^ 4). ● a(n) = (n * (1 + n) ^ 2 * (1 - 6 * n + n ^ 2 + 4 * n ^ 3)) / 30. G.f.: - x ^ 2 * (x ^ 3 + 25 * x ^ 2 + 55 * x + 15) / (x - 1) ^ 7. - _ Colin Barker _ , Jul 11 2014 ●

▶ [A021048] 1,15,160,1530,14071,127605,1151470,10372560,93381541,840520395,7564945180,68085295590,612770035411,5514937460385,49634458601290,446710191850620,4020391920103681,36183527861539575,325651752496199800 ⋆ Expansion of 1 / ((1 - x)(1 - 2x)(1 - 3x)(1 - 9x)). ● a(n) = (243 / 112) * 9 ^ n - (9 / 4) * 3 ^ n + (8 / 7) * 2 ^ n - 1 / 16. - Neven Juric, Oct 22 2009 ● a(0)=1, a(1)=15; for n>1, a(n) = 12 * a(n - 1) - 27 * a(n - 2) + 2 ^ n - 1. - _ Vincenzo Librandi _ , Jul 05 2013 ● a(0)=1, a(1)=15, a(2)=160, a(3)=1530; for n>3, a(n) = 15 * a(n - 1) - 65 * a(n - 2) + 105 * a(n - 3) - 54 * a(n - 4). - _ Vincenzo Librandi _ , Jul 05 2013 ●

▶ [A095685] 1,15,160,1600,15856,156976,1553920,15382240,152268496,1507302736,14920758880,147700286080,1462082101936,14473120733296,143269125231040,1418218131577120,14038912190540176,138970903773824656,1375670125547706400,13617730351703239360 ⋆ Expansion of (1 + x) ^ 4 / (1 - 11 * x + 11 * x ^ 2 - x ^ 3). ● a(n) = - 2 + 3 * (5 - 2 * sqrt(6)) ^ n * (3 + sqrt(6)) - 3 * (- 3 + sqrt(6)) * (5 + 2 * sqrt(6)) ^ n for n>1. - _ Colin Barker _ , Mar 05 2016 ●

▶ [A014920] 1,15,162,1534,13539,114381,937924,7526268,59409477,462945547,3570173286,27298094202,207234827815,1563680973513,11737027066248,87698011225336,652657830908553,4840007082678279,35779865442976810 ⋆ a(1)=1, a(n) = n * 7 ^ (n - 1) + a(n - 1). ● a(1)=1, a(2)=15, a(n) = 14 * a(n - 1) - 49 * a(n - 2) + 1. - _ Vincenzo Librandi _ , Oct 23 2012 ● a(n) = (1 / 36) * (1 + 7 ^ n * (6 * n - 1)). - _ Vincenzo Librandi _ , Oct 26 2012 ● a(1)=1, a(2)=15, a(3)=162, a(n) = 15 * a(n - 1) - 63 * a(n - 2) + 49 * a(n - 3). - _ Harvey P. Dale _ , Jun 26 2013 ●

▶ [A081034] 1,15,162,1548,13896,120240,1016352,8457408,69618816,568707840,4620206592,37384915968,301618907136,2428188733440,19516934725632,156684026953728,1256763510521856,10073855853527040,80709333444329472 ⋆ 7th binomial transform of the periodic sequence (1,8,1,1,8,1...). ● a(n)=8 * a(n - 1) + 7 * 6 ^ (n - 1) a(n)=(9 / 2) * 8 ^ n - (7 / 2)6 ^ n. ● a(0)=1, a(1)=15, a(n)=14 * a(n - 1) - 48 * a(n - 2). - _ Harvey P. Dale _ , Jun 16 2013 ●

▶ [A016243] 1,15,163,1563,14059,121803,1030411,8579211,70649227,577287051,4690855819,37962203019,306309762955,2466150936459,19823244488587,159150177890187,1276586755010443,10233006031417227,81985920199339915 ⋆ Expansion of 1 / ((1 - x) * (1 - 6 * x) * (1 - 8 * x)). ● a(n) = 14 * a(n - 1) - 48 * a(n - 2) + 1 with a(0)=1, a(1)=15. - _ Vincenzo Librandi _ , Feb 10 2011 ● a(n) = (5 * 8 ^ (n + 2) - 7 * 6 ^ (n + 2) + 2) / 70. - _ Yahia Kahloune _ , May 19 2013 ●

▶ [A164599] 1,15,163,1577,14417,127719,1110467,9543745,81420481,691330719,5851867459,49433600633,417032638289,3515077706295,29610553888547,249339102243793,2099051398651393,17667781775661231,148693529122641763 ⋆ a(n) = 14 * a(n - 1) - 47 * a(n - 2), for n > 1, with a(0) = 1, a(1) = 15. ● a(n) = ((1 + 4 * sqrt(2)) * (7 + sqrt(2)) ^ n + (1 - 4 * sqrt(2)) * (7 - sqrt(2)) ^ n) / 2. ●

▶ [A016291] 1,15,163,1587,14779,135027,1223371,11042979,99517627,896182419,8067737899,72618027651,653595799195,5882496402291,52943004475147,476489187727203,4288411279413883,38595735874332243,347361760307681515,3126256392524423235,28136309731742016091 ⋆ Expansion of 1 / ((1 - 2x) * (1 - 4x) * (1 - 9x)). ● a(n) = (2 / 7) * 2 ^ n - (8 / 5) * 4 ^ n + (81 / 35) * 9 ^ n. - _ Antonio Alberto Olivares _ , May 12 2012 ● a(n) = 15 * a(n - 1) - 62 * a(n - 2) + 72 * a(n - 3). - _ Vincenzo Librandi _ , Jun 26 2013 ●

▶ [A167615] 1,15,165,1665,16664,166664,1666663,16666663,166666661,1666666662,16666666661,166666666660,1666666666661,16666666666660,166666666666659,1666666666666660,16666666666666658,166666666666666657,1666666666666666660,16666666666666666656 ⋆ Total number of positive integers below 10 ^ n with 4 positive squares in their representation as sum of squares. ● a(n) = Sum _{ i=0..k } ceiling(10 ^ n / 2 ^ (2 * i + 3) - 7 / 8) with minimal k for which ceiling (10 ^ n / 2 ^ (2 * k + 3) - 7 / 8) = 0. ●

▶ [A016234] 1,15,166,1650,15631,144585,1320796,11984820,108351661,977606355,8810664226,79357013190,714518294491,6432190529325,57897344158456,521114244398760,4690218934452121,42212924084385495 ⋆ Expansion of 1 / ((1 - x)(1 - 5x)(1 - 9x)). ● a(0)=1, a(1)=15, a(n) = 14 * a(n - 1) - 45 * a(n - 2) + 1. - _ Vincenzo Librandi _ , Feb 10 2011 ● a(n) = (9 ^ (n + 2) - 2 * 5 ^ (n + 2) + 1) / 32. - _ Yahia Kahloune _ , Aug 13 2013 ● a(0)=1, a(1)=15, a(2)=166, a(n) = 15 * a(n - 1) - 59 * a(n - 2) + 45 * a(n - 3). - _ Harvey P. Dale _ , Oct 16 2014 ●

▶ [A055660] 15,168,1260,7920,45045,240240,1225224,6046560,29099070,137287920,637408200,2920488480,13233463425,59400885600,264475371600,1169259537600,5137434093330,22449291836400,97620405409800,422649444016800,1822675727322450,7832297982551328,33547430170018800 ⋆ Number of (2,2; n,n) - partitions of a chain of length n ^ 2 + n. ● a(n) = 2 * (2 * n - 3) * (n - 3) * (2 * n - 5)! / ((n - 3)! ^ 2 * n). ●

► [A016177] 0,1,15,169,1695,15961,144495,1273609,11012415,93864121,791266575,6612607849,54878189535,452866803481,3719823438255,30436810578889,24824204614105 5,2019169299698041,16385984911571535,132716292890482729,1073129238309234975,8664826172771491801 ⋆ a(n) = 8 ^ n - 7 ^ n. ● a(n) = numerator(f(n - 1)) where f(n) = Integral _{ x=0..1 / 4 } (1 - x / 2) ^ n dx. And denominator(f(n)) = 4 * (n + 1) * 8 ^ n. - Al Hakanson (hawkuu(AT)excite.com), Feb 22 2004 [corrected by _ Michel Marcus _ , Dec 23 2022] ● a(n) = 15 * a(n - 1) - 56 * a(n - 2), n > 1. - _ Philippe Deléham _ , Jan 01 2009 ● a(n) = 8 * a(n - 1) + 7 ^ (n - 1), a(0)=0. - _ Vincenzo Librandi _ , Feb 09 2011 ●

► [A016279] 1,15,169,1755,17761,178275,1784809,17854395,178563121,1785689235,17857067449,178571201835,1785713604481,17857140811395,178571422430089,1785714267282075,17857142801829841,178571428405456755 ⋆ Expansion of 1 / ((1 - 2x)(1 - 3x)(1 - 10x)). ● a(n) = 2 ^ n / 2 - 9 * 3 ^ n / 7 + 25 * 10 ^ n / 14. - _ Antonio Alberto Olivares _ , Feb 03 2010 ● a(n) = 15 * a(n - 1) - 56 * a(n - 2) + 60 * a(n - 3). - _ Vincenzo Librandi _ , Jun 24 2013 ●

► [A016172] 1,15,171,1755,17091,161595,1501011,13789035,125780931,1142106075,10339420851,93417584715,842935044771,7599476096955,68473649036691,616733026314795,5553418346740611,49997691780110235 ⋆ Expansion of 1 / ((1 - 6x)(1 - 9x)). ● a(n) = (9 ^ (n + 1) - 6 ^ (n + 1)) / 3. - Lambert Klasen (lambert.klasen(AT)gmx.net), Feb 05 2005 ● a(0)=1, a(n) = 9 * a(n - 1) + 6 ^ n. - _ Vincenzo Librandi _ , Feb 09 2011 ● a(0)=1, a(1)=15, a(n) = 15 * a(n - 1) - 54 * a(n - 2). - _ Vincenzo Librandi _ , Feb 09 2011 ●

► [A016225] 1,15,171,1795,18291,184275,1848211,18503955,185126931,1851618835,18517586451,185181456915,1851836938771,18518458866195,185184946575891,1851850897414675,18518514700769811,185185169914190355 ⋆ Expansion of 1 / ((1 - x)(1 - 4x)(1 - 10x)). ● a(n) = (50 * 10 ^ n - 24 * 4 ^ n + 1) / 27. - _ Paul Barry _ , Feb 17 2003 ● a(n) = 14 * a(n - 1) - 40 * a(n - 2) + 1, n>=2. - _ Vincenzo Librandi _ , Feb 10 2011 ●

► [A331516] 1,15,174,1850,18855,187425,1832460,17705700,169569405,1612842275,15256106778,143660483070,1347716324227,12603114069525,117536416879320,1093553079352200,10153324144411065,94098595671581175,870667876141568070,8044341506669534850 ⋆ Expansion of 1 / (1 - 10 * x + 9 * x ^ 2) ^ (3 / 2). ● a(n) = 1 / 2 * Sum _{ k=1..n + 1 } 3 ^ (n + 1 - k) * k * binomial(n + 1,k) * binomial(n + 1 + k,k). ● a(n) = ((n + 2) / 2) * Sum _{ k=0..n } 4 ^ k * binomial(n + 1,k) * binomial(n + 1,k + 1). ●

► [A036083] 1,15,175,1750,15750,131250,1031250,7734375,55859375,391015625,2666015625,17773437500,116210937500,747070312500,4731445312500,29571533203125,182647705078125,1116180419921875,6755828857421875 ⋆ Expansion of (- 1 + 1 / (1 - 5 * x) ^ 5) / (25 * x); related to A036071. ● a(n) = 5 ^ (n - 1) * binomial(n + 5, 4); ●

► [A051588] 0,1,15,175,1827,17791,164955,1475335,12844707,109581871,920591595,7643833495,62904774387,514168732351,4180996130235,33864296127655,273465115692867,2203291473841231,17721094011796875,142344054436901815 ⋆ Number of 3 X n binary matrices such that any 2 rows have a common 1. ● a(n) = 8 ^ n - 3 * 6 ^ n + 3 * 5 ^ n - 4 ^ n. ● a(0)=0, a(1)=1, a(2)=15, a(3)=175, a(n) = 23 * a(n - 1) - 194 * a(n - 2) + 712 * a(n - 3) - 960 * a(n - 4). - _ Harvey P. Dale _ , Mar 07 2012 ●

► [A016164] 1,15,175,1875,19375,196875,1984375,19921875,199609375,1998046875,19990234375,199951171875,1999755859375,19998779296875,199993896484375,1999969482421875,19999847412109375,199999237060546875 ⋆ Expansion of 1 / ((1 - 5x)(1 - 10x)). ● a(n) = - 5 ^ n + 2 * 10 ^ n. ● a(0)=1, a(n) = 10 * a(n - 1) + 5 ^ n. - _ Vincenzo Librandi _ , Feb 09 2011 ●

► [A120995] 1,15,175,3675,14553,231231,920205,234652275,2807136475,14933966047,59612442981,11425718238025,15211755050625,243077636829375,9712302022 64925,993568496917018275,3970836034391543625 ⋆ Denominators of rationals related to John Wallis' product formula for Pi / 2 (from his 'Arithmetica infinitorum' from 1659). ● a(n) = denominators((3 / 4) * W(n)), n>=1. ●

► [A024197] 15,176,950,3480,10045,24640,53676,106800,197835,345840,576290,922376,1426425,2141440,3132760,4479840,6278151,8641200,11702670,15618680,20570165,26765376,34442500,43872400,55361475 ⋆ a(n) = 3rd elementary symmetric function of the first n + 2 odd positive integers. ● a(n) = n * (n + 1) * (n + 2) ^ 2 * (n ^ 2 + 3 * n + 1) / 6. ●

► [A071535] 1,15,176,1680,13824,102144,696320,4460544,27197440,159318016,902823936,4975493120,26776436736,141180272640,731218182144,3728300048384,18747532247040,93110596009984,457328117678080,2223830986653696,10715840324304896,51209754063667200 ⋆ (- 1) ^ (n + 1) * Determinant of n X n matrix of form [1 ^ 2 2 ^ 2 3 ^ 2 4 ^ 2 5 ^ 2 / 2 ^ 2 1 ^ 2 2 ^ 2 3 ^ 2 4 ^ 2 / 3 ^ 2 2 ^ 2 1 ^ 2 2 ^ 2 3 ^ 2 / 4 ^ 2 3 ^ 2 2 ^ 2 1 ^ 2 2 ^ 2 / 5 ^ 2 4 ^ 2 3 ^ 2 2 ^ 2 1 ^ 2]. ● a(n) = 2 ^ (- 5 + 2 * n) * (6 + 8 * n + 5 * n ^ 2 + 4 * n ^ 3 + n ^ 4) / 3. - _ Colin Barker _ , Oct 24 2014 ●

► [A081043] 1,15,176,1856,18432,176128,1638400,14942208,134217728,1191182336,10468982784,91268055040,790273982464,6803228196864,58274116272128,496979255754752,4222124650659840,35747322042253312,301741175033823232 ⋆ 8th binomial transform of (1,7,0,0,0,0,0,...). ● a(n) = 16 * a(n - 1) - 64 * a(n - 2), a(0)=1, a(1)=15. ● a(n) = (7n + 8) * 8 ^ (n - 1). ● a(n) = Sum _{ k=0..n } (k + 1) * 7 ^ k * binomial(n, k) } . ●

► [A155000] 1,1,15,176,2248,27840,348608,4347904,54305280,677924864,8464494592,105679749120,1319449690112,16473663471616,205678490419200,2567953077764096,32061620085587968,400298333039493120 ⋆ a(n) = 8 * a(n - 1) + 56 * a(n - 2), n > 2; a(0)=1, a(1)=1, a(2)=15. ● a(n) = (11 / 24) * sqrt(2) * ((4 + 6 * sqrt(2)) ^ (n - 1) - (4 - 6 * sqrt(2)) ^ (n - 1)) + (1 / 2) * ((4 + 6 * sqrt(2)) ^ (n - 1) + (4 - 6 * sqrt(2)) ^ (n - 1)) + (7 / 8) * (C(2 * n,n) mod 2), with n >= 0. - _ Paolo P. Lava _ , Jan 26 2009 ●

► [A016216] 1,15,178,1998,22099,243453,2679076,29473116,324214117,3566384811,39230321494,431533802154,4746872620855,52215601220889,574371620604232,6318087848169912,69498966394439113,764488630532540487,8409374936439076090,92503124302573229190 ⋆ Expansion of 1 / ((1 - x)(1 - 3x)(1 - 11x)). ● a(0)=1, a(1)=15, a(n)=14 * a(n - 1) - 33 * a(n - 2) + 1. - _ Vincenzo Librandi _ , Feb 10 2011 ● a(n) = (1 / 20) - (9 / 16) * (3) ^ n + (121 / 80) * (11) ^ n. _ Antonio Alberto Olivares _ , May 12, 2012 ●

► [A293476] 0,15,180,1050,4200,13230,35280,83160,178200,353925,660660,1171170,1987440,3248700,5140800,7907040,11860560,17398395,25017300,35331450,49092120,67209450,90776400,121095000,159705000 ⋆ a(n) = ((n + 1) / 2) * (n + 2) * Pochhammer(n, 5) / 4!. ● a(n) = n * Stirling2(4 + n, 1 + n). ● a(n) = (1 / 48) * (n * (2 + 3 * n + n ^ 2) ^ 2 * (12 + 7 * n + n ^ 2)). ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>7. ●

► [A016158] 1,15,181,2055,22861,252495,2781541,30613335,336812221,3705196575,40758210901,448344514215,4931806433581,54249937878255,596749585096261,6564246509800695,72206715902774941,794273892110393535 ⋆ Expansion of 1 / ((1 - 4 * x)(1 - 11 * x)). ● a(n) = 15 * a(n - 1) - 44 * a(n - 2) for n >= 2. - _ Vincenzo Librandi _ , Mar 18 2011 ● a(n) = 11 * a(n - 1) + 4 ^ n for n >= 1. - _ Vincenzo Librandi _ , Mar 18 2011 ● a(n) = (11 ^ (n + 1) - 2 ^ (2 * n + 2)) / 7. - _ R. J. Mathar _ , Mar 20 2011 ●

► [A273654] 15,185,1485,9905,59850,341082,1872990,10032990,52814025,274436305,1411449039,7195628895,36390053700,182622509860,909578754540,4496410556268,22062707386875,107464431586995,519700280676885,2495827315731365,11905791978208590,56429414876395550 ⋆ Number of forests of labeled rooted trees of height at most 1, with n labels, four of which are used for root nodes and any root may contain >= 1 labels. ● a(n) = C(n,4) * Sum _{ j=0..4 } Stirling2(4,j) * j ^ (n - 4). ●

► [A016207] 1,15,187,2259,27139,325731,3908899,46907043,562885027,6754621347,81055458211,972665502627,11671986039715,140063832492963,1680765989948323,20169191879445411,242030302553476003 ⋆ Expansion of 1 / ((1 - x)(1 - 2x)(1 - 12x)). ● a(n) = (72 * 12 ^ n - 22 * 2 ^ n + 5) / 55. - _ Bruno Berselli _ , Feb 09 2011 ● a(n)=12 * a(n - 1) + 2 ^ (n + 1) - 1, n>0. - _ Vincenzo Librandi _ , Feb 09 2011 ●

► [A145601] 1,15,189,2352,29700,382239,5010005,66745536,901995588,12342120700,170724392916,2384209771200,33577620944400,476432168185575,6805332732133125,97790670976838400,1412830549632694500 ⋆ a(n) is the number of walks from (0,0) to (0,2) that remain in the upper half - plane y >= 0 using 2 * n unit steps either up (U), down (D), left (L) or right (R). ● a(n) = 3 / (2 * n + 1) * binomial(2 * n + 1,n + 2) * binomial(2 * n + 1,n - 1). ●

► [A051545] 0,1,15,191,2414,31594,434568,6314664,97053936,1576890000,27046454400,488849155200,9293295110400,185464792800000,3878247384345600,84822225638169600,1937048605944883200,46113230058645657600 ⋆ Second unsigned column of triangle A051539. ● a(n) = n! * Sum _{ k=0,..,n - 1 } ((- 1) ^ k * binomial(- 7,k) / (n - k)), for n>=1. - _ Milan Janjic _ , Dec 14 2008 ● a(n) = n! * [6]h(n), where [k]h(n) denotes the k - th successive summation of The harmonic numbers from 0 to n. - _ Gary Detlefs _ , Jan 04 2011 ●

► [A172204] 0,0,15,194,1974,9856,34475,95466,224589,468854,893646,1585850,2656976,4246284,6523909,9693986,13997775,19716786,27175904,36746514,48849626,63959000,82604271,105374074,132919169 ⋆ Number of ways to place 5 nonattacking kings on a 5 X n board. ● a(n) = (625n ^ 5 - 9750n ^ 4 + 66415n ^ 3 - 247626n ^ 2 + 504664n - 446544) / 24, n>=4. ●

► [A098300] 0,1,15,196,2535,32761,423360,5470921,70698615,913611076,11806245375,152567578801,1971572279040,25477872048721,329240764354335,4254652064557636,54981236074894935,710501416909076521 ⋆ Member r=15 of the family of Chebyshev sequences S _ r(n) defined in A092184. ● a(n) = 13 * a(n - 1) - a(n - 2) + 2, n>=2, a(0)=0, a(1)=1. ● a(n) = 14 * a(n - 1) - 14 * a(n - 2) + a(n - 3), n>=3, a(0)=0, a(1)=1, a(2)=15. ●

► [A322914] 0,1,15,198,2511,31266,385398,4721004,57590271,700465482,8501284530,103007201364,1246500179910,15068548264212,182007001727244,2196875784339288,26501619841355871,319541469851970522,3851239987536347034,46399926869155488708,558853144337650364226 ⋆ a(0)=0; for n>0, a(n) is the number of rooted 4 - regular maps on the torus having n vertices. ● a(n) = 6 ^ (n - 1) * (2 ^ n - (2 * n - 1)!! / n!) for n>0. ●

► [A019553] 15,210,315,420,525,630,735,840,945,1050,1155,1260,1365,1470,1575,1680,1785,1890,1995,20100,21105,22110,23115,24120,25125 ⋆ a(n) is the concatenation of n and 5n. ● a(n) = n * 10 ^ floor(log _ 10(5 * n) + 1) + 5 * n, with n >= 1. - _ Paolo P. Lava _ , Mar 24 2010 ●

► [A234249] 15,210,1365,5985,20475,58905,148995,341055,720720,1426425,2672670,4780230,8214570,13633830,21947850,34389810,52602165,78738660,115584315,166695375,236561325,330791175,456326325,621682425,837222750 ⋆ Number of ways to choose 4 points in an n X n X n triangular grid. ● a(n) = n * (n + 1) * (n - 1) * (n + 2) * (n - 2) * (n + 3) * (n ^ 2 + n - 4) / 384. ● a(n) = C(C(n + 1, 2), 4). ● a(n - 1) = 15 * C(n,4) + 135 * C(n,5) + 330 * C(n,6) + 315 * C(n,7) + 105 * C(n,8), where the coefficient of C(n,k) is the number of chiral pairs of colorings using exactly k colors. ●

► [A112496] 15,210,1750,11368,63805,325930,1561516,7150000,31682651,137031986,582035714,2438479592,10109790809,41579014154,169946747160,691299506640,2801567046135,11320801495410,45642930545070,183698923750440 ⋆ Fourth column of triangle A112493 used for e.g.f.s of Stirling2 diagonals. ● a(n) = 2 ^ (2 * n + 11) / 3 - 3 ^ (n + 5) * (n + 9) / 2 + 2 ^ (n + 3) * (n ^ 2 + 15 * n + 58) - n ^ 3 / 6 - 3 * n ^ 2 - 55 * n / 3 - 229 / 6. - _ Vaclav Kotesovec _ , Jul 23 2021 ●

► [A163440] 1,15,210,2940,41160,576135,8064420,112881405,1580053020,22116729180,309578036040,4333306233165,60655281460410,849019887139515,11884122064943310,166347525415813560,2328442863574420320 ⋆ Number of reduced words of length n in Coxeter group on 15 generators S _ i with relations (S _ i) ^ 2 = (S _ i S _ j) ^ 5 = I. ● a(n) = 13 * a(n - 1) + 13 * a(n - 2) + 13 * a(n - 3) + 13 * a(n - 4) - 91 * a(n - 5). - _ Wesley Ivan Hurt _ , May 10 2021 ●

► [A135519] 1,15,211,2955,41371,579195,8108731,113522235,1589311291,22250358075,311505013051,4361070182715,61054982558011,854769755812155,11966776581370171,167534872139182395,2345488209948553531 ⋆ Generalized repunits in base 14. ● a(n) = (14 ^ n - 1) / 13. ● a(n) = 14 * a(n - 1) + 1 for n>1, a(1)=1. - _ Vincenzo Librandi _ , Aug 03 2010 ● a(n) = Sum _{ i=0..n - 1 } 13 ^ i * binomial(n,n - 1 - i). - _ Bruno Berselli _ , Nov 12 2015 ●

► [A289160] 0,0,0,15,220,1253,5412,15642,44368,97158,218816,410209,797052,1350435,2367668,3733284,6068736,9065724,13907808,19916451,29188092,4039995

3,57056164,76789790,105186576 ⋆ Number of 6 - cycles in the n X n black bisho p graph. ● a(n) = 2 * a(n - 1) + 5 * a(n - 2) - 12 * a(n - 3) - 9 * a(n - 4) + 30 * a(n - 5) + 5 * a(n - 6) - 40 * a(n - 7) + 5 * a(n - 8) + 30 * a(n - 9) - 9 * a(n - 10) - 12 * a(n - 11) + 5 * a(n - 12) + 2 * a(n - 13) - a(n - 14). ●

▶ [A078364] 1,15,224,3345,49951,745920,11138849,166336815,2483913376,37092 363825,553901543999,8271430796160,123517560398401,1844491975179855,27543 862067299424,411313439034311505 ⋆ A Chebyshev S - sequence with Diophanti ne property. ● a(n) = 15 * a(n - 1) - a(n - 2), n>= 1; a(- 1)=0, a(0)=1. ● a(n) = S(2 * n + 1, sqrt(17)) / sqrt(17) = S(n, 15); S(n, x) := U(n, x / 2), Chebyshe v polynomials of the 2nd kind, A049310. ● a(n) = (ap ^ (n + 1) - am ^ (n + 1)) / (ap - am) with ap = (15 + sqrt(221)) / 2 and am = (15 - sqrt(221)) / 2. ●

▶ [A207596] 15,225,825,1995,3915,6765,10725,15975,22695,31065,41265,53475,67 875,84645,103965,126015,150975,179025,210345,245115,283515,325725,371925,42 2295,477015 ⋆ Number of n X 5 0..1 arrays avoiding 0 0 0 and 0 1 0 horizontall y and 0 0 1 and 1 0 1 vertically. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>4. ●

▶ [A207700] 15,225,1071,3321,8151,17225,32775,57681,95551,150801,228735,335 625,478791,666681,908951,1216545,1601775,2078401,2661711,3368601,4217655,5 229225,6425511,7830641,9470751 ⋆ Number of n X 5 0..1 arrays avoiding 0 0 0 a nd 0 1 0 horizontally and 0 0 1 and 1 1 0 vertically. ● a(n) = (3 - 10 * n - 15 * n ^ 2 + 44 * n ^ 3 + 21 * n ^ 4 + 2 * n ^ 5) / 3. ●

▶ [A154597] 0,1,15,226,3405,51301,772920,11645101,175449435,2643386626,3982 6248825,600037119001,9040383033840,136205782626601,2052127122432855,3091 8112619119426,465823816409224245,7018275358757483101 ⋆ a(n) = 15 * a(n - 1) + a(n - 2) with a(0) = 0, a(1) = 1. ● a(n) = ((15 + sqrt(229)) ^ n - (15 - sqrt(229)) ^ n) / (2 ^ n * sqrt(229)). ●

▶ [A129836] 0,15,228,291,368,1575,1940,2387,9416,11543,14148,55115,67512,826 95,321468,393723,482216,1873887,2295020,2810795,10922048,13376591,1638274 8,63658595,77964720 ⋆ Nonnegative values x of solutions (x, y) to the Diophant ine equation x ^ 2 + (x + 97) ^ 2 = y ^ 2. ● a(n) = 6 * a(n - 3) - a(n - 6) + 194 for n > 6; a(1)=0, a(2)=15, a(3)=228, a(4)=291, a(5)=368, a(6)=1575. ●

▶ [A097262] 0,15,240,255,3840,3855,4080,4095,61440,61455,61680,61695,65280,6 5295,65520,65535,983040,983055,983280,983295,986880,986895,987120,987135,10 44480 ⋆ Numbers whose set of base 16 digits is { 0,F } , where F base 16 = 15 base 10. ● a(2n) = 16 * a(n), a(2n + 1) = a(2n) + 15. ●

▶ [A158557] 15,240,915,2040,3615,5640,8115,11040,14415,18240,22515,27240,324 15,38040,44115,50640,57615,65040,72915,81240,90015,99240,108915,119040,1296 15 ⋆ a(n) = 225 * n ^ 2 + 15. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A093147] 1,15,250,4250,72500,1237500,21125000,360625000,6156250000,1050 93750000,1794062500000,30626562500000,522828125000000,8925234375000000,1 52363281250000000,2601003906250000000,44401914062500000000 ⋆ Third binom ial transform of Pell(3n + 1). ● a(n) = ((1 + sqrt(2)) * (10 + 5 * sqrt(2)) ^ n - (1 - sqrt(2)) * (10 - 5 * sqrt(2)) ^ n) / (2 * sqrt(2)). ●

▶ [A055659] 0,15,253,1653,6786,21115,54615,123753,253828,481671,858705,1454 365,2359878,3692403,5599531,8264145,11909640,16805503,23273253,31692741,42 508810,56238315,73477503,94909753,121313676 ⋆ Number of (2,n) - partitions o f a chain of length n ^ 3. ● a(n) = (1 / 2) * (n - 1) * (n ^ 2 + n - 1) * (n ^ 3 - 2 * n + 2). ●

▶ [A099273] 0,1,15,256,4335,73441,1244160,21077281,357069615,6049106176,10 2477735375,1736072395201,29410752983040,498246728316481,844078362839713 5,1429950749544348 16,2422475490596994735 ⋆ Unsigned member r= - 15 of the family of Chebyshev sequences S _ r(n) defined in A092184. ● a(n)= 17 * a(n - 1) - a(n - 2) + 2 * (- 1) ^ (n + 1), n>=2, a(0)=0, a(1)=1. ● a(n)= 16 * a(n - 1) + 16 * a(n - 2) - a(n - 3), n>=3, a(0)=0, a(1)=1, a(2)=15. ●

▶ [A361185] 0,0,15,264,1700,6900,21315,54880,123984,253800,480975,856680,145 0020,2351804,3678675,5577600,8230720,11860560,16735599,23176200,31560900,4 2333060,56007875,73179744,94530000 ⋆ Number of chordless cycles in the n X n rook complement graph. ● a(n) = 2 * binomial(n,2) * binomial(n,3) + 9 * bino mial(n,3) ^ 2 + 12 * binomial(n,4) * binomial(n,2). - _ Andrew Howroyd _ , M ar 03 2023 ● a(n) = (n - 2) * (n - 1) ^ 2 * n ^ 2 * (6 * n - 13) / 12. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). ●

▶ [A249961] 15,285,2010,8790,28785,77595,181860,383580,745155,1355145,23347 50,3845010,6094725,9349095,13939080,20271480,28839735,40235445,55160610,74 440590,99037785,130066035,168805740,216719700,275469675 ⋆ Number of lengt h 1 + 5 0..n arrays with no six consecutive terms having the maximum of any t wo terms equal to the minimum of the remaining four terms. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a (n - 7) for n>7. ●

▶ [A177074] 15,285,2985,29985,299985,2999985,29999985,299999985,299999998 5,29999999985,299999999985,2999999999985,29999999999985,299999999999985,2 999999999999985,29999999999999985,299999999999999985 ⋆ 3 * (10 ^ n - 5). ● a(n) = 11 * a(n - 1) - 10 * a(n - 2), n>1. - _ Vincenzo Librandi _ , Apr 26 201 4 ●

▶ [A105491] 15,312,4263,49112,521640,5329044,53580450,537427440,542289933 9,55344162874,573270663966,6040762924560,64851119605636,709986204480672,7 931189102016852,90430835147203728,1052534895931584828 ⋆ Number of partiti ons of { 1...n } containing 5 detached pairs of consecutive integers, i.e., partitio ns in which only 1 - or 2 - strings of consecutive integers can appear in a block and there are exactly five 2 - strings. ● a(n)=binomial(n - 5, 5) * Bell(n - 6), w hich is the case r=5 in the general case of r pairs, d(n, r)=binomial(n - r, r) * B ell(n - r - 1), which is the case t=2 of the general formula d(n, r, t)=binomial(n - r * (t - 1), r) * B(n - r * (t - 1) - 1). ●

▶ [A133766] 15,315,1287,3315,6783,12075,19575,29667,42735,59163,79335,10363 5,132447,166155,205143,249795,300495,357627,421575,492723,571455,658155,753 207,856995,969903 ⋆ a(n) = (4 * n + 1) * (4 * n + 3) * (4 * n + 5). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>3. - _ Harvey P. Dale _ , May 06 2012 ●

▶ [A359404] 0,0,15,315,4200,45360,433440,3825360,31944000,256164480,1991877 888,15117822720,112519680000,824063385600,5953789181952,42518284701696,30 0588079104000,2106258635980800,14642876032942080,101081482775691264,6933 38799538176000,4728258324725760000,32074214121878323200 ⋆ Number of uno rdered triples of self - avoiding paths with nodes that cover all vertices of a con vex n - gon. ● a(n) = n * (n - 1) * (n - 2) * 2 ^ (n - 10) * (3 ^ (n - 4) - 2 ^ (n - 3) + 1). ●

▶ [A087330] 0,15,370,6150,86430,1114210,13641990,161419770,1864197550,2114 1975330,23641975311 0,2614197530890,28641975308670,31141975308650,336419 7530864230,36141975308642010,386419753086419790 ⋆ Sum of all digits of all in tegers less than or equal to 555...55 (with n 5's) in base 10. ● a(n)=20 / 9 * n - 110 / 81 * 10 ^ n + 110 / 81 + 5 / 2 * n * 10 ^ n (formula from B. Greco) ●

▶ [A361284] 0,0,0,0,0,15,420,7140,95760,1116990,11891880,118776900,113218248 0,10415938533,93207174060,815777235000,7011723045600,59364660734172,49623 8466573648,4102968354298200,33602671702168800,272909132004479355,2200084 921469527092,17618774018675345340,140252152286127750000 ⋆ Number of uno rdered triples of self - avoiding paths whose sets of nodes are disjoint subsets of a set of n points on a circle; one - node paths are not allowed. ● a(n) = (n * (n - 1) * (n - 2) / 384) * (7 ^ (n - 3) - 3 * 5 ^ (n - 3) + 3 ^ (n - 2) - 1). ●

▶ [A079610] 15,480,2145,5760,12075,21840,35805,54720,79335,110400,148665,19 4880,249795,314160,388725,474240,571455,681120,803985,940800,1092315,12592 80,1442445,1642560,1860375 ⋆ a(n) = (5 * n + 1) * (5 * n + 3) * (5 * n + 5). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Vincenzo Librandi _ , Jun 23 2012 ●

▶ [A249962] 15,505,5300,31180,129095,422065,1164800,2830080,6226935,126556 65,24104740,43494620,74973535,124270265,199108960,309691040,469249215,6946 78665,1007250420,1433411980,2005680215,2763631585,3754994720 ⋆ Number of length 2 + 5 0..n arrays with no six consecutive terms having the maximum of any two terms equal to the minimum of the remaining four terms. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. ●

▶ [A171113] 0,0,15,675,7915,41310,145383,404185,959115,2029980,3939295,7139 823,12245355,20064730,31639095,48282405,71625163,103661400,146798895,20391 2635,278401515,374248278,496082695,649247985,839870475 ⋆ a(n) is the Severi degree for curves of degree n and cogenus 3. ● a(n) = 9 * n ^ 6 / 2 - 27 * n ^ 5 + 9 * n ^ 4 / 2 + 423 * n ^ 3 / 2 - 229 * n ^ 2 - 829 * n / 2 + 525 for n > 2. - _ Andrey Zabolotskiy _ , Jan 19 2021 ●

▶ [A001520] 15,693,3315,9177,19575,35805,59163,90945,132447,184965,249795,3 28233,421575,531117,658155,803985,969903,1157205,1367187,1601145,1860375,2 146173,2459835,2802657,3175935 ⋆ a(n) = (6 * n + 1) * (6 * n + 3) * (6 * n + 5). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n >= 4. - _ J inyuan Wang _ , Mar 10 2020 ●

▶ [A249963] 15,897,14094,111746,585069,2319123,7532380,21069828,52478667,11 9135973,250738026,495501318,928465577,1662329463,2861289912,4758396424,76 76971911,12056692041,18484955334,27734216586,40805996517,58982320859 ⋆ N umber of length 3 + 5 0..n arrays with no six consecutive terms having the max imum of any two terms equal to the minimum of the remaining four terms. ● a (n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>9. ●

▶ [A055413] 1,15,953,12435,88273,394691,1405325,4031123,10248133,23120727,4 8218513,93417543,172039681,299505299,503363697,813950491,1279144845,19505 68311,2912136485,4244109647,6080556217,8545686087,11835454865 ⋆ Number o f points in Z ^ 7 of norm <= n. ● a(n) = [x ^ (n ^ 2)] theta _ 3(x) ^ 7 / (1 - x) , where theta _ 3() is the Jacobi theta function. - _ Ilya Gutkovskiy _ , Apr 1 4 2018 ●

▶ [A249964] 15,1593,37584,402010,2662039,12791191,48882360,157381572,44362 8615,1124698773,2615110872,5658900702,11524855615,22285365715,4120336955 2,73256257608,125830345119,209624636913,339808080960,537480344226 ⋆ Num ber of length 4 + 5 0..n arrays with no six consecutive terms having the maxim um of any two terms equal to the minimum of the remaining four terms. ● a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10) for n>1 0. ●

▶ [A249965] 15,2825,100236,1447334,12123567,70617807,317518832,117657001 2,3753186183,10625460549,27293238764,64668634914,143140038743,29892484394 7,593647442496,1128342108536,2063388866271,3646247928129 ⋆ Number of leng th 5 + 5 0..n arrays with no six consecutive terms having the maximum of any two terms equal to the minimum of the remaining four terms. ● a(n) = 11 * a(n - 1) - 55 * a(n - 2) + 165 * a(n - 3) - 330 * a(n - 4) + 462 * a(n - 5) - 462 * a(n - 6) + 330 * a(n - 7) - 165 * a(n - 8) + 55 * a(n - 9) - 11 * a(n - 10) + a(n - 11) for n>11. ●

▶ [A079919] 1,15,4163,158364,3904260,60560175,671224467,5697401802,3898364 3908,223245029176,1100925116264,4780871048064,18612106195456,65909241461 760,214868401724416,650515953570304,1842743223078144,4916155345428736,12 422627638293760,29881211844270336,68721268507385344,151698799246127104 ⋆ Solution to the Dancing School Problem with 14 girls and n + 14 boys: f(14,n). ● a(n) = n ^ 14 - 77 * n ^ 13 + 3094 * n ^ 12 - 83083 * n ^ 11 + 1637636 * n ^ 10 - 24785761 * n ^ 9 + 294696402 * n ^ 8 - 2779448529 * n ^ 7 + 20797459683 * n ^ 6 - 122389753486 * n ^ 5 + 555826054784 * n ^ 4 - 1883902028008 * n ^ 3 + 4494445040176 * n ^ 2 - 6742111050752 * n + 4789534153984 for n >= 12. - _ Georg Fischer _ , Apr 27 2021 (polynomial computed by the program in link s) ●

▶ [A249966] 15,4999,267004,5207128,55191061,389769865,2062131616,87949671 12,31750272891,100377252987,284840809660,738995422048,1777772706385,40095 52754989,8552986503328,17379265831600,33835476742695 ⋆ Number of length 6 + 5 0..n arrays with no six consecutive terms having the maximum of any two t erms equal to the minimum of the remaining four terms. ● a(n) = 12 * a(n - 1) - 66 * a(n - 2) + 220 * a(n - 3) - 495 * a(n - 4) + 792 * a(n - 5) - 924 * a(n - 6) + 792 * a(n - 7) - 495 * a(n - 8) + 220 * a(n - 9) - 66 * a(n - 10) + 12 * a(n - 11) - a(n - 12) for n>12. ●

▶ [A249967] 15,8823,709814,18707320,251002319,2149795141,13385651492,6571 7571120,268511791119,948021599547,2972106528666,8443442678840,2207661037

2895,53774915777897,123215084622184,267660712891040,554792683762767 ⋆ Number of length 7 + 5 0..n arrays with no six consecutive terms having the maximum of any two terms equal to the minimum of the remaining four terms. ● a(n) = 13 * a(n - 1) - 78 * a(n - 2) + 286 * a(n - 3) - 715 * a(n - 4) + 1287 * a(n - 5) - 1716 * a(n - 6) + 1716 * a(n - 7) - 1287 * a(n - 8) + 715 * a(n - 9) - 286 * a(n - 10) + 78 * a(n - 11) - 13 * a(n - 12) + a(n - 13) for n>13. ●

▶ [A104682] 1,15,32767,7174453,357913941,7629394531,94036996915,791260251657,5026338869833,25736391511831,111111111111111,417724816941565,1400638324962397,4265491084507563,11966776581370171,31278135027204241,76861433640456465,178901440719363487 ⋆ a(n) = Sum _{ j=0..14 } n ^ j. ● a(n) = n ^ 14 + n ^ 13 + n ^ 12 + n ^ 11 + n ^ 10 + n ^ 9 + n ^ 8 + n ^ 7 + n ^ 6 + n ^ 5 + n ^ 4 + n ^ 3 + n ^ 2 + n ^ 1 + 1. ● a(n) = (n ^ 2 + n + 1) * (n ^ 4 + n ^ 3 + n ^ 2 + n + 1) * (n ^ 8 - n ^ 7 + n ^ 5 - n ^ 4 + n ^ 3 - n + 1). - _ Jonathan Vos Post _ , Apr 23 2005 ●

▶ [A209726] 16,17,18,20,22,26,30,38,46,62,78,110,142,206,270,398,526,782,1038,1550,2062,3086,4110,6158,8206 ⋆ 1 / 4 the number of (n + 1) X 8 0..2 arrays with every 2 X 2 subblock having distinct clockwise edge differences. ● a(n) = 3 * 2 ^ (n / 2 - 1) + 14 for n even. ● a(n) = 2 ^ ((n + 1) / 2) + 14 for n odd. ●

▶ [A241751] 16,17,20,25,32,41,52,65,80,97,116,137,160,185,212,241,272,305,340,377,416,457,500,545,592 ⋆ a(n) = n ^ 2 + 16. ● a(n) = a(- n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) = a(n - 1) + 2 * n - 1. ●

▶ [A151977] 0,1,16,17,32,33,48,49,64,65,80,81,96,97,112,113,128,129,144,145,160,161,176,177,192 ⋆ Numbers that are congruent to { 0, 1 } mod 16. ● a(n) = (32 * n - 14 * (- 1) ^ n - 46) / 4. - _ Vincenzo Librandi _ , Jul 11 2012 ● a(n) = a(n - 2) + 16. ●

▶ [A319281] 1,16,17,33,49,65,81,97,113,129,145,161,177,193,209,225,241,256,257,272,273,289,305,321,337 ⋆ Numbers of the form 16 ^ i * (16 * j + 1). ● a(n) = 15 * n + O(log(n)). ●

▶ [A022106] 1,16,17,33,50,83,133,216,349,565,914,1479,2393,3872,6265,10137,16402,26539,42941,69480,112421,181901,294322,476223,770545 ⋆ Fibonacci sequence beginning 1, 16. ● a(n)= a(n - 1) + a(n - 2), n>=2, a(0)=1, a(1)=16. a(- 1): =15. ●

▶ [A042195] 1,1,16,17,33,50,233,283,2214,4711,115278,235267,1762147,1997414,9751803,11749217,21501020,33250237,520254575,553504812,27088485551,27641990363,441718340996,469360331359,911078672355 ⋆ Denominators of continued fraction convergents to sqrt(622). ● a(n) = 27608740126 * a(n - 20) - a(n - 40) for n > 39. - _ Vincenzo Librandi _ , Jan 16 2014 ●

▶ [A042205] 1,16,17,50,267,1118,2503,3621,9745,23111,79078,102189,385645,4729929,14575432,19305361,72491515,164288391,401068297,565356688,1531781673,6692483380,34994198573,76680880526,111675079099 ⋆ Denominators of continued fraction convergents to sqrt(628). ● a(n) = 93397457463698 * a(n - 26) - a(n - 52) for n>51. - _ Vincenzo Librandi _ , Jan 16 2014 ●

▶ [A033052] 0,1,16,17,256,257,272,273,4096,4097,4112,4113,4352,4353,4368,4369,65536,65537,65552,65553,65792,65793,65808,65809,69632 ⋆ a(1) = 1, a(2n) = 16a(n), a(2n + 1) = a(2n) + 1. ● a(n) = Sum _{ i=0..m } d(i) * 16 ^ i, where Sum _{ i=0..m } d(i) * 2 ^ i is the base - 2 representation of n. ● a(2n) = 16 * a(n), a(2n + 1) = a(2n) + 1. ●

▶ [A041541] 1,1,16,17,560,577,9215,9792,322559,332351,5307824,5640175,18579342 4,191433599,3057297409,3248731008,107016689665,110265420673,1760997999760,1871263420433,61641427453616,63512690874049,1014331790564351,1077844481438400 ⋆ Denominators of continued fraction convergents to sqrt(287). ● a(n) = 576 * a(n - 4) - a(n - 8) for n>7. - _ Vincenzo Librandi _ , Dec 19 2013 ●

▶ [A308607] 16,18,22,26,30,34,38,42,46,50,54,58,62,66,70,74,78,82,86,90,94,98,102,106,110 ⋆ Number of (not necessarily maximal) cliques in the wheel graph on n vertices. ● a(n) = 4 * n - 2 for n > 4. ● a(n) = 2 * a(n - 1) - a(n - 2) for n>6. ●

▶ [A255847] 16,18,24,34,48,66,88,114,144,178,216,258,304,354,408,466,528,594,664,738,816,898,984,1074,1168 ⋆ a(n) = 2 * n ^ 2 + 16. ● a(n) = a(- n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A303813] 0,1,16,19,49,54,99,106,166,175,250,261,351,364,469,484,604,621,756,775,925,946,1111,1134,1314 ⋆ Generalized 19 - gonal (or enneadecagonal) numbers: m * (17 * m - 15) / 2 with m = 0, + 1, - 1, + 2, - 2, + 3, - 3, ... ● a(n) = (34 * n ^ 2 + 60 * n) / 16 for n even. ● a(n) = (34 * n ^ 2 + 8 * n - 26) / 16 for n odd. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n >4. ●

▶ [A219395] 0,16,20,68,76,156,168,280,296,440,460,636,660,868,896,1136,1168,1440,1476,1780,1820,2156,2200,2568,2616 ⋆ Numbers k such that 18 * k + 1 is a square. ● a(n) = a(- n + 1) = (18 * n * (n - 1) + 7 * (- 1) ^ n * (2 * n - 1) - 1) / 4 + 2. ●

▶ [A179370] 16,23,163,184,464,499,919,968,1528,1591,2291,2368,3208,3299,4279,4384,5504,5623,6883,7016,8416,8563,10103,10264,11944 ⋆ Positive integers of the form (7 * m ^ 2 + 1) / 11. ● a(n) = (154 * n * (n - 1) - 63 * (2 * n - 1) * (- 1) ^ n + 65) / 8. ● a(n) = a(- n + 1) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). ●

▶ [A247065] 1,16,24,32,40,49,64,65,80,88,96,104,113,128,129,144,152,160,168,177,192,193,208,216,224 ⋆ Dynamic Betting Game D(n,6,1). ● a(n) = a(n - 1) + a(n - 7) - a(n - 8). - _ Colin Barker _ , Sep 14 2014 ●

▶ [A273801] 16,24,32,48,56,72,80,96,120,128,152,168,176,192,216,240,248,272,288,296,320,336,360,392,408 ⋆ Numbers n for which n = (x - phi(x)) * (y - phi(y)), where n = x + y and x - phi(x) is the Euler cototient function of x. ● a(n) = 4 * (prime(n + 1) + 1). - _ Paolo P. Lava _ , Sep 06 2017 ●

▶ [A100316] 1,16,24,34,48,70,108,178,312,574,1092,2122,4176,8278,16476,32866,65640,131182,262260,524410,1048704,2097286,4194444,8388754,16777368 ⋆ Number of 4 X n 0 - 1 matrices avoiding simultaneously the right angled numbered polyomino patterns (ranpp) (00;1), (01;0), (10;0) and (01;1). ● a(n) = 2 ^ n + 6 * n + 8 for n>0, a(0) = 1. ●

▶ [A140135] 16,24,36,54,54,81,100,140,140,140,196,225,315,315,315,315,315,441,484,550,550,625,676,858,858 ⋆ Product of largest semiprime <= n and smallest semiprime >= n. ● a(n) = MAX { j in A001358 and j <= n } * MIN { j in A001358 and j >= n } ●

▶ [A175161] 16,24,40,72,136,264,520,1032,2056,4104,8200,16392,32776,65544,131080,262152,524296,1048584,2097160,4194312,8388616,16777224,33554440,67108872,134217736 ⋆ a(n) = 8 * (2 ^ n + 1). ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) with a(0)=16, a(1)=24. - _ Vincenzo Librandi _ , Dec 28 2010 ●

▶ [A111026] 16,25,27,32,49,121,125,128,169,225,243,289,343,361,512,529,625,729,841,961,1000,1225,1331,1369,1681 ⋆ Perfect powers (A001597) of the form 3p + q + 3, p & q are primes. ● a(n)=3p + q + 3 where p and q are primes and a(n) is a perfect power. ●

▶ [A368049] 16,25,36,49,64,81,100,121,144,225,400,441,484,676,900,1444,10000,40000,44944,90000,1000000,4000000,9000000,100000000,400000000 ⋆ Perfect squares whose decimal expansion consists of k > 1 digits, k - 1 of which are equal. ● a(n) = 100 * a(n - 3) for n > 22. - _ Stefano Spezia _ , Dec 09 2023 ●

▶ [A152152] 0,1,1,16,25,121,256,841,2025,5776,14641,39601,102400,271441,707281,1860496,4862025,12752041,33362176,87403801,228765625,599074576,1568239201,4106118241,10749542400 ⋆ A sequence related to sine products and the Fibonacci numbers A000045: a(n) = Product _{ k=1..n } (1 + 4 * sin(2 * Pi * k / n) ^ 2). ● a(n) = Product _{ k=1..n } (1 + 4 * sin(2 * Pi * k / n) ^ 2). ● a(n) = (1 + Fibonacci(n) - 2 * Fibonacci(n + 1) + (- 1) ^ n) ^ 2. ● a(n) = (1 + (- 1) ^ n - Lucas(n)) ^ 2. - _ G. C. Greubel _ , Mar 13 2019 ●

▶ [A374007] 16,27,31,42,50,61,73,84,100,111,131,142,166,177,205,216,248,259,295,306,346,357,401,412,460 ⋆ a(n) = (1 + (n + 5) ^ 2 - (n - 6) * (- 1) ^ n) / 2. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). ●

▶ [A088247] 16,27,32,64,81,125,128,243,256,343,512,625,729,1024,1331,2048,2187,2197,2401,3125,4096,4913,6561,6859,8192 ⋆ Orders of proper semifields. ● a(n) = n ^ 3 log ^ 3 n + O(n ^ 3 log ^ 2 n log log n). - _ Charles R Greathouse IV _ , Mar 11 2014 ●

▶ [A032610] 16,27,38,49,510,611,712,813,914,1015,1116,1217,1318,1419,1520,1621,1722,1823,1924,2025,2126,2227,2328,2429,2530 ⋆ Concatenation of n and n + 5 or { n,n + 5 } . ● a(n) = n * 10 ^ floor(log _ 10(n + 5) + 1) + n + 5, with n >= 0. - _ Paolo P. Lava _ , Oct 09 2008 ●

▶ [A286429] 0,0,0,0,16,27,40,55,72,91,112,135,160,187,216,247,280,315,352,391,432,475,520,567,616 ⋆ Highest elevation of an island above sea level in a number square. ● a(n) = n ^ 2 + 2 * n - 8 for n>3. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>6. ●

▶ [A337663] 1,16,28,38,49,60 ⋆ Solution to stepping stone puzzle if we start with n 1's (see Comments). ● a(n) >= 5 * n - 4. ● a(n) >= 6 * n - 6. [This has since been strengthened to a(n) >= 6 * n for n >= 3 - see Comments and Link. - _ N. J. A. Sloane _ , Sep 14 2022] ●

▶ [A349418] 16,28,46,71,104,146,198,261,336,424,526,643,776,926,1094,1281,1488,1716,1966,2239,2536,2858,3206,3581,3984 ⋆ a(n) is the Wiener index of a tridon on n vertices. ● a(n) = (1 / 6) * n ^ 3 - (19 / 6) * n + 11. ●

▶ [A184031] 16,28,49,91,169,325,625,1225,2401,4753,9409,18721,37249,74305,148225,296065,591361,1181953,2362369,4723201,9443329,18883585,37761025,75515905,151019521 ⋆ 1 / 16 the number of (n + 1) X 2 0..3 arrays with all 2 X 2 subblocks having the same four values. ● a(n) = 9 * 2 ^ (n / 2 - 1) + 9 * 2 ^ (n - 1) + 1 for n even. ● a(n) = 9 * 2 ^ (n - 1) + 3 * 2 ^ ((n + 1) / 2) + 1 for n odd. ●

▶ [A206259] 16,28,78,260,932,3440,12878,48628,184764,705440,2704164,10400608,40116608,155117528,601080398,2333606228,9075135308,35345263808,137846528828,538257874448,2104098963728,8233430727608,32247603683108 ⋆ Number of (n + 1) X (n + 1) 0..1 arrays with the number of rightwards and downwards edge increases in each 2 X 2 subblock equal to the number in all its horizontal and vertical neighbors. ● a(n) = 8 + 2 * C(2 * n + 1,n), for n>1. - _ Vaclav Kotesovec _ , Oct 28 2012 ●

▶ [A308026] 0,0,16,30,90,134,266,356,588,740,1100,1330,1846,2170,2870,3304,4216,4776,5928,6630,8050,8910,10626,11660,13700 ⋆ a(n) = n * (2 * n - 3 - (- 1) ^ n) * (11 * n + (- 1) ^ n) / 24. ● a(n) = a(n - 1) + 3 * a(n - 2) - 3 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) + a(n - 6) - a(n - 7). ● a(n) = 2 * Sum _{ i=1..floor((n - 1) / 2) } (n - i) * (n + i). ●

▶ [A220000] 16,31,47,63,78,94,109,125,141,156,172,188,203,219,234,250,266,281,297,313,328,344,359,375,391 ⋆ Sixty fourths of an inch in thousandths, rounded to nearest integer. ● a(n) = round(125 * n / 8), with 0.5 rounded up. ●

▶ [A122614] 16,32,48,64,80,81,96,97,112,113,128,129,144,145,160,161,162,176,177,178,192,193,194,208,209 ⋆ Sums of 4th powers of primes. ● a(n) = a * 16 + b * 81 + c * 625 + d * 2401 + e * 14641 + ... where a,b,c,d,e,... are nonnegative integers. Sumset of A030514 4th powers of primes. ●

▶ [A008598] 0,16,32,48,64,80,96,112,128,144,160,176,192,208,224,240,256,272,288,304,320,336,352,368,384 ⋆ Multiples of 16. ● a(n) = Sum _{ k=1..8n } (i ^ k + 1) * (i ^ (8n - k) + 1), where i=sqrt(- 1). - _ Bruno Berselli _ , Mar 19 2012 ●

▶ [A204645] 16,32,56,90,137,200,283,390,526,696,906,1162,1471,1840,2277,2790,3388,4080,4876,5786,6821,7992,9311,10790,12442 ⋆ Number of (n + 1) X 3 0..1 arrays with column and row pair sums b(i,j)=a(i,j) + a(i,j - 1) and c(i,j)=a(i,j) + a(i - 1,j) nondecreasing in column and row directions, respectively. ● a(n) = (576 + 704 * n + 232 * n ^ 2 + 16 * n ^ 3 + 2 * n ^ 4) / 96 for n even. ● a(n) = (582 + 704 * n + 232 * n ^ 2 + 16 * n ^ 3 + 2 * n ^ 4) / 96 for n odd. ●

▶ [A018923] 16,32,63,124,244,480,944,1856,3649,7174,14104,27728,54512,107168,210687,414200,814296,1600864,3147216,6187264,12163841,23913482,47012668,92424472,181701728 ⋆ Define the generalized Pisot sequence T(a(0),a(1)) by: a(n + 2) is the greatest integer such that a(n + 2) / a(n + 1) < a(n + 1) / a(n). This is T(16,32). ● a(n + 1) = ceiling(a(n) ^ 2 / a(n - 1)) - 1 for n>0. - _ Bruno Berselli _ , Feb 15 2016 ●

▶ [A331420] 0,0,0,0,0,0,0,0,16,32,192,384,1344,2688,7168,14336,32256,64512,129024,258048,473088,946176,1622016,3244032,5271552 ⋆ a(n) is the number of subsets of { 1..n } that contain exactly 5 odd numbers. ● a(n) = binomial((n + 1) / 2, 5) * 2 ^ ((n - 1) / 2), n odd; ● a(n) = binomial((n / 2), 5) * 2 ^ (n / 2), n even. ● a(n) = 12 * a(n - 2) - 60 * a(n - 4) + 160 * a(n - 6) - 240 * a(n - 8) + 192 * a(n - 10) - 64 * a(n - 12) for n>12. (End) ●

▶ [A151981] 0,1,16,33,48,49,64,81,96,97,112,129,144,145,160,177,192,193,208,225,240,241,256,273,288 ⋆ Numbers n such that n ^ 2 - n is divisible by 48. ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. (End) ● a(n) = 12 * n - (35 + 3 * i ^ (2

* n)) / 2 + (2 + 2 * i) * i ^ (- n) + (2 - 2 * i) * i ^ n where i=sqrt(- 1). - _ Wesley Ivan Hurt _ , Jun 07 2016 ●

► [A132758] 0,16,33,51,70,90,111,133,156,180,205,231,258,286,315,345,376,408,441,475,510,546,583,621,660 ⋆ a(n) = n * (n + 31) / 2. ● a(n) = n * (n + 31) / 2 . ● a(n) = n + a(n - 1) + 15 for n>0, a(0)=0. - _ Vincenzo Librandi _ , Aug 03 2010 ● a(0)=0, a(1)=16, a(2)=33; for n>2, a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Jun 21 2012 ● a(n) = 16 * n - floor(n / 2) + floor(n ^ 2 / 2). - _ Wesley Ivan Hurt _ , Jun 15 2013 ●

► [A195146] 0,1,16,33,64,97,144,193,256,321,400,481,576,673,784,897,1024,1153,1296,1441,1600,1761,1936,2113,2304 ⋆ Concentric 16 - gonal numbers. ● a(n) = (8 * n ^ 2 + 3 * (- 1) ^ n - 3) / 2; ● a(n) = - a(n - 1) + 8 * n ^ 2 - 8 * n + 1. (End) ●

► [A198275] 16,33,67,135,271,543,1087,2175,4351,8703,17407,34815,69631,139263,278527,557055,1114111,2228223,4456447,8912895,17825791,35651583,71303167,142606335,285212671 ⋆ 17 * 2 ^ n - 1. ● a(n + 1) = 2 * a(n) + 1. ● a(0)=16, a(1)=33, a(n)=3 * a(n - 1) - 2 * a(n - 2). - _ Harvey P. Dale _ , Dec 03 2011 ● a(n) + a(n - 1) ^ 2 = (a(n - 1) + 1) ^ 2. - _ Vincenzo Librandi _ , Jun 11 2014 ●

► [A144533] 0,1,16,33,544,1121,18480,38081,627776,1293633,21325904,43945441,724452960,1492851361,24610074736,50713000833,836018088064,1722749176961,28400004919440,58522759015841,964764149172896,1988051057361633,32773581066959024,67535213191279681 ⋆ Numerators of continued fraction convergents to sqrt(8 / 9). ● a(n) = 16 * a(n - 1) + a(n - 2) if n odd, otherwise a(n) = 2 * a(n - 1) + a(n - 2), for n >= 2. ● a(n) = 34 * a(n - 2) - a(n - 4). G.f.: - x * (x ^ 2 - 16 * x - 1) / ((x ^ 2 - 6 * x + 1) * (x ^ 2 + 6 * x + 1)). [_ Colin Barker _ , Jul 16 2012] ●

► [A350522] 16,34,52,70,88,106,124,142,160,178,196,214,232,250,268,286,304,322,340,358,376,394,412,430,448 ⋆ a(n) = 18 * n + 16. ● a(n) = 2 * a(n - 1) - a(n - 2) for n > 1. (End) ●

► [A132760] 0,16,34,54,76,100,126,154,184,216,250,286,324,364,406,450,496,544,594,646,700,756,814,874,936 ⋆ a(n) = n * (n + 15). ● a(n) = n * (n + 15). ● a(n) = 2 * n + a(n - 1) + 14 (with a(0)=0). - _ Vincenzo Librandi _ , Aug 03 2010 ●

► [A153819] 16,34,88,232,610,1600,4192,10978,28744,75256,197026,515824,1350448,3535522,9256120,24232840,63442402,166094368,434840704,1138427746,2980442536,7802899864,20428257058,53481871312,140017356880 ⋆ Linear recurrence with a(n) = 3a(n - 1) - a(n - 2) + 2 = 4a(n - 1) - 4a(n - 2) + a(n - 3). Full sequence for A153466. ● a(n) = (2 ^ (- n) * (- 5 * 2 ^ (1 + n) - 9 * (3 - sqrt(5)) ^ n * (- 5 + sqrt(5)) + 9 * (3 + sqrt(5)) ^ n * (5 + sqrt(5)))) / 5. - _ Colin Barker _ , Nov 02 2016 ●

► [A337024] 16,35,60,91,128,171,220,275,336,403,476,555,640,731,828,931,1040,1155,1276,1403,1536,1675,1820,1971,2128 ⋆ Number of ways to tile a 2n X 2n square with 1 X 1 white and n X n black squares. ● a(n) = 3 * n ^ 2 + 10 * n + 3. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n > 3. (End) ●

► [A109287] 16,36,40,56,88,135,156,184,204,210,220,248,250,260,296,306,315,328,330,340,342,372,414,459,472 ⋆ 4 - almost primes equal to p * q + 1, where p and q are (not necessarily distinct) primes. ● a(n) is in this sequence iff a(n) is in A014613 and (a(n) - 1) is in A001358. ●

► [A022040] 16,36,80,177,391,863,1904,4200,9264,20433,45067,99399,219232,483532,1066464,2352161,5187855,11442175,25236512,55660880,122763936,270764385,597189651,1317143239,2905050864 ⋆ Define the sequence T(a(0),a(1)) by a(n + 2) is the greatest integer such that a(n + 2) / a(n + 1) < a(n + 1) / a(n) for n >= 0. This is T(16,36). ● a(n + 1) = ceiling(a(n) ^ 2 / a(n - 1)) - 1 for n>0. - _ Bruno Berselli _ , Feb 15 2016 ●

► [A182461] 16,40,88,184,376,760,1528,3064,6136,12280,24568,49144,98296,196600,393208,786424,1572856,3145720,6291448,12582904,25165816,50331640,100663288,201326584,402653176 ⋆ a(n) = 3 * a(n - 1) - 2 * a(n - 2) with a(0)=16 and a(1)=40. ● a(n) = a(n - 1) * 2 + 8. ●

► [A185761] 16,40,104,264,680,1736,4456,11400,29224,74824,191720,491016,1257896,3221960,8253544,21141384,54155560,138721096,355343336,910227720,2331601064,5972511944,15298916200,39188963976,100384628776 ⋆ Number of (n + 1) X 2 binary arrays with no 2 X 2 subblock trace equal to any horizontal or vertical neighbor 2 X 2 subblock trace. ● a(n) = (2 ^ (- n) * ((1 - sqrt(17)) ^ n * (- 13 + 3 * sqrt(17)) + (1 + sqrt(17)) ^ n * (13 + 3 * sqrt(17)))) / sqrt(17). ●

► [A205248] 16,40,112,328,976,2920,8752,26248,78736,236200,708592,2125768,6377296,19131880,57395632,172186888,516560656,1549681960,4649045872,13947137608,41841412816,125524238440,376572715312,1129718145928,3389154437776 ⋆ Number of (n + 1) X 2 0..1 arrays with the number of clockwise edge increases in every 2 X 2 subblock the same. ● a(n) = 4 * a(n - 1) - 3 * a(n - 2). ● a(n) = 4 * (3 ^ n + 1). ●

► [A205186] 16,40,124,256,736,1408,3904,7168,19456,34816,93184,163840,434176,753664,1982464,3407872,8912896,15204352,39583744,67108864,174063616,293601280,759169024,1275068416,3288334336 ⋆ Number of (n + 1) X (n + 1) 0..1 arrays with the number of clockwise edge increases in every 2 X 2 subblock differing from each horizontal or vertical neighbor. ● a(n) = 8 * a(n - 2) - 16 * a(n - 4) for n>3. ●

► [A197903] 16,40,124,327,732,1447,2604,4359,6892,10407,15132,21319,29244,39207,51532,66567,84684,106279,131772,161607,196252,236199,281964,334087,393132 ⋆ Ceiling((n + 1 / n) ^ 4). ● a(n) = n ^ 4 + 4 * n ^ 2 + 7, n>=3. ●

► [A188861] 16,41,68,95,122,149,176,203,230,257,284,311,338,365,392,419,446,473,500,527,554,581,608,635,662 ⋆ Number of n X 4 binary arrays without the pattern 0 1 diagonally, vertically or antidiagonally. ● a(n) = 2 * a(n - 1) - a(n - 2) for n>3. ●

► [A134593] 1,16,41,76,121,176,241,316,401,496,601,716,841,976,1121,1276,1441,1616,1801,1996,2201,2416,2641,2876,3121 ⋆ a(n) = 5 * n ^ 2 + 10 * n + 1. Coefficients of the rational part of (1 + sqrt(n)) ^ 5. ● a(n) = 5 * n ^ 2 + 10 * n + 1. ● a(n) = a(n - 1) + 10 * n + 5 (with a(0)=1). - _ Vincenzo Librandi _ , Nov 23 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Wesley Ivan Hurt _ , May 17 2021 ●

► [A200408] 1,16,41,121,316,841,2201,5776,15121,39601,103676,271441,710641,1860496,4870841,12752041,33385276,87403801,228826121,599074576,1568397601,4106118241,10749957116,28143753121,73681302241 ⋆ - 4 + 5 * Fibonacci(n + 1) ^ 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 3) + a(n - 4). G.f.: - x * (x ^ 3 - 7 * x ^ 2 + 13 * x + 1) / ((x - 1) * (x + 1) * (x ^ 2 - 3 * x + 1)). - _ Colin Barker _ , Sep 01 2013 ●

► [A210375] 0,1,16,44,80,125,180,246,324,415,520,640,776,929,1100,1290,1500,1731,1984,2260,2560,2885,3236,3614,4020 ⋆ Number of 2 X 2 matrices with all terms in { 0,1,...,n } and (sum of terms) = n + 3. ● a(n) = (- 120 + 74 * n + 15 * n ^ 2 + n ^ 3) / 6 for n > 1. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n > 5. ●

► [A258547] 16,44,104,228,480,988,2008,4052,8144,16332,32712,65476,131008,262076,524216,1048500,2097072,4194220,8388520,16777124,33554336,67108764,134217624,268435348,536870800 ⋆ Number of (n + 1)X(1 + 1) 0..1 arrays with every 2X2 subblock ne - sw antidiagonal difference nondecreasing horizontally and nw + se diagonal sum nondecreasing vertically ● a(n) = 16 * 2 ^ n - 4 * n - 12. - _ Michael Somos _ , Oct 14 2020 ●

► [A051868] 0,1,16,45,88,145,216,301,400,513,640,781,936,1105,1288,1485,1696,1921,2160,2413,2680,2961,3256,3565,3888 ⋆ 16 - gonal (or hexadecagonal) numbers: a(n) = n * (7 * n - 6). ● a(n) = 14 * n + a(n - 1) - 13, with n>0, a(0)=0. - _ Vincenzo Librandi _ , Aug 06 2010 ● a(0)=0, a(1)=1, a(2)=16; for n>2, a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , May 07 2011 ● a(14 * a(n) + 92 * n + 1) = a(14 * a(n) + 92 * n) + a(14 * n + 1). - _ Vladimir Shevelev _ , Jan 24 2014 ● a(n) = (4 * n - 3) ^ 2 - (3 * n - 3) ^ 2. In general, if we let P(k,n) be the n - th k - gonal number, then P(4k,n) = (k * n - k + 1) ^ 2 - ((k - 1) * n - k + 1) ^ 2. In addition, { P(4k,n) } are the only polygonal number sequences each of whose terms can be written as the difference of two squares. - _ Charlie Marion _ , Feb 16 2020 ●

► [A069128] 1,16,46,91,151,226,316,421,541,676,826,991,1171,1366,1576,1801,2041,2296,2566,2851,3151,3466,3796,4141,4501 ⋆ Centered 15 - gonal numbers: a(n) = (15 * n ^ 2 - 15 * n + 2) / 2. ● a(n) = (15 * n ^ 2 - 15 * n + 2) / 2. ● a(n) = 15 * n + a(n - 1) - 15 (with a(1)=1). - _ Vincenzo Librandi _ , Aug 08 2010 ●

► [A099003] 1,16,46,106,226,466,946,1906,3826,7666,15346,30706,61426,122866,245746,491506,983026,1966066,3932146,7864306,15728626,31457266,62914546,125829106,251658226 ⋆ Number of 4 X n 0 - 1 matrices avoiding simultaneously the right angled numbered polyomino patterns (ranpp) (00;1), (10;0) and (11;0). ● a(n) = 15 * 2 ^ n - 14. ●

► [A244094] 16,46,109,222,407,690,1099,1669,2437,3445,4737,6363,8376,10834,13797,17330,21503,26389,32064,38608,46108,54651,64331,75243,87489 ⋆ Rounded down ratio of area of a unit circle and one of the circles inscribed between a regular n - gon and a circumscribed unit circle. ● a(n) = floor(Pi / area(n)) where area(n) = Pi * r(n) ^ 2, r(n) = (1 - cos(Pi / n)) / 2 = sin(Pi / (2 * n)) ^ 2, n >= 3. ●

► [A133345] 1,1,16,46,316,1276,6976,31816,161296,768016,3794176,18340576,89799616,436367296,2129929216,10369000576,50557010176,246280028416,1200358199296,5848636796416,28502288382976,138885491915776 ⋆ a(n) = 2 * a(n - 1) + 14 * a(n - 2) for n>1, a(0)=1, a(1)=1. ● a(n) = (1 / 2) * ((1 - sqrt(15)) ^ n + (1 + sqrt(15)) ^ n). - _ Paolo P. Lava _ , Jun 10 2008 ● a(n) = (b * i) ^ (n - 1) * (b * i * ChebyshevU(n, - i / b) - ChebyshevU(n - 1, - i / b)), with b = sqrt(14). - _ G. C. Greubel _ , Oct 15 2022 ●

► [A194268] 1,16,47,94,157,236,331,442,569,712,871,1046,1237,1444,1667,1906,2161,2432,2719,3022,3341,3676,4027,4394,4777 ⋆ a(n) = 8 * n ^ 2 + 7 * n + 1. ● a(0)=1, a(1)=16, a(2)=47, a(n)=3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Apr 06 2014 ●

► [A204609] 16,47,125,335,907,2470,6740,18406,50278,137354,375250,1025194,2800874,7652122,20905978,57116186,156044314,426320986,1164730586,3182103138693667418,23751541082,64890416986,177283916122,484348666202 ⋆ Number of (n + 1) X 2 0..1 arrays with the determinants of 2 X 2 subblocks nondecreasing rightwards and downwards. ● a(n) = (112 + (193 - 113 * sqrt(3)) * (1 - sqrt(3)) ^ n + (1 + sqrt(3)) ^ n * (193 + 113 * sqrt(3))) / 24 for n>2. ●

► [A208634] 16,47,150,494,1652,5572,18888,64216,218704,745616,2543520,8679776,29625920,101131840,345250944,1178690944,4024163584,13739075840,46907582976,160151393792,546788836352,1866849412096,6373813684224 ⋆ Number of n X 5 0..1 arrays with new values 0..1 introduced in row major order and no element equal to more than one of its immediate leftward or upward or right - upward antidiagonal neighbors. ● a(n) = (3 * 2 ^ (1 + n) + (11 - 2 * sqrt(2)) * (2 - sqrt(2)) ^ n + (2 + sqrt(2)) ^ n * (11 + 2 * sqrt(2))) / 4. ●

► [A333602] 1,1,16,47,397,1770,11658,59946,359962,1958968,11341696,63142224,360314940,2024278172,11485023624,64758162416,366573071464,2069908196378,11706322628832,66139560111600,373914808423830,2113066820134474,11944325099736622,67505931650135578 ⋆ Number of directed Hamiltonian walks from NW to SW corners of a 6 X n grid. ● a(n) = 5 * a(n - 1) + 14 * a(n - 2) - 63 * a(n - 3) + 12 * a(n - 4) + 90 * a(n - 5) - 35 * a(n - 6) - 66 * a(n - 7) + 118 * a(n - 8) - 8 * a(n - 9) - 82 * a(n - 10) + 42 * a(n - 11) + 28 * a(n - 12) - 4 * a(n - 13) + 2 * a(n - 14), n > 14. - _ Michael Gray _ , Jan 30 2022 ●

► [A035008] 0,16,48,96,160,240,336,448,576,720,880,1056,1248,1456,1680,1920,2176,2448,2736,3040,3360,3696,4048,4416,4800 ⋆ Total number of possible knight moves on an (n + 2) X (n + 2) chessboard, if the knight is placed anywhere. ● a(n) = 8 * n * (n + 1). ● a(n) = binomial(n + 1,2) * 4 ^ 2, n >= 0. - _ Zerinvary Lajos _ , Aug 07 2008 ● a(n) = a(n - 1) + 16 * n, with a(0)=0. - _ Vincenzo Librandi _ , Nov 17 2010 ●

► [A175164] 0,16,48,112,240,496,1008,2032,4080,8176,16368,32752,65520,131056,262128,524272,1048560,2097136,4194288,8388592,16777200,33554416,67108848,134217712,268435440 ⋆ a(n) = 16 * (2 ^ n - 1). ● a(n) = 2 ^ (n + 4) - 16. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2), a(0)=0, a(1)=16. - _ Vincenzo Librandi _ , Dec 28 2010 ●

► [A223395] 16,48,152,488,1576,5096,16488,53352,172648,558696,1807976,5850728,18933352,61269608,198272616,641623656,2076337768,6719170152,21743691368,70364063336,227702892136,736862037608,2384535643752,7716519437928 ⋆ 4 X 4 square grid graph coloring a rectangular array: number of n X 1 0..15 arrays where 0..15 label nodes of the square grid graph and every array movement to a horizontal or vertical neighbor moves along an edge of this graph. ● a(n) = (8

+ (11 - 5 * sqrt(5)) * (1 - sqrt(5)) ^ n + (1 + sqrt(5)) ^ n * (11 + 5 * sqrt(5))) / 5. ●

▶ [A016778] 1,16,49,100,169,256,361,484,625,784,961,1156,1369,1600,1849,2116,2401,2704,3025,3364,3721,4096,4489,4900,5329 ⋆ a(n) = (3 * n + 1) ^ 2. ● a(n) = a(n - 1) + 3 * (6 * n - 1); a(0)=1. - _ Vincenzo Librandi _ , Nov 20 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3); a(0)=1, a(1)=16, a(2)=49. - _ Harvey P. Dale _ , Mar 03 2013 ●

▶ [A080860] 1,16,51,106,181,276,391,526,681,856,1051,1266,1501,1756,2031,2326,2641,2976,3331,3706,4101,4516,4951,5406,5881 ⋆ 10 * n ^ 2 + 5 * n + 1. ● a(n) = C(5,0) + C(5,1) * n + C(5,2) * n ^ 2. ● a(n) = 20 * n + a(n - 1) - 5 with n >0, a(0)=1. - _ Vincenzo Librandi _ , Aug 08 2010 ●

▶ [A363350] 1,1,16,51,276,969,3504,10659,30954,81719,205040,482885,1088100,2340135,4850640,9694845,18789795,35357670,64833120,115997970,203014680,347993910,585292320,966955410,1571349780 ⋆ Number of n element multisets of length 4 vectors over GF(2) that sum to zero. ● a(n) = binomial(n + 15, 15) / 16 for odd n; ● a(n) = (binomial(n + 15, 15) + 15 * binomial(n / 2 + 7, 7)) / 16 for even n. ●

▶ [A009931] 1,16,52,130,244,380,538,784,986,1268,1588,1930,2236,2764,3086,3592,4126,4676,5084,5962,6364,7096,7846,8624,9094 ⋆ Coordination sequence for MgCu2, Mg position. ● a(n) = - 3 * a(n - 1) - 4 * a(n - 2) - a(n - 3) + 6 * a(n - 4) + 11 * a(n - 5) + 9 * a(n - 6) - 9 * a(n - 8) - 11 * a(n - 9) - 6 * a(n - 10) + a(n - 11) + 4 * a(n - 12) + 3 * a(n - 13) + a(n - 14) for n>14. ●

▶ [A334643] 0,0,16,53,209,963,4816,25367,138531,777041,4449511,25901655,152818458,911755012,5491420104,33343242196,203881825163,1254342228285,7759025239189,48227078649155,301056318504165,1886647802277315,11864793375611820,74854437302309175 ⋆ a(n) is the total number of down steps between the second and third up steps in all 2 _ 1 - Dyck paths of length 3 * n. A 2 _ 1 - Dyck path is a lattice path with steps (1, 2), (1, - 1) that starts and ends at y = 0 and stays above the line y = - 1. ● a(0) = a(1) = 0 and a(n) = binomial(3 * n + 1, n) / (3 * n + 1) + 4 * Sum _{ j=1..2 } binomial(3 * j + 2, j) * binomial(3 * (n - j), n - j) / ((3 * j + 2) * (n - j + 1)) - 7 * [n=2] for n > 1, where [ ] is the Iverson bracket. ●

▶ [A137741] 1,16,54,119,218,360,555,814,1149,1573,2100,2745,3524,4454,5553,6840,8335,10059,12034,14283,16830,19700,22919,26514,30513 ⋆ Number of different strings of length n + 4 obtained from "123...n" by iteratively duplicating any substring. ● a(n) = n ^ 4 for n=1,2; a(n) = 1 / 24 * (n + 3) * (n ^ 3 + 15 * n ^ 2 + 50 * n - 96) for n>2 (conjectured). ●

▶ [A122658] 0,0,16,54,512,1000,3888,6174,16384,23328,50000,66550,124416,158184,268912,330750,524288,628864,944784,1111158,1600000,1852200,2576816,2944414,3981312 ⋆ a(n) = if n mod 2 = 1 then n ^ 3 * (n - 1) ^ 2 / 2 else n ^ 5 / 2. ● a(n) = (n ^ 3 * (1 - (- 1) ^ n + 2 * (- 1 + (- 1) ^ n) * n + 2 * n ^ 2)) / 4. G.f.: 2 * x ^ 2 * (x ^ 8 + 7 * x ^ 7 + 95 * x ^ 6 + 113 * x ^ 5 + 379 * x ^ 4 + 149 * x ^ 3 + 189 * x ^ 2 + 19 * x + 8) / ((x - 1) ^ 6 * (x + 1) ^ 5). - _ Colin Barker _ , Sep 20 2013 ●

▶ [A224040] 16,55,105,168,252,363,508,695,933,1232,1603,2058,2610,3273,4062,4993,6083,7350,8813,10492,12408,14583,17040,19803,22897 ⋆ Number of 4 X n 0..1 arrays with antidiagonals unimodal and rows and diagonals nondecreasing. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>7. ●

▶ [A244805] 1,16,55,118,205,316,451,610,793,1000,1231,1486,1765,2068,2395,2746,3121,3520,3943,4390,4861,5356,5875,6418,6985 ⋆ The 240 - degree spoke (or ray) of a hexagonal spiral of Ulam. ● a(n) = 12 * n ^ 2 - 21 * n + 10 (see A056105). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>3. ●

▶ [A152096] 1,1,1,16,55,355,1888,9829,57145,294064,1683055,8893147,49635520,267601933,1472118817,8012384080,43823300455,239288418067,1306681029664,7139564615413,38980858167625,212971742938096,1162967620577311 ⋆ Quartic product sequence: a(n) = Product _{ k=1..(n - 1) / 2 } (1 + m * cos(k * Pi / n) ^ 2 + q * cos(k * Pi / n) ^ 4), with m=12 and q = 3 * 4 ^ 3. ● a(n) = Product _{ k=1..(n - 1) / 2 } (1 + m * cos(k * Pi / n) ^ 2 + q * cos(k * Pi / n) ^ 4), with m=3 * 4 and q = 3 * 4 ^ 3. ●

▶ [A295986] 1,1,1,16,56,192,624,1920,5632,15872,43264,114688,296960,753664,1880064,4620288,11206656,26869760,63766528,149946368,349700096,809500672,1861222400,4253024256,9663676416 ⋆ Number of maximal cliques in the n - halved cube graph. ● a(n) = 2 ^ (n - 4) * (n ^ 2 - 5 * n + 12) * (n + 2) / 3 for n > 3. ● a(n) = 8 * a(n - 1) - 24 * a(n - 2) + 32 * a(n - 3) - 16 * a(n - 4) for n > 7. ●

▶ [A202993] 1,1,16,56,296,1052,4952,17292,70512,249712,931226,3212690,11399590,38331770,130310820,428389292,1408697596,4524980036,14486512316,45558807176,142488702483,439559056419,1347096766984,4082169772704,12286806024269 ⋆ G.f.: A(x) = exp(Sum _{ n>=1 } sigma(n ^ 4) * x ^ n / n), a power series in x with integer coefficients. ● a(n) = (1 / n) * Sum _{ k=1..n } sigma(k ^ 4) * a(n - k) for n>0, with a(0)=1. ●

▶ [A187277] 1,16,57,136,265,456,721,1072,1521,2080,2761,3576,4537,5656,6945,8416,10081,11952,14041,16360,18921,21736,24817,28176,31825 ⋆ Let S denote the palindromes in the language { 0,1,2,...,n - 1 }* ; a(n) = number of words of length 4 in the language SS. ● a(n) = n * (2 * n ^ 2 + n - 2). ●

▶ [A177890] 0,1,16,58,140,275,476,756,1128,1605,2200,2926,3796,4823,6020,7400,8976,10761,12768,15010,17500,20251,23276,26588,30200 ⋆ 15 - gonal (or pentadecagonal) pyramidal numbers: a(n) = n * (n + 1) * (13 * n - 10) / 6. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Vincenzo Librandi _ , Jul 04 2012 ● a(n) = Sum _{ i=0..n - 1 } (n - i) * (13 * i + 1), with a(0)=0. - _ Bruno Berselli _ , Feb 10 2014 ●

▶ [A235510] 16,58,209,746,2660,9476,33753,120216,428160,1524918,5431081,19343086,68891428,245360464,873864257,3112313708,11084669648,39478636370,140605248417,500773018002,1783529550852,6352134688572,22623463167433 ⋆ Number of (n + 1) X (1 + 1) 0..1 arrays with the sum of each 2 X 2 subblock maximum and minimum lexicographically nondecreasing rowwise and columnwise. ● a(n) = (1 / 544) * (- 221 - 68 * (- 1) ^ n + 2 ^ (- 1 - n) * ((2533 - 611 * sqrt(17)) * (3 - sqrt(17)) ^ n + (3 + sqrt(17)) ^ n * (2533 + 611 * sqrt(17))) - 68 * (1 + n)). ●

▶ [A027117] 16,59,155,352,738,1475,2861,5444,10232,19079,35395,65452,120786,222615,409965,754616,1388592,2554723,4699643,8644840,15901266,29247995,53796541,98948444,181995832 ⋆ a(n) = A027113(n, n + 4). ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 2 * a(n - 3) - a(n - 4) + 2 * a(n - 5) - a(n - 6) for n>9. ●

▶ [A292537] 16,59,227,899,3587,14339,57347,229379,917507,3670019,14680067,58720259,234881027,939524099,3758096387,15032385539,60129542147,240518168579,962072674307,3848290697219,15393162788867,61572651155459,246290604621827,985162418487299 ⋆ Number of cliques in the n - Sierpinski tetrahedron graph. ● a(n) = 7 * 4 ^ n / 2 + 3 for n > 1. ● a(n) = 5 * a(n - 1) - 4 * a(n - 2) for n > 1. ●

▶ [A356249] 1,16,62,219,405,1053,1523,2948,4407,7041,8703,15283,17949,24657,32685,44806,50536,70687,78573,105411,125879,149879,163565,222425,247476 ⋆ a(n) = Sum _{ k=1..n } (k * floor(n / k)) ^ 3. ● a(n) = Sum _{ k=1..n } k ^ 3 * Sum _{ d|k } (1 - (1 - 1 / d) ^ 3). ●

▶ [A022289] 0,16,63,141,250,390,561,763,996,1260,1555,1881,2238,2626,3045,3495,3976,4488,5031,5605,6210,6846,7513,8211,8940 ⋆ a(n) = n * (31 * n + 1) / 2. ● a(n) = 31 * n + a(n - 1) - 15, for n>0, a(0)=0. - _ Vincenzo Librandi _ , Aug 04 2010 ●

▶ [A143860] 1,16,63,142,253,396,571,778,1017,1288,1591,1926,2293,2692,3123,3586,4081,4608,5167,5758,6381,7036,7723,8442,9193 ⋆ Ulam's spiral (NNW spoke). ● a(n) = 16 * n ^ 2 - 33 * n + 18. - _ R. J. Mathar _ , Sep 08 2008 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Jul 10 2012 ●

▶ [A100176] 1,16,63,160,325,576,931,1408,2025,2800,3751,4896,6253,7840,9675,11776,14161,16848,19855,23200,26901,30976,35443,40320,45625 ⋆ Structured octagonal prism numbers. ● a(n) = 3 * n ^ 3 - 2 * n ^ 2. ● a(n) = Sum _{ i=0..n - 1 } n * (6 * i + 1). - _ Bruno Berselli _ , Sep 08 2015 ●

▶ [A060091] 0,0,0,16,63,162,341,636,1092,1764,2718,4032,5797,8118,11115,14924,19698,25608,32844,41616,52155,64714,79569,97020,117392 ⋆ Number of 4 - block ordered bicoverings of an unlabeled n - set. ● a(n) = binomial(n + 5, 5) - 4 * binomial(n + 2, 2) - 3 * binomial(n + 1, 1) + 12 * binomial(n, 0) - 6 * binomial(n - 1, - 1). ● a(n) = (n + 5) * (n - 1) * (n - 2) * (n ^ 2 + 13 * n + 72) / 120, n >0. - _ R. J. Mathar _ , Aug 15 2017 ●

▶ [A016802] 0,16,64,144,256,400,576,784,1024,1296,1600,1936,2304,2704,3136,3600,4096,4624,5184,5776,6400,7056,7744,8464,9216 ⋆ a(n) = (4 * n) ^ 2. ● a(n) = a(n - 1) + 16 * (2 * n - 1) (with a(0)=0). - _ Vincenzo Librandi _ , Nov 20 2010 ●

▶ [A102860] 0,16,64,160,320,560,896,1344,1920,2640,3520,4576,5824,7280,8960,10880,13056,15504,18240,21280,24640,28336,32384,36800,41600 ⋆ Number of ways to change three non - identical letters in the word aabbccdd..., where there are n types of letters. ● a(n) = 16 * C(n, 3) = 2 * C(2 * n, 3) - 8 * C(n, 2). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ● a(n) = 8 * n * (n - 1) * (n - 2) / 3. (End) ●

▶ [A100184] 1,16,64,164,335,596,966,1464,2109,2920,3916,5116,6539,8204,10130,12336,14841,17664,20824,24340,28231,32516,37214,42344,47925 ⋆ Structured octagonal anti - prism numbers. ● a(n) = (1 / 6) * (19 * n ^ 3 - 15 * n ^ 2 + 2 * n). [Corrected by _ Luca Colucci _ , Mar 01 2011] ● a(n) = Sum _{ i = 0..n - 1 } (n + i) * (n + 2 * i). - _ Bruno Berselli _ , Feb 14 2018 ●

▶ [A212506] 0,1,16,64,196,441,900,1600,2704,4225,6400,9216,12996,17689,23716,30976,40000,50625,63504,78400,96100,116281,139876,166464,197136 ⋆ Number of (w,x,y,z) with all terms in { 1,...,n } and w<=2x and y<=2z. ● a(n) = 2a(n - 1) + 2a(n - 2) - 6a(n - 3) + 6a(n - 5) - 2a(n - 6) - 2a(n - 7) + a(n - 8). ●

▶ [A212512] 0,1,16,64,196,462,930,1680,2860,4485,6800,9888,13908,19019,25564,33440,43200,54900,68796,85120,104470,126511,152218,181560,214896 ⋆ Number of (w,x,y,z) with all terms in { 1,...,n } and w<=2x and y<3z. ● a(n) = 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4) - 4 * a(n - 5) + 2 * a(n - 7) - 2 * a(n - 9) + 4 * a(n - 11) + a(n - 12) - 2 * a(n - 13) - 2 * a(n - 14) + a(n - 16). ●

▶ [A034720] 1,16,65,168,345,616,1001,1520,2193,3040,4081,5336,6825,8568,10585,12896,15521,18480,21793,25480,29561,34056,38985,44368,50225 ⋆ Number of different words that can be formed from an n X n grid of letters, reading horizontally, vertically or diagonally. ● a(n) = n * (2n - 1) * (5n - 2) / 3. - _ Henry Bottomley _ , Apr 11 2002 ●

▶ [A253673] 1,16,65,1520,6321,148896,619345,14590240,60689441,1429694576,5946945825,140095478160,582740001361,13727927165056,57102573187505,1345196766697280,5595469432374081,131815555209168336,548298901799472385,12916579213731799600 ⋆ Indices of centered triangular numbers (A005448) that are also centered octagonal numbers (A016754). ● a(n) = a(n - 1) + 98 * a(n - 2) - 98 * a(n - 3) - a(n - 4) + a(n - 5). ●

▶ [A329530] 0,1,16,66,172,355,636,1036,1576,2277,3160,4246,5556,7111,8932,11040,13456,16201,19296,22762,26620,30891,35596,40756,46392 ⋆ a(n) = n * (7 * binomial(n, 2) + 1). ● a(n) = n * (7 * n ^ 2 - 7 * n + 2) / 2. ●

▶ [A216306] 16,67,121,220,229,247,283,295,334,361,379,394,481,592,604,673,724,757,760,772,793,844,880,913,988 ⋆ Values of k such that 10 * k + 3 and 10 * k + 7 alone are prime between 10 * k and 10 * k + 9. ● a(n) >> n log ^ 2 n. - _ Charles R Greathouse IV _ , Sep 07 2012 ●

▶ [A321180] 1,16,67,152,271,424,611,832,1087,1376,1699,2056,2447,2872,3331,3824,4351,4912,5507,6136,6799,7496,8227,8992,9791 ⋆ a(n) = 17 * n ^ 2 - 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ● a(n + 1) = a(n) + 17 * (2n + 1). ● a(n + 15) = a(15 - n) + 1020 * n. ●

▶ [A100186] 1,16,67,176,365,656,1071,1632,2361,3280,4411,5776,7397,9296,11495,14016,16881,20112,23731,27760,32221,37136,42527,48416,54825 ⋆ Structured heptagonal anti - diamond numbers (vertex structure 7). ● a(n) = (1 / 6) * (22 * n ^ 3 - 24 * n ^ 2 + 8 * n). ●

▶ [A271913] 0,16,68,148,248,360,488,620,768,924,1096,1272,1464,1660,1872,2088,2320,2556,2808,3064,3336,3612,3904,4200,4512 ⋆ Number of ways to choose three distinct points from a 4 X n grid so that they form an isosceles triangle. ● a(n) = - 3 / 2 * (143 + (- 1) ^ n) + 64 * n + 5 * n ^ 2 for n>8. ● a(n) = 5 * n ^ 2 + 64 * n - 216 for n>8 and even. ● a(n) = 5 * n ^ 2 + 64 * n - 213 for n>8 and odd. ●

▶ [A005906] 1,16,68,180,375,676,1106,1688,2445,3400,4576,5996,7683,9660,11950,14576,17561,20928,24700,28900,33551,38676,44298,50440,57125 ⋆ Truncated te

trahedral numbers: a(n) = (1 / 6) * (n + 1) * (23 * n ^ 2 + 19 * n + 6). ● a(n) = binomial(3 * n, 3) - 4 * binomial(n + 1, 3) = n * (23 * n ^ 2 - 27 * n + 10) / 6. ●

▶ [A235643] 16,68,296,1300,5728,25268,111512,492196,2172592,9590180,42332936,186866356,824867584,3641141012,16072772984,70948650820,313182494032,1382454408452,6102448992488,26937513095764,118907935627168,524885022092660,2316954583165784 ★ Total number of sides of a tetraflake - like fractal after n iterations, a(1) = 16 (see comments). ● a(n) = sqrt(2) * ((3 - sqrt(2)) ^ n * (- 1 + sqrt(2)) + (1 + sqrt(2)) * (3 + sqrt(2)) ^ n). ● a(n) = 6 * a(n - 1) - 7 * a(n - 2). ●

▶ [A200839] 16,69,194,435,846,1491,2444,3789,5620,8041,11166,15119,20034,26055,33336,42041,52344,64429,78490,94731,113366,134619,158724,185925,216476 ★ Number of 0..n arrays x(0..3) of 4 elements without any two consecutive increases or two consecutive decreases. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

▶ [A063493] 1,16,70,189,399,726,1196,1835,2669,3724,5026,6601,8475,10674,13224,16151,19481,23240,27454,32149,37351,43086,49380,56259,63749 ★ a(n) = (2 * n - 1) * (13 * n ^ 2 - 13 * n + 6) / 6. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>3. - _ Vincenzo Librandi _ , Dec 16 2015 ●

▶ [A220212] 0,1,16,70,200,455,896,1596,2640,4125,6160,8866,12376,16835,22400,29240,37536,47481,59280,73150,89320,108031,129536,154100,182000 ★ Convolution of natural numbers (A000027) with tetradecagonal numbers (A051866). ● a(n) = n * (n + 1) * (n + 2) * (3 * n - 2) / 6. ●

▶ [A212513] 0,1,16,72,210,483,990,1760,2964,4680,7040,10176,14364,19551,26180,34320,44200,56025,70308,86800,106330,128898,154836,184416,218448 ★ Number of (w,x,y,z) with all terms in { 1,...,n } and w<=2x and y<=3z. ● a(n) = 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4) - 4 * a(n - 5) + 2 * a(n - 7) - 2 * a(n - 9) + 4 * a(n - 11) + a(n - 12) - 2 * a(n - 13) - 2 * a(n - 14) + a(n - 16). ●

▶ [A279905] 0,0,0,16,72,216,480,960,1680,2800,4320,6480,9240,12936,17472,23296,30240,38880,48960,61200,75240,91960,110880,133056,157872 ★ Number of 2 X 2 matrices with entries in { 0,1,...,n } and odd trace with no elements repeated. ● a(n) = ((n - 2) * (n - 1) * (2 * (n + 1) ^ 2 - (- 1) ^ n - 1)) / 4 for n>=0 . ● a(n) = (n ^ 4 - n ^ 3 - 4 * n ^ 2 + 4 * n) / 2 for n even. ● a(n) = (n ^ 4 - n ^ 3 - 3 * n ^ 2 + n + 2) / 2 for n odd. ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 6 * a(n - 3) + 6 * a(n - 5) - 2 * a(n - 6) - 2 * a(n - 7) + a(n - 8) for n>7. ●

▶ [A058333] 1,16,73,208,465,896,1561,2528,3873,5680,8041,11056,14833,19488,25145,31936,40001,49488,60553,73360,88081,104896,123993,145568,169825 ★ Number of 3 X 3 matrices with elements from [0,...,(n - 1)] satisfying the condition that the middle element of each row or column is the difference of the two end elements (in absolute value). ● a(n) = Sum _{ i=0..n - 1 } Sum _{ j=0..n - 1 } Sum _{ k=0..n - 1 } Sum _{ l=0..n - 1 } [||i - k| - |j - l|| == ||i - j| - |k - l||]. ●

▶ [A200786] 16,75,225,530,1071,1946,3270,5175,7810,11341,15951,21840,29225,38340,49436,62781,78660,97375,119245,144606,173811,207230,245250,288275,336726 ★ Number of 0..n arrays x(0..3) of 4 elements without any two consecutive increases. ● a(n) = (24 + 106 * n + 151 * n ^ 2 + 86 * n ^ 3 + 17 * n ^ 4) / 24. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n >5. ●

▶ [A250353] 16,75,235,581,1221,2287,3935,6345,9721,14291,20307,28045,37805,49911,64711,82577,103905,129115,158651,192981,232597,278015,329775,388441,454601 ★ Number of length 4 arrays x(i), i=1..4 with x(i) in i..i + n and no value appearing more than 2 times. ● a(n) = n ^ 4 + 4 * n ^ 3 + 2 * n ^ 2 + 9 * n + 1 for n>1. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>6. ●

▶ [A212690] 0,1,16,75,236,567,1172,2157,3672,5861,8920,13031,18436,25355,34076,44857,58032,73897,92832,115171,141340,171711,206756,246885,292616 ★ Number of (w,x,y,z) with all terms in { 1,...,n } and 2|w - x|<=n + |y - z|. ● a(n)=3 * a(n - 1) - a(n - 2) - 5 * a(n - 3) + 5 * a(n - 4) + a(n - 5) - 3 * a(n - 6) + a(n - 7). ●

▶ [A200873] 16,77,236,567,1168,2163,3704,5973,9184,13585,19460,27131,36960,49351,64752,83657,106608,134197,167068,205919,251504,304635,366184,437085,518336 ★ Number of 0..n arrays x(0..4) of 5 elements without any interior element greater than both neighbors or less than both neighbors. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. ●

▶ [A082966] 0,1,16,77,319,920,2397,5278,10874,20355,36390,61171,99441,154882,235179,346060,499172,702933,974124,1324585,1777555,2349116,3070441,3962762,5066814 ★ Number of inequivalent ways (mod D _ 4) three checkers can be placed on an n X n board. ● a(n) = (1 / 48) * (n - 1) * (n ^ 5 + n ^ 4 - 2 * n ^ 3 + 14 * n ^ 2 - 5 * n + 3) if n is odd; ● a(n) = (1 / 48) * n * (n - 1) * (n ^ 2 - n + 2) * (n ^ 2 + 2 * n - 2) if n is even. ●

▶ [A061995] 0,0,0,16,78,228,520,1020,1806,2968,4608,6840,9790,13596,18408,24388,31710,40560,51136,63648,78318,95380,115080,137676,163438 ★ Number of ways to place 2 nonattacking kings on an n X n board. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5), n >= 6. ● a(n) = (n - 1) * (n - 2) * (n ^ 2 + 3 * n - 2) / 2, n >= 1. ●

▶ [A212563] 0,1,16,78,240,577,1182,2172,3680,5865,8900,12986,18336,25193,33810,44472,57472,73137,91800,113830,139600,169521,204006,243508,288480 ★ Number of (w,x,y,z) with all terms in { 1,...,n } and w + x<=2y + 2z. ● a(n) = 3 * a(n - 1) - a(n - 2) - 5 * a(n - 3) + 5 * a(n - 4) + a(n - 5) - 3 * a(n - 6) + a(n - 7). ● a(n) = 1 / 96 * (82 * n ^ 4 + 36 * n ^ 3 - 16 * n ^ 2 - 6 * ((- 1) ^ n - 1) * n + 9 * ((- 1) ^ n - 1)). ●

▶ [A212896] 1,16,79,240,551,1066,1839,2924,4375,6246,8591,11464,14919,19010,23791,29316,35639,42814,50895,59936,69991,81114,93359,106780,121431 ★ Number of (w,x,y,z) with all terms in { 0,...,n } and (least gapsize)<2. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>=6. ● a(n) = 9 * n ^ 3 - 6 * n ^ 2 + 20 * n - 9 with n>1, a(0)=1, a(1)=16. [_ Bruno Berselli _ , Jun 12 2012] ●

▶ [A269584] 16,79,250,613,1276,2371,4054,6505,9928,14551,20626,28429,38260,50443,65326,83281,104704,130015,159658,194101,233836,279379,331270,390073,456376 ★ Number of length - 4 0..n arrays with no repeated value differing from the previous repeated value by more than one. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

▶ [A008511] 0,16,80,240,544,1040,1776,2800,4160,5904,8080,10736,13920,17680,22064,27120,32896,39440,46800,55024,64160,74256,85360,97520,110784 ★ Number of points on surface of 4 - dimensional cube. ● a(n) = (n + 1) ^ 4 - (n - 1) ^ 4 = 8 * n + 8 * n ^ 3. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4), a(0)=0, a(1)=16, a(2)=80, a(3)=240. - _ Harvey P. Dale _ , Oct 15 2012 ● a(n) = - a(- n) for all n in Z. - _ Michael Somos _ , Jun 24 2018 ●

▶ [A130810] 16,80,240,560,1120,2016,3360,5280,7920,11440,16016,21840,29120,38080,48960,62016,77520,95760,117040,141680,170016,202400,239200,280800,327600 ★ If X _ 1,...,X _ n is a partition of a 2n - set X into 2 - blocks then a(n) is equal to the number of 4 - subsets of X containing none of X _ i, (i=1,...,n). ● a(n) = binomial(2 * n,4) + binomial(n,2) - n * binomial(2 * n - 2,2). ● a(n) = binomial(n,4) * 16. - _ Zerinvary Lajos _ , Dec 07 2007 ●

▶ [A212090] 0,1,16,80,251,610,1261,2331,3970,6351,9670,14146,20021,27560,37051,48805,63156,80461,101100,125476,154015,187166,225401,269215,319126 ★ Number of (w,x,y,z) with all terms in { 1,...,n } and w<x + y + z. ● a(n) = 5a(n - 1) - 10a(n - 2) + 10a(n - 3) - 5a(n - 4) + a(n - 5). ● a(n) = n * (- 2 + (1 + (2 + 23 * n) * n) * n) / 24. ●

▶ [A050468] 1,16,80,256,626,1280,2400,4096,6481,10016,14640,20480,28562,38400,50080,65536,83522,103696,130320,160256,192000,234240,279840,327680,391251 ★ Sum _{ d|n, n / d=1 mod 4 } d ^ 4 - Sum _{ d|n, n / d=3 mod 4 } d ^ 4. ● a(n) is multiplicative with a(2 ^ e) = 16 ^ e, a(p ^ e) = ((p ^ 4) ^ (e + 1) - 1) / (p ^ 4 - 1) if p == 1 (mod 4), a(p ^ e) = ((p ^ 4) ^ (e + 1) - (- 1) ^ (e + 1)) / (p ^ 4 + 1) if p == 3 (mod 4). - _ Michael Somos _ , Jan 14 2012 ●

▶ [A247817] 0,16,80,336,1360,5456,21840,87376,349520,1398096,5592400,22369616,89478480,357913936,1431655760,5726623056,22906492240,91625968976,366503875920,1466015503696,5864062014800,23456248059216,93824992236880,375299968947536,1501199875790160 ★ Sum(4 ^ k, k=2..n). ● a(n) = a(n - 1) + 4 ^ n = (4 ^ (n + 1) - 16) / 3 = 5 * a(n - 1) - 4 * a(n - 2). ●

▶ [A221910] 1,16,80,536,4128,32808,262192,2097208,16777280,134217800,1073741904,8589934680,68719476832,549755813992,4398046511216,35184372088952,281474976710784,2251799813685384,18014398509482128 ★ a(n) = 8 ^ n + 8 * n. ● a(n) = 10 * a(n - 1) - 17 * a(n - 2) + 8 * a(n - 3). ●

▶ [A223951] 16,81,177,321,558,928,1479,2267,3356,4818,6733,9189,12282,16116,20803,26463,33224,41222,50601,61513,74118,88584,105087,123811,144948 ★ Number of 4 X n 0..1 arrays with diagonals and antidiagonals unimodal and rows non decreasing. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>7. ●

▶ [A016898] 16,81,196,361,576,841,1156,1521,1936,2401,2916,3481,4096,4761,5476,6241,7056,7921,8836,9801,10816,11881,12996,14161,15376 ★ a(n) = (5 * n + 4) ^ 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>2. ●

▶ [A224135] 16,81,208,419,760,1279,2032,3083,4504,6375,8784,11827,15608,20239,25840,32539,40472,49783,60624,73155,87544,103967,122608,143659,167320 ★ Number of 4 X n 0..1 arrays with rows nondecreasing and antidiagonals unimodal. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>7. ●

▶ [A212898] 1,16,81,254,609,1234,2215,3640,5599,8182,11479,15580,20575,26554,33607,41824,51295,62110,74359,88132,103519,120610,139495,160264,183007 ★ Number of (w,x,y,z) with all terms in { 0,...,n } and (least gapsize)<=2. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>=9. ● a(n) = 15 * n ^ 3 - 48 * n ^ 2 + 144 * n - 161 with n>4, a(0)=1, a(1)=16, a(2)=81, a(3)=254, a(4)=609. [_ Bruno Berselli _ , Jun 12 2012] ●

▶ [A212145] 0,1,16,81,255,621,1285,2377,4050,6481,9870,14441,20441,28141,37835,49841,64500,82177,103260,128161,157315,191181,230241,275001,325990 ★ Number of (w,x,y,z) with all terms in { 1,...,n } and w<2x + y + z. ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 5 * a(n - 4) - 4 * a(n - 5) + a(n - 6). ● a(n) = (3 - 3 * (- 1) ^ n - 8 * n - 4 * n ^ 2 + 8 * n ^ 3 + 94 * n ^ 4) / 96. - _ Colin Barker _ , Nov 21 2014 ●

▶ [A250362] 16,81,255,623,1293,2397,4091,6555,9993,14633,20727,28551,38405,50613,65523,83507,104961,130305,159983,194463,234237,279821,331755,390603,456953 ★ Number of length 4 arrays x(i), i=1..4 with x(i) in i..i + n and no value appearing more than 3 times. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>6. ●

▶ [A000583] 0,1,16,81,256,625,1296,2401,4096,6561,10000,14641,20736,28561,38416,50625,65536,83521,104976,130321,160000,194481,234256,279841,331776 ★ Fourth powers: a(n) = n ^ 4. ● a(n) = C(n + 3,4) + 11 * C(n + 2,4) + 11 * C(n + 1,4) + C(n,4). [Worpitzky's identity for powers of 4. See, e.g., Graham et al., eq. (6.37). - _ Wolfdieter Lang _ , Jul 17 2019] ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) + 24. - _ Ant King _ , Sep 23 2013 ●

▶ [A352050] 0,16,81,256,625,1312,2401,4096,6642,10016,14641,20992,28561,38432,51331,65536,83521,106288,130321,160256,196963,234272,279841,335872,391250 ★ Sum of the 4th powers of the divisor complements of the odd proper divisors of n. ● a(n) = n ^ 4 * Sum _{ d|n, d<n, d odd } 1 / d ^ 4. ●

▶ [A056118] 1,16,81,266,686,1512,2982,5412,9207,14872,23023,34398,49868,70448,97308,131784,175389,229824,296989,378994,478170,597080,738530,905580,1101555 ★ a(n) = (11 * n + 5) * (n + 4) * (n + 3) * (n + 2) * (n + 1) / 120. ● a(n) = (11 * n + 5) * binomial(n + 4,4) / 5. ● a(0)=1, a(1)=16, a(2)=81, a(3)=266, a(4)=686, a(5)=1512; for n>5, a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). - _ Harvey P. Dale _ , Oct 18 2013 ● a(n) = 11 * binomial(n + 5,5) - 8 * binomial(n + 4,4). ●

▶ [A372998] 1,16,81,270,625,1296,2401,4362,6639,10000,14641,21870,28561,38416,50625,69890,83521,106224,130321,168750,194481,234256,279841,353322,391245 ★ a(n) = Sum _{ k=1..n } sigma((n / gcd(k,n)) ^ 3). ● a(n) = Sum _{ d|n } phi(d) * sigma(d ^ 3). ●

▶ [A056571] 0,1,1,16,81,625,4096,28561,194481,1336336,9150625,62742241,429981696,2947295521,20200652641,138458410000,949005240561,6504586067281,44583076827136,305577005139121,2094455819300625,14355614096087056 ★ Fourth power of Fibonacci numbers A000045. ● a(n) = (F(n) * F(3n) - 3 * F(n) ^ 2 * (- 1) ^ n) / 5. - _ Gary Detlefs _ , Dec 26 2010 ●

► [A231303] 1,1,16,82,272,707,1568,3108,5664,9669,15664,24310,36400,52871,74816,103496,140352,187017,245328,317338,405328,511819,639584,791660,971360 ★ Recurrence a(n) = a(n - 2) + n ^ M for M=4, starting with a(0)=0, a(1)=1. ● a(n) = Sum _{ k=0..floor(n / 2) } (n - 2 * k) ^ 4. ● a(n) = (1 / 30) * n * (3 * n ^ 4 + 15 * n ^ 3 + 20 * n ^ 2 - 8). ●

► [A172219] 1,16,84,412,1126,2760,5739,10982,19695,33068,52801,80638,118731,169368,235135,318890,423733,553028,710389,899690,1125059,1390880,1701793,2062694,2478735 ★ Number of ways to place 4 nonattacking nightriders on a 4 X n board. ● a(n) = (32n ^ 4 - 432n ^ 3 + 3190n ^ 2 - 13323n + 25530) / 3, n >=18. ●

► [A118675] 0,16,85,141,225,616,940,1428,3705,5593,8437,21708,32712,49288,126637,190773,287385,738208,1112020,1675116,4302705,6481441,9763405,25078116,37776720 ★ Nonnegative values x of solutions (x, y) to the Diophantine equation x ^ 2 + (x + 47) ^ 2 = y ^ 2. ● a(n) = 6 * a(n - 3) - a(n - 6) + 94 for n > 6; a(1)=0, a(2)=16, a(3)=85, a(4)=141, a(5)=225, a(6)=616. ●

► [A223962] 16,85,295,805,1876,3906,7470,13365,22660,36751,57421,86905,127960,183940,258876,357561,485640,649705,857395,1117501,1440076,1836550,2319850,2904525,3606876 ★ Number of 2 X n 0..3 arrays with antidiagonals unimodal and rows and diagonals nondecreasing. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

► [A252834] 16,85,529,3365,18528,78674,244131,569420,1070036,1750150,2610438,3650950,4871686,6272646,7853830,9615238,11556870,13678726,15980806,18463110,21125638,23968390,26991366,30194566,33577990 ★ Number of n X 6 nonnegative integer arrays with upper left 0 and every value within 2 of its king move distance from the upper left and every value increasing by 0 or 1 with every step right, diagonally se or down. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>12. ●

► [A223835] 16,86,255,596,1240,2388,4325,7436,12222,19316,29499,43716,63092,88948,122817,166460,221882,291348,377399,482868,610896,764948,948829,1166700,1423094 ★ Number of n X 5 0..1 arrays with rows and antidiagonals unimodal and columns nondecreasing. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>8. ●

► [A224143] 16,86,275,691,1509,2985,5471,9431,15457,24285,36811,54107,77437,108273,148311,199487,263993,344293,443139,563587,709013,883129,1089999,1334055,1620113 ★ Number of n X 5 0..1 arrays with rows and antidiagonals unimodal and columns nondecreasing. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>8. ●

► [A225007] 16,86,296,791,1792,3612,6672,11517,18832,29458,44408,64883,92288,128248,174624,233529,307344,398734,510664,646415,809600,1004180,1234480,1505205,1821456 ★ Number of n X 5 0..1 arrays with rows unimodal and columns nondecreasing. ● a(n) = (2 / 15) * n ^ 5 + (7 / 6) * n ^ 4 + (23 / 6) * n ^ 3 + (35 / 6) * n ^ 2 + (121 / 30) * n + 1. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. ●

► [A070052] 16,87,384,1516,5535,19030,62347,196301,597725,1768733,5105853,14423037,39968765,108884733,292116989,772923389,2019573757,5216813053,13334904829,33758183421,84702265341,210777210877,520498839549,1276178857981,3108165910525 ★ Number of Bottleneck - Monge matrices with 4 rows. ● a(N) = a(4, N), where a(P, N) is defined recursively in A070050. ●

► [A035291] 0,0,16,88,280,680,1400,2576,4368,6960,10560,15400,21736,29848,40040,52640,68000,86496,108528,134520,164920,200200,240856,287408,340400 ★ Number of ways to place a non - attacking white and black queen on n X n chessboard. ● a(n) = (3 n ^ 4 - 10 n ^ 3 + 9 n ^ 2 - 2 n) / 3. ●

► [A208640] 16,89,284,722,1652,3577,7504,15448,31440,63543,127884,256718,514556,1030421,2062360,4126468,8254936,16512147,33026868,66056634,132116516,264236657,528477344,1056959152,2113923232 ★ Number of 5 X n 0..1 arrays with new values 0..1 introduced in row major order and no element equal to more than one of its immediate leftward or upward or right - upward antidiagonal neighbors. ● a(n) = - 84 + 63 * 2 ^ n - (191 * n) / 6 - 4 * n ^ 2 - n ^ 3 / 6 for n>2. ●

► [A055920] 1,16,90,328,886,2016,3986,7208,12050,19096,28802,41936,59030,81048,108586,142816,184386,234688,294410,365176,447702,543856,654370,781368,925586 ★ Susceptibility series H _ 4 for 2 - dimensional Ising model (divided by 2) for 1 particle excitation. ● a(n) = (133 * n ^ 4 + 524 * n ^ 2 + 96) / 48 for n >0 and even. ● a(n) = (133 * n ^ 4 + 542 * n ^ 2 + 93) / 48 for n odd. ●

► [A055856] 1,16,90,328,888,2016,3994,7212,12070,19112,28846,41976,59116,81132,108738,142972,184638,234952,294806,365596,448296,544492,655230,782292,926794 ★ Susceptibility series H _ 4 for 2 - dimensional Ising model (divided by 2). ● a(n) = (4794 * n ^ 4 + 19194 * n ^ 2 + 3349 - 81 * (- 1) ^ n * (2 * n ^ 2 + 5) + 512 * ChebyshevT(n, - 1 / 2])) / 1728, for n >= 1, with a(0) = 1. - _ G. C. Greubel _ , Jan 16 2020 ●

► [A195591] 16,90,344,1082,3036,7918,19648,47058,109796,251126,565512,1257754,2769196,6046014,13107536,28246370,60555636,129237382,274727320,581960106,1228931516,2587886030,5435818464,11391730162,23823647236 ★ Number of ways to place 3n nonattacking kings on a vertical cylinder 6 X 2n. ● a(n) = (31 * n - 65) * 2 ^ n + 18 * n + 66. ●

► [A050406] 1,16,91,336,966,2352,5082,10032,18447,32032,53053,84448,129948,194208,282948,403104,562989,772464,1043119,1388464,1824130,2368080,3040830,3865680,4868955 ★ Partial sums of A051880. ● a(n) = C(n + 5, 5) * (5 * n + 3) / 3. ●

► [A153029] 1,1,1,1,1,16,91,2679,38641,1787941,49219381,3272794719,147764521081,13316891432131,897003497620231,105118238883221315,989958964905997632 1 ★ Special rounded values of the generalized hypergeometric function of the type 5F0. ● a(n) = ceiling(5F0(- n / 2,1 / 2 - n / 2,1 - n / 2,3 / 2 - n / 2,2 - n / 2;; - 4)). ●

► [A027938] 1,16,92,365,1204,3588,10093,27476,73440,194345,511576,1342936,3520457,9222440,24151764,63238773,165571628,433484476,1134891605,2971201740,7778726776 ★ a(n) = T(2n, n + 2), T given by A027935. ● a(n) = Fibonacci(2 * n + 5) - (4 * n ^ 3 + 6 * n ^ 2 + 14 * n + 15) / 3. - _ G. C. Greubel _ , Sep 28 2019 ●

► [A294433] 1,16,94,331,871,1906,3676,6469,10621,16516,24586,35311,49219,66886,88936,116041,148921,188344,235126,290131,354271,428506,513844,611341,722101 ★ Expansion of (1 + 11 * x + 24 * x ^ 2 + 11 * x ^ 3 + x ^ 4) / (1 - x) ^ 5. ● a(n) = 1 + 7 * n / 2 + 11 * n ^ 2 / 2 + 4 * n ^ 3 + 2 * n ^ 4. - _ Robert Israel _ , Oct 30 2017 ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>4. ●

► [A160750] 1,16,94,331,880,1951,3811,6784,11251,17650,26476,38281,53674,73321,97945,128326,165301,209764,262666,325015,397876,482371,579679,691036,817735 ★ Expansion of (1 + 11 * x + 24 * x ^ 2 + 11 * x ^ 3 + 10 * x ^ 4) / (1 - x) ^ 5. ● a(n) = 19 * n ^ 4 / 8 + 7 * n ^ 3 / 4 + 77 * n ^ 2 / 8 + 5 * n / 4 + 1. - _ R. J. Mathar _ , Sep 11 2011 ●

► [A277044] 0,0,0,16,96,216,600,1008,2064,3040,5280,7200,11280,14616,21336,26656,36960,44928,59904,71280,92160,107800,135960,156816,193776 ★ Number of 2 X 2 matrices with entries in { 0,1,...,n } and even determinant with no entry repeated. ● a(n) = a(n - 1) + 4 * a(n - 2) - 4 * a(n - 3) - 6 * a(n - 4) + 6 * a(n - 5) + 4 * a(n - 6) - 4 * a(n - 7) - a(n - 8) + a(n - 9) for n>8. ● a(n) = (5 * n ^ 4 - 8 * n ^ 3 + 4 * n ^ 2 - 16 * n) / 8 for n even. ● a(n) = (5 * n ^ 4 - 12 * n ^ 3 + 2 * n ^ 2 + 12 * n - 7) / 8 for n odd. ●

► [A006637] 16,96,344,952,2241,4712,9108,16488,28314,46552,73788,113360,169507,247536,354008,496944,686052,932976,1251568,1658184,2172005,2815384,3614220,4598360,5802030 ★ From generalized Catalan numbers. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8). - _ Wesley Ivan Hurt _ , Jun 18 2022 ●

► [A241937] 16,96,357,1007,2373,4928,9318,16389,27214,43120,65715,96915,138971,194496,266492,358377,474012,617728,794353,1009239,1268289,1577984,1945410,2378285,2884986 ★ Number of length 1 + 4 0..n arrays with no consecutive five elements summing to more than 2 * n. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. ●

► [A100313] 1,16,96,400,1408,4480,13312,37632,102400,270336,696320,1757184,4358144,10649600,25690112,61276160,144703488,338690048,786432000,1812987904,4152360960,9453961216,21407727616,48234496000,108179488768 ★ Number of 4 X n binary matrices avoiding simultaneously the right angled numbered polyomino patterns (ranpp) (10;0) and (01;1). ● a(n) = (1 / 3) n * (n ^ 2 + 9 * n + 14) * 2 ^ n for n>0, with a(0) = 1. ●

► [A344866] 0,1,16,99,352,925,2016,3871,6784,11097,17200,25531,36576,50869,68992,91575,119296,152881,193104,240787,296800,362061,437536,524239,623232 ★ Number of polygons formed when every pair of vertices of a regular (2n - 1) - gon are joined by an infinite line. ● a(n) = 2 * n ^ 4 - 11 * n ^ 3 + 23 * n ^ 2 - 21 * n + 7. ●

► [A001249] 1,16,100,400,1225,3136,7056,14400,27225,48400,81796,132496,207025,313600,462400,665856,938961,1299600,1768900,2371600,3136441,4096576,5290000,6760000,8555625 ★ Squares of tetrahedral numbers: a(n) = binomial(n + 3, n) ^ 2. ● a(n) = (n + 3) * C(n + 2, 2) * C(n + 3, 3) / 3. - _ Gary Detlefs _ , Jan 06 2014 ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). - _ Wesley Ivan Hurt _ , Aug 29 2022 ●

► [A052206] 1,16,100,408,1290,3432,8052,17160,33891,62920,110968,187408,304980,480624,736440,1100784,1609509,2307360,3249532,4503400,6150430,8288280,11033100,14522040,18915975 ★ Partial sums of A050405. ● a(n) = (9n + 7) * C(n + 6, 6) / 7. ●

► [A169721] 1,16,100,484,2116,8836,36100,145924,586756,2353156,9424900,37724164,150945796,603881476,2415722500,9663283204,38653919236,154617249796,618472144900,2473894871044,9895592067076,39582393434116,158329624068100,633318596935684 ★ a(n) = (2 * (3 * 2 ^ (n - 1) - 1)) ^ 2. ● a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3). - _ Vincenzo Librandi _ , Dec 04 2012 ●

► [A061432] 1,16,100,1024,10000,100489,1000000,10004569,100000000,1000014129,10000000000,100000147984,1000000000000,10000002149284,100000000000000,1000000025191729,10000000000000000,100000000621806289,1000000000000000000,1000000000259630921 ★ a(n) = smallest n - digit square. ● a(n) = ceiling(10 ^ ((n - 1) / 2)) ^ 2. - Antonio G. Astudillo (afg _ astudillo(AT)lycos.com), Mar 30 2003 ●

► [A223774] 16,101,371,1040,2516,5573,11635,23230,44703,83305,150815,265901,457485,769447,1267085,2045843,3242928,5052561,7745747,11695606,17409482,25569241,37081383,53138828,75296493 ★ Number of n X 5 0..1 arrays with rows and columns unimodal and antidiagonals nondecreasing. ● a(n) = 11 * a(n - 1) - 55 * a(n - 2) + 165 * a(n - 3) - 330 * a(n - 4) + 462 * a(n - 5) - 462 * a(n - 6) + 330 * a(n - 7) - 165 * a(n - 8) + 55 * a(n - 9) - 11 * a(n - 10) + a(n - 11) for n>13. ●

► [A199773] 1,16,103,169,1072,6799,11153,70736,448631,735929,4667504,29602847,48560161,307984528,1953339271,3204234697,20322311344,128890789039,211430929841,1340964564176,8504838737303,13951237134809,88483338924272,561190465872959,920570219967553 ★ y - values in the solution to 17 * x ^ 2 - 16 = y ^ 2. ● a(n) = 66 * a(n - 3) - a(n - 6), a(1)=1, a(2)=16, a(3)=103, a(4)=169, a(5)=1072, a(6)=6799. ●

► [A245872] 16,103,256,549,960,1579,2368,3433,4720,6351,8256,10573,13216,16339,19840,23889,28368,33463,39040,45301,52096,59643,67776,76729,86320 ★ Number of length 3 + 2 0..n arrays with some pair in every consecutive three terms totalling exactly n. ● a(n) = 1 + 5 * n + 13 * n ^ 2 + 5 * n ^ 3 for n even. ● a(n) = - 5 + 3 * n + 13 * n ^ 2 + 5 * n ^ 3 for n odd. ●

► [A304505] 16,104,264,496,800,1176,1624,2144,2736,3400,4136,4944,5824,6776,7800,8896,10064,11304,12616,14000,15456,16984,18584,20256,22000 ★ a(n) = 4 * (n + 1) * (9 * n + 4). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>2. ●

► [A210687] 16,104,303,653,1196,1978,3032,4410,6148,8292,10875,13955,17556,21730,26522,31966,38104,44988,52645,61133,70482,80738,91940,104140,117368 ★ The number of triangles in an equipotential triangle divided by medians into n rows of smaller triangles. ● a(n) = (1678 * n ^ 3 + 3117 * n ^ 2 + 88 * n - 345 * Mod[n,2] - 320 * Mod[n,3] - 90 * Mod[n,4] - 288 * Mod[n ^ 3 - n ^ 2 + n,5]) / 240. (Bill Daly) ●

► [A010079] 1,16,104,344,792,1528,2632,4152,6200,8792,12072,16024,20824,26424,33032,40568,49272,59032,70120,82392,96152,111224,127944,146104,166072 ★ Coordination sequence for net formed by holes in D _ 4 lattice. ● a(n) = 2 * (- 4 * (- 1) ^ n + (3 + (- 1) ^ n) * n + 6 * n ^ 3) for n>1. G.f.: - (8 * x ^ 7 - 25

* x ^ 6 + 2 * x ^ 5 - 63 * x ^ 4 - 124 * x ^ 3 - 71 * x ^ 2 - 14 * x - 1) / ((x - 1) ^ 4 * (x + 1) ^ 2). - _ Colin Barker _ , Jul 07 2013 ●

▶ [A195806] 16,105,496,1759,5052,12469,27412,55059,102952,181543,304908,491563,765184,1155567,1699684,2442553,3438468,4752283,6460432,8652429,11432392,14920189,19253232,24588229,31102456 ⋆ Number of triangular of a 5 X 5 X 5 0..n arrays with all rows and diagonals having the same length having the same sum, with corners zero. ● a(6 * n) = 1 + 25 * n + 158 * n ^ 2 + 650 * n ^ 3 + 2275 * n ^ 4 + 4680 * n ^ 5 + 4680 * n ^ 6. ● a(6 * n + 1) = 16 + 198 * n + 1133 * n ^ 2 + 3900 * n ^ 3 + 8125 * n ^ 4 + 9360 * n ^ 5 + 4680 * n ^ 6. ● a(6 * n + 2) = 105 + 1087 * n + 4922 * n ^ 2 + 12350 * n ^ 3 + 17875 * n ^ 4 + 14040 * n ^ 5 + 4680 * n ^ 6. ● a(6 * n + 3) = 496 + 4148 * n + 14783 * n ^ 2 + 28600 * n ^ 3 + 31525 * n ^ 4 + 18720 * n ^ 5 + 4680 * n ^ 6. ● a(6 * n + 4) = 1759 + 12121 * n + 35258 * n ^ 2 + 55250 * n ^ 3 + 49075 * n ^ 4 + 23400 * n ^ 5 + 4680 * n ^ 6. ● a(6 * n + 5) = (1 + n) ^ 2 * (5052 + 19370 * n + 28405 * n ^ 2 + 18720 * n ^ 3 + 4680 * n ^ 4). (End) ●

▶ [A081588] 1,16,106,396,1011,2076,3716,6056,9221,13336,18526,24916,32631,41796,52536,64976,79241,95456,113746,134236,157051,182316,210156,240696,274061 ⋆ Fourth row of the Pascal - (1,4,1) array A081579. ● a(n) = (6 + 115 * n - 150 * n ^ 2 + 125 * n ^ 3) / 6. ●

▶ [A276159] 1,16,106,416,1211,2912,6132,11712,20757,34672,55198,84448,124943,179648,252008,345984,466089,617424,805714,1037344,1319395,1659680,2066780,2550080,3119805 ⋆ Convolution of nonzero octagonal numbers (A000567) with themselves. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). ● a(n) = (n + 1) * (n + 2) * (n + 3) * (9 * n ^ 2 + 6 * n + 5) / 30. ●

▶ [A224160] 16,108,281,574,1156,2271,4339,8008,14257,24519,40840,66082,104179,160456,242022,358249,521350,747070,1055505,1472065,2028598,2764693,3729181,4981854,6595423 ⋆ Number of 4 X n 0..1 arrays with diagonals and rows unimodal and antidiagonals nondecreasing. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>13. ●

▶ [A224411] 16,108,358,884,1928,3902,7490,13784,24467,42053,70195,114073,180875,280385,425693,634043,927836,1335806,1894388,2649298,3657346,4988504,6728252,8980226,11869193 ⋆ Number of 4 X n 0..1 arrays with rows unimodal and antidiagonals nondecreasing. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>11. ●

▶ [A056001] 1,16,108,480,1650,4752,12012,27456,57915,114400,213928,381888,655044,1085280,1744200,2728704,4167669,6229872,9133300,13156000,18648630,26048880,35897940,48859200,65739375 ⋆ A second - order recursive sequence. ● a(n) = (n + 1) * C(n + 7, 7). ●

▶ [A337391] 1,16,108,1024,10000,100008,1000188,10000384,100000575,1000000000,10000001319,100000001088,1000000000792,10000000000536,100000000001250,1000000000000000,10000000000001886,100000000000001952,100000000000000332 4,1000000000000000000,10000000000000008972,100000000000000009208 ⋆ a(n) is the smallest n - digit number divisible by n ^ 3. ● a(n) = n ^ 3 * ceiling(10 ^ (n - 1) / n ^ 3). - _ David A. Corneth _ , Aug 26 2020 ●

▶ [A053526] 0,0,0,0,16,110,435,1295,3220,7056,14070,26070,45540,75790,121121,187005,280280,409360,584460,817836,1124040,1520190,2026255,2665355,3464076 ⋆ Number of bipartite graphs with 3 edges on nodes { 1..n } . ● a(n) = (n - 3) * (n - 2) * (n - 1) * n * (n ^ 2 + 3 * n + 4) / 48. ●

▶ [A107908] 1,16,110,490,1666,4704,11592,25740,52635,100672,182182,314678,522340,837760,1303968,1976760,2927349,4245360,6042190,8454754,11649638,15827680,21229000,28138500,36891855 ⋆ a(n) = (n + 1) * (n + 2) ^ 2 * (n + 3) ^ 2 * (n + 4) * (3 * n + 5) / 720. ● a(0)=1, a(1)=16, a(2)=110, a(3)=490, a(4)=1666, a(5)=4704, a(6)=11592, a(7)=25740, a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8). - _ Harvey P. Dale _ , Aug 07 2013 ●

▶ [A177046] 16,111,143,238,270,365,397,492,524,619,651,746,778,873,905,1000,1032,1127,1159,1254,1286,1381,1413,1508,1540 ⋆ a(n) = 127 * (n - 1) - a(n - 1) with n>1, a(1)=16. ● a(n) = (127 - 63 * (- 1) ^ (n - 1) + 254 * (n - 1)) / 4. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3). ●

▶ [A234250] 0,16,111,439,1305,3240,7091,14126,26154,45660,75955,121341,187291,280644,409815,585020,818516,1124856,1521159,2027395,2666685,3465616,4454571,5668074,7145150 ⋆ Number of ways to choose 3 points in an n X n X n triangular grid so that they do not form a 2 X 2 X 2 triangle. ● a(n) = (n - 1) * (n - 2) * (n ^ 4 + 6 * n ^ 3 + 13 * n ^ 2 + 16 * n - 24) / 48. ●

▶ [A213754] 1,16,111,576,2631,11292,46927,191680,775599,3122076,12531591,50220912,201088855,804798268,3220143903,12882607872,51534757599,206148206268,824612224663,3298489794160,13194045161031,52776361000476 ⋆ Principal diagonal of the convolution array A213753. ● a(n) = - 3 * 2 ^ n + 3 * 2 ^ (2 * n) - n * 2 ^ (n + 1) - n ^ 2. ● a(n) = 11 * a(n - 1) - 47 * a(n - 2) + 101 * a(n - 3) - 116 * a(n - 4) + 68 * a(n - 5) - 16 * a(n - 6) for n>5. Corrected by _ Colin Barker _ , Nov 07 2017 ●

▶ [A144449] 16,112,280,520,832,1216,1672,2200,2800,3472,4216,5032,5920,6880,7912,9016,10192,11440,12760,14152,15616,17152,18760,20440,22192 ⋆ a(n) = 36 * n ^ 2 + 60 * n + 16. ● a(n) = 4 * (4 + 9 * n ^ 2 + 15 * n), with n >= 0. - _ Paolo P. Lava _ , Oct 28 2008 ● a(n) = a(n - 1) + 24 * (3 * n + 1) = a(n - 1) + 72 * n + 24, a(0)=16. ●

▶ [A081194] 1,16,113,664,3617,18976,97553,495784,2502977,12587056,63151793,316408504,1583991137,7925801536,39646545233,198285338824,991584532097,4958396174416,24793401413873,123971268694744,619869128349857 ⋆ a(n) = 8 * a(n - 1) - 15 * a(n - 2), a(0)=1, a(1)=16. ● a(n) = 13 * 5 ^ n / 2 - 11 * 3 ^ n / 2. ●

▶ [A055994] 1,16,115,550,2035,6292,17017,41470,92950,194480,384098,722228,1301690,2261000,3801710,6210644,9887999,15382400,23434125,35027850,51456405,74397180,106002975,149009250,206859900 ⋆ Expansion of (1 + 6x) / (1 - x) ^ 10. ● a(n) = (7n + 9) * C(n + 8, 8) / 9. ●

▶ [A145216] 1,16,118,560,2003,5888,14988,34176,71445,139216,255970,448240,752999,1220480,1917464,2931072,4373097,6384912,9142990,12865072,17817019,24320384,32760740,43596800,57370365 ⋆ Self - convolution of (1 ^ 3, 2 ^ 3, 3 ^ 3, 4 ^ 3, ...). ● a(n) = C(n + 2,3) * (3 * n * (n + 2) * (n ^ 2 + 2 * n + 3) + 16) / 70. ●

▶ [A226761] 1,1,16,118,1004,8601,75076,662796,5903676,52949332,477533356,4326309406,39343725716,358943047438,3283745710968,30112624408488,276715616909148,2547523969430508,23491659440021920,216942761366305144,2006084011596742384,18572529488934397689 ⋆ G.f.: 1 / (1 + 12 * x * G(x) ^ 2 - 13 * x * G(x) ^ 3) where G(x) = 1 + x * G(x) ^ 4 is the g.f. of A002293. ● a(n) = Sum _{ k=0..n } C(3 * k, n - k) * C(4 * n - 3 * k, k). ● a(n) = Sum _{ k=0..n } C(n + 3 * k, n - k) * C(3 * n - 3 * k, k). ● a(n) = Sum _{ k=0..n } C(2 * n + 3 * k, n - k) * C(2 * n - 3 * k, k). ● a(n) = Sum _{ k=0..n } C(3 * n + 3 * k, n - k) * C(n - 3 * k, k). ● a(n) = Sum _{ k=0..n } C(4 * n + 3 * k, n - k) * C(- 3 * k, k). ●

▶ [A210428] 0,1,16,119,560,1955,5552,13573,29632,59229,110320,193963,325040,523055,813008,1226345,1801984,2587417,3639888,5027647,6831280,9145115,12078704,15758381,20328896 ⋆ Number of semistandard Young tableaux over all partitions of 6 with maximal element <= n. ● a(n) = n ^ 2 * (76 + (85 + 19 * n ^ 2) * n ^ 2) / 180. ●

▶ [A248621] 0,16,120,456,1240,2760,5376,9520,15696,24480,36520,52536,73320,99736,132720,173280,222496,281520,351576,433960,530040,641256,769120,915216,1081200 ⋆ Floor of sums of the squares of the non - integer cube roots of n, as partitioned by the integer roots: floor[sum(j from n ^ 3 + 1 to (n + 1) ^ 3 - 1, j ^ (2 / 3))]. ● a(n) = floor[sum(j from n ^ 3 + 1 to (n + 1) ^ 3 - 1, j ^ (2 / 3))]. ● a(n) = 2 * n + 5 * n ^ 2 + 6 * n ^ 3 + 3 * n ^ 4. ●

▶ [A190049] 16,120,482,1412,3402,7168,13692,24264,40524,64504,98670,145964,209846,294336,404056,544272,720936,940728,1211098,1540308,1937474,2412608,2976660,3641560,4420260 ⋆ Expansion of (16 + 24 * x + 2 * x ^ 2) / (x - 1) ^ 6. ● a(n) = 16 * binomial(n + 5,5) + 24 * binomial(n + 4,5) + 2 * binomial(n + 3,5). ● a(n) = (21 * n ^ 5 + 245 * n ^ 4 + 1105 * n ^ 3 + 2395 * n ^ 2 + 2474 * n + 960) / 60. ●

▶ [A014805] 1,16,120,576,2060,6048,15424,35200,73518,143280,263584,461376,775160,1256928,1973760,3017088,4503557,6572880,9411984,13249280,18340932,25034976,33739520,44879616,59057510 ⋆ Expansion of Jacobi theta constant (theta_2 / 2) ^ 16. ● a(n) = 1 / 192 * Sum _{ a, b, x, y > 0, a * x + b * y = 2 * n + 4, a == b == x == y == 1 mod 2 and a > b } a * b * (a ^ 2 - b ^ 2) ^ 2. - _ Seiichi Manyama _ , May 05 2017 ●

▶ [A164542] 1,16,120,832,5696,38912,265728,1814528,12390400,84606976,577732608,3945005056,26938179584,183945396224,1256057733120,8576898695168,58566727696384,399918632009728,2730815234506752,18647172819976192 ⋆ a(n) = 8 * a(n - 1) - 8 * a(n - 2) for n > 1; a(0) = 1, a(1) = 16. ● a(n) = 8 * a(n - 1) - 8 * a(n - 2) for n > 1; a(0) = 1, a(1) = 16. ● a(n) = ((1 + 3 * sqrt(2)) * (4 + 2 * sqrt(2)) ^ n + (1 - 3 * sqrt(2)) * (4 - 2 * sqrt(2)) ^ n) / 2. ●

▶ [A060219] 16,120,1360,16320,209712,2795480,38347920,536862720,7635496960,109951057896,1599289640400,23456246655680,346430740566960,5146970983535160,76861433640386288,1152921504338411520 ⋆ Number of orbits of length n under the full 16 - shift (whose periodic points are counted by A001025). ● a(n) = (1 / n) * Sum _{ d|n } mu(d) * 16 ^ (n / d). ●

▶ [A191902] 0,16,121,512,1562,3888,8403,16384,29524,50000,80525,124416,185646,268912,379687,524288,709928,944784,1238049,1600000,2042050,2576816,3218171,3981312,4882812 ⋆ Number of compositions of odd positive integers into 5 parts <= n. ● a(n) = ((n + 1) ^ 5 - (1 + (- 1) ^ n) / 2) / 2. ●

▶ [A294140] 0,1,16,121,676,3249,14400,61009,252004,1026169,4145296,16670889,66879684,267944161,1072693504,4292739361,17175150916,68709515625,274856935824,1099467588025,4397954236900,17591993106961,70368341525056,281474137850481,1125898162012836 ⋆ Number of total dominating sets in the n - crown graph. ● a(n) = (2 ^ n - 1 - n) ^ 2. - _ Andrew Howroyd _ , Apr 16 2018 ● a(n) = 11 * a(n - 1) - 47 * a(n - 2) + 101 * a(n - 3) - 116 * a(n - 4) + 68 * a(n - 5) - 16 * a(n - 6). ●

▶ [A081071] 1,16,121,841,5776,39601,271441,1860496,12752041,87403801,599074576,4106118241,28143753121,192900153616,1322157322201,9062201101801,62113250390416,425730551631121,2918000611027441,20000273725560976 ⋆ a(n) = Lucas(4 * n + 2) - 2, or Lucas(2 * n + 1) ^ 2. ● a(n) = 8 * a(n - 1) - 8 * a(n - 2) + a(n - 3). ● a(n) = - 2 + (3 / 2) * ((7 / 2 - (3 / 2) * sqrt(5)) ^ n + (7 / 2 + (3 / 2) * sqrt(5)) ^ n) + (1 / 2) * sqrt(5) * ((7 / 2 + (3 / 2) * sqrt(5)) ^ n - (7 / 2 - (3 / 2) * sqrt(5)) ^ n), with n >= 0. - _ Paolo P. Lava _ , Dec 01 2008 ●

▶ [A104265] 1,16,121,1156,11236,111556,1115136,11115556,111112681,1111155556,11111478921,111111555556,1111118377216,11111115555556,111111226346761,1111111155555556,11111112515384644,111111111555555556,1111111112398242916,11111111115555555556,111111111113333185156,1111111111155555555556 ⋆ Smallest n - digit square with no zero digits. ● a(n) >= (10 ^ n - 1) / 9. ●

▶ [A191484] 1,16,122,512,1563,3888,8404,16384,29525,50000,80526,124416,185647,268912,379688,524288,709929,944784,1238050,1600000,2042051,2576816,3218172,3981312,4882813 ⋆ Number of compositions of even natural numbers into 5 parts <= n. ● a(n) = ((n + 1) ^ 5 + (1 + (- 1) ^ n) / 2) / 2. ● a(n) = 5 * a(n - 1) - 9 * a(n - 2) + 5 * a(n - 3) + 5 * a(n - 4) - 9 * a(n - 5) + 5 * a(n - 6) - a(n - 7). ●

▶ [A030508] 16,122,549,1837,5069,12203,26510,53141,99840,177811,302759,496128,786545,1211476,1819136,2670647,3842461,5429083,7546084,10333440,13959209,18623545,24563096,32055772,41425920 ⋆ Graham - Sloane - type lower bound on the size of a ternary (n,3,8) constant - weight code. ● a(n) = ceiling(binomial(n, w) * 2 ^ w / (2 * n + 1)) with w=8. ●

▶ [A006215] 0,16,122,800,5296,36976,275792,2204480,18870016,172585936,1681843712,17411416160,190939611136,2211961358896,26999750469632,346419349043840,4661658528710656,65657186909139856,966054350401175552,14822897275566895520 ⋆ Number of down - up permutations of n + 6 starting with n + 1. ● a(n) = T(n + 5, n), where T is the triangle in A008282. (End) ●

▶ [A060633] 16,123,361,778,1428,2371,3673,5406,7648,10483,14001,18298,23476,29643,36913,45406,55248,66571,79513,94218,110836,129523,150441,173758,199648 ⋆ Surround numbers of an n X 1 rectangle. ● a(n) = (n ^ 4 + 22 * n ^ 3 + 105 * n ^ 2 - 56 * n - 8) / 4. ●

► [A213748] 1,16,125,758,4071,20424,98185,458506,2096651,9436172,41941005,184545294,805298191,3489644560,15032352785,64424443922,274877775891,1168230842388,4947801800725,20890719879190,87960928124951 ⋆ Principal diagonal of the convolution array A213747. • a(n) = 12 * a(n - 1) - 53 * a(n - 2) + 106 * a(n - 3) - 96 * a(n - 4) + 32 * a(n - 5). • a(n) = 2 - 2 ^ n + 4 ^ n * (n - 1) + n. - _ Colin Barker _ , Nov 07 2017 •

► [A007787] 1,16,125,976,8512,79384,752061,7110272,67005561,630588698,5933085772,55827318685,525343024814,4943673540576,46521924780255,437788749723725,4119750109152730,38768318191017931,364823700357765771,3433121323699285343 ⋆ Number of nonintersecting rook paths joining opposite corners of 5 X n board. • a(1) = 1, • a(2) = 16, • a(3) = 125, • a(4) = 976, • a(5) = 8512, • a(6) = 79384, •

► [A133111] 0,0,0,1,16,126,672,2772,9504,28314,75504,184041,416416,884884,1782144,3426384,6325632,11267532,19442016,32605881,53300016,85131970,133138720,204246900,307850400 ⋆ a(n) = 1 / (1! * 2! * 3! * 4!) * sum { 1 <= x _ 1, x _ 2, x _ 3, x _ 4 <= n } |det V(x _ 1,x _ 2,x _ 3,x _ 4)|, where V(x _ 1,x _ 2,x _ 3,x _ 4 } is the Vandermonde matrix of order 4. • a(n) = 1 / 288 * sum { 1 <= i,j,k,l <= n } |(i - j)(i - k)(j - k)(i - l)(j - l)(k - l)|. G.f.: x ^ 4 * (1 + 5x + 5x ^ 2 + x ^ 3) / (1 - x) ^ 11 . a(n) = n ^ 2(n ^ 2 - 1) ^ 2(n ^ 2 - 4)(n ^ 2 - 9) / 302400. a(n) = sum { i + j + k + l = n } i * j * k ^ 2 * l ^ 3. •

► [A290031] 0,0,0,16,128,640,2560,8960,28672,86016,245760,675840,1802240,4685824,11927552,29818880,73400320,178257920,427819008,1016070144,2390753280,5578424320,12918456320,29712449536,67914170368 ⋆ Number of 6 - cycles in the n - hypercube graph. • a(n) = 2 ^ (n + 1) * binomial(n, 3). • a(n) = 8 * a(n - 1) - 24 * a(n - 2) + 32 * a(n - 4) - 16 * a(n - 4). •

► [A035473] 1,16,128,688,3072,11472,36224,99184,241664,535440,1097344,2107952,3834880,6661200,11119488,17932016,28057600,42745616,63597696,92637616,132389888,185967568,257169792,350589552,471732224 ⋆ Coordination sequence for lattice D *_ 8 (with edges defined by l _ 1 norm = 1). • a(m) = sum(2 ^ k * binomial(n, k) * binomial(m - 1, k - 1), k=0..n) + 2 ^ n * binomial((n + 2 * m) / 2 - 1, n - 1), where n=8, a(0)=1. •

► [A067488] 1,16,128,1024,16384,131072,1048576,16777216,134217728,1073741824,17179869184,137438953472,1099511627776,17592186044416,140737488355328,1125899906842624,18014398509481984,144115188075855872 ⋆ Powers of 2 with initial digit 1. • a(n) = 2 ^ ceiling((n - 1) * log(10) / log(2)). - _ Benoit Cloitre _ , Aug 29 2002 •

► [A099195] 0,1,16,129,704,2945,10128,29953,78592,187137,411280,845185,1640640,3032705,5373200,9173505,15158272,24331777,38058768,58161793,87037120,127791489,184402064,261902081,366594816 ⋆ a(n) = (n ^ 2) * (n ^ 6 + 28 * n ^ 4 + 154 * n ^ 2 + 132) / 315. • a(n) = (n ^ 2) * (n ^ 6 + 28 * n ^ 4 + 154 * n ^ 2 + 132) / 315. • a(n) = 16 * a(n - 1) / (n - 1) + a(n - 2) for n > 1. - _ Seiichi Manyama _ , Jun 06 2018 •

► [A335560] 1,16,131,335,851,2207,5891,16175,45491,130367,378851,1112015,3286931,9762527,29091011,86879855,259853171,777986687,2330814371,6986151695,20945872211,62812450847,188387020931,565060399535,1694979872051 ⋆ Number of ways to tile an n X n square with 1 X 1 squares and (n - 1) X 1 vertical or horizontal strips. • a(n) = 2 * 3 ^ n + 12 * 2 ^ n - 19, for n >= 3. • a(n) = 6 * a(n - 1) - 11 * a(n - 2) + 6 * a(n - 3) for n>5. •

► [A334979] 0,1,16,132,1034,8134,64880,525132,4307512,35750473,299759200,2535849836,21619615164,185582339740,1602675301920,13915031036412,121396437548136,1063653520870612,9355905795325888,82585983533819920,731350409249262330,6495673923406863630 ⋆ a(n) is the total number of down steps between the (n - 1) - th and n - th up steps in all 3 _ 1 - Dyck paths of length 4 * n. A 3 _ 1 - Dyck path is a lattice path with steps (1, 3), (1, - 1) that starts and ends at y = 0 and stays above the line y = - 1. • a(0) = 0 and a(n) = binomial(4 * n + 6, n + 1) / (2 * n + 3) - 4 * binomial(4 * n + 2, n) / (2 * n + 1) for n > 0. •

► [A110274] 16,135,1010,7528,56183,419346,3130024,23362807,174382354,1301607592,9715331319,72516220178,541268436136,4040082608375,30155587122450,225084366546088,1680052583878903,12540083204846866,93600455303259304 ⋆ Expansion of (- 16 - 7 * x + 6 * x ^ 2 + 28 * x ^ 3 + 8 * x ^ 4) / ((x - 1) * (x ^ 2 + x + 1) * (4 * x ^ 2 - 8 * x + 1)). • a(n) = 8 * a(n - 1) - 4 * a(n - 2) + a(n - 3) - 8 * a(n - 4) + 4 * a(n - 5) for n>4. - _ Colin Barker _ , May 12 2019 •

► [A139616] 16,136,256,376,496,616,736,856,976,1096,1216,1336,1456,1576,1696,1816,1936,2056,2176,2296,2416,2536,2656,2776,2896 ⋆ a(n) = 120 * n + 16. • a(n) = 2 * a(n - 1) - a(n - 2). - _ Wesley Ivan Hurt _ , Jun 17 2021 •

► [A304506] 16,136,364,700,1144,1696,2356,3124,4000,4984,6076,7276,8584,10000,11524,13156,14896,16744,18700,20764,22936,25216,27604,30100,32704 ⋆ a(n) = 2 * (3 * n + 1) * (9 * n + 8). • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n >2. •

► [A010968] 1,16,136,816,3876,15504,54264,170544,490314,1307504,3268760,7726160,17383860,37442160,77558760,155117520,300540195,565722720,1037158320,1855967520,3247943160,5567902560,9364199760,15471286560,25140840660 ⋆ a(n) = binomial(n,15). • a(n + 14) = n(n + 1)(n + 2)(n + 3)(n + 4)(n + 5)(n + 6)(n + 7)(n + 8)(n + 9)(n + 10)(n + 11)(n + 12)(n + 13)(n + 14) / 15!. - _ Artur Jasinski _ , Dec 02 2007; _ R. J. Mathar _ , Jul 07 2009 • a(n) = n / (n - 15) * a(n - 1), n > 15. - _ Vincenzo Librandi _ , Mar 26 2011 •

► [A290896] 0,0,0,0,0,0,0,1,16,136,816,3876,15504,54264,170544,490315,1307536,3269288,7732144,17436220,37819152,79883544,167737776,362063944,839161648 ⋆ p - INVERT of the positive integers, where p(S) = 1 - S ^ 8. • a(n) = 16 * a(n - 1) - 120 * a(n - 2) + 560 * a(n - 3) - 1820 * a(n - 4) + 4368 * a(n - 5) - 8008 * a(n - 6) + 11440 * a(n - 7) - 12869 * a(n - 8) + 11440 * a(n - 9) - 8008 * a(n - 10) + 4368 * a(n - 11) - 1820 * a(n - 12) + 560 * a(n - 13) - 120 * a(n - 14) + 16 * a(n - 15) - a(n - 16). •

► [A114182] 0,16,137,978,6754,46355,317796,2178292,14930333,102334134,701408710,4807526951,32951280072,225851433688,1548008755889,10610209857690,72723460248106,498454011879227,3416454622906668,23416728348467644 ⋆ F(4n) - 2n - 1 where F(n) = Fibonacci numbers. Also, the floor of the log base phi of sequence A090162 (phi = (1 + Sqrt(5)) / 2). • a(0)=0, a(1)=16, a(2)=137, a(3)=978, a(n)=9 * a(n - 1) - 16 * a(n - 2) + 9 * a(n - 3) - a(n - 4). - _ Harvey P. Dale _ , May 28 2015 •

► [A060300] 0,16,144,576,1600,3600,7056,12544,20736,32400,48400,69696,97344,132496,176400,230400,295936,374544,467856,577600,705600,853776,1024144,1218816,1440000 ⋆ a(n) = (2n(n + 1)) ^ 2. • a(n) = Integral _{ x=1..2 * n + 1 } (x ^ 3 - x) dx. - _ César Aguilera _ , Jun 27 2020 •

► [A128985] 0,16,144,768,3200,11520,37632,114688,331776,921600,2478080,6488064,16613376,41746432,103219200,251658240,606076928,1443889152,3406823424,7969177600,18496880640,42630905856,97626619904,222264557568 ⋆ a(n) = (n ^ 3 - n ^ 2) * 2 ^ n. • a(n) = 8 * a(n - 1) - 24 * a(n - 2) + 32 * a(n - 3) - 16 * a(n - 4). - _ Vincenzo Librandi _ , Feb 11 2013 •

► [A054851] 1,16,144,960,5280,25344,109824,439296,1647360,5857280,19914752,65175552,206389248,635043840,1905131520,5588385792,16066609152,45364543488,126012620800,344876646400,931166945280,2483111854080 ⋆ a(n) = 2 ^ (n - 7) * binomial(n,7). Number of 7D hypercubes in an n - dimensional hypercube. • a(n) = Sum _{ i=7..n } binomial(i,7) * binomial(n,i). Example: for n=11, a(11) = 1 * 330 + 8 * 165 + 36 * 55 + 120 * 11 + 330 * 1 = 5280. - _ Bruno Berselli _ , Mar 23 2018 •

► [A155663] 1,16,144,1240,10656,91816,793584,6880120,59823936,521638216,4560526224,39970994200,351149013216,3091621642216,27274838966064,241075504183480,2134495165562496,18928981513351816,168109033806481104 ⋆ 9 ^ n + 8 ^ n - 1. • a(n)=17 * a(n - 1) - 72 * a(n - 2) - 56 with a(0)=1, a(1)=16 - _ Vincenzo Librandi _ , Jul 21 2010 •

► [A052388] 0,1,16,146,955,4905,20907,76851,250530,739612,2009177,5085119,12109526,27348478,58955082,121956402,243172488,469115187,878387366,1600751976,2845918041,4946262815,8419256605,14057377245,23055913530 ⋆ Number of 4 X n binary matrices such that any 2 rows have a common 1, up to column permutations. • a(n) = n * (n + 1) * (n + 2) * (n + 3) * (n + 4) * (n ^ 10 + 110 * n ^ 9 + 5445 * n ^ 8 + 160050 * n ^ 7 + 2906463 * n ^ 6 + 30644250 * n ^ 5 + 176659055 * n ^ 4 + 711220750 * n ^ 3 + 1781493036 * n ^ 2 + 4034382840 * n + 4159814400) / 1307674368000. •

► [A027651] 1,16,146,1066,6902,41506,237686,1315666,7107302,37712866,197451926,1023358066,5262831302,26903268226,136887643766,693968021266,3508093140902,17693879415586,89084256837206,447884338361266,2249284754708102,11285908565322946,56587579617416246 ⋆ Poly - Bernoulli numbers B _ n ^ (k) with k= - 4. • a(n) = 24 * 5 ^ n - 36 * 4 ^ n + 14 * 3 ^ n - 2 ^ n. - _ Vladeta Jovovic _ , Nov 14 2003 •

► [A155657] 1,16,148,1342,12400,116806,1117648,10823542,105764800,1040353606,10282475248,101977326742,1013841287200,10096889010406,100678223072848,1004747561509942,10033232930569600,100232630513987206 ⋆ 10 ^ n + 7 ^ n - 1. • a(n)=17 * a(n - 1) - 70 * a(n - 2) - 54 with a(0)=1, a(1)=16 - _ Vincenzo Librandi _ , Jul 21 2010 •

► [A073384] 1,16,152,1104,6756,36624,181224,834768,3628746,15035504,59829704,229977904,857894388,3117321456,11067753144,38492230704,131417200419,441252045408,1459330704656,4760342849504 ⋆ Seventh convolution of A000129(n + 1) (generalized (2,1) - Fibonacci, called Pell numbers), n>=0, with itself. • a(n) = Sum _{ k=0..floor(n / 2) } 2 ^ (n - 2 * k) * binomial(n - k + 7, 7) * binomial(n - k, k). • a(n) = F’’’’’’’(n + 8, 2) / 7!, that is, 1 / 7! times the 7th derivative of the (n + 8) - th Fibonacci polynomial evaluated at x=2. - _ T. D. Noe _ , Jan 19 2006 •

► [A373293] 16,154,1240,9202,66016,466954,3283240,23026402,161316016,1129605754,7908421240,55362491602,387548070016,2712868376554,18990174295240,132931507044802,930521410248016,6513652454539354,45595574930185240,319169047756526002 ⋆ Number of edge covers of F _{ n,3 } . • a(n) = 4 * 7 ^ n - 5 * 3 ^ n + 3. •

► [A155649] 1,16,156,1546,15936,168826,1818216,19767106,216038496,2368025386,25997890776,285674467666,3140605159056,34535772837946,379828197747336,4177718354400226,45952550973479616,505463955158738506 ⋆ a(n) = 11 ^ n + 6 ^ n - 1 ^ n. • a(n) = 17 * a(n - 1) - 66 * a(n - 2) - 50 with a(0)=1, a(1)=16 - _ Vincenzo Librandi _ , Jul 21 2010 •

► [A041005] 1,16,159,1260,8722,55152,326811,1844084,10015566,52754624,270976342,1362986520,6734927460,32775704608,157408497171,747269225028,3511471892470,16351481223840,75525932249922,346305571781224 ⋆ Convolution of Catalan numbers A000108(n + 1), n >= 0, with A020918. • a(n)=binomial(n + 7, 3) * binomial(2 * (n + 4), n + 2) / 20 - (n + 4) * (n + 3) * 4 ^ (n + 1); G.f. (c(x) ^ 2) / (1 - 4 * x) ^ (7 / 2), where c(x) = g.f. for Catalan numbers. •

► [A073394] 1,16,160,1248,8304,49344,269184,1372800,6628512,30584576,135804416,583471616,2436145920,9919484928,39503038464,154230921216,591550292736,2232748892160,8305370185728,30486351396864,110551407403008,396424924397568,1406924861276160,4945692873129984,17231635316293632 ⋆ Seventh convolution of A002605(n) (generalized (2,2) - Fibonacci), n >= 0, with itself. • a(n) = Sum _{ k=0..floor(n / 2) } binomial(n - k + 7, 7) * binomial(n - k, k) * 2 ^ (n - k). •

► [A038846] 1,16,160,1280,8960,57344,344064,1966080,10813440,57671680,299892736,1526726656,7633633280,37580963840,182536110080,876173328384,4161823309824,19585050869760,91396904058880,423311976693760,1947235092791296,8901646138474496,40462027902156800 ⋆ 4 - fold convolution of A000302 (powers of 4); expansion of g.f. 1 / (1 - 4 * x) ^ 4. • a(n) = binomial(n + 3, 3) * 4 ^ n. •

► [A053410] 0,16,160,1600,15840,156816,1552320,15366400,152111680,1505750416,14905392480,147548174400,1460576351520,14458215340816,143121577056640,1416757555225600,14024453975199360,138827782196768016 ⋆ a(1) = 0, a(2) = 16, a(2n + 1) = 10 * a(2n) - a(2n - 1), a(2n) = 10 * a(2n - 1) - a(2n - 2) + 16. • a(n) = 10 * a(n - 1) - 10 * a(n - 3) + a(n - 4). •

► [A025930] 1,16,165,1400,10661,75936,517525,3421000,22124421,140796656,885205685,5513890200,34098207781,209668346176,1283419890645,7827611393000,47601257612741,288785879108496,1748608103548405 ⋆ Expansion of 1 / ((1 - 2x)(1 - 3x)(1 - 5x)(1 - 6x)). • a(n) = 16 * a(n - 1) - 91 * a(n - 2) + 216 * a(n - 3) - 180 * a(n - 4), n >= 4. • a(n) = 11 * a(n - 1) - 30 * a(n - 2) + 3 ^ (n + 1) - 2 ^ (n + 1), n >= 2. (End) • a(n) = 3 * 6 ^ (n + 1) - 5 ^ (n + 3) / 6 + 3 ^ (n + 2) / 2 - 2 ^ (n + 1) / 3. - _ R. J. Mathar _ , Mar 19 2011 •

► [A246057] 1,16,166,1666,16666,166666,1666666,16666666,166666666,1666666666,16666666666,166666666666,1666666666666,16666666666666,166666666666666,1

6666666666666666,16666666666666666,166666666666666666,1666666666666666666,16666666666666666666 ★ a(n) = (5 * 10 ^ n - 2) / 3. ● a(n) = 11 * a(n - 1) - 10 * a(n - 2). ●

► [A021744] 1,16,167,1442,11193,81228,563179,3779974,24771725,159439280,1012078431,6355276746,39568060897,244679845972,1504794392723,9213774596558,56213415403509,341957238034104,2075218782238855 ★ Expansion of 1 / ((1 - x)(1 - 4x)(1 - 5x)(1 - 6x)). ● a(n) = (6 ^ (n + 4) - 3 * 5 ^ (n + 4) + 10 * 4 ^ (n + 3) - 1) / 60. - _ Yahia Kahloune _ , May 07 2013 ●

► [A025445] 1,16,167,1454,11529,86772,633739,4547818,32300477,228024368,1604029791,11260172742,78950652145,553177103404,3874344193523,27128870214626,189936063951333,1329688724613480,9308367341848135 ★ Expansion of 1 / ((1 - 2x)(1 - 3x)(1 - 4x)(1 - 7x)). ● a(n)=(2 * 7 ^ (n + 3) - 5 * 4 ^ (n + 4) + 10 * 3 ^ (n + 4) - 3 * 2 ^ (n + 5)) / 120. [_ Yahia Kahloune _ , May 30 2013] ● a(0)=1, a(1)=16, a(2)=167, a(3)=1454, a(n)=16 * a(n - 1) - 89 * a(n - 2) + 206 * a(n - 3) - 168 * a(n - 4). - _ Harvey P. Dale _ , Dec 07 2015 ●

► [A021424] 1,16,170,1520,12411,96096,719860,5278240,38153621,273134576,1942326750,13748476560,97001079631,682818667456,4798793396840,33686888924480,236284962774441,1656378634646736,11606570499786130 ★ Expansion of 1 / ((1 - x)(1 - 3x)(1 - 5x)(1 - 7x)). ● a(n) = (7 ^ n - 3 * 5 ^ n + 3 ^ (n + 1) - 1) / 48. - Victor Adamchik (adamchik(AT)cs.cmu.edu), Jul 21 2001 ● a(n) = 12 * a(n - 1) - 35 * a(n - 2) + (3 ^ n - 1) / 2 with a(0)=1, a(1)=16. - _ Vincenzo Librandi _ , Jul 09 2013 ● a(n) = 16 * a(n - 1) - 86 * a(n - 2) + 176 * a(n - 3) - 105 * a(n - 4), with a(0)=1, a(1)=16, a(2)=170, a(3)=1520. - _ Vincenzo Librandi _ , Jul 09 2013 ●

► [A018209] 1,16,173,1580,13161,103656,787333,5836420,42545921,306538496,2190403293,15560186460,110074899481,776359376536,5463959472053,38396009227700,269517824177841,1890370747033776,13251393837657613 ★ Expansion of 1 / ((1 - 4x)(1 - 5x)(1 - 7x)). ● a(n) = 16 * 4 ^ n / 3 - 25 * 5 ^ n / 2 + 49 * 7 ^ n / 6. - _ R. J. Mathar _ , Jun 29 2013 ● a(0)=1, a(1)=16, a(2)=173; for n>2, a(n) = 16 * a(n - 1) - 83 * a(n - 2) + 140 * a(n - 3). - _ Vincenzo Librandi _ , Jul 02 2013 ● a(n) = 12 * a(n - 1) - 35 * a(n - 2) + 4 ^ n. - _ Vincenzo Librandi _ , Jul 02 2013 ●

► [A021174] 1,16,173,1592,13461,108192,841261,6392584,47771141,352537328,2576599389,18689228376,134742802741,966708860224,6908017500557,49202455443368,349495185871461,2476934287969680,17521374793528765 ★ Expansion of 1 / ((1 - x)(1 - 2x)(1 - 6x)(1 - 7x)). ● a(0)=1, a(1)=16, a(2)=173, a(3)=1592; for n >3, a(n) = 16 * a(n - 1) - 83 * a(n - 2) + 152 * a(n - 3) - 84 * a(n - 4). - _ Vincenzo Librandi _ , Jul 07 2013 ● a(0)=1, a(1)=16; for n>1, a(n) = 13 * a(n - 1) - 42 * a(n - 2) + 2 ^ n - 1. - _ Vincenzo Librandi _ , Jul 07 2013 ● a(n) = (2 * 7 ^ (n + 3) - 3 * 6 ^ (n + 3) + 3 * 2 ^ (n + 3) - 2) / 60. [_ Yahia Kahloune _ , Jul 07 2013] ●

► [A021374] 1,16,173,1604,13833,115032,938821,7588108,61024865,489508448,3921394269,31392726612,251228899897,2010181938664,16082865641717,128668587186716,1029371410275729,8235062327044080,65880863376836365 ★ Expansion of 1 / ((1 - x)(1 - 3x)(1 - 4x)(1 - 8x)). ● a(0)=1, a(1)=16; for n>1, a(n) = 12 * a(n - 1) - 32 * a(n - 2) + (3 ^ n - 1) / 2. - _ Vincenzo Librandi _ , Jul 09 2013 ● a(0)=1, a(1)=16, a(2)=173, a(3)=1604; for n>3, a(n) = 16 * a(n - 1) - 83 * a(n - 2) + 164 * a(n - 3) - 96 * a(n - 4). - _ Vincenzo Librandi _ , Jul 09 2013 ●

► [A215687] 0,16,174,690,1876,4140,7986,14014,22920,35496,52630,75306,104604,141700,187866,244470,312976,394944,492030,605986,738660,891996,1068034,1268910,1496856 ★ Number of solid standard Young tableaux of shape [[2 * n,2],[2]]. ● a(n) = n * (2 * n - 1) * (2 * n ^ 2 + 7 * n + 7). ●

► [A017931] 1,16,175,1630,13921,112756,881875,6730810,50468341,373414096,2734771975,19868820790,143434778761,1030163245036,7367866260475,52515419443570,373250112873181,2646603979861576,18729347384947375 ★ Expansion of 1 / ((1 - 3x)(1 - 6x)(1 - 7x)). ● a(0)=1, a(1)=16, a(2)=175; for n>2, a(n) = 16 * a(n - 1) - 81 * a(n - 2) + 126 * a(n - 3). - _ Vincenzo Librandi _ , Jul 02 2013 ● a(n) = 13 * a(n - 1) - 42 * a(n - 2) + 3 ^ n. - _ Vincenzo Librandi _ , Jul 02 2013 ● a(n) = (3 * 7 ^ (n + 2) - 4 * 6 ^ n + 2) + 3 ^ (n + 2)) / 12. [_ Yahia Kahloune _ , Jul 06 2013] ●

► [A021129] 1,16,175,1650,14481,122316,1010995,8250550,66817861,538611216,4329233415,34735589850,278393339641,2229689837716,17850234337435,142865452943550,1143241514899821,9147521576217816,73188119895363055 ★ Expansion of 1 / ((1 - x)(1 - 2x)(1 - 5x)(1 - 8x)). ● a(0)=1, a(1)=16, a(2)=175, a(3)=1650; for n>3, a(n) = 16 * a(n - 1) - 81 * a(n - 2) + 146 * a(n - 3) - 80 * a(n - 4). - _ Vincenzo Librandi _ , Jul 07 2013 ● a(0)=1, a(1)=16; for n>1, a(n) = 13 * a(n - 1) - 40 * a(n - 2) + 2 ^ n - 1. - _ Vincenzo Librandi _ , Jul 07 2013 ● a(n) = (2 * 8 ^ (n + 3) - 7 * 5 ^ (n + 3) + 14 * 2 ^ (n + 3) - 9) / 252. [_ Yahia Kahloune _ , Jul 07 2013] ●

► [A268459] 16,176,852,2776,7160,15816,31276,56912,97056,157120,243716,364776,529672,749336,1036380,1405216,1872176,2455632,3176116,4056440,5121816,6399976,7921292,9718896,11828800 ★ Number of length - 5 0..n arrays with no adjacent pair x,x + 1 followed at any distance by x + 1,x. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. ●

► [A017521] 1,16,177,1688,14945,127008,1054033,8624296,69961089,564542000,4540661489,36447096504,292186326433,2340539977792,18739571436945,149992843917512,1200324156496577,9604500406895184,76845539417194801 ★ Expansion of 1 / ((1 - 3 * x) * (1 - 5 * x) * (1 - 8 * x)). ● a(n) = 16 * a(n - 1) - 79 * a(n - 2) + 120 * a(n - 3). ● a(n) = 13 * a(n - 1) - 40 * a(n - 2) + 3 ^ n. (End) ● a(n) = (2 ^ (7 + 3 * n) + 3 ^ (3 + n) - 5 ^ (3 + n)) / 30. - _ Bruno Berselli _ , Jun 27 2013 ●

► [A021084] 1,16,179,1766,16545,151572,1374943,12417922,111935549,1008117968,9075855867,81693883518,735289682713,6617786085004,59560790560151,536049978287354,4824461257701237,43420197132033480 ★ Expansion of 1 / ((1 - x)(1 - 2x)(1 - 4x)(1 - 9x)). ● a(0)=1, a(1)=16; for n>1, a(n) = 13 * a(n - 1) - 36 * a(n - 2) + 2 ^ n - 1. - _ Vincenzo Librandi _ , Jul 06 2013 ● a(0)=1, a(1)=16, a(2)=179, a(3)=1766; for n>3, a(n) = 16 * a(n - 1) - 77 * a(n - 2) + 134 * a(n - 3) - 72 * a(n - 4). - _ Vincenzo Librandi _ , Jul 06 2013 ● a(n) = (3 * 9 ^ (n + 3) - 28 * 4 ^ (n + 3) + 60 * 2 ^ (n + 3) - 35) / 840. [_ Yahia Kahloune _ , Jul 07 2013] ●

► [A269202] 16,180,1284,9612,68052,472044,3212820,21562476,143085588,940780908,6138286356,39791327340,256517615124,1645723601772,10514049071892,66922539204204,424564703856660,2685565034934636,16942451080369428 ★ Number of 2 X n 0..3 arrays with some element plus some horizontally, diagonally or antidiagonally adjacent neighbor totalling three no more than once. ● a(n) = (6 * (- 678 * (- 1) ^ n + 335 * 6 ^ n) + 56 * (144 * (- 1) ^ n + 25 * 6 ^ n) * n) / 1029. ●

► [A269103] 16,180,1740,15540,132300,1090740,8787660,69580980,543538380,4200069300,32167589580,244542858420,1847388128460,13880833735860,103809654007500,773174303047860,5737767196302540,42443199898890420,313054205965641420 ★ Number of n X 2 0..3 arrays with some element plus some horizontally or vertically adjacent neighbor totalling three no more than once. ● a(n) = 60 * 7 ^ (n - 3) * (8 * n + 5) for n>1. ●

► [A016305] 1,16,180,1760,16016,139776,1188160,9925120,81920256,670478336,5454525440,44180398080,356708356096,2873257885696,23103609323520,185534152048640,1488504881217536,11933429038841856,95619772245606400 ★ Expansion of 1 / ((1 - 2 * x) * (1 - 6 * x) * (1 - 8 * x)). ● a(n) = 2 ^ (n - 1) * (2 ^ (2 * n + 5) - 3 ^ (n + 3) + 1) / 3. - _ Zerinvary Lajos _ , Jun 05 2009 ● a(n) = 16 * a(n - 1) - 76 * a(n - 2) + 96 * a(n - 3) for n > 2; ● a(n) = 14 * a(n - 1) - 48 * a(n - 2) + 2 ^ n for n > 1. (End) ●

► [A016909] 1,16,181,1804,17017,156520,1422877,12864868,116026273,1045225984,9411051013,84715704892,762506858569,6862825379608,61766487809389,555902642205076,5003140830574705,45028335807228592 ★ Expansion of 1 / ((1 - 3x)(1 - 4x)(1 - 9x)). ● a(n) = 3 * 3 ^ n / 2 - 16 * 4 ^ n / 5 + 27 * 9 ^ n / 10. - _ R. J. Mathar _ , Jun 23 2013 ● a(n) = 16 * a(n - 1) - 75 * a(n - 2) + 108 * a(n - 3). ● a(n) = 13 * a(n - 1) - 36 * a(n - 2) + 3 ^ n; a(0)=1, a(1)=16. (End) ●

► [A199018] 1,16,181,1996,21961,241576,2657341,29230756,321538321,3536921536,38906136901,427967505916,4707642565081,51784068215896,569624750374861,6265872254123476,68924594795358241,758170542748940656,8339875970238347221 ★ (3 * 11 ^ n - 1) / 2. ● a(n) = 11 * a(n - 1) + 5. ● a(n) = 12 * a(n - 1) - 11 * a(n - 2), n>1. ●

► [A016298] 1,16,183,1850,17681,164316,1504843,13673710,123714261,1116683216,10066424303,90679197570,816519676441,7350711587716,66166576804563,595550053849430,5360204797752221,48243114745437816 ★ Expansion of 1 / ((1 - 2x)(1 - 5x)(1 - 9x)). ● a(n) = 16 * a(n - 1) - 73 * a(n - 2) + 90 * a(n - 3), n >= 3. ● a(n) = 14 * a(n - 1) - 45 * a(n - 2) + 2 ^ n, n >= 2. (End) ● a(n) = 2 ^ (n + 2) / 21 + 9 ^ (n + 2) / 28 - 5 ^ (n + 2) / 12. - _ R. J. Mathar _ , Mar 18 2011 ●

► [A288720] 0,1,16,184,1744,15136,126016,1028224,8306944,66781696,535561216,4289726464,34338770944,274794029056,2198687727616,17590843899904,140732119711744,1125878432137216,9007113355657216,72057250441068544,576459377914937344 ★ Detour index of the n - hypercube graph. ● a(n) = 14 * a(n - 1) - 56 * a(n - 2) + 64 * a(n - 3). ● a(n) = 2 ^ n * (2 ^ (2 * n - 1) - 5 * 2 ^ (n - 2) + 1) for n > 0. - _ Andrew Howroyd _ , Jun 19 2017 ●

► [A016249] 1,16,185,1880,17841,162336,1435945,12448360,106312481,897579056,7510186905,62388376440,515255179921,4235078618176,34671889197065,282913935338120,2302083235036161,18688068146607696,151404361037090425,1224533599346325400,9889359772117817201 ★ Expansion of 1 / ((1 - x) * (1 - 7 * x) * (1 - 8 * x)). ● a(0)=1, a(1)=16, a(n) = 15 * a(n - 1) - 56 * a(n - 2) + 1. - _ Vincenzo Librandi _ , Feb 10 2011 ●

► [A021049] 1,16,185,1940,19701,197976,1982785,19837180,198400301,1984089536,19841156985,198412358820,1984125963301,19841266774696,198412689204785,1984126956486860,19841269758316701,198412698163773456 ★ Expansion of 1 / ((1 - x)(1 - 2x)(1 - 3x)(1 - 10x)). ● a(n) = - (1 / 18) + 2 ^ n - (27 / 14) * 3 ^ n + (125 / 63) * 10 ^ n. [_ Antonio Alberto Olivares _ , May 22 2012] ● a(0)=1, a(1)=16; for n>1, a(n) = 13 * a(n - 1) - 30 * a(n - 2) + 2 ^ n - 1. - _ Vincenzo Librandi _ , Jul 05 2013 ● a(0)=1, a(1)=16, a(2)=185, a(3)=1940; for n>3, a(n) = 16 * a(n - 1) - 71 * a(n - 2) + 116 * a(n - 3) - 60 * a(n - 4). - _ Vincenzo Librandi _ , Jul 05 2013 ●

► [A016244] 1,16,187,1942,19033,180628,1681639,15470674,141251605,1283357680,11622778531,105040363246,947975408017,8547451504972,77021100541663,693754126856458,6247172473597069,56244864253707304 ★ Expansion of 1 / ((1 - x) * (1 - 6 * x) * (1 - 9 * x)). ● a(n) = (1 - 96 * 6 ^ n + 135 * 9 ^ n) / 40. - Neven Juric, Oct 22 2009 ● a(0)=1, a(1)=16, a(n) = 15 * a(n - 1) - 54 * a(n - 2) + 1. - _ Vincenzo Librandi _ , Feb 10 2011 ●

► [A016292] 1,16,188,2000,20496,206976,2077888,20811520,208246016,2082983936,20831935488,208327741440,2083310964736,20833243856896,208332975423488,2083331901685760,20833327606726656,208333310426873856,208333324170742988,2083333296682958880 ★ Expansion of 1 / ((1 - 2x) * (1 - 4x) * (1 - 10x)). ● a(n) = (1 / 4) * 2 ^ n - (4 / 3) * 4 ^ n + (25 / 12) * 10 ^ n. - _ Antonio Alberto Olivares _ , May 12 2012 ● a(n) = 16 * a(n - 1) - 68 * a(n - 2) + 80 * a(n - 3). - _ Vincenzo Librandi _ , Jun 26 2013 ●

► [A016237] 1,16,191,2066,21441,218316,2202691,22124566,221733941,2219780816,22210015191,222161187066,2221917046441,22220696343316,222214592827691,2222184075249566,22222031487358941,222221268547905816,2222217453850640191,22222198380364312066 ★ Expansion of 1 / ((1 - x)(1 - 5x)(1 - 10x)). ● a(0)=1, a(1)=16, a(n)=15 * a(n - 1) - 50 * a(n - 2) + 1. - _ Vincenzo Librandi _ , Feb 10 2011 ● a(n) = (8 * 10 ^ (n + 1) - 9 * 5 ^ (n + 1) + 1) / 36. - _ Yahia Kahloune _ , Aug 13 2013 ●

► [A302298] 0,16,192,1008,3504,9504,21840,44576,83232,145008,239008,376464,570960,838656,1198512,1672512,2285888,3067344,4049280,5268016,6764016,8582112,10771728,13387104,16487520 ★ Wiener index of the graph of nodes (i,j) of the square lattice such that abs(i) + abs(j) <= n. ● a(n) = 2 * (n * (6 + 25 * n + 40 * n ^ 2 + 35 * n ^ 3 + 14 * n ^ 4)) / 15. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>5. ●

► [A365934] 0,16,192,1744,14592,118672,955200,7659088,61325184,490758928,3926543808,31413767632,251314392576,2010527895184,16084261425216,128674206192976,1029393993917568,8235152984461840,65881226975058624,527049825098560720,4216398628682760960 ★ Number of 4 - cycles in the n - Sierpinski carpet graph. ● a(n) = 8 / 35 * (5 + 2 ^ (1 + 3 * n) - 7 * 3 ^ n). ● a(n) = 12 * a(n - 1) - 35 * a(n - 1) + 24 * a(n - 2). ●

► [A053539] 1,0,1,16,192,2048,20480,196608,1835008,16777216,150994944,1342177280,11811160064,103079215104,893353197568,7696581394432,65970697666560,562949953421312,4785074604081152,40532396646334464,342273571680157696 ⋆ a(n) = n * 8 ^ (n - 1). ● a(n) = 16 * a(n - 1) - 64 * a(n - 2), with a(0)=0, a(1)=1. - _ Emeric Deutsch _ , Aug 06 2014 ●

► [A120994] 1,16,192,4096,16384,262144,1048576,268435456,3221225472,17179869184,68719476736,1319413953331,2147483648,2814749767106,11258999068426624,115292150460684697,461168601842738790 4 ⋆ Numerators of rational s related to John Wallis' product formula for Pi / 2 from his 'Arithmetica infinitorum' from 1659. ● a(n) = numerator((3 / 4) * W(n)), n>=1, with the rationals W(n) given above. An equivalent form is W(n) = (((4 ^ n) / binomial(2 * n, n)) ^ 2) / (2 * n + 1). ●

► [A016178] 1,16,193,2080,21121,206896,1979713,18640960,173533441,1602154576,14701866433,134294124640,1222488408961,11099284691056,100571785292353,909893629141120,8222275592839681,74233110849544336 ⋆ Expansion of 1 / ((1 - 7x)(1 - 9x)). ● a(n) = 9 * a(n - 1) + 7 ^ n, with a(0)=1. - _ Vincenzo Librandi _ , Feb 09 2011 ● a(n) = 16 * a(n - 1) - 63 * a(n - 2), n >= 2. - _ Vincenzo Librandi _ , Feb 09 2011 ●

► [A081202] 0,1,16,193,2080,21121,206896,1979713,18640960,173533441,1602154576,14701866433,134294124640,1222488408961,11099284691056,100571785292353,909893629141120,8222275592839681,74233110849544336,669726411243809473 ⋆ 8th binomial transform of (0,1,0,1,0,1,....), A000035. ● a(n) = 16a(n - 1) - 63a(n - 2), a(0)=0, a(1)=1. ● a(n) = (9 ^ n - 7 ^ n) / 2. ●

► [A081185] 0,1,16,194,2112,21764,217280,2127112,20562432,197117968,1879016704,17842953248,168988216320,1597548359744,15083504344064,142288071200896,1341431869882368,12641049503662336,119088016125890560 ⋆ 8th binomial transform of (0,1,0,2,0,4,0,8,0,16,...). ● a(n) = 16 * a(n - 1) - 62 * a(n - 2), a(0)=0, a(1)=1. ● a(n) = ((8 + sqrt(2)) ^ n - (8 - sqrt(2)) ^ n) / (2 * sqrt(2)). ● a(n) = Sum _{ k=0..n } C(n,2 * k + 1) * 2 ^ k * 7 ^ (n - 2 * k - 1). ●

► [A153599] 1,16,195,2144,22409,227760,2277211,22542016,221762385,2173135184,21242657459,207321273120,2021338264921,19694814578416,191815399094475,1867662696228224,18181863794888609,176982396248296080,1722624648484532131,16766068204606453216 ⋆ a(n) = ((8 + sqrt(3)) ^ n - (8 - sqrt(3)) ^ n) / (2 * sqrt(3)). ● a(n) = 16 * a(n - 1) - 61 * a(n - 2) for n>1; a(0)=0, a(1)=1. - _ Philippe Deléham _ , Jan 01 2009 ●

► [A016280] 1,16,195,2210,24521,270396,2976415,32746870,360234741,3962640176,43589217035,479481914730,5274302648161,58017333896356,638190687176055,7020097601917790,77221073750104781,849431811638310936 ⋆ Expansion of 1 / ((1 - 2x)(1 - 3x)(1 - 11x)). ● a(n) = 4 * 2 ^ n / 9 - 9 * 3 ^ n / 8 + 121 * 11 ^ n / 72. - _ Antonio Alberto Olivares _ , Feb 06 2010 ● a(n) = 16 * a(n - 1) - 61 * a(n - 2) + 66 * a(n - 3). - _ Vincenzo Librandi _ , Jun 25 2013 ●

► [A017318] 16,196,576,1156,1936,2916,4096,5476,7056,8836,10816,12996,15376,17956,20736,23716,26896,30276,33856,37636,41616,45796,50176,54756,59536 ⋆ a(n) = (10 * n + 4) ^ 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Wesley Ivan Hurt _ , Aug 19 2022 ●

► [A126981] 1,16,196,1936,19881,199809,1999396,19998784,199996164,1999967841,19999899241,199999467369,1999998409369,19999991458225,199999982358225,1999999950806881,19999999932878736,199999999552824025 ⋆ Largest perfect squares less than 2 * 10 ^ n. ● a(n) = floor(sqrt(2 * 10 ^ n)) ^ 2. ●

► [A086940] 16,196,1996,19996,199996,1999996,19999996,199999996,1999999996,19999999996,199999999996,1999999999996,19999999999996,199999999999996,1999999999999996,19999999999999996,199999999999999996,1999999999999999996 ⋆ a(n) = k where R(k + 4) = 2. ● a(n) = 2 * (10 ^ n - 2). ● a(n) = 11 * a(n - 1) - 10 * a(n - 2); a(1)=16, a(2)=196. - _ Harvey P. Dale _ , Aug 11 2012 ●

► [A016173] 1,16,196,2176,23056,238336,2430016,24580096,247480576,2484883456,24909300736,249455804416,2496734826496,24980408958976,249882453753856,2499294722523136,24995768335138816,249974610010832896 ⋆ Expansion of 1 / ((1 - 6x)(1 - 10x)). ● a(n) = 16 * a(n - 1) - 60 * a(n - 2). - _ Philippe Deléham _ , Jan 01 2009 ● a(n) = 10 * a(n - 1) + 6 ^ n, a(0)=1. - _ Vincenzo Librandi _ , Feb 09 2011 ●

► [A144844] 0,1,16,196,2304,26896,313600,3655744,42614784,496754944,5790601216,67500196864,786839961600,9172078759936,106917585289216,1246322708463616,14528202160472064,169353135091941376,1974124812461670400,23012085209172803584 ⋆ a(n) = ((2 + sqrt(2)) ^ n - (2 - sqrt(2)) ^ n) ^ 2 / 8. ● a(n) = 14 * a(n - 1) - 28 * a(n - 2) + 8 * a(n - 3) for n > 2; a(0) = 0, a(1) = 1; a(2) = 16. - _ Klaus Brockhaus _ , Jul 15 2009 ● a(n) = 2 ^ (n - 3) * (Q(2 * n) - 2), where Q(m) are the Pell - Lucas numbers (A002203). - _ G. C. Greubel _ , Sep 27 2018 ●

► [A153885] 1,16,197,2208,23705,249008,2585533,26677056,274286449,2814636880,28851289589,295557057504,3026686834313,30989122956272,317251444075885,3247664850794112,33244802412228577,340304612398804624,3484343045605938791,35656915165420734240 ⋆ a(n) = ((8 + sqrt(5)) ^ n - (8 - sqrt(5)) ^ n) / (2 * sqrt(5)). ● a(n) = 16 * a(n - 1) - 59 * a(n - 2) for n>1, with a(0)=0, a(1)=1. ●

► [A016226] 1,16,197,2252,25113,277608,3059149,33672484,370484705,4075681280,44833892181,493178406396,5424984839977,59674922718232,656424507814493,7220671017615188,79427386920390129,873701279030783664 ⋆ Expansion of 1 / ((1 - x)(1 - 4x)(1 - 11x)). ● a(n) = (1 / 30) - (16 / 21) * 4 ^ (n - 1) + (121 / 70) * 11 ^ (n - 1). - _ Antonio Alberto Olivares _ , Feb 07 2010 ● a(0)=1, a(1)=16, a(n) = 15 * a(n - 1) - 44 * a(n - 2) + 1. - _ Vincenzo Librandi _ , Feb 10 2011 ●

► [A154240] 1,16,198,2240,24356,259776,2743768,28833280,302193936,3162772736,33077115488,345793029120,3614215767616,37771456592896,394718790964608,4124756173045760,43102408892784896,450402684247904256 ⋆ a(n) = ((8 + sqrt(6)) ^ n - (8 - sqrt(6)) ^ n) / (2 * sqrt(6)). ● a(n) = 16 * a(n - 1) - 58 * a(n - 2) for n>1, with a(0)=0, a(1)=1. ●

► [A154249] 1,16,199,2272,25009,270640,2904727,31049152,331216993,3529670224,37595354983,400334476960,4262416397329,45379597170544,483115820080951,5143216082574208,54753855576573121,582898372518440080 ⋆ a(n) = ((8 + sqrt(7)) ^ n - (8 - sqrt(7)) ^ n) / (2 * sqrt(7)). ● a(n) = 16 * a(n - 1) - 57 * a(n - 2) for n>1, with a(0)=0, a(1)=1. ●

► [A154348] 1,16,200,2304,25664,281600,3068416,33325056,361369600,3915710464,42414669824,459354931200,4974457389056,53867442077696,583309459456000,6316374594945024,68396663789584384,740629643316428800 ⋆ a(n) = 16 * a(n - 1) - 56 * a(n - 2) for n>1, with a(0)=1, a(1)=16. ● a(n) = 16 * a(n - 1) - 56 * a(n - 2) for n>1. - _ Philippe Deléham _ , Jan 12 2009 ● a(n) = ((8 + 2 * sqrt(2)) ^ n - (8 - 2 * sqrt(2)) ^ n) / (4 * sqrt(2)). ●

► [A016165] 1,16,201,2336,26321,292656,3234841,35661376,392665761,4321276496,47543807081,523030706016,5753581906801,63290621677936,696202941972921,7658262879280256,84241044259973441,926652249799160976 ⋆ Expansion of 1 / ((1 - 5x)(1 - 11x)). ● a(n) = 11 * a(n - 1) + 5 ^ n, a(0)=1. - _ Vincenzo Librandi _ , Feb 09 2011 ●

► [A157707] 16,205,1165,4415,13055,32606,72030,144930,270930,477235,800371,1288105,2001545,3017420,4430540,6356436,8934180,12329385,16737385,22386595,29542051,38509130,49637450,63324950 ⋆ The z ^ 2 coefficients of the polynomials in the GF3 denominators of A156927 divided by 2 ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) ● a(n) = 1 / 4 * n ^ 6 + 7 / 4 * n ^ 5 + 37 / 8 * n ^ 4 + 34 / 6 * n ^ 3 + 25 / 8 * n ^ 2 + 7 / 12 * n ●

► [A016159] 1,16,208,2560,30976,372736,4476928,53739520,644939776,7739539456,92875522048,1114510458880,13374142283776,160489774514176,1925877562605568,23110531825008640,277326386195070976 ⋆ Expansion of 1 / ((1 - 4x)(1 - 12x)). ● a(n) = 2 ^ (2 * n - 1) * (3 ^ (n + 1) - 1). - _ Bruno Berselli _ , Feb 09 2011 ● a(n) = 12 * a(n - 1) + 4 ^ n with a(0)=1. - _ Vincenzo Librandi _ , Feb 09 2011 ● a(n) = 16 * a(n - 1) - 48 * a(n - 2), a(0)=1, a(1)=16. - _ Harvey P. Dale _ , Nov 30 2011 ● a(n) = 2 ^ (2n - 3) * (3 ^ n - 1). - _ Harvey P. Dale _ , Nov 30 2011 ●

► [A245828] 0,16,216,1280,5000,15120,38416,86016,174960,330000,585640,988416,1599416,2497040,3780000,5570560,8018016,11302416,15638520,21280000,28523880,37715216,49252016,63590400,81250000 ⋆ Szeged index of the grid graph P _ n X P _ n. ● a(n) = (1 / 3) * n ^ 4 * (n ^ 2 - 1). ●

► [A239096] 0,0,0,16,216,1584,8096,32256,106992,308352,795168,1873872,4098952,8422128,16406208,30522752,54556128,94140288,157458624,256141584,406401336,630447664,958234464,1429591680,2096803280 ⋆ (n ^ 9 + 21 * n ^ 5 - 190 * n ^ 3 + 168 * n) / 1260. ● a(n) = (n - 2) * (n - 1) * n * (n + 1) * (n + 2) * (n ^ 4 + 5 * n ^ 2 + 42) / 1260. [_ Bruno Berselli _ , May 12 2014] ●

► [A269290] 16,216,2124,19188,164556,1363572,11026764,87559668,685523916,5306911092,40706083404,309846524148,2343253251276,17623065834612,131903512372044,983118947312628,7300393156146636,54032675767734132,398738196097092684 ⋆ Number of 2 X n 0..3 arrays with some element plus some horizontally or antidiagonally adjacent neighbor totalling three no more than once. ● a(n) = 36 * 7 ^ (n - 4) * (120 * n + 53) for n>2. ●

► [A159739] 16,216,2592,29160,314928,3306744,34012224,344373768,3443737680,34093003032,334731302496,3263630199336,31632108085872,305023899399480,2928229434235008,28001193964872264,266834907194665104,2534931618349318488,24015141647519859360 ⋆ Number of permutations of 8 indistinguishable copies of 1..n arranged in a circle with exactly 1 local maximum. ● a(n) = (copies * n) * (copies + 1) ^ (n - 2) with copies = 8. ● a(n) = 8 * n * 9 ^ (n - 2). ● a(n) = 18 * a(n - 1) - 81 * a(n - 2) for n>3. ●

► [A017438] 16,225,676,1369,2304,3481,4900,6561,8464,10609,12996,15625,18496,21609,24964,28561,32400,36481,40804,45369,50176,55225,60516,66049,71824 ⋆ a(n) = (11 * n + 4) ^ 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n > 2. ●

► [A097829] 1,16,240,3585,53536,799456,11938305,178275120,2662188496,39754552321,593656096320,8865086892480,132382647290881,1976874622470736,29520736689770160,440834175724081665,6582991899171454816 ⋆ Partial sums of Chebyshev sequence S(n,15)= U(n,15 / 2)=A078364(n). ● a(n) = 16 * a(n - 1) - 16 * a(n - 2) + a(n - 3) with n>=2, a(- 1)=0, a(0)=1, a(1)=16. ● a(n) = 15 * a(n - 1) - a(n - 2) + 1 with n>=1, a(- 1)=0, a(0)=1. ● a(n) = (S(n + 1, 15) - S(n, 15) - 1) / 13. ●

► [A163441] 1,16,240,3600,54000,809880,12146400,182169120,2732133600,40975956000,614548634280,9216869130000,138232634196720,2073183516810000,31093163487414000,466328623499110680,6993897072666789600 ⋆ Number of reduced words of length n in Coxeter group on 16 generators S _ i with relations (S _ i) ^ 2 = (S _ i S _ j) ^ 5 = I. ● a(n) = 14 * a(n - 1) + 14 * a(n - 2) + 14 * a(n - 3) + 14 * a(n - 4) - 105 * a(n - 5). - _ Wesley Ivan Hurt _ , May 10 2021 ●

► [A163964] 1,16,240,3600,54000,810000,12149880,182246400,2733669120,41004633600,615063456000,9225861120000,138386556014280,2075777928630000,31136362758696720,467040848864310000,7005543845899914000 ⋆ Number of reduced words of length n in Coxeter group on 16 generators S _ i with relations (S _ i) ^ 2 = (S _ i S _ j) ^ 6 = I. ● a(n) = - 105 * a(n - 6) + 14 * Sum _{ k=1..5 } a(n - k). - _ Wesley Ivan Hurt _ , May 11 2021 ●

► [A207995] 16,243,3891,63267,1034073,16932816,277458045,4547477370,74538711609,1221819475953,20027983390866,328298744831580,5381481886580865,88213445048426316,1445998260462433698,23702862077090281716 ⋆ Number of nX60..2 arrays with new values 0..2 introduced in row major order and no element equal to any horizontal or vertical neighbor (colorings ignoring permutations of colors). ● a(n) = 30 * a(n - 1) - 291 * a(n - 2) + 1278 * a(n - 3) - 2901 * a(n - 4) + 3519 * a(n - 5) - 2152 * a(n - 6) + 516 * a(n - 7). ●

► [A304170] 16,244,892,2764,8236,24364,72172,214444,638956,1907884,5705452,17079724,51165676,153349804,459754732,1378674604,4134844396,12402174124,37201804012,111595975084,334769051116,1004269404844,3012732717292,9038047157164,27113839481836 ⋆ a(n) = 32 * 3 ^ n + 18 * 2 ^ n - 116 (n>=1). ● a(n) = 6 * a(n - 1) - 11 * a(n - 2) + 6 * a(n - 3) for n>2. ●

► [A077412] 1,16,255,4064,64769,1032240,16451071,262184896,4178507265,66593931344,1061324394239,16914596376480,269572217629441,4296240885694576,68470281953483775,1091228270370045824,17391182043967249409 ⋆ Chebyshev U(n,x) polynomial evaluated at x=8. ● a(n) = 16 * a(n - 1) - a(n - 2), n>=1, a(- 1)=0, a(0)=1. ● a(n) = S(n, 16) with S(n, x) := U(n, x / 2), Chebyshev's polynomials of the second kind. See A049310. ● a(n) = (((8 + 3 * sqrt(7)) ^ (n + 1) - (8 - 3 * sqrt(7)) ^ (n + 1))) / (6 * sqrt(7)). ●

► [A208376] 16,256,704,1344,2176,3200,4416,5824,7424,9216,11200,13376,15744,18304,21056,24000,27136,30464,33984,37696,41600,45696,49984,54464,59136 ⋆ Number of n X 5 0..1 arrays avoiding 0 0 0 and 1 1 1 horizontally and 0 0 1 and 1 0 1 vertically. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>4. ●

► [A017570] 16,256,784,1600,2704,4096,5776,7744,10000,12544,15376,18496,21904,25600,29584,33856,38416,43264,48400,53824,59536,65536,71824,78400,85264 ⋆ a(n) = (12 * n + 4) ^ 2. ● a(n) = a(n - 1) + 288 * n - 48, n >= 1. - _ Vincenzo Librandi _ , Mar 20 2011 ●

► [A207450] 16,256,1008,2560,5200,9216,14896,22528,32400,44800,60016,78336,100048,125440,154800,188416,226576,269568,317680,371200,430416,495616,567088,645120,730000 ⋆ Number of n X 5 0..1 arrays avoiding 0 0 0 and 0 0 1 horizontally and 0 0 1 and 1 0 1 vertically. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>4. ●

► [A207256] 16,256,1232,3776,9072,18688,34608,59264,95568,146944,217360,311360,434096,591360,789616,1036032,1338512,1705728,2147152,2673088,3294704,4024064,4874160,5858944,6993360 ⋆ Number of 5 X n 0..1 arrays avoiding 0 0 1 and 1 0 1 horizontally and 0 1 0 and 1 0 1 vertically. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. ●

► [A208284] 16,256,1260,3984,9900,21096,40376,71360,118584,187600,285076,418896,598260,833784,1137600,1523456,2006816,2604960,3337084,4224400,5290236,6560136,8061960,9825984,11885000 ⋆ Number of n X 5 0..1 arrays avoiding 0 0 0 and 0 0 1 horizontally and 0 0 1 and 1 1 0 vertically. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. ●

► [A207401] 16,256,1296,4356,11664,26896,55696,106276,190096,322624,524176,820836,1245456,1838736,2650384,3740356,5180176,7054336,9461776,12517444,16353936,21123216,26998416,34175716,42876304 ⋆ Number of n X 6 0..1 arrays avoiding 0 0 1 and 0 1 1 horizontally and 0 0 1 and 1 1 0 vertically. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

► [A308467] 1,16,256,1296,10000,104976,1048576,10556001,100000000,1003875856,10098039121,100469346961,1000000000000,10016218555281,100091400875761,1000417426149376,10000000000000000,100004631514837921,100002825819962864 1 ⋆ The smallest positive n - digit 4th power. ● a(n) = ceiling(10 ^ ((n - 1) / 4)) ^ 4. - _ Charlie Neder _ , Jun 13 2019 ●

► [A208140] 16,256,1600,6400,19600,50176,112896,230400,435600,774400,1308736,2119936,3312400,5017600,7398400,10653696,15023376,20793600,28302400,37945600,50183056,65545216,84640000,108160000,136890000 ⋆ Number of n X 6 0..1 arrays avoiding 0 0 1 and 0 1 1 horizontally and 0 0 1 and 1 0 1 vertically. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

► [A296779] 0,16,256,1744,6912,21744,55296,126016,256000,487600,864000,1467216,2370816,3716944,5619712,8306944,11943936,16875216,23328000,31800400,42592000,56397616,73598976,95137344,121485312 ⋆ Detour index of the n X n grid graph. ● a(2n - 1) = 32 * n ^ 3 * (n - 1) ^ 3, a(2n) = 4 * n ^ 2 * (8 * n ^ 4 - 5 * n ^ 2 + 1). - _ Andrew Howroyd _ , Dec 20 2017 ● a(n) = 2 * a(n - 1) + 4 * a(n - 2) - 10 * a(n - 3) - 5 * a(n - 4) + 20 * a(n - 5) - 20 * a(n - 7) + 5 * a(n - 8) + 10 * a(n - 9) - 4 * a(n - 10) - 2 * a(n - 11) + a(n - 12) for n>12. ●

► [A223682] 16,256,2032,9822,35509,105995,275775,646407,1395174,2815594,5372794,9777124,17079747,28794301,47049089,74774613,115931628,175785252,261231028,381179194,547003777,773063487,1077301747,1481933555 ⋆ Number of 4 X n 0..1 arrays with rows and antidiagonals unimodal. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>9. ●

► [A223756] 16,256,2500,16900,87616,372100,1352569,4338889,12559936,33362176,82373776,190992400,419266576,877225924,1759047481,3396208729,6338070544,11471266816,20192978404,34657779556,58123423744,95427859396 ⋆ Number of n X 2 0..3 arrays with rows, antidiagonals and columns unimodal. ● a(n) = 13 * a(n - 1) - 78 * a(n - 2) + 286 * a(n - 3) - 715 * a(n - 4) + 1287 * a(n - 5) - 1716 * a(n - 6) + 1716 * a(n - 7) - 1287 * a(n - 8) + 715 * a(n - 9) - 286 * a(n - 10) + 78 * a(n - 11) - 13 * a(n - 12) + a(n - 13) for n>13. ●

► [A223565] 16,256,3136,34496,379456,4174016,45914176,505055936,5555615296,61111768256,672229450816,7394523958976,81339763548736,894737399036096,9842111389397056,108263225283367616,1190895478117043776 ⋆ Number of nX4 0..1 arrays with antidiagonals unimodal ● a(n) = product { (1 + (i * (i + 1) / 2)) ^ 2 , i=1..(min(n,4) - 1) } * (1 + (min(n,4) * (min(n,4) + 1) / 2)) ^ (max(n,4) - min(n,4) + 1) ● a(n) = 11 * a(n - 1) for n>3 ●

► [A068770] 1,1,16,264,4480,77952,1386496,25135616,463233024,8658673664,163829383168,3132565553152,60446638866432,1175715287400448,2302856259226828,4538481328688898816,8993594212565909504 ⋆ Generalized Catalan numbers. ● a(n) = (8 ^ n) * p(n, - 7 / 8) with the row polynomials p(n, x) defined from array A068763. ● a(n + 1) = 8 * sum(a(k) * a(n - k), k=0..n), n>=1, a(0)=1=a(1). ● a(n) = (4 ^ (n - 1) * 14 ^ (1 / 2 * n + 1 / 2) * LegendreP(n + 1,2 / 7 * 14 ^ (1 / 2)) - LegendreP(n,2 / 7 * 14 ^ (1 / 2)) * 4 ^ n * 14 ^ (1 / 2 * n)) / n for n > 0. - _ Mark van Hoeij _ , Apr 23 2010 ●

► [A158574] 16,272,1040,2320,4112,6416,9232,12560,16400,20752,25616,30992,36880,43280,50192,57616,65552,74000,82960,92432,102416,112912,123920,135440,147472 ⋆ a(n) = 256 * n ^ 2 + 16. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A330151] 0,16,272,1568,5664,15664,36400,74816,140352,245328,405328,639584,971360,1428336,2042992,2852992,3901568,5237904,6917520,9002656,11562656,14674352,18422448,22899904,28208320 ⋆ Partial sums of 4th powers of the even numbers. ● a(n) = Sum _{ k=1..n } (2 * k) ^ 4 = (8 / 15) * n * (6 * n ^ 4 + 15 * n ^ 3 + 10 * n ^ 2 - 1). ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>5. ●

► [A000487] 16,272,2880,24576,185856,1304832,8728576,56520704,357888000,2230947840,13754155008,84134068224,511780323328,3100738912256,18733264797696,112949304754176,680032201605120,4090088616099840,24582312700149760,147669797096652800 ⋆ Number of permutations of length n with exactly two valleys. ● a(n) = (6 ^ n + (2 - 2n)4 ^ n + (2n ^ 2 - 4n - 1)2 ^ n) / 32. - Mitchell Harris, Apr 02 2004 ●

► [A158610] 1,16,272,4368,74000,1192208,20136208,325341456,5480210704,88767623440,1491701563664,24216213164304,406091813462288,6605442383524112,110564946629869840,1801558196812042512,30106184534058721552 ⋆ Expansion of (1 + 15 * x) / (1 - x - 256 * x ^ 2). ● a(n) = a(n - 1) + 256 * a(n - 2), a(0)=1, a(1)=16. ● a(n) = (1 / 2) * ((1 / 2 - (5 / 2) * sqrt(41)) ^ n + (1 / 2 + (5 / 2) * sqrt(41)) ^ n) + (31 / 410) * sqrt(41) * ((1 / 2 + (5 / 2) * sqrt(41)) ^ n - (1 / 2 - (5 / 2) * sqrt(41)) ^ n), with n >= 0. - _ Paolo P. Lava _ , Mar 30 2009 ●

► [A038758] 16,281,1785,7175,22015,56406,126966,259170,490050,871255,1472471,2385201,3726905,5645500,8324220,11986836,16903236,23395365,31843525,42693035,56461251,73744946,95228050,121689750,154012950 ⋆ Number of ways of covering a 2n X 2n lattice by 2n ^ 2 dominoes with exactly 4 horizontal (or vertical) dominoes. ● a(n) = (1 / 24) * n * (n - 1) * (n + 1) * (12 * n ^ 3 - 11 * n - 10). ●

► [A183886] 16,292,2574,13344,59518,250124,1024174,4143944,16671934,66886900,267965390,1072744752,4292852990,17175392028,68710014830,274857954776,1099469650494,4397958390916,17592001449102,70368358249024 ⋆ Number of arrangements of n + 3 numbers in 0..3 with each number being the sum mod 4 of three others. ● a(n) = 12 * a(n - 1) - 58 * a(n - 2) + 148 * a(n - 3) - 217 * a(n - 4) + 184 * a(n - 5) - 84 * a(n - 6) + 16 * a(n - 7) for n>8. ●

► [A172211] 1,16,313,2320,12160,53744,209428,683524,1905625,4664384,10297579,20907590,39664250,71114916,121559433,199459466,315906248,485124352,725031335,1057839684,1510706686,2116429956,2914190277,3950340692 ⋆ Number of ways to place 6 nonattacking bishops on a 6 X n board. ● a(n) = (648n ^ 6 - 17820n ^ 5 + 240930n ^ 4 - 2011545n ^ 3 + 10806047n ^ 2 - 35094560n + 53430940) / 10, n>=25. ●

► [A221577] 16,345,4240,26911,117104,395641,1116400,2754635,6127696,12553189,24049616,43584535,75375280,125247281,201055024,313170691,475045520,703848925,1021190416,1453929359,2035077616,2804800105,3811518320 ⋆ Number of 0..n arrays of length 7 with each element differing from at least one neighbor by something other than 1. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>10. ●

► [A155122] 0,16,360,1920,6160,15120,31416,58240,99360,159120,242440,354816,502320,691600,929880,1224960,1585216,2019600,2537640,3149440,3865680,4697616,5657080,6756480,8008800 ⋆ a(n) = 4 * (3 * n + 2) * (2 * n + 1) * (n + 2) * (n + 1). ● a(n) = 16 + 80 * n + 140 * n ^ 2 + 100 * n ^ 3 + 24 * n ^ 4. ●

► [A116166] 0,16,384,6144,81920,983040,11010048,117440512,1207959552,12079595520,118111600640,1133871366144,10720238370816,100055558127616,923589767331840,8444249301319680,76561193665298432,689050742987685888 ⋆ a(n) = 8 ^ n * n * (n + 1). ● a(n) = 24 * a(n - 1) - 192 * a(n - 2) + 512 * a(n - 3). - _ Vincenzo Librandi _ , Feb 28 2013 ●

► [A051360] 0,0,0,16,389,3112,16231,66177,228438,697219,1932601,4953493,11892484,27003029,58421782,121154728,241995312,467422242,875997590,1597434614,2841382379,4940146414,8411111897,14046656347,23041951126 ⋆ A class of Boolean functions of n variables and rank 4. ● a(n) = n * (n - 1) * (n - 2) * (n ^ 12 + 123 * n ^ 11 + 6947 * n ^ 10 + 238995 * n ^ 9 + 5406153 * n ^ 8 + 81325989 * n ^ 7 + 826126601 * n ^ 6 + 6015252225 * n ^ 5 + 31515483346 * n ^ 4 + 95237254188 * n ^ 3 + 64213530552 * n ^ 2 - 798617063520 * n - 210151791360 0) / 15!. ●

► [A269412] 16,394,2872,12380,39560,104006,238224,492312,939360,1681570,2857096,4647604,7286552,11068190,16357280,23599536,33332784,46198842,62956120,84492940,111841576,146193014,188912432,241555400,305884800 ⋆ Number of length - 6 0..n arrays with no repeated value greater than or equal to the previous repeated value. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

► [A269643] 16,396,2828,12125,38738,101999,234080,484673,926390,1660883,2825684,4601765,7221818,10979255,16237928,23442569,33129950,45940763,62632200,84091373,111349154,145595135,188193008,240696785,304867718 ⋆ Number of length - 6 0..n arrays with no repeated value differing from the previous repeated value by other than plus two or minus 1. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>9. ●

► [A172205] 0,0,16,408,8544,62266,291908,1021254,2916232,7179314,15790572,31795390,59638832,105546666,177953044,287974838,449932632,681918370,1006409660,1450930734,2048760064,2839684634,3870800868,5197362214,6883673384 ⋆ Number of ways to place 6 nonattacking kings on a 6 X n board. ● a(n) = 2 * (162n ^ 6 - 3240n ^ 5 + 29160n ^ 4 - 151830n ^ 3 + 483798n ^ 2 - 895085n + 749335) / 5, n>=5. ●

► [A000489] 1,16,435,7136,99350,1234032,14219212,155251840,1628202762,16550991200,164111079110,1594594348800,15235525651840,143518352447680,1335670583147400,12301278983461376,112264111607438906,1016361486936571680,9136254276320346046 ⋆ Card matching: Coefficients B[n,3] of t ^ 3 in the reduced hit polynomial A[n,n,n](t). ● a(n) = 3 * binomial(n, 3) * sum(binomial(n, k + 3) * binomial(n, k) * binomial(n - 3, k), k=0..n - 3) + 6n * binomial(n, 2) * sum(binomial(n, k + 1) * binomial(n - 1, k + 2) * binomial(n - 2, k), k=0..n - 3) + n ^ 3 * sum(binomial(n - 1, k) ^ 3, k=0..n - 1). ●

► [A187160] 0,0,0,16,544,2328,6172,11576,18540,27064,37148,48792,61996,76760,93084,110968,130412,151416,173980,198104,223788,251032,279836,310200,342124 ⋆ Number of 7 - step one space at a time bishop's tours on an n X n board summed over all starting positions. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>8. ●

► [A016792] 16,625,4096,14641,38416,83521,160000,279841,456976,707281,1048576,1500625,2085136,2825761,3748096,4879681,6250000,7890481,9834496,12117361,14776336,17850625,21381376,25411681,29986576 ⋆ a(n) = (3 * n + 2) ^ 4. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). (End) ●

► [A128048] 16,640,15360,278528,4259840,58195968,734003200,8724152320,99052683264,1084479242240,11527692222464,119571889520640,1214960348692480,12129812277624832,119275021381140480,1157425104234217472 ⋆ (n ^ 3 + n) * 8 ^ n. ● a(n) = 32 * a(n - 1) - 384 * a(n - 2) + 2048 * a(n - 3) - 4096 * a(n - 4). - _ Vincenzo Librandi _ , Feb 23 2013 ●

► [A221527] 0,16,768,8544,50400,205080,654864,1763328,4184064,9005400,17936160,33537504,59505888,101012184,165102000,261162240,401458944,601751448,88

1987904,1267087200,1787812320,2481740184,3394333008,4580116224 ⋆ Number of 0..n arrays of length 7 with each element differing from at least one neighbor by 2 or more. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>10. ●

▶ [A129008] 16,768,18432,327680,4915200,66060288,822083584,9663676416,108716359680,1181116006400,12472585027584,128642860449792,1300722255659008,12930256742645760,126663739519795200,1224979098644774912 ⋆ (n ^ 3 + n ^ 2) * 8 ^ n. ● a(n) = 32 * a(n - 1) - 384 * a(n - 2) + 2048 * a(n - 3) - 4096 * a(n - 4). - _ Vincenzo Librandi _ , Feb 12 2013 ●

▶ [A186855] 16,800,8352,34448,91328,186544,322528,498320,712080,963008,1251104,1576368,1938800,2338400,2775168,3249104,3760208,4308480,4893920,5516528,6176304,6873248,7607360,8378640,9187088 ⋆ Number of 6 - step knight's tours on an (n + 2) X (n + 2) board summed over all starting positions. ● a(n) = 18584 * n ^ 2 - 102168 * n + 126288 for n > 7. ●

▶ [A289707] 0,0,16,911,8013,38130,129932,358272,851710,1815124,3554910,6510729,11289019,18704640,29823436,46014402,69002190,100930284,144424446,202667301,279473821,379377584,507719550,670746120,875712560 ⋆ Number of 6 - cycles in the n - triangular honeycomb queen graph. ● a(n) = 3 * a(n - 1) + a(n - 2) - 10 * a(n - 3) + 3 * a(n - 4) + 13 * a(n - 5) - 3 * a(n - 6) - 12 * a(n - 7) - 3 * a(n - 8) + 13 * a(n - 9) + 3 * a(n - 10) - 10 * a(n - 11) + a(n - 12) + 3 * a(n - 13) - a(n - 14). ●

▶ [A290940] 0,0,16,920,7800,36260,122080,334656,794640,1696200,3334320,6137560,10706696,17859660,28683200,44591680,67393440,99365136,143334480,202771800,281890840,385759220,520418976,693017600,911950000 ⋆ Number of 6 - cycles in the n - triangular graph. ● a(n) = 2 * binomial(n, 4) (n ^ 3 + 27 * n ^ 2 - 220 * n + 392). ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8). ●

▶ [A374493] 1,16,1136,12112,74864,252016,859952,1887888,4793456,8830096,17893136,28366288,56672048,77264112,134040048,190776112,306783344,386279728,626936816,752843856,1179182864,1429131216,2014006448,2368768912,3628646192 ⋆ Number of ways of writing n ^ 2 as a sum of 8 squares. ● a(n) = [x ^ (n ^ 2)] (Sum _{ j= - n..n } x ^ (j ^ 2)) ^ 8. ● a(n) is divisible by 16 for n > 0. ●

▶ [A353029] 0,0,16,1152,16640,140800,887040,4616192,20987904,86261760,327782400,1169653760,3964207104,12869828608,40285306880,122211532800,360794030080,1040028008448,2935426646016,8130951905280,22146344550400,59411980615680,157208570494976 ⋆ Number of copies of the star graph S(2,2,2) contained in the n - dimensional hypercube graph. ● a(n) = 2 ^ n * C(n,3) * ((n - 1) ^ 3 - 3 * (n - 1)). ●

▶ [A186856] 16,1280,21664,118480,372384,847520,1584576,2596480,3879696,5424848,7224912,9277856,11583680,14142384,16953968,20018432,23335776,26906000,30729104,34805088,39133952,43715696,48550320,53637824,58978208 ⋆ Number of 7 - step knight's tours on an (n + 2) X (n + 2) board summed over all starting positions. ● a(n) = 126440 * n ^ 2 - 855176 * n + 1332608 for n >= 10. - _ Andrew Howroyd _ , Jan 02 2023 ●

▶ [A016828] 16,1296,10000,38416,104976,234256,456976,810000,1336336,2085136,3111696,4477456,6250000,8503056,11316496,14776336,18974736,24010000,29986576,37015056,45212176,54700816,65610000,78074896,92236816 ⋆ a(n) = (4 * n + 2) ^ 4. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ●

▶ [A351760] 0,0,16,1393,26481,247731,1516515,6978790,26131686,83684778,237014778,607915231,1436816095,3170754405,6600189141,13064343516,24750198748,45116627556,79482515700,135826148445,225852708445,366397514791,581244702423,903454469346,1378306878690 ⋆ a(n) = Sum _{ 1 <= i < j <= n } (i * j) ^ 4. ● a(n) = Sum _{ j=2..n } Sum _{ i=1..j - 1 } j ^ 4 * i ^ 4. ● a(n) = n * (n - 1) * (n + 1) * (2 * n - 1) * (2 * n + 1) * (9 * n ^ 5 + 20 * n ^ 4 - 15 * n ^ 3 - 50 * n ^ 2 + n + 30) / 1800. ● a(n) = binomial(2 * n + 2, 5) * (9 * n ^ 5 + 20 * n ^ 4 - 15 * n ^ 3 - 50 * n ^ 2 + n + 30) / 5!. ●

▶ [A186857] 16,2208,57392,405040,1508784,3846192,7777808,13502064,21089312,30521216,41748432,54726992,69434272,85865344,104020208,123898864,145501312,168827552,193877584,220651408,249149024,279370432,311315632,344984624,380377408 ⋆ Number of 8 - step knight's tours on an (n + 2) X (n + 2) board summed over all starting positions. ● a(n) = 861896 * n ^ 2 - 6840120 * n + 1269408 for n >= 12. - _ Andrew Howroyd _ , Jan 02 2023 ●

▶ [A016936] 16,4096,38416,160000,456976,1048576,2085136,3748096,6250000,9834496,14776336,21381376,29986576,40960000,54700816,71639296,92236816,116985856,146410000,181063936,221533456,268435456,322417936,384160000,454371856 ⋆ a(n) = (6 * n + 2) ^ 4. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Harvey P. Dale _ , Aug 22 2012 ●

▶ [A272358] 0,16,4112,65208,387424,1439480,4068096,9611392,20012288,37931904,66862960,111243176,176568672,269507368,398012384,571435440,800640256,1098115952,1478090448,1956643864,2551821920,3283749336,4174743232,5249426528,6534841344 ⋆ a(n) = n * (945 * n ^ 4 - 3150 * n ^ 3 + 4095 * n ^ 2 - 2370 * n + 496). ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6), for n>5. ●

▶ [A201241] 0,0,0,16,4450,442980,11281312,139580160,1103589198,6433276500,30047250222,118507673088,408912072478,1265701033492,3579712962750,9380986518528,23027843919870,53409035159316,117860600410206,248890790976000,505371757001454,990655558290772 ⋆ Number of ways to place 7 non - attacking wazirs on an n X n toroidal board. ● a(n) = n ^ 2 * (n ^ 12 - 105 * n ^ 10 + 4795 * n ^ 8 - 122115 * n ^ 6 + 1834084 * n ^ 4 - 15461460 * n ^ 2 + 57441600) / 5040, n>=8. ●

▶ [A079920] 1,16,6746,313464,9479292,174763208,2262089361,22088730348,171764779170,1106667645872,6087616677864,29267369636800,125299076209408,485013257865472,1718947213795328,5636819806209792,17235204961273600,49467590616190208,134058587073795072,344809293460572928,845577589114049792,1985060631106310400 ⋆ Solution to the Dancing School Problem with 15 girls and n + 15 boys: f(15,n). ● a(n) = n ^ 15 - 90 * n ^ 14 + 4200 * n ^ 13 - 131040 * n ^ 12 + 3011190 * n ^ 11 - 53441388 * n ^ 10 + 751250500 * n ^ 9 - 8470570680 * n ^ 8 + 76896261585 * n ^ 7 - 560015385930 * n ^ 6 + 3235452199980 * n ^ 5 - 14525684311320 * n ^ 4 + 48947506506080 * n ^ 3 - 116650912956480 * n ^ 2 + 175512302620800 * n - 125495209214208 for n >= 13. - _ Georg Fischer _ , Apr 27 2021 (polynomial computed by the program in links) ●

▶ [A017416] 16,28561,331776,1500625,4477456,10556001,21381376,38950081,65610000,104060401,157351936,228886641,322417936,442050625,592240896,777796321,1003875856,1275989841,1600000000,1982119441 ⋆ (11n + 2) ^ 4. ● a(0)=16, a(1)=28561, a(2)=331776, a(3)=1500625, a(4)=4477456, a(n)= 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) From _ Harvey P. Dale _ , Jun 05 2012 ●

▶ [A017548] 16,38416,456976,2085136,6250000,14776336,29986576,54700816,92236816,146410000,221533456,322417936,454371856,623201296,835210000,1097199376,1416468496,1800814096,2258530576 ⋆ a(n) = (12n + 2) ^ 4. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Wesley Ivan Hurt _ , Mar 02 2023 ●

▶ [A105312] 1,16,65535,21523360,1431655765,38146972656,564221981491,5538821761600,40210710958665,231627523606480,1111111111111111,4594972986357216,16807659899548765,55451384098598320,167534872139182395,469172025408063616,1229782938247303441 ⋆ a(n) = Sum _{ j=0..15 } n ^ j. ● a(n) = n ^ 15 + n ^ 14 + n ^ 13 + n ^ 12 + n ^ 11 + n ^ 10 + n ^ 9 + n ^ 8 + n ^ 7 + n ^ 6 + n ^ 5 + n ^ 4 + n ^ 3 + n ^ 2 + n ^ 1 + 1. ●

▶ [A241847] 17,18,21,26,33,42,53,66,81,98,117,138,161,186,213,242,273,306,341,378,417,458,501,546,593 ⋆ a(n) = n ^ 2 + 17. ● a(n) = a(- n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) = a(n - 1) + 2 * n - 1. ●

▶ [A151978] 0,1,17,18,34,35,51,52,68,69,85,86,102,103,119,120,136,137,153,154,170,171,187,188,204 ⋆ Numbers that are congruent to { 0, 1 } mod 17. ● a(n) = (34 * n - 15 * (- 1) ^ n - 49) / 4. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) = a(n - 2) + 17. ● a(n) + a(n + 1) = a(2n). (End) ●

▶ [A022107] 1,17,18,35,53,88,141,229,370,599,969,1568,2537,4105,6642,10747,17389,28136,45525,73661,119186,192847,312033,504880,816913 ⋆ Fibonacci sequence beginning 1, 17. ● a(n)= a(n - 1) + a(n - 2), n>=2, a(0)=1, a(1)=17. a(- 1): =16. ●

▶ [A041582] 17,18,35,88,123,334,1459,1793,3252,5045,43612,266717,310329,3370007,3680336,25452023,207296520,232748543,440045063,672793606,3131219487,6935232580,10066452067,27068136714 ⋆ Numerators of continued fraction convergents to sqrt(309). ● a(n) = 128405450990 * a(n - 26) - a(n - 52) for n>51. [_ Bruno Berselli _ , Nov 16 2013] ●

▶ [A140142] 1,17,18,274,275,1571,1572,5668,5669,15669,15670,36406,36407,74823,74824,140360,140361,245337,245338,405338,405339,639595,639596,971372,971373 ⋆ a(1)=1, a(n)=a(n - 1) + n ^ 0 if n odd, a(n)=a(n - 1) + n ^ 4 if n is even. ● a(n)=a(n - 1) +{ [1 - (- 1) ^ n] / 2 }+{ [1 + (- 1) ^ n] / 2 }* n ^ 4, with a(1)=1 a(n)=(1 / 4) - (1 / 4) * (- 1) ^ n * n - (1 / 4) * (- 1) ^ n + (1 / 2) * (- 1) ^ n * n ^ 3 + (1 / 6) * n ^ 3 + (29 / 60) * n + (1 / 10) * n ^ 5 + (1 / 4) * (- 1) ^ n * n ^ 4 + (1 / 4) * n ^ 4, with n>=1 - _ Paolo P. Lava _ , Jun 06 2008 ●

▶ [A041143] 1,1,17,18,305,323,5473,5796,98209,104005,1762289,1866294,31622993,33489287,567451585,600940872,10182505537,10783446409,182717648081,193501094490,3278735159921,3472236254411,58834515230497,62306751484908,1055742538989025 ⋆ Denominators of continued fraction convergents to sqrt(80). ● a(n) = 18 * a(n - 2) - a(n - 4). ● a(n) = Product _{ k = 1..floor(n / 2) } (16 + 4 * cos ^ 2(k * Pi / (n + 1))). ● a(n) = (5 + 3 * (- 1) ^ n) * Fibonacci(3 * (n + 1)) / 16. - _ Ehren Metcalfe _ , Apr 15 2019 ●

▶ [A041609] 1,1,17,18,629,647,10981,11628,406333,417961,7093709,7511670,262490489,270002159,4582525033,4852527192,169568449561,174420976753,2960304077609,3134725054362,109540955925917,112675680980279,1912351851610381,2025027532590660 ⋆ Denominators of continued fraction convergents to sqrt(322). ● a(n) = 646 * a(n - 4) - a(n - 8) for n>7. - _ Vincenzo Librandi _ , Dec 21 2013 ●

▶ [A008366] 1,17,19,23,29,31,37,41,43,47,53,59,61,67,71,73,79,83,89,97,101,103,107,109,113 ⋆ Smallest prime factor is >= 17. ● a(n) = a(n - 1) + a(n - 5760) - a(n - 5761). - _ Vaclav Kotesovec _ , Mar 18 2016 ● a(n) = (1001 / 192) * n + O(1), where the O(1) term is bounded by +/- 19. - _ Charles R Greathouse IV _ , Oct 13 2022 ●

▶ [A205646] 17,19,25,43,97,259,745,2203,6577,19699,59065,177163,531457,1594339,4782985,14348923,43046737,129140179,387420505,1162261483,3486784417,10460353219,31381059625,94143178843,282429536497 ⋆ Number of empty faces in Freij's family of Hansen polytopes. ● a(n) = 3 ^ n + 16. ● a(n) = 4 * a(n - 1) - 3 * a(n - 2). G.f.: - (49 * x - 17) / ((x - 1) * (3 * x - 1)). - _ Colin Barker _ , May 02 2013 ●

▶ [A045803] 17,19,31,33,117,119,131,133,217,219,231,233,317,319,331,333,417,419,431,433,517,519,531,533,617 ⋆ 3 - ish numbers (end in 17, 19, 31, 33). ● a(n) = - 75 / 2 - (23 * (- 1) ^ n) / 2 - (9 - 9 * i) * (- i) ^ n - (9 + 9 * i) * i ^ n + 25 * n where i=sqrt(- 1). - _ Colin Barker _ , Oct 16 2015 ●

▶ [A218864] 0,1,17,20,52,57,105,112,176,185,265,276,372,385,497,512,640,657,801,820,980,1001,1177,1200,1392 ⋆ Numbers of the form 9 * k ^ 2 + 8 * k, k an integer. ● a(n) = (18 * n * (n - 1) - 7 * (- 1) ^ n * (2 * n - 1) - 7) / 8. - _ Bruno Berselli _ , Nov 13 2012 ●

▶ [A069961] 1,17,20,73,169,464,1193,3145,8212,21521,56321,147472,386065,1010753,2646164,6927769,18137113,47483600,124313657,325457401,852058516,2230718177,5840095985,15289569808,40028613409 ⋆ Define C(n) by the recursion C(0) = 4 * i where i ^ 2 = - 1, C(n + 1) = 1 / (1 + C(n)), then a(n) = 4 * (- 1) ^ n / Im(C(n)) where Im(z) denotes the imaginary part of z. ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - a(n - 3). ● a(n) = (2 ^ (- 1 - n) * (- 15 * (- 1) ^ n * 2 ^ (2 + n) - (3 - sqrt(5)) ^ n * (- 35 + sqrt(5)) + (3 + sqrt(5)) ^ n * (35 + sqrt(5)))) / 5. - _ Colin Barker _ , Oct 01 2016 ●

▶ [A140146] 1,17,20,276,281,1577,1584,5680,5689,15689,15700,36436,36449,74865,74880,140416,140433,245409,245428,405428,405449,639705,639728,971504,971529 ⋆ a(1)=1, a(n)=a(n - 1) + n ^ 1 if n odd, a(n)=a(n - 1) + n ^ 4 if n is even. ● a(n)=a(n - 1) +{ [1 - (- 1) ^ n] / 2 }* n +{ [1 + (- 1) ^ n] / 2 }* n ^ 4, with a(1)=1 a(n)=(1 / 8) - (1 / 2) * (- 1) ^ n * n - (1 / 8) * (- 1) ^ n + (1 / 2) * (- 1) ^ n * n ^ 3 + (1 / 6) * n ^ 3 + (1 / 4) * n ^ 2 + (7 / 30) * n + (1 / 10) * n ^ 5 + (1 / 4) * (- 1) ^ n * n ^ 4 + (1 / 4) * n ^ 4, with n>=1 - _ Paolo P. Lava _ , Jun 06 2008 ●

► [A373583] 1,1,1,1,17,21,25,29,289,397,521,661,4913,7229,10137,13701,83521,129133,190249,269877,1419857,2280125,3492281,5149701,24137569 ⋆ Expansion of 1 / ((1 - 16 * x ^ 4) * (1 - x / (1 - 16 * x ^ 4) ^ (1 / 4))). ● a(4 * n) = 17 ^ n for n >= 0. ● a(n) = Sum _{ k=0..floor(n / 4) } 16 ^ k * binomial(n / 4,k). ● a(n) == 1 (mod 4). ●

► [A259555] 17,21,29,41,57,77,101,129,161,197,237,281,329,381,437,497,561,629,701,777,857,941,1029,1121,1217 ⋆ a(n) = 2 * n ^ 2 - 2 * n + 17. ● a(n) = 2 * n ^ 2 - 2 * n + 17. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Colin Barker _ , Jul 01 2015 ●

► [A219396] 0,17,21,72,80,165,177,296,312,465,485,672,696,917,945,1200,1232,1521,1557,1880,1920,2277,2321,2712,2760 ⋆ Numbers k such that 19 * k + 1 is a square. ● a(n) = a(- n + 1) = (38 * n * (n - 1) + 15 * (- 1) ^ n * (2 * n - 1) - 1) / 8 + 2. ●

► [A156567] 17,23,37,65,115,205,373,667,1193,2173,3887,6953,12665,22655,40525,73817,132043,236197,430237,769603,1376657,2507605,4485575,8023745,14615393 ⋆ Positive numbers y such that y ^ 2 is of the form x ^ 2 + (x + 23) ^ 2 with integer x. ● a(n) = 6 * a(n - 3) - a(n - 6) for n > 6; a(1)=17, a(2)=23, a(3)=37, a(4)=65, a(5)=115, a(6)=205. ●

► [A267984] 17,23,47,53,77,83,107,113,137,143,167,173,197,203,227,233,257,263,287,293,317,323,347,353,377 ⋆ Numbers congruent to { 17, 23 } mod 30. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3), n >= 4. ● a(n) = a(n - 2) + 30. ● a(n) = 10 * (3 * n - 2) - a(n - 1). ● a(n) = (30 * n - 9 * (- 1) ^ n - 5) / 2 for n>0. ● a(n) = 15 * n - 7 for n>0 and even. ● a(n) = 15 * n + 2 for n odd. ●

► [A214493] 17,23,65,89,149,191,269,329,425,503,617,713,845,959,1109,1241,1409,1559,1745,1913,2117,2303,2525,2729,2969 ⋆ Numbers of the form ((6k + 5) ^ 2 + 9) / 2 or 2(3k + 4) ^ 2 - 9. ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4). ● a(n) = (6 * n * (3 * n + 10) + 27 * (- 1) ^ n + 41) / 4. ●

► [A231963] 17,24,31,48,55,62,79,86,93,109,116,123,130,147,154,161,178,185,192,208,215,222,239,246,253 ⋆ Concatenate n with its UPC check digit. ● a(n) = 10n + c(n), where c(n) = - ((sum(i = 1 .. floor(L / 2), d(2i - 1)) + 3(sum(j = 0 .. floor(L / 2), d(2j)))) mod 10, where L is how many digits n has, d(L - 1) is the most significant digit of n, ..., and d(0) is the one's place digit. ●

► [A158803] 17,24,58,65,99,106,140,147,181,188,222,229,263,270,304,311,345,352,386,393,427,434,468,475,509 ⋆ Numbers k such that k ^ 2 == 2 (mod 41). ● a(n) = a(n - 1) + a(n - 2) - a(n - 3). ● a(n) = (1 / 4) * (41 + 27 * (- 1) ^ (n - 1) + 82 * (n - 1)). ●

► [A154277] 17,26,197,530,1025,1682,2501,3482,4625,5930,7397,9026,10817,12770,14885,17162,19601,22202,24965,27890,30977,34226,37637,41210,44945 ⋆ a(n) = 81 * n ^ 2 - 72 * n + 17. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Feb 02 2012 ●

► [A140150] 1,17,26,282,307,1603,1652,5748,5829,15829,15950,36686,36855,75271,75496,141032,141321,246297,246658,406658,407099,641355,641884,973660,974285 ⋆ a(1)=1, a(n)=a(n - 1) + n ^ 2 if n odd, a(n)=a(n - 1) + n ^ 4 if n is even. ● a(n)=a(n - 1) +{ [1 - (- 1) ^ n] / 2 }* n ^ 2 +{ [1 + (- 1) ^ n] / 2 }* n ^ 4, with a(1)=1 a(n)= - (1 / 2) * (- 1) ^ n * n + (1 / 2) * (- 1) ^ n * n ^ 3 + (1 / 3) * n ^ 3 - (1 / 4) * (- 1) ^ n * n ^ 2 + (1 / 4) * n ^ 2 + (1 / 15) * n + (1 / 10) * n ^ 5 + (1 / 4) * (- 1) ^ n * n ^ 4 + (1 / 4) * n ^ 4, with n>=1 - _ Paolo P. Lava _ , Jun 06 2008 ●

► [A032611] 17,28,39,410,511,612,713,814,915,1016,1117,1218,1319,1420,1521,1622,1723,1824,1925,2026,2127,2228,2329,2430,2531 ⋆ Concatenation of n and n + 6 or { n,n + 6 } . ● a(n) = n * 10 ^ floor(log _ 10(n + 6) + 1) + n + 6, with n >= 0. - _ Paolo P. Lava _ , Oct 09 2008 ●

► [A069755] 17,29,89,125,251,323,539,659,989,1169,1637,1889,2519,2855,3671,4103,5129,5669,6929,7589,9107,9899,11699,12635,14741 ⋆ Frobenius number of the numerical semigroup generated by 3 consecutive triangular numbers. ● a(n) = (- 14 + 6 * (- 1) ^ n + (3 + 9 * (- 1) ^ n) * n + 3 * (5 + (- 1) ^ n) * n ^ 2 + 6 * n ^ 3) / 8. ● a(n) = (6 * n ^ 3 + 18 * n ^ 2 + 12 * n - 8) / 8 for n even. ● a(n) = (6 * n ^ 3 + 12 * n ^ 2 - 6 * n - 20) / 8 for n odd. (End) ●

► [A267781] 17,31,47,61,107,137,151,167,181,197,211,227,241,257,271,287,301,317,331,347,361,377,391,407,421 ⋆ Expansion of (x * (- 14x ^ 6 - 32x ^ 5 + 16x ^ 4 + 30x ^ 3 - x + 14) + 17) / ((x - 1) ^ 2 * (x + 1)). ● a(n) = (30 * n - (- 1) ^ n + 123) / 2 for n > 4. - _ Colin Barker _ , Jan 21 2016 ●

► [A158057] 1,17,33,49,65,81,97,113,129,145,161,177,193,209,225,241,257,273,289,305,321,337,353,369,385 ⋆ First differences of A051870: 16 * n + 1. ● a(n) = 16 * n + 1. ● a(n) = 2 * a(n - 1) - a(n - 2), a(0) = 1, a(1) = 17. ●

► [A249356] 1,17,33,49,65,97,129,161,193,241,289,337,385,449,513,577,641,721,801,881,961,1057,1153,1249,1345 ⋆ 8 * A200975(n) - 7 where A200975 are the numbers on the diagonals in Ulam's spiral. ● a(n) = 2 * n * (n + 2) + (- 1) ^ n - 4 * sin((Pi * n) / 2). ● a(n) = 2 * a(n - 1) - a(n - 2) + 16 if n == 2 mod 4, a(n) = 2 * a(n - 1) - a(n - 2) otherwise. - _ Robert Israel _ , Nov 04 2014 ● a(n) = 2 * n * (n + 2) - (1 - (- 1) ^ n) * (1 - 2 * i ^ (n + 1)) + 1, where i=sqrt(- 1). - _ Bruno Berselli _ , Nov 18 2014 ●

► [A116523] 0,1,17,33,289,305,561,817,4913,4929,5185,5441,9537,9793,13889,17985,83521,83537,83793,84049,88145,88401,92497,96593,162129 ⋆ a(0)=1, a(1)=1, a(n) = 17 * a(n / 2) for n=2,4,6,..., a(n) = 16 * a((n - 1) / 2) + a((n + 1) / 2) for n=3,5,7,.... ● a(n) = Sum _{ k=0..n - 1 } 16 ^ wt(k), where wt = A000120. - _ Mike Warburton _ , Mar 22 2019 ●

► [A168579] 1,1,17,33,305,833,5713,19041,110449,415105,2182289,8823969,43740593,184924097,884773585,3843559137,17999936497,79496882689,367495866641,1639445989665,7519379855921,33750515690561,154060593385297 ⋆ G.f.: 1 / (1 - x - 16 * x ^ 2). ● a(0)=a(1)=1, a(n) = a(n - 1) + 16 * a(n - 2) for n>1. ● a(n) = (1 / sqrt(65)) * (((1 + sqrt(65)) / 2) ^ (n + 1) - ((1 - sqrt(65)) / 2) ^ (n + 1)), for n >= 0 [Binet representation] - _ Felix P. Muga II _ , Mar 12 2014 ●

► [A008599] 0,17,34,51,68,85,102,119,136,153,170,187,204,221,238,255,272,289,306,323,340,357,374,391,408 ⋆ Multiples of 17. ● a(n) = 17 * n = 2 * a(n - 1) - a(n - 2). ●

► [A249988] 0,17,34,52,69,87,104,121,139,156,173,190,207,224,241,258,275,292,309,325,342,358,374,390,406 ⋆ Integer part of sine of n degrees multiplied by 1000. ● a(n) = round(1000 * sin(pi * n / 180)), where round() is the rounding towards zero function. ● a(360 + n) = a(n). ● a(180 + n) = - a(n). ●

► [A110287] 17,34,68,136,272,544,1088,2176,4352,8704,17408,34816,69632,139264,278528,557056,1114112,2228224,4456448,8912896,17825792,35651584,71303168,142606336,285212672 ⋆ a(n) = 17 * 2 ^ n. ● a(n) = 2 * a(n - 1) (with a(0)=17). - _ Vincenzo Librandi _ , Dec 26 2010 ●

► [A042305] 1,17,35,52,295,2412,2707,5119,130682,135801,266483,2267665,11604808,13872473,39349754,682818291,35545900886,604963133353,1245472167592,185043530094 5,10497648672317,85831624679481,96329273351798,18216089803127 9,4650351724133773 ⋆ Denominators of continued fraction convergents to sqrt(679). ● a(n) = 35585250640 * a(n - 16) - a(n - 32) for n>31. - _ Vincenzo Librandi _ , Jan 19 2014 ●

► [A041566] 17,35,52,347,1093,1440,3973,9386,13359,22745,195319,2171254,4537827,20322562,45182951,517335023,4183863135,4701198158,8885061293,22471320744,53827702781,76299023525,282724773356 ⋆ Numerators of continued fraction convergents to sqrt(301). ● a(n) = 11766785075390 * a(n - 26) - a(n - 52) for n >51. [_ Bruno Berselli _ , Nov 16 2013] ●

► [A239129] 17,35,53,71,89,107,125,143,161,179,197,215,233,251,269,287,305,323,341,359,377,395,413,431,449 ⋆ a(n) = 18 * n - 1, n >= 1, the second column of triangle A239127 related to the Collatz problem. ● a(n) = 18 * n - 1 for n >= 1. ●

► [A212427] 0,17,35,54,74,95,117,140,164,189,215,242,270,299,329,360,392,425,459,494,530,567,605,644,684 ⋆ a(n) = 17 * n + A000217(n - 1). ● a(n) = (16 + n) * (17 + n) / 2 - 16 * 17 / 2 = 17 * n + (n - 1) * n / 2 = n * (n + 33) / 2. ● a(n) = 17n - floor(n / 2) + floor(n ^ 2 / 2). - _ Wesley Ivan Hurt _ , Jun 15 2013 ●

► [A195047] 0,1,17,35,68,103,153,205,272,341,425,511,612,715,833,953,1088,1225,1377,1531,1700,1871,2057,2245,2448 ⋆ Concentric 17 - gonal numbers. ● a(n) = 17 * n ^ 2 / 4 + 13 * ((- 1) ^ n - 1) / 8. [Typo fixed by _ Ivan Panchenko _ , Nov 08 2013] ● a(n) = a(- n) = (34 * n ^ 2 + 13 * (- 1) ^ n - 13) / 8. ●

► [A144534] 1,1,17,35,577,1189,19601,40391,665857,1372105,22619537,46611179,768398401,1583407981,26102926097,53789260175,886731088897,1827251437969,30122754096401,62072759630771,1023286908188737,2108646576008245,3476163212432065 7,71631910824649559 ⋆ Denominators of continued fraction convergents to sqrt(8 / 9). ● a(n) = 16 * a(n - 1) + a(n - 2) if n odd, otherwise a(n) = 2 * a(n - 1) + a(n - 2), for n >= 2. ● a(n) = 34 * a(n - 2) - a(n - 4). G.f.: (x ^ 3 - 17 * x ^ 2 + x + 1) / ((x ^ 2 - 6 * x + 1) * (x ^ 2 + 6 * x + 1)). [_ Colin Barker _ , Jul 16 2012] ●

► [A098849] 0,17,36,57,80,105,132,161,192,225,260,297,336,377,420,465,512,561,612,665,720,777,836,897,960 ⋆ a(n) = n * (n + 16). ● a(n) = (n + 8) ^ 2 - 8 ^ 2 = n * (n + 16), n>=0. ● a(n) = a(n - 1) + 2 * n + 15 (with a(0)=0). - _ Vincenzo Librandi _ , Nov 17 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A161549] 1,17,37,61,89,121,157,197,241,289,341,397,457,521,589,661,737,817,901,989,1081,1177,1277,1381,1489 ⋆ a(n) = 2n ^ 2 + 14n + 1. ● a(n) = a(n - 1) + 4 * n + 12 (with a(0)=1). - _ Vincenzo Librandi _ , Nov 30 2010 ●

► [A269788] 17,37,61,89,157,197,241,397,457,521,661,1277,1381,1489,1601,2089,2221,2357,2789,3257,3761,4877,5077,5281,5701 ⋆ Primes p such that 2 * p + 47 is a square. ● a(1) = 17 because 2 * 17 + 47 = 81, which is a square. ●

► [A139579] 0,17,38,63,92,125,162,203,248,297,350,407,468,533,602,675,752,833,918,1007,1100,1197,1298,1403,1512 ⋆ a(n) = 2 * n ^ 2 + 15 * n. ● a(n) = a(n - 1) + 4 * n + 13; a(0) = 0. - _ Vincenzo Librandi _ , Nov 24 2010 ●

► [A140679] 0,17,40,69,104,145,192,245,304,369,440,517,600,689,784,885,992,1105,1224,1349,1480,1617,1760,1909,2064 ⋆ a(n) = n * (3 * n + 14). ● a(n) = 3 * n ^ 2 + 14 * n. ● a(n) = a(n - 1) + 6 * n + 11, with a(0)=0. - _ Vincenzo Librandi _ , Aug 03 2010 ● a(n) = 3a(n - 1) - 3a(n - 2) + a(n - 3), with a(1)=0, a(2)=17, a(3)=40. - Harvey P. Dale, Apr 29 2011 ●

► [A350052] 17,41,65,89,113,137,161,185,209,233,257,281,305,329,353,377,401,425,449,473,497,521,545,569,593 ⋆ Third part of the trisection of A017077: a(n) = 17 + 24 * n. ● a(n) = 2 * a(n - 1) - a(n - 2), for n >= 1, with a(- 1) = - 7, a(0) = 17. ●

► [A166147] 1,17,41,73,113,161,217,281,353,433,521,617,721,833,953,1081,1217,1361,1513,1673,1841,2017,2201,2393,2593 ⋆ a(n) = 4 * n ^ 2 + 4 * n - 7. ● a(n) = a(n - 1) + 8 * n with n>1, a(1)=1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). (End) ●

► [A158014] 17,41,89,137,233,569,809,857,1049,1097,1193,1433,1913,2153,2777,3209,3449,3593,3833,3929,4073,4457,4793,4937,5273 ⋆ Primes p such that (p - 1) / 8 is also prime. ● a(n) >> n log ^ 2 n. - _ Charles R Greathouse IV _ , Oct 21 2021 ●

► [A164602] 1,17,41,201,689,2785,10393,40281,153313,588593,2250377,8620905,32994449,126335233,483631609,1851609849,7088640961,27138550865,103897588457,397765032969,1522813185137,5829981601057,22319655498073 ⋆ a(n) = ((1 + 4 * sqrt(2)) * (1 + 2 * sqrt(2)) ^ n + (1 - 4 * sqrt(2)) * (1 - 2 * sqrt(2)) ^ n) / 2. ● a(n) = 2 * a(n - 1) + 7 * a(n - 2) for n > 1; a(0) = 1, a(1) = 17. ●

► [A118587] 17,43,47,131,397,947,1883,3307,5321,8027,11527,15923,21317,27811,35507,44507,54913,66827,80351,95587,112637,131603,152587,175691,201017 ⋆ Expansion of (17 - 25 * x - 23 * x ^ 2 + 133 * x ^ 3) / (1 - x) ^ 4. ● a(n) = 17 * n ^ 3 - 62 * n ^ 2 + 71 * n + 17. ●

► [A172044] 1,17,43,79,125,181,247,323,409,505,611,727,853,989,1135,1291,1457,1633,1819,2015,2221,2437,2663,2899,3145 ⋆ 5 * n ^ 2 + 11 * n + 1. ● a(n)= + 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). G.f.: (- 1 - 14 * x + 5 * x ^ 2) / (x - 1) ^ 3 . - _ R. J. Mathar _ , Jan 04 2011 ●

► [A227721] 17,44,83,134,197,272,359,458,569,692,827,974,1133,1304,1487,1682,1889,2108,2339,2582,2837,3104,3383,3674,3977 ⋆ Floor(1 / s(n)), where s(n) = (2 n + 1) / (2n + 2) - n * log((n + 1) / n). ● a(n) = 2 + 9 * n + 6 * n ^ 2 (conjectured). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) (conjectured). ●

► [A140155] 1,17,44,300,425,1721,2064,6160,6889,16889,18220,38956,41153,79569,82944,148480,153393,258369,265228,425228,434489,668745,680912,1012688,1028313 ⋆ a(1)=1, a(n)=a(n - 1) + n ^ 3 if n odd, a(n)=a(n - 1) + n ^ 4 if n is even. ● a(n)=a(n - 1) +{ [1 - (- 1) ^ n] / 2 }* n ^ 3 +{ [1 + (- 1) ^ n] / 2 }* n ^ 4, with a(1)=1 a(n)= (- 1 / 16) - (1 / 4) * (- 1) ^ n * n + (1 / 16) * (- 1) ^ n + (1 / 4) * (- 1) ^ n * n ^ 3 + (5 / 12) * n ^ 3 - (3 / 8) * (- 1) ^ n * n ^ 2 + (1 / 8) * n ^ 2 - (1 / 60) * n + (1 / 10) * n ^ 5 + (1 / 4) * (- 1) ^ n * n ^ 4 + (3 / 8) * n ^ 4, with n>=1 - _ Paolo P. Lava _ , Jun 06 2008 ●

► [A128468] 17,47,77,107,137,167,197,227,257,287,317,347,377,407,437,467,497,527,557,587,617,647,677,707,737 ⋆ a(n) = 30 * n + 17. ● a(n) = 2 * a(n - 1) - a(n - 2) for n >= 2. - _ Jinyuan Wang _ , Mar 10 2020 ●

► [A229448] 17,47,128,324,753,1609,3184,5890,10281,17075,27176,41696,61977,89613,126472,174718,236833,315639,414320,536444,685985,867345,1085376,1345402,1653241 ⋆ Number of 5 X n 0..2 arrays with horizontal differences mod 3 never 1, vertical differences mod 3 never - 1, and rows and columns lexicographically nondecreasing. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. ●

► [A051869] 0,1,17,48,94,155,231,322,428,549,685,836,1002,1183,1379,1590,1816,2057,2313,2584,2870,3171,3487,3818,4164 ⋆ 17 - gonal (or heptadecagonal) numbers: a(n) = n * (15 * n - 13) / 2. ● a(n) = a(n - 1) + 15 * n - 14 with n>0, a(0)=0. - _ Vincenzo Librandi _ , Aug 06 2010 ● a(15 * a(n) + 106 * n + 1) = a(15 * a(n) + 106 * n) + a(15 * n + 1). - _ Vladimir Shevelev _ , Jan 24 2014 ●

► [A069129] 1,17,49,97,161,241,337,449,577,721,881,1057,1249,1457,1681,1921,2177,2449,2737,3041,3361,3697,4049,4417,4801 ⋆ Centered 16 - gonal numbers. ● a(n) = 8 * n ^ 2 - 8 * n + 1. ● a(n) = 16 * n + a(n - 1) - 16 with n > 1, a(1)=1. - _ Vincenzo Librandi _ , Aug 08 2010 ●

► [A120612] 1,1,17,49,353,1441,8177,37969,198593,966721,4912337,24325489,122336033,609554401,3054149297,15251614609,76315468673,381405156481,1907542343057,9536162033329,47685459212513,238413348924961,1192108586037617,5960417405949649 ⋆ For n>1, a(n) = 2 * a(n - 1) + 15 * a(n - 2); a(0)=1, a(1)=1. ● a(n) = (5 ^ n + (- 1) ^ n * 3 ^ n) / 2. ●

► [A098329] 1,1,17,49,481,2081,16241,85457,600769,3489601,23391697,143000177,938797729,5897385313,38397492017,244866166289,1590355308929,10231490804353,66456634775441,429898281869489,2795449543782241,18150017431150241,118194927388259057,769438418283309649 ⋆ Expansion of 1 / (1 - 2x - 31x ^ 2) ^ (1 / 2). ● a(n) = sum { k=0..floor(n / 2), binomial(n - k, k) * binomial(n, k) * 8 ^ k } . ● a(n) = hypergeom([1 / 2 - n / 2, - n / 2], [1], 32). - _ Peter Luschny _ , Mar 18 2018 ●

► [A005570] 17,50,99,164,245,342,455,584,729,890,1067,1260,1469,1694,1935,2192,2465,2754,3059,3380,3717,4070,4439,4824,5225 ⋆ Number of walks on cubic lattice. ● a(n) = 8 * n ^ 2 + 9 * n. ●

► [A195037] 0,17,51,102,170,255,357,476,612,765,935,1122,1326,1547,1785,2040,2312,2601,2907,3230,3570,3927,4301,4692,5100 ⋆ 17 times triangular numbers. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>2. ● a(n) = Sum _{ i=8n..9n } i. (End) ●

► [A258598] 17,51,153,459,1377,4131,12393,37179,111537,334611,1003833,3011499,9034497,27103491,81310473,243931419,731794257,2195382771,6586148313,19758444939,59275334817,177826004451,533478013353,1600434040059,4801302120177 ⋆ a(n) = 17 * 3 ^ n. ● a(n) = 3 * a(n - 1). ●

► [A330390] 1,17,51,391,1649,9945,47923,264911,1344513,7192513,37241747,196756215,1026622129,5398099913,28248776019,148265250559,776759693441,4074028646385,21352972081267,111964431151079,586929387683697,3077254104935737,16132307800494323 ⋆ G.f.: (1 + 15 * x) / (1 - 2 * x - 17 * x ^ 2). ● a(n) = 2 * a(n - 1) + 17 * a(n - 2) for n>1. ● a(n) / a(n - 1) ~ 1 + 3 * sqrt(2). ● a(n) = ((1 - 3 * sqrt(2)) ^ n * (- 16 + 3 * sqrt(2)) + (1 + 3 * sqrt(2)) ^ n * (16 + 3 * sqrt(2))) / (6 * sqrt(2)). - _ Colin Barker _ , Dec 14 2019 ●

► [A078757] 1,17,51,449,1853,12853,61557,382024,1971559,11585969,62088471,355111613,1939427729,10943439733,60338602299,338172377293,1873494595072,10464657396101,58113694771149,324052035315389,1801727076022631,10038214290617749,55845947547948897 ⋆ Values of A028470(n) / A000045(n + 1). ● a(n) = a(n - 1) + 25a(n - 2) + 11a(n - 3) - 47a(n - 4) - 11a(n - 5) + 25a(n - 6) - a(n - 7) - a(n - 8). ●

► [A042295] 1,1,17,52,277,606,2095,2701,4796,31477,36273,212842,249115,461957,711072,1173029,1884101,3057130,4941231,7998361,44933036,52931397,362521418,415452815,777974233 ⋆ Denominators of continued fraction convergents to sqrt(673). ● a(n) = 97626910587864 * a(n - 31) + a(n - 62) for n>61. - _ Vincenzo Librandi _ , Jan 19 2014 ●

► [A295869] 17,53,71,89,107,143,161,179,197,233,251,269,287,323,341,359,377,413,431,449,467,503,521,539,557 ⋆ Numbers not divisible by 2, 3 or 5 (A007775) with digital root 8. ● a(n) = (5 + 9 * (- 1) ^ n - (9 + 9 * i) * (- i) ^ n - (9 - 9 * i) * i ^ n + 90 * n) / 4, where i=sqrt(- 1). ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. ●

► [A180456] 17,53,109,157,173,193,227,229,281,349,439,607,659,701,709,827,883,977,1153,1187,1301,1619,1667,1867,2207 ⋆ Central term of seven successive primes whose average is a prime. ● a(n)=[p(n - 3) + p(n - 2) + p(n - 1) + p(n) + p(n + 1) + p(n + 2) + p(n + 3)] / 7 ●

► [A072895] 17,54,110,186,281,396,532,686,861,1055,1269,1503,1757,2030,2323,2636,2968,3320,3692,4084,4495,4927,5377,5848,6338 ⋆ Least k for the Theodorus spiral to complete n revolutions. ● a(n) = k means k is the least integer such that Sum _{ i=1..k } arctan(1 / sqrt(i)) > 2n * Pi. ●

► [A048508] 1,17,58,160,408,1000,2392,5624,13048,29944,68088,153592,344056,765944,1695736,3735544,8191992,17891320,38928376,84410360,182452216,393215992,845152248,1811939320,3875536888 ⋆ a(n) = T(3,n), array T given by A048505. ● a(n) = (n + 4) * (n + 9) * 2 ^ (n - 2) - 8. - _ Ralf Stephan _ , Feb 05 2004 ● a(n) = 7 * a(n - 1) - 18 * a(n - 2) + 20 * a(n - 3) - 8 * a(n - 4). - _ Colin Barker _ , Feb 25 2015 ●

► [A020879] 17,58,181,602,2006,6797,23205,79771,275462,954367,3314074,11526782,40136519,139865123,487656165,1700907382,5934174209,20707036102,72265263946,252219473921,880346196329,3072884622527,10726335768378,37442520667627,130702738526702 ⋆ Number of elementary edge - subgraphs in Moebius ladder M _ n. ● a(n) = 4 * a(n - 1) + 2 * a(n - 2) - 11 * a(n - 3) - 8 * a(n - 4) + a(n - 5) + a(n - 6) for n>7. ●

► [A104165] 17,59,101,311,353,479,521,941,983,1109,1361,1571,1613,1823,1949,2243,2663,2789,2999,3083,3251,3671,3881,4133,4259 ⋆ Sophie Germain type primes where 7 * Prime[n]=2 * Prime[m] + 1. ● a(n) = If (7 * Prime[n] - 1) / 2 is prime, then a[m]=(7 * Prime[n] - 1) / 2 ●

► [A195025] 0,17,62,135,236,365,522,707,920,1161,1430,1727,2052,2405,2786,3195,3632,4097,4590,5111,5660,6237,6842,7475,8136 ⋆ a(n) = n * (14 * n + 3). ● a(n) = 14 * n ^ 2 + 3 * n. ●

► [A172076] 0,1,17,62,150,295,511,812,1212,1725,2365,3146,4082,5187,6475,7960,9656,11577,13737,16150,18830,21791,25047,28612,32500 ⋆ a(n) = n * (n + 1) * (14 * n - 11) / 6. ● a(n) = Sum _{ i=0..n - 1 } (n - i) * (14 * i + 1), with a(0)=0. - _ Bruno Berselli _ , Feb 10 2014 ●

► [A130885] 1,17,65,163,329,581,937,1415,2033,2809,3761,4907,6265,7853,9689,11791,14177,16865,19873,23219,26921,30997,35465,40343,45649 ⋆ 3n ^ 3 - 2n ^ 2 + n - 1. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Vincenzo Librandi _ , Feb 12 2013 ●

► [A036545] 1,17,65,209,641,1937,5825,17489,52481,157457,472385,1417169,4251521,12754577,38263745,114791249,344373761,1033121297,3099363905,9298091729,27894275201,83682825617,251048476865,753145430609 ⋆ a(n) = T(4,n), array T given by A048471. ● a(n) = 8 * 3 ^ n - 7. - _ Ralf Stephan _ , Feb 17 2004 ● a(n) = 3 * a(n - 1) + 14. ● a(n) = 4 * a(n - 1) - 3 * a(n - 2). ●

► [A156570] 17,65,373,2173,12665,73817,430237,2507605,14615393,85184753,496493125,2893773997,16866150857,98303131145,572952636013,3339412684933,19463523473585,113441728156577,661186845465877,3853679344638685 ⋆ a(n) = 6 * a(n - 1) - a(n - 2) for n > 2; a(1)=17, a(2)=65. ● a(n) = ((74 + 47 * sqrt(2)) * (3 - 2 * sqrt(2)) ^ n + (74 - 47 * sqrt(2)) * (3 + 2 * sqrt(2)) ^ n) / 4. ●

► [A157474] 17,66,147,260,405,582,791,1032,1305,1610,1947,2316,2717,3150,3615,4112,4641,5202,5795,6420,7077,7766,8487,9240,10025 ⋆ a(n) = 16n ^ 2 + n. ● a(1)=17, a(2)=66, a(3)=147, a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Nov 08 2011 ●

► [A024215] 1,17,66,166,335,591,952,1436,2061,2845,3806,4962,6331,7931,9780,11896,14297,17001,20026,23390,27111,31207,35696,40596,45925 ⋆ Sum of squares of first n positive integers congruent to 1 mod 3. ● a(n) = n * (6 * n ^ 2 - 3 * n - 1) / 2. ●

► [A244630] 0,17,68,153,272,425,612,833,1088,1377,1700,2057,2448,2873,3332,3825,4352,4913,5508,6137,6800,7497,8228,8993,9792 ⋆ a(n) = 17 * n ^ 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n > 2. ● a(n) = a(- n). - _ Muniru A Asiru _ , Jun 29 2018 ●

► [A157910] 17,71,161,287,449,647,881,1151,1457,1799,2177,2591,3041,3527,4049,4607,5201,5831,6497,7199,7937,8711,9521,10367,11249 ⋆ a(n) = 18 * n ^ 2 - 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). (End) ●

► [A320895] 1,17,71,263,513,1377,2063,4111,6298,10298,12960,23328,27722,38698,52198,72678,82504,117496,131214,179214,216258,258850,283184,393776,440651 ⋆ a(n) = Sum _{ k=1..n } k ^ 3 * tau(k), where tau is A000005. ● a(n) = Sum _{ k=1..n } (k ^ 3 / 4) * floor(n / k) ^ 2 * floor(1 + n / k) ^ 2. - _ Daniel Suteu _ , Nov 07 2018 ●

► [A130748] 17,72,190,395,711,1162,1772,2565,3565,4796,6282,8047,10115,12510,15256,18377,21897,25840,30230,35091,40447,46322,52740,59725,67301 ⋆ Place n points on each of the three sides of a triangle, 3n points in all; a(n) = number of nondegenerate triangles that can be constructed using these points (plus the 3 original vertices) as vertices. ● a(n) = C(3 * (n + 1), 3) - 3 * C(n + 2, 3) where n>0. ● a(n) = (8n ^ 3 + 15n ^ 2 + 9n + 2) / 2 \\ _ Charles R Greathouse IV _ , Feb 14 2013 ●

► [A063494] 1,17,75,203,429,781,1287,1975,2873,4009,5411,7107,9125,11493,14239,17391,20977,25025,29563,34619,40221,46397,53175,60583,68649 ⋆ a(n) = (2 * n - 1) * (7 * n ^ 2 - 7 * n + 3) / 3. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Wesley Ivan Hurt _ , May 11 2023 ●

► [A357740] 0,0,17,78,234,520,1035,1806,2996,4608,6885,9790,13662,18408,24479,31710,40680,51136,63801,78318,95570,115080,137907,163438,192924 ⋆ Number of non - equivalent ways under symmetry in one axis that 2 non - attacking kings of different colors can be placed on an n X n board. ● a(n) = n ^ 4 / 2 - 4 * n ^ 2 + (9 / 2) * n - 1 if n is odd else n ^ 4 / 2 - (9 / 2) * n ^ 2 + 6 * n - 2; ● a(n) = n ^ 4 / 2 - (17 / 4) * n ^ 2 + (21 / 4) * n - 3 / 2 + (- 1) ^ n * (- (1 / 4) * n ^ 2 + (3 / 4) * n - 1 / 2); ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 6 * a(n - 3) + 6 * a(n - 5) - 2 * a(n - 6) - 2 * a(n - 7) + a(n - 8); ● a(n) = (n - 2) * (n - 1) * ((n + 3) * n - 2 + (n mod 2)) / 2. ●

► [A172045] 0,1,17,80,240,565,1141,2072,3480,5505,8305,12056,16952,23205,31045,40720,52496,66657,83505,103360,126560,153461,184437,219880,260200 ⋆ a(n) = (9 * n ^ 4 + 10 * n ^ 3 - 3 * n ^ 2 - 4 * n) / 12. ● a(n) = n * (n + 1) * (9 * n ^ 2 + n - 4) / 12. - _ Bruno Berselli _ , Apr 21 2010 ●

► [A060934] 1,17,80,303,1039,3364,10493,31885,95032,279051,809771,2327372,6636025,18794633,52925984,148303719,413768263,1150029940,3185625077,8797726981,24230897416,66574108227 ⋆ Second column of Lucas bisection triangle (even part). ● a(n) = 2 * n * Lucas(2 * n + 2) + Fibonacci(2 * n + 2). - _ G. C. Greubel _ , Apr 09 2021 ●

► [A228602] 17,80,388,1872,9040,43648,210752,1017600,4913408,23724032,114549760,553095168,2670579712,12894699520,62261116928,300623265792,1451537530880,7008643186688,33840722870272,163397464227840,788952748392448,3809400850481152 ⋆ a(1) = 17, a(2) = 80, a(n) = 4 * (a(n - 1) + a(n - 2)) for n >= 3. ● a(n) = (1 / 8) * (12 - 11 * sqrt(2)) * (2 - 2 * sqrt(2)) ^ n + (1 / 8) * (12 + 11 * sqrt(2)) * (2 + 2 * sqrt(2)) ^ n. ●

► [A373518] 1,1,1,1,17,81,241,3361,32481,183457,2534561,36903681,325995121,4808334961,90981786897,1126128625441,18354227120321,415821040873281,6714588707173441,122710186163310337,3174234862391072721,63597591858999638161,1308604168710672673841 ⋆ Expansion of e.g.f. exp(x / (1 - x ^ 3) ^ (2 / 3)). ● a(n) = n! * Sum _{ k=0..floor(n / 3) } binomial(2 * n / 3 - k - 1,k) / (n - 3 * k)!. ●

► [A347501] 17,81,405,2025,10125,50625,253125,1265625,6328125,31640625,158203125,791015625,3955078125,19775390625,98876953125,494384765625,2471923828125,12359619140625,61798095703125,308990478515625,1544952392578125,7724761962890625 ⋆ Number of dominating sets in the n - alkane graph. ● a(n) = 81 * 5 ^ (n - 2) for n > 1. ●

► [A354012] 1,1,17,81,702,4623,35044,248045,1819731,13110984,95362462,690253391,5008926698,36300216768,263252448712,1908449014617,13837881924141,100326715619679,727420462629671,5274035027493046,38238994112367061,277246970248002472,2010151423463689959 ⋆ Number of tilings of a 4 X n rectangle using 2 X 2 tiles, right trominoes and dominoes. ● a(n)=5 * a(n - 1) + 28 * a(n - 2)

- 69 * a(n - 3) - 142 * a(n - 4) + 194 * a(n - 5) + 78 * a(n - 6) - 57 * a(n - 7) - 36 * a(n - 8) + 70 * a(n - 9) - 32 * a(n - 10). ●

► [A065960] 1,17,82,272,626,1394,2402,4352,6642,10642,14642,22304,28562,40834,51332,69632,83522,112914,130322,170272,196964,248914,279842,356864,391250 ⋆ a(n) = n ^ 4 * Product _{ distinct primes p dividing n } (1 + 1 / p ^ 4). ● a(n) = n ^ 4 * Sum _{ d|n } mu(d) ^ 2 / d ^ 4. - _ Benoit Cloitre _ , Apr 07 2002 ●

► [A001159] 1,17,82,273,626,1394,2402,4369,6643,10642,14642,22386,28562,40834,51332,69905,83522,112931,130322,170898,196964,248914,279842,358258,391251 ⋆ sigma _ 4(n): sum of 4th powers of divisors of n. ● a(n) = Sum _{ d|n } tau _{- 2 }^ (d) * J _ 4(n / d), where tau _{- 2 } is A007427 and J _ 4 A059377. - _ Enrique Pérez Herrero _ , Jan 19 2013 ●

► [A294288] 0,0,17,82,354,898,2275,4420,8772,14708,25333,38678,60710,86870,127687,174216,243848,320808,432345,552666,722666,902506,1151403,1410508,1763020 ⋆ Sum of the fourth powers of the parts in the partitions of n into two distinct parts. ● a(n) = Sum _{ i=1..floor((n - 1) / 2) } i ^ 4 + (n - i) ^ 4. ● a(n) = (1 / 480) * (n * (- 16 + 160 * n ^ 2 - 15 * (17 + (- 1) ^ n) * n ^ 3 + 96 * n ^ 4)). ● a(n) = a(n - 1) + 5 * a(n - 2) - 5 * a(n - 3) - 10 * a(n - 4) + 10 * a(n - 5) + 10 * a(n - 6) - 10 * a(n - 7) - 5 * a(n - 8) + 5 * a(n - 9) + a(n - 10) - a(n - 11) for n>11. ●

► [A343498] 1,17,83,274,629,1411,2407,4388,6729,10693,14651,22742,28573,40919,52207,70216,83537,114393,130339,172346,199781,249067,279863,364204,393145 ⋆ a(n) = Sum _{ k=1..n } gcd(k, n) ^ 4. ● a(n) = Sum _{ d|n } phi(n / d) * d ^ 4. ● a(n) = Sum _{ d|n } mu(n / d) * d * sigma _ 3(d). ●

► [A193046] 1,1,17,83,275,727,1673,3505,6873,12843,23155,40639,69889,118353,198097,328659,541667,888311,1451433,2365089,3846201,6245771,10131747,16423103,26606785 ⋆ Constant term of the reduction by x ^ 2 - >x + 1 of the polynomial p(n,x) defined at Comments. ● a(n) = 5 * a(n - 1) - 9 * a(n - 2) + 6 * a(n - 3) + a(n - 4) - 3 * a(n - 5) + a(n - 6). ●

► [A213436] 1,17,84,260,625,1281,2352,3984,6345,9625,14036,19812,27209,36505,48000,62016,78897,99009,122740,150500,182721,219857,262384,310800,365625 ⋆ Principal diagonal of the convolution array A212891. ● a(n) = (11 * n ^ 4 + 6 * n ^ 3 - 5 * n ^ 2) / 12. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ●

► [A344523] 1,17,84,276,649,1417,2528,4432,7033,10905,15556,22836,30673,41729,54944,71968,89969,115457,140820,175444,212537,257113,302720,366160,426505 ⋆ a(n) = Sum _{ 1 <= i, j, k, l <= n } gcd(i,j,k,l). ● a(n) = Sum _{ k=1..n } phi(k) * floor(n / k) ^ 4. ●

► [A156157] 17,85,493,2873,16745,97597,568837,3315425,19323713,112626853,656437405,3825997577,22299548057,129971290765,757528196533,4415197888433,25733659134065,149986756915957,874186882361677,5095134537254105 ⋆ a(n) = 6 * a(n - 1) - a(n - 2) for n > 2; a(1) = 17, a(2) = 85. ● a(n) = ((2 + sqrt(2)) * (3 - 2 * sqrt(2)) ^ n + (2 - sqrt(2)) * (3 + 2 * sqrt(2)) ^ n) * 17 / 4. ●

► [A080770] 17,86,157,260,401,586,821,1112,1465,1886,2381,2956,3617,4370,5221,6176,7241,8422,9725,11156,12721,14426,16277,18280,20441 ⋆ a(n)=[e * (n + 3)!] - (n + 3)(n + 2)(n + 1)(n) * [e * (n - 1)!]. ● a(1)=17 n>1 a(n)=n ^ 3 + 7 * n ^ 2 + 17 * n + 16 ●

► [A061679] 17,87,277,647,1257,2167,3437,5127,7297,10007,13317,17287,21977,27447,33757,40967,49137,58327,68597,80007,92617,106487,121677,138247,156257 ⋆ Concatenation of n ^ 3 and 7. ● a(n) = 10 * n ^ 3 + 7. ●

► [A271567] 1,17,87,287,742,1638,3234,5874,9999,16159,25025,37401,54236,76636,105876,143412,190893,250173,323323,412643,520674,650210,804310,986310,1199835 ⋆ Convolution of nonzero triangular numbers (A000217) and nonzero tetradecagonal numbers (A051866). ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). ● a(n) = (n + 1) * (n + 2) * (n + 3) * (n + 4) * (12 * n + 5) / 120. ●

► [A228462] 17,91,310,821,1847,3703,6812,11721,19117,29843,44914,65533,93107,129263,175864,235025,309129,400843,513134,649285,812911,1007975,1238804,1510105,1826981 ⋆ Number of arrays of maxima of three adjacent elements of some length 7 0..n array. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. ●

► [A213574] 1,17,93,349,1093,3093,8221,20957,51861,125509,298477,699789,1621285,3718325,8453181,19069885,42728245,95156901,210762253,464517485,1019214021,2227173397,4848613213,10519312029,22749902293 ⋆ Principal diagonal of the convolution array A213573. ● a(n) = 9 * a(n - 1) - 33 * a(n - 2) + 63 * a(n - 3) - 66 * a(n - 4) + 36 * a(n - 5) - 8 * a(n - 6). ● a(n) = 2 ^ n * (3 + 2 * n + n ^ 2) - (3 + 4 * n + 4 * n ^ 2). - _ Colin Barker _ , Oct 30 2017 ●

► [A081593] 1,17,97,241,449,721,1057,1457,1921,2449,3041,3697,4417,5201,6049,6961,7937,8977,10081,11249,12481,13777,15137,16561,18049 ⋆ Third row of Pascal - (1,7,1) array A081582. ● a(n) = 1 - 16 * n + 32 * n ^ 2. ●

► [A008514] 1,17,97,337,881,1921,3697,6497,10657,16561,24641,35377,49297,66977,89041,116161,149057,188497,235297,290321,354481,428737,514097,611617,722401 ⋆ 4 - dimensional centered cube numbers. ● a(n) = n ^ 4 + (n + 1) ^ 4. ● a(n) = 2 * n ^ 4 + 4 * n ^ 3 + 6 * n ^ 2 + 4 * n + 1. - Al Hakanson (hawkuu(AT)gmail.com), May 27 2009, corrected _ R. J. Mathar _ , May 29 2009 ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5), with a(0) = 1, a(1) = 17, a(2) = 97, a(3) = 337, a(4) = 881. - _ Harvey P. Dale _ , Jan 28 2013 ● a(n) = 4 * (n + n ^ 2) + 2 * (n + n ^ 2) ^ 2 + 1. - _ Avi Friedlich _ , Mar 31 2015 ●

► [A184327] 1,17,97,577,3361,19601,114241,665857,3880897,22619537,131836321,768398401,4478554081,26102926097,152139002497,886731088897,5168247530881,30122754096401,175568277047521,1023286908188737,5964153172084897,34761632124320657 ⋆ a(1)=1, a(2)=17; thereafter a(n) = 6 * a(n - 1) - a(n - 2) + c, where c= - 4 if n is odd, c=12 if n is even. ● a(n) = a(- n) = 6 * a(n - 1) - 6 * a(n - 3) + a(n - 4). ● a(n) = ((1 + sqrt(2)) ^ (2n) + (1 - sqrt(2)) ^ (2n)) / 2 + (- 1) ^ n - 1. ●

► [A282997] 17,97,16561,89041,2579199841,3497992081,5645806321,2110320768 1,428888025121,686770904161,2726023770721,4017427557361,6831989588161,693 3052766641,10138513506001,19387278797041,23452359542401,35287577206801,4 0057354132561,62093498771041,64116963608881 ⋆ Primes of the form (p ^ 2 + q ^ 2) / 2 such that |q ^ 2 - p ^ 2| is square, where p and q are prime. ● a(n) = = 1 (mod 16). ●

► [A253707] 17,98,291,644,1205,2022,3143,4616,6489,8810,11627,14988,18941,23534,28815,34832,41633,49266,57779,67220,77637,89078,101591,115224,130025 ⋆ Numbers M(n) which are the number of terms in the sums of consecutive cube d integers equaling a squared integer, b ^ 3 + (b + 1) ^ 3 + ... + (b + M - 1) ^ 3 = c ^ 2, for a first term b(n) being an odd squared integer (A016754). ● a(n) = n(8n(n + 1) + 1). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Colin Barker _ , Jan 10 2015 ●

► [A000538] 0,1,17,98,354,979,2275,4676,8772,15333,25333,39974,60710,89271,127687,178312,243848,327369,432345,562666,722666,917147,1151403,1431244,1763020 ⋆ Sum of fourth powers: 0 ^ 4 + 1 ^ 4 + ... + n ^ 4. ● a(n) = n * (1 + n) * (1 + 2 * n) * (- 1 + 3 * n + 3 * n ^ 2) / 30. ● a(n) = Sum _{ i = 1..n } J _ 4(i) * floor(n / i), where J _ 4 is A059377. - _ Enrique Pérez Herrero _ , Feb 26 2012 ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) + 24. - _ Ant King _ , Sep 23 2013 ● a(n) = - Sum _{ j=1..4 } j * s(n + 1, n + 1 - j) * S(n + 4 - j,n), where s(n,k) and S(n,k) are the Stirling numbers of the first kind and the second kind, respectively. - _ Mircea Merca _ , Jan 25 2014 ● a(n) = (n + 1) * (n + 1 / 2) * n * (n + 1 / 2 + sqrt(7 / 12)) * (n + 1 / 2 - sqrt(7 / 12)) / 5, see the Graham et al. reference, p. 275. - _ Wolfdieter Lang _ , Apr 02 2015 ●

► [A023873] 1,1,17,98,490,2411,11940,56093,256274,1140980,4977222,21273772,89281011,368408970,1496993290,5996312751,23700208290,92510062036,356887002352,1361671469470,5141380256124,19221678032134,71190778935805,261320839754142,951091521384860 ⋆ Expansion of Product _{ k>=1 } (1 - x ^ k) ^ (- k ^ 4). ● a(n) = (1 / n) * Sum _{ k=1..n } sigma _ 5(k) * a(n - k). - _ Seiichi Manyama _ , Mar 04 2017 ●

► [A257449] 1,17,99,373,1115,2901,6907,15509,33483,70405,145451,296997,601819,1213493,2439195,4893301,9804587,19630629,39286603,78602885,157240251,314520277,629086139,1258224213,2516507275 ⋆ a(n) = 75 * (2 ^ n - 1) - 4 * n ^ 3 - 18 * n ^ 2 - 52 * n. ● a(n) = 6 * a(n - 1) - 14 * a(n - 2) + 16 * a(n - 3) - 9 * a(n - 4) + 2 * a(n - 5) for n>5. ●

► [A229425] 17,102,524,2204,7816,24126,66503,166972,387738,842802,1731129,3385828,6344979,11451106,19987862,33864276,55858927,89938670,141669058,218736396,331604442,494332150,725582545,1049856844,1498992304 ⋆ Number of n X 5 0..2 arrays with horizontal differences mod 3 never 1, vertical differences mod 3 never - 1, rows lexicographically nondecreasing, and columns lexicographically nonincreasing. ● a(n) = 11 * a(n - 1) - 55 * a(n - 2) + 165 * a(n - 3) - 330 * a(n - 4) + 462 * a(n - 5) - 462 * a(n - 6) + 330 * a(n - 7) - 165 * a(n - 8) + 55 * a(n - 9) - 11 * a(n - 10) + a(n - 11) for n>11. ●

► [A160767] 1,17,103,367,971,2131,4117,7253,11917,18541,27611,39667,55303,75167,99961,130441,167417,211753,264367,326231,398371,481867,577853,687517,812101 ⋆ Expansion of (1 + 12 * x + 28 * x ^ 2 + 12 * x ^ 3 + x ^ 4) / (1 - x) ^ 5. ● a(n) = 9 * n ^ 4 / 4 + 9 * n ^ 3 / 2 + 23 * n ^ 2 / 4 + 7 * n / 2 + 1. - _ R. J. Mathar _ , Sep 11 2011 ● a(0)=1, a(1)=17, a(2)=103, a(3)=367, a(4)=971, a(n)=5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Harvey P. Dale _ , Feb 28 2015 ●

► [A254757] 17,103,601,3503,20417,118999,693577,4042463,23561201,137324743,800387257,4664998799,27189605537,158472634423,923646201001,5383404571583,31376781228497,182877282799399,1065886915567897,6212444210607983 ⋆ Part of the positive proper solutions x of the Pell equation x ^ 2 - 2 * y ^ 2 = - 7 ^ 2 based on the fundamental solution (x0, y0)= (- 1, 5). ● a(n) = rational part of z(n), where z(n) = (- 1 + 5 * sqrt(2)) * (3 + 2 * sqrt(2)) ^ n, n >= 1. ● a(n) = 6 * a(n - 1) - a(n - 2), n >= 2, with a(0) = - 1 and a(1) = 17. ● a(n) = 17 * S(n - 1, 6) + S(n - 2, 6), n >= 1, with Chebyshev's S - polynomials evaluated at x = 6 (see A049310). ●

► [A194131] 0,0,1,17,105,407,1216,3036,6696,13428,25005,43861,73277,117471,181880,273268,399960,572076,801825,1103625,1494541,1994387,2626152,3416300,4395148 ⋆ Number of ways to arrange 3 indistinguishable points on an n X n X n triangular grid so that no three points are collinear at any angle. ● a(n) = ((n ^ 2 + n + 2) / 2) * binomial(n + 2,4) - (3 / 2) * Sum _{ k=2..n } (n - k + 1) * (n - k + 2) * Sum _{ m=2..k } gcd(k - 1,m - 1). - _ David Bevan _ , Jan 01 2012 ●

► [A268263] 17,106,479,1610,4357,10082,20771,39154,68825,114362,181447,276986,409229,587890,824267,1131362,1524001,2018954,2635055,3393322,4317077,5432066,6766579,8351570,10220777 ⋆ Number of length - (4 + 1) 0..n arrays with new repeated values introduced in sequential order starting with zero. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. ●

► [A135400] 1,17,108,382,995,2151,4102,7148,11637,17965,26576,37962,52663,71267,94410,122776,157097,198153,246772,303830,370251,447007,535118,635652,749725 ⋆ a(n) = (4 * n ^ 4 - 4 * n ^ 3 - n ^ 2 + 3 * n) / 2. ● a(1)=1, a(2)=17, a(3)=108, a(4)=382, a(5)=995, a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Harvey P. Dale _ , May 25 2012 ●

► [A052254] 1,17,108,444,1410,3762,8844,18876,37323,69355,122408,206856,336804,531012,813960,1217064,1780053,2552517,3595636,4984100,6808230,9176310,12217140,16082820,20951775 ⋆ Partial sums of A050406. ● a(n) = (10 * n + 7) * binomial(n + 6, 6) / 7. ● a(n) = 10 * binomial(n + 7, 7) - 9 * binomial(n + 6, 6). ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8). - _ Wesley Ivan Hurt _ , Nov 28 2021 ●

► [A108649] 1,17,111,457,1428,3710,8442,17382,33099,59191,100529,163527,256438,389676,576164,831708,1175397,1630029,2222563,2984597,3952872,5169802,6684030,8551010,10833615 ⋆ a(n) = (n + 1)(n + 2)(n + 3)(13n ^ 3 + 69n ^ 2 + 113n + 60) / 360. ● a(0)=1, a(1)=17, a(2)=111, a(3)=457, a(4)=1428, a(5)=3710, a(6)=8442, a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). - _ Harvey P. Dale _ , Jul 01 2012 ●

► [A349879] 0,1,17,114,564,2507,10961,49260,231928,1150781,6017297,33085294,190777804,1150650935,7241707281,47454741400,323154690928,2282779984281,16700904481425,126356632381834,987303454919204,7957133905597635,660717

72829234641 ⋆ Expansion of Sum _{ k>=0 } k ^ 4 * x ^ k / (1 - k * x). ● a(n) = Sum _{ k=0..n } k ^ (n - k + 4). ●

▶ [A086020] 1,17,117,517,1742,4878,11934,26334,53559,101959,183755,316251,523276,836876,1299276,1965132,2904093,4203693,5972593,8344193,11480634,15577210,20867210,27627210,36182835 ⋆ a(n) = Sum _ (i=1..n) binomial(i + 2,3) ^ 2 [Sequential sums of the tetragonal numbers or "tetras" (pyramidal, square) raised to power 2 (drawn from the 4th diagonal - left or right - of Pascal's Triangle)]. ● a(n) = Sum _ (i=1..n) binomial(i + 2, 3) ^ 2. ● a(n) = (C(n + 3, 4) / 3 5) * (35 + 84 * C(n - 1, 1) + 70 * C(n - 1, 2) + 20 * C(n - 1, 3)). ● a(n) = n * (n + 1) * (n + 2) * (n + 3) * (2 * n + 3)(5 * n ^ 2 + 15 * n + 1) / 2520. - _ Emeric Deutsch _ , Aug 02 2005 ●

▶ [A056117] 1,17,117,525,1815,5247,13299,30459,64350,127270,238238,425646,730626,1211250,1947690,3048474,4657983,6965343,10214875,14718275,20868705,29156985,40190085,54712125,73628100 ⋆ Expansion of (1 + 8 * x) / (1 - x) ^ 9. ● a(n) = (9 * n + 8) * binomial(n + 7, 7) / 8. ● a(n) = 9 * binomial(n + 8,8) - 8 * binomial(n + 7,7). ●

▶ [A083200] 0,1,17,118,514,1681,4529,10612,22380,43473,79057,136202,224302,355537,545377,813128,1182520,1682337,2347089,3217726,4342394,5777233,7587217,9847036,12642020 ⋆ Polynexus numbers of order 7. ● a(n) = ((n ^ 7 - (n - 1) ^ 7) - (n ^ 3 - (n - 1) ^ 3)) / 120. ●

▶ [A274325] 1,1,17,122,513,1563,3889,8404,16385,29525,50001,80526,124417,185647,268913,379688,524289,709929,944785,1238050,1600001,2042051,2576817,3218172,3981313 ⋆ Number of partitions of n ^ 5 into at most two parts. ● a(n) = (3 + (- 1) ^ n + 2 * n ^ 5) / 4. ● a(n) = 5 * a(n - 1) - 9 * a(n - 2) + 5 * a(n - 3) + 5 * a(n - 4) - 9 * a(n - 5) + 5 * a(n - 6) - a(n - 7) for n>6. ●

▶ [A108682] 1,17,122,560,1946,5586,13944,31284,64515,124267,226226,392756,654836,1054340,1646688,2503896,3718053,5405253,7710010,10810184,14922446,20308310,27280760,36211500,47538855 ⋆ a(n) = (n + 1) * (n + 2) ^ 2 * (n + 3) * (n + 4) * (4 * n ^ 2 + 15 * n + 15) / 720. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8). - _ Wesley Ivan Hurt _ , May 23 2015 ●

▶ [A021003] 0,1,17,123,514,1565,3891,8407,16388,29529,50005,80531,124422,185653,268919,379695,524296,709937,944793,1238059,1600010,2042061,2576827,3218183,3981324 ⋆ a(n) = (n / 2) * (n ^ 4 + 1). ● a(0)=0, a(1)=1, a(2)=17, a(3)=123, a(4)=514, a(5)=1565, a(n)=6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). - _ Harvey P. Dale _ , Dec 18 2011 ● a(n) = - a(- n) for all n in Z. - _ Michael Somos _ , Jul 11 2017 ●

▶ [A056122] 1,17,125,605,2255,7007,19019,46475,104390,218790,432718,814606,1469650,2554930,4299130,7027834,11195503,17425375,26558675,39714675,58363305,84412185,120310125,169169325,234908700 ⋆ a(n) = (8 * n + 9) * C(n + 8,8) / 9. ● a(n) = (362880 + 1308816 * n + 1939788 * n ^ 2 + 1550548 * n ^ 3 + 740313 * n ^ 4 + 220416 * n ^ 5 + 41202 * n ^ 6 + 4692 * n ^ 7 + 297 * n ^ 8 + 8 * n ^ 9) / 362880. - _ Harvey P. Dale _ , Mar 09 2011 ●

▶ [A036828] 0,1,17,125,637,2637,9549,31501,97037,283661,795661,2158605,5697549,14696461,37175309,92471309,226689037,548667405,1313079309,3111125005,7305429005,17016291341,39346765837,90378862605,206342979597 ⋆ A036827 / 2. ● a(n) = 2 ^ n * (n ^ 3 - 3 * n ^ 2 + 9 * n - 13) + 13. - Bruno Berselli, Mar 06 2012 ●

▶ [A336186] 1,17,127,1871,13969,205793,1536463,22635359,168996961,2489683697 ⋆ Side length of a square block of integers, with 1 at the top - left corner, on a diagonally numbered 2D board such that the sum of the integers in the square is a perfect square. ● a(n) = 110 * a(n - 2) - a(n - 4) for n>4. ●

▶ [A244874] 1,17,137,707,2709,8417,22408,53008,114251,228431,429325,766167,1308451,2151643,3423880,5293736,7979133,11757477,16977097,24070067,33566489,46110317,62476800,83591624,110551831 ⋆ Number of magic labelings with magic sum n of 6th graph shown in link. ● a(n) = (- 315 * (- 129 + (- 1) ^ n) + 138528 * n + 202104 * n ^ 2 + 171248 * n ^ 3 + 93030 * n ^ 4 + 32312 * n ^ 5 + 6636 * n ^ 6 + 632 * n ^ 7) / 40320. - _ Colin Barker _ , Jan 11 2017 ●

▶ [A277387] 1,17,138,670,2355,6671,16212,35148,69765,129085,225566,375882,601783,931035,1398440,2046936,2928777,4106793,5655730,7663670,10233531,13484647,17554428,22600100,28800525 ⋆ Number of nonnegative solutions of a certain system of linear Diophantine equations depending on an even parameter. ● a(n) = n * (1 + n) * (3 + 2 * n + n ^ 2 + n ^ 3 + 2 * n ^ 4) / 18. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

▶ [A099922] 1,17,138,979,6755,46356,317797,2178293,14930334,102334135,701408711,4807526952,32951280073,225851433689,1548008755890,10610209857691,72723460248107,498454011879228,3416454622906669,23416728348467645 ⋆ a(n) = F(4n) - 2n, where F(n) = Fibonacci numbers A000045. ● a(n) = Sum _{ k=1..n } Lucas(2k - 1) ^ 2. ● a(n) = (- ((7 - 3 * sqrt(5)) / 2) ^ n + ((7 + 3 * sqrt(5)) / 2) ^ n) / sqrt(5) - 2 * n. ● a(n) = 9 * a(n - 1) - 16 * a(n - 2) + 9 * a(n - 3) - a(n - 4) for n>4. ●

▶ [A228254] 17,143,621,2059,6305,19171,58025,175099,527345,1586131,4766585,14316139,42981185,129009091,387158345,1161737179,3485735825,10458256051,31376865305,94134790219,282412759265,847255055011,2541798719465 ⋆ Number of third differences of arrays of length n + 3 of numbers in 0..2. ● a(n) = 3 ^ (3 + n) - 2 ^ (3 + n) for n>3. ●

▶ [A008417] 1,17,145,833,3649,13073,40081,108545,265729,598417,1256465,2485825,4673345,8405905,14546705,24331777,39490049,62390545,96220561,145198913,214828609,312193553,446304145,628496897,872893441 ⋆ Crystal ball sequence for 8 - dimensional cubic lattice. ● a(n) = (2 * n ^ 8 + 8 * n ^ 7 + 84 * n ^ 6 + 224 * n ^ 5 + 798 * n ^ 4 + 1232 * n ^ 3 + 1636 * n ^ 2 + 1056 * n + 315) / 315. - _ Alexander Adamchuk _ , May 23 2006 ●

▶ [A233328] 1,17,145,1169,9361,74897,599185,4793489,38347921,306783377,2454267025,19634136209,157073089681,1256584717457,10052677739665,80421421917329,643371375338641,5146971002709137,41175768021673105,329406144173384849,2635249153387078801 ⋆ a(n) = (2 * 8 ^ (n + 1) - 9) / 7. ● a(n) = 9 * a(n - 1) - 8 * a(n - 2) for n>1, a(0)=1, a(1)=17. ● a(n) = 8 * a(n - 1) + 9 for n>0, a(0)=1. ●

▶ [A247613] 1,17,153,969,4845,20349,74613,245157,735471,2031535,5189327,12316239,27322191,57029103,112740255,212383935,383358645,666220005,1119362365,1824861005,2895653673,4484253081,6793194849,10087438257,14708950035 ⋆ a(n) = Sum _{ k=0..8 } binomial(16,k) * binomial(n,k). ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9). ● a(n) = (20160 - 15076944 * n + 40499716 * n ^ 2 - 42247940 * n ^ 3 + 23174515 * n ^ 4 - 7234136 * n ^ 5 + 1335334 * n ^ 6 - 134420 * n ^ 7 + 6435 * n ^ 8) / 20160. ●

▶ [A010969] 1,17,153,969,4845,20349,74613,245157,735471,2042975,5311735,13037895,30421755,67863915,145422675,300540195,601080390,1166803110,2203961430,4059928950,7307872110,12875774670,22239974430,37711260990,62852101650 ⋆ a(n) = binomial(n,16). ● a(n + 15) = n(n + 1)(n + 2)(n + 3)(n + 4)(n + 5)(n + 6)(n + 7)(n + 8)(n + 9)(n + 10)(n + 11)(n + 12)(n + 13)(n + 14)(n + 15) / 16!. - _ Artur Jasinski _ , Dec 02 2007 ● a(n) = n / (n - 16) * a(n - 1), n > 16. - _ Vincenzo Librandi _ , Mar 26 2011 ●

▶ [A164543] 1,17,153,1241,9809,76993,603177,4722889,36974881,289459697,2266023993,17739425081,138871842929,1087148202913,8510660699337,66625087543849,521569643549761,4083069947252177,31964015532175833,250227966218471321 ⋆ a(n) = 10 * a(n - 1) - 17 * a(n - 2) for n > 1; a(0) = 1, a(1) = 17. ● a(n) = 10 * a(n - 1) - 17 * a(n - 2) for n > 1; a(0) = 1, a(1) = 17. ● a(n) = ((1 + 3 * sqrt(2)) * (5 + 2 * sqrt(2)) ^ n + (1 - 3 * sqrt(2)) * (5 - 2 * sqrt(2)) ^ n) / 2. ●

▶ [A295932] 17,153,1289,10521,84809,680409,5449097,43610265,348934601,2791634265,22333546505,178669789209,1429362565193,11434913276121,91479344472713,731834870572953,5854679308957385,46837435504780377,374699487137606921,2997595906398947097,23980767279085851977 ⋆ Number of (not necessarily maximal) cliques in the n - Sierpinski carpet graph. ● a(n) = (13 * 8 ^ n - 8 * 3 ^ n + 5) / 5. ● a(n) = 12 * a(n - 1) - 35 * a(n - 2) + 24 * a(n - 3). ●

▶ [A160699] 0,17,154,531,1268,2485,4302,6839,10216,14553,19970,26587,34524,43901,54838,67455,81872,98209,116586,137123,159940,185157,212894,243271,276408 ⋆ A bisection of A063522. ● a(0)=0, a(1)=17, a(2)=154, a(3)=531, a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Harvey P. Dale _ , May 07 2011 ●

▶ [A198859] 0,17,161,1457,13121,118097,1062881,9565937,86093441,774840977,6973568801,62762119217,564859072961,5083731656657,45753584909921,411782264189297,3706040377703681,33354363399333137,300189270593998241 ⋆ 2 * 9 ^ n - 1. ● a(n) = 9 * a(n - 1) + 8. a(n) = 10 * a(n - 1) - 9 * a(n - 2), n>1. ●

▶ [A155664] 1,17,163,1511,14095,132767,1262143,12097151,116777215,1134217727,11073741823,108589934591,1068719476735,10549755813887,104398046511103,1035184372088831,10281474976710655,102251799813685247 ⋆ 10 ^ n + 8 ^ n - 1 ● a(n)=18 * a(n - 1) - 80 * a(n - 2) - 63 with a(0)=1, a(1)=17 - _ Vincenzo Librandi _ , Jul 21 2010 ● a(0)=1, a(1)=17, a(2)=163, a(n)=19 * a(n - 1) - 98 * a(n - 2) + 80 * a(n - 3) [From Harvey P. Dale, Oct 11 2011] ●

▶ [A076458] 17,165,678,1910,4335,8547,15260,25308,39645,59345,85602,119730,163163,217455,284280,365432,462825,578493,714590,873390,1057287,1268795,1510548,1785300,2095925 ⋆ Sum of numbers that can be written as t * n + u * (n + 1) for nonnegative integers t,u in exactly five ways. ● a(n) = n * (n + 1) * (10 * n ^ 2 + 8 * n - 1) / 2. ●

▶ [A155658] 1,17,169,1673,17041,177857,1889209,20310713,220123681,2398301297,26219899849,287288997353,3152269663921,34619601154337,380428056656089,4181995730925593,45982962794141761,505679659013280977 ⋆ a(n) = 11 ^ n + 7 ^ n - 1. ● a(n) = 18 * a(n - 1) - 77 * a(n - 2) - 60 with a(0)=1, a(1)=17. - _ Vincenzo Librandi _ , Jul 21 2010 ●

▶ [A228214] 17,177,1429,9705,58141,320481,1688101,8717049,44633821,227363409,1153594261,5835080169,29443836301,148292923329,745759583941,3745977788889,18798608421181,94267920012849,472439111692021 ⋆ Number of second differences of arrays of length n + 2 of numbers in 0..4. ● a(n) = 5 ^ (2 + n) - 4 ^ (2 + n) for n>7. ●

▶ [A246058] 1,17,177,1777,17777,177777,1777777,17777777,177777777,1777777777,17777777777,177777777777,1777777777777,17777777777777,177777777777777,1777777777777777,17777777777777777,177777777777777777 ⋆ a(n) = (16 * 10 ^ n - 7) / 9. ● a(n) = 11 * a(n - 1) - 10 * a(n - 2). ●

▶ [A025958] 1,17,185,1645,13041,96117,674185,4565165,30122081,194911717,1242462585,7828123485,48869031121,302849847317,1865814241385,11440608686605,69880858180161,425505538990917,2584272622186585 ⋆ Expansion of 1 / ((1 - 2x)(1 - 4x)(1 - 5x)(1 - 6x)). ● a(n) = - 2 ^ n / 3 + 16 * 4 ^ n / 1 - 125 * 5 ^ n / 3 + 27 * 6 ^ n / 1. - _ R. J. Mathar _ , Jun 20 2013 ● a(0)=1, a(1)=17, a(2)=185, a(3)=1645, a(n)=17 * a(n - 1) - 104 * a(n - 2) + 268 * a(n - 3) - 240 * a(n - 4). - _ Harvey P. Dale _ , Oct 10 2015 ●

▶ [A025931] 1,17,188,1726,14343,112371,848506,6255392,45386165,325753285,2320698744,16447547298,116147697667,818112983159,5752200695702,40392496919044,283383067688049,1986859807248393,13923911479636180,97546847987676230,683225284523104511 ⋆ Expansion of 1 / ((1 - 2x)(1 - 3x)(1 - 5x)(1 - 7x)). ● a(n) = 12 * a(n - 1) - 35 * a(n - 2) + 3 ^ (n + 1) - 2 ^ (n + 1), n >= 2. - _ Vincenzo Librandi _ , Mar 19 2011 ● a(n) = 7 ^ (n + 3) / 40 - 2 ^ (n + 3) / 15 + 3 ^ (n + 3) / 8 - 5 ^ (n + 3) / 12. - _ R. J. Mathar _ , Mar 19 2011 ●

▶ [A021754] 1,17,190,1770,14931,118587,905920,6742340,49288261,355826757,2546230050,18106416510,128181315991,904540692527,6368500164580,44764509392280,314282333570121,2204653080603897,15456046918261510,108310071701877650,758760684298882651 ⋆ Expansion of 1 / ((1 - x)(1 - 4x)(1 - 5x)(1 - 7x)). ● a(n) = (2 * 7 ^ (n + 3) - 9 * 5 ^ (n + 3) + 8 * 4 ^ (n + 3) - 1) / 72. [_ Yahia Kahloune _ , May 08 2013] ●

▶ [A025467] 1,17,191,1813,15855,132909,1089607,8828501,71093759,570671101,4573228023,36617788389,293071750063,2345096538893,18762876780839,150111475106677,1200925773302367,9607542463373085,76860885976538455 ⋆ Expansion of 1 / ((1 - 2x)(1 - 3x)(1 - 4x)(1 - 8x)). ● a(n)=(8 ^ (n + 3) - 15 * 4 ^ (n + 3) + 24 * 3 ^ (n + 3) - 10 * 2 ^ (n + 3)) / 120. [_ Yahia Kahloune _ , May 27 2013] ●

▶ [A322122] 0,0,17,191,1816,16541,149320,1344880,12106148,108960347,980654368,8825914594,79433288194,714899721602,6434097782077,57906880685893,521161

1927629204,4690457351939133,42214116174823814,379927045590000351,3419343410347321718 ⋆ Number of positive integers that are not the sum of 3 squares and a nonnegative (2n + 1) - st power. ● a(n) = Sum _{ k=2..n - 1 } (floor(3 ^ (2n + 1) / 2 ^ (2k + 3) - 7 / 8) + 1). ●

► [A021494] 1,17,192,1822,15743,128499,1010374,7741184,58209525,431623621,3166395596,23035216386,166469995147,1196633240183,8564499500658,61079918944228,434330031817409,3080934011678985,21810281396626360 ⋆ Expansion of 1 / ((1 - x)(1 - 3x)(1 - 6x)(1 - 7x)). ● a(n) = (5 * 7 ^ (n + 3) - 8 * 6 ^ (n + 3) + 5 * 3 ^ (n + 3) - 2) / 120. [_ Yahia Kahloune _ , Jul 05 2013] ● a(0)=1, a(1)=17; for n>1, a(n) = 13 * a(n - 1) - 42 * a(n - 2) + (3 ^ n - 1) / 2. - _ Vincenzo Librandi _ , Jul 10 2013 ● a(0)=1, a(1)=17, a(2)=192, a(3)=1822; for n>3, a(n) = 17 * a(n - 1) - 97 * a(n - 2) + 207 * a(n - 3) - 126 * a(n - 4). - _ Vincenzo Librandi _ , Jul 10 2013 ●

► [A021434] 1,17,194,1882,16827,143835,1197868,9822164,79783253,644325253,5184986742,41632083246,333818409679,2674358387471,21413929824416,171406773741928,1371730930238505,10976231337133689,87821770754328490 ⋆ Expansion of 1 / ((1 - x)(1 - 3x)(1 - 5x)(1 - 8x)). ● a(n) = (8 ^ (n + 4) - 7 * 5 ^ (n + 4) + 14 * 3 ^ (n + 4) - 15) / 840. - _ Yahia Kahloune _ , Jul 05 2013 ● a(0)=1, a(1)=17; for n>1, a(n) = 13 * a(n - 1) - 40 * a(n - 2) + (3 ^ n - 1) / 2. - _ Vincenzo Librandi _ , Jul 10 2013 ● a(0)=1, a(1)=17, a(2)=194, a(3)=1882; for n>3, a(n) = 17 * a(n - 1) - 95 * a(n - 2) + 199 * a(n - 3) - 120 * a(n - 4). - _ Vincenzo Librandi _ , Jul 10 2013 ●

► [A019316] 1,17,195,1885,16571,137277,1092715,8456045,64100091,478409437,3528167435,25777174605,186937014811,1347606967997,9667804397355,69083038251565,492036007548731,3494997671436957,24769526131110475 ⋆ Expansion of 1 / ((1 - 4x)(1 - 6x)(1 - 7x)). ● a(n) = 8 * 4 ^ n / 3 - 18 * 6 ^ n + 49 * 7 ^ n / 3. - _ R. J. Mathar _ , Jun 29 2013 ● a(0)=1, a(1)=17, a(2)=195; for n>2, a(n) = 17 * a(n - 1) - 94 * a(n - 2) + 168 * a(n - 3). - _ Vincenzo Librandi _ , Jul 02 2013 ● a(n) = 13 * a(n - 1) - 42 * a(n - 2) + 4 ^ n. - _ Vincenzo Librandi _ , Jul 02 2013 ●

► [A018250] 1,17,197,1945,17661,152817,1284277,10599305,86485421,700600417,5649437157,45422860665,364536479581,2922126916817,23406459170837,187399966290025,1499945489904141,12003309897022017,96045277784597317 ⋆ Expansion of 1 / ((1 - 4x)(1 - 5x)(1 - 8x)). ● a(n) = (3 * 4 ^ (n + 1) - 5 ^ (n + 2) + 2 * 8 ^ (n + 1)) / 3. - _ Bruno Berselli _ , Apr 05 2011 ● a(n) = 17 * a(n - 1) - 92 * a(n - 2) + 160 * a(n - 3). - _ Wesley Ivan Hurt _ , Sep 04 2022 ●

► [A021184] 1,17,197,1957,17973,157749,1345909,11271029,93191285,763669621,6218195061,50398593141,407106949237,3280364834933,26383974158453,211918126207093,1700423007424629,13633852046266485,109253624291872885 ⋆ Expansion of 1 / ((1 - x)(1 - 2x)(1 - 6x)(1 - 8x)). ● a(n) = (10 * 8 ^ (n + 3) - 21 * 6 ^ (n + 3) + 35 * 2 ^ (n + 3) - 24) / 840. [_ Yahia Kahloune _ , Jul 05 2013] ● a(0)=1, a(1)=17; for n>1, a(n) = 14 * a(n - 1) - 48 * a(n - 2) + 2 ^ n - 1. - _ Vincenzo Librandi _ , Jul 07 2013 ● a(0)=1, a(1)=17, a(2)=197, a(3)=1957; for n>3, a(n) = 17 * a(n - 1) - 92 * a(n - 2) + 172 * a(n - 3) - 96 * a(n - 4). - _ Vincenzo Librandi _ , Jul 07 2013 ●

► [A069361] 1,17,197,1985,18621,167337,1461797,12519345,105683341,882516857,7308428597,60131384705,492202181661,4012347269577,32599584662597,264152863210065,2135714594033581,17236446198921497,138901692341235797,1117982939085627425,8989229069675479101 ⋆ Number of 3 X n binary arrays with a path of adjacent 1's from top row to bottom row. ● a(n) = 15 * a(n - 1) - 58 * a(n - 2) + 16 * a(n - 3), where a(1)=1, a(2)=17, a(3)=197; ● a(n) = 8 ^ n + 1 / sqrt(41) * 4 ^ (n + 1) * ((7 + sqrt(41)) ^ (- (n + 1)) - (7 - sqrt(41)) ^ (- (n + 1))). (End) ●

► [A021379] 1,17,198,2002,19019,175539,1598416,14463284,130489557,1175715541,10586766554,95302471446,857809330015,7720634709623,69487122519012,625389764724088,5628530595298793,50656866402527385 ⋆ Expansion of 1 / ((1 - x)(1 - 3x)(1 - 4x)(1 - 9x)). ● a(0)=1, a(1)=17; for n>1, a(n) = 13 * a(n - 1) - 36 * a(n - 2) + (3 ^ n - 1) / 2. - _ Vincenzo Librandi _ , Jul 09 2013 ● a(0)=1, a(1)=17, a(2)=198, a(3)=2002; for n>3, a(n) = 17 * a(n - 1) - 91 * a(n - 2) + 183 * a(n - 3) - 108 * a(n - 4). - _ Vincenzo Librandi _ , Jul 09 2013 ●

► [A017932] 1,17,199,1997,18487,163205,1398223,11743469,97300423,798539093,6509186047,52798905341,426744275959,3440074001381,27677315556271,222358880070413,1784513217331495,14309958928401269,114682790953126495 ⋆ Expansion of 1 / ((1 - 3x)(1 - 6x)(1 - 8x)). ● a(0)=1, a(1)=17, a(2)=199; for n>2, a(n) = 17 * a(n - 1) - 90 * a(n - 2) + 144 * a(n - 3). - _ Vincenzo Librandi _ , Jul 02 2013 ● a(n) = 14 * a(n - 1) - 48 * a(n - 2) + 3 ^ n. - _ Vincenzo Librandi _ , Jul 02 2013 ● a(n) =(3 * 8 ^ (n + 2) - 5 * 6 ^ (n + 2) + 2 * 3 ^ (n + 2)) / 30. [_ Yahia Kahloune _ , Jul 06 2013] ●

► [A021134] 1,17,200,2050,19731,184047,1688890,15362600,139076861,1255760077,11322184380,102001381950,918521058391,8269232646107,74435809450670,669985863300100,6030190661052321,54273305406490137 ⋆ Expansion of 1 / ((1 - x)(1 - 2x)(1 - 5x)(1 - 9x)). ● a(0)=1, a(1)=17; for n>1, a(n) = 14 * a(n - 1) - 45 * a(n - 2) + 2 ^ n - 1. - _ Vincenzo Librandi _ , Jul 07 2013 ● a(0)=1, a(1)=17, a(2)=200, a(3)=2050; for n>3, a(n) = 17 * a(n - 1) - 89 * a(n - 2) + 163 * a(n - 3) - 90 * a(n - 4). - _ Vincenzo Librandi _ , Jul 07 2013 ● a(n) = (3 * 9 ^ (n + 3) - 14 * 5 ^ (n + 3) + 32 * 2 ^ (n + 3) - 21) / 672. [_ Yahia Kahloune _ , Jul 07 2013] ●

► [A279448] 0,1,17,202,1397,6582,24185,73496,195086,463875,1013505,2061426,3956947,7222992,12640817,21312992,34801420,55215621,85424721,129174250,191397185,278361226,398108777,560635032,778491962 ⋆ Number of nonequivalent ways to place 4 points on an n X n square grid so that no more than 2 points are on a vertical or horizontal straight line. ● a(n) = (n ^ 8 - 14 * n ^ 6 + 30 * n ^ 5 + 12 * n ^ 4 - 60 * n ^ 3 + 40 * n ^ 2) / 192 + IF(MOD(n, 2) = 1, 4 * n ^ 4 - 20 * n ^ 3 + 22 * n ^ 2 - 2 * n - 7) / 64. ● a(n) = 4 * a(n - 1) - a(n - 2) - 16 * a(n - 3) + 19 * a(n - 4) + 20 * a(n - 5) - 45 * a(n - 6) + 45 * a(n - 8) - 20 * a(n - 9) - 19 * a(n - 10) + 16 * a(n - 11) + a(n - 12) - 4 * a(n - 13) + a(n - 14). ●

► [A017897] 1,17,202,2090,20251,189707,1745332,15900020,144066901,1301455397,11737424062,105758621150,952437144751,8574983669087,77190104636392,694787214149480,6253466332501801,56283104147438777,506557473488982322,4559064943373269010 ⋆ Expansion of 1 / ((1 - 3x)(1 - 5x)(1 - 9x)). ● a(n) = term (1, 1) in the 3 X 3 matrix [17,1,0; - 87,0,1; 135,0,0] ^ n. - _ Alois P. Heinz _ , Aug 04 2008 ● a(n) = 17 * a(n - 1) - 87 * a(n - 2) + 135 * a(n - 3); a(0)=1, a(1)=17, a(2)=202. - _ Vincenzo Librandi _ , Jul 01 2013 ● a(n) = 14 * a(n - 1) - 45 * a(n - 2) + 3 ^ n. - _ Vincenzo Librandi _ , Jul 01 2013 ● a(n) = (9 ^ (n + 2) - 3 * 5 ^ (n + 2) + 2 * 3 ^ (n + 2)) / 24. - _ Yahia Kahloune _ , Aug 13 2013 ●

► [A016311] 1,17,203,2101,20163,184821,1643251,14298917,122461955,1036190485,8684988819,72248167173,597363137827,4914549713909,40265910006707,328773866154469,2676717032006979,21739418975585493 ⋆ Expansion of 1 / ((1 - 2 * x) * (1 - 7 * x) * (1 - 8 * x)). ● a(n) = 4 * 8 ^ (n + 1) / 3 - 7 ^ (n + 2) / 5 + 2 ^ (n + 1) / 15. - _ R. J. Mathar _ , Mar 14 2011 ● a(n) = (160 * 8 ^ n - 147 * 7 ^ n + 2 * 2 ^ n) / 15; ● a(n) = 15 * a(n - 1) - 56 * a(n - 2) + 2 ^ n. (End) ● a(n) = 17 * a(n - 1) - 86 * a(n - 2) + 112 * a(n - 3), with a(0)=1, a(1)=17, a(2)=203. - _ Harvey P. Dale _ , Jul 12 2012 ●

► [A140961] 1,17,205,2129,20341,184457,1615405,13808609,116015461,962575097,7913168605,64610052689,524855128981,4247421698537,34274519697805,275985344786369,2218709434248901,17815093293410777,142915542082163005,1145704555158361649,9179974972732223221 ⋆ Number of 3 X n { 0,1 }- matrices such that: (a) first and second row have a common 1, (b) second and third row have a common 1. ● a(n) = 8 ^ n - 2 * 6 ^ n + 5 ^ n. ●

► [A021092] 1,17,205,2205,22701,229677,2307565,23119085,231365101,2314349037,23146284525,231474025965,2314784990701,23148028847597,231481004271085,2314812905956845,23148140512683501,231481450939557357 ⋆ Expansion of 1 / ((1 - x)(1 - 2x)(1 - 4x)(1 - 10x)). ● a(n) = - (1 / 27) + (1 / 2) * 2 ^ n - (16 / 9) * 4 ^ n + (125 / 54) * 10 ^ n. [_ Antonio Alberto Olivares _ , May 22 2012] ● a(0)=1, a(1)=17; for n>1, a(n) = 14 * a(n - 1) - 40 * a(n - 2) + 2 ^ n - 1. - _ Vincenzo Librandi _ , Jul 06 2013 ● a(0)=1, a(1)=17, a(2)=205, a(3)=2205; for n>3, a(n) = 17 * a(n - 1) - 84 * a(n - 2) + 148 * a(n - 3) - 80 * a(n - 4). - _ Vincenzo Librandi _ , Jul 06 2013 ●

► [A016981] 1,17,207,2245,23231,235677,2370967,23768645,237928911,2380278637,23806803527,238084281045,2380908324991,23809346902397,238094528416887,2380949536089445,23809512411623471,238095192448290957 ⋆ Expansion of 1 / ((1 - 3x)(1 - 4x)(1 - 10x)). ● a(0)=1, a(1)=17, a(2)=207, a(n)=17 * a(n - 1) - 82 * a(n - 2) + 120 * a(n - 3). - _ Harvey P. Dale _ , Aug 25 2012 ● a(n) = 9 * 3 ^ n / 7 - 8 * 4 ^ n / 3 + 50 * 10 ^ n / 21. - _ R. J. Mathar _ , Jun 23 2013 ● a(n) = 14 * a(n - 1) - 40 * a(n - 2) + 3 ^ n for n>1, a(0)=1, a(1)=17. - _ Vincenzo Librandi _ , Jun 26 2013 ●

► [A014921] 1,17,209,2257,22737,219345,2054353,18831569,169826513,1512003793,13323163857,116402378961,1009755576529,8706336970961,74677034637521,637626988058833,5422701592139985,45955098238474449 ⋆ a(1)=1, a(n) = n * 8 ^ (n - 1) + a(n - 1). ● a(n) = (1 / 49) * (1 + 8 ^ n * (7 * n - 1)). - _ Paolo P. Lava _ , Jan 13 2009 ● a(1)=1, a(2)=17, a(n) = 16 * a(n - 1) - 64 * a(n - 2) + 1. - _ Vincenzo Librandi _ , Oct 23 2012 ●

► [A081035] 1,17,209,2273,23201,228017,2186609,20620673,192174401,1775688017,16304021009,148995991073,1356782533601,12321773100017,111671069983409,1010465414433473,9132169221980801,82455386442384017,743959522093353809 ⋆ 8th binomial transform of the periodic sequence (1,9,1,1,9,1...). ● a(n) = 9 * a(n - 1) + 8 * 7 ^ (n - 1). ● a(n) = 5 * 9 ^ n - 4 * 7 ^ n. ● a(0)=1, a(1)=17, a(n)=16 * a(n - 1) - 63 * a(n - 2). - _ Harvey P. Dale _ , Oct 07 2014 ●

► [A016299] 1,17,209,2293,23961,244797,2473969,24869813,249349001,2496744877,24983724129,249918620133,2499593099641,24997965496157,249989827476689,2499949137375253,24999745686859881,249998728434266637 ⋆ Expansion of 1 / ((1 - 2 * x) * (1 - 5 * x) * (1 - 10 * x)). ● a(n) = 17 * a(n - 1) - 80 * a(n - 2) + 100 * a(n - 3); a(0)=1, a(1)=17, a(2)=209. - _ Harvey P. Dale _ , Aug 24 2011 ● a(n) = 15 * a(n - 1) - 50 * a(n - 2) + 2 ^ n; a(0)=1, a(1)=17. - _ Vincenzo Librandi _ , Aug 25 2011 ● a(n) = (1 / 6) * (2 ^ n - 10 * 5 ^ n + 15 * 10 ^ n). - _ Bruno Berselli _ , Aug 25 2011 ●

► [A016250] 1,17,210,2290,23411,230307,2210020,20850980,194384421,1796538997,16498405430,150792530070,1373280939031,12472565630087,113044350922440,1022937980063560,9245213572903241,83478324422447577,753204735666257050,6792141332045915450 ⋆ Expansion of 1 / ((1 - x)(1 - 7x)(1 - 9x)). ● a(0)=1, a(1)=17, a(n) = 16 * a(n - 1) - 63 * a(n - 2) + 1. - _ Vincenzo Librandi _ , Feb 10 2011 ● a(n) = (3 * 9 ^ (n + 2) - 4 * 7 ^ (n + 2) + 1) / 48. - _ Yahia Kahloune _ , Jul 09 2013 ● a(n) = 17 * a(n - 1) - 79 * a(n - 2) + 63 * a(n - 3) for n > 2. - _ Colin Barker _ , Sep 01 2015 ●

► [A021054] 1,17,212,2422,26943,297339,3273754,36020624,396255365,4358895541,47948112576,527430027306,5801732675467,63819066571823,702009753747878,7722107355665668,84943181105770449,934374992744081385 ⋆ Expansion of 1 / ((1 - x)(1 - 2x)(1 - 3x)(1 - 11x)). ● a(0)=1, a(1)=17; for n>1, a(n) = 14 * a(n - 1) - 33 * a(n - 2) + 2 ^ n - 1. - _ Vincenzo Librandi _ , Jul 05 2013 ● a(0)=1, a(1)=17, a(2)=212, a(3)=2422; for n>3, a(n) = 17 * a(n - 1) - 77 * a(n - 2) + 127 * a(n - 3) - 66 * a(n - 4). - _ Vincenzo Librandi _ , Jul 05 2013 ● a(n) = (11 ^ (n + 3) - 45 * 3 ^ (n + 3) + 80 * 2 ^ (n + 3) - 36) / 720. [_ Yahia Kahloune _ , Jul 07 2013] ●

► [A016246] 1,17,213,2389,25445,263781,2693797,27273893,274754469,2759637925,27668938661,277124743077,2773859569573,27754268528549,277636722282405,2776931444805541,27772699779944357,277747309790777253 ⋆ Expansion of 1 / ((1 - x)(1 - 6x)(1 - 10x)). ● a(0)=1, a(1)=17, a(n) = 16 * a(n - 1) - 60 * a(n - 2) + 1. - _ Vincenzo Librandi _ , Feb 10 2011 ● a(0)=1, a(1)=17, a(2)=213, a(n) = 17 * a(n - 1) - 76 * a(n - 2) + 60 * a(n - 3). - _ Harvey P. Dale _ , Jan 27 2013 ● a(n) = (5 * 10 ^ (n + 2) - 9 * 6 ^ (n + 2) + 4) / 180. - _ Yahia Kahloune _ , Aug 13 2013 ●

► [A016185] 0,1,17,217,2465,26281,269297,2685817,26269505,253202761,2413042577,22791125017,213710059745,1992110014441,18478745943857,170706760005817,1571545212141185,14425381885981321,132080236787517137,1206736529597136217,11004743954450081825 ⋆ a(n) = 9 ^ n - 8 ^ n. ● a(n) = 9 * a(n - 1) + 8 ^ (n - 1), a(0)=0. - _ Vincenzo Librandi _ , Feb 09 2011 ● a(n) = 17 * a(n - 1) - 72 * a(n - 2), a(0)=0, a(1)=1. - _ Vincenzo Librandi _ , Feb 09 2011 ●

► [A016181] 1,17,219,2533,27731,294117,3058819,31411733,319882131,3239174917,32674224419,328719570933,3301036996531,33107258975717,331750812830019,3322255689810133,33255789828670931,332790528800696517 ⋆ Expansion of 1 / ((

1 - 7x)(1 - 10x)). ● a(n) = 10 * a(n - 1) + 7 ^ n, a(0)=1. - _ Vincenzo Librandi _ , Feb 09 2011 ● a(n) = 17 * a(n - 1) - 70 * a(n - 2), a(0)=1, a(1)=17. - _ Vincenzo Librandi _ , Feb 09 2011 ●

► [A016174] 1,17,223,2669,30655,344981,3841447,42535853,469573999,5175391685,56989774711,627250318877,6901930289983,75934293883829,835355596886215,9189381750732941,101086020367969807,1111963150707112613 ⋆ Expansion of 1 / ((1 - 6x)(1 - 11x)). ● a(n) = 11 * a(n - 1) + 6 ^ n, a(0)=1. - _ Vincenzo Librandi _ , Feb 09 2011 ●

► [A016281] 1,17,223,2741,33103,397901,4776871,57328757,687964255,8255629085,99067724119,1188813216773,14265760187407,171189127015469,2054269538501767,24651234505002389,295814814189037759 ⋆ Expansion of 1 / ((1 - 2x)(1 - 3x)(1 - 12x)). ● a(n) = (2 / 5) * 2 ^ (n - 1) - 3 ^ (n - 1) + (8 / 5) * 12 ^ (n - 1). - _ Antonio Alberto Olivares _ , Feb 06 2010 ● a(n) = 17 * a(n - 1) - 66 * a(n - 2) + 72 * a(n - 3). - _ Vincenzo Librandi _ , Jun 25 2013 ●

► [A081044] 1,17,225,2673,29889,321489,3365793,34543665,349156737,3486784401,34480423521,338218086897,3295011258945,31914537622353,307565765227809,2951106226689969,28207085096966913,268687927383516945 ⋆ 9th binomial transform of (1,8,0,0,0,0,0,0,.....). ● a(n) = 18 * a(n - 1) - 81 * a(n - 2), a(0)=0, a(1)=17. ● a(n) = (8n + 9) * 9 ^ (n - 1). ● a(n) = Sum _{ k=0..n } (k + 1) * 8 ^ k * binomial(n, k). ●

► [A016227] 1,17,225,2785,33761,406497,4883425,58622945,703562721,8443102177,101318624225,1215829083105,14589971366881,175079745881057,21009573084086625,252114891334952 65,302537875328566241 ⋆ Expansion of 1 / ((1 - x)(1 - 4x)(1 - 12x)). ● a(n) = (1 / 33) - (2 / 3) * 4 ^ (n - 1) + (18 / 11) * 12 ^ (n - 1). - _ Antonio Alberto Olivares _ , Feb 07 2010 ● a(0)=1, a(1)=17, a(n) = 16 * a(n - 1) - 48 * a(n - 2) + 1. - _ Vincenzo Librandi _ , Feb 10 2011 ●

► [A155001] 1,1,17,225,3249,45441,642897,9057825,127809009,1802444481,254242489977,3585942434 25,5057894117169,71339832581121,1006226869666257,1419250977837025,20018092257150372 9,282348900678799361 ⋆ a(n) = 9 * a(n - 1) + 72 * a(n - 2), n > 2; a(0)=1, a(1)=1, a(2)=17. ● a(n) = (1 / 2) * ((9 / 2 + (3 / 2) * sqrt(41)) ^ (n - 1) + (9 / 2 - (3 / 2) * sqrt(41)) ^ (n - 1)) + (25 / 246) * sqrt(41) * ((9 / 2 + (3 / 2) * sqrt(41)) ^ (n - 1) - (9 / 2 - (3 / 2) * sqrt(41)) ^ (n - 1) + (8 / 9) * (C(2 * n,n) mod 2), n >= 0. - _ Paolo P. Lava _ , Jan 20 2009 ●

► [A296999] 0,1,17,226,1550,7221,26120,78484,206242,486640,1056377,2137506,4085167,7430276,12964014,21801632,35520743,56249658,86880957,131186720,194133425,282024809,402949496,566950056,786640454 ⋆ Number of nonequivalent (mod D _ 8) ways to place 4 points on an n X n point grid so that no point is equally distant from two other points on the same row or the same column. ● a(n) = (n ^ 8 - 6 * n ^ 6 - 12 * n ^ 5 + 64 * n ^ 4 + 8 * n ^ 3 - 136 * n ^ 2 + (n == 1 (mod 2)) * (14 * n ^ 4 - 96 * n ^ 3 + 162 * n ^ 2 - 92 * n + 93)) / 192 + (n == 2 (mod 6)) * n / 6 + (n == 2 (mod 4)) * n / 4 + (n == 5 (mod 6)) * (n + 1) / 6. ● a(n) = (n ^ 8 - 6 * n ^ 6 - 12 * n ^ 5) / 192 + b(n) + c(n), where ● a(n) = 3 * a(n - 1) - a(n - 2) - 4 * a(n - 3) + 4 * a(n - 4) - 4 * a(n - 5) + 5 * a(n - 6) + a(n - 7) - 5 * a(n - 8) + 6 * a(n - 9) - 10 * a(n - 10) + 8 * a(n - 11) - 8 * a(n - 13) + 10 * a(n - 14) - 6 * a(n - 15) + 5 * a(n - 16) - a(n - 17) - 5 * a(n - 18) + 4 * a(n - 19) - 4 * a(n - 20) + 4 * a(n - 21) + a(n - 22) - 3 * a(n - 23) + a(n - 24) for n>24. ●

► [A164600] 1,17,227,2743,31441,349241,3802499,40854943,434991553,4602307457,48477201539,509007338599,5332433173201,55772217368297,582637691946467,6081473282940943,63438141429166081,661450156372654961 ⋆ a(n) = 18 * a(n - 1) - 79 * a(n - 2) for n > 1; a(0) = 1, a(1) = 17. ● a(n) = ((1 + 4 * sqrt(2)) * (9 + sqrt(2)) ^ n + (1 - 4 * sqrt(2)) * (9 - sqrt(2)) ^ n) / 2. ●

► [A119273] 1,17,232,540,2520,27702,59869,82657,2947885,5851737,37568808,297970002,478867545,5721476626,29961646177,65107456694,570931518444,2997997000002,9607464857096,53858918990529,299956723113202,1253472906066265,2171966135005184 ⋆ Absolute value of the difference between largest square and largest cube each with n decimal digits. ● a(n) = (ceiling(10 ^ (n / 2)) - 1) ^ 2 - (ceiling(10 ^ (n / 3)) - 1) ^ 3. ●

► [A051560] 0,1,17,242,3382,48504,725592,11393808,188204400,3270729600,59753750400,1146140409600,23046980025600,485075533132800,10669304848204800,244861798361241600,5854837379724748800 ⋆ Second unsigned column of triangle A051379. ● a(n) = n! * Sum _{ k=0..n - 1 } ((- 1) ^ k * binomial(- 8,k) / (n - k)), for n>=1. - _ Milan Janjic _ , Dec 14 2008 ● a(n) = n! * [7]h(n), where [k]h(n) denotes the k - th successive summation of the harmonic numbers from 0 to n. - _ Gary Detlefs _ , Jan 04 2011 ●

► [A098302] 0,1,17,256,3825,57121,852992,12737761,190213425,2840463616,42416740817,633410648641,9458742988800,141247734183361,2109257269761617,31497611312240896,470354912413851825,7023826074895536481 ⋆ Member r=17 of the family of Chebyshev sequences S _ r(n) defined in A092184. ● a(n) = 15 * a(n - 1) - a(n - 2) + 2, n>=2, a(0)=0, a(1)=1. ● a(n) = 16 * a(n - 1) - 16 * a(n - 2) + a(n - 3), n>=3, a(0)=0, a(1)=1, a(2)=17. ●

► [A014898] 1,17,258,3874,58115,871731,13075972,196139588,2942093829,44131407445,661971111686,9929566675302,148943500129543,2234152501943159,33512287529147400,502684312937211016,7540264694058165257 ⋆ a(1)=1, a(n) = 15 * a(n - 1) + n. ● a(n) = - 15 / 196 + (15 / 196) * 15 ^ n - (1 / 14) * n, with n >= 1. - _ Paolo P. Lava _ , Jan 14 2009 ● a(n) = 17 * a(n - 1) - 31 * a(n - 2) + 15 * a(n - 3); a(1)=1, a(2)=17, a(3)=258. - _ Vincenzo Librandi _ , Oct 20 2012 ●

► [A135214] 1,17,260,516,3641,4937,21744,25840,84889,94889,255940,276676,647969,686385,1445760,1511296,2931153,3036129,5512228,5672228,9756329,9990585,16426928,16758704,26524329 ⋆ a(1)=1, a(n) = a(n - 1) + n ^ 5 if n odd, a(n) = a(n - 1) + n ^ 4 if n is even. ● a(2 * n - 1) = n * (- 8 + 80 * n ^ 2 + 48 * n ^ 4 + 80 * n ^ 5 + 35 * n - 220 * n ^ 3) / 15. ● a(2 * n) = n * (- 8 + 80 * n ^ 2 + 48 * n ^ 4 + 80 * n ^ 5 + 35 * n + 20 * n ^ 3) / 15 . (End) ●

► [A163451] 1,17,272,4352,69632,1113976,17821440,285108360,4561178880,72969984000,1167377713080,18675771192000,298775988016200,4779834262113600,76468044587443200,1223339873805905400,19571056837109136000 ⋆ Number of reduced words of length n in Coxeter group on 17 generators S _ i with relations (S _ i) ^ 2 = (S _ i S _ j) ^ 5 = I. ● a(n) = 15 * a(n - 1) + 15 * a(n - 2) + 15 * a(n - 3) + 15 * a(n - 4) - 120 * a(n - 5). - _ Wesley Ivan Hurt _ , May 10 2021 ●

► [A163965] 1,17,272,4352,69632,1114112,17825656,285208320,4563298440,73012220160,1168186644480,18690844262400,299051235428280,4784783402808000,76555952624637000,1224885932940283200,19598025983313945600 ⋆ Number of reduced words of length n in Coxeter group on 17 generators S _ i with relations (S _ i) ^ 2 = (S _ i S _ j) ^ 6 = I. ● a(n) = - 120 * a(n - 6) + 15 * Sum _{ k=1..5 } a(n - k). - _ Wesley Ivan Hurt _ , May 11 2021 ●

► [A169222] 1,17,272,4352,69632,1114112,17825792,285212672,4563402752,73014444032,1168231104512,18691697672192,299067162755072,4785074604081152,76561193665298432,1224979098644774912,19599665578316398592 ⋆ Number of reduced words of length n in Coxeter group on 17 generators S _ i with relations (S _ i) ^ 2 = (S _ i S _ j) ^ 28 = I. ● a(n) = - 120 * a(n - 28) + 15 * Sum _{ k=1..27 } a(n - k). - _ Wesley Ivan Hurt _ , Mar 01 2023 ●

► [A245940] 0,0,17,279,1960,8875,30555,87122,216384,483570,994125,1909985,3469752,6013189,10010455,16096500,25111040,38144532,56590569,82205115,117173000,164182095,226505587,308092774,413668800 ⋆ (2n ^ 7 + 4n ^ 6 - n ^ 5 - 4n ^ 4 - n ^ 3) / 24. ● a(n) = n ^ 3 * (2 * n ^ 3 + 2 * n ^ 2 - 3 * n - 1) * (n + 1) / 24 = n ^ 3 * (n - 1) * (n + 1) * (2 * n ^ 2 + 4 * n + 1) / 24. ●

► [A078366] 1,17,288,4879,82655,1400256,23721697,401868593,6808044384,115334885935,1953885016511,33100710394752,560758191694273,9499788548407889,160935647131239840,2726406212682669391 ⋆ A Chebyshev S - sequence with Diophantine property. ● a(n) = 17 * a(n - 1) - a(n - 2), n >= 1; a(- 1)=0, a(0)=1. ● a(n) = S(2 * n + 1, sqrt(19)) / sqrt(19) = S(n, 17), where S(n, x) = U(n, x / 2), Chebyshev polynomials of the 2nd kind, A049310. ● a(n) = (ap ^ (n + 1) - am ^ (n + 1)) / (ap - am) with ap = (17 + sqrt(285)) / 2 and am = (17 - sqrt(285)) / 2. ●

► [A007805] 1,17,305,5473,98209,1762289,31622993,567451585,10182505537,182717648081,3278735159921,58834515230497,1055742538989025,18944531186571953,339945818819306129,6100080207560938369 ⋆ a(n) = Fibonacci(6 * n + 3) / 2. ● a(n) = 18 * a(n - 1) - a(n - 2), n > 1, a(0)=1, a(1)=17. ● a(n + 1) = 9 * a(n) + 4 * sqrt(5 * a(n) ^ 2 - 1). - _ Richard Choulet _ , Aug 30 2007, Dec 28 2007 ● a(n) = ((2 + sqrt(5)) ^ (2 * n + 1) - (2 - sqrt(5)) ^ (2 * n + 1)) / (2 * sqrt(5)). - _ Dean Hickerson _ , Dec 09 2002 ● a(n) = 19 * a(n - 1) - 19 * a(n - 2) + a(n - 3); f(x) = (sqrt(5) / 10) * ((2 + sqrt(5)) * (9 + 4 * sqrt(5)) ^ (x - 1) - (2 - sqrt(5)) * (9 - 4 * sqrt(5)) ^ (x - 1)). - _ Antonio Alberto Olivares _ , May 15 2008 ● a(n) = 17 * a(n - 1) + 17 * a(n - 2) - a(n - 3). - _ Antonio Alberto Olivares _ , Jun 19 2008 ● a(n) = S(n,18) - S(n - 1,18) with the Chebyshev S - polynomials (A049310). - _ Wolfdieter Lang _ , Jun 20 2013 ●

► [A158585] 17,306,1173,2618,4641,7242,10421,14178,18513,23426,28917,34986,41633,48858,56661,65042,74001,83538,93653,104346,115617,127466,139893,152898,166481 ⋆ a(n) = 289 * n ^ 2 + 17. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A129992] 0,17,308,381,468,2117,2540,3045,12648,15113,18056,74025,88392,105545,431756,515493,615468,2516765,3004820,3587517,14669088,17513681,20909888,85498017,102077520 ⋆ Nonnegative values x of solutions (x, y) to the Diophantine equation x ^ 2 + (x + 127) ^ 2 = y ^ 2. ● a(n) = 6 * a(n - 3) - a(n - 6) + 254 for n > 6; a(1)=0, a(2)=17, a(3)=308, a(4)=381, a(5)=468, a(6)=2117. ●

► [A099275] 0,1,17,324,6137,116281,2203200,41744521,790942697,14986166724,283946225057,5379992109361,101935903852800,1931402181093841,36594705536930177,693368003020579524,13137397351854080777 ⋆ Unsigned member r= - 17 of the family of Chebyshev sequences S _ r(n) defined in A092184. ● a(n)= 19 * a(n - 1) - a(n - 2) + 2 * (- 1) ^ (n + 1), n>=2, a(0)=0, a(1)=1. ● a(n)= 18 * a(n - 1) + 18 * a(n - 2) - a(n - 3), n>=3, a(0)=0, a(1)=1, a(2)=17. ●

► [A180676] 1,1,1,1,17,337,6641,130865,2578785,50816737,1001378849,19732860833,388849631729,7662550168241,150995835638929,2975477077435217,58633827885912001,1155420016046016193,22768348266078953793 ⋆ The Gi3 sums of the Pell - Jacobsthal triangle A013609. ● a(n) = 20 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) with a(0)=1, a(1)=1, a(2)=1 and a(3)=1. ●

► [A136270] 1,17,337,6689,132769,2635313,52307953,1038253121,20608138561,409048011857,8119135821457,161155572393569,3198754040407009,63491614090959473,1260236019697968433,25014245551686490241 ⋆ a(n) = 20 * a(n - 1) - 3 * a(n - 2). ● a(n) = 20 * a(n - 1) - 3 * a(n - 2), n>2; a(1) = 1, a(2) = 17. ● a(n) = (1 / 2) * (10 - sqrt(97)) ^ n - (9 / 194) * sqrt(97) * (10 + sqrt(97)) ^ n + (1 / 2) * (10 + sqrt(97)) ^ n + (9 / 194) * (10 - sqrt(97)) ^ n * sqrt(97) - _ Alexander R. Povolotsky _ , Mar 31 2008 ●

► [A120287] 1,17,355,7715,203413,492527,49601051,1823359051,16684019407,186004308017,22757931053507,298630937704541,5087253899876732 9,512237317202 55509,1030637838923010 61,7045407930432340853 ⋆ Numerator of 1 / n ^ 3 + 2 / (n - 1) ^ 3 + 3 / (n - 2) ^ 3 + ... + (n - 1) / 2 ^ 3 + n. ● a(n) = numerator[Sum[Sum[1 / i ^ 3, { i,1,k }], { k,1,n }]]. ●

► [A219090] 0,17,610,6433,37366,152243,490222,1334838,3205770,6983372,14071004,26600198,47683715,81721509,134764658,214942297,332956585,502650756,741655290,1072117239,1521517764,2123582899,2919292602,3957993128 ⋆ a(n) = floor((n + 1 / 2) ^ 7). ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) + a(n - 64) - 7 * a(n - 65) + 21 * a(n - 66) - 35 * a(n - 67) + 35 * a(n - 68) - 21 * a(n - 69) + 7 * a(n - 70) - a(n - 71). - _ Wesley Ivan Hurt _ , Jun 18 2022 ●

► [A347851] 17,1277,113147,2580647,20737877,171958667,311725847,408936947,701679047,1804302107,4955335367,7449267797,14005112897,22741837817,52998494597,61033681757,74325366107,78271296197,90479441177,218018750687,236874793697,560125662977,657582657857 ⋆ Primes at lower end of record gaps between prime octuplets given by A347850. ● a(n) == 17 (mod 30). ●

► [A055414] 1,17,1713,33809,306049,1733537,7259297,24499121,70554353,179773681,415055025,886597537,1773617697,3355533537,6058457297,10510672945,17588781393,28537047057,45040906785,69369596001,104503770913 ⋆ Number of points in Z ^ 8 of norm <= n. ● a(n) = [x ^ (n ^ 2)] theta _ 3(x) ^ 8 / (1 - x), where theta _ 3() is the Jacobi theta function. - _ Ilya Gutkovskiy _ , Apr 14 2018 ●

► [A134686] 1,17,203119913336833 ⋆ Number of social welfare functions according to the definition given by Kim and Roush for m=n, where m = number of p

ersons and n = number of alternatives. • a(n) = w(n, n) where w(m,n) = Sum _{ k=1..m } (Stirling2(n,k) * k!) ^ (n! * m). •

▶ [A022352] 0,18,18,36,54,90,144,234,378,612,990,1602,2592,4194,6786,10980,17766,28746,46512,75258,121770,197028,318798,515826,834624 ⋆ Fibonacci sequence beginning 0, 18. • a(n) = 9 * (Lucas(n) - Fibonacci(n)). - _ Harvey P. Dale _ , Oct 09 2013 •

▶ [A241848] 18,19,22,27,34,43,54,67,82,99,118,139,162,187,214,243,274,307,342,379,418,459,502,547,594 ⋆ a(n) = n ^ 2 + 18. • a(n) = a(- n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) = a(n - 1) + 2 * n - 1. •

▶ [A118510] 1,18,19,36,37,54,55,72,73 ⋆ Define sequence S _ m by: initial term = m, reverse digits and add 1 to get next term. It is conjectured that S _ m always reaches a cycle of length 9, as in A117230. Sequence gives records for number of steps to reach cycle. • a(n) = 1 + 9 * (n - 1) for odd n; a(n) = 9 * n for even n. Recursion: a(1) = 1; a(2) = 18; a(n + 1) = a(n - 1) + 18. - (Klaus Brockhaus, Jul 28 2006) •

▶ [A022108] 1,18,19,37,56,93,149,242,391,633,1024,1657,2681,4338,7019,11357,18376,29733,48109,77842,125951,203793,329744,533537,863281 ⋆ Fibonacci sequence beginning 1, 18. • a(n)= a(n - 1) + a(n - 2), n>=2, a(0)=1, a(1)=18. a(- 1): =17. •

▶ [A042507] 1,1,18,19,37,56,317,373,690,3133,3823,6956,38603,45559,84162,129721,2289419,2419140,132922979,135342119,2433739002,2569081121,5002820123,7571901244,42862326343 ⋆ Denominators of continued fraction convergents to sqrt(781). • a(n) = 135212398 * a(n - 18) - a(n - 36) for n>35. - _ Vincenzo Librandi _ , Jan 23 2014 •

▶ [A042517] 1,18,19,56,299,355,3139,3494,6633,182585,189218,371803,3163642,3535445,20840867,45217179,66058046,1234262007,69184730438,1246559409891,1315744140329,3878047690549,20705982593074,24584030283623,217378224862058 ⋆ Denominators of continued fraction convergents to sqrt(787). • a(n) = 692507 88484 * a(n - 18) - a(n - 36) for n>35. - _ Vincenzo Librandi _ , Jan 23 2014 •

▶ [A041668] 18,19,75,94,263,357,620,977,1597,2574,4171,10916,15087,56177,71264,2621681,2692945,10700516,13393461,37487438,50880899,88368337,139249236,227617573,366866809 ⋆ Numerators of continued fraction convergents to sqrt(353). • a(n) = 142528 * a(n - 15) + a(n - 30) for n>29. [_ Bruno Berselli _ , Nov 06 2013] •

▶ [A041666] 18,19,75,394,3621,18499,59118,77617,2853330,2930947,11646171,61161802,562102389,2871673747,9177123630,12048797377,442933829202,454982626579,1807881708939,9494391171274,87257402250405,445781402423299,1424601609520302,1870383011943601 ⋆ Numerators of continued fraction convergents to sqrt(352). • a(n) = 155234 * a(n - 8) - a(n - 16) for n>15. [_ Bruno Berselli _ , Nov 06 2013] •

▶ [A041670] 18,19,94,207,508,9351,19210,47771,210294,258065,9500634,9758699,48535430,106829559,262194548,4826331423,9914857394,24656046211,108539042238,133195088449,4903562226402,5036757314851,25050591485806,55137940286463,135326472058732 ⋆ Numerators of continued fraction convergents to sqrt(354). • a(n) = 516130 * a(n - 10) - a(n - 20) for n>19. [_ Bruno Berselli _ , Nov 06 2013] •

▶ [A041672] 18,19,113,358,1187,1545,10457,12002,46463,151391,803418,954809,35176542,36131351,215833297,683631242,2266727023,2950358265,19968876613,22919234878,88726581247,289098978619 ⋆ Numerators of continued fraction convergents to sqrt(355). • a(n) = 1909618 * a(n - 12) - a(n - 24) for n>23. [_ Bruno Berselli _ , Nov 06 2013] •

▶ [A041674] 18,19,132,151,283,717,1000,8717,9717,28151,37868,66019,433982,500001,18434018,18934019,132038132,150972151,283010283,716992717,1000003000,8717016717,9717019717,28151056151 ⋆ Numerators of continued fraction convergents to sqrt(356). • a(n) = 1000002 * a(n - 14) - a(n - 28) for n>27. [_ Bruno Berselli _ , Nov 06 2013] •

▶ [A041676] 18,19,170,359,3042,3401,125478,128879,1156510,2441899,20691702,23133601,853501338,876634939,7866580850,16609796639,140744953962,157354750601,5805515975598,5962870726199,53508481785190,112979834296579,957347156157822 ⋆ Numerators of continued fraction convergents to sqrt(357). • a(n) = 6802 * a(n - 6) - a(n - 12). - _ Vincenzo Librandi _ , Nov 06 2013 •

▶ [A041681] 1,1,18,19,702,721,12959,13680,505439,519119,9330462,9849581,363915378,373764959,6717919681,7091684640,262018566721,269110251361,4836892839858,5106003091219,188653004123742,193759007214961,3482556126778079,3676315133993040 ⋆ Denominators of continued fraction convergents to sqrt(359). • a(n) = 720 * a(n - 4) - a(n - 8) for n>7. - _ Vincenzo Librandi _ , Dec 22 2013 •

▶ [A255848] 18,20,26,36,50,68,90,116,146,180,218,260,306,356,410,468,530,596,666,740,818,900,986,1076,1170 ⋆ a(n) = 2 * n ^ 2 + 18. • a(n) = a(- n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). (End) •

▶ [A072904] 18,20,27,32,45,48,50,52,54,63,68,72,75,80,84,90,96,98,99,108,112,116,117,125,126 ⋆ Nonsquares m such that the discriminant of the quadratic field Q(sqrt(m)) < m. • a(n) appears to be asymptotic to C * n with C = 3.4... . •

▶ [A113541] 1,18,20,37,39,56,58,75,77,94,96,113,115,132,134,151,153,170,172,189,191,208,210,227,229 ⋆ Numbers k such that 18 * k ^ 2 + 1 is multiple of 19. • a(1)=1, a(2)=18 then add alternatively 2 and 17. • a(n) = 19 * (n - 1) - a(n - 1), (with a(1)=1). - _ Vincenzo Librandi _ , Nov 13 2010 •

▶ [A088341] 0,1,18,21,28,38,42,45,46,49,51,52,56,58,62,69,74,77,79,81,82,83,86,88,93 ⋆ Numbers n such that frac(x ^ n)=frac(x ^ 2 * frac(x ^ (n - 2))) where x =3 / 2 and frac(x) denotes the fractional part of x. • a(n) appears to be asymptotic to 4 * n. •

▶ [A303298] 0,1,18,21,55,60,111,118,186,195,280,291,393,406,525,540,676,693,846,865,1035,1056,1243,1266,1470 ⋆ Generalized 21 - gonal (or icosihenagonal) numbers: m * (19 * m - 17) / 2 with m = 0, + 1, - 1, + 2, - 2, + 3, - 3, ... • a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n>4. • a(n) = (19 * n ^ 2 + 34 * n) / 8 for n even. • a(n) = (19 * n ^ 2 + 4 * n - 15) / 8 for n odd. •

▶ [A154151] 0,18,21,111,128,650,749,3791,4368,22098,25461,128799,148400,750698,864941,4375391,5041248,25501650,29382549,148634511,171254048,866305418,998141741,5049197999,5817596400 ⋆ Indices k such that 25 plus the k - th triangular number is a perfect square. • a(n)= + a(n - 1) + 6 * a(n - 2) - 6 * a(n - 3) - a(n - 4) + a(n - 5). •

▶ [A002505] 18,23,28,32,35,39,42,46,49,52,55,58,60,63,66,68,71,74,76,79,81,84,86,88,91 ⋆ Nearest integer to the n - th Gram point. • a(n) = round(2 * Pi * exp(1 + LambertW((8 * n + 1) / (8 * exp(1))))), Eric Weisstein's World of Mathematics. • a(n + 1) = round(2 * Pi * (n - 7 / 8) / LambertW((n - 7 / 8) / exp(1))), after Guilherme França, André LeClair formula (163) page 47. •

▶ [A154920] 1,18,27,324,405,4374,5103,52488,59049,590490,649539,6377292,6908733,66961566,71744535,688747536,731794257,6973568802,7360989291,69735688020,73222472421,690383311398,721764371007,6778308875544 ⋆ Denominators of a ternary BBP - type formula for log(3). • a(n) = (n + 1) * 9 ^ [(n + 1) / 2] = 18 * a(n - 2) - 81 * a(n - 4). • a(n) = (2 - (- 1) ^ n) * (n + 1) * 3 ^ n. - _ Jaume Oliver Lafont _ , Sep 27 2009 •

▶ [A339633] 1,18,28,58,140,334,824,2038,5084,12730,32004,80694,204004,516902,1312336,3337682,8502132,21688182,55395140,141651742,362601356,929084578,2382677360,6115461118,15707982020 ⋆ Number of final Tic - Tac - Toe positions on a (2 * n) X 3 board that resulted in a tie. • a(n) = [x ^ (2 * n) * t ^ (3 * n)] (4 * t ^ 17 * x ^ 11 + 4 * t ^ 16 * x ^ 11 + 8 * t ^ 16 * x ^ 10 + 12 * t ^ 15 * x ^ 10 + 6 * t ^ 15 * x ^ 9 + 8 * t ^ 14 * x ^ 10 + 8 * t ^ 14 * x ^ 9 + 8 * t ^ 13 * x ^ 9 - 2 * t ^ 13 * x ^ 8 + 6 * t ^ 12 * x ^ 9 - 16 * t ^ 12 * x ^ 8 - 2 * t ^ 11 * x ^ 8 - 26 * t ^ 11 * x ^ 7 - 26 * t ^ 10 * x ^ 7 - 19 * t ^ 10 * x ^ 6 - 38 * t ^ 9 * x ^ 6 - 7 * t ^ 9 * x ^ 5 - 19 * t ^ 8 * x ^ 6 - 13 * t ^ 8 * x ^ 5 - 13 * t ^ 7 * x ^ 5 - t ^ 7 * x ^ 4 - 7 * t ^ 6 * x ^ 5 + 10 * t ^ 6 * x ^ 4 - t ^ 5 * x ^ 4 + 16 * t ^ 5 * x ^ 3 + 16 * t ^ 4 * x ^ 3 + 9 * t ^ 4 * x ^ 2 + 18 * t ^ 3 * x ^ 2 + 9 * t ^ 2 * x ^ 2) / (t ^ 12 * x ^ 8 + t ^ 11 * x ^ 7 + t ^ 10 * x ^ 7 + t ^ 9 * x ^ 6 - 2 * t ^ 6 * x ^ 4 - t ^ 5 * x ^ 3 - t ^ 4 * x ^ 3 - t ^ 3 * x ^ 2 + 1) for n >= 1. •

▶ [A032612] 18,29,310,411,512,613,714,815,916,1017,1118,1219,1320,1421,1522,1623,1724,1825,1926,2027,2128,2229,2330,2431,2532 ⋆ Concatenation of n and n + 7. • a(n) = n * 10 ^ floor(log _ 10(n + 7) + 1) + n + 7, with n >= 0. - _ Paolo P. Lava _ , Oct 09 2008 •

▶ [A014640] 0,18,34,112,148,286,342,540,616,874,970,1288,1404,1782,1918,2356,2512,3010,3186,3744,3940,4558,4774,5452,5688 ⋆ Even heptagonal numbers (A000566). • a(0)=0, a(1)=18, a(2)=34, a(3)=112, a(4)=148, a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). - _ Harvey P. Dale _ , Jun 16 2014 • a(n) = (20 * n ^ 2 - 10 * (- 1) ^ n * n + 4 * n - (- 1) ^ n + 1) / 2. • a(n) = 10 * n ^ 2 - 3 * n for n even. • a(n) = 10 * n ^ 2 + 7 * n + 1 for n odd. •

▶ [A215137] 1,18,35,52,69,86,103,120,137,154,171,188,205,222,239,256,273,290,307,324,341,358,375,392,409 ⋆ a(n) = 17 * n + 1. • a(n) = 2 * a(n - 1) - a(n - 2). •

▶ [A160844] 0,1,18,35,62,93,136,181,238,299,370,445,532,621,722,827,942,1061,1192,1325,1470,1619,1778,1941,2116 ⋆ Number of lines through at least 2 points of a 4 X n grid of points. • a(n) = 2 * a(n - 1) - a(n - 2) + C(mod(n + 2,6) + 1)), C=(10,4,12,2,12,4). •

▶ [A154575] 18,36,58,84,114,148,186,228,274,324,378,436,498,564,634,708,786,868,954,1044,1138,1236,1338,1444,1554 ⋆ a(n) = 2 * n ^ 2 + 12 * n + 4. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Feb 26 2012 •

▶ [A097926] 18,36,70,134,258,498,960,1850,3566,6874,13250,25540,49230,94894,182914,352578,679616,1310002,2525110,4867306,9382034,18084452,34858902,67192694,129518082 ⋆ Number of (n,4) Freiman - Wyner sequences. • a(n) = 2a(n - 1) - a(n - k - 1), k=4, n >= 2k + 2. - _ R. J. Mathar _ , Oct 31 2006 •

▶ [A212428] 0,18,37,57,78,100,123,147,172,198,225,253,282,312,343,375,408,442,477,513,550,588,627,667,708 ⋆ a(n) = 18 * n + A000217(n - 1). • a(n) = (17 + n) * (18 + n) / 2 - 17 * 18 / 2 = 18 * n + (n - 1) * n / 2 = n * (n + 35) / 2. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Jul 10 2012 • a(n) = 18n - floor(n / 2) + floor(n ^ 2 / 2). - _ Wesley Ivan Hurt _ , Jun 15 2013 •

▶ [A195147] 0,1,18,37,72,109,162,217,288,361,450,541,648,757,882,1009,1152,1297,1458,1621,1800,1981,2178,2377,2592 ⋆ Concentric 18 - gonal numbers. • a(n) = (18 * n ^ 2 + 7 * (- 1) ^ n - 7) / 4; • a(n) = - a(n - 1) + 9 * n ^ 2 - 9 * n + 1. (End) •

▶ [A198276] 18,37,75,151,303,607,1215,2431,4863,9727,19455,38911,77823,155647,311295,622591,1245183,2490367,4980735,9961471,19922943,39845887,79691775,159383551,318767103 ⋆ 19 * 2 ^ n - 1. • a(n + 1) = 2 * a(n) + 1. • a(n) + a(n - 1) ^ 2 = (a(n - 1) + 1) ^ 2. - _ Vincenzo Librandi _ , Jun 11 2014 •

▶ [A041646] 18,37,1350,2737,99882,202501,7389918,14982337,546754050,1108490437,40452409782,82013310001,2992931569818,6067876449637,221436483756750,448940843963137,16383306866429682,33215554576822501 ⋆ Numerators of continued fraction convergents to sqrt(342). • a(n) = 74 * a(n - 2) - a(n - 4). - _ Vincenzo Librandi _ , Nov 06 2013 •

▶ [A114698] 1,18,38,58,78,98,118,138,158,178,198,218,238,258,278,298,318,338,358,378,398,418,438,458,478 ⋆ Let M(n) be the n X n matrix m(i,j)=min(i,j) for 1 <=i,j<=n then a(n) is the trace of M(n) ^ (- 3). • a(1)=1 then a(n)=20n - 22. •

▶ [A132761] 0,18,38,60,84,110,138,168,200,234,270,308,348,390,434,480,528,578,630,684,740,798,858,920,984 ⋆ a(n) = n * (n + 17). • a(n) = n * (n + 17). • a(n) = 2 * n + a(n - 1) + 16 for n>0, a(0)=0. - _ Vincenzo Librandi _ , Aug 03 2010 •

▶ [A079862] 18,38,80,168,352,736,1536,3200,6656,13824,28672,59392,122880,253952,524288,1081344,2228224,4587520,9437184,19398656,39845888,81788928,167772160,343932928,704643072 ⋆ a(i) = the number of occurrences of 9's in the palindromic compositions of n=2 * i - 1 = the number of occurrences of 10's in the palindromic compositions of n=2 * i. • a(n) = (n + 8) * 2 ^ (n - 10). • a(n) = 4 * a(n - 1) - 4 * a(n - 2) for n>11. •

▶ [A106521] 18,38,456,854,9192,17132,183474,341876,3660378,6820478,73024176,136067774,1456823232,2714535092,29063440554,54154634156,579811987938,1080378148118,11567176318296,21553408328294 ⋆ Numbers m such that Sum _{ k=0..10 } (m + k) ^ 2 is a square. • a(1)=18, a(2)=38, a(3)=456, a(4)=854, a(5)=9192; thereafter a(n)=a(n - 1) + 20 * a(n - 2) - 20 * a(n - 3) - a(n - 4) + a(n - 5). - _ Harvey P. Dale _ , May 07 2011 • a(1)=18, a(2)=38, a(3)=456, a(4)=

854; thereafter a(n) = 20 * a(n - 2) - a(n - 4) + 90. - _ Daniel Mondot _ , Aug 05 2016 ●

▶ [A097972] 18,40,154,340,928,1804,3658,5254,10504,11770,19180,22648,32578,37054,39400,52210,57838,73168,79804,97654,121450,176818,187054,213904,273004 ⋆ Least m such that both p|m and p + 2|m + 2 for twin prime pairs (p,p + 2) (p=A001359). ● a(n)=p * (p + 3), with p=A001359. ●

▶ [A252747] 18,42,602,1418,20442,48162,694418,1636082,23589762,55578618,801357482,1888036922,27222564618,64137676722,924765839522,2178792971618,31414815979122,74014823358282,1067178977450618,2514325201209962,36252670417341882,85413042017780418 ⋆ Numbers n such that the hexagonal number H(n) is equal to the sum of four consecutive squares. ● a(n) = a(n - 1) + 34 * a(n - 2) - 34 * a(n - 3) - a(n - 4) + a(n - 5). ●

▶ [A250784] 18,46,106,238,518,1106,2326,4838,9978,20446,41686,84658,171398,346166,697786,1404398,2823078,5669266,11375926,22812358,45722618,91603646,183463606,367341938,735354918 ⋆ Number of (2 + 1) X (n + 1) 0..1 arrays with nondecreasing x(i,j) + x(i,j - 1) in the i direction and nondecreasing absolute value of x(i,j) - x(i - 1,j) in the j direction. ● a(n) = 2 ^ (1 - n) * (2 ^ n * (1 + 11 * 2 ^ n) + 2 * (1 - sqrt(5)) ^ n * (- 2 + sqrt(5)) - 2 * (1 + sqrt(5)) ^ n * (2 + sqrt(5))). ●

▶ [A067726] 18,48,90,144,210,288,378,480,594,720,858,1008,1170,1344,1530,1728,1938,2160,2394,2640,2898,3168,3450,3744,4050 ⋆ a(n) = 6 * n ^ 2 + 12 * n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Jul 08 2012 ●

▶ [A273459] 18,50,578,1458,3362,4802,6962,10082,15842,20402,31250,34322,55778,57122,59858,167042,171698,293378,559682,916658,982802,1062882,1104098,1158242,1195058 ⋆ Even numbers such that the sum of the odd divisors is a prime p and the sum of the even divisors is 2p. ● a(n) >> n ^ 2. - _ Charles R Greathouse IV _ , Jun 08 2016 ●

▶ [A051870] 0,1,18,51,100,165,246,343,456,585,730,891,1068,1261,1470,1695,1936,2193,2466,2755,3060,3381,3718,4071,4440 ⋆ 18 - gonal (or octadecagonal) numbers: a(n) = n * (8 * n - 7). ● a(n) = 16 * n + a(n - 1) - 15, with n > 0, a(0) = 0. - _ Vincenzo Librandi _ , Aug 06 2010 ● a(16 * a(n) + 121 * n + 1) = a(16 * a(n) + 121 * n) + a(16 * n + 1). - _ Vladimir Shevelev _ , Jan 24 2014 ●

▶ [A069130] 1,18,52,103,171,256,358,477,613,766,936,1123,1327,1548,1786,2041,2313,2602,2908,3231,3571,3928,4302,4693,5101 ⋆ Centered 17 - gonal numbers: (17 * n ^ 2 - 17 * n + 2) / 2. ● a(n) = (17 * n ^ 2 - 17 * n + 2) / 2. ● a(n) = 17 * n + a(n - 1) - 17 (with a(1)=1). - _ Vincenzo Librandi _ , Aug 08 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3); a(0)=1, a(1)=18, a(2)=52. - _ Harvey P. Dale _ , Jun 05 2011 ●

▶ [A334645] 0,0,18,52,277,1752,12120,88692,674751,5282160,42267384,344152080,2842055359,23746693240,200383750632,1705243729560,14617677294675,126106202849760,1094034474058488,9538676631305712,83536778390997780,734521734171474400,6481894477750488160 ⋆ a(n) is the total number of down steps between the 2nd and 3rd up steps in all 3 - Dyck paths of length 4 * n. A 3 - Dyck path is a nonnegative lattice path with steps (1, 3), (1, - 1) that starts and ends at y = 0. ● a(0) = a(1) = 0 and a(n) = 3 * Sum _{ j=0..2 } binomial(4 * j + 1, j) * binomial(4 * (n - j), n - j) / ((4 * j + 1) * (n - j + 1)) for n > 1. ●

▶ [A133356] 1,1,18,52,392,1616,9504,44864,241792,1201408,6271488,31765504,163874816,835997696,4293992448,21963948032,112631775232,576686718976,2955481841664,15137951186944,77563611840512,397334442672128 ⋆ a(n) = 2 * a(n - 1) + 16 * a(n - 2) for n>1, a(0)=1, a(1)=1. ● a(n) = (1 / 2) * ((1 - sqrt(17)) ^ n + (1 + sqrt(17)) ^ n). - _ Paolo P. Lava _ , Jun 10 2008 ●

▶ [A033571] 1,18,55,112,189,286,403,540,697,874,1071,1288,1525,1782,2059,2356,2673,3010,3367,3744,4141,4558,4995,5452,5929 ⋆ a(n) = (2 * n + 1) * (5 * n + 1). ● a(n) = a(n - 1) + 20 * n - 3 (with a(0)=1). - _ Vincenzo Librandi _ , Nov 17 2010 ●

▶ [A155155] 18,58,178,538,1618,4858,14578,43738,131218,393658,1180978,3542938,10628818,31886458,95659378,286978138,860934418,2582803258,7748409778,23245229338,69735688018,209207064058,627621192178,1882863576538 ⋆ a(n) = 2 * (10 * 3 ^ n - 1). ● a(n) = 4 * a(n - 1) - 3 * a(n - 2). ● a(n) = 3 * a(n - 1) - a(n - 2) + 3 * a(n - 3) + 8. ●

▶ [A244806] 1,18,59,124,213,326,463,624,809,1018,1251,1508,1789,2094,2423,2776,3153,3554,3979,4428,4901,5398,5919,6464,7033 ⋆ The 180 - degree spoke (or ray) of a hexagonal spiral of Ulam. ● a(n) = 12 * n ^ 2 - 19 * n + 8. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>3. ●

▶ [A027055] 1,18,59,146,319,652,1281,2456,4637,8670,16111,29822,55067,101528,187013,344276,633561,1165674,2144419,3944650,7255831,13346084,24547849,45151152,83046581 ⋆ a(n) = T(n, n + 4), T given by A027052. ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 2 * a(n - 3) - a(n - 4) + 2 * a(n - 5) - a(n - 6) for n>9. ●

▶ [A275155] 18,64,338,1936,11250,65536,381938,2226064,12974418,75620416,440748050,2568867856,14972459058,87265886464,508622859698,2964471271696,17278204770450,100704757350976,586950339335378,3420997278661264,19939033332632178,116213202717131776 ⋆ a(1) = 18; a(n) = 3 * a(n - 1) + 2 * sqrt(2 * a(n - 1) * (a(n) - 1) - 14)) - 14 for n > 1. ● a(n + 1) = 3 * a(n) + 2 * sqrt(2 * a(n) * (a(n) - 14)) - 14. ● a(n) = (14 + (9 - 4 * sqrt(2)) * (3 + 2 * sqrt(2)) ^ n + (3 - 2 * sqrt(2)) ^ n * (9 + 4 * sqrt(2))) / 2. ● a(n) = 7 * a(n - 1) - 7 * a(n - 2) + a(n - 3) for n>3. ●

▶ [A010006] 1,18,66,146,258,402,578,786,1026,1298,1602,1938,2306,2706,3138,3602,4098,4626,5186,5778,6402,7058,7746,8466,9218 ⋆ Coordination sequence for C _ 3 lattice: a(n) = 16 * n ^ 2 + 2 (n>0), a(0)=1. ● a(0)=1, a(n) = 16 * n ^ 2 + 2, n >= 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3); a(0)=1, a(1)=18, a(2)=66, a(3)=146. - _ Harvey P. Dale _ , Oct 15 2012 ●

▶ [A237616] 0,1,18,66,160,315,546,868,1296,1845,2530,3366,4368,5551,6930,8520,10336,12393,14706,17290,20160,23331,26818,30636,34800 ⋆ a(n) = n * (n + 1) * (5 * n - 4) / 2. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n >= 4. - _ Wesley Ivan Hurt _ , Dec 18 2020 ●

▶ [A143859] 1,18,67,148,261,406,583,792,1033,1306,1611,1948,2317,2718,3151,3616,4113,4642,5203,5796,6421,7078,7767,8488,9241 ⋆ Ulam's spiral (WNW spoke). ● a(n) = 16 * n ^ 2 - 31 * n + 16. - _ R. J. Mathar _ , Sep 08 2008 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3), a(1)=1, a(2)=18, a(3)=67. - _ Harvey P. Dale _ , Mar 24 2012 ●

▶ [A063523] 0,1,18,67,164,325,566,903,1352,1929,2650,3531,4588,5837,7294,8975,10896,13073,15522,18259,21300,24661,28358,32407,36824 ⋆ a(n) = n * (8 * n ^ 2 - 5) / 3. ● a(0)=0, a(1)=1, a(2)=18, a(3)=67, a(n)=4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Harvey P. Dale _ , Jul 11 2011 ●

▶ [A158056] 18,68,150,264,410,588,798,1040,1314,1620,1958,2328,2730,3164,3630,4128,4658,5220,5814,6440,7098,7788,8510,9264,10050 ⋆ a(n) = 16 * n ^ 2 + 2 * n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A059224] 18,70,224,648,1760,4576,11520,28288,68096,161280,376832,870400,1990656,4513792,10158080,22708224,50462720,111542272,245366784,537395200,1172307968,2548039680,5519704064,11920211968,25669140480 ⋆ a(n) = 2 ^ (n - 3) * (n + 3) * (2 * n - 3). ● a(n) = 6 * a(n - 1) - 12 * a(n - 2) + 8 * a(n - 3). ●

▶ [A262000] 0,1,18,72,184,375,666,1078,1632,2349,3250,4356,5688,7267,9114,11250,13696,16473,19602,23104,27000,31311,36058,41262,46944 ⋆ a(n) = n ^ 2 * (7 * n - 5) / 2. ● a(n) = Sum _{ i=0..n - 1 } n * (7 * i + 1) for n>0, a(0)=0. ●

▶ [A211619] 0,1,18,73,192,395,710,1157,1764,2551,3546,4769,6248,8003,10062,12445,15180,18287,21794,25721,30096,34939,40278,46133,52532 ⋆ Number of ordered triples (w,x,y) with all terms in {- n,... - 1,1,...,n } and 2w + x + y>2. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - 2 * a(n - 3) + 3 * a(n - 4) - a(n - 5) for n>6. ● a(n) = 4 * n ^ 3 - 5 * n ^ 2 + 5 * n - 4 for n>1 and even. ● a(n) = 4 * n ^ 3 - 5 * n ^ 2 + 5 * n - 5 for n>1 and odd. ●

▶ [A022145] 1,18,74,170,306,482,698,954,1250,1586,1962,2378,2834,3330,3866,4442,5058,5714,6410,7146,7922,8738,9594,10490,11426 ⋆ Coordination sequence for root lattice B _ 3. ● a(n) = 20 * n ^ 2 - 4 * n + 2, for n>0. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>3. G.f.: (1 + 15 * x + 23 * x ^ 2 + x ^ 3) / (1 - x) ^ 3. [_ Colin Barker _ , Apr 13 2012] ●

▶ [A139757] 1,18,75,196,405,726,1183,1800,2601,3610,4851,6348,8125,10206,12615,15376,18513,22050,26011,30420,35301,40678,46575,53016,60025 ⋆ a(n) = (n + 1) * (2n + 1) ^ 2. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4); G.f.: (1 + 14 * x + 9 * x ^ 2) / (x - 1) ^ 4. - _ R. J. Mathar _ , Sep 19 2010 ● a(n) = Sum _{ i=1..2n - 1 } (n ^ 2 + n * i - i). - _ Wesley Ivan Hurt _ , Sep 29 2014 ●

▶ [A262402] 0,18,76,200,412,738,1200,1824,2632,3650,4900,6408,8196,10290,12712,15488,18640,22194,26172,30600,35500,40898,46816,53280,60312 ⋆ a(n) = number of triangles that can be formed from the points of a 3 X n grid. ● a(n) = n ^ 2 * (8 * n - 7) / 2 - (n mod 2) / 2. - _ Jared Nash _ , Dec 14 2017 ● a(n) = n ^ 2 * (8 * n - 7) / 2 for n even. ● a(n) = (8 * n ^ 3 - 7 * n ^ 2 - 1) / 2 for n odd. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) - 2 * a(n - 3) + 3 * a(n - 4) - a(n - 5) for n>5. ●

▶ [A164603] 1,18,76,376,1808,8736,42176,203648,983296,4747776,22924288,110688256,534450176,2580553728,12460015616,60162277376,290489171968,1402605797376,6772379877376,32699942699008,157889290305536 ⋆ a(n) = ((1 + 4 * sqrt(2)) * (2 + 2 * sqrt(2)) ^ n + (1 - 4 * sqrt(2)) * (2 - 2 * sqrt(2)) ^ n) / 2. ● a(n) = 4 * a(n - 1) + 4 * a(n - 2) for n > 1; a(0) = 1, a(1) = 18. ●

▶ [A100187] 1,18,77,204,425,766,1253,1912,2769,3850,5181,6788,8697,10934,13525,16496,19873,23682,27949,32700,37961,43758,50117,57064,64625 ⋆ Structured octagonal anti - diamond numbers (vertex structure 7). ● a(n) = (1 / 6) * (26 * n ^ 3 - 30 * n ^ 2 + 10 * n). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4); a(1)=1, a(2)=18, a(3)=77, a(4)=204. - _ Harvey P. Dale _ , Dec 24 2012 ●

▶ [A063495] 1,18,80,217,459,836,1378,2115,3077,4294,5796,7613,9775,12312,15254,18631,22473,26810,31672,37089,43091,49708,56970,64907,73549 ⋆ a(n) = (2 * n - 1) * (5 * n ^ 2 - 5 * n + 2) / 2. ● a(1)=1, a(2)=18, a(3)=80, a(4)=217, a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ●

▶ [A264850] 0,1,18,80,230,525,1036,1848,3060,4785,7150,10296,14378,19565,26040,34000,43656,55233,68970,85120,103950,125741,150788,179400,211900 ⋆ a(n) = n * (n + 1) * (n + 2) * (7 * n - 5) / 12. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Vincenzo Librandi _ , Nov 27 2015 ●

▶ [A085504] 0,1,18,81,405,1944,9477,45927,223074,1082565,5255361,25509168,123825753,601059771,2917611090,14162371209,68745613437,333698181192,1619805064509,7862698824255,38166342053346,185263315578333,899287025215113,4365230915850336 ⋆ Horadam sequence (0,1,9,3). ● a(n) = s * a(n - 1) + r * a(n - 2); for n > 3, where a(0) = 0, a(1) = 1, a(2) = 18, a(4) = 81, s = 3, r = 9. ●

▶ [A250101] 0,18,86,198,3646,15078,69806,712758,3029566,18311238,140238926,655858518,4289313886,28250282598,145561230446,954150191478,5838715924606,32329836673158,207348403892366,1231435592095638,7130307943789726,44648052096906918,263148726196032686 ⋆ Expansion of (18 * x + 86 * x ^ 2) / (1 - 11 * x ^ 2 - 150 * x ^ 3). ● a(n) = 2 ^ (1 + n) * 3 ^ n - (- 3 - 4 * i) ^ n - (- 3 + 4 * i) ^ n where i is the imaginary unit. ● a(n) = 11 * a(n - 2) + 150 * a(n - 3) for n>2. ●

▶ [A215191] 0,18,88,276,664,1366,2512,4264,6800,10330,15080,21308,29288,39326,51744,66896,85152,106914,132600,162660,197560,237798,283888,336376,395824 ⋆ Number of arrays of 4 0..n integers with no sum of consecutive elements equal to a disjoint adjacent sum of an equal number of elements. ● a(n) = n * (3 * n ^ 3 + n ^ 2 - 1) / 3 for n even. ● a(n) = (3 * n ^ 4 + n ^ 3 - n - 3) / 3 for n odd. ●

▶ [A059138] 18,90,270,666,1494,3186,6606,13482,27270,54882,110142,220698,441846,884178,1768878,3538314,7077222,14155074,28310814,56622330,113245398,226491570,452983950,905968746,1811938374 ⋆ A hierarchical sequence (S(W3 { 2, 2 } cc) - see A059126). ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 2 * a(n - 3) for n>2. ●

▶ [A374083] 1,18,93,296,725,1506,2793,4768,7641,11650,17061,24168,33293,44786,59025,76416,97393,122418,151981,186600,226821,273218,326393,386976,455625 ⋆ Vertical moments of inertia of a unit lozenge tiling of the hexagon with side lengths n (see references for exact configuration). ● a(n) = (7 * n ^ 4 - n ^ 2) / 6. ●

▶ [A047929] 0,18,96,300,720,1470,2688,4536,7200,10890,15840,22308,30576,40950,53760,69360,88128,110466,136800,167580,203280,244398,291456,345000,405600 ⋆ a(n) = n ^ 2 * (n - 1) * (n - 2). ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Wesley Ivan Hurt _ , May 22 2021 ●

► [A177371] 1,18,98,812,5748,43120,316600,2343120,17290256,127726400,943159584,6965532736,51439836352,379886330112,2805462584192,20718413985536,153005867110656,1129951564794880,8344715027364352,61625891492889600 ⋆ Expansion of (1 + 12 * x - 24 * x ^ 2 + 8 * x ^ 4) / ((1 - 8 * x + 4 * x ^ 2 + 4 * x ^ 3) * (1 + 2 * x - 2 * x ^ 2)). ● a(0)=1, a(1)=18, a(2)=98, a(3)=812, a(4)=5748, a(n)=6a(n - 1) + 14a(n - 2) - 28a(n - 3) + 8a(n - 5). (End) ●

► [A221911] 1,18,99,756,6597,59094,531495,4783032,43046793,387420570,3486784491,31381059708,282429536589,2541865828446,22876792455087,205891132094784,1853020188851985,16677181699666722,150094635296999283 ⋆ 9 ^ n + 9 * n. ● a(n) = 11 * a(n - 1) - 19 * a(n - 2) + 9 * a(n - 3). ●

► [A064604] 1,18,100,373,999,2393,4795,9164,15807,26449,41091,63477,92039,132873,184205,254110,337632,450563,580885,751783,948747,1197661,1477503,1835761,2227012 ⋆ Partial sums of A001159: Sum _{ j=1..n } sigma _ 4(j). ● a(n) = Sum _{ k=1..n } Bernoulli(5, floor(1 + n / k)) / 5, where Bernoulli(n,x) are the Bernoulli polynomials. - _ Daniel Suteu _ , Nov 07 2018 ● a(n) = Sum _{ k=1..n } k ^ 4 * floor(n / k). - _ Daniel Suteu _ , Nov 08 2018 ●

► [A008528] 1,18,102,318,732,1410,2418,3822,5688,8082,11070,14718,19092,24258,30282,37230,45168,54162,64278,75582,88140,102018,117282,133998,152232 ⋆ Coordination sequence for 4 - dimensional RR - centered di - isohexagonal orthogonal lattice. ● a(n) = n * (11 * n ^ 2 + 7) with n>0, with a(0)=1. ●

► [A020881] 18,102,418,2006,8946,41222,187202,855606,3899538,17794662,81157858,370232726,1688782386,7703577542,35140060802,160293673206,731187195858 ⋆ Number of strong restricted edge - subgraphs in Moebius ladder M _ n. ● a(n) = 2 * a(n - 1) + 11 * a(n - 2) + 4 * a(n - 3) - 4 * a(n - 4) for n>5. ●

► [A285043] 1,18,102,500,2310,10332,45276,195624,836550,3549260,14965236,62783448,262303132,1092063000,4533175800,18769219920,77539370310,319704052140,1315894618500,5407825361400,22193291140020 ⋆ Expansion of cosh(3 * arctanh(2 * sqrt(x))). ● a(n) = (8 * n + 1) * binomial(2 * n,n). ●

► [A019584] 0,0,1,18,108,400,1125,2646,5488,10368,18225,30250,47916,73008,107653,154350,216000,295936,397953,526338,685900,882000,1120581,1408198,1752048 ⋆ a(n) = n ^ 2 * (n - 1) ^ 3 / 4. ● a(n) = Sum _{ j=1..n - 2 } Sum _{ i=1..n - 2 } (i ^ 3 + j ^ 3) / 2. - _ Alexander Adamchuk _ , Oct 24 2004 ● a(n) = Sum _{ i=0..n - 1 } (n - 1) * (n - 1 - i) ^ 3 for n>0. - _ Bruno Berselli _ , Oct 31 2017 ●

► [A213562] 1,18,109,407,1152,2723,5670,10746,18939,31504,49995,76297,112658,161721,226556,310692,418149,553470,721753,928683,1180564,1484351,1847682,2278910,2787135 ⋆ Principal diagonal of the convolution array A213561. ● a(n) = (4 / 15) * n ^ 5 + (11 / 24) * n ^ 4 + (1 / 4) * n ^ 3 + (1 / 24) * n ^ 2 - (1 / 16) * n. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). ●

► [A160765] 1,18,112,403,1071,2356,4558,8037,13213,20566,30636,44023,61387,83448,110986,144841,185913,235162,293608,362331,442471,535228,641862,763693,902101 ⋆ Expansion of (1 + 13 * x + 32 * x ^ 2 + 13 * x ^ 3 + x ^ 4) / (1 - x) ^ 5. ● a(n) = (n ^ 2 + n + 1) * (5 * n ^ 2 + 5 * n + 2) / 2. - _ R. J. Mathar _ , Sep 11 2011 ●

► [A244866] 1,18,114,438,1263,3024,6356,12132,21501,35926,57222,87594,129675,186564,261864,359720,484857,642618,839002,1080702,1375143,1730520,2155836,2660940,3256565 ⋆ Let G denote the 7 - node, 12 - edge graph formed from a hexagon with main diagonals drawn and a node at the center; a(n) = number of magic labelings of G with magic sum 2n. ● a(n) = (n + 1) * (n + 2) * (19 * n ^ 3 + 63 * n ^ 2 + 68 * n + 30) / 60. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>5. ●

► [A061803] 1,18,115,452,1333,3254,6951,13448,24105,40666,65307,100684,149981,216958,305999,422160,571217,759714,995011,1285332,1639813,2068550,2582647,3194264,3916665 ⋆ Sum of n - th row of triangle of 4th powers: 1; 1 16 1; 1 16 81 16 1; 1 16 81 256 81 16 1; ... ● a(n) = n(6n ^ 4 + 10n ^ 2 - 1) / 15. - Dean Hickerson, Jun 06 2001 ●

► [A101089] 1,18,116,470,1449,3724,8400,17172,32505,57838,97812,158522,247793,375480,553792,797640,1125009,1557354,2120020,2842686,3759833,4911236,6342480,8105500,10259145 ⋆ Second partial sums of fourth powers (A000583). ● a(n) = (1 / 60) * n * (n + 1) ^ 2 * (n + 2) * (2 * n * (n + 2) - 1). ● a(n) = Sum _{ i=1..n } i * (n + 1 - i) ^ 4, by the definition. - _ Bruno Berselli _ , Jan 31 2014 ● a(n) = 2 * a(n - 1) - a(n - 2) + n ^ 4. - _ Luciano Ancora _ , Jan 08 2015 ●

► [A190705] 0,18,120,378,864,1650,2808,4410,6528,9234,12600,16698,21600,27378,34104,41850,50688,60690,71928,84474,98400,113778,130680,149178,169344 ⋆ a(n) = 6 * n ^ 2 * (2 * n + 1). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4); a(0)=0, a(1)=18, a(2)=120, a(3)=378. - _ Harvey P. Dale _ , Mar 20 2016 ●

► [A108648] 1,18,120,500,1575,4116,9408,19440,37125,66550,113256,184548,289835,441000,652800,943296,1334313,1851930,2527000,3395700,4500111,5888828,7617600,9750000,12358125 ⋆ a(n) = (n + 1) ^ 2 * (n + 2) ^ 3 * (n + 3) / 24. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>6. ●

► [A107417] 1,18,126,560,1890,5292,12936,28512,57915,110110,198198,340704,563108,899640,1395360,2108544,3113397,4503114,6393310,8925840,12273030,16642340,22281480,29484000,38595375 ⋆ a(n) = C(n + 2,2) * C(n + 5,5). ● a(0)=1, a(1)=18, a(2)=126, a(3)=560, a(4)=1890, a(5)=5292, a(6)=12936, a(7)=28512, a(n)=8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8). ●

► [A056125] 1,18,126,570,1980,5742,14586,33462,70785,140140,262548,469404,806208,1337220,2151180,3368244,5148297,7700814,11296450,16280550,23088780,32265090,44482230,60565050,81516825 ⋆ a(n) = (5 * n + 4) * binomial(n + 7,7) / 4. ● a(0)=1, a(1)=18, a(2)=126, a(3)=570, a(4)=1980, a(5)=5742, a(6)=14586, a(7)=33462, a(8)=70785, a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9). - _ Harvey P. Dale _ , Jan 18 2013 ● a(n) = 10 * binomial(n + 8,8) - 9 * binomial(n + 7,7). ●

► [A244879] 1,18,129,571,1884,5103,11998,25362,49347,89848,154935,255333,404950,621453,926892,1348372,1918773,2677518,3671389,4955391,6593664,8660443,11241066,14433030,18347095 ⋆ Number of magic labelings of the cycle - of - loops graph LOOP X C _ 6 having magic sum n, where LOOP is the 1 - vertex, 1 - loop - edge graph. ● a(n) = (120 + 438 * n + 677 * n ^ 2 + 570 * n ^ 3 + 275 * n ^ 4 + 72 * n ^ 5 + 8 * n ^ 6) / 120. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n > 6. ●

► [A142965] 1,18,129,646,2685,10002,34777,115566,372453,1175290,3654369,11245110,34349005,104373282,315969705,954002878,2874983541,8652474378,26015617585,78169534470,234766551261,704840716978,2115654610809,6349329417486,19052920751365 ⋆ One fourth of third column (m=2) of triangle A142963. ● a(n) = 10a(n - 1) - 40a(n - 2) + 82a(n - 3) - 91a(n - 4) + 52a(n - 5) - 12a(n - 6). ● a(n) = 35 / 2 + 2 * n ^ 2 + 12 * n - 84 * 2 ^ n - 24 * 2 ^ n * n + 135 / 2 * 3 ^ n ●

► [A058649] 0,1,18,132,680,2880,10752,36736,117504,357120,1041920,2939904,8067072,21618688,56770560,146472960,372113408,932511744,2308571136,5653135360,13707509760,32942063616,78525759488,185799278592,436627046400 ⋆ a(n) = 2 ^ (n - 4) * n * (n + 1) * (n ^ 2 + 5 * n - 2). ● a(n) = Sum _{ i=1..n } i ^ 4 * binomial(n, i). ● a(n) = 10 * a(n - 1) - 40 * a(n - 2) + 80 * a(n - 3) - 80 * a(n - 4) + 32 * a(n - 5). - _ Wesley Ivan Hurt _ , Dec 24 2021 ●

► [A056003] 1,18,135,660,2475,7722,21021,51480,115830,243100,481338,906984,1637610,2848860,4796550,7845024,12503007,19468350,29683225,44401500,65270205,94427190,134617275,189329400,262957500 ⋆ A second - order recursive sequence. ● a(n) = (n + 1) * C(n + 8, 8). ●

► [A337002] 0,1,18,135,796,4605,28926,204883,1643160,14795001,147960010,1627574751,19530917748,253901959285,3554627468406,53319412076715,853110593292976,14502880086064113,261051841549259010,4959984989436051511,99199699788721190220 ⋆ a(n) = n! * Sum _{ k=0..n } k ^ 4 / k!. ● a(0) = 0; a(n) = n * (n ^ 3 + a(n - 1)). ●

► [A114239] 1,18,136,650,2331,6860,17472,39852,83325,162382,298584,522886,878423,1423800,2236928,3419448,5101785,7448874,10666600,15008994,20786227,28373444,38220480,50862500,66931605 ⋆ a(n) = (n + 1)(n + 2) ^ 3 * (n + 3)(n ^ 2 + 4n + 5) / 120. ● a(n - 2) = (n ^ 7 - n ^ 3) / (2 ^ 7 - 2 ^ 3). - _ David Radcliffe _ , Dec 27 2008 ●

► [A087115] 0,1,18,137,650,2350,6860,17609,39870,83976,162382,301070,522886,885284,1424468,2254537,3419448,5143987,7448874,10750712,15015872,20948610,28373444,38539022,50863150 ⋆ Convolution of sum of cubes of divisors with it self. ● a(n) = (sigma _ 7(n) - sigma _ 3(n)) / 120. ●

► [A108680] 1,18,140,700,2646,8232,22176,53460,117975,242242,468468,861224,1516060,2570400,4217088,6720984,10439037,15844290,23554300,34364484,49286930,69595240,96876000,133087500,180626355 ⋆ Kekulé numbers for certain benzenoids. ● a(n) = (n + 1) * (n + 2) ^ 3 * (n + 3) ^ 2 * (n + 4) * (n + 5) / 1440 (from Maple section). ●

► [A081074] 0,18,141,984,6762,46365,317808,2178306,14930349,102334152,701408730,4807526973,32951280096,225851433714,1548008755917,10610209857720,72723460248138,498454011879261,3416454622906704,23416728348467682 ⋆ Fibonacci(4n) - 3, or Fibonacci(2n - 2) * Lucas(2n + 2). ● a(n) = 8a(n - 1) - 8a(n - 2) + a(n - 3). ● a(n) = - 3 + (3 / 2) *{ [(7 / 2) - (3 / 2) * sqrt(5)] ^ n + [(7 / 2) + (3 / 2) * sqrt(5)] ^ n }+ (7 / 10) * sqrt(5) *{ [(7 / 2) + (3 / 2) * sqrt(5)] ^ n - [(7 / 2) - (3 / 2) * sqrt(5)] ^ n } , with n>=0. - _ Paolo P. Lava _ , Dec 01 2008 ●

► [A127408] 18,144,625,1980,5145,11648,23814,45000,79860,134640,217503,338884,511875,752640,1080860,1520208,2098854,2850000,3812445,5031180,6558013,8452224,10781250,13621400,17058600 ⋆ Negative value of coefficient of x ^ (n - 3) in the characteristic polynomial of a certain n X n integer circulant matrix. ● a(n + 2) = n * (n + 1) * (n + 2) ^ 3 * (2n + 14) / (2 * 4!) for n>=1. ● a(n) = (n ^ 6 + 2 * n ^ 5 - 13 * n ^ 4 + 10 * n ^ 3) / 4! for n>=3. ●

► [A178759] 0,0,0,18,144,750,3240,12642,46368,163350,559800,1881066,6229872,20406750,66273480,213759090,685601856,2188698150,6959413080,22053083514,69672773520,219535296750,690106487400,2164714299138,6777100916064 ⋆ Expansion of e.g.f. 3 * x * exp(x) * (exp(x) - 1) ^ 2. ● a(n) = (3 ^ n - 3 * 2 ^ n + 3) * n. - _ Mark van Hoeij _ , May 13 2013 ●

► [A224329] 1,18,147,996,6245,37494,218743,1249992,7031241,39062490,214843739,1171874988,6347656237,34179687486,183105468735,976562499984,5187988281233,27465820312482,144958496093731,762939453124980 ⋆ Number of idempotent n X n 0..4 matrices of rank n - 1. ● a(n) = n * (2 * 5 ^ (n - 1) - 1). ● a(n) = 12 * a(n - 1) - 46 * a(n - 2) + 60 * a(n - 3) - 25 * a(n - 4). ●

► [A294486] 1,18,150,980,5670,30492,156156,772200,3719430,17551820,81477396,373173528,1690097500,7582037400,33738060600,149067936720,654576544710,2858667619500,12423860225700,53760146239800,231720014946420,995238809839560,4260800401533000 ⋆ a(n) = binomial(2 * n,n) * (2 * n + 1) ^ 2. ● a(n) = Sum _{ k = 0..2 * n + 1 } (- 1) ^ (n + k + 1) * k ^ 2 * binomial(2 * n + 1,k) ^ 2. Cf. A361719. - _ Peter Bala _ , Mar 24 2023 ●

► [A244876] 1,18,154,813,3157,9880,26429,62713,135470,271285,510485,911840,1558368,2564093,4082142,6313934,9519951,14031732,20265700,28738335,40083439,55070862,74627587,99860383,132081092 ⋆ Number of magic labelings with magic sum n of 8th graph shown in link. ● a(n) = 3 * n ^ 7 / 160 + 63 * n ^ 6 / 320 + 151 * n ^ 5 / 160 + 339 * n ^ 4 / 128 + 2251 * n ^ 3 / 480 + n ^ 2 * (- 1) ^ n / 64 + 1677 * n ^ 2 / 320 + 3 * n * (- 1) ^ n / 64 + 3259 * n / 960 + 9 * (- 1) ^ n / 256 + 247 / 256. [_ Bruno Berselli _ , Jul 08 2014] ●

► [A271899] 1,18,162,927,3906,13248,38256,97614,225819,482482,965250,1827189,3299556,5720976,9574128,15531132,24508917,37735938,56831698,83900619,121641894,173477040,243696960,337630410,461835855 ⋆ a(n) = 1 + 471 * n / 140 + 1594 * n ^ 2 / 315 + 73 * n ^ 3 / 16 + 161 * n ^ 4 / 60 + 83 * n ^ 5 / 80 + 61 * n ^ 6 / 240 + n ^ 7 / 28 + 11 * n ^ 8 / 5040. ● a(n) = (n + 4) * (n + 3) * (n + 2) * (n + 1) * (11 * n ^ 4 + 70 * n ^ 3 + 196 * n ^ 2 + 269 * n + 210) / 5040. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9). - _ Wesley Ivan Hurt _ , Jul 02 2020 ●

► [A099196] 0,1,18,163,996,4645,17718,57799,166344,432073,1030490,2286955,4772780,9446125,17852030,32398735,56730512,96220561,158611106,254831667,400030580,614859189,927052742,1373356887,2001853784 ⋆ a(n) = n * (2 * n ^ 8 + 84 * n ^ 6 + 798 * n ^ 4 + 1636 * n ^ 2 + 315) / 2835. ● a(n) = n * (2 * n ^ 8 +

84 * n ^ 6 + 798 * n ^ 4 + 1636 * n ^ 2 + 315) / 2835. ● a(n) = 18 * a(n - 1) / (n - 1) + a(n - 2) for n > 1. - _ Seiichi Manyama _ , Jun 06 2018 ●

► [A041618] 18,163,5886,53137,1918818,17322499,625528782,5647081537,203920464114,1840931258563,66477445772382,600137943210001,21671443401332418,195643128555201763,7064824071388595886 ★ Numerators of continued fraction convergents to sqrt(328). ● a(n) = 326 * a(n - 2) - a(n - 4). G.f.: - (x ^ 3 - 18 * x ^ 2 - 163 * x - 18) / ((x ^ 2 - 18 * x - 1) * (x ^ 2 + 18 * x - 1)). [_ Colin Barker _ , Jul 16 2012] ●

► [A208827] 18,167,828,2821,7582,17339,35288,65769,114442,188463,296660,449709,660310,943363,1316144,1798481,2412930,3184951,4143084,5319125,6748302,8469451,10525192,12962105,15830906 ★ Number of 6 - bead necklaces labeled with numbers - n..n allowing reversal, with sum zero. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. ●

► [A071539] 0,18,168,1170,7440,45738,277368,1672290,10056480,60404058,362613768,2176238610,13059075120,78359331978,470170537368,2821066664130,16926529911360,101559568461498,609358576176168,3656154950132850,21936940173733200,131621672448624618,789730128885258168 ★ Number of n - tuples of elements _ 1,e _ 2,...,e _ n in the symmetric group S _ 3 such that the subgroup generated by e _ 1,e _ 2,...,e _ n is S _ 3. ● a(n) = 6 ^ n - 3 * 2 ^ n - 3 ^ n + 3. ●

► [A010970] 1,18,171,1140,5985,26334,100947,346104,1081575,3124550,8436285,21474180,51895935,119759850,265182525,565722720,1166803110,2333606220,4537567650,8597496600,15905368710,28781143380,51021117810,88732378800,151584480450 ★ a(n) = binomial(n,17). ● a(n + 16) = n * (n + 1) * (n + 2) * (n + 3) * (n + 4) * (n + 5) * (n + 6) * (n + 7) * (n + 8) * (n + 9) * (n + 10) * (n + 11) * (n + 12) * (n + 13) * (n + 14) * (n + 15) * (n + 16) / 17!. - _ Artur Jasinski _ , Dec 02 2007; _ R. J. Mathar _ , Jul 07 2009 ● a(n) = n / (n - 17) * a(n - 1), n > 17. - _ Vincenzo Librandi _ , Mar 26 2011 ●

► [A071910] 0,18,180,900,3150,8820,21168,45360,89100,163350,283140,468468,745290,1146600,1713600,2496960,3558168,4970970,6822900,9216900,12273030,16130268,20948400,26910000,34222500 ★ a(n) = t(n) * t(n + 1) * t(n + 2), where t() are the triangular numbers. ● a(n) = ((n + 1) * (n + 2)) ^ 3 / 8 - Sum _{ i=1..n + 1 } i ^ 3. - _ Jon Perry _ , Feb 13 2004 ● a(n) = C(2 + n, n) * C(3 + n, 1 + n) * C(4 + n, 2 + n). - _ Zerinvary Lajos _ , Jul 29 2005 ●

► [A140325] 1,18,180,1320,7920,41184,192192,823680,3294720,12446720,44808192,154791936,515973120,1666990080,5239111680,16066609152,48199827456,141764198400,409541017600,1163958681600,3259084308480,9001280471040 ★ a(n) = binomial(n + 8,8) * 2 ^ n. ● a(n) = Sum _{ i=8..n + 8 } binomial(i,8) * binomial(n + 8,i). Example: for n=6, a(6) = 1 * 3003 + 9 * 2002 + 45 * 1001 + 165 * 364 + 495 * 91 + 1287 * 14 + 3003 * 1 = 192192. - _ Bruno Berselli _ , Mar 23 2018 ●

► [A199299] 1,18,180,1512,11664,85536,606528,4199040,28553472,191476224,1269789696,8344332288,54419558400,352638738432,2272560758784,14575734521856,93096626946048,592433080565760,3757718396731392,23765029860409344,149902496042582016,943288877536247808 ★ a(n) = (2 * n + 1) * 6 ^ n. ● a(n) = 12 * a(n - 1) - 36 * a(n - 2). ● a(n) = 6 * a(n - 1) + 2 * 6 ^ n. - _ Vincenzo Librandi _ , Nov 05 2011 ●

► [A155669] 1,18,180,1728,16560,159048,1531440,14782968,143046720,1387420488,13486784400,131381059608,1282429536480,12541865828328,122876792454960,1205891132094648,11853020188851840,116677181699666568 ★ 11 ^ n + 9 ^ n - 1. ● a(n)=19 * a(n - 1) - 90 * a(n - 2) - 72 with a(0)=1, a(1)=18 - _ Vincenzo Librandi _ , Jul 21 2010 ●

► [A296778] 1,18,184,1800,15136,127008 ★ Detour index of the n - folded cube graph. ● a(n) = 2 ^ (n - 4) * (2 ^ n - 2) ^ 2 for odd n>=3. ●

► [A155665] 1,18,184,1842,18736,193818,2033704,21584322,231136096,2492165418,27011166424,293901605202,3207147853456,35072467957818,384147880094344,4212432541504482,46231204840282816,507698828312979018 ★ 11 ^ n + 8 ^ n - 1. ● a(n)=19 * a(n - 1) - 88 * a(n - 2) - 70 with a(0)=1, a(1)=18 - _ Vincenzo Librandi _ , Jul 21 2010 ● a(0)=1, a(1)=18, a(2)=184, a(n)=20 * a(n - 1) - 107 * a(n - 2) + 88 * a(n - 3) [From Harvey P. Dale, May 18 2011] ●

► [A246059] 1,18,188,1888,18888,188888,1888888,18888888,188888888,1888888888,18888888888,188888888888,1888888888888,18888888888888,188888888888888,1888888888888888,18888888888888888,188888888888888888,1888888888888888888 ★ (17 * 10 ^ n - 8) / 9. ● a(n) = 11 * a(n - 1) - 10 * a(n - 2). ●

► [A073385] 1,18,189,1500,9945,58014,307197,1507176,6950295,30443270,127666539,515754252,2017069431,7667214570,28419251715,102997948704,365832349542,1275914693196,4376992440590 ★ Eighth convolution of A000129(n + 1) (generalized (2,1) - Fibonacci, called Pell numbers), n>=0, with itself. ● a(n) = Sum _{ k=0..floor(n / 2) } 2 ^ (n - 2 * k) * binomial(n - k + 8, 8) * binomial(n - k, k). ● a(n) = F''''''''(n + 9, 2) / 8!, that is, 1 / 8! times the 8th derivative of the (n + 9) - th Fibonacci polynomial evaluated at x=2. - _ T. D. Noe _ , Jan 19 2006 ●

► [A036219] 1,18,189,1512,10206,61236,336798,1732104,8444007,39405366,177324147,773778096,3288556908,13660159464,55616363532,222465454128,875957725629,3400777052442,13036312034361,49400761393368,185252855225130,688082033693340,2533392942234570 ★ Expansion of 1 / (1 - 3 * x) ^ 6; 6 - fold convolution of A000244 (powers of 3). ● a(n) = 3 ^ n * binomial(n + 5, 5). ●

► [A060532] 0,1,18,198,1300,5895,20646,60028,151848,344925,719290,1399266,2569788,4496323,7548750,12229560,19206736,29351673,43782498,63913150,91508580,128746431,178285558,243341748,327771000 ★ Number of ways to color vertices of a heptagon using <= n colors, allowing rotations and reflections. ● a(n) = (n ^ 7 + 7 * n ^ 4 + 6 * n) / 14. ●

► [A073397] 1,18,198,1680,12060,76824,446952,2420352,12363120,60151520,280833696,1265442048,5528697408,23507763840,97575960960,396398370816,1579498956288,6184543546368,23833455191040 ★ Eighth convolution of A002605(n) (generalized (2,2) - Fibonacci), n>=0, with itself. ● a(n) = Sum _{ k=0..floor(n / 2) } (binomial(n - k + 8, 8) * binomial(n - k, k) * 2 ^ (n - k). ●

► [A020920] 1,18,198,1716,12870,87516,554268,3325608,19122246,106234700,573667380,3024791640,15628090140,79342611480,396713057400,1957117749840,9540949030470,46021048264620,219878341708740,1041528987041400,4895186239094580,22844202449108040 ★ Expansion of 1 / (1 - 4 * x) ^ (9 / 2). ● a(n) = ((2n + 7)(2n + 5)(2n + 3)(2n + 1) / (7 * 5 * 3 * 1)) * binomial(2n, n). ● a(n) = binomial(2n + 8, 8) * binomial(2n, n) / binomial(n + 4, 4). ● a(n) = binomial(n + 4, 4) * binomial(2n + 8, n + 4) / binomial(8, 4). (End) ●

► [A083812] 18,198,1998,19998,199998,1999998,19999998,199999998,1999999998,19999999998,199999999998,1999999999998,19999999999998,199999999999998,1999999999999998,19999999999999998,199999999999999998,1999999999999999998,19999999999999999998,199999999999999999998,1999999999999999999998,19999999999999999999998,199999999999999999999998 ★ 4n - 1 is the digit reversal of n - 1. ● a(n) = 2 * (10 ^ n - 1). ● a(1)=18, a(2)=198, a(n)=11 * a(n - 1) - 10 * a(n - 2). - _ Harvey P. Dale _ , Apr 24 2015 ●

► [A086573] 0,18,198,1998,19998,199998,1999998,19999998,199999998,1999999998,19999999998,199999999998,1999999999998,19999999999998,199999999999998,1999999999999998,19999999999999998,199999999999999998,1999999999999999998,19999999999999999998,199999999999999999998,1999999999999999999998,19999999999999999999998,199999999999999999999998 ★ a(n) = 2 * (10 ^ n - 1). ● a(n) = 11 * a(n - 1) - 10 * a(n - 2) for n > 1. ●

► [A028025] 1,18,205,1890,15421,116298,830845,5709330,38119741,249026778,1599719485,10142356770,63639854461,396031348458,2448208592125,15053605980210,92160458747581,562225198873338,3419937140824765 ★ Expansion of 1 / ((1 - 3x)(1 - 4x)(1 - 5x)(1 - 6x)). ● a(n) = - 5 ^ (n + 3) / 2 + 2 * 4 ^ (n + 2) + 6 ^ (n + 2) - 3 ^ (n + 2) / 2. - _ R. J. Mathar _ , Mar 22 2011 ●

► [A055528] 0,1,18,207,2134,21465,214866,2149003,21490542,2149061492149062490,21490626231,214906264038,2149062642577,21490626428514,214906264288515,2149062642889246,21490626428897373,214906264288979562,2149062642889802479,2149062642889803279 0 ★ a(n)=10 * a(n - 1) + n ^ 3, a(0)=0. ● a(n) = (10 ^ n - 1) * (470 / 2187) - n ^ 3 / 9 - n ^ 2 * (10 / 27) - n * (110 / 243). ●

► [A025959] 1,18,209,1998,17157,137970,1063273,7962966,58471853,423482202,3037367697,21634921854,153344743189,1083048862914,7630057197881,53656123623462,376830071424765,2644030889883306,18539455617424225 ★ Expansion of 1 / ((1 - 2x)(1 - 4x)(1 - 5x)(1 - 7x)). ● a(n) = - 4 * 2 ^ n / 15 + 32 * 4 ^ n / 3 - 125 * 5 ^ n / 6 + 343 * 7 ^ n / 30. - _ R. J. Mathar _ , Jun 20 2013 ●

► [A025937] 1,18,211,2052,18025,148806,1179487,9089784,68647909,510709914,3756191803,27381204396,198197187553,1426557620142,10220981500759,72957382445088,519164877763357,3684933735388290,26099214855723955 ★ Expansion of 1 / ((1 - 2x)(1 - 3x)(1 - 6x)(1 - 7x)). ● a(n) = - 3 * 6 ^ (n + 1) - 2 ^ (n + 1) / 5 + 7 ^ (n + 3) / 20 + 3 ^ (n + 2) / 4. - _ R. J. Mathar _ , May 22 2013 ●

► [A021804] 1,18,213,2098,18669,155946,1248661,9704706,73804797,552214234,4080381669,29857556274,216794571085,1564401539082,11232205936437,80315244188002,572351251736733,4067348923173690,28836875054284165 ★ Expansion of 1 / ((1 - x)(1 - 4x)(1 - 6x)(1 - 7x)). ● a(n) = - 1 / 90 + 2 ^ (2n + 5) / 9 - 2 ^ (n + 2) * 3 ^ (n + 3) / 5 + 7 ^ (n + 3) / 18. [_ Bruno Berselli _ , May 08 2013] ● a(0)=1, a(1)=18, a(2)=213, a(3)=2098, a(n)=18 * a(n - 1) - 111 * a(n - 2) + 262 * a(n - 3) - 168 * a(n - 4). - _ Harvey P. Dale _ , May 28 2015 ●

► [A025932] 1,18,213,2114,19173,165354,1384741,11393778,92748645,750039290,6040740069,48528576642,389243479717,3119026937226,24977625311397,199948094540306,1600220345577189,12804941098049562,102455421613293925 ★ Expansion of 1 / ((1 - 2x)(1 - 3x)(1 - 5x)(1 - 8x)). ● a(n) = 18 * a(n - 1) - 111 * a(n - 2) + 278 * a(n - 3) - 240 * a(n - 4), n >= 4. ● a(n) = 13 * a(n - 1) - 40 * a(n - 2) + 3 ^ (n + 1) - 2 ^ (n + 1), n >= 2. (End) ● a(n) = 4 * 8 ^ (n + 2) / 45 - 2 ^ (n + 2) / 9 - 5 ^ (n + 3) / 18 + 3 ^ (n + 3) / 10. - _ R. J. Mathar _ , Mar 19 2011 ●

► [A021764] 1,18,215,2160,19821,172638,1456915,12056220,98541641,799142058,6448579215,51871439880,416407919461,3338534836278,26744994007115,214144960297140,1714090450201281,13717400347223298,109762678131820615 ★ Expansion of 1 / ((1 - x)(1 - 4x)(1 - 5x)(1 - 8x)). ● a(n) = - 1 / 84 + 4 ^ (n + 2) / 3 - 5 ^ (n + 3) / 12 + 2 ^ (3n + 7) / 21. - _ Bruno Berselli _ , May 07 2013 ● a(n) = 18 * a(n - 1) - 109 * a(n - 2) + 252 * a(n - 3) - 160 * a(n - 4). - _ Wesley Ivan Hurt _ , May 17 2023 ●

► [A059357] 1,18,215,2475,28294,340116,4335596,57773700,831170736,12532005288,201002619168,3401283910752,60929911689984,1143429812726400,22572470529457920,468013463441475840,10124124979606179840 ★ A diagonal of triangle in A008298. ● a(n) = (n! / 6) * Sum _{ i,j,k > 0 and i + j + k=n } sigma(i) * sigma(j) * sigma(k) / (i * j * k). - _ Seiichi Manyama _ , Nov 09 2020. ●

► [A111991] 1,18,216,2136,18864,154656,1203072,9000576,65339136,463112704,3219204096,22019254272,148577427456,990973034496,6543595044864,42832379117568,278217855664128,1794871415144448,11508930723708928 ★ Second convolution of A111989. ● a(0)=1, a(1)=18, a(2)=216, a(3)=2136, a(4)=18864, a(5)=154656, a(6)=1203072, a(7)=9000576, a(8)=65339136, a(n)=18 * a(n - 1) - 108 * a(n - 2) + 192 * a(n - 3) + 288 * a(n - 4) - 864 * a(n - 5) - 192 * a(n - 6) + 1152 * a(n - 7) - 512 * a(n - 9). - _ Harvey P. Dale _ , Oct 10 2013 ●

► [A081136] 0,0,1,18,216,2160,19440,163296,1306368,10077696,75582720,554273280,3990767616,28298170368,198087192576,1371372871680,9403699691520,63945157902336,431629815840768,2894458765049856,19296391766999040 ★ 6th binomial transform of (0,0,1,0,0,0, ...). ● a(n) = 18 * a(n - 1) - 108 * a(n - 2) + 216 * a(n - 3), a(0)=a(1)=0, a(2)=1. ● a(n) = 6 ^ (n - 2) * C(n, 2). ●

► [A019757] 1,18,217,2190,19981,170898,1398097,11075670,85654261,650280378,4865931577,35994162750,263799130141,1918854559458,13871649322657,99770067275430,714554190919621,5099624595840138,36287658424563337,257574399980365710,1824480913344734701,12900603911464394418 ★ Expansion of 1 / ((1 - 5 * x)(1 - 6 * x)(1 - 7 * x)). ● a(n) = (7 ^ (n + 2) + 5 ^ (n + 2) - 2 * 6 ^ (n + 2)) / 2. ● a(n) = 18 * a(n - 1) - 107 * a(n - 2) + 210 * a(n - 3), n >= 3. ● a(n) = 13 * a(n - 1) - 42 * a(n - 2) + 5 ^ n, a(0)=1, a(1)=18. (End) ●

► [A021503] 1,18,217,2214,20701,183906,1582129,13325598,110626021,909165114,7418351161,60217256502,486961532461,3927035533842,31604351090113,253963231160526,2038476448492021,16348435376893290 ★ Expansion of 1 / ((1 - x)(1 - 3x)(1 - 6x)(1 - 8x)). ● a(n) = (3 * 8 ^ (n + 3) - 7 * 6 ^ (n + 3) + 7 * 3 ^ (n + 3) - 3) / 210. - _ Yahia Kahloune _ , May 06 2013 ● a(0)=1, a(1)=18; for n>1, a(n) = 14 * a(n - 1) - 48 * a(n - 2) + (3 ^ n - 1) / 2. - _ Vincenzo Librandi _ , Jul 10 2013 ● a(0)=1, a(1)=18, a(2)=217, a(3)=2214; for n>3, a(n) = 18 * a(n - 1) - 107 * a(n - 2) + 234 * a(n - 3) - 144 * a(n - 4). - _ Vincenzo Librandi _ , Jul 10 2013 ●

► [A025470] 1,18,217,2238,21493,199506,1821889,16508646,149043565,1343313114,12097677241,108911059374,980328977317,8823483334242,79413454477873,714729551160822,6432599932896349,57893535673021290 ⋆ Expansion of 1 / ((1 - 2x)(1 - 3x)(1 - 4x)(1 - 9x)). ● a(n) = - 4 * 2 ^ n / 7 + 9 * 3 ^ n / 2 - 32 * 4 ^ n / 5 + 243 * 9 ^ n / 70. - _ R. J. Mathar _ , Jun 30 2013 ●

► [A046915] 1,18,217,2340,24211,246078,2480437,24902280,249511591,2497558338,24987792457,249938963820,2499694822171,24998474116998,249992370597277,2499961853010960,24999809265103951,24999904632561805 8,249999523162828689 7 ⋆ Sum of divisors of 10 ^ n. ● a(n) = 1 / 4 * (2 ^ (n + 1) - 1) * (5 ^ (n + 1) - 1). E.g., a(1) = 1 / 4 * (2 ^ 2 - 1) * (5 ^ 2 - 1) = 18. - _ Vladeta Jovovic _ , Dec 18 2001 ● a(n) = 18 * a(n - 1) - 97 * a(n - 2) + 180 * a(n - 3) - 100 * a(n - 4). - _ Colin Barker _ , Jan 27 2015 ●

► [A019333] 1,18,220,2280,21616,194208,1685440,14290560,119232256,983568648,8047836160,65462691840,530198327296,4280634482688,34479631482880,277245459333120,2226418414452736,17862092934217728 ⋆ Expansion of 1 / ((1 - 4x)(1 - 6x)(1 - 8x)). ● a(n) = 2 * 4 ^ n - 9 * 6 ^ n + 8 * 8 ^ n. - _ R. J. Mathar _ , Jun 29 2013 ● a(0)=1, a(1)=18, a(2)=220; for n>2, a(n) = 18 * a(n - 1) - 104 * a(n - 2) + 192 * a(n - 3). - _ Vincenzo Librandi _ , Jul 02 2013 ● a(n) = 14 * a(n - 1) - 48 * a(n - 2) + 4 ^ n. - _ Vincenzo Librandi _ , Jul 02 2013 ●

► [A021454] 1,18,220,2310,22561,212268,1957600,17857620,161924521,1463379918,13200803980,118959425130,1071396569881,9646380238968,86836484875360,781623699024840,7035090031526641,63318194178965418 ⋆ Expansion of 1 / ((1 - x)(1 - 3x)(1 - 5x)(1 - 9x)). ● a(0)=1, a(1)=18, a(2)=220, a(3)=2310, a(n)=18 * a(n - 1) - 104 * a(n - 2) + 222 * a(n - 3) - 135 * a(n - 4). - _ Harvey P. Dale _ , Nov 05 2011 ● a(n) = (3 * 9 ^ (n + 2) - 2 * 5 ^ (n + 3) + 8 * 3 ^ (n + 2) - 1) / 64. - _ Yahia Kahloune _ , Jun 26 2013 ● a(0)=1, a(1)=18; for n>1, a(n) = 14 * a(n - 1) - 45 * a(n - 2) + (3 ^ n - 1) / 2. - _ Vincenzo Librandi _ , Jul 10 2013 ●

► [A021224] 1,18,221,2322,22485,207306,1850557,16149474,138611429,1174801914,9859790733,82107957906,679471095733,5594020809642,45859930816349,374633796970818,3051350828977797,24790769804563290 ⋆ Expansion of 1 / ((1 - x)(1 - 2x)(1 - 7x)(1 - 8x)). ● a(n)=(5 * 8 ^ (n + 3) - 7 ^ (n + 4) + 7 * 2 ^ (n + 3) - 5) / 210. [_ Yahia Kahloune _ , Jun 26 2013] ● a(0)=1, a(1)=18, a(2)=221, a(3)=2322; for n>3, a(n) = 18 * a(n - 1) - 103 * a(n - 2) + 198 * a(n - 3) - 112 * a(n - 4). - _ Vincenzo Librandi _ , Jul 08 2013 ● a(0)=1, a(1)=18; for n>1, a(n) = 15 * a(n - 1) - 56 * a(n - 2) + 2 ^ n - 1. - _ Vincenzo Librandi _ , Jul 08 2013 ●

► [A017997] 1,18,223,2364,23053,213654,1914571,16756128,144132505,1223664090,10283600119,85728989892,710053773157,5849984757726,47986764852067,392202340697256,3195776321789809,25973313876940962 ⋆ Expansion of 1 / ((1 - 3x)(1 - 7x)(1 - 8x)). ● a(n) = (4 * 8 ^ (n + 2) - 5 * 7 ^ (n + 2) + 3 ^ (n + 2)) / 20. [_ Yahia Kahloune _ , Jun 30 2013] ● a(0)=1, a(1)=18, a(2)=223; for n>2, a(n) = 18 * a(n - 1) - 101 * a(n - 2) + 168 * a(n - 3). - _ Vincenzo Librandi _ , Jul 02 2013 ● a(n) = 15 * a(n - 1) - 56 * a(n - 2) + 3 ^ n. - _ Vincenzo Librandi _ , Jul 02 2013 ●

► [A018911] 1,18,223,2376,23485,222894,2067787,18935172,172107529,1557684810,14063797111,126801537408,1142367430933,10287141958566,92613721463395,833671786093884,7503791834428897,67537872487648962 ⋆ Expansion of 1 / ((1 - 4x)(1 - 5x)(1 - 9x)). ● a(n) = 16 * 4 ^ n / 5 - 25 * 5 ^ n / 4 + 81 * 9 ^ n / 20. - _ R. J. Mathar _ , Jun 29 2013 ● a(0)=1, a(1)=18, a(2)=223; for n>2, a(n)= 18 * a(n - 1) - 101 * a(n - 2) + 180 * a(n - 3). - _ Vincenzo Librandi _ , Jul 02 2013 ● a(n) = 14 * a(n - 1) - 45 * a(n - 2) + 4 ^ n. - _ Vincenzo Librandi _ , Jul 02 2013 ●

► [A021194] 1,18,223,2388,23809,228246,2138131,19746936,180745477,1644848634,14912475799,134865314844,1217706037705,10982863580382,98986827702427,891727782261312,8030628038119693,72306120329946690 ⋆ Expansion of 1 / ((1 - x)(1 - 2x)(1 - 6x)(1 - 9x)). ● a(0)=1, a(1)=18, a(2)=223, a(3)=2388, a(n)=18 * a(n - 1) - 101 * a(n - 2) + 192 * a(n - 3) - 108 * a(n - 4) [From Harvey P. Dale, Jul 18 2011] ● a(n)=(5 * 9 ^ (n + 3) - 14 * 6 ^ (n + 3) + 30 * 2 ^ (n + 3) - 21) / 840. [_ Yahia Kahloune _ , Jun 26 2013] ● a(0)=1, a(1)=18; for n>1, a(n) = 15 * a(n - 1) - 54 * a(n - 2) + 2 ^ n - 1. - _ Vincenzo Librandi _ , Jul 08 2013 ●

► [A017933] 1,18,225,2430,24381,234738,2205225,20404710,186995061,1703091258,15448694625,139763668590,1262226050541,11386154248578,102632111782425,924629361662070,8327306431726821,74979611075290698 ⋆ Expansion of 1 / ((1 - 3x)(1 - 6x)(1 - 9x)). ● a(n) = (3 ^ n - 8 * 6 ^ n + 9 * 9 ^ n) / 2. ● a(0)=1, a(1)=18, a(2)=225; for n > 2, a(n) = 18 * a(n - 1) - 99 * a(n - 2) + 162 * a(n - 3). - _ Vincenzo Librandi _ , Jul 02 2013 ● a(n) = 15 * a(n - 1) - 54 * a(n - 2) + 3 ^ n. - _ Vincenzo Librandi _ , Jul 02 2013 ●

► [A021384] 1,18,225,2470,25701,261378,2632345,26400990,264329901,2644608538,26451412065,264535693110,2645444018101,26454790920498,264549319337385,2645498855426830,26455011267050301,264550203715341258 ⋆ Expansion of 1 / ((1 - x)(1 - 3x)(1 - 4x)(1 - 10x)). ● a(0)=1, a(1)=18, a(2)=225, a(3)=2470, a(n)= 18 * a(n - 1) - 99 * a(n - 2) + 202 * a(n - 3) - 120 * a(n - 4). [_ Harvey P. Dale _ , Oct 21 2011] ● a(0)=1, a(1)=18; for n>1, a(n) = 14 * a(n - 1) - 40 * a(n - 2) + (3 ^ n - 1) / 2. - _ Vincenzo Librandi _ , Jul 09 2013 ● a(n) = (10 ^ (n + 3) - 21 * 4 ^ (n + 3) + 27 * 3 ^ (n + 3) - 7) / 378. [_ Yahia Kahloune _ , Sep 16 2013] ●

► [A021144] 1,18,227,2520,26481,271278,2745247,27615060,276964061,2773708938,27757433067,277676053200,2777269152841,27775234648998,277765062125687,2777714199500940,27777459886360821,277776188320627458 ⋆ Expansion of 1 / ((1 - x)(1 - 2x)(1 - 5x)(1 - 10x)). ● a(0)=1, a(1)=18, a(2)=227, a(3)=2520; for n>2, a(n) = 18 * a(n - 1) - 97 * a(n - 2) + 180 * a(n - 3) - 100 * a(n - 4). - _ Vincenzo Librandi _ , Jul 07 2013 ● a(0)=1, a(1)=18; for n>1, a(n) = 15 * a(n - 1) - 50 * a(n - 2) + 2 ^ n - 1. - _ Vincenzo Librandi _ , Jul 07 2013 ● a(n) = (10 ^ (n + 3) - 6 * 5 ^ (n + 3) + 15 * 2 ^ (n + 3) - 10) / 360. [_ Yahia Kahloune _ , Jul 07 2013] ●

► [A016312] 1,18,229,2538,26197,259290,2498293,23637546,220808533,2043771642,18789409717,171872944074,1566234297109,14231753285274,129035291862901,1167964212866922,10558204018573525,95349518886691386 ⋆ Expansion of 1 / ((1 - 2x) * (1 - 7x) * (1 - 9x)). ● a(n) = ((9 ^ n - 2 ^ n) / 7 - (7 ^ n - 2 ^ n) / 5) / 2, n >= 2. - _ Zerinvary Lajos _ , Jun 05 2009 ● a(n) = 18 * a(n - 1) - 95 * a(n - 2) + 126 * a(n - 3). - _ Vincenzo Librandi _ , Jun 26 2013 ●

► [A017916] 1,18,229,2562,27061,278058,2818549,28377522,284741941,2852272698,28547052469,285592329282,2856532847221,28568377838538,285699029999989,2857066572421842,28571047129374901,285712378448671578 ⋆ Expansion of 1 / ((1 - 3x)(1 - 5x)(1 - 10x)). ● a(0)=1, a(2)=18, a(3)=229, a(n) = 18 * a(n - 1) - 95 * a(n - 2) + 150 * a(n - 3). - _ Vincenzo Librandi _ , Jul 01 2013 ● a(n) = 15 * a(n - 1) - 50 * a(n - 2) - 3 ^ n. - _ Vincenzo Librandi _ , Jul 01 2013 ● a(n) = (2 * 10 ^ (n + 2) - 7 * 5 ^ (n + 2) + 5 * 3 ^ (n + 2)) / 70. [_ Yahia Kahloune _ , Aug 13 2013] ●

► [A021094] 1,18,233,2718,30549,338706,3736561,41145606,452775917,4981233114,54796358409,602771123214,6630527086405,72935976891042,802296461596577,8825263940808342,97077914802006813,1067857108634797290 ⋆ Expansion of 1 / ((1 - x)(1 - 2x)(1 - 4x)(1 - 11x)). ● a(n) = - (1 / 30) + (4 / 9) * 2 ^ n - (32 / 21) * 4 ^ n + (1331 / 630) * 11 ^ n. [_ Antonio Alberto Olivares _ , May 22 2012] ● a(0)=1, a(1)=18; for n>1, a(n) = 15 * a(n - 1) - 44 * a(n - 2) + 2 ^ n - 1. - _ Vincenzo Librandi _ , Jul 06 2013 ● a(0)=1, a(1)=18, a(2)=233, a(3)=2718; for n>3, a(n) = 18 * a(n - 1) - 91 * a(n - 2) + 162 * a(n - 3) - 88 * a(n - 4). - _ Vincenzo Librandi _ , Jul 06 2013 ●

► [A016256] 1,18,235,2700,28981,298278,2984095,29253600,282456361,2695498938,25486623955,239196683700,2231306698141,20710052641998,191416812647815,1762962024789000,16188343910770321,148268580698287458,1355005110295423675,12359749064745505500 ⋆ Expansion of 1 / ((1 - x) * (1 - 8 * x) * (1 - 9 * x)). ● a(n) = 17 * a(n - 1) - 72 * a(n - 2) + 1. - _ Vincenzo Librandi _ , Feb 10 2011 ● a(n) = 9 ^ (n + 2) / 8 - 8 ^ (n + 2) / 7 + 1 / 56. - _ R. J. Mathar _ , Mar 14 2011 ● a(n) = 18 * a(n - 1) - 89 * a(n - 2) + 72 * a(n - 3). - _ Wesley Ivan Hurt _ , Apr 20 2023 ●

► [A017065] 1,18,235,2760,31141,345918,3819295,42071220,463025881,5094274218,56041033555,616467614880,6781209278221,74593565712918,820530282235015,9025837356505740,99284227972292161,1092126576027270018 ⋆ Expansion of 1 / ((1 - 3x)(1 - 4x)(1 - 11x)). ● a(n) = 9 * 3 ^ n / 8 - 16 * 4 ^ n / 7 + 121 * 11 ^ n / 56. - _ R. J. Mathar _ , Jun 23 2013 ● a(n) = 18 * a(n - 1) - 89 * a(n - 2) + 132 * a(n - 3). ● a(n) = 15 * a(n - 1) - 44 * a(n - 2) + 3 ^ n. (End) ●

► [A016252] 1,18,237,2770,30501,324618,3383437,34795170,354677301,3593852218,36268076637,364987647570,3666024644101,36773283619818,368524096449837,3690779786259970,36946569614930901,369737098415627418 ⋆ Expansion of 1 / ((1 - x) * (1 - 7x) * (1 - 10x)). ● a(n) = 17 * a(n - 1) - 70 * a(n - 2) + 1; a(0)=1, a(1)=18. - _ Vincenzo Librandi _ , Feb 10 2011 ● a(n) = (2 * 10 ^ (n + 2) - 3 * 7 ^ (n + 2) + 1) / 54. - _ Yahia Kahloune _ , Jul 09 2013 ●

► [A016301] 1,18,237,2810,31941,356538,3947917,43557210,479780181,5280836858,58105480797,639241667610,7032065242021,77354752161978,850912446296877,9360087771874010,102961219803721461,1132574689406603898 ⋆ Expansion of 1 / ((1 - 2 * x) * (1 - 5 * x) * (1 - 11 * x)). ● a(n) = 18 * a(n - 1) - 87 * a(n - 2) + 110 * a(n - 3); a(1)=1, a(2)=18, a(3)=237. ● a(n) = 16 * a(n - 1) - 55 * a(n - 2) + 2 ^ n; a(1)=1, a(2)=18. (End) ● a(n) = (1 / 54) * (2 * 2 ^ (2 + n) - 3 * 5 ^ (2 + n) + 11 ^ (2 + n)). - _ Bruno Berselli _ , Aug 25 2011 ●

► [A016247] 1,18,241,2910,33565,378546,4219993,46755846,516329845,5691721530,62681496241,689931815118,7591862105101,83526155988930,918881752875145,10108263503608086,111194283871577893,1223157434578690506 ⋆ Expansion of 1 / ((1 - x)(1 - 6x)(1 - 11x)). ● a(0)=1, a(1)=18, a(n)=17 * a(n - 1) - 66 * a(n - 2) + 1. - _ Vincenzo Librandi _ , Feb 10 2011 ● a(0)=1, a(1)=18, a(2)=241, a(n)=18 * a(n - 1) - 83 * a(n - 2) + 66 * a(n - 3). - _ Harvey P. Dale _ , Sep 23 2012 ● a(n) = (11 ^ (n + 2) - 2 * 6 ^ (n + 2) + 1) / 50. [_ Yahia Kahloune _ , Aug 13 2013] ●

► [A021064] 1,18,241,2982,36085,433986,5210857,62539614,750503869,9006132954,108073857073,1296887073846,15562647261253,186751774276722,2241021312778489,26892255817780878,322707070006818637 ⋆ Expansion of 1 / ((1 - x)(1 - 2x)(1 - 3x)(1 - 12x)). ● a(0)=1, a(1)=18; for n>1, a(n)= 15 * a(n - 1) - 36 * a(n - 2) + 2 ^ n - 1. - _ Vincenzo Librandi _ , Jul 05 2013 ● a(0)=1, a(1)=18, a(2)=241, a(3)=2982; for n>3, a(n) = 18 * a(n - 1) - 83 * a(n - 2) + 138 * a(n - 3) - 72 * a(n - 4). - _ Vincenzo Librandi _ , Jul 05 2013 ● a(n) = (12 ^ (n + 3) - 55 * 3 ^ (n + 3) + 99 * 2 ^ (n + 3) - 45) / 990. [_ Yahia Kahloune _ , Jul 07 2013] ●

► [A053540] 1,18,243,2916,32805,354294,3720087,38263752,387420489,3874204890,38354628411,376572715308,3671583974253,35586121596606,343151886824415,3294258113514384,31501343210481297,300189270593998242,2851798070642983299,27017034335459841780 ⋆ a(n) = n * 9 ^ (n - 1). ● a(n) = 18 * a(n - 1) - 81 * a(n - 2). ●

► [A016186] 1,18,244,2952,33616,368928,3951424,41611392,432891136,4463129088,45705032704,465640261632,4725122093056,47800976744448,482407813955584,4859262511644672,48874100093157376,490992800745259008 ⋆ Expansion of 1 / ((1 - 8x)(1 - 10x)). ● a(n) = 8 * a(n - 1) + 10 ^ (n - 1). - _ Geoffrey Critzer _ , Jan 24 2011 ● a(n) = 10 * a(n - 1) + 8 ^ n, a(0)=1. - _ Vincenzo Librandi _ , Feb 09 2011 ● a(n) = 18 * a(n - 1) - 80 * a(n - 2), a(0)=1, a(1)=18. - _ Vincenzo Librandi _ , Feb 09 2011 ●

► [A081203] 0,1,18,244,2952,33616,368928,3951424,41611392,432891136,4463129088,45705032704,465640261632,4725122093056,47800976744448,482407813955584,4859262511644672,48874100093157376,490992800745259008 ⋆ 9th binomial transform of (0,1,0,1,0,1,.....), A000035. ● a(n) = 18 * a(n - 1) - 80 * a(n - 2), a(0)=0, a(1)=1. ● a(n) = 10 ^ n / 2 - 8 ^ n / 2. ●

► [A016294] 1,18,244,3048,37072,446880,5370688,64480896,773901568,9287342592,111450207232,1337410873344,16048964030464,192587702575104,2311052967755776,27732637760520192,332791661716111360 ⋆ Expansion of 1 / ((1 - 2x)(1 - 4x)(1 - 12x)). ● a(n) = 18 * a(n - 1) - 80 * a(n - 2) + 96 * a(n - 3), n >= 3. ● a(n) = 16 * a(n - 1) - 48 * a(n - 2) + 2 ^ n, n >= 2. (End) ● a(n) = 9 * 12 ^ n / 5 + 2 ^ n / 5 - 4 ^ n. - _ R. J. Mathar _ , Mar 17 2011 ●

► [A153593] 1,18,245,2988,34429,383670,4186169,45041112,480032665,5082340122,53559541661,562566880260,5895000053461,61667217421758,644304909368225,6725778192309168,70163919621475249,731614075994130210 ⋆ a(n) = ((9 + sqrt(2)) ^ n - (9 - sqrt(2)) ^ n) / (2 * sqrt(2)). ● a(n) = 18 * a(n - 1) - 79 * a(n - 2) for n>1; a(0)=0, a(1)=1. - _ Philippe Deléham _ , Jan 01 2009 ● a(n) = Sum[

Binomial[n - 1 - i, i] (- 1) ^ i * 18 ^ (n - 1 - 2 i) * 79 ^ i, { i, 0, Floor[(n - 1) / 2] }]. - _ Sergio Falcon _ , Sep 21 2009 ●

► [A016183] 1,18,247,3060,36061,413478,4665907,52148520,579398521,6413737338,70833585967,781146772380,8606455783381,94767902627598,1043125151976427,11479124233250640,126303599496326641 ⋆ Expansion of 1 / ((1 - 7x)(1 - 11x)) . ● a(n) = 18 * a(n - 1) - 77 * a(n - 2). - _ Philippe Deléham _ , Jan 01 2009 ● a(n) = 11 * a(n - 1) + 7 ^ n, a(0)=1. - _ Vincenzo Librandi _ , Feb 09 2011 ●

► [A016239] 1,18,247,3120,38221,462558,5570227,66940380,803772841,9647715498,115784793007,1389478551240,16674047790661,200090099366838,2401088821796587,28813104008531700,345757438837243681 ⋆ Expansion of 1 / ((1 - x) * (1 - 5 * x) * (1 - 12 * x)). ● a(0)=1, a(1)=18; for n>1, a(n)=17 * a(n - 1) - 60 * a(n - 2) + 1. - _ Vincenzo Librandi _ , Feb 10 2011 ● a(n) = (4 * 12 ^ (n + 2) - 11 * 5 ^ (n + 2) + 7) / 308. - _ Yahia Kahloune _ , Aug 13 2013 ●

► [A153886] 1,18,248,3096,36880,428544,4910912,55827072,631657984,7126986240,80279745536,903384465408,10159659716608,114216655527936,1283765661040640,14427316078608384,162125499175862272,1821782963191283712,20470555400077574144 ⋆ a(n) = ((9 + sqrt(5)) ^ n - (9 - sqrt(5)) ^ n) / (2 * sqrt(5)). ● a(n) = 18 * a(n - 1) - 76 * a(n - 2) for n>1, with a(0)=0, a(1)=1. ●

► [A154241] 1,18,249,3132,37701,443718,5159349,59589432,685658601,7872647418,90283258449,1034650095732,11852457339501,135745474931118,1554484248297549,17799805849522032,203810186669080401 ⋆ a(n) = ((9 + sqrt(6)) ^ n - (9 - sqrt(6)) ^ n) / (2 * sqrt(6)). ● a(n) = 18 * a(n - 1) - 75 * a(n - 2) for n>1, with a(0)=0, a(1)=1. ●

► [A154250] 1,18,250,3168,38524,459000,5411224,63436032,741418000,8651257632,100857705376,1175245632000,13690951178176,159468944439168,1857310612720000,21630889140461568,251915019187028224 ⋆ a(n) = ((9 + sqrt(7)) ^ n - (9 - sqrt(7)) ^ n) / (2 * sqrt(7)). ● a(n) = 18 * a(n - 1) - 74 * a(n - 2) for n>1, with a(0)=0, a(1)=1. ●

► [A154350] 1,18,251,3204,39349,474390,5666543,67367304,798953833,9463355802,112016774627,1325476969740,15681360907549,185504677544862,2194344849556439,25956365831240976,307027410944717521 ⋆ a(n) = ((9 + 2 * sqrt(2)) ^ n - (9 - 2 * sqrt(2)) ^ n) / (4 * sqrt(2)). ● a(n) = 18 * a(n - 1) - 73 * a(n - 2) for n>1, with a(0)=0, a(1)=1. - _ Philippe Deléham _ , Jan 12 2009 ●

► [A060788] 0,18,252,1134,3312,7650,15228,27342,45504,71442,107100,154638,216432,295074,393372,514350,661248,837522,1046844,1293102,1580400,1913058,2295612,2732814,3229632 ⋆ a(n) = 9 * (n - 2) ^ 2 * (n ^ 2 - 2 * n - 1). ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). (End) ●

► [A020528] 0,18,252,2520,22320,187488,1536192,12435840,100074240,802948608,6433016832,51501864960,412165877760,3297930928128,26385863196672,211096568954880,1688811205754880,13510644263682048 ⋆ 3rd Bernoulli polynomial evaluated at powers of 2 (multiplied by 6). ● a(n) = 3 * 2 ^ (n + 1) * (2 ^ (n + 1) - 1) * (2 ^ (n + 1) - 2) / 4. - _ Ralf Stephan _ , Apr 06 2004 ● a(n) = 14 * a(n - 1) - 56 * a(n - 2) + 64 * a(n - 3). - _ Wesley Ivan Hurt _ , Mar 02 2023 ●

► [A088924] 1,18,252,3168,37512,427608,4748472,51736248,555626232,5900636088,62105724792,648951523128,6740563708152,69665073373368,716985660360312,7352870943242808,75175838489185272,766582546402667448 ⋆ Number of "9ish numbers" with n digits. ● a(n) = 9 * 10 ^ (n - 1) - 8 * 9 ^ (n - 1). ● a(n) = 19 * a(n - 1) - 90 * a(n - 2). - _ Vincenzo Librandi _ , May 04 2015 ●

► [A255371] 0,1,18,252,3177,37764,432315,4821867,52767711,569171142,6070198824,64154357361,673034324472,7017585817887,72795938474871,751858421307975,7736579039166894,79354228046171004,811679794900979769,8282239107946760700,84331460977774328115 ⋆ Number of strings of n decimal digits that contain at least one "0" digit that is not part of a string of two or more consecutive "0" digits. ● a(0)=0, a(1)=1, a(n) = 9 * (10 ^ (n - 2) - a(n - 2) + sum _{ i=1..n - 1 } a(i)) for n>=2. ● a(n) = 20 * a(n - 1) - 109 * a(n - 2) + 99 * a(n - 3) - 90 * a(n - 4) for n>3. - _ Colin Barker _ , Feb 27 2015 ●

► [A016175] 1,18,252,3240,40176,489888,5925312,71383680,858283776,10309483008,123774262272,1485653944320,17830024114176,213973350064128,2567758564933632,30813572964188160,369765696680165376 ⋆ Expansion of 1 / ((1 - 6x)(1 - 12x)). ● a(n) = - 6 ^ n + 2 * 12 ^ n. ● a(n - 1) = ((9 + sqrt9) ^ n - (9 - sqrt9) ^ n) / 6. - Al Hakanson (hawkuu(AT)gmail.com), Jan 07 2009 ● a(n) = 12 * a(n - 1) + 6 ^ n, n >= 1. - _ Vincenzo Librandi _ , Feb 09 2011 ● a(n) = 18 * a(n - 1) - 72 * a(n - 2), n >= 2. - _ Vincenzo Librandi _ , Feb 09 2011 ●

► [A157708] 18,254,1571,6335,19615,50743,115234,237066,451320,807180,1371293,2231489,3500861,5322205,7872820,11369668,16074894,22301706,30420615,40866035,54143243,70835699,91612726 ⋆ The z ^ 2 coefficients of the polynomials in the GF4 denominators of A156933 ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) ● a(n) = 1 / 2 * n ^ 6 + 5 / 2 * n ^ 5 + 41 / 8 * n ^ 4 + 67 / 12 * n ^ 3 + 27 / 8 * n ^ 2 + 11 / 12 * n ●

► [A365137] 0,0,1,18,261,3411,42048,499131,5770611,65427678,730784601,8065910511,88170256008,956125498671,10298661792111,110293085617038,1175325726682341,12470569310694411,131813055336390768,1388552621823766611,14583291094441416411,152746593446386647198 ⋆ a(n) is the number of n - digit numbers that contain '22' in their decimal representation. ● a(n) = 19 * a(n - 1) - 81 * a(n - 2) - 90 * a(n - 3) with a(0) = a(1) = 0, a(2) = 1 and a(3) = 18 for n >= 4. ● a(0) = 0, a(n) = 9 * 10 ^ (n - 1) - (p ^ (n + 1) - q ^ (n + 1)) / (3 * sqrt(13)) + (p ^ (n - 1) - q ^ (n - 1)) / (3 * sqrt(13)) with p = (9 + 3 * sqrt(13)) / 2 and q = (9 - 3 * sqrt(13)) / 2 for n >= 1. ●

► [A255372] 0,0,1,18,261,3411,42057,499383,5775480,65506986,731953926,8082054387,88382960316,958831580700,10332164902851,110698940875149,1180155371168034,12527193711780981,132468636134059128,1396061253467955315,14668489189614036627 ⋆ Number of strings of n decimal digits that contain at least one string of exactly 2 consecutive "0" digits. ● a(0) = a(1) = 0, a(2) = 1, a(n) = 9 * (10 ^ (n - 3) - a(n - 3) + Sum _{ i=2..n - 1 } a(i)) for n>=3. ●

► [A255373] 0,0,0,1,18,261,3420,42291,503757,5845383,66525399,745904151,8264888316,90700808526,987461965116,10678505242392,114817381566435,1228431892382460,13086248073415290,138875261344657416,1468815363559657773,15488131104999233505 ⋆ Number of strings of n decimal digits that contain at least one string of exactly 3 consecutive "0" digits. ● a(0) = a(1) = a(2) = 0, a(3) = 1, a(n) = 9 * (10 ^ (n - 4) - a(n - 4) + sum _{ i=3..n - 1 } a(i)) for n>=4. ●

► [A255374] 0,0,0,0,1,18,261,3420,42300,503991,5849757,66595383,746925399,8278904070,90884885481,989800742916,10707460718526,115168484215116,1232617054343121,13135427089598511,139446180653268195,1475374347592901460,15562803326717545290 ⋆ Number of strings of n decimal digits that contain at least one string of exactly 4 consecutive "0" digits. ● a(0) = a(1) = a(2) = a(3) = 0, a(4) = 1, a(n) = 9 * (10 ^ (n - 5) - a(n - 5) + sum _{ i=4..n - 1 } a(i)) for n>=5. ●

► [A255375] 0,0,0,0,0,1,18,261,3420,42300,504000,5849991,66599757,746995383,8279925399,90898904070,989984885400,10709800740081,115197460652916,1232968482968526,13139617033315116,139495426762343121,1475946175849599240,15569374280153300271 ⋆ Number of strings of n decimal digits that contain at least one string of exactly 5 consecutive "0" digits. ● a(0) = a(1) = ... = a(4) = 0, a(5) = 1, a(n) = 9 * (10 ^ (n - 6) - a(n - 6) + sum _{ i=5..n - 1 } a(i)) for n>=6. ●

► [A255376] 0,0,0,0,0,0,1,18,261,3420,42300,504000,5850000,66599991,746999757,8279995383,90899925399,989998904070,10709984885400,115199800740000,1232997460650081,13139968482902916,139499617032068526,1475995426741315116,15569946175522343121 ⋆ Number of strings of n decimal digits that contain at least one string of exactly 6 consecutive "0" digits. ● a(0) = a(1) = ... = a(5) = 0, a(6) = 1, a(n) = 9 * (10 ^ (n - 7) - a(n - 7) + sum _{ i=6..n - 1 } a(i)) for n>=7. ●

► [A255377] 0,0,0,0,0,0,0,1,18,261,3420,42300,504000,5850000,66600000,746999991,8279999757,90899995383,989999925399,10709998904070,115199984885400,1232999800740000,13139997460650000,139499968482900081,1475999617032002916 ⋆ Number of strings of n decimal digits that contain at least one string of exactly 7 consecutive "0" digits. ● a(0) = a(1) = ... = a(6) = 0, a(7) = 1, a(n) = 9 * (10 ^ (n - 8) - a(n - 8) + sum _{ i=7..n - 1 } a(i)) for n>=8. ●

► [A255378] 0,0,0,0,0,0,0,0,1,18,261,3420,42300,504000,5850000,66600000,747000000,8279999991,90899999757,989999995383,10709999925399,115199998904070,1232999984885400,13139999800740000,139499997460650000 ⋆ Number of strings of n decimal digits that contain at least one string of exactly 8 consecutive "0" digits. ● a(0) = a(1) = ... = a(7) = 0, a(8) = 1, a(n) = 9 * (10 ^ (n - 9) - a(n - 9) + sum _{ i=8..n - 1 } a(i)) for n>=9. ●

► [A255379] 0,0,0,0,0,0,0,0,0,1,18,261,3420,42300,504000,5850000,66600000,747000000,8280000000,90899999991,989999999757,10709999995383,115199999925399,1232999998904070,13139999984885400 ⋆ Number of strings of n decimal digits that contain at least one string of exactly 9 consecutive "0" digits. ● a(0) = a(1) = ... = a(8) = 0, a(9) = 1, a(n) = 9 * (10 ^ (n - 10) - a(n - 10) + sum _{ i=9..n - 1 } a(i)) for n>=10. ●

► [A255380] 0,0,0,0,0,0,0,0,0,0,1,18,261,3420,42300,504000,5850000,66600000,747000000,8280000000,90900000000,989999999991,10709999999757,115199999995383,1232999999925399 ⋆ Number of strings of n decimal digits that contain at least one string of exactly 10 consecutive "0" digits. ● a(0) = a(1) = ... = a(9) = 0, a(10) = 1, a(n) = 9 * (10 ^ (n - 11) - a(n - 11) + sum _{ i=10..n - 1 } a(i)) for n>=11. ●

► [A083445] 18,270,3438,40950,468558,5217030,56953278,612579510,6513215598,68618940390,717570463518,7458134171670,77123207545038,794108867905350,8146979811148158,83322818300333430,849905364703000878,8649148282327007910,87842334540943071198 ⋆ Largest n - digit number minus the product of its digits; i.e., a(n) = 99999... (n 9's) - 9 ^ n. ● a(n) = (10 ^ n - 1) - 9 ^ n. ● a(n) = 20 * a(n - 1) - 109 * a(n - 2) + 90 * a(n - 3) with a(2)=18, a(3)=270, a(4)=3438. - _ Harvey P. Dale _ , Sep 05 2015 ●

► [A159740] 18,270,3600,45000,540000,6300000,72000000,810000000,9000000000,99000000000,1080000000000,11700000000000,126000000000000,1350000000000000,14400000000000000,153000000000000000 ⋆ Number of permutations of 9 in distinguishable copies of 1..n arranged in a circle with exactly 1 local maximum. ● a(n) = (copies * n) * (copies + 1) ^ (n - 2). ● a(n) = 9 * n * 10 ^ (n - 2). ●

► [A115903] 1,18,270,3780,51030,673596,8756748,112586760,1435481190,18182761740,229102797924,2874198737592,35927484219900,447711726432600,5564417171376600,68998772925069840,853859814947739270 ⋆ Expansion of (1 - 12 * x) ^ (- 3 / 2). ● a(n) = Jacobi _ P(n,1 / 2,1 / 2,1) * 12 ^ n. ●

► [A288959] 0,18,288,1800,7200,22050,56448,127008,259200,490050,871200,1472328,2384928,3726450,5644800,8323200,11985408,16901298,23392800,31840200,42688800,56455938,73738368,95220000,121680000 ⋆ a(n) = n ^ 2 * (n ^ 2 - 1) ^ 2 / 2. ● a(n) = n ^ 2 * (n ^ 2 - 1) ^ 2 / 2. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). ●

► [A098303] 0,1,18,289,4608,73441,1170450,18653761,297289728,4737981889,75510420498,1203428746081,19179349516800,305666163522721,4871479266846738,77638002106025089,1237336554429554688 ⋆ Member r=18 of the family of Chebyshev sequences S _ r(n) defined in A092184. ● a(n) = 16 * a(n - 1) - a(n - 2) + 2, n>=2, a(0)=0, a(1)=1. ● a(n) = 17 * a(n - 1) - 17 * a(n - 2) + a(n - 3), n >=3, a(0)=0, a(1)=1, a(2)=18. ●

► [A167713] 1,18,294,4724,75654,1210716,19372380,309961512,4959397062,79350401612,1269606610548,20313706474200,325019306291356,5200308911062296,832049426171336,13312790820289308 96,2130046531363974726 ⋆ a(n) = 16 ^ n * Sum _{ k=0..n } binomial(2 * k, k) / 16 ^ k. ● a(n) = 16 ^ n * Sum _{ k=0..n } ((2k)! / (k!) ^ 2) / 16 ^ k. ● a(n) = 16 ^ n * Sum _{ k=0..n } binomial(2k,k) / 16 ^ k. ●

► [A166927] 1,18,296,4768,76416,1223168,19572736,313171968,5010784256,80172679168,1282763390976,20524216352768,328387470032896,5254199554080768,84067192999510016,1345075088529031168,21521201418611982336 ⋆ a(n) = 20 * a(n - 1) - 64 * a(n - 2) for n > 1; a(0) = 1, a(1) = 18. ● a(n) = (7 * 16 ^ n - 4 ^ n) / 6. ●

► [A097831] 1,18,306,5185,87840,1488096,25209793,427078386,7235122770,122570008705,2076455025216,35177165419968,595935357114241,10095723905522130,171031371036761970,2897437583719431361,49085407552193571168 ⋆ Partial sums of Chebyshev sequence S(n,17)= U(n,17 / 2)=A078366(n). ● a(n) = 18 * a(n - 1) - 18 * a(n - 2) + a(n - 3), n>=2, a(- 1)=0, a(0)=1, a(1)=18. ● a(n) = 17 *

a(n - 1) - a(n - 2) + 1, n>=1, a(- 1)=0, a(0)=1. • a(n) = (S(n + 1, 17) - S(n, 17) - 1) / 15. •

▶ [A163452] 1,18,306,5202,88434,1503225,25552224,434343744,7383094560,125499873024,2133281378232,36262103930496,616393221671808,10477621608796800,178101495469706112,3027418232198243904,51460888233840150528 ⋆ Number of reduced words of length n in Coxeter group on 18 generators S _ i with relations (S _ i) ^ 2 = (S _ i S _ j) ^ 5 = I. • a(n) = 16 * a(n - 1) + 16 * a(n - 2) + 16 * a(n - 3) + 16 * a(n - 4) - 136 * a(n - 5). - _ Wesley Ivan Hurt _ , May 10 2021 •

▶ [A163967] 1,18,306,5202,88434,1503378,25557273,434471040,7385963616,125560632384,2134518016032,36286589786112,616868346117816,10486699320193920,178272824864888448,3030619941978033024,51520231643134128768 ⋆ Number of reduced words of length n in Coxeter group on 18 generators S _ i with relations (S _ i) ^ 2 = (S _ i S _ j) ^ 6 = I. • a(n) = - 136 * a(n - 6) + 16 * Sum _{ k=1..5 } a(n - k). - _ Wesley Ivan Hurt _ , May 11 2021 •

▶ [A167048] 1,18,306,5202,88434,1503378,25557426,434476242,7386096114,125563633938,2134581776946,36287890208082,616894133537394,10487200270135545,178282404592301664,3030800878069084224,51523614927173682720 ⋆ Number of reduced words of length n in Coxeter group on 18 generators S _ i with relations (S _ i) ^ 2 = (S _ i S _ j) ^ 13 = I. • a(n) = - 136 * a(n - 13) + 16 * Sum _{ k=1..12 } a(n - k). - _ Wesley Ivan Hurt _ , May 06 2021 •

▶ [A091045] 1,18,307,5220,88741,1508598,25646167,435984840,7411742281,125999618778,2141993519227,36413889826860,619036127056621,10523614159962558,178901440719363487,3041324492229179280,51702516367896047761 ⋆ Partial sums of powers of 17 (A001026). • a(n) = Sum _{ k=0..n - 1 } 17 ^ k = (17 ^ n - 1) / 16. • a(n) = 17 * a(n - 1) + 1 (with a(1)=1). - _ Vincenzo Librandi _ , Nov 16 2010 •

▶ [A208537] 0,0,18,312,2340,11160,39990,117648,299592,683280,1428570,2783880,5118828,8964072,15059070,24408480,38347920,58619808,87460002,127695960,182857140,257298360,356336838,486403632,655210200 ⋆ Number of 7 - bead necklaces of n colors not allowing reversal, with no adjacent beads having the same color. • a(n + 2) = delta(- n) = - delta(n) for n >= 0, where delta is the p - derivation over the integers with respect to prime p = 7. - _ Danny Rorabaugh _ , Nov 10 2017 • a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. • a(n) = ((n - 1) ^ 7 - (n - 1)) / 7. (inspired by Hassler's formula in A208536) - _ Eric M. Schmidt _ , Dec 08 2017 •

▶ [A292299] 0,0,0,0,18,312,3798,41544,438270,4566120,47368110,490668936,5080145070,52588590888,544355820750,5634640292424,58323941179182,603707608725096,6248936971173390,64682313170747016,669522088312069614,6930176023749038760,71733763792342350798 ⋆ Sum of values of vertices of type E at level n of the hyperbolic Pascal pyramid. • a(n) = 18 * a(n - 1) - 99 * a(n - 2) + 226 * a(n - 3) - 224 * a(n - 4) + 92 * a(n - 5) - 12 * a(n - 6), n >= 7. •

▶ [A187381] 0,0,18,324,1418,3448,6581,10688,15769,21824,28853,36856,45833,55784,66709,78608,91481,105328,120149,135944,152713,170456,189173,208864,229529 ⋆ Number of 7 - step S, NW and NE - moving king's tours on an n X n board summed over all starting positions. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>8. •

▶ [A207109] 18,324,1504,4534,10898,22714,42874,75198,124602,197280,300900,444814,640282,900710,1241902,1682326,2243394,2949756,3829608,4915014,6242242,7852114,9790370,12108046,14861866 ⋆ Number of n X 6 0..1 arrays avoiding 0 0 0 and 0 1 1 horizontally and 0 0 1 and 1 1 0 vertically. • a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. •

▶ [A041145] 1,18,325,5868,105949,1912950,34539049,623615832,11259624025,203296848282,3670602893101,66274148924100,1196605283526901,21605169252408318,390089651826876625,7043218902136187568 ⋆ Denominators of continued fraction convergents to sqrt(82). • a(n) = F(n,18), the n - th Fibonacci polynomial evaluated at x=18. - _ T. D. Noe _ , Jan 19 2006 • a(n) = 18 * a(n - 1) + a(n - 2) for n > 1; a(0)=1, a(1)=18. •

▶ [A222812] 0,18,329,5000,65931,779504,8517616,88555255,897147508,8997325290,90000000000,900000000000,9000000000000,90000000000000,900000000000000,9000000000000000,90000000000000000,900000000000000000,9000000000000000000 ⋆ Number of n - digit numbers N such that the number formed by some nontrivial permutation of the digits of N divides N. • a(n) = 9 * 10 ^ (n - 1) for n >= 11. - _ Hiroaki Yamanouchi _ , Sep 03 2014. •

▶ [A068771] 1,1,18,333,6318,122634,2429028,48974949,1002875094,20814628158,437088964860,9272342710962,198456435657036,4280758166952756,92972201833888200,2031520673763657621,44630859892110807654 ⋆ Generalized Catalan numbers. • a(n) = (9 ^ n) * p(n, - 8 / 9) with the row polynomials p(n, x) defined from array A068763. • a(n + 1) = 9 * sum(a(k) * a(n - k), k=0..n), n>=1, a(0)=1=a(1). •

▶ [A212669] 18,340,2022,7400,20602,48060,99022,186064,325602,538404,850102,1291704,1900106,2718604,3797406,5194144,6974386,9212148,11990406,15401608,19548186,24543068,30510190,37585008,45915010 ⋆ a(n) = 2 / 15 * (32 * n ^ 5 + 80 * n ^ 4 + 40 * n ^ 3 - 20 * n ^ 2 + 3 * n). • a(n) = 2 / (2 * n + 1) * Sum _{ i=1..n } tan ^ 6(Pi * i / (2 * n + 1)). •

▶ [A158590] 18,342,1314,2934,5202,8118,11682,15894,20754,26262,32418,39222,46674,54774,63522,72918,82962,93654,104994,116982,129618,142902,156834,171414,186642 ⋆ a(n) = 324 * n ^ 2 + 18. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). •

▶ [A127585] 1,18,345,10243,437769,25260317 ⋆ Exponential error term from Stirling's Approximation. • a(n) = Floor[sqrt(2 * pi) * (n ^ n) * (n ^ (n / 2))] - n! . •

▶ [A099276] 0,1,18,361,7200,143641,2865618,57168721,1140508800,22753007281,453919636818,9055639729081,180658874944800,3604121859166921,71901778308393618,1434431444308705441,28616727107865715200 ⋆ Unsigned member r= - 18 of the family of Chebyshev sequences S _ r(n) defined in A092184. • a(n)= 20 * a(n - 1) - a(n - 2) + 2 * (- 1) ^ (n + 1), n>=2, a(0)=0, a(1)=1. • a(n)= 19 * a(n - 1) + 19 * a(n - 2) - a(n - 3), n>=3, a(0)=0, a(1)=1, a(2)=18. •

▶ [A215229] 0,18,408,2940,12600,40110,105168,240408,496080,945450,1690920,2870868,4667208,7313670,11104800,16405680,23662368,33413058,46299960,63081900,84647640,112029918,146420208,189184200,241878000 ⋆ Number of length - 6 0..k arrays connected end - around, with no sequence of L<n elements immediately followed by itself (periodic "squarefree"). • a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. •

▶ [A172135] 0,1,18,412,4436,26133,111066,376560,1080942,2732909,6253408,13204356,26100160,48819677,87137934,149398608,247349946,397168485,620696612,946921684,1413726108,2069939461,2977725410,4215337872 ⋆ Number of ways to place 4 nonattacking knights on an n X n board. • a(n) = (n ^ 8 - 54 * n ^ 6 + 144 * n ^ 5 + 1019 * n ^ 4 - 5232 * n ^ 3 - 2022 * n ^ 2 + 51120 * n - 77184) / 24, n >= 6. (Karl Fabel, 1966) •

▶ [A326368] 0,0,18,434,2814,11127,33365,83568,184254,369254,686952,1203930,2009018,3217749,4977219,7471352,10926570,15617868,21875294,30090834,40725702,54318035,71490993,92961264,119547974 ⋆ Number of tilings of an equilateral triangle of side length n with unit triangles (of side length 1) and exactly three unit "lozenges" or "diamonds" (also of side length 1). • a(n) = (1 / 16) * (n - 2) * (9 * n ^ 5 - 9 * n ^ 4 - 81 * n ^ 3 + 81 * n ^ 2 + 160 * n - 192) for n >= 2 (proved by _ Greg Dresden _ and E. Sijaric). • a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>8. •

▶ [A116176] 0,18,486,8748,131220,1771470,22320522,267846264,3099363912,34867844010,383546284110,4142299868388,44059007691036,462619580755878,4804126415541810,49413871702715760,504021491367700752 ⋆ a(n) = 9 ^ n * n * (n + 1). • a(n) = 27 * a(n - 1) - 243 * a(n - 2) + 729 * a(n - 3). - _ Vincenzo Librandi _ , Feb 28 2013 •

▶ [A126276] 18,504,5200,31500,136710,471968,1378944,3547800,8258250,17728920,35603568,67606084,122399550,212688000,356602880,579419568,915652674,1411582200,2128266000,3145097340,4563969718,6514114464,9157680000,12696125000,17377501050 ⋆ Moment of inertia of all magic cubes of order n. • a(n) = (n ^ 3) * (n ^ 3 + 1) * (n ^ 2 - 1) / 12. •

▶ [A128074] 0,18,810,21870,446148,7676370,117979902,1674039150,22384294920,285916320882,3521652245010,42113381995278,491427393476940,5617523480607090,63094193590782438,697970937800860110 ⋆ a(n) = (n ^ 3 + n) * 9 ^ n. • a(1)=18, a(2)=810, a(3)=21870, a(4)=446148, a(n)=36 * a(n - 1) - 486 * a(n - 2) + 2916 * a(n - 3) - 6561 * a(n - 4). - _ Harvey P. Dale _ , Jun 16 2011 •

▶ [A129009] 18,972,26244,524880,8857350,133923132,1874923848,24794911296,313810596090,3835462841100,45565298552268,528708092292432,6014054549826414,67257769817585340,741208075540736400 ⋆ (n ^ 3 + n ^ 2) * 9 ^ n. • a(n) = 36 * a(n - 1) - 486 * a(n - 2) + 2916 * a(n - 3) - 6561 * a(n - 4). - _ Vincenzo Librandi _ , Feb 12 2013 •

▶ [A243215] 0,0,0,18,2593,39979,281514,1301950,4618099,13628193,35115244,81502564,174076485,347418199,655313518,1178436234,2034127639,3388621645,5472091824,8596923568,13179641449,19766948739,29066362930,41981957974,59655750843 ⋆ Number of 4 - matchings of the n X n grid graph. • a(n) = (4 * n ^ 8 - 16 * n ^ 7 - 60 * n ^ 6 + 308 * n ^ 5 + 171 * n ^ 4 - 1942 * n ^ 3 + 872 * n ^ 2 + 3963 * n - 3366) / 6 for n>=4, a(3) = 18, a(n) = 0 for n<=2. •

▶ [A296653] 18,26432,3066830,348933114,44690978122,6553736049264 ⋆ a(n) is the smallest k > 15 such that the density of semiprimes in 1..k is 1 / n. • a(n) = exp(n log n + n log log n + O(n)). - _ Charles R Greathouse IV _ , Dec 14 2022 •

▶ [A266804] 19,19,361,1795,14011,91489,638899,4348051,29883145,204609571,1402971259,9614651329,65903614291,451700107795,3096024736681,21220400800579,145446970016059,996907894114081,6832909585226995,46833455808339091,321001289959109449 ⋆ Coefficient of x ^ 0 in the minimal polynomial of the continued fraction [1 ^ n,sqrt(6),1,1,...], where 1 ^ n means n ones. • a(n) = 5 * a(n - 1) + 15 * a(n - 2) - 15 * a(n - 3) - 5 * a(n - 4) + a(n - 5) . •

▶ [A241849] 19,20,23,28,35,44,55,68,83,100,119,140,163,188,215,244,275,308,343,380,419,460,503,548,595 ⋆ a(n) = n ^ 2 + 19. • a(n) = a(- n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) = a(n - 1) + 2 * n - 1. •

▶ [A151979] 0,1,19,20,38,39,57,58,76,77,95,96,114,115,133,134,152,153,171,172,190,191,209,210,228 ⋆ Numbers congruent to { 0, 1 } (mod 19). • a(n) = a(n - 1) + a(n - 2) - a(n - 3). - _ Colin Barker _ , Apr 09 2012 • a(n) = (1 / 4) * (38 * n - 55 - 17 * (- 1) ^ n). •

▶ [A022109] 1,19,20,39,59,98,157,255,412,667,1079,1746,2825,4571,7396,11967,19363,31330,50693,82023,132716,214739,347455,562194,909649 ⋆ Fibonacci sequence beginning 1, 19. • a(n)= a(n - 1) + a(n - 2), n>=2, a(0)=1, a(1)=19. a(- 1)=18. •

▶ [A041730] 19,20,39,59,98,157,569,726,2021,2747,10262,13009,23271,36280,59551,95831,3701129,3796960,7498089,11295049,18793138,30088187,109057699,139145886,387349471 ⋆ Numerators of continued fraction convergents to sqrt(385). • a(n) = 191662 * a(n - 16) - a(n - 32) for n>31. [_ Bruno Berselli _ , Nov 07 2013] •

▶ [A041724] 19,20,39,215,2619,2834,16789,19623,36412,92447,313753,406200,7625353,8031553,31720012,71471577,103191589,174663166,976507419,1151170585,14790554439,75103942780,89894497219 ⋆ Numerators of continued fraction convergents to sqrt(382). • a(n) = 329996879998 * a(n - 24) - a(n - 48) for n>47. [_ Bruno Berselli _ , Nov 08 2013] •

▶ [A041722] 19,20,39,488,527,1015,39097,40112,79209,990620,1069829,2060449,79366891,81427340,160794231,2010958112,2171752343,4182710455,16111474963,165297460088,326412209721,4082243976740,4408656186461,8490900163201,327062862388099 ⋆ Numerators of continued fraction convergents to sqrt(381). • a(n) = 2030 * a(n - 6) - a(n - 12) for n>11. [_ Bruno Berselli _ , Nov 07 2013] •

▶ [A041736] 19,20,59,197,847,10361,11208,100025,111233,1434821,5850517,18986372,43823261,62809633,2430589315,2493398948,7417387211,24745560581,106399629535,1301541115001,1407940744536,12565067071289 ⋆ Numerators of continued fraction convergents to sqrt(388). • a(n) = 125619266 * a(n - 14) - a(n - 28) for n>27. [_ Bruno Berselli _ , Nov 08 2013] •

▶ [A041742] 19,20,79,178,435,613,1048,2709,52519,107747,160266,268013,696292,1660597,5678083,7338680,284547923,291886603,1160207732,2612302067,638481

1866,8997113933,15381925799,39760965531 ⋆ Numerators of continued fraction convergents to sqrt(391). ● a(n) = 14677360 * a(n - 16) - a(n - 32) for n>31. [_ Bruno Berselli _ , Nov 07 2013] ●

▶ [A041746] 19,20,99,119,337,1467,1804,3271,5075,8346,105227,113573,218800,332373,551173,2537065,5625303,8162368,38274775,46437143,1802886209,1849323352,9200179617,11049502969 ⋆ Numerators of continued fraction convergents to sqrt(393). ● a(n) = 92874286 * a(n - 20) - a(n - 40) for n>39. [_ Bruno Berselli _ , Nov 07 2013] ●

▶ [A041748] 19,20,119,139,258,397,1449,1846,6987,36781,80549,197879,1069944,3407711,4477655,16840676,21318331,38159007,59477338,335545697,395023035,15346421027,15741444062,94053641337 ⋆ Numerators of continued fraction convergents to sqrt(394). ● a(n) = 790046070 * a(n - 21) + a(n - 42) for n>41. [_ Bruno Berselli _ , Nov 07 2013] ●

▶ [A041750] 19,20,139,159,6181,6340,44221,50561,1965539,2016100,14062139,16078239,625035221,641113460,4471715981,5112829441,198759234739,203872064180,1421991619819,1625863683999,63204811611781 ⋆ Numerators of continued fraction convergents to sqrt(395). ● a(n) = 318 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Nov 07 2013 ●

▶ [A041754] 19,20,259,797,3447,31820,35267,102354,137621,377596,515217,892813,2300843,3193656,8688155,11881811,115624454,474379627,1538763335,18939539647,20478302982,797115052963,817593355945 ⋆ Numerators of continued fraction convergents to sqrt(397). ● a(n) = 40956605964 * a(n - 21) + a(n - 42) for n >41. [_ Bruno Berselli _ , Nov 07 2013] ●

▶ [A041179] 1,1,19,20,379,399,7561,7960,150841,158801,3009259,3168060,60034339,63202399,1197677521,1260879920,23893516081,25154396001,476672644099,501827040100,9509559365899,10011386405999,189714514673881,199725901079880,3784780734111721 ⋆ Denominators of continued fraction convergents to sqrt(99). ● a(n) = 20 * a(n - 2) - a(n - 4). - _ Vincenzo Librandi _ , Dec 12 2013 ● a(n) = Product _{ k = 1..floor((n - 1) / 2) } (18 + 4 * cos ^ 2(k * Pi / n)). ●

▶ [A041756] 19,20,379,399,15541,15940,302461,318401,12401699,12720100,241363499,254083599,9896540261,10150623860,192607769741,202758393601,7897426726579,8100185120180,153700758889819 ⋆ Numerators of continued fraction convergents to sqrt(398). ● a(n) = 798 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Nov 08 2013 ●

▶ [A041757] 1,1,19,20,779,799,15161,15960,621641,637601,12098459,12736060,496068739,508804799,9654555121,10163359920,395862232081,406025592001,7704322888099,8110348480100,315897565131899,324007913611999,6148040010147881,6472047923759880 ⋆ Denominators of continued fraction convergents to sqrt(398). ● a(n) = 798 * a(n - 4) - a(n - 8) for n>7. - _ Vincenzo Librandi _ , Dec 24 2013 ●

▶ [A041758] 19,20,779,799,31141,31940,1244861,1276801,49763299,51040100,1989287099,2040327199,79521720661,81562047860,3178879539341,3260441587201,127075659852979,130336101440180,5079847514579819,5210183616019999,203066824923339781 ⋆ Numerators of continued fraction convergents to sqrt(399). ● a(n) = 40 * a(n - 2) - a(n - 4). - _ Vincenzo Librandi _ , Nov 07 2013 ●

▶ [A042735] 1,1,19,20,1179,1199,22761,23960,1412441,1436401,27267659,28704060,1692103139,1720807199,32666632721,34387439920,2027138148081,2061525588001,39134598732099,41196124320100,2428509809297899,2469705933617999,46883216614421881 ⋆ Denominators of continued fraction convergents to sqrt(897). ● a(n) = 1198 * a(n - 4) - a(n - 8) for n>7. - _ Vincenzo Librandi _ , Jan 27 2014 ●

▶ [A303299] 0,1,19,22,58,63,117,124,196,205,295,306,414,427,553,568,712,729,891,910,1090,1111,1309,1332,1548 ⋆ Generalized 22 - gonal (or icosidigonal) numbers: m * (10 * m - 9) with m = 0, + 1, - 1, + 2, - 2, + 3, - 3, ... ● a(n) = (5 * n ^ 2 + 9 * n) / 2 for n even. ● a(n) = (5 * n ^ 2 + n - 4) / 2 for n odd. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n>4. ●

▶ [A166061] 1,19,23,29,31,37,41,43,47,53,59,61,67,71,73,79,83,89,97,101,103,107,109,113,127 ⋆ 19 - rough numbers: positive integers that have no prime factors less than 19. ● a(n) = k * n + O(1) where k = 17017 / 3072 = 5.539388.... In particular, k * n - 31 < a(n) < k * n + 25. - _ Charles R Greathouse IV _ , Sep 24 2018 ●

▶ [A129071] 19,25,37,49,73,85,109,121,145,181,193,229,253,265,289,325,361,373,409,433,445,481,505,541,589 ⋆ Numbers n such that (n - 7) / 6 is prime. ● a(n) = 6 * prime(n) + 7. - Zak Seidov, May 12 2007 ●

▶ [A259054] 19,27,43,67,99,139,187,243,307,379,459,547,643,747,859,979,1107,1243,1387,1539,1699,1867,2043,2227,2419 ⋆ a(n) = 4 * n ^ 2 - 4 * n + 19, n >= 1. ● a(n) = 4 * n ^ 2 - 4 * n + 19, n >= 1. ●

▶ [A141417] 1,1,1,1,19,27,863,1375,33953,57281,3250433,5675265,13695779093,24466579093,132282840127,240208245823,111956703448001,205804074290625,151711881512390095,281550972898020815,865600562642898602 03,161867055619224199787,209538162862426744951 91,394279360104794744951 91 ⋆ (- 1) ^ (n + 1) * A091137(n) * a(0,n), where a(i,j) = Integral _{ x=i..i + 1 } x * (x - 1) * (x - 2) * ... * (x - j + 1) / j! dx. ● a(i,j) = a(i - 1,j) + a(i - 1,j - 1), see reference page 33. ● a(n) = numerator(n * (n + 1) * Sum _{ k=1..n } ((- 1) ^ (n - k) * Stirling2(n + k,k) * binomial(2 * n - 1,n - k)) / ((n + k) * (n + k - 1))), n>0, a(0)= - 1. - _ Vladimir Kruchinin _ , Dec 12 2016 ●

▶ [A264834] 1,19,27,1293,41419,41493,41519,41521,41601,1629899,3142492081,3142492231 ⋆ Integers k such that A008347(k) is divisible by k. ● a(n) mod 2 = 1. ●

▶ [A094677] 19,28,37,46,55,64,73,82,91,109,118,127,136,145,154,163,172,181,190,208,217,226,235,244,253 ⋆ Sum of digits is divisible by 10. ● a(n)=10n + r(n) where r(n) takes values in { 0, 1, 2, 3, 4, 5, 6, 7, 8, 9 } . ●

▶ [A121458] 1,1,19,28,406,721,8722,17983,188209,438697,4078270,10530100,88714549,249679990,1936716229,5864281633,42418800739,136706927896,931844786950,3167777090989,20525689021222,73046232419419,453213909082585 ⋆ Expansion of (1 + x - 2 * x ^ 2) / (1 - 21 * x ^ 2 - 7 * x ^ 3). ● a(0)=a(1)=1, a(2)=19, a(n + 1) = 21 * a(n - 1) + 7 * a(n - 2) for n>=2. ● a(n) = (1 / 7) * ((s(2)) ^ 2 * (1 + 3 * c(1)) ^ n + (s(4)) ^ 2 * (1 + 3 * c(2)) ^ n + (s(1)) ^ 2 * (1 + 3 * c(4)) ^ n), where c(j):=2 * cos(2 * Pi * j / 7) and s(j):=2 * sin(2 * Pi * j / 7) (for the proof see Witula - Slota - Warzynski paper). - _ Roman Witula _ , Aug 11 2012 ●

▶ [A265804] 1,19,29,95,229,619,1601,4211,11005,28831,75461,197579,517249,1354195,3545309,9281759,24299941,63618091,166554305,436044851,1141580221,2988695839,7824507269,20484825995,53629970689 ⋆ Coefficient of x ^ 2 in minimal polynomial of the continued fraction [1 ^ n,5,1,1,1,...], where 1 ^ n means n ones. ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - a(n - 3). ●

▶ [A184750] 0,0,0,0,19,32,48,67,89,114,142,173,207,244,284,327,373,422,474,529,587,648,712,779,849 ⋆ a(n) = largest k such that A000326(n + 1) = A000326(n) + (A000326(n) mod k), or 0 if no such k exists. ● a(n) = (3n ^ 2 - 7n - 2) / 2 for n >= 5 and a(n) = 0 for n <= 4. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>7. G.f.: x ^ 5 * (9 * x ^ 2 - 25 * x + 19) / (1 - x) ^ 3. - _ Colin Barker _ , Apr 05 2014 ●

▶ [A106527] 19,33,51,81,179,289,467,1041,1683,2721,6067,9809,15859,35361,57171,92433,206099,333217,538739,1201233,1942131,3140001,7001299,11319569,18301267 ⋆ Values of x in x ^ 2 - 289 = 2 * y ^ 2. ● a(n) = 6 * a(n - 3) - a(n - 6). ●

▶ [A161705] 1,19,37,55,73,91,109,127,145,163,181,199,217,235,253,271,289,307,325,343,361,379,397,415,433 ⋆ a(n) = 18 * n + 1. ● a(n) = 18 * n + 1, n >= 0. ● a(n) = a(n - 1) + 18 (with a(0)=1). - _ Vincenzo Librandi _ , Dec 27 2010 ● a(n) = 2 * a(n - 1) - a(n - 2). (End) ●

▶ [A131600] 19,37,55,397,1063,2053,9199,28333,65287,230869,740863,1916029,6071671,19407205,53895727,163185805,512515495,1482638581,4419983071,13645261981,40332756439,119892451717,365507167375,1091496783277,3249560914183 ⋆ Number of different configurations of an n - block of a shift space with k symbols where each symbol but the first must appear isolated and separated from others by a block of length at least m made of first symbols. Here k=19 and m=2. ● a(n) = a(n - 1) + (k - 1) * a(n - m - 1), where k=19, m=2. ●

▶ [A301617] 1,19,37,73,91,109,127,163,181,199,217,253,271,289,307,343,361,379,397,433,451,469,487,523,541 ⋆ Numbers not divisible by 2, 3 or 5 (A007775) with digital root 1. ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. ●

▶ [A123028] 1,1,19,37,1159,3367,147193,569023,31940881,154205233,10572431611,61219477501,4958470425559,33487054193047,3128794838527729,24144166073186887,255622538307715459 3,2218848862125874915 3 ⋆ a(n) = (3 * n ^ 2 + 3 * n + 1) * a(n - 2), for n>2, with a(0) = a(1) = 1. ● a(n) = n! * b(n), where b(n) = (3 * n * (n + 1) + 1) * b(n - 2) / (n * (n - 1)), b(0) = b(1) = 1. ●

▶ [A008601] 0,19,38,57,76,95,114,133,152,171,190,209,228,247,266,285,304,323,342,361,380,399,418,437,456 ⋆ Multiples of 19. ● a(n) = 19 * n = 2 * a(n - 1) - a(n - 2). G.f.: 19x / (x - 1) ^ 2. - _ Vincenzo Librandi _ , Dec 24 2010 ●

▶ [A041712] 19,39,58,97,349,446,1241,2928,12953,28834,70621,99455,368986,468441,837427,2143295,82282637,166708569,248991206,415699775,1496090531,1911790306,5319671143,12551132592 ⋆ Numerators of continued fraction convergents to sqrt(376). ● a(n) = 4286590 * a(n - 16) - a(n - 32) for n>31. [_ Bruno Berselli _ , Nov 08 2013] ●

▶ [A042629] 1,19,39,58,329,387,1490,1877,3367,5244,8611,13855,36321,231781,268102,2108495,4485092,15563771,35612634,86789039,990292063,4047957291,5038249354,19162705353,273316124296 ⋆ Denominators of continued fraction convergents to sqrt(844). ● a(n) = 30992462932033525728999 8 * a(n - 48) - a(n - 96) for n>95. - _ Vincenzo Librandi _ , Jan 26 2014 ●

▶ [A041708] 19,39,58,1083,1141,3365,129011,261387,390398,7288551,7678949,22646449,868244011,1759134471,2627378482,49051947147,51679325629,1524105984 05,5843282065019,11838974728443,17682256793462,330119597010759,347801853804221,1025723304619201 ⋆ Numerators of continued fraction convergents to sqrt(374). ● a(n) = 6730 * a(n - 6) - a(n - 12). - _ Wesley Ivan Hurt _ , Apr 16 2023 ●

▶ [A079044] 19,39,59,78,98,118,138,157,177,197,217,236,256,276,296,315,335,355,375,394,414,434,454,473,493 ⋆ Numbers k such that Sum _{ j=0..k } sin(j / Pi) < 0. ● a(n) is asymptotic to c * n where c=19.7... ●

▶ [A258016] 19,39,61,81,103,123,145,165,187,207,229,249,271,291,313,333,355,375,397,417,439,459,481,501,523 ⋆ Unlucky numbers removed at the stage three of Lucky sieve. ● a(n) = a(n - 2) + 42. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3). ●

▶ [A195048] 0,1,19,39,76,115,171,229,304,381,475,571,684,799,931,1065,1216,1369,1539,1711,1900,2091,2299,2509,2736 ⋆ Concentric 19 - gonal numbers. ● a(n) = (19 / 4) * n ^ 2 + (15 / 8) * ((- 1) ^ n - 1). ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4). ●

▶ [A041718] 19,39,292,915,2122,5159,33076,402071,435147,2142659,2577806,4720465,7298271,26615278,113759383,2188043555,8865933603,28785844364,37651777967,66437622331,104089400298,482795223523 ⋆ Numerators of continued fraction convergents to sqrt(379). ● a(n) = 25882394441081380 * a(n - 30) - a(n - 60) for n>59. [_ Bruno Berselli _ , Nov 06 2013] ●

▶ [A041720] 19,39,1501,3041,117059,237159,9129101,18495361,711952819,1442400999,55523190781,112488782561,4330096928099,8772682638759,337692037200941,684156757040641,26335648804745299,53355454366531239 ⋆ Numerators of continued fraction convergents to sqrt(380). ● a(n) = 78 * a(n - 2) - a(n - 4). - _ Vincenzo Librandi _ , Nov 07 2013 ●

▶ [A098850] 0,19,40,63,88,115,144,175,208,243,280,319,360,403,448,495,544,595,648,703,760,819,880,943,1008 ⋆ a(n) = n * (n + 18). ● a(n) = (n + 9) ^ 2 - 9 ^ 2 = n * (n + 18), n>=0. ● a(n) = 2 * n + a(n - 1) + 17 (with a(0)=0). - _ Vincenzo Librandi _ , Nov 17 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A248339] 19,41,63,85,107,129,151,173,195,217,239,261,283,305,327,349,371,393,415,437,459,481,503,525,547 ⋆ a(n) = 22 * n + 19. ● a(n) = 22 * n + 19. ● a(n) = 2 * a(n - 1) - a(n - 2). G.f.: (3 * x + 19) / (x - 1) ^ 2. - _ Colin Barker _ , Oct 05 2014 ●

▶ [A139580] 0,19,42,69,100,135,174,217,264,315,370,429,492,559,630,705,784,867,954,1045,1140,1239,1342,1449,1560 ⋆ a(n) = n(2n + 17). ● a(n) = 2 * n ^ 2 + 17 * n. ● a(n) = a(n - 1) + 4 * n + 15; a(0) = 0. - _ Vincenzo Librandi _ , Nov 24 2010 ●

▶ [A350051] 19,43,67,91,115,139,163,187,211,235,259,283,307,331,355,379,403,427,451,475,499,523,547,571,595 ⋆ Part three of the trisection of A017101: a(n) = 19 + 24 * n. ● a(n) = 2 * a(n - 1) - a(n - 2), for n >= 1 , with a(- 1) = - 5, a(0) = 19. ●

▶ [A153169] 19,43,75,115,163,219,283,355,435,523,619,723,835,955,1083,1219,1363,1515,1675,1843,2019,2203,2395,2595,2803 ⋆ a(n) = 4 * n ^ 2 + 12 * n + 3. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3); a(1)=19, a(2)=43, a(3)=75. (End) ●
▶ [A063313] 1,19,44,67,94,117,144,165,194,215,244,263,294,313,344,361,394,411,444,459,494,509,544,557,594 ⋆ Dimension of the space of weight n cuspidal newforms for Gamma _ 1(40). ● a(n) = a(n - 2) + a(n - 4) - a(n - 6) for n>8. ●
▶ [A140680] 0,19,44,75,112,155,204,259,320,387,460,539,624,715,812,915,1024,1139,1260,1387,1520,1659,1804,1955,2112 ⋆ a(n) = n * (3 * n + 16). ● a(n) = 3 * n ^ 2 + 16 * n. ● a(n) = 6 * n + a(n - 1) + 13 (with a(0)=0). - _ Vincenzo Librandi _ , Aug 03 2010 ●
▶ [A183624] 19,45,115,309,859,2445,7075,20709,61099,181245,539635,1610709,4815739,14414445,43177795,129402309,387944779,1163310045,3488881555,10464547509,31389448219,94159956045,282463090915,847355718309,2542000046059 ⋆ Number of (n + 1) X 2 0..2 arrays with every 2 x 2 subblock summing to 4. ● a(n) = 2 + 2 ^ (2 + n) + 3 ^ (1 + n). ●
▶ [A166148] 1,19,46,82,127,181,244,316,397,487,586,694,811,937,1072,1216,1369,1531,1702,1882,2071,2269,2476,2692,2917 ⋆ a(n) = (9 * n ^ 2 + 9 * n - 16) / 2. ● a(n) = a(n - 1) + 9 * n with n > 1, a(1)=1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). (End) ●
▶ [A156376] 19,49,79,109,139,169,199,229,259,289,319,349,379,409,439,469,499,529,559,589,619,649,679,709,739 ⋆ a(n) = 30 * n + 19. ● a(n) = 2 * a(n - 1) - a(n - 2). ●
▶ [A349554] 1,19,51,201,723,2709,10161,38459,146297,559135,2145021,8255579,31861021,123256499,477823891,1855782329,7219352971,28125910829,109720617991,428537256449,1675561707271,6557869020329,25689734662771,100720871774981,395197661173123 ⋆ a(n) = A054108(n) + 4 * (- 1) ^ n. ● a(n) = C(2(n + 1), n + 1) - a(n - 1) with a(1) = 1. - _ Chai Wah Wu _ , Jan 19 2022 ●
▶ [A051871] 0,1,19,54,106,175,261,364,484,621,775,946,1134,1339,1561,1800,2056,2329,2619,2926,3250,3591,3949,4324,4716 ⋆ 19 - gonal (or enneadecagonal) numbers: n(17n - 15) / 2. ● a(n) = n(17n - 15) / 2. ● a(n) = 17 * n + a(n - 1) - 16 (with a(0) = 0). - _ Vincenzo Librandi _ , Aug 06 2010 ● a(17 * a(n) + 137 * n + 1) = a(17 * a(n) + 137 * n) + a(17 * n + 1). - _ Vladimir Shevelev _ , Jan 24 2014 ●
▶ [A069131] 1,19,55,109,181,271,379,505,649,811,991,1189,1405,1639,1891,2161,2449,2755,3079,3421,3781,4159,4555,4969,5401 ⋆ Centered 18 - gonal numbers. ● a(n) = 9 * n ^ 2 - 9 * n + 1. ● a(n) = 18 * n + a(n - 1) - 18 (with a(1)=1). - _ Vincenzo Librandi _ , Aug 08 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3); a(1)=1, a(2)=19, a(3)=55. - _ Harvey P. Dale _ , Jan 20 2014 ●
▶ [A125818] 1,1,19,55,433,1801,10963,52543,291457,1476145,7907059,40908583,216237169,1127920249,5931872371,31038388975,162918608257,853489829089,4476595998547,23462519091607,123027170158513,644917164874345,3381296222443411,17726184247750687 ⋆ a(n) = ((1 + 3 * sqrt(2)) ^ n + (1 - 3 * sqrt(2)) ^ n) / 2. ● a(n) = 2 * a(n - 1) + 17 * a(n - 2), with a(0)=a(1)=1. ●
▶ [A362298] 1,1,19,55,472,2023,13249,66325,392299,2088856,11877025,64803157,362823607,1998759703,11123273896,61509329983,341492705365,1891193243713,10489893539203,58127214942544,322296397820593,1786338231961609,9903234373856059,54893955008138983 ⋆ Number of tilings of a 4 X n rectangle using dominos and 2 X 2 right triangles. ● a(n) = 4 * a(n - 1) + 18 * a(n - 2) - 48 * a(n - 3) - 42 * a(n - 4) + 99 * a(n - 5). ●
▶ [A250024] 19,59,99,139,179,219,259,299,339,379,419,459,499,539,579,619,659,699,739,779,819,859,899,939,979 ⋆ 40n - 21. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Nov 11 2014 ●
▶ [A201812] 19,61,151,313,571,949,1471,2161,3043,4141,5479,7081,8971,11173,13711,16609,19891,23581,27703,32281,37339,42901,48991,55633,62851 ⋆ Number of arrays of 4 integers in - n..n with sum zero and equal numbers of elements greater than zero and less than zero. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>4. ●
▶ [A093485] 1,19,64,136,235,361,514,694,901,1135,1396,1684,1999,2341,2710,3106,3529,3979,4456,4960,5491,6049,6634,7246,7885 ⋆ a(n) = (27 * n ^ 2 + 9 * n + 2) / 2. ● a(n) = (n + 1) * (3 * (n + 1) - 1) * (3 * (n + 1) - 2) / 2 - n * (3 * n - 1) * (3 * n - 2) / 2. ●
▶ [A165806] 19,67,145,253,391,559,757,985,1243,1531,1849,2197,2575,2983,3421,3889,4387,4915,5473,6061,6679,7327,8005,8713,9451 ⋆ a(n) = 15n ^ 2 + 3n + 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●
▶ [A204675] 1,19,69,151,265,411,589,799,1041,1315,1621,1959,2329,2731,3165,3631,4129,4659,5221,5815,6441,7099,7789,8511,9265 ⋆ a(n) = 16 * n ^ 2 + 2 * n + 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Wesley Ivan Hurt _ , Jun 09 2023 ●
▶ [A172078] 0,1,19,70,170,335,581,924,1380,1965,2695,3586,4654,5915,7385,9080,11016,13209,15675,18430,21490,24871,28589,32660,37100 ⋆ a(n) = n * (16 * n ^ 2 + 3 * n - 13) / 6. ● a(n) = n * (n + 1) * (16 * n - 13) / 6. ● a(n) = Sum _{ i=0..n - 1 } (n - i) * (16 * i + 1), with a(0)=0. - _ Bruno Berselli _ , Feb 10 2014 ●
▶ [A342737] 19,71,181,379,701,1189,1891,2861,4159,5851,8009,10711,14041,18089,22951,28729,35531,43471,52669,63251,75349,89101,104651,122149,141751 ⋆ Number of wedged n - spheres in the homotopy type of the neighborhood complex of Kneser graph KG _{ 3,n } . ● a(n) = 1 + (n + 1) * (n + 3) * (n + 4) * (n + 6) / 4. ●
▶ [A157889] 19,73,163,289,451,649,883,1153,1459,1801,2179,2593,3043,3529,4051,4609,5203,5833,6499,7201,7939,8713,9523,10369,11251 ⋆ a(n) = 18 * n ^ 2 + 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). (End) ●
▶ [A361677] 1,1,1,19,73,181,1711,10081,38809,256033,1696861,8388271,49449511,326195299,1847392093,10789655059,69202030969,418647580489,2498113460881,15735859252147,97919649290053,598317173139313,3748943081117323 ⋆ Constant term in the expansion of (1 + x + y + z + 1 / (x * y) + 1 / (y * z) + 1 / (z * x)) ^ n. ● a(n) = Sum _{ k=0..floor(n / 3) } (3 * k)! / k! ^ 3 * binomial(3 * k,k) * binomial(n,3 * k). ●
▶ [A373720] 1,1,1,19,73,541,5761,35911,515089,5399353,61253281,991270171,11862564121,203249068309,3295367161633,52595413358671,1060046073787681,18422593177204081,383150483373313729,8042585703164409763,165930214242407069161,3968988522451484425741 ⋆ Expansion of e.g.f. exp(x * (1 + x ^ 2) ^ 3). ● a(n) = n! * Sum _{ k=0..floor(3 * n / 7) } binomial(3 * n - 6 * k,k) / (n - 2 * k)!. ● a(n) == 1 (mod 18). ● a(n) = a(n - 1) + 9 * (n - 1) * (n - 2) * a(n - 3) + 15 * (n - 1) * (n - 2) * (n - 3) * (n - 4) * a(n - 5) + 7 * (n - 1) * (n - 2) * (n - 3) * (n - 4) * (n - 5) * (n - 6) * a(n - 7). ●
▶ [A244631] 0,19,76,171,304,475,684,931,1216,1539,1900,2299,2736,3211,3724,4275,4864,5491,6156,6859,7600,8379,9196,10051,10944 ⋆ 19 * n ^ 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>2. ●
▶ [A304513] 19,76,190,418,874,1786,3610,7258,14554,29146,58330,116698,233434,466906,933850,1867738,3735514,7471066,14942170,29884378,59768794,119537626,239075290,478150618,956301274 ⋆ a(n) = 57 * 2 ^ (n - 1) - 38 (n >= 1). ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>2. ●
▶ [A213832] 1,19,78,202,415,741,1204,1828,2637,3655,4906,6414,8203,10297,12720,15496,18649,22203,26182,30610,35511,40909,46828,53292,60325 ⋆ Principal diagonal of the convolution array A213831. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ● a(n) = (n - 7 * n ^ 2 + 8 * n ^ 3) / 2. ● a(n) = Sum _{ i = 0..n - 1 } (n + i) * (n + 3 * i). - _ Bruno Berselli _ , Feb 14 2018 ●
▶ [A158491] 19,79,179,319,499,719,979,1279,1619,1999,2419,2879,3379,3919,4499,5119,5779,6479,7219,7999,8819,9679,10579,11519,12499 ⋆ a(n) = 20 * n ^ 2 - 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●
▶ [A063496] 1,19,85,231,489,891,1469,2255,3281,4579,6181,8119,10425,13131,16269,19871,23969,28595,33781,39559,45961,53019,60765,69231,78449 ⋆ a(n) = (2 * n - 1) * (8 * n ^ 2 - 8 * n + 3) / 3. ● a(n + 1) = (1 / Pi) * Integral _{ x=0..Pi } (sin((n + 1 / 2) * x) / sin(x / 2)) ^ 4. - _ Yalcin Aktar _ , Nov 02 2011, corrected by _ R. J. Mathar _ , Dec 01 2011 ●
▶ [A302710] 0,1,19,90,266,615,1221,2184,3620,5661,8455,12166,16974,23075,30681,40020,51336,64889,80955,99826,121810,147231,176429,209760,247596 ⋆ a(n) = trinomial(2 * n, 4) = (1 / 6) * n * (2 * n - 1) * (2 * n ^ 2 + 7 * n - 3). ● a(n) = binomial(2 * n, 2) + (2 * n) * binomial(2 * n - 1, 2) + binomial(2 * n, 4)(from the trinomial definition) = (1 / 6) * n * (2 * n - 1) * (2 * n ^ 2 + 7 * n - 3). ● a(n) = (1 / Pi) * Integral _{ x=0..2 } (1 / sqrt(4 - x ^ 2)) * (x ^ 2 - 1) ^ (2 * n) * R(4 * (n - 2), x), n >= 0, with the R polynomial coefficients given in A127672. Note that R(- n, x) = R(n, x) [Comtet, p. 77, the integral formula for q = 3, n - > 2 * n, k = 4, rewritten with x = 2 * cos(phi)]. For the odd numbered rows see A302709. ●
▶ [A371532] 1,19,93,263,569,1051,1749,2703,3953,5539,7501,9879,12713,16043,19909,24351,29409,35123,41533,48679,56601,65339,74933,85423,96849 ⋆ Centered cuboctahedral numbers: the number of integer triples (x,y,z) such that max(|x|,|y|,|z|) <= n and |x| + |y| + |z| <= 2n. ● a(n) = (20 * n ^ 3 + 24 * n ^ 2 + 10 * n + 3) / 3. ●
▶ [A027005] 1,19,101,370,1148,3278,8967,23993,63483,167040,438346,1148844,3009181,7879855,20631713,54016798,141420392,370246298,969320643,2537718005,6643835991,17393792844,45537545686,119218847640,312119000953 ⋆ a(n) = T(2 * n + 1,n + 2), T given by A026998. ● a(n) = (- 6 + (2 ^ (- 1 - n) * ((3 - sqrt(5)) ^ n * (- 25 + 11 * sqrt(5)) + (3 + sqrt(5)) ^ n * (25 + 11 * sqrt(5)))) / sqrt(5) + 7 * (1 + n) - 6 * (1 + n) * (2 + n)). ● a(n) = 6 * a(n - 1) - 13 * a(n - 2) + 13 * a(n - 3) - 6 * a(n - 4) + a(n - 5) for n>5. ●
▶ [A253218] 1,1,1,19,102,263,504,825,1226,1707,2268,2909,3630,4431,5312,6273,7314,8435,9636,10917,12278,13719,15240,16841,18522 ⋆ Number of n X 3 nonnegative integer arrays with upper left 0 and lower right its king - move distance away minus 2 and every value within 2 of its king move distance from the upper left and every value increasing by 0 or 1 with every step right, diagonally se or down. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>7. ●
▶ [A356126] 1,19,103,395,1025,2537,4945,9625,16438,27778,42430,66958,95532,138876,191796,266692,350230,472864,603204,787164,989436,1253172,1533036,1926156,2319931 ⋆ a(n) = Sum _{ k=1..n } k * sigma _ 3(k). ● a(n) = Sum _{ k =1..n } k ^ 4 * binomial(floor(n / k) + 1,2). ●
▶ [A191566] 1,1,19,109,811,5581,39259,274429,1921771,13450861,94159099,659107549,4613765131,32296331341,226074368539,1582520481469,11077643566891,77543504575021,542804532811579,3799631728108189 ⋆ a(n) = 7 * a(n - 1) + (- 1) ^ n * 6 * 2 ^ (n - 1). ● a(n) = (7 ^ n + 2 * (- 2) ^ n) / 3. - _ Charles R Greathouse IV _ , Jun 06 2011 ● a(n) = 5 * a(n - 1) + 14 * a(n - 2). ●
▶ [A372010] 1,19,109,1099,10099,100999,1000999,10009999,100009999,1000099999,10000099999,100000999999,1000000999999,10000009999999,100000099999999,1000000099999999,10000000099999999,100000000099999999,1000000000999999999,10000000000999999999 ⋆ a(n) is the n - digit number k such that R(k) / k is maximal for any n - digit number. ● a(n) = 1 0 ^ (n - 1 - h) 9 ^ h, where h = floor(n / 2) and ^ represents repeated concatenation (see links for proof). ● a(n) = 10 ^ (n - 1) + 10 ^ floor(n / 2) - 1. ●
▶ [A164604] 1,19,113,659,3841,22387,130481,760499,4432513,25834579,150574961,877615187,5115116161,29813081779,173763374513,1012767165299,5902839617281,34404270538387,200522783613041,1168732431139859 ⋆ a(n) = ((1 + 4 * sqrt(2)) * (3 + 2 * sqrt(2)) ^ n + (1 - 4 * sqrt(2)) * (3 - 2 * sqrt(2)) ^ n) / 2. ● a(n) = 6 * a(n - 1) - a(n - 2) for n > 1; a(0) = 1, a(1) = 19. ●
▶ [A213556] 1,19,118,446,1271,3017,6300,11964,21117,35167,55858,85306,126035,181013,253688,348024,468537,620331,809134,1041334,1324015,1664993,2072852,2556980,3127605 ⋆ Principal diagonal of the convolution array A213555. ● a(n) = (9 * n ^ 5 + 15 * n ^ 4 + 5 * n ^ 3 + n) / 30. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). ●
▶ [A252054] 19,121,176,725,1471,5041,11989,37584,97021,290521,783511,2289869,6323504,18241441,51026011,146160725,411720121,1174844176,3322046089,9459791909,26804466571,76241702161,216275875376,614789884829,1745053751719 ⋆ Number of perfect matchings in the P _ 4 X C _ n graph. ● a(n) = product(13 - 14 * cos(2 * (2 * j - 1) * Pi / n) + 2 * cos(4 * (2 * j - 1) * Pi / n), j=1..floor(n / 2)). ● a(n) = a(n - 1) + 13 * a(n - 2) - 7 * a(n - 3) - 61 * a(n - 4) + 12 * a(n - 5) + 128 * a(n - 6) - 128 * a(n - 8) - 12 * a(n - 9) + 61 * a(n - 10) + 7 * a(n - 11) - 13 * a(n - 12) - a(n - 13) + a(n - 14). ●
▶ [A070302] 1,19,121,439,1171,2581,4999,8821,14509,22591,33661,48379,67471,91729,122011,159241,204409,258571,322849,398431,486571,588589,705871,839869,992101 ⋆ Number of 3 X 3 X 3 magic cubes with sum 3n. ● a(n) = 25 * n ^ 2

/ 4 - 7 * n / 2 - 11 * n ^ 3 / 2 + 11 * n ^ 4 / 4 + 1. - _ R. J. Mathar _ , Sep 04 2011 ●

► [A241965] 19,124,486,1421,3437,7280,13980,24897,41767,66748,102466,152061,219233,308288,424184,572577,759867,993244,1280734,1631245,2054613,2561648,3164180,3875105,4708431 ★ Number of length 2 + 3 0..n arrays with no consecutive four elements summing to more than 2 * n. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. ●

► [A182193] 1,1,19,125,743,4345,25339,147701,860879,5017585,29244643,170450285,993457079,5790292201,33748296139,196699484645,1146448611743,6681992185825,38945504503219,226991034833501,1323000704497799,7711013192153305,44943078448422043 ★ Sequence of row differences related to table A182355. ● a(n) = 6 * a(n - 1) - a(n - 2) + 12. ● a(0)= - 1, a(1)=1, a(2)=19, a(n) = 7 * a(n - 1) - 7 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Feb 09 2014 ● a(n) = - 3 + (1 / 4) * ((4 - sqrt(2)) * (3 + 2 * sqrt(2)) ^ n + (4 + sqrt(2)) * (3 - 2 * sqrt(2)) ^ n). ●

► [A169727] 1,19,127,631,2791,11719,48007,194311,781831,3136519,12564487,50294791,201252871,805158919,3220930567,12884312071,51538427911,206156070919,824629002247,3298525446151,13194120658951,52776520384519,211106157035527,844424779137031 ★ a(n) = 3 * (2 ^ (n + 1) - 2) * (2 ^ (n + 1) - 1) + 1. ● a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3). ●

► [A085464] 1,19,134,586,1919,5173,12124,25572,49677,90343,155650,256334,406315,623273,929272,1351432,1922649,2682363,3677374,4962706,6602519,8671069,11253716,14447980,18364645 ★ Number of monotone n - weightings of complete bipartite digraph K(4,2). ● a(n) = n + 17 * binomial(n, 2) + 80 * binomial(n, 3) + 160 * binomial(n, 4) + 144 * binomial(n, 5) + 48 * binomial(n, 6). ● a(n) = (1 / 30) * n * (n + 1) * (2 * n ^ 4 + 4 * n ^ 3 + 6 * n ^ 2 + 4 * n - 1). ● a(n) = Sum _{ i=1..n } ((n + 1 - i) ^ 4 - (n - i) ^ 4) * i ^ 2. ● a(n) = Sum _{ i=1..n } ((n + 1 - i) ^ 2 - (n - i) ^ 2) * i ^ 4. ● a(n) = sum(i=1..n, sum (j=1..n, min(i,j) ^ 4)). - _ Enrique Pérez Herrero _ , Jan 16 2013 ●

► [A215863] 0,19,135,540,1610,3990,8694,17220,31680,54945,90805,144144,221130,329420,478380,679320,945744,1293615,1741635,2311540,3028410,3920994,5022050,6368700,8002800 ★ Number of simple labeled graphs on n + 3 nodes with exactly n connected components that are trees or cycles. ● a(n) = C(n + 3,4) * (n ^ 2 + 13 * n + 24) / 2. ●

► [A101090] 1,19,135,605,2054,5778,14178,31350,63855,121693,219505,378027,625820,1001300,1555092,2352732,3477741,5035095,7155115,9997801,13757634,18668870,25011350,33116850,43375995 ★ Third partial sums of fourth powers (A000583). ● a(n) = (n * (1 + n) * (2 + n) * (3 + n) * (3 + 2 * n) * (- 1 + 2 * n * (3 + n))) / 840. ● a(n)= (2 * n + 3) * (12 * n ^ 2 + 36 * n - 6) * (n + 3)! / (5040 * (n - 1)!), n>0 - _ Gary Detlefs _ , Mar 01 2013 ●

► [A060104] 1,19,140,660,2370,7062,18348,42900,92235,185185,351208,634712,1100580,1841100,2984520,4705464,7237461,10887855,16055380,23250700,33120230,46473570,64314900,87878700 ★ Fifth column (m=4) of triangle A060102. ● a(n)=(2 * n ^ 2 + 10 * n + 7) * binomial(n + 6, 6) / 7. ● a(0)=1, a(1)=19, a(2)=140, a(3)=660, a(4)=2370, a(5)=7062, a(6)=18348, a(7)=42900, a(8)=92235, a(n)=9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9). - _ Harvey P. Dale _ , Nov 08 2012 ●

► [A110694] 1,19,142,664,2330,6726,16848,37884,78243,150865,274846,477412,796276,1282412,2003280,3046536,4524261,6577743,9382846,13156000,18160846,24715570,33200960,44069220,57853575 ★ Kekulé numbers for certain benzenoids. ● a(n) = (n + 1) * (n + 2) * (n + 3) * (n + 4) * (34 * n ^ 3 + 199 * n ^ 2 + 355 * n + 210) / 7!. ● a(0)=1, a(1)=19, a(2)=142, a(3)=664, a(4)=2330, a(5)=6726, a(6)=16848, a(7)=37884, a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8). - _ Harvey P. Dale _ , Feb 16 2014 ●

► [A081590] 1,19,145,595,1585,3331,6049,9955,15265,22195,30961,41779,54865,70435,88705,109891,134209,161875,193105,228115,267121,310339,357985,410275,467425 ★ Fourth row of Pascal - (1,5,1) array A081580. ● a(n) = 1 + 36 * n - 54 * n ^ 2 + 36 * n ^ 3. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4); a(0)=1, a(1)=19, a(2)=145, a(3)=595. - _ Harvey P. Dale _ , Sep 07 2011 ●

► [A093646] 1,19,145,715,2695,8437,23023,56485,127270,267410,529958,999362,1805570,3142790,5293970,8662214,13810511,21511325,32807775,49088325,72171705,104442195,148924425,209489475,291006300 ★ Higher dimensional figurate numbers based on 12 - gonal numbers A051624. ● a(n)= (10 * n + 9) * binomial(n + 8, 8) / 9. G.f.: (1 + 9 * x) / (1 - x) ^ 10. ●

► [A241620] 19,147,711,2567,7586,19374,44274,92697,180829,332761,583089,980031,1589108,2497436,3818676,5698689,8321943,11918719,16773163,23232231,31715574,42726410,56863430,74833785,97467201 ★ Number of length 5 + 2 0..n arrays with no consecutive three elements summing to more than n. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. ●

► [A354337] 19,149,1039,7139,48949,335519,2299699,15762389,108037039,740496899,5075441269,34787591999,238437702739,1634276327189,11201496587599,76776199786019,526231901914549,3606847113615839,24721697893396339,169445038140158549,1161393569087713519 ★ a(n) is the integer w such that (L(2 * n) ^ 2, - L(2 * n + 1) ^ 2, w) is a primitive solution to the Diophantine equation 2 * x ^ 3 + 2 * y ^ 3 + z ^ 3 = 125, where L(n) is the n - th Lucas number (A000032). ● a(n) = 8 * a(n - 1) - 8 * a(n - 2) + a(n - 3). ●

► [A107891] 1,19,155,805,3136,9996,27468,67320,150645,313027,611611,1134497,2012920,3436720,5673648,9093096,14194881,21643755,32310355,47319349,68105576,96479020,134699500,185562000,252493605 ★ a(n) = (n + 1) * (n + 2) ^ 2 * (n + 3) ^ 2 * (n + 4) * (3n ^ 2 + 15n + 20) / 2880. ● a(n - 2) = (1 / 8) * Sum _{ 1 <= x _ 1, x _ 2 <= n } (x _ 1 * x _ 2) ^ 2 * (det V(x _ 1,x _ 2)) ^ 2 = 1 / 8 * sum { 1 <= i,j <= n } (i * j * (i - j)) ^ 2, where V(x _ 1,x _ 2 } is the Vandermonde matrix of order 2. - _ Peter Bala _ , Sep 21 2007 ●

► [A302352] 0,1,19,155,936,4884,23465,107107,472600,2036838,8631206,36119798,149724940,616104450,2520629685,10265200035,41650094640,168481778790,679847488650,2737640364810,11005139655744,44176226269728,177114113623194,709364594864910,2838599638596176 ★ a(n) = Sum _{ k=0..n } k ^ 4 * binomial(2 * n - k,n). ● a(n) = [x ^ n] x * (1 + 11 * x + 11 * x ^ 2 + x ^ 3) / (1 - x) ^ (n + 6). ● a(n) = 2 ^ (2 * n + 1) * n * (75 * n ^ 3 + 52 * n ^ 2 - 3 * n - 4) * Gamma(n + 3 / 2) / (sqrt(Pi) * Gamma(n + 6)). ●

► [A261791] 19,157,532,1263,2467,4263,6770,10106,14389,19739,26272,34109,43367,54164,66619,80851,96978,115119,135391,157913,182804,210183,240166,272874,308425 ★ The integer part of the surface area of the 4 - dimensional sphere of radius n. ● a(n) = floor(2 * Pi ^ 2 * n ^ 3). ●

► [A008419] 1,19,181,1159,5641,22363,75517,224143,598417,1462563,3317445,7059735,14218905,27298155,50250765,89129247,152951073,254831667,413442773,654862247,1014889769,1541911931,2300409629,3375210671,4876601009 ★ Crystal ball sequence for 9 - dimensional cubic lattice. ● a(n) = (4 * n ^ 9 + 18 * n ^ 8 + 240 * n ^ 7 + 756 * n ^ 6 + 3612 * n ^ 5 + 7182 * n ^ 4 + 14360 * n ^ 3 + 14724 * n ^ 2 + 10134 * n + 2835) / 2835 - _ Johannes W. Meijer _ , Jul 14 2013 ● a(0)=1, a(1)=19, a(2)=181, a(3)=1159, a(4)=5641, a(5)=22363, a(6)=75517, a(7)=224143, a(8)=598417, a(9)=1462563, a(n)=10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10). - _ Harvey P. Dale _ , Jul 25 2013 ●

► [A211866] 1,19,181,1639,14761,132859,1195741,10761679,96855121,871696099,7845264901,70607384119,635466457081,5719198113739,51472783023661,463255047212959,4169295424916641,37523658824249779,337712929418248021,3039416364764232199,27354747282878089801 ★ (9 ^ n - 5) / 4. ● a(n) = 9 * a(n - 1) + 10, a(1) = 1. - _ Philippe Deléham _ , Feb 24 2014 ●

► [A193575] 0,19,189,936,3250,9045,21609,46144,90396,165375,286165,472824,751374,1154881,1724625,2511360,3576664,4994379,6852141,9253000,12317130,16183629,21012409,26986176,34312500 ★ T(n) ^ 3 - n ^ 3 where T(n) is a triangular number. ● a(n) = (n ^ 3 * (n ^ 3 + 3 * n ^ 2 + 3 * n - 7) / 8) = (1 / 8) * (n - 1) * (n ^ 2 + 4 * n + 7) * n ^ 3. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). ● a(n) = sum _{ i=1..n } sum _{ j=1..n } sum _{ k=1..n } (i * j * k - 1). ●

► [A139619] 19,190,361,532,703,874,1045,1216,1387,1558,1729,1900,2071,2242,2413,2584,2755,2926,3097,3268,3439,3610,3781,3952,4123 ★ a(n) = 171 * n + 19. ● a(n) = 2 * a(n - 1) - a(n - 2) for n > 1. ●

► [A247614] 1,19,190,1330,7315,33649,134596,480700,1562275,4686825,13079352,34084128,83204745,191006115,414237570,852920310,1675575165,3155247975,5719519850,10018268150,17013571223,28096825757,45238870040,71179679480,109665022415 ★ a(n) = Sum _{ k=0..9 } binomial(18,k) * binomial(n,k). ● a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10). ● a(n) = (181440 + 462101904 * n - 1283316876 * n ^ 2 + 1433031524 * n ^ 3 - 853620201 * n ^ 4 + 303063726 * n ^ 5 - 66245634 * n ^ 6 + 8905416 * n ^ 7 - 678249 * n ^ 8 + 24310 * n ^ 9) / 181440. ●

► [A010971] 1,19,190,1330,7315,33649,134596,480700,1562275,4686825,13123110,34597290,86493225,206253075,471435600,1037158320,2203961430,4537567650,9075135300,17672631900,33578000610,62359143990,113380261800,202112640600,353697121050 ★ a(n) = binomial(n,18). ● a(n + 17) = n * (n + 1) * (n + 2) * (n + 3) * (n + 4) * (n + 5) * (n + 6) * (n + 7) * (n + 8) * (n + 9) * (n + 10) * (n + 11) * (n + 12) * (n + 13) * (n + 14) * (n + 15) * (n + 16) * (n + 17) / 18!. - _ Artur Jasinski _ , Dec 02 2007; _ R. J. Mathar _ , Jul 07 2009 ●

► [A135162] 0,1,19,199,1711,13471,101359,743359,5367871,38381311,272651599,1928323519,13596619231,95666721151,672114790639,4717029615679,33080299697791,231867445524991,1624598513486479,11379820537307839,79696895380235551,558069016466824831,3907436831415107119 ★ a(n) = 7 ^ n - 5 ^ n - 3 ^ n + 2 ^ n. Constants are the prime numbers in decreasing order. ● a(n) = 7 ^ n - 5 ^ n - 3 ^ n + 2 ^ n. ● a(0)=0, a(1)=1, a(2)=19, a(3)=199, a(n) = 17 * a(n - 1) - 101 * a(n - 2) + 247 * a(n - 3) - 210 * a(n - 4). - _ Harvey P. Dale _ , Dec 13 2013 ●

► [A067272] 1,19,199,1999,19999,199999,1999999,19999999,199999999,1999999999,19999999999,199999999999,1999999999999,19999999999999,199999999999999,1999999999999999,19999999999999999,199999999999999999 ★ a(n) = 2 * 10 ^ (n - 1) - 1. ● a(n) = 2 * 10 ^ (n - 1) - 1 - _ Benoit Cloitre _ , Feb 28 2002 ● a(n) = 10 * a(n - 1) + 9. - _ Vincenzo Librandi _ , Nov 01 2011 ●

► [A113596] 0,1,19,200,1320,6230,23086,71484,192900,467115,1036585,2140996,4164524,7698600,13623260,23210440,38252856,61222389,95462175,145416880,216905920,317444666,456618954,646518500,902235100 ★ P(P(n)) - P(P(n - 1)), where P(n) = n(n + 1)(n + 2) / 6 (cf. A000292). ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) ●

► [A155670] 1,19,201,2059,21201,220099,2303001,24270139,257405601,2745368179,29424209001,316692730219,3420857913201,37064577972259,402626626038201,4383139301510299,47802750052424001,522124210198960339 ★ 11 ^ n + 9 ^ n - 1 ^ n ● a(n)=20 * a(n - 1) - 99 * a(n - 2) - 80 with a(0)=1, a(1)=19 - _ Vincenzo Librandi _ , Jul 21 2010 ●

► [A002501] 1,19,205,1795,14221,106819,778765,5581315,39606541,279447619,1965098125,13792018435,96690872461,677427332419,4744368982285,33220131761155,232579232659981,1628208214321219,11398072876175245,79788974736297475,558532690864457101 ★ a(n) = 7 ^ n - 3 * 4 ^ n + 2 * 3 ^ n. ● a(n) = 14 * a(n - 1) - 61 * a(n - 2) + 84 * a(n - 3). - _ Wesley Ivan Hurt _ , Apr 11 2022 ●

► [A032613] 19,210,311,412,513,614,715,816,917,1018,1119,1220,1321,1422,1523,1624,1725,1826,1927,2028,2129,2230,2331,2432,2533 ★ Concatenation of n and n + 8 or { n,n + 8 } . ● a(n) = n * 10 ^ floor(log _ 10(n + 8) + 1) + n + 8, with n >= 0. - _ Paolo P. Lava _ , Oct 09 2008 ●

► [A220978] 1,19,217,2107,19441,176419,1592137,14342347,129120481,1162202419,10460176057,94142647387,847287015121,7625592702019,68630363015977,617673353237227,5559060437415361,50031544711579219,450283904728735897,4052555149532191867 ★ a(n) = 3 ^ (2 * n + 1) - 3 ^ (n + 1) + 1: The left Aurifeuillian factor of 3 ^ (6 * n + 3) + 1. ● a(n) = 13 * a(n - 1) - 39 * a(n - 2) + 27 * a(n - 3). ●

► [A028026] 1,19,230,2270,19971,163569,1278040,9670540,71557541,521211119,3754036650,26822296410,190541788711,1347984742669,9507913700060,669197503

27880,4702770751614 81,3301201972518219,2315499975521227 0,162319024049252950,1137407684744763851 ⋆ Expansion of 1 / ((1 - 3x)(1 - 4x)(1 - 5x)(1 - 7x)). ● a(n) = (7 ^ (n + 3) - 6 * 5 ^ (n + 3) + 8 * 4 ^ (n + 3) - 3 ^ (n + 4)) / 24. - _ Yahia Kahloune _ , May 22 2013. ●

► [A025965] 1,19,233,2351,21273,179823,1452361,11360767,86821625,652052687,4832272809,35441720223,257820455257,1863247878511,13394300154377,95871638560319,683779284669369,4862556240775695,34494638612661865 ⋆ Expansion of 1 / ((1 - 2x)(1 - 4x)(1 - 6x)(1 - 7x)). ● a(n) = - 2 ^ n / 5 + 16 * 4 ^ n / 3 - 27 * 6 ^ n / 1 + 343 * 7 ^ n / 15. - _ R. J. Mathar _ , Jun 20 2013 ●

► [A025960] 1,19,235,2415,22491,197799,1679875,13959055,114403531,929407479,7508252115,60439364895,485415209371,3892957335559,31192373841955,249784713973935,1999514917852011,16002339732726039,128049957250049395,1024556404696890175,8197237170079803451 ⋆ Expansion of 1 / ((1 - 2x)(1 - 4x)(1 - 5x)(1 - 8x)). ● a(n) = (8 ^ (n + 3) - 8 * 5 ^ (n + 3) + 9 * 4 ^ (n + 3) - 2 ^ (n + 4)) / 72. [_ Yahia Kahloune _ , May 25 2013] ●

► [A152494] 0,1,19,235,2539,26119,263863,2648107,26513875,265250287,2652876847,26530008499,265304159371,2653054879735,26530591844071,265306057146811,2653061016284227,2653061158338 4063,2653061203537463 35,2653061217872021443,2653061224048411643 ⋆ 1 / 3 of the number of permutations of 2 indisting uishable copies of 1..n with exactly 2 local maxima. ● a(n) = (13 * 10 ^ (n - 1) - 13 * 3 ^ (n - 1) - 14 * (n - 1) * 3 ^ (n - 1)) / 49. - _ Andrew Howroyd _ , May 10 2020 ● a(n) = 16 * a(n - 1) - 69 * a(n - 2) + 90 * a(n - 3) for n>3. ●

► [A022033] 1,19,236,2426,22407,193305,1591402,12667072,98321333,748601711,5614533288,41608696038,305407826179,2224262385637,16095911708294,115865978983724,830420169903345,5930044765743483,42217703190306820 ⋆ Expansion of 1 / ((1 - x)(1 - 5x)(1 - 6x)(1 - 7x)). ● a(n) = (10 * 7 ^ (n + 3) - 24 * 6 ^ (n + 3) + 15 * 5 ^ (n + 3) - 1) / 120. - _ Yahia Kahloune _ , May 22 2013. ● a(0)=1, a(1)=19, a(2)=236, a(3)=2426; for n>3, a(n) = 19 * a(n - 1) - 125 * a(n - 2) + 317 * a(n - 3) - 210 * a(n - 4). - _ Vincenzo Librandi _ , Jul 12 2013 ● a(0)=1, a(1)=19; for n>1, a(n) = 13 * a(n - 1) - 42 * a(n - 2) + (5 ^ n - 1) / 4. - _ Vincenzo Librandi _ , Jul 12 2013 ●

► [A025938] 1,19,237,2471,23429,210063,1818349,15380167,128060757,1054660607,8618507261,70035919863,566816115685,4573706232751,36824728021773,296008336113959,2376529889559413,19063018707520095 ⋆ Expansion of 1 / ((1 - 2x)(1 - 3x)(1 - 6x)(1 - 8x)). ● a(n) = (2 * 8 ^ (n + 3) - 5 * 6 ^ (n + 3) + 8 * 3 ^ (n + 3) - 5 * 2 ^ (n + 3)) / 120. - _ Yahia Kahloune _ , May 24 2013 ●

► [A229026] 1,19,238,2490,23631,211509,1823908,15348100,127057261,1040261799,8453319978,68343722910,550640774491,4426107030889,35521389816448,284771933350920,2281370275767321,18267889925254779,146232526369201318,1170331087647336130,9365122293936867751 ⋆ Expansion of 1 / ((1 - x) * ((1 - 5x) ^ 2) * (1 - 8x)). ● a(n) = (2 * 8 ^ (n + 4) - (84 * n + 287) * 5 ^ (n + 2) - 9) / 1008. ●

► [A021814] 1,19,239,2519,24135,218343,1903783,16194343,135426599,1118993447,9166829607,74629521447,604827848743,4885462331431,39365093814311,316610553147431,2543028967600167,20405121901817895 ⋆ Expansion of 1 / ((1 - x)(1 - 4x)(1 - 6x)(1 - 8x)). ● a(n) = - 1 / 105 + 2 ^ (2n + 3) / 3 - 2 ^ (n + 1) * 3 ^ (n + 3) / 5 + 8 ^ (n + 2) / 7. [_ Bruno Berselli _ , May 08 2013] ●

► [A025933] 1,19,240,2570,25391,240489,2226310,20352640,184772181,1670999759,15079423580,135917468310,1224272081371,11023527831829,99237160300050,893261534749580,8039989402000961,72363082951440699,651283639391863720,5861632222156996450,52755087348022338951 ⋆ Expansion of 1 / ((1 - 2x)(1 - 3x)(1 - 5x)(1 - 9x)). ● a(0)=1, a(1)=19, a(2)=240; a(n)=(9 ^ (n + 3) - 7 * 5 ^ (n + 3) + 14 * 3 ^ (n + 3) - 8 * 2 ^ (n + 3)) / 168. [_ Yahia Kahloune _ , May 08 2013] ●

► [A021544] 1,19,242,2606,25659,239313,2153884,18910012,163042517,1386706607,11670306726,97399296618,807453069775,6657437827501,54644202679568,446846543376824,3642622865166633,29615936742107595 ⋆ Expansion of 1 / ((1 - x)(1 - 3x)(1 - 7x)(1 - 8x)). ● a(n) = (3 * 8 ^ (n + 4) - 5 * 7 ^ (n + 4) + 7 * 3 ^ (n + 4) - 10) / 840. - _ Yahia Kahloune _ , May 24 2013 ● a(0)=1, a1()=19; for n>1, a(n) = 15 * a(n - 1) - 56 * a(n - 2) + (3 ^ n - 1) / 2. - _ Vincenzo Librandi _ , Jul 11 2013 ● a(0)=1, a(1)=19, a(2)=242, a(3)=2606; for n>3, a(n) = 19 * a(n - 1) - 119 * a(n - 2) + 269 * a(n - 3) - 168 * a(n - 4). - _ Vincenzo Librandi _ , Jul 11 2013 ●

► [A021772] 1,19,242,2618,26103,248997,2316784,21251956,193359485,1751044295,15814841406,142616378814,1284983809747,11572125768313,104185847231708,937857633325592,8441649467754489,75979521955403451 ⋆ Expansion of 1 / ((1 - x)(1 - 4x)(1 - 5x)(1 - 9x)). ● a(0)=1, a(1)=19, a(2)=242, a(3)=2618, a(n)=19 * a(n - 1) - 119 * a(n - 2) + 281 * a(n - 3) - 180 * a(n - 4). [_ Harvey P. Dale _ , Jul 23 2011] ● a(n) = (3 * 9 ^ (n + 3) - 30 * 5 ^ (n + 3) + 32 * 4 ^ (n + 3) - 5) / 480. - _ Yahia Kahloune _ , May 23 2013. ●

► [A019783] 1,19,243,2615,25571,235599,2086603,17981815,151979091,1266533279,10446235163,85502523015,695860175011,5639142048559,45552803794923,367090952376215,2952891339001331,23720875971413439 ⋆ Expansion of 1 / ((1 - 5x)(1 - 6x)(1 - 8x)). ● a(n) = (8 ^ (n + 2) + 2 * 5 ^ (n + 2) - 3 * 6 ^ (n + 2)) / 6. ● a(n) = 14 * a(n - 1) - 48 * a(n - 2) + 5 ^ n. ● a(n) = 19 * a(n - 1) - 118 * a(n - 2) + 240 * a(n - 3), n >= 3. (End) ●

► [A021504] 1,19,244,2674,27055,261793,2467018,22871728,209866789,1912958047,17361652672,157125321262,1419351371803,12805505620381,115437617402806,1040066979064876,9367373410791697,84346984486082395 ⋆ Expansion of 1 / ((1 - x)(1 - 3x)(1 - 6x)(1 - 9x)). ● a(n) = (5 * 9 ^ (n + 3) - 16 * 6 ^ (n + 3) + 20 * 3 ^ (n + 3) - 9) / 720. - _ Yahia Kahloune _ , May 21 2013 ● a(0)=1, a(1)=19; for n>1, a(n) = 15 * a(n - 1) - 54 * a(n - 2) + (3 ^ n - 1) / 2. - _ Vincenzo Librandi _ , Jul 10 2013 ● a(0)=1, a(1)=19, a(2)=244, a(3)=2674; for n>3, a(n) = 19 * a(n - 1) - 117 * a(n - 2) + 261 * a(n - 3) - 162 * a(n - 4). - _ Vincenzo Librandi _ , Jul 10 2013 ●

► [A019512] 1,19,245,2675,26661,251139,2278165,20125075,174364421,1488724259,12567504885,105148209075,873459639781,7213661997379,59291458568405,485407880414675,3960800821356741,32229188196998499 ⋆ Expansion of 1 / ((1 - 4x)(1 - 7x)(1 - 8x)). ● a(n) = (3 * 8 ^ (n + 2) - 4 * 7 ^ (n + 2) + 4 ^ (n + 2)) / 12. [_ Yahia Kahloune _ , May 06 2013] ● a(0)=1, a(1)=19, a(2)=245; for n>2, a(n) = 19 * a(n - 1) - 116 * a(n - 2) + 224 * a(n - 3). - _ Vincenzo Librandi _ , Jul 03 2013 ● a(n) = 15 * a(n - 1) - 56 * a(n - 2) + 4 ^ n. - _ Vincenzo Librandi _ , Jul 03 2013 ●

► [A025927] 1,19,245,2735,28701,293079,2957125,29682895,297294701,2974868039,29756539605,297597360255,2976103045501,29761552993399,297617634403685,2976184804896815,29761882021417101,297618956491125159 ⋆ Expansion of 1 / ((1 - 2x)(1 - 3x)(1 - 4x)(1 - 10x)). ● a(n) = 19 * a(n - 1) - 116 * a(n - 2) + 284 * a(n - 3) - 240 * a(n - 4), with a(0)=1, a(1)=19, a(2)=245, a(3)=2735. [_ Harvey P. Dale _ , Oct 18 2011] ● a(n) = (10 ^ (n + 3) - 7 * 4 ^ (n + 4) + 16 * 3 ^ (n + 4) - 21 * 2 ^ (n + 3)) / 336. - _ Yahia Kahloune _ , May 19 2013 ●

► [A019443] 1,19,247,2743,28063,273847,2596399,24174631,222479455,2032023895,18467516431,167287650439,1512085646527,13647818683063,123064923768943,1108992721390567,9989389232302879,89955248709321751 ⋆ Expansion of 1 / ((1 - 4x)(1 - 6x)(1 - 9x)). ● a(n) = 8 * 4 ^ n / 5 - 6 * 6 ^ n + 27 * 9 ^ n / 5. - _ R. J. Mathar _ , Jun 29 2013 ● a(0)=1, a(1)=19, a(2)=247; for n>2, a(n) = 19 * a(n - 1) - 114 * a(n - 2) + 216 * a(n - 3). - _ Vincenzo Librandi _ , Jul 03 2013 ● a(n) = 15 * a(n - 1) - 54 * a(n - 2) + 4 ^ n. - _ Vincenzo Librandi _ , Jul 03 2013 ●

► [A021229] 1,19,248,2786,28983,288273,2786566,26424112,247232645,2291004287,21080414004,192953358078,1759187655187,15990940940461,145026232803362,1312990445670284,11871194464243809,107220713350935195 ⋆ Expansion of 1 / ((1 - x)(1 - 2x)(1 - 7x)(1 - 9x)). ● a(n) = (15 * 9 ^ (n + 3) - 28 * 7 ^ (n + 3) + 48 * 2 ^ (n + 3) - 35) / 1680. - _ Yahia Kahloune _ , May 19 2013 ● a(0)=1, a(1)=19, a(2)=248, a(3)=2786; for n>3, a(n) = 19 * a(n - 1) - 113 * a(n - 2) + 221 * a(n - 3) - 126 * a(n - 4). - _ Vincenzo Librandi _ , Jul 08 2013 ● a(0)=1, a(1)=19; for n>1, a(n) = 16 * a(n - 1) - 63 * a(n - 2) + 2 ^ n - 1. - _ Vincenzo Librandi _ , Jul 08 2013 ●

► [A021464] 1,19,248,2810,29871,307929,3126478,31504000,316245941,3168518639,31715571108,317307900390,3173840747611,31742218586149,317441248586138,3174507821007980,31745554950382881,317457933399054459 ⋆ Expansion of 1 / ((1 - x)(1 - 3x)(1 - 5x)(1 - 10x)). ● a(n) = (8 * 10 ^ (n + 3) - 63 * 5 ^ (n + 3) + 90 * 3 ^ (n + 3) - 35) / 2520. - _ Yahia Kahloune _ , May 19 2013 ● a(0)=1, a(1)=19; for n>1, a(n) = 15 * a(n - 1) - 50 * a(n - 2) + (3 ^ n - 1) / 2. - _ Vincenzo Librandi _ , Jul 10 2013 ● a(0)=1, a(1)=19, a(2)=248, a(3)=2810; for n>3, a(n) = 19 * a(n - 1) - 113 * a(n - 2) + 245 * a(n - 3) - 150 * a(n - 4). - _ Vincenzo Librandi _ , Jul 10 2013 ●

► [A017998] 1,19,250,2830,29611,295729,2866900,27241660,255258421,2367929839,21805655950,199711092490,1821621686431,16564149750349,150264234543400,1360686332771320,12304334591153641,111146114623005259 ⋆ Expansion of 1 / ((1 - 3x)(1 - 7x)(1 - 9x)). ● a(0)=1, a(1)=19, a(2)=250, a(n)=19 * a(n - 1) - 111 * a(n - 2) + 189 * a(n - 3). - _ Harvey P. Dale _ , Oct 31 2011 ● a(n) = (2 * 9 ^ (n + 2) - 3 * 7 ^ (n + 2) + 3 ^ (n + 2)) / 24. - _ Yahia Kahloune _ , Jun 30 2013 ● a(n) = 16 * a(n - 1) - 63 * a(n - 2) + 3 ^ n. - _ Vincenzo Librandi _ , Jul 02 2013 ●

► [A018912] 1,19,251,2879,30891,320439,3266131,32986399,331554971,3324266759,33287301411,333100377519,3332157369451,33327408774679,333303531583091,3333183608754239,33332581847126331,333329564449052199 ⋆ Expansion of 1 / ((1 - 4x)(1 - 5x)(1 - 10x)). ● a(n) = 8 * 4 ^ n / 3 - 5 * 5 ^ n / 1 + 10 * 10 ^ n / 3. - _ R. J. Mathar _ , Jun 29 2013 ● a(0)=1, a(1)=19, a(2)=251; for n>2, a(n) = 19 * a(n - 1) - 110 * a(n - 2) + 200 * a(n - 3). - _ Vincenzo Librandi _ , Jul 02 2013 ● a(n) = 15 * a(n - 1) - 50 * a(n - 2) + 4 ^ n. - _ Vincenzo Librandi _ , Jul 02 2013 ●

► [A021202] 1,19,251,2891,31227,326235,3346267,33966427,342687323,3445012571,34558963803,346242670683,3466344910939,34686958350427,347010638983259,3470952722772059,34714605225488475,347176520241754203,3471948010339283035,34720576950924324955 ⋆ Expansion of 1 / ((1 - x)(1 - 2x)(1 - 6x)(1 - 10x)). ● a(n) = (5 * 10 ^ (n + 3) - 18 * 6 ^ (n + 3) + 45 * 2 ^ (n + 3) - 32) / 1440. - _ Yahia Kahloune _ , May 20 2013 ● a(0)=1, a(1)=19; for n>1, a(n) = 16 * a(n - 1) - 60 * a(n - 2) + 2 ^ n - 1. - _ Vincenzo Librandi _ , Jul 08 2013 ● a(0)=1, a(1)=19, a(2)=251, a(3)=2891; for n>3, a(n) = 19 * a(n - 1) - 110 * a(n - 2) + 212 * a(n - 3) - 120 * a(n - 4). - _ Vincenzo Librandi _ , Jul 08 2013 ●

► [A017952] 1,19,253,2935,31861,333919,3431773,34875415,352106821,3541203919,35532912493,356054541895,3564898452181,35675104315519,356907766700413,3570018022624375,35705822403011941,357092077219868719,3571123891724603533,35712457635563794855 ⋆ Expansion of 1 / ((1 - 3x)(1 - 6x)(1 - 10x)). ● a(n) = (3 * 10 ^ (n + 2) - 7 * 6 ^ (n + 2) + 4 * 3 ^ (n + 2)) / 84. - _ Yahia Kahloune _ , May 19 2013 ● a(0)=1, a(1)=19, a(2)=253; for n>2, a(n) = 19 * a(n - 1) - 108 * a(n - 2) + 180 * a(n - 3). - _ Vincenzo Librandi _ , Jul 02 2013 ● a(n) = 16 * a(n - 1) - 60 * a(n - 2) + 3 ^ n. - _ Vincenzo Librandi _ , Jul 02 2013 ●

► [A021394] 1,19,254,3014,34155,380073,4199368,46270588,509296469,5603570687,61644604242,678112219122,7459321497343,82052887210261,902583169445276,9928420525951016,109212648498243177,1201339224525513195 ⋆ Expansion of 1 / ((1 - x)(1 - 3x)(1 - 4x)(1 - 11x)). ● a(0)=1, a(1)=19; for n>1, a(n) = 15 * a(n - 1) - 44 * a(n - 2) + (3 ^ n - 1) / 2. - _ Vincenzo Librandi _ , Jul 09 2013 ● a(0)=1, a(1)=19, a(2)=254, a(3)=3014; for n>3, a(n) = 19 * a(n - 1) - 107 * a(n - 2) + 221 * a(n - 3) - 132 * a(n - 4). - _ Vincenzo Librandi _ , Jul 09 2013 ● a(n) = (3 * 11 ^ (n + 3) - 80 * 4 ^ (n + 3) + 105 * 3 ^ (n + 3) - 28) / 1680. [_ Yahia Kahloune _ , Aug 12 2013] ●

► [A016316] 1,19,255,2975,32231,333759,3353335,32976175,319155111,3051352799,28893830615,271497720975,2535105456391,23548956856639,217804673719095,2007154559579375,18439691005140071,168959618797797279,1544655767192730775,14094055488835543375 ⋆ Expansion of 1 / ((1 - 2x) * (1 - 8x) * (1 - 9x)). ● a(n) = 19 * a(n - 1) - 106 * a(n - 2) + 144 * a(n - 3). ● a(n) = 17 * a(n - 1) - 72 * a(n - 2) + 2 ^ n. (End) ●

► [A021154] 1,19,256,3066,35007,391545,4339462,47896672,527676853,5808513711,63913994508,703155662118,7735220904139,85089973066117,936002419362994,10296090191237004,113257309994958465,1245831999401562363 ⋆ Expansion of 1 / ((1 - x)(1 - 2x)(1 - 5x)(1 - 11x)). ● a(0)=1, a(1)=19, a(2)=256, a(3)=3066, a(n)=19 * a(n - 1) - 105 * a(n - 2) + 197 * a(n - 3) - 110 * a(n - 4). - _ Harvey P. Dale _ , Sep 09 2012 ● a(0)=1, a(1)=19; for n>1, a(n) = 16 * a(n - 1) - 55 * a(n - 2) + 2 ^ n - 1. - _ Vincenzo Librandi _ , Jul 07 2013 ● a(n) = (2 * 11 ^ (n

+ 3) - 15 * 5 ^ (n + 3) + 40 * 2 ^ (n + 3) - 27) / 1080. [_ Yahia Kahloune _ , Jul 07 2013] ●

▶ [A016313] 1,19,257,3047,33825,361767,3782353,38976439,397835009,4034844935,40743914289,410207399511,4121451795553,41350162566823,414451137963665,4151157965737463,41558105760145857,41590674032098231 ⋆ Expansion of 1 / ((1 - 2x)(1 - 7x)(1 - 10x)). ● a(0)=1, a(1)=19, a(2)=257, a(n)=19 * a(n - 1) - 104 * a(n - 2) + 140 * a(n - 3). - _ Harvey P. Dale _ , May 02 2012 ● a(n) = 2 ^ n / 10 - 49 * 7 ^ n / 15 + 25 * 10 ^ n / 6. - _ R. J. Mathar _ , Jun 23 2013 ● a(n) = 17 * a(n - 1) - 70 * a(n - 2) + 2 ^ n. - _ Vincenzo Librandi _ , Jun 26 2013 ●

▶ [A017917] 1,19,258,3110,35651,399609,4433668,48962380,539552901,5939935199,65363612678,719121544050,7910946538951,87023461294789,957273325857288,10530082856852120,115831292830529801,1274146128290750379 ⋆ Expansion of 1 / ((1 - 3x)(1 - 5x)(1 - 11x)). ● a(0)=1, a(1)=19, a(2)=258; for n>2, a(n) = 19 * a(n - 1) - 103 * a(n - 2) + 165 * a(n - 3). - _ Vincenzo Librandi _ , Jul 01 2013 ● a(n) = 16 * a(n - 1) - 55 * a(n - 2) + 3 ^ n. - _ Vincenzo Librandi _ , Jul 01 2013 ● a(n) = (11 ^ (n + 2) - 4 * 5 ^ (n + 2) + 3 ^ (n + 3)) / 48. [_ Yahia Kahloune _ , Jul 06 2013] ●

▶ [A014923] 1,19,262,3178,35983,390277,4110364,42374116,429794605,4303999495,42658627906,419231343214,4090815317467,39676936914073,382828823738488,3677086937252872,35178430147734169 ⋆ a(1) = 1, a(n) = n * 9 ^ (n - 1) + a(n - 1). ● a(n) = (1 / 64) * (1 + 9 ^ n * (8 * n - 1)), with n>=1. - _ Paolo P. Lava _ , Jan 13 2009 ● a(1)=1, a(2)=19, a(n) = 18 * a(n - 1) - 81 * a(n - 2) + 1. - _ Vincenzo Librandi _ , Oct 23 2012 ●

▶ [A081036] 1,19,262,3196,36568,402544,4320352,45562816,474502528,4896020224,50168161792,511345294336,5190762354688,52526098837504,530208790700032,5341670325600256,53733362604802048,539866900838416384 ⋆ 9th binomial transform of the periodic sequence (1,10,1,1,10,1...). ● a(n) = 10 * a(n - 1) + 9 * 8 ^ (n - 1). ● a(n) = (11 / 2) * 10 ^ n - (9 / 2) * 8 ^ n. ● a(0)=1, a(1)=19, a(n)=18 * a(n - 1) - 80 * a(n - 2). - _ Harvey P. Dale _ , Aug 16 2014 ●

▶ [A016257] 1,19,263,3215,36831,405759,4357183,45968575,478859711,4941988799,50647021503,516287283135,5241409376191,53042386120639,535450200076223,5394712711720895,54268812804878271,545261613550137279 ⋆ Expansion of 1 / ((1 - x)(1 - 8x)(1 - 10x)). ● a(n) = 18 * a(n - 1) - 80 * a(n - 2) + 1, n >= 2. - _ Vincenzo Librandi _ , Mar 21 2011 ● a(n) = (1 / 63) * (7 * 2 ^ (n + 1) * 5 ^ (n + 2) - 9 * 2 ^ (3 * n + 5) + 1). - _ Vincenzo Librandi _ , Mar 21 2011 ● a(0)=1, a(1)=19, a(2)=263, a(n) = 19 * a(n - 1) - 98 * a(n - 2) + 80 * a(n - 3). - _ Harvey P. Dale _ , Dec 14 2011 ●

▶ [A021104] 1,19,263,3311,40383,487263,5857951,70338847,844240415,10131583007,121581790239,1458992663583,17507956694047,210095659269151,2521148627024927,30253786387545119,363045448103656479 ⋆ Expansion of 1 / ((1 - x)(1 - 2x)(1 - 4x)(1 - 12x)). ● a(n) = - (1 / 33) + (2 / 5) * 2 ^ n - (4 / 3) * 4 ^ n + (108 / 55) * 12 ^ n. - _ Antonio Alberto Olivares _ , May 22 2012 ● a(0)=1, a(1)=19; for n>1, a(n) = 16 * a(n - 1) - 48 * a(n - 2) + 2 ^ n - 1. - _ Vincenzo Librandi _ , Jul 07 2013 ● a(0)=1, a(1)=19, a(2)=263, a(3)=3311; for n>3, a(n) = 19 * a(n - 1) - 98 * a(n - 2) + 176 * a(n - 3) - 96 * a(n - 4). - _ Vincenzo Librandi _ , Jul 07 2013 ●

▶ [A017161] 1,19,265,3355,41041,495859,5964505,71633035,859838881,10319056099,123832690345,1486008529915,17832167873521,213986278134739,2567836397009785,30814041016037995,369768509243184961 ⋆ Expansion of 1 / ((1 - 3x)(1 - 4x)(1 - 12x)). ● a(n) = 3 ^ n - 2 * 4 ^ n + 2 * 12 ^ n. - _ R. J. Mathar _ , Jun 23 2013 ● a(n) = 19 * a(n - 1) - 96 * a(n - 2) + 144 * a(n - 3). ● a(n) = 16 * a(n - 1) - 48 * a(n - 2) + 3 ^ n. (End) ●

▶ [A016254] 1,19,266,3326,39387,452865,5118772,57267292,636665813,7050403151,77883989118,859030761498,9465486544879,104233389172477,1147358541148904,12626482774399544,138930082270726185 ⋆ Expansion of 1 / ((1 - x)(1 - 7x)(1 - 11x)). ● a(0)=1, a(1)=19, a(n) = 18 * a(n - 1) - 77 * a(n - 2) + 1. - _ Vincenzo Librandi _ , Feb 10 2011 ● a(n) = (3 * 11 ^ (n + 2) - 5 * 7 ^ (n + 2) + 2) / 120. - _ Yahia Kahloune _ , Jul 09 2013 ●

▶ [A016189] 0,1,19,271,3439,40951,468559,5217031,56953279,612579511,6513215599,68618940391,717570463519,7458134171671,77123207545039,79410886790535 1,8146979811148159,83322818300333431,849905364703000879,8649148282327007911,87842334540943071199,890581010868487640791 ⋆ a(n) = 10 ^ n - 9 ^ n. ● a(0) = 0, a(1) = 1, then a(n + 1) = 9 * a(n) + 10 ^ n. ● a(n) = 19 * a(n - 1) - 90 * a(n - 2), n > 1; a(0)=0, a(1)=1. - _ Philippe Deléham _ , Jan 01 2009 ●

▶ [A016248] 1,19,271,3511,43687,533575,6458887,77842567,936126343,11245609351,135019871623,1620673815943,19450697930119,233424047994247,2801182612927879,33614755577116039,403380452257281415 ⋆ Expansion of 1 / ((1 - x)(1 - 6x)(1 - 12x)). ● a(0)=1, a(1)=19, a(n)=18 * a(n - 1) - 72 * a(n - 2) + 1. - _ Vincenzo Librandi _ , Feb 10 2011 ● a(n) = (5 * 12 ^ (n + 2) - 11 * 6 ^ (n + 2) + 6) / 330. [_ Yahia Kahloune _ , Aug 13 2013] ●

▶ [A016187] 1,19,273,3515,42761,503139,5796673,65860555,741243321,8287894259,92240578673,1023236299995,11324318776681,125117262357379,1380687932442273,15222751628953835,167731742895202841 ⋆ Expansion of 1 / ((1 - 8x)(1 - 11x)). ● a(n) = (11 ^ (n + 1) - 8 ^ (n + 1)) / 3. - Lambert Klasen (lambert.klasen(AT)gmx.net), Feb 05 2005 ● a(n) = 11 * a(n - 1) + 8 ^ n, a(0)=1. - _ Vincenzo Librandi _ , Feb 09 2011 ● a(n) = 19 * a(n - 1) - 88 * a(n - 2), a(0)=1, a(1)=19. - _ Vincenzo Librandi _ , Feb 09 2011 ●

▶ [A016184] 1,19,277,3667,46405,573667,7001653,84843379,1023885349,12326977795,148206208789,1780451832211,21379263273733,256648048295203,3084054802615285,36970205192893363,443675695245289957 ⋆ Expansion of 1 / ((1 - 7x)(1 - 12x)). ● a(n) = (12 ^ (n + 1) - 7 ^ (n + 1)) / 5. - Lambert Klasen (lambert.klasen(AT)gmx.net), Feb 06 2005 ● a(n) = 12 * a(n - 1) + 7 ^ n, a(0)=1. - _ Vincenzo Librandi _ , Feb 09 2011 ● a(n) = 19 * a(n - 1) - 84 * a(n - 2), a(0)=1, a(1)=19. - _ Vincenzo Librandi _ , Feb 09 2011 ●

▶ [A322628] 0,0,1,19,279,3671,45431,540639,6260959,71068951,794428551,8773216559,95937737039,1040604153831,11210103801271,120060433858879,1279394234787519,13573881914016311,143459424905375591,1511020367139739599,15866744246492020399 ⋆ Number of n - digit decimal numbers containing a fixed 2 - digit integer with distinct digits as a substring. ● a(n) = 10 * a(n - 1) - a(n - 2) + 9 * 10 ^ (n - 3) with a(0) = a(1) = 0, a(2) = 1. ● a(n) = (27 * 10 ^ n + 5 * (5 - 2 * sqrt(6)) ^ n * (- 3 + sqrt(6)) - 5 * (3 + sqrt(6)) * (5 + 2 * sqrt(6)) ^ n) / 30 for n>0. - _ Colin Barker _ , Dec 21 2018 ●

▶ [A328916] 0,0,0,1,19,280,3699,45971,549430,6390601,72860039,818050960,9074118999,99668329951,1085865248550,11749578366501,126396115335059,1352875288102040,14417003302653899,153043636911203931,1619083493823937270,17076417934936718801 ⋆ Number of n - digit decimal numbers containing 123 as a sub string. ● a(n) = 10 * a(n - 1) + 9 * 10 ^ (n - 4) - a(n - 3). ●

▶ [A081045] 1,19,280,3700,46000,550000,6400000,73000000,820000000,9100000000,100000000000,1090000000000,11800000000000,127000000000000,1360000000000000,14500000000000000,154000000000000000 ⋆ 10th binomial transform of (1,9,0,0,0,0,0,...). ● a(n) = 20 * a(n - 1) - 100 * a(n - 2); a(0)=1, a(1)=19. ● a(n) = Sum _{ k=0..n } (k + 1) * 9 ^ k * binomial(n, k). ●

▶ [A155017] 1,1,19,280,4510,70300,1108900,17416000,273961000,4307050000,67726990000,1064904400000,16744473100000,263286127000000,4139863849000000,65094389920000000,1023531645610000000 ⋆ a(n) = 10 * a(n - 1) + 90 * a(n - 2), n>2 ; a(0)=1, a(1)=1, a(2)=19 . ● a(n) = (7 / 115) * sqrt(115) *{ [5 + sqrt(115)] ^ (n - 1) - [5 - sqrt(115)] ^ (n - 1) }+ (1 / 2) *{ [5 - sqrt(115)] ^ (n - 1) + [5 + sqrt(115)] ^ (n - 1) }+ (9 / 10) * [C(2 * n,n) mod 2], with n>=0. - _ Paolo P. Lava _ , Jan 26 2009 ●

▶ [A051562] 0,1,19,299,4578,71394,1153956,19471500,343976400,6366517200,123418922400,2503748556000,53091962697600,1175271048201600,27123099523027200,651708291206649600,16282170039031142400 ⋆ Second unsigned column of triangle A051380. ● a(n) = n! * Sum _{ k=0..n - 1 } ((- 1) ^ k * binomial(- 9,k) / (n - k)), for n>=1. - _ Milan Janjic _ , Dec 14 2008 ● a(n) = n! * [8]h(n), where [k]h(n) denotes the k - th successive summation of the harmonic numbers from 0 to n. - _ Gary Detlefs _ , Jan 04 2011 ●

▶ [A180845] 0,1,19,313,5035,80641,1290499,20648713,330381595,5286112081,84577812979,1353245066713,21651921244555,346430740444321,5542891848703459,88686269584038313,1418980313358961915 ⋆ a(n) = (16 ^ n - 3 ^ n) / 13 ● a(n) = (16 ^ n - 3 ^ n) / 13 ●

▶ [A166965] 1,19,316,5104,81856,1310464,20970496,335540224,5368692736,85899280384,1374389272576,21990231506944,351843716694016,5629499517435904,90071992480301056,1441151880490123264,23058430091063197696 ⋆ a(n) = 20 * a(n - 1) - 64 * a(n - 2) for n > 1; a(0) = 1, a(1) = 19. ● a(n) = (5 * 16 ^ n - 4 ^ n) / 4. ●

▶ [A143699] 0,1,19,319,5301,88000,1460701,24245719,402446619,6680076601,110880352000,1840465787401,30549274537419,507077165538919,8416803858813901,139707705280792000,2318961358994380101 ⋆ a(n) = 19 * a(n - 1) - 41 * a(n - 2) + 19 * a(n - 3) - a(n - 4). ● a(- n) = a(n). - _ Michael Somos _ , Feb 24 2009 ● a(n) = (r1 ^ n + r2 ^ n - r3 ^ n - r4 ^ n) / s1 where s1 = sqrt(205), s2 = sqrt(550 + 38 * s1), s3 = 36 * sqrt(5) / s2, r1 = (19 + s1 + s2) / 4, r2 = 1 / r1, r3 = (19 - s1 + s3) / 4, r4 = 1 / r3. - _ Michael Somos _ , Feb 12 2012 ● a(n) = (T(n,alpha) - T(n,beta)) / (alpha - beta), n >= 1, where alpha = (1 / 4) * (19 + sqrt(205)), beta = (1 / 4) * (19 - sqrt(205)) and where T(n,x) denotes the Chebyshev polynomial of the first kind. ● a(n)= U(n - 1, (sqrt(5) - 9) / 4) * U(n - 1, - (sqrt(5) + 9) / 4) for n >= 1, where U(n,x) denotes the Chebyshev polynomial of the second kind. ● a(n) = the bottom left entry of the 2 X 2 matrix T(n, M), where M is the 2 X 2 matrix [0, - 39 / 4; 1, 19 / 2]. See the remarks in A100047 for the general connection between Chebyshev polynomials of the first kind and 4th - order linear divisibility sequences. (End) ●

▶ [A098304] 0,1,19,324,5491,93025,1575936,26697889,452288179,7662201156,129805131475,2199025033921,37253620445184,631112522534209,10691659262636371,181127094942284100,3068468954756193331 ⋆ Member r=19 of the family of Chebyshev sequences S _ r(n) defined in A092184. ● a(n) = 17 * a(n - 1) - a(n - 2) + 2, n>=2, a(0)=0, a(1)=1. ● a(n) = 18 * a(n - 1) - 18 * a(n - 2) + a(n - 3), n>=3, a(0)=0, a(1)=1, a(2)=19. ●

▶ [A121324] 1,19,328,4437,55546,666655,7777764,88888873,999999982,11111111091,122222222200,1333333333309,14444444444418,155555555555527,1666666666666636,17777777777777745,188888888888888854,1999999999999999963 ⋆ Number of digits in quotient { R _ (n * R _ n) }/ (R _ n) ^ 2, where R _ n=A002275(n),n * R _ n=A053422(n). ● a(n)=round[log _ 10 { 9 * (10 ^ (n * (10 ^ n - 1) / 9) - 1) / (10 ^ n - 1) ^ 2 }] ●

▶ [A163453] 1,19,342,6156,110808,1994373,35895636,646066215,11628197676,209289662676,3766891838382,67798255971825,1220264268268608,21962878883360919,395298019772086050,7114756005603413388 ⋆ Number of reduced words of length n in Coxeter group on 19 generators S _ i with relations (S _ i) ^ 2 = (S _ i S _ j) ^ 5 = I. ● a(n) = 17 * a(n - 1) + 17 * a(n - 2) + 17 * a(n - 3) + 17 * a(n - 4) - 153 * a(n - 5). - _ Wesley Ivan Hurt _ , May 10 2021 ●

▶ [A163968] 1,19,342,6156,110808,1994544,35901621,646226100,11632014567,209375268012,3768736928724,67836942598176,1221059168656830,21978960670333953,395619413496128064,7121115628832971863 ⋆ Number of reduced words of length n in Coxeter group on 19 generators S _ i with relations (S _ i) ^ 2 = (S _ i S _ j) ^ 6 = I. ● a(n) = - 153 * a(n - 6) + 17 * Sum _{ k=1..5 } a(n - k). - _ Wesley Ivan Hurt _ , May 11 2021 ●

▶ [A167049] 1,19,342,6156,110808,1994544,35901792,646232256,11632180608,209379250944,3768826516992,67838877305856,1221099791505408,21979796247097173,395636332447746036,7121453984059373415 ⋆ Number of reduced words of length n in Coxeter group on 19 generators S _ i with relations (S _ i) ^ 2 = (S _ i S _ j) ^ 13 = I. ● a(n) = - 153 * a(n - 13) + 17 * Sum _{ k=1..12 } a(n - k). - _ Wesley Ivan Hurt _ , May 06 2021 ●

▶ [A167929] 1,19,342,6156,110808,1994544,35901792,646232256,11632180608,209379250944,3768826516992,67838877305856,1221099791505408,21979796247097344,395636332447752192,7121453984059539456 ⋆ Number of reduced words of length n in Coxeter group on 19 generators S _ i with relations (S _ i) ^ 2 = (S _ i S _ j) ^ 16 = I. ● a(n) = - 153 * a(n - 16) + 17 * Sum _{ k=1..15 } a(n - k). - _ Wesley Ivan Hurt _ , May 06 2021 ●

▶ [A078368] 1,19,360,6821,129239,2448720,46396441,879083659,16656193080,315588584861,5979526919279,113295422881440,2146633507828081,40672741225852099,770635449783361800,14601400804658022101 ⋆ A Chebyshev S - sequence with Diophantine property. ● a(n) = 19 * a(n - 1) - a(n - 2), n >= 1; a(- 1)=0, a

(0)=1. ● a(n) = (ap ^ (n + 1) - am ^ (n + 1)) / (ap - am) with ap = (19 + sqrt(357)) / 2 and am = (19 - sqrt(357)) / 2. ● a(n) = S(2 * n + 1, sqrt(21)) / sqrt(21) = S(n, 19); S(n, x) := U(n, x / 2), Chebyshev polynomials of the 2nd kind, A049310. ●

▶ [A207167] 19,361,1482,3952,8455,15789,26866,42712,64467,93385,130834,178296,237367,309757,397290,501904,625651,770697,939322,1133920,1356999,1611181,1899202,2223912,2588275 ⋆ Number of n X 6 0..1 arrays avoiding 0 0 0 and 1 0 1 horizontally and 0 0 1 and 1 0 1 vertically. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

▶ [A207303] 19,361,1675,4939,11497,23091,41893,70537,112151,170389,249463,354175,489949,662863,879681,1147885,1475707,1872161,2347075,2911123,3575857,4353739,5258173,6303537,7505215 ⋆ Number of n X 6 0..1 arrays avoiding 0 0 0 and 1 0 1 horizontally and 0 0 1 and 1 1 0 vertically. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. ●

▶ [A023283] 19,373,607,1171,1381,1867,2137,2539,3181,4021,5689,5827,5857,6163,7213,7507,11497,12007,13291,13687,14173,15193,16453,21997,22501 ⋆ Primes that remain prime through 3 iterations of function f(x) = 5x + 2. ● a(n) == 1 (mod 6). - _ John Cerkan _ , Sep 20 2016 ●

▶ [A158592] 19,380,1463,3268,5795,9044,13015,17708,23123,29260,36119,43700,52003,61028,70775,81244,92435,104348,116983,130340,144419,159220,174743,190988,207955 ⋆ a(n) = 361 * n ^ 2 + 19. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A222835] 19,384,648,1536,4032,9600,22848,55296,133824,322944,779328,1881600,4542912,10967424,26477376,63922176,154322112,372566400,899454528,2171475456,5242405824,12656287104,30554979648,73766246400,178087472832 ⋆ Number of n X 5 0..3 arrays with no element equal to another at a city block distance of exactly two, and new values 0..3 introduced in row major order. ● a(n) = 48 * ((- 1 + i) * ((- i) ^ n + i ^ (1 + n)) + (1 - sqrt(2)) ^ n + (1 + sqrt(2)) ^ n) for n>3, where i=sqrt(- 1). ●

▶ [A099277] 0,1,19,400,8379,175561,3678400,77070841,1614809259,33833923600,708897586339,14853015389521,311204425593600,6520439922076081,136618033938004099,2862458272776010000,59975005694358205899 ⋆ Unsigned member r= - 19 of the family of Chebyshev sequences S _ r(n) defined in A092184. ● a(n) = 21 * a(n - 1) - a(n - 2) + 2 * (- 1) ^ (n + 1), n>=2, a(0)=0, a(1)=1. ● a(n) = 20 * a(n - 1) + 20 * a(n - 2) - a(n - 3), n>=3, a(0)=0, a(1)=1, a(2)=19. ●

▶ [A162012] 0,19,663,6501,36729,149842,491274,1375206,3413982,7710813,16133689,31690659,59028879,105082068,179893252,297641916,477906924,747198807,1140797259,1704931921,2499346773,3600290694,5103978990,7130572930 ⋆ The sequence of the absolute values of the a(n - 2) coefficients of A162011 ● a(n) = (20 * n ^ 8 + 80 * n ^ 7 + 4 * n ^ 6 - 268 * n ^ 5 - 155 * n ^ 4 + 230 * n ^ 3 + 131 * n ^ 2 - 42 * n) / 360 ●

▶ [A055415] 1,19,2869,84663,995241,7129227,35372141,140246303,458690081,1318315075,3375505573,7945596055,17282877369,35516896155,68960061837,128236319951,228701936081,394678200083,658850300869,1072056316615 ⋆ Number of points in Z ^ 9 of norm <= n. ● a(n) = [x ^ (n ^ 2)] theta _ 3(x) ^ 9 / (1 - x), where theta _ 3() is the Jacobi theta function. - _ Ilya Gutkovskiy _ , Apr 14 2018 ●

▶ [A133895] 20,21,22,23,24,45,46,47,48,49,70,71,72,73,74,95,96,97,98,99,120,121,122,123,124 ⋆ Numbers m such that binomial(m + 5,m) mod 5 = 0. ● a(n)=5n + 20 - 4 * (n mod 5). ●

▶ [A241850] 20,21,24,29,36,45,56,69,84,101,120,141,164,189,216,245,276,309,344,381,420,461,504,549,596 ⋆ a(n) = n ^ 2 + 20. ● a(n) = a(- n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) = a(n - 1) + 2 * n - 1. ●

▶ [A022110] 1,20,21,41,62,103,165,268,433,701,1134,1835,2969,4804,7773,12577,20350,32927,53277,86204,139481,225685,365166,590851,956017 ⋆ Fibonacci sequence beginning 1, 20. ● a(n)= a(n - 1) + a(n - 2), n>=2, a(0)=1, a(1)=20. a(- 1):=19. ●

▶ [A042855] 1,1,20,21,41,62,413,1714,2127,3841,5968,9809,25586,35395,167166,202561,1990215,4182991,127479945,259142881,2459765874,2718908755,13335400894,16054309649,45444020192 ⋆ Denominators of continued fraction convergents to sqrt(958). ● a(n) = 33525044660851198 * a(n - 36) - a(n - 72) for n>71. - _ Vincenzo Librandi _ , Jan 31 2014 ●

▶ [A041812] 20,21,41,62,2521,2583,5104,7687,312584,320271,632855,953126,38757895,39711021,78468916,118179937,4805666396,4923846333,9729512729,14653359062,595863875209,610517234271,1206381109480 ⋆ Numerators of continued fraction convergents to sqrt(427). ● a(n) = 124 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Nov 09 2013 ●

▶ [A041800] 20,21,41,554,2811,3365,12906,16271,45448,61719,107167,168886,444939,4173337,4618276,36501269,114122083,378867518,871857119,2122581756,7239602387,23841388917,174129324806 ⋆ Numerators of continued fraction convergents to sqrt(421). ● a(n) = 88084891393642836 * a(n - 37) + a(n - 74) for n>73. [_ Bruno Berselli _ , Nov 09 2013] ●

▶ [A042865] 1,20,21,62,393,455,848,2999,3847,6846,10693,17539,203622,221161,1088266,3485959,4574225,67525109,72099334,283823111,1207391778,1491214889,17610755557,19101970446,36712726003 ⋆ Denominators of continued fraction convergents to sqrt(964). ● a(n) = 20170287114002498 * a(n - 34) - a(n - 68) for n > 67. - _ Vincenzo Librandi _ , Jan 31 2014 ●

▶ [A041826] 20,21,104,125,5104,5229,26020,31249,1275980,1307229,6504896,7812125,318989896,326802021,1626197980,1953000001,79746198020,81699198021,406542990104,488242188125,19936230515104,20424472703229 ⋆ Numerators of continued fraction convergents to sqrt(434). ● a(n) = 250 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Nov 09 2013 ●

▶ [A041824] 20,21,104,437,978,2393,3371,12506,165949,178455,344404,522859,867263,11797278,36259097,48056375,132371847,312800069,1383572123,5847088561,7230660684,295073515921,302304176605 ⋆ Numerators of continued fraction convergents to sqrt(433). ● a(n) = 14461321368 * a(n - 21) + a(n - 42) for n>41. [_ Bruno Berselli _ , Nov 09 2013] ●

▶ [A041830] 20,21,167,355,522,877,1399,19064,58591,136246,331083,1791661,2122744,3914405,17780364,181718045,744652544,926370589,1671023133,9281486254,20233995641,49749477536,169482428249 ⋆ Numerators of continued fraction convergents to sqrt(436). ● a(n) = 316141343972498 * a(n - 30) - a(n - 60) for n >59. [_ Bruno Berselli _ , Nov 09 2013 ●

▶ [A041832] 20,21,209,439,4160,4599,188120,192719,1922591,4037901,38263700,42301601,1730327740,1772629341,17683991809,37140612959,351949508440,389090121399,15915554364400,16304644485799,162657354736591,341619353958981,3237231540367420 ⋆ Numerators of continued fraction convergents to sqrt(437). ● a(n) = 9198 * a(n - 6) - a(n - 12). - _ Wesley Ivan Hurt _ , May 04 2021 ●

▶ [A041834] 20,21,272,293,11992,12285,159412,171697,7027292,7198989,93415160,100614149,4117981120,4218595269,54741124348,58959719617,2413129909028,2472089628645,32078205452768,34550295081413 ⋆ Numerators of continued fraction convergents to sqrt(438). ● a(n) = 586 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Nov 10 2013 ●

▶ [A063013] 0,1,20,21,300,301,320,321,4000,4001,4020,4021,4300,4301,4320,4321,50000,50001,50020,50021,50300,50301,50320,50321,54000 ⋆ Numbers where k - th digit from right is either 0 or k. ● a(n) = a(n - 2 ^ floor(log _ 2(n))) + floor(log _ 2(n) + 1) * 10 ^ floor(log _ 2(n)). ●

▶ [A063012] 0,1,20,21,400,401,420,421,8000,8001,8020,8021,8400,8401,8420,8421,160000,160001,160020,160021,160400,160401,160420,160421,168000 ⋆ Sum of distinct powers of 20; i.e., numbers with digits in { 0,1 } base 20; i.e., write n in base 2 and read as if written in base 20. ● a(n) = a(n - 2 ^ floor(log _ 2(n))) + 20 ^ floor(log _ 2(n)). a(2n) = 20 * a(n); a(2n + 1) = a(2n) + 1 = 20 * a(n) + 1. ●

▶ [A041836] 20,21,419,440,18019,18459,368740,387199,15856700,16243899,324490781,340734680,13953877981,14294612661,285551518540,299846131201,12279396766580,12579242897781,251285011824419 ⋆ Numerators of continued fraction convergents to sqrt(439). ● a(n) = 880 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Nov 10 2013 ●

▶ [A041837] 1,1,20,21,860,881,17599,18480,756799,775279,15487100,16262379,665982260,682244639,13628630401,14310875040,586063632001,600374507041,11993179265780,12593553772821,515735330178620,528328883951441,10553984125255999,11082313009207440 ⋆ Denominators of continued fraction convergents to sqrt(439). ● a(n) = 880 * a(n - 4) - a(n - 8) for n>7. - _ Vincenzo Librandi _ , Dec 25 2013 ●

▶ [A041838] 20,21,860,881,36100,36981,1515340,1552321,63608180,65160501,2670028220,2735188721,112077577060,114812765781,4704588208300,4819400974081,197480627171540,202300028145621,8289481752996380 ⋆ Numerators of continued fraction convergents to sqrt(440). ● a(n) = 42 * a(n - 2) - a(n - 4). - _ Vincenzo Librandi _ , Nov 10 2013 ●

▶ [A303303] 0,1,20,23,61,66,123,130,206,215,310,321,435,448,581,596,748,765,936,955,1145,1166,1375,1398,1626 ⋆ Generalized 23 - gonal (or icositrigonal) numbers: m * (21 * m - 19) / 2 with m = 0, + 1, - 1, + 2, - 2, + 3, - 3, ... ● a(n) = n * (21 * n + 38) / 8 for n even. ● a(n) = (21 * n - 17) * (n + 1) / 8 for n odd. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n>4. ●

▶ [A171696] 0,20,24,31,34,36,41,48,50,54,57,69,71,79,86,88,89,92,97,104,106,111,116,119,130 ⋆ Nonnegative numbers k such that neither 6 * k +- 1 is prime. ● a(n) = n + O(n / log n). - _ Charles R Greathouse IV _ , Feb 17 2017 ●

▶ [A219392] 0,20,24,84,92,192,204,344,360,540,560,780,804,1064,1092,1392,1424,1764,1800,2180,2220,2640,2684,3144,3192 ⋆ Numbers k such that 22 * k + 1 is a square. ● a(n) = a(- n + 1) = (22 * n * (n - 1) + 9 * (- 1) ^ n * (2 * n - 1) + 1) / 4 + 2. ●

▶ [A077340] 1,20,31,42,53,64,75,86,97,108,119,1200,1301,1402,1503,1604,1705,1806,1907,2008,2109,2210,2311,2412,2513 ⋆ Final terms of rows in A077339. ● a(m + (10 ^ k + 8) / 9) = 10 ^ k * (m + (10 ^ k + 8) / 9) + m for 0 <= m < 10 ^ k. ●

▶ [A254363] 20,35,77,203,605,1955,6677,23723,86765,324275,1231877,4738043,18396125,71940995,282882677,1116985163,4424500685,17568076115,69883311077,278367837083,1109978272445,4429440153635,17686354389077,70651224045803,282322365983405 ⋆ a(n) = 4 ^ n + 6 * 2 ^ n + 3 ^ (n + 1) + 10. ● a(n) = 10 * a(n - 1) - 35 * a(n - 2) + 50 * a(n - 3) - 24 * a(n - 4). - _ Colin Barker _ , Jan 30 2015 ●

▶ [A229356] 20,35,87,287,1119,4775,21447,99407,470319,2256695,10936407,53384927,261997119,1291033415,6381582567,31620148847,156969213519,780378126935,3884192631927,19350690855167,96473921031519,481256133809255,2401840755956487,11991486019167887 ⋆ Total sum of n - th powers of parts in all partitions of 5. ● a(n) = 12 + 4 * 2 ^ n + 2 * 3 ^ n + 4 ^ n + 5 ^ n. ●

▶ [A184065] 20,36,130,382,924,1884,3463,5800,9065,13397,18940,25837,34232,44269,56092,69845,85672,103717,124124,147037,172600,200957,232252,266629,304232 ⋆ Number of (n + 1) X 4 binary arrays with rows and columns in nondecreasing order and with no 2 X 2 subblock sum differing from a horizontal or vertical neighbor subblock sum by more than one. ● a(n) = 757 + 14 * n - 115 * n ^ 2 + 24 * n ^ 3 for n>9. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>13. ●

▶ [A345339] 20,38,56,74,92,110,128,146,164,182,200,218,236,254,272,290,308,326,344,362,380,398,416,434,452 ⋆ a(n) = 18 * n + 20. ● a(n) = 18 * n + 20. ●

▶ [A215144] 1,20,39,58,77,96,115,134,153,172,191,210,229,248,267,286,305,324,343,362,381,400,419,438,457 ⋆ a(n) = 19 * n + 1. ● a(n) = 2 * a(n - 1) - a(n - 2). ●

▶ [A061830] 0,20,40,60,80,200,220,240,260,280,400,420,440,460,480,600,620,640,660,680,800,820,840,860,880 ⋆ Multiples of 5 having only even digits. ● a(0)=0, a(1)=20, a(2)=40, a(3)=60, a(4)=80, a(5)=200, a(6)=220, a(7)=240, a(8)=260, a(9)=280, a(10)=400, a(11)=420, a(12)=440, a(13)=460, a(14)=480, a(15)=600, a(16)=620, a(17)=640, a(18)=660, a(19)=680, a(20)=800, a(21)=820, a(22)=840, a(23)=860, a(24)=880, a(25)=2000, a(n)=a(n - 1) + a(n - 25) - a(n - 26). - _ Harvey P. Dale _ , Feb 24 2014 ●

▶ [A235282] 20,40,68,136,236,472,836,1672,3020,6040,11108,22216,41516,83032,157316,314632,603020,1206040,2333348,4666696,9097196,18194392,35680196,71360392,140595020 ⋆ Number of (n + 1) X (1 + 1) 0..3 arrays with every 2 X 2 subblock having its diagonal sum differing from its antidiagonal sum by 4 (constant - stress 1 X 1 tilings). ● a(n) = 2 ^ (2 + n) + 2 * 3 ^ ((- 1 + n) / 2) * (3 - 3 * (- 1) ^ n + 2 * sqrt(3) + 2 * (- 1) ^ n * sqrt(3)). ●

► [A195148] 0,1,20,41,80,121,180,241,320,401,500,601,720,841,980,1121,1280,1441,1620,1801,2000,2201,2420,2641,2880 ⋆ Concentric 20 - gonal numbers. ● a(n) = 5 * n ^ 2 + 2 * (- 1) ^ n - 2; ● a(n) = - a(n - 1) + 10 * n ^ 2 - 10 * n + 1. (End) ●

► [A171389] 20,41,83,167,335,671,1343,2687,5375,10751,21503,43007,86015,172031,344063,688127,1376255,2752511,5505023,11010047,22020095,44040191,88080383,176160767,352321535 ⋆ a(n) = 21 * 2 ^ n - 1. ● a(n + 1) = 2 * a(n) + 1. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2). - _ Vincenzo Librandi _ , Jul 06 2012 ● a(n) + a(n - 1) ^ 2 = (a(n - 1) + 1) ^ 2. - _ Vincenzo Librandi _ , Jun 11 2014 ●

► [A041792] 20,41,102,143,245,388,2185,9128,11313,144884,156197,769672,4004557,4774229,8778786,13553015,35884816,85322647,3448790696,6982904039,17414598774,24397502813,41812101587,66209604400 ⋆ Numerators of continued fraction convergents to sqrt(417). ● a(n) = 170645294 * a(n - 18) - a(n - 36) for n>35. [_ Bruno Berselli _ , Nov 09 2013] ●

► [A041794] 20,41,184,3721,15068,33857,1369348,2772553,12459560,251963753,1020314572,2292592897,92724030452,187740653801,843686645656,17061473566921,69089580913340,155240635393601,6278714996657380 ⋆ Numerators of continued fraction convergents to sqrt(418). ● a(n) = 67714 * a(n - 6) - a(n - 12). - _ Vincenzo Librandi _ , Nov 09 2013 ●

► [A041796] 20,41,307,348,1003,3357,4360,12077,16437,324380,340817,1006014,1346831,5046507,11439845,16486352,126844309,270174970,10933843109,22137861188,165898871425,188036732613,541972336651 ⋆ Numerators of continued fraction convergents to sqrt(419). ● a(n) = 540349940 * a(n - 18) - a(n - 36) for n>35. [_ Bruno Berselli _ , Nov 09 2013] ●

► [A041798] 20,41,1660,3361,136100,275561,11158540,22592641,914864180,1852321001,75007704220,151867729441,6149716881860,12451301493161,504201776608300,1020854854709761,41338395964998740,83697646784707241 ⋆ Numerators of continued fraction convergents to sqrt(420). ● a(n) = 82 * a(n - 2) - a(n - 4). - _ Vincenzo Librandi _ , Nov 09 2013 ●

► [A132762] 0,20,42,66,92,120,150,182,216,252,290,330,372,416,462,510,560,612,666,722,780,840,902,966,1032 ⋆ a(n) = n * (n + 19). ● a(n) = 2 * n + a(n - 1) + 18 for n > 0, a(0) = 0. - _ Vincenzo Librandi _ , Aug 03 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n > 2. ●

► [A228319] 20,45,82,131,192,265,350,447,556,677,810,955,1112,1281,1462,1655,1860,2077,2306,2547,2800,3065,3342,3631,3932 ⋆ The hyper - Wiener index of the graph obtained by applying Mycielski's construction to the star graph K(1,n). ● a(n) = 6n ^ 2 + 7n + 7. ●

► [A234259] 20,46,104,244,560,1336,3104,7504,17600,42976,101504,249664,592640,1465216,3490304,8660224,20679680,51437056,123029504,306525184,733982720,1830762496,4387119104,10951020544,26255605760 ⋆ Number of (n + 1) X (1 + 1) 0..2 arrays with every 2 X 2 subblock having its diagonal sum differing from its antidiagonal sum by 2 (constant - stress 1 X 1 tilings). ● a(n) = 2 ^ (2 + n) + 2 ^ ((- 3 + n) / 2) * 3 ^ ((- 1 + n) / 2) * (12 - 12 * (- 1) ^ n + 5 * sqrt(6) + 5 * (- 1) ^ n * sqrt(6)). ●

► [A264444] 0,20,48,85,132,190,260,343,440,552,680,825,988,1170,1372,1595,1840,2108,2400,2717,3060,3430,3828,4255,4712 ⋆ a(n) = n * (n + 7) * (n + 14) / 6. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>3. - _ Vincenzo Librandi _ , Nov 16 2015 ●

► [A303295] 0,20,49,99,165,247,345,459,589,735,897,1075,1269,1479,1705,1947,2205,2479,2769,3075,3397,3735,4089,4459,4845 ⋆ a(n) is the maximum water retention of a height - 3 length - n number parallelogram with maximum water area. ● a(n) = ((4 * n + 7) * (4 * n + 2)) - (4 * n + 2) * (4 * n + 3) / 2 + 4 for n > 2. ● a(n) = - 3 + 10 * n + 8 * n ^ 2 for n>1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n > 4. ●

► [A304832] 20,50,82,116,152,190,230,272,316,362,410,460,512,566,622,680,740,802,866,932,1000,1070,1142,1216,1292 ⋆ a(n) = n ^ 2 + 25 * n - 34 (n >=2). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>4. ●

► [A182462] 20,50,110,230,470,950,1910,3830,7670,15350,30710,61430,122870,245750,491510,983030,1966070,3932150,7864310,15728630,31457270,62914550,125829110,251658230,503316470 ⋆ a(n) = 3a(n - 1) - 2a(n - 2) with a(0)=20 and a(1)=50. ● a(n) = a(n - 1) * 2 + 10. ●

► [A128905] 20,51,59,60,65,68,69,76,77,83,91,92,105,110,114,115,123,129,131,139,154,156,165,182,185 ⋆ Numbers k such that the k - th triangular number has exactly four distinct prime factors. ● a(n)=k and T(k)=k(k + 1) / 2=p * q * r * s for some k, p, q, r, s where T(k) is a triangular number and p, q, r, s are distinct primes. ●

► [A209982] 0,20,52,116,180,308,372,564,692,884,1012,1332,1460,1844,2036,2292,2548,3060,3252,3828,4084,4468,4788,5492,5748 ⋆ Number of 2 X 2 matrices having all elements in {- n,...,n } and determinant 1. ● a(n) = - 12 + 32 * Sum _{ k=1..n } phi(k) for n > 0. (End) ●

► [A205220] 20,52,132,340,868,2228,5700,14612,37412,95860,245508,628948,1610980,4126772,10570692,27077780,69360548,177671668,455113860,1165800532,2986255972,7649458100,19594481988,50192314388,128570242340 ⋆ Number of (n + 1) X 3 0..1 arrays with the number of equal 2 X 2 subblock diagonal pairs and equal antidiagonal pairs differing from each horizontal or vertical neighbor, and new values 0..1 introduced in row major order. ● a(n) = (2 ^ (2 - n) * ((1 - sqrt(17)) ^ n * (- 4 + sqrt(17)) + (1 + sqrt(17)) ^ n * (4 + sqrt(17)))) / sqrt(17). ●

► [A051872] 0,1,20,57,112,185,276,385,512,657,820,1001,1200,1417,1652,1905,2176,2465,2772,3097,3440,3801,4180,4577,4992 ⋆ 20 - gonal (or icosagonal) numbers: a(n) = n * (9 * n - 8). ● a(n) = 18 * n + a(n - 1) - 17, with n > 0, a(0) = 0. - _ Vincenzo Librandi _ , Aug 06 2010 ● a(18 * a(n) + 154 * n + 1) = a(18 * a(n) + 154 * n) + a(18 * n + 1). - _ Vladimir Shevelev _ , Jan 24 2014 ●

► [A069132] 1,20,58,115,191,286,400,533,685,856,1046,1255,1483,1730,1996,2281,2585,2908,3250,3611,3991,4390,4808,5245,5701 ⋆ Centered 19 - gonal numbers. ● a(n) = (19 * n ^ 2 - 19 * n + 2) / 2. ● a(n) = 19 * n + a(n - 1) - 19 (with a(1)=1). - _ Vincenzo Librandi _ , Aug 08 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3); a(0)=1, a(1)=20, a(2)=58. - _ Harvey P. Dale _ , Aug 21 2011 ●

► [A116530] 20,60,180,540,1620,4860,14580,43740,131220,393660,1180980,3542940,10628820,31886460,95659380,286978140,860934420,2582803260,7748409780,23245229340,69735688020,209207064060,627621192180,1882863576540 ⋆ a(n) = 3 * a(n - 1), with a(1) = 20. ● a(n) = 20 * 3 ^ (n - 1). ●

► [A041780] 20,61,81,142,223,4379,4602,8981,13583,49730,2002783,6058079,8060862,14118941,22179803,435535198,457715001,893250199,1350965200,4946145799,199196797160,602536537279,801733334439,1404269871718,2206003206157 ⋆ Numerators of continued fraction convergents to sqrt(411). ● a(n) = 99460 * a(n - 10) - a(n - 20). - _ Vincenzo Librandi _ , Nov 08 2013 ●

► [A041782] 20,61,142,203,751,954,4567,14655,33877,455056,4584437,60052737,124689911,434122470,1861179791,2295302261,8747086574,11042388835,30831864244,103537981567,4172351126924,12620591362339 ⋆ Numerators of continued fraction convergents to sqrt(412). ● a(n) = 207075963134 * a(n - 20) - a(n - 40) for n>39. [_ Bruno Berselli _ , Nov 09 2013] ●

► [A033577] 1,20,63,130,221,336,475,638,825,1036,1271,1530,1813,2120,2451,2806,3185,3588,4015,4466,4941,5440,5963,6510,7081 ⋆ a(n) = (3 * n + 1) * (4 * n + 1). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>2. ●

► [A187156] 0,0,20,64,132,224,340,480,644,832,1044,1280,1540,1824,2132,2464,2820,3200,3604,4032,4484,4960,5460,5984,6532 ⋆ Number of 3 - step one space at a time bishop's tours on an n X n board summed over all starting positions. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>4. ●

► [A363840] 20,69,285,749,2813,4589,10149,14119,24907,49675,60613,102749,139613,160951,209947,300667,414357,457813,606151,721011,783511,992477,1150629,1418037,1834951 ⋆ a(n) is the number of isomorphism classes of genus 2 hyperelliptic curves over the finite field of order prime(n). ● a(1) = 20, and for n > 1, a(n) = 2 * prime(n) ^ 3 + prime(n) ^ 2 + 2 * prime(n) - 2 + 2 * [prime(n) = = 1 (mod 3)] + 8 * [prime(n) == 1 (mod 5)] + 2 * [prime(n) == 5] + 2 * [prime(n) == 1 or 3 (mod 8)]. ●

► [A053741] 20,70,120,170,220,270,320,370,420,470,520,570,620,670,720,770,820,870,920,970,1020,1070,1120,1170,1220 ⋆ Sum of even numbers in range 10 * n to 10 * n + 9. ● a(n) = 50 * n + 20. ● a(n) = 2 * a(n - 1) - a(n - 2). ●

► [A052516] 0,0,0,0,0,0,20,70,182,420,912,1914,3938,8008,16172,32526,65262,130764,261800,523906,1048154,2096688,4193796,8388054,16776614 ⋆ Number of pairs of sets of cardinality at least 3. ● a(n) = max(0,2 ^ n - n ^ 2 - n - 2). - _ Dennis P. Walsh _ , Dec 09 2014 ●

► [A143854] 1,20,71,154,269,416,595,806,1049,1324,1631,1970,2341,2744,3179,3646,4145,4676,5239,5834,6461,7120,7811,8534,9289 ⋆ Ulam's spiral (WSW spoke). ● a(n) = 14 - 29 * n + 16 * n ^ 2. ●

► [A010008] 1,20,74,164,290,452,650,884,1154,1460,1802,2180,2594,3044,3530,4052,4610,5204,5834,6500,7202,7940,8714,9524,10370 ⋆ a(0) = 1, a(n) = 18 * n ^ 2 + 2 for n>0. ● a(n) = (3 * n - 1) ^ 2 + (3 * n + 1) ^ 2 = (n - 1) ^ 2 + (n + 1) ^ 2 + (4 * n) ^ 2 for n>0. - _ Bruno Berselli _ , Feb 06 2012 ●

► [A005565] 20,75,189,392,720,1215,1925,2904,4212,5915,8085,10800,14144,18207,23085,28880,35700,43659,52877,63480,75600,89375,104949,122472,142100 ⋆ Number of walks on square lattice. ● a(n) = 1 / 4 * (n ^ 4 + 14n ^ 3 + 69n ^ 2 + 136n + 80). G.f.: (20 - 25x + 14x ^ 2 - 3x ^ 3) / (1 - x) ^ 5. - _ Ralf Stephan _ , Apr 23 2004 ● a(n) = binomial(n + 4,2) ^ 2 - binomial(n + 4,1) ^ 2. - _ Gary Detlefs _ , Nov 22 2011 ●

► [A228025] 20,76,285,1065,3976,14840,55385,206701,771420,2878980,10744501,40099025,149651600,558507376,2084377905,7779004245,29031639076,108347552060,404358569165,1509086724601,5631988329240,21018866592360,78443478040201,292755045568445 ⋆ a(1) = least k such that 1 / 2 + 1 / 3 + 1 / 4 + 1 / 5 < H(k) - H(5); a(2) = least k such that H(a(1)) - H(5) < H(k) - H(a(1)), and for n > 2, a(n) = least k such that H(a(n - 1)) - H(a(n - 2) > H(k) - H(a(n - 1)), where H = harmonic number. ● a(n) = 5 * a(n - 1) - 5 * a(n - 2) + a(n - 3) (conjectured). ●

► [A211613] 0,1,20,78,199,407,726,1180,1793,2589,3592,4826,6315,8083,10154,12552,15301,18425,21948,25894,30287,35151,40510,46388,52809 ⋆ Number of ordered triples (w,x,y) with all terms in {- n,... - 1,1,...,n } and w + x + y>1. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>4. ● a(n) = (- 6 + 9 * n - 9 * n ^ 2 + 8 * n ^ 3) / 2 for n>0. ●

► [A292360] 0,1,20,78,300,980,3120,9527,28560,84114,244750,704836,2013120,5709613,16097900,45155190,126099120,350765012,972333360,2687024099,7404969000,20355783546,55829853970,152808294148,417451104000 ⋆ a(n) = n * (Lucas(n) * Lucas(n + 1) - 2). ● a(n) = n * Sum _{ k=1..n } Lucas(k) ^ 2 (by Adnan Ali, see References). ● a(n) = 6 * a(n - 1) - 9 * a(n - 2) - 6 * a(n - 3) + 20 * a(n - 4) - 6 * a(n - 5) - 9 * a(n - 6) + 6 * a(n - 7) - a(n - 8) for n > 7. (End) ● a(n) = n * (Lucas(2 * n + 1) - 1) for n even, otherwise a(n) = n * (Lucas(2 * n + 1) - 3). - _ Bruno Berselli _ , Sep 15 2017 ●

► [A195322] 0,20,80,180,320,500,720,980,1280,1620,2000,2420,2880,3380,3920,4500,5120,5780,6480,7220,8000,8820,9680,10580,11520 ⋆ a(n) = 20 * n ^ 2. ● a(0)=0, a(1)=20, a(2)=80; for n>2, a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Jan 18 2013 ●

► [A103532] 1,20,81,208,425,756,1225,1856,2673,3700,4961,6480,8281,10388,12825,15616,18785,22356,26353,30800,35721,41140,47081,53568,60625 ⋆ Number of divisors of 240 ^ n. ● a(n) = (4 * n + 1) * (n + 1) ^ 2. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>3. - _ Harvey P. Dale _ , Jan 21 2013 ● a(n) = Sum _{ i=0..n } (n + 1) * (8 * i + 1). [_ Bruno Berselli _ , Sep 08 2015] ●

► [A041778] 20,81,3260,13121,528100,2125521,85548940,344321281,13858400180,55777922001,2244975280220,9035679042881,363672136995460,1463724227024721,58912641217984300,237114289089861921 ⋆ Numerators of continued fraction convergents to sqrt(410). ● a(n) = 162 * a(n - 2) - a(n - 4). G.f.: - (x ^ 3 - 20 * x ^ 2 - 81 * x - 20) / (x ^ 4 - 162 * x ^ 2 + 1). - _ Colin Barker _ , Jul 16 2012 ●

► [A172221] 1,20,84,200,403,720,1180,1808,2631,3676,4970,6540,8413,10616,13176,16120,19475,23268,27526,32276,37545,43360,49748,56736,64351 ⋆ Number of ways to place 3 nonattacking zebras on a 3 X n board. ● a(n) = (9 * n ^ 3 - 21 * n ^ 2 + 50 * n - 48) / 2, n>=6. ●

► [A006566] 0,1,20,84,220,455,816,1330,2024,2925,4060,5456,7140,9139,11480,14190,17296,20825,24804,29260,34220,39711,45760,52394,59640 ⋆ Dodecahedral numbers: a(n) = n * (3 * n - 1) * (3 * n - 2) / 2. ● a(n) = C(n + 2,3) + 16 C(n +

1,3) + 10 C(n,3). ● a(0)=0, a(1)=1, a(2)=20, a(3)=84, a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Harvey P. Dale _ , Jul 24 2013 ●

▶ [A211158] 20,84,528,1040,3060,4788,10304,14400,26100,34100,55440,69264,104468,126420,180480,213248,291924,338580,448400,512400,660660,745844,940608,1051200,1301300 ⋆ Number of 2 X 2 matrices having all terms in {- n,...,0,..,n } and positive odd determinant. ● a(n) = n * (n + 1) * (3 * n + 1 + 3 * n ^ 2 - (- 1) ^ n * (2 * n + 1)). Therefore: ● a(n) = n ^ 2 * (n + 1) * (3 * n + 1) if n is even, ● a(n) = n * (n + 1) ^ 2 * (3 * n + 2) if n is odd. ● a(n) = a(n - 1) + 4 * a(n - 2) - 4 * a(n - 3) - 6 * a(n - 4) + 6 * a(n - 5) + 4 * a(n - 6) - 4 * a(n - 7) - a(n - 8) + a(n - 9) for n > 9. ● a(n) = a(- n - 1). - _ Bruno Berselli _ , Dec 14 2016 ●

▶ [A027849] 1,20,87,232,485,876,1435,2192,3177,4420,5951,7800,9997,12572,15555,18976,22865,27252,32167,37640,43701,50380,57707,65712,74425 ⋆ a(n) = (n + 1) * (5 * n ^ 2 + 4 * n + 1). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n > 3. ●

▶ [A243645] 0,0,0,1,20,87,244,545,1056,1855,3032,4689,6940,9911,13740,18577,24584,31935,40816,51425,63972,78679,95780,115521,138160 ⋆ Number of ways two L - tiles can be placed on an n X n square. ● a(n) = (n ^ 4 - 4 * n ^ 3 - n ^ 2 + 18 * n - 16) / 2 for n>=2, a(n) = 0 for n<2. ●

▶ [A213839] 1,20,89,240,505,916,1505,2304,3345,4660,6281,8240,10569,13300,16465,20096,24225,28884,34105,39920,46361,53460,61249,69760,79025 ⋆ Principal diagonal of the convolution array A213838. ● a(n) = (8 * n - 21 * n ^ 2 + 16 * n ^ 3) / 3. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ●

▶ [A264851] 0,1,20,90,260,595,1176,2100,3480,5445,8140,11726,16380,22295,29680,38760,49776,62985,78660,97090,118580,143451,172040,204700,241800 ⋆ a(n) = n * (n + 1) * (n + 2) * (4 * n - 3) / 6. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Vincenzo Librandi _ , Nov 27 2015 ●

▶ [A200431] 0,20,92,248,520,940,1540,2352,3408,4740,6380,8360,10712,13468,16660,20320,24480,29172,34428,40280,46760,53900,61732,70288,79600 ⋆ Number of - n..n arrays x(0..3) of 4 elements with zero sum and no two or three adjacent elements summing to zero. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>4. ●

▶ [A169711] 1,20,93,256,545,996,1645,2528,3681,5140,6941,9120,11713,14756,18285,22336,26945,32148,37981,44480,51681,59620,68333,77856,88225 ⋆ The function W _ n(6) (see Borwein et al. reference for definition). ● a(n) = 6 * n ^ 3 - 9 * n ^ 2 + 4 * n. - _ Peter Luschny _ , May 27 2017 ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Vincenzo Librandi _ , May 28 2017 ●

▶ [A158446] 20,95,220,395,620,895,1220,1595,2020,2495,3020,3595,4220,4895,5620,6395,7220,8095,9020,9995,11020,12095,13220,14395,15620 ⋆ a(n) = 25 * n ^ 2 - 5. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A188050] 0,20,100,280,600,1100,1820,2800,4080,5700,7700,10120,13000,16380,20300,24800,29920,35700,42180,49400,57400,66220,75900,86480,98000 ⋆ a(n) = A016755(n) - A001845(n). ● a(n) = (10 / 3) * n * (n + 1) * (2 * n + 1). ●

▶ [A240437] 0,20,100,600,3000,15500,77500,390000,1950000,9762500,48812500,244125000,1220625000,6103437500,30517187500,152587500000,762937500000,3814695312500,19073476562500,95367421875000,476837109375000,2384185742187500,11920928710937500,59604644531250000,298023222656250000 ⋆ Number of non - palindromic n - tuples of 5 distinct elements. ● a(n) = 1 / 2 * 5 ^ (n / 2) * ((sqrt(5) - 1) * (- 1) ^ n - sqrt(5) - 1) + 5 ^ n. ● a(n) = 5 ^ n - 5 ^ ceiling(n / 2). ●

▶ [A187756] 0,1,20,105,336,825,1716,3185,5440,8721,13300,19481,27600,38025,51156,67425,87296,111265,139860,173641,213200,259161,312180,372945,442176 ⋆ a(n) = n ^ 2 * (4 * n ^ 2 - 1) / 3. ● a(n) = a(- n) for all n in Z. ●

▶ [A173963] 0,0,20,108,336,800,1620,2940,4928,7776,11700,16940,23760,32448,43316,56700,72960,92480,115668,142956,174800,211680,254100,302588,357696 ⋆ Number of nonoverlapping placements of one 1 X 1 square and one 2 X 2 square on an n X n board. ● a(n) = (n ^ 2 - 4) * (n - 1) ^ 2. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5), with a(1)=0, a(2)=0, a(3)=20, a(4)=108, a(5)=336. - _ Harvey P. Dale _ , Aug 16 2011 ●

▶ [A008383] 1,20,110,340,780,1500,2570,4060,6040,8580,11750,15620,20260,25740,32130,39500,47920,57460,68190,80180,93500,108220,124410,142140,161480 ⋆ Coordination sequence for A _ 4 lattice. ● a(n) = 5 * n * (7 * n ^ 2 + 5) / 3, a(0) = 1. ●

▶ [A024192] 20,110,368,961,2149,4316,8000,13931,23071,36655,56244,83769,121594,172567,240089,328176,441530,585615,766730,992095,1269934,1609562,2021481,2517473,3110702 ⋆ Integer part of (4th elementary symmetric function of 3,4,...,n + 5) / (3 + 4 + ... + n + 5). ● a(n) = floor(1 / 2880 n (1 + n) (2 + n) (53848 + 26922 n + 5165 n ^ 2 + 450 n ^ 3 + 15 n ^ 4) / (8 + n)). - _ Ivan Neretin _ , May 17 2018 ●

▶ [A086605] 0,1,20,111,328,725,1356,2275,3536,5193,7300,9911,13080,16861,21308,26475,32416,39185,46836,55423,65000,75621,87340,100211,114288 ⋆ a(n) = 9 * n ^ 3 - 18 * n ^ 2 + 10 * n. ● a(0)=0, a(1)=1, a(2)=20, a(3)=111, a(n)=4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Harvey P. Dale _ , Mar 05 2013 ●

▶ [A271494] 1,20,112,1088,7936,66560,520192,4210688,33488896,268697600,2146435072,17184063488,137422176256,1099578736640,8795824586752,70369817919488,562945658454016,4503616807239680,36028728299487232,288230651029618688,2305841909702066176,18446748471756062720 ⋆ Expansion of (1 + 16 * x) / ((1 + 4 * x) * (1 - 8 * x)). ● a(n) = 2 ^ (1 + 3 * n) - (- 4) ^ n. ● a(n) = 4 * a(n - 1) + 32 * a(n - 2) for n>1. ●

▶ [A357042] 1,20,117,400,1025,2196,4165,7232,11745,18100,26741,38160,52897,71540,94725,123136,157505,198612,247285,304400,370881,447700,535877,636480,750625 ⋆ The sum of the numbers of the central diamond of the multiplication table [1..k] X [1..k] for k=2 * n - 1. ● a(n) = n ^ 2 * (2 * n ^ 2 - 2 * n + 1). ●

▶ [A299965] 0,20,118,348,764,1420,2370,3668,5368,7524,10190,13420,17268,21788,27034,33060,39920,47668,56358,66044,76780,88620,101618,115828,131304 ⋆ Number of triangles in a Star of David of size n. ● a(n) = 9 * n ^ 3 + 12 * n ^ 2 - n. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>3. ●

▶ [A093566] 0,0,0,0,1,20,120,455,1330,3276,7140,14190,26235,45760,76076,121485,187460,280840,410040,585276,818805,1125180,1521520,2027795,2667126 ⋆ a(n) = n * (n - 1) * (n - 2) * (n - 3) * (n ^ 2 - 3 * n - 2) / 48. ● a(n) = binomial(binomial(n - 1, 2), 3). ● a(n + 1) = 1 * C(n,3) + 16 * C(n,4) + 30 * C(n,5) + 15 * C(n,6), where the coefficient of C(n,k) is the number of chiral pairs of colorings using exactly k colors. - _ Robert A. Russell _ , Sep 28 2020 ●

▶ [A213223] 1,20,120,1030,10040,100050,1000060,10000070,100000080,1000000090,10000000100,100000000110,1000000000120,10000000000130,100000000000140,1000000000000150,10000000000000160,100000000000000170 ⋆ 10 ^ n + 10 * n. ● a(n) = 12 * a(n - 1) - 21 * a(n - 2) + 10 * a(n - 3). ●

▶ [A249709] 20,125,440,1153,2524,4893,8688,14433,22756,34397,50216,71201,98476,133309,177120,231489,298164,379069,476312,592193,729212,890077,1077712,1295265,1546116 ⋆ Number of length 3 + 3 0..n arrays with every four consecutive terms having the maximum of some two terms equal to the minimum of the remaining two terms. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. ●

▶ [A073968] 0,0,1,20,125,650,3150,15625,78000,390625,1952500,9762500,48815625,244125000,1220703125,6103593750,30517656250,152587890625,762939062500,3814697265625,19073484375000,95367421875000,476837119140625,2384185742187500,11920928955078125 ⋆ Number of strings of length n over Z _ 5 with trace 1 and subtrace 2. ● a(n; t, s) = a(n - 1; t, s) + a(n - 1; t + 4, s + 4t + 1) + a(n - 1; t + 3, s + 3t + 4) + a(n - 1; t + 2, s + 2t + 4) + a(n - 1; t + 1, s + t + 1). ●

▶ [A373561] 0,1,20,126,480,1375,3276,6860,13056,23085,38500,61226,93600,138411,198940,279000,382976,515865,683316,891670,1148000,1460151,1836780,2287396,2822400 ⋆ a(n) = (1 / 3) * n ^ 5 + (1 / 2) * n ^ 4 + (1 / 6) * n ^ 3. ● a(n) = (1 / 3) * n ^ 5 + (1 / 2) * n ^ 4 + (1 / 6) * n ^ 3. ●

▶ [A304507] 20,130,330,620,1000,1470,2030,2680,3420,4250,5170,6180,7280,8470,9750,11120,12580,14130,15770,17500,19320,21230,23230,25320,27500 ⋆ a(n) = 5 * (n + 1) * (9 * n + 4). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>2. (End) ●

▶ [A006417] 1,20,131,469,1262,2862,5780,10725,18647,30784,48713,74405,110284,159290,224946,311429,423645,567308,749023,976373,1258010,1603750,2024672,2533221,3143315 ⋆ Number of loopless rooted planar maps with 4 faces and n vertices and no isthmuses. ● a(n) = (2160 + 846 * n - 1027 * n ^ 2 - 345 * n ^ 3 + 125 * n ^ 4 + 39 * n ^ 5 + 2 * n ^ 6) / 360. ●

▶ [A085284] 0,1,20,135,560,1750,4536,10290,21120,40095,71500,121121,196560,307580,466480,688500,992256,1400205,1939140,2640715,3542000,4686066,6122600,7908550,10108800 ⋆ a(n) = C(n + 3,3) * n ^ 3 / 4. ● a(n) = n ^ 3(n + 1)(n + 2)(n + 3) / 4!. ● a(n) = C(n + 1, n) ^ 2 * C(n + 4, n). - _ Zerinvary Lajos _ , Jul 29 2005 ●

▶ [A144965] 0,20,136,444,1040,2020,3480,5516,8224,11700,16040,21340,27696,35204,43960,54060,65600,78676,93384,109820,128080,148260,170456,194764,221280 ⋆ a(n) = 4 * n * (4 * n ^ 2 + 1). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Vincenzo Librandi _ , Jun 30 2012 ●

▶ [A262140] 20,136,812,4752,27716,161560,941660,5488416,31988852,186444712,1086679436,6333631920,36915112100,215157040696,1254027132092,7309005751872,42600007379156,248291038523080,1447146223759340,8434586304032976,49160371600438532 ⋆ The first of nine consecutive positive integers the sum of the squares of which is equal to the sum of the squares of eight consecutive positive integers. ● a(n) = 7 * a(n - 1) - 7 * a(n - 2) + a(n - 3) for n>3. ●

▶ [A054389] 1,20,140,620,2016,5364,12292,25228,47488,83508,138908,220748,337568,499668,719124,1010092,1388800,1873876,2486316,3249836,4190816,5338676,6725796,8387916,10364032 ⋆ Susceptibility series H _ 5 for 2 - dimensional Ising model (divided by 2). ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) - 4 * a(n - 3) + 10 * a(n - 4) - 4 * a(n - 5) - 4 * a(n - 6) + 4 * a(n - 7) - a(n - 8) for n>8. ● a(n) = (77 * n ^ 5 + 630 * n ^ 3 + 448 * n) / 60 for n>0 and even. ● a(n) = (77 * n ^ 5 + 630 * n ^ 3 + 493 * n) / 60 for n odd. (End) ● a(n) = n * (154 * n ^ 4 + 1260 * n ^ 2 + 941 - 45 * (- 1) ^ n) / 120, n>0, with a(0)=1. ●

▶ [A071816] 1,20,141,580,1751,4332,9331,18152,32661,55252,88913,137292,204763,296492,418503,577744,782153,1040724,1363573,1762004,2248575,2837164,3543035,4382904,5375005 ⋆ Number of ordered solutions to x + y + z = u + v + w, 0 <= x, y, z, u, v, w < n. ● a(n) = n * (11 * n ^ 4 + 5 * n ^ 2 + 4) / 20. Recurrence: a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). G.f.: x * (1 + 14 * x + 36 * x ^ 2 + 14 * x ^ 3 + x ^ 4) / (1 - x) ^ 6. - _ Vladeta Jovovic _ , Jun 09 2002 ●

▶ [A100190] 1,20,147,760,3317,13164,49255,177200,620073,2125828,7174523,23914920,78919069,258280412,839411151,2711943520,8716961105,27894275316,88913002339,282429536600,894360198981,2824295364940,8896530399287,27960524111760,87694371077497 ⋆ The (4,1) - entry in the 4 X 4 matrix M ^ n, where M = [1,0,0,0 / 3,3,0,0 / 3,6,3,0 / 1,3,3,1]. ● a(n) = 8 * a(n - 1) - 22 * a(n - 2) + 24 * a(n - 3) - 9 * a(n - 4) for n>=5 (derived from the minimal polynomial of the matrix M). ● a(n) = ((11 + 3 ^ (2 + n)) * n - 18 * (3 ^ n - 1)) / 2. - _ Colin Barker _ , Feb 28 2017 ●

▶ [A108647] 1,20,150,700,2450,7056,17640,39600,81675,157300,286286,496860,828100,1332800,2080800,3162816,4694805,6822900,9728950,13636700,18818646,25603600,34385000,45630000,59889375 ⋆ a(n) = (n + 1) ^ 2 * (n + 2) ^ 2 * (n + 3) ^ 2 * (n + 4) / 144. ● a(n) = C(n + 4,4) * C(n + 3,2)(n + 1) / 3. - _ Paul Barry _ , May 13 2006 ● a(n) = 4 * C(n,4) ^ 2 / n, n >= 4. - _ Zerinvary Lajos _ , May 09 2008 ●

▶ [A164605] 1,20,152,1056,7232,49408,337408,2304000,15732736,107429888,733577216,5009178624,34204811264,233565061120,1594881998848,10890535501824,74365228023808,507797540175872,3467458497216512,23677287656325120 ⋆ a(n) = ((1 + 4 * sqrt(2)) * (4 + 2 * sqrt(2)) ^ n + (1 - 4 * sqrt(2)) * (4 - 2 * sqrt(2)) ^ n) / 2. ● a(n) = 8 * a(n - 1) - 8 * a(n - 2) for n > 1; a(0) = 1, a(1) = 20. ●

▶ [A101091] 1,20,155,760,2814,8592,22770,54120,117975,239668,459173,837200,1463020,2464320,4019412,6372144,9849885,14884980,22040095,32037896,45795530,64464400,89475750,122592600,165968595 ⋆ Fourth partial sums of fourth powers (A000583). ● a(n) = n * (1 + n) * (2 + n) ^ 2 * (3 + n) * (4 + n) * (- 1 + 3 * n * (4 + n)) / 5040. ● a(1)=1, a(2)=20, a(3)=155, a(4)=760, a(5)=2814, a(6)=8592, a(7)=22770, a(8)=54120, a(9)=117975, a(n)=9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9). - _ Harvey P. Dale _ , Dec 30 2011 ●

▶ [A059601] 1,20,160,820,3190,10252,28600,71500,163735,348920,700128,1334840,2435420,4276520,7261040,11966504,19203965,30091820,46147200,69397900,102

518130,148991700,213306600,301185300 ⋆ Expansion of (1 + 10 * x + 5 * x ^ 2) / (1 - x) ^ 10. ● a(n)= binomial(n + 7, 7) * (4 * n ^ 2 + 23 * n + 18) / 18. ●

▶ [A118676] 0,20,161,237,341,1140,1580,2184,6837,9401,12921,40040,54984,75500,233561,320661,440237,1361484,1869140,2566080,7935501,10894337,14956401,46251680,63497040 ⋆ Nonnegative values x of solutions (x, y) to the Diophantine equation x ^ 2 + (x + 79) ^ 2 = y ^ 2. ● a(n) = 6 * a(n - 3) - a(n - 6) + 158 for n > 6; a(1)=0, a(2)=20, a(3)=161, a(4)=237, a(5)=341, a(6)=1140. ●

▶ [A067534] 1,20,161,900,4225,18196,75185,304836,1225905,4913620,19669121,78697220,314817441,1259308180,5037283345,20149198916,80596879185,322387621716,1289550617185,5158202628740,20632810709441 ⋆ a(n) = 4 ^ n * sum _{ i=1,n } i ^ 4 / 4 ^ i. ● a(1)=1, a(2)=20, a(3)=161, a(4)=900, a(5)=4225, a(6)=18196, a(n)= 9 * a(n - 1) - 30 * a(n - 2) + 50 * a(n - 3) - 45 * a(n - 4) + 21 * a(n - 5) - 4 * a(n - 6). - _ Harvey P. Dale _ , Jul 15 2012 ●

▶ [A056114] 1,20,165,880,3575,12012,35035,91520,218790,486200,1016158,2015520,3821090,6963880,12257850,20920064,34730575,56241900,89049675,138138000,210315105,314757300,463681725,673171200,964177500 ⋆ Expansion of (1 + 9 * x) / (1 - x) ^ 11. ● a(n) = (n + 1) * binomial(n + 9, 9). ● a(n) = 10 * binomial(n + 10,10) - 9 * binomial(n + 9,9). ●

▶ [A292281] 1,20,167,867,3322,10309,27410,64770,139479,278674,523457,933725,1594008,2620411,4168756,6444020,9711165,14307456,20656363,29283143,40832198,56086305,75987814,101661910,134442035 ⋆ Number of magic labelings of the prism graph I X C _ 6 having magic sum n. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>7. ●

▶ [A056932] 1,20,168,887,3490,11196,30900,75966,170379,354640,693836,1288365,2287844,3908776,6456600,10352796,16167765,24660252,36824128,53943395,77656326,110029700,153644140,211691610,288086175 ⋆ Antichains (or order ideals) in the poset 2 * 2 * 2 * n or size of the distributive lattice J(2 * 2 * 2 * n). ● a(n) = 48 * C(n + 8, 8) - 96 * C(n + 7, 7) + 63 * C(n + 6, 6) - 15 * C(n + 5, 5) + C(n + 4, 4). ●

▶ [A304508] 20,170,455,875,1430,2120,2945,3905,5000,6230,7595,9095,10730,12500,14405,16445,18620,20930,23375,25955,28670,31520,34505,37625,40880 ⋆ a(n) = 5 * (3 * n + 1) * (9 * n + 8) / 2 (n>=0). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>2. ●

▶ [A056128] 1,20,174,988,4277,15288,47320,130832,330174,772616,1696396,3527160,6995534,13312768,24426552,43385360,74847175,125777340,206390730,331405620,521690715,806403000,1225732560,1834391520,2706007980 ⋆ a(n) = (9 * n + 11) * binomial(n + 10, 10) / 11. ● a(n) = (9 * n + 11) * binomial(n + 10, 10) / 11. ● a(n) = 9 * binomial(n + 11,11) - 8 * binomial(n + 10,10). - _ G. C. Greubel _ , Jan 18 2020 ●

▶ [A027791] 20,175,840,2940,8400,20790,46200,94380,180180,325325,560560,928200,1485120,2306220,3488400,5155080,7461300,10599435,14805560,20366500,27627600,37001250,48976200,64127700,83128500 ⋆ a(n) = 5 * (n + 1) * binomial(n + 3,6). ● a(n) = C(n + 1, 4) * C(n + 3, 3) - _ Zerinvary Lajos _ , May 10 2005; corrected by _ R. J. Mathar _ , Mar 16 2016 ●

▶ [A047819] 1,20,175,980,4116,14112,41580,108900,259545,572572,1184183,2318680,4331600,7768320,13441968,22535064,36729945,58373700,90684055,138003404,206108980,302588000,437287500,622849500,875343105 ⋆ a(n) = Product _{ i=1..n } ((i + 3) * (i + 4) * (i + 5)) / (i * (i + 1) * (i + 2)). ● a(n) = C(n + 3,n + 2) * C(n + 4,n + 1) * C(n + 5,n) / 12. - _ Zerinvary Lajos _ , May 29 2007 ● a(n - 3) = (1 / 24) * Sum _{ 1 <= x _ 1, x _ 2, x _ 3 <= n } (det V(x _ 1,x _ 2,x _ 3)) ^ 2 = (1 / 24) * Sum _ { 1 <= i,j,k <= n } ((i - j)(i - k)(j - k)) ^ 2, where V(x _ 1,x _ 2,x _ 3) is the Vandermonde matrix of order 3. - _ Peter Bala _ , Sep 21 2007 ● a(n) = - a(- 6 - n) for all n in Z. - _ Michael Somos _ , Dec 26 2016 ●

▶ [A361609] 1,20,180,1264,7808,44544,240640,1249280,6291456,30932992,149159936,707788800,3313500160,15334375424,70262980608,319169757184,1438814044160,6442450944000,28673201668096,126924873531392,559101662724096,2451910929940480,10709243254538240,46601700831657984 ⋆ a(n) = 4 ^ n * (1 + (23 / 8) * n + (9 / 8) * n ^ 2). ● a(n) = 12 * a(n - 1) - 48 * a(n - 2) + 64 * a(n - 3). ●

▶ [A177073] 20,182,506,992,1640,2450,3422,4556,5852,7310,8930,10712,12656,14762,17030,19460,22052,24806,27722,30800,34040,37442,41006,44732,48620 ⋆ a(n) = (9 * n + 4) * (9 * n + 5). ● a(n) = 162 * n + a(n - 1) with n>0, a(0)=20. ● a(0)=20, a(1)=182, a(2)=506, a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A210429] 0,1,20,189,1100,4615,15372,43219,106808,238581,491380,946913,1726308,3002987,5018092,8098695,12679024,19324937,28761876,41906533,59902460,84159855,116399756,158702875,213563304 ⋆ Number of semistandard Young tableaux over all partitions of 7 with maximal element <= n. ● a(n) = n * (180 + (637 + (385 + 58 * n ^ 2) * n ^ 2) * n ^ 2) / 1260. ●

▶ [A232224] 0,0,0,1,20,195,1430,9009,51688,278460,1434120,7141530,34648856,164663785,769491450,3546222225,16152872400,72846725160,325722299760,1445598337950,6373942543800,27942072562950,121863923024844,529043313674106,2287209524819120 ⋆ Number of ways of arranging n chords on a circle (handshakes between 2n people across a table) with exactly 3 simple intersections. ● a(n) = [x ^ (2n)] (1 - sqrt(1 - 4 * x ^ 2)) ^ 6 * ((1 - x ^ 2) * sqrt(1 - 4 * x ^ 2) + 7 * x ^ 2 - 26 * x ^ 4) / (64 * x ^ 6 * sqrt(1 - 4 * x ^ 2) ^ 5). - _ Michel Marcus _ , Sep 30 2015 ●

▶ [A035474] 1,20,200,1340,6800,29028,108120,355980,1047840,2793140,6830056,15502300,32993200,66410500,127335800,233975084,414071360,708767060,1177632520,1905107580,3008636112,4648808100,7041860760,10474929100,15324477280 ⋆ Coordination sequence for lattice D *_ 10 (with edges defined by l _ 1 norm = 1). ● a(m) = sum(2 ^ k * binomial(n, k) * binomial(m - 1, k - 1), k=0..n) + 2 ^ n * binomial((n + 2 * m) / 2 - 1, n - 1), where n=10, a(0)=1. ●

▶ [A099197] 0,1,20,201,1360,7001,29364,104881,329024,927441,2390004,5707449,12767184,26986089,54284244,104535009,193664256,346615329,601446996,1014889769,1669752016,2684641785,4226553716,6526963345,9902174016 ⋆ a(n) = (n ^ 2) * (2 * n ^ 8 + 120 * n ^ 6 + 1806 * n ^ 4 + 7180 * n ^ 2 + 5067) / 14175. ● a(n) = (n ^ 2) * (2 * n ^ 8 + 120 * n ^ 6 + 1806 * n ^ 4 + 7180 * n ^ 2 + 5067) / 14175. ●

▶ [A094311] 1,20,210,1309,5720,19536,55825,139490,314019,650440,1258796,2302455,4015570,6724004,10870035,17041156,26003285,38738700,56489014,80803505,113593116,157190440,214416005,288651174,383917975 ⋆ n(1 + n ^ 2)((2 + n ^ 2) ^ 2 - n ^ 2) / 16. ● a(1)=1, a(2)=20, a(3)=210, a(4)=1309, a(5)=5720, a(6)=19536, a(7)=55825, a(8)=139490, a(n)=8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a (n - 8) [From Harvey P. Dale, Oct 17 2011] ●

▶ [A010972] 1,20,210,1540,8855,42504,177100,657800,2220075,6906900,20030010,54627300,141120525,347373600,818809200,1855967520,4059928950,8597496600,17672631900,35345263800,68923264410,131282408400,244662670200,446775310800,800472431850 ⋆ a(n) = binomial(n,19). ● a(n + 18) = n * (n + 1) * (n + 2) * (n + 3) * (n + 4) * (n + 5) * (n + 6) * (n + 7) * (n + 8) * (n + 9) * (n + 10) * (n + 11) * (n + 12) * (n + 13) * (n + 14) * (n + 15) * (n + 16) * (n + 17) * (n + 18) / 19!. - _ Artur Jasinski _ , Dec 02 2007; _ R. J. Mathar _ , Jul 07 2009 ● a(n) = n / (n - 19) * a(n - 1), n > 19. - _ Vincenzo Librandi _ , Mar 26 2011 ●

▶ [A007744] 1,20,210,1680,11550,72072,420420,2333760,12471030,64664600,327202876,1622493600,7909656300,38003792400,180324117000,846321189120,3934071152550,18132120329400,82937661506700 ⋆ Expansion of (1 + 6 * x) / (1 - 4 * x) ^ (7 / 2). ● a(n) = binomial(2n + 3, n) * binomial(n + 3, 3). - _ Paul Barry _ , May 02 2005 ●

▶ [A121204] 0,0,20,212,1768,13672,102012,745404,5374160,38400464,272709604,1928498596,13597146552,95668307256,672119557196,4717043931788,33080342678944,231867574534048,1624598900644788,11379821699044980 ⋆ - 2n + 7 ^ n - 5 ^ n. ● a(n) = 14 * a(n - 1) - 60 * a(n - 2) + 82 * a(n - 3) - 35 * a(n - 4). - _ Vincenzo Librandi _ , Feb 26 2013 ●

▶ [A140236] 0,1,20,220,1540,7770,30856,102340,295240,762355,1798940,3939936,8104460,15803060,29426320,52636760,90889616,152112005,247574180,392991060,609896980,927341646,1383960600,2030479100,2932714200 ⋆ Double tetrahedral numbers (or double pyramidal numbers): a(n) = k(k + 1)(k + 2) / 6 where k = n(n + 1)(n + 2) / 6. ● a(n) = (n * (1 + n) * (2 + n) * (3 + n) * (2 + n ^ 2) * (12 + n * (1 + n) * (2 + n))) / 1296. ●

▶ [A140354] 1,20,220,1760,11440,64064,320320,1464320,6223360,24893440,94595072,343982080,1203937280,4074864640,13388840960,42844291072,133888409600,409541017600,1228623052800,3621204787200,10501493882880,30004268236800 ⋆ a(n) = binomial(n + 9,9) * 2 ^ n. ● a(0)=1, a(1)=20, a(2)=220, a(3)=1760, a(4)=11440, a(5)=64064, a(6)=320320, a(7)=1464320, a(8)=6223360, a(9)=24893440; for n>9, a(n) = 20 * a(n - 1) - 180 * a(n - 2) + 960 * a(n - 3) - 3360 * a(n - 4) + 8064 * a(n - 5) - 13440 * a(n - 6) + 15360 * a(n - 7) - 11520 * a(n - 8) + 5120 * a(n - 9) - 1024 * a(n - 10). - _ Harvey P. Dale _ , Jul 18 2011 ● a(n) = Sum _{ i=9..n + 9 } binomial(i,9) * binomial(n + 9,i). - _ Bruno Berselli _ , Mar 23 2018 ●

▶ [A155673] 1,20,220,2330,24640,261050,2771560,29487170,314358880,3357947690,35937424600,385311670610,4138428376720,44522712143930,479749833583240,5177248169415650,55949729863572160,605447028499293770 ⋆ 11 ^ n + 10 ^ n - 1 ^ n ● a(n)=21 * a(n - 1) - 110 * a(n - 2) - 90 with a(0)=1, a(1)=20 [From _ Vincenzo Librandi _ , Jul 21 2010] ●

▶ [A112503] 1,20,225,1882,13070,79872,444902,2311828,11388999,53820068,246112783,1096379070,4782801180,20515294320,86808499020,363304109640,1507010836605,6206407299540,25412183425165,103563957886370 ⋆ Fourth column of triangle A112500. ● a(n) = 7813 / 324 + (2251 / 432) * (n + 1) + (31 / 36) * binomial(n + 2, 2) + (1 / 12) * binomial(n + 3, 3) + (- 1344 - 256 * (n + 1) - 64 * binomial(n + 2, 2)) * 2 ^ n + (6561 / 4 - (6561 / 16) * (n + 1)) * 3 ^ n + (3278 / 81) * 4 ^ n, n>=0 (from partial fractions for g.f.). ●

▶ [A007160] 1,20,225,1925,14014,91728,556920,3197700,17587350,93486536,483367885,2442687975,12109051500,59053512000,286809030560,1348824395160,6338392712550,29503515951000,136173391604250 ⋆ Number of diagonal dissections of a convex (n + 6) - gon into n regions. ● a(n) = binomial(n + 3, 4) * binomial(2n + 4, n - 1) / n. ●

▶ [A073386] 1,20,230,1980,14135,88264,497860,2591160,12630475,58295380,256887774,1087825180,4449607565,17654254880,68177369040,257006941664,948023601910,3428968838680,12182953719860 ⋆ Ninth convolution of A000129(n + 1) (generalized (2,1) - Fibonacci, called Pell numbers), n>=0, with itself. ● a(n) = Sum _{ k=0..floor(n / 2) } 2 ^ (n - 2 * k) * binomial(n - k + 9, 9) * binomial(n - k, k). ● a(n) = F’’’’’’’’’(n + 10, 2) / 9!, that is, 1 / 9! times the 9th derivative of the (n + 10)th Fibonacci polynomial evaluated at x=2. - _ T. D. Noe _ , Jan 19 2006 ●

▶ [A074334] 0,1,20,234,2144,16750,117432,761460,4654848,27173718,152867000,834212236,4438175040,23108423884,118111709744,594059985000,2946077521920,14429322555750,69892354873080,335194270938780,1593211647720000,7511501237722020,35153884344493200 ⋆ a(n) = Sum _{ r=1..n } r ^ 4 * binomial(n,r) ^ 2. ● a(n) = (n ^ 2 * (n ^ 3 + n ^ 2 - 3 * n - 1) / (2 * (2 * n - 3))) * binomial(2 * n - 2, n - 1). ●

▶ [A073398] 1,20,240,2200,16940,115104,711040,4072640,21930480,112157760,549010176,2587777920,11802273600,52287866880,225756241920,952486588416,3935984616960,15961485957120,63628396339200,249702113464320,965924035135488,3687247950397440 ⋆ Ninth convolution of A002605(n) (generalized (2,2) - Fibonacci), n>=0, with itself. ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n - k + 9, 9) * binomial(n - k, k) * 2 ^ (n - k). ●

▶ [A040075] 1,20,240,2240,17920,129024,860160,5406720,32440320,187432960,1049624576,5725224960,30534533120,159719096320,821412495360,4161823309824,20809116549120,102821517066240,502682972323840,2434043865989120,11683410556747776,55635288365465600 ⋆ 5 - fold convolution of A000302 (powers of 4); expansion of 1 / (1 - 4 * x) ^ 5. ● a(n) = binomial(n + 4, 4) * 4 ^ n. ●

▶ [A123954] 0,0,0,0,1,20,244,2352,19725,150996,1084600,7438112,49268857,317763732,2007173532,12470499600,76456454725,463727364692,2787905507488,16639142746368,98709193239921,582627136604436,3424383528301252 ⋆ Expansion of g.f.: x ^ 5 / ((1 - 3 * x) * (1 - 4 * x) * (1 - 5 * x) * (1 - 8 * x + 13 * x ^ 2)). ● a(n) = 20 * a(n - 1) - 156 * a(n - 2) + 592 * a(n - 3) - 1091 * a(n - 4) + 780 * a(n - 5). ●

► [A081143] 0,0,0,1,20,250,2500,21875,175000,1312500,9375000,64453125,429687500,2792968750,17773437500,111083984375,683593750000,4150390625000,24902343750000,147857666015625,869750976562500,5073547363281250 ⋆ 5th binomial transform of (0,0,0,1,0,0,0,0,.....). ● a(n) = 20 * a(n - 1) - 150 * a(n - 2) + 500 * a(n - 3) - 625 * a(n - 4), with a(0)=a(1)=a(2)=0, a(3)=1. ● a(n) = 5 ^ (n - 3) * binomial(n,3). ●

► [A306290] 1,20,252,2860,30940,325584,3364900,34337160,347103900,3483301360,34754081648,345120260940,3413758188932,33655718658800,330869721936600,3244839440755920,31754250910172700,310165459118369712,3024542552887591120,29449493278116018800,286360607519186119920 ⋆ a(n) = 1 / (Integral _{ x= 0..1 } (x ^ 3 - x ^ 4) ^ n dx). ● a(n) = 1 / Beta(3 * n + 1,n + 1) = (4 * n + 1)! / (n! * (3 * n)!). ●

► [A028032] 1,20,255,2650,24521,210840,1725235,13631750,104995341,793395460,5908353815,43502236050,317443722961,2299938136880,16567618807995,118785894675550,848393691575381,6040178746163100,42890062369599775,303884399490790250,2149118961443240601 ⋆ Expansion of 1 / ((1 - 3x)(1 - 4x)(1 - 6x)(1 - 7x)). ● a(n) = (7 ^ (n + 3) - 2 * 6 ^ (n + 3) + 2 * 4 ^ (n + 3) - 3 ^ (n + 3)) / 12. - _ Yahia Kahloune _ , May 30 2013 ●

► [A025986] 1,20,257,2704,25389,221676,1841449,14758568,115171397,880623172,6627177921,49248518592,362296167325,2643446894108,19158543110873,138087153497176,990728497913973,7081081591668084 ⋆ Expansion of 1 / ((1 - 2x)(1 - 5x)(1 - 6x)(1 - 7x)). ● a(n) = - 2 * 2 ^ n / 15 + 125 * 5 ^ n / 6 - 54 * 6 ^ n / 1 + 343 * 7 ^ n / 10. - _ R. J. Mathar _ , Jun 20 2013 ●

► [A028027] 1,20,257,2716,25809,230244,1975009,16524332,136058417,1108775668,8975764161,72350153148,581586939025,4666887733892,37407122372513,299621333407564,2398809490126833,19199738367402516 ⋆ Expansion of 1 / ((1 - 3 * x) * (1 - 4 * x) * (1 - 5 * x) * (1 - 8 * x)). ● a(n) = (8 ^ (n + 3) - 10 * 5 ^ (n + 3) + 15 * 4 ^ (n + 3) - 6 * 3 ^ (n + 3)) / 60. - _ Yahia Kahloune _ , May 25 2013 ● a(n) = 20 * a(n - 1) - 143 * a(n - 2) + 436 * a(n - 3) - 480 * a(n - 4) for n > 3. - _ Colin Barker _ , Oct 23 2019 ●

► [A025966] 1,20,260,2800,27216,248640,2182720,18656000,156544256,1296655360,10641146880,86744985600,703688298496,5688011079680,45855653642240,368956766617600,2964331947687936,23790756829593600 ⋆ Expansion of 1 / ((1 - 2x)(1 - 4x)(1 - 6x)(1 - 8x)). ● a(n) = (- 2 ^ n + 24 * 4 ^ n - 81 * 6 ^ n + 64 * 8 ^ n) / 3!. ●

► [A041764] 20,261,542,803,2951,3754,14213,17967,50147,669878,26845267,349658349,726161965,1075820314,3953622907,5029443221,19041952570,24071395791,67184744152,897473069767,35966107534832,468456871022583,97287984957999 8,1441336720602581 ⋆ Numerators of continued fraction convergents to sqrt(403). ● a(n) = 1339756 * a(n - 10) - a(n - 20) for n>19. - _ Bruno Berselli _ , Nov 07 2013 ●

► [A022111] 1,20,263,2878,28449,264048,2350651,20332466,172311557,1438844836,11885079999,97387603014,793247778025,6432389826584,51985193621507,419076145997722,3371967484999053,27092843456412492 ⋆ Expansion of 1 / ((1 - x)(1 - 5x)(1 - 6x)(1 - 8x)). ● a(n) = 256 * 8 ^ n / 21 - 108 * 6 ^ n / 5 + 125 * 5 ^ n / 12 - 1 / 140. - _ R. J. Mathar _ , Mar 11 2011 ● a(0)=1, a(1)=20, a(2)=263, a(3)=2878, a(n)=20 * a(n - 1) - 137 * a(n - 2) + 358 * a(n - 3) - 240 * a(n - 4). - _ Harvey P. Dale _ , Nov 04 2012 ●

► [A025943] 1,20,263,2890,28833,271320,2457211,21670550,187473605,1598611300,13480822719,112690635330,935435043817,7720854845360,63428474542787,519059289782830,4233894901355469,34441103679651900 ⋆ Expansion of 1 / ((1 - 2x)(1 - 3x)(1 - 7x)(1 - 8x)). ● a(n) = - 2 ^ (n + 2) / 15 + 4 * 8 ^ (n + 2) / 15 + 3 ^ (n + 3) / 20 - 7 ^ (n + 3) / 20. - _ R. J. Mathar _ , Jun 04 2013 ●

► [A025961] 1,20,263,2902,29289,281472,2630731,24196634,220500797,1998686404,18061169919,162923877246,1468215185425,13223572329416,119060866122227,1071793518338338,9647378871105573,86832630229860108 ⋆ Expansion of 1 / ((1 - 2x)(1 - 4x)(1 - 5x)(1 - 9x)). ● a(0)=1, a(1)=20, a(2)=263, a(3)=2902, a(n)=20 * a(n - 1) - 137 * a(n - 2) + 382 * a(n - 3) - 360 * a(n - 4). [_ Harvey P. Dale _ , Dec 08 2011] ● a(n) = - 4 * 2 ^ n / 21 + 32 * 4 ^ n / 5 - 125 * 5 ^ n / 12 + 729 * 9 ^ n / 140. - _ R. J. Mathar _ , Jun 20 2013 ●

► [A021854] 1,20,265,2940,29601,280740,2558905,22683980,197048401,1685772660,14253277545,119401486620,992861126401,8206523123780,67497981692185,552905862106860,4513706683463601,36742894880462100 ⋆ Expansion of 1 / ((1 - x)(1 - 4x)(1 - 7x)(1 - 8x)). ● a(n) = (9 * 8 ^ (n + 3) - 14 * 7 ^ (n + 3) + 7 * 4 ^ (n + 3) - 2) / 252. - _ Yahia Kahloune _ , Jul 05 2013 ●

► [A025939] 1,20,265,2960,30301,295340,2795905,25996520,238988101,2181067460,19810829545,179385327680,1620996705901,14628147660380,131888407103185,1188406175868440,10704118783463701,96387848642218100 ⋆ Expansion of 1 / ((1 - 2x)(1 - 3x)(1 - 6x)(1 - 9x)). ● a(n) = - 6 ^ (n + 1) - 2 ^ (n + 1) / 7 + 3 ^ (n + 1) / 2 + 9 ^ (n + 2) / 14. - _ R. J. Mathar _ , Jun 04 2013 ●

► [A021824] 1,20,267,3010,31073,304920,2901319,27075950,249555405,2281579300,20749095731,188036746170,1700122392697,15347941075760,138412864844703,1247405586235270,11236794818538149,101192043527859900 ⋆ Expansion of 1 / ((1 - x)(1 - 4x)(1 - 6x)(1 - 9x)). ● a(n) = (9 ^ (n + 3) - 4 * 6 ^ (n + 3) + 4 ^ (n + 4) - 1) / 120. - _ Yahia Kahloune _ , Jul 05 2013 ●

► [A019928] 1,20,269,3040,31161,300300,2775109,24887960,218303921,1882786180,16026538749,135010883280,1127921219881,9359429537660,77233958267189,634411837477000,5191228487083041,42342127346986740 ⋆ Expansion of 1 / ((1 - 5x)(1 - 7x)(1 - 8x)). ● a(n) = 25 * 5 ^ n / 6 - 49 * 7 ^ n / 2 + 64 * 8 ^ n / 3. - _ R. J. Mathar _ , Jun 29 2013 ● a(0)=1, a(1)=20, a(2)=269; for n>2, a(n) = 20 * a(n - 1) - 131 * a(n - 2) + 280 * a(n - 3). - _ Vincenzo Librandi _ , Jul 03 2013 ● a(n) = 15 * a(n - 1) - 56 * a(n - 2) + 5 ^ n. - _ Vincenzo Librandi _ , Jul 03 2013 ●

► [A025934] 1,20,269,3100,33261,344580,3507709,35392940,355527821,3563328340,35673709149,356939747580,3570412342381,35709202523300,357117435046589,3571301442515020,35713650014404941,357139678477481460 ⋆ Expansion of 1 / ((1 - 2x)(1 - 3x)(1 - 5x)(1 - 10x)). ● a(n) = (3 * 10 ^ (n + 3) - 28 * 5 ^ (n + 3) + 60 * 3 ^ (n + 3) - 35 * 2 ^ (n + 3)) / 840. - _ Yahia Kahloune _ , May 22 2013 ●

► [A021594] 1,20,270,3100,32711,328440,3195340,30437000,285695421,2653625260,24459281210,224170373700,2045792060131,18609941810480,168874176353880,1529560509125200,13833895100278841,124980009723284100 ⋆ Expansion of 1 / ((1 - x)(1 - 3x)(1 - 7x)(1 - 9x)). ● a(n) = (9 ^ (n + 3) - 2 * 7 ^ (n + 3) + 2 * 3 ^ (n + 3) - 1) / 96. - _ Yahia Kahloune _ , May 23 2013 ● a(0)=1, a(1)=20; for n>1, a(n) = 16 * a(n - 1) - 63 * a(n - 2) + (3 ^ n - 1) / 2. - _ Vincenzo Librandi _ , Jul 11 2013 ● a(0)=1, a(1)=20, a(2)=270, a(3)=3100; for n>3, a(n) = 20 * a(n - 1) - 130 * a(n - 2) + 300 * a(n - 3) - 189 * a(n - 4). - _ Vincenzo Librandi _ , Jul 11 2013 ●

► [A019793] 1,20,271,3110,32641,324800,3125011,29414090,272851381,2506362980,22871235751,207773763470,1881803862121,17008495407560,153516126074491,1384313656687250,12474986630176861,112372624930994540 ⋆ Expansion of 1 / ((1 - 5x)(1 - 6x)(1 - 9x)). ● a(n) = 25 * 5 ^ n / 4 - 12 * 6 ^ n + 27 * 9 ^ n / 4. - _ R. J. Mathar _ , Jun 29 2013 ● a(0)=1, a(1)=20, a(2)=271; for n>2, a(n) = 20 * a(n - 1) - 129 * a(n - 2) + 270 * a(n - 3). - _ Vincenzo Librandi _ , Jul 03 2013 ● a(n) = 15 * a(n - 1) - 54 * a(n - 2) + 5 ^ n. - _ Vincenzo Librandi _ , Jul 03 2013 ●

► [A021774] 1,20,271,3150,34041,354480,3620611,36607010,368161981,3692428740,36979730151,370080107670,3702237477121,37029646251800,370333177834891,3703516786589130,37036098633715461,370365663082767660 ⋆ Expansion of 1 / ((1 - x)(1 - 4x)(1 - 5x)(1 - 10x)). ● a(n) = - 1 / 108 + 2 ^ (2n + 5) / 9 - 5 ^ (n + 2) / 4 + 10 ^ (n + 2) / 27. [_ Bruno Berselli _ , May 08 2013] ●

► [A019613] 1,20,273,3172,33809,342132,3348241,32033924,301669137,2808831124,25937190929,238042888356,2174659962385,19797924540596,179763483454737,1628947562960068,14738065844679953,133185374228264148 ⋆ Expansion of 1 / ((1 - 4 * x) * (1 - 7 * x) * (1 - 9 * x)). ● a(n) = 16 * 4 ^ n / 15 - 49 * 7 ^ n / 6 + 81 * 9 ^ n / 10. - _ R. J. Mathar _ , Jun 29 2013 ● a(0)=1, a(1)=20, a(2)=273; for n>2, a(n) = 20 * a(n - 1) - 127 * a(n - 2) + 252 * a(n - 3). - _ Vincenzo Librandi _ , Jul 03 2013 ● a(n) = 16 * a(n - 1) - 63 * a(n - 2) + 4 ^ n. - _ Vincenzo Librandi _ , Jul 03 2013 ●

► [A021514] 1,20,273,3208,35069,368988,3800761,38676176,390782997,3931986916,39464899409,395519441304,3960417893485,39635522209004,396543288909417,3966561311533792,39672383714545733,396764460934414452 ⋆ Expansion of 1 / ((1 - x)(1 - 3x)(1 - 6x)(1 - 10x)). ● a(n) = (10 ^ (n + 4) - 7 * 6 ^ (n + 4) + 20 * 3 ^ (n + 4) - 28) / 2520. [_ Yahia Kahloune _ , Jun 19 2013] ● a(0)=1, a(1)=20; for n>1, a(n) = 16 * (n - 1) - 60 * a(n - 2) + (3 ^ n - 1) / 2. - _ Vincenzo Librandi _ , Jul 10 2013 ● a(0)=1, a(1)=20, a(2)=273, a(3)=3208; for n>3, a(n) = 20 * a(n - 1) - 127 * a(n - 2) + 288 * a(n - 3) - 180 * a(n - 4). - _ Vincenzo Librandi _ , Jul 10 2013 ●

► [A021264] 1,20,275,3250,35481,369240,3722575,36698750,355853861,3407206660,32301037275,303798758250,2838904214641,26387861071280,244192534790375,2251347094369750,20691038099509821,189650656897307100 ⋆ Expansion of 1 / ((1 - x)(1 - 2x)(1 - 8x)(1 - 9x)). ● a(0)=1, a(1)=20, a(2)=275; a(n)=(3 * 9 ^ (n + 3) - 4 * 8 ^ (n + 3) + 2 ^ (n + 5) - 3) / 168. [_ Yahia Kahloune _ , Jun 21 2013] ● a(0)=1, a(1)=20, a(2)=275, a(3)=3250; for n>3, a(n) = 20 * a(n - 1) - 125 * a(n - 2) + 250 * a(n - 3) - 144 * a(n - 4). - _ Vincenzo Librandi _ , Jul 08 2013 ● a(0)=1, a(1)=20; for n>1, a(n) = 17 * a(n - 1) - 72 * a(n - 2) + 2 ^ n - 1. - _ Vincenzo Librandi _ , Jul 08 2013 ●

► [A025928] 1,20,275,3310,37761,421440,4662175,51395570,565817021,6225908260,68492850075,753453315030,8288115908281,91169797529480,1002869877293975,11031577111093690,121347382194479541 ⋆ Expansion of 1 / ((1 - 2x)(1 - 3x)(1 - 4x)(1 - 11x)). ● a(0)=1, a(1)=20, a(2)=275, a(3)=3310, a(n)=20 * a(n - 1) - 125 * a(n - 2) + 310 * a(n - 3) - 264 * a(n - 4). - _ Harvey P. Dale _ , May 24 2012 ● a(n)=(11 ^ (n + 3) - 9 * 4 ^ (n + 4) + 7 * 3 ^ (n + 5) - 7 * 2 ^ (n + 5)) / 504. - _ Yahia Kahloune _ , May 20 2013. ●

► [A019483] 1,20,276,3280,36176,383040,3962176,40428800,409195776,4121666560,41395966976,415039672320,4156893515776,41607983022080,416314385842176,4164552265891840,41653977398706176,416590519605657600 ⋆ Expansion of 1 / ((1 - 4x)(1 - 6x)(1 - 10x)). ● a(n) = 4 * 4 ^ n / 3 - 9 * 6 ^ n / 2 + 25 * 10 ^ n / 6. - _ R. J. Mathar _ , Jun 29 2013 ● a(0)=1, a(1)=20, a(2)=276; for n>2, a(n) = 20 * a(n - 1) - 124 * a(n - 2) + 240 * a(n - 3). - _ Vincenzo Librandi _ , Jul 03 2013 ● a(n) = 16 * a(n - 1) - 60 * a(n - 2) + 4 ^ n. - _ Vincenzo Librandi _ , Jul 03 2013 ●

► [A018056] 1,20,277,3296,36169,377804,3819229,37727192,366384337,3512195588,33327711781,313693195088,2933189599705,27278314742972,252541704234733,2329170324845384,21412892860517473,196318915369069556 ⋆ Expansion of 1 / ((1 - 3 * x) * (1 - 8 * x) * (1 - 9 * x)). ● a(0)=1, a(1)=20, a(2)=277; for n>2, a(n) = 20 * a(n - 1) - 123 * a(n - 2) + 216 * a(n - 3). - _ Vincenzo Librandi _ , Jul 02 2013 ● a(n) = 17 * a(n - 1) - 72 * a(n - 2) + 3 ^ n. - _ Vincenzo Librandi _ , Jul 02 2013 ● a(n) = (5 * 9 ^ (n + 2) - 6 * 8 ^ (n + 2) + 3 ^ (n + 2)) / 30. [_ Yahia Kahloune _ , Jul 06 2013] ●

► [A021234] 1,20,277,3324,37149,398916,4181269,43157708,440992717,4475837652,45219751941,455427151452,4576878947005,45927041513828,460378179477493,4611536145214956,46169641905360813,462076382226349044 ⋆ Expansion of 1 / ((1 - x)(1 - 2x)(1 - 7x)(1 - 10x)). ● a(n) = (5 * 10 ^ (n + 3) - 12 * 7 ^ (n + 3) + 27 * 2 ^ (n + 3) - 20) / 1080. [_ Yahia Kahloune _ , Jul 07 2013] ● a(0)=1, a(1)=20, a(2)=277, a(3)=3324; for n>3, a(n) = 20 * a(n - 1) - 123 * a(n - 2) + 244 * a(n - 3) - 140 * a(n - 4). - _ Vincenzo Librandi _ , Jul 08 2013 ● a(0)=1, a(1)=20; for n>1, a(n) = 17 * a(n - 1) - 70 * a(n - 2) + 2 ^ n - 1. - _ Vincenzo Librandi _ , Jul 08 2013 ●

► [A021474] 1,20,278,3388,39039,438648,4872316,53834696,593387597,6533322796,71896935474,791018479524,8701965018475,95725426313264,1052998752170552,11583081609022672,127414374439552473 ⋆ Expansion of 1 / ((1 - x)(1 - 3x)(1 - 5x)(1 - 11x)). ● a(0)=1, a(1)=20; for n>1, a(n) = 16 * a(n - 1) - 55 * a(n - 2) + (3 ^ n - 1) / 2. - _ Vincenzo Librandi _ , Jul 10 2013 ● a(0)=1, a(1)=20, a(2)=278, a(3)=3388; for n>3, a(n) = 20 * a(n - 1) - 122 * a(n - 2) + 268 * a(n - 3) - 165 * a(n - 4). - _ Vincenzo Librandi _ , Jul 10 2013 ● a(n) = (11 ^ (n + 3) - 10 * 5 ^ (n + 3) + 15 * 3 ^ (n + 3) - 6) / 480. [_ Yahia Kahloune _ , Sep 16 2013] ●

► [A017999] 1,20,279,3370,37841,407640,4281739,44256950,452652981,459713386

0,46465625999,468116448930,4705386343321,47223418005680,473421066847059,4742518890351310,47483346499724861,475240568299871100,475525540650448891 9,4757250213074759690 ⋆ Expansion of 1 / ((1 - 3x)(1 - 7x)(1 - 10x)). ● a(n) = (4 * 10 ^ (n + 2) - 7 ^ (n + 3) + 3 ^ (n + 3)) / 84. - _ Yahia Kahloune _ , Jun 30 2013 ● a(0)=1, a(1)=20, a(2)=279; for n>2, a(n) = 20 * a(n - 1) - 121 * a(n - 2) + 210 * a(n - 3). - _ Vincenzo Librandi _ , Jul 02 2013 ● a(n) = 17 * a(n - 1) - 70 * a(n - 2) + 3 ^ n. - _ Vincenzo Librandi _ , Jul 02 2013 ●

► [A028294] 1,20,281,1357,4281,10666,22825,43891,77937,130096,206681,315305,465001,666342,931561,1274671,1711585,2260236,2940697,3775301,4788761,6008290,7463721,9187627,11215441 ⋆ a(n) = n ^ 5 - (65 / 6) * n ^ 4 + (173 / 6) * n ^ 3 + (148 / 3) * n ^ 2 - (862 / 3) * n + 265. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). - _ Wesley Ivan Hurt _ , Aug 28 2015 ●

► [A019040] 1,20,281,3460,40161,453300,5048041,55853540,616079921,6785596180,74686191801,821775473220,9040683799681,99453356876660,109401636947956 1,120343283571985 00,132378357688767441 ⋆ Expansion of 1 / ((1 - 4x)(1 - 5x)(1 - 11x)). ● a(n) = 16 * 4 ^ n / 7 - 25 * 5 ^ n / 6 + 121 * 11 ^ n / 42. - _ R. J. Mathar _ , Jun 29 2013 ● a(0)=1, a(1)=20, a(2)=281; for n>2 a(n) = 20 * a(n - 1) - 119 * a(n - 2) + 220 * a(n - 3). - _ Vincenzo Librandi _ , Jul 02 2013 ● a(n) = 16 * a(n - 1) - 55 * a(n - 2) + 4 ^ n. - _ Vincenzo Librandi _ , Jul 02 2013 ●

► [A017953] 1,20,283,3518,41209,468608,5247271,58277666,644406997,7108612676,78315612739,862197157094,9488521761265,104399859167624,1148555174389087,1263504727390020 2,138991162189670413 ⋆ Expansion of 1 / ((1 - 3x)(1 - 6x)(1 - 11x)). ● a(0)=1, a(1)=20, a(2)=283; for n>2, a(n) = 20 * a(n - 1) - 117 * a(n - 2) + 198 * a(n - 3). - _ Vincenzo Librandi _ , Jul 02 2013 ● a(n) = 17 * a(n - 1) - 66 * a(n - 2) + 3 ^ n. - _ Vincenzo Librandi _ , Jul 02 2013 ● a(n) = (3 * 11 ^ (n + 2) - 8 * 6 ^ (n + 2) + 5 * 3 ^ (n + 2)) / 120. [_ Yahia Kahloune _ , Jul 06 2013] ●

► [A016317] 1,20,284,3520,40656,450240,4851904,51315200,535521536,5534172160,56773377024,579187015680,5883496124416,59567968993280,601543751942144,6062350015528960,60998800124215296,612990400993689600 ⋆ Expansion of 1 / ((1 - 2x)(1 - 8x)(1 - 10x)). ● a(n) = (75 * 10 ^ n + 2 ^ n - 8 ^ (n + 2)) / 12. ● a(n) = 18 * a(n - 1) - 80 * a(n - 2) + 2 ^ n. ● a(n) = 20 * a(n - 1) - 116 * a(n - 2) + 160 * a(n - 3), n >= 3. (End) ●

► [A021404] 1,20,285,3640,44681,540540,6505045,78138080,937976961,11257033060,135089723405,1621098253320,19453266126841,233439544261580,2801275941271365,33615316957309360,403383826200494321 ⋆ Expansion of 1 / ((1 - x)(1 - 3x)(1 - 4x)(1 - 12x)). ● a(0)=1, a(1)=20, a(2)=285, a(3)=3640, a(n) = 20 * a(n - 1) - 115 * a(n - 2) + 240 * a(n - 3) - 144 * a(n - 4). [_ Harvey P. Dale _ , May 06 2012] ● a(0)=1, a(1)=20; for n>1, a(n) = 16 * a(n - 1) - 48 * a(n - 2) + (3 ^ n - 1) / 2. - _ Vincenzo Librandi _ , Jul 09 2013 ●

► [A016314] 1,20,287,3634,43329,500136,5666179,63480878,706360277,7826457892,86486501751,954119775882,10514695335145,115797293297888,1274719738572203,14028563710395046,154360726917116733 ⋆ Expansion of 1 / ((1 - 2x) * (1 - 7x) * (1 - 11x)). ● a(n) = 4 * 2 ^ n / 45 - 49 * 7 ^ n / 20 + 121 * 11 ^ n / 36. - _ R. J. Mathar _ , Jun 23 2013 ● a(n) = 20 * a(n - 1) - 113 * a(n - 2) + 154 * a(n - 3). ● a(n) = 18 * a(n - 1) - 77 * a(n - 2) + 2 ^ n. (End) ●

► [A021164] 1,20,287,3694,45609,553776,6677779,80295938,964364717,11576444932,138937682871,1667353916982,20008755624625,240107610616088,2881304043028763,34575712094589226,414908863026422133 ⋆ Expansion of 1 / ((1 - x) * (1 - 2 * x) * (1 - 5 * x) * (1 - 12 * x)). ● a(0)=1, a(1)=20; for n>1, a(n) = 17 * a(n - 1) - 60 * a(n - 2) + 2 ^ n - 1. - _ Vincenzo Librandi _ , Jul 07 2013 ● a(0)=1, a(1)=20, a(2)=287, a(3)=3694; for n>3, a(n) = 20 * a(n - 1) - 113 * a(n - 2) + 214 * a(n - 3) - 120 * a(n - 4). - _ Vincenzo Librandi _ , Jul 07 2013 ● a(n) = (6 * 12 ^ (n + 3) - 11 * 5 ^ (n + 4) + 77 * 2 ^ (n + 4) - 105) / 4620. [_ Yahia Kahloune _ , Jul 07 2013] ●

► [A017918] 1,20,289,3740,46321,563300,6797569,81762860,982121041,11790305780,141507994849,1698217742780,20379222467761,244553718979460,2934659879368129,35215994824839500,422592319303230481 ⋆ Expansion of 1 / ((1 - 3x)(1 - 5x)(1 - 12x)). ● a(0)=1, a(1)=20, a(2)=289; for n>2, a(n) = 20 * a(n - 1) - 111 * a(n - 2) + 180 * a(n - 3). - _ Vincenzo Librandi _ , Jul 02 2013 ● a(n) = 17 * a(n - 1) - 60 * a(n - 2) + 3 ^ n. - _ Vincenzo Librandi _ , Jul 02 2013 ● a(n) = (2 * 12 ^ (n + 2) - 9 * 5 ^ (n + 2) + 7 * 3 ^ (n + 2)) / 126. [_ Yahia Kahloune _ , Jul 06 2013] ●

► [A016261] 1,20,291,3730,44681,513240,5730271,62683550,675263061,7188478660,75807419051,793377882570,8251512054241,85374719599280,879483587504631,9026463398652790,92349281698986221,942254646401987100,9591402928728995011,97433737469672066210 ⋆ Expansion of 1 / ((1 - x) * (1 - 9 * x) * (1 - 10 * x)). ● a(n) = (8 * 10 ^ (n + 2) - 9 ^ (n + 3) + 1) / 72. - _ Bruno Berselli _ , Mar 21 2011 ● a(n) = 19 * a(n - 1) - 90 * a(n - 2) + 1, n >= 2. - _ Vincenzo Librandi _ , Mar 21 2011 ●

► [A016309] 1,20,292,3824,47824,585536,7096384,85576448,1029436672,12368356352,148510974976,1782675894272,21395375902720,256764101869568,3081286768672768,36976146501533696,443717989683232768 ⋆ Expansion of 1 / ((1 - 2 * x) * (1 - 6 * x) * (1 - 12 * x)). ● a(n) = 18 * a(n - 1) - 72 * a(n - 2) + 2 ^ n; a(n) = 20 * a(n - 1) - 108 * a(n - 2) + 144 * a(n - 3) for n > 2. - _ Vincenzo Librandi _ , Sep 02 2011 ● a(n) = det(|ps(i + 3,j + 2)|, 1 <= i,j <= n), where ps(n,k) are Legendre - Stirling numbers of the first kind (A129467). - _ Mircea Merca _ , Apr 06 2013 ●

► [A016259] 1,20,293,3808,46569,549708,6346381,72206936,813450257,9101344516,101341923189,1124578223184,12448896999865,137566159357244,1518254091799517,16741005720753352,184472748615956193 ⋆ Expansion of 1 / ((1 - x)(1 - 8x)(1 - 11x)). ● a(n) = (7 * 11 ^ (n + 2) - 10 * 8 ^ (n + 2) + 3) / 210. - _ Bruno Berselli _ , Mar 21 2011 ● a(n) = 19 * a(n - 1) - 88 * a(n - 2) + 1, n >= 2. - _ Vincenzo Librandi _ , Mar 21 2011 ●

► [A016255] 1,20,297,3964,50369,624036,7625689,92469068,1116354417,13443332212,161649541001,1942101373212,23321364646945,279969412942148,3360424215557433,40330629408450796,484006324653740753 ⋆ Expansion of 1 / ((1 - x)(1 - 7x)(1 - 12x)). ● a(0)=1, a(1)=20, a(n) = 19 * a(n - 1) - 84 * a(n - 2) + 1. - _ Vincenzo Librandi _ , Feb 10 2011 ● a(n) = (6 * 12 ^ (n + 2) - 11 * 7 ^ (n + 2) + 5) / 330. - _ Yahia Kahloune _ , Jul 09 2013 ●

► [A250015] 20,300,2040,8840,28860,77700,182000,383760,745380,1355420,2335080,3845400,6095180,9349620,13939680,20272160,28840500,40236300,55161560,74441640,99038940,130067300,168807120,216721200,275471300 ⋆ Number of length 1 + 5 0..n arrays with no six consecutive terms having the maximum of any three terms equal to the minimum of the remaining three terms. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

► [A053541] 1,20,300,4000,50000,600000,7000000,80000000,900000000,10000000000,110000000000,1200000000000,13000000000000,140000000000000,15000000000000000,160000000000000000,1700000000000000000 ⋆ a(n) = n * 10 ^ (n - 1). ● a(n) = 20 * a(n - 1) - 100 * a(n - 2), with a(0)=0, a(1)=1, a(2)=20. ● a(n) = 10 * a(n - 1) + 10 * (n - 1). ● a(n) = Sum _{ k=1..n } k * binomial(n,k) * 9 ^ (n - k). ●

► [A016190] 1,20,301,4040,51001,620060,7352101,85656080,985263601,11225320100,126965305501,1427999420120,15990423157801,178436520564140,1985678518660501,22048354837360160,244384923399813601 ⋆ Expansion of 1 / ((1 - 9x)(1 - 11x)). ● a(n) = (11 ^ (n + 1) - 9 ^ (n + 1)) / 2. - _ Bruno Berselli _ , Feb 09 2011 ● a(n) = 11 * a(n - 1) + 9 ^ n, a(0)=1. ● a(n) = 20 * a(n - 1) - 99 * a(n - 2), a(0)=1, a(1)=20. (End) ●

► [A016188] 1,20,304,4160,54016,680960,8433664,103301120,1256390656,15210905600,183604609024,2211845242880,26610862391296,319880104509440,3842959300624384,46150695979581440,554089826731687936 ⋆ Expansion of 1 / ((1 - 8x) * (1 - 12x)). ● a(n) = 3 * 12 ^ n - 2 * 8 ^ n. - _ Bruno Berselli _ , Feb 09 2011 ● a(n) = 12 * a(n - 1) + 8 ^ n, a(0)=1. - _ Vincenzo Librandi _ , Feb 09 2011 ● a(n) = 20 * a(n - 1) - 96 * a(n - 2), a(0)=1, a(1)=20. - _ Vincenzo Librandi _ , Feb 09 2011 ●

► [A054621] 0,1,20,315,2344,11165,39996,117655,299600,683289,1428580,2783891,5118840,8964085,15059084,24408495,38347936,58619825,87460020,127695979,182857160,257298381,356336860,486403655,655210224 ⋆ Number of ways to color vertices of a heptagon using <= n colors, allowing only rotations. ● a(n) = (1 / 7) * Sum _{ d|7 } phi(d) * n ^ (7 / d) = (1 / 7) * (n ^ 7 + 6 * n). [corrected by _ Klaus Wagner _ , Sep 15 2015] ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8), n >7. - _ Wesley Ivan Hurt _ , Sep 15 2015 ●

► [A229775] 20,322,3232,21331,103222,397460,1287672,3647349,9281272,21642038,46934680,95749927,185397226,343142248,610590224,1049496105,1749325212,2836933738,4488787184,6946186555,10534026910,15683670652,22960578760 ⋆ Number of 3 X 3 0..n arrays with rows in lexicographically nondecreasing order and columns in nonincreasing order. ● a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10) for n>10. ●

► [A187512] 0,0,20,330,1224,2726,4807,7458,10679,14470,18831,23762,29263,35334,41975,49186,56967,65318,74239,83730,93791,104422,115623,127394,139735 ⋆ Number of 7 - step S, E, and NW - moving king's tours on an n X n board summed over all starting positions. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>8. ●

► [A167031] 1,20,337,5461,87653,1403557,22461349,359399333,5750460325,92007649189,1472123522981,23553980911525,376863712759717,6029819476856741,96477111920512933,1543633791891427237,24698140674915717029 ⋆ a(n) = 20 * a(n - 1) - 64 * a(n - 2) + 1 for n > 1; a(0) = 1, a(1) = 20. ● a(n) = (241 * 16 ^ n - 65 * 4 ^ n + 4) / 180. ● a(n) = 21 * a(n - 1) - 84 * a(n - 2) + 64 * a(n - 2). ●

► [A093144] 0,1,20,350,6000,102500,1750000,29875000,510000000,8706250000,148625000000,2537187500000,43312500000000,739390625000000,12622187500000000,215474218750000000,3678375000000000000 ⋆ Third binomial transform of Pell(3 * n) / Pell(3). ● a(n) = ((10 + 5 * sqrt(2)) ^ n - (10 - 5 * sqrt(2)) ^ n) / (10 * sqrt(2)). ●

► [A089350] 0,20,360,5520,75080,950640,11506200,135061760,1550617320,17506172880,195061728440,2150617284000,23506172839560,255061728395120,2750617283950680,29506172839506240,315061728395061800,3350617283950617360,35506172839506172920 ⋆ Sum of all digits in all even numbers from 0 to 8(10 ^ (k + 1) - 1) / 9 (with (k + 1) 8's). ● a(k + 1) = 4((10 ^ k)(110 * 4 + 405k - 135) - 4(18k + 29) + 162k + 216) / 81. ● a(n) = (2 * (- 20 * (- 1 + 10 ^ n) + 9 * (20 + 9 * 10 ^ n) * n)) / 81. ● a(n) = 22 * a(n - 1) - 141 * a(n - 2) + 220 * a(n - 3) - 100 * a(n - 4) for n>3. ●

► [A004292] 1,20,360,6460,115920,2080100,37325880,669785740,12018817440,215668928180,3870021889800,69444725088220,1246135029698160,22360985809478660,401251609540917720,7200167985927040300 ⋆ Expansion of (1 + x) ^ 2 / (1 - 18 * x + x ^ 2). ● a(n) = 1 / 2 * (1 - (- 1) ^ 2 ^ n + (20 + 9 * sqrt(5)) * ((9 + 4 * sqrt(5)) ^ (2 * n) - 1) / (9 + 4 * sqrt(5)) ^ (n + 1)). - _ Gerry Martens _ , May 30 2015 ●

► [A000564] 20,371,2588,11097,35645,94457,218124,454220,872648,1571715,2684936,4388567,6909867,10536089,15624200,22611330,32025950,44499779,60780420,81744725,108412889,141963273,183747956,235309016,298395540 ⋆ Number of discordant permutations. ● a(n) = 81 / 80n ^ 6 - 405 / 16n ^ 5 + 4113 / 16n ^ 4 - 21267 / 16n ^ 3 + 140357 / 40n ^ 2 - 7587 / 2n, n>6. (End) ●

► [A177109] 20,380,3980,39980,399980,3999980,39999980,399999980,3999999980,39999999980,399999999980,3999999999980,39999999999980,399999999999980,3999999999999980,39999999999999980 ⋆ a(n) = 4 * (10 ^ n - 5). ● a(n) = 11 * a(n - 1) - 10 * a(n - 2). - _ Wesley Ivan Hurt _ , Mar 17 2023 ●

► [A084329] 0,1,20,380,7200,136400,2584000,48952000,927360000,17568160000,332816000000,6304956800000,119442816000000,2262757184000000,42866287360000000,812070603520000000,15384086323200000000 ⋆ a(0)=0, a(1)=1, a(n)=20a(n - 1) - 20a(n - 2). ● a(n)=(1 / 8) * sum(k=0, n, binomial(n, k) * F(6 * k)) where F(k) denotes the k - th Fibonacci number. ● a(n)= - (1 / 40) * [10 - 4 * sqrt(5)] ^ n * sqrt(5) + (1 / 40) * sqrt(5) * [10 + 4 * sqrt(5)] ^ n, with n>=0 - _ Paolo P. Lava _ , Jun 16 2008 ●

► [A097832] 1,20,380,7201,136440,2585160,48981601,928065260,17584258340,333172843201,6312699762480,119608122643920,2266241630472001,42938982856324100,813574432639685900,15414975237297708001 ⋆ Partial sums of Chebyshev sequence S(n,19)= U(n,19 / 2)=A078368(n). ● a(n) = 20 * a(n - 1) - 20 * a(n - 2) + a(n - 3), n>=2, a(- 1)=0, a(0)=1, a(1)=20. ● a(n) = 19 * a(n - 1) - a(n - 2) + 1, n>=1, a(- 1)=0, a(0)=1. ● a(n) = (S(n + 1, 19) - S(n, 19) - 1) / 17. ●

► [A163454] 1,20,380,7220,137180,2606230,49514760,940712040,17872229160,339547661640,6450936451470,122558879953620,2328449391567180,44237321450224020,840447989197392780,15967350630411275430 ⋆ Number of reduced words of length n in Coxeter group on 20 generators S _ i with relations (S _ i) ^ 2 = (S _ i S _ j) ^ 5 = I. ● a(n) = 18 * a(n - 1) + 18 * a(n - 2) + 18 * a(n - 3) + 18 * a(n - 4) - 171 * a(n - 5). - _ Wesley Ivan Hurt _ , May 10 2021 ●

► [A170269] 1,20,380,7220,137180,2606420,49521980,940917620,17877434780,339671260820,6453753955580,122621325156020,2329805177964380,44266298381323220,841059669245141180,15980133715657682420 ⋆ Number of reduced words of length n in Coxeter group on 20 generators S _ i with relations (S _ i) ^ 2 = (S _ i S _ j) ^ 41 = I. ● a(n) = - 171 * a(n - 41) + 18 * Sum _{ k=1..40 } a(n - k). - _ Wesley Ivan Hurt _ , Sep 05 2022 ●

► [A075843] 0,1,20,399,7960,158801,3168060,63202399,1260879920,25154396001,501827040100,10011386405999,199725901079880,3984506635191601,79490406802752140,1585823629419851199,31636982181594271840 ⋆ Numbers k such that 9 9 * k ^ 2 + 1 is a square. ● a(n) = ((10 + 3 * sqrt(11)) ^ n - (10 - 3 * sqrt(11)) ^ n) / (6 * sqrt(11)). ● a(n) = 20 * a(n - 1) - a(n - 2), n>=1, a(0)=0, a(1)=1. ● a(n) = S(n - 1, 20), with S(n, x) := U(n, x / 2), Chebyshev's polynomials of the second kind. S(- 1, x) := 0. See A049310. ●

► [A207402] 20,400,2340,8910,26676,68060,154580,321110,621300,1134296,1972900,3293310,5306580,8291940,12612116,18730790,27232340,38844000,54460580,75171886,102292980,137397420,182353620,239364470,311010356 ⋆ Number of n X 7 0..1 arrays avoiding 0 0 1 and 0 1 1 horizontally and 0 0 1 and 1 1 0 vertically. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. ●

► [A208141] 20,400,3000,14000,49000,141120,352800,792000,1633500,3146000,5725720,9937200,16562000,26656000,41616000,63256320,93896100,136458000,194579000,272734000,376372920,512072000,687700000,912600000,1197787500 ⋆ Number of n X 7 0..1 arrays avoiding 0 0 1 and 0 1 1 horizontally and 0 0 1 and 1 0 1 vertically. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. ●

► [A009964] 1,20,400,8000,160000,3200000,64000000,1280000000,25600000000,512000000000,10240000000000,204800000000000,4096000000000000,81920000000000000,1638400000000000000,32768000000000000000 ⋆ Powers of 20. ● a(n) = 20 ^ n. ● a(n) = 20 * a(n - 1) for n > 0, a(0) = 1. (End) ●

► [A158601] 20,420,1620,3620,6420,10020,14420,19620,25620,32420,40020,48420,57620,67620,78420,90020,102420,115620,129620,144420,160020,176420,193620,211620,230420 ⋆ a(n) = 400 * n ^ 2 + 20. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A250016] 20,520,5200,30360,125780,412160,1140160,2776080,6119220,12455960,23755600,42913000,74043060,122832080,196951040,306535840,464739540,688361640,998559440,1421646520,1989983380,2742965280,3728112320 ⋆ Number of length 2 + 5 0..n arrays with no six consecutive terms having the maximum of any three terms equal to the minimum of the remaining three terms. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. ●

► [A371017] 20,520,5880,48720,341880,2162160,12732720,71179680,382444920,1991669680,10113543440,50297301600,245807780400,1183546677600,5626112450400,26447537160000,123113285479800,568139770321200,2601623487262800,11830908080191200,53465154668125200,240246019677549600 ⋆ The second row of generalized Knuth's old sum. ● a(n) = 4 * (8n - 3) * binomial(2n - 2,n - 1) * binomial(2n + 1,2n - 2) / n. ● a(n) = b(n + 1,1), where b(n,m) = Sum _{ i=0..m } binomial(2n + 2m + 1,2n) * binomial(2m + 1,2i + 1) * binomial(2n + 2m - 2i,n + m - i) * 2 ^ (2i + 1) = Sum _{ k=0..2n } (- 1) ^ k * binomial(4m + 2,2m + 1) * binomial(2n + 2m + 1,k + 2m + 1) * binomial(2k,k) * 2 ^ (2n - k). ●

► [A336412] 1,1,20,630,18144,3326400,148262400 ⋆ Number of labeled dihedral groups with a fixed identity. ● a(1) = a(2) = 1; a(n>2) = (2n - 1)! / (n * (n - 1)) for prime n, otherwise (2n - 1)! / (2n) (conjectured). ●

► [A006410] 20,651,8344,64667,361884,1607125,5997992,19535997,57014776,151986562,375470160,869285378,1902886024,3966657702,7920130544,15220758070,28268206764,50910912965,89176474920,152305796565,254193384900,415363487955,665644575960,1047743815755 ⋆ Number of nonseparable rooted toroidal maps with n + 5 edges and n + 1 vertices. ● a(n) = 20 * binomial(n + 6, 8) + 471 * binomial(n + 6, 9) + 2734 * binomial(n + 6, 10) + 5388 * binomial(n + 6, 11) + 3264 * binomial(n + 6, 12) [From Walsh]. - _ Sean A. Irvine _ , Apr 03 2017 ● a(n) = binomial(n + 6, 8) * (136 * n ^ 4 + 790 * n ^ 3 + 447 * n ^ 2 - 180 * n - 24) / 495. - _ Andrew Howroyd _ , Apr 05 2021 ●

► [A281777] 0,0,0,0,20,800,14260,189280,2181060,23241120,235737620,2308206560,21979728100,204477713440,1864504348980,16707856095840,147469451067140,1284607771225760,11063319237792340,94343562846289120,797685042851814180,6694943490279586080 ⋆ Number of distinct topologies on an n - set that have exactly 9 open sets. ● a(n) = 5 / 6 * 4! Stirling2(n, 4) + 5 * 5! Stirling2(n, 5) + 11 / 2 * 6! Stirling2(n, 6) + 3 * 7! Stirling2(n, 7) + 8! Stirling2(n, 8). ●

► [A006424] 20,831,12656,109075,648792,2978245,11293436,36973989,107727724,285451894,699013380,1601397330,3465135024,7135903782,14072047976,26707904230,48991682628,87164772761,150869282184,254695011933,420306632200,679327313795,1077197343300,1678276223715 ⋆ Number of rooted toroidal maps with 4 faces and n vertices and without separating cycles or isthmuses. ● a(n) = n * (n + 1) * (n + 2) * (n + 3) * (n + 4) * (136 * n ^ 7 + 6554 * n ^ 6 + 98165 * n ^ 5 + 516860 * n ^ 4 + 763064 * n ^ 3 + 306776 * n ^ 2 + 2220955 * n - 586110) / 19958400. - _ Andrew Howroyd _ , Apr 04 2021 ●

► [A250017] 20,912,13512,106352,558588,2224848,7259024,20384352,50937444,115954256,244606296,484335696,909078092,1630002576,2809238304,4677097664,7553346228,11873110032,18218051048,27353482032,40272132252,58245315920 ⋆ Number of length 3 + 5 0..n arrays with no six consecutive terms having the maximum of any three terms equal to the minimum of the remaining three terms. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>8. ●

► [A269413] 20,957,10132,56890,223320,695135,1837752,4302612,9168780,18124865,33696300,59523022,100692592,164133795,259075760,397577640,595133892,871360197,1250765060,1763612130,2446878280,3345312487,4512600552 ⋆ Number of length - 7 0..n arrays with no repeated value greater than or equal to the previous repeated value. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. ●

► [A269644] 20,969,9928,55225,216528,675151,1789528,4200933,8974480,17780443,33120936,58606993,99291088,162060135,256094008,393394621,589390608,863622643,1240514440,1750234473,2429653456,3323402623,4485037848 ⋆ Number of length - 7 0..n arrays with no repeated value differing from the previous repeated value by other than plus two or minus 1. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>10. ●

► [A072962] 1,20,1071,107104,17201225,4053135456,1318104508735,565989104282624,310299479406324369 ⋆ Unsigned reduced Euler characteristic for the matroid complex of cycle matroid for complete bipartite graph K _{ n,n } . ● a(s, t)= sum _{ i=0..s - 2 } (- 1) ^{ i }* binomial(s - 1,i) * w(s - 1 - i, t), where s, t>1 and an e.g.f. for w(a, b) is given by exp(sum _{ i, j>0 } i ^{ j - 1 } j ^{ i - 1 } (j - 1)x ^{ i } y ^{ j }/ i!j!). ●

► [A151625] 0,0,20,1168,27664,450048,6030140,72338144,811888600,8742609264,91700484132,945739871600,9647920866016,97729381122976,985430937715404,9906926101717184,99407643757824680,996242539625306512,997623583137532854,998501003631206164 4 ⋆ Number of permutations of 2 indistinguishable copies of 1..n with exactly 3 adjacent element pairs in decreasing order. ● a(n) = 10 ^ n - (2 * n + 1) * 6 ^ n + binomial(2 * n + 1, 2) * 3 ^ n - binomial(2 * n + 1, 3). - _ Andrew Howroyd _ , May 07 2020 ●

► [A022355] 0,21,21,42,63,105,168,273,441,714,1155,1869,3024,4893,7917,12810,20727,33537,54264,87801,142065,229866,371931,601797,973728 ⋆ Fibonacci sequence beginning 0, 21. ● a(n) = 21 * Fibonacci(n) = h * Fibonacci(n + k) + Fibonacci(n + k - h) with h=8, k=2. - _ Bruno Berselli _ , Feb 20 2017 ● a(n) = - 21 * (((1 - sqrt(5)) / 2) ^ n - ((1 + sqrt(5)) / 2) ^ n) / sqrt(5). ● a(n) = a(n - 1) + a(n - 2) for n>1. ●

► [A241851] 21,22,25,30,37,46,57,70,85,102,121,142,165,190,217,246,277,310,345,382,421,462,505,550,597 ⋆ a(n) = n ^ 2 + 21. ● a(n) = a(- n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) = a(n - 1) + 2 * n - 1. ●

► [A022391] 1,21,22,43,65,108,173,281,454,735,1189,1924,3113,5037,8150,13187,21337,34524,55861,90385,146246,236631,382877,619508,1002385 ⋆ Fibonacci sequence beginning 1, 21. ● a(n) = a(n - 1) + a(n - 2), n>=2, a(0)=1, a(1)=21. a(- 1):=20. ●

► [A041902] 21,22,65,87,3719,3806,11331,15137,647085,662222,1971529,2633751,112589071,115222822,343034715,458257537,19589851269,20048108806,596866068881,79734177687,3408521531735,3488255709422 ⋆ Numerators of continued fraction convergents to sqrt(473). ● a(n) = 174 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Nov 11 2013 ●

► [A041916] 21,22,219,241,10341,10582,105579,116161,4984341,5100502,50888859,55989361,2402442021,2458431382,24528324459,26986755841,1157972069781,1184958825622,11822601500379,13007560326001 ⋆ Numerators of continued fraction convergents to sqrt(480). ● a(n) = 482 * a(n - 4) - a(n - 8). G.f.: - (x ^ 7 - 21 * x ^ 6 + 22 * x ^ 5 - 219 * x ^ 4 - 241 * x ^ 3 - 219 * x ^ 2 - 22 * x - 21) / ((x ^ 4 - 22 * x ^ 2 + 1) * (x ^ 4 + 22 * x ^ 2 + 1)). [_ Colin Barker _ , Jul 16 2012] ●

► [A041219] 1,1,21,22,461,483,10121,10604,222201,232805,4878301,5111106,107100421,112211527,2351330961,2463542488,51622180721,54085723209,1133336644901,1187422368110,24881784007101,26069206375211,546265911511321,572335117886532,11992968269241961 ⋆ Denominators of continued fraction convergents to sqrt(120). ● a(n) = 22 * a(n - 2) - a(n - 4). ● a(n) = Product _{ k = 1..floor((n - 1) / 2) } (20 + 4 * cos ^ 2(k * Pi / n)). ●

► [A041920] 21,22,461,483,20747,21230,445347,466577,20041581,20508158,430204741,450712899,19360146499,19810859398,415577334459,435388193857,18701881476453,19137269670310,401447274882653,420584544552963,18065998146107099,18486582690660062 ⋆ Numerators of continued fraction convergents to sqrt(482). ● a(n) = 966 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Nov 12 2013 ●

► [A041921] 1,1,21,22,945,967,20285,21252,912869,934121,19595289,20529410,881830509,902359919,18929028889,19831388808,851847358825,871678747633,18285422311485,19157101059118,822883666794441,842040767853559,17663699023865621,18505739791719180 ⋆ Denominators of continued fraction convergents to sqrt(482). ● a(n) = 966 * a(n - 4) - a(n - 8) for n>7. - _ Vincenzo Librandi _ , Dec 27 2013 ●

► [A041922] 21,22,945,967,41559,42526,1827651,1870177,80375085,82245262,3534676089,3616921351,155445372831,159062294182,6836061728475,6995124022657,300631270680069,307626394702726,13220939848194561 ⋆ Numerators of continued fraction convergents to sqrt(483). ● a(n) = 44 * a(n - 2) - a(n - 4). - _ Vincenzo Librandi _ , Nov 12 2013 ●

► [A303814] 0,1,21,24,64,69,129,136,216,225,325,336,456,469,609,624,784,801,981,1000,1200,1221,1441,1464,1704 ⋆ Generalized 24 - gonal (or icositetragonal) numbers: m * (11 * m - 10) with m = 0, + 1, - 1, + 2, - 2, + 3, - 3, ... ● a(n) = a(- n - 1) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). ● a(n) = (22 * n * (n + 1) + 9 * (2 * n + 1) * (- 1) ^ n - 9) / 8. Therefore: ● a(n) = n * (11 * n + 20) / 4, if n is even, or (n + 1) * (11 * n - 9) / 4 otherwise. ●

► [A219393] 0,21,25,88,96,201,213,360,376,565,585,816,840,1113,1141,1456,1488,1845,1881,2280,2320,2761,2805,3288,3336 ⋆ Numbers k such that 23 * k + 1 is a square. ● a(n) = a(- n + 1) = (46 * n * (n - 1) + 19 * (- 1) ^ n * (2 * n - 1) + 3) / 8 + 2. ●

► [A254368] 21,28,44,82,176,418,1064,2842,7856,22258,64184,187402,551936,1635298,4864904,14512762,43374416,129795538,388731224,1164882922,3492027296,10470838978,31402031144,94185121882,282513422576 ⋆ a(n) = 5 * 2 ^ n + 3 ^ n

+ 15. ● a(n) = 6 * a(n - 1) - 11 * a(n - 2) + 6 * a(n - 3). - _ Colin Barker _ , Jan 30 2015 ●

▶ [A228142] 1,21,30,82,99,183,208,324,357,505,546,726,775,987,1044,1288,1353,1629,1702,2010,2091,2431,2520,2892,2989 ⋆ Number of blocks in a Steiner system S(2, 5, A228141(n + 1)). ● a(n) = (- 3 / 4 * (- 1 + (- 1) ^ n) + (- 5 / 2 + 3 * (- 1) ^ n) * n + 5 * n ^ 2). ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). ●

▶ [A034111] 21,31,43,57,73,91,111,133,157,183,211,241,273,307,343,381,421,463,507,553,601,651,703,757,813 ⋆ Fractional part of square root of a(n) starts with 5 : first term of runs. ● a(n) = n ^ 2 + 7 * n + 13. - _ Charles R Greathouse IV _ , Aug 10 2010 ●

▶ [A168004] 21,32,43,54,65,76,86,97,108,119,131,141,151,161,171,181,191,201,211,221,231,241,252,262,272 ⋆ Numbers n with property that first digit of 8 * n = last digit of n. ● a(n) - a(n - 1) can be 1 : 8 * 624 = 4992 and 8 * 625 = 5000. - _ Altug Alkan _ , Jul 04 2016 ●

▶ [A026068] 21,33,49,68,90,116,145,179,217,259,306,357,414,476,543,616,694,779,870,967,1071,1181,1299,1424,1556 ⋆ (d(n) - r(n)) / 5, where d = A026066 and r is the periodic sequence with fundamental period (0,3,1,0,1). ● a(n)=(n + 7) * (n ^ 2 + 35 * n + 90) / 30 - 1 / 5 * (1 + (- 1 / 2 + 3 / 10 * 5 ^ (1 / 2)) * cos(2 * n * Pi / 5) + (1 / 5 * 2 ^ (1 / 2) * (5 + 5 ^ (1 / 2)) ^ (1 / 2) + 1 / 10 * 2 ^ (1 / 2) * (5 - 5 ^ (1 / 2)) ^ (1 / 2)) * sin(2 * n * Pi / 5) + (- 1 / 2 - 3 / 10 * 5 ^ (1 / 2)) * cos(4 * n * Pi / 5) + (- 1 / 10 * 2 ^ (1 / 2) * (5 + 5 ^ (1 / 2)) ^ (1 / 2) + 1 / 5 * 2 ^ (1 / 2) * (5 - 5 ^ (1 / 2)) ^ (1 / 2)) * sin(4 * n * Pi / 5)) - _ Richard Choulet _ , Dec 14 2008 ● a(n)= 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + a(n - 5) - 3 * a(n - 6) + 3 * a(n - 7) - a(n - 8). G.f.: - x ^ 7 * (- 21 + 30 * x - 13 * x ^ 2 + x ^ 3 + 20 * x ^ 5 - 29 * x ^ 6 + 11 * x ^ 7) / ((x ^ 4 + x ^ 3 + x ^ 2 + x + 1) * (x - 1) ^ 4). - _ R. J. Mathar _ , Oct 05 2009 ●

▶ [A072708] 21,39,42,48,81,99,102,108,141,159,162,168,201,219,222,228,261,279,282,288,321,339,342,348,381 ⋆ Last digit of F(n) is 6 where F(n) is the n - th Fibonacci number. ● a(n) = (- 3 / 4 + (3 * i) / 4) * ((1 + i) * (- 1) ^ n + (5 + 2 * i) * (- i) ^ n + (2 + 5 * i) * i ^ n - (10 + 10 * i) * n) where i=sqrt(- 1). - _ Colin Barker _ , Oct 16 2015 ●

▶ [A104393] 21,41,51,55,76,86,90,106,110,120,132,142,146,162,166,176,197,201,211,216,226,230,231,246,250 ⋆ Sums of 3 distinct positive pentatope numbers (A000332). ● a(n) = Ptop(i) + Ptop(j) + Ptop(k) for some positive i= / =j= / =k and Ptop(n) = binomial(n + 3,4). ●

▶ [A215145] 1,21,41,61,81,101,121,141,161,181,201,221,241,261,281,301,321,341,361,381,401,421,441,461,481 ⋆ a(n) = 20 * n + 1. ● a(n) = 2 * a(n - 1) - a(n - 2). ●

▶ [A154576] 21,41,65,93,125,161,201,245,293,345,401,461,525,593,665,741,821,905,993,1085,1181,1281,1385,1493,1605 ⋆ a(n) = 2 * n ^ 2 + 14 * n + 5. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Feb 22 2012 ●

▶ [A173960] 21,41,69,105,149,201,261,329,405,489,581,681,789,905,1029,1161,1301,1449,1605,1769,1941,2121,2309,2505,2709 ⋆ Averages of four consecutive odd squares. ● a(n) = ((2 * n - 1) ^ 2 + (2 * n + 1) ^ 2 + (2 * n + 3) ^ 2 + (2 * n + 5) ^ 2) / 4 = 4 * n ^ 2 + 8 * n + 9. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). G.f.: x * (21 - 22 * x + 9 * x ^ 2) / (1 - x) ^ 3. - _ Colin Barker _ , Apr 15 2012 ●

▶ [A195034] 0,21,41,83,123,186,246,330,410,515,615,741,861,1008,1148,1316,1476,1665,1845,2055,2255,2486,2706,2958,3198 ⋆ Vertex number of a square spiral in which the length of the first two edges are the legs of the primitive Pythagorean triple [21, 20, 29]. The edges of the spiral have length A195033. ● a(n) = (2 * n * (41 * n + 83) - (2 * n + 43) * (- 1) ^ n + 43) / 16. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). ●

▶ [A053428] 1,1,21,41,461,1281,10501,36121,246141,968561,5891381,25262601,143090221,648342241,3510146661,16476991481,86679924701,416219754321,2149818248341,10474213334761,53470578301581,262954844996801 ⋆ a(n) = a(n - 1) + 20 * a(n - 2), n >= 2; a(0)=1, a(1)=1. ● a(n) = ((5 ^ (n + 1)) - (- 4) ^ (n + 1)) / 9. ●

▶ [A235497] 21,42,63,84,105,126,147,168,189,2010,2211,2412,2613,2814,3015,3216,3417,3618,3819,4020,4221,4422,4623,4824,5025 ⋆ 2n concatenated with n. ● a(n) = 2 * n * 10 ^ floor(log _ 10(n) + 1) + n. ●

▶ [A175805] 21,42,84,168,336,672,1344,2688,5376,10752,21504,43008,86016,172032,344064,688128,1376256,2752512,5505024,11010048,22020096,44040192,88080384,176160768,352321536 ⋆ a(n) = 21 * 2 ^ n. ● a(n) = 2 * a(n - 1). - _ Vincenzo Librandi _ , Jul 08 2016 ●

▶ [A041870] 21,43,64,107,171,962,2095,28197,30292,119073,149365,716533,865898,1582431,7195622,8778053,33529781,42307834,583531623,1209371080,6630387023,7839758103,14470145126,22309903229 ⋆ Numerators of continued fraction convergents to sqrt(457). ● a(n) = 118179903168 * a(n - 25) + a(n - 50) for n>49. [_ Bruno Berselli _ , Nov 11 2013] ●

▶ [A135391] 21,43,65,87,109,131,152,174,196,218,240,262,284,305,327,349,371,393,415,437,458,480,502,524,546 ⋆ Numbers n such that 9 ^ n and 9 ^ (n + 1) have the same number of decimal digits. ● a(n) / n has the limit 1 / (1 - Log[9] / Log[10]) = 21.85434... - _ Stefan Steinerberger _ , Dec 12 2007 ●

▶ [A195049] 0,1,21,43,84,127,189,253,336,421,525,631,756,883,1029,1177,1344,1513,1701,1891,2100,2311,2541,2773,3024 ⋆ Concentric 21 - gonal numbers. ● a(n) = 21 * n ^ 2 / 4 + 17 * ((- 1) ^ n - 1) / 8. ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4). ●

▶ [A041872] 21,43,107,4537,9181,22899,970939,1964777,4900493,20778548 3,420471459,1048728401,44467064301,89982857003,224432778307,9516159545897,19256751870101,48029663286099,2036502609886259 ⋆ Numerators of continued fraction convergents to sqrt(458). ● a(n) = 214 * a(n - 3) + a(n - 6) for n>5. [_ Bruno Berselli _ , Nov 11 2013] ●

▶ [A041880] 21,43,1827,3697,157101,317899,13508859,27335617,1161604773,2350545163,99884501619,202119548401,8588905534461,17379930617323,738545991462027,1494471913541377,63506366360199861,128507204633941099 ⋆ Numerators of continued fraction convergents to sqrt(462). ● a(n) = 86 * a(n - 2) - a(n - 4). - _ Vincenzo Librandi _ , Nov 11 2013 ●

▶ [A120071] 0,21,44,69,96,125,156,189,224,261,300,341,384,429,476,525,576,629,684,741,800,861,924,989,1056 ⋆ a(n) = n * (n + 20). ● a(n) = (n + 10) ^ 2 - 10 ^ 2 = n * (n + 20), n>=0. ● a(n) = 2 * n + a(n - 1) + 19 (with a(0)=0). - _ Vincenzo Librandi _ , Nov 13 2010 ●

▶ [A139581] 0,21,46,75,108,145,186,231,280,333,390,451,516,585,658,735,816,901,990,1083,1180,1281,1386,1495,1608 ⋆ a(n) = n * (2 * n + 19). ● a(n) = 2 * n ^ 2 + 19 * n. ● a(n) = a(n - 1) + 4 * n + 17 (with a(0)=0). - _ Vincenzo Librandi _ , Nov 24 2010 ●

▶ [A327302] 0,1,21,46,546,3046,12421,59296,59296,840546,8653046,28184296,125840546,369981171,2811387421,2811387421,2811387421,460575059296,27493934186 71,10378787949921,48525760606171,143893192246796,2051241825059296,681961340709054 6,30661471317246796 ⋆ One of the two successive approximations up to 5 ^ n for the 5 - adic integer sqrt(- 9). This is the 1 (mod 5) case (except for n = 0). ● a(1) = 1; for n >= 2, a(n) is the unique number k in { a(n - 1) + m * 5 ^ (n - 1) : m = 0, 1, 2, 3, 4 } such that k ^ 2 + 9 is divisible by 5 ^ n. ●

▶ [A140681] 0,21,48,81,120,165,216,273,336,405,480,561,648,741,840,945,1056,1173,1296,1425,1560,1701,1848,2001,2160 ⋆ a(n) = 3 * n * (n + 6). ● a(n) = 6 * n + a(n - 1) + 15 with n>0, a(0)=0. - _ Vincenzo Librandi _ , Aug 03 2010 ●

▶ [A166150] 1,21,51,91,141,201,271,351,441,541,651,771,901,1041,1191,1351,1521,1701,1891,2091,2301,2521,2751,2991,3241 ⋆ a(n) = 5 * n ^ 2 + 5 * n - 9. ● a(n) = a(n - 1) + 10 * n (with a(1)=1). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A224334] 21,51,93,147,213,291,381,483,597,723,861,1011,1173,1347,1533,1731,1941,2163,2397,2643,2901,3171,3453,3747,4053 ⋆ Number of idempotent 3 X 30..n matrices of rank 2. ● a(n) = 6 * n ^ 2 + 12 * n + 3. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>3. ●

▶ [A235877] 21,51,129,339,921,2571,7329,21219,62121,183291,543729,1618899,4832121,14447211,43243329,129533379,388206921,1163834331,3489930129,10466644659,31393642521,94168344651,282479868129,847389272739,2542067154921 ⋆ Number of (n + 1) X (1 + 1) 0..2 arrays with the minimum plus the upper median equal to the lower median plus the maximum in every 2 X 2 subblock. ● a(n) = 3 * (2 ^ (1 + n) + 3 ^ n). ●

▶ [A304517] 21,53,117,245,501,1013,2037,4085,8181,16373,32757,65525,131061,262133,524277,1048565,2097141,4194293,8388597,16777205,33554421,67108853,134217717,268435445,536870901 ⋆ a(n) = 16 * 2 ^ n - 11 (n>=1). ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>2. ●

▶ [A180674] 0,21,55,110,199,343,576,953,1563,2550,4147,6731,10912,17677,28623,46334,74991,121359,196384,317777,514195,832006,1346235,2178275,3524544 ⋆ a(n) = Fibonacci(n + 9) - Fibonacci(9). ● a(n) = F(n + 9) - F(9) with F = A000045. ● a(n) = a(n - 1) + a(n - 2) + 34 for n>1, a(0)=0, a(1)=21, and where 34 = F(9). ● a(n) = (- 34 + (2 ^ (- n) * ((1 - sqrt(5)) ^ n * (- 38 + 17 * sqrt(5)) + (1 + sqrt(5)) ^ n * (38 + 17 * sqrt(5)))) / sqrt(5)). ● a(n) = 2 * a(n - 1) - a(n - 3) for n>2. (End) ●

▶ [A067727] 21,56,105,168,245,336,441,560,693,840,1001,1176,1365,1568,1785,2016,2261,2520,2793,3080,3381,3696,4025,4368,4725 ⋆ a(n) = 7 * n ^ 2 + 14 * n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Jul 08 2012 ●

▶ [A254144] 21,56,196,812,3724,18236,93436,494732,2685004,14851676,83384476,473755052,2717541484,15709845116,91395715516,534498925772,3139343105164,18504595174556,109397060622556,648335998054892,3850205790608044 ⋆ a(n) = 1 * 6 ^ n + 2 * 5 ^ n + 3 * 4 ^ n + 4 * 3 ^ n + 5 * 2 ^ n + 6 * 1 ^ n. ● a(n) = (x + 1) * (Bernoulli(n + 1, x + 1) - Bernoulli(n + 1, 1)) / (n + 1) - (Bernoulli(n + 2, x + 1) - Bernoulli(n + 2, 1)) / (n + 2) at x = 6. ● a(n) = (1 / 5!) * Sum _{ k = 0..n } (- 1) ^ (k + n) * (k + 7)! * Stirling2(n,k) / ((k + 1) * (k + 2)). (End) ●

▶ [A118057] 1,21,57,109,177,261,361,477,609,757,921,1101,1297,1509,1737,1981,2241,2517,2809,3117,3441,3781,4137,4509,4897 ⋆ a(n) = 8 * n ^ 2 - 4 * n - 3. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). G.f.: x * (1 + 18 * x - 3 * x ^ 2) / (1 - x) ^ 3. - _ Colin Barker _ , Jul 01 2012 ● a(n) + (a(n) + 1) + ... + (a(n) + 8n + 5)=(a(n) + 8n + 6) + ... + a(n + 1) - 1; a(n + 1) - 1=a(n) + 16n + 3. ● a(n) + (a(n) + 1) + ... + (a(n) + 8n + 5)=(4n - 1)(4n + 1)(4n + 3); e.g., 21 + 22 + ... + 56=693=7 * 9 * 11. ● a(n) = 16 * n + a(n - 1) - 12 (with a(1)=1). - _ Vincenzo Librandi _ , Nov 13 2010 ●

▶ [A051873] 0,1,21,60,118,195,291,406,540,693,865,1056,1266,1495,1743,2010,2296,2601,2925,3268,3630,4011,4411,4830,5268 ⋆ 21 - gonal numbers: a(n) = n * (19n - 17) / 2. ● a(n) = 19 * n + a(n - 1) - 18 with n>0, a(0)=0. - _ Vincenzo Librandi _ , Aug 06 2010 ● a(19 * a(n) + 172 * n + 1) = a(19 * a(n) + 172 * n) + a(19 * n + 1). - _ Vladimir Shevelev _ , Jan 24 2014 ●

▶ [A069133] 1,21,61,121,201,301,421,561,721,901,1101,1321,1561,1821,2101,2401,2721,3061,3421,3801,4201,4621,5061,5521,6001 ⋆ Centered 20 - gonal (or icosa gonal) numbers. ● a(n) = 10n ^ 2 - 10n + 1. ● a(n) = 20 * n + a(n - 1) - 20 with a(1)=1. - _ Vincenzo Librandi _ , Aug 08 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3); a(0)=1, a(1)=21, a(2)=61. - _ Harvey P. Dale _ , Apr 29 2011 ●

▶ [A041864] 21,64,213,277,3814,7905,27529,62963,90492,153455,704312,4379327,5083639,39964800,45048439,85013239,130061678,2686246799,2816308477,5502555276,8318863753,63734601547,72053465300 ⋆ Numerators of continued fraction convergents to sqrt(454). ● a(n) = 33832080168351370 * a(n - 34) - a(n - 68) for n>67. [_ Bruno Berselli _ , Nov 11 2013] ●

▶ [A041866] 21,64,2709,8191,346731,1048384,44378859,134184961,5680147221,17174626624,727014465429,2198218022911,93052171427691,281354732305984,11909950928279019,36011207517143041,1524380666648286741 ⋆ Numerators of continued fraction convergents to sqrt(455). ● a(n) = 128 * a(n - 2) - a(n - 4). - _ Vincenzo Librandi _ , Nov 11 2013 ●

▶ [A014641] 1,21,65,133,225,341,481,645,833,1045,1281,1541,1825,2133,2465,2821,3201,3605,4033,4485,4961,5461,5985,6533,7105 ⋆ Odd octagonal numbers: (2n + 1) * (6n + 1). ● a(n) = a(n - 1) + 24 * n - 4, with n > 0, a(0)=1. - _ Vincenzo Librandi _ , Dec 28 2010 ● a(n) = (1 / 4 ^ n) * Sum _{ k = 0..n } (2 * k + 1) ^ 4 * binomial(2 * n + 1, n - k). ● a(n - 1) = (2 / 4 ^ n) * binomial(2 * n,n) *

(1 + 3 ^ 4 * (n - 1) / (n + 1) + 5 ^ 4 * (n - 1) * (n - 2) / ((n + 1) * (n + 2)) + 7 ^ 4 * (n - 1) * (n - 2) * (n - 3) / ((n + 1) * (n + 2) * (n + 3)) + ...). (End) ●
► [A168240] 21,67,139,237,361,511,687,889,1117,1371,1651,1957,2289,2647,3031,3441,3877,4339,4827,5341,5881,6447,7039,7657,8301 ★ 1 + 7 * n + 13 * n ^ 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●
► [A195026] 0,21,70,147,252,385,546,735,952,1197,1470,1771,2100,2457,2842,3255,3696,4165,4662,5187,5740,6321,6930,7567,8232 ★ a(n) = 7 * n * (2 * n + 1). ● a(n) = 14 * n ^ 2 + 7 * n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>2. ● a(n) = Sum _{ i=6n..8n } i. - _ Wesley Ivan Hurt _ , Dec 23 2015 ●
► [A085027] 21,77,165,285,437,621,837,1085,1365,1677,2021,2397,2805,3245,3717,4221,4757,5325,5925,6557,7221,7917,8645,9405,10197 ★ a(n) = (4 * n + 3) * (4 * n + 7). ● a(n) = 16 * n ^ 2 + 40 * n + 21. - _ Vincenzo Librandi _ , Aug 13 2011 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●
► [A182754] 1,21,77,1617,5929,124509,456533,9587193,35153041,738213861,2706784157,56842467297,208422380089,4376869981869,16048523266853,337018988603913,1235736291547681,25950462122501301,95151694449171437,1998185583432600177,7326680472586200649 ★ a(1) = 1, a(2) = 21, a(n) = 77 * a(n - 2) for n>=3. ● a(2 * n) = 21 * a(2 * n - 1), a(2 * n + 1) = (11 / 3) * a(2 * n). ● a(n) = 3 * 7 ^ (n / 2) * 11 ^ (n / 2 - 1) for n even. ● a(n) = 77 ^ ((n - 1) / 2) for n odd. ●
► [A144314] 0,21,78,171,300,465,666,903,1176,1485,1830,2211,2628,3081,3570,4095,4656,5253,5886,6555,7260,8001,8778,9591,10440 ★ a(n) = 3 * n * (6 * n + 1). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>2. ●
► [A172082] 0,1,21,78,190,375,651,1036,1548,2205,3025,4026,5226,6643,8295,10200,12376,14841,17613,20710,24150,27951,32131,36708,41700 ★ a(n) = n * (n + 1) * (6 * n - 5) / 2. ● a(0)=0, a(1)=1, a(2)=21, a(3)=78; for n>3, a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Harvey P. Dale _ , Jun 29 2011 ● a(n) = Sum _{ i=0..n - 1 } (n - i) * (18 * i + 1), with a(0)=0. - _ Bruno Berselli _ , Feb 10 2014 ●
► [A068085] 0,1,21,78,1540,30381,112575,2220778,43809480,162333171,3202360435,63173239878,234084320106,4617801526591,91095768094695,337549427259780,6658866598983886,131360034419310411,486746040024282753,9602081017933237120,18942107853687751806 6,70188745216558847014 5 ★ Numbers k such that k and 10 * k are both triangular numbers. ● a(n) = (99 + 1442 * a(n - 3) + 57 * sqrt((1 + 8 * a(n - 3)) * (1 + 88 * a(n - 3)))) / 2. ● a(n) = 1442 * a(n - 3) - a(n - 6) + 99, for n > 3, with a(- 2) = 21, a(- 1) = 1, a(0) = 0, a(1) = 0, a(2) = 1, a(3) = 21. ● a(n) = a(n - 1) + 1442 (a(n - 3) - a(n - 4)) - (a(n - 6) - a(n - 7)) for n >= 4 with a(- 2) = 21, a(- 1) = 1, a(0) = 0, a(1) = 0, a(2) = 1, a(3) = 21. ●
► [A158493] 1,21,81,181,321,501,721,981,1281,1621,2001,2421,2881,3381,3921,4501,5121,5781,6481,7221,8001,8821,9681,10581,11521 ★ a(n) = 20 * n ^ 2 + 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). (End) ●
► [A071397] 0,21,83,186,330,516,743,1012,1321,1672,2065,2498,2973,3489,4047,4645,5285,5967,6689,7453,8258,9105,9993,10922,11892 ★ Rounded total surface area of a regular dodecahedron with edge length n. ● a(n) = round(3 * n ^ 2 * sqrt(25 + 10 * sqrt(5))). ●
► [A064762] 0,21,84,189,336,525,756,1029,1344,1701,2100,2541,3024,3549,4116,4725,5376,6069,6804,7581,8400,9261,10164,11109,12096 ★ a(n) = 21 * n ^ 2. ● a(n) = 42 * n + a(n - 1) - 21 for n>0, a(0)=0. - _ Vincenzo Librandi _ , Aug 07 2010 ●
► [A104676] 21,84,216,450,825,1386,2184,3276,4725,6600,8976,11934,15561,19950,25200,31416,38709,47196,57000,68250,81081,95634,112056,130500,151125 ★ a(n) = binomial(n + 2,2) * binomial(n + 7,2). ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Wesley Ivan Hurt _ , Jan 25 2022 ●
► [A116972] 1,21,85,281,873,2653,7997,24033,72145,216485,649509,1948585,5845817,17537517,52612621,157837937,473513889,1420541749,4261625333,12784876089,38354628361,115063885181,345191655645,1035574967041 ★ a(n) = 11 * 3 ^ n - 2 * n - 10. ● a(0)=1, a(n)=3 * a(n - 1) + 4 * n + 14. - _ Zak Seidov _ , Apr 02 2006 ● a(0)=1, a(1)=21, a(2)=85, a(n)=5 * a(n - 1) - 7 * a(n - 2) + 3 * a(n - 3). G.f.: (1 + 16 * x - 13 * x ^ 2) / (1 - 5 * x + 7 * x ^ 2 - 3 * x ^ 3). [_ Colin Barker _ , Jan 25 2012] ●
► [A063651] 1,1,21,85,747,4375,31387,202841,1382259,9167119,61643709,411595537,2758179839,18448963469,123518353059,826573277157,5532716266089,37028886137273,247839719105625,1658772577825883,11102227136885119 ★ Number of ways to tile a 7 X n rectangle with 1 X 1 and 2 X 2 tiles. ● a(n) = 3a(n - 1) + 30a(n - 2) - 17a(n - 3) - 138a(n - 4) + 85a(n - 5) + 116a(n - 6) - 42a(n - 7) - 32a(n - 8). - Keith Schneider (kschneid(AT)bulldog.unca.edu), Apr 02 2006 ●
► [A158540] 21,87,197,351,549,791,1077,1407,1781,2199,2661,3167,3717,4311,4949,5631,6357,7127,7941,8799,9701,10647,11637,12671,13749 ★ a(n) = 22 * n ^ 2 - 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●
► [A304514] 21,87,219,483,1011,2067,4179,8403,16851,33747,67539,135123,270291,540627,1081299,2162643,4325331,8650707,17301459,34602963,69205971,138411987,276824019,553648083,1107296211 ★ a(n) = 33 * 2 ^ n - 45 (n>=1). ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>2. ●
► [A223363] 21,90,420,1992,9552,45984,221760,1070208,5166336,24943104,120431616,581486592,2807648256,13556490240,65456455680,316051587072,1526031777792,7368332673024,35577456230400,171783152467968,829442428502016 ★ 6 X 6 X 6 triangular graph coloring a rectangular array: number of n X 1 0..20 arrays where 0..20 label nodes of the fully triangulated graph and every array movement to a horizontal or vertical neighbor moves along an edge of this graph. ● a(n) = (3 / 2) * (2 ^ n - (2 - 2 * sqrt(2)) ^ n * (- 1 + sqrt(2)) + 2 ^ (1 / 2 + n) * (1 + sqrt(2)) ^ n + (2 * (1 + sqrt(2))) ^ n). ●
► [A193218] 1,21,95,259,549,1001,1651,2535,3689,5149,6951,9131,11725,14769,18299,22351,26961,32165,37999,44499,51701,59641,68355,77879,88249 ★ Number of vertices in truncated tetrahedron with faces that are centered polygons. ● a(n) = 6 * n ^ 3 - 9 * n ^ 2 + 5 * n - 1. ●
► [A356738] 1,21,101,121,1101,1121,21121,101121,121121,1101121,1121121,21121121,101121121,121121121,1101121121,1121121121,21121121121,121121121121,1101121121121,1121121121121,21121121121121,101121121121121,121121121121121,1101121121121121 ★ Smallest positive integer whose American English name consists of n words. ● a(n) == 1 (mod 20). ●
► [A076454] 1,21,102,310,735,1491,2716,4572,7245,10945,15906,22386,30667,41055,53880,69496,88281,110637,136990,167790,203511,244651,291732,345300,405925 ★ Sum of numbers that can be written as t * n + u * (n + 1) for nonnegative integers t,u in exactly one way. ● a(n) = n * (n + 1) * (2 * n ^ 2 - 1) / 2. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5), n>=6, with a(1)=1, a(2)=21, a(3)=102, a(4)=310, a(5)=735. - _ L. Edson Jeffery _ , Dec 30 2013 ●
► [A116689] 0,1,21,105,325,780,1596,2926,4950,7875,11935,17391,24531,33670,45150,59340,76636,97461,122265,151525,185745,225456,271216,323610,383250 ★ Partial sums of dodecahedral numbers (A006566). ● a(n) = sum(i=0..n) i * (3 * i - 1) * (3 * i - 2) / 2. ● a(n) = n * (9 * n ^ 3 + 6 * n ^ 2 - 5 * n - 2) / 8. G.f.: x * (1 + 16 * x + 10 * x ^ 2) / (1 - x) ^ 5. [_ Colin Barker _ , Apr 04 2012] ●
► [A041854] 21,106,339,445,784,1229,9387,10616,62467,322951,385418,3020877,3406295,6427172,9833467,35927573,189471332,7993723517,40158088917,128467990268,168626079185,297094069453,465720148638 ★ Numerators of continued fraction convergents to sqrt(449). ● a(n) = 378942664 * a(n - 17) + a(n - 34) for n>33. [_ Bruno Berselli _ , Nov 10 2013] ●
► [A157265] 21,112,275,510,817,1196,1647,2170,2765,3432,4171,4982,5865,6820,7847,8946,10117,11360,12675,14062,15521,17052,18655,20330,22077 ★ a(n) = 36 * n ^ 2 - 17 * n + 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Jan 27 2012 ●
► [A158091] 21,114,154,348,748,1824,4402,11177,28334,73281,189501,493774,1286655,3362376,8787092,22988862,60144668,157418794 ★ The number of ways that a straight line segment of length n, marked into n equal units, can be surrounded in a plane by one layer of regular polygons of unit edge that fit together without any gaps or overlaps, such that every polygon shares either a vertex or an exact unit edge with the segment. ("Line wreaths of length n.") Ways that differ by reflection or rotation are not counted as different. ● a(0) = 21, a(1) = 114, and if n >= 2 let F the Fibonacci sequence A000045 and let m = n / 2 if n is even, or m = (n + 3) / 2 if n is odd, then a(n) = 7 + 6 * F(n - 2) + 27 * F(n - 1) + 31 * F(n) + F(n - 2) ^ 2 + 18 * F(n - 1) ^ 2 + 25 * F(n) ^ 2 + 40 * F(n) * F(n - 1) + 8 * F(n - 1) * F(n - 2) + 8 * F(n) * F(n - 2) + 2 * F(m) * F(m - 1) + (3 * F(m - 1) + 7 * F(m) + F(m - 1) ^ 2 + 5 * F(m) ^ 2) / 2. ● a(0) = 21, a(1) = 114, and if n >= 2 then a(n) = (9 / 5) * (F(2n + 3) + F(2n + 5)) + (1 / 10) * ((51 + 6D) * F(n + 2) + (56 + 6D) * F(n + 4)) + (1 / 2) * (F((n + 3D) / 2) + 3F((n + 4 + 3D) / 2)) + 7 - (8 / 5) * (- 1) ^ n - (2 / 5) * (- 1) ^ ((n - D) / 2). ●
► [A121628] 0,21,114,333,732,1365,2286,3549,5208,7317,9930,13101,16884,21333,26502,32445,39216,46869,55458,65037,75660,87381,100254,114333,129672 ★ Nonnegative k such that 3 * k + 1 is a perfect cube. ● a(n) = 3 * (n - 1) * (3 * n ^ 2 - 3 * n + 1) with n>0. Corresponding cubes are 3 * a(n) + 1 = (3 * n - 2) ^ 3. ●
► [A204214] 21,120,404,1025,2181,4116,7120,11529,17725,26136,37236,51545,69629,92100,119616,152881,192645,239704,294900,359121,433301,518420,615504,725625,849901 ★ Number of length 6 nonnegative integer arrays starting and ending with 0 with adjacent elements differing by no more than n. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●
► [A074088] 0,0,0,0,21,120,585,2508,10122,39042,145974,532704,1907451,6725004,23407287,80591148,274899288,930128646,3124838844,10432356000,34634029713,114403303008,376184538165,1231890463020,4018920819606 ★ Coefficient of q ^ 2 in nu(n), where nu(0)=1, nu(1)=b and, for n>=2, nu(n)=b * nu(n - 1) + lambda * (1 + q + q ^ 2 + ... + q ^ (n - 2)) * nu(n - 2) with (b,lambda)=(2,3). ● a(n) = 6 * a(n - 1) - 3 * a(n - 2) - 28 * a(n - 3) + 9 * a(n - 4) + 54 * a(n - 5) + 27 * a(n - 6) for n>=8. ●
► [A245031] 0,1,21,120,2080,11781,203841,1154440,19974360,113123361,1957283461,11084934960,191793804840,1086210502741,18793835590881,106437544333680,1841604094101520,10429793134197921,180458407386358101,1022013289607062600 ★ Numbers m such that 3 * m + 1 and 8 * m + 1 are both squares. ● a(n) = a(n - 1) + 98 * a(n - 2) - 98 * a(n - 3) - a(n - 4) + a(n - 5). ● a(4k + 1): 40 * x * (52 + 3 * x) / ((1 - x) * (1 - 9602 * x + x ^ 2)); ● a(4k + 2): (1 + 2178 * x + 21 * x ^ 2) / ((1 - x) * (1 - 9602 * x + x ^ 2)); ● a(4k + 3): (21 + 2178 * x + x ^ 2) / ((1 - x) * (1 - 9602 * x + x ^ 2)); ● a(4k + 4): 40 * (3 + 52 * x) / ((1 - x) * (1 - 9602 * x + x ^ 2)). ●
► [A365205] 1,21,121,421,1101,2401,4621,8121,13321,20701,30801,44221,61621,83721,111301,145201,186321,235621,294121,362901,443101,535921,642621,764521,903001 ★ Centered pentachoral numbers. ● a(n) = 5 * n ^ 4 / 2 - 5 * n ^ 3 + 15 * n ^ 2 / 2 - 5 * n + 1. ●
► [A361699] 1,1,1,1,1,21,121,421,1121,2521,6301,23101,99001,386101,1301301,3943941,11779041,38241841,136988041,504616441,1793870941,6061831441,19923689941,66139128441,227052188441 ★ Constant term in the expansion of (1 + x ^ 3 + y ^ 3 + 1 / (x * y)) ^ n. ● a(n) = Sum _{ k=0..floor(n / 5) } binomial(2 * k,k) * binomial(5 * k,2 * k) * binomial(n,5 * k). ●
► [A200888] 21,121,422,1121,2507,4977,9052,15393,24817,38313,57058,82433,116039,159713,215544,285889,373389,480985,611934,769825,958595,1182545,1446356,1755105,2114281 ★ Number of 0..n arrays x(0..4) of 5 elements without any interior element greater than both neighbors. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. ●
► [A179441] 1,21,121,432,1182,2723,5558,10368,18039,29689,46695,70720,103740,148071,206396,281792,377757,498237,647653,830928,1053514,1321419,1641234,2020160,2466035 ★ Number of solutions to a + b + c < d + e with each of a,b,c,d,e in { 1..n + 1 } . ● a(n) = (1 / 120) * (27 * n ^ 5 + 80 * n ^ 4 + 65 * n ^ 3 - 20 * n ^ 2 - 32 * n). ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n > 6. ●
► [A164785] 1,21,121,621,3121,15621,78121,390621,1953121,9765621,48828121,244140621,1220703121,6103515621,30517578121,152587890621,762939453121,3814697265621,19073486328121,95367431640621,476837158203121 ★ a(n) = 5 ^ n - 4. ● a(n) = 5 * a(n - 1) + 16 with n > 1, a(1)=1. - _ Vincenzo Librandi _ , Nov 30 2010 ● a(n) = 6 * a(n - 1) - 5 * a(n - 2); a(1)=1, a(2)=21. - _ Harvey P. Dale _ , Jun 07 2012 ●
► [A213565] 1,21,127,467,1302,3038,6258,11754,20559,33979,53625,81445,119756,171276,239156,327012,438957,579633,754243,968583,1229074,1542794,191751

0,2361710,2884635 ⋆ Principal diagonal of the convolution array A213564. • a(n) = (16 * n ^ 5 + 85 * n ^ 4 + 15 * n ^ 3 - 25 * n ^ 2 - n) / 60. • a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). •

► [A041852] 21,127,5355,32257,1360149,8193151,345472491,2081028097,87748652565,528572943487,22287812279019,134255446617601,5661016570218261,34100354867927167,1437875921023159275 ⋆ Numerators of continued fraction convergents to sqrt(448). • a(n) = 254 * a(n - 2) - a(n - 4). - _ Vincenzo Librandi _ , Nov 10 2013 •

► [A228283] 21,129,3154,44024,745178,11771298,190540884,3057290265,49208639399,791176762937,12725363193829,204647839919537,3291296999329711,52931964429099939,851279732514835940,13690693829364308175 ⋆ Number of nX8 binary arrays with top left value 1 and no two ones adjacent horizontally, vertically or nw - se diagonally. • a(n) = a(n - 1) + 170 * a(n - 2) + 1243 * a(n - 3) + 452 * a(n - 4) - 25328 * a(n - 5) - 47829 * a(n - 6) + 329977 * a(n - 7) + 677669 * a(n - 8) - 3899000 * a(n - 9) - 4142351 * a(n - 10) + 40598266 * a(n - 11) - 22625542 * a(n - 12) - 280040412 * a(n - 13) + 733571937 * a(n - 14) + 225285263 * a(n - 15) - 5406913431 * a(n - 16) + 15244941445 * a(n - 17) - 23143116063 * a(n - 18) + 18064627845 * a(n - 19) + 2246759550 * a(n - 20) - 21472294755 * a(n - 21) + 18258761486 * a(n - 22) + 5172378119 * a(n - 23) - 19704882159 * a(n - 24) + 6931675953 * a(n - 25) + 12628340471 * a(n - 26) - 10036097232 * a(n - 27) - 6485990080 * a(n - 28) + 8290578844 * a(n - 29) + 3493944338 * a(n - 30) - 5396581563 * a(n - 31) - 2482388885 * a(n - 32) + 2807416030 * a(n - 33) + 2023351213 * a(n - 34) - 877760575 * a(n - 35) - 1366907685 * a(n - 36) - 211758176 * a(n - 37) + 511379314 * a(n - 38) + 405881894 * a(n - 39) + 67901250 * a(n - 40) - 105839886 * a(n - 41) - 110007288 * a(n - 42) - 59224072 * a(n - 43) - 20510652 * a(n - 44) - 4214944 * a(n - 45) - 234085 * a(n - 46) + 87637 * a(n - 47) - 2782 * a(n - 48) - 10138 * a(n - 49) - 671 * a(n - 50) + 608 * a(n - 51) + 45 * a(n - 52) - 30 * a(n - 53) - a(n - 54) + a(n - 55) •

► [A008384] 1,21,131,471,1251,2751,5321,9381,15421,24001,35751,51371,71631,97371,129501,169001,216921,274381,342571,422751,516251,624471,748881,891021,1052501 ⋆ Crystal ball sequence for A _ 4 lattice. • a(n) = 1 + 5 * n * (n + 1) * (7 * n ^ 2 + 7 * n + 10) / 12. - _ T. D. Noe _ , Apr 29 2007 • a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5), n> 4. - _ Harvey P. Dale _ , Aug 22 2011 •

► [A243201] 1,21,133,481,1281,2821,5461,9633,15841,24661,36741,52801,73633,100101,133141,173761,223041,282133,352261,434721,530881,642181,770133,916321,1082401 ⋆ Odd octagonal numbers indexed by triangular numbers. • a(n) = 3 * n ^ 4 + 6 * n ^ 3 + 7 * n ^ 2 + 4 * n + 1. • a(n) = (n ^ 2 + n + 1) * (3 * n ^ 2 + 3 * n + 1). • a(n) = ((3 * n ^ 2 + 3 * n + 2) ^ 2 - 1) / 3. •

► [A337899] 0,1,21,140,575,1785,4606,10416,21330,40425,71995,121836,197561,308945,468300,690880,995316,1404081,1943985,2646700,3549315,4694921,6133226,7921200,10123750 ⋆ Number of chiral pairs of colorings of the edges of a regular tetrahedron using n or fewer colors. • a(n) = (n - 1) * n ^ 2 * (n + 1) * (n ^ 2 - 2) / 24. • a(n) = 1 * C(n,2) + 18 * C(n,3) + 62 * C(n,4) + 75 * C(n,5) + 30 * C(n,6), where the coefficient of C(n,k) is the number of chiral pairs of colorings using exactly k colors. •

► [A107731] 1,21,141,521,1401,3101,6021,10641,17521,27301,40701,58521,81641,111021,147701,192801,247521,313141,391021,482601,589401,713021,855141,1017521,1202001 ⋆ Row 7 of the array in A107735. • a(n) = 1 + (n ^ 2 + n) * (n ^ 2 + n + 1) * 10 / 3. a(- 1 - n)= a(n). - _ Michael Somos _ , Mar 20 2007 •

► [A041850] 21,148,6237,43807,1846131,12966724,546448539,3838106497,161746921413,1136066556388,47876542289709,336271862584351,14171294770832451,995353533258411508,41946553756241157 87 ⋆ Numerators of continued fraction convergents to sqrt(447). • a(n) = 296 * a(n - 2) - a(n - 4). - _ Vincenzo Librandi _ , Nov 10 2013 •

► [A358994] 21,151,561,1503,3310,6396,11256,18466,28683,42645,61171,85161,115596,153538,200130,256596,324241,404451,498693,608515,735546,881496,1048156,1237398,1451175 ⋆ The sum of the numbers that are inside the contour of an n - story Christmas tree drawn at the top of the numerical pyramid containing the positive integers in natural order. • a(n) = n * (27 * n ^ 3 + 66 * n ^ 2 + 49 * n + 26) / 8. •

► [A239569] 0,1,21,151,615,1845,4571,9926,19566,35805,61765,101541,160381,244881,363195,525260,743036,1030761,1405221,1886035,2495955,3261181,4211691,5381586,6809450 ⋆ Number of ways to place 3 points on a triangular grid of side n so that no two of them are adjacent. • a(n) = (n - 1) * (n - 2) * (n ^ 4 + 6 * n ^ 3 - 23 * n ^ 2 - 92 * n + 264) / 48. •

► [A184368] 21,153,1107,8019,58077,420633,3046491,22064643,159806277,1157419449,8382773187,60713414163,439725443661,3184773389433,23066169329547,167059976482179,1209955382858997,8763272085493593,63469230958692531 ⋆ 1 / 3 the number of (n + 1) X 2 0..2 arrays with every 2 X 2 subblock having at least two equal elements connected horizontally or vertically. • a(n) = ((3 - 3 * sqrt(2)) ^ n * (- 4 + 3 * sqrt(2)) + (3 * (1 + sqrt(2))) ^ n * (4 + 3 * sqrt(2))) / (2 * sqrt(2)). •

► [A267473] 21,160,712,2285,5921,13216,26440,48657,83845,137016,214336,323245,472577,672680,935536,1274881,1706325,2247472,2918040,3739981,4737601,5937680,7369592,9065425,11060101 ⋆ Number of length - 5 0..n arrays with no following elements larger than the first repeated value. • a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. •

► [A070315] 1,21,161,813,3361,12421,42865,141549,453905,1426725,4422913,13579309,41408833,125667333,380081105,1146795693,3454279345,10392196645,31238454241,93845384301,281808780641,845996765061,2539181475121,7620027450733,22865249731921 ⋆ Third diagonal of triangle in A046739. • a(n) = 3 ^ n - (3n + 2) * 2 ^ (n - 1) + 2n ^ 2. - _ Ralf Stephan _ , May 09 2004 •

► [A242191] 21,161,1071,6797,42231,259421,1582791,9614717,58230711,351922781,2123580711,12799240637,77074749591,463808234141,2789504205831,16769733474557,100779708074871,605475935585501,3636808913042151,21840480209276477,131140458175102551,787328413691288861 ⋆ Expected value of the highest die when n six - sided dice are rolled, multiplied by 6 ^ n. • a(n) = 1 + Sum _{ k =2..6, j=1..n } k * binomial(n,j) * (k - 1) ^ (n - j). •

► [A338891] 1,21,165,1274,9435,69720,515230,3807265,28132035,207869515,1535959665,11349295155 ⋆ a(n) is the least number k such that the average number of odd divisors of { 1..k } is >= n. • a(n + 1) / a(n) approaches e ^ 2. •

► [A266733] 0,21,168,756,2520,6930,16632,36036,72072,135135,240240,408408,668304,1058148,1627920,2441880,3581424,5148297,7268184,10094700,13813800,18648630,24864840,32776380,42751800 ⋆ a(n) = 21 * binomial(n + 6,7). • a(n) = n * (1 + n) * (2 + n) * (3 + n) * (4 + n) * (5 + n) * (6 + n) / 240. • a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>7. •

► [A105249] 1,21,168,840,3150,9702,25872,61776,135135,275275,528528,965328,1689324,2848860,4651200,7379904,11415789,17261937,25573240,37191000,53183130,74890530,103980240,142506000,192976875 ⋆ a(n) = binomial(n + 2,n) * binomial(n + 6,n). • a(0)=1, a(1)=21, a(2)=168, a(3)=840, a(4)=3150, a(5)=9702, a(6)=25872, a(7)=61776, a(8)=135135, a(n)=9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9). - _ Harvey P. Dale _ , Oct 08 2012 •

► [A090021] 0,1,21,175,1185,7471,45801,277495,1672545,10056991,60405081,362615815,2176242705,13059083311,78359348361,470170570135,2821066729665,16926530042431,101559568723641,609358576700455,3656154951181425 ⋆ Number of distinct lines through the origin in the n - dimensional lattice of side length 5. • a(n) = 6 ^ n - 3 ^ n - 2 * 2 ^ n + 2. •

► [A254681] 1,21,176,936,3750,12342,35112,89232,207207,446875,906048,1743248,3206268,5670588,9690000,16062144,25912029,40797009,62837104,94875000,140670530,205134930,294610680,417203280,583171875 ⋆ Fifth partial sums of fourth powers (A000583). • a(n) = n ^ 2 * (1 + n) * (2 + n) * (3 + n) * (4 + n) * (5 + n) ^ 2 * (5 + 2 * n) / 30240. • a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) + n ^ 4. •

► [A244875] 1,21,179,938,3612,11242,29947,70855,152720,305330,573812,1023939,1748545,2875153,4574922,7073018,10660515,15707931,22680505,32155320,44840378,61595732,83456781,111659833,147670042 ⋆ Number of magic labelings with magic sum n of 7th graph shown in link. • a(n) = (315 * (255 + (- 1) ^ n) + 306144 * n + 498456 * n ^ 2 + 452312 * n ^ 3 + 250530 * n ^ 4 + 86576 * n ^ 5 + 17724 * n ^ 6 + 1688 * n ^ 7) / 80640. - _ Colin Barker _ , Jan 11 2017 •

► [A164606] 1,21,193,1573,12449,97749,765857,5996837,46948801,367541781,2877288193,22524671653,176332817249,1380408754389,10806429650657,84593747681957,662264172758401,5184486816990741,40586377233014593,317727496441303333 ⋆ a(n) = 10 * a(n - 1) - 17 * a(n - 2) for n > 1; a(0) = 1, a(1) = 21. • a(n) = 10 * a(n - 1) - 17 * a(n - 2) for n > 1; a(0) = 1, a(1) = 21. • a(n) = ((1 + 4 * sqrt(2)) * (5 + 2 * sqrt(2)) ^ n + (1 - 4 * sqrt(2)) * (5 - 2 * sqrt(2)) ^ n) / 2. •

► [A027780] 21,196,1008,3780,11550,30492,72072,156156,315315,600600,1089088,1893528,3174444,5155080,8139600,12534984,18877089,27861372,40378800,57557500,80810730,111891780,152956440,206633700,276105375 ⋆ a(n) = 7 * (n + 1) * binomial(n + 2,7) / 2. • a(n) = C(n + 1, 6) * C(n + 2, 2). - _ Zerinvary Lajos _ , Apr 28 2005; corrected by _ R. J. Mathar _ , Feb 10 2016 •

► [A108679] 1,21,196,1176,5292,19404,60984,169884,429429,1002001,2186184,4504864,8836464,16604784,30046752,52581816,89311761,147685461,238369516,376372920,582481900,885069900,1322357400,1945206900,2820550005 ⋆ a(n) = (n + 1) * (n + 2) ^ 2 * (n + 3) ^ 2 * (n + 4) ^ 2 * (n + 5) ^ 2 * (n + 6) / 86400. • a(n) = binomial(n + 5,5) ^ 2 - binomial(n + 5,4) * binomial(n + 5,6). - _ Gary Detlefs _ , Dec 05 2011 •

► [A337897] 1,21,201,1076,4025,11901,29841,66256,134001,251725,445401,750036,1211561,1888901,2856225,4205376,6048481,8520741,11783401,16026900,21474201,28384301,37055921,47831376,61100625 ⋆ Number of achiral colorings of the 8 triangular faces of a regular octahedron or the 8 vertices of a cube using n or fewer colors. • a(n) = n ^ 2 * (7 + 2 * n ^ 2 + 3 * n ^ 4) / 12. • a(n) = 1 * C(n, 1) + 19 * C(n,2) + 141 * C(n,3) + 394 * C(n,4) + 450 * C(n,5) + 180 * C(n,6), where the coefficient of C(n,k) is the number of achiral colorings using exactly k colors. •

► [A160768] 21,203,896,2681,6371,13011,23878,40481,64561,98091,143276,202553,278591,374291,492786,637441,811853,1019851,1265496,1553081,1887131,2272403,2713886,3216801,3786601 ⋆ G.f.: (21 + 98 * x + 91 * x ^ 2 + 21 * x ^ 3 + x ^ 4) / (1 - x) ^ 5. • a(n) = 29 * n ^ 4 / 3 + 233 * n ^ 3 / 6 + 214 * n ^ 2 / 3 + 373 * n / 6 + 21. - _ R. J. Mathar _ , Sep 11 2011 •

► [A160769] 21,206,917,2757,6571,13446,24711,41937,66937,101766,148721,210341,289407,388942,512211,662721,844221,1060702,1316397,1615781,1963571,2364726,2824447,3348177,3941601 ⋆ G.f.: (21 + 101 * x + 97 * x ^ 2 + 22 * x ^ 3 + x ^ 4) / (1 - x) ^ 5. • a(n) = 121 * n ^ 4 / 12 + 40 * n ^ 3 + 869 * n ^ 2 / 12 + 125 * n / 2 + 21. - _ R. J. Mathar _ , Sep 11 2011 •

► [A160787] 21,209,938,2833,6771,13881,25544,43393,69313,105441,154166,218129,300223,403593,531636,688001,876589,1101553,1367298,1678481,2040011,2457049,2935008,3479553,4096601 ⋆ G.f.: (21 + 104 * x + 103 * x ^ 2 + 23 * x ^ 3 + x ^ 4) / (1 - x) ^ 5. • a(n) = 21 * n ^ 4 / 2 + 247 * n ^ 3 / 6 + 147 * n ^ 2 / 2 + 377 * n / 6 + 21. - _ R. J. Mathar _ , Sep 11 2011 •

► [A133355] 1,21,210,1386,6930,28314,99099,306735,858858,2212210,5309304,11992344,25697880,52581816,103285710,195635286,358664691,638489775,1106715610,1872263250,3097744650,5021809650,7989242625,12491007165,19216934100 ⋆ Dimensions of certain Lie algebra (see reference for precise definition). • a(n) = 14 * (C(n + 6,7) ^ 2 - C(n + 6,6) * C(n + 6,8)) / ((n + 6) * (n + 1)). - _ Gary Detlefs _ , Jan 06 2014 •

► [A008421] 1,21,221,1561,8361,36365,134245,433905,1256465,3317445,8097453,18474633,39753273,81270333,158819253,298199265,540279585,948062325,1616336765,2684641785,4354393801,6911195501,10753517061,16429137361,24680949041 ⋆ Crystal ball sequence for 10 - dimensional cubic lattice. • a(n) = (4 * n ^ 10 + 20 * n ^ 9 + 330 * n ^ 8 + 1200 * n ^ 7 + 7392 * n ^ 6 + 18060 * n ^ 5 + 50270 * n ^ 4 + 71800 * n ^ 3 + 83754 * n ^ 2 + 50670 * n + 14175) / 14175 - _ Johannes W. Meijer _ , Jul 14 2013 •

► [A165402] 1,21,221,2221,22221,222221,2222221,22222221,222222221,2222222221,22222222221,222222222221,2222222222221,22222222222221,222222222222221,2222222222222221,22222222222222221 ⋆ a(n) = (10 ^ n * 2 - 11) / 9. • a(n) = 10 * a(n - 1) + 11, a(1) = 1. - _ Philippe Deléham _ , Feb

24 2014 ● a(n) = 11 * a(n - 1) - 10 * a(n - 2), a(1) = 1, a(2) = 21. - _ Philippe Deléham _ , Feb 24 2014 ●

▶ [A027812] 21,224,1260,5040,16170,44352,108108,240240,495495,960960,1769768,3118752,5290740,8682240,13837320,21488544,32605881,48454560,70662900,101301200,142972830,198918720,273136500,370515600,496989675 ⋆ a(n) = 7 * (n + 1) * binomial(n + 5,7). ● a(n) = C(n + 1, 3) * C(n + 5, 5). - _ Zerinvary Lajos _ , May 26 2005; corrected by _ R. J. Mathar _ , Feb 10 2016 ●

▶ [A171108] 0,0,21,225,882,2370,5175,9891,17220,27972,43065,63525,90486,125190,168987,223335,289800,370056,465885,579177,711930,866250,1044351,1248555,1481292 ⋆ a(n) is the Severi degree for curves of degree n and cogenus 2. ● a(n) = 3 * (n - 1) * (n - 2) * (3 * n ^ 2 - 3 * n - 11) / 2. ● a(1)=0, a(2)=0, a(3)=21, a(4)=225, a(5)=882, a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Harvey P. Dale _ , Feb 01 2013 ●

▶ [A247615] 1,21,231,1771,10626,53130,230230,888030,3108105,10015005,30045015,84504355,223651350,558350430,1318250890,2952624906,6296642121,12834146941,25098124271,47262174531,85990654178,151631858378,259857912678,433877085278,707369215553 ⋆ a(n) = Sum _{ k=0..10 } binomial(20,k) * binomial(n,k) . ● a(n) = 11 * a(n - 1) - 55 * a(n - 2) + 165 * a(n - 3) - 330 * a(n - 4) + 462 * a(n - 5) - 462 * a(n - 6) + 330 * a(n - 7) - 165 * a(n - 8) + 55 * a(n - 9) - 11 * a(n - 10) + a(n - 11). ● a(n) = 1 - 5512999 * n / 630 + 212329883 * n ^ 2 / 8400 - 134689309 * n ^ 3 / 4536 + 3453077689 * n ^ 4 / 181440 - 64212077 * n ^ 5 / 8640 + 80300707 * n ^ 6 / 43200 - 1817521 * n ^ 7 / 6048 + 1860157 * n ^ 8 / 60480 - 331721 * n ^ 9 / 181440 + 46189 * n ^ 10 / 907200. ●

▶ [A010973] 1,21,231,1771,10626,53130,230230,888030,3108105,10015005,30045015,84672315,225792840,573166440,1391975640,3247943160,7307872110,15905368710,33578000610,68923264410,137846528820,269128937220,513791607420,960566918220,1761039350070 ⋆ a(n) = binomial(n,20). ● a(n + 19) = n * (n + 1) * (n + 2) * (n + 3) * (n + 4) * (n + 5) * (n + 6) * (n + 7) * (n + 8) * (n + 9) * (n + 10) * (n + 11) * (n + 12) * (n + 13) * (n + 14) * (n + 15) * (n + 16) * (n + 17) * (n + 18) * (n + 19) / 20!. - _ Artur Jasinski _ , Dec 02 2007; _ R. J. Mathar _ , Jul 07 2009 ● a(n) = n / (n - 20) * a(n - 1), n > 20. - _ Vincenzo Librandi _ , Mar 26 2011 ●

▶ [A198974] 1,21,241,2661,29281,322101,3543121,38974341,428717761,4715895381,51874849201,570623341221,6276856753441,69045424287861,759499667166481,8354496338831301,91899459727144321,1010894056998587541,11119834626984462961 ⋆ 2 * 11 ^ n - 1. ● a(n) = 11 * a(n - 1) + 10. ● a(n) = 12 * a(n - 1) - 11 * a(n - 2), n>1. ●

▶ [A177730] 1,21,245,2325,20181,168021,1370965,11075925,89042261,714081621,5719635285,45785027925,366392038741,2931583636821,23454458533205,187642826282325,1501171242849621,12009484474209621,96076333921424725,768612503886583125,6148907361161794901 ⋆ Expansion of (6 * x + 1) / ((x - 1) * (2 * x - 1) * (4 * x - 1) * (8 * x - 1)). ● a(n) = ((2 ^ (n + 1) - 1) ^ 2 * (2 ^ (n + 2) - 1)) / 3. ● a(n) = 15 * a(n - 1) - 70 * a(n - 2) + 120 * a(n - 3) - 64 * a(n - 4) for n>3. ●

▶ [A199300] 1,21,245,2401,21609,184877,1529437,12353145,98001617,766718533,5931980229,45478515089,346032180025,2616003280989,19668469112621,147174406808233,1096686708796833,8142067989552245,60251303122686613,444556912229552577,3271482918202092041 ⋆ a(n) = (2 * n + 1) * 7 ^ n. ● a(n) = 14 * a(n - 1) - 49 * a(n - 2). ● a(n) = 7 * a(n - 1) + 2 * 7 ^ n. - _ Vincenzo Librandi _ , Nov 05 2011 ●

▶ [A036220] 1,21,252,2268,17010,112266,673596,3752892,19702683,98513415,472864392,2192371272,9865670724,43257171636,185387878440,778629089448,3211844993973,13036312034361,52145248137444,205836505805700,802762372642230,3096369151620030 ⋆ Expansion of 1 / (1 - 3 * x) ^ 7; 7 - fold convolution of A000244 (powers of 3). ● a(n) = 3 ^ n * binomial(n + 6, 6). ●

▶ [A092794] 1,21,265,2733,25441,223461,1895545,15736413,128882641,1046542101,8451838825,68020609293,546227922241,4380272835141,35094966838105,281025802973373,2249545355064241,18003091856638581,144058517372685385,1152637601335180653 ⋆ Number of connected relations. ● a(n) = 8 ^ n - 3 * 5 ^ n + 2 * 4 ^ n. ● a(n) = 17 * a(n - 1) - 92 * a(n - 2) + 160 * a(n - 3). ●

▶ [A000770] 1,21,266,2646,22827,179487,1323652,9321312,63436373,420693273,2734926558,17505749898,110687251039,693081601779,4306078895384,26585679462804,163305339345225,998969857983405,6090236036084530,37026417000002430,224595186974125331 ⋆ Stirling numbers of the second kind, S(n,6). ● a(n) = 1 / 720 * (6 ^ n - 6 * 5 ^ n + 15 * 4 ^ n - 20 * 3 ^ n + 15 * 2 ^ n - 6). - _ Vaclav Kotesovec _ , Nov 19 2012 ● a(n) = det(|s(i + 6,j + 5)|, 1 <= i,j <= n - 6), where s(n,k) are Stirling numbers of the first kind. - _ Mircea Merca _ , Apr 06 2013 ●

▶ [A028053] 1,21,280,3030,29071,258111,2172430,17592960,138433141,1065579801,8062670980,60182175690,444345657211,3251849151091,23627323915930,170652039023220,1226510307989281,8779155519807981,62625124983987280,445449774932327550,3160830238141717351 ⋆ Expansion of 1 / ((1 - 3x)(1 - 5x)(1 - 6x)(1 - 7x)). ● a(n) = (3 * 7 ^ (n + 3) - 8 * 6 ^ (n + 3) + 6 * 5 ^ (n + 3) - 3 ^ (n + 3)) / 24. - _ Yahia Kahloune _ , May 27 2013 ●

▶ [A028033] 1,21,283,3129,31003,287217,2547091,21931833,185027755,1538650113,12663786499,103454051337,840560481307,6802315926609,54886579262707,441905197121241,3552134005816459,28518494951667105 ⋆ Expansion of 1 / ((1 - 3x)(1 - 4x)(1 - 6x)(1 - 8x)). ● a(n)=(3 * 8 ^ (n + 3) - 10 * 6 ^ (n + 3) + 15 * 4 ^ (n + 3) - 8 * 3 ^ (n + 3)) / 120. [_ Yahia Kahloune _ , May 27 2013]. ●

▶ [A176711] 21,285,1365,4221,10197,21021,38805,66045,105621,160797,235221,332925,458325,616221,811797,1050621,1338645,1682205,2088021,2563197,3115221,3751965,4481685,5313021,6254997 ⋆ a(n) = 16n ^ 4 + 64n ^ 3 + 104n ^ 2 + 80n + 21. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) + 384 for n > 3; a(0)=21, a(1)=285, a(2)=1365, a(3)=4221. ● a(n) = (2 * n + 1) * (2 * n + 3) * (4 * n ^ 2 + 8 * n + 7). - corrected by _ Eric Rowland _ , Aug 15 2017 ● a(n) = a(- n - 2). - _ Bruno Berselli _ , Sep 05 2011 ●

▶ [A025987] 1,21,285,3185,31941,299481,2685565,23352945,198684981,1663903241,13774041645,113050606305,921961387621,7483064823801,60518933442525,488128819261265,3929148977523861,31579173926461161 ⋆ Expansion of 1 / ((1 - 2x)(1 - 5x)(1 - 6x)(1 - 8x)). ● a(n) = (2 * 8 ^ (n + 3) - 9 * 6 ^ (n + 3) + 8 * 5 ^ (n + 3) - 2 ^ (n + 3)) / 72. [_ Yahia Kahloune _ , May 25 2013] ●

▶ [A028028] 1,21,286,3234,33187,322455,3035152,28040628,256229413,2326373049,21042916258,189930286182,1712158289479,15423616827003,138884571944404,1250325501927096,11254768340210185,101302177508279517 ⋆ Expansion of 1 / ((1 - 3 * x) * (1 - 4 * x) * (1 - 5 * x) * (1 - 9 * x)). ● a(n) = (243 / 40) * 9 ^ n - (125 / 8) * 5 ^ n + (64 / 5) * 4 ^ n - (9 / 4) * 3 ^ n. - Neven Juric, Oct 22 2009 ● a(n) = 21 * a(n - 1) - 155 * a(n - 2) + 483 * a(n - 3) - 540 * a(n - 4); a(0)=1, a(1)=21, a(2)=286, a(3)=3234. - _ Harvey P. Dale _ , Aug 11 2011 ●

▶ [A025971] 1,21,287,3249,33159,317457,2913079,25951233,226266887,1941258033,16450020951,138048250977,1149556141735,9512774280849,78317007130103,642041894674881,5244884610706503,42718957418411505,347070960515299735,2813803342053741345 ⋆ Expansion of 1 / ((1 - 2x)(1 - 4x)(1 - 7x)(1 - 8x)). ● a(n) = (5 * 8 ^ (n + 2) - 7 ^ (n + 3) + 10 * 4 ^ (n + 1) - 2 ^ (n + 1)) / 15. - _ Yahia Kahloune _ , May 23 2013 ● a(n) = 21 * a(n - 1) - 154 * a(n - 2) + 456 * a(n - 3) - 448 * a(n - 4), for n >= 4. - _ Giovanni Resta _ , May 23 2013 ●

▶ [A025967] 1,21,289,3321,34705,343257,3282913,30740457,283960369,2599944633,23667405697,214622461833,1941330570193,17530479823449,158125883415841,1425244488222249,12839878208747377,115635005126816505 ⋆ Expansion of 1 / ((1 - 2x)(1 - 4x)(1 - 6x)(1 - 9x)). ● a(n) = (8 * 9 ^ (n + 3) - 35 * 6 ^ (n + 3) + 42 * 4 ^ (n + 3) - 15 * 2 ^ (n + 3)) / 840. - _ Yahia Kahloune _ , May 24 2013 ●

▶ [A022452] 1,21,290,3330,34491,334791,3109900,27997860,246301781,2129087961,18155626710,153166509990,1281087729871,10640517267531,87874475534720,722286313011720,5913514800094761,48255642147081501 ⋆ Expansion of 1 / ((1 - x) * (1 - 5 * x) * (1 - 7 * x) * (1 - 8 * x)). ● a(n) = - 1 / 168 + 125 * 5 ^ n / 24 - 343 * 7 ^ n / 12 + 512 * 8 ^ n / 21. - _ R. J. Mathar _ , Mar 11 2011 ● a(n) = 15 * a(n - 1) - 56 * a(n - 2) + (5 ^ (n + 1) - 1) / 4, a(0)=1, a(1)=21. - _ Vincenzo Librandi _ , Mar 12 2011 ●

▶ [A086947] 21,291,2991,29991,299991,2999991,29999991,299999991,2999999991,29999999991,299999999991,2999999999991,29999999999991,299999999999991,2999999999999991 ⋆ Numbers k such that Reverse(k + 9) = 3. ● a(n) = 3 * (10 ^ n - 3). ● a(n) = 11 * a(n - 1) - 10 * a(n - 2) for n > 2. ●

▶ [A275359] 0,0,21,292,1566,5664,16375,40716,90552,184576,350649,628500,1072786,1756512,2774811,4249084,6331500,9209856,13112797,18315396,25145094,33988000,45295551,59591532,77479456 ⋆ Maximum incarceration of numbers in an n X n X n number cubes with full incarceration volumes. ● a(n) = (n ^ 3 - 3 * n ^ 2 + 27 * n - 8) / 2 * (n - 1) ^ 3 for n>0. ● a(n) = (n ^ 6 - 6 * n ^ 5 + 39 * n ^ 4 - 99 * n ^ 3 + 108 * n ^ 2 - 51 * n + 8) / 2 for n>0. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

▶ [A022291] 1,21,292,3402,36043,360843,3485854,32899944,305751325,2812114305,25683350056,233457113526,2115260975647,19123756383207,172639882457698,1556953539144948,14031940169321809,126404565100316349 ⋆ Expansion of 1 / ((1 - x)(1 - 5x)(1 - 6x)(1 - 9x)). ● a(0)=1, a(1)=21, a(2)=292, a(3)=3402; for n>3, a(n) = 21 * a(n - 1) - 149 * a(n - 2) + 399 * a(n - 3) - 270 * a(n - 4). - _ Vincenzo Librandi _ , Jul 12 2013 ● a(n) = (5 * 9 ^ (n + 3) - 32 * 6 ^ (n + 3) + 30 * 5 ^ (n + 3) - 3) / 480. [_ Yahia Kahloune _ , Aug 13 2013] ●

▶ [A025944] 1,21,292,3414,36439,368607,3604114,34449888,324158197,3016246233,27838148416,255387389322,2332396465075,21228942680499,192722119904398,1746130572580116,15796595736313873,142739306095633005 ⋆ Expansion of 1 / ((1 - 2x)(1 - 3x)(1 - 7x)(1 - 9x)). ● a(n) = 3 ^ (n + 2) / 8 - 2 ^ (n + 3) / 35 - 7 ^ (n + 3) / 40 + 3 ^ (2 * n + 5) / 28. - _ R. J. Mathar _ , Jun 04 2013 ● a(n) = 21 * a(n - 1) - 149 * a(n - 2) + 411 * a(n - 3) - 378 * a(n - 4). - _ Wesley Ivan Hurt _ , Oct 29 2022 ●

▶ [A025962] 1,21,293,3465,37821,396081,4058293,41102985,413760941,4151788641,41590878693,416282134905,4164721639261,41656852053201,416617235689493,4166418080133225,41665418007392781,416660400463837761 ⋆ Expansion of 1 / ((1 - 2x)(1 - 4x)(1 - 5x)(1 - 10x)). ● a(n) = - 2 ^ n / 6 + 16 * 4 ^ n / 3 - 25 * 5 ^ n / 3 + 25 * 10 ^ n / 6. - _ R. J. Mathar _ , Jun 20 2013 ●

▶ [A027474] 1,21,294,3430,36015,352947,3294172,29647548,259416045,2219448385,18643366434,154231485954,1259557135291,10173346092735,81386768741880,645668365352248,5084638377148953,39779817891812397,309398583602985310 ⋆ a(n) = 7 ^ (n - 2) * C(n,2). ● a(n) = 21 * a(n - 1) - 147 * a(n - 2) + 343 * a(n - 3), a(0) = a(1) = 0, a(2) = 1. (End) ●

▶ [A021864] 1,21,294,3466,37275,379407,3727648,35761572,337430709,3146261833,29083452762,267126341118,2441786303503,22239710844099,202003194298836,1830950757258904,16569016601938857,149754390830203005 ⋆ Expansion of 1 / ((1 - x)(1 - 4x)(1 - 7x)(1 - 9x)). ● a(n) = 21 * a(n - 1) - 147 * a(n - 2) + 379 * a(n - 3) - 252 * a(n - 4), with a(0)=1, a(1)=21, a(2)=294, a(3)=3466. - _ Harvey P. Dale _ , Feb 01 2013 ● a(n) = (9 ^ (n + 4) - 20 * 7 ^ (n + 3) + 4 ^ (n + 5) - 5) / 720. [_ Yahia Kahloune _ , Jun 26 2013] ●

▶ [A020570] 1,21,295,3465,36751,365001,3463615,31794105,284628751,2499039081,21606842335,184519243545,1559982264751,13079717026761,108915112739455,901732722577785,7429565635164751,60963378722560041,498496565225842975,4064108629664292825,33049477950757248751 ⋆ Expansion of 1 / ((1 - 6 * x) * (1 - 7 * x) * (1 - 8 * x)). ● a(n) = 18 * 6 ^ n - 49 * 7 ^ n + 32 * 8 ^ n. - _ R. J. Mathar _ , Jun 30 2013 ● a(0)=1, a(1)=21, a(2)=295; for n>2, a(n) = 21 * a(n - 1) - 146 * a(n - 2) + 336 * a(n - 3). - _ Vincenzo Librandi _ , Jul 04 2013 ● a(n) = 15 * a(n - 1) - 56 * a(n - 2) + 6 ^ n. - _ Vincenzo Librandi _ , Jul 04 2013 ●

▶ [A025940] 1,21,295,3525,38911,411741,4255255,43385925,438878671,4418961261,44370835015,444796211925,4454490876031,44584086067581,446075938835575,4462169900295525,44630162203602991,446352401627074701 ⋆ Expansion of 1 / ((1 - 2x)(1 - 3x)(1 - 6x)(1 - 10x)). ● a(n) = - 9 * 6 ^ n / 2 + 3 ^ (n + 2) / 7 - 2 ^ (n - 2) + 125 * 10 ^ n / 28. - _ R. J. Mathar _ , Jun 04 2013 ● a(n) = 21 * a(n - 1) - 146 * a(n - 2) + 396 * a(n - 3) - 360 * a(n - 4), with a(0)=1, a(1)=21, a(2)=295, a(3)=3525. - _ Harvey P. Dale _ , Jul 26 2014 ●

▶ [A021829] 1,21,297,3577,39753,422793,4384969,44813769,454009545,4575676105,45971643081,461011315401,4617904831177,46225887853257,462540273695433,4627092539587273,46281069938293449,462871589543951049 ⋆ Expansion of 1 / ((

1 - x)(1 - 4x)(1 - 6x)(1 - 10x)). ● a(n) = (5 * 10 ^ (n + 3) - 27 * 6 ^ (n + 3) + 30 * 4 ^ (n + 3) - 8) / 1080. [_ Yahia Kahloune _ , Jun 26 2013] ●

► [A019943] 1,21,298,3570,38971,401751,3988468,38583300,366449941,3434404281,31873887838,293663563830,2690806228111,24553315831611,223338364450408,2026585451393160,18355202849805481,166009125098571741,1499772036736668178,13537796780062999290 ★ Expansion of 1 / ((1 - 5 * x) * (1 - 7 * x) * (1 - 9 * x)). ● a(n) = (5 ^ (n + 2) - 2 * 7 ^ (n + 2) + 9 ^ (n + 2)) / 8. - _ R. J. Mathar _ , Jun 29 2013 ● a(0)=1, a(1)=21, a(2)=298; for n>2, a(n) = 21 * a(n - 1) - 143 * a(n - 2) + 315 * a(n - 3). - _ Vincenzo Librandi _ , Jul 03 2013 ● a(n) = 16 * a(n - 1) - 63 * a(n - 2) + 5 ^ n. - _ Vincenzo Librandi _ , Jul 03 2013 ●

► [A021634] 1,21,298,3594,39763,417567,4236796,41963988,408348325,3920543913,37248255694,350941450782,3284131050487,30562445793459,283104150028192,2612274474873576,24025167335391049,220344082704460605 ★ Expansion of 1 / ((1 - x)(1 - 3x)(1 - 8x)(1 - 9x)). ● a(n) = (35 * 9 ^ (n + 3) - 48 * 8 ^ (n + 3) + 28 * 3 ^ (n + 3) - 15) / 1680. [_ Yahia Kahloune _ , Aug 12 2013] ●

► [A021604] 1,21,300,3670,41511,449151,4730890,48987840,501640821,5098774681,51564400680,519680849610,5225067192931,52448485198611,525869552045670,5268388442396980,52751734942121841,527992303241992941 ★ Expansion of 1 / ((1 - x)(1 - 3x)(1 - 7x)(1 - 10x)). ● a(n)=(8 * 10 ^ (n + 3) - 3 * 7 ^ (n + 4) + 3 ^ (n + 6) - 14) / 1512. [_ Yahia Kahloune _ , Jun 26 2013] ● a(0)=1, a(1)=21, a(2)=300, a(3)=3670; for n>3, a(n) = 21 * a(n - 1) - 141 * a(n - 2) + 331 * a(n - 3) - 210 * a(n - 4). - _ Vincenzo Librandi _ , Jul 11 2013 ●

► [A025935] 1,21,300,3710,43071,485751,5405170,59772720,659098341,7258131881,79879876440,878881296930,9668709132811,106360879560411,11699950849781 10,1287007302680834 0,141571438884146481 ★ Expansion of 1 / ((1 - 2x)(1 - 3x)(1 - 5x)(1 - 11x)). ● a(n) = 3 ^ (n + 3) / 16 + 11 ^ (n + 3) / 432 - 2 ^ (n + 3) / 27 - 5 ^ (n + 3) / 36. - _ R. J. Mathar _ , May 22 2013 ●

► [A019664] 1,21,301,3669,40957,433125,4418317,43942773,428973853,4128937989,39306876973,370937567637,3475860284989,32382187083813,300235508341069,2772487245505461,25515330868003165,234141560259529797 ★ Expansion of 1 / ((1 - 4x)(1 - 8x)(1 - 9x)). ● a(n) = 4 ^ (n + 1) / 5 + 9 ^ (n + 2) / 5 - 2 * 8 ^ (n + 1). - _ R. J. Mathar _ , Nov 11 2012 ● a(0)=1, a(1)=21, a(2)=301; for n>2, a(n) = 21 * a(n - 1) - 140 * a(n - 2) + 288 * a(n - 3). - _ Vincenzo Librandi _ , Jul 03 2013 ● a(n) = 17 * a(n - 1) - 72 * a(n - 2) + 4 ^ n. - _ Vincenzo Librandi _ , Jul 03 2013 ●

► [A019839] 1,21,301,3681,41461,445641,4658221,47871201,486836581,4919066361,49504632541,496978967121,4981629662101,49888557269481,499325240101261,4995920923029441,49975372950286021,499851474762263001,499910503387631238 1,4999461112977154616 1 ★ Expansion of 1 / ((1 - 5x)(1 - 6x)(1 - 10x)). ● a(n) = 5 * 5 ^ n - 9 * 6 ^ n + 5 * 10 ^ n. - _ R. J. Mathar _ , Jun 29 2013 ● a(n) = 21 * a(n - 1) - 140 * a(n - 2) + 300 * a(n - 3), with a(0)=1, a(1)=21, a(2)=301. - _ Vincenzo Librandi _ , Jul 03 2013 ● a(n) = 16 * a(n - 1) - 60 * a(n - 2) + 5 ^ n. - _ Vincenzo Librandi _ , Jul 03 2013 ●

► [A021784] 1,21,302,3762,43923,497223,5545264,61398804,677478725,7463074905,82149266706,903924739926,9944608539607,109397965416267,12034143348958 28,1323774269209432 8,145616100380861769 ★ Expansion of 1 / ((1 - x)(1 - 4x)(1 - 5x)(1 - 11x)). ● a(n) = - 1 / 120 + 2 ^ (2n + 6) / 21 - 5 ^ (n + 3) / 24 + 11 ^ (n + 3) / 420. [_ Bruno Berselli _ , May 08 2013] ●

► [A019618] 1,21,303,3745,42711,464961,4918663,51086385,524227671,5336085601,54018566823,544793838225,5480212349431,55028108373441,551863246323783,5529708675105265,55374624529091991,554289026917064481 ★ Expansion of 1 / ((1 - 4 * x) * (1 - 7 * x) * (1 - 10 * x)). ● a(n) = (2 * 4 ^ (n + 1) - 7 ^ (n + 2) + 5 * 10 ^ (n + 1)) / 9. - _ R. J. Mathar _ , Nov 11 2012 ● a(0)=1, a(1)=21, a(2)=303; for n>2, a(n) = 21 * a(n - 1) - 138 * a(n - 2) + 280 * a(n - 3). - _ Vincenzo Librandi _ , Jul 03 2013 ● a(n) = 17 * a(n - 1) - 70 * a(n - 2) + 4 ^ n. - _ Vincenzo Librandi _ , Jul 03 2013 ●

► [A021524] 1,21,304,3822,45031,513639,5760910,64038576,708445573,7817058249,86132670988,948329828082,10436851589347,114836710756971,1263391885146058,13898439159046260,152889601348716673 ★ Expansion of 1 / ((1 - x)(1 - 3x)(1 - 6x)(1 - 11x)). ● a(n) = (3 * 11 ^ (n + 3) - 16 * 6 ^ (n + 3) + 25 * 3 ^ (n + 3) - 12) / 1200. [_ Yahia Kahloune _ , Jun 30 2013] ● a(0)=1, a(1)=21; for n>1, a(n) = 17 * a(n - 1) - 66 * a(n - 2) + (3 ^ n - 1) / 2. - _ Vincenzo Librandi _ , Jul 10 2013 ● a(0)=1, a(1)=21, a(2)=304, a(3)=3822; for n>3, a(n) = 21 * a(n - 1) - 137 * a(n - 2) + 315 * a(n - 3) - 198 * af(n - 4). - _ Vincenzo Librandi _ , Jul 10 2013 ●

► [A021268] 1,21,305,3825,44481,494721,5346625,56661825,592183361,6126355521,62899732545,642086748225,6525582872641,66093551865921,667637303808065,6729987319337025,67728787443552321,680719188437241921 ★ Expansion of 1 / ((1 - x)(1 - 2x)(1 - 8x)(1 - 10x)). ● a(n) = (7 * 10 ^ (n + 3) - 12 * 8 ^ (n + 3) + 21 * 2 ^ (n + 3) - 16) / 1008. [_ Yahia Kahloune _ , Jun 30 2013] ● a(0)=1, a(1)=21, a(2)=305, a(3)=3825; for n>3, a(n) = 21 * a(n - 1) - 136 * a(n - 2) + 276 * a(n - 3) - 160 * a(n - 4). - _ Vincenzo Librandi _ , Jul 08 2013 ● a(0)=1, a(1)=21; for n>1, a(n) = 18 * a(n - 1) - 80 * a(n - 2) + 2 ^ n - 1. - _ Vincenzo Librandi _ , Jul 08 2013 ●

► [A018069] 1,21,307,3873,45235,504633,5465323,58007361,606913219,6283868745,64556638939,659310178449,6703052628403,67910134629657,686138217844555,6917677165178337,69627131588692387,699874195511336169 ★ Expansion of 1 / ((1 - 3x)(1 - 8x)(1 - 10x)). ● a(0)=1, a(1)=21, a(2)=307; for n>2, a(n) = 21 * a(n - 1) - 134 * a(n - 2) + 240 * a(n - 3). - _ Vincenzo Librandi _ , Jul 02 2013 ● a(n) = 18 * a(n - 1) - 80 * a(n - 2) + 3 ^ n. - _ Vincenzo Librandi _ , Jul 02 2013 ● a(n) = (5 * 10 ^ (n + 2) - 7 * 8 ^ (n + 2) + 2 * 3 ^ (n + 2)) / 70. [_ Yahia Kahloune _ , Jul 06 2013] ●

► [A019488] 1,21,307,3897,46243,529953,5961259,66380889,735097555,8115781905,89452902331,985061928201,10842178002787,119303005894977,1312567620466123,14439652232597433,158844629298359539 ★ Expansion of 1 / ((1 - 4 * x) * (1 - 6 * x) * (1 - 11 * x)). ● a(n) = (10 * 4 ^ (n + 1) - 21 * 6 ^ (n + 1) + 11 ^ (n + 2)) / 35. - _ R. J. Mathar _ , Jun 29 2013 ● a(0)=1, a(1)=21, a(2)=307; for n>2, a(n) = 21 * a(n - 1) - 134 * a(n - 2) + 264 * a(n - 3). - _ Vincenzo Librandi _ , Jul 03 2013 ● a(n) = 17 * a(n - 1) - 66 * a(n - 2) + 4 ^ n. - _ Vincenzo Librandi _ , Jul 03 2013 ●

► [A025929] 1,21,307,3969,48979,593817,7152139,85937313,1031713507,12382483113,148597656571,1783203843057,21398575559635,256783429254009,3081403255517803,36976847527073601,443722204297332163 ★ Expansion of 1 / ((1 - 2x)(1 - 3x)(1 - 4x)(1 - 12x)). ● a(n) = 21 * a(n - 1) - 134 * a(n - 2) + 336 * a(n - 3) - 288 * a(n - 4), n >= 4. ● a(n) = 16 * a(n - 1) - 48 * a(n - 2) + 3 ^ (n + 1) - 2 ^ (n + 1), n >= 2. (End) ● a(n) = 3 ^ (n + 1) - 2 ^ (n + 1) / 5 - 2 ^ (2 * n + 2) + 12 ^ (n + 1) / 5. - _ R. J. Mathar _ , Mar 19 2011 ●

► [A021244] 1,21,308,3942,47271,547407,6213586,69694464,776054741,8602512633,95089014384,1049208790266,11563904125411,127361197423299,1402080935995502,15430644646390548,169791371563507281 ★ Expansion of 1 / ((1 - x)(1 - 2x)(1 - 7x)(1 - 11x)). ● a(n)=(11 ^ (n + 3) - 3 * 7 ^ (n + 3) + 8 * 2 ^ (n + 3) - 6) / 360. [_ Yahia Kahloune _ , Jun 30 2013] ● a(0)=1, a(1)=21, a(2)=308, a(3)=3942; for n>3, a(n) = 21 * a(n - 1) - 133 * a(n - 2) + 267 * a(n - 3) - 154 * a(n - 4). - _ Vincenzo Librandi _ , Jul 08 2013 ● a(0)=1, a(1)=21; for n>1, a(n) = 18 * a(n - 1) - 77 * a(n - 2) + 2 ^ n - 1. - _ Vincenzo Librandi _ , Jul 08 2013 ●

► [A021484] 1,21,310,4050,50371,613671,7411240,89174100,1071295141,12861600921,154369595770,1852587338550,22231809806311,266785528785771,3201445408153900,38417440232993400,461009759536223881 ★ Expansion of 1 / ((1 - x)(1 - 3x)(1 - 5x)(1 - 12x)). ● a(0)=1, a(1)=21; for n>2, a(n) = 17 * a(n - 1) - 60 * a(n - 2) + (3 ^ n - 1) / 2. - _ Vincenzo Librandi _ , Jul 10 2013 ● a(0)=1, a(1)=21, a(2)=310, a(3)=4050; for n>3, a(n) = 21 * a(n - 1) - 131 * a(n - 2) + 291 * a(n - 3) - 180 * a(n - 4). - _ Vincenzo Librandi _ , Jul 10 2013 ●

► [A157088] 0,21,312,4365,60816,847077,11798280,164328861,2288805792,31878952245,444016525656,6184352406957,86136917171760,1199732487997701,16710117914796072,232741918319147325 ★ Consider all consecutive integer Pythagorean septuples (X, X + 1, X + 2, X + 3, Z - 2, Z - 1, Z) ordered by increasing Z; sequence gives X values. ● a(n) = (3 ^ (n + 1)((1 + sqrt(4 / 3)) ^ (2n + 1) + (1 - sqrt(4 / 3)) ^ (2n + 1)) - 2 * 3) / 4. ●

► [A016321] 1,21,313,4065,49081,566721,6350473,69654225,751887961,8016991521,84652923433,886876310385,9231886792441,95586981129921,985282830165193,10117545471478545,103557909243290521,1057021183189581921 ★ Expansion of 1 / ((1 - 2x)(1 - 9x)(1 - 10x)). ● a(n) = 2 ^ (n - 1) / 7 - 9 ^ (n + 2) / 7 + 25 * 10 ^ n / 2. ● a(n) = (175 * 10 ^ n + 2 ^ n - 2 * 9 ^ (n + 2)) / 14. ● a(n) = 19 * a(n - 1) - 90 * a(n - 2) + 2 ^ n. ● a(n) = 21 * a(n - 1) - 128 * a(n - 2) + 180 * a(n - 3), n >= 3. (End) ●

► [A019041] 1,21,313,4125,51601,630741,7630633,91892685,1104403201,13261555461,159183299353,1910426955645,22926277062001,275121159824181,3301483361726473,39617948633641005,475416129363276001 ★ Expansion of 1 / ((1 - 4x)(1 - 5x)(1 - 12x)). ● a(n) = 2 * 4 ^ n - 25 * 5 ^ n / 7 + 18 * 12 ^ n / 7. - _ R. J. Mathar _ , Jun 29 2013 ● a(0)=1, a(1)=21, a(2)=313; for n>2, a(n)= 21 * a(n - 1) - 128 * a(n - 2) + 240 * a(n - 3). - _ Vincenzo Librandi _ , Jul 02 2013 ● a(n) = 17 * a(n - 1) - 60 * a(n - 2) + 4 ^ n. - _ Vincenzo Librandi _ , Jul 02 2013 ●

► [A021214] 1,21,313,4137,51961,637497,7733881,93310329,1122747001,13491103353,162002078329,1944677972601,23340053875321,280104155744889,3361390924417657,40337537425951353,484055527109184121 ★ Expansion of 1 / ((1 - x) * (1 - 2x) * (1 - 6x) * (1 - 12x)). ● a(n) = (2 * 12 ^ (n + 3) - 11 * 6 ^ (n + 3) + 33 * 2 ^ (n + 3) - 24) / 1320. - _ Yahia Kahloune _ , May 19 2013 ● a(0)=1, a(1)=21, a(2)=313, a(3)=4137; for n>3, a(n) = 21 * a(n - 1) - 128 * a(n - 2) + 252 * a(n - 3) - 144 * a(n - 4). - _ Vincenzo Librandi _ , Jul 08 2013 ● a(0)=1, a(1)=21; for n>1, a(n) = 18 * a(n - 1) - 72 * a(n - 2) + 2 ^ n - 1. - _ Vincenzo Librandi _ , Jul 08 2013 ●

► [A016318] 1,21,315,4145,51051,605241,7007155,79874865,900993051,10089880361,112420339395,1248076978785,13820472734251,152758207825881,1686204348094035,18595160325141905,204922063545486651 ★ Expansion of 1 / ((1 - 2x)(1 - 8x)(1 - 11x)). ● a(n) = (11 ^ (n + 2) + 2 ^ (n + 1) - 96 * 8 ^ n) / 27. ● a(n) = 19 * a(n - 1) - 88 * a(n - 2) + 2 ^ n. ● a(n) = 21 * a(n - 1) - 126 * a(n - 2) + 176 * a(n - 3), n >= 3. (End) ●

► [A017954] 1,21,315,4185,52731,648081,7869555,94992345,1143260811,13739265441,164992058595,1980630120105,23771914474491,285289093487601,3423625845396435,41084450500377465,493019048181297771 ★ Expansion of 1 / ((1 - 3x)(1 - 6x)(1 - 12x)). ● a(0)=1, a(1)=21, a(2)=315; for n>2, a(n) = 21 * a(n - 1) - 126 * a(n - 2) + 216 * a(n - 3). - _ Vincenzo Librandi _ , Jul 02 2013 ● a(n) = 18 * a(n - 1) - 72 * a(n - 2) + 3 ^ n. - _ Vincenzo Librandi _ , Jul 02 2013 ● a(n) = (12 ^ (n + 2) - 3 * 6 ^ (n + 2) + 2 * 3 ^ (n + 2)) / 54. [_ Yahia Kahloune _ , Jul 06 2013] ●

► [A016315] 1,21,319,4305,55015,683697,8369047,101581473,1227048295,14781074385,177768357559,2135988547329,25651240368391,307950529031985,3696355860679255,44362916914251873,532401529073793703 ★ Expansion of 1 / ((1 - 2x) * (1 - 7x) * (1 - 12x)). ● a(n) = 2 * 2 ^ n / 25 - 49 * 7 ^ n / 25 + 72 * 12 ^ n / 25. - _ R. J. Mathar _ , Jun 23 2013 ● a(n) = 21 * a(n - 1) - 122 * a(n - 2) + 168 * a(n - 3). ● a(n) = 19 * a(n - 1) - 84 * a(n - 2) + 2 ^ n. (End) ●

► [A113531] 1,21,321,2005,7737,22461,54121,114381,219345,390277,654321,1045221,1604041,2379885,3430617,4823581,6636321,8957301,11886625,15536757,20033241,25515421,32137161,40067565,49491697 ★ a(n) = 1 + 2 * n + 3 * n ^ 2 + 4 * n ^ 3 + 5 * n ^ 4 + 6 * n ^ 5. ● a(n) = 1 + 2 * n + 3 * n ^ 2 + 4 * n ^ 3 + 5 * n ^ 4 + 6 * n ^ 5. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6), a(0)=1, a(1)=21, a(2)=321, a(3)=2005, a(4)=7737, a(5)=22461. - _ Harvey P. Dale _ , Nov 02 2011 ●

► [A057138] 0,1,21,321,4321,54321,654321,7654321,87654321,987654321,9876543210987654321,210987654321,3210987654321,43210987654321,543210987654321,6543210987654321,76543210987654321,876543210987654321 ★ Add (n mod 10) * 10 ^ (n - 1) to the previous term, with a(0) = 0. ● a(n) = floor(((q / (10 ^ 10 - 1)) + q mod 10 ^ (n mod 10)) * 10 ^ (10 * floor(n / 10))), where q = 9876543210. - _ Hieronymus Fischer _ , Jan 03 2013 ●

► [A014925] 1,21,321,4321,54321,654321,7654321,87654321,987654321,109876543210987654321,1320987654321,14320987654321,154320987654321,1654320987654321,17654320987654321,187654320987654321 ★ Number of zeros in numbers 1 to 111...1 (n + 1 digits). ● a(1) = 1; for n>1, a(n) = n * 10 ^ (n - 1) + a(n - 1). ● a(n) = 10 ^ n * (n + 1) / 9 - 1 / 81 * 10 ^ (n + 1) + 1 / 81. ● a(n) = (10 ^ n * (9 * n - 1) + 1) / 81. - _ Kenneth E. Caviness _ , Mar 30 2011 ● a(n) =

Sum _{ i=0..n } (i * 10 ^ (i - 1)). - _ José de Jesús Camacho Medina _ , Dec 14 2016 ●

▶ [A016260] 1,21,325,4485,58501,739461,9173125,112474245,1368864901,16579770501,200184379525,2412029622405,29022892013701,348902996523141,4191862297147525,50342558276728965,604432385008416901 ⋆ Expansion of 1 / ((1 - x)(1 - 8x)(1 - 12x)). ● a(n) = (21 * 12 ^ (n + 1) - 22 * 8 ^ (n + 1) + 1) / 77. - _ Bruno Berselli _ , Mar 21 2011 ● a(n) = 20 * a(n - 1) - 96 * a(n - 2) + 1, n >= 2. - _ Vincenzo Librandi _ , Mar 21 2011 ●

▶ [A016195] 0,1,21,331,4641,61051,771561,9487171,114358881,1357947691,15937424601,185311670611,2138428376721,24522712143931,279749833583241,3177248169415651,35949729863572161,405447028499293771 ⋆ a(n) = 11 ^ n - 10 ^ n. ● a(n) = 11 * a(n - 1) + 10 ^ (n - 1), a(0)=0. - _ Vincenzo Librandi _ , Feb 09 2011 ● a(n) = 21 * a(n - 1) - 110 * a(n - 2), a(0)=0, a(1)=1. - _ Vincenzo Librandi _ , Feb 09 2011 ●

▶ [A016191] 1,21,333,4725,63261,818181,10349613,128978325,1590786621,19476859941,237209103693,2877890303925,34817113183581,420347224031301,5067043480830573,61010412902061525,733977975013590141 ⋆ Expansion of 1 / ((1 - 9x) * (1 - 12x)). ● a(n) = (12 ^ (n + 1) - 9 ^ (n + 1)) / 3. - Lambert Klasen (lambert.klasen(AT)gmx.net), Feb 05 2005 ● a(n - 1) = Sum _{ k=1..n } 3 ^ (n - 1) * 3 ^ (n - k) * binomial(n, k). - _ Zerinvary Lajos _ , Sep 24 2006 ● a(n) = 12 * a(n - 1) + 9 ^ n, a(0)=1. - _ Vincenzo Librandi _ , Feb 09 2011 ● a(n) = 21 * a(n - 1) - 108 * a(n - 2); a(0)=1, a(1)=21. - _ Vincenzo Librandi _ , Feb 09 2011 ●

▶ [A095905] 1,21,333,5373,86589,1395549,22491837,362497437,5842314621,94159673181,1517556760893,24458225530653,394189404655869,6353089129389789,102391746224652477,1650231797698803357,26596528397525794941 ⋆ Sequence generated from Golomb's proof of de Bruijn's theorem on a torus considered as a matrix. ● a(1) = 1, a(2) = 21, a(n + 2) = 15 * a(n + 1) + 18 * a(n), n>2. Matrix method: Let M = the 6 X 6 matrix [1 2 1 2 1 2 / 3 4 3 4 3 4 / 1 2 1 2 1 2 / 3 4 3 4 3 4 / 1 2 1 2 1 2 / 3 4 3 4 3 4]. Then M ^ n * [1 0 0 0 0 0] = [a(n) q a(n) q a(n) q a(n) q], where q = a term in another sequence with the same recursion rule. ●

▶ [A036224] 1,21,336,4536,54432,598752,6158592,60046272,560431872,5043886848,44019376128,374164697088,3108445175808,25311625003008,202493000024064,1594632375189504,12381851383824384,94927527275986944 ⋆ Expansion of (- 1 + 1 / (1 - 6 * x) ^ 6) / (36 * x); related to A036084. ● a(n) = 6 ^ (n - 1) * binomial(n + 6, 5); ●

▶ [A062260] 1,21,336,5040,75600,1164240,18627840,311351040,5448643200,99891792000,1917922406400,38532804710400,809188898918400,17739910476288000,405483668029440000,9650511299100672000 ⋆ Third (unsigned) column sequence of triangle A062140 (generalized a=4 Laguerre). ● a(n) = binomial(n,6) * (n - 4)! / 2, n >= 6. - _ Zerinvary Lajos _ , Jul 07 2009 ●

▶ [A166914] 21,340,5456,87360,1398016,22369280,357912576,5726617600,91625947136,1466015416320,23456247709696,375299967549440,6004799497568256,96076792028200960,1537228672719650816,24595658764588154880 ⋆ a(n) = 20 * a(n - 1) - 64 * a(n - 2) for n > 1; a(0) = 21, a(1) = 340. ● a(n) = (64 * 16 ^ n - 4 ^ n) / 3. ● a(n) = 20 * a(n - 1) - 64 * a(n - 2). ●

▶ [A323277] 0,0,1,21,342,5049,70794,961794,12792492,167583249,2170496898,27864238950,355198394484,4501897295274,56786420175588,713416451137956,8931958558413912,111495926008783809,1388178160043508018,17244120146466623166,213776181450214477092,2645421031806169214574 ⋆ G.f. = (x / 6) * (1 / (1 - 12 * x) ^ (3 / 2) - 1 / (1 - 12 * x)). ● a(n) = (2 ^ (2 * n - 3) * 3 ^ (n - 2) * ((2 * n - 1)!! / 2 ^ (n - 1) - (n - 1)!)) / (n - 1)!, n>0. - _ Jean - François Alcover _ , Feb 14 2019 ●

▶ [A075921] 1,21,343,5145,74431,1058841,14941423,210003465,2945813311,41281739961,578226834703,8097153012585,113373983463391,1587332657497881,22223335428043183,311131443554114505 ⋆ Second column of triangle A075502. ● a(n) = - 7 ^ n + 2 * 14 ^ n. ● a(0)=1, a(1)=21, a(n) = 21a(n - 1) - 98a(n - 2). - _ Harvey P. Dale _ , Apr 30 2011 ●

▶ [A006105] 1,21,357,5797,93093,1490853,23859109,381767589,6108368805,97734250405,1563749404581,25019996065701,400319959420837,6405119440211877,102481911401303973 ⋆ Gaussian binomial coefficient [n,2] for q=4. ● a(n) = (16 ^ n - 5 * 4 ^ n + 4) / 180. - _ Mitch Harris _ , Mar 23 2008 ● a(n) = 5 * a(n - 1) - 4 * a(n - 2) + 16 ^ (n - 2), n>=4. - _ Vincenzo Librandi _ , Mar 20 2011 ●

▶ [A167032] 1,21,358,5818,93450,1496650,23952202,383258442,6132227914,98116017994,1569857773386,25117730316106,401883708825418,6430139436277578,102882231360724810,1646115703292731210,26337851258768236362 ⋆ a(n) = 20 * a(n - 1) - 64 * a(n - 2) + 2 for n > 1; a(0) = 1, a(1) = 21. ● a(n) = (257 * 16 ^ n - 85 * 4 ^ n + 8) / 180. ● a(n) = 21 * a(n - 1) - 84 * a(n - 2) + 64 * a(n - 3) for n>2. ●

▶ [A051564] 0,1,21,362,6026,101524,1763100,31813200,598482000,11752855200,240947474400,5154170774400,114942011990400,2669517204076800,64496340380102400,1619153396908185600,42188624389562112000 ⋆ Second unsigned column of triangle A051523. ● a(n) = n! * Sum _{ k=0..n - 1 } ((- 1) ^ k * binomial(- 10,k) / (n - k)), for n>=1. - _ Milan Janjic _ , Dec 14 2008 ● a(n) = n! * [9]h(n), where [k]h(n) denotes the k - th successive summation of the harmonic numbers from 0 to n. - _ Gary Detlefs _ , Jan 04 2011 ●

▶ [A083043] 1,21,419,8359,166761,3326861,66370459,1324082319,26415275921,526981436101,10513213446099,209737287485879,4184232536271481,83474913437943741,1665314036222603339,33222805811014123039 ⋆ Integers y such that 11 * x ^ 2 - 9 * y ^ 2 = 2 for some integer x. ● a(n) = 20 * a(n - 1) - a(n - 2). ● a(1 - n) = - a(n). ● a(n + 1) = 10 * a(n) + sqrt(99 * a(n) ^ 2 + 22). - _ Richard Choulet _ , Sep 27 2007 ● a(n) = ((3 + sqrt(11)) * (10 + 3 * sqrt(11)) ^ (n - 1) + (3 - sqrt(11)) * (10 - 3 * sqrt(11)) ^ (n - 1)) / 6. - _ G. C. Greubel _ , Dec 06 2019 ●

▶ [A162807] 1,21,420,8190,159600,3108210,60532290,1178845500,22957618110,447091673490,8706955895400,169564956368010,3302218915041690,64309571936658300,1252406684472377910,24390187277913766890 ⋆ Number of reduced words of length n in Coxeter group on 21 generators S _ i with relations (S _ i) ^ 2 = (S _ i S _ j) ^ 3 = I. ● a(n) = 19 * a(n - 1) + 19 * a(n - 2) - 190 * a(n - 3). - _ Wesley Ivan Hurt _ , May 02 2021 ●

▶ [A097833] 1,21,420,8380,167181,3335241,66537640,1327417560,26481813561,528308853661,10539695259660,210265596339540,4194772231531141,83685179034283281,1669508808454134480,33306490990048406320 ⋆ Partial sums of Chebyshev sequence S(n,20)= U(n,10)=A075843(n + 1). ● a(n) = 20 * a(n - 1) - a(n - 2) + 1, n>=1, a(- 1)=0, a(0)=1. ● a(n) = (S(n + 1, 20) - S(n, 20) - 1) / 18. ● a(n) = 21 * a(n - 1) - 21 * a(n - 2) + a(n - 3), n>=2, a(- 1)=0, a(0)=1, a(1)=21. ● a(n) = (((10 + 3 * sqrt(11)) ^ (- n) * (33 + 10 * sqrt(11) - 11 * (10 + 3 * sqrt(11)) ^ n * (1257 + 379 * sqrt(11)) + (10 + 3 * sqrt(11)) ^ (2 * n) * (262680 + 79201 * sqrt(11))))) / (198 * (1257 + 379 * sqrt(11))). - _ Colin Barker _ , Mar 03 2016 ●

▶ [A163503] 1,21,420,8400,168000,3359790,67191600,1343748210,26873288400,537432252000,10747974763890,214946090593500,4298653734898110,85967713492846500,1719247052441058000,34382796834223386990 ⋆ Number of reduced words of length n in Coxeter group on 21 generators S _ i with relations (S _ i) ^ 2 = (S _ i S _ j) ^ 5 = I. ● a(n) = 19 * a(n - 1) + 19 * a(n - 2) + 19 * a(n - 3) + 19 * a(n - 4) - 190 * a(n - 5). - _ Wesley Ivan Hurt _ , May 10 2021 ●

▶ [A163977] 1,21,420,8400,168000,3360000,67199790,1343991600,26879748210,537593288400,10751832252000,215035974720000,4300706088043890,86013853634593500,1720271710182898110,34405326953812846500 ⋆ Number of reduced words of length n in Coxeter group on 21 generators S _ i with relations (S _ i) ^ 2 = (S _ i S _ j) ^ 6 = I. ● a(n) = - 190 * a(n - 6) + 19 * Sum _{ k=1..5 } a(n - k). - _ Wesley Ivan Hurt _ , May 11 2021 ●

▶ [A092499] 0,1,21,440,9219,193159,4047120,84796361,1776676461,37225409320,779956919259,16341869895119,342399310878240,7174043658547921,150312517518628101,3149388824232642200,65968652791366858099 ⋆ Chebyshev polynomials S(n - 1,21) with Diophantine property. ● a(0)=0, a(1)=1, a(2)=21 and a(n - 1) * a(n + 1) = a(n) ^ 2 - 1 ● a(n) = S(n - 1, 21)=U(n - 1, 21 / 2) with S(n, x) =U(n, x / 2) Chebyshev's polynomials of the 2nd kind, A049310. S(- 1, x)= 0 = U(- 1, x). ● a(n) = S(2 * n - 1, sqrt(23)) / sqrt(23), n>=1. ● a(n) = 21 * a(n - 1) - a(n - 2), n >= 1; a(0)=0, a(1)=1. ● a(n) = (ap ^ n - am ^ n) / (ap - am) with ap := (21 + sqrt(437)) / 2 and am := (21 - sqrt(437)) / 2. ●

▶ [A207389] 21,441,2307,7561,19319,42167,82477,148743,251937,405885,627663,938013,1361779,1928363,2672201,3633259,4857549,6397665,8313339,10672017,13549455,17030335,21208901,26189615,32087833 ⋆ Number of n X 6 0..1 arrays avoiding 0 0 1 and 0 1 0 horizontally and 0 0 1 and 1 1 0 vertically. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

▶ [A207066] 21,441,2499,8799,23856,54684,111426,208026,362943,599907,948717,1446081,2136498,3073182,4319028,5947620,8044281,10707165,14048391,18195219,23291268,29497776,36994902,45983070,56684355 ⋆ Number of n X 6 0..1 arrays avoiding 0 0 1 and 0 1 0 horizontally and 0 0 1 and 1 0 1 vertically. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

▶ [A158603] 21,462,1785,3990,7077,11046,15897,21630,28245,35742,44121,53382,63525,74550,86457,99246,112917,127470,142905,159222,176421,194502,213465,233310,254037 ⋆ a(n) = 441 * n ^ 2 + 21. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A089907] 0,21,483,7785,107787,1377789,16777791,197777793,2277777795,25777777797,287777777799,3177777777801,34777777777803,377777777777805,4077777777777807,43777777777777809,467777777777777811 ⋆ Sum of digits of numbers between 0 and (6 / 9) * (10 ^ n - 1). ● a(n) = s(6, n - 1) where s(a, k)=a * (k + 1) + a ^ 2 * sum(i=0, k, i * 10 ^ (k - i)) + sum(i=0, k, 5 * a * (9 * (k - i) + a - 1) * 10 ^ (k - i - 1)). ● a(n) = (- 11 / 9 * (- 1 + 10 ^ n) + (2 + 3 * 10 ^ n) * n). G.f.: 3 * x * (40 * x ^ 2 + 7 * x + 7) / ((x - 1) ^ 2 * (10 * x - 1) ^ 2). - _ Colin Barker _ , Jun 14 2013 ●

▶ [A129993] 0,21,504,597,704,3441,3980,4601,20540,23681,27300,120197,138504,159597,701040,807741,930680,4086441,4708340,5424881,23818004,27442697,31619004,138821981,159948240 ⋆ Nonnegative values x of solutions (x, y) to the Diophantine equation x ^ 2 + (x + 199) ^ 2 = y ^ 2. ● a(n) = 6 * a(n - 3) - a(n - 6) + 398 for n > 6; a(1)=0, a(2)=21, a(3)=504, a(4)=597, a(5)=704, a(6)=3441. ● a(1)=0, a(2)=21, a(3)=504, a(4)=597, a(5)=704, a(6)=3441, a(7)=3980, a(n)=a(n - 1) + 6 * a(n - 3) - 6 * a(n - 4) - a(n - 6) + a(n - 7). - _ Harvey P. Dale _ , Jun 03 2012 ●

▶ [A100713] 21,697,1333,1909,3901,96361,130153,163201,2708413,2768581,4013833,4312681,4658449,6392257,7478041,8766061,8883841,9427657,9699181,12064333,14489437,15042553,16260901,16904101,18116737 ⋆ Hyperperfect brilliant numbers. ● a(n) is an element in the intersection of A007592 and A078972. a(n)=m (sigma(a(n)) - a(n) - 1) + 1 for some m>1 and a(n) is a semiprime with the same number of digits in each prime factor. ●

▶ [A250060] 21,735,7224,40320,160545,509691,1375080,3281544,7116165,14290815,26947536,48211800,82498689,135877035,216496560,335083056,505506645,745428159,1077028680,1527827280,2131592001,2929349115,3970495704 ⋆ Number of length 1 + 6 0..n arrays with no seven consecutive terms having the maximum of any two terms equal to the minimum of the remaining five terms. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. ●

▶ [A250061] 21,1299,18966,142170,715155,2753061,8746524,24049476,59084865,132643335,276590226,542336574,1009470111,1796982585,3077570040,5095523016,8188763949,12815629371,19587034830,29304700770,43006157931,62017291149 ⋆ Number of length 2 + 6 0..n arrays with no seven consecutive terms having the maximum of any two terms equal to the minimum of the remaining five terms. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>9. ●

▶ [A250062] 21,2292,50028,505154,3213429,15002490,56118016,177725772,494492733,1240508808,2859421884,6142632990,12432735341,23913080862,44008420512,77925990328,133371203589,221477260860,357993503916,564783216666 ⋆ Number of length 3 + 6 0..n arrays with no seven consecutive terms having the maximum of any two terms equal to the minimum of the remaining five terms. ● a(

n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10) for n >10. ●

▶ [A352086] 1,21,2697,4736533,14244123157,4804953862344753 ⋆ a(n) is the smallest positive integer k such that wt(k ^ 2) / wt(k) = n where wt(k) = A000120(k) is the binary weight of k. ● a(n) > 2 ^ (n ^ 2 / 2) for n > 1. - _ Charles R Greathouse IV _ , Mar 16 2022 ●

▶ [A250064] 21,4030,132054,1800040,14492075,82072086,361440380,1318262304,4153110705,11640299550,29654571826,69781269480,153557285479,319076606870,630919231800,1194629311616,2177281160205,3836033915454 ⋆ Number of length 4 + 6 0..n arrays with no seven consecutive terms having the maximum of any two terms equal to the minimum of the remaining five terms. ● a(n) = 11 * a(n - 1) - 55 * a(n - 2) + 165 * a(n - 3) - 330 * a(n - 4) + 462 * a(n - 5) - 462 * a(n - 6) + 330 * a(n - 7) - 165 * a(n - 8) + 55 * a(n - 9) - 11 * a(n - 10) + a(n - 11) for n>11. ●

▶ [A055416] 1,21,4541,198765,3083569,27634481,164379601,759891589,2839094517,9183188589,26107328109,67602028569,160441685209,357086356401,746545031221,1487788785845,2829595966381,5188248484757,9170828884817 ⋆ Number of points in Z ^ 10 of norm <= n. ● a(n) = [x ^ (n ^ 2)] theta _ 3(x) ^ 10 / (1 - x), where theta _ 3() is the Jacobi theta function. - _ Ilya Gutkovskiy _ , Apr 15 2018 ●

▶ [A250063] 21,7054,348066,6415638,65419155,449532868,2330996068,9790907652,34925259201,109359675810,307898807590,793597679082,1898570817663,4261710821064,9053571280840,18330419662312,35574363778221 ⋆ Number of length 5 + 6 0..n arrays with no seven consecutive terms having the maximum of any two terms equal to the minimum of the remaining five terms. ● a(n) = 12 * a(n - 1) - 66 * a(n - 2) + 220 * a(n - 3) - 495 * a(n - 4) + 792 * a(n - 5) - 924 * a(n - 6) + 792 * a(n - 7) - 495 * a(n - 8) + 220 * a(n - 9) - 66 * a(n - 10) + 12 * a(n - 11) - a(n - 12) for n>12. ●

▶ [A270873] 21,7668,75545,545730,3015021,13239896,48243393,151298070,420233285,1056651996,2446142121,5282430218,10751650845,20796493440,38483939921,68504620446,117836491893,196610583620,319221957945,505734798546,783636668621,1190003472168 ⋆ a(n) = n ^ 9 + 8 * n ^ 8 + 43 * n ^ 7 + 159 * n ^ 6 + 452 * n ^ 5 + 997 * n ^ 4 + 1725 * n ^ 3 + 2272 * n ^ 2 + 1990 * n + 21. ● a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10). ●

▶ [A250065] 21,12284,915064,22838540,295152625,2461761504,15032948568,72725094312,293743941525,1027603529940,3197464381472,9027047995732,23478340317185,56931986760280,129941488925520,281314031706000,581349481570101 ⋆ Number of length 6 + 6 0..n arrays with no seven consecutive terms having the maximum of any two terms equal to the minimum of the remaining five terms. ● a(n) = 13 * a(n - 1) - 78 * a(n - 2) + 286 * a(n - 3) - 715 * a(n - 4) + 1287 * a(n - 5) - 1716 * a(n - 6) + 1716 * a(n - 7) - 1287 * a(n - 8) + 715 * a(n - 9) - 286 * a(n - 10) + 78 * a(n - 11) - 13 * a(n - 12) + a(n - 13) for n>13. ●

▶ [A022392] 1,22,23,45,68,113,181,294,475,769,1244,2013,3257,5270,8527,13797,22324,36121,58445,94566,153011,247577,400588,648165,1048753 ⋆ Fibonacci sequence beginning 1, 22. ● a(n) = a(n - 1) + a(n - 2), n>=2, a(0)=1, a(1)=22. a(-1):=21. ●

▶ [A041980] 22,23,45,68,385,453,2197,11438,25073,136803,572285,709088,4117725,4826813,8944538,13771351,614883982,628655333,1243539315,1872194648,10604512555,12476707203,60511341367,315033414038 ⋆ Numerators of continued fraction convergents to sqrt(513). ● a(n) = 27542702 * a(n - 16) - a(n - 32). - _ Wesley Ivan Hurt _ , Apr 18 2023 ●

▶ [A041970] 22,23,45,248,293,4350,22043,26393,48436,171701,735240,906941,2549122,3456063,6005185,9461248,100617665,110078913,210696578,320775491,852247560,1173023051,5544339764,17806042343 ⋆ Numerators of continued fraction convergents to sqrt(508). ● a(n) = 89515213717502 * a(n - 32) - a(n - 64) for n>63. [_ Bruno Berselli _ , Nov 12 2013] ●

▶ [A041982] 22,23,68,1519,3106,4625,206606,211231,629068,14050727,28730522,42781249,1911105478,1953886727,5818878932,129969223231,265757325394,395726548625,17677725464894,18073452013519 ⋆ Numerators of continued fraction convergents to sqrt(514). ● a(n) = 9250 * a(n - 6) - a(n - 12). - _ Vincenzo Librandi _ , Nov 12 2013 ●

▶ [A042004] 22,23,252,527,5522,6049,271678,277727,3048948,6375623,66805178,73180801,3286760422,3359941223,36886172652,77132286527,808209037922,885341324449,39763227313678,40648568638127 ⋆ Numerators of continued fraction convergents to sqrt(525). ● a(n) = 12098 * a(n - 6) - a(n - 12). - _ Vincenzo Librandi _ , Nov 13 2013 ●

▶ [A042008] 22,23,505,528,23737,24265,533302,557567,25066250,25623817,5631646407,588790224,26469936263,27058726487,594703192490,621761918977,27952227627478,28573989546455,628006008103033 ⋆ Numerators of continued fraction convergents to sqrt(527). ● a(n) = 1056 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Nov 13 2013 ●

▶ [A042009] 1,1,22,23,1034,1057,23231,24288,1091903,1116191,24531914,25648105,1153048534,1178696639,25905677953,27084374592,1217618160001,1244702534593,27356371386454,28601073921047,1285803623912522,1314404697833569,28888302278417471 ⋆ Denominators of continued fraction convergents to sqrt(527). ● a(n) = 1056 * a(n - 4) - a(n - 8) for n>7. - _ Vincenzo Librandi _ , Jan 12 2014 ●

▶ [A042010] 22,23,1034,1057,47542,48599,2185898,2234497,100503766,102738263,4620987338,4723725601,212464913782,217188639383,9768765046634,9985953686017,449150727231382,459136680917399 ⋆ Numerators of continued fraction convergents to sqrt(528). ● a(n) = 46 * a(n - 2) - a(n - 4). - _ Vincenzo Librandi _ , Nov 13 2013 ●

▶ [A303304] 0,1,22,25,67,72,135,142,226,235,340,351,477,490,637,652,820,837,1026,1045,1255,1276,1507,1530,1782 ⋆ Generalized 25 - gonal (or icosipentagonal) numbers: m * (23 * m - 21) / 2 with m = 0, + 1, - 1, + 2, - 2, + 3, - 3, ... ● a(n) = n * (23 * n + 42) / 8 for n even. ● a(n) = (23 * n - 19) * (n + 1) / 8 for n odd. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n>4. ●

▶ [A129073] 22,29,43,57,85,99,127,141,169,211,225,267,295,309,337,379,421,435,477,505,519,561,589,631,687 ⋆ Numbers n such that (n - 8) / 7 is prime. ● a(n) = 7 * prime(n) + 8. - Zak Seidov, May 12 2007 ●

▶ [A026044] 22,33,49,70,97,132,176,229,292,367,455,556,671,802,950,1115,1298,1501,1725,1970,2237,2528,2844,3185,3552 ⋆ a(n) = (d(n) - r(n)) / 2, where d = A026043 and r is the periodic sequence with fundamental period (1,1,0,0). ● a(n) =(n + 5) * (2 * n ^ 2 + 11 * n + 54) / 12 - 1 / 4 - (1 / 4) * cos(Pi * n / 2) - (1 / 4) * sin(Pi * n / 2) [From _ Richard Choulet _ , Dec 13 2008] ●

▶ [A103320] 1,22,33,444,555,6666,7777,8888,99999 ⋆ Condensed Golomb sequence: digits according to Golomb's sequence, same digits concatenated. ● a(n)=n ●

▶ [A061561] 22,35,84,105,180,225,360,405,744,837,1488,1581,3024,3213,6048,6237,12192,12573,24384,24765,48960,49725,97920,98685,196224 ⋆ Trajectory of 22 under the Reverse and Add! operation carried out in base 2. ● a(0) = 22; a(1) = 35; for n > 1 and n = 2 (mod 4): a(n) = 6 * 2 ^ (2 * k) - 3 * 2 ^ k where k = (n + 6) / 4; n = 3 (mod 4): a(n) = 6 * 2 ^ (2 * k) + 3 * 2 ^ k - 3 where k = (n + 5) / 4; n = 0 (mod 4): a(n) = 12 * 2 ^ (2 * k) - 3 * 2 ^ k where k = (n + 4) / 4; n = 1 (mod 4): a(n) = 12 * 2 ^ (2 * k) + 9 * 2 ^ k - 3 where k = (n + 3) / 4. [_ Klaus Brockhaus _ , Sep 05 2002] ●

▶ [A078612] 22,38,80,140,302,410,668,824,1182,1832,2086,2930,3572,3920,4662,5892,7262,7756,9320,10442,11032,12884,14202,16298,19310 ⋆ Number of transitions necessary for a Turing machine to compute the differences between consecutive primes (primes written in unary), when using the instruction table below. ● a(n) = prime(n + 1) - prime(n) + (2 * prime(n) + 3) * (prime(n) + 1) because when started with input string 1 ^ q - 1 ^ p =, with q >= p, the Turing machine halts with 1 ^ (q - p) on its tape after (q - p) + (2 * p + 3) * (p + 1) steps. - _ Michael S. Branicky _ , Jul 04 2020 ●

▶ [A063327] 1,22,42,64,86,106,128,150,170,192,214,234,256,278,298,320,342,362,384,406,426,448,470,490,512 ⋆ Dimension of the space of weight n cuspidal newforms for Gamma _ 1(54). ● a(n) = a(n - 1) + a(n - 3) - a(n - 4) for n>6. ●

▶ [A215146] 1,22,43,64,85,106,127,148,169,190,211,232,253,274,295,316,337,358,379,400,421,442,463,484,505 ⋆ a(n) = 21 * n + 1. ● a(n) = 2 * a(n - 1) - a(n - 2). ●

▶ [A277051] 22,44,66,88,110,133,155,177,199,221,244,266,288,310,332,355,377,399,421,443,465,488,510,532,554 ⋆ a(n) = floor(n / (1 - 3 / Pi)). ● a(n) = floor(n / (1 - 3 / Pi)). ●

▶ [A248422] 22,44,66,88,1010,1212,1414,1616,1818,2020,2222,2424,2626,2828,3030,3232,3434,3636,3838,4040,4242,4444,4646,4848,5050 ⋆ Even integers concatenated with themselves. ● a(n) = 2 * n * 10 ^ ceiling(log _ 10(2 * n)) + 2 * n. - _ Tom Edgar _ , Oct 21 2014 ●

▶ [A038153] 22,44,67,89,112,134,157,179,202,224,247,269,291,314,336,359,381,404,426,449,471,494,516,539,561 ⋆ Beatty sequence for Pi ^ e. ● a(n) = floor(n * 22.4591577...). ●

▶ [A041956] 22,45,67,112,179,291,1052,8707,9759,28225,292009,320234,1893179,4106592,59385467,122877526,673773097,796650623,8640279327,18077209277,26717488604,231817118109,722168842931 ⋆ Numerators of continued fraction convergents to sqrt(501). ● a(n) = 22485463805950 * a(n - 28) - a(n - 56) for n>55. [_ Bruno Berselli _ , Nov 12 2013] ●

▶ [A041952] 22,45,67,1452,1519,4490,199079,402648,601727,13038915,13640642,40320199,1787729398,3615778995,5403508393,117089455248,122492963641,362075382530,16053809794961,32469694972452,48523504767413,1051463295088125,1099986799855538 ⋆ Numerators of continued fraction convergents to sqrt(499). ● a(n) = 8980 * a(n - 6) - a(n - 12). - _ Wesley Ivan Hurt _ , May 27 2021 ●

▶ [A195149] 0,1,22,45,88,133,198,265,352,441,550,661,792,925,1078,1233,1408,1585,1782,1981,2200,2421,2662,2905,3168 ⋆ Concentric 22 - gonal numbers. ● a(n) = (22 * n ^ 2 + 9 * (- 1) ^ n - 9) / 4; a(n) = - a(n - 1) + 11 * n ^ 2 - 11 * n + 1. - _ Vincenzo Librandi _ , Sep 27 2011 ●

▶ [A291557] 22,45,91,183,367,735,1471,2943,5887,11775,23551,47103,94207,188415,376831,753663,1507327,3014655,6029311,12058623,24117247,48234495,96468991,192937983,385875967 ⋆ a(n) = 23 * 2 ^ n - 1. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n > 1. ●

▶ [A041962] 22,45,202,449,19958,40365,181418,403201,17922262,36247725,162913162,362074049,16094171318,32550416685,146295838058,325142092801,1445254792130 2,29230237935405,131373499662922 ⋆ Numerators of continued fraction convergents to sqrt(504). ● a(n) = 898 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Nov 12 2013 ●

▶ [A041966] 22,45,2002,4049,180158,364365,16212218,32788801,1458919462,2950627725,131286539362,265523706449,11814329623118,23894182952685,1063158379541258,2150210942035201,95672439829090102,193495090600215405 ⋆ Numerators of continued fraction convergents to sqrt(506). ● a(n) = 90 * a(n - 2) - a(n - 4). - _ Vincenzo Librandi _ , Nov 12 2013 ●

▶ [A132763] 0,22,46,72,100,130,162,196,232,270,310,352,396,442,490,540,592,646,702,760,820,882,946,1012,1080 ⋆ a(n) = n * (n + 21). ● a(n) = n * (n + 21). ● a(n) = 2 * n + a(n - 1) + 20 (with a(0)=0). - _ Vincenzo Librandi _ , Aug 03 2010 ● a(0)=0, a(1)=22, a(2)=46, a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , May 25 2014 ●

▶ [A304387] 22,49,103,211,427,859,1723,3451,6907,13819,27643,55291,110587,221179,442363,884731,1769467,3538939,7077883,14155771,28311547,56623099,113246203,226492411,452984827 ⋆ a(n) = 27 * 2 ^ n - 5. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>1. ●

▶ [A015226] 22,50,252,372,946,1222,2360,2856,4750,5530,8372,9500,13482,15022,20336,22352,29190,31746,40300,43460,53922,57750,70312,74872,89726 ⋆ Even hexagonal pyramidal numbers. ● a(n) = a(n - 1) + 3 * a(n - 2) - 3 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) + a(n - 6) - a(n - 7). ● a(n) = 3 * a(n - 2) - 3 * a(n - 4) + a(n - 6) + 256. ● a(n) = (4 * n + (- 1) ^ n + 5) * (4 * n + (- 1) ^ n + 7) * (8 * n + 2 * (- 1) ^ n + 9) / 24. ●

▶ [A277979] 0,22,52,90,136,190,252,322,400,486,580,682,792,910,1036,1170,1312,1462,1620,1786,1960,2142,2332,2530,2736 ⋆ a(n) = 4 * n ^ 2 + 18 * n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A063302] 1,22,56,91,126,161,196,231,266,301,336,369,406,441,476,509,546,579,616,649,686,719,756,787,826 ⋆ Dimension of the space of weight n cuspidal new forms for Gamma _ 1(29). ● a(n) = a(n - 4) + a(n - 6) - a(n - 10) for n>13. ●
▶ [A131878] 1,22,57,106,169,246,337,442,561,694,841,988,1163,1352,1555,1772,2003,2248,2507,2780,3067,3368,3683,4012,4355 ⋆ Row sums of triangle A131876. ● a(n) = a(n - 1) + 14 * n + 7 (with a(0)=1). - _ Vincenzo Librandi _ , Nov 23 2010 ●
▶ [A216299] 22,61,85,142,166,169,178,199,268,316,415,451,478,541,682,775,787,862,1045,1111,1237,1387,1618,1720,1738 ⋆ Numbers k such that 10k + 1 is composite but 10k + 3, 10k + 7, 10k + 9 are all prime. ● a(n) >> n log ^ 3 n. - _ Charles R Greathouse IV _ , Sep 07 2012 ●
▶ [A051874] 0,1,22,63,124,205,306,427,568,729,910,1111,1332,1573,1834,2115,2416,2737,3078,3439,3820,4221,4642,5083,5544 ⋆ 22 - gonal numbers: a(n) = n * (10 * n - 9). ● a(n) = 2 * a(n - 1) - a(n - 2) + 20 with n>1, a(0)=0, a(1)=1. - _ Zerinvary Lajos _ , Feb 18 2008 ● a(n) = 20 * n + a(n - 1) - 19 with n>0, a(0)=0. - _ Vincenzo Librandi _ , Aug 06 2010 ● a(20 * a(n) + 191 * n + 1) = a(20 * a(n) + 191 * n) + a(20 * n + 1). - _ Vladimir Shevelev _ , Jan 24 2014 ●
▶ [A069178] 1,22,64,127,211,316,442,589,757,946,1156,1387,1639,1912,2206,2521,2857,3214,3592,3991,4411,4852,5314,5797,6301 ⋆ Centered 21 - gonal numbers. ● a(n) = (21n ^ 2 - 21n + 2) / 2 ● a(n) = 21 * n + a(n - 1) - 21 (with a(1)=1). - _ Vincenzo Librandi _ , Aug 08 2010 ● a(n) = 1 + Sum _{ i=1..n } 21 * (i - 1). - _ Wesley Ivan Hurt _ , May 25 2013 ●
▶ [A081929] 1,22,64,127,211,316,442,589,757,946,1156,2467,3979,5692,7606,9721,12037,14554,17272,20191,23311,26632,30154,33877,37801 ⋆ Sum of the n - th row of A077339. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n > 13. ●
▶ [A305064] 22,64,148,316,652,1324,2668,5356,10732,21484,42988,85996,172012,344044,688108,1376236,2752492,5505004,11010028,22020076,44040172,88080364,176160748,352321516,704643052 ⋆ a(n) = 42 * 2 ^ n - 20. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>1. ●
▶ [A164136] 0,22,66,132,220,330,462,616,792,990,1210,1452,1716,2002,2310,2640,2992,3366,3762,4180,4620,5082,5566,6072,6600 ⋆ a(n) = 11 * n * (n + 1). ● a(n) = 22 * n + a(n - 1) with n>0, a(0)=0. - _ Vincenzo Librandi _ , Nov 30 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Sep 12 2013 ●
▶ [A080861] 1,22,73,154,265,406,577,778,1009,1270,1561,1882,2233,2614,3025,3466,3937,4438,4969,5530,6121,6742,7393,8074,8785 ⋆ 15 * n ^ 2 + 6 * n + 1. ● a(n) = C(6,0) + C(6,1) * n + C(6,2) * n ^ 2. ●
▶ [A241521] 22,75,119,172,216,269,313,366,410,463,507,560,604,657,701,754,798,851,895,948,992,1045,1089,1142,1186 ⋆ Numbers n such that n ^ 2 == - 1 (mod 97). ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n>2. ● a(n) = a(n - 2) + 97 for all n>2. ● a(n) = - 22 * (- 1) ^ n + 97 * floor(n / 2). ●
▶ [A143838] 1,22,75,160,277,426,607,820,1065,1342,1651,1992,2365,2770,3207,3676,4177,4710,5275,5872,6501,7162,7855,8580,9337 ⋆ Ulam's spiral (SSW spoke). ● a(n) = 16 * n ^ 2 - 27 * n + 12, n>0. - _ R. J. Mathar _ , Sep 04 2008 ●
▶ [A253304] 1,22,77,1376,4785,85302,296605,5287360,18384737,327731030,1139557101,20314036512,70634155537,1259142532726,4378178086205,78046522992512,271376407189185,4837625283003030,16820959067643277,299854721023195360,1042628085786694001 ⋆ Numbers n such that the sum of the heptagonal numbers H(n) and H(n + 1) is equal to the octagonal number O(m) for some m. ● a(n) = a(n - 1) + 62 * a(n - 2) - 62 * a(n - 3) - a(n - 4) + a(n - 5). ●
▶ [A237618] 0,1,22,82,200,395,686,1092,1632,2325,3190,4246,5512,7007,8750,10760,13056,15657,18582,21850,25480,29491,33902,38732,44000 ⋆ a(n) = n * (n + 1) * (19 * n - 16) / 6. ● a(n) = Sum _{ i=0..n - 1 } (n - i) * (19 * i + 1), for n>0; see the generalization in A237616 (Formula field). ● a(n) = binomial(n + 2, 3) + 18 * binomial(n + 1, 3). ●
▶ [A195323] 0,22,88,198,352,550,792,1078,1408,1782,2200,2662,3168,3718,4312,4950,5632,6358,7128,7942,8800,9702,10648,11638,12672 ⋆ a(n) = 22 * n ^ 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). [_ Harvey P. Dale _ , Sep 19 2011] ●
▶ [A041944] 22,89,3938,15841,700942,2819609,124763738,501874561,22207244422,89330852249,3952764743378,15900389825761,703569170768 62,2830180058133209,125231492474938058,503756149957885441 ⋆ Numerators of continued fraction convergents to sqrt(495). ● a(n) = 178 * a(n - 2) - a(n - 4). - _ Vincenzo Librandi _ , Nov 12 2013 ●
▶ [A272378] 0,1,22,99,268,565,1026,1687,2584,3753,5230,7051,9252,11869,14938,18495,22576,27217,32454,38323,44860,52101,60082,68839,78408 ⋆ a(n) = n * (6 * n ^ 2 - 8 * n + 3). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4), for n>3. ●
▶ [A264852] 0,1,22,100,290,665,1316,2352,3900,6105,9130,13156,18382,25025,33320,43520,55896,70737,88350,109060,133210,161161,193292,230000,271700 ⋆ a(n) = n * (n + 1) * (n + 2) * (9 * n - 7) / 12. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Vincenzo Librandi _ , Nov 27 2015 ●
▶ [A156795] 22,103,184,265,346,427,508,589,670,751,832,913,994,1075,1156,1237,1318,1399,1480,1561,1642,1723,1804,1885,1966 ⋆ a(n) = 81 * n - 59. ● a(n) = 2 * a(n - 1) - a(n - 2). ●
▶ [A089184] 1,22,111,4444,33333,333333,3333333,13333133,133331133,3323333233,31133331133,333343333433,3333333333333,33333333333333,333333333333333,3313333333313333,31133333333113333,333323333333323333 ⋆ A coding semi - palindromic sequence made by converting a zero containing limited digit set palindromic sequence to a fraction and then converting back to an continued fraction array and making the sequence up from the result. ● a(n) = CodeContinuedfraction[Palindromic number[n]] ●
▶ [A260810] 0,1,22,117,376,925,1926,3577,6112,9801,14950,21901,31032,42757,57526,75825,98176,125137,157302,195301,239800,291501,351142,419497,497376 ⋆ a(n) = n ^ 2 * (3 * n ^ 2 - 1) / 2. ● a(n) = a(- n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ●
▶ [A290800] 0,1,22,120,120,9724,26531,144180,144180,17438583,259560225,259560225,259560225,83307283431,180196293838,2893088585234,17135773115063,116834564823866,582095592798280,1035257718026 0974,5594815792175 3546,454909489409813551 ⋆ One of the two successive approximations up to 7 ^ n for the 7 - adic integer sqrt(- 6). These are the numbers congruent to 1 mod 7 (except for the initial 0). ● a(0) = 0 and a(1) = 1, a(n) = a(n - 1) + 3 * (a(n - 1) ^ 2 + 6) mod 7 ^ n for n > 1. ●
▶ [A215626] 1,22,129,468,1309,3101,6539,12644,22857,39148,64141,101256,154869,230491,334967,476696,665873,914754,1237945,1652716,2179341,2841465,3666499,4686044,5936345 ⋆ Number of terms in 8th derivative of a function composed with itself n times. ● a(n) = n * (n + 6) * (n ^ 5 + 50 * n ^ 4 + 568 * n ^ 3 + 722 * n ^ 2 - 713 * n + 92) / 5040. ●
▶ [A095694] 1,22,130,485,1400,3416,7392,14610,26895,46750,77506,123487,190190,284480,414800,591396,826557,1134870,1533490,2042425,2684836,3487352,4480400 ⋆ T(n,3) diagonal of triangle in A095693. ● a(n) = (n + 1) * n * (n - 1) * (n ^ 3 + 3 * n ^ 2 + 2 * n - 16) / 48. - corrected by _ Eric Rowland _ , Aug 15 2017 ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). - _ Wesley Ivan Hurt _ , Apr 12 2023 ●
▶ [A003778] 1,22,132,1006,4324,26996,109722,602804,2434670,12287118,49852352,237425498,969300694,4434629912,18203944458,80978858522,333840165288,1456084764388,6021921661718,25904211802080 ⋆ Number of Hamiltonian paths in P _ 5 X P _ n. ● a(1) = 1, ● a(2) = 22, ● a(3) = 132, ● a(4) = 1006, ● a(5) = 4324, ● a(6) = 26996, ●
▶ [A254699] 22,133,464,1205,2606,4977,8688,14169,21910,32461,46432,64493,87374,115865,150816,193137,243798,303829,374320,456421,551342,660353,784784,926025,1085526 ⋆ Number of length 1 + 4 0..n arrays with every five consecutive terms having the maximum of some two terms equal to the minimum of the remaining three terms. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●
▶ [A183909] 1,1,22,136,470,1193,2525,4752,8238,13438,20912,31340,45538,64475,89291,121316,162090,213384,277222,355904,452030,568525,708665,876104,1074902 ⋆ Number of nondecreasing arrangements of n + 2 numbers in 0..6 with each number being the sum mod 7 of two others. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>10. ●
▶ [A238170] 0,1,22,140,512,1397,3174,6352,11585,19683,31622,48558,71831,102978,143739,196069,262144,344365,445375,568056,715541,891223,1098758,1342070,1625363 ⋆ Integer part of square root of A001017: a(n) = floor(n ^ (9 / 2)). ● a(n) = floor(n ^ (9 / 2)). ● a(n) = floor(n ^ 4 * sqrt(n)). ●
▶ [A275799] 1,22,140,578,1785,4612,10416,21340,40425,72010,121836,197582,308945,468328,690880,995352,1404081,1944030,2646700,3549370,4694921,6133292,7921200,10123828,12814425 ⋆ Number of inequivalent (modulo C _ 4 rotations) square n X n grids with squares coming in two colors and three squares have one of the colors. ● a(n) = (n ^ 6 - 3 * n ^ 4 + 2 * n ^ 2) / 24 for n even. ● a(n) = (n ^ 6 - 3 * n ^ 4 + 5 * n ^ 2 - 3) / 24 for n odd. (End) ● a(n) = C(n ^ 2,3) / 4 for n even, ● a(n) = (C(n ^ 2,3) + (n ^ 2 - 1) / 2) / 4 for n odd. (End) ●
▶ [A169722] 1,22,145,715,3151,13207,54055,218695,879751,3528967,14135815,56583175,226412551,905809927,3623559175,14494875655,57980780551,231925678087,927707824135,3710841520135,14843386527751,59373587005447,237494429810695,949977882820615 ⋆ a(n) = (3 * 2 ^ (n - 1) - 1) * (18 * 2 ^ (n - 1) - 7). ● a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3). - _ Vincenzo Librandi _ , Dec 04 2012 ●
▶ [A262139] 22,145,862,5041,29398,171361,998782,5821345,33929302,197754481,1152597598,6717831121,39154389142,228208503745,1330096633342,7752371296321,45184131144598,263352415571281,1534930362283102,8946229758127345,52142448186480982 ⋆ The first of eight consecutive positive integers the sum of the squares of which is equal to the sum of the squares of nine consecutive positive integers. ● a(n) = 7 * a(n - 1) - 7 * a(n - 2) + a(n - 3) for n>3. ● a(n) = (- 14 + 3 * (3 - 2 * sqrt(2)) ^ (1 + n) + 3 * (3 + 2 * sqrt(2)) ^ (1 + n)) / 4. - _ Colin Barker _ , Mar 05 2016 ●
▶ [A223836] 22,148,503,1286,2884,5992,11749,21912,39064,66854,110269,175938,272468,410812,604669,870916,1230072,1706794,2330405,3135454,4162308,5457776,7075765,9077968,11534584 ⋆ Number of n X 6 0..1 arrays with rows and antidiagonals unimodal and columns nondecreasing. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>10. ●
▶ [A224144] 22,148,554,1573,3827,8375,16885,31841,56783,96579,157729,248701,380299,566063,822701,1170553,1634087,2242427,3029913,4036693,5309347,6901543,8874725,11298833,14253055 ⋆ Number of n X 6 0..1 arrays with rows and antidiagonals unimodal and columns nondecreasing. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>10. ●
▶ [A225008] 22,148,610,1897,4900,11088,22716,43065,76714,129844,210574,329329,499240,736576,1061208,1497105,2072862,2822260,3784858,5006617,6540556,8447440,10796500,13666185,17144946 ⋆ Number of n X 6 0..1 arrays with rows unimodal and columns nondecreasing. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●
▶ [A027943] 1,22,155,709,2587,8273,24416,68595,187030,500950,1327986,3499982,9195035,24115804,63192397,165512723,433410661,1134800215,2971089810,7778591025,20364830496,53316076892,139583609940,365435000524,956721681957 ⋆ a(n) = T(2 * n + 1, n + 3), T given by A027935. ● a(n) = Sum _{ j=0..n - 2 } binomial(2 * n - j + 1, 2 * (n - j - 2)). ● a(n) = Fibonacci(2 * n + 7) - (78 + 75 * n + 35 * n ^ 2 + 12 * n ^ 3 + 4 * n ^ 4) / 6. (End) ●
▶ [A224257] 22,158,648,2017,5246,11990,24842,47643,85838,146878,240668,380061,581398,865094,1256270,1785431,2489190,3411038,4602160,6122297,8040654,10436854,13401938,17039411,21466334 ⋆ Number of n X 3 0..2 arrays with rows and antidiagonals unimodal and columns nondecreasing. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●
▶ [A244868] 1,22,158,654,1980,4906,10577,20588,37059,62710,100936,155882,232518,336714,475315,656216,888437,1182198,1548994,2001670,2554496,3223242,4025253,4979524,6106775 ⋆ Number of symmetric 5 X 5 matrices of nonnegative integers with zeros on the main diagonal and every row and column adding to n. ● a(n) = (24 + 94 * n + 165 * n ^ 2 + 155 * n ^ 3 + 75 * n ^ 4 + 15 * n ^ 5) /

24. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>5. ●

► [A223913] 22,158,666,2111,5548,12752,26494,50863,91634,156682,256442,404415,617720,917692,1330526,1887967,2628046,3595862,4844410,6435455,8440452,10941512,14032414,17819663,22423594 ⋆ Number of n X 3 0..2 arrays with rows and antidiagonals unimodal and columns nondecreasing. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

► [A189416] 1,1,22,158,674,2159,5664,13004,26904,51401,92094,156710,255090,400359,608656,900100,1299336,1836461,2546550,3472162,4661898,6173123,8071952,10434600,13346080 ⋆ Number of parallelograms on an n X n grid. ● a(n) = Sum _{ a=1..n - 1 } Sum _{ b=1..n - 1 } (n - a) * (n - b) * (2 * a * b - gcd(a,b)). - _ Andrew Howroyd _ , Sep 19 2017 ●

► [A224185] 22,158,684,2205,5852,13524,28176,54153,97570,166738,272636,429429,655032,971720,1406784,1993233,2770542,3785446,5092780,6756365,8849940,11458140,14677520,18617625,23402106 ⋆ Number of n X 3 0..2 arrays with rows unimodal and columns nondecreasing. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

► [A173393] 22,164,1758,20776,248882,2986044,35831878,429981776,5159780442,61917364324,743008370798,8916100448376,106993205379202,1283918464549004,15407021574586518,184884258895036576 ⋆ 10n + 12 ^ n. ● a(n)= 14 * a(n - 1) - 25 * a(n - 2) + 12 * a(n - 3). G.f.: 2 * x * (11 - 72 * x + 6 * x ^ 2) / ((1 - 12 * x) * (x - 1) ^ 2). [From _ R. J. Mathar _ , Feb 21 2010] ●

► [A141306] 22,166,1107,9222,73778,645555,5533333,49799993,442666605,4057777214,36888883762,342539634932,3161904322448,29642853022951,276666628214208,2612962599800854,24592589174596271,233629597158664575,2213333025713664398 ⋆ Approximate prime counts at 10 ^ n resulting from an experimental algorithm designed to estimate with 99 +% accuracy unknown values of 10 ^ n. ● a(n) = round(log(9.14615 ^ n) * 10 ^ (n - 1) / floor(n ^ 2 / 2)). ●

► [A243143] 1,22,170,816,2947,8765,22703,52823,113042,225817,426299,766905,1324282,2206478,3563770,5599258,8584775,12875840,18934040,27347390,38860741,54402707,75125825,102441321,138070912 ⋆ Number of inequivalent (mod D _ 3) ways to place 4 points on a triangular grid of side n so that they are not vertices of an equilateral triangle of any orientation. ● a(n) = (n ^ 8 + 4 * n ^ 7 - 14 * n ^ 6 - 56 * n ^ 5 + 136 * n ^ 4 - 104 * n ^ 3 + 552 * n ^ 2 - 672 * n) / 2304 + IF(MOD(n, 2) = 1) * (28 * n ^ 3 - 198 * n ^ 2 + 296 * n + 21) / 768) + IF(MOD(n - 1, 4) <= 1) * (- 1 / 8). ●

► [A321268] 0,0,0,0,22,172,856,3488,12746,43628,143244,457536,1434318,4438540,13611136,41473216,125797010,380341580,1147318004,3455325600,10394291094,31242645420,93853769320,281825553760,846030314842 ⋆ Number of permutations on [n] whose up - down signature has nonnegative partial sums and which have exactly two descents. ● a(n) = 3 ^ n - 3 * n * 2 ^ (n - 1) - 2 * binomial(n,3) + 4 * binomial(n,2) - 1 for n > 1. ● a(n) = 11 * a(n - 1) - 50 * a(n - 2) + 122 * a(n - 3) - 173 * a(n - 4) + 143 * a(n - 5) - 64 * a(n - 6) + 12 * a(n - 7) for n>8. ● a(n) = - 1 + 3 ^ n - (16 + 9 * 2 ^ n) * n / 6 + 3 * n ^ 2 - n ^ 3 / 3 for n>1. ●

► [A107969] 1,22,182,915,3388,10192,26376,60894,128535,252406,467038,822185,1387386,2257360,3558304,5455164,8159949,11941158,17134390,24154207,33507320,45807168,61789960,82332250,108470115 ⋆ a(n) = (n + 1)(n + 2) ^ 2 * (n + 3)(2n + 3)(5n ^ 2 + 19n + 20) / 720. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>7. ●

► [A129126] 22,185,810,2580,6765,15525,32305,62337,113265,195910,325193,521235,810654,1228080,1817910,2636326,3753600,5256711,7252300,9869990,13266099,17627775,23177583,30178575,38939875 ⋆ Ninth diagonal of table A060850 counting partitions into parts of k kinds. ● a(n) = n * (n + 6) * (n + 3) * (n + 1) * (4200 + (9994 + (1571 + (74 + n) * n) * n) * n) / 40320. (End) ●

► [A107959] 1,22,190,1015,4018,12936,35784,88110,197835,412126,806806,1498861,2662660,4550560,7518624,12058236,18834453,28731990,42909790,62865187,90508726,128250760,179101000,246782250,335859615 ⋆ a(n) = (n + 1) * (n + 2) ^ 2 * (n + 3) ^ 2 * (n + 4) * (n ^ 2 + 5 * n + 5) / 720. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>8. ●

► [A200936] 22,190,2878,3862,111382,117118,3864190,3897622,131738902,131933758,4477986238,4479121942,152135692822,152142312190,5168228240638,5168266821142,175568164615702,175568389479358,5964152516784190,5964153827385622,202605635754466582 ⋆ Successive values x of solutions Mordell's elliptic curve x ^ 3 - y ^ 2 = d contained points { x,y } with quadratic extension sqrt(2) over rationals. ● a(n) = a(n - 1) + 40 * a(n - 2) - 40 * a(n - 3) - 206 * a(n - 4) + 206 * a(n - 5) + 40 * a(n - 6) - 40 * a(n - 7) - a(n - 8) + a(n - 9). ●

► [A110690] 1,22,193,1045,4180,13566,37764,93456,210705,440440,864721,1610401,2866864,4908580,8123280,13046616,20404233,31162242,46587145,68316325,98440276,139597810,195085540,268983000,366294825 ⋆ Kekulé numbers for certain benzenoids. ● a(n) = (n + 1) * (n + 2) ^ 2 * (n + 3) * (n + 4)(31 * n ^ 3 + 236 * n ^ 2 + 545 * n + 420) / 20160. ●

► [A254470] 1,22,198,1134,4884,17226,52338,141570,348777,795652,1701700,3444948,6651216,12321804,22011804,38073948,63985977,104782986,167620090,262495090,403165620,608300550,902911230,1320114510,1903286385 ⋆ Sixth partial sums of fourth powers (A000583). ● a(n) = n * (1 + n) * (2 + n) * (3 + n) ^ 2 * (4 + n) * (5 + n) * (6 + n) * (1 + 12 * n + 2 * n ^ 2) / 302400. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) + n ^ 4. ●

► [A224330] 1,22,213,1724,12955,93306,653177,4478968,30233079,201553910,1330255861,8707129332,56596340723,365699432434,2350924922865,15045919506416,95917736853487,609359740010478,3859278353399789,24374389600419820 ⋆ Number of idempotent n X n 0..5 matrices of rank n - 1. ● a(n) = n * (2 * 6 ^ (n - 1) - 1). ● a(n) = 14 * a(n - 1) - 61 * a(n - 2) + 84 * a(n - 3) - 36 * a(n - 4). ●

► [A290362] 0,1,22,223,1344,5727,19193,54046,133476,297633,611644,1175845,2138500,3711279,6187767,9965276,15570232,23687409,35193282,51193771,73066648,102508879,141589173,192806010,259151420 ⋆ Number of 8 - leaf rooted trees with n levels. ● a(n) = (272 * n ^ 7 + 273 * n ^ 6 + 749 * n ^ 5 + 1365 * n ^ 4 + 1043 * n ^ 3 + 882 * n ^ 2 + 456 * n) / 7!. ●

► [A300624] 0,1,22,243,1804,10165,46530,180775,614680,1871145,5188590,13286043,31760676,71513949,152784282,311603535,609802800,1150082385,2098144710,3714481475,6399123260,10753517061,17664712562,28418229623,44847366984 ⋆ Figurate numbers based on the 11 - dimensional regular convex polytope called the 11 - dimensional cross - polytope, or 11 - dimensional hyperoctahedron. ● a(n) = 11 - crosspolytope(n). ● a(n) = (n * (14175 + 83754 * n ^ 2 + 50270 * n ^ 4 + 7392 * n ^ 6 + 330 * n ^ 8 + 4 * n ^ 10)) / 155925. ●

► [A010974] 1,22,253,2024,12650,65780,296010,1184040,4292145,14307150,44352165,129024480,354817320,927983760,2319959400,5567902560,12875774670,28781143380,62359143990,131282408400,269128937220,538257874440,1052049481860,2012616400080,3773655750150 ⋆ a(n) = binomial(n,21). ● a(n) = n * (n + 1) * (n + 2) * (n + 3) * (n + 4) * (n + 5) * (n + 6) * (n + 7) * (n + 8) * (n + 9) * (n + 10) * (n + 11) * (n + 12) * (n + 13) * (n + 14) * (n + 15) * (n + 16) * (n + 17) * (n + 18) * (n + 19) * (n + 20) / 21!. - _ Artur Jasinski _ , Dec 02 2007 ● a(n) = n / (n - 21) * a(n - 1), n > 21. - _ Vincenzo Librandi _ , Mar 26 2011 ●

► [A172242] 1,22,264,2288,16016,96096,512512,2489344,11202048,47297536,189190144,722362368,2648662016,9372188672,32133218304,107110727680,348109864960,1105760747520,3440144547840,10501493882880,31504481648640 ⋆ Number of 10 - D hypercubes in an n - dimensional hypercube. ● a(n) = binomial(n,10) * 2 ^ (n - 10). [Corrected by _ R. J. Mathar _ , Feb 21 2010] ● a(n) = Sum _{ i=10..n } binomial(i,10) * binomial(n,i). Example: for n=15, a(15) = 1 * 3003 + 11 * 1365 + 66 * 455 + 286 * 105 + 1001 * 15 + 3003 * 1 = 96096. - _ Bruno Berselli _ , Mar 23 2018 ●

► [A128766] 1,22,267,1996,10375,41406,135877,384112,966141,2212750,4693711,9340332,17610307,31703686,54839625,91604416,148382137,233880102,359762131,541403500,798782271,1157522542,1650105997,2317268976,3209603125 ⋆ Number of inequivalent n - colorings of the vertices of the 3D cube under full orthogonal group of the cube (of order 48). ● a(n) = (1 / 48) * (20 * n ^ 2 + 21 * n ^ 4 + 6 * n ^ 6 + n ^ 8). ● a(n)=C(n,1) + 20C(n,2) + 204C(n,3) + 1056C(n,4) + 2850C(n,5) + 4080C(n,6) + 2940C(n,7) + 840C(n,8). Each term indicates the number of ways to use n colors to color the cube vertices (octahedron faces) with exactly 1, 2, 3, 4, 5, 6, 7, or 8 colors. ●

► [A172226] 0,0,22,276,1474,5248,14690,35012,74326,144544,262398,450580,739002,1166176,1780714,2642948,3826670,5420992,7532326,10286484,13830898,18336960,24002482,31054276,39750854 ⋆ Number of ways to place 3 nonattacking wazirs on an n X n board. ● a(n) = (n - 2) * (n ^ 5 + 2 * n ^ 4 - 11 * n ^ 3 - 10 * n ^ 2 + 42 * n - 12) / 6, n>=2. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). - _ Vincenzo Librandi _ , Apr 30 2013 ●

► [A020922] 1,22,286,2860,24310,184756,1293292,8498776,53117350,318704100,1848483780,10418726760,57302997180,308554600200,1630931458200,8480843582640,43464323361030,219878341708740,1099391708543700,5439095821216200,26651569523959380,129450480544945560 ⋆ Expansion of 1 / (1 - 4 * x) ^ (11 / 2). ● a(n) = ((2n + 9)(2n + 7)(2n + 5)(2n + 3)(2n + 1) / (9 * 7 * 5 * 3 * 1)) * binomial(2n, n). ● a(n) = binomial(2n + 10, 10) * binomial(2n, n) / binomial(n + 5, 5). ● a(n) = binomial(n + 5, 5) * binomial(2n + 10, n + 5) / binomial(10, 5). ●

► [A003468] 1,22,305,3410,33621,305382,2619625,21554170,171870941,1337764142,10216988145,76862115330,571247591461,4203844925302,30687029023865,222518183370890,1604626924403181,11518132293452862 ⋆ Number of minimal 3 - covers of a labeled n - set. ● a(n) = 7 ^ n / 6 - 6 ^ n / 2 + 5 ^ n / 2 - 4 ^ n / 6. - _ Vaclav Kotesovec _ , Nov 19 2012 ●

► [A041928] 22,309,331,971,4215,5186,9401,33389,76179,414284,490463,3357062,3847525,7204587,155143852,162348439,317492291,2067302185,2384794476,1399127456 5,30367343606,105093305383 ⋆ Numerators of continued fraction convergents to sqrt(487). ● a(n) = 103812147681136 * a(n - 28) - a(n - 56) for n>55. [_ Bruno Berselli _ , Nov 12 2013] ●

► [A028054] 1,22,309,3542,36197,344190,3119173,27339334,233997093,1968524558,16351808837,134557949526,1099534023589,8937744119326,72366036152901,584189060834918,4705458521506085,37837251535931694 ⋆ Expansion of 1 / ((1 - 3x)(1 - 5x)(1 - 6x)(1 - 8x)). ● a(n) = (8 ^ (n + 3) - 5 * 6 ^ (n + 3) + 5 ^ (n + 4) - 3 ^ (n + 3)) / 30. - _ Yahia Kahloune _ , May 19 2013 ●

► [A028038] 1,22,311,3608,37485,363594,3368947,30231916,265060169,2283904766,19419219183,163405866624,1363677239653,11304693716338,93205539717419,765024499566932,6255874320057537,50996811157171110 ⋆ Expansion of 1 / ((1 - 3x)(1 - 4x)(1 - 7x)(1 - 8x)). ● a(n)=(3 * 8 ^ (n + 3) - 5 * 7 ^ (n + 3) + 5 * 4 ^ (n + 3) - 3 ^ (n + 4)) / 60. [_ Yahia Kahloune _ , May 30 2013] ●

► [A025992] 1,22,313,3666,38493,377286,3529681,31947322,282198565,2447183310,20920905369,176852694018,1481626607917,12322682753494,101879323774177,838170485025354,6867569457133749,56077266261254238 ⋆ Expansion of 1 / ((1 - 2x)(1 - 5x)(1 - 7x)(1 - 8x)). ● a(0)=1, a(1)=22, a(2)=313, a(3)=3666, a(n)=22 * a(n - 1) - 171 * a(n - 2) + 542 * a(n - 3) - 560 * a(n - 4). - _ Harvey P. Dale _ , Jan 29 2013 ● a(n) = (5 * 8 ^ (n + 3) - 9 * 7 ^ (n + 3) + 5 ^ (n + 4) - 2 ^ (n + 3)) / 90. - _ Yahia Kahloune _ , May 07 2013 ●

► [A028034] 1,22,313,3682,39109,391174,3769921,35484394,328932637,3018821806,27523981849,249859595986,2261664434485,20432811986518,184363359728497,1662082800576058,14975637634031053,134882161611414910 ⋆ Expansion of 1 / ((1 - 3x)(1 - 4x)(1 - 6x)(1 - 9x)). ● a(n) = (9 ^ (n + 3) - 5 * 6 ^ (n + 3) + 9 * 4 ^ (n + 3) - 5 * 3 ^ (n + 3)) / 90. - _ Yahia Kahloune _ , May 30 2013 ●

► [A025988] 1,22,315,3740,40121,405042,3935095,37284280,347419941,3201202862,29273641475,266321046420,2414445954961,21837387317482,197190900709455,1778695458106160,16032377546389181,144437380023772902 ⋆ Expansion of 1 / ((1 - 2x)(1 - 5x)(1 - 6x)(1 - 9x)). ● a(n) = - 2 * 2 ^ n / 21 + 125 * 5 ^ n / 12 - 18 * 6 ^ n / 1 + 243 * 9 ^ n / 28. _ R. J. Mathar _ , Jun 20 2013 ●

► [A023949] 1,22,317,3782,40533,405534,3869149,35663254,320292005,2819331086,24426173421,208945416966,1768927681717,14848644708478,123763757447933,1025496480025718,8455062115190469,69418440837750510 ⋆ Expansion of 1 / ((1 - x)(1 - 6x)(1 - 7x)(1 - 8x)). ● a(n) = (30 * 8 ^ (n + 3) - 10 * 7 ^ (n + 4) + 7 * 6 ^ (n + 4) - 2) / 420. [_ Yahia Kahloune _ , Jun 27 2013] ● a(0)=1, a(1)=22, a

(2)=317, a(3)=3782; for n>3, a(n) = 22 * a(n - 1) - 167 * a(n - 2) + 482 * a(n - 3) - 336 * a(n - 4). - _ Vincenzo Librandi _ , Jul 12 2013 ●

▶ [A025972] 1,22,317,3806,41421,424974,4198189,40430302,382529741,3573890606,33084972141,304212832638,2783085627661,25364095795918,230491675046573,2089930913053214,18917927670786381,171021229569836910 ⋆ Expansion of 1 / ((1 - 2x)(1 - 4x)(1 - 7x)(1 - 9x)). ● a(n) = - 4 * 2 ^ n / 35 + 32 * 4 ^ n / 15 - 343 * 7 ^ n / 30 + 729 * 9 ^ n / 70. - _ R. J. Mathar _ , Jun 20 2013 ●

▶ [A028029] 1,22,317,3830,42381,447582,4608877,46813030,471994061,4740248942,47508048237,475624522230,4759030936141,47604501583102,476117036332397,4761534717751430,47617186000380621,476181122450194062 ⋆ Expansion of 1 / ((1 - 3x)(1 - 4x)(1 - 5x)(1 - 10x)). ● a(0)=1, a(1)=22, a(2)=317, a(3)=3830, a(n) =22 * a(n - 1) - 167 * a(n - 2) + 530 * a(n - 3) - 600 * a(n - 4). [_ Harvey P. Dale _ , May 08 2012] ● a(n)=(10 ^ (n + 3) - 21 * 5 ^ (n + 3) + 35 * 4 ^ (n + 3) - 15 * 3 ^ (n + 3)) / 210. [_ Yahia Kahloune _ , May 30 2013] ●

▶ [A022453] 1,22,320,3890,42861,444612,4433080,43016380,409466321,3843870602,35717758440,329381322270,3020187550381,27573503381992,250911867832400,2277497319225560,20632700169031041,186641825267602782 ⋆ Expansion of 1 / ((1 - x) * (1 - 5 * x) * (1 - 7 * x) * (1 - 9 * x)). ● a(n) = (3 * 9 ^ (n + 3) - 8 * 7 ^ (n + 3) + 6 * 5 ^ (n + 3) - 1) / 192. -_ Yahia Kahloune _ , Jun 26 2013 ● a(0) =1, a(1)=22, a(2)=320, a(3)=3890; for n>3, a(n) = 22 * a(n - 1) - 164 * a(n - 2) + 458 * a(n - 3) - 315 * a(n - 4). - _ Vincenzo Librandi _ , Jul 12 2013 ●

▶ [A025968] 1,22,320,3920,44016,471072,4904320,50237440,509670656,5141007872,51677982720,518395637760,5193684791296,51995352604672,520305091051520,5205162447994880,52064302294695936,520719124195049472 ⋆ Expansion of 1 / ((1 - 2x)(1 - 4x)(1 - 6x)(1 - 10x)). ● a(n) = - 2 ^ n / 8 + 8 * 4 ^ n / 3 - 27 * 6 ^ n / 4 + 125 * 10 ^ n / 24. - _ R. J. Mathar _ , Jun 20 2013 ●

▶ [A025948] 1,22,321,3938,44045,465894,4751017,47229226,460842789,4433881166,42195474113,398084143314,3729357886333,34737030515638,322015765266009,2973201855377402,27359296571272277,251037508511614110 ⋆ Expansion of 1 / ((1 - 2x)(1 - 3x)(1 - 8x)(1 - 9x)). ● a(n) = - 4 * 2 ^ n / 21 + 9 * 3 ^ n / 10 - 256 * 8 ^ n / 15 + 243 * 9 ^ n / 14. - _ R. J. Mathar _ , Jun 20 2013 ● a(0)=1, a(1) =22, a(2)=321, a(3)=3938, a(n)=22 * a(n - 1) - 163 * a(n - 2) + 462 * a(n - 3) - 432 * a(n - 4). - _ Harvey P. Dale _ , Oct 04 2014 ●

▶ [A021904] 1,22,323,3992,44949,478074,4896391,48839164,477813017,4606751006,43913627979,414851195616,3890711480605,36272898564418,336508406905487,3108995652410948,28624326520414113,262765886779943910 ⋆ Expansion of 1 / ((1 - x)(1 - 4x)(1 - 8x)(1 - 9x)). ● a(n) = (21 * 9 ^ (n + 3) - 30 * 8 ^ (n + 3) + 14 * 4 ^ (n + 3) - 5) / 840. [_ Yahia Kahloune _ , Jul 03 2013] ●

▶ [A022343] 1,22,323,4004,45465,491106,5149327,53020528,539857109,5458923470,54963556011,551942523132,5533572185233,55422129454714,554747369555975,5550668292585416,55526041242871437,555377516005134438 ⋆ Expansion of 1 / ((1 - x) * (1 - 5 * x) * (1 - 6 * x) * (1 - 10 * x)). ● a(n) = (1 / 180) * (9 * 5 ^ (n + 3) + 10 ^ (n + 3) - 9 * 6 ^ (n + 3) - 1). - _ R. J. Mathar _ , Mar 11 2011 ● a(n) = 16 * a(n - 1) - 60 * a(n - 2) + (5 ^ (n + 1) - 1) / 4, n>=2. - _ Vincenzo Librandi _ , Mar 12 2011 ●

▶ [A025945] 1,22,323,4016,45873,499386,5280511,54817972,562288925,5721711710,57909049419,583934547768,5873255438857,58969928883394,591360924613847,5925240739579004,59333827978882869,593908224257636838 ⋆ Expansion of 1 / ((1 - 2x)(1 - 3x)(1 - 7x)(1 - 10x)). ● a(n) = 125 * 10 ^ n / 21 - 7 ^ (n + 3) / 60 - 2 ^ n / 5 + 3 ^ (n + 3) / 28. - _ R. J. Mathar _ , Jun 04 2013 ●

▶ [A020571] 1,22,325,4030,45301,478702,4851925,47752510,460048501,4362445582,40876539925,379553364190,3499808594101,32098136255662,293160602826325,2668857246099070,24235419069434101,219645625266148942 ⋆ Expansion of 1 / ((1 - 6x)(1 - 7x)(1 - 9x)). ● a(n) = 12 * 6 ^ n - 49 * 7 ^ n / 2 + 27 * 9 ^ n / 2. - _ R. J. Mathar _ , Jun 30 2013 ● a(0)=1, a(1)=22, a(2)=325; for n>2, a(n) = 22 * a(n - 1) - 159 * a(n - 2) + 378 * a(n - 3). - _ Vincenzo Librandi _ , Jul 04 2013 ● a(n) = 16 * a(n - 1) - 63 * a(n - 2) + 6 ^ n. - _ Vincenzo Librandi _ , Jul 04 2013 ●

▶ [A021874] 1,22,325,4070,46781,511742,5430405,56516790,580744461,5916830062,59935396885,604729235110,6084941584541,61113049957982,612976296281765,6142684971387030,61517309500479021,615806336417543502 ⋆ Expansion of 1 / ((1 - x)(1 - 4x)(1 - 7x)(1 - 10x)). ● a(n) = (10 ^ (n + 3) - 3 * 7 ^ (n + 3) + 3 * 4 ^ (n + 3) - 1) / 162. - _ Yahia Kahloune _ , Jul 05 2013 ●

▶ [A025963] 1,22,325,4110,48381,550062,6148165,68149870,752379661,8290355502,91266902805,1004309278830,11049302357341,121551961591342,1337120292662245,14708568942522990,161795495573813421 ⋆ Expansion of 1 / ((1 - 2x)(1 - 4x)(1 - 5x)(1 - 11x)). ● a(n) = - 4 * 2 ^ n / 27 + 32 * 4 ^ n / 7 - 125 * 5 ^ n / 18 + 1331 * 11 ^ n / 378. - _ R. J. Mathar _ , Jun 20 2013 ●

▶ [A020343] 1,22,327,4100,46781,503202,5201827,52278640,514595961,4986022382,47721236927,452316244380,4253691236341,39747202125562,369442770633627,3418759065309320,31519177212527921,289676122850156742 ⋆ Expansion of 1 / ((1 - 5x)(1 - 8x)(1 - 9x)). ● a(n) = 25 * 5 ^ n / 12 - 64 * 8 ^ n / 3 + 81 * 9 ^ n / 4. - _ R. J. Mathar _ , Jun 29 2013 ● a(0)=1, a(1)=22, a(3)=327; for n>2, a(n) = 22 * a(n - 1) - 157 * a(n - 2) + 360 * a(n - 3). - _ Vincenzo Librandi _ , Jul 03 2013 ● a(n) = 17 * a(n - 1) - 72 * a(n - 2) + 5 ^ n. - _ Vincenzo Librandi _ , Jul 03 2013 ●

▶ [A025941] 1,22,327,4172,49553,567714,6382699,71043064,786493125,8681598926,95678810591,1053554778276,11595631317817,127591121803258,1403737417995603,15442522109891408,169876206409453229 ⋆ Expansion of 1 / ((1 - 2x)(1 - 3x)(1 - 6x)(1 - 11x)). ● a(n) = - 2 ^ (n + 1) / 9 - 3 * 6 ^ (n + 1) / 5 + 11 ^ (n + 3) / 360 + 3 ^ (n + 2) / 8. - _ R. J. Mathar _ , Jun 04 2013 ● a(0)=1, a(1)=22, a(2)=327, a(3)=4172, a(n)=22 * a(n - 1) - 157 * a(n - 2) + 432 * a(n - 3) - 396 * a(n - 4). - _ Harvey P. Dale _ , Aug 20 2014 ●

▶ [A019958] 1,22,329,4178,48621,537222,5744929,60136378,620564021,6341995022,64384199529,650640568578,6554239839421,65878458172822,661143103694129,6627971208280778,66395645870074821,664768758151070622 ⋆ Expansion of 1 / ((1 - 5 * x) * (1 - 7 * x) * (1 - 10 * x)). ● a(n) = 5 * 5 ^ n / 2 - 49 * 7 ^ n / 6 + 20 * 10 ^ n / 3. - _ R. J. Mathar _ , Jun 29 2013 ● a(n) = 22 * a(n - 1) - 155 * a(n - 2) + 350 * a(n - 3); a(0)=1, a(1)=22, a(2)=329. ● a(n) = 17 * a(n - 1) - 70 * a(n - 2) + 5 ^ n. (End) ●

▶ [A021834] 1,22,329,4226,50469,580422,6541681,72922570,80802012530,8923802030,98376704361,1083438632562,11925616635349,131228622530326,1443796242996449,15883448475593882,174728077773953421 ⋆ Expansion of 1 / ((1 - x) * (1 - 4 * x) * (1 - 6 * x) * (1 - 11 * x)). ● a(n) = (3 * 11 ^ (n + 3) - 21 * 6 ^ (n + 3) + 25 * 4 ^ (n + 3) - 7) / 1050. [_ Yahia Kahloune _ , Jul 05 2013] ●

▶ [A019671] 1,22,332,4280,50736,571872,6238912,66567040,699159296,7259766272,74744097792,764616652800,7783588704256,78935331561472,798149140201472,8051859072450560,81081536382959616,815318946277097472 ⋆ Expansion of 1 / ((1 - 4x)(1 - 8x)(1 - 10x)). ● a(n)= 2 * 4 ^ n / 3 - 8 ^ (n + 1) + 25 * 10 ^ n / 3 . - _ R. J. Mathar _ , Nov 11 2012 ● a(0)=1, a(1)=22, a(2)=332; for n>2, a(n) = 22 * a(n - 1) - 152 * a(n - 2) + 320 * a(n - 3). - _ Vincenzo Librandi _ , Jul 03 2013 ● a(n) = 18 * a(n - 1) - 80 * a(n - 2) + 4 ^ n. - _ Vincenzo Librandi _ , Jul 03 2013 ●

▶ [A021614] 1,22,332,4322,52353,609924,6948544,78112924,871004585,9663416906,106874239836,1179653481006,13004446987897,143246730136168,1577098731557408,17357778969071768,191003419177941489 ⋆ Expansion of 1 / ((1 - x)(1 - 3x)(1 - 7x)(1 - 11x)). ● a(0)=1, a(1)=22, a(2)=332, a(3)=4322; for n>3, a(n) = 22 * a(n - 1) - 152 * a(n - 2) + 362 * a(n - 3) - 231 * a(n - 4). - _ Vincenzo Librandi _ , Jul 11 2013 ●

▶ [A025936] 1,22,333,4406,55133,673566,8144701,98052262,1178225565,14146756910,169801508669,2037820760118,24454863987997,293463446955454,3521586773279037,42259168371397574,507110656046025629 ⋆ Expansion of 1 / ((1 - 2x)(1 - 3x)(1 - 5x)(1 - 12x)). ● a(n)=22 * a(n - 1) - 151 * a(n - 2) + 402 * a(n - 3) - 360 * a(n - 4), n>3. [From Harvey P. Dale, May 07 2012] ● a(n) = 96 * 12 ^ n / 35 + 3 ^ (n + 1) / 2 - 2 ^ (n + 2) / 15 - 5 ^ (n + 3) / 42. - _ R. J. Mathar _ , May 22 2013 ●

▶ [A021284] 1,22,335,4400,53481,620202,6970675,76624900,828512861,8845504382,93498427815,980374738200,10212261530641,105799242660562,1091082072825755,11208627544304300,114766536787594821 ⋆ Expansion of 1 / ((1 - x)(1 - 2x)(1 - 9x)(1 - 10x)). ● a(n) = (7 * 10 ^ (n + 3) - 9 ^ (n + 4) + 9 * 2 ^ (n + 3) - 7) / 504. - _ Yahia Kahloune _ , Jul 08 2013 ● a(0)=1, a(1)=22, a(2)=335, a(3)= 4400; for n>3, a(n) = 22 * a(n - 1) - 149 * a(n - 2) + 308 * a(n - 3) - 180 * a(n - 4). - _ Vincenzo Librandi _ , Jul 08 2013 ● a(0)=1, a(1)=22; for n>1 a(n) = 19 * a(n - 1) - 90 * a(n - 2) + 2 ^ n - 1. - _ Vincenzo Librandi _ , Jul 08 2013 ●

▶ [A019623] 1,22,335,4400,53661,628122,7178395,80862100,902846921,10025125022,110934086055,1224883116600,13505988249781,148791855626722,1638292574483315,18032294531183900,198432777621062241 ⋆ Expansion of 1 / ((1 - 4 * x) * (1 - 7 * x) * (1 - 11 * x)). ● a(n) = 4 ^ (n + 2) / 21 + 11 ^ (n + 2) / 28 - 7 ^ (n + 2) / 12. - _ R. J. Mathar _ , Nov 11 2012 ● a(0)=1, a(1)=22, a(2)=335; for n>2, a(n)= 22 * a(n - 1) - 149 * a(n - 2) + 308 * a(n - 3). - _ Vincenzo Librandi _ , Jul 03 2013 ● a(n) = 18 * a(n - 1) - 77 * a(n - 2) + 4 ^ n. - _ Vincenzo Librandi _ , Jul 03 2013 ●

▶ [A021794] 1,22,335,4460,56061,686802,8317435,100210120,1204613321,14466168782,173649468135,2084076423780,25010353485781,300131513309962,3601614875036435,43219563508677440,518635692871953441 ⋆ Expansion of 1 / ((1 - x)(1 - 4x)(1 - 5x)(1 - 12x)). ● a(n) = - 1 / 132 + 2 ^ (2n + 3) / 3 - 5 ^ (n + 3) / 28 + 2 ^ (2n + 3) * 3 ^ (n + 3) / 77. - _ Bruno Berselli _ , May 08 2013 ● a(n) = 22 * a(n - 1) - 149 * a(n - 2) + 368 * a(n - 3) - 240 * a(n - 4). - _ Wesley Ivan Hurt _ , Apr 12 2023 ●

▶ [A348134] 0,0,22,336,1422,3952,8790,16992,29806,48672,75222,111280,158862,220176,297622,393792,511470,653632,823446,1024272,1259662,1533360,1849302,2211616,2624622 ⋆ Number of ways two L - tiles (with rotation) can be placed on an n X n square. ● a(n) = 2 * (n - 2) * (4 * n ^ 3 - 8 * n ^ 2 - 19 * n + 32) for n > 1. ●

▶ [A018090] 1,22,337,4450,54301,631462,7111417,78287530,847442101,9055541902,95785566097,1004927161810,10472915657101,108541954516342,1119734731454377,11506184005511290,117841370316867301 ⋆ Expansion of 1 / ((1 - 3x)(1 - 9x)(1 - 10x)). ● a(0)=1, a(1)=22, a(2)=337; for n>2 a(n) = 22 * a(n - 1) - 147 * a(n - 2) + 270 * a(n - 3). - _ Vincenzo Librandi _ , Jul 02 2013 ● a(n) = 19 * a (n - 1) - 90 * a(n - 2) + 3 ^ n. - _ Vincenzo Librandi _ , Jul 02 2013 ● a(n) = (6 * 10 ^ (n + 2) - 7 * 9 ^ (n + 2) + 3 ^ (n + 2)) / 42. [_ Yahia Kahloune _ , Jul 06 2013] ●

▶ [A021274] 1,22,337,4482,55533,660774,7667929,87542794,988535845,11078416206,123498755601,1371575734386,15192048468637,167950256294518,1854154604388553,20449314929530458,225371378475017109 ⋆ Expansion of 1 / ((1 - x)(1 - 2x)(1 - 8x)(1 - 11x)). ● a(n) = (7 * 11 ^ (n + 3) - 15 * 8 ^ (n + 3) + 35 * 2 ^ (n + 3) - 27) / 1890. - _ Yahia Kahloune _ , Jul 08 2013 ● a(0)=1, a(1)=22, a(2)=337, a(3)=4482; for n>3, a(n) = 22 * a(n - 1) - 147 * a(n - 2) + 302 * a(n - 3) - 176 * a(n - 4). - _ Vincenzo Librandi _ , Jul 08 2013 ● a(0)=1, a(1)=22; for n>1, a(n) = 19 * a(n - 1) - 88 * a(n - 2) + 2 ^ n - 1. - _ Vincenzo Librandi _ , Jul 08 2013 ●

▶ [A021534] 1,22,337,4522,57253,705334,8574889,103567234,1246828045,14986093486,179978152081,2160608272186,25932522746677,311221616234278,3734847461630713,44819297962008178,537838346143305949 ⋆ Expansion of 1 / ((1 - x)(1 - 3x)(1 - 6x)(1 - 12x)). ● a(0)=1, a(1)=22; for n>1, a(n) = 18 * a(n - 1) - 72 * a (n - 2) + (3 ^ n - 1) / 2. - _ Vincenzo Librandi _ , Jul 10 2013 ● a(0)=1, a(1)= 22, a(2)=337, a(3)=4522; for n>3, a(n) = 22 * a(n - 1) - 147 * a(n - 2) + 342 * a(n - 3) - 216 * a(n - 4). - _ Vincenzo Librandi _ , Jul 11 2013 ● a(n) = - 1 / 1 10 - (12 / 5) * 6 ^ n + (1 / 2) * 3 ^ n + (32 / 11) * 12 ^ n - _ Robert Israel _ , Apr 06 2014 ●

▶ [A018070] 1,22,339,4532,56357,672210,7813303,89300464,1009144713,11315328398,126186563867,1401795991596,15529706751469,171706382611786,1895807080277631,20910172869786728,230462261504563025 ⋆ Expansion of 1 / ((1 - 3x)(1 - 8x)(1 - 11x)). ● a(n) = 22 * a(n - 1) - 145 * a(n - 2) + 264 * a(n - 3) for n>2; a(0)=1, a(1)=22, a(2)=339. - _ Vincenzo Librandi _ , Jul 02 2013 ● a(n) = 19 * a(n - 1) - 88 * a(n - 2) + 3 ^ n. - _ Vincenzo Librandi _ , Jul 02 2013 ● a(n) = (5 * 11 ^ (n + 2) - 8 ^ (n + 3) + 3 ^ (n + 3)) / 120. - _ Yahia Kahloune _ , Jul 06 2013 ●

▶ [A019490] 1,22,340,4600,58576,724192,8822080,106672000,1284971776,15449370112,185571742720,2227940915200,26741787774976,320940501164032,38515205

69589760,46219655242547200,554644317650354176 ⋆ Expansion of 1 / ((1 - 4 * x) * (1 - 6 * x) * (1 - 12 * x)). ● a(n) = 4 ^ n - 3 * 6 ^ n + 3 * 12 ^ n. - _ R. J. Mathar _ , Jun 29 2013 ● a(0)=1, a(1)=22, a(2)=340; for n>2, a(n) = 22 * a(n - 1) - 144 * a(n - 2) + 288 * a(n - 3). - _ Vincenzo Librandi _ , Jul 03 2013 ● a (n) = 18 * a(n - 1) - 72 * a(n - 2) + 4 ^ n. - _ Vincenzo Librandi _ , Jul 03 201 3 ●

► [A021254] 1,22,341,4646,59661,743358,9112405,110693878,1337742173,161188 16558,193887174117,2329875721446,27981116089837,335931645121822,40322875 05801077,48395204420052950,580796733493846653 ⋆ Expansion of 1 / ((1 - x)(1 - 2x)(1 - 7x)(1 - 12x)). ● a(n) = (3 * 12 ^ (n + 3) - 11 * 7 ^ (n + 3) + 33 * 2 ^ (n + 3) - 25) / 1650. [_ Yahia Kahloune _ , Jul 07 2013] ● a(0)=1, a(1)=22, a (2)=341, a(3)=4646; for n>3, a(n) = 22 * a(n - 1) - 143 * a(n - 2) + 290 * a(n - 3) - 168 * a(n - 4). - _ Vincenzo Librandi _ , Jul 08 2013 ● a(0)=1, a(1)=22; fo r n>1, a(n) = 19 * a(n - 1) - 84 * a(n - 2) + 2 ^ n - 1. - _ Vincenzo Librandi _ , Jul 08 2013 ●

► [A018055] 1,22,343,4696,60493,755146,9267091,112644652,1361819305,164124 35710,197443515919,2372782379968,28497610413637,342140879536114,41068774 41223627,492908375165642 44,591548207794982689 ⋆ Expansion of 1 / ((1 - 3 * x) * (1 - 7 * x) * (1 - 12 * x)). ● a(0)=1, a(1)=22, a(2)=343; for n>2, a(n) = 22 * a(n - 1) - 141 * a(n - 2) + 252 * a(n - 3). - _ Vincenzo Librandi _ , Jul 02 201 3 ● a(n) = 19 * a(n - 1) - 84 * a(n - 2) + 3 ^ n. - _ Vincenzo Librandi _ , Jul 0 2 2013 ● a(n) = (4 * 12 ^ (n + 2) - 9 * 7 ^ (n + 2) + 5 * 3 ^ (n + 2)) / 180. [_ Yahia Kahloune _ , Jul 06 2013] ●

► [A016322] 1,22,345,4730,60461,740982,8834065,103324210,1191912021,136091 44142,154183593785,1736366607690,19463156373181,217362833310502,24204041 85281505,2688916320792317 0,298163249815659941 ⋆ Expansion of 1 / ((1 - 2x)(1 - 9x)(1 - 11x)). ● a(n) = (7 * 11 ^ (n + 2) + 2 ^ (n + 3) - 9 ^ (n + 3)) / 126. ● a(n) = 20 * a(n - 1) - 99 * a(n - 2) + 2 ^ n. ● a(n) = 22 * a(n - 1) - 139 * a(n - 2) + 198 * a(n - 3), n >= 3. (End) ●

► [A096047] 1,22,346,5482,87466,1398442,22370986,357919402,5726644906,9162 6056362,1466015853226,23456249457322,375299974539946,6004799525530282,96 076792140049066,1537228673167043242,24595658766377724586 ⋆ a(n)=B(2n,4) / B(2n) (see comment). ● a(n)=(1 / 3) * (4 * 16 ^ n + 4 ^ n - 2); a(0)=1, a(1) =22, a(2)=346 and a(n)=21 * a(n - 1) - 84 * a(n - 2) + 64 * a(n - 3) ●

► [A016320] 1,22,348,4856,63728,808416,10050496,123402112,1503194880,18217 295360,220039199744,2651923642368,31914709676032,383709523861504,4610378 348347392,55371452676276224,664832732084240384 ⋆ Expansion of 1 / ((1 - 2x) (1 - 8x)(1 - 12x)). ● a(n) = (54 * 12 ^ n + 2 ^ n - 40 * 8 ^ n) / 15. ● a(n) = 20 * a(n - 1) - 96 * a(n - 2) + 2 ^ n. ● a(n) = 22 * a(n - 1) - 136 * a(n - 2) + 192 * a(n - 3), n >= 3. (End) ●

► [A016265] 1,22,353,4994,66045,837606,10324777,124683658,1482631349,17420 055950,202731726561,2341160103282,26863872247213,306613705830454,3483861 875246105,39433591738818266,444880620238112037 ⋆ Expansion of 1 / ((1 - x) * (1 - 10x) * (1 - 11x)). ● a(n) = (9 * 11 ^ (n + 2) - 10 ^ (n + 3) + 1) / 90. - _ Bruno Berselli _ , Mar 21 2011 ● a(n) = 21 * a(n - 1) - 110 * a(n - 2) + 1, n > = 2. - _ Vincenzo Librandi _ , Mar 21 2011 ● a(n) = 22 * a(n - 1) - 131 * a(n - 2) + 110 * a(n - 3); a(0)=1, a(1)=22, a(2)=353. - _ Harvey P. Dale, _ Aug 05 2011 ●

► [A016263] 1,22,355,5080,68341,886522,11236135,140214460,1731001081,21207 861022,258416964715,3136307268640,37953420452221,458300644483522,5525344 125314095,66535757027375620,800513732040965761 ⋆ Expansion of 1 / ((1 - x)(1 - 9x)(1 - 12x)). ● a(n) = (32 * 12 ^ (n + 1) - 33 * 9 ^ (n + 1) + 1) / 88. - _ Bruno Berselli _ , Mar 21 2011 ● a(n) = 21 * a(n - 1) - 108 * a(n - 2) + 1, n > = 2. - _ Vincenzo Librandi _ , Mar 21 2011 ●

► [A081127] 0,1,22,363,5324,73205,966306,12400927,155897368,1929229929,2357 9476910,285311670611,3423740047332,40799568897373,483317970015034,569624 7503748615,6683597071065 0416,781145407680726737 ⋆ 11th binomial transform of (0,1,0,0,0,0,0,.....). ● a(n) = 22 * a(n - 1) - 121 * a(n - 2); a(0)=0, a(1)=1. ● a(n) = n * 11 ^ (n - 1). ●

► [A016196] 1,22,364,5368,74416,992992,12915904,164990848,2079890176,25958 682112,321504185344,3958050224128,48496602689536,591959232274432,7203510 787293184,87442129447518208,1059305553370218496 ⋆ Expansion of 1 / ((1 - 10 x) * (1 - 12x)). ● a(n) = 6 * 12 ^ n - 5 * 10 ^ n. - _ Bruno Berselli _ , Feb 09 2011 ● a(n) = 12 * a(n - 1) + 10 ^ n, a(0)=1. - _ Vincenzo Librandi _ , Feb 09 2011 ● a(n) = 22 * a(n - 1) - 120 * a(n - 2); a(0)=1, a(1)=22. - _ Vincenzo Libr andi _ , Feb 09 2011 ●

► [A167120] 1,22,376,6113,98197,1572709,25169573,402738085,6443909029,1031 02943141,1649648684965,26394385338277,422310190927781,6756963156905893,1 08111410918739877,1729782576332820389,27676521227857055653 ⋆ a(n) = 20 * a(n - 1) - 64 * a(n - 2) + 1 for n > 2; a(0) = 1, a(1) = 22, a(2) = 376. ● a(n) = (4321 * 16 ^ n - 1460 * 4 ^ n + 64) / 2880, for n > 0. ●

► [A167121] 1,22,377,6134,98554,1578506,25262666,404228938,6467768138,1034 84710730,1655757053770,26492119588682,423873940332362,6781983152971594,1 08511730878160714,1736187695773032266,27779003139258359626 ⋆ a(n) = 20 * a(n - 1) - 64 * a(n - 2) + 2 for n > 2; a(0) = 1, a(1) = 22, a(2) = 377. ● a(n) = (4337 * 16 ^ n - 1540 * 4 ^ n + 128) / 2880, for n > 0. ●

► [A167122] 1,22,378,6155,98911,1584303,25355759,405719791,6491627247,1038 66478319,1661865422575,26589853839087,425437689736943,6807003149037295,1 08912050837581551,1742592815213244143,27881485050659663599 ⋆ a(n) = 20 * a(n - 1) - 64 * a(n - 2) + 3 for n > 2; a(0) = 1, a(1) = 22, a(2) = 378. ● a(n) = (1451 * 16 ^ n - 540 * 4 ^ n + 64) / 960, for n > 0. ●

► [A167033] 1,22,379,6175,99247,1589743,25443055,407117551,6513995503,1042 24386799,1667592023791,26681479720687,426903704891119,6830459395698415,1 09287350800936687,1748597614694035183,27977561842620755695 ⋆ a(n) = 20 * a(n - 1) - 64 * a(n - 2) + 3 for n > 1; a(0) = 1, a(1) = 22. ● a(n) = (91 * 16 ^ n - 35 * 4 ^ n + 4) / 60. ● a(n) = 21 * a(n - 1) - 84 * a(n - 2) + 64 * a(n - 3). ●

► [A268947] 22,396,2780,11950,38322,101192,232696,482490,923150,1656292,281 9412,4593446,7211050,10965600,16220912,23421682,33104646,45910460,6259630 0,84049182,111300002,145538296,188127720,240622250,304783102 ⋆ Number of l ength - 6 0..n arrays with no repeated value unequal to the previous repeated v alue plus one mod n + 1. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 3 5 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

► [A269540] 22,418,2878,12214,38878,102202,234358,485038,926854,1661458,282 6382,4602598,7222798,10980394,16239238,23444062,33131638,45942658,6263433 4,84093718,111351742,145597978,188196118,240700174,304871398 ⋆ Number of l ength - 6 0..n arrays with no repeated value differing from the previous repeate d value by other than one. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

► [A268460] 22,456,3146,13204,41526,108032,245626,504876,959414,1712056,290 1642,4710596,7373206,11184624,16510586,23797852,33585366,46516136,6334983 4,84976116,112428662,146899936,189756666,242556044,307062646 ⋆ Number of l ength - 6 0..n arrays with no adjacent pair x,x + 1 followed at any distance by x + 1,x. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

► [A269681] 22,462,2976,12390,39156,102606,234912,485766,927780,1662606,282 7776,4604262,7224756,10982670,16241856,23447046,33135012,45946446,6263856 0,84098406,111356916,145603662,188202336,240706950,304878756 ⋆ Number of l ength - 6 0..n arrays with no repeated value differing from the previous repeate d value by other than plus or minus one modulo n + 1. ● a(n) = 7 * a(n - 1) - 2 1 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>8. ●

► [A269470] 22,462,3180,13300,41730,108402,246232,505800,960750,1713910,290 4132,4713852,7377370,11189850,16517040,23805712,33594822,46527390,6336310 0,84991620,112446642,146920642,189780360,242583000,307093150 ⋆ Number of l ength - 6 0..n arrays with no repeated value equal to the previous repeated valu e. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

► [A163149] 1,22,462,9702,203511,4268880,89544840,1878307200,39399681090,8 26454197800,17335839305400,363639419173800,7627760320511100,160001156198 268000,3356210592504924000,70400425902447564000 ⋆ Number of reduced wor ds of length n in Coxeter group on 22 generators S _ i with relations (S _ i) ^ 2 = (S _ i S _ j) ^ 4 = I. ● a(n) = - 210 * a(n - 4) + 20 * Sum _{ k=1..3 } a(n - k). - _ Wesley Ivan Hurt _ , May 05 2021 ●

► [A163514] 1,22,462,9702,203742,4278351,89840520,1886549280,39615400440,8 31878586000,17468509071090,366818925627000,7702782398341800,161749714998 425400,3396561002126245800,71323937982067871100 ⋆ Number of reduced wor ds of length n in Coxeter group on 22 generators S _ i with relations (S _ i) ^ 2 = (S _ i S _ j) ^ 5 = I. ● a(n) = - 210 * a(n - 5) + 20 * Sum _{ k=1..4 } a(n - k). - _ Wesley Ivan Hurt _ , May 05 2021 ●

► [A164635] 1,22,462,9702,203742,4278582,89850222,1886854431,39623938200,8 32102600560,17474152477320,366957157200480,7706099359922040,161828066791 314000,3398388987509621490,71366160020435695800 ⋆ Number of reduced wor ds of length n in Coxeter group on 22 generators S _ i with relations (S _ i) ^ 2 = (S _ i S _ j) ^ 7 = I. ● a(n) = - 210 * a(n - 7) + 20 * Sum _{ k=1..6 } a(n - k). - _ Wesley Ivan Hurt _ , May 05 2021 ●

► [A167935] 1,22,462,9702,203742,4278582,89850222,1886854662,39623947902,8 32102905942,17474161024782,366957381520422,7706105011928862,161828205250 506102,3398392310260628142,71366238515473190982 ⋆ Number of reduced wor ds of length n in Coxeter group on 22 generators S _ i with relations (S _ i) ^ 2 = (S _ i S _ j) ^ 16 = I. ● a(n) = - 210 * a(n - 16) + 20 * Sum _{ k=1..15 } a(n - k). - _ Wesley Ivan Hurt _ , May 06 2021 ●

► [A218724] 0,1,22,463,9724,204205,4288306,90054427,1891142968,3971400232 9,833994048910,17513875027111,367791375569332,7723618886955973,162195996 626075434,3406115929147584115,71528434512099266416 ⋆ a(n) = (21 ^ n - 1) / 20. ● a(n) = floor(21 ^ n / 20). ● a(n) = 22 * a(n - 1) - 21 * a(n - 2). - _ Vince nzo Librandi _ , Nov 07 2012 ● a(n) = 21 * a(n - 1) + 1. - _ Kival Ngaokrajan g _ , Jan 27 2015 ● a(n) = a(n - 1) + 21 ^ (n - 1), n >= 1, a(0) = 0. - _ Wolfd ieter Lang _ , Feb 02 2015 ●

► [A209648] 22,484,2354,7128,16830,34012,61754,103664,163878,247060,358402,5 03624,688974,921228,1207690,1556192,1975094,2473284,3060178,3745720,454038 2,5455164,6501594,7691728,9038150 ⋆ Number of n X 6 0..1 arrays avoiding 0 0 1 and 1 0 0 horizontally and 0 0 1 and 1 0 1 vertically. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

► [A207936] 22,484,2706,9430,25490,58602,120276,226850,400646,671248,107690 2,1666038,2498914,3649382,5206776,7277922,9989270,13489148,17950138,235715 74,30582162,39242722,49849052,62734914,78275142 ⋆ Number of n X 6 0..1 arra ys avoiding 0 0 1 and 1 0 0 horizontally and 0 0 1 and 1 1 0 vertically. ● a(n) = (720 - 1584 * n - 6206 * n ^ 2 + 7335 * n ^ 3 + 6505 * n ^ 4 + 1089 * n ^ 5 + 6 1 * n ^ 6) / 360. ●

► [A158629] 22,506,1958,4378,7766,12122,17446,23738,30998,39226,48422,5858 6,69718,81818,94886,108922,123926,139898,156838,174746,193622,213466,23427 8,256058,278806 ⋆ a(n) = 484 * n ^ 2 + 22. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A095696] 22,822,8547,52892,238392,863289,2660889,7245414,17879004,407196 79,86762676,174750576,335401976,617395086,1095642486,1882507308,314274025 8,5113062108,8127478513,12649594188,19313392560,28974165935,42771520935,6 2206645410,89236307160 ⋆ T(n,5) diagonal of triangle in A095693. ● a(n) = ((n)(n - 1)(n - 2)(n - 3)(n - 4)(n ^ 5 + 5n ^ 4 + 45n ^ 3 - 1605n ^ 2 + 9234n - 1721 6)) / 3840. ●

► [A199836] 22,1650,20240,118280,462234,1402934,3579520,8046928,16426926,3 1082698,55316976,93593720,151783346,237431502,360051392,531439648,7660157 50,1081184994,1497725008,2040195816,2737373450,3622707110,4734799872 ⋆ Nu mber of - n..n arrays x(0..6) of 7 elements with zero sum and no two neighbors summing to zero. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

► [A241889] 23,24,27,32,39,48,59,72,87,104,123,144,167,192,219,248,279,312,34 7,384,423,464,507,552,599 ⋆ a(n) = n ^ 2 + 23. ● a(n) = a(- n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) = a(n - 1) + 2 * n - 1. ●

► [A022393] 1,23,24,47,71,118,189,307,496,803,1299,2102,3401,5503,8904,14407,2 3311,37718,61029,98747,159776,258523,418299,676822,1095121 ⋆ Fibonacci sequ

ence beginning 1, 23. • a(n) = a(n - 1) + a(n - 2), n>=2, a(0)=1, a(1)=23. a(- 1):=22. •

► [A042070] 23,24,47,71,331,5036,5367,10403,46979,57382,161743,219125,1038243,1257368,2295611,35691533,145061743,180753276,325815019,506568295,23627956589,24134524884,47762481473,71897006357 ⋆ Numerators of continued fraction convergents to sqrt(559). • a(n) = 1013136590 * a(n - 20) - a(n - 40) for n>39. [_ Bruno Berselli _ , Nov 15 2013] •

► [A042062] 23,24,47,165,212,801,1013,1814,84457,86271,170728,598455,769183,2906004,3675187,6581191,306409973,312991164,619401137,2171194575,2790595712,10542981711,13333577423,23876559134 ⋆ Numerators of continued fraction convergents to sqrt(555). • a(n) = 3628 * a(n - 8) - a(n - 16). - _ Vincenzo Librandi _ , Nov 14 2013 •

► [A042060] 23,24,47,306,1271,1577,2848,12969,80662,93631,174293,8111109,8285402,16396511,106664468,443054383,549718851,992773234,4520811787,2811764 3956,32638455743,60756099699,2827419041897,2888175141596,5715594183493 ⋆ Numerators of continued fraction convergents to sqrt(554). • a(n) = 348586 * a(n - 11) + a(n - 22). - _ Wesley Ivan Hurt _ , Sep 05 2022 •

► [A042058] 23,24,47,729,3692,4421,21376,47173,68549,115722,415715,531437,1478589,9402971,20284531,29687502,109347037,139034539,248381576,635797691,2791572340,3427370031,19928422495 ⋆ Numerators of continued fraction convergents to sqrt(553). • a(n) = 1249271674814 * a(n - 26) - a(n - 52). - _ Wesley Ivan Hurt _ , Sep 05 2022 •

► [A042080] 23,24,71,95,4441,4536,13513,18049,843767,861816,2567399,3429215,160311289,163740504,487792297,651532801,30458301143,31109833944,92677969031,123787802975,5786916905881,5910704708856 ⋆ Numerators of continued fraction convergents to sqrt(564). • a(n) = 190 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Nov 16 2013 •

► [A042088] 23,24,119,143,6697,6840,34057,40897,1915319,1956216,9740183,11696399,547774537,559470936,2785658281,3345129217,156661602263,160006731480,796688528183,956695259663,44804670472681 ⋆ Numerators of continued fraction convergents to sqrt(568). • a(n) = 286 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Nov 16 2013 •

► [A042086] 23,24,119,381,1643,2024,94747,96771,481831,1542264,6650887,8193151,383535833,391728984,1950451769,6243084291,26922788933,33165873224,1552552957237,1585718830461,7895428279081 ⋆ Numerators of continued fraction convergents to sqrt(567). • a(n) = 4048 * a(n - 6) - a(n - 12). - _ Vincenzo Librandi _ , Nov 16 2013 •

► [A042092] 23,24,167,191,8953,9144,63817,72961,3420023,3492984,24377927,27870911,1306439833,1334310744,9312304297,10646615041,499056596183,509703211224,3557275863527,4066979074751 ⋆ Numerators of continued fraction convergents to sqrt(570). • a(n) = 382 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Nov 16 2013 •

► [A042094] 23,24,215,239,454,1147,1601,2748,4349,67983,208298,484579,692877,4641841,33185764,37827605,184496184,406819973,1404956103,6026644385,13458244873,315566276464,644590797801,2893929467668 ⋆ Numerators of continued fraction convergents to sqrt(571). • a(n) = 362248710123261572260 * a(n - 42) - a(n - 84) for n>83. [_ Bruno Berselli _ , Nov 16 2013] •

► [A042096] 23,24,263,287,13465,13752,150985,164737,7728887,7893624,86665127,94558751,4436367673,4530926424,49745631913,54276558337,2546467315415,2600743873752,28553906052935,31154649926687 ⋆ Numerators of continued fraction convergents to sqrt(572). • a(n) = 574 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Nov 16 2013 •

► [A042098] 23,24,359,383,17977,18360,275017,293377,13770359,14063736,210662663,224726399,10548077017,10772803416,161367324841,172140128257,8079813224663,8251953352920,123607160165543 ⋆ Numerators of continued fraction convergents to sqrt(573). • a(n) = 766 * a(n - 4) - a(n - 8). _ Vincenzo Librandi _ , Nov 16 2013 •

► [A041263] 1,1,23,24,551,575,13201,13776,316273,330049,7577351,7907400,181540151,189447551,4349386273,4538833824,104203730401,108742564225,2496540143351,2605282707576,59812759710023,62418042417599,1433009692897201,1495427735314800 ⋆ Denominators of continued fraction convergents to sqrt(143). • a(n) = 24 * a(n - 2) - a(n - 4). - _ Vincenzo Librandi _ , Dec 14 2013 • a(n) = Product _{ k = 1..floor((n - 1) / 2) } (22 + 4 * cos ^ 2(k * Pi / n)). •

► [A042100] 23,24,551,575,27001,27576,633673,661249,31051127,31712376,728723399,760435775,35708769049,36469204824,838031275177,874500480001,41065053355223,41939553835224,963735237730151 ⋆ Numerators of continued fraction convergents to sqrt(574). • a(n) = 1150 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Nov 16 2013 •

► [A042101] 1,1,23,24,1127,1151,26449,27600,1296049,1323649,30416327,31739976,1490455223,1522195199,34978749601,36500944800,1714022210401,1750523155201,40225531624823,41976054780024,1971124051505927,2013100106285951,46259326389796849 ⋆ Denominators of continued fraction convergents to sqrt(574). • a(n) = 1150 * a(n - 4) - a(n - 8) for n>7. - _ Vincenzo Librandi _ , Jan 14 2014 •

► [A042102] 23,24,1127,1151,54073,55224,2594377,2649601,124476023,127125624,5972254727,6099380351,286543750873,292643131224,13748127787177,14040770918401,659623590033623,673664360952024 ⋆ Numerators of continued fraction convergents to sqrt(575). • a(n) = 48 * a(n - 2) - a(n - 4). - _ Vincenzo Librandi _ , Nov 12 2013 •

► [A316724] 0,1,23,26,70,75,141,148,236,245,355,366,498,511,665,680,856,873,1071,1090,1310,1331,1573,1596,1860 ⋆ Generalized 26 - gonal (or icosihexagonal) numbers: m * (12 * m - 11) with m = 0, + 1, - 1, + 2, - 2, + 3, - 3, ... • a(n) = a(- 1 - n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). • a(n) = (12 * n * (n + 1) + 5 * (2 * n + 1) * (- 1) ^ n - 5) / 4. Therefore: • a(n) = n * (6 * n + 11) / 2 for n even; otherwise, a(n) = (n + 1) * (6 * n - 5) / 2. •

► [A219259] 0,23,27,96,104,219,231,392,408,615,635,888,912,1211,1239,1584,1616,2007,2043,2480,2520,3003,3047,3576,3624 ⋆ Numbers k such that 25 * k + 1 is a square. • a(n) = a(- n + 1) = (50 * n * (n - 1) + 21 * (- 1) ^ n * (2 * n - 1) + 5) / 8 + 2. •

► [A166063] 1,23,29,31,37,41,43,47,53,59,61,67,71,73,79,83,89,97,101,103,107,109,113,127,131 ⋆ 23 - rough numbers: positive integers that have no prime factors less than 23. • a(n) = k * n + O(1) where k = 323323 / 55296 = 5.8471.... In particular, k * n - 51 < a(n) < k * n + 45. - _ Charles R Greathouse IV _ , Sep 21 2018 •

► [A155107] 23,30,76,83,129,136,182,189,235,242,288,295,341,348,394,401,447,454,500,507,553,560,606,613,659 ⋆ Numbers that are 23 or 30 (mod 53). • a(n) = 23 * (- 1) ^ (n + 1) + 53 * floor(n / 2). - _ M. F. Hasler _ , Jun 16 2010 • a(n) = a(n - 2) + 53 for all n > 2. - _ M. F. Hasler _ , Jun 16 2010 • a(n) = a(n - 1) + a(n - 2) - a(n - 3) = 53 * n / 2 - 53 / 4 - 39 * (- 1) ^ n / 4. •

► [A026051] 23,31,40,53,68,86,109,135,167,203,244,292,345,406,473,547,630,720,820,928,1045,1173,1310,1459,1618 ⋆ a(n) = (d(n) - r(n)) / 5, where d = A026049 and r is the periodic sequence with fundamental period (4,1,4,0,1). • a(n)=(n + 7) * (2 * n ^ 2 + 13 * n + 102) / 30 - 1 / 5 * (2 + (- 1 / 5 * 5 ^ (1 / 2) + 1) * cos(2 * n * Pi / 5) + (2 / 5 * 2 ^ (1 / 2) * (5 - 5 ^ (1 / 2)) ^ (1 / 2)) * sin(2 * n * Pi / 5) + (1 / 5 * 5 ^ (1 / 2) + 1) * cos(4 * n * Pi / 5) + (- 2 / 5 * 2 ^ (1 / 2) * (5 + 5 ^ (1 / 2)) ^ (1 / 2)) * sin(4 * n * Pi / 5)) [From _ Richard Choulet _ , Dec 14 2008] •

► [A355118] 23,33,47,69,99,141,207,297,423,621,891,1269,1863,2673,3807,5589,8019,11421,16767,24057,34263,50301,72171,102789,150903 ⋆ The number of noneq uivalent root ancestral configurations in a recursively defined family of gene tre es and species trees with at least n = 9 leaves, in which for n >= 12 leaves, 3 - leaf trees are successively added at the root of the tree with n - 3 leaves. • a(n) = floor(3 ^ (floor(n / 3)) * (2 * (n - 3 * floor(n / 3)) ^ 2 + 8 * (n - 3 * floor(n / 3)) + 23) / 27). •

► [A045533] 23,35,57,711,1113,1317,1719,1923,2329,2931,3137,3741,4143,4347,4753,5359,5961,6167,6771,7173,7379,7983,8389,8997,97101 ⋆ Concatenate the n - th and (n + 1)st prime. • a(n) = prime(n) * (10 ^ floor(log _ 10(prime(n + 1))) + 1) + prime(n + 1). - _ Conner L. Delahanty _ , May 10 2014 •

► [A154114] 23,37,41,43,59,73,79,83,109,113,127,137,151,163,197,199,223,227,229,233,239,251,263,269,283 ⋆ Primes p such that p + 9699690 is also prime, 9699690 = 2 * 3 * 5 * 7 * 11 * 13 * 17 * 19. • a(n) >> n log ^ 2 n. - _ Charles R Greathouse IV _ , Sep 02 2016 •

► [A092622] 23,37,53,73,127,137,157,173,229,239,251,263,271,283,293,307,313,317,331,347,359,367,379,383,397 ⋆ Primes with exactly two prime digits. • a(n) >> n ^ 1.285 •

► [A345277] 23,39,61,85,109,133,157,185,211,239,269,297,321,351,383,421,453,487,517,547,573,615,651,691,719 ⋆ Sums of 3 consecutive even - indexed primes. • a(n) = prime(2n) + prime(2n + 2) + prime(2n + 4). •

► [A301623] 23,41,59,77,113,131,149,167,203,221,239,257,293,311,329,347,383,401,419,437,473,491,509,527,563 ⋆ Numbers not divisible by 2, 3 or 5 (A007775) with digital root 5. • a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. •

► [A153037] 23,41,63,89,119,153,191,233,279,329,383,441,503,569,639,713,791,873,959,1049,1143,1241,1343,1449,1559 ⋆ a(n) = 2 * n ^ 2 + 16 * n + 23. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Feb 22 2012 •

► [A023264] 23,43,83,109,193,379,389,569,643,659,853,1063,1129,1283,1423,1493,1759,1789,1889,2003,2129,2293,2459,2713,2729 ⋆ Primes that remain prime through 2 iterations of function f(x) = 8x + 9. • a(n) == 3 or 9 (mod 10). - _ John Cerkan _ , Sep 16 2016 •

► [A198949] 1,23,43,461,859,9197,17137,183479,341881,3660383,6820483,73024181,136067779,1456823237,2714535097,29063440559,54154634161,579811987943,1080378148123,11567176318301,21553408328299,230763714378077,4299877884178 57,4603707111243239 ⋆ y - values in the solution to 11 * x ^ 2 - 10 = y ^ 2. • a(n + 4) = 20 * a(n + 2) - a(n) with a(1)=1, a(2)=23, a(3)=43, a(4)=461. • a(n) = ((- (- 1) ^ n - t) * (10 - 3 * t) ^ floor(n / 2) + (- (- 1) ^ n + t) * (10 + 3 * t) ^ floor(n / 2)) / 2 where t=sqrt(11). - _ Bruno Berselli _ , Nov 14 2011 •

► [A161709] 1,23,45,67,89,111,133,155,177,199,221,243,265,287,309,331,353,375,397,419,441,463,485,507,529 ⋆ a(n) = 22 * n + 1. • a(n) = 2 * a(n - 1) - a(n - 2). •

► [A122041] 23,45,89,177,353,705,1409,2817,5633,11265,22529,45057,90113,180225,360449,720897,1441793,2883585,5767169,11534337,23068673,46137345,92274689,184549377,369098753 ⋆ a(n) = 2 * a(n - 1) - 1 for n>1, a(1)=23. • a(n) = 11 * 2 ^ n + 1 for n>=1. - _ Paolo P. Lava _ , Oct 01 2008 • a(n) = 3 * a(n - 1) - 2 * a(n - 2), a(1)=23, a(2)=45. - _ Harvey P. Dale _ , Dec 13 2012 •

► [A038152] 23,46,69,92,115,138,161,185,208,231,254,277,300,323,347,370,393,416,439,462,485,509,532,555,578 ⋆ Beatty sequence for e ^ Pi. • a(n) = int(n * 23.1406926327...) •

► [A042044] 23,47,70,187,257,701,32503,65707,98210,262127,360337,982801,45569183,92121167,137690350,367501867,505192217,1377886301,63887962063,129153810427,193041772490,515237355407,708279127897 ⋆ Numerators of continued fraction convergents to sqrt(546). • a(n) = 1402 * a(n - 6) - a(n - 12). - _ Vincenzo Librandi _ , Nov 14 2013 •

► [A042042] 23,47,70,607,677,1961,90883,183727,274610,2380607,2655217,7691041,356443103,720577247,1077020350,9336740047,10413760397,30164260841,1397969759083,2826103779007,4224073538090 ⋆ Numerators of continued fraction convergents to sqrt(545). • a(n) = 3922 * a(n - 6) - a(n - 12). - _ Vincenzo Librandi _ , Nov 14 2013 •

► [A183010] 1,23,47,71,95,119,143,167,191,215,239,263,287,311,335,359,383,407,431,455,479,503,527,551,575 ⋆ a(n) = 24 * n - 1. • a(1)=23, a(2)=47, a(n) = 2 * a(n - 1) - a(n - 2). - _ Vincenzo Librandi _ , Jan 23 2011 •

► [A195058] 0,1,23,47,92,139,207,277,368,461,575,691,828,967,1127,1289,1472,1657,1863,2071,2300,2531,2783,3037,3312 ⋆ Concentric 23 - gonal numbers. • a(n) = 23 * n ^ 2 / 4 + 19 * ((- 1) ^ n - 1) / 8. • a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4). •

► [A042048] 23,47,117,398,515,2973,3488,37853,41341,244558,285899,1102255,2490409,6083073,282311767,570706607,1423724981,4841881550,6265606531,36169914205,42435520736,460525121565 ⋆ Numerators of continued fraction convergents to sqrt(548). • a(n) = 12166146 * a(n - 14) - a(n - 28). - _ Wesley Ivan Hurt _ , Sep 05 2022 •

► [A042050] 23,47,164,1523,16917,18440,35357,53797,89154,410413,499567,909980,1409547,2319527,26924344,244638623,760840213,1766319049,82011516467,165789351983,579379572416,5380205503727,59761640113413 ★ Numerators of continued fraction convergents to sqrt(549). ● a(n) = 3532638098 * a(n - 18) - a(n - 36). - _ Wesley Ivan Hurt _ , Sep 05 2022 ●

► [A042054] 23,47,399,446,3967,8380,389447,787274,6687639,7474913,66486943,140448799,6527131697,13194712193,112084829241,125279541434,1114321160713,2353921862860,109394726852273,221143375567406,1878541731391521,20996851069589 27,18676022587062937 ★ Numerators of continued fraction convergents to sqrt(551). ● a(n) = 16760 * a(n - 6) - a(n - 12). - _ Wesley Ivan Hurt _ , Sep 05 2022 ●

► [A157358] 23,47,719,1439,2879,4079,9839,11279,21599,28319,51599,84719,92399,95279,96959,137279,157679,159119,178799,209519,219839,243119,349199,429119,430799 ★ Triple - safe primes p: p, (p - 1) / 2, (p - 3) / 4, and (p - 7) / 8 are all prime. ● a(n) >> n log ^ (4) n. - _ Charles R Greathouse IV _ , Oct 14 2021 ●

► [A042056] 23,47,2185,4417,205367,415151,19302313,39019777,1814212055,3667443887,170516630857,344700705601,16026749088503,32398198882607,1506343897688425,3045085994259457,141580299633623447,286205685261506351 ★ Numerators of continued fraction convergents to sqrt(552). ● a(n) = 94 * a(n - 2) - a(n - 4). - _ Vincenzo Librandi _ , Nov 14 2013 ●

► [A132764] 0,23,48,75,104,135,168,203,240,279,320,363,408,455,504,555,608,663,720,779,840,903,968,1035,1104 ★ a(n) = n * (n + 22). ● a(n) = n * (n + 22). ● a(n) = 2 * n + a(n - 1) + 21 (with a(0)=0). - _ Vincenzo Librandi _ , Aug 03 2010 ● a(0)=0, a(1)=23, a(2)=48, a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , May 02 2012 ●

► [A063321] 1,23,49,77,103,131,157,185,211,239,265,293,319,347,373,401,427,455,481,509,535,563,589,617,643 ★ Dimension of the space of weight n cuspidal newforms for Gamma _ 1(48). ● a(n) = (- (- 1) ^ n + 54 * n - 117) / 2 for n>2. a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n>5. G.f.: x ^ 2 * (- 1 + 24 * x + 27 * x ^ 2 + 4 * x ^ 3) / ((1 - x) ^ 2 * (1 + x)). [_ Colin Barker _ , Sep 28 2012] ●

► [A140689] 0,23,52,87,128,175,228,287,352,423,500,583,672,767,868,975,1088,1207,1332,1463,1600,1743,1892,2047,2208 ★ a(n) = n * (3 * n + 20). ● a(n) = 3 * n ^ 2 + 20 * n. ● a(n) = a(n - 1) + 6 * n + 17 (with a(0)=0). - _ Vincenzo Librandi _ , Dec 15 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3), with a(0)=0, a(1)=23, a(2)=52. - _ Harvey P. Dale _ , Apr 29 2016 ●

► [A128473] 23,53,83,113,143,173,203,233,263,293,323,353,383,413,443,473,503,533,563,593,623,653,683,713,743 ★ Numbers of the form 30 * k + 23 or numbers that cannot be part of a twin prime pair. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). (End) ●

► [A166144] 1,23,56,100,155,221,298,386,485,595,716,848,991,1145,1310,1486,1673,1871,2080,2300,2531,2773,3026,3290,3565 ★ a(n) = (11 * n ^ 2 + 11 * n - 20) / 2. ● a(n) = a(n - 1) + 11 * n, a(1)=1, with n>1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). (End) ●

► [A321133] 1,23,59,407,1811,9503,46619,234887,1170851,5861423,29292779,146492567,732405491,3662142143,18310481339,91552865447,457763409731,2288818883663,11444090748299,57220461081527,286102290727571,1430511482997983,7152557356269659,35762786898788807,178813934259063011 ★ a(n) = 3 * a(n - 1) + 10 * a(n - 2), n >= 2; a(0)= - 1, a(1)=23. ● a(n) = 3 * 5 ^ n - 4 * (- 2) ^ n. ●

► [A055821] 1,23,60,122,217,354,543,795,1122,1537,2054,2688,3455,4372,5457,6729,8208,9915,11872,14102,16629,19478,22675,26247,30222 ★ a(n) = T(n,n - 4), array T as in A055818. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n > 9. ● a(n) = (72 - 54 * n - 25 * n ^ 2 + 6 * n ^ 3 + n ^ 4) / 24 for n > 4, with a(4) = 1. ●

► [A323220] 1,23,64,131,232,376,573,834,1171,1597,2126,2773,3554,4486,5587,6876,8373,10099,12076,14327,16876,19748,22969,26566,30567 ★ a(n) = n * (n + 5) * (n + 7) * (n + 10) / 24 + 1. ● a(n) = [x ^ n] (8 * x ^ 4 - 31 * x ^ 3 + 41 * x ^ 2 - 18 * x - 1) / (x - 1) ^ 5. ● a(n) = n! [x ^ n] exp(x) * (x ^ 4 + 28 * x ^ 3 + 228 * x ^ 2 + 528 * x + 24) / 24. ● a(n) = (1 / 3) * ((2 * n + 17) * a(n - 3) - (3 * n + 25) * a(n - 2) + (n + 15) * a(n - 1)) for n >= 3. ●

► [A051875] 0,1,23,66,130,215,321,448,596,765,955,1166,1398,1651,1925,2220,2536,2873,3231,3610,4010,4431,4873,5336,5820 ★ 23 - gonal numbers: a(n) = n(21n - 19) / 2. ● a(n) = 21 * n + a(n - 1) - 20 with n > 0, a(0) = 0. - _ Vincenzo Librandi _ , Aug 06 2010 ● a(21 * a(n) + 211 * n + 1) = a(21 * a(n) + 211 * n) + a(21 * n + 1). - _ Vladimir Shevelev _ , Jan 24 2014 ●

► [A322414] 23,67,104,148,172,216,253,297,341,378,422,446,490,527,571,608,652,676,720,757,801,845,882,926,950 ★ Compound tribonacci sequence with a(n) = A278041(A278041(n)), for n >= 0. ● a(n) = C(C(n)) = C(C(n) + 1) - 4 = 7 * A(n) + 6 * B(n) + 4 * (n + 4), for n >= 0, where A = A278040, B = A278039 and C = A278041. For a proof see the W. Lang link in A278040, Proposition 9, eq. (56). ●

► [A069173] 1,23,67,133,221,331,463,617,793,991,1211,1453,1717,2003,2311,2641,2993,3367,3763,4181,4621,5083,5567,6073,6601 ★ Centered 22 - gonal numbers. ● a(n) = 11 * n ^ 2 - 11 * n + 1. ● a(n) = 22 * n + a(n - 1) - 22 (with a(1)=1). - _ Vincenzo Librandi _ , Aug 08 2010 ●

► [A195039] 0,23,69,138,230,345,483,644,828,1035,1265,1518,1794,2093,2415,2760,3128,3519,3933,4370,4830,5313,5819,6348,6900 ★ 23 times triangular numbers. ● a(0)=0, a(1)=23, a(2)=69, a(n)=3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Aug 28 2012 ●

► [A042034] 23,70,93,535,628,5559,11746,52543,64289,181121,607652,788773,1396425,16149448,243638145,503425738,1250489621,1753915359,3004404980,4758320339,7762725319,12521045658 ★ Numerators of continued fraction convergents to sqrt(541). ● a(n) = 2723032632938454900 * a(n - 39) + a(n - 78) for n>77. [_ Bruno Berselli _ , Nov 15 2013] ●

► [A042038] 23,70,233,769,1002,14797,15799,62194,202381,669337,30991883,93644986,311926841,1029425509,1341352350,19808358409,21149710759,83257490686,270922182817,896024039137,41488027983119,125360107988494,4175683519486 01,1378065163834297 ★ Numerators of continued fraction convergents to sqrt(543). ● a(n) = 1338674 * a(n - 10) - a(n - 20). - _ Wesley Ivan Hurt _ , Sep 05 2022 ●

► [A042040] 23,70,793,2449,113447,342790,3884137,11995201,555663383,1678985350,19024502233,58752492049,2721639136487,8223669901510,93182008053097,287769694060801,13330587934849943,40279533498610630 ★ Numerators of continued fraction convergents to sqrt(544). ● a(n) = 4898 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Nov 14 2013 ●

► [A248877] 23,71,167,359,743,1511,3047,6119,12263,24551,49127,98279,196583,393191,786407,1572839,3145703,6291431,12582887,25165799,50331623,100663271,201326567,402653159,805306343 ★ a(1) = 23, a(2) = 71, a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>2. ● a(n + 1) = a(n) + 3 * 2 ^ (n + 3) with a(1) = 23. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2). - _ Colin Barker _ , Mar 05 2015 ●

► [A035072] 23,71,224,708,2237,7072,22361,70711,223607,707107,2236068,7071068,22360680,70710679,223606798,707106782,2236067978,7071067812,22360679775,70710678119,223606797750,707106781187,2236067977500 ★ a(n) is root of square starting with digit 5: first term of runs. ● a(n) = ceiling(sqrt(5 * 10 ^ n)), n > 1. ●

► [A167573] 23,83,183,323,503,723,983,1283,1623,2003,2423,2883,3383,3923,4503,5123,5783,6483,7223,8003,8823,9683,10583,11523,12503 ★ The third row of the ED3 array A167572. ● a(n) = 20 * n ^ 2 + 3. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ G. C. Greubel _ , Jun 16 2016 ●

► [A304839] 23,84,145,206,267,328,389,450,511,572,633,694,755,816,877,938,999,1060,1121,1182,1243,1304,1365,1426,1487 ★ a(n) = 61 * n - 38 (n>=1). ● a(n) = 2 * a(n - 1) - a(n - 2) for n>2. ●

► [A229449] 23,84,293,915,2546,6374,14536,30571,59969,110816,194535,326723,528084,825458,1252946,1853131,2678395,3792332,5271257,7205811,9702662,12886302,16900940,21912491,28110661 ★ Number of 6 X n 0..2 arrays with horizontal differences mod 3 never 1, vertical differences mod 3 never - 1, and rows and columns lexicographically nondecreasing. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

► [A172117] 0,1,23,86,210,415,721,1148,1716,2445,3355,4466,5798,7371,9205,11320,13736,16473,19551,22990,26810,31031,35673,40756,46300 ★ a(n) = n * (n + 1) * (20 * n - 17) / 6. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n > 3. - _ Harvey P. Dale _ , May 15 2011 ● a(n) = Sum _{ i=0..n - 1 } (n - i) * (20 * i + 1), with a(0)=0. - _ Bruno Berselli _ , Feb 11 2014 ●

► [A217529] 23,86,284,856,2416,6496,16832,42368,104192,251392,596992,1398784,3239936,7430144,16891904,38109184,85393408,190185472,421265408,928514048,2037383168,4452253696,9693036544,21030240256,45483032576 ★ a(n) = 2 ^ (n - 4) * (4 * n ^ 2 - 16 * n + 23). ● a(n) = 6 * a(n - 1) - 12 * a(n - 2) + 8 * a(n - 3). ●

► [A193018] 23,87,119,201,312,376,455,616,760,840,1055,1136,1248,1472,1719,1959,2064,2472,2764,2976,3264,3407,3584,4032,4336 ★ The largest integer that can not be written as the sum of squares of integers larger than n. ● a(n) < n ^ 4 + 6n ^ 3 + 11n ^ 2 + 6n by Sylvester's theorem. [_ Charles R Greathouse IV _ , Jul 14 2011] ● a(n) = o(n ^{ 2 + e }) for all e > 0, according to Dutch and Rickett. [_ Jeffrey Shallit _ , Mar 17 2021] ● a(n) = O(n ^ 2), according to Moscariello. [_ Jeffrey Shallit _ , Mar 17 2021] ●

► [A050255] 1,23,88,187,313,459,622,797,983,1179,1382,1592,1809,2031,2257,2489,2724,2963,3205,3450,3698,3949,4203,4459,4717 ★ A Diaconis - Mosteller approximation to the Birthday problem function. ● a(n) is ceiling(x), where x is the real solution to x * exp(- x / (365 * n)) = (log(2) * 365 ^ (n - 1) * n! * (1 - x / (365 * (n + 1)))) ^ (1 / n). - _ Iain Fox _ , Oct 26 2018 ●

► [A158537] 1,23,89,199,353,551,793,1079,1409,1783,2201,2663,3169,3719,4313,4951,5633,6359,7129,7943,8801,9703,10649,11639,12673 ★ a(n) = 22 * n ^ 2 + 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A244632] 0,23,92,207,368,575,828,1127,1472,1863,2300,2783,3312,3887,4508,5175,5888,6647,7452,8303,9200,10143,11132,12167,13248 ★ 23 * n ^ 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>2. ●

► [A042030] 23,93,116,209,325,534,859,3970,183479,737886,921365,1659251,2580616,4239867,6820483,31521799,1456823237,5858814747,7315637984,13174452731,20490090715,33664543446,54154634161,250283080090,11567176318301 ★ Numerators of continued fraction convergents to sqrt(539). ● a(n) = 7940 * a(n - 8) - a(n - 16). - _ Wesley Ivan Hurt _ , Sep 05 2022 ●

► [A042032] 23,93,395,488,5275,5763,28327,119071,5505593,22141443,94071365,116212808,1256199445,1372412253,6745848457,28355806081,1311112928183,5272807518813,22402343003435,27675150522248,299153848225915,326828998748163,1606469843218567 ★ Numerators of continued fraction convergents to sqrt(540). ● a(n) = 238142 * a(n - 8) - a(n - 16). - _ Wesley Ivan Hurt _ , Sep 05 2022 ●

► [A158544] 23,95,215,383,599,863,1175,1535,1943,2399,2903,3455,4055,4703,5399,6143,6935,7775,8663,9599,10583,11615,12695,13823,14999 ★ a(n) = 24 * n ^ 2 - 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). (End) ●

► [A154376] 23,96,219,392,615,888,1211,1584,2007,2480,3003,3576,4199,4872,5595,6368,7191,8064,8987,9960,10983,12056,13179,14352,15575 ★ a(n) = 25 * n ^ 2 - 2 * n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). (End) ●

► [A214092] 1,23,102,274,575,1041,1708,2612,3789,5275,7106,9318,11947,15029,18600,22696,27353,32607,38494,45050,52311,60313,69092,78684,89125 ★ Principal diagonal of the convolution array A213773. ● a(n) = (5 * n - 15 * n ^ 2 + 12 * n ^ 3) / 2. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ●

► [A241746] 23,103,163,223,283,343,403,463,523,583,643,703,763,823,883,943,1003,1063,1123,1183,1243,1303,1363,1423,1483 ★ Smallest number greater than n that CANNOT be scored using n darts on a standard dartboard. ● a(1) = 23, remaining terms: a(n) = 103 + 60 * (n - 2). - _ David Consiglio, Jr. _ , Jun 11 2014 ●

► [A156568] 23,115,667,3887,22655,132043,769603,4485575,26143847,152377507,888121195,5176349663,30169976783,175843511035,1024891089427,5973503025527,34816127063735,202923259356883,1182723429077563 ★ a(n) = 6 * a(n - 1) - a(n - 2) for n > 2; a(1)=23, a(2)=115. ● a(n) = 23 * ((2 + sqrt(2)) * (3 - 2 * sqrt(2)) ^ n + (2 - sqrt(2)) * (3 + 2 * sqrt(2)) ^ n) / 4. ●

► [A253679] 23,118,333,716,1315,2178,3353,4888,6831,9230,12133,15588,19643,24346,29745,35888,42823,50598,59261,68860,79443,91058,103753,117576,132575 ★ Numbers that begin a run of an odd number of consecutive integers whose cube

s sum to a square. ● a(n) = (2n + 1) ^ 3 - (3n + 1). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Colin Barker _ , Jan 09 2015 ●

▶ [A069756] 23,119,359,839,1679,3023,5039,7919,11879,17159,24023,32759,43679,57119,73439,93023,116279,143639,175559,212519,255023,303599,358799,421199,491399 ⋆ Frobenius number of the numerical semigroup generated by consecutive squares. ● a(n) = n ^ 2 * (n + 1) ^ 2 - n ^ 2 - (n + 1) ^ 2 = n ^ 4 + 2 * n ^ 3 - n ^ 2 - 2 * n - 1. ● a(n) = Numerator of ((n + 2)! - (n - 2)!) / n!, n >=2. - _ Artur Jasinski _ , Jan 09 2007 ●

▶ [A254758] 1,23,137,799,4657,27143,158201,922063,5374177,31322999,182563817,1064059903,6201795601,36146713703,210678486617,1227924205999,7156866749377,41713276290263,243122790992201,1417023469662943 ⋆ Part of the positive proper solutions x of the Pell equation x ^ 2 - 2 * y ^ 2 = - 7 ^ 2 based on the fundamental solution (x0, y0)= (1, 5). ● a(n) = rational part of z(n), where z(n) = (1 + 5 * sqrt(2)) * (3 + 2 * sqrt(2)) ^ n, n >= 0. ● a(n) = 6 * a(n - 1) - a(n - 2), n >= 1, with a(- 1) = - 17 and a(0) = 1. ● a(n) = S(n, 6) + 17 * S(n - 1, 6), n >= 0, with Chebyshev's S - polynomials evaluated at x = 6 (see A049310). ●

▶ [A042024] 23,139,162,301,764,4121,9006,13127,22133,145925,6734683,40554023,47288706,87842729,222974164,1202713549,2628401262,3831114811,6459516073,42588211249,1965517233527,11835691612411 ⋆ Numerators of continued fraction convergents to sqrt(536). ● a(n) = 291850 * a(n - 10) - a(n - 20): n in [1..30]; // _ Vincenzo Librandi _ , Nov 14 2013 ●

▶ [A122162] 1,23,154,647,1876,4802,9948,19975,34903,60648,94502,151298,217504,324844,446404,633351,830298,1144229,1447250,1931272,2396352,3105246,3759604,4821250,5705001 ⋆ Coefficient of q - series for constant term of Tate curve. ● a(n) = (5 sigma _ 3(n) + 7 sigma _ 5(n)) / 12, where sigma _ 3(n) is A001158, the sum of the cubes of the divisors of n and sigma _ 5(n) is A001160, the sum of the fifth powers of the divisors of n. ●

▶ [A248698] 0,23,166,621,1676,3715,7218,12761,21016,32751,48830,70213,97956,133211,177226,231345,297008,375751,469206,579101,707260,855603,1026146,1221001,1442376 ⋆ Floor of sums of the non - integer fourth roots of n, as partitioned by the integer roots: floor[sum(j from n ^ 4 + 1 to (n + 1) ^ 4 - 1, j ^ (1 / 4))]. ● a(n) = floor[sum(j from n ^ 4 + 1 to (n + 1) ^ 4 - 1, j ^ (1 / 4))]. ● a(n) = 3 * n + 8 * n ^ 2 + 8 * n ^ 3 + 4 * n ^ 4. ●

▶ [A167467] 23,190,652,1559,3061,5308,8450,12637,18019,24746,32968,42835,54497,68104,83806,101753,122095,144982,170564,198991,230413,264980,302842,344149,389051 ⋆ a(n) = 25 * n ^ 3 - n * (5 * n + 1) / 2 + 1. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ●

▶ [A108646] 1,23,194,985,3668,11074,28728,66438,140415,276001,511082,900263,1519882,2473940,3901024,5982300,8950653,13101051,18802210,26509637,36780128,50287798,67841720,90405250,119117115 ⋆ a(n) = (n + 1)(n + 2) ^ 2 * (n + 3)(11n ^ 3 + 58n ^ 2 + 101n + 60) / 720. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n > 7. ●

▶ [A107956] 1,23,205,1120,4508,14700,41076,101970,230505,482911,949949,1772134,3159520,5416880,8975184,14430348,22590297,34531455,51665845,75820052,109327372,155134540,216924500,299256750,407726865 ⋆ a(n) = (n + 1)(n + 2) ^ 2 * (n + 3) ^ 2 * (n + 4)(5n ^ 2 + 21n + 20) / 2880. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>8. ●

▶ [A027481] 23,215,1035,3535,9730,23058,48930,95370,173745,299585,493493,782145,1199380,1787380,2597940,3693828,5150235,7056315,9516815,12653795,16608438,21542950,27642550,35117550,44205525 ⋆ Second subdiagonal of triangle A027477, constructed from the Stirling numbers of the first kind. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n > 9. ●

▶ [A254870] 1,23,221,1355,6239,23465,75803,217373,566150,1361802,3063502,6508450,13159666,25481470,47493274,85567222,149553199,254336185,421956275,684451365,1087616985,1695917535,2598828765,3918943275,5822229660 ⋆ Seventh partial sums of fourth powers (A000583). ● a(n) = n * (1 + n) * (2 + n) * (3 + n) * (4 + n) * (5 + n) * (6 + n) * (7 + n) * (7 + 2 * n) * (7 + 42 * n + 6 * n ^ 2) / 19958400. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) + n ^ 4. ●

▶ [A091628] 23,223,2223,22223,222223,2222223,22222223,222222223,2222222223,22222222223,222222222223,2222222222223,22222222222223,222222222222223,2222222222222223,22222222222222223,222222222222222223 ⋆ Concatenation of n 2's followed by 3. ● a(n) = (10 ^ (n + 1) - 1) / 9 * 2 + 1. ● a(n) = 10 * a(n - 1) - 7, with a(1)=23. - _ Vincenzo Librandi _ , Nov 16 2010 ● a(n) = 11 * a(n - 1) - 10 * a(n - 2). ●

▶ [A060189] 1,23,230,1682,10543,60657,331612,1756340,9116141,46702427,237231970,1198382694,6031771195,30287995733,151856096504,760614930344,3807336276505,19050241098975,95294209168414,476607030432890 ⋆ A column and diagonal of A060187 (k=3). ● a(n) = 5 ^ (n - 1) - n * 3 ^ (n - 1) + n(n - 1) / 2. - _ Ralf Stephan _ , May 08 2004 ●

▶ [A242279] 1,23,252,1666,7509,26865,79920,209096,491425,1064575,2150076,4104738,7458437,13005041,21857984,35598880,56353185,87019191,131364700,194364050,282314901,403316353,567402672,787201416,1078078209 ⋆ Number of inequivalent (mod D _ 4) ways four checkers can be placed on an n X n board. ● a(n) = (n ^ 8 - 6 * n ^ 6 + 40 * n ^ 4 - 48 * n ^ 3 + 16 * n ^ 2 + IF(MOD(n, 2) = 1) * (14 * n ^ 4 - 48 * n ^ 3 + 34 * n ^ 2 - 3)) / 192. ●

▶ [A240876] 1,23,265,2047,11969,56695,227305,795455,2485825,7059735,18474633,45046719,103274625,224298231,464387817,921406335,1759885185,3248227095,5812626185,10113604735,17152640321,28418229623,46082942185,73265596607,114375683009 ⋆ Expansion of (1 + x) ^ 11 / (1 - x) ^ 12. ● a(n) = 12 * a(n - 1) - 66 * a(n - 2) + 220 * a(n - 3) - 495 * a(n - 4) + 792 * a(n - 5) - 924 * a(n - 6) + 792 * a(n - 7) - 495 * a(n - 8) + 220 * a(n - 9) - 66 * a(n - 10) + 12 * a(n - 11) - a(n - 12), with initial values as shown. ● a(n) = (2 * n + 1) * (2 * n * (n + 1) * (n ^ 2 + n + 5) * (2 * n ^ 2 + 2 * n + 51) * (n ^ 4 + 2 * n ^ 3 + 68 * n ^ 2 + 67 * n + 537) / 155925 + 1). ● a(n) = Sum _{ k = 0..min(11,n) } 2 ^ k * binomial(11,k) * binomial(n,k). See Bump et al. - _ Tom Copeland _ , Sep 05 2014 ●

▶ [A010975] 1,23,276,2300,14950,80730,376740,1560780,5852925,20160075,64512240,193536720,548354040,1476337800,3796297200,9364199760,22239974430,51021117810,113380261800,244662670200,513791607420,1052049481860,2104098963720,4116715363800 ⋆ a(n) = binomial(n,22). ● a(n) = n / (n - 22) * a(n - 1), n > 22. - _ Vincenzo Librandi _ , Mar 26 2011 ●

▶ [A199031] 1,23,287,3455,41471,497663,5971967,71663615,859963391,10319560703,123834728447,1486016741375,17832200896511,213986410758143,2567836929097727,30814043149172735,369768517790072831,4437222213480873983 ⋆ a(n) = 2 * 12 ^ n - 1. ● a(n) = 12 * a(n - 1) + 11. ● a(n) = 13 * a(n - 1) - 12 * a(n - 2). ●

▶ [A086943] 23,293,2993,29993,299993,2999993,29999993,299999993,2999999993,29999999993,299999999993,2999999999993,29999999999993,299999999999993,2999999999999993,29999999999999993 ⋆ Integers k such that R(k + 7) = 3. ● a(n) = 3 * 10 ^ n - 7. ●

▶ [A000543] 0,1,23,333,2916,16725,70911,241913,701968,1798281,4173775,8942021,17930628,34009053,61518471,106823025,179003456,290715793,459239463,707740861,1066780100,1576090341,2286660783,3263156073,4586706576 ⋆ Number of inequivalent ways to color vertices of a cube using at most n colors. ● a(n) = (1 / 24) * n ^ 2 * (n ^ 6 + 17 * n ^ 2 + 6). (Replace all x _ i's in the cycle index with n.) ● a(n) = 1 * C(n,1) + 21 * C(n,2) + 267 * C(n,3) + 1718 * C(n,4) + 5250 * C(n,5) + 7980 * C(n,6) + 5880 * C(n,7) + 1680 * C(n,8), where the coefficient of C(n,k) is the number of oriented colorings using exactly k colors. ●

▶ [A028110] 1,23,335,3955,41391,401163,3691255,32746835,282966431,2398399003,20039831175,165661847715,1358507565871,11073172312043,89845493043095,726472924548595,5858783037195711,47156008120196283 ⋆ Expansion of 1 / ((1 - 4x)(1 - 5x)(1 - 6x)(1 - 8x)). ● a(n)=(8 ^ (n + 3) - 6 ^ (n + 4) + 8 * 5 ^ (n + 3) - 3 * 4 ^ (n + 3)) / 24. [_ Yahia Kahloune _ , Jun 11 2013] ●

▶ [A028059] 1,23,338,4054,43323,430269,4065916,37085708,329561045,2871469315,24640946694,208933723362,1754722389967,14623596707561,121104748389872,997726082646616,8184406735022889,66895347552055407 ⋆ Expansion of 1 / ((1 - 3x)(1 - 5x)(1 - 7x)(1 - 8x)). ● a(n)=(8 ^ (n + 4) - 15 * 7 ^ (n + 3) + 2 * 5 ^ (n + 4) - 3 ^ (n + 4)) / 120. [_ Yahia Kahloune _ , Jun 08 2013] ●

▶ [A028055] 1,23,340,4130,45031,459893,4504690,42928160,401635861,3711270563,34005047440,309788905790,2811170579491,25442007146033,229842147512590,2073840099225020,18696506927851921,168462145714550303 ⋆ Expansion of 1 / ((1 - 3x)(1 - 5x)(1 - 6x)(1 - 9x)). ● a(n)=(9 ^ (n + 3) - 8 * 6 ^ (n + 3) + 9 * 5 ^ (n + 3) - 2 * 3 ^ (n + 3)) / 72. [_ Yahia Kahloune _ , Jun 07 2013] ● a(0)=1, a(1)=23, a(2)=340, a(3)=4130, a(n)=23 * a(n - 1) - 189 * a(n - 2) + 657 * a(n - 3) - 810 * a(n - 4). - _ Harvey P. Dale _ , Jul 01 2015 ●

▶ [A026324] 1,23,341,4147,45045,455091,4373797,40541699,365712149,3230463379,28067769093,240654781731,2041291828213,17162300683187,143239714105829,1188212150789443,9805989936743637,80575358596047315 ⋆ Expansion of 1 / ((1 - 2x)(1 - 6x)(1 - 7x)(1 - 8x)). ● a(n) = - 2 ^ n / 15 + 27 * 6 ^ n - 343 * 7 ^ n / 5 + 128 * 8 ^ n / 3. _ R. J. Mathar _ , Jun 23 2013 ●

▶ [A028039] 1,23,342,4198,46403,481341,4792264,46410716,440901285,4131534979,38331795866,353038275954,3233774790247,29499248911337,268261230188748,2433731253526312,22039259605258889,199303153044040815 ⋆ Expansion of 1 / ((1 - 3x)(1 - 4x)(1 - 7x)(1 - 9x)). ● a(n)=(2 * 9 ^ (n + 3) - 5 * 7 ^ (n + 3) + 8 * 4 ^ (n + 3) - 5 * 3 ^ (n + 3)) / 120. [_ Yahia Kahloune _ , May 31 2013] ●

▶ [A025993] 1,23,344,4258,47487,496725,4981918,48547136,463544213,4361492707,40596873252,374857310334,3440520848779,31434357529169,286207079508746,2598999610410652,23553202070626785,213115529239825311 ⋆ Expansion of 1 / ((1 - 2x)(1 - 5x)(1 - 7x)(1 - 9x)). ● a(n) = - 8 * 2 ^ n / 105 + 125 * 5 ^ n / 24 - 343 * 7 ^ n / 20 + 729 * 9 ^ n / 56. _ R. J. Mathar _ , Jun 20 2013 ● a(0)=1, a(1)=23, a(2)=344, a(3)=4258, a(n)=23 * a(n - 1) - 185 * a(n - 2) + 601 * a(n - 3) - 630 * a(n - 4). - _ Harvey P. Dale _ , Jul 04 2013 ●

▶ [A028035] 1,23,345,4315,49121,530403,5553385,57088955,580462641,5863054483,58985130425,591995063595,5932878706561,59406619141763,594534243267465,5948154995694235,59498442385788881,595085846763024243 ⋆ Expansion of 1 / ((1 - 3x)(1 - 4x)(1 - 6x)(1 - 10x)). ● a(n)=(10 ^ (n + 3) - 7 * 6 ^ (n + 3) + 14 * 4 ^ (n + 3) - 8 * 3 ^ (n + 3)) / 168. [_ Yahia Kahloune _ , May 30 2013] ●

▶ [A025976] 1,23,347,4363,49683,532491,5483299,54909371,538792595,5206523179,49719923331,470377414299,4416615113587,41215417310987,382666342963043,3537819931431547,32590970730866259,299323501721262315 ⋆ Expansion of 1 / ((1 - 2x)(1 - 4x)(1 - 8x)(1 - 9x)). ● a(n) = - 2 * 2 ^ n / 21 + 8 * 4 ^ n / 5 - 64 * 8 ^ n / 3 + 729 * 9 ^ n / 35. _ R. J. Mathar _ , Jun 20 2013 ● a(0)=1, a(1)=23, a(2)=347, a(3)=4363, a(n)=23 * a(n - 1) - 182 * a(n - 2) + 568 * a(n - 3) - 576 * a(n - 4). - _ Harvey P. Dale _ , Sep 11 2013 ●

▶ [A025989] 1,23,347,4375,50211,546063,5750347,59371895,605580371,6130227103,61765086747,620509140615,6222647943331,62333853156143,623992946413547,6243906815856535,62463186581999091,624777847926261183 ⋆ Expansion of 1 / ((1 - 2x)(1 - 5x)(1 - 6x)(1 - 10x)). ● a(n) = - 2 ^ n / 12 + 25 * 5 ^ n / 3 - 27 * 6 ^ n / 2 + 25 * 10 ^ n / 4. _ R. J. Mathar _ , Jun 20 2013 ●

▶ [A023950] 1,23,348,4378,49679,528381,5380306,53132816,513181317,4875626899,45752166824,425305531014,3925114125115,36023250380777,329183853207102,2998041099306172,27233460168740273,246879085434889215 ⋆ Expansion of 1 / ((1 - x)(1 - 6x)(1 - 7x)(1 - 9x)). ● a(n) = (5 * 9 ^ (n + 3) - 20 * 7 ^ (n + 3) + 16 * 6 ^ (n + 3) - 1) / 240. [_ Yahia Kahloune _ , May 25 2013] ● a(0)=1, a(1)=23, a(2)=348, a(3)=4378; for n>3, a(n) = 23 * a(n - 1) - 181 * a(n - 2) + 537 * a(n - 3) - 378 * a(n - 4). - _ Vincenzo Librandi _ , Jul 12 2013 ●

▶ [A025973] 1,23,349,4443,51597,568155,6054973,63196331,650620333,6637326267,67293219357,679380276939,6838972903309,68706054180059,689275354683901,6908259384473067,69191143298038125,692671313513140731 ⋆ Expansion of 1 / ((1 - 2x)(1 - 4x)(1 - 7x)(1 - 10x)). ● a(n) = (5 * 10 ^ (n + 3) - 16 * 7 ^ (n + 3) + 20 * 4 ^ (n + 3) - 9 * 2 ^ (n + 3)) / 720. - _ Yahia Kahloune _ , May 23 2013 ●

▶ [A022469] 1,23,350,4450,51231,554433,5756260,58034900,572630861,5558653243,53279890170,505596134550,4759287370891,44506489496453,413949260130080,3832708325439400,35351885537967321,325028008388124063,2980145152236043990,27260474825925725450,248857740289031716151 ⋆ Expansion of 1 / ((1 - x) * (1 - 5 * x) * (1 - 8 * x) * (1 - 9 * x)). ● a(n) = (21 * 9 ^ (n + 3) - 32 * 8 ^ (n +

3) + 14 * 5 ^ (n + 3) - 3) / 672. - _ Yahia Kahloune _ , May 25 2013 ● a(0)=1 , a(1)=23, a(2)=350, a(3)=4450; for n>3, a(n) = 23 * a(n - 1) - 179 * a(n - 2) + 517 * a(n - 3) - 360 * a(n - 4). - _ Vincenzo Librandi _ , Jul 12 2013 ●

► [A028030] 1,23,350,4510,53691,614373,6891160,76527020,845660981,9322579123,102653929170,1129737260730,12429895581871,136743043622273,1504245500346380,16547064858237640,182019552263480361 ⋆ Expansion of 1 / ((1 - 3x)(1 - 4x)(1 - 5x)(1 - 11x)). ● a(n) = (11 ^ (n + 3) - 28 * 5 ^ (n + 3) + 48 * 4 ^ (n + 3) - 21 * 3 ^ (n + 3)) / 336. [_ Yahia Kahloune _ , May 25 2013] ●

► [A022454] 1,23,352,4530,53151,590373,6335302,66471680,687035701,7029030723,71413230252,722053798830,7276293638251,73154751811073,734297855505202,7362269063785980,73757914933860801,738526673084931423 ⋆ Expansion of 1 / ((1 - x) * (1 - 5 * x) * (1 - 7 * x) * (1 - 10 * x)). ● a(n) = (8 * 10 ^ (n + 3) - 30 * 7 ^ (n + 3) + 27 * 5 ^ (n + 3) - 5) / 1080. -_ Yahia Kahloune _ , May 22 2013 ● a(0)=1, a(1)=23, a(2)=352, a(3)=4530; for n>3, a(n) = 23 * a(n - 1) - 177 * a(n - 2) + 505 * a(n - 3) - 350 * a(n - 4). - _ Vincenzo Librandi _ , Jul 12 2013 ●

► [A025949] 1,23,353,4579,54393,613419,6692161,71391683,749696585,7783261915,80123162769,819556503987,8342165636377,84594465902411,855327149649377,8628331464477091,86883794517646569,873641784546629307 ⋆ Expansion of 1 / ((1 - 2x)(1 - 3x)(1 - 8x)(1 - 10x)). ● a(n) = - 2 ^ n / 6 + 27 * 3 ^ n / 35 - 128 * 8 ^ n / 15 + 125 * 10 ^ n / 14. - _ R. J. Mathar _ , Jun 20 2013 ●

► [A025969] 1,23,353,4603,55449,640851,7242961,80866811,896831177,9909444259,109271790849,1203605509899,13249389022585,145801783940147,1604171188346417,17647994609290267,194140618516940073 ⋆ Expansion of 1 / ((1 - 2x)(1 - 4x)(1 - 6x)(1 - 11x)). ● a(0)=1, a(1)=23, a(2)=353, a(3)=4603, a(n)=23 * a(n - 1) - 176 * a(n - 2) + 532 * a(n - 3) - 528 * a(n - 4). - _ Harvey P. Dale _ , Jun 25 2011 ● a(n) = (8 * 11 ^ (n + 3) - 63 * 6 ^ (n + 3) + 90 * 4 ^ (n + 3) - 35 * 2 ^ (n + 3)) / 2520. - _ Yahia Kahloune _ , May 24 2013 ●

► [A020579] 1,23,355,4595,53851,592403,6240235,63710915,635468251,6225852083,60146237515,574587484835,5439634923451,51116555484563,477406092913195,4435981769620355,41041272503703451,378327871809737843 ⋆ Expansion of 1 / ((1 - 6x)(1 - 8x)(1 - 9x)). ● a(n) = 6 * 6 ^ n - 32 * 8 ^ n + 27 * 9 ^ n. - _ R. J. Mathar _ , Jun 30 2013 ● a(0)=1, a(1)=23, a(2)=355; for n>2, a(n) = 23 * a(n - 1) - 174 * a(n - 2) + 432 * a(n - 3). - _ Vincenzo Librandi _ , Jul 04 2013 ● a(n) = 17 * a(n - 1) - 72 * a(n - 2) + 6 ^ n. - _ Vincenzo Librandi _ , Jul 04 2013 ●

► [A021914] 1,23,355,4635,55371,627243,6866155,73433195,772592491,8032358763,82776456555,847393109355,8630981813611,87566313375083,885715453576555,8937574526027115,90019110908986731,905338057186084203 ⋆ Expansion of 1 / ((1 - x)(1 - 4x)(1 - 8x)(1 - 10x)). ● a(n) = (14 * 10 ^ (n + 3) - 27 * 8 ^ (n + 3) + 21 * 4 ^ (n + 3) - 8) / 1512. - _ Yahia Kahloune _ , May 24 2013 ●

► [A022412] 1,23,356,4690,57015,663621,7538098,84446336,938561525,10384529155,114604142016,1262952525198,13906624731091,153059279644385,1684178151097070,18529154259093436,203840055167045073 ⋆ Expansion of 1 / ((1 - x)(1 - 5x)(1 - 6x)(1 - 11x)). ● a(n) = 5 ^ (n + 3) / 24 + 11 ^ (n + 3) / 300 - 1 / 200 - 6 ^ (n + 3) / 25. - _ R. J. Mathar _ , Mar 11 2011 ● a(n) = 17 * a(n - 1) - 66 * a(n - 2) + (5 ^ (n + 1) - 1) / 4, n >= 2. - _ Vincenzo Librandi _ , Mar 12 2011 ●

► [A025946] 1,23,356,4702,57435,672441,7683502,86531384,965954429,10724321179,118659465288,1310098171746,14444989850383,159132262849037,1752116527119314,19284913291752988,212215466792375697 ⋆ Expansion of 1 / ((1 - 2x)(1 - 3x)(1 - 7x)(1 - 11x)). ● a(n)=(5 * 11 ^ (n + 3) - 18 * 7 ^ (n + 3) + 45 * 3 ^ (n + 3) - 32 * 2 ^ (n + 3)) / 1440. From _ Yahia Kahloune _ , May 22 2013. ●

► [A020572] 1,23,357,4675,55781,628803,6831637,72401555,754291461,7764923683,79263766517,804302170035,8126850016741,81868359076163,822960967286997,8260021493532115,82815918789863621,829686041539878243 ⋆ Expansion of 1 / ((1 - 6x)(1 - 7x)(1 - 10x)). ● a(n) = 9 * 6 ^ n - 49 * 7 ^ n / 3 + 25 * 10 ^ n / 3. - _ R. J. Mathar _ , Jun 30 2013 ● a(0)=1, a(1)=23, a(2)=357; for n>2, a(n) = 23 * a(n - 1) - 172 * a(n - 2) + 420 * a(n - 3). - _ Vincenzo Librandi _ , Jul 04 2013 ● a(n) = 17 * a(n - 1) - 70 * a(n - 2) + 6 ^ n. - _ Vincenzo Librandi _ , Jul 04 2013 ●

► [A021884] 1,23,358,4758,58419,686541,7864936,88727036,991573957,11016698979,121950785034,1346833901634,14852822151415,163644677778137,1801937252261452,19834231783445352,218267009404507593 ⋆ Expansion of 1 / ((1 - x)(1 - 4x)(1 - 7x)(1 - 11x)). ● a(n) = (9 * 11 ^ (n + 3) - 35 * 7 ^ (n + 3) + 40 * 4 ^ (n + 3) - 14) / 2520. - _ Yahia Kahloune _ , May 24 2013 ● a(n) = 23 * a(n - 1) - 171 * a(n - 2) + 457 * a(n - 3) - 308 * a(n - 4) for n > 3. - _ Chai Wah Wu _ , Feb 03 2021 ●

► [A020346] 1,23,359,4747,57351,655683,7229839,77760587,821694071,8571599443,88563029919,908455411227,9267399149191,94137972490403,953097676407599,9624750893682667,96997854561570711,975982073553112563 ⋆ Expansion of 1 / ((1 - 5x)(1 - 8x)(1 - 10x)). ● a(n) = 5 ^ (n + 1) / 3 - 4 * 8 ^ (n + 1) / 3 + 10 ^ (n + 1). - R. J. Mathar, Mar 15 2011 ● a(0)=1, a(1)=23, a(2)=359; for n>2, a(n) = 23 * a(n - 1) - 170 * a(n - 2) + 400 * a(n - 3). - _ Vincenzo Librandi _ , Jul 03 2013 ● a(n) = 18 * a(n - 1) - 80 * a(n - 2) + 5 ^ n. - _ Vincenzo Librandi _ , Jul 03 2013 ●

► [A025964] 1,23,359,4843,61287,753315,9137263,110167211,1324737623,15911030707,191005360767,2292437677179,27511152416359,330143464656899,3961770291040271,47541489215721547,570499107794719095 ⋆ Expansion of 1 / ((1 - 2x)(1 - 4x)(1 - 5x)(1 - 12x)). ● a(0)=1, a(1)=23, a(2)=359, a(3)=4843, a(n)=23 * a(n - 1) - 170 * a(n - 2) + 496 * a(n - 3) - 480 * a(n - 4). - _ Harvey P. Dale _ , Jan 28 2013 ● a(n) = (3 * 12 ^ (n + 3) - 80 * 5 ^ (n + 3) + 105 * 4 ^ (n + 3) - 28 * 2 ^ (n + 3)) / 1680. - _ Yahia Kahloune _ , May 23 2013 ●

► [A021684] 1,23,360,4810,59111,690573,7801990,86089520,933531621,9989073523,105774639620,1110701801430,11583617458531,120125571974873,1239860303429250,1274604430894054 0,130587414625807841 ⋆ Expansion of 1 / ((1 - x)(1 - 3x)(1 - 9x)(1 - 10x)). ● a(n) = - 1 / 144 + 10 ^ (n + 3) / 63 + 3 ^ (n + 2) / 28 - 3 * 9 ^ (n + 2) / 16. - R. J. Mathar, Mar 15 2011 ●

► [A025942] 1,23,361,4907,62545,773171,9415897,113824139,1370909089,16481083619,197954225833,2376538571771,28524991618033,342339076723667,4108303998843769,49301058498065003,591621165177427777 ⋆ Expansion of 1 / ((1 - 2x)(1 - 3x)(1 - 6x)(1 - 12x)). ● a(0)=1, a(1)=23, a(2)=361, a(3)=4907, a(n)=23 * a(n - 1) - 168 * a(n - 2) + 468 * a(n - 3) - 432 * a(n - 4). - _ Harvey P. Dale _ , Oct 20 2012 ● a(n) = 16 * 12 ^ n / 5 - 3 * 6 ^ n - 2 ^ n / 5 + 3 ^ n. - _ R. J. Mathar _ , Jun 04 2013 ●

► [A020000] 1,23,362,4870,60411,715533,8243572,93366380,1046230421,11644889443,129058033182,1426436938290,15738640474831,173461105001753,1910430676985192,21031277618176600,231459987587209641 ⋆ Expansion of 1 / ((1 - 5x)(1 - 7x)(1 - 11x)). ● a(n) = 5 ^ (n + 2) / 12 + 11 ^ (n + 2) / 24 - 7 ^ (n + 2) / 8. - R. J. Mathar, Mar 15 2011 ● a(0)=1, a(1)=23, a(2)=362; for n>2, a(n) = 23 * a(n - 1) - 167 * a(n - 2) + 385 * a(n - 3). - _ Vincenzo Librandi _ , Jul 03 2013 ● a(n) = 18 * a(n - 1) - 77 * a(n - 2) + 5 ^ n. - _ Vincenzo Librandi _ , Jul 03 2013 ●

► [A021664] 1,23,362,4894,61251,733461,8546764,97847228,1106991941,12422320339,138608884206,1540404875802,17070111627271,188776494239057,2084583574516688,22994756444303416,253457017948866441 ⋆ Expansion of 1 / ((1 - x)(1 - 3x)(1 - 8x)(1 - 11x)). ● a(n) = 3 ^ (n + 3) / 80 - 1 / 140 + 11 ^ (n + 3) / 240 - 8 ^ (n + 3) / 105. - _ R. J. Mathar _ , Mar 15 2011 ● a(0) = 1, a(1) = 23, a(2) = 362, a(3) = 4894, a(n) = 23 * a(n - 1) - 167 * a(n - 2) + 409 * a(n - 3) - 264 * a(n - 4). - _ Harvey P. Dale _ , Feb 17 2015 ●

► [A021844] 1,23,363,4963,63539,787731,9609811,116281811,1401253587,16850623699,202422366419,2430363281619,29172151056595,350112652220627,4201633221810387,50421288464357587,605065606114711763 ⋆ Expansion of 1 / ((1 - x)(1 - 4x)(1 - 6x)(1 - 12x)). ● a(n) = 3 * 12 ^ (n + 1) / 11 - 3 * 6 ^ (n + 1) / 5 + 2 ^ (2 * n + 2) / 3 - 1 / 165. - R. J. Mathar, Mar 15 2011 ● a(0)=1, a(1)=23, a(2)=363, a(3)=4963, a(n)=23a(n - 1) - 166a(n - 2) + 432a(n - 3) - 288a(n - 4) [From Harvey P. Dale, May 11 2011] ●

► [A019672] 1,23,365,4975,62661,753783,8811805,101107775,1145674421,12870591943,143722946445,1598128085775,17716831119781,195984586836503,2164626279788285,23881256748106975,263256769887630741 ⋆ Expansion of 1 / ((1 - 4x)(1 - 8x)(1 - 11x)). ● a(n)= 11 ^ (n + 2) / 21 - 2 * 8 ^ (n + 1) / 3 + 4 ^ (n + 1) / 7. - _ R. J. Mathar _ , Nov 11 2012 ● a(0)=1, a(1)=23, a(2)=365; for n>2, a(n) = 23 * a(n - 1) - 164 * a(n - 2) + 352 * a(n - 3). - _ Vincenzo Librandi _ , Jul 03 2013 ● a(n) = 19 * a(n - 1) - 88 * a(n - 2) + 4 ^ n. - _ Vincenzo Librandi _ , Jul 03 2013 ●

► [A021629] 1,23,366,5062,65555,820701,10087792,122732444,1484551749,17896987459,215340503378,2588122883346,31085733296983,373226612833097,4480104054056724,53770941570620968,645319149365603657 ⋆ Expansion of 1 / ((1 - x)(1 - 3x)(1 - 7x)(1 - 12x)). ● a(0)=1, a(1)=23, a(2)=366, a(3)=5062; for n>3, a(n) = 23 * a(n - 1) - 163 * a(n - 2) + 393 * a(n - 3) - 252 * a(n - 4). - _ Vincenzo Librandi _ , Jul 11 2013 ●

► [A019869] 1,23,367,5075,65551,817643,10013527,121451315,1465540351,17637184763,211960186087,2545454874755,30557298487951,366759842503883,4401557777453047,52821361851453395,633872505937432351 ⋆ Expansion of 1 / ((1 - 5 * x) * (1 - 6 * x) * (1 - 12 * x)). ● a(n) = 25 * 5 ^ n / 7 - 6 * 6 ^ n + 24 * 12 ^ n / 7. - _ R. J. Mathar _ , Jun 29 2013 ● a(0)=1, a(1)=23, a(2)=367; for n>2, a(n) = 23 * a(n - 1) - 162 * a(n - 2) + 360 * a(n - 3). - _ Vincenzo Librandi _ , Jul 03 2013 ● a(n) = 18 * a(n - 1) - 72 * a(n - 2) + 5 ^ n. - _ Vincenzo Librandi _ , Jul 03 2013 ●

► [A021294] 1,23,368,5098,65559,806541,9640606,112964816,1304876837,14914020979,169097614764,1905464222454,21368620595635,238731453906137,2659135639187642,29548298847110812,327711548662770753 ⋆ Expansion of 1 / ((1 - x)(1 - 2x)(1 - 9x)(1 - 11x)). ● a(n) = (28 * 11 ^ (n + 3) - 45 * 9 ^ (n + 3) + 80 * 2 ^ (n + 3) - 63) / 5040. [_ Yahia Kahloune _ , Jul 08 2013] ● a(0)=1, a(1)=23, a(2)=368, a(3)=5098; for n>3, a(n) = 23 * a(n - 1) - 161 * a(n - 2) + 337 * a(n - 3) - 198 * a(n - 4). - _ Vincenzo Librandi _ , Jul 08 2013 ● a(0)=1, a(1)=23; for n>1, a(n) = 20 * a(n - 1) - 99 * a(n - 2) + 2 ^ n - 1. - _ Vincenzo Librandi _ , Jul 08 2013 ●

► [A019628] 1,23,369,5143,66977,841575,10367953,126315191,1529146113,18443562247,221980457777,2668373663319,32052757927009,384859080003239,4619891122628241,55449769683406327,665474773978915265 ⋆ Expansion of 1 / ((1 - 4 * x) * (1 - 7 * x) * (1 - 12 * x)). ● a(n) = 2 * 4 ^ n / 3 - 7 ^ (n + 2) / 15 + 18 * 12 ^ n / 5. - _ R. J. Mathar _ , Nov 11 2012 ● a(0)=1, a(1)=23, a(2)=369; for n>2, a(n) = 23 * a(n - 1) - 160 * a(n - 2) + 336 * a(n - 3). - _ Vincenzo Librandi _ , Jul 03 2013 ● a(n) = 19 * a(n - 1) - 84 * a(n - 2) + 4 ^ n. - _ Vincenzo Librandi _ , Jul 03 2013 ●

► [A018091] 1,23,370,5150,66451,819413,9810340,115087100,1330524901,15216894803,172615989910,1945847389850,21827965327351,243920416546193,2717439768299080,30200674142257400,334986945826585801 ⋆ Expansion of 1 / ((1 - 3x)(1 - 9x)(1 - 11x)). ● a(0)=1, a(1)=23, a(2)=370; for n>2, a(n) = 23 * a(n - 1) - 159 * a(n - 2) + 297 * a(n - 3). - _ Vincenzo Librandi _ , Jul 02 2013 ● a(n) = 20 * a(n - 1) - 99 * a(n - 2) + 3 ^ n. - _ Vincenzo Librandi _ , Jul 02 2013 ● a(n) = (3 * 11 ^ (n + 2) - 4 * 9 ^ (n + 2) + 3 ^ (n + 2)) / 48. [_ Yahia Kahloune _ , Jul 06 2013] ●

► [A021279] 1,23,371,5227,68955,877371,10927867,134329979,1637524859,19854820219,239894019963,2891817662331,34806527338363,418516051199867,5028894399547259,60400347075823483,725233079160063867 ⋆ Expansion of 1 / ((1 - x)(1 - 2x)(1 - 8x)(1 - 12x)). ● a(n) = (21 * 12 ^ (n + 3) - 55 * 8 ^ (n + 3) + 154 * 2 ^ (n + 3) - 120) / 9240. - _ Yahia Kahloune _ , Jul 08 2013 ● a(0)=1, a(1)=23, a(2)=371, a(3)=5227; for n >3, a(n) = 23 * a(n - 1) - 158 * a(n - 2) + 328 * a(n - 3) - 192 * a(n - 4). - _ Vincenzo Librandi _ , Jul 08 2013 ● a(0)=1, a(1)=23; for n>1, a(n) = 20 * a(n - 1) - 96 * a(n - 2) + 2 ^ n - 1. - _ Vincenzo Librandi _ , Jul 08 2013 ●

► [A018071] 1,23,373,5279,69853,890519,11105221,136616783,1666241005,20209628615,244233494869,2944545727487,35444499573757,426213603230711,5121600110316517,61515496310530991,738636315663280909 ⋆ Expansion of 1 / ((1 - 3x)(1 - 8x)(1 - 12x)). ● a(0)=1, a(1)=23, a(2)=373; for n>2, a(n) = 23 * a(n - 1) - 156 * a(n - 2) + 288 * a(n - 3). - _ Vincenzo Librandi _ , Jul 02 2013 ● a(n) = 20 * a(n - 1) - 96 * a(n - 2) + 3 ^ n. - _ Vincenzo Librandi _ , Jul 02 2013 ● a(n) = (5 * 12 ^ (n + 2) - 9 * 8 ^ (n + 2) + 4 * 3 ^ (n + 2)) / 180. [_ Yahia Kahloune _ , Jul 06 2013] ●

► [A016325] 1,23,377,5395,71841,915243,11317657,136994195,1631936081,19201296763,223714264137,2585856904995,29694425953921,339138685491083,3855525540397817,43660780944367795,492768590388029361 ⋆ Expansion of 1 / ((1 - 2x)(1 - 10x)(1 - 11x)). ● a(n) = 11 ^ (n + 2) / 9 + 2 ^ (n - 1) / 9 - 25 * 10 ^ n / 2. ● a(n) = 21 * a(n - 1) - 110 * a(n - 2) + 2 ^ n. - _ Vincenzo Librandi _ , Oct 09 2011 ●

► [A016324] 1,23,379,5483,74227,966635,12282883,153544091,1897874803,23272609547,283754322787,3445398949499,41707911082579,503763046196459,6074569573223491,73159552048508507,880297079110607155 ⋆ Expansion of 1 / ((1 - 2x)(1 - 9x)(1 - 12x)). ● a(n) = (168 * 12 ^ n + 2 ^ (n + 1) - 5 * 3 ^ (2 * n + 3)) / 35. ● a(n) = 21 * a(n - 1) - 108 * a(n - 2) + 2 ^ n. ● a(n) = 23 * a(n - 1) - 150 * a(n - 2) + 216 * a(n - 3), n >= 3. (End) ●

► [A014926] 1,23,386,5710,78915,1045221,13446148,169343516,2098573445,25678050355,310989720966,3734729768298,44534298665671,527852268680705,6224099772429320,73060070483079736 ⋆ a(1)=1, a(n) = n * 11 ^ (n - 1) + a(n - 1). ● a(n) = (1 / 100) * (1 + 11 ^ n * (10 * n - 1)), with n >= 1. - _ Paolo P. Lava _ , Jan 13 2009 ● a(1)=1, a(2)=23, a(n) = 22 * a(n - 1) - 121 * a(n - 2) + 1. - _ Vincenzo Librandi _ , Oct 23 2012 ●

► [A016267] 1,23,387,5755,80171,1073163,13989067,178979915,2258870091,28217552203,349721737547,4307771961675,52804374651211,644763606925643,7848274394218827,95290403841737035,1154595957211955531 ⋆ Expansion of 1 / ((1 - x)(1 - 10x)(1 - 12x)). ● a(n) = (54 * 12 ^ (n + 1) - 55 * 10 ^ (n + 1) + 1) / 99. - _ Bruno Berselli _ , Mar 21 2011 ● a(n) = 22 * a(n - 1) - 120 * a(n - 2) + 1, n >= 2. - _ Vincenzo Librandi _ , Mar 21 2011 ● a(0)=1, a(1)=23, a(2)=387, a(n) = 23 * a(n - 1) - 142 * a(n - 2) + 120 * a(n - 3). - _ Harvey P. Dale _ , May 03 2012 ●

► [A016197] 0,1,23,397,6095,87781,1214423,16344637,215622815,2801832661,35979939623,457696700077,5777672071535,72470493235141,904168630965623,11229773405170717,138934529031464255,1713164078241143221 ⋆ a(n) = 12 ^ n - 11 ^ n. ● a(0)=0, a(n)=12 * a(n - 1) + 11 ^ (n - 1). - _ Vincenzo Librandi - , Feb 09 2011 ● a(0)=0, a(1)=1, a(n)=23 * a(n - 1) - 132 * a(n - 2). - _ Vincenzo Librandi _ , Feb 09 2011 ●

► [A062273] 1,23,456,7890,12345,678901,2345678,90123456,789012345,6789012345,67890123456,789012345678,9012345678901,23456789012345,678901234567890,12345678901234567890,123456789012345678901,2345678901234567890,12345678901234567890,123456789012345678901,2345678901234567890,12345678901234567890 ⋆ a(n) is an n - digit number with digits in increasing order with 0 following 9 and this is maintained in the concatenation of any number of consecutive terms. ● a(n) = floor(10 ^ (10 * ceiling(n / 10) + (n * (n + 1) / 2 mod 10)) * 1234567890 / 9999999999) mod 10 ^ n. ● a(n) = Sum _{ i=1..n } ((n * (n - 1) / 2 + i) mod 10) * 10 ^ (n - i). - _ Vedran Glisic _ , Apr 08 2011 ●

► [A007923] 1,23,456,7891,23456,789123,4567891,23456789,123456789,1234567891,23456789123,456789123456,7891234567891,23456789123456,789123456789123,456789123456789123456789,123456789123456789,123456789123456789 ⋆ Lengths increase by 1, digits cycle through positive digits. ● a(n) = (10 ^ 9 + 1) a(n - 9) - 10 ^ 9 a(n - 18), n>=18. - corrected by _ Michael Somos _ , Sep 28 2002 ● a(n) = Sum _{ i=1..n } ((n * (n - 1) / 2 + i - 1 mod 9) + 1) * 10 ^ (n - i). - _ Vedran Glisic _ , Apr 08 2011 ● a(n) = floor(10 ^ (n * (n + 1) / 2) * 123456789 / 999999999) - 10 ^ n * floor(10 ^ (n * (n - 1) / 2) * 123456789 / 999999999). - _ Néstor Jofré _ , Jun 03 2017 ●

► [A014905] 1,23,486,10210,214415,4502721,94557148,1985700116,41699702445,875693751355,18389568778466,386180944347798,8109799831303771,170305796457379205,3576421725604963320,75104856237704229736 ⋆ a(1)=1, a(n) = 21 * a(n - 1) + n. ● a(n) = - 21 / 400 - (1 / 20) * n + (21 / 400) * 21 ^ n, with n >= 1. - _ Paolo P. Lava _ , Jan 14 2009 ● a(1)=1, a(2)=23, a(3)=486, a(n) = 23 * a(n - 1) - 43 * a(n - 2) + 21 * a(n - 3). - _ Vincenzo Librandi _ , Oct 19 2012 ●

► [A158631] 23,552,2139,4784,8487,13248,19067,25944,33879,42872,52923,64032,76199,89424,103707,119048,135447,152904,171419,190992,211623,233312,256059,279864,304727 ⋆ a(n) = 529 * n ^ 2 + 23. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A242358] 23,567,6814,47358,239511,954226,3207212,9414828,24862239,60136329,135311658,286229762,574460495,1101240084,2028333848,3605765688,6211552455,10402472811,16984387958,27099325638,42342870823,64905898662,97761436356,144885584740,211543443215 ⋆ Number of inequivalent (mod D _ 4) ways five checkers can be placed on an n X n board. ● a(n) = (n ^ 10 - 10 * n ^ 8 + 35 * n ^ 6 + 52 * n ^ 5 - 210 * n ^ 4 + 140 * n ^ 3 - 56 * n ^ 2 + 48 * n + IF(MOD(n, 2) = 1) * (52 * n ^ 5 - 145 * n ^ 4 + 140 * n ^ 3 - 80 * n ^ 2 + 48 * n - 15)) / 960. ●

► [A129991] 0,23,620,723,840,4223,4820,5499,25200,28679,32636,147459,167736,190799,860036,978219,1112640,5013239,5702060,6485523,29219880,33234623,37800980,170306523,193706160 ⋆ Nonnegative values x of solutions (x, y) to the Diophantine equation x ^ 2 + (x + 241) ^ 2 = y ^ 2. ● a(n) = 6 * a(n - 3) - a(n - 6) + 482 for n > 6; a(1)=0, a(2)=23, a(3)=620, a(4)=723, a(5)=840, a(6)=4223. ●

► [A023278] 23,683,1663,2753,3203,6073,6323,7523,8243,9293,9613,15173,19913,21023,21683,25183,26633,29663,34613,34703,39293,41953,43283,45533,52813 ⋆ Primes that remain prime through 3 iterations of function f(x) = 3x + 4. ● a(n) == 3 (mod 10). - _ John Cerkan _ , Sep 16 2016 ●

► [A202656] 0,0,0,0,23,1104,16945,141696,810746,3568352,12948318,40514560,112720393,285073712,666143975,1456288512,3007576740,5913372864,11138305068,20202100224,35433809451,60316600080,99947225741,161638967424,255701773822 ⋆ Number of ways to place 5 nonattacking semi - queens on an n X n board. ● a(n) = n ^ 10 / 120 - 2 * n ^ 9 / 9 + 95 * n ^ 8 / 36 - 183 * n ^ 7 / 10 + 1463 * n ^ 6 / 180 - 1201 * n ^ 5 / 5 + 16753 * n ^ 4 / 36 - 25364 * n ^ 3 / 45 + 68293 * n ^ 2 / 180 - 12781 * n / 120 + (n ^ 3 / 2 - 6 * n ^ 2 + 39 * n / 2 - 61 / 4) * floor(n / 2). ●

► [A193430] 23,6911,5944066965503999 ⋆ Primes p such that p + 1 is in A055462. ● a(n) are the prime values of 1! * (1! * 2!) * (1! * 2! * 3!) * (1! * 2! * 3! * ... * n!) - 1 ●

► [A241890] 24,25,28,33,40,49,60,73,88,105,124,145,168,193,220,249,280,313,348,385,424,465,508,553,600 ⋆ a(n) = n ^ 2 + 24. ● a(n) = a(- n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) = a(n - 1) + 2 * n - 1. ●

► [A008856] 0,1,24,25,49,51,75,76,99,100,101,124,125,149,151,175,176,199,200,201,224,225,249,251,275 ⋆ Numbers n such that n ^ 3 and n have same last 2 digits. ● a(9n)=100 * n, a(9n + 1)=100 * n + 1, a(9n + 2)=100 * n + 24, a(9n + 3)=100 * n + 25, a(9n + 4)=100 * n + 49, a(9n + 5)=100 * n + 51, a(9n + 6)=100 * n + 75, a(9n + 7)=100 * n + 76, a(9n + 8)=100 * n + 99. - _ Franklin T. Adams - Watters _ , Mar 13 2006 ● a(n) = a(n - 1) + a(n - 9) - a(n - 10) for n >10. ●

► [A042156] 24,25,49,172,221,5255,5476,21683,27159,48842,2371575,2420417,4791992,16796393,21588385,513329248,534917633,2118082147,2652999780,4771081927,231664932276,236436014203,468100946479,1640738853640,2108839800119 ⋆ Numerators of continued fraction convergents to sqrt(603). ● a(n) = 97684 * a(n - 10) - a(n - 20). - _ Wesley Ivan Hurt _ , Apr 25 2023 ●

► [A042154] 24,25,49,319,368,687,33344,34031,67375,438281,505656,943937,45814632,46758569,92573201,602197775,694770976,1296968751,62949271024,64246239775,127195510799,827419304569,954614815368,1782034119937,86492252572344 ⋆ Numerators of continued fraction convergents to sqrt(602). ● a(n) = 1374 * a(n - 6) - a(n - 12). - _ Vincenzo Librandi _ , Nov 18 2013 ●

► [A042180] 24,25,99,124,6051,6175,24576,30751,1500624,1531375,6094749,7626124,372148701,379774825,1511473176,1891248001,92291377224,94182625225,374839252899,469021878124,22887889402851,23356911280975 ⋆ Numerators of continued fraction convergents to sqrt(615). ● a(n) = 248 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Nov 18 2013 ●

► [A042190] 24,25,224,249,12176,12425,111576,124001,6063624,6187625,55564624,61752249,3019672576,3081424825,27671071176,30752496001,1503790879224,1534543375225,137801378810 24,15314681256249 ⋆ Numerators of continued fraction convergents to sqrt(620). ● a(n) = 498 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Nov 18 2013 ●

► [A042196] 24,25,599,624,30551,31175,747576,778751,38127624,38906375,932974249,971880624,47583244201,48555124825,1164351115176,1212906240001,59383850635224,60596756875225,1453109258765399 ⋆ Numerators of continued fraction convergents to sqrt(623). ● a(n) = 1248 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Nov 18 2013 ●

► [A042197] 1,1,24,25,1224,1249,29951,31200,1527551,1558751,37378824,38937575,1906382424,1945319999,46648742401,48594062400,2379163737601,2427757800001,58217593137624,60645350937625,2969194438143624,3029839789081249,72655509587012351 ⋆ Denominators of continued fraction convergents to sqrt(623). ● a(n) = 1248 * a(n - 4) - a(n - 8) for n>7. - _ Vincenzo Librandi _ , Jan 16 2014 ●

► [A079720] 24,26,28,42,46,48,62,64,68,82,84,86,204,206,208,214,216,218,224,226,228,402,404,406,408 ⋆ Incorrect duplicate of A062908. ● a(n) = 0 (mod 2) and R(n)= 0 (mod 2), but n does not equal R(n). ●

► [A308603] 24,27,33,39,45,51,57,63,69,75,81,87,93,99,105,111,117,123,129,135,141,147,153,159,165 ⋆ Number of (not necessarily maximal) cliques in the n - dipyramidal graph. ● a(n) = 6 * n + 3 for n > 3. ●

► [A316725] 0,1,24,27,73,78,147,154,246,255,370,381,519,532,693,708,892,909,1116,1135,1365,1386,1639,1662,1938 ⋆ Generalized 27 - gonal (or icosiheptagonal) numbers: m * (25 * m - 23) / 2 with m = 0, + 1, - 1, + 2, - 2, + 3, - 3, ... ● a(n) = n * (25 * n + 46) / 8 for n even. ● a(n) = (25 * n - 21) * (n + 1) / 8 for n odd. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n>4. ●

► [A206261] 24,28,44,64,93,128,174,228,295,372,464,568,689,824,978,1148,1339,1548,1780,2032,2309,2608,2934,3284,3663 ⋆ Number of (n + 1) X 3 0..1 arrays with the number of rightwards and downwards edge increases in each 2 X 2 subblock equal to the number in all its horizontal and vertical neighbors. ● a(n) = (72 + 26 * n + 9 * n ^ 2 + n ^ 3) / 6 for n>1 and even. ● a(n) = (78 + 26 * n + 9 * n ^ 2 + n ^ 3) / 6 for n>1 and odd. ●

► [A217441] 0,24,28,100,108,228,240,408,424,640,660,924,948,1260,1288,1648,1680,2088,2124,2580,2620,3124,3168,3720,3768 ⋆ Numbers k such that 26 * k + 1 is a square. ● a(n) = a(- n + 1) = (26 * n * (n - 1) + 11 * (- 1) ^ n * (2 * n - 1) - 3) / 4 + 3 = (26 * n + 11 * (- 1) ^ n - 15) * (26 * n + 11 * (- 1) ^ n - 11) / 104. ●

► [A048260] 24,30,32,36,38,40,42,44,48,50,52,54,56,58,60,62,64,66,68,70,72,74,76,78,80 ⋆ The sum of 2 (not necessarily distinct) abundant numbers. ● a(n) = n + 1456 if n > 18705. - _ Charles R Greathouse IV _ , Feb 21 2017 ●

► [A075422] 24,30,36,40,54,84,100,102,112,126,132,140,156,176,198,208,220,228,234,260,272,276,294,308,340 ⋆ Primitive numbers n such that the product of factorials of all proper divisors of n does not divide n!. ● a(n) appears to be asymptotic to c * n with 12 < c < 15. - _ Benoit Cloitre _ , Sep 16 2002 ●

► [A266984] 1,1,24,31,384,511,6144,8191,98304,131071,1572864,2097151,25165824,33554431,402653184,536870911,6442450944,8589934591,103079215104,137438953471,1649267441664,2199023255551,26388279066624,35184372088831,422212465065984 ⋆ Decimal representation of the n - th iteration of the "Rule 81" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = ((- 4) ^ n + (- 1) ^ n - 1) / 2 + 4 ^ n for n>0. ● a(n) = 17 * a(n - 2) - 16 * a(n - 4) for n>4. ●

► [A304616] 24,36,210,546,1044,1704,2526,3510,4656,5964,7434,9066,10860,12816,14934,17214,19656,22260,25026,27954,31044,34296,37710,41286,45024 ⋆ a(n) = 81 * n ^ 2 - 69 * n + 24. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>2. ●

► [A026040] 24,40,64,98,144,204,280,374,488,624,784,970,1184,1428,1704,2014,2360,2744,3168,3634,4144,4700,5304,5958,6664 ⋆ a(n) = dot _ product(1,2,...,n) * (4,5,...,n,1,2,3). ● a(n) = n(n ^ 2 - 3n + 14) / 3 (n >= 4). - _ Emeric Deutsch _ , Nov 27 2006 ●

► [A259217] 24,40,66,112,192,334,588,1048,1890,3448,6360,11854,22308,42352,81042,156160,302736,589966,1154844,2269096,4472514,8838760,17505576,34732942,69015732 ⋆ Number of (n + 1) X (3 + 1) 0..1 arrays with each 2 X 2 subblock having clockwise pattern 0000 0011 or 0101. ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) - a(n - 3) + 2 * a(n - 4). ●

▶ [A063323] 1,24,46,69,92,115,138,162,184,208,230,253,276,301,322,346,368,392,414,439,460,485,506,530,552 ⋆ Dimension of the space of weight n cuspidal newforms for Gamma _ 1(50). ● a(n) = a(n - 4) + a(n - 6) - a(n - 10) for n>13. ●

▶ [A028992] 0,24,46,154,204,396,474,750,856,1216,1350,1794,1956,2484,2674,3286,3504,4200,4446,5226,5500,6364,6666,7614,7944 ⋆ Even 9 - gonal (or enneagonal) numbers. ● a(n) = (1 / 2) * (28 * (n - 1) ^ 2 + 60 * (n - 1) + 33 + (14 * (n - 1) + 15) * (- 1) ^ (n - 1)). ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n>4. - _ Colin Barker _ , May 30 2015 ●

▶ [A215148] 1,24,47,70,93,116,139,162,185,208,231,254,277,300,323,346,369,392,415,438,461,484,507,530,553 ⋆ a(n) = 23 * n + 1. ● a(n) = 2 * a(n - 1) - a(n - 2). ●

▶ [A129837] 0,24,49,57,85,136,180,196,261,357,481,616,660,816,1105,1357,1449,1824,2380,3100,3885,4141,5049,6732,8200 ⋆ Nonnegative values x of solutions (x, y) to the Diophantine equation x ^ 2 + (x + 119) ^ 2 = y ^ 2. ● a(n) = 6 * a(n - 9) - a(n - 18) + 238 for n > 18; a(1)=0, a(2)=24, a(3)=49, a(4)=57, a(5)=85, a(6)=136, a(7)=180, a(8)=196, a(9)=261, a(10)=357, a(11)=481, a(12)=616, a(13)=660, a(14)=816, a(15)=1105, a(16)=1357, a(17)=1449, a(18)=1824. ●

▶ [A042140] 24,49,73,122,561,683,3293,3976,7269,18514,895941,1810396,2706337,4516733,20773269,25290002,121933277,147223279,269156556,685536391,33174903324,67035343039,100210246363 ⋆ Numerators of continued fraction convergents to sqrt(595). ● a(n) = 37028 * a(n - 10) - a(n - 20). (End) ●

▶ [A195158] 0,1,24,49,96,145,216,289,384,481,600,721,864,1009,1176,1345,1536,1729,1944,2161,2400,2641,2904,3169,3456 ⋆ Concentric 24 - gonal numbers. ● a(n) = 6 * n ^ 2 + 5 * ((- 1) ^ n - 1) / 2. ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4). ●

▶ [A042150] 24,49,2376,4801,232824,470449,22814376,46099201,2235576024,4517251249,219063635976,442644523201,21466000749624,43374646022449,2103449009827176,4250272665676801,206116536962313624,416483346590304049 ⋆ Numerators of continued fraction convergents to sqrt(600). ● a(n) = 98 * a(n - 2) - a(n - 4). - _ Vincenzo Librandi _ , Nov 18 2013 ●

▶ [A132765] 0,24,50,78,108,140,174,210,248,288,330,374,420,468,518,570,624,680,738,798,860,924,990,1058,1128 ⋆ a(n) = n * (n + 23). ● a(n) = n * (n + 23). ● a(n) = 2 * n + a(n - 1) + 22 for n>0, a(0)=0. - _ Vincenzo Librandi _ , Aug 03 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n > 2. ●

▶ [A208086] 24,56,134,344,888,2318,6056,15848,41478,108584,284264,744206,1948344,5100824,13354118,34961528,91530456,239629838,627359048,1642447304,4299982854,11257501256,29472520904,77160061454,202007663448 ⋆ Number of 4 X (n + 1) 0..1 arrays with every 2 X 2 subblock having the same number of equal edges as its horizontal neighbors and a different number from its vertical neighbors, and new values 0..1 introduced in row major order. ● a(n) = 2 ^ (1 - n) * (2 ^ n * (15 + 2 * (- 1) ^ n) + (9 - 4 * sqrt(5)) * (3 - sqrt(5)) ^ n + (3 + sqrt(5)) ^ n * (9 + 4 * sqrt(5))) / 5. ●

▶ [A101860] 1,24,60,110,175,256,354,470,605,760,936,1134,1355,1600,1870,2166,2489,2840,3220,3630,4071,4544,5050,5590,6165 ⋆ a(n) = (3 + n) * (2 + 33 * n + n ^ 2) / 6. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Vincenzo Librandi _ , Jun 26 2012 ●

▶ [A366751] 0,0,0,0,24,60,120,210,20496,181944,1059120,4990590,180292200,3191349876,36598884504,327837512730,7732754793120,194896185648240,3574721299186656,51311061420097014,1105883184455171640,32127696556638165420,812811279492629700360 ⋆ Expansion of e.g.f. - log(1 - x ^ 3 * (exp(x) - 1)). ● a(n) = n! * Sum _{ k=1..floor(n / 4) } (k - 1)! * Stirling2(n - 3 * k,k) / (n - 3 * k)!. ●

▶ [A182464] 24,60,132,276,564,1140,2292,4596,9204,18420,36852,73716,147444,294900,589812,1179636,2359284,4718580,9437172,18874356,37748724,75497460,150994932,301989876,603979764 ⋆ a(n) = 3a(n - 1) - 2a(n - 2) with a(0)=24 and a(1)=60. ● a(n) = a(n - 1) * 2 + 12. ●

▶ [A240524] 24,60,140,315,693,1287,2288,3536,5168,7429,10925,16675,22475,33263,47027,65231,82861,99029,122059,153223,190747,241133,290177,347261,409457 ⋆ S _ 7 sequence in partition of integers > 1 described in A240521. ● a(n) = q _ n * q _ (n + 1) * q _ (n + 2), where q _ n is the n - th term of A050376. ●

▶ [A052759] 0,0,0,0,24,60,240,1260,8064,60480,518400,4989600,53222400,6227020800,7925299200,108972864000,1609445376000,25406244864000,426824913715200,7602818775552000,143111882833920000,2838385676206080000,59157933040926720000,1292600836944248832000 ⋆ E.g.f.: x ^ 3 * log(1 / (1 - x)). ● a(n) = n! / (n - 3) (n > 3). - _ Olivier Gérard _ , Jun 13 2001 ●

▶ [A366777] 0,0,0,0,24,60,240,1260,28224,241920,2181600,21621600,395176320,5915669760,87034409280,1321166246400,26242709391360,529649632512000,10741214992435200,221702803264051200,5187617452174233600,128491776028533657600 ⋆ Expansion of e.g.f. - log(1 + x ^ 3 * log(1 - x)). ● a(n) = n! * Sum _{ k=1..floor(n / 4) } (k - 1)! * |Stirling1(n - 3 * k,k)| / (n - 3 * k)!. ●

▶ [A090386] 0,24,64,126,217,345,519,749,1046,1422,1890,2464,3159,3991,4977,6135,7484,9044,10836,12882,15205,17829,20779,24081,27762 ⋆ Fifth diagonal (m=4) of triangle A084938; a(n) = A084938(n + 4,n) = (n ^ 4 + 18 * n ^ 3 + 131 * n ^ 2 + 426 * n) / 24. ● a(0)=0, a(1)=24, a(2)=64, a(3)=126, a(4)=217, a(n)= 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Harvey P. Dale _ , Feb 23 2014 ●

▶ [A250791] 24,66,180,490,1336,3646,9956,27194,74288,202950,554460,1514802,4138504,11306590,30890164,84393482,230567264,629921462,1720977420,4701797730,12845550264,35094695950,95880492388,261950376634,715661738000 ⋆ Number of (n + 1) X (2 + 1) 0..1 arrays with nondecreasing min(x(i,j),x(i,j - 1)) in the i direction and nondecreasing absolute value of x(i,j) - x(i - 1,j) in the j direction. ● a(n) = (- 6 + (39 - 23 * sqrt(3)) * (1 - sqrt(3)) ^ n + 39 * (1 + sqrt(3)) ^ n + 23 * sqrt(3) * (1 + sqrt(3)) ^ n + 6 * n) / 9. ●

▶ [A304157] 24,68,112,156,200,244,288,332,376,420,464,508,552,596,640,684,728,772,816,860,904,948,992,1036,1080 ⋆ a(n) is the first Zagreb index of the linear phenylene G[n], defined pictorially in the Darafsheh reference. ● a(n) = 44 * n - 20. ● a(n) = 2 * a(n - 1) - a(n - 2) for n>2. ●

▶ [A051876] 0,1,24,69,136,225,336,469,624,801,1000,1221,1464,1729,2016,2325,2656,3009,3384,3781,4200,4641,5104,5589,6096 ⋆ 24 - gonal numbers: a(n) = n * (11 * n - 10). ● a(n) = 22 * n + a(n - 1) - 21, with n>0, a(0)=0. - _ Vincenzo Librandi _ , Aug 06 2010 ● a(22 * a(n) + 232 * n + 1) = a(22 * a(n) + 232 * n) + a(22 * n + 1). - _ Vladimir Shevelev _ , Jan 24 2014 ●

▶ [A069174] 1,24,70,139,231,346,484,645,829,1036,1266,1519,1795,2094,2416,2761,3129,3520,3934,4371,4831,5314,5820,6349,6901 ⋆ Centered 23 - gonal numbers. ● a(n) = (23 * n ^ 2 - 23 * n + 2) / 2. ● a(n) = 23 * n + a(n - 1) - 23 (with a(1)=1). - _ Vincenzo Librandi _ , Aug 08 2010 ●

▶ [A090860] 24,72,120,264,504,1032,2040,4104,8184,16392,32760,65544,131064,262152,524280,1048584,2097144,4194312,8388600,16777224,33554424,67108872,134217720,268435464,536870904 ⋆ Number of ways of 4 - coloring a map in which there is a central circle surrounded by an annulus divided into n - 1 regions. There are n regions in all. ● a(n) = 2 ^ (n + 1) - 8 * (- 1) ^ n. - _ Vincenzo Librandi _ , Oct 10 2011 ●

▶ [A304374] 24,72,138,222,324,444,582,738,912,1104,1314,1542,1788,2052,2334,2634,2952,3288,3642,4014,4404,4812,5238,5682,6144 ⋆ a(n) = 9 * n ^ 2 + 21 * n - 6 (n>=1). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>3. ●

▶ [A064200] 0,0,24,72,144,240,360,504,672,864,1080,1320,1584,1872,2184,2520,2880,3264,3672,4104,4560,5040,5544,6072,6624 ⋆ a(n) = 12 * n * (n - 1). ● a(n) = 24 * (n - 1) + a(n - 1) for n>0, with a(0)=0. - _ Vincenzo Librandi _ , Aug 07 2010 ● a(0)=0, a(1)=0, a(2)=24, a(n)=3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Jul 22 2015 ●

▶ [A305065] 24,72,168,360,744,1512,3048,6120,12264,24552,49128,98280,196584,393192,786408,1572840,3145704,6291432,12582888,25165800,50331624,100663272,201326568,402653160,805306344 ⋆ a(n) = 48 * 2 ^ n - 24. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>1. ●

▶ [A192833] 24,72,180,336,600,936,1428,2016,2808,3720,4884,6192,7800,9576,11700,14016,16728,19656,23028,26640,30744,35112,40020,45216,51000 ⋆ Molecular topological indices of the Moebius ladders. ● a(n) = (3 / 2) * n * (9 - (- 1) ^ n + 4 * n + 2 * n ^ 2). ●

▶ [A042128] 24,73,97,267,631,9732,10363,40821,377752,796325,3563052,4359377,51516199,158907974,1004964043,1163872017,2168836060,3332708077,5501544137,19837340488,45176225113,155366015827 ⋆ Numerators of continued fraction convergents to sqrt(589). ● a(n) = 82846332134072437502 * a(n - 40) - a(n - 80) for n>79. [_ Bruno Berselli _ , Nov 17 2013] ●

▶ [A161587] 1,24,73,148,249,376,529,708,913,1144,1401,1684,1993,2328,2689,3076,3489,3928,4393,4884,5401,5944,6513,7108,7729 ⋆ a(n) = 13n ^ 2 + 10n + 1. ● a(n) = a(n - 1) + 26 * n - 3 (with a(0)=1). - _ Vincenzo Librandi _ , Nov 30 2010 ●

▶ [A042130] 24,73,170,753,1676,5781,279164,843273,1965710,8706113,19377936,66839921,3227694144,9749922353,22727538850,100660077753,224047694356,772803160821,37318599413764,112728601402113 ⋆ Numerators of continued fraction convergents to sqrt(590). ● a(n) = 11562 * a(n - 6) - a(n - 12). - _ Vincenzo Librandi _ , Nov 17 2013 ●

▶ [A042132] 24,73,316,389,705,5324,6029,11353,51441,165676,8003889,24177343,104713261,128890604,233603865,1764117659,1997721524,3761839183,17045078256,54897073951,2652104627904,8011210957663,34696948458556,42708159416219,77405107874775 ⋆ Numerators of continued fraction convergents to sqrt(591). ● a(n) = 331352 * a(n - 10) - a(n - 20) for n>19. [_ Bruno Berselli _ , Nov 17 2013] ●

▶ [A042134] 24,73,3528,10657,515064,1555849,75195816,227143297,10978074072,33161365513,1602723618696,4841332221601,233986670255544,706801342988233,34160451133690728,103188154744060417,4987191878848590744 ⋆ Numerators of continued fraction convergents to sqrt(592). ● a(n) = 146 * a(n - 2) - a(n - 4). - _ Vincenzo Librandi _ , Nov 17 2013 ●

▶ [A185940] 24,74,228,698,2124,6434,19428,58538,176124,529394,1590228,4774778,14332524,43013954,129074628,387289418,1161999324,3486260114,10459304628,31378962458,94138984524,282421147874,847271832228,2541832273898,7625530376124 ⋆ a(n) = 1 - 2 ^ (n + 1) + 3 ^ (n + 2). ● a(n + 2) = - 6 * a(n) + 5 * a(n + 1) + 2. (End) ● a(n) = 6 * a(n - 1) - 11 * a(n - 2) + 6 * a(n - 3). - _ G. C. Greubel _ , Feb 25 2017 ●

▶ [A033572] 1,24,75,154,261,396,559,750,969,1216,1491,1794,2125,2484,2871,3286,3729,4200,4699,5226,5781,6364,6975,7614,8281 ⋆ a(n) = (2 * n + 1) * (7 * n + 1). ● a(n) = a(n - 1) + 28 * n - 5 for n>0, a(0)=1. - _ Vincenzo Librandi _ , Nov 17 2010 ●

▶ [A195027] 0,24,76,156,264,400,564,756,976,1224,1500,1804,2136,2496,2884,3300,3744,4216,4716,5244,5800,6384,6996,7636,8304 ⋆ a(n) = 2 * n * (7 * n + 5). ● a(n) = 14 * n ^ 2 + 10 * n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3); a(0)=0, a(1)=24, a(2)=76. - _ Harvey P. Dale _ , Jul 24 2012 ●

▶ [A325958] 24,76,160,276,424,604,816,1060,1336,1644,1984,2356,2760,3196,3664,4164,4696,5260,5856,6484,7144,7836,8560,9316,10104 ⋆ Sum of the corners of a 2n + 1 X 2n + 1 square spiral. ● a(n) = 16 * n ^ 2 + 4 * n + 4. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>3. ●

▶ [A144459] 1,24,77,160,273,416,589,792,1025,1288,1581,1904,2257,2640,3053,3496,3969,4472,5005,5568,6161,6784,7437,8120,8833 ⋆ a(n) = (3 * n + 1) * (5 * n + 1). ● a(0)=1, a(1)=24, a(2)=77, a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , May 02 2015 ●

▶ [A290710] 24,77,178,373,724,1331,2364,4127,7186,12625,22558,41153,76680,145607,280792,547867,1078006,2133461,4238634,8442221,16841500,33630907,67199188,134323703,268559034 ⋆ Number of irredundant sets in the n - crown graph. ● a(n) = 2 ^ (n + 1) + n * (n ^ 3 - 2 * n ^ 2 + 3 * n + 2) / 4 - 1 for n > 3. - _ Andrew Howroyd _ , Aug 11 2017 ● a(n) = 7 * a(n - 1) - 20 * a(n - 2) + 30 * a(n - 3) - 25 * a(n - 4) + 11 * a(n - 5) - 2 * a(n - 6) for n > 9. ●

▶ [A143839] 1,24,79,166,285,436,619,834,1081,1360,1671,2014,2389,2796,3235,3706,4209,4744,5311,5910,6541,7204,7899,8626,9385 ⋆ Ulam's spiral (SSE spoke). ● a(n) = 16 * n ^ 2 - 25 * n + 10. - _ R. J. Mathar _ , Sep 04 2008 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3); a(1) = 1, a(2) = 24, a(3) = 79. - _ Harvey P. Dale _ , May 26 2012 ●

▶ [A167561] 24,80,192,384,680,1104,1680,2432,3384,4560,5984,7680,9672,11984,14640,17664,21080,24912,29184,33920,39144,44880,51152,57984,65400 ⋆ The fourth row of the ED2 array A167560. ● a(n) = 4 * n ^ 3 + 4 * n ^ 2 + 16 * n. ● a(

n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ G. C. Greubel _ , Jun 15 2016 ●
► [A304158] 24,84,144,204,264,324,384,444,504,564,624,684,744,804,864,924,984,1044,1104,1164,1224,1284,1344,1404,1464 ⋆ a(n) is the second Zagreb index of the linear phenylene G[n], defined pictorially in the Darafsheh reference (Fig. 3). ● a(n) = 60 * n - 36. ● a(n) = 2 * a(n - 1) - a(n - 2). ●
► [A045946] 0,24,84,180,312,480,684,924,1200,1512,1860,2244,2664,3120,3612,4140,4704,5304,5940,6612,7320,8064,8844,9660,10512 ⋆ Star of David matchstick numbers: 6 * n * (3 * n + 1). ● a(n) = 24 * C(n, 1) + 36 * C(n, 2); binomial transform of (0, 24, 36, 0, 0, 0, ...). - _ Paul Barry _ , Mar 15 2003 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3); a(0)=0, a(1)=24, a(2)=84. - _ Harvey P. Dale _ , Nov 23 2012 ●
► [A192838] 24,84,180,360,600,972,1428,2064,2808,3780,4884,6264,7800,9660,11700,14112,16728,19764,23028,26760,30744,35244,40020,45360,51000 ⋆ Molecular topological indices of the prism graphs Y _ n. ● a(n) = (3 / 2) * n * (11 + (- 1) ^ n + 2 * n * (2 + n)). ●
► [A280304] 0,24,84,198,384,660,1044,1554,2208,3024,4020,5214,6624,8268,10164,12330,14784,17544,20628,24054,27840,32004,36564,41538,46944 ⋆ a(n) = 3 * n * (n ^ 2 + 3 * n + 4). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n > 3. - _ Colin Barker _ , Dec 31 2016 ●
► [A168538] 0,24,84,204,414,750,1254,1974,2964,4284,6000,8184,10914,14274,18354,23250,29064,35904,43884,53124,63750,75894,89694,105294,122844 ⋆ a(n) = (n + 6) * (n + 1) * (n ^ 2 + 7 * n + 16) / 4. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ● a(n) = sum _{ k=1..n } (k + 3) * (k + 2) * (k + 1), with offset 0. ● a(n) = (n / 4) * (n + 5) * (n ^ 2 + 5n + 10), with offset 0. (End) ●
► [A228874] 24,84,924,5544,40194,269874,1864584,12741324,87431844,599001144,4106310474,28143249834,192901471224,1322153872644,9062210132844,62113226746824,425730613530834,2918000448971874,20000274149827944,137083914357154044,939587137457703924 ⋆ a(n) = L(n) * L(n + 1) * L(n + 2) * L(n + 3), the product of four consecutive Lucas numbers, A000032. ● a(n + 5) = 5 * a(n + 4) + 15 * a(n + 3) - 15 * a(n + 2) - 5 * a(n + 1) + a(n). ●
► [A304375] 24,87,177,294,438,609,807,1032,1284,1563,1869,2202,2562,2949,3363,3804,4272,4767,5289,5838,6414,7017,7647,8304,8988 ⋆ a(n) = 27 * n ^ 2 / 2 + 45 * n / 2 - 12 (n>=1). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>3. ●
► [A256718] 0,1,24,90,220,435,756,1204,1800,2565,3520,4686,6084,7735,9660,11880,14416,17289,20520,24130,28140,32571,37444,42780,48600 ⋆ a(n) = n * (n + 1) * (7 * n - 6) / 2. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) with n>3, a(0)=0, a(1)=1, a(2)=24, a(3)=90. ● a(n) = Sum _{ i=0..n - 1 } (n - i) * (21 * i + 1) for n>0. ●
► [A233637] 24,90,324,1188,4320,15768,57456,209520,763776,2784672,10152000,37012032,134936064,491944320,1793505024,6538675968,23838382080,86908819968,316847932416,1155148784640,4211385163776,15353663035392,55975637053440 ⋆ Number of (n + 1) X (1 + 1) 0..2 arrays with every 2 X 2 subblock having the sum of the squares of the edge differences equal to 2. ● a(n) = ((1 - sqrt(7)) ^ n * (- 17 + 7 * sqrt(7)) + (1 + sqrt(7)) ^ n * (17 + 7 * sqrt(7))) / (2 * sqrt(7)) . ●
► [A076799] 1,24,92,140,171,199,226,251,277,320,363,391,425,449,474,500,524,548,575,632,673,777,801,836,861 ⋆ Greedy powers of (e / 3): Sum _{ n>=1 } (e / 3) ^ a(n) = 1. ● a(n) = Sum _{ k=1..n } floor(g _ k) where g _ 1=1, g _{ n + 1 } =log _ x(x ^ frac(g _ n) - x) (n>0) at x=(e / 3) and frac(y) = y - floor(y). ●
► [A370846] 0,24,96,168,1200,3960,16128,66888,259152,1052184,4195488,16759272,67158000,268359864,1073772096,4295178888,17179113360,68720897880,274876666848,1099509663528,4398057364272,17592161341944,70368774872448,281474983436232,1125899763886800 ⋆ a(n) = 5 + 4 ^ n + 3 * ((- i * Sqrt[7] - 3) ^ n + (i * Sqrt[7] - 3) ^ n) / 2 ^ n. ● a(n) = 2 * a(n - 1) + 7 * a(n - 2) + 8 * a(n - 3) - 16 * a(n - 4). ●
► [A195824] 0,24,96,216,384,600,864,1176,1536,1944,2400,2904,3456,4056,4704,5400,6144,6936,7776,8664,9600,10584,11616,12696,13824 ⋆ a(n) = 24 * n ^ 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Wesley Ivan Hurt _ , Aug 05 2014 ●
► [A272871] 0,0,24,96,240,480,840,1344,2016,2880,3960,5280,6864,8736,10920,13440,16320,19584,23256,27360,31920,36960,42504,48576,55200 ⋆ Imaginary part of (n + i) ^ 4. ● a(n) = 4 * (n - 1) * n * (n + 1). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>3. ● a(n) = 24 * binomial(n + 1,3). ●
► [A319577] 0,0,0,24,96,240,544,1288,3136,7392,16320,33528,64416,116688,200928,331240,525952,808384,1207680,1759704,2508000,3504816,4812192,6503112,8662720 ⋆ a(n) = (4 / 45) * n * (n - 2) * (n - 1) * (n ^ 3 - 12 * n ^ 2 + 47 * n - 15). ● a(n) = [x ^ 6] JacobiTheta3(x) ^ n. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>6. ●
► [A042122] 24,97,121,581,702,1283,3268,4551,12370,91141,103511,298163,699837,998000,7685837,16369674,24055511,64480696,88536207,153016903,700603819,853620722,4115086707,198377782658 ⋆ Numerators of continued fraction convergents to sqrt(586). ● a(n) = 8230173414 * a(n - 23) + a(n - 46) for n>45. [_ Bruno Berselli _ , Nov 17 2013] ●
► [A042126] 24,97,4680,18817,907896,3650401,176127144,708158977,34167758040,137379191137,6628368932616,26650854921601,1285869405169464,5170128475599457,249452036233943400,1002978273411373057 ⋆ Numerators of continued fraction convergents to sqrt(588). ● a(n) = 194 * a(n - 2) - a(n - 4). - _ Vincenzo Librandi _ , Nov 17 2013 ●
► [A157514] 24,98,222,396,620,894,1218,1592,2016,2490,3014,3588,4212,4886,5610,6384,7208,8082,9006,9980,11004,12078,13202,14376,15600 ⋆ a(n) = 25 * n ^ 2 - n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Jan 26 2012 ●
► [A100152] 1,24,100,260,535,956,1554,2360,3405,4720,6336,8284,10595,13300,16430,20016,24089,28680,33820,39540,45871,52844,60490,68840,77925 ⋆ Structured truncated cubic numbers. ● a(n) = (1 / 6) * n * (31 * n ^ 2 - 27 * n + 2). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4); a(1)=1, a(2)=24, a(3)=100, a(4)=260. - _ Harvey P. Dale _ , Jan 11 2016 ●
► [A213842] 1,24,101,264,545,976,1589,2416,3489,4840,6501,8504,10881,13664,16885,20576,24769,29496,34789,40680,47201,54384,62261,70864,80225 ⋆ Principal diagonal of the convolution array A213841. ● a(n) = (2 * n - 15 * n ^ 2 + 16 * n ^ 3) / 3. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ●
► [A100155] 1,24,103,272,565,1016,1659,2528,3657,5080,6831,8944,11453,14392,17795,21696,26129,31128,36727,42960,49861,57464,65803,74912,84825 ⋆ Structured truncated octahedral numbers. ● a(n) = (1 / 3) * n * (17 * n ^ 2 - 18 * n + 4). ●
► [A011199] 1,24,105,280,585,1056,1729,2640,3825,5320,7161,9384,12025,15120,18705,22816,27489,32760,38665,45240,52521,60544,69345,78960,89425 ⋆ a(n) = (n + 1) * (2 * n + 1) * (3 * n + 1). ● a(n) = 6 * n ^ 3 + 11 * n ^ 2 + 6 * n + 1. - _ Reinhard Zumkeller _ , Jun 08 2015 ●
► [A100149] 1,24,106,284,595,1076,1764,2696,3909,5440,7326,9604,12311,15484,19160,23376,28169,33576,39634,46380,53851,62084,71116,80984,91725 ⋆ Structured small rhombicubeoctahedral numbers. ● a(n) = (1 / 6) * (37 * n ^ 3 - 45 * n ^ 2 + 14 * n). ●
► [A100150] 1,24,107,288,605,1096,1799,2752,3993,5560,7491,9824,12597,15848,19615,23936,28849,34392,40603,47520,55181,63624,72887,83008,94025 ⋆ Structured snub cubic numbers. ● a(n) = (1 / 6) * (38 * n ^ 3 - 48 * n ^ 2 + 16 * n). ●
► [A187163] 0,24,108,288,600,1080,1764,2688,3888,5400,7260,9504,12168,15288,18900,23040,27744,33048,38988,45600,52920,60984,69828,79488,90000 ⋆ Number of 2 - step self - avoiding walks on an n X n X n cube summed over all starting positions. ● a(n) = 6 * n ^ 3 - 6 * n ^ 2. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>4. ●
► [A101862] 24,108,302,671,1296,2275,3724,5778,8592,12342,17226,23465,31304,41013,52888,67252,84456,104880,128934,157059,189728,227447,270756,320230,376480 ⋆ a(n) = n * (n + 1) * (n + 7) * (122 + 57 * n + n ^ 2) / 120. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n > 6. - _ Wesley Ivan Hurt _ , Dec 06 2016 ●
► [A052762] 0,0,0,0,24,120,360,840,1680,3024,5040,7920,11880,17160,24024,32760,43680,57120,73440,93024,116280,143640,175560,212520,255024 ⋆ Products of 4 consecutive integers: a(n) = n * (n - 1) * (n - 2) * (n - 3). ● a(n) = n * (n - 1) * (n - 2) * (n - 3) = n! / (n - 4)! (for n >= 4). ● a(n) = numbperm(n, 4). - _ Zerinvary Lajos _ , Apr 26 2007 ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5), with a(0)=0, a(1)=0, a(2)=0, a(3)=0, a(4)=24. - _ Harvey P. Dale _ , May 09 2012 ● a(n) = (n) _ 4 = Pochhammer(n,4), using the "falling factorial" convention; other authors write Pochhammer(x,k) for what is denoted x ^ (k) in the Wikipedia article, then a(n) = (n - 3) ^ (4). - _ M. F. Hasler _ , Oct 20 2013 ●
► [A235702] 1,24,120,600,3000,15000,75000,375000,1875000,9375000,46875000,234375000,1171875000,5859375000,29296875000,146484375000,732421875000,3662109375000,18310546875000,91552734375000,457763671875000,2288818359375000,11444091796875000 ⋆ Fixed points of A001175 (Pisano periods). ● a(n) = 24 * 5 ^ (n - 2) for n > 1. ● a(n) = 5 * a(n - 1) for n > 2. ●
► [A305159] 24,126,330,738,1554,3186,6450,12978,26034,52146,104370,208818,417714,835506,1671090,3342258,6684594,13369266,26738610,53477298,106954674,213909426,427818930,855637938,1711275954 ⋆ a(n) = 102 * 2 ^ n - 78. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>1. ●
► [A326367] 0,0,24,126,248,387,915,1845,3339,5586,8802,13230,19140,26829,36621,48867,63945,82260,104244,130356,161082,196935,238455,286209,340791,402822 ⋆ Number of tilings of an equilateral triangle of side length n with unit triangles (of side length 1) and exactly two unit "lozenges" or "diamonds" (also of side length 1). ● a(n) = (3 / 8) * (n - 2) * (n - 1) * (3 * n ^ 2 + 3 * n - 4) (conjectured by _ R. J. Mathar _ , proved by _ Greg Dresden _ and E. Sijaric). ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●
► [A182186] 24,128,648,3160,14984,69536,317264,1427912,6355080,28021504,122586224,532681648,2301267408,9891512000,42327269792,180410129576,766250022536,3244192404032,13696322822960,57673821115088,242287778611184,1015664308220864,4249246138360928 ⋆ Number b(n) of basic ideals in the Borel subalgebra of the untwisted affine Lie algebra of type B. ● a(n) = (3 * n + 5) * 2 ^ (2 * n - 2) - (2 * (3 * n - 1)) * binomial(2 * n - 2, n - 1). ● a(n) - 8 * a(n - 1) + 16 * a(n - 2) = (24 / (n - 1)) * binomial(2 * n - 6,n - 2) for n>3. ●
► [A205343] 0,24,138,454,1130,2370,4424,7588,12204,18660,27390,38874,53638,72254,95340,123560,157624,198288,246354,302670,368130,443674,530288,629004,740900 ⋆ Number of length 6 nonnegative integer arrays starting and ending with 0 with adjacent elements unequal but differing by no more than n. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●
► [A059593] 0,0,0,0,0,24,144,504,1344,3024,78624,809424,4809024,20787624,72696624,1961583624,28478346624,238536558624,1425925698624,6764765838624,189239120970624,3500701266525624,37764092547420624,288099608198025624 ⋆ Number of degree - n permutations of order exactly 5. ● a(n) = a(n - 1) + (1 + a(n - 5)) * (n - 1)(n - 2)(n - 3)(n - 4). ● a(n) = Sum _{ j=1..floor(n / 5) } n! / (j! * (n - 5 * j)! * (5 ^ j)). ●
► [A029572] 0,0,0,0,0,24,144,1008,8064,72576,653184,7185024,86220288,1120863744,15692092416,237124952064,3793999233024,64497986961408,1160963765305344,22058311540801536,441004037348818944,9261084784325197824,203743865255154352128,4686108900868550098944 ⋆ Number of permutations of an n - set containing a 5 - cycle. ● a(n) = n! (1 - sum(k=0...floor(n / 5), (- 1) ^ k / (k! * 5 ^ k)). ● a(n) / n! is asymptotic to 1 - e ^ (- 1 / 5) = 1 - A092618. ●
► [A290313] 1,24,145,545,1575,3836,8274,16290,29865,51700,85371,135499,207935,309960,450500,640356,892449,1222080,1647205,2188725,2870791,3721124,4771350,6057350,7619625 ⋆ Fourth diagonal sequence of the Sheffer triangle A094816 (special Charlier). ● a(n) = (48 + 256 * n + 422 * n ^ 2 + 303 * n ^ 3 + 105 * n ^ 4 + 17 * n ^ 5 + n ^ 6) / 48. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n > 6. ●
► [A042118] 24,145,6984,42049,2025336,12194065,587340456,3536236801,170326706904,1025496478225,49394157661704,297390442448449,14324135395187256,86242202813571985,4153949870446642536 ⋆ Numerators of continued fraction convergents to sqrt(584). ● a(n) = 290 * a(n - 2) - a(n - 4). - _ Vincenzo Librandi _ , Nov 17 2013 ●

► [A305160] 24,147,393,885,1869,3837,7773,15645,31389,62877,125853,251805,503709,1007517,2015133,4030365,8060829,16121757,32243613,64487325,128974749,257949597,515899293,1031798685,2063597469 ⋆ a(n) = 123 * 2 ^ n - 99. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>1. ●

► [A092181] 1,24,153,544,1425,3096,5929,10368,16929,26200,38841,55584,77233,104664,138825,180736,231489,292248,364249,448800,547281,661144,791913,941184,1110625 ⋆ Figurate numbers based on the 24 - cell (4 - D polytope with Schaefli symbol { 3,4,3 }). ● a(n) = n ^ 2 * ((3 * n ^ 2) - (4 * n) + 2). ● a(n) = C(n + 3,4) + 19 C(n + 2,4) + 43 C(n + 1,4) + 9 C(n,4). ● a(n) = + 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). G.f.: x * (1 + 19 * x + 43 * x ^ 2 + 9 * x ^ 3) / (1 - x) ^ 5. [_ R. J. Mathar _ , Jun 21 2010] ● a(n) = Sum _{ k = 1..n } (k ^ 3 + k ^ 7) * binomial(n,k) / binomial(n + k,k). Cf. A034262 and A155977. - _ Peter Bala _ , Feb 12 2019 ●

► [A001702] 1,24,154,580,1665,4025,8624,16884,30810,53130,87450,138424,211939,315315,457520,649400,903924,1236444,1664970,2210460,2897125,3752749,4809024,6101900,7671950 ⋆ Generalized Stirling numbers. ● a(n) = (1 / 48) * (n - 1) * n * (n + 1) * (n + 4) * (n ^ 2 + 7n + 14), n > 1. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). - _ Colin Barker _ , Jul 08 2020 ●

► [A250142] 24,162,632,1827,4368,9156,17424,30789,51304,81510,124488,183911,264096,370056,507552,683145,904248,1179178,1517208,1928619,2424752,3018060,3722160,4551885,5523336 ⋆ Number of length 3 + 2 0..n arrays with the medians of every three consecutive terms nondecreasing. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. ●

► [A288486] 0,24,168,624,1680,3720,7224,12768,21024,32760,48840,70224,97968,133224,177240,231360,297024,375768,469224,579120,707280,855624,1026168,1221024,1442400 ⋆ Square rings obtained by adding four identical cuboids from A169938, a(n) = 4 * n * (n + 1) * (n * (n + 1) + 1). ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ●

► [A223291] 24,168,1368,11304,93528,773928,6404184,52994088,438521688,3628730664,30027445848,248474628648,2056106982744,17014115072808,140790393758808,1165028853392424,9640517317978968,79774482741456168,660127240765231704 ⋆ 4 - loop graph coloring a rectangular array: number of n X 2 0..8 arrays where 0..8 label nodes of a graph with edges 0,1 1,2 2,0 0,3 3,4 4,0 0,5 5,6 6,0 0,7 7,8 8,0 and every array movement to a horizontal or vertical neighbor moves along an edge of this graph. ● a(n) = (2 ^ (2 - n) * ((9 - sqrt(57)) ^ n * (3 + sqrt(57)) + (- 3 + sqrt(57)) * (9 + sqrt(57)) ^ n)) / sqrt(57). ●

► [A272125] 0,1,24,171,704,2125,5256,11319,22016,39609,67000,107811,166464,248261,359464,507375,700416,948209,1261656,1653019,2136000,2725821,3439304,4294951,5313024 ⋆ a(n) = n ^ 3 * (2 * n ^ 2 + 1) / 3. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). ●

► [A165187] 1,24,180,800,2625,7056,16464,34560,66825,121000,207636,340704,538265,823200,1224000,1775616,2520369,3508920,4801300,6468000,8591121,11265584,14600400,18720000,23765625 ⋆ a(n) = n ^ 3 * (n + 1) ^ 2 * (n + 2) / 12. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). ●

► [A073993] 0,0,0,24,180,1080,7056,48384,308448,1806624,10349856,60217344,356638464,2139830784,12940881408,78328332288,472093588224,2832561529344,16960580969472,101565116448768,608795590588416,3652649829734400,21926115464435712,131620960833896448 ⋆ Number of strings of length n over Z _ 6 with trace 3 and subtrace 4. ● a(n; t, s) = a(n - 1; t, s) + a(n - 1; t + 5, s + 5t + 1) + a(n - 1; t + 4, s + 4t + 4) + a(n - 1; t + 3, s + 3t + 3) + a(n - 1; t + 2, s + 2t + 2) + a(n - 1; t + 1, s + t + 1) where t is the trace and s is the subtrace. ●

► [A305166] 24,188,516,1172,2484,5108,10356,20852,41844,83828,167796,335732,671604,1343348,2686836,5373812,10747764,21495668,42991476,85983092,171966324,343932788,687865716,1375731572,2751463284 ⋆ a(n) = 164 * 2 ^ n - 140. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2). (End) ●

► [A128960] 0,24,192,960,3840,13440,43008,129024,368640,1013760,2703360,7028736,17891328,44728320,110100480,267386880,641728512,1524105216,3586129920,8367636480,19377684480,44568674304,101871255552,231525580800,523449139200 ⋆ a(n) = (n ^ 3 - n) * 2 ^ n. ● a(n) = 8 * a(n - 1) - 24 * a(n - 2) + 32 * a(n - 3) - 16 * a(n - 4). - _ Vincenzo Librandi _ , Feb 12 2013 ●

► [A066406] 0,24,192,1248,7680,46464,279552,1678848,10076160,60463104,362790912,2176770048,13060669440,78364114944,470184868272,2821109710848,16926659051520,101559955881984,609359738437632,3656158436917248,21936950634086400,131621703829684224 ⋆ a(n) = 2 ^ n * (3 ^ n - 3). ● a(n) = 8 * a(n - 1) - 12 * a(n - 2). ●

► [A042114] 24,193,9288,74497,3585144,28755649,1383856296,11099606017,534164945112,4284419166913,206186284956936,1653774698822401,79587371828432184,638352749326279873,30720519339489866088 ⋆ Numerators of continued fraction convergents to sqrt(582). ● a(n) = 386 * a(n - 2) - a(n - 4). - _ Vincenzo Librandi _ , Nov 17 2013 ●

► [A123197] 1,24,195,728,1935,4224,8099,14160,23103,35720,52899,75624,104975,142128,188355,245024,313599,395640,492803,606840,739599,893024,1069155,1270128,1498175 ⋆ (2 * n + 1) * (n + 1) * (2 * n ^ 2 + 3 * n - 1). ● a(n) - a(n - 1) = (4 * n + 1) * (4 * n ^ 2 + 2 * n - 1). ● a(0)= - 1, a(1)=24, a(2)=195, a(3)=728, a(4)=1935, a(n)=5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Harvey P. Dale _ , May 29 2014 ●

► [A048355] 0,24,200,775,2000,10000,20000,100000,200000,1000000,2000000,10000000,20000000,100000000,200000000,1000000000,2000000000,10000000000,20000000000,100000000000,200000000000,1000000000000,2000000000000,10000000000000,20000000000000 ⋆ a(n) is the index of the smallest triangular number containing exactly n 0's. ● a(n) = 10 * a(n - 2) for n>4. ●

► [A132458] 0,0,0,1,24,200,1000,3675,10976,28224,64800,136125,266200,490776,861224,1449175,2352000,3699200,5659776,8450649,12346200,17689000,24901800,34500851,47110624 ⋆ Let df(n,k) = Product _{ i=0..k - 1 } (n - i) be the descending factorial and let P(m,n) = df(n - 1,m - 1) ^ 2 * (2 * n - m) / ((m - 1)! * m!). Sequence gives P(4,n). ● a(n) = (n - 3) ^ 2 * (n - 2) ^ 3 * (n - 1) ^ 2 / 72. ●

► [A239574] 0,1,24,200,1053,3932,11988,31298,73046,155880,310046,581414,1038634,1779531,2942114,4714412,7350595,11184786,16654116,24317554,34886940,49252544,68523846,94062350,127534794 ⋆ Number of non - equivalent (mod D _ 3) ways to place 4 indistinguishable points on a triangular grid of side n so that no two of them are adjacent. ● a(n) = (n ^ 8 + 4 * n ^ 7 - 78 * n ^ 6 - 104 * n ^ 5 + 2556 * n ^ 4 - 3152 * n ^ 3 - 27280 * n ^ 2 + 89664 * n - 78336) / 2304 + IF(n == 1 mod 2) * (28 * n ^ 3 - 54 * n ^ 2 - 160 * n + 129) / 768 + IF(n == 1 mod 3) * (n ^ 2 + n - 14) / 18. ●

► [A269691] 24,201,944,2995,7584,16541,32416,58599,99440,160369,248016,370331,536704,758085,1047104,1418191,1887696,2474009,3197680,4081539,5150816,6433261,7959264,9761975,11877424 ⋆ Number of length - 5 0..n arrays with no repeated value differing from the previous repeated value by plus or minus one modulo n + 1. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>7. ●

► [A047659] 0,0,0,0,24,204,1024,3628,10320,25096,54400,107880,199400,348020,579264,926324,1431584,2148048,3141120,4490256,6291000,8656860,11721600,15641340,20597104 ⋆ Number of ways to place 3 nonattacking queens on an n X n board. ● a(n) = n(n - 2) ^ 2(2n ^ 3 - 12n ^ 2 + 23n - 10) / 12 if n is even and (n - 1)(n - 3)(2n ^ 4 - 12n ^ 3 + 25n ^ 2 - 14n + 1) / 12 if n is odd (Landau, 1896). ● a(n) = 5a(n - 1) - 8a(n - 2) + 14a(n - 4) - 14a(n - 5) + 8a(n - 7) - 5a(n - 8) + a(n - 9) for n >= 9. ● a(0)=0, a(1)=0, a(2)=0, a(3)=0, a(4)=24, a(5)=204, a(6)=1024, a(7)=3628, a(8)=10320, a(n) = 5 * a(n - 1) - 8 * a(n - 2) + 14 * a(n - 4) - 14 * a(n - 5) + 8 * a(n - 7) - 5 * a(n - 8) + a(n - 9). - _ Harvey P. Dale _ , Nov 06 2011 ● a(n) = n ^ 6 / 6 - 5 * n ^ 5 / 3 + 79 * n ^ 4 / 12 - 25 * n ^ 3 / 2 + 11 * n ^ 2 - 43 * n / 12 + 1 / 8 + (- 1) ^ n * (n / 4 - 1 / 8) [Chaiken et al.]. - _ N. J. A. Sloane _ , Feb 16 2013 ● a(n) = (3 * (2 * n - 1) * (- 1) ^ n + 4 * n ^ 6 - 40 * n ^ 5 + 158 * n ^ 4 - 300 * n ^ 3 + 264 * n ^ 2 - 86 * n + 3) / 24. - _ Antal Pinter _ , Oct 03 2014 ●

► [A108671] 1,24,208,1075,4053,12348,32256,75006,159225,314116,583440,1030393,1743469,2843400,4491264,6897852,10334385,15144672,21758800,30708447,42643909,58352932,78781440,105056250,138509865 ⋆ a(n) = (n + 1)(n + 2) ^ 3 * (n + 3)(13n ^ 2 + 37n + 30) / 720. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>7. ●

► [A269496] 24,215,964,3021,7616,16579,32460,58649,99496,160431,248084,370405,536784,758171,1047196,1418289,1887800,2474119,3197796,4081661,5150944,6433395,7959404,9762121,11877576 ⋆ Number of length - 5 0..n arrays with no repeated value differing from the previous repeated value by one. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n >6 ●

► [A133754] 0,0,24,216,960,3000,7560,16464,32256,58320,99000,159720,247104,369096,535080,756000,1044480,1414944,1883736,2469240,3192000,4074840,5142984,6424176,7948800 ⋆ a(n) = n ^ 5 - n ^ 3. ● a(n) = 12 * n * (2 * binomial(n + 2,4) - binomial(n + 1,3)). - _ Gary Detlefs _ , Mar 25 2012 ●

► [A042112] 24,217,241,458,699,1157,1856,6725,75831,82556,323499,729554,4700823,10131200,35094423,45225623,532576276,1642954451,2175530727,3818485178,5994015905,9812501083,15806516988 ⋆ Numerators of continued fraction convergents to sqrt(581). ● a(n) = 304142307950 * a(n - 24) - a(n - 48) for n>47. [_ Bruno Berselli _ , Nov 17 2013] ●

► [A107968] 1,24,220,1225,4998,16464,46368,115830,263175,553696,1093092,2045407,3656380,6283200,10431744,16802460,26346141,40330920,60421900,88774917,128146018,182018320,254748000,351731250,479594115 ⋆ a(n) = (n + 1) * (n + 2) ^ 3 * (n + 3) ^ 2 * (n + 4) * (3n + 5) / 1440. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>8. ●

► [A269777] 24,222,984,3060,7680,16674,32592,58824,99720,160710,248424,370812,537264,758730,1047840,1419024,1888632,2475054,3198840,4082820,5152224,6434802,7960944,9763800,11879400 ⋆ Number of length - 5 0..n arrays with every repeated value unequal to the previous repeated value plus one mod n + 1. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. ●

► [A213560] 1,24,236,1400,6009,20608,59952,153792,357225,765688,1535820,2913560,5270993,9153600,15339712,24914112,39357873,60656664,91429900,135083256,195987209,279684416,393128880,544960000,745814745 ⋆ Antidiagonal sums of the convolution array A213558. ● a(n) = n * (1 + n) ^ 2 * (2 + n) * (16 + 18 * n + 21 * n ^ 2 + 12 * n ^ 3 + 3 * n ^ 4) / 840. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9). ●

► [A192491] 24,240,864,2112,4200,7344,11760,17664,25272,34800,46464,60480,77064,96432,118800,144384,173400,206064,242592,283200,328104,377520,431664,490752,555000 ⋆ Molecular topological indices of the complete tripartite graphs K _{ n,n,n } . ● a(n) = 12 * n ^ 2 * (3 * n - 1). ●

► [A167548] 24,240,960,2688,6144,12264,22200,37320,59208,89664,130704,184560,253680,340728,448584,580344,739320,929040,1153248,1415904,1721184,2073480,2477400,2937768,3459624 ⋆ The fifth row of the ED1 array A167546 ● a(n) = 9 * n ^ 4 - 6 * n ^ 3 + 63 * n ^ 2 - 66 * n + 24. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ G. C. Greubel _ , Jun 15 2016 ●

► [A192849] 0,0,24,240,1080,3360,8400,18144,35280,63360,106920,171600,264264,393120,567840,799680,1101600,1488384,1976760,2585520,3335640,4250400,5355504,6679200,8252400 ⋆ Molecular topological indices of the triangular graphs. ● a(n) = n * (n ^ 2 - 1) * (n - 2) ^ 2. ●

► [A253285] 0,24,240,1200,4200,11760,28224,60480,118800,217800,377520,624624,993720,1528800,2284800,3329280,4744224,6627960,9097200,12289200,16364040,21507024,27931200,35880000,45630000 ⋆ a(n) = RF(n + 1,3) * C(n + 2,n - 1), where RF(a,n) is the rising factorial. ● a(n) = n * ((n + 1) * (n + 2)) ^ 2 * (n + 3) / 6. ● a(n) = (N ^ 3 + 4 * N ^ 2 + 4 * N) / 6 = N * (N + 2) ^ 2 / 6 with N = n ^ 2 + 3 * n. ● a(n) = Sum _{ i=0..n } i * (i + 1) ^ 3 * (i + 2). Therefore, the first differences are in A133754. (End) ●

► [A052796] 0,0,0,0,24,240,1440,6720,26880,96768,322560,1013760,3041280,8785920,24600576,67092480,178913280,467927040,1203240960,3048210432,7620526080,18827182080,46022000640,111421685760,267412045824 ⋆ Expansion of e.g.f. x

^ 4 * exp(x) ^ 2. ● a(n) = (n - 3) * (n - 2) * (n - 1) * n * 2 ^ (n - 4). - _ Vaclav Kotesovec _ , Nov 27 2012 ●

► [A000919] 0,0,0,24,240,1560,8400,40824,186480,818520,3498000,14676024,60780720,249401880,1016542800,4123173624,16664094960,67171367640,270232006800,1085570781624,4356217681200,17466686971800,69992221794000,280345359228024,1122510953731440 ⋆ a(n) = 4 ^ n - C(4,3) * 3 ^ n + C(4,2) * 2 ^ n - C(4,1). ● a(n) = k! * S2(n,k), where k=4 is the number of colors and S2 is the Stirling subset number. - _ Robert A. Russell _ , Sep 25 2018 ●

► [A268966] 24,240,2016,15552,114048,808704,5598720,38071296,255301632,1693052928,11125776384,72559411200,470184984576,3030081011712,19434312695808,124128835928064,789910774087680,5010291195641856,31686706480545792 ⋆ Number of n X 3 0..2 arrays with some element plus some horizontally or antidiagonally adjacent neighbor totalling two not more than once. ● a(n) = 2 ^ (n + 2) * 3 ^ (n - 1) * (2 * n + 1). ●

► [A052520] 0,0,0,0,24,240,2160,20160,201600,2177280,25401600,319334400,4311014400,62270208000,958961203200,15692092416000,271996268544000,4979623993344000,96035605585920000,1946321606541312000 ⋆ Number of pairs of sequences of cardinality at least 2. ● a(n) = (n - 3) * n!, n>2. ● a(n) = (n + 1)! * (n - 3) / (n + 1), n>2. - _ Gary Detlefs _ , Oct 02 2011 ●

► [A304835] 24,244,680,1332,2200,3284,4584,6100,7832,9780,11944,14324,16920,19732,22760,26004,29464,33140,37032,41140,45464,50004,54760,59732,64920 ⋆ a(n) = 108 * n ^ 2 - 104 * n + 20 (n>=1). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A370110] 0,0,0,0,24,252,1032,2836,6332,12496,22328,37020,58148,87520,127056,178868,245260,328728,431960,557836,709428,890000,1103008,1352100,1641116 ⋆ Number of chordless cycles in the complement of the n X n antelope graph. ● a(n) = 2 * (4 * n ^ 4 - 56 * n ^ 3 + 185 * n ^ 2 + 903 * n - 5142) for n > 11. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n > 16. ●

► [A187380] 0,0,24,264,832,1810,3154,4864,6940,9382,12190,15364,18904,22810,27082,31720,36724,42094,47830,53932,60400,67234,74434,82000,89932 ⋆ Number of 6 - step S, NW and NE - moving king's tours on an n X n board summed over all starting positions. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>7. ●

► [A126904] 1,24,264,1800,8736,32952,102744,276648,663744,1451736,2944104,5607624,10131552,17499768,29077176,46711656,72852864,110689176,164304072,238853256,340763808,477956664,660093720,898850856,1208218176 ⋆ Coordination sequence for 8 - dimensional cyclotomic lattice Z[zeta _ 24]. ● a(0)=1, a(1)=24, a(2)=264, a(3)=1800, a(4)=8736, a(5)=32952, a(6)=102744, a(7)=276648, a(8)=663744, a(n)=8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) [From Harvey P. Dale, Apr 09 2012] ●

► [A000915] 24,274,1624,6769,22449,63273,157773,357423,749463,1474473,2749747,4899622,8394022,13896582,22323822,34916946,53327946,79721796,116896626,168423871,238810495,333685495,460012995,626334345,843041745 ⋆ Stirling numbers of first kind s(n + 4, n). ● a(n) = binomial(n + 4, 5) * (15 * n ^ 3 + 150 * n ^ 2 + 485 * n + 502) / 48. - _ André F. Labossière _ , Sep 30 2004 ●

► [A014809] 1,24,276,2048,11178,48576,177400,565248,1612875,4200352,10131156,22892544,48897678,99448320,193740408,363315200,658523925,1157743824,1980143600,3303168000,5386270686,8602175744,13477895856,20748607488,31425764410 ⋆ Expansion of Jacobi theta constant (theta _ 2 / 2) ^ 24. ● a(n) = 1 / 72 * Sum _{ a, b, x, y > 0, a * x + b * y = n + 3, x == y == 1 mod 2 and a > b } (a * b) ^ 3 * (a ^ 2 - b ^ 2) ^ 2. - _ Seiichi Manyama _ , May 05 2017 ●

► [A001496] 1,24,282,2008,10147,40176,132724,381424,981541,2309384,5045326,10356424,20158151,37478624,66952936,115479776,193077449,313981688,498033282,772409528,1173759851,1750812624,2567527260,3706873040 ⋆ Number of 4 X 4 matrices with nonnegative integer entries and row and column sums equal to n. ● a(n) = binomial(n + 3, 3) + 20 * binomial(n + 4, 5) + 152 * binomial(n + 5, 7) + 352 * binomial(n + 6, 9). [Equivalent to a formula given by Bell]. ●

► [A035475] 1,24,288,2312,14016,68664,288096,1071912,3600768,11036504,31125408,81412680,199013440,457923960,998269920,2073758312,4126016256,7897561752,14598964768,26150436744,45523755456,77217221304,127904389728 ⋆ Coordination sequence for lattice D *_ 12 (with edges defined by l _ 1 norm = 1). ● a(m)=add(2 ^ k * binomial(n, k) * binomial(m - 1, k - 1), k=0..n) + 2 ^ n * binomial((n + 2 * m) / 2 - 1, n - 1); with n=12. ●

► [A086941] 24,294,2994,29994,299994,2999994,29999994,299999994,2999999994,29999999994,299999999994,2999999999994,29999999999994,299999999999994,2999999999999994,29999999999999994,299999999999999994 ⋆ a(n) = k where R(k + 6) = 3. ● a(n) = 3 * (10 ^ n - 2). ●

► [A128598] 1,24,297,3210,32510,318171,3054100,28980565,273077443,2562036673,23973009386,223949654108,2090070431683,19496003736658,181815760387221,1695523268254637,15813185728272754,147508341317700463 ⋆ Column 3 of triangle A128596; a(n) = coefficient of q ^ (3n + 9) in the q - analog of the even double factorials (2n + 6)!! for n>=0. ● a(n) = [q ^ (3n + 9)] Product _{ j=1..n + 3 } (1 - q ^ (2j)) / (1 - q) for n>=0. ●

► [A073990] 0,0,0,24,300,1800,9072,48384,272160,1594080,9722592,60217344,367960320,2207761920,13144674816,78328332288,468419708160,2810518248960,16894457846784,101565116448768,609985806796800,3659790885120000,21947538146863104,131620960833896448 ⋆ Number of strings of length n over Z _ 6 with trace 3 and subtrace 1. ● a(n; t, s) = a(n - 1; t, s) + a(n - 1; t + 5, s + 5t + 1) + a(n - 1; t + 4, s + 4t + 4) + a(n - 1; t + 3, s + 3t + 3) + a(n - 1; t + 2, s + 2t + 2) + a(n - 1; t + 1, s + t + 1) where t is the trace and s is the subtrace. ●

► [A056285] 0,0,0,0,24,300,2400,15750,92680,510312,2691600,13794150,69309240,343501500,1686135376,8221437000,39901776360,193054016840,932142850800,4495236798162,21664357535320,104388120866100,503044634004000,2425003924383900,11696087875731624 ⋆ Number of n - bead necklaces with exactly five different colored beads. ● a(n) = (k! / n) Sum _{ d|n } phi(d) S2(n / d,k), where k =5 is the number of colors and S2 is the Stirling subset number A008277. ●

► [A010976] 1,24,300,2600,17550,98280,475020,2035800,7888725,28048800,92561040,286097760,834451800,2310789600,6107086800,15471286560,37711260990,88732378800,202112640600,446775310800,960566918220,2012616400080,4116715363800,8233430727600 ⋆ Binomial coefficient C(n,23). ● a(n) = n / (n - 23) * a(n - 1) for n > 23. - _ Vincenzo Librandi _ , Mar 26 2011 ●

► [A187851] 0,24,304,1056,2312,4048,6264,8960,12136,15792,19928,24544,29640,35216,41272,47808,54824,62320,70296,78752,87688,97104,107000,117376,128232 ⋆ Number of 3 - step king - knight's tours (piece capable of both kinds of moves) on an n X n board summed over all starting positions. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>6. ●

► [A168303] 24,308,2236,11640,47753,163419,485121,1284987,3101175,6927921,14502059,28718989,54217878,98183330,171418854,289756194,475873962,761609034,1190854830,1823151902,2738088199,4040638965,5867589455,8395197525,11848267665 ⋆ The fifth left hand column of triangle A167552. ● a(n) = (642 * n ^ 9 - 13833 * n ^ 8 + 132840 * n ^ 7 - 726642 * n ^ 6 + 2439738 * n ^ 5 - 5133177 * n ^ 4 + 6699660 * n ^ 3 - 5194188 * n ^ 2 + 2157840 * n - 362880) / 9! ● a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10). ● a(n) - 9 * a(n - 1) + 36 * a(n - 2) - 84 * a(n - 3) + 126 * a(n - 4) - 126 * a(n - 5) + 84 * a(n - 6) - 36 * a(n - 7) + 9 * a(n - 8) - a(n - 9) = 2 * 321. ●

► [A290939] 0,0,24,312,1584,5376,14448,33264,68544,129888,230472,387816,624624,969696,1458912,2136288,3055104,4279104,5883768,7957656,10603824,13941312,18106704,23255760,29565120 ⋆ Number of 5 - cycles in the n - triangular graph. ● a(n) = 12 / 5 * binomial(n, 4) * (n ^ 2 + 7 * n - 34). ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). ●

► [A069779] 1,24,315,2080,8925,29016,77959,182400,384345,746200,1356531,2336544,3847285,6097560,9352575,13943296,20276529,28845720,40242475,55168800,74450061,99048664,130078455,168819840,216735625 ⋆ q - factorial numbers 4! _ q. ● a(n) = (n + 1) * (n ^ 2 + n + 1) * (n ^ 3 + n ^ 2 + n + 1). ●

► [A199301] 1,24,320,3584,36864,360448,3407872,31457280,285212672,2550136832,22548578304,197568495616,1717986918400,14843406974976,127543488220161,090715534753792,928867423145164 8,7881299347898368 0,6665327448508334 08,5620492334958379008,47269781688880726016 ⋆ a(n) = (2n + 1) * 8 ^ n. ● a(n) = 16 * a(n - 1) - 64 * a(n - 2). ● a(n) = 8 * (a(n - 1) + 2 ^ (3 * n - 2)). - _ Vincenzo Librandi _ , Nov 05 2011 ●

► [A289706] 0,0,24,324,1692,5796,15516,35388,71988,134460,234972,389304,617400,943992,1399272,2019528,2847960,3935304,5340816,7132860,9390084,12201948,15670116,19908900,25046892 ⋆ Number of 5 - cycles in the n - triangular honeycomb queen graph. ● a(n) = (1095 - 4770 * n + 934 * n ^ 2 + 4680 * n ^ 3 - 3170 * n ^ 4 + 540 * n ^ 5 + ● a(n) = 4 * a(n - 1) - 3 * a(n - 2) - 8 * a(n - 3) + 14 * a(n - 4) - 14 * a(n - 6) + 8 * a(n - 7) + 3 * a(n - 8) - 4 * a(n - 9) + a(n - 10). ●

► [A300846] 0,0,24,324,1728,6000,16200,37044,75264,139968,243000,399300,627264,949104,1391208,1984500,2764800,3773184,5056344,6666948,8664000,11113200,14087304,17666484,21938688 ⋆ a(n) = 3 * (n - 1) ^ 2 * n ^ 3. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). ● a(n) = 3 * (n - 1) ^ 5 + 9 * (n - 1) ^ 4 + 9 * (n - 1) ^ 3 + 3 * (n - 1) ^ 2. ●

► [A036221] 1,24,324,3240,26730,192456,1250964,7505784,42220035,225173520,1148384952,5637526128,26778249108,123591918960,556163635320,2447119995408,10553204980197,44695926974952,186233029062300 ⋆ Expansion of 1 / (1 - 3 * x) ^ 8; 8 - fold convolution of A000244 (powers of 3). ● a(n) = 3 ^ n * binomial(n + 7, 7). ●

► [A292298] 0,0,0,0,24,324,3600,38148,398112,4132596,42818208,443356212,4589665248,47509091508,491769434400,5090291998452,52689326584800,545383755284532,5645229662006688,58433377222329972,604839778633231200,6260653947359090868,64803587809297981728 ⋆ Sum of values of vertices of type D at level n of the hyperbolic Pascal pyramid. ● a(n) = 18 * a(n - 1) - 99 * a(n - 2) + 226 * a(n - 3) - 224 * a(n - 4) + 92 * a(n - 5) - 12 * a(n - 6), n >= 7. ●

► [A045543] 1,24,336,3584,32256,258048,1892352,12976128,84344832,524812288,3148873728,18320719872,103817412608,574988746752,3121367482368,16647293239296,87398289506304,452414675091456,2312341672689664,11683410556747776,58417052783738880,289303499500421120 ⋆ 6 - fold convolution of A000302 (powers of 4); expansion of 1 / (1 - 4 * x) ^ 6. ● a(n) = binomial(n + 5, 5) * 4 ^ n. ●

► [A004325] 1,24,351,4060,40920,376992,3262623,26978328,215553195,1677106640,12777711870,95722852680,707285522580,5166863427600,37387265592825,268367258592576,1913212193400684,13559593014190944 ⋆ Binomial coefficient C(3n, n - 7). ● a(n + 1) = (3 * (3 * n + 1)) * (3 * n + 2) * (n + 1) / ((2 * (n + 4)) * (2 * n + 9) * (n - 6)) * a(n). ●

► [A081144] 0,0,0,1,24,360,4320,45360,435456,3919104,33592320,277136640,2217093120,17293326336,132058128384,990435962880,7313988648960,53287631585280,383670947414016,2733655500324864,19296391766999040,135074742368993280 ⋆ Starting at 1, four - fold convolution of A000400 (powers of 6). ● a(n) = 24 * a(n - 1) - 216 * a(n - 2) + 864 * a(n - 3) - 1296 * a(n - 4) for n > 3, a(0) = a(1) = a(2) = 0, a(3) = 1. ● a(n) = 6 ^ (n - 3) * binomial(n, 3). ●

► [A028115] 1,24,365,4500,49161,496944,4762885,43939500,394061921,3459033864,29862674205,254461580100,2145767540281,17942499698784,149003957062325,1230427665726300,10112939149988241,82793883946939704 ⋆ Expansion of 1 / ((1 - 4x)(1 - 5x)(1 - 7x)(1 - 8x)). ● a(n)=(8 ^ (n + 3) - 2 * 7 ^ (n + 3) + 2 * 5 ^ (n + 3) - 4 ^ (n + 3)) / 12. [_ Yahia Kahloune _ , Jun 11 2013] ●

► [A028074] 1,24,367,4566,50449,516348,5012659,46832082,425124997,3774414072,32930084551,283309497198,2409910756345,20309449295796,169843460626843,1411263104458314,11663354948539693,95953443568179120 ⋆ Expansion of 1 / ((1 - 3x)(1 - 6x)(1 - 7x)(1 - 8x)). ● a(n)=(6 * 8 ^ (n + 3) - 15 * 7 ^ (n + 3) + 10 * 6 ^ (n + 3) - 3 ^ (n + 3)) / 60. [_ Yahia Kahloune _ , Jun 10 2013] ●

► [A028111] 1,24,367,4578,50953,528612,5239459,50371926,474339085,4403719320,40486113031,369718215594,3360676724497,30451202305548,275320935296683,2485597397873982,22417376221672789,202042129817685696 ⋆ Expansion of 1 / ((1 - 4x)(1 - 5x)(1 - 6x)(1 - 9x)). ● a(0)=1, a(1)=24, a(2)=367, a(3)=4578, a(n)= 24 * a(n - 1) - 209 * a(n - 2) + 786 * a(n - 3) - 1080 * a(n - 4). - _ Harvey P. Dale _ , May 08 2013 ● a(n)=(9 ^ (n + 3) - 10 * 6 ^ (n + 3) + 3 * 5 ^ (n + 4) - 6 * 4 ^ (n + 3)) / 60. [_ Yahia Kahloune _ , Jun 11 2013] ●

► [A168304] 24,368,2736,13712,53121,171258,480711,1210572,2793219,5996562,12117677,23257104,42696758,75408396,128723898,213203256,343741122,540958044,832928118,1257300704,1863880095,2717733590,3902905305,5526820260,7725470805 ★ The fifth left hand column of triangle A167565. ● a(n) = (321 * n ^ 9 - 4500 * n ^ 8 + 25506 * n ^ 7 - 75096 * n ^ 6 + 121905 * n ^ 5 - 104580 * n ^ 4 + 2736 * n ^ 2 + 37164 * n ^ 3 - 3456 * n) / 9!. ● a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10). ● a(n) - 9 * a(n - 1) + 36 * a(n - 2) - 84 * a(n - 3) + 126 * a(n - 4) - 126 * a(n - 5) + 84 * a(n - 6) - 36 * a(n - 7) + 9 * a(n - 8) - a(n - 9) = 321. ●

► [A028060] 1,24,370,4680,53011,560784,5670820,55595760,533237221,5034115944,46976235670,434592270840,3994583040631,36537064953504,332949559310920,3025434129325920,27431505237783241,248303640811921464 ★ Expansion of 1 / ((1 - 3x)(1 - 5x)(1 - 7x)(1 - 9x)). ● a(n)=(9 ^ (n + 3) - 3 * 7 ^ (n + 3) + 3 * 5 ^ (n + 3) - 3 ^ (n + 3)) / 48. [_ Yahia Kahloune _ , Jun 08 2013] ● a(0)=1, a(1)=24, a(2)=370, a(3)=4680, a(n)=24 * a(n - 1) - 206 * a(n - 2) + 744 * a(n - 3) - 945 * a(n - 4). - _ Harvey P. Dale _ , Jun 07 2015 ●

► [A026326] 1,24,373,4776,54853,588408,6028741,59809992,579668485,5521782552,51920105029,483393574248,4466595742597,41031327740856,375223258308037,3419303762715144,31074026594864389,281793678455877720 ★ Expansion of 1 / ((1 - 2x)(1 - 6x)(1 - 7x)(1 - 9x)). ● a(n) = - 2 * 2 ^ n / 35 + 18 * 6 ^ n - 343 * 7 ^ n / 10 + 243 * 9 ^ n / 14. _ R. J. Mathar _ , Jun 23 2013 ●

► [A028043] 1,24,373,4788,55321,599088,6215581,62589516,616742401,5979165192,57244372549,542670685284,5103872340841,47693804106336,443316920660077,4102438007485692,37822644890460241,347609494930910520,3186131255427986965,29136348803275064340 ★ Expansion of 1 / ((1 - 3x)(1 - 4x)(1 - 8x)(1 - 9x)). ● a(n)=(2 * 9 ^ (n + 3) - 3 * 8 ^ (n + 3) + 3 * 4 ^ (n + 3) - 2 * 3 ^ (n + 3)) / 60. [_ Yahia Kahloune _ , Jun 07 2013] ●

► [A028056] 1,24,373,4800,55861,613224,6497893,67364880,688931221,6985860024,70462212613,708365604960,7106726476981,71208736700424,712951450202533,7134775273637040,71379698771197141,713990571075854424 ★ Expansion of 1 / ((1 - 3x)(1 - 5x)(1 - 6x)(1 - 10x)). ● a(n)=(3 * 10 ^ (n + 3) - 35 * 6 ^ (n + 3) + 42 * 5 ^ (n + 3) - 10 * 3 ^ (n + 3)) / 420. [_ Yahia Kahloune _ , Jun 08 2013] ●

► [A025997] 1,24,375,4850,56481,616164,6434155,65146950,644889861,6275802104,60272841135,572861926650,5399415089641,50546032304844,470534835243315,4359828735795950,40238834684119821,370153792218396384 ★ Expansion of 1 / ((1 - 2x)(1 - 5x)(1 - 8x)(1 - 9x)). ● a(n) = - 4 * 2 ^ n / 63 + 125 * 5 ^ n / 36 - 256 * 8 ^ n / 9 + 729 * 9 ^ n / 28. _ R. J. Mathar _ , Jun 20 2013 ●

► [A028040] 1,24,375,4870,57321,636924,6829435,71574690,738951741,7552940824,76677389295,774826006110,7804690367761,78442179476724,787189784753955,7891278029367130,79048458617193381,791434402768644624 ★ Expansion of 1 / ((1 - 3x)(1 - 4x)(1 - 7x)(1 - 10x)). ● a(n)=(2 * 10 ^ (n + 3) - 7 ^ (n + 4) + 14 * 4 ^ (n + 3) - 3 ^ (n + 5)) / 252. [_ Yahia Kahloune _ , Jun 07 2013] ●

► [A025994] 1,24,377,4932,58485,654192,7053313,74243004,769050029,7880095080,80144389689,810929347956,8176098535333,82230655243488,825604414181105,8279180036642988,82954005943360797,830676770037792216 ★ Expansion of 1 / ((1 - 2x)(1 - 5x)(1 - 7x)(1 - 10x)). ● a(n) = - 2 ^ n / 15 + 25 * 5 ^ n / 6 - 343 * 7 ^ n / 30 + 25 * 10 ^ n / 3. _ R. J. Mathar _ , Jun 20 2013 ●

► [A023954] 1,24,379,4974,58825,651228,6891463,70602378,706070629,6931922712,67078160227,641665645062,6081300568513,57197856053076,534603948966271,4970585718586626,46011858222290077,424339730032027920 ★ Expansion of 1 / ((1 - x)(1 - 6x)(1 - 8x)(1 - 9x)). ● a(n) = (35 * 9 ^ (n + 3) - 60 * 8 ^ (n + 3) + 28 * 6 ^ (n + 3) - 3) / 840. [_ Yahia Kahloune _ , Jun 29 2013] ● a(0)=1, a(1)=24, a(2)=379, a(3)=4974; for n>3, a(n) = 24 * a(n - 1) - 197 * a(n - 2) + 606 * a(n - 3) - 432 * a(n - 4). - _ Vincenzo Librandi _ , Jul 16 2013 ●

► [A028036] 1,24,379,5034,61345,713988,8103223,90690558,1007169229,11137289592,122864771107,1353656241522,14903146727353,164012446077036,1804604958697231,19853467108689126,218405030624426917 ★ Expansion of 1 / ((1 - 3x)(1 - 4x)(1 - 6x)(1 - 11x)). ● a(n)=(3 * 11 ^ (n + 3) - 28 * 6 ^ (n + 3) + 60 * 4 ^ (n + 3) - 35 * 3 ^ (n + 3)) / 840. [_ Yahia Kahloune _ , May 31 2013] ●

► [A025977] 1,24,380,5040,60816,693504,7625920,81818880,862797056,8985360384,92714818560,950046289920,9683681284096,98302694129664,994754528460800,10041368129372160,101164272641703936,1017647491560505344 ★ Expansion of 1 / ((1 - 2x)(1 - 4x)(1 - 8x)(1 - 10x)). ● a(0)=1, a(1)=24, a(2)=380, a(3)=5040, a(n)=24 * a(n - 1) - 196 * a(n - 2) + 624 * a(n - 3) - 640 * a(n - 4). - _ Harvey P. Dale _ , Dec 23 2012 ● a(n) = - 2 ^ n / 12 + 4 * 4 ^ n / 3 - 32 * 8 ^ n / 3 + 125 * 10 ^ n / 12. _ R. J. Mathar _ , Jun 20 2013 ●

► [A023951] 1,24,381,5056,60837,689640,7521277,79922832,834214293,8599137976,87862904493,892165074528,9019015091269,90887374167432,913848341454429,9173869834986544,91989788624850165,921675830164728408 ★ Expansion of 1 / ((1 - x)(1 - 6x)(1 - 7x)(1 - 10x)). ● a(n) = (5 * 10 ^ (n + 3) - 30 * 7 ^ (n + 3) + 27 * 6 ^ (n + 3) - 2) / 540. [_ Yahia Kahloune _ , Jun 29 2013] ● a(0)=1, a(1)=24, a(2)=381, a(3)=5056; for n>3, a(n) = 24 * a(n - 1) - 195 * a(n - 2) + 592 * a(n - 3) - 420 * a(n - 4). - _ Vincenzo Librandi _ , Jul 12 2013 ●

► [A025990] 1,24,381,5096,62517,731640,8337757,93583752,1041282693,11528533016,127276678893,1402901740968,15449475687829,170051606288952,1871222084030589,20587420276057544,226485741460066725,2491489138167004248,27407262770303269645 ★ Expansion of 1 / ((1 - 2x)(1 - 5x)(1 - 6x)(1 - 11x)). ● a(n) = (1 / 270) * (1331 * 11 ^ n - 2916 * 6 ^ n + 1875 * 5 ^ n - 20 * 2 ^ n). - _ R. J. Mathar _ , Jun 20 2013 ● a(n) = 24 * a(n - 1) - 195 * a(n - 2) + 632 * a(n - 3) - 660 * a(n - 4) for n > 3. - _ Wesley Ivan Hurt _ , Jan 05 2017 ●

► [A022565] 1,24,383,5130,62481,718164,7948003,85708590,907402661,9479002104,98042032023,1006497443250,10273896592441,104411869082844,1057509545490443,10682260439173110,107680115000743821 ★ Expansion of 1 / ((1 - x) * (1 - 5 * x) * (1 - 8 * x) * (1 - 10 * x)). ● a(n) = (14 * 10 ^ (n + 3) - 30 * 8 ^ (n + 3) + 21 * 5 ^ (n + 3) - 5) / 1260. - _ Yahia Kahloune _ , Jul 01 2013 ● a(0)=1, a(1)=24, a(2)=383, a(3)=5130; for n>3, a(n) = 24 * a(n - 1) - 193 * a(n - 2) + 570 * a(n - 3) - 400 * a(n - 4). - _ Vincenzo Librandi _ , Jul 12 2013 ●

► [A025974] 1,24,383,5166,63993,756108,8690611,98243322,1099333565,12223792152,135381670359,1495646457318,16497281164417,181786417955556,2001865410394427,22036025351972754,242504828325007749 ★ Expansion of 1 / ((1 - 2x)(1 - 4x)(1 - 7x)(1 - 11x)). ● a(n) = - 4 * 2 ^ n / 45 + 32 * 4 ^ n / 21 - 343 * 7 ^ n / 60 + 1331 * 11 ^ n / 252. - _ R. J. Mathar _ , Jun 20 2013 ● a(n) = 24 * a(n - 1) - 193 * a(n - 2) + 606 * a(n - 3) - 616 * a(n - 4). (End) ●

► [A228406] 0,24,384,2064,7104,18984,43008,86688,160128,276408,451968,706992,1065792,1557192,2214912,3077952,4190976,5604696,7376256,9569616,12255936,15513960,19430400,24100320,29627520 ★ Sequences from the quartic oscillator . ● a(n) = (n + 1) * (n + 2) * (n + 3) * (4 + 44 * n / 5 + 16 * n ^ 2 / 5). ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). - _ Wesley Ivan Hurt _ , Oct 24 2014 ●

► [A087292] 0,24,384,4056,38400,351384,3179904,28671576,258201600,2324286744,20919997824,188284231896,1694570841600,15251175838104,137260697334144,1235346620381016,11118120616550400,100063088648317464,900567807132948864,8105110292090814936 ★ Number of pairs of polynomials (f,g) in GF(3)[x] satisfying 1 <= deg(f) < =n, 1 <= deg(g) <= n and gcd(f,g) = 1. ● a(n) = 6 * (3 ^ n - 1) ^ 2. ●

► [A081138] 0,0,1,24,384,5120,61440,688128,7340032,75497472,754974720,7381975040,70866960384,670014898176,6253472382976,57724360458240,527765581332480,4785074604081152,43065671436730368,385057768140177408 ★ 8th binomial transform of (0,0,1,0,0,0, ...). ● a(n) = 24 * a(n - 1) - 192 * a(n - 2) + 512 * a(n - 3) for n>2, a(0)=a(1)=0, a(2)=1. ● a(n) = 8 ^ (n - 2) * binomial(n, 2). ●

► [A020782] 1,24,385,5160,62401,706104,7628545,79669320,810888001,8089258584,79415935105,769621605480,7379461252801,70134974713464,661651583000065,6203106293141640,57847125937972801,537010118353326744 ★ Expansion of 1 / ((1 - 7x)(1 - 8x)(1 - 9x)). ● a(n) = 24 * a(n - 1) - 191 * a(n - 2) + 504 * a(n - 3), n>=3. - _ Vincenzo Librandi _ , Mar 15 2011 ● a(n) = 17 * a(n - 1) - 72 * a(n - 2) + 7 ^ n, n>=2. - _ Vincenzo Librandi _ , Mar 15 2011 ● a(n) = 7 ^ (n + 2) / 2 - 8 ^ (n + 2) + 9 ^ (n + 2) / 2. - _ R. J. Mathar _ , Mar 15 2011 ●

► [A025952] 1,24,385,5220,64741,760944,8633305,95554140,1038550381,11132642664,118050851425,1241028864660,12954973386421,134451901289184,1388638534032745,14283461073576780,146408292464020861 ★ Expansion of 1 / ((1 - 2x)(1 - 3x)(1 - 9x)(1 - 10x)). ● a(n) = - 2 ^ n / 7 + 9 * 3 ^ n / 14 - 243 * 9 ^ n / 14 + 125 * 10 ^ n / 7. - _ R. J. Mathar _ , Jun 20 2013 ●

► [A028031] 1,24,385,5280,67441,833064,10129825,122282160,1471249681,176753045 04,212209212865,2547054594240,30567440844721,366823482358344,4401953808801505,52823810060045520,633887559543412561 ★ Expansion of 1 / ((1 - 3x)(1 - 4x)(1 - 5x)(1 - 12x)). ● a(0)=1, a(1)=24, a(2)=385, a(3)=5280, a(n)=24 * a(n - 1) - 191 * a(n - 2) + 624 * a(n - 3) - 720 * a(n - 4). [_ Harvey P. Dale _ , Jul 15 2012] ● a(n)=(12 ^ (n + 3) - 36 * 5 ^ (n + 3) + 63 * 4 ^ (n + 3) - 28 * 3 ^ (n + 3)) / 504. [_ Yahia Kahloune _ , May 30 2013] ●

► [A022455] 1,24,386,5256,65667,781200,9024772,102391152,1148621573,12793511016,141851544198,1568288482488,17306929857319,190768033959072,2101198710944264,23132476329120864,254592463916330505 ★ Expansion of 1 / ((1 - x) * (1 - 5 * x) * (1 - 7 * x) * (1 - 11 * x)). ● a(0)=1, a(1)=24, a(2)=386, a(3)=5256; for n>3, a(n) = 24 * a(n - 1) - 190 * a(n - 2) + 552 * a(n - 3) - 385 * a(n - 4). - _ Harvey P. Dale _ , Feb 25 2012 ● a(n) = 1 / 240 * (- 1 + 5 ^ (3 + n) - 5 * 7 ^ (2 + n) + 11 ^ (2 + n)). _ Harvey P. Dale _ , Feb 25 2012 ●

► [A021954] 1,24,387,5278,65793,776412,8835919,98027226,1067371965,11457966520,121639285131,1279935023094,13371252146617,138859728185748,1434922500247623,14766153399643282,151413895297559349 ★ Expansion of 1 / ((1 - x)(1 - 4x)(1 - 9x)(1 - 10x)). ● a(n) = (2 * 10 ^ (n + 4) - 3 * 9 ^ (n + 4) + 3 * 4 ^ (n + 4) - 5) / 1080. - _ Yahia Kahloune _ , Jul 05 2013 ●

► [A025950] 1,24,387,5306,66969,806148,9425599,108151662,1225448037,13766224472,153719012811,1709234017218,18948174785905,209602732183596,2315012544644823,25540197959076374,281542657422715773 ★ Expansion of 1 / ((1 - 2x)(1 - 3x)(1 - 8x)(1 - 11x)). ● a(n) = - 4 * 2 ^ n / 27 + 27 * 3 ^ n / 40 - 256 * 8 ^ n / 45 + 1331 * 11 ^ n / 216. - _ R. J. Mathar _ , Jun 20 2013 ●

► [A020584] 1,24,388,5280,65296,760704,8515648,92705280,989122816,103978659 84,108092228608,1114193633280,11410283892736,116262680100864,1179983894560768,11939165879009280,120509095367213056 ★ Expansion of 1 / ((1 - 6x)(1 - 8x)(1 - 10x)). ● a(n) = 9 * 6 ^ n / 2 - 16 * 8 ^ n + 25 * 10 ^ n / 2. - _ R. J. Mathar _ , Jun 30 2013 ● a(0)=1, a(1)=24, a(2)=388; for n>2, a(n) = 24 * a(n - 1) - 188 * a(n - 2) + 480 * a(n - 3). - _ Vincenzo Librandi _ , Jul 04 2013 ● a(n) = 18 * a(n - 1) - 80 * a(n - 2) + 6 ^ n. - _ Vincenzo Librandi _ , Jul 04 2013 ●

► [A025970] 1,24,388,5376,69328,862848,10547776,127767552,1540506880,18530383872,222632510464,2673205936128,32088199647232,385116900458496,4621754370506752,55463163983560704,665570645617475584 ★ Expansion of 1 / ((1 - 2x)(1 - 4x)(1 - 6x)(1 - 12x)). ● a(n) = - 2 ^ n / 10 + 2 * 4 ^ n / 1 - 9 * 6 ^ n / 2 + 18 * 12 ^ n / 5. _ R. J. Mathar _ , Jun 20 2013 ● a(0)=1, a(1)=24, a(2)=388, a(3)=5376, a(n)=24 * a(n - 1) - 188 * a(n - 2) + 576 * a(n - 3) - 576 * a(n - 4). - _ Harvey P. Dale _ , May 24 2015 ●

► [A021924] 1,24,389,5364,68025,821808,9633613,110741388,1256415809,14127007752,157849954197,1755978039972,19472809159753,215457395996256,2380083675784541,26261340423891516,289518110311522257 ★ Expansion of 1 / ((1 - x)(1 - 4x)(1 - 8x)(1 - 11x)). ● a(0)=1, a(1)=24, a(2)=389, a(3)=5364, a(n)=24 * a(n - 1) - 187 * a(n - 2) + 516 * a(n - 3) - 352 * a(n - 4). - _ Harvey P. Dale _ , Dec 27 2012 ● a(n) = (14 * 11 ^ (n + 3) - 35 * 8 ^ (n + 3) + 35 * 4 ^ (n + 3) - 14) / 2940. [_ Yahia Kahloune _ , Jul 05 2013] ●

► [A020494] 1,24,391,5394,67921,808164,9257851,103242534,1128792181,12157176504,129404822911,1364594578074,14281107062041,148528742855244,1536752582181571,15830742722056014,162476531910613501 ★ Expansion of 1 / ((1 - 5x)(1 - 9x)(1 - 10x)). ● a(n) = 5 * 5 ^ n / 4 - 81 * 9 ^ n / 4 + 20 * 10 ^ n. - _ R. J. Mathar _ , Jun 30 2013 ● a(0)=1, a(1)=24, a(2)=391; for n>2, a(n) = 24 * a(n - 1) - 185 * a(n - 2) + 450 * a(n - 3). - _ Vincenzo Librandi _ , Jul 03 2013 ● a(n) = 19 * a(n - 1) - 90 * a(n - 2) + 5 ^ n. - _ Vincenzo Librandi _ , Jul 03 2013 ●

► [A020573] 1,24,391,5406,68497,824460,9612667,109824522,1238345653,13843811256,153896453503,1704525493398,18833608743769,207769555090212,2289742482517699,25217579128356834,277609074266467645 ★ Expansion of 1 / ((1 - 6x)(1 - 7x)(1 - 11x)). ● a(n) = 36 * 6 ^ n / 5 - 49 * 7 ^ n / 4 + 121 * 11 ^ n / 20. -

_ R. J. Mathar _ , Jun 30 2013 ● a(0)=1, a(1)=24, a(2)=391; for n>2, a(n) = 24 * a(n - 1) - 185 * a(n - 2) + 462 * a(n - 3). - _ Vincenzo Librandi _ , Jul 04 2013 ● a(n) = 18 * a(n - 1) - 77 * a(n - 2) + 6 ^ n. - _ Vincenzo Librandi _ , Jul 04 2013 ●

► [A025947] 1,24,391,5478,71449,898044,11063179,134771010,1631361325,1967515 8360,236793832639,2846370045246,34190350504129,410521580544372,4927920 602312371,59146678721188986,709841565237360661 ★ Expansion of 1 / ((1 - 2x)(1 - 3x)(1 - 7x)(1 - 12x)). ● a(n) = - 7 ^ (n + 3) / 100 + 96 * 12 ^ n / 25 + 3 ^ (n + 1) / 4 - 2 ^ (n + 2) / 25; - _ R. J. Mathar _ , May 22 2013 ●

► [A007752] 1,24,391,6240,99457,1585080,25261831,402604224,6416405761,1022 59887960,1629741801607,25973608937760,413948001202561,6597194410303224,1 05141162563649031,1675661406608081280 ★ Odd bisection of A007750. ● a(n) = 16 * a(n - 1) - a(n - 2) + 8. ● a(n) = - 4 / 7 + (11 / 14) * [8 - 3 * sqrt(7)] ^ n + (11 / 14) * [8 + 3 * sqrt(7)] ^ n + (2 / 7) * sqrt(7) * [8 + 3 * sqrt(7)] ^ n - (2 / 7) * [8 - 3 * sqrt(7)] ^ n * sqrt(7), with n>=0. - _ Paolo P. Lava _ , Jun 19 2008 ● a(n) = (4 * ChebyshevU(n, 8) - 53 * ChebyshevU(n - 1, 8) - 4) / 7. - _ G. C. Greubel _ , Mar 04 2020 ●

► [A145602] 1,24,392,5760,81675,1145144,16032016,225059328,3173688180,4498 6664800,641087516256,9183622822400,132211882468575,1912322889603000,2778 1440618420000,40524887474058240 0,5933888308457316900 ★ a(n) is the number of walks from (0,0) to (0,3) that remain in the upper half - plane y >= 0 using 2 * n + 1 unit steps either up (U), down (D), left (L) or right (R). ● a(n) = 2 / (n + 1) * binomial(2 * n + 2,n + 3) * binomial(2 * n + 2,n - 1). ●

► [A020447] 1,24,393,5480,70161,853944,10066393,116192520,1322205921,14898 923864,166735197993,1856912289960,20608880226481,228161663489784,2521496 249891193,27830232878409800,306882907287251841 ★ Expansion of 1 / ((1 - 5x)(1 - 8x)(1 - 11x)). ● a(n) = 25 * 5 ^ n / 18 - 64 * 8 ^ n / 9 + 121 * 11 ^ n / 18 . - _ R. J. Mathar _ , Jun 29 2013 ● a(0)=1, a(1)=24, a(2)=393; for n>2, a(n) = 24 * a(n - 1) - 183 * a(n - 2) + 440 * a(n - 3). - _ Vincenzo Librandi _ , Jul 03 2013 ● a(n) = 19 * a(n - 1) - 88 * a(n - 2) + 5 ^ n. - _ Vincenzo Librandi _ , Jul 03 2013 ●

► [A021894] 1,24,393,5536,72513,914088,11282041,137597232,1666743345,20110 305592,242090763369,2910464426688,34963222353697,419822302356936,5039713 424985177,60489483108391504,725964257087306769 ★ Expansion of 1 / ((1 - x)(1 - 4x)(1 - 7x)(1 - 12x)). ● a(n) = (9 * 12 ^ (n + 3) - 44 * 7 ^ (n + 3) + 55 * 4 ^ (n + 3) - 20) / 3960. - _ Yahia Kahloune _ , Jul 05 2013 ● a(n) = 24 * a(n - 1) - 183 * a(n - 2) + 496 * a(n - 3) - 336 * a(n - 4) for n > 3. - _ Chai Wah Wu _ , Feb 03 2021 ●

► [A021694] 1,24,394,5544,71995,891408,10701748,125788848,1456313749,16673 208552,189289198462,2135136588312,23963101915663,267883518461856,2985323 286760936,33185997429018336,368172943255604137 ★ Expansion of 1 / ((1 - x)(1 - 3x)(1 - 9x)(1 - 11x)). ● a(n) = - 1 / 160 + 3 ^ (n + 2) / 32 - 3 ^ (2n + 5) / 32 + 11 ^ (n + 3) / 160. [_ Bruno Berselli _ , May 07 2013] ●

► [A019687] 1,24,397,5628,73513,914112,11008549,129690276,1504024705,17241 418920,195930981181,2211723344844,24837316537177,277785786712848,3096821 665511893,34435641499407732,382127489397444529,4233421296687394296,46837 804552120354285 ★ Expansion of 1 / ((1 - 4x)(1 - 9x)(1 - 11x)). ● a(n) = 4 ^ (n + 2) / 35 + 11 ^ (n + 2) / 14 - 9 ^ (n + 2) / 10. - _ R. J. Mathar _ , Nov 11 2012 ● a(0)=1, a(1)=24, a(2)=397; for n>2, a(n) = 24 * a(n - 1) - 179 * a(n - 2) + 396 * a(n - 3). - _ Vincenzo Librandi _ , Jul 03 2013 ● a(n) = 20 * a(n - 1) - 99 * a(n - 2) + 4 ^ n. - _ Vincenzo Librandi _ , Jul 03 2013 ●

► [A020341] 1,24,397,5652,74665,946992,11736613,143526444,1741517569,21034 565640,253379036989,3047347017156,36615998359513,439728040092768,5279095 003079125,63365680208288988,760504096286734897 ★ Expansion of 1 / ((1 - 5x)(1 - 7x)(1 - 12x)). ● a(n) = 5 ^ (n + 2) / 14 - 7 ^ (n + 2) / 10 + 12 ^ (n + 2) / 35. - R. J. Mathar, Mar 15 2011 ● a(0)=1, a(1)=24, a(2)=397, a(n)=24 * a(n - 1) - 179 * a(n - 2) + 420 * a(n - 3). [_ Harvey P. Dale _ , Dec 10 2011] ● a(n) = 19 * a(n - 1) - 84 * a(n - 2) + 5 ^ n. - _ Vincenzo Librandi _ , Jul 03 2013 ●

► [A021674] 1,24,397,5676,75529,966048,12071269,148688052,1814929057,22024 557672,266258052541,3210803780028,38655303353785,464868906584496,5586469 016901013,67101965327432004,805738280990712913 ★ Expansion of 1 / ((1 - x)(1 - 3x)(1 - 8x)(1 - 12x)). ● a(n) = - 1 / 154 + 3 ^ (n + 1) / 10 - 2 ^ (3n + 7) / 35 + 2 ^ (2n + 4) * 3 ^ (n + 1) / 11. [_ Bruno Berselli _ , May 07 2013] ●

► [A021314] 1,24,401,5796,77637,992880,12310537,149304732,1781240813,20982 537576,244696801713,2830553706708,32524979660629,371663665151712,4227189 205549529,47887970149917324,540656560537946685 ★ Expansion of 1 / ((1 - x)(1 - 2x)(1 - 10x)(1 - 11x)). ● a(0)=1, a(1)=24, a(2)=401, a(3)=5796, a(n)=24 * a(n - 1) - 175 * a(n - 2) + 372 * a(n - 3) - 220 * a(n - 4). - _ Harvey P. Dale _ , May 21 2012 ● a(n) = (8 * 11 ^ (n + 3) - 10 ^ (n + 4) + 5 * 2 ^ (n + 4) - 8) / 720. - _ Yahia Kahloune _ , Jul 07 2013 ● a(0)=1, a(1)=24; for n>1, a(n) = 21 * a(n - 1) - 110 * a(n - 2) + 2 ^ n - 1. - _ Vincenzo Librandi _ , Jul 09 2013 ●

► [A018206] 1,24,403,5850,78601,1007364,12509263,151886670,1813607701,2137 8247704,249446413723,2886767617890,33183014997601,379298878576044,431514 4805143783,48895164279003510,552132521336304301 ★ Expansion of 1 / ((1 - 3x)(1 - 10x)(1 - 11x)). ● a(0)=1, a(1)=24, a(2)=403; for n>2, a(n) = 24 * a(n - 1) - 173 * a(n - 2) + 330 * a(n - 3). - _ Vincenzo Librandi _ , Jul 02 2013 ● a(n) = 21 * a(n - 1) - 110 * a(n - 2) + 3 ^ n. - _ Vincenzo Librandi _ , Jul 02 2013 ● a(n) = (7 * 11 ^ (n + 2) - 8 * 10 ^ (n + 2) + 3 ^ (n + 2)) / 56. [_ Yahia Kahloune _ , Jul 06 2013] ●

► [A021304] 1,24,403,5886,80113,1046748,13329631,166873722,2064748525,2533 7358072,309091680859,3754490630358,45462401712937,549225447909396,662379 5021132887,79783347069641394,960080426180248549 ★ Expansion of 1 / ((1 - x)(1 - 2x)(1 - 9x)(1 - 12x)). ● a(n) = (28 * 12 ^ (n + 3) - 55 * 9 ^ (n + 3) + 132 * 2 ^ (n + 3) - 105) / 9240. - _ Yahia Kahloune _ , Jul 07 2013 ● a(0)=1, a(1)=24, a(2)=403, a(3)=5886; for n>3, a(n) = 24 * a(n - 1) - 173 * a(n - 2) + 366 * a(n - 3) - 216 * a(n - 4). - _ Vincenzo Librandi _ , Jul 09 2013 ● a(0)=1, a(1)=24; for n>1, a(n) = 21 * a(n - 1) - 108 * a(n - 2) + 2 ^ n - 1. - _ Vincenzo Librandi _ , Jul 09 2013 ●

► [A018092] 1,24,405,5940,81081,1061424,13533885,169579980,2099526561,2577 5439624,314535422565,3821496571620,46281602898441,559192032726624,674461 9579010445,8124427163909286 0,97771078993086872 1 ★ Expansion of 1 / ((1 - 3 * x) * (1 - 9 * x) * (1 - 12 * x)). ● a(n) = 24 * a(n - 1) - 171 * a(n - 2) + 324 * a(n - 3); a(1)=1, a(2)=24, a(3)=405. - _ Harvey P. Dale _ , Apr 26 2011 ● a(n) = (32 * 4 ^ n - 27 * 3 ^ n + 1) * 3 ^ (n - 1) / 2. - _ Bruno Berselli _ , May 16 2011 ●

► [A221619] 24,410,6120,85035,1130256,14576404,183919920,2282493365,279605 43720,338950264686,4073680032984,48607978698655,576460247379360,68005600 19808680,798606305028884 16,934066108666694889 ★ Number of n X 4 arrays with each row a permutation of 1..4 having at least as many downsteps as the preceding row. ● a(n) = (4 * (4 + 11 ^ (2 + n)) + 5 * (1 + 11 ^ (2 + n)) * n) / 500. ●

► [A016326] 1,24,412,6192,86800,1166592,15249088,195489024,2470868224,3090 0418560,383305022464,4724660269056,57945923227648,707851078729728,861921 2944752640,10468055533702348 8,1268666664044265472 ★ Expansion of 1 / ((1 - 2x)(1 - 10x)(1 - 12x)). ● a(n) = (12 ^ (n + 2) + 2 ^ n - 125 * 10 ^ n) / 20. ● a(n) = 22 * a(n - 1) - 120 * a(n - 2) + 2 ^ n. ● a(n) = 24 * a(n - 1) - 164 * a(n - 2) + 240 * a(n - 3), n>=3. (End) ●

► [A016268] 1,24,421,6516,94297,1308720,17653357,233276172,3035108833,3901 5048456,496711748533,6274383820068,78744877055209,982913508020832,122126 86913191549,151147215944655804,1864311294185799025 ★ Expansion of 1 / ((1 - x)(1 - 11x)(1 - 12x)). ● a(n) = (10 * 12 ^ (n + 2) - 11 ^ (n + 3) + 1) / 110. - _ Bruno Berselli _ , Mar 21 2011 ● a(n) = 24 * a(n - 1) - 155 * a(n - 2) + 132 * a(n - 3). - _ Wesley Ivan Hurt _ , Sep 04 2022 ●

► [A081128] 0,1,24,432,6912,103680,1492992,20901888,286654464,3869835264,51 597803520,681091006464,8916100448256,115909305827328,1497904875307008,19 258776968232960,246512345193381888 ★ 12th binomial transform of (0,1,0,0,0,0, 0,0,...). ● a(n) = 24 * a(n - 1) - 132 * a(n - 2); a(0)=0, a(1)=1. ● a(n) = n * 12 ^ (n - 1). ●

► [A062149] 1,24,432,7200,118800,1995840,34594560,622702080,11675664000,22 8324096000,4657811558400,99084354969600,2196369868492800,506854585036800 00,1216451004088320000,3033017836860211 2000 ★ Third column sequence of triangle A062138 (generalized a=5 Laguerre). ● a(n) = (n + 2)! * binomial(n + 7, 7) / 2!. ●

► [A006260] 0,24,444,4400,32120,195800,1062500,5326160,25243904,114876376,5 07259276,2189829808,9292526920,38917528600,161343812980,663661077072,2713 224461136,11039636532120,44751359547420,180880752056880 ★ Second - order Eulerian numbers <<n,3>>. ● a(n) = sum((- 1) ^ (n + k + 2) * binomial(2 * n + 1,k) * stirling1(2 * n - k - 3,n - k - 3), k=0..n - 4). [_ Johannes W. Meijer _ , Oct 16 2009]. ●

► [A060195] 1,24,448,7680,126976,2064384,33292288,534773760,8573157376,1373 04735744,2197949513728,35175782154240,562881233944576,9006649498927104,1 44110790029344768,2305807824841605120 ★ a(n) = 8 ^ (n - 1) * (2 ^ n - 1). ● a(1)=1, a(2)=24, a(n) = 24 * a(n - 1) - 128 * a(n - 2). - _ Harvey P. Dale _ , Oct 20 2014 ●

► [A292282] 0,24,576,4320,19200,63000,169344,395136,829440,1603800,2904000,4 983264,8176896,12918360,19756800,29376000,42614784,60488856,84214080,11523 1200,155232000,206186904,270374016,350409600,449280000 ★ a(n) = 2 * (n - 1) ^ 3 * n ^ 2 * (n + 1). ● a(n) = 2 * (n - 1) ^ 3 * n ^ 2 * (n + 1). ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). ●

► [A158637] 24,600,2328,5208,9240,14424,20760,28248,36888,46680,57624,6972 0,82968,97368,112920,129624,147480,166488,186648,207960,230424,254040,27880 8,304728,331800 ★ a(n) = 576 * n ^ 2 + 24. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A179059] 0,0,0,24,600,5400,29400,117600,381024,1058400,2613600,5880600,1 2269400,24048024,44717400,79497600,135945600,224726400,360561024,56337660 0,859685400,1284221400,1881864600,2709885024,3840540000 ★ Number of non - attacking placements of 4 rooks on an n X n board. ● a(n) = 4! * binomial(n, 4) ^ 2. ● a(n) = (n ^ 2 * (- 6 + 11 * n - 6 * n ^ 2 + n ^ 3) ^ 2) / 24. ●

► [A334281] 0,0,0,0,24,600,7560,61320,351120,1515024,5266800,15531120,403088 40,94534440,204228024,412284600,786283680,1428742560,2490276960,418617302 4,6816915000,10793253240,16666437480,25164280680,37233759024 ★ Number of n - colorings of the vertices of the 4 - dimensional cross polytope such that no two adjacent vertices have the same color. ● a(n) = n * (n - 1) * (n - 2) * (n - 3) * (465 - 392n + 125n ^ 2 - 18n ^ 3 + n ^ 4). ● a(n) = - 2790n + 7467n ^ 2 - 7852n ^ 3 + 4300n ^ 4 - 1346n ^ 5 + 244n ^ 6 - 24n ^ 7 + n ^ 8. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>8. ●

► [A154128] 24,600,9000,105000,1050000,9450000,78750000,618750000,46406250 00,33515625000,234609375000,1599609375000,10664062500000,69726562500000,4 48242187500000,2838867187500000,17742919921875000,109588623046875000 ★ a(n) = 5 ^ n * (n + 4)! / n!. ● a(n) = 5 ^ n * (n + 4) * (n + 3) * (n + 2) * (n + 1). ● a(n) = 25 * a(n - 1) - 250 * a(n - 2) + 1250 * a(n - 3) - 3125 * a(n - 4) + 3125 * a(n - 5). ●

► [A175604] 24,744,7944,79944,799944,7999944,79999944,799999944,799999994 4,79999999944,799999999944,7999999999944,79999999999944,799999999999944,7 99999999999944,7999999999999944,79999999999999944 ★ a(n) = 8 * (10 ^ n - 7). ● a(n) = 11 * a(n - 1) - 10 * a(n - 2). - _ Vincenzo Librandi _ , Aug 24 2014 ● a(n) = 10 * a(n - 1) + 504. - _ Robert Israel _ , Aug 24 2014 ●

► [A281778] 0,0,0,0,24,900,18030,276570,3680964,45065160,523292010,58599099 90,63862084704,680829769620,7122705252390,73284607133010,74284317065324 4,7429450873589280,73416173732059170,717721593866613630,6949589106333898 584,66721599431782204140 ★ Number of distinct topologies on an n - set that have exactly 10 open sets. ● a(n) = 4! Stirling2(n, 4) + 11 / 2 * 5! Stirling2(n, 5) + 73 / 8 * 6! Stirling2(n, 6) + 15 / 2 * 7! Stirling2(n, 7) + 7 / 2 * 8! Stirling 2(n, 8) + 9! Stirling2(n, 9). ●

► [A172206] 0,0,24,926,37282,394202,2484382,10999618,38168864,110899878,28 1638602,643766432,1352358921,2651129458,4906381466,8648792662,1462385492 2,23851793294,37697787702,57953320884,86929476107,127563008202,1835360114 62,259410007946,360775279732 ★ Number of ways to place 7 nonattacking kings

on a 7 X n board. • a(n) = (117649n ^ 7 - 2873997n ^ 6 + 32197753n ^ 5 - 215350695n ^ 4 + 932130286n ^ 3 - 2618213868n ^ 2 + 4424623272n - 3468569760) / 720, n>=6. For any fixed value of k > 1, a(n) = 1 / k! * (kn) ^ k - 3(k - 1)(3k - 2) / 2 / k! * (kn) ^ (k - 1) + ... •

▶ [A033590] 1,24,945,6160,21945,57456,124729,238680,417105,680680,1052961,1560384,2232265,3100800,4201065,5571016,7251489,9286200,11721745,14607600,17996121,21942544,26504985,31744440 ⋆ a(n) = (2 * n - 1) * (3 * n - 1) * (4 * n - 1) * (5 * n - 1). • a(n) = n ^ 4 * Pochhammer(2 - 1 / n, 4) = Product _{ j=2..5 } (j * n - 1). •

▶ [A187029] 0,24,1344,7056,19568,39348,66360,100380,141408,189444,244488,306540,375600,451668,534744,624828,721920,826020,937128,1055244,1180368,1312500,1451640,1597788,1750944 ⋆ Number of 4 - step one or two collinear space at a time queen's tours on an n X n board summed over all starting positions. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>8. •

▶ [A187852] 0,24,1400,7620,20952,41652,69456,104268,146088,194916,250752,313596,383448,460308,544176,635052,732936,837828,949728,1068636,1194552,1327476,1467408,1614348,1768296 ⋆ Number of 4 - step king - knight's tours (piece capable of both kinds of moves) on an n X n board summed over all starting positions. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>8. •

▶ [A217574] 0,0,24,3024,43680,303600,1413720,5085024,15249024,39929760,94109400,203889840,412293024,787083024,1431033240,2495102400,4195023360,6831849024,10817040024,16702719120,25217757600,37310399280,54198168024,77425845024,108932342400 ⋆ (n ^ 2) * (n ^ 2 - 1) * (n ^ 2 - 2) * (n ^ 2 - 3). • a(n) = n ^ 2 * (n ^ 6 - 6 * n ^ 4 + 11 * n ^ 2 - 6). - _ Jon Perry _ , Nov 08 2014 • a(0)=0, a(1)=0, a(2)=24, a(3)=3024, a(4)=43680, a(5)=303600, a(6)=1413720, a(7)=5085024, a(8)=15249024, a(n)=9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9). - _ Harvey P. Dale _ , Mar 02 2015 •

▶ [A147860] 24,7960,240480,2934568,21663936,115970400,495329520,1787153280,5652862776,16082870232,41929743856,101579030280,231145969600,4982677674 24,1024487280288,2020455667392,3839788818840,7059475223640,12597342069312,21880343758504,37081456651008 ⋆ Number of consistent sets of 6 irreflexive binary order relationships over n objects. • a(n) = (n - 3) * (n - 2) * (n - 1) * n * (n ^ 8 - 26 * n ^ 6 - 60 * n ^ 5 + 131 * n ^ 4 + 1200 * n ^ 3 + 3374 * n ^ 2 - 4140 * n - 44640) / 720. - _ Vaclav Kotesovec _ , Apr 11 2020 •

▶ [A233148] 0,0,0,24,9216,772680,20864640,281690640,2408469504,14923820016,72840764160,295839890280,1038542714880,3238606068984,9155710252416,23832538897440,57817164625920,131989025850720,285757100158464,590483650831416,1170770734955520 ⋆ Number of n - edge - colorings of the cubical graph. • a(n) = n * (n - 1) * (n - 2) * (n ^ 9 - 21 * n ^ 8 + 203 * n ^ 7 - 1191 * n ^ 6 + 4701 * n ^ 5 - 13031 * n ^ 4 + 25524 * n ^ 3 - 34192 * n ^ 2 + 28400 * n - 11072). •

▶ [A362712] 0,0,0,0,24,15360,787320,13762560,131250000,846526464,4150656720,16609443840,56821671720,171600000000,468159796104,1173850030080,2740855222560,6021219348480,12547912500000,24970939858944,47714180896440,87939285396480,156928122498840 ⋆ Number of n - colorings of the Goldner - Harary graph. • a(n) = n ^ 11 - 27 * n ^ 10 + 326 * n ^ 9 - 2316 * n ^ 8 + 10710 * n ^ 7 - 33642 * n ^ 6 + 72576 * n ^ 5 - 105948 * n ^ 4 + 99873 * n ^ 3 - 54675 * n ^ 2 + 13122 * n. •

▶ [A323522] 1,1,1,1,1,1,1,1,1,1,25,25,49,73,121,145,217,265,361,433,553,649,817,937,1129 ⋆ Number of ways to fill a square matrix with the parts of a strict integer partition of n. • a(n) = Sum _{ k >= 0 } (k ^ 2)! * Q(n, k ^ 2) where Q = A008289. •

▶ [A022359] 0,25,25,50,75,125,200,325,525,850,1375,2225,3600,5825,9425,15250,24675,39925,64600,104525,169125,273650,442775,716425,1159200 ⋆ Fibonacci sequence beginning 0, 25. • a(n) = Lucas(n + 5) + Lucas(n - 5), with Lucas(- i) = (- 1) ^ i * Lucas(i) for the negative indices. - _ Bruno Berselli _ , Dec 27 2016 •

▶ [A140058] 25,26,27,28,29,35,36,37,38,39,45,46,47,48,49,55,56,57,58,59,65,66,67,68,69 ⋆ Numbers > 24 that are congruent to { 5,6,7,8,9 } mod 10. • a(n) = 10 + a(n - 5) for n >= 6. • a(n) = a(n - 1) + a(n - 5) - a(n - 6) for n > 6. • a(n) = 25 + ((n - 1) mod 5) + 10 * floor((n - 1) / 5). - _ Wesley Ivan Hurt _ , Nov 03 2016 •

▶ [A042264] 25,26,51,77,513,590,1103,1693,85753,87446,173199,260645,1737069,1997714,3734783,5732497,290359633,296092130,586451763,882543893,5881715121,6764259014,12645974135,19410233149 ⋆ Numerators of continued fraction convergents to sqrt(658). • a(n) = 3386 * a(n - 8) - a(n - 16). - _ Vincenzo Librandi _ , Nov 18 2013 •

▶ [A042274] 25,26,77,103,5227,5330,15887,21217,1076737,1097954,3272645,4370599,221802595,226173194,674148983,900322177,45690257833,46590580010,1388714178 53,185461997863,9411971311003,9597433308866 ⋆ Numerators of continued fraction convergents to sqrt(663). • a(n) = 206 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Nov 18 2013 •

▶ [A042270] 25,26,77,180,797,3368,54685,58053,577162,1212377,1789539,22686845,115223764,137910609,253134373,391044982,1035224337,1426269319,5314032294,6740301613,12054333907,42903303334 ⋆ Numerators of continued fraction convergents to sqrt(661). • a(n) = 5730908870845166436 * a(n - 39) + a(n - 78) for n>77. [_ Bruno Berselli _ , Nov 22 2013] •

▶ [A042268] 25,26,77,334,745,1079,54695,55774,166243,720746,1607735,2328481,118031785,120360266,358752317,1555369534,3469491385,5024860919,254712537335,259737398254,774187333843,3356486733626 ⋆ Numerators of continued fraction convergents to sqrt(660). • a(n) = 2158 * a(n - 6) - a(n - 12). - _ Vincenzo Librandi _ , Nov 18 2013 •

▶ [A042266] 25,26,77,1951,3979,5930,300479,306409,913297,23138834,47190965,70329799,3563680915,3634010714,10831702343,274426569289,559684840921,834111410210,42265255351421,43099366761631 ⋆ Numerators of continued fraction convergents to sqrt(659). • a(n) = 11860 * a(n - 6) - a(n - 12). - _ Vincenzo Librandi _ , Nov 18 2013 •

▶ [A042284] 25,26,155,336,4187,8710,47737,56447,2870087,2926534,17502757,37932048,472687333,983306714,5389220903,6372527617,324015601753,33038812937 0,1975956248603,4282300626576,53363563767515 ⋆ Numerators of continued fraction convergents to sqrt(668). • a(n) = 112894 * a(n - 8) - a(n - 16). - _ Vincenzo Librandi _ , Nov 18 2013 •

▶ [A042286] 25,26,181,388,957,3259,4216,41203,45419,86622,218663,305285,3882083,15833617,19715700,35549317,55265017,90814334,146079351,2428083950,2574163301,5002247251,7576410552,12578657803 ⋆ Numerators of continued fraction convergents to sqrt(669). • a(n) = 28452357181082 70 * a(n - 38) - a(n - 76) for n>75. [_ Bruno Berselli _ , Nov 22 2013] •

▶ [A042292] 25,26,311,337,17161,17498,209639,227137,11566489,11793626,141296375,153090001,7795796425,7948886426,95233547111,103182433537,5254355223961,5357537657498,64187269456439 ⋆ Numerators of continued fraction convergents to sqrt(672). • a(n) = 674 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Nov 21 2013 •

▶ [A042294] 25,26,441,1349,7186,15721,54349,70070,124419,816584,941003,5521599,6462602,11984201,18446803,30431004,48877807,79308811,128186618,207495429,1165663763,1373159192,9404618915,10777778107 ⋆ Numerators of continued fraction convergents to sqrt(673). • a(n) = 97626910587864 * a(n - 31) + a(n - 62) for n>61. [_ Bruno Berselli _ , Nov 22 2013] •

▶ [A041311] 1,1,25,26,649,675,16849,17524,437425,454949,11356201,11811150,294823801,306634951,7654062625,7960697576,198710804449,206671502025,5158826853049,5365498355074,133930787374825,139296285729899,3477041644892401,3616337930622300 ⋆ Denominators of continued fraction convergents to sqrt(168). • a(n) = 26 * a(n - 2) - a(n - 4). - _ Vincenzo Librandi _ , Dec 15 2013 • a(n) = Product _{ k = 1..floor((n - 1) / 2) } (24 + 4 * cos ^ 2(k * Pi / n)). •

▶ [A042296] 25,26,649,675,34399,35074,876175,911249,46438625,47349874,1182835601,1230185475,62692109351,63922294826,1596827185175,1660749480001,84634301185225,86295050665226,2155715517150649 ⋆ Numerators of continued fraction convergents to sqrt(674). • a(n) = 1350 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Nov 21 2013 •

▶ [A042297] 1,1,25,26,1325,1351,33749,35100,1788749,1823849,45561125,47384974,2414809825,2462194799,61507485001,63969679800,3259991475001,3323961154801,83035059190225,86359020345026,4400986076441525,4487345096786551,11209726839931874 9 ⋆ Denominators of continued fraction convergents to sqrt(674). • a(n) = 1350 * a(n - 4) - a(n - 8) for n>7. - _ Vincenzo Librandi _ , Jan 19 2014 •

▶ [A042298] 25,26,1325,1351,68875,70226,3580175,3650401,186100225,189750626,9673631525,9863382151,502842739075,512706121226,26138148800375,26650854921601,1358680894880425,1385331749802026,70625268384981725,72010600134783751,3671155275124169275 ⋆ Numerators of continued fraction convergents to sqrt(675). • a(n) = 52 * a(n - 2) - a(n - 4). - _ Vincenzo Librandi _ , Nov 21 2013, simplified by _ Colin Barker _ , Dec 28 2013 •

▶ [A183982] 25,27,30,36,46,66,102,174,310,582,1110,2166,4246,8406,16662,33174,66070,131862,263190,525846,1050646,2100246,4198422,8394774,16785430 ⋆ 1 / 4 the number of (n + 1) X 6 binary arrays with all 2 X 2 subblock sums the same. • a(n) = 3 * 2 ^ (n / 2 - 1) + 2 ^ (n - 1) + 22 for n even. • a(n) = 2 ^ (n - 1) + 2 ^ ((n + 1) / 2) + 22 for n odd. •

▶ [A303812] 0,1,25,28,76,81,153,160,256,265,385,396,540,553,721,736,928,945,1161,1180,1420,1441,1705,1728,2016 ⋆ Generalized 28 - gonal (or icosioctagonal) numbers: m * (13 * m - 12) with m = 0, + 1, - 1, + 2, - 2, + 3, - 3, ... • a(n) = (26 * n * (n + 1) + 11 * (2 * n + 1) * (- 1) ^ n - 11) / 8. • a(n) = n * (13 * n + 24) / 4, if n is even, or (n + 1) * (13 * n - 11) / 4 otherwise. •

▶ [A219258] 0,25,29,104,112,237,249,424,440,665,685,960,984,1309,1337,1712,1744,2169,2205,2680,2720,3245,3289,3864,3912 ⋆ Numbers k such that 27 * k + 1 is a square. • a(n) = a(- n + 1) = (54 * n * (n - 1) + 23 * (- 1) ^ n * (2 * n - 1) - 1) / 8 + 3. •

▶ [A284045] 1,25,30,40,45,70,95,215,220,385,425,455,560,565,710,775,975,980,1060,1130,1500,1540,1605,1755,1815 ⋆ Numbers k such that p = 6k - 1 and q = 6k + 1 are twin primes and (p ^ 2 + q ^ 2) / 2 is prime. • a(n) == 0 (mod 5) for n > 1. •

▶ [A184042] 25,31,41,61,97,169,305,577,1105,2161,4241,8401,16657,33169,66065,131857,263185,525841,1050641,2100241,4198417,8394769,16785425,33566737,67125265 ⋆ 1 / 9 the number of (n + 1) X 4 0..2 arrays with all 2 X 2 subblocks having the same four values. • a(n) = 3 * 2 ^ (n / 2) + 2 ^ (n + 1) + 17 for n even. • a(n) = 2 ^ (n + 1) + 2 ^ ((n + 3) / 2) + 17 for n odd. •

▶ [A157646] 25,31,41,109,155,221,629,899,1285,3665,5239,7489,21361,30535,43649,124501,177971,254405,725645,1037291,1482781,4229369,6045775,8642281,24650569 ⋆ Positive numbers y such that y ^ 2 is of the form x ^ 2 + (x + 31) ^ 2 with integer x. • a(n) = 6 * a(n - 3) - a(n - 6) for n > 6; a(1)=25, a(2)=31, a(3)=41, a(4)=109, a(5)=155, a(6)=221. •

▶ [A050694] 25,32,125,128,135,175,243,250,256,324,375,432,512,625,735,875,1024,1250,1352,1372,1593,1675,1715,1792,2048 ⋆ Composite numbers n such that all prime factors of n are a substring of n. • a(n) << n log n. - _ Charles R Greathouse IV _ , Jul 09 2015 •

▶ [A129074] 25,33,49,65,97,113,145,161,193,241,257,305,337,353,385,433,481,497,545,577,593,641,673,721,785 ⋆ Numbers n such that (n - 9) / 8 is prime. • a(n) = 8 * prime(n) + 9. - Zak Seidov, May 12 2007 •

▶ [A054550] 25,35,49,55,65,77,85,91,95,115,119,125,133,145,155,161,175,185,203,205,215,217,235,245,259 ⋆ Composite numbers whose least prime factor is either 5 or 7. • a(n) = a(n - 1) + a(n - 22) - a(n - 23). - _ Charles R Greathouse IV _ , Jun 01 2018 •

▶ [A063149] 25,35,55,65,85,95,115,125,145,155,175,185,205,215,235,245,265,275,295,305,325,335,355,365,385 ⋆ Composite numbers which in base 5 contain their largest proper factor as a substring. • a(n) = 30 * n - a(n - 1) for n>1, a(1)=25. [_ Vincenzo Librandi _ , Aug 07 2010] • a(n) = (15 / 2) * (1 - 3 * (- 1) ^ n + 2 * n). [_ Paolo P. Lava _ , Aug 31 2010] •

▶ [A343826] 25,45,65,81,85,105,117,145,153,165,169,185,189,205,221,245,261,265,273,285,289,297,305,333,345 ⋆ Numbers which are the product of two S - primes (A057948) in exactly one way. • a(n) == 1 (mod 4). - _ Hugo Pfoertner _ , May 01 2021 •

▶ [A216869] 1,25,49 ⋆ The smallest non - constant arithmetic progression of integer squares of maximal length three. • a(2) - a(1) = a(3) - a(2) = 24. •

▶ [A104777] 1,25,49,121,169,289,361,529,625,841,961,1225,1369,1681,1849,2209,2401,2809,3025,3481,3721,4225,4489,5041,5329 ⋆ Integer squares congruent to 1 mod 6. ● a(n) = 9 * n ^ 2 - 9 * n + 5 / 2 + (- 1) ^ n * (3 * n - 3 / 2). a(n + 4) = 2 * a(n + 2) - a(n) + 72. - _ Robert Israel _ , Dec 12 2014 ● a(n) == 1 (mod 24). - _ Joerg Arndt _ , Jan 03 2017 ●

▶ [A169860] 0,25,50,76,101,127,152,177,203,228,254,279,304,330,355,381,406,431,457,482,508,533,558,584,609 ⋆ Floor of n inches converted to millimeters. ● a(n) = floor(n * 25.4) = floor(n * 127 / 5). ●

▶ [A224670] 25,50,76,123,191,300,470,741,1173,1866,2980,4775,7671,12348,19906,32125,51885,83846,135548,219191,354515,573460,927706,1500873,2428261 ⋆ Number of (n + 1) X 3 0..2 matrices with each 2 X 2 subblock idempotent ● a(n) = - 2 + 2 ^ (1 - n) * sqrt(5) * (- (1 - sqrt(5)) ^ (1 + n) + (1 + sqrt(5)) ^ (1 + n)) + 2 * (1 + n) + (1 + n) * (2 + n) / 2. ●

▶ [A042232] 25,51,76,1875,1951,5777,290801,587379,878180,21663699,22541879,66747457,3359914729,6786576915,10146491644,250302376371,260448868015,771200112401,38820454488065,78412109088531 ⋆ Numerators of continued fraction convergents to sqrt(642). ● a(n) = 11554 * a(n - 6) - a(n - 12). - _ Vincenzo Librandi _ , Nov 19 2013 ●

▶ [A042240] 25,51,127,305,15377,31059,77495,186049,9379945,18945939,47271823,113489585,5721751073,11556991731,28835734535,69228460801,3490258774585,7049746009971,17589750794527 ⋆ Numerators of continued fraction convergents to sqrt(646). ● a(n) = 610 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Nov 19 2013 ●

▶ [A042244] 25,51,280,1731,8935,19601,988985,1997571,10976840,67858611,350269895,768398401,38770189945,78308778291,430314081400,2660193266691,13731280414855,30122754096401,1519868985234905 ⋆ Numerators of continued fraction convergents to sqrt(648). ● a(n) = 39202 * a(n - 6) - a(n - 12). - _ Vincenzo Librandi _ , Nov 19 2013 ●

▶ [A042248] 25,51,2575,5201,262625,530451,26785175,54100801,2731825225,5517751251,278619387775,562756526801,28416445727825,57395647982451,2898198844850375,5853793337683201,295587865729010425,597029524795704051 ⋆ Numerators of continued fraction convergents to sqrt(650). ● a(n) = 102 * a(n - 2) - a(n - 4). - _ Vincenzo Librandi _ , Nov 20 2013 ●

▶ [A132766] 0,25,52,81,112,145,180,217,256,297,340,385,432,481,532,585,640,697,756,817,880,945,1012,1081,1152 ⋆ a(n) = n * (n + 24). ● a(n) = n * (n + 24). ● a(n) = 2 * n + a(n - 1) + 23 (with a(0)=0). - _ Vincenzo Librandi _ , Aug 03 2010 ● a(0)=0, a(1)=25, a(2)=52; for n>2, a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Feb 11 2016 ●

▶ [A349416] 25,54,100,167,259,380,534,725,957,1234,1560,1939,2375,2872,3434,4065,4769,5550,6412,7359,8395,9524,10750,12077,13509 ⋆ a(n) is the Wiener index of a broom on 2n vertices of which n + 2 are pendant. ● a(n) = 2n ^ 3 / 3 + n ^ 2 / 2 + 5n / 6. ●

▶ [A166873] 1,25,61,109,169,241,325,421,529,649,781,925,1081,1249,1429,1621,1825,2041,2269,2509,2761,3025,3301,3589,3889 ⋆ a(n) = a(n - 1) + 12 * n for n > 1; a(1) = 1. ● a(n) = 6 * n ^ 2 + 6 * n - 11. ● a(n) = 2 * a(n - 1) - a(n - 2) + 12. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A159008] 25,64,114,153,203,242,292,331,381,420,470,509,559,598,648,687,737,776,826,865,915,954,1004,1043,1093 ⋆ Positive numbers k such that k ^ 2 == 2 (mod 89). ● a(n) = a(n - 1) + a(n - 2) - a(n - 3). ● a(n) = (89 + 11 * (- 1) ^ (n - 1) + 178 * (n - 1)) / 4. ●

▶ [A063308] 1,25,70,112,154,196,238,280,322,364,406,452,490,532,574,620,658,704,742,788,826,872,910,960,994 ⋆ Dimension of the space of weight n cuspidal new forms for Gamma _ 1(35). ● a(n) = a(n - 4) + a(n - 6) - a(n - 10) for n>13. ●

▶ [A182323] 25,72,122,169,219,266,316,363,413,460,510,557,607,654,704,751,801,848,898,945,995,1042,1092,1139,1189 ⋆ a(n) = (194 * n + 3 * (- 1) ^ n + 1) / 4 + 24. ● a(n) = - a(- n - 1) = a(n - 1) + a(n - 2) - a(n - 3). ●

▶ [A069190] 1,25,73,145,241,361,505,673,865,1081,1321,1585,1873,2185,2521,2881,3265,3673,4105,4561,5041,5545,6073,6625,7201 ⋆ Centered 24 - gonal numbers . ● a(n) = 12 * n ^ 2 - 12 * n + 1. ● a(n) = 24 * n + a(n - 1) - 24 with a(1)=1. - _ Vincenzo Librandi _ , Aug 08 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3); a(1)=1, a(2)=25, a(3)=73. - _ Harvey P. Dale _ , Jul 17 2011 ●

▶ [A114553] 0,1,1,25,73,673,3025,20329,107929,653425,3674017,21516217,123214825,714258241,4113149041,23770767625,137113121593,791700344593,4568824885825,26373938451289,152222238686089,878652055801825 ⋆ a(n) = 25 * a(n - 2) + 48 * a(n - 3) with a(0) = 0, a(1) = a(2) = 1. ● a(n) = w(n)((1)) where w(n) = M * w(n - 1), w(0) = { 0, 1, 1 } , and M = {{ 0, 1, 0 } , { 0, 0, 1 } , { 48, 25, 0 }} . ● a(n) = 25 * a(n - 2) + 48 * a(n - 3). ● a(n) = (4 * i) ^ (n - 1) * (4 * i * ChebyshevU(n, - 3 * I / 8) - 5 * ChebyshevU(n - 1, - 3 * I / 8)) - (- 3) ^ n. - _ G. C. Greubel _ , Jul 07 2021 ●

▶ [A098439] 1,1,25,73,1009,4561,47881,272665,2480353,16076449,135464185,945516265,7648488145,55729490545,441280178665,3297808663993,25833412158913,196026748033345,1527879583118809,11703693337452937,91042025394288049 ⋆ Expansion of 1 / sqrt(1 - 2x - 47x ^ 2). ● a(n) = Sum _{ k=0..floor(n / 2) } binomial(n - k, k) * binomial(n, k) * 12 ^ k. ●

▶ [A053742] 25,75,125,175,225,275,325,375,425,475,525,575,625,675,725,775,825,875,925,975,1025,1075,1125,1175,1225 ⋆ Sum of odd numbers in range 10 * n to 10 * n + 9. ● a(n) = 25 + 50 * n. ● a(n) = a(n - 1) + 50. - _ Harvey P. Dale _ , Aug 11 2011 ● a(n) = 2 * a(n - 1) - a(n - 2). ●

▶ [A123296] 0,25,75,150,250,375,525,700,900,1125,1375,1650,1950,2275,2625,3000,3400,3825,4275,4750,5250,5775,6325,6900,7500 ⋆ Number of permutations of n distinct letters (ABCD...) each of which appears 5 times and having n - 2 fixed points. ● a(n) = 25 * n + a(n - 1) (with a(0)=0). - _ Vincenzo Librandi _ , Nov 13 2010 ●

▶ [A008852] 0,1,25,76,100,101,125,176,200,201,225,276,300,301,325,376,400,401,425,476,500,501,525,576,600 ⋆ Numbers n such that n ^ 2 and n have same last 2 digits. ● a(4n)=100 * n, a(4n + 1)=100 * n + 1, a(4n + 2)=100 * n + 25, a(4n + 3)=100 * n + 76. - _ Franklin T. Adams - Watters _ , Mar 13 2006 ● a(n) = a(n - 1) + a(n - 4) - a(n - 5). ●

▶ [A223181] 25,80,400,2080,10880,56960,298240,1561600,8176640,42813440,224174080,1173790720,6146048000,32181125120,168502558720,882290851840,4619734876160,24189245849600,126656535592960,663182230159360 ⋆ Rolling icosahedron footprints: number of n X 3 0..11 arrays starting with 0 where 0..11 label vertices of an icosahedron and every array movement to a horizontal, vertical or an tidiagonal neighbor moves along an icosahedral edge. ● a(n) = sqrt(5) * ((3 - sqrt(5)) ^ n * (1 + sqrt(5)) + (- 1 + sqrt(5)) * (3 + sqrt(5)) ^ n) for n>1. ●

▶ [A016814] 1,25,81,169,289,441,625,841,1089,1369,1681,2025,2401,2809,3249,3721,4225,4761,5329,5929,6561,7225,7921,8649,9409 ⋆ a(n) = (4 * n + 1) ^ 2. ● a(n) = a(n - 1) + 32 * n - 8, n > 0. - _ Vincenzo Librandi _ , Dec 15 2010 ● a(n + 1) = a(n) + 16 + 8 * sqrt(a(n)). ● a(n + 1) = 2 * a(n) - a(n - 1) + 32 = 3 * a(n) - 3 * a(n - 1) + a(n - 2). ● a(n - 1) * a(n + 1) = (a(n) - 16) ^ 2 ; a(n + 1) - a(n - 1) = 16 * sqrt(a(n)). ●

▶ [A204708] 25,81,257,833,2689,8705,28161,91137,294913,954369,3088385,9994241,32342017,104660993,338690049,1096024065,3546808321,11477712897,37142659073,120196169729,388962975745,1258710630401,4073273163777 ⋆ Number of (n + 1) X 4 0..1 arrays with the permanents of all 2 X 2 subblocks equal and nonzero. ● a(n) = (5 + (20 - 8 * sqrt(5)) * (1 - sqrt(5)) ^ n + 4 * (1 + sqrt(5)) ^ n * (5 + 2 * sqrt(5))) / 5. ●

▶ [A166080] 1,25,85,145,221,265,365,481,545,685,841,925,1105,1405,1513,1625,1985,2245,2665,2813,2965,3281,3445,3785,3961 ⋆ Nonprimes of the form (k ^ 2 + 1) / 2. ● a(n) = 2n ^ 2 + O(n ^ 2 / log n). - _ Charles R Greathouse IV _ , Mar 21 2014 ●

▶ [A081272] 1,25,85,181,313,481,685,925,1201,1513,1861,2245,2665,3121,3613,4141,4705,5305,5941,6613,7321,8065,8845,9661,10513 ⋆ Downward vertical of triangular spiral in A051682. ● a(n) = C(n, 0) + 24 * C(n, 1) + 36 * C(n, 2). ● a(n) = 18 * n ^ 2 + 6 * n + 1. ●

▶ [A256716] 0,1,25,94,230,455,791,1260,1884,2685,3685,4906,6370,8099,10115,12440,15096,18105,21489,25270,29470,34111,39215,44804,50900 ⋆ a(n) = n * (n + 1) * (22 * n - 19) / 6. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) with n>3, a(0)=0, a(1)=1, a(2)=25, a(3)=94. ● a(n) = Sum _{ i=0..n - 1 } (n - i) * (22 * i + 1) for n>0. ●

▶ [A158547] 1,25,97,217,385,601,865,1177,1537,1945,2401,2905,3457,4057,4705,5401,6145,6937,7777,8665,9601,10585,11617,12697,13825 ⋆ a(n) = 24 * n ^ 2 + 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A353152] 25,100,125,225,400,625,900,1000,1225,1600,2025,2500,3025,3125,3375,3600,4225,4900,5625,6400,7225,8000,8100,9025,10000 ⋆ Perfect powers that are divisible by 5. ● a(n) = (5 * m) ^ k for some positive m and some k > 1. - _ David A. Corneth _ , Apr 28 2022 ●

▶ [A309779] 25,100,400,1600,6400,25600,102400,409600,1638400,6553600,26214400,104857600,419430400,1677721600,6710886400,26843545600,107374182400,429496729600,1717986918400,6871947673600,27487790694400,109951162777600,439804651110400,1759218604441600 ⋆ Squares that can be expressed as the sum of two positive squares but not as the sum of three positive squares. ● a(n) = 5 ^ 2 * 4 ^ (n - 1) with n >= 1. ● a(n) = 4 * a(n - 1) for n > 1. G.f.: 25 * x / (1 - 4 * x). - _ Chai Wah Wu _ , Aug 29 2019 ●

▶ [A114254] 1,25,101,261,537,961,1565,2381,3441,4777,6421,8405,10761,13521,16717,20381,24545,29241,34501,40357,46841,53985,61821,70381,79697 ⋆ Sum of all terms on the two principal diagonals of a 2n + 1 X 2n + 1 square spiral. ● a(n) = 1 + 10 * n ^ 2 + (16 * n ^ 3 + 26 * n) / 3. [Corrected by _ Arie Groeneveld _ , Aug 17 2008] ●

▶ [A158551] 25,103,233,415,649,935,1273,1663,2105,2599,3145,3743,4393,5095,5849,6655,7513,8423,9385,10399,11465,12583,13753,14975,16249 ⋆ a(n) = 26 * n ^ 2 - 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A174371] 1,25,121,289,529,841,1225,1681,2209,2809,3481,4225,5041,5929,6889,7921,9025,10201,11449,12769,14161,15625,17161,18769,20449 ⋆ a(n) = (6 * n - 1) ^ 2. ● a(n) = 36n ^ 2 - 12n + 1. - _ Omar E. Pol _ , Jul 28 2016 ●

▶ [A062938] 1,25,121,361,841,1681,3025,5041,7921,11881,17161,24025,32761,43681,57121,73441,93025,116281,143641,175561,212521,255025,303601,358801,421201 ⋆ a(n) = n * (n + 1) * (n + 2) * (n + 3) + 1 = (n ^ 2 + 3 * n + 1) ^ 2. ● a(n + 1) = Numerator of ((n + 2)! + (n - 2)!) / n!, for n>=2. - _ Artur Jasinski _ , Jan 09 2007; corrected by _ Michel Marcus _ , Dec 25 2022 ● a(n) = n * (n + 1) * (n + 2) * (n + 3) + 1 ^ 4 = 1 * (1 + n) * (1 + 2 * n) * (1 + 3 * n) + n ^ 4 =(n ^ 2 + 3 * n + 1) ^ 2; in general, n * (n + k) * (n + 2 * k) * (n + 3 * k) + k ^ 4 = k * (k + n) * (k + 2 * n) * (k + 3 * n) + n ^ 4 = (n ^ 2 + 3 * k * n + k ^ 2) ^ 2. - _ Charlie Marion _ , Jan 13 2011 ●

▶ [A361637] 1,1,1,1,25,121,361,841,4201,25705,118441,423721,1628881,8065201,41225185,184416961,768211081,3420474121,16620237001,79922011465,364149052705,1638806098945,7655390077105,36739991161105,174363209490625 ⋆ Constant term in the expansion of (1 + x + y + z + 1 / (x * y * z)) ^ n. ● a(n) = n! * Sum _{ k=0..floor(n / 4) } 1 / (k! ^ 4 * (n - 4 * k)!). ●

▶ [A190875] 1,1,1,1,25,121,361,841,21841,184465,912241,3334321,89824681,106379988 1,7325422105,36454050361,1017339566881,15314809967521,134865698721121,848781820990945,24508030788375481,443521231499750041,4748434334677932361 ⋆ E.g.f. exp(x + x ^ 4) ● a(n)=n! * sum(j=0..n / 3, binomial(n - 3 * j,j) / (n - 3 * j)!) ●

▶ [A205800] 1,1,1,1,25,121,361,841,21841,547345,4541041,23292721,169658281,7550279881,95230199065,692107448761,25431412450081,563675083228321,9791797014753121,112525775579561185,3370231071632996281,65798618669268652441,1345746844683430533961 ⋆ Expansion of e.g.f. exp(Sum _{ n>=1 } x ^ (n ^ 2)). ● a(0) = 1; a(n) = (n - 1)! * Sum _{ k=1..floor(sqrt(n)) } k ^ 2 * a(n - k ^ 2) / (n - k ^ 2)!. - _ Seiichi Manyama _ , Apr 29 2022 ●

▶ [A330045] 1,1,1,1,25,121,361,841,42001,365905,1819441,6660721,498971881,6278929801,43710250585,218205219961,21795091762081,358652470233121,3210080802962401,20298322381652065,253433327009477868 1,5151684082428550044 1,5635617857807911956 1 ⋆ Expansion of e.g.f. exp(x) / (1 - x ^ 4). ● a(0) = a(1) = a(2) = a(3) = 1; a(n) = n * (n - 1) * (n - 2) * (n - 3) * a(n - 4) + 1. ● a(n) = Sum _{ k=0..floor(n / 4) } n! / (n - 4 * k)!. ●

▶ [A274783] 1,1,1,25,121,361,3361,24361,116425,790441,6060121,36888721,238815721,1760983225,11968188961,79763351305,570661612585,4040282139625,27901708614985,198090585115105,1420583920034161,10056659775872161,71730482491962361,517012699162717825,3713833648541268121 ⋆ Diagonal of the rational fun

ction 1 / (1 - (w * x * y * z + w * x * y + w * x * z + w * y * z + x * y * z)). • a(n) = Sum _{ k = 0..floor(n / 3) } (n + k)! / (k! ^ 4 * (n - 3 * k)!) = Sum _{ k = 0..floor(n / 3) } binomial(n,3 * k) * binomial(n + k,k) * (3 * k)! / k! ^ 3 (apply Eger, Theorem 3 to the set of column vectors S = { [1,1,1,1], [1,1,0,1], [1,0,1,1], [0,1,1,1], [1,1,1,0] }). - _ Peter Bala _ , Jan 27 2018 •

► [A354553] 1,1,1,1,25,121,361,3361,42001,275185,1819441,30777121,371238121,3057311401,44263763545,801096528961,9710981323681,125367419194081,2643123767954401,45840730383002305,646414025466298681,13258301279836276441 ★ Expansion of e.g.f. exp(x * exp(x ^ 3)). • a(n) = n! * Sum _{ k=0..floor(n / 3) } (n - 3 * k) ^ k / (k! * (n - 3 * k)!). •

► [A367719] 1,1,1,1,25,121,361,3361,42001,275185,1819441,30777121,371238121,9284332201,131442054745,1454933712961,34120902859681,851562584890081,12300037440760801,187928965721651905,6019555345508794681,130768735411230580441 ★ E.g.f. satisfies A(x) = exp(x * A(x ^ 3)). • a(0) = 1; a(n) = (n - 1)! * Sum _{ k=0..floor((n - 1) / 3) } (3 * k + 1) * a(k) * a(n - 1 - 3 * k) / (k! * (n - 1 - 3 * k)!). •

► [A293493] 1,1,1,1,25,121,361,5881,62161,365905,5145841,84831121,812318761,11450816521,243450591385,3371056121161,51784222133281,127560579904464 1,235316355434020 81,4105595905258904 65,11089633716053137081,256375957896260034841,5161258224477109736521 ★ E.g.f.: exp(x / (1 - x ^ 3)). • a(0) = 1; a(n) = Sum _{ k=0..floor((n - 1) / 3) } binomial(n - 1,3 * k) * (3 * k + 1)! * a(n - 3 * k - 1). - _ Ilya Gutkovskiy _ , Feb 24 2022 •

► [A362571] 1,1,1,1,25,121,361,8401,82321,456625,11496241,172149121,1452983401,40947003241,823437038425,9491714865361,300842942443681,7568303382376801,111494036396244961,3957438528527140225,119206427681076135481,2147109997071581380441 ★ E.g.f. satisfies A(x) = exp(x * A(x) ^ (x ^ 2)). • a(n) = n! * Sum _{ k=0..floor(n / 3) } (n - 2 * k) ^ k * binomial(n - 2 * k - 1,k) / (n - 2 * k)!. •

► [A141722] 1,25,121,505,2041,8185,32761,131065,524281,2097145,8388601,33554425,134217721,536870905,2147483641,8589934585,34359738361,137438953465,549755813881,2199023255545,8796093022201,35184372088825,140737488355321,562949953421305 ★ a(n) = 8 * 4 ^ n - 7. • a(n) = 4 * a(n - 1) + 21. • a(n) = 5 * a(n - 1) - 4 * a(n - 2). •

► [A073963] 1,1,1,25,125,625,3025,15625,78625,393125,1955625,9765625,48815625,244140625,1220703125,6103515625,30517265625,152587890625,762941015625,3814705078125,19073494140625,95367431640625,476837119140625,2384185791015625,11920928955078125 ★ Number of strings of length n over Z _ 5 with trace 0 and subtrace 0. • a(n; t, s) = a(n - 1; t, s) + a(n - 1; t + 4, s + 4t + 1) + a(n - 1; t + 3, s + 3t + 4) + a(n - 1; t + 2, s + 2t + 4) + a(n - 1; t + 1, s + t + 1). •

► [A042218] 25,126,6325,31751,1593875,8001126,401650175,2016252001,101214250225,508087503126,25505589406525,128036034535751,6427307316194075,3226457261550612 6,16196559380915003 75 ★ Numerators of continued fraction convergents to sqrt(635). • a(n) = 252 * a(n - 2) - a(n - 4). - _ Vincenzo Librandi _ , Nov 19 2013 •

► [A156158] 25,137,797,4645,27073,157793,919685,5360317,31242217,182092985,1061315693,6185801173,36053491345,210135146897,1224757390037,7138409193325,41605697769913,242495777426153,1413368966787005 ★ a(n) = 6 * a(n - 1) - a(n - 2) for n > 2; a(1) = 25, a(2) = 137. • a(n) = ((26 + 7 * sqrt(2)) * (3 - 2 * sqrt(2)) ^ n + (26 - 7 * sqrt(2)) * (3 + 2 * sqrt(2)) ^ n) / 4. •

► [A100255] 0,1,25,144,484,1225,2601,4900,8464,13689,21025,30976,44100,61009,82369,108900,141376,180625,227529,283024,348100,423801,511225,611524,725904 ★ Squares of pentagonal numbers: a(n) = (1 / 4) * n ^ 2 * (3 * n - 1) ^ 2. • a(n) = 5 * a(n - 1) - 10 * (n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). (End) •

► [A305269] 25,145,385,865,1825,3745,7585,15265,30625,61345,122785,245665,491425,982945,1965985,3932065,7864225,15728545,31457185,62914465,125829025,251658145,503316385,1006632865,2013265825 ★ a(n) = 120 * 2 ^ n - 95. • a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>1. •

► [A052501] 1,1,1,1,1,25,145,505,1345,3025,78625,809425,4809025,20787625,72696625,1961583625,28478346625,238536558625,1425925698625,6764765838625,189239120970625,3500701266525625,37764092547420625,288099608198025625 ★ Number of permutations sigma such that sigma ^ 5=Id; degree - n permutations of order dividing 5. • a(n + 5) = a(n + 4) + (24 + 50 * n + 35 * n ^ 2 + 10 * n ^ 3 + n ^ 4) * a(n), with a(0)= ... = a(4) = 1. • a(n) = a(n - 1) + a(n - 5) * (n - 1)! / (n - 5)!. • a(n) = Sum _{ j = 0..floor(n / 5) } n! / (5 ^ j * j! * (n - 5 * j)!). •

► [A193438] 1,1,1,1,1,25,145,505,1345,43345,481825,3027025,13679425,528618025,8796735025,81517983625,529655946625,2361969127862 5,526089195906625,6512769913326625,55783484692170625,280228118657068 5625,7836973328659830062 5,1221751619270220585625 ★ E.g.f.: exp(Sum _{ n>=0 } x ^ (4 * n + 1) / (4 * n + 1)). • a(n) = a(n - 1) + (n - 4) * (n - 3) * (n - 2) * (n - 1) * a(n - 4). - _ Vaclav Kotesovec _ , Apr 15 2020 • a(0) = 1; a(n) = Sum _{ k=0..floor((n - 1) / 4) } binomial(n - 1,4 * k) * (4 * k)! * a(n - 4 * k - 1). - _ Ilya Gutkovskiy _ , Jul 14 2021 •

► [A168571] 0,25,150,775,3900,19525,97650,488275,2441400,12207025,61035150,305175775,1525878900,7629394525,38146972650,190734863275,953674316400,4768371582025,23841857910150,119209289550775,596046447753900,2980232238769525 ★ a(n) = 25 * (5 ^ n - 1) / 4. • a(n) = + 6 * a(n - 1) - 5 * a(n - 2). •

► [A362314] 1,1,1,1,25,151,541,1471,84001,925345,5682601,25177681,2245355641,35901100951,312222474565,1917363070351,23247959472192 1,4873115730725761,54830346428307601,430468886732009185,6599794790331346 1401,1711564302775814535511 ★ a(n) = n! * Sum _{ k=0..floor(n / 4) } (n / 4) ^ k / (k! * (n - 4 * k)!). • a(n) = n! * [x ^ n] exp(x + n * x ^ 4 / 4). •

► [A007204] 1,25,169,625,1681,3721,7225,12769,21025,32761,48841,70225,97699,133225,177241,231361,297025,375769,469225,579121,707281,855625,1026169,1221025,1442401 ★ Crystal ball sequence for D _ 4 lattice. • a(0)=1, a(1)=25, a(2)=169, a(3)=625, a(4)=1681, a(n)=5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Harvey P. Dale _ , Mar 03 2013 •

► [A120096] 1,25,169,1681,14641,133225,1194649,10764961,96845281,871725625,7845176329,70607649841,635465659921,5719200505225,51472775849209,463255068736321,4169295360346561,37523659017960025,337712928837117289,3039416366507624401,27354747277647913201 ★ a(n) = (A046717(n)) ^ 2 (starting with n =1). • a(n) = leftmost term in M ^ n * [1,0,0,0] where M is the 4 X 4 matrix: [1, - 2,4, - 2; - 2,1, - 2,4; 4, - 2,1, - 2; - 2,4, - 2,1]. • a(n) = 7 * a(n - 1) + 21 * a(n - 2) - 27 * a(n - 3). • a(n) = (1 + 2 * (- 3) ^ n + 9 ^ n) / 4. - _ Colin Barker _ , Dec 23 2017 •

► [A213546] 1,25,170,674,1979,4795,10164,19524,34773,58333,93214,143078,212303,306047,430312,592008,799017,1060257,1385746,1786666,2275427,2865731,3572636,4412620,5403645 ★ Principal diagonal of the convolution array A213505. • a(n) = (16 * n ^ 5 + 15 * n ^ 4 - n) / 30. • a(n) = 6 * a(n - 1) - 10 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). •

► [A201089] 25,175,651,1759,3899,7581,13405,22085,34421,51331,73815,102995,140071,186369,243289,312361,395185,493495,609091,743911,899955,1079365,1284341,1517229,1780429 ★ Number of - n..n arrays of 4 elements with first and second differences also in - n..n. • a(n) = (101 * n ^ 4 + 202 * n ^ 3 + 190 * n ^ 2 + 92 * n + 24) / 24 for n even. • a(n) = (101 * n ^ 4 + 202 * n ^ 3 + 190 * n ^ 2 + 86 * n + 21) / 24 for n odd. •

► [A042212] 25,176,1081,7743,388231,2725360,16740391,119908097,6012145241,42204924784,259241693945,1856896782399,93104080813895,653585462479664,4014616855691879,28755903452322817,144180978947183272 9 ★ Numerators of continued fraction convergents to sqrt(632). • a(n) = 15486 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Nov 19 2013 •

► [A302562] 1,25,178,722,2147,5243,11172,21540,38469,64669,103510,159094,236327,340991,479816,660552,892041,1184289,1548538,1997338,2544619,3205763,3997676,4938860,6049485 ★ Partial sums of A092181. • a(n) = n * (7 - 10 * n ^ 2 + 15 * n ^ 3 + 18 * n ^ 4) / 30. • a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. •

► [A243209] 1,25,186,881,3146,9264,23810,55058,117205,233135,438544,786541,1354696,2252202,3630684,5694984,8718963,13060515,19184110,27681103,39300096,54974216,75861038,103377456,139251749 ★ Number of inequivalent (mod D _ 3) ways to place 4 points on a triangular grid of side n so that they are not vertices of an equilateral triangle with sides parallel to the grid. • a(n) = (n ^ 8 + 4 * n ^ 7 - 6 * n ^ 6 - 80 * n ^ 5 + 60 * n ^ 4 + 208 * n ^ 3 + 464 * n ^ 2 - 1152 * n) / 2304 + IF(MOD(n, 2) = 1) * (28 * n ^ 3 - 206 * n ^ 2 + 312 * n + 33) / 768 + IF(MOD(n, 3) = 1) * (n ^ 2 - 2 * n + 4) / 18 + IF(MOD(n, 6) = 1) * (- 1 / 6). • a(n) = 3 * a(n - 1) - 6 * a(n - 3) + 6 * a(n - 5) + 8 * a(n - 6) - 12 * a(n - 7) - 9 * a(n - 8) + 13 * a(n - 9) + 6 * a(n - 10) - 6 * a(n - 11) - 13 * a(n - 12) + 9 * a(n - 13) + 12 * a(n - 14) - 8 * a(n - 15) - 6 * a(n - 16) + 6 * a(n - 18) - 3 * a(n - 20) + a(n - 21). - _ Vaclav Kotesovec _ , Jun 02 2014 •

► [A017222] 25,196,529,1024,1681,2500,3481,4624,5929,7396,9025,10816,12769,14884,17161,19600,22201,24964,27889,30976,34225,37636,41209,44944,48841 ★ a(n) = (9 * n + 5) ^ 2. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , May 22 2012 • a(n) = a(n - 1) + 9 * (18 * n + 1). •

► [A271535] 0,1,25,196,900,3025,8281,19600,41616,81225,148225,256036,422500,670761,1030225,1537600,2238016,3186225,4447881,6100900,8236900,10962721,14402025,18696976,24010000 ★ a(n) = (n * (n + 1) * (2 * n + 1) / 6) ^ 2. • a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). •

► [A017330] 25,225,625,1225,2025,3025,4225,5625,7225,9025,11025,13225,15625,18225,21025,24025,27225,30625,34225,38025,42025,46225,50625,55225,60025 ★ a(n) = (10 * n + 5) ^ 2. • a(0) = 25, a(n) = a(n - 1) + 200 * n. - _ Alonso del Arte _ , Feb 25 2020 •

► [A288876] 1,25,225,1225,4900,15876,44100,108900,245025,511225,1002001,1863225,3312400,5664400,9363600,15023376,23474025,35820225,53509225,78411025,112911876,160022500,223502500,308002500,419225625 ★ a(n) = binomial(n + 4, n) ^ 2. Square of the fifth diagonal sequence of A007318 (Pascal). Fifth diagonal sequence of A008459. • a(n) = binomial(n + 4, n) ^ 2, n >= 0. •

► [A067472] 25,225,2025,20164,200704,2002225,20007729,200024449,2000057284,20000182084,200000361796,2000001237796,20000000402496,200000010642496,2000000040249600,20000000215721449,200000000447251216 ★ Smallest n - digit square starting with 2. • a(n) = ceiling(sqrt(2 * 10 ^ (n - 1))) ^ 2, n>1. - _ Rick L. Shepherd _ , Feb 14 2002 •

► [A081195] 1,25,226,1660,11176,71920,450976,2783680,17013376,103325440,624933376,3769523200,22696830976,136499752960,820273586176,4926741790720,29580851838976,177566715412480,1065726709989376,6395665929994240 ★ a(n) = 10 * a(n - 1) - 24 * a(n - 2) for n>1, a(0)=1, a(1)=25. • a(n) = 21 * 6 ^ n / 2 - 19 * 4 ^ n / 2. •

► [A088890] 0,1,25,234,1290,5115,16211,43700,104244,226005,453805,855646,1530750,2619279,4313895,6873320,10638056,16048425,23665089,34192210,48503410,67670691,92996475,126048924,168700700 ★ Polynexus numbers of order 8. • a(n) = ((n ^ 8 - (n - 1) ^ 8) - (n ^ 2 - (n - 1) ^ 2)) / 252 = ((n ^ 8 - (n - 1) ^ 8) - (n ^ 2 - (n - 1) ^ 2)) / (2 ^ 8 - 2 ^ 2). •

► [A108178] 1,25,235,1330,5488,18228,51660,129690,295845,624481,1236235,2318680,4153240,7149520,11888304,19174572,30101985,46130385,69177955,101729782,146964664,208902100,292571500,404205750,551461365 ★ a(n) = (n + 1)(n + 2) ^ 2 * (n + 3) ^ 2 * (n + 4)(7n ^ 2 + 23n + 20) / 2880. • a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>8. •

► [A362393] 1,1,1,1,25,241,1441,6721,87361,1729729,24816961,270452161,3705324481,85344916801,1992230175937,38047293910081,709217112938881,17385498239168641,514103858592923521,14254662916125735553,366807994235438359681,10338786602768939575681 ★ E.g.f. satisfies A(x) = exp(x + x ^ 4 * A(x)). • a(n) = n! * Sum _{ k=0..floor(n / 4) } (k + 1) ^ (n - 3 * k - 1) / (k! * (n - 4 * k)!). •

► [A090022] 0,1,25,253,2065,15541,112825,804973,5692705,40071781,281367625,1972955293,13823978545,96820307221,677949854425,4746473419213,33228592555585,232613204977861,1628344491013225,11398619145204733 ★ Number of distinct lines through the origin in the n - dimensional lattice of side length 6. • a(n) = 7 ^ n - 4 ^ n - 3 ^ n + 1. •

► [A017450] 25,256,729,1444,2401,3600,5041,6724,8649,10816,13225,15876,18769,21904,25281,28900,32761,36864,41209,45796,50625,55696,61009,66564,72361 ★

a(n) = (11 * n + 5) ^ 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3); a(0)=25, a(1)=256, a(2)=729. - _ Harvey P. Dale _ , Dec 08 2013 ●

▶ [A058482] 1,25,265,2161,16081,115465,816985,5745121,40294561,282298105,1976795305,13839692881,96884227441,678208723945,4747518463225,33232801429441,232630126566721,1628412435648985,11398891698588745,79792258337258801,558545832702224401 ★ Number of 3 X n binary matrices with no zero rows or columns. ● a(n) = 7 ^ n - 3 * 3 ^ n + 3. ● a(n) = 11 * a(n - 1) - 31 * a(n - 2) + 21 * a(n - 3). G.f.: - x * (21 * x ^ 2 + 14 * x + 1) / ((x - 1) * (3 * x - 1) * (7 * x - 1)). - _ Colin Barker _ , Jul 10 2013 ●

▶ [A210430] 0,1,25,294,2090,10460,40677,131131,366088,912519,2075965,4381168,8683962,16321682,29310113,50595765,84373024,136476493,214859601,330171322,496443610,731902920,1059919949,1510112495,2119617096 ★ Number of semistandard Young tableaux over all partitions of 8 with maximal element <= n. ● a(n) = n ^ 2 * (n ^ 2 + 3) * (1124 + (1205 + 191 * n ^ 2) * n ^ 2) / 10080. ●

▶ [A269448] 25,301,454,3850,31966,47569,393925,3261481,4852834,40177750,332640346,494942749,4097737825,33926055061,50479308814,417929081650,3460124977126,5148394557529,42624668591725,352898821613041,525085765560394,4347298267275550 ★ The first of 26 consecutive positive integers the sum of the squares of which is a square. ● a(1)=25, a(2)=301, a(3)=454, a(4)=3850, a(5)=31966, a(6)=47569, a(n)=102 * a(n - 3) - a(n - 6) + 1250. - _ Daniel Mondot _ , Aug 05 2016 ●

▶ [A240846] 0,1,25,313,3769,45241,542905,6514873,78178489,938141881,11257702585,135092431033,1621109172409,19453310068921,233439720827065,2801276649924793,33615319799097529,403383837589170361,4840606051070044345,58087272612840532153 ★ a(0)=0, a(1)=1, a(n) = a(n - 1) * 12 + 13. ● a(n) = (2 ^ (2 * n + 1) * 3 ^ n - 13) / 11 for n>0. ● a(n) = 13 * a(n - 1) - 12 * a(n - 2) for n>2. ●

▶ [A228255] 25,319,2511,13933,58911,242461,989527,4017157,16245775,65514541,263652487,1059392917,4251920575,17050729021,68332056247,273715645477,1096024843375,4387586157901,17560804984807,70274600998837 ★ Number of third differences of arrays of length n + 3 of numbers in 0..3. ● a(n) = 4 ^ (3 + n) - 3 ^ (3 + n) for n>5. ●

▶ [A077503] 1,25,324,4096,50176,600625,7001316,80013025,900000000,1000014129,11000024161,120000580921,1300001310976,14000004588964,150000007007601,1600000000000000,17000000233634401,180000000244436761 ★ Smallest n - digit square beginning with n. ● a(n) = ceiling(sqrt(n * 10 ^ d)) ^ 2 where d = n - digit(n), digit(n) = number of digits in n. - _ Ray Chandler _ , Aug 11 2003 ●

▶ [A010977] 1,25,325,2925,20475,118755,593775,2629575,10518300,38567100,131128140,417225900,1251677700,3562467300,9669554100,25140840660,62852101650,151584480450,353697121050,800472431850,1761039350070,3773655750150,7890371113950,16123801841550 ★ a(n) = binomial coefficient C(n,24). ● a(n) = n / (n - 24) * a(n - 1), n > 24. - _ Vincenzo Librandi _ , Mar 26 2011 ●

▶ [A059255] 0,25,365,2030,7230,19855,45955,94220,176460,308085,508585,802010,1217450,1789515,2558815,3572440,4884440,6556305,8657445,11265670,14467670,18359495,23047035,28646500,35284900 ★ Both sum of n + 1 consecutive squares and sum of the immediately following n consecutive squares. ● a(n) = n * (n + 1) * (2n + 1) * (12n ^ 2 + 12n + 1) / 6. ● a(n) = 4 * n ^ 5 + 10 * n ^ 4 + (25 / 3) * n ^ 3 + (5 / 2) * n ^ 2 + (1 / 6) * n. [Corrected by _ Ignacio Larrosa Cañestro _ , Nov 15 2021] ● a(0)=0, a(1)=25, a(2)=365, a(3)=2030, a(4)=7230, a(5)=19855, a(n) = 6a(n - 1) - 15a(n - 2) + 20a(n - 3) - 15a(n - 4) + 6a(n - 5) - a(n - 6). - _ Harvey P. Dale _ , May 09 2011 ● a(n) = (4 * T(n) - n) ^ 2 + (4 * T(n) - n + 1) ^ 2 + ... + (4 * T(n)) ^ 2 = (4 * T(n) + 1) ^ 2 + (4 * T(n) + 2) ^ 2 + ... + (4 * T(n) + n) ^ 2, where T = A000217. See Boardman (2000). - _ Jonathan Sondow _ , Mar 07 2013 ● a(0)=0, a(n) = 25 + 340 * C(n - 1,1) + 1325 * C(n - 1,2) + 2210 * C(n - 1,3) + 1680 * C(n - 1,4) + 480 * C(n - 1,5) for n >= 1, where C(a,b) are binomial coefficients. - _ Kieren MacMillan _ , Sep 16 2014 ●

▶ [A036071] 1,25,375,4375,43750,393750,3281250,25781250,193359375,1396484375,9775390625,66650390625,444335937500,2905273437500,18676757812500,118286132812500,739288330078125,4566192626953125,27904510498046875 ★ Expansion of 1 / (1 - 5 * x) ^ 5. ● a(n) = binomial(n + 4, 4) * 5 ^ n; ● a(n) = 25 * a(n - 1) - 250 * a(n - 2) + 1250 * a(n - 3) - 3125 * a(n - 4) + 3125 * a(n - 5), a(0)=1, a(1)=25, a(2)=375, a(3)=4375, a(4)=43750. - _ Harvey P. Dale _ , Mar 20 2013 ●

▶ [A094190] 0,25,376,9376,90625,109376,2890625,12890625,212890625,1787109376,18212890625,918212890625,9918212890625,40081787109376,259918212890625,3740081787109376,43740081787109376,256259918212890625,225625991821289062 5 ★ Least n - digit automorphic number. ● a(n) = Min(5 ^ (2 ^ n) (mod 10 ^ n), 16 ^ (5 ^ n) (mod 10 ^ n)). - _ Robert G. Wilson v _ , Aug 27 2006 ●

▶ [A028130] 1,25,395,5045,56931,592725,5834515,55132165,505157411,4519668725,39685517235,343261312485,2933027514691,24811827085525,208162421081555,1734382406904005,14367095262780771,118431759773683125 ★ Expansion of 1 / ((1 - 4x)(1 - 6x)(1 - 7x)(1 - 8x)). ● a(n) = 25 * a(n - 1) - 230 * a(n - 2) + 920 * a(n - 3) - 1344 * a(n - 4), n >= 4. ● a(n) = 15 * a(n - 1) - 56 * a(n - 2) - 2 * 4 ^ n + 3 * 6 ^ n, n >= 2. (End) ● a(n) = - 7 ^ (n + 3) / 3 - 2 * 4 ^ (n + 1) / 3 + 9 * 6 ^ (n + 1) + 8 ^ (n + 2). - _ R. J. Mathar _ , Mar 18 2011 ●

▶ [A286719] 1,25,395,5075,58086,618870,6289690,61885450,595122671,5629238615,52605474285,487197745125,4481780785756,41018845739260,373968405050180,3399402534376100,30830907772159341,279134548584080805,252381750775651337 5,2279566316533681037 5,2057304056721072354 26,1855561201430080303250,16727971116048518559870,150747219419372400319950,1358093516662781192486011 ★ Column k=4 of triangle A039755, Sheffer(exp(x), (exp(2 * x) - 1) / 2). ● a(n) = h ^{ (5) }_ n, the complete homogeneous symmetric function of degree n of the five symbols 1, 3, 5, 7, 9. ● a(n) = (1 - 4 * 3 ^ (4 + n) + 6 * 5 ^ (4 + n) - 4 * 7 ^ (4 + n) + 9 ^ (4 + n)) / 384. ● a(n) = 25 * a(n - 1) - 230 * a(n - 2) + 950 * a(n - 3) - 1689 * a(n - 4) + 945 * a(n - 5) for n>4. ●

▶ [A174515] 1,25,397,5125,58813,626725,6356749,62315125,596370205,5610245125,52128987181,480061573525,4392455087677,40002549209125,363080219023693,3287474035532725,29714233445499229,268240649382317125 ★ Expansion of g.f. exp(Sum _{ n>=1 } (2 ^ n + 3 ^ n) ^ 2 * x ^ n / n). ● a(n) = 25 * a(n - 1) - 228 * a(n - 2) + 900 * a(n - 3) - 1296 * a(n - 4) for n > 3. ● a(n) = (9 ^ (2 + n) - 4 ^ (2 + n) - 5 * 6 ^ (1 + n) * (2 + n)) / 5. (End) ●

▶ [A028116] 1,25,398,5162,59619,640227,6549376,64780804,625573157,5936696909,55620675474,516146265726,4755391291015,43574880995671,397637888433092,3617137005125528,32823750870307593,297304128579802113,2688988551055876630,24293750984286505810 ★ Expansion of 1 / ((1 - 4 * x) * (1 - 5 * x) * (1 - 7 * x) * (1 - 9 * x)). ● a(n) = (3 * 9 ^ (n + 3) - 10 * 7 ^ (n + 3) + 3 * 5 ^ (n + 4) - 2 * 4 ^ (n + 4)) / 120. -_ Yahia Kahloune _ , Jun 11 2013 ● a(n) = 25 * a(n - 1) - 227 * a(n - 2) + 887 * a(n - 3) - 1260 * a(n - 4) for n>3. - _ Colin Barker _ , Apr 17 2017 ●

▶ [A028075] 1,25,400,5230,60991,661675,6836950,68263360,664838581,6356961325,59947423900,559395635890,5177995501771,47632122760975,436056971109250,3977028159426820,36166503547714561,328145135909292625,2972035570568581000,26880644285129620150,242859379929646660951 ★ Expansion of 1 / ((1 - 3x)(1 - 6x)(1 - 7x)(1 - 9x)). ● a(n) = (2 * 9 ^ (n + 3) - 9 * 7 ^ (n + 3) + 8 * 6 ^ (n + 3) - 3 ^ (n + 3)) / 72. [_ Yahia Kahloune _ , Jun 10 2013] ●

▶ [A042204] 25,401,426,1253,6691,28017,62725,90742,244209,579160,1981689,2560849,9664236,118531681,365259279,483790960,1816632159,4117055278,10050742715,14167797993,38386338701,167713152797 ★ Numerators of continued fraction convergents to sqrt(628). ● a(n) = 93397457463698 * a(n - 26) - a(n - 52) for n>51. [_ Bruno Berselli _ , Nov 19 2013] ●

▶ [A028112] 1,25,401,5285,62601,696045,7442401,77640805,797399801,8108665565,81939294801,824736146325,8280574247401,83010854259085,831368657137601,8321395551579845,83260955156605401,832895295388684605 ★ Expansion of 1 / ((1 - 4x)(1 - 5x)(1 - 6x)(1 - 10x)). ● a(n)=(10 ^ (n + 3) - 15 * 6 ^ (n + 3) + 24 * 5 ^ (n + 3) - 10 * 4 ^ (n + 3)) / 120. [_ Yahia Kahloune _ , Jun 11 2013] ●

▶ [A028064] 1,25,402,5306,62699,691299,7275724,74105812,736913397,7196762573,69311524646,660250818318,6234443691295,58450533199447,544794370231968,5053142176005224,46678603740543593,429711934071787521 ★ Expansion of 1 / ((1 - 3x)(1 - 5x)(1 - 8x)(1 - 9x)). ● a(n)=(5 * 9 ^ (n + 3) - 8 ^ (n + 4) + 5 ^ (n + 4) - 2 * 3 ^ (n + 3)) / 120. [_ Yahia Kahloune _ , Jun 08 2013] ●

▶ [A028061] 1,25,404,5390,64791,731595,7939714,83955520,872430581,8959286765,91262059824,924426748050,9327520083571,93861018423535,942726158964734,945614968517498 0,947640949255997 61,949061042927869905,950056062114383844,950753052364667883 10,951241183953215635151 ★ Expansion of 1 / ((1 - 3x)(1 - 5x)(1 - 7x)(1 - 10x)). ● a(n) = (8 * 10 ^ (n + 3) - 5 * 7 ^ (n + 4) + 42 * 5 ^ (n + 3) - 5 * 3 ^ (n + 4)) / 840. [_ Yahia Kahloune _ , Jun 08 2013] ●

▶ [A026561] 1,25,405,5405,64661,721725,7683685,79078285,793624821,7813101725,75772440965,726132366765,6891899656981,64900354798525,607206802510245,5650395374640845,52342063252985141,483011998315708125 ★ Expansion of 1 / ((1 - 2x)(1 - 6x)(1 - 8x)(1 - 9x)). ● a(n) = - 2 ^ n / 21 + 9 * 6 ^ n - 128 * 8 ^ n / 3 + 243 * 9 ^ n / 7. - _ R. J. Mathar _ , Jun 30 2013 ●

▶ [A026391] 1,25,407,5489,66759,762321,8356279,89114113,932519687,9629963057,98523692631,1001349555297,10129549127335,102127457330833,1027215881948663,10314453257429441,103444825304722503 ★ Expansion of 1 / ((1 - 2x)(1 - 6x)(1 - 7x)(1 - 10x)). ● a(n) = - 2 ^ n / 20 + 27 * 6 ^ n / 2 - 343 * 7 ^ n / 15 + 125 * 10 ^ n / 12. - _ R. J. Mathar _ , Jun 23 2013 ●

▶ [A028044] 1,25,407,5501,67239,773589,8559679,92246077,975897527,10187458853,105306474351,1080536075853,11025196931815,112010922356917,1134181907272223,11454404794267229,115444750765761303 ★ Expansion of 1 / ((1 - 3x)(1 - 4x)(1 - 8x)(1 - 10x)). ● a(n)=(10 ^ (n + 4) - 21 * 8 ^ (n + 3) + 35 * 4 ^ (n + 3) - 8 * 3 ^ (n + 4)) / 840. [_ Yahia Kahloune _ , Jun 07 2013] ●

▶ [A260953] 1,1,25,409,5041,6553,104857,1677721,20648881,26843545,429496729,6871947673,84577817521,109951162777,1759218604441,28147497671065,346430740566961,450359962737049,7205759403792793,115292150460684697,1418980313362273201,1844674407370955161 ★ List of numbers of the forms (2 ^ (4m + 3) - 3) / 5 and (2 ^ (12m + 4) - 3) / 13 arranged in increasing order. ● a(n) = 4097 * a(n - 4) - 4096 * a(n - 8) for n>8. [_ Bruno Berselli _ , Aug 07 2015] ●

▶ [A025998] 1,25,409,5565,68481,792645,8815129,95390845,1012475761,10596550965,109756131849,1127967674925,11523334499041,117184641488485,1187466959384569,11999684812451805,120997224186474321 ★ Expansion of 1 / ((1 - 2x)(1 - 5x)(1 - 8x)(1 - 10x)). ● a(n) = - 2 ^ n / 18 + 25 * 5 ^ n / 9 - 128 * 8 ^ n / 9 + 25 * 10 ^ n / 2. _ R. J. Mathar _ , Jun 20 2013 ● a(0)=1, a(1)=25, a(2)=409, a(3)=5565, a(n)=25 * a(n - 1) - 216 * a(n - 2) + 740 * a(n - 3) - 800 * a(n - 4). - _ Harvey P. Dale _ , Aug 25 2014 ●

▶ [A024437] 1,25,410,5570,67971,774075,8402620,88071940,898959941,8988218525,88404153630,858025759110,8237487011911,78372461725375,740024044725440,6943130337867080,64790256275839881,601800374629166625 ★ Expansion of 1 / ((1 - x)(1 - 7x)(1 - 8x)(1 - 9x)). ● a(n) = (21 * 9 ^ (n + 3) - 6 * 8 ^ (n + 4) + 4 * 7 ^ (n + 4) - 1) / 336. - _ Yahia Kahloune _ , Jun 28 2013 ● a(n) = 25 * a(n - 1) - 215 * a(n - 2) + 695 * a(n - 3) - 504 * a(n - 4). - _ Matthew House _ , Jan 16 2017 ●

▶ [A028041] 1,25,410,5630,70551,839775,9697720,109955260,1232712701,13723263125,152103875430,1681194742890,18549572478451,204440573062075,2251614293669540,24787137412192520,272794189857639801 ★ Expansion of 1 / ((1 - 3x)(1 - 4x)(1 - 7x)(1 - 11x)). ● a(n)=(3 * 11 ^ (n + 3) - 2 * 7 ^ (n + 4) + 2 * 4 ^ (n + 5) - 7 * 3 ^ (n + 4)) / 672. [_ Yahia Kahloune _ , Jun 07 2013] ●

▶ [A025995] 1,25,412,5694,71799,859131,9961834,113290048,1272810517,14190510477,157439054136,1741315046562,19221270567955,211903646137663,2334237969260518,25699753556697636,282859494700604913 ★ Expansion of 1 / ((1 - 2x)(1 - 5x)(1 - 7x)(1 - 11x)). ● a(n) = - 8 * 2 ^ n / 135 + 125 * 5 ^ n / 36 - 343 * 7 ^ n / 40 + 1331 * 11 ^ n / 216. _ R. J. Mathar _ , Jun 20 2013 ●

▶ [A023955] 1,25,413,5693,70989,831693,9347341,102052621,1091175437,11489041421,119581270029,1233774903309,12644058796045,128906738896909,1308890633457677,13248056512466957,133757151879680013 ★ Expansion of 1 / ((1 - x)(1 - 6x)(1 - 8x)(1 - 10x)). ● a(n) = (35 * 10 ^ (n + 3) - 90 * 8 ^ (n + 3) + 63 * 6 ^ (n + 3) - 8) / 2520. [_ Yahia Kahloune _ , Jun 30 2013] ● a(0)=1, a(1)=25, a(2)=413, a(3)=5693; for n>3, a(n) = 25 * a(n - 1) - 212 * a(n - 2) + 668 * a(n - 3) - 480 * a(n - 4). - _ Vincenzo Librandi _ , Jul 16 2013 ●

► [A025980] 1,25,413,5717,71949,854517,9768541,108728389,1186801517,12764197589,135709713789,1429715165541,14950747454605,155389970948341,1606842713958557,16544916327312773,169737574552541613 ★ Expansion of 1 / ((1 - 2x)(1 - 4x)(1 - 9x)(1 - 10x)). ● a(n) = - 2 ^ n / 14 + 16 * 4 ^ n / 15 - 729 * 9 ^ n / 35 + 125 * 10 ^ n / 6. - _ R. J. Mathar _ , Jun 20 2013 ●

► [A025978] 1,25,415,5805,74271,902325,10616455,122340685,1390355791,15651303525,175025553495,1948179192765,21613189505311,239210965847125,2643048211482535,29167353171072045,321591476229774831 ★ Expansion of 1 / ((1 - 2x)(1 - 4x)(1 - 8x)(1 - 11x)). ● a(n) = - 2 * 2 ^ n / 27 + 8 * 4 ^ n / 7 - 64 * 8 ^ n / 9 + 1331 * 11 ^ n / 189. _ R. J. Mathar _ , Jun 20 2013 ●

► [A028037] 1,25,415,5845,76111,952525,11679655,141710965,1710104671,20579684125,247310795095,2969873300485,35651407676431,427894724193325,5135204742169735,61625269469056405,739520126057523391 ★ Expansion of 1 / ((1 - 3x)(1 - 4x)(1 - 6x)(1 - 12x)). ● a(n) = (12 ^ (n + 3) - 12 * 6 ^ (n + 3) + 27 * 4 ^ (n + 3) - 16 * 3 ^ (n + 3)) / 432 = - 3 ^ n + 4 ^ (n + 1) + 3 ^ n * 4 ^ (n + 1) - 6 ^ (n + 1). - _ Yahia Kahloune _ , May 31 2013 ● a(n) = 25 * a(n - 1) - 210 * a(n - 2) + 720 * a(n - 3) - 864 * a(n - 4), with a(0)=1, a(1)=25, a(2)=415, a(3)=5845. - _ Harvey P. Dale _ , May 23 2014 ●

► [A022845] 1,25,416,5810,73731,881895,10139746,113382280,1242174461,13399350965,142804173876,1507398751950,15788505813991,164317248669235,1701069830850806,17531812552906820,180008344463520321 ★ Expansion of 1 / ((1 - x) * (1 - 5 * x) * (1 - 9 * x) * (1 - 10 * x)). ● a(n) = (32 * 10 ^ (n + 3) - 45 * 9 ^ (n + 3) + 18 * 5 ^ (n + 3) - 5) / 1440. - _ Yahia Kahloune _ , Jun 29 2013 ● a(0)=1, a(1)=25, a(2)=416, a(3)=5810; for n>3, a(n) = 25 * a(n - 1) - 209 * a(n - 2) + 635 * a(n - 3) - 450 * a(n - 4). - _ Vincenzo Librandi _ , Jul 12 2013 ●

► [A023952] 1,25,416,5822,74319,898779,10511446,120335968,1358681621,15202492877,169098946380,1873624439778,20707233183547,228476788273759,2518219270791458,27735798399148292,305344872665615937 ★ Expansion of 1 / ((1 - x)(1 - 6x)(1 - 7x)(1 - 11x)). ● a(0)=1, a(1)=25, a(2)=416, a(3)=5822, a(n)=25 * a(n - 1) - 209 * a(n - 2) + 647 * a(n - 3) - 462 * a(n - 4) [_ Harvey P. Dale _ , Mar 24 2012] ● a(n) = (3 * 11 ^ (n + 3) - 25 * 7 ^ (n + 3) + 24 * 6 ^ (n + 3) - 2) / 600. [_ Yahia Kahloune _ , Jun 29 2013] ●

► [A025991] 1,25,417,5909,77369,972381,11958289,145367893,1756276137,21149737037,254259660161,3053974195077,36665246878105,440090336260093,5281738449973233,63384838751399861,760642183440232073 ★ Expansion of 1 / ((1 - 2x)(1 - 5x)(1 - 6x)(1 - 12x)). ● a(0)=1, a(1)=25, a(2)=417, a(3)=5909, a(n)=25 * a(n - 1) - 208 * a(n - 2) + 684 * a(n - 3) - 720 * a(n - 4). - _ Harvey P. Dale _ , May 20 2013 ● a(n) = - 2 ^ n / 15 + 125 * 5 ^ n / 21 - 9 * 6 ^ n / 1 + 144 * 12 ^ n / 35. _ R. J. Mathar _ , Jun 20 2013 ●

► [A020838] 1,25,419,5885,74811,892605,10199659,113009005,1223954171,13030808285,136920690699,1424085096525,14693717768731,150657001125565,1537006821834539,15618310264486445,158202271944562491 ★ Expansion of 1 / ((1 - 7x)(1 - 8x)(1 - 10x)). ● a(n) = 25 * a(n - 1) - 206 * a(n - 2) + 560 * a(n - 3), n >= 3. - _ Vincenzo Librandi _ , Mar 15 2011 ● a(n) = 18 * a(n - 1) - 80 * a(n - 2) + 7 ^ n, n >= 2. - _ Vincenzo Librandi _ , Mar 15 2011 ● a(n) = 7 ^ (n + 2) / 3 + 5 * 10 ^ (n + 1) / 3 - 4 * 8 ^ (n + 1). - _ R. J. Mathar _ , Mar 15 2011 ●

► [A025975] 1,25,419,5981,78939,999453,12366859,151048909,1831243931,22106050109,266192557995,3200758779309,38454275485627,461767630974493,5543426384577227,66536622452560781,798548018884036827 ★ Expansion of 1 / ((1 - 2x)(1 - 4x)(1 - 7x)(1 - 12x)). ● a(n) = - 2 * 2 ^ n / 25 + 4 * 4 ^ n / 3 - 343 * 7 ^ n / 75 + 108 * 12 ^ n / 25. _ R. J. Mathar _ , Jun 20 2013 ●

► [A025953] 1,25,420,5990,78431,976275,11762890,138612880,1607750661,18432396125,209480782160,2364808954170,26557583235691,297035583017575,3311510934334230,36823696010925860,408634337848437521 ★ Expansion of g.f. 1 / ((1 - 2x)(1 - 3x)(1 - 9x)(1 - 11x)). ● a(n) = - 8 * 2 ^ n / 63 + 9 * 3 ^ n / 16 - 243 * 9 ^ n / 28 + 1331 * 11 ^ n / 144. - _ R. J. Mathar _ , Jun 20 2013 ●

► [A020595] 1,25,421,5965,76741,929005,10791061,121699645,1342777381,14569879885,156038219701,1653799781725,17380932862021,181408804717165,1882561696208341,19442349988398205,199976918230722661 ★ Expansion of 1 / ((1 - 6x)(1 - 9x)(1 - 10x)). ● a(0)=1, a(1)=25, a(2)=421; For n>2, a(n) = 25 * a(n - 1) - 204 * a(n - 2) + 540 * a(n - 3). - _ Harvey P. Dale _ , Oct 13 2012 ● a(n) = (3 * 10 ^ (n + 2) - 4 * 9 ^ (n + 2) + 6 ^ (n + 2)) / 12. [_ Yahia Kahloune _ , Jun 30 2013] ● a(n) = 19 * a(n - 1) - 90 * a(n - 2) + 6 ^ n. - _ Vincenzo Librandi _ , Jul 04 2013 ●

► [A021964] 1,25,422,6050,79563,993675,12002224,141692500,1645717205,18887136125,214818117306,2426541462150,27263857999327,305049644712175,3401871310224068,37837512809631800,419965002207076329 ★ Expansion of 1 / ((1 - x)(1 - 4x)(1 - 9x)(1 - 11x)). ● a(n) = (12 * 11 ^ (n + 3) - 21 * 9 ^ (n + 3) + 4 ^ (n + 5) - 7) / 1680. - _ Yahia Kahloune _ , Jun 26 2013 ● a(0)=1, a(1)=25, a(2)=422, a(3)=6050; for n>3, a(n) = 25 * a(n - 1) - 203 * a(n - 2) + 575 * a(n - 3) - 396 * a(n - 4). - _ Vincenzo Librandi _ , Jul 11 2013 ● a(0)=1, a(1)=25; for n>1, a(n) = 20 * a(n - 1) - 99 * a(n - 2) + (4 ^ n - 1) / 3. - _ Vincenzo Librandi _ , Jul 11 2013 ●

► [A022456] 1,25,422,6074,80739,1027731,12764344,156290788,1897808357,22932373997,276311410986,3323658428142,39939656787655,479667696880423,5758762699959548,69124442908248536,829628539194983433 ★ Expansion of 1 / ((1 - x) * (1 - 5 * x) * (1 - 7 * x) * (1 - 12 * x)). ● a(n) = (2 * 12 ^ (n + 4) - 22 * 7 ^ (n + 4) + 33 * 5 ^ (n + 4) - 35) / 9240. - _ Yahia Kahloune _ , Jun 27 2013 ● a(0)=1, a(1)=25, a(2)=422, a(3)=6074; for n > 3, a(n) = 25 * a(n - 1) - 203 * a(n - 2) + 599 * a(n - 3) - 420 * a(n - 4). - _ Vincenzo Librandi _ , Jul 12 2013 ●

► [A020593] 1,25,423,6053,79079,977613,11662351,135834661,1556251287,17625401981,197992990559,2211194243349,24591484236775,272666167778029,3016684939110447,33322861263616517,367668910476901943,4053314434522328157,4465821169391353241 5 ★ Expansion of 1 / ((1 - 6x)(1 - 8x)(1 - 11x)). ● a(n) = 18 * 6 ^ n / 5 - 32 * 8 ^ n / 3 + 121 * 11 ^ n / 15. - _ R. J. Mathar _ , Jun 30 2013 ● a(0)=1, a(1)=25, a(2)=423; for n>2, a(n) = 25 * a(n - 1) - 202 * a(n - 2) + 528 * a(n - 3). - _ Vincenzo Librandi _ , Jul 04 2013 ● a(n) = 19 * a(n - 1) - 88 * a(n - 2) + 6 ^ n. - _ Vincenzo Librandi _ , Jul 04 2013 ●

► [A025951] 1,25,423,6125,82103,1054725,13214671,163046125,1992333255,24194295125,292622085119,3529789897725,42504079369207,511221761969125,6144043634254767,73803583579040525,886243482821361959 ★ Expansion of 1 / ((1 - 2x)(1 - 3x)(1 - 8x)(1 - 12x)). ● a(n) = - 2 * 2 ^ n / 15 + 3 * 3 ^ n / 5 - 64 * 8 ^ n / 15 + 24 * 12 ^ n / 5. - _ R. J. Mathar _ , Jun 20 2013 ● a(0)=1, a(1)=25, a(2)=423, a(3)=6125, a(n)=25 * a(n - 1) - 202 * a(n - 2) + 600 * a(n - 3) - 576 * a(n - 4). - _ Harvey P. Dale _ , Mar 08 2014 ●

► [A021944] 1,25,425,6185,83241,1072425,13462825,166325545,2034167081,24716438825,299050134825,3608230161705,43455812660521,522726247165225,6287287285808425,75473627419962665,906326894688267561 ★ Expansion of 1 / ((1 - x) * (1 - 4 * x) * (1 - 8 * x) * (1 - 12 * x)). ● a(n) = (21 * 12 ^ (n + 3) - 66 * 8 ^ (n + 3) + 77 * 4 ^ (n + 3) - 32) / 7392. [_ Yahia Kahloune _ , Jun 26 2013] ● a(n) = 25 * a(n - 1) - 200 * a(n - 2) + 560 * a(n - 3) - 384 * a(n - 4). - _ Wesley Ivan Hurt _ , May 04 2021 ●

► [A020499] 1,25,426,6170,81851,1029315,12498676,148149460,1726010901,19855374605,226242178526,2559210312750,28786474721551,322368894171895,3597522989519976,40035969784960040,444564772324613801 ★ Expansion of 1 / ((1 - 5x)(1 - 9x)(1 - 11x)). ● a(n) = 25 * 5 ^ n / 24 - 81 * 9 ^ n / 8 + 121 * 11 ^ n / 12. - _ R. J. Mathar _ , Jun 30 2013 ● a(0)=1, a(1)=25, a(2)=426; for n>2, a(n) = 25 * a(n - 1) - 199 * a(n - 2) + 495 * a(n - 3). - _ Vincenzo Librandi _ , Jul 03 2013 ● a(n) = 20 * a(n - 1) - 99 * a(n - 2) + 5 ^ n. - _ Vincenzo Librandi _ , Jul 03 2013 ●

► [A020577] 1,25,427,6229,83779,1076341,13459699,165601573,2017494787,24431946517,294797887891,3549239159557,42674698231075,512696237681653,6156632228705203,73909998565124581,887135686636037443 ★ Expansion of 1 / ((1 - 6x)(1 - 7x)(1 - 12x)). ● a(n) = 6 * 6 ^ n - 49 * 7 ^ n / 5 + 24 * 12 ^ n / 5. - _ R. J. Mathar _ , Jun 30 2013 ● a(0)=1, a(1)=25, a(2)=427; for n>2, a(n) = 25 * a(n - 1) - 198 * a(n - 2) + 504 * a(n - 3). - _ Vincenzo Librandi _ , Jul 04 2013 ● a(n) = 19 * a(n - 1) - 84 * a(n - 2) + 6 ^ n. - _ Vincenzo Librandi _ , Jul 04 2013 ●

► [A021714] 1,25,428,6278,84879,1092243,13601506,165488176,1979095877,23357343581,272803757304,3159571375194,36342586372795,415641464948839,4730786270092622,53625950549096132,605758471885400433 ★ Expansion of 1 / ((1 - x)(1 - 3x)(1 - 10x)(1 - 11x)). ● a(n) = - 1 / 180 + 3 ^ (n + 3) / 112 - 10 ^ (n + 3) / 63 + 11 ^ (n + 3) / 80. [_ Bruno Berselli _ , May 07 2013] ●

► [A056090] 25,429,3364,17602,71385,242347,720792,1934076,4777337,11021713,24008532,49790614,98954626,189457350,350941064,631167840,1105440045,1890167329,3162113836,5185330818,8348369731,13215102985,20593381200,31626858540,47916657405 ★ Number of 4 - element ordered antichain covers of an unlabeled n - element set. ● a(n) = C(n + 14, 14) - 12 * C(n + 10, 10) + 24 * C(n + 8, 8) + 4 * C(n + 7, 7) - 18 * C(n + 6, 6) + 6 * C(n + 5, 5) - 36 * C(n + 4, 4) + 36 * C(n + 3, 3) + 11 * C(n + 2, 2) - 22 * C(n + 1, 1) + 6 * C(n, 0). ● a(n) = (- 104270181120 n + 236073062016 n ^ 2 - 169534943760 n ^ 3 + 28403538800 n ^ 4 + 12862329480 n ^ 5 - 2983956976 n ^ 6 - 613678065 n ^ 7 + 39763295 n ^ 8 + 21456435 n ^ 9 + 2461459 n ^ 10 + 143325 n ^ 11 + 5005 n ^ 12 + 105 n ^ 13 + n ^ 14) / (14)!. - _ G. C. Greubel _ , Oct 06 2017 ●

► [A020448] 1,25,429,6305,85541,1108665,13976989,173186065,2122320981,25822510505,312717161549,3775431050625,45488017644421,547320192731545,6579560264282109,79048497300991985,949332313236647861 ★ Expansion of 1 / ((1 - 5x)(1 - 8x)(1 - 12x)). ● a(n) = 25 * 5 ^ n / 21 - 16 * 8 ^ n / 3 + 36 * 12 ^ n / 7. - _ R. J. Mathar _ , Jun 30 2013 ● a(0)=1, a(1)=25, a(2)=429; for n>2, a(n) = 25 * a(n - 1) - 196 * a(n - 2) + 480 * a(n - 3). - _ Vincenzo Librandi _ , Jul 03 2013 ● a(n) = 20 * a(n - 1) - 96 * a(n - 2) + 5 ^ n. - _ Vincenzo Librandi _ , Jul 03 2013 ●

► [A019742] 1,25,431,6365,86511,1117605,13957591,170189245,2038704671,24092243285,281680643751,3265150951725,37583315950831,430083097386565,4897580558961911,55540052099419805,627607236896972991 ★ Expansion of 1 / ((1 - 4x)(1 - 10x)(1 - 11x)). ● a(n) = 2 * 4 ^ (n + 1) / 21 + 11 ^ (n + 2) / 7 - 5 * 10 ^ (n + 1) / 3. - _ R. J. Mathar _ , Nov 11 2012 ● a(0)=1, a(1)=25, a(2)=431; for n>2, a(n) = 25 * a(n - 1) - 194 * a(n - 2) + 440 * a(n - 3). - _ Vincenzo Librandi _ , Jul 03 2013 ● a(n) = 21 * a(n - 1) - 110 * a(n - 2) + 4 ^ n. - _ Vincenzo Librandi _ , Jul 03 2013 ●

► [A019722] 1,25,433,6457,89089,1174537,15047761,189169369,2347464097,28866716329,352675969009,4288594179961,51971489903425,628233183645001,7579976215410577,91330317763703833,1099299246068405473 ★ Expansion of 1 / ((1 - 4x)(1 - 9x)(1 - 12x)). ● a(n) = 2 * 4 ^ n / 5 - 3 ^ (2n + 3) / 5 + 12 ^ n * 6. - _ R. J. Mathar _ , Nov 11 2012 ● a(0)=1, a(1)=25, a(2)=433; for n>2, a(n) = 25 * a(n - 1) - 192 * a(n - 2) + 432 * a(n - 3). - _ Vincenzo Librandi _ , Jul 03 2013 ● a(n) = 21 * a(n - 1) - 108 * a(n - 2) + 4 ^ n. - _ Vincenzo Librandi _ , Jul 03 2013 ●

► [A021324] 1,25,437,6629,93429,1260021,16509109,211998133,2682866357,33583284917,416888307381,5141548576437,63087471804085,770938550533813,9390151495286453,114070706832309941,1382737370876575413 ★ Expansion of 1 / ((1 - x)(1 - 2x)(1 - 10x)(1 - 12x)). ● a(n) = (36 * 12 ^ (n + 3) - 55 * 10 ^ (n + 3) + 99 * 2 ^ (n + 3) - 80) / 7920. [_ Yahia Kahloune _ , Jul 07 2013] ● a(0)=1, a(1)=25; for n>1, a(n) = 22 * a(n - 1) - 120 * a(n - 2) + 2 ^ n - 1. - _ Vincenzo Librandi _ , Jul 09 2013 ● a(0)=1, a(1)=25, a(2)=437, a(3)=6629; for n>3, a(n) = 25 * a(n - 1) - 188 * a(n - 2) + 404 * a(n - 3) - 240 * a(n - 4). - _ Vincenzo Librandi _ , Jul 09 2013 ●

► [A018207] 1,25,439,6685,94471,1276405,16745119,215226205,2725568791,34135388485,423910350799,5229781276525,64185946519111,784517071831765,9557062002788479,116113315455883645,1407645499737869431 ★ Expansion of 1 / ((1 - 3x)(1 - 10x)(1 - 12x)). ● a(0)=1, a(1)=25, a(2)=439; for n>2. a(n) = 25 * a(n - 1) - 186 * a(n - 2) + 360 * a(n - 3). - _ Vincenzo Librandi _ , Jul 02 2013 ● a(n) = 22 * a(n - 1) - 120 * a(n - 2) + 3 ^ n. - _ Vincenzo Librandi _ , Jul 02 2013 ● a(n) = (7 * 12 ^ (n + 2) - 9 * 10 ^ (n + 2) + 2 * 3 ^ (n + 2)) / 126. [_ Yahia Kahloune _ , Jul 06 2013] ●

► [A016633] 1,25,447,6989,101759,1417941,19180519,253983853,3309800367,42599540357,542895780791,6863463633117,86197420501375,1076563471968373,13382900349107463,165700329729679181 ★ Expansion of 1 / ((1 - 2x)(1 - 11x)(1 - 12x)). ● a(n) = (648 * 12 ^ n + 2 ^ (n + 1) - 5 * 11 ^ (n + 2)) / 45. ● a(n) = 23

* a(n - 1) - 132 * a(n - 2) + 2 ^ n. ● a(n) = 25 * a(n - 1) - 178 * a(n - 2) + 264 * a(n - 3), n >= 3. (End) ●

► [A056069] 25,454,3818,21420,92805,335152,1055944,2990020,7767357,18789070,42797602,92588216,191542842,381000192,731941256,1363109096,2468549141,4358716470,7520830306,12706161124,21054530855,34269633840,54863015040,86489873580,134406530985 ⋆ Number of 4 - element ordered antichains on an unlabeled n - element set; T _ 1 - hypergraphs with 4 labeled nodes and n hyperedges. ● a(n) = C(n + 15, 15) - 12 * C(n + 11, 11) + 24 * C(n + 9, 9) + 4 * C(n + 8, 8) - 18 * C(n + 7, 7) + 6 * C(n + 6, 6) - 36 * C(n + 5, 5) + 36 * C(n + 4, 4) + 11 * C(n + 3, 3) - 22 * C(n + 2, 2) + 6 * C(n + 1, 1). ●

► [A014927] 1,25,457,7369,111049,1604041,22505929,309160393,4178995657,55776799177,736867805641,9652968253897,125562274081225,1623467149388233,20882244117621193,267394589311003081 ⋆ a(1)=1, a(n) = n * 12 ^ (n - 1) + a(n - 1). ● a(n) = (1 / 121) * (1 + 12 ^ n * (11 * n - 1)), with n >= 1. - _ Paolo P. Lava _ , Jan 13 2009 ● a(1)=1, a(2)=25, a(n) = 24 * a(n - 1) - 144 * a(n - 2) + 1. - _ Vincenzo Librandi _ , Oct 23 2012 ●

► [A059946] 0,0,0,25,472,6185,70700,759045,7894992,80736625,817897300,8241325565,82783813112,830046591465,8313655213500,83215436364085,832626645756832,8329096006484705,83307920631515300,833180902353754605,83324189289633 58152,83327847634888960345 ⋆ Number of 5 - block bicoverings of an n - set. ● a(n) = (1 / 5!) * (10 ^ n - 5 * 6 ^ n - 10 * 4 ^ n + 20 * 3 ^ n + 30 * 2 ^ n - 60). ●

► [A207597] 25,625,3025,9025,21025,42025,75625,126025,198025,297025,429025,600625,819025,1092025,1428025,1836025,2325625,2907025,3591025,4389025,5313025,6375625,7590025,8970025,10530025 ⋆ Number of n X 6 0..1 arrays avoiding 0 0 0 and 0 1 0 horizontally and 0 0 1 and 1 0 1 vertically. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

► [A207110] 25,625,3399,11511,30415,68737,139341,260597,457869,765241,1227499,1902387,2863155,4201417,6030337,8488161,11742113,15992673,21478255,28480303,37328823,48408369,62164501,79110733,99835989 ⋆ Number of n X 7 0..1 arrays avoiding 0 0 0 and 0 1 1 horizontally and 0 0 1 and 1 1 0 vertically ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. ●

► [A207701] 25,625,3969,15129,43681,105625,225625,439569,797449,1366561,2235025,3515625,5349969,7912969,11417641,16120225,22325625,30393169,40746899,53860921,70308225,90725625,115842169,146482609,183575401 ⋆ Number of n X 6 0..1 arrays avoiding 0 0 0 and 0 1 0 horizontally and 0 0 1 and 1 1 0 vertically. ● a(n) = (- 3 + n + 15 * n ^ 2 + 2 * n ^ 3) ^ 2 / 9. ●

► [A286439] 0,1,25,747,7459,42983,176373,575775,1595487,3908979,8701313,17936083,34713675,63739327,111921149,189119943,309074343,490526475,758575017,1146284219,1696579123,2464458903,3519561925,4949117807,6861323439 ⋆ Number of ways to tile an n X n X n triangular area with four 2 X 2 X 2 triangular tiles and an appropriate number (= n ^ 2 - 16) of 1 X 1 X 1 tiles. ● a(n) = (n ^ 8 - 12 * n ^ 7 + 6 * n ^ 6 + 432 * n ^ 5 - 1279 * n ^ 4 - 4692 * n ^ 3 + 20592 * n ^ 2 + 13320 * n - 91800) / 24, for n>=5. ●

► [A183879] 1,25,821,8361,57625,336617,1817149,9433849,48036737,242284857,1216409221,6093687497,30495285865,152537717449,762827288141,3814448005209,19072935346513,95366219539097,476834503269013 ⋆ Number of arrangements of n + 2 numbers in 0..4 with each number being the sum mod 5 of two others. ● a(n) = 15 * a(n - 1) - 92 * a(n - 2) + 306 * a(n - 3) - 609 * a(n - 4) + 747 * a(n - 5) - 554 * a(n - 6) + 228 * a(n - 7) - 40 * a(n - 8) for n>9. ●

► [A014769] 1,25,1225,2601,13689,21025,61009,82369,180625,227529,423801,511225,855625,1002001,1555009,1782225,2614689,2948089,4141225,4609609,6255001,6890625,9090225,9928801,12794929 ⋆ Squares of odd pentagonal numbers. ● a(n) = a(n - 1) + 4 * a(n - 2) - 4 * a(n - 3) - 6 * a(n - 4) + 6 * a(n - 5) + 4 * a(n - 6) - 4 * a(n - 7) - a(n - 8) + a(n - 9) for n>8. ● a(n) = 36 * n ^ 4 + 60 * n ^ 3 + 37 * n ^ 2 + 10 * n + 1 for n even. ● a(n) = 36 * n ^ 4 - 12 * n ^ 3 + n ^ 2 for n odd. ●

► [A172261] 0,0,25,1847,162531,2501726,21243084,119138166,502726650,1724809105,5059647669,13132889249,30905051345,67124176002,136380034610,261909043488,479315827404,841394145399,1424246670499,2334919892115 ⋆ Number of ways to place 8 nonattacking kings on an 8 X n board. ● a(n) = (1048576n ^ 8 - 30277632n ^ 7 + 406210560n ^ 6 - 3319585920n ^ 5 + 18136811049n ^ 4 - 68048382318n ^ 3 + 171628664735n ^ 2 - 266425935930n + 194935658400) / 2520, n >=7. ●

► [A051112] 0,0,0,0,25,2020,82115,2401910,58089465,1245331920,24625121455,460316430970,8266174350005,144171200793620,2461016066613195,41343340015862430,686274244801356145,11289648429330100120 ⋆ Number of monotone Boolean functions of n variables with 4 mincuts. Also Sperner systems with 4 blocks. ● a(n) = (1 / 4!) * (16 ^ n - 12 * 12 ^ n + 24 * 10 ^ n + 4 * 9 ^ n - 18 * 8 ^ n + 6 * 7 ^ n - 36 * 6 ^ n + 36 * 5 ^ n + 11 * 4 ^ n - 22 * 3 ^ n + 6 * 2 ^ n). ● a(n) = 82 * a(n - 1) - 2970 * a(n - 2) + 62700 * a(n - 3) - 856713 * a(n - 4) + 7947786 * a(n - 5) - 51019100 * a(n - 6) + 226259000 * a(n - 7) - 678011136 * a(n - 8) + 1304341632 * a(n - 9) - 1445575680 * a(n - 10) + 696729600 * a(n - 11). ●

► [A042366] 26,27,53,80,373,453,826,1279,67334,68613,135947,204560,954187,1158747,2112934,3271681,172240346,175512027,347752373,523264400,2440809973,2964074373,5404884346,8368958719 ⋆ Numerators of continued fraction convergents to sqrt(710). ● a(n) = 2558 * a(n - 8) - a(n - 16). - _ Vincenzo Librandi _ , Nov 22 2013 ●

► [A042368] 26,27,53,80,4213,4293,8506,12799,674054,686853,1360907,2047760,107844427,109892187,217736614,327628801,17254434266,17582063067,3483649733 3,52418560400,2760601638133,2813020198533 ⋆ Numerators of continued fraction convergents to sqrt(711). ● a(n) = 160 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Nov 22 2013 ●

► [A042360] 26,27,53,133,452,1037,1489,2526,132841,135367,268208,671783,2283557,5238897,7522454,12761351,671112706,683874057,1354986763,3393847583,11536529512,26466906607,38003436119,64470342726 ⋆ Numerators of continued fraction convergents to sqrt(707). ● a(n) = 5052 * a(n - 8) - a(n - 16). - _ Vincenzo Librandi _ , Nov 22 2013 ●

► [A042358] 26,27,53,186,4889,14853,19742,34595,1818682,1853277,3671959,12869154,338269963,1027679043,1365949006,2393628049,125834607554,12822823560 3,254062843157,890416765074,23404898735081 ⋆ Numerators of continued fraction convergents to sqrt(706). ● a(n) = 69190 * a(n - 8) - a(n - 16). - _ Vincenzo Librandi _ , Nov 22 2013 ●

► [A042374] 26,27,80,107,187,481,668,1149,2966,4115,216946,221061,659068,880129,1539197,3958523,5497720,9456243,24410206,33866449,1785465554,181933200 3,5424129560,7243461563,12667591123 ⋆ Numerators of continued fraction convergents to sqrt(714). ● a(n) = 8230 * a(n - 10) - a(n - 20). - _ Wesley Ivan Hurt _ , Sep 07 2022 ●

► [A042376] 26,27,80,107,615,3182,16525,19707,55939,75646,3989531,4065177,12119885,16185062,93045195,481411037,2500100380,2981511417,8463123214,11444634631,603584124026,615028758657,1833641641340,2448670399997,14076993641325 ⋆ Numerators of continued fraction convergents to sqrt(715). ● a(n) = 151292 * a(n - 10) - a(n - 20). - _ Wesley Ivan Hurt _ , Sep 07 2022 ●

► [A042370] 26,27,80,507,1094,1601,84346,85947,256240,1623387,3503014,5126401,270075866,275202267,820480400,5198084667,11216649734,16414734401,864782838586,881197572987,2627177984560,16644265480347 ⋆ Numerators of continued fraction convergents to sqrt(712). ● a(n) = 3202 * a(n - 6) - a(n - 12). - _ Vincenzo Librandi _ , Nov 22 2013 ●

► [A042378] 26,27,107,776,1659,2435,4094,26999,274084,301083,575167,2601751,5778669,8380420,106343709,114724129,335791967,1457891997,1793683964,3251575961,34309443574,209108237405 ⋆ Numerators of continued fraction convergents to sqrt(716). ● a(n) = 70231439376398 * a(n - 28) - a(n - 56) for n>55. [_ Bruno Berselli _ , Nov 22 2013] ●

► [A042392] 26,27,215,242,12799,13041,104086,117127,6194690,6311817,50377409,56689226,2998217161,3054906387,24382561870,27437468257,1451130911234,1478568379491,11801109567671,13279677947162 ⋆ Numerators of continued fraction convergents to sqrt(723). ● a(n) = 484 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Nov 23 2013 ●

► [A042396] 26,27,350,727,9074,9801,518726,528527,6861050,14250627,177868574,192119201,10168067026,10360186227,134490301750,279340789727,3486579778474,3765920568201,199314449324926 ⋆ Numerators of continued fraction convergents to sqrt(725). ● a(n) = 19602 * a(n - 6) - a(n - 12). - _ Vincenzo Librandi _ , Nov 23 2013 ●

► [A042398] 26,27,458,485,25678,26163,444286,470449,24907634,25378083,430956962,456335045,24160379302,24616714347,418027808854,442644523201,23435543015306,23878187538507,405486543631418 ⋆ Numerators of continued fraction convergents to sqrt(726). ● a(n) = 970 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Nov 23 2013 ●

► [A042400] 26,27,701,728,38557,39285,1020682,1059967,56138966,57198933,1486112291,1543311224,81738295939,83281607163,2163778475014,2247060082177,119010902748218,121257962830395,3150459973508093 ⋆ Numerators of continued fraction convergents to sqrt(727). ● a(n) = 1456 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Nov 23 2013 ●

► [A042402] 26,27,1430,1457,77194,78651,4167046,4245697,224943290,229188987,12142770614,12371959601,655484669866,667856629467,35384029402150,36051886031617,1910082103046234,1946133989077851 ⋆ Numerators of continued fraction convergents to sqrt(728). ● a(n) = 54 * a(n - 2) - a(n - 4). - _ Vincenzo Librandi _ , Nov 23 2013 ●

► [A056081] 1,26,28,53,55,80,82,107,109,134,136,161,163,188,190,215,217,242,244,269,271,296,298,323,325 ⋆ Numbers that are congruent to { 1, 26 } mod 27. ● a(n) = 27 * (n - 1) - a(n - 1) with n>1, a(1) = 1. - _ Vincenzo Librandi _ , Aug 07 2010 ●

► [A303815] 0,1,26,29,79,84,159,166,266,275,400,411,561,574,749,764,964,981,1206,1225,1475,1496,1771,1794,2094 ⋆ Generalized 29 - gonal (or icosienneagonal) numbers: m * (27 * m - 25) / 2 with m = 0, + 1, - 1, + 2, - 2, + 3, - 3, ... ● a(n) = a(- n - 1) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). ● a(n) = (54 * n * (n + 1) + 23 * (2 * n + 1) * (- 1) ^ n - 23) / 16. Therefore: ● a(n) = n * (27 * n + 50) / 8, if n is even, or (n + 1) * (27 * n - 23) / 8 otherwise. ●

► [A069962] 1,26,29,109,250,689,1769,4666,12181,31925,83546,218761,572689,1499354,3925325,10276669,26904634,70437281,184407161,482784250,1263945541,3309052421,8663211674,22680582649,59378536225 ⋆ Define C(n) by the recursion C(0) = 5 * i where i ^ 2 = - 1, C(n + 1) = 1 / (1 + C(n)), then a(n) = 5 * (- 1) ^ n / Im(C(n)) where Im(z) denotes the imaginary part of z. ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - a(n - 3). ● a(n) = (2 ^ (- 1 - n) * (- 3 * (- 1) ^ n * 2 ^ (5 + n) - (3 - sqrt(5)) ^ n * (- 53 + sqrt(5)) + (3 + sqrt(5)) ^ n * (53 + sqrt(5)))) / 5. - _ Colin Barker _ , Oct 01 2016 ●

► [A373621] 1,1,1,1,1,26,31,36,41,46,676,881,1111,1366,1646,17576,24281,32386,42016,53296,456976,658806,916411,1238666,1635071 ⋆ Expansion of 1 / ((1 - 25 * x ^ 5) * (1 - x / (1 - 25 * x ^ 5) ^ (1 / 5))). ● a(5 * n) = 26 ^ n for n >= 0. ● a(n) = Sum _{ k=0..floor(n / 5) } 25 ^ k * binomial(n / 5,k). ● a(n) == 1 (mod 5). ●

► [A034096] 26,37,50,65,82,101,102,122,123,145,146,170,171,197,198,226,227,228,257,258,259,290,291,292,325 ⋆ Fractional part of square root of n starts with digit 0 (squares excluded). ● a(n) = 10n + O(sqrt(n)). - _ Charles R Greathouse IV _ , Sep 08 2022 ●

► [A217775] 26,44,68,98,134,176,224,278,338,404,476,554,638,728,824,926,1034,1148,1268,1394,1526,1664,1808,1958,2114 ⋆ a(n) = n * (n + 1) + (n + 2) * (n + 3) + (n + 4) * (n + 5). ● a(n) = 3 * n ^ 2 + 15 * n + 26. - _ Bruno Berselli _ , Mar 29 2013 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Wesley Ivan Hurt _ , Jan 27 2022 ●

► [A261932] 26,48,68,126,468,866,1226,2268,8406,15548,22008,40706,150848,279006,394926,730448,2706866,5006568,7086668,13107366,48572748,89839226,127165106,235202148,871602606 ⋆ The first of two consecutive positive integers the sum of the squares of which is equal to the sum of the squares of ten consecutive positive integers. ● a(n) = a(n - 1) + 18 * a(n - 4) - 18 * a(n - 5) - a(n - 8) + a(n - 9) for n>8. - _ Vincenzo Librandi _ , Sep 07 2015 ●

► [A158060] 26,51,76,101,126,151,176,201,226,251,276,301,326,351,376,401,426,451,476,501,526,551,576,601,626 ⋆ a(n) = 25 * n + 1. ● a(n) = 2 * a(n - 1) - a(n

- 2). ●
► [A169861] 0,26,51,77,102,127,153,178,204,229,254,280,305,331,356,381,407,432,458,483,508,534,559,585,610 ⋆ Ceiling of n inches converted to millimeters. ● a(n) = ceiling(n * 25.4) = ceiling(n * 127 / 5). ●
► [A122999] 1,1,26,51,701,1976,19501,68901,556426,2278951,16189601,73163376,477903401,2306987801,14254572826,71929267851,428293588501,2226525284776,1293386499730 1,685969971670 1,391943622049226 ⋆ G.f.: 1 / (1 - x - 25 * x ^ 2). ● a(0)=1, a(1)=1, a(n) = a(n - 1) + 25 * a(n - 2) for n>1. - _ Philippe Deléham _ , Sep 19 2009 ● a(n) = (1 / 2 + sqrt(101) / 202) * (1 / 2 + sqrt(101) / 2) ^ (n - 1) + (1 / 2 - sqrt(101) / 202) * (1 / 2 - sqrt(101) / 2) ^ (n - 1). - _ Antonio Alberto Olivares _ , Jun 06 2011 ●
► [A252994] 0,26,52,78,104,130,156,182,208,234,260,286,312,338,364,390,416,442,468,494,520,546,572,598,624 ⋆ Multiples of 26. ● a(n) = 26 * n = 2 * a(n - 1) - a(n - 2). ●
► [A042350] 26,53,2782,5617,294866,595349,31253014,63101377,3312524618,6688150613,351096356494,708880863601,37212901263746,75134683391093,3944216437600582,7963567558592257,418049729484397946,844063026527388149 ⋆ Numerators of continued fraction convergents to sqrt(702). ● a(n) = 106 * a(n - 2) - a(n - 4). - _ Vincenzo Librandi _ , Nov 22 2013 ●
► [A132767] 0,26,54,84,116,150,186,224,264,306,350,396,444,494,546,600,656,714,774,836,900,966,1034,1104,1176 ⋆ a(n) = n * (n + 25). ● a(n) = 2 * n + a(n - 1) + 24 (with a(0)=0). - _ Vincenzo Librandi _ , Aug 03 2010 ● a(n) = n ^ 2 + 25 * n. - _ Omar E. Pol _ , Nov 04 2016 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n > 2. ●
► [A184839] 26,56,85,115,144,174,204,232,262,291,321,351,380,410,438,468,497,526,556,585,615,645,673,703,732 ⋆ a(n) = n + floor(n * t) + floor(n * t ^ 2) + floor(n * t ^ 3) + floor(n * t ^ 4), where t is the pentanacci constant. ● a(n) = n + floor(n * q / p) + floor(n * r / p) + floor(n * s / p) + floor(n * u / p), where p=t, q=t ^ 2, r=t ^ 3, s=t ^ 4, u=t ^ 5, and t is the pentanacci constant. ●
► [A267294] 1,1,26,59,476,751,7024,16319,115136,195327,1776384,4177919,29474816,50003967,454754304,1069547519,7545552896,12801015807,116417101824,273804165119,1931661541376,3277060046847,29802778066944,70093866270719,494505354592256 ⋆ Decimal representation of the n - th iteration of the "Rule 121" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = a(n - 2) + 256 * a(n - 4) - 256 * a(n - 6) for n>12. ●
► [A162316] 1,26,61,106,161,226,301,386,481,586,701,826,961,1106,1261,1426,1601,1786,1981,2186,2401,2626,2861,3106,3361 ⋆ a(n) = 5n ^ 2 + 20n + 1. ● a(n) = a(n - 1) + 10 * n + 15 (with a(0)=1). - _ Vincenzo Librandi _ , Dec 02 2010 ●
► [A173085] 26,62,86,118,134,566,706,982,1198,1322,1346,1678,1706,1822,2386,2402,2498,2654,2966,3086,3142,3158,3326,3662,4222 ⋆ Numbers n such that n, n ^ 2 - 5, and n ^ 2 + 5 are semiprime. ● a(n) >> n log n. - _ Charles R Greathouse IV _ , Sep 14 2015 ●
► [A063304] 1,26,65,105,145,185,225,265,305,345,385,423,465,505,545,583,625,663,705,743,785,823,865,901,945 ⋆ Dimension of the space of weight n cuspidal new forms for Gamma _ 1(31). ● a(n) = a(n - 4) + a(n - 6) - a(n - 10) for n>13. ●
► [A262221] 1,26,76,151,251,376,526,701,901,1126,1376,1651,1951,2276,2626,3001,3401,3826,4276,4751,5251,5776,6326,6901,7501 ⋆ a(n) = 25 * n * (n + 1) / 2 + 1. ● a(n) = a(- n - 1) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●
► [A139698] 1,26,76,176,376,776,1576,3176,6376,12776,25576,51176,102376,204776,409576,819176,1638376,3276776,6553576,13107176,26214376,52428776,104857576,209715176,419430376 ⋆ Binomial transform of [1, 25, 25, 25, ...]. ● a(n) = 25 * 2 ^ (n - 1) - 24. - _ Emeric Deutsch _ , May 03 2008 ● a(n) = 2 * a(n - 1) + 24 (with a(1)=1). - _ Vincenzo Librandi _ , Nov 24 2010 ● a(n) = 3 * a(n - 1) - 2 * a(n - 2). G.f.: x * (23 * x + 1) / ((x - 1) * (2 * x - 1)). - _ Colin Barker _ , Mar 11 2014 ●
► [A083578] 1,1,26,76,776,3376,25376,131776,872576,4907776,30757376,179301376,1096779776,6496792576,39316299776,234555621376,1412702437376,8454739787776,50814338072576,304542431051776,1828628975845376 ⋆ a(n) = (6 ^ n + (- 4) ^ n) / 2. ● a(n) = (6 ^ n + (- 4) ^ n) / 2. ●
► [A173307] 0,26,78,156,260,390,546,728,936,1170,1430,1716,2028,2366,2730,3120,3536,3978,4446,4940,5460,6006,6578,7176,7800 ⋆ a(n) = 13 * n * (n + 1). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Sep 28 2013 ●
► [A042326] 26,79,105,289,394,1471,76886,232129,309015,850159,1159174,4327681,226198586,682923439,909122025,2501167489,3410289514,12732036031,6654761631 26,2009160525409,2674636688535,7358433902479 ⋆ Numerators of continued fraction convergents to sqrt(690). ● a(n) = 2942 * a(n - 6) - a(n - 12). - _ Vincenzo Librandi _ , Nov 21 2013 ●
► [A042330] 26,79,263,342,947,1289,2236,28121,30357,58478,147313,205791,764686,2499849,130756834,394770351,1315067887,1709838238,4734744363,6444582601,11179326964,140596506169,151775833133 ⋆ Numerators of continued fraction convergents to sqrt(692). ● a(n) = 4999698 * a(n - 14) - a(n - 28). - _ Wesley Ivan Hurt _ , May 20 2021 ●
► [A048509] 1,26,87,233,577,1377,3217,7409,16881,38129,85489,190449,421873,929777,2039793,4456433,9699313,21037041,45481969,98041841,210763761,451936241,966787057,2063597553,4395630577 ⋆ a(n) = T(4,n), array T given by A048505. ● a(n) = (n ^ 2 + 17 * n + 64) * 2 ^ (n - 2) - 15. - _ Ralf Stephan _ , Feb 05 2004 ● a(n) = 7 * a(n - 1) - 18 * a(n - 2) + 20 * a(n - 3) - 8 * a(n - 4). - _ Colin Barker _ , Mar 04 2015 ●
► [A010014] 1,26,98,218,386,602,866,1178,1538,1946,2402,2906,3458,4058,4706,5402,6146,6938,7778,8666,9602,10586,11618,12698,13826 ⋆ a(0) = 1, a(n) = 24 * n ^ 2 + 2 for n>0. ● a(n) = (2 * n + 1) ^ 3 - (2 * n - 1) ^ 3 for n >= 1. - Xavier Acloque, Oct 20 2003 ● a(n) = (2 * n - 1) ^ 2 + (2 * n + 1) ^ 2 + (4 * n) ^ 2 for n>0. - _ Bruno Berselli _ , Feb 06 2012 ●
► [A095796] 1,26,98,238,467,806,1276,1898,2693,3682,4886,6326,8023,9998,12272,14866,17801,21098,24778,28862,33371,38326,43748,49658,56077 ⋆ 1 + (26 * n + 17 + 7 * n ^ 2) * n / 2. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ●
► [A256645] 0,1,26,98,240,475,826,1316,1968,2805,3850,5126,6656,8463,10570,13000,15776,18921,22458,26410,30800,35651,40986,46828,53200 ⋆ 25 - gonal pyramidal numbers: a(n) = n * (n + 1) * (23 * n - 20) / 6. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>3. - _ Colin Barker _ , Apr 07 2015 ●
► [A175549] 0,26,98,290,578,1154,1730,2882,4034,5762,7490,10370,12674,16706,20162,24770,29378,36290,41474,50114,57026,66242,74882,87554,96770 ⋆ Number of triples (a, b, c) with gcd(a, b, c) = 1 and - n <= a,b,c <= n. ● a(n) = 2 * n * (4 * n ^ 2 + 6 * n + 3) - Sum _{ j=2..n } a(floor(n / j)). - _ Chai Wah Wu _ , Mar 30 2021 ●
► [A144129] 0,1,26,99,244,485,846,1351,2024,2889,3970,5291,6876,8749,10934,13455,16336,19601,23274,27379,31940,36981,42526,48599,55224 ⋆ ChebyshevT(3, n). ● a(n) = 4 * n ^ 3 - 3 * n. - _ Klaus Brockhaus _ , Jan 11 2009 ● a(n) = cosh(3 * arccosh(n)) = cos(3 * arccos(n)). - _ Artur Jasinski _ , Feb 14 2010 ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Vincenzo Librandi _ , Jun 30 2012 ●
► [A026915] 1,26,100,272,640,1400,2944,6056,12304,24824,49888,100040,200368,401048,802432,1605224,3210832,6422072,12844576,25689608,51379696,102759896,205520320,411041192,822082960 ⋆ a(n) = T(n,0) + T(n,1) + ... + T(n,n), T given by A026907. ● a(n) = 49 * 2 ^ n - 24 * n - 48. ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 2 * a(n - 3) for n>2. G.f.: (1 + 22 * x + x ^ 2) / ((1 - x) ^ 2 * (1 - 2 * x)). - _ Colin Barker _ , Feb 18 2016 ●
► [A136293] 26,102,178,254,330,406,482,558,634,710,786,862,938,1014,1090,1166,1242,1318,1394,1470,1546,1622,1698,1774,1850 ⋆ Linear bound on the genera of Heegaard splittings of closed, orientable 3 - manifolds that admit a generalized triangulation with n generalized tetrahedra. ● a(n) = 76 * n + 26. ● a(n) = 2 * a(n - 1) - a(n - 2). G.f.: 2 * (25 * x + 13) / (x - 1) ^ 2. [_ Colin Barker _ , Nov 09 2012] ●
► [A173089] 26,102,228,404,630,906,1232,1608,2034,2510,3036,3612,4238,4914,5640,6416,7242,8118,9044,10020,11046,12122,13248,14424,15650 ⋆ a(n) = 25 * n ^ 2 + n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Feb 04 2012 ●
► [A244633] 0,26,104,234,416,650,936,1274,1664,2106,2600,3146,3744,4394,5096,5850,6656,7514,8424,9386,10400,11466,12584,13754,14976 ⋆ a(n) = 26 * n ^ 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n > 2. ●
► [A042324] 26,105,5486,22049,1152034,4630185,241921654,972316801,50802395306,204181898025,10668261092606,42877226268449,2240284027051954,9004013334476265,470448977419817734,1890799923013747201 ⋆ Numerators of continued fraction convergents to sqrt(689). ● a(n) = 210 * a(n - 2) - a(n - 4). - _ Vincenzo Librandi _ , Nov 21 2013 ●
► [A024381] 1,26,107,276,565,1006,1631,2472,3561,4930,6611,8636,11037,13846,17095,20816,25041,29802,35131,41060,47621,54846,62767,71416,80825 ⋆ a(n) = sum of squares of first n positive integers congruent to 1 mod 4. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Vincenzo Librandi _ , Jun 19 2012 ●
► [A100161] 1,26,115,308,645,1166,1911,2920,4233,5890,7931,10396,13325,16758,20735,25296,30481,36330,42883,50180,58261,67166,76935,87608,99225 ⋆ Structured disdyakis dodecahedral numbers (vertex structure 9). ● a(n) = (1 / 6) * (40 * n ^ 3 - 48 * n ^ 2 + 14 * n). ●
► [A100162] 1,26,117,316,665,1206,1981,3032,4401,6130,8261,10836,13897,17486,21645,26416,31841,37962,44821,52460,60921,70246,80477,91656,103825 ⋆ Structured disdyakis dodecahedral numbers (vertex structure 7). ● a(n) = (1 / 6) * (42 * n ^ 3 - 54 * n ^ 2 + 18 * n). ●
► [A100163] 1,26,119,324,685,1246,2051,3144,4569,6370,8591,11276,14469,18214,22555,27536,33201,39594,46759,54740,63581,73326,84019,95704,108425 ⋆ Structured disdyakis dodecahedral numbers (vertex structure 5). ● a(n) = (1 / 6) * (44 * n ^ 3 - 60 * n ^ 2 + 22 * n). ●
► [A304169] 26,126,422,1302,3926,11766,35222,105462,315926,946806,2838422,8511222,25525526,76560246,229648022,688878582,2066504726,6199252086,18597232022,55790647542,167369845526,502105342326,1506307638422,4518906138102,13556684859926 ⋆ a(n) = 16 * 3 ^ n + 2 ^ (n + 1) - 26 (n>=1). ● a(n) = 6 * a(n - 1) - 11 * a(n - 2) + 6 * a(n - 3) for n>3. ●
► [A287992] 1,26,129,444,1285,3366,8281,19544,44829,100770,223201,488916,1061749,2289854,4910505,10480176,22275661,47178234,99605809,209704940,440390181,922733526,1929364729,4026514824,8388588925 ⋆ Number of (undirected) paths in the prism graph Y _ n. ● a(n) = (5 * 2 ^ (n + 1) - 5 * n - n ^ 2 - 13) * n. ● a(n) = 8 * a(n - 1) - 26 * a(n - 2) + 44 * a(n - 3) - 41 * a(n - 4) + 20 * a(n - 5) - 4 * a(n - 6) for n>6. (End) ●
► [A042314] 26,157,183,340,4263,4603,8866,57799,3014414,18144283,21158697,39302980,492794457,532097437,1024891894,6681448801,348460229546,2097442826077,2445903055623,4543345881700,56966053636023 ⋆ Numerators of continued fraction convergents to sqrt(684). ● a(n) = 115598 * a(n - 8) - a(n - 16), - _ Vincenzo Librandi _ , Nov 21 2013 ●
► [A200874] 26,163,602,1673,3886,7973,14932,26073,43066,67991,103390,152321,218414,305929,419816,565777,750330,980875,1265762,1614361,2037134,2545709,3152956,3873065,4721626 ⋆ Number of 0..n arrays x(0..5) of 6 elements without any interior element greater than both neighbors or less than both neighbors. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●
► [A214353] 26,169,660,1951,4822,10507,20840,38421,66802,110693,176188,271011,404782,589303,838864,1170569,1604682,2164993,2879204,3779335,4902150,6289603,7989304,10055005,12547106 ⋆ Number of 3 X 3 X 3 triangular 0..n arrays with no element lying outside the (possibly reversed) range delimited by its sw and se neighbors. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●
► [A027001] 1,26,174,743,2552,7784,22193,60882,163430,433495,1142496,3001056,7869649,20619098,54001422,141401879,370224248,969294632,2537687585,6643800690,17393752166,45537499111,119218794624,312118940928,817138091617 ⋆ a(n) = T(2 * n, n + 2), T given by A026998. ● a(n) = (2 ^ (- 1 - n) * (- 11 * 2 ^ (1 + n) + (11 - 5 * sqrt(5)) * (3 - sqrt(5)) ^ n + (3 + sqrt(5)) ^ n * (11 + 5 * sqrt(5))) - 12 * n - 2 * n ^ 2 - 4 * n ^ 3). ●
► [A181342] 1,26,186,726,2031,4626,9176,16486,27501,43306,65126,94326,132411,181026,241956,317126,408601,518586,649426,803606,983751,1192626,1433136,1

708326,2021381 ⋆ a(n) = (35 * n ^ 4 - 105 * n ^ 3 + 160 * n ^ 2 - 120 * n + 36) / 6. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) + 140 for n > 4; a(1)=1, a(2)=26, a(3)=186, a(4)=726. ●

▶ [A357178] 0,1,26,189,784,2375,5886,12691,24704,44469,75250,121121,187056,279019,404054,570375,787456,1066121,1418634,1858789,2402000,3065391,3867886,4830299,5975424 ⋆ First differences of cubes of triangular numbers. ● a(n) = (n ^ 3 + 3 * n ^ 5) / 4. ●

▶ [A245952] 26,197,676,1889,3966,7669,13064,21281,32290,47621,67116,92737,124166,163829,211216,269249,337194,418501,512180,622241,747406,892277,1055256,1241569,1449266 ⋆ Number of length 2 + 3 0..n arrays with some pair in every consecutive four terms totalling exactly n. ● a(n) = 1 + 12 * n - 5 * n ^ 2 + 18 * n ^ 3 + 3 * n ^ 4 for n even. ● a(n) = 16 - 5 * n - 6 * n ^ 2 + 18 * n ^ 3 + 3 * n ^ 4 for n odd. ●

▶ [A056026] 1,26,199,224,226,251,424,449,451,476,649,674,676,701,874,899,901,926,1099,1124,1126,1151,1324,1349,1351 ⋆ Numbers k such that k ^ 14 == 1 (mod 15 ^ 2). ● a(1)=1, a(2)=26, a(3)=199, a(4)=224, a(5)=226, a(n) = a(n - 1) + a(n - 4) - a(n - 5). - _ Harvey P. Dale _ , Nov 11 2011 ● a(n) = (- 225 - 125 * (- 1) ^ n + (171 - 171 * i) * (- i) ^ n + (171 + 171 * i) * i ^ n + 450 * n) / 8 where i=sqrt(- 1). - _ Colin Barker _ , Oct 16 2015 ●

▶ [A100242] 0,1,26,207,904,2825,7146,15631,30752,55809,95050,153791,238536,357097,518714,734175,1015936,1378241,1837242,2411119,3120200,3987081,5036746,6296687,7797024 ⋆ a(n) = n ^ 5 - n ^ 2 * (n ^ 2 - 1) / 2. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6); a(0)=0, a(1)=1, a(2)=26, a(3)=207, a(4)=904, a(5)=2825. - _ Harvey P. Dale _ , Aug 15 2011 ●

▶ [A241938] 26,218,1043,3599,10031,24052,51570,101421,186208,323246,535613,853307,1314509,1966952,2869396,4093209,5724054,7863682,10631831,14168231,18634715,24217436,31129190,39611845,49938876 ⋆ Number of length 2 + 4 0..n arrays with no consecutive five elements summing to more than 2 * n. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

▶ [A269658] 1,26,225,988,3065,7686,16681,32600,58833,99730,160721,248436,370825,537278,758745,1047856,1419041,1888650,2475073,3198860,4082841,5152246,6434825,7960968,9763825 ⋆ Number of length - 5 0..n arrays with no adjacent pair x,x + 1 repeated. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n >= 6. ●

▶ [A098994] 0,0,0,1,26,229,1246,5086,17084,49768,129958,311051,693290,1455909,2906436,5554172,10217000,18173272,31373636,52731365,86514106,138865053,218487442,337533050,512743140 ⋆ Number of permutations of [n] with exactly 3 descents which avoid the pattern 1324. ● a(n) = 12 * a(n - 1) - 66 * a(n - 2) + 220 * a(n - 3) - 495 * a(n - 4) + 792 * a(n - 5) - 924 * a(n - 6) + 792 * a(n - 7) - 495 * a(n - 8) + 220 * a(n - 9) - 66 * a(n - 10) + 12 * a(n - 11) - a(n - 12) for n >12. - _ Colin Barker _ , Oct 26 2017 ●

▶ [A172124] 0,0,26,232,1124,3896,10894,26192,56296,110960,204130,355000,589196,940072,1450134,2172576,3172944,4530912,6342186,8720520,11799860,15736600,20711966,26934512,34642744 ⋆ Number of ways to place 3 nonattacking bishops on an n X n board. ● a(n) = n * (n - 2) * (2 * n ^ 4 - 4 * n ^ 3 + 7 * n ^ 2 - 6 * n + 4) / 12 if n is even. ● a(n) = (n - 1) * (2 * n ^ 5 - 6 * n ^ 4 + 9 * n ^ 3 - 11 * n ^ 2 + 5 * n - 3) / 12 if n is odd. (End) ● a(n) = (2 * (n - 2) * n * (2 * n ^ 4 - 4 * n ^ 3 + 7 * n ^ 2 - 6 * n + 4) - 3 * (- 1) ^ n + 3) / 24. - _ Bruno Berselli _ , May 26 2013 ●

▶ [A293614] 0,26,238,1176,4200,12180,30492,68376,140712,270270,490490,848848,1410864,2264808,3527160,5348880,7922544,11490402,16353414,22881320,31523800,42822780,57425940,76101480,99754200 ⋆ a(n) = (8 * n + 18) * Pochhammer(n, 6) / 6!. ● a(n) = (n * (1080 + 2946 * n + 3121 * n ^ 2 + 1665 * n ^ 3 + 475 * n ^ 4 + 69 * n ^ 5 + 4 * n ^ 6)) / 360. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>7. ●

▶ [A245873] 26,239,676,1629,3102,5515,8840,13625,19810,28071,38316,51349,67046,86339,109072,136305,167850,204895,247220,296141,351406,414459,485016,564649,653042 ⋆ Number of length 4 + 2 0..n arrays with some pair in every consecutive three terms totalling exactly n. ● a(n) = 1 + 7 * n + 20 * n ^ 2 + 16 * n ^ 3 + n ^ 4 for n even. ● a(n) = - 8 - 3 * n + 20 * n ^ 2 + 16 * n ^ 3 + n ^ 4 for n odd. ●

▶ [A020537] 1,26,244,2024,16336,130976,1048384,8388224,67108096,536869376,4294964224,34359732224,274877894656,2199023230976,17592185995264,140737488257024,1125899906646016,9007199254347776,72057594037141504,576460752301850624,4611686018424242176 ⋆ a(n) = 4 * 8 ^ n - 3 * 2 ^ n. ● a(n) = 10 * a(n - 1) - 16 * a(n - 2). - _ Colin Barker _ , May 03 2015 ●

▶ [A088889] 0,1,26,245,1353,5368,17017,45878,109446,237291,476476,898403,1607255,2750202,4529539,7216924,11169884,16850757,24848238,35901697,50928437,71054060,97646109,132351154,177135490 ⋆ Polynexus numbers of order 8. ● a(n) = ((n ^ 8 - (n - 1) ^ 8) - (n ^ 4 - (n - 1) ^ 4)) / 240 = ((n ^ 8 - (n - 1) ^ 8) - (n ^ 4 - (n - 1) ^ 4)) / (2 ^ 8 - 2 ^ 4). ●

▶ [A060105] 1,26,246,1442,6292,22374,68354,185614,458601,1048476,2246244,4553484,8801104,16319252,29174652,50495236,84906041,139104966,222612170,348732670,535778100,808600650,1200499950,1755572130,2531579505 ⋆ Sixth column (m=5) of triangle A060102. ● a(n)=(n + 4) * (8 * n ^ 2 + 64 * n + 45) * binomial(n + 7, 7) / (4 * 45). ●

▶ [A086023] 1,26,251,1476,6376,22252,66352,175252,420277,931502,1933503,3796728,7109128,12773528,22137128,37160504,60634529,96454754,149963979,228375004,341286880,501309380,724811880,1032814380,1452040005 ⋆ a(n) = Sum _{ i =1..n } C(i + 3,4) ^ 2. ● a(n) = (C(n + 4,5) / 126) * (126 + 420 * C(n - 1,1) + 540 * C(n - 1,2) + 315 * C(n - 1,3) + 70 * C(n - 1,4)). ● a(n) = n * (n + 1) * (n + 2) * (n + 3) * (n + 4) * (35 * n ^ 4 + 280 * n ^ 3 + 685 * n ^ 2 + 500 * n + 12) / 181440. - _ Bruno Berselli _ , Sep 05 2013 ●

▶ [A109467] 1,26,256,2472,25056,250016,2499456,25002112,249995776,2500000256,25000032256,249999869952,2500000260096,25000000004096,249999997894656,2500000008404992,24999999983190016,250000000000065536,250000000013408665,24999999999463391232 ⋆ 4 X 4 analog of A094943. ● a(n + 4)=4 * a(n + 3) + 44 * a(n + 2) + 144 * a(n + 1) + 160 * a(n), a(0) = 1, a(1) = 26, a(2) = 256, a(3) = 2472. ●

▶ [A187695] 0,0,0,0,1,26,264,1846,10616,54354,258388,1168862,5109696,21805162,91460972,378874998,1555269016,6341845250,25732834116,104034429454,419461348976,1687846763418,6781455643420,27216164395430,109135969307976 ⋆ G.f.: x ^ 4 * (1 + x) * (1 + 12 * x - 31 * x ^ 2 + 12 * x ^ 2) / ((1 - x) ^ 2 * (1 - 2 * x) ^ 2 * (1 - 3 * x) * (1 - 4 * x)). ● a(n) = 27 * 2 ^ (n - 4) * n + 33 * 2 ^ (n - 4) - 2 * n + 2 - 26 * 3 ^ (n - 2) + 25 * 4 ^ (n - 3), n>1. - _ R. J. Mathar _ , Mar 17 2011 ●

▶ [A130901] 1,26,281,2827,28288,282895,2828967,28289681,282896824,2828968252,28289682538,282896825395,2828968253967,28289682539681,282896825396824,2828968253968252,28289682539682538,282896825396825395,2828968253968253967,28289682539682539681 ⋆ a(n) = Sum _{ k=1..9 } floor(10 ^ n / k). ● a(n) = 11 * a(n - 1) - 10 * a(n - 2) - a(n - 3) + 11 * a(n - 4) - 10 * a(n - 5) for n > 7. ●

▶ [A336732] 0,1,26,282,2072,12279,63858,305464,1382648,6029325,25628762,107026662,441439944,1804904755,7334032754,29669499492,119647095176,481400350185,1933747745850,7758556171570,31102292517560,124605486285231,498987240470066,1997573938402512 ⋆ The number of tight 4 X n pavings. ● a(n) = (4 ^ (n + 5) + (n - 42) * 3 ^ (n + 4) - 9 * (2 * n - 27) * 2 ^ (n + 5) - 36 * n ^ 3 - 486 * n ^ 2 - 2577 * n - 5398) / 36. ●

▶ [A224331] 1,26,291,2740,24005,201678,1647079,13176680,103766409,807072130,6214455467,47455841820,359873467213,2712892291382,20346692185455,151921968318160,1129919639366417,8374698503539434,61879716720597043 ⋆ Number of idempotent n X n 0..6 matrices of rank n - 1. ● a(n) = n * (2 * 7 ^ (n - 1) - 1). ● a(n) = 16 * a(n - 1) - 78 * a(n - 2) + 112 * a(n - 3) - 49 * a(n - 4). ●

▶ [A208600] 26,297,1564,5457,14838,34153,69784,130401,227314,374825,590580,895921,1316238,1881321,2625712,3589057,4816458,6358825,8273228,10623249,13479334,16919145,21027912,25898785,31633186 ⋆ Number of 6 - bead necklaces labeled with numbers - n..n not allowing reversal, with sum zero. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n >6. ●

▶ [A000498] 1,26,302,2416,15619,88234,455192,2203488,10187685,45533450,198410786,848090912,3572085255,14875399450,61403313100,251732291184,1026509354985,4168403181210,16871482830550,68111623139600 ⋆ Eulerian numbers (Euler's triangle: column k=4 of A008292, column k=3 of A173018) ● a(n) = (6 * 4 ^ n - 6 * (n + 1) * 3 ^ n + 3 * (n) * (n + 1) * 2 ^ n - (n - 1) * (n) * (n + 1)) / 6. (End) ●

▶ [A066912] 0,1,26,302,2416,15619,88234,455192,2203488,10187685,45533450,198410786,848090912,3572085255,14875399450,61403313100,251732291184,1026509354985,4168403181210,16871482830550,68111623139600 ⋆ Fourth column of the Eulerian triangle A008292 in square array format. ● a(n) = 4 ^ (n + 3) - (n + 4) * 3 ^ (n + 3) + (1 / 2) * (n + 3) * (n + 4) * 2 ^ (n + 3) - (1 / 6) * (n + 2) * (n + 3) * (n + 4). ●

▶ [A085743] 0,0,26,333,1944,7550,22770,57771,129248,262764,495450,879065,1483416,2400138,3746834,5671575,8357760,12029336,16956378,23461029,31923800,42790230,56577906,73883843,95392224 ⋆ a(n) = T(n ^ 3) - T(n ^ 2), where T() are the triangular numbers (A000217). ● a(n) = (n - 1) * n ^ 2 * (n ^ 3 + n ^ 2 + 1) / 2. ●

▶ [A053494] 1,26,348,2698,14751,62781,222190,681460,1865715,4655535,10756921,23290026,47700173,93104473,174248451,314246511,548380980,929209095,1533389605,2470568045,3894914166,6019752376,9136114923,13635769173,20039850376 ⋆ Number of symmetric 5 X 5 matrices of nonnegative integers with every row and column adding to n. ● a(n) = (189 * (59981 + 5555 * (- 1) ^ n) + 18 * (2345165 + 65331 * (- 1) ^ n) * n + (76615494 + 689850 * (- 1) ^ n) * n ^ 2 + 40 * (2138179 + 6237 * (- 1) ^ n) * n ^ 3 + (63277966 + 47250 * (- 1) ^ n) * n ^ 4 + 1260 * (25421 + 3 * (- 1) ^ n) * n ^ 5 + 11171664 * n ^ 6 + 2644080 * n ^ 7 + 405954 * n ^ 8 + 36500 * n ^ 9 + 1460 * n ^ 10) / 12386304. - _ Colin Barker _ , Jan 14 2017 ●

▶ [A010978] 1,26,351,3276,23751,142506,736281,3365856,13884156,52451256,183579396,600805296,1852482996,5414950296,15084504396,40225345056,103077446706,254661927156,608359048206,1408831480056,3169870830126,6943526580276,14833897694226,30957699535776 ⋆ a(n) = binomial(n,25). ● a(n) = C(n,25), n >= 25. ●

▶ [A020924] 1,26,390,4420,41990,352716,2704156,19315400,130378950,840219900,5209363380,31256180280,182327718300,1037865473400,5782393351800,31610416989840,169905991320390,899502306990300,4697400936504900,24228699567235800,123566367792902580,623715951716555880 ⋆ Expansion of 1 / (1 - 4 * x) ^ (13 / 2). ● a(n) = (2 * n + 11) * (2 * n + 9) * (2 * n + 7) * (2 * n + 5) * (2 * n + 3) * (2 * n + 1) * Binomial(2 * n, n) / 10395. - _ Vincenzo Librandi _ , Jul 05 2013 ● a(n) = 45 * binomial(n + 6,n) * binomial(2 * n + 12,n + 6) / (4 * binomial(2 * n,n)). - _ G. C. Greubel _ , Jul 20 2019 ●

▶ [A229025] 1,26,417,5334,59829,616602,5996089,55931678,505925277,4470884418,38804443041,332070466182,2809908472645,23562316644074,196128590350473,1622684846427246,13358308842842733,109510501632625170,894623468678425585,7286920685445869270 ⋆ Expansion of 1 / ((1 - 2x)(1 - 4x)(1 - 5x)(1 - 7x)(1 - 8x)). ● a(n) = (5 * 8 ^ (n + 4) - 12 * 7 ^ (n + 4) + 20 * 5 ^ (n + 4) - 15 * 4 ^ (n + 4) + 2 * 2 ^ (n + 4)) / 360. ● a(n) = (K * v ^ (n + 4) - L * u ^ (n + 4) + M * t ^ (n + 4) - N * s ^ (n + 4) + P * r ^ (n + 4)) / (K * L * M * N * P) ^ (1 / 3) where K,L,M,N,P have the following values: ●

▶ [A028165] 1,26,425,5590,64701,688506,6906145,66324830,616252901,5580303586,49508360265,432061044870,3720287489101,31681154472266,267320885100785,2238337148081710,18621251375573301,154069635600426546 ⋆ Expansion of 1 / ((1 - 5x)(1 - 6x)(1 - 7x)(1 - 8x)). ● a(n) = 26 * a(n - 1) - 251 * a(n - 2) + 1066 * a(n - 3) - 1680 * a(n - 4), n >= 4. - _ Vincenzo Librandi _ , Mar 19 2011 ● a(n) = 15 * a(n - 1) - 56 * a(n - 2) + 6 ^ (n + 1) - 5 ^ (n + 1), a(0)=1, a(1)=26. - _ Vincenzo Librandi _ , Mar 19 2011 ● a(n) = - 125 * 5 ^ n / 6 + 108 * 6 ^ n - 343 * 7 ^ n / 2 + 256 * 8 ^ n / 3. - _ R. J. Mathar _ , Jun 23 2013 ●

▶ [A028131] 1,26,429,5746,68285,751842,7859293,79189682,776807229,7469674498,70755237917,662574315858,6150105857533,56698559685794,519954841569501,4748676612377074,43230125518942397,392566127341918530 ⋆ Expansion of 1 / ((

1 - 4x)(1 - 6x)(1 - 7x)(1 - 9x)). ● a(n) = (9 ^ (n + 3) - 5 * 7 ^ (n + 3) + 5 * 6 ^ (n + 3) - 4 ^ (n + 3)) / 30. - _ Yahia Kahloune _ , Jun 02 2013 ●

▶ [A028120] 1,26,431,5824,70077,783510,8335867,85622108,857084393,8414359954,81378676743,777830951352,7365015041749,69207262292558,646271819803859,6003846344524756,55534562590626945,511814373212664522 ⋆ Expansion of 1 / ((1 - 4x)(1 - 5x)(1 - 8x)(1 - 9x)). ● a(n) = 26 * a(n - 1) - 245 * a(n - 2) + 988 * a(n - 3) - 1440 * a(n - 4), n >= 4. ● a(n) = 17 * a(n - 1) - 72 * a(n - 2) + 5 ^ (n + 1) - 4 ^ (n + 1), n >= 2. (End) ● a(n) = - 2 * 8 ^ (n + 2) / 3 + 9 ^ (n + 3) / 20 - 4 ^ (n + 2) / 5 + 5 ^ (n + 3) / 12. - _ R. J. Mathar _ , Mar 18 2011 ●

▶ [A028079] 1,26,433,5894,71533,807002,8661241,89694638,9045521658938508578,86964763249,835481774582,7946080247197,74954796226154,702270481591657,6542793214395326,60669652146889429,560336828250406130 ⋆ Expansion of 1 / ((1 - 3x)(1 - 6x)(1 - 8x)(1 - 9x)). ● a(n)=(5 * 9 ^ (n + 3) - 9 * 8 ^ (n + 3) + 5 * 6 ^ (n + 3) - 3 ^ (n + 3)) / 90. [_ Yahia Kahloune _ , Jun 02 2013] ●

▶ [A028117] 1,26,433,5910,72261,826266,9049993,96336350,10059094210365632706,105846730353,1074027489990,10850349799381,109279857370346,1098262533175513,11021021340982830,110479731234006141 ⋆ Expansion of 1 / ((1 - 4x)(1 - 5x)(1 - 7x)(1 - 10x)). ● a(n) = (10 ^ (n + 3) - 5 * 7 ^ (n + 3) + 9 * 5 ^ (n + 3) - 5 * 4 ^ (n + 3)) / 90. [_ Yahia Kahloune _ , Jun 11 2013] ●

▶ [A028076] 1,26,435,5980,73721,849966,9381535,100546160,1055929941,10932713506,112061907035,1140487891140,11548313690161,116513300146646,1172500867726935,11777524096712920,118148491080002381,1184131514779885386,1186004449518380123 5 ⋆ Expansion of 1 / ((1 - 3x)(1 - 6x)(1 - 7x)(1 - 10x)). ● a(n) = (10 ^ (n + 3) - 7 ^ (n + 4) + 7 * 6 ^ (n + 3) - 3 ^ (n + 3)) / 84. [_ Yahia Kahloune _ , Jun 10 2013] ●

▶ [A028005] 1,26,437,6034,74469,855042,9338629,98346578,1007581157,10104420898,99624776901,968871159282,9317203571365,88769381856194,839190346712453,7881486986566546,73610099911105893,684230318175538530 ⋆ Expansion of 1 / ((1 - 2x)(1 - 7x)(1 - 8x)(1 - 9x)). ● a(n)=(15 * 9 ^ (n + 3) - 35 * 8 ^ (n + 3) + 3 * 7 ^ (n + 4) - 2 ^ (n + 3)) / 210. [_ Yahia Kahloune _ , Jun 05 2013] ●

▶ [A028065] 1,26,437,6058,75525,882258,9876613,107390426,1143865349,12003195490,124572616389,1282173260394,13113918930373,133479729281522,1353536864252165,13685361486439162,138053939020888197 ⋆ Expansion of 1 / ((1 - 3x)(1 - 5x)(1 - 8x)(1 - 10x)). ● a(n)=(3 * 10 ^ (n + 3) - 7 * 8 ^ (n + 3) + 7 * 5 ^ (n + 3) - 3 ^ (n + 4)) / 210. [_ Yahia Kahloune _ , Jun 08 2013] ● a(0)=1, a(1)=26, a(2)=437, a(3)=6058, a(n)=26 * a(n - 1) - 239 * a(n - 2) + 910 * a(n - 3) - 1200 * a(n - 4). - _ Harvey P. Dale _ , Nov 03 2015 ●

▶ [A028113] 1,26,437,6082,76653,913218,10527349,119017634,1330185725,14766710530,163286454981,1801494203106,19849649018317,218551250986562,2405323875398933,26466271609592098,291175987346320029 ⋆ Expansion of 1 / ((1 - 4x)(1 - 5x)(1 - 6x)(1 - 11x)). ● a(n)=(11 ^ (n + 3) - 21 * 6 ^ (n + 3) + 7 * 5 ^ (n + 4) - 15 * 4 ^ (n + 3)) / 210. [_ Yahia Kahloune _ , Jun 11 2013] ●

▶ [A026562] 1,26,440,6160,77616,915936,10347520,113400320,1215923456,12829712896,133751654400,1381696942080,14173677776896,144610035654656,1469203965870080,14877573810749440,150264242988711936 ⋆ Expansion of 1 / ((1 - 2x)(1 - 6x)(1 - 8x)(1 - 10x)). ● a(n) = - 2 ^ n / 24 + 27 * 6 ^ n / 4 - 64 * 8 ^ n / 3 + 125 * 10 ^ n / 8. _ R. J. Mathar _ , Jun 23 2013 ●

▶ [A028062] 1,26,440,6190,78981,952476,11101000,126669380,1426238561,15923605126,176828848560,1956923483970,21609410926741,238289337781976,2625298690331120,28907173689169960,318181508654719521 ⋆ Expansion of 1 / ((1 - 3x)(1 - 5x)(1 - 7x)(1 - 11x)). ● a(n) = (11 ^ (n + 3) - 6 * 7 ^ (n + 3) + 8 * 5 ^ (n + 3) - 3 ^ (n + 4)) / 192. - _ Yahia Kahloune _ , Jun 08 2013 ● a(n) = 26 * a(n - 1) - 236 * a(n - 2) + 886 * a(n - 3) - 1155 * a(n - 4). - _ Wesley Ivan Hurt _ , May 22 2021 ●

▶ [A028047] 1,26,441,6214,79157,948090,10903777,121902638,1335052653,14395752514,153368576153,1618401466422,16946521522789,176328040607498,1825046893884369,18806371581048766,193066856641062365 ⋆ Expansion of 1 / ((1 - 3x)(1 - 4x)(1 - 9x)(1 - 10x)). ● a(n)=(5 * 10 ^ (n + 3) - 7 * 9 ^ (n + 3) + 7 * 4 ^ (n + 3) - 5 * 3 ^ (n + 3)) / 210. [_ Yahia Kahloune _ , Jun 07 2013] ●

▶ [A026024] 1,26,443,6280,80481,969126,11196103,125634740,1380061661,14917299826,159239422563,1683073423200,17647253908441,183823250672126,1904399083525823,19639540889107660,201755613688828821 ⋆ Expansion of 1 / ((1 - 2x)(1 - 5x)(1 - 9x)(1 - 10x)). ● a(0)=1, a(1)=26, a(2)=443, a(3)=6280, a(n)=26 * a(n - 1) - 233 * a(n - 2) + 820 * a(n - 3) - 900 * a(n - 4) [From Harvey P. Dale, Jul 12 2011] ● a(n) = - 2 ^ n / 21 + 25 * 5 ^ n / 12 - 729 * 9 ^ n / 28 + 25 * 10 ^ n / 1. _ R. J. Mathar _ , Jun 20 2013 ●

▶ [A026542] 1,26,443,6292,81081,986622,11585911,132996344,1504338341,16852487938,187601429379,2079728352156,22993065448081,253755685986374,2797253854490447,30812086837337728,339233247941143101,3733693166454672330,41085669244650954715 ⋆ Expansion of 1 / ((1 - 2 * x) * (1 - 6 * x) * (1 - 7 * x) * (1 - 11 * x)). ● a(n) = (1 / 180) * (11 ^ (n + 3) - 9 * 7 ^ (n + 3) + 9 * 6 ^ (n + 3) - 2 ^ (n + 3)). - _ R. J. Mathar _ , Jun 23 2013 ●

▶ [A028045] 1,26,443,6304,81573,998502,11807311,136529708,1555263545,17536382578,196332094179,2187124368312,24278204224717,268819199510654,2971083878320247,32794508383067716,361640295036833889,3985248936321941130,43895384100591144715 ⋆ Expansion of 1 / ((1 - 3x)(1 - 4x)(1 - 8x)(1 - 11x)). ● a(0)=1, a(1)=26, a(2)=443, a(3)=6304, a(n)=26 * a(n - 1) - 233 * a(n - 2) + 844 * a(n - 3) - 1056 * a(n - 4). - _ Harvey P. Dale _ , Jun 11 2012 ● a(n) = (5 * 11 ^ (n + 3) - 14 * 8 ^ (n + 3) + 30 * 4 ^ (n + 3) - 21 * 3 ^ (n + 3)) / 840. - _ Yahia Kahloune _ , Jun 07 2013 ●

▶ [A288714] 26,444,3654,22888,124850,628860,3014438,13987152,63462906,283337380,1249770830,5460869112,23680912034,102049764684,437447065590,1866647382688,7933717075274,33602668068852,141880252869278,597395676419400,2509073159290866,10514236156062364 ⋆ Number of (undirected) paths on the 2n - crossed prism graph. ● a(n) = n * (163 * 4 ^ n - 9 * 2 ^ (n + 3) * n - 87 * 2 ^ (n + 1) - 4) / 6. ● a(n) = 16 * a(n - 1) - 105 * a(n - 2) + 366 * a(n - 3) - 732 * a(n - 4) + 840 * a(n - 5) - 512 * a(n - 6) + 128 * a(n - 7) for n>7. ●

▶ [A024438] 1,26,445,6330,81141,973746,11173405,124182410,1348136581,14378944866,151299635565,1575384732090,16269102500821,166926103626386,1703932925460925,17322243189947370,175524515134509861 ⋆ Expansion of 1 / ((1 - x)(1 - 7x)(1 - 8x)(1 - 10x)). ● a(n) = (7 * 10 ^ (n + 3) - 27 * 8 ^ (n + 3) + 21 * 7 ^ (n + 3) - 1) / 378. [_ Yahia Kahloune _ , Jun 28 2013] ●

▶ [A025999] 1,26,445,6370,82901,1019746,12105885,140404290,1603014501,18104952866,202945103725,2262802497410,25134485221301,278430633932386,3078357517755965,33986947913921730,374856803115095301 ⋆ Expansion of 1 / ((1 - 2x)(1 - 5x)(1 - 8x)(1 - 11x)). ● a(n) = - 4 * 2 ^ n / 81 + 125 * 5 ^ n / 54 - 256 * 8 ^ n / 27 + 1331 * 11 ^ n / 162. _ R. J. Mathar _ , Jun 20 2013 ● a(0)=1, a(1)=26, a(2)=445, a(3)=6370, a(n)=26 * a(n - 1) - 231 * a(n - 2) + 806 * a(n - 3) - 880 * a(n - 4). - _ Harvey P. Dale _ , May 24 2014 ●

▶ [A028058] 1,26,445,6410,84781,1071986,13229485,161139770,1948959661,23484063746,282412377325,3392692006730,40735374508141,488965966028306,5868455675537965,70426728878067290,845152692571634221 ⋆ Expansion of 1 / ((1 - 3x)(1 - 5x)(1 - 6x)(1 - 12x)). ● a(0)=1, a(1)=26, a(2)=445, a(3)=6410, a(n)=26 * a(n - 1) - 231 * a(n - 2) + 846 * a(n - 3) - 1080 * a(n - 4). - _ Harvey P. Dale _ , Dec 06 2012 ● a(n)=(2 * 12 ^ (n + 3) - 42 * 6 ^ (n + 3) + 54 * 5 ^ (n + 3) - 14 * 3 ^ (n + 3)) / 756. [_ Yahia Kahloune _ , Jun 08 2013] ●

▶ [A024170] 1,26,447,6412,83153,1012158,11803219,133502864,1476280245,16046160130,172084379831,1825884161556,19206817023577,200615621740742,2083177317949083,21525527306347288,221502445537069949 ⋆ Expansion of 1 / ((1 - x)(1 - 6x)(1 - 9x)(1 - 10x)). ● a(n) = (120 * 10 ^ (n + 3) - 180 * 9 ^ (n + 3) + 72 * 6 ^ (n + 3) - 12) / 4320. [_ Yahia Kahloune _ , Jun 28 2013] ● a(0)=1, a(1)=26, a(2)=447, a(3)=6412; for n>3, a(n) = 26 * a(n - 1) - 229 * a(n - 2) + 744 * a(n - 3) - 540 * a(n - 4). - _ Vincenzo Librandi _ , Jul 16 2013 ●

▶ [A028042] 1,26,447,6484,86429,1100862,13670539,167326808,2031126537,24536941858,295591283351,3555147513372,42718200467125,513013681404614,6158932166842083,73926566183932576,887254472530712993 ⋆ Expansion of 1 / ((1 - 3x)(1 - 4x)(1 - 7x)(1 - 12x)). ● a(n)=(12 ^ (n + 3) - 6 * 7 ^ (n + 3) + 15 * 4 ^ (n + 3) - 10 * 3 ^ (n + 3)) / 360. [_ Yahia Kahloune _ , Jun 07 2013] ●

▶ [A023956] 1,26,449,6502,85581,1063194,12725545,148560206,1704811493,19330213474,217323204033,2428517447382,27020001684157,299686169462186,3316371108572633,36639232372189150,404308142849091093 ⋆ Expansion of 1 / ((1 - x)(1 - 6x)(1 - 8x)(1 - 11x)). ● a(n) = (7 * 11 ^ (n + 3) - 25 * 8 ^ (n + 3) + 21 * 6 ^ (n + 3) - 3) / 1050. [_ Yahia Kahloune _ , Jun 29 2013] ●

▶ [A025981] 1,26,449,6526,86565,1087242,13183033,156056342,1816137389,20873693698,237678368577,2687080081998,30211476701173,338208740115194,3773239145742281,41982119790892294,466091728979229117 ⋆ Expansion of 1 / ((1 - 2x)(1 - 4x)(1 - 9x)(1 - 11x)). ● a(0)=1, a(1)=26, a(2)=449, a(3)=6526, a(n)=26 * a(n - 1) - 227 * a(n - 2) + 754 * a(n - 3) - 792 * a(n - 4) – From _ Harvey P. Dale _ , Aug 11 2012 ● a(n) = - 4 * 2 ^ n / 63 + 32 * 4 ^ n / 35 - 729 * 9 ^ n / 70 + 1331 * 11 ^ n / 126. _ R. J. Mathar _ , Jun 20 2013 ●

▶ [A025996] 1,26,449,6550,87765,1122522,13981657,171489758,2084497085,25203559810,303786156609,3654919330374,43925837020261,527579714133290,6334254431345705,76034189070980398,912572474428695693 ⋆ Expansion of 1 / ((1 - 2 * x) * (1 - 5 * x) * (1 - 7 * x) * (1 - 12 * x)). ● a(n) = - 4 * 2 ^ n / 75 + 125 * 5 ^ n / 42 - 343 * 7 ^ n / 50 + 864 * 12 ^ n / 175. - _ R. J. Mathar _ , Jun 20 2013 ● a(n) = 26 * a(n - 1) - 227 * a(n - 2) + 778 * a(n - 3) - 840 * a(n - 4). - _ Iain Fox _ , Oct 19 2018 ●

▶ [A023540] 1,26,452,6622,88473,1117788,13616464,161765924,1887776825,21743151430,247985329956,2807195642706,31593670364257,353962564536152,3951485554056128,43987455339016168,488552227663629969 ⋆ Expansion of 1 / ((1 - x)(1 - 5x)(1 - 9x)(1 - 11x)). ● a(n) = (8 * 11 ^ (n + 3) - 15 * 9 ^ (n + 3) + 10 * 5 ^ (n + 3) - 3) / 960. [_ Yahia Kahloune _ , Jun 29 2013] ● a(0)=1, a(1)=26, a(2)=452, a(3)=6622; for n>3, a(n) = 26 * a(n - 1) - 224 * a(n - 2) + 694 * a(n - 3) - 495 * a(n - 4). - _ Vincenzo Librandi _ , Jul 12 2013 ●

▶ [A025979] 1,26,452,6664,90384,1169952,14730304,182323328,2232488192,27147248128,328628192256,3966436411392,47780455321600,574831345147904,6909703728939008,83010267592032256,996873802452369408 ⋆ Expansion of 1 / ((1 - 2x)(1 - 4x)(1 - 8x)(1 - 12x)). ● a(n) = - 2 ^ n / 15 + 4 ^ n / 1 - 16 * 8 ^ n / 3 + 27 * 12 ^ n / 5. - _ R. J. Mathar _ , Jun 20 2013 ●

▶ [A020970] 1,26,453,6610,87221,1079106,12770773,146348690,1637020341,17972357986,194425446293,2078548587570,22007974284661,231179027537666,2412362060669013,25033514235831250,258557417951152181 ⋆ Expansion of 1 / ((1 - 7 * x) * (1 - 9 * x) * (1 - 10 * x)). ● a(n) = 26 * a(n - 1) - 223 * a(n - 2) + 630 * a(n - 3), n>=3. - _ Vincenzo Librandi _ , Mar 15 2011 ● a(n) = 19 * a(n - 1) - 90 * a(n - 2) + 7 ^ n, a(0)=1, a(1)=26. - _ Vincenzo Librandi _ , Mar 15 2011 ● a(n) = (7 ^ (n + 2) - 3 * 9 ^ (n + 2) + 2 * 10 ^ (n + 2)) / 6. - _ Bruno Berselli _ , Mar 15 2011 ●

▶ [A023953] 1,26,453,6682,90461,1166802,14626501,180228074,2197722861,26629669378,321427557269,3870666716826,46545364947901,559241602629554,6715873831334757,80625872396459338,967761559032496781 ⋆ Expansion of 1 / ((1 - x)(1 - 6x)(1 - 7x)(1 - 12x)). ● a(n) = (12 ^ (n + 3) - 11 * 7 ^ (n + 3) + 11 * 6 ^ (n + 3) - 1) / 330. [_ Yahia Kahloune _ , Jun 29 2013] ● a(0)=1, a(1)=26, a(2)=453, a(3)=6682; for n>3, a(n) = 26 * a(n - 1) - 223 * a(n - 2) + 702 * a(n - 3) - 504 * a(n - 4). - _ Vincenzo Librandi _ , Jul 16 2013 ●

▶ [A020968] 1,26,455,6700,89661,1130766,13712035,161844800,1874156921,21406992706,242089527615,2717862993300,30349359729781,337562780465846,3743627395703195,41428143398876200,457728746687336241 ⋆ Expansion of 1 / ((1 - 7 * x) * (1 - 8 * x) * (1 - 11 * x)). ● a(n) = 26 * a(n - 1) - 221 * a(n - 2) + 616 * a(n - 3) for n>=3. - _ Vincenzo Librandi _ , Mar 15 2011 ● a(n) = 19 * a(n - 1) - 88 * a(n - 2) + 7 ^ n for n>1, a(0)=1, a(1)=26. - _ Vincenzo Librandi _ , Mar 15 2011 ● a(n) = (3 * 7 ^ (n + 2) - 4 * 8 ^ (n + 2) + 11 ^ (n + 2)) / 12. - _ Bruno Berselli _ , Mar 15 2011 ●

▶ [A025955] 1,26,455,6760,92121,1191606,14892475,181671620,2176950941,25732149586,300910712895,3488589043680,40160193084961,459619264745966,5234383334635715,59363930948274940,670860383232854181 ⋆ Expansion of 1 / ((1 - 2x)(1 - 3x)(1 - 10x)(1 - 11x)). ● a(n) = - 2 ^ n / 9 + 27 * 3 ^ n / 56 - 125 * 10 ^ n / 7 + 1331 * 11 ^ n / 72. - _ R. J. Mathar _ , Jun 20 2013 ● a(0)=1, a(1)=26, a(2)=455, a(3)=6760, a(n)=26 * a(n - 1) - 221 * a(n - 2) + 676 * a(n - 3) - 660 * a(n - 4). - _ Harvey P. Dale _ , Aug 25 2014 ●

► [A022725] 1,26,455,6760,92301,1200966,15177955,188364020,2310685001,28133195506,340850357055,4116281407680,49604299052101,596924491783646,7176484756065755,86224982057057740,1035557295293705601 ★ Expansion of 1 / ((1 - x) * (1 - 5 * x) * (1 - 8 * x) * (1 - 12 * x)). ● a(n) = (3 * 12 ^ (n + 3) - 11 * 8 ^ (n + 3) + 11 * 5 ^ (n + 3) - 3) / 924. - _ Yahia Kahloune _ , Jun 29 2013 ● a(0)=1, a(1)=26, a(2)=455, a(3)=6760; for n>3, a(n) = 26 * a(n - 1) - 221 * a(n - 2) + 676 * a(n - 3) - 480 * a(n - 4). - _ Vincenzo Librandi _ , Jul 12 2013 ●

► [A020606] 1,26,457,6782,91693,1170218,14373409,171896534,2016642805,23325176930,266916367081,3029497622606,34167408893437,383440973924762,4286324362209073,47766301010614598,530982729463501189 ★ Expansion of 1 / ((1 - 6x)(1 - 9x)(1 - 11x)). ● a(0)=1, a(1)=26, a(2)=457, a(n)=26 * a(n - 1) - 219 * a(n - 2) + 594 * a(n - 3). [_ Harvey P. Dale _ , Oct 26 2011] ● a(n) = (3 * 11 ^ (n + 2) - 5 * 9 ^ (n + 2) + 2 * 6 ^ (n + 2)) / 30. [_ Yahia Kahloune _ , Jun 30 2013] ● a(n) = 20 * a(n - 1) - 99 * a(n - 2) + 6 ^ n. - _ Vincenzo Librandi _ , Jul 04 2013 ●

► [A021984] 1,26,457,6822,93333,1210938,15168529,185357774,2224062445,26316305730,307996949481,3573147901206,41156463852037,471239561238602,5368820120200513,60908872219620318,688516109116593309 ★ Expansion of 1 / ((1 - x)(1 - 4x)(1 - 10x)(1 - 11x)). ● a(n)=(27 * 11 ^ (n + 3) - 35 * 10 ^ (n + 3) + 15 * 4 ^ (n + 3) - 7) / 1890. [_ Yahia Kahloune _ , Jun 29 2013] ● a(0)=1, a(1)=26, a(2)=457, a(3)=6822; for n>3, a(n) = 26 * a(n - 1) - 219 * a(n - 2) + 634 * a(n - 3) - 440 * a(n - 4). - _ Vincenzo Librandi _ , Jul 12 2013 ●

► [A025954] 1,26,457,6854,94789,1251002,16035889,201651758,2502830077,30781099778,376097622121,4573691815862,55428986530165,670050005786954,8084719590584353,97413710820261566,1172538211571391853 ★ Expansion of 1 / ((1 - 2x)(1 - 3x)(1 - 9x)(1 - 12x)). ● a(n) = 26 * a(n - 1) - 219 * a(n - 2) + 666 * a(n - 3) - 648 * a(n - 4) with a(0)=1, a(1)=26, a(2)=457, a(3)=6854. [_ Harvey P. Dale _ , Jan 19 2012] ● a(n) = - 4 * 2 ^ n / 35 + 3 ^ n / 2 - 81 * 9 ^ n / 14 + 32 * 12 ^ n / 5. - _ R. J. Mathar _ , Jun 20 2013 ●

► [A021974] 1,26,459,6916,96005,1270542,16318303,205487672,2552951769,31419668098,384095637107,4672689817068,56644179720493,684877363365494,8264853578776071,99595171342479904,1198894417410885377 ★ Expansion of 1 / ((1 - x)(1 - 4x)(1 - 9x)(1 - 12x)). ● a(n) = (5 * 12 ^ (n + 3) - 11 * 9 ^ (n + 3) + 11 * 4 ^ (n + 3) - 5) / 1320. [_ Yahia Kahloune _ , Jul 05 2013] ● a(0)=1, a(1)=26, a(2)=459, a(3)=6916; for n>3, a(n) = 26 * a(n - 1) - 217 * a(n - 2) + 624 * a(n - 3) - 432 * a(n - 4). - _ Vincenzo Librandi _ , Jul 11 2013 ●

► [A020594] 1,26,460,6920,95536,1254176,15958720,199053440,2450711296,29915173376,363095649280,4390419138560,52953377222656,637600367845376,7668561507696640,92162065025761280,1107062216886255616 ★ Expansion of 1 / ((1 - 6x)(1 - 8x)(1 - 12x)). ● a(n) = (2 * 12 ^ (n + 2) - 6 * 8 ^ (n + 2) + 4 * 6 ^ (n + 2)) / 48. [_ Yahia Kahloune _ , Jun 30 2013] ● a(0)=1, a(1)=26, a(2)=460; for n>2, a(n) = 26 * a(n - 1) - 216 * a(n - 2) + 576 * a(n - 3). - _ Vincenzo Librandi _ , Jul 04 2013 ● a(n) = 20 * a(n - 1) - 96 * a(n - 2) + 6 ^ n. - _ Vincenzo Librandi _ , Jul 04 2013 ●

► [A020567] 1,26,461,6946,95781,1250466,15739501,193056386,2323229621,27553572706,323079534141,3753826047426,43291842381061,496209045488546,5658293396858381,64241196847864066,726653012738614101 ★ Expansion of 1 / ((1 - 5x)(1 - 10x)(1 - 11x)). ● a(n) = 5 * 5 ^ n / 6 - 20 * 10 ^ n + 121 * 11 ^ n / 6. - _ R. J. Mathar _ , Jun 30 2013 ● a(0)=1, a(1)=26, a(2)=461; for n>2, a(n) = 26 * a(n - 1) - 215 * a(n - 2) + 550 * a(n - 3). - _ Vincenzo Librandi _ , Jul 04 2013 ● a(n) = 21 * a(n - 1) - 110 * a(n - 2) + 5 ^ n. - _ Vincenzo Librandi _ , Jul 04 2013 ●

► [A021724] 1,26,465,7150,101621,1378026,18123145,233349350,2958918141,37094306626,461004657425,5690785933950,69876732453061,854393804284826,10411455807073305,126524771262956950,1534170271000826381 ★ Expansion of 1 / ((1 - x)(1 - 3x)(1 - 10x)(1 - 12x)). ● a(n) = - 1 / 198 + 3 ^ (n + 1) / 14 - 2 ^ (n + 2) * 5 ^ (n + 3) / 63 + 2 ^ (2n + 5) * 3 ^ (n + 1) / 11. [_ Bruno Berselli _ , May 07 2013] ●

► [A019747] 1,26,468,7240,103376,1406496,18541888,239158400,3036523776,38104777216,473923294208,5853743400960,71911576293376,879605537447936,10721932937084928,130329861195857920,1580624998153650176 ★ Expansion of 1 / ((1 - 4x)(1 - 10x)(1 - 12x)). ● a(n)= - 25 * 10 ^ n / 3 + 9 * 12 ^ n + 4 ^ n / 3. - _ R. J. Mathar _ , Nov 11 2012 ● a(0)=1, a(1)=26, a(2)=468; for n>2, a(n) = 26 * a(n - 1) - 208 * a(n - 2) + 480 * a(n - 3). - _ Vincenzo Librandi _ , Jul 03 2013 ● a(n) = 22 * a(n - 1) - 120 * a(n - 2) + 4 ^ n. - _ Vincenzo Librandi _ , Jul 03 2013 ●

► [A021334] 1,26,473,7462,109221,1527162,20707681,274691534,3584491901,46184032258,589079813049,7452543446166,93649963947541,1170213435915914,14553113785023377,180253443514702558 ★ Expansion of 1 / ((1 - x)(1 - 2x)(1 - 11x)(1 - 12x)). ● a(n) = (9 * 12 ^ (n + 3) - 11 ^ (n + 4) + 11 * 2 ^ (n + 3) - 9) / 990. [_ Yahia Kahloune _ , Jul 07 2013] ● a(0)=1, a(1)=26; for n>1, a(n) = 23 * a(n - 1) - 132 * a(n - 2) + 2 ^ n - 1. - _ Vincenzo Librandi _ , Jul 09 2013 ● a(0)=1, a(1)=26, a(2)=473, a(3)=7462; for n>3, a(n) = 26 * a(n - 1) - 203 * a(n - 2) + 442 * a(n - 3) - 264 * a(n - 4). - _ Vincenzo Librandi _ , Jul 09 2013 ●

► [A018208] 1,26,475,7520,110341,1545446,20980975,278565740,3637529881,46892529266,598374287875,7572794935160,95188878040621,1189735265087486,14798979200433175,183331466632763780 ★ Expansion of 1 / ((1 - 3x)(1 - 11x)(1 - 12x)). ● a(0)=1, a(1)=26, a(2)=475; for n>2, a(n) = 26 * a(n - 1) - 201 * a(n - 2) + 396 * a(n - 3). - _ Vincenzo Librandi _ , Jul 02 2013 ● a(n) = 23 * a(n - 1) - 132 * a(n - 2) + 3 ^ n. - _ Vincenzo Librandi _ , Jul 02 2013 ● a(n) = (8 * 12 ^ (n + 2) - 9 * 11 ^ (n + 2) + 3 ^ (n + 2)) / 72. [_ Yahia Kahloune _ , Jul 07 2013] ●

► [A293612] 0,26,588,5376,30660,129780,446292,1315776,3444012,8198190,18058040,37285248,72882264,135925608,243374040,420468480,703858344,1145608002,1818257364,2821132160,4288122300,6397170780,9381740940,13544556480,19273936500 ★ a(n) = (1 / 2) * (n + 1) * (5 * n ^ 2 + 15 * n + 6) * Pochhammer(n, 6) / 6!. ● a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10) for n>9. ● a(n) = ((n * (1 + n) ^ 2 * (720 + 2724 * n + 3336 * n ^ 2 + 1919 * n ^ 3 + 571 * n ^ 4 + 85 * n ^ 5 + 5 * n ^ 6))) / 1440. ●

► [A106793] 1,26,650,15600,358800,7893600,165765600,3315312000,62990928000,1133836704000,19275223968000,308403583488000,4626053752320000,64764752532480000,841941782922240000,10103301395066880000 ★ Number of words over an alphabet of size 26) of length n with all different letters. ● a(n) = 26! / (26 - n)! ●

► [A208377] 26,676,2080,4212,7072,10660,14976,20020,25792,32292,39520,47476,56160,65572,75712,86580,98176,110500,123552,137332,151840,167076,183040,199732,217152 ★ Number of n X 6 0..1 arrays avoiding 0 0 0 and 1 1 1 horizontally and 0 0 1 and 1 0 1 vertically. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>4. ●

► [A207451] 26,676,3354,10088,23530,46956,84266,139984,219258,327860,472186,659256,896714,1192828,1556490,1997216,2525146,3151044,3886298,4742920,5733546,6871436,8170474,9645168,11310650 ★ Number of n X 6 0..1 arrays avoiding 0 0 0 and 0 0 1 horizontally and 0 0 1 and 1 0 1 vertically. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

► [A207257] 26,676,4238,15652,43498,101036,207298,388232,677898,1119716,1767766,2688140,3960346,5678764,7954154,10915216,14710202,19508580,25502750,32909812,41973386,52965484,66188434,81976856,100699690 ★ Number of 6 X n 0..1 arrays avoiding 0 0 1 and 1 0 1 horizontally and 0 1 0 and 1 0 1 vertically. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

► [A208285] 26,676,4374,16872,49130,119580,256774,502416,914778,1572500,2578774,4065912,6200298,9187724,13279110,18776608,26040090,35494020,47634710,63037960,82367082,106381308,135944582,172034736,215753050 ★ Number of n X 6 0..1 arrays avoiding 0 0 0 and 0 0 1 horizontally and 0 0 1 and 1 1 0 vertically. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

► [A158643] 26,702,2730,6110,10842,16926,24362,33150,43290,54782,67626,81822,97370,114270,132522,152126,173082,195390,219050,244062,270426,298142,327210,357630,389402 ★ a(n) = 676 * n ^ 2 + 26. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A042462] 27,28,55,248,303,551,30057,30608,60665,273268,333933,607201,3312787,33729988,66852775,301141088,367993863,669134951,36501281217,37170416168,73671697385,331857205708,405528903093 ★ Numerators of continued fraction convergents to sqrt(759). ● a(n) = 1102 * a(n - 6) - a(n - 12). - _ Vincenzo Librandi _ , Nov 25 2013 ●

► [A042482] 27,28,83,111,305,416,721,12673,13394,146613,893072,1039685,6091497,19314176,64034025,147382226,211416251,358798477,570214728,929013205,1499227933,2428241138,6355710209,21495371765 ★ Numerators of continued fraction convergents to sqrt(769). ● a(n) = 32734748155099080 * a(n - 37) + a(n - 74) for n>73. [_ Bruno Berselli _ , Nov 26 2013] ●

► [A042484] 27,28,83,111,6077,6188,18453,24641,1349067,1373708,4096483,5470191,299486797,304956988,909400773,1214357761,66484719867,67699077628,201882875123,269581952751,14759308323677,15028890276428 ★ Numerators of continued fraction convergents to sqrt(770). ● a(n) = 222 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Nov 26 2013 ●

► [A042488] 27,28,111,139,250,389,2195,2584,4779,36037,76853,112890,189743,3338521,3528264,45677689,49205953,882178890,931384843,1813563733,4558512309,33723149896,38281662205,72004812101 ★ Numerators of continued fraction convergents to sqrt(772). ● a(n) = 12448646853698 * a(n - 30) - a(n - 60) for n>59. [_ Bruno Berselli _ , Nov 26 2013] ●

► [A042486] 27,28,111,361,833,3693,4526,8219,12745,20964,54673,1497135,3048943,4546078,7595021,12141099,19736120,91085579,201907278,696807413,2292329517,2989136930,163705723737,166694860667 ★ Numerators of continued fraction convergents to sqrt(771). ● a(n) = 5978273860 * a(n - 22) - a(n - 44) for n>43. [_ Bruno Berselli _ , Nov 26 2013] ●

► [A042496] 27,28,167,195,10697,10892,65157,76049,4171803,4247852,25411063,29658915,1626992473,1656651388,9910249413,11566900801,634522892667,646089793468,3864971860007,4511061653475,247462301147657,251973362801132,1507329115153317 ★ Numerators of continued fraction convergents to sqrt(776). ● a(n) = 390 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Nov 26 2013 ●

► [A042498] 27,28,195,223,12237,12460,86997,99457,5457675,5557132,38800467,44357599,2434110813,2478468412,17304921285,19783389697,1085607964923,1105391354620,7717956092643,8823347447263 ★ Numerators of continued fraction convergents to sqrt(777). ● a(n) = 446 * a(n - 4) - a(n - 8). G.f.: - (x ^ 7 - 27 * x ^ 6 + 28 * x ^ 5 - 195 * x ^ 4 - 223 * x ^ 3 - 195 * x ^ 2 - 28 * x - 27) / (x ^ 8 - 446 * x ^ 4 + 1). [_ Colin Barker _ , Jul 16 2012] ●

► [A042504] 27,28,363,391,21477,21868,283893,305761,16794987,17100748,222003963,239104711,13133658357,13372763068,173606815173,186979578241,10270504040187,10457483618428,135760307461323 ★ Numerators of continued fraction convergents to sqrt(780). ● a(n) = 782 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Nov 26 2013 ●

► [A041363] 1,1,27,28,755,783,21113,21896,590409,612305,16510339,17122644,461699083,478821727,12911063985,13389885712,361048092497,374437978209,10096435525931,10470873504140,282339146633571,292810020137711,7895399670214057,8188209690351768 ★ Denominators of continued fraction convergents to sqrt(195). ● a(n) = 28 * a(n - 2) - a(n - 4). - _ Vincenzo Librandi _ , Dec 16 2013 ● a(n) = Product _{ k = 1..floor((n - 1) / 2) } (26 + 4 * cos ^ 2(k * Pi / n)). ●

► [A042508] 27,28,755,783,43037,43820,1182357,1226177,67395915,68622092,1851570307,1920192399,105541959853,107462152252,2899557918405,3007020070657,165278641733883,168285661804540,4540705848651923 ★ Numerators of continued fraction convergents to sqrt(782). ● a(n) = 1566 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Nov 26 2013 ●

► [A042509] 1,1,27,28,1539,1567,42281,43848,2410073,2453921,66212019,68665940,3774172779,3842838719,103687979473,107530818192,5910352161841,6017882980033,162375309642699,168393192622732,9255607711270227,9424009038929599,254279631212487161 ★ Denominators of continued fraction convergents to sqrt(782). ● a(0)=1, a(1)=1, a(2)=27, a(3)=28, a(4)=1539, a(5)=1567, a(6)=42281, a(7)=43848, a(n)=1566 * a(n - 4) - a(n - 8). - _ Harvey P. Dale _ , Jun 20 2015 ●

► [A042510] 27,28,1539,1567,86157,87724,4823253,4910977,270016011,274926988,15116073363,15391000351,846230092317,861621092668,47373769096389,48235390189057,2652084839305467,2700320229494524 ★ Numerators of continued fraction convergents to sqrt(783). ● a(n) = 56 * a(n - 2) - a(n - 4). - _ Vincenzo Librandi _ , Nov 26 2013 ●
► [A214832] 27,29,30,32,34,36,38,41,43,46,48,51,55,58,61,65,69,73,77,82,87,92,97,103,110 ★ Integer part of A440 piano key frequencies, start with A0 = the 1st key. ● a(n) = floor[2 ^ ((n - 49) / 12) * 440] (Hz) for 1 <= n <= 88. ●
► [A316729] 0,1,27,30,82,87,165,172,276,285,415,426,582,595,777,792,1000,1017,1251,1270,1530,1551,1837,1860,2172 ★ Generalized 30 - gonal (or triacontagonal) numbers: m * (14 * m - 13) with m = 0, + 1, - 1, + 2, - 2, + 3, - 3, ... ● a(n) = (28 * n * (n + 1) + 12 * (2 * n + 1) * (- 1) ^ n - 12) / 8. ● a(n) = n * (7 * n + 13) / 2, if n is even, or (n + 1) * (7 * n - 6) / 2 otherwise. ●
► [A160119] 0,1,27,35,235,243,443,499,1899,1907,2107,2163,3563,3619,5019,5411,15211,15219,15419,15475,16875,16931,18331,18723,28523 ★ A three - dimensional version of the cellular automaton A160118, using cubes. ● a(2n - 1) = 3 ^ d + (2 ^ d) * Sum _{ k=1..n - 1 } (2 ^ d - 1) ^ (wt(k) - 1) + (2 ^ d) * (3 ^ d - 2) * Sum _{ k=1..n - 2 } (2 ^ d - 1) ^ (wt(k) - 1), n >= 2. ● a(2n) = 3 ^ d + (2 ^ d) * Sum _{ k=1..n - 1 } (2 ^ d - 1) ^ (wt(k) - 1) + (2 ^ d) * (3 ^ d - 2) * Sum _{ k=1..n - 1 } (2 ^ d - 1) ^ (wt(k) - 1), n >= 1. (End) ●
► [A160379] 0,1,27,35,235,261,881,937,2241,2339,4591,4743,8207,8425,13365,13661,20341,20727,29411,29899,40851,41453,54937,55665,71945 ★ Number of ON cells at n - th stage of three - dimensional version of the cellular automaton A160117 using cubes. ● a(2n) = 46n ^ 3 - 57n ^ 2 + 57n - 19 for n>=1, a(2n + 1) = 46n ^ 3 - 51n ^ 2 + 57n - 17 for n>=1. [From _ Nathaniel Johnston _ , Nov 06 2010] ●
► [A097228] 27,38,127,138,289,298,1127,1138,1289,1298,11127,11138,11289,11298,111127,111138,111289,111298,1111127,1111138,1111289,1111298,11111127,11111138,11111289 ★ Numbers n such that the product of digits of n equals the concatenation of pi(d)'s where d runs through the digits of n. ● a(n) = 11 * a(n - 4) - 10 * a(n - 8) for n > 10. ●
► [A241407] 27,46,100,119,173,192,246,265,319,338,392,411,465,484,538,557,611,630,684,703,757,776,830,849,903 ★ Numbers n such that n ^ 2 == - 1 (mod 73). ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n>2. ● a(n) = a(n - 2) + 73 for all n>2. ● a(n) = - 27 * (- 1) ^ n + 73 * floor(n / 2). ●
► [A109067] 27,50,52,63,66,70,75,78,92,116,124,130,147,170,186,188,195,207,222,236,238,255,266,268,275 ★ 3 - almost primes of the form semiprime + 1. ● a(n) is in this sequence iff a(n) is in A014612 and a(n) - 1 is in A001358. ●
► [A154591] 27,51,79,111,147,187,231,279,331,387,447,511,579,651,727,807,891,979,1071,1167,1267,1371,1479,1591,1707 ★ a(n) = 2 * n ^ 2 + 18 * n + 7. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Feb 22 2012 ●
► [A160845] 0,1,27,52,93,140,207,274,361,454,563,676,809,944,1099,1258,1433,1614,1815,2016,2237,2464,2707,2954,3221 ★ Number of lines through at least 2 points of a 5 X n grid of points. ● a(n) = (1 / 2) * (f(m,n,1) - f(m,n,2)) where f(m,n,k) = Sum((n - |kx|) * (m - |ky|)); - n < kx < n, - m < ky < m, (x,y)=1, m= 5. ● a(n) = a(n - 1) + a(n - 3) - a(n - 5) - a(n - 7) + a(n - 8) for n > 7. ●
► [A305548] 0,27,54,81,108,135,162,189,216,243,270,297,324,351,378,405,432,459,486,513,540,567,594,621,648 ★ a(n) = 27 * n. ● a(n) = 27 * n. ●
► [A042448] 27,55,137,192,521,713,1947,4607,250725,506057,1262839,1768896,4800631,6569527,17939685,42448897,2310180123,4662809143,11635798409,16298607552,44233013513,60531621065,165296255643 ★ Numerators of continued fraction convergents to sqrt(752). ● a(n) = 9214 * a(n - 8) - a(n - 16). - _ Vincenzo Librandi _ , Nov 25 2013 ●
► [A042454] 27,55,577,1209,65863,132935,1395213,2923361,159256707,321436775,3373624457,7068685689,385082651663,777233989015,8157422541813,17092079072641,931129692464427,1879351464001495 ★ Numerators of continued fraction convergents to sqrt(755). ● a(n) = 2418 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Nov 25 2013 ●
► [A042456] 27,55,2997,6049,329643,665335,36257733,73180801,3988020987,8049222775,438646050837,885341324449,48247077571083,97379496466615,5306739886768293,10710859270003201,583693140466941147 ★ Numerators of continued fraction convergents to sqrt(756). ● a(n) = 110 * a(n - 2) - a(n - 4). - _ Vincenzo Librandi _ , Nov 25 2013 ●
► [A132768] 0,27,56,87,120,155,192,231,272,315,360,407,456,507,560,615,672,731,792,855,920,987,1056,1127,1200 ★ a(n) = n * (n + 26). ● a(n) = n * (n + 26). ● a(n) = 2 * n + a(n - 1) + 25, with a(0)=0. - _ Vincenzo Librandi _ , Aug 03 2010 ●
► [A260440] 27,57,91,121,153,183,217,247,279,309,343,373,405,435,469,499,531,561,595,625,657,687,721,751,783 ★ Unlucky numbers removed at the stage four of Lucky sieve. ● a(n) = a(n - 4) + 126. ● a(n) = a(n - 1) + a(n - 4) - a(n - 5). ●
► [A180574] 27,60,105,174,259,376,513,690,891,1140,1417,1750,2115,2544,3009,3546,4123,4780,5481,6270,7107,8040,9025,10114,11259 ★ Wiener index of the n - sunlet graph. ● a(n) = n(n ^ 2 + 4n - 2) / 2 if n is even; a(n) = n(n ^ 2 + 4n - 3) / 2 if n is odd. ● a(n) = n * (- 5 + (- 1) ^ n + 8 * n + 2 * n ^ 2) / 4. - _ Colin Barker _ , Oct 31 2012 ● a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + a(n - 4) + 2 * a(n - 5) - a(n - 6). - _ Eric W. Weisstein _ , Sep 07 2017 ●
► [A147651] 0,27,72,135,216,315,432,567,720,891,1080,1287,1512,1755,2016,2295,2592,2907,3240,3591,3960,4347,4752,5175,5616 ★ First trisection of A028560. ● a(n) = 9 * n * (n + 2). ●
► [A195028] 0,27,82,165,276,415,582,777,1000,1251,1530,1837,2172,2535,2926,3345,3792,4267,4770,5301,5860,6447,7062,7705,8376 ★ a(n) = n * (14 * n + 13). ● a(n) = 14 * n ^ 2 + 13 * n. ●
► [A042438] 27,82,4455,13447,730593,2205226,119812797,361643617,19648568115,59307347962,3222245358063,9726043422151,528428590154217,15950118138848402,866590665399335525,2615722114336857 7 ★ Numerators of continued fraction convergents to sqrt(747). ● a(n) = 164 * a(n - 2) - a(n - 4). - _ Vincenzo Librandi _ , Nov 24 2013 ●
► [A161340] 0,1,27,83,343,399,791,1183,3375,3431,3823,4215,6959,7351,10095,12839,29791,29847,30239,30631,33375,33767,36511,39255,58463 ★ Number of "ON" cells at n - th stage of three - dimensional version of the cellular automaton A160414 using cubes. ● a(n) = (2n - 1) ^ 3 if n is a power of 2. ●
► [A035074] 27,84,265,837,2646,8367,26458,83667,264576,836661,2645752,8366601,26457514,83666003,264575132,836660027,2645751312,8366600266,26457513111,83666002654,264575131107,836660026535,2645751311065 ★ a(n) is root of square starting with digit 7: first term of runs. ● a(n) = ceiling(sqrt(7 * 10 ^ n)), n > 1. ●
► [A028993] 1,27,85,175,297,451,637,855,1105,1387,1701,2047,2425,2835,3277,3751,4257,4795,5365,5967,6601,7267,7965,8695,9457 ★ Odd 10 - gonal (or decagonal) numbers. ● a(n) = (2n + 1) * (8n + 1). - _ N. J. A. Sloane _ ●
► [A228600] 27,92,125,282,343,632,729,1190,1331,2004,2197,3122,3375,4592,4913,6462,6859,8780,9261,11594,12167,14952,15625,18902,19683 ★ The Szeged index of the n - sunlet graph (n>=3). ● a(n) = 4 * n * (floor(n / 2)) ^ 2 + 2 * n ^ 2 - n. ● a(n) = n ^ 3 if n is odd; a(n) = n ^ 3 + 2 * n ^ 2 - n if n is even. ●
► [A154377] 27,104,231,408,635,912,1239,1616,2043,2520,3047,3624,4251,4928,5655,6432,7259,8136,9063,10040,11067,12144,13271,14448,15675 ★ a(n) = 25 * n ^ 2 + 2 * n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●
► [A158549] 1,27,105,235,417,651,937,1275,1665,2107,2601,3147,3745,4395,5097,5851,6657,7515,8425,9387,10401,11467,12585,13755,14977 ★ a(n) = 26 * n ^ 2 + 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●
► [A244634] 0,27,108,243,432,675,972,1323,1728,2187,2700,3267,3888,4563,5292,6075,6912,7803,8748,9747,10800,11907,13068,14283,15552 ★ 27 * n ^ 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>2. ●
► [A134171] 0,0,0,27,108,270,540,945,1512,2268,3240,4455,5940,7722,9828,12285,15120,18360,22032,26163,30780,35910,41580,47817,54648 ★ a(n) = (9 / 2) * (n - 1) * (n - 2) * (n - 3). ● a(n) = 27 * binomial(n - 1,3). - _ Zerinvary Lajos _ , Aug 06 2008 ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>4. ●
► [A042424] 27,109,136,1741,1877,9249,501323,2014541,2515864,32204909,34720773,171088001,9273472827,37264979309,46538452136,595726404941,64226485707,3164785833249,171540699852523 ★ Numerators of continued fraction convergents to sqrt(740). ● a(n) = 18498 * a(n - 6) - a(n - 12). - _ Vincenzo Librandi _ , Nov 24 2013 ●
► [A193391] 27,109,271,529,899,1397,2039,2841,3819,4989,6367,7969,9811,11909,14279,16937,19899,23181,26799,30769,35107,39829,44951,50489,56459 ★ Wiener index of a benzenoid consisting of a spiral chain of n hexagons (s=1; see the Gutman et al. reference). ● a(n) = (27 - 26 * n + 72 * n ^ 2 + 8 * n ^ 3) / 3. ●
► [A193399] 27,109,271,545,931,1493,2199,3145,4267,5693,7327,9329,11571,14245,17191,20633,24379,28685,33327,38593,44227,50549,57271,64745,72651 ★ Wiener index of a benzenoid consisting of a chain of n hexagons characterized by the encoding s = 1133 (see the Gutman et al. reference, Sec. 5). ● a(n) = 4 * n ^ 3 + 16 * n ^ 2 + 8 * n + 2 * (- 1) ^ n * (n - 2) - 3. ●
► [A193393] 27,109,271,545,963,1557,2359,3401,4715,6333,8287,10609,13331,16485,20103,24217,28859,34061,39855,46273,53347,61109,69591,78825,88843 ★ Wiener index of a benzenoid consisting of a zig - zag chain of n hexagons (s=13; see the Gutman et al. reference). ● a(n) = (16 * n ^ 3 + 24 * n ^ 2 + 62 * n - 21) / 3. ●
► [A143938] 27,109,279,569,1011,1637,2479,3569,4939,6621,8647,11049,13859,17109,20831,25057,29819,35149,41079,47641,54867,62789,71439,80849,91051 ★ The Wiener index of a benzenoid consisting of a linear chain of n hexagons. ● a(n) = (1 / 3) * (16 * n ^ 3 + 36 * n ^ 2 + 26 * n + 3). ●
► [A158554] 27,111,251,447,699,1007,1371,1791,2267,2799,3387,4031,4731,5487,6299,7167,8091,9071,10107,11199,12347,13551,14811,16127,17499 ★ a(n) = 28 * n ^ 2 - 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●
► [A267812] 1,1,27,119,495,2015,8127,32639,130815,523775,2096127,8386559,33550335,134209535,536854527,2147450879,8589869055,34359607295,137438691327,549755289599,2199022206975,8796090925055,35184367894527,140737479966719,562949936644095 ★ Decimal representation of the n - th iteration of the "Rule 217" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3) for n>4. ●
► [A029699] 0,1,27,120,340,765,1491,2632,4320,6705,9955,14256,19812,26845,35595,46320,59296,74817,93195,114760,139860,168861,202147,240120,283200 ★ Number of words of length 4 in the n(n - 1) / 2 transpositions of S[n] equivalent to the identity. ● a(n) = n * (n - 1) * (3 * n ^ 2 + n - 12) / 4. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. - _ Colin Barker _ , May 28 2015 ●
► [A061434] 1,27,125,1000,10648,103823,1000000,10077696,100544625,1000000000,10007873875,100026577288,1000000000000,10000909453625,100000721719296,1000000000000000,10000073940248384,100000075387171679,1000000000000000000,100000043162342626 875 ★ a(n) is the smallest n - digit cube. ● a(n) = ceiling(10 ^ ((n - 1) / 3)) ^ 3. - Antonio G. Astudillo (afg _ astudillo(AT)lycos.com), Mar 30 2003 ●
► [A026917] 1,27,127,399,1039,2439,5383,11439,23743,48567,98455,198495,398863,799911,1602343,3207567,6418399,12840471,25685047,51374655,102754351,205514247,411034567,822075759,1644158719 ★ a(n) = Sum { T(i,j) } , 0<=j<=i, 0<=i<=n, T given by A026907. ● a(n) = 98 * 2 ^ n - 12 * n ^ 2 - 60 * n - 97. ● a(n) = 5 * a(n - 1) - 9 * a(n - 2) + 7 * a(n - 3) - 2 * a(n - 4) for n>3. ●
► [A267935] 1,1,27,127,511,2047,8191,32767,131071,524287,2097151,8388607,33554431,134217727,536870911,2147483647,8589934591,34359738367,137438953471,549755813887,2199023255551,8796093022207,35184372088831,140737488355327,562949953421311 ★ Decimal representation of the n - th iteration of the "Rule 249" elementary cellular automaton starting with a single ON (black) cell. ● a(n) = 5 * a(n - 1) - 4 * a(n - 2) for n>4. ●
► [A180578] 27,144,351,648,1035,1512,2079,2736,3483,4320,5247,6264,7371,8568,9855,11232,12699,14256,15903,17640,19467,21384,23391,25488,27675 ★ The Wiener index of the Dutch windmill graph D(6,n) (n>=1). ● a(n) = 9n(5n - 2). ●
► [A192328] 27,147,507,867,1587,2187,3267,4107,5547,6627,8427,9747,11907,13467,15987,17787,20667,22707,25947,28227,31827,34347,38307,41067,45387 ★ Numbers of the form 20 * k + 7 which are three times a square. ● a(n) = 3 * ((10 *

(n - 1) + (- 1) ^ (n - 1) + 5) / 2) ^ 2. • a(n) = a(- n - 1) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). •

► [A129028] 0,27,150,483,1188,2475,4602,7875,12648,19323,28350,40227,55500,74763,98658,127875,163152,205275,255078,313443,381300,459627,549450,651843,767928 ⋆ A129027(n) / 4. • a(n) = (n * (5 + 13 * n + 7 * n ^ 2 + 2 * n ^ 3)). G.f.: - 3 * x * (x ^ 3 + x ^ 2 + 5 * x + 9) / (x - 1) ^ 5. - _ Colin Barker _ , Jul 27 2013 •

► [A224001] 27,157,476,1144,2403,4614,8291,14141,23109,36428,55674,82826,120331,171174,238953,327959,443261,590796,777464,1011228,1301219,1657846,2092911,2619729,3253253 ⋆ Number of 3 X n 0..2 arrays with antidiagonals unimodal and rows and diagonals nondecreasing. • a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>9. •

► [A042420] 27,163,8829,53137,2878227,17322499,938293173,5647081537,305880696171,1840931258563,99716168658573,600137943210001,32507165101998627,195643128555201763,10597236107082893829 ⋆ Numerators of continued fraction convergents to sqrt(738). • a(n) = 326 * a(n - 2) - a(n - 4). - _ Vincenzo Librandi _ , Nov 24 2013 •

► [A213285] 0,1,27,165,712,2535,8151,23527,60600,140517,297595,584001,1075152,1875835,3127047,5013555,7772176,11700777,17167995,24623677,34610040,47773551,64877527,86815455,114625032 ⋆ Number of 6 - length words w over n - ary alphabet such that for every prefix z of w we have # (z,a _ i) = 0 or # (z,a _ i) >= # (z,a _ j) for all j>i and # (z,a _ i) counts the occurrences of the i - th letter in z. • a(n) = n * (- 332 + 757 * n - 632 * n ^ 2 + 255 * n ^ 3 - 48 * n ^ 4 + 4 * n ^ 5) / 4. •

► [A224454] 27,180,567,1296,2475,4212,6615,9792,13851,18900,25047,32400,41067,51156,62775,76032,91035,107892,126711,147600,170667,196020,223767,254016,286875 ⋆ The Wiener index of the linear phenylene with n hexagons. • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ G. C. Greubel _ , Dec 08 2016 •

► [A228463] 27,183,736,2227,5615,12453,25096,46941,82699,138699,223224,346879,522991,768041,1102128,1549465,2138907,2904511,3886128,5130027,6689551,8625805,11008376,13916085,17437771 ⋆ Number of arrays of maxima of three adjacent elements of some length 8 0..n array. • a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. •

► [A000499] 0,1,27,184,875,2700,7546,17600,35721,72750,126445,223776,353717,595448,843750,1349120,1827636,2808837,3600975,5306000,6667920,9599172,11509982,16416000,19015625 ⋆ a(n) = Sum _{ k=1..n - 1 } k ^ 3 * sigma(k) * sigma(n - k). • a(n) = Sum _{ k=1..n - 1 } k ^ 3 * sigma(k) * sigma(n - k). - _ Michel Marcus _ , Feb 02 2014 • a(n) = (n ^ 3 / 24 - n ^ 4 / 8) * sigma _ 1(n) + (n ^ 3 / 12) * sigma _ 3(n). - _ Ridouane Oudra _ , Sep 15 2020 •

► [A042416] 27,190,217,624,841,2306,3147,24335,1317237,9244994,10562231,30369456,40931687,112232830,153164517,1184384449,64109924763,449953857790,514063782553,1478081422896,1992145205449 ⋆ Numerators of continued fraction convergents to sqrt(736). • a(n) = 48670 * a(n - 8) - a(n - 16). - _ Vincenzo Librandi _ , Nov 23 2013 •

► [A216108] 27,198,585,1260,2295,3762,5733,8280,11475,15390,20097,25668,32175,39690,48285,58032,69003,81270,94905,109980,126567,144738,164565,186120,209475 ⋆ The Wiener index of the ortho - polyphenyl chain with n hexagons (see the Dou et al. and the Deng references). • a(n) = 12n ^ 3 + 36n ^ 2 - 21n. •

► [A216110] 27,198,621,1404,2655,4482,6993,10296,14499,19710,26037,33588,42471,52794,64665,78192,93483,110646,129789,151020,174447,200178,228321,258984,292275 ⋆ The Wiener index of the meta - polyphenyl chain with n hexagons (see the Dou et al. and the Deng references). • a(n) = 18n ^ 3 + 18n ^ 2 - 9n. •

► [A216112] 27,198,657,1548,3015,5202,8253,12312,17523,24030,31977,41508,52767,65898,81045,98352,117963,140022,164673,192060,222327,255618,292077,331848,375075 ⋆ The Wiener index of the para - polyphenyl chain with n hexagons (see the Dou et al. and the Deng references). • a(n) = 3n(1 + 8n ^ 2). •

► [A033544] 0,27,210,822,2328,5433,11130,20748,36000,59031,92466,139458,203736,289653,402234,547224,731136,961299,1245906,1594062,2015832,2522289,3125562,3838884,4676640 ⋆ Wiener number of n - hexagonal triangle. • a(n) = (1 / 10) * n * (n + 1) * (4 * n ^ 3 + 36 * n ^ 2 + 79 * n + 16). •

► [A016767] 0,27,216,729,1728,3375,5832,9261,13824,19683,27000,35937,46656,59319,74088,91125,110592,132651,157464,185193,216000,250047,287496,328509,373248 ⋆ a(n) = (3 * n) ^ 3. • a(n) = - a(- n) for all n in Z. - _ Michael Somos _ , Sep 16 2018 •

► [A224354] 27,216,788,2321,5840,13052,26610,50423,90012,152912,249120,391589,596768,885188,1282094,1818123,2530028,3461448,4663724,6196761,8129936,10543052,13527338,17186495,21637788 ⋆ Number of 3 X n 0..2 arrays with diagonals and antidiagonals unimodal and rows nondecreasing. • a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>8. •

► [A224013] 27,216,868,2661,6815,15340,31324,59267,105461,178416,289332,452617,686451,1013396,1461052,2062759,2858345,3894920,5227716,6920973,9048871,11696508,14960924,18952171,23794429 ⋆ Number of 3 X n 0..2 arrays with rows nondecreasing and antidiagonals unimodal. • a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>8. •

► [A059827] 1,27,216,1000,3375,9261,21952,46656,91125,166375,287496,474552,753571,1157625,1728000,2515456,3581577,5000211,6859000,9261000,12326391,16194277,21024576,27000000,34328125 ⋆ Cubes of triangular numbers: (n * (n + 1) / 2) ^ 3. • a(n) = Sum _{ j=1..n } Sum _{ i=1..n } i * j ^ 3. - _ Alexander Adamchuk _ , Jun 25 2006 •

► [A272342] 27,216,1728,13824,110592,884736,7077888,56623104,452984832,3623878656,28991029248,231928233984,1855425871872,14843406974976,118747255998808,949978046398464,7599824371187712,60798594969501696 ⋆ a(n) = 27 * 8 ^ n. • a(n) = 27 * 8 ^ n = 2 ^ 3n + 2 ^ (3n + 1) + 2 ^ (3n + 3) + 2 ^ (3n + 4). • a(n) = 8 * a(n - 1), n>0; a(0)=27. •

► [A074117] 1,27,243,2187,19683,177147,1594323,14348907,129140163,1162261467,10460353203,282429536481,2541865828329,22876792454961,205891132094649,1853020188851841,16677181699666569,150094635296999121,1350851717672992089,12157665459056928801 ⋆ Smallest n - digit power of 3. • a(n) = 3 ^ ceiling((n - 1) * log(10) / log(3)). - _ Andrew Howroyd _ , Jan 16 2020 •

► [A030509] 27,244,1225,4506,13559,35346,82664,177494,355621,672796,1212758,2097452,3499818,5659535,8902155,13662083,20509867,30184333,43630080,62040927,86909874,120086243,163840610,220938240,294721720 ⋆ Graham - Sloane - type lower bound on the size of a ternary (n,3,9) constant - weight code. • a(n) = ceiling(binomial(n, w) * 2 ^ w / (2 * n + 1)) with w=9. •

► [A108670] 1,27,268,1575,6678,22638,65184,165726,381975,813241,1621620,3060421,5511324,9531900,15915264,25763772,40578813,62368887,93778300,138238947,200147794,285072810,399990240,553556250,756416115 ⋆ a(n) = (n + 1)(n + 2) ^ 3 * (n + 3)(n + 4)(5n ^ 2 + 16n + 15) / 1440. • a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>8. •

► [A059603] 1,27,273,1715,8007,30381,98735,284349,742950,1791426,4037670,8591154,17392258,33711510,62886162,113381398,198287439,337392405,560004575,908737245,1444515345,2253115995,3453615945,5209188075,7740767580 ⋆ Expansion of (1 + 15 * x + 15 * x ^ 2 + x ^ 3) / (1 - x) ^ 12. • a(n)= binomial(n + 8, 8) * (2 * n + 9) * (8 * n ^ 2 + 72 * n + 55) / (11 * 5 * 9). •

► [A115246] 0,0,27,288,2250,15795,105987,696864,4540968,29490750,191420427,1243565235,8091223647,52739879283,344402073027,2253045672480,14764068268068,96899123172708,636877933530303,4191430966219038,27617820628739718,182176855684869243 ⋆ Number of different ways to select n elements from three sets of n elements such that there is at least one element from each set. • a(n) = binomial(3n, n) - 3 * binomial(2n, n) + 3. •

► [A086574] 0,27,297,2997,29997,299997,2999997,29999997,299999997,2999999997,29999999997,299999999997,2999999999997,29999999999997,299999999999997,2999999999999997,29999999999999997,299999999999999997,2999999999999999997,29999999999999999997,299999999999999999997,2999999999999999999997,29999999999999999999997,299999999999999999999997 ⋆ a(n) = 3 * (10 ^ n - 1). • a(0)=0, a(1)=27, a(n)=11 * a(n - 1) - 10 * a(n - 2). - _ Harvey P. Dale _ , Nov 28 2015 •

► [A048396] 0,27,315,1638,5670,15345,35217,71820,134028,233415,384615,605682,918450,1348893,1927485,2689560,3675672,4931955,6510483,8469630,10874430,13796937,17316585,21520548,26504100 ⋆ Sums of consecutive noncubes. • a(n) = (6n ^ 5 + 15n ^ 4 + 18n ^ 3 + 12n ^ 2 + 3n) / 2. • a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). - _ Wesley Ivan Hurt _ , Apr 10 2015 •

► [A128831] 1,27,343,3375,29791,250047,2048383,16581375,133432831,1070599167,8577357823,68669157375,549554511871,4397241253887,35181150961663,281462092005375,2251748274470911,18014192351838207,144114363443707903 ⋆ Number of n - tuples where each entry is chosen from the subsets of { 1,2,3 } such that the intersection of all n entries is empty. • a(n) = (2 ^ n - 1) ^ 3. •

► [A030648] 1,27,351,3003,19305,100386,442442,1706562,5895396,18559580,53965548,146477916,374332452,907036326,2096092350,4642456390,9895762305,20373628275,40639459575,78751105875,148599912825,273612537900,492502568220,868056366060,1500344336400 ⋆ Dimensions of multiples of minimal representation of complex Lie algebra E6. • a(n) = (1 / 517440) * binomial(n + 11, 3) * binomial(n + 3, 3) * binomial(n + 8, 5) ^ 2. •

► [A223278] 27,351,4995,72279,1048923,15229647,221142771,3211159815,46628577099,677084057343,9831800199267,142765577323191,2073070007320635,30102629340815919,437114178530327763,6347246378746198887 ⋆ Rolling icosahedron face footprints: number of n X 4 0..19 arrays starting with 0 where 0..19 label faces of an icosahedron and every array movement to a horizontal, diagonal or an tidiagonal neighbor moves across an icosahedral edge. • a(n) = (3 * 2 ^ (- 1 - n) * ((17 - sqrt(145)) ^ n * (- 1 + sqrt(145)) + (1 + sqrt(145)) * (17 + sqrt(145)) ^ n)) / sqrt(145). •

► [A110207] 1,27,368,6615,88536,1449198,20078192,320944275,4584724120,72867715074,1064153845776,16896536592390,250629464211504,3980364331323996,59709362473177824,948742244639103915,14352114907032903000 ⋆ a(n) = sum of cubes of numbers < 2 ^ n having exactly [n / 2] + 1 ones in their binary expansion. • a(n) = (8 ^ n - 1) / 7 * C(n - 3, [n / 2]) + ((2 ^ n - 1) * (4 ^ n - 1) - (8 ^ n - 1) / 7) * C(n - 3, [n / 2] - 1) + (2 ^ n - 1) ^ 3 * C(n - 3, [n / 2] - 2). •

► [A000535] 0,27,378,4536,48600,489780,4738104,44535456,409752432,3708359550,33125746500,292779558720,2565087894720,22307854940280,192788833482000,1657111548654720,14176605442521312,120779466450505758,1025230099571720676,8674221270307971600 ⋆ Card matching: coefficients B[n,2] of t ^ 2 in the reduced hit polynomial A[n,n,n](t). • a(n) = 3 * binomial(n, 2) * Sum _{ k=0..n - 2 } binomial(n, k + 2) * binomial(n, k) * binomial(n - 2, k) + 3 * n ^ 2 * Sum _{ k=0..n - 2 } binomial(n, k + 1) * binomial(n - 1, k + 1) * binomial(n - 1, k). • a(n) = 3(n - 1) * n ^ 3 3F2(1 - n, 1 - n, 2 - n; 2, 2; - 1) + (3 / 4)(n - 1) ^ 2 n ^ 2 3F2(2 - n, 2 - n, - n; 1, 3; - 1), where 3F2 is the hypergeometric function 3F2. - _ Jean - François Alcover _ , Feb 09 2016 •

► [A033280] 1,27,385,4004,34398,259896,1790712,11511720,70114902,409003595,2303105805,12593413560,67173369900,350777861280,1798432526880,9073909567440,45140379405030,221768094898350,1077403874372826,5182007298602904,24699073588138180,116759256962107760 ⋆ Number of diagonal dissections of a convex (n + 8) - gon into n + 1 regions. • a(n) = binomial(n + 5, 5) * binomial(2n + 7, n) / (n + 1). •

► [A036222] 1,27,405,4455,40095,312741,2189187,14073345,84440070,478493730,2583866142,13389124554,66945622770,324428787270,1529449997130,7035469986798,31659614940591,139674771796725,605257344452475 ⋆ Expansion of 1 / (1 - 3 * x) ^ 9; 9 - fold convolution of A000244 (powers of 3). • a(n) = 3 ^ n * binomial(n + 8, 8). • a(0)=1, a(1)=27, a(2)=405, a(3)=4455, a(4)=40095, a(5)=312741, a(6)=2189187, a(7)=14073345, a(8)=84440070, a(n) = 27 * a(n - 1) - 324 * a(n - 2) + 2268 * a(n - 3) - 10206 * a(n - 4) + 30618 * a(n - 5) - 61236 * a(n - 6) + 78732 * a(n - 7) - 59049 * a(n - 8) + 19683 * a(n - 9). - _ Harvey P. Dale _ , Jan 07 2016 •

► [A155988] 1,27,405,5103,59049,649539,6908733,71744535,731794257,7360989291,73222472421,721764371007,7060738412025,68630377364883,663426981193869,6382625094934119,61149666232110753,583701359488329915,5553501505988967 47

7,5268321698924669147 1,49846428382133408 41 ⋆ a(n) = (2 * n + 1) * 9 ^ n. ● a(n) = 18 * a(n - 1) - 81 * a(n - 2) for n>=2. ●

► [A028166] 1,27,460,6330,76951,863457,9169210,93598560,928041301,9002652087,85889800360,809002365990,7544820424051,69822238375917,642271794705910,5880216219628620,53636500167577201,487828126104034947 ⋆ Expansion of 1 / ((1 - 5x)(1 - 6x)(1 - 7x)(1 - 9x)). ● a(n) = 27 * a(n - 1) - 2 69 * a(n - 2) + 1173 * a(n - 3) - 1890 * a(n - 4), n >= 4. - _ Vincenzo Librandi _ , Mar 19 2011 ● a(n) = 16 * a(n - 1) - 63 * a(n - 2) + 6 ^ (n + 1) - 5 ^ (n + 1), n >= 2. - _ Vincenzo Librandi _ , Mar 19 2011 ● a(n) = - 7 ^ (n + 3) / 4 + 2 * 6 ^ (n + 2) + 3 * 9 ^ (n + 2) / 8 - 5 ^ (n + 3) / 8. - _ R. J. Mathar _ , Mar 19 2011 ●

► [A028135] 1,27,463,6447,79639,910959,9884071,103247199,1048457047,10419680271,101824958599,981887319231,9367184200375,88585292286063,831747262057447,7762970817850143,72093155775104023,666700494910153935 ⋆ Expansion of 1 / ((1 - 4x)(1 - 6x)(1 - 8x)(1 - 9x)). ● a(n)=(6 * 9 ^ (n + 2) - 10 * 8 ^ (n + 2) + 5 * 6 ^ (n + 2) - 4 ^ (n + 2)) / 10. [_ Yahia Kahloune _ , Jun 02 2013] ●

► [A028132] 1,27,465,6535,81921,956487,10657585,115031895,1214419041,12622599847,129754165905,1323318833655,13420125351361,135548860481607,1365156409213425,13720647130385815,137698507311406881 ⋆ Expansion of 1 / ((1 - 4x)(1 - 6x)(1 - 7x)(1 - 10x)). ● a(n)=(10 ^ (n + 3) - 8 * 7 ^ (n + 3) + 9 * 6 ^ (n + 3) - 2 * 4 ^ (n + 3)) / 72. [_ Yahia Kahloune _ , Jun 02 2013] ●

► [A028089] 1,27,466,6558,82075,952329,10485532,111125916,1144265749,11522055831,113982102598,1111567913274,10714164992623,102277469691333,968483992074064,9108558269363832,85172800746064297 ⋆ Expansion of 1 / ((1 - 3x)(1 - 7x)(1 - 8x)(1 - 9x)). ● a(n)=(10 * 9 ^ (n + 3) - 24 * 8 ^ (n + 3) + 15 * 7 ^ (n + 3) - 3 ^ (n + 3)) / 120. [_ Yahia Kahloune _ , May 31 2013] ●

► [A028121] 1,27,467,6615,83811,990927,11193547,122534775,1311833171,13818932127,143838758427,1483810444935,15202640928931,154948536206127,1572891821232107,15916318178611095,160663127276015091 ⋆ Expansion of 1 / ((1 - 4x)(1 - 5x)(1 - 8x)(1 - 10x)). ● a(n) = 27 * a(n - 1) - 262 * a(n - 2) + 1080 * a(n - 3) - 1600 * a(n - 4), n>=4. - _ Vincenzo Librandi _ , Mar 17 2011 ● a(n) = 18 * a(n - 1) - 80 * a(n - 2) + 5 ^ (n + 1) - 4 ^ (n + 1), n>=2. - _ Vincenzo Librandi _ , Mar 17 2011 ● a(n) = 5 * 10 ^ (n + 1) / 3 + 5 ^ (n + 2) / 3 - 8 ^ (n + 2) / 3 - 2 * 4 ^ (n + 1) / 3. - _ R. J. Mathar _ , Mar 17 2011 ●

► [A028080] 1,27,469,6687,85357,1016775,11565973,127403199,1371332413,14511863223,151627818277,1569077088111,16117515157069,164615225572071,1673829571276981,16960654592840223,171391059145733725 ⋆ Expansion of 1 / ((1 - 3x)(1 - 6x)(1 - 8x)(1 - 10x)). ● a(n)=(15 * 10 ^ (n + 3) - 42 * 8 ^ (n + 3) + 35 * 6 ^ (n + 3) - 8 * 3 ^ (n + 3)) / 840. [_ Yahia Kahloune _ , May 31 2013] ●

► [A028118] 1,27,470,6750,87411,1065177,12504280,143383500,1619764421,18123947127,201553821690,2232652225050,24669249375031,272138102501877,2998983086992700,33027209966147400,363568827451799241 ⋆ Expansion of 1 / ((1 - 4x)(1 - 5x)(1 - 7x)(1 - 11x)). ● a(0)=1, a(1)=27, a(2)=470, a(3)=6750, a(n)=27 * a(n - 1) - 259 * a(n - 2) + 1053 * a(n - 3) - 1540 * a(n - 4). - _ Harvey P. Dale _ , Oct 20 2012 ● a(n)=(11 ^ (n + 3) - 7 ^ (n + 4) + 14 * 5 ^ (n + 3) - 8 * 4 ^ (n + 3)) / 168. [_ Yahia Kahloune _ , Jun 11 2013] ●

► [A028068] 1,27,472,6810,88351,1073217,12477502,140675040,1550817301,16809628407,179833708132,1904095702470,19993394169451,208508925363597,2162279358272362,22317580796873100,229429274301232801 ⋆ Expansion of 1 / ((1 - 3x)(1 - 5x)(1 - 9x)(1 - 10x)). ● a(n)=(24 * 10 ^ (n + 3) - 35 * 9 ^ (n + 3) + 21 * 5 ^ (n + 3) - 10 * 3 ^ (n + 3)) / 840. [_ Yahia Kahloune _ , Jun 10 2013] ●

► [A028077] 1,27,472,6822,88963,1091349,12886714,148484664,1683799645,18895210191,210582084076,2336271745626,25842423980647,285296827032153,3145632963614158,34654478019199308,381572508324065569 ⋆ Expansion of 1 / ((1 - 3x)(1 - 6x)(1 - 7x)(1 - 11x)). ● a(n) = (3 * 11 ^ (n + 3) - 30 * 7 ^ (n + 3) + 32 * 6 ^ (n + 3) - 5 * 3 ^ (n + 3)) / 480. - _ Yahia Kahloune _ , Jun 10 2013 ● a(0)=1, a(1)=27, a(2)=472, a(3)=6822, a(n)=27 * a(n - 1) - 257 * a(n - 2) + 1017 * a(n - 3) - 1386 * a(n - 4). - _ Harvey P. Dale _ , May 22 2014 ●

► [A028006] 1,27,473,6831,88473,1069551,12338761,137686527,1499327225,16029462735,168979616169,1762044328863,18217806426457,187092613978479,1911192049791497,19440694364069439,197083660672701369,1992576025702599183,20101955387867645545 ⋆ Expansion of 1 / ((1 - 2x)(1 - 7x)(1 - 8x)(1 - 10x)). ● a(n) = (5 * 10 ^ (n + 3) - 20 * 8 ^ (n + 3) + 16 * 7 ^ (n + 3) - 2 ^ (n + 3)) / 240. - _ Yahia Kahloune _ , Jun 05 2013 ●

► [A028066] 1,27,474,6902,90867,1126545,13446028,156530604,1791797733,20274317063,227558149182,2539586737506,28227640438999,312844584806781,3460030004311536,38210322891344408,421513875961285065 ⋆ Expansion of 1 / ((1 - 3x)(1 - 5x)(1 - 8x)(1 - 11x)). ● a(n) = (5 * 11 ^ (n + 3) - 2 * 8 ^ (n + 4) + 4 * 5 ^ (n + 4) - 3 ^ (n + 5)) / 720. - _ Yahia Kahloune _ , Jun 08 2013 ●

► [A026795] 1,27,475,6915,90571,1110147,13011355,147722355,1638222091,17846324067,191730867835,2037261517395,21455455896811,224319716510787,2331201129229915,24104752246858035,248186422724438731 ⋆ Expansion of 1 / ((1 - 2 * x) * (1 - 6 * x) * (1 - 9 * x) * (1 - 10 * x)). ● a(n) = (875 * 10 ^ n - 972 * 9 ^ n + 126 * 6 ^ n - 2 ^ n) / 28. - _ R. J. Mathar _ , Jun 23 2013 ●

► [A028114] 1,27,475,6975,93451,1191447,14779315,180568575,2187814651,26388443367,317513959555,3815510712975,45819341339851,550037207863287,6601706608906195,79228188287078175,950785259085745051 ⋆ Expansion of 1 / ((1 - 4x)(1 - 5x)(1 - 6x)(1 - 12x)). ● a(n)=(12 ^ (n + 3) - 28 * 6 ^ (n + 3) + 48 * 5 ^ (n + 3) - 21 * 4 ^ (n + 3)) / 336. [_ Yahia Kahloune _ , Jun 11 2013] ●

► [A026727] 1,27,477,7007,93093,1163799,13989949,163814559,1883880405,21393162791,240779316141,2692752875631,29976989988037,332620147754103,3681925234618653,40686711732853823,449042333942609589 ⋆ Expansion of 1 / ((1 - 2 * x) * (1 - 6 * x) * (1 - 8 * x) * (1 - 11 * x)). ● a(n) = (- 5 * 2 ^ n + 729 * 6 ^ n - 30 * 8 ^ (n + 2) + 11 ^ (n + 3)) / 135. _ R. J. Mathar _ , Jun 23 2013 ●

► [A028048] 1,27,478,7062,94699,1198209,14603176,173499804,2024524117,23314991271,265875954994,3009351209826,33865370166655,379381897212813,4234967357150332,47140543570858728,523549120110020713 ⋆ Expansion of 1 / ((1 - 3x)(1 - 4x)(1 - 9x)(1 - 11x)). ● a(n)=(15 * 11 ^ (n + 3) - 28 * 9 ^ (n + 3) + 48 * 4 ^ (n + 3) - 35 * 3 ^ (n + 3)) / 1680. [_ Yahia Kahloune _ , Jun 07 2013] ●

► [A028063] 1,27,478,7086,95923,1234761,15440896,189849132,2311064965,27967760535,337282318594,4059193972938,48793580278327,586108780927749,7037421345862372,84477944245876104,1013937929024363209 ⋆ Expansion of 1 / ((1 - 3x)(1 - 5x)(1 - 7x)(1 - 12x)). ● a(0)=1, a(1)=27, a(2)=478, a(3)=7086, a(n)=27 * a(n - 1) - 251 * a(n - 2) + 957 * a(n - 3) - 1260 * a(n - 4) [From Harvey P. Dale, Aug 31 2011] ● a(n)=(8 * 12 ^ (n + 3) - 9 * 7 ^ (n + 4) + 18 * 5 ^ (n + 4) - 35 * 3 ^ (n + 3)) / 2520. [_ Yahia Kahloune _ , Jun 08 2013] ●

► [A024441] 1,27,480,7090,94311,1173417,13944190,160292880,1797313221,19769671207,214195117500,2292743705070,24300717989731,255479745527397,2667841806196410,27701356042027660,286258773993179841 ⋆ Expansion of 1 / ((1 - x)(1 - 7x)(1 - 9x)(1 - 10x)). ● a(n) = (16 * 10 ^ (n + 3) - 27 * 9 ^ (n + 3) + 12 * 7 ^ (n + 3) - 1) / 432. [_ Yahia Kahloune _ , Jun 28 2013] ●

► [A026028] 1,27,480,7130,96111,1221537,14941750,178032960,2082076821,24019528247,274281235020,3107772782790,35002020287131,392372934746157,4382268859012290,48800507502984620,542165787330583041 ⋆ Expansion of 1 / ((1 - 2x)(1 - 5x)(1 - 9x)(1 - 11x)). ● a(n) = - 8 * 2 ^ n / 189 + 125 * 5 ^ n / 72 - 729 * 9 ^ n / 56 + 1331 * 11 ^ n / 108. _ R. J. Mathar _ , Jun 22 2013 ● a(n) = 27 * a(n - 1) - 249 * a(n - 2) + 893 * a(n - 3) - 990 * a(n - 4). - _ Wesley Ivan Hurt _ , Sep 04 2022 ●

► [A026543] 1,27,481,7191,98161,1272663,16005025,197611623,2412718033,29257382583,353312653057,4255864465671,51186427162417,615069092006487,7386770412718177,88683539390560935,1064502765417159313 ⋆ Expansion of 1 / ((1 - 2 * x) * (1 - 6 * x) * (1 - 7 * x) * (1 - 12 * x)). ● a(n) = (- 2 ^ n + 225 * 6 ^ n - 7 ^ (n + 3) + 12 ^ (n + 2)) / 25. - _ R. J. Mathar _ , Jun 23 2013 ●

► [A024439] 1,27,482,7182,96843,1227609,14939644,176784444,2050941365,23457934071,265547461686,2983410454986,33332770184767,370895550650613,4114522946353808,45542666345230008,503271413032566249 ⋆ Expansion of 1 / ((1 - x)(1 - 7x)(1 - 8x)(1 - 11x)). ● a(n) = (7 * 11 ^ (n + 3) - 40 * 8 ^ (n + 3) + 35 * 7 ^ (n + 3) - 2) / 840. [_ Yahia Kahloune _ , Jun 28 2013] ●

► [A026006] 1,27,483,7271,100083,1308831,16594651,206375367,2535071715,30892653935,374502469419,4524435989463,54536889623347,656393971978239,7892348208238587,94833193717469159,1138998700671586179 ⋆ Expansion of 1 / ((1 - 2x)(1 - 5x)(1 - 8x)(1 - 12x)). ● a(n) = - 2 * 2 ^ n / 45 + 125 * 5 ^ n / 63 - 64 * 8 ^ n / 9 + 216 * 12 ^ n / 35. _ R. J. Mathar _ , Jun 20 2013 ●

► [A024346] 1,27,484,7266,98959,1269177,15642586,187539120,2204181925,25529358855,292445725936,3321943348542,37489352241979,420930326166741,4707254688375814,52473555698990412,583456285162491601 ⋆ Expansion of 1 / ((1 - x) * (1 - 6 * x) * (1 - 9 * x)(1 - 11 * x)). ● a(n) = 27 * a(n - 1) - 245 * a(n - 2) + 813 * a(n - 3) - 594 * a(n - 4) for n > 3; a(0)=1, a(1)=27, a(2)=484, a(3)=7266. - _ Vincenzo Librandi _ , Jul 16 2013 ● a(n) = (12 * 11 ^ (n + 3) - 25 * 9 ^ (n + 3) + 16 * 6 ^ (n + 3) - 3) / 1200. - _ Yahia Kahloune _ , Aug 13 2013 ●

► [A025983] 1,27,485,7335,101181,1319967,16597525,203384295,2445473261,28983189807,339647023365,3944444998455,45472205947741,521027509282047,5939635577526005,67419323254471815,762445883405916621 ⋆ Expansion of 1 / ((1 - 2x)(1 - 4x)(1 - 10x)(1 - 11x)). ● a(n) = - 2 ^ n / 18 + 16 * 4 ^ n / 21 - 125 * 10 ^ n / 6 + 1331 * 11 ^ n / 63. - _ R. J. Mathar _ , Jun 20 2013 ●

► [A081139] 0,0,1,27,486,7290,98415,1240029,14880348,172186884,1937102445,21308126895,230127770466,2447722649502,25701087819771,266895911974545,2745215094595320,28001193964872264,283512088894331673 ⋆ 9th binomial transform of (0,0,1,0,0,0,...). ● a(n) = 27 * a(n - 1) - 243 * a(n - 2) + 729 * a(n - 3), a(0)=a(1)=0, a(2)=1. ● a(n) = 9 ^ (n - 2) * binomial(n, 2). ●

► [A020976] 1,27,487,7335,99631,1265607,15341887,179688375,2050086511,22913907687,251930201887,2733012078615,29322230800591,311701053949767,3287717299503487,34448718207176055,358912563957741871 ⋆ Expansion of 1 / ((1 - 8 * x) * (1 - 9 * x) * (1 - 10 * x)). ● a(0) = 1, a(1) = 27, a(2) = 487, a(n) = 27 * a(n - 1) - 242 * a(n - 2) + 720 * a(n - 3). ● a(n) = 2 ^ (2 + 3 * (n + 1)) + 2 ^ (n + 1) * 5 ^ (2 + n) - 9 ^ (2 + n). (End) ●

► [A024114] 1,27,487,7407,102943,1357119,17315839,216369279,2667080575,32582253951,395677903231,4786097041791,57739474264447,695339842109823,8363901349806463,100525966375567743,1207588183261823359 ⋆ Expansion of 1 / ((1 - x)(1 - 6x)(1 - 8x)(1 - 12x)). ● a(n) = (35 * 12 ^ (n + 3) - 165 * 8 ^ (n + 3) + 154 * 6 ^ (n + 3) - 24) / 9240. [_ Yahia Kahloune _ , Jun 27 2013] ● a(0)=1, a(1)=27, a(2)=487, a(3)=7407; for n>3, a(n) = 27 * a(n - 1) - 242 * a(n - 2) + 792 * a(n - 3) - 576 * a(n - 4). - _ Vincenzo Librandi _ , Jul 16 2013 ●

► [A025982] 1,27,487,7431,103951,1382439,17812639,224794647,2797053391,34460823111,421597615231,5131789410423,62235068724271,752703321093543,9085382857597663,109501083478899159,1318301413026203791 ⋆ Expansion of 1 / ((1 - 2x)(1 - 4x)(1 - 9x)(1 - 12x)). ● a(0)=1, a(1)=27, a(2)=487, a(3)=7431, a(n)=27 * a(n - 1) - 242 * a(n - 2) + 816 * a(n - 3) - 864 * a(n - 4) – From _ Harvey P. Dale _ , Jul 21 2012 ● a(n) = - 2 * 2 ^ n / 35 + 4 * 4 ^ n / 5 - 243 * 9 ^ n / 35 + 36 * 12 ^ n / 5. _ R. J. Mathar _ , Jun 20 2013 ●

► [A023946] 1,27,488,7434,103215,1353681,17093182,210149568,2533379189,30086951895,353166486036,4106992533462,47398834914523,543607880403069,6201901277261450,70443098125125516,797096110863739617 ⋆ Expansion of 1 / ((1 - x)(1 - 5x)(1 - 10x)(1 - 11x)). ● a(n) = (6 * 11 ^ (n + 3) - 8 * 10 ^ (n + 3) + 3 * 5 ^ (n + 3) - 1) / 360. [_ Yahia Kahloune _ , Jun 27 2013] ● a(0)=1, a(1)=27, a(2)=488, a(3)=7434; for n>3, a(n) = 27 * a(n - 1) - 241 * a(n - 2) + 765 * a(n - 3) - 550 * a(n - 4). - _ Vincenzo Librandi _ , Jul 12 2013 ●

► [A020971] 1,27,490,7470,103291,1343097,16753780,202932540,2405791381,28065859767,323426323870,3691983687210,41834308968271,471276683342037,5284615302054760,59040661951743480,657669557062017961 ⋆ Expansion of 1 / ((1 - 7 * x) * (1 - 9 * x) * (1 - 11 * x)). ● a(n) = 27 * a(n - 1) - 239 * a(n - 2) + 693 * a(n - 3), n>=3. - _ Vincenzo Librandi _ , Mar 15 2011 ● a(n) = 20 * a(n - 1) - 99 * a(n - 2) + 7 ^ n, a(0)=1, a(1)=27. - _ Vincenzo Librandi _ , Mar 15 2011 ● a(n) = (7 ^ (n + 2) - 2 * 9 ^ (n + 2) + 11 ^ (n + 2)) / 8. - _ Bruno Berselli _ , Mar 15 2011 ●

► [A023772] 1,27,490,7530,105991,1416477,18318520,231807060,2890036381,35658042927,436707179350,5319843165390,64552636279171,781063825879377,9430663254710980,113689073300930520,1368959098545618361 ⋆ Expansion of 1 / ((1 - x)(1 - 5x)(1 - 9x)(1 - 12x)). ● a(n) = 27 * a(n - 1) - 239 * a(n - 2) + 753 * a(n - 3) - 540 * a(n - 4), with a(0)=1, a(1)=27, a(2)=490, a(3)=7530. [_ Harvey P.

Dale _ , Mar 07 2012] • a(n) = (32 * 12 ^ (n + 3) - 77 * 9 ^ (n + 3) + 66 * 5 ^ (n + 3) - 21) / 7392. [_ Yahia Kahloune _ , Jun 27 2013] •

► [A020726] 1,27,493,7599,106645,1411431,17955757,222093423,2690508229,32080473975,377794514461,4405195463487,50953884924853,585473143132359,6690087028209805,76090252032830991,861988540696279717 ★ Expansion of 1 / ((1 - 6 * x) * (1 - 10 * x) * (1 - 11 * x)). • a(n) = 21 * a(n - 1) - 110 * a(n - 2) + 6 ^ n for n>1, a(0)=1, a(1)=27. - _ Vincenzo Librandi _ , Mar 11 2011 • a(n) = (4 * 11 ^ (n + 2) - 5 * 10 ^ (n + 2) + 6 ^ (n + 2)) / 20. - _ Yahia Kahloune _ , Jun 30 2013 • a(0) = 1, a(1) = 27, a(2) = 493, a(n) = 27 * a(n - 1) - 236 * a(n - 2) + 660 * a(n - 3). - _ Harvey P. Dale _ , Oct 01 2014 •

► [A020969] 1,27,493,7611,107293,1432011,18457741,232505307,2883927805,35398400235,431393410669,5231599117563,63232056214237,762504498009099,9180490786688077,110414131486397979,1326988747136473789 ★ Expansion of 1 / ((1 - 7 * x) * (1 - 8 * x) * (1 - 12 * x)). • a(n) = 27 * a(n - 1) - 236 * a(n - 2) + 672 * a(n - 3), n>=3. - _ Vincenzo Librandi _ , Mar 15 2011 • a(n) = 20 * a(n - 1) - 96 * a(n - 2) + 7 ^ n for n>1, a(0)=1, a(1)=27. - _ Vincenzo Librandi _ , Mar 15 2011 • a(n) = (7 ^ (n + 2) - 10 * 8 ^ (n + 1) + 3 * 12 ^ (n + 1)) / 5. - _ Bruno Berselli _ , Mar 15 2011 •

► [A025956] 1,27,493,7671,109813,1496031,19737181,254700567,3234969925,40605328335,505121007469,6240023291463,76665993102037,937849058035839,11432760118860157,139878835693603959,1685603171125077349 ★ Expansion of 1 / ((1 - 2x)(1 - 3x)(1 - 10x)(1 - 12x)). • a(n) = - 2 ^ n / 10 + 3 * 3 ^ n / 7 - 125 * 10 ^ n / 14 + 48 * 12 ^ n / 5. - _ R. J. Mathar _ , Jun 20 2013 •

► [A020724] 1,27,495,7695,109431,1474767,19198215,244167615,3055792311,37811613807,464078786535,5662363023135,68791291322391,833094971965647,10065613312624455,121404092777808255,1462402531680439671 ★ G.f.: 1 / ((1 - 6 * x) * (1 - 9 * x) * (1 - 12 * x)). • a(n) = (12 ^ (n + 2) - 2 * 9 ^ (n + 2) + 6 ^ (n + 2)) / 18. - _ Yahia Kahloune _ , Jun 30 2013 • a(n) = 27 * a(n - 1) - 234 * a(n - 2) + 648 * a(n - 3). - _ Jinyuan Wang _ , Mar 10 2020 •

► [A021994] 1,27,495,7735,111111,1517607,20059495,259217895,3295741671,41400518887,515323813095,6369067214055,78280643507431,957886180955367,11679819118040295,142009680313898215,1722634678467548391 ★ G.f.: 1 / ((1 - x)(1 - 4x)(1 - 10x)(1 - 12x)). • a(n) = (27 * 12 ^ (n + 3) - 44 * 10 ^ (n + 3) + 33 * 4 ^ (n + 3) - 16) / 4752. [_ Yahia Kahloune _ , Jun 27 2013] • a(0)=1, a(1)=27, a(2)=495, a(3)=7735; for n>3, a(n) = 27 * a(n - 1) - 234 * a(n - 2) + 688 * a(n - 3) - 480 * a(n - 4). - _ Vincenzo Librandi _ , Jul 12 2013 •

► [A020568] 1,27,499,7863,113731,1561647,20724139,268611543,3422947891,43073421567,536871293179,6642406690023,81708636139651,1000502412972687,12206022852156619,148472243708301303 ★ G.f.: 1 / ((1 - 5x)(1 - 10x)(1 - 12x)). • a(0)=1, a(1)=27, a(2)=499, a(n)=27 * a(n - 1) - 230 * a(n - 2) + 600 * a(n - 3) From _ Harvey P. Dale _ , May 22 2012 • a(n) = 5 * 5 ^ n / 7 - 10 * 10 ^ n + 72 * 12 ^ n / 7. - _ R. J. Mathar _ , Jun 30 2013 •

► [A021734] 1,27,502,8022,118363,1663809,22644784,301210524,3938740405,50831269671,649205557546,8222000492706,103410878533327,1293146143620813,16092125344053988,199423591976817768 ★ G.f.: 1 / ((1 - x)(1 - 3x)(1 - 11x)(1 - 12x)). • a(n)=(80 * 12 ^ (n + 3) - 9 * 11 ^ (n + 4) + 55 * 3 ^ (n + 3) - 36) / 7920. [_ Yahia Kahloune _ , Jun 27 2013] •

► [A014928] 1,27,534,9322,152127,2379885,36167548,538155684,7879732173,113924725903,1630368136242,23136292864686,326011399456939,4566262891748481,63626908677237816,882601196902689928 ★ a(1)=1, a(n)=n * 13 ^ (n - 1) + a(n - 1). • a(n)=(1 / 144) * (1 + 13 ^ n * (12 * n - 1)). [_ Paolo P. Lava _ , Jan 13 2009] • a(1)=1, a(2)=27, a(n) = 26 * a(n - 1) - 169 * a(n - 2) + 1. - _ Vincenzo Librandi _ , Oct 23 2012 • a(1)=1, a(2)=27, a(3)=534, a(n)=27 * a(n - 1) - 195 * a(n - 2) + 169 * a(n - 3). - _ Harvey P. Dale _ , Jan 20 2015 •

► [A076008] 1,27,567,10935,203391,3720087,67493007,1219657095,21996874431,396331160247,7137447668847,128505439098855,2313380333315871,41643387865514007,749603858371707087,13493075341822822215 ★ Second column of triangle A075504. • a(n) = - 9 ^ n + 2 * 18 ^ n. • a(0)=1, a(1)=27, a(n) = 27 * a(n - 1) - 162 * a(n - 2). - _ Harvey P. Dale _ , Dec 01 2015 •

► [A212670] 27,615,3843,14351,40363,94711,195859,368927,646715,1070727,1692195,2573103,3787211,5421079,7575091,10364479,13920347,18390695,23941443,30757455,39043563,49025591,60951379,75091807,91741819 ★ a(n) = 1 / 15 * (128 * n ^ 5 + 320 * n ^ 4 + 80 * n ^ 3 - 200 * n ^ 2 + 92 * n - 15). • a(n) = 2 / (2 * n + 1) * Sum _{ i=1..n } tan ^ 7(Pi * i / (2 * n + 1)) * sin(2 * Pi * i / (2 * n + 1)). •

► [A016947] 27,729,3375,9261,19683,35937,59319,91125,132651,185193,250047,328509,421875,531441,658503,804357,970299,1157625,1367631,1601613,1860867,2146689,2460375,2803221,3176523 ★ a(n) = (6 * n + 3) ^ 3. • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Wesley Ivan Hurt _ , Oct 02 2020 •

► [A158645] 27,756,2943,6588,11691,18252,26271,35748,46683,59076,72927,88236,105003,123228,142911,164052,186651,210708,236223,263196,291627,321516,352863,385668,419931 ★ a(n) = 729 * n ^ 2 + 27. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). •

► [A348634] 0,0,0,27,768,8771,63468,340620,1470784,5371002,17153352,49075521,128066400,309124101,697874996,1486830618,3011414784,5833686340,10863883728,19532496375,34028554944,57623258007,95101946940,153331834040,241997811264 ★ Number of transitive relations on an n - set with exactly five ordered pairs. • a(n) = 27 * C(n,3) + 660 * C(n,4) + 5201 * C(n,5) + 21822 * C(n,6) + 54600 * C(n,7) + 84000 * C(n,8) + 75600 * C(n,9) + 30240 * C(n,10). • a(n) = (1 / 120) * (n ^ 10 - 20 * n ^ 9 + 220 * n ^ 8 - 1500 * n ^ 7 + 6710 * n ^ 6 - 19954 * n ^ 5 + 38765 * n ^ 4 - 46950 * n ^ 3 + 31944 * n ^ 2 - 9216 * n). • a(n) = C(n,3) * (n ^ 7 - 17 * n ^ 6 + 167 * n ^ 5 - 965 * n ^ 4 + 3481 * n ^ 3 - 7581 * n ^ 2 + 9060 * n - 4608) / 20. - _ Chai Wah Wu _ , Jan 06 2022 •

► [A129999] 0,27,888,1011,1148,6027,6740,7535,35948,40103,44736,210335,234552,261555,1226736,1367883,1525268,7150755,7973420,8890727,41678468,46473311,51819768,242920727,270867120 ★ Nonnegative values x of solutions (x, y) to the Diophantine equation x ^ 2 + (x + 337) ^ 2 = y ^ 2. • a(n)=6 * a(n - 3) - a(n - 6) + 674 for n > 6; a(1)=0, a(2)=27, a(3)=888, a(4)=1011, a(5)=1148, a(6)=6027. • a(0)=0, a(1)=27, a(2)=888, a(3)=1011, a(4)=1148, a(5)=6027, a(6)=6740, a(n)=a(n - 1) + 6 * a(n - 3) - 6 * a(n - 4) - a(n - 6) + a(n - 7). - _ Harvey P. Dale _ , Feb 26 2015 •

► [A239571] 0,0,27,999,11565,74811,342042,1239525,3799488,10259640,25076952,56552364,119324403,238062357,452774595,826245798,1454229216,2479147536,4108199481,6636929805,10479498849,16207085223,24596072424,36687908235,53862785520 ★ Number of ways to place 5 points on a triangular grid of side n so that no two of them are adjacent. • a(n) = (n - 3) * (n - 4) * (n ^ 8 + 12 * n ^ 7 - 58 * n ^ 6 - 860 * n ^ 5 + 2141 * n ^ 4 + 23728 * n ^ 3 - 61316 * n ^ 2 - 24492 * n + 770880) / 3840. •

► [A143366] 27,1002,7809,33204,101751,253758,549213,1071720,1932435,3274002,5274489,8151324,12165231,17624166,24887253,34368720,46541835,61942842,81174897,104912004,133902951,168975246,211039053,261091128,320218755 ★ Wiener index of the hexagon crown (beehive model) with n hexagons on each side of the outside ring. • a(n) = n(164n ^ 4 - 30n ^ 2 + 1) / 5. •

► [A017427] 27,2744,15625,46656,103823,195112,328509,512000,753571,1061208,1442897,1906624,2460375,3112136,3869893,4741632,5735339,6859000,8120601,9528128,11089567,12812904,14706125 ★ (11n + 3) ^ 3. • a(0)=27, a(1)=2744, a(2)=15625, a(3)=46656, a(n)=4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) [From Harvey P. Dale, Apr 01 2012] •

► [A227492] 27,2871,39663,326367,2123199,12126591,63900927,319163391,1535375871,7186396671,32947236351,148643831295,662099705343,2918722534911,12756670414335,55354839662079,238734196604415,1024200814362111,4373869249953279 ★ The Wiener index of the nanostar dendrimer D _ n. • a(n) = - 513 + 2 ^ n * (2016 * n + 9468) + 4 ^ n * (4032 * n - 8928). •

► [A069076] 27,3375,42875,250047,970299,2924207,7414875,16581375,33698267,63521199,112678587,190109375,307546875,480048687,726572699,1070599167,1540798875,2171747375,3004685307,4088324799,5479701947,7245075375 ★ a(n) = (4 * n ^ 2 - 1) ^ 3. • a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7); a(1)=27, a(2)=3375, a(3)=42875, a(4)=250047, a(5)=970299, a(6)=2924207, a(7)=7414875. - _ Harvey P. Dale _ , Jan 20 2012 •

► [A022398] 1,28,29,57,86,143,229,372,601,973,1574,2547,4121,6668,10789,17457,28246,45703,73949,119652,193601,313253,506854,820107,1326961 ★ Fibonacci sequence beginning 1, 28. • a(n) = (2 ^ (- 1 - n) * ((1 - sqrt(5)) ^ n * (- 55 + sqrt(5)) + (1 + sqrt(5)) ^ n * (55 + sqrt(5)))) / sqrt(5). - _ Colin Barker _ , Mar 02 2018 •

► [A042576] 28,29,57,143,200,343,19408,19751,39159,98069,137228,235297,13313860,13549157,26863017,67275191,94138208,161413399,9133288552,9294701951,18427990503,46150682957,64578673460 ★ Numerators of continued fraction convergents to sqrt(817). • a(n) = 686 * a(n - 6) - a(n - 12). - _ Vincenzo Librandi _ , Nov 28 2013 •

► [A042568] 28,29,57,1055,1112,2167,122464,124631,247095,4572341,4819436,9391777,530758948,540150725,1070909673,19816524839,20887434512,40703959351,2300309158168,2341013117519,4641322275687 ★ Numerators of continued fraction convergents to sqrt(813). • a(n) = 4334 * a(n - 6) - a(n - 12). - _ Vincenzo Librandi _ , Nov 28 2013 •

► [A042598] 28,29,115,259,892,1151,65348,66499,264845,596189,2053412,2649601,150431068,153080669,609673075,1372426819,4726953532,6099380351,34629225188,352391633539,1403467153805,3159325941149 ★ Numerators of continued fraction convergents to sqrt(828). • a(n) = 2302 * a(n - 6) - a(n - 12). - _ Vincenzo Librandi _ , Nov 29 2013 •

► [A042612] 28,29,260,289,549,838,4739,5577,21470,69987,91457,161444,414345,2233169,4880683,7113852,11994535,43097457,141286906,184384363,1063208721,1247593084,2310801805,3558394889 ★ Numerators of continued fraction convergents to sqrt(835). • a(n) = 68672711612 * a(n - 26) - a(n - 52) for n>51. [_ Bruno Berselli _ , Nov 30 2013] •

► [A042622] 28,29,1652,1681,95788,97469,5554052,5651521,322039228,327690749,18672721172,19000411921,1082695788748,1101696200669,62777683026212,63879379226881,3640022919731548,3703902298958429 ★ Numerators of continued fraction convergents to sqrt(840). • a(n) = 58 * a(n - 2) - a(n - 4), - _ Vincenzo Librandi _ , Nov 29 2013 •

► [A374008] 28,30,43,49,62,72,85,99,112,130,143,165,178,204,217,247,260,294,307,345,358,400,413,459,472 ★ a(n) = (1 + (n + 6) ^ 2 + (n - 7) * (- 1) ^ n) / 2. • a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). •

► [A260637] 28,35,56,91,140,203,280,371,476,595,728,875,1036,1211,1400,1603,1820,2051,2296,2555,2828,3115,3416,3731,4060 ★ Sums of seven consecutive squares: a(n) = n ^ 2 + (n + 1) ^ 2 + (n + 2) ^ 2 + (n + 3) ^ 2 + (n + 4) ^ 2 + (n + 5) ^ 2 + (n + 6) ^ 2. • a(n) = 7 * n ^ 2 + 42 * n + 91 = 7 * (n ^ 2 + 6 * n + 13) = 7 * ((n + 3) ^ 2 + 4). • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) = a(n - 1) + 7 * (2 * n + 7). •

► [A034964] 28,39,53,67,83,101,119,139,161,181,199,221,243,263,287,311,331,351,373,395,421,449,473,497,517 ★ Sums of five consecutive primes. • a(n) = Sum _{ i=n..n + 4 } prime(i). - _ Wesley Ivan Hurt _ , Sep 14 2014 •

► [A184032] 28,40,61,103,181,337,637,1237,2413,4765,9421,18733,37261,74317,148237,296077,591373,1181965,2362381,4723213,9443341,18883597,37761037,75515917,151019533 ★ 1 / 16 the number of (n + 1) X 3 0..3 arrays with all 2 X 2 sub blocks having the same four values. • a(n) = 9 * 2 ^ (n / 2 - 1) + 9 * 2 ^ (n - 1) + 13 for n even. • a(n) = 9 * 2 ^ (n - 1) + 3 * 2 ^ ((n + 1) / 2) + 13 for n odd. •

► [A305060] 28,46,82,154,298,586,1162,2314,4618,9226,18442,36874,73738,147466,294922,589834,1179658,2359306,4718602,9437194,18874378,37748746,75497482,150994954,301989898 ★ a(n) = 18 * 2 ^ n + 10. • a(n) = 3 * a(n - 1) - 2 * a(n - 2) = 2 * a(n - 1) - 10. (End) •

► [A216303] 28,52,115,172,193,211,214,259,280,337,358,382,385,424,427,442,448,502,613,655,676,679,733,901,928 ★ Numbers k such that 10k + 1 and 10k + 3 are prime but 10k + 7 and 10k + 9 are composite. • a(n) >> n log ^ 2 n. - _ Charles R Greathouse IV _ , Sep 07 2012 •

► [A056028] 1,28,54,62,68,69,99,116,127,234,245,262,292,293,299,307,333,360,362,389,415,423,429,430,460 ★ Numbers k such that k ^ 18 == 1 (mod 19 ^ 2). • a(n) = a(n - 1) + a(n - 18) - a(n - 19). - _ Matthew House _ , Feb 12 2017 •

► [A274642] 28,55,60,79,92,95,112,240,368,448,960,1472,1792,3840,5888,7168,15360,23552,28672,61440,94208,114688,245760,376832,458752 ⋆ Numbers of the form 4 ^ k * (8 * j + 7) that have exactly three partitions into four positive squares. ● a(n) = 4 * a(n - 3) for n>9. ●

► [A079731] 28,55,110,220,440,880,1760,3520 ⋆ Fundamental piano frequencies in Hertz rounded to nearest integer. ● a(n)=round(27.5 * 2 ^ n), n=0...7. ●

► [A135628] 0,28,56,84,112,140,168,196,224,252,280,308,336,364,392,420,448,476,504,532,560,588,616,644,672 ⋆ Multiples of 28. ● a(n) = 28 * n. ● a(n) = 2 * a(n - 1) - a(n - 2). (End) ●

► [A204646] 28,56,104,178,284,434,637,908,1259,1708,2270,2966,3814,4838,6059,7504,9197,11168,13444,16058,19040,22426,26249,30548,35359 ⋆ Number of (n + 1) X 4 0..1 arrays with column and row pair sums b(i,j)=a(i,j) + a(i,j - 1) and c(i,j)=a(i,j) + a(i - 1,j) nondecreasing in column and row directions, respectively. ● a(n) = (256 + 400 * n + 144 * n ^ 2 + 16 * n ^ 3 + 2 * n ^ 4) / 32 for n>1 and even. ● a(n) = (238 + 400 * n + 144 * n ^ 2 + 16 * n ^ 3 + 2 * n ^ 4) / 32 for n>1 and odd. ●

► [A042564] 28,57,598,655,5838,6493,12331,31155,43486,74641,118127,429022,2692259,48889684,51581943,255217456,306799399,868816254,1175615653,32610438885,33786054538,100182547961,133968602499 ⋆ Numerators of continued fraction convergents to sqrt(811). ● a(n) = 2764144327157232820 * a(n - 38) - a(n - 76) for n>75. [_ Bruno Berselli _ , Nov 26 2013] ●

► [A042566] 28,57,3220,6497,367052,740601,41840708,84422017,4769473660,9623369337,543678156532,1096979682401,61974540370988,125046060424377,7064553924136100,14254153908696577,805297172811144412 ⋆ Numerators of continued fraction convergents to sqrt(812). ● a(n) = 114 * a(n - 2) - a(n - 4). - _ Vincenzo Librandi _ , Nov 28 2013 ●

► [A132769] 0,28,58,90,124,160,198,238,280,324,370,418,468,520,574,630,688,748,810,874,940,1008,1078,1150,1224 ⋆ a(n) = n * (n + 27). ● a(n) = 2 * n + a(n - 1) + 26, with a(0)=0. - _ Vincenzo Librandi _ , Aug 03 2010 ● a(0)=0, a(1)=28, a(2)=58; for n>2, a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Oct 14 2012 ●

► [A245990] 28,68,164,396,956,2308,5572,13452,32476,78404,189284,456972,1103228,2663428,6430084,15523596,37477276,90478148,218433572,527345292,1273124156,3073593604,7420311364,17914216332,43248744028 ⋆ Number of length n + 2 0..3 arrays with no pair in any consecutive three terms totalling exactly 3. ● a(n) = sqrt(2) * ((1 - sqrt(2)) ^ n * (- 4 + 3 * sqrt(2)) + (1 + sqrt(2)) ^ n * (4 + 3 * sqrt(2))). ●

► [A182465] 28,70,154,322,658,1330,2674,5362,10738,21490,42994,86002,172018,344050,688114,1376242,2752498,5505010,11010034,22020082,44040178,88080370,176160754,352321522,704643058 ⋆ a(n) = 3a(n - 1) - 2a(n - 2) with a(0)=28 and a(1)=70. ● a(n) = a(n - 1) * 2 + 14. ●

► [A277987] 28,72,172,272,372,472,572,672,772,872,972,1072,1172,1272,1372,1472,1572,1672,1772,1872,1972,2072,2172,2272,2372 ⋆ a(n) = 100 * n - 28. ● a(n) = 2 * a(n - 1) - a(n - 2). - _ Vincenzo Librandi _ , Nov 13 2016 ●

► [A161935] 0,1,28,81,160,265,396,553,736,945,1180,1441,1728,2041,2380,2745,3136,3553,3996,4465,4960,5481,6028,6601,7200 ⋆ 28 - gonal numbers: a(n) = n * (13 * n - 12). ● a(n + 1) = a(n) + 26 * n + 1. - _ Vincenzo Librandi _ , Nov 30 2010 ●

► [A254145] 28,84,336,1596,8400,47244,278256,1695036,10592400,67518444,437200176,2867080476,18997064400,126948964044,854359702896,5783851121916,39350309552400,268842017200044,1843254419626416,12675940450459356 ⋆ a(n) = 1 * 7 ^ n + 2 * 6 ^ n + 3 * 5 ^ n + 4 * 4 ^ n + 5 * 3 ^ n + 6 * 2 ^ n + 7 * 1 ^ n. ● a(n) = (x + 1) * (Bernoulli(n + 1, x + 1) - Bernoulli(n + 1, 1)) / (n + 1) - (Bernoulli(n + 2, x + 1) - Bernoulli(n + 2, 1)) / (n + 2) at x = 7. ● a(n) = (1 / 6!) * Sum _{ k = 0..n } (- 1) ^ (k + n) * (k + 8)! * Stirling2(n,k) / ((k + 1) * (k + 2)). (End) ●

► [A042540] 28,85,113,424,23857,71995,95852,359551,20230708,61051675,81282383,304898824,17155616527,51771748405,68927364932,258553843201,14547942584188,43902381595765,58450324179953 ⋆ Numerators of continued fraction convergents to sqrt(799). ● a(n) = 848 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Nov 27 2013 ●

► [A272399] 1,28,91,190,325,496,703,946,1225,1540,1891,2278,2701,3160,3655,4186,4753,5356,5995,6670,7381,8128,8911,9730,10585 ⋆ The intersection of hexagonal numbers (A000384) and centered 9 - gonal numbers (A060544). ● a(n) = 10 - 27 * n + 18 * n ^ 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>3. ●

► [A189808] 28,94,200,342,524,732,972,1236,1524,1840,2180,2544,2932,3344,3780,4240,4724,5232,5764,6320,6900,7504,8132,8784,9460 ⋆ Number of right triangles on a (n + 1) X 4 grid. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>8. ●

► [A263200] 28,104,388,1448,5404,20168,75268,280904,1048348,3912488,14601604,54493928,203374108,759002504,2832635908,10571541128,39453528604,147242573288,549516764548,2050824484904,7653781175068,28564300215368,106603419686404,397849378530248 ⋆ Number of perfect matchings on a Möbius strip of width 3 and length 2n. ● a(n) = Product _{ k=1..n } (10 + 2 * cos(Pi * (4 * k - 1) / n) - 12 * cos(1 / 2 * Pi * (4 * k - 1) / n)). ● a(n) = 2 * ((2 - sqrt(3)) ^ n + (2 + sqrt(3)) ^ n). ● a(n) = 4 * a(n - 1) - a(n - 2). (End) ●

► [A223443] 28,104,408,1616,6432,25664,102528,409856,1638912,6554624,26216448,104861696,419438592,1677737984,6710919168,26843611136,107374313472,429496991744,1717987442688,6871948722176,27487792791552,109951166971904 ⋆ 4 - level binary fanout graph coloring a rectangular array: number of n X 2 0..14 arrays where 0..14 label nodes of a graph with edges 0,1 1,3 3,5 3,6 1,4 4,7 4,8 0,2 2,9 9,11 9,12 2,10 10,13 10,14 and every array movement to a horizontal or vertical neighbor moves along an edge of this graph. ● a(n) = 2 ^ (n - 2) * (4 + 2 5 * 2 ^ n) for n>1. ●

► [A064763] 0,28,112,252,448,700,1008,1372,1792,2268,2800,3388,4032,4732,5488,6300,7168,8092,9072,10108,11200,12348,13552,14812,16128 ⋆ a(n) = 28 * n ^ 2. ● a(n) = 56 * n + a(n - 1) - 28 (with a(0)=0). - _ Vincenzo Librandi _ , Aug 07 2010 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Mar 30 2015 ●

► [A042538] 28,113,6356,25537,1436428,5771249,324626372,1304276737,73364123644,294760771313,16579967317172,66614630040001,3746999249557228,15054611628268913,846805250432616356 ⋆ Numerators of continued fraction convergents to sqrt(798). ● a(n) = 226 * a(n - 2) - a(n - 4). - _ Vincenzo Librandi _ , Nov 27 2013 ●

► [A220755] 0,1,28,117,2760,11481,270468,1125037,26503120,110242161,2597035308,10802606757,254482957080,1058545220041,24936732758548,103726628957277,2443545327380640,10164151092593121,239442505350544188,995983080445168597,2346292197902594980 0 ⋆ Numbers n such that n ^ 2 + n(n + 1) / 2 is an oblong number (A002378). ● a(n) = ((- (- 1) ^ n + sqrt(6)) * (5 + 2 * sqrt(6)) ^ (n - 1) - ((- 1) ^ n + sqrt(6)) * (5 - 2 * sqrt(6)) ^ (n - 1) - 2) / 12. - _ Bruno Berselli _ , Apr 14 2013 ● a(n) = a(n - 1) + 98 * a(n - 2) - 98 * a(n - 3) - a(n - 4) + a(n - 5). ●

► [A101095] 1,28,121,240,360,480,600,720,840,960,1080,1200,1320,1440,1560,1680,1800,1920,2040,2160,2280,2400,2520,2640,2760 ⋆ Fourth difference of fifth powers (A000584). ● a(k + 1) = Sum _{ j=0..k + 1 } (- 1) ^ j * binomial(n + 1 - z, j) * (k - j + 1) ^ n; n = 5, z = 2. ● a(n) = 2 * a(n - 1) - a(n - 2), n>5. G.f.: x * (1 + 26 * x + 66 * x ^ 2 + 26 * x ^ 3 + x ^ 4) / (1 - x) ^ 2. - _ Colin Barker _ , Mar 01 2012 ●

► [A045823] 1,28,126,344,757,1332,2198,3528,4914,6860,9632,12168,15751,20440,24390,29792,37296,43344,50654,61544,68922,79508,95382,103824,117993 ⋆ a(n) = sigma _ 3(2 * n + 1). ● a(n) = b(2 * n + 1) where b(n) is multiplicative and b(2 ^ e) = 0 ^ e, b(p ^ e) = ((p ^ 3) ^ (e + 1) - 1) / (p ^ 3 - 1) if p>2. - _ Michael Somos _ , Nov 29 2007 ●

► [A318778] 1,28,128,300,544,860,1248,1708,2240,2844 ⋆ Number of different positions that an elementary sphinx can occupy in a sphinx of order n. ● a(n) = 44 - 80 * n + 36 * n ^ 2 for n>1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>4. ●

► [A184679] 28,128,544,2384,10384,45392,198352,867152,3791056,16575056,72469456,316854608,1385372368,6057228368,26483886544,115794964304,506288081104,2213633766992,9678629263312,42317689343312,185024841512656 ⋆ Number of (n + 1) X 3 binary arrays with every 2 X 2 subblock singular. ● a(n) = 2 ^ (- 2 - n) * (11 * 2 ^ (1 + 2 * n) - 3 * (3 - sqrt(33)) ^ n * (- 55 + 7 * sqrt(33)) + 3 * (3 + sqrt(33)) ^ n * (55 + 7 * sqrt(33))) / 11. ●

► [A192796] 0,28,132,360,760,1380,2268,3472,5040,7020,9460,12408,15912,20020,24780,30240,36448,43452,51300,60040,69720,80388,92092,104880,118800 ⋆ Molecular topological indices of the crown graphs ● a(n) = 2 * (n - 1) * n * (4 * n - 1). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Vincenzo Librandi _ , Jul 04 2012 ●

► [A042532] 28,141,1297,6626,372353,1868391,17187872,87807751,4934421928,24759917391,227773678447,1163628309626,65390959017503,328118423397141,3018456769591772,15420402271356001,866560983965527828 ⋆ Numerators of continued fraction convergents to sqrt(795). ● a(n) = 13252 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Nov 27 2013 ●

► [A187608] 0,0,0,28,144,340,675,1120,1675,2340,3115,4000,4995,6100,7315,8640,10075,11620,13275,15040,16915,18900,20995,23200,25515 ⋆ Number of 4 - step one space for components leftwards or up, two space for components rightwards or down asymmetric quasi - bishop's tours (antidiagonal moves become knight moves) on an n X n board summed over all starting positions. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>8. ●

► [A271636] 0,28,152,468,1072,2060,3528,5572,8288,11772,16120,21428,27792,35308,44072,54180,65728,78812,93528,109972,128240,148428,170632,194948,221472 ⋆ a(n) = 4 * n * (4 * n ^ 2 + 3). ● a(n) = - a(- n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ●

► [A002593] 0,1,28,153,496,1225,2556,4753,8128,13041,19900,29161,41328,56953,76636,101025,130816,166753,209628,260281,319600,388521,468028,559153,662976 ⋆ a(n) = n ^ 2 * (2 * n ^ 2 - 1); also Sum _{ k=0..n - 1 } (2k + 1) ^ 3. ● a(n) = n ^ 2 * (2n ^ 2 - 1). - _ Vladimir Pletser _ , Jan 10 2015 ●

► [A172220] 1,28,157,1248,4650,15162,37988,86958,181423,351708,648441,1127392,1874194,2988466,4602096,6870240,9983347,14163972,19672403,26812260,35929480,47418482,61723238,79341720,100828175 ⋆ Number of ways to place 5 nonattacking nightriders on a 5 X n board. ● a(n) = (625n ^ 5 - 15250n ^ 4 + 19791 5n ^ 3 - 1588634n ^ 2 + 7645896n - 17283552) / 24, n>=32. ●

► [A085377] 0,28,164,486,1072,2000,3348,5194,7616,10692,14500,19118,24624,31096,38612,47250,57088,68204,80676,94582,110000,127008,145684,166106,188352 ⋆ a(n) = 15n ^ 2 + 13n ^ 3. ● a(n)=4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). G.f.: 2 * x * (14 + 26 * x - x ^ 2) / (1 - x) ^ 4. [From _ R. J. Mathar _ , Apr 20 2009] ●

► [A305270] 28,168,448,1008,2128,4368,8848,17808,35728,71568,143248,286608,573328,1146768,2293648,4587408,9174928,18349968,36700048,73400208,146800528,293601168,587202448,1174405008,2348810128 ⋆ a(n) = 140 * 2 ^ n - 112. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>1. ●

► [A042528] 28,169,704,4393,246712,1484665,6185372,38596897,2167611604,13044266521,54344677688,339112332649,19044635306032,114606924168841,4774723 31981396,2979440916057217,167326163631185548,1006936422703170505 ⋆ Numerators of continued fraction convergents to sqrt(793). ● a(n) = 8786 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Nov 26 2013 ●

► [A263944] 28,189,959,4648,22323,107009,512764,2456853,11771543,56400904,270233019,1294764233,6203588188,29723176749,142412295599,682338301288,3269279210883,15664057753169,75051009555004,359590990021893,1722903940554503,8254928712750664 ⋆ Positive integers n such that (n + 28) ^ 3 - n ^ 3 is a square. ● a(n) = 6 * a(n - 1) - 6 * a(n - 2) + a(n - 3) for n>3. ● a(n) = 7 * (- 2 + (2 ^ (- 1 - n) * ((5 - sqrt(21)) ^ n * (- 7 + sqrt(21)) + (5 + sqrt(21)) ^ n * (7 + sqrt(21)))) / sqrt(21)). - _ Colin Barker _ , Mar 05 2016 ●

► [A079903] 1,28,190,703,1891,4186,8128,14365,23653,36856,54946,79003,110215,149878,199396,260281,334153,422740,527878,651511,795691,962578,1154440,1373653,1622701 ⋆ a(n) = (9n ^ 4 - 18n ^ 3 + 18n ^ 2 - 9n + 2) / 2. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5), a(0) = 1, a(1) = 28, a(2) = 190, a(3) = 703, a(4) = 1891. (End) ● a(n) = (3 * n ^ 2 - 3 * n + 1) * (3 * n ^ 2 - 3 * n + 2) / 2. - _ Bruno Berselli _ , Jan 28 2017 ●

► [A042526] 28,197,11060,77617,4357612,30580901,1716888068,12048797377,676449541180,4747195585637,266519402336852,1870383011943601,105007968071178508,736926159510193157,41372872900641995300 ⋆ Numerators of continued fraction convergents to sqrt(792). ● a(n) = 394 * a(n - 2) - a(n - 4). - _ Vincenzo Librandi _ , Nov 26 2013 ●
► [A155466] 28,207,1248,7315,42676,248775,1450008,8451307,49257868,287095935,1673317776,9752810755,56843546788,331308470007,1931007273288,11254735169755,65597403745276,382329687301935,2228380720066368 ⋆ a(n) = 7 * a(n - 1) - 7 * a(n - 2) + a(n - 3) for n > 2; a(0) = 28, a(1) = 207, a(2) = 1248. ● a(n) = 6 * a(n - 1) - a(n - 2) + 34 for n > 1; a(0) = 28, a(1) = 207. ● a(n) = ((73 + 53 * sqrt(2)) * (3 + 2 * sqrt(2)) ^ n + (73 - 53 * sqrt(2)) * (3 - 2 * sqrt(2)) ^ n - 34) / 4. ●
► [A249710] 28,221,896,2601,6172,12789,24032,41937,69052,108493,164000,239993,341628,474853,646464,864161,1136604,1473469,1885504,2384585,2983772,3697365,4540960,5531505,6687356 ⋆ Number of length 4 + 3 0..n arrays with every four consecutive terms having the maximum of some two terms equal to the minimum of the remaining two terms. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. ●
► [A269621] 28,222,954,2956,7440,16218,31822,57624,97956,158230,245058,366372,531544,751506,1038870,1408048,1875372,2459214,3180106,4060860,5126688,6405322,7927134,9725256,11835700 ⋆ Number of length - 5 0..n arrays with no repeated value differing from the previous repeated value by other than plus two, zero or minus 1. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. ●
► [A269437] 28,222,964,2995,7536,16408,32152,58149,98740,159346,246588,368407,534184,754860,1043056,1413193,1881612,2466694,3188980,4071291,5138848,6419392,7943304,9743725,11856676 ⋆ Number of length - 5 0..n arrays with no repeated value greater than the previous repeated value. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. ●
► [A133071] 0,1,28,225,976,3025,7596,16513,32320,58401,99100,159841,247248,369265,535276,756225,1044736,1415233,1884060,2469601,3192400,4075281,5143468,6424705,7949376 ⋆ a(n) = n ^ 5 - n ^ 3 + n ^ 2. ● a(n) = n ^ 5 - n ^ 3 + n ^ 2. ●
► [A135497] 0,0,28,234,1008,3100,7740,16758,32704,58968,99900,160930,248688,371124,537628,759150,1048320,1419568,1889244,2475738,3199600,4083660,5153148,6435814,7962048 ⋆ a(n) = n ^ 5 - n ^ 2. ● a(n) = floor(n ^ 8 / (n ^ 3 + 1)). - _ Gary Detlefs _ , Feb 11 2010 ●
► [A112797] 28,244,325,385,730,1025,1729,2188,5185,6562,7777,16385,26245,36865,46657,49153,55297,82945,93313,221185,354295,419905,531442,559873,589825 ⋆ Pierpont 3 - almost primes. 3 - almost primes of form (2 ^ K) * (3 ^ L) + 1. ● a(n) is in this sequence iff there exist nonnegative integers K and L such that Omega((2 ^ K) * (3 ^ L) + 1) = 3. ●
► [A085438] 1,28,244,1244,4619,13880,35832,82488,173613,339988,627484,1102036,1855607,3013232,4741232,7256688,10838265,15838476,22697476,31958476,44284867,60479144,81503720,108503720,142831845 ⋆ a(n) = Sum _{ i=1..n } binomial(i + 1,2) ^ 3. ● a(n) = (90 * n ^ 7 + 630 * n ^ 6 + 1638 * n ^ 5 + 1890 * n ^ 4 + 840 * n ^ 3 - 48 * n) / 7!. ● a(n) = (C(n + 2, 3) / 35) * (35 + 210 * C(n - 1, 1) + 399 * C(n - 1, 2) + 315 * C(n - 1, 3) + 90 * C(n - 1, 4)). ●
► [A042522] 28,253,534,787,4469,5256,9725,34431,147449,181880,874969,1056849,5102365,16363944,21466309,37830253,210617574,248447827,707513228,6616066879,371207258452,3347481392947,7066170044346 ⋆ Numerators of continued fraction convergents to sqrt(790). ● a(n) = 13232133758 * a(n - 20) - a(n - 40) for n>39. [_ Bruno Berselli _ , Nov 26 2013] ●
► [A172214] 1,28,259,1968,9386,30842,82738,192336,400277,763984,1360797,2291056,3681226,5687022,8496534,12333352,17459691,24179516,32841667,43842984,57631432,74709226,95635956,121031712,151580209 ⋆ Number of ways to place 5 nonattacking knights on a 5 X n board. ● a(n) = (625n ^ 5 - 8250n ^ 4 + 57235n ^ 3 - 242778n ^ 2 + 608440n - 705984) / 24, n>=8. ●
► [A065693] 1,1,1,28,271,1567,6616,21925,60481,164836,627751,3355183,18052336,84393037,338279761,1198269100,4009627711,14134316671,57201128776,256878349813,1159252365601,4930744442932,19479046111831 ⋆ Braided power sequence: A065692 is b(n + 1)=3b(n) + 2d(n) - c(n), this is c(n + 1)=3c(n) + 2b(n) - d(n) and A065694 is d(n + 1)=3d(n) + 2c(n) - b(n), starting with b(0)=0, c(0)=1 and d(0)=2. ● a(n) = 9 * a(n - 1) - 33 * a(n - 2) + 52 * a(n - 3) for n>2. ●
► [A241621] 28,287,1730,7483,25774,75180,193194,449295,963886,1934647,3672032,6645821,11544820,19351984,31437420,49671909,76563768,115422055,170549302,247467143,353178386,496469260,688255750,941978115,1274047866 ⋆ Number of length 6 + 2 0..n arrays with no consecutive three elements summing to more than n. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>9. ●
► [A027781] 28,288,1620,6600,21780,61776,156156,360360,772200,1555840,2975544,5441904,9573720,16279200,26860680,43147632,67663332,103831200,156227500,230887800,335675340,480720240,678939300 ⋆ a(n) = 4 * (n + 1) * binomial(n + 2,8). ● a(n) = C(n + 1, 7) * C(n + 2, 2). - _ Zerinvary Lajos _ , May 13 2005 ● a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10). - _ Harvey P. Dale _ , May 20 2012 ●
► [A156711] 28,299,858,1705,2840,4263,5974,7973,10260,12835,15698,18849,22288,26015,30030,34333,38924,43803,48970,54425,60168,66199,72518,79125,86020 ⋆ a(n) = 144 * n ^ 2 - 161 * n + 45. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●
► [A107942] 1,28,300,1925,8918,32928,102816,282150,698775,1591876,3383380,6782139,12931100,23609600,41505024,70570332,116486397,187250700,293916700,451511137,680159634,1006454240,1465100000,2100881250,2970992115 ⋆ a(n) = (n + 1)(n + 2) ^ 3 * (n + 3) ^ 3 * (n + 4)(2n + 5) / 4320. ● a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10). - _ Wesley Ivan Hurt _ , Jun 23 2020 ●
► [A196513] 0,28,308,1218,3298,7250,13938,24388,39788,61488,91000,129998,180318,243958,323078,420000,537208,677348,843228,1037818,1264250,1525818,1825978,2168348,2556708 ⋆ a(n) = 1 * 4 * 7 + 4 * 7 * 10 + 7 * 10 * 13 + ... (n terms). ● a(n) = ((3 * n - 2) * (3 * n + 1) * (3 * n + 4) * (3 * n + 7) + 56) / 12 = n * (3 * n + 5) * (9 * n ^ 2 + 15 * n - 10) / 4 = Sum _{ i=1..n } (3 * i - 2) * (3 * i + 1) * (3 * i + 4). ●
► [A042520] 28,309,1264,1573,2837,7247,24578,31825,438303,1346734,1785037,4916808,90287581,185491970,275779551,1012830623,13442577650,14455408273,56808802469,128073013211,184881815680 ⋆ Numerators of continued fraction convergents to sqrt(789). ● a(n) = 32233334545150 * a(n - 24) - a(n - 48) for n>47. [_ Bruno Berselli _ , Nov 26 2013] ●
► [A241038] 0,1,28,325,3160,29161,264628,2388205,21513520,193680721,1743303628,15690264085,141213971080,1270930522681,11438389053028,102945544523965,926510029855840,8338590656123041,75047317067368828 ⋆ A000217(A058481(n)). ● a(n) = (1 / 2) * 3 ^ (2 * n) - (3 / 2) * 3 ^ n + 1. ● a(n) = 13 * a(n - 1) - 39 * a(n - 2) + 27 * a(n - 3). G.f.: - x * (15 * x + 1) / ((x - 1) * (3 * x - 1) * (9 * x - 1)). - _ Colin Barker _ , Apr 15 2014 ●
► [A027820] 28,336,2100,9240,32340,96096,252252,600600,1321320,2722720,5309304,9876048,17635800,30387840,50736840,82372752,130423524,201894000,306205900,455855400,667206540,961440480,1365682500,1914330600,2650611600 ⋆ a(n) = 28 * (n + 1) * binomial(n + 6,8) / 3. ● a(n) = C(n + 1, 3) * C(n + 6, 6). - _ Zerinvary Lajos _ , Jun 08 2005; corrected by _ R. J. Mathar _ , Feb 10 2016 ●
► [A134288] 1,28,336,2520,13860,60984,226512,736164,2147145,5725720,14158144,32821152,71954064,150233760,300467520,578399976,1075994073,1941008916,3405278800,5824819000,9735768900,15931258200,25565576400,40293571500,62455035825 ⋆ a(n) = binomial(n + 7,7) * binomial(n + 7,6) / (n + 7). ● a(n) = binomial(n + 6,6) ^ 2 - binomial(n + 6,5) * binomial(n + 6,7). - _ Gary Detlefs _ , Dec 05 2011 ●
► [A085744] 0,0,28,351,2016,7750,23220,58653,130816,265356,499500,885115,1492128,2412306,3763396,5693625,8386560,12066328,17003196,23519511,31996000,42878430,56684628,74011861,95544576 ⋆ a(n) = A000217(n ^ 3) - n ^ 3. ● a(n) = n ^ 3 * (n ^ 3 - 1) / 2. - _ Vincenzo Librandi _ , Sep 14 2011 ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n > 6. ●
► [A130608] 0,28,385,501,645,2668,3340,4176,15957,19873,24745,93408,116232,144628,544825,677853,843357,3175876,3951220,4915848,18510765,23029801,28652065,107889048,134227920 ⋆ Nonnegative values x of solutions (x, y) to the Diophantine equation x ^ 2 + (x + 167) ^ 2 = y ^ 2. ● a(n) = 6 * a(n - 3) - a(n - 6) + 334 for n > 6; a(1)=0, a(2)=28, a(3)=385, a(4)=501, a(5)=645, a(6)=2668. ●
► [A331353] 1,28,387,2784,13125,46836,137543,349952,797769,1667500,3248971,5973408,10459917,17571204,28479375,44742656,68393873,102041532,148984339,213340000,300189141,415735188,567481047,764423424 ⋆ Number of achiral colorings of the edges (or triangular faces) of a regular 4 - dimensional simplex with n available colors. ● a(n) = (5 * n ^ 3 + n ^ 7) / 6. ● a(n) = C(n,1) + 26 * C(n,2) + 306 * C(n,3) + 1400 * C(n,4) + 2800 * C(n,5) + 2520 * C(n,6) + 840 * C(n,7), where the coefficient of C(n,k) is the number of colorings using exactly k colors. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. ●
► [A177108] 28,388,3988,39988,399988,3999988,39999988,399999988,3999999988,39999999988,399999999988,3999999999988,39999999999988,399999999999988,3999999999999988,39999999999999988,399999999999999988 ⋆ a(n) = 4 * (10 ^ n - 3). ● a(n) = a(n - 1) + 36 * 10 ^ (n - 1) = 10 * a(n - 1) + 108 = 11 * a(n - 1) - 10 * a(n - 2). - _ Vincenzo Librandi _ , Jul 15 2012 ●
► [A035476] 1,28,392,3668,25872,147084,703640,2936004,10975776,37424380,117743528,344562484,943845168,2433633132,5936978616,13769398692,30495241280,64756472284,132333870536,261119764500,498982041936 ⋆ Coordination sequence for lattice D *_ 14 (with edges defined by l _ 1 norm = 1). ● a(m) = sum(2 ^ k * binomial(n, k) * binomial(m - 1, k - 1), k=0..n) + 2 ^ n * binomial((n + 2 * m) / 2 - 1, n - 1), where n=14, a(0)=1. ●
► [A010980] 1,28,406,4060,31465,201376,1107568,5379616,23535820,94143280,348330136,1203322288,3910797436,12033222880,35240152720,98672427616,265182149218,686353797976,1715884494940,4154246671960,9762479679106,22314239266528,49699896548176 ⋆ a(n) = binomial(n,27). ● a(n) = C(n,27), n >= 27. ●
► [A024213] 28,418,2485,9605,28700,72128,159978,322770,604560,1066450,1790503,2884063,4484480,6764240,9936500,14261028,20050548,27677490,37581145,50275225,66355828,86509808,111523550,142292150,179829000 ⋆ a(n) = 3rd elementary symmetric function of first n + 2 positive integers congruent to 1 mod 3. ● a(n) = n * (n + 1) * (n + 2) * (3n + 5) * (9n ^ 2 + 21 * n - 2) / 48. ●
► [A054337] 1,28,448,5376,53760,473088,3784704,28114944,196804608,1312030720,8396996608,51908706304,311452237824,1820797698048,10404558274560,58265526337536,320460394856448,1734256254517248,9249366690758656,48680877319782400,253140562062868480 ⋆ 7 - fold convolution of A000302 (powers of 4). ● a(n) = binomial(n + 6, 6) * 4 ^ n. ●
► [A000771] 1,28,462,5880,63987,627396,5715424,49329280,408741333,3281882604,25708104786,197462483400,1492924634839,11143554045652,82310957214948,602762379967440,4382641999117305,31677463851804540,227832482998716310,1631853797991016600 ⋆ Stirling numbers of second kind, S(n,7). ● a(n) = 1 / 720 * (7 ^ (n - 1) - 6 ^ n + 3 * 5 ^ n - 5 * 4 ^ n + 5 * 3 ^ n - 3 * 2 ^ n + 1). - _ Vaclav Kotesovec _ , Nov 19 2012 ● a(n) = det(|s(i + 7,j + 6)|, 1 <= i,j <= n - 7), where s(n,k) are Stirling numbers of the first kind. - _ Mircea Merca _ , Apr 06 2013 ●
► [A263949] 28,476,1106,8218,18256,131600,291578,2097970,4647580,33436508,74070290,532886746,1180477648,8492752016,18813572666,135351146098,299836685596,2157125586140,4778573397458,34378658232730,76157337674320,547901406138128,1213738829392250 ⋆ Positive integers n such that (n + 84) ^ 3 - n ^ 3 is a square. ● a(n) = a(n - 1) + 16 * a(n - 2) - 16 * a(n - 3) - a(n - 4) + a(n - 5) for n>5. ●
► [A140107] 1,28,490,6860,84035,941192,9882516,98825160,951192165,8877793540,80787921214,719746934452,6297785676455,54257845827920,461191689537320,3874010192113488,32202709721943369,265198785945415980,2165790085220897170,17554298585474640220 ⋆ a(n) = binomial(n + 3, 3) * 7 ^ n. ● a(n) = 28 * a(n - 1) - 294 * a(n - 2) + 1372 * a(n - 3) - 2401 * a(n - 4). ●

► [A028170] 1,28,495,7070,89201,1038408,11432275,120872290,1239829701,12425000588,122271240455,1185943687110,11369353359001,107963322279568,1017222704311035,9522095291175530,88651748959581101 ⋆ Expansion of 1 / ((1 - 5x)(1 - 6x)(1 - 8x)(1 - 9x)). ● a(n) = 28 * a(n - 1) - 289 * a(n - 2) + 1302 * a(n - 3) - 2160 * a(n - 4). - _ Vincenzo Librandi _ , Feb 23 2012 ● a(n) = (9 ^ (n + 3) - 2 * 8 ^ (n + 3) + 2 * 6 ^ (n + 3) - 5 ^ (n + 3)) / 12. - _ Yahia Kahloune _ , Jun 03 2013 ●

► [A079598] 1,28,496,8128,130816,2096128,33550336,536854528,8589869056,137438691328,2199022206976,35184367894528,562949936644096,9007199187632128,144115187807420416,2305843008139952128 ⋆ a(n) = 2 ^ (4n + 1) - 2 ^ (2n). ● a(n + 1) = 16 * a(n) + 12 * 2 ^ (2n). ● a(n) = Sum _{ k=1..2 ^ n } (2 * k - 1) ^ 3. - _ Franz Vrabec _ , Jun 24 2006 ● a(n) = Sum _{ k=2 * n..4 * n } 2 ^ k. - _ Martin Renner _ , Mar 22 2022 ●

► [A028145] 1,28,497,7148,90993,1070076,11908849,127304716,1320106865,13369686044,132894679281,1301200322604,12584262543217,120472024886332,1143539682545393,10777265023323212,100956186031265649 ⋆ Expansion of 1 / ((1 - 4x)(1 - 7x)(1 - 8x)(1 - 9x)). ● a(n) = 28 * a(n - 1) - 287 * a(n - 2) + 1268 * a(n - 3) - 2016 * a(n - 4), n >= 4. ● a(n) = 17 * a(n - 1) - 72 * a(n - 2) + (7 ^ (n + 1) - 4 ^ (n + 1) / 3), n >= 2. (End) ● a(n) = - 2 * 8 ^ (n + 2) - 4 ^ (n + 2) / 15 + 7 ^ (n + 3) / 6 + 9 ^ (n + 3) / 10. - _ R. J. Mathar _ , Mar 18 2011 ●

► [A028167] 1,28,497,7160,91581,1086708,12265177,133727440,1422928661,14879566988,153661601457,1572610177320,15989900903341,161817863592868,1632050285251337,16420272919788800,164917283388807621 ⋆ Expansion of 1 / ((1 - 5x)(1 - 6x)(1 - 7x)(1 - 10x)). ● a(n) = 28 * a(n - 1) - 287 * a(n - 2) + 1280 * a(n - 3) - 2100 * a(n - 4), n >= 4. - _ Vincenzo Librandi _ , Mar 19 2011 ● a(n) = 17 * a(n - 1) - 70 * a(n - 2) + 6 ^ (n + 1) - 5 ^ (n + 1), n >= 2. - _ Vincenzo Librandi _ , Mar 19 2011 ● a(n) = 9 * 6 ^ (n + 1) - 5 ^ (n + 2) / 2 - 7 ^ (n + 3) / 6 + 5 * 10 ^ (n + 1) / 3. - _ R. J. Mathar _ , Mar 19 2011 ●

► [A028136] 1,28,500,7280,94416,1138368,13069120,144981760,1569049856,16674065408,174788490240,1813347594240,18663674269696,190917377179648,1943653403279360,19713779492126720,199364213335719936 ⋆ Expansion of 1 / ((1 - 4x)(1 - 6x)(1 - 8x)(1 - 10x)). ● a(n)=(10 ^ (n + 3) - 3 * 8 ^ (n + 3) + 3 * 6 ^ (n + 3) - 4 ^ (n + 3))48. [_ Yahia Kahloune _ , Jun 02 2013] ●

► [A028090] 1,28,503,7394,96993,1183584,13750411,154260238,1686734885,18091012940,191193729519,1997666285082,20686716623977,212717150997496,2175158274827027,22143785088967526,224633627211465069 ⋆ Expansion of 1 / ((1 - 3x)(1 - 7x)(1 - 8x)(1 - 10x)). ● a(n)=(10 ^ (n + 4) - 42 * 8 ^ (n + 3) + 5 * 7 ^ (n + 4) - 3 ^ (n + 4)) / 420. - _ Yahia Kahloune _ , May 31 2013 ●

► [A028124] 1,28,503,7406,97545,1198344,14051227,159447442,1766581949,19223504300,206298840111,2189789938518,23040266816113,240689810119696,2499511822660355,25828790012697434,265791691961403237 ⋆ Expansion of 1 / ((1 - 4x)(1 - 5x)(1 - 9x)(1 - 10x)). ● a(n) = 28 * a(n - 1) - 281 * a(n - 2) + 1190 * a(n - 3) - 1800 * a(n - 4), n >= 4. - _ Vincenzo Librandi _ , Mar 17 2011 ● a(n) = 19 * a(n - 1) - 90 * a(n - 2) + 5 ^ (n + 1) - 4 ^ (n + 1), n >= 2. (End) ● a(n) = 10 ^ (n + 2) / 3 + 5 ^ (n + 2) / 4 - 9 ^ (n + 3) / 20 - 2 * 4 ^ (n + 2) / 15. - _ R. J. Mathar _ , Mar 17 2011 ●

► [A028133] 1,28,503,7418,98169,1217136,14481211,167749366,1909343117,21481183724,239821188399,2663810246994,29488849731745,325724954017192,3592642298586467,39588148322702702,435961667557278453 ⋆ Expansion of 1 / ((1 - 4x)(1 - 6x)(1 - 7x)(1 - 11x)). ● a(n)=(3 * 11 ^ (n + 3) - 5 * 7 ^ (n + 4) + 7 * 6 ^ (n + 4) - 10 * 4 ^ (n + 3)) / 420. [_ Yahia Kahloune _ , Jun 02 2013] ●

► [A028083] 1,28,505,7480,99181,1226548,14470705,165111760,1838112661,20084217868,216290873305,2302672401640,24288950066941,254275654917988,2645388660962305,27378515971285120,282112466144578021 ⋆ Expansion of 1 / ((1 - 3x)(1 - 6x)(1 - 9x)(1 - 10x)). ● a(0)=1, a(1)=28, a(2)=505, a(3)=7480, a(n)=28 * a(n - 1) - 279 * a(n - 2) + 1152 * a(n - 3) - 1620 * a(n - 4) From _ Harvey P. Dale _ , Jul 04 2012 ● a(n)=(9 * 10 ^ (n + 3) - 14 * 9 ^ (n + 3) + 7 * 6 ^ (n + 3) - 2 * 3 ^ (n + 3)) / 252. [_ Yahia Kahloune _ , Jun 02 2013] ●

► [A028122] 1,28,505,7500,100161,1254588,15084745,176531500,2028331921,23012251548,258784204185,2892049106700,32177076653281,356869970102908,3948976130302825,43626137399621100,481387456885736241 ⋆ Expansion of 1 / ((1 - 4x)(1 - 5x)(1 - 8x)(1 - 11x)). ● a(n) = 28 * a(n - 1) - 279 * a(n - 2) + 1172 * a(n - 3) - 1760 * a(n - 4), n >= 4. ● a(n) = 19 * a(n - 1) - 88 * a(n - 2) + 5 ^ (n + 1) - 4 ^ (n + 1), n >= 2. (End) ● a(n) = - 4 ^ (n + 2) / 7 - 2 * 8 ^ (n + 2) / 9 + 11 ^ (n + 3) / 126 + 5 ^ (n + 3) / 18. - _ R. J. Mathar _ , Mar 18 2011 ●

► [A028081] 1,28,507,7574,101801,1283016,15511399,182368858,2103357861,23935475564,269799417251,3020592495102,33653261722081,373625952944272,4137562797943263,45735549657446306,504875559449240861 ⋆ Expansion of 1 / ((1 - 3x)(1 - 6x)(1 - 8x)(1 - 11x)). ● a(0)=1, a(1)=28, a(2)=507, a(3)=7574, a(n)=28 * a(n - 1) - 277 * a(n - 2) + 1134 * a(n - 3) - 1584 * a(n - 4). - _ Harvey P. Dale _ , Jan 04 2013 ● a(n)=(11 ^ (n + 3) - 4 * 8 ^ (n + 3) + 4 * 6 ^ (n + 3) - 3 ^ (n + 3)) / 120. [_ Yahia Kahloune _ , May 31 2013] ●

► [A028009] 1,28,509,7628,102477,1284060,15338893,177026476,1991073293,21954504572,238334455437,2555217498444,27118409281549,285415846100764,2983193752870541,30999901741572332,320557221434296845,3300921733229659836,33869642781313790605 ⋆ Expansion of 1 / ((1 - 2x)(1 - 7x)(1 - 9x)(1 - 10x)). ● a(n) = (35 * 10 ^ (n + 3) - 60 * 9 ^ (n + 3) + 4 * 7 ^ (n + 4) - 3 * 2 ^ (n + 3)) / 840. - _ Yahia Kahloune _ , Jun 06 2013 ●

► [A028119] 1,28,509,7688,105417,1368660,17211253,212371456,2591003393,31398579212,378973353837,4563240432504,54868960089529,659203880450884,7915910524882661,95029322307819632,1140621385518013425 ⋆ Expansion of 1 / ((1 - 4x)(1 - 5x)(1 - 7x)(1 - 12x)). ● a(n) = 28 * a(n - 1) - 275 * a(n - 2) + 1136 * a(n - 3) - 1680 * a(n - 4), n >= 4. ● a(n) = 19 * a(n - 1) - 84 * a(n - 2) + 5 ^ (n + 1) - 4 ^ (n + 1), n >= 2. (End) ● a(n) = 5 ^ (n + 3) / 14 - 7 ^ (n + 3) / 30 - 2 * 4 ^ (n + 1) / 3 + 18 * 12 ^ (n + 1) / 35. - _ R. J. Mathar _ , Mar 18 2011 ●

► [A028069] 1,28,510,7700,104951,1344168,16531180,197743000,2319239901,26813094308,306681461450,3479254697100,39224238812851,440041610610448,4917647821351320,54788913249014000,608931512071655801 ⋆ Expansion of 1 / ((1 - 3x)(1 - 5x)(1 - 9x)(1 - 11x)). ● a(n)=(11 ^ (n + 3) - 2 * 9 ^ (n + 3) + 2 * 5 ^ (n + 3) - 3 ^ (n + 3)) / 96. [_ Yahia Kahloune _ , Jun 10 2013] ●

► [A028007] 1,28,511,7722,105105,1340976,16393987,194632774,2263422469,25933837644,293957202903,3305777399106,36960914527993,411484609521832,4566596614746859,50561336628369918,558851419944076077 ⋆ Expansion of 1 / ((1 - 2x)(1 - 7x)(1 - 8x)(1 - 11x)). ● a(n)=(5 * 11 ^ (n + 3) - 30 * 8 ^ (n + 3) + 27 * 7 ^ (n + 3) - 2 ^ (n + 4)) / 540. [_ Yahia Kahloune _ , Jun 06 2013] ●

► [A028000] 1,28,513,7808,107309,1384836,17143081,206182696,2429008197,28183193324,323282753729,3676063130064,41519535153565,466480044231892,5219284450672857,58204869911960312,647392469287421813 ⋆ Expansion of 1 / ((1 - 2x)(1 - 6x)(1 - 9x)(1 - 11x)). ● a(n) = (14 * 11 ^ (n + 3) - 30 * 9 ^ (n + 3) + 21 * 6 ^ (n + 3) - 5 * 2 ^ (n + 3)) / 1260 . [_ Yahia Kahloune _ , Jun 05 2013] ● a(n) = 28 * a(n - 1) - 271 * a(n - 2) + 1032 * a(n - 3) - 1188 * a(n - 4) for n>3. - _ Vincenzo Librandi _ , Jun 03 2014 ●

► [A028067] 1,28,513,7844,109073,1435884,18284641,228039988,2806440945,34241833340,415442661569,5021759035332,60553294750417,728980076982796,8766500495230497,105347998786683476,1265376309596698289 ⋆ Expansion of 1 / ((1 - 3x)(1 - 5x)(1 - 8x)(1 - 12x)). ● a(n)=(5 * 12 ^ (n + 3) - 21 * 8 ^ (n + 3) + 30 * 5 ^ (n + 3) - 14 * 3 ^ (n + 3)) / 1260. [_ Yahia Kahloune _ , Jun 08 2013] ●

► [A024771] 1,28,515,7850,107481,1373088,16714975,196403350,2246489861,25160397548,277090599435,3010102678050,32332333478641,344033387428408,3631750686931895,38080468894107950,396993032851849821 ⋆ Expansion of 1 / ((1 - x)(1 - 8x)(1 - 9x)(1 - 10x)). ● a(n) = (28 * 10 ^ (n + 3) - 63 * 9 ^ (n + 3) + 36 * 8 ^ (n + 3) - 1) / 504. [_ Yahia Kahloune _ , Aug 13 2013] ●

► [A028050] 1,28,515,7910,110241,1448328,18302575,225096970,2713995581,32234230028,378383333835,4400300953230,50784218810521,582435753818128,6644887820416295,75474715560668690,854031383578979061 ⋆ Expansion of 1 / ((1 - 3x)(1 - 4x)(1 - 10x)(1 - 11x)). ● a(n)=(3 * 11 ^ (n + 3) - 4 * 10 ^ (n + 3) + 4 ^ (n + 4) - 3 ^ (n + 4)) / 168. [_ Yahia Kahloune _ , May 27 2013]. ●

► [A026149] 1,28,517,7980,111741,1473948,18687397,230431180,2784091981,33121756668,389323047477,4532472142380,52356786665821,600922618820188,6860138634498757,77961474116861580,882575960972337261 ⋆ Expansion of 1 / ((1 - 2x)(1 - 5x)(1 - 10x)(1 - 11x)). ● a(n) = - 2 ^ n / 27 + 25 * 5 ^ n / 18 - 25 * 10 ^ n + 1331 * 11 ^ n / 54. - _ R. J. Mathar _ , Jun 23 2013 ●

► [A028049] 1,28,517,8008,113113,1513876,19589389,247937536,3091276705,38140546444,467097608341,5689887004984,69041150918377,835356636400132,10086046124610973,121588456137536752,1464064614481015729 ⋆ Expansion of 1 / ((1 - 3x)(1 - 4x)(1 - 9x)(1 - 12x)). ● a(0)=1, a(1)=28, a(2)=517, a(3)=8008, a(n)=28 * a(n - 1) - 267 * a(n - 2) + 1008 * a(n - 3) - 1296 * a(n - 4) [From Harvey P. Dale, Sep 23 2011] ● a(n)=(5 * 12 ^ (n + 3) - 12 * 9 ^ (n + 3) + 27 * 4 ^ (n + 3) - 20 * 3 ^ (n + 3)) / 1080. [_ Yahia Kahloune _ , Jun 07 2013] ●

► [A283244] 1,28,518,7439,90517,972398,9472190,85145743,715281840,5668682493,42691867112,307312234334,2124355701646,14157081285263,91250293831492,570441761053192,3466874635995098,20526329624103412,118608374492197651,669949478060261642 ⋆ Expansion of exp(Sum _{ n>=1 } sigma _ 3(3 * n) * x ^ n / n) in powers of x. ● a(n) = (1 / n) * Sum _{ k=1..n } sigma _ 3(3 * k) * a(n - k). - _ Seiichi Manyama _ , Mar 04 2017 ●

► [A024442] 1,28,518,7988,111279,1454376,18208156,221140696,2626932077,30692791844,354119115714,4046102802924,45880411771195,517157095113232,5801772397167992,64842434348911472,722511991410929433 ⋆ Expansion of 1 / ((1 - x)(1 - 7x)(1 - 9x)(1 - 11x)). ● a(n)=(6 * 11 ^ (n + 3) - 15 * 9 ^ (n + 3) + 10 * 7 ^ (n + 3) - 1) / 480. [_ Yahia Kahloune _ , Jun 27 2013] ●

► [A026108] 1,28,519,8078,114617,1539720,19981483,253451506,3165132333,39098271212,479245678847,5841627343734,70916047801249,858343285202704,10366285999237011,124990982044693562,1505251989334074965 ⋆ Expansion of 1 / ((1 - 2x)(1 - 5x)(1 - 9x)(1 - 12x)). ● a(0)=1, a(1)=28, a(2)=519, a(3)=8078, a(n)=28 * a(n - 1) - 265 * a(n - 2) + 966 * a(n - 3) - 1080 * a(n - 4). - _ Harvey P. Dale _ , Feb 20 2013 ● a(n) = - 4 * 2 ^ n / 105 + 125 * 5 ^ n / 84 - 243 * 9 ^ n / 28 + 288 * 12 ^ n / 35. _ R. J. Mathar _ , Jun 23 2013 ●

► [A024434] 1,28,521,8120,114765,1526196,19481953,241575376,2932083605,35012557580,412807072041,4818002535528,55771887460381,641245030592740,7331332058802545,83421584091633536,945410124787913253 ⋆ Expansion of 1 / ((1 - x)(1 - 6x)(1 - 10x)(1 - 11x)). ● a(n)=(18 * 11 ^ (n + 3) - 25 * 10 ^ (n + 3) + 9 * 6 ^ (n + 3) - 2) / 900. [_ Yahia Kahloune _ , Jun 27 2013] ● a(0)=1, a(1)=28, a(2)=521, a(3)=8120; for n>3, a(n) = 28 * a(n - 1) - 263 * a(n - 2) + 896 * a(n - 3) - 660 * a(n - 4). - _ Vincenzo Librandi _ , Jul 16 2013 ●

► [A024440] 1,28,521,8132,115425,1547436,20005177,252510484,3136438289,38534838524,469928249193,5701527366756,68933583580993,831438081590092,10011928868278169,120426060354676148,1447414807491149937 ⋆ Expansion of 1 / ((1 - x)(1 - 7x)(1 - 8x)(1 - 12x)). ● a(0)=1, a(1)=28, a(2)=521, a(3)=8132; for n>3, a(n) = 28 * a(n - 1) - 263 * a(n - 2) + 908 * a(n - 3) - 672 * a(n - 4) [_ Harvey P. Dale _ , Oct 15 2011] ● a(n) = (21 * 12 ^ (n + 3) - 165 * 8 ^ (n + 3) + 154 * 7 ^ (n + 3) - 10) / 4620. [_ Yahia Kahloune _ , Jun 30 2013] ●

► [A024347] 1,28,523,8218,117649,1592416,20790631,264958246,3320750557,41132364364,505211150899,6167574174034,74958865496425,908053837462072,10973667150086527,132377759927894782,1594780291608334453 ⋆ Expansion of 1 / ((1 - x) * (1 - 6 * x) * (1 - 9 * x) * (1 - 12 * x)). ● a(n) = (20 * 12 ^ (n + 3) - 55 * 9 ^ (n + 3) + 44 * 6 ^ (n + 3) - 9) / 3960. - _ Yahia Kahloune _ , Jun 28 2013 ● a(n) = 28 * a(n - 1) - 261 * a(n - 2) + 882 * a(n - 3) - 648 * a(n - 4) for n > 3; a(0)=1, a(1)=28, a(2)=523, a(3)=8218. - _ Vincenzo Librandi _ , Jul 16 2013 ●

► [A025984] 1,28,524,8288,119952,1646400,21834688,282827776,3602179328,45309135872,564541565952,6982826532864,85877229359104,1051359996166144,12824652929417216,155979167054692352 ⋆ Expansion of 1 / ((1 - 2x)(1 - 4x)(1 - 10x)(1 - 12x)). ● a(n) = - 2 ^ n / 20 + 2 * 4 ^ n / 3 - 125 * 10 ^ n / 12 + 54 * 12 ^ n / 5. _ R. J. Mathar _ , Jun 20 2013 ●

► [A020973] 1,28,527,8330,119361,1607088,20736787,259516390,3174562421,38159361548,452427201447,5305418786850,61660643651881,711374339146408,8156868543440507,93047809667655710,1056781696172883741 ⋆ Expansion of 1 / ((1 - 7 * x) * (1 - 10 * x) * (1 - 11 * x)). ● a(n) = 28 * a(n - 1) - 257 * a(n - 2) + 770 * a(n - 3) for n>=3. - _ Vincenzo Librandi _ , Mar 15 2011 ● a(n) = 21 * a(n - 1) - 110 * a(n - 2) + 7 ^ n for n>1, a(0)=1, a(1)=28. - _ Vincenzo Librandi _

, Mar 15 2011 ● a(n) = (3 * 11 ^ (n + 2) - 4 * 10 ^ (n + 2) + 7 ^ (n + 2)) / 12. - _ Yahia Kahloune _ , Jun 30 2013 ●

► [A023947] 1,28,527,8390,122121,1683768,22407907,291019450,3713967341,46787388908,583658682087,7226065372110,88934701511761,1089437114484448,13295459966641067,161767703674942370 ★ Expansion of 1 / ((1 - x)(1 - 5x)(1 - 10x)(1 - 12x)). ● a(n) = (90 * 12 ^ (n + 3) - 154 * 10 ^ (n + 3) + 99 * 5 ^ (n + 3) - 35) / 13860. [_ Yahia Kahloune _ , Jun 27 2013] ● a(0)=1, a(1)=28, a(2)=527, a(3)=8390; for n>3, a(n) = 28 * a(n - 1) - 257 * a(n - 2) + 830 * a(n - 3) - 600 * a(n - 4). - _ Vincenzo Librandi _ , Jul 12 2013 ●

► [A020972] 1,28,529,8428,122257,1673980,22067473,283450636,3574941073,44501447452,548719235857,6718924954924,81849587868049,993294339107644,12020103854584081,145151139884150092,1750035954202640785 ★ Expansion of 1 / ((1 - 7 * x) * (1 - 9 * x) * (1 - 12 * x)). ● a(n) = 28 * a(n - 1) - 255 * a(n - 2) + 756 * a(n - 3), n>=3. - _ Vincenzo Librandi _ , Mar 15 2011 ● a(n) = 21 * a(n - 1) - 108 * a(n - 2) + 7 ^ n, a(0)=1, a(1)=28. - _ Vincenzo Librandi _ , Mar 15 2011 ● a(n) = (2 * 12 ^ (n + 2) - 5 * 9 ^ (n + 2) + 3 * 7 ^ (n + 2)) / 30. - _ Yahia Kahloune _ , Jun 30 2013 ●

► [A025957] 1,28,531,8582,127505,1800456,24581887,327729514,4292988909,55478507084,709331302043,8991457539246,113171793119113,1416078851325712,17631136903084599,218593740438932978 ★ Expansion of 1 / ((1 - 2x)(1 - 3x)(1 - 11x)(1 - 12x)). ● a(n) = - 4 * 2 ^ n / 45 + 3 * 3 ^ n / 8 - 1331 * 11 ^ n / 72 + 96 * 12 ^ n / 5. - _ R. J. Mathar _ , Jun 20 2013 ●

► [A020758] 1,28,532,8560,125776,1747648,23401792,305401600,3912299776,49432480768,618099069952,7666644643840,94496470552576,1158938055589888,14157139120832512,172384964172513280 ★ Expansion of 1 / ((1 - 6x)(1 - 10x)(1 - 12x)). ● a(n) = 22 * a(n - 1) - 120 * a(n - 2) + 6 ^ n for n>1, a(0)=1, a(1)=28. - _ Vincenzo Librandi _ , Mar 11 2011 ● a(n) = (2 * 12 ^ (n + 2) - 3 * 10 ^ (n + 2) + 6 ^ (n + 2)) / 24. [_ Yahia Kahloune _ , Jun 30 2013] ●

► [A022000] 1,28,533,8648,128889,1824276,24950461,333078016,4367420897,56484732044,722650676709,9164986526904,115404823162825,1444532800672132,17990818115880077,223110488408176112 ★ Expansion of 1 / ((1 - x)(1 - 4x)(1 - 11x)(1 - 12x)). ● a(n) = (105 * 12 ^ (n + 3) - 132 * 11 ^ (n + 3) + 55 * 4 ^ (n + 3) - 28) / 9240. [_ Yahia Kahloune _ , Jun 28 2013] ● a(0)=1, a(1)=28, a(2)=533, a(3)=8648; for n>3, a(n) = 28 * a(n - 1) - 251 * a(n - 2) + 752 * a(n - 3) - 528 * a(n - 4). - _ Vincenzo Librandi _ , Jul 12 2013 ●

► [A020569] 1,28,537,8780,131681,1872828,25708777,344166700,4522666161,58593270428,750663052217,9530987332620,120125429898241,1504795780456828,18753752307454857,232703290568738540 ★ Expansion of 1 / ((1 - 5x)(1 - 11x)(1 - 12x)). ● a(n) = 25 * 5 ^ n / 42 - 121 * 11 ^ n / 6 + 144 * 12 ^ n / 7. - _ R. J. Mathar _ , Jun 30 2013 ● a(0)=1, a(1)=28, a(2)=537; for n>2, a(n) = 28 * a(n - 1) - 247 * a(n - 2) + 660 * a(n - 3). - _ Vincenzo Librandi _ , Jul 04 2013 ● a(n) = 23 * a(n - 1) - 132 * a(n - 2) + 5 ^ n. - _ Vincenzo Librandi _ , Jul 04 2013 ●

► [A001234] 1,28,546,9450,157773,2637558,44990231,790943153,14409322928,272803210680,5374523477960,110228466184200,2353125040549984,52260903362512720,1206647803780373360,28939583397335447760 ★ Unsigned Stirling numbers of the first kind s(n,7). ● a(n) = det(|S(i + 7,j + 6)|, 1 <= i,j <= n - 7), where S(n,k) are Stirling numbers of the second kind. - _ Mircea Merca _ , Apr 06 2013 ●

► [A062142] 1,28,560,10080,176400,3104640,55883520,1037836800,19978358400,399567168000,8310997094400,179819755315200,4045944494592000,94612855873536000,2297740785500160000,57903067794604032000 ★ Fourth (unsigned) column sequence of coefficient triangle A062137 of generalized Laguerre polynomials n! * L(n,3,x). ● a(n) = (n + 3)! * binomial(n + 6, 6) / 3!; e.g.f.: (1 + 18 * x + 45 * x ^ 2 + 20 * x ^ 3) / (1 - x) ^ 10. ●

► [A053110] 1,28,588,10290,158466,2218524,28840812,353299947,4121832715,46164526408,499416240232,5243870522436,53648829191076,536488291910760,5257585260725448,50604258134482437,479252091744216021 ★ Expansion of (- 1 + 1 / (1 - 7 * x) ^ 7) / (49 * x); related to A036226. ● a(n) = 7 ^ (n - 1) * binomial (n + 7, 6); ●

► [A089908] 0,28,609,9555,130501,1654947,20049393,235493839,2704938285,30549382731,340493827177,3754938271623,41049382716069,445493827160515,4804938271604961,51549382716049407,550493827160493853 ★ Sum of digits of numbers between 0 and (7 / 9) * (10 ^ n - 1). ● a(n) = s(7, n - 1) where s(a, k)=a * (k + 1) + a ^ 2 * sum(i=0, k, i * 10 ^ (k - i)) + sum(i=0, k, 5 * a * (9 * (k - i) + a - 1) * 10 ^ (k - i - 1)). ● a(n) = (7 * (- 22 * (- 1 + 10 ^ n) + 9 * (4 + 9 * 10 ^ n) * n)) / 162. G.f.: 7 * x * (15 * x ^ 2 - x + 4) / ((x - 1) ^ 2 * (10 * x - 1) ^ 2). - _ Colin Barker _ , Jun 14 2013 ●

► [A113532] 1,28,769,7108,36409,131836,380713,937924,2054353,4110364,7654321,13446148,22505929,36167548,56137369,84557956,124076833,177920284,249972193,344857924,468033241,625878268,825796489,1076318788 ★ a(n) = 1 + 2 * n + 3 * n ^ 2 + 4 * n ^ 3 + 5 * n ^ 4 + 6 * n ^ 5 + 7 * n ^ 6. ● a(n) = 1 + 2 * n + 3 * n ^ 2 + 4 * n ^ 3 + 5 * n ^ 4 + 6 * n ^ 5 + 7 * n ^ 6. ●

► [A207168] 28,784,3808,11452,26908,54208,98224,164668,260092,391888,568288,798364,1092028,1460032,1913968,2466268,3130204,3919888,4850272,5937148,7197148,8647744,10307248,12194812,14330428 ★ Number of n X 7 0..1 arrays avoiding 0 0 0 and 1 0 1 horizontally and 0 0 1 and 1 0 1 vertically ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

► [A207304] 28,784,4344,14446,36868,79802,154228,274288,457660,725932,1104976,1625322,2322532,3237574,4417196,5914300,7788316,10105576,12939688,16371910,20491524,25396210,31192420,37995752,45931324 ★ Number of n X 7 0..1 arrays avoiding 0 0 0 and 1 0 1 horizontally and 0 0 1 and 1 1 0 vertically. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. ●

► [A158659] 28,812,3164,7084,12572,19628,28252,38444,50204,63532,78428,94892,112924,132524,153692,176428,200732,226604,254044,283052,313628,345772,379484,414764,451612 ★ a(n) = 784 * n ^ 2 + 28. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A190397] 0,0,28,1668,29092,252584,1441634,6222996,22004086,66972760,181332416,446905476,1019470032,2179712872,4410518630,8510498516,15756224370,28128603736,48622240660,81660504068,133643402268,213660267432 ★ Number of ways to place 5 nonattacking grasshoppers on a chessboard of size n x n. ● a(n) = 1 / 120 * (n ^ 10 - 10 * n ^ 8 - 200 * n ^ 7 + 1175 * n ^ 6 - 1136 * n ^ 5 - 740 * n ^ 4 - 30520 * n ^ 3 + 159624 * n ^ 2 - 289024 * n + 179175 - 135 * (- 1) ^ n), n>3. ●

► [A180067] 0,0,0,0,0,28,81095,42752576,2436444603,53633024900,666519047964,5655962632720,36502953719310,191587564345044,854990702601025,3346890268570368,11756179090049177,37692541754516628,111774885566128630,309788198526691600 ★ Number of ways to place 9 nonattacking kings on an n X n toroidal board. ● a(n) = 1 / 362880 * n ^ 2 * (n ^ 16 - 324 * n ^ 14 + 46914 * n ^ 12 - 3975048 * n ^ 10 + 216203169 * n ^ 8 - 7756575876 * n ^ 6 + 179987135516 * n ^ 4 - 2481599151792 * n ^ 2 + 15651056776320), n>=10. ●

► [A022363] 0,29,29,58,87,145,232,377,609,986,1595,2581,4176,6757,10933,17690,28623,46313,74936,121249,196185,317434,513619,831053,1344672 ★ Fibonacci sequence beginning 0, 29. ● a(n) = Fibonacci(n + 7) - Fibonacci(n - 7), where Fibonacci(- 7.. - 1) = 13, - 8, 5, - 3, 2, - 1, 1. - _ Bruno Berselli _ , May 22 2015 ● a(n) = a(n - 1) + a(n - 2) for n>=2, with a(0)=0, a(1)=29. - _ Wesley Ivan Hurt _ , May 12 2023 ●

► [A042700] 29,30,59,89,5221,5310,10531,15841,929309,945150,1874459,2819609,165411781,168231390,333643171,501874561,29442367709,29944242270,59386609979,89330852249,5240576040421,5329906892670 ★ Numerators of continued fraction convergents to sqrt(880). ● a(n) = 178 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Dec 02 2013 ●

► [A042684] 29,30,59,443,502,6969,7471,59266,66737,126003,7374911,7500914,14875825,111631689,126507514,1756229371,1882736885,14935387566,16818124451,31753512017,1858521821437,1890275333454,3748797154891,28131855417691,31880652572582 ★ Numerators of continued fraction convergents to sqrt(872). ● a(n) = 252006 * a(n - 10) - a(n - 20). - _ Wesley Ivan Hurt _ , Apr 16 2023 ●

► [A042708] 29,30,89,119,327,446,1219,1665,97789,99454,296697,396151,1088999,1485150,4059299,5544449,325637341,331181790,988000921,1319182711,3626366343,4945549054,13517464451,18463013505,1084372247741 ★ Numerators of continued fraction convergents to sqrt(884). ● a(n) = 3330 * a(n - 8) - a(n - 16). - _ Vincenzo Librandi _ , Dec 02 2013 ●

► [A042710] 29,30,89,119,6991,7110,21211,28321,1663829,1692150,5048129,6740279,395984311,402724590,1201433491,1604158081,94242602189,95846760270,28593612272 9,381782882999,22429343336671,22811126219670 ★ Numerators of continued fraction convergents to sqrt(885). ● a(n) = 238 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Dec 02 2013 ●

► [A042704] 29,30,89,297,1871,5910,13691,19601,1150549,1170150,3490849,11642697,73347031,231683790,536714611,768398401,45103821869,45872220270,136848262409,456417007497,2875350307391,9082467929670 ★ Numerators of continued fraction convergents to sqrt(882). ● a(n) = 39202 * a(n - 8) - a(n - 16). - _ Vincenzo Librandi _ , Dec 02 2013 ●

► [A042716] 29,30,119,149,8761,8910,35491,44401,2610749,2655150,10576199,13231349,777994441,791225790,3151671811,3942897601,231839732669,235782630270,939187623479,1174970253749,69087462340921 ★ Numerators of continued fraction convergents to sqrt(888). ● a(n) = 298 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Dec 02 2013 ●

► [A042720] 29,30,149,179,10531,10710,53371,64081,3770069,3834150,19106669,22940819,1349674171,1372614990,6840134131,8212749121,483179583149,491392332270,2448748912229,2940141244499 ★ Numerators of continued fraction convergents to sqrt(890). ● a(n) = 358 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Dec 02 2013 ●

► [A042718] 29,30,149,328,1133,1461,2594,29995,62584,92579,340321,6558678,6898999,13457677,20356676,33814353,223242794,257057147,1508528529,1765585676,6805285557,56207870132,175428895953 ★ Numerators of continued fraction convergents to sqrt(889). ● a(n) = 2646394935607314430 * a(n - 42) - a(n - 84) for n>83. [_ Bruno Berselli _ , Dec 03 2013] ●

► [A042722] 29,30,179,209,388,597,3373,3970,233633,237603,1421648,1659251,3080899,4740150,26781649,31521799,1855045991,1886567790,11287884941,13174452731,24462337672,37636790403,212646289687 ★ Numerators of continued fraction convergents to sqrt(891). ● a(n) = 7940 * a(n - 8) - a(n - 16). - _ Vincenzo Librandi _ , Dec 02 2013 ●

► [A042724] 29,30,209,448,6481,13410,86941,100351,5907299,6007650,41953199,89914048,1300749871,2691413790,17449232611,20140646401,1185606723869,1205747370270,8420090945489,18045929261248 ★ Numerators of continued fraction convergents to sqrt(892). ● a(n) = 200702 * a(n - 8) - a(n - 16). - _ Vincenzo Librandi _ , Dec 02 2013 ●

► [A042728] 29,30,269,299,17611,17910,160891,178801,10531349,10710150,962125 49,106922699,6297729091,6404651790,57534943411,63939595201,3766031465069,3829971060270,34405799947229,38235771007499 ★ Numerators of continued fraction convergents to sqrt(894). ● a(n) = 598 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Dec 03 2013 ●

► [A042730] 29,30,329,359,21151,21510,236251,257761,15186389,15444150,169627889,185072039,10903806151,11088878190,121792588051,132881466241,7828917630029,7961799096270,87446908592729,95408707688999,5621151954554671,5716560662243670,62786758576991371 ★ Numerators of continued fraction convergents to sqrt(895). ● a(n) = 718 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Dec 03 2013 ●

► [A042732] 29,30,419,449,26461,26910,376291,403201,23761949,24165150,337908899,362074049,21338203741,21700277790,303441815011,325142092801,19161683197469,19486825290270,272490411970979,291977237261249,17207170173123421,17499147410384670,244696086508124131 ★ Numerators of continued fraction convergents to sqrt(896). ● a(n) = 898 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Dec 03 2013 ●

► [A042734] 29,30,569,599,35311,35910,681691,717601,42302549,43020150,816665249,859685399,50678418391,51538103790,978364286611,1029902390401,60712702929869,61742605320270,1172079598694729,1233822204014999,72733767431564671,73967589635579670 ★ Numerators of continued fraction convergents to sqrt(897). ● a(n) = 1198 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Dec 03 2013 ●

► [A041419] 1,1,29,30,869,899,26041,26940,780361,807301,23384789,24192090,700763309,724955399,20999514481,21724469880,629284671121,651009141001,1885754061914 9,19508549760150,565096933903349,584605483663499,16934050476481321,17518655960144820 ⋆ Denominators of continued fraction convergents to sqrt(224). ● a(n) = 30 * a(n - 2) - a(n - 4) for n > 3. - _ Vincenzo Librandi _ , Dec 17 2013 ● a(n) = Product _{ k = 1..floor((n - 1) / 2) } (28 + 4 * cos ^ 2(k * Pi / n)). ●

► [A042736] 29,30,869,899,53011,53910,1562491,1616401,95313749,96930150,2809357949,2906288099,171374067691,174280355790,5051224029811,5225504385601,308130478394669,313355982780270,9082097996242229,9395453979022499,554018428779547171 ⋆ Numerators of continued fraction convergents to sqrt(898). ● a(n) = 1798 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Dec 03 2013, simplified by _ Colin Barker _ , Dec 27 2013 ●

► [A042738] 29,30,1769,1799,106111,107910,6364891,6472801,381787349,388260150,22900876049,23289136199,1373670775591,1396959911790,82397345659411,83794305571201,4942467068789069,5026261374360270,296465626781684729,301491888156044999,17782995139832294671 ⋆ Numerators of continued fraction convergents to sqrt(899). ● a(n) = 60 * a(n - 2) - a(n - 4), - _ Vincenzo Librandi _ , Dec 03 2013 ●

► [A157681] 29,31,60,91,151,242,393,635,1028,1663,2691,4354,7045,11399,18444,29843,48287,78130,126417,204547,330964,535511,866475,1401986,2268461 ⋆ Fibonacci sequence beginning 29, 31. ● a(n) = a(n - 1) + a(n - 2), a(0)=29, a(1)=31. ● a(n) = 27 * Fibonacci(n) + 2 * Fibonacci(n + 1). ●

► [A261521] 29,32,37,44,53,64,77,92,109,128,149,172,197,224,253,284,317,352,389,428,469,512,557,604,653 ⋆ a(n) = n ^ 2 + 2 * n + 29. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Oct 03 2015 ●

► [A346145] 29,41,61,89,281,349,509,601,701,809,1049,1181,1321,1789,2141,2729,3389,4649,5209,5501,5801,8861,9241,9629,10429 ⋆ Primes of the form k ^ 2 + 25. ● a(n) >> n log ^ 2 n (Brun sieve). - _ Charles R Greathouse IV _ , Jul 06 2021 ●

► [A057539] 1,29,41,71,139,169,181,209,211,239,251,281,349,379,391,419,421,449,461,491,559,589,601,629,631 ⋆ Birthday set of order 7, i.e., numbers congruent to +- 1 modulo 2, 3, 4, 5, 6 and 7. ● a(n) = a(n - 8) + 210 = a(n - 1) + a(n - 8) - a(n - 9). - _ Charles R Greathouse IV _ , Oct 20 2014 ● a(n) = 105n / 4 + O(1). - _ Charles R Greathouse IV _ , Oct 20 2014 ●

► [A157257] 29,41,85,89,205,481,505,1189,2801,2941,6929,16325,17141,40385,95149,99905,235381,554569,582289,1371901,3232265,3393829,7996025,18839021,19780685 ⋆ Positive numbers y such that y ^ 2 is of the form x ^ 2 + (x + 41) ^ 2 with integer x. ● a(n) = 6 * a(n - 3) - a(n - 6) for n > 6; a(1)=29, a(2)=41, a(3)=85, a(4)=89, a(5)=205, a(6)=481. ●

► [A214405] 1,29,41,85,113,173,217,293,353,445,521,629,721,845,953,1093,1217,1373,1513,1685,1841,2029,2201,2405,2593 ⋆ Numbers of the form (4k + 3) ^ 2 - 8 or (4k + 5) ^ 2 + 4. ● a(n) = 2 * a(n - 1) - 2 * a(n - 3) + a(n - 4). ● a(n) = 4 * n * (n + 3) - 6 * (- 1) ^ n + 7. ●

► [A374009] 29,44,48,63,71,86,98,113,129,144,164,179,203,218,246,261,293,308,344,359,399,414,458,473,521 ⋆ a(n) = (1 + (n + 7) ^ 2 - (n - 8) * (- 1) ^ n) / 2. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). ●

► [A195819] 0,29,58,87,116,145,174,203,232,261,290,319,348,377,406,435,464,493,522,551,580,609,638,667,696 ⋆ Multiples of 29. ● a(n) = 29 * n. ●

► [A184073] 29,58,150,335,728,1499,2968,5645,10331,18242,31173,51709,83492,131554,202727,306142,453830,661439,949082,1342332,1873381,2582381,3518986,4744115,6331957 ⋆ Number of (n + 1) X 2 0..2 arrays with rows and columns in nondecreasing order and with no 2 X 2 subblock sum differing from a horizontal or vertical neighbor subblock sum by more than one. ● a(n) = (1290240 - 1768560 * n + 1559788 * n ^ 2 - 343756 * n ^ 3 + 72569 * n ^ 4 - 4480 * n ^ 5 + 602 * n ^ 6 - 4 * n ^ 7 + n ^ 8) / 40320 for n>5. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>14. ●

► [A042668] 29,59,88,147,823,970,13433,14403,85448,99851,185299,470449,27471341,55413131,82884472,138297603,774372487,912670090,12639083657,13551753747,80397852392,93949606139,174347458531,442644523201,25847729804189 ⋆ Numerators of continued fraction convergents to sqrt(864). ● a(n) = 940898 * a(n - 12) - a(n - 24). - _ Wesley Ivan Hurt _ , Apr 26 2021 ●

► [A042664] 29,59,88,323,411,734,7017,28802,64621,158044,380709,538753,3074474,3613227,17527382,38667991,752219211,6056421679,12865062569,18921484248,542666621513,561588105761,1665842833035 ⋆ Numerators of continued fraction convergents to sqrt(862). ● a(n) = 716045132294624251006 * a(n - 40) - a(n - 80) for n>79. [_ Bruno Berselli _ , Dec 01 2013] ●

► [A042672] 29,59,147,206,5915,6121,18157,42435,2479387,5001209,12481805,17483014,502006197,519489211,1540984619,3601458449,210425574661,424452607771,1059330790203,1483783397974,42605265933475,44089049331449,130783364596373,305655778524195 ⋆ Numerators of continued fraction convergents to sqrt(866). ● a(n) = 84870 * a(n - 8) - a(n - 16). - _ Vincenzo Librandi _ , Dec 01 2013 ●

► [A356717] 1,29,59,241,445,1691,3089,11629,21211,79745,145421,546619,996769,3746621,6831995,25679761,46827229,176011739,320958641,1206402445,2199883291,8268805409,15078224429,56675235451,103347687745 ⋆ a(n) is the integer w such that (c(n) ^ 2, - d(n) ^ 2, w) is a primitive solution to the Diophantine equation 2 * x ^ 3 + 2 * y ^ 3 + z ^ 3 = 11 ^ 3, where c(n) = F(n + 2) + (- 1) ^ n * F(n - 3), d(n) = F(n + 3) + (- 1) ^ n * F(n - 2) and F(n) is the n - th Fibonacci number (A000045). ● a(n) = ((1 - (- 1) ^ n) / 2) * (- 5 + 14 * Sum _{ k=1..n - 1 } Fibonacci(4 * k - 1) + 6 * Sum _{ k=0..n - 1 } Fibonacci(4 * k + 1)) + ((1 + (- 1) ^ n) / 2) * (- 5 + 14 * Sum _{ k=1..n } Fibonacci(4 * k - 1) + 6 * Sum _{ k=0..n - 1 } Fibonacci(4 * k + 1)). ● a(n) = a(n - 1) + 7 * a(n - 2) - 7 * a(n - 3) - a(n - 4) + a(n - 5) for n > 5. (End) ●

► [A042674] 29,59,265,7744,31241,70226,4104349,8278924,37220045,1087660229,4387860961,9863382151,576464025719,1162791433589,5227629760075,152764054475764,616283847663131,1385331749802026,80965525336180639 ⋆ Numerators of continued fraction convergents to sqrt(867). ● a(n) = 140452 * a(n - 6) - a(n - 12). - _ Vincenzo Librandi _ , Dec 01 2013 ●

► [A042680] 29,59,3451,6961,407189,821339,48044851,96911041,5668885229,11434681499,668880412171,1349195505841,78922219750949,159193635007739,9312153050199811,18783499735407361,1098755137703826749 ⋆ Numerators of continued fraction convergents to sqrt(870). ● a(n) = 118 * a(n - 2) - a(n - 4). - _ Vincenzo Librandi _ , Dec 01 2013 ●

► [A132770] 0,29,60,93,128,165,204,245,288,333,380,429,480,533,588,645,704,765,828,893,960,1029,1100,1173,1248 ⋆ a(n) = n * (n + 28). ● a(n) = 2 * n + a(n - 1) + 27, with a(0)=0. - _ Vincenzo Librandi _ , Aug 03 2010 ●

► [A161617] 1,29,73,133,209,301,409,533,673,829,1001,1189,1393,1613,1849,2101,2369,2653,2953,3269,3601,3949,4313,4693,5089 ⋆ 8 * n ^ 2 + 20 * n + 1. ● a(n) = a(n - 1) + 16 * n + 12 (with a(0)=1). - _ Vincenzo Librandi _ , Nov 30 2010 ●

► [A195314] 1,29,85,169,281,421,589,785,1009,1261,1541,1849,2185,2549,2941,3361,3809,4285,4789,5321,5881,6469,7085,7729,8401 ⋆ Centered 28 - gonal numbers. ● a(n) = 14 * n ^ 2 - 14 * n + 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Oct 01 2011 ●

► [A042656] 29,88,205,703,40979,123640,288259,988417,57616445,173837752,405291949,1389713599,81008680691,244415755672,569840192035,1953936331777,113898147435101,343648378637080,801194904709261 ⋆ Numerators of continued fraction convergents to sqrt(858). ● a(n) = 1406 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Nov 30 2013 ●

► [A042658] 29,88,381,1993,2374,4367,6741,17849,42439,145166,332771,6467815,58543106,65010921,188564948,253575869,442140817,2022139137,2464279954,9414978999,106029048943,221473076885 ⋆ Numerators of continued fraction convergents to sqrt(859). ● a(n) = 4117689543959286120248020 * a(n - 46) - a(n - 92) for n>91. [_ Bruno Berselli _ , Dec 01 2013] ●

► [A042660] 29,88,1261,3871,225779,681208,9762691,29969281,1747980989,5273912248,75582752461,232022169631,13532868591059,40830627942808,585161659790371,1796315607313921,104771466883997789,316110716259307288 ⋆ Numerators of continued fraction convergents to sqrt(860). ● a(n) = 7742 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Nov 30 2013 ●

► [A010017] 1,29,110,245,434,677,974,1325,1730,2189,2702,3269,3890,4565,5294,6077,6914,7805,8750,9749,10802,11909,13070,14285,15554 ⋆ a(0) = 1, a(n) = 27 * n ^ 2 + 2 for n>0. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3), n>=4, a(1)=29, a(2)=110, a(3)=245. - _ G. C. Greubel _ , Aug 02 2015 ●

► [A158556] 1,29,113,253,449,701,1009,1373,1793,2269,2801,3389,4033,4733,5489,6301,7169,8093,9073,10109,11201,12349,13553,14813,16129 ⋆ a(n) = 28 * n ^ 2 + 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A244635] 0,29,116,261,464,725,1044,1421,1856,2349,2900,3509,4176,4901,5684,6525,7424,8381,9396,10469,11600,12789,14036,15341,16704 ⋆ 29 * n ^ 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>2. ●

► [A042650] 29,117,731,3041,177109,711477,4445971,18495361,1077176909,4327202997,27040394891,112488782561,6551389783429,26318047916277,1644596772810 91,684156757040641,39845551585638269,160066363099593717 ⋆ Numerators of continued fraction convergents to sqrt(855). ● a(n) = 6082 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Nov 30 2013 ●

► [A158560] 29,119,269,479,749,1079,1469,1919,2429,2999,3629,4319,5069,5879,6749,7679,8669,9719,10829,11999,13229,14519,15869,17279,18749 ⋆ a(n) = 30 * n ^ 2 - 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A260260] 0,1,29,132,358,755,1371,2254,3452,5013,6985,9416,12354,15847,19943,24690,30136,36329,43317,51148,59870,69531,80179,91862,104628 ⋆ a(n) = n * (16 * n ^ 2 - 21 * n + 7) / 2. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n >= 4. - _ Wesley Ivan Hurt _ , Dec 18 2020 ●

► [A145980] 29,139,323,581,913,1319,1799,2353,2981,3683,4459,5309,6233,7231,8303,9449,10669,11963,13331,14773,16289,17879,19543,21281,23093 ⋆ a(n) = 29 + 73 * n + 37 * n ^ 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A101096] 1,29,150,390,750,1230,1830,2550,3390,4350,5430,6630,7950,9390,10950,12630,14430,16350,18390,20550,22830,25230,27750,30390,33150 ⋆ Third differences of fifth powers (A000584). ● a(k + 1) = MagicNKZ(5,k,3) where MagicNKZ(n,k,z) = Sum _{ j=0..k + 1 } (- 1) ^ j * binomial(n + 1 - z,j) * (k - j + 1) ^ n. (Cf. A101095.) ● a(k + 1) = 30 * (1 - 2 * k + 2 * k ^ 2); k>2. ●

► [A042640] 29,175,379,2449,142421,856975,1856371,11995201,697578029,419746375,9092504779,58752492049,3416737043621,20559174753775,44535086551171,287769694060801,16735177342077629,100698833746526575 ⋆ Numerators of continued fraction convergents to sqrt(850). ● a(n) = 4898 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Nov 30 2013 ●

► [A372962] 1,29,235,925,3101,6815,16759,29597,57097,89929,160931,217375,371125,486011,728735,947101,1419569,1655813,2475739,2868425,3938365,4666999,6435815,6955295,9690601 ⋆ a(n) = Sum _{ 1 <= x _ 1, x _ 2, x _ 3 <= n } (n / gcd(x _ 1, x _ 2, x _ 3, n)) ^ 2. ● a(n) = Sum _{ d|n } mu(n / d) * (n / d) ^ 2 * sigma _ 5(d). ●

► [A091630] 29,235,2247,22271,222319,2222415,22222607,222222991,2222223759,22222225295,222222228367,2222222234511,22222222246799,222222222271375,2222222222320527,22222222222418831,222222222222615439 ⋆ Numbers n + product of digits associated with A091628. ● a(n) = 13 * a(n - 1) - 32 * a(n - 2) + 20 * a(n - 3) for n > 3. ●

► [A223837] 29,239,926,2578,6159,13582,28369,56607,108282,199047,352486,602938,998945,1607388,2518375,3850945,5759652,8442093,12147444,17186068,23940259,32876186,44557101,59657875,78980926 ⋆ Number of n X 7 0..1 arrays with rows and antidiagonals unimodal and columns nondecreasing. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>12. ●

► [A224145] 29,239,1037,3296,8838,21183,46586,95455,184222,337727,592178,998751,1627894,2574399,3963306,5956703,8761486,12638143,17910626,24977375,34323558,46534591,62311002,82484703,108036734 ⋆ Number of n X 7 0..1 arrays with rows and antidiagonals unimodal and columns nondecreasing. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>12. ●

► [A225009] 29,239,1163,4166,12174,30738,69498,144111,278707,508937,885677,1479452,2385644,3730548,5678340,8439021,12277401,17523187,24582239,3394905

8,46220570,62111270,82469790,108296955,140765391 ⋆ Number of n X 7 0..1 arr ays with rows unimodal and columns nondecreasing. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. ●

▶ [A027939] 1,29,247,1300,5270,18228,56967,166681,467301,1274856,3419252,90 76280,23945893,62955061,165188091,432974764,1134224458,2970340412,7777628 427,20363608737,53314542953,139581703056,365432651464,956718812272,250472 6904937 ⋆ a(n) = T(2 * n, n + 3), T given by A027935. ● a(n) = Fibonacci(2 * n + 7) - (195 + 186 * n + 90 * n ^ 2 + 35 * n ^ 3 + 4 * n ^ 5) / 15. - _ G. C. Greubel _ , Sep 28 2019 ●

▶ [A110692] 1,29,275,1498,5846,18250,48546,114480,245751,489247,915629,1627 418,2768740,4536884,7195828,11091888,16671645,24502305,35294647,49928714,6 9482402,95263102,128842550,172095040,227239155 ⋆ Kekulé numbers for certai n benzenoids. ● a(n) = (n + 1) * (n + 2) * (n + 3) * (155 * n ^ 4 + 911 * n ^ 3 + 2062 * n ^ 2 + 2122 * n + 840) / 7!. ●

▶ [A244873] 1,29,289,1640,6604,21122,57271,137155,298184,599954,1132942,20 29229,3475465,5728289,9132418,14141618,21342771,31483251,45501823,6456327 8,90097018,123839804,167882881,224723693,297322402 ⋆ Number of magic label ings of the prism graph I X C _ 7 with magic sum n. ● a(n) = 61 * n ^ 7 / 144 0 + 427 * n ^ 6 / 960 + 1463 * n ^ 5 / 720 + 2009 * n ^ 4 / 384 + 11809 * n ^ 3 / 1440 + 1253 * n ^ 2 / 160 + 169 * n / 40 + (- 1) ^ n / 256 + 255 / 256. [_ Bruno Berselli _ , Jul 08 2014] ●

▶ [A042632] 29,320,349,669,1018,1687,2705,4392,11489,15881,27370,43251,7062 1,113872,184493,2143295,124495603,1371594928,1496090531,2867685459,4363775 990,7231461449,11595237439,18826698888 ⋆ Numerators of continued fraction c onvergents to sqrt(846). ● a(n) = 4286590 * a(n - 16) - a(n - 32) for n>31. [_ Bruno Berselli _ , Nov 30 2013] ●

▶ [A107966] 1,29,320,2100,9898,37044,116928,323730,807675,1851421,3955952,7 966322,15249780,27941200,49273344,84012300,139021461,223980645,352290400,5 42195192,818163038,1212563220,1767688000,2538168750,3593841615 ⋆ a(n) = (n + 1)(n + 2) ^ 3 * (n + 3) ^ 2 * (n + 4)(5n ^ 2 + 23n + 30) / 8640. ● a(0)=1, a (1)=29, a(2)=320, a(3)=2100, a(4)=9898, a(5)=37044, a(6)=116928, a(7)=3237 30, a(8)=807675, a(9)=1851421, a(n)=10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10). - _ Harvey P. Dale _ , Apr 18 2016 ●

▶ [A156640] 29,338,985,1970,3293,4954,6953,9290,11965,14978,18329,22018,2604 5,30410,35113,40154,45533,51250,57305,63698,70429,77498,84905,92650,100733 ⋆ a(n) = 169 * n ^ 2 + 140 * n + 29. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>2. ●

▶ [A261540] 0,29,478,4287,24476,101785,337434,946043,2333752,5206581,107140 70,20633239,37597908,65378417,109216786,176222355,275832944,420346573,625 528782,911300591,1302512140,1829807049,2530582538,3450050347,4642403496 ⋆ a(n) = n ^ 7 + 7 * n ^ 5 + 14 * n ^ 3 + 7 * n. ● a(n) = - a(- n) = ((n + sqrt(n ^ 2 + 4)) / 2) ^ 7 - 1 / ((n + sqrt(n ^ 2 + 4)) / 2) ^ 7. ●

▶ [A028180] 1,29,530,7810,101451,1213359,13695340,148146020,1551618101,158 47349089,158652680550,1562885008230,15193886293951,146104406183219,13921 73613916160,131639743627224 40,123666997751585001 ⋆ Expansion of 1 / ((1 - 5 x)(1 - 7x)(1 - 8x)(1 - 9x)). ● a(n)=(3 * 9 ^ (n + 3) - 8 ^ (n + 4) + 6 * 7 ^ (n + 3) - 5 ^ (n + 3)) / 24. [_ Yahia Kahloune _ , May 31 2013] ●

▶ [A028171] 1,29,533,7945,105021,1285809,14944693,167428745,1826266541,195 29198689,205738222053,2142884743545,22124707610461,226886218153169,23144 14985326613,2351124080564 2345,238065299395424781 ⋆ Expansion of 1 / ((1 - 5 x)(1 - 6x)(1 - 8x)(1 - 10x)). ● a(n)=(3 * 10 ^ (n + 3) - 10 * 8 ^ (n + 3) + 15 * 6 ^ (n + 3) - 8 * 5 ^ (n + 3)) / 12 = (- 2 ^ (3 * n + 7) + 2 ^ n * 3 ^ (n + 4) - 5 ^ (n + 2) + 3 * 2 ^ n * 5 ^ (n + 2)) / 3. [_ Yahia Kahloune _ , May 31 2013] ●

▶ [A028146] 1,29,535,8025,106911,1320249,15480655,174931625,1923680671,207 25530969,2198228145 75,2303376354825,23907223188031,246285893877689,25221 50397345295,2570691185386 7625,261029919360032991 ⋆ Expansion of 1 / ((1 - 4 x)(1 - 7x)(1 - 8x)(1 - 10x)). ● a(n)=(2 * 10 ^ (n + 3) - 9 * 8 ^ (n + 3) + 8 * 7 ^ (n + 3) - 4 ^ (n + 3)) / 72. [_ Yahia Kahloune _ , May 31 2013] ●

▶ [A028168] 1,29,536,8086,108927,1369095,16458142,192115232,2198921813,248 38420321,278088555108,3094968268938,34308450088459,379311805532507,41863 01510184 234,461490866792580 04,5083545076627576 65 ⋆ Expansion of 1 / ((1 - 5 x)(1 - 6x)(1 - 7x)(1 - 11x)). ● a(n) = 29 * a(n - 1) - 305 * a(n - 2) + 1387 * a(n - 3) - 2310 * a(n - 4), n >= 4. - _ Vincenzo Librandi _ , Mar 19 2011 ● a(n) = 18 * a(n - 1) - 77 * a(n - 2) + 6 ^ (n + 1) - 5 ^ (n + 1), n >= 2. - _ Vincenzo Librandi _ , Mar 19 2011 ● a(n) = 6 ^ (n + 3) / 5 - 7 ^ (n + 3) / 8 - 5 ^ (n + 3) / 12 + 11 ^ (n + 3) / 120. - _ R. J. Mathar _ , Mar 19 2011 ●

▶ [A028139] 1,29,537,8113,109193,1365777,16254169,186716321,2089642665,229 28450545,247752021881,2644807869249,27960164339017,293249462073233,30555 59544501273,31664588166403297,326635270896335849 ⋆ Expansion of 1 / ((1 - 4 x)(1 - 6x)(1 - 9x)(1 - 10x)). ● a(n)=(5 * 10 ^ (n + 3) - 8 * 9 ^ (n + 3) + 5 * 6 ^ (n + 3) - 2 * 4 ^ (n + 3)) / 120. [_ Yahia Kahloune _ , Jun 02 2013] ●

▶ [A028137] 1,29,539,8209,111915,1425273,17363443,205288433,2377405019,271 35022057,306533078787,3437326558497,38340790470763,426029329661081,47208 02257754771,5220607029463 5601,576493191655444347 ⋆ Expansion of 1 / ((1 - 4 x)(1 - 6x)(1 - 8x)(1 - 11x)). ● a(n)=(8 * 11 ^ (n + 3) - 35 * 8 ^ (n + 3) + 42 * 6 ^ (n + 3) - 15 * 4 ^ (n + 3)) / 840. [_ Yahia Kahloune _ , May 27 2013]. ●

▶ [A028093] 1,29,540,8230,111911,1414839,17015290,197394560,2229204021,246 59970049,268405356440,2883764656890,30659268255331,323156832303659,33818 32557579990,351790119085712 20,364094453676865841 ⋆ Expansion of 1 / ((1 - 3 x)(1 - 7x)(1 - 9x)(1 - 10x)). ● a(0)=1, a(1)=29, a(2)=540, a(3)=8230, a(n)=29 * a(n - 1) - 301 * a(n - 2) + 1299 * a(n - 3) - 1890 * a(n - 4). [_ Harvey P. Dale _ , Sep 02 2011] ● a(n)=(8 * 10 ^ (n + 3) - 14 * 9 ^ (n + 3) + 7 ^ (n + 4) - 3 ^ (n + 3)) / 168. [_ Yahia Kahloune _ , May 30 2013] ●

▶ [A028091] 1,29,542,8326,114639,1474683,18136084,216253052,2522916077,289 75740937,329016750426,3704913244578,41464099463515,461955078856391,51294 92632272368,568166212956933 04,628178610574416153 ⋆ Expansion of 1 / ((1 - 3 x)(1 - 7x)(1 - 8x)(1 - 11x)). ● a(0)=1, a(1)=29, a(2)=542, a(3)=8326, a(n)=29 * a(n - 1) - 299 * a(n - 2) + 1279 * a(n - 3) - 1848 * a(n - 4). [_ Harvey P. Dale _ , Jul 27 2011] ● a(n)=(5 * 11 ^ (n + 3) - 32 * 8 ^ (n + 3) + 30 * 7 ^ (n + 3) - 3 ^ (n + 4)) / 480. [_ Yahia Kahloune _ , May 27 2013]. ●

▶ [A028125] 1,29,542,8338,115203,1490127,18459184,221986196,2613955685,303 11197345,347486967906,3949158184374,44583107459047,500701324008083,56003 28285552308,624372892716927 2,694313904033290889 ⋆ Expansion of 1 / ((1 - 4 x)(1 - 5x)(1 - 9x)(1 - 11x)). ● a(n) = 29 * a(n - 1) - 299 * a(n - 2) + 1291 * a(n - 3) - 1980 * a(n - 4), n >= 4. ● a(n) = 20 * a(n - 1) - 99 * a(n - 2) + 5 ^ (n + 1) - 4 ^ (n + 1), n >= 2. (End) ● a(n) = - 4 ^ (n + 3) / 35 + 5 ^ (n + 3) / 24 - 9 ^ (n + 3) / 40 + 11 ^ (n + 3) / 84. - _ R. J. Mathar _ , Mar 17 2011 ●

▶ [A028084] 1,29,544,8414,116935,1521023,18936478,228705968,2702760709,314 33459057,361216744252,4113147855362,46506852459523,522961531303331,58552 08956119066,653319278789717 96,726978513100416577 ⋆ Expansion of 1 / ((1 - 3 x)(1 - 6x)(1 - 9x)(1 - 11x)). ● a(n)=(9 * 11 ^ (n + 3) - 20 * 9 ^ (n + 3) + 16 * 6 ^ (n + 3) - 5 * 3 ^ (n + 3)) / 720. [_ Yahia Kahloune _ , May 27 2013]. ● a(0)=1, a(1)=29, a(2)=544, a(3)=8414, a(n)=29 * a(n - 1) - 297 * a(n - 2) + 1251 * a(n - 3) - 1782 * a(n - 4). - _ Harvey P. Dale _ , Jun 16 2015 ●

▶ [A028015] 1,29,545,8425,116481,1498569,18339025,216366425,2482819361,278 79546409,307689294705,3348390668025,36019012136641,383739078223049,40551 95455949585,42559109119075225,444030782195892321 ⋆ Expansion of 1 / ((1 - 2 x)(1 - 8x)(1 - 9x)(1 - 10x)). ● a(n) = (21 * 10 ^ (n + 3) - 48 * 9 ^ (n + 3) + 28 * 8 ^ (n + 3) - 2 ^ (n + 3)) / 336. [_ Yahia Kahloune _ , Jun 06 2013] ●

▶ [A028123] 1,29,545,8485,119481,1586589,20323345,254479445,3140238761,383 83465549,466251023745,5640435145605,68049758226841,819519225638909,98576 37166837745,118479045968342965,1423248497110019721 ⋆ Expansion of 1 / ((1 - 4x)(1 - 5x)(1 - 8x)(1 - 12x)). ● a(n) = 29 * a(n - 1) - 296 * a(n - 2) + 1264 * a(n - 3) - 1920 * a(n - 4), n >= 4. ● a(n) = 20 * a(n - 1) - 96 * a(n - 2) + 5 ^ (n + 1) - 4 ^ (n + 1), n >= 2. (End) ● a(n) = 5 ^ (n + 3) / 21 - 2 * 4 ^ n - 4 * 8 ^ (n + 1) / 3 + 54 * 12 ^ n / 7. - _ R. J. Mathar _ , Mar 18 2011 ●

▶ [A028082] 1,29,547,8561,121219,1617833,20812219,261490097,3235181587,396 20718137,481957803691,5836292549633,70462254871555,848987132460041,10215 522905076763,122808633740991569,1475488118109230323 ⋆ Expansion of 1 / ((1 - 3x)(1 - 6x)(1 - 8x)(1 - 12x)). ● a(n)=(5 * 12 ^ (n + 3) - 27 * 8 ^ (n + 3) + 30 * 6 ^ (n + 3) - 8 * 3 ^ (n + 3)) / 1080. [_ Yahia Kahloune _ , May 27 2013]. ●

▶ [A028010] 1,29,548,8566,120423,1583943,19921666,242775872,2891343125,338 48546017,391123415904,4474230519018,50782770006307,572842223354651,64302 99748764062,719012614492716 04,801472079960561169 ⋆ Expansion of 1 / ((1 - 2 x)(1 - 7x)(1 - 9x)(1 - 11x)). ● a(n)=(35 * 11 ^ (n + 3) - 10 * 9 ^ (n + 4) + 9 * 7 ^ (n + 4) - 2 ^ (n + 6)) / 2520. [_ Yahia Kahloune _ , Jun 06 2013] ●

▶ [A028071] 1,29,548,8590,121551,1615119,20584858,254810960,3087662501,368 16560209,433529214768,5054413691730,58455083456251,671574295857299,76730 16284430278,872602457011549 00,988433749842078801 ⋆ Expansion of 1 / ((1 - 3 x)(1 - 5x)(1 - 10x)(1 - 11x)). ● a(0)=1, a(1)=29, a(2)=548, a(3)=8590, a(n)=29 * a(n - 1) - 293 * a(n - 2) + 1195 * a(n - 3) - 1650 * a(n - 4). - _ Harvey P. Dal e _ , Apr 06 2013 ● a(n)=(35 * 11 ^ (n + 3) - 48 * 10 ^ (n + 3) + 28 * 5 ^ (n + 3) - 15 * 3 ^ (n + 3)) / 1680. [_ Yahia Kahloune _ , Jun 10 2013] ●

▶ [A028070] 1,29,550,8690,124531,1684079,21954280,279351380,3496283461,432 56856929,530819707210,6475595107670,78659578436791,952489924910579,11507 069203563340,138779617656909560,1671608878215416521 ⋆ Expansion of 1 / ((1 - 3x)(1 - 5x)(1 - 9x)(1 - 12x)). ● a(n)=(8 * 12 ^ (n + 3) - 21 * 9 ^ (n + 3) + 27 * 5 ^ (n + 3) - 14 * 3 ^ (n + 3)) / 1512. [_ Yahia Kahloune _ , May 27 2013]. ●

▶ [A028008] 1,29,551,8713,124719,1681449,21820639,276146585,3436220975,422 70842185,515935095039,6263469307641,75758994829519,914022487668137,11008 535762024351,132431203010446681,1591851153157367151 ⋆ Expansion of 1 / ((1 - 2x)(1 - 7x)(1 - 8x)(1 - 12x)). ● a(n)=(3 * 12 ^ (n + 3) - 25 * 8 ^ (n + 3) + 24 * 7 ^ (n + 3) - 2 ^ (n + 4)) / 600. [_ Yahia Kahloune _ , Jun 06 2013] ●

▶ [A042628] 29,552,1133,1685,9558,11243,43287,54530,97817,152347,250164,402 511,1055186,6733627,7788813,61255318,130299449,452153665,1034606779,252136 7223,28769646232,117599952151,146369598383 ⋆ Numerators of continued fracti on convergents to sqrt(844). ● a(n) = 309924629320335257289998 * a(n - 48) - a(n - 96) for n>95. [_ Bruno Berselli _ , Nov 30 2013] ●

▶ [A028001] 1,29,553,8801,127033,1728833,22655881,289479377,3634751065,450 81115937,554241018409,6770845059953,82332981442297,997760934850241,12061 135182324937,145526363142458129,1753455257965355929 ⋆ Expansion of 1 / ((1 - 2x)(1 - 6x)(1 - 9x)(1 - 12x)). ● a(n)=(14 * 12 ^ (n + 3) - 40 * 9 ^ (n + 3) + 35 * 6 ^ (n + 3) - 9 * 2 ^ (n + 3)) / 2520. [_ Yahia Kahloune _ , May 27 2013]. ●

▶ [A024772] 1,29,554,8794,125715,1681143,21476668,265496948,3202922789,379 27649617,442690769742,5108795150862,58428053357623,663418639575851,74890 21847982176,841422023525929 36,941752569789292617 ⋆ Expansion of 1 / ((1 - x)(1 - 8x)(1 - 9x)(1 - 11x)). ● a(n) = (28 * 11 ^ (n + 3) - 105 * 9 ^ (n + 3) + 80 * 8 ^ (n + 3) - 3) / 1680. [_ Yahia Kahloune _ , Jun 28 2013] ●

▶ [A028051] 1,29,555,8905,130091,1796769,23932195,310954985,3969388731,500 12943409,623962124435,7725629774265,95088465616171,1164870934296449,1421 6545739974275,172979498415780745 ⋆ Expansion of 1 / ((1 - 3x)(1 - 4x)(1 - 10x)(1 - 12x)). ● a(0)=1, a(1)=29, a(2)=555, a(3)=8905, a(n)=29 * a(n - 1) - 286 * a(n - 2) + 1104 * a(n - 3) - 1440 * a(n - 4). [_ Harvey P. Dale _ , Dec 31 2011] ● a(n)=(7 * 12 ^ (n + 3) - 12 * 10 ^ (n + 3) + 21 * 4 ^ (n + 3) - 16 * 3 ^ (n + 3)) / 1008. [_ Yahia Kahloune _ , May 27 2013] ●

▶ [A024444] 1,29,556,8886,128247,1735335,22472122,281988512,3456550933,416 15912481,494043113928,5799461900778,67460105552659,778834444699067,89357 02988139574,101983512655795284,1158765208828679025 ⋆ Expansion of 1 / ((1 - x)(1 - 7x)(1 - 10x)(1 - 11x)). ● a(n) = (27 * 11 ^ (n + 3) - 40 * 10 ^ (n + 3) + 15 * 7 ^ (n + 3) - 2) / 1080. [_ Yahia Kahloune _ , Jun 28 2013] ●

▶ [A026241] 1,29,557,8977,131685,1825017,24374173,317359889,4057667669,511 88756905,6392488806989,79209043040 01,975504447465 3,1195603302467993,1459 7229457092605,177666702622486513 ⋆ Expansion of 1 / ((1 - 2x)(1 - 5x)(1 - 10x)(1 - 12x)). ● a(n) = - 2 ^ n / 30 + 25 * 5 ^ n / 21 - 25 * 10 ^ n / 2 + 432 * 12 ^ n / 35. _ R. J. Mathar _ , Jun 23 2013 ●

▶ [A024443] 1,29,558,8986,131243,1805223,23872696,307323332,3882264405,483 83711857,597102947714,7316027902638,89165615770687,1082459954878331,1310 2563809462412,158253703693612504 ⋆ Expansion of 1 / ((1 - x)(1 - 7x)(1 - 9x)(1

- 12x)). ● a(n) = (16 * 12 ^ (n + 3) - 55 * 9 ^ (n + 3) + 44 * 7 ^ (n + 3) - 5) / 2640. [_ Yahia Kahloune _ , Jun 28 2013] ●

► [A024435] 1,29,561,9121,134897,1882545,25284337,330685937,4242985713,53675466481,671774536433,8338419180273,102834889732849,1261772945322737,15418912066155249,187803876238668529 ⋆ Expansion of 1 / ((1 - x)(1 - 6x)(1 - 10x)(1 - 12x)). ● a(n) = (30 * 12 ^ (n + 3) - 55 * 10 ^ (n + 3) + 33 * 6 ^ (n + 3) - 8) / 3960. [_ Yahia Kahloune _ , Jun 28 2013] ● a(0)=1, a(1)=29, a(2)=561, a(3)=9121, a(n)=29 * a(n - 1) - 280 * a(n - 2) + 972 * a(n - 3) - 720 * a(n - 4). - _ Harvey P. Dale _ , Apr 20 2015 ●

► [A020979] 1,29,563,9145,134211,1845249,24249163,308352185,3824765171,46535545969,557596038363,6599196683625,77316285612931,898280118486689,10363489117309163,118857642802045465,1356308170915657491 ⋆ Expansion of 1 / ((1 - 8 * x) * (1 - 10 * x) * (1 - 11 * x)). ● a(0)=1, a(1)=29, a(2)=563; for n>2, a(n) = 29 * a(n - 1) - 278 * a(n - 2) + 880 * a(n - 3). - _ Harvey P. Dale _ , Dec 19 2012 ● a(n) = (2 * 11 ^ (n + 2) - 3 * 10 ^ (n + 2) + 8 ^ (n + 2)) / 6. - _ Yahia Kahloune _ , Jun 30 2013 ● a(0)=1, a(1)=29; for n>1, a(n) = 21 * a(n - 1) - 110 * a(n - 2) + 8 ^ (n - 1). - _ Vincenzo Librandi _ , Jul 08 2013 ●

► [A025985] 1,29,563,9241,138723,1972833,27071851,362271257,4758885395,61635081937,789436108539,10021208067273,126282252770467,1581692483050241,19709670281308427,244539010854912889 ⋆ Expansion of 1 / ((1 - 2x)(1 - 4x)(1 - 11x)(1 - 12x)). ● a(n) = - 2 * 2 ^ n / 45 + 4 * 4 ^ n / 7 - 1331 * 11 ^ n / 63 + 108 * 12 ^ n / 5. _ R. J. Mathar _ , Jun 20 2013 ● a(0)=1, a(1)=29, a(2)=563, a(3)=9241, a(n)=29 * a(n - 1) - 278 * a(n - 2) + 976 * a(n - 3) - 1056 * a(n - 4). - _ Harvey P. Dale _ , Nov 25 2013 ●

► [A020978] 1,29,565,9245,137221,1915949,25677205,334395965,4265954341,53604494669,666045061045,8206250792285,100467119521861,1224084180206189,14859716922480085,179888148281902205 ⋆ Expansion of 1 / ((1 - 8 * x) * (1 - 9 * x) * (1 - 12 * x)). ● a(n) = (12 ^ (n + 2) - 4 * 9 ^ (n + 2) + 3 * 8 ^ (n + 2)) / 12. - _ Yahia Kahloune _ , Jun 30 2013 ● a(0)=1, a(1)=29, a(2)=565; for n>2, a(n) = 29 * a(n - 1) - 276 * a(n - 2) + 864 * a(n - 3). - _ Vincenzo Librandi _ , Jul 05 2013 ● a(n) = 21 * a(n - 1) - 108 * a(n - 2) + 8 ^ n. - _ Vincenzo Librandi _ , Jul 05 2013 ●

► [A023948] 1,29,566,9346,141027,2013855,27722632,371889332,4894555493,63487825921,814150878138,10345138210758,130470568108999,1635266348565827,20389018656020684,253092309224759224 ⋆ Expansion of 1 / ((1 - x)(1 - 5x)(1 - 11x)(1 - 12x)). ● a(0)=1, a(1)=29, a(2)=566, a(3)=9346; for n>3, a(n) = 29 * a(n - 1) - 275 * a(n - 2) + 907 * a(n - 3) - 660 * a(n - 4). [_ Harvey P. Dale _ , Jun 20 2011] ● a(n) = (5 * 2 ^ (2 * n + 7) * 3 ^ (n + 3) + 11 * 5 ^ (n + 3) - 14 * 11 ^ (n + 3) - 21) / 9240. [_ Harvey P. Dale _ , Jun 20 2011] ●

► [A020766] 1,29,571,9521,144907,2083865,28847827,388709777,5134091323,66784487561,858403625443,10928093824193,138039056180299,1732402968047417,21624191213455219,268679676312195569 ⋆ Expansion of 1 / ((1 - 6x)(1 - 11x)(1 - 12x)). ● a(n) = 23 * a(n - 1) - 132 * a(n - 2) + 6 ^ n; a(0)=1, a(1)=29. - _ Vincenzo Librandi _ , Mar 11 2011 ● a(n) = 6 * 6 ^ n / 5 - 121 * 11 ^ n / 5 + 24 * 12 ^ n. - _ R. J. Mathar _ , Jul 01 2013 ● a(n) = 29 * a(n - 1) - 270 * a(n - 2) + 792 * a(n - 3); a(0)=1, a(1)=29, a(2)=571. - _ Harvey P. Dale _ , Jun 13 2015 ●

► [A201245] 0,0,29,661,6285,35378,143787,468529,1301351,3202970,7170593,14872997,28969129,53527866,94568255,160741233,264175507,421511954,655152581,994751765,1478979173,2157585442,3093803379,4367119121,6076449375 ⋆ Number of ways to place 4 non - attacking ferses on an n X n board. ● a(n) = (n ^ 8 - 30 n ^ 6 + 48n ^ 5 + 299n ^ 4 - 912n ^ 3 - 462n ^ 2 + 4368n - 4200) / 24, n>=3. ●

► [A158665] 29,870,3393,7598,13485,21054,30305,41238,53853,68150,84129,101790,121133,142158,164865,189254,215325,243078,272513,303630,336429,370910,407073,444918,484445 ⋆ a(n) = 841 * n ^ 2 + 29. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A268461] 29,1169,11536,62535,240170,736525,1926444,4474451,9476950,18644745,34530920,60809119,102607266,166901765,262977220,402956715,602407694,881028481,1263420480,1779951095,2467712410,3371580669,4545381596 ⋆ Number of length - 7 0..n arrays with no adjacent pair x,x + 1 followed at any distance by x + 1,x. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>9. ●

► [A267747] 0,1,30,31,60,61,90,91,120,121,150,151,180,181,210,211,240,241,270,271,300,301,330,331,360 ⋆ Numbers k such that k mod 2 = k mod 3 = k mod 5. ● a(n) = 15 * n - 7 * (- 1) ^ n - 22. ●

► [A042808] 30,31,61,153,214,581,795,1376,83355,84731,168086,420903,588989,1598881,2187870,3786751,229392930,233179681,462572611,1158324903,1620897514,4400119931,6021017445,10421137376,631289260005 ⋆ Numerators of continued fraction convergents to sqrt(935). ● a(n) = 2752 * a(n - 8) - a(n - 16) - _ Vincenzo Librandi _ , Dec 05 2013 ●

► [A042810] 30,31,61,153,979,2111,3090,5201,315150,320351,635501,1591353,10183619,21958591,32142210,54100801,3278190270,3332291071,6610481341,16553253753,105930003859,228413261471,334343265330,562756526801,34099734873390 ⋆ Numerators of continued fraction convergents to sqrt(936). ● a(n) = 10402 * a(n - 8) - a(n - 16). - _ Vincenzo Librandi _ , Dec 05 2013 ●

► [A042822] 30,31,92,399,8072,32687,73446,106133,6441426,6547559,19536544,84693735,1713411244,6938338711,15590088666,22528427377,1367295731286,1389824158663,4146944048612,17977600353111,363698951110832,1472773404796439,3309245760703710,4782019165500149 ⋆ Numerators of continued fraction convergents to sqrt(942). ● a(n) = 212266 * a(n - 8) - a(n - 16). - _ Vincenzo Librandi _ , Dec 05 2013 ●

► [A042842] 30,31,185,216,1481,1697,9966,11663,709746,721409,4316791,5038200,34545991,39584191,232466946,272051137,16555535166,16827586303,100693466681,117521052984,805819784585,923340837569,5422523972430,6345864809999,38617441257370 ⋆ Numerators of continued fraction convergents to sqrt(952). ● a(n) = 23326 * a(n - 8) - a(n - 16). - _ Vincenzo Librandi _ , Dec 07 2013 ●

► [A042846] 30,31,247,278,1637,5189,12015,77279,166573,576998,3051563,3628561,28451490,32080051,1953254550,1985334601,15850596757,17835931358,105030253547,332926691999,770883637545,4958228517269 ⋆ Numerators of continued fraction convergents to sqrt(954). ● a(n) = 64160102 * a(n - 14) - a(n - 28) for n >27. - _ Vincenzo Librandi _ , Feb 01 2014 ●

► [A042852] 30,31,464,959,13890,14849,904830,919679,13780336,28480351,412505250,440985601,26871641310,27312626911,409248418064,845809463039,12250580900610,13096390363649,798034002719550,811130393083199,12153859505884336,25118849404851871 ⋆ Numerators of continued fraction convergents to sqrt(957). ● a(n) = 29698 * a(n - 6) - a(n - 12), - _ Vincenzo Librandi _ , Dec 07 2013 ●

► [A268337] 0,1,30,31,756,3250,3276,3280,81255,81256,81280,81900,81901,82000,59078250,59078251,59078280,59078281,31789468750,31789468776,31789469505,31789471900,31789471905,31789471906 ⋆ Numbers which have only digits 0 and 1 in bases 3 and 5. ● a(n) >> n ^ k with k = log 5 / log 2 = 2.321928.... - _ Charles R Greathouse IV _ , Feb 02 2016 ●

► [A042856] 30,31,929,960,58529,59489,1783710,1843199,112375650,114218849,3424722271,3538941120,215761189471,219300130591,6575464976610,6794765107201,414261371408670,421056136515871,12624889330368929,13045945466884800,79538161734345692 9,808427562810341729 ⋆ Numerators of continued fraction convergents to sqrt(959). ● a(n) = 1920 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Dec 07 2013 ●

► [A042857] 1,1,30,31,1890,1921,57599,59520,3628799,3688319,110590050,114278369,6967292190,7081570559,212332838401,219414408960,13377197376001,13596611784961,407678939139870,421275550924831,25684211994629730,261054875455 54561,782743350815711999 ⋆ Denominators of continued fraction convergents to sqrt(959). ● a(n) = 1920 * a(n - 4) - a(n - 8) for n>7. - _ Vincenzo Librandi _ , Dec 25 2013 ●

► [A042858] 30,31,1890,1921,117150,119071,7261410,7380481,450090270,457470751,27898335330,28355806081,1729246700190,1757602506271,107185397076450,108942999582721,6643765372039710,6752708371622431,411806267669385570,418558976041008001,25525344830129865630 ⋆ Numerators of continued fraction convergents to sqrt(960). ● a(n) = 62 * a(n - 2) - a(n - 4). - _ Vincenzo Librandi _ , Dec 08 2013 ●

► [A133266] 30,32,33,52,60,63,90,120,150,180,210,240,270,300,330,360,390,420,450,480,510,540,570,600,630 ⋆ a(1) = 30; for n >= 2, choose smallest a(n) so that no sum of 2 or more terms equals a prime. ● a(n + 1) = a(n) + 30 for n >= 7 (conjectured). - _ Chai Wah Wu _ , Feb 15 2020 ●

► [A367481] 30,42,66,78,306,342,414,522,558,666,2214,2322,2538,2862,3186,3294,3618,3834,3942,4266,4482,4806,5238,5454,5562 ⋆ Primitive practical numbers of the form 2 * 3 ^ i * prime(k). ● a(n) = 2 * 3 ^ (floor(log _ 3(2 * prime(n + 2))) - 1) * prime(n + 2). ●

► [A090692] 30,42,146,346,942,2430,6398,16714,43794,114618,300110,785662,2056926,5385066,14098322,36909850,96631278,252983934,662320574,1733977738,4539612690,11884860282,31114968206,81460044286,213265164702 ⋆ Expansion of 2 * (x ^ 2 - 9 * x + 15) / ((1 + x) * (1 - 3 * x + x ^ 2)). ● a(0)=30, a(1)=42, a(2)=146, a(n) = 2 * a(n - 1) + 2 * a(n - 2) - a(n - 3). - _ Harvey P. Dale _ , Aug 21 2014 ● a(n) = (2 ^ (1 - n) * (25 * (- 2) ^ n + (25 - 11 * sqrt(5)) * (3 - sqrt(5)) ^ n + (3 + sqrt(5)) ^ n * (25 + 11 * sqrt(5)))) / 5. - _ Colin Barker _ , Oct 01 2016 ●

► [A004222] 0,30,47,60,69,77,84,90,95,100,104,107,111,114,117,120,123,125,127,130,132,134,136,138,139 ⋆ a(n) = 100 * log _ 10 (n) rounded down. ● a(n) = floor(100 * log _ 10 (n)). - _ Wesley Ivan Hurt _ , Mar 15 2023 ●

► [A271998] 30,48,80,112,162,212,284,356,454,552,680,808,970,1132,1332,1532,1774,2016,2304,2592,2930,3268,3660,4052,4502 ⋆ Volatile sequence: a(n) = A018227(n) - 6. ● a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + a(n - 4) + 2 * a(n - 5) - a(n - 6) for n>8. ● a(n) = (n ^ 3 + 9 * n ^ 2 + 26 * n - 24) / 6 for n even. ● a(n) = (n ^ 3 + 9 * n ^ 2 + 29 * n - 15) / 6 for n odd. (End) ●

► [A027578] 30,55,90,135,190,255,330,415,510,615,730,855,990,1135,1290,1455,1630,1815,2010,2215,2430,2655,2890,3135,3390 ⋆ Sums of five consecutive squares: a(n) = n ^ 2 + (n + 1) ^ 2 + (n + 2) ^ 2 + (n + 3) ^ 2 + (n + 4) ^ 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>2. (End) ● a(n) = 5 * (n + 2) ^ 2 + 10. a(n) is never square. - _ Bruno Berselli _ , Jul 29 2015 ●

► [A248572] 1,30,59,88,117,146,175,204,233,262,291,320,349,378,407,436,465,494,523,552,581,610,639,668,697 ⋆ a(n) = 29 * n + 1. ● a(n) = 29 * n + 1. ●

► [A248739] 0,30,59,88,117,146,175,204,233,262,291,320,349,378,407,436,465,494,523,552,581,610,639,668,697 ⋆ a(n) = 29 * n + ceiling(n / 29). ● a(n) = 29 * n + ceiling(n / 29). ●

► [A271744] 30,59,139,365,1039,3149,10039,33365,114799,406589,1475239,5460965,20550559,78375629,302129239,1174610165,4597146319,18085554269,71434828039,283020552965,1123932750079,4471296246509,17811907987639,71027855481365,283452201569839 ⋆ Number of set partitions of [n] such that 5 is the largest element of the last block. ● a(n) = 8 + 13 * 2 ^ (n - 5) + 7 * 3 ^ (n - 5) + 4 ^ (n - 5) for n>5. ● a(n) = 10 * a(n - 1) - 35 * a(n - 2) + 50 * a(n - 3) - 24 * a(n - 4) for n>9. ●

► [A121960] 1,30,59,237,698,2346,7452,24308,78328,253992,820976,2658384,8599520,27834528,90062784,291471680,943177600,3052274304,9877192448,31963612416,103435730432,334726433280,1083194735616,3505297298432 ⋆ Expansion of g.f. x * (1 + 30 * x + 49 * x ^ 2 - 71 * x ^ 3 - 116 * x ^ 4) / ((1 + 2 * x) * (1 - 2 * x ^ 2) * (1 - 2 * x - 4 * x ^ 2)). ● a(n) = 10 * a(n - 2) + 8 * a(n - 3) - 16 * a(n - 4) - 16 * a(n - 5). ● a(2 * n) = 2 ^ (2 * n - 3) * (47 * Fibonacci(2 * n + 1) - 40 * Fibonacci(2 * n) + 1) + 10 * 2 ^ (n - 3). ● a(2 * n + 1) = 4 ^ (n - 1) * (47 * Fibonacci(2 * n + 2) - 40 * Fibonacci(2 * n + 1) - 1) - 2 ^ (n - 1). (End) ●

► [A042784] 30,61,91,152,243,638,38523,77684,116207,193891,310098,814087,49155318,99124723,148280041,247404764,395684805,1038774374,62722147245,126483068864,189205216109,315688284973,504893501082,1325475287137,80033410729302 ⋆ Numerators of continued fraction convergents to sqrt(923). ● a(n) = 1276 * a(n - 6) - a(n - 12). - _ Vincenzo Librandi _ , Dec 04 2013 ●

► [A132771] 0,30,62,96,132,170,210,252,296,342,390,440,492,546,602,660,720,782,846,912,980,1050,1122,1196,1272 ⋆ a(n) = n * (n + 29). ● a(n) = 2 * n + a(n - 1) + 28 (with a(0)=0). - _ Vincenzo Librandi _ , Aug 03 2010 ●

► [A218327] 30,70,364,540,1386,1794,3480,4216,7030,8190,12420,14100,20034,22330,30256,33264,43470,47286,60060,64780,80410,86130,104904,111720,133926 ⋆ Even octagonal pyramidal numbers (A002414) ● a(n) = a(n - 1) + 3 * a(n - 2) - 3 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) + a(n - 6) - a(n - 7) ● a(n) = 3 * a(n - 2

) - 3 * a(n - 4) + a(n - 6) + 384 ● a(n) = (4 * n - (- 1) ^ n + 1) * (4 * n - (- 1) ^ n + 3) * (4 * n - (- 1) ^ n) / 8 ●

► [A308137] 30,72,130,228,350,528,738,1020,1342,1752,2210,2772,3390,4128,4930,5868,6878,8040,9282,10692,12190,13872,15650,17628,19710 ★ Number of (undirected) Hamiltonian paths on the n - prism graph. ● a(n) = n * (3 + (- 1) ^ n + 2 * n ^ 2) / 2. ● a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a(n - 3) + a(n - 4) + 2 * a(n - 5) - a(n - 6) for n>8. ●

► [A155461] 30,83,138,195,254,315,378,443,510,579,650,723,798,875,954,1035,1118,1203,1290,1379,1470,1563,1658,1755,1854 ★ a(n) = n ^ 2 + 52 * n + 30. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) + 4 = 3a(n - 1) - 3a(n - 2) + a(n - 3). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). (End) ●

► [A277980] 0,30,84,162,264,390,540,714,912,1134,1380,1650,1944,2262,2604,2970,3360,3774,4212,4674,5160,5670,6204,6762,7344 ★ a(n) = 12 * n ^ 2 + 18 * n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A130862] 0,30,85,171,294,460,675,945,1276,1674,2145,2695,3330,4056,4879,5805,6840,7990,9261,10659,12190,13860,15675,17641,19764 ★ a(n) = (n - 1) * (n + 2) * (2 * n + 11) / 2. ● a(n) = (5 / 2) * (n + 2) * (n + 3) * Sum[Sum[Sum[k ^ 2 - 1, { k, 1, m }], { m, 1, j }], { j, 1, n }] / Sum[Sum[Sum[k, { k, 1, m }], { m, 1, j }], { j, 1, n }]=(1 / 2)(- 1 + n))((2 + n)(11 + 2 n) ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4); a(0)=0, a(1)=30, a(2)=85, a(3)=171. - _ Harvey P. Dale _ , May 01 2011 ●

► [A165133] 30,93,315,1143,4335,16863,66495,264063,1052415,4201983,16792575,67139583,268496895,1073864703,4295213055,17180360703,68720459775,274879873023,1099515559935,4398054375423,17592201773055,70368775634943,281475039625215 ★ a(n) = (2 ^ (n + 4) - 1) * (2 ^ n + 1). ● a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3). G.f.: 3 * (10 - 39 * x + 28 * x ^ 2) / ((1 - x) * (2 * x - 1) * (4 * x - 1)). ●

► [A035076] 30,95,300,949,3000,9487,30000,94869,300000,948684,3000000,9486833,30000000,94868330,300000000,948683299,3000000000,9486832981,30000000000,94868329806,300000000000,948683298051,3000000000000 ★ a(n) is root of square starting with digit 9: first term of runs. ● a(n) = ceiling(sqrt(9 * 10 ^ n)), n > 1. ●

► [A096382] 30,96,210,384,630,960,1386,1920,2574,3360,4290,5376,6630,8064,9690,11520,13566,15840,18354,21120,24150,27456,31050,34944,39150 ★ Consider a Pythagorean triangle with sides a=u ^ 2 - v ^ 2, b=2uv, c=u ^ 2 + v ^ 2. The sequence is the area of the triangle when v=2, u=3,4,5,... ● a(n) = (n - 2) * (n * 2) * (n + 2), n >= 3. - _ Zerinvary Lajos _ , Mar 05 2007 ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4); a(2)=30, a(3)=96, a(4)=210, a(5)=384. - _ Harvey P. Dale _ , May 06 2012 ●

► [A130863] 0,30,100,231,448,780,1260,1925,2816,3978,5460,7315,9600,12376,15708,19665,24320,29750,36036,43263,51520,60900,71500,83421,96768 ★ Ratio of quadruple Sum of k ^ 2 - 1 to quadruple sum of k made into an integer sequence: (1 / 6) * (- 1 + n)(2 + n)(3 + n)(7 + n). ● a(n) =1 / 2) * (n + 2) * (n + 3) * (n + 4) * Sum[Sum[Sum[Sum[k ^ 2 - 1, { k, 1, m }], { m, 1, j }], { j, 1, l }], { l, 1, n }] / Sum[Sum[Sum[Sum[k, { k, 1, m }], { m, 1, j }], { j, 1, l }], { l, 1, n }]=(1 / 6) * (- 1 + n)(2 + n)(3 + n)(7 + n) ●

► [A158445] 30,105,230,405,630,905,1230,1605,2030,2505,3030,3605,4230,4905,5630,6405,7230,8105,9030,10005,11030,12105,13230,14405,15630 ★ a(n) = 25 * n ^ 2 + 5. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A304836] 0,30,114,252,444,690,990,1344,1752,2214,2730,3300,3924,4602,5334,6120,6960,7854,8802,9804,10860,11970,13134,14352,15624 ★ a(n) = 27 * n ^ 2 - 51 * n + 24, n>=1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>3. ●

► [A244636] 0,30,120,270,480,750,1080,1470,1920,2430,3000,3630,4320,5070,5880,6750,7680,8670,9720,10830,12000,13230,14520,15870,17280 ★ a(n) = 30 * n ^ 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>2. ●

► [A277451] 1,30,120,480,1920,7680,30720,122880,491520,1966080,7864320,31457280,125829120,503316480,2013265920,8053063680,32212254720,128849018880,515396075520,2061584302080,8246337208320,32985348833280,131941395333120,527765581332480 ★ Number of edges in geodesic dome generated from icosahedron by recursively dividing each triangle in 4. ● a(n) = 1 if n=0, else 30 * 4 ^ (n - 1). ● a(n) = 4 * a(n - 1) for n>1. ●

► [A307849] 1,30,128,362,813,1588,2808,4620,7185,10690,15336,21350,28973,38472,50128,64248,81153,101190,124720,152130,183821,220220,261768,308932,362193 ★ Number of ways to pay n dollars using Canadian coins, that is: nickels (5 cents), dimes (10 cents), quarters (25 cents), loonies (100 cents or $ 1 coins) and toonies ($ 2 coins). ● a(n) = (5 / 6) * n ^ 4 + (17 / 3) * n ^ 3 + (149 / 12) * n ^ 2 + (28 / 3) * n + (11 + 3 * (- 1) ^ (n + 1)) / 8. Our proof is based on the fact that the number of ways f(n) to pay n dollars using nickels, dimes and quarters is f(n) = 20 * n ^ 2 + 8 * n + 1. From this one can show that the number of ways g(n) to pay n dollars using nickels, dimes, quarters and loonies ($ 1 coins) is g(n) = (20 / 3) * n ^ 3 + 14 * n ^ 2 + (25 / 3) * n + 1. ● a(n) = (33 - 9 * (- 1) ^ n + 224 * n + 298 * n ^ 2 + 136 * n ^ 3 + 20 * n ^ 4) / 24. ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 5 * a(n - 4) - 4 * a(n - 5) + a(n - 6) for n > 5. ●

► [A291582] 30,132,306,552,870,1260,1722,2256,2862,3540,4290,5112,6006,6972,8010,9120,10302,11556,12882,14280,15750,17292,18906,20592,22350 ★ Maximum number of 6 sphinx tile shapes in a sphinx tiled hexagon of order n. ● a(n) = 6 * n * (6 * n - 1). - _ Walter Trump _ ●

► [A079588] 1,30,135,364,765,1386,2275,3480,5049,7030,9471,12420,15925,20034,24795,30256,36465,43470,51319,60060,69741,80410,92115,104904,118825 ★ a(n) = (n + 1) * (2 * n + 1) * (4 * n + 1). ● a(n) = 8 * n ^ 3 + 14 * n ^ 2 + 7 * n + 1. - _ Reinhard Zumkeller _ , Jun 08 2015 ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Wesley Ivan Hurt _ , Jun 23 2021 ●

► [A158462] 30,138,318,570,894,1290,1758,2298,2910,3594,4350,5178,6078,7050,8094,9210,10398,11658,12990,14394,15870,17418,19038,20730,22494 ★ a(n) = 36 * n ^ 2 - 6. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Feb 12 2012 ●

► [A229450] 30,142,625,2402,8024,23610,62205,149031,329106,677706,1314145,2419348,4257692,7203590,11773293,18662385,28789446,43346358,63855729,92235910,130874080,182707874,251316029,341018523,456986682 ★ Number of 7 X n 0..2 arrays with horizontal differences mod 3 never 1, vertical differences mod 3 never - 1, and rows and columns lexicographically nondecreasing. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. ●

► [A316459] 30,150,420,900,1650,2730,4200,6120,8550,11550,15180,19500,24570,30450,37200,44880,53550,63270,74100,86100,99330,113850,129720,147000,165750 ★ Expansion of 30 * x * (1 + x) / (1 - x) ^ 4. ● a(n) = 10 * n ^ 3 + 15 * n ^ 2 + 5 * n. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>4. ●

► [A141221] 0,30,156,826,4406,23562,126104,675074,3614142,19349430,103593804,554625898,2969386478,15897666066,85113810056,455687062274,2439682811478,13061709929934,69930511268508,374397872321626 ★ Number of ways for each of 2n (labeled) people in a circle to look at either a neighbor or the diametrally opposite person, such that no eye contact occurs. ● a(n) = 8 * a(n - 1) - 16 * a(n - 2) + 10 * a(n - 3) - a(n - 4), for n > 1. ●

► [A100430] 1,30,175,588,1485,3146,5915,10200,16473,25270,37191,52900,73125,98658,130355,169136,215985,271950,338143,415740,505981,610170,729675,865928,1020425 ★ Bisection of A002417. ● a(n) = (8 * n ^ 4 + 28 * n ^ 3 + 34 * n ^ 2 + 17 * n + 3) / 3. - _ Ralf Stephan _ , May 15 2007 ● a(n) = (2 * n + 1) * binomial(2 * n + 3, 3). ●

► [A068236] 30,180,570,1320,2550,4380,6930,10320,14670,20100,26730,34680,44070,55020,67650,82080,98430,116820,137370,160200,185430,213180,243570,276720,312750 ★ First differences of (n + 1) ^ 5 - n ^ 5. ● a(n) = (n + 2) ^ 5 - 2 * (n + 1) ^ 5 + n ^ 5. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Colin Barker _ , Dec 13 2014 ●

► [A054559] 30,180,630,1680,3780,7560,13860,23760,38610,60060,90090,131040,185640,257040,348840,465120,610470,790020,1009470,1275120,1593900,1973400,2421900,2948400,3562650 ★ Number of labeled pure 2 - complexes on n nodes (0 - simplexes) with 5 2 - simplexes and 8 1 - simplexes. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). - _ Vincenzo Librandi _ , Apr 29 2012 ●

► [A281999] 1,30,181,600,1501,3150,5881,10080,16201,24750,36301,51480,70981,95550,126001,163200,208081,261630,324901,399000,485101,584430,698281,828000,975001 ★ Half of the height of the right trapezoidal gnomon (of the derivative of Y=X ^ 5). ● a(n) = (5 * (n ^ 2 - 1) * n ^ 2 - (- 1) ^ n + 1) / 2. ● a(n) = (n ^ 5 - (n - 1) ^ 5) - a(n - 1). ● a(n) = 4 * a(n - 1) - 5 * a(n - 2) + 5 * a(n - 4) - 4 * a(n - 5) + a(n - 6) for n>6. - _ Colin Barker _ , Feb 27 2017 ●

► [A265037] 1,30,185,886,3855,16064,65569,264930,1065059,4270948,17105253,68463974,273941863,1095939432,4384101737,17537095018,70149756267,280601777516,1122412615021,4489661470062,17958667900271,71834715641200,287338950645105,1149355978741106 ★ G.f.: (1 + 22 * x - 34 * x ^ 2 + 14 * x ^ 3) / ((1 - x) ^ 2 * (1 - 6 * x + 8 * x ^ 2)). ● a(n) = 8 * a(n - 1) - 21 * a(n - 2) + 22 * a(n - 3) - 8 * a(n - 4). ● a(n) = (1 / 12) * (68 + 49 * 2 ^ (2 * n + 2) - 63 * 2 ^ (2 + n) + 12 * n). ●

► [A209789] 30,204,1380,9348,63300,428676,2902980,19659012,133130820,901562244,6105381060,41345652228,279992833860,1896111996036,12840473986500,86955713884932,588864257262660,3987789852932484,27005320351814340 ★ Half the number of (n + 1) X 2 0..2 arrays with every 2 X 2 subblock having exactly one duplicate clockwise edge difference. ● a(n) = (2 ^ (- 2 - n) * (3 * (5 + sqrt(73)) ^ n * (25 + 3 * sqrt(73)) + (5 - sqrt(73)) ^ n * (- 75 + 9 * sqrt(73)))) / sqrt(73). ●

► [A215627] 1,30,210,867,2690,6956,15833,32775,63024,114235,197241,326976,523575,813671,1231910,1822706,2642259,3760860,5265508,7262865,9882576,13280982,17645255,23197985,30202250 ★ Number of terms in 9th derivative of a function composed with itself n times. ● a(n) = n * (n + 1) * (n ^ 6 + 75 * n ^ 5 + 1703 * n ^ 4 + 13697 * n ^ 3 + 29472 * n ^ 2 - 30788 * n + 6000) / 40320. ●

► [A178672] 0,30,210,1290,7770,46650,279930,1679610,10077690,60466170,362797050,2176782330,13060694010,78364164090,470184984570,2821109907450,16926659444730,101559956668410,609359740010490,3656158440062970,21936950640377850,131621703842267130 ★ a(n) = 6 ^ n - 6. ● a(n) = 6 * a(n - 1) + 30, n>1. ● a(n) = 7 * a(n - 1) - 6 * a(n - 2). - _ Vincenzo Librandi _ , Jan 25 2013 ●

► [A210101] 30,225,1690,12725,95830,721705,5435250,40933565,308275950,2321665905,17484765130,131680019525,991699197190,7468614458425,56247097997730,423604143817805,3190217398715550,24025938366280065,180942438158822650 ★ Number of (n + 1) X 3 0..2 arrays with every 2 X 2 subblock having one or three distinct values, and new values 0..2 introduced in row major order. ● a(n) = (1 / 13) * 2 ^ (- 2 - n) * (13 * 2 ^ (1 + n) + (117 - 11 * sqrt(65)) * (7 - sqrt(65)) ^ n + (7 + sqrt(65)) ^ n * (117 + 11 * sqrt(65))). ●

► [A246893] 30,231,900,2701,6210,12931,23400,40281,63750,97951,142380,202981,278250,376251,494160,642481,816750,1030231,1276500,1571901,1907730,2303731,2748600,3265801,3841110 ★ Number of length 1 + 4 0..n arrays with some pair in every consecutive five terms totalling exactly n. ● a(n) = 1 - 5 * n + 30 * n ^ 2 - 5 * n ^ 3 + 10 * n ^ 4 for n even. ● a(n) = - 15 + 20 * n + 20 * n ^ 2 - 5 * n ^ 3 + 10 * n ^ 4 for n odd. ●

► [A008385] 1,30,240,1010,2970,7002,14240,26070,44130,70310,106752,155850,220250,302850,406800,535502,692610,882030,1107920,1374690,1687002,2049770,2468160,2947590,3493730 ★ Coordination sequence for A _ 5 lattice. ● a(n) = (21 * n ^ 4 + 35 * n ^ 2 + 4) / 2, a(0) = 1. ●

► [A061167] 0,0,30,240,1020,3120,7770,16800,32760,59040,99990,161040,248820,371280,537810,759360,1048560,1419840,1889550,2476080,3199980,4084080,5153610,6436320,7962600 ★ a(n) = n ^ 5 - n. ● a(n) = n * (n - 1) * (n + 1) * (n ^ 2 + 1). - _ Bernard Schott _ , Mar 16 2021 ●

► [A214944] 0,30,264,1140,3480,8610,18480,35784,64080,107910,172920,265980,395304,570570,803040,1105680,1493280,1982574,2592360,3343620,4259640,5366130,6691344,8266200,10124400 ★ Number of squarefree words of length 5 in an (n + 1) - ary alphabet. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. ●

► [A259455] 1,30,270,1400,5250,15876,41160,95040,200475,393250,726726,1277640,2153060,3498600,5508000,8434176,12601845,18421830,26407150,37191000,51546726,70409900,94902600,126360000,166359375 ★ n Sum _ n Sum _ n Sum _ n . ● a(n) = n ^ 3 * (n + 3) * (n + 2) * (n + 1) ^ 2 / 48. ● a(n) = n * Stirling2(n + 3,n). (End) ●

► [A113754] 1,30,285,1496,5525,16206,40425,89440,180441,338350,597861,1005720,1623245,2529086,3822225,5625216,8087665,11389950,15747181,21413400,28686021,37910510,49485305,63866976,81575625 ★ Number of possible squares on an n ^ 2 X n ^ 2 grid. ● a(n) = n ^ 2 * (n ^ 2 + 1) * (2 * n ^ 2 + 1) / 6. ● a(n) = Sum _{ k=1..n ^ 2 } k ^ 2. - _ L. Edson Jeffery _ , Sep 05 2013; corrected by _ Bruno Berselli _ , Sep 06 2013 ●

► [A129029] 0,30,288,1134,3120,6990,13680,24318,40224,62910,94080,135630,189648,258414,344400,450270,578880,733278,916704,1132590,1384560,1676430,2012208,2396094,2832480 ★ a(n) = 8 * n ^ 4 + 44 * n ^ 3 + 106 * n ^ 2 + 100 * n + 30. ● a(n) = 2 * (n + 1) * (4 * n ^ 3 + 18 * n ^ 2 + 35 * n + 15). ●

► [A134287] 1,30,315,1960,8820,31752,97020,261360,637065,1431430,3006003,5962320,11262160,20391840,35581680,60093504,98590905,157608990,246142435,376372920,564559380,832117000,1206913500,1724814000,2431508625 ★ Fifth column of triangle A103371 (without leading zeros). ● a(n) = 5 * C(n + 5,5) ^ 2 / (n + 5), n >= 0. - _ Zerinvary Lajos _ , May 09 2008 ● a(n) = (C(n + 6,6) * C(n + 5,4) + 5 * C(n + 5,6) * C(n + 5,4)) / (n + 5). - _ Gary Detlefs _ , Jan 06 2014 ●

► [A362521] 1,30,323,3110,27777,237498,1977439,16202990,131490509,1060894002,8529819531,68439823942,548461371993,4392080943978,35156984457463,281349668446430,2251228221924645,18011798305060578,144103388698943651,1152868080218482102,9223130638279472433 ★ Number of vertex cuts in the n - web graph. ● a(n) = 20 * a(n - 1) - 146 * a(n - 2) + 480 * a(n - 3) - 657 * a(n - 4) + 60 * a(n - 5) + 660 * a(n - 6) - 400 * a(n - 7) - 144 * a(n - 8) + 128 * a(n - 9). ●

► [A227689] 1,30,329,3319,33216,332190,3321925,33219278,332192807,3321928092,33219280946,332192809486,3321928094885,33219280948871,332192809488733,3321928094887360,33219280948873621,332192809488736232,3321928094887362345,33219280948873623476 ★ a(n) is the least integer k such that 2 ^ k - 1 has at least 10 ^ n digits. ● a(n) = ceiling(log _ 2(10 ^ (10 ^ n - 1) + 1)). ●

► [A006859] 1,30,330,2145,10010,37128,116280,319770,793155,1808950,3848130,7719075,14725620,26898080,47303520,80454132,132835365,213578430,335304970,515175045,776173134,1148670600,1672307000,2398236750,3391791975 ★ From paths in the plane. ● a(n) = (n + 1) * (n + 2) ^ 2 * (n + 3) ^ 2 * (n + 4) * (2 * n + 3) * (2 * n + 5) * (2 * n + 7) / 15120. - _ Peter Bala _ , Oct 11 2011 ●

► [A107967] 1,30,340,2275,10878,41160,131040,365310,916575,2110966,4528524,9150505,17568460,32272800,57041664,97454268,161556525,260710590,410664100,632879247,956166442,1418672200,2070276000,2975456250,4216691115 ★ a(n) = (n + 1)(n + 2) ^ 3 * (n + 3) ^ 2 * (n + 4)(n ^ 2 + 4n + 5) / 1440. ● a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10) for n>9. ●

► [A214085] 0,1,30,342,1960,7575,22806,57820,129312,262845,495550,879186,1483560,2400307,3747030,5671800,8358016,12029625,16956702,23461390,31924200,42790671,56578390,73884372,95392800 ★ n ^ 2 * (n ^ 4 - n ^ 2 + n + 1) / 2. ● a(0)=0, a(1)=1, a(2)=30, a(3)=342, a(4)=1960, a(5)=7575, a(6)=22806, a(n)=7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). - _ Harvey P. Dale _ , Dec 12 2012 ●

► [A107916] 1,30,350,2450,12348,49392,166320,490050,1297725,3149146,7100598,15071420,30321200,58262400,107535744,191548044,330569505,554550150,906840550,1449035742,2267198780,3479762000,5247450000,7785618750,11379460365 ★ a(n) = binomial(n + 3,2) * binomial(n + 4,3) * binomial(n + 5,5) / 12. ● a(n) = (1 / 17280)(n + 1)(n + 2) ^ 3 * (n + 3) ^ 3 * (n + 4) ^ 2 * (n + 5). ●

► [A086864] 0,0,0,1,30,360,2970,19845,115668,612360,3018060,14073345,62788770,270208224,1128426390,4594307445,18302828040,71553216240,275154640632,1042806816225,3901324324230,14427539010360,52801538445810,191427950399301,688082033693340 ★ a(n) = (n - 1) * (n - 2) * (n - 3) * (3 * n - 10) * 3 ^ (n - 5) / 4. ● a(1)=0, a(2)=0, a(3)=0, a(4)=1, a(5)=30, a(n)=15 * a(n - 1) - 90 * a(n - 2) + 270 * a(n - 3) - 405 * a(n - 4) + 243 * a(n - 5). - _ Harvey P. Dale _ , May 15 2015 ●

► [A224332] 1,30,381,4092,40955,393210,3670009,33554424,301989879,2684354550,23622320117,206158430196,1786706395123,15393162788850,131941395333105,1125899906842608,9570149208162287,81064793292668910,684547143360315373 ★ Number of idempotent n X n 0..7 matrices of rank n - 1. ● a(n) = n * (2 * 8 ^ (n - 1) - 1). ● a(n) = 18 * a(n - 1) - 97 * a(n - 2) + 144 * a(n - 3) - 64 * a(n - 4). ●

► [A290363] 0,1,30,424,3357,17836,71769,236093,667335,1676364,3832477,8113347,16112746,30319341,54481246,94072398,156878210,253719339,399333792,613438978,921996699,1358705458,1966745847,2800806163,3929416785 ★ Number of 9 - leaf rooted trees with n levels. ● a(n) = (1385 * n ^ 8 + 1124 * n ^ 7 + 4018 * n ^ 6 + 6776 * n ^ 5 + 7945 * n ^ 4 + 9716 * n ^ 3 + 6812 * n ^ 2 + 2544 * n) / 8!. ●

► [A161740] 0,30,425,3008,14572,55060,174130,481360,1197196,2733874,5817955,11668800,22250280,40616264,71373956,121292960,200092040,321439910,504211037,774042368,1165242100,1723107100,2506711350,3592233840 ★ Fourth right hand column of the RSEG2 triangle A161739 ● a(n) = (n + 4) * (n + 3) * (n + 2) * (n + 1) * (n) * (n - 1) * (35 * n ^ 3 + 189 * n ^ 2 + 325 * n + 204) / 45360 ●

► [A210431] 0,1,30,434,3740,22220,100562,370909,1168008,3245311,8148590,18821968,40542228,82300842,158779362,293092635,520505744,893364637,1487517086,2410539918,3812130380,5897064040,8941168786,13310814265,19486468504 ★ Number of semistandard Young tableaux over all partitions of 9 with maximal element <= n. ● a(n) = n * (10080 + (40484 + (31395 + (8106 + 655 * n ^ 2) * n ^ 2) * n ^ 2) * n ^ 2) / 90720. ●

► [A036223] 1,30,495,5940,57915,486486,3648645,25019280,159497910,956987460,5454828522,29753610120,156206453130,793048146660,3908594437110,18761253298128,87943374834975,403504896301650,1815772033357425 ★ Expansion of 1 / (1 - 3 * x) ^ 10; 10 - fold convolution of A000244 (powers of 3). ● a(n) = 3 ^ n * binomial(n + 9, 9). ●

► [A090957] 1,30,495,7280,101745,1381380,18407025,242082720,3153092085,40763504210,523886186670,6700599687600,85360889543475,1083790852008480,13721016740550360,173280964190422080,2183615911571190525 ★ a(n) = 1 / (Integral _{ x=0..1 } (x ^ 4 - x ^ 5) ^ n dx). ● a(n) = 1 / B(4 * n + 1,n + 1) = (5 * n + 1)! / (n! * (4 * n)!), where B(p,q) is Euler's beta function. - _ Emeric Deutsch _ , Jul 03 2009 ●

► [A060560] 0,1,30,498,4435,25395,107331,365260,1058058,2707245,6278140,13442286,26942565,51084943,92383305,160386360,268718116,436365945,689252778,1062132490,1600850055,2365010571,3431103775,4896133188,6881801550 ★ Number of ways to color vertices of an octagon using <= n colors, allowing rotations and reflections. ● a(n) = n * (n + 1) * (n ^ 6 - n ^ 5 + n ^ 4 + 3 * n ^ 3 + 2 * n ^ 2 - 2 * n + 4) / 16. ●

► [A020926] 1,30,510,6460,67830,624036,5200300,40116600,290845350,2003601300,13223768580,84151254600,518932736700,3113596420200,18236779032600,104557533120240,588136123801350,3252046802195700,17705588145287700,95051052148386600,503770576386448980 ★ Expansion of 1 / (1 - 4 * x) ^ (15 / 2). ● a(n) = ((2 * n + 13) * (2 * n + 11) * (2 * n + 9) * (2 * n + 7) * (2 * n + 5) * (2 * n + 3) * (2 * n + 1) / 135135) * binomial(2 * n, n). - _ Vincenzo Librandi _ , Jul 05 2013 ●

► [A050982] 1,30,525,7000,78750,787500,7218750,61875000,502734375,3910156250,29326171875,213281250000,1510742187500,10458984375000,70971679687500,473144531250000,3105010986328125,20091247558593750,128360748291015625,810699462890625000 ★ 5 - idempotent numbers. ● a(n) = C(n, 5) * 5 ^ (n - 5). ●

► [A037961] 0,1,30,540,8400,126000,1905120,29635200,479001600,8083152000,142702560000,2637143308800,50999300352000,1031319184896000,21785854970880000,480178027929600000,11029155770400768000 ★ a(n) = n ^ 2 * (n + 1) * (n + 3)! / 48. ● a(n) = Sum _{ k = 0..n } (- 1) ^ (n - k) * binomial(n,k) * k ^ (n + 3). - _ Peter Bala _ , Mar 28 2017 ● a(n) = n! * StirlingS2(n + 3, n). ●

► [A143399] 0,0,0,0,1,30,545,7770,95781,1071630,11192665,111095490,1060634861,9822843030,88799732385,787259974410,6869327386741,59158464019230,503954741177705,4254156112792530,35637875826743421,296621138907400230,2455329298857576625 ★ Expansion of x ^ k / Product _{ t=k..2k } (1 - tx) for k=4. ● a(n) = 30a(n - 1) - 355a(n - 2) + 2070a(n - 3) - 5944a(n - 4) + 6720a(n - 5). ●

► [A075510] 1,30,560,8400,111216,1360800,15790720,176563200,1922176256,20518417920,215825326080,2244998246400,23153670762496,237224718704640,2418102840688640,24549985173504000,248464183682727936 ★ Fifth column of triangle A075497. ● a(n) = (2 ^ n - 64 * 4 ^ n + 486 * 6 ^ n - 1024 * 8 ^ n + 625 * 10 ^ n) / 4!. ●

► [A028200] 1,30,565,8550,113701,1388310,15958405,175419750,1863406501,19269697590,195034120645,1939826329350,19018419228901,184245490086870,1767124523521285,16805853434269350,158682246543588901,1489103597614860150,13900428943759584325 ★ Expansion of 1 / ((1 - 6x)(1 - 7x)(1 - 8x)(1 - 9x)). ● a(n) = 17 * a(n - 1) - 72 * a(n - 2) + 7 ^ (n + 1) - 6 ^ (n + 1), a(0)=1, a(1)=30. - _ Vincenzo Librandi _ , Mar 11 2011 ● a(n) = (9 ^ (n + 3) - 3 * 8 ^ (n + 3) + 3 * 7 ^ (n + 3) - 6 ^ (n + 3)) / 6. [_ Yahia Kahloune _ , Jun 12 2013] ● a(n) = 30 * a(n - 1) - 335 * a(n - 2) + 1650 * a(n - 3) - 3024 * a(n - 4). - _ Matthew House _ , Feb 11 2017 ●

► [A028181] 1,30,569,8730,118461,1484910,17624209,201130050,2229604421,24178830390,257814842649,2713159309770,28259514317581,291954572713470,2996779685401889,30602208691495890,311213315402041941 ★ Expansion of 1 / ((1 - 5x)(1 - 7x)(1 - 8x)(1 - 10x)). ● a(n) = (10 ^ (n + 3) - 5 * 8 ^ (n + 3) + 5 * 7 ^ (n + 3) - 5 ^ (n + 3)) / 30. [_ Yahia Kahloune _ , Jun 04 2013] ● a(0)=1, a(1)=30, a(2)=569, a(3)=8730, a(n)=30 * a(n - 1) - 331 * a(n - 2) + 1590 * a(n - 3) - 2800 * a(n - 4). - _ Harvey P. Dale _ , Aug 18 2013 ●

► [A177097] 30,570,5970,59970,599970,5999970,59999970,599999970,5999999970,59999999970,599999999970,5999999999970,59999999999970,599999999999970,5999999999999970,59999999999999970 ★ a(n) = 6 * (10 ^ n - 5). ● a(1)=30, a(2)=570, a(n)=11 * a(n - 1) - 10 * a(n - 2). [_ Harvey P. Dale _ , Oct 10 2011] ●

► [A028174] 1,30,571,8820,120841,1533210,18457111,213985200,2412703381,26633396790,289205203651,3099825799980,32880061861921,345809114026770,3611607266342191,37500386320109160,387478849831268461 ★ Expansion of 1 / ((1 - 5x)(1 - 6x)(1 - 9x)(1 - 10x)). ● a(n)=(2 * 10 ^ (n + 2) - 3 * 9 ^ (n + 2) + 2 * 6 ^ (n + 2) - 5 ^ (n + 2)) / 4. [_ Yahia Kahloune _ , Jun 03 2013] ● a(0)=1, a(1)=30, a(2)=571, a(3)=8820, a(n)=30 * a(n - 1) - 329 * a(n - 2) + 1560 * a(n - 3) - 2700 * a(n - 4). - _ Harvey P. Dale _ , Nov 07 2013 ●

► [A028149] 1,30,573,8902,122829,1570422,19052461,222558534,2527254477,28081375894,306750949869,3305552387046,35230183832845,372099762869046,3900761112145197,40636558684412038,421103652688800333 ★ Expansion of 1 / ((1 - 4x)(1 - 7x)(1 - 9x)(1 - 10x)). ● a(n)=(5 * 10 ^ (n + 3) - 9 ^ (n + 4) + 5 * 7 ^ (n + 3) - 4 ^ (n + 3)) / 90. [_ Yahia Kahloune _ , Jun 11 2013] ●

► [A028172] 1,30,573,8918,123669,1595958,19642141,234045366,2726478117,31257792566,354281953389,3982604010294,44504504288245,495188689219254,5492628385206717,60786003189650102,671598926425152453 ★ Expansion of 1 / ((1 - 5x)(1 - 6x)(1 - 8x)(1 - 11x)). ● a(n)=(11 ^ (n + 3) - 5 * 8 ^ (n + 3) + 9 * 6 ^ (n + 3) - 5 ^ (n + 4)) / 90. [_ Yahia Kahloune _ , Jun 03 2013] ●

► [A028147] 1,30,575,9000,125661,1633410,20245675,242827500,2845466921,32788860390,373244969175,4210842870000,47192731209781,526333705304970,5848962216923075,64823992266568500,717024715753610241 ★ Expansion of 1 / ((1 - 4x)(1 - 7x)(1 - 8x)(1 - 11x)). ● a(n)=(11 ^ (n + 3) - 7 * 8 ^ (n + 3) + 7 ^ (n + 4) - 4 ^ (n + 3)) / 84. [_ Yahia Kahloune _ , Jun 04 2013] ● a(0)=1, a(1)=30, a(2)=575, a(3)=9000, a(n)=30 * a(n - 1) - 325 * a(n - 2) + 1500 * a(n - 3) - 2464 * a(n - 4). - _ Harvey P. Dale _ , Aug 11 2014 ●

► [A028099] 1,30,577,9066,126829,1646094,20280169,240528882,2771673157,31228927158,345616983361,3769863028698,40631819886685,433596513609822,4588506840332953,48214238728174914,503555280142266613 ★ Expansion of 1 / ((1 - 3 * x) * (1 - 8 * x) * (1 - 9 * x) * (1 - 10 * x)). ● a(n)=(15 * 10 ^ (n + 3) - 35 * 9 ^ (n + 3) + 21 * 8 ^ (n + 3) - 3 ^ (n + 3)) / 210. [_ Yahia Kahloune _ , Jun 10 2013] ●

► [A028140] 1,30,577,9090,128053,1682430,21103129,256309050,3041879005,35492692950,408887138881,4665046178130,52827593605957,594751348348590,6665329755603433,74427620033028330,828693209595614509 ★ Expansion of 1 / ((1 - 4x)(1 - 6x)(1 - 9x)(1 - 11x)). ● a(0)=1, a(1)=30, a(2)=577, a(3)=9090, a(n)=30 * a(n - 1) - 323 * a(n - 2) + 1470 * a(n - 3) - 2376 * a(n - 4). - _ Harvey P. Dale

_ , Oct 22 2012 ● a(n)=(3 * 11 ^ (n + 3) - 7 * 9 ^ (n + 3) + 7 * 6 ^ (n + 3) - 3 * 4 ^ (n + 3)) / 210. [_ Yahia Kahloune _ , Jun 03 2013] ●

► [A028169] 1,30,577,9114,129349,1723086,22075129,275977218,3397380877,41418850902,501892142401,6058699871562,72968197588885,877537225626078,10544318356835593,126631590349302546,1520293638382550173 ★ Expansion of 1 / ((1 - 5x)(1 - 6x)(1 - 7x)(1 - 12x)). ● a(n)=(12 ^ (n + 3) - 3 * 7 ^ (n + 4) + 35 * 6 ^ (n + 3) - 3 * 5 ^ (n + 4)) / 210. [_ Yahia Kahloune _ , Jun 12 2013] ●

► [A028094] 1,30,580,9210,130921,1735860,21961360,268816620,3212241241,37702583490,436534074340,5001585910230,56839066698961,641793883438920,7209996952371520,80670652808858040,899681515488592081 ★ Expansion of 1 / ((1 - 3x)(1 - 7x)(1 - 9x)(1 - 11x)). ● a(n)=(3 * 11 ^ (n + 3) - 8 * 9 ^ (n + 3) + 6 * 7 ^ (n + 3) - 3 ^ (n + 3)) / 192. [_ Yahia Kahloune _ , Jun 10 2013] ●

► [A028138] 1,30,580,9240,132496,1784160,23095360,291434880,3616450816,44380976640,540619555840,6552897361920,79164966670336,954260234526720,11485602445803520,138104474808975360,1659480116122157056 ★ Expansion of 1 / ((1 - 4x)(1 - 6x)(1 - 8x)(1 - 12x)). ● a(n)=9 * 12 ^ n - 2 * 8 ^ (n + 1) + 9 * 6 ^ n - 4 ^ n. [_ Yahia Kahloune _ , Jun 02 2013] ●

► [A028127] 1,30,581,9270,132861,1781910,22867141,284524950,3461329421,41398890390,488675095701,5708526430230,66125948101981,760712837896470,8701144748444261,99045775841641110,1122836116105178541 ★ Expansion of 1 / ((1 - 4x)(1 - 5x)(1 - 10x)(1 - 11x)). ● a(n) = 30 * a(n - 1) - 319 * a(n - 2) + 1410 * a(n - 3) - 2200 * a(n - 4), n >= 4. ● a(n) = 21 * a(n - 1) - 110 * a(n - 2) + 5 ^ (n + 1) - 4 ^ (n + 1), n >= 2. (End) ● a(n) = - 2 * 4 ^ (n + 2) / 21 - 10 ^ (n + 2) / 3 + 5 ^ (n + 2) / 6 + 11 ^ (n + 3) / 42. - _ R. J. Mathar _ , Mar 18 2011 ●

► [A028086] 1,30,583,9348,134689,1815498,23402251,292300176,3567408757,42782700246,506142615199,5923623309084,68724754852105,791647407688674,9065029251275827,103285339786658472,1171844560056255133 ★ Expansion of 1 / ((1 - 3x)(1 - 6x)(1 - 10x)(1 - 11x)). ● a(n)=(21 * 11 ^ (n + 3) - 3 * 10 ^ (n + 4) + 14 * 6 ^ (n + 3) - 5 * 3 ^ (n + 3)) / 840. [_ Yahia Kahloune _ , May 31 2013] ● a(0)=1, a(1)=30, a(2)=583, a(3)=9348, a(n)=30 * a(n - 1) - 317 * a(n - 2) + 1368 * a(n - 3) - 1980 * a(n - 4). - _ Harvey P. Dale _ , Jun 18 2014 ●

► [A028092] 1,30,583,9360,135373,1838130,23972131,304421700,3797192905,46789978950,571763347519,6946889160120,84072723694597,1014722669092890,12224658793966747,147088107868298220 ★ Expansion of 1 / ((1 - 3x)(1 - 7x)(1 - 8x)(1 - 12x)). ● a(n)=(12 ^ (n + 3) - 9 * 8 ^ (n + 3) + 9 * 7 ^ (n + 3) - 3 ^ (n + 3)) / 180. [_ Yahia Kahloune _ , May 31 2013] ●

► [A028126] 1,30,583,9372,135949,1854282,24319171,310765224,3901290217,48373167414,594541806079,7261303210356,88278005955205,1069623213421026,12928092282515707,155970779176282368 ★ Expansion of 1 / ((1 - 4x)(1 - 5x)(1 - 9x)(1 - 12x)). ● a(n) = 30 * a(n - 1) - 317 * a(n - 2) + 1392 * a(n - 3) - 2160 * a(n - 4), n >= 4. ● a(n) = 21 * a(n - 1) - 108 * a(n - 2) + 5 ^ (n + 1) - 4 ^ (n + 1), n >= 2. (End) ● a(n) = - 2 * 4 ^ (n + 1) / 5 - 3 * 9 ^ (n + 2) / 20 + 6 * 12 ^ (n + 1) / 7 + 5 ^ (n + 3) / 28. - _ R. J. Mathar _ , Mar 18 2011 ●

► [A028016] 1,30,585,9410,135741,1826910,23449345,290918970,3519263781,41763254390,488289628905,5642683638930,64604625484621,734199837187470,8294002882781265,93241186270173290,1044092739977046261 ★ Expansion of 1 / ((1 - 2x)(1 - 8x)(1 - 9x)(1 - 11x)). ● a(n)=(7 * 11 ^ (n + 3) - 3 * 9 ^ (n + 4) + 21 * 8 ^ (n + 3) - 2 ^ (n + 3)) / 378. [_ Yahia Kahloune _ , Jun 06 2013] ●

► [A028085] 1,30,585,9450,137781,1888110,24862545,318755250,4012058061,49847787990,613622150505,7503229474650,91300979746341,1106997911204670,13386607046238465,161563913916523650 ★ Expansion of 1 / ((1 - 3x)(1 - 6x)(1 - 9x)(1 - 12x)). ● a(n) = (12 ^ (n + 3) - 3 * 9 ^ (n + 3) + 3 * 6 ^ (n + 3) - 3 ^ (n + 3)) / 162. - _ Yahia Kahloune _ , Jun 10 2013 ● a(0)=1, a(1)=30, a(2)=585, a(3)=9450, a(n) = 30 * a(n - 1) - 315 * a(n - 2) + 1350 * a(n - 3) - 1944 * a(n - 4). - _ Harvey P. Dale _ , Feb 06 2015 ●

► [A028012] 1,30,587,9504,138369,1883826,24504439,308525268,3791612957,45742587462,543912376371,6393243539592,74447130731065,860268600608538,9877405744657583,112802621156970876,1282386938486825493 ★ Expansion of 1 / ((1 - 2x)(1 - 7x)(1 - 10x)(1 - 11x)). ● a(n) = (10 * 11 ^ (n + 3) - 15 * 10 ^ (n + 3) + 6 * 7 ^ (n + 3) - 2 ^ (n + 3)) / 360. [_ Yahia Kahloune _ , Jun 06 2013] ● a(n) = 30 * a(n - 1) - 313 * a(n - 2) + 1284 * a(n - 3) - 1540 * a(n - 4). - _ Wesley Ivan Hurt _ , Apr 26 2021 ●

► [A028072] 1,30,589,9630,142621,1989510,26692669,348689550,4469016541,56480471190,706312706749,8761344810270,107992670570461,1324480424684070,16179464126208829,197010636086927790 ★ Expansion of 1 / ((1 - 3x)(1 - 5x)(1 - 10x)(1 - 12x)). ● a(n)=(5 * 12 ^ (n + 3) - 9 * 10 ^ (n + 3) + 9 * 5 ^ (n + 3) - 5 * 3 ^ (n + 3)) / 630. [_ Yahia Kahloune _ , Jun 10 2013] ●

► [A028003] 1,30,592,9744,145264,2038176,27478144,360357888,4633015552,58698511872,735496093696,9137636831232,112771744215040,1384481544019968,16926102088724448,206237168590258176 ★ Expansion of 1 / ((1 - 2x)(1 - 6x)(1 - 10x)(1 - 12x)). ● a(n)=(8 * 12 ^ (n + 3) - 15 * 10 ^ (n + 3) + 10 * 6 ^ (n + 3) - 3 * 2 ^ (n + 3)) / 960. [_ Yahia Kahloune _ , Jun 05 2013] ●

► [A024999] 1,30,593,9738,143949,1989198,26238361,334590546,4159355717,50694901686,608290940049,7207487623674,84523773236605,982803891723294,11346293009032457,130203935811077922,1486512106726735413 ★ Expansion of 1 / ((1 - x)(1 - 8x)(1 - 10x)(1 - 11x)). ● a(0)=1, a(1)=30, a(2)=593, a(3)=9738, a(n)=30 * a(n - 1) - 307 * a(n - 2) + 1158 * a(n - 3) - 880 * a(n - 4). - _ Harvey P. Dale _ , Aug 19 2012 ● a(n) = (21 * 11 ^ (n + 3) - 35 * 10 ^ (n + 3) + 15 * 8 ^ (n + 3) - 1) / 630. [_ Yahia Kahloune _ , Jul 01 2013] ●

► [A024778] 1,30,595,9840,147061,2063010,27740215,362136180,4628090521,58232585190,724277646235,8930528438520,109397647960381,1333481828166570,16193198750646655,196081347032548860 ★ Expansion of 1 / ((1 - x)(1 - 8x)(1 - 9x)(1 - 12x)). ● a(n) = (14 * 12 ^ (n + 3) - 77 * 9 ^ (n + 3) + 66 * 8 ^ (n + 3) - 3) / 1848. [_ Yahia Kahloune _ , Jul 01 2013] ● a(0)=1, a(1)=30, a(2)=595, a(3)=9840, a(n)=30 * a(n - 1) - 305 * a(n - 2) + 1140 * a(n - 3) - 864 * a(n - 4). - _ Harvey P. Dale _ , May 10 2015 ●

► [A028052] 1,30,595,9900,149941,2145210,29561815,396813000,5224781881,67791656790,869540915035,11050958595300,139392712421821,1747306114774770,21788203659532255,270484281270892800 ★ Expansion of 1 / ((1 - 3x)(1 - 4x)(1 - 11x)(1 - 12x)). ● a(n)=(7 * 12 ^ (n + 3) - 9 * 11 ^ (n + 3) + 9 * 4 ^ (n + 3) - 7 * 3 ^ (n + 3)) / 504. [_ Yahia Kahloune _ , Jun 07 2013] ●

► [A026308] 1,30,597,9974,151629,2176086,30060949,404288598,5331243357,69255757142,889174566501,11309336465622,142744102829485,1790283986115798,22334320279686453,277371931128111446 ★ Expansion of 1 / ((1 - 2x)(1 - 5x)(1 - 11x)(1 - 12x)). ● a(n) = - 4 * 2 ^ n / 135 + 125 * 5 ^ n / 126 - 1331 * 11 ^ n / 54 + 864 * 12 ^ n / 35. - _ R. J. Mathar _ , Jun 23 2013 ●

► [A081140] 0,0,1,30,600,10000,150000,2100000,28000000,360000000,4500000000,55000000000,660000000000,7800000000000,91000000000000,1050000000000000,12000000000000000,136000000000000000,1530000000000000000 ★ 10th binomial transform of (0,0,1,0,0,0,...). ● a(n) = 30 * a(n - 1) - 300 * a(n - 2) + 1000 * a(n - 3), a(0)=a(1)=0, a(2)=1. ● a(n) = 10 ^ (n - 2) * binomial(n, 2). ●

► [A020982] 1,30,601,10050,151501,2135070,28702801,372684090,4712104501,58346365110,710428956601,8532288986130,101313313019101,1191569650755150,13901375026212001,161062105099480170 ★ Expansion of 1 / ((1 - 9 * x) * (1 - 10 * x) * (1 - 11 * x)). ● a(n) = 30 * a(n - 1) - 299 * a(n - 2) + 990 * a(n - 3), n>=3. - _ Vincenzo Librandi _ , Mar 18 2011 ● a(n) = 21 * a(n - 1) - 110 * a(n - 2) + 9 ^ n, n>=2. - _ Vincenzo Librandi _ , Mar 18 2011 ● a(n) = 11 ^ (n + 2) / 2 + 9 ^ (n + 2) / 2 - 10 ^ (n + 2). - _ R. J. Mathar _ , Mar 20 2011 ●

► [A024436] 1,30,601,10122,155029,2238894,31086721,419796498,5553887821,72338375382,930742000825,11858835825018,149897892005317,1882300860052734,23506492073507953,292186168385703522 ★ Expansion of 1 / ((1 - x)(1 - 6x)(1 - 11x)(1 - 12x)). ● a(n) = (25 * 12 ^ (n + 3) - 33 * 11 ^ (n + 3) + 11 * 6 ^ (n + 3) - 3) / 1650. [_ Yahia Kahloune _ , Jun 28 2013] ● a(0)=1, a(1)=30, a(2)=601, a(3)=10122, a(n)=30 * a(n - 1) - 299 * a(n - 2) + 1062 * a(n - 3) - 792 * a(n - 4). - _ Harvey P. Dale _ , Nov 20 2013 ●

► [A020980] 1,30,604,10200,156016,2241120,30844864,411749760,5373888256,68949788160,873102490624,10942870149120,136039563882496,1680275743334400,20645716733968384,252607863319265280 ★ Expansion of 1 / ((1 - 8 * x) * (1 - 10 * x) * (1 - 12 * x)). ● a(n) = (12 ^ (n + 2) - 2 * 10 ^ (n + 2) + 8 ^ (n + 2)) / 8. - _ Yahia Kahloune _ , Jun 30 2013 ● a(0)=1, a(1)=30, a(2)=604; for n>2, a(n) = 30 * a(n - 1) - 296 * a(n - 2) + 960 * a(n - 3). - _ Vincenzo Librandi _ , Jul 05 2013 ● a(n) = 22 * a(n - 1) - 120 * a(n - 2) + 8 ^ n. - _ Vincenzo Librandi _ , Jul 05 2013 ●

► [A051303] 0,0,0,1,30,605,9030,110901,1200150,11932285,111885510,1006471301,8786447670,75039565965,630534185190,5234341175701,43059373189590,351805681631645,2859550165976070,23152657123816101,186907026783617910,1505512392025329325 ★ Number of 3 - element proper antichains of an n - element set. ● a(n) = (8 ^ n - 9 * 6 ^ n + 15 * 5 ^ n - 4 * 4 ^ n - 9 * 3 ^ n + 8 * 2 ^ n - 2) / 3!. ● a(n) = 29 * a(n - 1) - 343 * a(n - 2) + 2135 * a(n - 3) - 7504 * a(n - 4) + 14756 * a(n - 5) - 14832 * a(n - 6) + 5760 * a(n - 7) for n > 6. - _ Wesley Ivan Hurt _ , Oct 06 2017 ●

► [A277877] 0,30,608,8740,109296,1269450,14096320,151927776,1603346160,16659866938,171064877280 ★ Number of A'Campo forests of degree n>1 and co - dimension 2. ● a(n) is obtained by using the generating function N _{ 1 } =1 + yN _{ 2 }^ 4 and (1 - N _{ 2 } + 2yN _{ 2 }^ 4 - yN _{ 2 }^{ 5 } + xyN _{ 2 }^{ 6 } + y ^{ 2 } N _{ 2 }^{ 8 })(1 + yN _{ 2 }^{ 4 }- xyN _{ 2 }^{ 5 }) + x ^ 3y ^{ 2 } N _{ 2 }^{ 9 } =0, where N _{ 1 } (x,y)= \ sum _{ n } N _{ 1 } '(2,n)x ^{ 2 } y ^{ n } and N _{ 1 } '(2,n) is the number of A'Campo forests with co - dimension 2; N _{ 2 } (x,y)= \ sum _{ n } N _{ 2 } '(2,n)x ^{ 2 } y ^{ n } where N _{ 2 } '(2,n) is the number of partial configurations. ●

► [A124099] 1,30,619,10920,177061,2726130,40547359,588485820,8387148121,117876868230,1638536364499,22574666496720,308755233696781,4197234089634330,56765041887676039,764357559726523620 ★ Sum _ (x ^ i * y ^ j * z ^ k) with i + j + k = m and (x, y, z) = the primitive Pythagorean triple (5, 12, 13). ● a(m) = (x ^ (m + 2) * (z - y) + y ^ (m + 2) * (x - z) + z ^ (m + 2) * (y - x)) / ((x - y) * (y - z) * (z - x)). ● a(n) = 30 * a(n - 1) - 281 * a(n - 2) + 780 * a(n - 3) for n > 2. ●

► [A027475] 1,30,675,13500,253125,4556250,79734375,1366875000,23066015625,384433593750,6343154296875,103797070312500,1686702392578125,27246730957031250,437893890380859375,7006302246093750000 ★ a(n) = (n - 1) * 15 ^ (n - 2). ● a(2) = 1, a(3) = 30; for n >= 4, a(n) = 30 * a(n - 1) - 225 * a(n - 2). - _ Jiaing Song _ , Jul 16 2018 ●

► [A158672] 30,930,3630,8130,14430,22530,32430,44130,57630,72930,90030,108930,129630,152130,176430,202530,230430,260130,291630,324930,360030,396930,435630,476130,518430 ★ a(n) = 900 * n ^ 2 + 30. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A268948] 30,969,9684,54045,213042,667065,1773384,4171869,8925990,17704137,33006300,58441149,99058554,161742585,255670032,392839485,588676014,862716489,1239380580,1748832477,2427938370,3321324729,4482542424 ★ Number of length - 7 0..n arrays with no repeated value unequal to the previous repeated value plus one mod n + 1. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. ●

► [A269541] 30,1048,10192,55836,217714,677200,1792788,4205812,8981446,17790024,33133720,58623628,99312282,162086656,256126684,393434340,589438318,863679352,1240581216,1750312444,2429743810,3323506608,4485156772 ★ Number of length - 7 0..n arrays with no repeated value differing from the previous repeated value by other than one. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. ●

► [A269682] 30,1206,10700,57030,220050,681254,1799256,4215510,8995310,17809110,33159204,58656806,99354570,162139590,256191920,393513654,589533606,863792630,1240714620,1750468230,2429924354,3323714406,4485394440 ★ Number of length - 7 0..n arrays with no repeated value differing from the previous repeated value by other than plus or minus one modulo n + 1. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>9. ●

► [A269471] 30,1206,11796,63420,242370,741090,1934856,4488696,9499590,18678990,34580700,60879156,102703146,167030010,263145360,403173360,602682606,881372646,1263846180,1780471980,2468343570,3372338706,4546284696 ★ Number of length - 7 0..n arrays with no repeated value equal to the previous repeated

value. • a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. •

► [A056093] 30,2176,54036,709956,6290051,42606671,237197942,1135834242,4823607212,18563958502,65783057592,217240417628,674884181813,1987124979703,5579019610088,15010371955248,38862554420034,97163223921924,235290234202584,553296290481584 ⋆ Number of 5 - element ordered antichain covers of an unlabeled n - element set. • a(n)=C(n + 30, 30) - 20 * C(n + 22, 22) + 60 * C(n + 18, 18) + 20 * C(n + 16, 16) + 10 * C(n + 15, 15) - 110 * C(n + 14, 14) - 120 * C(n + 13, 13) + 150 * C(n + 12, 12) + 120 * C(n + 11, 11) - 240 * C(n + 10, 10) + 20 * C(n + 9, 9) + 240 * C(n + 8, 8) + 40 * C(n + 7, 7) - 205 * C(n + 6, 6) + 60 * C(n + 5, 5) - 210 * C(n + 4, 4) + 210 * C(n + 3, 3) + 50 * C(n + 2, 2) - 100 * C(n + 1, 1) + 24 * C(n, 0). •

► [A056070] 30,2206,56242,766198,7056249,49662920,286860862,1422695104,6246302316,24810260818,90593318410,307833736038,982717917851,2969842897554,8548862507642,23559234462890,62421788882924,159585012804848,394875247007432,948171537489016 ⋆ Number of 5 - element ordered antichains on an unlabeled n - element set; T _ 1 - hypergraphs with 5 labeled nodes and n hyperedges. • a(n)=C(n + 31, 31) - 20 * C(n + 23, 23) + 60 * C(n + 19, 19) + 20 * C(n + 17, 17) + 10 * C(n + 16, 16) - 110 * C(n + 15, 15) - 120 * C(n + 14, 14) + 150 * C(n + 13, 13) + 120 * C(n + 12, 12) - 240 * C(n + 11, 11) + 20 * C(n + 10, 10) + 240 * C(n + 9, 9) + 40 * C(n + 8, 8) - 205 * C(n + 7, 7) + 60 * C(n + 6, 6) - 210 * C(n + 5, 5) + 210 * C(n + 4, 4) + 50 * C(n + 3, 3) - 100 * C(n + 2, 2) + 24 * C(n + 1, 1). •

► [A054647] 30,2310,42840,391545,2375100,10980585,41761720,136963255,399689290,1060984925,2603641040,5979294230,12973080120,26794003110,53000811600,100914240770,185718969590,331524753560,575738427880,975199600375,1614655942900,2618302433175 ⋆ Number of labeled pure 2 - complexes on n nodes (0 - simplexes) with 4 2 - simplexes and 12 1 - simplexes. • a(n) = 30 * C(n, 6) + 2100 * C(n, 7) + 25200 * C(n, 8) + 86625 * C(n, 9) + 116550 * C(n, 10) + 69300 * C(n, 11) + 15400 * C(n, 12) = n * (n - 1) * (n - 2) * (n - 3) * (n - 4) * (n - 5) * (n ^ 6 + 3 * n ^ 5 - 86 * n ^ 4 - 240 * n ^ 3 + 2704 * n ^ 2 + 5232 * n - 34128) / 31104. •

► [A059049] 0,0,0,0,30,8220,738842,25256626,464670831,5570534392,48655319306,332222541564,1859009659336,8811850222304,36244568422086,131710639199900,428697293437675,1263065928235140,3396450715952370 ⋆ Number of 6 - element ordered T _ 0 - antichains on an unlabeled n - set; T _ 1 - hypergraphs on 6 labeled nodes with n (not necessarily empty) distinct hyperedges (n=0,1,...,64). • a(n)=C(64, n) - 30 * C(48, n) + 120 * C(40, n) + 60 * C(36, n) + 60 * C(34, n) - 12 * C(33, n) - 345 * C(32, n) - 720 * C(30, n) + 810 * C(28, n) + 120 * C(27, n) + 480 * C(26, n) + 360 * C(25, n) - 480 * C(24, n) - 720 * C(23, n) - 240 * C(22, n) - 540 * C(21, n) + 1380 * C(20, n) + 750 * C(19, n) + 60 * C(18, n) - 210 * C(17, n) - 1535 * C(16, n) - 1820 * C(15, n) + 2250 * C(14, n) + 1800 * C(13, n) - 2820 * C(12, n) + 300 * C(11, n) + 2040 * C(10, n) + 340 * C(9, n) - 1815 * C(8, n) + 510 * C(7, n) - 1350 * C(6, n) + 1350 * C(5, n) + 274 * C(4, n) - 548 * C(3, n) + 120 * C(2, n). •

► [A056071] 30,8340,780242,29813578,657271645,10037038800,117733967666,1130702091428,9273992351046,66900184307860,433616524985590,2566055594813118,14037125952339998,71676448315103924,344320192201127730,1566076395413987110,6779944255517707576 ⋆ Number of 6 - element ordered antichains on an unlabeled n - element set; T _ 1 - hypergraphs with 6 labeled nodes and n hyperedges. • a(n)=C(n + 63, 63) - 30 * C(n + 47, 47) + 120 * C(n + 39, 39) + 60 * C(n + 35, 35) + 60 * C(n + 33, 33) - 12 * C(n + 32, 32) - 345 * C(n + 31, 31) - 720 * C(n + 29, 29) + 810 * C(n + 27, 27) + 120 * C(n + 26, 26) + 480 * C(n + 25, 25) + 360 * C(n + 24, 24) - 480 * C(n + 23, 23) - 720 * C(n + 22, 22) - 240 * C(n + 21, 21) - 540 * C(n + 20, 20) + 1380 * C(n + 19, 19) + 750 * C(n + 18, 18) + 60 * C(n + 17, 17) - 210 * C(n + 16, 16) - 1535 * C(n + 15, 15) - 1820 * C(n + 14, 14) + 2250 * C(n + 13, 13) + 1800 * C(n + 12, 12) - 2820 * C(n + 11, 11) + 300 * C(n + 10, 10) + 2040 * C(n + 9, 9) + 340 * C(n + 8, 8) - 1815 * C(n + 7, 7) + 510 * C(n + 6, 6) - 1350 * C(n + 5, 5) + 1350 * C(n + 4, 4) + 274 * C(n + 3, 3) - 548 * C(n + 2, 2) + 120 * C(n + 1, 1). •

► [A022401] 1,31,32,63,95,158,253,411,664,1075,1739,2814,4553,7367,11920,19287,31207,50494,81701,132195,213896,346091,559987,906078,1466065 ⋆ Fibonacci sequence beginning 1, 31. • a(n) = (2 ^ (- 1 - n) * ((1 - sqrt(5)) ^ n * (- 61 + sqrt(5)) + (1 + sqrt(5)) ^ n * (61 + sqrt(5)))) / sqrt(5). - _ Colin Barker _ , Mar 02 2018 •

► [A042934] 31,32,63,95,158,885,5468,6353,37233,80819,441328,522147,3574210,18393197,21967407,40360604,62328011,102688615,6429022141,6531710756,12960732897,19492443653,32453176550 ⋆ Numerators of continued fraction convergents to sqrt(999). • a(n) = 205377230 * a(n - 18) - a(n - 36). - _ Wesley Ivan Hurt _ , May 28 2021 •

► [A042924] 31,32,63,536,599,1135,70969,72104,143073,1216688,1359761,2576449,161099599,163676048,324775647,2761881224,3086656871,5848538095,365696018761,371544556856,737240575617,6269469161792,7006709737409,13276178899201,830129801487871 ⋆ Numerators of continued fraction convergents to sqrt(994). • a(n) = 2270 * a(n - 6) - a(n - 12). - _ Vincenzo Librandi _ , Dec 09 2013 •

► [A041479] 1,1,31,32,991,1023,31681,32704,1012801,1045505,32377951,33423456,1035081631,1068505087,33090234241,34158739328,1057852414081,10920111534,33818187016351,34910198169760 ⋆ Denominators of continued fraction convergents to sqrt(255). • a(n) = 32 * a(n - 2) - a(n - 4). • a(n) = Product _{ k = 1..floor((n - 1) / 2) } (30 + 4 * cos ^ 2(k * Pi / n)). •

► [A361263] 0,1,31,33,363,366,2046,2050,7810,7815,23325,23331,58821,58828,131068,131076,265716,265725,499995,500005,885775,885786,1492986,1492998,2413398 ⋆ Numbers of the form k * (k ^ 5 +- 1) / 2. • a(n) = a(n - 1) + 6 * a(n - 2) - 6 * a(n - 3) - 15 * a(n - 4) + 15 * a(n - 5) + 20 * a(n - 6) - 20 * a(n - 7) - 15 * a(n - 8) + 15 * a(n - 9) + 6 * a(n - 10) - 6 * a(n - 11) - a(n - 12) + a(n - 13). •

► [A245650] 31,41,59,67,101,107,139,179,193,199,211,229,239,269,271,281,293,307,313,353,353,353,379,397,409 ⋆ Primes in the sequence 12 * n - prime(n), (A245071). • a(n) is the n - th prime member of the sequence 12 * i - prime(i). a(n) = prime(n) if (12 * i - prime(i)) = prime(n). •

► [A060834] 31,43,67,103,151,211,283,367,463,571,691,823,967,1123,1291,1471,1663,1867,2083,2311,2551,2803,3067,3343,3631 ⋆ a(n) = 6 * n ^ 2 + 6 * n + 31. • a(0)=31, a(1)=43, a(2)=67, a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Aug 09 2011 •

► [A128470] 1,31,61,91,121,151,181,211,241,271,301,331,361,391,421,451,481,511,541,571,601,631,661,691,721 ⋆ a(n) = 30 * n + 1. • a(n) = 2 * a(n - 1) - a(n - 2) for n > 1. - _ Vincenzo Librandi _ , Dec 30 2014 •

► [A195744] 31,61,121,241,481,961,1921,3841,7681,15361,30721,61441,122881,245761,491521,983041,1966081,3932161,7864321,15728641,31457281,62914561,125829121,251658241,503316481 ⋆ a(n) = 15 * 2 ^ (n + 1) + 1. • a(n) = 2 * a(n - 1) - 1. •

► [A088463] 31,61,181,283,811,1279,1999,2551,3931,4159,5659,6553,8389,9241,9463,11551,12253,14629,15889,17923,20509,26113,27109,29401,33829 ⋆ Upper twin primes of upper twin prime index. • a(n) == 1 (mod 6). •

► [A053430] 1,1,31,61,991,2821,32551,117181,1093711,4609141,37420471,175694701,1298308831,6569149861,45518414791,242592910621,1608145354351,8885932672981,57130293303511,323708273492941,2037617072598271 ⋆ a(n) = (6 ^ (n + 1) - (- 5) ^ (n + 1)) / 11. • a(0)=1, a(1)=1, a(n) = a(n - 1) + 30 * a(n - 2). - _ Harvey P. Dale _ , May 09 2012 •

► [A135631] 0,31,62,93,124,155,186,217,248,279,310,341,372,403,434,465,496,527,558,589,620,651,682,713,744 ⋆ Multiples of 31. • a(n) = 31 * n. • a(n) = 2 * a(n - 1) - a(n - 2). (End) •

► [A042902] 31,63,94,533,16617,83618,100235,284088,17713691,35711470,53425161,302837275,9441380686,47509740705,56951121391,161411983487,10064494097585,20290400178657,30354894276242,172064871559867,5364365912632119,26993894434720462,32358260347352581 ⋆ Numerators of continued fraction convergents to sqrt(983). • a(n) = 568176 * a(n - 8) - a(n - 16). - _ Vincenzo Librandi _ , Dec 09 2013 •

► [A042900] 31,63,94,2883,2977,8837,550871,1110579,1661450,50954079,52615529,156185137,9736094023,19628373183,29364467206,900562389363,929926856569,2760416102501,172075725211631,346911866525763,518987591737394,1591653961864758 3,16435527210384977 ⋆ Numerators of continued fraction convergents to sqrt(982). • a(n) = 17674 * a(n - 6) - a(n - 12). - _ Vincenzo Librandi _ , Dec 09 2013 •

► [A042910] 31,63,157,377,23531,47439,118409,284257,17742343,35768943,892802 29,214329401,13377703091,26969735583,67317174257,161604084097,10086770388271,20335144860639,50757060109549,121849265079737,7605411495053243,15332672255186223,38270756005425689 ⋆ Numerators of continued fraction convergents to sqrt(987). • a(n) = 754 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Dec 09 2013 •

► [A042908] 31,63,157,9797,19751,49299,3076289,6201877,15480043,965964543,1947409129,4860782801,303315942791,611492668383,1526301279557,95242172000917,192010645281391,479263462563699,29906345324230729,60291954111025157,150490253546281043 ⋆ Numerators of continued fraction convergents to sqrt(986). • a(n) = 314 * a(n - 3) + a(n - 6). - _ Vincenzo Librandi _ , Dec 09 2013 , simplified by _ Colin Barker _ , Dec 26 2013 •

► [A042916] 31,63,409,881,55031,110943,720689,1552321,96964591,195481503,1269853609,2735188721,170851554311,344438297343,2237481338369,4819400974081,301040341731391,606900084436863,3942440848352569,8491781781142001,53043291127915663 1 ⋆ Numerators of continued fraction convergents to sqrt(990). • a(n) = 1762 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Dec 09 2013 •

► [A132772] 0,31,64,99,136,175,216,259,304,351,400,451,504,559,616,675,736,799,864,931,1000,1071,1144,1219,1296 ⋆ a(n) = n * (n + 30). • a(n) = 2 * n + a(n - 1) + 29 (with a(0)=0). - _ Vincenzo Librandi _ , Aug 03 2010 • a(0)=0, a(1)=31, a(2)=64, a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Mar 06 2015 •

► [A055810] 1,31,80,160,280,450,681,985,1375,1865,2470,3206,4090,5140,6375,7815,9481,11395,13580,16060,18860,22006,25525,29445,33795 ⋆ a(n) = T(n,n - 5), array T as in A055807. • a(n) = (240 - 54 * n - 49 * n ^ 2 + 6 * n ^ 3 + n ^ 4) / 24 for n > 5, with a(5) = 1. •

► [A139700] 1,31,91,211,451,931,1891,3811,7651,15331,30691,61411,122851,245731,491491,983011,1966051,3932131,7864291,15728611,31457251,62914531,125829091,251658211,503316451 ⋆ Binomial transform of [1, 30, 30, 30, ...]. • a(n) = 30 * 2 ^ (n - 1) - 29. - _ Emeric Deutsch _ , May 07 2008 • a(n) = 2 * a(n - 1) + 29 (with a(1)=1). - _ Vincenzo Librandi _ , Nov 24 2010 • a(n) = 3 * a(n - 1) - 2 * a(n - 2). •

► [A098440] 1,1,31,91,1531,7051,88201,520381,5529091,37734931,365291101,2721338401,24972058981,196231466341,1746558487831,14182492489651,124085095556851,1028416533153331,8913996083549341,74841905963166481,645571197111115201 ⋆ Expansion of 1 / sqrt(1 - 2x - 59x ^ 2). • a(n) = sum { k=0..floor(n / 2), binomial(n - k, k) * binomial(n, k) * 15 ^ k } . •

► [A042892] 31,94,125,219,344,10539,10883,21422,32305,118337,7369199,22225934,29595133,51821067,81416200,2494307067,2575723267,5070030334,7645753601,28007291137,1744097804095,5260300703422,7004398507517,12264699210939,19269097718456 ⋆ Numerators of continued fraction convergents to sqrt(978). • a(n) = 236674 * a(n - 10) - a(n - 20). - _ Wesley Ivan Hurt _ , May 03 2023 •

► [A042890] 31,94,125,1094,5595,6689,12284,43541,317071,360612,677683,5104393,15990862,21095255,37086117,206525840,1689292837,1895818677,7376748868,45925424849 3,1385139494347,1844393742840 ⋆ Numerators of continued fraction convergents to sqrt(977). • a(n) = 14753497736 * a(n - 19) - a(n - 38) for n > 37. [_ Bruno Berselli _ , Dec 08 2013] •

► [A042896] 31,94,313,407,720,1847,2567,4414,15809,51841,3229951,9741694,32455033,42196727,74651760,191500247,266152007,457652254,1639108769,5374978561,33488777955 1,1010038317214,3365002731193,4375041048407,7740043779600 ⋆ Numerators of continued fraction convergents to sqrt(980). • a(n) = 103682 * a(n - 10) - a(n - 20). - _ Vincenzo Librandi _ , Dec 08 2013 •

► [A081275] 1,31,97,199,337,511,721,967,1249,1567,1921,2311,2737,3199,3697,4231,4801,5407,6049,6727,7441,8191,8977,9799,10657 ⋆ Shallow diagonal of triangular spiral in A051682. • a(n) = C(n, 0) + 30 * C(n, 1) + 36 * C(n, 2). • a(n) =

18 * n ^ 2 + 12 * n + 1. ● a(0)=1, a(1)=31, a(2)=97, a(n)=3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Jun 30 2011 ●

▶ [A289134] 1,31,103,217,373,571,811,1093,1417,1783,2191,2641,3133,3667,4243,4861,5521,6223,6967,7753,8581,9451,10363,11317,12313 ⋆ a(n) = 21 * n ^ 2 - 33 * n + 13. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>3. - _ Colin Barker _ , Jul 29 2017 ●

▶ [A206526] 31,106,168,243,305,380,442,517,579,654,716,791,853,928,990,1065,1127,1202,1264,1339,1401,1476,1538,1613,1675 ⋆ a(n) = 137 * (n - 1) - a(n - 1) with n>1, a(1)=31. ● a(n) = a(n - 2) + 137. ● a(n) = (- 137 + 13 * (- 1) ^ n + 274 * n) / 4. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3). ●

▶ [A063397] 1,31,111,343,979,2655,6943,17663,43967,107519,259071,616447,1451007,3383295,7823359,17956863,40943615,92798975,209190911,469237759,1047789567,2329935871,5161091071,11391729663,25060966399 ⋆ T(4,n) with T(n,m) as in A063394. ● a(n) = (6 * (- 4 + 27 * 2 ^ n) + 191 * 2 ^ n * n + 15 * 2 ^ (1 + n) * n ^ 2 + 2 ^ n * n ^ 3) / 24 for n>0. - _ Colin Barker _ , May 27 2015 ●

▶ [A158558] 1,31,121,271,481,751,1081,1471,1921,2431,3001,3631,4321,5071,5881,6751,7681,8671,9721,10831,12001,13231,14521,15871,17281 ⋆ a(n) = 30 * n ^ 2 + 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A042884] 31,125,156,593,749,1342,2091,24343,26434,156513,495973,4124297,4620270,8744567,13364837,22109404,676646957,698756361,1375403318,2074159679,3449562997,29670663655,92461553962 ⋆ Numerators of continued fraction convergents to sqrt(974). ● a(n) = 977651490470430 * a(n - 32) - a(n - 64) for n > 63. [_ Bruno Berselli _ , Dec 08 2013] ●

▶ [A042886] 31,125,281,1249,77719,312125,701969,3120001,194142031,779688125,1753518281,7793761249,484966715719,1947660624125,4380287963969,19468812480001,1211446661724031,4865255459376125,10941957580476281,48633085781281249 ⋆ Numerators of continued fraction convergents to sqrt(975). ● a(n) = 2498 * a(n - 4) - a(n - 8). - _ Vincenzo Librandi _ , Dec 08 2013 ●

▶ [A042888] 31,125,781,906,2593,8685,11278,53797,118872,410413,939698,4169205,5108903,19495914,44100731,63596645,425680601,1766319049,109937461639,441516165605,2759034455269,3200550620874 ⋆ Numerators of continued fraction convergents to sqrt(976). ● a(n) = 3532638098 * a(n - 18) - a(n - 36) for n > 35. [_ Bruno Berselli _ , Dec 08 2013] ●

▶ [A158563] 31,127,287,511,799,1151,1567,2047,2591,3199,3871,4607,5407,6271,7199,8191,9247,10367,11551,12799,14111,15487,16927,18431,19999 ⋆ a(n) = 32 * n ^ 2 - 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A165568] 1,1,31,137,391,889,1751,3121,5167,8081,12079,17401,24311,33097,44071,57569,73951,93601,116927,144361,176359,213401,255991,304657,359951 ⋆ a(n) = - 1 - 2 * n + n ^ 2 + 2 * n ^ 3 + n ^ 4. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) + 24. ●

▶ [A228261] 31,143,319,565,881,1267,1723,2249,2845,3511,4247,5053,5929,6875,7891,8977,10133,11359,12655,14021,15457,16963,18539,20185,21901 ⋆ Number of third differences of arrays of length 5 of numbers in 0..n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>4. ●

▶ [A226890] 1,1,1,1,31,151,451,1051,33601,663601,5187001,25905001,254322751,10408719751,128046088171,920598820051,29249420054401,723848667813601,12441294278905201,138598703861148241,4406639731521827551,9345360831074362815 1,193298124563559716085 1,277440523101608740545 1 ⋆ E.g.f.: exp(Sum _{ n>=1 } sigma(n,n) * x ^ (n ^ 2) / n ^ n). ● a(n) == 1 (mod 30) (conjecture - valid up to n=4000; if true for n>=0, why?). ●

▶ [A042880] 31,156,187,343,530,4053,24848,28901,111551,140452,2077879,2218331,8732872,10951203,74440090,532031833,606471923,1138503756,1744975679,9863382151,613274669041,3076236727356 ⋆ Numerators of continued fraction convergents to sqrt(972). ● a(n) = 19726764302 * a(n - 20) - a(n - 40) for n > 39. [_ Bruno Berselli _ , Dec 08 2013] ●

▶ [A042882] 31,156,811,1778,15035,31848,174275,903223,56174101,281773728,1465042741,3211859210,27159916421,57531692052,314818376681,1631623575457,10147548005501 5,509009023850532,2646520599307675,5802050222465882,49062922379034731,103927894980535344 ⋆ Numerators of continued fraction convergents to sqrt(973). ● a(n) = 1806446 * a(n - 8) - a(n - 16). - _ Vincenzo Librandi _ , Dec 08 2013 ●

▶ [A157373] 31,158,383,706,1127,1646,2263,2978,3791,4702,5711,6818,8023,9326,10727,12226,13823,15518,17311,19202,21191,23278,25463,27746,30127 ⋆ a(n) = 49 * n ^ 2 - 20 * n + 2. ● a(n) = 49 * n ^ 2 - 20 * n + 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3), with a(1)=31, a(2)=158, a(3)=383. - _ Harvey P. Dale _ , Jun 20 2011 ●

▶ [A183877] 1,31,171,631,2059,6399,19483,58807,176859,531103,1593931,4782519,14348395,43046143,129139515,387419767,1162260667,3486783519,10460352235,31381058551,94143177675,282429535231,847288608091,2541865826871 ⋆ Number of arrangements of n + 2 numbers in 0..2 with each number being the sum mod 3 of two others. ● a(n) = 6 * a(n - 1) - 12 * a(n - 2) + 10 * a(n - 3) - 3 * a(n - 4) for n>5. ●

▶ [A107953] 31,175,703,2415,7551,22143,61951,167167,438271,1122303,2818047,6959103,16941055,40730623,96862207,228130815,532676607,1234173951,2839543807,6491734015,14755561471,33361494015,75061264383,168124481535,375004332031 ⋆ Number of chains in the power set lattice of an (n + 3) - element set X _ (n + 3) of specification n ^ 1 2 ^ 1 1, that is, n identical objects of one kind, 2 identical objects of another kind and one other kind. It is the same as the number of fuzzy subsets X _ (n + 3). ● a(n) = 2 ^ (n + 1) * ((n ^ 2 / 2) * (n + 13) + 21 * n + 16) - 1. ● a(0)=31, a(1)=175, a(2)=703, a(3)=2415, a(4)=7551, a(n)=9 * a(n - 1) - 32 * a(n - 2) + 56 * a(n - 3) - 48 * a(n - 4) + 16 * a(n - 5). - _ Harvey P. Dale _ , Feb 10 2015 ●

▶ [A272130] 1,31,177,535,1201,2271,3841,6007,8865,12511,17041,22551,29137,36895,45921,56311,68161,81567,96625,113431,132081,152671,175297,200055,227041 ⋆ a(n) = 16 * n ^ 3 + 10 * n ^ 2 + 4 * n + 1. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>3. ●

▶ [A331759] 1,31,179,585,1463,3065,5729,9797,15737,24087,35315,50073,69025,92871,122475,158681,202529,254597,315957,387977,471589,568227,678971,805241,948515 ⋆ a(n) = A115004(2n + 1). ● a(n) = (2 * n + 1) ^ 2 + Sum _{ i=2..2 n + 1 } (2 * n + 2 - i) * (4 * n + 4 - i) * phi(i). - _ Chai Wah Wu _ , Aug 17 2021 ●

▶ [A373519] 1,1,1,1,1,31,181,631,1681,60481,687961,4379761,19982161,802740511,13848694861,131732390791,873339798241,38385869907841,894783905472241,11506538747852641,101612306808695521,4824806928717603871,142148609212891008421 ⋆ Expansion of e.g.f. exp(x / (1 - x ^ 4) ^ (1 / 4)). ● a(n) = n! * Sum _{ k=0..floor(n / 4) } binomial(n / 4 - 1,k) / (n - 4 * k)!. ●

▶ [A042878] 31,187,779,966,1745,2711,7167,38546,122805,284156,3532677,109797143,1321098393,2751993929,9577080180,50637394829,110851869838,1614892646 67,272341134505,433830399172,2007662731193 ⋆ Numerators of continued fraction convergents to sqrt(971). ● a(n) = 24959613572660 * a(n - 22) - a(n - 44) for n > 43. - _ Vincenzo Librandi _ , Feb 01 2014 ●

▶ [A165130] 0,31,189,889,3825,15841,64449,259969,1044225,4185601,16759809,67074049,268365825,1073602561,4294688769,17179312129,68718362625,274875678721,1099507171329,4398037598209,17592168218625,70368708526081,281474905407489 ⋆ a(n) = (2 ^ (n + 4) - 1) * (2 ^ n - 1). ● a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3). G.f.: x * (31 - 28 * x) / ((1 - x) * (2 * x - 1) * (4 * x - 1)). - R. J. Mathar, Sep 20 2009 ●

▶ [A055816] 1,31,192,1120,6400,36288,205184,1159488,6554880,37088480,210075712,1191254688,6762782208,38434677120,218663320320,1245254943872,7098135387648,40495661150112,231220652273600,1321222104326880 ⋆ a(n) = T(2 * n + 4,n), array T as in A055807. ● a(n) = (n + 4) * hypergeom([- n - 3, n], [2], - 1) = Sum _{ s=1..n + 4 } binomial(n + 4,s) * binomial(s + n - 2,n - 1) for n >= 1. - _ Petros Hadjicostas _ , Feb 13 2021 ●

▶ [A274501] 0,1,31,196,756,2226,5502,12012,23892,44187,77077,128128,204568,315588,472668,689928,984504,1376949,1891659,2557324,3407404,4480630,5821530,7480980,9516780 ⋆ a(n) = 25 * binomial(n - 1,6) + binomial(n - 1,5). ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). ● a(n) = (n - 1) * (n - 2) * (n - 3) * (n - 4) * (n - 5) * (25 * n - 144) / 720. - _ Wesley Ivan Hurt _ , Jun 25 2016 ●

▶ [A228220] 31,199,625,1429,2731,4651,7309,10825,15319,20911,27721,35869,45475,56659,69541,84241,100879,119575,140449,163621,189211,217339,248125,281689,318151 ⋆ Number of second differences of arrays of length 5 of numbers in 0..n. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>4. ●

▶ [A152730] 0,0,1,31,211,782,2132,4862,9813,18093,31143,50764,79144,118924,173225,245675,340475,462426,616956,810186,1048957,1340857,1694287,2118488,2623568 ⋆ a(n) + a(n + 1) + a(n + 2) = n ^ 5, with a(1) = a(2) = 0. ● a(n) = (1 / 3) * (n ^ 5 - 5 * n ^ 4 + (10 / 3) * n ^ 3 + 10 * n ^ 2 - 5 * n - (13 / 3)) + ((13 / 54) * i) * sqrt(3) * ((- 1 / 2 - (1 / 2) * i * sqrt(3)) ^ n - (- 1 / 2 + (1 / 2) * i * sqrt(3)) ^ n) + (13 / 18) * ((- 1 / 2 - (1 / 2) * i * sqrt(3)) ^ n + (- 1 / 2 + (1 / 2) * i * sqrt(3)) ^ n) with n >= 0 where i = sqrt(- 1). - _ Paolo P. Lava _ , Dec 23 2008 ●

▶ [A361700] 1,1,1,1,1,1,31,211,841,2521,6301,13861,30691,90091,360361,1501501,5645641,18749641,56063281,157520641,445836901,1368402421,4638690211,16511900791,58059667051 ⋆ Constant term in the expansion of (1 + x ^ 4 + y ^ 4 + 1 / (x * y)) ^ n. ● a(n) = Sum _{ k=0..floor(n / 6) } binomial(2 * k,k) * binomial(6 * k,2 * k) * binomial(n,6 * k). ●

▶ [A090027] 0,31,211,961,2851,7471,15541,31471,55651,95821,152041,239791,351331,517831,723241,1007041,1352041,1821721,2359051,3082921,3904081,4956901,6151651,7677901,9334261 ⋆ Number of distinct lines through the origin in 5 - dimensional cube of side length n. ● a(n) = (n + 1) ^ 5 - 1 - Sum _{ j=2..n + 1 } a(floor(n / j)). - _ Chai Wah Wu _ , Mar 30 2021 ●

▶ [A164784] 1,31,211,1291,7771,46651,279931,1679611,10077691,60466171,362797051,2176782331,13060694011,78364164091,470184984571,2821109907451,16926659444731,101559956668411,609359740010491,3656158440062971 ⋆ a(n) = 6 ^ n - 5. ● a(n) = 6 * a(n - 1) + 25 with n>1, a(1)=1. - _ Vincenzo Librandi _ , Oct 29 2009 ●

▶ [A062393] 0,1,31,212,812,2313,5463,11344,21424,37625,62375,98676,150156,221137,316687,442688,605888,813969,1075599,1400500,1799500,2284601,2869031,3567312,4395312 ⋆ a(n) = n ^ 5 - (n - 1) ^ 5 + (n - 2) ^ 5 - ... + (- 1) ^ n * 0 ^ 5. ● a(n) = (2 * n ^ 5 + 5 * n ^ 4 - 5 * n ^ 2 + 1 - (- 1) ^ n) / 4 = n ^ 5 - a(n - 1). ● a(0)=0, a(1)=1, a(2)=31, a(3)=212, a(4)=812, a(5)=2313, a(6)=5463, a(n) = 5 * a(n - 1) - 9 * a(n - 2) + 5 * a(n - 3) + 5 * a(n - 4) - 9 * a(n - 5) + 5 * a(n - 6) - a(n - 7). - _ Harvey P. Dale _ , Feb 01 2013 ●

▶ [A075932] 31,227,805,1354,6182,10315,18731,35149,67943,393255,655433,1181959,6291497,10485837,18874658,35653635,69337155,1364462552,7066605416106127792684354638,4831838504,9126807585,17716871269,34896740609 ⋆ Basis for code in A075931. ● a(n) = b(2 ^ n), where b is A075931, the binary lexicode, d=5. ●

▶ [A082544] 1,31,241,991,3091,7501,16531,31711,57781,96601,157651,240031,362491,519961,739201,1012441,1383721,1822711,2409241,3091441,3966301,4974751,6257461,7680781,9481681 ⋆ Number of ordered quintuples (a,b,c,d,e) with gcd(a,b,c,d,e)=1 (1<= { a,b,c,d,e } <= n). ● a(n) = Sum _{ k=1..n } mu(k) * floor(n / k) ^ 5; a(n) is asymptotic to c * n ^ 5 with c=0.9643.... ●

▶ [A372961] 1,31,241,991,3121,7471,16801,31711,58561,96751,161041,238831,371281,520831,752161,1014751,1419841,1815391,2476081,3092911,4049041,4992271,6436321,7642351,9753121 ⋆ a(n) = Sum _{ 1 <= x _ 1, x _ 2, x _ 3, x _ 4 <= n } n / gcd(x _ 1, x _ 2, x _ 3, x _ 4, n). ● a(n) = Sum _{ d|n } mu(n / d) * n / d * sigma _ 5(d). ●

▶ [A059378] 1,31,242,992,3124,7502,16806,31744,58806,96844,161050,240064,371292,520986,756008,1015808,1419856,1822986,2476098,3099008,4067052,4992550,6436342,7682048,9762500 ⋆ Jordan function J _ 5(n). ● a(n) = Sum _{ d|n } d ^ 5 * mu(n / d). - _ Benoit Cloitre _ , Apr 05 2002 ● a(n) = n ^ 5 * Product _{ distinct primes p dividing n } (1 - 1 / p ^ 5). - _ Tom Edgar _ , Jan 09 2015 ●

▶ [A258807] 0,31,242,1023,3124,7775,16806,32767,59048,99999,161050,248831,371292,537823,759374,1048575,1419856,1889567,2476098,3199999,4084100,5153631,6436342,7962623,9765624 ⋆ a(n) = n ^ 5 - 1. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). ●

► [A358934] 1,0,1,31,242,3093,32525,368168,4051333,45064131,499200274,5538624025,61414079849,681135796944,7553728681433,83772910243607,929052526388050,1030336431934757,11426600234888571 7,1267229634537217144,14053790947047408701,155858934437282250075 ★ a(n) = Fibonacci(n + 1) ^ 5 - Fibonacci(n - 1) ^ 5. ● a(n) = 8 * a(n - 1) + 40 * a(n - 2) - 60 * a(n - 3) - 40 * a(n - 4) + 8 * a(n - 5) + a(n - 6) for n > 5. (End) ●

► [A344723] 1,31,243,992,3094,7564,16596,31744,58237,97117,158169,241837,364299,521829,745693,1018120,1389402,1837302,2423834,3105432,3998776,5007286,6289998,7738784,9543887 ★ a(n) = Sum _{ k=1..n } (- 1) ^ (k + 1) * floor(n / k) ^ 5. ● a(n) = Sum _{ k=1,..n } Sum _{ d|k } (- 1) ^ (k / d + 1) * (d ^ 5 - (d - 1) ^ 5). ●

► [A042872] 31,249,280,1929,2209,19601,1217471,9759369,10976840,75620409,86597249,768398401,47727298111,382586783289,430314081400,2964471271689,3394785353089,30122754096401,187100553932995 1,149981670687360 09,1686917260806065960,116213202717131769 ★ Numerators of continued fraction convergents to sqrt(968). ● a(n) = 39202 * a(n - 6) - a(n - 12). - _ Vincenzo Librandi _ , Dec 08 2013 ●

► [A008386] 1,31,271,1281,4251,11253,25493,51563,95693,166003,272755,428605,648855,951705,1358505,1894007,2586617,3468647,4576567,5951257,7638259,9688029,12156189,15103779,18597509 ★ Crystal ball sequence for A _ 5 lattice. ● a(n) = (2 * n + 1) * (63 * n ^ 4 + 126 * n ^ 3 + 217 * n ^ 2 + 154 * n + 60) / 60. - _ T. D. Noe _ , Apr 29 2007 ●

► [A156094] 1,1,31,281,2101,14851,102961,708761,4865911,33372361,228792301,1568309051,10749725281,73680695281,505017569551,3461448647801,23725139605861,162614572159411,1114576979567761,7639424583421961,52361395886149351 ★ 5 F(2n) (F(2n) - 1) + 1 where F(n) denotes the n - th Fibonacci number. ● a(n)=((2 * sqrt(5)) / 2) * (((3 - sqrt(5)) / 2) ^ n - ((3 + sqrt(5)) / 2) ^ n) + ((7 + 3 * sqrt(5)) / 2) ^ n + ((7 - 3 * sqrt(5)) / 2) ^ n - 1. - _ Tim Monahan _ , Aug 15 2011 ●

► [A001298] 0,1,31,301,1701,6951,22827,63987,159027,359502,752752,1479478,2757118,4910178,8408778,13916778,22350954,34952799,53374629,79781779,116972779,168519505,238929405,333832005,460192005 ★ Stirling numbers of the second kind S(n + 4, n). ● a(n) = Stirling2(n + 4, n) = Sum _{ L=1..n } (Sum _{ k=1..L } (Sum _{ j=1..k } (Sum _{ i=1..j } i * j * k * L))) = (n + 4) * (n + 3) * (n + 2) * (n + 1) * n * (15 * n ^ 3 + 30 * n ^ 2 + 5 * n - 2) / 5760 = (15 * n ^ 3 + 30 * n ^ 2 + 5 * n - 2) * binomial(n + 4, 5) / 48. - _ Vladeta Jovovic _ , Jan 31 2005 ●

► [A137318] 1,31,313,1313,13131,313131,3131313,13131313,131313131,3131313131,31313131313,131313131313,1313131313131,31313131313131,313131313131313,1313131313131313,13131313131313131,313131313131313131 ★ Concatenation of segments of the digit sequence 1 3 1 3 1 3 1 3 1 3 1 3 1 3 1 3 1 3.... ● a(n + 1) = (1 / 4) * ((n mod 4) + ((n + 1) mod 4) + ((n + 2) mod 4) - ((n + 3) mod 4)) * (10 ^ n) * (1 + (- 1) ^ (n + 1)) + a(n) * 10 ^ (1 / 2 + 1 / 2 * (- 1) ^ n) + (1 / 4) * ((n mod 4) + ((n + 1) mod 4) - ((n + 2) mod 4) + ((n + 3) mod 4)) * (1 + (- 1) ^ n), with a(0)=1 and n >= 1. - _ Paolo P. Lava _ , Apr 15 2008 ●

► [A033175] 1,31,331,3331,33331,333331,3333331,33333331,333333331,3333333331,33333333331,333333333331,3333333333331,33333333333331,333333333333331,3333333333333331,33333333333333331,333333333333333331,3333333333333333331 ★ n 3's followed by 1. ● a(n) = (10 ^ (n + 1) - 7) / 3. ● a(n) = 10 * a(n - 1) + 21 (with a(0)=1). - _ Vincenzo Librandi _ , Nov 17 2010 ●

► [A100728] 1,31,337,2570,16865,104858,650761,4145956,27483392,190522216,1382087111,10478149999,82860356456,682066659044,5832719543338,51724107920729,474869705028520,4506715494154371,44152005320340946 ★ Number of rank - (n - 2) simple matroids on S _ n. ● a(n) = Bell(n + 1) - (n ^ 2 + n + 4) * 2 ^ (n - 2) + n * (n + 1) * (3 * n ^ 2 - n + 10) / 24. ●

► [A091348] 0,1,31,391,3451,25231,164731,999391,5767051,32122831,174397531,929043391,4879252651,25349936431,130617150331,668714319391,3406562690251,17286209766031,87448932863131,441329102667391,2223021985199851,11180731992411631,56166496811775931,281884877304327391 ★ a(n) = 24 * 5 ^ n - 60 * 4 ^ n + 50 * 3 ^ n - 15 * 2 ^ n + 1. ● a(n) = Sum _{ i=1..n } i! * i ^ 4 * Stirling2(n, i) * (- 1) ^ (n - i). ●

► [A316457] 31,512,2943,10624,29375,68256,140287,263168,459999,760000,1199231,1821312,2678143,3830624,5349375,7315456,9821087,12970368,16879999,21680000,27514431,34542112,42937343,52890624,64609375 ★ Expansion of x * (31 + 326 * x + 336 * x ^ 2 + 26 * x ^ 3 + x ^ 4) / (1 - x) ^ 6. ● a(n) = 6 * n ^ 5 + 15 * n ^ 4 + 10 * n ^ 3. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. ●

► [A028201] 1,31,605,9515,131901,1684011,20303725,234831355,2632942301,28828462091,309891463245,3283433875995,34394321024701,357022927273771,3679144385477165,37693176577349435,384363133408659101 ★ Expansion of 1 / ((1 - 6x)(1 - 7x)(1 - 8x)(1 - 10x)). ● a(n) = 18 * a(n - 1) - 80 * a(n - 2) + 7 ^ (n + 1) - 6 ^ (n + 1); a(0)=1, a(1)=31. - _ Vincenzo Librandi _ , Mar 11 2011 ● a(n) = (10 ^ (n + 3) - 6 * 8 ^ (n + 3) + 8 * 7 ^ (n + 3) - 3 * 6 ^ (n + 3)) / 24. - _ Yahia Kahloune _ , Jun 04 2013 ● a(n) = 31 * a(n - 1) - 356 * a(n - 2) + 1796 * a(n - 3) - 3360 * a(n - 4). - _ Wesley Ivan Hurt _ , May 22 2021 ●

► [A028184] 1,31,608,9650,135471,1756461,21553078,254114080,2907590741,32510311691,356977004748,3863433611310,41325142341211,437804739243721,4601385756887618,48040443020269340,498759633052498881,5153605455623560551,53035826592972273688 ★ Expansion of 1 / ((1 - 5x)(1 - 7x)(1 - 9x)(1 - 10x)). ● a(n) =(8 * 10 ^ (n + 3) - 15 * 9 ^ (n + 3) + 10 * 7 ^ (n + 3) - 3 * 5 ^ (n + 3)) / 120. [_ Yahia Kahloune _ , Jun 04 2013] ●

► [A028182] 1,31,610,9750,138411,1822821,22826140,275975500,3254034421,37677164811,430475351670,4870239751650,54700558488031,611065572906001,6798955260233200,75422919700042200,834843345187547241 ★ Expansion of 1 / ((1 - 5x)(1 - 7x)(1 - 8x)(1 - 11x)). ● a(n)=(11 ^ (n + 3) - 8 ^ (n + 4) + 9 * 7 ^ (n + 3) - 2 * 5 ^ (n + 3)) / 72. [_ Yahia Kahloune _ , Jun 04 2013] ●

► [A028155] 1,31,611,9779,138747,1820595,22624267,270185443,3130828283,35437220819,393679085163,4307728419267,46553144477659,497913631860403,5279371826945099,55566205514956451,581177386017567675 ★ Expansion of 1 / ((1 - 4x)(1 - 8x)(1 - 9x)(1 - 10x)). ● a(n)=(10 ^ (n + 4) - 24 * 9 ^ (n + 3) + 15 * 8 ^ (n + 3) - 4 ^ (n + 3)) / 120. [_ Yahia Kahloune _ , Jun 04 2013] ●

► [A028175] 1,31,612,9842,140903,1874733,23747074,290631904,3469802325,40674188555,470287309856,5380934171886,61072079752867,688801372689097,7730331225654558,86417957138887388,963072515157938129 ★ Expansion of 1 / ((1 - 5x)(1 - 6x)(1 - 9x)(1 - 11x)). ● a(n)=(2 * 11 ^ (n + 3) - 5 * 9 ^ (n + 3) + 8 * 6 ^ (n + 3) - 5 ^ (n + 4)) / 120. [_ Yahia Kahloune _ , Jun 03 2013] ●

► [A028150] 1,31,614,9926,142995,1915077,24414088,300588892,3608146949,42498447563,493420114122,5665664143698,64496965543063,729264545514289,8201673484111916,91847355888191144,1025058980614782537 ★ Expansion of 1 / ((1 - 4x)(1 - 7x)(1 - 9x)(1 - 11x)). ● a(n) = (15 * 11 ^ (n + 3) - 42 * 9 ^ (n + 3) + 5 * 7 ^ (n + 4) - 2 * 4 ^ (n + 4)) / 840. [_ Yahia Kahloune _ , May 29 2013] ●

► [A028173] 1,31,615,9995,145511,1981731,25867375,328390315,4092662871,50378487731,614988087935,7465359578235,90280175113831,1089001243414531,13113567724769295,157729903649607755 ★ Expansion of 1 / ((1 - 5x)(1 - 6x)(1 - 8x)(1 - 12x)). ● a(n) = (12 ^ (n + 3) - 7 * 8 ^ (n + 3) + 14 * 6 ^ (n + 3) - 8 * 5 ^ (n + 3)) / 168. [_ Yahia Kahloune _ , Jun 03 2013] ●

► [A028142] 1,31,617,10067,146913,1999083,25952089,325901779,3994115345,48056935355,570022255881,6685284487011,77695022872897,896253234623947,10275099966705593,117190651899653363,1330751148294893169 ★ Expansion of 1 / ((1 - 4x)(1 - 6x)(1 - 10x)(1 - 11x)). ● a(n)=(24 * 11 ^ (n + 3) - 35 * 10 ^ (n + 3) + 21 * 6 ^ (n + 3) - 10 * 4 ^ (n + 3)) / 840. [_ Yahia Kahloune _ , Jun 02 2013] ●

► [A028148] 1,31,617,10079,147609,2022447,26547529,338695423,4238709497,52353238223,640806363561,7794824571807,94411354501465,1140149916014959,13741090450747913,165378493289389631 ★ Expansion of 1 / ((1 - 4x)(1 - 7x)(1 - 8x)(1 - 12x)). ● a(0)=1, a(1)=31, a(2)=617, a(3)=10079, a(n)=31 * a(n - 1) - 344 * a(n - 2) + 1616 * a(n - 3) - 2688 * a(n - 4) [_ Harvey P. Dale _ , Nov 20 2011] ● a(n)=(3 * 12 ^ (n + 3) - 30 * 8 ^ (n + 3) + 32 * 7 ^ (n + 3) - 5 * 4 ^ (n + 3)) / 480. [_ Yahia Kahloune _ , May 29 2013]. ●

► [A028100] 1,31,618,10094,147203,1997037,25786636,321380188,3901566405,46429426043,544051398254,6298258575882,72214033934407,821632688021449,9290501272470672,104524684322022776,1171184420402768009 ★ Expansion of 1 / ((1 - 3x)(1 - 8x)(1 - 9x)(1 - 11x)). ● a(n) = (5 * 11 ^ (n + 3) - 20 * 9 ^ (n + 3) + 2 * 8 ^ (n + 4) - 3 ^ (n + 3)) / 240. - _ Yahia Kahloune _ , Jun 10 2013 ●

► [A028141] 1,31,619,10171,150115,2075227,27499123,354164107,4472448739,55701408763,686884421587,8409900709483,102430894160323,1242818548606939,15036887507052211,181551642806017099 ★ Expansion of 1 / ((1 - 4x)(1 - 6x)(1 - 9x)(1 - 12x)). ● a(n)=(5 * 12 ^ (n + 3) - 16 * 9 ^ (n + 3) + 20 * 6 ^ (n + 3) - 9 * 4 ^ (n + 3)) / 720. [_ Yahia Kahloune _ , Jun 11 2013] ●

► [A028096] 1,31,620,10190,149931,2056881,26907430,340238680,4195278461,50745196931,604662792240,7119407163570,83018865142591,960430934574181,11038161347163050,126162293709144860,1435268577300318321 ★ Expansion of 1 / ((1 - 3x)(1 - 7x)(1 - 10x)(1 - 11x)). ● a(n)=(21 * 11 ^ (n + 3) - 32 * 10 ^ (n + 3) + 2 * 7 ^ (n + 4) - 3 ^ (n + 4)) / 672. [_ Yahia Kahloune _ , May 29 2013]. ●

► [A042864] 31,621,652,1925,12202,14127,26329,93114,119443,212557,332000,544557,6322127,6866684,33788863,108233273,142022136,2096543177,2238565313,8812239116,37487521777,46299760893 ★ Numerators of continued fraction convergents to sqrt(964). ● a(n) = 20170287114002498 * a(n - 34) - a(n - 68) for n > 67. - _ Vincenzo Librandi _ , Feb 01 2014 ●

► [A028095] 1,31,622,10294,153139,2133397,28467664,368853628,4681501957,58545953323,724357095826,8891996242402,108525576595255,1318871068893409,15976717061264308,193081291067943016 ★ Expansion of 1 / ((1 - 3x)(1 - 7x)(1 - 9x)(1 - 12x)). ● a(n)=(8 * 12 ^ (n + 3) - 30 * 9 ^ (n + 3) + 27 * 7 ^ (n + 3) - 5 * 3 ^ (n + 3)) / 1080. [_ Yahia Kahloune _ , Jun 10 2013] ●

► [A028128] 1,31,623,10355,155151,2182251,29453143,386424115,4968644351,62947998971,788663289063,9797059846275,120896875524751,1484089915071691,18142382512443383,221041773758074835 ★ Expansion of 1 / ((1 - 4x)(1 - 5x)(1 - 10x)(1 - 12x)). ● a(n) = 31 * a(n - 1) - 338 * a(n - 2) + 1520 * a(n - 3) - 2400 * a(n - 4), n >= 4. ● a(n) = 22 * a(n - 1) - 120 * a(n - 2) + 5 ^ (n + 1) - 4 ^ (n + 1), n >= 2. (End) ● a(n) = 9 * 12 ^ (n + 1) / 7 - 5 * 10 ^ (n + 1) / 3 - 2 ^ (2n + 2) / 3 + 5 ^ (n + 2) / 7. - _ R. J. Mathar _ , Mar 18 2011 ●

► [A028018] 1,31,625,10395,155001,2155251,28559665,365471515,4555708201,55646962371,668889963105,7936976609835,93190238832601,1084660596151891,12532810309612945,143923263421271355 ★ Expansion of 1 / ((1 - 2x)(1 - 8x)(1 - 10x)(1 - 11x)). ● a(n)=(16 * 11 ^ (n + 3) - 27 * 10 ^ (n + 3) + 12 * 8 ^ (n + 3) - 2 ^ (n + 3)) / 432. [_ Yahia Kahloune _ , Jun 06 2013] ●

► [A028087] 1,31,625,10435,157081,2218891,30058465,395576995,5099030761,64729573051,812287789105,10103508011155,124806994586041,1533359039348011,18757216238876545,228656612889142915 ★ Expansion of 1 / ((1 - 3x)(1 - 6x)(1 - 10x)(1 - 12x)). ● a(n)=(14 * 12 ^ (n + 3) - 27 * 10 ^ (n + 3) + 21 * 6 ^ (n + 3) - 8 * 3 ^ (n + 3)) / 1512. [_ Yahia Kahloune _ , Jun 10 2013] ●

► [A028017] 1,31,627,10499,158219,2232387,30141979,394679923,5055314187,63715123043,793475307131,9793201406547,120053522334955,1464191224876099,17788099372232283,215464347026366771 ★ Expansion of 1 / ((1 - 2x)(1 - 8x)(1 - 9x)(1 - 12x)). ● a(n)=(7 * 12 ^ (n + 3) - 40 * 9 ^ (n + 3) + 35 * 8 ^ (n + 3) - 2 ^ (n + 4)) / 840. [_ Yahia Kahloune _ , May 29 2013]. ●

► [A028013] 1,31,629,10595,160965,2293347,31302517,414606643,5373114725,68512221635,862890573909,10764894286419,133300183232581,1640952361357795,20105879474257205,245421711656823923 ★ Expansion of 1 / ((1 - 2x)(1 - 7x)(1 - 10x)(1 - 12x)). ● a(0)=1, a(1)=31, a(2)=629, a(3)=10595, a(n)=31 * a(n - 1) - 332 * a(n - 2) + 1388 * a(n - 3) - 1680 * a(n - 4) [From Harvey P. Dale, Nov 02 2011] ● a(n)=(12 ^ (n + 4) - 25 * 10 ^ (n + 3) + 16 * 7 ^ (n + 3) - 3 * 2 ^ (n + 3)) / 1200. [_ Yahia Kahloune _ , Jun 06 2013] ●

► [A028073] 1,31,630,10670,163691,2363901,32800480,442568140,5850370581,76144382171,979096198730,12468275928810,157530257684671,1977386553510841,24685911967987380,306761026472700680 ★ Expansion of 1 / ((1 - 3x)(1 - 5x)(1 - 11x)(1 - 12x)). ● a(n)=(16 * 12 ^ (n + 3) - 21 * 11 ^ (n + 3) + 12 * 5 ^ (n + 3) - 7 * 3 ^ (n + 3)) / 1008. [_ Yahia Kahloune _ , Jun 10 2013] ●

► [A025009] 1,31,632,10682,162183,2297253,31000054,403684144,5115788645,63462153755,773891110356,9306180096486,110619493115587,1302189143870737,15203564170082738,176265669269562908 ★ Expansion of 1 / ((1 - x)(1 - 9x)(1 - 10x)(1 - 11x)). ● a(n) = (36 * 11 ^ (n + 3) - 80 * 10 ^ (n + 3) + 45 * 9 ^ (n + 3) - 1) / 720. [_ Yahia Kahloune _ , Jul 02 2013] ●

► [A028004] 1,31,633,10787,166481,2416827,33681481,456072739,6046236801,78876961163,1016157547769,12960408919731,163959874019761,2060322716086939,25744836645629097,320169349603453763 ★ Expansion of 1 / ((1 - 2x)(1 - 6x)(1 - 11x)(1 - 12x)). ● a(n)=(6 * 12 ^ (n + 3) - 8 * 11 ^ (n + 3) + 3 * 6 ^ (n + 3) - 2 ^ (n + 3)) / 360. [_ Yahia Kahloune _ , Jun 05 2013] ●

► [A025007] 1,31,635,10835,166851,2407971,33252835,445002595,5818890851,74768679011,947871169635,11890741318755,147930305201251,1828206048535651,22473922782504035,275081786101769315 ★ Expansion of 1 / ((1 - x)(1 - 8x)(1 - 10x)(1 - 12x)). ● a(n) = (63 * 12 ^ (n + 3) - 154 * 10 ^ (n + 3) + 99 * 8 ^ (n + 3) - 8) / 5544. [_ Yahia Kahloune _ , Jul 02 2013] ●

► [A020981] 1,31,645,11255,177821,2636991,37440565,515147335,6923011341,91364030351,1188608942885,15286543614615,194762842152061,2462271368182111,30927944350627605,386358083836485095 ★ Expansion of 1 / ((1 - 8 * x) * (1 - 11 * x) * (1 - 12 * x)). ● a(n) = 16 * 8 ^ n / 3 - 121 * 11 ^ n / 3 + 36 * 12 ^ n. - _ R. J. Mathar _ , Jul 01 2013 ● a(0)=1, a(1)=31, a(2)=645; for n>2, a(n) = 31 * a(n - 1) - 316 * a(n - 2) + 1056 * a(n - 3). - _ Vincenzo Librandi _ , Jul 05 2013 ● a(n) = 23 * a(n - 1) - 132 * a(n - 2) + 8 ^ n. - _ Vincenzo Librandi _ , Jul 05 2013 ●

► [A000565] 31,696,5823,29380,108933,327840,848380,1958004,4130895,8107024,14990889,26372124,44470165,72305160,113897310,174496828,260846703,381480456,547057075,770735316,1068589557,1460069392,1968505152,2621661540 ★ Number of discordant permutations. ● a(n) = 243 / 560n ^ 7 - 243 / 16n ^ 6 + 3591 / 16n ^ 5 - 28737 / 16n ^ 4 + 82257 / 10n ^ 3 - 81931 / 4n ^ 2 + 151931 / 7n, for n>6. (End) ●

► [A014930] 1,31,706,14206,267331,4823581,84557956,1451432956,24517448581,408951042331,6752105339206,110549175651706,1797251568229831,29043982525261081,466937872906120456,7473240118999870456 ★ a(1)=1, a(n) = n * 15 ^ (n - 1) + a(n - 1). ● a(n) = (1 / 196) * (1 + 15 ^ n * (14 * n - 1)), with n >= 1. - _ Paolo P. Lava _ , Jan 13 2009 ●

► [A061252] 0,1,31,721,14911,289201,5386591,97576081,1732076671,30276117361,522861237151,8942430185041,151728638820031,2557404559011121,42864668012537311,715027614225987601,11878335717996660991 ★ a(n) = 16 ^ n - 15 ^ n. ● a(0)=0, a(n) = 15 * a(n - 1) + 16 ^ (n - 1). - _ Vincenzo Librandi _ , Feb 09 2011 ● a(0)=0, a(1)=1, a(n) = 31 * a(n - 1) - 240 * a(n - 2). - _ Vincenzo Librandi _ , Feb 09 2011 ●

► [A051587] 0,1,31,781,17887,380821,7635991,145858861,2680379887,47772681541,831224886151,14192847754141,238791235611487,3971678627940661,65470546978625911,1071778956904132621,17451563620410100687 ★ Number of 4 X n binary matrices such that any 2 rows have a common 1. ● a(n) = 16 ^ n - 6 * 12 ^ n + 12 * 10 ^ n - 9 ^ n - 16 * 8 ^ n + 15 * 7 ^ n - 6 * 6 ^ n + 5 ^ n. ●

► [A207390] 31,961,6115,23071,65955,158217,335915,651531,1178343,2015377,3292963,5178919,7885387,11676345,16875819,23876819,33151023,45259233,60862627,80734831,105774835,137020777,175664619,223067739,280777463 ★ Number of n X 7 0..1 arrays avoiding 0 0 1 and 0 1 0 horizontally and 0 0 1 and 1 1 0 vertically. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. ●

► [A207067] 31,961,6634,27063,82739,210118,468348,947298,1776951,3138223,5275270,8509345,13254267,20033564,29499352,42453012,59867727,82912941,112980802,151714651,201039619,263195394,340771220,436743190,554513895 ★ Number of n X 7 0..1 arrays avoiding 0 0 1 and 0 1 0 horizontally and 0 0 1 and 1 0 1 vertically. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. ●

► [A158675] 31,992,3875,8680,15407,24056,34627,47120,61535,77872,96131,116312,138415,162440,188387,216256,246047,277760,311395,346952,384431,423832,465155,508400,553567 ★ a(n) = 961 * n ^ 2 + 31. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A130004] 0,31,1204,1347,1504,8151,8980,9891,48600,53431,58740,284347,312504,343447,1658380,1822491,2002840,9666831,10623340,11674491,56343504,61918447,68045004,328395091,360888240 ★ Nonnegative values x of solutions (x, y) to the Diophantine equation x ^ 2 + (x + 449) ^ 2 = y ^ 2. ● a(n) = 6 * a(n - 3) - a(n - 6) + 898 for n > 6; a(1)=0, a(2)=31, a(3)=1204, a(4)=1347, a(5)=1504, a(6)=8151. ●

► [A115421] 32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56 ★ Numbers having a 1 in position 5 of their binary expansion. ● a(n + 32) = a(n) + 64. ●

► [A151983] 0,1,32,33,64,65,96,97,128,129,160,161,192,193,224,225,256,257,288,289,320,321,352,353,384 ★ Numbers congruent to { 0, 1 } mod 32. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n > 3. ● a(n) = (32 * n - 15 * (- 1) ^ n - 47) / 2. ●

► [A067010] 32,33,682,779,15292,17435,342562,390581,7673992,8749697,171910882,196008563,3851105332,4390935659,86271515242,98364661565,1932632833312,2203540975361,43294375870042,49363183412027,969869968690732,1105821903842843,21726788694026482 ★ a(2n) and a(2n + 1) are side lengths of a Beentjes sequence of perfect squared rectangles, starting with a 32 X 33 rectangle. ● a(2n) = 11 * a(2n - 2) + 10 * a(2n - 1), a(2n + 1) = 13 * a(2n - 2) + 11 * a(2n - 1), a(0) = 32, a(1) = 33. ● a(n) = 22 * a(n - 2) + 9 * a(n - 4) for n>3. - _ Colin Barker _ , May 26 2015 ●

► [A029925] 32,34,36,37,39,41,43,45,46,48,50,52,54,55,57,59,61,63,64,66,68,70,72,73,75 ★ Convert n from degrees Celsius to Fahrenheit. ● a(n) = floor((18 * n + 325) / 10). - _ Reinhard Zumkeller _ , May 03 2010 ●

► [A159007] 32,41,105,114,178,187,251,260,324,333,397,406,470,479,543,552,616,625,689,698,762,771,835,844,908 ★ Numbers k such that k == 32 or 41 (mod 73). ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) with a(1)=32, a(2)=41, a(3)=105. ● a(n) = (73 + 55 * (- 1) ^ (n - 1) + 146 * (n - 1)) / 4. ●

► [A046304] 32,48,64,72,80,96,108,112,120,128,144,160,162,168,176,180,192,200,208,216,224,240,243,252,256 ★ Divisible by at least 5 primes (counted with multiplicity). ● a(n) = n + O(n (log log n) ^ 3 / log n). - _ Charles R Greathouse IV _ , Apr 07 2017 ●

► [A175162] 32,48,80,144,272,528,1040,2064,4112,8208,16400,32784,65552,131088,262160,524304,1048592,2097168,4194320,8388624,16777232,33554448,67108880,134217744,268435472 ★ a(n) = 16 * (2 ^ n + 1). ● a(n) = 3 * a(n - 1) - 2 * a(n - 2), a(0)=32, a(1)=48. - _ Vincenzo Librandi _ , Dec 28 2010 ●

► [A099048] 32,50,68,86,104,122,140,158,176,194,212,230,248,266,284,302,320,338,356,374,392,410,428,446,464 ★ Number of 5 X n 0 - 1 matrices avoiding simultaneously the right angled numbered polyomino patterns (ranpp) (00;1), (01;0), (10;0) and (11;0). ● a(n) = 18 * n + 14. ●

► [A176542] 32,50,98,128,200,242,338,392,512,578,722,800,968,1058,1250,1352,1568,1682,1922,2048,2312,2450,2738,2888,3200 ★ Numbers n such that there are only a finite nonzero number of sets of n consecutive triangular numbers that sum to a square. ● a(n) = (9 * n ^ 2 + 24 * n + 16) / 2 for n even. ● a(n) = (9 * n ^ 2 + 30 * n + 25) / 2 for n odd. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5) for n>5. ●

► [A206371] 32,63,125,249,497,993,1985,3969,7937,15873,31745,63489,126977,253953,507905,1015809,2031617,4063233,8126465,16252929,32505857,65011713,130023425,260046849,520093697 ★ a(n) = 31 * 2 ^ n + 1. ● a(n) = 31 * 2 ^ n + 1. ●

► [A122616] 32,64,96,128,160,192,224,243,256,275,288,307,320,339,352,371,384,403,416,435,448,467,480,486,499 ★ Sums of 5th powers of primes. ● a(n) = a * 32 + b * 243 + c * 3125 + d * 16807 + e * 161051 + ... where a,b,c,d,e,... are non negative integers. Sumset of A050997 Fifth powers of primes. ●

► [A339358] 32,64,320,576,1696,2816,6400,9984,19392,28800,50304,71808,116160,160512,244992,329472,480480,631488,887744,1144000,1560416,1976832,2629120,3281408,4271488 ★ Maximum number of copies of a 1234567 permutation pattern in an alternating (or zig - zag) permutation of length n + 11. ● a(2n - 1) = 128 * C(n + 4,7) + 128 * C(n + 4,6) + 32 * C(n + 4,5). ●

► [A132773] 0,32,66,102,140,180,222,266,312,360,410,462,516,572,630,690,752,816,882,950,1020,1092,1166,1242,1320 ★ a(n) = n * (n + 31). ● a(n) = 2 * n + a(n - 1) + 30, with n>0, a(0)=0. - _ Vincenzo Librandi _ , Aug 03 2010 ●

► [A234875] 32,68,128,268,512,1068,2048,4268,8192,17068,32768,68268,131072,273068,524288,1092268,2097152,4369068,8388608,17476268,33554432,69905068,134217728,279620268,536870912 ★ Number of (n + 1) X (1 + 1) 0..4 arrays with every 2 X 2 subblock having its diagonal sum differing from its antidiagonal sum by 1, with no adjacent elements equal (constant - stress tilted 1 X 1 tilings). ● a(n) = (4 + (- 2) ^ n + 49 * 2 ^ n) / 3 for n even. ● a(n) = ((- 2) ^ n + 49 * 2 ^ n) / 3 for n odd. ●

► [A153981] 32,68,176,464,1220,3200,8384,21956,57488,150512,394052,1031648,2700896,7071044,18512240,48465680,126884804,332188736,869681408,2276855492,5960885072,15605799728,40856514116,106963742624,280034713760 ★ a(n) = 36 * Fibonacci(2 * n + 1) - 4. ● a(n) = 3 * a(n - 1) - a(n - 2) + 4. ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) + a(n - 3). ● a(n) = 3 * a(n - 1) - 3 * a(n - 3) + a(n - 4). ● a(n) = - 4 + 18 * (((3 + sqrt(5)) / 2) ^ n + ((3 - sqrt(5)) / 2) ^ n) + (18 / 5) * sqrt(5) * (((3 + sqrt(5)) / 2) ^ n - ((3 - sqrt(5)) / 2) ^ n), with n>=0. - _ Paolo P. Lava _ , Jan 20 2009 ●

► [A250756] 32,72,129,203,294,402,527,669,828,1004,1197,1407,1634,1878,2139,2417,2712,3024,3353,3699,4062,4442,4839,5253,5684 ★ Number of (1 + 1) X (n + 1) 0..2 arrays with nondecreasing x(i,j) - x(i,j - 1) in the i direction and nondecreasing x(i,j) + x(i - 1,j) in the j direction. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>3. ●

► [A182466] 32,80,176,368,752,1520,3056,6128,12272,24560,49136,98288,196592,393200,786416,1572848,3145712,6291440,12582896,25165808,50331632,100663280,201326576,402653168,805306352 ★ a(n) = 3a(n - 1) - 2a(n - 2) with a(0)=32 and a(1)=80. ● a(n) = a(n - 1) * 2 + 16. ● a(n) = 8 * (3 * 2 ^ n - 2). - _ Harvey P. Dale _ , Aug 23 2012 ●

► [A234133] 32,80,192,512,1280,3584,9216,26624,69632,204800,540672,1605632,4259840,12713984,33816576,101187584,269484032,807403520,2151677952,6450839552,17196646400,51573161984,137506062336,412451078144,1099780063232 ★ Number of (n + 1) X (1 + 1) 0..3 arrays with every 2 X 2 subblock having the sum of the absolute values of all six edge and diagonal differences equal to 9. ● a(n) = 2 ^ (3 + n) + 2 ^ (- 1 / 2 + (3 * n) / 2) * (4 - 4 * (- 1) ^ n + 3 * sqrt(2) + 3 * (- 1) ^ n * sqrt(2)). ●

► [A175165] 0,32,96,224,480,992,2016,4064,8160,16352,32736,65504,131040,262112,524256,1048544,2097120,4194272,8388576,16777184,33554400,67108832,134217696,268435424,536870880 ★ a(n) = 32 * (2 ^ n - 1). ● a(n) = 2 ^ (n + 5) - 32. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2); a(0)=0, a(1)=32. - _ Vincenzo Librandi _ , Dec 28 2010 ●

► [A281237] 32,96,544,3168,18464,107616,627232,3655776,21307424,124188768,723825184,4218762336,24588748832,143313730656,835293635104,4868448079968,28375394844704,165383920988256,963928131084832,5618184865520736,32745181062039584,190852901506716768 ★ Solutions x to the negative Pell equation y ^ 2 = 72 * x ^ 2 - 73728 with x,y >= 0. ● a(n) = - 8 * sqrt(2) * ((4 - 3 * sqrt(2)) * (3 + 2 * sqrt(2)) ^ n - (3 - 2 * sqrt(2)) ^ n * (4 + 3 * sqrt(2))). ● a(n) = 6 * a(n - 1) - a(n - 2) for n>2. ●

► [A287925] 32,97,641,2417,14657,28577,83537,130337,279857,707297,923537,1874177,2825777,3418817,4879697,7890497,12117377,13845857,20151137,25411697,28398257,38950097,47458337,62742257,88529297 ★ a(n) = prime(1) ^ 4 + prime(n) ^ 4 ● a(n) = 2 ^ 4 + prime(n) ^ 4. ●

► [A197904] 32,98,412,1387,3803,8918,18594,35410,62786,105102,167817,257593,382409,551685,776401,1069217,1444593,1918909,2510585,3240201,4130617,5207093,6497409,8031985,9844001 ★ a(n) = ceiling((n + 1 / n) ^ 5). ● a(n) = n ^ 5 + 5n ^ 3 + 10n for n > 10. [_ Charles R Greathouse IV _ , Nov 21 2011] ●

► [A172517] 0,0,0,32,100,288,588,1152,1944,3200,4840,7200,10140,14112,18900,25088,32368,41472,51984,64800,79380,96800,116380,139392,165000 ★ Number of ways to place 2 nonattacking queens on an n X n toroidal board. ● a(n) = n ^ 2 * (n - 2) ^ 2 / 2 if n is even and a(n) = n ^ 2 * (n - 1)(n - 3) / 2 if n is odd. ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - 6 * a(n - 3) + 6 * a(n - 5) - 2 * a(n - 6) - 2 * a(n - 7) + a(n - 8). - _ Wesley Ivan Hurt _ , May 28 2021 ●

► [A194645] 32,100,344,1220,4392,15988,58776,218052,815816,3076180,11682296,44653028,171670440,663421684,2575592664,10039703172,39273896840,154109956756,606353229752,2391296071460,9449664931176,37407140524084,148300497571992,588693691298244 ⋆ Number of ways to place 3n nonattacking kings on a 6 X 2n cylindrical chessboard. ● a(n) = 2 * 4 ^ n + 2 * 3 ^ n + 4 * (2 + sqrt(2)) ^ n + 4 * (2 - sqrt(2)) ^ n + 2. ●
► [A221685] 32,113,241,418,636,891,1182,1509,1872,2271,2706,3177,3684,4227,4806,5421,6072,6759,7482,8241,9036,9867,10734,11637,12576 ⋆ Number of 0..n arrays of length 6 with each element differing from at least one neighbor by 1 or less, starting with 0. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>7. ●
► [A298201] 32,114,548,2970,16892,98466,583412,3500970,21232556,129930354,801132452,4970993658,31006439132,194231313474,1220944803668,7696445791050,48625129598732,307759067766546,1950657679387652,12377791111168410,78613025212107836,499635602835227874 ⋆ Number of Eulerian orientations of the torus grid graph C _ 4 X C _ n. ● a(n) = 15 * a(n - 1) - 77 * a(n - 2) + 161 * a(n - 3) - 138 * a(n - 4) + 40 * a(n - 5). ●
► [A247155] 32,125,280,497,776,1117,1520,1985,2512,3101,3752,4465,5240,6077,6976,7937,8960,10045,11192,12401,13672,15005,16400,17857,19376 ⋆ 31n ^ 2 + 1 ● a(1)=32, a(2)=125, a(3)=280, a(n)=3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Apr 28 2016 ●
► [A244082] 0,32,128,288,512,800,1152,1568,2048,2592,3200,3872,4608,5408,6272,7200,8192,9248,10368,11552,12800,14112,15488,16928,18432 ⋆ a(n) = 32 * n ^ 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Wesley Ivan Hurt _ , Nov 19 2021 ●
► [A304380] 32,136,312,560,880,1272,1736,2272,2880,3560,4312,5136,6032,7000,8040,9152,10336,11592,12920,14320,15792,17336,18952,20640,22400 ⋆ a(n) = 36 * n ^ 2 - 4 * n (n>=1). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>3. ●
► [A137740] 1,32,138,348,700,1246,2050,3188,4749,6836,9567,13076,17514,23050,29872,38188,48227,60240,74501,91308,110984,133878,160366,190852,225769 ⋆ Number of different strings of length n + 5 obtained from "123...n" by iteratively duplicating any substring. ● a(n) = (n + 4)(n ^ 2 + 3n - 8)(n ^ 2 + 23n + 150) / 5! + 4 for n>4. ●
► [A221597] 32,139,342,651,1068,1593,2226,2967,3816,4773,5838,7011,8292,9681,11178,12783,14496,16317,18246,20283,22428,24681,27042,29511,32088 ⋆ Number of 0..n arrays of length 5 with each element differing from at least one neighbor by 1 or less. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>5. ●
► [A100164] 1,32,143,384,805,1456,2387,3648,5289,7360,9911,12992,16653,20944,25915,31616,38097,45408,53599,62720,72821,83952,96163,109504,124025 ⋆ Structured rhombic triacontahedral numbers (vertex structure 11). ● a(n) = (1 / 6) * (50 * n ^ 3 - 60 * n ^ 2 + 16 * n) = (1 / 3) * n * (5 * n - 2) * (5 * n - 4). ● a(n) = (5 * (n - 1) + 1) * (5 * (n - 1) + 3) * (5 * (n - 1) + 5) / 15. ●
► [A224041] 32,144,298,488,734,1064,1505,2091,2864,3875,5185,6866,9002,11690,15041,19181,24252,30413,37841,46732,57302,69788,84449,101567,121448 ⋆ Number of 5 X n 0..1 arrays with antidiagonals unimodal and rows and diagonals nondecreasing. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>9. ●
► [A100165] 1,32,147,400,845,1536,2527,3872,5625,7840,10571,13872,17797,22400,27735,33856,40817,48672,57475,67280,78141,90112,103247,117600,133225 ⋆ Structured rhombic triacontahedral numbers (vertex structure 7). ● a(n) = (1 / 6) * (54 * n ^ 3 - 72 * n ^ 2 + 24 * n) = n * (3 * n - 2) ^ 2. ● a(n) = (3 * (n - 1) + 1) ^ 2 * (3 * (n - 1) + 3) / 3. ●
► [A100173] 1,32,148,404,855,1556,2562,3928,5709,7960,10736,14092,18083,22764,28190,34416,41497,49488,58444,68420,79471,91652,105018,119624,135525 ⋆ Structured pentakis dodecahedral numbers (vertex structure 6). ● a(n) = (1 / 6) * (55 * n ^ 3 - 75 * n ^ 2 + 26 * n). ●
► [A100172] 1,32,150,412,875,1596,2632,4040,5877,8200,11066,14532,18655,23492,29100,35536,42857,51120,60382,70700,82131,94732,108560,123672,140125 ⋆ Structured triakis icosahedral numbers (vertex structure 4). ● a(n) = (1 / 6) * (57 * n ^ 3 - 81 * n ^ 2 + 30 * n). ●
► [A318159] 1,32,156,436,935,1716,2842,4376,6381,8920,12056,15852,20371,25676,31830,38896,46937,56016,66196,77540,90111,103972,119186,135816,153925 ⋆ Figurate numbers based on the small stellated dodecahedron: a(n) = n * (21 * n ^ 2 - 33 * n + 14) / 2. ● a(n) == a(n + 20) (mod 10). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>4. ●
► [A035286] 0,0,32,156,456,1040,2040,3612,5936,9216,13680,19580,27192,36816,48776,63420,81120,102272,127296,156636,190760,230160,275352,326876,385296 ⋆ Number of ways to place a non - attacking white and black king on n X n chess board. ● a(n) = n ^ 4 - 9 n ^ 2 + 12 n - 4. ● a(n) = (n - 1) (n - 2) (n ^ 2 + 3 n - 2). - _ M. F. Hasler _ , Nov 17 2021 ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) - _ Nathan L. Skirrow _ , Oct 11 2022 ●
► [A304381] 32,168,412,764,1224,1792,2468,3252,4144,5144,6252,7468,8792,10224,11764,13412,15168,17032,19004,21084,23272,25568,27972,30484,33104 ⋆ a(n) = 54 * n ^ 2 - 26 * n + 4 (n>=1). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>3. ●
► [A188820] 32,169,432,841,1360,2025,2800,3721,4752,5929,7216,8649,10192,11881,13680,15625,17680,19881,22192,24649,27216,29929,32752,35721,38800 ⋆ Number of n X 5 binary arrays without the pattern 0 1 diagonally or antidiagonally. ● a(n) = 9 - 48 * n + 64 * n ^ 2 for n even. ● a(n) = - 48 * n + 64 * n ^ 2 for n >1 and odd. ●
► [A200840] 32,191,676,1817,4108,8239,15128,25953,42184,65615,98396,143065,202580,280351,380272,506753,664752,859807,1098068,1386329,1732060,2143439,2629384,3199585,3864536 ⋆ Number of 0..n arrays x(0..4) of 5 elements without any two consecutive increases or two consecutive decreases. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. ●
► [A019560] 1,32,192,608,1408,2720,4672,7392,11008,15648,21440,28512,36992,47008,58688,72160,87552,104992,124608,146528,170880,197792,227392,259808,295168 ⋆ Coordination sequence for C _ 4 lattice. ● a(n) = (32 / 3) * n * (1 + 2 * n ^ 2) for n>0. ●
► [A130811] 32,192,672,1792,4032,8064,14784,25344,41184,64064,96096,139776,198016,274176,372096,496128,651168,842688,1076768,1360128,1700160,2104960,2583360,3144960,3800160 ⋆ If X _ 1,...,X _ n is a partition of a 2n - set X into 2 - blocks then a(n) is equal to the number of 5 - subsets of X containing none of X _ i, (i=1,...n). ● a(n) = binomial(2 * n,5) + (2 * n - 4) * binomial(n,2) - n * binomial(2 * n - 2,3). ● a(n) = C(n,n - 5) * 2 ^ 5, for n>=5. - _ Zerinvary Lajos _ , Dec 07 2007 ●
► [A200787] 32,216,840,2425,5796,12152,23136,40905,68200,108416,165672,244881,351820,493200,676736,911217,1206576,1573960,2025800,2575881,3239412,4033096,4975200,6085625,7385976 ⋆ Number of 0..n arrays x(0..4) of 5 elements without any two consecutive increases. ● a(n) = (1 + n) ^ 2 * (12 + 44 * n + 33 * n ^ 2 + 7 * n ^ 3) / 12 . ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. ●
► [A250354] 32,216,888,2724,6900,15186,30072,54888,93924,152550,237336,356172,518388,734874,1018200,1382736,1844772,2422638,3136824,4010100,5067636,6337122,7848888,9636024,11734500 ⋆ Number of length 5 arrays x(i), i=1..5 with x(i) in i..i + n and no value appearing more than 2 times. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>8. ●
► [A070053] 32,223,1194,5535,23225,90398,331561,1158554,3887592,12603092,39659340,121593628,364327996,1069496444,3082349564,8737174524,24395286524,67182399484,182689947644,491040063484,1305703776252,3437454229500,8965943918588,23184233594876,59466277191676 ⋆ Number of Bottleneck - Monge matrices with 5 rows. ● a(N) = a(5, N), where a(P, N) is defined recursively in A070050. ●
► [A022146] 1,32,224,768,1856,3680,6432,10304,15488,22176,30560,40832,53184,67808,84896,104640,127232,152864,181728,214016,249920,289632,333344,381248,433536 ⋆ Coordination sequence for root lattice B _ 4. ● a(0) = 1, a(n) = 32 * n ^ 3 - 16 * n ^ 2 + 16 * n. - _ Ralf Stephan _ , Sep 03 2003 ●
► [A269585] 32,229,964,2969,7456,16237,31844,57649,97984,158261,245092,366409,531584,751549,1038916,1408097,1875424,2459269,3180164,4060921,5126752,6405389,7927204,9725329,11835776 ⋆ Number of length - 5 0..n arrays with no repeated value differing from the previous repeated value by more than one. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). ●
► [A208641] 32,233,851,2331,5572,12404,26508,55260,113427,230559,465773,937321,1881726,3772054,7554458,15121266,30257157,60531513,121083123,242189591,484406152,968843304,1937722072,3875484536,7751014887 ⋆ Number of 6 X n 0..1 arrays with new values 0..1 introduced in row major order and no element equal to more than one of its immediate leftward or upward or right - upward antidiagonal neighbors ● a(n) = (792 * (7 * 2 ^ n - 10) - 3382 * n - 539 * n ^ 2 - 38 * n ^ 3 - n ^ 4) / 24 for n>3. ●
► [A223952] 32,243,596,1062,1821,3115,5233,8564,13613,21017,31561,46194,66045,92439,126913,171232,227405,297701,384665,491134,620253,775491,960657,1179916,1437805 ⋆ Number of 5 X n 0..1 arrays with diagonals and antidiagonals unimodal and rows nondecreasing. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>9. ●
► [A224136] 32,243,748,1635,3149,5648,9577,15505,24141,36350,53169,75823,105741,144572,194201,256765,334669,430602,547553,688827,858061,1059240,1296713,1575209,1899853 ⋆ Number of 5 X n 0..1 arrays with rows nondecreasing and antidiagonals unimodal. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>9. ●
► [A250363] 32,243,1016,3094,7712,16700,32608,58826,99704,160672,248360,370718,537136,758564,1047632,1418770,1888328,2474696,3198424,4082342,5151680,6434188,7960256,9763034,11878552 ⋆ Number of length 5 arrays x(i), i=1..5 with x(i) in i..i + n and no value appearing more than 3 times. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>8. ●
► [A346637] 0,1,32,243,1019,3095,7671,16527,32138,57789,97690,157091,242397,361283,522809,737535,1017636,1377017,1831428,2398579,3098255,3952431,4985387,6223823,7696974 ⋆ a(n) is the number of quintuples (a _ 1,a _ 2,a _ 3,a _ 4,a _ 5) having all terms in { 1,...,n } such that there exists a pentagon with these side - lengths. ● a(n) = n ^ 5 - 5 * binomial(n + 1,5) = n ^ 5 - (n + 1) * binomial(n,4). ●
► [A000584] 0,1,32,243,1024,3125,7776,16807,32768,59049,100000,161051,248832,371293,537824,759375,1048576,1419857,1889568,2476099,3200000,4084101,5153632,6436343,7962624 ⋆ Fifth powers: a(n) = n ^ 5. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) + 120. - _ Ant King _ , Sep 23 2013 ● a(n) = n + Sum _{ j=0..n - 1 }{ k=1..4 } binomial(5,k) * j ^ (5 - k). - _ Patrick J. McNab _ , Mar 28 2016 ●
► [A352051] 0,32,243,1024,3125,7808,16807,32768,59292,100032,161051,249856,371293,537856,762743,1048576,1419857,1897376,2476099,3201024,4101151,5153664,6436343,7995392,9768750 ⋆ Sum of the 5th powers of the divisor complements of the odd proper divisors of n. ● a(n) = n ^ 5 * Sum _{ d|n, d<n, d odd } 1 / d ^ 5. ●
► [A373000] 1,32,243,1054,3125,7776,16807,33818,59289,100000,161051,256122,371293,537824,759375,1082386,1419857,1897248,2476099,3293750,4084101,5153632,6436343,8217774,9768745 ⋆ a(n) = Sum _{ k=1..n } sigma((n / gcd(k,n)) ^ 4). ● a(n) = Sum _{ d|n } phi(d) * sigma(d ^ 4). ●
► [A056572] 0,1,1,32,243,3125,32768,371293,4084101,45435424,503284375,5584059449,61917364224,686719856393,7615646045657,84459630100000,936668172433707,10387823949447757,115202670521319424,1277617458486664901 ⋆ Fifth power of Fibonacci numbers A000045. ● a(n) = (10 * F(n) + 5 * (- 1) ^ (n + 1) * F(3 * n) + F(5 * n)) / 25, n >= 0. See the general comment on A111418 regarding the Ozeki reference; here the row 10, 5, 1 of that triangle applies. - _ Wolfdieter Lang _ , Aug 25 2012 ● a(n) = (F(n) ^ 2 * (F(3 * n) - (- 1) ^ n * 3 * F(n)) / 5. - _ Gary Detlefs _ , Jan 07 2013 ● a(n) = F(n - 2) * F(n - 1) * F(n) * F(n + 1) * F(n + 2) + F(n). - _ Tony Foster III _ , Apr 11 2018 ●
► [A231304] 0,1,32,244,1056,3369,8832,20176,41600,79225,141600,240276,390432,611569,928256,1370944,1976832,2790801,3866400,5266900,7066400,9351001,12220032,15787344,20182656 ⋆ Recurrence a(n) = a(n - 2) + n ^ M for M=5, starting with a(0)=0, a(1)=1. ● a(n) = Sum _{ k=0..floor(n / 2) } (n - 2k) ^ 5. ● a(0)=0, a(1)=1, a(2)=32, a(3)=244, a(4)=1056, a(5)=3369, a(6)=8832, a(7)=20

176, a(n) = 6 * a(n - 1) - 14 * a(n - 2) + 14 * a(n - 3) - 14 * a(n - 5) + 14 * a(n - 6) - 6 * a(n - 7) + a(n - 8). - _ Harvey P. Dale _ , Jul 22 2014 ● a(n) = (1 / 24) * (2 * n ^ 6 + 12 * n ^ 5 + 20 * n ^ 4 - 16 * n ^ 2 - 3 * (- 1) ^ n + 3). ●

► [A195592] 32,256,1220,4460,13932,39316,103508,259372,626780,1473764,3392964,7682812,17166476,37942900,83115188,180699980,390351420,838619524,1793087780,3817890076,8099228012,17125372436,36104600340,75916936300,1592493706 52 ★ Number of ways to place 4n nonattacking kings on a vertical cylinder 8 X 2n. ● a(n) = (221 * n - 779) * 2 ^ n + 44 * n ^ 2 + 324 * n + 780. ●

► [A122103] 32,275,3400,20207,181258,552551,1972408,4448507,10884850,313959 99,60025150,129369107,245225308,392233751,621578758,1039774251,1754698550,2599294851,3949419958,5753649309,7826720902,10903777301,14842817944 ★ Sum of the fifth powers of the first n primes. ● a(n) = sum(k = 1 .. n, prime(k) ^ 5). ●

► [A267324] 0,0,0,0,0,32,288,2448,22080,216000,2298240,26530560,330946560,4441651200,63866880000,980037273600,15990989414400,276529539686400,5052853757952000,97290972979200000,1969085601939456000,41794695550992384000,928395406320205824000 ★ Number of elements of S _ n with strategic pile of size 4 . ● a(n) = (n - 4)! * (6 * binomial(n - 5,3) + 16 * binomial(n - 5,2) + 16 * binomial(n - 5,1)) for n>5. - _ Marisa Gaetz _ , Jan 18 2017 ●

► [A337418] 32,290,2240,16322,116192,819170,5751680,40314242,282357152,1976972450,13840224320,96885821762,678213506912,4747532812130,33232844476160,232630255706882,1628412823069472,11398892860850210,79792259324043200,558545843162577602 ★ Number of sets (in the Hausdorff metric geometry) at each location between two sets defined by a complete bipartite graph K(3,n) (with n at least 3) missing two edges, where the removed edges are not incident to the same vertex in the 3 point part but are incident to the same vertex in the other part. ● a(n) = 7 ^ (n - 1) - 2 * 3 ^ (n - 1) + 1. ● a(n) = 11 * a(n - 1) - 31 * a(n - 2) + 21 * a(n - 3) for n>5. ●

► [A060158] 0,0,0,0,0,32,300,1852,9576,45096,201060,866324,3650592,15154240,62260380,253939116,1030367448,4165106264,16790875860,67553807428,271383782544,1089035545968,4366631897100,17497971562460,70086163646280 ★ Number of permutations of [n] with 4 sequences. ● a(n) = 2n - 7 + (6 - n) * 2 ^ (n - 1) - 3 ^ n + 4 ^ (n - 1). ●

► [A199532] 32,320,1324,3734,8470,16682,29750,49284,77124,115340,166232,232330,316394,421414,550610,707432,895560,1118904,1381604,1688030,2042782,2450690,2916814,3446444,4045100 ★ Number of - n..n arrays x(0..4) of 5 elements with zero sum and no two consecutive zero elements. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

► [A244867] 1,32,320,1784,7040,22104,58980,139320,299343,596200,1115972,1983488,3374150,5527952,8765880,13508880,20299581,29826960,42954136,60749480,84521228,115855784,156659900,209206920,276187275 ★ Let G denote the 9 - node, 16 - edge graph formed from an octagon with main diagonals drawn and a node at the center; a(n) = number of magic labelings of G with magic sum 2n. ● a(n) = (5040 + 22164 * n + 43092 * n ^ 2 + 46963 * n ^ 3 + 30240 * n ^ 4 + 11326 * n ^ 5 + 2268 * n ^ 6 + 187 * n ^ 7) / 5040. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>7. ●

► [A095152] 1,32,321,2560,18881,135072,954241,6705920,47020161,329377312,2306349761,16146574080,113032395841,791245902752,5538778714881,38771623191040,271401878897921,1899814701967392,13298707562817601,93090966886860800,651636810049438401 ★ Number of 3 - block covers of a labeled n - set. ● a(n) = (1 / 3!) * (11 - 6 * 3 ^ n + 7 ^ n). ● a(n) = 11 * a(n - 1) - 31 * a(n - 2) + 21 * a(n - 3). G.f.: - x ^ 2 * (21 * x + 1) / ((x - 1) * (3 * x - 1) * (7 * x - 1)). - _ Colin Barker _ , Jul 12 2013 ● a(n) = sum(i=0..n, (- 1) ^ i * C(n,i) * C(2 ^ (n - i) - 1,3)). - _ Geoffrey Critzer _ , Aug 24 2014 ●

► [A145402] 1,32,336,3610,26996,229348,1620034,12071462,82550864,572479244,3808019582,25304433030,164452629818,1062773834046,6777328517896,42944798886570,269706791277978,1683956271732804,10445800698724066,64470330298173718,395897522698282286 ★ Number of Hamiltonian paths in P _ 6 X P _ n. ● a(1) = 1, ● a(2) = 32, ● a(3) = 336, ● a(4) = 3610, ● a(5) = 26996, ● a(6) = 229348, ●

► [A335612] 32,344,2792,20720,148592,1050824,7387832,51811040,362965952,2541627704,17793992072,124565738960,871983556112,6103955042984,42727895751512,299095901612480,2093673205343072,14655718119568664,102590043883482152 ★ Number of sets (in the Hausdorff metric geometry) at each location between two sets defined by a complete bipartite graph K(3,n) (with n at least 3) missing two edges, where the removed edges are incident to the same vertex in the three point part. ● a(n) = 9 * 7 ^ (n - 2) - 11 * 3 ^ (n - 2) + 2. ● a(n) = 11 * a(n - 1) - 31 * a(n - 2) + 21 * a(n - 3) for n>5. ●

► [A158074] 0,0,0,0,32,352,3072,30848,295456,2896832,28120096,273895232,2664515712,25931157504,252338724352,2455552258304,23895692937216,232533011307776,2262837745837568,22020130538878208,214282979451801088,2085233793265765376,20291876152214982656 ★ Number of (directed) Hamiltonian cycles on a 3 X (2n) knight's tour graph. ● a(n) = 6 * a(n - 1) + 64 * a(n - 2) - 200 * a(n - 3) - 1000 * a(n - 4) + 3016 * a(n - 5) + 3488 * a(n - 6) - 24256 * a(n - 7) + 23776 * a(n - 8) + 104168 * a(n - 9) - 203408 * a(n - 10) - 184704 * a(n - 11) + 443392 * a(n - 12) + 14336 * a(n - 13) - 151296 * a(n - 14) + 145920 * a(n - 15) - 263424 * a(n - 16) + 317440 * a(n - 17) + 36864 * a(n - 18) - 966656 * a(n - 19) + 573440 * a(n - 20) + 131072 * a(n - 21), for n>=23. (See A070030) - _ Seiichi Manyama _ , Dec 16 2016 ●

► [A105250] 1,32,360,2400,11550,44352,144144,411840,1061775,2516800,5562128,11583936,22926540,43411200,79070400,139163904,237557133,394558560,639331000,1013012000,1572701130,2396496960,3589794000,5293080000,7691506875 ★ a(n) = binomial(n + 3,n) * binomial(n + 7,n). ● a(n) = 11 * a(n - 1) - 55 * a(n - 2) + 165 * a(n - 3) - 330 * a(n - 4) + 462 * a(n - 5) - 462 * a(n - 6) + 330 * a(n - 7) - 165 * a(n - 8) + 55 * a(n - 9) - 11 * a(n - 10) + a(n - 11). - _ Wesley Ivan Hurt _ , May 24 2021 ●

► [A191901] 0,32,364,2048,7812,23328,58824,131072,265720,500000,885780,1492992,2413404,3764768,5695312,8388608,12068784,17006112,23522940,32000000,42883060,56689952,74017944,95551488,122070312 ★ Number of compositions of odd natural numbers into 6 parts <= n. ● a(n) = ((n + 1) ^ 6 - (1 + (- 1) ^ n) / 2) / 2. ● a(0)=0, a(1)=32, a(2)=364, a(3)=2048, a(4)=7812, a(5)=23328, a(6)=58824, a(7)=131072, a(n)=6 * a(n - 1) - 14 * a(n - 2) + 14 * a(n - 3) - 14 * a(n - 5) + 14 * a(n - 6) - 6 * a(n - 7) + a(n - 8). - _ Harvey P. Dale _ , Apr 12 2015 ●

► [A191489] 1,32,365,2048,7813,23328,58825,131072,265721,500000,885781,1492992,2413405,3764768,5695313,8388608,12068785,17006112,23522941,32000000,42883061,56689952,74017945,95551488,122070313 ★ Number of compositions of even natural numbers into 6 parts <= n. ● a(n) = ((n + 1) ^ 6 + (1 + (- 1) ^ n) / 2) / 2. ●

► [A086942] 32,392,3992,39992,399992,3999992,39999992,399999992,3999999992,39999999992,399999999992,3999999999992,39999999999992,399999999999992,3999999999999992,39999999999999992,399999999999999992,3999999999999999992 ★ Integers k such that R(k + 8) = 4. ● a(n) = 4 * 10 ^ n - 8. ●

► [A247996] 32,396,2292,9080,28020,72972,167576,349392,674520,1223180,2105772,3469896,5507852,8465100,12649200,18439712,26298576,36781452,50549540,68382360,91191012,120032396,156123912,200859120,255823880 ★ Number of length 1 + 5 0..n arrays with no disjoint triples in any consecutive six terms having the same sum. ● a(n) = (2 * n ^ 6 + n ^ 5 + 35 * n ^ 4 - 5 * n ^ 3 + 10 * n ^ 2 + 36 * n) / 2 for n even. ● a(n) = (2 * n ^ 6 + n ^ 5 + 35 * n ^ 4 - 5 * n ^ 3 + 10 * n ^ 2 + 36 * n - 15) / 2 for n odd. ●

► [A068548] 1,32,400,3584,26880,180224,1118208,6553600,36765696,199229440,1049624576,5402263552,27262976000,135291469824,661693399040,3195455668224,15260018802688,72155450572800,338168545017856 ★ Coefficients of (- x ^ (2n - 6)) in Chebyshev polynomial of degree 2n. ● a(n) = n(2n ^ 2 + 3n - 2) / 12 * 4 ^ n. - _ Ralf Stephan _ , May 08 2004 ●

► [A145403] 1,32,414,5382,79384,1262816,20562673,336067810,5493330332,89803472792,1468381290905,24012936982592,392716580997352,6422777815120738,105043595925333255,1717976646746942760 ★ Number of nonintersecting rook paths joining opposite corners of 6 X n board. ● a(1) = 1, ● a(2) = 32, ● a(3) = 414, ● a(4) = 5382, ● a(5) = 79384, ● a(6) = 1262816, ●

► [A125116] 1,32,417,3072,15585,60960,197057,550912,1374273,3127840,6602849,13089792,24605217,44188704,76283265,127213568,205777537,323968032,497842465,748559360,1103602017,1598210592,2277045057,3196102656 ★ Number of 8 X 8 pandiagonal Franklin squares with magic sum 4n. ● a(n) = s ^ 8 / 2293760 + s ^ 7 / 71680 + s ^ 6 / 3840 + s ^ 5 / 320 + s ^ 4 / 40 + 2s ^ 3 / 15 + 197s ^ 2 / 420 + 106s / 105 + 1 where s=4n [Ahmed]. ●

► [A145217] 1,32,418,3104,16003,64064,213060,614976,1587333,3742816,8190182,16832608,32795399,61021312,109078664,188234880,314856201,512202912,812698666,1260762272,1916300683,2858972864,4193345740,6055075520 ★ a(n) is the self - convolution series of the sum of 4th powers of the first n natural numbers. ● a(n) = C(n + 2,3) * (n * (n + 2) * (n ^ 4 + 4 * n ^ 3 + 8 * n ^ 2 + 8 * n + 6) + 24) / 105. ●

► [A283811] 1,32,454,4718,41506,329462,2441314,17234438,117437746,779305142,5067707074,32440729958,205120773586,1284333040022,7978977787234,49258610238278,302555048903026,1850666770922102,11281963755617794,68586728901231398,416015651355490066 ★ Poly - Bernoulli numbers B _ n ^ (k) with k = - 5. ● a(n) = 120 * 6 ^ n - 240 * 5 ^ n + 150 * 4 ^ n - 30 * 3 ^ n + 2 ^ n. ● a(n) = 20 * a(n - 1) - 155 * a(n - 2) + 580 * a(n - 3) - 1044 * a(n - 4) + 720 * a(n - 5) for n>4. ●

► [A035477] 1,32,512,5472,44032,285088,1549824,7288544,30382080,114509600,396241408,1273082976,3829072896,10848180384,29093973504,74178420192,180482027520,420523089440,941348409856,2030565262176,4232440732672,8546273961888,16756632155648 ★ Coordination sequence for lattice D *_ 16 (with edges defined by l _ 1 norm = 1). ● a(m) = Sum _{ k=0..n } (2 ^ k * binomial(n, k) * binomial(m - 1, k - 1)) + 2 ^ n * binomial((n + 2 * m) / 2 - 1, n - 1), with n=16 . ●

► [A146124] 0,32,516,2307,6472,14379,27684,48331,78552,120867,178084,253299,349896,471547,622212,806139,1027864,1292211,1604292,1969507,2393544,2882379,3442276,4079787 ★ Number of n X n arrays of squares of integers summing to 5 with every element equal to at least one neighbor. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>8. ●

► [A130609] 0,32,533,669,833,3672,4460,5412,21945,26537,32085,128444,155208,187544,749165,905157,1093625,4366992,5276180,6374652,25453233,30752369,37154733,148352852,179238480 ★ Nonnegative values x of solutions (x, y) to the Diophantine equation x ^ 2 + (x + 223) ^ 2 = y ^ 2. ● a(n) = 6 * a(n - 3) - a(n - 6) + 446 for n > 6; a(1)=0, a(2)=32, a(3)=533, a(4)=669, a(5)=833, a(6)=3672. ●

► [A054338] 1,32,576,7680,84480,811008,7028736,56229888,421724160,2998927360,20392706048,133479530496,845370359808,5202279137280,31213674823680,183120225632256,1052941297385472,5946021444059136,33033452466995200,180814687187763200,976399310813921280 ★ 8 - fold convolution of A000302 (powers of 4). ● a(n) = binomial(n + 7, 7) * 4 ^ n. ●

► [A028204] 1,32,645,10480,150101,1979712,24649045,294242960,3402478101,38387226592,424748805845,4627041422640,49770222820501,529800364460672,5591164247433045,58580499720429520,610040416273729301 ★ Expansion of 1 / ((1 - 6 * x) * (1 - 7 * x) * (1 - 9 * x) * (1 - 10 * x)). ● a(n) = 19 * a(n - 1) - 90 * a(n - 2) + 7 ^ (n + 1) - 6 ^ (n + 1), n >= 2. - _ Vincenzo Librandi _ , Mar 13 2011 ● a(n) = 7 ^ (n + 3) / 6 - 3 ^ (2 * n + 5) / 2 - 3 * 6 ^ (n + 1) + 25 * 10 ^ (n + 1) / 3. - _ R. J. Mathar _ , Mar 14 2011 ● a(n) = 32 * a(n - 1) - 379 * a(n - 2) + 1968 * a(n - 3) - 3780 * a(n - 4). - _ Muniru A Asiru _ , Aug 31 2018 ●

► [A028190] 1,32,647,10570,152481,2028012,25481947,307098110,3585577061,40841792992,456139166847,5013707912850,54390770364841,583654905773972,6205991828373347,65478677349042790,686305950702955821 ★ Expansion of 1 / ((1 - 5x)(1 - 8x)(1 - 9x)(1 - 10x)). ● a(n) = 19 * a(n - 1) - 90 * a(n - 2) + (8 ^ (n + 1) - 5 ^ (n + 1)) / 3; a(0)=1, a(1)=32. - _ Vincenzo Librandi _ , Mar 12 2011 ● a(n) = 32 * a(n - 1) - 377 * a(n - 2) + 1930 * a(n - 3) - 3600 * a(n - 4); a(0)=1, a(1)=32, a(2)=647, a(3)=10570. - _ Harvey P. Dale _ , Apr 28 2013 ● a(n) = (6 * 10 ^ (n + 3) - 15 * 9 ^ (n + 3) + 10 * 8 ^ (n + 3) - 5 ^ (n + 3)) / 60. - _ Yahia Kahloune _ , Jun 05 2013 ●

► [A028202] 1,32,647,10582,153153,2049684,26010139,317905634,3781590725,44096537056,506668749951,5757875493006,64896612687817,726942456592748,8105282135259683,90059836210434298,998087763949942029 ★ Expansion of 1 / ((1 - 6x)(1 - 7x)(1 - 8x)(1 - 11x)). ● a(n) = 19 * a(n - 1) - 88 * a(n - 2) + 7 ^ (n + 1) - 6 ^ (n + 1), n >= 2. - _ Vincenzo Librandi _ , Mar 13 2011 ● a(n) = - 3 * 6 ^ (n + 2) / 5 + 11 ^ (n + 3) / 60 - 4 * 8 ^ (n + 2) / 3 + 7 ^ (n + 3) / 4. - _ R. J. Mathar _ , Mar 18 2011 ●

► [A028185] 1,32,650,10720,156891,2127552,27391540,339890240,4105242581,48592072672,566386687230,6523917123360,74453894585071,843546156267392,9502346083391720,106552392368702080,1190431518905528361 ★ Expansion of 1 / ((1 - 5x)(1 - 7x)(1 - 9x)(1 - 11x)). ● a(n)=(11 ^ (n + 3) - 3 * 9 ^ (n + 3) + 3 * 7 ^ (n + 3) - 5 ^ (n + 3)) / 48. [_ Yahia Kahloune _ , Jun 05 2013] ●

► [A028156] 1,32,653,10852,160329,2196744,28582501,358350284,4370826977,52208034736,613595259069,7120485417396,81801199876345,932195385723608,10554384751300757,118870719509813788,1333093245475954833 ★ Expansion of 1 / ((1 - 4x)(1 - 8x)(1 - 9x)(1 - 11x)). ● a(n)=(10 * 11 ^ (n + 3) - 42 * 9 ^ (n + 3) + 35 * 8 ^ (n + 3) - 3 * 4 ^ (n + 3)) / 420. [_ Yahia Kahloune _ , Jun 11 2013] ●

► [A028177] 1,32,653,10864,160965,2216256,29037037,367278608,4526901269,54714980320,651369416061,7662042543792,89264097643813,1031793631351424,11849055184966925,135335527957665616 ★ Expansion of 1 / ((1 - 5x)(1 - 6x)(1 - 10x)(1 - 11x)). ● a(n)=(2 * 11 ^ (n + 3) - 3 * 10 ^ (n + 3) + 3 * 6 ^ (n + 3) - 2 * 5 ^ (n + 3)) / 60. [_ Yahia Kahloune _ , Jun 04 2013] ● a(0)=1, a(1)=32, a(2)=653, a(3)=10864, a(n)=32 * a(n - 1) - 371 * a(n - 2) + 1840 * a(n - 3) - 3300 * a(n - 4). - _ Harvey P. Dale _ , Oct 23 2015 ●

► [A028183] 1,32,653,10876,161673,2240376,29659621,380803412,4787944865,59338124560,728084033469,8872019284908,107592152638777,1300465261202984,15682817092702997,188828216949912964 ★ Expansion of 1 / ((1 - 5x)(1 - 7x)(1 - 8x)(1 - 12x)). ● a(n)=(3 * 12 ^ (n + 3) - 35 * 8 ^ (n + 3) + 6 * 7 ^ (n + 4) - 2 * 5 ^ (n + 4)) / 420.[_ Yahia Kahloune _ , Jun 04 2013] ●

► [A028176] 1,32,655,10970,164281,2296172,30679075,397562990,5043607261,63029650112,779227037095,9558498208610,116583782365441,1416013883792852,17145682731588715,207132506435751830 ★ Expansion of 1 / ((1 - 5x)(1 - 6x)(1 - 9x)(1 - 12x)). ● a(n) = (2 * 12 ^ (n + 3) - 7 * 9 ^ (n + 3) + 14 * 6 ^ (n + 3) - 9 * 5 ^ (n + 3)) / 252. - _ Yahia Kahloune _ , Jun 03 2013 ● a(n) = 32 * a(n - 1) - 369 * a(n - 2) + 1818 * a(n - 3) - 3240 * a(n - 4). - _ Wesley Ivan Hurt _ , Jan 25 2023 ●

► [A028143] 1,32,660,11200,170576,2429952,33121600,437888000,5663851776,72087887872,906450621440,11292447129600,139666259070976,1717603091873792,21027551488327680,256495170125824000 ★ Expansion of 1 / ((1 - 4x)(1 - 6x)(1 - 10x)(1 - 12x)). ● a(n)=(12 ^ (n + 3) - 2 * 10 ^ (n + 3) + 2 * 6 ^ (n + 3) - 4 ^ (n + 3)) / 96. [_ Yahia Kahloune _ , Jun 11 2013] ● a(0)=1, a(1)=32, a(2)=660, a(3)=11200, a(n)=32 * a(n - 1) - 364 * a(n - 2) + 1728 * a(n - 3) - 2880 * a(n - 4). - _ Harvey P. Dale _ , Aug 15 2013 ●

► [A028101] 1,32,661,11228,170905,2428664,32963197,433285556,5565811009,70301927696,876950844133,10837103324684,132978429495913,1623019468693928,19728775328561869,239074474267587812 ★ Expansion of 1 / ((1 - 3x)(1 - 8x)(1 - 9x)(1 - 12x)). ● a(n)=(5 * 12 ^ (n + 3) - 30 * 9 ^ (n + 3) + 27 * 8 ^ (n + 3) - 2 * 3 ^ (n + 3)) / 540. [_ Yahia Kahloune _ , Jun 10 2013] ●

► [A028097] 1,32,663,11326,173753,2492676,34193851,454583162,5907650925,75488944960,952332965519,11896112035158,147458730765217,1816728187188284,22274159313106467,272032430647628914 ★ Expansion of 1 / ((1 - 3x)(1 - 7x)(1 - 10x)(1 - 12x)). ● a(n)=(7 * 12 ^ (n + 4) - 18 * 10 ^ (n + 4) + 18 * 7 ^ (n + 4) - 10 * 3 ^ (n + 4)) / 7560. [_ Yahia Kahloune _ , Jun 10 2013] ●

► [A028021] 1,32,665,11380,174261,2483592,33669985,440024060,5592152621,69530670352,849490297305,10231269580740,121775852180581,1435121355116312,16771617736444625,194605340572369420 ★ Expansion of 1 / ((1 - 2x)(1 - 9x)(1 - 10x)(1 - 11x)). ● a(n)=(28 * 11 ^ (n + 3) - 63 * 10 ^ (n + 3) + 36 * 9 ^ (n + 3) - 2 ^ (n + 3)) / 504. [_ Yahia Kahloune _ , May 30 2013] ●

► [A028129] 1,32,665,11440,177441,2582592,36039145,488323280,6475959281,84497107552,1088651482425,13885593262320,175667802947521,2207466992246912,27583620276442505,343037771674508560 ★ Expansion of 1 / ((1 - 4x)(1 - 5x)(1 - 11x)(1 - 12x)). ● a(n) = 32 * a(n - 1) - 359 * a(n - 2) + 1648 * a(n - 3) - 2640 * a(n - 4), n >= 4. ● a(n) = 23 * a(n - 1) - 132 * a(n - 2) + 5 ^ (n + 1) - 4 ^ (n + 1), n >= 2. (End) ● a(n) = 18 * 12 ^ (n + 1) / 7 - 11 ^ (n + 3) / 42 - 2 * 4 ^ (n + 1) / 7 + 5 ^ (n + 3) / 42. - _ R. J. Mathar _ , Mar 18 2011 ●

► [A028088] 1,32,667,11522,179473,2622284,36714679,498853814,6630652765,86676445856,1118432963011,14283392713226,180889234319977,2275070671007348,28449403226477263,354027885991627358 ★ Expansion of 1 / ((1 - 3x)(1 - 6x)(1 - 11x)(1 - 12x)). ● a(n)=(20 * 12 ^ (n + 3) - 27 * 11 ^ (n + 3) + 12 * 6 ^ (n + 3) - 5 * 3 ^ (n + 3)) / 1080. [_ Yahia Kahloune _ , May 30 2013] ●

► [A028019] 1,32,668,11536,179088,2599296,36043456,483836672,6341561600,81632911360,1036368313344,13015606775808,162070777434112,2004417298202624,24654551330373632,301916965980012544 ★ Expansion of 1 / ((1 - 2x)(1 - 8x)(1 - 10x)(1 - 12x)). ● a(n) = (6 * 12 ^ (n + 3) - 15 * 10 ^ (n + 3) + 10 * 8 ^ (n + 3) - 2 ^ (n + 3)) / 480. - _ Yahia Kahloune _ , May 23 2013 ●

► [A028014] 1,32,671,11686,183561,2702868,38100595,520688018,6954616493,91281855808,1181868771447,15136545033246,192153235734097,2421636122107052,30334353203856827,378040802156676970 ★ Expansion of 1 / ((1 - 2x)(1 - 7x)(1 - 11x)(1 - 12x)). ● a(n)=(18 * 12 ^ (n + 3) - 25 * 11 ^ (n + 3) + 9 * 7 ^ (n + 3) - 2 ^ (n + 4)) / 900. [_ Yahia Kahloune _ , May 31 2013] ●

► [A025031] 1,32,675,11830,186641,2752932,38765455,527869010,7009691181,91304772832,1171464693035,14850954198990,186462962442121,2322930268904732,28754646814361415,354082225170989770 ★ Expansion of 1 / ((1 - x)(1 - 9x)(1 - 10x)(1 - 12x)). ● a(0)=1, a(1)=32, a(2)=675, a(3)=11830, a(n)=32 * a(n - 1) - 349 * a(n - 2) + 1398 * a(n - 3) - 1080 * a(n - 4) [From Harvey P. Dale, Jul 26 2011] ● a(n) = (12 ^ (n + 4) - 44 * 10 ^ (n + 3) + 33 * 9 ^ (n + 3) - 1) / 792. [_ Yahia Kahloune _ , Jul 02 2013] ●

► [A025008] 1,32,677,11932,189753,2826744,40267309,555414644,7478425985,98842456336,1287451399221,16573995013836,211336837165897,2673608205348008,33601552555975613,419959636392460708 ★ Expansion of 1 / ((1 - x)(1 - 8x)(1 - 11x)(1 - 12x)). ● a(n) = (105 * 12 ^ (n + 3) - 154 * 11 ^ (n + 3) + 55 * 8 ^ (n + 3) - 6) / 4620. [_ Yahia Kahloune _ , Jul 02 2013] ●

► [A223566] 32,1024,21952,379456,6071296,97140736,1554251776,24868028416,397888454656,6366215274496,101859444391936,1629751110270976,26076017764335616,417216284229369856,6675460547669917696 ★ Number of nX5 0..1 arrays with antidiagonals unimodal ● a(n) = product { (1 + (i * (i + 1) / 2)) ^ 2 , i=1..(min(n,5) - 1) } * (1 + (min(n,5) * (min(n,5) + 1) / 2)) ^ (max(n,5) - min(n,5) + 1) ● a(n) = 16 * a(n - 1) for n>4 ●

► [A158685] 32,1056,4128,9248,16416,25632,36896,50208,65568,82976,102432,123936,147488,173088,200736,230432,262176,295968,331808,369696,409632,451616,495648,541728,589856 ★ a(n) = 32 * (32 * n ^ 2 + 1). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A265021] 0,32,1056,8832,41600,141600,390432,928256,1976832,3866400,7066400,12220032,20182656,32064032,49274400,73574400,107128832,152564256,213030432,292265600,394665600,525356832,690273056,896236032,1151040000 ★ Sum of fifth powers of the first n even numbers. ● a(n) = 32 * Sum _{ i=0..n } i ^ 5 = (8 / 3) * n ^ 2 * (n + 1) ^ 2 * (2 * n ^ 2 + 2 * n - 1). ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). - _ Vincenzo Librandi _ , Dec 01 2015 ●

► [A194652] 0,0,0,32,1205,13260,74494,291708,908973,2416410,5711530,12327414,24743693,46797968,84216990,145288600,241697109,389546478,610597338,933745570,1396771845,2048393204,2950649438,4181658708,5838778525 ★ Number of ways to place 4 nonattacking kings on an n X n cylindrical chessboard. ● a(n) = 1 / 24 * n * (n ^ 7 - 54 * n ^ 5 + 36 * n ^ 4 + 1019 * n ^ 3 - 1236 * n ^ 2 - 6690 * n + 10884), n>=5. ●

► [A016793] 32,3125,32768,161051,537824,1419857,3200000,6436343,11881376,20511149,33554432,52521875,79235168,115856201,164916224,229345007,312500000,418195493,550731776,714924299,916132832,1160290625,1453933568,1804229351,2219006624 ★ a(n) = (3 * n + 2) ^ 5. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). (End) ●

► [A240446] 32,6726,166702,1895938,13790212,74380406,322961410,1188292304,3835115230,11126671552,29549197210,72828900336 ★ Numbers of ways to place six indistinguishable points on an n X n square grid so that no four of them are vertices of a square of any orientation. ● a(n) = (n ^ 12 - 15 * n ^ 10 + 55 * n ^ 8 + 75 * n ^ 6) / 720 + O(n ^ 4). ●

► [A016829] 32,7776,100000,537824,1889568,5153632,11881376,24300000,45435424,79235168,130691232,205962976,312500000,459165024,656356768,916132832,1252332576,1680700000,2219006624,2887174368,3707398432,4704270176,5904900000,7339040224,9039207968 ★ a(n) = (4n + 2) ^ 5. ● a(0)=32, a(1)=7776, a(2)=100000, a(3)=537824, a(4)=1889568, a(5)=5153632, a(n)=6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). ●

► [A351805] 0,0,32,8051,290675,4353175,38761975,243824182,1194358326,4842169350,16924669350,52488756425,147511725257,381689190701,920589376525,2089893985900,4500779925100,9254143113132,18262909865676,34746798604575,63973358604575,114343801467875 ★ a(n) = Sum _{ 1 <= i < j <= n } j ^ 5 * i ^ 5. ● a(n) = Sum _{ j=2..n } Sum _{ i=1..j - 1 } j ^ 5 * i ^ 5. ● a(n) = n * (n - 1) * (n + 1) * (44 * n ^ 9 + 120 * n ^ 8 - 132 * n ^ 7 - 540 * n ^ 6 + 99 * n ^ 5 + 912 * n ^ 4 - 11 * n ^ 3 - 672 * n ^ 2 + 120) / 3168. ●

► [A187240] 0,0,0,0,32,12944,867328,22522960,328097824,3209594096,23460698496,137045115696,670158151296,2835083100640,10634260782464,36033282628832,111923478184128,322412415716896,869530617762304,2212626780591008,5346773160475488,12336574243905648,27303885052866048 ★ Number of ways to place 8 nonattacking bishops on an n X n board. ● a(n) = n ^ 16 / 40320 - n ^ 15 / 1080 + 7n ^ 14 / 432 - 1153n ^ 13 / 6480 + 53951n ^ 12 / 38880 - 187277n ^ 11 / 22680 + 106928053n ^ 10 / 2721600 - 13957093n ^ 9 / 90720 + 182160427n ^ 8 / 362880 - 8821499n ^ 7 / 6480 + 1176831457n ^ 6 / 388800 - 490477369n ^ 5 / 90720 + 8235592409n ^ 4 / 1088640 - 726205757n ^ 3 / 90720 + 1815275047n ^ 2 / 302400 - 7953419n / 2880 + 8491 / 16 + (- n ^ 10 / 960 + 5n ^ 9 / 144 - 307n ^ 8 / 576 + 1793n ^ 7 / 360 - 90571n ^ 6 / 2880 + 201911n ^ 5 / 1440 - 513865n ^ 4 / 1152 + 477841n ^ 3 / 480 - 4271471n ^ 2 / 2880 + 1269721n / 960 - 8491 / 16) * (- 1) ^ n. ●

► [A016877] 32,16807,248832,1419857,5153632,14348907,33554432,69343957,130691232,229345007,380204032,601692057,916132832,1350125107,1934917632,2706784157,3707398432,4984209207,6590815232 ★ a(n) = (5n + 2) ^ 5. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). - _ Wesley Ivan Hurt _ , Apr 13 2022 ●

► [A016937] 32,32768,537824,3200000,11881376,33554432,79235168,164916224,312500000,550731776,916132832,1453933568,2219006624,3276800000,4704270176,6590815232,9039207968,12166529024,16105100000,21003416576,27027081632,34359738368,43204003424,53782400000 ★ a(n) = (6 * n + 2) ^ 5. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). - _ Harvey P. Dale _ , Dec 13 2012 ●

► [A017297] 32,248832,5153632,33554432,130691232,380204032,916132832,1934917632,3707398432,6590815232,11040808032,17623416832,27027081632,40074642432,57735339232,81136812032,111577100832 ★ a(n) = (10 * n + 2) ^ 5. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6); a(0)=32, a(1)=248832, a(2)=5153632, a(3)=33554432, a(4)=130691232, a(5)=380204032. - _ Harvey P. Dale _ , May 24 2015 ●

► [A140143] 1,33,34,1058,1059,8835,8836,41604,41605,141605,141606,390438,390439,928263,928264,1976840,1976841,3866409,3866410,7066410,7066411,12220043,12220044,20182668,20182669 ★ a(1)=1, a(n)=a(n - 1) + n ^ 0 if n odd, a(n)=a(n - 1) + n ^ 5 if n is even. ● a(n)=a(n - 1) +{ [1 - (- 1) ^ n] / 2 }+{ [1 + (- 1) ^ n] / 2 }* n ^ 5, with a(1)=1 a(n)=(1 / 8) - (1 / 8) * (- 1) ^ n - (5 / 8) * (- 1) ^ n * n ^ 2 - (1 / 24) * n ^ 2 + (1 / 2) * n + (1 / 12) * n ^ 6 + (1 / 4) * (- 1) ^ n * n ^ 5 + (1 / 4) * n ^ 5 + (5 / 8) * (- 1) ^ n * n ^ 4 + (5 / 24) * n ^ 4, with n>=1 - _ Paolo P. Lava _ , Jun 06 2008 ● a(n)=a(n - 1) + 6a(n - 2) - 6a(n - 3) - 15a(n - 4) + 15a(n - 5) + 20a(n - 6) - 20a(n - 7) - 15a(n - 8) + 15a(n - 9) + 6a(n - 10) - 6a(n - 11) - a(n - 12) + a(n - 13). G.f.: x * (- 1 - 32 * x + 5 * x ^ 2 - 832 * x ^ 3 - 10 * x ^ 4 - 2112 * x ^ 5 + 10 * x ^ 6 - 832 * x ^ 7 - 5 * x ^ 8 -

32 * x ^ 9 + x ^ 10) / ((1 + x) ^ 6 * (x - 1) ^ 7). [From _ R. J. Mathar _ , Feb 22 2009] ●

▶ [A041543] 1,1,33,34,1121,1155,38081,39236,1293633,1332869,43945441,45278310,1492851361,1538129671,50713000833,52251130504,1722749176961,1775000307465,58522759015841,60297759323306,1988051057361633,2048348816684939,67535213191279681 ⋆ Denominators of continued fraction convergents to sqrt(288). ● a(n) = 34 * a(n - 2) - a(n - 4) for n > 3. - _ Vincenzo Librandi _ , Dec 20 2013 ● a(n) = Product _{ k = 1..floor((n - 1) / 2) } (32 + 4 * cos ^ 2(k * Pi / n)). ●

▶ [A140147] 1,33,36,1060,1065,8841,8848,41616,41625,141625,141636,390468,390481,928305,928320,1976896,1976913,3866481,3866500,7066500,7066521,12220153,12220176,20182800,20182825 ⋆ a(1)=1, a(n)=a(n - 1) + n ^ 1 if n odd, a(n)=a(n - 1) + n ^ 5 if n is even. ● a(n)=a(n - 1) +{ [1 - (- 1) ^ n] / 2 }* n +{ [1 + (- 1) ^ n] / 2 }* n ^ 5, with a(1)=1 a(n)= - (1 / 4) * (- 1) ^ n * n - (5 / 8) * (- 1) ^ n * n ^ 2 + (5 / 24) * n ^ 2 + (1 / 4) * n + (1 / 12) * n ^ 6 + (1 / 4) * (- 1) ^ n * n ^ 5 + (1 / 4) * n ^ 5 + (5 / 8) * (- 1) ^ n * n ^ 4 + (5 / 24) * n ^ 4, with n>=1 - _ Paolo P. Lava _ , Jun 06 2008 ●

▶ [A140151] 1,33,42,1066,1091,8867,8916,41684,41765,141765,141886,390718,390887,928711,928936,1977512,1977801,3867369,3867730,7067730,7068171,12221803,12222332,20184956,20185581 ⋆ a(1)=1, a(n)=a(n - 1) + n ^ 2 if n odd, a(n)=a(n - 1) + n ^ 5 if n is even. ● a(n)=a(n - 1) +{ [1 - (- 1) ^ n] / 2 }* n ^ 2 +{ [1 + (- 1) ^ n] / 2 }* n ^ 5, with a(1)=1 a(n)= (- 1 / 8) - (1 / 4) * (- 1) ^ n * n + (1 / 8) * (- 1) ^ n + (1 / 6) * n ^ 3 - (7 / 8) * (- 1) ^ n * n ^ 2 + (5 / 24) * n ^ 2 + (1 / 12) * n + (1 / 12) * n ^ 6 + (1 / 4) * (- 1) ^ n * n ^ 5 + (1 / 4) * n ^ 5 + (5 / 8) * (- 1) ^ n * n ^ 4 + (5 / 24) * n ^ 4, with n>=1 - _ Paolo P. Lava _ , Jun 06 2008 ●

▶ [A096278] 33,50,72,96,120,144,172,206,240,274,308,336,364,402,444,480,514,548,578,610,648,692,742,786,816 ⋆ Sums of successive sums of successive sums of successive primes. ● a(n) = prime(n) + 3 * prime(n + 1) + 3 * prime(n + 2) + prime(n + 3). - _ Robert Israel _ , Dec 28 2022 ●

▶ [A140156] 1,33,60,1084,1209,8985,9328,42096,42825,142825,144156,392988,395185,933009,936384,1984960,1989873,3879441,3886300,7086300,7095561,12249193,12261360,20223984,20239609 ⋆ a(1)=1, a(n) = a(n - 1) + n ^ 3 if n odd, a(n) = a(n - 1) + n ^ 5 if n is even. ● a(n) = a(n - 1) + ((1 - (- 1) ^ n) / 2) * n ^ 3 + ((1 + (- 1) ^ n) / 2) * n ^ 5, with a(1)=1. ● a(n) = - 3 / 16 + (3 / 16) * (- 1) ^ n - (1 / 4) * (- 1) ^ n * n ^ 3 + (1 / 4) * n ^ 3 - (- 1) ^ n * n ^ 2 + (1 / 12) * n ^ 2 + (1 / 12) * n ^ 6 + (1 / 4) * (- 1) ^ n * n ^ 5 + (1 / 4) * n ^ 5 + (5 / 8) * (- 1) ^ n * n ^ 4 + (1 / 3) * n ^ 4, with n >= 1. (End) ●

▶ [A154600] 33,61,93,129,169,213,261,313,369,429,493,561,633,709,789,873,961,1053,1149,1249,1353,1461,1573,1689,1809 ⋆ a(n) = 2 * n ^ 2 + 22 * n + 9. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). (End) ●

▶ [A211837] 33,77,157,289,492,788,1202,1762,2499,3447,4643,6127,7942,10134,12752,15848,19477,23697,28569,34157,40528,47752,55902,65054,75287 ⋆ Number of nonnegative integer arrays of length n + 4 with new values 0 upwards introduced in order, no three adjacent elements equal, and containing the value n + 1. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n >5. ●

▶ [A067705] 33,88,165,264,385,528,693,880,1089,1320,1573,1848,2145,2464,2805,3168,3553,3960,4389,4840,5313,5808,6325,6864,7425 ⋆ a(n) = 11 * n ^ 2 + 22 * n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Jul 07 2012 ●

▶ [A165378] 33,94,158,243,346,467,606,763,938,1131,1342,1571,1818,2083,2366,2667,2986,3323,3678,4051,4442,4851,5278,5723,6186 ⋆ Number of slanted n X 4 (i =1..n) X (j=i..4 + i - 1) 1..4 arrays with all 1s connected, all 2s connected, all 3s connected, all 4s connected, 1 in the upper left corner, 2 in the upper right corner, 3 in the lower left corner, 4 in the lower right corner, and with no element having more than 2 neighbors with the same value. ● a(n) = 9 * n ^ 2 + 4 * n - 2 for n>3. ●

▶ [A098923] 0,1,33,96,190,315,471,658,876,1125,1405,1716,2058,2431,2835,3270,3736,4233,4761,5320,5910,6531,7183,7866,8580 ⋆ 33 - gonal numbers: n(31n - 29) / 2. ● a(n) = n * (31 * n - 29) / 2. ● a(n) = 31 * n + a(n - 1) - 30 (with a(0)=0). - _ Vincenzo Librandi _ , Nov 16 2010 ●

▶ [A195315] 1,33,97,193,321,481,673,897,1153,1441,1761,2113,2497,2913,3361,3841,4353,4897,5473,6081,6721,7393,8097,8833,9601 ⋆ Centered 32 - gonal numbers. ● a(n) = 16 * n ^ 2 - 16 * n + 1. ●

▶ [A098441] 1,1,33,97,1729,8001,105441,627873,6989697,48363649,488206753,3701949153,35289342529,283146701761,2610495177057,21695983405857,196218339243777,1667338615773441,14917038493453089,128562758660255073 ⋆ Expansion of 1 / sqrt(1 - 2 * x - 63 * x ^ 2). ● a(n) = Sum _{ k=0..floor(n / 2) } binomial (n - k, k) * binomial(n, k) * 16 ^ k. ● a(n) = 4 ^ n * GegenbauerC(n, - n, - 1 / 8). - _ Peter Luschny _ , May 08 2016 ● a(n) = hypergeometric2F1((1 - n) / 2 , - n / 2, 1, 64). - _ G. C. Greubel _ , Feb 21 2017 ●

▶ [A370481] 33,102,311,940,2829,8498,25507,76536,229625,688894,2066703,6200132,18600421,55801290,167403899,502211728,1506635217,4519905686,13559717095,40679151324,122037454013,366112362082,1098337086291,3295011258920,9885033776809 ⋆ a(0) = 33. a(n) = 3 * a(n - 1) + 2 * n + 1 for n >= 1. ● a(n) = 4 * a(n - 1) - 3 * a(n - 2) + 2 with a(0) = 33 and a(1) = 102 for n >= 2. ● a(n) = 35 * 3 ^ n - n - 2. - _ Hugo Pfoertner _ , Mar 31 2024 ●

▶ [A140161] 1,33,114,1138,1763,9539,11940,44708,51269,151269,165910,414742,443303,981127,1031752,2080328,2163849,4053417,4183738,7383738,7578219,12731851,13011692,20974316,21364941 ⋆ a(1)=1, a(n) = a(n - 1) + n ^ 4 if n odd, a(n) = a(n - 1) + n ^ 5 if n is even. ● a(n) = a(n - 1) + ((1 - (- 1) ^ n) / 2) * n ^ 4 + ((1 + (- 1) ^ n) / 2) * n ^ 5, with a(1)=1. ● a(n) = - 1 / 8 + (1 / 4) * (- 1) ^ n * n + (1 / 8) * (- 1) ^ n - (1 / 2) * (- 1) ^ n * n ^ 3 + (1 / 6) * n ^ 3 - (5 / 8) * (- 1) ^ n * n ^ 2 - (1 / 24) * n ^ 2 - (1 / 60) * n + (1 / 12) * n ^ 6 + (1 / 4) * (- 1) ^ n * n ^ 5 + (7 / 20) * n ^ 5 + (3 / 8) * (- 1) ^ n * n ^ 4 + (11 / 24) * n ^ 4, with n >= 1. (End) ●

▶ [A235895] 33,125,473,1797,6849,26189,100457,386517,1491537,5771933,22396025,87120549,339708129,1327583213,5199036809,20399760501,80187289713,315721128509,1244976918425,4916128826181,19437363570945,76940441387405 ⋆ Number of (n + 1) X (1 + 1) 0..2 arrays with the minimum plus the maximum equal to the lower median plus the upper median in every 2 X 2 subblock. ● a(n) = 4 ^ (1 + n) + (2 ^ (- 1 - n) * ((3 - sqrt(17)) ^ n * (- 19 + 5 * sqrt(17)) + (3 + sqrt(17)) ^ n * (19 + 5 * sqrt(17)))) / sqrt(17). ●

▶ [A158575] 1,33,129,289,513,801,1153,1569,2049,2593,3201,3873,4609,5409,6273,7201,8193,9249,10369,11553,12801,14113,15489,16929,18433 ⋆ a(n) = 32 * n ^ 2 + 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A036546] 1,33,129,417,1281,3873,11649,34977,104961,314913,944769,2834337,8503041,25509153,76527489,229582497,688747521,2066242593,6198727809,18596183457,55788550401,167365651233,502096953729,1506290861217 ⋆ a(n) = T(5, n), array T given by A048471. ● a(n) = 16 * 3 ^ n - 15. - _ Ralf Stephan _ , Feb 17 2004 ● a(n) = 3 * a(n - 1) + 30. ● a(n) = 4 * a(n - 1) - 3 * a(n - 2). ●

▶ [A158588] 33,135,305,543,849,1223,1665,2175,2753,3399,4113,4895,5745,6663,7649,8703,9825,11015,12273,13599,14993,16455,17985,19583,21249 ⋆ a(n) = 34 * n ^ 2 - 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A005904] 1,33,155,427,909,1661,2743,4215,6137,8569,11571,15203,19525,24597,30479,37231,44913,53585,63307,74139,86141,99373,113895,129767,147049 ⋆ Centered dodecahedral numbers. ● a(n) = (2 * n + 1) * (5 * n ^ 2 + 5 * n + 1). ●

▶ [A207078] 0,33,156,308,365,584,665,969,1380,1533,1700,2349,3185,3504,4745,5208,6956,9333,10220,11189,14960,19824,21681,28908,31605 ⋆ Nonnegative values x of solutions (x, y) to the Diophantine equation x ^ 2 + (x + 511) ^ 2 = y ^ 2. ● a(n) = a(n - 1) + 6 * a(n - 9) - 6 * a(n - 10) - a(n - 18) + a(n - 19). - _ Wesley Ivan Hurt _ , May 31 2021 ●

▶ [A199900] 33,159,461,1043,2031,3573,5839,9021,13333,19011,26313,35519,46931,60873,77691,97753,121449,149191,181413,218571,261143,309629,364551,426453,495901 ⋆ Number of - n..n arrays x(0..4) of 5 elements with zero sum, and adjacent elements not both strictly positive and not both strictly negative. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

▶ [A155883] 1,33,173,505,1113,2081,3493,5433,7985,11233,15261,20153,25993,32865,40853,50041,60513,72353,85645,100473,116921,135073,155013,176825,200593 ⋆ a(n) = 14 * n ^ 3 - 30 * n ^ 2 + 24 * n - 7. ● a(n) = 14 * n ^ 3 - 30 * n ^ 2 + 24 * n - 7. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Vincenzo Librandi _ , Jun 30 2012 ●

▶ [A046142] 1,33,185,553,1233,2321,3913,6105,8993,12673,17241,22793,29425,37233,46313,56761,68673,82145,97273,114153,132881,153553,176265,201113,228193 ⋆ Haiiy rhombic dodecahedral numbers. ● a(n) = (2 * n - 1) * (8 * n ^ 2 - 14 * n + 7). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>4. - _ Wesley Ivan Hurt _ , Mar 02 2016 ●

▶ [A209531] 33,193,1025,6145,32769,196609,1048577,6291457,33554433,201326593,1073741825,6442450945,34359738369,206158430209,1099511627777,6597069766657,35184372088833,211106232532993,1125899906842625 ⋆ Half the number of (n + 1) X 5 0..2 arrays with every 2 X 2 subblock having exactly two distinct clockwise edge differences. ● a(n) = 3 * 2 ^ ((5 * n) / 2 + 1) + 1 for n even. ● a(n) = 2 ^ ((5 * (n + 1)) / 2) + 1 for n odd. ●

▶ [A351300] 1,33,244,1056,3126,8052,16808,33792,59292,103158,161052,257664,371294,554664,762744,1081344,1419858,1956636,2476100,3301056,4101152,5314716,6436344,8245248,9768750 ⋆ a(n) = n ^ 5 * Product _{ p|n, p prime } (1 + 1 / p ^ 5). ● a(n) = Sum _{ d|n } d ^ 5 * mu(n / d) ^ 2. ● a(n) = n ^ 5 * Sum _{ d|n } mu(d) ^ 2 / d ^ 5. ●

▶ [A294300] 0,0,33,244,1300,4182,12201,27984,61776,117700,220825,374100,630708,985194,1539825,2266432,3347776,4708584,6657201,9033300,12333300,16256350,21571033,27758544,35970000 ⋆ Sum of the fifth powers of the parts in the partitions of n into two distinct parts. ● a(n) = Sum _{ i=1..floor(n / 2) - ((n + 1) mod 2) } i ^ 5 + (n - i) ^ 5. ● a(n) = (1 / 192) * (n ^ 2 * (- 16 + 80 * n ^ 2 - 3 * (33 + (- 1) ^ n) * n ^ 3 + 32 * n ^ 4)). ● a(n) = a(n - 1) + 6 * a(n - 2) - 6 * a(n - 3) - 15 * a(n - 4) + 15 * a(n - 5) + 20 * a(n - 6) - 20 * a(n - 7) - 15 * a(n - 8) + 15 * a(n - 9) + 6 * a(n - 10) - 6 * a(n - 11) - a(n - 12) + a(n - 13) for n>13. ●

▶ [A271208] 1,1,33,245,1027,3129,7781,16813,32775,59057,100009,161061,248843,371305,537837,759389,1048591,1419873,1889585,2476117,3200019,4084121,5153653,6436365,7962647 ⋆ a(n) = n ^ 5 + n - 1. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a (n - 6), n > 5. (End) ●

▶ [A343499] 1,33,245,1058,3129,8085,16813,33860,59541,103257,161061,259210,371305,554829,766605,1083528,1419873,1964853,2476117,3310482,4119185,5315013,6436365,8295700,9778145 ⋆ a(n) = Sum _{ k=1..n } gcd(k, n) ^ 5. ● a(n) = Sum _{ d|n } phi(n / d) * d ^ 5. ● a(n) = Sum _{ d|n } mu(n / d) * d * sigma _ 4(d). ●

▶ [A344524] 1,33,246,1060,3165,8091,17128,33936,60645,103825,164886,259368,381841,557595,784200,1091056,1462353,1968261,2554810,3327120,4230561,5361463,6644196,8302020,10113445 ⋆ a(n) = Sum _{ 1 <= i, j, k, l, m <= n } gcd(i,j, k,l,m). ● a(n) = Sum _{ k=1..n } phi(k) * floor(n / k) ^ 5. ●

▶ [A061223] 33,260,1113,3408,8465,18228,35385,63488,107073,171780,264473,393360,568113,799988,1101945,1488768,1977185,2585988,3336153,4250960,5356113,6679860,8253113,10109568,12285825 ⋆ a(n) = n ^ 3 + (n + 1) ^ 4 + (n + 2) ^ 5. ● a(n) = (n + 1) * (n ^ 4 + 10 * n ^ 3 + 35 * n ^ 2 + 51 * n + 33). ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). (End) ●

▶ [A252978] 1,1,1,33,266,851,1836,3221,5006,7191,9776,12761,16146,19931,24116,28701,33686,39071,44856,51041,57626,64611,71996,79781,87966 ⋆ Number of n X 3 nonnegative integer arrays with upper left 0 and lower right its king - move distance away minus 2 and every value increasing by 0 or 1 with every step right, diagonally se or down. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n> 7. ●

▶ [A268264] 33,273,1616,6877,22710,62249,148468,318261,627242,1155265,2012664,3347213,5351806,8272857,12419420,18173029,25998258,36454001,50205472,68036925,90865094,119753353,155926596,200786837,255929530 ⋆ Number of length - (5 + 1) 0..n arrays with new repeated values introduced in sequential order starting with zero. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>8. ●

▶ [A008515] 1,33,275,1267,4149,10901,24583,49575,91817,159049,261051,409883,620125,909117,1297199,1807951,2468433,3309425,4365667,5676099,7284101,92

37733,11589975,14398967,17728249 ⋆ 5 - dimensional centered cube numbers. ● a(n) = n ^ 5 + (n + 1) ^ 5 = 2 * n ^ 5 + 5 * n ^ 4 + 10 * n ^ 3 + 10 * n ^ 2 + 5 * n + 1. ● a(n) = - a(- n - 1). ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). (End) ●

▶ [A179995] 1,33,276,1299,4392,11925,27708,57351,108624,191817,320100,509883,781176,1157949,1668492,2345775,3227808,4358001,5785524,7565667,9760200,12437733,15674076,19552599,24164592 ⋆ Generating function A(5,t)(1 + t + t ^ 2) / (1 - t) ^ 6, where A(5,t) is an Eulerian polynomial. ● a(n) = n * (3 * n ^ 4 + 20 * n ^ 2 + 10) for n>0, a(0)=1. (End) ● a(0)=1, a(1)=33, a(2)=276, a(3)=1299, a(4)=4392, a(5)=11925, a(6)=27708; for n>6, a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). - _ Harvey P. Dale _ , Apr 10 2015 ●

▶ [A000539] 0,1,33,276,1300,4425,12201,29008,61776,120825,220825,381876,630708,1002001,1539825,2299200,3347776,4767633,6657201,9133300,12333300,16417401,21571033,28007376,35970000 ⋆ Sum of 5th powers: 0 ^ 5 + 1 ^ 5 + 2 ^ 5 + ... + n ^ 5. ● a(n) = n ^ 2 * (n + 1) ^ 2 * (2 * n ^ 2 + 2 * n - 1) / 12. ● a(n) = sqrt(Sum _{ j=1..n } Sum _{ i=1..n } (i * j) ^ 5). - _ Alexander Adamchuk _ , Oct 26 2004 ● a(n) = Sum _{ i = 1..n } J _ 5(i) * floor(n / i), where J _ 5 is A059378. - _ Enrique Pérez Herrero _ , Feb 26 2012 ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) + 120. - _ Ant King _ , Sep 23 2013 ● a(n) = 120 * C(n + 3,6) + 30 * C(n + 2,4) + C(n + 1,2) (Knuth). - _ Gary Detlefs _ , Jan 02 2014 ● a(n) = - Sum _{ j=1..5 } j * s(n + 1,n + 1 - j) * S(n + 5 - j,n)), where s(n,k) and S(n,k) are the Stirling numbers of the first kind and the second kind, respectively. - _ Mircea Merca _ , Jan 25 2014 ●

▶ [A023874] 1,1,33,276,1828,12729,88903,582846,3690325,22864592,138658796,822374485,4781447342,27314310586,153519181630,849786024496,4637270263913,24970548655999,132788838463944,697863705334941,3626864249759775,18650694625385462,94948991121030892 ⋆ Expansion of Product _{ k>=1 } (1 - x ^ k) ^ (- k ^ 5). ● a(n) = (1 / n) * Sum _{ k=1..n } sigma _ 6(k) * a(n - k). - _ Seiichi Manyama _ , Mar 05 2017 ●

▶ [A257450] 1,33,277,1335,4771,14193,37417,90795,207871,456693,974437,2036655,4195771,8558073,17337697,34964595,70300471,141070653,282727837,566179575,1133243251,2267556033,4536394777,9074315835,18150434671 ⋆ a(n) = 541 * (2 ^ n - 1) - 5 * n ^ 4 - 30 * n ^ 3 - 130 * n ^ 2 - 375 * n. ● a(n) = 7 * a(n - 1) - 20 * a(n - 2) + 30 * a(n - 3) - 25 * a(n - 4) + 11 * a(n - 5) - 2 * a(n - 6) for n>6. ●

▶ [A297492] 33,308,2874,11528,72060,141218,414918,648260,1394328,3528690,4608800,9358298,14113470,17077148,24378288,39426858,60555180,69195410,100714868,127012680,141942878,194693840,237229188,313639470,442561238 ⋆ a(n) = (1 / 2) * Sum _{ |k|<=2 * sqrt(p) } k ^ 6 * H(4 * p - k ^ 2) where H() is the Hurwitz class number and p is the n - th prime. ● a(n) = b(prime(n)). ●

▶ [A241966] 33,311,1597,5778,16660,40978,89622,179079,333091,584529,977483,1569568,2434446,3664564,5374108,7702173,10816149,14915323,20234697,27049022,35677048,46485990,59896210,76386115,96497271 ⋆ Number of length 3 + 3 0..n arrays with no consecutive four elements summing to more than 2 * n. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

▶ [A209359] 0,1,33,357,2405,12405,53877,207541,731829,2411445,7531445,22523829,64991157,181977013,496680885,1326120885,3473604533,8947236789,22706651061,56869519285,140755599285,344683708341,835954147253,2009692372917,4792831180725 ⋆ a(n) = 2 ^ n * (n ^ 4 - 4 * n ^ 3 + 18 * n ^ 2 - 52 * n + 75) - 75. ● a(n) = (1 / 2) * Sum _{ k=0..n } Sum _{ i=0..n } k ^ 4 * C(k,i). - _ Wesley Ivan Hurt _ , Sep 21 2017 ●

▶ [A085742] 0,0,33,372,2070,7860,23415,58968,131292,266040,500445,886380,1493778,2414412,3766035,5696880,8390520,12071088,17008857,23526180,32003790,42887460,56695023,74023752,95558100 ⋆ a(n) = T(n ^ 3) - T(n), where T() are the triangular numbers (A000217). ● a(n) = (n - 1) * n * (n + 1) * (n ^ 3 + n + 1) / 2. ●

▶ [A244502] 33,378,2190,9110,30300,85563,213293,482085,1006950,1971185,3655053,6472533,11017505,18120840,28919970,44942618,68206473,101336700,147703280,211580280,298329258,414609113,568614795,770347395,1031918240 ⋆ Number of ways to place 4 points on an n X n X n triangular grid so that no pair of them has distance sqrt(3). ● a(n) = 1 / 384 * n ^ 8 + 1 / 96 * n ^ 7 - 13 / 64 * n ^ 6 + 5 / 48 * n ^ 5 + 875 / 128 * n ^ 4 - 2543 / 96 * n ^ 3 - 4141 / 96 * n ^ 2 + 3759 / 8 * n - 837, for n >= 5. ●

▶ [A058796] 33,492,2055,5898,13797,28248,52587,91110,149193,233412,351663,513282,729165,1011888,1375827,1837278,2414577,3128220,4000983,5058042,6327093,7838472,9625275,11723478,14172057 ⋆ Row 5 of A007754. ● a(n) = 33 + 173 * n + 189 * n ^ 2 + 81 * n ^ 3 + 15 * n ^ 4 + n ^ 5. ● a(n) = (n + 3) * (n ^ 4 + 12 * n ^ 3 + 45 * n ^ 2 + 54 * n + 11). ●

▶ [A228256] 33,565,6419,53315,315601,1688101,8717049,44633821,227363409,1153594261,5835080169,29443836301,148292923329,745759583941,3745977788889,18798608421181,94267920012849,472439111692021,2366593604971209 ⋆ Number of third differences of arrays of length n + 3 of numbers in 0..4. ● a(n) = 5 ^ (3 + n) - 4 ^ (3 + n) for n>6. ●

▶ [A076684] 1,33,609,10945,196417,3524577,63245985,1134903169,20365011073,365435296161,6557470319841,117669030460993,2111485077978049,37889062373143905,679891637638612257,12200160415121876737 ⋆ Odd terms in A027941. ● a(n) = F(6n + 3) - 1 where F(k) denotes the k - th Fibonacci number. ●

▶ [A028210] 1,33,685,11445,168301,2275413,28994365,353654565,4172013901,47945991093,539606148445,5970648969285,65146124616301,702577801647573,7503184109388925,79467822863509605,835719501138799501 ⋆ Expansion of 1 / ((1 - 6x)(1 - 8x)(1 - 9x)(1 - 10x)). ● a(n) = 19 * a(n - 1) - 90 * a(n - 2) + 4 * 8 ^ n - 3 * 6 ^ n, n >= 2. - _ Vincenzo Librandi _ , Mar 13 2011 ● a(n) = - 9 * 6 ^ n + 125 * 10 ^ n + 2 * 8 ^ (n + 2) - 3 * 9 ^ (n + 2). - _ R. J. Mathar _ , Mar 18 2011 ●

▶ [A028205] 1,33,688,11598,172879,2380371,31036006,389148576,4740682837,56509956789,662486064604,7666900074834,87835709417275,998290939845687,11274360941128882,126686827598516772,1417790522653118593 ⋆ Expansion of 1 / ((1 - 6x)(1 - 7x)(1 - 9x)(1 - 11x)). ● a(n) = 20 * a(n - 1) - 99 * a(n - 2) + 7 ^ (n + 1) - 6 ^ (n + 1), n >= 2. - _ Vincenzo Librandi _ , Mar 13 2011 ● a(n) = - 3 * 9 ^ (n + 2) / 4 + 11 ^ (n + 3) / 40 + 7 ^ (n + 3) / 8 - 2 * 6 ^ (n + 2) / 5. - _ R. J. Mathar _ , Mar 18 2011 ●

▶ [A028191] 1,33,690,11690,175371,2432283,31956940,403804980,4956450741,59506980533,702298022790,8177594495070,94207230682111,1076026739628783,12205736906550240,137681865037361960 ⋆ Expansion of 1 / ((1 - 5x)(1 - 8x)(1 - 9x)(1 - 11x)). ● a(n) = 20 * a(n - 1) - 99 * a(n - 2) + (8 ^ (n + 1) - 5 ^ (n + 1)) / 3, n >= 2. - _ Vincenzo Librandi _ , Mar 12 2011 ● a(n) = (8 ^ (n + 4) - 9 ^ (n + 4) + 2 * 11 ^ (n + 3) - 5 ^ (n + 3)) / 72. - _ Bruno Berselli _ , Mar 12 2010 ● a(0)=1, a(1)=33, a(2)=690, a(3)=11690, a(n) = 33 * a(n - 1) - 399 * a(n - 2) + 2087 * a(n - 3) - 3960 * a(n - 4). - _ Harvey P. Dale _ , May 15 2011 ●

▶ [A028203] 1,33,691,11757,177835,2499021,33451867,433216509,5483226859,68297761389,841179979003,10278678991581,124904130163723,1511929278991437,18252066460636699,219926530250218173 ⋆ Expansion of 1 / ((1 - 6x)(1 - 7x)(1 - 8x)(1 - 12x)). ● a(n) = 20 * a(n - 1) - 96 * a(n - 2) + 7 ^ (n + 1) - 6 ^ (n + 1), n >= 2. - _ Vincenzo Librandi _ , Mar 13 2011 ● a(n) = - 8 ^ (n + 2) - 3 * 6 ^ (n + 1) + 6 * 12 ^ (n + 1) / 5 + 7 ^ (n + 3) / 5. - _ R. J. Mathar _ , Mar 14 2011 ●

▶ [A028186] 1,33,694,11898,181747,2582715,34981048,458355876,5866720453,73835049717,917894484442,11308397377134,138391574753719,1685252212876239,20446364918965276,247382964478976472 ⋆ Expansion of 1 / ((1 - 5x)(1 - 7x)(1 - 9x)(1 - 12x)). ● a(n)=(8 * 12 ^ (n + 3) - 35 * 9 ^ (n + 3) + 6 * 7 ^ (n + 4) - 3 * 5 ^ (n + 4)) / 840. [_ Yahia Kahloune _ , Jun 04 2013] ●

▶ [A028157] 1,33,697,12033,185353,2657361,36306649,479622561,6184444585,78342273009,979414153081,12123907404609,148962749140297,1819935176767377,22139457629549593,268445978800100577 ⋆ Expansion of 1 / ((1 - 4x)(1 - 8x)(1 - 9x)(1 - 12x)). ● a(0)=1, a(1)=33, a(2)=697, a(3)=12033, a(n)=33 * a(n - 1) - 392 * a(n - 2) + 1968 * a(n - 3) - 3456 * a(n - 4) [From Harvey P. Dale, Mar 01 2012] ● a(n)=(5 * 12 ^ (n + 3) - 32 * 9 ^ (n + 3) + 30 * 8 ^ (n + 3) - 3 * 4 ^ (n + 3)) / 480. [_ Yahia Kahloune _ , Jun 11 2013] ●

▶ [A028153] 1,33,699,12133,188307,2724645,37614403,502459221,6553738323,83980945477,1061789912547,13286272788789,164915485814899,2034013938152229,24960030504150531,305050074724911637 ⋆ Expansion of 1 / ((1 - 4x)(1 - 7x)(1 - 10x)(1 - 12x)). ● a(n)=(9 * 12 ^ (n + 3) - 2 * 10 ^ (n + 4) + 16 * 7 ^ (n + 3) - 5 * 4 ^ (n + 3)) / 720. - _ Yahia Kahloune _ , Jun 11 2013 ●

▶ [A028105] 1,33,700,12150,187951,2698923,36799570,483082800,6161352901,76830423813,940920228040,11355049670250,135378462029851,1597705036844703,18694490136746110,217145575509718500 ⋆ Expansion of 1 / ((1 - 3x)(1 - 9x)(1 - 10x)(1 - 11x)). ● a(n) = (21 * 11 ^ (n + 3) - 48 * 10 ^ (n + 3) + 28 * 9 ^ (n + 3) - 3 ^ (n + 3)) / 336. [_ Yahia Kahloune _ , Jun 11 2013] ●

▶ [A372855] 0,33,702,3630,11409,27603,56748,104352,176895,281829,427578,623538,880077,1208535,1621224,2131428,2753403,3502377,4394550,5447094,6678153,8106843,9753252,11638440,13784439 ⋆ Number of ways two dihexes can be placed on an n - th regular hexagonal board. ● a(n) = (3 / 2) * (27 * n ^ 4 - 90 * n ^ 3 + 78 * n ^ 2 + 11 * n - 24), for n > 1. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n > 6. ●

▶ [A028103] 1,33,703,12309,192943,2819949,39304711,529663893,6962879935,89838427965,1142617774519,14370723472677,179151734300527,2217730946235981,27298909572676327,334504592037294261 ⋆ Expansion of 1 / ((1 - 3x)(1 - 8x)(1 - 10x)(1 - 12x)). ● a(n)=(35 * 12 ^ (n + 3) - 9 * 10 ^ (n + 4) + 63 * 8 ^ (n + 3) - 8 * 3 ^ (n + 3)) / 2520. [_ Yahia Kahloune _ , Jun 11 2013] ●

▶ [A028144] 1,33,703,12333,194239,2860821,40291111,549874221,7333588207,96118840389,1242878986999,15899609772189,201637495269055,2538952949123637,31780003009949767,395799688351994637 ⋆ Expansion of 1 / ((1 - 4x)(1 - 6x)(1 - 11x)(1 - 12x)). ● a(n)=(35 * 12 ^ (n + 3) - 48 * 11 ^ (n + 3) + 28 * 6 ^ (n + 3) - 15 * 4 ^ (n + 3)) / 1680. [_ Yahia Kahloune _ , Jun 03 2013] ●

▶ [A028098] 1,33,706,12462,197575,2928471,41480272,568927644,7620023389,100232692989,1300003138798,16672816906746,211898596387843,2673025439802387,33510157279049884,417902567586112968 ⋆ Expansion of 1 / ((1 - 3x)(1 - 7x)(1 - 11x)(1 - 12x)). ● a(n)=(32 * 12 ^ (n + 3) - 45 * 11 ^ (n + 3) + 18 * 7 ^ (n + 3) - 5 * 3 ^ (n + 3)) / 1440. [_ Yahia Kahloune _ , Jun 10 2013] ●

▶ [A028022] 1,33,709,12573,199957,2966205,41944933,572993421,7627809013,99550699677,1279261319557,16238012145069,204088032533269,2544643371529149,31521003288514981,388369584933658317 ⋆ Expansion of 1 / ((1 - 2x)(1 - 9x)(1 - 10x)(1 - 12x)). ● a(n) = (28 * 12 ^ (n + 3) - 105 * 10 ^ (n + 3) + 80 * 9 ^ (n + 3) - 3 * 2 ^ (n + 3)) / 1680. [_ Yahia Kahloune _ , May 22 2013] ●

▶ [A028020] 1,33,711,12677,203175,3043341,43527247,602201829,8127414999,107618860349,1403846663583,18094236941781,230951316035623,2924174000253357,36776292351134319,459910668538753733 ⋆ Expansion of 1 / ((1 - 2x)(1 - 8x)(1 - 11x)(1 - 12x)). ● a(n)=(27 * 12 ^ (n + 3) - 40 * 11 ^ (n + 3) + 15 * 8 ^ (n + 3) - 2 ^ (n + 4)) / 1080. [_ Yahia Kahloune _ , May 29 2013] ●

▶ [A025130] 1,33,718,12978,211099,3208611,46530856,652053876,8903593717,119147391909,1569038275714,20395728301494,262306431768655,3343671393938727,42305729458640092,531898781072416632 ⋆ Expansion of 1 / ((1 - x)(1 - 9x)(1 - 11x)(1 - 12x)). ● a(n)=(80 * 12 ^ (n + 3) - 132 * 11 ^ (n + 3) + 55 * 9 ^ (n + 3) - 3) / 2640. [_ Yahia Kahloune _ , May 29 2013]. ●

▶ [A081141] 0,0,1,33,726,13310,219615,3382071,49603708,701538156,9646149645,129687123005,1711870023666,22254310307658,285596982281611,3624884775112755,45569980029988920,568105751040528536 ⋆ 11th binomial transform of (0,0,1,0,0,0,...). ● a(n) = 33 * a(n - 1) - 363 * a(n - 2) + 1331 * a(n - 3), a(0) = a(1) = 0, a(2) = 1. ● a(n) = 11 ^ (n - 2) * binomial(n, 2). ●

▶ [A021021] 1,33,727,13365,221431,3428733,50631967,721942485,10021257511,136192514733,1819621847407,23973890545605,312209398691191,4026262617877533,51492399583946047,653585524870924725 ⋆ Expansion of 1 / ((1 - 10x)(1 - 11x)(1 - 12x)). ● a(n) = 33 * a(n - 1) - 362 * a(n - 2) + 1320 * a(n - 3), n >= 3. - _ Vincenzo Librandi _ , Mar 18 2011 ● a(n) = 23 * a(n - 1) - 132 * a(n - 2) + 10 ^ n, n >= 2. - _ Vincenzo Librandi _ , Mar 18 2011 ● a(n) = 6 * 12 ^ (n + 1) - 11 ^ (n + 2) + 5 * 10 ^ (n + 1). - _ R. J. Mathar _ , Mar 18 2011 ●

▶ [A014931] 1,33,801,17185,344865,6636321,124076833,2271560481,40926266145,728121033505,12822748939041,223928981472033,3883103678710561,669334984

61897505,1147797409030816545,19594541482740368161 ⋆ a(1)=1, a(n) = n * 16 ^ (n - 1) + a(n - 1). ● a(n) = (1 + 16 ^ n * (15 * n - 1)) / 225. - _ Paolo P. Lava _ , Jan 13 2009 ●

▶ [A158688] 33,1122,4389,9834,17457,27258,39237,53394,69729,88242,108933,131802,156849,184074,213477,245058,278817,314754,352869,393162,435633,480282,527109,576114,627297 ⋆ a(n) = 1089 * n ^ 2 + 33. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A281239] 34,38,66,102,162,358,578,934,2082,3366,5442,12134,19618,31718,70722,114342,184866,412198,666434,1077478,2402466,3884262,6280002,14002598,22639138 ⋆ Solutions x to the negative Pell equation y ^ 2 = 72 * x ^ 2 - 83232 with x,y >= 0. ● a(n) = 6 * a(n - 3) - a(n - 6) for n>6. ●

▶ [A206262] 34,44,78,135,218,339,503,724,1009,1374,1828,2389,3068,3885,4853,5994,7323,8864,10634,12659,14958,17559,20483,23760,27413 ⋆ Number of (n + 1) X 4 0..1 arrays with the number of rightwards and downwards edge increases in each 2 X 2 subblock equal to the number in all its horizontal and vertical neighbors. ● a(n) = (336 + 154 * n + 71 * n ^ 2 + 14 * n ^ 3 + n ^ 4) / 24 for n>1 and even. ● a(n) = (312 + 154 * n + 71 * n ^ 2 + 14 * n ^ 3 + n ^ 4) / 24 for n>1 and odd. ●

▶ [A074757] 34,46,62,74,86,94,142,188,202,214,218,231,243,244,262,278,302,356,375,394,422,423,428,436,446 ⋆ Numbers n such that tau(n) = (tau(n + 1) + tau(n - 1)) / 2. ● a(n) seems to be asymptotic to c * n with c around 23. [This conjecture is false. The limit a(n) / n, if it exists, is > 29, see graphs. - _ Vaclav Kotesovec _ , Feb 14 2019] ●

▶ [A305061] 34,54,94,174,334,654,1294,2574,5134,10254,20494,40974,81934,163854,327694,655374,1310734,2621454,5242894,10485774,20971534,41943054,83886094,167772174,335544334 ⋆ a(n) = 20 * 2 ^ n + 14. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>1. ●

▶ [A241520] 34,55,123,144,212,233,301,322,390,411,479,500,568,589,657,678,746,767,835,856,924,945,1013,1034,1102 ⋆ Numbers n such that n ^ 2 == - 1 (mod 89). ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n>2. ● a(n) = a(n - 2) + 89 for all n>2. ● a(n) = - 34 * (- 1) ^ n + 89 * floor(n / 2). ●

▶ [A211715] 34,58,106,202,394,778,1546,3082,6154,12298,24586,49162,98314,196618,393226,786442,1572874,3145738,6291466,12582922,25165834,50331658,100663306,201326602,402653194 ⋆ Number of (n + 1) X (n + 1) - 11..11 symmetric matrices with every 2 X 2 subblock having sum zero and two or four distinct values. ● a(n) = 10 + 3 * 2 ^ (2 + n). ●

▶ [A280931] 34,62,96,158,254,412,666,1078,1744,2822,4566,7388,11954,19342,31296,50638,81934,132572,214506,347078,561584,908662,1470246,2378908,3849154 ⋆ a(n) = 2 * F(n - 1) + 9 * F(n - 4) + 9 * F(n - 7) where n >= 7 and F = A000045. ● a(n) = a(n - 1) + a(n - 2). ● a(n) = F(n + 2) + F(n - 3) + F(n - 11). - _ Greg Dresden _ , Jul 07 2022 ●

▶ [A277113] 34,68,102,137,171,205,239,274,308,342,376,411,445,479,513,548,582,616,650,685,719,753,787,822,856 ⋆ a(n) = floor(n / (1 - Pi / (sqrt(5) + 1))). ● a(n) = floor(n / (1 - Pi / (sqrt(5) + 1))). ●

▶ [A063331] 1,34,70,105,140,175,210,243,280,313,350,385,420,451,490,523,560,593,630,661,700,731,770,803,840 ⋆ Dimension of the space of weight n cuspidal new forms for Gamma _ 1(58). ● a(n) = a(n - 4) + a(n - 6) - a(n - 10) for n>13. ●

▶ [A079863] 34,70,144,296,608,1248,2560,5248,10752,22016,45056,92160,188416,385024,786432,1605632,3276800,6684672,13631488,27787264,56623104,115343360,234881024,478150656,973078528 ⋆ a(n) is the number of occurrences of 11s in the palindromic compositions of m=2 * n - 1 = the number of occurrences of 12s in the palindromic compositions of m=2 * n. ● a(n) = (n + 22) * 2 ^ (n - 12). ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) for n>13. ●

▶ [A213025] 34,86,94,122,142,185,194,202,214,218,262,289,302,314,321,358,371,394,407,413,415,422,446,471,489 ⋆ Balanced semiprimes (of order one): semiprimes which are the average of the previous semiprime and the following semiprime. ● a(n) = 1 / 3 * (sp(i) + sp(i + 1) + sp(i + 2), for some i(n). ●

▶ [A165222] 34,99,325,1161,4369,16929,66625,264321,1052929,4203009,16794625,67143681,268505089,1073881089,4295245825,17180426241,68720590849,274880135169,1099516084225,4398055424001,17592203870209,70368779829249 ⋆ a(n) = (2 ^ (n + 4) + 1) * (2 ^ n + 1). ● a(n) = 7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3). G.f.: (34 - 139 * x + 108 * x ^ 2) / ((1 - x) * (2 * x - 1) * (4 * x - 1)). - R. J. Mathar, Sep 20 2009 ●

▶ [A173308] 0,34,102,204,340,510,714,952,1224,1530,1870,2244,2652,3094,3570,4080,4624,5202,5814,6460,7140,7854,8602,9384,10200 ⋆ a(n) = 17 * n * (n + 1). ● a(0)=0, a(1)=34, a(2)=102, a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). G.f.: 34 * x / (1 - x) ^ 3. - _ Colin Barker _ , Jan 25 2012 ●

▶ [A216308] 34,127,202,223,226,265,352,355,412,433,454,463,496,619,694,730,838,853,859,967,976,1000,1003,1042,1093 ⋆ Values of k such that 10 * k + 7 and 10 * k + 9 are the only primes between 10 * k and 10 * k + 9. ● a(n) >> n log ^ 2 n. - _ Charles R Greathouse IV _ , Sep 07 2012 ●

▶ [A010021] 1,34,130,290,514,802,1154,1570,2050,2594,3202,3874,4610,5410,6274,7202,8194,9250,10370,11554,12802,14114,15490,16930,18434 ⋆ a(0) = 1, a(n) = 32 * n ^ 2 + 2 for n > 0. ● a(n) = (4n + 1) ^ 2 + (4n - 1) ^ 2 for n>0. [_ Bruno Berselli _ , Jun 24 2014] ●

▶ [A334648] 0,0,34,132,722,4638,32416,238956,1827918,14370595,115384756,942115942,7798224226,65286060253,551838621972,4702955036640,40366238473530,348631520142879,3027590307082804,26420699531880832,231571468023697960,2037650653547067005 ⋆ a(n) is the total number of down steps between the second and third up steps in all 3 _ 1 - Dyck paths of length 4 * n. ● a(0) = a(1) = 0 and a(n) = binomial(4 * n + 1, n) / (4 * n + 1) + 6 * Sum _{ j=1..2 } binomial(4 * j + 2, j) * binomial(4 * (n - j), n - j) / ((4 * j + 2) * (n - j + 1)) - 9 * [n=2] for n > 1, where [ ] is the Iverson bracket. ●

▶ [A158062] 34,140,318,568,890,1284,1750,2288,2898,3580,4334,5160,6058,7028,8070,9184,10370,11628,12958,14360,15834,17380,18998,20688,22450 ⋆ a(n) = 36 * n ^ 2 - 2 * n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Feb 11 2012 ●

▶ [A153465] 34,142,574,2302,9214,36862,147454,589822,2359294,9437182,37748734,150994942,603979774,2415919102,9663676414,38654705662,154618822654,618475290622,2473901162494,9895604649982,39582418599934,158329674399742,633318697598974,2533274790395902 ⋆ 9 * 4 ^ n - 2. ● a(n) = 5 * a(n - 1) - 4 * a(n - 2). ●

▶ [A192398] 1,34,153,436,985,1926,3409,5608,8721,12970,18601,25884,35113,46606,60705,77776,98209,122418,150841,183940,222201,266134,316273,373176,437425 ⋆ a(n) = n ^ 4 + 3 * n ^ 3 - 3 * n. ● a(n) = binomial transform of [1, 33, 86, 78, 24, 0, 0, 0,...]. ● a(n) = lower right term in the 2 X 2 matrix M ^ 4, M = {{ 1,n - 1 } , { 1,n }} . ● a(n) = ((n - 1) + a) * ((n - 1) + b) * ((n - 1) + c) * (n - 1) + d), where a, b, c, d, = { k=1,2,3,4 } 4 * cos ^ 2 (2 * Pi * k) / 9. ●

▶ [A028470] 1,1,34,153,2245,14824,167089,1292697,12988816,108435745,1031151241,8940739824,82741005829,731164253833,6675498237130,59554200469113,540061286536921,4841110033666048,43752732573098281,393139145126822985,3547073578562247994,31910388243436817641 ⋆ Number of perfect matchings in graph P _{ 8 } X P _{ n } . ● a(1) = 1, ● a(2) = 34, ● a(3) = 153, ● a(4) = 2245, ● a(5) = 14824, ● a(6) = 167089, ●

▶ [A191593] 1,34,169,478,1033,1906,3169,4894,7153,10018,13561,17854,22969,28978,35953,43966,53089,63394,74953,87838,102121,117874,135169,154078,174673 ⋆ Number of partitions of 12 * n into parts < 5. ● a(n) = 12 * n ^ 3 + 15 * n ^ 2 + 6 * n + 1. ●

▶ [A063652] 1,1,34,171,2115,16334,159651,1382259,12727570,113555791,1029574631,9258357134,83605623809,753361554685,6795928721858,61270295494859,552555688390363,4982395765808506,44929655655496287,405145692220245539,3653405881837027898 ⋆ Number of ways to tile an 8 X n rectangle with 1 X 1 and 2 X 2 tiles. ● a(n) = 6a(n - 1) + 50a(n - 2) - 171a(n - 3) - 514a(n - 4) + 1800a(n - 5) + 845a(n - 6) - 5430a(n - 7) + 704a(n - 8) + 6175a(n - 9) - 1762a(n - 10) - 2810a(n - 11) + 870a(n - 12) + 392a(n - 13) - 120a(n - 14). - Keith Schneider (kschneid(AT)bulldog.unca.edu), Apr 02 2006 ●

▶ [A269237] 1,34,189,616,1525,3186,5929,10144,16281,24850,36421,51624,71149,95746,126225,163456,208369,261954,325261,399400,485541,584914,698809,828576,975625 ⋆ a(n) = (n + 1) ^ 2 * (5 * n ^ 2 + 10 * n + 2) / 2. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ●

▶ [A020872] 34,241,1582,10204,65197,415076,2638366,16759249,106427154,675771276,4290678337,27242281044,172964658642,1098170541121,6972388689086,44268329738124,281063582763949,1784497634505876,11329933410988622,71934748718289089,456720074988060962 ⋆ Number of restricted forests in Moebius ladder M _ n. ● a(n) is asymptotic to c ^ n where c = 6.349088... is the inverse of the root of x ^ 4 - x ^ 3 - 4 x ^ 2 + 7 x - 1 of smallest modulus. - _ Peter Kagey _ , May 10 2019 ● a(n) = 11 * a(n - 1) - 34 * a(n - 2) + 23 * a(n - 3) + 43 * a(n - 4) - 56 * a(n - 5) - 3 * a(n - 6) + 25 * a(n - 7) - 6 * a(n - 8) - 3 * a(n - 9) + a(n - 10). - _ Peter J. Taylor _ , Mar 30 2019 ●

▶ [A209944] 34,258,1956,14832,112464,852768,6466176,49030272,371775744,2819017728,21375415296,162080704512,1228989210624,9318903717888,70661292834816,535794601623552,4062703123759104,30805753962037248,233586961257332736 ⋆ Half the number of (n + 1) X 2 0..2 arrays with every 2 X 2 subblock having at most one duplicate clockwise edge difference. ● a(n) = ((3 - sqrt(21)) ^ n * (- 41 + 9 * sqrt(21)) + (3 + sqrt(21)) ^ n * (41 + 9 * sqrt(21))) / (4 * sqrt(21)). ●

▶ [A081219] 1,34,259,1092,3333,8294,17927,34952,62985,106666,171787,265420,396045,573678,809999,1118480,1514513,2015538,2641171,3413332,4356373,5497206,6865431,8493464,10416665 ⋆ One sixtieth the product of primitive Pythagorean triangles' sides whose odd values differ by 2. ● a(n) = n * (16 * n ^ 4 - 1) / 15. ●

▶ [A254700] 34,267,1116,3341,8142,17255,33048,58617,97882,155683,237876,351429,504518,706623,968624,1302897,1723410,2245819,2887564,3667965,4608318,5731991,7064520,8633705,10469706 ⋆ Number of length 2 + 4 0..n arrays with every five consecutive terms having the maximum of some two terms equal to the minimum of the remaining three terms. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. ●

▶ [A248076] 1,34,278,1335,4461,12513,29321,63146,122439,225597,386649,644557,1015851,1570515,2333259,3415660,4835518,6792187,9268287,12572469,16673621,21988337,28424681,36677981,46446732 ⋆ Partial sums of the sum of the 5th powers of the divisors of n: Sum _{ i=1..n } sigma _ 5(i). ● a(n) = Sum _{ k=1..n } (Bernoulli(6, floor(1 + n / k)) - 1 / 42) / 6, where Bernoulli(n,x) are the Bernoulli polynomials. - _ Daniel Suteu _ , Nov 07 2018 ● a(n) = Sum _{ k=1..n } k ^ 5 * floor(n / k). - _ Daniel Suteu _ , Nov 08 2018 ●

▶ [A252999] 0,0,0,1,34,279,1028,2601,5318,9499,15464,23533,34026,47263,63564,83249,106638,134051,165808,202229,243634,290343,342676,400953,465494 ⋆ Number of n X 3 nonnegative integer arrays with upper left 0 and lower right its king - move distance away minus 3 and every value within 3 of its king move distance from the upper left and every value increasing by 0 or 1 with every step right, diagonally se or down. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>8. ●

▶ [A101092] 1,34,310,1610,6035,18236,47244,109020,229845,450670,832546,1463254,2465255,4005080,6304280,9652056,14419689,21076890,30210190,42543490,58960891,80531924,108539300,144509300,190244925 ⋆ Second partial sums of fifth powers (A000584). ● a(n) = (n * (1 + n) * (2 + n) * (- 1 + n * (2 + n)) * (1 + 2 * n * (2 + n))) / 84. ● a(n) = Sum _{ i=1..n } i * (n + 1 - i) ^ 5, by the definition. - _ Bruno Berselli _ , Jan 31 2014 ● a(n) = 2 * a(n - 1) - a(n - 2) + n ^ 5. - _ Luciano Ancora _ , Jan 08 2015 ●

▶ [A368719] 0,1,34,345,2404,15145,98646,707329,5691400,51281649,512916490,5642242441,67707158124,880193426905,12322708514494,184840628476785,2957450056677136,50276650964931169,904979717370650610,17194614630044837689,343892292600899953780 ⋆ a(n) = n! * Sum _{ k=0..n } k ^ 5 / k!. ● a(0) = 0; a(n) = n * a(n - 1) + n ^ 5. ●

▶ [A244881] 1,34,353,2037,8272,26585,72302,173502,377739,760804,1437799,2576795,4415346,7280131,11609996,17982668,27145413,40049910,57891613,82153873,114657092,157613181,213685594,286055210,378492335 ⋆ Expansion of (1 + 26 * x + 109 * x ^ 2 + 109 * x ^ 3 + 26 * x ^ 4 + x ^ 5) / (1 - x) ^ 8. ● a(n) = (2520 + 11526 * n + 22617 * n ^ 2 + 24724 * n ^ 3 + 16275 * n ^ 4 + 6454 * n ^ 5 + 1428 * n ^ 6 + 136 * n ^ 7) / 2520. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 5

6 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>7. ●

▶ [A168122] 0,1,34,369,2056,7825,23346,58849,131104,265761,500050,885841,1493064,2413489,3764866,5695425,8388736,12068929,17006274,23523121,32000200,42883281,56690194,74018209,95551776 ⋆ n ^ 2 * (n ^ 4 + 1) / 2. ● a(0)=0, a(1)=1, a(2)=34, a(3)=369, a(4)=2056, a(5)=7825, a(6)=23346; for n>6, a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). - _ Harvey P. Dale _ , Apr 21 2014 ●

▶ [A271036] 34,450,3114,15116,58036,188034,535106,1373944,3244098,7143708,14829100,29262168,55258840,100405196,176323116,300384832,497995586,805585902,1274479910,1975833860,3006869580,4498661310,6625771230,9618069240 ⋆ Number of 4 X 4 X 4 triangular 0..n arrays with some element less than a w, nw or ne neighbor exactly once. ● a(n) = 11 * a(n - 1) - 55 * a(n - 2) + 165 * a(n - 3) - 330 * a(n - 4) + 462 * a(n - 5) - 462 * a(n - 6) + 330 * a(n - 7) - 165 * a(n - 8) + 55 * a(n - 9) - 11 * a(n - 10) + a(n - 11) for n>11. ●

▶ [A244495] 1,34,451,3380,17531,70466,235014,679722,1757085,4147792,9084361,18683314,36421463,67798940,121239308,209285436,350158809,569759574,904194895,1402934104,2132700691,3182223374,4667981330,6741092150,9595505205 ⋆ Number of 3 X 3 matrices of nonnegative integer entries with all row and column sums <= n. ● a(k) = 1 + (25 / 6) * k + (3337 / 420) * k ^ 2 + (13777 / 1512) * k ^ 3 + (3289 / 480) * k ^ 4 + (9983 / 2880) * k ^ 5 + (281 / 240) * k ^ 6 + (73 / 288) * k ^ 7 + (107 / 3360) * k ^ 8 + (107 / 60480) * k ^ 9. - _ Robert Israel _ , Jul 06 2014 ●

▶ [A277226] 1,34,464,3182,14769,53044,158976,416140,980625,2124310,4295376,8199674,14907809,25992232,43700224,71167704,112680801,173990730,262690000,388656070,564571601,806527964,1134722304,1574255332,2156041329 ⋆ Number of inequivalent (modulo C _ 4 rotations) square n X n grids with squares coming in two colors and four squares have one of the colors. ● a(n) = (n ^ 8 - 6 * n ^ 6 + 14 * n ^ 4) / 96 for n even. ● a(n) = (n ^ 8 - 6 * n ^ 6 + 14 * n ^ 4 - 6 * n ^ 2 - 3) / 96 for n odd. (End) ● a(n) = (C(n ^ 2,4) + C(n ^ 2 / 2,2) + n ^ 2 / 2) / 4 for n even, ● a(n) = (C(n ^ 2,4) + C((n ^ 2 - 1) / 2,2) + (n ^ 2 - 1) / 2) / 4 for n odd. (End) ●

▶ [A035712] 1,34,578,6562,56066,385186,2220098,11058466,48663554,192441122,693230658,2300164770,7094825730,20501991330,55871829570,144411206178,355761664002,838944980514,1900906442306,4152257037218,8769652761346,17955289409186,35721495233602 ⋆ Coordination sequence for 17 - dimensional cubic lattice. ● a(n) = (2 * (638512875 + 4851868680 * n ^ 2 + 4215249348 * n ^ 4 + 1045091320 * n ^ 6 + 99734206 * n ^ 8 + 4181320 * n ^ 10 + 80444 * n ^ 12 + 680 * n ^ 14 + 2 * n ^ 16)) / 638512875 for n>0. - _ Colin Barker _ , Apr 20 2017 ●

▶ [A020928] 1,34,646,9044,104006,1040060,9360540,77558760,601080390,4407922860,30855460020,207573094680,1349225115420,8510496881880,52278766560120,313672599360720,1842826521244230,10623352887172620,60198999693978180,335847050924299320,1847158780083646260 ⋆ Expansion of 1 / (1 - 4 * x) ^ (17 / 2). ● a(n) = ((2 * n + 15) * (2 * n + 13) * (2 * n + 11) * (2 * n + 9) * (2 * n + 7) * (2 * n + 5) * (2 * n + 3) * (2 * n + 1) / 2027025) * binomial(2 * n, n). - _ Vincenzo Librandi _ , Jul 05 2013 ●

▶ [A016109] 1,34,725,12410,186501,2571114,33339685,413066170,4941549701,57504755594,654463491045,7314256515930,80522026412101,875355238834474,9415203971344805,100355146006589690 ⋆ Expansion of 1 / ((1 - 7x)(1 - 8x)(1 - 9x)(1 - 10x)). ● a(n) = 19 * a(n - 1) - 90 * a(n - 2) + 8 ^ (n + 1) - 7 ^ (n + 1), n >= 2. - _ Vincenzo Librandi _ , Mar 12 2011 ● a(n) = (10 ^ (n + 3) - 3 * 9 ^ (n + 3) + 3 * 8 ^ (n + 3) - 7 ^ (n + 3)) / 6. - _ Bruno Berselli _ , Mar 12 2011 ● a(n) = 34 * a(n - 1) - 431 * a(n - 2) + 2414 * a(n - 3) - 5040 * a(n - 4); a(0)=1, a(1)=34, a(2)=725, a(3)=12410. - _ Harvey P. Dale _ , Jan 26 2012 ●

▶ [A028211] 1,34,729,12614,192605,2711058,36061873,460391518,5699774949,68923376522,818303379257,9575924656662,110774806146733,1269639423098626,14443439746998081,163313818986599246 ⋆ Expansion of 1 / ((1 - 6x)(1 - 8x)(1 - 9x)(1 - 11x)). ● a(n) = 20 * a(n - 1) - 99 * a(n - 2) + 2 ^ n * (4 ^ (n + 1) - 3 ^ (n + 1)), n >= 2. - _ Vincenzo Librandi _ , Mar 14 2011 ● a(n) = 2 ^ (3 * n + 8) / 3 + 11 ^ (n + 3) / 30 - 6 ^ (n + 2) / 5 - 3 ^ (2 * n + 5) / 2. - _ R. J. Mathar _ , Mar 14 2011 ●

▶ [A028207] 1,34,731,12716,195657,2781030,37422967,484054192,6078887573,74632686986,900223323363,10706758727028,125901196014049,1466781515230702,16957557634824719,194793155476604024 ⋆ Expansion of 1 / ((1 - 6x)(1 - 7x)(1 - 10x)(1 - 11x)). ● a(n) = (- 54 / 5) * 6 ^ n + (343 / 12) * 7 ^ n - (250 / 3) * 10 ^ n + (1331 / 20) * 11 ^ n. - _ N. J. A. Sloane _ , Mar 14 2011 ● a(n) = 21 * a(n - 1) - 110 * a(n - 2) + 7 ^ (n + 1) - 6 ^ (n + 1); a(0)=1, a(1)=34. - _ Vincenzo Librandi _ , Mar 13 2011 ●

▶ [A028193] 1,34,733,12810,198261,2836554,38431933,500511850,6327324421,78172168074,948456878733,11341481077290,134023690999381,1568398573483594,18205481984727133,209885052725681130 ⋆ Expansion of 1 / ((1 - 5x)(1 - 8x)(1 - 10x)(1 - 11x)). ● a(n) = 21 * a(n - 1) - 110 * a(n - 2) + (8 ^ (n + 1) - 5 ^ (n + 1)) / 3, n >= 2. - _ Vincenzo Librandi _ , Mar 12 2011 ● a(n) = (8 ^ (n + 3) + 11 ^ (n + 3) - 18 * 10 ^ (n + 2) - 5 ^ (n + 2)) / 18. - _ Bruno Berselli _ , Mar 12 2011 ●

▶ [A028206] 1,34,733,12826,199213,2869258,39283021,519148762,6689833645,84640449322,1056561931789,13058296545658,160199367141997,1954490541959626,23747047106341837,287633422522201114 ⋆ Expansion of 1 / ((1 - 6x)(1 - 7x)(1 - 9x)(1 - 12x)). ● a(n) = 21 * a(n - 1) - 108 * a(n - 2) + 7 ^ (n + 1) - 6 ^ (n + 1), n >= 2. - _ Vincenzo Librandi _ , Mar 13 2011 ● a(n) = 7 ^ (n + 3) / 10 - 9 ^ (n + 2) / 2 - 2 * 6 ^ (n + 1) + 8 * 12 ^ (n + 1) / 5. - _ R. J. Mathar _ , Mar 18 2011 ●

▶ [A028192] 1,34,735,12920,201821,2925054,40302475,535908340,6945496041,88331974874,1107704935415,13744775469360,169190996868661,2070039164549494,25209912745227555,305937712008039980 ⋆ Expansion of 1 / ((1 - 5x)(1 - 8x)(1 - 9x)(1 - 12x)). ● a(n) = 21 * a(n - 1) - 108 * a(n - 2) + (8 ^ (n + 1) - 5 ^ (n + 1)) / 3, n >= 2. - _ Vincenzo Librandi _ , Mar 12 2011 ● a(n) = (7 * 8 ^ (n + 3) - 7 * 9 ^ (n + 3) + 12 ^ (n + 3) - 5 ^ (n + 3)) / 84. - _ Bruno Berselli _ , Mar 12 2011 ●

▶ [A028161] 1,34,737,12998,203493,2949042,40498969,534679966,6850824365,85749662570,1053427606881,12745999413654,152297310673717,1800758893450018,21104410600012073,245479747499528462 ⋆ Expansion of 1 / ((1 - 4 * x) * (1 - 9 * x) * (1 - 10 * x) * (1 - 11 * x)). ● a(n) = (7 * 3 ^ (5 + 2 * n) - 4 ^ (2 + n) - 7 * 2 ^ (2 + n) * 5 ^ (3 + n) + 15 * 11 ^ (2 + n)) / 210. - _ Harvey P. Dale _ , Jun 18 2011 ● a(n) = 34 * a(n - 1) - 419 * a(n - 2) + 2186 * a(n - 3) - 3960 * a(n - 4), n>=4. - _ Vincenzo Librandi _ , Mar 16 2011 ● a(n) = 21 * a(n - 1) - 110 * a(n - 2) + (9 ^ (n + 1) - 4 ^ (n + 1)) / 5), a(0)=1, a(1)=34. - _ Vincenzo Librandi _ , Mar 16 2011 ●

▶ [A028188] 1,34,737,13022,204885,2995842,41695033,560476774,7346285309,94497418730,1198353224289,15030879260046,186924790959973,2308975949692498,28368854500004105,347054225208330038 ⋆ Expansion of 1 / ((1 - 5 * x) * (1 - 7 * x) * (1 - 10 * x) * (1 - 12 * x)). ● a(n) = (3 * 12 ^ (n + 3) - 7 * 10 ^ (n + 3) + 7 ^ (n + 4) - 3 * 5 ^ (n + 3)) / 210. [_ Yahia Kahloune _ , May 29 2013]. ● a(n) = 34 * a(n - 1) - 419 * a(n - 2) + 2210 * a(n - 3) - 4200 * a(n - 4). - _ Wesley Ivan Hurt _ , May 04 2021 ●

▶ [A028159] 1,34,740,13160,208656,3075744,43147840,584341120,7711252736,99794799104,1272281687040,16031996897280,200167551471616,2480945949220864,30569500530851840,374885865442672640 ⋆ Expansion of 1 / ((1 - 4x)(1 - 8x)(1 - 10x)(1 - 12x)). ● a(0)=1, a(1)=34, a(2)=740, a(3)=13160, a(n)=34 * a(n - 1) - 416 * a(n - 2) + 2144 * a(n - 3) - 3840 * a(n - 4) [From Harvey P. Dale, Oct 21 2011] ● a(n)=(3 * 12 ^ (n + 3) - 8 * 10 ^ (n + 3) + 6 * 8 ^ (n + 3) - 4 ^ (n + 3)) / 192. [_ Yahia Kahloune _ , May 27 2013]. ●

▶ [A028154] 1,34,743,13316,213453,3189558,45453091,626299192,8418437225,111046371722,1443490546719,18546769677228,236067224376517,2981598548144926,37417475152222427,467041996357853024 ⋆ Expansion of 1 / ((1 - 4x)(1 - 7x)(1 - 11x)(1 - 12x)). ● a(n)=(21 * 12 ^ (n + 3) - 30 * 11 ^ (n + 3) + 2 * 7 ^ (n + 4) - 5 * 4 ^ (n + 3)) / 840. [_ Yahia Kahloune _ , May 29 2013] ●

▶ [A028106] 1,34,745,13390,214981,3211234,45646225,626042230,8359948861,109374928234,1408284704905,17904343620670,225325039105141,2812442423778034,34869043816790785,429934709807000710 ⋆ Expansion of 1 / ((1 - 3x)(1 - 9x)(1 - 10x)(1 - 12x)). ● a(n) = (7 * 12 ^ (n + 3) - 27 * 10 ^ (n + 3) + 21 * 9 ^ (n + 3) - 3 ^ (n + 3)) / 378. - _ Yahia Kahloune _ , May 29 2013 ●

▶ [A028104] 1,34,747,13496,218309,3291918,47316319,657096292,8894300217,118046931002,1542749735891,19914792822288,254507220618925,3225793030038886,40605323440744263,508174054158717884 ⋆ Expansion of 1 / ((1 - 3x)(1 - 8x)(1 - 11x)(1 - 12x)). ● a(n)=(10 * 12 ^ (n + 3) - 15 * 11 ^ (n + 3) + 6 * 8 ^ (n + 3) - 3 ^ (n + 3)) / 360. [_ Yahia Kahloune _ , May 29 2013] ●

▶ [A028023] 1,34,753,13766,225653,3448818,50219881,705962782,9663465405,129570729002,1709032341809,22244754709398,286400212885957,3654165387941986,46270388840585337,582133829294947214 ⋆ Expansion of 1 / ((1 - 2x)(1 - 9x)(1 - 11x)(1 - 12x)). ● a(n)=(21 * 12 ^ (n + 3) - 35 * 11 ^ (n + 3) + 15 * 9 ^ (n + 3) - 2 ^ (n + 3)) / 630. [_ Yahia Kahloune _ , May 29 2013] ●

▶ [A025190] 1,34,761,14126,235557,3664290,54296257,776238742,10797496253,146990010986,1966611858393,25940502403998,338149901095189,4364412518972722,55856812102918769,709715336973843494 ⋆ Expansion of 1 / ((1 - x)(1 - 10x)(1 - 11x)(1 - 12x)). ● a(n)=(45 * 12 ^ (n + 3) - 99 * 11 ^ (n + 3) + 55 * 10 ^ (n + 3) - 1)) / 990. [_ Yahia Kahloune _ , May 29 2013] ● a(0)=1, a(1)=34, a(2)=761, a(3)=14126, a(n)=34 * a(n - 1) - 395 * a(n - 2) + 1682 * a(n - 3) - 1320 * a(n - 4). - _ Harvey P. Dale _ , May 22 2015 ●

▶ [A063843] 0,1,34,792,10688,90005,533358,2437848,9156288,29522961,84293770,217993600,519341472,1154658869,2420188694,4821091920,9187076352,16837177281,29809183410,51172613512,85448030080,139159855989,221554769150,345523218536,528767663040 ⋆ Number of n - multigraphs on 5 nodes. ● a(n) = (1 / 120) * (24 * n ^ 2 + 50 * n ^ 3 + 20 * n ^ 4 + 15 * n ^ 6 + 10 * n ^ 7 + n ^ 10). ● a(n + 1) = (1 / 5!) * (n ^ 10 + 10 * n ^ 9 + 45 * n ^ 8 + 130 * n ^ 7 + 295 * n ^ 6 + 552 * n ^ 5 + 805 * n ^ 4 + 900 * n ^ 3 + 774 * n ^ 2 + 448 * n + 120). ● a(0)=0, a(1)=1, a(2)=34, a(3)=792, a(4)=10688, a(5)=90005, a(6)=533358, a(7)=2437848, a(8)=9156288, a(9)=29522961, a(10)=84293770, a(n)= 11 * a(n - 1) - 55 * a(n - 2) + 165 * a(n - 3) - 330 * a(n - 4) + 462 * a(n - 5) - 462 * a(n - 6) + 330 * a(n - 7) - 165 * a(n - 8) + 55 * a(n - 9) - 11 * a(n - 10) + a(n - 11). - _ Harvey P. Dale _ , Oct 20 2012 ● a(n) = 1 * C(n,1) + 32 * C(n,2) + 693 * C(n,3) + 7720 * C(n,4) + 44150 * C(n,5) + 138312 * C(n,6) + 247380 * C(n,7) + 252000 * C(n,8) + 136080 * C(n,9) + 30240 * C(n,10), where the coefficient of C(n,k) is the number of unoriented colorings using exactly k colors. (End) ●

▶ [A158731] 34,1190,4658,10438,18530,28934,41650,56678,74018,93670,115634,139910,166498,195398,226610,260134,295970,334118,374578,417350,462434,509830,559538,611558,665890 ⋆ a(n) = 1156 * n ^ 2 + 34. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A187591] 0,0,34,2309,15056,45718,95776,164135,250132,353767,475040,613951,770500,944687,1136512,1345975,1573076,1817815,2080192,2360207,2657860,2973151,3306080,3656647,4024852 ⋆ Number of 8 - step E, S, NW and NE - moving king's tours on an n X n board summed over all starting positions. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>9. ●

▶ [A199837] 34,6126,113884,888420,4340094,15805218,47040968,120843752,277500282,583380598,1141982292,2107735180,3702875670,6237700074,10134506112,15955531856,24435201362,36516986238,53395192396,76561981236 ⋆ Number of - n..n arrays x(0..7) of 8 elements with zero sum and no two neighbors summing to zero. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. ●

▶ [A270874] 34,26259,294888,2528263,16531326,84603579,353479684,1252968303,3885899418,10799026531,27392790624,64342966359,141552806518,294334006923,582732259836,1105171977919,2017898582034,3562049183283,6100587181528,10167796877991,16534554287214 ⋆ a(n) = n ^ 10 + 9 * n ^ 9 + 53 * n ^ 8 + 218 * n ^ 7 + 695 * n ^ 6 + 1754 * n ^ 5 + 3572 * n ^ 4 + 5854 * n ^ 3 + 7510 * n ^ 2 + 6559 * n + 34. ● a(n) = 11 * a(n - 1) - 55 * a(n - 2) + 165 * a(n - 3) - 330 * a(n - 4) + 462 * a(n - 5) - 462 * a(n - 6) + 330 * a(n - 7) - 165 * a(n - 8) + 55 * a(n - 9) - 11 * a(n - 10) + a(n - 11). ●

▶ [A250488] 1,34,37889062373143906 ⋆ a(n) = Fibonacci(9 ^ n). ● a(n + 1) = 625 * a(n) ^ 9 - 1125 * a(n) ^ 7 + 675 * a(n) ^ 5 - 150 * a(n) ^ 3 + 9 * a(n) with

a(0) = 1. ● a(n) == 7 (mod 9) for n >= 1. ● a(n + 1) == a(n) mod (9 ^ n). ●
► [A041611] 1,1,35,36,1259,1295,45289,46584,1629145,1675729,58603931,60279660,2108112371,2168392031,75833441425,78001833456,2727895778929,2805897612385,98128414600019,100934312212404,3529895029821755,3630829342034159,12697809265898316 1 ★ Denominators of continued fraction convergents to sqrt(323). ● a(n) = 36 * a(n - 2) - a(n - 4) for n > 3. - _ Vincenzo Librandi _ , Dec 21 2013 ● a(n) = Product _{ k = 1..floor((n - 1) / 2) } (34 + 4 * cos ^ 2(k * Pi / n)). ●
► [A254366] 35,56,112,272,760,2336,7672,26432,94360,346016,1295032,4923392,18943960,73568096,287731192,1131465152,4467809560,17697740576,70271780152,279532195712,1113469251160,4439908895456,17717752225912,70754400779072,282604862628760 ★ a(n) = 4 ^ n + 10 * 2 ^ n + 4 * 3 ^ n + 20. ● a(n) = 10 * a(n - 1) - 35 * a(n - 2) + 50 * a(n - 3) - 24 * a(n - 4). - _ Colin Barker _ , Jan 30 2015 ●
► [A026064] 35,59,90,127,172,225,287,357,437,527,628,739,862,997,1145,1305,1479,1667,1870,2087,2320,2569,2835,3117,3417 ★ a(n) = (d(n) - r(n)) / 2, where d = A026063 and r is the periodic sequence with fundamental period (1,1,0,1). ● a(n)=(n + 6) * (n ^ 2 + 30 * n + 71) / 12 - 0.375 + 0.125 * (- 1) ^ n - 0.25 * cos (n * Pi / 2) [From _ Richard Choulet _ , Dec 13 2008] ●
► [A229357] 35,66,180,660,2904,14196,73920,400620,2229624,12637956,72573360,420738780,2456635944,14422057716,85023813600,502907704140,2982460443864,17724476245476,105513644666640,628987635392700,3753738850485384,22422625749793236,134041199563164480 ★ Total sum of n - th powers of parts in all partitions of 6. ● a(n) = 19 + 8 * 2 ^ n + 4 * 3 ^ n + 2 * 4 ^ n + 5 ^ n + 6 ^ n. ●
► [A254364] 35,70,182,574,2054,7990,32942,141694,629174,2862790,13275902,62494414,297701894,1431677590,6937683662,33825224734,165731728214,815255212390,4023182840222,19905098860654,98686897716134,490094080827190,2437150677449582 ★ a(n) = 3 * 4 ^ n + 10 * 2 ^ n + 6 * 3 ^ n + 5 ^ n + 15. ● a(n) = 15 * a(n - 1) - 85 * a(n - 2) + 225 * a(n - 3) - 274 * a(n - 4) + 120 * a(n - 5). - _ Colin Barker _ , Jan 30 2015 ●
► [A350055] 35,71,107,143,179,215,251,287,323,359,395,431,467,503,539,575,611,647,683,719,755,791,827,863,899 ★ a(n) = 36 * n + 35, for n >= 0. ● a(n) = 36 + a(n - 1), for n >= 1, with a(0) = 35. ●
► [A201632] 35,83,1203,2835,40883,96323,1388835,3272163,47179523,111157235,1602714963,3776073843,54445129235,128275353443,1849531679043,4357585943235,62829631958243,148029646716563,2134357954901235,5028650402419923 ★ If the sum of the squares of 4 consecutive numbers is a triangular number t(u), then a(n) is its index u. ● a(n + 4) = 34 * a(n + 2) - a(n) + 16. ● a(n + 5) = a(n + 4) + 34 * a(n + 3) - 34 * a(n + 2) - a(n + 1) + a(n). ● a(n + 1) = (k1 * e1 + k2 * e2 ^ n + k3 * e3 ^ n + k4 * e4 ^ n + k5 * e5 ^ n) / 4 for k1= - 2; k2=50 + 35r; k3=21 + 15r; k4=50 - 35r; k5=21 - 15r, where r = sqrt(2). ●
► [A156126] 1,35,84,165,286,455,680,969,1330,1771,2300,2925,3654,4495,5456,6545,7770,9139,10660,12341,14190,16215,18424,20825,23426 ★ Sequence related to Hankel transform of super - ballot numbers. ● a(n) = (2 * n + 5) * (2 * n + 3) * (n + 2) / 3, n>0. - R. J. Mathar, Oct 13 2011 ●
► [A182755] 1,35,90,3150,8100,283500,729000,25515000,65610000,2296350000,5904900000,206671500000,531441000000,18600435000000,47829690000000,1674039150000000,4304672100000000,150663523500000000,387420489000000000,13559717115000000000,34867844010000000000 ★ Expansion of (1 + 35 * x) / (1 - 90 * x ^ 2). ● a(2n) = 35 * a(2n - 1), a(2n + 1) = 18 / 7 * a(2n). ● a(2n) = 35 * 90 ^ (n - 1), a(2n + 1) = 90 ^ n. ●
► [A251269] 35,114,313,772,1775,3894,8277,17224,35339,71834,145137,292108,586471,1175678,2354637,4713168,9430915,18867170,37740521,75488148,150984415,301978054,603966533,1207944792,2415902715 ★ Number of (2 + 1) X (n + 1) 0..1 arrays with no 2 X 2 subblock having x11 - x00 less than x10 - x01. ● a(n) = 8 * (9 * 2 ^ n - 8) - (109 * n) / 3 - 8 * n ^ 2 - (2 * n ^ 3) / 3. ●
► [A220481] 1,35,130,273,595,1001,1885,2925,4886,7410,11466,16660,24955,35191,50505,70252,98085,133455,182819,244790,329121,435420,576030,752609,984165 ★ a(n) = 12spt(n) + (24n - 1)p(n), with a(0) = - 1. ● a(n) = 12spt(n) + Tr(n) = 12(3spt(n) + N _ 2(n)) - p(n), n >= 1. ●
► [A171473] 35,135,527,2079,8255,32895,131327,524799,2098175,8390655,33558527,134225919,536887295,2147516415,8590000127,34359869439,137439215615,549756338175,2199024304127,8796095119359,35184376283135 ★ a(n) = 6 * a(n - 1) - 8 * a(n - 2) - 3 for n > 1; a(0) = 35, a(1) = 135. ● a(n) = 32 * 4 ^ n + 4 * 2 ^ n - 1. ●
► [A158586] 1,35,137,307,545,851,1225,1667,2177,2755,3401,4115,4897,5747,6665,7651,8705,9827,11017,12275,13601,14995,16457,17987,19585 ★ a(n) = 34 * n ^ 2 + 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●
► [A157286] 35,142,321,572,895,1290,1757,2296,2907,3590,4345,5172,6071,7042,8085,9200,10387,11646,12977,14380,15855,17402,19021,20712,22475 ★ a(n) = 36 * n ^ 2 - n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●
► [A005339] 35,154,424,930,1775,3080,4985,7650,11256,16006,22126,29866,39501,51332,65687,82922,103422,127602,155908,188818,226843,270528,320453,377234,441524 ★ Number of ways in which n identical balls can be distributed among 6 boxes in a row such that each pair of adjacent boxes contains at least 4 balls. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6), a(12)=35, a(13)=154, a(14)=424, a(15)=930, a(16)=1775, a(17)=3080, a(18)=4985. - _ Harvey P. Dale _ , Aug 12 2011 ●
► [A015219] 1,35,165,455,969,1771,2925,4495,6545,9139,12341,16215,20825,26235,32509,39711,47905,57155,67525,79079,91881,105995,121485,138415,156849 ★ Odd tetrahedral numbers: a(n) = (4 * n + 1) * (4 * n + 2) * (4 * n + 3) / 6. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ● a(n) = 64 + 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). (End) ●
► [A194716] 0,1,35,181,523,1145,2131,3565,5531,8113,11395,15461,20395,26281,33203,41245,50491,61025,72931,86293,101195,117721,135955,155981,177883 ★ Number of n - ary words beginning with the first character of the alphabet, that can be built by inserting four doublets into the initially empty word. ● a(0) = 0, a(n) = 1 + (6 + (14 + 14 * (n - 1)) * (n - 1)) * (n - 1) for n>0. ●
► [A341043] 1,35,189,559,1241,2331,3925,6119,9009,12691,17261,22815,29449,37259,46341,56791,68705,82179,97309,114191,132921,153595,176309,201159,228241 ★ a(n) = 16 * n ^ 3 - 36 * n ^ 2 + 30 * n - 9. ● a(n) = 16 * n ^ 3 - 36 * n ^ 2 + 30 * n - 9. ●
► [A240137] 0,1,35,216,748,1925,4131,7840,13616,22113,34075,50336,71820,99541,134603,178200,231616,296225,373491,464968,572300,697221,841555,1007216,1196208 ★ Sum of n consecutive cubes starting from n ^ 3. ● a(n) = Sum _{ j=n..2n - 1 } j ^ 3. - _ Jon E. Schoenfield _ , Mar 13 2022 ●
► [A300523] 35,220,680,1540,2925,4960,7770,11480,16215,22100,29260,37820,47905,59640,73150,88560,105995,125580,147440,171700,198485,227920,260130,295240,333375 ★ a(n) = (5 * n + 5) * (5 * n + 6) * (5 * n + 7) / 6. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ●
► [A104474] 35,224,840,2400,5775,12320,24024,43680,75075,123200,194480,297024,440895,638400,904400,1256640,1716099,2307360,3059000,4004000,5180175,6630624,8404200,10556000,13147875 ★ a(n) = binomial(n + 3,3) * binomial(n + 7,3). ● a(n) = (1 / 36) * (n + 1) * (n + 2) * (n + 3) * (n + 5) * (n + 6) * (n + 7). ●
► [A171471] 35,225,837,3213,12573,49725,197757,788733,3150333,12592125,50350077,201363453,805380093,3221372925,12885196797,51540197373,206159609853,824636080125,3298539601917,13194148970493,52776577007613 ★ a(n) = 6 * a(n - 1) - 8 * a(n - 2) - 9 for n > 2; a(0) = 35, a(1) = 225, a(2) = 837. ● a(n) = 48 * 4 ^ n + 18 * 2 ^ n - 3 for n > 0. ●
► [A068722] 1,35,247,925,2501,5551,10795,19097,31465,49051,73151,105205,146797,199655,265651,346801,445265,563347,703495,868301,1060501,1282975,1538747,1830985,2163001 ★ Number of solenoidal flows (flow in = flow out) in a 3 X 3 square array with integer velocities - n .. n. ● a(n) = (1 + 2 * n + 2 * n ^ 2) * (1 + 3 * n + 3 * n ^ 2). ●
► [A372927] 1,35,251,1132,3149,8785,16855,36272,61065,110215,161171,284132,371461,589925,790399,1160896,1420145,2137275,2476459,3564668,4230605,5640985,6436871,9104272,9841225 ★ a(n) = Sum _{ 1 <= x _ 1, x _ 2 <= n } gcd(x _ 1, x _ 2, n) ^ 5. ● a(n) = Sum _{ 1 <= x _ 1, x _ 2, x _ 3, x _ 4, x _ 5 <= n } gcd(x _ 1, x _ 2, x _ 3, x _ 4, x _ 5, n) ^ 2. ● a(n) = Sum _{ d|n } mu(n / d) * d ^ 2 * sigma _ 3(d), where mu is the Moebius function A008683. ●
► [A055658] 0,0,1,35,286,1330,4495,12341,29260,62196,121485,221815,383306,632710,1004731,1543465,2303960,3353896,4775385,6666891,9145270,12347930,16435111,21592285,28032676 ★ Number of (3,n) - partitions of a chain of length n ^ 2. ● a(n) = (1 / 6) * (n - 1) * (n - 2) * (n ^ 2 - 3 * n + 3) * (n ^ 2 - 3 * n + 1). ●
► [A341441] 1,35,287,1302,4257,11297,25935,53516,101745,181279,306383,495650,772785,1167453,1716191,2463384,3462305,4776219,6479551,8659118,11415425,14864025,19136943,24384164,30775185 ★ Total number of triangles visible in a regular (2n + 1) - gon with all diagonals drawn. ● a(n) = n * (2 * n + 1) * (2 * n - 1) * (2 * n ^ 3 + 21 * n ^ 2 - 2 * n + 9) / 90. ●
► [A027792] 35,336,1764,6720,20790,55440,132132,288288,585585,1121120,2042040,3564288,5996172,9767520,15465240,23876160,36038079,53300016,77392700,110510400,155405250,215495280,294987420,399016800,533803725 ★ a(n) = 7 * (n + 1) * binomial(n + 3,7). ● a(n) = C(n + 1, 5) * C(n + 3, 3). - _ Zerinvary Lajos _ , May 10 2005; corrected by _ R. J. Mathar _ , Feb 10 2016 ●
► [A163935] 35,340,1750,6440,19110,48720,110880,231000,448305,820820,1431430,2395120,3867500,6054720,9224880,13721040,19975935,28528500,40042310,55326040,75356050,101301200,134550000,176740200,229790925 ★ Third right hand column of triangle A163934 ● a(n) = (n - 2) * (n - 1) * (n) * stirling1(n + 2,n) / 3!. ●
► [A101099] 1,35,345,1955,7990,26226,73470,182490,412335,863005,1695551,3158805,5624060,9629140,15933420,25585476,40005165,61082055,91292245,133835735,192796626,273328550,381867850,526377150,716622075 ★ Third partial sums of fifth powers (A000584). ● a(n) = n * (1 + n) * (2 + n) * (3 + n) * (- 1 + n * (2 + n)) * (2 + n * (4 + n)) / 336. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9). - _ Harvey P. Dale _ , Feb 20 2015 ●
► [A027803] 35,350,1890,7350,23100,62370,150150,330330,675675,1301300,2382380,4176900,7054320,11531100,18314100,28352940,42902475,63596610,92534750,132382250,186486300,259008750,355077450,480957750,644245875 ★ a(n) = 35 * (n + 1) * binomial(n + 4, 7) / 4. ● a(n) = C(n + 1, 4) * C(n + 4, 4). - _ Zerinvary Lajos _ , May 10 2005, corrected by _ R. J. Mathar _ , Mar 16 2016 ●
► [A133458] 1,35,393,2128,8135,24017,60691,134512,273127,512365,908755,1528688,2473325,3852919,5832765,8582336,12354469,17395119,24072133,32726960,43874139,57971221,75715487,97702640,124853275 ★ The size of the largest antichain in the 7 - dimensional hypercubic lattice of size n; also the coefficient of x ^ floor(7 * (n - 1) / 2) in (1 + x + ... + x ^ (n - 1)) ^ 7. ● a(n)= 2 * a(n - 1) + 4 * a(n - 2) - 10 * a(n - 3) - 5 * a(n - 4) + 20 * a(n - 5) - 20 * a(n - 7) + 5 * a(n - 8) + 10 * a(n - 9) - 4 * a(n - 10) - 2 * a(n - 11) + a(n - 12). ● a(n) = - 25 * (- 1) ^ n / 512 + 2261 * n ^ 2 / 23040 + 25 / 512 + 5887 * n ^ 6 / 11520 - 77 * (- 1) ^ n * n ^ 4 / 1536 + 847 * n ^ 4 / 4608 - 91 * (- 1) ^ n * n ^ 2 / 1536. (End) ●
► [A075664] 1,35,405,2584,11375,38961,111475,278720,627669,1300375,2516921,4604040,8030035,13446629,21738375,34080256,52004105,77474475,112974589,161603000,227181591,314375545,428825915,577295424,767828125 ★ Sum of next n cubes. ● a(1)=1; a(n)=sum(i ^ s, { i, n(n - 1) / 2 + 1, n(n - 1) / 2 + 1 + n }). ● a(n) = (n ^ 7 + 4n ^ 5 + 3n ^ 3) / 8. - _ Charles R Greathouse IV _ , Sep 17 2009 ●
► [A105947] 1,35,420,2940,14700,58212,194040,566280,1486485,3578575,8016008,16893240,33786480,64574160,118605600,210327264,361499985,604167795,984569740,1568220500,2446423980,3744526500,5632263000,8336601000,12157543125 ★ a(n) = C(n + 6,n) * C(n + 4,4). ● a(n) = (17280 + 78336 * n + 152376 * n ^ 2 + 167780 * n ^ 3 + 116150 * n ^ 4 + 52983 * n ^ 5 + ● a(n) = 11 * a(n - 1) - 55 * a(n - 2) + 165 * a(n - 3) - 330 * a(n - 4) + 462 * a(n - 5) - 462 * a(n - 6) + 330 * a(n - 7) - 165 * a(n - 8) + 55 * a(n - 9) - 11 * a(n - 10) + a(n - 11). (End) ●
► [A107915] 1,35,490,4116,24696,116424,457380,1557270,4723719,13026013,33157124,78835120,176729280,376375104,766192176,1498581756,2828205765,5168991135,9177226366,15870391460,26794167400,44253495000,71627692500,113794603650,177694650315 ★ a(n) = binomial(n + 4,4) * binomial(n + 5,4) * binomial(n + 6,4) / 75. ● a(n) = C(n,n - 2) * C(n + 1,n - 3) * C(n + 2,n - 4) / (5 * 3!), n>= 4. - _ Zerinvary Lajos _ , May 29 2007 ● a(n - 3) = (1 / 144) * Sum _{ 1 <=

x _ 1, x _ 2, x _ 3 <= n } x _ 1 * x _ 2 * x _ 3 * (det V(x _ 1,x _ 2,x _ 3)) ^ 2 = 1 / 144 * sum { 1 <= i,j,k <= n } i * j * k * ((i - j)(i - k)(j - k)) ^ 2, where V(x _ 1,x _ 2,x _ 3) is the Vandermonde matrix of order 3. - _ Peter Bala _ , Sep 21 2007 ●

▶ [A033281] 1,35,616,7644,76440,659736,5116320,36581688,245402157,1563837275,9553624080,56338955400,322432175520,1798432526880,9809631964800,52470868368240,275857874141850,1428186531145374 ⋆ Number of diagonal dissections of a convex (n + 9) - gon into n + 1 regions. ● a(n)=binomial(n + 6, 6) * binomial(2n + 8, n) / (n + 1). ●

▶ [A175774] 35,665,6965,69965,699965,6999965,69999965,699999965,6999999965,69999999965,699999999965,6999999999965,69999999999965,699999999999965,6999999999999965,69999999999999965 ⋆ 7 * (10 ^ n - 5) ● a(n) = 10 * a(n - 1) + 315. - _ Vincenzo Librandi _ , Jul 12 2012 ●

▶ [A112504] 1,35,665,9107,100751,957197,8110087,62854845,453710670,3091406010,20086835910,125465290530,758173316850,4455503465430,25571494599330,143839855533270,795332428661055,4333564250230845,23317657891319095 ⋆ Fifth column of triangle A112500. ● a(n) computable from partial fraction decomposition of g.f. Cf. A112503. ●

▶ [A367250] 0,1,35,703,11231,158311,2062655,25466743,302423471,3487593511,39314599775,435241463383,4748453693711,51186327429511,546278900354495,5781325731101623,60750456603203951,634502309615150311,6592506388026870815,68188442304165981463,702543059232886986191 ⋆ a(n) is the number of n - digit numbers whose difference between the largest and smallest digits is equal to 9. ● a(n) = 9 * 10 ^ (n - 1) - 17 * 9 ^ (n - 1) + 8 ^ n. ● a(n) = 27 * a(n - 1) - 242 * a(n - 2) + 720 * a(n - 3) for n > 3. ●

▶ [A145603] 1,35,720,12375,196625,3006003,45048640,668144880,9859090500,145173803500,2136958387520,31479019635375,464342770607625,6861343701121875,101583106970400000,1507019252941540800 ⋆ a(n) is the number of walks from (0,0) to (0,4) that remain in the upper half - plane y >= 0 using 2 * n + 2 unit steps either up (U), down (D), left (L) or right (R). ● a(n) = 5 / (2 * n + 3) * binomial(2 * n + 3,n + 4) * binomial(2 * n + 3,n - 1). ●

▶ [A240928] 35,750,6174,31025,114961,346193,896876,2072694,4379055,8606312,15936426,28073487,47400509,77164915,121695128,186650684,279308283,408886194,586909430,827618109,1148421417,1570399589,2118856324,2823924050,3721224455 ⋆ Number of 8 - digit positive integers in base n where the sum of the first k digits equals the sum of the last k digits. ● a(n) = n * (n - 1) * (1208 * n ^ 5 + 151 * n ^ 4 + 291 * n ^ 3 + 116 * n ^ 2 + 88 * n + 60) / 2520. ●

▶ [A028213] 1,35,773,13783,216909,3146703,43129381,567128471,7227535997,89900761951,1097000610069,13181200344039,156403487677165,1836701044549679,21383695384607237,247159815109688887 ⋆ Expansion of 1 / ((1 - 6x)(1 - 8x)(1 - 10x)(1 - 11x)). ● a(n) = 21 * a(n - 1) - 110 * a(n - 2) + 2 ^ n * (4 ^ (n + 1) - 3 ^ (n + 1)), n >= 2. ● a(n) = 35 * a(n - 1) - 452 * a(n - 2) + 2548 * a(n - 3) - 5280 * a(n - 4), n >= 4. (End) ● a(n) = 11 ^ (n + 3) / 15 + 2 * 8 ^ (n + 2) / 3 - 125 * 10 ^ n - 27 * 6 ^ n / 5. - _ R. J. Mathar _ , Mar 15 2011 ●

▶ [A028208] 1,35,777,13999,223769,3314031,46600009,631601663,8333511417,107767060687,1372468494761,17273924107167,215413939302745,2666835630709103,32824988535796233,402159883923086911 ⋆ Expansion of 1 / ((1 - 6x)(1 - 7x)(1 - 10x)(1 - 12x)). ● a(n) = 22 * a(n - 1) - 120 * a(n - 2) + 7 ^ (n + 1) - 6 ^ (n + 1), n >= 2. - _ Vincenzo Librandi _ , Mar 13 2011 ● a(n) = 12 ^ (n + 2) / 5 - 9 * 6 ^ n + 7 ^ (n + 3) / 15 - 125 * 10 ^ n / 3. - _ R. J. Mathar _ , Mar 18 2011 ●

▶ [A028194] 1,35,779,14095,226491,3373575,47712739,650313455,8625455531,112077065815,1433487819699,18110309247615,226591110120571,2813231293937255,34711873203654659,426167229337538575 ⋆ Expansion of 1 / ((1 - 5x)(1 - 8x)(1 - 10x)(1 - 12x)). ● a(n) = 22 * a(n - 1) - 120 * a(n - 2) + (8 ^ (n + 1) - 5 ^ (n + 1)) / 3, n >= 2. - _ Vincenzo Librandi _ , Mar 12 2011 ● a(n) = (54 * 12 ^ (n + 1) - 105 * 10 ^ (n + 1) + 7 * 8 ^ (n + 2) - 5 ^ (n + 2)) / 21. - _ Bruno Berselli _ , Mar 12 2011 ●

▶ [A028189] 1,35,782,14254,231459,3493041,50160064,695287148,9389676197,124321003807,1620910078866,20877357884682,266266935091015,3368664326093933,42334402590112388,529044108699525256 ⋆ Expansion of 1 / ((1 - 5x)(1 - 7x)(1 - 11x)(1 - 12x)). ● a(n) = (2 * 12 ^ (n + 4) - 35 * 11 ^ (n + 3) + 3 * 7 ^ (n + 4) - 2 * 5 ^ (n + 4)) / 840. [_ Yahia Kahloune _ , Jun 12 2013] ●

▶ [A028162] 1,35,783,14287,231959,3494127,49989031,689059679,9238060887,121247325199,1565149220999,19940086389951,251372353802935,3141956721674351,38999543432154087,481325752085244703 ⋆ Expansion of 1 / ((1 - 4x)(1 - 9x)(1 - 10x)(1 - 12x)). ● a(n) = 22 * a(n - 1) - 120 * a(n - 2) + (9 ^ (n + 1) - 4 ^ (n + 1)) / 5), n >= 2. - _ Vincenzo Librandi _ , Mar 16 2011 ● a(n) = 3 * 12 ^ (n + 1) - 25 * 10 ^ (n + 1) / 3 + 3 * 9 ^ (n + 2) / 5 - 2 ^ (2 * n + 2) / 15. - _ R. J. Mathar _ , Mar 18 2011 ●

▶ [A028160] 1,35,785,14395,235401,3578595,51754945,722167115,9811679801,130610749555,1711051941105,22130751379035,283285847668201,3595414758854915,45309603386047265,567596497380674155 ⋆ Expansion of 1 / ((1 - 4x)(1 - 8x)(1 - 11x)(1 - 12x)). ● a(n) = 23 * a(n - 1) - 132 * a(n - 2) + 2 ^ (3n + 1) - 4 ^ n, n >= 2. - _ Vincenzo Librandi _ , Mar 16 2011 ● a(n) = - 11 ^ (n + 3) / 21 + 4 * 8 ^ (n + 1) / 3 + 54 * 12 ^ n - 2 * 4 ^ n / 7. - _ R. J. Mathar _ , Mar 17 2011 ●

▶ [A028107] 1,35,790,14630,242011,3723545,54492880,769001660,10558544821,141919432655,1875649181770,24453637571090,315271616180431,4027179810711365,51043597496835460,642723844104282920 ⋆ Expansion of 1 / ((1 - 3x)(1 - 9x)(1 - 11x)(1 - 12x)). ● a(n) = (16 * 12 ^ (n + 3) - 27 * 11 ^ (n + 3) + 12 * 9 ^ (n + 3) - 3 ^ (n + 3)) / 432 = (1 / 16) * (- 3 ^ n + 3 ^ n * 4 ^ (n + 5) + 4 * 9 ^ (n + 2) - 11 ^ (n + 3)). - _ Yahia Kahloune _ , May 31 2013 ● a(n) = 35 * a(n - 1) - 435 * a(n - 2) + 2205 * a(n - 3) - 3564 * a(n - 4) for n > 3; a(0)=1, a(1)=35, a(2)=790, a(3)=14630. - _ Vincenzo Librandi _ , Jul 17 2013 ●

▶ [A028024] 1,35,797,14959,251349,3931431,58494829,838932143,11699121797,159590758327,2138803364061,28251497273727,368712393238645,4763687404354823,61019774392655693,775898073656236111 ⋆ Expansion of 1 / ((1 - 2x)(1 - 10x)(1 - 11x)(1 - 12x)). ● a(n)=(36 * 12 ^ (n + 3) - 80 * 11 ^ (n + 3) + 45 * 10 ^ (n + 3) - 2 ^ (n + 3)) / 720. [_ Yahia Kahloune _ , May 30 2013]. ●

▶ [A249884] 35,805,7420,40740,161315,510965,1377040,3284400,7120155,14296205,26954620,48220900,82510155,135891245,216513920,335104000,505531635,745457685,1077063260,1527867460,2131638355,2929402245,3970556240 ⋆ Number of length 1 + 6 0..n arrays with no seven consecutive terms having the maximum of any three terms equal to the minimum of the remaining four terms. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. ●

▶ [A080250] 1,35,871,19215,402591,8236095,166570111,3349906175,67183250431,1345516627455,26928850135551,538762184167935,10777095520297471,215560428864815615,4311393762242888191,86229727095755178495 ⋆ Expansion of 1 / ((1 - x)(1 - 4x)(1 - 10x)(1 - 20x)). ● a(n) = (1350 * 20 ^ n - 950 * 10 ^ n + 114 * 4 ^ n - 1) / 513. ● a(0)=1, a(1)=35, a(2)=871, a(3)=19215, a(n) = 35 * a(n - 1) - 354 * a(n - 2) + 1120 * a(n - 3) - 800 * a(n - 4). - _ Harvey P. Dale _ , Apr 25 2011 ●

▶ [A209649] 35,1225,7210,24990,65765,145775,287140,518700,876855,1406405,2161390,3205930,4615065,6475595,8886920,11961880,15827595,20626305,26516210,33672310,42287245,52572135,64757420,79093700,95852575 ⋆ Number of n X 7 0..1 arrays avoiding 0 0 1 and 1 0 0 horizontally and 0 0 1 and 1 0 1 vertically. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. ●

▶ [A207937] 35,1225,8977,38207,121313,319439,737575,1544037,2994871,5463725,9477733,15759955,25278917,39305795,59479787,87882217,127119915,180418417,251725529,345825799,468466441,626495255,828011087,1082527373,1401149311 ⋆ Number of n X 7 0..1 arrays avoiding 0 0 1 and 1 0 0 horizontally and 0 0 1 and 1 1 0 vertically. ● a(n) = (1260 + 4974 * n - 32165 * n ^ 2 - 6041 * n ^ 3 + 51940 * n ^ 4 + 21091 * n ^ 5 + 2905 * n ^ 6 + 136 * n ^ 7) / 1260. ●

▶ [A158733] 35,1260,4935,11060,19635,30660,44135,60060,78435,99260,122535,148260,176435,207060,240135,275660,313635,354060,396935,442260,490035,540260,592935,648060,705635 ⋆ a(n) = 1225 * n ^ 2 + 35. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A249885] 35,1365,18390,136010,684585,2644815,8435180,23274900,57355695,129095945,269791170,530015070,988165685,1761591555,3020773080,5007074600,8054623035,12616909245,19298748590,28894277490,42431703105,61225563575 ⋆ Number of length 2 + 6 0..n arrays with no seven consecutive terms having the maximum of any three terms equal to the minimum of the remaining four terms. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>9. ●

▶ [A135923] 0,35,1430,13941,75205,289800,897165,2379300,5620846,12135825,24377000,46145495,83119995,143526526,238971495,385462350,604641900,925264015,1384940106,2032187465,2928812225,4152661380,5800779985,7993011336,10876079610 ⋆ (n ^ 8 - 60 * n ^ 6 + 90 * n ^ 5 + 1160 * n ^ 4 - 3204 * n ^ 3 - 5349 * n ^ 2 + 26586 * n - 23760) / 24. ● a(n) = (n - 3) * (n + 6) * (n ^ 6 - 3 * n ^ 5 - 33 * n ^ 4 + 135 * n ^ 3 + 161 * n ^ 2 - 1257 * n + 1320) / 24 . ● a(n)=9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9), n>=12 [_ Harvey P. Dale _ , Oct 20 2011] ●

▶ [A130005] 0,35,1568,1731,1908,10595,11540,12567,63156,68663,74648,369495,401592,436475,2154968,2342043,2545356,12561467,13651820,14836815,73214988,79570031,86476688,426729615,463769520 ⋆ Nonnegative values x of solutions (x, y) to the Diophantine equation x ^ 2 + (x + 577) ^ 2 = y ^ 2. ● a(n) = 6 * a(n - 3) - a(n - 6) + 1154 for n > 6; a(1)=0, a(2)=35, a(3)=1568, a(4)=1731, a(5)=1908, a(6)=10595. ●

▶ [A129288] 0,36,39,123,319,336,820,1960,2059,4879,11523,12100,28536,67260,70623,166419,392119,411720,970060,2285536,2399779,5654023,13321179,13987036,32954160 ⋆ Nonnegative values x of solutions (x, y) to the Diophantine equation x ^ 2 + (x + 41) ^ 2 = y ^ 2. ● a(n) = 6 * a(n - 3) - a(n - 6) + 82 for n > 6; a(1)=0, a(2)=36, a(3)=39, a(4)=123, a(5)=319, a(6)=336. ●

▶ [A082295] 36,64,72,100,108,128,144,180,192,196,200,216,225,252,256,288,300,320,324,360,384,392,396,400,432 ⋆ Numbers having more than two square divisors > 1. ● a(n) < 17n for n > 25. - _ Charles R Greathouse IV _ , Oct 16 2015 ●

▶ [A044102] 0,36,72,108,144,180,216,252,288,324,360,396,432,468,504,540,576,612,648,684,720,756,792,828,864 ⋆ Multiples of 36. ● a(n) = 36 * n. - _ Vincenzo Librandi _ , Jan 26 2011 ●

▶ [A153642] 36,72,116,168,228,296,372,456,548,648,756,872,996,1128,1268,1416,1572,1736,1908,2088,2276,2472,2676,2888,3108 ⋆ a(n) = 4 * n ^ 2 + 24 * n + 8. ● a(n)= 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A286430] 0,0,0,0,36,78,136,210,300,406,528,666,820,990,1176,1378,1596,1830,2080,2346,2628,2926,3240,3570,3916 ⋆ Least volume of water to surround the largest possible island in a number square. ● a(n) = 28 - 30 * n + 8 * n ^ 2 for n >3. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>2. ●

▶ [A202330] 36,82,162,289,478,746,1112,1597,2224,3018,4006,5217,6682,8434,10508,12941,15772,19042,22794,27073,31926,37402,43552,50429,58088 ⋆ Number of (n + 1) X 4 binary arrays with consecutive windows of two bits considered as a binary number nondecreasing in every row and column. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ●

▶ [A226264] 36,84,180,372,756,1524,3060,6132,12276,24564,49140,98292,196596,393204,786420,1572852,3145716,6291444,12582900,25165812,50331636,100663284,201326580,402653172,805306356 ⋆ Number of additive Z _ 2 Z _ 8 codes of a certain type (see Siap - Aydogdu for precise definition). ● a(n) = 12 * (2 ^ (1 + n) - 1) for n>0. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>2. ●

▶ [A305068] 36,90,144,198,252,306,360,414,468,522,576,630,684,738,792,846,900,954,1008,1062,1116,1170,1224,1278,1332 ⋆ a(n) = 54 * n - 18 (n>=1). ● a(n) = 2 * a(n - 1) - a(n - 2) for n>2. ●

▶ [A182467] 36,90,198,414,846,1710,3438,6894,13806,27630,55278,110574,221166,442350,884718,1769454,3538926,7077870,14155758,28311534,56623086,113246190,226492398,452984814,905969646 ⋆ a(n) = 3a(n - 1) - 2a(n - 2) with a(0)=36 and a(1)=90. ● a(n) = a(n - 1) * 2 + 18 ●

▶ [A027603] 36,100,224,432,748,1196,1800,2584,3572,4788,6256,8000,10044,12412,15128,18216,21700,25604,29952,34768,40076,45900,52264,59192,66708 ⋆ a(n) =

n ^ 3 + (n + 1) ^ 3 + (n + 2) ^ 3 + (n + 3) ^ 3. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>=4. ●

► [A250813] 36,100,225,441,784,1296,2025,3025,4356,6084,8281,11025,14400,18496,23409,29241,36100,44100,53361,64009,76176,90000,105625,123201,142884 ★ Number of (1 + 1) X (n + 1) 0..2 arrays with nondecreasing x(i,j) - x(i,j - 1) in the i direction and nondecreasing min(x(i,j),x(i - 1,j)) in the j direction. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

► [A307939] 36,120,310,660,1218,2032,3150,4620,6490,8808,11622,14980,18930,23520,28798,34812,41610,49240,57750,67188,77602,89040,101550,115180,129978 ★ Number of (undirected) Hamiltonian paths in the n - dipyramidal graph. ● a(n) = 2 * n * (31 - 20 * n + 4 * n ^ 2) for n > 3. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n > 7. ●

► [A254146] 36,120,540,2892,17172,109020,725220,4992492,35277012,254402940,1864757700,13850340492,103996064052,787943896860,6015370201380,46217575406892,357036252710292,2770979252910780,21591510288112260,168818732978719692,1323861500735007732 ★ a(n) = 1 * 8 ^ n + 2 * 7 ^ n + 3 * 6 ^ n + 4 * 5 ^ n + 5 * 4 ^ n + 6 * 3 ^ n + 7 * 2 ^ n + 8 * 1 ^ n. ● a(n) = (x + 1) * (Bernoulli(n + 1, x + 1) - Bernoulli(n + 1, 1)) / (n + 1) - (Bernoulli(n + 2, x + 1) - Bernoulli(n + 2, 1)) / (n + 2) at x = 8. ● a(n) = 1 / 7! * Sum _{ k = 0..n } (- 1) ^ (k + n) * (k + 9)! * Stirling2(n,k) / ((k + 1) * (k + 2)). (End) ● a(n) = 36 * a(n - 1) - 546 * a(n - 2) + 4536 * a(n - 3) - 22449 * a(n - 4) + 67284 * a(n - 5) - 118124 * a(n - 6) + 109584 * a(n - 7) - 40320 * a(n - 8). - _ Wesley Ivan Hurt _ , May 24 2021 ●

► [A016862] 1,36,121,256,441,676,961,1296,1681,2116,2601,3136,3721,4356,5041,5776,6561,7396,8281,9216,10201,11236,12321,13456,14641 ★ a(n) = (5 * n + 1) ^ 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Jul 11 2012 ●

► [A067865] 36,136,236,336,436,536,636,736,836,936,1036,1136,1236,1336,1436,1536,1636,1736,1836,1936,2036,2136,2236,2336,2436 ★ Numbers n such that n and 2 ^ n end with the same two digits. ● a(n) = 36 + 100(n - 1). ● a(n) = 2 * a(n - 1) - a(n - 2). G.f.: 4 * x * (9 + 16 * x) / (1 - x) ^ 2. [_ Colin Barker _ , Dec 01 2012] ●

► [A016910] 0,36,144,324,576,900,1296,1764,2304,2916,3600,4356,5184,6084,7056,8100,9216,10404,11664,12996,14400,15876,17424,19044,20736 ★ a(n) = (6 * n) ^ 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A275496] 0,1,36,153,528,1225,2628,4753,8256,13041,20100,29161,41616,56953,77028,101025,131328,166753,210276,260281,320400,388521,468996,559153,664128 ★ a(n) = n ^ 2 * (2 * n ^ 2 + (- 1) ^ n). ● a(n) = n ^ 4 + Sum _{ k=0..(n ^ 2 - (n mod 2)) } 2k. ● a(n) = n ^ 2 * (2 * n ^ 2 + (- 1) ^ n). ● a(n) = 2 * n ^ 4 + n ^ 2 for n even. ● a(n) = 2 * n ^ 4 - n ^ 2 for n odd. ●

► [A268905] 0,36,168,696,2664,9720,34344,118584,402408,1347192,4461480,14644152,47711592,154472184,497428776,1594323000,5089079016,16185567096,51311691432,162200044728,511395045480,1608569870328,5048863812648 ★ Number of 2 X n 0..2 arrays with some element plus some horizontally or antidiagonally adjacent neighbor totalling two exactly once. ● a(n) = 8 * 3 ^ (n - 3) * (8 * n - 3) for n>2. ●

► [A017054] 36,169,400,729,1156,1681,2304,3025,3844,4761,5776,6889,8100,9409,10816,12321,13924,15625,17424,19321,21316,23409,25600,27889,30276 ★ a(n) = (7 * n + 6) ^ 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3); a(0)=36, a(1)=169, a(2)=400. - _ Harvey P. Dale _ , Apr 28 2016 ●

► [A330770] 36,169,1233,9745,77841,622609,4980753,39845905,318767121,2550136849,20401094673,163208757265,1305670058001,10445360463889,83562883710993,668503069687825,5348024557502481,42784196460019729,342273571680157713,2738188573441261585 ★ a(n) = 19 * 8 ^ n + 17 for n >= 0. ● a(n) = 9 * a(n - 1) - 8 * a(n - 2) for n>1. ●

► [A304378] 0,36,200,492,912,1460,2136,2940,3872,4932,6120,7436,8880,10452,12152,13980,15936,18020,20232,22572,25040,27636,30360,33212,36192 ★ a(n) = 4 * (n - 1) * (16 * n - 23) for n >= 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>3. (End) ●

► [A326347] 36,240,780,2952,10164,35040,118044,393720,1299012,4251600,13817388,44641128,143488980,459165120,1463588412,4649045976,14721978468,46490458800,146444944716,460255541064,1443528741876,4518872583840,14121476823900,44059007691192 ★ Number of unordered pairs of 4 - colorings of an n - cycle that differ in the coloring of exactly one vertex. ● a(n) = 6 * n * (3 ^ (n - 2) + (- 1) ^ n). ● a(n) = 4 * a(n - 1) + 2 * a(n - 2) - 12 * a(n - 3) - 9 * a(n - 4) for n > 6. ●

► [A074363] 0,0,0,0,36,246,1293,6057,26592,111934,457353,1827529,7176636,27789976,106371588,403204880,1515647250,5656172420,20974163475,77339044883,283743384228,1036296662574,3769287797151,13658724680991,49325767966842 ★ Coefficient of q ^ 3 in nu(n), where nu(0)=1, nu(1)=b and, for n>=2, nu(n)=b * nu(n - 1) + lambda * (1 + q + q ^ 2 + ... + q ^ (n - 2)) * nu(n - 2) with (b,lambda)=(3,1). ● a(n) = 12 * a(n - 1) - 50 * a(n - 2) + 72 * a(n - 3) + 21 * a(n - 4) - 72 * a(n - 5) - 50 * a(n - 6) - 12 * a(n - 7) - a(n - 8) for n>9. ●

► [A247840] 0,36,252,1548,9324,55980,335916,2015532,12093228,72559404,435356460,2612138796,15672832812,94036996908,564221981484,3385331888940,20311991333676,121871948002092,731231688012588,4387390128075564,26324340768453420 ★ Sum(6 ^ k, k=2..n). ● a(n) = a(n - 1) + 6 ^ n = (6 ^ (n + 1) - 36) / 5 = 7 * a(n - 1) - 6 * a(n - 2). ●

► [A133072] 0,1,36,261,1072,3225,7956,17101,33216,59697,100900,162261,250416,373321,540372,762525,1052416,1424481,1895076,2482597,3207600,4092921,5163796,6447981,7975872 ★ a(n) = n ^ 5 + n ^ 3 - n ^ 2. ● a(n) = n ^ 5 + n ^ 3 - n ^ 2. ●

► [A187511] 0,0,36,272,772,1525,2524,3769,5260,6997,8980,11209,13684,16405,19372,22585,26044,29749,33700,37897,42340,47029,51964,57145,62572 ★ Number of 6 - step S, E, and NW - moving king's tours on an n X n board summed over all starting positions. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>7. ●

► [A288963] 0,0,36,288,1320,4464,12348,29568,63504,125280,230868,402336,669240,1070160,1654380,2483712,3634464,5199552,7290756,10041120,13607496,18173232,23951004,31185792,40158000 ★ Number of 5 - cycles in the n X n rook graph. ● a(n) = 6 * n * binomial(n,3) * (n ^ 2 - 2 * n + 7) / 5. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). ●

► [A185096] 0,36,300,1176,3240,7260,14196,25200,41616,64980,97020,139656,195000,265356,353220,461280,592416,749700,936396,1155960,1412040,1708476,2049300,2438736,2881200 ★ Let T(n) = n(n + 1) / 2 be the n - th triangular number (A000217); a(n) = T(8T(n)). ● a(n) = 2 * n * (n + 1) * (2 * n + 1) ^ 2. ●

► [A073972] 0,0,0,36,300,1440,7056,42336,272160,1700352,10349856,62099136,367960320,2173796352,12940881408,77716392192,468419708160,2821539889152,16960580969472,101763485816832,609985806796800,3656220357427200,21926115464435712,131556692786614272 ★ Number of strings of length n over Z _ 6 with trace 0 and subtrace 1. ● a(n; t, s) = a(n - 1; t, s) + a(n - 1; t + 5, s + 5t + 1) + a(n - 1; t + 4, s + 4t + 4) + a(n - 1; t + 3, s + 3t + 3) + a(n - 1; t + 2, s + 2t + 2) + a(n - 1; t + 1, s + t + 1) where t is the trace and s is the subtrace. ●

► [A237128] 36,324,396,684,756,1044,1116,1404,1476,1764,1836,2124,2196,2484,2556,2844,2916,3204,3276,3564,3636,3924,3996,4284,4356 ★ Angles n expressed in degrees such that 2 * cos(n) = phi where phi is the golden ratio (A001622). ● a(n) = 18 * (- 5 + 3 * (- 1) ^ n + 10 * n). a(n) = a(n - 1) + a(n - 2) - a(n - 3). G.f.: 36 * x * (x ^ 2 + 8 * x + 1) / ((x - 1) ^ 2 * (x + 1)). - _ Colin Barker _ , Feb 04 2014 ●

► [A017594] 36,324,900,1764,2916,4356,6084,8100,10404,12996,15876,19044,22500,26244,30276,34596,39204,44100,49284,54756,60516,66564,72900,79524,86436 ★ a(n) = (12 * n + 6) ^ 2. ● a(n) = a(n - 1) + 288 * n, n >= 1. - _ Vincenzo Librandi _ , Mar 19 2011 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3); a(0)=36, a(1)=324, a(2)=900. - _ Harvey P. Dale _ , Jun 04 2012 ●

► [A067473] 36,324,3025,30276,300304,3003289,30008484,300017041,3000081529,30000318436,300000484729,3000000666601,30000004655076,300000032019081,3000000027329536,30000000084216561,300000000542063364 ★ Smallest n - digit square starting with 3. ● a(n) = ceiling(sqrt(3 * 10 ^ (n - 1))) ^ 2, n>1. - _ Rick L. Shepherd _ , Feb 14 2002 ●

► [A223299] 36,324,3132,30564,298620,2918052,28515132,278649828,2722966524,26608833828,260021573820,2540931306084,24829985481084,242638664618916,2371065485035068,23170056359958756,226417834139125500 ★ 4 X 4 X 4 triangular graph coloring a rectangular array: number of n X 2 0..9 arrays where 0..9 label nodes of a graph with edges 0,1 0,2 1,2 1,3 1,4 2,4 3,4 2,5 4,5 3,6 3,7 4,7 6,7 4,8 5,8 7,8 5,9 8,9 and every array movement to a horizontal or vertical neighbor moves along an edge of this graph. ● a(n) = (3 * 2 ^ (- n) * ((11 - sqrt(73)) ^ n * (- 1 + sqrt(73)) + (1 + sqrt(73)) * (11 + sqrt(73)) ^ n)) / sqrt(73). ●

► [A071232] 0,1,36,378,2080,7875,23436,58996,131328,266085,500500,886446,1493856,2414503,3766140,5697000,8390656,12071241,17009028,23526370,32004000,42887691,56695276,74024028,95558400 ★ a(n) = (n ^ 6 + n ^ 3) / 2. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7); a(0)=0, a(1)=1, a(2)=36, a(3)=378, a(4)=2080, a(5)=7875, a(6)=23436. - _ Harvey P. Dale _ , Nov 06 2011 ●

► [A254644] 1,36,381,2336,10326,36552,110022,292512,704847,1567852,3263403,6422208,12046268,21675408,37608828,63194304,103199469,164281524,255573769,389409504,582206130,855534680,1237402530,1763779680,2480401755 ★ Fourth partial sums of fifth powers (A000584). ● a(n) = n * (1 + n) * (2 + n) * (3 + n) * (4 + n) * (- 24 + 20 * n + 85 * n ^ 2 + 40 * n ^ 3 + 5 * n ^ 4) / 15120. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) + n ^ 5. ●

► [A083811] 36,396,3996,39996,399996,3999996,39999996,399999996,3999999996,39999999996,399999999996,3999999999996 ★ Numbers n such that 2n + 1 is the digit reversal of n + 1. ● a(n) = 4 * (10 ^ n - 1). ●

► [A086575] 0,36,396,3996,39996,399996,3999996,39999996,399999996,3999999996,39999999996,399999999996,3999999999996,39999999999996,399999999999996,3999999999999996,39999999999999996,399999999999999996,3999999999999999996,39999999999999999996,399999999999999999996 ★ a(n) = 4 * (10 ^ n - 1). ● a(n) = 11 * a(n - 1) - 10 * a(n - 2) for n > 1. ●

► [A027782] 36,405,2475,10890,38610,117117,315315,772200,1750320,3719430,7482618,14360580,26453700,47006190,80901810,135326664,220641300,351511875,548358525,839188350,1261890630,1867083075,2721610125,3912807600,5553662400 ★ a(n) = 9 * (n + 1) * binomial(n + 2,9) / 2. ● a(n) = binomial(n + 1, 8) * binomial(n + 2, 2). - _ Zerinvary Lajos _ , Apr 28 2005; corrected by _ R. J. Mathar _ , Feb 13 2016 ●

► [A181685] 0,36,432,1296,15552,139968,559872,5038848,40310784,181398528,1451188224,10883911680,52242776064,391820820480,2821109907456,14105549537280,101559956668416,710919696678912,3656158440062976,25593109080440832,175495605123022848,921351926895869952 ★ Expansion of 36 * x ^ 2 * (1 + 6 * x - 36 * x ^ 2) / ((1 - 6 * x) ^ 2 * (1 + 6 * x + 36 * x ^ 2)). ● a(n) = (n - 1 - 2 * floor((n - 1) / 3)) * 6 ^ n. ●

► [A178690] 0,0,0,36,432,3660,27000,185556,1223712,7862940,49653000,309776676,1915868592,11772890220,71992229400,438593697396,2664227115072,16146540253500,97676540188200,590011376299716,3559691497843152,21455715437760780,129219925869401400 ★ Expansion of (exp(3 * x) - 1) * (exp(2 * x) - 1) * (exp(x) - 1). ● a(n) = 18 * a(n - 1) - 121 * a(n - 2) + 372 * a(n - 3) - 508 * a(n - 4) + 240 * a(n - 5). - _ Vaclav Kotesovec _ , Dec 01 2014 ●

► [A244498] 1,36,446,3172,15891,62408,204828,585672,1501269,3521452,7674810,15723500,30556903,56739216,101252408,174482832,291507177,473741364,751024438,1164218484,1768415099,2636848984,3865629780,5579414360,7938153405 ★ Number of magic labelings of the nodes of the 4 X 4 grid graph with magic sum n. ● a(n) = (7560 + 34164 * n + 67044 * n ^ 2 + 75190 * n ^ 3 + 53382 * n ^ 4 + 25095 * n ^ 5 + 7896 * n ^ 6 + 1620 * n ^ 7 + 198 * n ^ 8 + 11 * n ^ 9)) / 7560. ● a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10) for n>9. ●

► [A110693] 1,36,448,3175,15786,61446,199872,566676,1441275,3356782,7268976,14805583,28621684,52892100,93977088,161303616,268510869,434915472,687359200,1062509679,1609692766,2394343930,3502175040,5044162500 ★ Kekulé numbers for certain benzenoids. ● a(n) = 2 * (n + 1) * (n + 2) ^ 3 * (n + 3) * (n + 4) * (25 * n ^ 3 + 142 * n ^ 2 + 295 * n + 210) / 8!. ●

► [A128986] 0,36,486,3888,24300,131220,642978,2939328,12754584,53144100,214347870,841802544,3233287044,12187005012,45199057050,165299408640,597144113712,2133912053412,7552375012566,26499561447600,92260315250460 ★ a(n) = (n ^ 3 - n ^ 2) * 3 ^ n. ● a(n) = 12 * a(n - 1) - 54 * a(n - 2) + 108 * a(n - 3) - 81 * a(n - 4). - _ Vincenzo Librandi _ , Feb 11 2013 ●

► [A329913] 0,1,36,540,6080,56250,455112,3342192,22809600,146988270,904475000,5358254616,30750385536,171773279860,937514244240,5014575000000,26351064760320,136319273714070,695429503781400,3503580441563400,17452918098000000,86055711108818220 ★ The fifth moments of the squared binomial coefficients; a(n) = Sum _{ m=0..n } m ^ 5 * binomial(n, m) ^ 2. ● a(n) = binomial(2 * n, n) * n ^ 4 * (n ^ 3 + 3 * n ^ 2 - 3 * n - 5) / (8 * (2 * n - 1) * (2 * n - 3)). ●

► [A183356] 36,576,1296,3600,9216,24336,63504,166464,435600,1140624,2985984,7817616,20466576,53582400,140280336,367258896,961496064,2517229584,6590192400,17253347904,45169851024,118256205456,309598765056,810540090000 ★ One quarter the number of n X 4 1..4 arrays with no two neighbors of any element equal to each other. ● a(n) = (9 / 5) * 2 ^ (3 - n) * ((- 1) ^ n * 2 ^ (2 + n) + (3 - sqrt(5)) ^ (1 + n) + (3 + sqrt(5)) ^ (1 + n)) for n>1. ●

► [A099764] 0,36,576,3600,14400,44100,112896,254016,518400,980100,1742400,2944656,4769856,7452900,11289600,16646400,23970816,33802596,46785600,63680400,85377600,112911876,147476736,190440000,243360000 ★ a(n) = n ^ 2 * (n + 1) ^ 2 * (n + 2) ^ 2 = 36 * A001249(n - 1). ● a(n) = (Sum _{ k=0..n } (2 * k + 1)) ^ 3 - Sum _{ k=0..n } (2 * k + 1) ^ 3. - _ Philippe Deléham _ , Mar 10 2014 ●

► [A151597] 0,36,606,4744,30850,186924,1092966,6248976,35154954,195310900,1074216814,5859372696,31738278546,170898434364,915527340150,4882812495904,25939941401626,137329101557316,724792480462974,3814697265618600,20027160644524194,104904174804679756 ★ Number of permutations of 4 indistinguishable copies of 1..n arranged in a circle with exactly 2 adjacent element pairs in decreasing order. ● a(n) = n * (2 * 5 ^ n - 16 * n) for n > 1. - _ Andrew Howroyd _ , May 04 2020 ● a(n) = 13 * a(n - 1) - 58 * a(n - 2) + 106 * a(n - 3) - 85 * a(n - 4) + 25 * a(n - 5) for n>6. ●

► [A129839] 0,0,0,1,36,625,8100,90601,933156,9150625,87048900,812307001,7486748676,68447640625,622473660900,5641104760201,51003678922596,460438253730625,4152386009780100,37422167780506201,337103845136750916,3035761307578140625,27332814735512302500 ★ a(n) = Stirling _ 2(n,3) ^ 2. ● a(n) = (3 ^ n - 3 * 2 ^ n + 3) ^ 2 / 36 for n>0. - _ Charles R Greathouse IV _ , Jan 03 2013 ●

► [A210432] 0,1,36,630,6512,45628,239316,1007083,3570240,11042199,30569012,77221232,180646896,395884866,820217412,1618520277,3060257024,5572071725,9810869508,16763347626,27879160048,45246275592,71818632820,111707913791,170553162816 ★ Number of semistandard Young tableaux over all partitions of 10 with maximal element <= n. ● a(n) = n ^ 2 * (126432 + (206020 + (101031 + (18930 + 1187 * n ^ 2) * n ^ 2) * n ^ 2) * n ^ 2) / 453600. ●

► [A287990] 1,36,630,7176,60165,398412,2184078,10255320,42321942,156590980,527649912,1639560888,4745867595,12904341336,33190117110,81222775680,190066236318,427113304920,925107172122,1937505253320,3934709716500,7767340567380,14937197788890 ★ Expansion of Jacobi theta constant (theta _ 2 / 2) ^ 36. ● a(n) = 1 / 141557760 * Sum _{ a, b, c, x, y, z > 0, a * x + b * y + c * z = 2 * n + 9, a == b == c == x == y == z == 1 mod 2 and a > b > c } a * b * c * ((a ^ 2 - b ^ 2) * (a ^ 2 - c ^ 2) * (b ^ 2 - c ^ 2)) ^ 2. ●

► [A035478] 1,36,648,7788,70416,511668,3116952,16395516,76117536,317484356,1207612584,4241116044,13890124080,42757028820,124465217976,344307603996,908746910784,2296252865124,5571657926344,13017260865708,29356976611152,64056799324404,135523702100952 ★ Coordination sequence for lattice D *_ 18 (with edges defined by l _ 1 norm = 1). ● a(m) = 2 ^ n * binomial((n + 2 * m) / 2 - 1, n - 1) + Sum _{ k=0..n } (2 ^ k * binomial(n, k) * binomial(m - 1, k - 1)), with n=18. ●

► [A268900] 36,696,9720,118584,1347192,14644152,154472184,1594323000,16185567096,162200044728,1608569870328,15816054042936,154394813276280,1498006261495224,14458132831535352,138907883786523192 ★ Number of n X 4 0..2 arrays with some element plus some horizontally or antidiagonally adjacent neighbor or totalling two exactly once. ● a(n) = 8 * 3 ^ (2 * n - 3) * (16 * n - 3) for n>1. ●

► [A054339] 1,36,720,10560,126720,1317888,12300288,105431040,843448320,6372720640,45883588608,317013884928,2113425899520,13655982735360,85837605765120,526470648692736,3158823892156416,18581317012684800,107358720517734400,610249569258700800 ★ 9 - fold convolution of A000302 (powers of 4). ● a(n) = binomial(n + 8, 8) * 4 ^ n. ● a(n) = 36 * a(n - 1) - 576 * a(n - 2) + 5376 * a(n - 3) - 32256 * a(n - 4) + 129024 * a(n - 5) - 344064 * a(n - 6) + 589824 * a(n - 7) - 589824 * a(n - 8) + 262144 * a(n - 9). - _ Harvey P. Dale _ , Aug 30 2013 ●

► [A058001] 1,36,738,8240,57675,289716,1144836,3780288,10865205,27969700,65834406,143887536,295467263,575308020,1069960200,1911933696,3298486761,5516122788,8972008810,14233690800,22078652211,33555443636,50058302988,73417387200,106006948125 ★ Number of 3 X 3 matrices with entries mod n, up to row and column permutation. ● a(n) = (1 / 3! ^ 2) * (n ^ 9 + 6 * n ^ 6 + 9 * n ^ 5 + 8 * n ^ 3 + 12 * n ^ 2). ●

► [A089909] 0,36,748,11460,154572,1945684,23456796,274567908,3145679020,35456790132,394567901244,4345679012356,47456790123468,514567901234580,5545679012345692,59456790123456804,634567901234567916 ★ Sum of digits of numbers between 0 and (8 / 9) * (10 ^ n - 1). ● a(n) = s(8, n - 1) where s(a, k)=a * (k + 1) + a ^ 2 * sum(i=0, k, i * 10 ^ (k - i)) + sum(i=0, k, 5 * a * (9 * (k - i) + a - 1) * 10 ^ (k - i - 1)). ● a(n) = (4 * (- 11 * (- 1 + 10 ^ n) + 9 * (2 + 9 * 10 ^ n) * n)) / 81. G.f.: 4 * x * (20 * x ^ 2 - 11 * x + 9) / ((x - 1) ^ 2 * (10 * x - 1) ^ 2). - _ Colin Barker _ , Jun 14 2013 ●

► [A049434] 1,36,750,11880,159027,1899612,20912320,216627840,2141764053,20415995028,189036065010,1709751003480,15170932662679,132511015347084,1142399079991620,9741955019900400,82318282158320505,690223721118368580,5749622251945664950 ★ Stirling numbers of second kind: 8th column of Stirling2 triangle A008277. ● a(n) = det(|s(i + 8,j + 7)|, 1 <= i,j <= n - 8), where s(n,k) are Stirling numbers of the first kind. - _ Mircea Merca _ , Apr 06 2013 ●

► [A036084] 1,36,756,12096,163296,1959552,21555072,221709312,2161665792,20175547392,181579926528,1584697540608,13469929095168,111904026329088,911218500108288,7289748000866304,57406765506822144,445746649817677824 ★ Expansion of 1 / (1 - 6 * x) ^ 6. ● a(n) = 6 ^ n * binomial(n + 5, 5). ●

► [A014772] 36,784,4356,14400,36100,76176,142884,246016,396900,608400,894916,1272384,1758276,2371600,3132900,4064256,5189284,6533136,8122500,9985600,12152196,14653584,17522596,20793600,24502500 ★ Squares of even hexagonal numbers. ● a(1)=36, a(2)=784, a(3)=4356, a(4)=14400, a(5)=36100, a(n)=5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) [From Harvey P. Dale, May 11 2012] ●

► [A173187] 1,36,810,14580,229635,3306744,44641044,573956280,7102708965,85232507580,997220338686,11422705697676,128505439098855,1423444863864240,15556218869373480,168007163789233584 ★ a(n) = binomial(n + 3, 3) * 9 ^ n. ● a(n) = 36 * a(n - 1) - 486 * a(n - 2) + 2916 * a(n - 3) - 6561 * a(n - 4). ●

► [A028222] 1,36,815,14850,238161,3512376,48835795,650202750,8376184421,105168836916,1293777896775,15655641961050,186905779340281,2206620573868656,25809833134389755,299526474742773750 ★ Expansion of 1 / ((1 - 7x)(1 - 8x)(1 - 10x)(1 - 11x)). ● a(n)=(11 ^ (n + 3) - 2 * 10 ^ (n + 3) + 2 * 8 ^ (n + 3) - 7 ^ (n + 3)) / 12. [_ Yahia Kahloune _ , Jun 12 2013] ●

► [A028216] 1,36,817,14952,241213,3582348,50196889,673865424,8755297045,110878147380,1375697840881,16786476031416,202032169207597,2403762666000732,28323951022216393,331005811232778528 ★ Expansion of 1 / ((1 - 6x)(1 - 9x)(1 - 10x)(1 - 11x)). ● a(n) = 21 * a(n - 1) - 110 * a(n - 2) + 3 * 9 ^ n - 2 * 6 ^ n, n >= 2. - _ Vincenzo Librandi _ , Mar 13 2011 ● a(n) = - 25 * 10 ^ (n + 1) + 11 ^ (n + 3) / 10 - 3 * 6 ^ (n + 1) / 5 + 3 * 9 ^ (n + 2) / 2. - _ R. J. Mathar _ , Mar 18 2011 ● a(n) = 36 * a(n - 1) - 479 * a(n - 2) + 2784 * a(n - 3) - 5940 * a(n - 4); a(0)=1, a(1)=36, a(2)=817, a(3)=14952. - _ Harvey P. Dale _ , Jan 16 2013 ●

► [A028221] 1,36,817,14964,241969,3609732,50945329,691013268,9103047217,117325825188,1487325837361,18617531653812,230789841098545,2839613067896004,34737008397752113,423047207066166996 ★ Expansion of 1 / ((1 - 7x)(1 - 8x)(1 - 9x)(1 - 12x)). ● a(n)=(12 ^ (n + 3) - 10 * 9 ^ (n + 3) + 15 * 8 ^ (n + 3) - 6 * 7 ^ (n + 3)) / 60. [_ Yahia Kahloune _ , Jun 12 2013] ● a(0)=1, a(1)=36, a(2)=817, a(3)=14964, a(n)=36 * a(n - 1) - 479 * a(n - 2) + 2796 * a(n - 3) - 6048 * a(n - 4). - _ Harvey P. Dale _ , Apr 28 2015 ●

► [A000597] 36,820,7645,44473,191620,669188,1999370,5293970,12728936,28285400,58856655,115842675,217378200,391367064,679524340,1142659012,1867463260,2975110060,4631998657,7063027565,10567817084,15540347900,22492529150,32082258390,45146587200 ★ Central factorial numbers. ● a(n) = s(n,n - 3) ^ 2 - 2 * s(n,n - 4) * s(n,n - 2) + 2 * s(n,n - 5) * s(n,n - 1) + 2 * s(n,n - 6), where s(n,k) are Stirling numbers of the first kind, A048994. - _ Mircea Merca _ , Apr 03 2012 ● a(n) = Sum _{ 0 < i < j < k < n } (i * j * k) ^ 2. ● a(n) = (n - 1) * (n - 2) * (n - 3) * n * (2 * n - 1) * (2 * n - 3) * (2 * n - 5) * (35 * n ^ 2 + 21 * n + 4) / 45360. ● a(n) = (1 / (9! * 2)) * ((2 * n)! / (2 * n - 7)!) * (35 * n ^ 2 + 21 * n + 4). ● a(n) = binomial(2 * n,7) * (35 * n ^ 2 + 21 * n + 4) / 144. (End) ●

► [A028197] 1,36,823,15270,251161,3822096,55123003,764718570,10305415021,135822156756,1759270703983,22475843025870,283991223372481,3556423423325016,44213833662081763,546396746667037170 ★ Expansion of 1 / ((1 - 5x)(1 - 9x)(1 - 10x)(1 - 12x)). ● a(n) = 22 * a(n - 1) - 120 * a(n - 2) + (9 ^ (n + 1) - 5 ^ (n + 1)) / 4, n >= 2. - _ Vincenzo Librandi _ , Mar 12 2011 ● a(n) = - 5 ^ (n + 2) / 28 - 10 ^ (n + 2) + 2 * 12 ^ (n + 2) / 7 + 3 * 9 ^ (n + 2) / 4. - _ R. J. Mathar _ , Mar 18 2011 ●

► [A028209] 1,36,823,15282,251881,3847032,55777051,779149134,10588135261,140901434388,1844713666159,23841089487306,304926682591441,3866889746187504,48692419436767747,609526612369569798 ★ Expansion of 1 / ((1 - 6x)(1 - 7x)(1 - 11x)(1 - 12x)). ● a(n) = 23 * a(n - 1) - 132 * a(n - 2) + 7 ^ (n + 1) - 6 ^ (n + 1), n >= 2. - _ Vincenzo Librandi _ , Mar 13 2011 ● a(n) = - 6 ^ (n + 2) / 5 - 11 ^ (n + 3) / 20 + 2 * 12 ^ (n + 2) / 5 + 7 ^ (n + 3) / 20. - _ R. J. Mathar _ , Mar 18 2011 ● a(n) = 36 * a(n - 1) - 473 * a(n - 2) + 2682 * a(n - 3) - 5544 * a(n - 4); a(0)=1, a(1)=36, a(2)=823, a(3)=15282. - _ Harvey P. Dale _ , Apr 09 2015 ●

► [A028195] 1,36,825,15380,254721,3910596,56993545,800115060,10923586641,145981963556,1918518760665,24879137417940,319158529241761,4058064014390916,51218264422582185,642449405949396020 ★ Expansion of 1 / ((1 - 5x)(1 - 8x)(1 - 11x)(1 - 12x)). ● a(n) = 23 * a(n - 1) - 132 * a(n - 2) + (8 ^ (n + 1) - 5 ^ (n + 1)) / 3, n >= 2. - _ Vincenzo Librandi _ , Mar 12 2011 ● a(n) = (28 * 8 ^ (n + 2) + 54 * 12 ^ (n + 2) - 7 * 11 ^ (n + 3) - 5 ^ (n + 3)) / 126. - _ Bruno Berselli _ , Mar 12 2011 ●

► [A028163] 1,36,829,15576,260425,4039212,59479093,843439392,11625297409,156744987828,2076870835117,27134173366248,350447396932153,4483154549898684,56894676264296101,717171756670960944 ★ Expansion of 1 / ((1 - 4x)(1 - 9x)(1 - 11x)(1 - 12x)). ● a(n) = 23 * a(n - 1) - 132 * a(n - 2) + (9 ^ (n + 1) - 4 ^ (n + 1)) / 5), n >= 2. - _ Vincenzo Librandi _ , Mar 16 2011 ● a(n) = - 11 ^ (n + 3) / 14 - 2 * 4 ^ (n + 1) / 35 + 6 * 12 ^ (n + 1) + 3 * 9 ^ (n + 2) / 10. - _ R. J. Mathar _ , Mar 17 2011 ●

► [A054622] 0,1,36,834,8230,48915,210126,720916,2097684,5381685,12501280,26796726,53750346,101969959,184478490,320367720,536879176,871980201,1377508284,2122961770,3200020110,4727881851,6859513606,9788908284,13759455900 ★ Number of ways to color vertices of an octagon using <= n colors, allowing only rotations. ● a(n) = Sum _{ d|8 } phi(d) * n ^ (8 / d) / 8 = n * (n + 1) * (n ^ 6 - n ^ 5 + n ^ 4 - n ^ 3 + 2 * n ^ 2 - 2 * n + 4) / 8. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9). _ Vincenzo Librandi _ , Apr 29 2012 ●

► [A028108] 1,36,835,15870,269041,4235856,63339535,911961090,12757140781,174463937076,2343013658635,31002931521510,405218193255721,5241917197644696,67218151176880135,855512978401565130 ★ Expansion of 1 / ((1 - 3x)(1 - 10x)(1 - 11x)(1 - 12x)). ● a(0)=1, a(1)=36, a(2)=835, a(3)=15870, a(n)=36 * a(n - 1) - 461 * a(n - 2) + 2406 * a(n - 3) - 3960 * a(n - 4). - _ Harvey P. Dale _ , Mar 15 2013 ● a(n)=(28 * 12 ^ (n + 3) - 63 * 11 ^ (n + 3) + 36 * 10 ^ (n + 3) - 3 ^ (n + 3)) / 504. [_ Yahia Kahloune _ , Jun 11 2013] ●

► [A004360] 1,36,861,17296,316251,5461512,90858768,1473109704,23446881315,368136785016,5720645481903,88188515933856,1350990969850340,20592957740312160,312629484400483356,4730523156632595024 ★ Binomial coefficient C(6n,n - 5). ● a(n + 1) = a(n) * 72 * (6 * n + 1) * (3 * n + 1) * (2 * n + 1) * (3 * n + 2) * (6 * n + 5) * (n + 1) / (5 * (5 * n + 6) * (5 * n + 7) * (5 * n + 8) * (5 * n + 9) * (n + 2) * (n - 4)). - _ Robert Israel _ , Feb 04 2018 ●

► [A081142] 0,0,1,36,864,17280,311040,5225472,83607552,1289945088,19349176320,283787919360,4086546038784,57954652913664,811365140791296,11234286564802560,154070215745863680,2095354934143746048 ★ 12th binomial transform of (0,0,1,0,0,0,...). ● a(n) = 36 * a(n - 1) - 432 * a(n - 2) + 1728 * a(n - 3), a(0) = a(1) = 0, a(2) = 1. ● a(n) = 12 ^ (n - 2) * binomial(n, 2). ● a(n) = 2 ^ (2 * n - 5) * 3 ^ (n - 2) * n * (n - 1). - _ Harvey P. Dale _ , Jul 25 2013 ●

► [A075916] 1,36,900,19440,390096,7511616,141134400,2611802880,47870735616,871982724096,15819463296000,286235993272320,5170077903015936,93275375604350976,1681524519443251200,30298254922942709760 ★ Third column of triangle A075501. ● a(n) = (6 ^ n - 8 * 12 ^ n + 9 * 18 ^ n) / 2. ●

► [A158739] 36,1332,5220,11700,20772,32436,46692,63540,82980,105012,129636,156852,186660,219060,254052,291636,331812,374580,419940,467892,518436,571572,627300,685620,746532 ★ a(n) = 1296 * n ^ 2 + 36. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A113618] 1,36,1793,24604,167481,756836,2620201,7526268,18831569,42374116,87654321,169343516,309160393,538155684,899445401,1451432956,2271560481,3460629668,5147732449,7495831836,10708033241,15034586596,20780659593 ★ a(n) = 1 + 2 * n + 3 * n ^ 2 + 4 * n ^ 3 + 5 * n ^ 4 + 6 * n ^ 5 + 7 * n ^ 6 + 8 * n ^ 7. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8), with a(0)=1, a(1)=36, a(2)=1793, a(3)=24604, a(4)=167481, a(5)=756836, a(6)=2620201, a(7)=7526268. - _ Harvey P. Dale _ , Jul 16 2014 ●

► [A291911] 0,0,36,3456,77040,800640,5265540,25514496,99320256,327836160,951285060,2488844160,5980596336,13384215936,28197301860,56398325760,107825391360,198142765056,351580800996,604675808640,1011282960240,1649187872640,2628701385156 ★ Number of 5 - cycles in the n X n rook complement graph. ● a(n) = (n - 2) ^ 2 * (n - 1) ^ 2 * n ^ 2 * (4 + 2 * n + 3 * n ^ 2 - 4 * n ^ 3 + n ^ 4) / 10. ● a(n) = 11 * a(n - 1) - 55 * a(n - 2) + 165 * (n - 3) - 330 * a(n - 4) + 462 * a(n - 5) - 462 * a(n - 6) + 330 * a(n - 7) - 165 * a(n - 8) + 55 * a(n - 9) - 11 * a(n - 10) + a(n - 11). ●

► [A120349] 36,3600,8100,10000,22500,26244,32400,90000,142884,202500,396900,518400,656100,810000,980100,1285956,1368900,1587600,1679616,2286144,2340900,2624400,2924100 ★ Refactorable numbers k such that the number of odd divisors r is odd, the number of even divisors s is even and both r and s are divisors of k. ● a(n) = n - th number such that n is even, r = number of odd divisors of n, s = number of even divisors of n, t = r + s = number of divisors of n, are all divisors of n and r is odd, s is even. ●

► [A041683] 1,1,37,38,1405,1443,53353,54796,2026009,2080805,76934989,79015794,2921503573,3000519367,110940200785,113940720152,4212806126257,4326746846409,159975692596981,164302439443390,6074863512559021,6239165952002411 ★ Denominators of continued fraction convergents to sqrt(360). ● a(n) = 38 * a(n - 2) - a(n - 4) for n > 3. - _ Vincenzo Librandi _ , Dec 22 2013 ● a(n) = Product _{ k = 1..floor((n - 1) / 2) } (36 + 4 * cos ^ 2(k * Pi / n)). ●

► [A069963] 1,37,40,153,349,964,2473,6525,17032,44641,116821,305892,800785,2096533,5488744,14369769,37620493,98491780,257854777,675072621,1767363016,4627016497,12113686405,31714042788,83028441889 ★ Define C(n) by the recursion C(0) = 6 * i where i ^ 2 = - 1, C(n + 1) = 1 / (1 + C(n)), then a(n) = 6 * (- 1) ^ n / Im(C(n)) where Im(z) denotes the imaginary part of z. ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - a(n - 3). ● a(n) = (2 ^ (- 1 - n) * (- 35 * (- 1) ^ n * 2 ^ (2 + n) - (3 - sqrt(5)) ^ n * (- 75 + sqrt(5)) + (3 + sqrt(5)) ^ n * (75 + sqrt(5)))) / 5. - _ Colin Barker _ , Sep 28 2016 ●

► [A159750] 37,47,65,157,235,353,905,1363,2053,5273,7943,11965,30733,46295,69737,179125,269827,406457,1044017,1572667,2369005,6084977,9166175,13807573,35465845 ★ Positive numbers y such that y ^ 2 is of the form x ^ 2 + (x + 47) ^ 2 with integer x. ● a(n) = 6 * a(n - 3) - a(n - 6) for n > 6; a(1)=37, a(2)=47, a(3)=65, a(4)=157, a(5)=235, a(6)=353. ●

► [A129072] 37,49,73,97,145,169,217,241,289,361,385,457,505,529,577,649,721,745,817,865,889,961,1009,1081,1177 ★ Numbers n such that (n - 13) / 12 is prime. ● a(n) = 12 * prime(n) + 13. - Zak Seidov, May 12 2007 ●

► [A158065] 37,73,109,145,181,217,253,289,325,361,397,433,469,505,541,577,613,649,685,721,757,793,829,865,901 ★ a(n) = 36 * n + 1. ● a(n) = 2 * a(n - 1) - a(n - 2). - _ Vincenzo Librandi _ , Feb 11 2012 ●

► [A085959] 0,37,74,111,148,185,222,259,296,333,370,407,444,481,518,555,592,629,666,703,740,777,814,851,888 ★ Multiples of 37. ● a(n) = a(n - 1) + 37; a(0)=0. ●

► [A216287] 37,78,113,124,133,134,139,154,167,180,218,234,248,276,288,291,310,314,323,331,347,374,418,430,436 ★ Decades whose prime pattern repeat in the next decade. ● a(n) >> n log ^ 2 n. - _ Charles R Greathouse IV _ , Sep 07 2012 ●

► [A216329] 37,78,124,139,154,180,234,276,288,291,310,331,436,444,499,532,558,609,616,624,648,696,706,717,750 ★ Decades whose prime pattern repeat into the next decade, with at least one prime. ● a(n) >> n log ^ 2 n. - _ Charles R Greathouse IV _ , Sep 06 2012 ●

► [A172193] 1,37,83,139,205,281,367,463,569,685,811,947,1093,1249,1415,1591,1777,1973,2179,2395,2621,2857,3103,3359,3625 ★ a(n) = 5 * n ^ 2 + 31 * n + 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Apr 07 2013 ●

► [A063325] 1,37,86,135,182,231,278,331,374,427,470,525,566,623,662,721,758,817,854,917,950,1013,1046,1111,1142 ★ Dimension of the space of weight n cuspidal newforms for Gamma _ 1(52). ● a(n) = a(n - 4) + a(n - 6) - a(n - 10) for n> 13. ●

► [A145480] 37,97,109,157,181,241,277,349,409,421,577,661,709,757,829,877,937,1009,1117,1201,1249,1381,1429,1609,1621 ★ Primes p such that (p + 37) / 2 is prime. ● a(n) >> n log ^ 2 n. - _ Charles R Greathouse IV _ , Jan 23 2017 ●

► [A195316] 1,37,109,217,361,541,757,1009,1297,1621,1981,2377,2809,3277,3781,4321,4897,5509,6157,6841,7561,8317,9109,9937,10801 ★ Centered 36 - gonal numbers. ● a(n) = 18 * n ^ 2 - 18 * n + 1. ●

► [A048510] 1,37,122,320,776,1816,4168,9448,21224,47336,104936,231400,507880,1109992,2416616,5242856,11337704,24444904,52559848,112721896,241172456,514850792,1096810472,2332033000,4949278696 ★ a(n) = T(5,n), array T given by A048505. ● a(n) = (n ^ 2 + 21 * n + 100) * 2 ^ (n - 2) - 24. - _ Ralf Stephan _ , Feb 05 2004 ● a(n) = 7 * a(n - 1) - 18 * a(n - 2) + 20 * a(n - 3) - 8 * a(n - 4). - _ Colin Barker _ , Mar 04 2015 ●

► [A250899] 37,127,403,1229,3673,10875,32095,94729,280069,829943,2465227,7338309,21883825,65356531,195414199,584800769,1751256541,5246953839,15726181411,47147086909,141374151817,423979849067,1271637557263,3814275137529 ★ Number of (1 + 1) X (n + 1) 0..2 arrays with nondecreasing x(i,j) - x(i,j - 1) in the i direction and nondecreasing absolute value of x(i,j) - x(i - 1,j) in the j direction. ● a(n) = (7 - 2 ^ (4 + n) + 3 ^ (3 + n) + (2 + 2 ^ (3 + n)) * n) / 2. ●

► [A158591] 1,37,145,325,577,901,1297,1765,2305,2917,3601,4357,5185,6085,7057,8101,9217,10405,11665,12997,14401,15877,17425,19045,20737 ★ a(n) = 36 * n ^ 2 + 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A157324] 37,146,327,580,905,1302,1771,2312,2925,3610,4367,5196,6097,7070,8115,9232,10421,11682,13015,14420,15897,17446,19067,20760,22525 ★ a(n) = 36 * n ^ 2 + n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Jan 26 2012 ●

► [A158596] 37,151,341,607,949,1367,1861,2431,3077,3799,4597,5471,6421,7447,8549,9727,10981,12311,13717,15199,16757,18391,20101,21887,23749 ★ a(n) = 38 * n ^ 2 - 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A172080] 0,1,37,190,590,1415,2891,5292,8940,14205,21505,31306,44122,60515,81095,106520,137496,174777,219165,271510,332710,403711,485507,579140,685700 ★ a(n) = n * (12 * n ^ 3 + 10 * n ^ 2 - 9 * n - 7) / 6. ● a(n) = n * (n + 1) * (12 * n ^ 2 - 2 * n - 7) / 6. ●

► [A156569] 37,205,1193,6953,40525,236197,1376657,8023745,46765813,272571133,1588660985,9259394777,53967707677,314546851285,1833313400033,10685333548913,62278687893445,362986793811757,2115642074977097 ★ a(n) = 6 * a(n - 1) - a(n - 2) for n > 2; a(1)=37, a(2)=205. ● a(n) = ((34 + 7 * sqrt(2)) * (3 - 2 * sqrt(2)) ^ n + (34 - 7 * sqrt(2)) * (3 + 2 * sqrt(2)) ^ n) / 4. ●

► [A165381] 37,285,1012,2467,4708,7748,11588,16228,21668,27908,34948,42788,51428,60868,71108,82148,93988,106628,120068,134308,149348,165188,181828,199268,217508 ★ Number of slanted n X 4 (i=1..n) X (j=i..4 + i - 1) 1..4 arrays with all 1s connected, all 2s connected, all 3s connected, all 4s connected, 1 in the upper left corner, 2 in the upper right corner, 3 in the lower left corner, 4 in the lower right corner, and with no element having more than 3 neighbors with the same value. ● a(n) = 4 * (817 - 540 * n + 100 * n ^ 2) for n>5. ●

► [A200889] 37,292,1268,3985,10213,22736,45648,84681,147565,244420,388180,595049,884989,1282240,1815872,2520369,3436245,4610692,6098260,7961569,10272053,13110736,16569040,20749625,25767261 ★ Number of 0..n arrays x(0..5) of 6 elements without any interior element greater than both neighbors. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

► [A165373] 37,305,1409,4569,11449,24225,45585,78729,127369,195729,288545,411065,569049,768769,1017009,1321065,1688745,2128369,2648769,3259289,3969785,4790625,5732689,6807369,8026569 ★ Number of slanted n X 4 (i=1..n) X (j=i..4 + i - 1) 1..4 arrays with all 1s connected, all 2s connected, all 3s connected, all 4s connected, 1 in the upper left corner, 2 in the upper right corner, 3 in the lower left corner, and 4 in the lower right corner. ● a(n) = (1107 - 1060 * n + 716 * n ^ 2 - 320 * n ^ 3 + 64 * n ^ 4) / 3 for n>2. ●

► [A027944] 1,37,376,2267,10220,38403,127921,392688,1140260,3189022,8699540,23352118,62048869,163843187,431026972,1131463777,2966502032,7772382641,20356549685,53305176134,139569431544,365416760764,956698453752,2504701077772,6557433205689 ★ a(n) = T(2n + 1, n + 4), T given by A027935. ● a(n) = Sum _{ j=0..n - 3 } binomial(2 * n - j + 1, 2 * (n - j - 3)). ● a(n) = Fibonacci(2 * n + 9) - (8 * n ^ 6 + 12 * n ^ 5 + 110 * n ^ 4 + 465 * n ^ 3 + 1412 * n ^ 2 + 2943 * n + 3060) / 90. ●

► [A083818] 1,37,397,3997,39997,399997,3999997,39999997,399999997,3999999997,39999999997,399999999997,3999999999997,39999999999997,399999999999997,3999999999999997,39999999999999997,399999999999999997,3999999999999999997 ★ Numbers n such that 2n - 1 is the digit reversal of n. ● a(n) = 4 * 10 ^ (n - 1) - 3. ●

► [A090023] 0,1,37,415,3745,31471,257257,2078455,16704865,133935391,1072633177,8585561095,68702163985,549687102511,4397773276297,35183283965335,281470638631105,2251782504544831,18014329402322617,144114912035163175,1152920401607386225 ★ Number of distinct lines through the origin in the n - dimensional lattice of side length 7. ● a(n) = 8 ^ n - 4 ^ n - 3 ^ n - 2 ^ n + 2. ●

► [A254682] 1,37,418,2754,13080,49632,159654,452166,1157013,2724865,5988268,12410476,24456744,46132152,83740980,146935284,250134753,414416277,669990046,1059399550,1641605680,2497140360,3734542890,5498322570 ★ Fifth partial sums of fifth powers (A000584). ● a(n) = n * (1 + n) * (2 + n) * (3 + n) * (4 + n) * (5 + n) * (- 2 + 5 * n + n ^ 2) * (9 + 10 * n + 2 * n ^ 2) / 60480. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) + n ^ 5. ●

► [A218376] 0,1,37,428,3164,18945,102501,529312,2679328,13455689,67378445,337053276,1685515212,8427947353,42140274589,210702132320,1053511710176,5267559970737,26337801743253,131689011192364,658445059161820 ★ a(n) = 5 ^ n * sum _{ i=1..n } i ^ 5 / 5 ^ i. ● a(n) = 1 / 512 * (3535 * 5 ^ n - (128 * n ^ 5 + 800 * n ^ 4 + 2400 * n ^ 3 + 4600 * n ^ 2 + 5700 * n + 3535)). ●

► [A166132] 1,37,469,4789,45397,417781,3796885,34319413,309464533,2787540085,25097297941,225913430197,2033371866709,18300950780149,164710972940437,1482408420140341,13341714435968725,120075584542541173 ★ a(n) = 1 + (4 * 9 ^ n - 9 * 4 ^ n) / 5. ● a(n) = 14 * a(n - 1) - 49 * a(n - 2) + 36 * a(n - 3). ●

► [A086025] 1,37,478,3614,19490,82994,296438,923702,2580071,6588075,15606084,34685508,72976852,146387476,281597860,521971876,936053677,1629533233,2761788434,4568378450,7391175350,11718183750,18235516650,27894475050,41997225075 ★ a(n) = Sum _{ i=1..n } C(i + 4,5) ^ 2. ● a(n) = n * (2 * n + 5) * (n +

5) * (n + 4) * (n + 3) * (n + 2) * (n + 1) * (63 * n ^ 4 + 630 * n ^ 3 + 1855 * n ^ 2 + 1400 * n + 12) / 19958400. (End) ●

► [A156923] 1,37,646,8030,82610,756218,6411720,51586344,400011435,3020658295,22373863774,163379472214,1180488191108,8462445970580,60305767988960,427848087263712,3025286818472661 ★ Fourth right hand column (n - m=3) of the A156920 triangle ● a(n) = 30 * a(n - 1) - 385 * a(n - 2) + 2776 * a(n - 3) - 12418 * a(n - 4) + 35908 * a(n - 5) - 67818 * a(n - 6) + 82552 * a(n - 7) - 62109 * a(n - 8) + 26190 * a(n - 9) - 4725 * a(n - 10) ● a(n) = (- 8 * n ^ 3 + 972 * n ^ 2 * 3 ^ n - 84 * n ^ 2 + 7776 * n * 3 ^ n - 11250 * n * 5 ^ n - 286 * n + 15309 * 3 ^ n - 50625 * 5 ^ n + 36015 * 7 ^ n - 315) / 384 ●

► [A028225] 1,37,860,16070,263991,3983007,56583850,768771040,10093501781,129000877577,1613435099640,19826334683610,240097655804371,2872532413857447,34007147715912230,399112139110865780 ★ Expansion of 1 / ((1 - 7x)(1 - 9x)(1 - 10x)(1 - 11x)). ● a(n)=(3 * 11 ^ (n + 3) - 8 * 10 ^ (n + 3) + 6 * 9 ^ (n + 3) - 7 ^ (n + 3)) / 24. [_ Yahia Kahloune _ , Jun 05 2013] ●

► [A028223] 1,37,863,16241,269703,4129041,59748151,829986817,11183795975,147236359985,1903757010519,24269169222753,305923748441767,3821741982426769,47397910610955767,584393237595955649 ★ Expansion of 1 / ((1 - 7x)(1 - 8x)(1 - 10x)(1 - 12x)). ● a(n) = (3 * 12 ^ (n + 3) - 10 ^ (n + 4) + 15 * 8 ^ (n + 3) - 8 * 7 ^ (n + 3)) / 120. [_ Yahia Kahloune _ , Jun 12 2013] ● a(0)=1, a(1)=37, a(2)=863, a(3)=16241, a(n) = 37 * a(n - 1) - 506 * a(n - 2) + 3032 * a(n - 3) - 6720 * a(n - 4). - _ Harvey P. Dale _ , Apr 08 2014 ●

► [A028215] 1,37,867,16457,276563,4296369,63218779,894460009,12289771395,165102658721,2179224895211,28361892985881,364934200067347,4651876568586193,58839203762144763,739393306409353673 ★ Expansion of 1 / ((1 - 6x)(1 - 8x)(1 - 11x)(1 - 12x)). ● a(n) = 23 * a(n - 1) - 132 * a(n - 2) + 2 ^ n * (4 ^ (n + 1) - 3 ^ (n + 1)), n >= 2. - _ Vincenzo Librandi _ , Mar 14 2011 ● a(n) = 6 * 12 ^ (n + 1) + 8 ^ (n + 2) / 3 - 11 ^ (n + 3) / 15 - 3 * 6 ^ (n + 1) / 5. - _ R. J. Mathar _ , Mar 14 2011 ●

► [A028198] 1,37,870,16610,281171,4403367,65339080,932218420,12912631941,174806957897,2323925673290,30446318392230,394142295428311,5052076439311627,64222440261259500,810705252920074040 ★ Expansion of 1 / ((1 - 5x)(1 - 9x)(1 - 11x)(1 - 12x)). ● a(n) = 23 * a(n - 1) - 132 * a(n - 2) + (9 ^ (n + 1) - 5 ^ (n + 1)) / 4, n >= 2. - _ Vincenzo Librandi _ , Mar 12 2011 ● a(n) = 4 * 12 ^ (n + 2) / 7 - 5 ^ (n + 3) / 168 - 11 ^ (n + 3) / 12 + 3 * 9 ^ (n + 2) / 8. - _ R. J. Mathar _ , Mar 18 2011 ●

► [A028164] 1,37,875,16865,288891,4584297,68969155,997819105,14012533931,192242650457,2588592449235,34328260342545,449522440061371,5824352378123017,74789809096438115,953017761256677185 ★ Expansion of 1 / ((1 - 4x)(1 - 10x)(1 - 11x)(1 - 12x)). ● a(n) = 23 * a(n - 1) - 132 * a(n - 2) + (10 ^ (n + 1) - 4 ^ (n + 1)) / 6), n >= 2. ● a(n) = 37 * a(n - 1) - 494 * a(n - 2) + 2768 * a(n - 3) - 5280 * a(n - 4), n >= 4. (End) ● a(n) = - 2 ^ (2 * n + 2) / 21 - 11 ^ (n + 3) / 7 + 25 * 10 ^ (n + 1) / 3 + 9 * 12 ^ (n + 1). - _ R. J. Mathar _ , Mar 18 2011 ●

► [A158741] 37,1406,5513,12358,21941,34262,49321,67118,87653,110926,136937,165686,197173,231398,268361,308062,350501,395678,443593,494246,547637,603766,662633,724238,788581 ★ a(n) = 1369 * n ^ 2 + 37. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A130013] 0,37,1768,1941,2128,11937,12940,14025,71148,76993,83316,416245,450312,487165,2427616,2626173,2840968,14150745,15308020,16559937,82478148,89223241,96519948,480719437,520032720 ★ Nonnegative values x of solutions (x, y) to the Diophantine equation x ^ 2 + (x + 647) ^ 2 = y ^ 2. ● a(n) = 6 * a(n - 3) - a(n - 6) + 1294 for n > 6; a(1)=0, a(2)=37, a(3)=1768, a(4)=1941, a(5)=2128, a(6)=11937. ●

► [A026047] 38,52,72,97,130,170,220,279,350,432,528,637,762,902,1060,1235,1430,1644,1880,2137,2418,2722,3052,3407,3790 ★ a(n) = (d(n) - r(n)) / 2, where d = A026046 and r is the periodic sequence with fundamental period (0,1,0,1). ● a(n)=(n + 6) * (n ^ 2 + 6 * n + 38) / 6 - 0.5 * sin(n * Pi / 2) ^ 2 [From _ Richard Choulet _ , Dec 13 2008] ●

► [A177044] 38,65,141,168,244,271,347,374,450,477,553,580,656,683,759,786,862,889,965,992,1068,1095,1171,1198,1274 ★ a(n) = 103 * (n - 1) - a(n - 1) with n >1, a(1)=38. ● a(n) = (103 + 49 * (- 1) ^ (n - 1) + 206 * (n - 1)) / 4. ●

► [A160846] 0,1,38,75,136,207,306,405,534,673,836,1003,1200,1401,1632,1869,2128,2397,2696,2995,3324,3661,4022,4389,4786 ★ Number of lines through at least 2 points of a 6 X n grid of points. ● a(n) = (1 / 2) * (f(m,n,1) - f(m,n,2)) where f(m,n,k) = Sum((n - |kx|) * (m - |ky|)); - n < kx < n, - m < ky < m, (x,y)=1, m=6. ●

► [A219999] 38,79,114,125,134,135,140,155,168,181,219,235,249,277,289,292,311,315,324,332,348,375,419,431,437 ★ Decades whose prime pattern is the same as prime pattern in the previous decade. ● a(n) >> n log ^ 2 n. ●

► [A219997] 38,79,125,140,155,181,235,277,289,292,311,332,437,445,500,533,559,610,617,625,649,697,707,718,751 ★ Decades whose prime pattern is same as the prime pattern in the previous decade, with at least one prime. ● a(n) >> n log ^ 2 n. ●

► [A218331] 38,90,476,708,1826,2366,4600,5576,9310,10850,16468,18700,26586,29638,40176,44176,57750,62826,79820,86100,106898,114510,139496,148568,178126 ★ Even, nonzero decagonal pyramidal numbers. ● a(n) = a(n - 1) + 3 * a(n - 2) - 3 * a(n - 3) - 3 * a(n - 4) + 3 * a(n - 5) + a(n - 6) - a(n - 7). ● a(n) = 3 * a(n - 2) - 3 * a(n - 4) + a(n - 6) + 512. ● a(n) = (16 * n - 4 * (- 1) ^ n - 1) * (4 * n - (- 1) ^ n + 3) * (4 * n - (- 1) ^ n + 1) / 24. ●

► [A186439] 38,100,200,300,400,462,500,538,600,700,800,900,962,1000,1038,1100,1200,1300,1400,1462,1500,1538,1600,1700,1800 ★ Numbers whose squares end in three identical digits. ● a(n) = a(n - 7) + 500 for n > 7. - _ Zak Seidov _ and _ Bruno Berselli _ , Feb 23 2011 ●

► [A173309] 0,38,114,228,380,570,798,1064,1368,1710,2090,2508,2964,3458,3990,4560,5168,5814,6498,7220,7980,8778,9614,10488,11400 ★ a(n) = 19 * n * (n + 1). ● a(0)=0, a(1)=38, a(2)=114, a(n)=3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Oct 12 2012 ● a(0)=0, a(n)=a(n - 1) + 38 * n. - _ Vincenzo Librandi _ , Oct 13 2012 ●

► [A158064] 38,148,330,584,910,1308,1778,2320,2934,3620,4378,5208,6110,7084,8130,9248,10438,11700,13034,14440,15918,17468,19090,20784,22550 ★ a(n) = 36 * n ^ 2 + 2 * n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Feb 11 2012 ●

► [A100167] 1,38,171,460,965,1746,2863,4376,6345,8830,11891,15588,19981,25130,31095,37936,45713,54486,64315,75260,87381,100738,115391,131400,148825 ★ Structured pentagonal icositetrahedral numbers (vertex structure 13). ● a(n) = (1 / 6) * (60 * n ^ 3 - 72 * n ^ 2 + 18 * n). ●

► [A100168] 1,38,174,472,995,1806,2968,4544,6597,9190,12386,16248,20839,26222,32460,39616,47753,56934,67222,78680,91371,105358,120704,137472,155725 ★ Structured pentagonal icositetrahedral numbers (vertex structure 10). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4); a(1)=1, a(2)=38, a(3)=174, a(4)=472. - _ Harvey P. Dale _ , Dec 18 2011 ●

► [A020870] 38,205,1092,5719,29486,150049,755432,3769771,18673250,91917621,450025692,2193031871,10643233110,51467250249,248079277008,1192335047635,5715823515722,27336235315037,130457855039172,621374856379623,2954332179898174,14023263123496049 ★ Number of strong single - component edge - subgraphs in Moebius ladder M _ n. ● a(n) = n - 1 + [n(17 - sqrt(17)) / 34 + 1][(5 + sqrt(17)) / 2] ^ n + [n(17 + sqrt(17)) / 34 + 1][(5 - sqrt(17)) / 2] ^ n: G.f.: x ^ 2(38 - 251x + 532x ^ 2 - 479x ^ 3 + 192x ^ 4 - 28x ^ 5) / [(1 - x) ^ 2 * (1 - 5x + 2x ^ 2) ^ 2]. - _ Emeric Deutsch _ , Dec 21 2004 ●

► [A007229] 38,264,2016,15504,122661,986700,8064576,66756144,558689224,4719593312,40193414112,344721646640,2974925353455,25814778578820,225105551191680,1971557711151600,17336058626562984,152984380665537760 ★ Number of distinct perforation patterns for deriving (v,b) = (n + 2,n) punctured convolutional codes from (4,1). ● a(n) = (1 / n) * Sum _{ k|gcd(n + 2,n) } phi(k) * binomial(4 * n / k, (n + 2) / k). ● a(n) = (1 / n) * (binomial(4 * n, n + 2) + [(n mod 2) == 0] * binomial(2 * n, (n / 2) + 1)). ●

► [A367968] 0,0,1,38,276,1270,4745,15936,50608,156116,474585,1432450,4309076,12942618,38847601,116567660,349733760,1049238856,3147761873,9443339646,28330082740,84990322910,254971055481,764913266488,2294739914096 ★ Number of 6 - cycles in the n - Dorogovtsev - Goltsev - Mendes graph. ● a(n) = (65 * 3 ^ n - 84 * n - 6 * n ^ 2 - 40 * n ^ 3 - 65) / 8. ● a(n) = 7 * a(n - 1) - 18 * a(n - 2) + 22 * a(n - 3) - 13 * a(n - 4) + 3 * a(n - 5). ●

► [A204070] 38,329,2882,25277,221726,1944977,17061338,149662085,1312836086,11516200601,101020133234,886148797901,7773298914638,68187392635937,598139935894154,5246884637775509,46025681868191270,403737367538170409 ★ Number of (n + 1) X 3 0..2 arrays with every 2 X 2 subblock having equal diagonal elements or equal antidiagonal elements, and new values 0..2 introduced in row major order. ● a(n) = 1 / 2 + (2 ^ (- 2 - n) * (3 * (9 + sqrt(73)) ^ n * (23 + 3 * sqrt(73)) + (9 - sqrt(73)) ^ n * (- 69 + 9 * sqrt(73)))) / sqrt(73). ●

► [A201244] 0,0,38,340,1630,5552,15210,35828,75530,146240,264702,453620,742918,1171120,1786850,2650452,3835730,5431808,7545110,10301460,13848302,18357040,24025498,31080500,39780570 ★ Number of ways to place 3 non - attackingferses on an n X n board. ● a(n) = (n - 2) * (n ^ 5 + 2n ^ 4 - 11n ^ 3 + 2n ^ 2 + 54n - 60) / 6, n>=2. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). - _ Vincenzo Librandi _ , Apr 30 2013 ●

► [A249711] 38,377,1724,5425,13666,29673,57912,104289,176350,283481,437108,650897,940954,1326025,1827696,2470593,3282582,4294969,5542700,7064561,8903378,11106217,13724584,16814625,20437326 ★ Number of length 5 + 3 0..n arrays with every four consecutive terms having the maximum of some two terms equal to the minimum of the remaining two terms. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. ●

► [A267474] 38,418,2490,10119,31880,83972,193852,404589,779938,1410134,2418406,3968211,6271188,9595832,14276888,20725465,29439870,41017162,56165426,75716767,100641024,132060204,171263636,219723845,279113146 ★ Number of length - 6 0..n arrays with no following elements larger than the first repeated value. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

► [A254471] 1,38,456,3210,16290,65922,225576,677742,1834755,4559620,10547888,22958364,47415108,93547260,177288240,324223524,574358277,988774554,1658764600,2718164150,4359769830,6856910190,10591453080,16089775650,24068499975 ★ Sixth partial sums of fifth powers (A000584). ● a(n) = n * (1 + n) * (2 + n) * (3 + n) * (4 + n) * (5 + n) * (6 + n) * (- 29 + 54 * n + 81 * n ^ 2 + 24 * n ^ 3 + 2 * n ^ 4) / 665280. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) + n ^ 5. ●

► [A039685] 38,462,538,962,1038,1462,1538,1962,2038,2462,2538,2962,3038,3462,3538,3962,4038,4462,4538,4962,5038,5462,5538,5962,6038 ★ Numbers m such that m ^ 2 ends in 444. ● a(2n + 1) = 500n + 38 and a(2n + 2) = 500n - 38. ● a(n) = 250 * n + 87 * (- 1) ^ n - 125. ● a(n) - a(n - 1) - a(n - 2) + a(n - 3) = 0 for n > 3. (End) ●

► [A088891] 0,1,38,481,3355,16120,60071,186238,502386,1215435,2694340,5559191,10803013,19953466,35282365,60071660,98945236,158276613,246683346,375619645,560079455,819422956,1178340163 ★ Polynexus numbers of order 9. ● a(n) = ((n ^ 9 - (n - 1) ^ 9) - (n ^ 3 - (n - 1) ^ 3)) / 504 = ((n ^ 9 - (n - 1) ^ 9) - (n ^ 3 - (n - 1) ^ 3)) / (2 ^ 9 - 2 ^ 3). ● a(1)=1, a(2)=38, a(3)=481, a(4)=3355, a(5)=16120, a(6)=60071, a(7)=186238, a(8)=502386, a(9)=1215435, a(n)=9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9). - Harvey P. Dale, Jan 18 2012 ●

► [A020930] 1,38,798,12236,152950,1651860,15967980,141430680,1166803110,9075135300,67156001220,476197099560,3254013513660,21526550936520,138384970306200,867212480585520,5311676443586310,31870058661517860,187679234340049620,1086563988284497800 ★ Expansion of 1 / (1 - 4 * x) ^ (19 / 2). ● a(n) = ((2 * n + 17) * (2 * n + 15) * (2 * n + 13) * (2 * n + 11) * (2 * n + 9) * (2 * n + 7) * (2 * n + 5) * (2 * n + 3) * (2 * n + 1) / 34459425) * binomial(2 * n, n). - _ Vincenzo Librandi _ , Jul 05 2013 ● a(n) = binomial(2 * (n + 9),n + 9) * binomial(n + 9, 9) / binomial(18,9). - _ G. C. Greubel _ , Jul 21 2019 ●

► [A028226] 1,38,909,17518,297437,4648350,68550973,968960366,13264544733,177146894782,2320188183677,29920806791694,381057655784989,4803870896957534,60058812824159421,745739268125744302 ★ Expansion of 1 / ((1 - 7x)(1 - 9x)(1

- 10x)(1 - 12x)). ● a(n)=(12 ^ (n + 3) - 5 * 10 ^ (n + 3) + 5 * 9 ^ (n + 3) - 7 ^ (n + 3)) / 30. [_ Yahia Kahloune _ , Jun 05 2013] ●

► [A028224] 1,38,911,17632,301245,4745706,70660507,1009770884,13991407529,189303883054,2513736124263,32882696484456,424941717543253,5436863390984882,68985988087521779,869260000449137548 ★ Expansion of 1 / ((1 - 7x)(1 - 8x)(1 - 11x)(1 - 12x)). ● a(n)=(3 * 12 ^ (n + 3) - 5 * 11 ^ (n + 3) + 5 * 8 ^ (n + 3) - 3 * 7 ^ (n + 3)) / 60. [_ Yahia Kahloune _ , Jun 12 2013] ●

► [A028218] 1,38,913,17738,304549,4824806,72271081,1039149506,14486436877,197162419454,2632865400529,34623882428954,449653998040885,5779288950415382,73637791767193657,931419802216938482 ★ Expansion of 1 / ((1 - 6x)(1 - 9x)(1 - 11x)(1 - 12x)). ● a(n) = 23 * a(n - 1) - 132 * a(n - 2) + 3 ^ n * (3 ^ (n + 1) - 2 ^ (n + 1)), a(0)=1, a(1)=38. ● a(n) = 38 * a(n - 1) - 531 * a(n - 2) + 3222 * a(n - 3) - 7128 * a(n - 4), a(0)=1, a(1)=38, a(2)=913, a(3)=17738. (End) ● a(n) = (5 * 12 ^ (n + 3) - 9 * 11 ^ (n + 3) + 5 * 9 ^ (n + 3) - 6 ^ (n + 3)) / 90. - _ Yahia Kahloune _ , Jun 12 2013 ●

► [A028199] 1,38,917,17950,311181,4984638,75555157,1099718270,15519848861,213791759038,2888580642597,38416793758590,504293367484141,6547729455298238,84231046860437237,1075013759173110910 ★ Expansion of 1 / ((1 - 5x)(1 - 10x)(1 - 11x)(1 - 12x)). ● a(n) = 23 * a(n - 1) - 132 * a(n - 2) + 5 ^ n * (2 ^ (n + 1) - 1), n >= 2. - _ Vincenzo Librandi _ , Mar 12 2011 ● a(n) = 10 ^ (n + 2) - 5 ^ (n + 2) / 42 - 11 ^ (n + 3) / 6 + 6 * 12 ^ (n + 2) / 7. - _ R. J. Mathar _ , Mar 18 2011 ●

► [A158766] 38,1482,5814,13034,23142,36138,52022,70794,92454,117002,144438,174762,207974,244074,283062,324938,369702,417354,467894,521322,577638,636842,698934,763914,831782 ★ a(n) = 1444 * n ^ 2 + 38. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A041759] 1,1,39,40,1559,1599,62321,63920,2491281,2555201,99588919,102144120,3981065479,4083209599,159143030241,163226239840,6361740144161,6524966384001,254310462736199,260835429120200,10166056769303799,10426892198423999 ★ Denominators of continued fraction convergents to sqrt(399). ● a(n) = 40 * a(n - 2) - a(n - 4) for n > 3. - _ Vincenzo Librandi _ , Dec 24 2013 ● a(n) = Product _{ k = 1..floor((n - 1) / 2) } (38 + 4 * cos ^ 2(k * Pi / n)). ●

► [A243577] 39,71,87,119,191,255,287,351,471,567,615,711,879,1007,1071,1199,1415,1575,1655,1815,2079,2271,2367,2559,2871 ★ Integers of the form 8k + 7 that can be written as a sum of four distinct 'almost consecutive' squares. ● a(n) = - 3 * (- 7 + (- i) ^ n + i ^ n) - (1 - i) * ((- 6 - 6 * i) + (- i) ^ n + i * i ^ n) * n + 4 * n ^ 2 where i=sqrt(- 1). - _ Colin Barker _ , Jun 09 2014 ●

► [A063335] 1,39,80,120,160,200,240,278,320,358,400,440,480,516,560,598,640,678,720,756,800,836,880,918,960 ★ Dimension of the space of weight n cuspidal new forms for Gamma _ 1(62). ● a(n) = a(n - 4) + a(n - 6) - a(n - 10) for n>13. ●

► [A242181] 39,89,139,189,239,289,339,389,439,489,539,589,639,689,739,789,839,889,939,989,1039,1089,1139,1189,1239 ★ Numbers with four X's in Roman numerals. ● a(n) = 50n - 11. - _ Charles R Greathouse IV _ , May 06 2014 ●

► [A063318] 1,39,92,143,194,249,300,351,406,457,508,561,614,665,720,769,822,875,928,977,1034,1083,1136,1187,1242 ★ Dimension of the space of weight n cuspidal newforms for Gamma _ 1(45). ● a(n) = a(n - 4) + a(n - 6) - a(n - 10) for n >13. ●

► [A033576] 1,39,125,259,441,671,949,1275,1649,2071,2541,3059,3625,4239,4905,5611,6369,7175,8029,8931,9881,10879,11925,13019,14161 ★ a(n) = (2 * n + 1) * (12 * n + 1). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A158593] 1,39,153,343,609,951,1369,1863,2433,3079,3801,4599,5473,6423,7449,8551,9729,10983,12313,13719,15201,16759,18393,20103,21889 ★ a(n) = 38 * n ^ 2 + 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A158598] 39,159,359,639,999,1439,1959,2559,3239,3999,4839,5759,6759,7839,8999,10239,11559,12959,14439,15999,17639,19359,21159,23039,24999 ★ a(n) = 40 * n ^ 2 - 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A251328] 39,171,753,3333,14823,66219,297057,1337733,6045495,27408747,124625745,568146309,2596130823,11887635627,54533628609,250576195845,1153020767319,5312272049259,24501992068785,113120150702085,522688044131367 ★ Number of (n + 1) X (1 + 1) 0..2 arrays with every 2 X 2 subblock summing to 24 or 6. ● a(n) = (7 * 2 ^ (3 + 2 * n) + (35 - 13 * sqrt(7)) * (2 - sqrt(7)) ^ n + (2 + sqrt(7)) ^ n * (35 + 13 * sqrt(7))) / 14. ●

► [A193228] 1,39,185,511,1089,1991,3289,5055,7361,10279,13881,18239,23425,29511,36569,44671,53889,64295,75961,88959,103361,119239,136665,155711,176449 ★ Truncated octahedron with faces of centered polygons. ● a(n) = 12 * n ^ 3 - 18 * n ^ 2 + 8 * n - 1. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4); a(0)=1, a(1)=39, a(2)=185, a(3)=511. - _ Harvey P. Dale _ , Aug 27 2011 ●

► [A243578] 39,191,471,879,1415,2079,2871,3791,4839,6015,7319,8751,10311,11999,13815,15759,17831,20031,22359,24815,27399,30111,32951,35919,39015 ★ Integers n of the form 8k + 7 that are sum of distinct squares of the form m, m + 1, m + 2, m + 4, where m == 1 (mod 4). ● a(n) = 64 * n ^ 2 - 40 * n + 15. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>3. ●

► [A290071] 0,39,196,664,1809,4250,8954,17346,31434,53949,88500,139744,213571,317304,459914,652250,907284,1240371,1669524,2215704,2903125,3759574,4816746,6110594,7681694 ★ a(n) = (1 / 48) * n * (n + 5) ^ 2 * (1 * n ^ 3 + 7 * n ^ 2 + 16 * n + 28). ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n > 6. ●

► [A254871] 1,39,495,3705,19995,85917,311493,989235,2823990,7383610,17931498,40889862,88304970,181852230,359140470,683363994,1257722271,2246496825,3905261425,6623425575,10983195405,17840105595,28431558675,44521334325,68589834300 ★ Seventh partial sums of fifth powers (A000584). ● a(n) = n * (1 + n) * (2 + n) * (3 + n) * (4 + n) * (5 + n) * (6 + n) * (7 + n) * (- 21 + 49 * n + 56 * n ^ 2 + 14 * n ^ 3 + n ^ 4) / 3991680. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) + n ^ 5. ●

► [A200409] 1,39,571,911,13299,194141,309739,4521621,66007369,105310349,1537337841,22442311319,35805208921,522690344319,7630319841091,12173665722791,177713179730619,2594286303659621,4139010540540019,60421958418066141,882049712924430049 ★ The y - values in the solution to 19 * x ^ 2 - 18 = y ^ 2. ● a(n) = 340 * a(n - 3) - a(n - 6), a(1)=1, a(2)=39, a(3)=571, a(4)=911, a(5)=13299, a(6)=194141. ●

► [A016091] 1,39,955,18795,325171,5167659,77353795,1107933915,15345293491,207057429579,2736619356835,35572444360635,456191563128211,5785999811488299,72719715037363075,907085298655532955 ★ Expansion of 1 / ((1 - 8x)(1 - 9x)(1 - 10x)(1 - 12x)). ● a(n) = 39 * a(n - 1) - 566 * a(n - 2) + 3624 * a(n - 3) - 8640 * a(n - 4) for n >= 4. ● a(n) = 22 * a(n - 1) - 120 * a(n - 2) + 9 ^ (n + 1) - 8 ^ (n + 1) for n >= 2. (End) ● a(n) = - 8 ^ (n + 2) + 3 * 9 ^ (n + 2) - 25 * 10 ^ (n + 1) + 6 * 12 ^ (n + 1). - _ R. J. Mathar _ , Mar 18 2011 ●

► [A028227] 1,39,958,18966,330883,5313693,80518096,1169149692,16435587685,225292911987,3026941267714,40015278899778,522017655765607,6735488552529321,86110477932406612,1092366397140622824 ★ Expansion of 1 / ((1 - 7x)(1 - 9x)(1 - 11x)(1 - 12x)). ● a(n)=(8 * 12 ^ (n + 3) - 15 * 11 ^ (n + 3) + 10 * 9 ^ (n + 3) - 3 * 7 ^ (n + 3)) / 120. [_ Yahia Kahloune _ , Jun 05 2013] ●

► [A028219] 1,39,961,19131,336217,5446035,83308177,1221791547,17352006793,240304555491,3261449180353,43542585627723,573464912457529,7467052092622707,96294712139682289,1231626797709018459 ★ Expansion of 1 / ((1 - 6 * x) * (1 - 10 * x) * (1 - 11 * x) * (1 - 12 * x)). ● a(n) = 23 * a(n - 1) - 132 * a(n - 2) + 2 ^ (n - 1) * (5 ^ (n + 1) - 3 ^ (n + 1)), n >= 2. - _ Vincenzo Librandi _ , Mar 13 2011 ● a(n) = (5 * 12 ^ (n + 2) - 11 ^ (n + 3) + 5 ^ 4 * 10 ^ n - 9 * 6 ^ n) / 5. - _ R. J. Mathar _ , Mar 15 2011 ●

► [A240442] 0,39,1194,11259,64776,275805,957516,2859768,7606821,18444537,41458599,87464157,174846963,333687378,611613150,1081890447 ★ Number of ways to place 5 points on a triangular grid of side n so that no three of these points are vertices of an equilateral triangle of any orientation. ● a(n) = (n ^ 10 + 5 * n ^ 9 - 30 * n ^ 8 - 150 * n ^ 7) / 3840 + O(n ^ 6). ●

► [A158768] 39,1560,6123,13728,24375,38064,54795,74568,97383,123240,152139,184080,219063,257088,298155,342264,389415,439608,492843,549120,608439,670800,736203,804648,876135 ★ a(n) = 1521 * n ^ 2 + 39. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A082763] 40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63,64 ★ Roman numeral contains an asymmetric symbol (L). ● a(n + 50) = a(n) + 100 for n >= 1 [a(n + L) = a(n) + C for n >= I], a(1) = 40 [a(I) = XL], a(n + 1) = a(n) + 1 for 1 <= n <= 49 [a(n + I) = a(n) + I for I <= n <= XLIX]; so a(n) = floor((n - 1) / 50) * 100 + 40 + ((n - 1)(mod 50)) for n >= 1 [a(n) = floor((n - I) / L) * C + XL + ((n - I)(mod L)) for n >= I]. ●

► [A216305] 40,49,70,76,91,157,253,274,301,304,322,349,370,388,475,505,517,622,652,715,769,817,868,931,994 ★ Values of k such that 10 * k + 1 and 10 * k + 9 alone are prime between 10 * k and 10 * k + 9. ● a(n) >> n log ^ 2 n. - _ Charles R Greathouse IV _ , Sep 07 2012 ●

► [A317095] 0,40,80,120,160,200,240,280,320,360,400,440,480,520,560,600,640,680,720,760,800,840,880,920,960 ★ a(n) = 40 * n. ● a(n) = 2 * a(n - 1) - a(n - 2) for n > 1. - _ Stefano Spezia _ , Sep 07 2018 ●

► [A063310] 1,40,96,153,210,267,324,381,438,495,552,607,666,723,780,835,894,949,1008,1063,1122,1177,1236,1289,1350 ★ Dimension of the space of weight n cuspidal newforms for Gamma _ 1(37). ● a(n) = a(n - 4) + a(n - 6) - a(n - 10) for n>13. ●

► [A235271] 40,100,208,520,1120,2800,6208,15520,35200,88000,203008,507520,1185280,2963200,6980608,17451520,41359360,103398400,246059008,615147520,1467965440,3669913600,8774238208,21935595520,52511211520 ★ Number of (n + 1) X (1 + 1) 0..4 arrays with every 2 X 2 subblock having its diagonal sum differing from its antidiagonal sum by 5 (constant - stress 1 X 1 tilings). ● a(n) = (- 2) ^ n + 9 * 2 ^ n + 6 ^ ((1 / 2) * (- 1 + n)) * (12 - 12 * (- 1) ^ n + 5 * sqrt(6) + 5 * (- 1) ^ n * sqrt(6)). ●

► [A192791] 40,112,240,448,760,1200,1792,2560,3528,4720,6160,7872,9880,12208,14880,17920,21352,25200,29488,34240,39480,45232,51520,58368,65800 ★ Molecular topological index of the n - antiprism graph. ● a(n) = 4 * n * (n ^ 2 + n + 8). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ●

► [A235886] 40,112,352,1216,4480,17152,67072,265216,1054720,4206592,16801792,67158016,268533760,1073938432,4295360512,17180655616,68721049600,274881052672,1099517919232,4398059094016,17592211210240,70368794509312 ★ Number of (n + 1) X (1 + 1) 0..3 arrays with the minimum plus the upper median equal to the lower median plus the maximum in every 2 X 2 subblock. ● a(n) = 2 ^ (2 + n) * (3 + 2 ^ n). ●

► [A261191] 0,1,40,117,232,385,576,805,1072,1377,1720,2101,2520,2977,3472,4005,4576,5185,5832,6517,7240,8001,8800,9637,10512 ★ 40 - gonal numbers: a(n) = 38 * n * (n - 1) / 2 + n. ● a(n) = n * (19 * n - 18). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3), for n > 2. - _ Colin Barker _ , Aug 11 2015 ●

► [A251130] 40,133,369,919,2129,4699,10033,20947,43077,87703,177389,357271,717625,1439011,2882553,5770507,11547389,23102239,46213141,92436271,184883985,369781003,739576769,1479170179,2958359029 ★ Number of (n + 1) X (1 + 1) 0..2 arrays with no 2 X 2 subblock having the sum of its diagonal elements greater than the maximum of its antidiagonal elements. ● a(n) = (- 957 + (- 1) ^ n + 529 * 2 ^ (1 + n) - 540 * n - 126 * n ^ 2 - 12 * n ^ 3) / 12. ●

► [A211155] 0,40,168,1056,2080,6120,9576,20608,28800,52200,68200,110880,138528,208936,252840,360960,426496,583848,677160,896800,1024800,1321320,1491688,1881216,2102400 ★ Number of 2 X 2 matrices having all terms in {- n,...,0,..,n} and odd determinant. ● a(n) = a(n - 1) + 4 * a(n - 2) - 4 * a(n - 3) - 6 * a(n - 4) + 6 * a(n - 5) + 4 * a(n - 6) - 4 * a(n - 7) - a(n - 8) + a(n - 9) for n > 9. ●

► [A068790] 0,0,0,0,40,240,1120,4608,17280,65280,253440,1013760,4126720,16773120,67624960,270532608,1077903360,4294901760,17146183680,68584734720,274608947200,1099510579200,4400191897600,17600775979008,70385915658240 ★ Number of strings over Z _ 4 of length n with trace 2 and subtrace 2. ● a(n; t, s) = a(n - 1; t, s) + a(n - 1; t + 3, s + 3t + 1) + a(n - 1; t + 2, s + 2t) + a(n - 1; t + 1, s + t + 1) where t is the trace and s is the subtrace. ●

► [A117216] 1,40,272,888,2080,4040,6960,11032,16448,23400,32080,42680,55392,70408,87920,108120,131200,157352,186768,219640,256160,296520,340912,389528,442560 ★ Number of points in the standard root system version of the D _ 4 lattice having L _ infinity norm n. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4), n>4; ●

► [A365607] 0,40,328,2536,19912,158056,1260616,10073320,80551624,644308072,5154149704,41232252904,329855188936,2638833008488,21110638558792,168885

031942888,1351080025960648,10808639518937704,86469114085259080,691752906483344872,5534023233270575560,44272185810376054120 ⋆ Number of degree 3 vertices in the n - Sierpinski carpet graph. ● a(n) = (3 / 5) * 8 ^ n + (16 / 15) * 3 ^ n - 8. ● a(n) = 8 * a(n - 1) - 16 * 3 ^ (n - 2) + 56. ●

► [A008355] 1,40,370,1640,4930,11752,24050,44200,75010,119720,182002,265960,376130,517480,695410,915752,1184770,1509160,1896050,2353000,2888002,3509480,4226290,5047720,5983490 ⋆ Coordination sequence for D _ 5 lattice. ● a(n) = 2 * (9 * n ^ 2 + 1) * (n ^ 2 + 1) (see MAPLE line). ●

► [A269692] 40,525,3544,14465,44556,114205,256880,523809,989380,1757261,2967240,4802785,7499324,11353245,16731616,24082625,33946740,46968589,63909560,85661121,113258860,147897245,190945104,243961825,308714276 ⋆ Number of length - 6 0..n arrays with no repeated value differing from the previous repeated value by plus or minus one modulo n + 1. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>8. ●

► [A107419] 1,40,540,4200,23100,99792,360360,1132560,3185325,8179600,19467448,43439760,91706160,184497600,355816800,661028544,1187785665,2071432440,3516320500,5824819000,9436206780,14978106000,23333661000,35728290000,53840548125 ⋆ a(n) = C(n + 4,4) * C(n + 7,7). ● a(n) = 12 * a(n - 1) - 66 * a(n - 2) + 220 * a(n - 3) - 495 * a(n - 4) + 792 * a(n - 5) - 924 * a(n - 6) + 792 * a(n - 7) - 495 * a(n - 8) + 220 * a(n - 9) - 66 * a(n - 10) + 12 * a(n - 11) - a(n - 12) for n > 11. ●

► [A269778] 40,624,3816,15040,45600,115920,259504,527616,994680,1764400,2976600,4814784,7514416,11371920,16754400,24110080,33979464,47007216,63954760,85713600,113319360,147966544,191024016,244051200,308815000 ⋆ Number of length - 6 0..n arrays with every repeated value unequal to the previous repeated value plus one mod n + 1. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

► [A035609] 1,40,800,10680,107200,864008,5831520,33940120,174074240,800061160,3340552608,12819218040,45663942720,152270990280,478683156960,1426865410392,4052167914240,11006991835560,28691971995680,71976895917880 ⋆ Coordination sequence for lattice D *_ 20 (with edges defined by l _ 1 norm = 1). ● a(m)=add(2 ^ k * binomial(n, k) * binomial(m - 1, k - 1), k=0..n) + 2 ^ n * binomial((n + 2 * m) / 2 - 1, n - 1); with n=20. ●

► [A054340] 1,40,880,14080,183040,2050048,20500480,187432960,1593180160,12745441280,96865353728,704475299840,4931327098880,33381291130880,219362770288640,1403921729847296,8774510811545600,53679360258867200,322076161553203200,1898554215471513600 ⋆ 10 - fold convolution of A000302 (powers of 4). ● a(n) = binomial(n + 9, 9) * 4 ^ n. ●

► [A140220] 1,40,900,15000,206250,2475000,26812500,268125000,2513671875,22343750000,189921875000,1553906250000,12301757812500,94628906250000,709716796875000,5204589843750000,37407989501953125,264056396484375000,1833724975585937500,12546539306640625000 ⋆ a(n) = binomial(n + 7, 7) * 5 ^ n. ● a(n) = 40 * a(n - 1) - 700 * a(n - 2) + 7000 * a(n - 3) - 43750 * a(n - 4) + 175000 * a(n - 5) - 437500 * a(n - 6) + 625000 * a(n - 7) - 390625 * a(n - 8) for n > 7. ●

► [A130610] 0,40,901,1077,1281,6160,7180,8364,36777,42721,49621,215220,249864,290080,1255261,1457181,1691577,7317064,8493940,9860100,42647841,49507177,57469741,248570700,288549840 ⋆ Nonnegative values x of solutions (x, y) to the Diophantine equation x ^ 2 + (x + 359) ^ 2 = y ^ 2. ● a(n) = 6 * a(n - 3) - a(n - 6) + 718 for n > 6; a(1)=0, a(2)=40, a(3)=901, a(4)=1077, a(5)=1281, a(6)=6160. ●

► [A016092] 1,40,1005,20300,360521,5881680,90375685,1328528500,18879767841,261281940920,3540146411165,47147861315100,619093593987961,8034113714073760,103234967777291445,1315472793832108100 ⋆ Expansion of 1 / ((1 - 8x)(1 - 9x)(1 - 11x)(1 - 12x)). ● a(n) = 40 * a(n - 1) - 595 * a(n - 2) + 3900 * a(n - 3) - 9504 * a(n - 4), n>=4. - _ Vincenzo Librandi _ , Mar 17 2011 ● a(n) = 23 * a(n - 1) - 132 * a(n - 2) + 9 ^ (n + 1) - 8 ^ (n + 1), n>=2 . - _ Vincenzo Librandi _ , Mar 17 2011 ● a(n) = 12 ^ (n + 2) - 2 * 8 ^ (n + 2) / 3 - 11 ^ (n + 3) / 6 + 3 * 9 ^ (n + 2) / 2. - _ R. J. Mathar _ , Mar 18 2011 ●

► [A028228] 1,40,1007,20414,364329,5979036,92485219,1369339018,19606630637,273438929192,3733694351751,50109751007862,662977655746225,8667106208101108,112162143040653803,1438993526155501346 ⋆ Expansion of 1 / ((1 - 7x)(1 - 10x)(1 - 11x)(1 - 12x)). ● a(n) = 40 * a(n - 1) - 593 * a(n - 2) + 3854 * a(n - 3) - 9240 * a(n - 4), n >= 4. ● a(n) = 23 * a(n - 1) - 132 * a(n - 2) + (10 ^ (n + 1) - 7 ^ (n + 1)) / 3, n >= 2. (End) ● a(n) = 6 * 12 ^ (n + 2) / 5 - 11 ^ (n + 3) / 4 + 5 * 10 ^ (n + 2) / 3 - 7 ^ (n + 3) / 60. - _ R. J. Mathar _ , Mar 20 2011 ●

► [A075907] 1,40,1040,22400,435456,7956480,139694080,2387968000,40075329536,663887544320,10896534405120,177653730508800,2882307270639616,46596186764738560,751299029274460160,12089975328525516800 ⋆ Fourth column of triangle A075499. ● a(n) = (- 4 ^ n + 24 * 8 ^ n - 81 * 12 ^ n + 64 * 16 ^ n) / 3!. ● a(0)=1, a(1)=40, a(2)=1040, a(3)=22400, a(n) = 40 * a(n - 1) - 560 * a(n - 2) + 3200 * a(n - 3) - 6144 * a(n - 4). - _ Harvey P. Dale _ , Jun 04 2013 ●

► [A124100] 1,40,1089,25160,531521,10625640,204744769,3844391560,70827391041,1286290883240,23101397290049,411249127989960,7269184506192961,127745926316548840,2234231991096868929,38920247688751940360 ⋆ Sum _ (x ^ i * y ^ j * z ^ k) with i + j + k = m and (x, y, z) = the primitive Pythagorean triple (8, 15, 17). ● a(m) = (x ^ (m + 2) * (z - y) + y ^ (m + 2) * (x - z) + z ^ (m + 2) * (y - x)) / ((x - y) * (y - z) * (z - x)). ● a(n) = 40 * a(n - 1) - 511 * a(n - 2) + 2040 * a(n - 3) for n > 2. ● a(n) = 2 ^ (3 * n + 6) / 63 - 15 ^ (n + 2) / 14 + 17 ^ (n + 2) / 18. - _ Vaclav Kotesovec _ , Sep 25 2016 ●

► [A331350] 1,40,1197,18592,166885,1019880,4738153,17962624,58248153,166920040,432738229,1032709536,2298857821,4822806184,9613704465,18329410048,33605960689,59516325288,102196242685,170682720160,278019522837 ⋆ Number of oriented colorings of the edges (or triangular faces) of a regular 4 - dimensional simplex with n available colors. ● a(n) = (24 * n ^ 2 + 20 * n ^ 4 + 15 * n ^ 6 + n ^ 10) / 60. ● a(n) = C(n,1) + 38 * C(n,2) + 1080 * C(n,3) + 14040 * C(n,4) + 85500 * C(n,5) + 274104 * C(n,6) + 493920 * C(n,7) + 504000 * C(n,8) + 272160 * C(n,9) + 60480 * C(n,10), where the coefficient of C(n,k) is the number of colorings using exactly k colors. ●

► [A207598] 40,1600,9240,30400,75400,157440,292600,499840,801000,1220800,1786840,2529600,3482440,4681600,6166200,7978240,10162600,12767040,15842200,19441600,23621640,28441600,33963640,40252800,47377000 ⋆ Number of n X 7 0..1 arrays avoiding 0 0 0 and 0 1 0 horizontally and 0 0 1 and 1 0 1 vertically. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5 . ●

► [A207702] 40,1600,13230,61254,206910,571350,1369900,2956980,5883084,10965220,19372210,32726250,53222130,83765514,128131680,191146120,278888400,398920680,560542294,775071790,1056157830,1420120350,1886323380 ⋆ Number of n X 7 0..1 arrays avoiding 0 0 0 and 0 1 0 horizontally and 0 0 1 and 1 1 0 vertically. ● a(n) = (n * (162 - 327 * n - 881 * n ^ 2 + 1296 * n ^ 3 + 997 * n ^ 4 + 183 * n ^ 5 + 10 * n ^ 6)) / 36. ●

► [A188154] 0,0,40,2640,14520,39792,78168,128688,191068,265280,351324,449200,558908,680448,813820,959024,1116060,1284928,1465628,1658160,1862524,2078720,2306748,2546608,2798300 ⋆ Number of 9 - step self - avoiding walks on an n X n square summed over all starting positions. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>10. ●

► [A041839] 1,1,41,42,1721,1763,72241,74004,3032401,3106405,127288601,130395006,5343088841,5473483847,224282442721,229755926568,9414519505441,9644275432009,395185536785801,404829812217810,16588378025498201,16993207837716011 ⋆ Denominators of continued fraction convergents to sqrt(440). ● a(n) = 42 * a(n - 2) - a(n - 4) for n > 3. - _ Vincenzo Librandi _ , Dec 25 2013 ● a(n) = Product _{ k = 1..floor((n - 1) / 2) } (40 + 4 * cos ^ 2(k * Pi / n)). ●

► [A202018] 41,43,47,53,61,71,83,97,113,131,151,173,197,223,251,281,313,347,383,421,461,503,547,593,641 ⋆ a(n) = n ^ 2 + n + 41. ● a(a(n) + n) = a(n) * a(n + 1). - _ Vladimir Shevelev _ , Jul 16 2012 (This identity holds for all sequences of the form n ^ 2 + n + c, _ Joerg Arndt _ , Jul 17 2012). ● a(0) = 41 and for n > 0, a(n) = a(n - 1) + 2 * n. - _ Jean - Christophe Hervé _ , Sep 27 2014 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Colin Barker _ , Sep 28 2014 ● a(n) = 2 * a(n - 1) - a(n - 2) + 2. - _ Vincenzo Librandi _ , Mar 04 2016 ●

► [A259552] 41,43,53,83,151,281,503,853,1373,2111,3121,4463,6203,8413,11171,14561,18673,23603,29453,36331,44351,53633,64303,76493,90341 ⋆ a(n) = (1 / 4) * n ^ 4 - (1 / 2) * n ^ 3 + (3 / 4) * n ^ 2 - (1 / 2) * n + 41. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5), n>5. - _ Wesley Ivan Hurt _ , Jul 09 2015 ●

► [A157194] 41,43,84,127,211,338,549,887,1436,2323,3759,6082,9841,15923,25764,41687,67451,109138,176589,285727,462316,748043,1210359,1958402,3168761 ⋆ Fibonacci sequence beginning 41, 43. ● a(n) = a(n - 1) + a(n - 2), a(0)=41, a(1)=43. ● a(n) = (41 / 2) *{ [(1 / 2) + (1 / 2) * sqrt(5)] ^ n + [(1 / 2) - (1 / 2) * sqrt(5)] ^ n } + (9 / 2) * sqrt(5) *{ [(1 / 2) + (1 / 2) * sqrt(5)] ^ n - [(1 / 2) - (1 / 2) * sqrt(5)] ^ n } , with n>=0. - _ Paolo P. Lava _ , Mar 02 2009 ●

► [A113338] 41,59,419,473,1193,1283,2363,2489,3929,4091,5891,6089,8249,8483,11003,11273,14153,14459,17699,18041,21641,22019,25979,26393,30713 ⋆ Positive integers of the form (18 * m ^ 2 + 1) / 11. ● a(n) = a(- n + 1) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). ● a(n) = (198 * n * (n - 1) - 81 * (2 * n - 1) * (- 1) ^ n + 83) / 4. (End) ●

► [A320468] 1,41,61,881,2101,19721,61741,456161,1690981,10814201,44633821,260917841,1153594261,6371951081,29443836301,156882857921,745759583941,3883416742361,18798608421181,96466943268401,472439111692021,2401777977060041,11850560210900461,59886119752101281,296897323970110501 ⋆ a(n) = a(n - 1) + 20 * a(n - 2), n >= 2; a(0)=1, a(1)=41. ● a(n) = (- 4) ^ (n + 1) + 5 ^ (n + 1). ●

► [A224671] 41,76,108,170,257,398,617,967,1525,2421,3862,6185,9934,15990,25778,41604,67199,108600,175575,283929,459235,742871,1201788,1944315,3145732 ⋆ Number of (n + 1) X 4 0..2 matrices with each 2 X 2 subblock idempotent. ● a(n) = 5 + (2 ^ (- 1 - n) * ((1 - sqrt(5)) ^ n * (- 19 + 29 * sqrt(5)) + (1 + sqrt(5)) ^ n * (19 + 29 * sqrt(5)))) / sqrt(5) + 4 * (1 + n) + (1 + n) * (2 + n) / 2 for n>1. ●

► [A195317] 1,41,121,241,401,601,841,1121,1441,1801,2201,2641,3121,3641,4201,4801,5441,6121,6841,7601,8401,9241,10121,11041,12001 ⋆ Centered 40 - gonal numbers. ● a(n) = 20 * n ^ 2 - 20 * n + 1. ●

► [A205797] 1,1,41,126,1526,5185,46920,176865,1254608,4986548,30563031,123868761,683127011,2793828323,14223836013,58127497582,278433541834,1130954381904,5159127957638,20767403083249,91032595281699,362455763000997,1536849042738162 ⋆ G.f.: A(x) = exp(Sum _{ n>=1 } sigma(n) ^ 4 * x ^ n / n). ● a(n) = (1 / n) * Sum _{ k=1..n } sigma(k) ^ 4 * a(n - k) for n>0, with a(0) = 1 . ●

► [A158602] 1,41,161,361,641,1001,1441,1961,2561,3241,4001,4841,5761,6761,7841,9001,10241,11561,12961,14441,16001,17641,19361,21161,23041 ⋆ a(n) = 40 * n ^ 2 + 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A158626] 41,167,377,671,1049,1511,2057,2687,3401,4199,5081,6047,7097,8231,9449,10751,12137,13607,15161,16799,18521,20327,22217,24191,26249 ⋆ a(n) = 42 * n ^ 2 - 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A088319] 41,205,389,689,1565,1625,1781,3865,4105,4549,5989,7421,9161,9685,10225,10685,13025,17509,17965,18329,21349,21701,25801,33161,33169 ⋆ Ordered hypotenuses of primitive Pythagorean triangles having legs that add up to a square. ● a(n)=e ^ 2 + f ^ 2, where e>f, e=j ^ 2 - jk + k ^ 2 / 2 and f=jk for coprime pairs (j, k) with k even. ●

► [A172085] 0,1,41,212,660,1585,3241,5936,10032,15945,24145,35156,49556,67977,91105,119680,154496,196401,246297,305140,373940,453761,545721,650992,770800 ⋆ a(n) = n * (27 * n ^ 3 + 22 * n ^ 2 - 21 * n - 16) / 12. ● a(n) = n * (n + 1) * (27 * n ^ 2 - 5 * n - 16) / 12. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). (End) ●

► [A020866] 41,265,1697,10897,69941,448945,2881697,18497137,118730021,762108145,4891844657,31399932337,201550911701,1293721577905,8304182337857,53303156937457,342144045482501,2196165379031665,14096818096762577,90485116626705457,580808823292457141 ⋆ Number of strong edge - subgraphs in Moebius ladder M _ n. ● a(n) = Lucas(2n) + [x ^ n] x(4 + 2x + 3x ^ 2 - 4x ^ 3 + x ^ 4) / ((1 + x)(1 - 3x + x ^ 2)(1 - 6x - 3x ^ 2 + 2x ^ 3)); a(n) ~ (6.4188) ^ n + (- 0.8056) ^ n + (0.3867) ^ n - (- 1) ^ n (Th. 3.2.). - C. Ronaldo (aga _ new _ ac (AT)hotmail.com), Jan 17 2005 ● a(n) = 5 * a(n - 1) + 9 * a(n - 2) + a(n - 3) - 2 * a(n - 4). ●

► [A201043] 41,295,1111,3011,6691,13021,23045,37981,59221,88331,127051,177295,241151,320881,418921,537881,680545,849871,1048991,1281211,1550011,1859045,2212141,2613301,3066701 ⋆ Number of - n..n arrays of 4 elements with adjacent element differences also in - n..n. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

► [A175110] 1,41,313,1201,3281,7321,14281,25313,41761,65161,97241,139921,195313,265721,353641,461761,592961,750313,937081,1156721,1412881,1709401,2050313,2439841,2882401 ⋆ a(n) = ((2 * n + 1) ^ 4 + 1) / 2. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ●

► [A282867] 41,313,3593,4481,32633,42961,66361,67073,165233,198593,237161,266921,378953,462073,465041,487073,559001,594161,750353,757633,815401,1157033,1414081,1416161,1687393 ⋆ Primes of the form x ^ 2 + y ^ 2 with x > y such that x ^ 2 - y ^ 2 is a square and x ^ 4 + y ^ 4 is a prime. ● a(n) == 1 (mod 8). ● a(n) == 1 or 33 (mod 40). ●

► [A250143] 41,391,1959,6902,19446,46914,100962,199023,365959,635921,1054417,1680588,2589692,3875796,5654676,8066925,11281269,15498091,20953163,27921586,36721938,47720630,61336470,78045435,98385651 ⋆ Number of length 4 + 20..n arrays with the medians of every three consecutive terms nondecreasing. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

► [A267325] 1,41,421,3562,37309,504880,1688724,20969807,856967187,5376948073,17667973799,73247846210,7038850387534,32764157273501,384623091229702,4924836055850737,21264412149709993,58314132226659275 0,559275579995050115 2,78206057147010955997 ⋆ Next n digits of sqrt(2). ● a(n) = floor(sqrt(2) * 10 ^ (n * (n + 1) / 2 - 1)) mod (10 ^ n). ●

► [A173768] 1,41,441,4441,44441,444441,4444441,44444441,444444441,4444444441,44444444441,444444444441,4444444444441,44444444444441,444444444444441,4444444444444441,44444444444444441 ⋆ a(n) = (4 * 10 ^ n - 31) / 9. ● a(n)=10 * a(n - 1) + 31, n>1. ●

► [A211154] 1,41,457,1345,4481,8521,18985,30017,54721,78121,126281,168961,252097,322505,454441,562561,759425,916777,1197001,1416641,1800961,2097481,2608937,2998465,3662401 ⋆ Number of 2 X 2 matrices having all terms in {- n,...,0,..,n } and even determinant. ● a(n) = a(n - 1) + 4 * a(n - 2) - 4 * a(n - 3) - 6 * a(n - 4) + 6 * a(n - 5) + 4 * a(n - 6) - 4 * a(n - 7) - a(n - 8) + a(n - 9) for n > 9. ●

► [A241622] 41,556,4175,21631,86828,289248,835812,2159025,5093737,11151140,22925695,44678543,83149600,148659968,256576512,429221457,698321649,1108104700,1719162599,2613217519,3898939484,5718981280,8258412500,11754751905 ⋆ Number of length 7 + 2 0..n arrays with no consecutive three elements summing to more than n. ● a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10) for n>10. ●

► [A143010] 1,41,661,5741,33001,142001,494341,1465661,3833941,9073501,19789001,40328641,77620661,142282141,250054001,423621001,694880441,1107728161,1721435341,2614694501,3890418001,5681377241,8156775661,11529853541 ⋆ Crystal ball sequence for the A4 x A4 lattice. ● a(n) = (35 * n ^ 8 + 140 * n ^ 7 + 630 * n ^ 6 + 1400 * n ^ 5 + 2595 * n ^ 4 + 3020 * n ^ 3 + 2500 * n ^ 2 + 1200 * n + 288) / 288 = 5 * n * (n + 1) * (n ^ 2 + n + 2) * (7 * n ^ 4 + 14 * n ^ 3 + 77 * n ^ 2 + 70 * n + 120) / 288 + 1. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>8. - _ Vincenzo Librandi _ , Dec 16 2015 ●

► [A016093] 1,41,1055,21805,395871,6595701,103397575,1549123085,22414242191,315506452261,4343673465495,58723278269565,781995624847711,10282227616659221,133750220517219815,1723860289008683245 ⋆ Expansion of 1 / ((1 - 8 * x) * (1 - 10 * x) * (1 - 11 * x) * (1 - 12 * x)). ● a(n) = - 8 ^ (2 + n) / 3 - 11 ^ (n + 3) / 3 + 25 * 10 ^ (n + 1) + 18 * 12 ^ (n + 1). - _ R. J. Mathar _ , Mar 14 2011 ● a(n) = 41 * a(n - 1) - 626 * a(n - 2) + 4216 * a(n - 3) - 10560 * a(n - 4), n>=4. - _ Vincenzo Librandi _ , Mar 18 2011 ● a(n) = 23 * a(n - 1) - 132 * a(n - 2) + 5 * 10 ^ n - 4 * 8 ^ n, n>=2. - _ Vincenzo Librandi _ , Mar 18 2011 ●

► [A076462] 41,1471,12938,62870,218555,611821,1471316,3161388,6227565,11448635,19895326,32995586,52606463,81092585,121411240,177204056,252895281,353796663,486218930,657589870,876579011,1153228901,1499092988,1927380100,2453105525 ⋆ Sum of squares of numbers that can be written as t * n + u * (n + 1) for nonnegative integers t,u in exactly three ways. ● a(n) = n * (n + 1) * (55 * n ^ 4 + 74 * n ^ 3 + 6 * n ^ 2 - 13 * n + 1) / 6. ●

► [A305863] 41,1513,19689,175465,1287657,8420713,51126249,295141225,1644285417,8927926633,47563308009,249806529385,1297882995177,6687496584553,34237868091369,174415093507945,885051189224937,4477377106010473,22596025278436329,113818651291052905 ⋆ a(n) = 6144 * 5 ^ n - 12288 * 4 ^ n + 7616 * 3 ^ n - 1472 * 2 ^ n + 41. ● a(n) = 15 * a(n - 1) - 85 * a(n - 2) + 225 * a(n - 3) - 274 * a(n - 4) + 120 * a(n - 5) for n>5. ●

► [A180667] 41,1613,9080,29462,72479,150551,278798,475040,759797,1156289,1690436,2390858,3288875,4418507,5816474,7522196,9577793,12028085,14920592,18305534,22235831,26767103,31957670 ⋆ The maximum number of points obtainable in a game of Entanglement on a board of radius n. ● a(n) = (225 / 2) * n ^ 4 + 45 * n ^ 3 - 135 * n ^ 2 - (51 / 2) * n + 44. ● a(n) = + 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ●

► [A133897] 42,43,44,45,46,47,48,91,92,93,94,95,96,97,140,141,142,143,144,145,146,189,190,191,192 ⋆ Numbers m such that binomial(m + 7,m) mod 7 = 0. ● a(n)=7n + 42 - 6 * (n mod 7). ●

► [A330893] 42,72,84,126,144,156,168,198,210,216,252,288,294,312,330,336,342,360,378,396,420,432,462,468,504 ⋆ Numbers whose set of divisors contains a Pythagorean quadruple. ● a(n) == 0 (mod 6). ●

► [A305153] 42,72,132,252,492,972,1932,3852,7692,15372,30732,61452,122892,245772,491532,983052,1966092,3932172,7864332,15728652,31457292,62914572,125829132,251658252,503316492 ⋆ a(n) = 30 * 2 ^ n + 12. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>1. ●

► [A153644] 42,82,130,186,250,322,402,490,586,690,802,922,1050,1186,1330,1482,1642,1810,1986,2170,2362,2562,2770,2986,3210 ⋆ a(n) = 4 * n ^ 2 + 28 * n + 10. ● a(1)=42, a(2)=82, a(3)=130, a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A067296] 42,90,255,785,2529,8398,28511,98462,344720,1220532,4362438,15718149,57028063,208164950,763915215,2816707650,10429892340,38768134380,144600329250,541036998090,2030157909234,7637910332556 ⋆ Fifth column of triangle A028364. ● a(n)= ((193n ^ 4 + 1727 * n ^ 3 + 5303 * n ^ 2 + 6457 * n + 2520) / (8 * (2 * n + 1) * (2 * n + 3) * (2 * n + 5) * (2 * n + 7))) * C(n + 4). ●

► [A063329] 1,42,94,144,198,248,302,350,406,454,510,556,614,660,718,762,822,866,926,968,1030,1072,1134,1174,1238 ⋆ Dimension of the space of weight n cuspidal newforms for Gamma _ 1(56). ● a(n) = a(n - 2) + a(n - 4) - a(n - 6) for n>8. ●

► [A304613] 42,129,303,651,1347,2739,5523,11091,22227,44499,89043,178131,356307,712659,1425363,2850771,5701587,11403219,22806483,45613011,91226067,182452179,364904403,729808851,1459617747 ⋆ a(n) = 87 * 2 ^ n - 45. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>1. ●

► [A005557] 42,132,297,572,1001,1638,2548,3808,5508,7752,10659,14364,19019,24794,31878,40480,50830,63180,77805,95004,115101,138446,165416,196416,231880 ⋆ Number of walks on square lattice. ● a(n) = binomial(n + 9,5) - binomial(n + 9,3). - _ Zerinvary Lajos _ , Jul 19 2006 ●

► [A158479] 42,150,330,582,906,1302,1770,2310,2922,3606,4362,5190,6090,7062,8106,9222,10410,11670,13002,14406,15882,17430,19050,20742,22506 ⋆ a(n) = 36 * n ^ 2 + 6. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A158484] 42,189,434,777,1218,1757,2394,3129,3962,4893,5922,7049,8274,9597,11018,12537,14154,15869,17682,19593,21602,23709,25914,28217,30618 ⋆ a(n) = 49 * n ^ 2 - 7. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A193392] 42,215,636,1401,2622,4427,6960,10381,14866,20607,27812,36705,47526,60531,75992,94197,115450,140071,168396,200777,237582,279195,326016,378461,436962 ⋆ Hyper - Wiener index of a benzenoid consisting of a spiral chain of n hexagons (s=1; see the Gutman et al. reference). ● a(n) = (2 * n ^ 4 + 28 * n ^ 3 + 154 * n ^ 2 - 169 * n + 111) / 3. ●

► [A193400] 42,215,636,1513,2862,5211,8352,13229,19314,28063,38532,52785,69366,91043,115752,147061,182202,225639,273804,332153,396222,472555,555696,653373,759042 ⋆ Hyper - Wiener index of a benzenoid consisting of a chain of n hexagons characterized by the encoding s = 1133 (see the Gutman et al. reference, Sec. 5). ● a(n) = (6 * n ^ 4 + 40 * n ^ 3 + 114 * n ^ 2 + 16 * n - 45 + (- 1) ^ n * (6 * n ^ 2 + 20 * n - 63)) / 4. ●

► [A193394] 42,215,636,1513,3118,5787,9920,15981,24498,36063,51332,71025,95926,126883,164808,210677,265530,330471,406668,495353,597822,715435,849616,1001853,1173698 ⋆ Hyper - Wiener index of a benzenoid consisting of a zig - zag chain of n hexagons (s=13; see the Gutman et al. reference). ● a(n) = (8 * n ^ 4 + 24 * n ^ 3 + 28 * n ^ 2 + 147 * n - 81) / 3. ●

► [A193390] 42,215,680,1661,3446,6387,10900,17465,26626,38991,55232,76085,102350,134891,174636,222577,279770,347335,426456,518381,624422,745955,884420,1041321,1218226 ⋆ The hyper - Wiener index of a benzenoid consisting of a straight - line chain of n hexagons (s=2; see the Gutman et al. reference). ● a(n) = (8 * n ^ 4 + 32 * n ^ 3 + 46 * n ^ 2 + 37 * n + 3) / 3. ●

► [A234043] 1,42,273,969,2530,5481,10472,18278,29799,46060,68211,97527,135408,183379,243090,316316,404957,511038,636709,784245,956046,1154637,1382668,1642914,1938275 ⋆ a(n) = binomial(5 * (n + 1),4) / 5, with n >= 0. ● a(n) = (n + 1) * (5 * n + 2) * (5 * n + 3) * (5 * n + 4) / 24. ●

► [A095266] 1,42,303,1144,3105,6906,13447,23808,39249,61210,91311,131352,183313,249354,331815,433216,556257,703818,878959,1084920,1325121,1603162,1922823,2288064,2703025 ⋆ A sequence generated from the Narayana triangle considered as a matrix, or from Pascal's triangle. ● a(n) = (n * (- 8 + 25 * n - 30 * n ^ 2 + 15 * n ^ 3)) / 2. ●

► [A033277] 0,42,330,1485,5005,14014,34398,76440,157080,302940,554268,969969,1633905,2662660,4214980,6503112,9806280,14486550,21007350,29954925,42063021,58241106,79606450,107520400,143629200 ⋆ Number of diagonal dissections of an n - gon into 5 regions. ● a(n) = binomial(n + 3, 4) * binomial(n - 3, 4) / 5. ●

► [A200875] 42,343,1528,4917,12890,29325,60112,113745,201994,340659,550408,857701,1295802,1905881,2738208,3853441,5324010,7235599,9688728,12800437,16706074,21561189,27543536,34855185,43724746 ⋆ Number of 0..n arrays x(0..6) of 7 elements without any interior element greater than both neighbors or less than both neighbors. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. ●

► [A215628] 1,42,345,1597,5436,15217,37148,81901,166819,318857,578413,1004224,1679522,2719666,4281488,6574614,9875045,14541308,21033513,29935679,41981720,58085511,79375484,107234235,143343655 ⋆ Number of terms in 10th derivative of a function composed with itself n times. ● a(n) = n * (n + 1) * (n ^ 7 + 98 * n ^ 6 + 3148 * n ^ 5 + 40826 * n ^ 4 + 203887 * n ^ 3 + 209204 * n ^ 2 - 412380 * n + 136656) / 362880. ●

► [A064302] 1,42,381,1606,4641,10746,21517,38886,65121,102826,154941,224742,315841,432186,578061,758086,977217,1240746,1554301,1923846,2355681,2856442,3433101,4092966,4843681 ⋆ Sixth diagonal of triangle A064094. ● a(n) = 1 + 4 * n + 9 * n ^ 2 + 14 * n ^ 3 + 14 * n ^ 4, compare to row n = 4 of Catalan triangle A009766. ●

► [A224455] 42,396,1656,4740,10890,21672,38976,65016,102330,153780,222552,312156,426426,569520,745920,960432,1218186,1524636,1885560,2307060,2795562,3357816,4000896,4732200,5559450 ⋆ The hyper - Wiener index of the linear phenylene with n hexagons. ● a(n) = (3 / 2) * n * (n + 1) * (9 * n ^ 2 + 3 * n + 2). ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ G. C. Greubel _ , Dec 08 2016 ●

► [A242145] 42,435,2338,8688,25494,63490,140148,282051,527626,930237,1561638,2515786,3913014,5904564,8677480,12459861,17526474,24204727,32881002,44007348,58108534,75789462,97742940,124757815,157727466 ⋆ Number of length 1 + 5 0..n arrays with no consecutive six elements summing to more than 3 * n. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

► [A248094] 0,42,444,2187,7443,20247,47313,98994,190386,342576,584034,952149,1494909,2272725,3360399,4849236,6849300,9491814,12931704,17350287,22958103,29997891,38747709,49524198,62685990 ⋆ The hyper - Wiener index of the he

xagonal triangle T _ n, defined in the He et al. reference. ● a(n) = n * (66 + 407n + 670n ^ 2 + 425n ^ 3 + 104n ^ 4 + 8n ^ 5) / 40 (see Corollary 3,10 in the He et al. reference). ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n > 6. - _ Wesley Ivan Hurt _ , Aug 16 2016 ●

▶ [A008387] 1,42,462,2562,9492,27174,65226,137886,264936,472626,794598,1272810,1958460,2912910,4208610,5930022,8174544,11053434,14692734,19234194,24836196,31674678,39944058,49858158,61651128 ⋆ Coordination sequence for A _ 6 lattice. ● a(n) = S(n,6) = 7 * n * (11 * n ^ 4 + 35 * n ^ 2 + 14) / 10, with S(n, m) = Sum _{ k=0..m } binomial(m,k) ^ 2 * binomial(n - k + m - 1, m - 1), for n > 0, and a(0) = 1. ●

▶ [A216109] 42,477,1701,4254,8820,16227,27447,43596,65934,95865,134937,184842,247416,324639,418635,531672,666162,824661,1009869,1224630,1471932,1754907,2076831,2441124,2851350 ⋆ The hyper - Wiener index of the ortho - polyphenyl chain with n hexagons (see the Dou et al. and the Deng references). ● a(n) = 3 * (28 + 123 * n + 127 * n ^ 2 + 36 * n ^ 3 + 4 * n ^ 4) / 2 = 3 * (n + 1)(4 * n ^ 3 + 32 * n ^ 2 + 95 * n + 28) / 2. ●

▶ [A216111] 42,477,1953,5442,12240,23967,42567,70308,109782,163905,235917,329382,448188,596547,778995,1000392,1265922,1581093,1951737,2384010,2884392,3459687,4117023,4863852,5707950 ⋆ The hyper - Wiener index of the meta - polyphenyl chain with n hexagons (see the Dou et al. and the Deng references). ● a(n) = 3 * n * (- 13 + 14 * n + 18 * n ^ 2 + 9 * n ^ 3) / 2. ●

▶ [A216113] 42,477,2241,6846,16380,33507,61467,104076,165726,251385,366597,517482,710736,953631,1254015,1620312,2061522,2587221,3207561,3933270,4775652,5746587,6858531,8124516,9558150 ⋆ The hyper - Wiener index of the meta - polyphenyl chain with n hexagons (see the Dou et al. and the Deng references). ● a(n) = 3n(16n ^ 3 + 8n ^ 2 - 5n + 9) / 2. ●

▶ [A086944] 42,492,4992,49992,499992,4999992,49999992,499999992,4999999992,49999999992,499999999992,4999999999992,49999999999992,499999999999992,4999999999999992,49999999999999992,499999999999999992 ⋆ a(n) = k where R(k + 8) = 5. ● a(n) = 5 * 10 ^ n - 8. ●

▶ [A245874] 42,553,1764,4753,9726,18505,31176,50401,76050,111721,156972,216433,289254,381193,490896,625345,782586,970921,1187700,1442641,1732302,2067913,2445144,2876833,3357666 ⋆ Number of length 5 + 2 0..n arrays with some pair in every consecutive three terms totalling exactly n. ● a(n) = 1 + 12 * n + 26 * n ^ 2 + 39 * n ^ 3 + 7 * n ^ 4 for n even. ● a(n) = - 9 - 18 * n + 23 * n ^ 2 + 39 * n ^ 3 + 7 * n ^ 4 for n odd. ●

▶ [A279888] 0,1,42,569,4250,22006,88004,293369,845358,2186376,5145646,11282966,23143198,45179324,83905292,150271993,258816840,433786483,704268402,1119633944,1733618768,2640037170,3931060364,5777392406,8325691750 ⋆ a(n) = Sum _{ k=1..n - 1 } sigma _ 3(k) * sigma _ 5(n - k). ● a(n) = (11 * sigma _ 9(n) - 21 * sigma _ 5(n) + 10 * sigma _ 3(n)) / 5040. ●

▶ [A091962] 0,1,42,594,4719,26026,111384,395352,1215126,3331251,8321170,19240650,41683005,85408596,166768096,312203232,563178924,982981701,1665911754,2749500754,4430505387,6985558206,10797503640,16388608600,24462014850 ⋆ From enumerating paths in the plane. ● a(n) = binomial(2 * n + 6, 7) * (2 * n + 3) * (n + 1) * (n + 2) / 240. ● a(n) = det(A * Transpose(A)) / 36, where A is the 2 X (n + 1) matrix whose (i,j) - th element is j ^ (2 * i - 1). - _ Lechoslaw Ratajczak _ , Oct 01 2017 ● a(n) = binomial(2 * n + 4, 3) * binomial(2 * n + 6, 7) / 160. - _ G. C. Greubel _ , Dec 17 2021 ● a(n) = a(- 3 - n) for all n in Z. - _ Michael Somos _ , Jun 27 2023 ●

▶ [A269659] 42,626,3816,15036,45590,115902,259476,527576,994626,1764330,2976512,4814676,7514286,11371766,16754220,24109872,33979226,47006946,63954456,85713260,113318982,147966126,191023556,244050696,308814450 ⋆ Number of length - 6 0..n arrays with no adjacent pair x,x + 1 repeated. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

▶ [A007746] 42,640,5894,42840,271240,1569984,8536890,44346456,222516030,1086685600,5193298110,24384586200,112831907760,515709552000,2332549535400,10455495457248,46500885666900,205401168733824,901819865269180,3938266773556720,17116175702216624 ⋆ Number of ways for n - 3 nonintersecting loops to cross a line 2n times. ● a(n) = 4 * (2 * n)! * (n ^ 4 + 20 * n ^ 3 + 107 * n ^ 2 - 107 * n + 15) / (3 * (n - 4)! * (n + 6)!). ●

▶ [A214945] 0,42,696,4260,16680,50190,126672,281736,569520,1068210,1886280,3169452,5108376,7947030,11991840,17621520,25297632,35575866,49118040,66704820,89249160,117810462,153609456,198043800,252704400 ⋆ Number of squarefree words of length 6 in an (n + 1) - ary alphabet. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

▶ [A290364] 0,1,42,817,8429,55627,268272,1030101,3331117,9425128,23970089,55880968,121188860,247272012,478904297,886654486,1578265414,2713745819,4525019252,7341094011,11619845543,17987638185,27288156478,40641967587,59518495595 ⋆ Number of 10 - leaf rooted trees with n levels. ● a(n) = (7936 * n ^ 9 + 4635 * n ^ 8 + 24756 * n ^ 7 + 43974 * n ^ 6 + 65352 * n ^ 5 + 60795 * n ^ 4 + 81524 * n ^ 3 + 72036 * n ^ 2 + 1872 * n) / 9!. ●

▶ [A090969] 1,42,858,15504,265650,4417686,72068304,1160068104,18490100706,292486494300,4599035681526,71963547329856,1121519754006288,17419158268943970,269767427275060200,4167406330765934256 ⋆ a(n) = 1 / Integral _{ x=0..1 } (x ^ 5 - x ^ 6) ^ n. ● a(n) = 1 / B(5 * n + 1,n + 1) = (6 * n + 1)! / (n! * (5 * n)!), where B(p,q) is Euler's beta function (basically identical with _ R. J. Mathar _ 's comment). - _ Emeric Deutsch _ , Jun 29 2009 ●

▶ [A020932] 1,42,966,16100,217350,2521260,26053020,245642760,2149374150,17672631900,137846528820,1027583214840,7364346373020,50983936428600,342320716020600,2236495344667920,14257657822257990,88900689950549820,543281994142248900,3259691964853493400 ⋆ Expansion of 1 / (1 - 4 * x) ^ (21 / 2). ● a(n) = ((2 * n + 19) * (2 * n + 17) * (2 * n + 15) * (2 * n + 13) * (2 * n + 11) * (2 * n + 9) * (2 * n + 7) * (2 * n + 5) * (2 * n + 3) * (2 * n + 1) / 654729075) * Binomial(2 * n, n). - _ Vincenzo Librandi _ , Jul 05 2013 ●

▶ [A221050] 42,1008,10276,75180,462140,2558556,13231260,65284380,311431708,1448846364,6612207644,29725724700,132031520796,580686331932,2533085184028,10973912563740,47262391730204,202517499871260,863943782826012,3671274602627100,15547105441480732 ⋆ The Wiener index of the nanostar dendrimer D _ 1[n], defined pictorially in the Eslahchi et al. reference. ● a(n) = 28 + 2 ^ n * (448 * n + 1554) + 4 ^ n * (784 * n - 1540). Theorem 5 of the Eslahchi et al. paper contains a less explicit formula for the Wiener index. ●

▶ [A016094] 1,42,1105,23310,431221,7309722,116419465,1769717670,25948716541,369730963602,5147200519825,70298695224030,944897655707461,12530341519244682,164265473257148185,2132247784185258390 ⋆ Expansion of 1 / ((1 - 9x)(1 - 10x)(1 - 11x)(1 - 12x)). ● a(n) = 42 * a(n - 1) - 659 * a(n - 2) + 4578 * a(n - 3) - 11880 * a(n - 4), n >= 4. - _ Vincenzo Librandi _ , Mar 18 2011 ● a(n) = 23 * a(n - 1) - 132 * a(n - 2) + 10 ^ (n + 1) - 9 ^ (n + 1), n >= 2. - _ Vincenzo Librandi _ , Mar 18 2011 ● a(n) = 5 * 10 ^ (n + 2) + 2 * 12 ^ (n + 2) - 11 ^ (n + 3) / 2 - 3 * 9 ^ (n + 2) / 2. - _ R. J. Mathar _ , Mar 19 2011 ●

▶ [A215545] 0,42,1638,10659,40480,115101,272272,566618,1072764,1888460,3137706,4973877,7582848,11186119,16043940,22458436,30776732,41394078,54756974,71366295,91780416,116618337,146562808,182363454,224839900 ⋆ Number of standard Young tableaux of shape [5n,5]. ● a(n) = (5 * n - 4) * (5 * n + 2) * (5 * n + 3) * (5 * n + 4) * (n + 1) / 24 for n>0, a(0) = 0. ●

▶ [A120815] 42,1664,33338,468200,5253864,50442128,431645370,3380738400,24682378500,170201240352,1119398566704,7074531999584,43215257135312,256343213520000,1482127305153560,8378542979807616,46428426576857886 ⋆ Number of permutations of length n with exactly 7 occurrences of the pattern 2 - 13. ● a(n) = ((n + 5)(40320 + 67824n - 20180n ^ 2 - 7556n ^ 3 - 5n ^ 4 + 211n ^ 5 + 25n ^ 6 + n ^ 7) / (5040(n + 8)(n + 9))Binomial[2n, n - 7]; generating function = x ^ 7 C ^ 15(32 + 16516C - 92666C ^ 2 + 215944C ^ 3 - 281094C ^ 4 + 225628C ^ 5 - 110922C ^ 6 + 25360C ^ 7 + 7066C ^ 8 - 9364C ^ 9 + 4622C ^ 10 - 1440C ^ 11 + 294C ^ 12 - 36C ^ 13 + 2C ^ 14) / (2 - C) ^ 13, where C=(1 - Sqrt[1 - 4x]) / (2x) is the Catalan function. ●

▶ [A208378] 42,1764,6216,13860,25200,40740,60984,86436,117600,154980,199080,250404,309456,376740,452760,538020,633024,738276,854280,981540,1120560,1271844,1435896,1613220,1804320 ⋆ Number of n X 7 0..1 arrays avoiding 0 0 0 and 1 1 1 horizontally and 0 0 1 and 1 0 1 vertically. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>5. ●

▶ [A207452] 42,1764,10710,36456,92610,196812,370734,640080,1034586,1588020,2338182,3326904,4600050,6207516,8203230,10645152,13595274,17119620,21288246,26175240,31858722,38420844,45947790,54529776,64261050 ⋆ Number of n X 7 0..1 arrays avoiding 0 0 0 and 0 0 1 horizontally and 0 0 1 and 1 0 1 vertically. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n >5. ●

▶ [A207258] 42,1764,14406,64176,206514,541380,1231650,2524704,4777290,8483748,14307678,23117136,36023442,54423684,80047002,115004736,161844522,223608420,303895158,406926576,537618354,701655108,905569938,1156828512 ⋆ Number of 7 X n 0..1 arrays avoiding 0 0 1 and 1 0 1 horizontally and 0 1 0 and 1 0 1 vertically. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. ●

▶ [A208286] 42,1764,14946,70216,239490,665892,1604862,3478160,6942474,12974340,22973082,38883480,63339874,99833412,152904150,228359712,333522218,477505188,671522130,929228520,1267098882,1704840676,2265846702 ⋆ Number of n X 7 0..1 arrays avoiding 0 0 0 and 0 0 1 horizontally and 0 0 1 and 1 1 0 vertically. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. ●

▶ [A214580] 42,2697,29805,163914,616008,1819539,4550763,10075380,20321478,38078781,67224201,112973694,182160420,283539207,428117319,629511528,904331490,1272589425,1758136101,2389123122,3198491520,4224486651,5511199395,7109133660,9075800190 ⋆ The hyper - Wiener index of the circumcoronene H(n) (see definition in the Klavzar papers). ● a(n) = (1 / 10)n + (17 / 15)n ^ 2 - 3n ^ 3 - (55 / 6)n ^ 4 + (82 / 5)n ^ 5 + (548 / 15)n ^ 6. ●

▶ [A227493] 42,14652,376080,4717944,42247752,311654376,2030475048,12146472360,68316332712,366865702056,1900861968552,9573539690664,47121333848232,227582442154152,1081872982370472,5074283412646056,23526766452271272,107995434142918824,491414463894251688,2218905516729428136 ⋆ The hyper - Wiener index of the nanostar dendrimer D _ n. ● a(n) = - 5976 + 2 ^ n * (7056 * n ^ 2 - 33264 * n - 213990) + 4 ^ n * (28244 * n ^ 2 - 122976 * n + 220008). ●

▶ [A041923] 1,1,43,44,1891,1935,83161,85096,3657193,3742289,160833331,164575620,7073009371,7237584991,311051578993,318289163984,13679196466321,13997485630305,601573592939131,615571078569436,26455558892855443,27071129971424879 ⋆ Denominators of continued fraction convergents to sqrt(483). ● a(n) = 44 * a(n - 2) - a(n - 4) for n > 3. - _ Vincenzo Librandi _ , Dec 27 2013 ● a(n) = Product _{ k = 1..floor((n - 1) / 2) } (42 + 4 * cos ^ 2(k * Pi / n)). ●

▶ [A121957] 0,43,75,303,853,2786,8608,27261,85646,270137,851245,2684011,8462548,26684106,84143305,265331874,836695587,2638426981,8320048505,26236520890,82734709152,260896992401,822717574538,2594372978149 ⋆ Expansion of x ^ 2 * (43 - 11 * x - 148 * x ^ 2 + 23 * x ^ 3) / (1 - 2 * x - 7 * x ^ 2 + 7 * x ^ 3 + 12 * x ^ 4 - 2 * x ^ 5). ● a(n) = 2 * a(n - 1) + 7 * a(n - 2) - 7 * a(n - 3) - 12 * a(n - 4) + 2 * a(n - 5). ●

▶ [A065874] 1,1,43,85,1891,5461,84883,314245,3879331,17077621,180009523,897269605,8457669571,46142992981,401365114963,2339370820165,19196705648611,117450280095541,923711917337203,5856623681349925,44652524209512451 ⋆ a(n) = (7 ^ (n + 1) - (- 6) ^ (n + 1)) / 13. ● a(n) = a(n - 1) + 42a(n - 2); a(0) = a(1) = 1. ●

▶ [A350141] 43,86,172,217,303,346,432,475,563,606,692,735,821,864,952,995,1081,1124,1210,1255,1341,1384 ⋆ Times when clock hands are most nearly equidistant - expressed exactly as a(n) * 43200 / 1427 seconds after 00:00:00. ● a(n) = m + mod(m - k, 2) where k = n + floor((n - 1) / 2) and m = floor(k * 1427 / 33). ●

▶ [A023293] 43,103,199,1039,1303,2311,2857,3673,4513,4663,5743,5953,8431,9721,12391,14143,14533,17599,18457,19507,21211,23719,24169,25621,28663 ⋆ Primes that remain prime through 3 iterations of function f(x) = 8x + 5. ● a(n) == 1 (mod 6). - _ John Cerkan _ , Sep 23 2016 ●

► [A334641] 0,0,0,43,108,444,2099,10683,56994,314296,1776519,10236081,59892690,354886920,2125117332,12839859620,78176677734,479177993904,2954360065247,18309779343549,114001476318240,712751759478780,4472908385838795,2816526733869435 ⋆ a(n) is the total number of down steps between the 3rd and 4th up steps in all 2 - Dyck paths of length 3 * n. ● a(0) = a(1) = a(2) = 0 and a(n) = 2 * Sum _{ j=1..3 } binomial(3 * j + 1, j) * binomial(3 * (n - j), n - j) / ((3 * j + 1) * (n - j + 1)) for n > 2. ●
► [A206399] 1,43,166,371,658,1027,1478,2011,2626,3323,4102,4963,5906,6931,8038,9227,10498,11851,13286,14803,16402,18083,19846,21691,23618 ⋆ a(0) = 1; for n >0, a(n) = 41 * n ^ 2 + 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n >= 4. - _ Wesley Ivan Hurt _ , Dec 18 2020 ●
► [A158604] 1,43,169,379,673,1051,1513,2059,2689,3403,4201,5083,6049,7099,8233,9451,10753,12139,13609,15163,16801,18523,20329,22219,24193 ⋆ a(n) = 42 * n ^ 2 + 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●
► [A158628] 43,175,395,703,1099,1583,2155,2815,3563,4399,5323,6335,7435,8623,9899,11263,12715,14255,15883,17599,19403,21295,23275,25343,27499 ⋆ a(n) = 44 * n ^ 2 - 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●
► [A138631] 43,179,281,349,383,587,757,859,1063,1097,1301,1471,1607,1709,1777,1811,1879,1913,2083,2287,2389,2423,2593,2729,2797 ⋆ Primes of the form 17 * k + 9. ● a(n) / log(a(n)) ~ 16 * n; ●
► [A213554] 1,43,334,1406,4271,10577,22764,44220,79437,134167,215578,332410,495131,716093,1009688,1392504,1883481,2504067,3278374,4233334,5398855,6807977,8497028,10505780,12877605 ⋆ Principal diagonal of the convolution array A213553. ● a(n) = n * (39 * n ^ 4 + 15 * n ^ 3 - 25 * n ^ 2 + 1) / 30. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) . ●
► [A164783] 1,43,337,2395,16801,117643,823537,5764795,40353601,282475243,1977326737,13841287195,96889010401,678223072843,4747561509937,33232930569595,232630513987201,1628413597910443,11398895185373137 ⋆ 7 ^ n - 6. ● a(n) = 7 * a(n - 1) + 36 with n>1, a(1)=1. - _ Vincenzo Librandi _ , Nov 30 2010 ● a(n) = 8 * a(n - 1) - 7 * a(n - 2) for n>2, a(1)=1, a(2)=43. - _ Vincenzo Librandi _ , Feb 06 2013 ●
► [A272124] 1,43,369,1507,4273,9771,19393,34819,58017,91243,137041,198243,277969,379627,506913,663811,854593,1083819,1356337,1677283,2052081,2486443,2986369,3558147,4208353 ⋆ a(n) = 12 * n ^ 4 + 16 * n ^ 3 + 10 * n ^ 2 + 4 * n + 1. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>4. ●
► [A340199] 43,379,2899,21043,149563,1053739,7396579,51837283,363044683,2541863899,17794700659,124567864723,871989933403,6103974174859,42727953147139,299096073799363,2093673721903723,14655719669250619,102590048532528019 ⋆ Number of sets in the geometry determined by the Hausdorff metric at each location between two sets defined by a complete bipartite graph K(3,n) (with n at least 3) missing two edges, where the two removed edges are not incident to the same vertex in the 3 - point set and are also not incident to the same vertex in the other set. ● a(n) = 9 * 7 ^ (n - 2) - 7 * 3 ^ (n - 2) + 1. ● a(n) = 11 * a(n - 1) - 31 * a(n - 2) + 21 * a(n - 3) for n > 5. (End) ●
► [A027002] 1,43,431,2482,10636,38138,122069,362853,1027843,2822668,7601784,20228876,53447609,140633575,369179479,967898846,2535852052,6641420806,17390705661,45533644161,119213967867,312112955384,817130734512,2139286435768,5600737350897 ⋆ a(n) = T(2 * n, n + 3), T given by A026998. ● a(n) = ((29 - 13 * sqrt(5)) / 2) * ((3 - sqrt(5)) / 2) ^ n + ((29 + 13 * sqrt(5)) / 2) * ((3 + sqrt(5)) / 2) ^ n - (4 / 5) * n ^ 5 + (4 / 3) * n ^ 4 - (25 / 3) * n ^ 3 - (31 / 3) * n ^ 2 - (433 / 15) * n - 29. ●
► [A184145] 43,499,5695,65227,746503,8544883,97806031,1119511003,12814167895,146673819139,1678861073311,19216616595691,219957659413927,2517684199404691,2881797225823217 5,329856907907420923 ⋆ 1 / 4 the number of (n + 1) X 2 0..3 arrays with every 2 X 2 subblock having at least two equal elements connected horizontally or vertically. ● a(n) = (2 ^ (- n) * ((9 - sqrt(193)) ^ n * (- 25 + 2 * sqrt(193)) + (9 + sqrt(193)) ^ n * (25 + 2 * sqrt(193)))) / sqrt(193). ●
► [A008388] 1,43,505,3067,12559,39733,104959,242845,507781,980407,1775005,3047815,5006275,7919185,12127795,18057817,26232361,37285795,51978529,71212723,96048919,127723597,167667655 ⋆ Crystal ball sequence for A _ 6 lattice. ● a(n) = 1 + 7 * n * (n + 1) * (n ^ 2 + n + 3) * (11 * n ^ 2 + 11 * n + 14) / 60. - _ T. D. Noe _ , Apr 29 2007 ●
► [A241939] 43,509,3150,13339,44063,122162,297324,654345,1329163,2529175,4558346,7847619,12991135,20788772,32295512,48878145,72279819,104692945,148840966,208069499,286447359,388877974,521221700,690429545,904688811 ⋆ Number of length 3 + 4 0..n arrays with no consecutive five elements summing to more than 2 * n. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. ●
► [A060888] 1,1,43,547,3277,13021,39991,102943,233017,478297,909091,1623931,2756293,4482037,7027567,10678711,15790321,22796593,32222107,44693587,60952381,81867661,108450343,141867727,183458857 ⋆ a(n) = n ^ 6 - n ^ 5 + n ^ 4 - n ^ 3 + n ^ 2 - n + 1. ● a(0)=1, a(1)=1, a(2)=43, a(3)=547, a(4)=3277, a(5)=13021, a(6)=39991, a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). - _ Harvey P. Dale _ , Jul 21 2012 ●
► [A130014] 0,43,2440,2643,2860,16443,17620,18879,97980,104839,112176,573199,613176,655939,3342976,3575979,3825220,19486419,20844460,22297143,113577300,121492543,129959400,661979143,708112560 ⋆ Nonnegative values x of solutions (x, y) to the Diophantine equation x ^ 2 + (x + 881) ^ 2 = y ^ 2. ● a(n) = 6 * a(n - 3) - a(n - 6) + 1762 for n > 6; a(1)=0, a(2)=43, a(3)=2440, a(4)=2643, a(5)=2860, a(6)=16443. ●
► [A178755] 44,46,49,64,66,69,94,96,99,104,155,215,221,222,225,226,251,255,262,265,333,334,335,338,339 ⋆ Integers that become semiprime when any single digit is removed. ● a(10) = 104 because deleting the "1" gives "04" which by OEIS protocol becomes the semiprime 4=2 * 2; deleting the "0" gives the semiprime 14=2 * 7; and deleting the "4" gives the semiprime 10=2 * 5. ●
► [A156812] 44,70,546,1472,2848,4674,6950,9676,12852,16478,20554,25080,30056,35482,41358,47684,54460,61686,69362,77488,86064,95090,104566,114492,124868 ⋆ a(n) = 225 * n ^ 2 - 199 * n + 44. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). (End) ●
► [A129289] 0,44,95,219,455,744,1460,2832,4515,8687,16683,26492,50808,97412,154583,296307,567935,901152,1727180,3310344,5252475,10066919,19294275,30613844,58674480 ⋆ Nonnegative values x of solutions (x, y) to the Diophantine equation x ^ 2 + (x + 73) ^ 2 = y ^ 2. ● a(n) = 6 * a(n - 3) - a(n - 6) + 146 for n > 6; a(1)=0, a(2)=44, a(3)=95, a(4)=219, a(5)=455, a(6)=744. ●
► [A264446] 0,44,119,234,399,625,924,1309,1794,2394,3125,4004,5049,6279,7714,9375,11284,13464,15939,18734,21875,25389,29304,33649,38454 ⋆ a(n) = n * (n + 5) * (n + 10) * (n + 15) / 24. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>4. - _ Vincenzo Librandi _ , Nov 16 2015 ●
► [A183634] 44,136,452,1576,5684,21016,79172,302536,1168724,4552696,17848292,70313896,278034164,1102505176,4381191812,17438411656,69494842004,277203478456,1106487293732,4418971411816,17654956552244,70557047312536 ⋆ Number of (n + 1) X 2 0..3 arrays with every 2 x 2 subblock summing to 6. ● a(n) = 2 + 2 ^ (2 + n) + 2 * 3 ^ (1 + n) + 4 ^ (1 + n). ●
► [A026908] 1,44,198,758,2824,10530,39516,149274,567120,2164898,8297206,31907214,123053938,475753142,1843357752,7155936162,27826486272,108369397602,422614721742,1650118887102,6450143419962,25238550057222 ⋆ T(2n,n), T given by A026907. ● a(n) = 4 ^ n * GAMMA(n + 1 / 2) * (38 + 99 * n + 49 * n ^ 2) * Pi ^ (- 1 / 2) / GAMMA(n + 3) - 18 (based on guessed recurrence) - _ Mark van Hoeij _ , Oct 30 2011 ●
► [A183246] 44,206,1168,6984,41808,250464,1501248,9001344,53983488,323802624,1942422528,11652962304,69911482368,419443728384,2516561707008,15098967588864,90592194920448,543546727071744,3261254592626688 ⋆ Number of permutations of 1..2 * n + 3 with each element displaced by at least n. ● a(n) = 10 * a(n - 1) - 24 * a(n - 2) for n>4. ●
► [A060836] 0,0,0,0,44,264,924,2464,5544,11088,20328,34848,56628,88088,132132,192192,272272,376992,511632,682176,895356,1158696,1480556,1870176,2337720 ⋆ Number of permutations of n letters where exactly 5 change position. ● a(n) = 44 * C(n, 5). a(n) = a(n - 1) * n / (n - 5). ●
► [A094794] 44,309,1214,3539,8544,18089,34754,61959,104084,166589,256134,380699,549704,774129,1066634,1441679,1915644,2506949,3236174,4126179,5202224,6492089,8026194,9837719,11962724 ⋆ a(n) = (1 / n!) * A001689(n). ● a(n) = n ^ 5 + 10 * n ^ 4 + 45 * n ^ 3 + 100 * n ^ 2 + 109 * n + 44. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6), with a(0)=44, a(1)=309, a(2)=1214, a(3)=3539, a(4)=8544, a(5)=18089. - _ Harvey P. Dale _ , Jul 25 2012 ●
► [A228464] 44,383,1821,6254,17487,42386,92430,185727,349558,623513,1063283,1745172,2771393,4276212,6433004,9462285,13640784,19311619,26895641,36904010,49952067,66774566,88242330,115380395,149387706 ⋆ Number of arrays of maxima of three adjacent elements of some 0..n array of length 9. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. ●
► [A250337] 44,429,2056,6785,17796,39949,80144,147681,254620,416141,650904,981409,1434356,2041005,2837536,3865409,5171724,6809581,8838440,11324481,14340964,17968589,22295856,27419425,33444476 ⋆ Number of length 1 + 5 0..n arrays with every six consecutive terms having the maximum of some three terms equal to the minimum of the remaining three terms. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. ●
► [A354608] 0,1,44,541,3236,12885,39656,102249,231736,476121,905620,1618661,2748604,4471181,7012656,10658705,15764016,22762609,32178876,44639341,60885140,81785221,108350264,141747321,183315176 ⋆ Number of quadruples (p _ 1 , ..., p _ 4) of positive integers such that p _{ i - 1 } <= p _ i <= n ^ (i - 1). ● a(n) = (6 * n ^ 6 - 6 * n ^ 5 + 3 * n ^ 4 + 4 * n ^ 3 - 3 * n ^ 2 + 2 * n) / 6. ●
► [A120812] 1,44,700,7460,63648,470934,3155691,19660630,115855025,653392740,3556757490,18805317960,97034823600,490465092600,2435567286708,11910569958216,57470522059594,274051266477560,1293219035408080 ⋆ Number of permutations of length n with exactly 4 occurrences of the pattern 2 - 13. ● a(n) = (- 36 - 100 m - 13 m ^ 2 + 4 m ^ 3 + m ^ 4) / (24(m + 6))Binomial[2m, m - 5]; generating function = x ^ 5 C ^ 11 (5 - 118C + 259C ^ 2 - 240C ^ 3 + 142C ^ 4 - 62C ^ 5 + 17C ^ 6 - 2 C ^ 7) / (2 - C) ^ 7, where C=(1 - Sqrt[1 - 4x]) / (2x) is the Catalan function. ●
► [A035611] 1,44,968,14212,156816,1388508,10286936,65652532,368804128,1854105484,8453107432,35333619428,136677756336,493244610364,1672424817272,5360494538388,16327295550016,47469373288172,132235461020168,354093052356164,913949931165392,2279318877511324,5504063080258968,12893712963761652 ⋆ Coordination sequence for lattice D *_ 22 (with edges defined by l _ 1 norm = 1). ● a(m) = add(2 ^ k * binomial(n, k) * binomial(m - 1, k - 1), k=0..n) + 2 ^ n * binomial((n + 2 * m) / 2 - 1, n - 1); with n=22. ●
► [A130645] 0,44,1121,1317,1541,7644,8780,10080,45621,52241,59817,266960,305544,349700,1557017,1781901,2039261,9076020,10386740,11886744,52899981,60539417,69282081,308324744,352850640 ⋆ Nonnegative values x of solutions (x, y) to the Diophantine equation x ^ 2 + (x + 439) ^ 2 = y ^ 2. ● a(n) = 6 * a(n - 3) - a(n - 6) + 878 for n > 6; a(1)=0, a(2)=44, a(3)=1121, a(4)=1317, a(5)=1541, a(6)=7644. ●
► [A042011] 1,1,45,46,2069,2115,95129,97244,4373865,4471109,201102661,205573770,9246348541,9451922311,425130930225,434582852536,19546776441809,199813592943 45,898726585392989,918707944687334,41321876151635685,42240584096323019,1899907576389848521 ⋆ Denominators of continued fraction convergents to sqrt(528). ● a(n) = 46 * a(n - 2) - a(n - 4) for n > 3. - _ Vincenzo Librandi _ , Jan 12 2014 ● a(n) = Product _{ k = 1..floor((n - 1) / 2) } (44 + 4 * cos ^ 2(k * Pi / n)). ●
► [A183983] 45,47,50,56,66,86,122,194,330,602,1130,2186,4266,8426,16682,33194,66090,131882,263210,525866,1050666,2100266,4198442,8394794,16785450 ⋆ 1 / 4 the number of (n + 1) X 7 binary arrays with all 2 X 2 subblock sums the same. ● a(n) = 3 * 2 ^ (n / 2 - 1) + 2 ^ (n - 1) + 42 for n even. ● a(n) = 2 ^ (n - 1) + 2 ^ ((n + 1) / 2) + 42 for n odd. ● a(n) = 3 * a(n - 1) - 6 * a(n - 3) + 4 * a(n - 4) for n>4. ●

▶ [A374010] 45,47,64,70,87,97,114,128,145,163,180,202,219,245,262,292,309,343,360,398,415,457,474,520,537 ⋆ a(n) = (1 + (n + 8) ^ 2 + (n - 9) * (- 1) ^ n) / 2. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). ●

▶ [A291787] 45,48,56,60,80,88,92,94,95,96,112,120,160,176,184,188,190,216,252,324,378,486,567,594,738 ⋆ Trajectory of 45 under repeated application of the map k - > A291784(k). ● a(n) = 2 * a(n - 7) for n >= 35, which proves this is unbounded. [Guy, Wall] ●

▶ [A184043] 45,51,61,81,117,189,325,597,1125,2181,4261,8421,16677,33189,66085,131877,263205,525861,1050661,2100261,4198437,8394789,16785445,33566757,67125285 ⋆ 1 / 9 the number of (n + 1) X 5 0..2 arrays with all 2 X 2 subblocks having the same four values. ● a(n) = 3 * 2 ^ (n / 2) + 2 ^ (n + 1) + 37 for n even. ● a(n) = 2 ^ (n + 1) + 2 ^ ((n + 3) / 2) + 37 for n odd. ●

▶ [A360769] 45,63,75,99,117,135,147,153,171,175,189,207,225,245,261,275,279,297,315,325,333,351,363,369,375 ⋆ Odd numbers that are neither prime powers nor squarefree. ● a(n) = { A005408 INTERSECT A126706 } = intersection of A005418, A013929, and A024619. ●

▶ [A026043] 45,67,98,140,195,265,352,458,585,735,910,1112,1343,1605,1900,2230,2597,3003,3450,3940,4475,5057,5688,6370,7105 ⋆ a(n) = dot _ product(1,2,...,n) * (5,6,...,n,1,2,3,4). ● a(n) = n(2n ^ 2 - 9n + 49) / 6 (n >= 5). - _ Emeric Deutsch _ , Nov 29 2006 ●

▶ [A259218] 45,71,112,183,303,510,869,1499,2616,4619,8251,14910,27249,50343,93968,177071,336567,644702,1243405,2412387,4704360,9213891,18112547,35715038,70604793 ⋆ Number of (n + 1) X (4 + 1) 0..1 arrays with each 2 X 2 subblock having clockwise pattern 0000 0011 or 0101. ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) - a(n - 3) + 2 * a(n - 4). ●

▶ [A026060] 45,80,126,184,255,340,440,556,689,840,1010,1200,1411,1644,1900,2180,2485,2816,3174,3560,3975,4420,4896,5404,5945 ⋆ a(n) = dot _ product(n,n - 1,...2,1) * (5,6,...,n,1,2,3,4). ● a(n) = n * (n ^ 2 + 15 * n - 46) / 6. - _ Ralf Stephan _ , Apr 30 2004 ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4); a(5)=45, a(6)=80, a(7)=126, a(8)=184. - _ Harvey P. Dale _ , Nov 05 2011 ●

▶ [A305154] 45,81,153,297,585,1161,2313,4617,9225,18441,36873,73737,147465,294921,589833,1179657,2359305,4718601,9437193,18874377,37748745,75497481,150994953,301989897,603979785 ⋆ a(n) = 36 * 2 ^ n + 9. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2). (End) ●

▶ [A063343] 1,45,84,126,168,210,252,298,336,382,420,462,504,554,588,634,672,718,756,806,840,890,924,970,1008 ⋆ Dimension of the space of weight n cuspidal newforms for Gamma _ 1(70). ● a(n) = a(n - 4) + a(n - 6) - a(n - 10) for n>13. ●

▶ [A183625] 45,87,189,447,1125,2967,8109,22767,65205,189447,556029,1643487,4881285,14545527,43439949,129926607,388993365,1165407207,3493075869,10472936127,31406225445,94193510487,282530199789,847489936047,2542268481525 ⋆ Number of (n + 1) X 3 0..2 arrays with every 2 X 2 subblock summing to 4. ● a(n) = 3 * (4 + 2 ^ (2 + n) + 3 ^ n). ●

▶ [A184540] 45,89,147,220,309,415,539,682,845,1029,1235,1464,1717,1995,2299,2630,2989,3377,3795,4244,4725,5239,5787,6370,6989 ⋆ Number of (n + 2) X 3 binary arrays with each 3 X 3 subblock having rows and columns in lexicographically nondecreasing order. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>4. ●

▶ [A331190] 45,105,190,300,435,595,780,990,1225,1485,1770,2080,2415,2775,3160,3570,4005,4465,4950,5460,5995,6555,7140,7750,8385 ⋆ Expansion of (- 5 * (9 - 6 * x + 2 * x ^ 2)) / (- 1 + x) ^ 3. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n > 0, with a(0) = 0, a(1) = 45, a(2) = 105. ●

▶ [A370914] 0,45,120,231,384,585,840,1155,1536,1989,2520,3135,3840,4641,5544,6555,7680,8925,10296,11799,13440,15225,17160,19251,21504 ⋆ a(n) = n * (n + 4) * (n + 8). ● a(n) = 64 * Pochhammer(n / 4, 3). ● a(n) = n ^ 3 + 12 * n ^ 2 + 32 * n. ● a(n) = [x ^ n] 3 * x * (7 * x ^ 2 - 20 * x + 15) / (x - 1) ^ 4. ● a(n) = Sum _{ k=0..3 } Stirling1(3, k) * (- 4) ^ (3 - k) * n ^ k. ●

▶ [A277131] 45,127,279,521,873,1355,1987,2789,3781,4983,6415,8097,10049,12291,14843,17725,20957,24559,28551,32953,37785,43067,48819,55061,61813 ⋆ Magic numbers of anti - Mackay icosahedra. ● a(n) = 10 / 3 * n ^ 3 + 25 * n ^ 2 + 161 / 3 * n + 45 with offset 0. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>5. ● a(n) = 11 - (19 * n) / 3 + 5 * n ^ 2 + (10 * n ^ 3) / 3. ●

▶ [A098924] 1,45,132,262,435,651,910,1212,1557,1945,2376,2850,3367,3927,4530,5176,5865,6597,7372,8190,9051,9955,10902,11892,12925 ⋆ 45 - gonal numbers: n * (43 * n - 41) / 2. ● a(n) = n * (43 * n - 41) / 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Jul 08 2012 ●

▶ [A195318] 1,45,133,265,441,661,925,1233,1585,1981,2421,2905,3433,4005,4621,5281,5985,6733,7525,8361,9241,10165,11133,12145,13201 ⋆ Centered 44 - gonal numbers. ● a(n) = 22 * n ^ 2 - 22 * n + 1. ●

▶ [A053743] 45,145,245,345,445,545,645,745,845,945,1045,1145,1245,1345,1445,1545,1645,1745,1845,1945,2045,2145,2245,2345,2445 ⋆ Sum of numbers in range 10 * n to 10 * n + 9. ● a(n) = 100 * n + 45. ● a(n) = 2 * a(n - 1) - a(n - 2). ●

▶ [A305069] 45,162,279,396,513,630,747,864,981,1098,1215,1332,1449,1566,1683,1800,1917,2034,2151,2268,2385,2502,2619,2736,2853 ⋆ a(n) = 117 * n - 72 (n>=1). ● a(n) = 2 * a(n - 1) - a(n - 2) for n>2. ●

▶ [A254147] 45,165,825,4917,32505,229845,1703625,13072917,103008345,828707925,6779099625,56214660117,471424600185,3990804658005,34053173154825,292542431786517,2527742384720025,21950298188288085,191434401453597225,1675813243179972117 ⋆ a(n) = 1 * 9 ^ n + 2 * 8 ^ n + 3 * 7 ^ n + 4 * 6 ^ n + 5 * 5 ^ n + 6 * 4 ^ n + 7 * 3 ^ n + 8 * 2 ^ n + 9 * 1 ^ n. ● a(n) = (x + 1) * (Bernoulli(n + 1, x + 1) - Bernoulli(n + 1, 1)) / (n + 1) - (Bernoulli(n + 2, x + 1) - Bernoulli(n + 2, 1)) / (n + 2) at x = 9. ● a(n) = (1 / 8!) * Sum _{ k = 0..n } (- 1) ^ (k + n) * (k + 10)! * Stirling2(n,k) / ((k + 1) * (k + 2)). (End) ●

▶ [A158630] 1,45,177,397,705,1101,1585,2157,2817,3565,4401,5325,6337,7437,8625,9901,11265,12717,14257,15885,17601,19405,21297,23277,25345 ⋆ a(n) = 44 * n ^ 2 + 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A158634] 45,183,413,735,1149,1655,2253,2943,3725,4599,5565,6623,7773,9015,10349,11775,13293,14903,16605,18399,20285,22263,24333,26495,28749 ⋆ a(n) = 46 * n ^ 2 - 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A280059] 1,45,225,637,1377,2541,4225,6525,9537,13357,18081,23805,30625,38637,47937,58621,70785,84525,99937,117117,136161,157165,180225,205437,232897 ⋆ Number of 2 X 2 matrices having all elements in {- n,..,0,..,n } with determinant = permanent. ● a(n) = 16 * (n + 1) ^ 3 - 28 * (n + 1) ^ 2 + 16 * (n + 1) - 3 for n>0. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). (End) ●

▶ [A172118] 0,1,45,234,730,1755,3591,6580,11124,17685,26785,39006,54990,75439,101115,132840,171496,218025,273429,338770,415170,503811,605935,722844,855900 ⋆ a(n) = n * (n + 1) * (5 * n ^ 2 - n - 3) / 2. ● a(n) = n * (n * (n + 1) * (20 * n - 17) / 6) - Sum _{ i=0..n - 1 } (i * (i + 1) * (20 * i - 17) / 2). ● a(n) = n * (n + 1) * (5 * n ^ 2 - n - 3) / 2. ● a(n) = 12 * binomial(n + 3,4) - 78 * binomial(n + 2,3) + 19 * binomial(n + 1,2). ●

▶ [A272850] 1,45,325,1225,3321,7381,14365,25425,41905,65341,97461,140185,195625,266085,354061,462241,593505,750925,937765,1157481,1413721,1710325,2051325,2440945,2883601 ⋆ a(n) = (n ^ 2 + (n + 1) ^ 2) * (n ^ 2 + (n + 1) ^ 2 + 2 * n * (n + 1)). ● a(n) = (2 * n ^ 2 + 2 * n + 1) * (4 * n ^ 2 + 4 * n + 1). ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>4. ●

▶ [A156719] 45,350,943,1824,2993,4450,6195,8228,10549,13158,16055,19240,22713,26474,30523,34860,39485,44398,49599,55088,60865,66930,73283,79924,86853 ⋆ a(n) = 144 * n ^ 2 - 127 * n + 28. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A086576] 0,45,495,4995,49995,499995,4999995,49999995,499999995,4999999995,49999999995,499999999995,4999999999995,49999999999995,499999999999995,4999999999999995,49999999999999995,499999999999999995,4999999999999999995,49999999999999999995,499999999999999999995,4999999999999999999995 ⋆ a(n) = 5 * (10 ^ n - 1). ● a(n) = 11 * a(n - 1) - 10 * a(n - 2) for n > 1. ●

▶ [A093529] 45,525,2205,31185,99099,585585,1640925,35334585,92147055,468495027,1166167275,11408158125,27484885575,130734984825,307452619485,1145509532425,2644267548037 5,121132637200575,275520749478975 ⋆ Pi * denominators of odd raw moments in the distribution of line lengths for lines picked at random in the unit disk. ● a(k) = Pi * Denominator[(2 * Gamma[3 + n]) / ((2 + n) * Gamma[2 + n / 2] * Gamma[3 + n / 2])] for n = 2k - 1. ●

▶ [A283116] 0,0,0,0,0,0,0,1,45,533,3546,16917,64345,207327,587922,1505924,3549610,7806420,16188690,31919658,60238044,109392480,192015912,326985561,541900545,876326275 ⋆ Number of nonequivalent ways (mod D _ 3) to place 5 points on an n X n X n triangular grid so that no two of them are on the same row, column or diagonal. ● a(n) = (n ^ 10 - 35 * n ^ 9 + 530 * n ^ 8 - 4526 * n ^ 7 + 23693 * n ^ 6 - 76544 * n ^ 5 + 141360 * n ^ 4 - 104944 * n ^ 3 - 67984 * n ^ 2 + 124224 * n) / 23040 + IF(MOD(n, 2) = 1, - 45 * n ^ 4 + 1350 * n ^ 3 - 13770 * n ^ 2 + 57915 * n - 81225) / 23040 + IF(MOD(n, 3) = 2, - 2) / 9. ●

▶ [A349849] 0,0,1,45,549,3755,18120,69006,220710,616554,1545435,3544915,7552611,15119325,28699034,52032540,90643260,152465316,248625765,394404489,610396945,923906655,1370595996,1996425530,2859913794 ⋆ Number of transitive relations on an n - set with exactly four ordered pairs. ● a(n) = C(n,2) + 42 * C(n,3) + 375 * C(n,4) + 1450 * C(n,5) + 2940 * C(n,6) + 3360 * C(n,7) + 1680 * C(n,8). ● a(n) = (1 / 24) * (n ^ 8 - 12 * n ^ 7 + 84 * n ^ 6 - 340 * n ^ 5 + 814 * n ^ 4 - 1130 * n ^ 3 + 829 * n ^ 2 - 246 * n). ●

▶ [A027783] 45,550,3630,17160,65065,210210,600600,1555840,3719430,8314020,17551820,35271600,67897830,125847260,225544440,392251200,663966875,1096717050,1771619850,2804201400,4356527175,6652824750,9999397200,14809766400,21636143100 ⋆ a(n) = 5 * (n + 1) * binomial(n + 2,10). ● a(n) = C(n + 1, 9) * C(n + 2, 2). - _ Zerinvary Lajos _ , May 13 2005; corrected by _ R. J. Mathar _ , Mar 15 2016 ●

▶ [A160837] 1,45,556,3457,14317,45565,120772,280001,586225,1132813,2052084,3524929,5791501,9162973,14034364,20898433,30360641,43155181,60162076,82425345,111172237,147833533,194064916,251769409,323120881 ⋆ G.f.: (1 + 38 * x + 262 * x ^ 2 + 475 * x ^ 3 + 254 * x ^ 4 + 37 * x ^ 5 + x ^ 6) / (1 - x) ^ 7. ● a(n) = 1 + 24 / 5 * n + 38 / 3 * n ^ 3 + 207 / 20 * n ^ 2 + 61 / 6 * n ^ 4 + 68 / 15 * n ^ 5 + 89 / 60 * n ^ 6. ● a(n) = 1 + n * (n + 1) * (89 * n ^ 4 + 183 * n ^ 3 + 427 * n ^ 2 + 333 * n + 288) / 60. (End) ●

▶ [A160838] 1,45,557,3473,14417,45965,121997,283137,593281,1147213,2079309,3573329,5873297,9295469,14241389,21212033,30823041,43821037,61101037,83724945,112941137,150205133,197201357,255865985,328410881 ⋆ G.f.: (1 + 38 * x + 263 * x ^ 2 + 484 * x ^ 3 + 263 * x ^ 4 + 38 * x ^ 5 + x ^ 6) / (1 - x) ^ 7. ● a(n) = 68 * n ^ 6 / 45 + 68 * n ^ 5 / 15 + 91 * n ^ 4 / 9 + 38 * n ^ 3 / 3 + 467 * n ^ 2 / 45 + 24 * n / 5 + 1. - _ R. J. Mathar _ , Sep 11 2011 ● a(0)=1, a(1)=45, a(2)=557, a(3)=3473, a(4)=14417, a(5)=45965, a(6)=121997, a(n)=7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). - _ Harvey P. Dale _ , Sep 17 2011 ●

▶ [A090024] 0,1,45,571,5841,55651,515025,4702531,42649281,385447171,3476958705,31332052291,282184860321,2540643522691,22870684139985,205860601348511,1852867557848961,16676418630942211,150090820212050865 ⋆ Number of distinct lines through the origin in the n - dimensional lattice of side length 8. ● a(n) = 9 ^ n - 5 ^ n - 3 ^ n - 2 ^ n + 2. ●

▶ [A110691] 1,45,632,4825,25227,101822,340416,986094,2551725,6028099,13209768,27179087,53000311,98685900,176508416,304743564,509943033,829849833,1317083800,2043740853,3107066435,4636381354,6801456960,9822556250 ⋆ Kekulé numbers for certain benzenoids. ● a(n) = (n + 1) * (n + 2) ^ 3 * (n + 3) * (13 * n ^ 4 + 104 * n ^ 3 + 311 * n ^ 2 + 412 * n + 210) / 7!. ●

▶ [A341427] 1,45,767,4452,21178,74452,224313,586035,1387583,2999430,6102276,11656386,21282969,37159993,62687904,102213426,162345824,251064745,379922217,562833191,819351646,1171991382,1651937498,2294227971,3147090871 ⋆ Number of positive solutions to (x _ 1) ^ 2 + (x _ 2) ^ 2 + ... + (x _ 8) ^ 2 <= n ^ 2. ● a(n) is the coefficient of x ^ (n ^ 2) in expansion of (theta _ 3(x) - 1) ^ 8 / (256 * (1 - x)). ●

▶ [A024379] 45,812,5130,20460,62335,158760,355572,722760,1361745,2413620,4068350,6574932,10252515,15502480,22821480,32815440,46214517,63889020,86866290,116348540,153731655,200624952,258871900,330571800,418102425 ⋆ a(n) = 3rd elementary symmetric function of the first n + 2 positive integers congruent to 1 mod 4. ● a(n) = n * (2 * n + 3) * (n + 2) * (n + 1) * (4 * n ^ 2 + 8 * n - 3) / 6. ●

► [A034967] 0,45,900,13500,180000,2250000,27000000,315000000,3600000000,40500000000,450000000000,4950000000000,54000000000000,585000000000000,6300000000000000,67500000000000000,720000000000000000,7650000000000000000,810000000000000000 ★ Sum of digits of numbers between 0 and (10 ^ n) - 1. ● a(n) = 45 * n * 10 ^ (n - 1). ● a(n) = 20 * a(n - 1) - 100 * a(n - 2), a(0)=0, a(1)=45. - _ Harvey P. Dale _ , Oct 09 2011 ● a(n) = (9 * n * 10 ^ n) / 2. - _ Harvey P. Dale _ , Apr 23 2018 ●

► [A140346] 1,45,1125,20625,309375,4021875,46921875,502734375,5027343750,47480468750,427324218750,3690527343750,30754394531250,248400878906250,1951721191406250,14963195800781250,112223968505859375,825176230136718 75,5959606170654296875,42344570159912109375 ★ a(n) = binomial(n + 8, 8) * 5 ^ n. ● a(n) = 45 * a(n - 1) - 900 * a(n - 2) + 10500 * a(n - 3) - 78750 * a(n - 4) + 393750 * a(n - 5) - 1312500 * a(n - 6) + 2812500 * a(n - 7) - 3515625 * a(n - 8) + 1953125 * a(n - 9) for n > 8. ●

► [A229796] 45,1169,14178,102251,520017,2066505,6842284,19692165,50724037,119421753,261015470,535936479,1043365337,1940082033,3466044984,5978361865,9995569629,16254413569,25781605914,39983353235,60755768865,90619631609 ★ Number of 3 X 3 0..n arrays with rows and columns in lexicographically nondecreasing order. ● a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10) for n>10. ●

► [A027476] 1,45,1350,33750,759375,15946875,318937500,6150937500,115330078125,2114384765625,38058925781250,674680957031250,11806916748046875,204350482177734375,3503151123046875000,59553569091796875000 ★ Third column of A027467. ● a(n) = 15 ^ (n - 3) * binomial(n - 1, 2). ● a(n) = 45 * a(n - 1) - 675 * a(n - 2) + 3375 * a(n - 3). ●

► [A062262] 1,45,1350,34650,831600,19459440,454053600,10702692000,256864608000,6307453152000,158947819430400,4118193503424000,109818493424640000,3015784780968960000,85303626661693440000 ★ Fifth (unsigned) column sequence of triangle A062140 (generalized a=4 Laguerre). ● a(n) = (n + 4)! * binomial(n + 8, 8) / 4!. ●

► [A053112] 1,45,1485,40095,938223,19702683,379980315,6839645670,116273976390,1883638417518,29282015399598,439230230993970,6385731819835410,90312492880529370,1246312401751305306,16825217423642621631 ★ Expansion of (- 1 + 1 / (1 - 9 * x) ^ 9) / (81 * x); related to A053108. ● a(n) = 9 ^ (n - 1) * binomial(n + 9, 8). ● a(0)=1, a(1)=45, a(2)=1485, a(3)=40095, a(4)=938223, a(5)=19702683, a(6)=379980315, a(7)=6839645670, a(8)=116273976390, a(n)=81 * a(n - 1) - 2916 * a(n - 2) + 61236 * a(n - 3) - 826686 * a(n - 4) + 7440174 * a(n - 5) - 44641044 * a(n - 6) + 172186884 * a(n - 7) - 387420489 * a(n - 8) + 387420489 * a(n - 9). - _ Harvey P. Dale _ , Apr 27 2013 ●

► [A279439] 0,0,45,2304,34020,270720,1475145,6209280,21654864,65422080,176467005,434206080,990140580,2117816064,4288771305,8284308480,15355471680,27446584320,47501098029,79872376320,130866406020,209448328320,328150139625,504222960384,761083938000 ★ Number of ways to place 5 points on an n X n square grid so that no more than 2 points are on a vertical or horizontal straight line. ● a(n) = (n ^ 10 - 30 * n ^ 8 + 90 * n ^ 7 - 27 * n ^ 6 - 270 * n ^ 5 + 500 * n ^ 4 - 360 * n ^ 3 + 96 * n ^ 2) / 120. ● a(n) = 11 * a(n - 1) - 55 * a(n - 2) + 165 * a(n - 3) - 330 * a(n - 4) + 462 * a(n - 5) - 462 * a(n - 6) + 330 * a(n - 7) - 165 * a(n - 8) + 55 * a(n - 9) - 11 * a(n - 10) +* a(n - 11). ●

► [A130017] 0,45,2688,2901,3128,18105,19340,20657,107876,115073,122748,631085,673032,717765,3680568,3925053,4185776,21454257,22879220,24398825,125046908,133352201,142209108,728829125,777235920 ★ Nonnegative values x of solutions (x, y) to the Diophantine equation x ^ 2 + (x + 967) ^ 2 = y ^ 2. ● a(n) = 6 * a(n - 3) - a(n - 6) + 1934 for n > 6; a(1)=0, a(2)=45, a(3)=2688, a(4)=2901, a(5)=3128, a(6)=18105. ● a(1)=0, a(2)=45, a(3)=2688, a(4)=2901, a(5)=3128, a(6)=18105, a(7)=19340, a(n)=a(n - 1) + 6 * a(n - 3) - 6 * a(n - 4) - a(n - 6) + a(n - 7). - _ Harvey P. Dale _ , Nov 03 2013 ●

► [A213880] 45,3960,279720,16798320,839991600,33599966400,1007999899200,20159999798400,201599999798400 ★ a(n) = sum of n - digit numbers with distinct nonzero digits. ● a(n) = 5 * (10 ^ n - 1) * 8! / (9 - n)!. ●

► [A113630] 1,45,4097,83653,757305,4272461,17736745,59409477,169826513,429794605,987654321,2098573445,4178995657,7879732173,14181546905,24517448581,40926266145,66242446637,104327377633,160347899205,241108033241 ★ 1 + 2 * n + 3 * n ^ 2 + 4 * n ^ 3 + 5 * n ^ 4 + 6 * n ^ 5 + 7 * n ^ 6 + 8 * n ^ 7 + 9 * n ^ 8. ● a(n) = 1 + 2 * n + 3 * n ^ 2 + 4 * n ^ 3 + 5 * n ^ 4 + 6 * n ^ 5 + 7 * n ^ 6 + 8 * n ^ 7 + 9 * n ^ 8. ●

► [A282465] 1,46,47,93,140,233,373,606,979,1585,2564,4149,6713,10862,17575,28437,46012,74449,120461,194910,315371,510281,825652,1335933,2161585 ★ a(n) = 11 * Fibonacci(n + 3) + Fibonacci(n - 8) with n>=0. ● a(n) = a(n - 1) + a(n - 2). ● a(n) = a(i) * Fibonacci(n - i + 1) + a(i - 1) * Fibonacci(n - i). Examples: ● a(n) = 44 * Fibonacci(n) + Fibonacci(n + 2), ● a(n) = 45 * Fibonacci(n) + Fibonacci(n + 1), ● a(n) = 46 * Fibonacci(n) + Fibonacci(n - 1), ● a(n) = 47 * Fibonacci(n) - Fibonacci(n - 2). ●

► [A374011] 46,65,69,88,96,115,127,146,162,181,201,220,244,263,291,310,342,361,397,416,456,475,519,538,586 ★ a(n) = (1 + (n + 9) ^ 2 - (n - 10) * (- 1) ^ n) / 2. ● a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). ●

► [A264445] 0,46,104,175,260,360,476,609,760,930,1120,1331,1564,1820,2100,2405,2736,3094,3480,3895,4340,4816,5324,5865,6440 ★ a(n) = n * (n + 11) * (n + 22) / 6. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>3. - _ Vincenzo Librandi _ , Nov 16 2015 ●

► [A204769] 46,105,197,256,348,407,499,558,650,709,801,860,952,1011,1103,1162,1254,1313,1405,1464,1556,1615,1707,1766,1858 ★ a(n) = 151 * (n - 1) - a(n - 1) with n>1, a(1)=46. ● a(n) = (- 151 - 33 * (- 1) ^ n + 302 * n) / 4. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3). ●

► [A250778] 46,106,230,482,990,2010,4054,8146,16334,32714,65478,131010,262078,524218,1048502,2097074,4194222,8388522,16777126,33554338,67108766,134217626,268435350,536870802,1073741710 ★ Number of (n + 1) X (3 + 1) 0..1 arrays with nondecreasing x(i,j) + x(i,j - 1) in the i direction and nondecreasing absolute value of x(i,j) - x(i - 1,j) in the j direction. ● a(n) = 2 ^ (5 + n) - 4 * n - 14. ●

► [A122513] 0,1,46,135,4540,13261,444906,1299475,43596280,127335321,4271990566,12477562015,418611479220,1222673742181,41019652973026,119809549171755,4019507379877360,11740113145089841,393870703575008286,1150411278669632695,38595309442970934700 ★ Numbers n such that 1 + 2n + 3n ^ 2 is a triangular number. ● a(n) = a(n - 1) + 98 * a(n - 2) - 98 * a(n - 3) - a(n - 4) + a(n - 5). - _ Colin Barker _ , Dec 15 2014 ● a(n) = (- (5 / 8) * sqrt(6) - 3 / 2) * (5 - 2 * sqrt(6)) ^ n + (- 3 / 2 + (5 / 8) * sqrt(6)) * (5 + 2 * sqrt(6)) ^ n - 1 / 3 + (- (1 / 3) * sqrt(6) - 5 / 6) * (- 5 + 2 * sqrt(6)) ^ n + ((1 / 3) * sqrt(6) - 5 / 6) * (- 5 - 2 * sqrt(6)) ^ n. - _ Robert Israel _ , Dec 15 2014 ●

► [A189809] 46,158,342,596,926,1308,1754,2250,2794,3390,4026,4702,5426,6190,6994,7838,8726,9654,10622,11630,12678,13766,14894,16062,17270 ★ Number of right triangles on an (n + 1) X 5 grid. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>11. ●

► [A192850] 46,184,414,832,1390,2232,3262,4672,6318,8440,10846,13824,17134,21112,25470,30592,36142,42552,49438,57280,65646,75064,85054,96192,107950 ★ Molecular topological indices of the web graphs. ● a(n) = n * (6 * n ^ 2 + 22 * n + 3 * ((- 1) ^ n + 7)). ●

► [A156841] 46,263,1538,3871,7262,11711,17218,23783,31406,40087,49826,60623,72478,85391,99362,114391,130478,147623,165826,185087,205406,226783,249218,272711,297262 ★ 529n ^ 2 - 312n + 46. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A213286] 0,1,46,367,1805,7280,25781,83916,250062,676155,1662160,3748261,7839811,15370082,28505855,50400890,85502316,139914981,221828802,342014155,514390345,756672196,1091099801,1545256472,2152979930 ★ Number of 7 - length words w over n - ary alphabet such that for every prefix z of w we have # (z,a _ i) = 0 or # (z,a _ i) >= # (z,a _ j) for all j>i and # (z,a _ i) counts the occurrences of the i - th letter in z. ● a(n) = n * (11954 - 29577 * n + 27640 * n ^ 2 - 12831 * n ^ 3 + 3234 * n ^ 4 - 420 * n ^ 5 + 24 * n ^ 6) / 24. ●

► [A224258] 46,548,3096,12467,41012,116692,296646,688533,1482310,2995516,5735542,10482777,18398930,31165238,51155680,81650727,127097568,193423162,288406876,422119879,607438872,860642144,1202096354,1657042849 ★ Number of n X 4 0..2 arrays with rows and antidiagonals unimodal and columns nondecreasing. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>11. ●

► [A223914] 46,548,3311,14123,48182,139925,359344,837243,1802306,3633256,6929795,12606425,22013660,37091549,60560840,96157525,148916916,225513812,334665727,487606559,698638490,985770317,1371450824,1883406215 ★ Number of n X 4 0..2 arrays with rows and antidiagonals unimodal and columns nondecreasing. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>10. ●

► [A224186] 46,548,3526,15779,55438,163746,424326,992607,2138488,4305730,8191976,14853709,25840868,43366252,70515252,111501861,171977322,259398184,383460946,556610879,794633026,1117333790,1549321930,2120898195 ★ Number of n X 4 0..2 arrays with rows unimodal and columns nondecreasing. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>9. ●

► [A027940] 1,46,551,3785,18955,77533,276408,895103,2708322,7811510,21791338,59419294,159571139,424302452,1121168305,2951121095,7749900701,20324325571,53259796514,139506540045,365330860180,956582678652,2504546934692,6557230277964,17167369784405 ★ a(n) = T(2 * n, n + 4), T given by A027935. ● a(n) = Fibonacci(2 * n + 9) - (21420 + 20571 * n + 9961 * n ^ 2 + 3304 * n ^ 3 + 490 * n ^ 4 + 364 * n ^ 5 - 56 * n ^ 6 + 16 * n ^ 7) / 630. ●

► [A341428] 1,46,760,7751,43910,186098,652710,1943742,5178030,12411211,27773308,57798904,114152429,214399664,387571706,673189698,1135916808,1857320784,2966816950,4623984661,7066527283,10577150039,15589368584,22580091614,32256768126 ★ Number of positive solutions to (x _ 1) ^ 2 + (x _ 2) ^ 2 + ... + (x _ 9) ^ 2 <= n ^ 2. ● a(n) is the coefficient of x ^ (n ^ 2) in expansion of (theta _ 3(x) - 1) ^ 9 / (512 * (1 - x)). ●

► [A113922] 1,46,769,5632,18688,44032,85760,147968,234752,350208,498432,683520,909568,1180672,1500928,1874432,2305280,2797568,3355392,3982848,4684032,5463040,6323968,7270912,8307968 ★ G.f.: (1 + 14 * x + x ^ 2) ^ 3 / ((1 - x)) ^ 4. ● a(n) = 256 * (n - 1) * (8 * n ^ 2 - 16 * n + 9) / 3 for n >= 3. - _ Emeric Deutsch _ , Apr 02 2006 ●

► [A156842] 46,887,2786,5743,9758,14831,20962,28151,36398,45703,56066,67487,79966,93503,108098,123751,140462,158231,177058,196943,217886,239887,262946,287063,312238 ★ 529n ^ 2 - 746n + 263. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A078427] 46,901,13501,180001,2250001,27000001,315000001,3600000001,40500000001,450000000001,4950000000001,54000000000001,585000000000001,6300000000000001,67500000000000001,720000000000000001,7650000000000000001,810000000000000000001 ★ Sum of all the decimal digits of numbers from 1 to 10 ^ n. ● a(n) = (45 * n) * 10 ^ (n - 1) + 1. ● a(n) = 21 * a(n - 1) - 120 * a(n - 2) + 100 * a(n - 3). - _ Colin Barker _ , May 23 2014 ●

► [A060561] 0,1,46,1219,15084,110085,563786,2250311,7472984,21552969,55605670,131077771,286779076,589324749,1148105154,2136122255,3818273456,6588925841,11020906014,17928333139,28446045340,44128712341,67073090106 ★ Number of ways to color vertices of a 9 - gon using <= n colors, allowing rotations and reflections. ● a(n) = (n ^ 9 + 9 * n ^ 5 + 2 * n ^ 3 + 6 * n) / 18. ● a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10), a(0)=0, a(1)=1, a(2)=46, a(3)=1219, a(4)=15084, a(5)=110085, a(6)=563786, a(7)=2250311, a(8)=7472984, a(9)=21552969. - _ Harvey P. Dale _ , Nov 23 2011 ●

► [A123830] 46,2596,194834,15834801,1395436949,128352319891,12224079725173,1193967045643245,118973723976420310 ★ Number of ways to build a contiguous building with n LEGO blocks of size 2 X 4 on top of a fixed block of the same size. ● a(n) >= 46 ^ n. ●

► [A243648] 0,0,0,0,0,46,4431,73098,587149,3125278,12712329,42731866,124522115,324628878,773900299,1714106922,3569586561,7053577342,13321444117,24185953530,42413141575,72121174766,119308962279,192546161866,303861667221 ★ Number of ways five L - tiles can be placed on an n X n square. ● a(n) = (n ^ 1

0 - 10 * n ^ 9 - 25 * n ^ 8 + 520 * n ^ 7 - 435 * n ^ 6 - 9982 * n ^ 5 + 19925 * n ^ 4 + 82740 * n ^ 3 - 215906 * n ^ 2 - 244868 * n + 728760) / 120 for n>=5, a(n) = 0 for n<5. ●

▶ [A042103] 1,1,47,48,2255,2303,108193,110496,5191009,5301505,249060239,254361744,11949700463,12204062207,573336561985,585540624192,27508205274817,28093745899009,1319820516629231,1347914262528240,63323876592928271,64671790855456511 ⋆ Denominators of continued fraction convergents to sqrt(575). ● a(n) = 48 * a(n - 2) - a(n - 4) for n > 3. - _ Vincenzo Librandi _ , Jan 14 2014 ● a(n) = Product _{ k = 1..floor((n - 1) / 2) } (46 + 4 * cos ^ 2(k * Pi / n)). ●

▶ [A309510] 1,47,59,71,2773,3337,4189,196883 ⋆ Divisors of 196883. ● a(2) * a(3) = a(5), ● a(2) * a(4) = a(6), ● a(3) * a(4) = a(7), ● a(2) * a(3) * a(4) = a(8). ●

▶ [A126980] 47,61,75,89,103,117,131,145,159,173,187,201,215,229,243,257,271,285,299,313,327,341,355,369,383 ⋆ a(n) = 14 * n + 47. ● a(n) = 2 * a(n - 1) - a(n - 2) for n > 1. ●

▶ [A044234] 47,111,175,239,303,367,376,431,495,559,623,687,751,815,879,888,943,1007,1071,1135,1199,1263,1327,1391,1400 ⋆ Numbers n such that string 5,7 occurs in the base 8 representation of n but not of n - 1. ● a(n) = 512 * (n - 7) / 9 + 376 when n == 7 mod 9; otherwise a(n) = 64 * (n - floor((n + 1) / 9) - 1) + 47. - _ Bob Selcoe _ , Apr 01 2016 ●

▶ [A114646] 1,47,117,187,257,327,397,467,537,607,677,747,817,887,957,1027,1097,1167,1237,1307,1377,1447,1517,1587,1657 ⋆ Let M(n) be the n X n matrix m(i,j)=min(i,j) for 1<=i,j<=n then a(n) is the trace of M(n) ^ (- 4). ● a(1)=1 then a(n)=70n - 93. ●

▶ [A253225] 47,132,306,742,1775,4158,9551,21591,48179,106371,232787,505683,1091603,2343699,5008403,10658835,22601747,47771667,100679699,211632147,443809811,928710675,1939603475,4043571219,8415870995 ⋆ Number of (n + 1) X (2 + 1) 0..1 arrays with every 2 X 2 subblock diagonal minimum minus antidiagonal minimum nondecreasing horizontally and diagonal maximum minus antidiagonal maximum nondecreasing vertically. ● a(n) = 19 + 377 * 2 ^ (n - 6) + 627 * 2 ^ (n - 6) * n for n>4. ●

▶ [A095311] 1,47,138,274,455,681,952,1268,1629,2035,2486,2982,3523,4109,4740,5416,6137,6903,7714,8570,9471,10417,11408,12444,13525 ⋆ 47 - gonal numbers. ● a(n + 3) = 3 * a(n + 2) - 3 * a(n + 1) - a(n); a(1) = 1, a(2) = 47, a(3) = 138. ● a(n) = (n * (45 * n - 43)) / 2. ●

▶ [A055822] 1,47,144,328,640,1131,1863,2910,4359,6311,8882,12204,16426,21715,28257,36258,45945,57567,71396,87728,106884,129211,155083,184902,219099 ⋆ a(n) = T(n, n - 5), array T as in A055818. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n > 11. ● a(n) = (480 + 524 * n - 250 * n ^ 2 - 45 * n ^ 3 + 10 * n ^ 4 + n ^ 5) / 120, for n>5, with a(5) = 1. ●

▶ [A158632] 1,47,185,415,737,1151,1657,2255,2945,3727,4601,5567,6625,7775,9017,10351,11777,13295,14905,16607,18401,20287,22265,24335,26497 ⋆ a(n) = 46 * n ^ 2 + 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A065532] 1,47,191,431,767,1199,1727,2351,3071,3887,4799,5807,6911,8111,9407,10799,12287,13871,15551,17327,19199,21167,23231,25391,27647 ⋆ a(n) = 48 * n ^ 2 - 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). (End) ●

▶ [A157362] 47,192,435,776,1215,1752,2387,3120,3951,4880,5907,7032,8255,9576,10995,12512,14127,15840,17651,19560,21567,23672,25875,28176,30575 ⋆ a(n) = 49 * n ^ 2 - 2 * n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A102090] 47,228,1511,9213,57536,356863,2217871,13775700,85579087,531616825,3302453192,20515048427,127440964999,791672146068,4917923140383,30550483740725,189781751728736,1178937572877255,7323643025265351 ⋆ Number of matchings in the C _ n X P _ 3 graph (C _ n is the cycle graph on n vertices and P _ 3 is the path graph on 3 vertices). ● a(n) = 3 * a(n - 1) + 19 * a(n - 2) + 10 * a(n - 3) - 24 * a(n - 4) - 10 * a(n - 5) + 11 * a(n - 6) + a(n - 7) - a(n - 8) with a(2)=47, a(3)=228, a(4)=1511, a(5)=9213, a(6)=57536, a(7)=356863, a(8)=2217871 and a(9)=13775700. ●

▶ [A069760] 47,287,959,2399,5039,9407,16127,25919,39599,58079,82367,113567,152879,201599,261119,332927,418607,519839,638399,776159,935087,1117247,1324799,1559999,1825199 ⋆ Frobenius number of the numerical semigroup generated by consecutive centered square numbers. ● a(n) = 4n ^ 4 + 16n ^ 3 + 20n ^ 2 + 8n - 1 ● a(1)=47,a(2)=287,a(3)=959,a(4)=2399,a(5)=5039,a(n)=5a(n - 1) - 10a(n - 2) + 10a(n - 3) - 5a(n - 4) + a(n - 5). [From Harvey P. Dale, Apr 25 2011] ●

▶ [A217119] 47,428,1721,6473,14033,35201,58961,58967,465743,530701,530710,1733741,4250788,4723108,4776398,25051529,37327196,42450640,42986860,42987589,42996409,225463817,382055767,382571822,386888308 ⋆ Greatest number (in decimal representation) with n nonprime substrings in base - 9 representation (substrings with leading zeros are considered to be nonprime). ● a(n) <= 9 ^ (n + 2). ● a(n) <= 9 ^ min(n + 2, 6 * floor((n + 7) / 8)). ● a(n) <= 9 ^ ((3 / 4) * (n + 3)). ● a(n + m + 1) >= 9 * a(n), where m := floor(log _ 9(a(n))) + 1. ●

▶ [A244880] 1,47,650,4726,23219,87677,274132,743724,1806597,4016683,8306078,16168802,29904823,52936313,90209192,148694104,238002057,371131047,565361074,843316046,1234212155,1775313397,2513615996,3507784580,4830364045 ⋆ Number of magic labelings of the cycle - of - loops graph LOOP X C _ 8 having magic sum n, where LOOP is the 1 - vertex, 1 - loop - edge graph. ● a(n) = (630 + 3051 * n + 6570 * n ^ 2 + 8211 * n ^ 3 + 6503 * n ^ 4 + 3339 * n ^ 5 + 1085 * n ^ 6 + 204 * n ^ 7 + 17 * n ^ 8) / 630. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>8. ●

▶ [A204647] 48,90,178,330,571,938,1478,2248,3317,4766,6690,9198,12415,16482,21558,27820,35465,44710,55794,68978,84547,102810,124102,148784,177245 ⋆ Number of (n + 1) X 5 0..1 arrays with column and row pair sums b(i,j)=a(i,j) + a(i,j - 1) and c(i,j)=a(i,j) + a(i - 1,j) nondecreasing in column and row directions, respectively. ● a(n) = (1920 + 9776 * n + 3480 * n ^ 2 + 540 * n ^ 3 + 90 * n ^ 4 + 4 * n ^ 5) / 480 for n>2 and even. ● a(n) = (1950 + 9776 * n + 3480 * n ^ 2 + 540 * n ^ 3 + 90 * n ^ 4 + 4 * n ^ 5) / 480 for n>2 and odd. ●

▶ [A194952] 48,126,390,1014,2982,8094,23646,66726,196086,568302,1682382,4954998,14750310,43833150,130942398,390959430,1170256854,3502513038,10495480494,31450265622,94296270918,282731526366 ⋆ Number of Hamiltonian cycles in C _ 3 X C _ n. ● a(n) = 3 ^ n + 3 / 4 * n * 2 ^ n + (2 ^ n - (- 2) ^ n) / 2 + (- 1) ^ n - 4, n>=3. ● a(n) = 5 * a(n - 1) - a(n - 2) - 25 * a(n - 3) + 26 * a(n - 4) + 20 * a(n - 5) - 24 * a(n - 6), for n>=9, with a(3)=48, a(4)=126, a(5)=390, a(6)=1014, a(7)=2982, a(8)=8094. ●

▶ [A114444] 0,48,128,240,384,560,768,1008,1280,1584,1920,2288,2688,3120,3584,4080,4608,5168,5760,6384,7040,7728,8448,9200,9984 ⋆ a(n) = 16 * n * (n + 2). ● a(n) = 16 * (2 * n + 1) + a(n - 1) (with a(0)=0). - _ Vincenzo Librandi _ , Nov 13 2010 ●

▶ [A129428] 1,48,142,283,471,706,988,1317,1693,2116,2586,3103,3667,4278,4936,5641,6393,7192,8038,8931,9871,10858,11892,12973,14101 ⋆ Centered 47 - gonal numbers. ● a(n) = 1 + (47 / 2) * n + (47 / 2) * n ^ 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). G.f.: - (x ^ 2 + 45 * x + 1) / (x - 1) ^ 3. - _ Colin Barker _ , Jul 27 2013 ●

▶ [A131683] 48,175,1680,25410,294000,2295513,12991440,57550100,211281840,669529875,1885734928,4823347830,11387316720,25126129245,52326450000,103659864168,196585724720,358766207415,632810010000,1082730294250,1802581066608,2927824829985,4650083620560 ⋆ a(n) = 4 * (n ^ 1 + 1!) * (n ^ 2 + 2!) * (n ^ 3 + 3!) * (n ^ 4 + 4!) / 4!. ● a(0)=48, a(1)=175, a(2)=1680, a(3)=25410, a(4)=294000, a(5)=2295513, a(6)=12991440, a(7)=57550100, a(8)=211281840, a(9)=669529875, a(10)=1885734928, a(n)=11 * a(n - 1) - 55 * a(n - 2) + 165 * a(n - 3) - 330 * a(n - 4) + 462 * a(n - 5) - 462 * a(n - 6) + 330 * a(n - 7) - 165 * a(n - 8) + 55 * a(n - 9) - 11 * a(n - 10) + a(n - 11). - _ Harvey P. Dale _ , Mar 23 2015 ●

▶ [A005911] 1,48,186,416,738,1152,1658,2256,2946,3728,4602,5568,6626,7776,9018,10352,11778,13296,14906,16608,18402,20288,22266,24336,26498 ⋆ Number of points on surface of truncated cube: 46n ^ 2 + 2. ● a(0)=1, a(1)=48, a(2)=186, a(3)=416, a(n)=3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Aug 19 2014 ●

▶ [A130566] 1,48,186,460,915,1596,2548,3816,5445,7480,9966,12948,16471,20580,25320,30736,36873,43776,51490,60060,69531,79948,91356,103800,117325 ⋆ Pyramidal 47 - gonal numbers. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Vincenzo Librandi _ , Jun 29 2012 ●

▶ [A157923] 48,194,438,780,1220,1758,2394,3128,3960,4890,5918,7044,8268,9590,11010,12528,14144,15858,17670,19580,21588,23694,25898,28200,30600 ⋆ a(n) = 49 * n ^ 2 - n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Feb 05 2012 ●

▶ [A296367] 0,48,200,516,1056,1884,3052,4628,6668,9232,12380,16176,20672,25936,32024,38996,46912,55836,65820,76932,89228,102768,117612,133824,151456 ⋆ Number of triangles on a 4 X n grid. ● a(n) = 2 * n * (n - 1) * (5 * n + 2) - 4 * floor((n - 1) ^ 2 / 4) - 4 * floor((n - 1) * (n - 2) / 6). ● a(n) = 2 * a(n - 1) - a(n - 3) - a(n - 4) + 2 * a(n - 6) - a(n - 7) for n>7. - _ Colin Barker _ , Dec 26 2017 ●

▶ [A100146] 1,48,221,600,1265,2296,3773,5776,8385,11680,15741,20648,26481,33320,41245,50336,60673,72336,85405,99960,116081,133848,153341,174640,197825 ⋆ Structured great rhombicuboctahedral numbers. ● a(n) = (1 / 6) * (80 * n ^ 3 - 102 * n ^ 2 + 28 * n). ● a(n) = ((n - 1) + 1) * (5 * (n - 1) + 3) * (8 * (n - 1) + 1) / 3; g.f.: x * (1 + 44 * x + 35 * x ^ 2) / (1 - x) ^ 4. - _ Jaume Oliver Lafont _ , Sep 08 2009 ●

▶ [A157913] 48,240,560,1008,1584,2288,3120,4080,5168,6384,7728,9200,10800,12528,14384,16368,18480,20720,23088,25584,28208,30960,33840,36848,39984 ⋆ a(n) = 64 * n ^ 2 - 16. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). (End) ●

▶ [A181773] 0,48,240,672,1440,2640,4368,6720,9792,13680,18480,24288,31200,39312,48720,59520,71808,85680,101232,118560,137760,158928,182160,207552,235200 ⋆ Molecular topological indices of the cocktail party graphs. ● a(n) = 8 * (n - 1) * n * (2n - 1). ●

▶ [A052683] 0,0,0,0,48,240,1440,10080,80640,725760,7257600,79833600,958003200,12454041600,174356582400,2615348736000,41845579776000,711374856192000,12804747411456000,243290200817664000 ⋆ Expansion of e.g.f. 2 * x ^ 4 / (1 - x). ● a(n) = 2 * n!, n>3. ●

▶ [A115056] 0,0,0,48,264,840,2040,4200,7728,13104,20880,31680,46200,65208,89544,120120,157920,204000,259488,325584,403560,494760,600600,722568,862224 ⋆ a(n) = n * (n ^ 2 - 1) * (3 * n + 2). ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ●

▶ [A281234] 0,48,288,1680,9792,57072,332640,1938768,11299968,65861040,383866272,2237336592,13040153280,76003583088,442981345248,2581884488400,15048325585152,87708069022512,511200088549920,2979492462277008,17365754685112128,101215035648395760 ⋆ Solutions y to the negative Pell equation y ^ 2 = 72 * x ^ 2 - 288 with x,y >= 0. ● a(n) = 6 * a(n - 1) - a(n - 2) for n>2. ● a(n) = 6 * sqrt(2) * (- (3 - 2 * sqrt(2)) ^ n * (3 + 2 * sqrt(2)) + (3 - 2 * sqrt(2)) * (3 + 2 * sqrt(2)) ^ n). ●

▶ [A187164] 0,48,342,1056,2370,4464,7518,11712,17226,24240,32934,43488,56082,70896,88110,107904,130458,155952,184566,216480,251874,290928,333822,380736,431850 ⋆ Number of 3 - step self - avoiding walks on an n X n X n cube summed over all starting positions. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>5. ●

▶ [A019558] 1,48,384,1392,3456,6960,12288,19824,29952,43056,59520,79728,104064,132912,166656,205680,250368,301104,358272,422256,493440,572208,658944,754032,857856 ⋆ Coordination sequence for F _ 4 lattice. ● a(n) = 16 * n * (2 - 3 * n + 4 * n ^ 2), n >= 1; ●

▶ [A172201] 0,0,0,0,48,424,1976,6616,17852,41544,86660,166288,298616,508200,827168,1296744,1968676,2907016,4189772,5910944,8182400,11136168,14926536,19732600,25760588 ⋆ Number of ways to place 3 nonattacking amazons (superqueens) on an n X n board. ● a(n) = (1 / 24) * (4 * n ^ 6 - 40 * n ^ 5 + 62 * n ^ 4 + 628 * n ^ 3 - 2904 * n ^ 2 + 4074 * n - 1341 + 3 * (- 1) ^ n * (2 * n - 1)) - 20 * [n=1] - 8 * [n=2] + 4 * [n=3]. - _ G. C. Greubel _ , Apr 29 2022 ●

▶ [A192828] 48,440,2008,6468,16736,37248,74280,136268,234128,381576,595448,896020,1307328,1857488,2579016,3509148,4690160,6169688,8001048,10243556,129

62848,16231200,20127848,24739308,30159696 ⋆ Molecular topological indices of the n X n grid graphs ● a(n) = 2 * (2 + n) * (6 - 24 * n + 25 * n ^ 2 - 13 * n ^ 3 + 4 * n ^ 4) / 3. ●

▶ [A229505] 0,48,480,4032,31104,228096,1617408,11197440,76142592,510603264,3386105856,22251552768,145118822400,940369969152,6060162023424,38868625391616,248257671856128,1579821548175360,10020582391283712 ⋆ Number of defective 3 - colorings of an n X 3 0..2 array connected diagonally and antidiagonally with exactly one mistake, and colors introduced in row - major 0..2 order. ● a(n) = 2 ^ (2 + n) * 3 ^ (n - 2) * (2 * n - 1) for n>1. ●

▶ [A168351] 0,1,48,486,2560,9375,27216,67228,147456,295245,550000,966306,1617408,2599051,4033680,6075000,8912896,12778713,17950896,24760990,33600000,44925111,59266768,77236116,99532800 ⋆ a(n) = n ^ 5 * (n + 1) / 2. ● a(n) = Sum _{ i=1..n } Sum _{ j=1..n } Sum _{ k=1..n } Sum _{ l=1..n } Sum _{ m=1..n } (i + j + k - l - m). - _ Wesley Ivan Hurt _ , Aug 13 2015 ●

▶ [A245953] 48,545,2304,7769,18384,39721,73728,130193,211440,332561,496128,723625,1017744,1407449,1895424,2519201,3281328,4228993,5364480,6745721,8374608,10320905,12585984,15252529,18321264 ⋆ Number of length 3 + 3 0..n arrays with some pair in every consecutive four terms totalling exactly n. ● a(n) = 1 + 26 * n - 17 * n ^ 2 + 24 * n ^ 3 + 21 * n ^ 4 + n ^ 5 for n even. ● a(n) = 39 - n - 36 * n ^ 2 + 24 * n ^ 3 + 21 * n ^ 4 + n ^ 5 for n odd. ●

▶ [A192832] 0,48,576,2880,9600,25200,56448,112896,207360,356400,580800,906048,1362816,1987440,2822400,3916800,5326848,7116336,9357120,12129600,15523200,19636848,24579456,30470400,37440000 ⋆ Molecular topological indices of the lattice graphs. ● a(n) = 4 * n ^ 2 * (n + 1) * (n - 1) ^ 2. ●

▶ [A352847] 0,0,48,576,3840,19200,80640,301056,1032192,3317760,10137600,29736960,84344832,232587264,626196480,1651507200,4278190080,10909384704,27433893888,68136468480,167352729600,406931374080,980510834688,2343038877696,5556613939200 ⋆ Number of copies of the star graph S(2,1,1) contained within the n - dimensional hypercube graph. ● a(n) = 2 ^ n * binomial(n,2) * (n - 1) * (n - 2). ●

▶ [A151624] 0,1,48,603,5158,37257,247236,1568215,9703890,59226357,358722928,2163496611,13017647646,78225458401,469740168924,2819689366191,16922139539626,101545622110989,609314411814024,3656015481903355,21936500845191030,131620291694585721 ⋆ Number of permutations of 2 indistinguishable copies of 1..n with exactly 2 adjacent element pairs in decreasing order. ● a(n) = 6 ^ n - (2 * n + 1) * 3 ^ n + n * (2 * n + 1). - _ Andrew Howroyd _ , May 06 2020 ● a(n) = 15 * a(n - 1) - 84 * a(n - 2) + 226 * a(n - 3) - 309 * a(n - 4) + 207 * a(n - 5) - 54 * a(n - 6) for n>6. ●

▶ [A187611] 0,0,0,0,48,616,2936,8530,17611,32086,51955,76258,105978,140386,179482,223266,271738,324898,382746,445282,512506,584418,661018,742306,828282 ⋆ Number of 7 - step one space for components leftwards or up, two space for components rightwards or down asymmetric quasi - bishop's tours (antidiagonal moves become knight moves) on an n X n board summed over all starting positions. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>14. ●

▶ [A136038] 0,0,48,648,3840,15000,45360,115248,258048,524880,990000,1756920,2965248,4798248,7491120,11340000,16711680,24054048,33907248,46915560,63840000,85571640,113145648,147756048,190771200 ⋆ a(n) = n ^ 6 - n ^ 4. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). ●

▶ [A132464] 0,0,0,0,0,1,48,735,6272,37044,169344,640332,2090880,6073353,16032016,39078039,89037312,191456720,391523328,766192176,1442244096,2622518073,4623197040,7925786407,13248326784 ⋆ Let df(n,k) = Product _{ i=0..k - 1 } (n - i) be the descending factorial and let P(m,n) = df(n - 1,m - 1) ^ 2 * (2 * n - m) / ((m - 1)! * m!). Sequence gives P(6,n). ● a(n) = (n - 5) ^ 2 * (n - 4) ^ 2 * (n - 3) ^ 2 * (n - 2) ^ 2 * (n - 1) ^ 2 * (2 * n - 6) / 86400. ●

▶ [A192839] 0,48,768,4320,15360,42000,96768,197568,368640,641520,1056000,1661088,2515968,3690960,5268480,7344000,10027008,13441968,17729280,23046240,29568000,37488528,47021568,58401600,71884800 ⋆ Molecular topological indices of the square graphs. ● a(n) = 8 * n * (n + 1) * (n - 1) ^ 3. ●

▶ [A241873] 1,48,822,9305,83590,647891,4537169,29532566,182034751,1076357002,6162251432,34394051095,188121970788,1012370499109,5376927101387,28254655805724,147182871736245,761235618312420,3914066453608570,20027841005048805,102071452026321906 ⋆ Number of ascent sequences of length n with exactly three descents. ● a(n) = 3 * 5 ^ (n - 1) / 8 - 4 ^ (n - 1) * n / 3 + 3 ^ (n - 2) * (6 * n ^ 2 - 2 * n - 7) / 16 - 2 ^ (n - 5) * (n - 2) * (n - 1) * (n + 3) / 3 - n / 24 + 1 / 16. - _ Vaclav Kotesovec _ , May 03 2014 ●

▶ [A089903] 0,1,48,960,14572,195684,2456796,29567908,345679020,3956790132,44567901244,495679012356,5456790123468,59567901234580,645679012345692,6956790123456804,74567901234567916,795679012345679028 ⋆ Sum of digits of numbers between 0 and (1 / 9) * (10 ^ n - 1). ● a(n) = s(1, n - 1) where s(a, k)=a * (k + 1) + a ^ 2 * sum(i=0, k, i * 10 ^ (k - i)) + sum(i=0, k, 5 * a * (9 * (k - i) + a - 1) * 10 ^ (k - i - 1)). ● a(n) = (- 88 * (- 1 + 10 ^ n) + 9 * (16 + 9 * 10 ^ n) * n) / 162. G.f.: x * (45 * x ^ 2 + 26 * x + 1) / ((x - 1) ^ 2 * (10 * x - 1) ^ 2). - _ Colin Barker _ , Jun 14 2013 ●

▶ [A292045] 0,48,972,7680,37500,136080,403368,1032192,2361960,4950000,9663060,17791488,31188612,52437840,85050000,133693440,204459408,305165232,445697820,638400000,898502220,1244602128,1699194552,2289254400,3046875000 ⋆ Wiener index of the n X n X n grid graph. ● a(n) = (n - 1) * (n + 1) * n ^ 5 / 2. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8). ●

▶ [A000156] 1,48,1104,16192,170064,1362336,8662720,44981376,195082320,721175536,2319457632,6631997376,17231109824,41469483552,93703589760,200343312768,407488018512,793229226336,1487286966928,2697825744960,4744779429216 ⋆ Number of ways of writing n as a sum of 24 squares. ● a(n) = (2 ^ 4 * (sigma _{ 11 } (n) - 2 * sigma _{ 11 } (n / 2) + 2 ^{ 12 }* sigma _{ 11 } (n / 4)) - 2 ^ 7 * 259 * (- 1) ^ n * tau(n) - 2 ^ 16 * tau(n / 2)) / 691, n >= 1. ●

▶ [A287991] 1,48,1128,17344,196836,1764192,13051008,82244736,452197434,2210431056,9753024192,39328459968,146436844568,507826976160,1652238451200,5074887938688,14794635174459,41126600601168,109456398969568,279899944411776,689873759134308 ⋆ Expansion of Jacobi theta constant (theta _ 2 / 2) ^ 48. ● a(n) = 1 / 3110400 * Sum _{ a, b, c, x, y, z > 0, a * x + b * y + c * z = n + 6 , x == y == z == 1 mod 2 and a > b > c } (a * b * c) ^ 3 * ((a ^ 2 - b ^ 2) * (a ^ 2 - c ^ 2) * (b ^ 2 - c ^ 2)) ^ 2. ●

▶ [A035797] 1,48,1152,18448,221952,2141808,17282432,120037968,733189632,4003707568,19804348032,89694733968,375299336448,1461956877552,5337746984832,18374985313488,59954658388992,186275979152688,553339789891712,1577125278862608,4326312626433792 ⋆ Coordination sequence for lattice D *_ 24 (with edges defined by l _ 1 norm = 1). ● a(m) = (Sum _{ k=0..n } 2 ^ k * binomial(n, k) * binomial(m - 1, k - 1)) + 2 ^ n * binomial((n + 2 * m) / 2 - 1, n - 1); with n=24. ●

▶ [A344401] 48,1176,14760,138840,1102080,7814016,51104592,314542800,1846484640,10435991280,57176069808,305224906896,1593937712640,8168132011200,41177443370400,204627619798560,1004073535314720,4871589672747600,23398711748319600,111369179635837200 ⋆ a(n) = [x ^ n] 24 * (- 40 * x ^ 4 + 49 * x ^ 3 - 15 * x ^ 2 + 13 * x + 2) / (1 - 4 * x) ^ (9 / 2). ● a(n) = 6 * (3 * n + 4) * (2 * n ^ 3 + 9 * n ^ 2 + 13 * n + 4) * binomial(2 * n - 1, n) for n>=1. - _ John Keith _ , May 28 2021 ●

▶ [A076003] 1,48,1600,46080,1232896,31653888,792985600,19566428160,478167433216,11613323132928,280917704704000,6777200695050240,163215697915150336,3926183399462535168,94372512377130188800 ⋆ Third column of triangle A07550 3. ● a(n) = (8 ^ n - 8 * 16 ^ n + 9 * 24 ^ n) / 2. ●

▶ [A042199] 1,1,49,50,2449,2499,122401,124900,6117601,6242501,305757649,312000150,15281764849,15593764999,763782484801,779376249800,38173842475201,38953218725001,1907928341275249,1946881560000250,95358243221287249,97305124781287499 ⋆ Denominators of continued fraction convergents to sqrt(624). ● a(n) = Product _{ k = 1..floor((n - 1) / 2) } (48 + 4 * cos ^ 2(k * Pi / n)). ●

▶ [A184033] 49,61,82,124,202,358,658,1258,2434,4786,9442,18754,37282,74338,148258,296098,591394,1181986,2362402,4723234,9443362,18883618,37761058,75515938,151019554 ⋆ 1 / 16 the number of (n + 1) X 4 0..3 arrays with all 2 X 2 sub blocks having the same four values. ● a(n) = 9 * 2 ^ (n / 2 - 1) + 9 * 2 ^ (n - 1) + 34 for n even. ● a(n) = 9 * 2 ^ (n - 1) + 3 * 2 ^ ((n + 1) / 2) + 34 for n odd. ●

▶ [A137558] 49,69,109,149,229,269,349,389,469,589,629,749,829,869,949,1069,1189,1229,1349,1429,1469,1589,1669,1789,1949 ⋆ A137521(n) / 5. ● a(n) = 20p + 9, where p is the n - th prime. - _ Charles R Greathouse IV _ , Aug 25 2014 ●

▶ [A131601] 49,97,145,2497,7153,14113,133969,477313,1154737,7585249,30496273,85923649,450015601,1913836705,6038171857,27638920705,119503082545,409335331681,1736003525521,7472151487681,27120247408369,110448416633377,469111688042065,1770883563643777 ⋆ The number of different configurations of an n - block of a shift space with k symbols where each symbol but the first must appear isolated and separated from others by an block of length at least m made of first symbol. Here k=49 and m=2. ● a(n) = a(n - 1) + (k - 1) * a(n - m - 1), where k=49, m=2, n>=4, with a(1) = 49, a(2) = 97, a(3) = 145. ●

▶ [A227863] 1,49,121,169,241,289,361,409,481,529,601,649,721,769,841,889,961,1009,1081,1129,1201,1249,1321,1369,1441 ⋆ Numbers congruent to { 1,49 } mod 120. ● a(n) = 60 * n - 6 * (- 1) ^ n - 65. [_ Bruno Berselli _ , Nov 04 2013] ●

▶ [A202331] 49,129,289,576,1052,1796,2906,4501,6723,9739,13743,18958,25638,34070,44576,57515,73285,92325,115117,142188,174112,211512,255062,305489,363575 ⋆ Number of (n + 1) X 5 binary arrays with consecutive windows of two bits considered as a binary number nondecreasing in every row and column. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. ●

▶ [A304171] 49,136,310,658,1354,2746,5530,11098,22234,44506,89050,178138,356314,712666,1425370,2850778,5701594,11403226,22806490,45613018,91226074,182452186,364904410,729808858,1459617754 ⋆ a(n) = 87 * 2 ^ n - 38 (n>=0). ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>1. ●

▶ [A098442] 1,1,49,145,3745,17761,329041,2057329,31209025,232680385,3110464369,26033283409,320766732001,2899777798945,33888636756625,322631662569265,3643305557364865,35919365323430785,396728681192463025 ⋆ Expansion of 1 / sqrt(1 - 2x - 95x ^ 2). ● a(n) = sum { k=0..floor(n / 2), binomial(n - k, k)binomial(n, k)24 ^ k } . ●

▶ [A027469] 49,147,294,490,735,1029,1372,1764,2205,2695,3234,3822,4459,5145,5880,6664,7497,8379,9310,10290,11319,12397,13524,14700,15925 ⋆ a(n) = 49 * (n - 1) * (n - 2) / 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3); a(3)=49, a(4)=147, a(5)=294. - _ Harvey P. Dale _ , Aug 24 2011 ●

▶ [A216870] 49,169,289,409,529 ⋆ A maximal length five arithmetic progression of squares in a quadratic number field. ● a(n + 1) - a(n) = 120 for n = 1, 2, 3, 4. ●

▶ [A016922] 1,49,169,361,625,961,1369,1849,2401,3025,3721,4489,5329,6241,7225,8281,9409,10609,11881,13225,14641,16129,17689,19321,21025 ⋆ a(n) = (6 * n + 1) ^ 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Wesley Ivan Hurt _ , Oct 13 2014 ●

▶ [A158638] 1,49,193,433,769,1201,1729,2353,3073,3889,4801,5809,6913,8113,9409,10801,12289,13873,15553,17329,19201,21169,23233,25393,27649 ⋆ a(n) = 48 * n ^ 2 + 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A351663] 49,196,343,441,784,1225,1764,2401,2744,3136,3969,4900,5929,7056,8281,9261,9604,11025,12544,14161,15876,16807,17689,19600,21609 ⋆ Perfect powers that are divisible by 7. ● a(n) has the form (7 * m) ^ k for some m > 0 and k > 1. ●

▶ [A157919] 49,199,449,799,1249,1799,2449,3199,4049,4999,6049,7199,8449,9799,11249,12799,14449,16199,18049,19999,22049,24199,26449,28799,31249 ⋆ a(n) = 50 * n ^ 2 - 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). (End) ●

▶ [A266799] 1,1,49,229,1861,12001,84241,572209,3935569,26939221,184737301,1265964481,8677687969,59476087009,407659540081,2794128600901,19151272325221,131264694791329,899701808208049,6166647394567441,42266831441062801,289701168799073461 ⋆ Coefficient of x ^ 0 in the minimal polynomial of the continued fraction [1 ^ n,sqrt(3),1,1,...], where 1 ^ n means n ones. ● a(n) = 5 * a(n - 1) + 15 * a(n - 2) - 15 * a(n - 3) - 5 * a(n - 4) + a(n - 5) . ●

▶ [A373707] 1,1,1,1,49,241,721,6721,124321,913249,4243681,94818241,1640604241,14642181841,131026944049,3669304504321,62536989802561,627395160826561,1

0818406189690561,308036857749752449,5219006583104930161,651462357142841 17681 ⋆ Expansion of e.g.f. exp(x * (1 + x ^ 3) ^ 2). • a(n) = n! * Sum _{ k= 0..floor(2 * n / 7) } binomial(2 * n - 6 * k,k) / (n - 3 * k)!. • a(n) == 1 (mod 4 8). • a(n) = a(n - 1) + 8 * (n - 1) * (n - 2) * (n - 3) * a(n - 4) + 7 * (n - 1) * (n - 2) * (n - 3) * (n - 4) * (n - 5) * (n - 6) * a(n - 7). •

► [A373680] 1,1,1,1,49,241,721,16801,204961,1276129,19968481,417479041,45225 97201,62399971921,1685741065009,28122880050721,415551065616961,120857529 36331201,281057646411506881,4923299166925874689,1430048000730253269 61,42 447971861485502104 81 ⋆ Expansion of e.g.f. exp(x / (1 - x ^ 3) ^ 2). • a(n) = n ! * Sum _{ k=0..floor(n / 3) } binomial(2 * n - 5 * k - 1,k) / (n - 3 * k)!. • a(n) == 1 (mod 48). •

► [A322675] 0,49,242,675,1444,2645,4374,6727,9800,13689,18490,24299,31212,39 325,48734,59535,71824,85697,101250,118579,137780,158949,182182,207575,23522 4 ⋆ a(n) = n * (4 * n + 3) ^ 2. • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>3. •

► [A017246] 49,256,625,1156,1849,2704,3721,4900,6241,7744,9409,11236,13225,1 5376,17689,20164,22801,25600,28561,31684,34969,38416,42025,45796,49729 ⋆ a(n) = (9 * n + 7) ^ 2. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3); a(0)=49, a(1) =256, a(2)=625. - _ Harvey P. Dale _ , Apr 24 2016 •

► [A239607] 1,1,49,289,961,2401,5041,9409,16129,25921,39601,58081,82369,1135 69,152881,201601,261121,332929,418609,519841,638401,776161,935089,1117249,1 324801 ⋆ a(n) = (1 - 2 * n ^ 2) ^ 2. • a(n) = sin(arcsin(n) - arccos(n)) ^ 2. G.f. : - (x ^ 4 + 44 * x ^ 3 + 54 * x ^ 2 - 4 * x + 1) / (x - 1) ^ 5. - _ Colin Barker _ , May 24 2014 •

► [A245033] 49,320,729,1300,2057,3024,4225,5684,7425,9472,11849,14580,1768 9,21200,25137,29524,34385,39744,45625,52052,59049,66640,74849,83700,93217 ⋆ 4 * (n + 7) ^ 3 - 27 * (n + 7) ^ 2 = (4 * n + 1) * (n + 7) ^ 2. • a(n) = 4 * (n + 7) ^ 3 - 27 * (n + 7) ^ 2. • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a (n - 4), n >= 4, with inputs a(0), ..., a(3). •

► [A365206] 1,49,337,1249,3361,7441,14449,25537,42049,65521,97681,140449,195 937,266449,354481,462721,594049,751537,938449,1158241,1414561,1711249,2052 337,2442049,2884801 ⋆ Centered octachoral numbers. • a(n) = 8 * n ^ 4 - 16 * n ^ 3 + 16 * n ^ 2 - 8n + 1. •

► [A017606] 49,361,961,1849,3025,4489,6241,8281,10609,13225,16129,19321,2280 1,26569,30625,34969,39601,44521,49729,55225,61009,67081,73441,80089,87025 ⋆ a(n) = (12 * n + 7) ^ 2. • a(n) = a(n - 1) + 288 * n + 24, n >= 1. - _ Vincen zo Librandi _ , Mar 20 2011 •

► [A206248] 49,361,1600,9409,47089,258064,1343281,7198489,37945600,2018956 81,1068570721,5672499856,30061664689,159465247561,845443470400,4483691905 729,23774527583569,126075439502224,668536407557041 ⋆ Number of (n + 1) X 2 0..3 arrays with every 2 X 2 subblock having zero permanent. • a(n) = 2 ^ (- n) * ((- 1) ^ n * 2 ^ (1 + n) * 3 ^ (3 + n) + (77 - 20 * sqrt(13)) * (7 - sqrt(13)) ^ n + (7 + sqrt(13)) ^ n * (77 + 20 * sqrt(13))) / 13. •

► [A168572] 0,49,392,2793,19600,137249,960792,6725593,47079200,329554449,23 06881192,16148168393,113037178800,791260251649,5538821761592,38771752331 193,271402266318400,1899815864228849,13298711049601992,93090977347213993 ⋆ a(n) = Sum _{ k=2..n } (7 ^ k). • a(n) = 7 ^ n + a(n - 1), with a(1)=0. • a (n) = 7 * (7 ^ n - 7) / 6. • a(n) = 8 * a(n - 1) - 7 * a(n - 2). - _ G. C. Greubel _ , Jul 26 2016 •

► [A250082] 49,444,2086,6835,17871,40054,80284,147861,254845,416416,651234,9 81799,1434811,2041530,2838136,3866089,5172489,6810436,8839390,11325531,143 42119,17969854,22297236,27420925,33446101 ⋆ Number of length 1 + 5 0..n arr ays with every six consecutive terms having the maximum of some two terms e qual to the minimum of the remaining four terms. • a(n) = 6 * a(n - 1) - 15 * a (n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. •

► [A030510] 49,490,2704,10847,35346,99196,248491,568993,1211033,2425515,461 4394,8399563,14714789,24926034,40986248,65631574,102626730,157068288,23575 5520,347639496,504362220,720898682,1016315904 ⋆ Graham - Sloane - type low er bound on the size of a ternary (n,3,10) constant - weight code. • a(n) = ceili ng(binomial(n, w) * 2 ^ w / (2 * n + 1)) with w=10. •

► [A175775] 49,679,6979,69979,699979,6999979,69999979,699999979,699999997 9,69999999979,699999999979,6999999999979,69999999999979,699999999999979,6 99999999999979,6999999999999979,69999999999999979 ⋆ 7 * (10 ^ n - 3). • a(1)=49, a(2)=679, a(n)=11 * a(n - 1) - 10 * a(n - 2). - _ Harvey P. Dale _ , J un 21 2011 •

► [A289992] 1,49,746,6122,34067,144963,506772,1524628,4074949,9898229,22220 990,46695870,92769495,175610631,318756136,557659432,944355593,1553488697,2 489980818,3898657938,5976186139,8985711691,13274641084,19296041660,276341 90285 ⋆ Number of magic labelings of the prism graph I X C _ 8 having magic sum n. • a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10) for n>9. •

► [A110906] 1,49,841,11881,165649,2307361,32137561,447618649,6234523681,868 35713041,1209465459049,16845680713801,234630064534321,3267975222766849,4 5517023054201721,633970347536057401 ⋆ Expansion of (1 + 34 * x + 121 * x ^ 2) / ((1 - x) * (x ^ 2 - 14 * x + 1)). • a(n) = - 13 + (7 - 4 * sqrt(3)) ^ n * (7 + (3 * sqrt(3)) / 2) + (7 - (3 * sqrt(3)) / 2) * (7 + 4 * sqrt(3)) ^ n. • a(n) = 15 * a(n - 1) - 15 * a(n - 2) + a(n - 3) for n>2. •

► [A173246] 1,49,1175,18375,210700,1888460,13771940,83993700,436994250,196 8555050,7766844470,27081460630,84045912300,233460867500,582985137700,1312 983918820,2672860120455,4923689695575,8206149492625,12352414499425 ⋆ Exp ansion of (1 + x) ^ 50 * (1 - x) / (1 - x ^ 51). • a(n) = (- 1) * Sum _{ j=1..50 } a(n - j) for n > 50. • a(n) = Sum _{ j=0..51 * n } (binomial(50, n - 51 * j) - binomial(50, n - 51 * j - 1)), n > 0. (End) •

► [A036226] 1,49,1372,28812,504210,7764834,108707676,1413199788,1731169740 3,201969803035,2262061793992,24471395771368,256949655599364,262879263036 2724,26287926303627240,257621677775546952 ⋆ Expansion of 1 / (1 - 7 * x) ^ 7. • a(n) = 7 ^ n * binomial(n + 6, 6). • a(n) = 49 * a(n - 1) - 1029 * a(n - 2) + 1 2005 * a(n - 3) - 84035 * a(n - 4) + 352947 * a(n - 5) - 823543 * a(n - 6) + 8235 43 * a(n - 7), a(0)=1, a(1)=49, a(2)=1372, a(3)=28812, a(4)=504210, a(5)=7764 834, a(6)=108707676. - _ Harvey P. Dale _ , Feb 21 2013 •

► [A245036] 49,2057,4225,11849,17689,34385,74849,93217,165649,230297,26810 5,355649,519665,727529,807457,1081849,1295537,1412185,1803649,2101145,2606 009,3396649,3845777,4084465,4591049 ⋆ a(n) = 4 * prime(n) ^ 3 - 27 * prime(n) ^ 2 = (prime(n) ^ 2) * [4 * prime(n) - 27], n >= 4. • a(n) = 4 * [prime(n)] ^ 3 - 27 * prime(n) ^ 2 = (prime(n) ^ 2) * [4 * prime(n) - 27], n >= 4. •

► [A014773] 1,49,3025,6561,35721,55225,162409,219961,485809,613089,1147041,1 385329,2325625,2725801,4239481,4862025,7144929,8059921,11336689,12623809,1 7147881,18896409,24950025,27258841,35153041 ⋆ Squares of odd heptagonal nu mbers. • a(n) = 1 / 2 * (200 * n ^ 4 - 920 * n ^ 3 + 1578 * n ^ 2 - 1196 * n + 3 38) for n even. • a(n) = 1 / 2 * (200 * n ^ 4 - 520 * n ^ 3 + 498 * n ^ 2 - 208 * n + 32) for n odd. •

► [A109552] 50,63,83,113,163,254,452,1019,4076 ⋆ a(n) = floor(4076 / (10 - n) ^ 2). • a(n) = floor(4076 / (10 - n) ^ 2). •

► [A206263] 50,64,135,260,471,800,1296,2010,3012,4376,6197,8576,11637,15512,2 0358,26342,33658,42512,53139,65788,80739,98288,118764,142514,169920 ⋆ Numb er of (n + 1) X 5 0..1 arrays with the number of rightwards and downwards edg e increases in each 2 X 2 subblock equal to the number in all its horizontal and vertical neighbors. • a(n) = (1680 + 1044 * n + 580 * n ^ 2 + 155 * n ^ 3 + 20 * n ^ 4 + n ^ 5) / 120 for n>1 and even. • a(n) = (1800 + 1044 * n + 580 * n ^ 2 + 155 * n ^ 3 + 20 * n ^ 4 + n ^ 5) / 120 for n>1 and odd. •

► [A158066] 50,99,148,197,246,295,344,393,442,491,540,589,638,687,736,785,83 4,883,932,981,1030,1079,1128,1177,1226 ⋆ a(n) = 49 * n + 1. • a(n) = 2 * a(n - 1) - a(n - 2). - _ Vincenzo Librandi _ , Feb 11 2012 •

► [A304840] 50,102,154,206,258,310,362,414,466,518,570,622,674,726,778,830,88 2,934,986,1038,1090,1142,1194,1246,1298 ⋆ a(n) = 52 * n - 2 (n>=1). • a(n) = 2 * a(n - 1) - a(n - 2) for n>2. •

► [A261343] 0,1,50,147,292,485,726,1015,1352,1737,2170,2651,3180,3757,4382,50 55,5776,6545,7362,8227,9140,10101,11110,12167,13272 ⋆ 50 - gonal numbers: a(n) = 48 * n * (n - 1) / 2 + n. • a(n) = n * (24 * n - 23). • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Aug 17 2015 •

► [A165676] 50,154,342,638,1066,1650,2414,3382,4578,6026,7750,9774,12122,148 18,17886,21350,25234,29562,34358,39646,45450,51794,58702,66198,74306 ⋆ Four th right hand column of triangle A165674 • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) • a(n) = 6 + 22 * n + 18 * n ^ 2 + 4 * n ^ 3 •

► [A048511] 1,50,163,421,1005,2317,5245,11741,26077,57565,126429,276445,602 077,1306589,2826205,6094813,13107165,28114909,60162013,128450525,27367830 1,581959645,1235222493,2617245661,5536481245 ⋆ a(n) = T(6,n), array T given by A048505. • a(n) = (n + 9) * (n + 16) * 2 ^ (n - 2) - 35. - _ Ralf Stephan _ , Feb 05 2004 • a(n) = 7 * a(n - 1) - 18 * a(n - 2) + 20 * a(n - 3) - 8 * a(n - 4). - _ Colin Barker _ , Feb 25 2015 •

► [A349808] 1,50,190,400,680,1030,1450,1940,2500,3130,3830,4600,5440,6350,733 0,8380,9500,10690,11950,13280,14680,16150,17690,19300,20980 ⋆ Number of cell s in a regular 7 - gon after n generations of mitosis. • a(0)=1; for n>=1, a(n) = 35 * k ^ 2 + 35 * k - 20. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n >= 4, with a(0) = 1, a(1) = 50, a(2) = 190, a(3) = 400. •

► [A173141] 50,198,444,788,1230,1770,2408,3144,3978,4910,5940,7068,8294,961 8,11040,12560,14178,15894,17708,19620,21630,23738,25944,28248,30650 ⋆ a(n) = 49 * n ^ 2 + n. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Lib randi _ , Feb 10 2012 •

► [A231087] 50,224,1058,5054,24200,115934,555458,2661344,12751250,6109489 4,292723208,1402521134,6719882450,32196891104,154264573058,739125974174,3 541365297800,16967700514814,81297137276258,389517985866464,1866292792056 050,8941945974413774,42843437080012808,205275239425650254 ⋆ Number of pe rfect matchings in graph C _ 3 x C _{ 2n } • a(n) = 2 * (((sqrt(7) + sqrt(3)) / 2) ^ n + ((sqrt(7) - sqrt(3)) / 2) ^ n) ^ 2. • a(n) = sqrt(Product _{ j=1..n } Product _{ k=1..3 } (4 * sin((2 * j - 1) * Pi / (2 * n)) ^ 2 + 4 * sin((2 * k - 1) * Pi / 3) ^ 2)). • a(n) = 5 * a(n - 1) - a(n - 2) - 12. (End) •

► [A172519] 0,0,0,0,50,288,2450,16384,62208,233600,638880,1755072,3901534,87 72176,17051850,33507328,59175640,105557904,173570244,287904000,447885774,7 02042000,1044894554,1565385984,2247132500 ⋆ Number of ways to place 4 nona ttacking queens on an n X n toroidal board. • a(n) = (n ^ 8 / 24 - n ^ 7 + 245n ^ 6 / 24 - 113n ^ 5 / 2 + 2843n ^ 4 / 16 - 593n ^ 3 / 2 + 4757n ^ 2 / 24) + (n ^ 6 / 8 - 5n ^ 5 / 2 + 305n ^ 4 / 16 - 129n ^ 3 / 2 + 629n ^ 2 / 8) * (- 1) ^ n + 8n ^ 2 * cos(2 * Pi * n / 3) / 3 + 9n ^ 2 * cos(Pi * n / 2) / 2. •

► [A183690] 50,314,1970,12362,77570,486746,3054290,19165418,120261410,7546 30394,4735243250,29713259402,186448243010,1169947290266,7341322395410,460 66190299178,289061530659170,1813837175689274,11381678123719730 ⋆ Number of (n + 1) X 2 0..2 arrays with every 2 X 2 subblock nonsingular. • a(n) = (2 ^ (1 - n) * ((5 - sqrt(57)) ^ n * (- 15 + 2 * sqrt(57)) + (5 + sqrt(57)) ^ n * (15 + 2 * sqrt(57)))) / sqrt(57). •

► [A334697] 1,50,363,1360,3665,8106,15715,27728,45585,70930,105611,151680,21 1393,287210,381795,498016,638945,807858,1008235,1243760,1518321,1836010,22 01123,2618160,3091825 ⋆ a(n) is the number of interior points in the n - th figu re shown in A255011 (meaning the figure with 4n points on the perimeter), cou nted with multiplicity. • a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. •

► [A293608] 0,50,390,1680,5320,13860,31500,64680,122760,218790,370370,60060 0,939120,1423240,2099160,3023280,4263600,5901210,8031870,10767680,1423884 0,18595500,24009700,30677400,38820600 ⋆ a(n) = (3 * n + 7) * Pochhammer(n, 5) / 4!. • a(n) = n * (n + 1) * Stirling2(4 + n, 2 + n). • a(n) = (1 / 24) * (n * (168 + 422 * n + 395 * n ^ 2 + 175 * n ^ 3 + 37 * n ^ 4 + 3 * n ^ 5)). • a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>6. •

► [A128954] 50,495,4952,49524,495238,4952381,49523810,495238095,495238095 2,49523809524,495238095238,4952380952381,49523809523810,495238095238095,4 952380952380952,49523809523809524,495238095238095238 ⋆ a(n) is equal to the number of positive integers m less than or equal to 10 ^ n such that m is not div

isible by the prime 2 and is not divisible by at least one of the primes 3, 5 and 7. ● a(n) = 10 ^ n - floor(10 ^ n / 2) - floor(10 ^ n / 105) + floor(10 ^ n / 210). ●

▶ [A022147] 1,50,530,2562,8130,20082,42130,78850,135682,218930,335762,494210,703170,972402,1312530,1735042,2252290,2877490,3624722,4508930,5545922,6752370,8145810,9744642,11568130 ⋆ Coordination sequence for root lattice B _ 5 . ● a(0) = 1; for n>0, a(n) = (108 * n ^ 4 - 88 * n ^ 3 + 156 * n ^ 2 - 32 * n + 6) / 3 . - _ Philippe Deléham _ , Feb 20 2004 ●

▶ [A285044] 1,50,550,4020,24710,138012,725340,3655080,17859270,85230860,399257716,1842353240,8396404380,37868584600,169278679800,750923914320,3308947546950,14495583969900,63172016823300,274031830241400,1183780040663220 ⋆ Expansion of cosh(5 * arctanh(2 * sqrt(x))). ● a(n) = 1 / 3 * (64 * n ^ 2 + 8 * n + 3) * binomial(2 * n,n). ●

▶ [A052460] 1,50,675,4624,21125,73926,214375,540800,1225449,2550250,4952651,9082800,15873325,26622974,43095375,67634176,103295825,154001250,224707699,321602000,452316501,626168950,854427575,1150602624 ⋆ 3 - magic series constant. ● a(n) = n ^ 3 / 4 * (n ^ 2 + 1) ^ 2. ● a(1)=1, a(2)=50, a(3)=675, a(4)=4624, a(5)=21125, a(6)=73926, a(7)= 214375, a(8)=540800, a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8). - _ Harvey P. Dale _ , Aug 14 2013 ●

▶ [A224168] 50,684,4739,22988,87878,282372,794220,2010035,4668304,10095924,20559019,39765666,73565736,130901340,225070360,375375241,609239622,964886492,1494683371,2269272536,3382617538,4958111188,7155904828,10181634047 ⋆ Number of n X 3 0..3 arrays with rows and antidiagonals unimodal and columns nondecreasing. ● a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10) for n>10. ●

▶ [A223859] 50,684,4884,24199,93731,303560,857696,2175884,5058530,10946664,22267210,43028893,79505879,141274716,242543322,403888650,654482250,1034900244,1600626232,2426368355,3611325155,5285548992,7617570604,10823463928 ⋆ Number of n X 3 0..3 arrays with rows and antidiagonals unimodal and columns nondecreasing. ● a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10) for n>10. ●

▶ [A223982] 50,684,5029,25410,99634,325120,922768,2346883,5462600,11818092,24045385,46430852,85704412,152105120,260790200,433664645,701719286,1107976716,1711156645,2590185158,3849685950,5626605920,8098142520,11491155975 ⋆ Number of n X 3 0..3 arrays with rows unimodal and columns nondecreasing. ● a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10) for n>10. ●

▶ [A128799] 0,0,50,750,7500,62500,468750,3281250,21875000,140625000,878906250,5371093750,32226562500,190429687500,1110839843750,6408691406250,36621093750000,207519531250000,1167297363281250,6523132324218750 ⋆ a(n) = n * (n - 1) * 5 ^ n. ● a(n) = 15 * a(n - 1) - 75 * a(n - 2) + 125 * a(n - 3). - _ Wesley Ivan Hurt _ , May 17 2021 ●

▶ [A086027] 1,50,834,7890,51990,265434,1119210,4063866,13081875,38131900,102259964,255425340,600047436,1336192860,2838530460,5783112156,11350211925,21540508734,39656591950,71021001950,124026854850,211648774950,353581802550,579225802950,931794553575 ⋆ a(n) = Sum _{ i=1..n } binomial(i + 5,6) ^ 2. ● a(n) = n * (n + 1) * (n + 2) * (n + 3) * (n + 4) * (n + 5) * (n + 6) * (77 * n ^ 6 + 1386 * n ^ 5 + 9380 * n ^ 4 + 29400 * n ^ 3 + 41783 * n ^ 2 + 20874 * n + 60) / 518918400. (End) ●

▶ [A042299] 1,1,51,52,2651,2703,137801,140504,7163001,7303505,372338251,379641756,19354426051,19734067807,1006057816401,1025791884208,52295652026801,53321443911009,2718367847577251,2771689291488260,141302832421990251,144074521713478511 ⋆ Denominators of continued fraction convergents to sqrt(675). ● a(n) = 52 * a(n - 2) - a(n - 4) for n>3. - _ Vincenzo Librandi _ , Jan 19 2014 ● a(n) = Product _{ k = 1..floor((n - 1) / 2) } (50 + 4 * cos ^ 2(k * Pi / n)). ●

▶ [A206525] 51,62,164,175,277,288,390,401,503,514,616,627,729,740,842,853,955,966,1068,1079,1181,1192,1294,1305,1407 ⋆ a(n) = 113 * (n - 1) - a(n - 1) with n>1, a(1)=51. ● a(n) = a(n - 2) + 113. ● a(n) = (- 113 - 91 * (- 1) ^ n + 226 * n) / 4. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3). ●

▶ [A075894] 51,91,157,235,337,505,673,925,1213,1465,1777,2137,2587,3055,3625,4183,4645,5275,5875,6595,7615,8605,9535,10417,11035 ⋆ Average of four successive primes squared, (prime(n) ^ 2 + prime(n + 1) ^ 2 + prime(n + 2) ^ 2 + prime(n + 3) ^ 2) / 4, n>=2. ● a(n) = (prime(n) ^ 2 + prime(n + 1) ^ 2 + prime(n + 2) ^ 2 + prime(n + 3) ^ 2) / 4, n>=2. ●

▶ [A044140] 51,100,149,198,247,296,345,357,394,443,492,541,590,639,688,700,737,786,835,884,933,982,1031,1043,1080 ⋆ Numbers k such that substring "02" occurs in the base - 7 representation of k but not of k - 1. ● a(n) = a(n - 1) + a(n - 8) - a(n - 9) for n>9. ●

▶ [A160847] 0,1,51,100,181,274,405,536,709,894,1111,1330,1591,1858,2167,2482,2825,3180,3577,3974,4413,4860,5339,5824,6351 ⋆ Number of lines through at least 2 points of a 7 X n grid of points. ● a(n) = (1 / 2) * (f(m,n,1) - f(m,n,2)) where f(m,n,k) = Sum((n - |kx|) * (m - |ky|)); - n < kx <n, - m < ky <m, (x,y)=1, m=7. ●

▶ [A235878] 51,105,231,537,1311,3345,8871,24297,68271,195585,568311,1668057,4930431,14643825,43636551,130319817,389779791,1166980065,3496221591,10479227577,31418808351,94218676305,282580531431,847590599337,2542469808111 ⋆ Number of (n + 1) X (2 + 1) 0..2 arrays with the minimum plus the upper median equal to the lower median plus the maximum in every 2 X 2 subblock. ● a(n) = 3 * (2 + 3 * 2 ^ (1 + n) + 3 ^ n). ●

▶ [A063314] 1,51,120,190,260,330,400,470,540,610,680,748,820,890,960,1028,1100,1168,1240,1308,1380,1448,1520,1586,1660 ⋆ Dimension of the space of weight n cuspidal newforms for Gamma _ 1(41). ● a(n) = a(n - 4) + a(n - 6) - a(n - 10) for n>13. ●

▶ [A129298] 0,51,120,267,540,931,1780,3367,5644,10591,19840,33111,61944,115851,193200,361251,675444,1126267,2105740,3936991,6564580,12273367,22946680,38261391,71534640 ⋆ Nonnegative values x of solutions (x, y) to the Diophantine equation x ^ 2 + (x + 89) ^ 2 = y ^ 2. ● a(n) = 6 * a(n - 3) - a(n - 6) + 178 with for n > 6; a(1)=0, a(2)=51, a(3)=120, a(4)=267, a(5)=540, a(6)=931. ● a(1)=0, a(2)=51, a(3)=120, a(4)=267, a(5)=540, a(6)=931, a(7)=1780, a(n) = a(n - 1) + 6 * a(n - 3) - 6 * a(n - 4) - a(n - 6) + a(n - 7). - _ Harvey P. Dale _ , Sep 21 2013 ●

▶ [A365834] 51,130,260,520,1040,3120,21440,42880,85760,171520,343040,686080,1372160,2744320,5488640,10977280,21954560,43909120,87818240,175636480,351272960,702545920,1405091840,2810183680,5620367360 ⋆ a(n) is the first number k with n prime divisors such that, if m is the next number with n prime divisors, k + m and k - m also have n prime divisors. In each case the divisors are counted with multiplicity. ● a(n) = 2 ^ (n - 2) * 5 * 67 for all n >= 8, the next number with n prime divisors being 2 ^ (n - 2) * 3 * 113. ●

▶ [A245829] 51,192,285,648,847,1536,1881,3000,3531,5184,5941,8232,9255,12288,13617,17496,19171,24000,26061,31944,34431,41472,44425,52728,56187 ⋆ Szeged index of the prism graph C _ n X P _ 2 (n >=3). ● a(n) = 3n ^ 3 if n is even; a(n) = 3n ^ 3 - 4n ^ 2 + 2n if n is odd. Follows from Theorem 2.1 of the Klavzar et al. reference. ●

▶ [A157365] 51,200,447,792,1235,1776,2415,3152,3987,4920,5951,7080,8307,9632,11055,12576,14195,15912,17727,19640,21651,23760,25967,28272,30675 ⋆ a(n) = 49 * n ^ 2 + 2 * n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A157916] 51,201,451,801,1251,1801,2451,3201,4051,5001,6051,7201,8451,9801,11251,12801,14451,16201,18051,20001,22051,24201,26451,28801,31251 ⋆ a(n) = 50 * n ^ 2 + 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). (End) ●

▶ [A158640] 51,207,467,831,1299,1871,2547,3327,4211,5199,6291,7487,8787,10191,11699,13311,15027,16847,18771,20799,22931,25167,27507,29951,32499 ⋆ a(n) = 52 * n ^ 2 - 1. ● a(n)= 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A201813] 51,221,631,1401,2651,4501,7071,10481,14851,20301,26951,34921,44331,55301,67951,82401,98771,117181,137751,160601,185851,213621,244031,277201,313251 ⋆ Number of arrays of 5 integers in - n..n with sum zero and equal numbers of elements greater than zero and less than zero. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>4. ●

▶ [A193250] 1,51,245,679,1449,2651,4381,6735,9809,13699,18501,24311,31225,39339,48749,59551,71841,85715,101269,118599,137801,158971,182205,207599,235249 ⋆ Small rhombicuboctahedron with faces of centered polygons. ● a(n) = 16 * n ^ 3 - 24 * n ^ 2 + 10 * n - 1. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4); a(0)=1, a(1)=51, a(2)=245, a(3)=679. - _ Harvey P. Dale _ , Aug 27 2011 ●

▶ [A155464] 0,51,340,2023,11832,69003,402220,2344351,13663920,79639203,464171332,2705388823,15768161640,91903581051,535653324700,3122016367183,18196444878432,106056652903443,618143472542260,3602804182350151 ⋆ a(n) = 7 * a(n - 1) - 7 * a(n - 2) + a(n - 3) for n > 2; a(0) = 0, a(1) = 51, a(2) = 340. ● a(n) = 6 * a(n - 1) - a(n - 2) + 34 for n > 1; a(0) = 0, a(1) = 51. ● a(n) = ((1 + sqrt(2)) * (3 + 2 * sqrt(2)) ^ n + (1 - sqrt(2)) * (3 - 2 * sqrt(2)) ^ n - 2) * (17 / 4). ●

▶ [A152579] 51,351,851,1551,2451,3551,4851,6351,8051,9951,12051,14351,16851,19551,22451,25551,28851,32351,36051,39951,44051,48351,52851,57551,62451 ⋆ a(n) = (10 * n + 3) * (10 * n + 17). ● a(n) = 2 * a(n - 2) - a(n - 2) + 200. ●

▶ [A083669] 1,51,381,1451,3951,8801,17151,30381,50101,78151,116601,167751,234131,318501,423851,553401,710601,899131,1122901,1386051,1692951,2048201,2456631,2923301,3453501 ⋆ Number of ordered quintuples (a,b,c,d,e), - n <= a,b,c,d,e <= n, such that a + b + c + d + e = 0. ● a(n) = 1 + 5 * n * (n + 1) * (23 * n ^ 2 + 23 * n + 14) / 12. ● a(n) = (1 / Pi) * Integral _{ x=0..Pi } (sin((n + 1 / 2) * x) / sin(x / 2)) ^ 5. - _ Yalcin Aktar _ , Dec 03 2011 ● a(n) = [x ^ (5 * n)] (Sum _{ k=0..2 * n } x ^ k) ^ 5. - _ Seiichi Manyama _ , Dec 14 2018 ●

▶ [A273189] 51,401,2451,14401,84051,490001,2856051,16646401,97022451,565488401,3295908051,19209960001,111963852051,652573152401,3803475062451,22168277222401,129206188272051,753068852410001,4389206926188051,25582172704718401,149103829302122451 ⋆ a(n) is the third number in a triple consisting of 3 numbers, which when squared are part of a right diagonal of a magic square of squares. ● a(0)= 51, a(1)= 401, a(n + 1)= a(n) * 6 - a(n - 1) + k where k=96. ● a(n) = (- 24 + 25 / 2 * (3 - 2 * sqrt(2)) ^ (1 + n) + 25 / 2 * (3 + 2 * sqrt(2)) ^ (1 + n)). ● a(n) = 7 * a(n - 1) - 7 * a(n - 2) + a(n - 3) for n>2. ●

▶ [A204215] 51,473,2208,7167,18583,41363,82440,151125,259459,422565,659000,991107,1445367,2052751,2849072,3875337,5178099,6809809,8829168,11301479,14298999,17901291,22195576,27277085,33249411 ⋆ Number of length 7 nonnegative integer arrays starting and ending with 0 with adjacent elements differing by no more than n. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. ●

▶ [A347922] 0,1,51,492,2500,8925,25431,61936,134352,266625,493075,861036,1433796,2293837,3546375,5323200,7786816,11134881,15604947,21479500,29091300,38829021,51143191,66552432,85650000 ⋆ Number of minimal total dominating sets in the n X n rook complement graph. ● a(n) = 6 * binomial(n,3) ^ 2 + 2 * binomial(n,2) ^ 3 - binomial(n,2) ^ 2. ● a(n) = (5 * n ^ 2 - 11 * n + 5) * n ^ 2 * (n - 1) ^ 2 / 12. ●

▶ [A142994] 1,51,501,2471,8361,22363,50973,103503,192593,334723,550725,866295,1312505,1926315,2751085,3837087,5242017,7031507,9279637,12069447,15493449,19654139,24664509,30648559,37741809 ⋆ Crystal ball sequence for the lattice C _ 5. ● a(n) = (2 * n + 1) * (32 * n ^ 4 + 64 * n ^ 3 + 88 * n ^ 2 + 56 * n + 15) / 15. ● a(n) = Sum _{ k = 0..5 } binomial(10,2k) * binomial(n + k,5). ● a(n) = Sum _{ k = 0..5 } binomial(10,2k + 1) * binomial(n + k + 1 / 2,5). ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6), for n>5. - _ Vincenzo Librandi _ , Dec 16 2015 ●

▶ [A173804] 1,51,551,5551,55551,555551,5555551,55555551,555555551,5555555551,55555555551,555555555551,5555555555551,55555555555551,555555555555551,5555555555555551,55555555555555551,555555555555555551 ⋆ a(n) = (5 * 10 ^ n - 41) / 9 for n > 0. ● a(n) = 10 * a(n - 1) + 41 with a(0)= - 4. ● a(n) = 11 * a(n - 1) - 10 * a(n - 2). - _ Vincenzo Librandi _ , Jul 05 2012 ●

▶ [A269438] 51,622,3674,14455,44021,112476,252932,516189,976135,1735866,2934526,4754867,7431529,11260040,16606536,23918201,33734427,46698694,63571170,85242031,112745501,147274612,190196684,243069525,307658351 ⋆ Number of l

ength - 6 0..n arrays with no repeated value greater than the previous repeated value. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

▶ [A269622] 51,624,3611,14125,43013,110099,248143,507521,961625,1712983,2900099,4705013,7361581,11164475,16478903,23751049,33519233,46425791,63229675,84819773,112228949,146648803,189445151,242174225,306599593 ⋆ Number of length - 6 0..n arrays with no repeated value differing from the previous repeated value by other than plus two, zero or minus 1. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>9. ●

▶ [A160829] 1,51,673,4287,17931,57321,152251,353333,740077,1430311,2590941,4450051,7310343,11563917,17708391,26364361,38294201,54422203,75856057,103909671,140127331,186309201,244538163,317207997,407052901 ⋆ Expansion of (1 + 44 * x + 337 * x ^ 2 + 612 * x ^ 3 + 305 * x ^ 4 + 40 * x ^ 5 + x ^ 6) / (1 - x) ^ 7. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7), with a(0)=1, a(1)=51, a(2)=673, a(3)=4287, a(4)=17931, a(5)=57321, a(6)=152251. - _ Harvey P. Dale _ , Jun 21 2011 ● a(n) = (1 / 36) * (36 + 174 * n + 391 * n ^ 2 + 513 * n ^ 3 + 442 * n ^ 4 + 213 * n ^ 5 + 67 * n ^ 6). - _ Harvey P. Dale _ , Jun 21 2011, corrected by _ Eric Rowland _ , Aug 15 2017 ●

▶ [A160835] 1,51,675,4319,18131,58121,154701,359605,754189,1459111,2645391,4546851,7473935,11828909,18122441,26991561,39219001,55753915,77733979,106508871,143665131,191052401,250811045,325401149,417632901 ⋆ G.f.: (1 + 44 * x + 339 * x ^ 2 + 630 * x ^ 3 + 323 * x ^ 4 + 42 * x ^ 5 + x ^ 6) / (1 - x) ^ 7. ● a(n) = 1 + n * (n + 1) * (23 * n ^ 4 + 48 * n ^ 3 + 98 * n ^ 2 + 73 * n + 58) / 12. - _ R. J. Mathar _ , Sep 17 2011 ●

▶ [A346455] 1,52,55,56,57,58,77,88,93,94,95,96,99,100,119,124,147,148,161,162,189,206,207,208,209 ⋆ a(n) is the smallest number k such that Sum _{ j=1..k } (- 1) ^ omega(j) = n, where omega(j) is the number of distinct primes dividing j. ● a(n) = min { k : Sum _{ j=1..k } mu(rad(j)) = n } , where mu is the Moebius function and rad is the squarefree kernel. ●

▶ [A227703] 52,150,328,610,1020,1582,2320,3258,4420,5830,7512,9490,11788,14430,17440,20842,24660,28918,33640,38850,44572,50830,57648,65050,73060 ⋆ The Wiener index of the zig - zag polyhex nanotube TUHC _ 6[2n,2] defined pictorially in Fig. 1 of the Eliasi et al. reference. ● a(n) = 2 * n * (1 + 2 * n + 2 * n ^ 2). ●

▶ [A161478] 0,52,175,339,615,1312,2260,3864,7923,13447,22795,46452,78648,133132,271015,458667,776223,1579864,2673580,4524432,9208395,15583039,26370595,53670732,90824880 ⋆ Nonnegative values x of solutions (x, y) to the Diophantine equation x ^ 2 + (x + 113) ^ 2 = y ^ 2. ● a(n) = 6 * a(n - 3) - a(n - 6) + 226 for n > 6; a(1)=0, a(2)=52, a(3)=175, a(4)=339, a(5)=615, a(6)=1312. ●

▶ [A288919] 0,0,52,176,372,640,980,1392,1876,2432,3060,3760,4532,5376,6292,7280,8340,9472,10676,11952,13300,14720,16212,17776,19412 ⋆ Number of 5 - cycles in the n X n king graph. ● a(n) = 36 * n ^ 2 - 128 * n + 112 for n > 1. - _ Andrew Howroyd _ , Jun 19 2017 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n > 4. (End) ●

▶ [A211564] 52,202,813,3046,10096,29503,77078,183074,401337,822277,1590604,2928879,5168035,8786128,14456683,23108105,35995730,54788196,81669919,119461564,171760506,243103381,339152932,466911460,634963295 ⋆ Number of nonnegative integer arrays of length n + 4 with new values 0 upwards introduced in order, and containing the value n - 1. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>9. ●

▶ [A079414] 1,52,297,976,2425,5076,9457,16192,26001,39700,58201,82512,113737,153076,201825,261376,333217,418932,520201,638800,776601,935572,1117777,1325376,1560625 ⋆ a(n) = 4 * n ^ 4 - 3 * n ^ 2. ● a(n) = n * Sum _{ k=0..n - 1 } (- 1) ^ k * (2 * n - 2 * k - 1) ^ 3. ● a(n + 1) = (n + 1) * ((2n + 1) ^ 3 - a(n) / n). ●

▶ [A005946] 1,52,358,1304,3455,7556,14532,25488,41709,64660,95986,137512,191243,259364,344240,448416,574617,725748,904894,1115320,1360471,1643972,1969628,2341424,2763525 ⋆ Number of n - step mappings with 5 inputs. ● a(n) = h(5,n) where h(n, m) = Sum _{ j } (n! / f(j)) * Product _{ k=1..n } h(k,m - 1) ^ (j(k)) and the sum runs over all partitions j=(j(1),...,j(n)) of n and f(j) = Product _{ k=1..n } j(k)! * (k!) ^ (j(k)). That is, j satisfies Sum _{ k=1..n } k * j(k) = n [From Hogg & Huberman]. - _ Sean A. Irvine _ , Oct 11 2016 ●

▶ [A100413] 52,592,5992,59992,599992,5999992,59999992,599999992,5999999992,59999999992,599999999992,5999999999992,59999999999992,599999999999992,5999999999999992,59999999999999992,599999999999999992 ⋆ Numbers k such that k is reversal(k) - th even composite number (k is A004086(k) - th even composite number). ● a(n) = 6 * 10 ^ n - 8. ● a(n) = 10 * a(n - 1) + a(n - 2) - 10 * a(n - 3). ●

▶ [A249712] 52,659,3440,11925,32500,75495,156416,297321,528340,889339,1431728,2220413,3335892,4876495,6960768,9730001,13350900,18018403,23958640,31432037,40736564,52211127,66239104,83252025,103733396 ⋆ Number of length 6 + 3 0..n arrays with every four consecutive terms having the maximum of some two terms equal to the minimum of the remaining two terms. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

▶ [A273655] 52,906,9891,87416,686826,5020092,35006202,236460312,1562226237,10158790642,65294141913,415967090448,2631510433188,16551428673528,103578621308388,645186720537744,4000912828433199,24700465510596414,151810205132056779,928768921758036744 ⋆ Number of forests of labeled rooted trees of height at most 1, with n labels, five of which are used for root nodes and any root may contain >= 1 labels. ● a(n) = C(n,5) * Sum _{ j=0..5 } Stirling2(5,j) * j ^ (n - 5). ●

▶ [A035798] 1,52,1352,23452,305552,3191812,27866072,209284972,1381251872,8143343572,43450388072,212064570172,955155127472,4000126870436,15677814054136,57833980313356,201820290790976,669263277244276 ⋆ Coordination sequence for lattice D *_ 26 (with edges defined by l _ 1 norm = 1). ● a(m)=add(2 ^ k * binomial(n, k) * binomial(m - 1, k - 1), k=0..n) + 2 ^ n * binomial((n + 2 * m) / 2 - 1, n - 1); with n=26. ●

▶ [A156854] 52,2726,9450,20224,35048,53922,76846,103820,134844,169918,209042,252216,299440,350714,406038,465412,528836,596310,667834,743408,823032,906706,994430,1086204,1182028 ⋆ a(n) = 2025 * n ^ 2 - 3401 * n + 1428. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A042403] 1,1,53,54,2861,2915,154441,157356,8336953,8494309,450041021,458535330,24293878181,24752413511,1311419380753,1336171794264,70792352682481,72128524476745,3821475625473221,3893604149949966,206288891422871453,210182495572821419 ⋆ Denominators of continued fraction convergents to sqrt(728). ● a(n) = 54 * a(n - 2) - a(n - 4) for n>3. - _ Vincenzo Librandi _ , Jan 21 2014 ● a(n) = Product _{ k = 1..floor((n - 1) / 2) } (52 + 4 * cos ^ 2(k * Pi / n)). ●

▶ [A102635] 53,61,317,349,353,134218081 ⋆ Skipping from prime to prime by least powers of 2 using 53 as the seed. ● a(1) = 53, a(n + 1) = a(n) + 2 ^ k; a(n + 1) prime, k minimal. ●

▶ [A160041] 53,73,125,193,365,697,1105,2117,4057,6437,12337,23645,37517,71905,137813,218665,419093,803233,1274473,2442653,4681585,7428173,14236825,27286277,43294565 ⋆ Positive numbers y such that y ^ 2 is of the form x ^ 2 + (x + 73) ^ 2 with integer x. ● a(n) = 6 * a(n - 3) - a(n - 6) for n > 6; a(1)=53, a(2)=73, a(3)=125, a(4)=193, a(5)=365, a(6)=697. ●

▶ [A063363] 1,53,102,157,212,259,314,367,416,469,526,573,628,679,730,783,840,885,942,993,1044,1095,1154,1199,1256 ⋆ Dimension of the space of weight n cuspidal newforms for Gamma _ 1(90). ● a(n) = a(n - 4) + a(n - 6) - a(n - 10) for n>13. ●

▶ [A158644] 1,53,209,469,833,1301,1873,2549,3329,4213,5201,6293,7489,8789,10193,11701,13313,15029,16849,18773,20801,22933,25169,27509,29953 ⋆ a(n) = 52 * n ^ 2 + 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A158656] 53,215,485,863,1349,1943,2645,3455,4373,5399,6533,7775,9125,10583,12149,13823,15605,17495,19493,21599,23813,26135,28565,31103,33749 ⋆ a(n) = 54 * n ^ 2 - 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A322043] 53,482,1340,2627,4343,6488,9062,12065,15497,19358,23648,28367,33515,39092,45098,51533,58397,65690,73412,81563,90143,99152,108590,118457,128753 ⋆ Numbers k such that the coefficient of x ^ k in the expansion of Product _{ m >= 1 } (1 - x ^ m) ^ 15 is zero. ● a(n) = (429 * n ^ 2 - 429 * n + 106) / 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>3. ●

▶ [A157618] 53,1042,3281,6770,11509,17498,24737,33226,42965,53954,66193,79682,94421,110410,127649,146138,165877,186866,209105,232594,257333,283322,310561,339050,368789 ⋆ a(n) = 625 * n ^ 2 - 886 * n + 314. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A350886] 54,70,1618,2344,2541,27597,48486,73795,184162,320739,648009,766669,990983,1452962,3816551,4456264,6287116,23251921,37396339,43540374,5113614,53005618,63668661,147115419,205943541 ⋆ Let X,Y,Z be positive integer solutions to X ^ 2 = Sum _{ j=0..Y - 1 } (1 + Z * j) ^ 2, where solutions for Y or Z < 1 are excluded. This sequence lists the sorted values for X. ● a(n) ^ 2 = c * b ^ 2 * (((1 / b) + (c - 1) / 2) ^ 2 + (c ^ 2 - 1) / 12). Shorter form of above. ● a(n) != a(m) if n != m. ●

▶ [A229358] 54,105,311,1281,6407,35745,212951,1323441,8464487,55247745,365983991,2451448401,16559916167,112602093345,769628452631,5282089330161,36372360161447,251135368228545,1737811434946871,12047233511096721,83642479068080327,581449745964789345 ⋆ Total sum of n - th powers of parts in all partitions of 7. ● a(n) = 30 + 11 * 2 ^ n + 6 * 3 ^ n + 3 * 4 ^ n + 2 * 5 ^ n + 6 ^ n + 7 ^ n. ●

▶ [A304172] 54,153,351,747,1539,3123,6291,12627,25299,50643,101331,202707,405459,810963,1621971,3243987,6488019,12976083,25952211,51904467,103808979,207618003,415236051,830472147,1660944339 ⋆ a(n) = 99 * 2 ^ n - 45 (n>=0). ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>1. ●

▶ [A250792] 54,162,482,1430,4258,12706,37986,113694,340562,1020650,3059890,9175558,27518466,82538994,247584194,742687022,2227929970,6683527738,20050058898,60149128086,180445287074,541331666882,1623986612002,4871943058750 ⋆ Number of (n + 1) X (3 + 1) 0..1 arrays with nondecreasing min(x(i,j),x(i,j - 1)) in the i direction and nondecreasing absolute value of x(i,j) - x(i - 1,j) in the j direction. ● a(n) = - 3 - (- 1) ^ n / 4 + 2 ^ (1 + n) + (23 * 3 ^ (1 + n)) / 4 + n. ●

▶ [A248598] 0,0,54,174,372,660,1050,1554,2184,2952,3870,4950,6204,7644,9282,11130,13200,15504,18054,20862,23940,27300,30954,34914,39192 ⋆ a(n) = (2 * n + 23) * n * (n - 1), a coefficient appearing in the formula a(n) * Pi / 324 + n + 1 giving the average number of regions into which n random planes divide the cube. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Colin Barker _ , Oct 09 2014 ●

▶ [A187299] 0,0,54,196,480,876,1398,2036,2790,3660,4646,5748,6966,8300,9750,11316,12998,14796,16710,18740,20886,23148,25526,28020,30630 ⋆ Number of 4 - step one space leftwards or up, two space rightwards or down asymmetric rook's tours on an n X n board summed over all starting positions. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>8. ●

▶ [A245830] 54,243,656,1381,2506,4119,6308,9161,12766,17211,22584,28973,36466,45151,55116,66449,79238,93571,109536,127221,146714,168103,191476,216921,244526 ⋆ The Szeged index of a benzenoid consisting of a linear chain of n hexagons. ● a(n) = (44 * n ^ 3 + 72 * n ^ 2 + 43 * n + 3) / 3. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ G. C. Greubel _ , Dec 08 2016 ●

▶ [A228016] 54,539,5340,52865,523314,5180279,51279480,507614525,5024865774,49741043219,492385566420,4874114620985,48248760643434,477613491813359,4727886157490160,46801248083088245,463284594673392294,4586044698650834699,45397162391834954700 ⋆ a(1) = least k such that 1 / 1 + 1 / 2 + 1 / 3 + 1 / 4 + 1 / 5 < H(k) - H(5); a(2) = least k such that H(a(1)) - H(5) < H(k) - H(a(1)), and for n > 2, a(n) = least k such that H(a(n - 1)) - H(a(n - 2) > H(k) - H(a(n - 1)), where H = harmonic number. ● a(n) = 11 * a(n - 1) - 11 * a(n - 2) + a(n - 3) (conjectured). ●

▶ [A245833] 54,540,2610,8820,23940,55944,117180,225720,406890,694980,1135134,1785420,2719080,4026960,5820120,8232624,11424510,15584940,20935530,27733

860,36277164,46906200,60009300,76026600,95454450 ★ The Szeged index of the triangle - shaped benzenoid T _ k (see Fig. 5.7 of the Diudea et al. reference). ● a(k) = (k ^ 6 + 12k ^ 5 + 49k ^ 4 + 84k ^ 3 + 58k ^ 2 + 12k) / 4. ●

▶ [A254701] 54,552,2764,9507,25962,60634,126456,242037,433054,733788,1188844,1854775,2802450,4118766,5909104,8299689,11440134,15506128,20702268,27265035,35465914,45614658,58062696,73206685,91492206 ★ Number of length 3 + 40..n arrays with every five consecutive terms having the maximum of some two terms equal to the minimum of the remaining three terms. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

▶ [A086577] 0,54,594,5994,59994,599994,5999994,59999994,599999994,5999999994,59999999994,599999999994,5999999999994,59999999999994,599999999999994,5999999999999994,59999999999999994,599999999999999994,5999999999999999994,59999999999999999994,599999999999999999994,5999999999999999999994,59999999999999999999994 ★ a(n) = 6 * (10 ^ n - 1). ● a(n) = 11 * a(n - 1) - 10 * a(n - 2) for n > 1. ●

▶ [A253006] 0,0,0,1,54,632,2902,8416,18770,35564,60398,94872,140586,199140,272134,361168,467842,593756,740510,909704,1102938,1321812,1567926,1842880,2148274 ★ Number of n X 3 nonnegative integer arrays with upper left 0 and lower right its king - move distance away minus 3 and every value increasing by 0 or 1 with every step right, diagonally se or down. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>10. ●

▶ [A128961] 0,54,648,4860,29160,153090,734832,3306744,14171760,58458510,233834040,911952756,3482001432,13057505370,48212327520,175630621680,632270238048,2252462723046,7949868434280,27824539519980,96653663595720,333455139405234,1143274763675088 ★ a(n) = (n ^ 3 - n) * 3 ^ n. ● a(n) = 12 * a(n - 1) - 54 * a(n - 2) + 108 * a(n - 3) - 81 * a(n - 4). - _ Vincenzo Librandi _ , Feb 12 2013 ●

▶ [A218130] 0,0,54,696,4020,15480,46410,117264,261576,530640,998910,1770120,2984124,4824456,7526610,11387040,16772880,24132384,34006086,47038680,63991620,85756440,113368794,148023216,191088600 ★ Number of length 6 primitive (=aperiodic or period 6) n - ary words. ● a(n) = n ^ 6 - n ^ 3 - n ^ 2 + n. ●

▶ [A281775] 0,0,0,0,54,780,7830,67620,535374,3992940,28483110,196316340,1317106494,8650141500,55853351190,355770438660,2241509994414,13998294536460,86795899256070,535048203626580,3282628800655134,20061393719417820,122212221633141750 ★ Number of distinct topologies on an n - set that have exactly 7 open sets. ● a(n) = 9 / 4 * 4! Stirling2(n, 4) + 2 * 5! Stirling2(n, 5) + 6! Stirling2(n, 6). ● a(n) = 21 * a(n - 1) - 175 * a(n - 2) + 735 * a(n - 3) - 1624 * a(n - 4) + 1764 * a(n - 5) - 720 * a(n - 6) for n>6. ● a(n) = - 5 + 17 * 2 ^ (n - 1) - 3 ^ (2 + n) + 29 * 4 ^ (n - 1) - 4 * 5 ^ n + 6 ^ n for n>0. (End) ●

▶ [A008401] 1,54,828,5202,20376,60030,146484,312858,605232,1084806,1830060,2938914,4530888,6749262,9763236,13770090,18997344,25704918,34187292,44775666,57840120,73791774,93084948 ★ Coordination sequence for { E _ 6 }* lattice. ● a(n) = 6 * n * (3 * n ^ 4 + 5 * n ^ 2 + 1), n > 0. ●

▶ [A107420] 1,54,945,9240,62370,324324,1387386,5096520,16563690,48668620,131405274,330142176,779502360,1743502320,3718285560,7601828256,14966099379,28482196050,52568991475,94362067800,165133618650,282337298100,472506635250,775303893000,1249100716500 ★ a(n) = C(n + 5,5) * C(n + 8,8). ● a(n) = 14 * a(n - 1) - 91 * a(n - 2) + 364 * a(n - 3) - 1001 * a(n - 4) + 2002 * a(n - 5) - 3003 * a(n - 6) + 3432 * a(n - 7) - 3003 * a(n - 8) + 2002 * a(n - 9) - 1001 * a(n - 10) + 364 * a(n - 11) - 91 * a(n - 12) + 14 * a(n - 13) - a(n - 14) for n > 13. ●

▶ [A281776] 0,0,0,1,54,955,11760,122941,1175034,10595215,91506420,763624081,6194818014,49084747075,381338401080,2914184784421,21965095364994,163656285828535,1207613518375740,8838842878371961,64253768864671974,464416229729871595,3340518964319750400 ★ Number of distinct topologies on an n - set that have exactly 8 open sets. ● a(n) = Stirling2(n, 3) + 2 * 4! Stirling2(n, 4) + 15 / 4 * 5! Stirling2(n, 5) + 5 / 2 * 6! Stirling2(n, 6) + 7! Stirling2(n, 7). ● a(n) = 13 / 4 - 19 * 2 ^ (n - 1) + 44 * 3 ^ (n - 1) - 2 ^ (n - 1) * 3 ^ (2 + n) - 57 * 4 ^ (n - 1) + (39 * 5 ^ n) / 4 + 7 ^ n for n>0. ●

▶ [A245832] 54,1008,6656,27340,84990,219604,497168,1019016,1932630,3443880,5830704,9458228,14795326,22432620,33101920,47697104,67296438,93186336,126886560,170176860,225125054,294116548,379885296,485546200,614628950 ★ The Szeged index of the parallelogram - shaped benzenoid Q _ k (see Fig. 5.7 of the Diudea et al. reference). ● a(k) = (12k ^ 6 + 72k ^ 5 + 137k ^ 92k ^ 3 + 13k ^ 2 - 2k) / 6. ●

▶ [A190399] 0,1,54,1068,8550,45873,177968,562032,1519560,3662625,8057390,16477020,31712850,58018793,101639700,171525568,280160068,444636297,687881890,1040201500,1541008350,2240952065,3204279960,4511682288 ★ Number of ways to place 4 nonattacking grasshoppers on a toroidal chessboard of size n x n. ● a(n) = 1 / 24 * n ^ 2 * (n ^ 6 - 6 * n ^ 4 - 96 * n ^ 3 + 347 * n ^ 2 + 96 * n - 726 + 96 * (- 1) ^ n), n>4. ●

▶ [A212705] 54,3220,38794,237832,995710,3256540,8954258,21645200,47366982,95758500,181475866,325939096,559444366,923676652,1474657570,2286163232,3453646934,5098701492,7374096042,10469422120,14617383838 ★ a(n) is the difference between numbers of nonnegative multiples of 2 * n + 1 with even and odd digit sum in base 2 * n in interval [0, (2 * n) ^ 8). ● a(n) = 2 / (2 * n + 1) * sum { i=1..n } tan ^ 8(pi * i / (2 * n + 1)). ● a(n) = 2 / 315 * n * (1088 * n ^ 6 + 3808 * n ^ 5 + 3920 * n ^ 4 + 280 * n ^ 3 - 868 * n ^ 2 + 322n - 45). ●

▶ [A245831] 54,3438,39258,220824,842850,2517534,6349518,14149728,28688094,53985150,95642514,161212248,260605098,406537614,615018150,905871744,1303303878,1836503118,2540282634,3455760600,4631079474,6122164158,7993519038,10319063904,13183008750 ★ The Szeged index of the coronene / circumcoronene benzenoid H _ k (see Fig. 5 of the Gutman & Klavzar reference or Fig. 5.7 of the Diudea et al. reference). ● a(k) = 3(36k ^ 6 - k ^ 4 + k ^ 2) / 2. ●

▶ [A085482] 54,13824,354294,3538944,21093750,90699264,311299254,905969664,2324522934,5400000000,11575379574,23219011584,44049458934,79692609024,138396093750,231928233984,376690901814,595077871104,917112404214 ★ Product of three solutions of the Diophantine equation x ^ 2 - y ^ 2 = z ^ 3. ● a(n) = 54 * n ^ 8. ● a(1)=54, a(2)=13824, a(3)=354294, a(4)=3538944, a(5)=21093750, a(6)=90699264, a(7)=311299254, a(8)=905969664, a(9)=2324522934, a(n)=9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9). - _ Harvey P. Dale _ , Jul 10 2013 ●

▶ [A042511] 1,1,55,56,3079,3135,172369,175504,9649585,9825089,540204391,550029480,30241796311,30791825791,1693000389025,1723792214816,94777779989089,96501572203905,5305862678999959,5402364251203864,297033532244008615,302435896495212479 ★ Denominators of continued fraction convergents to sqrt(78 3). ● a(n) = product { k = 1..floor((n - 1) / 2) } (54 + 4 * cos ^ 2(k * Pi / n)). ●

▶ [A101286] 55,58,62,65,69,73,78,82,87,92,98,104,110,117,123,131,139,147,156,165,175,185,196,208,220 ★ Rounded frequencies in Hz of the notes of the chromatic music scale beginning at A. ● a(1 + n) = round(55 * 2 ^ (n / 12)). - _ R. J. Mathar _ , Mar 12 2008 ●

▶ [A101285] 55,62,65,73,82,87,98,110,123,131,147,165,175,196,220,247,262,294,330,349,392,440,494,523,587 ★ Rounded frequencies in Hertz of the notes of the C major music scale beginning at A (A Minor equal - tempered). ● a(7n) = round(55 * 2 ^ (n - 1 / 6)); ● a(7n + 1) = 55 * 2 ^ n; ● a(7n + 2) = round(55 * 2 ^ (n + 1 / 6)); ● a(7n + 3) = round(55 * 2 ^ (n + 1 / 4)); ● a(7n + 4) = round(55 * 2 ^ (n + 5 / 12)); ● a(7n + 5) = round(110 * 2 ^ (n - 5 / 12)); ●

▶ [A004434] 55,66,75,79,82,87,88,90,94,95,99,100,103,106,110,111,114,115,118,120,121,123,126,127,129 ★ Numbers that are the sum of 5 distinct nonzero squares. ● a(n) = n + 124 for n > 121. [_ Charles R Greathouse IV _ , Jul 17 2011] ●

▶ [A027865] 55,91,139,199,271,355,451,559,679,811,955,1111,1279,1459,1651,1855,2071,2299,2539,2791,3055,3331,3619,3919,4231 ★ Sums of six consecutive squares: a(n) = n ^ 2 + (n + 1) ^ 2 + (n + 2) ^ 2 + (n + 3) ^ 2 + (n + 4) ^ 2 + (n + 5) ^ 2. ● a(n) = 6 * n ^ 2 + 30 * n + 55. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) = a(n - 1) + 12 * (n + 2). - _ Jean - Christophe Hervé _ , Nov 11 2015 ●

▶ [A128880] 1,55,91,253,325,595,703,1081,1225,1711,1891,2485,2701,3403,3655,4465,4753,5671,5995,7021,7381,8515,8911,10153,10585 ★ Triangular numbers congruent to 1 or 5 mod 6. ● a(1)=Tr(1), a(2)=Tr(10), where Tr(k)=k(k + 1) / 2 is triangular number; for n>=3 a(n)=Tr(k(n)), where k(n)=k(n - 2) + 12 with k(1)=1, k(2)=10. ● a(n) = (36 * n ^ 2 + 18 * (- 1) ^ n * n - 36 * n - 9 * (- 1) ^ n + 11) / 2. ● a(n) = 18 * n ^ 2 - 9 * n + 1 for n even. ● a(n) = 18 * n ^ 2 - 27 * n + 10 for n odd. ●

▶ [A063345] 1,55,119,184,247,312,375,441,503,569,631,698,759,826,887,955,1015,1083,1143,1212,1271,1340,1399,1469,1527 ★ Dimension of the space of weight n cuspidal newforms for Gamma _ 1(72). ● a(n) = a(n - 2) + a(n - 4) - a(n - 6) for n>8. ●

▶ [A224459] 55,133,259,442,691,1015,1423,1924,2527,3241,4075,5038,6139,7387,8791,10360,12103,14029,16147,18466,20995,23743,26719,29932,33391 ★ The Wiener index of the straight pentachain of n pentagonal rings (see Fig. 2.1 in the A. A. Ali et al. reference). ● a(n) = (3 * n ^ 3 + 21 * n ^ 2 - 6 * n + 14) / 2. ●

▶ [A158646] 1,55,217,487,865,1351,1945,2647,3457,4375,5401,6535,7777,9127,10585,12151,13825,15607,17497,19495,21601,23815,26137,28567,31105 ★ a(n) = 54 * n ^ 2 + 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A158658] 55,223,503,895,1399,2015,2743,3583,4535,5599,6775,8063,9463,10975,12599,14335,16183,18143,20215,22399,24695,27103,29623,32255,34999 ★ a(n) = 56 * n ^ 2 - 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A159746] 55,274,773,1793,3840,7936,16128,32512,65280,130816,261888,524032,1048320,2096896,4194048,8388352,16776960,33554176,67108608,134217472,268435200,536870656,1073741568,2147483392,4294967040 ★ If an array is made of columns of - nacci sequences, fibo - , tribo - etc. all starting w. 1,1,2 etc, the N W to SE diagonals can be extended by computation. The above is diagonal 9. See A159741 for details. ● a(n) = 2 ^ (7 + n) - 256 for n>=5. - _ R. J. Mathar _ , Feb 04 2021 ●

▶ [A350286] 0,55,286,910,2275,4900,9520,17136,29070,47025,73150,110110,161161,230230,322000,442000,596700,793611,1041390,1349950,1730575,2196040,2760736,3440800,4254250 ★ Number of different ways to partition the set of vertices of a convex (n + 11) - gon into 4 nonintersecting polygons. ● a(n) = (n * (n + 1) * (n + 2) * (n + 9) * (n + 10) * (n + 11)) / 144. ●

▶ [A063653] 1,1,55,341,5933,59925,795611,9167119,113555791,1355115601,16484061769,198549329897,2403674442213,29023432116879,350917980468767,4239961392742933,51247532773412135,619304595300705203,7484739788762129061,90454037365096154821 ★ Number of ways to tile a 9 X n rectangle with 1 X 1 and 2 X 2 tiles. ● a(n) = 6 * a(n - 1) + 110 * a(n - 2) - 262 * a(n - 3) - 2786 * a(n - 4) + 5916 * a(n - 5) + 25168 * a(n - 6) - 53907 * a(n - 7) - 95299 * a(n - 8) + 197820 * a(n - 9) + 193866 * a(n - 10) - 340168 * a(n - 11) - 228528 * a(n - 12) + 279636 * a(n - 13) + 137864 * a(n - 14) - 108909 * a(n - 15) - 33736 * a(n - 16) + 20214 * a(n - 17) + 2460 * a(n - 18) - 1296 * a(n - 19). ●

▶ [A053138] 1,55,715,5005,24310,92378,293930,817190,2042975,4686825,10015005,20160075,38567100,70607460,124403620,211915132,350343565,563921995,886163135,1362649145,2054455634,3042312350,4431613550,6358402050,8996462475 ★ Binomial coefficients C(2 * n + 9,9). ● a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10) for n > 9. - _ Wesley Ivan Hurt _ , Dec 05 2016 ●

▶ [A027784] 55,726,5148,26026,105105,360360,1089088,2975544,7482618,17551820,38798760,81477396,163601438,315762216,588376800,1062347000,1864418985,3188915730,5327982660,8713054350,13970931975,21998673840,34062462720,51926743440,78021243300 ★ a(n) = 11 * (n + 1) * binomial(n + 2,11) / 2. ● a(n) = C(n + 1, 10) * C(n + 2, 2). - _ Zerinvary Lajos _ , Apr 28 2005; corrected by _ R. J. Mathar _ , Mar 15 2016 ●

▶ [A008402] 1,55,883,6085,26461,86491,232975,545833,1151065,2235871,4065931,7004845,11535733,18284995,28048231,41818321,60815665,86520583,120707875,165483541,223323661,297115435 ★ Crystal ball sequence for { E _ 6 }* lattice. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7); a(0)=1, a(1)=55, a(2)=883, a(3)=6085, a(4)=26461, a(5)=86491, a(6)=232975. - _ Harvey P. Dale _ , Jun 20 2013 ● a(n) = 3 * n ^ 6 + 9 * n ^ 5 + 15 * n ^ 4 + 15 * n ^ 3 + 9 * n ^ 2 + 3 * n + 1 = 1 + 3 * n * (n + 1) * (n ^ 2 + n + 1) ^ 2. - _ Charles R Greathouse IV _ , Jun 20 2013 ●

► [A329753] 0,1,55,1015,9455,56980,255346,924490,2850730,7757035,19096385,43312841,91753025,183453270,349074740,636310340,1117143236,1897397285,3129084635,5026125195,7884086595,12104671656,18225763270,26957923950,39228339150 ⋆ Doubly square pyramidal numbers. ● a(n) = n * (2 * n + 1) * (n + 2) * (n + 1) * (2 * n ^ 2 - n + 3) * (2 * n ^ 3 + 3 * n ^ 2 + n + 3) / 648. - _ R. J. Mathar _ , Nov 28 2019 ●

► [A173113] 1,55,1650,35750,625625,9384375,125125000,1519375000,17092968750,180425781250,1804257812500,17222460937500,157872558593750,1396564941406250,11970556640625000,99754638671875000 ⋆ a(n) = binomial(n + 10, 10) * 5 ^ n. ● a(n) = C(n + 10, 10) * 5 ^ n, n>=0. ●

► [A113632] 1,55,9217,280483,3378745,23803711,118513705,462945547,1512003793,4303999495,10987654321,25678050355,55776799177,113924725903,220792014745,408951042331,728121033505,1252121211607,2087920281313 ⋆ 1 + 2 * n + 3 * n ^ 2 + 4 * n ^ 3 + 5 * n ^ 4 + 6 * n ^ 5 + 7 * n ^ 6 + 8 * n ^ 7 + 9 * n ^ 8 + 10 * n ^ 9. ● a(n) = 1 + 2 * n + 3 * n ^ 2 + 4 * n ^ 3 + 5 * n ^ 4 + 6 * n ^ 5 + 7 * n ^ 6 + 8 * n ^ 7 + 9 * n ^ 8 + 10 * n ^ 9. ●

► [A133898] 56,57,58,59,60,61,62,63,120,121,122,123,124,125,126,127,184,185,186,187,188,189,190,191,248 ⋆ Numbers m such that binomial(m + 8,m) mod 8 = 0. ● a(n)=8n + 56 - 7 * (n mod 8). [Corrected by _ Charles R Greathouse IV _ , Oct 13 2022] ●

► [A254369] 56,84,156,354,936,2754,8736,29274,102216,368274,1359216,5110794,19495896,75203394,292596096,1145977914,4511183976,17827536114,70660511376,280697078634,1116961278456,4450379734434,17749154257056,70839585900954,282887376051336 ⋆ a(n) = 15 * 2 ^ n + 4 ^ n + 5 * 3 ^ n + 35. ● a(n) = 10 * a(n - 1) - 35 * a(n - 2) + 50 * a(n - 3) - 24 * a(n - 4). - _ Colin Barker _ , Jan 30 2015 ●

► [A104394] 56,91,111,121,125,147,167,177,181,202,212,216,231,232,236,246,251,261,265,286,296,300,316,320,330 ⋆ Sums of 4 distinct positive pentatope numbers (A000332). ● a(n) = Ptop(h) + Ptop(i) + Ptop(j) + Ptop(k) for some positive h= / =i= / =j= / =k and Ptop(n) = binomial(n + 3,4). ●

► [A280932] 56,97,153,250,403,653,1056,1709,2765,4474,7239,11713,18952,30665,49617,80282,129899,210181,340080,550261,890341,1440602,2330943,3771545,6102488 ⋆ a(n) = 2 * F(n - 1) + 2 * F(n - 3) + 10 * F(n - 5) + 9 * F(n - 8) where n >= 8 and F = A000045. ● a(n) = a(n - 1) + a(n - 2). ●

► [A063347] 1,56,114,171,228,285,342,397,456,511,570,627,684,737,798,853,912,967,1026,1079,1140,1193,1254,1309,1368 ⋆ Dimension of the space of weight n cuspidal newforms for Gamma _ 1(74). ● a(n) = a(n - 4) + a(n - 6) - a(n - 10) for n>13. ●

► [A157330] 56,120,184,248,312,376,440,504,568,632,696,760,824,888,952,1016,1080,1144,1208,1272,1336,1400,1464,1528,1592 ⋆ a(n) = 64 * n - 8. ● a(n) = 2 * a(n - 1) - a(n - 2). ●

► [A254463] 56,126,378,1386,5778,26226,126378,636426,3314178,17714466,96660378,536249466,3015243378,17141522706,98333399178,568324150506,3305074833378,19319850386946,113420243462778,668241096915546,3948892688324178,23393955029043186 ⋆ a(n) = 15 * 2 ^ n + 6 * 4 ^ n + 10 * 3 ^ n + 3 * 5 ^ n + 6 ^ n + 21. ● a(n) = 21 * a(n - 1) - 175 * a(n - 2) + 735 * a(n - 3) - 1624 * a(n - 4) + 1764 * a(n - 5) - 720 * a(n - 6). - _ Colin Barker _ , Jan 31 2015 ●

► [A158481] 56,203,448,791,1232,1771,2408,3143,3976,4907,5936,7063,8288,9611,11032,12551,14168,15883,17696,19607,21616,23723,25928,28231,30632 ⋆ a(n) = 49 * n ^ 2 + 7. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A158487] 56,248,568,1016,1592,2296,3128,4088,5176,6392,7736,9208,10808,12536,14392,16376,18488,20728,23096,25592,28216,30968,33848,36856,39992 ⋆ a(n) = 64 * n ^ 2 - 8. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). (End) ●

► [A005912] 1,56,311,920,2037,3816,6411,9976,14665,20632,28031,37016,47741,60360,75027,91896,111121,132856,157255,184472,214661,247976,284571,324600,368217 ⋆ Truncated cube numbers. ● a(n) = (3 * n + 1) ^ 3 - 8 * (n) * (n + 1) * (n + 2) / 6 = (77 / 3) * n ^ 3 + 23 * n ^ 2 + (19 / 3) * n + 1. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4); a(0)=1, a(1)=56, a(2)=311, a(3)=920. - _ Harvey P. Dale _ , Aug 14 2011 ●

► [A287702] 0,1,56,381,1192,2705,5136,8701,13616,20097,28360,38621,51096,66001,83552,103965,127456,154241,184536,218557,256520,298641,345136,396221,452112 ⋆ a(n) = (3!) ^ 3 * [z ^ 3] hypergeom([], [1,1], z) ^ n. ● a(n) = 46 * n - 81 * n ^ 2 + 36 * n ^ 3. ● a(n) = [x ^ n] (x + 52 * x ^ 2 + 163 * x ^ 3) / (1 - x) ^ 4. ●

► [A187159] 0,0,0,56,456,1588,3288,5556,8392,11796,15768,20308,25416,31092,37336,44148,51528,59476,67992,77076,86728,96948,107736,119092,131016 ⋆ Number of 6 - step one space at a time bishop's tours on an n X n board summed over all starting positions. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>7. ●

► [A027793] 56,588,3360,13860,46200,132132,336336,780780,1681680,3403400,6534528,11992344,21162960,36085560,59690400,96101544,151016712,232178100,349949600,518017500,754233480,1081620540,1529564400,2135214900,2945124000 ⋆ a(n) = 28 * (n + 1) * binomial(n + 3,8) / 3. ● a(n) = C(n + 1, 6) * C(n + 3, 3). - _ Zerinvary Lajos _ , May 13 2005; corrected by _ R. J. Mathar _ , Feb 10 2016 ●

► [A027813] 56,630,3780,16170,55440,162162,420420,990990,2162160,4424420,8576568,15872220,28217280,48430620,80582040,130423524,205931880,317983050,481180700,714864150,1044323280,1502250750,2130464700,2981938050,4123173600 ⋆ a(n) = 14 * (n + 1) * binomial(n + 5,8). ● a(n) = C(n + 1, 4) * C(n + 5, 5). - _ Zerinvary Lajos _ , May 26 2005; corrected by _ R. J. Mathar _ , Feb 10 2016 ●

► [A175602] 56,776,7976,79976,799976,7999976,79999976,799999976,7999999976,79999999976,799999999976,7999999999976,79999999999976,799999999999976,7999999999999976,79999999999999976 ⋆ 8 * (10 ^ n - 3). ● a(n) = 11 * a(n - 1) - 10 * a(n - 2). - _ Vincenzo Librandi _ , Aug 23 2014 ●

► [A182866] 0,56,810,4992,20000,61560,158466,358400,734832,1395000,2488970,4219776,6854640,10737272,16301250,24084480,34744736,49076280,68027562,92720000,124467840,164799096,215477570,278525952,356250000 ⋆ Number of edges in the n ^ 2 X n ^ 2 Sudoku graph. ● a(n) = (1 / 2) * n ^ 4 * (- 1 - 2 * n + 3 * n ^ 2). ● a(1)=0, a(2)=56, a(3)=810, a(4)=4992, a(5)=20000, a(6)=61560, a(7)=158466, a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). - _ Harvey P. Dale _ , Oct 30 2011 ●

► [A008389] 1,56,812,5768,26474,91112,256508,623576,1356194,2703512,5025692,8823080,14768810,23744840,36881420,55599992,81659522,117206264,164826956,227605448,309182762,413820584,546468188,712832792,919453346 ⋆ Coordination sequence for A _ 7 lattice. ● a(n) = 2 + n ^ 2 * (143 * n ^ 4 + 770 * n ^ 2 + 707) / 30 with n>0, a(0)=1. - _ Bruno Berselli _ , Sep 26 2012 ●

► [A008921] 1,56,938,7688,39746,150248,455114,1171928,2668610,5521880,10585514,19068392,32622338,53439752,84361034,128991800,191829890,278402168,395411114,550891208,754375106,1017069608,1352041418,1774412696,2301566402 ⋆ Coordination sequence for lattice { E _ 7 }* . ● a(n) = 2 * (5 - 132 * n + 451 * n ^ 2 - 480 * n ^ 3 + 370 * n ^ 4 - 108 * n ^ 5 + 34 * n ^ 6) / 5 for n>0, with a(0)=1. ●

► [A243206] 0,0,0,56,1044,6632,26172,78536,196916,434584,871612,1622552,2845076,4749576,7609724,11773992,17678132,25858616,36967036,51785464,71242772,96431912,128628156,169308296,220170804 ⋆ Number of 3 - matchings of the n X n grid graph. ● a(n) = (4 * n ^ 6 - 12 * n ^ 5 - 30 * n ^ 4 + 116 * n ^ 3 + 14 * n ^ 2 - 272 * n + 156) / 3 for n>=3, a(n) = 0 for n<3. ●

► [A341429] 56,1108,12098,84624,439371,1785368,6078048,18139393,48586117,118929400,270250734,578320470,1169522013,2261784392,4193751331,7509793133,13008356489,21921125415,35951569269,57666975238,90464266824,139295784464,210514511189,313228848537 ⋆ Number of positive solutions to (x _ 1) ^ 2 + (x _ 2) ^ 2 + ... + (x _ 10) ^ 2 <= n ^ 2. ● a(n) is the coefficient of x ^ (n ^ 2) in expansion of (theta _ 3(x) - 1) ^ 10 / (1024 * (1 - x)). ●

► [A025597] 0,0,0,0,0,0,0,1,56,1309,20370,255366,2782296,27630317,256617790,2269878170,19345170656,160223380546,1297456951652,10319966008680,80906898257760,626886465395595,4810654849509082,36623649326935517 ⋆ Number of n - move king paths on 8 X 8 board from given corner to opposite corner. ● a(n) = (4 / 81) * Sum _{ j,k=1..8 } (- 1) ^ (j + k) * [sin(j * Pi / 9) * sin(k * Pi / 9)] ^ 2 * [(1 + 2 * cos(j * Pi / 9)) * (1 + 2 * cos(k * Pi / 9)) - 1] ^ n. - _ Andrew G. Buchanan _ , Jun 24 2012 ●

► [A030649] 1,56,1463,24320,293930,2785552,21737254,144538624,839848450,4347450800,20355385710,87265194240,345992859975,1279301331000,4442249264625,14573017267200,45398364338250,134897996890800,383822534859750,1049290591104000,2764459117589400 ⋆ Dimensions of multiples of minimal representation of complex Lie algebra E7. ● a(n) = (1 / 10950439500) * (n + 9) * binomial(n + 17, 4) * binomial(n + 4, 4) * binomial(n + 13, 9) ^ 2. ●

► [A035799] 1,56,1568,29288,410816,4618712,43381856,350353928,2485013888,15734806136,90102925472,471579734696,2275791199808,10202437251608,42760695613152,168488556607560,627208000027392,2215487522023608 ⋆ Coordination sequence for lattice D *_ 28 (with edges defined by l _ 1 norm = 1). ● a(m)=add(2 ^ k * binomial(n, k) * binomial(m - 1, k - 1), k=0..n) + 2 ^ n * binomial((n + 2 * m) / 2 - 1, n - 1); with n=28. ●

► [A130646] 0,56,1925,2181,2465,13056,14540,16188,77865,86513,96117,455588,505992,561968,2657117,2950893,3277145,15488568,17200820,19102356,90275745,100255481,111338445,526167356,584333520 ⋆ Nonnegative values x of solutions (x, y) to the Diophantine equation x ^ 2 + (x + 727) ^ 2 = y ^ 2. ● a(n) = 6 * a(n - 3) - a(n - 6) + 1454 for n > 6; a(1)=0, a(2)=56, a(3)=1925, a(4)=2181, a(5)=2465, a(6)=13056. ●

► [A201240] 0,0,0,56,7100,252792,3378942,26249184,144455454,625745100,2271361422,7192874328,20427662398,53065637212,127956238350,289628321664,620834113614,1269178026012,2488676915070,4702895069400,8598589878606,15261688799500,26371002575326 ⋆ Number of ways to place 6 non - attacking wazirs on a n n X n toroidal board. ● a(n) = n ^ 2 * (n ^ 10 - 75 * n ^ 8 + 2365 * n ^ 6 - 39285 * n ^ 4 + 345034 * n ^ 2 - 1288680) / 720, n>=7. ●

► [A042623] 1,1,57,58,3305,3363,191633,194996,11111409,11306405,644270089,655576494,37356553753,38012130247,2166035847585,2204047977832,125592722606177,127796770584009,7282211875310681,7410008645894690,422242696045413321 ⋆ Denominators of continued fraction convergents to sqrt(840). ● a(n) = product { k = 1..floor((n - 1) / 2) } (56 + 4 * cos ^ 2(k * Pi / n)). ●

► [A056082] 1,57,68,124,126,182,193,249,251,307,318,374,376,432,443,499,501,557,568,624,626,682,693,749,751 ⋆ Numbers k such that k ^ 4 == 1 (mod 5 ^ 3). ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n>5. ● a(n) = (250 * n - 125 + 99 * i ^ (2 * n) + (9 - 9 * i) * i ^ (- n) + (9 + 9 * i) * i ^ n) / 8 where i=sqrt(- 1). (End) ●

► [A304841] 57,124,191,258,325,392,459,526,593,660,727,794,861,928,995,1062,1129,1196,1263,1330,1397,1464,1531,1598,1665 ⋆ a(n) = 67 * n - 10 (n>=1). ● a(n) = 2 * a(n - 1) - a(n - 2). (End) ●

► [A063316] 1,57,133,210,287,364,441,518,595,672,749,824,903,980,1057,1132,1211,1286,1365,1440,1519,1594,1673,1746,1827 ⋆ Dimension of the space of weight n cuspidal newforms for Gamma _ 1(43). ● a(n) = a(n - 4) + a(n - 6) - a(n - 10) for n>13. ●

► [A158660] 1,57,225,505,897,1401,2017,2745,3585,4537,5601,6777,8065,9465,10977,12601,14337,16185,18145,20217,22401,24697,27105,29625,32257 ⋆ a(n) = 56 * n ^ 2 + 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A158668] 57,231,521,927,1449,2087,2841,3711,4697,5799,7017,8351,9801,11367,13049,14847,16761,18791,20937,23199,25577,28071,30681,33407,36249 ⋆ a(n) = 58 * n ^ 2 - 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A176635] 57,242,996,4040,16272,65312,261696,1047680,4192512,16773632,67101696,268421120,1073713152,4294909952,17179754496,68719247360,274877448192,1099510710272,4398044676096,17592182374400,70368736837632 ⋆ a(n) = 6 * a(n - 1) - 8 * a(n - 2) for n > 1; a(0) = 57, a(1) = 242. ● a(n) = 64 * 4 ^ n - 7 * 2 ^ n. ●

► [A157651] 57,308,759,1410,2261,3312,4563,6014,7665,9516,11567,13818,16269,18920,21771,24822,28073,31524,35175,39026,43077,47328,51779,56430,61281 ⋆ a(n) = 100 * n ^ 2 - 49 * n + 6. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A371515] 1,57,341,1045,2361,4481,7597,11901,17585,24841,33861,44837,57961,73425,91421,112141,135777,162521,192565,226101,263321,304417,349581,399005,452881 ⋆ Centered truncated octahedral numbers: the number of integer tripl

es (x,y,z) such that max(|x|,|y|,|z|) <= 2n and |x| + |y| + |z| <= 3n. • a(n) = 32 * n ^ 3 + 18 * n ^ 2 + 6 * n + 1. •

► [A076459] 1,57,390,1510,4335,10311,21532,40860,72045,119845,190146,290082,428155,614355,860280,1179256,1586457,2099025,2736190,3519390,4472391,5621407,6995220,8625300,10545925 ⋆ Sum of numbers that can be written as t * n + u * (n + 1) for nonnegative integers t,u in exactly n ways. • a(n) = n * (n + 1) * (2 * n ^ 3 + 2 * n ^ 2 - 2 * n - 1) / 2. •

► [A290779] 0,0,1,57,486,2360,8394,24354,61104,137412,283635,546403,994422,1725516,2875028,4625700,7219152,10969080,16276293,23645709,33705430,47228016,65154078,88618310,118978080 ⋆ Number of 6 - cycles in the n - triangular honeycomb bishop graph. • a(n) = binomial(n + 1, 4) * (- 62 + 11 * n - 109 * n ^ 2 + 40 * n ^ 3) / 70. • a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8). •

► [A164786] 1,57,505,4089,32761,262137,2097145,16777209,134217721,1073741817,8589934585,68719476729,549755813881,4398046511097,35184372088825,281474976710649,2251799813685241,18014398509481977,144115188075855865 ⋆ a(n) = 8 ^ n - 7. • a(n) = 8 * a(n - 1) + 49, with a(1)=1. - _ Vincenzo Librandi _ , Nov 30 2010 •

► [A241967] 57,775,5211,23320,80132,228826,569874,1277427,2634115,5075433,9244885,16061058,26797798,43178660,67486804,102691509,152592477,221983099,316833855,444497020,613933848,835965406,1123548230,1492075975 ⋆ Number of length 4 + 3 0..n arrays with no consecutive four elements summing to more than 2 * n. • a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. •

► [A008390] 1,57,869,6637,33111,124223,380731,1004307,2360501,5064013,10089705,18912785,33681595,57426435,94307855,149907847,231567369,348773633,513600589,741206037,1050388799,1464209383 ⋆ Crystal ball sequence for A _ 7 lattice. • a(n) = 143 / 210 * n ^ 7 + 143 / 60 * n ^ 6 + 451 / 60 * n ^ 5 + 77 / 6 * n ^ 4 + 937 / 60 * n ^ 3 + 707 / 60 * n ^ 2 + 363 / 70 * n + 1. - _ T. D. Noe _ , Apr 29 2007 •

► [A008922] 1,57,995,8683,48429,198677,653791,1825719,4494329,10016209,20601723,39670115,72292453,125732205,210093239,339085039,530914929,809317097,1204728211,1755619419,2509994525,3527064133,4879105551,6653518247,8955084649 ⋆ Crystal ball sequence for lattice { E _ 7 }* . • a(n) = (35 + 37 * n + 679 * n ^ 2 + 3928 * n ^ 3 + 280 * n ^ 4 + 518 * n ^ 5 - 14 * n ^ 6 + 68 * n ^ 7) / 35. •

► [A336734] 0,1,57,1071,12279,106738,781458,5111986,30980370,178047831,985621119,5311715977,28075774881,146309927344,754544640000,3861338821620,19646614600164,99532074868285,502608221035605,2531829420822835,12730273358124315,63919766245452606 ⋆ The number of tight 5 X n pavings. • a(n) = (5 ^ (n + 7) + (2 * n - 66) * 4 ^ (n + 6) + (16 * n ^ 2 - 1432 * n + 13164) * 3 ^ (n + 3) + (303 * n - 1505) * 2 ^ (n + 10) + 576 * n ^ 4 + 13248 * n ^ 3 + 129936 * n ^ 2 + 646972 * n + 1377903) / 576. •

► [A208601] 57,1163,8671,39019,129823,353333,833253,1764925,3438877,6267735,10816499,17836183,28300819,43447825,64821737,94321305,134249953,187369603,256957863,346868579,461595751,606340813,787083277,1010654741 ⋆ Number of 7 - bead necklaces labeled with numbers - n..n not allowing reversal, with sum zero. • a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. •

► [A000505] 1,57,1191,15619,156190,1310354,9738114,66318474,423281535,2571742175,15041229521,85383238549,473353301060,2575022097600,13796160184500,73008517581444,382493246941965,1987497491971605,10258045633638475 ⋆ Euleri an numbers (Euler's triangle: column k=5 of A008292, column k=4 of A173018). • a(n) = 5 ^ (n + 4) - (n + 5) * 4 ^ (n + 4) + (1 / 2) * (n + 4) * (n + 5) * 3 ^ (n + 4) - (1 / 6) * (n + 3) * (n + 4) * (n + 5) * 2 ^ (n + 4) + (1 / 24) * (n + 2) * (n + 3) * (n + 4) * (n + 5). - _ Randall L Rathbun _ , Jan 22 2002 •

► [A286442] 0,57,9233,563287,12649059,152516103,1211235921,7147857411,33812251267,134823778299,469266000129,1462057867743,4154650828483,10922915001087,26867398129329,62381437357035,137705497065315,290721776912275,588983390417697,1155073034088999,2190429436721571 ⋆ Number of ways to tile an n X n X n triangular area with seven 2 X 2 X 2 triangular tiles and an appropriate number (= n ^ 2 - 28) of 1 X 1 X 1 tiles. • a(n) = (n ^ 14 - 21 * n ^ 13 + 285 * n ^ 11 - 13664 * n ^ 10 - 147903 * n ^ 9 + 1159368 * n ^ 8 + 3480705 * n ^ 7 - 44292941 * n ^ 6 - 24613344 * n ^ 5 + 908186412 * n ^ 4 - 372748320 * n ^ 3 - 9895978296 * n ^ 2 + 5596762608 * n + 46620962640) / 5040 for n>=8. •

► [A366457] 58,59,62,67,74,83,94,107,122,139,158,179,202,227,254,283,314,347,382,419,458,499,542,587,634 ⋆ a(n) = n ^ 2 + 58. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) with a(0) = 58, a(1) = 59 and a(2) = 62. •

► [A368615] 58,74,166,226,262,326,334,478,566,694,734,802,838,886,1114,1142,1294,1382,1514,1574,1894,2038,2078,2138,2858 ⋆ Semiprimes k such that prime(k) - k and prime(k) + k are also semiprimes. • a(n) == 2 (mod 4). - _ Hugo Pfoertner _ , Jan 05 2024 •

► [A348569] 58,125,305,521,953,1313,1961,2833,3757,5317,6553,8081,9593,11425,14045,16477,19597,21913,24641,27829,30577,35113,40321,45509,50201 ⋆ a(n) = (prime(n) + prime(n + 2)) ^ 2 + prime(n + 1) ^ 2. • a(n) = prime(n) ^ 2 + prime(n + 1) ^ 2 + prime(n + 2) ^ 2 + 2 * prime(n) * prime(n + 2). •

► [A180571] 58,136,259,436,676,988,1381,1864,2446,3136,3943,4876,5944,7156,8521,10048,11746,13624,15691,17956,20428,23116,26029,29176,32566 ⋆ The Wiener index of the graph \ | /_\/_\/_\/_ ... _\/_\ | / having n nodes on the horizontal path. • a(n) = (2 + 9 * n + 18 * n ^ 2 + 3 * n ^ 3) / 2. •

► [A305156] 58,194,466,1010,2098,4274,8626,17330,34738,69554,139186,278450,556978,1114034,2228146,4456370,8912818,17825714,35651506,71303090,142606258,285212594,570425266,1140850610,2281701298 ⋆ a(n) = 136 * 2 ^ n - 78 (n>=0). • a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>1. •

► [A156639] 58,425,1130,2173,3554,5273,7330,9725,12458,15529,18938,22685,26770,31193,35954,41053,46490,52265,58378,64829,71618,78745,86210,94013,102154 ⋆ a(n) = 169 * n ^ 2 - 140 * n + 29. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). •

► [A246894] 58,673,3364,12481,33294,79345,159688,303169,521890,866881,1351788,2057473,2996854,4289041,5943184,8125825,10838538,14305249,18515380,23760961,30013918,37645873,46605144,57355201,69813874 ⋆ Number of length 2 + 4 0..n arrays with some pair in every consecutive five terms totalling exactly n. • a(n) = 1 - 72 * n + 146 * n ^ 2 - 57 * n ^ 3 + 31 * n ^ 4 + 6 * n ^ 5 for n even. • a(n) = - 101 + 84 * n + 99 * n ^ 2 - 61 * n ^ 3 + 31 * n ^ 4 + 6 * n ^ 5 for n odd. •

► [A172215] 1,58,729,8830,60285,257318,858262,2404448,5879329,12927182,26115008,49238436,87675623,148787822,242366502,381127124,581249573,862965246,1251190796,1776208532,2474393475,3388987070,4570917554,6079666980 ⋆ Number of ways to place 6 nonattacking knights on a 6 X n board. • a(n) = (648n ^ 6 - 11340n ^ 5 + 103770n ^ 4 - 606645n ^ 3 + 2328317n ^ 2 - 5466660n + 605172 0) / 10, n>=10. • a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). - _ Wesley Ivan Hurt _ , Apr 16 2023 •

► [A305263] 58,738,2098,4818,10258,21138,42898,86418,173458,347538,695698,1392018,2784658,5569938,11140498,22281618,44563858,89128338,178257298,356515218,713031058,1426062738,2852126098,5704252818,11408506258 ⋆ a(n) = 680 * 2 ^ n - 622. • a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>1. •

► [A142966] 1,58,877,8030,56285,335162,1792749,8904486,41949645,190129090,837258109,3607669966,15289404989,63975698570,265065915725,1089837752118,4454225465325,18119738464530,73441531708765,296814738679390,1196884383319261,4817845684107098 ⋆ Fourth column (m=3) of triangle A142963 divided by 8. • a(n) = 20a(n - 1) - 175 * a(n - 2) + 882 * a(n - 3) - 2835 * a(n - 4) + 6072 * a(n - 5) - 8777 * a(n - 6) + 8458 * a(n - 7) - 5204 * a(n - 8) + 1848 * a(n - 9) - 288 * a(n - 10). • a(n) = - (105 / 2) - (143 / 3) * n - 14 * n ^ 2 - (4 / 3) * n ^ 3 + 756 * 2 ^ n + 48 * 2 ^ n * n ^ 2 + 384 * 2 ^ n * n - (3645 / 2) * 3 ^ n - 405 * 3 ^ n * n + 1120 * 4 ^ n. •

► [A181280] 0,0,0,58,1629,28924,507052,8211776,133693904,2140571200,34361115072,549587348992,8798356254976,140744002571264,2252082614856704,36030315649662976,576487656686899200,9223539637335310336 ⋆ Number of 4Xn binary matrices M with rows in strictly increasing order and rows of M * Mtranspose (mod 2) in strictly decreasing order. • a(n) = (1 / 3) * 2 ^ (2 * n - 11) * (6 * n ^ 2 - 219 * n + 820) - (1 / 9) * 2 ^ (n - 5) * (3 * n + 32) - (113 / 3) * (- 1) ^ n * 2 ^ (3 * n - 14) + 2 ^ (4 * n - 9) - (1 / 3) * (- 1) ^ n * 2 ^ (2 * n - 11) * (13 * n - 164) + (1 / 9) * 2 ^ (3 * n - 14) * (288 * n - 3473) (conjectured). - _ Manuel Kauers _ and _ Christoph Koutschan _ , Mar 02 2023 •

► [A308391] 58,6610,668843,66965113,6697324753,669740590290,6697414006935 8,6697414817000983,669741489800555031,66974149061059480123 ⋆ Number of ordered pairs of n - digit positive integers the product of which is a 2n - digit integer. • a(n) = 9 * 10 ^ (2n - 1) - 10 ^ n - Sum _{ k=10 ^ (n - 1) + 1..10 ^ n - 1 } ceiling(10 ^ (2n - 1) / k). •

► [A243466] 0,0,0,58,18343,362643,2911226,14601844,54738489,168157793,446728228,1062085146,2312934779,4690690399,8967633918,16312226288,28436620141,47781858189,77746670984,122966217718,189647543823,285968959211,422550971074,613006835244 ⋆ Number of ways 4 domicules can be placed on an n X n square. • a(n) = (- 104802 + 61647 * n + 50017 * n ^ 2 - 35304 * n ^ 3 - 4984 * n ^ 4 + 6480 * n ^ 5 - 448 * n ^ 6 - 384 * n ^ 7 + 64 * n ^ 8) / 6 for n>=4, a(3) = 58, a(n) = 0 for n<3. •

► [A042739] 1,1,59,60,3539,3599,212281,215880,12733321,12949201,763786979,776736180,45814485419,46591221599,2748105338161,2794696559760,164840508 4241,167635202364001,9887682242916299,1005531744528030 0,5930960940691736 99 ⋆ Denominators of continued fraction convergents to sqrt(899). • a(n) = (alpha ^ n - beta ^ n) / (alpha ^ 2 - beta ^ 2) for n even. • a(n) = product { k = 1..floor((n - 1) / 2) } (58 + 4 * cos ^ 2(k * Pi / n)). •

► [A220463] 59,137,139,149,223,241,347,353,383,389,563,569,593,613,631,641,821,823,853,929,937,1009,1013,1061,1069 ⋆ Chebyshev numbers C _ v(n) for v=1. 2: a(n) is the smallest number such that if x>=a(n), then theta(x) - theta(5 * x / 6)>=n * log(x), where theta(x)=sum _{ prime p<=x } log p. • a(n)<=prime(11 * (n + 1)). •

► [A156796] 59,140,221,302,383,464,545,626,707,788,869,950,1031,1112,1193,1274,1355,1436,1517,1598,1679,1760,1841,1922,2003 ⋆ a(n) = 81 * n - 22. • a(n) = 2 * a(n - 1) - a(n - 2). (End) •

► [A158666] 1,59,233,523,929,1451,2089,2843,3713,4699,5801,7019,8353,9803,11369,13051,14849,16763,18793,20939,23201,25579,28073,30683,33409 ⋆ a(n) = 58 * n ^ 2 + 1. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). •

► [A158670] 59,239,539,959,1499,2159,2939,3839,4859,5999,7259,8639,10139,11759,13499,15359,17339,19439,21659,23999,26459,29039,31739,34559,37499 ⋆ a(n) = 60 * n ^ 2 - 1. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). •

► [A274503] 0,0,1,59,745,4665,19995,67287,191103,478335,1085370,2276560,4476758,8340982,14844570,25397490,41986770,67351314,105193671,160433625,239508775,350727575,504680605,714716145,997486425 ⋆ a(n) = 301 * binomial(n - 1,8) + 52 * binomial(n - 1,7) + binomial(n - 1,6). • a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9). • a(n) = (n - 1) * (n - 2) * (n - 3) * (n - 4) * (n - 5) * (n - 6) * (301 * n ^ 2 - 4099 * n + 14000) / 40320. - _ Wesley Ivan Hurt _ , Jun 25 2016 •

► [A248974] 59,959,4859,15359,37499,77759,144059,245759,393659,599999,878459,1244159,1713659,2304959,3037499,3932159,5011259,6298559,7819259,9599999,11668859,14055359,16790459,19906559,23437499 ⋆ Floor(1 / (n * sinh(1 / n) + n * sin(1 / n) - 2)). • a(n) = 60 * n ^ 4 - 1. • a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Colin Barker _ , Oct 22 2014 •

► [A245941] 0,0,59,1040,7014,29580,94105,247884,570220,1184424,2271735,4087160,6977234,11399700,17945109,27360340,40574040,58723984,83186355,115606944,157934270,212454620,281829009,369132060,477892804 ⋆ (16n ^ 6 - 24n ^ 5 + 2n ^ 4 + 11n ^ 3 - 6n ^ 2 + n) / 6. • a(n) = (n - 1) * n * (2 * n - 1) * (8 * n ^ 3 - 3 * n + 1) / 6. [_ Bruno Berselli _ , Aug 08 2014] • a(0)=0, a(1)=0, a(2)=59, a(3)=1040, a(4)=7014, a(5)=29580, a(6)=94105, a(n)=7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). - _ Harvey P. Dale _ , Apr 13 2015 •

► [A119886] 1,59,2416,6230,47680,120824,798976,2017760,12928000,32622464,207425536,523312640,3321118720,8378415104,53147140096,134076293120,85039120

3840,2145307295744,13606407110656,34325263155200,217703105167360,549205596176384,3483252048265216 ⋆ a(n) = 20 * a(n - 2) - 64 * a(n - 4). ● a(n) = 2 ^ (n - 4) * (- 3266 + 585 * (- 2) ^ n + 258 * (- 1) ^ n + 2583 * 2 ^ n) for n>0. - _ Colin Barker _ , Feb 05 2017 ●

► [A100659] 60,90,108,120,128,135,140,144,147,150,152,154,156,157,158,160,161,162,162,163,164,165,165,166,166 ⋆ Floor of measure (in degrees) of the interna l angles of a regular polygon with n sides. ● a(n) = floor(180 - 360 / n). - Mark Hudson. ●

► [A069976] 60,90,108,120,129,135,140,144,147,150,152,154,156,158,159,160,161,162,163,164,164,165,166,166,167 ⋆ Interior angle of a regular polygon of n side s, rounded to nearest integer. ● a(n) = round(((n - 2) * 180) / n). ●

► [A110546] 60,90,108,120,135,140,144,150,156,160,162,165,168,170,171,172,174,175,176,177,178,179 ⋆ In degrees, values of interior angles of regular polygons whose angles are integers. ● a(n) = ((n - 2) * 180)) / n. ●

► [A097714] 60,100,140,220,340,540,900,1500,2500,4140,6900,11500,19140,31900,53140,88540,147540,245900,409820,683020,1138340,1897220,3162020,5270020,8783340 ⋆ Repeatedly convert from sexagesimal to centesimal, starting with 60. ● a(n) = 100 * floor(a(n - 1) / 60) + mod(a(n - 1), 60). ●

► [A272515] 60,105,448,2016,4980,15675,61644,155155,482573,1733550,4549808,13890360,48104628,128949675,392009140,1322692581,3607864403,10929721440,36245555284,100109572875,302709337515,990788537700,2763564406113,8344789976616,27039048750600 ⋆ Number of set partitions of [n] into three blocks with di stinct sizes. ● a(n) = n! * [x ^ n * y ^ 3] Product _{ n>=1 } (1 + y * x ^ n / n!). ●

► [A309842] 60,120,204,312,444,600,780,984,1212,1464,1740,2040,2364,2712,3084,3480,3900,4344,4812,5304,5820,6360,6924,7512,8124 ⋆ a(n) is the total surface area of a hollow cubic block (defined as a block with a shell thickness of 1 cube) where n is the edge length of the removed volume. ● a(n) = 12 * n ^ 2 + 24 * n + 24. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>3. ●

► [A309315] 60,120,420,1200,3660,10920,32820,98400,295260,885720,2657220,7971600,23914860,71744520,215233620,645700800,1937102460,5811307320,17433922020,52301766000,156905298060,470715894120,1412147682420,4236443047200,12709329141660 ⋆ Number of 5 - colorings of an n - wheel graph. ● a(n) = 5 * 3 ^ (n - 1) - 15 * (- 1) ^ n. ● a(n) = 2 * a(n - 1) + 3 * a(n - 2) for n>4. ●

► [A056491] 0,0,0,0,0,0,0,60,120,960,1800,9300,16800,71400,126000,480060,834120,2968560,5103000,17355300,29607600,97567800,165528000,533274060,901020120 ⋆ Number of periodic palindromes using exactly five different symbols. ● a(n) = (k! / 2) * (S2(floor((n + 1) / 2),k) + S2(ceiling((n + 1) / 2),k)), with k=5 di fferent colors used and where S2(n,k) is the Stirling subset number A008277. - _ Robert A. Russell _ , Jun 05 2018 ● a(n) = a(n - 1) + 14 * a(n - 2) - 14 * a(n - 3) - 71 * a(n - 4) + 71 * a(n - 5) + 154 * a(n - 6) - 154 * a(n - 7) - 120 * a(n - 8) + 120 * a(n - 9). - _ Muniru A Asiru _ , Sep 26 2018 ●

► [A257146] 60,168,1092,2448,5616,6072,25308,29120,32736,39732,51888,74412,150348,194472,285852,546312,612468,1285608,1934868,2097024,2165292,2588772,3594432,3822588,5848428 ⋆ Primitive non - solvable numbers: elements of A056866 not divisible by any earlier term. ● a(n) >> n ^ 3 log ^ 3 n. - _ Char les R Greathouse IV _ , Apr 20 2015 ●

► [A249911] 0,1,60,177,352,585,876,1225,1632,2097,2620,3201,3840,4537,5292,6105,6976,7905,8892,9937,11040,12201,13420,14697,16032 ⋆ 60 - gonal (hexacontag onal) numbers: a(n) = n(29n - 28). ● a(n + 1) = a(n) + 58 * n + 1. - _ Jon Pe rry _ , Nov 09 2014 ●

► [A224335] 60,212,508,996,1724,2740,4092,5828,7996,10644,13820,17572,21948,26996,32764,39300,46652,54868,63996,74084,85180,97332,110588,124996,140604 ⋆ Number of idempotent 4X4 0..n matrices of rank 3. ● a(n) = 8 * n ^ 3 + 24 * n ^ 2 + 24 * n + 4. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) . - _ Colin Barker _ , Sep 20 2014 ●

► [A277990] 0,60,228,504,888,1380,1980,2688,3504,4428,5460,6600,7848,9204,10668,12240,13920,15708,17604,19608,21720,23940,26268,28704,31248 ⋆ a(n) = 54 * n ^ 2 + 6 * n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Libra ndi _ , Nov 13 2016 ●

► [A100153] 1,60,276,748,1575,2856,4690,7176,10413,14500,19536,25620,32851,41328,51150,62416,75225,89676,105868,123900,143871,165880,190026,216408,245125 ⋆ Structured truncated dodecahedral numbers. ● a(n) = (1 / 2) * n * (33 * n ^ 2 - 41 * n + 10). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4); a(1)=1, a(2)=60, a(3)=276, a(4)=748. - _ Harvey P. Dale _ , Dec 09 2012 ●

► [A100154] 1,60,282,772,1635,2976,4900,7512,10917,15220,20526,26940,34567,43512,53880,65776,79305,94572,111682,130740,151851,175120,200652,228552,258925 ⋆ Structured truncated icosahedral numbers. ● a(n) = (1 / 2) * n * (35 * n ^ 2 - 47 * n + 14). ●

► [A100148] 1,60,285,784,1665,3036,5005,7680,11169,15580,21021,27600,35425,44604,55245,67456,81345,97020,114589,134160,155841,179740,205965,234624,265825 ⋆ Structured small rhombicosidodecahedral numbers. ● a(n) = (1 / 6) * (108 * n ^ 3 - 150 * n ^ 2 + 48 * n). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4); a(1)=1, a(2)=60, a(3)=285, a(4)=784. - _ Harvey P. Dale _ , Oct 10 2011 ●

► [A100151] 1,60,286,788,1675,3056,5040,7736,11253,15700,21186,27820,35711,44968,55700,68016,82025,97836,115558,135300,157171,181280,207736,236648,268125 ⋆ Structured snub dodecahedral numbers. ● a(n) = (1 / 6) * n * (109 * n ^ 2 - 153 * n + 50). ●

► [A338109] 1,60,289,796,1689,3076,5065,7764,11281,15724,21201,27820,35689,44916,55609,67876,81825,97564,115201,134844,156601,180580,206889,235636,266929 ⋆ a(n) / A002939(n + 1) is the Kirchhoff index of the join of the disjoint uni on of two complete graphs on n vertices with the empty graph on n + 1 vertice s. ● a(n) = 1 + 10 * n + 31 * n ^ 2 + 18 * n ^ 3. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n >= 4. (End) ●

► [A063497] 0,60,300,840,1800,3300,5460,8400,12240,17100,23100,30360,39000,49140,60900,74400,89760,107100,126540,148200,172200,198660,227700,259440,294000 ⋆ Number of atoms in first n shells of type I hyperfullerene. ● a(n) = 20 * n ^ 3 + 30 * n ^ 2 + 10 * n. ●

► [A033591] 1,60,315,910,1989,3696,6175,9570,14025,19684,26691,35190,45325,57240,71079,86986,105105,125580,148555,174174,202581,233920,268335,305970,346969 ⋆ a(n) = (2 * n + 1) * (3 * n + 1) * (4 * n + 1). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4), with a(0)=1, a(1)=60, a(2)=315, a(3)=910. - _ Harvey P. Dale _ , Oct 24 2014 ● a(n) = n ^ 2 * Pochhammer(2 + 1 / n, 3). ●

► [A024184] 60,342,1175,3135,7140,14560,27342,48150,80520,129030,199485,299117,436800,623280,871420,1196460,1616292,2151750,2826915,3669435,4710860,5986992,7538250,9410050,11653200 ⋆ Third elementary symmetric function of 3, 4,...,n + 4. ● a(n) = n * (n + 1) * (n + 2) * (n + 7) * (n ^ 2 + 13 * n + 46) / 48. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7), with a(1)=60, a(2)=342, a(3)=1175, a(4)=3135, a(5)=7140, a(6)=14560, a(7)=27342. - _ Harvey P. Dale _ , Oct 31 2011 ●

► [A293615] 0,60,360,1260,3360,7560,15120,27720,47520,77220,120120,180180,262080,371280,514080,697680,930240,1220940,1580040,2018940,2550240,3187800,3946800,4843800,5896800 ⋆ a(n) = Pochhammer(n, 5) / 2. ● a(n) = n * (n + 1) * (n + 2) * Stirling2(4 + n, 3 + n). ● a(n) = (1 / 2) * (n * (1 + n) * (2 + n) * (3 + n) * (4 + n)). ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>5. ●

► [A060489] 0,0,60,375,1392,4020,9960,22200,45730,88543,163000,287650,489610,807625,1295944,2029165,3108220,4667690,6884660,9989345,14277740,20126570,28010840,38524310,52403246 ⋆ Number of 5 - block ordered tricoverings of an unlabeled n - set. ● a(n) = binomial(n + 9, 9) - 15 * binomial(n + 3, 3) + 45 * binomial(n + 1, 1) - 40 * binomial(n, 0) + 9 * binomial(n - 1, - 1). ●

► [A088942] 0,60,390,1450,4045,9421,19361,36281,63326,104466,164592,249612,366547,523627,730387,997763,1338188,1765688,2295978,2946558,3736809,4688089,5823829,7169629,8753354 ⋆ a(n)=60 * sum(1<=i<=j<=k<=n,i ^ 2 * j / k). ● a(n) = n / 120 * (96n ^ 4 + 765n ^ 3 + 2210n ^ 2 + 2275n + 1354). ●

► [A135037] 0,60,396,1386,3570,7650,14490,25116,40716,62640,92400,131670,182286,246246,325710,423000,540600,681156,847476,1042530,1269450,1531530,1832226,2175156,2564100 ⋆ Sums of the products of n consecutive triples of number s. ● a(1) = 0 * 1 * 2, a(2) = 0 * 1 * 2 + 3 * 4 * 5, ..., a(n) = 0 * 1 * 2 + 3 * 4 * 5 + 6 * 7 * 8 + ... + (2n - 1) * (2n) * (2n + 1). ● a(n) = (27 * n ^ 4 - 18 * n ^ 3 - 15 * n ^ 2 + 6 * n) / 4. ●

► [A069140] 0,60,504,1716,4080,7980,13800,21924,32736,46620,63960,85140,110544,140556,175560,215940,262080,314364,373176,438900,511920,592620,681384,778596,884640 ⋆ a(n) = (4n - 1) * 4n * (4n + 1). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Harvey P. Dale _ , Dec 24 2012 ●

► [A316458] 60,540,2160,6000,13500,26460,47040,77760,121500,181500,261360,365040,496860,661500,864000,1109760,1404540,1754460,2166000,2646000,3201660,3840540,4570560,5400000,6337500 ⋆ Expansion of 60 * x * (1 + 4 * x + x ^ 2) / (1 - x) ^ 5. ● a(n) = 15 * n ^ 4 + 30 * n ^ 3 + 15 * n ^ 2. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

► [A229750] 1,60,598,2347,6809,17404,41872,97565,223075,503650,1126490,2500555,5515189,12096536,26401012,57368137,124167191,267790942,575680798,1233926231,2637709321,5624580148,11966370008,25404922357,53829723019 ⋆ Number of defective 4 - colorings of an n X 3 0..3 array connected horizontally, verticall y, diagonally and antidiagonally with exactly two mistakes, and colors introduce d in row - major 0..3 order. ● a(n) = (2 * (1732 + 117 * 2 ^ n) + (- 4084 + 279 * 2 ^ n) * n + (484 + 9 * 2 ^ n) * n ^ 2) / 8 for n>2. ●

► [A136008] 0,0,60,720,4080,15600,46620,117600,262080,531360,999900,1771440,2985840,4826640,7529340,11390400,16776960,24137280,34011900,47045520,63999600,85765680,113379420,148035360,191102400 ⋆ a(n) = n ^ 6 - n ^ 2. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). - _ Wesley Ivan Hurt _ , May 04 2021 ● a(n) = 6 * binomial(n ^ 2 + 1, 3). ●

► [A305625] 0,0,0,0,60,900,8400,63000,417000,2551440,14802900,82763100,450501660,2404493700,12645952200,65771370000,339164682000,1737485315640,8855354531100,44952362878500,227475739300260,1148269299919500,5785013208282000,29100046926951000,146201097996135000 ⋆ Number of chiral pairs of rows of n colors with exactly 5 different colors. ● a(n) = (k! / 2) * (S2(n,k) - S2(ceiling(n / 2),k)), with k=5 colors used and where S2(n,k) is the Stirling subset number A008277. ●

► [A056312] 0,0,0,0,60,900,8400,63000,417120,2551560,14804700,82764900,450518460,2404510500,12646078200,65771496000,339165516120,1737486149760,8855359634100,44952367981500,227475768907860,1148269329527100,5785013373810000,29100047092479000 ⋆ Number of reversible strings with n beads using exactly five different colors. ● a(n) = k! (S2(n,k) + S2(ceiling(n / 2),k)) / 2, where k=5 is the number of colors and S2 is the Stirling subset number. - _ Robert A. R ussell _ , Sep 25 2018 ●

► [A268967] 60,912,11664,136080,1504656,16061328,167226768,1709114256,17218688400,171498136464,1692252695952,16569199473552,161173122151824,1559011041375120,15007175850454416,143849270956794768 ⋆ Number of n X 4 0..2 ar rays with some element plus some horizontally or antidiagonally adjacent neigh bor totalling two not more than once. ● a(n) = 16 * 3 ^ (2 * n - 3) * (8 * n + 3) for n>1. ●

► [A305545] 0,0,0,0,0,60,1080,11970,105840,821592,5873760,39705630,258121080,1631169900,10096542792,61535329380,370709045280,2213740488600,13132064237040,77509384111278,455754440462040,2672268921657540,15636049474529880,91353538645037220,533180401444362672 ⋆ Number of chiral pairs of color loo ps of length n with exactly 6 different colors. ● a(n) = - (k! / 4) * (S2(floor((n + 1) / 2),k) + S2(ceiling((n + 1) / 2),k)) + (k! / (2n)) * Sum _{ d|n } phi(d) * S2(n / d,k), with k=6 different colors used and where S2(n,k) is the Stirling s ubset number A008277. ●

► [A056346] 0,0,0,0,0,60,1080,11970,105840,821952,5874480,39713550,258136200,1631273220,10096734312,61536377700,370710950400,2213749658880,13132080672480,77509456944318,455754569692680 ⋆ Number of bracelets of length n usin g exactly six different colored beads. ● a(n) = (k! / 4) * (S2(floor((n + 1) / 2), k) + S2(ceiling((n + 1) / 2),k)) + (k! / 2n) * Sum _{ d|n } phi(d) * S2(n / d,k), where k=6 is the number of colors and S2 is the Stirling subset number A008 277. ●

► [A289156] 60,1224,8436,34320,103020,254040,546084,1060896,1907100,3224040,5185620,8004144,11934156,17276280,24381060,33652800,45553404,60606216,79399860,102592080,130913580,165171864,206255076,255135840 ⋆ Largest area of triangles with integer sides and area = n times perimeter. ● a(n) = 4 * n * (2 * n ^ 2 + 1) * (4 * n ^ 2 + 1). ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. ●

► [A288960] 0,0,60,1248,8400,35520,114660,309120,731808,1569600,3114540,5802720,10261680,17367168,28310100,44674560,68527680,102522240,150012828,215186400,303208080,420383040,574335300,774204288,1030860000 ⋆ Number of 6 - cycles in the n X n rook graph. ● a(n) = (n - 1) * (n - 2) * n ^ 2 * (n + 2) * (n ^ 2 + 2 * n - 11) / 6. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) + a(n - 8). ●

► [A053528] 0,0,0,0,0,60,1701,14952,81228,331884,1116675,3256407,8500734,20306286,45093048,94189095,186736368,353904096,644842674,1134910242,1936817820,3215467584,5207403663,8245956642,12793342716 ⋆ Number of bipartite graphs with 5 edges on nodes { 1..n } . ● a(n) = (n - 4) * (n - 3) * (n - 2) * (n - 1) * n * (n ^ 5 + 5 * n ^ 4 + 5 * n ^ 3 - 85 * n ^ 2 - 374 * n - 960) / 3840. ●

► [A035800] 1,60,1800,36020,541200,6516012,65520920,566262180,4296107040,29081139740,177923724072,994286700180,5119703270960,24470719227660,109262828065080,458260342666116,1814109445277760,6807471232021500 ⋆ Coordination sequence for lattice D *_ 30 (with edges defined by l _ 1 norm = 1). ● a(m) =add(2 ^ k * binomial(n, k) * binomial(m - 1, k - 1), k=0..n) + 2 ^ n * binomial((n + 2 * m) / 2 - 1, n - 1); with n=30. ●

► [A214946] 0,60,1848,15960,80040,292740,868560,2218608,5062320,10575180,20577480,37769160,66015768,110690580,179077920,280842720,428571360,638388828,930657240,1330760760,1869981960,2586474660,3526338288,4744798800 ⋆ Number of squarefree words of length 7 in an (n + 1) - ary alphabet. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. ●

► [A054623] 0,1,60,2195,29144,217045,1119796,4483815,14913200,43046889,111111340,261994491,573309320,1178278205,2295672484,4271485135,7635498336,13176431825,22039922460,35854190179,56888890680,88253340581,134141026580 ⋆ Number of ways to color vertices of a 9 - gon using <= n colors, allowing only rotations. ● a(n) = Sum _{ d|9 } phi(d) * n ^ (9 / d) / 9. ● a(n) = n * (n ^ 8 + 2 * n ^ 2 + 6) / 9. ● a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10). [_ Vincenzo Librandi _ , Apr 29 2012] ●

► [A130647] 0,60,2241,2517,2821,15180,16780,18544,90517,99841,110121,529600,583944,643860,3088761,3405501,3754717,18004644,19850740,21886120,104940781,115700617,127563681,611641720,674354640 ⋆ Nonnegative values x of solutions (x, y) to the Diophantine equation x ^ 2 + (x + 839) ^ 2 = y ^ 2. ● a(n) = 6 * a(n - 3) - a(n - 6) + 1678 for n > 6; a(1)=0, a(2)=60, a(3)=2241, a(4)=2517, a(5)=2821, a(6)=15180. ●

► [A291912] 0,0,60,18336,840800,14629200,143939460,971877760,5018582016,21193207200,76518984300,243664127520,699965254560,1844973808496,4520720267700,10403885452800,22674321863680,47112768624960,93845538165276,180039346960800,333959821087200,600947653207440 ⋆ Number of 6 - cycles in the n X n rook complement graph. ● a(n) = (- 2 + n) * (- 1 + n) ^ 2 * n ^ 2 * (- 52 + 12 * n + 76 * n ^ 2 - 63 * n ^ 3 - 2 * n ^ 4 + 20 * n ^ 5 - 8 * n ^ 6 + n ^ 7) / 12. ● a(n) = 13 * a(n - 1) - 78 * a(n - 2) + 286 * a(n - 3) - 715 * a(n - 4) + 1287 * a(n - 5) - 1716 * a(n - 6) + 1716 * a(n - 7) - 1287 * a(n - 8) + 715 * a(n - 9) - 286 * a(n - 10) + 78 * a(n - 11) - 13 * a(n - 12) + a(n - 13). ●

► [A042859] 1,1,61,62,3781,3843,234361,238204,14526601,14764805,900414901,915179706,55811197261,56726376967,3459393815281,3516120192248,214426605350161,217942725542409,13290990137894701,13508932863437110,823826961944121301,837335894807558411 ⋆ Denominators of continued fraction convergents to sqrt(960). ● a(n) = 62 * a(n - 2) - a(n - 4) for n>3. - _ Vincenzo Librandi _ , Dec 25 2013 ●

► [A106390] 1,61,97,277,349,649,757,1177,1321,1861,2041,2701,2917,3697,3949,4849,5137,6157,6481,7621,7981,9241,9637,11017,11449 ⋆ Numbers k such that 13 k = 6j ^ 2 + 6j + 1. ● a(1)=1, a(2)=61; for odd n a(n) = a(n - 1) + 18 * (n - 1) , for even n a(n) = a(n - 1) + 60 * (n - 1). ● a(n) = (25 - 21 * (- 1) ^ n + 6 * (- 13 + 7 * (- 1) ^ n) * n + 78 * n ^ 2) / 4. - _ Colin Barker _ , Apr 16 2014 ●

► [A063337] 1,61,133,205,277,349,421,493,565,637,709,781,853,925,997,1069,1141,1213,1285,1357,1429,1501,1573,1645,1717 ⋆ Dimension of the space of weight n cuspidal newforms for Gamma _ 1(64). ● a(n) = 2 * a(n - 1) - a(n - 2) for n>4. G.f.: x ^ 2 * (- 1 + 63 * x + 10 * x ^ 2) / (1 - x) ^ 2. [_ Colin Barker _ , Sep 28 2012] ●

► [A158673] 1,61,241,541,961,1501,2161,2941,3841,4861,6001,7261,8641,10141,11761,13501,15361,17341,19441,21661,24001,26461,29041,31741,34561 ⋆ a(n) = 60 * n ^ 2 + 1. ● a(n)= 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A174333] 0,61,244,549,976,1525,2196,2989,3904,4941,6100,7381,8784,10309,11956,13725,15616,17629,19764,22021,24400,26901,29524,32269,35136 ⋆ 61 * n ^ 2. ● a(n) = (31 * n) ^ 2 - (30 * n) ^ 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Jul 12 2012 ●

► [A158680] 61,247,557,991,1549,2231,3037,3967,5021,6199,7501,8927,10477,12151,13949,15871,17917,20087,22381,24799,27341,30007,32797,35711,38749 ⋆ a(n) = 62 * n ^ 2 - 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A357965] 1,1,1,1,1,61,361,1261,3361,68041,1073521,8343721,43290721,432509221,11472541081,165124339381,1457296102081,12237047593681,32236452139248 1,7462073325643921,103362225413048641,1051987428484484941,21127644716862970441 ⋆ Expansion of e.g.f. exp((exp(x ^ 4) - 1) / x ^ 3). ● a(n) = n! * Sum _{ k=0..floor(n / 4) } Stirling2(n - 3 * k,n - 4 * k) / (n - 3 * k)!. ●

► [A353225] 1,1,1,1,1,61,361,1261,3361,128521,1678321,11670121,56596321,1773048421,37020623641,410615985781,3056256665281,88439609228881,2516514283997281,39513591769228561,409546654143301441,1167930256596265134 1,41300878353473518164 1 ⋆ Expansion of e.g.f. (1 - x ^ 4) ^ (- 1 / x ^ 3). ● a(0) = 1; a(n) = (n - 1)! * Sum _{ k=1..floor((n + 3) / 4) } (4 * k - 3) / k * a(n - 4 * k + 3) / (n - 4 * k + 3)!. ● a(n) = n! * Sum _{ k=0..floor(n / 4) } |Stirling1(n - 3 * k,n - 4 * k)| / (n - 3 * k)!. ●

► [A373520] 1,1,1,1,1,61,361,1261,3361,143641,1829521,12501721,59922721,2173048021,44315751481,478799701381,3492321094081,116722067432881,3290135175240481,50242015215929521,508061488330088641,1641873612329290494 1,58542788713491529524 1 ⋆ Expansion of e.g.f. exp(x / (1 - x ^ 4) ^ (1 / 2)). ● a(n) = n! * Sum _{ k=0..floor(n / 4) } binomial(n / 2 - k - 1,k) / (n - 4 * k)!. ●

► [A283869] 61,661,1201,4261,5101,6121,6361,12421,12541,12841,13921,15361,17041,18301,19801,21661,26821,31321,36901,47521,54121,55921,56101,71341,80701 ⋆ Primes p such that p + 12, (p + 1) / 2, and (p + 13) / 2 are also prime. ● a(n) == 1 (mod 60). ●

► [A173805] 1,61,661,6661,66661,666661,6666661,66666661,666666661,6666666661,66666666661,666666666661,6666666666661,66666666666661,666666666666661,6666666666666661,66666666666666661 ⋆ a(n) = (6 * 10 ^ n - 51) / 9 for n>0. ● a(n) = 10 * a(n - 1) + 51 with n>0, a(0)= - 1. ● a(n) = 11 * a(n - 1) - 10 * a(n - 2). - _ Vincenzo Librandi _ , Jul 05 2012 ●

► [A372963] 1,61,721,3901,15601,43981,117601,249661,525601,951661,1771441,2812621,4826641,7173661,11248321,15978301,24137281,32061661,47045521,60859501,84790321,108057901,148035361,180005581,243765601 ⋆ a(n) = Sum _{ 1 <= x _ 1, x _ 2, x _ 3, x _ 4 <= n } (n / gcd(x _ 1, x _ 2, x _ 3, x _ 4, n)) ^ 2 . ● a(n) = Sum _{ d|n } mu(n / d) * (n / d) ^ 2 * sigma _ 6(d). ●

► [A000507] 61,1385,19028,206276,1949762,16889786,137963364,1081702420,8236142455,61386982075,450403628440,3266265481144,23480284103492,167687984079924,1191656966048088,8436830209386360,59563995267159825,419628657826253805 ⋆ Number of permutations of [n] with exactly 3 increasing runs of length at least 2. ● a(n) = (3 * 7 ^ n - (6 * n - 9) * 5 ^ n + (6 * n ^ 2 - 18 * n + 3) * 3 ^ n - 4 * n ^ 3 + 18 * n ^ 2 - 8 * n - 15) / 192. ●

► [A230007] 62,206,6002,6439562,60000002,6004356002,29355232298,60000000002,292369967108,600439956002,643956439562,6303723993362 ⋆ Numbers n such that sigma(n) = reversal(n + 7). ● a(1)=2 * f(0,s,0), a(2)=2 * f(0, - 3,1), a(3)= 2 * f(1,s,0), a(4)=2 * f(0,1,1), a(5)=2 * f(3,s,0), a(6)=2 * f(2,0,1), a(8)=2 * f(9 / 2,s,0), a(10)=2 * f(2,2,1), a(11)=2 * f(0,1,2), where f(r,s,t) = 3 * 10 ^ (t * (s + 4) + 2 * r + 1) + 10 ^ (r + 1) * (22 * (10 ^ (s + 2) - 1) * (10 ^ (t * (s + 4)) - 1) / (10 ^ (s + 4) - 1)) + 1. ●

► [A158067] 62,252,570,1016,1590,2292,3122,4080,5166,6380,7722,9192,10790,12516,14370,16352,18462,20700,23066,25560,28182,30932,33810,36816,39950 ⋆ a(n) = 64 * n ^ 2 - 2 * n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Feb 11 2012 ●

► [A100158] 1,62,293,804,1705,3106,5117,7848,11409,15910,21461,28172,36153,45514,56365,68816,82977,98958,116869,136820,158921,183282,210013,239224,271025 ⋆ Structured disdyakis triacontahedral numbers (vertex structure 11). ● a(n) = (1 / 6) * (110 * n ^ 3 - 150 * n ^ 2 + 46 * n). ●

► [A100166] 1,62,295,812,1725,3146,5187,7960,11577,16150,21791,28612,36725,46242,57275,69936,84337,100590,118807,139100,161581,186362,213555,243272,275625 ⋆ Structured deltoidal hexacontahedral numbers (vertex structure 9). ● a(n) = (1 / 6) * (112 * n ^ 3 - 156 * n ^ 2 + 50 * n). ●

► [A100159] 1,62,297,820,1745,3186,5257,8072,11745,16390,22121,29052,37297,46970,58185,71056,85697,102222,120745,141380,164241,189442,217097,247320,280225 ⋆ Structured disdyakis triacontahedral numbers (vertex structure 7). ● a(n) = (1 / 6) * (114 * n ^ 3 - 162 * n ^ 2 + 54 * n) = n * (19 * n ^ 2 - 27 * n + 9) . ●

► [A100160] 1,62,299,828,1765,3226,5327,8184,11913,16630,22451,29492,37869,47698,59095,72176,87057,103854,122683,143660,166901,192522,220639,251368,284825 ⋆ Structured disdyakis triacontahedral numbers (vertex structure 5). ● a(n) = (1 / 6) * (116 * n ^ 3 - 168 * n ^ 2 + 58 * n). ●

► [A069473] 62,602,2702,8162,19502,39962,73502,124802,199262,303002,442862,626402,861902,1158362,1525502,1973762,2514302,3159002,3920462,4812002,5847662,7042202,8411102,9970562,11737502 ⋆ First differences of (n + 1) ^ 6 - n ^ 6 (A022522). ● a(n) = 30 * n ^ 4 + 120 * n ^ 3 + 210 * n ^ 2 + 180 * n + 62. ●

► [A037962] 0,1,62,1806,40824,834120,16435440,322494480,6411968640,130456085760,2731586457600,59056027430400,1320663933388800,30575780537702400,733062897120153600,18198613875746304000 ⋆ a(n) = n * (15 * n ^ 3 + 30 * n ^ 2 + 5 * n - 2) * (n + 4)! / 5760. ● a(n) = (- 1) ^ n * Sum _{ j=0..n } (- 1) ^ j * binomial(n, j) * j ^ (n + 4). ● a(n) = n! * StirlingS2(n + 4, n). ●

► [A038865] 63,117,189,279,387,513,657,819,999,1197,1413,1647,1899,2169,2457,2763,3087,3429,3789,4167,4563,4977,5409,5859,6327 ⋆ (n + 3) ^ 3 - n ^ 3. ● a(1)=63, a(2)=117, a(3)=189, a(n)=3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Mar 04 2014 ●

► [A096023] 63,123,183,243,303,363,483,543,603,663,723,783,903,963,1023,1083,1143,1203,1323,1383,1443,1503,1563,1623,1743 ⋆ Numbers congruent to { 63, 123 , 183, 243, 303, 363 } mod 420. ● a(n) = a(n - 1) + a(n - 6) - a(n - 7) for n>7; a(n) = a(n - 6) + 420 for n>6. ● a(n) = (210 * n - 96 - 30 * cos(n * Pi / 3) - 30 * cos(2 * n * Pi / 3) - 15 * cos(n * Pi) + 30 * sqrt(3) * sin(n * Pi / 3) + 10 * sqrt(3) * sin(2 * n * Pi / 3)) / 3. ● a(6k) = 420k - 57, a(6k - 1) = 420k - 117, a(6k - 2) = 420k - 177, a(6k - 3) = 420k - 237, a(6k - 4) = 420k - 297, a(6k - 5) = 420k - 357. (End) ●

► [A211850] 63,147,286,494,785,1173,1672,2296,3059,3975,5058,6322,7781,9449,11340,13468,15847,18491,21414,24630,28153,31997,36176,40704,45595 ⋆ Number of nonnegative integer arrays of length 2n + 5 with new values 0 upwards introduced in order, no three adjacent elements all unequal, and containing the value n + 1. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>4. ●

► [A077263] 63,179,523,1619,5239,17379,58323,196691,664623,2247443,7601883,25715603,86993639,294295491,995592355,3368062355,11394070559,38545861491,130399711915,441139061715,1492362751831,5048627021731,17079382870643,57779138376659 ⋆ Number of (undirected) cycles in the n - th order antiprism graph. ● a(n) = 6 * a(n - 1) - 11 * a(n - 2) + 8 * a(n - 3) - 3 * a(n - 4) + 2 * a(n - 5) - a(n - 6) for n>8. - _ Eric W. Weisstein _ , Dec 19 2013 ●

► [A098140] 0,1,63,186,370,615,921,1288,1716,2205,2755,3366,4038,4771,5565,6420,7336,8313,9351,10450,11610,12831,14113,15456,16860 ⋆ 63 - gonal numbers: a(n) = n * (61 * n - 59) / 2. ● a(n) = n * (61 * n - 59) / 2. ● a(0)=0, a(1)=1, a(2)=63, a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Jun 09 2011 ●

► [A055811] 1,63,192,432,832,1452,2364,3653,5418,7773,10848,14790,19764,25954,33564,42819,53966,67275,83040,101580,123240,148392,177436,210801,248946 ⋆ a(n) = T(n,n - 6), array T as in A055807. • a(n) = n * (1584 - 310 * n - 85 * n ^ 2 + 10 * n ^ 3 + n ^ 4) / 120 for n > 6, with a(6) = 1. •

► [A035329] 0,63,198,429,780,1275,1938,2793,3864,5175,6750,8613,10788,13299,16170,19425,23088,27183,31734,36765,42300,48363,54978,62169,69960 ⋆ a(n) = n * (2 * n + 5) * (2 * n + 7). • a(n) = 4 * n ^ 3 + 24 * n ^ 2 + 35 * n. • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). •

► [A097973] 63,215,1727,5831,26999,74087,215999,373247,1061207,1259711,2628071,3374999,5831999,7077887,7762391,11852351,13823999,19682999,22425767,30371327,42144191,74087999,80621567,98611127,142236647 ⋆ Least m>p such that p|m, p + 1|m + 1 and p + 2|m + 2, for twin prime pairs (p, p + 2), p in A001359. • a(n) = p * (p + 1) * (p + 2) + p = (p + 1) ^ 3 - 1 (p=A001359, p + 1 =A014574). •

► [A083079] 1,63,229,547,1065,1831,2893,4299,6097,8335,11061,14323,18169,22647,27805,33691,40353,47839,56197,65475,75721,86983,99309,112747,127345 ⋆ 4th column of number array A083075. • a(n) = 8 * n ^ 3 + 28 * n ^ 2 + 26 * n + 1 = (n * (2n + 3) ^ 3 + 1) / (n + 1). • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4); a(0)=1, a(1)=63, a(2)=229, a(3)=547. - _ Harvey P. Dale _ , May 14 2011 •

► [A158676] 1,63,249,559,993,1551,2233,3039,3969,5023,6201,7503,8929,10479,12153,13951,15873,17919,20089,22383,24801,27343,30009,32799,35713 ⋆ a(n) = 62 * n ^ 2 + 1. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). •

► [A157948] 63,254,573,1020,1595,2298,3129,4088,5175,6390,7733,9204,10803,12530,14385,16368,18479,20718,23085,25580,28203,30954,33833,36840,39975 ⋆ a(n) = 64 * n ^ 2 - n. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Jan 29 2012 •

► [A158684] 63,255,575,1023,1599,2303,3135,4095,5183,6399,7743,9215,10815,12543,14399,16383,18495,20735,23103,25599,28223,30975,33855,36863,39999 ⋆ a(n) = 64 * n ^ 2 - 1. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). •

► [A063398] 1,63,255,863,2655,7683,21287,57071,149087,381311,958207,2372095,5796863,14007295,33511423,79466495,186949631,436666367,1013317631,2337538047,5362941951,12242386943,27817148415,62934482943,141815709695 ⋆ T(5,n) with T(n,m) as in A063394. • a(n) = (24 * (- 8 + 81 * 2 ^ n) + 1671 * 2 ^ (1 + n) * n + 803 * 2 ^ n * n ^ 2 + 27 * 2 ^ (1 + n) * n ^ 3 + 2 ^ n * n ^ 4) / 192 for n>0. - _ Colin Barker _ , May 27 2015 •

► [A055817] 1,63,448,2816,16896,99200,575872,3322112,19096064,109541824,627653440,3594256896,20577979392,117814911744,674630384384,3864033226240,22138650598400,126885674577728,727501822004416,4172725286118656 ⋆ a(n) = T(2n + 5,n), array T as in A055807. • a(n) = (n + 5) * hypergeom([- n - 4, n], [2], - 1) = Sum _{ s=1..n + 5 } binomial(n + 5,s) * binomial(s + n - 2,n - 1) for n >= 1. - _ Petros Hadjicostas _ , Feb 13 2021 •

► [A075935] 63,455,1611,2709,12365,20630,37463,70299,135886,786510,1310867,2363919,12582995,20971674,37749317,71307271,138674310,272892511,541332108,3221225558,5368709276,9663677009,18253615171,35433742539 ⋆ Basis for code in A075934. • a(n) = b(2 ^ n), where b is A075934, the binary lexicode, d=6. •

► [A228262] 63,621,2511,6419,12947,22727,36471,54851,78539,108207,144527,188171,239811,300119,369767,449427,539771,641471,755199,881627,1021427,1175271,1343831,1527779,1727787 ⋆ Number of third differences of arrays of length 6 of numbers in 0..n. • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>8. •

► [A228221] 63,665,3151,9705,23351,47953,88215,149681,238735,362601,529343,747865,1027911,1380065,1815751,2347233,2987615,3750841,4651695,5705801,6929623,8340465,9956471,11796625,13880751 ⋆ Number of second differences of arrays of length 6 of numbers in 0..n. • a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. •

► [A090028] 0,63,665,3969,14833,45801,112825,257257,515025,980217,1720145,2934505,4693473,7396137,11112129,16464385,23555441,33430033,45927505,62881561,83865257,111331241,144772201,187839225,238778281 ⋆ Number of distinct lines through the origin in 6 - dimensional cube of side length n. • a(n) = (n + 1) ^ 6 - 1 - Sum _{ j=2..n + 1 } a(floor(n / j)). - _ Chai Wah Wu _ , Mar 30 2021 •

► [A152725] 0,1,63,666,3430,12195,34461,83188,178956,352485,647515,1124046,1861938,2964871,4564665,6825960,9951256,14186313,19825911,27219970,36780030,48986091,64393813,83642076,107460900 ⋆ a(n) = n * (n + 1) * (n ^ 4 + 2 * n ^ 3 - 2 * n ^ 2 - 3 * n + 3) / 2. • a(n) = n ^ 6 - (n - 1) ^ 6 + (n - 2) ^ 6 - ... + ((- 1) ^ n) * 0 ^ 6. •

► [A086578] 0,63,693,6993,69993,699993,6999993,69999993,699999993,6999999993,69999999993,699999999993,6999999999993,69999999999993,699999999999993,6999999999999993,69999999999999993,699999999999999993,6999999999999999993,69999999999999999993,699999999999999999993,6999999999999999999993 ⋆ a(n) = 7 * (10 ^ n - 1). • a(n) = 11 * a(n - 1) - 10 * a(n - 2) for n > 1. •

► [A221968] 63,705,3647,12609,34111,78273,159615,297857,518719,854721,1345983,2041025,2997567,4283329,5976831,8168193,10959935,14467777,18821439,24165441,30659903,38481345,47823487,58898049,71935551 ⋆ Number of - n..n arrays of length 5 with the sum ahead of each element differing from the sum following that element by n or less. • a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. •

► [A343978] 1,63,727,4031,15559,45863,116855,257983,526615,983583,1755143,2935231,4776055,7407727,11256623,16498719,23859071,33434063,46467719,62949975,84644439,111486599,146142583,187854119,240880239 ⋆ Number of ordered 6 - tuples (a,b,c,d,e,f) with gcd(a,b,c,d,e,f)=1 (1<= { a,b,c,d,e,f } <= n). • a(n) = Sum _{ k=1..n } mu(k) * floor(n / k) ^ 6. •

► [A371878] 1,63,727,4031,15621,45801,117643,257983,529981,984123,1771551,2930537,4826797,7411509,11356467,16510911,24137553,33388803,47045863,62968251,85526461,111607713,148035867,187553641,244078121 ⋆ a(n) = Sum _{ 1 <= x _ 1, x _ 2, x _ 3, x _ 4, x _ 5 <= n } n / gcd(x _ 1, x _ 2, x _ 3, x _ 4, x _ 5, n). • a(n) = Sum _{ 1 <= x _ 1, x _ 2, x _ 3, x _ 4, x _ 5 <= n } (gcd(x _ 1, x _ 2, x _ 3, x _ 4, n) / gcd(x _ 1, x _ 2, x _ 3, x _ 4, x _ 5, n)) ^ 5. • a(n) = Sum _{ d|n } mu(n / d) * (n / d) * sigma _ 6(d). •

► [A069091] 1,63,728,4032,15624,45864,117648,258048,530712,984312,1771560,2935296,4826808,7411824,11374272,16515072,24137568,33434856,47045880,62995968,85647744,111608280,148035888,187858944,244125000 ⋆ Jordan function J _ 6 (n). • a(n) = Sum _{ d|n } d ^ 6 * mu(n / d). • a(n) = n ^ 6 * Product _{ distinct primes p dividing n } (1 - 1 / p ^ 6). - _ Tom Edgar _ , Jan 09 2015 •

► [A123866] 0,63,728,4095,15624,46655,117648,262143,531440,999999,1771560,2985983,4826808,7529535,11390624,16777215,24137568,34012223,47045880,63999999,85766120,113379903,148035888,191102975,244140624 ⋆ a(n) = n ^ 6 - 1. • a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7); a(1)=0, a(2)=63, a(3)=728, a(4)=4095, a(5)=15624, a(6)=46655, a(7)=117648. - _ Harvey P. Dale _ , Nov 18 2012 •

► [A091027] 63,910,6083,27483,97188,289884,762048,1816248,4001613,8264718,16168867,30204083,54215070,93980040,157979640,258402312,412440315,643939374,985474539,1480935379,2188715144,3185611044,4571556360,6475319760,9061322985 ⋆ Sixth column (m=7) of array A090452. • a(n)= (n + 12) * (n + 9) * (n + 3) * (n + 2) * (n + 1) * (n ^ 5 + 48 * n ^ 4 + 769 * n ^ 3 + 4782 * n ^ 2 + 11200 * n + 8400) / 86400. 86400=10! / (2 * 3 * 7). •

► [A243214] 0,63,1566,13971,77124,319206,1083723,3181401,8344854,20006349,44548227,93248628,185176866,351410664,640972980,1129067352,1928196432,3203016813 ⋆ Number of ways to place 5 points on a triangular grid of side n, so that no three of them are vertices of an equilateral triangle with sides parallel to the grid. • a(n) = (n ^ 10 + 5 * n ^ 9 - 10 * n ^ 8) / 3840 + O(n ^ 7) •

► [A272297] 64,65,80,145,320,689,1360,2465,4160,6625,10064,14705,20800,28625,38480,50689,65600,83585,105040,130385,160064,194545,234320,279905,331840 ⋆ a(n) = n ^ 4 + 64. • a(n) = (n ^ 2 - 8) ^ 2 + (4 * n) ^ 2. •

► [A151984] 0,1,64,65,128,129,192,193,256,257,320,321,384,385,448,449,512,513,576,577,640,641,704,705,768 ⋆ Numbers that are congruent to { 0, 1 } mod 64. • a(n) = (- 95 - 31 * (- 1) ^ n + 64 * n) / 2. • a(n) = a(n - 1) + a(n - 2) - a(n - 3). •

► [A135124] 1,64,65,4096,4097,4160,4161,262144,262145,262208,262209,266240,266241,266304,266305,16777216,16777217,16777280,16777281,16781312,16781313,16781376,16781377,17039360,17039361 ⋆ Numbers such that the digital sums in base 2, base 4 and base 8 are all equal. • a(n) = (1 / 2) * Sum _{ k=0..floor(log _ 2(n)) } (1 - (- 1) ^ floor(n / 2 ^ k)) * 64 ^ k. •

► [A070931] 1,64,68,120,729,4096,15625,46656,117649,262144,531441,1000000,1771561,2985984,4826809,7529536,11390625,16777216,24137569,34012224,47045881,64000000,85766121,113379904 ⋆ Numbers k such that the smallest integer value >= 0 of the form x ^ 3 - k ^ 2 equals the smallest integer value >= 0 of the form x ^ 2 - k ^ 3. • a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n > 11. •

► [A046305] 64,96,128,144,160,192,216,224,240,256,288,320,324,336,352,360,384,400,416,432,448,480,486,504,512 ⋆ Divisible by at least 6 primes (counted with multiplicity). • a(n) = n + O(n (log log n) ^ 4 / log n). - _ Charles R Greathouse IV _ , Apr 07 2017 •

► [A175163] 64,96,160,288,544,1056,2080,4128,8224,16416,32800,65568,131104,262176,524320,1048608,2097184,4194336,8388640,16777248,33554464,67108896,134217760,268435488,536870944 ⋆ a(n) = 32 * (2 ^ n + 1). • a(n) = 3 * a(n - 1) - 2 * a(n - 2), a(0)=64, a(1)=96. - _ Vincenzo Librandi _ , Dec 28 2010 •

► [A061099] 1,64,100,289,361,676,784,1225,1369,1936,2116,2809,3025,3844,4096,5041,5329,6400,6724,7921,8281,9604,10000,11449,11881 ⋆ Squares with digital root 1. • a(n) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). - _ Wesley Ivan Hurt _ , Apr 21 2021 •

► [A324487] 0,1,1,64,125,1331,4096,24389,91125,438976,1771561,7880599,32768000,141420761,594823321,2537716544,10720765125,45537538411,192699928576,817138135549,3460080078125,14662949322176,62103840598801,263115950765039,1114512556032000 ⋆ a(n) = A001350(n) ^ 3. • a(n) = 4 * a(n - 1) + 12 * a(n - 2) - 44 * a(n - 3) - 44 * a(n - 4) + 132 * a(n - 5) + 66 * a(n - 6) - 132 * a(n - 7) - 44 * a(n - 8) + 44 * a(n - 9) + 12 * a(n - 10) - 4 * a(n - 11) - a(n - 12) for n>11. •

► [A152691] 0,64,128,192,256,320,384,448,512,576,640,704,768,832,896,960,1024,1088,1152,1216,1280,1344,1408,1472,1536 ⋆ Multiples of 64. • a(n) = 64 * n. •

► [A195233] 64,155,246,337,428,519,610,701,792,883,974,1065,1156,1247,1338,1429,1520,1611,1702,1793,1884,1975,2066,2157,2248 ⋆ Number of lower triangles of a 3 X 3 0..n array with each element differing from all of its diagonal, vertical, antidiagonal and horizontal neighbors by one or less. • a(n) = 2 * a(n - 1) - a(n - 2) for n>2. •

► [A202332] 64,191,478,1052,2102,3896,6800,11299,18020,27757,41498,60454,86090,120158,164732,222245,295528,387851,502966,645152,819262,1030772,1285832,1591319,1954892 ⋆ Number of (n + 1) X 6 binary arrays with consecutive windows of two bits considered as a binary number nondecreasing in every row and column. • a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. •

► [A175166] 0,64,192,448,960,1984,4032,8128,16320,32704,65472,131008,262080,524224,1048512,2097088,4194240,8388544,16777152,33554368,67108800,134217664,268435392,536870848,1073741760 ⋆ a(n) = 64 * (2 ^ n - 1). • a(n) = 2 ^ (n + 6) - 64. • a(n) = 3 * a(n - 1) - 2 * a(n - 2), a(0)=0, a(1)=64. - _ Vincenzo Librandi _ , Dec 28 2010 •

► [A273321] 64,206,488,960,1672,2674,4016,5748,7920,10582,13784,17576,22008,27130,32992,39644,47136,55518,64840,75152,86504,98946,112528,127300,143312 ⋆ Wiener index of graph of b.c.c. unit cells in a line = Sum of distances in a b.c.c. row graph. • a(n) = (25 / 3) * n ^ 3 + 20 * n ^ 2 + (71 / 3) * n + 12. • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>4. •

► [A223332] 64,243,3969,64827,1059723,17324685,283231809,4630406067,75700050363,1237579942725,20232537609249,330771018512907,5407599817782603,88405979220238365,1445302430884160289,23628482316968449347 ⋆ Rolling cube footprints: number of 3 X n 0..7 arrays starting with 0 where 0..7 label vertices of a cube and every array movement to a horizontal or antidiagonal neighbor moves along a corresponding cube edge. • a(n) = (49 / 54) * ((9 - 3 * sqrt(6)) ^ n + (3 * (3 + sqrt(6))) ^ n) for n>2. •

► [A263924] 64,256,272,324,513,514,516,544,1026,1028,1032,1064,1088,1089,1216,1544,1552,1568,1569,2052,2056,2064,2188,2192,2193 ⋆ Numbers n such that th

ere is a prime p > 3 and an exponent e such that the central binomial coefficien t binomial(2n, n) is divisible by p ^ e but not by either 2 ^ e or 3 ^ e. ● a(n) > > n ^ 1.014. (This is surely not optimal.) - _ Charles R Greathouse IV _ , Jan 18 2016 ●

► [A141478] 64,256,640,1280,2240,3584,5376,7680,10560,14080,18304,23296,29120,35840,43520,52224,62016,72960,85120,98560,113344,129536,147200,166400,187200 ★ a(n) = binomial(n + 2,3) * 4 ^ 3. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Vincenzo Librandi _ , Jun 29 2012 ●

► [A366817] 64,298,752,1476,2520,3934,5768,8072,10896,14290,18304,22988,28392,34566,41560,49424,58208,67962,78736,90580,103544,117678,133032,149656,167600 ★ Detour index of n body - centered cubic grid unit cells in a row. ● a(n) = (25 * n ^ 3 + 180 * n ^ 2 - 13 * n) / 3. ●

► [A372093] 64,308,2116,16892,143224,1250228,11091536,99371772,895878604,8109607248,73605150496,669235388612,6091889767144,55495316073288,505799972171296,4611529143198652,42053844507644124,383555932615158068,3498586905231628036,31914171636394303392 ★ Number of Eulerian orientations of the tor us grid graph C _ 5 X C _ n. ● a(n) = 24 * a(n - 1) - 219 * a(n - 2) + 988 * a(n - 3) - 2407 * a(n - 4) + 3181 * a(n - 5) - 2042 * a(n - 6) + 292 * a(n - 7) + 280 * a(n - 8) - 96 * a(n - 9). ●

► [A221686] 64,320,844,1692,2856,4326,6102,8184,10572,13266,16266,19572,23184,27102,31326,35856,40692,45834,51282,57036,63096,69462,76134,83112,90396 ★ Number of 0..n arrays of length 7 with each element differing from at least one neighbor by 1 or less, starting with 0. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>6. ●

► [A016779] 1,64,343,1000,2197,4096,6859,10648,15625,21952,29791,39304,50653,64000,79507,97336,117649,140608,166375,195112,226981,262144,300763,343000,389017 ★ a(n) = (3 * n + 1) ^ 3. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Wesley Ivan Hurt _ , Oct 02 2020 ●

► [A137739] 1,64,355,1014,2218,4217,7343,12018,18767,28233,41193,58575,81476,111181,149183,197204,257217,331469,422505,533193,666750,826769,1017247,1242614,1507763 ★ Number of different strings of length n + 6 obtained from "123...n" by iteratively duplicating any substring. ● a(n) = 1 / 720 * (n + 9) * (n ^ 5 + 36 * n ^ 4 + 451 * n ^ 3 + 1716 * n ^ 2 - 380 * n - 8880) - 1 for n>4. ●

► [A224042] 64,377,848,1422,2149,3107,4395,6124,8439,11527,15626,21035,28125,37351,49265,64530,83935,108411,139048,177113,224069,281595,351607,436280,538071 ★ Number of 6 X n 0..1 arrays with antidiagonals unimodal and rows a nd diagonals nondecreasing ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>11. ●

► [A249984] 64,384,1242,3030,6252,11524,19574,31242,47480,69352,98034,134814,181092,238380,308302,392594,493104,611792,750730,912102,1098204,1311444,1554342,1829530,2139752 ★ Number of length 4 + 1 0..2 * n arrays with the sum of the absolute values of adjacent differences equal to 4 * n. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

► [A221598] 64,393,1210,2715,5082,8475,13056,18987,26430,35547,46500,59451,74562,91995,111912,134475,159846,188187,219660,254427,292650,334491,380112,429675,483342 ★ Number of 0..n arrays of length 6 with each element differing fr om at least one neighbor by 1 or less. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>7. ●

► [A188785] 0,64,432,1536,4000,8640,16464,28672,46656,72000,106480,152064,210912,285376,378000,491520,628864,793152,987696,1216000,1481760,1788864,2141392,2543616,3000000 ★ Number of 2 - step self - avoiding walks on an n X n X n X n 4 - cube summed over all starting positions. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

► [A188821] 64,441,1296,2704,4624,7056,10000,13456,17424,21904,26896,32400,38416,44944,51984,59536,67600,76176,85264,94864,104976,115600,126736,138384,150544 ★ Number of n X 6 binary arrays without the pattern 0 1 diagonal ly or antidiagonally. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>5. ●

► [A130812] 64,448,1792,5376,13440,29568,59136,109824,192192,320320,512512,792064,1188096,1736448,2480640,3472896,4775232,6460608,8614144,11334400,14734720,18944640,24111360,30401280,38001600 ★ If X _ 1,...,X _ n is a partition of a 2n - set X into 2 - blocks then a(n) is equal to the number of 6 - subsets of X containing none of X _ i, (i=1,...n). ● a(n) = binomial(2 * n,6) + binomial(n, 2) * binomial(2 * n - 4,2) - n * binomial(2 * n - 2,4) - binomial(n,3). ● a(n) = C (n,n - 6) * 2 ^ 6, n>=6. - _ Zerinvary Lajos _ , Dec 07 2007 ●

► [A016803] 0,64,512,1728,4096,8000,13824,21952,32768,46656,64000,85184,110592,140608,175616,216000,262144,314432,373248,438976,512000,592704,681472,778688,884736 ★ (4n) ^ 3. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>3. - _ Vincenzo Librandi _ , Jul 05 2014 ●

► [A200841] 64,529,2356,7587,19930,45465,93472,177381,315844,533929,864436,1349335,2041326,3005521,4321248,6083977,8407368,11425441,15294868,20197387,26342338,33969321,43350976,54795885,68651596 ★ Number of 0..n arrays x(0..5) of 6 elements without any two consecutive increases or two consecutive dec reases. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

► [A070054] 64,559,3558,19030,90398,393133,1595475,6121871,22418665,78909805,268421215,886226507,2849922043,8952215067,27534649147,83092274171,246448262139,719487237115,2070217930747,5877572837371,16481768407035,45689773670395,125310468063227,340264608595963,915344114450427 ★ Number of Bott leneck - Monge matrices with 6 rows. ● a(N) = a(6, N), where a(P, N) is define d recursively in A070050. ●

► [A247841] 0,64,576,4672,37440,299584,2396736,19173952,153391680,1227133504,9817068096,78536544832,628292358720,5026338869824,40210710958656,321685687669312,2573485501354560,20587884010836544,164703072086692416,1317624576693539392 ★ a(n) = Sum _{ k=2..n } 8 ^ k. ● a(n) = a(n - 1) + 8 ^ n. ● a(n) = (8 ^ (n + 1) - 64) / 7. ● a(n) = 9 * a(n - 1) - 8 * a(n - 2). ●

► [A330831] 64,576,82944,4362338304,18447869990796263424 ★ a(n) = (F _ n ^ 2 - 1) ^ 2, where F _ n is a Fermat prime, A019434. ● a(n) = (F(n) ^ 2 - 1) ^ 2 , where F(n) = 2 ^ (2 ^ n) + 1 is a Fermat prime. ●

► [A177757] 0,0,0,64,600,6912,29400,132864,381024,1139200,2613600,6177600,12269400,24912384,44717400,81636352,135945600,229423104,360561024,572788800,859685400,1301766400,1881864600,2740725504,3840540000 ★ Number of ways to place 4 nonattacking bishops on an n X n toroidal board. ● a(n) = 1 / 48 * (n - 2) ^ 2 * n ^ 2 * (2n ^ 4 - 16n ^ 3 + 50n ^ 2 - 84n + 81 + (6n ^ 2 - 36n + 63) * (- 1) ^ n). ●

► [A208642] 64,610,2552,7548,18888,43284,94320,199299,412962,844943,1714680,3461238,6962956,13976742,28016664,56111133,112317270,224749641,449637728,899440872,1799078160,3598388200,7197048672,14394415431,28789200714 ★ Number of 7 X n 0..1 arrays with new values 0..1 introduced in row major order a nd no element equal to more than one of its immediate leftward or upward or ri ght - upward antidiagonal neighbors. ● a(n) = (51480 * (- 3 + 2 ^ (1 + n)) - 71394 * n - 13145 * n ^ 2 - 1205 * n ^ 3 - 55 * n ^ 4 - n ^ 5) / 120 for n>4. ●

► [A200788] 64,622,3136,11100,31395,75992,164004,324087,597190,1039654,1726660,2756026,4252353,6371520,9305528,13287693,18598188,25569934,34594840,46130392,60706591,78933240,101507580,129222275,162973746 ★ Number of 0..n ar rays x(0..5) of 6 elements without any two consecutive increases. ● a(n) = 7 * a (n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

► [A250355] 64,622,3349,12734,38543,99344,226247,467642,894599,1606988,2740319,4473302,7036127,10719464,15884183,22971794,32515607,45152612,61636079,82848878,109817519,143726912,185935847,237993194,301654823 ★ Number of l ength 6 arrays x(i), i=1..6 with x(i) in i..i + n and no value appearing more tha n 2 times. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>10. ●

► [A067476] 64,625,6084,60025,600625,6002500,60000516,600005025,6000051600,60000012601,600000512409,6000001260100,60000004765089,600000028030404,6000000011750889,60000000353550625,600000001175088900 ★ Smallest n - digit s quare starting with 6. ● a(n) = ceiling(sqrt(6 * 10 ^ (n - 1))) ^ 2, n>1. - _ Ric k L. Shepherd _ , Feb 18 2002 ●

► [A269586] 64,659,3680,14239,43184,110339,248464,507935,962144,1713619,2900864,4705919,7362640,11165699,16480304,23752639,33521024,46427795,63231904,84822239,112231664,146651779,189448400,242177759,306603424 ★ Number of l ength - 6 0..n arrays with no repeated value differing from the previous repeate d value by more than one. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

► [A223963] 64,707,3471,12311,36028,92734,217144,471994,965172,1874532,3482781,6225291,10754192,18022648,29393806,46779538,72814768,111073890,166336539,244910775,355022580,507281450,715232788,996008770,1371090364 ★ Number of 3 X n 0..3 arrays with antidiagonals unimodal and rows and diagonals nondec reasing. ● a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10) for n>12. ●

► [A008513] 0,64,728,4032,14896,42560,102024,215488,413792,737856,1240120,1985984,3055248,4543552,6563816,9247680,12746944,17235008,22908312,29987776,38720240,49379904,62269768 ★ Number of points on surface of 6 - dimensional cube. ● a(n) = 12 * n ^ 5 + 40 * n ^ 3 + 12 * n. - _ Charles R Greathouse IV _ , Jan 02 2012 ●

► [A195249] 64,729,1682,2729,3776,4823,5870,6917,7964,9011,10058,11105,12152,13199,14246,15293,16340,17387,18434,19481,20528,21575,22622,23669,24716 ★ Number of lower triangles of a 3 X 3 0..n array with each element differing fro m all of its diagonal, vertical, antidiagonal and horizontal neighbors by two or l ess. ● a(n) = 2 * a(n - 1) - a(n - 2) for n>4. ●

► [A223953] 64,729,2024,3645,5951,9919,16845,28558,47721,78071,124691,194314,295659,439799,640561,914958,1283653,1771455,2407847,3227546,4271095,5585487,7224821,9250990,11734401 ★ Number of 6 X n 0..1 arrays with diagonals an d antidiagonals unimodal and rows nondecreasing. ● a(n) = 7 * a(n - 1) - 21 * a (n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>11. ●

► [A224137] 64,729,2692,6392,12874,24095,42832,72888,119424,189263,291226,436500,639038,915991,1288172,1780552,2422788,3249783,4302278,5627476,7279698,9321071,11822248,14863160,18533800 ★ Number of 6 X n 0..1 arrays with row s nondecreasing and antidiagonals unimodal. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>11. ●

► [A250364] 64,729,4048,15365,45866,115963,259106,526505,992530,1760831,2971178,4807021,7503770,11357795,16736146,24086993,33950786,46972135,63912410,85663061,113259658,147896651,190942850,243957625,308707826 ★ Number of l ength 6 arrays x(i), i=1..6 with x(i) in i..i + n and no value appearing more tha n 3 times. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>10. ●

► [A346638] 0,1,64,729,4096,15619,46614,117481,261640,530181,997228,1766017,2975688,4808791,7499506,11342577,16702960,24026185,33849432,46813321,63674416,85318443,112774222,147228313,190040376 ★ a(n) is the number of 6 - tup les (a _ 1,a _ 2,a _ 3,a _ 4,a _ 5,a _ 6) having all terms in { 1,...,n } such tha t there exists a hexagon with these side - lengths. ● a(n) = n ^ 6 - 6 * binomial (n + 1,6) = n ^ 6 - (n + 1) * binomial(n,5). ●

► [A001014] 0,1,64,729,4096,15625,46656,117649,262144,531441,1000000,1771561,2985984,4826809,7529536,11390625,16777216,24137569,34012224,47045881,64000000,85766121,113379904,148035889,191102976 ★ Sixth powers: a(n) = n ^ 6. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) + 720. (End) ● a(n) == 1 (mod 7) if gcd(n, 7) = 1, otherwise a(n) = = 0 (mod 7). See A109720. - _ Jake Lawrence _ , May 28 2016 ●

► [A352052] 0,64,729,4096,15625,46720,117649,262144,532170,1000064,1771561,2990080,4826809,7529600,11406979,16777216,24137569,34058944,47045881,64004096,85884499,113379968,148035889,191365120,244156250 ★ Sum of the 6th power s of the divisor complements of the odd proper divisors of n. ● a(n) = n ^ 6 * S um _{ d|n, d<n, d odd } 1 / d ^ 6. ●

► [A056573] 0,1,1,64,729,15625,262144,4826809,85766121,1544804416,27680640625,496981290961,8916100448256,160005726539569,2871098559212689,51520374361000000,924491486192068809,16589354847268067929 ★ Sixth power of Fibonac ci numbers A000045. ● a(n) = (F(3 * n) ^ 2 - (- 1) ^ n * 6 * F(n) * F(3 * n) +

9 * F(n) ^ 2) / 25. • a(n) = (10 * F(n) ^ 3 * F(3 * n) - F(3 * n) ^ 2 + 9 * F(n) ^ 2) / 25. (End) • a(n + 1) = 2 * [2 * F(n + 1) ^ 2 - (- 1) ^ n] ^ 3 + 3 * F(n) ^ 2 * F(n + 1) ^ 2 * F(n + 2) ^ 2 - [F(n) ^ 6 + F(n + 2) ^ 6] = { Sum(0 <= j <= [n / 2]; binomial(n - j, j)) }^ 6, for n (this is Theorem 2.2 (vi) of Azarian's second paper in the references for this sequence). - _ Mohammad K. Azarian _ , Jun 29 2015 •

▶ [A231305] 0,1,64,730,4160,16355,50816,134004,312960,665445,1312960,2437006,4298944,7263815,11828480,18654440,28605696,42792009,62617920,89837890,126617920,175604011,239997824,323639900,431100800 ⋆ Recurrence a(n) = a(n - 2) + n ^ M for M=6, starting with a(0)=0, a(1)=1. • a(n) = Sum _{ k=0..floor(n / 2) } (n - 2k) ^ 6. • a(n) = 1 / 42 * n * (3 * n ^ 6 + 21 * n ^ 5 + 42 * n ^ 4 - 56 * n ^ 2 + 32). •

▶ [A195593] 64,732,4392,18890,66532,205628,580664,1536814,3877300,9434784,22327496,51698178,117645348,263992580,585640568,1286898262,2805399156,6074441896,13076687560,28009586346,59732295204,126891641612,268638308152,566987715710 ⋆ Number of ways to place 5n nonattacking kings on a vertical cylinder 10 X 2n. • a(n) = - 4 * a(n - 6) + 20 * a(n - 5) - 41 * a(n - 4) + 44 * a(n - 3) - 26 * a(n - 2) + 8 * a(n - 1). • a(n) = (1771 * n - 8709) * 2 ^ n + 235 / 3 * n ^ 3 + 880 * n ^ 2 + 12815 / 3 * n + 8710. •

▶ [A236182] 64,793,16418,134067,1905628,6732437,30870006,77915887,225951776,820775097,1708278778,4274005187,9024109428,15345472477,26124687806,48289048935,90469582576,141989956937,232448339106,360548623027,511882849316,754970304837,1081910678206 ⋆ Sum of the sixth powers of the first n primes. • a(n) = Sum _{ k = 1..n } prime(k) ^ 6. •

▶ [A016959] 64,1000,4096,10648,21952,39304,64000,97336,140608,195112,262144,343000,438976,551368,681472,830584,1000000,1191016,1404928,1643032,1906624,2197000,2515456,2863288,3241792 ⋆ a(n) = (6 * n + 4) ^ 3. • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Wesley Ivan Hurt _ , Oct 02 2020 •

▶ [A224392] 64,1000,6094,27790,102232,319769,881519,2196522,5038720,10788462,21789398,41858498,76994510,136338455,233448747,387963222,627730762,991506308,1532314870,2321602662,3454306716,5054988261,7285189791 ⋆ Number of 3 X n 0..3 arrays with diagonals and antidiagonals unimodal and rows nondecreasing. • a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10) for n>11. •

▶ [A224025] 64,1000,6796,32523,122523,387729,1074167,2679260,6137666,13104218,26368076,50439449,92358199,162782299,277423483,458907498,739147146,1162327788,1788617172,2698724343,3999445995,5830352933,8371784327 ⋆ Number of 3 X n 0..3 arrays with rows nondecreasing and antidiagonals unimodal. • a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10) for n>11. •

▶ [A270272] 1,64,1000,8000,42875,175616,592704,1728000,4492125,10648000,23393656,48228544,94196375,175616000,314432000,543338496,909853209,1481544000,2352637000,3652264000,5554637011,8291469824,12167000000,17576000000,25025203125 ⋆ a(n) = binomial(n + 3,n) ^ 3. • a(n) = (6 + 11n + 6n ^ 2 + n ^ 3) ^ 3 / 216. •

▶ [A191900] 0,64,1093,8192,39062,139968,411771,1048576,2391484,5000000,9743585,17915904,31374258,52706752,85429687,134217728,205169336,306110016,446935869,640000000,900544270,1247178944,1702412723,2293235712,3051757812 ⋆ Number of compositions of odd natural numbers into 7 parts <=n • a(n) = ((n + 1) ^ 7 - (1 + (- 1) ^ n) / 2) / 2. •

▶ [A191494] 1,64,1094,8192,39063,139968,411772,1048576,2391485,5000000,9743586,17915904,31374259,52706752,85429688,134217728,205169337,306110016,446935870,640000000,900544271,1247178944,1702412724,2293235712,3051757813 ⋆ Number of compositions of even natural numbers in 7 parts <= n. • a(n) = ((n + 1) ^ 7 + (1 + (- 1) ^ n) / 2) / 2. •

▶ [A128987] 0,64,1152,12288,102400,737280,4816896,29360128,169869312,943718400,5075107840,26575110144,136096776192,683973541888,3382286745600,16492674416640,79439715106816,378506877861888,1786156639322112 ⋆ a(n) = (n ^ 3 - n ^ 2) * 4 ^ n. • a(n) = 16 * a(n - 1) - 96 * a(n - 2) + 256 * a(n - 3) - 256 * a(n - 4). - _ Vincenzo Librandi _ , Feb 11 2013 •

▶ [A283812] 1,64,1394,20266,237686,2441314,22934774,202229266,1701740006,13821281314,109214866454,844558486066,6419351203526,48118995192514,356641942834934,2618939805811666,19085432672558246,138206899494338914,995563711729120214 ⋆ Poly - Bernoulli numbers B _ n ^ (k) with k = - 6. • a(n) = 720 * 7 ^ n - 1800 * 6 ^ n + 1560 * 5 ^ n - 540 * 4 ^ n + 62 * 3 ^ n - 2 ^ n. • a(n) = 27 * a(n - 1) - 295 * a(n - 2) + 1665 * a(n - 3) - 5104 * a(n - 4) + 8028 * a(n - 5) - 5040 * a(n - 6) for n>5. •

▶ [A240930] 0,0,64,1458,12288,62500,233280,705894,1835008,4251528,9000000,17715610,32845824,57921708,97883968,159468750,251658240,386201104,578207808,846825858,1216000000,1715322420,2380977984,3256789558,4395368448 ⋆ a(n) = n ^ 7 - n ^ 6. • a(n) = n ^ 6 * (n - 1) = n ^ 7 - n ^ 6. •

▶ [A145218] 1,64,1510,17600,130835,713216,3098604,11320320,36074325,102925120,268038706,646519744,1460878055,3120396800,6346379480,12363588096,23184837609,42023883840,73881649150,126362703040,210792998011,343726413824,548946959300,860095808000 ⋆ a(n) is the self - convolution series of the sum of 5th powers of the first n natural numbers. • a(n) = C(n + 2, 3) * (n ^ 8 + 8 * n ^ 7 + 29 * n ^ 6 + 62 * n ^ 5 + 86 * n ^ 4 + 80 * n ^ 3 + 28 * n ^ 2 - 24 * n + 192) / 462. •

▶ [A014794] 0,64,1600,9216,30976,78400,166464,313600,541696,876096,1345600,1982464,2822400,3904576,5271616,6969600,9048064,11560000,14561856,18113536,22278400,27123264,32718400,39137536,46457856 ⋆ Squares of even octagonal numbers. • a(n) = 16n ^ 2 * (3n - 1) ^ 2. - _ Vincenzo Librandi _ , Jan 07 2012 •

▶ [A269660] 64,1710,14596,73348,269472,803434,2061940,4725456,9911008,19355302,35643204,62486620,105058816,170389218,267823732,409555624,611232000,892640926,1278484228,1799241012,2492126944,3402154330,4583298036 ⋆ Number of length - 7 0..n arrays with no adjacent pair x,x + 1 repeated. • a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. •

▶ [A035801] 1,64,2048,43712,700416,8991552,96376832,887582144,7172939776,51697913408,336604997632,2000727369920,10951050137600,55605785375040,263584490403840,1172818839714752,4921916082929664,19564527852207168 ⋆ Coordination sequence for lattice D *_ 32 (with edges defined by l _ 1 norm = 1). • a(m)=add(2 ^ k * binomial(n, k) * binomial(m - 1, k - 1), k=0..n) + 2 ^ n * binomial((n + 2 * m) / 2 - 1, n - 1); with n=32. •

▶ [A017319] 64,2744,13824,39304,85184,157464,262144,405224,592704,830584,1124864,1481544,1906624,2406104,2985984,3652264,4410944,5268024,6229504,7301384,8489664,9800344,11239424 ⋆ a(n) = (10 * n + 4) ^ 3. • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4); a(0)=64, a(1)=2744, a(2)=13824, a(3)=39304. - _ Harvey P. Dale _ , Oct 01 2014 •

▶ [A016830] 64,46656,1000000,7529536,34012224,113379904,308915776,729000000,1544804416,3010936384,5489031744,9474296896,15625000000,24794911296,38068692544,56800235584,82653950016,117649000000,164206490176,225199600704,304006671424,404567235136,531441000000 ⋆ a(n) = (4 * n + 2) ^ 6. • a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). - _ Harvey P. Dale _ , Oct 14 2012 •

▶ [A187242] 0,0,0,0,0,64,81184,12448832,627961728,15915225216,251806066272,2814607288320,24088436720256,166645918174848,969258913391552,4878776675787392,21731689658569984,87161301448676352,319192073724720448,1079363369445639936,3401826465353378560,10070308904424957632,28183638842590122720 ⋆ Number of ways to place 10 nonattacking bishops on an n X n board. • a(n) = n ^ 20 / 3628800 - n ^ 19 / 60480 + 341n ^ 18 / 725760 - 45949n ^ 17 / 5443200 + 235433n ^ 16 / 2177280 - 308291n ^ 15 / 291600 + 14982871n ^ 14 / 1814400 - 43484267n ^ 13 / 816480 + 175706737n ^ 12 / 604800 - 2444962049n ^ 11 / 1796256 + 30003106793n ^ 10 / 5443200 - 44899907477n ^ 9 / 2332800 + 9919713547n ^ 8 / 172800 - 18390588424n ^ 7 / 127575 + 217346831209n ^ 6 / 725760 - 8233418533709n ^ 5 / 16329600 + 104224385179n ^ 4 / 155520 - 14600765627n ^ 3 / 21600 + 583132621007n ^ 2 / 1209600 - 46669993739n / 221760 + 19990663 / 512 + (- n ^ 14 / 40320 + n ^ 13 / 720 - 1267n ^ 12 / 34560 + 15721n ^ 11 / 25920 - 730663n ^ 10 / 103680 + 5532407n ^ 9 / 90720 - 98193341n ^ 8 / 241920 + 10640393n ^ 7 / 5040 - 99209431n ^ 6 / 11520 + 1417368727n ^ 5 / 51840 - 686809973n ^ 4 / 10368 + 2144839679n ^ 3 / 18144 - 1683044471n ^ 2 / 11520 + 2242597633n / 20160 - 19990663 / 512) * (- 1) ^ n. •

▶ [A017010] 64,531441,16777216,148035889,729000000,2565726409,7256313856,17596287801,38068692544,75418890625,139314069504,243087455521,404567235136,646990183449,1000000000000,1500730351849,2194972623936,3138428376721,4398046511104,6053445140625 ⋆ a(n) = (7 * n + 2) ^ 6. • a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). •

▶ [A160864] 0,64,1734443,93604032,1391396086,10892513600,57713977089,234800671168,789011921132,2293521500736,5949698591575,14081075036864,30899647458018,63644611431232,124215678953261,231447389860800,414197292706264,715449540834368,1197666325048707 ⋆ 64 * P _ 9(n), 64 times the Legendre polynomial of order 9 at n. • a(n) = n * (315 - 4620 * n ^ 2 + 18018 * n ^ 4 - 25740 * n ^ 6 + 12155 * n ^ 8) / 2. •

▶ [A017190] 64,1771561,64000000,594823321,3010936384,10779215329,30840979456,75418890625,164206490176,326940373369,606355001344,1061520150601,1771561000000,2839760855281,4398046511104,6611856250609 ⋆ a(n) = (9 * n + 2) ^ 6. • a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). - _ Wesley Ivan Hurt _ , Apr 24 2021 •

▶ [A017298] 64,2985984,113379904,1073741824,5489031744,19770609664,56800235584,139314069504,304006671424,606355001344,1126162419264,1973822685184,3297303959104,5289852801024,8198418170944 ⋆ a(n) = (10 * n + 2) ^ 6. • a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7); a(0)=64, a(1)=2985984, a(2)=113379904, a(3)=1073741824, a(4)=5489031744, a(5)=19770609664, a(6)=56800235584. - _ Harvey P. Dale _ , Aug 12 2012 •

▶ [A017418] 64,4826809,191102976,1838265625,9474296896,34296447249,98867482624,243087455521,531441000000,1061520150601,1973822685184,3462825991689,5789336458816,9294114390625,14412774445056 ⋆ (11n + 2) ^ 6. • a(0)=64, a(1)=4826809, a(2)=191102976, a(3)=1838265625, a(4)=9474296896, a(5)=34296447249, a(6)=98867482624, a(n)=7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). - _ Harvey P. Dale _ , Jun 14 2015 •

▶ [A130764] 65,66,67,68,69,70,71,72,73,74,75,76,77,78,79,80,81,82,83,84,85,86,87,88,89 ⋆ ASCII codes for upper case letters. • a(n)=64 + n, 0<n<27. •

▶ [A174928] 1,65,66,130,131,195,196,260,261,325,326,390,391,455,456,520,521,585,586,650,651,715,716,780,781 ⋆ Partial sums of A174927. • a(n) = (67 + 130 * n - 63 * (- 1) ^ n) / 4. • a(n) = a(n - 2) + 65 for n > 1; a(0) = 1, a(1) = 65. • a(n) = ((n + 1) mod 2) + 65 * floor((n + 1) / 2). •

▶ [A159758] 65,79,101,289,395,541,1669,2291,3145,9725,13351,18329,56681,77815,106829,330361,453539,622645,1925485,2643419,3629041,11222549,15406975,21151601,65409809 ⋆ Positive numbers y such that y ^ 2 is of the form x ^ 2 + (x + 79) ^ 2 with integer x. • a(n) = 6 * a(n - 3) - a(n - 6) for n > 6; a(1)=65, a(2)=79, a(3)=101, a(4)=289, a(5)=395, a(6)=541. •

▶ [A224770] 65,85,130,145,170,185,205,221,265,290,305,325,365,370,377,410,425,442,445,481,485,493,505,530,533 ⋆ Numbers that are the primitive sum of two squares in exactly two ways. • a(n) = a ^ 2 + b ^ 2, a and integers, 0 < a < b and gcd(a,b) = 1 in exactly two ways. These representations of a(n) are denoted by two different pairs (a,b). •

▶ [A160055] 65,89,149,241,445,829,1381,2581,4825,8045,15041,28121,46889,87665,163901,273289,510949,955285,1592845,2978029,5567809,9283781,17357225,32451569,54109841 ⋆ Positive numbers y such that y ^ 2 is of the form x ^ 2 + (x + 89) ^ 2 with integer x. • a(n) = 6 * a(n - 3) - a(n - 6) for n > 6; a(1)=65, a(2)=89, a(3)=149, a(4)=241, a(5)=445, a(6)=829. •

▶ [A075893] 65,113,193,273,393,577,777,1057,1337,1633,1913,2289,2833,3337,3897,4417,4953,5537,6153,7017,8073,9177,10073,10753,11313 ⋆ Average of three suc

cessive primes squared, (prime(n) ^ 2 + prime(n + 1) ^ 2 + prime(n + 2) ^ 2) / 3, n>=3. ● a(n) = (prime(n) ^ 2 + prime(n + 1) ^ 2 + prime(n + 2) ^ 2) / 3, n>=3. ●

▶ [A158071] 65,129,193,257,321,385,449,513,577,641,705,769,833,897,961,1025,1089,1153,1217,1281,1345,1409,1473,1537,1601 ⋆ a(n) = 64 * n + 1. ● a(n) = 2 * a(n - 1) - a(n - 2). - _ Vincenzo Librandi _ , Feb 11 2012 ●

▶ [A348759] 0,65,131,196,261,327,392,458,523,588,654,719 ⋆ (43200 / 719) *{ a(n) } are the times, measured in seconds from 00:00:00, at which the angle of the sector enclosing the three hands of an analog clock has a local minimum. ● a(n) = round(n * 719 / 11). - _ Robert B Fowler _ , Dec 26 2022 ●

▶ [A048512] 1,65,210,536,1264,2880,6448,14288,31440,68816,149968,325584,704464,1519568,3268560,7012304,15007696,32047056,68288464,145227728,308281296,653262800,1382023120,2919235536,6157238224 ⋆ a(n) = T(7,n), array T given by A048505. ● a(n) = (n ^ 2 + 29 * n + 196) * 2 ^ (n - 2) - 48. - _ Ralf Stephan _ , Feb 05 2004 ● a(n) = 7 * a(n - 1) - 18 * a(n - 2) + 20 * a(n - 3) - 8 * a(n - 4). - _ Colin Barker _ , Feb 25 2015 ●

▶ [A305157] 65,229,557,1213,2525,5149,10397,20893,41885,83869,167837,335773,671645,1343389,2686877,5373853,10747805,21495709,42991517,85983133,171966365,343932829,687865757,1375731613,2751463325 ⋆ a(n) = 164 * 2 ^ n - 99. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>1. ●

▶ [A158686] 1,65,257,577,1025,1601,2305,3137,4097,5185,6401,7745,9217,10817,12545,14401,16385,18497,20737,23105,25601,28225,30977,33857,36865 ⋆ a(n) = 64 * n ^ 2 + 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A036547] 1,65,257,833,2561,7745,23297,69953,209921,629825,1889537,5668673,17006081,51018305,153054977,459164993,1377495041,4132485185,12397455617,37192366913,111577100801,334731302465,1004193907457 ⋆ a(n) = T(6,n), array T given by A048471. ● a(n) = 32 * 3 ^ n - 31. - _ Ralf Stephan _ , Feb 17 2004 ● a(n) = 3 * a(n - 1) + 62. ● a(n) = 4 * a(n - 1) - 3 * a(n - 2). ●

▶ [A165798] 65,260,585,1040,1625,2340,3185,4160,5265,6500,7865,9360,10985,12740,14625,16640,18785,21060,23465,26000,28665,31460,34385,37440,40625 ⋆ a(n) = 65 * n ^ 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A158693] 65,263,593,1055,1649,2375,3233,4223,5345,6599,7985,9503,11153,12935,14849,16895,19073,21383,23825,26399,29105,31943,34913,38015,41249 ⋆ a(n) = 66 * n ^ 2 - 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A200890] 65,704,3823,14288,42182,105813,235538,478467,904111,1611038,2734601,4455802,7011356,10705019,15920244,23134229,32933421,46030540,63283187,85714100,114533122,151160945,197254694,254735415,325817531 ⋆ Number of 0..n arrays x(0..6) of 7 elements without any interior element greater than both neighbors. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. ●

▶ [A268265] 65,717,5492,29461,118530,384605,1061632,2587557,5717246,11671405,22326540,40450997,69992122,116419581,187129880,291917125,443515062,658215437,956567716,1364165205,1912522610,2640050077,3593128752 ⋆ Number of length - (6 + 1) 0..n arrays with new repeated values introduced in sequential order starting with zero. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>9. ●

▶ [A351301] 1,65,730,4160,15626,47450,117650,266240,532170,1015690,1771562,3036800,4826810,7647250,11406980,17039360,24137570,34591050,47045882,65004160,85884500,115151530,148035890,194355200,244156250 ⋆ a(n) = n ^ 6 * Product _{ p|n, p prime } (1 + 1 / p ^ 6). ● a(n) = Sum _{ d|n } d ^ 6 * mu(n / d) ^ 2. ● a(n) = n ^ 6 * Sum _{ d|n } mu(d) ^ 2 / d ^ 6. ●

▶ [A294301] 0,0,65,730,4890,19786,67171,180724,446964,962780,1978405,3703310,6735950,11445110,19092295,30220776,47260136,70866264,105409929,151455810,216455810,300450370,415601835,560651740,754740700 ⋆ Sum of the sixth powers of the parts in the partitions of n into two distinct parts. ● a(n) = Sum _{ i=1..floor((n - 1) / 2) } i ^ 6 + (n - i) ^ 6. ● a(n) = (n / 42 - n ^ 3 / 6 + n ^ 5 / 2 - 1 / 128 * (65 + (- 1) ^ n) * n ^ 6 + n ^ 7 / 7). ● a(n) = a(n - 1) + 7 * a(n - 2) - 7 * a(n - 3) - 21 * a(n - 4) + 21 * a(n - 5) + 35 * a(n - 6) - 35 * a(n - 7) - 35 * a(n - 8) + 35 * a(n - 9) + 21 * a(n - 10) - 21 * a(n - 11) - 7 * a(n - 12) + 7 * a(n - 13) + a(n - 14) - a(n - 15) for n>15. ●

▶ [A343508] 1,65,731,4162,15629,47515,117655,266372,532905,1015885,1771571,3042422,4826821,7647575,11424799,17047816,24137585,34638825,47045899,65047898,86005805,115152115,148035911,194717932,244203145 ⋆ a(n) = Sum _{ k=1..n } gcd(k, n) ^ 6. ● a(n) = Sum _{ d|n } phi(n / d) * d ^ 6. ● a(n) = Sum _{ d|n } mu(n / d) * d * sigma _ 5(d). ●

▶ [A371628] 1,65,757,4225,16001,49205,119365,271489,554797,1040065,1783541,3198325,4850977,7758725,12112757,17392769,24211265,36061805,47162485,67604225,90359305,115930165,148291397,205517173,250266001 ⋆ a(n) = Sum _{ 1 <= x _ 1, x _ 2, x _ 3, x _ 4 <= n } (gcd(x _ 1, n) / gcd(x _ 1, x _ 2, x _ 3, x _ 4, n)) ^ 3. ● a(n) = Sum _{ d|n } phi(n / d) * (n / d) ^ 3 * sigma _ 6(d ^ 2) / sigma _ 3(d ^ 2). ●

▶ [A008516] 1,65,793,4825,19721,62281,164305,379793,793585,1531441,2771561,4757545,7812793,12356345,18920161,28167841,40914785,58149793,81058105,111045881,149766121,199146025,261415793,339138865,435243601 ⋆ 6 - dimensional centered cube numbers. ● a(n) = 1 + 6 * n + 15 * n ^ 2 + 20 * n ^ 3 + 15 * n ^ 4 + 6 * n ^ 5 + 2 * n ^ 6. (End) ●

▶ [A000540] 0,1,65,794,4890,20515,67171,184820,446964,978405,1978405,3749966,6735950,11562759,19092295,30482920,47260136,71397705,105409929,152455810,216455810,302221931,415601835,563637724,754740700 ⋆ Sum of 6th powers: 0 ^ 6 + 1 ^ 6 + 2 ^ 6 + ... + n ^ 6. ● a(n) = n * (n + 1) * (2 * n + 1) * (3 * n ^ 4 + 6 * n ^ 3 - 3 * n + 1) / 42. ● a(n) = sqrt(Sum _{ j=1..n } Sum _{ i=1..n } (i * j) ^ 6). - _ Alexander Adamchuk _ , Oct 26 2004 ● a(n) = Sum _{ i=1..n } J _ 6(i) * floor(n / i), where J _ 6 is A069091. - _ Enrique Pérez Herrero _ , Mar 09 2013 ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) + 720. - _ Ant King _ , Sep 24 2013 ● a(n) = - Sum _{ j=1..6 } j * s(n + 1,n + 1 - j) * S(n + 6 - j,n), where s(n,k) and S(n,k) are the Stirling numbers of the first kind and the second kind, respectively. - _ Mircea Merca _ , Jan 25 2014 ● a(n) = (n + 1) * (n + 1 / 2) * n * (n + 1 / 2 + z) * (n + 1 / 2 - z) * (n + 1 / 2 + zbar) * (n + 1 / 2 - zbar) / 7, with I ^ 2 = - 1 and z = 2 ^ (- 3 / 2) * 3 ^ (- 1 / 4) * (sqrt(sqrt(31) + 3 * sqrt(3)) + I * sqrt(sqrt(31) - 3 * sqrt(3)), and zbar is the complex conjugate of z. See the Graham et al. reference, eq. (6.98), pp. 288 - 289 (with n - > n + 1). (There was a typo in the first edition, which was corrected in the second edition.) - _ Wolfdieter Lang _ , Apr 03 2015 ●

▶ [A023875] 1,1,65,794,6970,69251,689896,6309849,55654858,483526120,4104495070,33968248260,275366110929,2192975727284,17169583920204,132264358228507,1003715206329332,7511468689508580,55479733165442038,404709686562480 2,4,2917717129031507178 ⋆ Expansion of Product _{ k>=1 } (1 - x ^ k) ^ (- k ^ 6). ● a(n) = (1 / n) * Sum _{ k=1..n } sigma _ 7(k) * a(n - k). - _ Seiichi Manyama _ , Mar 05 2017 ●

▶ [A305264] 65,901,2573,5917,12605,25981,52733,106237,213245,427261,855293,1711357,3423485,6847741,13696253,27393277,54787325,109575421,219151613,438303997,876608765,1753218301,3506437373,7012875517,14025751805 ⋆ a(n) = 836 * 2 ^ n - 771. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>1. ●

▶ [A086021] 1,65,1065,9065,51940,227556,820260,2548260,7040385,17688385,41082041,89310585,183506960,359122960,673554960,1216893456,2126746665,3608290665,5960927665,9613191665,15167828676,23459298500,35626298500,53202298500,78227501625 ⋆ a(n) = Sum _{ i=1..n } C(i + 2,3) ^ 3. ● a(n) = (C(n + 3, 4) / 1) * (1 + 12 * C(n - 1, 1) + 46 * C(n - 1, 2) + 84 * C(n - 1, 3) + 81 * C(n - 1, 4) + 40 * C(n - 1, 5) + 8 * C(n - 1, 6)). - Edited by _ Colin Barker _ , May 02 2014 ● a(n) = n ^ 2 * (- 36 + 300 * n + 1535 * n ^ 2 + 2700 * n ^ 3 + 2442 * n ^ 4 + 1260 * n ^ 5 + 375 * n ^ 6 + 60 * n ^ 7 + 4 * n ^ 8) / 8640. - _ G. C. Greubel _ , Nov 22 2017 ●

▶ [A086029] 1,65,1361,15761,124661,751925,3696581,15475205,56884430,187758030,565982734,1578749710,4117700254,10127050654,23648089054,52733344990,112835299639,232623278455,463695768455,896396608455,1684993889355,3086944610955,5522978819355 ⋆ a(n) = Sum _{ i=1..n } C(i + 6,7) ^ 2. ● a(n) = C(n + 7,8) * (- C(n + 7,0) + 8 * C(n + 7,1) - 36 * C(n + 7,2) + 120 * C(n + 3,7) - 330 * C(n + 7,4) + 792 * C(n + 7,5) - 1716 * C(n + 7,6) + 3432 * C(n + 7,7)) / 6435. - _ Yahia Kahloune _ , Dec 22 2013 ● a(n) = (1 / 108972864000) * n * (1 + n) * (2 + n) * (3 + n) * (4 + n) * (5 + n) * (6 + n) * (7 + n) * (7 + 2 * n) * (60 + 64974 * n + 126245 * n ^ 2 + 82467 * n ^ 3 + 23408 * n ^ 4 + 3003 * n ^ 5 + 143 * n ^ 6). - _ G. C. Greubel _ , Nov 22 2017 ●

▶ [A128896] 66,78,105,190,231,406,435,465,561,595,741,861,903,946,1378,1653,2211,2278,2485,3081,3655,3741,4371,4465,5151 ⋆ Triangular numbers that are products of three distinct primes. ● a(n) = T(k) = k * (k + 1) / 2 = p * q * r for some k,p,q,r, where T(k) is triangular number and p, q, r are distinct primes. ●

▶ [A160848] 0,1,66,131,238,361,534,709,938,1183,1470,1759,2104,2459,2870,3287,3740,4209,4734,5261,5844,6437,7070,7711,8408 ⋆ Number of lines through at least 2 points of an 8 X n grid of points. ● a(n) = (1 / 2) * (f(m,n,1) - f(m,n,2)) where f(m,n,k)=Sum((n - |kx|) * (m - |ky|)); - n<kx<n, - m<ky<m, (x,y)=1, m=8 ● a(n) = - a(n - 2) + a(n - 5) + a(n - 6) + 2 * a(n - 7) + a(n - 8) + a(n - 9) - a(n - 11) - a(n - 12) - 2 * a(n - 13) - a(n - 14) - a(n - 15) + a(n - 18) + a(n - 20) for n>21. ●

▶ [A174929] 1,66,132,262,393,588,784,1044,1305,1630,1956,2346,2737,3192,3648,4168,4689,5274,5860,6510,7161,7876,8592,9372,10153 ⋆ Partial sums of A174928. ● a(n) = (71 + 264 * n + 130 * n ^ 2 - 63 * (- 1) ^ n) / 8. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) + 65 for n > 2; a(0) = 1, a(1) = 66, a(2) = 132. ●

▶ [A158070] 0,66,260,582,1032,1610,2316,3150,4112,5202,6420,7766,9240,10842,12572,14430,16416,18530,20772,23142,25640,28266,31020,33902,36912 ⋆ a(n) = 64 * n ^ 2 + 2 * n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3), a(1)=66, a(2)=260, a(3)=582. - _ Harvey P. Dale _ , Jul 25 2011 [corrected by _ M. F. Hasler _ , Oct 09 2014] ●

▶ [A128952] 66,657,6572,65715,657143,6571429,65714286,657142857,6571428572,65714285715,657142857143,6571428571429,65714285714286,657142857142857,65714285714285572,657142857142857715,6571428571428571143 ⋆ a(n) is equal to the number of positive integers m less than or equal to 10 ^ n such that m is not divisible by the prime 3 and is not divisible by at least one of the primes 2, 5 and 7. ● a(n) = 10 ^ n - floor(10 ^ n / 3) - floor(10 ^ n / 70) + floor(10 ^ n / 210). ●

▶ [A101093] 1,66,860,5750,26265,93436,278256,725220,1703625,3682030,7431996,14167946,25730705,44823000,75305920,122566056,193963761,299373690,451829500,668285310,970507241,1386109076,1949746800,2704487500 ⋆ Second partial sums of sixth powers (A001014). ● a(n) = n * (1 + n) ^ 2 * (2 + n) * (- 1 + n * (2 + n)) * (- 2 + 3 * n * (2 + n)) / 168. ● a(n) = Sum _{ i=1..n } i * (n + 1 - i) ^ 6, by the definition. - _ Bruno Berselli _ , Jan 31 2014 ● a(n) = 2 * a(n - 1) - a(n - 2) + n ^ 6. - _ Luciano Ancora _ , Jan 08 2015 ●

▶ [A293613] 0,66,868,5586,24570,84630,245322,625086,1440582,3063060,6096090,11479468,20624604,35587188,59283420,95756580,150501204,230852622,346450104,509782350,736824550,1047776730,1467913590,2028556530,2768179050 ⋆ a(n) = (1 / 4) * (7 * n + 17) * (5 * n + 6) * Pochhammer(n, 6) / 6!. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>8. ● a(n) = ((n * (12240 + 43188 * n + 61948 * n ^ 2 + 46835 * n ^ 3 + 20200 * n ^ 4 + 4982 * n ^ 5 + 652 * n ^ 6 + 35 * n ^ 7))) / 2880. ●

▶ [A337896] 0,1,66,920,6350,29505,106036,317856,832140,1961025,4248310,8590296,16398746,29814785,51983400,87399040,142333656,225359361,347978730,525376600,777308070,1129138241,1613050076,2269437600 ⋆ Number of chiral pairs of colorings of the 8 triangular faces of a regular octahedron or the 8 vertices of a cube using n or fewer colors. ● a(n) = (n - 1) * n ^ 2 * (n + 1) * (8 - 5 * n ^ 2 + n ^ 4) / 48. ● a(n) = 1 * C(n,2) + 63 * C(n,3) + 662 * C(n,4) + 2400 * C(n,5) + 3900 * C(n,6) + 2940 * C(n,7) + 840 * C(n,8), where the coefficient of C(n,k) is the number of chiral pairs of colorings using exactly k colors. ●

▶ [A056468] 0,1,66,924,7400,44040,217392,942592,3714048,13593600,46914560,154328064,487778304,1490384896,4423372800,12801146880,36235378688,100580917248,274361352192,736775372800,1950815354880,5099601002496,13176144920576,33682341494784 ⋆ a(n) = Sum _{ k=1..n } k ^ 6 * binomial(n,k). ● a(n) = 2 ^ (n - 6) * n * (n + 1) * (n ^ 4 + 14 * n ^ 3 + 31 * n ^ 2 - 46 * n + 16). ●

▶ [A027785] 66,936,7098,38220,163800,594048,1893528,5441904,14360580,35271600,81477396,178474296,373173528,748843200,1448655000,2711882160,4928324310,8718517080,15049821150,25401694500,41997468240,68124925440,10857409992

0,170228167200,262852317000 ⋆ a(n) = 6 * (n + 1) * binomial(n + 2,12). ● a(n) = C(n + 1, 11) * C(n + 2, 2). - _ Zerinvary Lajos _ , May 13 2005; corrected by _ R. J. Mathar _ , Mar 15 2016 ●

▶ [A269693] 66,1347,13168,69405,260616,786079,2031072,4674393,9831160,19235931,35471184,62246197,104731368,169953015,267253696,408823089,610304472,891481843,1277052720,1797491661,2490009544,3399613647,4580273568 ⋆ Number of length - 7 0..n arrays with no repeated value differing from the previous repeated value by plus or minus one modulo n + 1. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>9. ●

▶ [A140925] 1,66,1716,26026,273273,2186184,14158144,77364144,367479684,1551580888,5924217936,20734762776,67255063876,203982391536,582806832960,1578435172600,4073755482225,10064572367850,23896002230100,54709268263650,121141951155225,260114319363600 ⋆ a(n) = binomial(m + n - 1,n) ^ 2 - binomial(m + n,n + 1) * binomial(m + n - 2,n - 1) with m=12. ● a(n) = ((n + 11) / (11 * n + 11)) * binomial(n + 10,10) ^ 2. - _ Bruno Berselli _ , May 07 2012 ●

▶ [A269779] 66,1740,14724,73680,270150,804636,2063880,4728384,9915210,19361100,35650956,62496720,105071694,170405340,267843600,409579776,611261010,892675404,1278524820,1799288400,2492181846,3402217500,4583370264 ⋆ Number of length - 7 0..n arrays with every repeated value unequal to the previous repeated value plus one mod n + 1. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. ●

▶ [A279446] 0,0,1,66,2096,25676,187984,983172,4073312,14196011,43309138,118818916,298926225,699619679,1540212590,3217045155,6419240369,12304959047,22763742133,40797668697,71065355815,120643462032,200077436639,324808463585,517088445952 ⋆ Number of non - equivalent (mod D _ 3) ways to place 6 indistinguishable points on a triangular grid of side n so that no two of them are adjacent. ● a(n) = (n ^ 12 + 6 * n ^ 11 - 195 * n ^ 10 - 670 * n ^ 9 + 17455 * n ^ 8 + 13426 * n ^ 7 - 835256 * n ^ 6 + 1246240 * n ^ 5 + 19563664 * n ^ 4 - 68181792 * n ^ 3 - 131524224 * n ^ 2 + 969500160 * n - 1298903040) / 276480 + IF(MOD(n, 2) = 1, 162 * n ^ 5 - 715 * n ^ 4 - 4480 * n ^ 3 + 21955 * n ^ 2 + 1108 * n - 41685) / 30720 + IF(MOD(n, 3) = 1, n ^ 2 + n - 25) / 27 for n>=4. ●

▶ [A283222] 66,6810,182430,105470250,17356640970,678676246650,1879504308930,4491035717130,10618004862030,21136679055030,23751520478010,27081671511090,27596192489190,31721097756750,115248550935750,133303609919430,140838829659930,182797297112430,197799116497230 ⋆ Integer area of integer - sided triangle such that the sides are of the form p, p + 2, 2(p - 1), where p, p + 2 and (p - 1) / 2 are prime numbers. ● a(n) == 6 mod 30. ●

▶ [A199838] 66,23206,645780,6715618,41008804,179213048,622300326,1827026482,4719970500,11025201168,23740333870,47800415256,90973748554,165038447302,287293180292,482460245532,785043786046,1242210635346,1917265955424 ⋆ Number of - n..n arrays x(0..8) of 9 elements with zero sum and no two neighbors summing to zero. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>9. ●

▶ [A187990] 67,117,181,260,355,467,597,746,915,1105,1317,1552,1811,2095,2405,2742,3107,3501,3925,4380,4867,5387,5941,6530,7155 ⋆ Number of nondecreasing arrangements of 6 numbers x(i) in - (n + 4)..(n + 4) with the sum of sign(x(i)) * 2 ^ |x(i)| zero. ● a(n) = (n ^ 3 + 39 * n ^ 2 + 260 * n + 402) / 6. - _ Manuel Kauers _ and _ Christoph Koutschan _ , Mar 01 2023 ●

▶ [A304383] 67,139,283,571,1147,2299,4603,9211,18427,36859,73723,147451,294907,589819,1179643,2359291,4718587,9437179,18874363,37748731,75497467,150994939,301989883,603979771,1207959547 ⋆ a(n) = 36 * 2 ^ n - 5 (n>=1). ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>2. ●

▶ [A163303] 67,142,369,754,1303,2022,2917,3994,5259,6718,8377,10242,12319,14614,17133,19882,22867,26094,29569,33298,37287,41542,46069,50874,55963 ⋆ a(n) = n ^ 3 + 73 * n ^ 2 + n + 67. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Vincenzo Librandi _ , Sep 13 2015 ●

▶ [A119593] 67,193,277,487,613,823,907,1663,1873,2083,2293,2377,2797,3217,3343,3847,4813,5233,5527,5653,5737,6577,6997,7207,7753 ⋆ Primes for which the weight as defined in A117078 is 7 and the gap as defined in A001223 is 4. ● a(n) = Omega(n log ^ 2 n). - _ Charles R Greathouse IV _ , Sep 17 2022 ●

▶ [A158689] 1,67,265,595,1057,1651,2377,3235,4225,5347,6601,7987,9505,11155,12937,14851,16897,19075,21385,23827,26401,29107,31945,34915,38017 ⋆ a(n) = 66 * n ^ 2 + 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A158730] 67,271,611,1087,1699,2447,3331,4351,5507,6799,8227,9791,11491,13327,15299,17407,19651,22031,24547,27199,29987,32911,35971,39167,42499 ⋆ a(n) = 68 * n ^ 2 - 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A254640] 1,67,927,6677,32942,126378,404634,1129854,2833479,6515509,13947505,28115451,53846156,98669156,173975076,296541132,490504893,789878583,1241708083,1909993393,2880500634,4266609710,6216356510,8920844010,12624212835 ⋆ Third partial sums of sixth powers (A001014). ● a(n) = n * (1 + n) * (2 + n) * (3 + n) * (3 + 2 * n) * (2 - 30 * n + 35 * n ^ 2 + 30 * n ^ 3 + 5 * n ^ 4) / 5040. ●

▶ [A157665] 67,1238,3867,7954,13499,20502,28963,38882,50259,63094,77387,93138,110347,129014,149139,170722,193763,218262,244219,271634,300507,330838,362627,395874,430579 ⋆ a(n) = 729 * n ^ 2 - 1016 * n + 354. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A130694] 68,70,79,82,84,87,88,89,94,95,96,97,98,100,101,103,104,105,106,109,110,111,112,113,114 ⋆ Exponents of powers of 2 that contain all ten digits. ● a(n) = n + 91 for n >= 78 (conjectured). - _ Chai Wah Wu _ , Jan 27 2020 ●

▶ [A281235] 68,76,132,204,324,716,1156,1868,4164,6732,10884,24268,39236,63436,141444,228684,369732,824396,1332868,2154956,4804932,7768524,12560004,28005196,45278276 ⋆ Solutions x to the negative Pell equation y ^ 2 = 72 * x ^ 2 - 332928 with x,y >= 0. ● a(n) = 6 * a(n - 3) - a(n - 6) for n>6. ●

▶ [A352040] 68,88,119,200,209,246,291,318,396,398,443,443,495,586,592,622,646,707,758,758,813,866,875,903,923 ⋆ a(n) is the least number k such that 2 ^ k contains each of the 10 digits at least n times. ● a(n) >= (10n - 1) * log _ 2(10), i.e., c = 10 * log _ 2(10) is a lower bound on the asymptotic growth rate. - _ Chai Wah Wu _ , Apr 16 2022 ●

▶ [A217776] 68,100,140,188,244,308,380,460,548,644,748,860,980,1108,1244,1388,1540,1700,1868,2044,2228,2420,2620,2828,3044 ⋆ a(n) = n * (n + 1) + (n + 2) * (n + 3) + (n + 4) * (n + 5) + (n + 6) * (n + 7). ● a(n) = 4 * n ^ 2 + 28 * n + 68. ●

▶ [A063341] 1,68,152,236,318,402,484,572,650,738,816,906,982,1074,1148,1242,1314,1408,1480,1578,1646,1744,1812,1912,1978 ⋆ Dimension of the space of weight n cuspidal newforms for Gamma _ 1(68). ● a(n) = a(n - 4) + a(n - 6) - a(n - 10) for n>13. ●

▶ [A292344] 68,212,420,692,1028,1428,1892,2420,3012,3668,4388,5172,6020,6932,7908,8948,10052,11220,12452,13748,15108,16532,18020,19572,21188 ⋆ The first Zagreb index of the Aztec diamond AZ(n) (see the Ramanes et al. reference, Theorem 2.1). ● a(n) = 32 * n ^ 2 + 48 * n - 12. ●

▶ [A027850] 1,68,531,2056,5645,12636,24703,43856,72441,113140,168971,243288,339781,462476,615735,804256,1033073,1307556,1633411,2016680,2463741,2981308,3576431,4256496,5029225 ⋆ a(n) = (n + 1) * (14 * n ^ 3 + 13 * n ^ 2 + 6 * n + 1). ● a(0)=1, a(1)=68, a(2)=531, a(3)=2056, a(4)=5645, a(n)=5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) _ Harvey P. Dale _ , May 21 2012 ●

▶ [A200876] 68,723,3882,14455,42744,107777,241718,495495,945790,1703537,2924076,4819113,7670638,11846955,17820980,26190965,37703808,53281111,74048150,101365923,136866444,182491453,240534714,313688075,405091466 ⋆ Number of 0..n arrays x(0..7) of 8 elements without any interior element greater than both neighbors or less than both neighbors. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>9. ●

▶ [A250144] 68,900,5696,24125,79200,217856,526032,1149057,2318140,4383764,7856784,13458029,22177208,35341920,54697568,82498977,121614516,175643524,249047840,347298237,477036560,646254368,864488880,1143037025,1495188396 ⋆ Number of length 5 + 2 0..n arrays with the medians of every three consecutive terms nondecreasing. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. ●

▶ [A250338] 68,907,5264,20085,59396,147903,325312,651369,1211620,2123891,3545488,5681117,8791524,13202855,19316736,27621073,38701572,53253979,72097040,96186181,126627908,164694927,211841984,269722425,340205476 ⋆ Number of length 2 + 5 0..n arrays with every six consecutive terms having the maximum of some three terms equal to the minimum of the remaining three terms. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

▶ [A254645] 1,68,995,7672,40614,166992,571626,1701480,4534959,11050468,24997973,53113424,106959580,205628736,379603812,676144944,1166649837,1956528420,3198236503,5108229896,7988730530,12255340240 ⋆ Fourth partial sums of sixth powers (A001014). ● a(n) = n * (1 + n) * (2 + n) ^ 2 * (3 + n) * (4 + n) * (- 1 - 8 * n + 14 * n ^ 2 + 8 * n ^ 3 + n ^ 4) / 5040. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) + n ^ 6. ●

▶ [A245875] 68,1281,4624,13961,30900,63241,113024,193137,305860,470321,688848,987961,1369844,1869561,2488960,3272801,4222404,5393377,6786320,8468841,10440628,12782441,15492864,18666961,22302020 ⋆ Number of length 6 + 2 0..n arrays with some pair in every consecutive three terms totalling exactly n. ● a(n) = 1 + 22 * n + 31 * n ^ 2 + 77 * n ^ 3 + 29 * n ^ 4 + n ^ 5 for n even. ● a(n) = - 5 - 44 * n + 10 * n ^ 2 + 77 * n ^ 3 + 29 * n ^ 4 + n ^ 5 for n odd. ●

▶ [A329444] 0,1,68,1314,18080,197350,1836792,15233316,115776768,821760390,5520171800,35438827996,219038609088,1310833221724,7629754810160,43348888067400,241117582878720,1316197491501510,7065439665315480,37362065079691500,194909773207512000,1004374157379474420 ⋆ The sixth moments of the squared binomial coefficients; a(n) = Sum _{ m=0..n } m ^ 6 * binomial(n, m) ^ 2. ● a(n) = binomial(2 * n, n) * n ^ 3 * (n ^ 6 + 3 * n ^ 5 - 13 * n ^ 4 - 15 * n ^ 3 + 30 * n ^ 2 + 8 * n - 2) / (8 * (2 * n - 1) * (2 * n - 3) * (2 * n - 5)). ●

▶ [A337962] 1,68,1659,16464,97935,420708,1443197,4198720,10770597,25016740,53619335,107545296,204013251,369072900,640912665,1074021632,1744341865,2755557252,4246675123,6401066960,9457144599,13720858404 ⋆ Number of achiral colorings of the 12 pentagonal faces of a regular dodecahedron or the 12 vertices of a regular icosahedron using n or fewer colors. ● a(n) = n ^ 2 * (15 * n ^ 6 + n ^ 4 + 44) / 60. ● a(n) = 1 * C(n,1) + 66 * C(n,2) + 1458 * C(n,3) + 10232 * C(n,4) + 31530 * C(n,5) + 47892 * C(n,6) + 35280 * C(n,7) + 10080 * C(n,8), where the coefficient of C(n,k) is the number of achiral colorings using exactly k colors. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 8) for n > 8. ●

▶ [A035802] 1,68,2312,52428,892432,12168532,138504984,1354168796,11614313504,88805833316,613171117352,3863171679980,22402282117680,120450005575540,604244840324920,2843633280971772,12614155679414336 ⋆ Coordination sequence for lattice D *_ 34 (with edges defined by l _ 1 norm = 1). ● a(m)=add(2 ^ k * binomial(n, k) * binomial(m - 1, k - 1), k=0..n) + 2 ^ n * binomial((n + 2 * m) / 2 - 1, n - 1); with n=34. ●

▶ [A166067] 1,69,70,139,209,348,557,905,1462,2367,3829,6196,10025,16221,26246,42467,68713,111180,179893,291073,470966,762039,1233005,1995044,3228049 ⋆ Fibonacci sequence beginning 1, 69. ● a(n) = a(n - 1) + a(n - 2). ●

▶ [A264045] 69,77,106,161,178,221,254,309,314,329,341,386,398,417,422,473,554,662,674,689,758,794,934,974,998 ⋆ Numbers n such that n and n + 5 are consecutive semiprimes. ● a(n) >> n log n. - _ Charles R Greathouse IV _ , Nov 02 2015 ●

▶ [A063355] 1,69,140,210,280,350,420,488,560,628,700,770,840,906,980,1048,1120,1188,1260,1326,1400,1466,1540,1608,1680 ⋆ Dimension of the space of weight n cuspidal newforms for Gamma _ 1(82). ● a(n) = a(n - 4) + a(n - 6) - a(n - 10) for n>13. ●

▶ [A295926] 69,161,401,961,2241,5121,11521,25601,56321,122881,266241,573441,1228801,2621441,5570561,11796481,24903681,52428801,110100481,230686721,482344961,1006632961,2097152001,4362076161,9059696641 ⋆ Number of (not necessarily maximal) cliques in the n - cube - connected cycle graph. ● a(n) = 5 *

2 ^ (n - 1) * n + 1 for n > 3. • a(n) = 5 * a(n - 1) - 8 * a(n - 2) + 4 * a(n - 3) f or n > 3. •

▶ [A063322] 1,69,164,258,352,446,540,634,728,822,916,1011,1104,1198,1292,138 7,1480,1575,1668,1763,1856,1951,2044,2140,2232 ⋆ Dimension of the space of we ight n cuspidal newforms for Gamma _ 1(49). • a(n) = a(n - 4) + a(n - 6) - a(n - 10) for n>13. •

▶ [A158732] 1,69,273,613,1089,1701,2449,3333,4353,5509,6801,8229,9793,11493,1 3329,15301,17409,19653,22033,24549,27201,29989,32913,35973,39169 ⋆ a(n) = 68 * n ^ 2 + 1. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). •

▶ [A158736] 69,279,629,1119,1749,2519,3429,4479,5669,6999,8469,10079,11829,1 3719,15749,17919,20229,22679,25269,27999,30869,33879,37029,40319,43749 ⋆ a(n) = 70 * n ^ 2 - 1. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). •

▶ [A161486] 0,69,336,573,936,2449,3820,5929,14740,22729,35020,86373,132936,2 04573,503880,775269,1192800,2937289,4519060,6952609,17120236,26339473,4052 3236,99784509,153518160 ⋆ Nonnegative values x of solutions (x, y) to the Diop hantine equation x ^ 2 + (x + 191) ^ 2 = y ^ 2. • a(n) = 6 * a(n - 3) - a(n - 6) + 382 for n > 6; a(1)=0, a(2)=69, a(3)=336, a(4)=573, a(5)=936, a(6)=2449. •

▶ [A160788] 1,69,1023,6761,28673,92189,245463,570193,1194577,2308405,41802 87,7177017,11785073,18634253,28523447,42448545,61632481,87557413,12199903 9,167063049,225223713,299364605,392821463,509427185,653558961 ⋆ G.f.: (1 + 62 * x + 561 * x ^ 2 + 1014 * x ^ 3 + 449 * x ^ 4 + 48 * x ^ 5 + x ^ 6) / (1 - x) ^ 7. • a(n) = 89 * n ^ 6 / 30 + 151 * n ^ 5 / 15 + 56 * n ^ 4 / 3 + 19 * n ^ 3 + 371 * n ^ 2 / 30 + 74 * n / 15 + 1. - _ R. J. Mathar _ , Sep 11 2011 •

▶ [A160815] 1,69,1024,6777,28773,92589,246688,573329,1201633,2322805,42075 12,7225417,11866869,18766749,28730472,42762145,62094881,88223269,12293800 0,168362649,226992613,301736205,395957904,513523761,658848961 ⋆ Expansion of (1 + 62 * x + 562 * x ^ 2 + 1023 * x ^ 3 + 458 * x ^ 4 + 49 * x ^ 5 + x ^ 6) / (1 - x) ^ 7. • a(n) = 539 * n ^ 6 / 180 + 151 * n ^ 5 / 15 + 335 * n ^ 4 / 18 + 19 * n ^ 3 + 2231 * n ^ 2 / 180 + 74 * n / 15 + 1. - _ R. J. Mathar _ , Sep 11 2011 •

▶ [A160816] 1,69,1025,6793,28873,92989,247913,576465,1208689,2337205,42347 37,7273817,11948665,18899245,28937497,43075745,62557281,88889125,12387696 1,169662249,228761513,304107805,399094345,517620337,664138961 ⋆ Expansion of (1 + 62 * x + 563 * x ^ 2 + 1032 * x ^ 3 + 467 * x ^ 4 + 50 * x ^ 5 + x ^ 6) / (1 - x) ^ 7. • a(n) = 136 * n ^ 6 / 45 + 151 * n ^ 5 / 15 + 167 * n ^ 4 / 9 + 19 * n ^ 3 + 559 * n ^ 2 / 45 + 74 * n / 15 + 1. - _ R. J. Mathar _ , Sep 17 2 011 •

▶ [A160817] 1,69,1026,6809,28973,93389,249138,579601,1215745,2351605,42619 62,7322217,12030461,19031741,29144522,43389345,63019681,89554981,12481592 2,170961849,230530413,306479405,402230786,521716913,669428961 ⋆ Expansion of (1 + 62 * x + 564 * x ^ 2 + 1041 * x ^ 3 + 476 * x ^ 4 + 51 * x ^ 5 + x ^ 6) / (1 - x) ^ 7. • a(n) = 61 * n ^ 6 / 20 + 151 * n ^ 5 / 15 + 37 * n ^ 4 / 2 + 19 * n ^ 3 + 249 * n ^ 2 / 20 + 74 * n / 15 + 1. - _ R. J. Mathar _ , Sep 17 2011 •

▶ [A160836] 1,69,1027,6825,29073,93789,250363,582737,1222801,2366005,42891 87,7370617,12112257,19164237,29351547,43702945,63482081,90220837,12575488 3,172261449,232299313,308851005,405367227,525813489,674718961 ⋆ G.f.: (1 + 62 * x + 565 * x ^ 2 + 1050 * x ^ 3 + 485 * x ^ 4 + 52 * x ^ 5 + x ^ 6) / (1 - x) ^ 7. • a(n) = 1 + n * (n + 1) * (277 * n ^ 4 + 629 * n ^ 3 + 1031 * n ^ 2 + 6 79 * n + 444) / 90. - _ R. J. Mathar _ , Sep 17 2011 • a(0)=1, a(1)=69, a(2)= 1027, a(3)=6825, a(4)=29073, a(5)=93789, a(6)=250363, a(n)=7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). - _ Harvey P. Dale _ , Sep 01 2015 •

▶ [A160834] 1,69,1029,6857,29273,94589,252813,589009,1236913,2394805,43436 37,7467417,12275849,19429229,29765597,44330145,64406881,91552549,12763280 5,174860649,235837113,313594205,411640109,534006641,685298961 ⋆ Expansion of: (1 + 62 * x + 567 * x ^ 2 + 1068 * x ^ 3 + 503 * x ^ 4 + 54 * x ^ 5 + x ^ 6) / (1 - x) ^ 7. • a(n) = 1 + n * (n + 1) * (47 * n ^ 4 + 104 * n ^ 3 + 171 * n ^ 2 + 114 * n + 74) / 15. - _ R. J. Mathar _ , Sep 17 2011 • a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). - _ Wesley Ivan Hurt _ , Oct 01 2021 •

▶ [A160833] 1,69,1031,6889,29473,95389,255263,595281,1251025,2423605,43980 87,7564217,12439441,19694221,30179647,44957345,65331681,92884261,12951072 7,177459849,239374913,318337405,417912991,542199793,695878961 ⋆ G.f.: (1 + 62 * x + 569 * x ^ 2 + 1086 * x ^ 3 + 521 * x ^ 4 + 56 * x ^ 5 + x ^ 6) / (1 - x) ^ 7. • a(n) = 1 + n * (n + 1) * (287 * n ^ 4 + 619 * n ^ 3 + 1021 * n ^ 2 + 6 89 * n + 444) / 90. - _ R. J. Mathar _ , Sep 17 2011 •

▶ [A160831] 1,69,1032,6905,29573,95789,256488,598417,1258081,2438005,44253 12,7612617,12521237,19826717,30386672,45270945,65794081,93550117,13044968 8,178759449,241143813,320709005,421049432,546296369,701168961 ⋆ G.f.: (1 + 62 * x + 570 * x ^ 2 + 1095 * x ^ 3 + 530 * x ^ 4 + 57 * x ^ 5 + x ^ 6) / (1 - x) ^ 7. • a(n) = 193 * n ^ 6 / 60 + 151 * n ^ 5 / 15 + 109 * n ^ 4 / 6 + 19 * n ^ 3 + 757 * n ^ 2 / 60 + 74 * n / 15 + 1. - _ R. J. Mathar _ , Sep 17 2011 •

▶ [A254683] 1,69,1064,8736,49350,216342,787968,2489448,7024407,18074875,430 72848,96186272,203145852,408774588,788378400,1464523344,2631173181,458770 1601,7785938104,12894168000,20882898530,33138238770 ⋆ Fifth partial sums of sixth powers (A001014). • a(n) = n * (1 + n) * (2 + n) * (3 + n) * (4 + n) * (5 + n) * (5 + 2 * n) * (- 3 + 5 * n + n ^ 2) * (4 + 15 * n + 3 * n ^ 2) / 33264 0. • a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) + n ^ 6. •

▶ [A253000] 1,1,1,1,69,1132,7235,25233,63135,129133,231419,378185,577623,837 925,1167283,1573889,2065935,2651613,3339115,4136633,5052359,6094485,727120 3,8590705,10061183 ⋆ Number of n X 4 nonnegative integer arrays with upper l eft 0 and lower right its king - move distance away minus 3 and every value wit hin 3 of its king move distance from the upper left and every value increasing b y 0 or 1 with every step right, diagonally se or down. • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>10. •

▶ [A156718] 70,99,239,268,408,437,577,606,746,775,915,944,1084,1113,1253,128 2,1422,1451,1591,1620,1760,1789,1929,1958,2098 ⋆ Numbers k such that k ^ 2 = = - 1 (mod 13 ^ 2). • a(n) = a(n - 1) + a(n - 2) - a(n - 3). •

▶ [A180274] 70,106,158,182,274,430,650,1022,1546,1786,2702,4250,6430,10114,15 302,17678,26746,42070,63650,100118,151474,174994,264758,416450,630070 ⋆ Int egers whose squares are the sums of 24 consecutive squares. • a(n) = + 10 * a(n - 6) - a(n - 12). G.f. (70 + 106 * x + 158 * x ^ 2 + 182 * x ^ 3 + 274 * x ^ 4 + 430 * x ^ 5 - 50 * x ^ 6 - 38 * x ^ 7 - 34 * x ^ 8 - 34 * x ^ 9 - 38 * x ^ 10 - 50 * x ^ 11) / (1 - 10 * x ^ 6 + x ^ 12). - _ Joerg Arndt _ , Jan 17 2011 •

▶ [A254367] 70,126,294,846,2814,10326,40614,168126,723534,3208806,14570934,6 7417806,316645854,1505245686,7225414854,34956689886,170199537774,83295295 2966,4093454620374,20184631056366,99800366967294,494533989722646,2454868 429675494 ⋆ a(n) = 5 * 2 ^ (n + 2) + 2 ^ (2n + 2) + 10 * 3 ^ n + 5 ^ n + 35. • a(n) = 15 * a(n - 1) - 85 * a(n - 2) + 225 * a(n - 3) - 274 * a(n - 4) + 120 * a(n - 5). - _ Colin Barker _ , Jan 30 2015 •

▶ [A063320] 1,70,161,253,345,437,529,621,713,805,897,987,1081,1173,1265,1355,1 449,1539,1633,1723,1817,1907,2001,2089,2185 ⋆ Dimension of the space of weigh t n cuspidal newforms for Gamma _ 1(47). • a(n) = a(n - 4) + a(n - 6) - a(n - 10) for n>13. •

▶ [A154361] 70,180,430,680,930,1180,1430,1680,1930,2180,2430,2680,2930,3180,3 430,3680,3930,4180,4430,4680,4930,5180,5430,5680,5930 ⋆ a(n) = 250 * n - 70. • a(n) = 2 * a(n - 1) - a(n - 2). - _ Vincenzo Librandi _ , Feb 21 2012 •

▶ [A151556] 1,70,357,3366,7748,29597,51604,134113,203475,427344,596471,1094 240,1444702,2413711,3062718,4778067,5884949,8712458,10485145,14894314,1759 5816,24172785,28127672,37588181,43189063 ⋆ Values of (n ^ 5 + 47 * n) / 48 as n ranges over the numbers that are == +- 1 mod 6. • a(n) = a(n - 1) + 5 * a(n - 2) - 5 * a(n - 3) - 10 * a(n - 4) + 10 * a(n - 5) + 10 * a(n - 6) - 10 * a(n - 7) - 5 * a(n - 8) + 5 * a(n - 9) + a(n - 10) - a(n - 11). [_ R. J. Mathar _ , May 21 2009] • a(n) = ((2 * n - 1) * (81 * n ^ 4 - 162 * n ^ 3 + 144 * n ^ 2 - 63 * n + 5 8) + (135 * n ^ 4 - 270 * n ^ 3 + 210 * n ^ 2 - 75 * n + 26) * (- 1) ^ n) / 32. - _ Tani Akinari _ , Oct 25 2014 •

▶ [A172222] 1,70,406,1168,2948,6576,13122,23808,40168,63996,97344,142516,202 072,278828,375856,496484,644296,823132,1037088,1290516,1588024,1934476,233 4992,2794948,3319976 ⋆ Number of ways to place 4 nonattacking zebras on a 4 X n board. • a(n) = 4 * (8 * n ^ 4 - 48 * n ^ 3 + 202 * n ^ 2 - 471 * n + 507) / 3, n>=9. •

▶ [A163434] 0,1,70,425,1426,3577,7526,14065,24130,38801,59302,87001,123410,1 70185,229126,302177,391426,499105,627590,779401,957202,1163801,1402150,167 5345,1986626 ⋆ Number of different fixed (possibly) disconnected tetrominoes b ounded tightly by an n X n square. • a(n) = (2n ^ 2 - 4n + 1) * (3n ^ 2 - 6n + 1), n>1. •

▶ [A060541] 1,70,495,1820,4845,10626,20475,35960,58905,91390,135751,194580,2 70725,367290,487635,635376,814385,1028790,1282975,1581580,1929501,233189 0,2794155,3321960,3921225 ⋆ a(n) = binomial(4 * n, 4). • a(n) = n * (2n - 1) * (4n - 1) * (4n - 3) / 3. •

▶ [A169712] 1,70,639,2716,7885,18306,36715,66424,111321,175870,265111,38466 0,540709,740026,989955,1298416,1673905,2125494,2662831,3296140,4036221,489 4450,5882779,7013736,8300425 ⋆ The function W _ n(8) (see Borwein et al. ref erence for definition). • a(n) = - 33 * n + 82 * n ^ 2 - 72 * n ^ 3 + 24 * n ^ 4. - _ Peter Luschny _ , May 27 2017 • a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Vincenzo Librandi _ , May 28 2017 •

▶ [A027804] 70,756,4410,18480,62370,180180,462462,1081080,2342340,4764760,9 189180,16930368,29980860,51279480,85058820,137287920,216228474,333125100,5 03052550,745945200,1087836750,1562340780,2212405650,3092380200,4270429800 ⋆ a(n) = 14 * (n + 1) * binomial(n + 4,8). • a(n) = C(n + 1, 5) * C(n + 4, 4). - _ Zerinvary Lajos _ , May 10 2005; corrected by _ R. J. Mathar _ , Feb 10 2 016 •

▶ [A125114] 70,906,4936,10766,17958,25870,35142,45572,56142,66934,77924,893 34,101024,113134,125664,138334,151704,165214,179004,192934,207704,223314,23 9204,255234,271544 ⋆ Sum of the first n weird numbers. • a(n) = O(n ^ 2). - _ Charles R Greathouse IV _ , Jul 28 2014 •

▶ [A254472] 1,70,1134,9870,59220,275562,1063530,3552978,10577385,28652260,7 1725108,167911380,371057232,779831820,1568210220,3032733564,5663906745,10 251608346,18037546450,30931714450,51814612980,84952851750,136562787270,21 5565263550,334584493425 ⋆ Sixth partial sums of sixth powers (A001014). • a(n) = n * (1 + n) * (2 + n) * (3 + n) ^ 2 * (4 + n) * (5 + n) * (6 + n) * (- 3 + 5 * n + n ^ 2) * (3 + 7 * n + n ^ 2) / 665280. • a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) + n ^ 6. •

▶ [A361610] 1,70,1175,13500,128125,1081250,8421875,61875000,434765625,2949 218750,19443359375,125195312500,790283203125,4904785156250,2999877929687 5,181152343750000,1081695556640625,6394958496093750,37471771240234375,21 781921387187500,125703811645507812 5 ⋆ a(n) = 5 ^ n * (n + 1) * (4 * n ^ 2 + 14 * n + 3) / 3. • a(n) = 20 * a(n - 1) - 150 * a(n - 2) + 500 * a(n - 3) - 625 * a (n - 4). •

▶ [A331351] 1,70,1407,12480,69050,281946,931490,2632512,6598935,15041950,31 740841,62830560,117855192,211141490,363551700,604679936,975561405,1531968 822,2348375395,3522668800,5181705606,7487800650,10646250902 ⋆ Number of a chiral colorings of the edges of a cube or regular octahedron. • a(n) = (8 * n ^ 2 + 6 * n ^ 3 + n ^ 6 + 6 * n ^ 7 + 3 * n ^ 8) / 24. • a(n) = 1 * C(n,1) + 68 * C(n,2) + 1200 * C(n,3) + 7268 * C(n,4) + 20025 * C(n,5) + 27750 * C(n,6) + 1 8900 * C(n,7) + 5040 * C(n,8), where the coefficient of C(n,k) is the number of colorings using exactly k colors. •

▶ [A047835] 1,70,1764,24696,232848,1646568,9343620,44537922,184225041,6773 52676,2254684432,6892441920,19571505408,52101067968,131018862096,31320358 7004,715536058545,1569305708586,3316911815140,6778924352200,134353610820 00 ⋆ a(n) = Product _{ i=1..n } ((i + 4) * (i + 5) * (i + 6) * (i + 7)) / (i * (i + 1) * (i + 2) * (i + 3)). • a(n) = C(n,n - 1) * C(n + 1,n - 2) * C(n + 2,n - 3) * C(n + 3,n - 4) / (10 * 4!), n >= 4 . - _ Zerinvary Lajos _ , May 29 2007 • a(n - 4) = (1 / 3456) * Sum _{ 1 <= x _ 1, x _ 2, x _ 3, x _ 4 <= n } (det V(x _ 1,x _ 2,x _ 3,x _ 4)) ^ 2 = (1 / 3456) * Sum _{ 1 <= i,j,k,l <= n } ((i - j)(i - k)(i - l)(j - k)(j - l)(k - l)) ^ 2, where V(x _ 1,x _ 2,x _ 3,x _ 4) is the Van dermonde matrix of order 4. - _ Peter Bala _ , Sep 21 2007 •

► [A197192] 1,70,2695,75460,1716715,33647614,588833245,9421331920,140142312310,1961992372340,26094498552122,332111799754280,4068369546989930,4819453155664994 0,55423711290147431 0,620745566496512272,6789404633043060297 5 ⋆ Binomial(n + 9, 9) * 7 ^ n ● a(n) = C(n + 9, 9) * 7 ^ n. ●
► [A103157] 70,17550,635376,9691375,88201170,566685735,2829877120,11671285626,41417124750,130179173740,370215608400,968104633665,2357084537626,5396491792125,11710951848960,24246290643940,48151733324310,92140804597626,170538695998000,306294282269955 ⋆ Number of ways to choose 4 distinct points from an (n + 1) X (n + 1) X (n + 1) lattice cube. ● a(n) = binomial((n + 1) ^ 3, 4). ●
► [A026063] 71,119,180,255,345,451,574,715,875,1055,1256,1479,1725,1995,2290,2611,2959,3335,3740,4175,4641,5139,5670,6235,6835 ⋆ dot _ product(n,n - 1,...2,1) * (6,7,...,n,1,2,3,4,5). ● a(n) = n(n ^ 2 + 18n - 73) / 6. - _ Ralf Stephan _ , Apr 30 2004 ●
► [A157921] 71,143,215,287,359,431,503,575,647,719,791,863,935,1007,1079,1151,1223,1295,1367,1439,1511,1583,1655,1727,1799 ⋆ a(n) = 72 * n - 1. ● a(n) = 2 * a(n - 1) - a(n - 2). - _ Vincenzo Librandi _ , Jan 28 2012 ●
► [A243579] 71,255,567,1007,1575,2271,3095,4047,5127,6335,7671,9135,10727,12447,14295,16271,18375,20607,22967,25455,28071,30815,33687,36687,39815 ⋆ Integers of the form 8k + 7 that can be written as a sum of four distinct squares of the form m, m + 2, m + 4, m + 5, where m == 1 (mod 4). ● a(n) = 64 * n ^ 2 - 8 * n + 15. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>3. ●
► [A158734] 1,71,281,631,1121,1751,2521,3431,4481,5671,7001,8471,10081,11831,13721,15751,17921,20231,22681,25271,28001,30871,33881,37031,40321 ⋆ a(n) = 70 * n ^ 2 + 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●
► [A158738] 71,287,647,1151,1799,2591,3527,4607,5831,7199,8711,10367,12167,14111,16199,18431,20807,23327,25991,28799,31751,34847,38087,41471,44999 ⋆ a(n) = 72 * n ^ 2 - 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●
► [A341426] 1,71,491,2522,9263,27723,71480,163908,345657,679802,1252185,2203724,3715206,6041979,9510283,14591324,21788606,31894205,45741815,64467383,89363919,122254946,164721244,219526449,289133792 ⋆ Number of positive solutions to (x _ 1) ^ 2 + (x _ 2) ^ 2 + ... + (x _ 7) ^ 2 <= n ^ 2. ● a(n) is the coefficient of x ^ (n ^ 2) in expansion of (theta _ 3(x) - 1) ^ 7 / (128 * (1 - x)). ●
► [A173806] 1,71,771,7771,77771,777771,7777771,77777771,777777771,7777777771,77777777771,777777777771,7777777777771,77777777777771,777777777777771,7777777777777771 ⋆ a(n) = (7 * 10 ^ n - 61) / 9 for n>0. ● a(n) = 10 * a(n - 1) + 61 with n>0, a(0)= - 6. ● a(n) = 11 * a(n - 1) - 10 * a(n - 2). - _ Vincenzo Librandi _ , Jul 05 2012 ●
► [A210699] 1,71,918,6667,33665,131616,425866,1192178,2977857,6785605,14339006,28451061,53519713,96176822,166119570,277155796,448497281,706337523,1085753062,1632969935,2408039361,3487969276,4970360858,6977601702,9661669825 ⋆ Number of bilaterally asymmetric 8 - hoops with n symbols and no a - rooted trees. ● a(n) = (n - 1) * (n ^ 7 - 7 * n ^ 6 + 29 * n ^ 5 - 71 * n ^ 4 + 116 * n ^ 3 - 128 * n ^ 2 + 80 * n - 32) / 16. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9). _ Vincenzo Librandi _ , May 13 2012 ●
► [A267475] 71,1112,8770,44901,171601,532840,1418740,3357537,7240267,14483216,27233174,48620533,83065269,136640848,217501096,336375073,507134991,747442216,1079476394,1530752741,2135032537,2933331864,3975033628 ⋆ Number of length - 7 0..n arrays with no following elements larger than the first repeated value. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. ●
► [A241940] 71,1187,9500,49355,193179,619132,1710198,4211175,9462805,19735067,38684438,71962709,128007725,219049200,362365540,581830389,909790395,1389318475,2076889640,3045529223,4388486135,6223486556,8697626250 ⋆ Number of length 4 + 4 0..n arrays with no consecutive five elements summing to more than 2 * n. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>9. ●
► [A254872] 1,71,1205,11075,70295,345857,1409387,4962365,15539750,44192010,115917118,283828498,654885730,1434717550,3002927770,6035661334,11699568079,21951176425,39988722875,70920437325,122735050305 ⋆ Seventh partial sums of sixth powers (A001014). ● a(n) = (n * (1 + n) * (2 + n) * (3 + n) * (4 + n) * (5 + n) * (6 + n) * (7 + n) * (7 + 2 * n) * (- 49 + 147 * n ^ 2 + 42 * n ^ 3 + 3 * n ^ 4)) / 51891840. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) + n ^ 6. ●
► [A221051] 71,3696,63950,688090,5703410,40217250,254522114,1492368834,8272324418,43936883266,225705715778,1128962528322,5525679156290,26563127958594,125778392431682,587953338416194,2718115098721346,12445431340858434,56504646938393666 ⋆ The hyper - Wiener index of the nanostar dendrimer D _ 1[n], defined pictorially in the Eslahchi et al. reference. ● a(n) = - 958 + 2 ^ n * (896 * n ^ 2 - 2904 * n - 19861) + 4 ^ n * (3136 * n ^ 2 - 11928 * n + 20890). Theorem 5 of the Eslahchi et al. paper contains a less explicit formula for the hyper - Wiener index. ●
► [A133899] 72,73,74,75,76,77,78,79,80,153,154,155,156,157,158,159,160,161,234,235,236,237,238,239,240 ⋆ Numbers m such that binomial(m + 9,m) mod 9 = 0. ● a(n)=9n + 72 - 8 * (n mod 9). ●
► [A206264] 72,93,218,471,932,1725,3011,5014,8016,12385,18572,27141,38768,54273,74621,100956,134604,177109,230238,296019,376748,475029,593783,736290,906200 ⋆ Number of (n + 1) X 6 0..1 arrays with the number of rightwards and downwards edge increases in each 2 X 2 subblock equal to the number in all its horizontal and vertical neighbors. ● a(n) = (11520 + 8028 * n + 5104 * n ^ 2 + 1665 * n ^ 3 + 295 * n ^ 4 + 27 * n ^ 5 + n ^ 6) / 720 for n>1 and even. ● a(n) = (10800 + 8028 * n + 5104 * n ^ 2 + 1665 * n ^ 3 + 295 * n ^ 4 + 27 * n ^ 5 + n ^ 6) / 720 for n>1 and odd. ●
► [A099943] 72,98,124,150,176,202,228,254,280,306,332,358,384,410,436,462,488,514,540,566,592,618,644,670,696 ⋆ Number of 5 X n binary matrices avoiding simultaneously the right angled numbered polyomino patterns (ranpp) (00;1), (01,1) and (11;0). ● a(n) = 26 * n + 20. ●
► [A102562] 72,108,120,144,168,180,200,216,240,252,264,270,280,288,300,312,324,336,360,378,392,396,400,408,420 ⋆ Numbers n such that the cyclic group of order n is not a Hajós group. ● a(n) = n + O(n(log log n) ^ 3 / log n). - _ Charles R Greathouse IV _ , Mar 24 2014 ●
► [A052486] 72,108,200,288,392,432,500,648,675,800,864,968,972,1125,1152,1323,1352,1372,1568,1800,1944,2000,2312,2592,2700 ⋆ Achilles numbers - powerful but imperfect: if n = Product(p _ i ^ e _ i) then all e _ i > 1 (i.e., powerful), but the highest common factor of the e _ i is 1, i.e., not a perfect power. ● a(n) = O(n ^ 2). - _ Daniel Forgues _ , Aug 11 2015 ● a(n) = O(n ^ 2 / log log n). - _ Daniel Forgues _ , Aug 12 2015 ●
► [A157336] 72,136,200,264,328,392,456,520,584,648,712,776,840,904,968,1032,1096,1160,1224,1288,1352,1416,1480,1544,1608 ⋆ a(n) = 8 * (8 * n + 1). ● a(n) = 2 * a(n - 1) - a(n - 2). (End) ●
► [A137883] 72,144,280,456,728,1056,1512,2040,2728,3504,4472,5544,6840,8256,9928,11736,13832,16080,18648,21384,24472,27744,31400,35256,39528 ⋆ Number of (directed) Hamiltonian paths in the n - Möbius ladder graph. ● a(n) = (- 1) ^ n * n * (- 1 + (- 1) ^ n * (5 + 2 * n ^ 2)). - _ Eric W. Weisstein _ , Dec 16 2013 ●
► [A208087] 72,168,402,1032,2664,6954,18168,47544,124434,325752,852792,2232618,5845032,15302472,40062354,104884584,274591368,718889514,1882077144,4927341912,12899948562,33772503768,88417562712,231480184362 ⋆ Number of 6 X (n + 1) 0..1 arrays with every 2 X 2 subblock having the same number of equal edges as its horizontal neighbors and a different number from its vertical neighbors, and new values 0..1 introduced in row major order. ● a(n) = (3 / 5) * 2 ^ (1 - n) * (2 ^ n * (15 + 2 * (- 1) ^ n) + (9 - 4 * sqrt(5)) * (3 - sqrt(5)) ^ n + (3 + sqrt(5)) ^ n * (9 + 4 * sqrt(5))). ●
► [A304376] 72,192,432,912,1872,3792,7632,15312,30672,61392,122832,245712,491472,982992,1966032,3932112,7864272,15728592,31457232,62914512,125829072,251658192,503316432,1006632912,2013265872 ⋆ a(n) = 60 * 2 ^ n - 48 (n>=1). ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>2. ●
► [A158488] 72,264,584,1032,1608,2312,3144,4104,5192,6408,7752,9224,10824,12552,14408,16392,18504,20744,23112,25608,28232,30984,33864,36872,40008 ⋆ a(n) = 64 * n ^ 2 + 8. ● a(1)=72, a(2)=264, a(3)=584, a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Nov 16 2011 ●
► [A308136] 72,288,960,2880,8064,21504,55296,138240,337920,811008,1916928,4472832,10321920,23592960,53477376,120324096,268959744,597688320,1321205760,2906652672,6366953472,13891534848,30198988800,65431142400,141331267584 ⋆ Number of (undirected) Hamiltonian paths in the 2n - crossed prism graph. ● a(n) = 3 * 2 ^ n * n * (1 + n). ● a(n) = 6 * a(n - 1) - 12 * a(n - 2) + 8 * a(n - 3) for n>4. ●
► [A277991] 0,72,306,702,1260,1980,2862,3906,5112,6480,8010,9702,11556,13572,15750,18090,20592,23256,26082,29070,32220,35532,39006,42642,46440 ⋆ a(n) = 81 * n ^ 2 - 9 * n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Nov 13 2016 ●
► [A157909] 72,315,720,1287,2016,2907,3960,5175,6552,8091,9792,11655,13680,15867,18216,20727,23400,26235,29232,32391,35712,39195,42840,46647,50616 ⋆ a(n) = 81 * n ^ 2 - 9. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). (End) ●
► [A192792] 72,360,2556,22572,219636,2204244,22197420,222257988,2207645892,21754722852,212845625820,2069408197476,20010127994676,192565336573476,1845376043710284,17619057807964452,167667905660138532,1590879916369856484,15054743317985652924 ⋆ Molecular topological indices of the Apollonian graphs. ● a(n) = 29 * a(n - 1) - 320 * a(n - 2) + 1676 * a(n - 3) - 4109 * a(n - 4) + 2537 * a(n - 5) + 9182 * a(n - 6) - 26346 * a(n - 7) + 43920 * a(n - 8) - 49896 * a(n - 9) + 23328 * a(n - 10) for n > 10. ●
► [A084479] 72,384,3360,21504,163968,1136640,8283648,58791936,423121920,3022872576,21679875072,155169515520,1111792499712,7961492434944,57028930483200,408439216748544,2925470825868288,20952944438968320,150073631759459328,1074876158496638976 ⋆ Number of fault - free tilings of a 5 X 3n rectangle with right trominoes. ● a(n) = 2 * a(n - 1) + 31 * a(n - 2) + 40 * a(n - 3) + 20 * a(n - 4) for n > 5. - _ Colin Barker _ , Mar 28 2017 ●
► [A187158] 0,0,0,72,388,904,1620,2536,3652,4968,6484,8200,10116,12232,14548,17064,19780,22696,25812,29128,32644,36360,40276,44392,48708 ⋆ Number of 5 - step one space at a time bishop's tours on an n X n board summed over all starting positions. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>6. ●
► [A205329] 72,594,4860,39852,326592,2676888,21939984,179823888,1473863040,12080008224,99009584064,811497652416,6651158427648,54513908309376,446804301553920,3662076158892288,30014934381324288,246006977148006912 ⋆ Number of (n + 1) X 3 0..2 arrays with the number of equal 2 X 2 subblock diagonal pairs and equal antidiagonal pairs differing from each horizontal or vertical neighbor, and new values 0..2 introduced in row major order. ● a(n) = ((9 - 5 * sqrt(3)) * (3 - 3 * sqrt(3)) ^ n + (3 * (1 + sqrt(3))) ^ n * (9 + 5 * sqrt(3))) / 2. ●
► [A304828] 72,760,5576,39288,275272,1927160,13490376,94432888,661030472,4627213560,32390495176,226733466488,1587134265672,11109939859960,77769579019976,544387053140088,3810709371980872,26674965603866360,186724759227064776,1307073314589453688,9149513202126176072 ⋆ a(n) = 344 * 7 ^ n / 21 - 128 / 3 (n>=1). ● a(n) = 8 * a(n - 1) - 7 * a(n - 2) for n>2. (End) ●
► [A086579] 0,72,792,7992,79992,799992,7999992,79999992,799999992,7999999992,79999999992,799999999992,7999999999992,79999999999992,799999999999992,7999999999999992,79999999999999992,799999999999999992,7999999999999999992,79999999999999999992,799999999999999999992,7999999999999999999992,79999999999999999999992 ⋆ a(n) = 8 * (10 ^ n - 1). ● a(n) = 11 * a(n - 1) - 10 * a(n - 2) for n > 1. ●
► [A330829] 72,800,147968,8657174528,36894614055915880448 ⋆ Numbers of the form 2 ^ (2 * (2 ^ n) + 1) * F _ n ^ 2, where F _ n is a Fermat prime A019434. ● a(n) = 2 ^ (2 * (2 ^ n) + 1) * (2 ^ (2 ^ n) + 1) ^ 2. ●
► [A008399] 1,72,1062,6696,26316,77688,189810,405720,785304,1408104,2376126,3816648,5885028,8767512,12684042,17891064,24684336,33401736,44426070,5818788 0,75168252,95901624,120978594,151048728,186823368 ⋆ Coordination sequence for E _ 6 lattice. ● a(n) = 9 * n * (13 * n ^ 2 + 7) * (n ^ 2 + 1) / 5 for n >= 1. ●
► [A022148] 1,72,1072,6968,28320,85992,214864,467544,918080,1665672,2838384,4596856,7138016,10698792,15559824,22049176,30546048,41484488,55357104,72718776,94190368,120462440,152298960 ⋆ Coordination sequence for root lattice

B _ 6. ● a(0) = 1; for n>0, a(n) = (8 * n / 15) * (58 * n ^ 4 - 65 * n ^ 3 + 180 * n ^ 2 - 85 * n + 47) . - _ Philippe Deléham _ , Feb 20 2004 ●

▶ [A192847] 0,0,0,72,1080,7020,30240,100800,281232,687960,1520640,3100680,5920200,10702692,18476640,30663360,49180320,76561200,116093952,171978120,249502680,355245660,497296800,685504512,931748400 ⋆ Molecular topological indices of the tetrahedral graphs. ● a(n) = n * (n - 1) * (n - 2) * (n - 3) ^ 2 * (n ^ 2 - 3 * n + 8) / 4. - _ Andrew Howroyd _ , May 23 2017 ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8). ●

▶ [A249713] 72,1177,7056,27113,80360,200489,442144,888465,1659976,2924889,4910896,7918521,12336104,18656489,27495488,39612193,55931208,77566873,105849552,142354057,188930280,247736105,321272672,412422065,524487496 ⋆ Number of length 7 + 3 0..n arrays with every four consecutive terms having the maximum of some two terms equal to the minimum of the remaining two terms. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. ●

▶ [A008391] 1,72,1332,11832,66222,271224,889716,2476296,6077196,13507416,27717948,53265960,96900810,168278760,280819260,452715672,708113304,1078467624,1604095524,2335932504,3337508646,4687156248,6480461988,8832976488,11883194148 ⋆ Coordination sequence for A _ 8 lattice. ● a(n) = n * (715 * n ^ 6 + 6006 * n ^ 4 + 10395 * n ^ 2 + 3044) / 280, a(0) = 1. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8). - _ Harvey P. Dale _ , Mar 04 2012 ●

▶ [A037251] 0,0,72,1512,12480,63000,234360,707952,1838592,4257360,9009000,17728920,32864832,57948072,97919640,159516000,251719680,386279712,578306952,846949320,1216152000,1715507640 ⋆ a(n) = n ^ 3 * (n ^ 3 + 1) * (n - 1). ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8); a(0)=0, a(1)=0, a(2)=72, a(3)=1512, a(4)=12480, a(5)=63000, a(6)=234360, a(7)=707952. - _ Harvey P. Dale _ , Nov 23 2012 ●

▶ [A352994] 0,0,72,1536,14400,92160,470400,2064384,8128512,29491200,100362240,324403200,1005109248,3005743104,8722022400,24662507520,68183654400,184817811456,492285984768,1291006771200,3338686955520,8526181171200,21526669688832,53788022931456 ⋆ Number of copies of the star graph S(2,2,1) contained within the n - dimensional hypercube graph. ● a(n) = (2 ^ n) * (C(n,3)) * (3 n) * (n - 2). ●

▶ [A187303] 0,0,72,2028,12778,37124,81362,145100,231552,338044,465734,613212,780752,968044,1175118,1401948,1648534,1914876,2200974,2506828,2832438,3177804,3542926,3927804,4332438 ⋆ Number of 8 - step one space leftwards or up, two space rightwards or down asymmetric rook's tours on an n X n board summed over all starting positions. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>16. ●

▶ [A035803] 1,72,2592,62232,1121472,16186536,194986080,2017132920,18300435840,147972367880,1080041397408,7190430174936,44042615547456,250012542410856,1323529602867936,6569619630522168,30721376739859200 ⋆ Coordination sequence for lattice D *_ 36 (with edges defined by l _ 1 norm = 1). ● a(m)=add(2 ^ k * binomial(n, k) * binomial(m - 1, k - 1), k=0..n) + 2 ^ n * binomial((n + 2 * m) / 2 - 1, n - 1); with n=36. ●

▶ [A286930] 0,72,4608,52488,294912,1125000,3359232,8470728,18874368,38263752,72000000,127552392,214990848,347530248,542126592,820125000,1207959552,1737904968,2448880128,3387303432,4608000000,6175160712,8163353088,10658584008,13759414272 ⋆ Integers whose double is a square and whose triple is a cube. ● a(n) = 72 * (n - 1) ^ 6. - _ David A. Corneth _ , May 16 2017 ●

▶ [A054557] 72,4824,32256,127008,378000,940464,2062368,4115232,7629336,13333320,22198176,35485632,54800928,82149984,120000960,171350208,239792616,329596344,445781952,594205920,781648560,1015906320,1305888480 ⋆ Number of labeled pure 2 - complexes on n nodes (0 - simplexes) with 5 2 - simplexes and 10 1 - simplexes. ● a(n) = 72 * C(n, 5) + 4392 * C(n, 6) = n * (n - 1) * (n - 2) * (n - 3) * (n - 4) * (61 * n - 299) / 10. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). _ Vincenzo Librandi _ , Apr 28 2012 ●

▶ [A334357] 0,1,72,7173,610160,28654530,723903411,11151501102,117740542158,928786063095,5822688352360,30338870238171,135818642249082,535712216425568,1898338161488055,6136965479845740,18323823959847156,51039512178104637,133722394132080528 ⋆ Number of nonequivalent proper colorings of the vertices of a 4D hypercube using at most n colors up to rotations and reflections of the cube. ● a(n) = n * (n - 1) * (n ^ 14 - 31 * n ^ 13 + 465 * n ^ 12 - 4471 * n ^ 11 + 30805 * n ^ 10 - 161035 * n ^ 9 + 659293 * n ^ 8 - 2149343 * n ^ 7 + 5610000 * n ^ 6 - 11666144 * n ^ 5 + 19009100 * n ^ 4 - 23485632 * n ^ 3 + 20729104 * n ^ 2 - 11646800 * n + 3125472) / 384. ●

▶ [A157120] 73,103,205,233,515,1157,1325,2987,6737,7717,17407,39265,44977,101455,228853,262145,591323,1333853,1527893,3446483,7774265,8905213,20087575,45311737,51903385 ⋆ Positive numbers y such that y ^ 2 is of the form x ^ 2 + (x + 103) ^ 2 with integer x. ● a(n) = 6 * a(n - 3) - a(n - 6) for n > 6; a(1) = 73, a(2) = 103, a(3) = 205, a(4) = 233, a(5) = 515, a(6) = 1157. ●

▶ [A196655] 73,139,271,535,1063,2119,4231,8455,16903,33799,67591,135175,270343,540679,1081351,2162695,4325383,8650759,17301511,34603015,69206023,138412039,276824071,553648135,1107296263 ⋆ 33 * 2 ^ (n + 1) + 7. ● a(n) = 33 * 2 ^ (n + 1) + 7. ●

▶ [A158740] 1,73,289,649,1153,1801,2593,3529,4609,5833,7201,8713,10369,12169,14113,16201,18433,20809,23329,25993,28801,31753,34849,38089,41473 ⋆ a(n) = 72 * n ^ 2 + 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A174334] 0,73,292,657,1168,1825,2628,3577,4672,5913,7300,8833,10512,12337,14308,16425,18688,21097,23652,26353,29200,32193,35332,38617,42048 ⋆ 73 * n ^ 2. ● a(n) = (37 * n) ^ 2 - (36 * n) ^ 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>2. ●

▶ [A158744] 73,295,665,1183,1849,2663,3625,4735,5993,7399,8953,10655,12505,14503,16649,18943,21385,23975,26713,29599,32633,35815,39145,42623,46249 ⋆ a(n) = 74 * n ^ 2 - 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A177095] 1,73,721,6553,59041,531433,4782961,43046713,387420481,3486784393,31381059601,282429536473,2541865828321,22876792454953,205891132094641,1853020188851833,16677181699666561,150094635296999113 ⋆ 9 ^ n - 8. ● a(n) = 10 * a(n - 1) - 9 * a(n - 2) for n>2, a(1)=1, a(2)=73. - _ Vincenzo Librandi _ , Feb 06 2013 ●

▶ [A100412] 1,73,793,7993,79993,799993,7999993,79999993,799999993,7999999993,79999999993,799999999993,7999999999993,79999999999993,799999999999993,7999999999999993,79999999999999993 ⋆ a(n) = 8 * 10 ^ n - 7. ● a(n) = 10 * a(n - 1) + a(n - 2) - 10 * a(n - 3). ●

▶ [A169830] 1,73,793,7993,79993,799993,7999993,79999993,799999993,7999999993,79999999993,799999999993,7999999999993,79999999999993,799999999999993,7999999999999993,79999999999999993,799999999999999993,7999999999999999993 ⋆ Numbers n such that 2 * reverse(n) - n = 1. ● a(n) = 8 * 10 ^ (n - 1) - 7. - _ David Radcliffe _ , Jul 25 2015 ● a(n) = 11 * a(n - 1) - 10 * a(n - 2). (End) ●

▶ [A305549] 1,73,985,6321,26577,85305,227305,528865,1110049,2149033,3898489,6704017,11024625,17455257,26751369,39855553,57926209,82368265,114865945,157417585,212372497,282469881,370879785,481246113,617731681 ⋆ Crystal ball sequence for the lattice C _ 6. ● a(n) = (128 * n ^ 6 + 384 * n ^ 5 + 800 * n ^ 4 + 960 * n ^ 3 + 692 * n ^ 2 + 276 * n + 45) / 45. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7), for n>6. ● a(n) = Sum _{ k=0..6 } binomial(12, 2k) * binomial(n + k, 6). ●

▶ [A346642] 0,1,73,1045,7445,35570,130826,399738,1063290,2539515,5564515,11362351,21875503,40068860,70321460,118921460,194681076,309689493,480223005,727832905,1080632905,1574809126,2256376958,3183210350,4427370350 ⋆ a(n) = Sum _{ j=1..n } Sum _{ i=1..j } j ^ 3 * i ^ 3. ● a(n) = n * (n + 1) * (n + 2) * (21 * n ^ 5 + 69 * n ^ 4 + 45 * n ^ 3 - 21 * n ^ 2 - 6 * n + 4) / 672 (from the recurrent form of Faulhaber's formula). ●

▶ [A008400] 1,73,1135,7831,34147,111835,301645,707365,1492669,2900773,5276899,9093547,14978575,23746087,36430129,54321193,79005529,112407265,156833335,215021215,290189467,386091091 ⋆ Crystal ball sequence for E _ 6 lattice. ● a(n) = 1 + (3 / 20) * n * (n + 1) * (26 * n ^ 4 + 52 * n ^ 3 + 73 * n ^ 2 + 47 * n + 42). ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). - _ Harvey P. Dale _ , Feb 23 2015 ●

▶ [A008392] 1,73,1405,13237,79459,350683,1240399,3716695,9793891,23301307,51019255,104285215,201186025,369464785,650284045,1102999717,1811113021,2889580645,4493676169,6829608673,10167117319,14854273567,21334735555,30167712043,42050906191 ⋆ Crystal ball sequence for A _ 8 lattice. ● a(n) = 143 / 448 * n ^ 8 + 143 / 112 * n ^ 7 + 2431 / 480 * n ^ 6 + 429 / 40 * n ^ 5 + 3355 / 192 * n ^ 4 + 297 / 16 * n ^ 3 + 22079 / 1680 * n ^ 2 + 761 / 140 * n + 1. - _ T. D. Noe _ , Apr 29 2007 ●

▶ [A305265] 74,86,110,158,254,446,830,1598,3134,6206,12350,24638,49214,98366,196670,393278,786494,1572926,3145790,6291518,12582974,25165886,50331710,100663358,201326654 ⋆ a(n) = 12 * 2 ^ n + 62. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>1. ●

▶ [A242146] 74,1113,7862,36224,126894,367358,924300,2088459,4333978,8394287,15356562,26776802,44817566,72410412,113445080,172987461,257528394,375265333,536418926,753586548,1042134830,1420633226,1911330660 ⋆ Number of length 2 + 5 0..n arrays with no consecutive six elements summing to more than 3 * n. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. ●

▶ [A337406] 0,74,10704,345640,5062600,45246810,288005144,1430618784,5881281480,20827126650,65370603320,185725346664,485325996064,1181031257770,2702889008400,5863794289280,12137528310384,24099966466794 ⋆ Number of chiral pairs of colorings of the edges of a cube (or regular octahedron) using n or fewer colors. ● a(n) = (n - 1) * n ^ 2 * (n + 1) * (n ^ 8 + n ^ 6 - 2n ^ 4 + 8) / 48 . ● a(n) = 74 * C(n,2) + 10482 * C(n,3) + 303268 * C(n,4) + 3440700 * C(n,5) + 19842840 * C(n,6) + 65867760 * C(n,7) + 133580160 * C(n,8) + 168399000 * C(n,9) + 128898000 * C(n,10) + 54885600 * C(n,11) + 9979200 * C(n,12), where the coefficient of C(n,k) is the number of colorings using exactly k colors. ●

▶ [A228306] 75,165,315,546,882,1350,1980,2805,3861,5187,6825,8820,11220,14076,17442,21375,25935,31185,37191,44022,51750,60450,70200,81081,93177 ⋆ The Wiener index of the Kneser graph K(n,2) (n>=5). ● a(n) = (1 / 8) * n * (n - 1) * (n - 2) * (n + 5). ●

▶ [A201916] 0,75,203,323,552,708,1020,1127,1311,1428,1608,1820,1955,2336,2675,3128,3311,3627,3927,4140,4508,4743,5535,6003,6800 ⋆ Nonnegative values x of solutions (x, y) to the Diophantine equation x ^ 2 + (x + 2737) ^ 2 = y ^ 2. ● a(n) = a(n - 1) + 6 * a(n - 27) - 6 * a(n - 28) - a(n - 54) + a(n - 55), where the 55 initial terms can be computed using the Mathematica program. ●

▶ [A098230] 0,1,75,222,442,735,1101,1540,2052,2637,3295,4026,4830,5707,6657,7680,8776,9945,11187,12502,13890,15351,16885,18492,20172 ⋆ 75 - gonal numbers: a(n) = n * (73 * n - 71) / 2. ● a(n) = n * (73 * n - 71) / 2. ●

▶ [A158742] 1,75,297,667,1185,1851,2665,3627,4737,5995,7401,8955,10657,12507,14505,16651,18945,21387,23977,26715,29601,32635,35817,39147,42625 ⋆ a(n) = 74 * n ^ 2 + 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A158765] 75,303,683,1215,1899,2735,3723,4863,6155,7599,9195,10943,12843,14895,17099,19455,21963,24623,27435,30399,33515,36783,40203,43775,47499 ⋆ a(n) = 76 * n ^ 2 - 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A226741] 75,308,807,1704,3155,5340,8463,12752,18459,25860,35255,46968,61347,78764,99615,124320,153323,187092,226119,270920,322035,380028,445487,519024,601275 ⋆ Column 4 of array in A226513. ● a(n) = (n + 1) ^ 4 + 12 * (n + 1) ^ 3 + 36 * (n + 1) ^ 2 + 26 * (n + 1). ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ●

▶ [A193252] 1,75,365,1015,2169,3971,6565,10095,14705,20539,27741,36455,46825,58995,73109,89311,107745,128555,151885,177879,206681,238435,273285,311375,352849 ⋆ Great rhombicuboctahedron with faces of centered polygons. ● a(n) = 24 * n ^ 3 - 36 * n ^ 2 + 14 * n - 1. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4); a(0)=1, a(1)=75, a(2)=365, a(3)=1015. - _ Harvey P. Dale _ , Jul 27 2011 ●

► [A015223] 1,75,405,1183,2601,4851,8125,12615,18513,26011,35301,46575,60025,75843,94221,115351,139425,166635,197173,231231,269001,310675,356445,406503,461041 ⋆ Odd pentagonal pyramidal numbers. • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + 192. •

► [A129625] 0,75,432,699,1092,3115,4660,6943,18724,27727,41032,109695,162168,239715,639912,945747,1397724,3730243,5512780,8147095,21742012,32131399,47485312,126722295,187276080 ⋆ Nonnegative values x of solutions (x, y) to the Diophantine equation x ^ 2 + (x + 233) ^ 2 = y ^ 2. • a(n) = 6 * a(n - 3) - a(n - 6) + 466 for n > 6; a(1)=0, a(2)=75, a(3)=432, a(4)=699, a(5)=1092, a(6)=3115. •

► [A199901] 75,533,2035,5725,13363,27457,51395,89577,147547,232125,351539,515557,735619,1024969,1398787,1874321,2471019,3210661,4117491,5218349,6542803,8123281,9995203,12197113,14770811 ⋆ Number of - n..n arrays x(0..5) of 6 elements with zero sum, and adjacent elements not both strictly positive and not both strictly negative. • a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. •

► [A293581] 75,1232,13064,114032,893490,6550112,45966744,313094512,2088274012,13719804224,89151186688,574612403008,3681207840264,23476261805376,14920204791568 0,945775992492352,5983286739107952,37794913734696448,238464380911582336,1503238554666345728 ⋆ Number of compositions of n where each part i is marked with a word of length i over a quaternary alphabet whose letters appear in alphabetical order and all four letters occur at least once in the composition. • a(n) = 20 * a(n - 1) - 160 * a(n - 2) + 670 * a(n - 3) - 1634 * a(n - 4) + 2476 * a(n - 5) - 2432 * a(n - 6) + 1564 * a(n - 7) - 640 * a(n - 8) + 152 * a(n - 9) - 16 * a(n - 10). •

► [A210505] 0,75,1380,1725,4575,7095,10020,10620,31800,38355,58710,61170,67125,92235,92310,94845,118530,137415,156000,168765,189705,238815,249450,257370,339375 ⋆ Numbers k for which 2 * k + 7, 4 * k + 7, 6 * k + 7, 8 * k + 7, 10 * k + 7 and 12 * k + 7 are primes. • a(n) == 0 (mod 15). •

► [A026046] 76,105,144,195,260,341,440,559,700,865,1056,1275,1524,1805,2120,2471,2860,3289,3760,4275,4836,5445,6104,6815,7580 ⋆ a(n) = dot _ product(1,2,...,n) * (6,7,...,n,1,2,3,4,5). • a(n) = n(n ^ 2 - 6n + 38) / 3. - _ Ralf Stephan _ , Apr 30 2004 •

► [A004944] 0,76,152,228,304,380,456,532,608,684,760,836,912,988,1064,1140,1216,1292,1368,1444,1520,1596,1672,1748,1824 ⋆ Nearest integer to n * phi ^ 9, where phi is the golden ratio, A001622. • a(n)=round(n * A001622 ^ 9) where tau ^ 9=76.013155... - _ R. J. Mathar _ , May 24 2008 •

► [A063359] 1,76,154,231,308,385,462,537,616,691,770,847,924,997,1078,1153,1232,1307,1386,1459,1540,1613,1694,1769,1848 ⋆ Dimension of the space of weight n cuspidal newforms for Gamma _ 1(86). • a(n) = a(n - 4) + a(n - 6) - a(n - 10) for n>13. •

► [A099944] 76,164,340,692,1396,2804,5620,11252,22516,45044,90100,180212,360436,720884,1441780,2883572,5767156,11534324,23068660,46137332,92274676,184549364,369098740,738197492,1476394996 ⋆ Number of 3 X n binary matrices avoiding simultaneously the right angled numbered polyomino patterns (ranpp) (00;1) and (11;0). • a(n) = 11 * 2 ^ n - 12. • a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n > 4. •

► [A005571] 76,288,700,1376,2380,3776,5628,8000,10956,14560,18876,23968,29900,36736,44540,53376,63308,74400,86716,100320,115276,131648,149500,168896,189900 ⋆ Number of walks on cubic lattice. • a(n) = 4(n + 1)(n + 3)(8n + 19) / 3. •

► [A167586] 76,372,1020,2212,4140,6996,10972,16260,23052,31540,41916,54372,69100,86292,106140,128836,154572,183540,215932,251940,291756,335572,383580,435972,492940 ⋆ The fourth row of the ED4 array A167584. • a(n) = 32 * n ^ 3 - 16 * n ^ 2 + 120 * n - 60. • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ G. C. Greubel _ , Jun 17 2016 •

► [A234779] 76,484,3084,19652,125228,797988,5085004,32403076,206481516,1315758308,8384382092,53427641412,340455961516,2169481164964,13824544308684,88093885500932,561359021271788,3577137606898788,22794527163204364 ⋆ Number of (n + 1) X (1 + 1) 0..3 arrays with no adjacent elements equal and with each 2 X 2 subblock having the number of clockwise edge increases equal to the number of counterclockwise edge increases. • a(n) = (2 ^ (1 - n) * ((7 - sqrt(33)) ^ n * (- 17 + 3 * sqrt(33)) + (7 + sqrt(33)) ^ n * (17 + 3 * sqrt(33)))) / sqrt(33). •

► [A363843] 76,526,6508,34228,324562,747004,2849576,4965266,12896050,41071144,57316082,138789292,231850328,294172382,458893426,836688844,1430252626,1689646684,2700843026,3609164734,4146921368,6155086706,7879211410,11169529016,17176506056 ⋆ a(n) is the number of isomorphism classes of genus 3 hyperelliptic curves over the finite field of order prime(n). • a(1) = 76, and for n > 1, a(n) = 2 * prime(n) ^ 5 + 2 * prime(n) ^ 3 - 2 - 2 * (prime(n) ^ 2 - prime(n)) * [prime(n) == 3 (mod 4)] + 2 * (prime(n) - 1) * [prime(n) > 3] + 4 * [prime(n) == 1 (mod 8)] + 12 * [prime(n) == 1 (mod 7)] + 2 * [prime(n) == 7] + 2 * [prime(n) == 1 or 5 (mod 12)]. •

► [A129626] 0,76,559,843,1239,3976,5620,7920,23859,33439,46843,139740,195576,273700,815143,1140579,1595919,4751680,6648460,9302376,27695499,38750743,54218899,161421876,225856560 ⋆ Nonnegative values x of solutions (x, y) to the Diophantine equation x ^ 2 + (x + 281) ^ 2 = y ^ 2. • a(n) = 6 * a(n - 3) - a(n - 6) + 562 for n > 6; a(1)=0, a(2)=76, a(3)=559, a(4)=843, a(5)=1239, a(6)=3976. •

► [A261574] 0,76,2786,46764,439204,2744420,12813606,48229636,153992264,432083484,1092730090,2537720636,5489037036,11179326964,21624372014,40001698260,71163830416,122319408236,203920464114,330799604044,523606640180,810600392196,1229857906486 ⋆ a(n) = n * (n ^ 2 + 3) * (n ^ 6 + 6 * n ^ 4 + 9 * n ^ 2 + 3). • a(n) = - a(- n) = ((n + sqrt(n ^ 2 + 4)) / 2) ^ 9 - 1 / ((n + sqrt(n ^ 2 + 4)) / 2) ^ 9. •

► [A035804] 1,76,2888,73188,1392016,21202556,269493720,2941076500,28142347040,239933990060,1846012202088,12950575751748,83558656596144,49945494112244,278294852888 3448,1453313349531 4548,71467464065517120 ⋆ Coordination sequence for lattice D *_ 38 (with edges defined by l _ 1 norm = 1). • a(m)=add(2 ^ k * binomial(n, k) * binomial(m - 1, k - 1), k=0..n) + 2 ^ n * binomial((n + 2 * m) / 2 - 1, n - 1); with n=38. •

► [A278685] 0,0,1,76,3773,66201,651193,4318451,21754341,89267490,312974387,968069337,2704548145,6942663519,16594368633,37311795887,79570707969,162013125016,316669793867,596873304925,1089009784181,1929545889877,3329316638249,5607471933963,9238336533613 ⋆ Number of non - equivalent ways to place 6 non - attacking ferses on an n X n board. • a(n) = n ^ 12 - 75 * n ^ 10 + 120 * n ^ 9 + 2305 * n ^ 8 - 6960 * n ^ 7 - 32008 * n ^ 6 + 152880 * n ^ 5 + 138204 * n ^ 4 - 1543560 * n ^ 3 + 1178528 * n ^ 2 + 5238720 * n - 7977600 + IF(MOD(n, 2) = 1, 122 * n ^ 6 - 600 * n ^ 5 - 1645 * n ^ 4 + 14520 * n ^ 3 - 19447 * n ^ 2 - 30480 * n + 81855) / 5760 for n>=5. • a(n) = 6 * a(n - 1) - 8 * a(n - 2) - 22 * a(n - 3) + 69 * a(n - 4) - 8 * a(n - 5) - 176 * a(n - 6) + 168 * a(n - 7) + 182 * a(n - 8) - 364 * a(n - 9) + 364 * a(n - 11) - 182 * a(n - 12) - 168 * a(n - 13) + 176 * a(n - 14) + 8 * a(n - 15) - 69 * a(n - 16) + 22 * a(n - 17) + 8 * a(n - 18) - 6 * a(n - 19) +* a(n - 20) for n>=25. •

► [A289227] 0,76,10956,371016,4988324,39302784,218633416,952344088,3460482612,10932805668,30901640212,79762409256,190898410020,428596770008,910935932112,1846146025240,3588666200596,6723331905852,12188915557404,21455723224456,36776237135268,61533021405936 ⋆ Number of ways to select 6 disjoint point triples from an n X n X n triangular point grid, each point triple forming a 2 X 2 X 2 triangle. • a(n) = (n ^ 12 - 12 * n ^ 11 - 129 * n ^ 10 + 2090 * n ^ 9 + 3985 * n ^ 8 - 142832 * n ^ 7 + 152809 * n ^ 6 + 4752598 * n ^ 5 - 12392266 * n ^ 4 - 76011076 * n ^ 3 + 274393360 * n ^ 2 + 455879232 * n - 2015187840) / 720 for n>=6. •

► [A118611] 0,77,132,245,392,585,728,1029,1428,1725,2352,3185,4292,5117,6860,9177,10904,14553,19404,25853,30660,40817,54320,64385,85652 ⋆ Nonnegative values x of solutions (x, y) to the Diophantine equation x ^ 2 + (x + 343) ^ 2 = y ^ 2. • a(n) = 6 * a(n - 7) - a(n - 14) + 686 for n > 14; a(1)=0, a(2)=77, a(3)=132, a(4)=245, a(5)=392, a(6)=585, a(7)=728, a(8)=1029, a(9)=1428, a(10)=1725, a(11)=2352, a(12)=3185, a(13)=4292, a(14)=5117. •

► [A075253] 77,166,267,684,897,1416,1557,2904,3333,5904,6189,11952,12813,24096,24669,48480,50205,97344,98493,195264,198717,391296,393597,783744,790653 ⋆ Trajectory of 77 under the Reverse and Add! operation carried out in base 2. • a(0) = 77; a(1) = 166; a(2) = 267; for n > 2 and •

► [A158767] 1,77,305,685,1217,1901,2737,3725,4865,6157,7601,9197,10945,12845,14897,17101,19457,21965,24625,27437,30401,33517,36785,40205,43777 ⋆ a(n) = 76 * n ^ 2 + 1. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). •

► [A158771] 77,311,701,1247,1949,2807,3821,4991,6317,7799,9437,11231,13181,15287,17549,19967,22541,25271,28157,31199,34397,37751,41261,44927,48749 ⋆ a(n) = 78 * n ^ 2 - 1. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). •

► [A176632] 77,897,3333,12813,50205,198717,790653,3154173,12599805,50365437,201394173,805441533,3221495805,12885442557,51540688893,206160592893,824638046205,3298543534077,13194156834813,52776592736253 ⋆ a(n) = 6 * a(n - 1) - 8 * a(n - 2) - 9 for n > 2; a(0) = 77, a(1) = 897, a(2) = 3333. • a(n) = 3 * (64 * 4 ^ n + 22 * 2 ^ n - 1) for n > 0, a(0) = 77. •

► [A289232] 0,77,2569,31951,223346,1089665,4161705,13314461,37246668,93781829,216901737,467727523,951014654,1839155785,3406165049,6074688977,10479716856,17553399741,28636182537,45620375447,71133273514,108768061009,163371926729,241402171109,351362501892 ⋆ Number of nonequivalent ways to select 5 disjoint point triples from an n X n X n triangular point grid, each point triple forming a 2 X 2 X 2 triangle. • a(n) = (n ^ 10 - 10 * n ^ 9 - 85 * n ^ 8 + 1160 * n ^ 7 + 1345 * n ^ 6 - 49084 * n ^ 5 + 61035 * n ^ 4 + 897210 * n ^ 3 - 2205196 * n ^ 2 - 5725656 * n + 18174960) / 720 + IF(MOD(n, 2) = 1, - 2 * n ^ 2 + 13 * n - 11) / 4. •

► [A224666] 78,108,142,180,222,268,318,372,430,492,558,628,702,780,862,948,1038,1132,1230,1332,1438,1548,1662,1780,1902 ⋆ Number of 4 X 4 0..n matrices with each 2 X 2 subblock idempotent. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>3. •

► [A074089] 0,0,0,0,0,78,501,2574,11757,50034,203229,797316,3046362,11394774,41885913,151732722,542840175,1921208586,6735519249,23417342568,80810560596,277008392478,943826398893,3198199361910,10783017814065 ⋆ Coefficient of q ^ 3 in nu(n), where nu(0)=1, nu(1)=b and, for n >= 2, nu(n) = b * nu(n - 1) + lambda * (1 + q + q ^ 2 + ... + q ^ (n - 2)) * nu(n - 2) with (b,lambda)=(2, 3). • a(n) = 8 * a(n - 1) - 12 * a(n - 2) - 40 * a(n - 3) + 74 * a(n - 4) + 120 * a(n - 5) - 108 * a(n - 6) - 216 * a(n - 7) - 81 * a(n - 8) for n>=11. •

► [A128951] 78,781,7809,78096,780952,7809524,78095238,780952381,7809523809,78095238096,780952380952,7809523809524,78095238095238,780952380952381,7809523809523809,78095238095238096,780952380952380952 ⋆ a(n) is equal to the number of positive integers m less than or equal to 10 ^ n such that m is not divisible by the prime 5 and is not divisible by at least one of the primes 2, 3 and 7. • a(n) = 10 ^ n - floor(10 ^ n / 5) - floor(10 ^ n / 42) + floor(10 ^ n / 210). •

► [A027786] 78,1183,9555,54600,247520,946764,3174444,9573720,26453700,67897830,163601438,373173528,811246800,1690097500,3389852700,6571099080,12351232530,22574731725,40219349625,69995780400,119218619520,199052516520,326270653800,525704634000 ⋆ a(n) = 13 * (n + 1) * binomial(n + 2,13) / 2. • a(n) = C(n + 1, 12) * C(n + 2, 2). - _ Zerinvary Lajos _ , Apr 28 2005; corrected by _ R. J. Mathar _ , Mar 15 2016 •

► [A190396] 0,1,78,1278,10002,50191,189208,584958,1563488,3737987,8181786,16669638,32003238,58438623,102234772,172344406,281269668,446107043,689807558,1042679982,1544166426,2244921423,3209227248,4517779918 ⋆ Number of ways to place 4 nonattacking grasshoppers on a chessboard of size n x n. • a(n) = 1 / 24 * (n ^ 8 - 6 * n ^ 6 - 80 * n ^ 5 + 431 * n ^ 4 - 552 * n ^ 3 - 666 * n ^ 2 + 2168 * n - 1392), n>2. •

► [A160839] 78,1662,13488,65481,231486,660921,1619353,3537997,7072138,13168476,23141394,38758149,62332986,96830175,145975971,214379497,307662550,432598330,597259092,811172721,1085488230,1433150181,1869082029 ⋆ Expansion of (78 + 1116 * x + 3492 * x ^ 2 + 3237 * x ^ 3 + 927 * x ^ 4 + 72 * x ^ 5 + x ^ 6) / (1 - x) ^ 7. • a(n) = 8923 * n ^ 6 / 720 + 18691 * n ^ 5 / 240 + 35375 * n ^ 4 / 144 + 7219 * n ^ 3 / 16 + 178361 * n ^ 2 / 360 + 9043 * n / 30 + 78. - _ R. J. Mathar _ , Sep 11 2011 •

► [A187590] 0,0,78,1708,7666,19104,35832,57592,84384,116208,153064,194952,241872,293824,350808,412824,479872,551952,629064,711208,798384,890592,987832,1090104,1197408 ⋆ Number of 7 - step E, S, NW and NE - moving king's tours on an n X n board summed over all starting positions. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>8. ●

► [A172217] 1,78,1758,38588,383246,2135344,8891854,30108310,86669806,219845764,504261973,1065642840,2104251027,3924818982,6973786593,11884673662,19532410762,31097451768,48140491605,72688612756,107333684073 ⋆ Number of ways to place 7 nonattacking knights on a 7 X n board. ● a(n) = (117649n ^ 7 - 2571471n ^ 6 + 29223943n ^ 5 - 216954465n ^ 4 + 1114503256n ^ 3 - 3907492824n ^ 2 + 8562799512n - 8962924320) / 720,n>=12. ●

► [A060562] 0,1,78,3210,53764,493131,3037314,14158228,53762472,174489813,500280022,1297362462,3096689388,6894242719,14464776522,28835595048,54980090320,100806155433,178532431326,306565817266,512016960084,834016715763 ⋆ Number of ways to color vertices of a 10 - gon using <= n colors, allowing rotations and reflections. ● a(n) = (n ^ 10 + 5 * n ^ 6 + 6 * n ^ 5 + 4 * n ^ 2 + 4 * n) / 20. ●

► [A250658] 79,142,221,316,427,554,697,856,1031,1222,1429,1652,1891,2146,2417,2704,3007,3326,3661,4012,4379,4762,5161,5576,6007 ⋆ Number of (4 + 1) X (n + 1) 0..1 arrays with nondecreasing x(i,j) - x(i,j - 1) in the i direction and nondecreasing min(x(i,j),x(i - 1,j)) in the j direction. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>3. ●

► [A362360] 79,160,241,322,403,484,565,646,727,808,889,970,1051,1132,1213,1294,1375,1456,1537,1618,1699,1780,1861,1942,2023 ⋆ a(n) = 81 * n - 2. ● a(n) = 3 ^ 4 * n - 2, for n >= 1. ●

► [A063328] 1,79,190,298,406,514,622,730,838,946,1054,1166,1270,1378,1486,1598,1702,1814,1918,2030,2134,2246,2350,2466,2566 ⋆ Dimension of the space of weight n cuspidal newforms for Gamma _ 1(55). ● a(n) = a(n - 4) + a(n - 6) - a(n - 10) for n>13. ●

► [A158769] 1,79,313,703,1249,1951,2809,3823,4993,6319,7801,9439,11233,13183,15289,17551,19969,22543,25273,28159,31201,34399,37753,41263,44929 ⋆ a(n) = 78 * n ^ 2 + 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A158774] 79,319,719,1279,1999,2879,3919,5119,6479,7999,9679,11519,13519,15679,17999,20479,23119,25919,28879,31999,35279,38719,42319,46079,49999 ⋆ a(n) = 80 * n ^ 2 - 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). (End) ●

► [A157507] 79,320,723,1288,2015,2904,3955,5168,6543,8080,9779,11640,13663,15848,18195,20704,23375,26208,29203,32360,35679,39160,42803,46608,50575 ⋆ a(n) = 81 * n ^ 2 - 2 * n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Jan 26 2012 ●

► [A023315] 79,401,1259,2477,3019,4409,10303,15679,20509,24499,34127,43987,44389,53101,66359,71287,74857,81097,85903,90803,93053,102811,103231,104999,112601 ⋆ Primes that remain prime through 4 iterations of function f(x) = 5x + 6. ● a(n) == 9 or 13 (mod 14). - _ John Cerkan _ , Oct 07 2016 ●

► [A107954] 79,527,2415,9263,31871,101759,307455,890111,2490367,6774783,18001919,46886911,120029183,302678015,753205247,1852375039,4507828223,10866393087,25970081791,61583917055,144997089279,339159810047 ⋆ Number of chains in the power set lattice, or the number of fuzzy subsets of an (n + 4) - element set X _ (n + 4) with specification n elements of one kind, 3 elements of another and 1 of yet another kind. ● a(n) = 2 ^ (n + 1) * ((n ^ 4 + 23 * n ^ 3) / 6 + (79 * n ^ 2 + 185 * n) / 3 + 40) - 1. ●

► [A023343] 79,34127,345431,549089,669937,703663,948593,978749,999007,1251329,1255333,1279133,1500277,1517413,1525421,1642769,1670629,1688101,1727161,1770127,2152159,2161343,2328517,2622167,2745451 ⋆ Primes that remain prime through 5 iterations of function f(x) = 5x + 6. ● a(n) == 9 (mod 14). - _ John Cerkan _ , Oct 20 2016 ●

► [A204648] 80,137,284,571,1076,1918,3261,5329,8408,12867,19162,27859,39640,55328,75895,102489,136444,179309,232860,299131,380428,479362,598865,742225,913104 ⋆ Number of (n + 1) X 6 0..1 arrays with column and row pair sums b(i,j)=a(i,j) + a(i,j - 1) and c(i,j)=a(i,j) + a(i - 1,j) nondecreasing in column and row directions, respectively. ● a(n) = (- 10080 + 43776 * n + 15308 * n ^ 2 + 2970 * n ^ 3 + 620 * n ^ 4 + 54 * n ^ 5 + 2 * n ^ 6) / 1440 for n>3 and even. ● a(n) = (- 10890 + 43776 * n + 15308 * n ^ 2 + 2970 * n ^ 3 + 620 * n ^ 4 + 54 * n ^ 5 + 2 * n ^ 6) / 1440 for n>3 and odd. ●

► [A202440] 80,138,224,338,484,666,888,1154,1468,1834,2256,2738,3284,3898,4584,5346,6188,7114,8128,9234,10436,11738,13144,14658,16284 ⋆ Number of (n + 2) X 3 binary arrays avoiding patterns 001 and 110 in rows, columns and nw - to - se diagonals. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n >5. ●

► [A157912] 80,272,592,1040,1616,2320,3152,4112,5200,6416,7760,9232,10832,12560,14416,16400,18512,20752,23120,25616,28240,30992,33872,36880,40016 ⋆ a(n) = 64 * n ^ 2 + 16. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). (End) ●

► [A194646] 80,276,1082,4460,18890,81606,358564,1599820,7238864,33175486,153802520,720390254,3404944506,16221905696,77820675992,375564803020,1821845982082,8876847931644,43416046650306,213033152875350,1048198981050148,5169676077206180 ⋆ Number of ways to place 4n nonattacking kings on an 8 X 2n cylindrical chessboard. ● a(n) = 4 + 2 * 5 ^ n + 2 * 4 ^ n + 2 * (2 + sqrt(3)) ^ n + 2 * (2 - sqrt(3)) ^ n + 4 * ((5 + sqrt(5)) / 2) ^ n + 4 * ((5 - sqrt(5)) / 2) ^ n + 4 * ((5 + sqrt(13)) / 2) ^ n + 4 * ((5 - sqrt(13)) / 2) ^ n + 2 * (2 * cos(Pi / 7)) ^ (2n) + 2 * (2 * cos(2 * Pi / 7)) ^ (2n) + 2 * (2 * cos(3 * Pi / 7)) ^ (2n). ●

► [A157953] 80,322,726,1292,2020,2910,3962,5176,6552,8090,9790,11652,13676,15862,18210,20720,23392,26226,29222,32380,35700,39182,42826,46632,50600 ⋆ a(n) = 81n ^ 2 - n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Jan 29 2012 ●

► [A200432] 0,80,520,1830,4750,10250,19530,34020,55380,85500,126500,180730,250770,339430,449750,585000,748680,944520,1176480,1448750,1765750,2132130,2552770,3032780,3577500 ⋆ Number of - n..n arrays x(0..4) of 5 elements with zero sum and no two or three adjacent elements summing to zero. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

► [A204342] 1,80,626,2400,6481,14640,28562,50080,83522,130320,192000,279840,391251,524960,707282,923520,1171200,1502400,1874162,2284960,2825762,3418800,4057106,4879680,5762401 ⋆ a(n) = (- 1) ^ n * Sum _{ 2 * m + 1 | 2 * n + 1 } (- 1) ^ m (2 * m + 1) ^ 4. ● a(n) = b(2 * n + 1) where b(n) is multiplicative with b(2 ^ e) = 0 ^ e, b(p ^ e) = ((p ^ 4) ^ (e + 1) + 1) / (p ^ 4 + 1) if p == 3 (mod 4), b(p ^ e) = ((p ^ 4) ^ (e + 1) - 1) / (p ^ 4 - 1) if p == 1 (mod 4). ●

► [A024392] 80,806,4040,14155,39655,95200,204036,400830,734910,1273910,2107820,3353441,5159245,7710640,11235640,16010940,22368396,30701910,41474720,55227095,72584435,94265776,121092700,153998650,194038650 ⋆ a(n) = 3rd elementary symmetric function of the first n + 2 positive integers congruent to 2 mod 3. ● a(n) = n * (n + 1) * (n + 2) * (3 * n + 7) * (9 * n ^ 2 + 33 * n + 22) / 48. ●

► [A168364] 0,1,80,1215,8704,40625,143856,420175,1064960,2421009,5050000,9824111,18040320,31559905,52975664,85809375,134742016,205879265,307054800,448173919,641600000,902586321,1249755760,1705630895,2297217024 ⋆ a(n) = n ^ 5 * (n ^ 2 + 1) / 2. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8). - _ G. C. Greubel _ , Jul 19 2016 ●

► [A151603] 0,80,1395,12560,96575,698940,4897655,33590720,226746135,1511651900,9976916015,65303466480,424472551295,2742745738460,17631936915975,112844396291840,719383026394055,4570198050070620,28944587650489535,182807922003138800,1151689908619826415 ⋆ Number of permutations of 5 indistinguishable copies of 1..n arranged in a circle with exactly 2 adjacent element pairs in decreasing order. ● a(n) = n * ((5 / 2) * 6 ^ n - 25 * n) for n > 1. - _ Andrew Howroyd _ , May 04 2020 ● a(n) = 15 * a(n - 1) - 75 * a(n - 2) + 145 * a(n - 3) - 120 * a(n - 4) + 36 * a(n - 5) for n>5. ●

► [A199533] 80,1414,8342,30484,84852,197962,407946,766664,1341816,2219054,3504094,5324828,7833436,11208498,15657106,21416976,28758560,37987158,49445030,63513508,80615108,101215642,125826330,155005912,189362760 ⋆ Number of - n..n arrays x(0..5) of 6 elements with zero sum and no two consecutive zero elements. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. ●

► [A173782] 80,1847,26040,281571,2580754,21137959,159636030,1134127305,7683664202,50123713793,317076250136,1955475353217,11806000507544,70004699407151,408747986045656,2355077855615435,13413115039118042,75623103424916527 ⋆ Number of ways to place 4n nonattacking kings on an 8 X 2n chessboard. ● a(n) = (- 12505804889 / 302760 + 7963567 / 2610 * n) * 5 ^ n + 3872 / 3 * 4 ^ n - 1 / 24 + (135343 * sqrt(3) / 18 - 234421 / 18) * (2 - sqrt(3)) ^ n - (135343 * sqrt(3) / 18 + 234421 / 18) * (2 + sqrt(3)) ^ n + (33301 / 5 - 74461 * sqrt(5) / 25 + (141 * sqrt(5) / 25 - 63 / 5) * n) * ((5 - sqrt(5)) / 2) ^ n + (74461 * sqrt(5) / 25 + 33301 / 5 - (141 * sqrt(5) / 25 + 63 / 5) * n) * ((5 + sqrt(5)) / 2) ^ n + (4306740 / 169 - 1194474 * sqrt(13) / 169 + (139103 / 117 - 501541 * sqrt(13) / 1521) * n) * ((5 - sqrt(13)) / 2) ^ n + (1194474 * sqrt(13) / 169 + 4306740 / 169 + (501541 * sqrt(13) / 1521 + 139103 / 117) * n) * ((5 + sqrt(13)) / 2) ^ n + 72 * (b * (3504697 * c - 11380560) - 11380560 * c + 36953816) / (142129 * (a - b) * (a - c)) * a ^ n + 72 * (a * (3504697 * c - 11380560) - 8 * (1422570 * c - 4619227)) / (142129 * (a - b) * (c - b)) * b ^ n + 72 * (a * (3504697 * b - 11380560) - 8 * (1422570 * b - 4619227)) / (142129 * (a - c) * (b - c)) * c ^ n, where: a=2 - 2 * sin(Pi / 14), b=2 + 2 * sin(3 * Pi / 14), c=2 - 2 * cos(Pi / 7). - _ Vaclav Kotesovec _ , added Mar 01 2010, updated Mar 29 2010. ●

► [A035805] 1,80,3200,85360,1708800,27392016,366366080,4206606640,42340840960,379634835920,3070951360128,22644802030320,153524473002240,963926974039440,5639746542798720,30914051605760688,159505036253752320,777889039669799760,3599066875202445440,15849971773188538480 ⋆ Coordination sequence for lattice D *_ 40 (with edges defined by l _ 1 norm = 1). ● a(m) = add(2 ^ k * binomial(n, k) * binomial(m - 1, k - 1), k=0..n) + 2 ^ n * binomial((n + 2 * m) / 2 - 1, n - 1); with n=40. ● a(m) = (16 / 59365650176761681675678939034410 40625) * m * (4 * m ^ 38 + 4940 * m ^ 36 + 26704158 * m ^ 34 + 22285268720 * m ^ 32 + 22169269111132 * m ^ 30 + 10351928397671640 * m ^ 28 + ●

► [A283102] 0,0,0,80,4845,138792,2893338,50507680,787265325,11345154600,154362306956,2010147294672,25288375607950 ⋆ Number of A'Campo forests of degree n and co - dimension 4. ● a(n) is obtained by using the generating function N _{ 1 } =1 + yN _{ 2 }^ 4 and (1 - N _{ 2 } + 2yN _{ 2 }^ 4 - yN _{ 2 }^{ 5 } + xyN _{ 2 }^{ 6 } + y ^{ 2 } N _{ 2 }^{ 8 })(1 + yN _{ 2 }^{ 4 }- xyN _{ 2 }^{ 5 }) + x ^ 3y ^{ 2 } N _{ 2 }^{ 9 } =0, where N _{ 1 } (x,y)= \ sum _{ n } N _{ 1 } '(4,n)x ^{ 4 } y ^{ n } and N _{ 1 } '(4,n) is the number of A'Campo forests with co - dimension 4; N _{ 2 } (x,y)= \ sum _{ n } N _{ 2 } '(4,n)x ^{ 4 } y ^{ n } where N _{ 2 } '(4,n) is the number of partial configurations. ●

► [A183984] 81,83,86,92,102,122,158,230,366,638,1166,2222,4302,8462,16718,33230,66126,131918,263246,525902,1050702,2100302,4198478,8394830,16785486 ⋆ 1 / 4 the number of (n + 1) X 8 binary arrays with all 2 X 2 subblock sums the same. ● a(n) = 3 * 2 ^ (n / 2 - 1) + 2 ^ (n - 1) + 78 for n even. ● a(n) = 2 ^ (n - 1) + 2 ^ ((n + 1) / 2) + 78 for n odd. ●

► [A184044] 81,87,97,117,153,225,361,633,1161,2217,4297,8457,16713,33225,66121,131913,263241,525897,1050697,2100297,4198473,8394825,16785481,33566793,67125321 ⋆ 1 / 9 the number of (n + 1) X 6 0..2 arrays with all 2 X 2 subblocks having the same four values. ● a(n) = 3 * 2 ^ (n / 2) + 2 ^ (n + 1) + 73 for n even. ● a(n) = 2 ^ (n + 1) + 2 ^ ((n + 3) / 2) + 73 for n odd. ●

► [A120457] 81,108,162,216,256,324,378,486,504,512,540,648,756,810,896,972,1024,1080,1280,1512,1620,1764,1792,1944,2048 ⋆ Sorted list of numbers of the form (p + 1) * (q + 1) * (r + 1) * (s + 1) that are not multiples of 48, where p, q, r, and s are primes. ● a(n) = Sorted[16 * Powerof[((Prime[n] + 1) / 2) * ((Prime[m] + 1) / 2) * ((Prime[o] + 1) / 2) * ((Prime[p] + 1) / 2)]] ●

► [A273372] 1,81,121,361,441,841,961,1521,1681,2401,2601,3481,3721,4761,5041,6241,6561,7921,8281,9801,10201,11881,12321,14161,14641 ⋆ Squares ending in digit 1. ● a(n) = (5 * n - 5 / 2 + (3 / 2) * (- 1) ^ n) ^ 2 = 25 * n ^ 2 - 25 * n + 17 / 2 + 15 * n * (- 1) ^ n - (15 / 2) * (- 1) ^ n. - _ David A. Corneth _ , May 21 2016 ●

► [A335843] 0,81,243,567,1215,2511,5103,10287,20655,41391,82863,165807,331695,663471,1327023,2654127,5308335,10616751,21233583,42467247,84934575,169869231,339738543,679477167,1358954415 ⋆ a(n) is the number of n - digit positive

integers with exactly two distinct base 10 digits. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n > 2. ● a(n) = 81 * (2 ^ (n - 1) - 1). ●

► [A202333] 81,270,746,1796,3896,7790,14588,25885,43903,71658,113154,173606,259694,379850,544580,766823,1062349,1450198,1953162,2598312,3417572,4448342,5734172,7325489,9280379 ⋆ Number of (n + 1) X 7 binary arrays with consecutive windows of two bits considered as a binary number nondecreasing in every row and column. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. ●

► [A158776] 1,81,321,721,1281,2001,2881,3921,5121,6481,8001,9681,11521,13521,15681,18001,20481,23121,25921,28881,32001,35281,38721,42321,46081 ⋆ a(n) = 80 * n ^ 2 + 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A017162] 0,81,324,729,1296,2025,2916,3969,5184,6561,8100,9801,11664,13689,15876,18225,20736,23409,26244,29241,32400,35721,39204,42849,46656 ⋆ a(n) = (9 * n) ^ 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3); a(0)=0, a(1)=81, a(2)=324. - _ Harvey P. Dale _ , Nov 06 2012 ●

► [A017378] 81,361,841,1521,2401,3481,4761,6241,7921,9801,11881,14161,16641,19321,22201,25281,28561,32041,35721,39601,43681,47961,52441,57121,62001 ⋆ a(n) = (10 * n + 9) ^ 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>2. ●

► [A017498] 81,400,961,1764,2809,4096,5625,7396,9409,11664,14161,16900,19881,23104,26569,30276,34225,38416,42849,47524,52441,57600,63001,68644,74529 ⋆ a(n) = (11 * n + 9) ^ 2. ● a(0)=81, a(1)=400, a(2)=961, a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Oct 30 2011 ●

► [A017630] 81,441,1089,2025,3249,4761,6561,8649,11025,13689,16641,19881,23409,27225,31329,35721,40401,45369,50625,56169,62001,68121,74529,81225,88209 ⋆ (12n + 9) ^ 2. ● a(0)=81, a(1)=441, a(2)=1089, a(n)=3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) [From Harvey P. Dale, Mar 31 2012] ●

► [A304617] 81,489,1545,3249,5601,8601,12249,16545,21489,27081,33321,40209,47745,55929,64761,74241,84369,95145,106569,118641,131361,144729,158745,173409,188721 ⋆ a(n) = 324 * n ^ 2 - 564 * n + 321 (n>=1). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>3. ●

► [A224002] 81,793,2980,7927,17929,36845,71061,130767,231730,397675,663404,1078800,1713877,2665051,4062821,6081063,8948154,12960157,18496312,26037092,36185097,49689073,67471357,90659063,120619338 ⋆ Number of 4 X n 0..2 arrays with antidiagonals unimodal and rows and diagonals nondecreasing. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>13. ●

► [A247842] 0,81,810,7371,66420,597861,5380830,48427551,435848040,3922632441,35303692050,317733228531,2859599056860,25736391511821,231627523606470,2084647712458311,18761829412124880,168856464709124001,1519708182382116090,13677373641439044891 ⋆ Sum(9 ^ k, k=2..n). ● a(n) = a(n - 1) + 9 ^ n = (9 ^ (n + 1) - 81) / 8 = 10 * a(n - 1) - 9 * a(n - 2). ●

► [A067478] 81,841,8100,80089,801025,8003241,80013025,800041225,8000050249,80000162649,800001447184,8000004951184,80000001609984,800000042569984,8000000160998400,80000000297200369,800000000000150481,800000000143576565,8000000000015048100 ⋆ Smallest n - digit square starting with 8. ● a(n) = ceiling(sqrt(8 * 10 ^ (n - 1))) ^ 2. - _ Sascha Kurz _ , Mar 18 2002 ●

► [A173810] 1,81,881,8881,88881,888881,8888881,88888881,888888881,8888888881,88888888881,888888888881,8888888888881,88888888888881,888888888888881 ⋆ (8 * 10 ^ n - 71) / 9 for n>0. ● a(n) = 10 * a(n - 1) + 71 with n>0, a(0)= - 7. ● a(n) = 11 * a(n - 1) - 10 * a(n - 2). - _ Vincenzo Librandi _ , Jul 05 2012 ●

► [A086580] 0,81,891,8991,89991,899991,8999991,89999991,899999991,8999999991,89999999991,899999999991,8999999999991,89999999999991,899999999999991,8999999999999991,89999999999999991,899999999999999991,8999999999999999991,89999999999999999991 ⋆ a(n) = 9 * (10 ^ n - 1). ● a(n) = 11 * a(n - 1) - 10 * a(n - 2) for n > 1. ●

► [A224355] 81,1296,5880,19608,57387,151010,363392,810436,1693423,3344982,6292120,11340202,19682181,33037788,53827802,85388930,132235237,200372476,297672078,434311972,623291815,881030622,1228055196,1689788168 ⋆ Number of 4 X n 0..2 arrays with diagonals and antidiagonals unimodal and rows nondecreasing. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>12. ●

► [A224014] 81,1296,7378,28541,90051,245055,595822,1325316,2742301,5343468,9896484,17548273,29963249,49496631,79408380,124123708,189546519,283432552,415829406,599591037,850974727,1190328935,1642880850,2239632876 ⋆ Number of 4 X n 0..2 arrays with rows nondecreasing and antidiagonals unimodal. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>11. ●

► [A203650] 81,1517,28057,519445,9616161,178019197,3295578857,61009378085,1129435635441,20908668388877,387071560403257,7165659241743925,132654210800937921,2455760042384774557,45462238622967429257 ⋆ 1 / 25 the number of (n + 1) X 3 0..4 arrays with every 2 X 2 subblock having equal diagonal elements or equal antidiagonal elements. ● a(n) = (2 ^ (- 1 - n) * ((17 - sqrt(401)) ^ n * (- 77 + 5 * sqrt(401)) + (17 + sqrt(401)) ^ n * (77 + 5 * sqrt(401)))) / sqrt(401). ●

► [A096302] 81,1620,24300,324000,4050000,48600000,567000000,6480000000,72900000000,810000000000,8910000000000,97200000000000,1053000000000000,11340000000000000,121500000000000000,1296000000000000000 ⋆ Number of combinations of two natural numbers that together have n digits. ● a(n) = Sum _{ i=0..n - 1 } binomial(n - 1, i) * 9 ^ (i + 1) * i. ● a(n) = 81 * (n - 1) * 10 ^ (n - 2). - _ Vladeta Jovovic _ , Jun 26 2004 ●

► [A016840] 81,2401,14641,50625,130321,279841,531441,923521,1500625,2313441,3418801,4879681,6765201,9150625,12117361,15752961,20151121,25411681,31640625,38950081,47458321,57289761 ⋆ (4n + 3) ^ 4. ● a(0)=81, a(1)=2401, a(2)=14641, a(3)=50625, a(4)=130321, a(n)=5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) [From Harvey P. Dale, Dec 08 2011] ●

► [A128832] 1,81,2401,50625,923521,15752961,260144641,4228250625,68184176641,1095222947841,17557851463681,281200199450625,4501401006735361,72040003462430721,1152780773560811521,18445618199572250625 ⋆ Number of n - tuples where each entry is chosen from the subsets of { 1,2,3,4 } such that the intersection of all n entries is empty. ● a(n) = (2 ^ n - 1) ^ 4. ●

► [A053108] 1,81,3645,120285,3247695,75996063,1595917323,30778405515,554011299270,9418192087590,152574711818958,2371843247367438,35577648710511570,517244277406668210,7315311923322878970 ⋆ Expansion of 1 / (1 - 9 * x) ^ 9. ● a(n) = 9 ^ n * binomial(n + 8, 8). ● a(n) = 81 * a(n - 1) - 2916 * a(n - 2) + 61236 * a(n - 3) - 826686 * a(n - 4) + 7440174 * a(n - 5) - 44641044 * a(n - 6) + 172186884 * a(n - 7) - 387420489 * a(n - 8) + 387420489 * a(n - 9); a(0)=1, a(1)=81, a(2)=3645, a(3)=120285, a(4)=3247695, a(5)=75996063, a(6)=1595917323, a(7)=30778405515, a(8)=554011299270. - _ Harvey P. Dale _ , Jan 21 2012 ●

► [A212706] 81,5825,73745,461313,1951057,6418369,17712657,42921473,94087249,190446273,361259537,649305089,1115101521,1841932225,2941740049,4561961985,6893373521,10179012289,14724250641,20908086785,29195724113,40152508353,54459292177,72929296897 ⋆ a(n) is the difference between numbers of nonnegative multiples of 2 * n + 1 with even and odd digit sum in base 2 * n in interval [0, (2 * n) ^ 9). ● a(n) = 2 / (2 * n + 1) * Sum _{ i=1..n } tan ^ 9(Pi * i / (2 * n + 1)) * sin(2 * Pi * i / (2 * n + 1)). ● a(n) = 1 + n / 315 * (4352 * n ^ 6 + 15232 * n ^ 5 + 12992 * n ^ 4 - 5600 * n ^ 3 - 5152 * n ^ 2 + 5488 * n - 2112). ●

► [A017200] 81,20736,194481,810000,2313441,5308416,10556001,18974736,31640625,49787136,74805201,108243216,151807041,207360000,276922881,362673936,466948881,592240896,741200625,916636176 ⋆ a(n) = (9 * n + 3) ^ 4. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). (End) ●

► [A017428] 81,38416,390625,1679616,4879681,11316496,22667121,40960000,68574961,108243216,163047361,236421376,332150625,454371856,607573201,796594176,1026625681,1303210000,1632240801,2019963136 ⋆ (11n + 3) ^ 4. ● a(0)=81, a(1)=38416, a(2)=390625, a(3)=1679616, a(4)=4879681, a(n)= 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Harvey P. Dale _ , Jan 15 2013 ●

► [A340398] 1,1,81,22799473113563136 ⋆ Number of spanning trees in the Bruhat graph of the symmetric group. ● a(n) = (1 / n!) * Product _{ lambda } (n * (n - 1) / 2 - Sum _{ (i,j) in lambda } (j - i)) ^{ f _{ lambda }^ 2 } where the product ranges over all integer partition lambda of n different from n, and f _{ lambda } is the number of standard Young tableaux of shape lambda (see sequence A117506). Furthermore, the partitions are also viewed as their Ferrers shape, for instance, the partition 31 corresponds to the pairs (1,1), (1,2), (1,3) and (2,1). ●

► [A158123] 82,163,244,325,406,487,568,649,730,811,892,973,1054,1135,1216,1297,1378,1459,1540,1621,1702,1783,1864,1945,2026 ⋆ a(n) = 81 * n + 1. ● a(n) = 2 * a(n - 1) - a(n - 2). - _ Vincenzo Librandi _ , Feb 03 2012 ●

► [A048513] 1,82,263,665,1553,3505,7777,17089,37313,81089,175553,378817,815041,1748929,3743681,7995329,17039297,36241345,76939201,163053505,344981441,728760257,1537212353,3238002625,6811549633 ⋆ a(n) = T(8,n), array T given by A048505. ● a(n) = (n ^ 2 + 33 * n + 256) * 2 ^ (n - 2) - 63. - _ Ralf Stephan _ , Feb 05 2004 ● a(n) = 7 * a(n - 1) - 18 * a(n - 2) + 20 * a(n - 3) - 8 * a(n - 4). - _ Colin Barker _ , Feb 25 2015 ●

► [A227704] 82,273,692,1475,2790,4837,7848,12087,17850,25465,35292,47723,63182,82125,105040,132447,164898,202977,247300,298515,357302,424373,500472,586375,682890 ⋆ The hyper - Wiener index of the zig - zag polyhex nanotube TUHC _ 6[2n,2] defined pictorially in Fig. 1 of the Eliasi et al. reference. ● a(n) = n * (15 + 14 * n + 12 * n ^ 2 + 4 * n ^ 3) / 3 (see Example 1 in the Eliasi et al. reference). ●

► [A288920] 0,0,82,430,1030,1882,2986,4342,5950,7810,9922,12286,14902,17770,20890,24262,27886,31762,35890,40270,44902,49786,54922,60310,65950 ⋆ Number of 6 - cycles in the n X n king graph. ● a(n) = 550 - 534 * n + 126 * n ^ 2 for n > 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n > 4. (End) ●

► [A002309] 1,82,707,3108,9669,24310,52871,103496,187017,317338,511819,791660,1182285,1713726,2421007,3344528,4530449,6031074,7905235,10218676,13044437,16463238,20563863,25443544,31208345 ⋆ Sum of fourth powers of first n odd numbers. ● a(n) = (48 * n ^ 5 - 40 * n ^ 3 + 7 * n) / 15. - _ Ralf Stephan _ , Jan 29 2003 ● a(1)=1, a(2)=82, a(3)=707, a(4)=3108, a(5)=9669, a(6)=24310, a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). - _ Harvey P. Dale _ , Oct 24 2011 ● a(n) = v(n,n - 2) - v(n,n - 1) * V(n,n - 1), where v(n,k) and V(n,k) are the central factorial numbers of the first kind and the second kind, respectively, with odd indices. - _ Mircea Merca _ , Jan 25 2014 ●

► [A128959] 82,810,8096,80953,809524,8095239,80952382,809523810,8095238096,80952380953,809523809524,8095238095239,80952380952382,809523809523810,8095238095238096,80952380952380953,809523809523809524,809523809523809523,8095238095238095238 ⋆ a(n) is equal to the number of positive integers m less than or equal to 10 ^ n such that m is not divisible by at least one of the primes 2,3 and is not divisible by at least one of the primes 5,7. ● a(n) = 10 ^ n - floor(10 ^ n / 6) - floor(10 ^ n / 35) + floor(10 ^ n / 210). ● a(n) = 11 * a(n - 1) - 11 * a(n - 2) + 11 * a(n - 3) - 11 * a(n - 4) + 11 * a(n - 5) - 10 * a(n - 6) for n>7. ●

► [A085439] 1,82,1378,11378,62003,256484,871140,2550756,6651381,15802006,34776742,71791798,140366759,261917384,469277384,811379400,1359360681,2214396762,3517606762,5462416762,8309813083,12406965164,18209748140,26309748140,37466388765 ⋆ a(n) = Sum _{ i=1..n } binomial(i + 1,2) ^ 4. ● a(n) = (2520 * n ^ 9 + 22680 * n ^ 8 + 79920 * n ^ 7 + 136080 * n ^ 6 + 107352 * n ^ 5 + 22680 * n ^ 4 - 10080 * n ^ 3 + 1728 * n) / 9!. ●

► [A234253] 1,82,2107,29332,274357,1930726,10948735,52357960,217994860,808970960,2723733524,8436372248,24304813148,65712993248,167965846148,408373664744,949291256585,2119095737210,4559798912835,9488531918460,19148848609485,37571357310510 ⋆ a(n) = sum _{ i=1..n } C(7 + i,8) ^ 2. ● a(n) = sum _{ i=1..n}C(7 + i,8) ^ 2 = C(n + 8,9) * F8(n) / C(17,8) ; F8(n)= Sum _{ i=1..n } (- 1) ^ (8 + i) * C(8 + i,i) * C(n + 8,i) = C(8,0) * C(n + 8,0) - C(9,1) * C(n + 8,1) + C(10,2) * C(n + 8,2) - C(11,3) * C(n + 8,3) + C(12,4) * C(n + 8,4) - C(13,5) * C(n + 8,5) + C(14,6) * C(n + 8,6) - C(15,7) * C(n + 8,7) + C(16,8) * Cn + 8,8). We have the following values for F8(n) : F8(0)=1, F8(1)=24310

, F8(2)=199342, F8(3)=931294, ... [This needs clarification, _ Joerg Arndt _ , May 04 2014] •

▶ [A252705] 1,82,5379,148648,2085655,18356514,116081245,574795936,2359033605,8345970370,26180606287,74354990568,194253329803,472634761522,1081541381145,2346163937920,4856060529001,9641643580530,18446420258299,34136541925480,61303301959263 ⋆ The number of ways to color the faces of a regular dodecahedron with n colors, counting mirror images as one. • a(n) = n ^ 2 * (n ^ 2 + 1) * (n ^ 8 - n ^ 6 + 16 * n ^ 4 + 44) / 120. • a(n) = C(n,1) + 80 * C(n,2) + 5136 * C(n,3) + 127620 * C(n,4) + 1395390 * C(n,5) + 7965948 * C(n,6) + 26368272 * C(n,7) + 53438112 * C(n,8) + 67359600 * C(n,9) + 51559200 * C(n,10) + 21954240 * C(n,11) + 3991680 * C(n,12). Each term indicates the number of ways to use n colors to color the dodecahedron with exactly 1, 2, 3, ..., 10, 11 , or 12 colors. •

▶ [A347226] 83,107,227,347,359,467,479,563,587,719,839,1187,1283,1307,1319,1439,1523,1907,2027,2039,2879,2963,2999,3119,3203 ⋆ Safe primes (A005385) that are half - period primes (A097443). • a(n) == { 17, 23, 29 } mod 30. • a(n) = = 11 (mod 12). - _ Hugo Pfoertner _ , Aug 24 2021 •

▶ [A160849] 0,1,83,164,299,454,673,894,1183,1492,1855,2218,2653,3102,3623,4148,4719,5310,5973,6638,7375,8124,8923,9730,10609 ⋆ Number of lines through at least 2 points of a 9 X n grid of points. • a(n) = (1 / 2) * (f(m,n,1) - f(m,n,2)) where f(m,n,k) = Sum((n - |kx|) * (m - |ky|)); - n < kx < n, - m < ky < m, (x ,y)=1, m=9. • a(n) = - a(n - 2) + a(n - 5) + a(n - 6) + 2 * a(n - 7) + a(n - 8) + a(n - 9) - a(n - 11) - a(n - 12) - 2 * a(n - 13) - a(n - 14) - a(n - 15) + a(n - 18) + a(n - 20) for n>21. •

▶ [A334644] 0,0,0,83,299,1263,6076,31307,168561,936161,5321611,30804795,180939408,1075636912,6459103704,39120216196,238692219923,1465783144605,9052278085129,56185368932615,350293215459915,2192731008315015,13775745283576920,86831135890324875 ⋆ a(n) is the total number of down steps between the third and fourth up steps in all 2 _ 1 - Dyck paths of length 3 * n. A 2 _ 1 - Dyck path is a lattice path with steps (1, 2), (1, - 1) that starts and ends at y = 0 and stays above the line y = - 1. • a(0) = a(1) = a(2) = 0 and a(n) = binomial(3 * n + 1, n) / (3 * n + 1) + 4 * Sum _{ j=1..3 } binomial(3 * j + 2, j) * binomial (3 * (n - j), n - j) / ((3 * j + 2) * (n - j + 1)) - 30 * [n=3] for n > 2, where [ ] is the Iverson bracket. •

▶ [A177099] 83,328,735,1304,2035,2928,3983,5200,6579,8120,9823,11688,13715,15904,18255,20768,23443,26280,29279,32440,35763,39248,42895,46704,50675 ⋆ a(n) = 81 * n ^ 2 + 2 * n. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Feb 03 2012 •

▶ [A061525] 83,361,951,1997,3667,6153,9671,14461,20787,28937,39223,51981,67571,86377,108807,135293,166291,202281,243767,291277,345363,406601,475591,552957,639347 ⋆ Surround numbers of an n X 2 rectangle when n is odd. • a(n) = (n ^ 4 + 32n ^ 3 + 278n ^ 2 + 656n + 361) / 16 when n is odd. • a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n > 5. •

▶ [A176633] 83,708,2952,12048,48672,195648,784512,3141888,12575232,50316288,201295872,805244928,3221102592,12884656128,51539116032,206157447168,824631754752,3298530951168,13194131668992,52776542404608 ⋆ a(n) = 6 * a(n - 1) - 8 * a(n - 2) for n > 2; a(0) = 83, a(1) = 708, a(2) = 2952. • a(n) = 6 * (32 * 4 ^ n - 5 * 2 ^ n) for n > 0, a(1) = 83. •

▶ [A128950] 83,829,8286,82858,828571,8285715,82857143,828571429,8285714286,82857142858,828571428571,8285714285715,82857142857143,828571428571429,8285714285714286,82857142857142858,828571428571428571 ⋆ a(n) is equal to the number of positive integers m less than or equal to 10 ^ n such that m is not divisible by the prime 7 and is not divisible by at least one of the primes 2, 3 and 5 . • a(n) = 10 ^ n - floor(10 ^ n / 7) - floor(10 ^ n / 30) + floor(10 ^ n / 210). •

▶ [A250083] 83,982,5604,21405,63611,159278,352192,708609,1323835,2329646,3902548,6272877,9734739,14656790,21493856,30799393,43238787,59603494,80826020,107995741,142375563,185419422,238790624,304381025,384331051 ⋆ Number of length 2 + 5 0..n arrays with every six consecutive terms having the maximum of some two terms equal to the minimum of the remaining four terms. • a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. •

▶ [A156924] 1,83,2685,56285,919615,12813843,160206627,1854550395,20291056470,212826091180,2161547322134,21414479565774,208076662576370,1991164206775450,18825064380813450 ⋆ Fifth right hand column (n - m=4) of the A156920 triangle • a(n)=55 * a(n - 1) - 1365 * a(n - 2) + 20251 * a(n - 3) - 200557 * a(n - 4) + 1402203 * a(n - 5) - 7137473 * a(n - 6) + 26886431 * a(n - 7) - 75433971 * a(n - 8) + 157376597 * a(n - 9) - 241846607 * a(n - 10) + 268663713 * a(n - 11) - 208880991 * a(n - 12) + 107416665 * a(n - 13) - 32730075 * a(n - 14) + 4465125 * a(n - 15) • a(n)= (16 * n ^ 4 - 7776 * n ^ 3 * 3 ^ n + 256 * n ^ 3 - 104976 * n ^ 2 * 3 ^ n + 225000 * n ^ 2 * 5 ^ n + 1496 * n ^ 2 - 464616 * n * 3 ^ n + 2250000 * n * 5 ^ n - 2016840 * n * 7 ^ n + 3776 * n - 673596 * 3 ^ n + 5568750 * 5 ^ n - 11092620 * 7 ^ n + 6200145 * 9 ^ n + 3465) / 6144 •

▶ [A202657] 0,0,0,0,0,83,6107,126376,1377328,9984758,54399330,239675936,895773148,2935757573,8641608781,23259768860,58039719112,135720432200,299995484600,631220344328,1271607596876,2464466665667,4613731163831,8372196591052,14769606793684 ⋆ Number of ways to place 6 nonattacking semi - queens on a n n X n board. • a(n) = n ^ 12 / 720 - n ^ 11 / 18 + 73 * n ^ 10 / 72 - 72247 * n ^ 9 / 6480 + 5909 * n ^ 8 / 72 - 320653 * n ^ 7 / 756 + 112795 * n ^ 6 / 72 - 8892919 * n ^ 5 / 2160 + 8086231 * n ^ 4 / 1080 - 5740271 * n ^ 3 / 648 + 2598425 * n ^ 2 / 432 - 13161367 * n / 7560 + (n ^ 5 / 4 - 77 * n ^ 4 / 12 + 757 * n ^ 3 / 12 - 7007 * n ^ 2 / 24 + 14581 * n / 24 - 1677 / 4) * floor(n / 2) + (64 * n / 9 - 88 / 9) * floor(n / 3) + (8 * n / 3 - 52 / 9) * floor((n + 1) / 3). •

▶ [A157119] 0,84,105,309,765,884,2060,4712,5405,12257,27713,31752,71688,161772,185313,418077,943125,1080332,2436980,5497184,6296885,14204009,32040185,36701184,82787280 ⋆ Nonnegative values x of solutions (x, y) to the Diophantine equation x ^ 2 + (x + 103) ^ 2 = y ^ 2. • a(n) = 6 * a(n - 3) - a(n - 6) + 206 for n > 6; a(1) = 0, a(2) = 84, a(3) = 105, a(4) = 309, a(5) = 765, a(6) = 884 . •

▶ [A306514] 84,180,324,360,684,744,1416,1488,2628,2904,3024,5580,5904,6048,10836,11400,11952,12192,21060,21684,23220,23448,23556,24096,24384 ⋆ Decimal representation of binary numbers with string structure 10s00, s in { 0,1 }* , such that it results in a non - palindromic cycle of length 4 in the Reverse and Add! procedure in base 2. • a(n) = 0 (mod 12). •

▶ [A254464] 84,210,714,2982,14178,73470,404634,2331462,13906578,85232910,533860554,3403329942,22012307778,144090486750,952693102074,6352175272422,42655384385778,288161867586990,1956674663089194,13344181547374902,91343993647708578 ⋆ a(n) = 21 * 2 ^ n + 10 * 4 ^ n + 15 * 3 ^ n + 3 * 6 ^ n + 6 * 5 ^ n + 7 ^ n + 28. • a(n) = 28 * a(n - 1) - 322 * a(n - 2) + 1960 * a(n - 3) - 6769 * a(n - 4) + 13132 * a(n - 5) - 13068 * a(n - 6) + 5040 * a(n - 7). - _ Colin Barker _ , Jan 31 2015 •

▶ [A096383] 84,240,486,840,1320,1944,2730,3696,4860,6240,7854,9720,11856,14280,17010,20064,23460,27216,31350,35880,40824,46200,52026,58320,65100 ⋆ Area of the Pythagorean triangle a = u ^ 2 - v ^ 2 (cf. A096382) when u=3, v=4,4,5, ... • a(n) = (n - 3) * (n * 3) * (n + 3), n >= 3. - _ Zerinvary Lajos _ , Mar 05 2007 • a(n)=4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4); a(3)=84, a(4)=240, a(5)=486, a(6)=840. - _ Harvey P. Dale _ , Aug 28 2011 •

▶ [A227708] 84,354,1674,8178,39858,191250,900498,4164114,18952722,85106706,377862162,1661755410,7249502226,31410683922,135299432466,579837493266,2473936945170,10514155438098,44530379784210,188016821796882,791649070350354 ⋆ The Wiener index of the dendrimer D _ n defined pictorially in Fig. 1 of the Heydari et al. reference. • a(n) = 18 + 2 ^ n * (66 + 30 * n) + 36 * n * 4 ^ n. • a(0)=84, a(1)=354, a(2)=1674, a(3)=8178, a(4)=39858, a(n)=13 * a(n - 1) - 64 * a(n - 2) + 148 * a(n - 3) - 160 * a(n - 4) + 64 * a(n - 5). - _ Harvey P. Dale _ , Jan 09 2016 •

▶ [A251293] 84,444,2356,12556,67204,361244,1950036,10570156,57525924,314285244,1723404916,9483540556,52358197444,289959524444,1610402286996,8967708907756,50059450561764,280064572814844,1570043088196276 ⋆ Number of (n + 1) X (1 + 1) 0..3 arrays with every 2 X 2 subblock summing to 3 6 or 9. • a(n) = (1 / 41) * 2 ^ (- n) * (41 * 10 ^ (1 + n) + (123 - 19 * sqrt(41)) * (5 - sqrt(41)) ^ n + (5 + sqrt(41)) ^ n * (123 + 19 * sqrt(41))). •

▶ [A349682] 1,84,455,1330,2925,5456,9139,14190,20825,29260,39711,52394,67525,85320,105995,129766,156849,187460,221815,260130,302621,349504,400995,457310,518665 ⋆ a(n) = A000292(6 * n + 1) where A000292 are the tetrahedral numbers. • a(n) = 1 + 11 * n + 36 * n ^ 2 + 36 * n ^ 3 = (1 + 2 * n) * (1 + 3 * n) * (1 + 6 * n). •

▶ [A069080] 84,864,3300,8736,18900,35904,62244,100800,154836,228000,324324,448224,604500,798336,1035300,1321344,1662804,2066400,2539236,3088800,3722964,4449984,5278500,6217536,7276500 ⋆ a(n) = (2n + 1) * (2n + 2) * (2n + 6) * (2n + 7). • a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). • a(n) = 16 * n ^ 4 + 128 * n ^ 3 + 332 * n ^ 2 + 304 * n + 84. (End) •

▶ [A027794] 84,960,5940,26400,94380,288288,780780,1921920,4375800,9335040,18845112,36279360,67016040,119380800,205931880,345181056,563861100,899870400,1406047500,2154952800,3244861620,4807202400,7015706100,10097568000,14346961200 ⋆ a(n) = 12 * (n + 1) * binomial(n + 3,9). • a(n) = C(n + 1, 7) * C(n + 3, 3) - _ Zerinvary Lajos _ , May 10 2005; corrected by _ R. J. Mathar _ , Mar 16 2016 •

▶ [A027821] 84,1050,6930,32340,120120,378378,1051050,2642640,6126120,13273260,27159132,52907400,98760480,177578940,308897820,521694096,858049500,1377926550,2165313150,3336032700,5047562520,7511253750,11007400950,15903669600,22677454800 ⋆ a(n) = 21 * (n + 1) * binomial(n + 6,9). • a(n) = C(n + 1, 4) * C(n + 6, 6). - _ Zerinvary Lajos _ , Jun 08 2005; corrected by _ R. J. Mathar _ , Feb 13 2016 •

▶ [A105942] 84,1470,12936,77616,360360,1387386,4624620,13741728,37165128,92912820,217273056,479693760,1007356896,2024399916,3912705720,7303717344,13213962300,23241027810,39841761960,66720654000,109363854600,175763337750,277386503940,430459323840 ⋆ a(n) = C(n + 6,n) * C(n + 9,6). • a(0)=84, a(1)=1470, a(2)=12936, a(3)=77616, a(4)=360360, a(5)=1387386, a(6)=4624620, a(7) =13741728, a(8)=37165128, a(9)=92912820, a(10)=217273056, a(11)=479693760, a(12)=1007356896, a(n)=13 * a(n - 1) - 78 * a(n - 2) + 286 * a(n - 3) - 715 * a(n - 4) + 1287 * a(n - 5) - 1716 * a(n - 6) + 1716 * a(n - 7) - 1287 * a(n - 8) + 715 * a(n - 9) - 286 * a(n - 10) + 78 * a(n - 11) - 13 * a(n - 12) + a(n - 13). - _ Harvey P. Dale _ , Sep 14 2012 •

▶ [A221010] 84,2328,23070,161322,951906,5097426,25678002,124125810,582682098,2676493554,12091136754,53909403378,237825453810,1040070008562,4515386474226,19482038992626,83610263027442,357169749688050,1519594327768818,6442039704551154 ⋆ The Wiener index of the nanostar dendrimer G[n], defined pictorially in the Nadjafi - Arani et al. reference. • a(n) = - 270 + 2 ^ (n - 1) * 2055 + 4 ^ (n - 1) * (1323 * n - 3024). •

▶ [A035806] 1,84,3528,98812,2076816,34949796,490681688,5913144396,62456027424,587522034932,4985149915368,38549117382300,273998113272240,1803067831236420,11053262513080440,63460928860322028,342841481215636032,1750035197354015124 ⋆ Coordination sequence for lattice D *_ 42 (with edges defined by l _ 1 norm = 1). • a(n) = (Sum _{ k=0..m } 2 ^ k * binomial(m, k) * binomial(n - 1, k - 1)) + 2 ^ m * binomial((m + 2 * n) / 2 - 1, m - 1), with m=42. •

▶ [A224429] 84,18327,233565,1771209,10839249,59193537,301745505,1470068769,6938902689,32002414497,145020899745,648175476129,2865160922529,12550658135457,54563037754785,235694448080289,1012548295652769,4329277751424417,18433454242526625 ⋆ The Wiener index of the dendrimer D _ 1[n], defined pictorially in the A. R. Ashrafi et al. reference. • a(n) = - 2655 + 26907 * 2 ^ n + 16245 * n * 4 ^ n - 24168 * 4 ^ n - 570 * n * 2 ^ n. •

▶ [A156650] 85,89,91,101,119,145,175,185,221,289,349,371,461,595,769,959,1021,1241,1649,2005,2135,2665,3451,4469,5579 ⋆ Positive numbers y such that y ^ 2 is of the form x ^ 2 + (x + 119) ^ 2 with integer x. • a(n) = 6 * a(n - 9) - a(n - 18) for n > 18; a(1)=85, a(2)=89, a(3)=91, a(4)=101, a(5)=119, a(6)=145, a(7) =175, a(8)=185, a(9)=221, a(10)=289, a(11)=349, a(12)=371, a(13)=461, a(14) =595, a(15)=769, a(16)=959, a(17)=1021, a(18)=1241. •

▶ [A157469] 85,97,113,397,485,593,2297,2813,3445,13385,16393,20077,78013,95545,117017,454693,556877,682025,2650145,3245717,3975133,15446177,18917425,23168773,90026917 ⋆ Positive numbers y such that y ^ 2 is of the form x ^ 2 + (

x + 97) ^ 2 with integer x. ● a(n) = 6 * a(n - 3) - a(n - 6) for n > 6; a(1)=85, a(2)=97, a(3)=113, a(4)=397, a(5)=485, a(6)=593. ●

▶ [A161479] 85,113,173,337,565,953,1937,3277,5545,11285,19097,32317,65773,111305,188357,383353,648733,1097825,2234345,3781093,6398593,13022717,22037825,37293733,75901957 ⋆ Positive numbers y such that y ^ 2 is of the form x ^ 2 + (x + 113) ^ 2 with integer x. ● a(n) = 6 * a(n - 3) - a(n - 6) for n > 6; a(1)=85, a(2)=113, a(3)=173, a(4)=337, a(5)=565, a(6)=953. ●

▶ [A259219] 85,127,192,303,487,798,1325,2227,3784,6499,11283,19806,35161,63135,114656,210535,390703,732286,1385109,2641659,5075320,9814107,19083707,37286398,73147297 ⋆ Number of (n + 1) X (5 + 1) 0..1 arrays with each 2 X 2 subblock having clockwise pattern 0000 0011 or 0101. ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) - a(n - 3) + 2 * a(n - 4). ●

▶ [A183644] 85,325,1333,5725,25405,115525,535333,2517805,11982925,57575125,278766133,1358125885,6649985245,32693825125,161264049733,797557733965,3952911584365,19625567713525,97573430562133,485654176126045 ⋆ Number of (n + 1) X 2 0..4 arrays with every 2 X 2 subblock summing to 8. ● a(n) = 2 + 2 ^ (2 + n) + 2 ^ (3 + 2 * n) + 2 * 3 ^ (1 + n) + 5 ^ (1 + n). ●

▶ [A166917] 85,1364,21840,349504,5592320,89478144,1431654400,22906486784,366503854080,5864061927424,93824991887360,1501199874392064,24019198007050240,384307168179912704,6148914691147038720 ⋆ a(n) = 20 * a(n - 1) - 64 * a(n - 2) for n > 1; a(0) = 85, a(1) = 1364. ● a(n) = (256 * 16 ^ n - 4 ^ n) / 3. ●

▶ [A351105] 0,1,85,1408,11440,61490,251498,846260,2458676,6369275,15047175,32955780,67746900,131969604,245444980,438485080,756163672,1263878005,2054474617,3257248280,5049161480,7668672374,11432601950,16756516140,24179145900 ⋆ a(n) = Sum _{ k=1..n } Sum _{ j=1..k } Sum _{ i=1..j } (i * j * k) ^ 2. ● a(n) = n * (n + 1) * (n + 2) * (n + 3) * (2n + 1) * (2n + 3) * (2n + 5) * (35 * n ^ 2 - 21 * n + 4) / 45360 (from the recurrent form of Faulhaber's formula). ● a(n) = (1 / (9! * 2)) * ((2n + 6)! / (2n - 1)!) * (35 * n ^ 2 - 21 * n + 4). ● a(n) = binomial(2n + 6,7) * (35 * n ^ 2 - 21 * n + 4) / 144. ●

▶ [A008360] 1,85,1583,13203,68853,264825,824083,2195399,5195081,11199037,22392919,42088091,75111165,128274849,210937851,335661583,518971409,782230181,1152631807,1664322595,2359658117,3290603337,4520283747 ⋆ Crystal ball sequence for D _ 7 lattice. ● a(n) = (2 * n + 1) * (242 * n ^ 6 + 726 * n ^ 5 + 1856 * n ^ 4 + 2502 * n ^ 3 + 2207 * n ^ 2 + 1077 * n + 315) / 315. ● a(0)=1, a(1)=85, a(2)=1583, a(3)=13203, a(4)=68853, a(5)=264825, a(6)=824083, a(7)=2195399, a(n)=8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8). ●

▶ [A157110] 85,2522,8321,17482,30005,45890,65137,87746,113717,143050,175745,211802,251221,294002,340145,389650,442517,498746,558337,621290,687605,757282,830321,906722,986485 ⋆ a(n) = 1681 * n ^ 2 - 2606 * n + 1010. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Jan 25 2012 ●

▶ [A076463] 85,2803,24026,115270,397655,1107505,2653588,5685996,11176665,20511535,35594350,58962098,93912091,144640685,216393640,315628120,450186333,629480811,864691330,1168973470,1557678815,2048586793,2662148156,3421740100,4353933025 ⋆ Sum of squares of numbers that can be written as t * n + u * (n + 1) for nonnegative integers t,u in exactly four ways. ● a(n) = n * (n + 1) * (97 * n ^ 4 + 146 * n ^ 3 + 30 * n ^ 2 - 19 * n + 1) / 6. ●

▶ [A229359] 86,176,558,2486,13578,83486,552378,3835406,27530298,202345886,1513288698,11466138926,87752274618,676845479486,5252962429818,40970428516046,320834049236538,2520676708888286,19857791921151738,156791682937990766,1240318818550256058 ⋆ Total sum of n - th powers of parts in all partitions of 8. ● a(n) = 45 + 19 * 2 ^ n + 9 * 3 ^ n + 6 * 4 ^ n + 3 * 5 ^ n + 2 * 6 ^ n + 7 ^ n + 8 ^ n. ●

▶ [A063353] 1,86,184,284,382,482,580,680,778,878,976,1076,1174,1274,1372,1472,1570,1670,1768,1868,1966,2066,2164,2264,2362 ⋆ Dimension of the space of weight n cuspidal newforms for Gamma _ 1(80). ● a(n) = (- (- 1) ^ n + 198 * n - 423) / 2 for n>2. a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n>5. G.f.: x ^ 2 * (- 1 + 87 * x + 99 * x ^ 2 + 13 * x ^ 3) / ((1 - x) ^ 2 * (1 + x)). [_ Colin Barker _ , Sep 28 2012] ●

▶ [A304518] 86,222,494,1038,2126,4302,8654,17358,34766,69582,139214,278478,557006,1114062,2228174,4456398,8912846,17825742,35651534,71303118,142606286,285212622,570425294,1140850638,2281701326 ⋆ a(n) = 68 * 2 ^ n - 50 (n>=1) . ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>2. ●

▶ [A157443] 86,411,978,1787,2838,4131,5666,7443,9462,11723,14226,16971,19958,23187,26658,30371,34326,38523,42962,47643,52566,57731,63138,68787,74678 ⋆ a(n) = 121 * n ^ 2 - 38 * n + 3. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Jan 26 2012 ●

▶ [A344679] 0,0,86,544,1854,4688,9910,18576,31934,51424,78678,115520,163966,226224,304694,401968,520830,664256,835414,1037664,1274558,1549840,1867446,2231504,2646334 ⋆ Number of 2 - matchings of the n - th centered square grid graph. ● a(n) = 2 * (n - 2) * (4n ^ 3 - 8n ^ 2 + n + 4) for n > 1. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n > 6. (End) ●

▶ [A272379] 0,1,86,759,3100,8765,19986,39571,70904,117945,185230,277871,401556,562549,767690,1024395,1340656,1725041,2186694,2735335,3381260,4135341,5009026,6014339,7163880 ⋆ a(n) = n * (24 * n ^ 3 - 60 * n ^ 2 + 54 * n - 17). ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ●

▶ [A128957] 86,857,8571,85715,857142,8571429,85714286,857142857,8571428571,85714285715,857142857142,8571428571429,85714285714286,857142857142857,85714285714285714,857142857142857142 ⋆ a(n) is equal to the number of positive integers m less than or equal to 10 ^ n such that m is not divisible by at least one of the primes 2,5 and is not divisible by at least one of the primes 3,7. ● a(n) = 10 ^ n - floor(10 ^ n / 10) - floor(10 ^ n / 21) + floor(10 ^ n / 210). ● a(n) = 9 * a(n - 1) + 9 * a(n - 2) + 9 * a(n - 3) + 9 * a(n - 4) + 9 * a(n - 5) + 10 * a(n - 6) for n>7. ●

▶ [A254702] 86,1140,6808,26759,81390,208114,469376,962541,1831798,3282224,5596152,9151987,14445614,22114542,32964928,48001625,68461398,95849452,131979416,179016927,239526958,316525034,413532480,534635845,684550646 ⋆ Number of length 4 + 4 0..n arrays with every five consecutive terms having the maximum of some two terms equal to the minimum of the remaining three terms. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. ●

▶ [A067749] 87,187,287,387,487,587,687,787,887,987,1087,1187,1287,1387,1487,1587,1687,1787,1887,1987,2087,2187,2287,2387,2487 ⋆ Numbers k such that k and 3 ^ k end with the same two digits. ● a(n) = 100 * n - 13. ●

▶ [A063349] 1,87,192,297,400,505,608,717,816,925,1024,1135,1232,1345,1440,1555,1648,1763,1856,1975,2064,2183,2272,2393,2480 ⋆ Dimension of the space of weight n cuspidal newforms for Gamma _ 1(76). ● a(n) = a(n - 4) + a(n - 6) - a(n - 10) for n>13. ●

▶ [A063336] 1,87,197,305,413,525,633,741,853,961,1069,1179,1289,1397,1509,1615,1725,1835,1945,2051,2165,2271,2381,2489,2601 ⋆ Dimension of the space of weight n cuspidal newforms for Gamma _ 1(63). ● a(n) = a(n - 4) + a(n - 6) - a(n - 10) for n>13. ●

▶ [A304509] 87,213,465,969,1977,3993,8025,16089,32217,64473,128985,258009,516057,1032153,2064345,4128729,8257497,16515033,33030105,66060249,132120537,264241113,528482265,1056964569,2113929177 ⋆ a(n) = 63 * 2 ^ n - 39 (n>=1) . ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>2. ●

▶ [A243580] 87,287,615,1071,1655,2367,3207,4175,5271,6495,7847,9327,10935,12671,14535,16527,18647,20895,23271,25775,28407,31167,34055,37071,40215 ⋆ Integers of the form 8k + 7 that can be written as a sum of four distinct squares of the form m, m + 1, m + 3, m + 5, where m == 2 (mod 4). ● a(n) = 64 * n ^ 2 + 8 * n + 15. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>3. ●

▶ [A128956] 87,867,8667,86668,866667,8666668,86666667,866666667,8666666667,86666666668,866666666667,8666666666668,86666666666667,866666666666667,8666666666666667,86666666666666668,866666666666666667 ⋆ a(n) is equal to the number of positive integers m less than or equal to 10 ^ n such that m is not divisible by at least one of the primes 3,5. ● a(n) = 10 ^ n - floor(10 ^ n / 14) - floor(10 ^ n / 15) + floor(10 ^ n / 210). ●

▶ [A304519] 88,232,520,1096,2248,4552,9160,18376,36808,73672,147400,294856,589768,1179592,2359240,4718536,9437128,18874312,37748680,75497416,150994888,301989832,603979720,1207959496,2415919048 ⋆ a(n) = 72 * 2 ^ n - 56 (n>=1) . ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>2. ●

▶ [A194651] 0,0,0,88,785,3528,11151,28560,63513,127520,236863,413736,687505,1096088,1687455,2521248,3670521,5223600,7286063,9982840,13460433,17889256,23466095,30416688,38998425 ⋆ Number of ways to place 3 nonattacking kings on an n X n cylindrical chessboard. ● a(n) = 1 / 6 * n * (n ^ 5 - 27 * n ^ 3 + 18 * n ^ 2 + 194 * n - 228), n>=4. ●

▶ [A157730] 88,923,2640,5239,8720,13083,18328,24455,31464,39355,48128,57783,68320,79739,92040,105223,119288,134235,150064,166775,184368,202843,222200,242439,263560 ⋆ a(n) = 441 * n ^ 2 - 488 * n + 135. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ● a(n) = (9 * n - 5) * (49 * n - 27). - _ Bruno Berselli _ , Apr 23 2018 ●

▶ [A228744] 88,1071,6130,23627,71278,181885,410828,845517,1617004,2913955,4999182,8228935,13075154,20150881,30239032,44324729,63631392,89660791,124237258,169556259,228237526,303382949,398639428,518266885,667211636 ⋆ Number of arrays of the median of three adjacent elements of some length 9 0..n array. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. ●

▶ [A245954] 88,1501,7744,31465,82968,199141,397504,754321,1292440,2144941,3335808,5074681,7380184,10560565,14620288,19990561,26650584,35181181,45522880,58435081,73803928,92598661,114633024,141119665,171779608 ⋆ Number of length 4 + 3 0..n arrays with some pair in every consecutive four terms totalling exactly n. ● a(n) = 1 + 34 * n + 6 * n ^ 2 - 16 * n ^ 3 + 66 * n ^ 4 + 15 * n ^ 5 for n even. ● a(n) = 58 + 57 * n - 80 * n ^ 2 - 28 * n ^ 3 + 66 * n ^ 4 + 15 * n ^ 5 for n odd. ●

▶ [A107422] 1,88,2376,34320,330330,2378376,13741728,66745536,281582730,1056804320,3593134688,11224833984,32583198648,88687996320,228054847680,557467405440,1302209017395,2919831983640,6308278977000,13175740578000,26680874670450,52514737446600 ⋆ a(n) = binomial(n + 7,7) * binomial(n + 10,10). ● a(n) = 18 * a(n - 1) - 153 * a(n - 2) + 816 * a(n - 3) - 3060 * a(n - 4) + 8568 * a(n - 5) - 18564 * a(n - 6) + 31824 * a(n - 7) - 43758 * a(n - 8) + 48620 * a(n - 9) - 43758 * a(n - 10) + 31824 * a(n - 11) - 18564 * a(n - 12) + 8568 * a(n - 13) - 3060 * a(n - 14) + 816 * a(n - 15) - 153 * a(n - 16) + 18 * a(n - 17) - a(n - 18) for n > 17. ●

▶ [A035807] 1,88,3872,113608,2501312,44091256,648339296,8182044904,90488748416,891142686104,7914446636448,64044689834760,476256430985280,3278081347299000,21013302552438240,126119045475296808,712041389847515904 ⋆ Coordination sequence for lattice D *_ 44 (with edges defined by l _ 1 norm = 1). ● a(m)=add(2 ^ k * binomial(n, k) * binomial(m - 1, k - 1), k=0..n) + 2 ^ n * binomial((n + 2 * m) / 2 - 1, n - 1); with n=44. ●

▶ [A253648] 89,91,107,117,119,121,125,127,137,141,143,151,154,155,157,159,161,163,167,170,171,173,175,178,179 ⋆ Numbers of Hamiltonian cycles that require a graph with at least 9 vertices. ● a(n) = n + 231 for n > 2289. ●

▶ [A184541] 89,193,340,537,792,1114,1513,2000,2587,3287,4114,5083,6210,7512,9007,10714,12653,14845,17312,20077,23164,26598,30405,34612,39247 ⋆ Number of (n + 2) X 4 binary arrays with each 3 X 3 subblock having rows and columns in lexicographically nondecreasing order. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

▶ [A159747] 89,504,1490,3525,7617,15808,32192,64960,130496,261568,523712,1048000,2096576,4193728,8388032,16776640,33553856,67108288,134217152,268434880,536870336,1073741248,2147483072,4294966720,8589934016 ⋆ If an array is made of columns of - nacci sequences, fibo - , tribo - etc. all starting w. 1,1,2 etc, the NW to SE diagonals can be extended by computation. The above is diagonal 10. See A159741 for details. ● a(n) = T(n + 9,n + 1) with T defined in A159741. a(n) = 2 ^ (n + 8) - 576 for n>=6. - _ R. J. Mathar _ , Feb 04 2021 ●

▶ [A176634] 89,519,2063,8223,32831,131199,524543,2097663,8389631,33556479,134221823,536879103,2147500031,8589967359,34359803903,137439084543,549756076031,2199023779839,8796094070783,35184374185983 ⋆ a(n) = 6 * a(n - 1) - 8 *

a(n - 2) - 3 for n > 2; a(0) = 89, a(1) = 519, a(2) = 2063. ● a(n) = 128 * 4 ^ n + 4 * 2 ^ n - 1 for n > 0, a(1) = 89. ●

▶ [A063654] 1,1,89,683,16717,221799,4005785,61643709,1029574631,16484061769,269718819131,4364059061933,71019435701025,1152314664726905,18725412666911121,304052089851133193,4939303236256928534 3 ★ Number of ways to tile a 1 0 X n rectangle with 1 X 1 and 2 X 2 tiles. ● a(n) = 11a(n - 1) + 195a(n - 2) - 1459a(n - 3) - 10427a(n - 4) + 79002a(n - 5) + 188873a(n - 6) - 1922453a(n - 7) - 522744a(n - 8) + 21726132a(n - 9) - 11085988a(n - 10) - 137059276a(n - 11) + 114023550a(n - 12) + 533938164a(n - 13) - 503739499a(n - 14) - 1345858084a(n - 15) + 1272444796a(n - 16) + 2223076291a(n - 17) - 1997887777a(n - 18) - 2382027317a(n - 19) + 2015253425a(n - 20) + 1613022647a(n - 21) - 1309632545a(n - 22) - 660948344a(n - 23) + 533727589a(n - 24) + 152685069a(n - 25) - 128889883a(n - 26) - 17772195a(n - 27) + 16954690a(n - 28) + 883980a(n - 29) - 1089264a(n - 30) - 11392a(n - 31) + 26112a(n - 32) - Keith Schneider (kschneid(AT)bulldog.unca.edu), Apr 02 2006 ●

▶ [A069764] 89,773,3611,12179,33349,78889,167383,326471,595409,1027949,1695539,2690843,4131581,6164689,8970799,12769039,17822153,24441941,32995019,43908899,57678389,74872313,96140551,122221399,153949249 ★ Frobenius number of the numerical semigroup generated by consecutive octahedral numbers. ● a(n)=((1 / 3)n(2n ^ 2 + 1) - 1)((1 / 3)(n + 1)(2(n + 1) ^ 2 + 1) - 1) - 1. ● a(2)=89, a(3)=773, a(4)=3611, a(5)=12179, a(6)=33349, a(7)=78889, a(8)=167383, a(n)=7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). - _ Harvey P. Dale _ , Nov 19 2015 ●

▶ [A290314] 1,89,814,4179,15659,47775,125853,296703,641058,1290718,2451449,4432792,7686042,12851762,20818302,32792898,50387031,75717831,111527416,161322161,229533997,321705945,444704195,606959145,818737920 ★ Fifth diagonal sequence of the Sheffer triangle A094816 (special Charlier). ● a(n) = (5760 + 67248 * n + 158180 * n ^ 2 + 161700 * n ^ 3 + 87695 * n ^ 4 + 26952 * n ^ 5 + 4670 * n ^ 6 + 420 * n ^ 7 + 15 * n ^ 8) / 5760. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>8. ●

▶ [A157757] 89,3898,13325,28370,49033,75314,107213,144730,187865,236618,290989,350978,416585,487810,564653,647114,735193,828890,928205,1033138,1143689,1259858,1381645,1509050,1642073 ★ a(n) = 2809 * n ^ 2 - 4618 * n + 1898. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A023330] 89,63419,127139,405269,810809,1069199,1122659,1178609,1333889,1598699,1806089,1958249,2164229,2245319,2329469,2606069,2848949,3241289,3339989,3784199,3962039,4088879,4328459,4444829,4658939 ★ Primes that remain prime through 5 iterations of function f(x) = 2x + 1. ● a(n) == 29 (mod 30). - _ Zak Seidov _ , Jan 31 2013 ●

▶ [A250878] 90,288,678,1328,2306,3680,5518,7888,10858,14496,18870,24048,30098,37088,45086,54160,64378,75808,88518,102576,118050,135008,153518,173648,195466 ★ Number of (1 + 1) X (n + 1) 0..3 arrays with nondecreasing x(i,j) - x(i,j - 1) in the i direction and nondecreasing x(i,j) + x(i - 1,j) in the j direction. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>4. ●

▶ [A027621] 90,288,700,1440,2646,4480,7128,10800,15730,22176,30420,40768,53550,69120,87856,110160,136458,167200,202860,243936,290950,344448,405000,473200,549666 ★ a(n) = n + (n + 1) ^ 2 + (n + 2) ^ 3 + (n + 3) ^ 4. ● a(n) = (n + 3) ^ 2 * (n ^ 2 + 7 * n + 10). - _ Bruno Berselli _ , Aug 05 2011 ●

▶ [A157888] 90,333,738,1305,2034,2925,3978,5193,6570,8109,9810,11673,13698,15885,18234,20745,23418,26253,29250,32409,35730,39213,42858,46665,50634 ★ a(n) = 81 * n ^ 2 + 9. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). (End) ●

▶ [A158490] 90,390,890,1590,2490,3590,4890,6390,8090,9990,12090,14390,16890,19590,22490,25590,28890,32390,36090,39990,44090,48390,52890,57590,62490 ★ a(n) = 100 * n ^ 2 - 10. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A304618] 90,402,930,1674,2634,3810,5202,6810,8634,10674,12930,15402,18090,20994,24114,27450,31002,34770,38754,42954,47370,52002,56850,61914,67194 ★ a(n) = 108 * n ^ 2 - 228 * n + 114 (n>=2). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>4. ●

▶ [A187300] 0,0,90,416,1208,2400,4092,6208,8766,11752,15166,19008,23278,27976,33102,38656,44638,51048,57886,65152,72846,80968,89518,98496,107902 ★ Number of 5 - step one space leftwards or up, two space rightwards or down asymmetric rook's tours on an n X n board summed over all starting positions. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>10. ●

▶ [A289792] 0,0,0,0,90,540,1995,5775,14280,31500,63630,119790,212850,360360,585585,918645,1397760,2070600,2995740,4244220,5901210,8067780,10862775,14424795,18914280 ★ Number of 4 - cycles in the n - tetrahedral graph. ● a(n) = binomial(n - 1, 4) * (210 - 41 * n + 7 * n ^ 2) / 2. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). ●

▶ [A065949] 0,0,0,90,630,2520,7560,18900,41580,83160,154440,270270,450450,720720,1113840,1670760,2441880,3488400,4883760,6715170,9085230,12113640,15939000,20720700,26640900 ★ Bessel polynomial { y _ n } '''(0). ● a(n) = ((- 2 + n) * (- 1 + n) * n * (1 + n) * (2 + n) * (3 + n)) / 8. ●

▶ [A224541] 90,630,2940,11508,40950,137610,445896,1410552,4390386,13514046,41278068,125405532,379557198,1145747538,3452182656,10388002848,31230066186,93828607686,281775226860,845929656900,2539047258150,7619759016090,22864712861880,68605412870088 ★ Number of doubly - surjective functions f:[n] - > [3]. ● a(n) = 3 ^ n - 3 * 2 ^ n - 3 * n * 2 ^ (n - 1) + 3 + 3 * n + 3 * n ^ 2. ●

▶ [A304165] 90,726,2010,3942,6522,9750,13626,18150,23322,29142,35610,42726,50490,58902,67962,77670,88026,99030,110682,122982,135930,149526,163770,178662,194202 ★ a(n) = 324 * n ^ 2 - 336 * n + 102 (n >= 1). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n > 3. (End) ●

▶ [A263170] 0,90,840,4410,20118,64890,186168,440730,972030,2094330,4013850,7512570,13279548,21906810,34902498,54772410,84444690,124785210,181983378,259292154,358930146,492406650,664548816,889272570,1186319550 ★ a(n) = (Sum _{ k=1..n } prime(k)) ^ 3 - (Sum _{ k=1..n } prime(k) ^ 3). ● a(n) mod 2 = 0. ●

▶ [A124167] 0,90,990,9990,99990,999990,9999990,99999990,999999990,9999999990,99999999990,999999999990,9999999999990,99999999999990,999999999999990,9999999999999990,99999999999999990 ★ a(n) = 10 * (10 ^ n - 1). ● a(n) = 11 * a(n - 1) - 10 * a(n - 2). ●

▶ [A279438] 0,1,90,1428,10600,51525,190806,584080,1552608,3701025,8088850,16470036,31616520,57743413,101055150,170433600,278290816,441610785,683206218,1033218100,1530887400,2226630021,3184447750,4484709648,6227340000 ★ Number of ways to place 4 points on an n X n square grid so that no more than 2 points are on a vertical or horizontal straight line. ● a(n) = (n ^ 8 - 14 * n ^ 6 + 30 * n ^ 5 - 17 * n ^ 4 - 6 * n ^ 3 + 6 * n ^ 2) / 24. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9). ●

▶ [A001561] 90,1560,6460,16848,34782,62320,101520,154440,223138,309672,416100,544480,696870,875328,1081912,1318680,1587690,1891000,2230668,2608752,3027310,3488400,3994080,4546408,5147442 ★ a(n) = (7 * n + 3) * (7 * n + 5) * (7 * n + 6). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ●

▶ [A296998] 0,1,90,1620,11810,56613,206234,623904,1641654,3882985,8431280,17078364,32641102,59401153,103638420,174341920,284041304,449881893,694849380,1049316180,1552766796,2255936441,3223157762,4535226864,6292505300 ★ Number of ways to place 4 points on an n X n point grid so that no point is equally distant from two other points on the same row or the same column. ● a(n) = binomial(n ^ 2, 4) - (floor((n - 1) ^ 2 / 4) * (n ^ 2 - 3) - ((5 / 12) * n ^ 2 - (3 / 2) * n + 1 / 3 + (n == 0 mod 3) * (- 1 / 3) + (n == 1 mod 2) * 3 / 4 + (n == 2 mod 4))) * 2 * n. ● a(n) = (n ^ 8 - 6 * n ^ 6 - 12 * n ^ 5 + 35 * n ^ 4 + 56 * n ^ 3 - 150 * n ^ 2) / 24 + b(n), where ● a(n) = 3 * a(n - 1) - a(n - 2) - 3 * a(n - 3) + a(n - 4) - 3 * a(n - 5) + 8 * a(n - 6) - 2 * a(n - 8) - 2 * a(n - 9) - 10 * a(n - 10) + 10 * a(n - 11) + 2 * a(n - 12) + 2 * a(n - 13) - 8 * a(n - 15) + 3 * a(n - 16) - a(n - 17) + 3 * a(n - 18) + a(n - 19) - 3 * a(n - 20) + a(n - 21) for n>21. ●

▶ [A060094] 0,0,0,0,90,1716,11350,49860,173745,519345,1389078,3411060,7821950,16949910,35013240,69404416,132703770,245767890,442372300,776064960,1330117230,2231754820,3672227850,5934754020,9432962515 ★ Number of 6 - block ordered bicoverings of an unlabeled n - set. ● a(n) = binomial(n + 14, n) - 6 * binomial(n + 9, 9) - 15 * binomial(n + 6, 6) + 30 * binomial(n + 5, 5) + 60 * binomial(n + 3, 3) - 50 * binomial(n + 2, 2) - 180 * binomial(n + 1, 1) + 240 * binomial(n, 0) - 80 * binomial(n - 1, - 1). ●

▶ [A008393] 1,90,2070,22530,151560,731502,2777370,8809110,24314490,60110030,135916002,285510150,563873400,1056789450,1893408750,3262336002,5431848930,8774904690,13799638910,21186110970,31830097752,46894786710 ★ Coordination sequence for A _ 9 lattice. ● a(n) = 2 + 11 * n ^ 2 * (221 * n ^ 6 + 2730 * n ^ 4 + 7917 * n ^ 2 + 5260) / 2016, a(0) = 1. ●

▶ [A279442] 0,0,0,90,67950,4531950,109425330,1460297160,13112872920,88456195800,480149029800,2196080372970,8743233946590,31033043111070,99992483914050,296626638016800,819218054279520,2125440234303840,5218743585428640,12201529135725450,27304286810701950 ★ Number of ways to place 8 points on a n n X n square grid so that no more than 2 points are on a vertical or horizontal straight line. ● a(n) = (n ^ 16 - 140 * n ^ 14 + 756 * n ^ 13 + 2506 * n ^ 12 - 36540 * n ^ 11 + 130940 * n ^ 10 - 117432 * n ^ 9 - 559615 * n ^ 8 + 2186100 * n ^ 7 - 3622360 * n ^ 6 + 3228876 * n ^ 5 - 1439892 * n ^ 4 + 181440 * n ^ 3 + 45360 * n ^ 2) / 40320; factorized: a(n) = n ^ 2 * (n - 1) ^ 2 * (n - 2) ^ 2 * (n - 3) ^ 2 * (n ^ 8 + 12 * n ^ 7 - 54 * n ^ 6 - 444 * n ^ 5 + 1845 * n ^ 4 + 1392 * n ^ 3 - 11332 * n ^ 2 + 9660 * n + 1260) / 8!. ● a(n) = SUM(1<=j<=17, C(17,j) * (- 1) ^ (j - 1) * a(n - j)). ●

▶ [A184034] 91,103,124,166,244,400,700,1300,2476,4828,9484,18796,37324,74380,148300,296140,591436,1182028,2362444,4723276,9443404,18883660,37761100,75515980,151019596 ★ 1 / 16 the number of (n + 1) X 5 0..3 arrays with all 2 X 2 subblocks having the same four values. ● a(n) = 9 * 2 ^ (n / 2 - 1) + 9 * 2 ^ (n - 1) + 76 for n even. ● a(n) = 9 * 2 ^ (n - 1) + 3 * 2 ^ ((n + 1) / 2) + 76 for n odd. ●

▶ [A179338] 1,91,131,401,481,931,1051,1681,1841,2651,2851,3841,4081,5251,5531,6881,7201,8731,9091,10801,11201,13091,13531,15601,16081 ★ Positive integers of the form (10 * m ^ 2 + 1) / 11. ● a(n) = (110 * n * (n - 1) + 35 * (2 * n - 1) * (- 1) ^ n + 39) / 4. ● a(n) = a(- n + 1) = a(n - 1) + 2 * a(n - 2) - 2 * a(n - 3) - a(n - 4) + a(n - 5). ●

▶ [A159961] 91,169,217,469,721,817,1027,1141,1261,1387,1519,2107,2611,2977,3367,3781,3997,4681,4921,5677,5941,6487,6769,7651,7957 ★ Cuban composites: composite numbers equal to the difference of two consecutive cubes. ● a(1)=1 + 3t * (t + 1) with t=5, a(2)=1 + 3t * (t + 1) with t=7. ●

▶ [A063367] 1,91,184,276,368,460,552,642,736,826,920,1012,1104,1192,1288,1378,1472,1562,1656,1744,1840,1928,2024,2114,2208 ★ Dimension of the space of weight n cuspidal newforms for Gamma _ 1(94). ● a(n) = a(n - 4) + a(n - 6) - a(n - 10) for n>13. ●

▶ [A224460] 91,263,589,1126,1940,3106,4708,6839,9601,13105,17471,22828,29314,37076,46270,57061,69623,84139,100801,119810,141376,165718,193064,223651,257725 ★ The hyper - Wiener index of the straight pentachain of n pentagonal rings (see Fig. 2.1 in the A. A. Ali et al. reference). ● a(n) = (3 * n ^ 4 + 34 * n ^ 3 + 145 * n ^ 2 - 190 * n + 208) / 8. ●

▶ [A373521] 1,1,1,1,1,91,541,1891,5041,249481,3424681,24365881,119821681,4208219731,96849813061,1133147785771,8728726799521,251218306095121,8116398738418321,138787857114672241,1523943014238675361,39648007379230971211,1599866285860593980461 ★ Expansion of e.g.f. exp(x / (1 - x ^ 4) ^ (3 / 4)). ● a(n) = n! * Sum _{ k=0..floor(n / 4) } binomial(3 * n / 4 - 2 * k - 1,k) / (n - 4 * k)!. ●

▶ [A338795] 1,91,703,2701,7381,16471,32131,56953,93961,146611,218791,314821,439453,597871,795691,1038961,1334161,1688203,2108431,2602621,3178981,3846151,4613203,5489641,6485401 ★ Each term of A003215 (centered hexagonal numbers) is multiplied by the corresponding term of A003154 (centered dodecagonal numbers). ● a(n) = 18 * n ^ 4 - 36 * n ^ 3 + 27 * n ^ 2 - 9 * n + 1. ●

▶ [A213287] 0,1,91,869,4895,21562,83728,296268,977026,2990967,8418649,21740455,51758345,114517208,237528214,465636886,868918932,1553027197,2672453415,4447208761,7183467523,11298758534,17352329324,26081348272,38443650358 ★ Number of 8 - length words w over n - ary alphabet such that for every prefix z of w we have # (z,a _ i) = 0 or # (z,a _ i) >= # (z,a _ j) for all j>i and # (z

,a _ i) counts the occurrences of the i - th letter in z. ● a(n) = n * (- 417562 + 1092135 * n - 1113650 * n ^ 2 + 587165 * n ^ 3 - 175728 * n ^ 4 + 30520 * n ^ 5 - 2880 * n ^ 6 + 120 * n ^ 7) / 120. ●

▶ [A185375] 0,0,1,91,966,5082,18447,53053,129948,282948,562989,1043119,1824130,3040830,4868955,7532721,11313016,16556232,23683737,33201987,45713278,61927138,82672359,108909669,141745044 ⋆ a(n) = n * (n - 1) * (2 * n + 1) * (2 * n - 1) * (2 * n - 3) * (10 * n - 17) / 90. ● a(n) = n * (n - 1) * (2 * n + 1) * (2 * n - 1) * (2 * n - 3) * (10 * n - 17) / 90. ● a(n) = binomial(2 * n + 1,5) * (10 * n - 17) / 3. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). - _ Wesley Ivan Hurt _ , Apr 23 2021 ●

▶ [A170955] 1,91,991,9991,99991,999991,9999991,99999991,999999991,9999999991,99999999991,999999999991,9999999999991,99999999999991,999999999999991,9999999999999991,99999999999999991 ⋆ a(n) = 10 ^ n - 9. ● a(n) = 10 * a(n - 1) + 81 for n>1, a(1)=1. ●

▶ [A213559] 1,91,1366,9542,43535,151313,435324,1089804,2452269,5071495,9794290,17873362,31098587,51953981,83802680,131102232,199652505,296878515,432150478,617143390,866238439,1196968553,1630510388,2192225060 ⋆ Principal diagonal of the convolution array A213558. ● a(n) = (16 / 35) * n ^ 7 + (1 / 2) * n ^ 6 + (1 / 15) * n ^ 3 - (1 / 42) * n. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8). ●

▶ [A027787] 91,1470,12600,76160,364140,1465128,5155080,16279200,47006190,125847260,315762216,748843200,1690097500,3650610600,7582037400,15201516960,29520803025,55688330250,102301525200,183413260800,321546372840,552150337200,930092814000 ⋆ a(n) = 7 * (n + 1) * binomial(n + 2,14). ● a(n) = C(n + 1, 13) * C(n + 2, 2). - _ Zerinvary Lajos _ , May 10 2005; corrected by _ R. J. Mathar _ , Mar 16 2016 ●

▶ [A118706] 1,91,1891,3403,403651,4388203,4468555,41710411,201553003,213283531,410970115,428264011,633021571,642342403,703181251,4913725411,2800740475,41103462403,90151709131,90294438403,337594212451 ⋆ Triangular numbers whose digits in base 12 are contained in { 1,5,7,11 } . ● a(n)=t if t is the n - th triangular number such that S subset { 1,5,7,11 } , where S is the set of digits of t in base 12. ●

▶ [A008394] 1,91,2161,24691,176251,907753,3685123,12494233,36808723,96918753,232834755,518344905,1082218305,2139007755,4032416505,7294752507,12726601437,21501506127,35301145037,56487256007 ⋆ Crystal ball sequence for A _ 9 lattice. ● a(n) = 2431 / 18144 * n ^ 9 + 2431 / 4032 * n ^ 8 + 4433 / 1512 * n ^ 7 + 715 / 96 * n ^ 6 + 67067 / 4320 * n ^ 5 + 4147 / 192 * n ^ 4 + 197329 / 9072 * n ^ 3 + 14465 / 1008 * n ^ 2 + 7129 / 1260 * n + 1. - _ T. D. Noe _ , Apr 29 2007 ●

▶ [A157802] 91,30464,115287,254560,448283,696456,999079,1356152,1767675,2233648,2754071,3328944,3958267,4642040,5380263,6172936,7020059,7921632,8877655,9888128,10953051,12072424,13246247,14474520,15757243 ⋆ a(n) = 27225 * n ^ 2 - 51302 * n + 24168. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A352755] 91,201159,15407765,295233841,2746367559,16448122691,73287987409,264133278045,811598515091,2202365761759,5410166901741,12249942682409,25914353312575,51755729480091,98389720844009,179211321358741,314429627203659,533744613620855,879807401606341,1412624924155809 ⋆ Positive centered cube numbers that can be written as the difference of two positive cubes: a(n) = t * (3 * t ^ 2 + 4) * (t ^ 2 * (3 * t ^ 2 + 4) ^ 2 + 3) / 4 with t = 2 * n - 1 and n > 0. ● a(n) = (2 * n - 1) * (3 * (2 * n - 1) ^ 2 + 4) * ((2 * n - 1) ^ 2 * (3 * (2 * n - 1) ^ 2 + 4) ^ 2 + 3) / 4. ● a(n) can be extended for negative n such that a(- n) = - a(n + 1). ●

▶ [A257761] 92,138,4278,6532,205252,313398,9847818,15036572,472490012,721442058,22669672758,34614182212,1087671802372,1660759304118,52185576841098,79681832415452,2503820016570332,3823067196637578,120131175218534838,183427543606188292 ⋆ Positive integers whose square is the sum of 23 consecutive squares. ● a(n) = 48 * a(n - 2) - a(n - 4). ●

▶ [A063326] 1,92,208,325,442,559,676,793,910,1027,1144,1259,1378,1495,1612,1727,1846,1961,2080,2195,2314,2429,2548,2661,2782 ⋆ Dimension of the space of weight n cuspidal newforms for Gamma _ 1(53). ● a(n) = a(n - 4) + a(n - 6) - a(n - 10) for n>13. ●

▶ [A302351] 92,377,1128,2700,5548,10227,17392,27798,42300,61853,87512,120432,161868,213175,275808,351322,441372,547713,672200,816788,983532,1174587,1392208,1638750,1916668 ⋆ Hyper - Wiener index of body - centered cubic grid cells in a row. ● a(n) = (25 * n ^ 4 + 105 * n ^ 3 + 143 * n ^ 2 + 171 * n + 108) / 6 (proven). ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>11. ●

▶ [A100169] 1,92,438,1204,2555,4656,7672,11768,17109,23860,32186,42252,54223,68264,84540,103216,124457,148428,175294,205220,238371,274912,315008,358824,406525 ⋆ Structured pentagonal hexacontahedral numbers (vertex structure 16). ● a(n) = (1 / 6) * (165 * n ^ 3 - 225 * n ^ 2 + 66 * n). ● a(n) = (55 * n ^ 3 - 75 * n ^ 2 + 22 * n) / 2. - _ Wesley Ivan Hurt _ , Nov 26 2013 ●

▶ [A100170] 1,92,444,1228,2615,4776,7882,12104,17613,24580,33176,43572,55939,70448,87270,106576,128537,153324,181108,212060,246351,284152,325634,370968,420325 ⋆ Structured pentagonal hexacontahedral numbers (vertex structure 10). ● a(n) = (1 / 6) * (171 * n ^ 3 - 243 * n ^ 2 + 78 * n). ●

▶ [A279913] 1,92,993,9994,99995,999996,9999997,99999998,999999999,9999999910,99999999911,999999999912,9999999999913,99999999999914,999999999999915,9999999999999916,99999999999999917,999999999999999918,9999999999999999919,99999999999999999920 ⋆ Largest n - digit number ending in n. ● a(n) = n + 10 ^ n - 10 ^ (1 + floor(log _ 10(n))). - _ Wesley Ivan Hurt _ , Mar 30 2020 ●

▶ [A172449] 0,0,0,0,0,0,0,92,1066,7828,44148,195270,707698,2211868,6120136,15324708,35312064,75937606,153942964,296590536,546621416,968910732,1659114170,2754780934,4449361442 ⋆ Number of ways to place 8 nonattacking queens on an 8 X n board. ● a(n) = n ^ 8 - 84 * n ^ 7 + 3378 * n ^ 6 - 85078 * n ^ 5 + 1467563 * n ^ 4 - 17723656 * n ^ 3 + 145910074 * n ^ 2 - 745654756 * n + 1802501048, for n >= 31. - _ Vaclav Kotesovec _ , Feb 03 2010 ●

▶ [A269439] 92,1722,13868,69235,255576,767172,1981512,4566213,9621220,18861326,34844052,61247927,103206208,167701080,264023376,404302857,604114092,883162978,1266058940,1783177851,2471620712,3376273132,4550970648 ⋆ Number of length - 7 0..n arrays with no repeated value greater than the previous repeated value. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. ●

▶ [A269623] 92,1740,13544,66925,246798,742487,1923796,4447329,9398090,18471403,34200192,60232661,101665414,165437055,260787308,399786697,597941826,874881299,1255127320,1768958013,2453365502,3353114791,4521908484 ⋆ Number of length - 7 0..n arrays with no repeated value differing from the previous repeated value by other than plus two, zero or minus 1. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>10. ●

▶ [A035808] 1,92,4232,129812,2987792,55053260,846141848,11160045188,128975126048,1327092434748,12312430500520,104062494360052,808072815510832,5806722035765932,38851092934042552,243319195759791460,1433080081936088128 ⋆ Coordination sequence for lattice D *_ 46 (with edges defined by l _ 1 norm = 1). ● a(m) = (Sum _{ k=0..n } 2 ^ k * binomial(n, k) * binomial(m - 1, k - 1)) + 2 ^ n * binomial((n + 2 * m) / 2 - 1, n - 1); with n=46. ●

▶ [A157838] 92,4843,16794,35945,62296,95847,136598,184549,239700,302051,371602,448353,532304,623455,721806,827357,940108,1060059,1187210,1321561,1463112,1611863,1767814,1930965,2101316 ⋆ 3600n ^ 2 - 6049n + 2541. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A252593] 0,0,0,0,0,0,0,92,13848,636524,14803480,207667564,2008758532,14752426528,87154016752,432539436508,1858901487620 ⋆ Number of ways to place 8 nonattacking queens on an n X n board. ● a(n) = n ^ 16 / 40320 - n ^ 15 / 432 + 221 * n ^ 14 / 2160 + O(n ^ 13). - _ Vaclav Kotesovec _ , Dec 19 2014 ●

▶ [A193248] 1,93,455,1267,2709,4961,8203,12615,18377,25669,34671,45563,58525,73737,91379,111631,134673,160685,189847,222339,258341,298033,341595,389207,441049 ⋆ Truncated dodecahedron, and truncated icosahedron with faces of centered polygons. ● a(n) = 30 * n ^ 3 - 45 * n ^ 2 + 17 * n - 1. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4); a(1)=1, a(2)=93, a(3)=455, a(4)=1267. - _ Harvey P. Dale _ , Aug 28 2011 ●

▶ [A160174] 1,93,545,1645,3681,6941,11713,18285,26945,37981,51681,68333,88225,111645,138881,170221,205953,246365,291745,342381,398561,460573,528705,603245,684481 ⋆ a(n) = (2 * n - 1) * (24 * n ^ 2 - 42 * n + 19). ● a(n) = 48 * n ^ 3 - 108 * n ^ 2 + 80 * n - 19. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Vincenzo Librandi _ , Jul 01 2012 ●

▶ [A160250] 1,93,617,1957,4497,8621,14713,23157,34337,48637,66441,88133,114097,144717,180377,221461,268353,321437,381097,447717,521681,603373,693177,791477,898657 ⋆ a(n) = 64 * n ^ 3 - 168 * n ^ 2 + 148 * n - 43. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Vincenzo Librandi _ , Jul 01 2012 ●

▶ [A250374] 93,1382,8964,37385,118621,312578,720112,1498569,2879845,5190968,8877188,14527617,22903349,34968130,51921536,75234673,106688397,148414054,202936740,273221081,362719533,475423202,615915184,789426425,1001894101 ⋆ Number of length 1 + 6 0..n arrays with every seven consecutive terms having the maximum of some three terms equal to the minimum of the remaining four terms. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

▶ [A146125] 0,93,2046,8675,24622,56389,112078,201457,335974,528757,794614,1150033,1613182,2203909,2943742,3855889,4965238,6298357,7883494,9750577,11931214,14458693,17367982,20695729,24480262 ⋆ Number of n X n arrays of squares of integers with every (n - 1) X (n - 1) subblock summing to 5 and every element equal to at least one neighbor. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>11. ●

▶ [A304609] 94,208,322,436,550,664,778,892,1006,1120,1234,1348,1462,1576,1690,1804,1918,2032,2146,2260,2374,2488,2602,2716,2830 ⋆ a(n) = 114 * n - 20. ● a(n) = 2 * a(n - 1) - a(n - 2) for n>2. ●

▶ [A174337] 0,94,376,846,1504,2350,3384,4606,6016,7614,9400,11374,13536,15886,18424,21150,24064,27166,30456,33934,37600,41454,45496,49726,54144 ⋆ 94 * n ^ 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Aug 21 2014 ●

▶ [A328088] 1,94,683,3520,15461,61826,232543,838276,2930585,10014406,33633299,111448904,365403853,1187875594,3834883271,12309375244,39320806145,125090127950,396537120379,1253145232336,3949433330741,12416933938834,38953666980143,121962851990420,381179210953321 ⋆ a(n) = Sum _{ k=4..n } (binomial(n,k) * (k - 2) * (2 ^ k - 2 * k - 2)) - (2 ^ n - n - 1). ● a(n) = 3 ^ (n - 1) * (2 * n - 6) + 2 ^ (n - 1) * (- n ^ 2 + n + 6) - n - 1. - _ Robert Israel _ , Oct 18 2019 ● a(n) = - 1 + 3 * 2 ^ n - 2 * 3 ^ n + (1 / 6) * (- 6 + 3 * 2 ^ n + 4 * 3 ^ n) * n - 2 ^ (- 1 + n) * n ^ 2 for n>3. ● a(n) = 14 * a(n - 1) - 82 * a(n - 2) + 260 * a(n - 3) - 481 * a(n - 4) + 518 * a(n - 5) - 300 * a(n - 6) + 72 * a(n - 7) for n>10. ●

▶ [A337954] 0,94,97974,10700090,390081800,7280687610,86121007714,730895668104,4816861200630,26010740238450,119563513291420,481192778757834,1732132086737234,5669991002636870,17101193825828700,48029634770843680 ⋆ Number of chiral pairs of colorings of the 16 tetrahedral facets of a hyperoctahedron or of the 16 vertices of a tesseract. ● a(n) = (n - 1) * n ^ 2 * (n + 1) * (n ^ 12 + n ^ 10 - 11 * n ^ 8 + n ^ 6 + 44 n ^ 4 - 4 n ^ 2 - 48) / 384. ● a(n) = 94 * C(n,2) + 97692 * C(n,3) + 10308758 * C(n,4) + 337560150 * C(n,5) + 5098740090 * C(n,6) + 42976836210 * C(n,7) + 224685801060 * C(n,8) + 775389028050 * C(n,9) + 1830791421900 * C(n,10) + 3007909258200 * C(n,11) + 3439214024400 * C(n,12) + 2685727044000 * C(n,13) + 1366701336000 * C(n,14) + 408648240000 * C(n,15) + 54486432000 * C(n,16), where the coefficient of C(n,k) is the number of chiral pairs of colorings using exactly k colors. ●

▶ [A063371] 1,95,188,282,376,470,564,659,752,847,940,1034,1128,1224,1316,1411,1504,1599,1692,1788,1880,1976,2068,2163,2256 ⋆ Dimension of the space of weight n cuspidal newforms for Gamma _ 1(98). ● a(n) = a(n - 4) + a(n - 6) - a(n - 10) for n>13. ●

▶ [A225931] 95,273,539,1156,3566,5603,8751,18346,34364,75443,95656,146882,308254,426656,576345,762412,990326,1120595,1985636,2976016,3591434,5103526,6017672,8208724,12553402 ⋆ Number of conjugacy classes in Chevalley group F _ 4(q) as q runs through the prime powers. ● a(n) = q ^ 4 + 2q ^ 3 + 6q ^ 2

+ 10q + 19 if q == 0 mod 2. • a(n) = q ^ 4 + 2q ^ 3 + 7q ^ 2 + 15q + 30 if q == 0 mod 3. • a(n) = q ^ 4 + 2q ^ 3 + 7q ^ 2 + 15q + 31 otherwise. •

▶ [A055823] 1,95,336,848,1800,3422,6017,9974,15782,24045,35498,51024,71672,98676,133475,177734,233366,302555,387780,491840,617880,769418,950373,1165094,1418390 ⋆ a(n) = T(n,n - 6), array T as in A055818. • a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n > 13. • a(n) = (n ^ 6 + 15 * n ^ 5 - 65 * n ^ 4 - 795 * n ^ 3 + 1864 * n ^ 2 + 6180 * n - 7200) / 720, for n > 6, with a(6) = 1. •

▶ [A161482] 0,96,189,453,969,1496,3020,6020,9089,17969,35453,53340,105096,207000,311253,612909,1206849,1814480,3572660,7034396,10575929,20823353,40999829,61641396,121367760 ⋆ Nonnegative values x of solutions (x, y) to the Diophantine equation x ^ 2 + (x + 151) ^ 2 = y ^ 2. • a(n) = 6 * a(n - 3) - a(n - 6) + 302 for n > 6; a(1)=0, a(2)=96, a(3)=189, a(4)=453, a(5)=969, a(6)=1496. •

▶ [A352975] 96,192,330,504,840,1304,1872,2910,3971,5340,6851,8932,11700,14496,18258,22410,27265,32620,39606,47124,55545,65448,76050,87854,101925 ⋆ a(n) is the smallest number which can be represented as the sum of n distinct centered n - gonal numbers in exactly n ways, or - 1 if no such number exists. • a(n) >= n * binomial(n + 2, 3) + n, if a(n) does exist. - _ Thomas Scheuerle _ , Apr 13 2022 •

▶ [A304510] 96,234,510,1062,2166,4374,8790,17622,35286,70614,141270,282582,565206,1130454,2260950,4521942,9043926,18087894,36175830,72351702,144703446,289406934,578813910,1157627862,2315255766 ⋆ a(n) = 69 * 2 ^ n - 42 (n>=1). • a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>2. •

▶ [A062027] 1,1,1,96,274,720,1680,3520,6750,12048,20284,32544,50154,74704,108072,152448,210358,284688,378708,496096,640962,817872,1031872,1288512,1593870 ⋆ a(1) = a(2) = a(3) = 1 and a(n) = 24 * binomial(n + 1, 5) + n * (n ^ 2 - n + 6) for n > 3. • a(n) = (n + 1) * (n) * (n - 1) * (n - 2) * (n - 3) / 5 + n * (n ^ 2 - n + 6), for n>3. •

▶ [A304830] 96,300,708,1524,3156,6420,12948,26004,52116,104340,208788,417684,835476,1671060,3342228,6684564,13369236,26738580,53477268,106954644,213909396,427818900,855637908,1711275924,3422551956 ⋆ a(n) = 102 * 2 ^ n - 108 (n>=1). • a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>2. •

▶ [A301459] 0,0,96,320,3200,4480,14336,43008,122880,337920,901120,2342912,5963776,14909440,36700160,89128960,213909504,508035072,1195376640,2789212160,6459228160,14856224768,33957085184 ⋆ Number of 6 - cycles in the n - folded cube graph. • a(n) = 2 ^ (n - 1) * n * (n - 1) * (n - 2) / 3 for n > 6. • a(n) = 8 * a(n - 1) - 24 * a(n - 2) + 32 * a(n - 3) - 16 * a(n - 4) for n > 10. •

▶ [A292345] 96,352,736,1248,1888,2656,3552,4576,5728,7008,8416,9952,11616,13408,15328,17376,19552,21856,24288,26848,29536,32352,35296,38368,41568 ⋆ The second Zagreb index of the Aztec diamond AZ(n) (see the Ramanes et al. reference, Theorem 2.2). • a(n) = 64 * n ^ 2 + 64 * n - 32. •

▶ [A277107] 0,96,384,1248,3840,11616,34944,104928,314880,944736,2834304,8503008,25509120,76527456,229582464,688747488,2066242560,6198727776,18596183424,55788550368,167365651200,502096953696,1506290861184,4518872583648,13556617751040 ⋆ a(n) = 16 * 3 ^ n - 48. • a(n) = 4 * a(n - 1) - 3 * a(n - 2). •

▶ [A292543] 0,96,384,1536,6144,24576,98304,393216,1572864,6291456,25165824,100663296,402653184,1610612736,6442450944,25769803776,103079215104,412316860416,1649267441664,6597069766656,26388279066624,105553116266496,422212465065984,1688849860263936 ⋆ Number of 5 - cycles in the n - Sierpinski tetrahedron graph. • a(n) = 4 * a(n - 1) for n > 2. •

▶ [A304515] 96,414,1050,2322,4866,9954,20130,40482,81186,162594,325410,651042,1302306,2604834,5209890,10420002,20840226,41680674,83361570,166723362,333446946,666894114,1333788450,2667577122,5335154466 ⋆ a(n) = 159 * 2 ^ n - 222 (n>=1). • a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>2. •

▶ [A216106] 96,652,1968,4344,8080,13476,20832,30448,42624,57660,75856,97512,122928,152404,186240,224736,268192,316908,371184,431320,497616,570372,649888,736464,830400 ⋆ The Wiener index of the tetrameric 1,3 - adamantane TA(n) (see the Fath - Tabar et al. reference). • a(n) = 50n ^ 3 + 80n ^ 2 - 34n. •

▶ [A187610] 0,0,0,0,96,711,2083,4758,8979,14434,21526,29978,39790,50962,63494,77386,92638,109250,127222,146554,167246,189298,212710,237482,263614 ⋆ Number of 6 - step one space for components leftwards or up, two space for components rightwards or down asymmetric quasi - bishop's tours (antidiagonal moves become knight moves) on an n X n board summed over all starting positions. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>12. •

▶ [A269215] 0,96,768,6528,49536,360960,2546304,17563392,119091072,796813824,5274483840,34608512256,225420724608,1459142258688,9394561013376,60205610853120,384263133750144,2443755614295552,15491594556534912 ⋆ Number of 2 X n 0..3 arrays with some element plus some horizontally, diagonally or antidiagonally adjacent neighbor totalling three exactly once. • a(n) = 8 * (175 * 6 ^ n * n + 1008 * n - 55 * 6 ^ n - 288) / 1029 for n even. • a(n) = 8 * (175 * 6 ^ n * n - 1008 * n - 55 * 6 ^ n + 288) / 1029 for n odd. •

▶ [A027628] 1,96,944,4057,11811,27446,55066,99639,166997,263836,397716,577061,811159,1110162,1485086,1947811,2511081,3188504,3994552,4944561,6054731,7342126,8824674,10521167,12451261 ⋆ Expansion of Molien series for 5 - dimensional group G _ 3 acting on Jacobi polynomials of ternary self - dual codes. • a(n) = (2 + 13 * n + 33 * n ^ 2 + 72 * n ^ 3 + 72 * n ^ 4) / 2. • a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>4. (End) •

▶ [A187165] 0,96,1104,3984,9612,18888,32712,51984,77604,110472,151488,201552,261564,332424,415032,510288,619092,742344,880944,1035792,1207788,1397832,1606824,1835664,2085252 ⋆ Number of 4 - step self - avoiding walks on an n X n X n cube summed over all starting positions. • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>6. •

▶ [A168526] 0,1,96,1458,10240,46875,163296,470596,1179648,2657205,5500000,10629366,19408896,33787663,56471520,91125000,142606336,217238121,323116128,470458810,672000000,943427331,1303868896,1776430668,2388787200 ⋆ a(n) = n ^ 6 * (n + 1) / 2. • a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8). •

▶ [A128962] 0,96,1536,15360,122880,860160,5505024,33030144,188743680,1038090240,5536481280,28789702656,146565758976,732828794880,3607772528640,17523466567680,84112639524864,399535037743104,1880164883496960,8774102789652480,40637949762600960 ⋆ a(n) = (n ^ 3 - n) * 4 ^ n. • a(n) = 16 * a(n - 1) - 96 * a(n - 2) + 256 * a(n - 3) - 256 * a(n - 4). - _ Vincenzo Librandi _ , Feb 09 2013 •

▶ [A159711] 0,0,0,0,0,0,96,1904,23040,221184,1858560,14353152,104742912,734769152,5010432000,33464217600,220066480128,1430279159808,9212045819904,58914039332864,374665295953920,2371935399837696,14960708435312640,94072038170296320,589975504803594240 ⋆ Number of permutations of 1..n arranged in a circle with exactly 3 local maxima. • a(n) = 1 / 3 * 2 ^ (- 6 + n) * n * (15 + 3 * 2 ^ (1 + n) + 3 ^ n - 3 * (8 + 2 ^ n) * n + 6 * n ^ 2) for n>1. - _ Colin Barker _ , Oct 26 2015 •

▶ [A272765] 1,96,4008,82528,1029552,8939152,59112616,316345408,1429655844,5627681904,19747867728,62882889360,184259252180,502404837648,1286281062776,3115358788304,7182265229303,15843826126704,33591306176240,68708263470288,136027864081380 ⋆ Expansion of (1 + 80 * x + 2592 * x ^ 2 + 29360 * x ^ 3 + 138124 * x ^ 4 + 295552 * x ^ 5 + 299984 * x ^ 6 + 144016 * x ^ 7 + 31146 * x ^ 8 + 2688 * x ^ 9 + 72 * x ^ 10) / (1 - x) ^ 16. • a(n) = (1 + n) * (2 + n) * (3 + n) * (4 + n) * (5 + n) * (2179457280 + 5624791200 * n + 8463690360 * n ^ 2 + 8430731628 * n ^ 3 + 5888536294 * n ^ 4 + 2935665243 * n ^ 5 + 1043021847 * n ^ 6 + 258468462 n ^ 7 + 42566616 * n ^ 8 + 4198827 * n ^ 9 + 188723 * n ^ 10) / 261534873600. • a(n) = 16 * a(n - 1) - 120 * a(n - 2) + 560 * a(n - 3) - 1820 * a(n - 4) + 4368 * a(n - 5) - 8008 * a(n - 6) + 11440 * a(n - 7) - 12870 * a(n - 8) + 11440 * a(n - 9) - 8008 * a(n - 10) + 4368 * a(n - 11) - 1820 * a(n - 12) + 560 * a(n - 13) - 120 * a(n - 14) + 16 * a(n - 15) - a(n - 16). - _ Wesley Ivan Hurt _ , Jul 02 2020 •

▶ [A240445] 96,4128,52080,373632,1898064,7604352,25580016,75208320,198651024,480768288,1081848768,2289041664,4594218720,8808178176,16223664672,28842649344,49686723072,83213333280,135864971088,216783321216,338725852080,519228378240,782063802000 ⋆ Numbers of ways to place five indistinguishable points on an n X n square grid so that no four of them are vertices of a square of any orientation. • a(n) = (n ^ 10 - 10 * n ^ 8 + 25 * n ^ 6 - 16 * n ^ 2) / 120. •

▶ [A035809] 1,96,4608,147488,3542016,68095200,1091884544,15023056032,181095585792,1943370847584,18801236605440,165673550159136,1341056098444288,10043368807877088,70018291338395136,456821317532555680 ⋆ Coordination sequence for lattice D *_ 48 (with edges defined by l _ 1 norm = 1). • a(m) = (Sum _{ k=0..n } 2 ^ k * binomial(n, k) * binomial(m - 1, k - 1)) + 2 ^ n * binomial(n + 2 * m) / 2 - 1, n - 1); with n=48. •

▶ [A000545] 1,96,9099,280832,4073375,36292320,230719293,1145393152,4707296613,16666924000,52307593239,148602435840,388302646355,944900450144,2162441849625,4691253854208,9710376716137,19280531603808,36888593841475,68266682784000,122597146773927 ⋆ Number of ways of n - coloring a dodecahedron. • a(n) = (n ^ 12 + 15 * n ^ 6 + 44 * n ^ 4) / 60. • a(n) = 1 * C(n,1) + 94 * C(n,2) + 8814 * C(n,3) + 245008 * C(n,4) + 2759250 * C(n,5) + 15884004 * C(n,6) + 52701264 * C(n,7) + 106866144 * C(n,8) + 134719200 * C(n,9) + 103118400 * C(n,10) + 43908480 * C(n,11) + 7983360 * C(n,12), where the coefficient of C(n,k) is the number of oriented colorings using exactly k colors. •

▶ [A130765] 97,98,99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121 ⋆ ASCII codes for lower case letters. • a(n) = 96 + n, 0 < n < 27. •

▶ [A157213] 97,137,277,305,685,1565,1733,3973,9113,10093,23153,53113,58825,134945,309565,342857,786517,1804277,1998317,4584157,10516097,11647045,26718425,61292305,67883953 ⋆ Positive numbers y such that y ^ 2 is of the form x ^ 2 + (x + 137) ^ 2 with integer x. • a(n) = 6 * a(n - 3) - a(n - 6) for n > 6; a(1)=97, a(2)=137, a(3)=277, a(4)=305, a(5)=685, a(6)=1565. •

▶ [A157924] 97,195,293,391,489,587,685,783,881,979,1077,1175,1273,1371,1469,1567,1665,1763,1861,1959,2057,2155,2253,2351,2449 ⋆ a(n) = 98 * n - 1. • a(n) = 2 * a(n - 1) - a(n - 2). - _ Vincenzo Librandi _ , Feb 05 2012 •

▶ [A174338] 0,97,388,873,1552,2425,3492,4753,6208,7857,9700,11737,13968,16393,19012,21825,24832,28033,31428,35017,38800,42777,46948,51313,55872 ⋆ a(n) = 97 * n ^ 2. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Feb 25 2012 • a(n) = (49n) ^ 2 - (48n) ^ 2 = (9n) ^ 2 + (4n) ^ 2. - _ Vincenzo Librandi _ , Feb 25 2012 •

▶ [A157331] 97,449,1057,1921,3041,4417,6049,7937,10081,12481,15137,18049,21217,24641,28321,32257,36449,40897,45601,50561,55777,61249,66977,72961,79201 ⋆ a(n) = 128 * n ^ 2 - 32 * n + 1. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Jan 29 2012 •

▶ [A361678] 1,1,1,1,97,481,1441,3361,77281,647137,3195361,11674081,116286721,1147935361,7611379777,37451144641,263670781921,2456043418081,19073086806241,115319128034017,748239468100417,6179458007222977,50636218964639617,350400618132423937 ⋆ Constant term in the expansion of (1 + w + x + y + z + 1 / (x * y * z) + 1 / (w * y * z) + 1 / (w * x * z) + 1 / (w * x * y)) ^ n. • a(n) = Sum _{ k=0..floor(n / 4) } (4 * k)! / k! ^ 4 * binomial(4 * k,k) * binomial(n,4 * k). •

▶ [A144130] 1,1,97,577,1921,4801,10081,18817,32257,51841,79201,116161,164737,227137,305761,403201,522241,665857,837217,1039681,1276801,1552321,1870177,2234497,2649601 ⋆ a(n) = ChebyshevT(4, n). • a(n) = 8 * n ^ 4 - 8 * n ^ 2 + 1. (End) • a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Wesley Ivan Hurt _ , Mar 15 2023 •

▶ [A162674] 0,1,97,956,4780,16745,46921,112672,241536,474585,870265,1508716,2496572,3972241,6111665,9134560,13311136,18969297,26502321,36377020,49142380,65438681,86007097,111699776,143490400 ⋆ Number of different fixed (possibly) disconnected tetrominoes bounded (not necessarily tightly) by an n X n square. • a(n) = n * (n - 1) * (8 * n ^ 4 - 16 * n ^ 3 - 9 * n ^ 2 + 17 * n + 8) / 12. •

▶ [A262925] 0,1,97,962,4578,14979,38995,86996,173636,318597,547333,891814,1391270,2092935,3052791,4336312,6019208,8188169,10941609,14390410,18658666,23884427,30220443,37834908,46912204 ⋆ Sum of n consecutive fourth powers starting with n ^ 4. • a(n) = n * (- 1 + 70 * n ^ 2 - 225 * n ^ 3 + 186 * n ^ 4) / 30. •

▶ [A241968] 97,1895,16649,92037,376559,1247602,3536286,8889273,20314789,42967177,85231367,160175717,287448747,495702356,825631180,1333724817,209683

6713,3217680571,4831372213,7113141893,10287349127,14637939174,20520487370 ⋆ Number of length 5 + 3 0..n arrays with no consecutive four elements summing to more than 2 * n. • a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>9. •

► [A075665] 1,97,2177,23058,152979,738835,2839571,9191876,26037717,66301333,154762069,336050870,686502375,1331121351,2467171687,4396168328,7566347369,12628007049,20504452585,32481640666 ⋆ Sum of next n 4th powers. i ^ s, s = 4. • a(1)=1; a(n)=sum(i ^ s, { i, n(n - 1) / 2 + 1, n(n - 1) / 2 + 1 + n }). • a(n) = (15n ^ 9 + 90n ^ 7 + 123n ^ 5 + 20n ^ 3 - 8n) / 240. •

► [A122128] 97,1567204831,771745495049,2523423764749,7766703722053,16167518745751,28962816187367,42932141486099,65562552714433,109392979058371,142311158323421,194472382292633,434809071709709,654363068549089 ⋆ Primes of form Sum[Prime[k] ^ 4, { k,1,n }] or primes in A122102[n]. • a(n) = A122102[A122127[n]]. •

► [A307371] 0,1,98,99,100,9998,9999,10000,999998,999999,1000000,99999998,99999999,100000000,9999999998,9999999999,10000000000,999999999998,999999999999,1000000000000,99999999999998,99999999999999,100000000000000,999999999999998,9999999999999999 ⋆ Numbers k such that the digits of sqrt(k) begin with k. • a(n) = 101 * a(n - 3) - 100 * a(n - 6) for n > 6. •

► [A109553] 98,124,162,221,319,498,886,1994,7976 ⋆ a(n) = floor(4076 / (10 - n) ^ 2 / 0.51099906). • a(n) = floor(4076 / (10 - n) ^ 2 / w Mev / me) = floor(4076 / (10 - n) ^ 2 / 0.51099906). •

► [A063369] 1,98,206,314,422,530,638,746,854,962,1070,1178,1286,1394,1502,1610,1718,1826,1934,2042,2150,2258,2366,2474,2582 ⋆ Dimension of the space of weight n cuspidal newforms for Gamma _ 1(96). • a(n) = 108 * n - 226 for n>2. a(n) = 2 * a(n - 1) - a(n - 2) for n>4. G.f.: x ^ 2 * (- 1 + 100 * x + 9 * x ^ 2) / (1 - x) ^ 2. [_ Colin Barker _ , Sep 28 2012] •

► [A160828] 98,354,978,2258,4578,8418,14354,23058,35298,51938,73938,102354,138338,183138,238098,304658,384354,478818,589778,719058,868578,1040354,1236498,1459218,1710818 ⋆ a(n) = 4 * n ^ 4 + 24 * n ^ 3 + 84 * n ^ 2 + 144 * n + 98. • a(0)=98, a(1)=354, a(2)=978, a(3)=2258, a(4)=4578, a(n)=5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Harvey P. Dale _ , Mar 25 2012 •

► [A158129] 98,396,894,1592,2490,3588,4886,6384,8082,9980,12078,14376,16874,19572,22470,25568,28866,32364,36062,39960,44058,48356,52854,57552,62450 ⋆ 100n ^ 2 - 2n. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). •

► [A190636] 1,98,1647,12304,58625,210006,617743,1572992,3587409,7500250,14615711,26874288,47061937,79060814,128145375,201327616,307755233,459166482,670405519,960002000,1350818721,1870771078,2553622127,3439857024,4577640625 ⋆ a(n)=(n ^ 3 + 3 * n ^ 7) / 4. • a(n) = ((n ^ 3 + n) / 2) ^ 3 - ((n ^ 3 - n) / 2) ^ 3. •

► [A285045] 1,98,1862,19796,160454,1114428,7008540,41132520,229435206,1230873644,6403088692,32488200472,161473267228,788758622680,3796375603320,18040943163600,84786596572230,394599588033420,1820669979129540,8335975464699960 ⋆ Expansion of cosh(7 * arctanh(2 * sqrt(x))). • a(n) = 1 / 15 * (512 * n ^ 3 + 64 * n ^ 2 + 144 * n + 15) * binomial(2 * n,n). •

► [A022149] 1,98,1946,16394,83442,307314,907018,2282394,5095650,10368386,19594106,34866218,59021522,95799186,150015210,227752378,336565698,485703330,686343002,951843914,1298014130,1743393458 ⋆ Coordination sequence for root lattice B _ 7. • a(0) = 1; for n>0, a(n) = (968 * n ^ 6 - 1368 * n ^ 5 + 5420 * n ^ 4 - 4080 * n ^ 3 + 4232 * n ^ 2 - 852 * n + 90) / 45 . - _ Philippe Deléham _ , Feb 20 2004 •

► [A128801] 0,98,2058,28812,336140,3529470,34588806,322828856,2905459704,25422772410,217505941730,1827049910532,15114685623492,123436599258518,996987917088030,7975903336704240,63275499804520304,498294560960597394 ⋆ a(n) = n * (n - 1) * 7 ^ n. • a(n) = 21 * a(n - 1) - 147 * a(n - 2) + 343 * a(n - 3). - _ Vincenzo Librandi _ , Feb 12 2013 •

► [A178974] 0,0,0,0,0,0,98,3328,17496,99600,316052,1041408,2501538,6157536,12531150,25938944,47168268,86938272,145818008,247240000,390084786,620964256,933865918,1414946304,2047225000 ⋆ Number of ways to place 4 nonattacking amazons (superqueens) on an n X n toroidal board. • a(n)= (1 / 4) * n ^ 2 * (n ^ 6 / 6 - 4 * n ^ 5 + 197 * n ^ 4 / 6 - 66 * n ^ 3 - 1941 * n ^ 2 / 4 + 2638 * n - 18907 / 6 + (n ^ 4 / 2 - 10 * n ^ 3 + 289 * n ^ 2 / 4 - 210 * n + 357 / 2) * (- 1) ^ n + 18 * cos(Pi * n / 2) + 32 / 3 * cos(4 * Pi * n / 3)), n>=10. •

► [A157947] 99,197,295,393,491,589,687,785,883,981,1079,1177,1275,1373,1471,1569,1667,1765,1863,1961,2059,2157,2255,2353,2451 ⋆ a(n) = 98n + 1. • a(n) = 2 * a(n - 1) - a(n - 2). - _ Vincenzo Librandi _ , Feb 10 2012 •

► [A250779] 99,238,534,1152,2426,5028,10306,20960,42394,85420,171666,344392,690122,1381908,2765858,5534192,11071354,22146236,44296626,88598104,177201834,354410148,708827714,1417663872,2835337306 ⋆ Number of (n + 1) X (4 + 1) 0..1 arrays with nondecreasing x(i,j) + x(i,j - 1) in the i direction and nondecreasing absolute value of x(i,j) - x(i - 1,j) in the j direction. • a(n) = (- 288 + 507 * 2 ^ n - 116 * n - 12 * n ^ 2 - 4 * n ^ 3) / 6. •

► [A125820] 1,1,99,295,10193,49001,1086723,6926543,119265217,910405105,13389536259,115088367703,1528961752529,14221495172249,176752280339811,1732989592387775,20610950377737217,209321891217088609,2417905969074687267,25140035386206969607 ⋆ a(n) = ((1 + 7 * sqrt(2)) ^ n + (1 - 7 * sqrt(2)) ^ n) / 2. • a(n) = 2 * a(n - 1) + 97 * a(n - 2), with a(0)=a(1)=1. •

► [A157659] 99,398,897,1596,2495,3594,4893,6392,8091,9990,12089,14388,16887,19586,22485,25584,28883,32382,36081,39980,44079,48378,52877,57576,62475 ⋆ a(n) = 100 * n ^ 2 - n. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). •

► [A273187] 99,449,2499,14449,84099,490049,2856099,16646449,97022499,565488449,3295908099,19209960049,111963852099,652573152449,3803475062499,22168277222449,129206188272099,753068852410049,4389206926188099,25582172704718449,149103829302122499 ⋆ a(n) is the third number in a triple consisting of 3 numbers, which when squared are part of a right diagonal of magic square of squares. • a(0)= 99, a(1)= 449, a(n + 1)= a(n) * 6 - a(n - 1) - k where k=96. • a(n) = (24 + 25 / 2 * (3 - 2 * sqrt(2)) ^ (1 + n) + 25 / 2 * (3 + 2 * sqrt(2)) ^ (1 + n)). • a(n) = 7 * a(n - 1) - 7 * a(n - 2) + a(n - 3) for n>2. •

► [A322830] 1,99,485,1351,2889,5291,8749,13455,19601,27379,36981,48599,62425,78651,97469,119071,143649,171395,202501,237159,275561,317899,364365,415151,470449 ⋆ a(n) = 32 * n ^ 3 + 48 * n ^ 2 + 18 * n + 1. • a(n) + sqrt(a(n) ^ 2 - 1) = (sqrt(n + 1) + sqrt(n)) ^ 6. • a(n) - sqrt(a(n) ^ 2 - 1) = (sqrt(n + 1) - sqrt(n)) ^ 6. • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>3. (End) • a(n) = (2 * n + 1) * (16 * n ^ 2 + 16 * n + 1). - _ Bruno Berselli _ , Jan 02 2019 •

► [A154359] 99,649,3699,9249,17299,27849,40899,56449,74499,95049,118099,143649,171699,202249,235299,270849,308899,349449,392499,438049,486099,536649,589699,645249,703299 ⋆ a(n) = 1250 * n ^ 2 - 700 * n + 99. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Feb 21 2012 •

► [A201044] 99,1161,6083,21141,57343,131781,268983,502265,875083,1442385,2271963,3445805,5061447,7233325,10094127,13796145,18512627,24439129,31794867,40824069,51797327,65012949,80798311,99511209,121541211 ⋆ Number of - n..n arrays of 5 elements with adjacent element differences also in - n..n. • a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. •

► [A305721] 1,99,1765,14407,74313,284075,880685,2340495,5529233,11905267,23784309,44673751,79684825,136030779,223619261,355747103,549905697,828705155,1220925445,1762702695,2498858857,3484382923,4786071885,6484339631,8675201969 ⋆ Crystal ball sequence for the lattice C _ 7. • a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8), for n>7. • a(n) = Sum _{ k=0..7 } binomial(14, 2k) * binomial(n + k, 7). •

► [A157370] 99,3480,11663,24648,42435,65024,92415,124608,161603,203400,249999,301400,357603,418608,484415,555024,630435,710648,795663,885480,980099,1079520,1183743,1292768,1406595 ⋆ a(n) = 2401 * n ^ 2 - 3822 * n + 1520. • a(1)=99, a(2)=3480, a(3)=11663, a(n)=3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) [From Harvey P. Dale, Dec 03 2011] •

► [A094027] 0,1,100,101,10100,10101,1010100,1010101,101010100,101010101,10101010100,10101010101,1010101010100,1010101010101,101010101010100,10101010101010101,1010101010101010100,10101010101010101 ⋆ Expansion of x(1 + 100x) / ((1 - x ^ 2)(1 - 100x ^ 2)). • a(n)=2 ^ n * 5 ^ (n + 1)((- 1) ^ n / 11 + 1 / 9) - (- 1) ^ n / 2 - 101 / 198 •

► [A280411] 1,1,100,111,10000,11111,1000000,1111111,100000000,111111111,10000000000,11111111111,1000000000000,1111111111111,100000000000000,1111111111111111,10000000000000000,11111111111111111,100000000000000000,1111111111111111111 ⋆ Binary representation of the x - axis, from the origin to the right edge, of the n - th stage of growth of the two - dimensional cellular automaton defined by "Rule 261", based on the 5 - celled von Neumann neighborhood. • a(n) = 2 ^ n * (4 * (- 5) ^ n + 5 ^ (n + 1)) / 9 for n even. • a(n) = ((- 5) ^ n * 2 ^ (n + 2) + 2 ^ n * 5 ^ (n + 1) - 1) / 9 for n odd. • a(n) = 101 * a(n - 2) - 100 * a(n - 4) for n>3. •

► [A292275] 100,125,150,200,250,300,400,500,600,800,1000,1250,1500,2000,2500,3000,4000,5000,6000,8000,10000,12500,15000,20000,25000 ⋆ A sequence of rounded numbers useful for entering values over several orders of magnitude in computer - human interfaces, with 10 values per order of magnitude. • a(n) = 10 ^ n * 1 if n mod 10 = 0; •

► [A172178] 1,100,199,298,397,496,595,694,793,892,991,1090,1189,1288,1387,1486,1585,1684,1783,1882,1981,2080,2179,2278,2377 ⋆ a(n) = 99 * n + 1. • a(n) = a(n - 1) + 99 with a(1) = 1. • a(0) = 1, a(1) = 100, a(n) = 2 * a(n - 1) - a(n - 2). - _ Harvey P. Dale _ , Apr 09 2012 •

► [A027604] 100,225,440,775,1260,1925,2800,3915,5300,6985,9000,11375,14140,17325,20960,25075,29700,34865,40600,46935,53900,61525,69840,78875,88660 ⋆ a(n) = n ^ 3 + (n + 1) ^ 3 + (n + 2) ^ 3 + (n + 3) ^ 3 + (n + 4) ^ 3. • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - 1 * a(n - 4) for n >= 4. •

► [A261276] 0,1,100,297,592,985,1476,2065,2752,3537,4420,5401,6480,7657,8932,10305,11776,13345,15012,16777,18640,20601,22660,24817,27072 ⋆ 100 - gonal numbers: a(n) = 98 * n * (n - 1) / 2 + n. • a(n) = n * (49 * n - 48). •

► [A104908] 100,300,316,435,537,691,875,1114,1416,1801,2290,2913,3705,4713,5994,7624,9698,12335,15690,19958,25386,32291,41075,52248,66460 ⋆ a(n) = floor(sqrt(a(n - 1) ^ 2 + a(n - 2) ^ 2)), a(1)=100, a(2)=300. • a(n) = floor(sqrt(a(n - 1) ^ 2 + a(n - 2) ^ 2)) with a(1) = 100, a(2) = 300. •

► [A124437] 0,100,300,600,1000,1500,2100,2800,3600,4500,5500,6600,7800,9100,10500,12000,13600,15300,17100,19000,21000,23100,25300,27600,30000 ⋆ Experience Points thresholds for levels in the pen and paper role - playing game "Das Schwarze Auge" (DSA, a.k.a. "The Dark Eye"). • a(n) = a(n - 1) + (n - 1) * 100; a(1) = 0. • a(n) = 50 * n * (n - 1). • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n > 3. •

► [A202334] 100,368,1112,2906,6800,14588,29174,55057,98958,170614,283766,457370,717062,1096910,1641488,2408309,3470656,4920852,6874012,9472322,12889892,17338232,23072402,30397889,39678266 ⋆ Number of (n + 1) X 8 binary arrays with consecutive windows of two bits considered as a binary number nondecreasing in every row and column. • a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>9. •

► [A017270] 0,100,400,900,1600,2500,3600,4900,6400,8100,10000,12100,14400,16900,19600,22500,25600,28900,32400,36100,40000,44100,48400,52900,57600 ⋆ a(n) = (10 * n) ^ 2. • a(n) = a(n - 1) + 200n - 100, n>0 ; a(0)=0. - _ Miquel Cerda _ , Oct 30 2016 •

► [A334707] 0,100,412,1056,2148,3820,6176,9352,13456,18612,24940,32568,41596,52164,64384,78376,94256,112156,132180,154464,179116,206260,236016,268512,303848 ⋆ Number of non - collinear triples in a 5 X n rectangular grid. • a(n) = 2 * a(n - 1) - a(n - 2) + a(n - 3) - a(n - 4) - a(n - 5) + a(n - 6) - a(n - 7) + 2 * a(n - 8) - a(n - 9) for n > 9. (End) •

► [A017642] 100,484,1156,2116,3364,4900,6724,8836,11236,13924,16900,20164,23716,27556,31684,36100,40804,45796,51076,56644,62500,68644,75076,81796,88804 ⋆ a(n) = (12 * n + 10) ^ 2. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n >= 3. • a(n) = 144 * n ^ 2 + 240 * n + 100. •

► [A172518] 0,0,0,0,100,576,2156,7168,17496,41600,82280,161280,280540,486080,774900,1232896,1844976,2757888,3933456,5606400,7699860,10570560,14081980,18754560,24365000 ⋆ Number of ways to place 3 nonattacking queens on an n X n toroidal board. ● a(n) = n ^ 2 * (n - 2) * (n - 4) * (n ^ 2 - 6 * n + 12) / 6 if n is even and a(n) = n ^ 2 * (n - 1) * (n - 3) * (n ^ 2 - 8 * n + 18) / 6 if n is odd. - _ Vaclav Kotesovec _ , Jan 31 2010 ●

► [A300254] 100,1050,3850,9500,19000,33350,53550,80600,115500,159250,212850,277300,353600,442750,545750,663600,797300,947850,1116250,1303500,1510600,1738550,1988350,2261000,2557500 ⋆ a(n) = 25 * (n + 1) * (4 * n + 3) * (5 * n + 4) / 3. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) ●

► [A129725] 0,100,1159,1563,2079,8080,10420,13416,48363,61999,79459,283140,362616,464380,1651519,2114739,2707863,9627016,12326860,15783840,56111619,71847463,91996219,327043740,418758960 ⋆ Nonnegative values x of solutions (x, y) to the Diophantine equation x ^ 2 + (x + 521) ^ 2 = y ^ 2. ● a(n) = 6 * a(n - 3) - a(n - 6) + 1042 for n > 6; a(1)=0, a(2)=100, a(3)=1159, a(4)=1563, a(5)=2079, a(6)=8080. ●

► [A128988] 0,100,2250,30000,312500,2812500,22968750,175000000,1265625000,8789062500,59082031250,386718750000,2475585937500,15551757812500,96130371093750,585937500000000,3527832031250000,21011352539062500 ⋆ a(n) = (n ^ 3 - n ^ 2) * 5 ^ n. ● a(1)=0, a(2)=100, a(3)=2250, a(4)=30000, a(n)=20 * a(n - 1) - 150 * a(n - 2) + 500 * a(n - 3) - 625 * a(n - 4). - _ Harvey P. Dale _ , Oct 25 2011 ●

► [A035810] 1,100,5000,166700,4170000,83500020,1394447000,19980314300,250799764000,2802204288900,28222682700200,258862555329100,2180706863326000,16993705726247700,123252789641763000,836413142574501340 ⋆ Coordination sequence for lattice D *_ 50 (with edges defined by l _ 1 norm = 1). ● a(m) = (Sum _{ k=0..n } 2 ^ k * binomial(n, k) * binomial(m - 1, k - 1)) + 2 ^ n * binomial((n + 2 * m) / 2 - 1, n - 1); with n=50. ●

► [A053109] 1,100,5500,220000,7150000,200200000,5005000000,114400000000,2431000000000,48620000000000,923780000000000,16796000000000000,293930000000000000,4974200000000000000,81719000000000000000 ⋆ Expansion of 1 / (1 - 10 * x) ^ 10. ● a(n) = 10 ^ n * binomial(n + 9, 9); ●

► [A284180] 1,1,101,101,11101,111101,1110101,11010101,101111101,111111101,11111110101,111111010101,1111101111101,11111111111101,111111111110101,1111111111010101,11111111101111101,1111111111111101,111111111111110101,1111111111111010101 ⋆ Binary representation of the x - axis, from the origin to the right edge, of the n - th stage of growth of the two - dimensional cellular automaton defined by "Rule 813", based on the 5 - celled von Neumann neighborhood. ● a(n) = 10 * a(n - 1) + a(n - 4) - 10 * a(n - 5) for n>4. ●

► [A162671] 1,1,101,102,10301,10403,1050601,1061004,107151001,108212005,10928351501,11036563506,1114584702101,1125621265607,113676711262801,114802332528408,11593909964103601,1170871229663200 9 ⋆ Generalized Fibonacci numbers ● a(n)=102 * a(n - 2) - a(n - 4). G.f.: - x * (- 1 - x + x ^ 2) / ((x ^ 2 + 10 * x - 1) * (x ^ 2 - 10 * x - 1)). [From _ R. J. Mathar _ , Jul 14 2009] ●

► [A279873] 1,1,101,111,10000,10111,1010100,1111101,100000001,101111111,10101000000,11111011111,1000000000000,1011111111111,101010000000000,111110111111111,10000000000000000,10111111111111111,1010100000000000000,1111101111111111111 ⋆ Binary representation of the x - axis, from the left edge to the origin, of the n - th stage of growth of the two - dimensional cellular automaton defined by "Rule 211", based on the 5 - celled von Neumann neighborhood. ● a(n) = a(n - 2) + 10000 * a(n - 4) - 10000 * a(n - 6) for n>10. ●

► [A035790] 101,137,419,1019,1049,1481,1871,1931,2081,2111,2969,3251,3461,4259,5009,5651,5867,6689,6947,7331,7547,8219,8969,10007,11057 ⋆ Start of a string of exactly 2 consecutive (but disjoint) pairs of twin primes. ● a(10)=2111, a(10 ^ 2)=77261, a(10 ^ 3)=1603697, a(10 ^ 4)=27397631, a(10 ^ 5)=435140477, a(10 ^ 6)=6391490657. - _ M. F. Hasler _ , May 04 2015 ●

► [A100775] 101,198,295,392,489,586,683,780,877,974,1071,1168,1265,1362,1459,1556,1653,1750,1847,1944,2041,2138,2235,2332,2429 ⋆ a(n) = 97 * n + 101. ● a(n) = 2 * a(n - 1) - a(n - 2); a(0)=101, a(1)=198. - _ Harvey P. Dale _ , Nov 26 2013 ●

► [A158128] 101,201,301,401,501,601,701,801,901,1001,1101,1201,1301,1401,1501,1601,1701,1801,1901,2001,2101,2201,2301,2401,2501 ⋆ 100n + 1. ● a(n) = 2 * a(n - 1) - a(n - 2). - _ Vincenzo Librandi _ , Feb 11 2012 ●

► [A162670] 1,1,101,201,10301,30401,1060501,4100601,110150701,520210801,11535280901,63556361001,1217084451101,7572720551201,129281165661301,886553220781401,13814669786911501,102469991865051601,1483936970556201701,11730936157061361801 ⋆ Expansion of x / (1 - x - 100 * x ^ 2). ● a(n) = a(n - 1) + 100 * a(n - 2). ●

► [A127348] 101,236,466,838,1330,1918,2862,3856,5350,7096,8622,10558,12654,15228,18090,21550,24916,27702,31500,35068,39298,45322,51240,56980,62398 ⋆ Coefficient of x ^ 2 in the polynomial (x - p(n)) * (x - p(n + 1)) * (x - p(n + 2)) * (x - p(n + 3)), where p(k) is the k - th prime. ● a(n) = p(n) * p(n + 1) + p(n) * p(n + 2) + p(n) * p(n + 3) + p(n + 1) * p(n + 2) + p(n + 1) * p(n + 3) + p(n + 2) * p(n + 3), where p(k) is the k - th prime (by Viete's formula relating the zeros and the coefficients of a polynomial). - _ Emeric Deutsch _ , Jan 20 2007 ●

► [A139701] 1,101,301,701,1501,3101,6301,12701,25501,51101,102301,204701,409501,819101,1638301,3276701,6553501,13107101,26214301,52428701,104857501,209715101,419430301,838860701,1677721501 ⋆ Binomial transform of [1, 100, 100, 100, ...]. ● a(n) = 100 * 2 ^ (n - 1) - 99. - _ Emeric Deutsch _ , May 03 2008 ● a(n) = 2 * a(n - 1) + 99 for n > 1. [_ Vincenzo Librandi _ , Nov 24 2010] ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n > 2. G.f.: x * (98 * x + 1) / ((x - 1) * (2 * x - 1)). - _ Colin Barker _ , Mar 11 2014 ●

► [A195855] 1,101,322,808,1872,4192,9232,20144,43696,94384,203184,436144,933808,1994672,4251568,9043888,19201968,40697776,86114224,181927856,383778736,808452016,1700790192,3573546928,7499415472 ⋆ a(n) = T(9,n), array T given by A048505. ● a(n) = (n ^ 2 + 37 * n + 324) * 2 ^ (n - 2) - 80. ● a(n) = 7 * a(n - 1) - 18 * a(n - 2) + 20 * a(n - 3) - 8 * a(n - 4). - _ Colin Barker _ , Feb 25 2015 ●

► [A055438] 101,402,903,1604,2505,3606,4907,6408,8109,10010,12111,14412,16913,19614,22515,25616,28917,32418,36119,40020,44121,48422,52923,57624,62525 ⋆ a(n) = 100 * n ^ 2 + n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Feb 04 2012 ●

► [A078787] 1,102,203,304,405,506,607,708,809,910,1011,1112,1213,1314,1415,1516,1617,1718,1819,1920,2021,2122,2223,2324,2425 ⋆ a(n) = 101 * n + 1. ● a(n) = 2 * a(n - 1) - a(n - 2); a(0)=1, a(1)=102. - _ Harvey P. Dale _ , Feb 02 2015 ●

► [A160850] 0,1,102,203,370,563,836,1111,1470,1855,2306,2757,3298,3857,4506,5159,5868,6603,7428,8255,9172,10105,11098,12101,13194 ⋆ Number of lines through at least 2 points of a 10 X n grid of points. ● a(n) = (1 / 2) * (f(m,n,1) - f(m,n,2)) where f(m,n,k) = Sum((n - |kx|) * (m - |ky|)); - n < kx < n, - m < ky < m, (x,y)=1, m=10. ● a(n) = - a(n - 2) + a(n - 5) + a(n - 6) + 2 * a(n - 7) + a(n - 8) + a(n - 9) - a(n - 11) - a(n - 12) - 2 * a(n - 13) - a(n - 14) - a(n - 15) + a(n - 18) + a(n - 20) for n>21. ●

► [A140062] 1,102,304,708,1516,3132,6364,12828,25756,51612,103324,206748,413596,827292,1654684,3309468,6619036,13238172,26476444,52952988,105906076,211812252,423624604,847249308,1694498716 ⋆ 101 * 2 ^ (n - 1) - 100. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2). G.f.: x * (1 + 99 * x) / ((1 - x) * (1 - 2 * x)). - _ Colin Barker _ , Aug 12 2012 ●

► [A158127] 102,404,906,1608,2510,3612,4914,6416,8118,10020,12122,14424,16926,19628,22530,25632,28934,32436,36138,40040,44142,48444,52946,57648,62550 ⋆ a(n) = 100 * n ^ 2 + 2 * n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Feb 11 2012 ●

► [A163435] 0,0,102,1792,11550,46848,144550,371712,838782,1715200,3247398,5779200,9774622,15843072,24766950,37531648,55357950,79736832,112466662,155692800,211949598,284204800,375906342,491031552,634138750 ⋆ Number of different fixed (possibly) disconnected pentominoes bounded tightly by an n X n square. ● a(n) = 2 / 3 * n ^ 2 * (n - 2) ^ 2 * (5 * n ^ 2 - 10 * n + 2), n>1. ●

► [A217331] 0,1,102,2862,34960,252375,1284066,5105212,16912512,48700845,125512750,295649706,646497072,1328022787,2586463530,4811211000,8598455296,14835732057,24812155062,40359796390,64032402000 ⋆ Number of inequivalent ways to color a 3 X 3 checkerboard using at most n colors allowing rotations and reflections. ● a(n) = (n ^ 9 + n ^ 5 + 2 * n ^ 3 + 4 * n ^ 6) / 8. ●

► [A076460] 1,103,1130,6070,22355,64981,160468,351660,703365,1308835,2297086,3841058,6166615,9562385,14390440,21097816,30228873,42438495,58506130,79350670,106046171,139838413,182162300,234660100,299200525 ⋆ Sum of squares of numbers that can be written as t * n + u * (n + 1) for nonnegative integers t, u in exactly one way. ● a(n) = n * (n + 1) * (7 * n ^ 4 + 2 * n ^ 3 - 6 * n ^ 2 - n + 1) / 6. ●

► [A270300] 104,208,416,832,1352,1664,1768,1976,2392,2704,3016,3224,3328,3536,3848,3952,4264,4472,4784,4888,5408,5512,6032,6136,6344 ⋆ Numbers which are representable as a sum of thirteen but no fewer consecutive nonnegative integers. ● a(n) == 0 (mod 104). - _ Hugo Pfoertner _ , Feb 04 2021 ●

► [A271745] 104,250,692,2110,6932,24190,88772,340030,1351412,5546110,23407652,101247550,447454292,2015029630,9224364932,42832260670,201341787572,956443162750,4584181712612,22137843427390,107584138943252,525581866073470,2578798342362692 ⋆ Number of set partitions of [n] such that 6 is the largest element of the last block. ● a(n) = 16 + 5 * 2 ^ (n - 3) + 35 * 3 ^ (n - 6) + 11 * 4 ^ (n - 6) + 5 ^ (n - 6) for n>6. ● a(n) = 15 * a(n - 1) - 85 * a(n - 2) + 225 * a(n - 3) - 274 * a(n - 4) + 120 * a(n - 5) for n>11. ●

► [A188150] 0,0,104,432,972,1712,2652,3792,5132,6672,8412,10352,12492,14832,17372,20112,23052,26192,29532,33072,36812,40752,44892,49232,53772 ⋆ Number of 5 - step self - avoiding walks on an n X n square summed over all starting positions. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>6. ●

► [A234220] 104,436,1824,7696,32384,137536,582144,2488576,10594304,45577216,195108864,844435456,3633741824,15814967296,68379869184,299119476736,1298877906944,5707511627776,24878046511104,109752186044416 ⋆ Number of (n + 1) X (1 + 1) 0..4 arrays with every 2 X 2 subblock having its diagonal sum differing from its antidiagonal sum by 3 (constant - stress 1 X 1 tilings). ● a(n) = 4 ^ (2 + n) + 2 ^ (- 1 + n) * 5 ^ ((- 1 + n) / 2) * (20 - 20 * (- 1) ^ n + 9 * sqrt(5) + 9 * (- 1) ^ n * sqrt(5)). ●

► [A340898] 104,1064,8480,62480,446744,3155384,22172240,155459360,1088976584,7625119304,53382684800,373699342640,2615957045624,18311884260824,128183744650160,897287877024320,6281020132589864,43967155908387944,307770136299492320 ⋆ Number of sets in the geometry determined by the Hausdorff metric at each location between two sets defined by a complete bipartite graph K(3,n) (with n at least 4) missing three edges, where all three removed edges are incident to the same vertex in the 3 - point set. ● a(n) = 27 * 7 ^ (n - 3) - 29 * 3 ^ (n - 3) + 2. ● a(n) = 11 * a(n - 1) - 31 * a(n - 2) + 21 * a(n - 3) for n > 6. (End) ●

► [A132434] 104,1064,8744,70184,561704,4493864,35951144,287609384,2300875304,18407002664,147256021544,1178048172584,9424385380904,75395083047464,603160664379944,4825285315039784,38602282520318504,308818260162548264,2470546081300386344 ⋆ a(n) = A132433(n) - 33. ● a(n) = (15 * 8 ^ n - 1856) / 56 for n>2. ● a(n) = 9 * a(n - 1) - 8 * a(n - 2) for n>4. ●

► [A187589] 0,0,104,1069,3514,7480,12874,19696,27946,37624,48730,61264,75226,90616,107434,125680,145354,166456,188986,212944,238330,265144,293386,323056,354154 ⋆ Number of 6 - step E, S, NW and NE - moving king's tours on an n X n board summed over all starting positions. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>7. ●

► [A035811] 1,104,5408,187512,4878016,101575240,1763889504,26278912088,342948774272,3983402767656,41701747803040,397530217856824,3480013344595008,28176478479561992,212293851572113376 ⋆ Coordination sequence for lattice D *_ 52 (with edges defined by l _ 1 norm = 1). ● a(m)=add(2 ^ k * binomial(n, k) * binomial(m - 1, k - 1), k=0..n) + 2 ^ n * binomial((n + 2 * m) / 2 - 1, n - 1); with n=52. ●

► [A026066] 105,168,246,340,451,580,728,896,1085,1296,1530,1788,2071,2380,2716,3080,3473,3896,4350,4836,5355,5908,6496,7120,7781 ⋆ dot _ product(n,n - 1,...

2,1) * (7,8,...,n,1,2,3,4,5,6). ● a(n) = (1 / 6) * (n ^ 2 + 21n - 106) * n. - _ Ralf Stephan _ , Apr 05 2004 ●
▶ [A242063] 0,105,211,316,422,527,633,738,844,949,1055 ⋆ Analog clock times w here the minute hand is on the hour hand (in hhmm format). ● a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n=4..11. - _ Colin Barker _ , Aug 19 2014 ● a(n) = (- 423 - (- 1) ^ n + 422 * n) / 4 for n=1..11. - _ Colin Barker _ , Aug 19 2014 ●
▶ [A228307] 105,225,420,714,1134,1710,2475,3465,4719,6279,8190,10500,13260,1 6524,20349,24795,29925,35805,42504,50094,58650,68250,78975,90909,104139 ⋆ T he hyper - Wiener index of the Kneser graph K(n,2) (n>=5). ● a(n) = (1 / 8) * n * (n - 1) * (n - 2) * (n + 9). ●
▶ [A250757] 105,237,423,663,957,1305,1707,2163,2673,3237,3855,4527,5253,603 3,6867,7755,8697,9693,10743,11847,13005,14217,15483,16803,18177 ⋆ Number of (2 + 1) X (n + 1) 0..2 arrays with nondecreasing x(i,j) - x(i,j - 1) in the i directi on and nondecreasing x(i,j) + x(i - 1,j) in the j direction. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>3. ●
▶ [A190577] 105,384,945,1920,3465,5760,9009,13440,19305,26880,36465,48384,62 985,80640,101745,126720,156009,190080,229425,274560,326025,384384,450225,52 4160,606825 ⋆ a(n) = n * (n + 2) * (n + 4) * (n + 6). ● a(n) = ((n + 2) * (n + 4) - 2 ^ 2) ^ 2 - 2 ^ 4. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Wesley Ivan Hurt _ , May 15 2023 ●
▶ [A058844] 105,1260,9450,56980,302995,1487200,6914908,30950920,134779645,5 75156036,2417578670,10046531276,41388056231,169371383384,689568172832,27 96362035104,11305163394129,45595968007260,183557935474290,73789743707706 0,2963015460969915 ⋆ Number of ways of placing n labeled balls into 4 indisting uishable boxes with at least 2 balls in each box. ● a(n) = (4 ^ n - 3 ^ (n - 1)(4n + 12) + 2 ^ (n - 1)(12 + 9n + 3n ^ 2) - 4n ^ 3 - 8n - 4) / 24. - _ David Wasser man _ , Jun 06 2007 ●
▶ [A024198] 105,1689,12139,57379,208054,626934,1646778,3889578,8439783,1708 5783,32645613,59394517,103613692,174281212,283927812,449681892,694529781,1 048818981,1552033791,2254874391,3221672146,4533175570,6289743070 ⋆ 4th ele mentary symmetric function of the first n + 3 odd positive integers. ● a(n) = n * (n + 1) * (n + 2) * (n + 3) * (15 * n ^ 4 + 150 * n ^ 3 + 515 * n ^ 2 + 672 * n + 223) / 360. ● a(n) = A(n + 4, n - 1), n >= 1 (fifth diagonal). See a crossre f. below. - _ Wolfdieter Lang _ , Jul 21 2017 ●
▶ [A027788] 105,1800,16320,104040,523260,2209320,8139600,26860680,8090181 0,225544440,588376800,1448655000,3389852700,7582037400,16287339600,337380 60600,67621543875,131530532400,248917996800,459351961200,828225505800,146 1574422000,2528333935200 ⋆ a(n) = 15 * (n + 1) * binomial(n + 2,15) / 2. ● a(n) = C(n + 1, 14) * C(n + 2, 2). - _ Zerinvary Lajos _ , Apr 28 2005; correcte d by _ R. J. Mathar _ , Mar 16 2016 ●
▶ [A154633] 105,3465,19305,62985,156009,326025,606825,1038345,1666665,2544 009,3728745,5285385,7284585,9803145,12924009,16736265,21335145,26822025,33 304425,40896009,49716585,59892105,71554665,84842505,99900009 ⋆ a(n) = (4 * n + 1) * (4 * n + 3) * (4 * n + 5) * (4 * n + 7). ● a(n) = (4 * n + 1) * (4 * n + 3) * (4 * n + 5) * (4 * n + 7). ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ●
▶ [A360275] 0,0,0,0,0,105,3780,81900,1386000,20207880,266666400,3277354080,3 8198160000,427365818880,4629059635200,48842864179200,504335346278400,511 4054709319680,51064119467827200,503151159589478400,4900668252598272000,4 7248486914198011904,451429610841538560000 ⋆ Number of unordered quadrup les of self - avoiding paths with nodes that cover all vertices of a convex n - gon. ● a(n) = (1 / 3) * n * (n - 1) * (n - 2) * (n - 3) * 2 ^ (n - 15) * (4 ^ (n - 4) - 4 * 3 ^ (n - 4) + 6 * 2 ^ (n - 4) - 4) for n != 4. ●
▶ [A168306] 105,6534,132444,1593960,13962848,98382912,590814336,313781529 6,15114950400,67240622592,279977837568,1102376491008,4137416245248,14896 905748480,51722619518976,173913487048704,568323403481088,181035942268108 8,5635647921192960 ⋆ The fifth left hand column of triangle A167580. ● a(n) = 2 ^ n * (214 * n ^ 9 - 3963 * n ^ 8 + 30768 * n ^ 7 - 130536 * n ^ 6 + 330834 * n ^ 5 - 514332 * n ^ 4 + 484382 * n ^ 3 - 262149 * n ^ 2 + 72342 * n - 7560) / 2 41920. ● a(n) = 20 * a(n - 1) - 180 * a(n - 2) + 960 * a(n - 3) - 3360 * a(n - 4) + 8064 * a(n - 5) - 13440 * a(n - 6) + 15360 * a(n - 7) - 11520 * a(n - 8) + 5120 * a(n - 9) - 1024 * a(n - 10). ● a(n) - 19 * a(n - 1) + 162 * a(n - 2) - 816 * a(n - 3) + 2688 * a(n - 4) - 6048 * a(n - 5) + 9408 * a(n - 6) - 9984 * a(n - 7) + 6912 * a(n - 8) - 2816 * a(n - 9) + 512 * a(n - 10) = 321 * 2 ^ (n - 1). ●
▶ [A001546] 105,19305,156009,606825,1666665,3728745,7284585,12924009,21335 145,33304425,49716585,71554665,99900009,135932265,180929385,236267625,3034 21545,383964009,479566185,591997545,723125865,874917225,1049436009,124884 4905,1475404905 ⋆ a(n) = (8 * n + 1) * (8 * n + 3) * (8 * n + 5) * (8 * n + 7). ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n > 4. - _ Wesley Ivan Hurt _ , Jan 02 2017 ●
▶ [A277605] 106,114,119,122,127,130,132,135,140,143,145,148,151,153,156,158,16 1,164,166,169,171,172,174,177,179 ⋆ Numbers not in a Fibonacci sequence starti ng with two 1 - digit numbers. ● a(n) = n + O(log n). - _ Charles R Greathou se IV _ , Oct 30 2016 ●
▶ [A166912] 106,8075,114235,1767675,28042235,447713275,7159562235,1145375 94875,1832539914235,29320392212475,469125289738235,7506000693166075,1200 95995320074235,1921535862038855675,30744573540292362235 ⋆ a(n) = 20 * a(n - 1) - 64 * a(n - 2) - 225 for n > 2; a(0) = 106, a(1) = 8075, a(2) = 114235. ● a(n) = (1280 * 16 ^ n + 940 * 4 ^ n - 15) / 3 for n > 0. ● a(n) = 21 * a(n - 1) - 8 4 * a(n - 2) + 64 * a(n - 3). ●
▶ [A069759] 107,647,2159,5399,11339,21167,36287,58319,89099,130679,185327,2 55527,343979,453599,587519,749087,941867,1169639,1436399,1746359,2103947,2 513807,2980799,3509999,4106699 ⋆ Frobenius number of the numerical semigro up generated by consecutive hex numbers. ● a(n) = 9 * n ^ 4 + 36 * n ^ 3 + 4 5 * n ^ 2 + 18 * n - 1; with offset 2, a(n) = 9 * n ^ 4 - 9 * n ^ 2 - 1. ●
▶ [A250155] 107,1452,9160,37805,119391,313852,722072,1501425,2883835,51963 56,8884272,14536717,22914815,34982340,51938896,75255617,106713387,14844358 0,202971320,273261261,362765887,475476332,615975720,789495025 ⋆ Number of length 1 + 6 0..n arrays with every seven consecutive terms having the maximu m of some two terms equal to the minimum of the remaining five terms. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●
▶ [A208088] 108,180,288,468,756,1224,1980,3204,5184,8388,13572,21960,35532,5 7492,93024,150516,243540,394056,637596,1031652,1669248,2700900,4370148,707 1048,11441196 ⋆ Number of 7 X (n + 1) 0..1 arrays with every 2 X 2 subblock having the same number of equal edges as its horizontal neighbors and a differe nt number from its vertical neighbors, and new values 0..1 introduced in row m ajor order. ● a(n) = (9 * 2 ^ (2 - n) * ((1 - sqrt(5)) ^ n * (- 2 + sqrt(5)) + (1 + sqrt(5)) ^ n * (2 + sqrt(5)))) / sqrt(5). ●
▶ [A202195] 108,240,450,756,1176,1728,2430,3300,4356,5616,7098,8820,10800,13 056,15606,18468,21660,25200,29106,33396,38088,43200,48750,54756,61236 ⋆ Nu mber of (n + 2) X 3 binary arrays avoiding patterns 001 and 101 in rows and c olumns. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>4. ●
▶ [A304377] 108,312,720,1536,3168,6432,12960,26016,52128,104352,208800,4176 96,835488,1671072,3342240,6684576,13369248,26738592,53477280,106954656,213 909408,427818912,855637920,1711275936,3422551968 ⋆ a(n) = 102 * 2 ^ n - 96 (n>=1). ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>2. ●
▶ [A202093] 108,324,720,1600,3000,5625,9450,15876,24696,38416,56448,82944,11 6640,164025,222750,302500,399300,527076,679536,876096,1107288,1399489,1739 010,2160900,2646000 ⋆ Number of (n + 2) X 3 binary arrays avoiding patterns 001 and 011 in rows and columns. ● a(n) = (n ^ 6 + 28 * n ^ 5 + 324 * n ^ 4 + 1984 * n ^ 3 + 6784 * n ^ 2 + 12288 * n + 9216) / 256 for n even. ● a(n) = (n ^ 6 + 28 * n ^ 5 + 321 * n ^ 4 + 1928 * n ^ 3 + 6395 * n ^ 2 + 11100 * n + 78 75) / 256 for n odd. ●
▶ [A192793] 108,360,900,1872,3420,5688,8820,12960,18252,24840,32868,42480,53 820,67032,82260,99648,119340,141480,166212,193680,224028,257400,293940,3337 92,377100 ⋆ Molecular topological indices of the crossed prism graphs ● a(n) = 12 * n * (2 * n ^ 2 + 7). ●
▶ [A251270] 108,480,1667,4930,13052,31936,73805,163604,351804,740008,153215 9,3136950,6372636,12876648,25924809,52069752,104417740,209182288,41879138 7,838101930,1676828540,3354401200,6709680485,13420387996 ⋆ Number of (3 + 1) X (n + 1) 0..1 arrays with no 2 X 2 subblock having x11 - x00 less than x10 - x01. ● a(n) = (5760 * (25 * 2 ^ (1 + n) - 49) - 186828 * n - 57236 * n ^ 2 - 9885 * n ^ 3 - 905 * n ^ 4 - 27 * n ^ 5 + n ^ 6) / 360. ●
▶ [A129027] 0,108,600,1932,4752,9900,18408,31500,50592,77292,113400,160908,2 22000,299052,394632,511500,652608,821100,1020312,1253772,1525200,1838508,2 197800,2607372,3071712 ⋆ Odd - indexed terms of A129026. ● a(n) = 4 * (n * (5 + 13 * n + 7 * n ^ 2 + 2 * n ^ 3)). G.f.: - 12 * x * (x ^ 3 + x ^ 2 + 5 * x + 9) / (x - 1) ^ 5. - _ Colin Barker _ , Jul 27 2013 ●
▶ [A292343] 108,888,3268,8560,18460,35048,60788,98528,151500,223320,317988,4 39888,593788,784840,1018580,1300928,1638188,2037048,2504580,3048240,367586 8,4395688,5216308,6146720,7196300 ⋆ The PI index of the Aztec diamond AZ(n) (see the Imran et al. reference). ● a(n) = (4 / 3) * n * (12 * n ^ 3 + 44 * n ^ 2 + 36 * n - 11). ●
▶ [A101213] 0,108,1152,6000,21600,61740,150528,326592,648000,1197900,209088 0,3480048,5564832,8599500,12902400,18865920,26967168,37779372,51984000,703 83600,93915360,123665388,160883712,207000000,263640000 ⋆ a(n) = n * (n + 1) ^ 2 * (n + 2) ^ 3. ● a(0)=0, a(1)=108, a(2)=1152, a(3)=6000, a(4)=21600, a(5)=61740, a(6)=150528, a(n)=7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a (n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). - _ Harvey P. Dale _ , Mar 29 2012 ●
▶ [A187302] 0,0,108,1368,6264,15596,31172,52256,79634,112568,151266,195512,2 45332,300704,361628,428104,500132,577712,660844,749528,843764,943552,10488 92,1159784,1276228 ⋆ Number of 7 - step one space leftwards or up, two space r ightwards or down asymmetric rook's tours on an n X n board summed over all starting positions. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>14. ●
▶ [A269277] 0,108,1368,13896,127512,1104264,9211608,74853576,596581272,468 4312584,36347893848,279339197256,2129701963032,16128206816904,1214394992 48088,909870855444936,6787656513072792,50443519266217224,373614100586474 328 ⋆ Number of 2 X n 0..3 arrays with some element plus some horizontally or antidiagonally adjacent neighbor totalling three exactly once. ● a(n) = 72 * 7 ^ (n - 4) * (60 * n - 47) for n>2. ●
▶ [A115135] 0,108,1407,1851,2407,9768,12340,15568,58435,73423,92235,342076,4 29432,539076,1995255,2504403,3143455,11630688,14598220,18322888,67790107,8 5086151,106795107,395111188,495919920 ⋆ Nonnegative values x of solutions (x, y) to the Diophantine equation x ^ 2 + (x + 617) ^ 2 = y ^ 2. ● a(n) = 6 * a(n - 3) - a(n - 6) + 1234 for n > 6; a(1)=0, a(2)=108, a(3)=1407, a(4)=1851, a(5) =2407, a(6)=9768. ●
▶ [A250339] 108,1989,14040,62041,206724,569693,1369136,2966769,5927452,110 92917,19671048,33342153,54383668,85814733,131562080,196648673,287406540,41 1715237,579267384,801862713,1093732068,1471892797,1956536976 ⋆ Number of length 3 + 5 0..n arrays with every six consecutive terms having the maximum of some three terms equal to the minimum of the remaining three terms. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. ●
▶ [A244877] 1,108,3396,49852,447777,2862384,14265040,58788720,208577633,65 5618172,1864806372,4877412332,11877770177,27199536768,59037366080,122252 641280,242826555969,464730264172,860261412132,1545252073596,270099954787 3,4605325025136,7675844020560,12529356938800 ⋆ Number of 4 X 4 traceless m atrices of nonnegative integers with all row and column sums <= n. ● a(n) = ((2 + n) ^ 2 * (226800 + 1014480 * n + 2137860 * n ^ 2 + 2775656 * n ^ 3 + 2422 453 * n ^ 4 + 1468908 * n ^ 5 + 621705 * n ^ 6 + 180336 * n ^ 7 + 34191 * n ^ 8 + 3820 * n ^ 9 + 191 * n ^ 10)) / 907200. - _ Colin Barker _ , Jan 11 2017 ●
▶ [A035812] 1,108,5832,209988,5672592,122653980,2211553368,34208719092,46 3476372768,5588323254732,60724672249320,600778137474468,545760713081131 2,45848471510756988,358366157766535032 ⋆ Coordination sequence for lattice D *_ 54 (with edges defined by l _ 1 norm = 1). ● a(m)=add(2 ^ k * binomial(n, k) * binomial(m - 1, k - 1), k=0..n) + 2 ^ n * binomial((n + 2 * m) / 2 - 1, n - 1); with n=54. ●

► [A147821] 108,6180,83952,601944,2991576,11662056,38167920,109368864,282174948,668565612,1475938464,3069513720,6065522736,11466274512,2085095260 8,36639176832,62447999580,103567126068,167581781136,265177823064,41116945 7160,625796259000 ⋆ Number of consistent sets of 5 irreflexive binary order rel ationships over n objects. • a(n) = (n - 3) * (n - 2) * (n - 1) * n * (n ^ 6 + n ^ 5 - 15 * n ^ 4 - 45 * n ^ 3 - 4 * n ^ 2 + 326 * n + 900) / 120. - _ Vaclav Kotes ovec _ , Apr 11 2020 • a(n) = 11 * a(n - 1) - 55 * a(n - 2) + 165 * a(n - 3) - 33 0 * a(n - 4) + 462 * a(n - 5) - 462 * a(n - 6) + 330 * a(n - 7) - 165 * a(n - 8) + 5 5 * a(n - 9) - 11 * a(n - 10) + a(n - 11) for n>12. •
► [A161483] 109,151,265,389,755,1481,2225,4379,8621,12961,25519,50245,7554 1,148735,292849,440285,866891,1706849,2566169,5052611,9948245,14956729,294 48775,57982621,87174205 ⋆ Positive numbers y such that y ^ 2 is of the form x ^ 2 + (x + 151) ^ 2 with integer x. • a(n) = 6 * a(n - 3) - a(n - 6) for n > 6; a(1)=109, a(2)=151, a(3)=265, a(4)=389, a(5)=755, a(6)=1481. •
► [A193397] 109,271,553,955,1541,2279,3265,4435,5917,7615,9689,12011,14773,1 7815,21361,25219,29645,34415,39817,45595,52069,58951,66593,74675,83581 ⋆ Wi ener index of a benzenoid consisting of a double - step spiral chain of n hexagon s (n>=2, s=21; see the Gutman et al. reference). • a(n) = 4 * n ^ 3 + 20 * n ^ 2 - 12 * n + 2 * (- 1) ^ n * (n - 2) + 21. • a(n) = 2 * a(n - 1) + a(n - 2) - 4 * a (n - 3) + a(n - 4) + 2 * a(n - 5) - a(n - 6), with a(2)=109, a(3)=271, a(4)=553, a(5)=955, a(6)=1541, a(7)=2279. - _ Harvey P. Dale _ , Aug 26 2011 •
► [A193395] 109,271,553,971,1573,2375,3425,4739,6365,8319,10649,13371,1653 3,20151,24273,28915,34125,39919,46345,53419,61189,69671,78913,88931,99773 ⋆ Wiener index of a benzenoid consisting of a double - step zig - zag chain of n he xagons (n >= 2, s = 2123; see the Gutman et al. reference). • a(n) = (16 * n ^ 3 + 24 * n ^ 2 + 74 * n + 6 * (- 1) ^ n - 51) / 3. •
► [A174339] 0,109,436,981,1744,2725,3924,5341,6976,8829,10900,13189,15696,18 421,21364,24525,27904,31501,35316,39349,43600,48069,52756,57661,62784 ⋆ a(n) = 109 * n ^ 2. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). • a(n) = (55n) ^ 2 - (54n) ^ 2 = (10n) ^ 2 + (3n) ^ 2. (End) [G.f. corrected by _ Georg Fischer _ , May 11 2019] •
► [A282003] 1,1,110,111,11000,11111,1100000,1111111,110000000,111111111,110 00000000,11111111111,1100000000000,1111111111111,110000000000000,1111111 11111111,11000000000000000,11111111111111111,1100000000000000000,1111111 111111111111 ⋆ Binary representation of the x - axis, from the origin to the rig ht edge, of the n - th stage of growth of the two - dimensional cellular automato n defined by "Rule 413", based on the 5 - celled von Neumann neighborhood. • a(n) = (89 * (- 10) ^ n + 109 * 10 ^ n) / 180 for n>0 and even. • a(n) = (89 * (- 10) ^ n + 109 * 10 ^ n - 20) / 180 for n odd. • a(n) = 101 * a(n - 2) - 100 * a(n - 4) for n>4. •
► [A274945] 110,121,152,240,251,282,390,1010,1021,1052,1103,1174,1265,1376,15 07,1658,1829,2040,2051,2082,2133,2204,2295,2406,2537 ⋆ The Staircase Sequenc e: numbers with at least three digits and with the property that the sum of the squares of the first and last digits equals the number obtained when the first an d last digits are deleted. • a(n) = 11 * a(n - 90) - 10 * a(n - 180) for n > 263. - _ Chai Wah Wu _ , Jul 24 2016 • a(n) = i(n) * 10 ^ (D _ 10(n) - 1) + (i(n) ^ 2 + j(n) ^ 2) * 10 + j(n) for n > 83, where: •
► [A146081] 110,184,258,332,406,480,554,628,702,776,850,924,998,1072,1146,122 0,1294,1368,1442,1516,1590,1664,1738,1812,1886 ⋆ First differences of A145980. • a(n) = 2 * a(n - 1) - a(n - 2). • a(n) = 74 * n + 110. •
► [A032614] 110,211,312,413,514,615,716,817,918,1019,1120,1221,1322,1423,152 4,1625,1726,1827,1928,2029,2130,2231,2332,2433,2534 ⋆ Concatenation of n and n + 9 or { n,n + 9 } . • a(n) = n * 10 ^ floor(log _ 10(n + 9) + 1) + n + 9, wi th n >= 0. - _ Paolo P. Lava _ , Oct 09 2008 •
► [A120727] 110,211,321,532,853,1385,2238,3623,5861,9484,15345,24829,40174,6 5003,105177,170180,275357,445537,720894,1166431,1887325,3053756,4941081,79 94837,12935918 ⋆ a(n) = a(n - 1) + a(n - 2), starting with 110, 211. • a(0)=101 , a(1)=110, a(n) = a(n - 1) + a(n - 2). •
► [A264447] 0,110,276,510,825,1235,1755,2401,3190,4140,5270,6600,8151,9945,12 005,14355,17020,20026,23400,27170,31365,36015,41151,46805,53010 ⋆ a(n) = n * (n + 7) * (n + 14) * (n + 21) / 24. • a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>4. - _ Vincenzo Librandi _ , Nov 16 201 5 •
► [A158539] 110,473,1078,1925,3014,4345,5918,7733,9790,12089,14630,17413,204 38,23705,27214,30965,34958,39193,43670,48389,53350,58553,63998,69685,75614 ⋆ a(n) = 121 * n ^ 2 - 11. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). (End) •
► [A159484] 0,0,110,1054,7097,41201,220171,1115862,5451131,25919515,1207217 73,553162595,2501388936,11188504443,49589159037,218081007181,95265423098 2,4137309942806,17876235129762,76889316253171,329384246847644,1405944884 946771,5981601330173431 ⋆ Upper bound arising in Hadwiger's conjecture. • a (n) = floor((4 ^ n) * (5 * n * log(n))). •
► [A200877] 110,1523,9858,42479,141688,395929,971416,2156867,4424298,85091 05,15512938,27033149,45322876,73486107,115712352,177555837,266264422,39116 3735,564102306,799963779,1117252576,1538759685,2092315544 ⋆ Number of 0..n arrays x(0..8) of 9 elements without any interior element greater than both neig hbors or less than both neighbors. • a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a (n - 8) + 10 * a(n - 9) - a(n - 10) for n>10. •
► [A245876] 110,2967,12100,40901,97602,214315,404264,727017,1200310,192067 1,2909100,4309357,6143690,8614131,11741392,15797585,20798334,27098407,3470 4020,44065941,55175890,68594747,84293880,102959161,124534982 ⋆ Number of l ength 7 + 2 0..n arrays with some pair in every consecutive three terms totallin g exactly n. • a(n) = 1 + 37 * n + 43 * n ^ 2 + 126 * n ^ 3 + 89 * n ^ 4 + 9 * n ^ 5 for n even. • a(n) = 7 - 76 * n - 41 * n ^ 2 + 122 * n ^ 3 + 89 * n ^ 4 + 9 * n ^ 5 for n odd. •
► [A008395] 1,110,3080,40370,322190,1815506,7925720,28512110,88206140,24192 5530,601585512,1379301990,2953859370,5968878630,11472968760,21114177018,3 7403270520,64062783510,106481351240,172295622730,272125000774,4204875984 10 ⋆ Coordination sequence for A _ 10 lattice. • a(n) = 46189 / 90720 * n ^ 9 + 26741 / 3024 * n ^ 7 + 171457 / 4320 * n ^ 5 + 111683 / 2268 * n ^ 3 + 738 1 / 630 * n for n >= 1. •
► [A289097] 1,1,111,111,10111,11111,1011111,1111111,101111111,111111111,101 11111111,11111111111,1011111111111,1111111111111,101111111111111,1111111 11111111,10111111111111111,11111111111111111,1011111111111111111,1111111 111111111111 ⋆ Binary representation of the diagonal from the origin to the co rner of the n - th stage of growth of the two - dimensional cellular automaton d efined by "Rule 545", based on the 5 - celled von Neumann neighborhood. • a(n) = a(n - 1) + 100 * a(n - 2) - 100 * a(n - 3) for n > 5 (conjectured). •
► [A290681] 1,1,111,111,11111,111111,1111111,11111111,111111111,111111111 1,11111111111,111111111111,1111111111111,11111111111111,111111111111111,1 111111111111111,11111111111111111,111111111111111111,11111111111111111111 1,1111111111111111111 ⋆ Binary representation of the diagonal from the origi n to the corner of the n - th stage of growth of the two - dimensional cellular au tomaton defined by "Rule 929", based on the 5 - celled von Neumann neighbor hood. • a(n) = (10 ^ (1 + n) - 1) / 9 for n>3. • a(n) = 11 * a(n - 1) - 10 * a(n - 2) for n>5. •
► [A133786] 111,113,117,119,131,133,137,139,151,153,157,159,171,173,177,179,19 1,193,197,199,311,313,317,319,331 ⋆ Numbers prime to 10, 10's digit is odd and 100's digit is odd. • a(n + 20)=a(n) + 200. - _ Robert Israel _ , May 20 2019 •
► [A177769] 111,222,333,444,555,666,777,888,999,1110,1221,1332,1443,1554,166 5,1776,1887,1998,2109,2220,2331,2442,2553,2664,2775 ⋆ a(n) = 111 * n. • a(n) = 2 * a(n - 1) - a(n - 2). • a(n) = a(n - 1) + 111. •
► [A304831] 111,357,849,1833,3801,7737,15609,31353,62841,125817,251769,5036 73,1007481,2015097,4030329,8060793,16121721,32243577,64487289,128974713,25 7949561,515899257,1031798649,2063597433,4127195001 ⋆ a(n) = 123 * 2 ^ n - 1 35. • a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>2. •
► [A304516] 111,495,1263,2799,5871,12015,24303,48879,98031,196335,392943,78 6159,1572591,3145455,6291183,12582639,25165551,50331375,100663023,20132631 9,402652911,805306095,1610612463,3221225199,6442450671 ⋆ a(n) = 192 * 2 ^ n - 273 (n>=1). • a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>2. •
► [A284351] 1,1,111,1101,11111,111101,1111111,11111101,111111111,111111110 1,11111111111,111111111101,1111111111111,11111111111101,111111111111111,1 111111111111101,11111111111111111,111111111111111101,11111111111111111 1,1111111111111111101 ⋆ Binary representation of the x - axis, from the left e dge to the origin, of the n - th stage of growth of the two - dimensional cellular automaton defined by "Rule 899", based on the 5 - celled von Neumann neighb orhood. • a(n) = (10 ^ (n + 1) - 1) / 9 for n even. • a(n) = (10 ^ (n + 1) - 91) / 9 for n odd. • a(n) = 10 * a(n - 1) + a(n - 2) - 10 * a(n - 3) for n>2. •
► [A101152] 0,111,1260,1707,2280,8791,11380,14707,52624,67711,87100,308091,3 96024,509031,1797060,2309571,2968224,10475407,13462540,17301451,61056520,7 8466807,100841620,355864851,457339440 ⋆ Nonnegative values x of solutions (x, y) to the Diophantine equation x ^ 2 + (x + 569) ^ 2 = y ^ 2. • a(n) = 6 * a(n - 3) - a(n - 6) + 1138 for n > 6; a(1)=0, a(2)=111, a(3)=1260, a(4)=1707, a(5) =2280, a(6)=8791. •
► [A250145] 111,2026,16104,81664,311498,974944,2637228,6376143,14100493,28 998090,56144452,103306710,181980592,308701712,506675752,807775485,1254955 947,1905142426,2832649296,4133191084,5928550518,8371971664,11654349620 ⋆ Number of length 6 + 2 0..n arrays with the medians of every three consecutive terms nondecreasing. • a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) f or n>10. •
► [A008396] 1,111,3191,43561,365751,2181257,10106977,38619087,126825227,36 8750757,970336269,2349638259,5303497629,11272376259,22745345019,438595220 37,81262792557,145325576067,251806927307 ⋆ Crystal ball sequence for A _ 10 lattice. • a(n) = 1 + 11 * n * (1 + n) * (483120 + 797004 * n + 1233596 * n ^ 2 + 953849 * n ^ 3 + 682786 * n ^ 4 + 258791 * n ^ 5 + 105859 * n ^ 6 + 1679 6 * n ^ 7 + 4199 * n ^ 8) / 907200. •
► [A109383] 112,120,162,300,304,378,392,396,408,520,552,567,592,612,630,656,67 5,680,688,696,700,750,780,918,924 ⋆ 5 - almost primes of the form semiprime + 1. • a(n) is in this sequence iff a(n) is in A014614 and (a(n) - 1) is in A001358. •
► [A061281] 112,147,185,224,273,283,294,331,331,336,370,403,441,448,485,520,54 6,555,559,560,566,588,592,637,645 ⋆ Side of n - th equilateral triangle enclosing at least one point located at integer distances from the vertices. • a(n) is the la rgest term in the n - th quadruple (a, b, c, d) satisfying the triangle equation 3 * (a ^ 4 + b ^ 4 + c ^ 4 + d ^ 4) = (a ^ 2 + b ^ 2 + c ^ 2 + d ^ 2) ^ 2. •
► [A235887] 112,232,568,1624,5272,18712,70168,271384,1067032,4231192,168509 68,67256344,268730392,1074331672,4296146968,17182228504,68724195352,27488 7344152,1099530502168,4398084259864,17592261541912,70368895172632 ⋆ Num ber of (n + 1) X (2 + 1) 0..3 arrays with the minimum plus the upper median e qual to the lower median plus the maximum in every 2 X 2 subblock. • a(n) = 4 * (6 + 9 * 2 ^ n + 4 ^ n). •
► [A264891] 0,1,112,783,2839,7480,16281,31192,54538,89019,137710,204061,2918 97,405418,549199,728190,947716,1213477,1531548,1908379,2350795,2865996,346 1557,4145428,4925934 ⋆ a(n) = n * (5 * n - 3) * (25 * n ^ 2 - 15 * n - 6) / 8. • a (n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Vi ncenzo Librandi _ , Nov 28 2015 •
► [A343372] 112,922,6880,49450,350032,2461882,17268160,120982090,84718955 2,5931271642,41521735840,290660653930,2034650086672,14242627134202,996986 19521920,697891025400970,4885239244049392 ⋆ Number of sets in the geometr y determined by the Hausdorff metric at each location between two sets define d by a complete bipartite graph K(3,n) (with n at least 4) missing three edges, where exactly two removed edges are incident to the same vertex in the 3 - poi nt set and exactly two removed edges are incident to the same vertex in the ot her set. • a(n) = 3 * 7 ^ (n - 2) - 4 * 3 ^ (n - 2) + 1. •
► [A188152] 0,0,112,1248,4152,8752,14932,22672,31972,42832,55252,69232,8477 2,101872,120532,140752,162532,185872,210772,237232,265252,294832,325972,358 672,392932 ⋆ Number of 7 - step self - avoiding walks on an n X n square summ ed over all starting positions. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n >8. •

► [A188153] 0,0,112,1976,8160,19312,35024,55104,79528,108296,141408,178864,220664,266808,317296,372128,431304,494824,562688,634896,711448,792344,877584,967168,1061096 ⋆ Number of 8 - step self - avoiding walks on an n X n square summed over all starting positions. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>9. ●

► [A008361] 1,112,2592,25424,149568,629808,2100832,5910288,14610560,32641008,67232416,129565392,236214464,410909616,686647008,1108180624,1734926592,2644311920,3935599392,5734220368 ⋆ Coordination sequence for D _ 8 lattice. ● a(n) = 16 / 315 * n * (219 + 1036 * n ^ 2 + 826 * n ^ 4 + 124 * n ^ 6). - _ Harvey P. Dale _ , Feb 21 2012 ● a(0)=1, a(1)=112, a(2)=2592, a(3)=25424, a(4)=149568, a(5)=629808, a(6)=2100832, a(7)=5910288, a(8)=14610560, a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8). - _ Harvey P. Dale _ , Feb 21 2012 ●

► [A172129] 0,0,0,112,3368,39680,282248,1444928,5865552,20014112,59673360,159698416,391202680,890095584,1902427800,3853570560,7450556064,13829016768,24759442464,42930138864,72328779720,118747638592 ⋆ Number of ways to place 5 nonattacking bishops on an n X n board. ● a(n) = n * (n - 2) * (3 * n ^ 8 - 34 * n ^ 7 + 177 * n ^ 6 - 590 * n ^ 5 + 1435 * n ^ 4 - 2592 * n ^ 3 + 3326 * n ^ 2 - 2844 * n + 1344) / 360 if n is even. ● a(n) = (n - 1) * (n - 2) * (n - 3) * (3 * n ^ 7 - 22 * n ^ 6 + 80 * n ^ 5 - 204 * n ^ 4 + 379 * n ^ 3 - 464 * n ^ 2 + 378 * n - 270) / 360 if n is odd. ● a(n) = (1 / 360) * (n - 2) * (n * (1344 - 2844 * n + 3326 * n ^ 2 - 2592 * n ^ 3 + 1435 * n ^ 4 - 590 * n ^ 5 + 177 * n ^ 6 - 34 * n ^ 7 + 3 * n ^ 8) - 15 * (54 - 58 * n + 22 * n ^ 2 - 3 * n ^ 3) * (1 - (- 1) ^ n) / 2). - _ G. C. Greubel _ , Apr 17 2022 ●

► [A035813] 1,112,6272,234192,6560512,147095984,2750165376,44107714576,619570628096,7744518260976,87234261025408,894539809017680,8421733435019520,73313390970875440,593725756425591680 ⋆ Coordination sequence for lattice D *_ 56 (with edges defined by l _ 1 norm = 1). ● a(m)=add(2 ^ k * binomial(n, k) * binomial(m - 1, k - 1), k=0..n) + 2 ^ n * binomial((n + 2 * m) / 2 - 1, n - 1); with n=56. ●

► [A159466] 113,127,145,533,635,757,3085,3683,4397,17977,21463,25625,104777,125095,149353,610685,729107,870493,3559333,4249547,5073605,20745313,24768175,29571137,120912545 ⋆ Positive numbers y such that y ^ 2 is of the form x ^ 2 + (x + 127) ^ 2 with integer x. ● a(n) = 6 * a(n - 3) - a(n - 6)for n > 6; a(1)=113, a(2)=127, a(3)=145, a(4)=533, a(5)=635, a(6)=757. ●

► [A180441] 113,131,139,173,233,421,953,1013,1021,1051,1583,1747,1901,2099,2423,2579,2819,2939,3761,3779,3931,4211,4253,4451,4591 ⋆ First term of four consecutive primes whose average is a prime ● a(n)=[p(n) + p(n + 1) + p(n + 2) + p(n + 3)] / 4 a(n) being a prime ●

► [A152929] 113,176,289,465,754,1219,1973,3192,5165,8357,13522,21879,35401,57280,92681,149961,242642,392603,635245,1027848,1663093,2690941,4354034,7044975,11399009 ⋆ Number of sets (in the Hausdorff metric geometry) at each location between two sets defining a polygonal configuration consisting of two 4 - gonal polygonal components chained with string components of length l as l varies. ● a(n) = a(n - 1) + a(n - 2) for n>2. - _ Colin Barker _ , Aug 05 2020 ● a(n) = Lucas(n + 9) - Fibonacci(n + 6) - Fibonacci(n - 5). - _ Greg Dresden _ , Mar 14 2022 ●

► [A094932] 113,199,317,619,863,1069,1129,1789,2861,3089,3169,3259,3677,3739,4733,4973,5419,5591,6581,7649,7963,8243,8297,8629,9973 ⋆ Primes that represent some mean of 4 consecutive (2 smaller, itself, 1 larger) primes. ● a(n) = If[(Prime[n - 3] + Prime[n - 2] + Prime[n - 1] + Prime[n]) / 4 - Prime[n - 1] - 1== 0, then Prime[n - 1] ●

► [A124586] 113,293,317,523,773,839,863,887,953,1069,1129,1259,1327,1381,1409,1583,1637,1669,1759,1831,1847,1913,1933,1951,2039 ⋆ Primes p such that q - p >= 14, where q is the next prime after p. ● a(n) = n log n + O(n log ^ 2 n). - _ Charles R Greathouse IV _ , May 05 2017 ●

► [A172983] 113,312,523,746,973,1202,1435,1712,2023,2354,2691,3124,3567,4016,4515,5072,5649,6248,6909,7586,8319,9092,9903,10780,11661 ⋆ Partial sums of near - repdigit primes A056710. ● a(n) = SUM[i=1..n] A056710 = SUM[i=1..n] { primes in whose base 10 representation all digits are equal except for an end - digit } . ●

► [A152928] 113,765,5234,35865,245813,1684818,11547905,79150509,542505650,3718389033,25486217573,174685133970,1197309720209,8206482907485,562480706 32178,385530011517753,2642462009992085,18111704058426834,124139466398995745,850864560734543373 ⋆ Number of sets (in the Hausdorff metric geometry) at each location between two sets defining a polygonal configuration consisting of two m - gonal polygonal components chained with string components of length 1 as m varies. ● a(n) = 8 * a(n - 1) - 8 * a(n - 2) + a(n - 3) for n>4. - _ Colin Barker _ , Aug 05 2020 ●

► [A008362] 1,113,2705,28129,177697,807505,2908337,8818625,23429185,56070193,123302609,252868001,489082465,899992081,1586639089,2694819713,4429746305,7074058225,11009657617,16743877985 ⋆ Crystal ball sequence for D _ 8 lattice. ● a(n) = 248 / 315 * n ^ 8 + 992 / 315 * n ^ 7 + 32 / 3 * n ^ 6 + 944 / 45 * n ^ 5 + 144 / 5 * n ^ 4 + 1184 / 45 * n ^ 3 + 992 / 63 * n ^ 2 + 584 / 105 * n + 1 (see MAPLE line). ●

► [A305066] 114,348,816,1752,3624,7368,14856,29832,59784,119688,239496,479112,958344,1916808,3833736,7667592,15335304,30670728,61341576,122683272,245366664,490733448,981467016,1962934152,3925868424 ⋆ a(n) = 234 * 2 ^ n - 120. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2)for n>0. ●

► [A239570] 0,1,114,1137,6100,23265,71211,186739,436437,932850,1856305,3483546,6224439,10668112,17640000,28271370,44083006,67084839,99893412,145869175,209275710,295463091,411077689,564300837,765118875 ⋆ Number of ways to place 4 points on a triangular grid of side n so that no two of them are adjacent. ● a(n) = (n - 2) * (n - 3) * (n ^ 6 + 9 * n ^ 5 - 39 * n ^ 4 - 353 * n ^ 3 + 950 * n ^ 2 + 4040 * n - 11904) / 384. ●

► [A200891] 114,1691,11472,50995,173606,491533,1215616,2710413,5567530,10700151,19461872,33793071,56398174,90957305,142375936,217076281,323334306,471666355,675269520,950520011,1317533910,1800794821,2429853056 ⋆ Number of 0..n arrays x(0..7) of 8 elements without any interior element greater than both neighbors. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>9. ●

► [A162675] 0,0,114,2910,26490,145110,582540,1891764,5263020,13010580,29297070,61162530,119933814,223098330,396734520,678599880,1121985720,1800456264,2813598090,4293914310,6415006290,9401194110,13538735364,19188810300 ⋆ Number of different fixed (possibly) disconnected pentominoes bounded (not necessarily tightly) by an n * n square ● a(n) = n * (n - 1) * (n - 2) * (n + 1) * (5 * n ^ 4 - 10 * n ^ 3 - 7 * n ^ 2 + 12 * n + 6) / 24. ●

► [A129544] 0,115,136,411,1036,1155,2740,6375,7068,16303,37488,41527,95352,218827,242368,556083,1275748,1412955,3241420,7435935,8235636,18892711,43340136,48001135,110115120 ⋆ Nonnegative values x of solutions (x, y) to the Diophantine equation x ^ 2 + (x + 137) ^ 2 = y ^ 2. ● a(n) = 6 * a(n - 3) - a(n - 6) + 274 for n > 6; a(1)=0, a(2)=115, a(3)=136, a(4)=411, a(5)=1036, a(6)=1155. ●

► [A183626] 115,189,355,741,1675,4029,10195,26901,73435,205869,588835,1709061,5012395,14807709,43964275,130975221,391090555,1169601549,3501464515,10489713381,31439779915,94260619389,282664417555,847758371541 ⋆ Number of (n + 1) X 4 0..2 arrays with every 2 X 2 subblock summing to 4. ● a(n) = 50 + 7 * 2 ^ (2 + n) + 3 ^ (1 + n). ●

► [A224673] 115,191,257,381,542,793,1166,1746,2650,4080,6355,9996,15843,25257,40439,64951,104556,168579,272108,439556,710424,1148626,1857577,3004606,4860457 ⋆ Number of (n + 1) X 6 0..2 matrices with each 2 X 2 subblock idempotent ● a(n) = 34 + (2 ^ (- 1 - n) * ((1 - sqrt(5)) ^ n * (- 11 + 53 * sqrt(5)) + (1 + sqrt(5)) ^ n * (11 + 53 * sqrt(5)))) / sqrt(5) + 14 * (1 + n) + (5 / 2) * (1 + n) * (2 + n) for n>1. ●

► [A122562] 115,236,369,520,695,900,1141,1424,1755,2140,2585,3096,3679,4340,5085,5920,6851,7884,9025,10280,11655,13156,14789,16560,18475 ⋆ a(n) = n ^ 3 + 114 * n. ● a(1)=115, a(2)=236, a(3)=369, a(4)=520, a(n)=4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Harvey P. Dale _ , Mar 14 2015 ●

► [A063361] 1,115,248,379,514,645,780,909,1046,1175,1312,1439,1578,1705,1844,1969,2110,2235,2376,2499,2642,2765,2908,3029,3174 ⋆ Dimension of the space of weight n cuspidal newforms for Gamma _ 1(88). ● a(n) = a(n - 2) + a(n - 4) - a(n - 6) for n>8. ●

► [A218324] 1,115,645,1911,4233,7931,13325,20735,30481,42883,58261,76935,99225,125451,155933,190991,230945,276115,326821,383383,446121,515355,591405,674591,765233 ⋆ Odd heptagonal pyramidal numbers. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + 320. ● a(n) = (2 * n - 1) * (4 * n - 3) * (20 * n - 17) / 3. ●

► [A287430] 115,1063,9121,75607,611569,4857223,38034241,294475447,2258978449,17196401383,130059675361,978211787287,7322040929329,54576195433543,40528673053248 1,2999780651211127,22137879320864209,162941058582753703,1196418733436205601 ⋆ Number of connected dominating sets in the 2n - crossed prism graph. ● a(n) = 7 ^ n + 240 * n * 7 ^ (n - 3) for n > 2. ● a(n) = 14 * a(n - 1) - 49 * a(n - 2) for n > 4. ●

► [A279451] 0,0,0,115,11810,326190,4444935,38675954,246563232,1248782460,5296300670,19499431941,63958228738,190528987506,523151460045,1339408935540,3227223506896,7372750196952,16069268866908,33586411339335,67610793877650,131569779776182,248290280743571 ⋆ Number of nonequivalent ways to place 7 points on an n X n square grid so that no more than 2 points are on a vertical or horizontal straight line. ● a(n) = (n ^ 14 - 91 * n ^ 12 + 420 * n ^ 11 + 693 * n ^ 10 - 10500 * n ^ 9 + 33647 * n ^ 8 - 45316 * n ^ 7 + 3682 * n ^ 6 + 62300 * n ^ 5 - 51996 * n ^ 4 - 28504 * n ^ 3 + 54384 * n ^ 2 - 18720 * n) / 40320 + IF(MOD(n, 2) = 1, 2 * n ^ 7 - 17 * n ^ 6 + 50 * n ^ 5 - 59 * n ^ 4 + 38 * n ^ 3 - 71 * n ^ 2 + 102 * n - 45) / 384. ●

► [A105934] 116,176,184,300,444,470,584,690,696,950 ⋆ Positive integers n such that n ^ 22 + 1 is semiprime (A001358). ● a(n) ^ 22 + 1 is in A001358. a(n) ^ 2 + 1 is in A000040 and (a(n) ^ 20 - a(n) ^ 18 + a(n) ^ 16 - a(n) ^ 14 + a(n) ^ 12 - a(n) ^ 10 + a(n) ^ 8 - a(n) ^ 6 + a(n) ^ 4 - a(n) ^ 2 + 1) is in A000040. ●

► [A035814] 1,116,6728,260188,7548816,175288644,3393946328,56367745324,819877766944,10611155020308,123745300449128,1313632295207420,12801566604046000,115340898562816740,966654502323949560 ⋆ Coordination sequence for lattice D *_ 58 (with edges defined by l _ 1 norm = 1). ● a(m)=add(2 ^ k * binomial(n, k) * binomial(m - 1, k - 1), k=0..n) + 2 ^ n * binomial((n + 2 * m) / 2 - 1, n - 1); with n=58. ●

► [A063332] 1,117,261,406,551,696,841,986,1131,1276,1421,1564,1711,1856,2001,2144,2291,2434,2581,2724,2871,3014,3161,3302,3451 ⋆ Dimension of the space of weight n cuspidal newforms for Gamma _ 1(59). ● a(n) = a(n - 4) + a(n - 6) - a(n - 10) for n>13. ●

► [A063338] 1,117,272,424,576,728,880,1032,1184,1336,1488,1644,1792,1944,2096,2252,2400,2556,2704,2860,3008,3164,3312,3472,3616 ⋆ Dimension of the space of weight n cuspidal newforms for Gamma _ 1(65). ● a(n) = a(n - 4) + a(n - 6) - a(n - 10) for n>13. ●

► [A304611] 117,272,427,582,737,892,1047,1202,1357,1512,1667,1822,1977,2132,2287,2442,2597,2752,2907,3062,3217,3372,3527,3682,3837 ⋆ a(n) = 155 * n - 38. ● a(n) = 2 * a(n - 1) - a(n - 2) for n>2. ●

► [A304610] 117,274,431,588,745,902,1059,1216,1373,1530,1687,1844,2001,2158,2315,2472,2629,2786,2943,3100,3257,3414,3571,3728,3885 ⋆ a(n) = 157 * n - 40 (n >=1). ● a(n) = 2 * a(n - 1) - a(n - 2) for n>2. ●

► [A261464] 118,321,1287,2083,4755,6583,11823,23879,28973,49721,67583,77863,102015,146711,202617,223553,297101,353483,384043,487781,565619,698159,904835,1020981,1082623 ⋆ a(n) = prime(n + 2) ^ 3 - prime(n + 1) ^ 2 + prime(n). ● a(n) = prime(n + 2) ^ 3 - prime(n + 1) ^ 2 + prime(n). ●

► [A334646] 0,0,0,118,409,2368,15750,112716,845295,6551208,52035714,421286280,3463401007,28832656408,242565115858,2058945519936,17611312647075,151647023490480,1313460091978458,11435310622320552,100019000856225156,878443730199290560 ⋆ a(n) is the total number of down steps between the 3rd and 4th up steps in all 3 - Dyck paths of length 4 * n. ● a(0) = a(1) = a(2) = 0 and a(n) = 3 * Sum _{ j=1..3 } binomial(4 * j + 1, j) * binomial(4 * (n - j), n - j) / ((4 * j + 1) * (n - j + 1)) for n > 2. ●

► [A026049] 119,156,204,265,341,434,546,679,835,1016,1224,1461,1729,2030,2366,2739,3151,3604,4100,4641,5229,5866,6554,7295,8091 ⋆ a(n) = dot _ product(1,

2,...,n) * (7,8,...,n,1,2,3,4,5,6). • a(n) = n(2n ^ 2 - 15n + 109) / 6. - _ Ralf Stephan _ , Apr 30 2004 •
► [A207059] 119,231,300,476,867,1496,2120,2511,3519,5780,9435,13067,15344,21216,34391,55692,76860,90131,124355,201144,325295,448671,526020,725492,1173051 ⋆ Nonnegative values x of solutions (x, y) to the Diophantine equation x ^ 2 + (x + 289) ^ 2 = y ^ 2. • a(n) = 6 * a(n - 5) - a(n - 10) + 578 with a(1) = 119, a(2) = 231, a(3) = 300, a(4) = 476, a(5) = 867, a(6) = 1496, a(7) = 2120, a(8) = 2511, a(9) = 3519, a(10) = 5780. - _ Mohamed Bouhamida _ , Aug 24 2019 •
► [A243581] 119,351,711,1199,1815,2559,3431,4431,5559,6815,8199,9711,11351,13119,15015,17039,19191,21471,23879,26415,29079,31871,34791,37839,41015 ⋆ Integers of the form 8k + 7 that can be written as a sum of four distinct squares of the form m, m + 2, m + 3, m + 4, where m == 2 (mod 4). • a(n) = 64 * n ^ 2 + 40 * n + 15. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Colin Barker _ , Jun 09 2014 •
► [A157040] 119,480,1083,1928,3015,4344,5915,7728,9783,12080,14619,17400,20423,23688,27195,30944,34935,39168,43643,48360,53319,58520,63963,69648,75575 ⋆ 121n ^ 2 - 2n. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). •
► [A048397] 0,119,3104,29319,162104,643535,2040744,5502959,13129424,28468359,57167120,107793719,192849864,329995679,543506264,865980255,1340320544,2022007319,2981683584,4308073319,6111252440,8526292719,11717298824 ⋆ Sum of consecutive non - fourth - powers. • a(n) = 4 * n ^ 7 + 14 * n ^ 6 + 28 * n ^ 5 + 34 * n ^ 4 + 26 * n ^ 3 + 11 * n ^ 2 + 2 * n. •
► [A158130] 120,241,362,483,604,725,846,967,1088,1209,1330,1451,1572,1693,1814,1935,2056,2177,2298,2419,2540,2661,2782,2903,3024 ⋆ 121n - 1. • a(n) = 2 * a(n - 1) - a(n - 2). •
► [A090391] 0,120,312,606,1040,1661,2526,3703,5272,7326,9972,13332,17544,22763,29162,36933,46288,57460,70704,86298,104544,125769,150326,178595,210984 ⋆ a(n) = n * (n ^ 4 + 30 * n ^ 3 + 395 * n ^ 2 + 2910 * n + 11064) / 120. • a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>5. - _ Colin Barker _ , Feb 12 2015 •
► [A118058] 1,120,337,652,1065,1576,2185,2892,3697,4600,5601,6700,7897,9192,10585,12076,13665,15352,17137,19020,21001,23080,25257,27532,29905 ⋆ a(n) = 49 n ^ 2 - 28n - 20. • a(n) + (a(n) + 1) + ... + (a(n) + 98n + 34)=7(7n - 2)(7n + 5)(14n + 3) / 2; e.g., 337 + 338 + ... + 518=77805=7 * 19 * 26 * 45 / 2. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). G.f.: x * (1 + 117 * x - 20 * x ^ 2) / (1 - x) ^ 3. - _ Colin Barker _ , Jun 30 2012 •
► [A052768] 0,0,0,0,0,120,360,840,1680,3024,5040,7920,11880,17160,24024,32760,43680,57120,73440,93024,116280,143640,175560,212520,255024 ⋆ A simple grammar. • a(n)=0, n <= 4; a(n) = n * (n - 1) * (n - 2) * (n - 3), n >= 5. •
► [A052778] 0,0,0,0,0,120,360,1680,10080,72576,604800,5702400,59875200,691891200,8717829120,118879488000,1743565824000,27360571392000,45731240755200 0,8109673360588800,15205637551104000,30053495395123200000,62444484876533760000,136063245994131456000 0 ⋆ E.g.f.: x ^ 4 * log(- 1 / (- 1 + x)). • a(n) = n! / (n - 4) (n > 4). - _ Olivier Gérard _ , Jun 13 2001 •
► [A307933] 120,408,1200,3240,8330,20720,50418,120760,285846,670416,1560728,3611020,8311110,19042656,43459344,98838684,224091320,506660240,1142669766,2571214756,5773744326,12940614624,28953267050,64676245192,144261049680 ⋆ Number of (undirected) Hamiltonian paths in the n - antiprism graph. • a(n) = 5 * a(n - 1) - 6 * a(n - 2) - 4 * a(n - 3) + 7 * a(n - 4) + 5 * a(n - 5) - 5 * a(n - 6) - 3 * a(n - 7) + a(n - 8) + a(n - 9) for n>11. •
► [A167562] 120,480,1344,3072,6144,11160,18840,30024,45672,66864,94800,130800,176304,232872,302184,386040,486360,605184,744672,907104,1094880,1310520,1556664,1836072,2151624 ⋆ The fifth row of the ED2 array A167560. • a(n) = 5 * n ^ 4 + 10 * n ^ 3 + 67 * n ^ 2 + 14 * n + 24. • a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ G. C. Greubel _ , Jun 16 2016 •
► [A157960] 120,482,1086,1932,3020,4350,5922,7736,9792,12090,14630,17412,20436,23702,27210,30960,34952,39186,43662,48380,53340,58542,63986,69672,75600 ⋆ a(n) = 121 * n ^ 2 - n. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Feb 10 2012 •
► [A305072] 120,528,1224,2208,3480,5040,6888,9024,11448,14160,17160,20448,24024,27888,32040,36480,41208,46224,51528,57120,63000,69168,75624,82368,89400 ⋆ a(n) = 144 * n ^ 2 - 24 * n (n>=1). • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>3. •
► [A100145] 1,120,579,1600,3405,6216,10255,15744,22905,31960,43131,56640,72709,91560,113415,138496,167025,199224,235315,275520,320061,369160,423039,481920,546025 ⋆ Structured great rhombicosidodecahedral numbers. • a(n) = (1 / 6) * (222 * n ^ 3 - 312 * n ^ 2 + 96 * n). • a(n) = (1 + (n - 1)) * (1 + 22 * (n - 1) + 37 * (n - 1) ^ 2); •
► [A052787] 0,0,0,0,0,120,720,2520,6720,15120,30240,55440,95040,154440,240240,360360,524160,742560,1028160,1395360,1860480,2441880,3160080,4037880,5100480 ⋆ Product of 5 consecutive integers. • a(n) = n * (n - 1) * (n - 2) * (n - 3) * (n - 4)=n! / (n - 5)!. [Corrected by _ Philippe Deléham _ , Dec 12 2003] •
► [A029573] 0,0,0,0,0,0,120,840,6720,60480,604800,6652800,73180800,951350400,13318905600,199783584000,3196537344000,54341134848000,983080530432000,18678530078208000,373570601564160000,7844982632847360000,172589617922641920000,3969561212220764160000 ⋆ Number of permutations of an n - set containing a 6 - cycle. • a(n) = n! * (1 - sum _{ k=0..floor(n / 6) } (- 1) ^ k / (k! * 6 ^ k)). • a(n) / n! is asymptotic to 1 - e ^ (- 1 / 6) = 1 - A092727. •
► [A011245] 1,120,945,3640,9945,22176,43225,76560,126225,196840,293601,422280,589225,801360,1066185,1391776,1786785,2260440,2822545,3483480,4254201,5146240,6171705,7343280,8674225 ⋆ a(n) = (n + 1) * (2 * n + 1) * (3 * n + 1) * (4 * n + 1). • a(0)=1, a(1)=120, a(2)=945, a(3)=3640, a(4)=9945, a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Harvey P. Dale _ , Oct 05 2012 •
► [A092182] 1,120,947,3652,9985,22276,43435,76952,126897,197920,295251,424700,592657,806092,1072555,1400176,1797665,2274312,2839987,3505140,4280801,5178580,6210667,7389832,8729425 ⋆ Figurate numbers based on the 600 - cell (4 - D polytope with Schlaefli symbol { 3,3,5 }). • a(n) = n * ((145 * n ^ 3) - (280 * n ^ 2) + (179 * n) - 38) / 6 • a(n) = C(n + 3,4) + 115 C(n + 2,4) + 357 C(n + 1,4) + 107 C(n,4) • a(n) = + 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). G.f.: x * (1 + 115 * x + 357 * x ^ 2 + 107 * x ^ 3) / (1 - x) ^ 5. [_ R. J. Mathar _ , Jun 21 2010] •
► [A167549] 120,1440,6720,21504,55296,122880,245640,452880,783144,1285536,2021040,3063840,4502640,6441984,9003576,12327600,16574040,21924000,28581024,36772416,46750560,58794240,73209960,90333264,110530056 ⋆ The sixth row of the ED1 array A167546. • a(n) = 11 * n ^ 5 + 0 * n ^ 4 + 209 * n ^ 3 - 264 * n ^ 2 + 308 * n - 144. • a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). - _ G. C. Greubel _ , Jun 15 2016 •
► [A175112] 1,120,1442,6840,21122,51000,105122,194040,330242,528120,804002,1176120,1664642,2291640,3081122,4059000,5253122,6693240,8411042,10440120,12816002,15576120,18759842,22408440,26565122 ⋆ First differences of A175111. • a(n)= 4 * a(n - 1) - 5 * a(n - 2) + 5 * a(n - 4) - 4 * a(n - 5) + a(n - 6), n>6. • a(n) = ((2 * n + 1) ^ 5 - (2 * n - 1) ^ 5) / 2 + (- 1) ^ n, n>0. •
► [A027795] 120,1485,9900,47190,180180,585585,1681680,4375800,10501920,23556390,49884120,100524060,193993800,360380790,647214480,1127722200,1912224600,3163606875,5118012900,8112154050,12618906300,19293191775,29030508000,43040883600,62941507200 ⋆ a(n) = 15 * (n + 1) * binomial(n + 3,10). • a(n) = C(n + 1, 8) * C(n + 3, 3). - _ Zerinvary Lajos _ , May 10 2005; corrected by _ R. J. Mathar _ , Mar 16 2016 •
► [A056286] 0,0,0,0,0,120,2160,23940,211680,1643544,11748240,79419180,516257280,3262443120,20193277104,123071707080,741419995680,4427490147480,26264144909520,155018841055596,911509010154720,5344538384445120,31272099902089200,182707081122261480 ⋆ Number of n - bead necklaces with exactly six different colored beads. • a(n) = (k! / n) Sum _{ d|n } phi(d) S2(n / d,k), where k =6 is the number of colors and S2 is the Stirling subset number A008277. •
► [A032180] 120,2520,31920,317520,2739240,21538440,158838240,1118557440,7612364760,50483192760,328191186960,2100689987760,13282470124680,831697922 13480,516729467446080,3190281535536480,19596640721427000,119876382958008600 ⋆ Number of ways to partition n labeled elements into 6 pie slices. • a(n) = 120 * S(n, 6). • a(n) = 5 * 2 ^ (n - 1) - 10 * 3 ^ (n - 1) + 10 * 4 ^ (n - 1) - 5 ^ n + 6 ^ (n - 1) - 1. •
► [A060490] 0,0,120,3030,24552,130740,551640,1997415,6470420,19219462,53187840,138658760,343297780,812249250,1845669776,4044119530,8573706300,1763747435 0,35294157340,68850086745,131179071560,244518601660,446576824800,800201972990,1408466719120 ⋆ Number of 6 - block ordered tricoverings of an unlabeled n - set. • a(n) = binomial(n + 19, 19) - 6 * binomial(n + 9, 9) - 15 * binomial(n + 7, 7) + 135 * binomial(n + 3, 3) - 310 * binomial(n + 1, 1) + 240 * binomial(n, 0) - 45 * binomial(n - 1, - 1). •
► [A282612] 0,1,120,3654,45760,333375,1703016,6784540,22500864,64836045,167167000,393877506,861456960,1769830699,3447273480,6412923000,11461636096,19776716505,33076889784,53804808190,85365336000,132422893911,201268229800,300266132244,440396812800 ⋆ Number of inequivalent 3 X 3 matrices with entries in { 1,2,3,..,n } up to row permutations. • a(n) = n ^ 3 * (n ^ 3 + 2) * (n + 1) * (n ^ 2 - n + 1) / 6. •
► [A000514] 1,120,4293,88234,1310354,15724248,162512286,1505621508,12843262863,102776998928,782115518299,5717291972382,40457344748072,278794377854832,1879708669896492,12446388300682056,81180715002105741 ⋆ Eulerian numbers (Euler's triangle: column k=6 of A008292, column k=5 of A173018) • a(n) = 6 ^ (n + 6 - 1) + Sum _{ i=1..6 - 1 } ((- 1) ^ i / i!) * (6 - i) ^ (n + 6 - 1) * Product _{ j=1..i } (n + 6 + 1 - j). - _ Randall L Rathbun _ , Jan 23 2002 •
► [A179060] 0,0,0,0,120,4320,52920,376320,1905120,7620480,25613280,75271680,198764280,480960480,1082161080,2289530880,4594961280,8809274880,16225246080,28844881920,49689816120,83217546720,135870624120 ⋆ Number of non - attacking placements of 5 rooks on an n X n board. • a(n) = 5! * binomial(n, 5) ^ 2. •
► [A342073] 0,0,0,0,0,120,4320,78120,913920,7575120,46751040,224587440,881591040,2946869640,8659691040,22915652760,55611279360,125508233760,266320172160,535945217760,1030028705280,1901347885080,3386866301280,5844714201480,9803816225280 ⋆ Number of n - colorings of the vertices of the 5 - dimensional cross polytope such that no two adjacent vertices have the same color. • a(n) = - 205056 * n + 593016 * n ^ 2 - 698250 * n ^ 3 + 448015 * n ^ 4 - 175004 * n ^ 5 + 43608 * n ^ 6 - 6990 * n ^ 7 + 700 * n ^ 8 - 40 * n ^ 9 + n ^ 10. • a(n) = (n - 4) * (n - 3) * (n - 2) * (n - 1) * n * (- 8544 + 6909 * n - 2240 * n ^ 2 + 365 * n ^ 3 - 30 * n ^ 4 + n ^ 5). •
► [A174686] 120,4860,65280,487500,2517480,10084200,33546240,96840360,249975000,589446660,1289882880,2651032020,5165127240,9610650000,17179607040,29646614160,49589350200,80671305420,127999200000,198568990620,301816016040,450286556280,660449894400 ⋆ Number of equivalence classes of 3 X 3 matrices filled with n colors so that no two rotations are identical. • a(n) = (n ^ 9 - n ^ (floor(9 / 2) + 1)) / 4. More generally for any m X m matrix f(n,m) = (n ^ (m ^ 2) - n ^ (m ^ 2 / 2)) / 4 if m is even, and f(n,m) = (n ^ (m ^ 2) - n ^ (floor(m ^ 2 / 2) + 1)) / 4 if m is odd. •
► [A035815] 1,120,7200,288040,8644800,207648024,4158723680,71440725960,1074729932160,14385297437880,173483353200288,1904315460088680,19187724061887040,178728796729801560,1548407735451345120 ⋆ Coordination sequence for lattice D *_ 60 (with edges defined by l _ 1 norm = 1). • a(m)=add(2 ^ k * binomial(n, k) * binomial(m - 1, k - 1), k=0..n) + 2 ^ n * binomial((n + 2 * m) / 2 - 1, n - 1); with n=60. •
► [A218503] 1,120,9765,251680,3043425,22661496,121226245,510902400,1799118945,5507702200,15072415941,37630041120,87029433985,188664603960,386925380325,756298318336,1417430759745,2559798038520,4472991338725,7589075296800,12538953723681 ⋆ q - factorial numbers 5! _ q. • a(n) = (n + 1) * (n ^ 2 + n + 1) * (n ^ 3 + n ^ 2 + n + 1) * (n ^ 4 + n ^ 3 + n ^ 2 + n + 1). •
► [A296913] 0,0,120,12960,332880,3868080,27767880,144278400,594347040,2055598560,6202551960,16774966560,41473626480,95135323920,204803912040,417515696640,811858751040,1514650599360,2724410748600,4743687388320,8022734847120,13217533726320,21265702652040,33484472926080,51695588642400 ⋆ Number of ways to properly color the Petersen graph using n colors. • a(n) = n ^ 10 - 15 * n ^ 9 + 105 * n ^ 8 - 455 * n ^ 7 + 1353 * n ^ 6 - 2861 * n ^ 5 + 4275 * n

^ 4 - 4305 * n ^ 3 + 2606 * n ^ 2 - 704 * n. ● a(n) = 11 * a(n - 1) - 55 * a(n - 2) + 165 * a(n - 3) - 330 * a(n - 4) + 462 * a(n - 5) - 462 * a(n - 6) + 330 * a(n - 7) - 165 * a(n - 8) + 55 * a(n - 9) - 11 * a(n - 10) + a(n - 11) for n>11. ●

▶ [A054778] 0,120,30240,360360,1860480,6375600,17100720,38955840,78960960,146611080,254251200,417451320,655381440,991186560,1452361680,2071126800,2884801920,3936182040,5273912160,6952862280,9034502400,11587277520,14686982640,18417137760 ⋆ 5n * (5n - 1) * (5n - 2) * (5n - 3) * (5n - 4). ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6), with a(0)=0, a(1)=120, a(2)=30240, a(3)=360360, a(4)=1860480, a(5)=6375600. - _ Harvey P. Dale _ , Aug 29 2012 ●

▶ [A147964] 120,691020,128047374,6519340912,156097542888,2259242749800,22815705739244,175939638868224,1099964624581680,5812510584460580,26753072198342490,109684475412107232,407515671392921520,1390695205822539984,4406577363489470616,13079027432832437440 ⋆ Number of consistent sets of 10 irreflexive binary order relationships over n objects. ● a(n) = (n - 4) * (n - 3) * (n - 2) * (n - 1) * n * (n ^ 15 - 80 * n ^ 13 - 300 * n ^ 12 + 1366 * n ^ 11 + 18300 * n ^ 10 + 117700 * n ^ 9 + 293220 * n ^ 8 - 4873571 * n ^ 7 - 63731100 * n ^ 6 - 168619940 * n ^ 5 + 2528179320 * n ^ 4 + 17989477164 * n ^ 3 - 56994404400 * n ^ 2 - 561199055760 * n + 1856094609600) / 3628800. - _ Vaclav Kotesovec _ , Apr 11 2020 ●

▶ [A017282] 1,121,441,961,1681,2601,3721,5041,6561,8281,10201,12321,14641,17161,19881,22801,25921,29241,32761,36481,40401,44521,48841,53361,58081 ⋆ a(n) = (10 * n + 1) ^ 2. ● a(n) = a(n - 1) + 40 * (5 * n - 2), n > 0; a(0)=1. - _ Miquel Cerda _ , Oct 30 2016 ●

▶ [A077432] 121,484,91809,163216,255025,367236,499849,64128064,81162081,100200100,121242121,144288144,169338169,196392196,225450225,256512256,289578289,324648324,361722361,400800400,441882441,484968484,52910580529 ⋆ Squares of the form u'v'w, where in decimal representation u=n ^ 2, v=2 * n ^ 2 and w=n ^ 2 possibly with a leading zero. ● a(n) = (n * (1 + 10 ^ (1 + floor(log _ 10(2 * n ^ 2))))) ^ 2. ●

▶ [A183885] 1,121,631,2059,6399,19483,58807,176859,531103,1593931,4782519,14348395,43046143,129139515,387419767,1162260667,3486783519,10460352235,31381058551,94143177675,282429535231,847288608091,2541865826871 ⋆ Number of arrangements of n + 3 numbers in 0..2 with each number being the sum mod 3 of three others. ● a(n) = 6 * a(n - 1) - 12 * a(n - 2) + 10 * a(n - 3) - 3 * a(n - 4) for n>6. ●

▶ [A361703] 1,1,1,1,1,121,721,2521,6721,15121,143641,1302841,7579441,32586841,113753641,509068561,3599319361,25076993761,142188273361,662296228561,2933770097881,15581813723281,99333170493481,623696622059281,34667732813128 81 ⋆ Constant term in the expansion of (1 + w + x + y + z + 1 / (w * x * y * z)) ^ n. ● a(n) = Sum _{ k=0..floor(n / 5) } (4 * k)! / k! ^ 4 * binomial(5 * k, 4 * k) * binomial(n,5 * k) = Sum _{ k=0..floor(n / 5) } (5 * k)! / k! ^ 5 * binomial(n,5 * k). ●

▶ [A190877] 1,1,1,1,1,121,721,2521,6721,15121,1844641,20013841,119845441,519072841,1816454641,223394731561,3501661887361,29675906201761,177923109591361,844925253766561,10475028279741888 1 ⋆ Expansion of e.g.f. exp(x + x ^ 5). ● a(n) = n! * Sum _{ j=0..n / 4 } binomial(n + (- 4) * j,j) / (n + (- 4) * j)!. ● a(n) = a(n - 1) + 5! * binomial(n - 1,4) * a(n - 5) for n > 4. - _ Seiichi Manyama _ , Feb 25 2022 ●

▶ [A361636] 1,1,1,1,121,721,2521,6721,128521,1277641,7539841,32527441,281835841,3031468441,23779315561,139431015361,962322302761,9034098300361,79726215362761,569831799431881,3952559737085401,32660742079719601,289694072383115401 ⋆ Diagonal of the rational function 1 / (1 - v * w * x * y * z * (1 + 1 / v + 1 / w + 1 / x + 1 / y + 1 / z)). ● a(n) = Sum _{ k=0..floor(n / 4) } (n + k)! / (k! ^ 5 * (n - 4 * k)!). ●

▶ [A354554] 1,1,1,1,1,121,721,2521,6721,196561,3659041,29993041,159762241,1686639241,60298558321,987112886761,9315623640961,76611297104161,2454331471018561,69805324167893281,1086439146068753281,11530308934656915481 ⋆ Expansion of e.g.f. exp(x * exp(x ^ 4)). ● a(n) = n! * Sum _{ k=0..floor(n / 4) } (n - 4 * k) ^ k / (k! * (n - 4 * k)!). ●

▶ [A367720] 1,1,1,1,1,121,721,2521,6721,196561,3659041,29993041,159762241,1686639241,60298558321,987112886761,9315623640961,76611297104161,2454331471018561,69805324167893281,1086439146068753281,62621251106366355481,135821917140624427 1 ⋆ E.g.f. satisfies A(x) = exp(x * A(x ^ 4)). ● a(0) = 1; a(n) = (n - 1)! * Sum _{ k=0..floor((n - 1) / 4) } (4 * k + 1) * a(k) * a(n - 1 - 4 * k) / (k! * (n - 1 - 4 * k)!). ●

▶ [A293507] 1,1,1,1,1,121,721,2521,6721,378001,5473441,39972241,199679041,7005552841,176899522801,2186722497961,17454339826561,459473703430561,1650399370242336 1,306140370496394401,3555223271216311681,8091722335365247068 1,35687704558307852088 1 ⋆ E.g.f.: exp(x / (1 - x ^ 4)). ● a(0) = 1; a(n) = Sum _{ k=0..floor((n - 1) / 4) } binomial(n - 1,4 * k) * (4 * k + 1)! * a(n - 4 * k - 1). - _ Ilya Gutkovskiy _ , Feb 24 2022 ●

▶ [A293588] 1,1,1,1,1,1,121,841,3361,10081,25201,55441,6763681,86692321,605765161,3027624601,12109056961,41169011521,5063607974881,94197184734241,939457659787201,6572292677455681,36141156689382361,166238526616664041,2061247989629156321 ⋆ E.g.f.: exp(x + x ^ 6 / 6). ● a(n) = a(n - 1) + (n - 1)! / (n - 6)! * a(n - 6). ● a(n) = Sum _{ j=0..floor(n / 6) } n! / (6 ^ j * j! * (n - 6 * j)!). - _ G. C. Greubel _ , Mar 07 2021 ●

▶ [A365969] 1,1,1,1,1,1,121,841,3361,10081,25201,3684241,50309281,369738721,1926648361,7980936601,1335634023361,27705746752321,302258931418081,2283161710263841,13419441405835201,249833982918850848 1,7015244870874611196 1,102531485270439551844 1 ⋆ Expansion of e.g.f. exp(Sum _{ k>=0 } x ^ (5 * k + 1) / (5 * k + 1)). ● a(0) = 1; a(n) = (n - 1)! * Sum _{ k=0..floor((n - 1) / 5) } a(n - 5 * k - 1) / (n - 5 * k - 1)!. ● a(0) = a(1) = ... = a(4) = 1; a(n) = a(n - 1) + 120 * binomial(n - 1,5) * a(n - 5). ●

▶ [A362319] 1,1,1,1,1,121,865,3529,10753,27217,7318081,96720625,689990401,3508289929,14239793569,5933573525881,114415115802625,1165402803391009,8298505279241857,46355961619888993,261672180737145523 21,663290722580370585625 ⋆ a(n) = n! * Sum _{ k=0..floor(n / 5) } (n / 5) ^ k / (k! * (n - 5 * k)!). ● a(n) = n! * [x ^ n] exp(x + n * x ^ 5 / 5). ●

▶ [A302561] 1,121,1068,4720,14705,36981,80416,157368,284265,482185,777436,1202136,1794793,2600885,3673440,5073616,6871281,9145593,11985580,15490720,19771521,24950101,31160768,38550600,47280025 ⋆ Partial sums of A092182. ● a(n) = (n * (12 + n - 64 * n ^ 2 + 5 * n ^ 3 + 58 * n ^ 4)) / 12. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. ●

▶ [A120353] 121,1089,9801,88209,793881,7144929,64304361,578739249,5208653241,46877879169,421900912521,3797108212689,34173973914201,307565765227809,2768091887050281,24912826983452529,224215442851072761,2017938985659654849,18161450870936893641 ⋆ Sum of 5 consecutive powers of 3, starting with a power of 9. ● a(n) = 121 * 3 ^ (2n - 2). ●

▶ [A175111] 1,121,1563,8403,29525,80525,185647,379687,709929,1238049,2040251,3218171,4882813,7174453,10255575,14314575,19567697,26260937,34671979,45112099,57928101,73504221,92264063,114672503,141237625 ⋆ ((2 * n + 1) ^ 5 + (- 1) ^ n) / 2. ● a(n)= 5 * a(n - 1) - 9 * a(n - 2) + 5 * a(n - 3) + 5 * a(n - 4) - 9 * a(n - 5) + 5 * a(n - 6) - a(n - 7). ●

▶ [A372964] 1,121,2161,15481,78001,261481,823201,1981561,4726081,9438121,19485841,33454441,62746321,99607321,168560161,253639801,410333761,571855801,893864881,1207533481,1778937361,2357786761,3404813281,4282153321,6093828001 ⋆ a(n) = Sum _{ 1 <= x _ 1, x _ 2, x _ 3, x _ 4 <= n } (n / gcd(x _ 1, x _ 2, x _ 3, x _ 4, n)) ^ 3. ● a(n) = Sum _{ d|n } mu(n / d) * (n / d) ^ 3 * sigma _ 7(d). ●

▶ [A272775] 121,6724,154449,1860496,14250625,78960996,344362249,1250895424,3936182121,11035502500,28143753121,66322731024,146186169649,304278004996,602680505625,1143051786496,2086600473049,3681862517124,6302555019121,10498248010000,17061121121121 ⋆ Squares of the form P(n, 5) + n, where P(x,k) is the Pochhammer function and n = square (A000290). ● a(n) = n ^ 10 + 10 * n ^ 8 + 35 * n ^ 6 + 50 * n ^ 4 + 25 * n ^ 2 = (n ^ 5 + 5 * n ^ 3 + 5 * n) ^ 2. ●

▶ [A304605] 122,218,410,794,1562,3098,6170,12314,24602,49178,98330,196634,393242,786458,1572890,3145754,6291482,12582938,25165850,50331674,100663322,201326618,402653210,805306394,1610612762 ⋆ a(n) = 48 * 2 ^ n + 26 (n>=1). ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n > 2. (End) ●

▶ [A158131] 122,243,364,485,606,727,848,969,1090,1211,1332,1453,1574,1695,1816,1937,2058,2179,2300,2421,2542,2663,2784,2905,3026 ⋆ a(n) = 121 * n + 1. ● a(n) = 2 * a(n - 1) - a(n - 2). ●

▶ [A195856] 1,122,387,965,2221,4941,10813,23453,50589,108701,232861,497565,1060765,2256797,4792221,10157981,21495709,45416349,95813533,201850781,424673181,892338077,1872756637,3925868445,8220835741 ⋆ a(n) = T(10,n), array T given by A048505. ● a(n) = (n ^ 2 + 41 * n + 400) * 2 ^ (n - 2) - 99. ● a(n) = 7 * a(n - 1) - 18 * a(n - 2) + 20 * a(n - 3) - 8 * a(n - 4). - _ Colin Barker _ , Feb 25 2015 ●

▶ [A173267] 122,486,1092,1940,3030,4362,5936,7752,9810,12110,14652,17436,20462,23730,27240,30992,34986,39222,43700,48420,53382,58586,64032,69720,75650 ⋆ a(n) = 121 * n ^ 2 + n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Feb 06 2012 ●

▶ [A316526] 122,9966,210134,2741670,27930182,245220486,1953210374,14543545350,103166087942,706033804806,4702595902214,30675859444230,196880387684102,1247535454225926,7825081688699654,48684535015586310,300917096071974662,1850113238390115846 ⋆ a(n) = 122880 * 6 ^ n - 307200 * 5 ^ n + 264960 * 4 ^ n - 90240 * 3 ^ n + 9844 * 2 ^ n - 122. ● a(n) = 21 * a(n - 1) - 175 * a(n - 2) + 735 * a(n - 3) - 1624 * a(n - 4) + 1764 * a(n - 5) - 720 * a(n - 6) for n>6. ●

▶ [A341992] 123,124,132,135,142,145,153,154,213,214,231,236,241,246,263,264,312,315,321,326,351,356,362,365,412 ⋆ Take a standard 6 - sided die and concatenate the numbers that can be seen around any of the corners and sort into increasing order. ● a(n) + a(49 - n) = 777 for n = 1..48. - _ Rémy Sigrist _ , Feb 26 2021 ●

▶ [A181679] 123,488,1095,1944,3035,4368,5943,7760,9819,12120,14663,17448,20475,23744,27255,31008,35003,39240,43719,48440,53403,58608,64055,69744,75675 ⋆ a(n) = 121 * n ^ 2 + 2 * n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A193251] 1,123,605,1687,3609,6611,10933,16815,24497,34219,46221,60743,78025,98307,121829,148831,179553,214235,253117,296439,344441,397363,455445,518927,588049 ⋆ Small rhombicosidodecahedron with faces of centered polygons. ● a(n) = 40 * n ^ 3 - 60 * n ^ 2 + 22 * n - 1. ●

▶ [A167231] 123,1234,2345,3456,4567,5678,6789,7890,8901,9012,10123,11234,12345,13456,14567,15678,16789,17890,18901,19012,20123,21234,22345,23456,24567 ⋆ Append three digits, each increasing by one modulo 10 from the last digit of the nonnegative integers. 0 - > 123, 1 - > 1234 2 - > 2345, ... , 9 - > 9012, 10 - > 10123, etc. ● a(n) = 1000n + O(1). ●

▶ [A259907] 1,123,1557,6719,16800,31920,52080,77280,107520,142800,183120,228480,278880,334320,394800,460320,530880,606480,687120,772800,863520,959280,1060080,1165920,1276800 ⋆ Fifth differences of 7th powers (A001015). ● a(n) = 840 * (3 * n ^ 2 - 9 * n + 8) for n>3. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>6. - _ Vincenzo Librandi _ , Jul 08 2015 ●

▶ [A068239] 1,123,4806,71410,583455,3232341,13675228,47502036,141991245,377162335,910842306,2033854758,4253012491,8411348505,15856955640,28673921896,49991146713,84387303171,138412872190,221253017370,345558093111,528471784093,792890261076 ⋆ 1 / 2 the number of colorings of a 3 X 3 square array with n colors. ● a(n) = (79 * n - 323 * n ^ 2 + 594 * n ^ 3 - 648 * n ^ 4 + 459 * n ^ 5 - 216 * n ^ 6 + 66 * n ^ 7 - 12 * n ^ 8 + n ^ 9) / 2. ●

▶ [A129010] 0,124,168,187,343,399,595,624,915,952,1260,1372,1768,1827,1975,2499,3135,3367,3468,4312,4620,5712,5875,7524,7735 ⋆ Nonnegative values x of solutions (x, y) to the Diophantine equation x ^ 2 + (x + 833) ^ 2 = y ^ 2. ● a(n) = 6 * a(n - 15) - a(n - 30) + 1666 for n > 30; a(1) = 0, a(2) = 124, a(3) = 168, a(4) = 187, a(5) = 343, a(6) = 399, a(7) = 595, a(8) = 624, a(9) = 915, a(10) = 952, a(11) = 1260, a(12) = 1372, a(13) = 1768, a(14) = 1827, a(15) = 1975, a(16) = 2499, a(17) = 3135, a(18) = 3367, a(19) = 3468, a(20) = 4312, a(21) = 4620, a(22) = 5712, a(23) = 5875, a(24) = 7524, a(25) = 7735, a(26) = 9499, a(27) = 10143, a(28) = 12427, a(29) = 12768, a(30) = 13624. ●

▶ [A038866] 124,208,316,448,604,784,988,1216,1468,1744,2044,2368,2716,3088,3484,3904,4348,4816,5308,5824,6364,6928,7516,8128,8764 ⋆ (n + 4) ^ 3 - n ^ 3. ● a

(n) = 12 * n ^ 2 + 48 * n + 64. - _ Charles R Greathouse IV _ , Nov 12 2014 ●
▶ [A253007] 1,1,1,1,124,3423,33533,158877,490403,1156178,2286874,4013538,6467242,9779058,14080058,19501314,26173898,34228882,43797338,55010338,67998954,82894258,99827322,118929218,140331018 ⋆ Number of n X 4 nonnegative integer arrays with upper left 0 and lower right its king - move distance away minus 3 and every value increasing by 0 or 1 with every step right, diagonally se or down. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>13. ●
▶ [A035816] 1,124,7688,317812,9856016,244619884,5062048280,89845298020,1396398655520,19309150041180,240550579435048,2727459472756052,28384206701341744,273049514243591756,2442767874758677048 ⋆ Coordination sequence for lattice D *_ 62 (with edges defined by l _ 1 norm = 1). ● a(m)=add(2 ^ k * binomial(n, k) * binomial(m - 1, k - 1), k=0..n) + 2 ^ n * binomial((n + 2 * m) / 2 - 1, n - 1); with n=62. ●
▶ [A038867] 125,215,335,485,665,875,1115,1385,1685,2015,2375,2765,3185,3635,4115,4625,5165,5735,6335,6965,7625,8315,9035,9785,10565 ⋆ (n + 5) ^ 3 - n ^ 3. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Jul 07 2012 ●
▶ [A172460] 125,253,496,752,1095,1607,2232,2961,3985,5014,6229,7479,8759,10090,11459,12917,14453,16134,17835,19550,21342,23191,25066,27114,29301 ⋆ Partial sums of economical numbers A046759. ● a(n) = SUM[i=1..n] { n written as a product of primes raised to powers, where D(n) = number of digits in product, l(n) = number of digits in n; sequence gives n such that D(n)<l(n) } . ●
▶ [A253226] 125,306,494,914,1709,3241,6231,12122,23800,47037,93377,185908,370806,740423,1479463,2957334,5912852,11823649,23644989,47287400,94571938,189140715,378277955,756552106,1513100064 ⋆ Number of (n + 1) X (3 + 1) 0..1 arrays with every 2 X 2 subblock diagonal minimum minus antidiagonal minimum nondecreasing horizontally and diagonal maximum minus antidiagonal maximum nondecreasing vertically. ● a(n) = 46 + 1443 * 2 ^ (n - 5) + (13 * n) / 2 + (15 * n ^ 2) / 2 for n>4. ●
▶ [A250900] 125,431,1325,3867,11029,31215,88421,251819,722525,2089551,6088189,17854683,52646213,155906639,463263029,1380089259,4119295693,12312797679,36841923341,110320248347,330524536565,990650861871,2970006427525 ⋆ Number of (2 + 1) X (n + 1) 0..2 arrays with nondecreasing x(i,j) - x(i,j - 1) in the i direction and nondecreasing absolute value of x(i,j) - x(i - 1,j) in the j direction. ● a(n) = 23 / 2 - 2 ^ (4 + n) + (7 * 3 ^ (2 + n)) / 2 + 2 * n + 3 * 2 ^ (3 + n) * n + n ^ 2. ●
▶ [A141480] 125,500,1250,2500,4375,7000,10500,15000,20625,27500,35750,45500,56875,70000,85000,102000,121125,142500,166250,192500,221375,253000,287500,325000,365625 ⋆ a(n) = binomial(n + 2,3) * 5 ^ 3. ● a(n) = C(n + 2,3) * 5 ^ 3, n>=1. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4); a(1)=125, a(2)=500, a(3)=1250, a(4)=2500. - _ Harvey P. Dale _ , Oct 20 2012 ●
▶ [A060093] 0,0,0,0,125,722,2565,7180,17335,37750,76093,144340,260590,451440,755040,1224964,1935050,2985380,4509590,6683720,9736835,13963670,19739575,27538060,37951265 ⋆ Number of 5 - block ordered bicoverings of an unlabeled n - set. ● a(n) = binomial(n + 9, 9) - 5 * binomial(n + 5, 5) - 10 * binomial(n + 3, 3) + 20 * binomial(n + 2, 2) + 30 * binomial(n + 1, 1) - 60 * binomial(n, 0) + 24 * binomial(n - 1, - 1). ● a(n) = (n - 1) * (n - 2) * (n - 3) * (n ^ 6 + 51 * n ^ 5 + 1165 * n ^ 4 + 15885 * n ^ 3 + 130954 * n ^ 2 + 660504 * n + 1451520) / 362880, n > 0. - _ R. J. Mathar _ , Aug 10 2017 ●
▶ [A016815] 1,125,729,2197,4913,9261,15625,24389,35937,50653,68921,91125,117649,148877,185193,226981,274625,328509,389017,456533,531441,614125,704969,804357,912673 ⋆ (4n + 1) ^ 3. ● a(0)=1, a(1)=125, a(2)=729, a(3)=2197, a(n)=4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Harvey P. Dale _ , Sep 01 2013 ●
▶ [A016851] 0,125,1000,3375,8000,15625,27000,42875,64000,91125,125000,166375,216000,274625,343000,421875,512000,614125,729000,857375,1000000,1157625,1331000,1520875,1728000 ⋆ a(n) = (5 * n) ^ 3. ● a(0)=0, a(1)=125, a(2)=1000, a(3)=3375, a(n)=4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Harvey P. Dale _ , Jun 18 2011 ●
▶ [A016971] 125,1331,4913,12167,24389,42875,68921,103823,148877,205379,274625,357911,456533,571787,704969,857375,1030301,1225043,1442897,1685159,1953125,2248091,2571353,2924207,3307949 ⋆ a(n) = (6 * n + 5) ^ 3. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Wesley Ivan Hurt _ , Oct 02 2020 ● a(n) = (125 + 831 * x + 339 * x ^ 2 + x ^ 3) / (- 1 + x) ^ 4. - _ Wesley Ivan Hurt _ , Oct 02 2020 ●
▶ [A255181] 1,125,1806,10206,35406,92526,201726,388206,682206,1119006,1738926,2587326,3714606,5176206,7032606,9349326,12196926,15651006,19792206,24706206,30483726,37220526,45017406,53980206,64219806 ⋆ Third differences of seventh powers (A001015). ● a(n) = 42 * (3 - 10 * n + 15 * n ^ 2 - 10 * n ^ 3 + 5 * n ^ 4) for n>1, a(0)=1, a(1)=125. ●
▶ [A373007] 1,125,2179,15997,78101,272375,823495,2047613,4765465,9762625,19487051,34857463,62748349,102936875,170182079,262094461,410338385,595683125,893871379,1249381697,1794395605,2435881375,3404824919,4461748727,6101640601 ⋆ a(n) = Sum _{ 1 <= x _ 1, x _ 2, x _ 3, x _ 4, x _ 5 <= n } (n / gcd(x _ 1, x _ 2, x _ 3, x _ 4, x _ 5, n)) ^ 2. ● a(n) = Sum _{ 1 <= x _ 1, x _ 2, x _ 3, x _ 4, x _ 5 <= n } (gcd(x _ 1, x _ 2, x _ 3, n) / gcd(x _ 1, x _ 2, x _ 3, x _ 4, x _ 5, n)) ^ 5. ● a(n) = Sum _{ d|n } mu(n / d) * (n / d) ^ 2 * sigma _ 7(d). ●
▶ [A017127] 125,2197,9261,24389,50653,91125,148877,226981,328509,456533,614125,804357,1030301,1295029,1601613,1953125,2352637,2803221,3307949,3869893,4492125,5177717,5929741,6751269 ⋆ a(n) = (8 * n + 5) ^ 3. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4); a(0)=125, a(1)=2197, a(2)=9261, a(3)=24389. - _ Harvey P. Dale _ , May 09 2013 ●
▶ [A017223] 125,2744,12167,32768,68921,125000,205379,314432,456533,636056,857375,1124864,1442897,1815848,2248091,2744000,3307949,3944312,4657463,5451776,6331625,7301384,8365427 ⋆ a(n) = (9 * n + 5) ^ 3. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n > 3. ●
▶ [A317981] 125,9028,110961,684176,2871325,9402660,25872833,62572096,136972701,276971300,524988145,943023888,1618774781,2672907076,4267591425,6616398080,9995653693,14757360516,21343778801,30303773200,42311023965,58184203748,78909220801 ⋆ Expansion of x * (125 + 8028 * x + 42237 * x ^ 2 + 42272 * x ^ 3 + 8007 * x ^ 4 + 132 * x ^ 5 - x ^ 6) / (1 - x) ^ 8. ● a(n) = 20 * n ^ 7 + 70 * n ^ 6 + 70 * n ^ 5 - 28 * n ^ 3 - 7 * n ^ 2. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. ●
▶ [A194654] 0,0,0,0,125,28930,809368,9414152,66305781,338374560,1378426060,4751038284,14388638901,39296604844,98605016040,230507248912,507379370525,1060395103800,2118303772332,4066797540820,7537144196589,13535598398916,23628635128024,40203393674520 ⋆ Number of ways to place 6 nonattacking kings on an n X n cylindrical chessboard. ● a(n) = 1 / 720 * n * (n ^ 11 - 135 * n ^ 9 + 90 * n ^ 8 + 7525 * n ^ 7 - 9420 * n ^ 6 - 216045 * n ^ 5 + 378090 * n ^ 4 + 3192694 * n ^ 3 - 6899520 * n ^ 2 - 19450080 * n + 48327120), n>=7. ●
▶ [A120807] 1,125,357911,28049850707778719,1093838138707598549,2498288375480240699,29718168201235659 59,113682987902437398 89,1410686317473246197 9,17104690428464397149,21904077634699214681,64352051556875937161 ⋆ Cubes in A120806: n + d + 1 is prime for all divisors d of n. All cubes greater than 1 are cubes of odd primes. ● a(1)=1. a(n) = p ^ 3 where p is the (n - 1)st prime such that a(n) + d + 1 is prime for all divisors d of a(n). ●
▶ [A104395] 126,182,217,237,247,251,266,301,321,331,335,357,377,386,387,391,412,421,422,426,441,442,446,451,455 ⋆ Sums of 5 distinct positive pentatope numbers (A000332). ● a(n) = Ptop(g) + Ptop(h) + Ptop(i) + Ptop(j) + Ptop(k) for some positive g= / =h= / =i= / =j= / =k and Ptop(n) = binomial(n + 3,4). ●
▶ [A254370] 126,210,450,1200,3750,13080,49350,197400,825750,3577080,15930150,72528600,336141750,1580449080,7518010950,36102667800,174710721750,850780489080,4164115131750,20465328135000,100917328245750,498984369457080,2472617583932550 ⋆ a(n) = 35 * 2 ^ n + 5 * 4 ^ n + 15 * 3 ^ n + 5 ^ n + 70. ● a(n) = 15 * a(n - 1) - 85 * a(n - 2) + 225 * a(n - 3) - 274 * a(n - 4) + 120 * a(n - 5). - _ Colin Barker _ , Jan 30 2015 ●
▶ [A254465] 126,252,672,2232,8592,36552,166992,804552,4037712,20923272,111231312,603667272,3331889232,18646768392,105558814032,603280840392,3475274371152,20152803339912,117513698083152,688425727971912,4048693055291472,23888489018765832,141334996634766672,838119509472869832 ⋆ a(n) = 35 * 2 ^ n + 10 * 4 ^ n + 20 * 3 ^ n + 4 * 5 ^ n + 6 ^ n + 56. ● a(n) = 21 * a(n - 1) - 175 * a(n - 2) + 735 * a(n - 3) - 1624 * a(n - 4) + 1764 * a(n - 5) - 720 * a(n - 6). - _ Colin Barker _ , Jan 31 2015 ●
▶ [A063334] 1,126,280,435,590,745,900,1055,1210,1365,1520,1673,1830,1985,2140,2293,2450,2603,2760,2913,3070,3223,3380,3531,3690 ⋆ Dimension of the space of weight n cuspidal newforms for Gamma _ 1(61). ● a(n) = a(n - 4) + a(n - 6) - a(n - 10) for n>13. ●
▶ [A172139] 0,1,126,1168,7334,35749,137970,438984,1208246,2969389,6662480,13873100,27144408,50389581,89424014,152638280,251834530,403250693,628798516,957543164,1427453780,2087456085,2999819778,4242915176 ⋆ Number of ways to place 4 nonattacking zebras on an n X n board. ● a(n) = (n ^ 8 - 54 * n ^ 6 + 240 * n ^ 5 + 827 * n ^ 4 - 8592 * n ^ 3 + 10362 * n ^ 2 + 75600 * n - 204864) / 24, n >= 9. ●
▶ [A194717] 0,1,126,1181,4966,14289,32966,65821,118686,198401,312814,470781,682166,957841,1309686,1750589,2294446,2956161,3751646,4697821,5812614,7114961,8624806,10363101,12351806 ⋆ Number of n - ary words beginning with the first character of the alphabet, that can be built by inserting five doublets into the initially empty word. ● a(0) = 0, a(n) = 1 + (8 + (27 + (48 + 42 * (n - 1)) * (n - 1)) * (n - 1)) * (n - 1) for n>0. ●
▶ [A027805] 126,1470,9240,41580,150150,462462,1261260,3123120,7147140,15315300,31039008,59961720,111105540,198470580,343219800,576609264,943854450,1509157650,2362159800,3626122500,5468192730,8112154050,11854124100,17081719200,24297273000 ⋆ a(n) = 21 * (n + 1) * binomial(n + 4,9). ● a(n) = C(n + 1, 6) * C(n + 4, 4). - _ Zerinvary Lajos _ , May 25 2005; corrected by _ R. J. Mathar _ , Feb 13 2016 ●
▶ [A027814] 126,1512,9702,44352,162162,504504,1387386,3459456,7963956,17153136,34918884,67721472,125919612,225629712,391270572,658982016,1081142370,1732250520,2716483770,4177293120,6309453150,9374044680,13716915030,19791233280,28184836680 ⋆ a(n) = 126 * (n + 1) * binomial(n + 5,9) / 5. ● a(n) = C(n + 1, 5) * C(n + 5, 5). - _ Zerinvary Lajos _ , Apr 18 2005; corrected by _ R. J. Mathar _ , Feb 10 2016 ●
▶ [A189345] 0,1,126,1820,12650,58905,211876,635376,1663740,3921225,8495410,17178876,32795126,59626385,103962600,174792640,284660376,450710001,695946630,1050739900,1554599970,2258257001,3226076876,4538847600,6296972500 ⋆ Number of ways to choose four points in an n X n grid (or geoplane). ● a(n) = binomial(n ^ 2,4) = (1 / 24) * n ^ 2 * (n ^ 2 - 1) * (n ^ 2 - 2) * (n ^ 2 - 3). ●
▶ [A255177] 1,126,1932,12138,47544,140070,341796,730002,1412208,2531214,4270140,6857466,10572072,15748278,22780884,32130210,44327136,59978142,79770348,104476554,134960280,172180806,217198212,271178418 ⋆ Second differences of seventh powers (A001015). ● a(n) = 14 * n * (3 * n ^ 4 + 5 * n ^ 2 + 1) for n >0, a(0)=1. ●
▶ [A172140] 0,0,126,2032,20502,160696,929880,4117520,15037036,47368960,132577826,336828368,789558314,1729320120,3574328936,7027309888,13226773092,23959787480,41954706558,71276149776,117848892710,190142197976 ⋆ Number of ways to place 5 nonattacking zebras on an n X n board. ● a(n) = (n ^ 10 - 90 * n ^ 8 + 400 * n ^ 7 + 2915 * n ^ 6 - 26880 * n ^ 5 + 2430 * n ^ 4 + 609920 * n ^ 3 - 1517496 * n ^ 2 - 4188480 * n + 16581120) / 120, n >= 12. ●
▶ [A008397] 1,126,2898,25886,133506,490014,1433810,3573054,7902594,15942206,29896146,52834014,88892930,143501022,223622226,338022398,497556738,715478526,1007769170,1393489566 ⋆ Coordination sequence for E _ 7 lattice. ● a(n) = (2 / 5) * (74 * n ^ 6 - 6 * n ^ 5 + 130 * n ^ 4 + 30 * n ^ 3 + 106 * n ^ 2 - 24 * n + 5) for n >= 1. ●
▶ [A329754] 0,1,126,3078,32800,213750,1008126,3783976,11985408,33297075,83338750,191592126,410450976,828497488,1589341950,2917620000,5154021376,8801526501,14585352318,23529456550,37052820000,57089119626,86233820926,127923156648,186649920000 ⋆ Doubly pentagonal pyramidal numbers. ● a(n) = n ^ 4 * (n ^ 3 + n ^ 2 + 2) * (n + 1) ^ 2 / 16. - _ R. J. Mathar _ , Nov 28 2019 ●

► [A086024] 1,126,3501,46376,389376,2389752,11650752,47587752,168875127,534401002,1537404003,4080706128,10109274128,23590546128,52243162128,110473767504,224205418629,438589465254,830009446129,1524339072504,2724140666880,4748425291880,8089787666880 ⋆ a(n) = Sum _{ i=1..n } C(i + 3,4) ^ 3. ● a(n) = (C(n + 4, 5) / 1001) * (1001 + 20020 * C(n - 1, 1) + 125840 * C(n - 1, 2) + 390390 * C(n - 1, 3) + 695695 * C(n - 1, 4) + 750750 * C(n - 1, 5) + 486850 * C(n - 1, 6) + 175175 * C(n - 1, 7) + 26950 * C(n - 1, 8)). ● a(n) = (n / 6918 9120) * (13824 + 960960 * n ^ 2 + 5885880 * n ^ 3 + 14370356 * n ^ 4 + 19269250 * n ^ 5 + 15996695 * n ^ 6 + 8678670 * n ^ 7 + 3138135 * n ^ 8 + 750750 * n ^ 9 + 114205 * n ^ 10 + 10010 * n ^ 11 + 385 * n ^ 12). - _ G. C. Greubel _ , Nov 22 2017 ●

► [A240929] 126,6046,88428,694360,3705741,15192604,51418473,150420187,392406145,933294637,2056947827,4253047045,8329101326,15566783605,27934647638,48371293570,81155221112,132379936520,210555362990,327359243694,498565022483,745175639274,1094795785319 ⋆ Number of 10 - digit positive integers in base n where the sum of the first k digits equals the sum of the last k digits. ● a(n) = n * (n - 1) * (156190 * n ^ 7 + 15619 * n ^ 6 + 45019 * n ^ 5 + 14149 * n ^ 4 + 18139 * n ^ 3 + 9760 * n ^ 2 + 6660 * n + 5040) / 362880 ●

► [A156702] 1,127,161,287,289,415,449,575,577,703,737,863,865,991,1025,1151,1153,1279,1313,1439,1441,1567,1601,1727,1729 ⋆ Numbers k such that k ^ 2 - 1 = = 0 (mod 24 ^ 2). ● a(n) = - 36 + 27 * (- 1) ^ n + (4 - 4 * i) * (- i) ^ n + (4 + 4 * i) * i ^ n + 72 * n. - _ Harvey P. Dale _ , Apr 25 2012 ●

► [A138127] 0,127,254,381,508,635,762,889,1016,1143,1270,1397,1524,1651,1778,1905,2032,2159,2286,2413,2540,2667,2794,2921,3048 ⋆ Multiples of 127. ● a(n) = 127 * n. ● a(n) = 2 * a(n - 1) - a(n - 2) for n > 1. ●

► [A157949] 127,255,383,511,639,767,895,1023,1151,1279,1407,1535,1663,1791,1919,2047,2175,2303,2431,2559,2687,2815,2943,3071,3199 ⋆ a(n) = 128 * n - 1. ● a(n) = 2 * a(n - 1) - a(n - 2). - _ Vincenzo Librandi _ , Jan 29 2012 ●

► [A250892] 127,431,1450,4750,15111,47061,144442,439056,1326285,3990883,11981256,35923998,107646283,322490625,966132822,2894737036,8674725225,26000484927,77943849220,233694315930,700761297831,2101539929629 ⋆ Number of (n + 1) X (2 + 1) 0..2 arrays with nondecreasing x(i,j) - x(i,j - 1) in the i direction and nondecreasing absolute value of x(i,j) - x(i - 1,j) in the j direction. ● a(n) = (567 - 3807 * 2 ^ n + 7225 * 3 ^ n - 54 * (- 1 + 15 * 2 ^ n) * n + 54 * (- 2 + 3 * 2 ^ n) * n ^ 2) / 108 for n>2. ●

► [A129537] 127,449,811,2089,2521,4651,4969,6427,13697,17351,23831,38393,52321,53569,69119,69767,112571,113021,116089,143257,156941,168409,171757,196561,197569 ⋆ Prime numbers p of the form p=x ^ 2 + y ^ 3 such that there exist three other prime numbers q,r,s such q=abs(x ^ 2 - y ^ 3) ; r=x ^ 3 + y ^ 2 ; s =abs(x ^ 3 - y ^ 2); x > y. ● a(n)=p=x ^ 2 + y ^ 3; q=x ^ 2 - y3;r=x ^ 3 + y ^ 2;s=x ^ 3 - y ^ 2 ; x > y ; a(n),q,r,s are prime numbers. ●

► [A204216] 127,1925,12492,51945,164255,431445,991152,2057553,3945655,7098949,12120428,19806969,31187079,47562005,70550208,102135201,144716751,201165445,274880620,369851657,490722639,642860373,832425776,1066448625 ⋆ Number of length 8 nonnegative integer arrays starting and ending with 0 with adjacent elements differing by no more than n. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

► [A075938] 127,1927,6553,10922,19252,98731,164529,295709,559292,1083662,2132519,4230034,125829127,427819033,713031722,1258291252,6467616811,1077936 1329,19377684509,36649828412,71017955342 ⋆ Basis for code in A075937. ● a(n) = b(2 ^ n), where b is A075937, the binary lexicode, d=7. ●

► [A228222] 127,2059,14053,58141,176851,439927,951049,1854553,3342151,5659651,9113677,14078389,21002203,30414511,42932401,59267377,80232079,106747003,139847221,180689101,230557027,290870119,363188953,449222281,550833751 ⋆ Number of second differences of arrays of length 7 of numbers in 0..n. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. ●

► [A090029] 0,127,2059,16129,75811,277495,804973,2078455,4702531,9905365,19188793,35533303,61846723,104511583,168681913,266042113,405259513,607140745,883046011,1269174145,1780715833,2472697501,3366818491,4548464341 ⋆ Number of distinct lines through the origin in 7 - dimensional cube of side length n. ● a(n) = (n + 1) ^ 7 - 1 - Sum _{ j=2..n + 1 } a(floor(n / j)). - _ Chai Wah Wu _ , Mar 30 2021 ●

► [A152726] 0,1,127,2060,14324,63801,216135,607408,1489744,3293225,6706775,12780396,23051412,39697105,65716399,105142976,163292480,247046193,365173839,528697900,751302100,1049786441,1444571447,1960254000 ⋆ a(n) = n ^ 7 - (n - 1) ^ 7 + (n - 2) ^ 7 - ... + ((- 1) ^ n) * 0 ^ 7. ● a(n) = (17 * (- 1) ^ n + 84 * n ^ 2 - 17 + 28 * n ^ 6 + 8 * n ^ 7 - 70 * n ^ 4) / 16. - _ R. J. Mathar _ , Jul 08 2013 ●

► [A069092] 1,127,2186,16256,78124,277622,823542,2080768,4780782,9921748,19487170,35535616,62748516,104589834,170779064,266338304,410338672,607159314,893871738,1269983744,1800262812,2474870590,3404825446,4548558848 ⋆ Jordan function J _ 7(n). ● a(n) = Sum _{ d|n } d ^ 7 * mu(n / d). ● a(n) = n ^ 7 * Product _{ distinct primes p dividing n } (1 - 1 / p ^ 7). - _ Tom Edgar _ , Jan 09 2015 ●

► [A258808] 0,127,2186,16383,78124,279935,823542,2097151,4782968,9999999,19487170,35831807,62748516,105413503,170859374,268435455,410338672,612220031,893871738,1279999999,1801088540,2494357887,3404825446,4586471423,6103515624 ⋆ a(n) = n ^ 7 - 1. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8). ●

► [A008398] 1,127,3025,28911,162417,652431,2086241,5659295,13561889,29504095,59400241,112234255,201127185,344628207,568250433,906272831,1403829569,2119308095,3127077265,4520566831 ⋆ Crystal ball sequence for E _ 7 lattice. ● a(n) = 1 + (2 / 105) * n * (222 * n ^ 6 + 756 * n ^ 5 + 1260 * n ^ 4 + 1470 * n ^ 3 + 1708 * n ^ 2 + 1029 * n + 170). ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8). - _ Harvey P. Dale _ , Jul 18 2012 ●

► [A229360] 128,270,910,4392,26218,177120,1292410,9924912,78974938,644749920,5365004410,45294444432,386724933658,3331246259520,28899114836410,252142576067952,2210222303020378,19448976596389920,171690169932572410,1519690359242075472,13481625657159443098 ⋆ Total sum of n - th powers of parts in all partitions of 9. ● a(n) = 67 + 26 * 2 ^ n + 15 * 3 ^ n + 8 * 4 ^ n + 5 * 5 ^ n + 3 * 6 ^ n + 2 * 7 ^ n + 8 ^ n + 9 ^ n. ●

► [A197708] 128,610,4572,25045,102807,339119,948645,2337564,5211939,10721353,20642867,37610342,65394162,109236388,176246402,275862066,420381442,625570111,911349137,1302568701,1829872465,2530657691,3450136161,4642500937,6172204001 ⋆ a(n) = floor((n + 1 / n) ^ 7). ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8). - _ Wesley Ivan Hurt _ , Apr 17 2023 ●

► [A366827] 0,1,128,731,2160,4765,8896,14903,23136,33945,47680,64691,85328,109941,138880,172495,211136,255153,304896,360715,422960,491981,568128,651751,743200 ⋆ - a(n) / 7! is the coefficient of x ^ 7 in the Taylor expansion of the k - th iteration of sin(x). ● a(n) = binomial(n,1) + 126 * binomial(n,2) + 350 * binomial(n,3) = (175 * n ^ 2 - 336 * n + 164) * n / 3. See A366834. ●

► [A188151] 0,0,128,800,2112,4008,6472,9504,13104,17272,22008,27312,33184,39624,46632,54208,62352,71064,80344,90192,100608,111592,123144,135264,147952 ⋆ Number of 6 - step self - avoiding walks on an n X n square summed over all starting positions. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>7. ●

► [A224043] 128,987,2419,4160,6321,9125,12856,17875,24623,33686,45837,62087,83746,112495,150470,200359,265513,350072,459107,598779,776516,1001209,1283428,1635659,2072563 ⋆ Number of 7 X n 0..1 arrays with antidiagonals unimodal and rows and diagonals nondecreasing. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>13. ●

► [A130813] 128,1024,4608,15360,42240,101376,219648,439296,823680,1464320,2489344,4073472,6449664,9922560,14883840,21829632,31380096,44301312,61529600,84198400,113667840,151557120,199779840,260582400,336585600 ⋆ If X _ 1,..., X _ n is a partition of a 2n - set X into 2 - blocks then a(n) is equal to the number of 7 - subsets of X containing none of X _ i, (i=1,...n). ● a(n) = binomial(2 * n,7) + binomial(n,2) * binomial(2 * n - 4,3) - n * binomial(2 * n - 2,5) - (2 * n - 6) * binomial(n,3). ● a(n) = C(n,n - 7) * 2 ^ 7, n>=7. - _ Zerinvary Lajos _ , Dec 07 2007 ●

► [A221599] 128,1113,4240,11011,22912,41401,67936,103975,150976,210397,283696,372331,477760,601441,744832,909391,1096576,1307845,1544656,1808467,2100736,2422921,2776480,3162871,3583552 ⋆ Number of 0..n arrays of length 7 with each element differing from at least one neighbor by 1 or less. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>6. ●

► [A134630] 0,0,128,1116,4896,15200,38160,82908,162176,292896,496800,801020,1238688,1849536,2680496,3786300,5230080,7083968,9429696,12359196,15975200,20391840,25735248,32144156,39770496 ⋆ 5 * n ^ 5 - 3 * n ^ 3 - 2 * n ^ 2. Coefficients and exponents are the prime numbers in decreasing order. ● a(n) = 5 * n ^ 5 - 3 * n ^ 3 - 2 * n ^ 2. ● a(0)=0, a(1)=0, a(2)=128, a(3)=1116, a(4)=4896, a(5)=15200, a(n)= 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). - _ Harvey P. Dale _ , Jun 01 2014 ●

► [A188822] 128,1156,3888,8836,15776,24964,36000,49284,64416,81796,101024,122500,145824,171396,198816,228484,260000,293764,329376,367236,406944,448900,492704,538756,586656 ⋆ Number of n X 7 binary arrays without the pattern 0 1 diagonally or antidiagonally. ● a(n) = 2 * (578 - 1088 * n + 512 * n ^ 2) for n >3 and even. ● a(n) = 2 * (528 - 1088 * n + 512 * n ^ 2) for n>3 and odd. ●

► [A070055] 128,1375,10238,62347,331561,1595475,7102354,29688844,117789230,447095308,1633583432,5773429726,19814156786,66246078602,216345953850,691705334522,2169266885114,6684119486458,20264694041594,60526805714938,178299235266554,518528519151610,1490041038438394,4234162281971706,11906594366685178 ⋆ Number of Bottleneck - Monge matrices with 7 rows. ● a(N) = a(7, N), where a(P, N) is defined recursively in A070050. ●

► [A200842] 128,1465,8210,31677,96690,250913,577660,1212729,2365804,4346969,7598878,12735125,20585358,32247681,49148888,73113073,106439160,151987897,213278858,294597997,401116298,539020065,715653396,939673385,1221218596 ⋆ Number of 0..n arrays x(0..6) of 7 elements without any two consecutive increases or two consecutive decreases. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. ●

► [A200789] 128,1791,11704,50775,169884,474566,1160616,2562633,5217520,9944957,17946864,30927871,51238812,82045260,127523120,193083297,285627456,413836891,588496520,822856023,1133030140,1538440146,2062298520 ⋆ Number of 0..n arrays x(0..6) of 7 elements without any two consecutive increases. ● a(n) = (5040 + 40704 * n + 127582 * n ^ 2 + 199213 * n ^ 3 + 169960 * n ^ 4 + 80626 * n ^ 5 + 19978 * n ^ 6 + 2017 * n ^ 7) / 5040. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. ●

► [A269587] 128,1889,13946,67763,248324,745013,1927694,4453031,9406088,18482249,34214498,60251099,101688716,165466013,260822774,399829583,597993104,874942001,1255198538,1769040899,2453461268,3353224709,4522033886 ⋆ Number of length - 7 0..n arrays with no repeated value differing from the previous repeated value by more than one. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. ●

► [A093528] 128,2048,16384,524288,4194304,67108864,536870912,34359738368,274877906944,4398046511104,35184372088832,1125899906842624,9007199254740992,144115188075855872,1152921504606846976 ⋆ Numerators of odd raw moments in the distribution of line lengths for lines picked at random in the unit disk. ● a(k) = Numerator[(2 * Gamma[3 + n]) / ((2 + n) * Gamma[2 + n / 2] * Gamma[3 + n / 2])] for n = 2k - 1. ●

► [A195594] 128,2102,15988,81606,327192,1118398,3419648,9643562,25603228,64923594,158877948,378088270,879980720,2011806182,4532900488,10091643138,22244251284,48622120786,105526014500,227633451206,488451508168,1043298475662,2219419264848 ⋆ Number of ways to place 6n nonattacking kings on a vertical cylinder 12 X 2n. ● a(n) = (15839 * n - 99729) * 2 ^ n + 231 / 2 * n ^ 4 + 1767 * n ^ 3 + 26001 / 2 * n ^ 2 + 53295 * n + 99730. ●

► [A223954] 128,2187,6869,12856,20275,31899,52532,89135,152495,259230,434069,712692,1145194,1800237,2769954,4175669,6174497,8966888,12805179,1800321

8,24947124,34107247,46051392,61459371,81138947 ⋆ Number of 7 X n 0..1 arrays with diagonals and antidiagonals unimodal and rows nondecreasing. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>13. ●

▶ [A224138] 128,2187,9688,25047,52581,101412,186348,329167,561329,927323,1488515,2327716,3554534,5311574,7781550,11195373,15841279,22075061,30331469,41136842,55123036,73042712,95786048,124398939,160102749 ⋆ Number of 7 X n 0..1 arrays with rows nondecreasing and antidiagonals unimodal. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>13. ●

▶ [A001015] 0,1,128,2187,16384,78125,279936,823543,2097152,4782969,10000000,19487171,35831808,62748517,105413504,170859375,268435456,410338673,612220032,893871739,1280000000,1801088541,2494357888,3404825447,4586471424 ⋆ Seventh powers: a(n) = n ^ 7. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) + 5040. - _ Ant King _ , Sep 24 2013 ● a(n) = n + Sum _{ j=0..n - 1 }{ k=1..6 } binomial(7,k) * j ^ (7 - k). - _ Patrick J. McNab _ , Mar 28 2016 ●

▶ [A352053] 0,128,2187,16384,78125,280064,823543,2097152,4785156,10000128,19487171,35848192,62748517,105413632,170939687,268435456,410338673,612500096,893871739,1280016384,1801914271,2494358016,3404825447,4588568576,6103593750 ⋆ Sum of the 7th powers of the divisor complements of the odd proper divisors of n. ● a(n) = n ^ 7 * Sum _{ d|n, d<n, d odd } 1 / d ^ 7. ●

▶ [A231306] 0,1,128,2188,16512,80313,296448,903856,2393600,5686825,12393600,25173996,48225408,87922513,153638912,258781888,422074368,669120561,1034294400,1562992300,2314294400,3364080841,4808652288,6768906288,9395123712 ⋆ Recurrence a(n) = a(n - 2) + n ^ M for M=7, starting with a(0)=0, a(1)=1. ● a(n) = Sum _{ k=0..floor(n / 2) } (n - 2k) ^ 7. ● a(n) = 1 / 96 * (6 * n ^ 8 + 48 * n ^ 7 + 112 * n ^ 6 - 224 * n ^ 4 + 256 * n ^ 2 + 51 * ((- 1) ^ n - 1)). ●

▶ [A236209] 128,2315,80440,903983,20391154,83139671,493478344,1387350083,4792175530,22042051839,49554665950,144486543083,339240816964,611059428071,1117682548534,2292393688371,4781045173190,7923788009211,13984499614534,23079619772925,34127018292022 ⋆ Sum of the seventh powers of the first n primes. ● a(n) = Sum _{ k=1..n } prime(k) ^ 7. ●

▶ [A128802] 0,0,128,3072,49152,655360,7864320,88080384,939524096,9663676416,96636764160,944892805120,9070970929152,85761906966528,800444465020928,7388718138654720,67553994410557440,612489549322387456 ⋆ a(n) = n * (n - 1) * 8 ^ n. ● a(n) = 24 * a(n - 1) - 192 * a(n - 2) + 512 * a(n - 3); a(0)=0, a(1)=0, a(2)=128. - _ Harvey P. Dale _ , Nov 05 2011 ●

▶ [A022150] 1,128,3264,34624,216448,954880,3301952,9556160,24165120,54993792,115021760,224533056,413862016,726758656,1224437056,1990370240,3135895040,4806690432,7190192832,10524011840,15105409920,21301909504,29563091008,40433645248,54567743744 ⋆ Coordination sequence for root lattice B _ 8. ● a(0) = 1; for n > 0, a(n) = (3968 * n ^ 7 - 6720 * n ^ 6 + 35840 * n ^ 5 - 36960 * n ^ 4 + 60032 * n ^ 3 - 26880 * n ^ 2 + 11040 * n) / 315. - _ Philippe Deléham _ , Feb 20 2004 ●

▶ [A191899] 0,128,3280,32768,195312,839808,2882400,8388608,21523360,50000000,107179440,214990848,407865360,737894528,1281445312,2147483648,3487878720,5509980288,8491781520,12800000000,18911429680,27437936768,39155492640,55037657088,76293945312 ⋆ Number of compositions of odd natural numbers into 8 parts <=n ● a(n) = 1 / 2 * ((n + 1) ^ 8 - (1 + (- 1) ^ n) / 2). ●

▶ [A191495] 1,128,3281,32768,195313,839808,2882401,8388608,21523361,50000000,107179441,214990848,407865361,737894528,1281445313,2147483648,3487878721,5509980288,8491781521,12800000000,18911429681,27437936768,39155492641,55037657088,76293945313 ⋆ Number of compositions of even natural numbers into 8 parts <= n. ● a(n) = ((n + 1) ^ 8 + (1 + (- 1) ^ n) / 2) / 2. ● a(n) = 8 * a(n - 1) - 27 * a(n - 2) + 48 * a(n - 3) - 42 * a(n - 4) + 42 * a(n - 6) - 48 * a(n - 7) + 27 * a(n - 8) - 8 * a(n - 9) + a(n - 10); a(0)=1, a(1)=128, a(2)=3281, a(3)=32768, a(4)=195313, a(5)=839808, a(6)=2882401, a(7)=8388608, a(8)=21523361, a(9)=50000000. - _ Harvey P. Dale _ , Mar 13 2013 ●

▶ [A283813] 1,128,4246,85310,1315666,17234438,202229266,2193664790,22447207906,219680806598,2076319823986,19088476874870,171615294959746,1515094215592358,13177154171845906,113190802751806550,962272631860465186,8109687887324611718,67845242760941615026 ⋆ Poly - Bernoulli numbers B _ n ^ (k) with k = - 7. ● a(n) = 5040 * 8 ^ n - 15120 * 7 ^ n + 16800 * 6 ^ n - 8400 * 5 ^ n + 1806 * 4 ^ n - 126 * 3 ^ n + 2 ^ n. ● a(n) = 35 * a(n - 1) - 511 * a(n - 2) + 4025 * a(n - 3) - 18424 * a(n - 4) + 48860 * a(n - 5) - 69264 * a(n - 6) + 40320 * a(n - 7) for n>6. ●

▶ [A240931] 0,0,128,4374,49152,312500,1399680,4941258,14680064,38263752,90000000,194871710,394149888,752982204,1370375552,2392031250,4026531840,6565418768,10407740544,16089691302,24320000000,36021770820,52381515648,749061598 34,105488842752 ⋆ a(n) = n ^ 8 - n ^ 7. ● a(n) = n ^ 7 * (n - 1) = n ^ 8 - n ^ 7. ●

▶ [A201239] 0,0,0,128,6745,100332,754453,3830016,15038541,49207020,140410699,360001152,846775007,1855033964,3828109545,7507096576,14087087961,25436160108,44395753647,75184958080,123935571963,199389702380,313797119069,484055619840,733144325125 ⋆ Number of ways to place 5 non - attacking wazirs on an n X n toroidal board. ● a(n) = n ^ 2 * (n ^ 8 - 50n ^ 6 + 995n ^ 4 - 9370n ^ 2 + 35424) / 120, n>=6. ●

▶ [A035817] 1,128,8192,349568,11190272,286680704,6123315200,112173964160,1799375912960,25678370512000,330122643283968,3862436697723264,41474426978451456,411631804378210944,3799040291725172736 ⋆ Coordination sequence for lattice D *_ 64 (with edges defined by l _ 1 norm = 1). ● a(m)=add(2 ^ k * binomial(n, k) * binomial(m - 1, k - 1), k=0..n) + 2 ^ n * binomial((n + 2 * m) / 2 - 1, n - 1); with n=64. ●

▶ [A001661] 128,12758,5134240,67898771,11146309947,766834015734,4968618780985762 ⋆ Largest number not the sum of distinct positive n - th powers. ● a(n) < d * 2 ^ (n - 1) * (c * 2 ^ n + (2 / 3) * d * (4 ^ n - 1) + 2 * d - 2) ^ n + c * d, where c = n! * 2 ^ (n ^ 2) and d = 2 ^ (n ^ 2 + 2 * n) * c ^ (n - 1) - 1, according to Kim [2016 - 2017]. - _ Danny Rorabaugh _ , Oct 11 2016 ●

▶ [A017011] 128,4782969,268435456,3404825447,21870000000,94931877133,319277809664,897410677851,2207984167552,4902227890625,10030613004288,19203908986159,34792782221696,60170087060757,100000000000000,160578147647843,250226879128704,379749833583241 ⋆ a(n) = (7 * n + 2) ^ 7. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>7. ●

▶ [A160865] 0,128,43793863,5765980032,156401023862,1935682046080,14862118997493,82608952539008,363455410347052,1339359393716352,4294566953004035,12309095341172608,32166963447719778,77797775304659072,176169028327719217,376942917127098240,767724795122229848 ⋆ 128 * P _ 11(n), 128 times the Legendre polynomial of order 11 at n. ● a(n) = 12 * a(n - 1) - 66 * a(n - 2) + 220 * a(n - 3) - 495 * a(n - 4) + 792 * a(n - 5) - 924 * a(n - 6) + 792 * a(n - 7) - 495 * a(n - 8) + 220 * a(n - 9) - 66 * a(n - 10) + 12 * a(n - 11) - a(n - 12) for n>11. ●

▶ [A017551] 128,105413504,8031810176,114415582592,781250000000,3521614606208,12151280273024,34792782221696,86812553324672,194871710000000,402271083010688,775771085481344,1414067010444416,2458100350228352 ⋆ a(n) = (12 * n + 2) ^ 7. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8); a(0)=128, a(1)=105413504, a(2)=8031810176, a(3)=114415582592, a(4)=781250000000, a(5)=3521614606208, a(6)=12151280273024, a(7)=34792782221696. - _ Harvey P. Dale _ , Jan 13 2013 ●

▶ [A235879] 129,231,453,951,2109,4911,11973,30471,80589,220191,617493,1766391,5127069,15037071,44423013,131892711,392925549,1173271551,3508804533,10504393431,31469140029,94319339631,282781858053,847993252551 ⋆ Number of (n + 1) X (3 + 1) 0..2 arrays with the minimum plus the upper median equal to the lower median plus the maximum in every 2 X 2 subblock. ● a(n) = 3 * (12 + 7 * 2 ^ (1 + n) + 3 ^ n). ●

▶ [A157951] 129,257,385,513,641,769,897,1025,1153,1281,1409,1537,1665,1793,1921,2049,2177,2305,2433,2561,2689,2817,2945,3073,3201 ⋆ a(n) = 128 * n + 1. ● a(n) = 2 * a(n - 1) - a(n - 2). - _ Vincenzo Librandi _ , Feb 10 2012 ●

▶ [A250814] 129,379,873,1731,3097,5139,8049,12043,17361,24267,33049,44019,57513,73891,93537,116859,144289,176283,213321,255907,304569,359859,422353,492651,571377 ⋆ Number of (2 + 1) X (n + 1) 0..2 arrays with nondecreasing x(i,j) - x(i,j - 1) in the i direction and nondecreasing min(x(i,j),x(i - 1,j)) in the j direction. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

▶ [A036548] 1,129,513,1665,5121,15489,46593,139905,419841,1259649,3779073,11337345,34012161,102036609,306109953,918329985,2754990081,8264970369,24794911233,74384733825,223154201601,669462604929,2008387814913 ⋆ a(n) = T(7, n), array T given by A048471. ● a(n) = 64 * 3 ^ n - 63. - _ Ralf Stephan _ , Feb 17 2004 ● a(n) = 3 * a(n - 1) + 126. ● a(n) = 4 * a(n - 1) - 3 * a(n - 2). ●

▶ [A341552] 129,975,7041,49935,351489,2466255,17281281,121021455,847307649,5931625935,41522798721,290663842575,2034659652609,14242655832015,99698705615361,697891283681295,4885240018890369,34196683231596495,239376791919267201,1675637571329145615 ⋆ Number of sets in the geometry determined by the Hausdorff metric at each location between two sets defined by a complete bipartite graph K(3,n) (with n at least 4) missing three edges, where all three removed edges are incident to different vertices in the 3 point set but exactly two removed edges are incident to the same vertex in the other set. ● a(n) = 3 * 7 ^ (n - 2) - 2 * 3 ^ (n - 2). ●

▶ [A209532] 129,1537,16385,196609,2097153,25165825,268435457,3221225473,34359738369,412316860417,4398046511105,52776558133249,562949953421313,6755399441055745,72057594037927937,864691128455135233 ⋆ Half the number of (n + 1) X 7 0..2 arrays with every 2 X 2 subblock having exactly two distinct clockwise edge differences. ● a(n) = 3 * 2 ^ ((7 * n) / 2 + 2) + 1 for n even. ● a(n) = 2 ^ ((7 * n) / 2 + 7 / 2) + 1 for n odd. ●

▶ [A351302] 1,129,2188,16512,78126,282252,823544,2113536,4785156,10078254,19487172,36128256,62748518,106237176,170939688,270532608,410338674,617285124,893871740,1290016512,1801914272,2513845188,3404825448,4624416768,6103593750 ⋆ a(n) = n ^ 7 * Product _{ p|n, p prime } (1 + 1 / p ^ 7). ● a(n) = Sum _{ d|n } d ^ 7 * mu(n / d) ^ 2. ● a(n) = n ^ 7 * Sum _{ d|n } mu(d) ^ 2 / d ^ 7. ●

▶ [A294302] 0,0,129,2188,18700,94638,376761,1183920,3297456,8002300,18080425,37287660,73399404,135324378,241561425,410323648,680856256,1086411960,1703414961,2587286700,3877286700,5658888070,8172733129,11541726768,16164030000 ⋆ Sum of the seventh powers of the parts in the partitions of n into two distinct parts. ● a(n) = Sum _{ i=1..floor((n - 1) / 2) } i ^ 7 + (n - i) ^ 7. ● a(n) = (1 / 768) * (n ^ 2 * (64 - 224 * n ^ 2 + 448 * n ^ 4 - 3 * (129 + (- 1) ^ n) * n ^ 5 + 96 * n ^ 6)). ● a(n) = a(n - 1) + 8 * a(n - 2) - 8 * a(n - 3) - 28 * a(n - 4) + 28 * a(n - 5) + 56 * a(n - 6) - 56 * a(n - 7) - 70 * a(n - 8) + 70 * a(n - 9) + 56 * a(n - 10) - 56 * a(n - 11) - 28 * a(n - 12) + 28 * a(n - 13) + 8 * a(n - 14) - 8 * a(n - 15) - a(n - 16) + a(n - 17) for n>17. ●

▶ [A343509] 1,129,2189,16514,78129,282381,823549,2113796,4787349,10078641,19487181,36149146,62748529,106237821,171024381,270565896,410338689,617568021,893871757,1290222306,1802748761,2513846349,3404825469,4627099444,6103828145 ⋆ a(n) = Sum _{ k=1..n } gcd(k, n) ^ 7. ● a(n) = Sum _{ d|n } phi(n / d) * d ^ 7. ● a(n) = Sum _{ d|n } mu(n / d) * d * sigma _ 6(d). ●

▶ [A221969] 129,2305,16513,73089,241153,653185,1535745,3246337,6316417,11500545,19831681,32682625,51833601,79545985,118642177,172591617,245602945,342722305,469937793,634290049,843988993,1108536705,1438856449 ⋆ Number of - n..n arrays of length 6 with the sum ahead of each element differing from the sum following that element by n or less. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

▶ [A000541] 0,1,129,2316,18700,96825,376761,1200304,3297456,8080425,18080425,37567596,73399404,136147921,241561425,412420800,680856256,1091194929,1703414961,2597286700,3877286700,5678375241,8172733129,11577558576,16164030000 ⋆ Sum of 7th powers: 1 ^ 7 + 2 ^ 7 + ... + n ^ 7. ● a(n) = n ^ 2 * (n + 1) ^ 2 * (3 * n ^ 4 + 6 * n ^ 3 - n ^ 2 - 4 * n + 2) / 24. ● a(n) = sqrt(Sum _{ j=1..n } Sum _{ i=1..n } (i * j) ^ 7). - _ Alexander Adamchuk _ , Oct 26 2004 ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) -

28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) + 5040. - _ Ant King _ , Sep 24 2013 ● a(n) = - Sum _{ j=1..7 } j * s(n + 1,n + 1 - j) * S(n + 7 - j,n), where s(n,k) and S(n,k) are the Stirling numbers of the first kind and the second kind, respectively. - _ Mircea Merca _ , Jan 25 2014 ●

▶ [A297493] 129,2444,39714,224664,2214948,5133114,19734534,34465980,89757384,286456170,399954528,969369474,1620023118,2055854724,3207878544,5850511794,10003119540,11817917898,18893239884,25249088088,29012002734,43064859120,55130420604 ⋆ a(n) = (1 / 2) * Sum _{ |k|<=2 * sqrt(p) } k ^ 8 * H(4 * p - k ^ 2) where H() is the Hurwitz class number and p is n - th prime. ● a(n) = b(prime(n)). ●

▶ [A305722] 1,129,2945,29953,187137,845185,3032705,9173505,24331777,58161793,127791489,261902081,506298625,931299201,1641303169,2786931713,4580166657,7312946305,11379709825,17304414465,25772582657,37668968833,54121468545,76551925249 ⋆ Crystal ball sequence for the lattice C _ 8. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9), for n>8. ● a(n) = Sum _{ k=0..8 } binomial(16, 2k) * binomial(n + k, 8). ●

▶ [A250212] 1,130,2446,21146,117971,494732,1695036,4992492,13072917,31153342,68720938,142120342,278268263,519829688,932250488,1613106744,2704301673,4407716634,7005003334,10882290034,16560665275,24733398404,36310956980,52474986980,74742532605 ⋆ Second partial sums of seventh powers (A001015). ● a(n) = n * (n + 1) * (n + 2) * (5 * n ^ 6 + 30 * n ^ 5 + 50 * n ^ 4 - 37 * n ^ 2 + 6 * n + 6) / 360. ● a(n) = 2 * a(n - 1) - a(n - 2) + n ^ 7. ●

▶ [A084641] 0,1,130,2574,25904,183200,1040112,5076400,22171648,88915968,333209600,1181548544,4001402880,13033885696,41061830656,125666611200,374947708928,1093874155520,3128047828992,8785866391552,24280799641600,66124498599936,177683966197760 ⋆ Binomial transform of n ^ 7. ● a(n) = n ^ 2 * (n ^ 5 + 21 * n ^ 4 + 105 * n ^ 3 + 35 * n ^ 2 - 210 * n + 112) * 2 ^ (n - 7). ● a(n) = Sum _{ k=0..n } C(n, k) * k ^ 7. ●

▶ [A168124] 0,1,130,3285,32776,195325,839826,2882425,8388640,21523401,50000050,107179501,214990920,407865445,737894626,1281445425,2147483776,3487878865,5509980450,8491781701,12800000200,18911429901,27437937010,39155492905,55037657376 ⋆ a(n) = n ^ 2 * (n ^ 6 + 1) / 2. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9). - _ Wesley Ivan Hurt _ , Jun 09 2023 ●

▶ [A254641] 1,131,2577,23723,141694,636426,2331462,7323954,20396871,51550213,120271151,262391493,540659756,1060489444,1992739932,3605846676,6310148349,10717864983,17722868317,28605158351,45165823626,69899222030,106210179010,158685165990 ⋆ Third partial sums of seventh powers (A001015). ● a(n) = n * (1 + n) * (2 + n) * (3 + n) * (6 - 6 * n - 20 * n ^ 2 + 15 * n ^ 3 + 25 * n ^ 4 + 9 * n ^ 5 + n ^ 6) / 720. ●

▶ [A253503] 132,260,428,636,884,1172,1500,1868,2276,2724,3212,3740,4308,4916,5564,6252,6980,7748,8556,9404,10292,11220,12188,13196,14244 ⋆ Number of (n + 2) X (1 + 2) 0..1 arrays with every 2 X 2 and 3 X 3 subblock diagonal maximum minus antidiagonal minimum nondecreasing horizontally and vertically. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>3. ●

▶ [A063365] 1,132,286,440,592,746,898,1056,1204,1362,1510,1670,1816,1978,2122,2286,2428,2592,2734,2902,3040,3208,3346,3516,3652 ⋆ Dimension of the space of weight n cuspidal newforms for Gamma _ 1(92). ● a(n) = a(n - 4) + a(n - 6) - a(n - 10) for n>13. ●

▶ [A305067] 132,414,978,2106,4362,8874,17898,35946,72042,144234,288618,577386,1154922,2309994,4620138,9240426,18481002,36962154,73924458,147849066,295698282,591396714,1182793578,2365587306,4731174762 ⋆ a(n) = 282 * 2 ^ n - 150. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>1. ●

▶ [A278128] 132,420,996,2148,4452,9060,18276,36708,73572,147300,294756,589668,1179492,2359140,4718436,9437028,18874212,37748580,75497316,150994788,301989732,603979620,1207959396,2415918948,4831838052 ⋆ a(n) = 288 * 2 ^ n - 156. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2). ●

▶ [A064059] 132,429,1001,2002,3640,6188,9996,15504,23256,33915,48279,67298,92092,123970,164450,215280,278460,356265,451269,566370,704816,870232,1066648,1298528,1570800 ⋆ Seventh column of Catalan triangle A009766. ● a(n) = binomial(n + 13,6) - 2 * binomial(n + 12,5). - _ Zerinvary Lajos _ , Jul 19 2006 ●

▶ [A158543] 132,564,1284,2292,3588,5172,7044,9204,11652,14388,17412,20724,24324,28212,32388,36852,41604,46644,51972,57588,63492,69684,76164,82932,89988 ⋆ a(n) = 144 * n ^ 2 - 12. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). (End) ●

▶ [A305271] 132,812,2172,4892,10332,21212,42972,86492,173532,347612,695772,1392092,2784732,5570012,11140572,22281692,44563932,89128412,178257372,356515292,713031132,1426062812,2852126172,5704252892,11408506332 ⋆ a(n) = 680 * 2 ^ n - 548. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>1. ●

▶ [A033278] 0,132,1287,7007,28028,91728,259896,659736,1534896,3325608,6789783,13180167,24496472,43835792,75869640,127481640,208606320,333316620,521215695,799197399,1203649524,1783184480,2601993680,3743934480,5317472160 ⋆ Number of diagonal dissections of an n - gon into 6 regions. ● a(n) = binomial(n + 4, 5) * binomial(n - 3, 5) / 6. ●

▶ [A129975] 0,132,2295,2859,3535,15792,19060,22984,94363,113407,136275,552292,663288,796572,3221295,3868227,4645063,18777384,22547980,27075712,109444915,131421559,157811115,637894012,765983280 ⋆ Nonnegative values x of solutions (x, y) to the Diophantine equation x ^ 2 + (x + 953) ^ 2 = y ^ 2. ● a(n) = 6 * a(n - 3) - a(n - 6) + 1906 for n > 6; a(1)=0, a(2)=132, a(3)=2295, a(4)=2859, a(5)=3535, a(6)=15792. ● a(1)=0, a(2)=132, a(3)=2295, a(4)=2859, a(5)=3535, a(6)=15792, a(7)=19060, a(n)=a(n - 1) + 6 * a(n - 3) - 6 * a(n - 4) - a(n - 6) + a(n - 7). - _ Harvey P. Dale _ , Apr 12 2013 ●

▶ [A064303] 1,132,2307,14506,55797,161376,387607,817062,1563561,2777212,4649451,7418082,11372317,16857816,24281727,34117726,46911057,63283572,83938371,109666842,141349701,179966032,226596327,282427926,348760057 ⋆ Seventh diagonal of triangle A064094. ● a(n) = 1 + 5 * n + 14 * n ^ 2 + 28 * n ^ 3 + 42 * n ^ 4 + 42 * n ^ 5, compare to row n = 5 of A009766. ●

▶ [A254646] 1,132,2709,26432,168126,804552,3136014,10459968,30856839,82407052,202678203,465069696,1005729452,2066218896,4058958828,7664805504,13974953853,24692818836,42415687153,71020845504,116186669130,186085891160,292296070170,450981236160,684408934755 ⋆ Fourth partial sums of seventh powers (A001015). ● a(n) = n * (1 + n) * (2 + n) * (3 + n) * (4 + n) * (48 - 100 * n - 89 * n ^ 2 + 160 * n ^ 3 + 140 * n ^ 4 + 36 * n ^ 5 + 3 * n ^ 6) / 23760. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) + n ^ 7. ●

▶ [A242147] 132,2902,27024,154647,647404,2180310,6256170,15876783,36560854,77812152,155155078,292868433,527561802,912752596,1524615420,2469089061,3890540016,5982195106,8998569348,13270128883,19220442384,27386087994 ⋆ Number of length 3 + 5 0..n arrays with no consecutive six elements summing to more than 3 * n. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n >9. ●

▶ [A335857] 1,132,4719,81796,884884,6852768,41314284,204951252,869562265,3245256300,10880587575,33309352440,94307358288,249485071616,621856804272,1470540624696,3318218562009,7179339254516,14955909351383,30104651175324,58733021049780,111358254207200 ⋆ a(n) is the determinant of the n X n Hankel matrix A with A(i,j) = A000108(i + j + 6) for 0<=i,j<=n - 1. ● a(n) = 2 ^ 5 / (5 * 7! * 9!) * (n + 1) * (n + 2) ^ 2 * (n + 3) ^ 3 * (n + 4) ^ 2 * (n + 5) * (2 * n + 3) * (2 * n + 5) ^ 2 * (2 * n + 7) ^ 2 * (2 * n + 9). ● a(n) = binomial(n + 5, 5) * binomial(2 * n + 7, 3) * binomial(2 * n + 9, 7) / 1260. ● a(n) = - a(- 6 - n) for all n in Z. - _ Michael Somos _ , Jun 27 2023 ●

▶ [A035818] 1,132,8712,383372,12655632,334338708,7363888664,139100713884,2300684695584,33851564979364,448681205484072,5411871200791980,59904484213281840,612840192258608820,5829554227763981880 ⋆ Coordination sequence for lattice D *_ 66 (with edges defined by l _ 1 norm = 1). ● a(m)=add(2 ^ k * binomial(n, k) * binomial(m - 1, k - 1), k=0..n) + 2 ^ n * binomial((n + 2 * m) / 2 - 1, n - 1); with n=66. ●

▶ [A215546] 0,132,9996,92092,451269,1570800,4395118,10559208,22664655,44602348,81921840,142247364,235740505,375609528,578665362,865924240,1263256995,1802085012,2520122836,3462167436,4680934125,6237939136,8204428854,10662355704,13705400695 ⋆ Number of standard Young tableaux of shape [6n,6]. ● a(n) = (6 * n - 5) * (6 * n + 5) * (3 * n + 2) * (2 * n + 1) * (3 * n + 1) * (n + 1) / 10 for n>0, a(0) = 0. ●

▶ [A251131] 133,416,1002,2264,4786,9786,19548,38674,76196,150192,296626,587420,1166206,2320222,4623712,9225118,18421072,36804772,73562342,147065944,294059610,588031298,1175956612,2351786634,4703423196 ⋆ Number of (n + 1) X (2 + 1) 0..2 arrays with no 2 X 2 subblock having the sum of its diagonal elements greater than the maximum of its antidiagonal elements. ● a(n) = (- 873 + 49 * (- 1) ^ n + 841 * 2 ^ (1 + n) - 614 * n - 11 * n ^ 2 + 38 * n ^ 3 + 5 * n ^ 4) / 12 for n>2. ●

▶ [A254684] 1,133,2842,29274,197400,1001952,4137966,14597934,45454773,127861825,330540028,795609724,1801339176,3867558072,7926516900,15591322404,29566276257,54259095093,96674782246,167695627750,283882296880 ⋆ Fifth partial sums of seventh powers (A001015). ● a(n) = n * (1 + n) * (2 + n) * (3 + n) * (4 + n) * (5 + n) * (- 3 + 5 * n + n ^ 2) * (- 2 + 5 * n + n ^ 2) * (5 + 5 * n + n ^ 2) / 95040. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) + n ^ 7. ●

▶ [A157734] 135,1064,2875,5568,9143,13600,18939,25160,32263,40248,49115,58864,69495,81008,93403,106680,120839,135880,151803,168608,186295,204864,224315,244648,265863 ⋆ a(n) = 441 * n ^ 2 - 394 * n + 88. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ● a(n) = (9 * n - 4) * (49 * n - 22). - _ Bruno Berselli _ , Apr 23 2018 ●

▶ [A143404] 0,0,0,0,0,0,0,0,0,1,135,10065,547965,24336312,934863930,32189799070,1017281878470,30001945084683,835898091070185,22206607023852615,566594907018764715,13964270139973201114,333991935681805199700,7781827783346875932300 ⋆ Expansion of x ^ k / Product _{ t=k..2k } (1 - tx) for k=9. ● a(n)= 0 for n<9, a(9)=1, a(n) = 135 * a(n - 1) - 8160 * a(n - 2) + 290790 * a(n - 3) - 6765213 * a(n - 4) + 107358615 * a(n - 5) - 1176812090 * a(n - 6) + 8797620060 * a(n - 7) - 42924478536 * a(n - 8) + 123418922400 * a(n - 9) - 158789030400 * a(n - 10). - _ Harvey P. Dale _ , May 22 2012 ●

▶ [A270301] 136,152,184,232,248,296,328,344,376,424,472,488,536,568,584,632,664,712,776,808,824,856,872,904,1016 ⋆ Numbers which are representable as a sum of sixteen but no fewer consecutive nonnegative integers. ● a(n) == 0 (mod 8). - _ Hugo Pfoertner _ , Feb 04 2021 ●

▶ [A281241] 136,152,264,408,648,1432,2312,3736,8328,13464,21768,48536,78472,126872,282888,457368,739464,1648792,2665736,4309912,9609864,15537048,25120008,56010392,90556552 ⋆ Solutions x to the negative Pell equation y ^ 2 = 72 * x ^ 2 - 1331712 with x,y >= 0. ● a(n) = 6 * a(n - 3) - a(n - 6) for n>6. ●

▶ [A304606] 136,244,460,892,1756,3484,6940,13852,27676,55324,110620,221212,442396,884764,1769500,3538972,7077916,14155804,28311580,56623132,113246236,226492444,452984860,905969692,1811939356 ⋆ a(n) = 54 * 2 ^ n + 28 (n >= 1). ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n > 2. (End) ●

▶ [A183635] 136,340,952,2884,9256,31060,107992,386404,1415176,5281780,20015032,76773124,297329896,1160228500,4554034072,17956283044,71047145416,281857767220,1120444917112,4460833796164,17780522733736,70933703913940 ⋆ Number of (n + 1) X 3 0..3 arrays with every 2 X 2 subblock summing to 6. ● a(n) = 18 + 3 * 2 ^ (3 + n) + 2 * 3 ^ (2 + n) + 4 ^ (1 + n). ●

▶ [A183901] 1,1,136,664,1720,3491,6263,10400,16357,24694,36091,51364,71482,97585,131003,173276,226175,291724,372223,470272,588796,731071,900751,1101896,1339001 ⋆ Number of nondecreasing arrangements of n + 3 numbers in 0..6 with each number being the sum mod 7 of three others. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>10. ●

▶ [A254703] 136,2310,16276,72271,242076,670372,1618264,3520845,7060672,13259026,23586828,40097083,65580724,103747728,159435376,238845529,349812792,502105438,707760964,981458151,1340927500,1807401916,2406109512 ⋆ Number of length 5 + 4 0..n arrays with every five consecutive terms having the maximum of some two terms equal to the minimum of the remaining three terms. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. ●

► [A071231] 0,1,136,3321,32896,195625,840456,2883601,8390656,21526641,50005000,107186761,215001216,407879641,737913736,1281470625,2147516416,3487920481,5510032776,8491846681,12800080000,18911526921,27438053896,39155632561,55037822976 ⋆ a(n) = (n ^ 8 + n ^ 4) / 2. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9); a(0)=0, a(1)=1, a(2)=136, a(3)=3321, a(4)=32896, a(5)=195625, a(6)=840456, a(7)=2883601, a(8)=8390656. ●

► [A035819] 1,136,9248,419288,14260416,388134888,8807231072,171389157176,2920221095296,44261088117832,604286975278752,7507398039179160,85587416923429440,901728467693644200,8833008614958340320 ⋆ Coordination sequence for lattice D *_ 68 (with edges defined by l _ 1 norm = 1). ● a(m)=add(2 ^ k * binomial(n, k) * binomial(m - 1, k - 1), k=0..n) + 2 ^ n * binomial((n + 2 * m) / 2 - 1, n - 1); with n=68. ●

► [A215864] 0,137,1267,6412,23597,70707,183099,424809,904299,1795794,3367364,6017011,10318126,17075786,27395466,42765846,65157498,97139343,142014873,203980238,288306403,401547685,551779085,748864935,1004761485 ⋆ Number of simple labeled graphs on n + 4 nodes with exactly n connected components that are trees or cycles. ● a(n) = C(n + 4,5) * (15 * n ^ 3 + 390 * n ^ 2 + 2285 * n + 3886) / 48. ●

► [A158527] 139,5997,78414,553810,2677065,10009839,31098172,84004164,203427495,451263505,931565514,1811000022,3346004389,5917977555,10077955320,16602342664,26561396547,41402273589,63048577990,94018466010 ⋆ Sum of squares of consecutive positive noncubes. ● a(n)=(1 / 2) * n * (1 + n) * (1 + 9 * n + 27 * n ^ 2 + 42 * n ^ 3 + 36 * n ^ 4 + 18 * n ^ 5 + 6 * n ^ 6) ●

► [A276026] 140,204,284,380,492,620,764,924,1100,1292,1500,1724,1964,2220,2492,2780,3084,3404,3740,4092,4460,4844,5244,5660,6092 ⋆ a(n) = Sum _{ k=0..7 } (n + k) ^ 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ● a(- n) = a(n - 7). ● a(n) = n ^ 2 + (n + 1) ^ 2 + (n + 2) ^ 2 + (n + 3) ^ 2 + (n + 4) ^ 2 + (n + 5) ^ 2 + (n + 6) ^ 2 + (n + 7) ^ 2. ● a(n) = 8 * n ^ 2 + 56 * n + 140. ●

► [A317984] 140,1260,5040,14000,31500,61740,109760,181440,283500,423500,609840,851760,1159340,1543500,2016000,2589440,3277260,4093740,5054000,6174000,7470540,8961260,10664640,12600000,14787500 ⋆ Expansion of 140 * x * (1 + 4 * x + x ^ 2) / (1 - x) ^ 5. ● a(n) = 35 * n ^ 4 + 70 * n ^ 3 + 35 * n ^ 2. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

► [A282613] 0,1,140,4995,65824,489125,2521476,10092775,33562880,96870249,250025500,589527851,1290008160,2651218765,5165397524,9611031375,17180133376,29647326545,49590297900,80672546899,128000804000,198571037301,301818598180,450289780535 ⋆ Number of inequivalent 3 X 3 matrices with entries in { 1,2,3,..,n } up to rotations. ● a(n) = n ^ 3 * (n ^ 2 + 1) * (n ^ 4 - n ^ 2 + 2) / 4. ●

► [A035820] 1,140,9800,457380,16013200,448644028,10479036120,209901182420,3681129969440,57425278222060,806898799084392,10316605397801220,121032811973584560,1312159718129050140,13225339591553573880 ⋆ Coordination sequence for lattice D *_ 70 (with edges defined by l _ 1 norm = 1). ● a(m)=add(2 ^ k * binomial(n, k) * binomial(m - 1, k - 1), k=0..n) + 2 ^ n * binomial((n + 2 * m) / 2 - 1, n - 1); with n=70. ●

► [A228598] 141,240,365,516,693,896,1125,1380,1661,1968,2301,2660,3045,3456,3893,4356,4845,5360,5901,6468,7061,7680,8325,8996,9693 ⋆ The Wiener index of the graph obtained by applying Mycielski's construction to the crown graph G(n) (n>=3). ● a(n) = 13 * n ^ 2 + 8 * n. ●

► [A063373] 1,141,302,463,625,786,948,1107,1271,1430,1594,1752,1917,2074,2240,2396,2563,2719,2886,3040,3209,3363,3532,3685,3855 ⋆ Dimension of the space of weight n cuspidal newforms for Gamma _ 1(100). ● a(n) = a(n - 4) + a(n - 6) - a(n - 10) for n>13. ●

► [A228597] 141,445,941,1629,2509,3581,4845,6301,7949,9789,11821,14045,16461,19069,21869,24861,28045,31421,34989,38749,42701,46845,51181,55709,60429 ⋆ The Wiener index of the graph obtained by applying Mycielski's construction to a benzenoid consisting of a linear chain of n hexagons. ● a(n) = 96 * n ^ 2 + 16 * n + 29. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ G. C. Greubel _ , Dec 08 2016 ●

► [A201814] 141,1001,4621,15681,42821,99961,207621,394241,697501,1165641,1858781,2850241,4227861,6095321,8573461,11801601,15938861,21165481,27684141,35721281,45528421,57383481,71592101,88488961,108439101 ⋆ Number of arrays of 6 integers in - n..n with sum zero and equal numbers of elements greater than zero and less than zero. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. ●

► [A201553] 1,141,1751,9331,32661,88913,204763,418503,782153,1363573,2248575,3543035,5375005,7896825,11287235,15753487,21533457,28897757,38151847,49638147,63738149,80874529,101513259,126165719,155390809 ⋆ Number of arrays of 6 integers in - n..n with sum zero. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). ● a(n) = [x ^ (6 * n)] (Sum _{ k=0..2 * n } x ^ k) ^ 6. - _ Seiichi Manyama _ , Dec 14 2018 ●

► [A158135] 142,572,1290,2296,3590,5172,7042,9200,11646,14380,17402,20712,24310,28196,32370,36832,41582,46620,51946,57560,63462,69652,76130,82896,89950 ⋆ a(n) = 144 * n ^ 2 - 2 * n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Feb 11 2012 ●

► [A257767] 143,253,440,1133,1397,3608,6325,11495,20152,52063,64207,165880,290807,528517,926552,2393765,2952125,7626872,13370797,24300287,42601240,110061127,135733543,350670232,614765855 ⋆ Positive integers whose square is the sum of 33 consecutive squares. ● a(n) = 46 * a(n - 6) - a(n - 12). ●

► [A158136] 143,287,431,575,719,863,1007,1151,1295,1439,1583,1727,1871,2015,2159,2303,2447,2591,2735,2879,3023,3167,3311,3455,3599 ⋆ a(n) = 144 * n - 1. ● a(n) = 2 * a(n - 1) - a(n - 2). - _ Vincenzo Librandi _ , Feb 11 2012 ●

► [A156635] 143,574,1293,2300,3595,5178,7049,9208,11655,14390,17413,20724,24323,28210,32385,36848,41599,46638,51965,57580,63483,69674,76153,82920,89975 ⋆ 144 * n ^ 2 - n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A279115] 0,0,0,0,143,7855,153311,1505465,9729830,47235703,186615092,630338668,1882894541,5092130575,12686490993,29498296651,64664954532,134715649055,268438970166,514318521438,951646716171,1706721390223,2976056379875,5058962536429,8402677784738 ⋆ Number of non - equivalent ways to place 6 non - attacking kings on an n X n board. ● a(n) = (n ^ 12 - 135 * n ^ 10 + 180 * n ^ 9 + 7465 * n ^ 8 - 18840 * n ^ 7 - 202468 * n ^ 6 + 749880 * n ^ 5 + 2446764 * n ^ 4 - 13439400 * n ^ 3 - 3570352 * n ^ 2 + 89413920 * n - 107694720 + IF(MOD(n, 2) = 1, 122 * n ^ 6 - 1020 * n ^ 5 + 1955 * n ^ 4 + 840 * n ^ 3 + 5753 * n ^ 2 - 42840 * n + 132975)) / 5760 for n>=5. ● a(n) = 6 * a(n - 1) - 8 * a(n - 2) - 22 * a(n - 3) + 69 * a(n - 4) - 8 * a(n - 5) - 176 * a(n - 6) + 168 * a(n - 7) + 182 * a(n - 8) - 364 * a(n - 9) + 364 * a(n - 11) - 182 * a(n - 12) - 168 * a(n - 13) + 176 * a(n - 14) + 8 * a(n - 15) - 69 * a(n - 16) + 22 * a(n - 17) + 8 * a(n - 18) - 6 * a(n - 19) + a(n - 20) for n>=25. ●

► [A178972] 0,0,0,0,0,144,392,896,1620,2800,4356,6624,9464,13328,18000,24064,31212,40176,50540,63200,77616,94864,114264,137088,162500 ⋆ Number of ways to place 2 nonattacking amazons (superqueens) on an n X n toroidal board. ● a(n) = 1 / 2 * n ^ 2 * (n ^ 2 - 4 * n - 9 / 2 + (- 1) ^ n / 2), n>=5. ●

► [A281240] 0,144,480,816,1344,3024,4896,7920,17664,28560,46176,102960,166464,269136,600096,970224,1568640,3497616,5654880,9142704,20385600,32959056,53287584,118815984,192099456 ⋆ Solutions y to the negative Pell equation y ^ 2 = 72 * x ^ 2 - 83232 with x,y >= 0. ● a(n) = 6 * a(n - 3) - a(n - 6) for n>6. ●

► [A014770] 0,144,484,4900,8464,30976,44100,108900,141376,283024,348100,611524,725904,1166400,1350244,2033476,2310400,3312400,3709476,5116644,5664400,7573504,8305924,10824100,11778624 ⋆ Squares of even pentagonal numbers. ● a(n) = a(n - 1) + 4 * a(n - 2) - 4 * a(n - 3) - 6 * a(n - 4) + 6 * a(n - 5) + 4 * a(n - 6) - 4 * a(n - 7) - a(n - 8) + a(n - 9) for n > 8. ●

► [A017402] 1,144,529,1156,2025,3136,4489,6084,7921,10000,12321,14884,17689,20736,24025,27556,31329,35344,39601,44100,48841,53824,59049,64516,70225 ⋆ a(n) = (11 * n + 1) ^ 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , May 05 2014 ●

► [A180413] 0,144,576,1440,2880,5040,8064,12096,17280,23760,31680,41184,52416,65520,80640,97920,117504,139536,164160,191520,221760,255024,291456,331200,374400 ⋆ Total number of possible knight moves on an n X n X n chessboard, if the knight is placed anywhere. ● a(n) = 24 * n * (n ^ 2 - 1). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4); a(1)=0, a(2)=144, a(3)=576, a(4)=1440. - _ Harvey P. Dale _ , Feb 13 2013 ●

► [A137885] 144,576,1920,5760,16128,43008,110592,276480,675840,1622016,3833856,8945664,20643840,47185920,106954752,240648192,537919488,1195376640,2642411520,5813305344,12733906944,27783069696,60397977600,130862284800,282662535168 ⋆ Number of directed Hamiltonian paths in the 2n - crossed prism graph. ● a(n) = 12 * 2 ^ (n - 1) * n * (n + 1). - _ Eric W. Weisstein _ , Dec 16 2013 ● a(n) = 5 * a(n - 1) - 6 * a(n - 2) - 4 * a(n - 3) + 8 * a(n - 4). - _ Colin Barker _ , May 06 2014 ●

► [A187301] 0,0,144,884,3006,6520,11896,18832,27478,37696,49508,62896,77860,94400,112516,132208,153476,176320,200740,226736,254308,283456,314180,346480,380356 ⋆ Number of 6 - step one space leftwards or up, two space rightwards or down asymmetric rook's tours on an n X n board summed over all starting positions. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>12. ●

► [A120089] 144,900,3136,8100,17424,23716,33124,43264,54756,57600,93636,115600,139876,144400,166464,174724,207936,213444,244036,298116,304704,357604,414736,422500,476100 ⋆ Square perimeters of primitive Pythagorean triangles. ● a(n) = (2 * u * v) ^ 2, where u=sqrt(j / 2) and v=sqrt(j + k) { for coprime pairs (j,k),j>k with odd k such that pairs (u,v),u<v are coprime with v odd } . ●

► [A159748] 144,927,2872,6930,15109,31489,64256,129792,260864,523008,1047296,2095872,4193024,8387328,16775936,33553152,67107584,134216448,268434176,536869632,1073740544,2147482368,4294966016,8589933312,17179867904 ⋆ If an array is made of columns of - nacci sequences, fibo - , tribo - etc. all starting w. 1,1,2 etc, the NW to SE diagonals can be extended by computation. The above is diagonal 11. See A159741 for details. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2), n > 8. - _ R. J. Mathar _ , Apr 22 2009 ●

► [A250084] 144,2228,15472,68863,232096,647122,1572320,3441309,6938416,13092816,23393360,39926107,65536576,104018734,160332736,240853433,353651664,508810348,718777392,998757431,1367144416,1845997066,2461559200 ⋆ Number of length 3 + 5 0..n arrays with every six consecutive terms having the maximum of some two terms equal to the minimum of the remaining four terms. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. ●

► [A223687] 144,2304,37008,595584,9594000,154616832,2492365968,40180445568,647800215696,10444288589568,168392298756240,2714990519274624,43773950520548496,705771016545286656,11379212680977220752 ⋆ Petersen graph (8,2) coloring a rectangular array: number of n X 3 0..15 arrays where 0..15 label nodes of a graph with edges 0,1 0,8 8,14 8,10 1,2 1,9 9,15 9,11 2,3 2,10 10,12 3,4 3,11 11,13 4,5 4,12 12,14 5,6 5,13 13,15 6,7 6,14 7,0 7,15 and every array movement to a horizontal or antidiagonal neighbor moves along an edge of this graph. ● a(n) = (72 * ((12 - sqrt(17)) ^ n * (- 31 + 8 * sqrt(17)) + (12 + sqrt(17)) ^ n * (31 + 8 * sqrt(17)))) / (127 * sqrt(17)). ●

► [A187166] 0,144,3240,14256,37470,77184,137754,223536,338886,488160,675714,905904,1183086,1511616,1895850,2340144,2848854,3426336,4076946,4805040,5614974,6511104,7497786,8579376,9760230 ⋆ Number of 5 - step self - avoiding walks on an n X n X n cube summed over all starting positions. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>7. ●

► [A168371] 0,1,144,3402,33280,196875,843696,2890804,8404992,21552885,50050000,107259966,215115264,408051007,738163440,1281825000,2148007936,3488588649,5510925072,8493019570,12801600000,18913471731,27440513584 ⋆ a(n) = n ^ 5 * (n ^ 3 + 1) / 2. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9). ●

► [A128989] 0,144,3888,62208,777600,8398080,82301184,752467968,6530347008,54419558400,438984437760,3448023220224,26487087464448,199671890116608,1481082701414400,10833062044631040,78268873272459264 ⋆ a(n) = (n ^ 3 - n ^ 2) * 6 ^ n. ● a(n) = 24 * a(n - 1) - 216 * a(n - 2) + 864 * a(n - 3) - 1296 * a(n - 4). - _ Vincenzo Librandi _ , Feb 12 2013 ●

► [A259318] 0,0,144,6048,85536,679536,3747744,16039296,56930688,174978144,479700144,1198248480,2770653600,6002352720,12298837824,24014605824,44957265408,81097765056,141549364944,239891292576,395928108576,637992775728,1005920381664,1554840524160 ⋆ a(n) = A259109(n) * A006331(n) - A259108(n) ^ 2.

● a(n) = (16 * n ^ 10 + 80 * n ^ 9 + 120 * n ^ 8 - 147 * n ^ 6 - 105 * n ^ 5 + 5 * n ^ 4 + 25 * n ^ 3 + 6 * n ^ 2) / 525. - _ Colin Barker _ , Jun 29 2015 ●

▶ [A035821] 1,144,10368,497712,17922816,516475728,12407366016,255606154992,4610216314368,73962265817104,1068744800817792,14051355610010544,169506887987474688,1889504367838959312,19580193687475702656 ★ Coordination sequence for lattice D *_ 72 (with edges defined by l _ 1 norm = 1). ● a(m)=add(2 ^ k * binomial(n, k) * binomial(m - 1, k - 1), k=0..n) + 2 ^ n * binomial((n + 2 * m) / 2 - 1, n - 1); with n=72. ●

▶ [A199406] 1,144,12111,358120,5131650,45528756,288936634,1433251296,5887880415,20842168600,65402344161,185788177224,485443851256,1181242399260,2703252560100,5864398969216,12138503871789,24101498435616,46112016365155,85335258695400,153249227870046 ★ The number of inequivalent ways to color the edges of a cube using at most n colors. ● a(n) = n ^ 12 / 48 + n ^ 8 / 16 + n ^ 7 / 4 + n ^ 6 / 12 + n ^ 4 / 6 + n ^ 3 / 4 + n ^ 2 / 6. ● a(n) = 1 * C(n,1) + 142 * C(n,2) + 11682 * C(n,3) + 310536 * C(n,4) + 3460725 * C(n,5) + 19870590 * C(n,6) + 65886660 * C(n,7) + 133585200 * C(n,8) + 168399000 * C(n,9) + 128898000 * C(n,10) + 54885600 * C(n,11) + 9979200 * C(n,12), where the coefficient of C(n,k) is the number of unoriented colorings using exactly k colors. (End) ●

▶ [A252779] 0,0,144,13932,226224,1809360,9637200,39225564,131679072,382238784,990202320,2340528300,5130339984,10556808912,20586528144,38330476380,68553028800,118348187904,198021287952,322219869804,511363229040,793426309200,1206140143824 ★ Number of ways of n - coloring the square grid graph G _ (3,3) such that no rectangle exists having all 4 corners of the same color. ● a(n) = n * (n - 1) ^ 2 * (n ^ 6 + 2 * n ^ 5 + 3 * n ^ 4 - 6 * n ^ 3 - 15 * n ^ 2 - 4 * n + 12). ●

▶ [A187169] 0,144,67824,608928,2188608,5299056,10416624,18026640,28617228,42676728,60693480,83155824,110552100,143370648,182099808,227227920,279243324,338634360,405889368,481496688,565944660,659721624,763315920,877215888 ★ Number of 8 - step self - avoiding walks on an n X n X n cube summed over all starting positions. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>10. ●

▶ [A159777] 145,167,197,673,835,1037,3893,4843,6025,22685,28223,35113,132217,164495,204653,770617,958747,1192805,4491485,5587987,6952177,26178293,32569175,40520257,152578273 ★ Positive numbers y such that y ^ 2 is of the form x ^ 2 + (x + 167) ^ 2 with integer x. ● a(n) = 6 * a(n - 3) - a(n - 6) for n > 6; a(1)=145, a(2)=167, a(3)=197, a(4)=673, a(5)=835, a(6)=1037. ●

▶ [A158133] 145,289,433,577,721,865,1009,1153,1297,1441,1585,1729,1873,2017,2161,2305,2449,2593,2737,2881,3025,3169,3313,3457,3601 ★ 144n + 1. ● a(n) = 2 * a(n - 1) - a(n - 2). ●

▶ [A365204] 1,145,1009,3745,10081,22321,43345,76609,126145,196561,293041,421345,587809,799345,1063441,1388161,1782145,2254609,2815345,3474721,4243681,5133745,6157009,7326145,8654401 ★ Centered icositetrachoral numbers. ● a(n) = 24 * n ^ 4 - 48 * n ^ 3 + 48 * n ^ 2 - 24 * n + 1. ●

▶ [A008377] 1,145,4339,55171,416773,2218645,9195511,31608967,94016137,249258777,601883259,1345167627,2817026445,5581287453,10542186111,19101404943,33368594193,56438048673,92746082819,148525641875,232376811797,355974143909,534934092551,789868374935 ★ Crystal ball sequence for D _ 9 lattice. ● a(n - 1) = 1006 / 2835 * n ^ 9 - 503 / 315 * n ^ 8 + 6404 / 945 * n ^ 7 - 244 / 15 * n ^ 6 + 3946 / 135 * n ^ 5 - 542 / 15 * n ^ 4 + 87068 / 2835 * n ^ 3 - 5356 / 315 * n ^ 2 + 1867 / 315 * n - 1. ●

▶ [A076464] 145,4567,38570,183670,630755,1751365,4187092,8957100,17583765,32236435,55893310,92521442,147274855,226710785,339024040,494299480,704782617,985168335,1352907730,1828533070,2436000875,3203053117,4161596540,5348100100,6804010525 ★ Sum of squares of numbers that can be written as t * n + u * (n + 1) for nonnegative integers t,u in exactly five ways. ● a(n) = n * (n + 1) * (151 * n ^ 4 + 242 * n ^ 3 + 66 * n ^ 2 - 25 * n + 1) / 6. ●

▶ [A211838] 146,461,1254,2997,6451,12766,23596,41229,68732,110111,170486,256281,375429,537592,754396,1039681,1409766,1883729,2483702,3235181,4167351,5313426,6711004,8402437,10435216 ★ Number of nonnegative integer arrays of length n + 5 with new values 0 upwards introduced in order, no three adjacent elements equal, and containing the value n + 1. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

▶ [A158132] 146,580,1302,2312,3610,5196,7070,9232,11682,14420,17446,20760,24362,28252,32430,36896,41650,46692,52022,57640,63546,69740,76222,82992,90050 ★ 144n ^ 2 + 2n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A184542] 147,340,631,1048,1627,2413,3461,4837,6619,8898,11779,15382,19843,25315,31969,39995,49603,61024,74511,90340,108811,130249,155005,183457,216011 ★ Number of (n + 2) X 5 binary arrays with each 3 X 3 subblock having rows and columns in lexicographically nondecreasing order. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>5. ●

▶ [A035822] 1,148,10952,540348,19998352,592275428,14622792792,309590672908,5738394543392,94605503014708,1404752160252392,18977706294953308,235229004437967792,2694049802004901508,28681579910712931192 ★ Coordination sequence for lattice D *_ 74 (with edges defined by l _ 1 norm = 1). ● a(m)=add(2 ^ k * binomial(n, k) * binomial(m - 1, k - 1), k=0..n) + 2 ^ n * binomial((n + 2 * m) / 2 - 1, n - 1); with n=74. ●

▶ [A268428] 149,151,157,167,179,193,211,233,257,283,313,347,383,421,463,509,557,607,661,719,779,841,907,977,1049 ★ a(n) = (3 * (n ^ 2 + n + 99) + cos(Pi * n / 2) - sin(Pi * n / 2)) / 2. ● a(n) = 2 * floor(3 * n * (n + 1) / 4) + 149. ● a(n) = (3 * (n ^ 2 + n + 99) + (- 1) ^ binomial(n + 1,2)) / 2. (Suggested by _ Michel Marcus _) ● a(n) - a(- n - 1) = 0. - _ Altug Alkan _ , Feb 04 2016 ● a(n) = ((1 / 4 + i / 4) * ((297 - 297 * i) - i * (- i) ^ n + i ^ n) + (3 * n) / 2 + (3 * n ^ 2) / 2) where i is the imaginary unit. - _ Colin Barker _ , Feb 09 2016 ●

▶ [A161487] 149,191,269,625,955,1465,3601,5539,8521,20981,32279,49661,122285,188135,289445,712729,1096531,1687009,4154089,6391051,9832609,24211805,37249775,57308645,141116741 ★ Positive numbers y such that y ^ 2 is of the form x ^ 2 + (x + 191) ^ 2 with integer x. ● a(n) = 6 * a(n - 3) - a(n - 6) for n > 6; a(1)=149, a(2)=191, a(3)=269, a(4)=625, a(5)=955, a(6)=1465. ●

▶ [A023290] 149,439,1319,2069,2089,2389,2699,2819,4259,4919,5059,5689,6469,7559,8429,8669,9199,9239,9319,9769,10159,10529,14449,14479,17659 ★ Primes that remain prime through 3 iterations of function f(x) = 7x + 6. ● a(n) == 9 (mod 10). - _ John Cerkan _ , Sep 23 2016 ●

▶ [A273322] 150,536,1336,2712,4826,7840,11916,17216,23902,32136,42080,53896,67746,83792,102196,123120,146726,173176,202632,235256,271210,310656,353756,400672,451566 ★ Wiener index of graphs of f.c.c. unit cells in a line = Sum of distances in face - centered cubic grid unit cells connected in a row. ● a(n) = 27 * n ^ 3 + 45 * n ^ 2 + 62 * n + 16. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n > 4. ●

▶ [A054558] 150,960,3605,10360,25200,54600,108570,201960,356070,600600,975975,1536080,2351440,3512880,5135700,7364400,10377990,14395920,19684665,26565000,35420000,46703800,60951150,78787800,100941750 ★ Number of labeled pure 2 - complexes on n nodes (0 - simplexes) with 5 2 - simplexes and 9 1 - simplexes. ● a(n) = 150 * C(n,5) + 60 * C(n,6) + 35 * C(n,7) = n * (n - 1) * (n - 2) * (n - 3) * (n - 4) * (n ^ 2 + n + 150) / 144. ●

▶ [A151607] 0,150,2763,28236,251205,2116386,17292639,138352920,1089544473,8474253870,65251778163,498286334052,3778671399789,28485369052602,213640267939335,1595180667331632,11864156213337153,87934334287152582,649737025566256155,4787535977856705660 ★ Number of permutations of 6 indistinguishable copies of 1..n arranged in a circle with exactly 2 adjacent element pairs in decreasing order. ● a(n) = n * (3 * 7 ^ n - 36 * n) for n > 1. - _ Andrew Howroyd _ , May 04 2020 ● a(n) = 17 * a(n - 1) - 94 * a(n - 2) + 190 * a(n - 3) - 161 * a(n - 4) + 49 * a(n - 5) for n>6. ●

▶ [A128963] 0,150,3000,37500,375000,3281250,26250000,196875000,1406250000,9667968750,64453125000,418945312500,2666015625000,16662597656250,102539062500000,622558593750000,3735351562500000,22178649902343750,130462646484375000,761032104492187500 ★ a(n) = (n ^ 3 - n) * 5 ^ n. ● a(1)=0, a(2)=150, a(3)=3000, a(4)=37500, a(n)=20 * a(n - 1) - 150 * a(n - 2) + 500 * a(n - 3) - 625 * a(n - 4). - _ Harvey P. Dale _ , Jul 22 2012 ●

▶ [A334931] 151,233,1483,1693,10707,13029,644007,941241,317049751,490370281,3111314891,3550957213,22455577043,27325461221,1350581212071,1973926386873,6649015197889 51,10283810172735 77,65249002475289 07,74468970216362 53,4709275830825211 5,57305645652210405 ★ Numbers that generate rotationally symmetrical XOR - triangles with a pattern of zero - triangles of edge length 2, some of which are clipped to result in some singleton zeros at the edges. ● a(n) = 2097153 * a(n - 8) - 2097152 * a(n - 16). (End) ●

▶ [A340436] 151,1207,8911,63775,450631,3167047,22207231,155564335,1089291511,7626064087,53385519151,373707845695,2615982554791,18311960788327,128183974232671,897288565771855,6281022198832471,43967162107115767,307770154895675791 ★ Number of sets in the geometry determined by the Hausdorff metric at each location between two sets defined by a complete bipartite graph K(3,n) (with n at least 4) missing three edges, where exactly two of the removed edges are incident to the same vertex in the 3 - point set but none of the removed edges are incident to the same vertex in the other set. ● a(n) = 27 * 7 ^ (n - 3) - 13 * 3 ^ (n - 3) + 1. ●

▶ [A250375] 151,3096,24566,119235,428421,1256106,3179756,7202421,14952595,28938316,52861986,92002391,153670401,247744830,387294936,589296041,875444751,1273080256,1816218190,2546703531,3515489021,4784045586,6425911236 ★ Number of length 2 + 6 0..n arrays with every seven consecutive terms having the maximum of some three terms equal to the minimum of the remaining four terms. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. ●

▶ [A239065] 1,152,2403,17344,81125,287496,840007,2129408,4841289,10099000,19646891,36078912,63117613,105948584,171615375,269479936,411753617,614103768,896340979,1283192000,1805163381,2499500872,3411249623,4594420224,6113265625 ★ n ^ 3 * (n ^ 4 + n ^ 2 - 1). ● a(n) = n ^ 7 + n ^ 5 - n ^ 3. ●

▶ [A035823] 1,152,11552,585352,22249152,676725432,17158543712,373068895912,7101177930112,120221169738712,1833042722372512,25427680393479112,323611487252712512,3805280811287736312,41591858654834621 12 ★ Coordination sequence for lattice D *_ 76 (with edges defined by l _ 1 norm = 1). ● a(m)=add(2 ^ k * binomial(n, k) * binomial(m - 1, k - 1), k=0..n) + 2 ^ n * binomial((n + 2 * m) / 2 - 1, n - 1); with n=76. ●

▶ [A183985] 153,155,158,164,174,194,230,302,438,710,1238,2294,4374,8534,16790,33302,66198,131990,263318,525974,1050774,2100374,4198550,8394902,16785558 ★ 1 / 4 the number of (n + 1) X 9 binary arrays with all 2 X 2 subblock sums the same. ● a(n) = 3 * 2 ^ (n / 2 - 1) + 2 ^ (n - 1) + 150 for n even. ● a(n) = 2 ^ (n - 1) + 2 ^ ((n + 1) / 2) + 150 for n odd. ●

▶ [A184045] 153,159,169,189,225,297,433,705,1233,2289,4369,8529,16785,33297,66193,131985,263313,525969,1050769,2100369,4198545,8394897,16785553,33566865,67125393 ★ 1 / 9 the number of (n + 1) X 7 0..2 arrays with all 2 X 2 subblocks having the same four values. ● a(n) = 3 * 2 ^ (n / 2) + 2 ^ (n + 1) + 145 for n even. ● a(n) = 2 ^ (n + 1) + 2 ^ ((n + 3) / 2) + 145 for n odd. ●

▶ [A193249] 1,153,755,2107,4509,8261,13663,21015,30617,42769,57771,75923,97525,122877,152279,186031,224433,267785,316387,370539,430541,496693,569295,648647,735049 ★ Snub dodecahedron with faces of centered polygons. ● a(n) = 50 * n ^ 3 - 75 * n ^ 2 + 27 * n - 1 = (2 * n - 1) * (25 * n ^ 2 - 25 * n + 1). ●

▶ [A160854] 1,154,2155,13524,55400,173911,455120,1043547,2164267,4148584,7463281,12743446,20828874,32804045,50041678,74249861,107522757,152394886,211898983,289627432,389797276,517318803,677867708,877960831,1125035471 ★ Expansion of (1 + 147 * x + 1098 * x ^ 2 + 1638 * x ^ 3 + 632 * x ^ 4 + 59 * x ^ 5 + x ^ 6) / (1 - x) ^ 7. ● a(n) = 149 * n ^ 6 / 30 + 81 * n ^ 5 / 4 + 337 * n ^ 4 / 8 + 142 * n ^ 3 / 3 + 3529 * n ^ 2 / 120 + 107 * n / 12 + 1. - _ R. J. Mathar _ , Sep 17 2011 ●

▶ [A160863] 1,154,2199,13911,57209,179988,471675,1082509,2246545,4308382,7753615,13243011,21650409,34104344,52033395,77215257,111829537,158514274,220426183,301304623,405539289,538241628,705319979,913558437,1170699441 ★ Expansion of (1 + 147 * x + 1142 * x ^ 2 + 1717 * x ^ 3 + 656 * x ^ 4 + 60 * x ^ 5 + x ^ 6) / (1 - x) ^ 7. ● a(n) = 931 * n ^ 6 / 180 + 1261 * n ^ 5 / 60 + 1547 *

n ^ 4 / 36 + 565 * n ^ 3 / 12 + 1276 * n ^ 2 / 45 + 42 * n / 5 + 1. - _ R. J. Mathar _ , Sep 17 2011 ●

▶ [A160840] 1,154,2287,14695,60907,192493,505912,1163401,2417905,4642048,8361145,14290255,23375275,36838075,56225674,83463457,120912433,171430534,238437955,325986535,438833179,582517321,763442428,988961545,1267466881 ★ Expansion of (1 + 147 * x + 1230 * x ^ 2 + 1885 * x ^ 3 + 714 * x ^ 4 + 63 * x ^ 5 + x ^ 6) / (1 - x) ^ 7. ● a(n) = 449 * n ^ 6 / 80 + 1803 * n ^ 5 / 80 + 713 * n ^ 4 / 16 + 745 * n ^ 3 / 16 + 1053 * n ^ 2 / 40 + 37 * n / 5 + 1. - _ R. J. Mathar _ , Sep 11 2011 ●

▶ [A160841] 1,154,2287,14725,61147,193546,509293,1172305,2438317,4684258,8441731,14434597,23620663,37237474,56852209,84415681,122320441,173462986,241310071,329969125,444262771,589807450,773096149,1001585233 ★ Expansion of (1 + 147 * x + 1230 * x ^ 2 + 1915 * x ^ 3 + 744 * x ^ 4 + 66 * x ^ 5 + x ^ 6) / (1 - x) ^ 7. ● a(n) = 1 + 3 * n * (n + 1) * (38 * n ^ 4 + 112 * n ^ 3 + 183 * n ^ 2 + 127 * n + 50) / 20. - _ R. J. Mathar _ , Sep 17 2011 ● a(0)=1, a(1)=154, a(2)=2287, a(3)=14725, a(4)=61147, a(5)=193546, a(6)=509293, a(n)=7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). - _ Harvey P. Dale _ , Feb 11 2015 ●

▶ [A160853] 1,154,2287,14735,61227,193897,510420,1175273,2445121,4698328,8468593,14482711,23702459,37370607,57061054,84733089,122789777,174140470,242267443,331296655,446072635,592237493,776314056,1005793129 ★ Expansion of (1 + 147 * x + 1230 * x ^ 2 + 1925 * x ^ 3 + 754 * x ^ 4 + 67 * x ^ 5 + x ^ 6) / (1 - x) ^ 7. ● a(n) = 1 + n * (n + 1) * (1375 * n ^ 4 + 4022 * n ^ 3 + 6573 * n ^ 2 + 4582 * n + 1808) / 240. - _ R. J. Mathar _ , Sep 17 2011 ●

▶ [A063340] 1,155,341,528,715,902,1089,1276,1463,1650,1837,2022,2211,2398,2585,2770,2959,3144,3333,3518,3707,3892,4081,4264,4455 ★ Dimension of the space of weight n cuspidal newforms for Gamma _ 1(67). ● a(n) = a(n - 4) + a(n - 6) - a(n - 10) for n>13. ●

▶ [A129640] 0,155,464,939,1764,3515,6260,11055,21252,37247,65192,124623,217848,380723,727112,1270467,2219772,4238675,7405580,12938535,24705564,43163639,75412064,143995335,251576880 ★ Nonnegative values x of solutions (x, y) to the Diophantine equation x ^ 2 + (x + 313) ^ 2 = y ^ 2. ● a(n) = 6 * a(n - 3) - a(n - 6) + 626 for n > 6; a(1)=0, a(2)=155, a(3)=464, a(4)=939, a(5)=1764, a(6)=3515. ●

▶ [A224336] 155,805,2555,6245,12955,24005,40955,65605,99995,146405,207355,285605,384155,506245,655355,835205,1049755,1303205,1599995,1944805,2342555,2798405,3317755,3906245,4569755 ★ Number of idempotent 5X5 0..n matrices of rank 4. ● a(n) = 10 * n ^ 4 + 40 * n ^ 3 + 60 * n ^ 2 + 40 * n + 5. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Colin Barker _ , Sep 20 2014 ●

▶ [A218328] 1,155,885,2639,5865,11011,18525,28855,42449,59755,81221,107295,138425,175059,217645,266631,322465,385595,456469,535535,623241,720035,826365,942679,1069425 ★ Odd 9 - gonal (nonagonal) pyramidal numbers. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + 448. ● a(n) = (2 * n - 1) * (4 * n - 3) * (28 * n - 25) / 3. ●

▶ [A158550] 156,663,1508,2691,4212,6071,8268,10803,13676,16887,20436,24323,28548,33111,38012,43251,48828,54743,60996,67587,74516,81783,89388,97331,105612 ★ a(n) = 169 * n ^ 2 - 13. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A304619] 156,972,2436,4548,7308,10716,14772,19476,24828,30828,37476,44772,52716,61308,70548,80436,90972,102156,113988,126468,139596,153372,167796,182868,198588 ★ a(n) = 324 * n ^ 2 - 804 * n + 468 (n>=2). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>4. ●

▶ [A035824] 1,156,12168,632788,24684816,770545932,20050650776,447393464388,8739210543648,151827622117756,2375502273471912,33813163932788916,441550716354149168,5327219734962149868,59738920517881797816 ★ Coordination sequence for lattice D *_ 78 (with edges defined by l _ 1 norm = 1). ● a(m)=add(2 ^ k * binomial(n, k) * binomial(m - 1, k - 1), k=0..n) + 2 ^ n * binomial((n + 2 * m) / 2 - 1, n - 1); with n=78. ●

▶ [A252778] 0,0,156,14298,228984,1821420,9676020,39328086,131914608,382726584,991134540,2342199090,5133181416,10561434468,20593784484,38341504110,68569332960,118371718896,198054533628,322265959434,511426049880,793510636380,1206251784276 ★ Number of ways of n - coloring the square grid graph G _ (3,3) such that no rectangle exists with sides parallel to the axes having all 4 corners of the same color. ● a(n) = n * (n - 1) * (n ^ 7 + n ^ 6 + n ^ 5 - 8 * n ^ 4 - 8 * n ^ 3 + 4 * n ^ 2 + 22 * n - 14). ●

▶ [A093472] 159,258,357,456,555,654,753,852,951,11599,12589,13579,14569,15559,16549,17539,18529,19519,21598,22588,23578,24568,25558,26548,27538 ★ (2n + 1) - digit anti - palindromic numbers or numberdromes, whose first and last digits add to ten, second and next - to - last add to ten and so on with the central digit a 5. ● a(n) = (10 ^ (m + 1))n + 5(10 ^ m) + (10 ^ m - n) ●

▶ [A250659] 159,286,445,636,859,1114,1401,1720,2071,2454,2869,3316,3795,4306,4849,5424,6031,6670,7341,8044,8779,9546,10345,11176,12039 ★ Number of (5 + 1) X (n + 1) 0..1 arrays with nondecreasing x(i,j) - x(i,j - 1) in the i direction and nondecreasing min(x(i,j),x(i - 1,j)) in the j direction. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>3. ●

▶ [A227709] 159,906,5664,34932,206652,1168620,6344268,33264780,169424652,842319372,4104041484,19659270156,92822679564,432877854732,1997218529292,9129086189580,41386604691468,186264812126220,832881548328972,3702608701685772,16373934411743244 ★ The hyper - Wiener index of the dendrimer D _ n defined pictorially in Fig. 1 of the Heydari et al. reference. ● a(n) = 12 + 2 ^ n * (15 + 45 * n + 15 * n ^ 2) + 4 ^ n * (132 + 18 * n + 36 * n ^ 2). ●

▶ [A121804] 0,159,4846,43648,272432,1759444,10596296,64633588,387979832,2337067204,14023337096,84221417428,505334268632,3032732926564,18196438915496,109185158327668,655111280131832,3930726320267524,23584360724983496 ★ 1045 * 6 ^ n / 27 - 513 * 2 ^ (n - 2) - 2072 * 3 ^ (n - 3) + 670 * (- 1) ^ n * 3 ^ (n - 3) + 254 * (- 1) ^ (n + 1), n>1. ● a(n)= 7 * a(n - 1) + 5 * a(n - 2) - 75 * a(n - 3) + 36 * a(n - 4) + 108 * a(n - 5), n>6. [Oct 14 2009] ●

▶ [A221011] 159,8934,138021,1343571,10311135,68588151,415166631,2351820039,12687791559,65945446215,332865161799,1641053851719,7935696378951,37761280783431,177249667277895,822339653125191,3776814888617031,17193456239838279,77664102465799239,348399491831563335 ★ The hyper - Wiener index of the nanostar dendrimer G[n], defined pictorially in the Nadjafi - Arani et al. reference. ● a(n) = 1095 - 2 ^ (n - 2) * 33885 + 4 ^ (n - 2) * (15876 * n ^ 2 - 69930 * n + 118080). ●

▶ [A224430] 159,104448,2123802,22761810,183445458,1256801106,7758199698,44564150802,242917046802,1272665857554,6464520301074,32033885569554,155562155893266,742852590887442,3497424488243730,16268164668891666,74884202558956050,341573770043761170,1545606217427624466 ★ The hyper - Wiener index of the dendrimer D _ 1[n], defined pictorially in the A. R. Ashrafi et al. reference. ● a(n) = 41490 - 420000 * 2 ^ n + 81225 * 4 ^ n * n ^ 2 - 467115 * 4 ^ n * n / 2 + 378669 * 4 ^ n + 231 * 2 ^ n * n - 1425 * 2 ^ n * n ^ 2. ●

▶ [A278129] 160,508,1204,2596,5380,10948,22084,44356,88900,177988,356164,712516,1425220,2850628,5701444,11403076,22806340,45612868,91225924,182452036,364904260,729808708,1459617604,2919235396,5838470980 ★ a(n) = 348 * 2 ^ n - 188. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2). ●

▶ [A305272] 160,996,2668,6012,12700,26076,52828,106332,213340,427356,855388,1711452,3423580,6847836,13696348,27393372,54787420,109575516,219151708,438304092,876608860,1753218396,3506437468,7012875612,14025751900 ★ a(n) = 836 * 2 ^ n - 676. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>1. ●

▶ [A127409] 160,1750,10044,40817,132608,367416,903000,2020458,4191264,8168446,15107092,26719875,45473792,74834816,119567664,186098388,282948000,421245846,615331948,883458037,1248597504,1739375000,2391126920 ★ Negative value of coefficient of x ^ (n - 4) in the characteristic polynomial of a certain n X n integer circulant matrix. ● a(n + 3) = n * (n + 1) * (n + 2) * (n + 3) ^ 4 * (3 * n + 22) / (2 * 5!) for n>=1. ● a(n) = (3 * n ^ 8 - 5 * n ^ 7 - 45 * n ^ 6 + 125 * n ^ 5 - 78 * n ^ 4) / (2 * 5!) for n>=4. ●

▶ [A035825] 1,160,12800,682720,27315200,874496032,23338104320,534067024480,10698844067840,190617057780640,3058431999744512,44642243043558880,597778600580572160,7395049289720822560,85027230683021319680 ★ Coordination sequence for lattice D *_ 80 (with edges defined by l _ 1 norm = 1). ● a(m)=add(2 ^ k * binomial(n, k) * binomial(m - 1, k - 1), k=0..n) + 2 ^ n * binomial((n + 2 * m) / 2 - 1, n - 1); with n=80. ●

▶ [A060641] 161,257,373,509,665,841,1037,1253,1489,1745,2021,2317,2633,2969,3325,3701,4097,4513,4949,5405,5881,6377,6893,7429,7985 ★ Surround numbers of a length 2n zig - zag. ● a(n) = 10n ^ 2 + 46n + 29 with n > 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A157954] 161,323,485,647,809,971,1133,1295,1457,1619,1781,1943,2105,2267,2429,2591,2753,2915,3077,3239,3401,3563,3725,3887,4049 ★ 162n - 1. ● a(n) = 2 * a(n - 1) - a(n - 2). - _ Vincenzo Librandi _ , Jan 29 2012 ●

▶ [A157337] 161,577,1249,2177,3361,4801,6497,8449,10657,13121,15841,18817,22049,25537,29281,33281,37537,42049,46817,51841,57121,62657,68449,74497,80801 ★ a(n) = 128 * n ^ 2 + 32 * n + 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Jan 29 2012 ●

▶ [A259220] 162,230,334,510,798,1278,2078,3422,5694,9566,16222,27774,48030,83934,148286,264926,478686,874622,1615390,3014238,5678142,10789470,20661854,39839870,77278878 ★ Number of (n + 1) X (6 + 1) 0..1 arrays with each 2 X 2 subblock having clockwise pattern 0000 0011 or 0101. ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) - a(n - 3) + 2 * a(n - 4). ●

▶ [A342850] 162,1242,9018,64098,451602,3169962,22215978,155590578,1089370242,7626300282,53386227738,373709971458,2615988932082,18311979920202,128184031628298,897288737958738,6281022715393122,43967163656797722,307770159544721658 ★ Number of sets in the geometry determined by the Hausdorff metric at each location between two sets defined by a complete bipartite graph K(3,n) (with n at least 4) missing three edges, where all three removed edges are incident to different vertices in the 3 - point set and none of the removed edges are incident to the same vertex in the other set. ● a(n) = 27 * 7 ^ (n - 3) - 3 ^ (n - 1). ●

▶ [A304166] 162,1854,5490,11070,18594,28062,39474,52830,68130,85374,104562,125694,148770,173790,200754,229662,260514,293310,328050,364734,403362,443934,486450,530910,577314 ★ a(n) = 972 * n ^ 2 - 1224 * n + 414 with n > 0. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n > 3. (End) ●

▶ [A213288] 0,1,162,2074,13280,64924,273248,1050777,3754472,12602451,39598078,115470300,311272072,777274550,1808153452,3946185587,8137258032,15957939797,29935676058,53988338158,94013898576,158665898944,260355640952,416527654621,651260985944 ★ Number of 9 - length words w over n - ary alphabet such that for every prefix z of w we have # (z,a _ i) = 0 or # (z,a _ i) >= # (z,a _ j) for all j>i and # (z,a _ i) counts the occurrences of the i - th letter in z. ● a(n) = n * (3353416 - 9177198 * n + 10002755 * n ^ 2 - 5796570 * n ^ 3 + 1984509 * n ^ 4 - 416052 * n ^ 5 + 52920 * n ^ 6 - 3780 * n ^ 7 + 120 * n ^ 8) / 120. ●

▶ [A128803] 0,0,162,4374,78732,1180980,15943230,200884698,2410616376,27894275208,313810596090,3451916556990,37280698815492,396531069219324,4163576226802902,43237137739876290,444724845324441840 ★ n * (n - 1) * 9 ^ n. ● a(n) = 27 * a(n - 1) - 243 * a(n - 2) + 729 * a(n - 3). - _ Vincenzo Librandi _ , Feb 12 2013 ●

▶ [A035746] 1,162,4482,53154,374274,1854882,7159170,22952610,63821826,158611106,360027522,758497698,1501390338,2818849698,5057616258,8724341922,14540038146,23507426466,36993091970,56826471330,85417838082,125897578914,182279185794,259648519842 ★ Coordination sequence for C _ 9 lattice. ● a(n) = [x ^ (2n)] ((1 + x) / (1 - x)) ^ 9. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n > 9. ●

▶ [A285046] 1,162,4806,71892,758214,6506172,48783900,332715240,2115552582,12745645484,73577414196,410265444888,2222886926364,11756568121560,60911288332920,310024235290320,1553692427724870 ★ Expansion of cosh(9 * arctanh(2 * sqrt(x))). ● a(n) = 1 / 105 * (4096 * n ^ 4 + 512 * n ^ 3 + 3392 * n ^ 2 + 400 * n + 105) * binomial(2 * n,n). ●

▶ [A022151] 1,162,5154,67266,507906,2653346,10666146,35310402,100746498,255708578,590675490,1262903490,2531446530,4804547490,8702041250,15135668034,25410452994,41350565538,65453329442,101075312322,152654680578,225974263

458,328470027426,469589919554 ★ Coordination sequence for root lattice B _ 9. ● a(0)=1; for n>0, a(n) = (2012 * n ^ 8 - 3952 * n ^ 7 + 27160 * n ^ 6 - 35392 * n ^ 5 + 81508 * n ^ 4 - 57568 * n ^ 3 + 45560 * n ^ 2 - 8928 * n + 630) / 315. - _ Ralf Stephan _ , Apr 28 2004 ●

▶ [A279917] 0,1,162,6689,121250,1296406,9613604,54550049,252178758,992204376,3424910566,10615778966,30047257318,78751366604,193075366412,446840757793,982597838280,2066025009763,4171924730922,8127978871064,15324653827568,28059983210370 ★ a(n) = Sum _{ k=1..n - 1 } sigma _ 5(k) * sigma _ 7(n - k). ● a(n) = (sigma _ 13(n) + 20 * sigma _ 7(n) - 21 * sigma _ 5(n)) / 10080. ●

▶ [A157952] 163,325,487,649,811,973,1135,1297,1459,1621,1783,1945,2107,2269,2431,2593,2755,2917,3079,3241,3403,3565,3727,3889,4051 ★ a(n) = 162 * n + 1. ● a(n) = 2 * a(n - 1) - a(n - 2), a(0)=163, a(1)=325. - _ Harvey P. Dale _ , Aug 10 2011 ●

▶ [A305723] 1,163,4645,57799,432073,2286955,9446125,32398735,96220561,254831667,614859189,1373356887,2874747225,5693596923,10751213181,19475555103,34015593249,57523019715,94516111685,151342583015,236760421097,362658000011,544937185805,804585705647 ★ Crystal ball sequence for the lattice C _ 9. ● a(n) = Sum _{ k=0..9 } binomial(18, 2k) * binomial(n + k, 9). ● a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10) for n>9. ●

▶ [A134160] 163,7411,49981,180793,477463,1042303,2002321,3509221,5739403,8893963,13198693,18904081,26285311,35642263,47299513,61606333,78936691,99689251,124287373,153179113,186837223,225759151,270467041,321507733 ★ a(n) = 163 + 1053 * n + 2520 * n ^ 2 + 2646 * n ^ 3 + 1029 * n ^ 4. ● a(n) = (3 * (7 * n + 4) ^ 4 + 6 * (7 * n + 4) ^ 3 - 3 * (7 * n + 4) + 1) / 7. ● a(n) = sum(k=1..7 * n + 4, k ^ 6) / sum(k=1..7 * n + 4, k ^ 2). ●

▶ [A063354] 1,164,356,548,740,932,1124,1316,1508,1700,1892,2084,2276,2468,2660,2852,3044,3236,3428,3620,3812,4004,4196,4388,4580 ★ Dimension of the space of weight n cuspidal newforms for Gamma _ 1(81). ● a(n) = 2 * a(n - 1) - a(n - 2) for n>4. ●

▶ [A027796] 165,2200,15730,80080,325325,1121120,3403400,9335040,23556390,55426800,122862740,258658400,520550030,1006778080,1879537000,3399510400,5975701875,10236025800,17125658550,28042014000,45017447475,70963464000,109993369200,167844019200 ★ a(n) = 55 * (n + 1) * binomial(n + 3,11) / 3. ● a(n) = C(n + 1, 9) * C(n + 3, 3). - _ Zerinvary Lajos _ , May 13 2005; corrected by _ R. J. Mathar _ , Mar 16 2016 ●

▶ [A158218] 167,672,1515,2696,4215,6072,8267,10800,13671,16880,20427,24312,28535,33096,37995,43232,48807,54720,60971,67560,74487,81752,89355,97296,105575 ★ 169n ^ 2 - 2n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A167574] 167,741,2043,4409,8175,13677,21251,31233,43959,59765,78987,101961,129023,160509,196755,238097,284871,337413,396059,461145,533007,611981,698403,792609,894935 ★ The fourth row of the ED3 array A167572. ● a(n) = 56 * n ^ 3 + 28 * n ^ 2 + 98 * n - 15. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ G. C. Greubel _ , Jun 16 2016 ●

▶ [A290757] 167,1666,14861,125972,1034803,8313830,65687321,512243704,3952731839,30238302794,229652377381,1733456444636,13015423731275,972765664485 58,724116167445041,5371074588248768,39713352030673111,29280427360523112,2153305580970250301 ★ Number of (non - null) connected induced subgraphs in the (2 n) - crossed prism graph. ● a(n) = 7 ^ n + n * (191 * 7 ^ (n - 2) - 14) / 3. ● a(n) = 16 * a(n - 1) - 78 * a(n - 2) + 112 * a(n - 3) - 49 * a(n - 4) for n > 5. ●

▶ [A158219] 168,337,506,675,844,1013,1182,1351,1520,1689,1858,2027,2196,2365,2534,2703,2872,3041,3210,3379,3548,3717,3886,4055,4224 ★ 169n - 1. ● a(n) = 2 * a(n - 1) - a(n - 2). ●

▶ [A157998] 168,674,1518,2700,4220,6078,8274,10808,13680,16890,20438,24324,28548,33110,38010,43248,48824,54738,60990,67580,74508,81774,89378,97320,105600 ★ 169n ^ 2 - n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A216107] 168,1720,6636,17796,38980,74868,131040,213976,331056,490560,701668,974460,1319916,1749916,2277240,2915568,3679480,4584456,5646876,6884020,8314068,9956100,11830096,13956936,16358400 ★ The hyper - Wiener index of the tetrameric 1,3 - adamantane TA(n) (see the Fath - Tabar et al. reference). ● a(n) = (75n ^ 4 + 210n ^ 3 + 229n ^ 2 - 178n) / 2. ●

▶ [A282614] 0,1,168,5346,67840,496875,2544696,10151428,33693696,97135605,250525000,590412966,1291500288,2653631071,5169160920,9616725000,17188519936,29659392873,49607301096,80696066410,128032800000,198613915731,301875282808,450363792396 ★ Number of inequivalent 3 X 3 matrices with entries in { 1, 2,3,..,n } up to vertical and horizontal reflections. ● a(n) = n ^ 5 * (n + 1) * (n ^ 3 - n ^ 2 + n + 1) / 4. ●

▶ [A184035] 169,181,202,244,322,478,778,1378,2554,4906,9562,18874,37402,74458,148378,296218,591514,1182106,2362522,4723354,9443482,18883738,37761178,75516058,151019674 ★ 1 / 16 the number of (n + 1) X 6 0..3 arrays with all 2 X 2 subblocks having the same four values. ● a(n) = 9 * 2 ^ (n / 2 - 1) + 9 * 2 ^ (n - 1) + 154 for n even. ● a(n) = 9 * 2 ^ (n - 1) + 3 * 2 ^ ((n + 1) / 2) + 154 for n odd. ●

▶ [A156159] 169,289,625,2809,7225,18769,93025,243049,635209,3157729,8254129,21576025,107267449,280395025,732947329,3643933225,9525174409,24898630849,123786459889,323575532569,845820499225,4205095700689 ★ Squares of the form k ^ 2 + (k + 17) ^ 2 with integer k. ● a(n) = 34 * a(n - 3) - a(n - 6) - 2312 for n > 6; a(1)=169, a(2)=289, a(3)=625, a(4)=2809, a(5)=7225, a(6)=18769. ●

▶ [A017534] 1,169,625,1369,2401,3721,5329,7225,9409,11881,14641,17689,21025,24649,28561,32761,37249,42025,47089,52441,58081,64009,70225,76729,83521 ★ a(n) = (12 * n + 1) ^ 2. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Jul 07 2012 ●

▶ [A158221] 170,339,508,677,846,1015,1184,1353,1522,1691,1860,2029,2198,2367,2536,2705,2874,3043,3212,3381,3550,3719,3888,4057,4226 ★ a(n) = 169n + 1. ● a(n) = 2 * a(n - 1) - a(n - 2). - _ Vincenzo Librandi _ , Feb 02 2012 ●

▶ [A173275] 170,678,1524,2708,4230,6090,8288,10824,13698,16910,20460,24348,28574,33138,38040,43280,48858,54774,61028,67620,74550,81818,89424,97368,105650 ★ a(n) = 169 * n ^ 2 + n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Feb 10 2012 ●

▶ [A158220] 171,680,1527,2712,4235,6096,8295,10832,13707,16920,20471,24360,28587,33152,38055,43296,48875,54792,61047,67640,74571,81840,89447,97392,105675 ★ a(n) = 169 * n ^ 2 + 2 * n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Feb 02 2012 ●

▶ [A199902] 171,1783,8823,30199,82555,193689,406575,783989,1413739,2414499,3942247,6197307,9431995,13958869,20159583,28494345,39511979,53860591,72298839,95707807,125103483,161649841,206672527,261673149,328344171 ★ Number of - n..n arrays x(0..6) of 7 elements with zero sum, and adjacent elements not both strictly positive and not both strictly negative. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

▶ [A195279] 171,2125,11319,39609,107811,248261,507375,948209,1653019,2725821,4294951,6515625,9572499,13682229,19096031,26102241,35028875,46246189,60169239,77260441,98032131,123049125,152931279,188356049,230061051 ★ Number of lower triangles of a 3 X 3 integer array with each element differing from all of its vertical and horizontal neighbors by n or less and triangles differing by a constant counted only once. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. ●

▶ [A370299] 0,0,171,2628,27495,259560,2372931,21467628,193542975,1742890320,15689024091,141210251028,1270919362455,11438355572280,102945444081651,926509728528828,8338589752141935,75047314355425440,675425848957273611,6078832699890797028,54709494476843177415 ★ Number of chordless cycles in the complement of the n - Sierpinski gasket graph. ● a(n) = (72 - 17 * 3 ^ n + 9 ^ n) / 2 for n > 1. ● a(n) = 13 * a(n - 1) - 39 * a(n - 2) + 27 * a(n - 3) for n > 4. ●

▶ [A250340] 172,4409,37824,193437,725596,2210213,5794496,13561449,29037004,57870241,108719744,194381733,333198204,550785901,882129536,1374085265,2088343020,3104898889,4526091328,6481257581,9132069276,12678608757,17366250304 ★ Number of length 4 + 5 0..n arrays with every six consecutive terms having the maximum of some three terms equal to the minimum of the remaining three terms. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>9. ●

▶ [A185526] 174,726,3030,12630,52662,219606,915702,3818262,15921462,66389334,276830070,1154326422,4813311414,20070547926,83690183670,348971383830,1455141093942,6067648253526,25300883554422,105499640297622 ★ Number of (n + 2) X 3 binary arrays with each 3 X 3 subblock nonsingular. ● a(n) = 3 * a(n - 1) + 2 * a(n - 2) + 12 * a(n - 3). ●

▶ [A224433] 174,22734,299646,2332398,14462574,79461294,406098606,1980213678,9348000174,43104718254,195270696366,872477232558,3855431404974,16883645533614,73381802986926,316914939973038,1361207885548974,5819017520467374,24772799043194286 ★ The Wiener index of the dendrimer D _ 3[n], defined pictorially in the A. R. Ashrafi et al. reference. ● a(n)= - 12882 + 44604 * 2 ^ n - 31548 * 4 ^ n + 21780 * n * 4 ^ n - 7260 * n * 2 ^ n. ●

▶ [A305062] 176,272,464,848,1616,3152,6224,12368,24656,49232,98384,196688,393296,786512,1572944,3145808,6291536,12582992,25165904,50331728,100663376,201326672,402653264,805306448,1610612816 ★ a(n) = 96 * 2 ^ n + 80. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2). - _ Vincenzo Librandi _ , May 25 2018 ●

▶ [A063344] 1,176,385,595,805,1015,1225,1435,1645,1855,2065,2273,2485,2695,2905,3113,3325,3533,3745,3953,4165,4373,4585,4791,5005 ★ Dimension of the space of weight n cuspidal newforms for Gamma _ 1(71). ● a(n) = a(n - 4) + a(n - 6) - a(n - 10) for n>13. ●

▶ [A243647] 0,0,0,0,1,176,3145,22969,106819,376796,1101151,2805825,6438909,13602304,26866541,50186401,89436655,153088924,253052339,405702361,633123801,964595760,1438347889,2103619049,3023051131 ★ Number of ways four L - tiles can be placed on an n X n square. ● a(n) = (n ^ 8 - 8 * n ^ 7 - 14 * n ^ 6 + 244 * n ^ 5 - 201 * n ^ 4 - 2428 * n ^ 3 + 4042 * n ^ 2 + 7700 * n - 15576) / 24 for n>=4, a(n) = 0 for n<4. ●

▶ [A068244] 1,176,5490,65600,455875,2239776,8647716,27962880,78920325,200002000,464447126,1003294656,2039332295,3935444800,7261533000,12884914176,22089914121,36733221360,59442494650,93866696000,144987663051,219503536736,326295822700,476993088000 ★ 1 / 6 the number of colorings of a 3 X 3 rhombic - or staggered - hexagonal array with n colors. ● a(n) = (n ^ 9 - 16 * n ^ 8 + 112 * n ^ 7 - 448 * n ^ 6 + 1120 * n ^ 5 - 1791 * n ^ 4 + 1786 * n ^ 3 - 1012 * n ^ 2 + 248 * n) / 6. (End) ●

▶ [A292185] 177,488,1159,2460,4781,8656,14787,24068,37609,56760,83135,118636,165477,226208,303739,401364,522785,672136,854007,1073468,1336093,1647984,2015795,2446756,2948697 ★ One - fifth of the rolling arithmetic mean of the fifth powers of the natural numbers taken five at a time. ● a(n) = ((n ^ 5 + (n + 1) ^ 5 + (n + 2) ^ 5 + (n + 3) ^ 5 + (n + 4) ^ 5) / 5) / 5. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. ●

▶ [A052461] 1,177,5111,60962,430729,2158099,8488095,27903044,79895265,205033333,481386807,1049954918,2152397897,4185095383,7774354687,13878462600,23923217921,39978597945,64985300791,103041066666,159757914953 ★ 4 - magic series constant. ● a(n) = n * (6 * n ^ 8 + 15 * n ^ 6 + 10 * n ^ 4 - 1) / 30. ●

▶ [A157842] 178,5379,17780,37381,64182,98183,139384,187785,243386,306187,376188,453389,537790,629391,728192,834193,947394,1067795,1195396,1330197,1472198,1621399,1777800,1941401,2112202 ★ a(n) = 3600 * n ^ 2 - 5599 * n + 2177. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A063350] 1,179,408,634,860,1086,1312,1538,1764,1990,2216,2446,2668,2894,3120,3350,3572,3802,4024,4254,4476,4706,4928,5162,5380 ★ Dimension of the space of weight n cuspidal newforms for Gamma _ 1(77). ● a(n) = a(n - 4) + a(n - 6) - a(n - 10) for n>13. ●

▶ [A177682] 179,1571,12511,155403,572951,2194479,8583263,33943743,134996351,538428159,2150598143,8596163583,34372196351,137463869439,549805645823,2199122919423,8796292349951,35184770744319,140738285666303 ★ a(n) = 6 * a(n - 1) - 8 * a(n - 2) - 3 for n > 4; a(0)=179, a(1)=1571, a(2)=12511, a(3)=155403, a(4)=572951. ● a(n) = 2 * 4 ^ (n + 5) + 6083 * 2 ^ (n - 1) - 1 for n > 2. ●

▶ [A142968] 1,179,5280,82610,919615,8284857,64730022,457217400,2999230965,18608607535,110625457964,636103699038,3562753619915,19541111960965,105392471360850,560747327119908,2950726075955265,15387821226034875,79656442803398680,409857988825489610 ★ Fifth column (m=4) of triangle A142963 divided

by 16=2 ^ 4. ● a(n) = 35a(n - 1) - 560a(n - 2) + 5432a(n - 3) - 35714a(n - 4) + 168542a(n - 5) - 589632a(n - 6) + 1556776a(n - 7) - 3126949a(n - 8) + 4777591a(n - 9) - 5506936a(n - 10) + 4703032a(n - 11) - 2881136a(n - 12) + 1195632a(n - 13) - 300672a(n - 14) + 34560a(n - 15). ● a(n) = (1155 / 8) + (472 / 3) * n - 5544 * 2 ^ n + (120285 / 4) * 3 ^ n - 49280 * 4 ^ n + (196875 / 8) * 5 ^ n - 64 * 2 ^ n * n ^ 3 - 864 * 2 ^ n * n ^ 2 - 3824 * 2 ^ n * n + (187 / 3) * n ^ 2 + 1215 * 3 ^ n * n ^ 2 + 12150 * 3 ^ n * n - 8960 * 4 ^ n * n + (32 / 3) * n ^ 3 + (2 / 3) * n ^ 4. ●

▶ [A309380] 180,240,1380,4200,15420,52080,177780,595320,1978860,6515520,21298980,69168840,223369500,717772560,2296480980,7319252760,23247851340,73615135200,232462779780,732245695080,2301319648380,7217727595440,22594530691380,70607719663800 ⋆ Number of unordered pairs of 5 - colorings of an n - wheel that differ in the coloring of exactly one vertex. ● a(n) = 10 * (2 ^ (n - 1) - 2 * (- 1) ^ n + (n - 1) * (3 ^ (n - 2) - 3 * (- 1) ^ n)). ● a(n) = 6 * a(n - 1) - 6 * a(n - 2) - 16 * a(n - 3) + 15 * a(n - 4) + 18 * a(n - 5) for n > 7. ●

▶ [A066164] 180,360,540,720,900,1080,1260,1440,1620,1800,1980,2160,2340,2520,2700,2880,3060,3240,3420,3600,3780,3960,4140,4320,4500 ⋆ Sum of interior angles in an n - sided polygon in degrees. ● a(n) = (n - 2) * 180. ●

▶ [A225933] 180,1269,5940,20454,140470,304548,605685,1965462,5261278,17967252,25736406,49799782,155060070,254724622,402876885,616803846,918048406,1109465220,2638932670,4871761782,6475385158,11018543046,14135549422,22598655270,42920128086 ⋆ Number of conjugacy classes in adjoint Chevalley group E _ 6(q) as q runs through the prime powers. ● a(n) = q ^ 6 + q ^ 5 + 2q ^ 4 + 2q ^ 3 + 9q ^ 2 + 9q + 22 if q == 1 (mod 6). ● a(n) = q ^ 6 + q ^ 5 + 2q ^ 4 + 2q ^ 3 + 6q ^ 2 + 4q + 4 if q == 2 (mod 6). ● a(n) = q ^ 6 + q ^ 5 + 2q ^ 4 + 2q ^ 3 + 7q ^ 2 + 5q + 3 if q == 3 (mod 6). ● a(n) = q ^ 6 + q ^ 5 + 2q ^ 4 + 2q ^ 3 + 8q ^ 2 + 8q + 20 if q == 4 (mod 6). ● a(n) = q ^ 6 + q ^ 5 + 2q ^ 4 + 2q ^ 3 + 7q ^ 2 + 5q + 4 if q == 5 (mod 6). ●

▶ [A225932] 180,1269,6116,20454,140886,304548,605685,1965462,5262486,17969012,25736406,49802214,155060070,254728710,402876885,616803846,918054582,1109465220,2638941366,4871761782,6475396806,11018543046,14135564454,22598655270,42920128086 ⋆ Number of conjugacy classes in simply connected Chevalley group E _ 6(q) as q runs through the prime powers. ● a(n) = q ^ 6 + q ^ 5 + 2q ^ 4 + 2q ^ 3 + 15q ^ 2 + 21q + 60 if q == 1 (mod 6). ● a(n) = q ^ 6 + q ^ 5 + 2q ^ 4 + 2q ^ 3 + 6q ^ 2 + 4q + 4 if q == 2 (mod 6). ● a(n) = q ^ 6 + q ^ 5 + 2q ^ 4 + 2q ^ 3 + 7q ^ 2 + 5q + 3 if q == 3 (mod 6). ● a(n) = q ^ 6 + q ^ 5 + 2q ^ 4 + 2q ^ 3 + 14q ^ 2 + 20q + 52 if q == 4 (mod 6). ● a(n) = q ^ 6 + q ^ 5 + 2q ^ 4 + 2q ^ 3 + 7q ^ 2 + 5q + 4 if q == 5 (mod 6). ●

▶ [A243465] 0,0,0,180,4890,36028,154434,488660,1271450,2883900,5907298,11182644,19877850,33562620,54291010,84691668,128065754,188492540,270942690,381399220,526986138,716104764,958577730,1265800660,1650901530 ⋆ Number of ways 3 domicules can be placed on an n X n square. ● a(n) = (2574 - 2328 * n - 144 * n ^ 5 - 96 * n ^ 4 + 1188 * n ^ 3 - 854 * n ^ 2 + 32 * n ^ 6) / 3 for n>=3, a(n) = 0 for n<3. ●

▶ [A159548] 181,199,221,865,995,1145,5009,5771,6649,29189,33631,38749,170125,196015,225845,991561,1142459,1316321,5779241,6658739,7672081,33683885,38809975,44716165,196324069 ⋆ Positive numbers y such that y ^ 2 is of the form x ^ 2 + (x + 199) ^ 2 with integer x. ● a(n) = 6 * a(n - 3) - a(n - 6) for n > 6; a(1)=181, a(2)=199, a(3)=221, a(4)=865, a(5)=995, a(6)=1145. ●

▶ [A069763] 181,1637,7811,26659,73529,174761,372007,727271,1328669,2296909,3792491,6023627,9254881,13816529,20114639,28641871,39988997,54857141,74070739,98591219,129531401,168170617,215970551,274591799,345911149 ⋆ Frobenius number of the numerical semigroup generated by consecutive cubes. ● a(n) = n ^ 3 * (n + 1) ^ 3 - n ^ 3 - (n + 1) ^ 3 = n ^ 6 + 3 * n ^ 5 + 3 * n ^ 4 - n ^ 3 - 3 * n ^ 2 - 3 * n - 1. ●

▶ [A008379] 1,181,6621,101241,903881,5590989,26515269,102908209,341661649,1001294629,2650436845,6447019305,14603375385,31126140605,62948716245,121608649569,225663101089,404083136149,700922413309,1181618464729,1941355693161,3115998965421,4896195782501 ⋆ Crystal ball sequence for D _ 10 lattice. ● a(n - 1) = 676 / 4725 * n ^ 10 - 676 / 945 * n ^ 9 + 1168 / 315 * n ^ 8 - 664 / 63 * n ^ 7 + 1796 / 75 * n ^ 6 - 1708 / 45 * n ^ 5 + 41176 / 945 * n ^ 4 - 6568 / 189 * n ^ 3 + 29342 / 1575 * n ^ 2 - 634 / 105 * n + 1. ●

▶ [A158553] 182,770,1750,3122,4886,7042,9590,12530,15862,19586,23702,28210,33110,38402,44086,50162,56630,63490,70742,78386,86422,94850,103670,112882,122486 ⋆ a(n) = 196 * n ^ 2 - 14. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A193253] 1,183,905,2527,5409,9911,16393,25215,36737,51319,69321,91103,117025,147447,182729,223231,269313,321335,379657,444639,516641,596023,683145,778367,882049 ⋆ Great rhombicosidodecahedron with faces of centered polygons. ● a(n) = 60 * n ^ 3 - 90 * n ^ 2 + 32 * n - 1. ●

▶ [A272126] 1,183,1205,3787,8649,16511,28093,44115,65297,92359,126021,167003,216025,273807,341069,418531,506913,606935,719317,844779,984041,1137823,1306845,1491827,1693489 ⋆ a(n) = 120 * n ^ 3 + 60 * n ^ 2 + 2 * n + 1. ● a(n) = (2 * n + 1) * (60 * n ^ 2 + 1). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>3. ● a(n) = 1 / 4 ^ n * Sum _{ k = 0..n } (2 * k + 1) ^ 6 * binomial(2 * n + 1, n - k). ● a(n - 1) = 2 / 4 ^ n * binomial(2 * n,n) * (1 + 3 ^ 6 * (n - 1) / (n + 1) + 5 ^ 6 * (n - 1) * (n - 2) / ((n + 1) * (n + 2)) + 7 ^ 6 * (n - 1) * (n - 2) * (n - 3) / ((n + 1) * (n + 2) * (n + 3)) + ...). (End) ●

▶ [A296780] 0,184,8788,126016,953312,4980744,20000844,66781696,192914176,498751000,1176318500,2576159424,5295012768,10321114216,19204598812,34338770944,59257739264,99137135736,161273290356,255920008000,397011388000,603492894664,900354295148 ⋆ Detour index of the n X n X n grid graph. ● a(2n - 1) = 4 * (n - 1) ^ 3 * (4 * n ^ 2 - 2 * n + 1) ^ 3, a(2n) = 8 * n ^ 3 * (32 * n ^ 6 - 10 * n ^ 3 + 1). - _ Andrew Howroyd _ , Dec 21 2017 ● a(n) = 3 * a(n - 1) + 4 * a(n - 2) - 20 * a(n - 3) + 56 * a(n - 5) - 28 * a(n - 6) - 84 * a(n - 7) + 70 * a(n - 8) + 70 * a(n - 9) - 84 * a(n - 10) - 28 * a(n - 11) + 56 * a(n - 12) - 20 * a(n - 14) + 4 * a(n - 15) + 3 * a(n - 16) - a(n - 17) for n>17. ●

▶ [A157297] 185,233,317,793,1165,1717,4573,6757,9985,26645,39377,58193,155297,229505,339173,905137,1337653,1976845,5275525,7796413,11521897,30748013,45440825,67154537,179212553 ⋆ Positive numbers y such that y ^ 2 is of the form x ^ 2 + (x + 233) ^ 2 with integer x. ● a(n) = 6 * a(n - 3) - a(n - 6) for n > 6; a(1)=185, a(2)=233, a(3)=317, a(4)=793, a(5)=1165, a(6)=1717. ●

▶ [A147817] 186,3050,20790,93030,321580,930636,2362500,5420580,11473110,22732710,42628586,76289850,131160120,217765240,350657640,549562536,840752850,1258681410,1847900670,2665301870,3782707236,5289850500,7297782700,9942741900,13390527150 ⋆ Number of consistent sets of 4 irreflexive binary order relationships over n objects. ● a(n) = binomial(n,4) * (n ^ 4 + 2 * n ^ 3 - 5 * n ^ 2 - 22 * n - 30). - _ Vaclav Kotesovec _ , Apr 11 2020 ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>10. ●

▶ [A063346] 1,187,408,630,852,1074,1296,1518,1740,1962,2184,2404,2628,2850,3072,3292,3516,3736,3960,4180,4404,4624,4848,5066,5292 ⋆ Dimension of the space of weight n cuspidal newforms for Gamma _ 1(73). ● a(n) = a(n - 4) + a(n - 6) - a(n - 10) for n>13. ●

▶ [A134163] 1,187,1531,5977,16441,36811,71947,127681,210817,329131,491371,707257,987481,1343707,1788571,2335681,2999617,3795931,4741147,5852761,7149241,8650027,10375531,12347137,14587201 ⋆ 1 + 12 * n + 81 * n ^ 3 + n * (105 * n + 81 * n ^ 3) / 2. ● a(n) = (3(3n + 1) ^ 4 + 6(3n + 1) ^ 3 - (3n + 1) ^ 2 - 4(3n + 1) + 2) / 6. ● a(n) = (sum _{ k=1..3n + 1 } k ^ 7) / (sum _{ k=1..3n + 1 } k ^ 3). ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Wesley Ivan Hurt _ , Oct 23 2014 ●

▶ [A099945] 188,404,836,1700,3428,6884,13796,27620,55268,110564,221156,442340,884708,1769444,3538916,7077860,14155748,28311524,56623076,113246180,226492388,452984804,905969636,1811939300,3623878628 ⋆ Number of 4 X n binary matrices avoiding simultaneously the right angled numbered polyomino patterns (ranpp) (00;1) and (11;0). ● a(n) = 27 * 2 ^ n - 28. ●

▶ [A352759] 189,3587409,355957875,7354447191,70607389041,429735975669,1932670025559,7006302268875,21612640524741,58809832966521,144757538551899,328260072633759,695228576765625,1389765141771741,2643927354266751,4818621138983379,8458493032498509,14364150148238625,23685527077994691,38040743821584231 ⋆ Centered cube numbers that are the difference of two positive cubes; a(n) = 27 * t ^ 3 * (27 * t ^ 6 + 1) / 4 with t = 2 * n - 1. ● a(n) = 27 * (2 * n - 1) ^ 3 * (27 * (2 * n - 1) ^ 6 + 1) / 4. ● a(n) can be extended for negative n such that a(- n) = - a(n + 1). ●

▶ [A107955] 191,1471,7551,31871,119231,410303,1327103,4090623,12130303,34842623,97435647,266313727,713637887,1879523327,4875091967,12474187775,31531728895,78832992255,195135799295,478649778175,1164351373311 ⋆ Number of chains in the power set lattice or the number of fuzzy subsets of an (n + 5) - element set X _ (n + 5) with specification n elements of one kind, 4 elements of another and 1 of yet another kind. ● a(n) = (2 ^ (n + 1)) * (1 / 24) * (n ^ 5 + 36 * n ^ 4 + 431 * n ^ 3 + 2088 * n ^ 2 + 3972 * n + 2304) - 1. ●

▶ [A177683] 191,1587,14161,123004,508152,2064880,8324064,33425344,133959552,536354560,2146450944,8587869184,34355607552,137430691840,549739290624,2198990209024,8796026929152,35184239902720,140737223983104 ⋆ a(n) = 6 * a(n - 1) - 8 * a(n - 2) for n > 4; a(0)=191, a(1)=1587, a(2)=14161, a(3)=123004, a(4)=508152. ● a(n) = 2 * 4 ^ (n + 5) - 2017 * 2 ^ (n - 1) for n > 2. ●

▶ [A229361] 192,420,1494,7686,49218,358710,2838234,23736846,206418978,1846772550,16877063274,156755849406,1474458820338,14008019814390,134151794416314,1293111887664366,12531051927887298,121969635737464230,1191547891970937354,11676481763813277726 ⋆ Total sum of n - th powers of parts in all partitions of 10. ● a(n) = 97 + 41 * 2 ^ n + 21 * 3 ^ n + 13 * 4 ^ n + 8 * 5 ^ n + 5 * 6 ^ n + 3 * 7 ^ n + 2 * 8 ^ n + 9 ^ n + 10 ^ n. ●

▶ [A305073] 192,960,2304,4224,6720,9792,13440,17664,22464,27840,33792,40320,47424,55104,63360,72192,81600,91584,102144,113280,124992,137280,150144,163584,177600 ⋆ a(n) = 288 * n ^ 2 - 96 * n (n>=1). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>3. ●

▶ [A188786] 0,192,1944,7936,22200,50112,98392,175104,289656,452800,676632,974592,1361464,1853376,2467800,3223552,4140792,5241024,6547096,8083200,9874872,11948992,14333784,17058816,20155000 ⋆ Number of 3 - step self - avoiding walks on an n X n X n X n 4 - cube summed over all starting positions. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>6. ●

▶ [A183702] 192,2472,31800,409128,5263608,67718760,871232952,11208812712,144206530680,1855283342568,23869073504568,307086608771880,3950810460600312,50828993677128552,653938381502821560 ⋆ Number of (n + 1) X 2 0..3 arrays with every 2 X 2 subblock nonsingular. ● a(n) = (3 * 2 ^ (- 1 - n) * ((11 - sqrt(217)) ^ n * (- 73 + 5 * sqrt(217)) + (11 + sqrt(217)) ^ n * (73 + 5 * sqrt(217))) / sqrt(217). ●

▶ [A351632] 0,0,0,192,2560,19200,107520,501760,2064384,7741440,27033600,89210880,281149440,852819968,2504785920,7156531200,19964887040,54546923520,146314100736,386106654720,1004116377600,2577232035840,6536738897920,16401272143872,40748502220800 ⋆ Number of copies of the star graph S(2,1,1,1) contained in the n - dimensional hypercube graph. ● a(n) = 2 ^ n * binomial(n,3) * (n - 1) * (n - 3). ●

▶ [A209594] 192,3645,28672,140625,513216,1529437,3932160,9034497,19000000,37202781,68677632,120670225,203297472,330328125,520093696,796539777,1190427840,1740697597,2496000000,3516410961,4875335872,6661615005,8981839872 ⋆ Number of 3 X 3 0..n arrays with every element equal to a diagonal or antidiagonal reflection. ● a(n) = (n + 1) ^ 6 * (2 * n + 1). ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>7. ●

▶ [A215688] 0,192,7020,52808,229680,738192,1950512,4488180,9314448,17841200,32050452,54630432,89126240,140105088,213336120,315984812,456821952,646447200,897527228,1225048440,1646584272,2182577072,2856634560,3695840868,4731082160 ⋆ Number of solid standard Young tableaux of shape [[3 * n,3],[3]]. ● a(n) = (3 * n - 1) * (3 * n - 2) * (3 * n ^ 2 + 13 * n + 16) * (3 * n ^ 2 + 5 * n + 4) / 4 for n>0, a(0) = 0. ●

▶ [A187168] 0,192,25344,177120,568248,1298016,2466510,4175136,6525450,9619008,13557366,18442080,24374706,31456800,39789918,49475616,60615450,73310976,87663750,103775328,121747266,141681120,163678446,187840800,214269738 ⋆ Number of 7 - step self - avoiding walks on an n X n X n cube summed over all

starting positions. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) fo r n>9. ●

▶ [A347636] 193,399,783,1601,3283,6947,14897,32607,72175,161649,364611,8275 55,1885729,4310639,9874319,22654881,52032883,119601123,275058321,63282374 3,1456319215,3352072913,7716633443,17765737443,40904125825 ⋆ Number of w ays to tile an n X n square with 1 X 1 squares and (n - 2) X 2 vertical or horizo ntal rectangles. ● a(n) = 3 * a(n - 1) + a(n - 2) - 7 * a(n - 3) + a(n - 4) + 3 * a (n - 5). ●

▶ [A166540] 0,0,0,193,1548,6714,21280,55395,125748,257908,489024,870885,1473 340,2388078,3732768,5655559,8339940,12009960,16935808,23439753,31902444,42 769570,56558880,73867563,95379988 ⋆ Number of ways to place 2 nonattacking kings on an n X n X n raumschach board. ● a(n) = (n ^ 6 - (3 * n - 2) ^ 3) / 2 = (n ^ 6) / 2 - (27 * n ^ 3) / 2 + 27 * n ^ 2 - 18 * n + 4 for n>0. - _ Andrew Woods _ , Aug 30 2011 ●

▶ [A250156] 193,3450,26710,129595,468231,1382188,3522460,8028405,16761565,3 2604286,59831058,104560495,175295875,283562160,444647416,678456553,101048 5305,1472922370,2105887630,2958814371,4091983423,5578217140,7504741140 ⋆ Number of length 2 + 6 0..n arrays with every seven consecutive terms having the maximum of some two terms equal to the minimum of the remaining five te rms. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a (n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. ●

▶ [A158224] 194,780,1758,3128,4890,7044,9590,12528,15858,19580,23694,28200,3 3098,38388,44070,50144,56610,63468,70718,78360,86394,94820,103638,112848,12 2450 ⋆ a(n) = 196 * n ^ 2 - 2 * n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A158225] 195,391,587,783,979,1175,1371,1567,1763,1959,2155,2351,2547,274 3,2939,3135,3331,3527,3723,3919,4115,4311,4507,4703,4899 ⋆ 196n - 1. ● a(n) = 2 * a(n - 1) - a(n - 2). ●

▶ [A158003] 195,782,1761,3132,4895,7050,9597,12536,15867,19590,23705,28212,3 3111,38402,44085,50160,56627,63486,70737,78380,86415,94842,103661,112872,12 2475 ⋆ a(n) = 196 * n ^ 2 - n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Feb 10 2012 ●

▶ [A295130] 195,1542,5193,12300,24015,41490,65877,98328,139995,192030,25558 5,331812,421863,526890,648045,786480,943347,1119798,1316985,1536060,177817 5,2044482,2336133,2654280,3000075 ⋆ a(n) = 3 * n * (64 * n ^ 2 + 1). ● a(n) = 3 * n * (64 * n ^ 2 + 1). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>4. ●

▶ [A257765] 195,1599,2379,19695,163059,242619,2008695,16630419,24744759,20 4867195,1696139679,2523722799,20894445195,172989616839,257394980739,2131 028542695,17643244777899,26251764312579,217344016909695,179943797772885 9,2677422564902319 ⋆ Positive integers whose square is the sum of 26 consecuti ve squares. ● a(n) = 102 * a(n - 3) - a(n - 6). ●

▶ [A224667] 196,260,332,412,500,596,700,812,932,1060,1196,1340,1492,1652,182 0,1996,2180,2372,2572,2780,2996,3220,3452,3692,3940 ⋆ Number of 5 X 5 0..n m atrices with each 2 X 2 subblock idempotent. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>3. ●

▶ [A211851] 196,561,1302,2619,4755,7996,12671,19152,27854,39235,53796,7208 1,94677,122214,155365,194846,241416,295877,359074,431895,515271,610176,7176 27,838684,974450 ⋆ Number of nonnegative integer arrays of length 2n + 6 wit h new values 0 upwards introduced in order, no three adjacent elements all une qual, and containing the value n + 1. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

▶ [A277792] 0,1,196,2601,15376,60025,181476,461041,1032256,2099601,3960100,7 027801,11861136,19193161,29964676,45360225,66846976,96216481,135629316,187 662601,255360400,342287001,452583076,591024721,763085376 ⋆ Squares that ar e also pentagonal pyramidal numbers. ● a(n) = a(- n). ● a(n) = n ^ 2 * (2 * n ^ 2 - 1) ^ 2. ●

▶ [A178722] 0,0,0,0,0,0,196,3072,42768,550000,3573856,25009344,102800672,454 967744,1441238400,4811118592,12616778208,34692705648,79514466480,18977045 9200,392908083876,842040318416,1610365515264,3172863442176,5692888800000 ⋆ Number of ways to place 6 nonattacking queens on an n X n toroidal board. ● a(n) = n ^ 2 * (n ^ 10 / 720 - n ^ 9 / 12 + 661 * n ^ 8 / 288 - 153 * n ^ 7 / 4 + 615887 * n ^ 6 / 1440 - 80581 * n ^ 5 / 24 + 1801697 * n ^ 4 / 96 - 295355 * n ^ 3 / 4 + 9389033 * n ^ 2 / 48 - 626899 * n / 2 + 142789469 / 630 ●

▶ [A128990] 0,196,6174,115248,1680700,21176820,242121642,2582630848,261491 37336,254227724100,2392565359030,21924598926384,196490913105396,17281123 89619252,14954818756320450,127614453387267840 ⋆ a(n) = (n ^ 3 - n ^ 2) * 7 ^ n. ● a(n) = 28 * a(n - 1) - 294 * a(n - 2) + 1372 * a(n - 3) - 2401 * a(n - 4). - _ Vincenzo Librandi _ , Feb 12 2013 ●

▶ [A159809] 197,223,257,925,1115,1345,5353,6467,7813,31193,37687,45533,18180 5,219655,265385,1059637,1280243,1546777,6176017,7461803,9015277,35996465,4 3490575,52544885,209802773 ⋆ Positive numbers y such that y ^ 2 is of the for m x ^ 2 + (x + 223) ^ 2 with integer x. ● a(n) = 6 * a(n - 3) - a(n - 6) for n > 6; a(1)=197, a(2)=223, a(3)=257, a(4)=925, a(5)=1115, a(6)=1345. ●

▶ [A158223] 197,393,589,785,981,1177,1373,1569,1765,1961,2157,2353,2549,274 5,2941,3137,3333,3529,3725,3921,4117,4313,4509,4705,4901 ⋆ a(n) = 196 * n + 1 . ● a(n) = 2 * a(n - 1) - a(n - 2). ●

▶ [A347225] 197,599,881,1277,1997,2081,2237,2801,2999,3359,4721,5279,5879,61 97,6959,7877,8837,9239,9719,12161,12239,13721,17921,17957,18521 ⋆ Lesser of t win primes (A001359) being both half - period primes (A097443). ● a(n) is cong ruent to { 11, 17, 29 } mod 30. ●

▶ [A304614] 198,618,1458,3138,6498,13218,26658,53538,107298,214818,429858,8 59938,1720098,3440418,6881058,13762338,27524898,55050018,110100258,2202007 38,440401698,880803618,1761607458,3523215138,7046430498 ⋆ a(n) = 420 * 2 ^ n - 222. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>1. ●

▶ [A158222] 198,788,1770,3144,4910,7068,9618,12560,15894,19620,23738,28248,3 3150,38444,44130,50208,56678,63540,70794,78440,86478,94908,103730,112944,12 2550 ⋆ a(n) = 196 * n ^ 2 + 2 * n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) . ●

▶ [A156771] 198,927,1656,2385,3114,3843,4572,5301,6030,6759,7488,8217,8946,9 675,10404,11133,11862,12591,13320,14049,14778,15507,16236,16965,17694 ⋆ a(n) = 729 * n - 531. ● a(n) = 2 * a(n - 1) - a(n - 2). ●

▶ [A224452] 198,2646,21558,141686,825078,4438006,22578678,110311926,522899 958,2422104566,11019370998,49421451766,219106574838,962208334326,41921777 50518,181425578972 06,78066631049718,334254292599286,1424972878709238 ⋆ T he Wiener index of the nanostar dendrimer NS _ 2[n], defined pictorially in the A. R. Ashrafi et al. reference. ● a(n) = 502 + 1280n * 4 ^ n + 1120n * 2 ^ n + 2000 * 2 ^ n - 2304 * 4 ^ n. ●

▶ [A227705] 198,3834,34434,230418,1327410,7005042,34949106,167809266,78388 5042,3587327730,16158854898,71878385394,316494986994,1381924896498,59915 17716210,25821420060402,110707230375666,472515428744946,200880835736344 2,8510221225819890 ⋆ The Wiener index of the nanostar dendrimer defined pic torially as G(n) in the Darafsheh et al. reference. ● a(n) = 4 ^ n * (1728 * n - 1 872) + 2340 * 2 ^ n - 270. ●

▶ [A156840] 1,199,251,449,451,649,701,899,901,1099,1151,1349,1351,1549,1601,1 799,1801,1999,2051,2249,2251,2449,2501,2699,2701 ⋆ Numbers k >= 1 such tha t k ^ 2 == 1 (mod 900). ● a(n) = a(n - 4) + 450. ● a(n) = a(n - 1) + a(n - 4) - a(n - 5). - _ R. J. Mathar _ , Aug 18 2009 ● a(n) = (2 * n + 1) * 225 / 4 + f(n mod 4) / 4, where f(0)= - 221, f(1)=121, f(2)= - 121, f(3)=221, so a nonrecursiv e formula for a(n) is ● a(n) = (450 * n + 225 - (100 * floor(((n - 1) mod 4) / 2) + 121) * (- 1) ^ n) / 4. (End) ●

▶ [A157955] 199,399,599,799,999,1199,1399,1599,1799,1999,2199,2399,2599,279 9,2999,3199,3399,3599,3799,3999,4199,4399,4599,4799,4999 ⋆ 200n - 1. ● a(n) = 2 * a(n - 1) - a(n - 2). ●

▶ [A033168] 199,409,619,829,1039,1249,1459,1669,1879,2089 ⋆ Longest arithmet ic progression of primes with difference 210 and minimal initial term. ● a(n) = a(0) + n * 210 for 0 <= n <= 9. - _ M. F. Hasler _ , Jan 02 2020 ●

▶ [A195523] 199,3753,27267,121367,401565,1089411,2563933,5423365,10557163,1 9228309,33165903,54668043,86714993,133092639,198526233,288824425,41103358 3,573602401,786556795,1061685087,1412733477,1855611803,2408609589 ⋆ Numb er of lower triangles of a 5 X 5 - n..n array with all row and column sums zero. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

▶ [A117412] 200,400,600,800,1000,1200,1400,1600,1800,2000,2200,2400,2600,280 0,3000,3200,3400,3600,3800,4000,4200,4400,4600,4800,5000 ⋆ Sum of the interior angles of an n - sided polygon, in gradians. ● a(n) = 200 * (n - 2) for n >= 3. ●

▶ [A109632] 200,500,800,1100,1400,1700,2000,2300,2600,2900,3200,3500,3800 ⋆ I n the game of bridge, a(n) is the penalty for going down n tricks in a vulnerable , doubled contract. ● a(n) = 300n - 100 ●

▶ [A129641] 0,200,611,1227,2291,4620,8180,14364,27927,48671,84711,163760,284 664,494720,955451,1660131,2884427,5569764,9676940,16812660,32463951,564023 27,97992351,189214760,328737840 ⋆ Nonnegative values x of solutions (x, y) to the Diophantine equation x ^ 2 + (x + 409) ^ 2 = y ^ 2. ● a(n) = 6 * a(n - 3) - a(n - 6) + 818 for n > 6; a(1)=0, a(2)=200, a(3)=611, a(4)=1227, a(5)=2291, a (6)=4620. ●

▶ [A200892] 200,4059,34350,181336,710976,2269938,6233356,15250675,3405459 2,70608021,137674186,254905378,451556600,769941268,1269757336,2033423669,3 172578200,4835901375,7218440614,10572623996,15221164112,21572066022 ⋆ Nu mber of 0..n arrays x(0..8) of 9 elements without any interior element greater t han both neighbors. ● a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10) for n>10. ●

▶ [A199534] 200,6346,53302,252154,860854,2378412,5662636,12071420,2362758 0,43207238,74751754,123503206,196263418,301676536,450535152,656109976,9345 03056,1305024546,1790593022,2418159346,3219154078,4229958436,5492398804 ⋆ Number of - n..n arrays x(0..6) of 7 elements with zero sum and no two consecu tive zero elements. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

▶ [A035747] 1,200,6800,97880,822560,4780008,21278640,77548920,242080320,66 8274440,1669752016,3842321560,8251811680,16711687720,32179616240,59307908 024,105189061760,180344446280,300011499280,485792684760,767737840032,1186 940456040,1798737871920 ⋆ Coordination sequence for C _ 10 lattice. ● a(n) = [x ^ (2n)] ((1 + x) / (1 - x)) ^ 10. ●

▶ [A022152] 1,200,7760,122264,1099040,6728168,31208560,117555640,37697747 2,1064088840,2708805776,6332774360,13786237280,28250329640,54959921840,10 2213292024,182747113600,315568484680,528350005968,860509231640,136711017 4112,2123741938280,3232547993840 ⋆ Coordination sequence for root lattice B _ 10. ● a(0)=1; for n>0, a(n) = (2704 * n ^ 9 - 6024 * n ^ 8 + 51648 * n ^ 7 - 80976 * n ^ 6 + 248304 * n ^ 5 - 239736 * n ^ 4 + 296672 * n ^ 3 - 126864 * n ^ 2 + 43272 * n) / 945. - _ Ralf Stephan _ , Apr 28 2004 ●

▶ [A157956] 201,401,601,801,1001,1201,1401,1601,1801,2001,2201,2401,2601,280 1,3001,3201,3401,3601,3801,4001,4201,4401,4601,4801,5001 ⋆ a(n) = 200 * n + 1 . ● a(n) = 2 * a(n - 1) - a(n - 2). - _ Vincenzo Librandi _ , Feb 04 2012 ●

▶ [A305724] 1,201,7001,104881,927441,5707449,26986089,104535009,346615329,1 014889769,2684641785,6526963345,14778775025,31490462745,63670078985,12297 7987009,228167048769,408511495049,708522994329,1194315679089,19620535191 21,3148993975161 ⋆ Crystal ball sequence for the lattice C _ 10. ● a(n) = 11 * a(n - 1) - 55 * a(n - 2) + 165 * a(n - 3) - 330 * a(n - 4) + 462 * a(n - 5) - 462 * a (n - 6) + 330 * a(n - 7) - 165 * a(n - 8) + 55 * a(n - 9) - 11 * a(n - 10) + a(n - 1 1) for n>10. ● a(n) = Sum _{ k=0..10 } binomial(20, 2k) * binomial(n + k, 10). ●

▶ [A228320] 203,280,369,470,583,708,845,994,1155,1328,1513,1710,1919,2140,237 3,2618,2875,3144,3425,3718,4023,4340,4669,5010,5363 ⋆ The Wiener index of th e graph obtained by applying Mycielski's construction to the cycle graph C(n). ● a(n) = 6n ^ 2 - 13n. ●

▶ [A273656] 203,4718,66808,750120,7370580,66562188,568136184,4663350120,37 228965774,291297376370,2245876801168,17126594554160,129527848474752,9734 16393927768,7278979868039760,54211596845506800,402386221073227314,297784 2560384800878,2197711826224423176 ⋆ Number of forests of labeled rooted tre

es of height at most 1, with n labels, six of which are used for root nodes and an y root may contain >= 1 labels. ● a(n) = C(n,6) * Sum _{ j=0..6 } Stirling2(6 ,j) * j ^ (n - 6). ●
▶ [A154518] 204,420,636,852,1068,1284,1500,1716,1932,2148,2364,2580,2796,301 2,3228,3444,3660,3876,4092,4308,4524,4740,4956,5172,5388 ⋆ a(n) = 216 * n - 12 . ● a(n) = 12 * (18n - 1). ● a(n) = 2 * a(n - 1) - a(n - 2). ●
▶ [A292346] 204,748,1548,2604,3916,5484,7308,9388,11724,14316,17164,20268,23 628,27244,31116,35244,39628,44268,49164,54316,59724,65388,71308,77484,83916 ⋆ The forgotten topological index of the Aztec diamond AZ(n) (see the Ramane s et al. reference, Theorem 2.1). ● a(n) = 128 * n ^ 2 + 160 * n - 84. ●
▶ [A338153] 204,1862,14700,109334,790524,5633222,39828300,280376054,196893 4044,13807724582,96754776300,677686169174,4745413960764,33224340503942,23 2596153986700,1628276158432694,11398345428510684,79790067272259302,55853 7067986067500,390978586420251061 4 ⋆ a(n) is the number of acyclic orientation s of the edges of the n - prism. ● a(n) = 14 * a(n - 1) - 63 * a(n - 2) + 106 * a(n - 3) - 56 * a(n - 4) for n>6. ● a(n) = 5 + 7 ^ n - 2 ^ (n + 1) - 2 * 4 ^ n. - _ Pe ter Kagey _ , Nov 15 2020 ●
▶ [A234789] 204,2504,30536,371976,4530424,55175944,671983416,8184025736,9 9672501944,1213902270984,14784004509496,180053035925896,219284942196626 4,267065121263516 24,325256163423006776,3961265003235768456 ⋆ Number of (n + 1) X (1 + 1) 0..3 arrays with each 2 X 2 subblock having the number of clo ckwise edge increases less than or equal to the number of counterclockwise edge increases. ● a(n) = (1 / 129) * 2 ^ (- 1 - n) * (- 129 * 2 ^ (1 + 2 * n) + (2193 - 191 * sqrt(129)) * (13 - sqrt(129)) ^ n + (13 + sqrt(129)) ^ n * (2193 + 191 * sqrt(129))). ●
▶ [A250780] 209,518,1194,2640,5688,12036,25126,51904,106344,216500,438614,8 85336,1782168,3580356,7182678,14395024,28829560,57711060,115489574,2310657 68,462241608,924621732,1849416198,3699045984,7398353992 ⋆ Number of (n + 1) X (5 + 1) 0..1 arrays with nondecreasing x(i,j) + x(i,j - 1) in the i direction a nd nondecreasing absolute value of x(i,j) - x(i - 1,j) in the j direction. ● a(n) = (9 / 2) * (49 * 2 ^ n - 32) - (374 * n) / 5 - 9 * n ^ 2 - (25 * n ^ 3) / 6 - n ^ 5 / 3 0. ●
▶ [A157441] 209,1540,2871,4202,5533,6864,8195,9526,10857,12188,13519,14850,1 6181,17512,18843,20174,21505,22836,24167,25498,26829,28160,29491,30822,3215 3 ⋆ a(n) = 1331 * n - 1122. ● a(n) = 2 * a(n - 1) - a(n - 2). - _ Vincenzo Libran di _ , Jan 29 2012 ●
▶ [A254466] 210,462,1386,5214,22770,110022,571626,3136014,17944290,1061561 82,645091866,4006997214,25344197010,162737255142,1058251916106,6955456112 814,461306587569 30,308314670926902,2074188361172346,14032607275346814,95 392686703000050 ⋆ a(n) = 56 * 2 ^ n + 20 * 4 ^ n + 35 * 3 ^ n + 4 * 6 ^ n + 1 0 * 5 ^ n + 7 ^ n + 84. ● a(n) = 28 * a(n - 1) - 322 * a(n - 2) + 1960 * a(n - 3) - 6769 * a(n - 4) + 13132 * a(n - 5) - 13068 * a(n - 6) + 5040 * a(n - 7). - _ Col in Barker _ , Jan 31 2015 ●
▶ [A236432] 210,630,1050,1470,1890,2310,2730,3150,3570,3990,4410,4830,5250,5 670,6090,6510,6930,7350,7770,8190,8610,9030,9450,9870,10290 ⋆ a(n) = (2n - 1) * 210; numbers which are 210 times an odd number. ● a(n) = (2n - 1) * 210 = 420 * n - 210. ●
▶ [A158559] 210,885,2010,3585,5610,8085,11010,14385,18210,22485,27210,3238 5,38010,44085,50610,57585,65010,72885,81210,89985,99210,108885,119010,12958 5,140610 ⋆ a(n) = 225 * n ^ 2 - 15. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●
▶ [A046302] 210,1155,5005,17017,46189,96577,215441,392863,765049,1363783,2 022161,3065857,4391633,6319667,8965109,12780049,17120443,21182921,2743361 9,33984931,42600829,56606581,72370439,89809099,107972737 ⋆ Product of 4 suc cessive primes. ● a(n) = Product _{ j=n..n + 3 } prime(j). - _ Jon E. Schoenf ield _ , Jan 07 2015 ●
▶ [A027806] 210,2640,17820,85800,330330,1081080,3123120,8168160,19691100,4 4341440,94225560,190466640,368588220,686439600,1235591280,2157381600,3665 097150,6074125200,9842332500,15623407800,24336462150,37255818600,56125648 800,83304936000,121949170200 ⋆ a(n) = 30 * (n + 1) * binomial(n + 4,10). ● a (n) = C(n + 1, 7) * C(n + 4, 4). - _ Zerinvary Lajos _ , May 26 2005; correcte d by _ R. J. Mathar _ , Feb 13 2016 ●
▶ [A027822] 210,2772,19404,96096,378378,1261260,3699696,9801792,23891868,5 4318264,116396280,237025152,461705244,864913896,1565082288,2745758400,468 4950270,7795127340,12676924260,20190250080,31547265750,48432564180,731568 80160,108851783040 ⋆ a(n) = 42 * (n + 1) * binomial(n + 6,10). ● a(n) = C(n + 1,5) * C(n + 6,6). - _ Zerinvary Lajos _ , Jun 08 2005 ●
▶ [A361701] 1,1,1,1,1,1,1,211,1681,7561,25201,69301,166321,360361,990991,5405 401,34834801,187867681,833709241,3153281041,10491944401,31945216801,97323 704941,345845431471,1529597398561 ⋆ Constant term in the expansion of (1 + x ^ 4 + y ^ 4 + z ^ 4 + 1 / (x * y * z)) ^ n. ● a(n) = Sum _{ k=0..floor(n / 7) } (3 * k)! / k! ^ 3 * binomial(7 * k,3 * k) * binomial(n,7 * k). ●
▶ [A200433] 0,212,2232,11008,36952,98052,221984,448224,830160,1437204,23569 04,3697056,5587816,8183812,11666256,16245056,22160928,29687508,39133464,50 844608,65206008,82644100,103628800,128675616,158347760 ⋆ Number of - n..n a rrays x(0..5) of 6 elements with zero sum and no two or three adjacent element s summing to zero. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. ●
▶ [A254704] 212,4542,37204,183491,665256,1961608,4985336,11325573,2356721 2,45697586,83610924,145721095,243693152,393304188,615444016,937266185,1393 499844,2027932966,2895077444,4062026571,5610515416,7639194608,10266128040 ⋆ Number of length 6 + 4 0..n arrays with every five consecutive terms having the maximum of some two terms equal to the minimum of the remaining three terms. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. ●
▶ [A302256] 213,942,2956,7326,15447,29038,50142,81126,124681,183822,26188 8,362542,489771,647886,841522,1075638,1355517,1686766,2075316,2527422,3049 663,3648942,4332486,5107846,5982897 ⋆ Hyper - Wiener index of rows of unit c ells on the face - centered cubic lattice. ● a(n) = (81 * n ^ 4 + 261 * n ^ 3 + 26 4 * n ^ 2 + 540 * n + 132) / 6. Proved in the Hamzeh Mujahed - Benedek Nag y paper. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5); with a(1)=213, a(2)=942, a(3)=2956, a(4)=7326 and a(5)=15447. ●
▶ [A063358] 1,215,480,742,1004,1266,1528,1790,2052,2314,2576,2842,3100,3362,3 624,3890,4148,4414,4672,4938,5196,5462,5720,5990,6244 ⋆ Dimension of the spac e of weight n cuspidal newforms for Gamma _ 1(85). ● a(n) = a(n - 4) + a(n - 6) - a(n - 10) for n>13. ●
▶ [A193398] 215,636,1557,3018,5555,8968,14225,20790,30159,41364,56525,7414 6,97067,123168,156105,193038,238535,288940,349829,416634,496035,582456,6837 77,793318,920255 ⋆ Hyper - Wiener index of a benzenoid consisting of a double - step spiral chain of n hexagons (n >= 2, s = 21; see the Gutman et al. referen ce). ● a(n) = (6 * n ^ 4 + 48 * n ^ 3 + 146 * n ^ 2 - 316 * n + 439 + (- 1) ^ n * (6 * n ^ 2 + 24 * n - 83)) / 4. ●
▶ [A193396] 215,636,1557,3162,5875,10008,16113,24630,36239,51508,71245,9614 6,127147,165072,210985,265838,330823,407020,495749,598218,715875,850056,100 2337,1174182,1367295 ⋆ Hyper - Wiener index of a benzenoid consisting of a do uble - step zig - zag chain of n hexagons (n >= 2, s = 2123; see the Gutman et al. reference). ● a(n) = (8 * n ^ 4 + 24 * n ^ 3 + 28 * n ^ 2 + 213 * n + 33 * (- 1) ^ n - 246) / 3. ●
▶ [A208089] 216,504,1206,3096,7992,20862,54504,142632,373302,977256,255837 6,6697854,17535096,45907416,120187062,314653752,823774104,2156668542,56462 31432,14782025736,38699845686,101317511304,265252688136,694440553086 ⋆ N umber of 8 X (n + 1) 0..1 arrays with every 2 X 2 subblock having the same nu mber of equal edges as its horizontal neighbors and a different number from its vertical neighbors, and new values 0..1 introduced in row major order. ● a(n) = (9 / 5) * 2 ^ (1 - n) * (2 ^ n * (15 + 2 * (- 1) ^ n) + (9 - 4 * sqrt(5)) * (3 - sqrt (5)) ^ n + (3 + sqrt(5)) ^ n * (9 + 4 * sqrt(5))). ●
▶ [A187859] 0,0,216,968,2754,5428,9237,14040,19837,26628,34413,43192,52965,6 3732,75493,88248,101997,116740,132477,149208,166933,185652,205365,226072,24 7773 ⋆ Number of 4 - step one space for components leftwards or up, two space for components rightwards or down asymmetric quasi - queen's tours (antidiago nal moves become knight moves) on an n X n board summed over all starting p ositions. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>8. ●
▶ [A016863] 1,216,1331,4096,9261,17576,29791,46656,68921,97336,132651,17561 6,226981,287496,357911,438976,531441,636056,753571,884736,1030301,1191016,1 367631,1560896,1771561 ⋆ a(n) = (5 * n + 1) ^ 3. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Wesley Ivan Hurt _ , Oct 02 2020 ●
▶ [A016911] 0,216,1728,5832,13824,27000,46656,74088,110592,157464,216000,28 7496,373248,474552,592704,729000,884736,1061208,1259712,1481544,1728000,20 00376,2299968,2628072,2985984 ⋆ a(n) = (6 * n) ^ 3. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>3. - _ Vincenzo Librandi _ , Jul 05 2014 ●
▶ [A017139] 216,2744,10648,27000,54872,97336,157464,238328,343000,474552,63 6056,830584,1061208,1331000,1643032,2000376,2406104,2863288,3375000,394431 2,4574296,5268024,6028568,6859000,7762392 ⋆ a(n) = (8 * n + 6) ^ 3. ● a(0)=2 16, a(1)=2744, a(2)=10648, a(3)=27000, a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Harvey P. Dale _ , Dec 11 2012 ●
▶ [A017343] 216,4096,17576,46656,97336,175616,287496,438976,636056,884736,1 191016,1560896,2000376,2515456,3112136,3796416,4574296,5451776,6434856,752 9536,8741816,10077696,11543176,13144256,14886936 ⋆ a(n) = (10 * n + 6) ^ 3. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). (End) ●
▶ [A017463] 216,4913,21952,59319,125000,226981,373248,571787,830584,11576 25,1560896,2048383,2628072,3307949,4096000,5000211,6028568,7189057,848966 4,9938375,11543176,13312053,15252992,17373979,19683000 ⋆ a(n) = (11 * n + 6) ^ 3. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4); a(0)=216, a(1)=4913, a(2)=21952, a(3)=59319. - _ Harvey P. Dale _ , May 16 2012 ●
▶ [A128964] 0,216,5184,77760,933120,9797760,94058496,846526464,7255941120,5 9861514240,478892113920,3735358488576,28524555730944,213934167982080,157 9821548175360,1151012842242048 0,8287292464142745 6,590469588070170624,416 8020621671792640,29176144351702548480 ⋆ a(n) = (n ^ 3 - n) * 6 ^ n. ● a(n) = 24 * a(n - 1) - 216 * a(n - 2) + 864 * a(n - 3) - 1296 * a(n - 4). - _ Vincenzo Lib randi _ , Feb 11 2013 ●
▶ [A017595] 216,5832,27000,74088,157464,287496,474552,729000,1061208,14815 44,2000376,2628072,3375000,4251528,5268024,6434856,7762392,9261000,1094104 8,12812904,14886936,17173512,19683000 ⋆ a(n) = (12n + 6) ^ 3. ● a(n) = 4 * a (n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Wesley Ivan Hurt _ , May 07 2021 ●
▶ [A352980] 0,0,0,216,16280,335655,3587535,25421200,135459216,584760870,214 5870870,6918983280,20073184560,53334782501,131555523645,304453955520,6666 98215360,1390977293580,2780695001196,5351537889480,9954554649480,1795769 8726275 ⋆ a(n) = Sum _{ 1 <= i < j < k <= n } (k * j * i) ^ 3. ● a(n) = Su m _{ k=3..n } Sum _{ j=2..k - 1 } Sum _{ i=1..j - 1 } k ^ 3 * j ^ 3 * i ^ 3. ● a(n) = n ^ 2 * (n + 1) ^ 2 * (n - 1) * (n - 2) * (35 * n ^ 6 + 5 * n ^ 5 - 237 * n ^ 4 - 77 * n ^ 3 + 502 * n ^ 2 + 148 * n - 336) / 13440. ● a(n) = binomial(n + 1,4) * binomial(n + 1,2) * (35 * n ^ 6 + 5 * n ^ 5 - 237 * n ^ 4 - 77 * n ^ 3 + 5 02 * n ^ 2 + 148 * n - 336) / 280. ●
▶ [A201248] 0,0,0,216,38070,1314600,21191208,207830308,1442794332,77750839 60,34530764200,131660992164,443702617356,1350258600008,3771242866680,978 9675562020,23856321869260,55015308882264,120855465245464,25428470266858 0,514791197224860,1006655249550696 ⋆ Number of ways to place 7 non - attack ing ferses on an n X n board. ● a(n) = n ^ 14 / 5040 - n ^ 12 / 48 + n ^ 11 / 3 0 + 673n ^ 10 / 720 - 17n ^ 9 / 6 - 1019n ^ 8 / 48 + 197n ^ 7 / 2 + 9772n ^ 6 / 45 - 3443n ^ 5 / 2 + 47n ^ 4 / 4 + 74259n ^ 3 / 5 - 1816352n ^ 2 / 105 - 49376n + 90660, n>=6. ●
▶ [A086026] 1,217,9478,185094,2185470,18188478,116799606,613592694,2745339 597,10769363605,37850444632,121189368664,358136205336,987118431768,255934 4776920,6286103520984,14712254089533,32974344717237,71073599975686,14786 0902015750,297836101312750 ⋆ a(n) = Sum _{ i=1..n } C(i + 4,5) ^ 3. ● a(n) = C(n + 5,6) ^ 2 * (1 + 279 * C(n,1) + 681 * C(n,2) + 504 * C(n,3) + 126 * C (n,4)) / 280. - _ Yahia Kahloune _ , Dec 22 2013 ● a(n) = (n ^ 2 / 580608000) * (57600 + 4583040 * n + 28668304 * n ^ 2 + 80791200 * n ^ 3 + 133134680

* n ^ 4 + 142979760 * n ^ 5 + 105929613 * n ^ 6 + 55881000 * n ^ 7 + 21323540 * n ^ 8 + 5904360 * n ^ 9 + 1175062 * n ^ 10 + 163800 * n ^ 11 + 15180 * n ^ 12 + 840 * n ^ 13 + 21 * n ^ 14). - _ G. C. Greubel _ , Nov 22 2017 •

▶ [A292545] 0,218,876,3504,14016,56064,224256,897024,3588096,14352384,57409536,229638144,918552576,3674210304,14696841216,58787364864,235149459456,940597837824,3762391351296,15049565405184,60198261620736,240793046482944,963172185931776,3852688743727104 ⋆ Number of 6 - cycles in the n - Sierpinski tetrahedron graph. • a(n) = 219 * 4 ^ (n - 2) for n > 2. • a(n) = 4 * a(n - 1) for n > 2. •

▶ [A060530] 0,1,218,22815,703760,10194250,90775566,576941778,2863870080,11769161895,41669295250,130772947481,371513523888,970769847320,2362273657030,5406141568500,11728193258496,24276032182173,48201464902410,92221684354915 ⋆ Number of inequivalent ways to color edges of a cube using at most n colors. • a(n) = (n ^ 12 + 6 * n ^ 7 + 3 * n ^ 6 + 8 * n ^ 4 + 6 * n ^ 3) / 24. (Replace all x _ i's in the cycle index by n.) • a(n) = 1 * C(n,1) + 216 * C(n,2) + 22164 * C(n,3) + 613804 * C(n,4) + 6901425 * C(n,5) + 39713430 * C(n,6) + 131754420 * C(n,7) + 267165360 * C(n,8) + 336798000 * C(n,9) + 257796000 * C(n,10) + 109771200 * C(n,11) + 19958400 * C(n,12), where the coefficient of C(n,k) is the number of oriented colorings using exactly k colors. •

▶ [A286441] 0,219,15160,369787,4366982,32450843,175628996,755759531,2734928266,8643796747,24503068784,63522668395,152816062222,345005930315,7374736095 32,1503178571195,2938515130514,5535661080283,10089397100584,17851538034587,30750030827926,51694565135803 ⋆ Number of ways to tile an n X n X n triangular area with six 2 X 2 X 2 triangular tiles and an appropriate number (= n ^ 2 - 24) of 1 X 1 X 1 tiles. • a(n) = (n ^ 12 - 18 * n ^ 11 + 3 * n ^ 10 + 1710 * n ^ 9 - 7175 * n ^ 8 - 60078 * n ^ 7 + 401649 * n ^ 6 + 884466 * n ^ 5 - 9521846 * n ^ 4 - 3238224 * n ^ 3 + 107453448 * n ^ 2 - 25651296 * n - 48314088 0) / 720 for n >= 7. •

▶ [A184543] 220,537,1048,1837,3024,4774,7307,10909,15944,22867,32238,44737,61180,82536,109945,144737,188452,242861,309988,392133,491896,612202,756327,927925,1131056 ⋆ Number of (n + 2) X 6 binary arrays with each 3 X 3 subblock having rows and columns in lexicographically nondecreasing order. • a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. •

▶ [A027797] 220,3146,24024,130130,560560,2042040,6534528,18845112,49884120,122862740,284524240,624660036,1308811504,2631351800,5099265600,9561123000,17401243860,30826185390,53279826600,90034894950,149023274400,241985412240,386041244160,605812006800 ⋆ a(n) = 22 * (n + 1) * binomial(n + 3,12). • a(n) = C(n + 1, 10) * C(n + 3, 3). - _ Zerinvary Lajos _ , May 10 2005; corrected by _ R. J. Mathar _ , Mar 16 2016 •

▶ [A055663] 220,4004,43680,371280,2713200,17907120,109830336,637408200,3543239700,19028509500,99348849600,506679132960,2533395664800,12454385680800,60338017584000,288616850776800,1365157704174264,6393385628146440,29677938224482240,136674715507484000 ⋆ Number of (3,3; n,n) - partitions of a chain of length n ^ 2 + n. • a(n) = (16 / 3) * (2 * n - 7) * (2 * n - 9) * (2 * n - 11) * (2 * n - 13) * (n - 8) * (2 * n - 15)! / (n * (n - 1) * (n - 2) * (n - 8)! ^ 2). •

▶ [A159565] 221,241,265,1061,1205,1369,6145,6989,7949,35809,40729,46325,208709,237385,270001,1216445,1383581,1573681,7089961,8064101,9172085,41323321,47001025,53458829,240849965 ⋆ Positive numbers y such that y ^ 2 is of the form x ^ 2 + (x + 241) ^ 2 with integer x. • a(n) = 6 * a(n - 3) - a(n - 6) for n > 6; a(1)=221, a(2)=241, a(3)=265, a(4)=1061, a(5)=1205, a(6)=1369. •

▶ [A177422] 221,1938,8673,73729,589855,7561526,34593784,218391421,2116566392,8522858480,34225586144,137170649024,549219204992,2197950037760,8793946586624,35180079217664,140728902612992,562932781936640 ⋆ a(n) = 6 * a(n - 1) - 8 * a(n - 2) for n > 10; a(0)=221, a(1)=1938, a(2)=8673, a(3)=73729, a(4)=589855, a(5)=7561526, a(6)=34593784, a(7)=218391421, a(8)=2116566392, a(9)=8522858480, a(10)=34225586144. • a(n) = 2 * 4 ^ (n + 7) - 4192257 * 2 ^ (n - 5) for n > 8. •

▶ [A177420] 221,2754,12456,77697,589869,5333271,48222198,218509695,3071851356,12683673552,51137150880,205353516864,823023894144,3295315229952,13187700226560,52763679519744,211080475305984,844373415677952 ⋆ a(n) = 6 * a(n - 1) - 8 * a(n - 2) for n > 10; a(0)=221, a(1)=2754, a(2)=12456, a(3)=77697, a(4)=589869, a(5)=5333271, a(6)=48222198, a(7)=218509695, a(8)=3071851356, a(9)=12683673552, a(10)=51137150880. • a(n) = 3 * 4 ^ (n + 7) - 12576771 * 2 ^ (n - 5) for n > 8. •

▶ [A063352] 1,222,481,741,1001,1261,1521,1781,2041,2301,2561,2819,3081,3341,3601,3859,4121,4379,4641,4899,5161,5419,5681,5937,6201 ⋆ Dimension of the space of weight n cuspidal newforms for Gamma _ 1(79). • a(n) = a(n - 4) + a(n - 6) - a(n - 10) for n>13. •

▶ [A092623] 223,227,233,257,277,337,353,373,523,557,577,727,733,757,773,1223,1237,1277,1327,1373,1523,1553,1723,1733,1753 ⋆ Primes with exactly three prime digits. • a(n) >> x ^ 1.285 •

▶ [A220474] 223,227,269,349,359,569,587,593,739,809,857,991,1009,1019,1259,1481,1483,1487,1489,1861,1867,1993,1997,2003,2027 ⋆ Chebyshev numbers C _ v(n) for v=10 / 9: a(n) is the smallest number such that if x>=a(n), then theta(x) - theta(9 * x / 10)>=n * log(x), where theta(x)=sum _{ prime p<=x } log p. • a(n)<=prime(31 * (n + 1)). •

▶ [A158226] 223,896,2019,3592,5615,8088,11011,14384,18207,22480,27203,32376,37999,44072,50595,57568,64991,72864,81187,89960,99183,108856,118979,129552,140575 ⋆ 225n ^ 2 - 2n. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). •

▶ [A202442] 224,376,676,1102,1722,2544,3652,5054,6850,9048,11764,15006,18906,23472,28852,35054,42242,50424,59780,70318,82234,95536,110436,126942,145282 ⋆ Number of (n + 2) X 5 binary arrays avoiding patterns 001 and 110 in rows , columns and nw - to - se diagonals. • a(n) = (n ^ 4 + 24 * n ^ 3 + 149 * n ^ 2 + 492 * n + 468) / 6 for n even. • a(n) = (n ^ 4 + 24 * n ^ 3 + 149 * n ^ 2 + 498 * n + 492) / 6 for n>1 and odd. •

▶ [A158227] 224,449,674,899,1124,1349,1574,1799,2024,2249,2474,2699,2924,3149,3374,3599,3824,4049,4274,4499,4724,4949,5174,5399,5624 ⋆ a(n) = 225 * n - 1. • a(n) = 2 * a(n - 1) - a(n - 2). •

▶ [A061524] 224,705,1600,3065,5280,8449,12800,18585,26080,35585,47424,61945,79520,100545,125440,154649,188640,227905,272960,324345,382624,448385,522240,604825,696800 ⋆ Surround numbers of an n X 2 rectangle when n is even. • a(n) = (n ^ 4 + 32n ^ 3 + 344n ^ 2 + 768n + 400) / 16 for even n. • a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n > 6. •

▶ [A156813] 224,898,2022,3596,5620,8094,11018,14392,18216,22490,27214,32388,38012,44086,50610,57584,65008,72882,81206,89980,99204,108878,119002,129576,140600 ⋆ a(n) = 225 * n ^ 2 - n. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). (End) •

▶ [A224431] 224,4878,46250,322146,1914578,10351026,52620146,256370418,1211362802,5594160114,25382926322,113581912050,502582927346,2203470381042,9586688622578,41438522310642,178122308583410,761964546228210,3245764578377714 ⋆ The Wiener index of the dendrimer D _ 2[n], defined pictorially in the A. R. Ashrafi et al. reference. • a(n) = - 14 + 4846 * 2 ^ n + 1056 * 2 ^ n * n + 2880 * 4 ^ n * n - 4608 * 4 ^ n. •

▶ [A373087] 225,441,900,1089,1225,1521,1764,2025,2601,3025,3249,3600,3969,4225,4356,4761,4900,5625,5929,6084,7056,7225,7569,8100,8281 ⋆ k is term if k is a square and its odd part is divisible by exactly two distinct primes. • a(n) = Sum _{ k=2..n + 3 } LegendreSymbol(n, prime(k)). •

▶ [A027470] 225,675,1350,2250,3375,4725,6300,8100,10125,12375,14850,17550,20475,23625,27000,30600,34425,38475,42750,47250,51975,56925,62100,67500,73125 ⋆ a(n) = 225 * (n - 1) * (n - 2) / 2. • a(3)=225, a(4)=675, a(5)=1350, a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Feb 01 2013 •

▶ [A203829] 225,1971,17289,151659,1330353,11669859,102368025,897972507,7877016513,69097203603,606120799401,5316892787403,46639793487825,409124355815619,3588839615364921,31481307826653051,276154091209147617 ⋆ Number of (n + 1) X 3 0..2 arrays with every 2 X 2 subblock having equal diagonal elements or equal antidiagonal elements. • a(n) = (9 * 2 ^ (- 1 - n) * ((9 - sqrt(73)) ^ n * (- 23 + 3 * sqrt(73)) + (9 + sqrt(73)) ^ n * (23 + 3 * sqrt(73)))) / sqrt(73) . •

▶ [A014771] 1,225,2025,8281,23409,53361,105625,189225,314721,494209,741321,1071225,1500625,2047761,2732409,3575881,4601025,5832225,7295401,9018009,11029041,13359025,16040025,19105641,22591009 ⋆ Squares of odd hexagonal numbers. • a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. - _ Harvey P. Dale _ , Jun 23 2011 • a(n) = (2 * n - 1) ^ 2 * (4 * n - 3) ^ 2. - _ Wesley Ivan Hurt _ , Jul 31 2016 •

▶ [A158229] 226,451,676,901,1126,1351,1576,1801,2026,2251,2476,2701,2926,3151,3376,3601,3826,4051,4276,4501,4726,4951,5176,5401,5626 ⋆ 225n + 1. • a(n) = 2 * a(n - 1) - a(n - 2). •

▶ [A156814] 226,902,2028,3604,5630,8106,11032,14408,18234,22510,27236,32412,38038,44114,50640,57616,65042,72918,81244,90020,99246,108922,119048,129624,140650 ⋆ a(n) = 225 * n ^ 2 + n. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). (End) •

▶ [A259059] 227,265,307,353,403,457,515,577,643,713,787,865,947,1033,1123,1217,1315,1417,1523,1633,1747,1865,1987,2113,2243 ⋆ One half of numbers representable in at least two different ways as sums of four distinct nonvanishing squares. See A259058 for these numbers and their representations. • a(n) = 2 * n ^ 2 + 36 * n + 227. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Aug 13 2015 •

▶ [A158228] 227,904,2031,3608,5635,8112,11039,14416,18243,22520,27247,32424,38051,44128,50655,57632,65059,72936,81263,90040,99267,108944,119071,129648,140675 ⋆ a(n) = 225n ^ 2 + 2n. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). •

▶ [A305063] 228,338,558,998,1878,3638,7158,14198,28278,56438,112758,225398,450678,901238,1802358,3604598,7209078,14418038,28835958,57671798,115343478,230686838,461373558,922746998,1845493878 ⋆ a(n) = 110 * 2 ^ n + 118. • a(n) = 3 * a(n - 1) - 2 * a(n - 2). - _ Vincenzo Librandi _ , May 25 2018 •

▶ [A154519] 228,444,660,876,1092,1308,1524,1740,1956,2172,2388,2604,2820,3036,3252,3468,3684,3900,4116,4332,4548,4764,4980,5196,5412 ⋆ a(n) = 216 * n + 12. • a(n) = 2 * a(n - 1) - a(n - 2). - _ Vincenzo Librandi _ , Jan 30 2012 •

▶ [A172531] 0,0,0,228,600,12357,68796,275888,872532,2344025,5580762,12107196,24392446,46261537,83426400,144157632,240119696,387393921,607715342,929951100 ⋆ Number of ways to place 4 nonattacking knights on an n X n toroidal board. • a(n) = n ^ 2 * (n ^ 6 - 54 * n ^ 4 + 1115 * n ^ 2 - 8934) / 24, n>=9. •

▶ [A201238] 0,0,0,228,3850,27225,122892,423152,1213380,3046025,6907890,14454972,28330822,52586065,93218400,158854080,261593552,418045617,650576150,988799100,1471339170,2147897257,3081651412,4352027760,6057877500 ⋆ Number of ways to place 4 non - attacking wazirs on an n X n toroidal board. • a(n) = n ^ 2 * (n ^ 2 - 11) * (n ^ 4 - 19n ^ 2 + 114) / 24, n>=5. •

▶ [A112847] 229,277,317,461,643,919,1033,1307,1427,1609,1777,1789,2089,2207,2347,2531,2551,2647,2969,3121,3169,3517,3659,3701,3727 ⋆ Primes such that the sum of the predecessor and successor primes is divisible by 23. • a(n) = prime(i) is in this sequence iff prime(i - 1) + prime(i + 1) = 0 mod 23. •

▶ [A157348] 229,281,365,1009,1405,1961,5825,8149,11401,33941,47489,66445,197821,276785,387269,1152985,1613221,2257169,6720089,9402541,13155745,39167549,54802025,76677301,228285205 ⋆ Positive numbers y such that y ^ 2 is of the form x ^ 2 + (x + 281) ^ 2 with integer x. • a(n) = 6 * a(n - 3) - a(n - 6) for n > 6; a(1)=229, a(2)=281, a(3)=365, a(4)=1009, a(5)=1405, a(6)=1961. •

▶ [A304389] 230,482,986,1994,4010,8042,16106,32234,64490,129002,258026,516074,1032170,2064362,4128746,8257514,16515050,33030122,66060266,132120554,264241130,528482282,1056964586,2113929194,4227858410 ⋆ a(n) = 126 * 2 ^ n - 22 (n>=1). • a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>2. •

▶ [A251276] 230,3264,46244,655040,9278296,131421696,1861511440,26367218944,373476205664,5290071598080,74930764222016,1061350366002176,15033405986262400,212939386264141824,3016161624583446784 ⋆ Number of (n + 1) X (1 + 1) 0..3 arrays with no 2 X 2 subblock having its maximum diagonal element less than its minimum antidiagonal element. • a(n) = ((8 - sqrt(38)) ^ n * (- 51 + 8 * sqrt(38)) + (8 + sqrt(38)) ^ n * (51 + 8 * sqrt(38))) / sqrt(38). •

▶ [A260302] 0,0,231,1378,4753,12246,26335,50086,87153,141778,218791,323610,462241,641278,867903,1149886,1495585,1913946,2414503,3007378,3703281,451351

0,5449951,6525078,7751953 ★ Maximum water retention of a number octagon of order n. ● a(n) = (1 / 2) * (7 * n ^ 2 - 18 * n + 12) (7 * n ^ 2 - 18 * n + 13) for n > 2. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>7. ●

► [A066370] 0,1,231,26796,1186570,26357430,359026206,3413156131,2466675921 6,143717956515,703974775735,2989908659661,11270904497931,38398515291136,1 19929709686710,347357071281165,941718655098991,2408309883851256,58471916 02173306,1355145021095090 5 ★ Quadruply triangular numbers. ● a(n) = n * (n + 1) * (n ^ 2 + n + 2) * (n ^ 4 + 2 * n ^ 3 + 3 * n ^ 2 + 2 * n + 8) * (n ^ 8 + 4 * n ^ 7 + 10 * n ^ 6 + 16 * n ^ 5 + 25 * n ^ 4 + 28 * n ^ 3 + 28 * n ^ 2 + 16 * n + 128) / 32768. ●

► [A153466] 232,610,1600,4192,10978,28744,75256,197026,515824,1350448,35355 22,9256120,24232840,63442402,166094368,434840704,1138427746,2980442536,780 2899864,20428257058,53481871312,140017356880,366570199330,959693241112,25 12509524008 ★ a(n) = A027941(n) + A027941(n + 6). ● a(n) = 3 * a(n - 1) - a(n - 2) + 2. ● a(n) = - 2 + 117 *{ [(3 / 2) + (1 / 2) * sqrt(5)] ^ n + [(3 / 2) - (1 / 2) * sqrt(5)] ^ n } + (261 / 5) * sqrt(5) *{ [(3 / 2) + (1 / 2) * sqrt(5)] ^ n - [(3 / 2) - (1 / 2) * sqrt(5)] ^ n } , with n>=0. - _ Paolo P. Lava _ , Dec 31 200 8 ●

► [A366816] 232,1296,3868,8624,16240,27392,42756,63008,88824,120880,159852,2 06416,261248,325024,398420,482112,576776,683088,801724,933360,1078672,1238 336,1413028,1603424,1810200 ★ Wiener index in diamond nanowires obtained b y connecting n unit cells in a sequence. ● a(n) = (338 * n ^ 3 + 234 * n ^ 2 + 1 24 * n) / 3. ●

► [A126979] 233,257,281,305,329,353,377,401,425,449,473,497,521,545,569,593,61 7,641,665,689,713,737,761,785,809 ★ a(n) = 24 * n + 233. ● a(n) = 2 * a(n - 1) - a(n - 2) for n > 1. ●

► [A160574] 233,313,493,905,1565,2725,5197,9077,15857,30277,52897,92417,1764 65,308305,538645,1028513,1796933,3139453,5994613,10473293,18298073,3493916 5,61042825,106648985,203640377 ★ Positive numbers y such that y ^ 2 is of the form x ^ 2 + (x + 313) ^ 2 with integer x. ● a(n) = 6 * a(n - 3) - a(n - 6) for n > 6; a(1)=233, a(2)=313, a(3)=493, a(4)=905, a(5)=1565, a(6)=2725. ●

► [A023338] 233,709,11699,16417,24481,31663,63317,94999,172279,185243,20508 1,228713,240347,266681,285539,334511,372059,395719,479327,583501,734197,786 613,856627,863711,1146091 ★ Primes that remain prime through 5 iterations of function f(x) = 3x + 10. ● a(n) == 9 (mod 14). - _ John Cerkan _ , Oct 11 20 16 ●

► [A304615] 234,741,1755,3783,7839,15951,32175,64623,129519,259311,518895,1 038063,2076399,4153071,8306415,16613103,33226479,66453231,132906735,265813 743,531627759,1063255791,2126511855,4253023983,8506048239 ★ a(n) = 507 * 2 ^ n - 273. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>1. ●

► [A129857] 0,235,1696,2571,3796,12075,17140,24255,72468,101983,143448,4244 47,596472,838147,2475928,3478563,4887148,14432835,20276620,28486455,841227 96,118182871,166033296,490305655,688822320 ★ Nonnegative values x of solutio ns (x, y) to the Diophantine equation x ^ 2 + (x + 857) ^ 2 = y ^ 2. ● a(n) = 6 * a(n - 3) - a(n - 6) + 1714 for n > 6; a(1)=0, a(2)=235, a(3)=1696, a(4)=2571, a(5)=3796, a(6)=12075. ●

► [A146126] 0,235,9716,43201,125064,290427,583948,1060251,1783944,2829619,4 281852,6235203,8794216,12073419,16197324,21300427,27527208,35032131,439796 44,54544179,66910152 ★ Number of n X n arrays of squares of integers with eve ry (n - 2) X (n - 2) subblock summing to 5 and every element equal to at least o ne neighbor. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>12. ●

► [A334649] 0,0,0,236,1034,6094,40996,295740,2231022,17370163,138473536,11 2443314 2,9266859394,77307427741,651540030688,5538977450256,474421038519 30,409000732566399,3546232676711824,30903652601552272,27052944839605357 6,2377829916885541565 ★ a(n) is the total number of down steps between the t hird and fourth up steps in all 3 _ 1 - Dyck paths of length 4 * n. ● a(0) = a(1) = a(2) = 0 and a(n) = binomial(4 * n + 1, n) / (4 * n + 1) + 6 * Sum _{ j=1.. 3 } binomial(4 * j + 2, j) * binomial(4 * (n - j), n - j) / ((4 * j + 2) * (n - j + 1)) - 52 * [n=3] for n > 2, where [ ] is the Iverson bracket. ●

► [A201045] 239,4569,33305,148433,491429,1333683,3139529,6641881,12930475,2 3552717,40627137,66969449,106231217,163051127,243218865,353851601,5035830 79,702765313,963682889,1300779873,1730899325,2273535419,2951098169 ★ Num ber of - n..n arrays of 6 elements with adjacent element differences also in - n..n . ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

► [A154378] 240,490,740,990,1240,1490,1740,1990,2240,2490,2740,2990,3240,349 0,3740,3990,4240,4490,4740,4990,5240,5490,5740,5990,6240 ★ a(n) = 250 * n - 10 . ● a(n) = 2 * a(n - 1) - a(n - 2). - _ Vincenzo Librandi _ , Jan 30 2012 ●

► [A063372] 1,240,521,800,1079,1362,1641,1920,2203,2482,2761,3042,3323,3602,3 885,4162,4443,4724,5005,5282,5567,5844,6125,6404,6687 ★ Dimension of the spac e of weight n cuspidal newforms for Gamma _ 1(99). ● a(n) = a(n - 4) + a(n - 6) - a(n - 10) for n>13. ●

► [A202196] 240,640,1400,2688,4704,7680,11880,17600,25168,34944,47320,6272 0,81600,104448,131784,164160,202160,246400,297528,356224,423200,499200,5850 00,681408,789264 ★ Number of (n + 2) X 4 binary arrays avoiding patterns 001 and 101 in rows and columns. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

► [A124352] 240,816,2400,6480,16660,41440,100836,241520,571692,1340832,3121 456,7222040,16622220,38085312,86918688,197677368,448182640,1013320480,2285 339532,5142429512,11547488652,25881229248,57906534100,129352490384,288522 099360 ★ Number of directed Hamiltonian paths on the n - antiprism graph. ● a(n) = 5 * a(n - 1) - 6 * a(n - 2) - 4 * a(n - 3) + 7 * a(n - 4) + 5 * a(n - 5) - 5 * a(n - 6) - 3 * a(n - 7) + a(n - 8) + a(n - 9) for n>11. ●

► [A158562] 240,1008,2288,4080,6384,9200,12528,16368,20720,25584,30960,3684 8,43248,50160,57584,65520,73968,82928,92400,102384,112880,123888,135408,147 440,159984 ★ a(n) = 256 * n ^ 2 - 16. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A218131] 0,0,240,6480,65280,390000,1678320,5762400,16773120,43040160,999 90000,214344240,429960960,815702160,1475750640,2562840000,4294901760,6975 673920,11019855600,16983432720,25599840000,37822664880,54875639280,783107 05440,110074982400 ★ Number of length 8 primitive (=aperiodic or period 8) n - ary words. ● a(n) = n ^ 8 - n ^ 4. ●

► [A008340] 1,240,9120,121680,864960,4113840,14905440,44480400,114879360,2 65422960,561403680,1105317840,2050966080,3620750640,6126497760,999413352 0,15792541440,24266930160,36377039520,53340513360,76681767360 ★ Coordinat ion sequence for E _ 8 lattice. ● a(n) = if n = 0 then 1 else (456 / 7) * n ^ 7 - 120 * n ^ 6 + 312 * n ^ 5 - 120 * n ^ 4 - 48 * n ^ 3 + 240 * n ^ 2 - (624 / 7) * n . ●

► [A187167] 0,240,9504,51504,148224,320328,588924,975216,1500408,2185704,3 052308,4121424,5414256,6952008,8755884,10847088,13246824,15976296,1905670 8,22509264,26355168,30615624,35311836,40465008,46096344 ★ Number of 6 - ste p self - avoiding walks on an n X n X n cube summed over all starting positions. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>8. ●

► [A218514] 0,0,0,0,240,80400,4012560,76848240,825447840,6005512800,3301487 2800,146953113120,554770648080,1835249610480,5448481998960,1477881798120 0,37135461679680,87386816771520,194264943433920,410876964198720,83163857 9799600,1618744884780240 ★ Number of n - colorings of the icosahedral graph. ● a(n) = n(n - 1)(n - 2)(n - 3)(n ^ 8 - 24n ^ 7 + 260n ^ 6 - 1670n ^ 5 + 6999n ^ 4 - 19698n ^ 3 + 36408n ^ 2 - 40240n + 20170). ●

► [A158792] 0,0,0,0,240,332400,105480720,7787433360,233556076320,388151111 3760,42569914312800,342908176422240,2176503575487120,11428762115181840,5 1423745096804080,203533610650297200,722989464927562560,2341382980699049 280,6999973732130650560 ★ Number of n - colorings of the Shrikhande graph. ● a(n) = n ^ 16 - 48 * n ^ 15 + ... (see Maple program). ●

► [A157961] 241,483,725,967,1209,1451,1693,1935,2177,2419,2661,2903,3145,338 7,3629,3871,4113,4355,4597,4839,5081,5323,5565,5807,6049 ★ a(n) = 242 * n - 1. ● a(n) = 2 * a(n - 1) - a(n - 2). - _ Vincenzo Librandi _ , Feb 10 2012 ●

► [A373708] 1,1,1,1,1,241,1441,5041,13441,393121,10946881,99902881,55902528 1,2335441681,182348406241,4382526067921,48882114328321,355837396998721,51 57802930734721,312898934463543361,712975589802251136 1,89524038506304371 761,773103613914955683361 ★ Expansion of e.g.f. exp(x * (1 + x ^ 4) ^ 2). ● a(n) = n! * Sum _{ k=0..floor(2 * n / 9) } binomial(2 * n - 8 * k,k) / (n - 4 * k)! . ● a(n) == 1 (mod 240). ● a(n) = a(n - 1) + 10 * (n - 1) * (n - 2) * (n - 3) * (n - 4) * a(n - 5) + 9 * (n - 1) * (n - 2) * (n - 3) * (n - 4) * (n - 5) * (n - 6) * (n - 7) * (n - 8) * a(n - 9). ●

► [A372966] 1,241,6481,61681,390001,1561921,5762401,15790321,42521761,9399 0241,214344241,399754561,815702161,1388738641,2527596481,4042322161,69756 73921,10247744401,16983432721,24055651681,37346120881,51656962081,7831070 5441,102337070401 ★ a(n) = sigma _ 8(n ^ 2) / sigma _ 4(n ^ 2). ● a(n) = Su m _{ 1 <= x _ 1, x _ 2, x _ 3, x _ 4 <= n } (n / gcd(x _ 1, x _ 2, x _ 3, x _ 4, n)) ^ 4. ● a(n) = Sum _{ d|n } mu(n / d) * (n / d) ^ 4 * sigma _ 8(d). ●

► [A060893] 1,1,241,6481,65281,390001,1678321,5762401,16773121,43040161,999 90001,214344241,429960961,815702161,1475750641,2562840001,4294901761,6975 673921,11019855601,16983432721,25599840001,37822664881,54875639281,783107 05441,110074982401 ★ n ^ 8 - n ^ 4 + 1. ● a(0)=1, a(1)=1, a(2)=241, a(3)=648 1, a(4)=65281, a(5)=390001, a(6)=1678321, a(7)=5762401, a(8)=16773121, a(n) =9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9). - _ Harvey P. Dale _ , Nov 03 2014 ●

► [A008349] 1,241,9361,131041,996001,5109841,20015281,64495681,179375041,4 44798001,1006201681,2111519521,4162485601,7783236241,13909734001,23903867 521,39696408961,63963339121,100340378641,153680892001 ★ Crystal ball sequen ce for E _ 8 lattice. ● a(0)=1, a(1)=241, a(2)=9361, a(3)=131041, a(4)=996001, a(5)=5109841, a(6)=20015281, a(7)=64495681, a(8)=179375041, a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9). - _ Harvey P. Dale _ , Jun 12 2012 ●

► [A120377] 241,428717761 ★ Primes of the form 2 * 11 ^ n - 1. ● a(n) = n - th number such that 2 * 11 ^ k - 1 that is prime for some k. ●

► [A160551] 1,242,1463,4464,10045,19006,32147,50268,74169,104650,142511,188 552,243573,308374,383755,470516,569457,681378,807079,947360,1103021,127486 2,1463683,1670284,1895465 ★ Number of unordered ways of making change for n dollars using coins of denominations 1, 5, 10, and 25. ● a(n) = [x ^ (100 * n)] 1 / ((1 - x) * (1 - x ^ 5) * (1 - x ^ 10) * (1 - x ^ 25)). ● a(n) = (3 + 53 * n + 27 0 * n ^ 2 + 400 * n ^ 3) / 3. ●

► [A035748] 1,242,9922,170610,1690370,11414898,58227906,240089586,8384788 50,2564399090,7039035586,17664712562,41110086402,89719625842,18526346720 2,364571790066,687750033410,1249849661170,2197075886786,3748850875506,622 7320558338,10096197409650 ★ Coordination sequence for C _ 11 lattice. ● a(n) = [x ^ (2n)] ((1 + x) / (1 - x)) ^ 11. ●

► [A022153] 1,242,11242,210474,2224178,15804866,83999962,358159802,1285951 458,4025098770,11267030346,28752157898,67886298898,150029971938,31323310 2138,622431249242,1184409984450,2169185665330,3839847763114,659336425508 2,11015371578354,17952558422018 ★ Coordination sequence for root lattice B _ 11. ● a(0)=1; for n>0, a(n) = (16296 * n ^ 10 - 40520 * n ^ 9 + 422820 * n ^ 8 - 772320 * n ^ 7 + 3019968 * n ^ 6 - 3688440 * n ^ 5 + 6425580 * n ^ 4 - 4306 480 * n ^ 3 + 2872836 * n ^ 2 - 547740 * n + 28350) / 14175. - _ Ralf Stephan _ , Apr 28 2004 ●

► [A194788] 0,0,0,0,242,51504,2484382,44601420,450193818,3112919712,1647166 7554,71393226972,265069706646,869583076752,2577681275622,7020477731884,17 794428237522,42397762374912,95726217156906,206149749502012,4257317848988 94,846919172059632 ★ Number of ways to place 7 nonattacking kings on an n X n board. ● a(n) = (n ^ 14 - 189n ^ 12 + 252n ^ 11 + 15211n ^ 10 - 38640n ^ 9 - 649215n ^ 8 + 2408700n ^ 7 + 14771764n ^ 6 - 75856200n ^ 5 - 144099396n ^ 4 + 1198867488n ^ 3 - 255900576n ^ 2 - 7543005120n + 10617929280) / 5040, n> =6. - _ Andrew Woods _ , Sep 02 2011 ●

► [A055554] 242,1757711582,3515422922,5273134262,7030845602,8788556942,10 546268282,12303979622,14061690962,15819402302,17577113642,19334824982,210

92536322,22850247662,24607959002,26365670342 ⋆ An arithmetic progression e ach term of which is followed by at least 4 nonsquarefree consecutive integers. ● a(n) = d * n + 242, where d = LCM(242, 243, 244, 245) = 1757711340 = 2 * 2 * 3 * 3 * 3 * 3 * 3 * 5 * 7 * 11 * 11 * 61. ●

▶ [A157958] 243,485,727,969,1211,1453,1695,1937,2179,2421,2663,2905,3147,3389,3631,3873,4115,4357,4599,4841,5083,5325,5567,5809,6051 ⋆ a(n) = 242 * n + 1 . ● a(n) = 2 * a(n - 1) - a(n - 2). - _ Vincenzo Librandi _ , Feb 06 2012 ●

▶ [A113335] 243,1458,5103,13608,30618,61236,112266,192456,312741,486486,729729,1061424,1503684,2082024,2825604,3767472,4944807,6399162,8176707,10328472,12910590,15984540,19617390,23882040,28857465 ⋆ a(n) = 3 ^ 5 * binomial(n + 4, 5). ● a(n) = 3 ^ 5 * binomial(n + 4, 5), n >= 1. ●

▶ [A029700] 0,1,243,3936,20860,72315,197421,460768,961416,1843245,3306655,5621616,9142068,14321671,21730905,32075520,46216336,65190393,90233451,122803840,164607660,217625331,284139493,366764256,468475800 ⋆ Number of words of length 6 in the n(n - 1) / 2 transpositions of S[n] equivalent to the identity. ● a(n) = n * (n - 1) * (15 * n ^ 4 + 30 * n ^ 3 - 105 * n ^ 2 - 700 * n + 1344) / 8. ●

▶ [A016841] 243,16807,161051,759375,2476099,6436343,14348907,28629151,52521875,90224199,147008443,229345007,345025251,503284375,714924299,992436543,1350125107,1804229351,2373046875,3077056399,3939040643,4984209207,6240321451,7737809375,9509900499 ⋆ a(n) = (4n + 3) ^ 5. ● a(0)=243, a(1)=16807, a(2)=161051, a(3)=759375, a(4)=2476099, a(5)=6436343, a(n)=6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). - _ Harvey P. Dale _ , Aug 11 2014 ●

▶ [A017309] 243,371293,6436343,39135393,147008443,418195493,992436543,2073071593,3939040643,6956883693,11592740743,18424351793,28153056843,41615795893,59797108943,83841135993,115063617043 ⋆ a(n) = (10 * n + 3) ^ 5. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). - _ Wesley Ivan Hurt _ , Aug 17 2021 ●

▶ [A017429] 243,537824,9765625,60466176,229345007,656356768,1564031349,3276800000,6240321451,11040808032,18424351793,29316250624,44840334375,66338290976,95388992557,133827821568,183765996899 ⋆ a(n) = (11 * n + 3) ^ 5. ● a(0)=243, a(1)=537824, a(2)=9765625, a(3)=60466176, a(4)=229345007, a(5)=656356768, a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). - _ Harvey P. Dale _ , Apr 30 2013 ●

▶ [A017561] 243,759375,14348907,90224199,345025251,992436543,2373046875,4984209207,9509900499,16850581551,28153056843,44840334375,68641485507,101621504799,146211169851,205236901143,281950621875 ⋆ (12n + 3) ^ 5. ● a(0)=243, a(1)=759375, a(2)=14348907, a(3)=90224199, a(4)=345025251, a(5)=992436543, a(n)=6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). - _ Harvey P. Dale _ , Aug 18 2012 ●

▶ [A085440] 1,244,8020,108020,867395,4951496,22161864,82628040,267156165,770440540,2022773116,4909947484,11150268935,23913084560,48796284560,95322158736,179163294729,325374464580,572984364580,981394464580,1639143014731,2675722491224,4277290592600 ⋆ a(n) = Sum _{ i=1..n } binomial(i + 1,2) ^ 5. ● a(n) = (113400 * n ^ 11 + 1247400 * n ^ 10 + 5544000 * n ^ 9 + 12474000 * n ^ 8 + 14196600 * n ^ 7 + 6237000 * n ^ 6 - 831600 * n ^ 5 + 1108800 * n ^ 3 - 172800 * n) / 11!. ●

▶ [A157246] 245,265,287,343,427,493,637,833,1097,1295,1715,2275,2693,3577,4753,6317,7483,9947,13223,15665,20825,27685,36805,43603,57967 ⋆ Positive numbers y such that y ^ 2 is of the form x ^ 2 + (x + 343) ^ 2 with integer x. ● a(n) = 6 * a(n - 7) - a(n - 14) for n > 14; a(1)=245, a(2)=265, a(3)=287, a(4)=343, a(5)=427, a(6)=493, a(7)=637, a(8)=833, a(9)=1097, a(10)=1295, a(11)=1715, a(12)=2275, a(13)=2693, a(14)=3577. ●

▶ [A137521] 245,345,545,745,1145,1345,1745,1945,2345,2945,3145,3745,4145,4345,4745,5345,5945,6145,6745,7145,7345,7945,8345,8945,9745 ⋆ Prime numbers concatenated with 45. ● a(n) = prime(n) concatenated with 45 ●

▶ [A257781] 245,385,495,655,795,1055,1365,2205,2855,3795,4615,6135,7945,12845,16635,22115,26895,35755,46305,74865,96955,128895,156755,208395,269885 ⋆ Positive integers whose square is the sum of 50 consecutive squares. ● a(n) = 6 * a(n - 6) - a(n - 12). ●

▶ [A063356] 1,247,533,820,1107,1394,1681,1968,2255,2542,2829,3114,3403,3690,3977,4262,4551,4836,5125,5410,5699,5984,6273,6556,6847 ⋆ Dimension of the space of weight n cuspidal newforms for Gamma _ 1(83). ● a(n) = a(n - 4) + a(n - 6) - a(n - 10) for n>13. ●

▶ [A001243] 1,247,14608,455192,9738114,162512286,2275172004,27971176092,311387598411,3207483178157,31055652948388,285997074307300,2527925001876036,21598596303099900,179385804170146680 ⋆ Eulerian numbers (Euler's triangle : column k=7 of A008292, column k=6 of A173018). ● a(n) = 7 ^ (n + 7 - 1) + Sum _{ i=1..7 - 1 } ((- 1) ^ i / i!) * (7 - i) ^ (n + 7 - 1) * Product _{ j=1..i } (n + 7 + 1 - j). - _ Randall L Rathbun _ , Jan 23 2002 ●

▶ [A178967] 0,0,0,0,0,0,248,7320,82758,562384,2756122,10771928,35504296,102677536,267284836,638673432,1420555842,2974232240,5911536526,11232560320,20516606128,36191817440,61893239340,102950022616,167010533830 ⋆ Number of ways to place 5 nonattacking amazons (superqueens) on an n X n board. ● a(n) = 1 / 120 * n ^ 10 - 5 / 18 * n ^ 9 + 253 / 72 * n ^ 8 - 689 / 45 * n ^ 7 - 34217 / 360 * n ^ 6 + 28391 / 18 * n ^ 5 - 6828569 / 810 * n ^ 4 + 29655659 / 1620 * n ^ 3 + 14328773 / 1296 * n ^ 2 - 779503661 / 6480 * n + 9261910451 / 64800 + (1 / 8 * n ^ 5 - 143 / 48 * n ^ 4 + 79 / 3 * n ^ 3 - 4711 / 48 * n ^ 2 + 5171 / 48 * n + 2549 / 32) * (- 1) ^ n + 1 / 2 * (29 * n - 35) * cos(Pi * n / 2) + (2 * n + 15) * sin(Pi * n / 2) + 1 / 81 * (96 * n ^ 3 - 1328 * n ^ 2 + 4744 * n - 2248) * cos(4 * Pi * n / 3) - 1 / 243 * (120 * n ^ 2 - 1496 * n + 5224) * sqrt(3) * sin(4 * Pi * n / 3) + 8 / 25 * ((5 - sqrt(5)) * n + 2 * sqrt(5) - 8) * cos(4 * Pi * n / 5) + 8 / 25 * ((5 + sqrt(5)) * n - 2 * sqrt(5) - 8) * cos(8 * Pi * n / 5) + 8 / 25 * sqrt(50 - 22 * sqrt(5)) * sin(4 * Pi * n / 5) - 8 / 25 * sqrt(50 + 22 * sqrt(5)) * sin(8 * Pi * n / 5), n>=10. ● a(n) = n ^ 10 / 120 - 5 * n ^ 9 / 18 + 253 * n ^ 8 / 72 - 689 * n ^ 7 / 45 - 34307 * n ^ 6 / 360 + 57001 * n ^ 5 / 36 - 55000657 * n ^ 4 / 6480 + 60118543 * n ^ 3 / 3240 + 34387307 * n ^ 2 / 3240 - 155720509 * n / 1296 + 142960 + (n ^ 5 / 2 - 143 * n ^ 4 / 12 + 316 * n ^ 3 / 3 - 4711 * n ^ 2 / 12 + 5123 * n / 12 + 2309 / 8) * floor[n / 2] + (32 * n ^ 3 / 9 - 1328 * n ^ 2 / 27 + 4744 * n / 27 - 2248 / 27) * floor[n / 3] + (16 * n ^ 3 / 9 - 724 * n ^ 2 / 27 + 1040 * n / 9 - 3736 / 27) * floor[(n + 1) / 3] + (33 * n - 5) * floor[n / 4] + (25 * n - 65) * floor[(n + 1) / 4] + (32 * n / 5 - 48 / 5) * floor[n / 5] + (24 * n / 5 - 64 / 5) * floor[(n + 1) / 5] + (16 * n / 5 - 56 / 5) * floor[(n + 2) / 5] + (8 * n / 5 - 32 / 5) * floor[(n + 3) / 5], n>=10. ●

▶ [A371491] 1,249,6535,63737,390501,1627215,5764459,16316665,42876109,97234749,214357551,416521295,815728525,1435350291,2551924035,4177066233,697575259,10676151141,16983556183,24889362237,37670739565,53375030199,78310973115,106629405775 ⋆ a(n) = Sum _{ 1 <= x _ 1, x _ 2, x _ 3, x _ 4, x ^ 5 <= n } (n / gcd(x _ 1, x _ 2, x _ 3, x _ 4, x _ 5, n)) ^ 3. ● a(n) = Sum _{ d|n } mu(n / d) * (n / d) ^ 3 * sigma _ 8(d). ● a(n) = Sum _{ d|n } phi(n / d) * (n / d) ^ 3 * sigma _ 8(d ^ 2) / sigma _ 4(d ^ 2). ●

▶ [A225209] 1,249,8537,186073,3427545,58664153,970097881,15776875737,254486643929,4088295982297,65545039643865,1049779971687641,16804957869966553,268947166998693081,4303697458594972889,68863501862374868185 ⋆ a(n) = (392 * 16 ^ n - 1620 * 8 ^ n + 1890 * 4 ^ n - 767) / 105. ● a(n) = 29 * a(n - 1) - 252 * a(n - 2) + 736 * a(n - 3) - 512 * a(n - 4). ● a(n) = a(n - 1) + 7 * 2 ^ (4 * n - 1) - 27 * 2 ^ (3 * n - 1) + 27 * 2 ^ (2 * n - 1), for n>0. ●

▶ [A104396] 252,336,392,427,447,456,457,461,512,547,567,577,581,596,621,631,651,661,665,677,687,707,712,717,721 ⋆ Sums of 6 distinct positive pentatope numbers (A000332). ● a(n) = Ptop(f) + Ptop(g) + Ptop(h) + Ptop(i) + Ptop(j) + Ptop(k) for some positive f= / =g= / =h= / =i= / =j= / =k and Ptop(n) = binomial(n + 3,4). ●

▶ [A254467] 252,462,1122,3432,12342,49632,216342,1001952,4863462,24500352,127161462,676195872,3668030982,20227217472,113076824982,639383508192,3649985092902,21003583828992,121677813214902,708891056106912,4149610383537222 ⋆ a(n) = 15 * 4 ^ n + 70 * 2 ^ n + 35 * 3 ^ n + 5 ^ (n + 1) + 6 ^ n + 126. ● a(n) = 21 * a(n - 1) - 175 * a(n - 2) + 735 * a(n - 3) - 1624 * a(n - 4) + 1764 * a(n - 5) - 720 * a(n - 6). - _ Colin Barker _ , Jan 31 2015 ●

▶ [A242570] 0,252,504,756,1008,1260,1512,1764,2016,2268,2520,2772,3024,3276,3528,3780,4032,4284,4536,4788,5040,5292,5544,5796,6048 ⋆ Multiples of 252. ● a(n) = 252(n - 1). ●

▶ [A172223] 1,252,1925,6534,20502,57710,142312,308254,606051,1105332,1897899,3100250,4857000,7344010,10771530,15387310,21479725,29380900,39469835,52175530,67980110,87421950,111098800,139670910,173864155 ⋆ Number of ways to place 5 nonattacking zebras on a 5 X n board. ● a(n) = 5 * (125n ^ 5 - 1250n ^ 4 + 7575n ^ 3 - 28426n ^ 2 + 64000n - 67056) / 24, n>=12. ●

▶ [A027815] 252,3234,22176,108108,420420,1387386,4036032,10618608,25729704,58198140,124156032,251839224,488864376,912964668,1647455040,2883046320,4908043140,8149451310,13228094880,21031510500,32809156380,50295355110,75866394240,112739346720 ⋆ a(n) = 42 * (n + 1) * binomial(n + 5,10). ● a(n) = C(n + 1, 6) * C(n + 5, 5). - _ Zerinvary Lajos _ , May 26 2005; corrected by _ R. J. Mathar _ , Feb 10 2016 ●

▶ [A169713] 1,252,4653,31504,127905,384156,948157,2039808,3965409,7132060,12062061,19407312,29963713,44685564,64699965,91321216,126065217,170663868,227079469,297519120,384449121,490609372,619027773,773034624,956277025 ⋆ The function W _ n(10) (see Borwein et al. reference for definition). ● a(n) = 120 * n ^ 5 - 600 * n ^ 4 + 1250 * n ^ 3 - 1225 * n ^ 2 + 456 * n. - _ Peter Luschny _ , May 27 2017 ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). - _ Vincenzo Librandi _ , May 28 2017 ●

▶ [A151610] 0,252,4935,56560,572215,5503260,51377823,469758912,4227854463,37580958940,330712475863,2886218015856,25013889523623,215504279034492,1847179534652655,15762598695784192,133982088914258095,1134907106097349116,9583660007044397799,80704505322479268720 ⋆ Number of permutations of 7 indistinguishable copies of 1..n arranged in a circle with exactly 2 adjacent element pairs in decreasing order. ● a(n) = n * ((7 / 2) * 8 ^ n - 49 * n) for n > 1. - _ Andrew Howroyd _ , May 04 2020 ● a(n) = 19 * a(n - 1) - 115 * a(n - 2) + 241 * a(n - 3) - 208 * a(n - 4) + 64 * a(n - 5) for n>6. ●

▶ [A250085] 252,5084,42936,222329,847708,2623376,6978064,16547001,35852668,72229740,137044040,247259649,427412636,712054192,1148730272,1801569169,2755552764,4121551516,6042207576,8698754729,12318868188,17185641584 ⋆ Number of length 4 + 5 0..n arrays with every six consecutive terms having the maximum of some two terms equal to the minimum of the remaining four terms. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>9. ●

▶ [A250376] 252,7168,69984,396745,1616636,5272892,14647808,36038649,80620540,167049696,324977632,599664273,1057895164,1795425260,2946189056,4693534097,7283752188,11042199904,16392317280,23877870841,34188764412 ⋆ Number of length 3 + 6 0..n arrays with every seven consecutive terms having the maximum of some three terms equal to the minimum of the remaining four terms. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>9. ●

▶ [A329755] 0,1,252,7337,84575,576080,2795121,10700382,34388362,96606475,243939410,564840991,1217275137,2469392562,4757404575,8765621740,15534503236,26603512517,44196596312,71459197125,112756874195,174046844356,263335062397,391232840362,571628456750 ⋆ Doubly hexagonal pyramidal numbers. ● a(n) = n * (4 * n - 1) * (n + 1) * (4 * n ^ 3 + 3 * n ^ 2 - n + 6) * (8 * n ^ 3 + 6 * n ^ 2 - 2 * n - 3) / 648 . - _ R. J. Mathar _ , Nov 28 2019 ●

▶ [A047831] 1,252,19404,731808,16818516,267227532,3184461423,30107635272,235234907908,1566039386912,9095857138368,46960429261824,218772384397632,931020034054176,3656383418054268,13365232267026024,45800747571406905,148055097314224100 ⋆ a(n) = Product _{ i=1..n } ((i + 5) * (i + 6) * (i + 7) * (i + 8) * (i + 9)) / (i * (i + 1) * (i + 2) * (i + 3) * (i + 4)). ● a(n) = C(n + 5,n + 4) * C(n + 6,n + 3) * C(n + 7,n + 2) * C(n + 8,n + 1) * C(n + 9,n) / (140 * 5!) . - _ Zerinvary Lajos _ , May 29 2007 ●

▶ [A255182] 1,253,5796,46620,213444,697788,1832292,4131036,8329860,15426684,26721828,43858332,68862276,104183100,152733924,217931868,303738372,414699516,555986340,733435164,953587908,1223732412,1551942756,1947119580,2419030404 ⋆ Third differences of eighth powers (A001016). ● a(n) = 84 * (2 * n - 1) * (2 * n ^ 4 - 4 * n ^ 3 + 8 * n ^ 2 - 6 * n + 3) for n>1, a(0)=1, a(1)=253. ●

► [A158249] 254,1020,2298,4088,6390,9204,12530,16368,20718,25580,30954,36840,43238,50148,57570,65504,73950,82908,92378,102360,112854,123860,135378,147408,159950 ⋆ a(n) = 256 * n ^ 2 - 2 * n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A255178] 1,254,6050,52670,266114,963902,2796194,6927230,15257090,30683774,57405602,101263934,170126210,274309310,427043234,644975102,948713474,1363412990,1919399330,2652834494,3606422402,4830154814,6382097570,8329217150,10748247554 ⋆ Second differences of eighth powers (A001016). ● a(n) = 2 * (28 * n ^ 6 + 70 * n ^ 4 + 28 * n ^ 2 + 1) for n>0, a(0)=1. ●

► [A101745] 255,384,511,575,639,728,767,896,1088,1295,1376,1407,1599,1700,1727,1792,1919,1920,2015,2024,2375,2431,2672,2815,2880 ⋆ Indices of triangular numbers which are 10 - almost primes. Indices of A101744. ● a(n) * (a(n) + 1) / 2 has exactly 10 prime factors. ●

► [A158250] 255,511,767,1023,1279,1535,1791,2047,2303,2559,2815,3071,3327,3583,3839,4095,4351,4607,4863,5119,5375,5631,5887,6143,6399 ⋆ a(n) = 256 * n - 1. ● a(n) = 2 * a(n - 1) - a(n - 2). ●

► [A158010] 255,1022,2301,4092,6395,9210,12537,16376,20727,25590,30965,36852,43251,50162,57585,65520,73967,82926,92397,102380,112875,123882,135401,147432,159975 ⋆ a(n) = 256 * n ^ 2 - n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Feb 10 2012 ●

► [A075941] 255,3855,13107,21845,38505,197462,329059,591418,1118584,2167325,4265038,8460068,251658255,855638067,1426063445,2516582505,12935233622,21558722659,38755369018,73299656824,142035910685 ⋆ Basis for code in A075940. ● a(n) = b(2 ^ n), where b is A075940, the binary lexicode, d=8. ●

► [A228223] 255,6305,58975,320481,1225631,3693505,9399615,21108545,43067071,81457761,144913055,245089825,397304415,621228161,941643391,1389259905,2001591935,2823895585,3910166751,5324199521,7140705055,9446490945 ⋆ Number of second differences of arrays of length 8 of numbers in 0..n. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

► [A069093] 1,255,6560,65280,390624,1672800,5764800,16711680,43040160,99609120,214358880,428236800,815730720,1470024000,2562493440,4278190080,6975757440,10975240800,16983563040,25499934720,37817088000 ⋆ Jordan function J _ 8(n). ● a(n) = Sum _{ d|n } d ^ 8 * mu(n / d). ● a(n) = n ^ 8 * Product _{ distinct primes p dividing n } (1 - 1 / p ^ 8). - _ Tom Edgar _ , Jan 09 2015 ●

► [A258809] 0,255,6560,65535,390624,1679615,5764800,16777215,43046720,99999999,214358880,429981695,815730720,1475789055,2562890624,4294967295,6975757440,11019960575,16983563040,25599999999,37822859360,54875873535,78310985280,110075314175 ⋆ a(n) = n ^ 8 - 1. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9). ●

► [A221970] 255,7425,73983,419841,1690623,5407233,14661375,35111681,76335103,153588225,290033151,519482625,889719039,1466441985,2337899007,3620254209,5463749375,8059712257,11648466687,16528199169,23064836607 ⋆ Number of - n..n arrays of length 7 with the sum ahead of each element differing from the sum following that element by n or less. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. ●

► [A206198] 256,1060,5136,32920,118936,484704,3270240,11893600,48470400,327024000,1189360000,4847040000,32702400000,118936000000,484704000000,3270240000000,11893600000000,48470400000000,327024000000000 ⋆ Number of (n + 1) X (n + 1) 0..3 arrays with every 2 X 3 or 3 X 2 subblock having exactly one clockwise edge increases. ● a(n) = 100 * a(n - 3) for n>7. ●

► [A120054] 256,1280,3840,8960,17920,32256,53760,84480,126720,183040,256256,349440,465920,609280,783360,992256,1240320,1532160,1872640,2266880,2720256,3238400,3827200,4492800,5241600 ⋆ a(n) = binomial(n + 3,4) * 4 ^ 4. ● a(n) = C(n + 3,4) * 4 ^ 4, n>=1. ●

► [A188865] 256,1393,3194,5275,7442,9627,11814,14001,16188,18375,20562,22749,24936,27123,29310,31497,33684,35871,38058,40245,42432,44619,46806,48993,51180 ⋆ Number of n X 8 binary arrays without the pattern 0 1 diagonally, vertically or antidiagonally. ● a(n) = 2 * a(n - 1) - a(n - 2) for n>7. ●

► [A016780] 1,256,2401,10000,28561,65536,130321,234256,390625,614656,923521,1336336,1874161,2560000,3418801,4477456,5764801,7311616,9150625,11316496,13845841,16777216,20151121,24010000,28398241 ⋆ a(n) = (3 * n + 1) ^ 4. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ●

► [A070056] 256,3327,28606,196301,1158554,6121871,29688844,134361100,574209267,2337788346,9128782573,34372098576,125327730017,444081743234,1533640995983,5174881667481,17096446731321,55402030270777,176377009761145,552397160169465,1704039417961465,5183132984363513,15559823619750905,46141145945628665 ⋆ Number of Bottleneck - Monge matrices with 8 rows. ● a(N) = a(8, N), where a(P, N) is defined recursively in A070050. ●

► [A259320] 0,256,3584,21504,84480,256256,652288,1462272,2976768,5617920,9974272,16839680,27256320,42561792,64440320,94978048,136722432,192745728,266712576,362951680,486531584,643340544,840170496,1084805120,1386112000 ⋆ a(n) = 2 * n * A259319(n) - A259110(n) ^ 2. ● a(n) = (64 * (n ^ 2 - 5 * n ^ 4 + 4 * n ^ 6)) / 45. - _ Colin Barker _ , Jun 29 2015 ●

► [A200843] 256,4057,28610,132263,469116,1384813,3570086,8291391,17720746,35389651,66794740,120185585,207567842,345957699,558926356,878476037,1347291804,2021416213,2973396622,4295957731,6106254704,8550764993,11810879754 ⋆ Number of 0..n arrays x(0..7) of 8 elements without any two consecutive increases or two consecutive decreases. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>9. ●

► [A115111] 0,0,0,256,5000,65880,739508,7653632,75687696,728589000,6899424840,64678048600,602586261420,5593531747076,51815550195500,479511147907328,4436081306716064,41044438822080816,379913227858140396 ⋆ Number of different ways to select n elements from four sets of n elements under the precondition of choosing at least one element from each set. ● a(n) = binomial(4 * n, n) - 4 * (binomial(3 * n, n) + 1) + 6 * binomial(2 * n, n); also: a(n)=sum { binomial(n, i) * binomial(n, j) * binomial(n, k) * binomial(n, l)|i, j, k, l=1...(n - 3), i + j + k + l=n } . ●

► [A200790] 256,5157,43681,232275,919413,2964416,8216484,20273247,45611500,95196145,186686721,347374261,617994573,1057577400,1749504272,2808961221,4391985888,6706321909,10024306825,14698033119,21177035341,30028769640 ⋆ Number of 0..n arrays x(0..7) of 8 elements without any two consecutive increases. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>9. ●

► [A195595] 256,6060,58776,358564,1649420,6286658,20984924,63558566,178909300,476033636,1212120160,2980927200,7129922604,16675350430,38293956836,86629645122,193553210580,427974677968,938053730248,2040792091884,4411561365324,9483844861978 ⋆ Number of ways to place 7n nonattacking kings on a vertical cylinder 14 X 2n. ● a(n) = (157823 * n - 1211433) * 2 ^ n + 9121 / 60 * n ^ 5 + 35581 / 12 * n ^ 4 + 352625 / 12 * n ^ 3 + 2179835 / 12 * n ^ 2 + 204565 97 / 30 * n + 1211434. ●

► [A016900] 256,6561,38416,130321,331776,707281,1336336,2313441,3748096,5764801,8503056,12117361,16777216,22667121,29986576,38950081,49787136,62742241,78074896,96059601,116985856,141158161 ⋆ a(n) = (5 * n + 4) ^ 4. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ●

► [A001016] 0,1,256,6561,65536,390625,1679616,5764801,16777216,43046721,100000000,214358881,429981696,815730721,1475789056,2562890625,4294967296,6975757441,11019960576,16983563041,25600000000,37822859361,54875873536,78310985281,110075314176 ⋆ Eighth powers: a(n) = n ^ 8. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) + 40320. - _ Ant King _ , Sep 24 2013 ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>8. ●

► [A352054] 0,256,6561,65536,390625,1679872,5764801,16777216,43053282,100000256,214358881,430047232,815730721,1475789312,2563287811,4294967296,6975757441,11021640448,16983563041,25600065536,37828630723,54875873792,78310985281,110092091392,152588281250 ⋆ Sum of the 8th powers of the divisor complements of the odd proper divisors of n. ● a(n) = n ^ 8 * Sum _{ d|n, d<n, d o dd } 1 / d ^ 8. ●

► [A231307] 0,1,256,6562,65792,397187,1745408,6161988,18522624,49208709,118522624,263567590,548504320,1079298311,2024293376,3642188936,6319260672,10617946377,17339221248,27601509418,42939221248,65424368779,97815094784,143735354060 ⋆ Recurrence a(n) = a(n - 2) + n ^ M for M=8, starting with a(0)=0, a(1)=1. ● a(n) = Sum _{ k=0..floor(n / 2) } (n - 2k) ^ 8. ● a(n) = 1 / 90 * n * (n + 1) * (n + 2) * (5 * n ^ 6 + 30 * n ^ 5 + 20 * n ^ 4 - 120 * n ^ 3 - 16 * n ^ 2 + 288 * n - 192). - _ Vaclav Kotesovec _ , Feb 14 2014 ●

► [A236214] 256,6817,397442,6162243,220521124,1036251845,8012009286,2499557232 7,103306557608,603552970569,1456444008010,4968923461931,12953848691052,24642048968653,48453335630414,110713026041775,257543463646096,449250776643377,855318454200018 ⋆ Sum of the eighth powers of the first n primes. ● a(n) = Sum _{ k=1..n } prime(k) ^ 8. ●

► [A128991] 0,256,9216,196608,3276800,47185920,616562688,7516192768,86973087744,966367641600,10393820856320,108851651149824,1114904790564864,11206222510292992,110830772079820800,1080863910568919040 ⋆ a(n) = (n ^ 3 - n ^ 2) * 8 ^ n. ● a(n) = 32 * a(n - 1) - 384 * a(n - 2) + 2048 * a(n - 3) - 4096 * a(n - 4). - _ Vincenzo Librandi _ , Feb 12 2013 ●

► [A191680] 0,256,9841,131072,976562,5038848,20176803,67108864,193710244,500000000,1178973845,2579890176,5302249686,10330523392,19221679687,34359738368,59293938248,99179645184,161343848889,256000000000,397140023290,603634608896,900576330731,1320903770112,1907348632812 ⋆ Number of compositions of odd natural numbers into 9 parts <= n. ● a(n) = ((n + 1) ^ 9 - (1 + (- 1) ^ n) / 2) / 2. ● a(n) = 9 * a(n - 1) - 35 * a(n - 2) + 75 * a(n - 3) - 90 * a(n - 4) + 42 * a(n - 5) + 42 * a(n - 6) - 90 * a(n - 7) + 75 * a(n - 8) - 35 * a(n - 9) + 9 * a(n - 10) - a(n - 11). - _ R. J. Mathar _ , Jun 29 2011 ●

► [A191496] 1,256,9842,131072,976563,5038848,20176804,67108864,193710245,500000000,1178973846,2579890176,5302249687,10330523392,19221679688,34359738368,59293938249,99179645184,161343848890,256000000000,397140023291,603634608896,900576330732,1320903770112,1907348632813 ⋆ Number of compositions of even numbers into 9 parts <= n. ● a(n)= ((n + 1) ^ 9 + (1 + (- 1) ^ n) / 2) / 2. ● a(n) = 9 * a(n - 1) - 35 * a(n - 2) + 75 * a(n - 3) - 90 * a(n - 4) + 42 * a(n - 5) + 42 * a(n - 6) - 90 * a(n - 7) + 75 * a(n - 8) - 35 * a(n - 9) + 9 * a(n - 10) - a(n - 11). ●

► [A016960] 256,10000,65536,234256,614656,1336336,2560000,4477456,7311616,11316496,16777216,24010000,33362176,45212176,59969536,78074896,100000000,126247696,157351936,193877776,236421376,285610000,342102016,406586896,479785216 ⋆ a(n) = (6 * n + 4) ^ 4. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Harvey P. Dale _ , Sep 23 2013 ●

► [A240932] 0,0,256,13122,196608,1562500,8398080,34588806,117440512,344373768,900000000,2143588810,4729798656,9788768652,19185257728,35880468750,64424509440,111612119056,187339329792,305704134738,486400000000,756457187220,1152393344256,1722841676182 ⋆ a(n) = n ^ 9 - n ^ 8. ● a(n) = n ^ 8 * (n - 1) = n ^ 9 - n ^ 8. ●

► [A017572] 256,65536,614656,2560000,7311616,16777216,33362176,59969536,100000000,157351936,236421376,342102016,479785216,655360000,875213056,1146228736,1475789056,1871773696,2342560000 ⋆ (12n + 4) ^ 4. ● a(0)=256, a(1)=65536, a(2)=614656, a(3)=2560000, a(4)=7311616, a(n)=5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Harvey P. Dale _ , Mar 08 2013 ●

► [A016832] 256,1679616,100000000,1475789056,11019960576,54875873536,208827064576,656100000000,1785793904896,4347792138496,9682651996416,20047612231936,39062500000000,72301961339136,128063081718016,218340105584896,360040606269696,576480100000000,899194740203776 ⋆ a(n) = (4 * n + 2) ^ 8. ● a(0)=256, a(1)=1679616, a(2)=100000000, a(3)=1475789056, a(4)=11019960576, a(5)=54875873536, a(6)=208827064576, a(7)=656100000000, a(8)=1785793904896, a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9). ●

► [A016880] 256,5764801,429981696,6975757441,54875873536,282429536481,1099511627776,3512479453921,9682651996416,23811286661761,53459728531456,111429157112001,218340105584896,406067677556641,722204136308736,1235736291547681,2044140858654976,3282116715437121 ★ a(n) = (5 * n + 2) ^ 8. ● a(0)=256, a(1)=5764801, a(2)=429981696, a(3)=6975757441, a(4)=54875873536, a(5)=282429536481, a(6)=1099511627776, a(7)=3512479453921, a(8)=9682651996416; for n>8, a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9). - _ Harvey P. Dale _ , Feb 11 2015 ●

► [A017552] 256,1475789056,208827064576,4347792138496,39062500000000,218340105584896,899194740203776,2992179271065856,8507630225817856,21435888100000000,49077072127303936,103953325454500096 ★ (12n + 2) ^ 8. ● a(0)=256, a(1)=1475789056, a(2)=208827064576, a(3)=4347792138496, a(4)=39062500000000, a(5)=218340105584896, a(6)=899194740203776, a(7)=2992179271065856, a(8)=8507630225817856, a(n)=9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9). - _ Harvey P. Dale _ , Jul 11 2014 ●

► [A158231] 257,513,769,1025,1281,1537,1793,2049,2305,2561,2817,3073,3329,3585,3841,4097,4353,4609,4865,5121,5377,5633,5889,6145,6401 ★ a(n) = 256 * n + 1. ● a(n) = 2 * a(n - 1) - a(n - 2); a(1)=257, a(2)=513. - _ Harvey P. Dale _ , Nov 21 2011 ●

► [A036549] 1,257,1025,3329,10241,30977,93185,279809,839681,2519297,7558145,22674689,68024321,204073217,612219905,1836659969,5509980161,16529940737,49589822465,148769467649,446308403201,1338925209857 ★ a(n) = T(8,n), array T given by A048471. ● a(n) = 128 * 3 ^ n - 127. ● a(n) = 3 * a(n - 1) + 254. ● a(n) = 4 * a(n - 1) - 3 * a(n - 2). ●

► [A351303] 1,257,6562,65792,390626,1686434,5764802,16842752,43053282,100390882,214358882,431727104,815730722,1481554114,2563287812,4311744512,6975757442,11064693474,16983563042,25700065792,37828630724,55090232674,78310985282,110522138624,152588281250 ★ a(n) = n ^ 8 * Product _{ p|n, p prime } (1 + 1 / p ^ 8). ● a(n) = Sum _{ d|n } d ^ 8 * mu(n / d) ^ 2. ● a(n) = n ^ 8 * Sum _{ d|n } mu(d) ^ 2 / d ^ 8. ●

► [A294303] 0,0,257,6562,72354,456418,2142595,7841860,24684612,67340708,167731333,380410598,812071910,1622037830,3103591687,5649705096,9961449608,16894160328,27957167625,44840730666,70540730666,108149231146,163239463563,241120467148,351625763020 ★ Sum of the eighth powers of the parts in the partitions of n into two distinct parts. ● a(n) = Sum _{ i=1..floor((n - 1) / 2) } i ^ 8 + (n - i) ^ 8. ● a(n) = a(n - 1) + 9 * a(n - 2) - 9 * a(n - 3) - 36 * a(n - 4) + 36 * a(n - 5) + 84 * a(n - 6) - 84 * a(n - 7) - 126 * a(n - 8) + 126 * a(n - 9) + 126 * a(n - 10) - 126 * a(n - 11) - 84 * a(n - 12) + 84 * a(n - 13) + 36 * a(n - 14) - 36 * a(n - 15) - 9 * a(n - 16) + 9 * a(n - 17) + a(n - 18) - a(n - 19) for n>19. ●

► [A000542] 0,1,257,6818,72354,462979,2142595,7907396,24684612,67731333,167731333,382090214,812071910,1627802631,3103591687,5666482312,9961449608,16937207049,27957167625,44940730666,70540730666,108363590027,163239463563,241550448844 ★ Sum of 8th powers: 1 ^ 8 + 2 ^ 8 + ... + n ^ 8. ● a(n) = n * (n + 1) * (2 * n + 1) * (5 * n ^ 6 + 15 * n ^ 5 + 5 * n ^ 4 - 15 * n ^ 3 - n ^ 2 + 9 * n - 3) / 90. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) + 40320. - _ Ant King _ , Sep 24 2013 ● a(n) = - Sum _{ j=1..8 } j * s(n + 1,n + 1 - j) * S(n + 8 - j,n), where s(n,k) and S(n,k) are the Stirling numbers of the first kind and the second kind, respectively. - _ Mircea Merca _ , Jan 25 2014 ●

► [A168116] 0,1,257,9843,131074,976565,5038851,20176807,67108868,193710249,500000005,1178973851,2579890182,5302249693,10330523399,19221679695,34359738376,59293938257,99179645193,161343848899,256000000010,397140023301,603634608907 ★ a(n) = n * (n ^ 8 + 1) / 2. ● a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10). - _ Wesley Ivan Hurt _ , Jun 26 2022 ●

► [A086022] 1,257,10257,170257,1670882,11505378,61292514,268652514,1009853139,3352413139,10042998755,27598188771,70457539396,168802499396,382616259396,825980472132,1707628231653,3396588391653,6525595601653,12150082161653,21987344308134,38769279231910 ★ a(n) = Sum _{ i=1..n } C(i + 2,3) ^ 4. ● a(n) = C(n + 3,4) * [- 41 * F3(n) + 350 * (47 * C(n + 8,9) + 1749 * C(n + 7,9) + 9292 * C(n + 6,9) + 9292 * C(n + 5,9) + 1749 * C(n + 4,9) + 47 * C(n + 3,9))] / 15015, where F3(n) = - C(3,0) * C(n + 3,0) + C(4,1) * C(n + 3,1) - C(5,2) * C(n + 3,2) + C(6,3) * C(n + 3,3). The value of F3(n), (n=0..8) is: 1, 35, 119, 273, 517, 871, 1355, 1989, 2793, ... - _ Yahia Kahloune _ , Dec 23 2013 ● a(n) = (n / 12972960) * (- 8856 + 60060 * n ^ 2 + 165165 * n ^ 3 + 841841 * n ^ 4 + 2462460 * n ^ 5 + 3709420 * n ^ 6 + 3243240 * n ^ 7 + 1756755 * n ^ 8 + 600600 * n ^ 9 + 126490 * n ^ 10 + 15015 * n ^ 11 + 770 * n ^ 12). - _ G. C. Greubel _ , Nov 22 2017 ●

► [A158230] 258,1028,2310,4104,6410,9228,12558,16400,20754,25620,30998,36888,43290,50204,57630,65568,74018,82980,92454,102440,112938,123948,135470,147504,160050 ★ 256n ^ 2 + 2n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A253636] 1,258,7076,79430,542409,2685004,10592400,35277012,103008345,270739678,652829892,1464901802,3092704433,6196296120,11862778432,21824228040,38761435089,66718602714,111659333380,182200064046,290563654073,453803117636,695353566480,1046979329500 ★ Second partial sums of eighth powers (A001016). ● a(n) = (2 * n ^ 10 + 20 * n ^ 9 + 75 * n ^ 8 + 120 * n ^ 7 + 42 * n ^ 6 - 84 * n ^ 5 - 50 * n ^ 4 + 40 * n ^ 3 + 21 * n ^ 2 - 6 * n) / 180. ● a(n) = 2 * a(n - 1) - a(n - 2) + n ^ 8. - _ Robert Israel _ , Jan 07 2015 ●

► [A168125] 0,1,258,9846,131080,976575,5038866,20176828,67108896,193710285,500000050,1178973906,2579890248,5302249771,10330523490,19221679800,34359738496,59293938393,99179645346,161343849070,256000000200,397140023511,603634609138,900576330996 ★ a(n) = n ^ 2 * (n ^ 7 + 1) / 2. ● a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10), where ● a(0)=0, a(1)=1, a(2)=258, a(3)=9846, a(4)=131080, a(5)=976575, a(6)=5038866, a(7)=20176828, a(8)=67108896, a(9)=193710285. (End) ●

► [A254642] 1,259,7335,86765,629174,3314178,13906578,49183590,152191935,422931613,1075761505,2540663307,5633367740,11829663860,23692442292,45516670332,84278105421,150996708135,262656041515,444856105561,735419759634,1189222877270 ★ Third partial sums of eighth powers (A001016). ● a(n) = n * (1 + n) * (2 + n) * (3 + n) * (3 + 2 * n) * (1 + 36 * n - 69 * n ^ 2 + 45 * n ^ 4 + 18 * n ^ 5 + 2 * n ^ 6) / 3960. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + n ^ 8. ●

► [A253504] 260,472,784,1196,1712,2340,3088,3964,4976,6132,7440,8908,10544,12356,14352,16540,18928,21524,24336,27372,30640,34148,37904,41916,46192 ★ Number of (n + 2) X (2 + 2) 0..1 arrays with every 2 X 2 and 3X3 subblock diagonal maximum minus antidiagonal minimum nondecreasing horizontally and vertically. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>6. ●

► [A154379] 260,510,760,1010,1260,1510,1760,2010,2260,2510,2760,3010,3260,3510,3760,4010,4260,4510,4760,5010,5260,5510,5760,6010,6260 ★ a(n) = 250 * n + 10. ● a(n) = 2 * a(n - 1) - a(n - 2). - _ Vincenzo Librandi _ , Jan 30 2012 ●

► [A254647] 1,260,7595,94360,723534,4037712,17944290,67127880,219319815,642251428,1718012393,4258676240,9892043980,21721707840,45414150132,909308204 64,175208925885,326205634020,588861675535,1033717781096,1769137540730,2958360418000,4842936861750,7774492635000 ★ Fourth partial sums of eighth powers (A001016). ● a(n) = n * (1 + n) * (2 + n) ^ 2 * (3 + n) * (4 + n) * (1 + 4 * n + n ^ 2) * (21 - 48 * n + 20 * n ^ 2 + 16 * n ^ 3 + 2 * n ^ 4) / 23760. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) + n ^ 8. ●

► [A168187] 0,1,260,9855,131104,976625,5038956,20176975,67109120,193710609,500000500,1178974511,2579891040,5302250785,10330524764,19221681375,34359740416,59293940705,99179648100,161343852319,256000004000 ★ a(n) = n ^ 3 * (n ^ 6 + 1) / 2. ● a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10); a(0)=0, a(1)=1, a(2)=260, a(3)=9855, a(4)=131104, a(5)=976625, a(6)= 5038956, a(7)=20176975, a(8)=67109120, a(9)=193710609. - _ Harvey P. Dale _ , Dec 08 2012 ●

► [A216940] 260,27768,1664244,64697626,1783839948,37112483200,609829326268,8196058134921,92610036317488,899427798281439,7644907607082576,57726306147546982,392120605767310660,2421735824309042268 ★ Number of side - 4 hexagonal 0..n arrays with values nondecreasing E, SW and SE. ● a(n) = (1 + n) * (2 + n) * (3 + n) * (4 + n) * (5 + n) * (6 + n) ^ 2 * (7 + n) ^ 3 * (8 + n) ^ 2 * (9 + n) * (10 + n) * (11 + n) * (12 + n) * (13 + n) * (15118483615575730790400000 + 37557333457279933473792000 * n + 45137854540680193956153600 * n ^ 2 + 34829846371335010335540480 * n ^ 3 + 19314393437459920710102704 * n ^ 4 + 8166533315859794719296864 * n ^ 5 + 2726904840964417033376520 * n ^ 6 + 735273283907306553706472 * n ^ 7 + 162382123713323392711687 * n ^ 8 + 29630015361661371290844 * n ^ 9 + 4487555755514810132362 * n ^ 10 + 564694034848365996336 * n ^ 11 + 58900361433618244860 * n ^ 12 + 5062226797216352960 * n ^ 13 + 354853893929158096 * n ^ 14 + 19969728998781072 * n ^ 15 + 880856790135603 * n ^ 16 + 29345762188932 * n ^ 17 + 694580474022 * n ^ 18 + 10413780440 * n ^ 19 + 74384146 * n ^ 20) / 221424599279703105635713957232640000000 (conjectured). - _ Manuel Kauers _ and _ Christoph Koutschan _ , Mar 01 2023 ●

► [A063364] 1,261,582,900,1218,1536,1854,2172,2490,2808,3126,3448,3762,4080,4398,4720,5034,5356,5670,5992,6306,6628,6942,7268,7578 ★ Dimension of the space of weight n cuspidal newforms for Gamma _ 1(91). ● a(n) = a(n - 4) + a(n - 6) - a(n - 10) for n>13. ●

► [A023314] 263,1217,2141,4673,5333,6983,10973,11423,26669,27143,28697,74843,85061,101063,102647,114113,121001,133349,141623,150497,154823,199877,200183,202409,203039 ★ Primes that remain prime through 4 iterations of function f(x) = 5x + 4. ● a(n) == 11 or 41 (mod 42). - _ John Cerkan _ , Oct 07 2016 ●

► [A123654] 0,264,1491,2427,3811,10764,16180,24220,64711,96271,143127,379120,563064,836160,2211627,3283731,4875451,12892260,19140940,28418164,75143551,111563527,165635151,437970664,650241840 ★ Nonnegative values x of solutions (x, y) to the Diophantine equation x ^ 2 + (x + 809) ^ 2 = y ^ 2. ● a(n) = 6 * a(n - 3) - a(n - 6) + 1618 for n > 6; a(1)=0, a(2)=264, a(3)=1491, a(4)=2427, a(5)=3811, a(6)=10764. ●

► [A183247] 265,1708,13365,114124,998112,8751552,76915200,677461056,5979015552,52866428352,468241962240,4153739516736,36900195503232,328234303349952,2923170205716480,26061029280983616,232569271090134912 ★ Number of permutations of 1..2 * n + 4 with each element displaced by at least n. ● a(n) = 22 * a(n - 1) - 157 * a(n - 2) + 360 * a(n - 3) for n>6. ●

► [A094795] 265,2119,9403,30637,81901,190435,398959,770713,1395217,2394751,3931555,6215749,9513973,14158747,20558551,29208625,40702489,55744183,75161227,99918301,131131645,170084179,218241343,277267657,349044001 ★ a(n) = (1 / n!) * A023043(n). ● a(n) = n ^ 6 + 15 * n ^ 5 + 100 * n ^ 4 + 355 * n ^ 3 + 694 * n ^ 2 + 689 * n + 265. ●

► [A211719] 265,3059,35377,409883,4757545,55318979,644340577,7517728043,87854788825,1028320041299,12054528824977,141515917523003,1663668298132105,19584269744002019,230833988758608577,2724058135239730763 ★ Number of (n + 1) X (n + 1) - 11..11 symmetric matrices with every 2 X 2 subblock having sum zero. ● a(n) = 11 ^ (1 + n) + 12 ^ (1 + n). ●

► [A225935] 266,1389,6102,20934,141262,306062,607533,1968990,5266030,17975982,25748166,49814254,155087838,254757166,402919341,616857990,918109966,1109537246,2639036782,4871910150,6475547950,11018764446,14135789614,22598970438,42920560350 ★ Number of conjugacy classes in adjoint twisted Chevalley group 2E6(q) as q runs through the prime powers. ● a(n) = q ^ 6 + q ^ 5 + 2q ^ 4 + 4q ^ 3 + 11q ^ 2 + 11q + 16 if q == 1 (mod 6). ● a(n) = q ^ 6 + q ^ 5 + 2q ^ 4 + 4q ^ 3 + 12q ^ 2 + 14q + 30 if q == 2 (mod 6). ● a(n) = q ^ 6 + q ^ 5 + 2q ^ 4 + 4q ^ 3 + 11q ^ 2 + 11q + 15 if q == 3 (mod 6). ● a(n) = q ^ 6 + q ^ 5 + 2q ^ 4 + 4q ^ 3 + 10q ^ 2 + 10q + 14 if q == 4 (mod 6). ● a(n) = q ^ 6 + q ^ 5 + 2q ^ 4 + 4q ^ 3 + 13q ^ 2 + 15q + 34 if q == 5 (mod 6). ●

► [A304388] 268,556,1132,2284,4588,9196,18412,36844,73708,147436,294892,589804,1179628,2359276,4718572,9437164,18874348,37748716,75497452,150994924,301989868,603979756,1207959532,2415919084,4831838188 ★ a(n) = 144 * 2 ^ n - 20 (n>=1). ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>2. ●

► [A352474] 268,2055,10285,42515,157911,548912,1826846,5902458,18679974,58255005,179762211,550473301,1676299353,5083919214,15372833564,46383749572,1

39730014800,420448279875,1264071072745,3798101946855,11406989330923,3424
8214094780 ⋆ a(n) is the number of different ways to partition the set of vertice
s of a convex n - gon into 3 intersecting polygons. ● a(n) = b(n) - n * (n - 1) * (
n - 7) * (n - 8) / 12, where b(n) = 3 * b(n - 1) + C(n - 1,2) * (2 ^ (n - 4) + 2 -
n - C(n - 3,2)) for n > 8 and b(8) = 0. b(n) is given in A272982. ●
▶ [A278130] 270,762,1746,3714,7650,15522,31266,62754,125730,251682,503586,1
007394,2015010,4030242,8060706,16121634,32243490,64487202,128974626,257949
474,515899170,1031798562,2063597346,4127194914,8254390050 ⋆ a(n) = 492 * 2
^ n - 222. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2). ●
▶ [A245969] 271,537,931,1477,2199,3121,4267,5661,7327,9289,11571,14197,1719
1,20577,24379,28621,33327,38521,44227,50469,57271,64657,72651,81277,90559 ⋆
The average Wiener index of the set of all fibonacenes with n hexagons. ● a(n)
= 4n ^ 3 + 16n ^ 2 + 6n + 1 (n>=3) (see p. 45 of the Gutman - Klavzar refer
ence). ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Colin Bar
ker _ , Aug 31 2014 ●
▶ [A270302] 272,544,1088,2176,4352,4624,5168,6256,7888,8432,8704,9248,1006
4,10336,11152,11696,12512,12784,14416,15776,16048,16592,16864,17408,18224 ⋆
Numbers which are representable as a sum of seventeen but no fewer consecuti
ve nonnegative integers. ● a(n) == 0 (mod 272). _ Hugo Pfoertner _ , Feb 04
2021 ●
▶ [A158587] 272,1139,2584,4607,7208,10387,14144,18479,23392,28883,34952,415
99,48824,56627,65008,73967,83504,93619,104312,115583,127432,139859,152864,1
66447,180608 ⋆ a(n) = 289 * n ^ 2 - 17. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(
n - 3). ●
▶ [A205345] 0,272,3272,18652,71630,214724,542850,1211784,2459988,4633800,82
5988,13857668,22413586,34980764,52940510,78003792,112259976,158228928,218
916480,297873260,399256886,527897524,689366810,890050136,1137222300 ⋆ Nu
mber of length 8 nonnegative integer arrays starting and ending with 0 with adj
acent elements unequal but differing by no more than n. ● a(n) = 7 * a(n - 1) -
21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n -
7) for n>7. ●
▶ [A157374] 273,616,959,1302,1645,1988,2331,2674,3017,3360,3703,4046,4389,47
32,5075,5418,5761,6104,6447,6790,7133,7476,7819,8162,8505 ⋆ a(n) = 343 * n - 7
0. ● a(n) = 2 * a(n - 1) - a(n - 2). - _ Vincenzo Librandi _ , Jan 28 2012 ●
▶ [A350303] 0,273,1820,7140,21420,54264,122094,251370,482790,876645,151951
8,2532530,4081350,6388200,9746100,14535612,21244356,30489585,43044120,5986
5960,82131896,111275472,149029650,197474550,259090650 ⋆ a(n) is the number
of ways to partition the set of vertices of a convex (n + 14) - gon into 5 noninte
rsecting polygons. ● a(n) = (1 / 2880) * n * (n + 1) * (n + 2) * (n + 3) * (n +
11) * (n + 12) * (n + 13) * (n + 14). ●
▶ [A279114] 0,0,0,0,273,5335,50021,291171,1263125,4434783,13355477,3567242
6,86686721,194886975,410820269,819819261,1561128613,2853802623,503383817
3,8602315716,14291999441,23150803815,36654054741,56841404455,86496828245
⋆ Number of non - equivalent ways to place 5 non - attacking kings on an n X n
board. ● a(n) = (n ^ 10 - 90 * n ^ 8 + 120 * n ^ 7 + 3115 * n ^ 6 - 7748 * n ^ 5
- 46050 * n ^ 4 + 173140 * n ^ 3 + 158584 * n ^ 2 - 1255952 * n + 1252800 + (
1 / 2 - (- 1) ^ n / 2) * (52 * n ^ 5 - 305 * n ^ 4 + 180 * n ^ 3 + 320 * n ^ 2 +
3488 * n - 375)) / 960 for n >= 4. ● a(n) = 5 * a(n - 1) - 4 * a(n - 2) - 20 * a(n
- 3) + 40 * a(n - 4) + 16 * a(n - 5) - 100 * a(n - 6) + 44 * a(n - 7) + 110 * a(n -
8) - 110 * a(n - 9) - 44 * a(n - 10) + 100 * a(n - 11) - 16 * a(n - 12) - 40 * a(n -
13) + 20 * a(n - 14) + 4 * a(n - 15) - 5 * a(n - 16) + a(n - 17) for n >= 21. ●
▶ [A351766] 0,1,273,8211,98835,710710,3659110,14886186,50816298,151416111,4
04746111,990005445,2248888005,4798557036,9703780828,18730825828,347116483
56,62053834605,107439683325,180766879111,296393439111,474761104818,744484
165986,1145004918190,1729932641710 ⋆ a(n) = Sum _{ j=1..n } Sum _{ i=1..j
} (i * j) ^ 4. ● a(n) = n * (n + 1) * (n + 2) * (2 * n + 1) * (2 * n + 3) * (9 * n ^
5 + 25 * n ^ 4 - 5 * n ^ 3 - 25 * n ^ 2 + 21 * n - 5) / 1800. ● a(n) = binomial(2
* n + 4,5) * (9 * n ^ 5 + 25 * n ^ 4 - 5 * n ^ 3 - 25 * n ^ 2 + 21 * n - 5) / 5!. ●
▶ [A165677] 274,1044,2754,5944,11274,19524,31594,48504,71394,101524,140274,1
89144,249754,323844,413274,520024,646194,794004,965794,1164024,1391274,165
0244,1943754,2274744,2646274 ⋆ Fifth right hand column of triangle A165674 ●
a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) ● a(n)
= 24 + 100 * n + 105 * n ^ 2 + 40 * n ^ 3 + 5 * n ^ 4 ●
▶ [A063368] 1,275,606,934,1262,1590,1918,2246,2574,2902,3230,3562,3886,4214,4
542,4874,5198,5530,5854,6186,6510,6842,7166,7502,7822 ⋆ Dimension of the spac
e of weight n cuspidal newforms for Gamma _ 1(95). ● a(n) = a(n - 4) + a(n
- 6) - a(n - 10) for n>13. ●
▶ [A075666] 1,275,11925,208624,2078375,14118201,72758875,304553600,1084203
549,3390961375,9540835601,24582546000,58801331875,131987718149,2804106723
75,567799960576,1102105900025,2060382328875,3724847929549,6534040766000,1
1154010982751,18575718271825 ⋆ Sum of next n 5th powers. ● a(1) = 1; a(n) =
sum(i ^ s, { i, n(n - 1) / 2 + 1, n(n - 1) / 2 + 1 + n }). ● a(n) = (3n ^ 11 + 25
n ^ 9 + 53n ^ 7 + 23n ^ 5 - 8n ^ 3) / 96. ●
▶ [A309998] 0,276,287,740,759,1587,3059,3120,5687,5796,10580,19136,19491,344
40,35075,62951,112815,114884,202011,205712,368184,658812,670871,1178684,120
0255 ⋆ Nonnegative values x of solutions (x, y) to the Diophantine equation x ^
2 + (x + 529) ^ 2 = y ^ 2. ● a(n) = 6 * a(n - 5) - a(n - 10) + 1058 with a(0) =
0, a(1) = 276, a(2) = 287, a(3) = 740, a(4) = 759, a(5) = 1587, a(6) = 3059, a(7
) = 3120, a(8) = 5687, a(9) = 5796. ● a(n) = a(n - 1) + 6 * a(n - 5) - 6 * a(n -
6) - a(n - 10) + a(n - 11) for n>11. ●
▶ [A331265] 0,279,656,1139,1860,2883,4340,6419,9156,13299,19220,27683,3978
0,55719,79856,114359,163680,234183,327080,467759,668856,956319,1367240,1908
683,2728620 ⋆ Nonnegative values x of solutions (x, y) to the Diophantine equa
tion x ^ 2 + (x + 31 ^ 2) ^ 2 = y ^ 2. ● a(n) = 6 * a(n - 5) - a(n - 10) + 1922 f
or n >= 11; a(1)=0, a(2)=279, a(3)=656, a(4)=1139, a(5)=1860, a(6)=2883, a(
7)=4340, a(8)=6419, a(9)=9156, a(10)=13299. ● a(n) = a(n - 1) + 6 * a(n - 5) -
6 * a(n - 6) - a(n - 10) + a(n - 11) for n>11. ●
▶ [A177844] 279,3996,16008,64784,260640,1045568,4188288,16765184,67084800,2
68387328,1073645568,4294774784,17179484160,68718706688,274876366848,10995
08547584,4398040350720,17592173723648,70368719536128 ⋆ a(n) = 6 * a(n - 1)
- 8 * a(n - 2) for n > 3; a(0)=279, a(1)=3996, a(2)=16008, a(3)=64784. ● a(n)
= 4 ^ (n + 5) - 47 * 2 ^ (n + 1) for n > 1. ●
▶ [A272982] 280,2100,10395,42735,158301,549549,1827826,5903898,18682014,582
57810,179765973,550478241,1676305723,5083927299,15372843684,46383762084,1
39730030100,420448298400,1264071094975,3798101973315,11406989362185,3424
8214131465,102803026929030,308533903071390 ⋆ a(n) is the number of ways of
putting n labeled balls into 3 indistinguishable boxes such that each box contain
s at least 3 balls. ● a(n) = (1 / 3) * (1 / 16) * (6 * n ^ 4 - 12 * n ^ 3 - 3 * 2 ^ n
* n ^ 2 + 42 * n ^ 2 - 9 * 2 ^ n * n + 12 * n + 8 * 3 ^ n - 3 * 2 ^ (n + 3) + 24)
. ● a(n) = 3 * a(n - 1) + C(n - 1,2) * (2 ^ (n - 4) + 2 - n - C(n - 3, 2)), a(n)=0,
n < 9. - _ Vladimir Kruchinin _ , Oct 04 2018 ●
▶ [A187384] 0,0,0,280,3792,17052,44464,92628,159328,245946,350386,472648,61
2732,770638,946366,1139916,1351288,1580482,1827498,2092336,2374996,267547
8,2993782,3329908,3683856 ⋆ Number of 10 - step S, NW and NE - moving king
's tours on an n X n board summed over all starting positions. ● a(n) = 3 * a(n
- 1) - 3 * a(n - 2) + a(n - 3) for n>11. ●
▶ [A024214] 280,5714,45474,227969,859369,2662569,7141953,17147823,3770286
3,77161513,148781633,272796342,479082422,810530182,1327228182,2111584722,3
274516506,4962843396,7368036676,10736476751,15381384711,21696600695 ⋆ a(n
) = 4th elementary symmetric function of first n + 3 positive integers congruen
t to 1 mod 3. ● a(n) = n * (n + 1) * (n + 2) * (n + 3) * (405 * n ^ 4 + 3510 *
n ^ 3 + 9855 * n ^ 2 + 8814 * n - 184) / 1920. ●
▶ [A296506] 1,280,833712928048000000 ⋆ Number of generalized knockout tour
nament seedings with 3 players in each match and n rounds. ● a(n) = (3 ^ n)!
/ 6 ^ ((3 ^ n - 1) / 2). ●
▶ [A288037] 285,984,2855,7488,18431,43504,99783,224280,496727,1087992,23626
07,5095216,10926255,23318880,49563959,104972328,221623847,466594600,97986
9471,2053083648,4292838335,8958997584,18664612775,38822433208,80631250551
⋆ Number of (undirected) paths in the n - web graph. ● a(n) = n * (- 104 + 89
* 2 ^ n - 52 * n - 8 * n ^ 2) / 4. ● a(n) = 8 * a(n - 1) - 26 * a(n - 2) + 44 * a(n
- 3) - 41 * a(n - 4) + 20 * a(n - 5) - 4 * a(n - 6). ●
▶ [A176712] 285,2805,9405,22197,43677,76725,124605,190965,279837,395637,54
3165,727605,954525,1229877,1559997,1951605,2411805,2948085,3568317,428075
7,5094045,6017205,7059645,8231157,9541917 ⋆ a(n) = 16 * n ^ 4 + 256 * n ^ 3
+ 1160 * n ^ 2 + 1088 * n + 285. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n -
3) - a(n - 4) + 384 for n > 3; a(0)=21, a(1)=285, a(2)=1365, a(3)=4221. ● a(n)
= (2 * n + 1) * (2 * n + 15) * (4 * n ^ 2 + 32 * n + 19). ● a(n) = a(- n - 8). -
_ Bruno Berselli _ , Sep 05 2011 ●
▶ [A027798] 286,4368,35490,203840,928200,3564288,11992344,36279360,1005240
60,258658400,624660036,1427794368,3109779400,6489974400,13037895000,25310
900160,47640468330,87185170800,155514818550,270951408000,461972150640,772
082488320,1266697832400 ⋆ a(n) = 26 * (n + 1) * binomial(n + 3,13). ● a(n) =
C(n + 1, 11) * C(n + 3, 3). - _ Zerinvary Lajos _ , May 10 2005; corrected by
_ R. J. Mathar _ , Mar 16 2016 ●
▶ [A157997] 287,575,863,1151,1439,1727,2015,2303,2591,2879,3167,3455,3743,40
31,4319,4607,4895,5183,5471,5759,6047,6335,6623,6911,7199 ⋆ 288n - 1. ● a(n) =
2 * a(n - 1) - a(n - 2). ●
▶ [A063362] 1,287,616,946,1276,1606,1936,2266,2596,2926,3256,3584,3916,4246,4
576,4904,5236,5564,5896,6224,6556,6884,7216,7542,7876 ⋆ Dimension of the spac
e of weight n cuspidal newforms for Gamma _ 1(89). ● a(n) = a(n - 4) + a(n
- 6) - a(n - 10) for n>13. ●
▶ [A158252] 287,1152,2595,4616,7215,10392,14147,18480,23391,28880,34947,415
92,48815,56616,64995,73952,83487,93600,104291,115560,127407,139832,152835,1
66416,180575 ⋆ 289n ^ 2 - 2n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●
▶ [A158253] 288,577,866,1155,1444,1733,2022,2311,2600,2889,3178,3467,3756,40
45,4334,4623,4912,5201,5490,5779,6068,6357,6646,6935,7224 ⋆ 289n - 1. ● a(n) =
2 * a(n - 1) - a(n - 2). ●
▶ [A292054] 288,708,1580,3144,5804,9996,16388,25660,38808,56808,81048,11285
6,154080,206448,272332,353920,454172,575784,722372,897196,1104592,1348436,1
633848,1965376,2348992 ⋆ Wiener index of the n X n knight graph. ● a(n) = 2
* a(n - 1) + a(n - 2) - 3 * a(n - 3) - a(n - 5) + 2 * a(n - 6) + 2 * a(n - 7) - a(n -
8) - 3 * a(n - 10) + a(n - 11) + 2 * a(n - 12) - a(n - 13) for n > 17. ●
▶ [A281236] 0,288,960,1632,2688,6048,9792,15840,35328,57120,92352,205920,332
928,538272,1200192,1940448,3137280,6995232,11309760,18285408,40771200,6591
8112,106575168,237631968,384198912 ⋆ Solutions y to the negative Pell equatio
n y ^ 2 = 72 * x ^ 2 - 332928 with x,y >= 0. ● a(n) = 6 * a(n - 3) - a(n - 6) for
n>6. ●
▶ [A296784] 288,1744,7200,21744,56448,126016,259200,487600,871200,1467216,2
384928,3716944,5644800,8306944,11985408,16875216,23392800,31800400,4268880
0,56397616,73738368,95137344,121680000,153887344,193179168 ⋆ Detour index f
or the n X n torus grid graph. ● a(n) = n ^ 2 * (n ^ 2 - 1) ^ 2 / 2 for odd n. ●
a(n) = 2 * a(n - 1) + 4 * a(n - 2) - 10 * a(n - 3) - 5 * a(n - 4) + 20 * a(n - 5) - 2
0 * a(n - 7) + 5 * a(n - 8) + 10 * a(n - 9) - 4 * a(n - 10) - 2 * a(n - 11) + a(n - 1
2) for n>14. ●
▶ [A322677] 0,288,2400,9408,25920,58080,113568,201600,332928,519840,776160,1
117248,1560000,2122848,2825760,3690240,4739328,5997600,7491168,9247680,112
96320,13667808,16394400,19509888,23049600 ⋆ a(n) = 16 * n * (n + 1) * (2 * n
+ 1) ^ 2. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(
n - 5) for n>4. ●
▶ [A229506] 0,288,4032,50112,575424,6298560,66764736,691581888,7040530368,7
0711413696,702522486720,691778025158 4,67615723104192,656742815497152,634
4497107509184,61004779879896000,584181772129884096 ⋆ Number of defective
3 - colorings of an n X 4 0..2 array connected diagonally and antidiagonally with
exactly one mistake, and colors introduced in row - major 0..2 order. ● a(n) =
64 * 3 ^ (2 * n - 5) * (8 * n - 3) for n>2. ●
▶ [A290028] 0,0,0,288,5664,50688,314496,1569792,6773760,26320896,94482432,3
18726144,1022681088,3148873728,9366110208,27051687936,76178522112,2098452
23424,566967140352,1505815953408,3938646491136,10161657741312,2589439977
0624,65248539181056 ⋆ Number of 5 - cycles in the n - halved cube graph. ● a(

n) = 3 * 2 ^ n * binomial(n,4) * (29 * n - 86) / 5. ● a(n) = 12 * a(n - 1) - 60 * a (n - 2) + 160 * a(n - 3) - 240 * a(n - 4) + 192 * a(n - 5) - 64 * a(n - 6). ●

▶ [A035749] 1,288,14016,284000,3281280,25534368,148321344,688686048,2681291520,9060853280,27266245056,74501171808,187641279616,440840828064,975339085632,2047881308384,4106643801600,7906687806240,14680871849152,26386944188256,46057341900672,78285175220640 ⋆ Coordination sequence for C _ 12 lattice. ● a(n) = [x ^ (2n)] ((1 + x) / (1 - x)) ^ 12. ●

▶ [A022154] 1,288,15776,346304,4254912,34792672,210482016,1010803584,4047994752,14009305760,43023042336,119628650560,305908697152,728298521184,1630273964256,3458692036352,7000203482880,13590066551840,25423081113760,46005461684160,80797523590080 ⋆ Coordination sequence for root lattice B _ 12. ● a(0)=1; for n>0, a(n) = (65344 * n ^ 11 - 179168 * n ^ 10 + 2231680 * n ^ 9 - 4643760 * n ^ 8 + 22442112 * n ^ 7 - 33057024 * n ^ 6 + 76060160 * n ^ 5 - 69575440 * n ^ 4 + 72405344 * n ^ 3 - 29758608 * n ^ 2 + 8915760 * n) / 155925. - _ Ralf Stephan _ , Apr 28 2004 ●

▶ [A159299] 0,0,0,0,288,166560,33539040,2350746720,75756999360,1388552614848,16744788486720,146769785743680,1002373493948640,5606534724167520,26640793339768608,110556058012152480,409297168707073920,1374572399886053760,4243833928227876480 ⋆ Number of n - colorings of the 4 X 4 Sudoku graph. ● a(n) = n ^ 16 - 56 * n ^ 15 + ... (see Maple program). ●

▶ [A184046] 289,295,305,325,361,433,569,841,1369,2425,4505,8665,16921,33433,66329,132121,263449,526105,1050905,2100505,4198681,8395033,16785689,33567001,67125529 ⋆ 1 / 9 the number of (n + 1) X 8 0..2 arrays with all 2 X 2 subblocks having the same four values. ● a(n) = 3 * 2 ^ (n / 2) + 2 ^ (n + 1) + 281 for n even. ● a(n) = 2 ^ (n + 1) + 2 ^ ((n + 3) / 2) + 281 for n odd. ●

▶ [A156572] 289,529,1369,4225,13225,42025,139129,444889,1423249,4721929,15108769,48344209,160402225,513249025,1642275625,5448949489,17435353849,55789022809,185103876169,592288777609,1895184495649,6288082836025 ⋆ Squares of the form k ^ 2 + (k + 23) ^ 2 with integer k. ● a(n) = 34 * a(n - 3) - a(n - 6) - 4232 for n > 6; a(1)=289, a(2)=529, a(3)=1369, a(4)=4225, a(5)=13225, a(6)=42025. ● a(n) = - 289 * [n=0] + (529 / 4) + (3 / 4) * (f(n / 3, 209, 5457) * (n mod 3 = 1) + f((n - 1) / 3, 209, 1649) * (n mod 3 = 1) + f((n - 2) / 2, 529, 529) * (n mod 3 = 2)), where f(n, p, q) = p * ChebyshevU(n, 17) - q * ChebyshevU(n - 1, 17). - _ G. C. Greubel _ , Jan 04 2022 ●

▶ [A157990] 289,577,865,1153,1441,1729,2017,2305,2593,2881,3169,3457,3745,4033,4321,4609,4897,5185,5473,5761,6049,6337,6625,6913,7201 ⋆ a(n) = 288 * n + 1. ● a(n) = 2 * a(n - 1) - a(n - 2). - _ Vincenzo Librandi _ , Feb 10 2012 ●

▶ [A152934] 289,1962,13429,92025,630730,4323069,29630737,203092074,1392013765,9541004265,65395016074,448224108237,3072173741569,21056992082730,144326770837525,989230403779929,6780286055621962,46472771985573789,318529117843394545,2183231052918188010 ⋆ Number of sets (in the Hausdorff metric geometry) at each location between two sets defining a polygonal configuration consisting of two m - gonal polygonal components chained with string components of length 3 as m varies. ● a(n) = 8 * a(n - 1) - 8 * a(n - 2) + a(n - 3) for n>4. ●

▶ [A158255] 290,579,868,1157,1446,1735,2024,2313,2602,2891,3180,3469,3758,4047,4336,4625,4914,5203,5492,5781,6070,6359,6648,6937,7226 ⋆ a(n) = 289n + 1. ● a(n) = 2 * a(n - 1) - a(n - 2). ●

▶ [A158254] 291,1160,2607,4632,7235,10416,14175,18512,23427,28920,34991,41640,48867,56672,65055,74016,83555,93672,104367,115640,127491,139920,152927,166512,180675 ⋆ a(n) = 289n ^ 2 + 2n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A088892] 0,1,291,16096,356232,4411517,36621423,227095448,1128128568,4708376529,17078744419,55199550120,161993768080,438011626365,1103841220991,2616890599056,5880356075792,12602902382337 ⋆ Polynexus numbers of order 14. ● a(n) = ((n ^ 14 - (n - 1) ^ 14) - (n ^ 2 - (n - 1) ^ 2)) / 16380 = ((n ^ 14 - (n - 1) ^ 14) - (n ^ 2 - (n - 1) ^ 2)) / (2 ^ 14 - 2 ^ 2). ●

▶ [A023305] 293,2063,4583,9203,14723,20123,25733,29453,40253,54713,76103,97523,99833,109433,138683,149993,158243,196853,199403,218873,253103,297623,379913,416963,445463 ⋆ Primes that remain prime through 4 iterations of function f(x) = 2x + 7. ● a(n) == 3 (mod 10). - _ John Cerkan _ , Oct 04 2016 ●

▶ [A085502] 1,293,2728,12318,38835,98411,215138,422668,765813,1302145,2103596,3258058,4870983,7066983,9991430,13812056,18720553,24934173,32697328,42283190,53995291,68169123,85173738,105413348,129328925 ⋆ Number of (unordered) ways of making change for n dollars using coins of denominations 1, 5, 10, 25, 50 and 100. ● a(n) = (n + 1) (80 n ^ 4 + 310 n ^ 3 + 362 n ^ 2 + 121 n + 6) / 6. - _ Dean Hickerson _ ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>5. ●

▶ [A128965] 0,294,8232,144060,2016840,24706290,276710448,2905459704,29054597040,279650496510,2610071300760,23751648836916,211605598728888,1851548988877770,15951806673408480,135590356723972080,1138958996481365472,9467596658251350486,77968443067952298120 ⋆ a(n) = (n ^ 3 - n) * 7 ^ n. ● a(n) = 28 * a(n - 1) - 294 * a(n - 2) + 1372 * a(n - 3) - 2401 * a(n - 4). - _ Vincenzo Librandi _ , Feb 11 2013 ●

▶ [A253029] 297,1647,9126,50571,280233,1552878,8605089,47684079,264235662,1464230547,8113859721,44961990246,249151530393,1380643622703,7650672704694,42395294391579,234928490071977,1301828333534622 ⋆ Number of (n + 2) X (1 + 2) 0..2 arrays with every consecutive three elements in every row and column having exactly two distinct values, and new values 0 upwards introduced in row major order. ● a(n) = (27 * 2 ^ (- n) * ((5 - sqrt(37)) ^ n * (- 6 + sqrt(37)) + (5 + sqrt(37)) ^ n * (6 + sqrt(37)))) / sqrt(37). ●

▶ [A036517] 0,300,20100,300700,2001000,50005000,200010000,5000050000,20000100000,500000500000,2000001000000,50000005000000,200000010000000,500000050000000,2000000100000000,5000000000500000000,20000000001000000000,500000000005000000000 ⋆ Smallest triangular number containing exactly n 0's. ● a(n) = 110 * a(n - 2) - 1000 * a(n - 4) for n>6. ●

▶ [A256101] 301,721,1141,1561,1981,2401,2821,3241,3661,4081,4501,4921,5341,5761,6181,6601,7021,7441,7861,8281,8701,9121,9541,9961,10381 ⋆ The broken egg s problem. ● a(n) = 420 * n - 119, n >= 1, (note that 420 = 3 * 4 * 5 * 7, with pairwise coprime factors needed for the Chinese remainder theorem). ●

▶ [A270303] 304,608,1216,2432,4864,5776,6992,8816,9424,9728,11248,11552,12464,13072,13984,14288,16112,17632,17936,18544,18848,19456,20368,21584,22192 ⋆ Numbers which are representable as a sum of nineteen but no fewer consecutive nonnegative integers. ● a(n) == 0 (mod 304). - _ Hugo Pfoertner _ , Feb 04 2021 ●

▶ [A172228] 0,0,1,304,10741,127960,870589,4197456,16005187,51439096,145085447,369074128,863338777,1883786680,3875953561,7583888944,14206566327,25617069208,44663199283,75572017136,124485188701,200156902936,314851577749,485484612496,735056106571 ⋆ Number of ways to place 5 nonattacking wazirs on a n n X n board. ● a(n) = (n ^ 10 - 50n ^ 8 + 40n ^ 7 + 995n ^ 6 - 1560n ^ 5 - 8890n ^ 4 + 21080n ^ 3 + 24264n ^ 2 - 97440n + 59520) / 120, n>=4. ●

▶ [A160577] 305,409,641,1189,2045,3541,6829,11861,20605,39785,69121,120089,231881,402865,699929,1351501,2348069,4079485,7877125,13685549,23776981,45911249,79765225,138582401,267590369 ⋆ Positive numbers y such that y ^ 2 is of the form x ^ 2 + (x + 409) ^ 2 with integer x. ● a(n) = 6 * a(n - 3) - a(n - 6) for n > 6; a(1)=305, a(2)=409, a(3)=641, a(4)=1189, a(5)=2045, a(6)=3541. ●

▶ [A247344] 1,1,1,1,1,305,7905,137105,2090305,30673905,446213025,6483539025,94216001025,1369259983025,19900452349025,289229603172625,4203610924242625,61094494859232625,887935798190222625 ⋆ a(n) = 1 for n <= 4; a(n) = 25 * a(n - 1) - 200 * a(n - 2) + 800 * a(n - 3) - 1600 * a(n - 4) + 1280 * a(n - 5) otherwise. ● a(n) = 25 * a(n - 1) - 200 * a(n - 2) + 800 * a(n - 3) - 1600 * a(n - 4) + 1280 * a(n - 5). ●

▶ [A158589] 306,1278,2898,5166,8082,11646,15858,20718,26226,32382,39186,46638,54738,63486,72882,82926,93618,104958,116946,129582,142866,156798,171378,186606,202482 ⋆ a(n) = 324 * n ^ 2 - 18. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). (End) ●

▶ [A172966] 0,0,0,306,2365,19047,90503,328324,981693,2547955,5933257,12681288,25284363,47595023,85357395,146879312,243867873,392452803,614423653,938708560,1403123967,2056426383,2960698943,4194107208,5854060325 ⋆ Number of ways to place 4 nonattacking knights on an n X n cylindrical board. ● a(n) = n * (n ^ 7 - 54n ^ 5 + 72n ^ 4 + 1115n ^ 3 - 2616n ^ 2 - 8502n + 26712) / 24, n>=9. ●

▶ [A220475] 307,347,563,569,733,821,1427,1429,1433,1439,1447,1481,1867,1931,1973,2657,2659,2663,2671,2683,3187,3191,3313,3319,3323 ⋆ Chebyshev numbers C _ v(n) for v=15 / 14: a(n) is the smallest number such that if x>=a(n), then theta(x) - theta(14 * x / 15)>=n * log(x), where theta(x)=sum _{ prime p<= x } log p. ● a(n) <= prime(32 * (n + 1)). ●

▶ [A343273] 308,3030,29757,294327,2911142,28814940,285214743,2823311133,27947663768,276653115090,2738581182417,27109156615827,268352962161482,2656420444277880,26295851254778283,260302091898387033,2576725065493516028,25506948561006315150 ⋆ a(n) is the number of geometrically distinct edge - unfoldings of the regular n - gonal cupola. ● a(n) = (c(2 * n + 1) + 5 * c(2 * n) - c(2 * n - 1) - c(2 * n - 2) - 5) / 8 + (3 + (- 1) ^ n) * c(n) / 4 for n >= 3 where c(m) = 10 * c(m - 2) - c(m - 4) for m > 4 and c(1) = 1, c(2) = 3, c(3) = 11, c(4) = 30. ●

▶ [A337955] 1,308,34128,1056576,15303750,136236276,865711763,4296782848,17656466751,62510672500,196174554026,557301826368,1456216515468,3543525156276,8109415963125,17592637669376,36414622551373 ⋆ Number of achiral colorings of the 16 tetrahedral facets of a hyperoctahedron or of the 16 vertices of a tesseract. ● a(n) = n ^ 4 * (3 * n ^ 8 + 5 * n ^ 4 + 12 * n ^ 2 + 28) / 48. ● a(n) = 1 * C(n,1) + 306 * C(n,2) + 33207 * C(n,3) + 921908 * C(n,4) + 10359075 * C(n,5) + 59584470 * C(n,6) + 197644440 * C(n,7) + 400752240 * C(n,8) + 505197000 * C(n,9) + 386694000 * C(n,10) + 164656800 * C(n,11) + 29937600 * C(n,12), where the coefficient of C(n,k) is the number of achiral colorings using exactly k colors. ●

▶ [A183627] 309,447,741,1383,2829,6207,14421,35223,89949,238767,654501,1840263,5274669,15332127,45012981,133072503,395284989,1177990287,3518241861,10523267943,31506888909,94394837247,282932853141,848295242583 ⋆ Number of (n + 1) X 5 0..2 arrays with every 2 x 2 subblock summing to 4. ● a(n) = 3 * (60 + 5 * 2 ^ (2 + n) + 3 ^ n). ●

▶ [A184544] 309,792,1627,3024,5313,8989,14767,23648,36997,56634,84939,124972,180609,256695,359215,495484,674357,906460,1204443,1583256,2060449,2656497,3395151,4303816,5413957 ⋆ Number of (n + 2) X 7 binary arrays with each 3 X 3 subblock having rows and columns in lexicographically nondecreasing order. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. ●

▶ [A304384] 310,646,1318,2662,5350,10726,21478,42982,85990,172006,344038,688102,1376230,2752486,5504998,11010022,22020070,44040166,88080358,176160742,352321510,704643046,1409286118,2818572262,5637144550 ⋆ a(n) = 168 * 2 ^ n - 26 (n>=1). ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>2. ●

▶ [A259221] 311,421,588,869,1325,2078,3319,5377,8804,14545,24225,40670,68843,117557,202636,352813,620837,1104574,1987407,3616121,6651956,12365081,23211193,43964734,83952995 ⋆ Number of (n + 1) X (7 + 1) 0..1 arrays with each 2 X 2 subblock having clockwise pattern 0000 0011 or 0101. ● a(n) = 4 * a(n - 1) - 4 * a(n - 2) - a(n - 3) + 2 * a(n - 4). ●

▶ [A289793] 0,0,0,0,312,3024,14868,51744,145152,350784,759528,1511136,2810808,4948944,8324316,13470912,21088704,32078592,47581776,69023808,98163576,137147472,188568996,255534048,341732160 ⋆ Number of 5 - cycles in the n - tetrahedral graph. ● a(n) = 6 * binomial(n, 5) * (- 78 + 21 * n + n ^ 2). ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8). ●

▶ [A159574] 313,337,365,1513,1685,1877,8765,9773,10897,51077,56953,63505,297697,331945,370133,1735105,1934717,2157293,10112933,11276357,12573625,58942493,65723425,73284457,343542025 ⋆ Positive numbers y such that y ^ 2 is of the form x ^ 2 + (x + 337) ^ 2 with integer x. ● a(n) = 6 * a(n - 3) - a(n - 6)for n > 6; a(1)=313, a(2)=337, a(3)=365, a(4)=1513, a(5)=1685, a(6)=1877. ●

▶ [A157621] 314,1825,4586,8597,13858,20369,28130,37141,47402,58913,71674,85685,100946,117457,135218,154229,174490,196001,218762,242773,268034,294545,322306,351317,381578 ⋆ a(n) = 625n ^ 2 - 364n + 53. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A058002] 1,317,90492,7880456,270656150,4947097821,58002778967,490172624992,3223155968811,17382581357725,79840867013666,321169288917192,1155731257886192,3782368364610941,11406226119319725,32031530635953536,84493500676300117,210856844364222717 ⋆ Number of 4 X 4 matrices with entries mod n, up to row and column permutation. ● a(n)=(1 / 4! ^ 2) * (n ^ 16 + 12 * n ^ 12 + 36 * n ^ 10 + 67 * n ^ 8 + 160 * n ^ 6 + 204 * n ^ 4 + 96 * n ^ 2). ●

▶ [A278131] 318,909,2091,4455,9183,18639,37551,75375,151023,302319,604911,1210095,2420463,4841199,9682671,19365615,38731503,77463279,154926831,309853935,619708143,1239416559,2478833391,4957667055,9915334383 ⋆ a(n) = 591 * 2 ^ n - 273. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2). ●

▶ [A075153] 318,1071,5040,5985,10710,20400,24225,43350,81600,85425,165750,327360,342705,664950,1309440,1324785,2629110,5241600,5303025,10524150,20966400,21027825,41973750,83880960,84126705 ⋆ Trajectory of 318 under the Reverse and Add! operation carried out in base 4, written in base 10. ● a(0) = 318; a(1) = 1071; for n > 1 and n = 2 (mod 6): a(n) = 5 * 4 ^ (2 * k + 5) - 5 * 4 ^ (k + 2) where k = (n - 2) / 6; n = 3 (mod 6): a(n) = 5 * 4 ^ (2 * k + 5) + 55 * 4 ^ (k + 2) - 15 where k = (n - 3) / 6; n = 4 (mod 6): a(n) = 10 * 4 ^ (2 * k + 5) + 30 * 4 ^ (k + 2) - 10 where k = (n - 4) / 6; n = 5 (mod 6): a(n) = 20 * 4 ^ (2 * k + 5) - 5 * 4 ^ (k + 2) where k = (n - 5) / 6; n = 0 (mod 6): a(n) = 20 * 4 ^ (2 * k + 5) + 235 * 4 ^ (k + 2) - 15 where k = (n - 6) / 6; n = 1 (mod 6): a(n) = 40 * 4 ^ (2 * k + 5) + 150 * 4 ^ (k + 2) - 10 where k = (n - 7) / 6. ●

▶ [A250660] 319,574,893,1276,1723,2234,2809,3448,4151,4918,5749,6644,7603,8626,9713,10864,12079,13358,14701,16108,17579,19114,20713,22376,24103 ⋆ Number of (6 + 1) X (n + 1) 0..1 arrays with nondecreasing x(i,j) - x(i,j - 1) in the i direction and nondecreasing min(x(i,j),x(i - 1,j)) in the j direction. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>3. ●

▶ [A168636] 0,1,320,10935,139264,1015625,5178816,20588575,68157440,196101729,505000000,1188717431,2597806080,5333623945,10383230144,19307109375,34493956096,59499107585,99485755200,161790784759,256640000000,398040567561,604881787840,902278743455 ⋆ a(n) = n ^ 7 * (n ^ 2 + 1) / 2. ● a(0)=0, a(1)=1, a(2)=320, a(3)=10935, a(4)=139264, a(5)=1015625, a(6)=5178816, a(7)=20588575, a(8)=68157440, a(9)=196101729, a(n)= 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10). ●

▶ [A144124] 1,321,2641,10321,28401,63601,124321,220641,364321,568801,842201,1222321,1706641,2322321,3091201,4036801,5184321,6560641,8194321,10115601,12356401,14950321,17932641,21340321,25212001 ⋆ P _ 4(2n + 1), the Legendre polynomial of order 4 at 2n + 1. ● a(n) = 70 * n ^ 4 + 140 * n ^ 3 + 90 * n ^ 2 + 20 * n + 1. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) + 1680 for n > 3; a(0)=1, a(1)=321, a(2)=2641, a(3)=10321. ●

▶ [A114358] 1,322,1186,2110,3034,3958,4882,5806,6730,7654,8578,9502,10426,11350,12274,13198,14122,15046,15970,16894,17818,18742,19666,20590,21514 ⋆ Let M(n) be the n X n matrix m(i,j)=min(i,j) for 1<=i,j<=n then a(n) is the trace of M(n) ^ (- 6). ● a(n) = 924n - 1586 with n>2, a(1)=1, a(2)=322. ● a(n) = 2 * a(n - 1) - a(n - 2) for n>4. G.f.: x * (1 + 320 * x + 543 * x ^ 2 + 60 * x ^ 3) / (1 - x) ^ 2. [_ Colin Barker _ , Mar 18 2012] ●

▶ [A158305] 322,1292,2910,5176,8090,11652,15862,20720,26226,32380,39182,46632,54730,63476,72870,82912,93602,104940,116926,129560,142842,156772,171350,186576,202450 ⋆ 324n ^ 2 - 2n. ● a(1)=322, a(2)=1292, a(3)=2910, a(n)=3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). (End) ●

▶ [A158306] 323,647,971,1295,1619,1943,2267,2591,2915,3239,3563,3887,4211,4535,4859,5183,5507,5831,6155,6479,6803,7127,7451,7775,8099 ⋆ 324n - 1. ● a(n) = 2 * a(n - 1) - a(n - 2). ●

▶ [A213289] 0,1,323,5168,37993,201975,916966,3771418,14486158,52359693,178880725,575581556,1731294863,4845394723,12619979568,30703918750,70168864396,151545355033,311129635863,610492421368,1150383157925,2090531036111,3677200683178,6280769764578 ⋆ Number of 10 - length words w over n - ary alphabet such that for every prefix z of w we have # (z,a _ i) = 0 or # (z,a _ i) >= # (z,a _ j) for all j>i and # (z,a _ i) counts the occurrences of the i - th letter in z. ● a(n) = n * (- 6044030 + 17209877 * n - 19851310 * n ^ 2 + 12422410 * n ^ 3 - 4715472 * n ^ 4 + 1139127 * n ^ 5 - 176832 * n ^ 6 + 17190 * n ^ 7 - 960 * n ^ 8 + 24 * n ^ 9) / 24. ●

▶ [A253708] 323,7497,57618,262430,878445,2399103,5669972,12026988,23457735,42785765,73877958,121874922,193444433,297057915,443289960,645140888,918382347,1281925953,1758214970,2373639030,3158971893,4149832247,5387167548,6917760900,8794760975 ⋆ Numbers c(n) whose squares are equal to the sums of consecutive cubed integers b ^ 3 + (b + 1) ^ 3 + ... + (b + M - 1) ^ 3 = c ^ 2, for a first term b(n) being an odd squared integer (A016754). ● a(n) = (n(n + 1) / 2)(4(2n + 1) ^ 4 - 1). ●

▶ [A272298] 324,325,340,405,580,949,1620,2725,4420,6885,10324,14965,21060,28885,38740,50949,65860,83845,105300,130645,160324,194805,234580,280165,332100 ⋆ a(n) = n ^ 4 + 324. ● a(n) = (n ^ 2 - 18) ^ 2 + (6 * n) ^ 2. ●

▶ [A014792] 0,324,1156,12544,21904,81796,116964,291600,379456,763876,940900,1658944,1971216,3175524,3678724,5550736,6310144,9060100,10150596,14017536,15523600,20775364,22791076,29724304,32353344 ⋆ Squares of even heptagonal numbers. ● a(n) = (1 / 2) * (200 * n ^ 4 - 120 * n ^ 3 + 18 * n ^ 2) for n even. ● a(n) = (1 / 2) * (200 * n ^ 4 + 280 * n ^ 3 + 138 * n ^ 2 + 28 * n + 2) for n odd. ●

▶ [A305070] 324,1404,3240,5832,9180,13284,18144,23760,30132,37260,45144,53784,63180,73332,84240,95904,108324,121500,135432,150120,165564,181764,198720,216432,234900 ⋆ a(n) = 378 * n ^ 2 - 54 * n (n>=1). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>3. ●

▶ [A128992] 0,324,13122,314928,5904900,95659380,1406192886,19284931008,251048476872,3138105960900,37971082126890,447368385785904,5154903899851212,58290067175240628,648557066098144350 ⋆ a(n) = (n ^ 3 - n ^ 2) * 9 ^ n. ● a(n) = 36 * a(n - 1) - 486 * a(n - 2) + 2916 * a(n - 3) - 6561 * a(n - 4). - _ Vincenzo Librandi _ , Feb 12 2013 ●

▶ [A184036] 325,337,358,400,478,634,934,1534,2710,5062,9718,19030,37558,74614,148534,296374,591670,1182262,2362678,4723510,9443638,18883894,37761334,75516214,151019830 ⋆ 1 / 16 the number of (n + 1) X 7 0..3 arrays with all 2 X 2 subblocks having the same four values. ● a(n) = 9 * 2 ^ (n / 2 - 1) + 9 * 2 ^ (n - 1) + 310 for n even. ● a(n) = 9 * 2 ^ (n - 1) + 3 * 2 ^ ((n + 1) / 2) + 310 for n odd. ●

▶ [A159844] 325,359,401,1549,1795,2081,8969,10411,12085,52265,60671,70429,304621,353615,410489,1775461,2061019,2392505,10348145,12012499,13944541,60313409,70013975,81274741,351532309 ⋆ Positive numbers y such that y ^ 2 is of the form x ^ 2 + (x + 359) ^ 2 with integer x. ● a(n) = 6 * a(n - 3) - a(n - 6) for n > 6; a(1)=325, a(2)=359, a(3)=401, a(4)=1549, a(5)=1795, a(6)=2081. ●

▶ [A160580] 325,457,877,1073,2285,4937,6113,13253,28745,35605,77233,167533,207517,450145,976453,1209497,2623637,5691185,7049465,15291677,33170657,41087293,89126425,193332757,239474293 ⋆ Positive numbers y such that y ^ 2 is of the form x ^ 2 + (x + 457) ^ 2 with integer x. ● a(n) = 6 * a(n - 3) - a(n - 6) for n > 6; a(1)=325, a(2)=457, a(3)=877, a(4)=1073, a(5)=2285, a(6)=4937. ●

▶ [A158272] 325,649,973,1297,1621,1945,2269,2593,2917,3241,3565,3889,4213,4537,4861,5185,5509,5833,6157,6481,6805,7129,7453,7777,8101 ⋆ 324n + 1. ● a(n) = 2 * a(n - 1) - a(n - 2). ●

▶ [A158271] 326,1300,2922,5192,8110,11676,15890,20752,26262,32420,39226,46680,54782,63532,72930,82976,93670,105012,117002,129640,142926,156860,171442,186672,202550 ⋆ 324n ^ 2 + 2n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A027807] 330,4455,32175,165165,675675,2342340,7147140,19691100,49884120,117781950,261891630,552882330,1115464350,2162284740,4045090500,7330194300,12907516050,22145248125,37105593525,60841155375,97796523825,154345534200,239501691000,365847510600 ⋆ a(n) = 165 * (n + 1) * binomial(n + 4,11) / 4. ● a(n) = C(n + 1, 8) * C(n + 4, 4). - _ Zerinvary Lajos _ , May 26 2005; corrected by _ R. J. Mathar _ , Mar 16 2016 ●

▶ [A097401] 332,528,796,1148,1596,2152,2828,3636,4588,5696,6972,8428,10076,11928,13996,16292,18828,21616,24668,27996,31612,35528,39756,44308,49196 ⋆ Largest achievable determinant of a 3 X 3 matrix whose elements are 9 distinct nonnegative integers chosen from the range 0..n. ● a(n) = 2 * n ^ 3 - 18 * n ^ 2 + 68 * n - 84. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Vincenzo Librandi _ , Jun 25 2012 ●

▶ [A250758] 332,756,1353,2123,3066,4182,5471,6933,8568,10376,12357,14511,16838,19338,22011,24857,27876,31068,34433,37971,41682,45566,49623,53853,58256 ⋆ Number of (3 + 1) X (n + 1) 0..2 arrays with nondecreasing x(i,j) - x(i,j - 1) in the i direction and nondecreasing x(i,j) + x(i - 1,j) in the j direction. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>3. ●

▶ [A254705] 334,9106,87892,489135,1954106,6255136,17080712,41376909,91273510,186738046,359115868,655729243,1145723346,1927361900,3136990096,4959897305,7643326974,11511895978,16985700580,24601401031,35036591722 ⋆ Number of length 7 + 4 0..n arrays with every five consecutive terms having the maximum of some two terms equal to the minimum of the remaining three terms. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>9. ●

▶ [A253227] 335,742,914,1498,2543,4490,8216,15476,29780,58148,114620,227276,452276,901940,1800908,3598460,7193156,14382116,28759580,57514028,115022420,230038676,460070636,920133980,1840260068 ⋆ Number of (n + 1) X (4 + 1) 0..1 arrays with every 2 X 2 subblock diagonal minimum minus antidiagonal minimum nondecreasing horizontally and diagonal maximum minus antidiagonal maximum nondecreasing vertically. ● a(n) = 188 + 1755 * 2 ^ (n - 5) + 60 * n + 12 * n ^ 2 for n>4. ●

▶ [A273529] 337,409,449,577,1009,1129,1489,1801,2377,2521,2609,2689,2833,3041,3169,3329,3361,3433,3529,3889,4049,4513,4657,5209,5569 ⋆ Primes p of the form x ^ 2 + y ^ 2 such that p + 1 is the sum of the two nonzero squares in exactly 2 ways. ● a(n) mod 8 = 1. ●

▶ [A157999] 337,675,1013,1351,1689,2027,2365,2703,3041,3379,3717,4055,4393,4731,5069,5407,5745,6083,6421,6759,7097,7435,7773,8111,8449 ⋆ a(n) = 338n - 1. ● a(n) = 2 * a(n - 1) - a(n - 2). ●

▶ [A251271] 337,2058,9109,32636,100843,279718,715685,1722176,3954037,8757506,18871133,39828260,82762159,170015870,346360653,701430696,1414589161,2844655514,5709353797,11444200908,22920272755,45879723734,91806810133 ⋆ Number of (4 + 1) X (n + 1) 0..1 arrays with no 2 X 2 subblock having x11 - x00 less than x10 - x01. ● a(n) = (20160 * (1369 * 2 ^ n - 1365) - 18907464 * n - 6363848 * n ^ 2 - 1352064 * n ^ 3 - 190036 * n ^ 4 - 16401 * n ^ 5 - 637 * n ^ 6 + 9 * n ^ 7 + n ^ 8) / 2520. ●

▶ [A194478] 0,0,0,1,337,8733,96478,668028,3413828,14054915,49171641,151422970,420674150,1073422309,2550004472,5699074284,12082541388,24462528078,47555986746,89173692795,161899772067,285517344145,490447009030 ⋆ Number of ways to arrange 6 indistinguishable points on an n X n X n triangular grid so that no three points are in the same row or diagonal. ● a(n) = (1 / 256) * (- 1) ^ n * (2 * n - 7) * (n ^ 2 - 7 * n + 13) + (1 / 322560) * (7 * n ^ 12 + 42 * n ^ 11 - 945 * n ^ 10 + 1274 * n ^ 9 + 26089 * n ^ 8 - 128810 * n ^ 7 + 175693 * n ^ 6 + 205366 * n ^ 5 - 810796 * n ^ 4 + 601328 * n ^ 3 + 354172 * n ^ 2 - 582180 * n + 114660). ●

▶ [A202443] 338,574,1102,1890,3122,4822,7238,10394,14602,19886,26622,34834,44962,57030,71542,88522,108538,131614,158382,188866,223762,263094,307622,357370,413162 ⋆ Number of (n + 2) X 6 binary arrays avoiding patterns 001 and 110 in rows, columns and nw - to - se diagonals. ● a(n) = (2 / 3) * (n ^ 4 + 12 * n ^ 3 + 59 * n ^ 2 + 177 * n + 159) for n even. ● a(n) = (2 / 3) * (n ^ 4 + 12 * n ^ 3 + 59 * n ^ 2 + 183 * n + 168) for n>1 and odd. ●

▶ [A035750] 1,338,19266,454610,6065410,53972178,354870594,1847023698,7988589570,29746958930,97926519106,290835675858,791675204866,2000029880786,4736845866818,10603978331986,22589850308610,46054413896530,90282306981698,170866164067794,313276266562818,558092423954130 ⋆ Coordination sequence for C _ 13 lattice. ● a(n) = [x ^ (2n)] ((1 + x) / (1 - x)) ^ 13. ●

▶ [A235880] 339,537,951,1833,3759,8097,18231,42873,105279,269457,715911,1963113,5520399,15823617,45995991,135038553,399217119,1185854577,3533970471,10554725193,31569803439,94520666337,283184511351,848798559033 ⋆ Number of (n + 1) X (4 + 1) 0..2 arrays with the minimum plus the upper median equal to

the lower median plus the maximum in every 2 X 2 subblock. • a(n) = 3 * (50 + 15 * 2 ^ (1 + n) + 3 ^ n). •

► [A158000] 339,677,1015,1353,1691,2029,2367,2705,3043,3381,3719,4057,4395,4733,5071,5409,5747,6085,6423,6761,7099,7437,7775,8113,8451 ⋆ a(n) = 338 * n + 1. • a(n) = 2 * a(n - 1) - a(n - 2). - _ Vincenzo Librandi _ , Feb 10 2012 •

► [A187383] 0,0,0,340,3060,10320,24892,46412,75567,111492,154187,203652,259887,322892,392667,469212,552527,642612,739467,843092,953487,1070652,1194587,1325292,1462767 ⋆ Number of 9 - step S, NW and NE - moving king's tours on an n X n board summed over all starting positions. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>10. •

► [A172255] 341,902,1547,2652,4039,5768,7673,9720,12185,14886,17707,20984,25017,29386,33757,38438,43899,50500,58457,66778,75259,84170,94431,105016,116321 ⋆ Partial sums of the Fermat pseudoprimes to base 2, A001567. • a(n) = SUM[i=1..n] { odd composite numbers n such that 2 ^ (n - 1) == 1 mod n } . •

► [A353021] 0,1,341,13013,196053,1733303,10787231,52253971,209609235,725520510,2230238010,6217887390,15973440990,38276304066,86383520146,185042663146,378620563178,743881306623,1409531082531,2585397711611,4605062303611 ⋆ a(n) = Sum _{ l=1..n } Sum _{ k=1..l } Sum _{ j=1..k } Sum _{ i=1..j } (l * k * j * i) ^ 2. • a(n) = n * (n + 1) * (n + 2) * (n + 3) * (n + 4) * (2 * n + 1) * (2 * n + 3) * (2 * n + 5) * (2 * n + 7) * (5 * n - 2) * (35 * n ^ 2 - 28 * n + 9) / 5443200. • a(n) = binomial(2 * n + 8,9) * (5 * n - 2) * (35 * n ^ 2 - 28 * n + 9) / (5! * 4). •

► [A121205] 342,438,546,666,798,942,1098,1266,1446,1638,1842,2058,2286,2526,2778,3042,3318,3606,3906,4218,4542,4878,5226,5586,5958 ⋆ "666" in bases 7 and higher rewritten in base 10. • a(n) = 6 * (n ^ 2 + n + 1) = a(n - 1) + 12 * n. •

► [A158595] 342,1425,3230,5757,9006,12977,17670,23085,29222,36081,43662,51965,60990,70737,81206,92397,104310,116945,130302,144381,159182,174705,190950,207917,225606 ⋆ a(n) = 361 * n ^ 2 - 19. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). •

► [A272380] 0,1,342,6315,40492,157125,456546,1099567,2321880,4448457,7907950,13247091,21145092,32428045,48083322,69273975,97353136,133878417,180626310,239606587,313076700,403556181,513841042,647018175,806479752 ⋆ a(n) = n * (120 * n ^ 4 - 480 * n ^ 3 + 762 * n ^ 2 - 556 * n + 155). • a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6), for n>5. •

► [A016983] 0,343,2744,9261,21952,42875,74088,117649,175616,250047,343000,456533,592704,753571,941192,1157625,1404928,1685159,2000376,2352637,2744000,3176523,3652264,4173281,4741632 ⋆ a(n) = (7 * n) ^ 3. • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n > 3. - _ Vincenzo Librandi _ , Jul 05 2014 •

► [A017355] 343,4913,19683,50653,103823,185193,300763,456533,658503,912673,1225043,1601613,2048383,2571353,3176523,3869893,4657463,5545233,6539203,7645373,8869743,10218313,11697083 ⋆ a(n) = (10 * n + 7) ^ 3. • a(0)=343, a(1)=4913, a(2)=19683, a(3)=50653; for n>3, a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Harvey P. Dale _ , Jun 11 2015 •

► [A017475] 343,5832,24389,64000,132651,238328,389017,592704,857375,1191016,1601613,2097152,2685619,3375000,4173281,5088448,6128487,7301384,8615125,10077696,11697083,13481272,15438249,17576000,19902511 ⋆ a(n) = (11 * n + 7) ^ 3. • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4); a(0)=343, a(1)=5832, a(2)=24389, a(3)=64000. - _ Harvey P. Dale _ , Oct 18 2014 •

► [A277636] 1,343,6859,50653,226981,753571,2048383,4826809,10218313,19902511,36264691,62570773,103161709,163667323,251239591,374805361,545338513,776151559,1083206683,1485446221,2005142581,2668267603,3504881359,4549540393,5841725401 ⋆ Number of 3 X 3 matrices having all elements in { 0,...,n } with determinant = permanent. • a(n) = (3 * n ^ 2 - 3 * n + 1) ^ 3. •

► [A224427] 343,8967,88679,620839,3667623,19657127,99084199,479187879,2250222503,10338917287,46716074919,208322526119,919156226983,4020155841447,17454879996839,75316812315559,323256950193063,1380987667741607,5875792265345959 ⋆ The Wiener index of the dendrimer NS[n], defined pictorially in the A. R. Ashrafi et al. reference. • a(n) = - 1113 + 8112 * 2 ^ n - 6656 * 4 ^ n + 5120 * n * 4 ^ n. •

► [A117197] 0,343,17576,250047,1906624,9938375,40001688,133432831,385828352,997002999,2352637000,5150827583,10590025536,20638466407,38409197624,68669157375,118515478528,198257271191,322546580712,511808023999 ⋆ a(n) = (n ^ 3 - 1) ^ 3. • a(n) = n ^ 9 - 3n ^ 6 + 3n ^ 3 - 1. •

► [A086028] 1,344,22296,615000,9876000,108487128,897376152,5950405848,33031486875,158406862000,671944398512,2567519091888,8965083682032,28938181326000,87168786702000,246953567853744,662331582918141,1691011474896264,4129363811437000,9684000822437000 ⋆ a(n) = Sum _{ i=1..n } C(i + 5,6) ^ 3. • a(n) = C(n + 6,7) * [- 15 * F6(n) + 63063 * (7 * C(n + 11,12) + 195 * C(n + 10,12) + * 920 * C(n + 9,12) + 920 * C(n + 8,12) + 195 * C(n + 7,12) + 7 * C(n + 6,12))] / 415701; • a(n) = (n / 120679663104000) * (1 + n) * (2 + n) * (3 + n) * (4 + n) * (5 + n) * (6 + n) * (- 864000 + 2116800 * n + 772737840 * n ^ 2 + 3398930472 * n ^ 3 + 6406454992 * n ^ 4 + 6701566410 * n ^ 5 + 4302755765 * n ^ 6 + 1780394616 * n ^ 7 + 484074591 * n ^ 8 + 85975890 * n ^ 9 + 9604595 * n ^ 10 + 612612 * n ^ 11 + 17017 * n ^ 12). - _ G. C. Greubel _ , Nov 22 2017 •

► [A063370] 1,345,736,1128,1520,1912,2304,2696,3088,3480,3872,4262,4656,5048,5440,5830,6224,6614,7008,7398,7792,8182,8576,8964,9360 ⋆ Dimension of the space of weight n cuspidal newforms for Gamma _ 1(97). • a(n) = a(n - 4) + a(n - 6) - a(n - 10) for n>13. •

► [A225934] 346,1389,6102,21182,141262,306574,607533,1969886,5266030,17975982,25750142,49814254,155091326,254757166,402919341,616863422,918109966,1109543806,2639036782,4871920766,6475547950,11018778302,14135789614,22598987966,42920581982 ⋆ Number of conjugacy classes in simply connected twisted Chevalley group 2E6(q) as q runs through the prime powers. • a(n) = q ^ 6 + q ^ 5 + 2q ^ 4 + 11q ^ 2 + 11q + 16 if q == (1 mod 6). • a(n) = q ^ 6 + q ^ 5 + 2q ^ 4 + 18q ^ 2 + 26q + 62 if q == (2 mod 6). • a(n) = q ^ 6 + q ^ 5 + 2q ^ 4 + 11q ^ 2 + 11q + 15 if q == (3 mod 6). • a(n) = q ^ 6 + q ^ 5 + 2q ^ 4 + 10q ^ 2 + 10q + 14 if q == (4 mod 6). • a(n) = q ^ 6 + q ^ 5 + 2q ^ 4 + 19q ^ 2 + 27q + 72 if q == (5 mod 6). •

► [A287700] 0,1,346,6219,36628,124405,316206,672511,1267624,2189673,3540610,5436211,8006076,11393629,15756118,21264615,28104016,36473041,46584234,58663963,72952420,89703621,109185406,131679439,157481208 ⋆ a(n) = (4!) ^ 3 * [z ^ 4] hypergeom([], [1,1], z) ^ n. • a(n) = - 1899 * n + 3916 * n ^ 2 - 2592 * n ^ 3 + 576 * n ^ 4. • a(n) = [x ^ n] (x + 341 * x ^ 2 + 4499 * x ^ 3 + 8983 * x ^ 4) / (1 - x) ^ 5. •

► [A129642] 0,348,495,1371,3255,4088,9140,20096,24947,54383,118235,146508,318072,690228,855015,1854963,4024047,4984496,10812620,23454968,29052875,63021671,136706675,169333668,367318320 ⋆ Nonnegative values x of solutions (x, y) to the Diophantine equation x ^ 2 + (x + 457) ^ 2 = y ^ 2. • a(n) = 6 * a(n - 3) - a(n - 6) + 914 for n > 6; a(1)=0, a(2)=348, a(3)=495, a(4)=1371, a(5)=3255, a(6)=4088. • a(1)=0, a(2)=348, a(3)=495, a(4)=1371, a(5)=3255, a(6)=4088, a(7)=9140, a(n)=a(n - 1) + 6 * a(n - 3) - 6 * a(n - 4) - a(n - 6) + a(n - 7) [From Harvey P. Dale, May 13 2012] •

► [A235888] 352,568,1096,2536,6952,21928,76456,283816,1091752,4280488,16949416,67453096,269123752,1075118248,4297719976,17185374376,68730486952,274899927208,1099555668136,4398134591656,17592362205352,70369096499368 ⋆ Number of (n + 1) X (3 + 1) 0..3 arrays with the minimum plus the upper median equal to the lower median plus the maximum in every 2 X 2 subblock. • a(n) = 4 * (42 + 21 * 2 ^ n + 4 ^ n). •

► [A255501] 0,1,352,9909,107776,698125,3252096,12045817,37679104,103495401,256420000,584190541,1241471232,2487920149,4741917376,8654360625,15207694336,25846158097,42644120544,68520305701,107506720000,165082149981,248581222912,367691205289 ⋆ a(n) = (n ^ 9 + 5 * n ^ 8 + 4 * n ^ 7 - n ^ 6 - 5 * n ^ 5 + 2 * n ^ 4) / 6. • a(n) = n ^ 4 * (n ^ 5 + 5 * n ^ 4 + 4 * n ^ 3 - n ^ 2 - 5 * n + 2) / 6. •

► [A304385] 353,737,1505,3041,6113,12257,24545,49121,98273,196577,393185,786401,1572833,3145697,6291425,12582881,25165793,50331617,100663265,201326561,402653153,805306337,1610612705,3221225441,6442450913 ⋆ a(n) = 192 * 2 ^ n - 31 (n>=1). • a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>2. •

► [A282998] 0,0,1,353,12231,153194,1124820,5893221,24425212,85152341,259805430,712840480,1793423456,4197531636,9240962666,19301854131,38514786780,73828909906,136581190475,244784427831,426389859697,723857976770,1200460734396,1948846090829,3102524331336 ⋆ Number of ways to place 6 points on a triangular grid of side n so that no two of them are adjacent. • a(n) = (n ^ 12 + 6 * n ^ 11 - 195 * n ^ 10 - 670 * n ^ 9 + 17455 * n ^ 8 + 13426 * n ^ 7 - 836249 * n ^ 6 + 1252990 * n ^ 5 + 19599884 * n ^ 4 - 68542552 * n ^ 3 - 131400416 * n ^ 2 + 974223360 * n - 1308856320) / 46080 for n>=4. •

► [A157668] 354,2099,5302,9963,16082,23659,32694,43187,55138,68547,83414,99739,117522,136763,157462,179619,203234,228307,254838,282827,312274,343179,375542,409363,444642 ⋆ a(n) = 729 * n ^ 2 - 442 * n + 67. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). •

► [A250157] 354,8377,79740,455055,1879526,6219899,17519352,43657365,98808010,206916501,406440244,756627027,1345629390,2300780615,3801384176,6094394889,9513396402,14501306065,21637264620,31668194551,45545537334 ⋆ Number of length 3 + 6 0..n arrays with every seven consecutive terms having the maximum of some two terms equal to the minimum of the remaining five terms. • a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>9. •

► [A166916] 357,5525,87637,1399125,22373717,357930325,5726688597,91626231125,1466016552277,23456252253525,375299985724757,6004799570269525,96076792319006037,1537228673882871125,24595658769241036117 ⋆ a(n) = 20 * a(n - 1) - 64 * a(n - 2) - 15 for n > 1; a(0) = 357, a(1) = 5525. • a(n) = (1024 * 16 ^ n + 48 * 4 ^ n - 1) / 3. • a(0)=357, a(1)=5525, a(2)=87637, a(n)=21 * a(n - 1) - 84 * a(n - 2) + 64 * a(n - 3). - _ Harvey P. Dale _ , Sep 24 2012 •

► [A166913] 357,14450,221650,3508050,55975250,894989650,14317376850,229068199250,3665051866450,58640672576850,938250132084050,15011999596762450,240191983481869650,3843071695444596050,61489146966052263250 ⋆ a(n) = 20 * a(n - 1) - 64 * a(n - 2) - 150 for n > 2; a(0) = 357, a(1) = 14450, a(2) = 221650. • a(n) = (2560 * 16 ^ n + 600 * 4 ^ n - 10) / 3 for n > 0. • a(0)=357, a(1)=14450, a(2)=221650, a(3)=3508050, a(n)=21 * a(n - 1) - 84 * a(n - 2) + 64 * a(n - 3). - _ Harvey P. Dale _ , Jun 18 2014 •

► [A224434] 357,112311,2540727,28861191,239301927,1663126311,10343555367,59654395431,325892779047,1709482140711,8689254356007,43074112914471,209214647804967,999137244521511,4704103526212647,21880432615990311,100713104634651687,459359353571484711 ⋆ The hyper - Wiener index of the dendrimer D _ 3[n], defined pictorially in the A. R. Ashrafi et al. reference. • a(n) = 107559 - 551400 * 2 ^ n + 108900 * 4 ^ n * n ^ 2 + 444198 * 4 ^ n - 304590 * 4 ^ n * n + 74910 * 2 ^ n * n - 18150 * 2 ^ n * n ^ 2. •

► [A158307] 359,1440,3243,5768,9015,12984,17675,23088,29223,36080,43659,51960,60983,70728,81195,92384,104295,116928,130283,144360,159159,174680,190923,207888,225575 ⋆ 361n ^ 2 - 2n. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). •

► [A069478] 360,480,600,720,840,960,1080,1200,1320,1440,1560,1680,1800,1920,2040,2160,2280,2400,2520,2640,2760,2880,3000,3120,3240 ⋆ First differences of A069477, successive differences of (n + 1) ^ 5 - n ^ 5. • a(n) = 120 * (n + 2). • a(n) = 2 * a(n - 1) - a(n - 2) for n > 2. •

► [A056492] 0,0,0,0,0,0,0,0,0,360,720,7920,15120,103320,191520,1048320,1905120,9170280,16435440,72833040,129230640,541130040,953029440,3832187040,6711344640 ⋆ Number of periodic palindromes using exactly six different symbols. • a(n) = (k! / 2) * (S2(floor((n + 1) / 2),k) + S2(ceiling((n + 1) / 2),k)), with k =6 different colors used and where S2(n,k) is the Stirling subset number A008277. - _ Robert A. Russell _ , Jun 05 2018 • a(n) = a(n - 1) + 20 * a(n - 2) - 20 * a(n - 3) - 155 * a(n - 4) + 155 * a(n - 5) + 580 * a(n - 6) - 580 * a(n - 7) - 104 * a(n - 8) + 1044 * a(n - 9) + 720 * a(n - 10) - 720 * a(n - 11). - _ Muniru A Asiru _ , Sep 26 2018 •

► [A158308] 360,721,1082,1443,1804,2165,2526,2887,3248,3609,3970,4331,4692,5053,5414,5775,6136,6497,6858,7219,7580,7941,8302,8663,9024 ⋆ 361n - 1. • a(1)=360, a(2)=721, a(n)=2 * a(n - 1) - a(n - 2). - Harvey P. Dale, Aug 18 2011 •

► [A140801] 360,1080,1800,2520,3240,3960,4680,5400,6120,6840,7560,8280,9000,9720,10440,11160,11880,12600,13320,14040,14760,15480,16200,16920,17640 ⋆ a

(0)=360, a(n)=a(n - 1) + 720 for n>=1. ● a(n) = 360 + 720 * n ●
▶ [A024185] 360,2754,12154,40369,111769,271929,600033,1225983,2353263,4288713,7480473,12565462,20427862,32270182,49698582,74824242,110382666,159872916,227718876,319454751,441937111,603585895,814656895,1087548345,1437144345 ★ Fourth elementary symmetric function of 3,4,...,n + 5. ● a(n) = n * (n + 1) * (n + 2) * (n + 3) * (15 * n ^ 4 + 450 * n ^ 3 + 5165 * n ^ 2 + 26922 * n + 53848) / 5760. - _ R. J. Mathar _ , Sep 15 2009 ●
▶ [A033592] 1,360,3465,14560,41769,96096,191425,344520,575025,905464,1361241,1970640,2764825,3777840,5046609,6610936,8513505,10799880,13518505,16720704,20460681,24795520,29785185,35492520,41983249 ★ a(n) = (2 * n + 1) * (3 * n + 1) * (4 * n + 1) * (5 * n + 1). ● a(0)=1, a(1)=360, a(2)=3465, a(3)=14560, a(4)=41769, a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Harvey P. Dale _ , Nov 28 2013 ● a(n) = n ^ 4 * Pochhammer(2 + 1 / n, 4). ●
▶ [A305626] 0,0,0,0,0,360,7560,95760,952560,8217720,64614960,476514360,3355664760,22837086720,151449482520,984573465120,6302069010720,39847409421480,249509368422720,1550188394120520,9570844541994120,58789922099665680,359629148397511080,2192484972513916080,13329510116645202480 ★ Number of chiral pairs of rows of n colors with exactly 6 different colors. ● a(n) = (k! / 2) * (S2(n,k) - S2(ceiling(n / 2),k)), with k=6 colors used and where S2(n,k) is the Stirling subset number A008277. ●
▶ [A056313] 0,0,0,0,0,360,7560,95760,952560,8217720,64615680,476515080,3355679880,22837101840,151449674040,984573656640,6302070915840,39847411326600,249509384858160,1550188410555960,9570844671224760 ★ Number of reversible strings with n beads using exactly six different colors. ● a(n) = k! (S2(n,k) + S2(ceiling(n / 2),k)) / 2, where k=6 is the number of colors and S2 is the Stirling subset number. - _ Robert A. Russell _ , Sep 25 2018 ●
▶ [A192829] 360,8064,68928,355470,1340424,4086180,10680384,24847938,52769640,104137704,193478400,341772054,578400648,943453260,1490419584,2289301770,3430174824,5027225808,7223302080,10194998814,14158316040,19374915444,26159007168,34884896850,45995223144 ★ Molecular topological indices of the n X n X n grid graphs. ● a(n) = n * (24 - 66 * n + 36 * n ^ 2 + 4 * n ^ 3 - 3 * n ^ 4 - 7 * n ^ 5 + 6 * n ^ 6). ●
▶ [A229681] 0,360,10896,186576,2700432,35485776,437924880,5169543120,590310491041,656886585168,7159989801744,76729919248080,810700618461840,8463178886657616,87441690785378832,895373932606109136 ★ Number of defective 3 - colorings of an n X 4 0..2 array connected diagonally and antidiagonally with exactly two mistakes, and colors introduced in row - major 0..2 order. ● a(n) = 16 * 3 ^ (2 * n - 7) * (- 449 + 60 * n + 256 * n ^ 2) for n > 3. ●
▶ [A054648] 360,13230,137760,835380,3679200,13056120,39584160,106383420,259819560,586936350,1242521280,2489618040,4758324480,8728907040,15446635200,26477304840,44114190120,71649152190,113722852320,176771479500,269590120800,404035889400,595897192800 ★ Number of labeled pure 2 - complexes on n nodes (0 - simplexes) with 4 2 - simplexes and 11 1 - simplexes. ● a(n) = 360 * C(n, 6) + 10710 * C(n, 7) + 42000 * C(n, 8) + 41580 * C(n, 9) + 12600 * C(n, 10) = n * (n - 1) * (n - 2) * (n - 3) * (n - 4) * (n - 5) * (n ^ 4 + 3 * n ^ 3 - 58 * n ^ 2 - 120 * n + 1008) / 288. ●
▶ [A361704] 1,1,1,1,1,1,361,2521,10081,30241,75601,166321,1580041,16833961,114594481,569368801,2273150881,7723366561,30024671041,193227592321,1460787267601,9492136169041,50996729017081,232560967743721,973251617544361 ★ Constant term in the expansion of (1 + w ^ 2 + x ^ 2 + y ^ 2 + z ^ 2 + 1 / (w * x * y * z)) ^ n. ● a(n) = Sum _{ k=0..floor(n / 6) } (4 * k)! / k! ^ 4 * binomial(6 * k,4 * k) * binomial(n,6 * k). ●
▶ [A191216] 361,230456,1005768,3462570,11006128,25925028,61456764,127697940,249379116,448408452,740850012,1263239320,1914568816,2884222410,4371191782,6287341056,8758591370,11640682466,15938770638,21721208748,29153150298,38784336168,49888704100,62506263054,76188213990 ★ Arithmetic derivative of prime(n) * prime(n + 1) * prime(n + 2) * prime(n + 3) * prime(n + 4) * prime(n + 5). ● a(n) = (prime(n) * prime(n + 1) * prime(n + 2) * prime(n + 3) * prime(n + 4) * prime(n + 5))' where f' is the arithmetic derivative (see A003415) of f. ●
▶ [A158310] 362,723,1084,1445,1806,2167,2528,2889,3250,3611,3972,4333,4694,5055,5416,5777,6138,6499,6860,7221,7582,7943,8304,8665,9026 ★ 361n + 1. ● a(n) = 2 * a(n - 1) - a(n - 2). ●
▶ [A243131] 0,1,362,3363,15124,47525,120126,262087,514088,930249,1580050,2550251,3946812,5896813,8550374,12082575,16695376,22619537,30116538,39480499,51040100,65160501,82245262,102738263,127125624 ★ a(n) = 16 * n ^ 5 - 20 * n ^ 3 + 5 * n. ● a(n) = n * (16 * n ^ 4 - 20 * n ^ 2 + 5) = (- 1 / 4) * n * (- 8 * n ^ 2 + 5 + sqrt(5)) * (8 * n ^ 2 - 5 + sqrt(5)). ●
▶ [A157442] 362,19601,68122,145925,253010,389377,555026,749957,974170,1227665,1510442,1822501,2163842,2534465,2934370,3363557,3822026,4309777,4826810,5373125,5948722,6553601,7187762,7851205,8543930 ★ a(n) = 14641 * n ^ 2 - 24684 * n + 10405. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3); a(1)=362, a(2)=19601, a(3)=68122. - _ Harvey P. Dale _ , Oct 22 2011 ●
▶ [A158309] 363,1448,3255,5784,9035,13008,17703,23120,29259,36120,43703,52008,61035,70784,81255,92448,104363,117000,130359,144440,159243,174768,191015,207984,225675 ★ 361n ^ 2 + 2n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●
▶ [A131348] 364,940,44140,152140,2722540,8820940,14062540,17388940,42380140,48024940,127916140,356076940,676520140,979064140,990360940,1032336940,1302488140,1431108940,1509322540,1766520940,1984702540,2561372140 ★ Sum of squares of prime quadruplets. ● a(n) = p ^ 2 + (p + 2) ^ 2 + (p + 6) ^ 2 + (p + 8) ^ 2 for p in A007530. ●
▶ [A027799] 364,5915,50960,309400,1485120,5996172,21162960,67016040,193993800,520550030,1308811504,3109779400,7030805600,15210877500,31638625200,63520624440,123512325300,233272227825,429006396000,769953584400,1351144354560,2322279359400,3915247845600 ★ a(n) = 91 * (n + 1) * binomial(n + 3,14) / 3. ● a(n) = C(n + 1, 12) * C(n + 3, 3). - _ Zerinvary Lajos _ , May 10 2005; corrected by _ R. J. Mathar _ , Mar 16 2016 ●
▶ [A175114] 1,364,7448,51012,206896,620060,1527624,3281908,6373472,11454156,19360120,31134884,48052368,71639932,103701416,146340180,201982144,273398828,363730392,476508676,615680240,785629404,991201288,1237724852 ★ First differences of A175113. ● a(n)= 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6), n>6. ● a(n) = ((2 * n + 1) ^ 6 - (2 * n - 1) ^ 6) / 2 = 4 * n * (12 * n ^ 2 + 1) * (4 * n ^ 2 + 3), n>0. - _ Bruno Berselli _ , Dec 27 2010 ●
▶ [A033171] 365,730,1095,1461,1826,2191,2556,2922,3287,3652,4017,4383,4748,5113,5478,5844,6209,6574,6939,7305,7670,8035,8400,8766,9131 ★ Number of days in n years (n=4 is the first leap year). ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n > 5. ●
▶ [A033172] 365,730,1096,1461,1826,2191,2557,2922,3287,3652,4018,4383,4748,5113,5479,5844,6209,6574,6940,7305,7670,8035,8401,8766,9131 ★ Number of days in n years (n=3 is the first leap year). ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n > 5. ●
▶ [A033173] 365,731,1096,1461,1826,2192,2557,2922,3287,3653,4018,4383,4748,5114,5479,5844,6209,6575,6940,7305,7670,8036,8401,8766,9131 ★ Number of days in n years (n=2 is the first leap year). ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n > 5. ●
▶ [A175113] 1,365,7813,58825,265721,885781,2413405,5695313,12068785,23522941,42883061,74017945,122070313,193710245,297411661,443751841,645733985,919132813,1282863205,1759371881,2375052121,3160681525,4151882813 ★ a(n) = ((2 * n + 1) ^ 6 + 1) / 2. ● a(n)= 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). ● a(n) = (2 * n ^ 2 + 2 * n + 1) * (16 * n ^ 4 + 32 * n ^ 3 + 20 * n ^ 2 + 4 * n + 1). - _ Bruno Berselli _ , Dec 27 2010 ●
▶ [A033174] 366,731,1096,1461,1827,2192,2557,2922,3288,3653,4018,4383,4749,5114,5479,5844,6210,6575,6940,7305,7671,8036,8401,8766,9132 ★ Number of days in n years (n=1 is the first leap year). ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n > 5. ●
▶ [A251132] 369,1002,1997,4110,8050,15830,30770,60088,117492,230956,455680,902602,1792830,3569098,7116086,14203652,28370704,56695536,113333908,226597798,453110314,906118110,1812113626,3624082160,7247993420 ★ Number of (n + 1) X (3 + 1) 0..2 arrays with no 2 X 2 subblock having the sum of its diagonal elements greater than the maximum of its antidiagonal elements. ● a(n) = (36 * (- 5 + 9 * (- 1) ^ n + 9 * 2 ^ (3 + n)) + 202 * n + 151 * n ^ 2 + 50 * n ^ 3 + 5 * n ^ 4) / 12 for n>3. ●
▶ [A023313] 373,1171,13687,21997,25657,61603,74413,76471,84199,87181,93487,114691,135859,170761,174877,184333,192979,196177,207931,209743,244219,276229,286687,292561,297811 ★ Primes that remain prime through 4 iterations of function f(x) = 5x + 2. ● a(n) == 31 or 37 (mod 42). - _ John Cerkan _ , Oct 07 2016 ●
▶ [A134161] 373,10363,61723,210901,539041,1151983,2180263,3779113,6128461,9432931,13921843,19849213,27493753,37158871,49172671,63887953,81682213,102957643,128141131,157684261,192063313,231779263,277357783,329349241 ★ a(n) = 373 + 1947n + 3780n ^ 2 + 3234n ^ 3 + 1029n ^ 4. ● a(n) = (3(7n + 5) ^ 4 + 6(7n + 5) ^ 3 - 3 (7n + 5) + 1) / 7 a(n) = Sum[k ^ 6] / Sum[k ^ 2], { k, 1, 7n + 5 }] ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) with a(0)=373, a(1)=10363, a(2)=61723, a(3)=210901, and a(4)=539041. - _ Harvey P. Dale _ , Nov 25 2012 ●
▶ [A008853] 0,1,376,625,1000,1001,1376,1625,2000,2001,2376,2625,3000,3001,3376,3625,4000,4001,4376,4625,5000,5001,5376,5625,6000 ★ Numbers n such that n ^ 2 and n have same last 3 digits. ● a(4n)=1000 * n, a(4n + 1)=1000 * n + 1, a(4n + 2)=1000 * n + 376, a(4n + 3)=1000 * n + 625. - _ Franklin T. Adams - Watters _ , Mar 13 2006 ● a(n) = a(n - 1) + a(n - 4) - a(n - 5). ●
▶ [A157116] 378,1303,2059,2984,3740,4665,5421,6346,7102,8027,8783,9708,10464,11389,12145,13070,13826,14751,15507,16432,17188,18113,18869,19794,20550 ★ Numbers k such that k ^ 2 + 1 == 0 (mod 41 ^ 2). ● a(1)=378, a(2)=1303; a(n) = 2 * a(n - 1) - a(n - 2) - 13 ^ 2 if n is odd, and a(n) = 2 * a(n - 1) - a(n - 2) + 13 ^ 2 if n is even. ● a(n) = (3362n - 1681 + 169 * (- 1) ^ n) / 4. ●
▶ [A224337] 378,2910,12282,37494,93306,201678,393210,708582,1199994,1932606,2985978,4455510,6453882,9112494,12582906,17038278,22674810,29713182,38399994,49009206,61843578,77236110,95551482,117187494,142576506 ★ Number of idempotent 6X6 0..n matrices of rank 5. ● a(n) = 12 * n ^ 5 + 60 * n ^ 4 + 120 * n ^ 3 + 120 * n ^ 2 + 60 * n + 6. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). - _ Colin Barker _ , Sep 20 2014 ●
▶ [A328552] 0,0,0,378,90027,2931831,33720354,224710119,1068797961,4037126346,12886585236,36161763120,91629683271,213681907449,465104644470,955060713621,1865654931141,3490074060228,6286011239592,10948910130774,18510503248611,30469179410667 ★ a(n) is the Severi degree for curves of degree n and cogenus 5. ● a(n) = (81 / 40) * n ^ 10 - (81 / 4) * n ^ 9 - (27 / 8) * n ^ 8 + (2349 / 4) * n ^ 7 - (1044) * n ^ 6 - (127071 / 20) * n ^ 5 + (128859 / 8) * n ^ 4 + (59097 / 2) * n ^ 3 - (3528381 / 40) * n ^ 2 - (946929 / 20) * n + 153513 for n > 3. ● a(n) = 11 * a(n - 1) - 55 * a(n - 2) + 165 * a(n - 3) - 330 * a(n - 4) + 462 * a(n - 5) - 462 * a(n - 6) + 330 * a(n - 7) - 165 * a(n - 8) + 55 * a(n - 9) - 11 * a(n - 10) + a(n - 11) for n>9. - _ Colin Barker _ , Oct 30 2019 ●
▶ [A158597] 380,1580,3580,6380,9980,14380,19580,25580,32380,39980,48380,57580,67580,78380,89980,102380,115580,129580,144380,159980,176380,193580,211580,230380,249980 ★ a(n) = 400 * n ^ 2 - 20. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●
▶ [A134241] 0,0,0,384,4800,25920,91200,248640,572544,1169280,2183040,3801600,6262080,9856704,14938560,21927360,31315200,43672320,59652864,80000640,105554880,137256000,176151360,223401024,280283520 ★ a(n) = 8 * (n - 1) * (n - 2) * (n - 3) * (6 * n ^ 2 - 37 * n + 60). ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). - _ G. C. Greubel _ , May 30 2016 ●
▶ [A168675] 0,1,384,13122,163840,1171875,5878656,23059204,75497472,215233605,550000000,1286153286,2794881024,5710115047,11068417920,20503125000,36507222016,62781816969,104689625472,169835630410,268800000000,416051452971,6

31072545664 ⋆ a(n) = n ^ 8 * (n + 1) / 2. ● a(0)=0, a(1)=1, a(2)=384, a(3)=13122, a(4)=163840, a(5)=1171875, a(6)=5878656, a(7)=23059204, a(8)=75497472, a(9)=215233605, a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10). ●

► [A052377] 389,479,1559,3209,8669,12269,12401,13151,14411,14759,21851,28859,31469,33191,36551,39659,40751,50321,54311,64601,70229,77339,79601,87671,99551 ⋆ Primes followed by an [8,4,8]=[d,D - d,d] prime difference pattern of A001223. ● a(n) is the initial term of a [p, p + 8, p + 12, p + 12 + 8] quadruple of consecutive primes. ●

► [A069477] 390,750,1230,1830,2550,3390,4350,5430,6630,7950,9390,10950,12630,14430,16350,18390,20550,22830,25230,27750,30390,33150,36030,39030,42150 ⋆ a(n) = 60 * n ^ 2 + 180 * n + 150. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3); a(1)=390, a(2)=750, a(3)=1230. - _ Harvey P. Dale _ , Apr 06 2012 ●

► [A158004] 391,783,1175,1567,1959,2351,2743,3135,3527,3919,4311,4703,5095,5487,5879,6271,6663,7055,7447,7839,8231,8623,9015,9407,9799 ⋆ a(n) = 392 * n - 1. ● a(n) = 2 * a(n - 1) - a(n - 2). - _ Vincenzo Librandi _ , Feb 10 2012 ●

► [A264448] 0,391,910,1575,2405,3420,4641,6090,7790,9765,12040,14641,17595,20930,24675,28860,33516,38675,44370,50635,57505,65016,73205,82110,91770 ⋆ a(n) = n * (n + 11) * (n + 22) * (n + 33) / 24. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>4. - _ Vincenzo Librandi _ , Nov 16 2015 ●

► [A035751] 1,392,25872,703640,10746400,108568488,803467056,4666890936,22345512000,91437047240,328578611536,1058868074712,3110749728352,8440960351208,21380213588848,50989319763704,115318214551680,248806698957320,5147059566708 64,1025296826430744,1973911289979552 ⋆ Coordination sequence for C _ 14 lattice. ● a(n) = [x ^ (2n)] ((1 + x) / (1 - x)) ^ 14. ●

► [A158002] 1,393,785,1177,1569,1961,2353,2745,3137,3529,3921,4313,4705,5097,5489,5881,6273,6665,7057,7449,7841,8233,8625,9017,9409 ⋆ a(n) = 392 * n + 1. ● a(n) = 2 * a(n - 1) - a(n - 2). - _ Vincenzo Librandi _ , Feb 10 2012 ●

► [A201815] 393,4145,23857,90609,263201,637393,1355145,2613857,4675609,7876401,12635393,19464145,28975857,41894609,59064601,81459393,110191145,146519857,191862609,247802801,316099393,398696145,497730857,615544609 ⋆ Number of arrays of 7 integers in - n..n with sum zero and equal numbers of elements greater than zero and less than zero. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. ●

► [A201554] 1,393,8135,60691,273127,908755,2473325,5832765,12354469,24072133,43874139,75715487,124853275,198105727,304134769,453752153,660249129,939749665,1311587215,1798705035,2428080047,3231170251,4244385685,5509582933 ⋆ Number of arrays of 7 integers in - n..n with sum zero. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ● a(n) = [x ^ (7 * n)] (Sum _{ k=0..2 * n } x ^ k) ^ 7. - _ Seiichi Manyama _ , Dec 14 2018 ●

► [A270842] 1,396,123786,9002912,254721400,3920311044,39571426713,293231076608,1715840171595,8333541708700,34810892718492,128392921513440,426551317876970,1296405100924948,3649123762524675,9607693522053120,23853550135649477,56222046462953772 ⋆ Number of nonisomorphic edge colorings of the Petersen graph with at most n colors. ● a(n) = n ^ 15 / 120 + 5 * n ^ 9 / 24 + 5 * n ^ 5 / 12 + 11 * n ^ 3 / 30. ●

► [A158316] 398,1596,3594,6392,9990,14388,19586,25584,32382,39980,48378,57576,67574,78372,89970,102368,115566,129564,144362,159960,176358,193556,211554,230352,249950 ⋆ 400n ^ 2 - 2n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A187515] 0,0,0,398,3868,13796,31548,56952,89684,129637,176796,231161,292732,361509,437492,520681,611076,708677,813484,925497,1044716,1171141,1304772,1445609,1593652 ⋆ Number of 10 - step S, E, and NW - moving king's tours on an n X n board summed over all starting positions. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>11. ●

► [A158317] 399,799,1199,1599,1999,2399,2799,3199,3599,3999,4399,4799,5199,5599,5999,6399,6799,7199,7599,7999,8399,8799,9199,9599,9999 ⋆ a(n) = 400 * n - 1. ● a(n) = 2 * a(n - 1) - a(n - 2). ●

► [A166915] 399,5695,88319,1401855,22384639,357974015,5726863359,91626930175,1466019348479,23456263438335,375300030463999,6004799749226495,96076793034833919,1537228676746182655,24595658780694282239 ⋆ a(n) = 20 * a(n - 1) - 64 * a(n - 2) - 45 for n>1; a(0) = 399, a(1) = 5695. ● a(n) = (1024 * 16 ^ n + 176 * 4 ^ n - 3) / 3. ● a(n) = 21 * a(n - 1) - 84 * a(n - 2) + 64 * a(n - 3). ●

► [A187051] 0,0,0,400,14024,86608,285048,668176,1272720,2110944,3180724,4475176,5989600,7722744,9674608,11845192,14234496,16842520,19669264,22714728,25978912,29461816,33163440,37083784,41222848 ⋆ Number of 7 - step one or two space at a time bishop's tours on an n X n board summed over all starting positions. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>14. ●

► [A159890] 401,439,485,1921,2195,2509,11125,12731,14569,64829,74191,84905,377849,432415,494861,2202265,2520299,2884261,12835741,14689379,16810705,74812181,85615975,97979969,436037345 ⋆ Positive numbers y such that y ^ 2 is of the form x ^ 2 + (x + 439) ^ 2 with integer x. ● a(n) = 6 * a(n - 3) - a(n - 6) for n > 6; a(1)=401, a(2)=439, a(3)=485, a(4)=1921, a(5)=2195, a(6)=2509. ●

► [A158313] 401,801,1201,1601,2001,2401,2801,3201,3601,4001,4401,4801,5201,5601,6001,6401,6801,7201,7601,8001,8401,8801,9201,9601,10001 ⋆ a(n) = 400 * n + 1. ● a(n) = 2 * a(n - 1) - a(n - 2). ●

► [A158312] 402,1604,3606,6408,10010,14412,19614,25616,32418,40020,48422,57624,67626,78428,90030,102432,115634,129636,144438,160040,176442,193644,211646,230448,250050 ⋆ 400n ^ 2 + 2n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A128767] 1,402,132102,11756666,405385550,7416923886,86986719477,735192450952,4834517667381,26073250910950,119759687845446,481750080584202,1733588303252702,5673534527793146,17109303241791825,48047227408513056 ⋆ Number of inequivalent n - colorings of the 4D hypercube under the full orthogonal group of the cube (of order 2 ^ 4 * 4! = 384). ● a(n) = (1 / 384) * (48 * n ^ 2 + 180 * n ^ 4 + 48 * n ^ 6 + 83 * n ^ 8 + 12 * n ^ 10 + 12 * n ^ 12 + n ^ 16) ● a(n) = 1 * C(n,1) + 400 * C(n,2) + 130899 * C(n,3) + 11230666 * C(n,4) + 347919225 * C(n,5) + 5158324560 * C(n,6) + 43174480650 * C(n,7) + 225086553300 * C(n,8) + 775894225050 * C(n,9) + 1831178115900 * C(n,10) + 3008073915000 * C(n,11) + 3439243962000 * C(n,12) + 2685727044000 * C(n,13) + 1366701336000 * C(n,14) + 408648240000 * C(n,15) + 54486432000 * C(n,16), where the coefficient of C(n,k) is the number of unoriented colorings using exactly k colors. ●

► [A250893] 403,1325,4388,14196,44525,136509,412006,1231112,3657629,10837431,32088956,95066910,281997715,837788285,2492972738,7429400340,22170161033,66233321571,198057333352,592697831402,1774742767583,5316672917289 ⋆ Number of (n + 1) X (3 + 1) 0..2 arrays with nondecreasing x(i,j) - x(i,j - 1) in the i direction and nondecreasing absolute value of x(i,j) - x(i - 1,j) in the j direction. ● a(n) = (- 8 * (179 + 223 * 2 ^ n - 25 * 3 ^ (3 + n)) + (1104 - 845 * 2 ^ n) * n + (32 + 375 * 2 ^ n) * n ^ 2) / 32 for n>2. ●

► [A165808] 403,4579,16945,41917,83911,147343,236629,356185,510427,703771,940633,1225429,1562575,1956487,2411581,2932273,3522979,4188115,4932097,5759341,6674263,7681279,8784805,9989257,11299051 ⋆ Expansion of x * (403 + 2967 * x + 1047 * x ^ 2 - x ^ 3) / (1 - x) ^ 4. ● a(n) = 1 - 13 * n - 321 * n ^ 2 + 736 * n ^ 3. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ●

► [A187382] 0,0,0,404,2140,6380,13220,22996,35366,50330,67888,88040,110786,136126,164060,194588,227710,263426,301736,342640,386138,432230,480916,532196,586070 ⋆ Number of 8 - step S, NW and NE - moving king's tours on an n X n board summed over all starting positions. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>9. ●

► [A271746] 406,1145,3627,12521,46299,181265,745107,3195161,14220459,65412065,309878787,1507297001,7508078619,38208764465,198238593267,1046593626041,5612793712779,30528112814465,168152752952547,936705967782281,5270538854994939,29919810501018065 ⋆ Number of set partitions of [n] such that 7 is the largest element of the last block. ● a(n) = 32 + 121 * 2 ^ (n - 7) + 155 * 3 ^ (n - 7) + 5 * 4 ^ (n - 5) + 16 * 5 ^ (n - 7) + 6 ^ (n - 7) for n>7. ● a(n) = 21 * a(n - 1) - 175 * a(n - 2) + 735 * a(n - 3) - 1624 * a(n - 4) + 1764 * a(n - 5) - 720 * a(n - 6) for n>13. ●

► [A317982] 406,13818,115836,545860,1858290,5124126,12182968,25945416,50745870,92745730,160386996,264896268,420839146,646725030,965662320,1406064016,2002403718,2796022026,3835983340,5179983060,6895305186,9059830318,11763094056,15107395800 ⋆ Expansion of 14 * x * (29 + 784 * x + 1974 * x ^ 2 + 784 * x ^ 3 + 29 * x ^ 4) / (1 - x) ^ 7. ● a(n) = 70 * n ^ 6 + 210 * n ^ 5 + 175 * n ^ 4 - 42 * n ^ 2 - 7 * n. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

► [A157263] 408,2136,3864,5592,7320,9048,10776,12504,14232,15960,17688,19416,21144,22872,24600,26328,28056,29784,31512,33240,34968,36696,38424,40152,41880 ⋆ a(n) = 1728 * n - 1320. ● a(n) = 2 * a(n - 1) - a(n - 2). - _ Vincenzo Librandi _ , Jan 27 2012 ●

► [A052376] 409,1039,2017,2719,3571,4219,4231,4261,4327,6079,6121,6679,6781,8209,11047,11149,11959,12241,15277,19531,19687,21577,21589,26881,27529 ⋆ Primes followed by a [10,2,10] prime difference pattern of A001223. ● a(n)=p, a prime which begins a [p, p + d, p + D, p + D + d]=[p, p + 10, p + 12, p + 22] prime quadruple. ●

► [A157431] 410,495,588,689,798,915,1040,1173,1314,1463,1620,1785,1958,2139,2328,2525,2730,2943,3164,3393,3630,3875,4128,4389,4658 ⋆ a(n) = 4 * n ^ 2 + 73 * n + 333. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A257823] 413,531,8673,11269,426511,554187,9192849,11944727,452101247,587437689,9744411267,12661399351,479226895309,622683396153,10329066750171,13421071367333,507980056926293,660043812484491,10948801010769993,14226322987973629,538458381114975271 ⋆ Positive integers whose square is the sum of 59 consecutive squares. ● a(n) = 1060 * a(n - 4) - a(n - 8). ●

► [A184545] 415,1114,2413,4774,8989,16345,28844,49489,82648,134509,213640,331669,504100,751282,1099549,1582550,2242789,3133396,4320151,5883784,7922575,10555279,13924402,18199855,23583014 ⋆ Number of (n + 2) X 8 binary arrays with each 3 X 3 subblock having rows and columns in lexicographically nondecreasing order. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>9. ●

► [A306381] 1,415,8623,64405,289981,965071,2626975,6195673,13123945,25572511,46610191,80439085,132644773,210471535,323122591,482085361,701481745,998443423,1393512175,1911065221,2579765581,3433037455,4509566623,5853825865,7516625401 ⋆ a(n) is the number of semimagic 4 X 3 matrices whose entries are nonnegative integers, with row sum = 3 * n and column sum = 4 * n. ● a(n) = (139 / 4) * n ^ 6 + (417 / 4) * n ^ 5 + (535 / 4) * n ^ 4 + (375 / 4) * n ^ 3 + (77 / 2) * n ^ 2 + 9 * n + 1. ●

► [A070237] 1,420,660,780,840,1320,1560,4620,5460,7140,7980,8580,9240,9660,10920,11220,12012,12180,12540,13020,13260,14280,14820,15180,15540 ⋆ Numbers n such that the sign of core(n) - phi(n) is not equal to 2 * mu(n) ^ 2 - 1, where core(x) is the squarefree part of x. ● a(n) = C * n + O(n), with C a constant conjectured to be a(2) = 420. ●

► [A169825] 0,420,840,1260,1680,2100,2520,2940,3360,3780,4200,4620,5040,5460,5880,6300,6720,7140,7560,7980,8400,8820,9240,9660,10080 ⋆ Multiples of 420. ● a(n) = 420 * n. - _ Wesley Ivan Hurt _ , Apr 11 2021 ●

► [A145678] 420,1743,3948,7035,11004,15855,21588,28203,35700,44079,53340,63483,74508,86415,99204,112875,127428,142863,159180,176379,194460,213423,233268,253995,275604 ⋆ a(n) = 441 * n ^ 2 - 21. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). (End) ●

► [A317983] 420,7140,41160,148680,411180,955500,1963920,3684240,6439860,10639860,16789080,25498200,37493820,53628540,74891040,102416160,137494980,181584900,236319720,303519720,385201740,483589260,601122480,740468400,904530900 ⋆ Expansion of 420 * x * (1 + x) * (1 + 10 * x + x ^ 2) / (1 - x) ^ 6. ● a(n) = 84 * n ^ 5 + 210 * n ^ 4 + 140 * n ^ 3 - 14 * n. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. ●

► [A289226] 0,420,15108,190371,1336320,6528948,24951780,79851975,223419840,562591836,1301255556,2806131075,5705746752,11034449244,20436317412,36447218199,62877079680,105318792564,171815016708,273719593923,426796282752,652604165220,980226360036,1448406641607 ⋆ Number of ways to select 5 disjoin

t point triples from an n X n X n triangular point grid, each point triple formin g a 2 X 2 X 2 triangle. ● a(n) = (n ^ 10 - 10 * n ^ 9 - 85 * n ^ 8 + 1160 * n ^ 7 + 1345 * n ^ 6 - 49162 * n ^ 5 + 62145 * n ^ 4 + 892140 * n ^ 3 - 2198566 * n ^ 2 - 5725008 * n + 18190440) / 120. ●

▶ [A159589] 421,449,481,2045,2245,2465,11849,13021,14309,69049,75881,83389,4 02445,442265,486025,2345621,2577709,2832761,13671281,15023989,16510541,796 82065,87566225,96230485,464421109 ⋆ Positive numbers y such that y ^ 2 is of t he form x ^ 2 + (x + 449) ^ 2 with integer x. ● a(n) = 6 * a(n - 3) - a(n - 6) fo r n > 6; a(1)=421, a(2)=449, a(3)=481, a(4)=2045, a(5)=2245, a(6)=2465. ●

▶ [A096024] 423,1263,2103,2943,3783,4623,5463,6303,7143,7983,8823,9663,1050 3,11343,12183,13023,13863,14703,15543,16383,17223,18063,18903,19743,20583 ⋆ Numbers n such that (n + j) mod (2 + j) = 1 for j from 0 to 5 and (n + 6) mod 8 <> 1. ● a(n) = 2 * a(n - 1) - a(n - 2). G.f.: 3 * x * (139 * x + 141) / (x - 1) ^ 2. - _ Colin Barker _ , Apr 11 2013 ● a(n) = 840 * n - 417. [_ Bruno Bersel li _ , Apr 11 2013] ●

▶ [A160098] 425,601,1261,1289,3005,7141,7309,17429,41585,42565,101569,2423 69,248081,591985,1412629,1445921,3450341,8233405,8427445,20110061,4798780 1,49118749,117210025,279693401,286285049 ⋆ Positive numbers y such that y ^ 2 is of the form x ^ 2 + (x + 601) ^ 2 with integer x. ● a(n) = 6 * a(n - 3) - a(n - 6) for n > 6; a(1)=425, a(2)=601, a(3)=1261, a(4)=1289, a(5)=3005, a(6)=71 41. ●

▶ [A338154] 426,4968,50640,486930,4547088,41796168,380789562,3451622904,31 194607488,281440825122,2536622917920,22848990484344,205743704494026,1852 238413383048,16673036119790640,150072652217086770,1350735146332489008,12 157047307392618408 ⋆ a(n) is the number of acyclic orientations of the edges of the n - antiprism. ● a(n) = 17 * a(n - 1) - 88 * a(n - 2) + 153 * a(n - 3) - 81 * a (n - 4) for n>6. ● a(n) = - 2 ^ (1 - n) * ((7 - sqrt(13)) ^ n + (7 + sqrt(13)) ^ n) + 9 ^ n + 5. - _ Peter Kagey _ , Nov 15 2020 ●

▶ [A227484] 426,110582,1543242,12208658,76176642,419676194,2147525346,104 78078306,49478563938,228185184866,1033790121570,4619196304994,2041241832 6114,89390811225698,388524258582114,1677932514369122,7207051830287970,30 809448121032290,131162651106926178,556349805776789090,23521955142413103 06 ⋆ The Wiener index of the dendrimer D _ 4[n], defined pictorially in the A. R. Ashrafi et al. reference. ● a(n) = - 74142 + 2 ^ n * (241658 - 45756 * n) + 4 ^ n * (115320 * n - 167090). ●

▶ [A224668] 428,542,668,806,956,1118,1292,1478,1676,1886,2108,2342,2588,284 6,3116,3398,3692,3998,4316,4646,4988,5342,5708,6086,6476 ⋆ Number of 6 X 6 0 ..n matrices with each 2 X 2 subblock idempotent. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>3. ●

▶ [A253505] 428,784,1332,2088,3052,4248,5692,7404,9404,11712,14348,17332,206 84,24424,28572,33148,38172,43664,49644,56132,63148,70712,78844,87564,96892 ⋆ Number of (n + 2) X (3 + 2) 0..1 arrays with every 2 X 2 and 3 X 3 subblock d iagonal maximum minus antidiagonal minimum nondecreasing horizontally and vertically. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>8. ●

▶ [A064061] 429,1430,3432,7072,13260,23256,38760,62016,95931,144210,21150 8,303600,427570,592020,807300,1085760,1442025,1893294,2459664,3164480,4034 712,5101360,6399888,7970688,9859575 ⋆ Eighth column of Catalan triangle A00 9766. ● a(n) = C(n + 13,7) - C(n + 13,5). - _ Zerinvary Lajos _ , Nov 25 2006 ●

▶ [A033279] 0,429,5005,32032,148512,556920,1790712,5116320,13302432,320089 77,72177105,153977824,313112800,610569960,1147334760,2086063200,36823550 40,6329047725,10617908301,17424259776,28021470400,44233892560,6863879880 0,104830165440,157759842240 ⋆ Number of diagonal dissections of an n - gon in to 7 regions. ● a(n) = binomial(n + 5, 6) * binomial(n - 3, 6) / 7. ●

▶ [A064304] 1,429,14589,137089,702297,2537781,7312789,17981769,39322929,78 571837,146150061,256488849,428947849,688828869,1068484677,1608522841,2359 104609,3381338829,4748770909,6548966817 ⋆ Eighth diagonal of triangle A0640 94. ● a(n) = 1 + 6 * n + 20 * n ^ 2 + 48 * n ^ 3 + 90 * n ^ 4 + 132 * n ^ 5 + 132 * n ^ 6, compare to row n = 6 of Catalan triangle A009766. ●

▶ [A215547] 0,429,62016,807300,5101360,21732542,71916768,199448964,485325 150,1067658735,2167714560,4122884232,7427426292,12781794760,21151379600,3 3835482648,52547352546,79506102225,117541332480,170211285180,24193534965 6,338141745810,465431207488 ⋆ Number of standard Young tableaux of shape [7n,7]. ● a(n) = C(7 * n + 7,7) * (7 * n - 6) / (7 * n + 1) for n>0, a(0) = 0. ●

▶ [A250815] 432,1315,3081,6171,11116,18537,29145,43741,63216,88551,120817,1 61175,210876,271261,343761,429897,531280,649611,786681,944371,1124652,1329 585,1561321,1822101,2114256 ⋆ Number of (3 + 1) X (n + 1) 0..2 arrays with n ondecreasing x(i,j) - x(i,j - 1) in the i direction and nondecreasing min(x(i,j),x(i - 1,j)) in the j direction. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

▶ [A228105] 0,432,27648,314928,1769472,6750000,20155392,50824368,11324620 8,229582512,432000000,765314352,1289945088,2085181488,3252759552,49207500 00,7247757312,10427429808,14693280768,20323820592,27648000000,3705096427 2,48980118528 ⋆ a(n) = 432 * n ^ 6. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>6. - _ Coli n Barker _ , Dec 11 2017 ●

▶ [A369153] 435,1598,2761,3924,5087,6250,7413,8576,9739,10902,12065,13228,14 391,15554,16717,17880,19043,20206,21369,22532,23695,24858,26021,27184,28347 ⋆ Numbers k such that gcd(2 * k ^ 7 + 1, 3 * k ^ 3 + 2) > 1. ● a(n) = 435 + 1 163 * n. ● a(n) = 2 * a(n - 1) - a(n - 2). ●

▶ [A250781] 436,1106,2604,5882,12950,27986,59590,125334,260916,538538,1103 752,2249266,4562698,9222258,18588322,37386830,75076376,150582730,30176827 6,604371338,1209885342,2421317714,4844708318,9692167046,19387949788 ⋆ Nu mber of (n + 1) X (6 + 1) 0..1 arrays with nondecreasing x(i,j) + x(i,j - 1) in th e i direction and nondecreasing absolute value of x(i,j) - x(i - 1,j) in the j directi on. ● a(n) = (2520 * (289 * 2 ^ n - 209) - 314796 * n - 41972 * n ^ 2 - 23779 * n ^ 3 + 385 * n ^ 4 - 364 * n ^ 5 + 7 * n ^ 6 - n ^ 7) / 1260. ●

▶ [A088893] 0,1,437,32338,898774,13420861,130567049,929084572,5210829060,2 4240197433,96985597357,342789175982,1092151142842,3186269918917,86180035 04977,21826239750488,52182586901800 ⋆ Polynexus numbers of order 15. ● a(n) = ((n ^ 15 - (n - 1) ^ 15) - (n ^ 3 - (n - 1) ^ 3)) / 32760 = ((n ^ 15 - (n - 1) ^ 15) - (n ^ 3 - (n - 1) ^ 3)) / (2 ^ 15 - 2 ^ 3). ●

▶ [A157737] 439,1760,3963,7048,11015,15864,21595,28208,35703,44080,53339,63 480,74503,86408,99195,112864,127415,142848,159163,176360,194439,213400,2332 43,253968,275575 ⋆ a(n) = 441 * n ^ 2 - 2 * n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A158319] 440,881,1322,1763,2204,2645,3086,3527,3968,4409,4850,5291,5732,6 173,6614,7055,7496,7937,8378,8819,9260,9701,10142,10583,11024 ⋆ 441n - 1. ● a (n) = 2 * a(n - 1) - a(n - 2). ●

▶ [A250879] 440,1456,3442,6728,11644,18520,27686,39472,54208,72224,93850,1 19416,149252,183688,223054,267680,317896,374032,436418,505384,581260,66437 6,755062,853648,960464 ⋆ Number of (2 + 1) X (n + 1) 0..3 arrays with nondec reasing x(i,j) - x(i,j - 1) in the i direction and nondecreasing x(i,j) + x(i - 1,j) in the j direction. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n >4. ●

▶ [A187239] 0,0,0,0,440,38368,1022320,14082528,126490352,837543200,44128182 40,19447224864,74255991784,251997948736,774861621936,2191005028672,576430 6674400,14243327787456,33309659739904,74194554880960,158241369977880,324 605935279648,642894402918768 ⋆ Number of ways to place 7 nonattacking bish ops on an n X n board. ● a(n) = n ^ 14 / 5040 - n ^ 13 / 180 + 313n ^ 12 / 432 0 - 383n ^ 11 / 648 + 14797n ^ 10 / 4320 - 38233n ^ 9 / 2520 + 3217n ^ 8 / 60 - 145469n ^ 7 / 945 + 1546679n ^ 6 / 4320 - 4297801n ^ 5 / 6480 + 257903n ^ 4 / 270 - 3915679n ^ 3 / 3780 + 1787007n ^ 2 / 2240 - 318023n / 840 + 9503 / 12 8 + (- n ^ 8 / 192 + n ^ 7 / 8 - 389n ^ 6 / 288 + 689n ^ 5 / 80 - 319n ^ 4 / 9 + 1153n ^ 3 / 12 - 95965n ^ 2 / 576 + 20129n / 120 - 9503 / 128) * (- 1) ^ n. ●

▶ [A343827] 441,693,1089,1197,1449,1617,1881,1953,2277,2541,2709,2793,2961,3 069,3249,3381,3717,3933,4221,4257,4473,4557,4653,4761,4977 ⋆ Numbers which are the product of two S - primes (A057948) in exactly two ways. ● a(n) == 1 (mod 4). - _ Hugo Pfoertner _ , May 01 2021 ●

▶ [A014793] 1,441,4225,17689,50625,116281,231361,416025,693889,1092025,1640 961,2374681,3330625,4549689,6076225,7958041,10246401,12996025,16265089,201 15225,24611521,29822521,35820225,42680089,50481025 ⋆ Squares of odd octagon al numbers. ● a(n) = ((1 + 2 * n) * (1 + 6 * n)) ^ 2. - _ Stefano Spezia _ , Ap r 16 2022 ●

▶ [A075268] 442,629,1326,2259,5508,6585,11628,15129,24912,26259,52038,7733 7,155394,221931,442374,639009,1179738,1917027,3539130,5062869,10666542,182 85939,45369156,54513657,96444396 ⋆ Trajectory of 442 under the Reverse and Add! operation carried out in base 2. ● a(0), ..., a(28) as above; a(29) = 703932 681; a(30) =1310348526; a(31) = 2309980455; a(32) = 6143702712; a(33) = 713 1271077; a(34) = 12699398352; a(35) = 13441412493; for n > 35 and ●

▶ [A158322] 442,883,1324,1765,2206,2647,3088,3529,3970,4411,4852,5293,5734,6 175,6616,7057,7498,7939,8380,8821,9262,9703,10144,10585,11026 ⋆ a(n) = 441 * n + 1. ● a(n) = 2 * a(n - 1) - a(n - 2). - _ Vincenzo Librandi _ , Jan 24 2012 ●

▶ [A158321] 443,1768,3975,7064,11035,15888,21623,28240,35739,44120,53383,63 528,74555,86464,99255,112928,127483,142920,159239,176440,194523,213488,2333 35,254064,275675 ⋆ a(n) = 441n ^ 2 + 2n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Jan 24 2012 ●

▶ [A160583] 445,521,629,2041,2605,3329,11801,15109,19345,68765,88049,11274 1,400789,513185,657101,2335969,2991061,3829865,13615025,17433181,2232208 9,79354181,101608025,130102669,462510061 ⋆ Positive numbers y such that y ^ 2 is of the form x ^ 2 + (x + 521) ^ 2 with integer x. ● a(n) = 6 * a(n - 3) - a(n - 6) for n > 6; a(1)=445, a(2)=521, a(3)=629, a(4)=2041, a(5)=2605, a(6)= 3329. ●

▶ [A048632] 0,0,0,0,0,0,448,3136,25088,238080,2780160,32409600,439263232,579 3579008,84589174784,1277254508544,20436072136704,347559326515200,6269816 107433984,119673237950431232,2402480754490605568,50578266728651816960,11 168238363218605506 56 ⋆ Differences between factorials and Xfactorials: A0486 31 - A000142. ● a(n) = n! - Xfactorial(n). ●

▶ [A366815] 448,3544,14294,40420,92348,183208,328834,547764,861240,129320 8,1870318,2621924,3580084,4779560,6257818,8055028,10214064,12780504,158026 30,19331428,23420588,28126504,33508274,39627700,46549288 ⋆ Hyper - Wiener index in diamond nanowires obtained by connecting n unit cells in a sequence. ● a(n) = (338 * n ^ 4 + 481 * n ^ 3 + 145 * n ^ 2 + 416 * n - 36) / 3. ●

▶ [A304511] 450,1086,2358,4902,9990,20166,40518,81222,162630,325446,651078,1 302342,2604870,5209926,10420038,20840262,41680710,83361606,166723398,33344 6982,666894150,1333788486,2667577158,5335154502,10670309190 ⋆ a(n) = 318 * 2 ^ n - 186 (n>=1). ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>2. ●

▶ [A202197] 450,1400,3500,7560,14700,26400,44550,71500,110110,163800,23660 0,333200,459000,620160,823650,1077300,1389850,1771000,2231460,2783000,3438 500,4212000,5118750,6175260,7399350 ⋆ Number of (n + 2) X 5 binary arrays a voiding patterns 001 and 101 in rows and columns. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. ●

▶ [A035752] 1,450,34050,1057730,18347010,209070018,1732242690,1118080557 0,59064045570,264870794690,1036722552066,3618706767810,11457102844930,333 52168328130,90257700222210,229129634462146,549758831116290,1254544094546 370,2737341512717570,5736763221834690 ⋆ Coordination sequence for C _ 15 l attice. ● a(n) = [x ^ (2n)] ((1 + x) / (1 - x)) ^ 15. ●

▶ [A107548] 1,450,37690,1252106,22905330,272968658,2350138410,1567919721 0,85233151458,391856046050,1567440920346,5576512118570,17955135189970,530 53662957042,145495299159050,373781033269306,906487838507970,208873017181 1330,4597733181281018 ⋆ Coordination sequence for B _ 15 lattice ● a(n) = 15 * a(n - 1) - 105 * a(n - 2) + 455 * a(n - 3) - 1365 * a(n - 4) + 3003 * a(n - 5) - 5 005 * a(n - 6) + 6435 * a(n - 7) - 6435 * a(n - 8) + 5005 * a(n - 9) - 3003 * a(n - 10) + 1365 * a(n - 11) - 455 * a(n - 12) + 105 * a(n - 13) - 15 * a(n - 14) + a(n - 15). - _ Wesley Ivan Hurt _ , May 20 2021 ●

▶ [A183636] 452,952,2300,6136,17612,53512,170300,563416,1926572,6776872,244 22300,89839096,336216332,1276265032,4900898300,18994385176,74156470892,29 1175781992,1148379038300,4544596313656,18031730594252,71687168111752 ⋆ N umber of (n + 1) X 4 0..3 arrays with every 2 X 2 subblock summing to 6. ● a(n) = 110 + 25 * 2 ^ (2 + n) + 14 * 3 ^ (1 + n) + 4 ^ (1 + n). ●

► [A259058] 454,530,614,706,806,914,1030,1154,1286,1426,1574,1730,1894,2066,2246,2434,2630,2834,3046,3266,3494,3730,3974,4226,4486 ⋆ Numbers that are representable in at least two ways as sums of four distinct nonvanishing squares. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Aug 13 2015 •

► [A329756] 0,1,456,14976,181780,1273970,6293756,24395756,79119496,223821235,568280240,1321714636,2858876956,5817509516,11237224740,20751835560,36849296016,63215722181,105182448536,170297734920,269047574180,415753060646,629674964556,936359517556 ⋆ Doubly heptagonal pyramidal numbers. • a(n) = n * (5 * n - 2) * (n + 1) * (5 * n ^ 3 + 3 * n ^ 2 - 2 * n + 6) * (25 * n ^ 3 + 15 * n ^ 2 - 10 * n - 12) / 1296. - _ R. J. Mathar _ , Nov 28 2019 •

► [A224456] 459,1008,1845,3024,4599,6624,9153,12240,15939,20304,25389,31248,37935,45504,54009,63504,74043,85680,98469,112464,127719,144288,162225,181584,202419 ⋆ The Wiener index of the cyclic phenylene with n hexagons (n>=3). • a(n) = 9n(n ^ 2 + 4n - 4). •

► [A104397] 462,582,666,722,747,757,777,787,791,831,887,922,942,951,952,956,967,1007,1042,1051,1062,1072,1076,1091,1107 ⋆ Sums of 7 distinct positive pentatope numbers (A000332). • a(n) = Ptop(e) + Ptop(f) + Ptop(g) + Ptop(h) + Ptop(i) + Ptop(j) + Ptop(k) for some positive e= / =f= / =g= / =h= / =i= / =j= / =k and Ptop(n) = binomial(n + 3,4). •

► [A254468] 462,924,2508,8646,35112,159654,787968,4137966,22807752,130656534,772253328,4683193086,29012227992,182964472614,1171328741088,7594839621006,49780643849832,329318254755894,2195866174387248,14741498331453726,99542297086537272 ⋆ a(n) = 35 * 4 ^ n + 126 * 2 ^ n + 70 * 3 ^ n + 15 * 5 ^ n + 5 * 6 ^ n + 7 ^ n + 210. • a(n) = 28 * a(n - 1) - 322 * a(n - 2) + 1960 * a(n - 3) - 6769 * a(n - 4) + 13132 * a(n - 5) - 13068 * a(n - 6) + 5040 * a(n - 7). - _ Colin Barker _ , Jan 31 2015 •

► [A158627] 462,1914,4334,7722,12078,17402,23694,30954,39182,48378,58542,69674,81774,94842,108878,123882,139854,156794,174702,193578,213422,234234,256014,278762,302478 ⋆ a(n) = 484 * n ^ 2 - 22. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). (End) •

► [A027816] 462,6336,46332,240240,990990,3459456,10618608,29405376,74826180,177365760,395747352,838053216,1695505812,3294910080,6177956400,11218384320,19791524610,34015101120,57085528500,93740446800,150886065330,238437239040,370429282080 ⋆ a(n) = 66 * (n + 1) * binomial(n + 5,11). • a(n) = C(n + 1, 7) * C(n + 5, 5). - _ Zerinvary Lajos _ , May 26 2005; corrected by _ R. J. Mathar _ , Feb 10 2016 • a(n)= 13 * a(n - 1) - 78 * a(n - 2) + 286 * a(n - 3) - 715 * a(n - 4) + 1287 * a(n - 5) - 1716 * a(n - 6) + 1716 * a(n - 7) - 1287 * a(n - 8) + 715 * a(n - 9) - 286 * a(n - 10) + 78 * a(n - 11) - 13 * a(n - 12) + a (n - 13). - _ Harvey P. Dale _ , Dec 27 2015 •

► [A027823] 462,6468,48048,252252,1051050,3699696,11435424,31855824,81477396,193993800,434546112,923410488,1873980108,3651858672,6864396000,12493200720,22086194130,38030772780,63935791920,105157552500,169513974630,268241893920,417265168320 ⋆ a(n) = 77 * (n + 1) * binomial(n + 6,11). • a(n) = C(n + 1, 6) * C(n + 6, 6). - _ Zerinvary Lajos _ , Jun 08 2005; corrected by _ R. J. Mathar _ , Feb 13 2016 •

► [A194718] 0,1,462,7941,48838,185193,530526,1265677,2654646,5060433,8960878,14964501,23826342,36463801,53972478,77642013,108971926,149687457,201755406,267399973,349118598,449697801,572229022,720124461,897132918 ⋆ Number of n - ary words beginning with the first character of the alphabet, that can be built by inserting six doublets into the initially empty word. • a(0) = 0, a(n) = 1 + (10 + (44 + (110 + (165 + 132 * (n - 1)) * (n - 1)) * (n - 1)) * (n - 1)) * (n - 1) for n>0. •

► [A249986] 466,7138,43068,168506,508902,1290856,2886016,5862924,11046810,19587334,33034276,53421174,83356910,126125244,185792296,267321976,376699362,521062026,708839308,949899538,1255705206,1639476080,2116360272 ⋆ Number of length 6 + 1 0..2 * n arrays with the sum of the absolute values of adjacent differences equal to 6 * n. • a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. •

► [A104744] 470,1000,1678,2445,3265,4120,5000,5897,6808,7729,8659,9595,10537,11483,12434,13388,14345,15305,16267,17231,18197,19165,20134,21105,22077 ⋆ Round(1000 * x), where x is the solution to x = 5 ^ (n - x). • a(n)=round(1000 * x), x = 5 ^ (n - x). •

► [A187161] 0,0,0,0,472,3504,10576,23340,40448,61900,87696,117836,152320,191148,234320,281836,333696,389900,450448,515340,584576,658156,736080,818348,904960 ⋆ Number of 8 - step one space at a time bishop's tours on an n X n board summed over all starting positions. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>9. •

► [A157434] 473,564,663,770,885,1008,1139,1278,1425,1580,1743,1914,2093,2280,2475,2678,2889,3108,3335,3570,3813,4064,4323,4590,4865 ⋆ a(n) = 4 * n ^ 2 + 79 * n + 390. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). •

► [A187612] 0,0,0,0,0,474,3780,12946,32869,68308,117760,187311,275272,379035,500919,639115,793623,964443,1151575,1355019,1574775,1810843,2063223,2331915,2616919 ⋆ Number of 8 - step one space for components leftwards or up, two space for components rightwards or down asymmetric quasi - bishop's tours (antidiagonal moves become knight moves) on an n X n board summed over all starting positions. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>16. •

► [A224453] 477,14517,192133,1790789,13716357,92392837,568494213,3272754309,17914312837,94292506757,481127721093,2394073245829,11669512054917,55910670854277,264011366000773,1231270134409349,5680970473662597,25967383211403397,117723243179141253 ⋆ The hyper - Wiener index of the nanostar dendrimer NS _ 2[n], defined pictorially in the A. R. Ashrafi et al. reference. • a(n) = - 6011 + (- 36208 - 9720n + 2800n ^ 2) * 2 ^ n + (42696 - 22400n + 6400n ^ 2) * 4 ^ n. •

► [A227706] 477,16515,222975,2038455,15095079,98153991,584951751,3276557127,17527771719,90505289799,454449839175,2230961075271,10750358250567,51003115291719,238802012701767,1105498179306567,5067682186396743,23031604974453831,103882403285042247 ⋆ The hyper - Wiener index of the nanostar dendrimer defined pictorially as G(n) in the Darafsheh et al. reference. • a(n) = 4 ^ n * (5184 * n ^ 2 - 10368 * n + 18696) - 2 ^ n * 19314 + 1095. •

► [A158329] 482,1932,4350,7736,12090,17412,23702,30960,39186,48380,58542,69672,81770,94836,108870,123872,139842,156780,174686,193560,213402,234212,255990,278736,302450 ⋆ 484n ^ 2 - 2n. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). •

► [A281047] 483,525,635,2015,2043,3335,3575,4275,10317,14955,17855,22547,49433,51695,52773,79877,125807,132725,176417,242073,314177,451937,463517,590663,598793 ⋆ Numbers n such that abs(n - 4 ^ k) is prime for k = 1..8. • a(n) > > n log ^ 8 n. - _ Charles R Greathouse IV _ , Jan 13 2017 •

► [A158330] 483,967,1451,1935,2419,2903,3387,3871,4355,4839,5323,5807,6291,6775,7259,7743,8227,8711,9195,9679,10163,10647,11131,11615,12099 ⋆ 484n - 1. • a(n) = 2 * a(n - 1) - a(n - 2). •

► [A014803] 484,2500,63504,138384,894916,1493284,5569600,8156736,22562500,30580900,70090384,90250000,181764324,225660484,413552896,499611904,852056100,1007808516,1624090000,1888771600,2907582084,3335062500,4943777344,5605816384,8050755076 ⋆ Squares of even hexagonal pyramidal numbers. • a(n) = a(n - 1) + 6 * a(n - 2) - 6 * a(n - 3) - 15 * a(n - 4) + 15 * a(n - 5) + 20 * a(n - 6) - 20 * a(n - 7) - 15 * a(n - 8) + 15 * a(n - 9) + 6 * a(n - 10) - 6 * a(n - 11) - a(n - 12) + a(n - 13), n>12. • a(n) = ((4 * n + (- 1) ^ n + 5) * (4 * n + (- 1) ^ n + 7) * (8 * n + 2 * (- 1) ^ n + 9)) ^ 2 / 576. •

► [A160090] 485,569,689,2221,2845,3649,12841,16501,21205,74825,96161,123581,436109,560465,720281,2541829,3266629,4198105,14814865,19039309,24468349,86347361,110969225,142611989,503269301 ⋆ Positive numbers y such that y ^ 2 is of the form x ^ 2 + (x + 569) ^ 2 with integer x. • a(n) = 6 * a(n - 3) - a(n - 6) for n > 6; a(1)=485, a(2)=569, a(3)=689, a(4)=2221, a(5)=2845, a(6)=3649. •

► [A158326] 485,969,1453,1937,2421,2905,3389,3873,4357,4841,5325,5809,6293,6777,7261,7745,8229,8713,9197,9681,10165,10649,11133,11617,12101 ⋆ 484n + 1. • a(n) = 2 * a(n - 1) - a(n - 2). •

► [A156774] 485,3482,19601,48842,91205,146690,215297,297026,391877,499850,620945,755162,902501,1062962,1236545,1423250,1623077,1836026,2062097,2301290,2553605,2819042,3097601,3389282,3694085 ⋆ a(n) = 6561 * n ^ 2 - 3564 * n + 485. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). •

► [A158325] 486,1940,4362,7752,12110,17436,23730,30992,39222,48420,58586,69720,81822,94892,108930,123936,139910,156852,174762,193640,213486,234300,256082,278832,302550 ⋆ a(n) = 484n ^ 2 + 2n. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). •

► [A187860] 0,0,486,3320,11986,26836,50378,81124,120051,166504,220483,281988,351019,427576,511659,603268,702403,809064,923251,1044964,1174203,1310968,1455259,1607076,1766419 ⋆ Number of 5 - step one space for components leftwards or up, two space for components rightwards or down asymmetric quasi - queen's tours (antidiagonal moves become knight moves) on an n X n board summed over all starting positions. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>10. •

► [A179428] 0,0,0,0,0,486,346381,36285336,956078397,12428297150,104000525596,643409498286,3191250652226,13361641961066,48905750870775,160414160371552,480243686391743,1330654487994234,3449609146025210,8439769551278350,19624142987739108,43616849672119790,93112709811981557,191696927842663704,381920049400830625 ⋆ Number of ways to place 8 nonattacking kings on an n X n toroidal board. • a(n) = 1 / 40320 * n ^ 2 * (n ^ 14 - 252 * n ^ 12 + 27874 * n ^ 10 - 1759800 * n ^ 8 + 68745649 * n ^ 6 - 1669136028 * n ^ 4 + 23447322156 * n ^ 2 - 147931524720), n>=9. •

► [A180457] 491,617,757,1489,1787,2141,2143,2269,3529,3571,4723,5563,6337,6451,6659,6961,6991,7741,7873,7907,8821,10141,10267,10657,12911 ⋆ Central term of nine successive primes whose average is a prime. • a(n)=[p(n - 4) + p(n - 3) + p(n - 2) + p(n - 1) + p(n) + p(n + 1) + p(n + 2) + p(n + 3) + p(n + 4)] / 9. •

► [A271664] 491,668,844,1183,1474,1961,2293,2936,4190,4686,6244,7363,7999,9266,11456,13835,14766,17449,19348,20419,23578,25781,29375,34549,37228 ⋆ Erroneous version of A271811 (but for odd primes only). • a(n) = (13 * p ^ 2 + 145 * p + 1338 + 80 * gcd(p - 1,3) + 45 * gcd(p - 1,4) + 8 * gcd(p - 1, 5) + 8 * gcd(p - 1,6)) / 4 for n>2 and where p = prime(n). See [Rodney James]. •

► [A027808] 495,7150,55055,300300,1301300,4764760,15315300,44341440,117781950,290990700,675745070,1487285800,3123300180,6292363000,12216990500,22946695200,41829913125,74211187050,128442439125,217325608500,360139579800,585448578000,934943638200 ⋆ a(n) = 55 * (n + 1) * binomial(n + 4,12). • a(n) = C(n + 1, 9) * C(n + 4, 4). - _ Zerinvary Lajos _ , May 26 2005 •

► [A157447] 496,1008,1520,2032,2544,3056,3568,4080,4592,5104,5616,6128,6640,7152,7664,8176,8688,9200,9712,10224,10736,11248,11760,12272,12784 ⋆ a(n) = 512 * n - 16. • a(n) = 2 * a(n - 1) - a(n - 2). - _ Vincenzo Librandi _ , Jan 26 2012 •

► [A337952] 1,496,230076,22456756,795467350,14697611496,173107727191,1466088119056,9651378868011,52083991149400,239323201136866,962942859342036,3465720389989936,11343525530430016,34210497067620525 ⋆ Number of oriented colorings of the 16 tetrahedral facets of a hyperoctahedron or of the 16 vertices of a tesseract. • a(n) = n ^ 2 * (n ^ 14 + 12 * n ^ 8 + 63 * n ^ 6 + 68 * n ^ 2 + 48) / 192. • a(n) = 1 * C(n,1) + 494 * C(n,2) + 228591 * C(n,3) + 21539424 * C(n,4) + 685479375 * C(n,5) + 10257064650 * C(n,6) + 86151316860 * C(n,7) + 449772354360 * C(n,8) + 1551283253100 * C(n,9) + 3661969537800 * C(n,10) + 6015983173200 * C(n,11) + 6878457986400 * C(n,12) + 5371454088000 * C(n,13) + 2733402672000 * C(n,14) + 817296480000 * C(n,15) + 108972864000 * C(n,16), where the coefficient of C(n,k) is the number of oriented colorings using exactly k colors. •

► [A373103] 1,497,19603,254449,1952501,9742691,40351207,130277873,385845769,970392997,2353933051,4987963747,10604470813,20054549879,38274877103,66702270961,118587792977,191765347193,322687567459,496811926949,791004710821,1171892726347,1801152381623 ⋆ a(n) = Sum _{ 1 <= x _ 1, x _ 2, x _ 3, x _ 4, x _ 5 <= n } (n / gcd(x _ 1, x _ 2, x _ 3, x _ 4, x _ 5, n)) ^ 4. • a(n) = Sum _{ 1 <= x _ 1, x _ 2, x _ 3, x _ 4, x _ 5 <= n } (gcd(x _ 1, n) / gcd(x _ 1, x _ 2, x _ 3, x _ 4, x _ 5, n)) ^ 5. • a(n) = Sum _{ d|n } mu(n / d)

* (n / d) ^ 4 * sigma _ 9(d). ● a(n) = Sum _{ d|n } phi(n / d) * (n / d) ^ 8 * sigma _ 8(d ^ 2) / sigma _ 4(d ^ 2). ●

► [A216114] 500,3400,9900,21200,38500,63000,95900,138400,191700,257000,335500,428400,536900,662200,805500,968000,1150900,1355400,1582700,1834000,2110500,2413400,2743900,3103200,3492500 ⋆ The Wiener index of a link of n fullerenes C _{ 20 } (see the Ghorbani and Hosseinzadeh reference). ● a(n) = 100 * n * (2n ^ 2 + 6n - 3). ●

► [A281779] 0,0,0,0,0,500,16980,342160,5486040,77926380,1031160060,13047426920,160124426880,1921105846660,22632779709540,262513678889280,3002768326532520,33914184260797340,378596540805849420,4181330954328313240,45727913513193402960,495618273676457274420 ⋆ Number of distinct topologies on an n - set that have exactly 11 open sets. ● a(n) = 25 / 6 * 5! Stirling2(n, 5) + 79 / 6 * 6! Stirling2(n, 6) + 29 / 2 * 7! Stirling2(n, 7) + 39 / 4 * 8! Stirling2(n, 8) + 4 * 9! Stirling2(n, 9) + 10! Stirling2(n, 10). ●

► [A121577] 0,502,1004,1506,2008,2510,3013,3515,4017,4519,5021,5523,10025,10527,11029,11531,12034,12536,13038,13540,14042,14544,15046,15548,20050 ⋆ Times in hours, minutes and seconds (to the nearest second) at which the hour and minute hands of an analog clock, if interchanged, continue to indicate some other albeit accurate times, over a complete 12 - hour sweep for the slower hand. Leading zeros omitted. ● a(n)=round(43200 * n / 143) expressed in doubly - spaced sexagesimal scale. In other words, the required times occur at 143 successive positions after every (12 / 143)hr, i.e., 5min2s and 14 / 143s from noon or midnight. ●

► [A001244] 1,502,47840,2203488,66318474,1505621508,27971176092,447538817472,6382798925475,83137223185370,1006709967915228,11485644635009424,124748182104463860,1300365805079109480,13093713503185076040 ⋆ Eulerian numbers (Euler's triangle: column k=8 of A008292, column k=7 of A173018). ● a(n) = 8 ^ (n + 8 - 1) + Sum _{ i=1..8 - 1 } ((- 1) ^ i / i!) * (8 - i) ^ (n + 8 - 1) * Product _{ j=1..i } (n + 8 + 1 - j). - _ Randall L Rathbun _ , Jan 23 2002 ●

► [A226265] 504,1176,2520,5208,10584,21336,42840,85848,171864,343896,687960,1376088,2752344,5504856,11009880,22019928,44040024,88080216,176160600,352321368,704642904,1409285976,2818572120,5637144408,11274288984 ⋆ Number of additive Z _ 2 Z _ 8 codes of a certain type (see Siap - Aydogdu for precise definition). ● a(n) = 168 * (2 ^ (1 + n) - 1) for n>0. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>2. ●

► [A061124] 0,0,0,0,0,0,504,4032,27216,514080,4823280,57081024,500972472,4412103696,60619398840,686638592640,9335025764064,104304736815552,1180585704051936,29016515871665280,478096386437121480 ⋆ Number of degree - n permutations of order exactly 10. ● a(n) = 1 + n! * (y3(n) - y2(n) - y1(n)). ●

► [A253724] 504,8721,65472,312375,1119528,3293829,8388096,19131147,39999000,77947353,143325504,250991871,421651272,683434125,1073737728,1641349779,2448874296,3575480097,5119992000,7204344903,9977420904,13619289621,18345871872,24414046875 ⋆ Numbers c(n) whose squares are equal to the sums of a number M(n) of consecutive cubed integers b ^ 3 + (b + 1) ^ 3 + ... + (b + M - 1) ^ 3 = c ^ 2, starting at b(n) (A002593) for M(n) being twice a squared integer (A001105). ● a(n) = n ^ 3(4n ^ 4 - 1). ●

► [A218132] 0,0,504,19656,262080,1953000,10077480,40353264,134217216,387419760,999999000,2357946360,5159778624,10604497176,20661044040,38443356000,68719472640,118587871584,198359284536,322687690920,511999992000,794280037320,1207269207144 ⋆ Number of length 9 primitive (=aperiodic or period 9) n - ary words. ● a(n) = n ^ 9 - n ^ 3. ● a(0)=0, a(1)=0, a(2)=504, a(3)=19656, a(4)=262080, a(5)=1953000, a(6)=10077480, a(7)=40353264, a(8)=134217216, a(9)=387419760, a(n)=10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10). - _ Harvey P. Dale _ , Feb 11 2015 ●

► [A158633] 506,2093,4738,8441,13202,19021,25898,33833,42826,52877,63986,76153,89378,103661,119002,135401,152858,171373,190946,211577,233266,256013,279818,304681,330602 ⋆ a(n) = 529 * n ^ 2 - 23. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A255183] 1,509,18150,204630,1225230,4985070,15717750,41436870,95750430,200038110,385991430,698516790,1199001390,1968942030,3113936790,4768039590,7098477630,10310731710,14653979430,20426901270 ⋆ Third differences of ninth powers (A001017). ● a(n) = 6 * (84 * n ^ 6 - 252 * n ^ 5 + 630 * n ^ 4 - 840 * n ^ 3 + 756 * n ^ 2 - 378 * n + 85) for n>1, a(0)=1, a(1)=509. ●

► [A255179] 1,510,18660,223290,1448520,6433590,22151340,63588210,159338640,359376750,745368180,1443884970,2642886360,4611828390,7725765180,12493804770,19592282400,29903014110,44556993540,64983894810,92967744360,130709124630,180894272460 ⋆ Second differences of ninth powers (A001017). ● a(n) = 6 * n * (3 + 28 * n ^ 2 + 42 * n ^ 4 + 12 * n ^ 6) for n>0, a(0)=1. ●

► [A158011] 511,1023,1535,2047,2559,3071,3583,4095,4607,5119,5631,6143,6655,7167,7679,8191,8703,9215,9727,10239,10751,11263,11775,12287,12799 ⋆ a(n) = 512n - 1. ● a(n) = 2 * a(n - 1) - a(n - 2). - _ Vincenzo Librandi _ , Feb 10 2012 ●

► [A075944] 511,15887,116275,412245,693418,3165290,12603032,21139155,38803550,201349286,336626733,609260174,3221261509,5374090380,25769843817,43016936625,78384372260,412317013686,687266122367,1238028666383 ⋆ Basis for code in A075943. ● a(n) = b(2 ^ n), where b is A075943, the binary lexicode, d=9. ●

► [A228224] 511,19171,242461,1688101,8006491,29066311,86929081,224817481,519682231,1098972331,2162213461,4007999341,7067000851,11941597711,19452737521,30694626961,47097859951,70501587571,103235334541,148211067061 ⋆ Number of second differences of arrays of length 9 of numbers in 0..n. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. ●

► [A069094] 1,511,19682,261632,1953124,10057502,40353606,133955584,387400806,998046364,2357947690,5149441024,10604499372,20620692666,38441386568,68585259008,118587876496,197961811866,322687697778,510999738368 ⋆ Jordan function J _ 9(n). ● a(n) = Sum _{ d|n } d ^ 9 * mu(n / d). ● a(n) = n ^ 9 * Product _{ distinct primes p dividing n } (1 - 1 / p ^ 9). - _ Tom Edgar _ , Jan 09 2015 ●

► [A258810] 0,511,19682,262143,1953124,10077695,40353606,134217727,387420488,999999999,2357947690,5159780351,10604499372,20661046783,38443359374,68719476735,118587876496,198359290367,322687697778,511999999999,794280046580,1207269217791,1801152661462 ⋆ a(n) = n ^ 9 - 1. ● a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10). ●

► [A046311] 512,768,1024,1152,1280,1536,1728,1792,1920,2048,2304,2560,2592,2688,2816,2880,3072,3200,3328,3456,3584,3840,3888,4032,4096 ⋆ Numbers that are divisible by at least 9 primes (counted with multiplicity). ● a(n) = n + O(n (log log n) ^ 7 / log n). - _ Charles R Greathouse IV _ , Apr 07 2017 ●

► [A070057] 512,7935,77950,597725,3887592,22418665,117789230,574209267,2630933289,11438763414,47540271657,189960445332,733160014779,2743585958976,9986068392201,35447227965486,122988982790340,417920043272208,1393150860920936,4562718944632792,14700625316815800,46648299847265144,145938710212960504 ⋆ Number of Bottleneck - Monge matrices with 9 rows. ● a(N) = a(9, N), where a(P, N) is defined recursively in A070050. ●

► [A017619] 512,8000,32768,85184,175616,314432,512000,778688,1124864,1560896,2097152,2744000,3511808,4410944,5451776,6644672,8000000,9528128,11239424,13144256,15252992,17576000,20123648 ⋆ a(n) = (12 * n + 8) ^ 3. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4); a(0)=512, a(1)=8000, a(2)=32768, a(3)=85184. - _ Harvey P. Dale _ , Dec 14 2015 ●

► [A200844] 512,11235,99700,552247,2276028,7642875,22063924,56687801,132734964,288116455,587136848,1134248583,2093008152,3711583751,6356379032,10555568481,17054586712,26885876603,41455479708,62649346759,92962556324 ⋆ Number of 0..n arrays x(0..8) of 9 elements without any two consecutive increases or two consecutive decreases. ● a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10) for n > 10. ●

► [A200791] 512,14849,163020,1062500,4975322,18514405,58154912,160338680,398601390,910893148,1941103528,3899741885,7449762880,13624665670,23987233104,40838614531,67488892468,108601809395,170627966340,262342539690 ⋆ Number of 0..n arrays x(0..8) of 9 elements without any two consecutive increases. ● a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10) for n>10. ●

► [A195657] 512,17536,218052,1599820,8500668,36383284,133538996,437500380,1314748124,3694894500,9849731140,25173962492,62193359676,149475988116,351246183572,810197361564,1840289301660,4126688132548,9154339355684,20122502355004,43888598831484 ⋆ Number of ways to place 8n nonattacking kings on a vertical cylinder 16 X 2n. ● a(n) = (1751437 * n - 15876635) * 2 ^ n + 8431 / 45 * n ^ 6 + 22263 / 5 * n ^ 5 + 500633 / 9 * n ^ 4 + 1381699 / 3 * n ^ 3 + 117001024 / 45 * n ^ 2 + 138801256 / 15 * n + 15876636. ●

► [A352055] 0,512,19683,262144,1953125,10078208,40353607,134217728,387440172,1000000512,2357947691,5160042496,10604499373,20661047296,38445332183,68719476736,118587876497,198369368576,322687697779,512000262144,794320419871,1207269218304,1801152661463,2641941757952 ⋆ Sum of the 9th powers of the divisor complements of the odd proper divisors of n. ● a(n) = n ^ 9 * Sum _{ d|n, d<n, d odd } 1 / d ^ 9. ●

► [A231308] 0,1,512,19684,262656,1972809,10340352,42326416,144558080,429746905,1144558080,2787694596,6304338432,13392193969,26965385216,51835553344,95684861952,170423429841,294044152320,493111127620,806044152320,1287391174201,2013313370112 ⋆ Recurrence a(n) = a(n - 2) + n ^ M for M=9, starting with a(0)=0, a(1)=1. ● a(n) = Sum { k=0..floor(n / 2) } (n - 2k) ^ 9. ● a(0)=0, a(1)=1, a(2)=512, a(3)=19684, a(4)=262656, a(5)=1972809, a(6)=10340352, a(7)=42326416, a(8)=144558080, a(9)=429746905, a(10)=1144558080, a(11)=2787694596, a(n) = 10 * a(n - 1) - 44 * a(n - 2) + 110 * a(n - 3) - 165 * a(n - 4) + 132 * a(n - 5) - 132 * a(n - 7) + 165 * a(n - 8) - 110 * a(n - 9) + 44 * a(n - 10) - 10 * a(n - 11) + a(n - 12). - _ Harvey P. Dale _ , Apr 29 2014 ● a(n) = (1 / 40) * (2 * n ^ 10 + 20 * n ^ 9 + 60 * n ^ 8 - 224 * n ^ 6 + 640 * n ^ 4 - 768 * n ^ 2 - 155 * ((- 1) ^ n - 1)). ●

► [A236215] 512,20195,1973320,42326927,2400274618,13004773991,131592650488,454280348267,2255433009730,16762578985599,43202201146270,173163940941347,500545875335308,1003138487272151,2122268960374918,5422032552177051,14085028370831990,25779174463666131 ⋆ Sum of the ninth powers of the first n primes. ● a(n) = Sum _{ k=1..n } prime(k) ^ 9. ●

► [A240933] 0,0,512,39366,786432,7812500,50388480,242121642,939524096,3099363912,9000000000,23579476910,56757583872,127253992476,268593608192,538207031250,1030792151040,1897406023952,3372107936256,5808378560022,9728000000000,15885600931620,25352653573632 ⋆ a(n) = n ^ 10 - n ^ 9. ● a(n) = n ^ 9 * (n - 1) = n ^ 10 - n ^ 9. ●

► [A035753] 1,512,44032,1549824,30316544,387328512,3575055360,25537728000,148348809216,727126954496,3093172083712,11673741260288,39773478832128,124061810555392,358342294418432,967507857612288,2460955893981184,5936073260900864,13653945217715200,30091563817059840 ⋆ Coordination sequence for C _ 16 lattice. ● a(n) = [x ^ (2n)] ((1 + x) / (1 - x)) ^ 16. ●

► [A016749] 0,512,262144,10077696,134217728,1000000000,5159780352,20661046784,68719476736,198359290368,512000000000,1207269217792,2641807540224,5429503678976,10578455953408,19683000000000,35184372088832,60716992766464,101559956668416,165216101262848 ⋆ a(n) = (2 * n) ^ 9. ● a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10). - _ Harvey P. Dale _ , Jan 13 2013 ●

► [A016941] 512,134217728,20661046784,512000000000,5429503678976,35184372088832,165216101262848,618121839509504,1953125000000000,5416169448144896,13537086546263552,31087100296429568,66540410775079424,134217728000000000,257327417311663616,472161363286556672 ⋆ a(n) = (6 * n + 2) ^ 9. ● a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10). - _ Harvey P. Dale _ , Sep 21 2013 ●

► [A017097] 512,1000000000,198359290368,5429503678976,60716992766464,406671383849472,1953125000000000,7427658739644928,23762680013799936,66540410775079424,167619550409708032,387420489000000000,833747762130149888,1689478959002692096,3251948521156637184,5987402799531080192 ⋆ a(n) = (8 * n + 2) ^ 9. ● a(0)=512, a(1)=1000000000, a(2)=198359290368, a(3)=5429503678976, a(4)=60716992766464, a(5)=406671383849472, a(6)=1953125000000000, a(7)=7427658739644928, a(8)=23762680013799936, a(9)=66540410775079424, a(n)=10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10). - _ Harvey P. Dale _ , Dec 15 2011 ●

► [A017301] 512,5159780352,1207269217792,3518437208832,406671383849472,2779905883635712,13537086546263552,51998697814228992,167619550409708032,472161363286556672,1195092568622310912,2773078757450186752 ⋆ a(n) = (10 * n + 2) ^ 9. ● a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10); a(0)=512, a(1)=5159780352, a(2)=1207269217792, a(3)=35184372088832, a(4)=406671383849472, a(5)=2779905883635712, a(6)=13537086546263552, a(7)=51998697814228992, a(8)=167619550409708032, a(9)=472161363286556672. - _ Harvey P. Dale _ , Jan 01 2013 ●

► [A076338] 1,513,1025,1537,2049,2561,3073,3585,4097,4609,5121,5633,6145,6657,7169,7681,8193,8705,9217,9729,10241,10753,11265,11777,12289 ⋆ a(n) = 512 * n + 1. ● a(n) = 2 * a(n - 1) - a(n - 2). - _ Vincenzo Librandi _ , Feb 23 2012 ●

► [A351304] 1,513,19684,262656,1953126,10097892,40353608,134479872,387440172,1001953638,2357947692,5170120704,10604499374,20701400904,38445332184,68853694464,118587876498,198756808236,322687697780,513000262656,794320419872,1209627165996,1801152661464,2647101800448 ⋆ a(n) = n ^ 9 * Product _{ p|n, p prime } (1 + 1 / p ^ 9). ● a(n) = Sum _{ d|n } d ^ 9 * mu(n / d) ^ 2. ● a(n) = n ^ 9 * Sum _{ d|n } mu(d) ^ 2 / d ^ 9. ●

► [A294304] 0,0,513,19684,282340,2215782,12313161,52404624,186884496,572351860,1574304985,3922174980,9092033028,19656178794,40357579185,78666720832,147520415296,265720871304,464467582161,786155279940,1299155279940,2091077378830,3300704544313 ⋆ Sum of the ninth powers of the parts of the partitions of n into two distinct parts. ● a(n) = Sum _{ i=1..floor((n - 1) / 2) } i ^ 9 + (n - i) ^ 9. ● a(n) = a(n - 1) + 10 * a(n - 2) - 10 * a(n - 3) - 45 * a(n - 4) + 45 * a(n - 5) + 120 * a(n - 6) - 120 * a(n - 7) - 210 * a(n - 8) + 210 * a(n - 9) + 252 * a(n - 10) - 252 * a(n - 11) - 210 * a(n - 12) + 210 * a(n - 13) + 120 * a(n - 14) - 120 * a(n - 15) - 45 * a(n - 16) + 45 * a(n - 17) + 10 * a(n - 18) - 10 * a(n - 19) - a(n - 20) + a(n - 21) for n>21. ●

► [A007487] 0,1,513,20196,282340,2235465,12313161,52666768,186884496,574304985,1574304985,3932252676,9092033028,19696532401,40357579185,78800938560,147520415296,266108291793,464467582161,787155279940,1299155279940,2093435326521,3300704544313 ⋆ Sum of 9th powers. ● a(n) = - Sum _{ j=1..9 } j * s(n + 1,n + 1 - j) * S(n + 9 - j,n), where s(n,k) and S(n,k) are the Stirling numbers of the first kind and the second kind, respectively. - _ Mircea Merca _ , Jan 25 2014 ● a(n) = 11 * a(n - 1) - 55 * a(n - 2) + 165 * a(n - 3) - 330 * a(n - 4) + 462 * a(n - 5) - 462 * a(n - 6) + 330 * a(n - 7) - 165 * a(n - 8) + 55 * a(n - 9) - 11 * a(n - 10) + a(n - 11) for n > 10. - _ Wesley Ivan Hurt _ , Dec 21 2016 ●

► [A086030] 1,513,47169,1775169,37712169,534505257,5587534953,46011772521,312480135396,1809674119396,9165388162788,41395684407012,169328324418084,635173167426084,2207399512578084,7167715400927268,21902130296812161,63361228916945025,174437774859945025 ⋆ a(n) = Sum _{ i=1..n } C(i + 6,7) ^ 3. ● a(n) = C(n + 7,8) * (5 * C(n + 13,14) + 210 * C(n + 12,14) + 1491 * C(n + 11,14) + 2828 * C(n + 10,14) + 1491 * C(n + 9,14) + 210 * C(n + 8,14) + 5 * C(n + 7,14)) / 5. - _ Yahia Kahloune _ , Dec 22 2013 ● a(n) = (1 / 28165294080000) * n ^ 2 * (1 + n) ^ 2 * (2 + n) ^ 2 * (3 + n) ^ 2 * (4 + n) ^ 2 * (5 + n) ^ 2 * (6 + n) ^ 2 * (7 + n) ^ 2 * (- 3 + 3234 * n + 6979 * n ^ 2 + 5292 * n ^ 3 + 1603 * n ^ 4 + 210 * n ^ 5 + 10 * n ^ 6). - _ G. C. Greubel _ , Nov 22 2017 ●

► [A253637] 1,514,20710,303050,2538515,14851676,67518444,254402940,828707925,2403012910,6335265586,15427298614,35123831015,75481410200,154282348760,301802764056,567911055849,1032378638010,1819533917950,3118689197890,5212124524411,8512829068724,13614686274500,21358351020500,32916713032125 ⋆ Second partial sums of ninth powers (A001017). ● a(n) = n * (n + 1) * (n + 2) * (n ^ 2 + n - 1) * (n ^ 2 + 3 * n + 1) * (6 * n ^ 4 + 24 * n ^ 3 + 5 * n ^ 2 - 38 * n + 25) / 660. ● a(n) = 2 * a(n - 1) - a(n - 2) + n ^ 9. ●

► [A254643] 1,515,21225,324275,2862790,17714466,85232910,339635850,1168343775,3571356685,9906622271,25333920885,60457751900,135939162100,290221510860,592024274916,1159935330765,2192313968775,4011847886725,7130537084615 ⋆ Third partial sums of ninth powers (A001017). ● a(n) = n * (1 + n) * (2 + n) * (3 + n) * (- 50 + 84 * n + 127 * n ^ 2 - 204 * n ^ 3 - 97 * n ^ 4 + 126 * n ^ 5 + 98 * n ^ 6 + 24 * n ^ 7 + 2 * n ^ 8) / 2640. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) + n ^ 9. ●

► [A094903] 520,2397,3500,3518,3826,4439,4662,6620,7518,8926,9206,10220,10780,10938,12498,12640,12740,14049,14358,18623,20118,20262,22569,24419,25300 ⋆ Average of 4 primes where the integer Schwarzian derivative is zero. ● a(n) = if Sf(Prime[n])=0 then (Prime[n - 3] + Prime[n - 2] + Prime[n - 1] + Prime[n]) / 2 ●

► [A305268] 522,604,768,1096,1752,3064,5688,10936,21432,42424,84408,168376,336312,672184,1343928,2687416,5374392,10748344,21496248,42992056,85983672,171966904,343933368,687866296,1375732152 ⋆ a(n) = 82 * 2 ^ n + 440. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>1. ●

► [A279926] 0,1,522,24329,454250,4905766,36532244,207705929,961214238,3784166376,13066960126,40511160326,114681233758,300599979884,737035375772,1705830324553,3751239987240,7887626314003,15927815870322,31031953887704,5858991327728,107133058597170 ⋆ a(n) = Sum _{ k=1..n - 1 } sigma _ 3(k) * sigma _ 9(n - k). ● a(n) = (sigma _ 13(n) - 11 * sigma _ 9(n) + 10 * sigma _ 3(n)) / 2640. ●

► [A124587] 523,887,1069,1129,1259,1327,1381,1637,1669,1759,1831,1913,1933,1951,2113,2161,2179,2221,2251,2311,2477,2503,2557,2593,2803 ⋆ Primes p such that q - p >= 16, where q is the next prime after p. ● a(n) = n log n + O(n log ^ 2 n). - _ Charles R Greathouse IV _ , May 05 2017 ●

► [A152464] 0,0,525,3105,18939,114381,693129,4195557,25405586,153820395,931359050,5639156409,34143908573,206733865761,1251728824798,7578945799704,45888871327435,277847147039527,1682304127857000,10185986079451152 ⋆ Number of n - digit bouncy numbers in which every pair of adjacent digits are distinct. ● a(n) = Sum _{ i=1..9 } (u(n,i) + d(n,i)) for n > 2 (0 otherwise), where ●

► [A204692] 0,0,525,8325,95046,987048,9969183,99932013,999859093,9999722967,99999479435,999999059545,9999998358645,99999997221695,999999995423887,9999999992645451,99999999988439336,999999999982190246,9999999999973063281,99999999999959940181,999999999999941340896 ⋆ a(n) is the number of base - 10 bouncy numbers below 10 ^ n. ● a(1) = a(2) = 0. For n > 2, a(n) = 10 ^ n - binomial(n + 9, n) + 10 * n - Sum _{ i=1..n } binomial(i + 9, i) = 10 ^ n - binomial(n + 10, 10) - binomial(n + 9, 9) + 10 * n + 1. [Corrected by _ Altug Alkan _ , Sep 28 2018] ● a(n) = 21 * a(n - 1) - 165 * a(n - 2) + 715 * a(n - 3) - 1980 * a(n - 4) + 3762 * a(n - 5) - 5082 * a(n - 6) + 4950 * a(n - 7) - 3465 * a(n - 8) + 1705 * a(n - 9) - 561 * a(n - 10) + 111 * a(n - 11) - 10 * a(n - 12) for n > 12. ●

► [A168308] 525,12396,162740,1537216,11589216,73898880,413745024,2087500800,9672309504,41745859584,169680276480,655126331392,2419298385920,8593269522432,29494166618112,98195558891520,318148898783232,1005877391523840,3110695891894272 ⋆ The fifth left hand column of triangle A167591. ● a(n) = 2 ^ n * (107 * n ^ 9 - 1824 * n ^ 8 + 14124 * n ^ 7 - 62538 * n ^ 6 + 165228 * n ^ 5 - 259476 * n ^ 4 + 241561 * n ^ 3 - 133542 * n ^ 2 + 36360 * n) / 241920. ● a(n) = 20 * a(n - 1) - 180 * a(n - 2) + 960 * a(n - 3) - 3360 * a(n - 4) + 8064 * a(n - 5) - 13440 * a(n - 6) + 15360 * a(n - 7) - 11520 * a(n - 8) + 5120 * a(n - 9) - 1024 * a(n - 10). ● a(n) - 19 * a(n - 1) + 162 * a(n - 2) - 816 * a(n - 3) + 2688 * a(n - 4) - 6048 * a(n - 5) + 9408 * a(n - 6) - 9984 * a(n - 7) + 6912 * a(n - 8) - 2816 * a(n - 9) + 512 * a(n - 10) = 321 * 2 ^ (n - 2). ●

► [A158364] 527,2112,4755,8456,13215,19032,25907,33840,42831,52880,63987,76152,89375,103656,118995,135392,152847,171360,190931,211560,233247,255992,279795,304656,330575 ⋆ 529n ^ 2 - 2n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A157475] 528,1040,1552,2064,2576,3088,3600,4112,4624,5136,5648,6160,6672,7184,7696,8208,8720,9232,9744,10256,10768,11280,11792,12304,12816 ⋆ a(n) = 512n + 16. ● a(1)=528, a(2)=1040, a(n) = 2 * a(n - 1) - a(n - 2). - _ Harvey P. Dale _ , Dec 07 2011 ●

► [A158365] 528,1057,1586,2115,2644,3173,3702,4231,4760,5289,5818,6347,6876,7405,7934,8463,8992,9521,10050,10579,11108,11637,12166,12695,13224 ⋆ 529n - 1. ● a(n) = 2 * a(n - 1) - a(n - 2). ●

► [A304512] 528,1260,2724,5652,11508,23220,46644,93492,187188,374580,749364,1498932,2998068,5996340,11992884,23985972,47972148,95944500,191889204,383778612,767557428,1535115060,3070230324,6140460852,12280921908 ⋆ a(n) = 366 * 2 ^ n - 204 (n >= 1). ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n>2. ●

► [A071236] 0,1,528,29646,524800,4884375,30236976,141246028,536887296,1743421725,5000050000,12968792826,30958806528,68929431571,144627596400,288325575000,549756338176,1007997660153,1785234558096,3065534366950,5120001600000,8339942531151 ⋆ a(n) = (n ^ 10 + n ^ 5) / 2. ● a(0)=0, a(1)=1, a(2)=528, a(3)=29646, a(4)=524800, a(5)=4884375, a(6)=30236976, a(7)=141246028, a(8)=536887296, a(9)=1743421725, a(10)=5000050000, a(n)= 11 * a(n - 1) - 55 * a(n - 2) + 165 * a(n - 3) - 330 * a(n - 4) + 462 * a(n - 5) - 462 * a(n - 6) + 330 * a(n - 7) - 165 * a(n - 8) + 55 * a(n - 9) - 11 * a(n - 10) + a(n - 11). - _ Harvey P. Dale _ , Jul 24 2012 ●

► [A067475] 529,5041,50176,501264,5004169,50013184,500014321,5000045521,50000090449,500000309449,5000000100624,50000002660624,500000010062400,5000000124641041,50000000111812804,500000001150395524 ⋆ Smallest n - digit square starting with 5. ● a(n) = ceiling(sqrt(5 * 10 ^ (n - 1))) ^ 2, n>2. - _ Rick L. Shepherd _ , Feb 18 2002 ●

► [A158368] 530,1059,1588,2117,2646,3175,3704,4233,4762,5291,5820,6349,6878,7407,7936,8465,8994,9523,10052,10581,11110,11639,12168,12697,13226 ⋆ 529n + 1. ● a(n) = 2 * a(n - 1) - a(n - 2). ●

► [A156772] 531,1260,1989,2718,3447,4176,4905,5634,6363,7092,7821,8550,9279,10008,10737,11466,12195,12924,13653,14382,15111,15840,16569,17298,18027 ⋆ a(n) = 729 * n - 198. ● a(n) = 2 * a(n - 1) - a(n - 2). ●

► [A158367] 531,2120,4767,8472,13235,19056,25935,33872,42867,52920,64031,76200,89427,103712,119055,135456,152915,171432,191007,211640,233331,256080,279887,304752,330675 ⋆ 529n ^ 2 + 2n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A160176] 533,617,733,2465,3085,3865,14257,17893,22457,83077,104273,130877,484205,607745,762805,2822153,3542197,4445953,16448713,20645437,25912913,95870125,120330425,151031525,558772037 ⋆ Positive numbers y such that y ^ 2 is of the form x ^ 2 + (x + 617) ^ 2 with integer x. ● a(n) = 6 * a(n - 3) - a(n - 6) for n > 6; a(1)=533, a(2)=617, a(3)=733, a(4)=2465, a(5)=3085, a(6)=3865. ●

► [A165989] 534,659,1727,1852,2920,3045,4113,4238,5306,5431,6499,6624,7692,7817,8885,9010,10078,10203,11271,11396,12464,12589,13657,13782,14850 ⋆ Numbers such that n ^ 2 = 29 mod 1193. ● a(1) = 534, a(2) = 659, a(3) = 1727, a(n) = a(n - 1) + a(n - 2) - a(n - 3). - _ Harvey P. Dale _ , Oct 22 2012 ● a(n) = (- 1193 - 943 * (- 1) ^ n + 2386 * n) / 4. ●

► [A077076] 537,1146,1899,3618,4713,9522,14427,28386,37533,84966,138123,353004,466209,738024,833301,1525224,1718853,3048912,3239469,6196176,6583437,12389280,12770397,24975264,25749789 ⋆ Trajectory of 537 under the Reverse and Add! operation carried out in base 2, written in base 10. ● a(0), ..., a(11) as above; for n > 11 and ●

► [A111258] 0,539,560,1803,4740,4859,12020,29103,29796,71519,171080,175119,418296,998579,1022120,2439459,5821596,5958803,14219660,33932199,34731900,82879703,197772800,202433799,483059760 ⋆ Nonnegative values x of solutions (x, y) to the Diophantine equation x ^ 2 + (x + 601) ^ 2 = y ^ 2. ● a(n) = 6 * a(n - 3) - a(n - 6) + 1202 for n > 6; a(1)=0, a(2)=539, a(3)=560, a(4)=1803, a(5)=4740, a(6)=4859. ●

► [A118630] 0,539,924,1220,1715,2744,3503,4095,5096,7203,9996,12075,13703,16464,22295,26640,30044,35819,48020,64239,76328,85800,101871,135828,161139 ⋆ Nonnegative values x of solutions (x, y) to the Diophantine equation x ^ 2 + (x + 2401) ^ 2 = y ^ 2. ● a(n)=6 * a(n - 9) - a(n - 18) + 4802 for n > 18; a(1)=0, a(2)=539, a(3)=924, a(4)=1220, a(5)=1715, a(6)=2744, a(7)=3503, a(8)=4095, a(9)=5096, a(10)=7203, a(11)=9996, a(12)=12075, a(13)=13703, a(14)=16464, a(15)=22295, a(16)=26640, a(17)=30044, a(18)=35819. ●

► [A184546] 539,1513,3461,7307,14767,28844,54543,99872,177207,305112,510719,832788,1325583,2063717,3148137,4713439,6936723,10048219,14343937,20200617,28093279,38615698,52504155,70664842,94205327 ⋆ Number of (n + 2) X 9 binary arrays with each 3 X 3 subblock having rows and columns in lexicographically nondecreasing order. ● a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10) for n>10. ●

► [A069474] 540,2100,5460,11340,20460,33540,51300,74460,103740,139860,183540,235500,296460,367140,448260,540540,644700,761460,891540,1035660,1194540,1368900,1559460,1766940,1992060 ⋆ First differences of A069473. ● a(n) = 120 * n ^ 3 + 540 * n ^ 2 + 900 * n + 540. ●

► [A146123] 1,540,4120,12188,31000,67216,129464,228136,375388,585140,873076,1256644,1755056,2389288,3182080,4157936,5343124,6765676,8455388,10443820,12764296,15451904 ⋆ Number of n X n arrays of squares of integers with every (n - 3) X (n - 3) subblock summing to 4 and every element equal to at least one neighbor. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>12. ●

► [A101705] 0,540,5940,54540,59940,540540,599940,5400540,5454540,5945940,5999940,54000540,54594540,59405940,59999940,540000540,540540540,545454540,545994540,594005940,594545940,599459940,599999940,5400000540,5405940540 ⋆ Numbers n such that n = 12 * reversal(n). ● a(n) = 540 * A057148. - _ Ray Chandler _ , Oct 09 2017 ●

► [A054562] 540,65625,1272320 ⋆ Number of labeled pure 2 - complexes on n nodes (0 - simplexes) with 5 2 - simplexes and 13 1 - simplexes. ● a(n)=540 * C(n, 6) + 61845 * C(n, 7) + 762440 * C(n, 8) + ... ●

► [A160200] 541,761,1465,1781,3805,8249,10145,22069,48029,59089,128609,279925,344389,749585,1631521,2007245,4368901,9509201,11699081,25463821,55423685,68187241,148414025,323032909,397424365 ⋆ Positive numbers y such that y ^ 2 is of the form x ^ 2 + (x + 761) ^ 2 with integer x. ● a(n) = 6 * a(n - 3) - a(n - 6) for n > 6; a(1)=541, a(2)=761, a(3)=1465, a(4)=1781, a(5)=3805, a(6)=8249. ●

► [A226800] 541,2612,7803,18424,37625,69516,119287,193328,299349,446500,645491,908712,1250353,1686524,2235375,2917216,3754637,4772628,5998699,7463000,9198441,11240812,13628903,16404624,19613125 ⋆ Column 5 of array in A226513. ● a(n) = (n + 1) * (n ^ 4 + 24 * n ^ 3 + 186 * n ^ 2 + 554 * n + 541). ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). ●

► [A293582] 541,13060,195020,2327960,24418640,235804122,2152586500,18883155160,160908360260,1341800118020,11007289244964,89168468504160,715330888641680,5694960569676240,45067846839572000,354959016901129928,2785141532606257120,21787375678321712160 ⋆ Number of compositions of n where each part i is marked with a word of length i over a quinary alphabet whose letters appear in alphabetical order and all five letters occur at least once in the composition. ● a(n) = 30 * a(n - 1) - 380 * a(n - 2) + 2690 * a(n - 3) - 11944 * a(n - 4) + 35618 * a(n - 5) - 74912 * a(n - 6) + 115104 * a(n - 7) - 132120 * a(n - 8) + 114500 * a(n - 9) - 74888 * a(n - 10) + 36504 * a(n - 11) - 12888 * a(n - 12) + 3120 * a(n - 13) - 464 * a(n - 14) + 32 * a(n - 15). - _ Vaclav Kotesovec _ , Oct 14 2017 ●

► [A250854] 543,2457,8037,21436,49599,103293,198297,356752,608671,993609,1562493,2379612,3524767,5095581,7209969,10008768,13658527,18354457,24323541,31827804,41167743,52685917,66770697,83860176,104446239 ⋆ Number of (2 + 1) X (n + 1) 0..3 arrays with nondecreasing x(i,j) - x(i,j - 1) in the i direction and nondecreasing min(x(i,j),x(i - 1,j)) in the j direction. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

► [A159626] 545,577,613,2657,2885,3133,15397,16733,18185,89725,97513,105977,522953,568345,617677,3047993,3312557,3600085,17765005,19306997,20982833,103542037,112529425,122296913,603487217 ⋆ Positive numbers y such that y ^ 2 is of the form x ^ 2 + (x + 577) ^ 2 with integer x. ● a(n) = 6 * a(n - 3) - a(n - 6) for n > 6; a(1)=545, a(2)=577, a(3)=613, a(4)=2657, a(5)=2885, a(6)=3133. ●

► [A286440] 0,546,14064,157248,1056516,5086902,19399860,62311740,175452816,445146906,1037833944,2255992584,4622997276,9007684494,16802136156,30169344996,52381036968,88270019922,144826036032,231969248016,363541216308,558559556262,842789431428,1250692671180 ⋆ Number of ways to tile an n X n X n triangular area with five 2 X 2 X 2 triangular tiles and an appropriate number (= n ^ 2 - 20) of 1 X 1 X 1 tiles. ● a(n) = (n ^ 10 - 15 * n ^ 9 + 5 * n ^ 8 + 930 * n ^ 7 - 3325 * n ^ 6 - 19863 * n ^ 5 + 109915 * n ^ 4 + 155100 * n ^ 3 - 1365876 * n ^ 2 - 191592 * n + 5981760) / 120 for n >= 6. ●

► [A103537] 548,1000,1582,2258,3000,3788,4609,5456,6322,7203,8096,9000,9912,10831,11757,12687,13623,14562,15505,16451,17400,18351,19305,20261,21219 ⋆ Round(1000 * x), where x is the solution to x = 3 ^ (n - x). ● a(n)=round(1000 * x), x = 3 ^ (n - x). ●

► [A158636] 552,2280,5160,9192,14376,20712,28200,36840,46632,57576,69672,82920,97320,112872,129576,147432,166440,186600,207912,230376,253992,278760,304680,331752,359976 ⋆ a(n) = 576 * n ^ 2 - 24. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A274901] 1,554,109152,5747200,128538250,1640929626,14167981324,91769978112,477063389475,2084653722250,7914860972876,26756396132544,82046630783572,231537699283450,608260629969000,1501341920229376,3508131297671589,7809071314434282,16646760371737000 ⋆ Number of (not necessarily proper) face colorings of the truncated cube using at most n colors. ● a(n) = 1 / 48 * n ^ 14 + 1 / 8 * n ^ 10 + 1 / 16 * n ^ 9 + 1 / 16 * n ^ 8 + 7 / 48 * n ^ 7 + 1 / 6 * n ^ 6 + 1 / 8 * n ^ 5 + 1 / 8 * n ^ 4 + 1 / 6 * n ^ 3 = n ^ 3 * (n + 1) * (n ^ 10 - n ^ 9 + n ^ 8 - n ^ 7 + 7 * n ^ 6 - 4 * n ^ 5 + 7 * n ^ 4 + 8 * n ^ 2 - 2 * n + 8) / 48. ●

► [A318119] 0,0,560,14240,146680,922680,4226040,15492680,48144680,131678360,325322360,739761880,1570082800,3143824320,5988841040,10926565040,19197225520,32624627920,53829216160,86499340720,135731931720,208455129960,313946860040,464464838200 ⋆ Constant term in the expansion of (Sum _{ k=0..n } k * (x ^ k + x ^ (- k))) ^ 5. ● a(n) = (n - 1) * n * (n + 1) * (2 * n + 1) * (967 * n ^ 5 + 3868 * n ^ 4 + 6005 * n ^ 3 + 5444 * n ^ 2 + 2844 * n + 1008) / 9072. ●

► [A184047] 561,567,577,597,633,705,841,1113,1641,2697,4777,8937,17193,33705,66601,132393,263721,526377,1051177,2100777,4198953,8395305,16785961,33567273,67125801 ⋆ 1 / 9 the number of (n + 1) X 9 0..2 arrays with all 2 X 2 subblocks having the same four values. ● a(n) = 3 * 2 ^ (n / 2) + 2 ^ (n + 1) + 553 for n even. ● a(n) = 2 ^ (n + 1) + 2 ^ ((n + 3) / 2) + 553 for n odd. ●

► [A083733] 561,1105,2465,3277,8321,10585,18721,29341,46657,62745,75361,104653,115921,162401,219781,226801,252601,278545,294409,314821,334153,340561,399001,410041,449065 ⋆ Pseudoprimes to bases 2 and 7. ● a(n) = n - th positive integer k(>1) such that 2 ^ (k - 1) = 1 (mod k) and 7 ^ (k - 1) = 1 (mod k). ●

► [A083732] 561,1729,2821,5461,6601,8911,12801,13981,15841,29341,41041,46657,52633,63973,68101,75361,101101,113201,115921,126217,137149,162401,172081,188461,252601 ⋆ Pseudoprimes to bases 2 and 5. ● a(n) = n - th positive integer k(>1) such that 2 ^ (k - 1) = 1 (mod k) and 5 ^ (k - 1) = 1 (mod k). ●

► [A213071] 561,13833,62745,170625,360801,656601,1081353,1658385,2411025,3362601,4536441,5955873,7644225,9624825,11921001,14556081,17553393,20936265,24728025,28952001,33631521,38789913,44450505,50636625,57371601 ⋆ 3 * n * (9n + 2) * (18n - 1), where n runs through the odd numbers 1, 3, 5,... ● a(n) = 3888n ^ 3 - 5508n ^ 2 + 2580n - 399. - _ Charles R Greathouse IV _ , Oct 01 2012 ●

► [A083736] 561,29341,46657,75361,115921,162401,252601,294409,314821,334153,340561,399001,410041,488881,512461,530881,552721,656601,658801,710533,721801,852841,1024651,1141141,1152271 ⋆ Pseudoprimes to bases 2,5 and 7. ● a(n) = n - th positive integer k(>1) such that 2 ^ (k - 1) = 1 (mod k), 5 ^ (k - 1) = 1 (mod k) and 7 ^ (k - 1) = 1 (mod k). ●

► [A076465] 1,571,12938,115270,630755,2543401,8307796,23249388,57792165,130790935,274285726,540036146,1008233863,1798831685,3085968040,5116005976,8229746121,12889413363,19711057330,29503047070,43311380651,62472570721,88674907388,124028940100 ⋆ Sum of squares of numbers that can be written as t * n + u * (n + 1) for nonnegative integers t,u in exactly n ways. ● a(n) = n * (n + 1) * (6 * n ^ 6 + 12 * n ^ 5 - 5 * n ^ 4 - 16 * n ^ 3 + 5 * n + 1) / 6. ● a(1)=1, a(2)=571, a(3)=12938, a(4)=115270, a(5)=630755, a(6)=2543401, a(7)=8307796, a(8)=23249388, a(9)=57792165, a(n)=9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9). - _ Harvey P. Dale _ , Sep 05 2015 ●

► [A158371] 574,2300,5178,9208,14390,20724,28210,36848,46638,57580,69674,82920,97318,112868,129570,147424,166430,186588,207898,230360,253974,278740,304658,331728,359950 ⋆ 576n ^ 2 - 2n. ● a(1)=574, a(2)=2300, a(3)=5178, a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). (End) ●

► [A158372] 575,1151,1727,2303,2879,3455,4031,4607,5183,5759,6335,6911,7487,8063,8639,9215,9791,10367,10943,11519,12095,12671,13247,13823,14399 ⋆ 576n - 1. ● a(n) = 2 * a(n - 1) - a(n - 2). ●

► [A281242] 0,576,1920,3264,5376,12096,19584,31680,70656,114240,184704,411840,665856,1076544,2400384,3880896,6274560,13990464,22619520,36570816,81542400,131836224,213150336,475263936,768397824 ⋆ Solutions y to the negative Pell equation y ^ 2 = 72 * x ^ 2 - 1331712 with x,y >= 0. ● a(n) = 6 * a(n - 3) - a(n - 6) for n>6. ●

► [A325475] 0,576,2304,5184,9216,14400,20736,28224,36864,46656,57600,69696,82944,97344,112896,129600,147456,166464,186624,207936,230400,254016,278784,304704,331776 ⋆ a(n) = (24 * n) ^ 2. ● a(n) = 4 * (16 * n * 9 * n). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>2. ●

► [A188787] 0,576,8928,41984,125840,296064,597632,1084928,1821744,2881280,4346144,6308352,8869328,12139904,16240320,21300224,27458672,34864128,43674464,54056960,66188304,80254592,96451328,114983424,136065200 ⋆ Number of 4 - step self - avoiding walks on an n X n X n X n 4 - cube summed over all starting positions. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>7. ●

► [A354021] 0,0,0,0,576,21076,296296,2475473,14739153,68943381,268880381,909450751,2742417535,7522650135,19058554515,45123156390,100771975590,213877057086,434042943246,846542846578,1593528150578 ⋆ a(n) = Sum _{ 1 <= i < j < k < m <= n } (m * k * j * i) ^ 2. ● a(n) = Sum _{ m=4..n } Sum _{ k=3..m - 1 } Sum _{ j=2..k - 1 } Sum _{ i=1..j - 1 } (m * k * j * i) ^ 2. ● a(n) = n * (n + 1) * (n - 1) * (n - 2) * (n - 3) * (2 * n + 1) * (2 * n - 1) * (2 * n - 3) * (2 * n - 5) * (5 * n + 7) * (35 * n ^ 2 + 98 * n + 72) / 5443200. ● a(n) = binomial(2 * n + 2,9) * (5 * n + 7) * (35 * n ^ 2 + 98 * n + 72) / (5! * 4). ●

► [A158370] 577,1153,1729,2305,2881,3457,4033,4609,5185,5761,6337,6913,7489,8065,8641,9217,9793,10369,10945,11521,12097,12673,13249,13825,14401 ⋆ 576n + 1. ● a(n) = 2 * a(n - 1) - a(n - 2). ●

► [A154514] 577,2449,5617,10081,15841,22897,31249,40897,51841,64081,77617,92449,108577,126001,144721,164737,186049,208657,232561,257761,284257,312049,341137,371521,403201 ⋆ a(n) = 648 * n ^ 2 - 72 * n + 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Jan 30 2012 ●

► [A157264] 577,15841,51841,108577,186049,284257,403201,542881,703297,884449,1086337,1308961,1552321,1816417,2101249,2406817,2733121,3080161,3447937,3836449,4245697,4675681,5126401,5597857,6090049 ⋆ a(n) = 10368 * n ^ 2 - 15840 * n + 6049. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Jan 27 2012 ●

► [A201046] 577,17981,182349,1042167,4211559,13497523,36644243,87831605,191065045,384593857,726495089,1301560155,2229621291,3675454983,5860399495,9075823625,13698583817,20208606757,29208734581,41446969823,57841257231 ⋆ Number of - n..n arrays of 7 elements with adjacent element differences also in - n..n. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. ●

► [A158369] 578,2308,5190,9224,14410,20748,28238,36880,46674,57620,69718,82968,97370,112924,129630,147488,166498,186660,207974,230440,254058,278828,304750,331824,360050 ⋆ 576n ^ 2 + 2n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A127694] 580,1175,2070,3325,5000,7155,9850,13145,17100,21775,27230,33525,40720,48875,58050,68305,79700,92295,106150,121325,137880,155875,175370,196425,219100 ⋆ Absolute value of coefficient of x ^ 3 in polynomial whose zeros are 5 consecutive integers starting with the n - th integer. ● a(n) = 5 * (n + 3) * (2 * n ^ 2 + 12 * n + 15). G.f.: 5 * x * (116 - 229 * x + 170 * x ^ 2 - 45 * x ^ 3) / (1 - x) ^ 4. [Colin Barker, Mar 28 2012] ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Vincenzo Librandi _ , Jun 28 2012 ●

► [A122694] 0,583,820,2283,5440,6783,15220,33579,41400,90559,197556,243139,529656,1153279,1418956,3088899,6723640,8272119,18005260,39190083,48215280,104944183,228418380,281021083,611661360 ⋆ Nonnegative values x of solutions (x, y) to the Diophantine equation x ^ 2 + (x + 761) ^ 2 = y ^ 2. ● a(n) = 6 * a (n - 3) - a(n - 6) + 1522 for n > 6; a(1)=0, a(2)=583, a(3)=820, a(4)=2283, a(5)=5440, a(6)=6783. ●

► [A187050] 0,0,0,584,6952,29500,79088,162320,281320,435436,623508,845084,1100164,1388748,1710836,2066428,2455524,2878124,3334228,3823836,4346948,4903564,5493684,6117308,6774436 ⋆ Number of 6 - step one or two space at a time b ishop's tours on an n X n board summed over all starting positions. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>12. ●

► [A024380] 585,14389,122119,633619,2441334,7680414,20836578,50469738,111748263,230015643,445638193,820409317,1445812732,2453473932,4028156052,6423683172,9982200981,15157211601,22540846251,32895866311,47192910226,66653530570 ⋆ 4th elementary symmetric function of the first n + 3 positive integers co ngruent to 1 mod 4. ● a(n) = n * (n + 1) * (n + 2) * (n + 3) * (240 * n ^ 4 + 1920 * n ^ 3 + 4760 * n ^ 2 + 3072 * n - 1217) / 360. G.f.: x * (585 + 9124 * x + 13678 * x ^ 2 + 3412 * x ^ 3 + 81 * x ^ 4) / (1 - x) ^ 9 . - _ R. J. Mathar _ , Sep 15 2009 ●

► [A352979] 0,1,585,28800,505280,4951530,33209946,170320080,714724560,2566030995,8130545995,23253835176,61054704360,149085989780,342048076020,743408003520,1540821690816,3062326169925,5862986735085,10855192630480,19500255870480 ⋆ a(n) = Sum _{ k=1..n } Sum _{ j=1..k } Sum _{ i=1..j } (k * j * i) ^ 3. ● a(n) = n ^ 2 * (n + 1) ^ 2 * (n + 2) * (n + 3) * (35 * n ^ 6 + 205 * n ^ 5 + 263 * n ^ 4 - 221 * n ^ 3 - 214 * n ^ 2 + 324 * n - 112) / 13440. ● a(n) = binomial(n + 3,4) * binomial(n + 1,2) * (35 * n ^ 6 + 205 * n ^ 5 + 263 * n ^ 4 - 221 * n ^ 3 - 214 * n ^ 2 + 324 * n - 112) / 280. ●

► [A230716] 588,1029,1323,2888,4704,8232,8281,9747,10584,15876,23104,27783,33124,35113,35721,37632,47089,65856,66248,73500,74529,77976,84672,103544,114075 ⋆ Numbers whose square is both a sum and a difference of two positive cub es. ● a(n) ^ 2 = a ^ 3 + b ^ 3 = c ^ 3 - d ^ 3 for some natural numbers a, b, c, d. ●

► [A211852] 588,2013,5486,12713,26163,49210,86275,142968,226230,344475,507732,727787,1018325,1395072,1875937,2481154,3233424,4158057,5283114,6639549,8261351,10185686,12453039,15107356,18196186 ⋆ Number of nonnegative inte ger arrays of length 2n + 7 with new values 0 upwards introduced in order, no three adjacent elements all unequal, and containing the value n + 1. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) f or n>6. ●

► [A178973] 0,0,0,0,0,0,588,3328,9720,27600,59048,124992,226460,408464,666900,1086464,1650768,2505168,3610000,5198400,7191828,9945232,13320220,17835264,23265000 ⋆ Number of ways to place 3 nonattacking amazons (superqueens) o n an n X n toroidal board. ● a(n) = 1 / 3 * n ^ 2 * (n ^ 4 / 2 - 6 * n ^ 3 + 61 * n ^ 2 / 4 + 42 * n - 285 / 2 + (3 * n ^ 2 / 4 - 6 * n + 21 / 2) * (- 1) ^ n), n>= 7. ●

► [A156835] 593,595,623,637,697,707,733,833,965,1015,1037,1225,1295,1547,1585,1973,2023,2443,2597,3145,3227,3433,4165,5057,5383 ⋆ Positive numbers y such that y ^ 2 is of the form x ^ 2 + (x + 833) ^ 2 with integer x. ● a(n) = 6 * a(n - 15) - a(n - 30) for n > 30; a(1) = 593, a(2) = 595, a(3) = 623, a(4) = 637, a(5) = 697, a(6) = 707, a(7) = 733, a(8) = 833, a(9) = 965, a(10) = 1015, a(11) = 1037, a(12) = 1225, a(13) = 1295, a(14) = 1547, a(15) = 1585, a(16) = 1973, a(17) = 2023, a(18) = 2443, a(19) = 2597, a(20) = 3145, a(21) = 3227, a(22) = 3433, a(23) = 4165, a(24) = 5057, a(25) = 5383, a(26) = 5525, a(27) = 6713, a(28) = 7147, a(29) = 8687, a(30) = 8917. ●

► [A200434] 0,594,9898,67852,293464,955602,2567334,6003816,12643728,24534258,44579634,76753204,126333064,200161234,306926382,457470096,665116704,946026642,1319573370,1808743836,2440562488,3246538834,4263138550 ⋆ Number o f - n..n arrays x(0..6) of 7 elements with zero sum and no two or three adjacent elements summing to zero. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

► [A157918] 600,2475,5600,9975,15600,22475,30600,39975,50600,62475,75600,89975,105600,122475,140600,159975,180600,202475,225600,249975,275600,302475,330600,359975,390600 ⋆ a(n) = 625 * n ^ 2 - 25. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). (End) ●

► [A092183] 1,600,4983,19468,53505,119676,233695,414408,683793,1066960,1592151,2290740,3197233,4349268,5787615,7556176,9701985,12275208,15329143,18920220,23108001,27955180,33527583,39894168,47127025 ⋆ Figurate numbers based on the 120 - cell (4 - D polytope with Schlaefli symbol { 5,3,3 }). ● a(n) = n * ((261 * n ^ 3) - (504 * n ^ 2) + (283 * n) - 38) / 2. ● a(n) = C(n + 3,4) + 595 C(n + 2,4) + 1993 C(n + 1,4) + 543 C(n,4). ● a(n) = + 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). G.f.: x * (1 + 595 * x + 1993 * x ^ 2 + 543 * x ^ 3) / (1 - x) ^ 5. [_ R. J. Mathar _ , Jun 21 2010] ●

► [A362323] 1,1,1,1,1,601,4321,17641,53761,136081,181742401,2415576241,17245198081,87699217321,355981385761,736792782125401,142870108456857 61,1454355898332432 1,10372102641693676 81,57942531720810590 41,162463790998014477 69601 ⋆ a(n) = n! * Sum _{ k=0..floor(n / 5) } n ^ k / (k! * (n - 5 * k)!). ● a(n) = n! * [x ^ n] exp(x + n * x ^ 5). ●

► [A302559] 1,601,5584,25052,78557,198233,431928,846336,1530129,2597089,4189240,6479980,9677213,14026481,19814096,27370272,37072257,49347465,64676608,83596828,106704829,134660009,168187592,208081760,255208785 ⋆ Partial sum s of A092183. ● a(n) = n * (584 - 105 * n - 2120 * n ^ 2 + 135 * n ^ 3 + 1566 * n ^ 4) / 60. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. (End) ●

► [A177685] 603,4731,58834,254204,1032696,4162544,16713696,66981824,268181376,1073233664,4293950976,17177836544,68715411456,274869776384,1099495366656,4398013988864,17592120999936,70368614088704 ⋆ a(n) = 6 * a(n - 1) - 8 * a (n - 2) for n > 4; a(0)=603, a(1)=4731, a(2)=58834, a(3)=254204, a(4)=1032696. ● a(n) = 4 ^ (n + 6) - 1985 * 2 ^ (n - 1) for n > 2. ●

► [A321269] 0,0,0,0,0,0,604,7296,54746,330068,1756878,8641800,40298572,180969752,790697160,3385019968,14270283414,59457742524,245507935018,1006678811272,4105447763032,16672235476128,67482738851220,272439143364672,1097660274098482 ⋆ Number of permutations on [n] whose up - down signature has nonn egative partial sums and which have exactly three descents. ● a(n) = 4 ^ n - 4 * n * 3 ^ (n - 1) + 9 * binomial(n,2) * 2 ^ (n - 2) - binomial(n,3) * 2 ^ (n - 2) - 2 ^ n - 8 * binomial(n,3) - 22 * binomial(n,5) + 16 * binomial(n,4) + 2 * n for n >3. ● a(n) = 24 * a(n - 1) - 260 * a(n - 2) + 1684 * a(n - 3) - 7278 * a(n - 4) + 22172 * a(n - 5) - 49004 * a(n - 6) + 79596 * a(n - 7) - 95065 * a(n - 8) + 82508 * a(n - 9) - 50616 * a(n - 10) + 20800 * a(n - 11) - 5136 * a(n - 12) + 576 * a(n - 13) for n>16. ●

► [A120719] 0,610,1596,16500,97410,707560,4744080,32791746,224035980,1537454500,10532923170,72206679000,494878036896,3392033285410,23249109634140,159352376426580,1092215843858370,7486162932788296,51310913160533040 ⋆ Ex pansion of 2 * x ^ 2 * (305 - 727 * x - 315 * x ^ 2 + 60 * x ^ 3) / ((1 - x) * (1 - 7 * x + x ^ 2) * (1 + 3 * x + x ^ 2)). ● a(n) = - 120 * [n=0] + (2 / 25) * (677 + (2 / 3) * (37 * Fibonacci(4 * n + 4) + 28 * Fibonacci(4 * n)) + (- 1) ^ n * (749 * Fibonacci(2 * n + 2) - 996 * Fibonacci(2 * n))). - _ G. C. Greubel _ , Jul 20 2023 ●

► [A159641] 613,647,685,2993,3235,3497,17345,18763,20297,101077,109343,118285,589117,637295,689413,3433625,3714427,4018193,20012633,21649267,23419745,116642173,126181175,136500277,679840405 ⋆ Positive numbers y such that y ^ 2 is of the form x ^ 2 + (x + 647) ^ 2 with integer x. ● a(n) = 6 * a(n - 3) - a (n - 6) for n > 6; a(1)=613, a(2)=647, a(3)=685, a(4)=2993, a(5)=3235, a(6)=3497. ●

► [A210887] 619,994,1369,3897,4272,4648,7551,7926,8301,11204,11579,11955,14858,15233,15608,18511,18886,19262,22165,22540,22915,25818,26193,26569,29472 ⋆ Number of days after Mar 01 00 such that the date written in the format DD.M M.YY is palindromic. ● a(n) = a(n - 1) + a(n - 6) - a(n - 7) for n > 10. ●

► [A224432] 622,28413,426343,4177227,32549395,220006179,1351039555,7748170371,42234607363,221419948035,1125752748547,5584044867075,27143513179651,129736439305731,611327539426819,2845765137102339,13108587035424259,5983126715339267 ⋆ The hyper - Wiener index of the dendrimer D _ 2[n], defined pi ctorially in the A. R. Ashrafi et al. reference. ● a(n) = - 2557 - 76735 * 2 ^ n - 9768 * 2 ^ n * n - 44640 * 4 ^ n * n + 79914 * 4 ^ n + 14400 * 4 ^ n * n ^ 2 + 2640 * 2 ^ n * n ^ 2. ●

► [A158373] 623,2496,5619,9992,15615,22488,30611,39984,50607,62480,75603,89976,105599,122472,140595,159968,180591,202464,225587,249960,275583,302456,330579,359952,390575 ⋆ 625n ^ 2 - 2n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A158374] 624,1249,1874,2499,3124,3749,4374,4999,5624,6249,6874,7499,8124,8749,9374,9999,10624,11249,11874,12499,13124,13749,14374,14999,15624 ⋆ 625 n - 1. ● a(n) = 2 * a(n - 1) - a(n - 2). ●

► [A184037] 625,637,658,700,778,934,1234,1834,3010,5362,10018,19330,37858,74914,148834,296674,591970,1182562,2362978,4723810,9443938,18884194,37761634,75516514,151020130 ⋆ 1 / 16 the number of (n + 1) X 8 0..3 arrays with all 2 X 2 subblocks having the same four values. ● a(n) = 9 * 2 ^ (n / 2 - 1) + 9 * 2 ^ (n - 1) + 610 for n even. ● a(n) = 9 * 2 ^ (n - 1) + 3 * 2 ^ ((n + 1) / 2) + 610 for n odd. ●

► [A016972] 625,14641,83521,279841,707281,1500625,2825761,4879681,7890481,12117361,17850625,25411681,35153041,47458321,62742241,81450625,104060401,131079601,163047361,200533921,244140625,294499921,352275361,418161601,494884401 ⋆ a(n) = (6 * n + 5) ^ 4. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n > 4. ●

► [A017128] 625,28561,194481,707281,1874161,4100625,7890481,13845841,22667121,35153041,52200625,74805201,104060401,141158161,187388721,244140625,312900721,395254161,492884401,607573201 ⋆ a(n) = (8 * n + 5) ^ 4. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5); a(0)=625, a(1)=28561, a(2)=194481, a(3)=707281, a(4)=1874161. - _ Harvey P. Dale _ , Dec 17 2013 ●

► [A017224] 625,38416,279841,1048576,2825761,6250000,12117361,21381376,35153041,54700816,81450625,116985856,163047361,221533456,294499921,384160000,492884401,623201296,777796321,959512576 ⋆ a(n) = (9 * n + 5) ^ 4. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ●

► [A120320] 625,1500625,9150625,17850625,37515625,52200625,73530625,81450625,174900625,442050625,577200625,1171350625,1766100625,1838265625,2136750625,3049800625,4931550625,7573350625,8653650625,12594450625 ⋆ RF(5): refa ctorable numbers with smallest prime factor 5. ● a(n) = odd square, 5 is the s mallest prime factor and refactorable. ●

► [A158383] 626,1251,1876,2501,3126,3751,4376,5001,5626,6251,6876,7501,8126,8751,9376,10001,10626,11251,11876,12501,13126,13751,14376,15001,15626 ⋆ 625n + 1. ● a(n) = 2 * a(n - 1) - a(n - 2). ●

► [A129974] 0,627,1128,2811,6188,9027,18740,38375,54908,111503,225936,322295,652152,1319115,1880736,3803283,7690628,10963995,22169420,44826527,63905108,129215111,261270408,372468527,753123120 ⋆ Nonnegative values x of solutio ns (x, y) to the Diophantine equation x ^ 2 + (x + 937) ^ 2 = y ^ 2. ● a(n) = 6 * a(n - 3) - a(n - 6) + 1874 for n > 6; a(1)=0, a(2)=627, a(3)=1128, a(4)=2811, a(5)=6188, a(6)=9027. ●

► [A158382] 627,2504,5631,10008,15635,22512,30639,40016,50643,62520,75647,90024,105651,122528,140655,160032,180659,202536,225663,250040,275667,302544,3

30671,360048,390675 ⋆ a(n) = 625 * n ^ 2 + 2 * n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A177421] 629,6585,26259,221931,1917027,18285939,125792217,703932681,7131271077,26172260445,103884128445,413926687101,1652487095037,6603509073405,26401157680125,105578873493501,422263979519997,1688952889171965 ⋆ a(n) = 6 * a(n - 1) - 8 * a(n - 2) - 9 for n > 10; a(0)=629, a(1)=6585, a(2)=26259, a(3)=221931, a(4)=1917027, a(5)=18285939, a(6)=125792217, a(7)=703932681, a(8)=7131271077, a(9)=26172260445, a(10)=103884128445. ● a(n) = 6 * 4 ^ (n + 7) + 12576771 * 2 ^ (n - 4) - 3 for n > 8. ●

▶ [A177684] 633,4809,46041,277767,1079823,4256799,16902207,67358847,268935423,1074741759,4296967167,17183868927,68727476223,274893905919,1099543625727,4398110507007,17592314036223,70369000161279 ⋆ a(n) = 6 * a(n - 1) - 8 * a(n - 2) - 3 for n > 4; a(0)=633, a(1)=4809, a(2)=46041, a(3)=277767, a(4)=1079823. ● a(n) = 4 ^ (n + 6) + 1953 * 2 ^ n - 1 for n > 2. ● a(0)=633, a(1)=4809), a(2)=46041, a(3)=277767, a(4)=1079823, a(5)=4256799, a(n)=7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3). - _ Harvey P. Dale _ , May 03 2012 ●

▶ [A253506] 636,1196,2088,3400,5136,7396,10236,13748,18024,23168,29292,36516,44968,54784,66108,79092,93896,110688,129644,150948,174792,201376,230908,263604,299688 ⋆ Number of (n + 2) X (4 + 2) 0..1 arrays with every 2 X 2 and 3 X 3 subblock diagonal maximum minus antidiagonal minimum nondecreasing horizontally and vertically. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>11. ●

▶ [A202048] 636,1968,4980,11016,22092,41088,71964,120000,192060,296880,445380,651000,930060,1302144,1790508,2422512,3230076,4250160,5525268,7103976,9041484,11400192,14250300,17670432,21748284 ⋆ Number of (n + 2) X 6 binary arrays avoiding patterns 001 and 110 in rows and columns. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. ●

▶ [A264449] 0,638,1656,3162,5280,8151,11934,16807,22968,30636,40052,51480,65208,81549,100842,123453,149776,180234,215280,255398,301104,352947,411510,477411,551304 ⋆ a(n) = n * (n + 7) * (n + 14) * (n + 21) * (n + 28) / 120. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6), for n>5. - _ Vincenzo Librandi _ , Nov 16 2015 ●

▶ [A250661] 639,1150,1789,2556,3451,4474,5625,6904,8311,9846,11509,13300,15219,17266,19441,21744,24175,26734,29421,32236,35179,38250,41449,44776,48231 ⋆ Number of (7 + 1) X (n + 1) 0..1 arrays with nondecreasing x(i,j) - x(i,j - 1) in the i direction and nondecreasing min(x(i,j),x(i - 1,j)) in the j direction. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>3. ●

▶ [A178975] 0,0,0,0,0,0,0,640,7290,123640,640574,3869280,12950132,47022360,123467040,340840960,759697190,1758672648,3494388306,7150739360,13041285516,24354594440,41566378136,72345297024,117101090250 ⋆ Number of ways to place 5 nonattacking amazons (superqueens) on an n X n toroidal board. ● a(n) = n ^ 2 / 5 * (1 / 24 * n ^ 8 - 5 / 3 * n ^ 7 + 635 / 24 * n ^ 6 - 1145 / 6 * n ^ 5 + 4139 / 16 * n ^ 4 + 10985 / 2 * n ^ 3 - 916385 / 24 * n ^ 2 + 273775 / 3 * n - 128930 / 3 + (5 / 24 * n ^ 6 - 15 / 2 * n ^ 5 + 5315 / 48 * n ^ 4 - 1675 / 2 * n ^ 3 + 25855 / 8 * n ^ 2 - 4935 * n - 2290 / 3) * (- 1) ^ n + (45 / 2 * n ^ 2 - 390 * n + 1630) * cos(n * Pi / 2) + 400 / 3 * cos(n * Pi / 3) + (40 / 3 * n ^ 2 - 640 / 3 * n + 2480 / 3) * cos(2 * n * Pi / 3) + 16 * cos(4 * n * Pi / 5) + 16 * cos(8 * n * Pi / 5)), n>=15. ●

▶ [A170774] 0,1,640,32805,557056,5078125,31072896,144120025,545259520,1764915561,5050000000,13075891741,31173672960,69337111285,145365222016,289606640625,551903297536,1011484828945,1790743593600,3074024910421,5132800000000,8358851918781 ⋆ a(n) = n ^ 8 * (n ^ 2 + 1) / 2. ● a(n) = 11 * a(n - 1) - 55 * a(n - 2) + 165 * a(n - 3) - 330 * a(n - 4) + 462 * a(n - 5) - 462 * a(n - 6) + 330 * a(n - 7) - 165 * a(n - 8) + 55 * a(n - 9) - 11 * a(n - 10) + a(n - 11) for n>10. ●

▶ [A290029] 0,0,0,640,34720,533760,4735360,30822400,164183040,759521280,3163607040,12148899840,43724595200,149243494400,487404503040,1533406085120,4672095518720,13845292646400,40043324375040,113352785264640,314803035832320,859445521285120 ⋆ Number of 6 - cycles in the n - halved cube graph. ● a(n) = 2 ^ n * binomial(n, 4) * (81 * n ^ 2 - 552 * n + 952). ● a(n) = 14 * a(n - 1) - 84 * a(n - 2) + 280 * a(n - 3) - 560 * a(n - 4) + 672 * a(n - 5) - 448 * a(n - 6) + 128 * a(n - 7). ●

▶ [A160203] 641,809,1105,2741,4045,5989,15805,23461,34829,92089,136721,202985,536729,796865,1183081,3128285,4644469,6895501,18232981,27069949,40189925,106269601,157775225,234244049,619384625 ⋆ Positive numbers y such that y ^ 2 is of the form x ^ 2 + (x + 809) ^ 2 with integer x. ● a(n) = 6 * a(n - 3) - a(n - 6) for n > 6; a(1)=641, a(2)=809, a(3)=1105, a(4)=2741, a(5)=4045, a(6)=5989. ●

▶ [A117129] 641,1213,2617,2957,3727,5443,9283,17359,33829,66173,131303,264763,494743,957547,1888157,3753647,7490797,14961157,29899357,59773871,119551489,239106347,478234723,956607929,1913366111 ⋆ Primes not occurring as |differences| in Cald's sequence A006509. ● a(n) = prime(A112877[n] - 1). ●

▶ [A304607] 644,1148,2156,4172,8204,16268,32396,64652,129164,258188,516236,1032332,2064524,4128908,8257676,16515212,33030284,66060428,132120716,264241292,528482444,1056964748,2113929356,4227858572,8455717004 ⋆ a(n) = 252 * 2 ^ n + 140 (n>=1). ● a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n > 2. (End) ●

▶ [A157432] 648,712,776,840,904,968,1032,1096,1160,1224,1288,1352,1416,1480,1544,1608,1672,1736,1800,1864,1928,1992,2056,2120,2184 ⋆ 64n + 584. ● a(n) = 2 * a(n - 1) - a(n - 2). ●

▶ [A337313] 0,0,648,3888,16200,58320,195048,625968,1960200,6045840,18468648,56068848,169533000,511252560,1539065448,4627812528,13904670600,41756478480,125354369448,376232977008,1129038669000,3387795483600,10164745404648,30496954122288,91496298184200 ⋆ a(n) is the number of n - digit positive integers with exactly three distinct base 10 digits. ● a(n) = 6 * a(n - 1) - 11 * a(n - 2) + 6 * a(n - 3) for n > 3. ● a(n) = 324 * (3 ^ (n - 1) - 2 ^ n + 1). ●

▶ [A035755] 1,648,70416,3116952,76117536,1202893992,13591279920,117561917880,818017823808,4752575891144,23727649169232,104129375982552,409027707560544,1459400559786216,4787137642562928,14581451741758968,41589736720488576,111867495074401032,285475524009208720 ⋆ Coordination sequence for C _ 18 lattice. ● a(n) = [x ^ (2n)] ((1 + x) / (1 - x)) ^ 18. ●

▶ [A157915] 650,2525,5650,10025,15650,22525,30650,40025,50650,62525,75650,90025,105650,122525,140650,160025,180650,202525,225650,250025,275650,302525,330650,360025,390650 ⋆ a(n) = 625 * n ^ 2 + 25. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). (End) ●

▶ [A158639] 650,2678,6058,10790,16874,24310,33098,43238,54730,67574,81770,97318,114218,132470,152074,173030,195338,218998,244010,270374,298090,327158,357578,389350,422474 ⋆ a(n) = 676 * n ^ 2 - 26. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A257827] 652,724,788,1012,1828,2372,2596,2908,6164,6908,7564,9836,17996,23404,25628,28724,60988,68356,74852,97348,178132,231668,253684,284332,603716 ⋆ Positive integers whose square is the sum of 96 consecutive squares. ● a(n) = 10 * a(n - 8) - a(n - 16). ●

▶ [A065759] 0,655,1461,1642,2361,3442,6550,14610,16420,23610,34420,65500,146100,164200,236100,344200,655000,1461000,1642000,2361000,3442000,6550000,14610000,16420000,23610000 ⋆ For a number k of length L, let f(k) be the sum of the products of the first i digits of k multiplied by the last L - i digits, for i from 1 to L - 1, e.g., f(1234) = 1 * 234 + 12 * 34 + 123 * 4 = 1134. Sequence gives k such that f(k) = k. ● a(n) = 10 * a(n - 5) for n>5. ●

▶ [A194653] 0,0,0,0,0,655,26952,309869,1998752,9124848,33065040,101473009,274593648,673080928,1522931256,3224953725,6458355776,12330557912,22588294464,39908439249,68290845520,113579839128,184145882536,291764365485,452734505952,689287992800 ⋆ Number of ways to place 5 nonattacking kings on an n X n cylindrical chessboard. ● a(n) = 1 / 120 * n * (n ^ 9 - 90 * n ^ 7 + 60 * n ^ 6 + 3155 * n ^ 5 - 3900 * n ^ 4 - 50910 * n ^ 3 + 86580 * n ^ 2 + 318864 * n - 656160), n>=6. ●

▶ [A088894] 0,1,656,64895,2263323,40728358,464160877,3788798018,23985732786,124343403711,548683300726,2120490369833,7334132330405,23085114905772,67009386720139,181293280189204,461148470725844 ⋆ Polynexus numbers of order 16. ● a(n) = ((n ^ 16 - (n - 1) ^ 16) - (n ^ 4 - (n - 1) ^ 4)) / 65520 = ((n ^ 16 - (n - 1) ^ 16) - (n ^ 4 - (n - 1) ^ 4)) / (2 ^ 16 - 2 ^ 4). ●

▶ [A023294] 659,2549,5189,6269,7229,7949,9209,11579,16139,18089,22739,25589,26099,26339,29009,30689,40289,51719,55799,59669,60689,61379,63599,69959,70229 ⋆ Primes that remain prime through 3 iterations of function f(x) = 8x + 7. ● a(n) == 29 (mod 30). - _ John Cerkan _ , Sep 23 2016 ●

▶ [A211839] 664,2621,9068,27312,72840,175475,388512,801674,1558833,2881546,5099561,8689553,14323455,22927854,35756027,54474297,81264494,118944411,171108250,242289158,338146058,465677085,633462042,851936396,1133699439 ⋆ Number of nonnegative integer arrays of length n + 6 with new values 0 upwards introduced in order, no three adjacent elements equal, and containing the value n + 1. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>9. ●

▶ [A221014] 666,10854,91062,586278,3293478,17076582,84106854,399946086,1854359910,8436473190,37822942566,167600700774,735637781862,3203485138278,13857655946598,59605426371942,255120762469734,1087278900313446,4616298106453350,19533920370425190 ⋆ The Wiener index of the dendrimer G _ n , defined pictorially in the Ashrafi - Shabani - Diudea reference. ● a(n) = - 666 + 2 ^ n * (- 270 * n + 2340) + 4 ^ n * (972 * n - 1674). ●

▶ [A227490] 666,35325,412443,3099663,19013175,104225031,533102247,2604327399,12319287399,56913753447,258258898791,1155566158695,5112617020263,22412337970023,97497752214375,421386451835751,1811131262622567,7746874238425959 ⋆ The Wiener index of the nanostar dendrimer D _ n, defined pictorially in the Ghorbani et al. references and recursively in the Deutsch et al. reference. ● a(n) = - 9369 + 56205 * 2 ^ (n - 1) - 75411 * 2 ^ (2n - 2) + 29241 * 2 ^ (2n - 2) * n. ● a(n) = 11 * a(n - 1) - 42 * a(n - 2) + 64 * a(n - 3) - 32 * a(n - 4) for n>4. - _ Colin Barker _ , Jun 15 2018 ●

▶ [A328551] 0,0,0,666,36975,437517,2667375,11225145,37206936,104285790,257991042,579308220,1203756165,2347234131,4340067705,7670818467,13041558390,21436446060,34205577876,53166223470,80723690667,120014201385,175072295955,251025419421 ⋆ a(n) is the Severi degree for curves of degree n and cogenus 4 . ● a(n) = - 8865 + (18057 / 4) * n + (37881 / 8) * n ^ 2 - 2529 * n ^ 3 - 642 * n ^ 4 + (1809 / 4) * n ^ 5 - 27 * n ^ 7 + (27 / 8) * n ^ 8 for n > 2. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>11. ● a(2 + 3k) == 3 (mod 9), all other a(n) == 0 (mod 9). Periods mod 5, 7, 2 (of length 5, 7, 8): a(3..7 + 5k) == (0, 1, 0, 2, 0) (mod 5). a(3..9 + 7k) == (0, 1, 1, 3, 4, 1, 4) (mod 7). If 1 <= m <= 8, then a(m + 8k) is odd iff m > 4. - _ M. F. Hasler _ , Oct 30 2019 ●

▶ [A067875] 668,1964,2434,3248,5152,8400 ⋆ One player's total legal chess moves by piece type on standard chessboard. ● a(6) = a(4) + a(5) (Queen moves equal sum of Bishop and Rook moves). Generalizing all terms for n X n chessboards other than 8 x 8 requires defining how many pieces and how many types of pieces are originally on the board and / or can be promoted to, especially because of the way captures are counted. ●

▶ [A157363] 672,1358,2044,2730,3416,4102,4788,5474,6160,6846,7532,8218,8904,9590,10276,10962,11648,12334,13020,13706,14392,15078,15764,16450,17136 ⋆ 686n - 14. ● a(n) = 2 * a(n - 1) - a(n - 2). ●

▶ [A297123] 1,672,33727,359536,1967109,7405696,21949027,55092192,122381161,247574944,465140391,823079632,1386090157,2239057536,3490880779,5278630336,7772038737,11178323872,15747344911,21777090864,29619501781,39686622592,52457089587 ⋆ a(n) = 462 * n ^ 6 + 330 * n ^ 4 - 165 * n ^ 3 + 55 * n ^ 2 - 11 * n + 1. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>6. ●

▶ [A160209] 673,937,1685,2353,4685,9437,13445,27173,54937,78317,158353,320185,456457,922945,1866173,2660425,5379317,10876853,15506093,31352957,63394945,90376133,182738425,369492817,526750705 ⋆ Positive numbers y such that y ^ 2 is of the form x ^ 2 + (x + 937) ^ 2 with integer x. ● a(n) = 6 * a(n - 3) - a(n - 6) for n > 6; a(1)=673, a(2)=937, a(3)=1685, a(4)=2353, a(5)=4685, a(6)=9437. ●

▶ [A158392] 674,2700,6078,10808,16890,24324,33110,43248,54738,67580,81774,97320,114218,132468,152070,173024,195330,218988,243998,270360,298074,327140,3

57558,389328,422450 ⋆ 676n ^ 2 - 2n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A158393] 675,1351,2027,2703,3379,4055,4731,5407,6083,6759,7435,8111,8787,9463,10139,10815,11491,12167,12843,13519,14195,14871,15547,16223,16899 ⋆ a(n) = 676 * n - 1. ● a(n) = 2 * a(n - 1) - a(n - 2). ●

▶ [A239608] 0,1,676,9801,59536,235225,715716,1825201,4096576,8346321,15760900,27994681,47279376,76545001,119552356,181037025,266864896,384199201,541679076,749609641,1020163600,1367594361,1808460676,2361862801,3049690176 ⋆ Sin(arcsin(n) - 2 * arccos(n)) ^ 2. ● a(n) = n ^ 2 * (3 - 4 * n ^ 2) ^ 2. G.f.: - x * (x + 1) * (x ^ 4 + 668 * x ^ 3 + 4422 * x ^ 2 + 668 * x + 1) / (x - 1) ^ 7. - _ Colin Barker _ , May 24 2014 ●

▶ [A159893] 677,727,785,3277,3635,4033,18985,21083,23413,110633,122863,136445,644813,716095,795257,3758245,4173707,4635097,21904657,24326147,27015325,127669697,141783175,157456853,744113525 ⋆ Positive numbers y such that y ^ 2 is of the form x ^ 2 + (x + 727) ^ 2 with integer x. ● a(n) = 6 * a(n - 3) - a(n - 6) for n > 6; a(1)=677, a(2)=727, a(3)=785, a(4)=3277, a(5)=3635, a(6)=4033. ●

▶ [A158386] 677,1353,2029,2705,3381,4057,4733,5409,6085,6761,7437,8113,8789,9465,10141,10817,11493,12169,12845,13521,14197,14873,15549,16225,16901 ⋆ a(n) = 676 * n + 1. ● a(n) = 2 * a(n - 1) - a(n - 2). ●

▶ [A158385] 678,2708,6090,10824,16910,24348,33138,43280,54774,67620,81818,97368,114270,132524,152130,173088,195398,219060,244074,270440,298158,327228,357650,389424,422550 ⋆ a(n) = 676 * n ^ 2 + 2 * n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A200860] 0,682,1364,2046,2728,3410,4092,4774,5456,6138,6820,7502,8184,8866,9548,10230,10912,11594,12276,12958,13640,14322,15004,15686,16368 ⋆ Multiples of 682. ● a(n) = 2 * a(n - 1) - a(n - 2), a(0)=0, a(1)=682. ●

▶ [A184547] 682,2000,4837,10909,23648,49489,99872,194245,364432,660821,1160932,1981045,3291704,5338066,8466235,13156911,20067894,30087214,44398911,64563765,92617576,131189919,183646650,254259817,348409036 ⋆ Number of (n + 2) X 10 binary arrays with each 3 X 3 subblock having rows and columns in lexicographically nondecreasing order. ● a(n) = 11 * a(n - 1) - 55 * a(n - 2) + 165 * a(n - 3) - 330 * a(n - 4) + 462 * a(n - 5) - 462 * a(n - 6) + 330 * a(n - 7) - 165 * a(n - 8) + 55 * a(n - 9) - 11 * a(n - 10) + a(n - 11) for n>11. ●

▶ [A269486] 1,1,683,44287,838861,8138021,51828151,247165843,954437177,3138105961,9090909091,23775972551,57154490053,128011456717,269971011311,540609741211,1034834473201,1903994239313,3382547898907,5824512944911 ⋆ a(n) = Sum _{ j=0..10 } (- n) ^ j. ● a(n) = 11 * a(n - 1) - 55 * a(n - 2) + 165 * a(n - 3) - 330 * a(n - 4) + 462 * a(n - 5) - 462 * a(n - 6) + 330 * a(n - 7) - 165 * a(n - 8) + 55 * a(n - 9) - 11 * a(n - 10) + a(n - 11). ●

▶ [A157435] 696,760,824,888,952,1016,1080,1144,1208,1272,1336,1400,1464,1528,1592,1656,1720,1784,1848,1912,1976,2040,2104,2168,2232 ⋆ 64n + 632. ● a(n) = 2 * a(n - 1) - a(n - 2). ●

▶ [A160206] 697,857,1117,3065,4285,6005,17693,24853,34913,103093,144833,203473,600865,844145,1185925,3502097,4920037,6912077,20411717,28676077,40286537,118968205,167136425,234807145,693397513 ⋆ Positive numbers y such that y ^ 2 is of the form x ^ 2 + (x + 857) ^ 2 with integer x. ● a(n) = 6 * a(n - 3) - a(n - 6) for n > 6; a(1)=697, a(2)=857, a(3)=1117, a(4)=3065, a(5)=4285, a(6)=6005. ●

▶ [A118059] 1,697,1969,3817,6241,9241,12817,16969,21697,27001,32881,39337,46369,53977,62161,70921,80257,90169,100657,111721,123361,135577,148369,161737,175681 ⋆ 288 * n ^ 2 - 168 * n - 119. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). G.f.: x * (1 + 694 * x - 119 * x ^ 2) / (1 - x) ^ 3. - _ Colin Barker _ , Jul 01 2012 ● a(n) + (a(n) + 1) + ... + (a(n) + 288n + 203)=(a(n) + 288n + 204) + ... + a(n + 1) - 1; a(n + 1) - 1=a(n) + 576n + 119. ● a(n) + (a(n) + 1) + ... + (a(n) + 288n + 203)=6(24n - 7)(24n + 5)(24n + 17); e.g., 1969 + 1970 + ... + 3036=2672670=6 * 65 * 77 * 89. ●

▶ [A157366] 700,1386,2072,2758,3444,4130,4816,5502,6188,6874,7560,8246,8932,9618,10304,10990,11676,12362,13048,13734,14420,15106,15792,16478,17164 ⋆ a(n) = 686 * n + 14. ● a(n) = 2 * a(n - 1) - a(n - 2). ●

▶ [A158655] 702,2889,6534,11637,18198,26217,35694,46629,59022,72873,88182,104949,123174,142857,163998,186597,210654,236169,263142,291573,321462,352809,385614,419877,455598 ⋆ a(n) = 729 * n ^ 2 - 27. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A305071] 702,3348,7938,14472,22950,33372,45738,60048,76302,94500,114642,136728,160758,186732,214650,244512,276318,310068,345762,383400,422982,464508,507978,553392,600750 ⋆ a(n) = 972 * n ^ 2 - 270 * n (n>=1). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>3. ●

▶ [A083735] 703,1105,2465,10585,18721,19345,29341,38503,46657,50881,75361,76627,88831,104653,115921,146611,162401,188191,213265,226801,252601,278545,286903,294409,314821 ⋆ Pseudoprimes to bases 3 and 7. ● a(n) = n - th positive integer k(>1) such that 3 ^ (k - 1) = 1 (mod k) and 7 ^ (k - 1) = 1 (mod k). ●

▶ [A027809] 715,11011,90090,520520,2382380,9189180,31039008,94225560,261891630,675745070,1636014380,3747960216,8180071900,17103786700,34420042800,66927861000,126159017985,231196390425,412918656150,720279159600,1229442013800,2056876004040 ⋆ a(n) = 143 * (n + 1) * binomial(n + 4,13) / 2. ● a(n) = C(n + 1, 10) * C(n + 4, 4). - _ Zerinvary Lajos _ , May 26 2005; corrected by _ R. J. Mathar _ , Mar 16 2016 ●

▶ [A131663] 720,1799,2519,2520,3240,4319,5039,5040,5760,6839,7559,7560,8280,9359,10079,10080,10800,11879,12599,12600,13320,14399,15119,15120,15840 ⋆ Numbers k such that either k or k + 1 is divisible by the numbers from 1 to 10. ● a(n) = 2520 + a(n - 4), n >= 5. - _ David A. Corneth _ , May 06 2021 ●

▶ [A090392] 0,720,1812,3428,5768,9090,13721,20069,28636,40032,54990,74382,99236,130754,170331,219575,280328,354688,445032,554040,684720,840434,1024925,1242345,1497284 ⋆ Seventh diagonal (m=6) of triangle A084938; a(n) = A084938(n + 6,n) = (n ^ 6 + 45 * n ^ 5 + 925 * n ^ 4 + 11475 * n ^ 3 + 92314 * n ^ 2 + 413640 * n) / 720. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n > 6. ●

▶ [A052794] 0,0,0,0,0,0,720,2520,13440,90720,725760,6652800,68428800,778377600,9686476800,130767436800,1902071808000,29640619008000,492490285056000,8688935743488000,162193467211776000,3193183885731840000,66117689869271040000,1436223152160276480000 ⋆ E.g.f.: - x ^ 5 * log(1 - x). ● a(n) = n! / (n - 5) for n > 5. ●

▶ [A167563] 720,3360,10752,27648,61440,122880,226800,392832,646128,1018080,1547040,2279040,3268512,4579008,6283920,8467200,11224080,14661792,18900288,24072960,30327360,37825920,46746672,57283968,69649200 ⋆ The sixth row of the ED2 array A167560. ● a(n) = 6 * n ^ 5 + 20 * n ^ 4 + 202 * n ^ 3 + 124 * n ^ 2 + 368 * n. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). - _ G. C. Greubel _ , Jun 16 2016 ●

▶ [A187290] 0,0,720,4576,13640,28224,48232,73408,103692,139056,179500,225024,275628,331312,392076,457920,528844,604848,685932,772096,863340,959664,1061068,1167552,1279116 ⋆ Number of 5 - step one or two space at a time rook's tours on an n X n board summed over all starting positions. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>10. ●

▶ [A053625] 0,0,0,0,0,0,720,5040,20160,60480,151200,332640,665280,1235520,2162160,3603600,5765760,8910720,13366080,19535040,27907200,39070080,53721360,72681840,96909120 ⋆ Product of 6 consecutive integers. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). - _ Vincenzo Librandi _ , Apr 28 2012 ●

▶ [A029574] 0,0,0,0,0,0,0,720,5760,51840,518400,5702400,68428800,889574400,11564467200,173467008000,2775472128000,47183026176000,849294471168000,16136594952192000,322731899043840000,6802195410616320000,149648299033559040000,3441910877771857920000 ⋆ Number of permutations of an n - set containing a 7 - cycle. ● a(n) = n! * (1 - sum _{ k=0..floor(n / 7) } (- 1) ^ k / (k! * 7 ^ k)). ● a(n) / n! is asymptotic to 1 - e ^ (- 1 / 7) = 1 - A092750. ●

▶ [A052521] 0,0,0,0,0,0,720,10080,120960,1451520,18144000,239500800,3353011200,49816166400,784604620800,13076743680000,230150688768000,4268249137152000,83230858174464000,1703031405723648000 ⋆ Number of pairs of sequences of cardinality at least 3. ● a(n) = (n - 5) * n!. ●

▶ [A000920] 0,0,0,0,0,720,15120,191520,1905120,16435440,129230640,953029440,6711344640,45674188560,302899156560,1969147121760,12604139926560,79694820748080,499018753280880,3100376804676480,19141689213218880,117579844328562000 ⋆ Differences of 0: 6! * Stirling2(n,6). ● a(n) = Sum((- 1) ^ i * binomial(6, i) * (6 - i) ^ n, i = 0 .. 5). ● a(n) = 6 ^ n - C(6,5) * 5 ^ n + C(6,4) * 4 ^ n - C(6,3) * 3 ^ n + C(6,2) * 2 ^ n - C(6,1) with n>=6. - _ Mohamed Bouhamida _ , Dec 15 2007 ●

▶ [A228909] 0,0,0,0,0,0,720,20160,332640,4233600,46070640,451725120,4115105280,35517081600,294293759760,2362955474880,18509835445920,142172988048000,1074905737084080,8023358912869440,59263889194762560,433988913576556800,3155502239364459600,22807773973299268800 ⋆ a(n) = 7 ^ n - 6 * 6 ^ n + 15 * 5 ^ n - 20 * 4 ^ n + 15 * 3 ^ n - 6 * 2 ^ n + 1. ● a(n) = 720 * S(n + 1,7), n>=0. ●

▶ [A179061] 0,0,0,0,0,720,35280,564480,5080320,31752000,153679680,614718720,2120152320,6492966480,18036018000,46172206080,110279070720,248127909120,530024705280,1081683072000,2120098821120,4008311833680 ⋆ Number of non - attacking placements of 6 rooks on an n X n board. ● a(n) = 6! * binomial(n, 6) ^ 2. ●

▶ [A342074] 0,0,0,0,0,0,720,35280,866880,13849920,158004000,1347524640,8866186560,46496324160,201705744240,748737990000,2444976293760,7178449299840,19276199691840,47983899216960,111920569776000,246727594270080,517702915311120,1039979954779920 ⋆ Number of n - colorings of the vertices of the 6 - dimensional cross polytope such that no two adjacent vertices have the same color. ● a(n) = - 22852200 * n + 70164670 * n ^ 2 - 89812001 * n ^ 3 + 64407806 * n ^ 4 - 29113410 * n ^ 5 + 8790285 * n ^ 6 - 1822164 * n ^ 7 + 260868 * n ^ 8 - 25405 * n ^ 9 + 1610 * n ^ 10 - 60 * n ^ 11 + n ^ 12. ● a(n) = (n - 5) * (n - 4) * (n - 3) * (n - 2) * (n - 1) * n * (190435 - 149879 * n + 49144 * n ^ 2 - 8605 * n ^ 3 + 850 * n ^ 4 - 45 * n ^ 5 + n ^ 6). ●

▶ [A364771] 1,720,51840,737280,9360000,37324800,276595200,754974720,3061100160,6739200000,25721308800,38220595200,137037962880,199148544000,485222400000,773094113280,2008994088960,2203992115200,6114035779200,6900940800000,14338695168000,18519342336000,41348052472320 ⋆ Order of the symplectic group of 4 X 4 matrices over Z _ n. ● a(n) = Product _{ primes p dividing n } p ^ (10 * v _ p(n) - 6) * (p ^ 2 - 1) * (p ^ 4 - 1), where v _ p(n) is the largest power k such that p ^ k divides n. ●

▶ [A159295] 1,721,1842,4025,7856,14124,23936,38654,60090,90407,132374,189223,264972,364230,492596,656404,863206,1121449,1441050,1832997,2310024,2886128,3577352,4401210,5377586 ⋆ Number of ways that a tile in the form of a strip of n congruent regular hexagons stuck together on successive parallel edges can be surrounded by one layer of copies of itself in a plane. Ways that differ by rotation or reflection are not counted as different. The surrounded tile is the exact surrounded region. ● a(1) = 1, a(2) = 721, and if n > 2 then a(n) = (1 / 144) * (n ^ 6 + 30 * n ^ 5 + 463 * n ^ 4 + 3132 * n ^ 3 + 11506 * n ^ 2 + 10716 * n - 1152 + (n odd)(9 * n ^ 2 + 90 * n + 261)). ●

▶ [A154515] 721,2737,6049,10657,16561,23761,32257,42049,53137,65521,79201,94177,110449,128017,146881,167041,188497,211249,235297,260641,287281,315217,344449,374977,406801 ⋆ a(n) = 648 * n ^ 2 + 72 * n + 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3); a(1)=721, a(2)=2737, a(3)=6049. (End) ●

▶ [A053497] 1,1,1,1,1,1,1,721,5761,25921,86401,237601,570241,1235521,8920454 1,13348249201,106757164801,604924594561,2722120577281,10344007402561,34479959558401,24928970490633601,546446134633639681,6281586217487489041,50248618811434961281 ⋆ Number of degree - n permutations of order dividing 7. ● a(n) = Sum _{ k=0..floor(n / 7) } n! / (7 ^ k * k! * (n - 7 * k)!). - _ G. C. Greubel _ , Mar 07 2021 ●

▶ [A035756] 1,722,87362,4298066,116323586,2029779538,25216532290,238745924050,1810015572994,11406058224594,61497762026306,290259969857618,1221518092836098,4652599114237778,16237772840882498,52462123239704786,158268201857667074,449093392401112274,1206082191029270850 ⋆ Coordination sequence for C _ 19 lattice. ● a(n) = [x ^ (2n)] ((1 + x) / (1 - x)) ^ 19. ●

▶ [A247894] 0,1,724,34091,524288,4367320,24685212,106765608,379625062,1162261467,3162277660,7820427766,17874003451,38235066239,77306558317,14889049

0631,274877906944,488950340714,841567195983,1406563064942,2289733608959,3639848436450,5662594565481 ⋆ Integer part of square root of A010807: a(n) = floor(sqrt(n ^ 19)). • a(n) = floor(sqrt(n ^ 19)). •

▶ [A158394] 727,2912,6555,11656,18215,26232,35707,46640,59031,72880,88187,104952,123175,142856,163995,186592,210647,236160,263131,291560,321447,352792,385595,419856,455575 ⋆ 729n ^ 2 - 2n. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). •

▶ [A056084] 1,728,730,1457,1459,2186,2188,2915,2917,3644,3646,4373,4375,5102,5104,5831,5833,6560,6562,7289,7291,8018,8020,8747,8749 ⋆ Numbers k such that k ^ 8 == 1 (mod 9 ^ 3). • a(2n + 1) = 729 * n + 1 (n >= 0), a(2n) = 729 * n - 1 (n >= 1), a(n) = 729 * floor(n / 2) - (- 1) ^ n. - _ M. F. Hasler _ , Apr 13 2015 • a(n) = (1458 * n - 729 + (- 1) ^ n * 725) / 4. - Conjectured by _ Philipp Emanuel Weidmann _ , explained by _ Robert Israel _ , Apr 13 2015 • a(n) = a(n - 1) + a(n - 2) - a(n - 3) for n>2. - _ Vincenzo Librandi _ , Apr 14 2015 •

▶ [A158395] 728,1457,2186,2915,3644,4373,5102,5831,6560,7289,8018,8747,9476,10205,10934,11663,12392,13121,13850,14579,15308,16037,16766,17495,18224 ⋆ 729n - 1. • a(n) = 2 * a(n - 1) - a(n - 2). •

▶ [A085479] 728,93184,1592136,11927552,56875000,203793408,599539304,1526726656,3482001432,7280000000,14186660488,26085556224,45680920376,76741030912,124385625000,195421011968,298726553944,445696183296,650738625992 ⋆ Product of three solutions of the Diophantine equation x ^ 3 - y ^ 3 = z ^ 2. • a(n) = 728 * n ^ 7. • a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. •

▶ [A202455] 729,1194,1876,2835,4137,5854,8064,10851,14305,18522,23604,29659,36801,45150,54832,65979,78729,93226,109620,128067,148729,171774,197376,225715,256977 ⋆ Number of (n + 2) X 4 binary arrays with consecutive windows of three bits considered as a binary number nondecreasing in every row and column. • a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. •

▶ [A017379] 729,6859,24389,59319,117649,205379,328509,493039,704969,970299,1295029,1685159,2146689,2685619,3307949,4019679,4826809,5735339,6751269,7880599,9129329,10503459,12008989 ⋆ a(n) = (10 * n + 9) ^ 3. • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4); a(0)=729, a(1)=6859, a(2)=24389, a(3)=59319. - _ Harvey P. Dale _ , Nov 01 2011 •

▶ [A067477] 729,7056,70225,700569,7001316,70006689,700025764,7000166889,70000459776,700001628921,7000003645504,70000012293201,700000047060196,7000000057996009,70000000472817424,700000000779640729 ⋆ Smallest n - digit square starting with 7. • a(n) = ceiling(sqrt(7 * 10 ^ (n - 1))) ^ 2, n>2. - _ Rick L. Shepherd _ , Feb 18 2002 •

▶ [A016758] 1,729,15625,117649,531441,1771561,4826809,11390625,24137569,47045881,85766121,148035889,244140625,387420489,594823321,887503681,1291467969,1838265625,2565726409,3518743761,4750104241,6321363049,8303765625,10779215329,13841287201 ⋆ a(n) = (2 * n + 1) ^ 6. • a(0)=1, a(1)=729, a(2)=15625, a(3)=117649, a(4)=531441, a(5)=1771561, a(6)=4826809, a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). - _ Harvey P. Dale _ , Dec 26 2012 •

▶ [A059978] 1,729,46656,1000000,11390625,85766121,481890304,2176782336,8303765625,27680640625,82653950016,225199600704,567869252041,1340095640625,2985984000000,6327518887936,12827693806929,25002110044521,47045881000000,85766121000000,151939915084881 ⋆ a(n) = binomial(n + 2,n) ^ 6. • a(n) = (1 / 16) * (3 * S(7,n + 1) + 10 * S(9,n + 1) + 3 * S(11,n + 1)), where S(r,n) = Sum _{ k = 1..n } k ^ r. Cf. A059977 and A059980. - _ Peter Bala _ , Jul 02 2019 •

▶ [A017106] 729,1771561,47045881,387420489,1838265625,6321363049,17596287801,42180533641,90458382169,177978515625,326940373369,567869252041,941480149401,1500730351849,2313060765625,3462825991689 ⋆ a(n) = (8 * n + 3) ^ 6. • a(0)=729, a(1)=1771561, a(2)=47045881, a(3)=387420489, a(4)=1838265625, a(5)=6321363049, a(6)=17596287801, a(n)=7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). - _ Harvey P. Dale _ , Oct 21 2015 •

▶ [A158397] 730,1459,2188,2917,3646,4375,5104,5833,6562,7291,8020,8749,9478,10207,10936,11665,12394,13123,13852,14581,15310,16039,16768,17497,18226 ⋆ a(n) = 729n + 1. • a(n) = 2 * a(n - 1) - a(n - 2). •

▶ [A224437] 730,8002,60754,381490,2146930,11252722,56133874,270161650,1265842930,5810393842,26243850994,117016314610,516299391730,2258288837362,9805857424114,42314967024370,181627585561330,775984568599282,3301842333205234 ⋆ The Wiener index of the nanostar dendrimer NS _ 1[n], defined pictorially in the A. R. Ashrafi et al. reference. • a(n) = - 754 + 3768 * 2 ^ n + 2880n * 4 ^ n + 1680n * 2 ^ n - 3792 * 4 ^ n. •

▶ [A259322] 1,730,16355,134004,665445,2437006,7263815,18654440,42792009,89837890,175604011,323639900,567780525,955201014,1550024335,2437528016,3728995985,5567261610,8132988019,11651731780,16401836021,22723199070,31026964695 ⋆ Sum of sixth powers of odd numbers. • a(n) = (n * (- 31 + 196 * n ^ 2 - 336 * n ^ 4 + 192 * n ^ 6)) / 21. - _ Colin Barker _ , Jun 29 2015 •

▶ [A085441] 1,730,47386,1047386,12438011,98204132,580094436,2756876772,11060642397,38741283022,121395233038,346594833742,914464085783,2254559726408,5240543726408,11568062614344,24395756421273,49397866465794,96443747465794,182209868465794 ⋆ a(n) = Sum _{ i=1..n } binomial(i + 1,2) ^ 6. • a(n) = (n / 960960) * (6112 - 40040 * n ^ 2 + 78078 * n ^ 4 + 15015 * n ^ 5 + 19305 * n ^ 6 + 225225 * n ^ 7 + 335335 * n ^ 8 + 225225 * n ^ 9 + 80535 * n ^ 10 + 15015 * n ^ 11 + 1155 * n ^ 12). - _ G. C. Greubel _ , Nov 22 2017 •

▶ [A158396] 731,2920,6567,11672,18235,26256,35735,46672,59067,72920,88231,105000,123227,142912,164055,186656,210715,236232,263207,291640,321531,352880,385687,419952,455675 ⋆ 729n ^ 2 + 2n. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). •

▶ [A180919] 1,733,1467,2203,2941,3681,4423,5167,5913,6661,7411,8163,8917,9673,10431,11191,11953,12717,13483,14251,15021,15793,16567,17343,18121 ⋆ a(n) = n ^ 2 + 731 * n + 1. • a(0)=1, a(1)=733, a(2)=1467; for n>2, a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Oct 14 2012 •

▶ [A067866] 736,1736,2736,3736,4736,5736,6736,7736,8736,9736,10736,11736,12736,13736,14736,15736,16736,17736,18736,19736,20736,21736,22736,23736,24736 ⋆ Numbers n such that n and 2 ^ n end with the same three digits. • a(n) = 736 + 1000(n - 1). • a(n) = 2 * a(n - 1) - a(n - 2). G.f.: 8 * x * (92 + 33 * x) / (1 - x) ^ 2. [_ Colin Barker _ , Dec 01 2012] •

▶ [A332000] 0,752,1820,2231,3995,6627,10575,16511,18840,28952,44180,67116,101664,115227,174135,262871,396539,597891,676940,1020276,1537464,2316536,3490100,3950831,5951939 ⋆ Nonnegative values x of solutions (x, y) to the Diophantine equation x ^ 2 + (x + 47 ^ 2) ^ 2 = y ^ 2. • a(n) = 6 * a(n - 5) - a(n - 10) + 4418 for n >= 11; a(1)=0, a(2)=752, a(3)=1820, a(4)=2231, a(5)=3995, a(6)=6627, a(7)=10575, a(8)=16511, a(9)=18840, a(10)=28952. • a(n) = a(n - 1) + 6 * a(n - 5) - 6 * a(n - 6) - a(n - 10) + a(n - 11) for n>11. •

▶ [A177423] 753,5043,25779,213003,1687623,18171219,73344977,769993485,4480470831,17582325855,69524390079,276487733631,1102731281151,4404485817855,17605064657919,70394501404671,281526491164671,1126002935750655 ⋆ a(n) = 6 * a(n - 1) - 8 * a(n - 2) - 3 for n > 10; a(0)=753, a(1)=5043, a(2)=25779, a(3)=213003, a(4)=1687623, a(5)=18171219, a(6)=73344977, a(7)=769993485, a(8)=4480470831, a(9)=17582325855, a(10)=69524390079. • a(n) = 4 ^ (n + 8) + 12576771 * 2 ^ (n - 4) - 1 for n > 8. •

▶ [A304608] 754,1330,2482,4786,9394,18610,37042,73906,147634,295090,590002,1179826,2359474,4718770,9437362,18874546,37748914,75497650,150995122,301990066,603979954,1207959730,2415919282,4831838386,9663676594 ⋆ a(n) = 288 * 2 ^ n + 178 (n >= 1). • a(n) = 3 * a(n - 1) - 2 * a(n - 2) for n > 2. (End) •

▶ [A202198] 756,2688,7560,18144,38808,76032,138996,240240,396396,628992,965328,1439424,2093040,2976768,4151196,5688144,7671972,10200960,13388760,17365920,22281480,28304640,35626500,44461872,55051164 ⋆ Number of (n + 2) X 6 binary arrays avoiding patterns 001 and 101 in rows and columns. • a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. •

▶ [A158657] 756,3108,7028,12516,19572,28196,38388,50148,63476,78372,94836,112868,132468,153636,176372,200676,226548,253988,282996,313572,345716,379428,414708,451556,489972 ⋆ a(n) = 784 * n ^ 2 - 28. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). •

▶ [A034414] 1,759,17296,249849,3217056,39703755,481008528,5776211364,69065734464,824142912363,9826364199840,117145945726810,1396918583188128,16665451879695801,198937019774252928 ⋆ Leading term in extremal weight enumerator of doubly - even binary self - dual code of length 24n. • a(24n) = C(24n, 5) * C(5n - 2, n - 1) / C(4n + 4, 5). •

▶ [A326369] 0,0,0,762,12699,90270,417435,1478160,4354497,11203269,25970895,55414395,110505120,208300257,374375664,645922095,1075615380,1736379630,2727171042,4179918384,6267764745,9214763640,13307191065,18906643602,26465101179 ⋆ Number of tilings of an equilateral triangle of side length n with unit triangles (of side length 1) and exactly four unit ”lozenges” or ”diamonds” (also of side length 1). • a(n) = (3 / 128) * (n - 3) * (n - 2) * (9 * n ^ 6 + 9 * n ^ 5 - 135 * n ^ 4 - 81 * n ^ 3 + 670 * n ^ 2 + 104 * n - 1216) for n >= 2 (proved by _ Greg Dresden _ and Eldin Sijaric). • a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>10. • a(n) = (3 / 128) * (- 7296 + 6704 * n + 2284 * n ^ 2 - 3732 * n ^ 3 + 265 * n ^ 4 + 648 * n ^ 5 - 126 * n ^ 6 - 36 * n ^ 7 + 9 * n ^ 8) for n>1. •

▶ [A329757] 0,1,765,27435,345415,2469420,12352956,48294610,157609530,447989355,1141711615,2663460261,5775482505,11777133550,22789550070,42150245460,74946834916,128723876325,214401953745,347453633935,549386792955,849592039296,1287617552320,1915941609990,2803320397950 ⋆ Doubly octagonal pyramidal numbers. • a(n) = n * (2 * n - 1) * (n + 1) * (2 * n ^ 3 + n ^ 2 - n + 2) * (2 * n ^ 3 + n ^ 2 - n - 1) / 8 . - _ R. J. Mathar _ , Nov 28 2019 •

▶ [A247486] 766,838,842,857,858,859,861,1073,1087,1091,1093,1094,1106,1107,1108,1109,1112,1114,1117,1118,1123,1132,1138,1142,1154 ⋆ Numbers not achievable by the rules of ’Countdown’ and 1,2,3,4,5,50. • a(n) = n + 2359 for n >= 6642. - _ Alois P. Heinz _ , Sep 22 2014 •

▶ [A281238] 0,768,4608,26880,156672,913152,5322240,31020288,180799488,1053776640,6141860352,35797385472,208642452480,1216057329408,7087701523968,41310151814400,240773209362432,1403329104360192,8179201416798720,47671879396432128,277852074961794048 ⋆ Solutions y to the negative Pell equation y ^ 2 = 72 * x ^ 2 - 73728 with x,y >= 0. • a(n) = 96 * sqrt(2) * (- (3 - 2 * sqrt(2)) ^ n * (3 + 2 * sqrt(2)) + (3 - 2 * sqrt(2)) * (3 + 2 * sqrt(2)) ^ n). • a(n) = 6 * a(n - 1) - a(n - 2) for n>2. •

▶ [A170783] 0,1,768,39366,655360,5859375,35271936,161414428,603979776,1937102445,5500000000,14147686146,33538572288,74231495611,154957850880,307546875000,584115552256,1067290888473,1884413258496,3226876977790 ⋆ a(n) = n ^ 9 * (n + 1) / 2. • a(n) = 11 * a(n - 1) - 55 * a(n - 2) + 165 * a(n - 3) - 330 * a(n - 4) + 462 * a(n - 5) - 462 * a(n - 6) + 330 * a(n - 7) - 165 * a(n - 8) + 55 * a(n - 9) - 11 * a(n - 10) + a(n - 11). - _ Wesley Ivan Hurt _ , Apr 11 2022 •

▶ [A077077] 775,1674,2325,5022,8919,23976,26757,47376,49581,96048,102669,193056,197469,388704,401949,779328,788157,1563840,1590333,3131520,3149181,6273408,6326397,12554496,12589821 ⋆ Trajectory of 775 under the Reverse and Add! operation carried out in base 2, written in base 10. • a(0), ..., a(5) as above ; for n > 5 and • a(n) = - a(n - 1) + 2 * a(n - 2) + 2 * a(n - 3) + 2 * a(n - 4) + 2 * a(n - 5) - 4 * a(n - 6) - 4 * a(n - 7) - 3 for n > 12; a(0), ..., a(12) as above. •

▶ [A177845] 775,8919,34223,133983,530111,2108799,8411903,33601023,134310911,537057279,2147856383,8590680063,34361229311,137441935359,549761777663,2199035183103,8796116877311,35184419799039,140737583775743 ⋆ a(n) = 6 * a(n - 1) - 8 * a(n - 2) - 3 for n > 2; a(0)=775, a(1)=8919, a(2)=34223. • a(n) = 2 * 4 ^ (n + 5) + 91 * 2 ^ (n + 2) - 1 for n > 0. • a(0)=775, a(1)=8919, a(2)=34223, a(3)=133983, a(n)=7 * a(n - 1) - 14 * a(n - 2) + 8 * a(n - 3). - _ Harvey P. Dale _ , Mar 04 2013 •

▶ [A177843] 775,8919,49581,197469,788157,3149181,12589821,50345469,201354237,805361661,3221336061,12885123069,51540049917,206159314941,824635490301,3298538422269,13194146611197,52776572289021,211106260844541 ⋆ a(n) = 6

* a(n - 1) - 8 * a(n - 2) - 9 for n > 3; a(0)=775, a(1)=8919, a(2)=49581, a(3)=197469. ● a(n) = 3 * 4 ^ (n + 5) + 27 * 2 ^ (n + 2) - 3 for n > 1. ●

▶ [A158398] 782,3132,7050,12536,19590,28212,38402,50160,63486,78380,94842,112872,132470,153636,176370,200672,226542,253980,282986,313560,345702,379412,414690,451536,489950 ⋆ a(n) = 784n ^ 2 - 2n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A158399] 783,1567,2351,3135,3919,4703,5487,6271,7055,7839,8623,9407,10191,10975,11759,12543,13327,14111,14895,15679,16463,17247,18031,18815,19599 ⋆ 784n - 1. ● a(n) = 2 * a(n - 1) - a(n - 2). ●

▶ [A366829] 0,0,784,436984,3908376,13530576,30543072,54738536,85743256,123447704,167851880,218955784,276759416,341262776,412465864,490368680,574971224,666273496,764275496,868977224,980378680,1098479864,1223280776,1354781416,1492981784 ⋆ Number of 9 - step self - avoiding king's tours on an n X n board summed over all starting positions. ● a(n) = 3349864 * n ^ 2 - 25942968 * n + 47890984 for n>7. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n > 10. - _ Stefano Spezia _ , Oct 28 2023 ●

▶ [A159896] 785,839,901,3809,4195,4621,22069,24331,26825,128605,141791,156329,749561,826415,911149,4368761,4816699,5310565,25463005,28073779,30952241,148409269,163625975,180402881,864992609 ⋆ Positive numbers y such that y ^ 2 is of the form x ^ 2 + (x + 839) ^ 2 with integer x. ● a(n) = 6 * a(n - 3) - a(n - 6) for n > 6; a(1)=785, a(2)=839, a(3)=901, a(4)=3809, a(5)=4195, a(6)=4621. ●

▶ [A167587] 789,4077,13269,33165,70485,133869,233877,382989,595605,888045,1278549,1787277,2436309,3249645,4253205,5474829,6944277,8693229,10755285,13165965,15962709,19184877,22873749,27072525,31826325 ⋆ The fifth row of the ED4 array A167584: 80 * n ^ 4 + 952 * n ^ 2 - 768 * n + 525. ● a(n) = 80 * n ^ 4 + 952 * n ^ 2 - 768 * n + 525. [Simplified by _ M. F. Hasler _ , Oct 08 2014] ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5); a(1)=789, a(2)=4077, a(3)=13269, a(4)=33165, a(5)=70485. - _ Harvey P. Dale _ , Jul 21 2011 ●

▶ [A104398] 792,957,1077,1161,1177,1217,1252,1272,1282,1286,1297,1381,1437,1462,1463,1472,1492,1502,1506,1546,1583,1602,1637,1657,1666 ⋆ Sums of 8 distinct positive pentatope numbers (A000332). ● a(n) = Ptop(d) + Ptop(e) + Ptop(f) + Ptop(g) + Ptop(h) + Ptop(i) + Ptop(j) + Ptop(k) for some positive d= / = e= / =f= / =g= / =h= / =i= / =j= / =k and Ptop(n) = binomial(n + 3,4). ●

▶ [A027817] 792,11583,90090,495495,2162160,7963956,25729704,74826180,199536480,494684190,1152323172,2543258718,5354228880,10811423700,21034470600,39583049220,72282089880,128442439125,222633561150,377215163325,625897752480,1018680525720,1628611498800 ⋆ a(n) = 99 * (n + 1) * binomial(n + 5,12). ● a(n) = C(n + 1, 8) * C(n + 5, 5). - _ Zerinvary Lajos _ , May 26 2005; corrected by _ R. J. Mathar _ , Feb 10 2016 ●

▶ [A075667] 1,793,66377,1911234,28504515,271739011,1874885963,10136389172,45311985069,173957200405,589679082421,1802148522758,5045944649967,13108508706879,31915866810295,73427944186856,160710828298553,33650748792113 7,677266380588289,1315464522556810 ⋆ Sum of next n 6th powers. ● a(1)=1; a(n)=sum(i ^ s, { i, n(n - 1) / 2 + 1, n(n - 1) / 2 + 1 + n }). ● a(n)=(21n ^ 13 + 231n ^ 11 + 693n ^ 9 + 549n ^ 7 - 126n ^ 5 - 56n ^ 3 + 32n) / 1344. ●

▶ [A035757] 1,800,107200,5831520,174074240,3339504032,45443741760,4693980 16480,3866465104640,26364054632480,153196621856192,776310358810720,34949 68152620160,141928297145422 40,526458365420060 80,180251314603984608,574703679819998720,1719149109983644960,4855892247909603520 ⋆ Coordination sequence for C _ 20 lattice. ● a(n) = [x ^ (2n)] ((1 + x) / (1 - x)) ^ 20. ●

▶ [A158667] 812,3335,7540,13427,20996,30247,41180,53795,68092,84071,101732,121075,142100,164807,189196,215267,243020,272455,303572,336371,370852,407015,444860,484387,525596 ⋆ a(n) = 841 * n ^ 2 - 29. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A064583] 0,0,816,53136,986880,9390000,58831920,276825696,1057222656,3444262560,9900990000,25724822640,61490347776,137047559376,287786357040,574098840000,1095233372160,2009042197056,3559481173296,6114129610320,10214463840000,16642143690480,26505160063536 ⋆ a(n) = n ^ 4 * (n ^ 4 + 1) * (n ^ 2 - 1). ● a(0)=0, a(1)=0, a(2)=816, a(3)=53136, a(4)=986880, a(5)=9390000, a(6)=58831920, a(7)=276825696, a(8)=1057222656, a(9)=3444262560, a(10)=9900990000, a(n)= 11 * a(n - 1) - 55 * a(n - 2) + 165 * a(n - 3) - 330 * a(n - 4) + 462 * a(n - 5) - 462 * a(n - 6) + 330 * a(n - 7) - 165 * a(n - 8) + 55 * a(n - 9) - 11 * a(n - 10) + a(n - 11). - _ Harvey P. Dale _ , Aug 17 2015 ●

▶ [A279441] 0,0,0,816,93000,2602800,35526120,309328320,1972234656,9989784000,42369069600,155993500080,511660972680,1524225598896,4185197289000,10715254368000,25817751281280,58981960615680,128554066935936,268691201838000,540886175310600,1052558059827120 ⋆ Number of ways to place 7 points on an n X n square grid so that no more than 2 points are on a vertical or horizontal straight line. ● a(n) = (n ^ 14 - 91 * n ^ 12 + 420 * n ^ 11 + 693 * n ^ 10 - 10500 * n ^ 9 + 33647 * n ^ 8 - 45780 * n ^ 7 + 5866 * n ^ 6 + 65940 * n ^ 5 - 89796 * n ^ 4 + 50400 * n ^ 3 - 10800 * n ^ 2) / 5040. ● a(n) = 15 * a(n - 1) - 105 * a(n - 2) + 455 * a(n - 3) - 1365 * a(n - 4) + 3003 * a(n - 5) - 5005 * a(n - 6) + 6435 * a(n - 7) - 6435 * a(n - 8) + 5005 * a(n - 9) - 3003 * a(n - 10) + 1365 * a(n - 11) - 455 * a(n - 12) + 105 * a(n - 13) - 15 * a(n - 14) + a(n - 15). ●

▶ [A177846] 837,7896,32176,129888,521920,2092416,8379136,33535488,134179840,536795136,2147332096,8589631488,34359132160,137437741056,549753389056,2199018405888,8796083322880,35184352690176,140737449558016 ⋆ a(n) = 6 * a(n - 1) - 8 * a(n - 2) for n > 2; a(0)=837, a(1)=7896, a(2)=32176. ● a(n) = 2 * 4 ^ (n + 5) - 37 * 2 ^ (n + 2) for n > 0. ●

▶ [A135639] 0,839,1678,2517,3356,4195,5034,5873,6712,7551,8390,9229,10068,10907,11746,12585,13424,14263,15102,15941,16780,17619,18458,19297,20136 ⋆ a(n) = 839 * n. ● a(n) = 2 * a(n - 1) - a(n - 2). ●

▶ [A158401] 839,3360,7563,13448,21015,30264,41195,53808,68103,84080,101739,121080,142103,164808,189195,215264,243015,272448,303563,336360,370839,407000,444843,484368,525575 ⋆ a(n) = 841 * n ^ 2 - 2 * n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n > 3. ●

▶ [A158402] 840,1681,2522,3363,4204,5045,5886,6727,7568,8409,9250,10091,10932,11773,12614,13455,14296,15137,15978,16819,17660,18501,19342,20183,21024 ⋆ a(n) = 841 * n - 1. ● a(n) = 2 * a(n - 1) - a(n - 2). ●

▶ [A135038] 0,840,8760,41520,134544,347064,768264,1523424,2780064,4754088,7715928,11996688,17994288,26179608,37102632,51398592,69794112,93113352,122284152,158344176,202447056,255868536,320012616,396417696,486762720 ⋆ Sums of the products of n consecutive quadruples of numbers. ● a(n) = floor(51.2 * n ^ 5 - 32 * n ^ 4 - 48 * n ^ 3 + 20 * n ^ 2 + 8.8 * n). ● a(1) = 0 * 1 * 2 * 3, a(2) = 0 * 1 * 2 * 3 + 4 * 5 * 6 * 7, ..., a(n) = 0 * 1 * 2 * 3 + 4 * 5 * 6 * 7 + 8 * 9 * 10 * 11 + ... + (2n - 1) * (2n) * (2n + 1)(2n + 2). ● a(1)=0, a(2)=840, a(3)=8760, a(4)=41520, a(5)=134544, a(6)=347064, a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). - _ Harvey P. Dale _ , May 09 2015 ● a(n) = (100 * n ^ 2 + 44 * n - 240 * n ^ 3 - 160 * n ^ 4 + 256 * n ^ 5) / 5. ●

▶ [A215230] 0,0,840,10080,57960,228480,710640,1874880,4379760,9313920,18378360,34114080,60180120,101687040,165590880,261152640,400468320,599074560,876634920,1257711840,1772629320,2458431360,3359941200,4530926400 ⋆ Number of length - 7 0..k arrays connected end - around, with no sequence of L<n elements immediately followed by itself (periodic "squarefree"). ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. ●

▶ [A252780] 0,0,840,12477384,2545607472,116307115440,2406303387000,30037635498360,262918567435104,1765904422135392,9653659287290280,44745048366882600,181129909217550480,654743996230865424,2149893215016113112,6499426966335074520,18286786291862020800 ⋆ Number of ways of n - coloring the square grid graph G _ (4,4) such that no rectangle exists with sides parallel to the axes having all 4 corners of the same color. ● a(n) = n * (n - 1) * (n ^ 14 + n ^ 13 + n ^ 12 - 35 * n ^ 11 - 35 * n ^ 10 + 61 * n ^ 9 + 547 * n ^ 8 - 101 * n ^ 7 - 1797 * n ^ 6 - 633 * n ^ 5 + 5655 * n ^ 4 - 5625 * n ^ 3 + 3684 * n ^ 2 - 2436 * n + 852). ●

▶ [A159690] 841,881,925,4121,4405,4709,23885,25549,27329,139189,148889,159265,811249,867785,928261,4728305,5057821,5410301,27558581,29479141,31533545,160623181,171817025,183790969,936180505 ⋆ Positive numbers y such that y ^ 2 is of the form x ^ 2 + (x + 881) ^ 2 with integer x. ● a(n) = 6 * a(n - 3) - a(n - 6) for n > 6; a(1)=841, a(2)=881, a(3)=925, a(4)=4121, a(5)=4405, a(6)=4709. ●

▶ [A361675] 1,1,1,1,1,1,1,841,6721,30241,100801,277201,665281,1441441,10450441,118918801,917716801,5162277121,23183465761,88037913601,293383742401,988690080001,4810025534161,33669381872281,234722545854721 ⋆ Constant term in the expansion of (1 + x * y * z + w * y * z + w * x * z + w * x * y + 1 / (w * x * y * z)) ^ n. ● a(n) = n! * Sum _{ k=0..floor(n / 7) } 1 / (k! ^ 4 * (3 * k)! * (n - 7 * k)!) = Sum _{ k=0..floor(n / 7) } (4 * k)! / k! ^ 4 * binomial(7 * k, 4 * k) * binomial(n,7 * k). ●

▶ [A158404] 842,1683,2524,3365,4206,5047,5888,6729,7570,8411,9252,10093,10934,11775,12616,13457,14298,15139,15980,16821,17662,18503,19344,20185,21026 ⋆ 841n + 1. ● a(n) = 2 * a(n - 1) - a(n - 2). ●

▶ [A096025] 843,1683,3363,4203,5883,6723,8403,9243,10923,11763,13443,14283,15963,16803,18483,19323,21003,21843,23523,24363,26043,26883,28563,29403,31083 ⋆ Numbers n such that (n + j) mod (2 + j) = 1 for j from 0 to 6 and (n + 7) mod 9 <> 1. ● a(n) = - 3 * (209 + 70 * (- 1) ^ n - 420 * n). a(n) = a(n - 1) + a(n - 2) - a(n - 3). G.f.: 3 * x * (279 * x ^ 2 + 280 * x + 281) / ((x - 1) ^ 2 * (x + 1)). - _ Colin Barker _ , Apr 11 2013 ●

▶ [A158403] 843,3368,7575,13464,21035,30288,41223,53840,68139,84120,101783,121128,142155,164864,189255,215328,243083,272520,303639,336440,370923,407088,444935,484464,525675 ⋆ 841n ^ 2 + 2n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A114359] 1,843,3827,7252,10684,14116,17548,20980,24412,27844,31276,34708,38140,41572,45004,48436,51868,55300,58732,62164,65596,69028,72460,75892,79324 ⋆ Let M(n) be the n X n matrix m(i,j)=min(i,j) for 1<=i,j<=n; then a(n) is the trace of M(n) ^ (- 7). ● a(n) = 3432 * n - 6476 for n > 3; a(1)=1, a(2)=843, a(3)=3827. ● a(n) = 2 * a(n - 1) - a(n - 2) for n > 5. ●

▶ [A160212] 845,953,1093,3977,4765,5713,23017,27637,33185,134125,161057,193397,781733,938705,1127197,4556273,5471173,6569785,26555905,31888333,38291513,154779157,185858825,223179293,902119037 ⋆ Positive numbers y such that y ^ 2 is of the form x ^ 2 + (x + 953) ^ 2 with integer x. ● a(n) = 6 * a(n - 3) - a(n - 6) for n > 6; a(1)=845, a(2)=953, a(3)=1093, a(4)=3977, a(5)=4765, a(6)=5713. ●

▶ [A187861] 0,0,846,9932,47962,126397,262409,452766,707541,1017934,1387600,1813854,2296696,2836126,3432144,4084750,4793944,5559726,6382096,7261054,8196600,9188734,10237456,11342766,12504664 ⋆ Number of 6 - step one space for components leftwards or up, two space for components rightwards or down asymmetric quasi - queen's tours (antidiagonal moves become knight moves) on an n X n board summed over all starting positions. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>12. ●

▶ [A163304] 858,3139,13142,36807,80098,149003,249534,387727,569642,801363,1088998,1438679,1856562,2348827,2921678,3581343,4334074,5186147,6143862,7213543,8401538,9714219,11157982,12739247,14464458 ⋆ a(n) = n ^ 4 + 984 * n ^ 3 + 902 * n ^ 2 + 394 * n + 858. ● a(n) = 5 * a(n -) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). ●

▶ [A183628] 859,1125,1675,2829,5299,10725,23035,52029,123139,304725,785995,2102829,5799379,16381125,47110555,137267229,403674019,1194767925,3551796715,10590377229,31641107059,94663273125,283469724475,849368984829 ⋆ Number of (n + 1)X6 0..2 arrays with every 2x2 subblock summing to 4 ● a(n)=124 * 2 ^ n + 3 * 3 ^ n + 602. (End) ●

▶ [A158669] 870,3570,8070,14370,22470,32370,44070,57570,72870,89970,108870,129570,152070,176370,202470,230370,260070,291570,324870,359970,396870,435570,476070,518370,562470 ⋆ a(n) = 900 * n ^ 2 - 30. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A024393] 880,12164,80844,363944,1276009,3751209,9668253,22494813,48216663,96625243,183045863,330597267,573081782,958613782,1554102702,2450715342,3770450706,5673969126,8369825926,12125268386,17278763271,24254430695 ⋆ 4th elementary symmetric function of the first n + 3 positive integers congruen

t to 2 mod 3. • a(n) = n * (n + 1) * (n + 2) * (n + 3) * (405 * n ^ 4 + 4590 * n ^ 3 + 18495 * n ^ 2 + 30534 * n + 16376) / 1920. - _ Robert Israel _ , Aug 15 2014 •

▶ [A035758] 1,882,130242,7796978,255582978,5369283570,79749022402,895903147122,7996359740418,58861356563058,367891005738690,1998142759241202,960944165912448 2,41553956372047602,163646115158499522,593216067051658610,1997319977281662978,6294200366345505138,18687294283503843522 ⋆ Coordination sequence for C _ 21 lattice. • a(n) = [x ^ (2n)] ((1 + x) / (1 - x)) ^ 21. •

▶ [A253507] 884,1712,3052,5136,7948,11740,16592,22720,30300,39560,50740,64104,79936,98540,120240,145380,174324,207456,245180,287920,336120,390244,450776,518220,593100 ⋆ Number of (n + 2) X (5 + 2) 0..1 arrays with every 2 X 2 and 3 X 3 subblock diagonal maximum minus antidiagonal minimum nondecreasing horizontally and vertically. • a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>13. •

▶ [A224338] 889,10199,57337,218743,653177,1647079,3670009,7440167,13999993,24801847,41803769,67575319,105413497,159468743,234881017,337925959,476171129,658642327,895999993,1200725687,1587318649,2072502439,2675441657 ⋆ Number of idempotent 7 X 7 0..n matrices of rank 6. • a(n) = 14 * n ^ 6 + 84 * n ^ 5 + 210 * n ^ 4 + 280 * n ^ 3 + 210 * n ^ 2 + 84 * n + 7. • a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). - _ Colin Barker _ , Sep 20 2014 •

▶ [A158408] 898,3596,8094,14392,22490,32388,44086,57584,72882,89980,108878,129576,152074,176372,202470,230368,260066,291564,324862,359960,396858,435556,476054,518352,562450 ⋆ a(n) = 900 * n ^ 2 - 2 * n. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Feb 12 2012 •

▶ [A158409] 899,1799,2699,3599,4499,5399,6299,7199,8099,8999,9899,10799,11699,12599,13499,14399,15299,16199,17099,17999,18899,19799,20699,21599,22499 ⋆ a(n) = 900 * n - 1. • a(n) = 2 * a(n - 1) - a(n - 2); a(1)=899, a(2)=1799. - _ Harvey P. Dale _ , Dec 08 2011 •

▶ [A158407] 901,1801,2701,3601,4501,5401,6301,7201,8101,9001,9901,10801,11701,12601,13501,14401,15301,16201,17101,18001,18901,19801,20701,21601,22501 ⋆ a(n) = 900 * n + 1. • a(n) = 2 * a(n - 1) - a(n - 2). - _ Vincenzo Librandi _ , Feb 09 2012 •

▶ [A250782] 901,2326,5568,12796,28692,63184,137082,293588,621664,1303276,2708612,5587548,11454008,23356632,47422730,95949660,193592124,389742628,783299900,1572215204,3152596828,6316933760,12650561098,25324612868 ⋆ Number of (n + 1) X (7 + 1) 0..1 arrays with nondecreasing x(i,j) + x(i,j - 1) in the i direction and nondecreasing absolute value of x(i,j) - x(i - 1,j) in the j direction. • a(n) = (45360 * (3025 * 2 ^ n - 2344) - 70509024 * n - 9423432 * n ^ 2 - 6541100 * n ^ 3 + 254142 * n ^ 4 - 151725 * n ^ 5 + 6552 * n ^ 6 - 870 * n ^ 7 + 18 * n ^ 8 - n ^ 9) / 90720. •

▶ [A158406] 902,3604,8106,14408,22510,32412,44114,57616,72918,90020,108922,129624,152126,176428,202530,230432,260134,291636,324938,360040,396942,435644,476146,518448,562550 ⋆ a(n) = 900 * n ^ 2 + 2 * n. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Feb 09 2012 •

▶ [A216930] 1,909,11925,358875,959595,1047585,3673089,3925635,3973971,4995825,5519241,6516015,6832245,7217805,7422381,9145809,10929765,11038071,11477235,11721291,12015555,12262791,12280935,13454349,13508475 ⋆ Numbers k such that k + 2, k ^ 2 + 2, k ^ 3 + 2, k ^ 4 + 2 and k ^ 5 + 2 are all prime. • a(n) == 3 (mod 6) for n>1. - _ Alexandru Petrescu _ , Dec 24 2022 •

▶ [A145646] 911,3645,8201,14580,22782,32806,44652,58321,73813,91127,110263,131222,154004 ⋆ Wavelength (in ångströms) of the series limit of the Hydrogen spectrum for main quantum number n. • a(n) = round(n ^ 2 * 10 ^ 10 / A081821). - _ R. J. Mathar _ , Oct 17 2008 • a(n) = (- 1 / 8 + i / 8) * ((3 + 3 * i) + (- i) ^ n + i ^ (1 + n) - (1 + i) * n - (3645 + 3645 * i) * n ^ 2) where i=sqrt(- 1). • a(n) = 3 * a(n - 1) - 4 * a(n - 2) + 4 * a(n - 3) - 3 * a(n - 4) + a(n - 5) for n>5. •

▶ [A251133] 919,2264,4110,8008,14753,27738,51679,97758,186223,359276,699161,1372028,2707973,5368806,10675899,21273570,42448163,84773896,169396869,338610768,677000585,1353737746,2707162679,5413957638,10827484663 ⋆ Number of (n + 1) X (4 + 1) 0..2 arrays with no 2 X 2 subblock having the sum of its diagonal elements greater than the maximum of its antidiagonal elements. • a(n) = (3063 + 961 * (- 1) ^ n + 121 * 2 ^ (5 + n) + 1726 * n + 691 * n ^ 2 + 146 * n ^ 3 + 11 * n ^ 4) / 12 for n>3. •

▶ [A289794] 0,0,0,0,920,17760,122640,537040,1794240,4994640,12178320,26840880,54620280,104184080,188348160,325459680,541078720,869994720,1358615520,2067768480,3075954840,4483100160,6414845360,9027424560,12513177600 ⋆ Number of 6 - cycles in the n - tetrahedral graph. • a(n) = 5 * binomial(n, 5) * (454 - 409 * n + 66 * n ^ 2 + n ^ 3). • a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9). •

▶ [A235881] 921,1311,2109,3759,7221,14631,30909,67839,154821,368151,912909,2356719,6307221,17396871,49142109,141330399,411800421,1211020791,3584302509,10655388879,31771130421,94923319911,283989818109,850409172159 ⋆ Number of (n + 1) X (5 + 1) 0..2 arrays with the minimum plus the upper median equal to the lower median plus the maximum in every 2 X 2 subblock. • a(n) = 3 * (180 + 31 * 2 ^ (1 + n) + 3 ^ n). •

▶ [A172224] 1,924,8989,37270,145233,525796,1605490,4136952,9435413,19632414,37957424,69050898,119351315,197524064,314935542,486171662,729604121,1068003424,1529198580,2146783422,2960869583,4018886128,5376425842 ⋆ Number of ways to place 6 nonattacking zebras on a 6 X n board. • a(n) = (1944n ^ 6 - 27540n ^ 5 + 227070n ^ 4 - 1222555n ^ 3 + 4366071n ^ 2 - 9580580n + 9925860) / 30, n>=15. •

▶ [A159701] 925,967,1013,4537,4835,5153,26297,28043,29905,153245,163423,174277,893173,952495,1015757,5205793,5551547,5920265,30341585,32356787,34505833,176843717,188589175,201114733,1030720717 ⋆ Positive numbers y such that y ^ 2 is of the form x ^ 2 + (x + 967) ^ 2 with integer x. • a(n) = 6 * a(n - 3) - a(n - 6) for n > 6; a(1)=925, a(2)=967, a(3)=1013, a(4)=4537, a(5)=4835, a(6)=5153. •

▶ [A158679] 930,3813,8618,15345,23994,34565,47058,61473,77810,96069,116250,138353,162378,188325,216194,245985,277698,311333,346890,384369,423770,465093,508338,553505,600594 ⋆ a(n) = 961 * n ^ 2 - 31. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). •

▶ [A120810] 935,305015,2339315,3690185,14080121,14259629,16143005,17754869,18679409,26655761,29184749,47372135,80945699,82768529,87102509 ⋆ Integers of the form p * q * r in A120806: x + d + 1 is prime for all divisors d of x, where p, q and r are distinct odd primes. See A007304. • a(n) = n - th element of A120806 of the form p * q * r where p, q and r are distinct odd primes. •

▶ [A133818] 945,36465,229425,801009,2070705,4456305,8473905,14737905,23961009,36954225,54626865,77986545,108139185,146289009,193738545,251888625,322238385,406385265,506025009,622951665,759057585,916333425,1096868145 ⋆ a(n) = (8 * n + 3) * (8 * n + 5) * (8 * n + 7) * (8 * n + 9). • a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Wesley Ivan Hurt _ , Apr 26 2021 •

▶ [A108896] 949,9449,94449,944449,9444449,94444449,944444449,9444444449,94444444449,944444444449,9444444444449,94444444444449,944444444444449,9444444444444449,94444444444444449,944444444444444449,9444444444444444449,94444444444444444449 ⋆ Numbers whose outer two digits are 9's and inner digits are 4's. • a(n) = 9 * 10 ^ (n + 1) + 9 + 40 * (10 ^ n - 1) / 9. • a(n) = 11 * a(n - 1) - 10 * a(n - 2) for n > 2. •

▶ [A158410] 959,3840,8643,15368,24015,34584,47075,61488,77823,96080,116259,138360,162383,188328,216195,245984,277695,311328,346883,384360,423759,465080,508323,553488,600575 ⋆ a(n) = 961 * n ^ 2 - 2 * n. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). •

▶ [A316338] 960,961,1085,1086,1087,1088,1089,1090,1091,1218,1219,1220,1221,1222,1223,1224,1225,1226,1227,1228,1229,1230,1359,1360,1361 ⋆ Numbers missing from A316328. • a(n + 1183) = n + 3198 for all n > 0. - _ M. F. Hasler _ , Nov 05 2019 •

▶ [A158412] 960,1921,2882,3843,4804,5765,6726,7687,8648,9609,10570,11531,12492,13453,14414,15375,16336,17297,18258,19219,20180,21141,22102,23063,24024 ⋆ 961n - 1. • a(n) = 2 * a(n - 1) - a(n - 2). •

▶ [A147883] 960,838130,71331470,2134043800,33969932808,353530511420,2710992616420,16512265636680,83974746129560,369225271340926,1439572248244130,5072665106738320,16393720098232880,49158099955813080,138052747638032104,365886966555545840,920991546926843280 ⋆ Number of consistent sets of 9 irreflexive binary order relationships over n objects. • a(n) = (n - 4) * (n - 3) * (n - 2) * (n - 1) * n * (n ^ 13 + n ^ 12 - 61 * n ^ 11 - 271 * n ^ 10 + 501 * n ^ 9 + 10539 * n ^ 8 + 69721 * n ^ 7 + 170899 * n ^ 6 - 1975510 * n ^ 5 - 21334612 * n ^ 4 - 30150228 * n ^ 3 + 619527780 * n ^ 2 + 1942605000 * n - 10974342960) / 362880. - _ Vaclav Kotesovec _ , Apr 11 2020 •

▶ [A166964] 0,0,0,0,960,4669200,1342968480,96351366720,2967164565120,51747096270240,600189633086400,5123179804311360,34443698001387840,191288688014664240,908558913657114720,3788089202221833600,14145018198653072640,48056437943548695360 ⋆ Number of n - colorings of the Errera graph. • a(n) = n ^ 17 - 45 * n ^ 16 + ... (see Maple program). •

▶ [A158414] 962,1923,2884,3845,4806,5767,6728,7689,8650,9611,10572,11533,12494,13455,14416,15377,16338,17299,18260,19221,20182,21143,22104,23065,24026 ⋆ 961n + 1. • a(n) = 2 * a(n - 1) - a(n - 2). •

▶ [A158413] 963,3848,8655,15384,24035,34608,47103,61520,77859,96120,116303,138408,162435,188384,216255,246048,277763,311400,346959,384440,423843,465168,508415,553584,600675 ⋆ 961n ^ 2 + 2n. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). •

▶ [A202049] 966,3304,9170,22092,47950,95984,180054,320180,544390,890904,1410682,2170364,3255630,4775008,6864158,9690660,13459334,18418120,24864546,33152812,43701518,57002064,73627750,94243604,119616966 ⋆ Number of (n + 2) X 7 binary arrays avoiding patterns 001 and 110 in rows and columns. • a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. •

▶ [A035759] 1,968,156816,10286936,368804128,8453107432,136585481648,1663935545976,16051394232896,127269237312008,853941394691792,4962895187697048,25459406230618976,117088340731041064,489035476964671472,1875154363323009208,6661774086773638272,22100369343864328264 ⋆ Coordination sequence for C _ 22 lattice. • a(n) = [x ^ (2n)] ((1 + x) / (1 - x)) ^ 22. •

▶ [A288917] 0,0,976,26414,207136,951750,3190304,8721576,20615340,43736788,85332868,155691014,268995384,444000894,705336724,1083967932,1619250600,2358809948,3361809572,4697700286,6451359236,8719953330,11620829368 ⋆ Number of 6 - cycles in the n X n queen graph. • a(n)=3 * a(n - 2) + 2 * a(n - 3) - a(n - 4) - 5 * a(n - 5) - 6 * a(n - 6) - a(n - 7) + 6 * a(n - 8) + 11 * a(n - 9) + 6 * a(n - 10) - 4 * a(n - 11) - 10 * a(n - 12) - 10 * a(n - 13) - 4 * a(n - 14) + 6 * a(n - 15) + 11 * a(n - 16) + 6 * a(n - 17) - a(n - 18) - 6 * a(n - 19) - 5 * a(n - 20) - a(n - 21) + 2 * a(n - 22) + 3 * a(n - 23) - a(n - 25). •

▶ [A172158] 0,0,0,0,978,62266,1220298,12033330,77784658,377818258,1492665418,5042436754,15062292834,40736208186,101489568538,235984235970,517314078210,1077720399538,2147500025914,4114538426818,7613150953522,13653752767866,23808409699242 ⋆ Number of ways to place 6 nonattacking kings on an n X n board. • a(n) = (n ^ 12 - 135 * n ^ 10 + 180 * n ^ 9 + 7465 * n ^ 8 - 18840 * n ^ 7 - 202665 * n ^ 6 + 751860 * n ^ 5 + 2442334 * n ^ 4 - 13441200 * n ^ 3 - 3643800 * n ^ 2 + 89860320 * n - 108217440) / 720, n>=5. For any fixed value of k > 1, a(n) = n ^ (2 * k) / k! - 9 * n ^ (2 * k - 2) / 2 / (k - 2)! + 6 * n ^ (2 * k - 3) / (k - 2)! ... - _ Vaclav Kotesovec _ , Jan 27 2010 •

▶ [A157515] 980,1980,2980,3980,4980,5980,6980,7980,8980,9980,10980,11980,12980,13980,14980,15980,16980,17980,18980,19980,20980,21980,22980,23980,24980 ⋆ a(n) = 1000 * n - 20. • a(n) = 2 * a(n - 1) - a(n - 2). - _ Vincenzo Librandi _ , Jan 26 2012 •

▶ [A109120] 980,34560,312120,1548800,5467500,15482880,37565360,81285120,161036100,297440000,518930280,863516160,1380726620,2133734400,3201660000,4682055680,6693569460,9378789120,12907266200,17478720000,23326421580,30720757760,39972975120,51439104000 ⋆ a(n) = 10 * (n + 1) ^ 3 * (n + 2) * (5 * n +

7) ^ 2. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). - _ Wesley Ivan Hurt _ , Aug 19 2022 ●

► [A131640] 985,1035,1085,1160,1210,1260,1335,1385,1435,1510,1560,1610,1685,1735,1785,1860,1910,1960,2035,2085,2135,2210,2260,2310,2385 ⋆ First differences are periodic: 50, 50, 75, 50, 50, 75, ... ● a(n) = 910 + Sum _{ k=0..n }{ 25 / 9 * [4 * (k mod 3) + 7 * ((k + 1) mod 3) + 10 * ((k + 2) mod 3)] } . - _ Paolo P. Lava _ , Sep 26 2007 ●

► [A218133] 0,0,990,58800,1047540,9762480,60458370,282458400,1073709000,3486725280,9999899910,25937263440,61917115260,137858120400,289254116970,576649631040,1099510578960,2015992480320,3570465336750,6131063781360,10239996799620,16679876893680 ⋆ Number of length 10 primitive (=aperiodic or period 10) n - ary words. ● a(n) = n ^ 10 - n ^ 5 - n ^ 2 + n. ●

► [A237991] 1,992,3965,8920,15857,24776,35677,48560,63425,80272,99101,119912,142705,167480,194237,222976,253697,286400,321085,357752,396401,437032,479645,524240,570817 ⋆ a(n) = 991 * n ^ 2 + 1. ● a(n) = a(n - 1) + 991 * (2 * n - 1). ●

► [A158683] 992,4064,9184,16352,25568,36832,50144,65504,82912,102368,123872,147424,173024,200672,230368,262112,295904,331744,369632,409568,451552,495584,541664,589792,639968 ⋆ a(n) = 1024 * n ^ 2 - 32. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A373105] 1,993,58807,1016801,9762501,58395351,282458443,1041204193,3472494301,9694163493,25937263551,59795016407,137858120557,280481233899,574103396307,1066193093601,2015992480593,3448186840893,6131063781703,9926520779301 ⋆ a(n) = sigma _ 10(n ^ 2) / sigma _ 5(n ^ 2). ● a(n) = Sum _{ 1 <= x _ 1, x _ 2, x _ 3, x _ 4, x _ 5 <= n } (n / gcd(x _ 1, x _ 2, x _ 3, x _ 4, x ^ 5, n)) ^ 5. ● a(n) = Sum _{ d|n } mu(n / d) * (n / d) ^ 5 * sigma _ 10(d). ●

► [A202456] 1000,1876,3362,5735,9338,14586,21972,32073,45556,63184,85822,114443,150134,194102,247680,312333,389664,481420,589498,715951,862994,1033010,1228556,1452369,1707372 ⋆ Number of (n + 2) X 5 binary arrays with consecutive windows of three bits considered as a binary number nondecreasing in every row and column. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. ●

► [A195163] 0,1,1000,2997,5992,9985,14976,20965,27952,35937,44920,54901,65880,77857,90832,104805,119776,135745,152712,170677,189640,209601,230560,252517,275472 ⋆ 1000 - gonal numbers: a(n) = n * (499 * n - 498). ● a(n) = 998 * n * (n - 1) / 2 + n, according to the common formula for s - gonal numbers, a(n) = (s - 2) * n * (n - 1) / 2 + n. - _ Sergey Pavlov _ , Aug 14 2015 ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n >= 4. - _ Muniru A Asiru _ , Sep 12 2017 ●

► [A017511] 1000,9261,32768,79507,157464,274625,438976,658503,941192,1295029,1728000,2248091,2863288,3581577,4410944,5359375,6434856,7645373,8998912,10503459,12167000,13997521,16003008,18191447,20570824 ⋆ a(n) = (11 * n + 10) ^ 3. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4), for n>3. - _ Vincenzo Librandi _ , May 26 2016 ●

► [A017643] 1000,10648,39304,97336,195112,343000,551368,830584,1191016,1643032,2197000,2863288,3652264,4574296,5639752,6859000,8242408,9800344,11543176,13481272,15625000,17984728,20570824,23393656,26463592 ⋆ a(n) = (12n + 10) ^ 3. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) with a(0)=1000, a(1)=10648, a(2)=39304, a(3)=97336. [_ Harvey P. Dale _ , Sep 30 2011] ●

► [A234787] 1000,64000,729000,4096000,15625000,46656000,117649000,262144000,531441000,1000000000,1771561000,2985984000,4826809000,7529536000,11390625000,16777216000,24137569000,34012224000,47045881000,64000000000 ⋆ Cubes (with at least two digits) that become squares when their rightmost digit is removed. ● a(n) = 1000 * n ^ 6. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

► [A153814] 1001,2002,3003,4004,5005,6006,7007,8008,9009,10010,11011,12012,13013,14014,15015,16016,17017,18018,19019,20020,21021,22022,23023,24024,25025 ⋆ a(n) = 1001 * n. ● a(n) = 2 * a(n - 1) - a(n - 2). - _ Vincenzo Librandi _ , Feb 26 2012 ●

► [A160451] 1008,2080,6440,10208,22360,31416,57408,75208,122816,153680,232408,281520,402600,476008,652400,757016,1003408,1147008,1479816,1671040,2108408,2356760,2918560,3234408,3942240 ⋆ (4 / 3)u(u ^ 3 + 6 * u ^ 2 + 8u - 3) where u=Floor[{ 3n + 5) / 2]. ● a(n) = a(n - 1) + 4 * a(n - 2) - 4 * a(n - 3) - 6 * a(n - 4) + 6 * a(n - 5) + 4 * a(n - 6) - 4 * a(n - 7) - a(n - 8) + a(n - 9). G.f.: - 8 * x * (126 + 134 * x + 41 * x ^ 2 - 65 * x ^ 3 + 95 * x ^ 4 + 52 * x ^ 5 - 61 * x ^ 6 - 13 * x ^ 7 + 15 * x ^ 8) / ((1 + x) ^ 4 * (x - 1) ^ 5). [_ R. J. Mathar _ , May 15 2009] ●

► [A139665] 1009,1129,1201,1801,2521,2689,3049,3361,3529,3889,4201,4561,4729,5209,5569,5881,6841,7561,7681,8089,8521,8689,8761,8929,9241 ⋆ Primes of the form x ^ 2 + 840 * y ^ 2. ● a(n) == { 1,25,49,73 } (mod 96); ● a(n) ^ 2 == { 1,49 } (mod 96 } ; ● a(n) ^ 4 == 1 (mod 96). (End) ● a(n) == { 1,9,25 } (mod 56). - _ Gary Detlefs _ , Jan 27 2014 ●

► [A157010] 1010,5297,12946,23957,38330,56065,77162,101621,129442,160625,195170,233077,274346,318977,366970,418325,473042,531121,592562,657365,725530,797057,871946,950197,1031810 ⋆ a(n) = 1681 * n ^ 2 - 756 * n + 85. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A250610] 1013,2336,4353,7320,11749,18664,30113,50192,87093,157200,293281,560872,1091045,2145944,4249857,8451360,16847605,33632896,67195841,134313656,268540773,536986056,1073867233,2147619760,4295114549 ⋆ Number of (n + 1) X (7 + 1) 0..1 arrays with nondecreasing x(i,j) - x(i,j - 1) in the i direction and nondecreasing x(i,j) - x(i - 1,j) in the j direction. ● a(n) = 128 + 2 ^ (7 + n) + 410 * n + 219 * n ^ 2. ●

► [A157510] 1020,2020,3020,4020,5020,6020,7020,8020,9020,10020,11020,12020,13020,14020,15020,16020,17020,18020,19020,20020,21020,22020,23020,24020,25020 ⋆ a(n) = 1000 * n + 20. ● a(n) = 2 * a(n - 1) - a(n - 2). - _ Vincenzo Librandi _ , Feb 04 2012 ●

► [A216115] 1020,11020,39600,99960,208900,386820,657720,1049200,1592460,2322300,3277120,4498920,6033300,7929460,10240200,13021920,16334620,20241900,24810960,30112600,36221220,43214820,51175000,60186960,70339500 ⋆ The Hyper - Wiener index of a link of n fullerenes C _{ 20 } (see the Ghorbani and Hosseinzadeh reference). ● a(n) = 10 * n * (15n ^ 3 + 70n ^ 2 + 134n - 117). ●

► [A362361] 1021,2045,3069,4093,5117,6141,7165,8189,9213,10237,11261,12285,13309,14333,15357,16381,17405,18429,19453,20477,21501,22525,23549,24573,25597 ⋆ a(n) = n * 2 ^ 10 - 3. ● a(n) = n * 4 ^ 5 - 3, for n >= 1. ●

► [A158420] 1022,4092,9210,16376,25590,36852,50162,65520,82926,102380,123882,147432,173030,200676,230370,262112,295902,331740,369626,409560,451542,495572,541650,589776,639950 ⋆ 1024n ^ 2 - 2n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A158421] 1023,2047,3071,4095,5119,6143,7167,8191,9215,10239,11263,12287,13311,14335,15359,16383,17407,18431,19455,20479,21503,22527,23551,24575,25599 ⋆ a(n) = 1024 * n - 1. ● a(n) = 2 * a(n - 1) - a(n - 2). ●

► [A075947] 1023,31775,232551,824491,1386837,6330581,25206065,42278310,77607100,402698573,673253467,1218520349,6442523019,10748180761,51539687634,86033873250,156768744521,824634027372,1374532244735,2476057332766 ⋆ Basis for code in A075946. ● a(n) = b(2 ^ n), where b is A075946, the binary lexicode, d=10. ●

► [A069095] 1,1023,59048,1047552,9765624,60406104,282475248,1072693248,3486725352,9990233352,25937424600,61855850496,137858491848,288972178704,576640565952,1098437885952,2015993900448,3566920035096,6131066257800 ⋆ Jordan function J _ 10(n). ● a(n) = Sum _{ d|n } d ^ 10 * mu(n / d). ● a(n) = n ^ 10 * Product _{ distinct primes p dividing n } (1 - 1 / p ^ 10). - _ Tom Edgar _ , Jan 09 2015 ●

► [A046313] 1024,1536,2048,2304,2560,3072,3456,3584,3840,4096,4608,5120,5184,5376,5632,5760,6144,6400,6656,6912,7168,7680,7776,8064,8192 ⋆ Numbers that are divisible by at least 10 primes (counted with multiplicity). ● a(n) = n + O(n (log log n) ^ 8 / log n). - _ Charles R Greathouse IV _ , Apr 07 2017 ●

► [A195234] 1024,3151,5428,7705,9982,12259,14536,16813,19090,21367,23644,25921,28198,30475,32752,35029,37306,39583,41860,44137,46414,48691,50968,53245,55522 ⋆ Number of lower triangles of a 4 X 4 0..n array with each element differing from all of its diagonal, vertical, antidiagonal and horizontal neighbors by one or less. ● a(n) = 2 * a(n - 1) - a(n - 2) for n>3. ●

► [A016781] 1,1024,16807,100000,371293,1048576,2476099,5153632,9765625,17210368,28629151,45435424,69343957,102400000,147008443,205962976,282475249,380204032,503284375,656356768,844596301,1073741824,1350125107,1680700000,2073071593 ⋆ a(n) = (3 * n + 1) ^ 5. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). - _ Harvey P. Dale _ , May 13 2012 ●

► [A195658] 1024,50922,815816,7238864,44693472,216134044,877751236,3130270224,10105541204,30179587994,84719304384,226268016376,580363147336,1440139184616,3477556916828,8210011147304,19021962952188,43385173057846,97653259485592,217359166880016 ⋆ Number of ways to place 9n nonattacking kings on a vertical cylinder 18 X 2n. ● a(n) = (21623809 * n - 226349399) * 2 ^ n + 8913 / 40 * n ^ 7 + 124781 / 20 * n ^ 6 + 376359 / 4 * n ^ 5 + 977074 * n ^ 4 + 294753537 / 40 * n ^ 3 + 787733819 / 20 * n ^ 2 + 135269649 * n + 226349400. ●

► [A352056] 0,1024,59049,1048576,9765625,60467200,282475249,1073741824,3486843450,10000001024,25937424601,61918412800,137858491849,289254656000,576660215299,1099511627776,2015993900449,3570527693824,6131066257801,10240001048576,16680163512499 ⋆ Sum of the 10th powers of the divisor complements of the odd proper divisors of n. ● a(n) = n ^ 10 * Sum _{ d|n, d<n, d odd } 1 / d ^ 10. ●

► [A231309] 0,1,1024,59050,1049600,9824675,61515776,292299924,1135257600,3779084325,11135257600,29716508926,73052621824,167575000775,362307276800,744225391400,1461818904576,2760219291849,5032286131200,8891285549650,15272286131200 ⋆ Recurrence a(n) = a(n - 2) + n ^ M for M=10, starting with a(0)=0, a(1)=1. ● a(n) = Sum _{ k=0..floor(n \ 2) } (n - 2 * k) ^ 10. ● a(n) = (1 / 66) * n * (3 * n ^ 10 + 33 * n ^ 9 + 110 * n ^ 8 - 528 * n ^ 6 + 2112 * n ^ 4 - 4224 * n ^ 2 + 2560). ●

► [A236216] 1024,60073,9825698,292300947,26229725548,164088217397,2180082117846,8311148375647,49737659589296,470444892889497,1290073179870298,6098657552288147,19521316862440548,41132799175724797,93731931411554846,268619401777067895,779736155077709296 ⋆ Sum of the tenth powers of the first n primes. ● a(n) = Sum _{ k=1..n } prime(k) ^ 10. ●

► [A017117] 1024,248832,3200000,17210368,60466176,164916224,380204032,777600000,1453933568,2535525376,4182119424,6590815232,10000000000,14693280768,21003416576,29316250624,40074642432,53782400000,71008211968,92389579776,118636749824,150536645632,188956800000 ⋆ a(n) = (8 * n + 4) ^ 5. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6); a(0)=1024, a(1)=248832, a(2)=3200000, a(3)=17210368, a(4)=60466176, a(5)=164916224. - _ Harvey P. Dale _ , Nov 24 2012 ●

► [A016798] 1024,9765625,1073741824,25937424601,289254654976,2015993900449,10240000000000,41426511213649,141167095653376,420707233300201,1125899906842624,2758547353515625,6278211847988224,13422659310152401,27197360938418176,52599132235830049 ⋆ a(n) = (3 * n + 2) ^ 10. ● a(n) = 59049 * n ^ 10 + 393660 * n ^ 9 + 1180980 * n ^ 8 + 2099520 * n ^ 7 + 2449440 * n ^ 6 + 1959552 * n ^ 5 + 1088640 * n ^ 4 + 414720 * n ^ 3 + 103680 * n ^ 2 + 15360 * n + 1024. [corrected by _ Amiram Eldar _ , Mar 31 2022] (End) ●

► [A351305] 1,1025,59050,1049600,9765626,60526250,282475250,1074790400,3486843450,10009766650,25937424602,61978880000,137858491850,289537131250,576660215300,1100585369600,2015993900450,3574014536250,6131066257802,10250001049600,16680163512500,26585860217050 ⋆ a(n) = n ^ 10 * Product _{ p|n, p prime } (1 + 1 / p ^ 10). ● a(n) = Sum _{ d|n } d ^ 10 * mu(n / d) ^ 2. ● a(n) = n ^ 10 * Sum _{ d|n } mu(d) ^ 2 / d ^ 10. ●

► [A294305] 0,0,1025,59050,1108650,10815226,71340451,352767124,1427557524,4904576300,14914341925,40791300350,102769130750,240345147350,529882277575,1105458926376,2206044295976,4218551412024,7792505423049,13913571680850,24163571680850,40817515234450 ⋆ Sum of the tenth powers of the parts in the partitions of n into two distinct parts. ● a(n) = Sum _{ i=1..floor((n - 1) / 2) } i ^ 10 + (n - i) ^ 10. ● a(n) = a(n - 1) + 11 * a(n - 2) - 11 * a(n - 3) - 55 * a(n - 4) + 55 * a(n - 5) + 165 * a(n - 6) - 165 * a(n - 7) - 330 * a(n - 8) + 330 * a(n -

9) + 462 * a(n - 10) - 462 * a(n - 11) - 462 * a(n - 12) + 462 * a(n - 13) + 330 * a(n - 14) - 330 * a(n - 15) - 165 * a(n - 16) + 165 * a(n - 17) + 55 * a(n - 18) - 5 5 * a(n - 19) - 11 * a(n - 20) + 11 * a(n - 21) + a(n - 22) - a(n - 23) for n>23. ●
▶ [A023002] 0,1,1025,60074,1108650,10874275,71340451,353815700,1427557524,4 914341925,14914341925,40851766526,102769130750,240627622599,52988227757 5,1106532668200,2206044295976,4222038196425,7792505423049,13923571680850 ⋆ Sum of 10th powers. ● a(n) = n * (n + 1) * (2 * n + 1) * (n ^ 2 + n - 1)(3 * n ^ 6 + 9 * n ^ 5 + 2 * n ^ 4 - 11 * n ^ 3 + 3 * n ^ 2 + 10 * n - 5) / 66 (see M athWorld, Power Sum, formula 40). - _ Bruno Berselli _ , Apr 26 2010 ● a(n) = - a(- n - 1). ● a(n) = (- 1) * Sum _{ j=1..10 } j * s(n + 1,n + 1 - j) * S(n + 10 - j,n), where s(n,k) and S(n,k) are the Stirling numbers of the first kind and the second kind, respectively. - _ Mircea Merca _ , Jan 25 2014 ●
▶ [A180270] 0,1025,476073,27022500,551536100,6129324225,45502479225,25340 5810448,1137920432400,4322847530025,14366776735025,42801847892100,116415 023802948,293153032943225,691043521403025,1538402208782400 ⋆ Integers of t he form (k ^ 12 - k ^ 8 - k ^ 4 + 1) / 512. ● a(n) = ((2 * n - 1) ^ 4 + 1) * ((n - 1) * n * (n ^ 2 + (n - 1) ^ 2)) ^ 2 / 8 (for k=2n - 1). ●
▶ [A221008] 1026,19458,174762,1170810,6751386,35653338,177967962,85483017 0,3994246746,18282889818,82367580762,366439242330,1613682326106,704653010 3898,30553522371162,131684094835290,564617195813466,2409993639295578,102 46077161667162,43408725425257050,183332581536692826 ⋆ The Wiener index o f the nanostar dendrimer D _ 3[n] , defined pictorially in the Alikhani - Iranma nesh reference. ● a(n) = - 1446 + 2 ^ n * 12132 + 4 ^ n * (8820 * n - 9660). ●
▶ [A253710] 1,1026,61100,1169750,12044025,83384476,437200176,1864757700,67 79099625,21693441550,62545208076,165314338826,405941961425,935824239000,2 042356907200,4248401203176,8470439399601,16262944822650,30186516503500,5 4350088184350,95193540843401,162596916293876,271426802958000,44366007058 7500 ⋆ Second partial sums of tenth powers (A008454). ● a(n) = n * (n + 1) ^ 2 * (n + 2) * (n ^ 2 + 2 * n - 2) * (2 * n ^ 6 + 12 * n ^ 5 + 16 * n ^ 4 - 16 * n ^ 3 - 17 * n ^ 2 + 30 * n - 5) / 264. ● a(n) = 2 * a(n - 1) - a(n - 2) + n ^ 10. ●
▶ [A250759] 1029,2361,4239,6663,9633,13149,17211,21819,26973,32673,38919,4 5711,53049,60933,69363,78339,87861,97929,108543,119703,131409,143661,15645 9,169803,183693 ⋆ Number of (4 + 1) X (n + 1) 0..2 arrays with nondecreasing x(i,j) - x(i,j - 1) in the i direction and nondecreasing x(i,j) + x(i - 1,j) in the j di rection. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>3. ●
▶ [A224428] 1032,54472,853256,8392840,64852872,433408392,2632152456,149471 10280,80788946312,420521631112,2125121035656,10487138557320,507537012893 52,241670439050632,1135046330686856,5268615489133960,24208077521689992,1 10246366797634952 ⋆ The hyper - Wiener index of the dendrimer NS[n], define d pictorially in the A. R. Ashrafi et al. reference. ● a(n) = 7560 - 64000 * 4 ^ n * n - 113312 * 2 ^ n + 106784 * 4 ^ n + 25600 * 4 ^ n * n ^ 2. ●
▶ [A168412] 0,1,1040,88695,2097664,24415625,181402416,988671775,429498368 0,15690559329,50000050000,142655915831,371504309760,896080382665,20247828 53744,4324878309375,8796093546496,17135948863745 ⋆ a(n) = n ^ 5 * (n ^ 6 + 1) / 2. ● a(n) = 12 * a(n - 1) - 66 * a(n - 2) + 220 * a(n - 3) - 495 * a(n - 4) + 79 2 * a(n - 5) - 924 * a(n - 6) + 792 * a(n - 7) - 495 * a(n - 8) + 220 * a(n - 9) - 66 * a(n - 10) + 12 * a(n - 11) - a(n - 12). - _ Wesley Ivan Hurt _ , Oct 02 2021 ●
▶ [A344410] 1,1,1045,23725,195661,975061,3578401,10680265,27453385,6301692 1,132361021,258815701,477132085,837244045,1408778281,2286380881,359592840 1,5501691505,8214519205,12001111741,17194450141,24205450501,33535911025,4 5792819865,61704091801 ⋆ a(n) = (3 * n ^ 2 - 1) * (3 * n ^ 2 - 2) * (3 * n ^ 3 - 3 * n + 1) / 2. ● a(n) = p(3 * n + 2, 3 * n ^ 3 - 3 * n + 1). ● a(n) = Sum _{ j =1..3 * n ^ 2 - 2 } p(3 * n + 2, j) for n > 0. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8). - _ Wesley Ivan Hurt _ , Sep 05 2022 ●
▶ [A337960] 1,1048,133875,4211872,61198135,545203800,3465030541,171977662 72,70665499413,250166670040,785039389519,2230057075104,5826818931739,1417 8299017624,32446195329465,70387069393408,145689159233737 ⋆ Number of ach iral colorings of the 30 triangular faces of a regular icosahedron or the 30 vertic es of a regular dodecahedron using n or fewer colors. ● a(n) = n ^ 2 * (15 * n ^ 10 + n ^ 8 + 20 * n ^ 2 + 24) / 60. ● a(n) = 1 * C(n,1) + 1046 * C(n,2) + 130 734 * C(n,3) + 3682656 * C(n,4) + 41467050 * C(n,5) + 238531284 * C(n,6) + 791012880 * C(n,7) + 1603496160 * C(n,8) + 2021060160 * C(n,9) + 154683648 0 * C(n,10) + 658627200 * C(n,11) + 119750400 * C(n,12), where the coefficien t of C(n,k) is the number of achiral colorings using exactly k colors. ●
▶ [A158692] 1056,4323,9768,17391,27192,39171,53328,69663,88176,108867,13173 6,156783,184008,213411,244992,278751,314688,352803,393096,435567,480216,527 043,576048,627231,680592 ⋆ a(n) = 1089 * n ^ 2 - 33. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●
▶ [A351770] 0,1,1057,68125,1399325,15227450,110102426,597639882,262191585 0,9756511275,31839011275,93340522951,250280856007,622316813300,1450471654 100,3196426654100,6706824221076,13476181309557,26055415288725,4867037028 5425,88136930285425,155187254126926 ⋆ a(n) = Sum _{ j=1..n } Sum _{ i=1. .j } (i * j) ^ 5. ● a(n) = n * (n + 1) * (n + 2) * (44 * n ^ 9 + 276 * n ^ 8 + 492 * n ^ 7 - 48 * n ^ 6 - 609 * n ^ 5 + 207 * n ^ 4 + 487 * n ^ 3 - 291 * n ^ 2 - 90 * n + 60) / 3168. ●
▶ [A035760] 1,1058,187266,13408034,523804162,13053926690,228751366018,301 3639296546,31343842260994,267120108528162,1920511723360130,1192393313463 5298,651572370713840 66,318308216281781026,1408463692886754178,5707273421 568956450,21377026411532247042,74604432883744337954 ⋆ Coordination seque nce for C _ 23 lattice. ● a(n) = [x ^ (2n)] ((1 + x) / (1 - x)) ^ 23. ●
▶ [A224457] 1062,2760,5715,10386,17304,27072,40365,57930,80586,109224,14480 7,188370,241020,303936,378369,465642,567150,684360,818811,972114,1145952,13 42080,1562325,1808586,2082834 ⋆ The hyper - Wiener index of the cyclic phenyl ene with n hexagons (n>=3). ● a(n) = (3 / 2)n(2n ^ 3 + 15n ^ 2 + 45n - 88). ●
▶ [A056102] 1,1068,2057,3124,3126,4193,5182,6249,6251,7318,8307,9374,9376,10 443,11432,12499,12501,13568,14557,15624,15626,16693,17682,18749,18751 ⋆ Nu mbers k such that k ^ 4 == 1 (mod 5 ^ 5). ● a(n) = a(n - 1) + a(n - 4) - a(n - 5) for n > 5. ●
▶ [A281259] 0,0,0,0,0,0,0,1080,12960,143424,1641600,19915200,257644800,35562 24000,52289556480,817133184000,13536585216000,237105792000000,4380335511 552000,85148431867699200,1737742314147840000,37156364106301440000,830772 012055265280000 ⋆ Number of elements of S _ n with strategic pile of size 6. ● a(n) = (n - 6)! * (120 * binomial(n - 7,5) + 576 * binomial(n - 7,4) + 1116 * bin omial(n - 7,3) + 1080 * binomial(n - 7,2) + 540 * binomial(n - 7,1)) for n>7. ●
▶ [A165809] 1083,8124,26703,62400,120795,207468,327999,487968,692955,9485 40,1260303,1633824,2074683,2588460,3180735,3857088,4623099,5484348,644641 5,7514880,8695323,9993324,11414463,12964320,14648475 ⋆ a(n) = 3 * n * (310 * n ^ 2 + 63 * n - 12). ● a(n) = 3 * n * (310 * n ^ 2 + 63 * n - 12). (End) ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). ●
▶ [A283356] 1,1,1,1101,10001,11101,110001,1111101,11110001,111111101,111111 0001,11111111101,111111110001,1111111111101,11111111110001,1111111111111 01,1111111111110001,11111111111111101,111111111111110001,111111111111111 1101,1111111111111110001 ⋆ Binary representation of the x - axis, from the or igin to the right edge, of the n - th stage of growth of the two - dimensional cell ular automaton defined by "Rule 621", based on the 5 - celled von Neumann ne ighborhood. ● a(n) = (10 ^ n - 9991) / 9 for n>4 and even. ● a(n) = (10 ^ n - 91) / 9 for n>4 and odd. ● a(n) = 10 * a(n - 1) + a(n - 2) - 10 * a(n - 3) for n >5. ●
▶ [A127308] 1104,16192,1362336,44981376,6631997376,41469483552,7932292263 36,2697825744960,22063059606912,282507110257440,588326886375936,41196467 55044256,127427998875092 16,2151765450620563 2,57242599902057216 ⋆ Number of ways of writing the n - th prime prime(n) as a sum of 24 squares. ● a(n) = (16 / 691) * (prime(n) ^ 11 + 1) + (33152 / 691) * tau(prime(n)) for n>1 where tau = A000594. - _ Giorgos Kalogeropoulos _ , Dec 15 2022 ●
▶ [A083738] 1105,2465,10585,18721,29341,46657,75361,104653,115921,162401,2 26801,252601,278545,294409,314821,334153,340561,399001,410041,449065,48888 1,512461,530881,534061,552721 ⋆ Pseudoprimes to bases 2,3 and 7. ● a(n) = n - th positive integer k(>1) such that 2 ^ (k - 1) = 1 (mod k), 3 ^ (k - 1) = 1 (mo d k) and 7 ^ (k - 1) = 1 (mod k). ●
▶ [A157376] 1107,13058,38131,76326,127643,192082,269643,360326,464131,5810 58,711107,854278,1010571,1179986,1362523,1558182,1766963,1988866,2223891,2 472038,2733307,3007698,3295211,3595846,3909603 ⋆ a(n) = 6561 * n ^ 2 - 7732 * n + 2278. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●
▶ [A322535] 1,1107,38165,398567,2306025,9377467,30162301,82073295,19701832 1,429042211,864287973,1633586615,2927984825,5017519755,8273550157,1319495 3119,20438495649,30853690355,45522444469,65803811463,93384154505,13033303 1003,179165107485,242908414063 ⋆ Number of arrays of 8 integers in - n..n wit h sum zero. ● a(n) = [x ^ (8 * n)] (Sum _{ k=0..2 * n } x ^ k) ^ 8. ● a(n) = (2 * n + 1) * (9664 * n ^ 6 + 28992 * n ^ 5 + 37360 * n ^ 4 + 26400 * n ^ 3 + 1 0936 * n ^ 2 + 2568 * n + 315) / 315. ●
▶ [A359098] 1111,1112,1113,1114,1115,1116,1117,1118,1119,1121,1122,1123,112 4,1125,1126,1127,1128,1129,1131,1132,1133,1134,1135,1136,1137 ⋆ Numbers wit h exactly four nonzero decimal digits and not ending with 0. ● a(n) is roughly 1 0 ^ (k * n ^ (1 / 3)), where k = (2 / 9) ^ (1 / 3) / 3 = 0.2019.... ●
▶ [A027622] 1114,3413,8476,18247,35414,63529,107128,171851,264562,393469,56 8244,800143,1102126,1488977,1977424,2586259,3336458,4251301,5356492,668027 9,8253574,10110073,12286376,14822107,17760034 ⋆ a(n) = n + (n + 1) ^ 2 + (n + 2) ^ 3 + (n + 3) ^ 4 + (n + 4) ^ 5. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>5. ●
▶ [A157444] 1122,2453,3784,5115,6446,7777,9108,10439,11770,13101,14432,1576 3,17094,18425,19756,21087,22418,23749,25080,26411,27742,29073,30404,31735,33 066 ⋆ a(n) = 1331 * n - 209. ● a(n) = 2 * a(n - 1) - a(n - 2). - _ Vincenzo Libra ndi _ , Jan 26 2012 ●
▶ [A158729] 1122,4590,10370,18462,28866,41582,56610,73950,93602,115566,1398 42,166430,195330,226542,260066,295902,334050,374510,417282,462366,509762,55 9470,611490,665822,722466 ⋆ a(n) = 1156 * n ^ 2 - 34. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●
▶ [A069984] 1123,22583,44043,65503,86963,108423,129883,151343,172803,19426 3,215723,237183,258643,280103,301563,323023,344483,365943,387403,408863,430 323,451783,473243,494703,516163 ⋆ 1123 + 21460n. ● a(0)=1123, a(1)=22583, a (n)=2 * a(n - 1) - a(n - 2). - _ Harvey P. Dale _ , Feb 04 2015 ●
▶ [A023307] 1129,10009,11489,12539,13859,30029,63079,77359,99119,121039,124 669,169409,194749,205589,246329,330329,349519,351829,354839,361279,369539,3 84589,395719,399769,416989 ⋆ Primes that remain prime through 4 iterations of function f(x) = 3x + 2. ● a(n) == 9 or 69 (mod 70). - _ John Cerkan _ , Oct 04 2016 ●
▶ [A166957] 1,1131,7829,25141,58113,111791,191221,301449,447521,634483,867 381,1151261,1491169,1892151,2359253,2897521,3512001,4207739,4989781,586317 3,6832961,7904191,9081909,10371161,11776993 ⋆ a(n) = 841 * n ^ 3 + 261 * n ^ 2 + 28 * n + 1. ● a(n) = 841 * n ^ 3 + 261 * n ^ 2 + 28 * n + 1. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Vincenzo Librandi _ , Jul 01 2012 ●
▶ [A154374] 1151,4801,10951,19601,30751,44401,60551,79201,100351,124001,150 151,178801,209951,243601,279751,318401,359551,403201,449351,498001,549151,6 02801,658951,717601,778751 ⋆ a(n) = 1250 * n ^ 2 - 100 * n + 1. ● a(n) = 3 * a (n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Jan 29 2012 ●
▶ [A035761] 1,1152,221952,17282432,733189632,19804348032,375282559232,533 2713820032,59660218248192,545370276747392,4193961783144192,2777389770612 9792,161439727075246592,836741699281154688,3918338381384594688,167636937 23937678208,66145673666689456128 ⋆ Coordination sequence for C _ 24 lattice. ● a(n) = [x ^ (2n)] ((1 + x) / (1 - x)) ^ 24. ●
▶ [A321245] 0,1,1155,759759,103786510,4767856260,107118740001,14653501368 10,13956101513964,100946621623995,588405869207695,2882842751900001,12245 455022841690,46164185630256694,157281327978056205,491245336843482180,142 2828159652548376,3857444027819847045,9864873410828916699,23951146853875 652515,55509091777214287590 ⋆ Non - isomorphic proper colorings of the 4 X 4 grid graph using at most n colors under rotational and reflectional symmetries. ● a(n) = (1 / 8) * n ^ 16 - 3 * n ^ 15 + (69 / 2) * n ^ 14 - (2015 / 8) * n ^ 13 +

(10437 / 8) * n ^ 12 - (20307 / 4) * n ^ 11 + 15333 * n ^ 10 - (292907 / 8) * n ^ 9 + (557915 / 8) * n ^ 8 - (848501 / 8) * n ^ 7 + (1023195 / 8) * n ^ 6 - (240539 / 2) * n ^ 5 + (683997 / 8) * n ^ 4 - (347485 / 8) * n ^ 3 + (112831 / 8) * n ^ 2 - (8807 / 4) * n. ●

▶ [A227485] 1165,795061,19190411,222761135,1865766759,13037931735,81350611063,470142180535,2571969023543,13504663462199,68693896897335,340717322458935,1655620816211767,7909483093294903,37250047530671927,173305467651546935,797871121068613431,3639796169374261047 ⋆ The hyper - Wiener index of the dendrimer D _ 4[n], defined pictorially in the A. R. Ashrafi et al. reference . ● a(n) = 1007415 + 2 ^ n * (- 4509545 + 732099 * n - 171585 * n ^ (2)) + 4 ^ n * (3503295 - 2446768 * n + 864900 * n ^ (2)). ●

▶ [A202199] 1176,4704,14700,38808,90552,192192,378378,700700,1233232,2079168,3378648,5317872,8139600,12155136,17757894,25438644,35802536,49588000,67687620,91171080,121310280,159606720,207821250,268006284,342540576 ⋆ Number of (n + 2) X 7 binary arrays avoiding patterns 001 and 101 in rows and columns. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. ●

▶ [A158735] 1190,4865,10990,19565,30590,44065,59990,78365,99190,122465,148190,176365,206990,240065,275590,313565,353990,396865,442190,489965,540190,592865,647990,705565,765590 ⋆ a(n) = 1225 * n ^ 2 - 35. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A186864] 0,0,1208,6712,17280,32520,52432,77016,106272,140200,178800,222072,270016,322632,379920,441880,508512,579816,655792,736440,821760,911752,1006416,1105752,1209760 ⋆ Number of 5 - step king's tours on an n X n board summed over all starting positions. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>6. ●

▶ [A235889] 1216,1624,2536,4744,10696,28744,89416,309064,1141576,4379464,17146696,67846984,269910856,1076691784,4300866376,17191666504,68743070536,274925093704,1099606000456,4398235255624,17592563532616,70369499153224 ⋆ Number of (n + 1) X (4 + 1) 0..3 arrays with the minimum plus the upper median equal to the lower median plus the maximum in every 2 X 2 subblock. ● a(n) = 4 * (210 + 45 * 2 ^ n + 4 ^ n). ●

▶ [A184038] 1225,1237,1258,1300,1378,1534,1834,2434,3610,5962,10618,19930,38458,75514,149434,297274,592570,1183162,2363578,4724410,9444538,18884794,37762234,75517114,151020730 ⋆ 1 / 16 the number of (n + 1) X 9 0..3 arrays with all 2 X 2 subblocks having the same four values. ● a(n) = 9 * 2 ^ (n / 2 - 1) + 9 * 2 ^ (n - 1) + 1210 for n even. ● a(n) = 9 * 2 ^ (n - 1) + 3 * 2 ^ ((n + 1) / 2) + 1210 for n odd. ●

▶ [A250894] 1229,3867,12387,39003,119359,357335,1052787,3069907,8903447,25780959,74735755,217269563,634036815,1857880039,5466025571,16140988131,47817974983,142048148015,422912961915,1261379418571,3767513043071 ⋆ Number of (n + 1) X (4 + 1) 0..2 arrays with nondecreasing x(i,j) - x(i,j - 1) in the i direction and nondecreasing absolute value of x(i,j) - x(i - 1,j) in the j direction. ● a(n) = - 265 - 21 * 2 ^ n + 9604 * 3 ^ (- 3 + n) + (226 - 9 * 2 ^ (3 + n)) * n + 6 * (7 + 9 * 2 ^ n) * n ^ 2 for n>2. ●

▶ [A221012] 1248,28184,264576,1799200,10428288,55146624,275248896,1321299200,6169283328,28218321664,127045890816,564885984000,2486370202368,10852804162304,47040516846336,202679222137600,868785296241408,3707414154572544,15758746697331456,66751342552544000,281870782248776448 ⋆ The Wiener index of the nanostar dendrimer G _ n , defined pictorially in the Golriz - Darafsheh - Khalifeh reference. ● a(n) = - 3328 - 2 ^ n * (1820 * n - 18616) + 4 ^ n * (13520 * n - 14040) - see Theorem 4 in the Golriz et al. reference; it has a typo: change 181616 to 18616. ●

▶ [A224435] 1248,136272,1590360,11608536,69325368,371933112,1870634040,9019095096,42224645688,193479671352,872186750520,3881641715256,17097660401208,74673784423992,323824724575800,1395810233321016,5985270160655928,25549161151039032,108628885484045880 ⋆ The Wiener index of the polyphenylene dendrimer G[n] defined pictorially in the N. E. Arif et al. reference. ● a(n) = - 31176 + 136464 * 2 ^ n + 93600 * n * 4 ^ n - 31860 * n * 2 ^ n - 104040 * 4 ^ n . ● a(n) = 13 * a(n - 1) - 64 * a(n - 2) + 148 * a(n - 3) - 160 * a(n - 4) + 64 * a(n - 5) for n>4. ●

▶ [A304829] 1256,9304,65640,459992,3220456,22543704,157806440,1104645592,7732519656,54127638104,378893467240,2652254271192,18565779898856,129960459292504,909723215048040,6368062505336792,44576437537358056,312035062761506904,2184245439330548840 ⋆ a(n) = 4024 * 7 ^ n / 147 - 256 / 3 (n >= 2). ● a(n) = 8 * a(n - 1) - 7 * a(n - 2) = 7 * a(n - 1) + 512. ● a(n) = (8 / 3) * (503 * 7 ^ (n - 2) - 32). (End) ●

▶ [A158737] 1260,5148,11628,20700,32364,46620,63468,82908,104940,129564,156780,186588,218988,253980,291564,331740,374508,419868,467820,518364,571500,627228,685548,746460,809964 ⋆ a(n) = 1296 * n ^ 2 - 36. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A104399] 1287,1507,1672,1792,1793,1876,1932,1958,1967,1987,1997,2001,2078,2157,2162,2178,2218,2253,2273,2283,2287,2298,2322,2382,2438 ⋆ Sums of 9 distinct positive pentatope numbers (A000332). ● a(n) = Ptop(c) + Ptop(d) + Ptop(e) + Ptop(f) + Ptop(g) + Ptop(h) + Ptop(i) + Ptop(j) + Ptop(k) for some positive c= / =d= / =e= / =f= / =g= / =h= / =i= / =j= / =k and Ptop(n) = binomial(n + 3,4). ●

▶ [A221006] 1296,14526,107082,649890,3539538,18027954,87813234,414505458,1911928050,8665131762,38733797106,171235454706,750157258482,3261519544050,14089697722098,60533384085234,258832139157234,1102123427954418,4675674117242610,19771419930918642,83360577251966706 ⋆ The Wiener index of the nanostar dendrimer NS[n], defined pictorially in the Karbasioun - Ashrafi - Diudea reference. ● a(n) = - 270 + 2 ^ n * 3510 + 4 ^ n * (3888 * n - 1944) (see Theorem 1 in the Karbasioun - Ashrafi - Diudea reference). ●

▶ [A016864] 1,1296,14641,65536,194481,456976,923521,1679616,2825761,4477456,6765201,9834496,13845841,18974736,25411681,33362176,43046721,54700816,68574961,84934656,104060401,126247696 ⋆ a(n) = (5 * n + 1) ^ 4. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Wesley Ivan Hurt _ , Oct 02 2020 ●

▶ [A016912] 0,1296,20736,104976,331776,810000,1679616,3111696,5308416,8503056,12960000,18974736,26873856,37015056,49787136,65610000,84934656,108243216,136048896,168896016,207360000,252047376 ⋆ (6n) ^ 4. ● a(0)=0, a(1)=1296, a(2)=20736, a(3)=104976, a(4)=331776, a(n)=5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Harvey P. Dale _ , Mar 28 2015 ●

▶ [A249586] 0,1,1296,142884,4326400,62015625,549246096,3480528016,17247043584,70801227225,250500250000,785786510916,2231605748736,5829824737009,14183810499600,32455809000000,70403108110336,145714859280081,289307033504784,553490085376900 ⋆ Sum of the first n ^ 3 cubes. ● a(n) = 13 * a(n - 1) - 78 * a(n - 2) + 286 * a(n - 3) - 715 * a(n - 4) + 1287 * a(n - 5) - 1716 * a(n - 6) + 1716 * a(n - 7) - 1287 * a(n - 8) + 715 * a(n - 9) - 286 * a(n - 10) + 78 * a(n - 11) - 13 * a(n - 12) + a(n - 13). ● a(n) = n ^ 6 * (n ^ 3 + 1) ^ 2 / 4. ● a(n) = Sum _{ i=0..n ^ 3 } i ^ 3. ●

▶ [A066509] 1309,1885,2013,2665,3729,5133,6061,6213,6305,6477,6853,6985,7257,7953,8393,8533,8785,9213,9453,9821,9877,10281,10945,11605,12453 ⋆ a(n) is the first of a triple of consecutive integers, each the product of three distinct primes. ● a(n) == 1 (mod 4). - _ Zak Seidov _ , Mar 31 2020 ●

▶ [A023318] 1319,2699,4259,4919,5689,8669,10159,10529,29819,33119,82339,86689,98669,174079,177949,196739,207869,210599,222499,231809,253369,267299,275699,323699,362459 ⋆ Primes that remain prime through 4 iterations of function f(x) = 7x + 6. ● a(n) == 9 (mod 10). - _ John Cerkan _ , Oct 08 2016 ●

▶ [A157266] 1320,3048,4776,6504,8232,9960,11688,13416,15144,16872,18600,20328,22056,23784,25512,27240,28968,30696,32424,34152,35880,37608,39336,41064,42792 ⋆ a(n) = 1728 * n - 408. ● a(n) = 2 * a(n - 1) - a(n - 2). - _ Vincenzo Librandi _ , Jan 27 2012 ●

▶ [A134116] 1327,8467,9973,11743,12163,17257,19087,20443,21433,29683,32653,34549,37747,41299,47743,49957,54217,59887,61057,61297,64237,73483,74653,77383,78367 ⋆ Primes p such that q - p = 34, where q is the next prime after p. ● a(n) >> n log ^ 2 n. - _ Charles R Greathouse IV _ , Sep 14 2015 ●

▶ [A202457] 1331,2835,5735,10918,19614,33468,54618,85779,130333,192425,277065,390236,539008,731658,977796,1288497,1676439,2156047,2743643,3457602,4318514,5349352,6575646,8025663,9730593 ⋆ Number of (n + 2) X 6 binary arrays with consecutive windows of three bits considered as a binary number nondecreasing in every row and column. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

▶ [A158743] 1332,5439,12284,21867,34188,49247,67044,87579,110852,136863,165612,197099,231324,268287,307988,350427,395604,443519,494172,547563,603692,662559,724164,788507,855588 ⋆ a(n) = 1369 * n ^ 2 - 37. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A154375] 1351,5201,11551,20401,31751,45601,61951,80801,102151,126001,152351,181201,212551,246401,282751,321601,362951,406801,453151,502001,553351,607201,663551,722401,783751 ⋆ a(n) = 1250 * n ^ 2 + 100 * n + 1. ● a(1)=1351, a(2)=5201, a(3)=11551, a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Apr 25 2011 ●

▶ [A243132] 1,1,1351,19601,119071,470449,1431431,3650401,8193151,16692641,31521799,55989361,94558751,153090001,239104711,362074049,533729791,768398401,1083358151,1499219281,2040327199,2735188721,3616921351,4723725601,6099380351 ⋆ 32 * n ^ 6 - 48 * n ^ 4 + 18 * n ^ 2 - 1. ● a(n) = (2 * n ^ 2 - 1) * (16 * n ^ 4 - 16 * n ^ 2 + 1). ●

▶ [A215865] 0,1356,15029,90734,394506,1381695,4138827,11002068,26603148,59546487,124984860,248436188,471271892,858408642,1508851218,2569865520,4255708464,6872006526,10847057991,16771536474,25448295950,37954221305,55716334245,80604653220 ⋆ Number of simple labeled graphs on n + 5 nodes with exactly n connected components that are trees or cycles. ● a(n) = C(n + 5,6) * (3 * n ^ 4 + 130 * n ^ 3 + 1565 * n ^ 2 + 7006 * n + 12992) / 16. ●

▶ [A178485] 1371,1372,1381,1383,1392,1393,1471,1472,1491,1494,1502,1504,1581,1583,1591,1594,1613,1614,1692,1693,1702,1704,1713,1714,2371 ⋆ (A178475(n) - 6) / 9. ● a(n) + a(5! + 1 - n) = 7406. ● a(n) == 1, 2, 3, 4 or 5 (mod 10). ● a(n + 6) - a(n) is an element of { 100, 110, 111, 200, 220, 222, 679 } . ● a(n + 6) - a(n) = 679 iff (n - 1) % 24 > 17, where % denotes the remainder upon division. ● a(n + 6) - a(n) = 200, 220 or 222 iff (n - 1) % 30 > 23, i.e. n==25,...,30 (mod 30). ●

▶ [A253490] 1388,3090,4196,6931,13528,29370,68992,172050,449608,1219050,3400912,9693570,28065688,82170330,242460832,719285490,2141665768,6392619210,19113104752,57209811810,171370433848,513593301690,1539743908672 ⋆ Number of (n + 1) X (3 + 1) 0..2 arrays with every 2 X 2 subblock diagonal minus antidiagonal sum nondecreasing horizontally, vertically and ne - to - sw antidiagonally. ● a(n) = 1655 + 247 * 2 ^ n + 49 * 3 ^ (n - 1) for n>4. ●

▶ [A250816] 1389,4321,10233,20631,37333,62469,98481,148123,214461,300873,411049,548991,719013,925741,1174113,1469379,1817101,2223153,2693721,3235303,3854709,4559061,5355793,6252651,7257693 ⋆ Number of (4 + 1) X (n + 1) 0..2 arrays with nondecreasing x(i,j) - x(i,j - 1) in the i direction and nondecreasing min(x(i,j),x(i - 1,j)) in the j direction. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

▶ [A202050] 1392,5216,15760,41088,95984,205792,411696,777760,1400080,2418432,4030832,6511456,10232400,15689792,23534800,34610112,49992496,71042080,99459024,137348288,187293232,252438816,336585200,444292576,580998096 ⋆ Number of (n + 2) X 8 binary arrays avoiding patterns 001 and 110 in rows and columns. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>9. ●

▶ [A158764] 1406,5738,12958,23066,36062,51946,70718,92378,116926,144362,174686,207898,243998,282986,324862,369626,417278,467818,521246,577562,636766,698858,763838,831706,902462 ⋆ a(n) = 38 * (38 * n ^ 2 - 1). ● a(n)= 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A156853] 1428,6854,16330,29856,47432,69058,94734,124460,158236,196062,237938,283864,333840,387866,445942,508068,574244,644470,718746,797072,879448,965874,1056350,1150876,1249452 ⋆ a(n) = 2025 * n ^ 2 - 649 * n + 52. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A124087] 1430,4862,11934,25194,48450,87210,149226,245157,389367,600875,904475,1332045,1924065,2731365,3817125,5259150,7152444,9612108,12776588,168

11300,21912660,28312548,36283236,46142811,58261125 ⋆ 9th column of Catalan triangle A009766. ● a(n) = C(n,8) - C(n,6). ●
▶ [A064305] 1,1430,95235,1338790,9137549,41260086,142648495,409186310,1022586105,2298558934,4750427771,9170347110,16730290885,29104970870,48618847719,78419396806,122678791025,186826162710 ⋆ Ninth diagonal of triangle A064094. ● a(n) = 1 + 7 * n + 27 * n ^ 2 + 75 * n ^ 3 + 165 * n ^ 4 + 297 * n ^ 5 + 429 * n ^ 6 + 429 * n ^ 7, compare to row n = 7 of Catalan triangle A009766. ●
▶ [A215548] 0,1430,389367,7152444,58261125,303719922,1188576675,3804949176,10495906641,25810820750,57928578191,120681823860,236332181085,439263172458,780774342075,1335176857200,2207407644585,3542395893894,5536432537895,8450810096300,12628017047349 ⋆ Number of standard Young tableaux of shape [8n,8]. ● a(n) = C(8 * n + 8,8) * (8 * n - 7) / (8 * n + 1) for n>0, a(0) = 0. ●
▶ [A221004] 1437,4263,15675,68163,325779,1602483,7835379,37613427,176915571,816731763,3710601843,16633811571,73738101363,323845964403,1411137700467,6107956052595,26286286307955,112564798489203,479941662081651,2038504721744499,8628988563948147,36415869693198963,153263217907335795,643451990789063283,2695404780741722739 ⋆ The Wiener index of the nanostar dendrimer NS[n], defined pictorially in the Wang - Hua reference. ● a(n) = 627 + 2 ^ n * (936 * n + 1602) + 4 ^ n * (432 * n - 792). ●
▶ [A227494] 1437,18915,170799,1224231,7577943,42506295,222662391,1110797943,5346791799,25055240055,115015961463,519520043895,2316518945655,10221182047095,44708102116215,194132294964087,837742493569911,3595852736893815 ⋆ The Wiener index of the nanostar dendrimer D _ n, defined pictorially as NS[n] in the Yang et al. reference. ● a(n) = 4983 + 2 ^ n * (15048 * n + 29502) + 4 ^ n * (14256 * n - 33048). ●
▶ [A157508] 1440,2898,4356,5814,7272,8730,10188,11646,13104,14562,16020,17478,18936,20394,21852,23310,24768,26226,27684,29142,30600,32058,33516,34974,36432 ⋆ a(n) = 1458 * n - 18. ● a(n) = 2 * a(n - 1) - a(n - 2). - _ Vincenzo Librandi _ , Jan 26 2012 ●
▶ [A187291] 0,0,1440,15424,57288,134408,248208,397152,580328,797160,1047532,1331408,1648788,1999672,2384060,2801952,3253348,3738248,4256652,4808560,5393972,6012888,6665308,7351232,8070660 ⋆ Number of 6 - step one or two space at a time rook's tours on an n X n board summed over all starting positions. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>12. ●
▶ [A362863] 1,1441,11521,44641,122401,273601,534241,947521,1563841,2440801,3643201,5243041,7319521,9959041,13255201,17308801,22227841,28127521,35130241,43365601,52970401,64088641,76871521,91477441,108072001 ⋆ Centered hecatonicosachoral numbers. ● a(n) = 300 * n ^ 4 - 600 * n ^ 3 + 420 * n ^ 2 - 120 * n + 1. ●
▶ [A023311] 1447,2207,6211,6607,8369,9769,11821,13537,13729,13781,15581,17231,17497,27817,32059,32569,32611,33647,36251,39079,46381,47417,55127,55171,57077 ⋆ Primes that remain prime through 4 iterations of function f(x) = 4x + 3. ● a(n) == 3 or 9 (mod 14). - _ John Cerkan _ , Oct 04 2016 ●
▶ [A242038] 0,1,1448,102275,2097152,21836601,148111277,747359260,3037000499,10460353203,31622776601,86024705429,214488041413,497055861119,1082291816449,2233357359474,4398046511104,8312155792152,15148209527700,26724698233906 ⋆ Integer part of square root of A010809(n) = n ^ 21. ● a(n) = floor(sqrt(n ^ 21)). ●
▶ [A167575] 1473,8169,26529,66345,140865,266793,464289,756969,1171905,1739625,2494113,3472809,4716609,6269865,8180385,10499433,13281729,16585449,20472225,25007145,30258753,36299049,43203489,51050985,59923905 ⋆ The fifth row of the ED3 array A167572. ● a(n) = 144 * n ^ 4 + 192 * n ^ 3 + 1080 * n ^ 2 - 48 * n + 105. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ G. C. Greubel _ , Jun 16 2016 ●
▶ [A157505] 1476,2934,4392,5850,7308,8766,10224,11682,13140,14598,16056,17514,18972,20430,21888,23346,24804,26262,27720,29178,30636,32094,33552,35010,36468 ⋆ a(n) = 1458 * n + 18. ● a(n) = 2 * a(n - 1) - a(n - 2). - _ Vincenzo Librandi _ , Feb 04 2012 ●
▶ [A158770] 1482,6045,13650,24297,37986,54717,74490,97305,123162,152061,184002,218985,257010,298077,342186,389337,439530,492765,549042,608361,670722,736125,804570,876057,950586 ⋆ a(n) = 1521 * n ^ 2 - 39. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●
▶ [A157375] 1520,7743,18768,34595,55224,80655,110888,145923,185760,230399,279840,334083,393128,456975,525624,599075,677328,760383,848240,940899,1038360,1140623,1247688,1359555,1476224 ⋆ a(n) = 2401 * n ^ 2 - 980 * n + 99. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Jan 28 2012 ●
▶ [A188788] 0,1536,39408,217728,702904,1726080,3583320,6635392,11307768,18090624,27538840,40272000,56974392,78395008,105347544,138710400,179426680,228504192,287015448,356097664,436952760,530847360,639112792,763145088 ⋆ Number of 5 - step self - avoiding walks on an n X n X n X n 4 - cube summed over all starting positions. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>7. ●
▶ [A083734] 1541,1729,1891,2821,6601,8911,15841,29341,41041,46657,52633,63973,75361,88831,101101,112141,115921,126217,146611,162401,172081,188461,218791,252601,294409 ⋆ Pseudoprimes to bases 3 and 5. ● a(n) = n - th positive integer k(>1) such that 3 ^ (k - 1) = 1 (mod k) and 5 ^ (k - 1) = 1 (mod k). ●
▶ [A158773] 1560,6360,14360,25560,39960,57560,78360,102360,129560,159960,193560,230360,270360,313560,359960,409560,462360,518360,577560,639960,705560,774360,846360,921560,999960 ⋆ a(n) = 1600 * n ^ 2 - 40. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●
▶ [A183637] 1576,2884,6136,14644,38056,105604,309016,945364,3004936,9877924,33458296,116413684,414874216,1510107844,5598165976,21077667604,80389277896,309840123364,1204303904056,4712234595124,18534372807976 ⋆ Number of (n + 1) X 5 0..3 arrays with every 2 X 2 subblock summing to 6. ● a(n) = 570 + 45 * 2 ^ (3 + n) + 10 * 3 ^ (2 + n) + 4 ^ (1 + n). ●
▶ [A187241] 0,0,0,0,0,1600,389312,22057472,565532992,8611750848,90564534336,720227187456,4603893554496,24675964279680,114402835995392,469601097840640,1737913582100864,5882030372643968,18417596366384512,53854324059153920,148209412582029184,386390343290393024,959556901097413696 ⋆ Number of ways to place 9 nonattacking bishops on an n X n board. ● a(n) = n ^ 18 / 36288 0 - n ^ 17 / 7560 + 181n ^ 16 / 60480 - 14509n ^ 15 / 340200 + 2101n ^ 14 / 4860 - 101071n ^ 13 / 30240 + 112406401n ^ 12 / 5443200 - 143351879n ^ 11 / 1360800 + 2465350549n ^ 10 / 5443200 - 14081834n ^ 9 / 8505 + 55888723201n ^ 8 / 10886400 - 6055816813n ^ 7 / 453600 + 155816526107n ^ 6 / 5443200 - 13489156949n ^ 5 / 272160 + 183801705823n ^ 4 / 2721600 - 15816472541n ^ 3 / 226800 + 30820237351n ^ 2 / 604800 - 919392091n / 40320 + 1101239 / 256 + (- n ^ 12 / 5760 + 11n ^ 11 / 1440 - 113n ^ 10 / 720 + 51793n ^ 9 / 25920 - 202873n ^ 8 / 11520 + 3428791n ^ 7 / 30240 - 1050169n ^ 6 / 1920 + 8590259n ^ 5 / 4320 - 1034689n ^ 4 / 192 + 68481311n ^ 3 / 6480 - 81534479n ^ 2 / 5760 + 465686363n / 40320 - 1101239 / 256) * (- 1) ^ n. ●
▶ [A224461] 1636,35877,358267,2593671,15836671,87269679,449795599,2213852367,10541202511,48969228111,223231118671,1002642454863,4450100228431,19559951884623,85281094811983,369296144564559,1589885770858831,6810377914286415,29044914697011535,123393405571563855 ⋆ The Wiener index of Wang's helicene - based dendrimer defined pictorially as DNS _ 2[n] in the Shabani et al. reference. ● a(n) = 335 + 2 ^ n * (6858 * n + 37319 / 2) + 4 ^ n * (6561 * n - 37989 / 2). ●
▶ [A158775] 1640,6440,14440,25640,40040,57640,78440,102440,129640,160040,193640,230440,270440,313640,360040,409640,462440,518440,577640,640040,705640,774440,846440,921640,1000040 ⋆ a(n) = 1600 * n ^ 2 + 40. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). (End) ●
▶ [A272127] 1,1641,26465,134953,427905,1046441,2172001,4026345,6871553,11010025,16784481,24577961,34813825,47955753,64507745,85014121,110059521,140268905,176307553,218881065,268735361,326656681,393471585,470046953,557289985 ⋆ a(n) = 1680 * n ^ 4 - 168 * n ^ 2 + 128 * n + 1. ● a(n) = (2 * n + 1) * (840 * n ^ 3 - 420 * n ^ 2 + 126 * n + 1). ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5), for n>4 ● a(n) = 1 / 4 ^ n * Sum _{ k = 0..n } (2 * k + 1) ^ 8 * binomial(2 * n + 1, n - k). ● a(n - 1) = 2 / 4 ^ n * binomial(2 * n,n) * (1 + 3 ^ 8 * (n - 1) / (n + 1) + 5 ^ 8 * (n - 1) * (n - 2) / ((n + 1) * (n + 2)) + 7 ^ 8 * (n - 1) * (n - 2) * (n - 3) / ((n + 1) * (n + 2) * (n + 3)) + ...). (End) ●
▶ [A060095] 0,0,0,0,0,1680,27342,208302,1099602,4636072,16734438,53810484,158053119,431305959,1106791524,2694914978,6269281305,14010246285,30208869495,63074014815,127909521180,252581107180,486738385140 ⋆ Number of 7 - block ordered bicoverings of an unlabeled n - set. ● a(n) = binomial(n + 20, n) - 7 * binomial(n + 14, 14) - 21 * binomial(n + 10, 10) + 42 * binomial(n + 9, 9) + 105 * binomial(n + 6, 6) - 140 * binomial(n + 5, 5) + 105 * binomial(n + 4, 4) - 420 * binomial(n + 3, 3) + 35 * binomial(n + 2, 2) + 1050 * binomial(n + 1, 1) - 1050 * binomial(n, 0) + 300 * binomial(n - 1, - 1). ●
▶ [A361705] 1,1,1,1,1,1,1,1,1681,15121,75601,277201,831601,2162161,5045041,10810801,54054001,592191601,5035670641,31553973361,157346607601,660308770801,2420415874801,7951853614321,24853781309281 ⋆ Constant term in the expansion of (1 + w ^ 4 + x ^ 4 + y ^ 4 + z ^ 4 + 1 / (w * x * y * z)) ^ n. ● a(n) = Sum _{ k=0..floor(n / 8) } (4 * k)! / k! ^ 4 * binomial(8 * k,4 * k) * binomial(n,8 * k). ●
▶ [A322745] 0,1681,23762,131043,465124,1275125,2948406,6041287,11309768,19740249,32580250,51369131,77968812,114594493,163845374,228735375,312723856,419746337,554245218,721200499,926160500,1175272581,1475313862,1833721943,2258625624 ⋆ a(n) = n * (16 * n ^ 2 + 20 * n + 5) ^ 2. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>5. ●
▶ [A335338] 1,1683,23525,129367,458649,1256651,2904733,5950575,11138417,19439299,32081301,50579783,76767625,112825467,161311949,225193951,307876833,413234675,545640517,709996599,911764601,1156995883,1452361725,1805183567,2223463249 ⋆ P _ 5(2n + 1), the Legendre polynomial of order 5 at 2n + 1. ● a(n) = 252 * n ^ 5 + 630 * n ^ 4 + 560 * n ^ 3 + 210 * n ^ 2 + 30 * n + 1 = (2 * n + 1) * (126 * n ^ 4 + 252 * n ^ 3 + 154 * n ^ 2 + 28 * n + 1). ●
▶ [A065903] 1689,1741,3306,3894,4362,4587,4999,5754,6025,6371,6668,7012,7982,9054,9158,9695,9742,9832,10056,10664,11005,12027,12385,13676,13895 ⋆ Integers i > 1 for which there is no prime p such that i is a solution mod p of x ^ 4 = 2. ● a(n) = n - th integer i such that i ^ 4 - 2 has no prime factor > i. ●
▶ [A126720] 1693,2203,4201,4547,4783,5261,6197,6421,6761,7103,7393,7817,8147,8353,9091,11027,11657,11863,12097,12143,13033,13291,16057,16217,16477 ⋆ Primes p such that p - q = 24, where q is the previous prime before p; or prime numbers preceded by precisely 23 composite numbers. ● a(n) >> n log ^ 2 n. - _ Charles R Greathouse IV _ , Mar 13 2020 ●
▶ [A301985] 1697,4027,6359,8693,11029,13367,15707,18049,20393,22739,25087,27437,29789,32143,34499,36857,39217,41579,43943,46309,48677,51047,53419,55793,58169 ⋆ a(n) = n ^ 2 + 2329n + 1697. ● a(n) = 2a(n - 1) - a(n - 2) + 2, a(1) = 1697, a(2) = 4027. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>2. ●
▶ [A157287] 1704,3432,5160,6888,8616,10344,12072,13800,15528,17256,18984,20712,22440,24168,25896,27624,29352,31080,32808,34536,36264,37992,39720,41448,43176 ⋆ a(n) = 1728 * n - 24. ● a(n) = 2 * a(n - 1) - a(n - 2). - _ Vincenzo Librandi _ , Jan 28 2012 ●
▶ [A297560] 1715,1728,1741,1754,1767,1780,1793,1806,1819,1847,1848,1849,1850,1851,1852,1853,1854,1855,1884,1897,1910,1923,1936,1949,1962 ⋆ Numbers with nonzero Conway base - 13 function value. ● a(i * b(k) + j) = i * 13 ^ n + a(j), where b(k) is the number of terms below 13 ^ n (see comment), 0 <= i <= 9, 1 <= j <= b(k). ●
▶ [A157247] 1715,1781,1855,2009,2401,2989,3451,3821,4459,5831,6865,7679,9065,12005,15925,18851,21145,25039,33271,39409,44219,52381,69629,92561,109655 ⋆ Positive numbers y such that y ^ 2 is of the form x ^ 2 + (x + 2401) ^ 2 with integer x. ● a(n)=6 * a(n - 9) - a(n - 18) for n > 18; a(1)=1715, a(2)=1781, a(3)=1855, a(4)=2009, a(5)=2401, a(6)=2989, a(7)=3451, a(8)=3821, a(9)=4459, a(10)=5831, a(11)=6865, a(12)=7679, a(13)=9065, a(14)=12005, a(15)=15925, a(16)=18851, a(17)=21145, a(18)=25039. ●
▶ [A318628] 0,1,1716,38760,296010,1344904,4496388,12271518,28989675,61474519,119877472,218618940,377447148,622614630,988172374,1517381580,2264243157,3295144749,4690625500,6547258432,8979650478,12122560170,16133132940,21193254160,27512019711 ⋆ Number of 7 - member subsets of [7 * n] whose elemen

ts sum to a multiple of n. • a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) + a(n - 7) - 6 * a(n - 8) + 15 * a(n - 9) - 20 * a(n - 10) + 15 * a(n - 11) - 6 * a(n - 12) + a(n - 13). - _ Wesley Ivan Hurt _ , Mar 25 2023 •

► [A194719] 0,1,1716,54573,492724,2467137,8786436,25066621,61189668,133071009,264735892,490704621,858686676,1432583713,2295801444,3554870397,5343375556,7826194881,11204046708,15718346029,21656369652,29356730241,39215159236,51690598653,67311601764 ⋆ Number of n - ary words beginning with the first character of the alphabet, that can be built by inserting seven doublets into the initially empty word. • a(0) = 0, a(n) = 1 + (12 + (65 + (208 + (429 + (572 + 429 * (n - 1)) * (n - 1)) * (n - 1)) * (n - 1)) * (n - 1)) * (n - 1) for n>0. •

► [A202458] 1728,4137,9338,19614,38478,71088,124740,209445,338596,529731,805398,1194128,1731522,2461458,3437424,4723983,6398376,8552269,11293650,14748882,19064918,24411684,30984636,39007497,48735180 ⋆ Number of (n + 2) X 7 binary arrays with consecutive windows of three bits considered as a binary number nondecreasing in every row and column. • a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. •

► [A202200] 1728,7680,26400,76032,192192,439296,926640,1830400,3422848,6110208,10480704,17364480,27907200,43659264,66682704,99677952,146132800,210496000,298378080,416782080,574367040,781747200,1051830000,1400196096 ⋆ Number of (n + 2) X 8 binary arrays avoiding patterns 001 and 101 in rows and columns. • a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>9. •

► [A017523] 0,1728,13824,46656,110592,216000,373248,592704,884736,1259712,1728000,2299968,2985984,3796416,4741632,5832000,7077888,8489664,10077696,11852352,13824000,16003008,18399744,21024576,23887872 ⋆ a(n) = (12 * n) ^ 3. • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>3. - _ Vincenzo Librandi _ , Jul 05 2014 •

► [A033181] 1729,2465,15841,41041,46657,75361,162401,172081,399001,449065,488881,530881,656601,670033,838201,997633,1050985,1615681,1773289,1857241,2113921,2433601,2455921,2704801,3057601 ⋆ Absolute Euler pseudoprimes: odd composite numbers n such that a ^ ((n - 1) / 2) == +- 1 (mod n) for every a coprime to n. • a(n) == 1 (mod 4). - _ Thomas Ordowski _ , May 02 2019 •

► [A138129] 0,1729,3458,5187,6916,8645,10374,12103,13832,15561,17290,19019,20748,22477,24206,25935,27664,29393,31122,32851,34580,36309,38038,39767,41496 ⋆ Multiples of 1729, the Hardy - Ramanujan number. • a(n) = 1729 * n. •

► [A130859] 1,1729,5184,10366,17275,25911,36274,48364,62181,77725,94996,113994,134719,157171,181350,207256,234889,264249,295336,328150,362691,398959,436954,476676,518125 ⋆ 1729 - gonal numbers. • a(n) = (1727n ^ 2 - 1725n) / 2. •

► [A286217] 1729,11339,49321,146969,386389,1089019,1221191,3864241,5171489,12640949,18181979,21243961,43974269,51881689,178433279,208506509,230324329,278421569,393806449,849244031,932539661,1341880019,1416207439,1672403471,1829232539 ⋆ Product of the n - th sexy prime triple. • a(n) = s(n) * (s(n) + 6) * (s(n) + 12), where s = A046118. •

► [A280428] 1729,13832,46683,110656,216125,373464,593047,885248,1260441,1729000,2301299,2987712,3798613,4744376,5835375,7081984,8494577,10083528,11859211,13832000,16012269,18410392,21036743,23901696,27015625 ⋆ a(n) = 1729 * n ^ 3. • a(n) = n ^ 3 * 1729. • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n > 4. •

► [A130876] 1,1730,5188,10375,17291,25936,36310,48413,62245,77806,95096,114115,134863,157340,181546,207481,235145,264538,295660,328511,363091,399400,437438,477205,518701 ⋆ Centered 1729 - gonal numbers. • a(n) = 1 + (1729 / 2) * n + (1729 / 2) * n ^ 2. •

► [A211853] 1731,6936,21897,57913,134164,280751,542235,981675,1685165,2766870,4374561,6695649,9963718,14465557,20548691,28629411,39201303,52844276,70234089,92152377,119497176,153293947,194707099,245052011,305807553 ⋆ Number of nonnegative integer arrays of length 2n + 8 with new values 0 upwards introduced in order, no three adjacent elements all unequal, and containing the value n + 1. • a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. •

► [A157325] 1752,3480,5208,6936,8664,10392,12120,13848,15576,17304,19032,20760,22488,24216,25944,27672,29400,31128,32856,34584,36312,38040,39768,41496,43224 ⋆ a(n) = 1728 * n + 24. • a(n) = 2 * a(n - 1) - a(n - 2). - _ Vincenzo Librandi _ , Jan 26 2012 •

► [A271747] 1754,5649,20085,77133,315597,1362669,6164685,29058813,142084077,717966669,3737612685,19991467293,109605434157,614681711469,3519553748685,20540447808573,121996580169837,736352527581069,4510823754140685,28011087761890653,176122939449075117 ⋆ Number of set partitions of [n] such that 8 is the largest element of the last block. • a(n) = 64 + 91 * 2 ^ (n - 6) + 245 * 2 ^ (2 * n - 15) + 11 * 2 ^ (n - 7) * 3 ^ (n - 8) + 217 * 3 ^ (n - 7) + 161 * 5 ^ (n - 8) + 7 ^ (n - 8) for n>8. • a(n) = 28 * a(n - 1) - 322 * a(n - 2) + 1960 * a(n - 3) - 6769 * a(n - 4) + 13132 * a(n - 5) - 13068 * a(n - 6) + 5040 * a(n - 7) for n>15. •

► [A165678] 1764,8028,24552,60216,127860,245004,434568,725592,1153956,1763100,2604744,3739608,5238132,7181196,9660840,12780984,16658148,21422172,27216936,34201080,42548724,52450188,64112712,77761176,93638820 ⋆ Sixth right hand column of triangle A165674. • a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). • a(n) = 120 + 548 * n + 675 * n ^ 2 + 340 * n ^ 3 + 75 * n ^ 4 + 6 * n ^ 5. •

► [A134155] 1,1807,21883,100801,303829,720931,1466767,2680693,4526761,7193719,10895011,15868777,22377853,30709771,41176759,54115741,69888337,88880863,111504331,138194449,169411621,205640947,247392223,295199941 ⋆ a(n) = 1 + 21 n + 168 n ^ 2 + 588 n ^ 3 + 1029 n ^ 4. • a(n) = 3(7n + 1) ^ 4 + 6(7n + 1) ^ 2 - 3 (7n + 1) + 1) / 7. •

► [A156636] 1820,6214,10608,15002,19396,23790,28184,32578,36972,41366,45760,50154,54548,58942,63336,67730,72124,76518,80912,85306,89700,94094,98488,102882,107276 ⋆ a(n) = 4394 * n + 1820. • a(n) = 2 * a(n - 1) - a(n - 2). •

► [A303272] 0,1852,3704,5556,7408,9260,11112,12964,14816,16668,18520,20372,22224,24076,25928,27780,29632,31484,33336,35188,37040,38892,40744,42596,44448 ⋆ Multiples of 1852. • a(n) = 1852 * n. •

► [A051355] 0,0,0,0,1855,41873,473414,3759915,23805016,127946132,605565989,2584498046,10113002933,36729043255,124992460002,401590336403,1225697257191,3571954259819,9982155789012,26849512929685 ⋆ A class of Boolean functions of n variables and rank 5. • a(n) = n * (n - 1) * (n - 2) * (n - 3) * (n ^ 27 + 502 * n ^ 26 + 120801 * n ^ 25 + 18555450 * n ^ 24 + 2043896145 * n ^ 23 + 171959382510 * n ^ 22 + 11492866392285 * n ^ 21 + 626595483118170 * n ^ 20 + 28395669619525335 * n ^ 19 + 1084042810491338490 * n ^ 18 + 35186149524510636675 * n ^ 17 + 976432949265387426270 * n ^ 16 + 23217929244997797467115 * n ^ 15 + 472721672719078245765450 * n ^ 14 + 8216952258092593785438255 * n ^ 13 + 121453170291069318701426670 * n ^ 12 + 1521541491360927508366755180 * n ^ 11 + 16143766722952584357123061080 * n ^ 10 + 145316099588153228925752250320 * n ^ 9 + 1109949254515099247776167957920 * n ^ 8 + 7130381649450829873015538236224 * n ^ 7 + 37568515430020522274235444451968 * n ^ 6 + 155312640493406761927342466801664 * n ^ 5 + 454096256426890805548935873515520 * n ^ 4 + 591552291328659577837839697920000 * n ^ 3 - 167519272257233476553272965120000 * n ^ 2 - 104195193057267739832711784038400000 * n - 167058140647845788108376440832000000) / 31!. •

► [A120809] 1859,357911,2141399,4641629,6633419,8447039,10338119,13526009,20163059,21603425,24099569,26187119,26483321,28226549,33379569,33485139,40790009,50139819,52046075,56152179,57170075,59824925,72541799 ⋆ Integers of the form p ^ 2 * q in A120806: x + d + 1 is prime for all divisors d of x. Both p and q are odd primes, with p and q distinct. See A054753. • a(n) = n - th element of A120806 of the form p ^ 2 * q where p and q are distinct odd primes. •

► [A127410] 1875,25920,184877,917504,3582306,11760000,33820710,87588864,208295373,461452992,962836875,1908408320,3617795636,6595852032,11617856508,19845120000,32979115575,53463778368,84747328281,131616866304,200621093750,300598812800,443333396610 ⋆ Negative value of coefficient of x ^ (n - 5) in the characteristic polynomial of a certain n X n integer circulant matrix. • a(n + 4) = n * (n + 1) * (n + 2) * (n + 3) * (n + 4) ^ 5 * (4 * n + 32) / (2 * 6!) for n>=1. • a(n) = (4 * n ^ 10 - 24 * n ^ 9 - 20 * n ^ 8 + 360 * n ^ 7 - 704 * n ^ 6 + 384 * n ^ 5) / (2 * 6!) for n>=5. •

► [A157760] 1898,9325,22370,41033,65314,95213,130730,171865,218618,270989,328978,392585,461810,536653,617114,703193,794890,892205,995138,1103689,1217858,1337645,1463050,1594073,1730714 ⋆ a(n) = 2809 * n ^ 2 - 1000 * n + 89. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). •

► [A157448] 1921,7937,18049,32257,50561,72961,99457,130049,164737,203521,246401,293377,344449,399617,458881,522241,589697,661249,736897,816641,900481,988417,1080449,1176577,1276801 ⋆ a(n) = 2048 * n ^ 2 - 128 * n + 1. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Jan 26 2012 •

► [A202051] 1926,7848,25650,71964,180054,411696,874998,1750140,3325410,6046344,10581246,17906868,29418570,47069856,73546794,112483476,168725358,248648040,360539802,515057004,725762286,1009756368,1388415150 ⋆ Number of (n + 2) X 9 binary arrays avoiding patterns 001 and 110 in rows and columns. • a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10) for n>10. •

► [A200435] 0,1928,50592,473034,2591502,10217182,32233938,86581308,205946004,445471164,892792604,1680711318,3002811474,5132333154,8444609086,13443374616,20791260168,31344775440,46194094584,66707951618,94583955318 ⋆ Number of - n..n arrays x(0..7) of 8 elements with zero sum and no two or three adjacent elements summing to zero. • a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. •

► [A221015] 1932,53181,650751,5617899,40053075,253523331,1481003043,8169745635,43181452131,220829474403,1100143233123,5365599704163,25713603050595,121424081661027,566235515047011,2612143455243363,11937564067826787,54106970144246883 ⋆ The hyper - Wiener index of the dendrimer G _ n , defined pictorially in the Ashrafi - Shabani - Diudea reference. • a(n) = 3171 + 2 ^ (n - 1) * (- 810 * n ^ 2 + 3240 * n - 35583) + 4 ^ (n - 1) * (11664 * n ^ 2 - 38232 * n + 58482). •

► [A227491] 1932,305592,6162360,67702236,555929988,3858461844,24038223540,139011929844,761612920692,4005957732468,20412297267828,101407748443764,493489861416564,2360705148118644,11131067755529844,51842363941865076,238902338228766324 ⋆ The hyper - Wiener index of the nanostar dendrimer D _ n, defined pictorially in the Ghorbani et al. references and recursively in the Deutsch et al. reference. • a(n) = 116340 - 2 ^ n * 1429983 / 2 + 4 ^ n * 4790367 / 8 - 4 ^ n * 2685555 * n / 8 + 4 ^ n * 263169 * n ^ 2 / 4. • a(n) = 15 * a(n - 1) - 86 * a(n - 2) + 232 * a(n - 3) - 288 * a(n - 4) + 128 * a(n - 5) for n > 5. •

► [A157627] 1960,9960,17960,25960,33960,41960,49960,57960,65960,73960,81960,89960,97960,105960,113960,121960,129960,137960,145960,153960,161960,169960,177960,185960,193960 ⋆ 8000n - 6040. • a(n) = 2 * a(n - 1) - a(n - 2). •

► [A166876] 1983,1984,1986,1989,1994,2002,2015,2036,2070,2125,2214,2358,2591,2968,3578,4565,6162,8746,12927,19692,30638,48349,77006,123374,198399 ⋆ a(n) = a(n - 1) + Fibonacci(n), a(1)=1983. • a(n) = 2 * a(n - 1) - a(n - 3). •

► [A104400] 2002,2288,2508,2652,2673,2793,2872,2877,2933,2968,2988,2998,3002,3037,3107,3157,3158,3241,3297,3323,3327,3332,3352,3362,3366 ⋆ Sums of 10 distinct positive pentatope numbers (A000332). • a(n) = Ptop(b) + Ptop(c) + Ptop(d) + Ptop(e) + Ptop(f) + Ptop(g) + Ptop(h) + Ptop(i) + Ptop(j) + Ptop(k) for some positive b= / =c= / =d= / =e= / =f= / =g= / =h= / =i= / =j= / =k and Ptop(n) = binomial(n + 3,4). •

► [A250880] 2002,6812,16262,31928,55386,88212,131982,188272,258658,344716,448022,570152,712682,877188,1065246,1278432,1518322,1786492,2084518,2413976,2776442,3173492,3606702,4077648,4587906 ⋆ Number of (3 + 1) X (n + 1) 0..3 arrays with nondecreasing x(i,j) - x(i,j - 1) in the i direction and nondecreasing x(i,j) + x(i - 1,j) in the j direction. • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>4. •

▶ [A153779] 2009,4655,4949,9065,9947,13475,14945,15239,17297,25235,26117,32585,33467,37877,39935,44639,47285,52577,56399,59339,59927,61985,62867,64925,72275 ⋆ Numbers of the form 49 * k, where 49 * k + 2 and 49 * k - 6 are both prime. ● a(n) >> n log ^ 2 n. - _ Charles R Greathouse IV _ , Aug 28 2016 ●
▶ [A110851] 1,2016,635376,74974368,4426165368,151473214816,3284214703056,47855699958816,488526937079580,3601688791018080,19619725782651120,80347448443237920,250649105469666120,601557853127198688,1118770292985239888,1620288010530347424,1832624140942590534 ⋆ Weight enumerator of [64,63,2] Reed - Muller code RM(5,6). ● a(n) = binomial(64, 2 * n). - _ Georg Fischer _ , Jul 01 2021 ●
▶ [A156855] 2024,8098,18222,32396,50620,72894,99218,129592,164016,202490,245014,291588,342212,396886,455610,518384,585208,656082,731006,809980,893004,980078,1071202,1166376,1265600 ⋆ a(n) = 2025 * n ^ 2 - n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●
▶ [A156856] 2026,8102,18228,32404,50630,72906,99232,129608,164034,202510,245036,291612,342238,396914,455640,518416,585242,656118,731044,810020,893046,980122,1071248,1166424,1265650 ⋆ a(n) = 2025 * n ^ 2 + n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●
▶ [A098808] 2037,4085,8181,16373,32757,65525,131061,262133,524277,1048565,2097141,4194293,8388597,16777205,33554421,67108853,134217717,268435445,536870901,1073741813,2147483637,4294967285,8589934581,17179869173 ⋆ a(n) = 2 ^ (n + 11) - 11. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2). ●
▶ [A075950] 2047,129055,932067,3299692,5548725,25323961,42250958,202390343,806394569,1409681880,2492481691,12894763567,21811487392,103089080516,176362268954,824702327536,1378954303613,2508261212719 ⋆ Basis for code in A075949. ● a(n) = b(2 ^ n), where b is A075949, the binary lexicode, d=11. ●
▶ [A258812] 0,2047,177146,4194303,48828124,362797055,1977326742,8589934591,31381059608,99999999999,285311670610,743008370687,1792160394036,4049565169663,8649755859374,17592186044415,34271896307632,64268410079231,116490258898218,204799999999999 ⋆ a(n) = n ^ 11 - 1. ● a(n) = 12 * a(n - 1) - 66 * a(n - 2) + 220 * a(n - 3) - 495 * a(n - 4) + 792 * a(n - 5) - 924 * a(n - 6) + 792 * a(n - 7) - 495 * a(n - 8) + 220 * a(n - 9) - 66 * a(n - 10) + 12 * a(n - 11) - a(n - 12). ●
▶ [A195659] 2048,148352,3076180,33175486,239238888,1314160492,5937279840,23174548666,80812754568,257860425672,766319864440,2149806985106,5753007728148,14807729805472,36902750545260,89523360235366,212335537312668,494171055510052,1131839140825580 ⋆ Number of ways to place 10n nonattacking kings on a vertical cylinder 20 X 2n. ● a(n) = (296191755 * n - 3519976573) * 2 ^ n + 524495 / 2016 * n ^ 8 + 4217363 / 504 * n ^ 7 + 2363921 / 16 * n ^ 6 + 66422455 / 36 * n ^ 5 + 557314865 / 32 * n ^ 4 + 8943856601 / 72 * n ^ 3 + 322704776641 / 504 * n ^ 2 + 90034143925 / 42 * n + 3519976574. ●
▶ [A096963] 1,2048,177148,4194304,48828126,362799104,1977326744,8589934592,31381236757,100000002048,285311670612,743012564992,1792160394038,4049565171712,8649804864648,17592186044416,34271896307634 ⋆ a(n) = Sum { 0<d|n, n / d odd } d ^ 11. ● a(n) = Sum { 0<d|n, n / d odd } d ^ 11. ●
▶ [A234740] 2048,179195,49007320,2026334063,287338004674,2079498398711,36351394706344,152841653604563,1105651411518490,1330616177224319,3871463807362915 0,216632259853089563,766961291569338004,1696255031040560711,4168414246124573014,13437450175496764611 ⋆ Sum of the eleventh powers of the first n primes. ● a(n) = Sum _{ k=1..n } prime(k) ^ 11. ●
▶ [A036089] 1,2049,179195,4371451,53022429,411625181,2340123799,10567261335,39970994201,131381059609,385311670611,1028320041299,2535168764725,5841725563701,12699321029039,26241941903791,51864082352049 ⋆ Centered cube numbers: (n + 1) ^ 11 + n ^ 11. ● a(n) = 12 * a(n - 1) - 66 * a(n - 2) + 220 * a(n - 3) - 495 * a(n - 4) + 792 * a(n - 5) - 924 * a(n - 6) + 792 * a(n - 7) - 495 * a(n - 8) + 220 * a(n - 9) - 66 * a(n - 10) + 12 * a(n - 11) - a(n - 12) for n>11. ●
▶ [A123095] 0,1,2049,179196,4373500,53201625,415998681,2393325424,10983260016,42364319625,142364319625,427675990236,1170684360924,2962844754961,7012409924625,15662165784000,33254351828416,67526248136049 ⋆ Sum of first n 11th powers. ● a(n) = n ^ 2 * (n + 1) ^ 2 * (2 * n ^ 8 + 8 * n ^ 7 + 4 * n ^ 6 - 16 * n ^ 5 - 5 * n ^ 4 + 26 * n ^ 3 - 3 * n ^ 2 - 20 * n + 10) / 24. - _ Bruno Berselli _ , Oct 03 2010 ● a(n) = (- 1) * Sum _{ j=1..11 } j * s(n + 1,n + 1 - j) * S(n + 11 - j,n), where s(n,k) and S(n,k) are the Stirling numbers of the first kind and the second kind, respectively. - _ Mircea Merca _ , Jan 25 2014 ●
▶ [A253711] 1,2050,181246,4554746,57756371,473755052,2867080476,13850340492,56214660117,198578979742,626254969978,1796939330902,4759784085863,11772194010488,27434359794488,60688711622904,128214959758953,260009617974234,508294535087734,961379452201234,1764741869856955,3152422588924004,5492913065904980 ⋆ Second partial sums of 11th powers (A008455). ● a(n) = n * (n + 1) * (n + 2) * (70 * n ^ 10 + 700 * n ^ 9 + 2310 * n ^ 8 + 1680 * n ^ 7 - 465 * n ^ 6 - 4410 * n ^ 5 + 8240 * n ^ 4 + 4120 * n ^ 3 - 7819 * n ^ 2 + 202 * n + 1382) / 10920. ● a(n) = 2 * a(n - 1) - a(n - 2) + n ^ 11. ●
▶ [A221052] 2071,73675,796915,5807107,35057827,190384867,967962979,4709311075,22210776163,102384824419,463801636963,2072447248483,9159135201379,40114693752931,174372925524067,753151386437731,3235250457266275,13831593842428003 ⋆ The Wiener index of the nanostar dendrimer NSC _ 5C _ 6[n], defined pictorially in the A. R. Ashrafi et al. reference and in the M. Rostami et al. reference. ● a(n) = - 14237 + 46170 * 2 ^ n - 32004 * 4 ^ n + 12960 * n * 4 ^ n + 72 * n * 2 ^ n. ●
▶ [A194605] 0,0,0,2080,27768,181032,807040,2817240,8271480,21328048,49692672,106717680,214322680,406928280,736614528,1279735912,2145244920,3484996320,5506324480,8487206208,12794341752,18904506760,27429548160,39145417080,55025652088 ⋆ Number of ways to place 2 nonattacking kings on an n X n X n X n raumschach board (four - dimensional chessboard). ● a(n) = (n ^ 8 - (3 * n - 2) ^ 4) / 2 for n>0. ●
▶ [A071235] 0,1,2080,266085,8390656,122078125,1088414496,6920702425,34359869440,141215033961,500000500000,1569215074141,4458051717120,11649044974645,28346959952416,64873174640625,140737496743936,291311130683665,578415707719200,1106657483056021 ⋆ a(n) = (n ^ 12 + n ^ 6) / 2. ● a(n) = n ^ 6 * (n ^ 2 + 1) * (n ^ 4 - n ^ 2 + 1) / 2. ●
▶ [A224438] 2083,49057,599137,5290465,38816833,252649537,1512820417,8522867905,45851773633,237985012417,1200461013697,5916834366145,28610917655233,136152093909697,639176875958977,2965915539989185,13624215530365633,62033920525853377,280263192943256257 ⋆ The hyper - Wiener index of the nanostar dendrimer NS _ 1[n], defined pictorially in the A. R. Ashrafi et al. reference . ● a(n) = - 7487 + (- 59832 - 10740n + 4200n ^ 2) * 2 ^ n + (69402 - 36480n + 14400n ^ 2) * 4 ^ n. ●
▶ [A201917] 0,2085,2325,5253,6141,6293,7728,10013,11960,12920,14637,16940,17112,18737,21648,21948,23541,24633,26588,27716,31620,33012,34937,35145,38012 ⋆ Nonnegative values x of solutions (x, y) to the Diophantine equation x ^ 2 + (x + 84847) ^ 2 = y ^ 2. ● a(n) = a(n - 1) + 6 * a(n - 81) - 6 * a(n - 82) - a(n - 162) + a(n - 163), where the 163 initial terms can be computed using the Mathematica program. The initial terms begin with 0 and end with 1696940. ●
▶ [A251134] 2129,4786,8050,14753,25597,46023,82431,151567,282371,536601,1033153,2013629,3956545,7822675,15528811,30912211,61642567,123062869,245854205,491382289,982373589,1964284511,3928022839,7855407543,15710071467 ⋆ Number of (n + 1) X (5 + 1) 0..2 arrays with no 2 X 2 subblock having the sum of its diagonal elements greater than the maximum of its antidiagonal elements. ● a(n) = (2 * (5472 + 1058 * (- 1) ^ n + 2809 * 2 ^ n) + 6142 * n + 1759 * n ^ 2 + 266 * n ^ 3 + 17 * n ^ 4) / 12 for n>3. ●
▶ [A157768] 2135,44608,141531,292904,498727,759000,1073723,1442896,1866519,2344592,2877115,3464088,4105511,4801384,5551707,6356480,7215703,8129376,9097499,10120072,11197095,12328568,13514491,14754864,16049687 ⋆ 27225n ^ 2 - 39202n + 14112. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●
▶ [A118576] 0,2145,3773,6468,8540,12005,19208,24521,28665,35672,41148,50421,61388,69972,84525,95921,115248,156065,186480,210308,250733,282405,336140,399797,449673 ⋆ Nonnegative values x of solutions (x, y) to the Diophantine equation x ^ 2 + (x + 16807) ^ 2 = y ^ 2. ● a(n) = 6 * a(n - 11) - a(n - 22) + 33614 for n > 22; a(1) = 0, a(2) = 2145, a(3) = 3773, a(4) = 6468, a(5) = 8540, a(6) = 12005, a(7) = 19208, a(8) = 24521, a(9) = 28665, a(10) = 35672, a(11) = 41148, a(12) = 50421, a(13) = 61388, a(14) = 69972, a(15) = 84525, a(16) = 95921, a(17) = 115248, a(18) = 156065, a(19) = 186480, a(20) = 210308, a(21) = 250733, a(22) = 282405. ●
▶ [A299796] 2160,19568,177136,1594304,14348784,129140160,1162261440,10460353136,94143178736,847288609392,7625597484912,68630377364848,617673396283888,5559060566555504,50031545098999664,450283905890997360,4052555153018976240,36472996377170786288 ⋆ Largest number k that is not the sum of 3 squares and a nonnegative (2n + 5) - th power. ● a(n) = max _{ 2<=i<=n + 1, j >=0 } { 4 ^ i * (8j + 7) : 4 ^ i * (8j + 7) < 3 ^ (2n + 5) } . ●
▶ [A157476] 2177,8449,18817,33281,51841,74497,101249,132097,167041,206081,249217,296449,347777,403201,462721,526337,594049,665857,741761,821761,905857,994049,1086337,1182721,1283201 ⋆ a(n) = 2048n ^ 2 + 128n + 1. ● a(1)=2177, a(2)=8449, a(3)=18817, a(n)=3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). (End) ●
▶ [A157853] 2177,11376,27775,51374,82173,120172,165371,217770,277369,344168,418167,499366,587765,683364,786163,896162,1013361,1137760,1269359,1408158,1554157,1707356,1867755,2035354,2210153 ⋆ 3600n ^ 2 - 1601n + 178. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●
▶ [A194585] 2184,27830,32214,57860,62244,87890,92274,117920,122304,147950,152334,177980,182364,208010,212394,238040,242424,268070,272454,298100,304284,328130,332514,358160,362544 ⋆ Starting points of stapled intervals of length 17. ● a(n) = (- 15031 + 10631 * (- 1) ^ n + 30030 * n) / 2. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3). ●
▶ [A215960] 2186,75938,745418,3959426,14704202,43261346,108110858,239479298,483533066,907216802,1603736906,2698690178,4356837578,6789523106,10262737802,15105828866,21720853898,30592580258,42299129546,57523267202,77064337226,101850842018 ⋆ First differences of A016759. ● a(n) = 2 * (7 * t * (t * (t + 17) + 91) + 1093), where t=4 * n * (n + 2). [_ Bruno Berselli _ , Aug 29 2012] ●
▶ [A059979] 1,2187,279936,10000000,170859375,1801088541,13492928512,78364164096,373669453125,1522435234375,5455160701056,17565568854912,51676101935731,140710042265625,358318080000000,860542568759296,1962637152460137,4275360817613091,8938717390000000 ⋆ Number of 7 - dimensional cage assemblies. ● a(n) = n ^ 7 * (1 + n) ^ 7 / 128. ● a(n) = binomial(n + 1, 2) ^ 7. - _ Alejandro Rodriguez _ , Oct 20 2020 ●
▶ [A017563] 2187,170859375,10460353203,137231006679,897410677851,3938980639167,13348388671875,37725479487783,93206534790699,207616015289871,425927596977747,817215093984375,1483273860320763,2569093262823519 ⋆ (12n + 3) ^ 7. ● a(0)=2187, a(1)=170859375, a(2)=10460353203, a(3)=137231006679, a(4)=897410677851, a(5)=3938980639167, a(6)=13348388671875, a(7)=37725479487783, a(n)=8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8). - _ Harvey P. Dale _ , Sep 12 2015 ●
▶ [A085442] 1,2188,282124,10282124,181141499,1982230040,15475158552,93839322648,467508775773,1989944010148,7445104711204,25010673566116,76686775501847,217396817767472,575714897767472,1436257466526768,3398894618986905,7674255436599996,16612972826599996 ⋆ a(n) = Sum _{ i=1..n } binomial(i + 1, 2) ^ 7. ● a(n) = (1 / 823680) * n * (n + 1) * (n + 2) * (429 * n ^ 12 + 5148 * n ^ 11 + 24123 * n ^ 10 + 52470 * n ^ 9 + 43047 * n ^ 8 - 8856 * n ^ 7 + 4109 * n ^ 6 + 50430 * n ^ 5 - 18796 * n ^ 4 - 44472 * n ^ 3 + 26864 * n ^ 2 + 8352 * n - 5568). - _ Vladeta Jovovic _ , Jul 07 2003 ●
▶ [A134158] 1,2191,24583,109513,324013,759811,1533331,2785693,4682713,7414903,11197471,16270321,22898053,31369963,42000043,55126981,71114161,90349663,113246263,140241433,171797341,208400851,250563523,298821613,353736073 ⋆ a(n) = 1 + 27n + 252n ^ 2 + 882n ^ 3 + 1029n ^ 4. ● a(n) = (3(7n + 1) ^ 4 + 6(7n + 1) ^ 3 - 3 (7n + 1) + 1) / 7. ● a(n) = (Sum _{ k=1..7n + 1 } k ^ 6) / (Sum _{ k=1..7n + 1 } k ^ 2). ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>4. - _ Colin Barker _ , Aug 12 2017 ●
▶ [A227488] 2192,75884,811076,5876276,35361428,191654996,973156820,4730314964,22295250644,102723642068,465158748884,2077879380692,9180871101140,40201652095700,174720788384468,754542896859860,3240816616917716 ⋆ The Wiener index of the nanostar dendrimer NSC _ 5C _ 6[n], defined pictorially in th

e Ashrafi et al. and the Rostami et al. references. • a(n) = - 13612 + 2 ^ n * (72 * n + 45270) + 4 ^ n * (12960 * n - 31680). •

► [A202459] 2197,5854,14586,33468,71088,141192,264822,473031,810265,1338508,2142292,3334680,5064336,7523802,10959108,15680847,22076853,30626626,41917654,56663788,75725832,100134516,131116026,170120271,218852073 ⋆ Number of (n + 2) X 8 binary arrays with consecutive windows of three bits considered as a binary number nondecreasing in every row and column. • a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>9. •

► [A017535] 1,2197,15625,50653,117649,226981,389017,614125,912673,1295029,1771561,2352637,3048625,3869893,4826809,5929741,7189057,8615125,10218313,12008989,13997521,16194277,18609625,21253933,24137569 ⋆ a(n) = (12 * n + 1) ^ 3. • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4), for n>3. - _ Vincenzo Librandi _ , May 26 2016 •

► [A114360] 1,2207,12389,25147,38017,50887,63757,76627,89497,102367,115237,128107,140977,153847,166717,179587,192457,205327,218197,231067,243937,256807,269677,282547,295417 ⋆ Let M(n) be the n X n matrix m(i,j)=min(i,j) for 1<=i,j<=n then a(n) is the trace of M(n) ^ (- 8). • a(n) = 12870 * n - 26333, with n> 3, a(1)=1, a(2)=2207, a(3)=12389. • a(n) = 2 * a(n - 1) - a(n - 2) for n> 5. G.f.: x * (1 + 2205 * x + 7976 * x ^ 2 + 2576 * x ^ 3 + 112 * x ^ 4) / (1 - x) ^ 2. [_ Colin Barker _ , Mar 18 2012] •

► [A257826] 2222,2530,39358,55990,872938,994598,15506810,22059818,343935350,391869082,6109643782,8691512302,135509654962,154395423710,2407184143298,3424433787170,53390460119678,60831405072658,948424442815630,1349218220632678,21035705777498170 ⋆ Positive integers whose square is the sum of 88 consecutive squares. • a(n) = 394 * a(n - 4) - a(n - 8). •

► [A287701] 0,1,2252,111753,1297504,7120505,25461756,70250257,163191008,335493009,629597260,1100904761,1819504512,2871901513,4362744764,6416555265,9179454016,12820890017,17535368268,23544177769,31097119520,40474234521,51987531772,65982716273,82840917024 ⋆ a(n) = (5!) ^ 3 * [z ^ 5] hypergeom([], [1, 1], z) ^ n. • a(n) = 163476 * n - 375375 * n ^ 2 + 305500 * n ^ 3 - 108000 * n ^ 4 + 14400 * n ^ 5. • a(n) = [x ^ n] (x + 2246 * x ^ 2 + 98256 * x ^ 3 + 660746 * x ^ 4 + 966751 * x ^ 5) / (1 - x) ^ 6. •

► [A257825] 2257,2849,21941,27713,604765,763865,16669573,21054961,162316669,205018517,4474051285,5651073085,123321498797,155764598629,1200818695321,1516726961053,33099030801665,41806637918965,912332431430633,1152346479602381,8883656545668089 ⋆ Positive integers whose square is the sum of 74 consecutive squares. • a(n) = 7398 * a(n - 6) - a(n - 12). •

► [A187292] 0,0,2304,47648,228512,616752,1241936,2102944,3192912,4505424,6037932,7789392,9759616,11948560,14356224,16982608,19827712,22891536,26174080,29675344,33395328,37334032,41491456,45867600,50462464 ⋆ Number of 7 - step one or two space at a time rook's tours on an n X n board summed over all starting positions. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>14. •

► [A259321] 0,2304,290304,6386688,65235456,424030464,2038772736,7894388736,25960393728,75123949824,196144058880,470584857600,1051840857600,2213790808320,4424337967104,8453141250048,15525242320896,27535076464896,47338548401664,79144486327296 ⋆ a(n) = A259110(n) * A259323(n) - A259319(n) ^ 2. • a(n) = (4096 * n ^ 10 - 15360 * n ^ 8 + 16128 * n ^ 6 - 5440 * n ^ 4 + 576 * n ^ 2) / 525. - _ Colin Barker _ , Jun 29 2015 •

► [A247698] 2308,4261,6569,10830,17399,28229,45628,73857,119485,193342,312827,506169,818996,1325165,2144161,3469326,5613487,9082813,14696300,23779113,38475413,62254526,100729939,162984465,263714404 ⋆ Brady numbers: B(n) = B(n - 1) + B(n - 2) with B(1) = 2308 and B(2) = 4261. • a(n) = a(n - 1) + a(n - 2). • a(n) = k * phi ^ n + o(1), where k = 976.5 + sqrt(354578.45) = 1571.96 .... - _ Charles R Greathouse IV _ , Sep 28 2014 •

► [A046303] 2310,15015,85085,323323,1062347,2800733,6678671,14535931,31367009,58642669,95041567,162490421,259106347,385499687,600662303,907383479,1249792339,1673450759,2276990377,3024658859,4132280413,5717264681 ⋆ Product of 5 successive primes. • a(n) = Product _{ j=n..n + 4 } prime(j). - _ Jon E. Schoenfield _ , Jan 07 2015 •

► [A075668] 1,2315,374445,17703664,394340375,5265954441,48574262275,338837482880,1900477947429,8950536157375,36536761179281,132397570996560,433806511149115,1303971065324669,3637715990646375,9507513902672896 ⋆ Sum of n ext n 7th powers. • a(1)=1; a(n)=sum(i ^ s, { i, n(n - 1) / 2 + 1, n(n - 1) / 2 + 1 + n }). • a(n)=(3n ^ 15 + 42n ^ 13 + 168n ^ 11 + 206n ^ 9 - 11n ^ 7 - 56n ^ 5 + 32n ^ 3) / 384. •

► [A016984] 0,2401,38416,194481,614656,1500625,3111696,5764801,9834496,15752961,24010000,35153041,49787136,68574961,92236816,121550625,157351936,200533921,252047376,312900721,384160000 ⋆ a(n) = (7 * n) ^ 4. • a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5); a(0)=0, a(1)=2401, a(2)=38416, a(3)=194481, a(4)=614656. - _ Harvey P. Dale _ , Mar 05 2013 •

► [A017476] 2401,104976,707281,2560000,6765201,14776336,28398241,49787136,81450625,126247696,187388721,268435456,373301041,506250000,671898241,875213056,1121513121,1416468496,1766100625,2176782336,2655237841,3208542736,3844124001,4569760000 ⋆ a(n) = (11 * n + 7) ^ 4. • a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5); a(0)=2401, a(1)=104976, a(2)=707281, a(3)=2560000, a(4)=6765201. - _ Harvey P. Dale _ , Oct 21 2015 •

► [A202201] 2430,11880,44550,138996,378378,926640,2084940,4375800,8664084,16325712,29476980,51279480,86337900,141210432,225054126,350430300,534298050,799227000,1174863690,1699689420,2423110950,3407929200,4733235000 ⋆ Number of (n + 2) X 9 binary arrays avoiding patterns 001 and 101 in rows and columns. • a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10) for n>10. •

► [A183629] 2445,2967,4029,6207,10725,20247,40749,86127,190005,437127,1049469,2628447,6849285,18479607,51306189,145657167,420452565,1228323687,3618906909,10724596287,31909543845,95200145367,284543467629 ⋆ Number of (n + 1) X 7 0..2 arrays with every 2 X 2 subblock summing to 4. • a(n) = 3 * (644 + 21 * 2 ^ (2 + n) + 3 ^ n). •

► [A166931] 2519,5039,7559,10079,12599,15119,17639,20159,22679,25199,27719,30239,32759,35279,37799,40319,42839,45359,47879,50399,52919,55439,57959,60479,62999 ⋆ Numbers n with property that n mod k is k - 1 for all k = 2..9. • a(n) = 2519 + n * 2520. • a(n) = 2 * a(n - 1) - a(n - 2). •

► [A131662] 2519,11879,13320,14399,15840,25200,27719,27720,30239,39599,41040,42119,43560,52920,55439,55440,57959,67319,68760,69839,71280,80640,83159,83160,85679 ⋆ Numbers n where either n or n + 1 is divisible by the numbers from 1 to 12. • a(n) = a(n - 1) + a(n - 8) - a(n - 9) for n>9. •

► [A224542] 2520,30240,226800,1367520,7271880,35692800,165957792,742822080,3234711480,13803744864,58021888080,241116750624,993313349544,4064913201216,16549636147968,67112688842496,271323921459096,1094303232174240,4405390451382960,17709538489849440 ⋆ Number of doubly - surjective functions f:[n] - >[4]. • a(n) = 4 ^ n - 4 * 3 ^ n - 4 * n * 3 ^ (n - 1) + (9 * n + 3 * n ^ 2) * 2 ^ (n - 1) + 6 * 2 ^ n - 4 - 8 * n - 4 * n ^ 3; • a(n) = sum(n! / (i!j!k!m!) over <i,j,k,m> such that i,j,k, and m are all at least 2 and i + j + k + m=n. •

► [A334932] 2535,3705,162279,237177,10385895,15179385,664697319,971480697,42540628455,62174764665,2722600221159,3979184938617,174246414154215,254667836071545,11151770505869799,16298741508578937,713713312375667175,1043119456549052025,45677651992042699239 ⋆ Numbers that generate rotationally symmetrical XOR - triangles with a pattern of zero - triangles of edge length 3, some of which are clipped to result in some zero - triangles of edge length 2 at the edges. • a(n) = 65 * a(n - 2) - 64 * a(n - 4) for n>4. • a(n) = (1 / 21) * (- 16 - 3 * (- 1) ^ n + 123 * 2 ^ (5 + 3 * n) - 85 * (- 1) ^ n * 2 ^ (5 + 3 * n)) for n>0. •

► [A235882] 2571,3345,4911,8097,14631,28185,56751,118257,254391,566025,1307391,3144417,7881351,20543865,55434831,153914577,436967511,1261353705,3684967071,10856716737,32173784871,95728627545,285600432111 ⋆ Number of (n + 1) X (6 + 1) 0..2 arrays with the minimum plus the upper median equal to the lower median plus the maximum in every 2 X 2 subblock. • a(n) = 3 * (602 + 63 * 2 ^ (1 + n) + 3 ^ n). •

► [A156627] 2574,6968,11362,15756,20150,24544,28938,33332,37726,42120,46514,50908,55302,59696,64090,68484,72878,77272,81666,86060,90454,94848,99242,103636,108030 ⋆ a(n) = 4394 * n - 1820. • a(n) = 2 * a(n - 1) - a(n - 2). •

► [A157609] 2640,5302,7964,10626,13288,15950,18612,21274,23936,26598,29260,31922,34584,37246,39908,42570,45232,47894,50556,53218,55880,58542,61204,63866,66528 ⋆ 2662n - 22. • a(n) = 2 * a(n - 1) - a(n - 2) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). •

► [A167191] 2664,20568,68592,161616,314520,542184,859488,1281312,1822536,2498040,3322704,4311408,5479032,6840456,8410560,10204224,12236328,14521752,17075376,19912080,23046744,26494248,30269472,34387296,38862600 ⋆ 4 * n * (1 + 45 * n + 620 * n ^ 2). • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Vincenzo Librandi _ , Jul 02 2012 •

► [A250855] 2670,13097,44797,123016,290646,614965,1195457,2172712,3738406,6146361,9724685,14888992,22156702,32162421,45674401,63612080,87064702,117311017,155840061,204373016,264886150,339634837,431178657,542407576,676569206 ⋆ Number of (3 + 1) X (n + 1) 0..3 arrays with nondecreasing x(i,j) - x(i,j - 1) in the i direction and nondecreasing min(x(i,j),x(i - 1,j)) in the j direction. • a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. •

► [A157613] 2684,5346,8008,10670,13332,15994,18656,21318,23980,26642,29304,31966,34628,37290,39952,42614,45276,47938,50600,53262,55924,58586,61248,63910,66572 ⋆ a(n) = 2662 * n + 22. • a(n) = 2 * a(n - 1) - a(n - 2). (End) •

► [A054561] 2700,118020,1220520 ⋆ Number of labeled pure 2 - complexes on n nodes (0 - simplexes) with 5 2 - simplexes and 12 1 - simplexes. • a(n)=2700 * C(n, 6) + 99120 * C(n, 7) + 351960 * C(n, 8) + ... •

► [A145647] 2734,4556,6379,8202,10024,11846,13669,15492,17314,19136,20959,22782,24604 ⋆ First differences of A145646. • a(n) = (3646 + (- i) ^ n + i ^ n + 7290 * n) / 4 where i = sqrt(- 1). • a(n) = 2 * a(n - 1) - 2 * a(n - 2) + 2 * a(n - 3) - a(n - 4) for n>4. •

► [A202460] 2744,8064,21972,54618,124740,264822,528390,1000023,1808746,3145568,5286030,8618736,13680954,21202494,32159196,47837493,69911652,100535440,142450112,199110774,274833336,374964438,506076906,676193475,895041702 ⋆ Number of (n + 2) X 9 binary arrays with consecutive windows of three bits considered as a binary number nondecreasing in every row and column. • a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10) for n>10. •

► [A248109] 0,1,2896,306827,8388608,109183006,888667667,5231514822,24296003999,94143178827,316227766016,946271759726,2573856496961,6461726194556,15152085430295,33500360392119,70368744177664,141306648466586 ⋆ Integer part of square root of A010811(n) = n ^ 23. • a(n) = floor(sqrt(n ^ 23)). •

► [A289228] 0,2910,404746,12025068,165279612,1405048082,8605979390,41555851716,167529980320,586136559350,1829074790082,5193890370940,13625393372916,33410188057962,77284672892438,169909353488372,357177283295160,721559475338446,1406717921047994,2656028041092876 ⋆ Number of ways to select 7 disjoint point triples from an n X n X n triangular point grid, each point triple forming a 2 X 2 X 2 triangle. • a(n) = (n ^ 14 - 14 * n ^ 13 - 182 * n ^ 12 + 3416 * n ^ 11 + 9072 * n ^ 10 - 342062 * n ^ 9 + 296688 * n ^ 8 + 17893944 * n ^ 7 - 48845153 * n ^ 6 - 511039228 * n ^ 5 + 2041220174 * n ^ 4 + 7429535400 * n ^ 3 - 37737333320 * n ^ 2 - 41483946096 * n + 262680697440) / 5040 for n>=7. •

► [A344474] 1,1,2915,39365,472391,590489,6377291,7440173,8503055,9565937 ⋆ Least number k such that half of the numbers from 0 to k inclusive contain the digit n. • a(n) == 1457 (mod 1458) for n >= 2. - _ Hugo Pfoertner _ , May 25 2021 •

► [A100896] 3003,3113,3223,3333,3443,3553,3663,3773,3883,3993,310103,311113,312123,313133,314143,315153,316163,317173,318183,319193,320203,321213,322223,323233,324243 ⋆ a(n) has decimal expansion 3nn3. • a(n) = 3nn3 where n= 0, 1, 2, 3, ... •

► [A086746] 3018,6036,9054,12072,15090,18108,21126,24144,27162,30180,33198,36216,39234,42252,45270,48288,51306,54324,57342,60360,63378,66396,69414,72432,75450 ⋆ Multiples of 3018. • a(n) = a(n - 1) + 3018; a(1)=3018. •

► [A343373] 3112,58984,978064,15345952,234980152,3558436504,53613281824,805858151632,12099490097992,181573692295624,2724174818398384,40866608458275712,613027030583891032,9195600786027620344 ⋆ Number of sets in the geometry determined by the Hausdorff metric at each location between two sets defined by a complete bipartite graph K(4,n) (with n at least 4) missing three edges, where exactly two removed edges are incident to the same vertex in the 4 - point set and exactly two removed edges are incident to the same vertex in the other set. • a(n) = 21 * 15 ^ (n - 2) - 36 * 7 ^ (n - 2) + 17 * 3 ^ (n - 2) - 2. •
► [A016817] 1,3125,59049,371293,1419857,4084101,9765625,20511149,39135393,69343957,115856201,184528125,282475249,418195493,601692057,844596301,1160290625,1564031349,2073071593,2706784157,3486784401,4437053125,5584059449,6956883693,8587340257 ⋆ a(n) = (4n + 1) ^ 5. • a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). - _ Wesley Ivan Hurt _ , Apr 12 2023 •
► [A115791] 0,0,0,0,3125,97200,1932805,31539200,461828790,6332578125,83235183075,1063505908080,13327125965725,164758298214965,2017489363833125,24538128923443200,297028957324770140,3583456866615114630 ⋆ Number of different ways to select n elements from five sets of n elements under the precondition of choosing at least one element from each set. • a(n) = binomial(5 * n,n) - 5 * binomial(4 * n,n) + 10 * binomial(3 * n,n) - 10 * binomial(2 * n,n) + 5; ; also: a(n)=sum { binomial(n,i) * binomial(n,j) * binomial(n,k) * binomial(n,l) * binomial(n,m)||i,j,k,l,m=1...(n - 4),i + j + k + l + m=n } . General formula for N sets with m elements each: the number of different ways to select k elements from j different sets: G(N,m,j,k) = binomial(N,j) * sum(binomial(j,i) * binomial(i * m,k) * (- 1) ^ i * (- 1) ^ j|i=1...j); Recursion formula: G(N,m,j,k) = binomial(N,j) * binomial(j * m,k) - sum(binomial(N - i,j - i) * G(N,m,i,k)|i=1...j - 1); •
► [A016853] 0,3125,100000,759375,3200000,9765625,24300000,52521875,102400000,184528125,312500000,503284375,777600000,1160290625,1680700000,2373046875,3276800000,4437053125,5904900000,7737809375,10000000000,12762815625,16105100000,20113571875,24883200000 ⋆ a(n) = (5 * n) ^ 5. • a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6), with a(0) = 0, a(1) = 3125, a(2) = 100000, a(3) = 759375, a(4) = 3200000, a(5) = 9765625. - _ Harvey P. Dale _ , Jul 11 2015 •
► [A016973] 3125,161051,1419857,6436343,20511149,52521875,115856201,229345007,418195493,714924299,1160290625,1804229351,2706784157,3939040643,5584059449,7737809375,10510100501,14025517307,18424351793,23863536599,30517578125,38579489651,48261724457 ⋆ a(n) = (6 * n + 5) ^ 5. • a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). - _ Harvey P. Dale _ , Sep 24 2014 •
► [A017129] 3125,371293,4084101,20511149,69343957,184528125,418195493,844596301,1564031349,2706784157,4437053125,6956883693,10510100501,15386239549,21924480357,30517578125,41615795893 ⋆ a(n) = (8 * n + 5) ^ 5. • a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6); a(0)=3125, a(1)=371293, a(2)=4084101, a(3)=20511149, a(4)=69343957, a(5)=184528125. - _ Harvey P. Dale _ , Oct 10 2011 •
► [A322536] 1,3139,180325,2636263,19610233,97464799,370487485,1163205475,3164588407,7702189345,17148949027,35500063501,69161990275,128000343121,226698100687,386480229085,637265493637,1020310909975,1591418959705,2424782370859,3617545938373,5295169534843 ⋆ Number of arrays of 9 integers in - n..n with sum zero. • a(n) = [x ^ (9 * n)] (Sum _{ k=0..2 * n } x ^ k) ^ 9. •
► [A250760] 3152,7272,13089,20603,29814,40722,53327,67629,83628,101324,120717,141807,164594,189078,215259,243137,272712,303984,336953,371619,407982,446042,485799,527253,570404 ⋆ Number of (5 + 1) X (n + 1) 0..2 arrays with non decreasing x(i,j) - x(i,j - 1) in the i direction and nondecreasing x(i,j) + x(i - 1,j) in the j direction. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>3. •
► [A023309] 3181,9551,22051,30941,32621,61981,76651,99961,134291,151901,163661,185951,226691,227671,240551,288191,342821,374501,394411,402881,423781,426301,446461,456151,459091 ⋆ Primes that remain prime through 4 iterations of function f(x) = 3x + 8. • a(n) == 1 or 31 (mod 70). - _ John Cerkan _ , Oct 04 2016 •
► [A023337] 3181,61981,134291,342821,459091,882451,984931,1016011,1028471,1181701,1391561,1897801,2009311,2272301,2476421,2769791,3048041,3085421,3128821,3207221,3545111,4092931,4690591,5015321,5863651 ⋆ Primes that remain prime through 5 iterations of function f(x) = 3x + 8. • a(n) == 31 (mod 70). - _ John Cerkan _ , Oct 11 2016 •
► [A261241] 3213,3950,4807,5796,6929,8218,9675,11312,13141,15174,17423,19900,22617,25586,28819,32328,36125,40222,44631,49364,54433,59850,65627,71776,78309 ⋆ One half of numbers representable in at least two different ways as sums of four nonvanishing cubes. See A259060 for these numbers and their representations. • a(n) = (n + 9) * (2 * n ^ 2 + 36 * n + 357), n >= 0. • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Vincenzo Librandi _ , Aug 13 2015 •
► [A328148] 1,3264,168399,2584576,21328125,119952576,518949739,1853620224,5718836601,15715000000,39312710151,90985918464,197228242549,404268317376,789541171875,1478257278976,2666742760689,4654606866624,7888229913151,13018560000000 ⋆ The number of conics tangent to five non - singular curves of degree n in general position, in a projective plane defined over an algebraically closed field of characteristic zero. • a(n) = n ^ 5 * ((n - 1) ^ 5 + 10 * (n - 1) ^ 4 + 40 * (n - 1) ^ 3 + 40 * (n - 1) ^ 2 + 10 * (n - 1) + 1). •
► [A147881] 3330,750810,31528980,572121396,6186026736,47056700160,277413461820,1346956001820,5610483560682,20631960791442,68410542640440,207816360293880,585602287143120,1545890870506608,3853704950392968,9131773574418120,20681704245537090,44975479946588730 ⋆ Number of consistent sets of 8 irreflexive binary order relationships over n objects. • a(n) = (n - 4) * (n - 3) * (n - 2) * (n - 1) * n * (n ^ 11 + 2 * n ^ 10 - 43 * n ^ 9 - 226 * n ^ 8 - 21 * n ^ 7 + 5110 * n ^ 6 + 36247 * n ^ 5 + 91954 * n ^ 4 - 612172 * n ^ 3 - 5449152 * n ^ 2 - 2743020 * n + 82544280) / 40320. - _ Vaclav Kotesovec _ , Apr 11 2020 •
► [A243217] 0,0,0,0,3388,157000,2135356,15836664,81324796,325679904,1088989348,3174085648,8301786980,19888285976,44304931948,92833927816,184597383660,350812701616,640815379476,1130391980512,1933082192404,3215240556392,5215796556572,8271817286296 ⋆ Number of 5 - matchings of the n X n grid graph. • a(n) = (4 * n ^ 10 - 20 * n ^ 9 - 100 * n ^ 8 + 640 * n ^ 7 + 635 * n ^ 6 - 7589 * n ^ 5 + 2370 * n ^ 4 + 39275 * n ^ 3 - 35789 * n ^ 2 - 74246 * n + 86580) / 15 for n>=5, a(4) = 3388, a(n) = 0 for n<=3. •
► [A221009] 3393,129171,1802955,16741275,125055483,817601211,4890505275,27466038075,147217502523,761318440251,3827379655995,18807535273275,90701268968763,430607210751291,2017310632781115,9343468205122875 ⋆ The hyper - Wiener index of the nanostar dendrimer D _ 3[n] , defined pictorially in the Alikhani - Iranmanesh reference. • a(n) = 9531 - 2 ^ n * 168276 + 4 ^ n * (44100 * n ^ 2 - 92190 * n + 162138). •
► [A264450] 0,3519,8372,14805,23088,33516,46410,62118,81016,103509,130032,161051,197064,238602,286230,340548,402192,471835,550188,638001,736064,845208,966306,1100274,1248072 ⋆ a(n) = n * (n + 11) * (n + 22) * (n + 33) * (n + 44) / 120. • a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>5. - _ Vincenzo Librandi _ , Nov 16 2015 •
► [A004972] 0,3572,7143,10714,14285,17856,21427,24998,28569,32140,35711,39282,42853,46424,49995,53566,57137,60708,64279,67850,71421,74992,78563,82134,85705 ⋆ a(n) = ceiling(n * phi ^ 17), where phi is the golden ratio, A001622. • a(n) = 3571 * n + 1 for n > 0. • a(n) = 2 * a(n - 1) - a(n - 2) for n > 2. •
► [A156845] 3588,15755,27922,40089,52256,64423,76590,88757,100924,113091,125258,137425,149592,161759,173926,186093,198260,210427,222594,234761,246928,259095,271262,283429,295596 ⋆ 12167n - 8579. • a(n) = 2 * a(n - 1) - a(n - 2). •
► [A157857] 3599,14398,32397,57596,89995,129594,176393,230392,291591,359990,435589,518388,608387,705586,809985,921584,1040383,1166382,1299581,1439980,1587579,1742378,1904377,2073576,2249975 ⋆ a(n) = 3600 * n ^ 2 - n. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Jan 25 2012 •
► [A096472] 3600,7200,10800,14400,18000,21600,25200,28800,32400,36000,39600,43200,46800,50400,54000,57600,61200,64800,68400,72000,75600,79200,82800,86400,90000 ⋆ Numbers containing squares of Pythagorean triples in their divisor set. • a(n) = n * 60 ^ 2. •
► [A157861] 3601,14402,32403,57604,90005,129606,176407,230408,291609,360010,435611,518412,608413,705614,810015,921616,1040417,1166418,1299619,1440020,1587621,1742422,1904423,2073624,2250025 ⋆ a(n) = 3600 * n ^ 2 + n. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Jan 25 2012 •
► [A253491] 3639,5386,6476,10477,19475,40117,89339,211597,527555,1373797,3709259,10309117,29295635,84629077,247377179,729117037,2161327715,6431941957,19191749099,57367099357,171685007795,514222448437,1541002201019 ⋆ Number of (n + 1) X (4 + 1) 0..2 arrays with every 2 X 2 subblock diagonal minus antidiagonal sum nondecreasing horizontally, vertically and ne - to - sw antidiagonally. • a(n) = 2802 + 397 * 2 ^ n + 49 * 3 ^ (n - 1) for n>3. •
► [A250895] 3673,11029,33821,102789,305429,890199,2553537,7243359,20421217,57483879,162149489,459536607,1310548497,3763833639,10886111617,31695302463,92829953729,273267490599,807835524561,2396325815007,7127717418673 ⋆ Number of (n + 1) X (5 + 1) 0..2 arrays with nondecreasing x(i,j) - x(i,j - 1) in the i direction and nondecreasing absolute value of x(i,j) - x(i - 1,j) in the j direction. • a(n) = - 877 + 1553 * 2 ^ (- 3 + n) + 17956 * 3 ^ (- 3 + n) + (976 - 2779 * 2 ^ (- 4 + n)) * n + (282 + 3087 * 2 ^ (- 4 + n)) * n ^ 2 for n>2. •
► [A188155] 0,0,0,3696,26000,82032,175312,303328,464304,657848,883928,1142544,1433696,1757384,2113608,2502368,2923664,3377496,3863864,4382768,4934208,5518184,6134696,6783744,7465328 ⋆ Number of 10 - step self - avoiding walks on an n X n square summed over all starting positions. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>11. •
► [A221013] 3722,180552,2683436,25503780,192352212,1262648052,7564190516,42499015860,227766985652,1177463868852,5916913295796,29062281058740,140094358522292,664827881302452,3113397432740276,14415083971242420,66086948110494132,300376858346940852,1354914339889899956 ⋆ The hyper - Wiener index of the nanostar dendrimer G _ n , defined pictorially in the Golriz - Darafsheh - Khalifeh reference. • a(n) = 27060 + 2 ^ n * (- 4550 * n ^ 2 + 16990 * n - 243062) + 4 ^ n * (67600 * n ^ 2 - 133640 * n + 219724). •
► [A224436] 3722,1132836,20633828,209655204,1629644756,10870551924,65747845364,371694578676,2000609407220,10374914467572,52260870309620,257180428281588,1241655454635764,5899945032398580,27659536839358196,128183302103185140,588138999088428788,2675081423266133748,12074040181321512692 ⋆ The hyper - Wiener index of the polyphenylene dendrimer G[n] defined pictorially in the N. E. Arif et al. reference. • a(n) = 407284 + (- 2453054 + 211431 * n - 103545 * n ^ 2) * 2 ^ n + (2049492 - 1303920 * n + 608400 * n ^ 2) * 4 ^ n. • a(n) = 19 * a(n - 1) - 150 * a(n - 2) + 636 * a(n - 3) - 1560 * a(n - 4) + 2208 * a(n - 5) - 1664 * a(n - 6) + 512 * a(n - 7) for n>6. - _ Colin Barker _ , May 30 2018 •
► [A257780] 3854,5170,369890,496226,35505586,47632526,3408166366,4572226270,327148465550,438886089394,31402844526434,42128492355554,3014345926072114,4043896380043790,289345806058396510,388171923991848286,27774183035679992846,37260460806837391666 ⋆ Positive integers whose square is the sum of 47 consecutive squares. • a(n) = 96 * a(n - 2) - a(n - 4). •
► [A283026] 0,1,3876,1929501,183181376,6419043125,118091211876,1388168405001,11745311589376,77279801651001,416916712502500,1915356782994501,7705740009485376,27731516944463501,90762229896563876,273716119247180625,768684707117285376,2027695320242670001 ⋆ Number of inequivalent 4 X 4 matrices with entries in { 1,2,3,...,n } up to row permutations. • a(n) = n ^ 4 * (n ^ 4 + 1) * (n ^ 4 + 2) * (n ^ 4 + 3) / 24. • a(n) = 17 * a(n - 1) - 136 * a(n - 2) + 680 * a(n - 3) - 2380 * a(n - 4) + 6188 * a(n - 5) - 12376 * a(n - 6) + 19448 * a(n - 7) - 24310 * a(n - 8) + 24310 * a(n - 9) - 19448 * a(n - 10) + 12376 * a(n - 11) - 6188 * a(n - 12) + 2380 * a(n - 13) - 680 * a(n - 14) + 136 * a(n - 15) - 17 * a(n - 16) + a(n - 17) for n > 16. •
► [A068240] 1,3906,3000366,414425080,19064362455,428429377026,5861180425996,55823546748096,403783634784285,2353615149832210,11531349080992026,48981767072238936,184656623163700051,629125059062885490,1964908390445196 0,5691311662142685376 ⋆ 1 / 2 the number of colorings of a 4 X 4 square array with n colors. • a(n) = n * (n - 1) * (n ^ 14 - 23 * n ^ 13 + 253 * n ^ 12 - 1762

* n ^ 11 + 8675 * n ^ 10 - 31939 * n ^ 9 + 90723 * n ^ 8 - 202160 * n ^ 7 + 355622 * n ^ 6 - 492434 * n ^ 5 + 529770 * n ^ 4 - 430857 * n ^ 3 + 251492 * n ^ 2 - 94782 * n + 17493) / 2. ●

▶ [A335789] 0,3927,7855,11782,15709,19636,23564,27491,31418,35345,39273,43200,47127,51055,54982,58909,62836,66764,70691,74618,78545,82473,86400,90327,94255 ⋆ a(n) = time to the nearest second at the n - th instant (n>=0) when the hour and minute hands on a clock face coincide, starting at time 0:00. ● a(n) = round(n * 43200 / 11). ●

▶ [A060896] 1,1,4033,530713,16773121,244125001,2176735681,13841169553,68719214593,282429005041,999999000001,3138426605161,8916097462273,23298080295673,56693904845761,129746326500001,281474959933441,582622213092193 ⋆ n ^ 12 - n ^ 6 + 1. ● a(0)=1, a(1)=1, a(2)=4033, a(3)=530713, a(4)=16773121, a(5)=244125001, a(6)=2176735681, a(7)=13841169553, a(8)=68719214593, a(9)=282429005041, a(10)=999999000001, a(11)=3138426605161, a(12)=8916097462273, a(n)=13 * a(n - 1) - 78 * a(n - 2) + 286 * a(n - 3) - 715 * a(n - 4) + 1287 * a(n - 5) - 1716 * a(n - 6) + 1716 * a(n - 7) - 1287 * a(n - 8) + 715 * a(n - 9) - 286 * a(n - 10) + 78 * a(n - 11) - 13 * a(n - 12) + a(n - 13). - _ Harvey P. Dale _ , Dec 16 2013 ●

▶ [A118060] 1,4060,11481,22264,36409,53916,74785,99016,126609,157564,191881,229560,270601,315004,362769,413896,468385,526236,587449,652024,719961,791260,865921,943944,1025329 ⋆ a(n) = 1681 * n ^ 2 - 984 * n - 696. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). G.f.: x * (1 + 4057 * x - 696 * x ^ 2) / (1 - x) ^ 3. - _ Colin Barker _ , Jul 01 2012 ● a(n) + (a(n) + 1) + ... + (a(n) + 1681n + 1188) = (a(n) + 1681n + 1189) + ... + a(n + 1) - 1; a(n + 1) - 1 = a(n) + 3362n + 696. ● a(n) + (a(n) + 1) + ... + (a(n) + 1681n + 1188)=41(41n - 12)(41n + 29)(82n + 17) / 2; e.g., 11481 + 11482 + ... + 17712=90965388=41 * 111 * 152 * 263 / 2. ●

▶ [A075953] 4095,258111,1864135,6599385,11097450,50647922,84501916,404780686,1612789139,2819363761,4984963383,25789527134,43622974785,206178161033,352724537908,1649404655073,2757908607226,5016522425438 ⋆ Basis for code in A075952. ● a(n) = b(2 ^ n), where b is A075952, the binary lexicode, d=12. ●

▶ [A123868] 0,4095,531440,16777215,244140624,2176782335,13841287200,68719476735,282429536480,999999999999,3138428376720,8916100448255,23298085122480,56693912375295,129746337890624,281474976710655,582622237229760,1156831381426175,2213314919066160 ⋆ a(n) = n ^ 12 - 1. ● a(n) = 13 * a(n - 1) - 78 * a(n - 2) + 286 * a(n - 3) - 715 * a(n - 4) + 1287 * a(n - 5) - 1716 * a(n - 6) + 1716 * a(n - 7) - 1287 * a(n - 8) + 715 * a(n - 9) - 286 * a(n - 10) + 78 * a(n - 11) - 13 * a(n - 12) + a(n - 13) for n > 12. ●

▶ [A016782] 1,4096,117649,1000000,4826809,16777216,47045881,113379904,244140625,481890304,887503681,1544804416,2565726409,4096000000,6321363049,9474296896,13841287201,19770609664,27680640625,38068692544,51520374361,68719476736,90458382169,117649000000 ⋆ a(n) = (3 * n + 1) ^ 6. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). (End) ●

▶ [A016806] 0,4096,262144,2985984,16777216,64000000,191102976,481890304,1073741824,2176782336,4096000000,7256313856,12230590464,19770609664,30840979456,46656000000,68719476736,98867482624 ⋆ a(n) = (4n) ^ 6. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). - _ Wesley Ivan Hurt _ , May 05 2021 ●

▶ [A195660] 4096,433500,11682296,153802520,1301236304,8155899320,41180193352,176740657340,668845118276,2290966142762,7241521734020,21437333168798,60123048359816,161217291701134,416373921218580,1041997475699102,2539265644237492,6050425313244116 ⋆ Number of ways to place 11n nonattacking kings on a vertical cylinder 22 X 2n. ● a(n) = (4480441703 * n - 59644067185) * 2 ^ n + 10913705 / 36288 * n ^ 9 + 219791627 / 20160 * n ^ 8 + 6663742261 / 30240 * n ^ 7 + 1542837967 / 480 * n ^ 6 + 314791170001 / 8640 * n ^ 5 + 311982683023 / 960 * n ^ 4 + 6333872421866 / 2835 * n ^ 3 + 56561301500209 / 5040 * n ^ 2 + 46445710897861 / 1260 * n + 59644067186. ●

▶ [A008456] 0,1,4096,531441,16777216,244140625,2176782336,13841287201,68719476736,282429536481,1000000000000,3138428376721,8916100448256,23298085122481,56693912375296,129746337890625,281474976710656,582622237229761 ⋆ 12th powers: a(n) = n ^ 12. ● a(n) = 13 * a(n - 1) - 78 * a(n - 2) + 286 * a(n - 3) - 715 * a(n - 4) + 1287 * a(n - 5) - 1716 * a(n - 6) + 1716 * a(n - 7) - 1287 * a(n - 8) + 715 * a(n - 9) - 286 * a(n - 10) + 78 * a(n - 11) - 13 * a(n - 12) + a(n - 13). - _ Wesley Ivan Hurt _ , Dec 02 2021 ●

▶ [A017442] 4096,11390625,308915776,2565726409,12230590464,42180533641,117649000000,282429536481,606355001344,1194052296529,2194972623936,3814697265625,6327518887936,10090298369529,15557597153344 ⋆ a(n) = (11 * n + 4) ^ 6. ● a(0)=4096, a(1)=11390625, a(2)=308915776, a(3)=2565726409, a(4)=12230590464, a(5)=42180533641, a(6)=117649000000, a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). ●

▶ [A123094] 0,1,4097,535538,17312754,261453379,2438235715,16279522916,84998999652,367428536133,1367428536133,4505856912854,13421957361110,36720042483591,93413954858887,223160292749512,504635269460168,1087257506689929,2244088888116105,4457403807182266 ⋆ Sum of first n 12th powers. ● a(n) = n * (n + 1) * (2 * n + 1) * (105 * n ^ 10 + 525 * n ^ 9 + 525 * n ^ 8 - 1050 * n ^ 7 - 1190 * n ^ 6 + 2310 * n ^ 5 + 1420 * n ^ 4 - 3285 * n ^ 3 - 287 * n ^ 2 + 2073 * n - 691) / 2730. - _ Bruno Berselli _ , Oct 03 2010 ● a(n) = (- 1) * Sum _{ j=1..12 } j * s(n + 1,n + 1 - j) * S(n + 12 - j,n), where s(n,k) and S(n,k) are the Stirling numbers of the first kind and the second kind, respectively. - _ Mircea Merca _ , Jan 25 2014 ●

▶ [A253712] 1,4098,539636,17852390,279305769,2717541484,18997064400,103996064052,471424600185,1838853136318,6344710049172,19766667410282,56486709893873,149900664752760,373060957502272,877696226962440,1964953733652369,4209042621768474,8666446428950740,17219850236133006,33129081554701913,61893315504320036 ⋆ Second partial sums of 12th powers (A008456). ● a(n) = (n + 1) ^ 2 * n * (n + 2) * (30 * n ^ 10 + 300 * n ^ 9 + 925 * n ^ 8 + 200 * n ^ 7 - 3022 * n ^ 6 - 772 * n ^ 5 + 7073 * n ^ 4 - 1228 * n ^ 3 - 7888 * n ^ 2 + 5528 * n - 691) / 5460. ● a(n) = 2 * a(n - 1) - a(n - 2) + n ^ 12. ●

▶ [A188789] 0,4224,174720,1141248,3974784,10183872,21725776,41004288,70869216,114616384,175987632,259170816,368799808,509954496,688160784,909390592,1180061856,1507038528,1897630576,2359593984,2901130752,3530888896 ⋆ Number of 6 - step self - avoiding walks on an n X n X n X n 4 - cube summed over all starting positions. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>8. ●

▶ [A023346] 4259,174079,253369,275699,448859,527159,539639,649969,1101509,1218559,1230629,1319729,1426889,1780939,1929899,1947109,1960919,2082469,2087419,2262409,2479619,2499169,2797999,2808359,2809439 ⋆ Primes that remain prime through 5 iterations of function f(x) = 7x + 6. ● a(n) == 9 (mod 10). - _ John Cerkan _ , Oct 24 2016 ●

▶ [A170786] 0,1,4352,807003,33685504,611328125,6535385856,48464682007,274945015808,1271126624409,5000500000000,17262535045811,53499182579712,151442855545813,396867717150464,973116755859375,2251834173423616,4952348310391217,10411581612480768 ⋆ a(n) = n ^ 9 * (n ^ 4 + 1) / 2. ● a(n) = 14 * a(n - 1) - 91 * a(n - 2) + 364 * a(n - 3) - 1001 * a(n - 4) + 2002 * a(n - 5) - 3003 * a(n - 6) + 3432 * a(n - 7) - 3003 * a(n - 8) + 2002 * a(n - 9) - 1001 * a(n - 10) + 364 * a(n - 11) - 91 * a(n - 12) - 14 * a(n - 13) + a(n - 14) for n>13. ●

▶ [A250817] 4356,13735,32745,66291,120304,201741,318585,479845,695556,976779,1335601,1785135,2339520,3013921,3824529,4788561,5924260,7250895,8788761,10559179,12584496,14888085,17494345,20428701,23717604 ⋆ Number of (5 + 1) X (n + 1) 0..2 arrays with nondecreasing x(i,j) - x(i,j - 1) in the i direction and nondecreasing min(x(i,j),x(i - 1,j)) in the j direction. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

▶ [A111345] 4375,19684,7077889,7962625,34012225,100663297,129140164,452984833,459165025,544195585,644972545,918330049,5159780353,7346640385,8589934593,13947137605,14495514625,23219011585,27518828545,28991029249 ⋆ Pierpont 5 - almost primes. 5 - almost primes of form (2 ^ K) * (3 ^ L) + 1. ● a(n) is in this sequence iff there exist nonnegative integers K and L such that Omega((2 ^ K) * (3 ^ L) + 1) = 5. ●

▶ [A343828] 4389,5313,7161,9177,9933,10857,12369,13629,14421,14973,15477,16401,17157,18249,18753,19173,19437,20769,22701,23529,23541,23793,24717,26733,26961 ⋆ Numbers which are the product of two S - primes (A057948) in exactly three ways. ● a(n) == 1 (mod 4). - _ Hugo Pfoertner _ , May 01 2021 ●

▶ [A221007] 4470,80313,838203,6691695,45640599,281028327,1611684231,8775528135,45938694471,233201577543,1155025033287,5606760426567,26764943119431,125976656389191,585835748869191,2696106788684871,12295673426019399,55628446980244551,249899881384379463 ⋆ The hyper - Wiener index of the nanostar dendrimer NS[n], defined pictorially in the Karbasioun - Ashrafi - Diudea reference. ● a(n) = 1095 - 2 ^ n * 28971 + 4 ^ n * (11664 * n ^ 2 - 9720 * n + 32346). ●

▶ [A235890] 4480,5272,6952,10696,19720,43912,116872,361096,1242760,4578952,17542792,68636296,271486600,1079840392,4307160712,17204252296,68768239240,274975428232,1099706666632,4398436585096,17592966188680,70370304462472 ⋆ Number of (n + 1) X (5 + 1) 0..3 arrays with the minimum plus the upper median equal to the lower median plus the maximum in every 2 X 2 subblock. ● a(n) = 4 * (930 + 93 * 2 ^ n + 4 ^ n). ●

▶ [A337314] 0,0,0,4536,45360,294840,1587600,7715736,35244720,154700280,661122000,2773768536,11487556080,47136955320,192126589200,779279814936,3149513947440,12695388483960,51073849285200,205172877726936,823325141746800,3301203837670200,13228529919066000 ⋆ a(n) is the number of n - digit positive integers with exactly four distinct base 10 digits. ● a(n) = 10 * a(n - 1) - 35 * a(n - 2) + 50 * a(n - 3) - 24 * a(n - 4) for n > 4. ● a(n) = 189 * (4 ^ n - 4 * 3 ^ n + 3 * 2 ^ (n + 1) - 4). ●

▶ [A157364] 4607,18817,42631,76049,119071,171697,233927,305761,387199,478241,578887,689137,808991,938449,1077511,1226177,1384447,1552321,1729799,1916881,2113567,2319857,2535751,2761249,2996351 ⋆ a(n) = 4802 * n ^ 2 - 196 * n + 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A227482] 4644,101007,945783,6458535,37636839,200044647,1002825063,4831285095,22623961959,103728982887,467924253543,2083881950055,9184570923879,40135063034727,174128583269223,750870085229415,3220908204874599,13753353986104167,58492320032480103,247884935325539175,1047202439771446119 ⋆ The Wiener index of the nanostar dendrimer defined pictorially as NS[n] in the M. Mirzargar reference. ● a(n) = - 9369 + 2 ^ n * 74088 + 4 ^ n * (50625 * n - 60075). ●

▶ [A226801] 4683,25988,87135,227304,507035,1014348,1871583,3242960,5342859,8444820,12891263,19103928,27595035,38979164,53985855,73472928,98440523,130045860,169618719,218677640,278946843,352373868,441147935,547719024,674817675 ⋆ Column 6 of array in A226513. ● a(n) = (n + 1) * (n ^ 5 + 35 * n ^ 4 + 430 * n ^ 3 + 2320 * n ^ 2 + 5525 * n + 4683). ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). ●

▶ [A251135] 4699,9786,15830,27738,46023,79226,135959,240780,434193,804400,1519053,2920510,5684595,11169870,22084427,43851224,87307005,174131892,347676817,694650138,1388459119,2775924642,5550678879,11099992388,22198396553 ⋆ Number of (n + 1) X (6 + 1) 0..2 arrays with no 2 X 2 subblock having the sum of its diagonal elements greater than the maximum of its antidiagonal elements. ● a(n) = (9 * (3271 + 441 * (- 1) ^ n + 441 * 2 ^ (1 + n)) + 15178 * n + 4111 * n ^ 2 + 578 * n ^ 3 + 35 * n ^ 4) / 12 for n>3. ●

▶ [A221005] 4797,18800,88530,500582,3112014,19362974,115754814,659875454,3602117886,18956429822,96789115902,482029987838,2351490682878,11274381991934,53269435990014,248554431348734,1147271095058430,5245861041405950,23788748016975870,107088865925791742,478941290597187582 ⋆ The hyper - Wiener index of the nanostar dendrimer NS[n], defined pictorially in the Wang - Hua reference. ● a(n) = - 2 + 2 ^ n * (1404 * n ^ 2 + 1764 * n - 3115) + 4 ^ n * (1296 * n ^ 2 - 4536 * n + 7914). ●

▶ [A227495] 4797,135138,2268072,25678020,224320572,1649999532,10785747852,64824941388,366263505612,1974734612940,10266404558796,51852359848908,255825084304332,1238033348475852,5895322649598924,27690990109023180,128550270229863372,590735658025999308 ⋆ The hyper - Wiener index of the nanostar dendrimer D _ n, defined pictorially as NS[n] in the Yang et al. reference. ● a(

n) = - 140340 + 2 ^ n * (82764 * n ^ 2 - 268092 * n - 1159017) + 4 ^ n * (15681 6 * n ^ 2 - 719928 * n + 1304154). ●

▶ [A157516] 4801,19601,44401,79201,124001,178801,243601,318401,403201,4980 01,602801,717601,842401,977201,1122001,1276801,1441601,1616401,1801201,199 6001,2200801,2415601,2640401,2875201,3120001 ⋆ a(n) = 5000 * n ^ 2 - 200 * n + 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , J an 26 2012 ●

▶ [A157628] 4801,124001,403201,842401,1441601,2200801,3120001,4199201,543 8401,6837601,8396801,10116001,11995201,14034401,16233601,18592801,2111200 1,23791201,26630401,29629601,32788801,36108001,39587201,43226401 ⋆ 80000n ^ 2 - 120800n + 45601. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A124088] 4862,16796,41990,90440,177650,326876,572033,961400,1562275,2466 750,3798795,5722860,8454225,12271350,17530500,24682944,34295052,47071640,6 3882940,85795600,114108148,150391384,196534195,254795320,327861625 ⋆ 10th column of Catalan triangle A009766. ● a(n) = C(n,9) - C(n,7). ●

▶ [A215549] 0,4862,2466750,63882940,670609940,4277470470,19794795118,7314 3988775,228723580800,628737007195,1559830082888,3559370252529,7576971259 000,15210525840125,29040055455840,53087119860346,93432350566520,15902888 0903100,262755041438890 ⋆ Number of standard Young tableaux of shape [9n,9]. ● a(n) = C(9 * n + 9,9) * (9 * n - 8) / (9 * n + 1) for n>0, a(0) = 0. ●

▶ [A157367] 4999,19601,43807,77617,121031,174049,236671,308897,390727,4821 61,583199,693841,814087,943937,1083391,1232449,1391111,1559377,1737247,192 4721,2121799,2328481,2544767,2770657,3006151 ⋆ a(n) = 4802 * n ^ 2 + 196 * n + 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A090393] 0,5040,12288,22572,36992,56990,84432,121703,171816,238536,32652 0,441474,590328,781430,1024760,1332165,1717616,2197488,2790864,3519864,441 0000,5490558,6795008,8361443,10233048 ⋆ Eighth diagonal (m=7) of triangle A 084938; a(n) = A084938(n + 7,n) = (n ^ 7 + 63 * n ^ 6 + 1855 * n ^ 5 + 34125 * n ^ 4 + 438424 * n ^ 3 + 3980172 * n ^ 2 + 20946960 * n) / 5040. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n > 7. ●

▶ [A159083] 0,0,0,0,0,0,0,0,5040,40320,181440,604800,1663200,3991680,8648640,1 7297280,32432400,57657600,98017920,160392960,253955520,390700800,58605120 0,859541760,1235591280,1744364160 ⋆ Products of 7 consecutive integers. ● a(n) = n * (n - 1) * (n - 2) * (n - 3) * (n - 4) * (n - 5) * (n - 6) = n! / (n - 7)!. ●

▶ [A029575] 0,0,0,0,0,0,0,0,5040,45360,453600,4989600,59875200,778377600,1089 7286400,163459296000,2451889440000,41682120480000,750278168640000,142552 85204160000,2851057040832000000,59872197857472000000,1317188352864384000000,3029533211588083200000 ⋆ Number of permutations of an n - set containing a n 8 - cycle. ● a(n) = n! * (1 - Sum _{ k=0..floor(n / 8) } (- 1) ^ k / (k! * 8 ^ k)). ● a(n) / n! is asymptotic to 1 - e ^ (- 1 / 8). ●

▶ [A191685] 5040,109584,1172700,8409500,45995730,206070150,790943153,2681 453775,8207628000,23057159840,60202693980,147560703732,342252511900,75611 1184500,1599718388730,3256091103430,6400590336096,12191224980000,2256393 7825000,40681506808800 ⋆ Eighth diagonal a(n) = s(n,n - 7) of the unsigned Sti rling numbers of the first kind with n>7 ● a(n + 1) = binomial(n + 1,8) * (80 * n + 114 * n ^ 2 - 23 * n ^ 3 - 75 * n ^ 4 - 9 * n ^ 5 + 9 * n ^ 6) / 144 ●

▶ [A135456] 5040,141120,2328480,29635200,322494480,3162075840,2880573696 0,248619571200,2060056318320,16540688324160,129568848121440,995210916336 000,7524340159588560,56163512390086080,414847224363337920 ⋆ Number of su rjections from an n - element set onto a seven - element set. ● a(n) = 7 ^ n - C (7,6) * 6 ^ n + C(7,5) * 5 ^ n - C(7,4) * 4 ^ n + C(7,3) * 3 ^ n - C(7,2) * 2 ^ n + C(7,1) with n>=7. ●

▶ [A228910] 0,0,0,0,0,0,0,5040,181440,3780000,59875200,801496080,957404448 0,105398092800,1091804313600,10794490827120,102896614941120,95274176765 0400,861714505753920,7646150061990216160,6678555173493033360,5757691363157 764800,49099453300298016000,414884142077935345200 ⋆ a(n) = 8 ^ n - 7 * 7 ^ n + 21 * 6 ^ n - 35 * 5 ^ n + 35 * 4 ^ n - 21 * 3 ^ n + 7 * 2 ^ n - 1. ● a(n) = 5 040 * S2(n + 1,8), n>=0. ●

▶ [A179062] 0,0,0,0,0,0,5040,322560,6531840,72576000,548856000,3161410560,14 841066240,59364264960,208702494000,659602944000,1906252508160,5104345559 040,12796310741760,30287126016000,68146033536000 ⋆ Number of non - attacki ng placements of 7 rooks on an n X n board. ● a(n) = 7! * binomial(n,7) ^ 2. ●

▶ [A342075] 0,0,0,0,0,0,0,5040,322560,10342080,216518400,3261535200,3702682 3680,325474269120,2264594492160,12789814237200,60389186457600,2452213302 73920,877374833287680,2821277454690240,8284633867238400,2250356963641920 0,57135310310453760 ⋆ Number of n - colorings of the vertices of the 7 - dimens ional cross polytope such that no two adjacent vertices have the same color. ● a (n) = - 3597143040 * n + 11590795728 * n ^ 2 - 15837356724 * n ^ 3 + 1235569 8460 * n ^ 4 - 6212542175 * n ^ 5 + 2144307578 * n ^ 6 - 526197678 * n ^ 7 + 9 3450369 * n ^ 8 - 12064836 * n ^ 9 + 1122618 * n ^ 10 - 73423 * n ^ 11 + 3206 * n ^ 12 - 84 * n ^ 13 + n ^ 14. ● a(n) = (n - 6) * (n - 5) * (n - 4) * (n - 3) * (n - 2) * (n - 1) * n * (n ^ 7 - 63 n ^ 6 + 1708 n ^ 5 - 25795 n ^ 4 + 234094 n ^ 3 - 1275281 n ^ 2 + 3858049 n - 4996032). ●

▶ [A243133] 0,1,5042,114243,937444,4656965,17057046,50843527,130576328,2995 37289,628855930,1229215691,2265463212,3974443213,6686381534,10850138895,1 7062657936,26102926097,38970776898,56930852179,81562047860,114812765781,1 59062294182 ⋆ 64 * n ^ 7 - 112 * n ^ 5 + 56 * n ^ 3 - 7 * n. ● a(n) = n * (64 * n ^ 6 - 112 * n ^ 4 + 56 * n ^ 2 - 7). ● a(0)=0, a(1)=1, a(2)=5042, a(3)=1142 43, a(4)=937444, a(5)=4656965, a(6)=17057046, a(7)=50843527, a(n)=8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8). - _ Harvey P. Dale _ , Mar 27 2015 ●

▶ [A224462] 5150,279882,4912058,52877106,437291570,3075863058,1942410139 4,113690358162,629297936786,3338556446610,17134277121938,85638400421778,4 18886606368658,2012591878934418,9525395433164690,44509034884173714,20569 5168792825746 ⋆ The hyper - Wiener index of Wang's helicene - based dendrim er defined pictorially as DNS _ 2[n] in the Shabani et al. reference. ● a(n) = - 61550 + 2 ^ n * (30861 * n ^ 2 - 164298 * n - 602830) + 4 ^ n * (59049 * n ^ 2 - 677241 * n / 2 + 664380). ●

▶ [A157511] 5201,20401,45601,80801,126001,181201,246401,321601,406801,5020 01,607201,722401,847601,982801,1128001,1283201,1448401,1623601,1808801,200 4001,2209201,2424401,2649601,2884801,3130001 ⋆ a(n) = 5000 * n ^ 2 + 200 * n + 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3); a(1)=5201, a(2)=20401, a(3) =45601. ●

▶ [A178027] 0,5291,10582,15873,21164,26455,31746,37037,42328,47619,52910,58 201,63492,68783,74074,79365,84656,89947,95238,100529,105820,111111,116402,1 21693,126984 ⋆ Multiples of 5291. ● a(n) = n * 5291. [_ R. J. Mathar _ , May 24 2010] ●

▶ [A227486] 5298,39854,251046,1422550,7507638,37673334,182185206,85690367 0,3945369078,17864129014,79813259766,352738009590,1545019376118,671662469 9894,29013289140726,124641612792310,532923049312758,2269124503273974,962 6239798084086,40703952922083830,171611842722922998 ⋆ The Wiener index of the nanostar dendrimer defined pictorially as G[n] in the M. H. Khalifeh et al. r eference. ● a(n) = 502 + 2 ^ (n) * (2800 * n + 8716) + 4 ^ (n) * (8000 * n - 39 20). ● a(n) = 13 * a(n - 1) - 64 * a(n - 2) + 148 * a(n - 3) - 160 * a(n - 4) + 64 * a(n - 5). - _ Matthew House _ , Nov 01 2016 ●

▶ [A187853] 0,0,5328,49776,177040,408048,744696,1183632,1723120,2362864,310 2864,3943120,4883632,5924400,7065424,8306704,9648240,11090032,12632080,142 74384,16016944,17859760,19802832,21846160,23989744 ⋆ Number of 5 - step kin g - knight's tours (piece capable of both kinds of moves) on an n X n board sum med over all starting positions. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>10. ●

▶ [A023342] 5333,26669,294167,324869,344189,578297,676829,807407,894893,10 78559,1114427,1174487,1624349,1883363,2247923,2926769,3075029,3196871,3427 871,3558407,4037039,4205879,5392799,6130823,6479423 ⋆ Primes that remain p rime through 5 iterations of function f(x) = 5x + 4. ● a(n) == 41 (mod 42). - _ John Cerkan _ , Oct 20 2016 ●

▶ [A014799] 1,5625,164025,1399489,6765201,23532201,66015625,159138225,3427 31169,676572121,1246160601,2169230625,3603000625,5752160649,8877596841,13 305853201,19439330625,27767223225,38877191929,53467775361 ⋆ Squares of od d pentagonal pyramidal numbers. ● a(n) = (1 + 2 * n) ^ 2 * (1 + 4 * n) ^ 4. ●

▶ [A183638] 5684,9256,17612,38056,90524,231736,629132,1793416,5328764,1641 3016,52195052,170891176,574845404,1983103096,7003319372,25265467336,92897 360444,347253741976,1316323506092,5047850897896,19540336713884 ⋆ Number of (n + 1) X 6 0..3 arrays with every 2 X 2 subblock summing to 6. ● a(n) = 27 02 + 301 * 2 ^ (2 + n) + 62 * 3 ^ (1 + n) + 4 ^ (1 + n). ●

▶ [A114361] 1,5778,40169,87727,136338,184958,233578,282198,330818,379438,4 28058,476678,525298,573918,622538,671158,719778,768398,817018,865638,91425 8,962878,1011498,1060118,1108738 ⋆ Let M(n) be the n X n matrix m(i,j)=min(i,j) for 1<=i,j<=n then a(n) is the trace of M(n) ^ (- 9). ● a(n) = 48620n - 10 6762, with n>4, a(1)=1, a(2)=5778, a(3)=40169, a(4)=87727. ● a(n) = 2 * a(n - 1) - a(n - 2) for n>6. ●

▶ [A248132] 0,1,5792,920482,33554432,545915033,5332006004,36620603758,1943 68031998,847288609443,3162277660168,10408989356987,30886277963534,840024 40529229,212129196024140,502505405881790,1125899906842624 ⋆ Integer part o f square root of A010813(n) = n ^ 25. ● a(n) = floor(sqrt(n ^ 25)). ●

▶ [A157666] 5967,25650,45333,65016,84699,104382,124065,143748,163431,18311 4,202797,222480,242163,261846,281529,301212,320895,340578,360261,379944,399 627,419310,438993,458676,478359 ⋆ a(n) = 19683 * n - 13716. ● a(n) = 2 * a(n - 1) - a(n - 2); a(1)=5967, a(2)=25650. (End) ●

▶ [A157652] 6040,14040,22040,30040,38040,46040,54040,62040,70040,78040,8604 0,94040,102040,110040,118040,126040,134040,142040,150040,158040,166040,1740 40,182040,190040,198040 ⋆ a(n) = 40 * (200 * n - 49). ● a(n) = 2 * a(n - 1) - a(n - 2). ●

▶ [A157267] 6049,32257,79201,146881,235297,344449,474337,624961,796321,988 417,1201249,1434817,1689121,1964161,2259937,2576449,2913697,3271681,365040 1,4049857,4470049,4910977,5372641,5855041,6358177 ⋆ a(n) = 10368 * n ^ 2 - 4 896 * n + 577. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Libr andi _ , Jan 27 2012 ●

▶ [A054560] 6300,89586,549528 ⋆ Number of labeled pure 2 - complexes on n n odes (0 - simplexes) with 5 2 - simplexes and 11 1 - simplexes. ● a(n)=6300 * C (n, 6) + 45486 * C(n, 7) + 9240 * C(n, 8) + ... ●

▶ [A296777] 6348,126016,2022480 ⋆ Detour index of the n - cube - connected cy cle graph. ● a(n) = 2 ^ (n - 1) * n * (2 ^ n * n - 1) ^ 2 for odd n >= 3. ●

▶ [A259060] 6426,7900,9614,11592,13858,16436,19350,22624,26282,30348,34846,3 9800,45234,51172,57638,64656,72250,80444,89262,98728,108866,119700,131254,1 43552,156618 ⋆ Numbers that are representable in at least two ways as sums of four distinct nonvanishing cubes. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ Vincenzo Librandi _ , Aug 13 2015 ●

▶ [A194720] 0,1,6435,381333,5068915,33563481,148733571,507709165,14430391 23,3581326065,8006545891,16475259141,31690921395,57644499913,10002860371 5,166732334301,268424064211,419229350625,637511191203,946759829365,137659 9316211,1963918036281 ⋆ Number of n - ary words beginning with the first cha racter of the alphabet, that can be built by inserting eight doublets into the init ially empty word. ● a(0) = 0, a(n) = 1 + (14 + (90 + (350 + (910 + (1638 + (2002 + 1430 * (n - 1)) * (n - 1)) * (n - 1)) * (n - 1)) * (n - 1)) * (n - 1) for n>0. ●

▶ [A338951] 1,6504,8416440,1455789440,80139247500,2125945744776,340264988 20524,376045864704000,3131319814422255,20854395850585000,115919421344402 676,554976171149122944,2343894146343268610,8896568181794053320 ⋆ Number of achiral colorings of the 24 octahedral facets (or 24 vertices) of the 4 - D 24 - cell using subsets of a set of n colors. ● a(n) = (8 * n ^ 4 + 8 * n ^ 6 + 22 * n ^ 7 + 6 * n ^ 8 + n ^ 12 + n ^ 13 + n ^ 15 + n ^ 18) / 48. ● a(n) = 1 * C(n,1) + 6502 * C(n,2) + 8396931 * C(n,3) + 1422162700 * C(n,4) + 72944399665 * C (n,5) + 1666778870130 * C(n,6) + 20777144613015 * C(n,7) + 15897399125580 0 * C(n,8) + 803196369526320 * C(n,9) + 2806639981714800 * C(n,10) + 6979 192091902800 * C(n,11) + 12538220293368000 * C(n,12) + 16327662245294400 * C(n,13) + 15272334392515200 * C(n,14) + 10003736158416000 * C(n,15) + 4 357170994176000 * C(n,16) + 1133753677056000 * C(n,17) + 133382785536000

* C(n,18), where the coefficient of C(n,k) is the number of achiral colorings using exactly k colors. ●

▶ [A147872] 6540,496680,10931760,124318112,934536600,5284309680,24238001040,94622473440,324833152644,1003729086360,2840342968320,7458732665280,18365400613040,42754133712096,94739078371680,200943535287360,40986129427110 0,807103156903560,1539611666989968 ⋆ Number of consistent sets of 7 irreflexive binary order relationships over n objects. ● a(n) = (n - 4) * (n - 3) * (n - 2) * (n - 1) * n * (n ^ 9 + 3 * n ^ 8 - 26 * n ^ 7 - 168 * n ^ 6 - 259 * n ^ 5 + 1743 * n ^ 4 + 15044 * n ^ 3 + 40722 * n ^ 2 - 111060 * n - 817320) / 5040. - _ Vaclav Kotesovec _ , Apr 11 2020 ●

▶ [A017164] 0,6561,104976,531441,1679616,4100625,8503056,15752961,26873856,43046721,65610000,96059601,136048896,187388721,252047376,332150625,429981696,547981281,688747536,855036081 ⋆ a(n) = (9 * n) ^ 4. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Wesley Ivan Hurt _ , Apr 21 2021 ●

▶ [A059980] 1,6561,1679616,100000000,2562890625,37822859361,377801998336,2821109907456,16815125390625,83733937890625,360040606269696,1370114370683136,4702525276151521,14774554437890625,42998169600000000,117033789351264256,300283484326400961 ⋆ Number of 8 - dimensional cage assemblies. ● a(n) = (n * (n + 1) / 2) ^ 8. ● a(n) = (1 / 16) * (S(9,n) + 7 * S(11,n) + 7 * S(13,n) + S(15,n)), where S(r,n) = Sum _{ k = 1..n } k ^ r. Cf. A059977 and A059978. (End) ●

▶ [A017432] 6561,1475789056,152587890625,2821109907456,23811286661761,12806308171801 6,513798374428641,1677721600000000,4702525276151521,11716593810022656,26584441929064321,55895067029733376 ⋆ a(n) = (11 * n + 3) ^ 8. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9). - _ Wesley Ivan Hurt _ , Jun 07 2021 ●

▶ [A075669] 1,6817,2135777,165588738,5498750979,102697107715,1264908663011,11373936899396,79985007371877,461856872635333,2269365182729029,9747136491367430,37362375267437415,129917413702762791 ⋆ Sum of next n 8th powers. ● a(1)=1; a(n)=sum(i ^ n, { i, n(n - 1) / 2 + 1, n(n - 1) / 2 + 1 + n }). ● a(n) = (45n ^ 17 + 780n ^ 15 + 3990n ^ 13 + 6900n ^ 11 + 1205n ^ 9 - 3240n ^ 7 + 1584n ^ 5 + 640n ^ 3 - 384n) / 11520. ●

▶ [A100897] 7007,7117,7227,7337,7447,7557,7667,7777,7887,7997,710107,711117,712127,713137,714147,715157,716167,717177,718187,719197,720207,721217,722227,723237,724247 ⋆ a(n) is the decimal expansion of 7nn7. ● a(n) = 7nn7. ●

▶ [A183630] 7075,8109,10195,14421,23035,40749,77635,155781,325195,703389,1577875,3681141,8950555,22678029,59698915,162438501,454011115,1295436669,3753128755,10993035861,32446418875,96273891309,286690955395 ⋆ Number of (n + 1) X 8 0..2 arrays with every 2 X 2 subblock summing to 4. ● a(n) = 6050 + 127 * 2 ^ (2 + n) + 3 ^ (1 + n). ●

▶ [A235883] 7329,8871,11973,18231,30909,56751,109893,220551,454989,963231,2097813,4721271,11031069,26839311,68021733,179084391,487303149,1362020991,3886297653,11259373911,32979095229,97339244271,288821661573 ⋆ Number of (n + 1) X (7 + 1) 0..2 arrays with the minimum plus the upper median equal to the lower median plus the maximum in every 2 X 2 subblock. ● a(n) = 3 * (1932 + 127 * 2 ^ (1 + n) + 3 ^ n). ●

▶ [A347164] 7386,11061,15176,16054,19950,24493,26749,29160,33902,42207,43013,44233,45627,52235,54727,56186,59228,59229,59230,60883,62823,63468,65404,69960,71225 ⋆ Positive integers k such that the decimal representation of 2 ^ k ends with some permutation of the string "0123456789". ● a(n + c) = a(n) + d with c=2795 and d as above. ●

▶ [A068245] 1,7616,5141250,552093440,20631905875,395001645696,4771909547076,41190314035200,275192443300005,1502690499112000,6971521964029766,28275884687022336,102456840191225975,337289521082456320,1022310183284613000,2883605488481550336,7636012822945480521 ⋆ 1 / 6 the number of colorings of a 4 X 4 rhombic - or staggered - hexagonal array with n colors. ● a(n) = (n ^ 16 - 33 * n ^ 15 + 510 * n ^ 14 - 4898 * n ^ 13 + 32703 * n ^ 12 - 160859 * n ^ 11 + 602408 * n ^ 10 - 1749715 * n ^ 9 + 3975561 * n ^ 8 - 7068408 * n ^ 7 + 9755858 * n ^ 6 - 10265148 * n ^ 5 + 7968348 * n ^ 4 - 4304712 * n ^ 3 + 1445104 * n ^ 2 - 226720 * n) / 6. (End) ●

▶ [A023322] 7949,25589,55799,61379,69959,70229,74609,174569,188369,204719,220469,225629,233759,250919,286619,363659,552749,592139,658349,735419,783269,827549,931949,1018889,1065839 ⋆ Primes that remain prime through 4 iterations of function f(x) = 8x + 7. ● a(n) == 9 (mod 10). - _ John Cerkan _ , Oct 08 2016 ●

▶ [A157660] 7960,15960,23960,31960,39960,47960,55960,63960,71960,79960,87960,95960,103960,111960,119960,127960,135960,143960,151960,159960,167960,175960,183960,191960,199960 ⋆ a(n) = 8000 * n - 40. ● a(n) = 2 * a(n - 1) - a(n - 2). - _ Vincenzo Librandi _ , Jan 28 2012 ●

▶ [A157663] 8040,16040,24040,32040,40040,48040,56040,64040,72040,80040,88040,96040,104040,112040,120040,128040,136040,144040,152040,160040,168040,176040,184040,192040,200040 ⋆ a(n) = 8000 * n + 40. ● a(n) = 2 * a(n - 1) - a(n - 2). - _ Vincenzo Librandi _ , Feb 04 2012 ●

▶ [A032780] 0,8064,67200,316800,1108800,3203200,8072064,18345600,38438400,75398400,140025600,248312064,423259200,697132800,1114220800,1734163200,2635928064,3922512000,5726448000,8216208000,11603592000,16152200064,22187088000,30105712000 ⋆ a(n) = n(n + 1)(n + 2)...(n + 8) / (n + (n + 1) + (n + 2) + ... + (n + 8)). ● a(- n) = a(n - 8) for all n in Z. - _ Michael Somos _ , Mar 18 2014 ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n > 8. ●

▶ [A075956] 8191,1040447,15786439,53683801,89475754,426151179,3759235934,13422994867,22549990279,40403963324,206697639567,825177352150,14432612797 81,6597741209193,11064929837983,52777249440092 ⋆ Basis for code in A075955. ● a(n) = b(2 ^ n), where b is A075955, the binary lexicode, d=13. ●

▶ [A195661] 8192,1270246,44653028,720390254,7177627944,51526819510,291859775552,1382652697282,5700499630916,21042965606234,71028444904044,222770819826574,657397551407816,1843639061043694,4953451546255928,1283502676755 9890,32249277650536068 ⋆ Number of ways to place 12n nonattacking kings on a vertical cylinder 24 X 2n. ● a(n) = (74405871551 * n - 1097352668753) * 2 ^ n + 696317 / 2016 * n ^ 10 + 420699809 / 30240 * n ^ 9 + 66463031 / 210 * n ^ 8 + 26602370087 / 5040 * n ^ 7 + 33515235289 / 480 * n ^ 6 + 1076425504013 / 1440 * n ^ 5 + 32380230257101 / 5040 * n ^ 4 + 325331895133417 / 7560 * n ^ 3 + 29685456992323 / 140 * n ^ 2 + 72053208873316 / 105 * n + 1097352668754. ●

▶ [A181134] 0,1,8193,1602516,68711380,1289414505,14350108521,111239118928,660994932816,3202860761145,13202860761145,47725572905076,154718778284148,457593884876401,1251308658130545,3197503726489920 ⋆ Sum of 13th powers: a(n) = Sum _{ j=0..n } j ^ 13. ● a(n) = a(- n - 1) = (n * (n + 1)) ^ 2 * (30 * n ^ 10 + 150 * n ^ 9 + 125 * n ^ 8 - 400 * n ^ 7 - 326 * n ^ 6 + 1052 * n ^ 5 + 367 * n ^ 4 - 1786 * n ^ 3 + 202 * n ^ 2 + 1382 * n - 691) / 420. ● a(n) = - Sum _{ j=1..13 } j * s(n + 1,n + 1 - j) * S(n + 13 - j,n), where s(n,k) and S(n,k) are the Stirling numbers of the first kind and the second kind, respectively. - _ Mircea Merca _ , Jan 25 2014 ●

▶ [A253713] 1,8194,1610710,70322090,1359736595,15709845116,126948964044,787943896860,3990804658005,17193665419150,64919238324226,219638016608374,677231901484775,1928540559615320,5126044286105240,12827147639965656,30432829026732009,68861475279169530,149343104993864110,311744734708558690,628618742162372731 ⋆ Second partial sums of 13th powers (A010801). ● a(n) = n * (n + 1) * (n + 2) * (6 * n ^ 12 + 72 * n ^ 11 + 297 * n ^ 10 + 330 * n ^ 9 - 765 * n ^ 8 - 1368 * n ^ 7 + 2059 * n ^ 6 + 2994 * n ^ 5 - 4091 * n ^ 4 - 2724 * n ^ 3 + 4069 * n ^ 2 + 66 * n - 735) / 1260. ● a(n) = 2 * a(n - 1) - a(n - 2) + n ^ 13. ●

▶ [A331357] 1,8200,9080559,1503323520,81461669375,2146080958056,34228350856910,377534786525184,3140004522270465,20896479183085000,116094911796177061,555622588428635520,2346039511676401359,8903083257215729960 ⋆ Number of achiral colorings of the edges of a regular 4 - dimensional orthoplex with n available colors. ● a(n) = (8 * n ^ 4 + 8 * n ^ 6 + 18 * n ^ 7 + 6 * n ^ 8 + n ^ 12 + 3 * n ^ 13 + 3 * n ^ 15 + n ^ 18) / 48. ● a(n) = C(n,1) + 8198 * C(n,2) + 9055962 * C(n,3) + 1467050480 * C(n,4) + 74035775370 * C(n,5) + 1679679306420 * C(n,6) + 20864180531565 * C(n,7) + 159341117375160 * C(n,8) + 804216787965360 * C(n,9) + 2808560520334800 * C(n,10) + 6981656802951600 * C(n,11) + 12540346820971200 * C(n,12) + 16328843044113600 * C(n,13) + 15272715797539200 * C(n,14) + 10003790644848000 * C(n,15) + 4357170994176000 * C(n,16) + 1133753677056000 * C(n,17) + 133382785536000 * C(n,18), where the coefficient of C(n,k) is the number of colorings using exactly k colors. ●

▶ [A168664] 0,1,8256,2392578,134225920,3051796875,39182222016,339111948196,2199024304128,11438398618965,50000005000000,189874926535206,641959250190336,1968688224223903,5556003465485760,14596463098125000,36028797153181696,84188913484869801 ⋆ a(n) = n ^ 7 * (n ^ 7 + 1) / 2. ● a(n) = 15 * a(n - 1) - 105 * a(n - 2) + 455 * a(n - 3) - 1365 * a(n - 4) + 3003 * a(n - 5) - 5005 * a(n - 6) + 6435 * a(n - 7) - 6435 * a(n - 8) + 5005 * a(n - 9) - 3003 * a(n - 10) + 1365 * a(n - 11) - 455 * a(n - 12) + 105 * a(n - 13) - 15 * a(n - 14) + a(n - 15). ●

▶ [A157731] 8274,26796,45318,63840,82362,100884,119406,137928,156450,174972,193494,212016,230538,249060,267582,286104,304626,323148,341670,360192,378714,397236,415758,434280,452802 ⋆ a(n) = 18522 * n - 10248. ● a(n) = 2 * a(n - 1) - a(n - 2). ●

▶ [A271748] 8280,29874,117488,495408,2215148,10419024,51235748,262138728,1389893708,7611839904,42937377908,248865777048,1478955826268,8994703967184,55889046456068,354251342263368,2287372272350828,15026157296580864,100307242528430228,679694909468957688 ⋆ Number of set partitions of [n] such that 9 is the largest element of the last block. ● a(n) = 36 * a(n - 1) - 546 * a(n - 2) + 4536 * a(n - 3) - 22449 * a(n - 4) + 67284 * a(n - 5) - 118124 * a(n - 6) + 109584 * a(n - 7) - 40320 * a(n - 8) for n>17. - _ Colin Barker _ , Jan 05 2018 ●

▶ [A224465] 8340,12428,26748,76444,268380,1100508,4959708,23244764,109587420,512103388,2360853468,10733675484,48188138460,213973935068,941242328028,4107369456604,17801289409500,76697192899548,328767224423388,1403004800476124,5963809931928540 ⋆ The Wiener index of the nanostar dendrimer defined pictorially as NS[n] in the Z. S. Irani reference. ● a(n) = 9180 + 2 ^ n * (2800 * n + 136) + 4 ^ n * (320 * n - 976). ●

▶ [A023321] 8431,9721,24169,35311,63577,74203,109471,109891,140269,174613,176599,182857,210187,241561,270553,274837,274909,276517,281557,324763,326737,383659,464089,474127,489109 ⋆ Primes that remain prime through 4 iterations of function f(x) = 8x + 5. ● a(n) == 19 or 31 (mod 42). - _ John Cerkan _ , Oct 08 2016 ●

▶ [A253492] 8501,9679,11937,18526,32652,63550,133284,296566,694572,1704910,4368564,11624806,31924092,89883070,257882244,750124246,2203339212,6515962030,19359786324,57703170886,172357147932,515566725790,1543690752804 ⋆ Number of (n + 1) X (5 + 1) 0..2 arrays with every 2 X 2 subblock diagonal minus antidiagonal sum nondecreasing horizontally, vertically and ne - to - sw antidiagonally. ● a(n) = (34338 + 4305 * 2 ^ n + 98 * 3 ^ n) / 6 for n>3. ●

▶ [A217338] 0,1,8548,5398083,537157696,19076074375,352654485156,4154189102413,35184646816768,231628411446741,1250002537502500,5743722797690911,23110548002468928,83177110918426603,272244240093265636,821051189587805625,2305843285702230016,6082649491072763593 ⋆ Number of inequivalent ways to color a 4 X 4 checkerboard using at most n colors allowing rotations and reflections. ● a(n) = (n ^ 16 + 2 * n ^ 4 + 3 * n ^ 8 + 2 * n ^ 10) / 8. ●

▶ [A156846] 8579,20746,32913,45080,57247,69414,81581,93748,105915,118082,130249,142416,154583,166750,178917,191084,203251,215418,227585,239752,251919,264086,276253,288420,300587 ⋆ a(n) = 12167n - 3588. ● a(n) = 2 * a(n - 1) - a(n - 2). ●

▶ [A221053] 8580,751148,13742092,145113196,1166551916,7991214060,49348860396,283593693164,1546469947372,8104770527212,41179270758380,204101468659692,991328100589548,4734560147021804,22293506692030444,103708270251417580,477422926327128044 ⋆ The hyper - Wiener index of the nanostar dendrimer NSC _ 5C _ 6[n], defined pictorially in the A. R. Ashrafi et al. reference and in the M. Rostami et al. reference. ● a(n) = 204780 - 1311272 * 2 ^ n + 1106480 * 4 ^ n + 360 * 2 ^ n * n ^ 2 + 129600 * 4 ^ n * n ^ 2 + 7852 * 2 ^ n * n - 633600 * 4 ^ n * n. ●

► [A067867] 8736,18736,28736,38736,48736,58736,68736,78736,88736,98736,108736,118736,128736,138736,148736,158736,168736,178736,188736,198736,208736,218736,228736,238736,248736 ⋆ Numbers n such that n and 2 ^ n end with the same 4 digits. ● a(n) = 8736 + 10 ^ 4(n - 1). ● a(n) = 2 * a(n - 1) - a(n - 2). G.f.: 16 * x * (546 + 79 * x) / (1 - x) ^ 2. [_ Colin Barker _ , Dec 01 2012] ●

► [A250881] 8736,30360,73122,144248,250964,400496,600070,856912,1178248,1571304,2043306,2601480,3253052,4005248,4865294,5840416,6937840,8164792,9528498,11036184,12695076,14512400,16495382,18651248,20987224 ⋆ Number of (4 + 1) X (n + 1) 0..3 arrays with nondecreasing x(i,j) - x(i,j - 1) in the i direction and nondecreasing x(i,j) + x(i - 1,j) in the j direction. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>4. ●

► [A322537] 1,8953,856945,17538157,167729959,1018872811,4577127763,16581420835,51125645317,139071924069,342237634221,775938666273,1643151128475,3284313415527,6247630238079,11385659856231,19984965376233,33936690554865,55957080110537,89868204063989,140950465124591 ⋆ Number of arrays of 10 integers in - n..n with sum zero. ● a(n) = [x ^ (10 * n)] (Sum _{ k=0..2 * n } x ^ k) ^ 10. ●

► [A144126] 1,8989,213445,1651609,7544041,25289461,69125869,163456945,346843729,676661581,1234422421,2131762249,3517093945,5582925349,8573842621,12795158881,18622228129,26510424445,37005786469,50756327161 ⋆ P _ 6(2n + 1), the Legendre polynomial of order 6 at 2n + 1. ● a(n) = 924 * n ^ 6 + 2772 * n ^ 5 + 3150 * n ^ 4 + 1680 * n ^ 3 + 420 * n ^ 2 + 42 * n + 1. - _ Vaclav Kotesovec _ , Jul 31 2013 ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>6. ●

► [A157619] 9100,40350,71600,102850,134100,165350,196600,227850,259100,290350,321600,352850,384100,415350,446600,477850,509100,540350,571600,602850,634100,665350,696600,727850,759100 ⋆ 31250n - 22150. ● a(n) = 2 * a(n - 1) - a(n - 2). ●

► [A209595] 9216,1476225,51380224,791015625,7316407296,47738317081,241591910400,1007680691889,3610000000000,11438404249041,32754285674496,86161557405625,210866643477504,484962978515625,1056630674292736 ⋆ Number of 4X4 0..n arrays with every element equal to a diagonal or antidiagonal reflection ● a(n) = (n + 1) ^ 8 * ((n + 1) * (2 * n + 1)) ^ 2 ●

► [A143367] 9412,30652,123148,564844,2726572,13219372,63206188,296679724,1368005932,6210491692,27825661228,123303445804,541361800492,2358354445612,10205728212268,43913619703084,188020440958252,801552290809132,3404105445803308,14408036898571564 ⋆ The Szeged index of third type dendrimer nanostar which has grown n stages. ● a(n) = 3636 * 2 ^ n + 1324 + 720 * n * 4 ^ n + 1560 * n * 2 ^ n - 1296 * 4 ^ n. ●

► [A134117] 9551,12853,14107,15823,18803,22193,22307,22817,24281,27143,28351,29881,32261,40387,42863,45083,45197,46771,46957,47981,50461,57601,60041,60457,62423 ⋆ Primes p such that q - p = 36, where q is the next prime after p. ● a(n) >> n log ^ 2 n. - _ Charles R Greathouse IV _ , Sep 14 2015 ●

► [A250761] 9585,22197,40023,63063,91317,124785,163467,207363,256473,310797,370335,435087,505053,580233,660627,746235,837057,933093,1034343,1140807,1252485,1369377,1491483,1618803,1751337 ⋆ Number of (6 + 1) X (n + 1) 0..2 arrays with nondecreasing x(i,j) - x(i,j - 1) in the i direction and nondecreasing x(i,j) + x(i - 1,j) in the j direction. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>3. ●

► [A156735] 9801,114243,332929,665859,1113033,1674451,2350113,3140019,4044169,5062563,6195201,7442083,8803209,10278579,11868193,13572051,15390153,17322499,19369089,21529923,23805001,26194323,28697889,31315699 ⋆ a(n) = 57122 * n ^ 2 + 47320 * n + 9801. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>2. ●

► [A227489] 9801,800545,14262241,148766529,1187870657,8103701057,49907422785,286259766337,1558851796033,8161139590209,41432038278209,205221516272705,996243752510529,4755963555931201,22386081148494913,104106406002746433 ⋆ The hyper - Wiener index of the nanostar dendrimer NSC _ 5C _ 6[n], defined pictorially in the Ashrafi et al. and the Rostami et al. references. ● a(n) = 189505 + 2 ^ (n) * (360 * n ^ (2) - 1148 * n - 1285024) + 4 ^ (n) * (129600 * n ^ (2) - 627120 * n + 1095500). ●

► [A126978] 9977,10081,10185,10289,10393,10497,10601,10705,10809,10913,11017,11121,11225,11329,11433,11537,11641,11745,11849,11953,12057,12161,12265,12369,12473 ⋆ a(n) = 104 * n + 9977. ● a(0)=9977, a(1)=10081, a(n) = 2 * a(n - 1) - a(n - 2). - _ Harvey P. Dale _ , Dec 16 2011 ●

► [A167149] 0,1,10000,29997,59992,99985,149976,209965,279952,359937,449920,549901,659880,779857,909832,1049805,1199776,1359745,1529712,1709677,1899640,2099601,2309560,2529517,2759472 ⋆ 10000 - gonal numbers: a(n) = n + 4999 * n * (n - 1). ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A017644] 10000,234256,1336336,4477456,11316496,24010000,45212176,78074896,126247696,193877776,285610000,406586896,562448656,759333136,1003875856,1303210000,1664966416,2097273616 ⋆ (12n + 10) ^ 4. ● a(0)=10000, a(1)=234256, a(2)=1336336, a(3)=4477456, a(4)=11316496, a(n)=5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5). - _ Harvey P. Dale _ , Jan 22 2016 ●

► [A173029] 10007,20016,60025,130026,200029,270038,360039,450046,550049,750052,950061,1250068,1650077,2150086,2850087,3750088,4650095,5650098,6650131,7650168,8650207,9650288,10650387,11650690,12651093 ⋆ Partial sums of naughty primes A164968. ● a(n) = SUM[i=1..n] { p such that p is prime and the number of zeros in the decimal representation of p is greater than the number of all other digits } . ●

► [A251136] 10033,19548,30770,51679,82431,135959,223663,380641,662361,1191797,2199909,4160395,8005403,15610747,30712547,60794301,120807237,240664809,480177897,958978999,1916316823,3830699263,7659125559,15315604409 ⋆ Number of (n + 1) X (7 + 1) 0..2 arrays with no 2 X 2 subblock having the sum of its diagonal elements greater than the maximum of its antidiagonal elements. ● a(n) = (68472 + 6724 * (- 1) ^ n + 1369 * 2 ^ (3 + n) + 34882 * n + 8827 * n ^ 2 + 1130 * n ^ 3 + 65 * n ^ 4) / 12 for n>3. ●

► [A023356] 10061,20071,161093,200713,291419,564979,600791,606839,693079,1826519,1876807,2106407,2249207,2471471,3335369,3955499,4542547,4765609,4829603,4955981,5090507,5534993,5866247,5987921,6091213 ⋆ Primes that remain prime through 5 iterations of the function f(x) = 10x + 3. ● a(n) == 9 (mod 14). - _ John Cerkan _ , Aug 26 2016 ●

► [A157288] 10081,40897,92449,164737,257761,371521,506017,661249,837217,1033921,1251361,1489537,1748449,2028097,2328481,2649601,2991457,3354049,3737377,4141441,4566241,5011777,5478049,5965057,6472801 ⋆ a(n) = 10368 * n ^ 2 - 288 * n + 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Jan 28 2012 ●

► [A157735] 10248,28770,47292,65814,84336,102858,121380,139902,158424,176946,195468,213990,232512,251034,269556,288078,306600,325122,343644,362166,380688,399210,417732,436254,454776 ⋆ 18522n - 8274. ● a(n) = 2 * a(n - 1) - a(n - 2). ●

► [A226599] 10370,10730,11570,12410,13130,19610,22490,25010,31610,38090,38930,39338,39962,40970,41810,55250,55970,59330,59930,69530,70850,73730,76850,77090,89570 ⋆ Numbers which are the sum of two squared primes in exactly four ways (ignoring order). ● a(n) = p ^ 2 + q ^ 2; p, q are (not necessarily different) primes ●

► [A157445] 10405,49730,118337,216226,343397,499850,685585,900602,1144901,1418482,1721345,2053490,2414917,2805626,3225617,3674890,4153445,4661282,5198401,5764802,6360485,6985450,7639697,8323226,9036037 ⋆ a(n) = 14641 * n ^ 2 - 4598 * n + 362. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Jan 26 2012 ●

► [A120500] 0,10527,21055,31622,42149,52716,63244,73811,84338,94905,105433,120000 ⋆ Times in hours,minutes and seconds (to the nearest second) at which the smoothly crossing minute and hour hands of an analog clock coincide, over a period of one complete 12 - hour sweep of the hour hand. ● a(n)=round(43200 * n / 11) expressed in double - spaced sexagesimal scale. In other words, the hour and minute hands line up at 11 successive positions after every (12 / 11)hr, i.e., 1hr5min27s and 3 / 11s from noon or midnight. ●

► [A224425] 10584,171477,1461051,9546255,54280503,284162823,1410216615,6746016231,31426525287,143519749479,645421289319,2867229803367,12611448843111,55016616065895,238351151471463,1026546163669863,4398756503804775,18765324647783271,79742515593599847 ⋆ The Wiener index of the phenylacetylene dendrimer NSB[n], defined pictorially in the Z. Yarahmadi et al. reference. ● a(n) = - 9369 + 85725 * 2 ^ n - 65772 * 4 ^ n + 68121 * n * 4 ^ n (agrees with Theorem 3 of the Yarahmadi et al. reference). ●

► [A179426] 0,0,0,0,0,10596,486668,7063520,55345356,299491100,1263811604,4455716184,13701863604,37823872044,95648273100,224887404416,497181121100,1042609380588,2088337713332,4017815773400,7459198321428,13414493857116,23444476061772,39928736913120,66425550447500 ⋆ Number of ways to place 6 non attacking kings on an n X n toroidal board. ● a(n) = 1 / 720 * n ^ 2 * (n ^ 10 - 135 * n ^ 8 + 7525 * n ^ 6 - 217665 * n ^ 4 + 3289354 * n ^ 2 - 20949480), n>=7. ●

► [A157326] 10657,42049,94177,167041,260641,374977,510049,665857,842401,1039681,1257697,1496449,1755937,2036161,2337121,2658817,3001249,3364417,3748321,4152961,4578337,5024449,5491297,5978881,6487201 ⋆ a(n) = 10368 * n ^ 2 + 288 * n + 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Jan 26 2012 ●

► [A250896] 10875,31215,91030,265546,764315,2168405,6060594,16732140,45832201,125162059,342287192,940831202,2606118783,7287014385,20581424254,58711891192,169046356181,490755132023,1434774937860,4219275237870 ⋆ Number of (n + 1) X (6 + 1) 0..2 arrays with nondecreasing x(i,j) - x(i,j - 1) in the i direction and nondecreasing absolute value of x(i,j) - x(i - 1,j) in the j direction. ● a(n) = (- 8787 + 3389 * 2 ^ n + 169 * 3 ^ (3 + n) + (14186 - 99 * 2 ^ (4 + n)) * n + 36 * (145 + 33 * 2 ^ (1 + n)) * n ^ 2) / 4 for n>2. ●

► [A224463] 11095,357449,3692349,26206373,155494901,834211733,4203722965,20315383637,95323077717,437644252757,1976168966741,8807356781141,38840665809493,169808425140821,737017916129877,3179209969369685,13641394194809429,58263792669360725 ⋆ The Wiener index of the tetrathiafulvalene dendrimer defined pictorially as D[n] in the Shabani reference. ● a(n) = - 64939 + 2 ^ n * (- 27280 * n + 344122) + 4 ^ n * (215264 * n - 268088). ●

► [A156713] 12005,12467,12985,14063,15025,16807,19073,20923,24157,26747,31213,40817,48055,53753,63455,71077,84035,99413,111475,131957,148015,175273,232897,275863,309533 ⋆ Positive numbers y such that y ^ 2 is of the form x ^ 2 + (x + 16807) ^ 2 with integer x. ● a(n) = 6 * a(n - 11) - a(n - 22) for n > 22; a(1) = 12005, a(2) = 12467, a(3) = 12985, a(4) = 14063, a(5) = 15025, a(6) = 16807, a(7) = 19073, a(8) = 20923, a(9) = 24157, a(10) = 26747, a(11) = 31213, a(12) = 40817, a(13) = 48055, a(14) = 53753, a(15) = 63455, a(16) = 71077, a(17) = 84035, a(18) = 99413, a(19) = 111475, a(20) = 131957, a(21) = 148015, a(22) = 175273. ●

► [A250856] 12311,63631,223933,626416,1499679,3204951,6279401,11485528,19866631,32808359,52106341,80039896,119451823,173834271,247420689,345283856,473439991,638958943,850080461,1116336544,1448679871,1859618311 ⋆ Number of (4 + 1) X (n + 1) 0..3 arrays with nondecreasing x(i,j) - x(i,j - 1) in the i direction and nondecreasing min(x(i,j),x(i - 1,j)) in the j direction. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

► [A178475] 12345,12354,12435,12453,12534,12543,13245,13254,13425,13452,13524,13542,14235,14253,14325,14352,14523,14532,15234,15243,15324,15342,15423,15432,21345 ⋆ Permutations of 12345: Numbers having each of the decimal digits 1,...,5 exactly once, and no other digit. ● a(n) + a(5! + 1 - n) = 66666. ● a(n) == 6 (mod 9). ●

► [A221016] 12428,25756,73468,261436,1085628,4928956,23182268,109461436,511850428,2360346556,10732660668,48186107836,213969872828,941234202556,4107353204668,17801256904636,76697127888828,328767094400956,1403004540430268,5963809411835836,25262501717354428 ⋆ The Wiener index of the fullerenyl anion G[n]C[60], defined pictorially in the Arezoomand reference (see Fig. 5). ● a(n) = 10172 + 2 ^ n * (5600 * n + 4880) + 4 ^ n * (1280 * n - 2624). ●

► [A272516] 12600,27720,138600,643500,4408404,12687675,60780720,238299880,1295666424,4208874756,18840460800,72351683460,361100656224,1228553894491,5370616442928,20605640103400,97659853077800,342942099783075,1479570975

628200,5678915129142255 ⋆ Number of set partitions of [n] into four blocks wit h distinct sizes. ● a(n) = n! * [x ^ n * y ^ 4] Product _{ n>=1 } (1 + y * x ^ n / n!). ●

▶ [A157509] 12799,51841,117127,208657,326431,470449,640711,837217,1059967,1 308961,1584199,1885681,2213407,2567377,2947591,3354049,3786751,4245697,473 0887,5242321,5779999,6343921,6934087,7550497,8193151 ⋆ a(n) = 13122 * n ^ 2 - 324 * n + 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Libra ndi _ , Jan 26 2012 ●

▶ [A165679] 13068,69264,241128,662640,1557660,3272688,6314664,11393808,194 71500,31813200,50046408,76223664,112890588,163158960,230784840,320251728,4 36858764,586813968,777332520,1016740080,1314581148,1681732464 ⋆ Seventh ri ght hand column of triangle A165674 ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) ● a(n) = 720 + 35 28 * n + 4872 * n ^ 2 + 2940 * n ^ 3 + 875 * n ^ 4 + 126 * n ^ 5 + 7 * n ^ 6 ●

▶ [A157433] 13121,15841,18817,22049,25537,29281,33281,37537,42049,46817,518 41,57121,62657,68449,74497,80801,87361,94177,101249,108577,116161,124001,13 2097,140449,149057 ⋆ 128n ^ 2 + 2336n + 10657. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A157506] 13447,53137,119071,211249,329671,474337,645247,842401,1065799,1 315441,1591327,1893457,2221831,2576449,2957311,3364417,3797767,4257361,474 3199,5255281,5793607,6358177,6948991,7566049,8209351 ⋆ a(n) = 13122 * n ^ 2 + 324 * n + 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Libr andi _ , Feb 04 2012 ●

▶ [A250818] 13449,42769,102393,207831,377857,634509,1003089,1512163,219356 1,3082377,4216969,5638959,7393233,9527941,12094497,15147579,18745129,22948 353,27821721,33432967,39853089,47156349,55420273,64725651,75156537 ⋆ Num ber of (6 + 1) X (n + 1) 0..2 arrays with nondecreasing x(i,j) - x(i,j - 1) in the i direction and nondecreasing min(x(i,j),x(i - 1,j)) in the j direction. ● a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. ●

▶ [A157669] 13716,33399,53082,72765,92448,112131,131814,151497,171180,1908 63,210546,230229,249912,269595,289278,308961,328644,348327,368010,387693,40 7376,427059,446742,466425,486108 ⋆ a(n) = 19683 * n - 5967. ● a(n) = 2 * a(n - 1) - a(n - 2). ●

▶ [A178486] 13717,13718,13727,13729,13738,13739,13817,13818,13837,13840,138 48,13850,13927,13929,13937,13940,13959,13960,14038,14039,14048,14050,14059,1 4060,14717 ⋆ (A178476(n) - 3) / 9. ● a(n) + a(6! + 1 - n) = 86419. ● a(n) == 0, 1, 2, 7, 8 or 9 (mod 10). ●

▶ [A157786] 14112,80539,201416,376743,606520,890747,1229424,1622551,20701 28,2572155,3128632,3739559,4404936,5124763,5899040,6727767,7610944,854857 1,9540648,10587175,11688152,12843579,14053456,15317783,16636560 ⋆ a(n) = 2 7225 * n ^ 2 - 15248 * n + 2135. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A023333] 14723,20123,54713,109433,594653,604883,676493,759953,847103,93 5843,1035743,1049603,1079033,1099823,1222253,1263323,1499153,1754033,18350 03,1893173,2017283,2071493,2099213,2199653,2895743 ⋆ Primes that remain pri me through 5 iterations of function f(x) = 2x + 7. ● a(n) == 23 (mod 30). - _ John Cerkan _ , Oct 10 2016 ●

▶ [A272128] 1,14763,628805,5501167,24943689,79549811,203823373,449807415,8 90712977,1624547899,2777745621,4508793983,7011864025,10520438787,15310942 109,21706367431,30079906593,40858578635,54526858597,71630306319,927791952 41,118652141203 ⋆ a(n) = 30240 * n ^ 5 - 25200 * n ^ 4 + 5040 * n ^ 3 + 7320 * n ^ 2 - 2638 * n + 1. ● a(n) = (2 * n + 1) * (15120 * n ^ 4 - 20160 * n ^ 3 + 12600 * n ^ 2 - 2640 * n + 1). ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). ● a(n) = 1 / 4 ^ n * Sum _{ k = 0..n } (2 * k + 1) ^ 10 * binomial(2 * n + 1, n - k). ● a(n - 1) = 2 / 4 ^ n * binomia l(2 * n,n) * (1 + 3 ^ 10 * (n - 1) / (n + 1) + 5 ^ 10 * (n - 1) * (n - 2) / ((n + 1) * (n + 2)) + 7 ^ 10 * (n - 1) * (n - 2) * (n - 3) / ((n + 1) * (n + 2) * (n + 3)) + ...). (End) ●

▶ [A177412] 14831,41069,55900,96969,152869,249838,402707,652545,1055252,17 07797,2763049,4470846,7233895,11704741,18938636,30643377,49582013,8022539 0,129807403,210032793,339840196,549872989,889713185,1439586174,2329299359 ⋆ Fibonacci sequence beginning 14831,41069. ● a(n) = a(n - 1) + a(n - 2). ● a(n) = (2 ^ (- 1 - n) * ((1 - sqrt(5)) ^ n * (- 67307 + 14831 * sqrt(5)) + (1 + sqr t(5)) ^ n * (67307 + 14831 * sqrt(5)))) / sqrt(5). - _ Colin Barker _ , May 03 2017 ●

▶ [A157436] 15137,18049,21217,24641,28321,32257,36449,40897,45601,50561,557 77,61249,66977,72961,79201,85697,92449,99457,106721,114241,122017,130049,13 8337,146881,155681 ⋆ a(n) = 128 * n ^ 2 + 2528 * n + 12481. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A261724] 15400,200200,1611610,10335325,57962905,297797500,1439774336,66 62393738,29844199346,130445781284,559533979466,2365296391535,98852909140 59,40944327590760,168389163468240,688631376550260,2803570746766140,11373 212443859760,46006062639998890 ⋆ a(n) is the number of ways of putting n lab eled balls into 4 indistinguishable boxes such that each box contains at least 3 b alls. ● a(n) = (1 / 12) * (- 3 ^ (n - 2) * (n ^ 2 + 5 * n + 18) + (1 / 64) * (2 ^ (2 * n + 5) + 3 * 2 ^ n * (n ^ 4 + 2 * n ^ 3 + 19 * n ^ 2 + 42 * n + 64) - 16 * (n ^ 6 - 9 * n ^ 5 + 43 * n ^ 4 - 91 * n ^ 3 + 112 * n ^ 2 - 32 * n + 8))). ●

▶ [A054840] 15427,64997,68261,68947,129023,129037,143567,154153,158071,192 461,221773,222493,244529,249797,285421,318737,337327,354421,357967,374287,3 85471,394787,402631,402691,419687 ⋆ Seventh term of weak prime septet: p(m - 5) - p(m - 6) < p(m - 4) - p(m - 5) < p(m - 3) - p(m - 4) < p(m - 2) - p(m - 3) < p(m - 1) - p(m - 2) < p(m) - p(m - 1). ● a(n) = nextprime(A054839), next prime = A151800; ●

▶ [A254029] 15621,31246,46871,62496,78121,93746,109371,124996,140621,15624 6,171871,187496,203121,218746,234371,249996,265621,281246,296871,312496,328 121,343746,359371,374996,390621 ⋆ Positive solutions of Monkey and Coconuts Problem for the classic case (5 sailors, 1 coconut to the monkey): a(n) = 15625 * n - 4 for n >= 1. ● a(n) = 2 * a(n - 1) - a(n - 2) = a(n - 1) + 15625, with a(0) = - 4 and a(- 1) = - (4 + 5 ^ 6). a(n) = 5 ^ 6 * n - 4. ●

▶ [A017130] 15625,4826809,85766121,594823321,2565726409,8303765625,221643 61129,51520374361,107918163081,208422380089,377149515625,646990183449,106 1520150601,1677100110841,2565164201769 ⋆ a(n) = (8 * n + 5) ^ 6. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7); a(0)=15625, a(1)=4826809, a(2)=85766121, a(3)=594823321, a(4) =2565726409, a(5)=8303765625, a(6)=22164361129. - _ Harvey P. Dale _ , Oc t 05 2011 ●

▶ [A017334] 15625,11390625,244140625,1838265625,8303765625,27680640625,75 418890625,177978515625,377149515625,735091890625,1340095640625,231306076 5625,3814697265625,6053445140625,9294114390625,13867245015625,2017918701 5625,28722900390625,40089475140625 ⋆ a(n) = (10 * n + 5) ^ 6. ● a(n) = 7 * a (n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7); a(0)=15625, a(1)=11390625, a(2)=244140625, a(3)=1838265625, a(4)=8303765625, a(5)=27680640625, a(6)=75418890625. - _ Harvey P. Dale _ , Aug 13 2013 ●

▶ [A017454] 15625,16777216,387420489,3010936384,13841287201,46656000000,1 28100283921,304006671424,646990183449,1265319018496,2313060765625,400150 4141376,6611856250609,10509215371264,16157819263041,24137569000000,35161 828327081,50096498540544,69980368892329 ⋆ a(n) = (11 * n + 5) ^ 6. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7); a(0)=15625, a(1)=16777216, a(2)=387420489, a(3)=301093638 4, a(4)=13841287201, a(5)=46656000000, a(6)=128100283921. - _ Harvey P. D ale _ , Dec 12 2013 ●

▶ [A187854] 0,0,16032,292776,1400168,3807828,7700944,13082348,19910456,281 60124,37824352,48902340,61394088,75299596,90618864,107351892,125498680,145 059228,166033536,188421604,212223432,237439020,264068368,292111476 ⋆ Num ber of 6 - step king - knight's tours (piece capable of both kinds of moves) on an n X n board summed over all starting positions. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>12. ●

▶ [A075959] 16383,2080895,31572879,107367603,178951509,852302358,75184718 68,26845989734,45099980558,80807926649,413395279134,1650354704301,2886522 559562,13195482418386,22129859675967,105554498880184 ⋆ Basis for code in A 075958. ● a(n) = b(2 ^ n), where b is A075958, the binary lexicode, d=14. ●

▶ [A016807] 0,16384,2097152,35831808,268435456,1280000000,4586471424,13492 928512,34359738368,78364164096,163840000000,319277809664,587068342272,102 8071702528,1727094849536,2799360000000 ⋆ a(n) = (4 * n) ^ 7. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n > 7. - _ Wesley Ivan Hurt _ , Oct 15 2017 ●

▶ [A017323] 16384,105413504,4586471424,52523350144,319277809664,133892520 9984,4398046511104,12151280273024,29509034655744,64847759419264,13159317 7923584,250226879128704,450766669594624,775771085481344 ⋆ a(n) = (10 * n + 4) ^ 7. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 5 6 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8); a(0)=16384, a(1)=105413504 , a(2)=4586471424, a(3)=52523350144, a(4)=319277809664, a(5)=133892520998 4, a(6)=4398046511104, a(7)=12151280273024. - _ Harvey P. Dale _ , Aug 26 2015 ●

▶ [A283027] 0,1,16456,10763361,1073758336,38147070625,705277897416,830823 4084801,70368748374016,463255057977921,2500000025005000,1148743251949008 1,46221064831264896,166354152499741921,544488334821309256,16421020895689 70625,46116860195011624 96 ⋆ Number of inequivalent 4 X 4 matrices with entr ies in { 1,2,3,...,n } up to rotations. ● a(n) = n ^ 4 * (n ^ 4 + 1) * (n ^ 8 - n ^ 4 + 2) / 4. ● a(n) = 17 * a(n - 1) - 136 * a(n - 2) + 680 * a(n - 3) - 2380 * a(n - 4) + 6188 * a(n - 5) - 12376 * a(n - 6) + 19448 * a(n - 7) - 24310 * a(n - 8) + 2431 0 * a(n - 9) - 19448 * a(n - 10) + 12376 * a(n - 11) - 6188 * a(n - 12) + 2380 * a(n - 13) - 680 * a(n - 14) + 136 * a(n - 15) - 17 * a(n - 16) + a(n - 17) for n > 16. ● a(n) = n ^ 4 * (n ^ 12 + n ^ 4 + 2) / 4. - _ Chai Wah Wu _ , Jan 24 2023 ●

▶ [A157796] 16471,86048,210075,388552,621479,908856,1250683,1646960,20976 87,2602864,3162491,3776568,4445095,5168072,5945499,6777376,7663703,860448 0,9599707,10649384,11753511,12912088,14125115,15392592,16714519 ⋆ a(n) = 2 7225 * n ^ 2 - 12098 * n + 1344. ● a(1)=16471, a(2)=86048, a(3)=210075; for n >3, a(n)=3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Harvey P. Dale _ , Jul 02 2 011 ●

▶ [A283028] 0,1,16576,10766601,1073790976,38147265625,705278736576,830823 6966001,70368756760576,463255079498001,2500000075000000,1148743262666220 1,46221065046245376,166354152907593001,544488335559184576,16421020908503 90625,46116860216486133 76 ⋆ Number of inequivalent 4 X 4 matrices with entr ies in { 1,2,3,...,n } up to vertical and horizontal reflections. ● a(n) = n ^ 8 * (n ^ 8 + 3) / 4. ● a(n) = 17 * a(n - 1) - 136 * a(n - 2) + 680 * a(n - 3) - 2380 * a(n - 4) + 6188 * a(n - 5) - 12376 * a(n - 6) + 19448 * a(n - 7) - 24310 * a(n - 8) + 24310 * a(n - 9) - 19448 * a(n - 10) + 12376 * a(n - 11) - 6188 * a(n - 12) + 2 380 * a(n - 13) - 680 * a(n - 14) + 136 * a(n - 15) - 17 * a(n - 16) + a(n - 17) for n > 16. ●

▶ [A170788] 0,1,16640,7184295,537001984,15259765625,235097531136,23738009 31775,17592253153280,102945759757569,500000500000000,2088625263681671,77 03513367183360,25592951809295065,77784058109429504 ⋆ a(n) = n ^ 9 * (n ^ 6 + 1) / 2. ● a(n) = 16 * a(n - 1) - 120 * a(n - 2) + 560 * a(n - 3) - 1820 * a(n - 4) + 4368 * a(n - 5) - 8008 * a(n - 6) + 11440 * a(n - 7) - 12870 * a(n - 8) + 1144 0 * a(n - 9) - 8008 * a(n - 10) + 4368 * a(n - 11) - 1820 * a(n - 12) + 560 * a(n - 13) - 120 * a(n - 14) + 16 * a(n - 15) - a(n - 16). - _ Wesley Ivan Hurt _ , Jul 29 2022 ●

▶ [A181098] 16718,26378,31173,39336,46406,46524,51782,55187,58374,58452,601 29,60850,63338,63762,67898,69587,71299,75652,78035,78269,80277,83674,84213,8 9052,95490 ⋆ Primefree centuries (i.e., no prime exists between 100 * n and 100 * n + 99). ● a(n) = n + 100n / log n - O(n / log ^ 2 n). - _ Charles R Greatho use IV _ , Sep 08 2017 ●

▶ [A215550] 0,16796,15737865,574221648,7766844470,60610884906,33167099565 6,1414591812920,5014392953273,15408077648040,42254306265171,105611585968 616,244384627765200,529868222188998,1086607184873210,2123449623259536,39 78448975695051,7182177974166580 ⋆ Number of standard Young tableaux of sh ape [10n,10]. ● a(n) = C(10 * n + 10,10) * (10 * n - 9) / (10 * n + 1) for n>0, a(0) = 0. ●

► [A016985] 0,16807,537824,4084101,17210368,52521875,130691232,282475249,550731776,992436543,1680700000,2706784157,4182119424,6240321451,9039207968,12762815625,17623416832,23863536599,31757969376,41615795893,53782400000,68641485507,86617093024 ⋆ a(n) = (7n) ^ 5. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6), n>5. (End) ●

► [A017477] 16807,1889568,20511149,102400000,345025251,916132832,2073071593,4182119424,7737809375,13382255776,21924480357,34359738368,51888844699,75937500000,108175616801,150536645632,205236901143 ⋆ a(n) = (11 * n + 7) ^ 5. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6), with a(0) = 16807, a(1) = 1889568, a(2) = 20511149, a(3) = 102400000, a(4) = 345025251, a(5) = 916132832. - _ Harvey P. Dale _ , Jan 16 2013 ●

► [A017609] 16807,2476099,28629151,147008443,503284375,1350125107,3077056399,6240321451,11592740743,20113571875,33038369407,51888844699,78502725751,115063617043,164130859375,228669389707 ⋆ (12n + 7) ^ 5. ● a(0)=16807, a(1)=2476099, a(2)=28629151, a(3)=147008443, a(4)=503284375, a(5)=1350125107, a(n)=6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). - _ Harvey P. Dale _ , Sep 03 2015 ●

► [A170797] 0,1,16896,7203978,537395200,15263671875,235122725376,2373921992596,17592722915328,102947309439525,500005000000000,2088637053420126,7703541745975296,25593015436291303,77784192406233600 ⋆ a(n) = n ^ 10 * (n ^ 5 + 1) / 2. ● a(n) = 16 * a(n - 1) - 120 * a(n - 2) + 560 * a(n - 3) - 1820 * a(n - 4) + 4368 * a(n - 5) - 8008 * a(n - 6) + 11440 * a(n - 7) - 12870 * a(n - 8) + 11440 * a(n - 9) - 8008 * a(n - 10) + 4368 * a(n - 11) - 1820 * a(n - 12) + 560 * a(n - 13) - 120 * a(n - 14) + 16 * a(n - 15) - a(n - 16) for n > 15. - _ Wesley Ivan Hurt _ , Aug 10 2016 ●

► [A235891] 17152,18712,21928,28744,43912,80392,177928,471304,1451272,4984072,18341128,70221064,274644232,1086143752,4319755528,17229430024,68818582792,275076103432,1099908005128,4398839250184,17593771506952 ⋆ Number of (n + 1) X (6 + 1) 0..3 arrays with the minimum plus the upper median equal to the lower median plus the maximum in every 2 X 2 subblock. ● a(n) = 4 * (3906 + 189 * 2 ^ n + 4 ^ n). ●

► [A167190] 17594,131307,432796,1013717,1965726,3380479,5349632,7964841,11317762,15500051,20603364,26719357,33939686,42356007,52059976,63143249,75697482,89814331,105585452,123102501,142457134,163741007,187045776 ⋆ a(n) = 1 + 85 * n + 2232 * n ^ 2 + 15276 * n ^ 3. ● a(n) = + 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4). - _ R. J. Mathar _ , Sep 02 2011 ●

► [A157738] 18480,37002,55524,74046,92568,111090,129612,148134,166656,185178,203700,222222,240744,259266,277788,296310,314832,333354,351876,370398,388920,407442,425964,444486,463008 ⋆ 18522n - 42. ● a(n) = 2 * a(n - 1) - a(n - 2). - _ Vincenzo Librandi _ , Jan 25 2012 ●

► [A157740] 18564,37086,55608,74130,92652,111174,129696,148218,166740,185262,203784,222306,240828,259350,277872,296394,314916,333438,351960,370482,389004,407526,426048,444570,463092 ⋆ a(n) = 18522 * n + 42. ● a(n) = 2 * a(n - 1) - a(n - 2). - _ Vincenzo Librandi _ , Feb 05 2012 ●

► [A243134] 1,1,18817,665857,7380481,46099201,203253121,708158977,2081028097,5374978561,12545596801,26986755841,54276558337,103182433537,186979578241,325142092801,545471324161,886731088897,1401864610177,2161873163521,3260441587201,4819400974081 ⋆ 128 * n ^ 8 - 256 * n ^ 6 + 160 * n ^ 4 - 32 * n ^ 2 + 1. ● a(0)=1, a(1)=1, a(2)=18817, a(3)=665857, a(4)=7380481, a(5)=46099201, a(6)=203253121, a(7)=708158977, a(8)=2081028097, a(n)=9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9). - _ Harvey P. Dale _ , Nov 01 2015 ●

► [A156721] 19603,143649,381939,734473,1201251,1782273,2477539,3287049,4210803,5248801,6401043,7667529,9048259,10543233,12152451,13875913,15713619,17665569,19731763,21912201,24206883,26615809,29138979 ⋆ a(n) = 57122 * n ^ 2 - 47320 * n + 9801. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A204665] 19609,25471,35677,43801,48679,59281,74959,103237,152311,167809,188197,206827,257731,315127,323149,326257,326779,348097,359929,363067,365851,377911,381859,405091,417037 ⋆ Primes p such that q - p = 52, where q is the next prime after p. ● a(n) >> n log ^ 2 n. - _ Charles R Greathouse IV _ , Sep 14 2015 ●

► [A016761] 1,19683,1953125,40353607,387420489,2357947691,10604499373,38443359375,118587876497,322687697779,794280046581,1801152661463,3814697265625,7625597484987,14507145975869,26439622160671,46411484401953,78815638671875,129961739795077,208728361158759 ⋆ a(n) = (2 * n + 1) ^ 9. ● a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10). - _ Harvey P. Dale _ , Jul 25 2013 ●

► [A016893] 19683,134217728,10604499373,198359290368,1801152661463,10578455953408,46411484401953,165216101262848,502592611936843,1352605460594688,3299763591802133,7427658739644928,15633814156853823 ⋆ (5n + 3) ^ 9. ● a(0)=19683, a(1)=134217728, a(2)=10604499373, a(3)=198359290368, a(4)=1801152661463, a(5)=10578455953408, a(6)=46411484401953, a(7)=165216101262848, a(8)=502592611936843, a(9)=1352605460594688, a(n)=10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10) [From Harvey P. Dale, Dec 15 2011] ●

► [A016953] 19683,387420489,38443359375,794280046581,7625597484987,46411484401953,208728361158759,756680642578125,2334165173090451,6351461955384057,15633814156853823,35452087835576229,75084686279296875,150094635296999121,285544154243029527,520411082988487293 ⋆ a(n) = (6 * n + 3) ^ 9. ● a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10). - _ Harvey P. Dale _ , Jan 19 2012 ●

► [A017109] 19683,2357947691,322687697779,7625597484987,78815638671875,502592611936843,2334165173090451,8662995818654939,27206534396294947,75084686279296875,186940255267540403,427929800129788411 ⋆ a(n) = (8 * n + 3) ^ 9. ● a(0)=19683, a(1)=2357947691, a(2)=322687697779, a(3)=7625597484987, a(4)=78815638671875, a(5)=502592611936843, a(6)=2334165173090451, a(7)=8662995818654939, a(8)=27206534396294947, a(9)=75084686279296875; for n>9, a(n)=10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10). - _ Harvey P. Dale _ , Apr 16 2015 ●

► [A017313] 19683,10604499373,1801152661463,46411484401953,502592611936843,3299763591802133,15633814156853823,58871586708267913,186940255267540403,520411082988487293,1304773183829244583,3004041937984268273 ⋆ a(n) = (10 * n + 3) ^ 9. ● a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10); a(0)=19683, a(1)=10604499373, a(2)=1801152661463, a(3)=46411484401953, a(4)=502592611936843, a(5)=3299763591802133, a(6)=15633814156853823, a(7)=58871586708267913, a(8)=186940255267540403, a(9)=520411082988487293. - _ Harvey P. Dale _ , Sep 14 2013 ●

► [A253493] 19701,20975,25715,37469,61955,113573,224747,470909,1034675,2376533,5703227,14285549,37236995,100500293,279108107,792567389,2288216915,6685708853,19699271387,58382132429,173715062435,518282546213 ⋆ Number of (n + 1) X (6 + 1) 0..2 arrays with every 2 X 2 subblock diagonal minus antidiagonal sum nondecreasing horizontally, vertically and ne - to - sw antidiagonally. ● a(n) = 14306 + 1365 * 2 ^ n + 49 * 3 ^ (n - 1) for n>3. ●

► [A194197] 1,19858,436140,2897747,11402579,33377536,80758518,171070425,328507157,585011614,981355696,1568220303,2407275335,3572259692,5150061274,7241796981,9963892713,13449163370,17847892852,23328914059,30080688891,38312388248,48254972030,60162269137 ⋆ Number of partitions of 60n into parts <= 6. ● a(n) = 1 + (167 * n + 2325 * n ^ 2 + 15400 * n ^ 3 + 47250 * n ^ 4 + 54000 * n ^ 5) / 6. ●

► [A011786] 1,20160,12130560,660602880,29016000000,244552089600,4635182361600,21646635171840,174060277297920,584962560000000,4139330225184000,8013482872012800,50858076935877120,93445276409856000,359803289600000000,7093169413108531200,28519037208767692800 ⋆ Number of 4 X 4 matrices whose determinant is 1 mod n. ● a(n) = (n ^ 16 / phi(n)) * Product _{ primes p dividing n } ((1 - 1 / p ^ 4) * (1 - 1 / p ^ 3) * (1 - 1 / p ^ 2) * (1 - 1 / p)). Multiplicative with a(p ^ e) = p ^ (15 * e - 9) * (p ^ 4 - 1) * (p ^ 3 - 1) * (p ^ 2 - 1). - _ Vladeta Jovovic _ , Nov 18 2001 ●

► [A075670] 1,20195,12292965,1561991824,77226633575,2014634387961,33098483802475,383318212734080,3377498614484589,23898971839102975,141290020118952881,719054471032657200,3223613105991831475,12964037775857022869 ⋆ Sum of next n 9th powers. ● a(1)=1; a(n)=sum(i ^ s, { i, n(n - 1) / 2 + 1, n(n - 1) / 2 + 1 + n }). ● a(n) = (5n ^ 19 + 105n ^ 17 + 666n ^ 15 + 1530n ^ 13 + 689n ^ 11 - 995n ^ 9 + 304n ^ 7 + 640n ^ 5 - 384n ^ 3) / 2560. ●

► [A059050] 0,0,0,0,0,20580,9106440,1058272828,56671435220,1819138009252,40526220292026,685404291322800,9333711208757096,106588763704012184,1051025434717631806,9144977489478933912,71381946761468630363 ⋆ Number of 7 - element ordered T _ 0 - antichains on an unlabeled n - set; T _ 1 - hypergraphs on 7 labeled nodes with n (not necessarily empty) distinct hyperedges (n=0,1,..., 128). ● a(n)=C(128, n) - 42 * C(96, n) + 210 * C(80, n) + 140 * C(72, n) + 210 * C(68, n) - 84 * C(66, n) + 14 * C(65, n) - 819 * C(64, n) - 2520 * C(60, n) + 2730 * C(56, n) + 840 * C(54, n) + 840 * C(52, n) - 420 * C(51, n) + 2940 * C(50, n) + 630 * C(48, n) - 5040 * C(46, n) + 840 * C(45, n) - 1260 * C(44, n) + 1680 * C(43, n) - 9660 * C(42, n) + 1260 * C(41, n) + 3360 * C(40, n) - 7560 * C(39, n) + 11130 * C(38, n) + 5880 * C(37, n) + 9240 * C(36, n) + 2982 * C(35, n) - 6300 * C(34, n) - 8652 * C(33, n) - 9905 * C(32, n) - 8400 * C(31, n) - 8540 * C(30, n) + 13860 * C(29, n) + 14490 * C(28, n) - 5040 * C(27, n) + 10500 * C(26, n) + 10080 * C(25, n) - 8120 * C(24, n) - 15050 * C(23, n) - 5040 * C(22, n) - 11340 * C(21, n) + 20580 * C(20, n) + 15750 * C(19, n) - 1540 * C(18, n) - 5810 * C(17, n) - 16485 * C(16, n) - 21420 * C(15, n) + 26250 * C(14, n) + 21000 * C(13, n) - 29820 * C(12, n) + 3500 * C(11, n) + 17640 * C(10, n) + 2940 * C(9, n) - 16016 * C(8, n) + 4410 * C(7, n) - 9744 * C(6, n) + 9744 * C(5, n) + 1764 * C(4, n) - 3528 * C(3, n) + 720 * C(2, n). ●

► [A056073] 20580,9209340,1113220168,64271300556,2302652531436,59028678965286,1179552813324360,19421453010531722,273692092058502488,3392151018511583748,37729265705269684476 ⋆ Number of 7 - element ordered antichains on an unlabeled n - element set; T _ 1 - hypergraphs with 7 labeled nodes and n hyperedges. ● a(n)=C(n + 127, 127) - 42 * C(n + 95, 95) + 210 * C(n + 79, 79) + 140 * C(n + 71, 71) + 210 * C(n + 67, 67) - 84 * C(n + 65, 65) + 14 * C(n + 64, 64) - 819 * C(n + 63, 63) - 2520 * C(n + 59, 59) + 2730 * C(n + 55, 55) + 840 * C(n + 53, 53) + 840 * C(n + 51, 51) - 420 * C(n + 50, 50) + 2940 * C(n + 49, 49) + 630 * C(n + 47, 47) - 5040 * C(n + 45, 45) + 840 * C(n + 44, 44) - 1260 * C(n + 43, 43) + ●

► [A183631] 20709,22767,26901,35223,52029,86127,155781,299463,599949,1240287,2639061,5790903,13157469,31079247,76488741,196005543,521132589,1429667007,4021576821,11529919383,33520173309,98421387567,290985935301 ⋆ Number of (n + 1) X 9 0..2 arrays with every 2 X 2 subblock summing to 4. ● a(n) = 3 * (6220 + 85 * 2 ^ (2 + n) + 3 ^ n). ●

► [A183639] 21016,31060,53512,105604,231736,551380,1398952,3743524,10479256,30483700,91664392,283832644,902755576,2945024020,9845481832,33704772964,118040932696,422335788340,1540872323272,5720102724484,21554302962616 ⋆ Number of (n + 1) X 7 0..3 arrays with every 2 X 2 subblock summing to 6. ● a(n) = 12138 + 483 * 2 ^ (3 + n) + 14 * 3 ^ (3 + n) + 4 ^ (1 + n). ●

► [A221002] 21558,141686,825078,4438006,22578678,110311926,522899958,2422104566,11019370998,49421451766,219106574838,962208334326,4192177750518,18142557897206,78066631049718,334254292599286,1424972878709238,6051724204704246,25614248465924598,108086444576211446,454863674100679158 ⋆ The Wiener index of the nanostar dendrimer G[n], defined pictorially in the Karbasioun - Ashrafi reference. ● a(n) = 502 + 2 ^ (n + 6) * 5 * (14 * n + 53) + 4 ^ (n + 6) * (5n + 1). ●

► [A157622] 22150,53400,84650,115900,147150,178400,209650,240900,272150,303400,334650,365900,397150,428400,459650,490900,522150,553400,584650,615900,647150,678400,709650,740900,772150 ⋆ 31250n - 9100. ● a(n) = 2 * a(n - 1) - a(n - 2). ●

► [A279443] 0,0,0,0,22650,4987800,240023070,5219088000,68483325960,630486309600,4456523194200,25647802519680,125166919041450,533442526857240,2029603476250350,7011735609715200,22291042191643680,65914292362262400,182880685655641440,479548000781222400 ⋆ Number of ways to place 9 points on an n X n board so that no more than 2 points are on a vertical or horizontal straight line. ● a(n) = (n ^ 18 - 204 * n ^ 16 + 1260 * n ^ 15 + 6846 * n ^ 14 - 104076 * n ^ 13 + 394504 * n ^ 12 + 128520 * n ^ 11 - 6237075 * n ^ 10 + 24018372 * n ^ 9 - 43820196 * n ^ 8 + 30400020 * n ^ 7 + 34251148 * n ^ 6 - 99199296 * n ^ 5 + 98504496 * n ^ 4 - 47779200 * n ^ 3 + 9434880 * n ^ 2) / 362880; factorized: a(n) = n ^ 2 * (n - 1) ^ 2 * (n - 2) ^ 2 * (n - 3) ^ 2 * (n - 4) ^ 2 * (n ^ 8 + 20 * n ^ 7 + 26 * n ^ 6 - 820 * n ^ 5 - 247 * n ^ 4 + 9704 * n ^ 3 - 9104 * n ^ 2 - 14700 * n + 16380) / 9!. ● a(n) = SUM(1<=j<=19, C(19,j) * (- 1) ^ (j - 1) * a(n - j)). ●

► [A227483] 23529,1111869,16608702,159373080,1213425084,8031303684,48448565652,273777454260,1474280952564,7651723403124,38578878478452,190021655079540,918191706377844,4366324687656564,20484111138612852,94990079602722420,436088524069815924,1984521827742566004,8961378366065460852,40189159189476918900,179133147653840946804 ⋆ The hyper - Wiener index of the nanostar dendrimer defined pictorially as NS[n] in the M. Mirzargar reference. ● a(n) = 116340 - 2 ^ n * 3768423 / 2 + 4 ^ n * (455625 * n ^ 2 - 2112075 * n / 2 + 3582801 / 2). ●

► [A118061] 1,23661,66921,129781,212241,314301,435961,577221,738081,918541,1118601,1338261,1577521,1836381,2114841,2412901,2730561,3067821,3424681,3801141,4197201,4612861,5048121,5502981,5977441 ⋆ 9800 * n ^ 2 - 5740 * n - 4059 ● a(n) + (a(n) + 1) + ... + (a(n) + 9800n + 6929)=(a(n) + 9800n + 6930) + ... + (a(n) + 19600n + 4059); a(n) + 19600n + 4059=a(n + 1) - 1; a(n + 1) - 1=a(n) + 19600n + 4059. ● a(n) + (a(n) + 1) + ... + (a(n) + 576n + 203)=35(140n - 41)(140n + 29)(140n + 99); e.g., 66921 + 66922 + ... + 103250=3091156215=35 * 379 * 449 * 519. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). G.f.: x * (1 + 23658 * x - 4059 * x ^ 2) / (1 - x) ^ 3. - _ Colin Barker _ , Jul 01 2012 ●

► [A194721] 0,1,24310,2699837,52955950,464221105,2561439806,10466643805,34648845862,98156060225,246643289830,563506356061,1191627482750,2363434581937,4441172224750,7969478316605,13742556531766,22888430598145,36972962559062,58126513174525,89196318660430 ⋆ Number of n - ary words beginning with the first character of the alphabet, that can be built by inserting nine doublets into the initially empty word. ● a(0) = 0, a(n) = 1 + (16 + (119 + (544 + (1700 + (3808 + (6188 + (7072 + 4862 * (n - 1)) * (n - 1)) * (n - 1)) * (n - 1)) * (n - 1)) * (n - 1)) * (n - 1)) * (n - 1) for n>0. ●

► [A156843] 24335,139128,813603,2047760,3841599,6195120,9108323,12581208,16613775,21206024,26357955,32069568,38340863,45171840,52562499,60512840,69022863,78092568,87721955,97911024,108659775,119968208,131836323 ⋆ 279841n ^ 2 - 165048n + 24335. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A156844] 24335,469224,1473795,3038048,5161983,7845600,11088899,14891880,19254543,24176888,29658915,35700624,42302015,49463088,57183843,65464280,74304399,83704200,93663683,104182848,115261695,126900224 ⋆ 279841n ^ 2 - 394634n + 139128. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A224423] 24485,120741,613541,3078309,15070373,71955621,336069797,1540900005,6958417061,31031755941,136961328293,599275078821,2603021763749,11236212212901,48242297406629,206161018094757,877415731561637,3720758807233701,15727438348682405 ⋆ The Wiener index of the Micelle - like chiral dendrimer G[n] defined pictorially in the Hassan Yousefi - Azari et al. reference. ● a(n) = 1189 + 15616 * 2 ^ n + 7680 * 4 ^ n + 12288 * n * 4 ^ n + 4224 * n * 2 ^ n (agrees with Theorem 2 of the Yousefi - Azari et al. reference). ●

► [A023350] 25589,220469,225629,286619,783269,1215629,1407389,1542029,1642919,2329469,2776979,3104159,4082759,4229129,5405999,5905619,6548849,6862859,7681409,7904669,8623799,8971049,9599309,9658469,9725039 ⋆ Primes that remain prime through 5 iterations of function f(x) = 8x + 7. ● a(n) == 29 (mod 30). - _ John Cerkan _ , Nov 08 2016 ●

► [A224466] 27180,47750,149614,608478,2894430,15765790,91789854,535578398,3038252830,16628755230,87950187294,451486444318,2259819129630,11073313975070,53298037467934,252671079230238,1182401611180830,5471588447169310,25074506044287774,113930988546960158,513775960055622430 ⋆ The hyper - Wiener index of the nanostar dendrimer defined pictorially as NS[n] in the Z. S. Iranі reference. ● a(n) = 11038 + 2 ^ n * (7000 * n ^ 2 - 8060 * n - 3132) + 4 ^ n * (1600 * n ^ 2 - 9600 * n + 19274). ●

► [A127411] 27216,453789,3866624,22674816,103500000,393286542,1297410048,3822832728,10267329072,25518796875,59378761728,130535973152,273106821312,547049504268,1054272000000,1962916959024,3543150344976,6218839661001,10640820731904,17789062500000 ⋆ Negative value of coefficient of x ^ (n - 6) in the characteristic polynomial of a certain n X n integer circulant matrix. ● a(n + 5) = n * (n + 1) * (n + 2) * (n + 3) * (n + 4) * (n + 5) ^ 6 * (5 * n + 44) / (2 * 7!) for n>=1. ● a(n) = (5 * n ^ 12 - 56 * n ^ 11 + 140 * n ^ 10 + 490 * n ^ 9 - 2905 * n ^ 8 + 4606 * n ^ 7 - 2280 * n ^ 6) / (2 * 7!) for n>=6. ●

► [A157814] 27223,108896,245019,435592,680615,980088,1334011,1742384,2205207,2722480,3294203,3920376,4600999,5336072,6125595,6969568,7867991,8820864,9828187,10889960,12006183,13176856,14401979,15681552,17015575 ⋆ a(n) = 27225 * n ^ 2 - 2 * n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A157820] 27227,108904,245031,435608,680635,980112,1334039,1742416,2205243,2722520,3294247,3920424,4601051,5336128,6125655,6969632,7868059,8820936,9828263,10890040,12006267,13176944,14402071,15681648,17015675 ⋆ 27225n ^ 2 + 2n. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A159056] 0,0,0,0,28560,18277200,1925512560,71729634480,1389478980960,171197179473600,1512179758152000,10346563434715200,57830871478485600,274318544059903200,1135989103238589600,4196549920448340000,14064489989993788800,43339497665040662400,124128198950608540800 ⋆ Number of n - colorings of the Clebsch Graph. ● a(n) = n ^ 16 - 40 * n ^ 15 + ... (see Maple program). ●

► [A157610] 28799,116161,262087,466577,729631,1051249,1431431,1870177,2367487,2923361,3537799,4210801,4942367,5732497,6581191,7488449,8454271,9478657,10561607,11703121,12903199,14161841,15479047,16854817,18289151 ⋆ 29282n ^ 2 - 484n + 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A250762] 29012,67356,121593,191723,277746,379662,497471,631173,780768,946256,1127637,1324911,1538078,1767138,2012091,2272937,2549676,2842308,3150833,3475251,3815562,4171766,4543863,4931853,5335736 ⋆ Number of (7 + 1) X (n + 1) 0..2 arrays with nondecreasing x(i,j) - x(i,j - 1) in the i direction and nondecreasing x(i,j) + x(i - 1,j) in the j direction. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) for n>3. ●

► [A152939] 29153,109649,486385,2024613,8634049,36481021,154687133,655020765,2775107981,11754906113,49795616797,210935942361,893541701545,3785099002297,16033943772281,67920864283629,287717416776137,1218790505711045,5162879481166789,21870308363154597 ⋆ Number of sets (in the Hausdorff metric geometry) at each location between two sets defining a polygonal configuration consisting of four 4 - gonal polygonal components chained with string components of length l as l varies. ● a(n) = 3 * a(n - 1) + 6 * a(n - 2) - 3 * a(n - 3) - a(n - 4) for n>4. ●

► [A083740] 29341,46657,75361,88831,115921,146611,162401,252601,294409,314821,334153,340561,399001,410041,488881,512461,530881,552721,658801,721801,852841,954271,1024651,1152271,1193221 ⋆ Pseudoprimes to bases 3,5 and 7. ● a(n) = n - th positive integer k(>1) such that 3 ^ (k - 1) = 1 (mod k), 5 ^ (k - 1) = 1 (mod k) and 7 ^ (k - 1) = 1 (mod k). ●

► [A083739] 29341,46657,75361,115921,162401,252601,294409,314821,334153,340561,399001,410041,488881,512461,530881,552721,658801,721801,852841,1024651,1152271,1193221,1461241,1569457,1615681 ⋆ Pseudoprimes to bases 2, 3, 5 and 7. ● a(n) = n - th positive integer k(>1) such that 2 ^ (k - 1) = 1 (mod k), 3 ^ (k - 1) = 1 (mod k), 5 ^ (k - 1) = 1 (mod k) and 7 ^ (k - 1) = 1 (mod k). ●

► [A157614] 29767,118097,264991,470449,734471,1057057,1438207,1877921,2376199,2933041,3548447,4222417,4954951,5746049,6595711,7503937,8470727,9496081,10579999,11722481,12923527,14183137,15501311,16878049,18313351 ⋆ a(n) = 29282 * n ^ 2 + 484 * n + 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). (End) ●

► [A157111] 30996,168838,306680,444522,582364,720206,858048,995890,1133732,1271574,1409416,1547258,1685100,1822942,1960784,2098626,2236468,2374310,2512152,2649994,2787836,2925678,3063520,3201362,3339204 ⋆ a(n) = 137842 * n - 106846. ● a(n) = 2 * a(n - 1) - a(n - 2). - _ Vincenzo Librandi _ , Jan 25 2012 ●

► [A134124] 31907,45893,60539,69263,95651,112691,162293,167543,172883,181553,197837,206699,212507,220613,225167,246839,272813,274529,291569,293021,298943,334793,338609,345329,349241 ⋆ Primes p such that q - p = 50, where q is the next prime after p. ● a(n) >> n log ^ 2 n. - _ Charles R Greathouse IV _ , Sep 14 2015 ●

► [A359343] 32043,100287,317096,1000287,3162426,10000287,31622792,100000287,316227814,1000000287,3162277718,10000000287,31622776661,100000000287,316227766026,1000000000287,3162277660177,10000000000287,31622776601685,100000000000287,316227766016843 ⋆ Square roots of least pandigital squares with n digits. ● a(n) = 10 ^ ((n - 1) / 2) + O(1). - _ Charles R Greathouse IV _ , Dec 30 2022 ●

► [A250897] 32095,88421,244200,680504,1893433,5232461,14283986,38498188,102731213,272597111,722672320,1922589386,5152218779,13948044421,38216305022,106061750888,298128374761,848068491251,2438292434012,7074745440934 ⋆ Number of (n + 1) X (7 + 1) 0..2 arrays with nondecreasing x(i,j) - x(i,j - 1) in the i direction and nondecreasing absolute value of x(i,j) - x(i - 1,j) in the j direction. ● a(n) = - 17515 / 4 + 4833 * 2 ^ (- 1 + n) + (198025 * 3 ^ (- 3 + n)) / 4 + (23737 / 2 - 28323 * 2 ^ (- 5 + n)) * n + (5071 + 53217 * 2 ^ (- 5 + n)) * n ^ 2 for n>2. ●

► [A101744] 32640,73920,130816,165600,204480,265356,294528,401856,592416,839160,947376,990528,1279200,1445850,1492128,1606528,1842240,1844160,2031120,2049300,2821500,2956096,3571128,3963520,4148640 ⋆ Triangular numbers which are 10 - almost primes. ● a(n) is in the intersection of { A000217 } and { A046314 } . Integers of the form k * (k + 1) / 2 which have exactly 10 prime factors. ●

► [A152932] 32733,80361,215658,559305,1469565,3842082,10063989,26342577,68971050,180563265,472726053,1237607586,3240104013,8482697145,22207994730,58141279737,152215851789,398506268322,1043302960485,2731402605825,7150904864298,18721311979761 ⋆ Number of sets (in the Hausdorff metric geometry) at each location between two sets defining a polygonal configuration consisting of three 6 - gonal polygonal components chained with string components of length l as l varies. ● a(n) = 2 * a(n - 1) + 2 * a(n - 2) - a(n - 3) for n>3. ●

► [A075962] 32767,8355967,126322567,429496729,715827882,1261745355,3221275279 8,109523344903,182561385259,322149788877,1655752033019,2785432610621,13200625665306,22026883141028,105563899667886,180876131965012 ⋆ Basis for code in A075961. ● a(n) = b(2 ^ n), where b is A075961, the binary lexicode, d=15. ●

► [A195235] 32768,127785,237818,348849,459880,570911,681942,792973,904004,1015035,1126066,1237097,1348128,1459159,1570190,1681221,1792252,1903283,2014314,2125345,2236376,2347407,2458438,2569469,2680500 ⋆ Number of lower triangles of a 5 X 5 0..n array with each element differing from all of its diagonal, vertical, antidiagonal and horizontal neighbors by one or less. ● a(n) = 2 * a(n - 1) - a(n - 2) for n>4. ●

► [A017069] 0,32768,1048576,7962624,33554432,102400000,254803968,550731776,1073741824,1934917632,3276800000,5277319168,8153726976,12166529024,17623416832,24883200000,34359738368,46525874176 ⋆ a(n) = (8 * n) ^ 5. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6); a(0)=0, a(1)=32768, a(2)=1048576, a(3)=7962624, a(4)=33554432, a(5)=102400000. - _ Harvey P. Dale _ , Sep 10 2014 ●

► [A337953] 1,33328,32524281,4312863360,191243490675,4239501280272,58236754527707,563536359633920,4172726943804861,25016666666700400,126431377927701253,554909560378102656,2163457078062360639,7625429483925609552,24638829565429941975 ⋆ Number of achiral colorings of the 30 edges of a regular dodecahedron or icosahedron using n or fewer colors. ● a(n) = n ^ 3 * (15 * n ^ 14

+ n ^ 12 + 20 * n ^ 2 + 24) / 60. • a(n) = 1 * C(n,1) + 33326 * C(n,2) + 32424300 * C(n,3) + 4182966200 * C(n,4) + 170004083410 * C(n,5) + 3156083300916 * C(n,6) + 32426546302332 * C(n,7) + 205938803790720 * C(n,8) + 864860752435680 * C(n,9) + 2503126577952000 * C(n,10) + 5110943178781440 * C(n,11) + 7428048096268800 * C(n,12) + 7644417350169600 * C(n,13) + 5446616304729600 * C(n,14) + 2556525184012800 * C(n,15) + 711374856192000 * C(n,16) + 88921857024000 * C(n,17), where the coefficient of C(n,k) is the number of achiral colorings using exactly k colors. •

► [A243467] 0,0,0,0,33792,2307376,38049764,316687056,1756247962,7430841848,25895095920,77947547416,209206118486,511919916960,1160763672124,2468985096704,4973232330258,9557709330856,17631022607048,31372223986440,54066152166478,90552261553040 ⋆ Number of ways 5 domicules can be placed on an n X n square. • a(n) = (5464830 - 2069823 * n - 2896628 * n ^ 2 + 1279635 * n ^ 3 + 493090 * n ^ 4 - 285192 * n ^ 5 - 22560 * n ^ 6 + 27360 * n ^ 7 - 1600 * n ^ 8 - 960 * n ^ 9 + 128 * n ^ 10) / 15 for n>=5, a(4) = 33792, a(n) = 0 for n<=3. •

► [A227699] 34081,133753,606505,2879881,13759561,65105353,303499465,1393200841,6306020041,28195082953,124751348425,547085017801,2381092856521,102963375725 53,44275297821385,189465493250761,807328896525001,3427204095550153 ⋆ The Wiener index of the nanostar dendrimer defined pictorially in the Ashrafi et al. reference. • a(n) = 8905 + 2 ^ (n) * (10560 * n + 21528) + 4 ^ (n) * (11520 * n + 3648). Replacing n with n + 1, we obtain the expression given in Theorem 1 of the Ashrafi et al. reference. •

► [A227487] 34255,398665,3470157,25438869,166187685,999925445,5660148997,30581012869,159315487365,806202248325,3984535138437,19312921409669,92094055975045,433117479708805,2012917990713477,9259384642267269,42212038923118725,190920673305290885,857470623117994117,3827025150533953669 ⋆ The hyper - Wiener index of the nanostar dendrimer defined pictorially as G[n] in the M. H. Khalifeh et al. reference. • a(n) = - 6011 + 2 ^ n * (- 111166 - 5960 * n + 7000 * n ^ 2) + 4 ^ n * (151432 - 35200 * n + 40000 * n ^ 2). •

► [A023336] 34613,165443,321053,363403,474143,496333,528673,631853,834503,957563,1199623,1274803,1817093,1918733,2063423,2611663,2889703,3224233,3652703,3697433,3824413,3852973,4655873,4708793,5089943 ⋆ Primes that remain prime through 5 iterations of function f(x) = 3x + 4. • a(n) == 33 (mod 70). - _ John Cerkan _ , Oct 10 2016 •

► [A143369] 36604,304804,2137492,13143988,73561204,385003252,1919944180,9239885812,43293991924,198728338420,897605155828,4002258869236,17658743397364,77238940933108,335382756072436,1447262942927860,6212030751579124,26540148350000116,112928927250390004 ⋆ The Szeged index of fourth type dendrimer nanostar which has grown n stages. • a(n) = 24624 * n * 4 ^ n + 7156 + 25992 * n * 2 ^ n + 53532 * 2 ^ n - 57024 * 4 ^ n. •

► [A250882] 37130,131068,317878,629528,1097986,1755220,2633198,3763888,5179258,6911276,8991910,11453128,14326898,17645188,21439966,25743200,30586858,36002908,42023318,48680056,56005090,64030388,72787918,82309648,92627546 ⋆ Number of (5 + 1) X (n + 1) 0..3 arrays with nondecreasing x(i,j) - x(i,j - 1) in the i direction and nondecreasing x(i,j) + x(i - 1,j) in the j direction. • a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>4. •

► [A090394] 0,40320,95616,170856,272584,409360,592296,835702,1157857,1581921,2137005,2859417,3794103,4996303,6533443,8487285,10956358,14058694,17934894,22751550,28705050,36025794,44982850,55889080,69106767 ⋆ Ninth diagonal (m=8) of triangle A084938; a(n) = A084938(n + 8,n) = (n ^ 8 + 84 * n ^ 7 + 3346 * n ^ 6 + 84840 * n ^ 5 + 1550689 * n ^ 4 + 21632436 * n ^ 3 + 224782284 * n ^ 2 + 1377648720 * n) / 40320. • a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n > 8. •

► [A239035] 0,40320,362880,1814400,6652800,19958400,51891840,121080960,259459200,518918400,980179200,1764322560,3047466240,5079110400,8204716800,12893126400,19769460480,29654190720,43609104000,62990928000,89513424000,125318793600,173059286400 ⋆ Product of 8 consecutive integers. a(n) = RisingFactorial(n, 8). • a(n) = n * (n + 1) * (n + 2) * (n + 3) * (n + 4) * (n + 5) * (n + 6) * (n + 7). • a(n) = (n ^ 4 + 14 * n ^ 3 + 63 * n ^ 2 + 98 * n + 28) ^ 2 - (28 + 8 * n) ^ 2. (see Thill link). •

► [A029576] 0,0,0,0,0,0,0,0,0,40320,403200,4435200,53222400,691891200,9686476800,145297152000,2324754432000,39520825344000,671854030848000,12765226586112000,255304531722240000,5361395166167040000,117950693655674880000,2712865954080522240000 ⋆ Number of permutations of an n - set containing a 9 - cycle. • a(n) = n! * (1 - Sum _{ k=0..floor(n / 9) } (- 1) ^ k / (k! * 9 ^ k); a(n) / n! is asymptotic to 1 - e ^ (- 1 / 9). •

► [A179063] 0,0,0,0,0,0,0,40320,3265920,81648000,1097712000,9879408000,66784798080,363606122880,1669619952000,6678479808000,23828156352000,77203226580480,230333593351680,639815537088000,1669577821632000,4122835028928000 ⋆ Number of non - attacking placements of 8 rooks on an n X n board. • a(n) = 8! * binomial(n,8) ^ 2. •

► [A250819] 41112,131455,315561,641571,1167796,1962717,3104985,4683421,6797016,9554931,13076497,17491215,22938756,29568961,37541841,47027577,58206520,71269191,86416281,103858651,123817332,146523525,172218601,201154101 ⋆ Number of (7 + 1) X (n + 1) 0..2 arrays with nondecreasing x(i,j) - x(i,j - 1) in the i direction and nondecreasing min(x(i,j),x(i - 1,j)) in the j direction. • a(n) = 5 * a(n - 1) - 10 * a(n - 2) + 10 * a(n - 3) - 5 * a(n - 4) + a(n - 5) for n>5. •

► [A253681] 41616,8643600,265559616,3359361600,25300083600,135426944016,568998662400,1995144950016,6080268272400,16566690848400,41192058954816,94910460840000,205045101804816,419208426176400,817072496870400,1527363954902016,2751797699456400,4798055269856016 ⋆ Integer squares c ^ 2 that are equal to the sum of an odd number M of consecutive cubed integers b ^ 3 + (b + 1) ^ 3 + ... + (b + M - 1) ^ 3 = c ^ 2 starting at b(n) (A253679). • a(n) = (2n(n + 1) * (2n + 1) * (8n * (n + 1) + 1)) ^ 2. •

► [A271749] 42294,168509,724731,3321545,16075611,81602489,432156891,2377526345,13540170651,79588371929,481614364251,2993757491945,19079196017691,124446430190969,829494189346011,5642172217982345,39113680447384731,276028057609763609,1980851149371918171 ⋆ Number of set partitions of [n] such that 10 is the largest element of the last block. • a(n) = 45 * a(n - 1) - 870 * a(n - 2) + 9450 * a(n - 3) - 63273 * a(n - 4) + 269325 * a(n - 5) - 723680 * a(n - 6) + 1172700 * a(n - 7) - 1026576 * a(n - 8) + 362880 * a(n - 9) for n>19. - _ Colin Barker _ , Jan 05 2018 •

► [A134450] 43175,1382000,10495575,44230400,134984375,335890800,726002375,1415475200,2550752775,4319750000,6957037175,10749024000,16039143575,23233036400,32803734375,45296844800,61335734375,81626713200,106964218775,138236000000,176428301175 ⋆ a(n) = square root of the square part of discriminant of Brioschi quintic polynomial x ^ 5 - 10 * n * x ^ 3 + 45 * n ^ 2 * x - n ^ 2. • a(n) = 25 * n ^ 4 * (1728 * n - 1). - _ Klaus Brockhaus _ , Oct 28 2007 •

► [A165479] 43690,131070,174761,262141,305832,393212,436903,524283,567974,655354,699045,786425,830116,917496,961187,1048567,1092258,1179638,1223329,1310709,1354400,1441780,1485471,1572851,1616542 ⋆ a(n) = Least i in range [A165478(n),A165478(n + 1)] for which abs(A165477(i)) gets the maximum value i n that range. • a(n) = floor(n / 2) * 131071 + (1 + 2 * (n modulo 2)) * 43690 •

► [A157653] 45601,246401,607201,1128001,1808801,2649601,3650401,4811201,6132001,7612801,9253601,11054401,13015201,15136001,17416801,19857601,22458401,25219201,28140001,31220801,34461601,37862401,41423201,45144001 ⋆ a(n) = 80000 * n ^ 2 - 39200 * n + 4801. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). •

► [A017058] 46656,4826809,64000000,387420489,1544804416,4750104241,12230590464,27680640625,56800235584,107918163081,192699928576,326940373369,531441000000,832972004929,1265319018496,1870414552161 ⋆ a(n) = (7 * n + 6) ^ 6. • a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7); a(0)=46656, a(1)=4826809, a(2)=64000000, a(3)=387420489, a(4)=1544804416, a(5)=4750104241, a(6)=12230590464. - _ Harvey P. Dale _ , Sep 04 2015 •

► [A017466] 46656,24137569,481890304,3518743761,15625000000,51520374361,139314069504,326940373369,689869781056,1340095640625,2436396322816,4195872914689,6906762437184,10942526586601,16777216000000,25002110044521,36343632130624,51682540549249,72074394832896 ⋆ a(n) = (11 * n + 6) ^ 6. • a(0) = 46656, a(1) = 24137569, a(2) = 481890304, a(3) = 3518743761, a(4) = 15625000000, a(5) = 51520374361, a(6) = 139314069504, a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). - _ Harvey P. Dale _ , Jan 19 2013 •

► [A227710] 47160,501516,3609684,21645828,117137700,594466020,2889375588,13620124260,62765849700,284277930084,1270122831972,5612855201892,24581542031460,106848038187108,461482510708836,1982297444839524 ⋆ The Wiener index of the nanostar dendrimer defined pictorially in Fig. 2 of the Madanshekaf reference. • a(n) = 4 ^ n * (31752 * n - 46494) + 2 ^ n * (3276 * n + 51786) - 3996. •

► [A221017] 47750,136534,559318,2753270,15400950,90898294,533474678,3033407350,16617791350,87925716854,451432421238,2259700922230,11073057240950,53297483364214,252669889754998,1182399069697910,5471583039141750,25074494578112374,113930964314371958 ⋆ The hyper - Wiener index of the fullerenyl anion G[n]C[60], defined pictorially in the Arezoomand reference (see Fig. 5). • a(n) = 14198 + 2 ^ n * (- 11544 + 6920 * n + 14000 * n ^ 2) + 4 ^ n * (6400 * n ^ 2 - 25600 * n + 45096). •

► [A227701] 48279,96987,255171,834771,3170163,13124019,56647731,248434995,1092754227,4792876851,20915808051,90764867379,391736497971,1682238527283,7191380186931,30617911318323,129886929049395,549220992440115,2315602753509171,9737340299794227 ⋆ The Wiener index of the nanostar dendrimer defined pictorially in Fig. 1 of the Iranmanesh et al. reference. • a(n) = 22323 + 2 ^ n * (9018 + 2664 * n) + 4 ^ n * (216 + 432 * n). • a(n) = 13 * a(n - 1) - 64 * a(n - 2) + 148 * a(n - 3) - 160 * a(n - 4) + 64 * a(n - 5) for n>5. - _ Colin Barker _ , May 30 2018 •

► [A067869] 48736,148736,248736,348736,448736,548736,648736,748736,848736,948736,1048736,1148736,1248736,1348736,1448736,1548736,1648736,1748736,1848736,1948736,2048736,2148736,2248736,2348736,2448736 ⋆ Numbers n such that n and 2 ^ n end with the same 5 digits. • a(n) = 48736 + 10 ^ 5(n - 1). • a(n) = 2 * a(n - 1) - a(n - 2). G.f.: x * (48736 + 51264 * x) / (1 - x) ^ 2. - _ Colin Barker _ , Jun 05 2012 •

► [A157667] 48842,902501,2819042,5798465,9840770,14945957,21114026,28344977,36638810,45995525,56415122,67897601,80442962,94051205,108722330,124456337,141253226,159112997,178035650,198021185,219069602,241180901 ⋆ a(n) = 531441 * n ^ 2 - 740664 * n + 258065. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). •

► [A159233] 0,0,0,0,49920,18936480,1293857280,34839270480,518880929280,5122755187200,37376074229760,216261381584160,1041571537839360,4323020652281760,15864787390932480,52496402135289840,159036030441200640,446469968164496640,1172916400659517440 ⋆ Number of edge colorings of the Petersen graph. • a(n) = n ^ 15 - 30 * n ^ 14 + ... (see Maple program). •

► [A191303] 52029,316725,1093345,2811129,6031029,11445709,19879545,32288625,49760749,73515429,104903889,145409065,196645605,260359869,338429929,432865569,545808285,679531285,836439489,1019069529,1230089749,1472300205,1748632665,2062150609 ⋆ An infinite sequence of 4 - digit half - palindromes. • a(n) = (2 * n + 2)(14 * n + 9) ^ 3 + (3 * n + 3) * (14 * n + 9) ^ 2 + (5 * n + 3) * (14 * n + 9) + (2 * n + 1) = (2 * n + 1) * (14 * n + 11) ^ 3 + (5 * n + 3) * (14 * n + 11) ^ 2 + (3 * n + 3) * (14 * n + 11) + (2 * n + 2), such that the bases b < c are b=14 * n + 9, c=14 * n + 11. •

► [A157758] 53000,350754,648508,946262,1244016,1541770,1839524,2137278,2435032,2732786,3030540,3328294,3626048,3923802,4221556,4519310,4817064,5114818,5412572,5710326,6008080,6305834,6603588,6901342,7199096 ⋆ a(n) = 297754 * n - 244754. • a(n) = 2 * a(n - 1) - a(n - 2). •

► [A155557] 53089,53093,53101,53113,53129,53149,53173,53201,53233,53269,53309,53353,53401,53453,53509,53569,53633,53701,53773,53849,53929,54013,54101,54193,54289 ⋆ A proximate - prime polynomial sequence generated by 2 * n ^ 2 - 2 * n + 53089. • a(n) = 2 * n ^ 2 - 2 * n + 53089. • a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3); a(1)=53089, a(2)=53093, a(3)=53101. - _ Harvey P. Dale _ , Jul 19 2011 •

► [A243362] 54023,54203,500407,23456789,23458679,23459687,23465789,23465987,23469587,23475869,23478569,23489657,23495867,23496587,23498567,23546879,23546987,23548697,23564897,23564987,23567849,23569487,23576489,23584679,23587649 ⋆ Numbers n such that A243361(n) = 123456789. ● a(1) = 54023; a(2) = 54203; a(3) = 500407; a(4) ··· a(3101) = A160402; a(3102) ... a(22659) = A243363; .... ●

► [A250857] 54410,291165,1043885,2955136,7134786,15344785,30214465,55486360,96292546,159461501,253855485,390738440,584174410,851456481,1213566241,1695663760,2327608090,3144508285,4187304941,5503382256,7147210610 ⋆ Number of (5 + 1) X (n + 1) 0..3 arrays with nondecreasing x(i,j) - x(i,j - 1) in the i direction and nondecreasing min(x(i,j),x(i - 1,j)) in the j direction. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

► [A227496] 58278,386154,2197138,11480034,56846210,271400130,1262261058,5756835906,25860706882,114780464706,504480353858,2199370440258,9523306249794,40996576329282,175599810575938,748853449588290,3181230972730946,13468193224392258 ⋆ The Wiener index of the nanostar dendrimer defined pictorially as NS _ 3 in the Ashrafi et al. references. ● a(n) = - 446 + 2 ^ n * (5338 - 208 * n) + 4 ^ n * (1300 + 10816 * n). ●

► [A017501] 59049,3200000,28629151,130691232,418195493,1073741824,2373046875,4704270176,8587340257,14693280768,23863536599,37129300000,55730836701,81136812032,115063617043,159494694624 ⋆ a(n) = (11 * n + 9) ^ 5. ● a(0)=59049, a(1)=3200000, a(2)=28629151, a(3)=130691232, a(4)=418195493, a(5)=1073741824, a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6). - _ Harvey P. Dale _ , Jan 25 2013 ●

► [A016774] 0,59049,60466176,3486784401,61917364224,576650390625,3570467226624,16679880978201,63403380965376,205891132094649,590490000000000,1531578985264449,3656158440062976,8140406085191601,17080198121677824 ⋆ a(n) = (3 * n) ^ 10. ● a(n) = 11 * a(n - 1) - 55 * a(n - 2) + 165 * a(n - 3) - 330 * a(n - 4) + 462 * a(n - 5) - 462 * a(n - 6) + 330 * a(n - 7) - 165 * a(n - 8) + 55 * a(n - 9) - 11 * a(n - 10) + a(n - 11); a(0)=0, a(1)=59049, a(2)=60466176, a(3)=3486784401, a(4)=61917364224, a(5)=576650390625, a(6)=3570467226624, a(7)=16679880978201, a(8)=63403380965376, a(9)=205891132094649, a(10)=5904900000000000. - _ Harvey P. Dale _ , Mar 04 2013 ●

► [A016954] 59049,3486784401,576650390625,16679880978201,20589113209464 9,15315789852644 49,8140406085191601,34050628916015625,119042423827613001,362033331456891249,984930291881790849,2446194060654759801,5631351470947265625,12157665459056928801 ⋆ a(n) = (6n + 3) ^ 10. ● a(n) = 11 * a(n - 1) - 55 * a(n - 2) + 165 * a(n - 3) - 330 * a(n - 4) + 462 * a(n - 5) - 462 * a(n - 6) + 330 * a(n - 7) - 165 * a(n - 8) + 55 * a(n - 9) - 11 * a(n - 10) + a(n - 11) for n>10. ●

► [A075965] 65535,16711935,252645135,858993459,1431655765,2523490710,64425505596,219046689807,365122770518,644299577754,3311504066038,5570865221243,26401251330613,44053766282056,211127799335772 ⋆ Basis for code in A075964. ● a(n) = b(2 ^ n), where b is A075964, the binary lexicode, d=16. ●

► [A016808] 0,65536,16777216,429981696,4294967296,25600000000,110075314176,377801998336,1099511627776,2821109907456,6553600000000,14048223625216,28179280429056,53459728531456,96717311574016,167961600000000,281474976710656,457163239653376 ⋆ a(n) = (4n) ^ 8. ● a(0)=0, a(1)=65536, a(2)=16777216, a(3)=429981696, a(4)=4294967296, a(5)=25600000000, a(6)=110075314176, a(7)=377801998336, a(8)=1099511627776, a(n)=9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9). - _ Harvey P. Dale _ , Aug 05 2013 ●

► [A016904] 65536,43046721,1475789056,16983563041,110075314176,500246412961,1785793904896,5352009260481,14048223625216,33232930569601,72301961339136,146830437604321,281474976710656,513798374428641 ⋆ a(n) = (5 * n + 4) ^ 8. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9); a(0)=65536, a(1)=43046721, a(2)=1475789056, a(3)=16983563041, a(4)=110075314176, a(5)=500246412961, a(6)=1785793904896, a(7)=5352009260481, a(8)=14048223625216. - _ Harvey P. Dale _ , Jul 29 2015 ●

► [A010804] 0,1,65536,43046721,4294967296,152587890625,2821109907456,33232930569601,281474976710656,1853020188851841,10000000000000000,45949729863572161,184884258895036416,665416609183179841,2177953337809371136,6568408355712890625,18446744073709551616,48661191875666868481 ⋆ 16th powers: a(n) = n ^ 16. ● a(n) = n ^ 16. ●

► [A157620] 66249,1302499,4101249,8462499,14386249,21872499,30921249,41532499,53706249,67442499,82741249,99602499,118026249,138012499,159561249,182672499,207346249,233582499,261381249,290742499,321666249,354152499 ⋆ 78125n ^ 2 - 1107500n + 392499. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A235892] 67072,70168,76456,89416,116872,177928,324616,716296,1892872,5818888,19962376,73415176,280984072,1098775048,4344969736,17279810056,68919294472,275277478408,1100310706696,4399644604936,17595382168072 ⋆ Number of (n + 1) X (7 + 1) 0..3 arrays with the minimum plus the upper median equal to the lower median plus the maximum in every 2 X 2 subblock. ● a(n) = 4 * (16002 + 381 * 2 ^ n + 4 ^ n). ●

► [A224426] 68556,2138994,27959412,251530740,1844957748,11922051060,70741011828,394986935412,2107840963188,10863256632948,54464106804852,267039247214196,1285451192174196,6093251133916788,28507903924684404,131887740411168372,604241712010610292 ⋆ The hyper - Wiener index of the phenylacetylene dendrimer NSB[n], defined pictorially in the Z. Yarahmadi et al. reference. ● a(n) = 116340 - 2180388 * 2 ^ n + 2132604 * 4 ^ n - 2299671 * 4 ^ n * n / 2 + 613089 * 4 ^ n * n ^ 2. ●

► [A224464] 70159,5540677,94770993,962654441,7544225177,50760280441,309334151737,1759763688889,9520613312697,49581897574073,250630474019513,1236980426140345,5986802543205049,28507052162513593,133885149461756601 ⋆ The hyper - Wiener index of the tetrathiafulvalene dendrimer defined pictorially as D[n] in the Shabani reference. ● a(n) = 1489593 + 2 ^ n * (- 190960 * n ^ 2 + 743480 * n - 13082162) + 4 ^ n * (3013696 * n ^ 2 - 7398832 * n + 11662728). ●

► [A243135] 0,1,70226,3880899,58106404,456335045,2421980406,9863382151,33165873224,96450076809,250283080090,592479412811,1300371936876,2678768828749,5228741809214,9743412645135,17438019715216,30122754096401,50428155189474,82094249361619 ⋆ 256 * n ^ 9 - 576 * n ^ 7 + 432 * n ^ 5 - 120 * n ^ 3 + 9 * n. ● a(n) = n * (4 * n ^ 2 - 3) * (64 * n ^ 6 - 96 * n ^ 4 + 36 * n ^ 2 - 3). ●

► [A157732] 77617,814087,2328481,4620799,7691041,11539207,16165297,21569311,27751249,34711111,42448897,50964607,60258241,70329799,81179281,92806687,105212017,118395271,132356449,147095551,162612577,178907527 ⋆ a(n) = 388962 * n ^ 2 - 430416 * n + 119071. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A016855] 0,78125,10000000,170859375,1280000000,6103515625,21870000000,64339296875,163840000000,373669453125,781250000000,1522435234375,2799360000000,4902227890625,8235430000000,13348388671875 ⋆ a(n) = (5 * n) ^ 7. ● a(0)=0, a(1)=78125, a(2)=10000000, a(3)=170859375, a(4)=1280000000, a(5)=6103515625, a(6)=21870000000, a(7)=64339296875, a(n)=8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8). - _ Harvey P. Dale _ , May 07 2013 ●

► [A016975] 78125,19487171,410338673,3404825447,17249876309,64339296875,194754273881,506623120463,1174711139837,2488651484819,4902227890625,9095120158391,16048523266853,27136050989627,44231334895529,69833729609375,107213535210701,160578147647843,235260548044817 ⋆ a(n) = (6 * n + 5) ^ 7. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8). - _ Harvey P. Dale _ , Jan 30 2013 ●

► [A017227] 78125,105413504,3404825447,34359738368,194754273881,781250000000,2488651484819,6722988818432,16048523266853,34792782221696,69833729609375,131593177923584,235260548044817,402271083010688 ⋆ a(n) = (9 * n + 5) ^ 7. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8); a(0)=78125, a(1)=105413504, a(2)=3404825447, a(3)=34359738368, a(4)=194754273881, a(5)=781250000000, a(6)=2488651484819, a(7)=6722988818432. - _ Harvey P. Dale _ , Apr 13 2014 ●

► [A183640] 79172,107992,170300,309016,629132,1398952,3333500,8411896,22294892,61632712,176596700,521681176,1582485452,4916663272,15625379900,50774508856,168710304812,573264314632,1991498803100,7067664046936 ⋆ Number of (n + 1) X 8 0..3 arrays with every 2 X 2 subblock summing to 6. ● a(n) = 52670 + 3025 * 2 ^ (2 + n) + 254 * 3 ^ (1 + n) + 4 ^ (1 + n). ●

► [A157661] 79201,318401,717601,1276801,1996001,2875201,3914401,5113601,6472801,7992001,9671201,11510401,13509601,15668801,17988001,20467201,23106401,25905601,28864801,31984001,35263201,38702401,42301601,46060801 ⋆ a(n) = 80000 * n ^ 2 - 800 * n + 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Jan 28 2012 ●

► [A157664] 80801,321601,722401,1283201,2004001,2884801,3925601,5126401,6487201,8008001,9688801,11529601,13530401,15691201,18012001,20492801,23133601,25934401,28895201,32016001,35296801,38737601,42338401,46099201 ⋆ a(n) = 80000 * n ^ 2 + 800 * n + 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Feb 04 2012 ●

► [A202933] 83521,113856,153874,206145,273683,359970,468980,605203,773669,979972,1230294,1531429,1890807,2316518,2817336,3402743,4082953,4868936,5772442,6806025,7983067,9317802,10825340,12521691,14423789 ⋆ Number of (n + 3) X 5 binary arrays with consecutive windows of four bits considered as a binary number nondecreasing in every row and column. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n>6. ●

► [A347853] 88793,284723,1146773,6560993,74266253,302542763,3279413303,4412997293,11163865613,42731353103,67588200923,90307985213,108039383513,253802571923,378166268723,508735164383,912404760713,1351905411533,3353287304813,4707449019173,5993035649963,7429168351463 ⋆ Primes at lower end of record gaps between prime octuplets given by A347852. ● a(n) == 173 (mod 210). ●

► [A194722] 0,1,92378,19319845,560198962,6507351113,44731364266,218878998733,844131474530,2730108129937,7711583225338,19564269083381,45486599105938,98378219490265,200201768681162,386776488742813,714420272913346,1268930908616993,2177477525153050 ⋆ Number of n - ary words beginning with the first character of the alphabet, that can be built by inserting ten doublets into the initially empty word. ● a(0) = 0, a(n) = 1 + (18 + (152 + (798 + (2907 + (7752 + (15504 + (23256 + (25194 + 16796 * (n - 1)) * (n - 1)) * (n - 1)) * (n - 1)) * (n - 1)) * (n - 1)) * (n - 1)) * (n - 1)) * (n - 1) for n>0. ●

► [A216122] 94698,1317858,10315218,63835698,349594098,1781094258,8661794418,40799683698,187793424498,849479276658,3790907541618,16734956611698,73223518070898,318024922835058,1372613885896818,5892491154499698,25178059222493298,107144508620089458 ⋆ The Wiener index of the nanostar dendrimer NS[n], defined pictorially in the Ashrafi et al. reference. ● a(n) = - 55182 + 181020 * 2 ^ n - 125640 * 4 ^ n - 42000 * n * 2 ^ n + 93600 * n * 4 ^ n. ●

► [A359345] 99066,315996,999366,3162039,9999629,31622524,99999629,316227746,999999629,3162277591,9999999629,31622776461,99999999629,316227765995,9999999999629,3162277660155,99999999999629,31622776601681,999999999999629,31622776601681,999999999999629 ⋆ Roots of largest pandigital squares with n digits. ● a(n) = (10 ^ (n / 2 - 3) - 1) * 10 ^ 3 + 629 for n >= 14 even. ●

► [A370795] 99905,107185,242905,350285,363805,372385,433381,569245,590785,630565,692665,752765,907205,942565,1026745,1076045,1090765,1105585,1227745,1275205,1333345,1467185,1526005,1647113,1661665 ⋆ Centered square numbers which are products of four distinct primes (or tetraprimes). ● a(n) == 1 (mod 4). ●

► [A017513] 100000,4084101,33554432,147008443,459165024,1160290625,2535525376,4984209207,9039207968,15386239549,24883200000,38579489651,57735339232,83841135993,118636749824,164130859375,222620278176,296709280757,389328928768,503756397099 ⋆ a(n) = (11 * n + 10) ^ 5. ● a(n) = 6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) for n > 5. ●

► [A253709] 104329,56205009,3319833924,68869504900,771665618025,5755695204609,32148582480784,144648440352144,550265331330225,1830621686635225,5457952678249764,14853496612506084,37420748658691489,88243404864147225,196505988636801600,416206765369428544,843426135281228409,1643334148974958 20

9,3091319880732100900,5634162244739340900 ⋆ Integer squares c ^ 2 that are e qual to the sums of M (A253707) consecutive cubed integers equaling a squared integer, b ^ 3 + (b + 1) ^ 3 + ... + (b + M - 1) ^ 3 = c ^ 2, for a first term b(n) being an odd squared integer (A016754). ● a(n) = ((n(n + 1) / 2)(4(2n + 1) ^ 4 - 1)) ^ 2. ●

▶ [A202934] 104976,153874,225858,330853,481798,695114,991196,1394929,1936228,2650602,3579742,4772133,6283690,8178418,10529096,13417985,16937560,21191266,26294298,32374405,39572718,48044602,57960532,69506993,82887404 ⋆ Number of (n + 3) X 6 binary arrays with consecutive windows of four bits considered as a binary number nondecreasing in every row and column. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

▶ [A157105] 106846,244688,382530,520372,658214,796056,933898,1071740,1209582,1347424,1485266,1623108,1760950,1898792,2036634,2174476,2312318,2450360,2588002,2725844,2863686,3001528,3139370,3277212,3415054 ⋆ a(n) = 137842 * n - 30996. ● a(n) = 2 * a(n - 1) - a(n - 2). ●

▶ [A157825] 107760,1835760,3563760,5291760,7019760,8747760,10475760,12203760,13931760,15659760,17387760,19115760,20843760,22571760,24299760,26027760,27755760,29483760,31211760,32939760,34667760,36395760 ⋆ 1728000n - 1620240. ● a(n) = 2 * a(n - 1) - a(n - 2). ●

▶ [A023349] 109891,324763,852367,3371527,3557797,4448701,4471549,5304661,5616679,5688919,5727349,7766659,8028109,8554999,9034723,10867099,11146987,12396487,12926401,14186611,18274513,19251517,20882713,21810493,23953921 ⋆ Primes that remain prime through 5 iterations of function f(x) = 8x + 5. ● a(n) == 19 (mod 42). - _ John Cerkan _ , Nov 06 2016 ●

▶ [A135403] 1,111111,222221,333331,444441,555551,666661,777771,888881,999991,1111101,1222211,1333321,1444431,1555541,1666651,1777761,1888871,1999981,2111091,2222201,2333311,2444421,2555531,2666641 ⋆ a(n) = 1 + 111110 * n. ● a(n) = 2 * a(n - 1) - a(n - 2). (End) ●

▶ [A156865] 116820,845820,1574820,2303820,3032820,3761820,4490820,5219820,5948820,6677820,7406820,8135820,8864820,9593820,10322820,11051820,11780820,12509820,13238820,13967820,14696820,15425820,16154820,16883820 ⋆ a(n) = 729000 * n - 612180. ● a(n) = 2 * a(n - 1) - a(n - 2). ●

▶ [A017610] 117649,47045881,887503681,6321363049,27680640625,904583821692430875455521,567869252041,1194052296529,2313060765625,4195872914689,7212549413161,11853911588401,18755369578009 ⋆ (12n + 7) ^ 6. ● a(0)=117649, a(1)=47045881, a(2)=887503681, a(3)=6321363049, a(4)=27680640625, a(5)=90458382169, a(6)=243087455521, a(n)= 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) From _ Harvey P. Dale _ , Jun 05 2012 ●

▶ [A120321] 117649,208422380089,567869252041,2839760855281,5534900853769,17416274304961,69980368892329,104413920565969,301855146292441,558845013849409,743702041351801,1268163904241521,2607614922465721 ⋆ RF(7): refactorable numbers with 7 as smallest prime factor. ● a(n) = odd square, 7 is the smallest prime factor and refactorable. ●

▶ [A157736] 119071,938449,2535751,4910977,8064127,11995201,16704199,22191121,28455967,35498737,43319431,51918049,61294591,71449057,82381447,94091761,106579999,119846161,133890247,148712257,164312191,180690049 ⋆ a(n) = 388962 * n ^ 2 - 347508 * n + 77617. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

▶ [A178476] 123456,123465,123546,123564,123645,123654,124356,124365,124536,124563,124635,124653,125346,125364,125436,125463,125634,125643,126345,126354,126435,126453,126534,126543,132456 ⋆ Permutations of 123456: Numbers having each of the decimal digits 1,...,6 exactly once, and no other digit. ● a(n) + a(6! + 1 - n) = 777777. ● a(n) == 3 (mod 9). ●

▶ [A371845] 123457,423457,523459,723451,823451,823457,923453,1234511,1234517,1234531,1234537,1234543,1234547,1234577,2234501,2234503,2234513,2234539,2234543,2234549,2234563,2234579,2234587,2234591,2234593 ⋆ Primes whose second, third, fourth and fifth digits are 2345. ● a(n) n log n. The ratio a(n) / (n log n) is bounded but does not have a limit. - _ Charles R Greathouse IV _ , Apr 09 2024 ●

▶ [A202935] 130321,206145,330853,533832,857408,1360328,2121734,3245653,4866027,7152307,10315635,14615638,20367858,27951842,37819916,50506667,66639157,86947893,112278577,143604660,182040724,228856716,285493058,353576657 ⋆ Number of (n + 3) X 7 binary arrays with consecutive windows of four bits considered as a binary number nondecreasing in every row and column. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8) for n>8. ●

▶ [A103534] 131013,191019,311031,611061,971097,1031103,1091109,1511151,1631163,1811181,1931193,2231223,2291229,2771277,2831283,3071307,3671367,3731373,4091409,4331433,4391439,4871487,4991499,5231523,5711571 ⋆ Concatenations of pairs of primes that differ by 1000. ● a(n) = Concatenate(P, P + 1000) iff P prime and P + 1000 prime. ●

▶ [A239610] 0,1,131044,11309769,228735376,2258625625,14430255876,686895955 69,264286471744,865363202001,2496558002500,6503780163001,15577324963344,34772403556969,73108895539876,145988618630625,278735579781376,511643454094369,907005861105444 ⋆ Sin(arcsin(n) - 4 arccos(n)) ^ 2. ● a(n) = n ^ 2 (16 * n ^ 4 - 20 * n ^ 2 + 5) ^ 2 = ChebyshevT(5,n) ^ 2. - _ Robert Israel _ , May 25 2014 ●

▶ [A165478] 0,131070,131071,262141,262142,393212,393213,524283,524284,655354,655355,786425,786426,917496,917497,1048567,1048568,1179638,1179639,1310709,1310710,1441780,1441781,1572851,1572852 ⋆ Positions of zeros in A165477. ● a(n) = floor(n / 2) * 131071 + (n modulo 2) * 131070 ●

▶ [A075968] 131071,66978047,2082344719,15240409907,54033798485,90887727786,414889199992,1654396181398,6738967974687,26545942883459,106105709811500,186917937746406,847174341792419,3387064916515659 ⋆ Basis for code in A075967. ● a(n) = b(2 ^ n), where b is A075967, the binary lexicode, d=17. ●

▶ [A190780] 131072,462722,33554432,1246103042,30324948992,563669272322,7763186941952,79452617800322,626224351281152,3963462651845762,209061398938 91072,947332257570316 82,377800938372595712,1351791004705013762,440685403 9510188032,13253329257388072322 ⋆ a(n) = 2 * (n ^ 8 + 224 * n ^ 4 + 256) ^ 2 . ● a(n) = 2 * (n ^ 8 + 14 * n ^ 4 * 2 ^ 4 + 2 ^ 8) ^ 2. ●

▶ [A023341] 135859,174877,192979,244219,292561,679297,842341,964897,1076029,1470241,1990579,2004943,2339263,2615707,2625577,2633557,2892277,3003787,3201901,3758233,4406797,5065861,5157547,5390857,5424961 ⋆ Primes that remain prime through 5 iterations of function f(x) = 5x + 2. ● a(n) == 31 (mod 42). - _ John Cerkan _ , Oct 17 2016 ●

▶ [A101202] 142857,285714,428571,571428,714285,857142,999999,1142856,1285713,1428570,1571427,1714284,1857141,1999998,2142855,2285712,2428569,2571426,2714283,2857140,2999997,3142854,3285711,3428568,3571425 ⋆ Multiples of 142857. ● a(n) = 142857 * n. - _ Robert Israel _ , May 14 2008 ●

▶ [A189789] 0,0,0,0,0,0,0,147456,3265920,129024000,1097712000,12939264000,66784798080,436483031040,1669619952000,7629571031040,23828156352000,85476013572096,230333593351680,693478195200000,1669577821632000 ⋆ Number of ways to place 8 nonattacking bishops on an n x n toroidal board ● a(n) = (1 / 80640) * (n - 6) ^ 2 * (n - 4) ^ 2 * (n - 2) ^ 2 * n ^ 2 * (2 * n ^ 8 - 64 * n ^ 7 + 884 * n ^ 6 - 7048 * n ^ 5 + 37382 * n ^ 4 - 147904 * n ^ 3 + 468540 * n ^ 2 - 1108800 * n + 1422225 + (28 * n ^ 6 - 840 * n ^ 5 + 10906 * n ^ 4 - 80640 * n ^ 3 + 370468 * n ^ 2 - 1034880 * n + 1400175) * (- 1) ^ n) ●

▶ [A224424] 147859,984643,6530659,40951843,241838755,1355802019,7283759011,37802644387,190766807971,940772076451,4551624543139,21670926257059,101780972047267,472467096865699,2171047575817123,9888107533437859,44684841214544803 ⋆ The hyper - Wiener index of the Micelle - like chiral dendrimer G[n] defined pictorially in the Hassan Yousefi - Azari et al. reference. ● a(n) = 2979 + 13680 * 2 ^ n + 131200 * 4 ^ n + 52224 * n * 4 ^ n + 30240 * n * 2 ^ n + 36864 * n ^ 2 * 4 ^ n + 6336 * n ^ 2 * 2 ^ n. ● a(n) = 19 * a(n - 1) - 150 * a(n - 2) + 636 * a(n - 3) - 1560 * a(n - 4) + 2208 * a(n - 5) - 1664 * a(n - 6) + 512 * a(n - 7). [_ Bruno Berselli _ , Apr 06 2013] ●

▶ [A250883] 155080,553736,1350002,2681528,4685964,7500960,11264166,16113232,22185808,29619544,38552090,49121096,61464212,75719088,92023374,110514720,131330776,154609192,180487618,209103704,240595100,275099456 ⋆ Number of (6 + 1) X (n + 1) 0..3 arrays with nondecreasing x(i,j) - x(i,j - 1) in the i direction and nondecreasing x(i,j) + x(i - 1,j) in the j direction. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>4. ●

▶ [A258073] 157115,314229,628457,1256913,2513825,5027649,10055297,20110593,40221185,80442369,160884737,321769473,643538945,1287077889,2574155777,5148311553,10296623105,20593246209,41186492417,82372984833,164745969665,329491939329 ⋆ a(n) = 1 + 78557 * 2 ^ n. ● a(n) = 3 * a(n - 1) - 2 * a(n - 2). - _ Wesley Ivan Hurt _ , Apr 26 2021 ●

▶ [A202936] 160000,273683,481798,857408,1515902,2631416,4457228,7350643,11802908,18474721,28237922,42223978,61879898,89032238,125959880,175476293,241022008,326768063,437731198,579901604,760384054,987553268,1271224388 ⋆ Number of (n + 3) X 8 binary arrays with consecutive windows of four bits considered as a binary number nondecreasing in every row and column. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9) for n>9. ●

▶ [A187170] 0,0,167016,2013360,8227752,21274896,43422072,76964016,124223214,187527168,269203674,371580528,496985526,647746464,826191138,1034647344,1275442878,1550905536,1863363114,2215143408,2608574214,3045983328 ⋆ Number of 9 - step self - avoiding walks on an n X n X n cube summed over all starting positions. ● a(n) = 4 * a(n - 1) - 6 * a(n - 2) + 4 * a(n - 3) - a(n - 4) for n>11. ●

▶ [A016775] 0,177147,362797056,31381059609,743008370688,8649755859375,64268410079232,350277500542221,1521681143169024,5559060566555523,17714700000000000,50542106513726817,131621703842267136,317475837322472439,711368321110468608 ⋆ (3 * n) ^ 11. ● a(n) = 12 * a(n - 1) - 66 * a(n - 2) + 220 * a(n - 3) - 495 * a(n - 4) + 792 * a(n - 5) - 924 * a(n - 6) + 792 * a(n - 7) - 495 * a(n - 8) + 220 * a(n - 9) - 66 * a(n - 10) + 12 * a(n - 11) - a(n - 12). ●

▶ [A221003] 192133,1790789,13716357,92392837,568494213,3272754309,17914312837,94292506757,481127721093,2394073245829,11669512054917,55910670854277,264011366000773,1231270134409349,5680970473662597,25967383211403397 ⋆ The hyper - Wiener index of the nanostar dendrimer G[n], defined pictorially in the Karbasioun - Ashrafi reference. ● a(n) = - 6011 + 2 ^ n * (11200 * n ^ 2 + 5920 * n - 177792) + 4 ^ n * (102400 * n ^ 2 + 51200 * n + 375936). ●

▶ [A202937] 194481,359970,695114,1360328,2631416,4958318,9044252,15949741,27226555,45087162,72615870,114028454,174987698,262982942,387782408,561967787,801561301,1126756210,1562762514,2140780404,2899114844,3884445518 ⋆ Number of (n + 3) X 9 binary arrays with consecutive windows of four bits considered as a binary number nondecreasing in every row and column. ● a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10) for n>10. ●

▶ [A213817] 197802,296703,395604,494505,593406,692307,791208,890109,989010,197802197802,296703296703,395604395604,494505494505,593406593406,692307692307,791208791208,890109890109,989010989010,197802197802197802,296703296703296703,395604395604395604 ⋆ Numbers n with the property that cyclically right - shifting by 2 positions divides n by 9 (leading 0's omitted). ● a(n) = 9 / 91 * (2 + ((n - 1) mod 9)) * (10 ^ (6 * floor((n + 8) / 9)) - 1). - _ Alois P. Heinz _ , Jun 28 2012 ●

▶ [A157377] 218295,749736,1281177,1812618,2344059,2875500,3406941,3938382,4469823,5001264,5532705,6064146,6595587,7127028,7658469,8189910,8721351,9252792,9784233,10315674,10847115,11378556,11909997,12441438,12972879 ⋆ a(n) = 531441 * n - 313146. ● a(n) = 2 * a(n - 1) - a(n - 2). ●

▶ [A250858] 233683,1280447,4648157,13263136,32201019,69543783,137379337,252943672,439905571,729793879,1163567333,1793326952,2684170987,3916192431,5586619089,7812096208,10731111667,14506563727,19328471341,25416827024 ⋆ Number of (6 + 1) X (n + 1) 0..3 arrays with nondecreasing x(i,j) - x(i,j - 1) in the i direction and nondecreasing min(x(i,j),x(i - 1,j)) in the j direction. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

► [A157761] 244754,542508,840262,1138016,1435770,1733524,2031278,2329032,2626786,2924540,3222294,3520048,3817802,4115556,4413310,4711064,5008818,5306572,5604326,5902080,6199834,6497588,6795342,7093096,7390850 ⋆ a(n) = 297754 * n - 53000. ● a(n) = 2 * a(n - 1) - a(n - 2) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A017405] 1,248832,6436343,45435424,184528125,550731776,1350125107,2887174368,5584059449,10000000000,16850581551,27027081632,41615795893,61917364224,89466096875,126049300576,173726604657 ⋆ (11n + 1) ^ 5. ● a(0)=1, a(1)=248832, a(2)=6436343, a(3)=45435424, a(4)=184528125, a(5)=550731776, a(n)=6 * a(n - 1) - 15 * a(n - 2) + 20 * a(n - 3) - 15 * a(n - 4) + 6 * a(n - 5) - a(n - 6) [From Harvey P. Dale, Apr 04 2012] ●

► [A253725] 254016,76055841,4286582784,97578140625,1253342942784,10849309481241,70360154505216,366000785535609,1599920001000000,6075789839706609,20542200096854016,62996919308080641,177789795179217984,467082203214515625,1152912708530601984 ⋆ Integer squares c ^ 2 that are equal to the sums of a number M(n) of consecutive cubed integers b ^ 3 + (b + 1) ^ 3 + ... + (b + M - 1) ^ 3 = c ^ 2, starting at b(n) (A002593) for M(n) being twice a squared integer (A001105). ● a(n) = (n ^ 3(4n ^ 4 - 1)) ^ 2. ●

► [A157670] 258065,1530170,3865157,7263026,11723777,17247410,23833925,31483322,40195601,49970762,60808805,72709730,85673537,99700226,114789797,130942250,148157585,166435802,185776901,206180882,227647745,250177490 ⋆ a(n) = 531441 * n ^ 2 - 322218 * n + 48842. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A243136] 1,1,262087,22619537,457470751,4517251249,28860511751,137379191137,528572943487,1730726404001,4993116004999,13007560326001,31154649926687,695448071139 37,1462177910797 51,2919772372612 49,5574711595627 51,1023286908188737,1814011722210887 ⋆ 512 * n ^ 10 - 1280 * n ^ 8 + 1120 * n ^ 6 - 400 * n ^ 4 + 50 * n ^ 2 - 1. ● a(n) = (2 * n ^ 2 - 1) * (256 * n ^ 8 - 512 * n ^ 6 + 304 * n ^ 4 - 48 * n ^ 2 + 1). ●

► [A075971] 262143,133956095,4164689439,30480819815,108067596971,181775455573,829778399985,3308792362796,13477935949375,53091885766918,212211419623001,373835875492812,1694348683584839,6774129833031318 ⋆ Basis for code in A075970. ● a(n) = b(2 ^ n), where b is A075970, the binary lexicode, d=18. ●

► [A016998] 1,262144,11390625,113379904,594823321,2176782336,6321363049,15625000000,34296447249,68719476736,128100283921,225199600704,377149515625,606355001344,941480149401,1418519112256,2081951752609 ⋆ a(n) = (7 * n + 1) ^ 6. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7); a(0)=1, a(1)=262144, a(2)=11390625, a(3)=113379904, a(4)=594823321, a(5)=2176782336, a(6)=6321363049. - _ Harvey P. Dale _ , Jun 11 2014 ●

► [A017490] 262144,47045881,729000000,4750104241,19770609664,62523502209,164206490176,377149515625,782757789696,1500730351849,2699554153024,4608273662721,7529536000000,11853911588401,18075490334784,26808753332089,38806720086016,54980371265625 ⋆ a(n) = (11 * n + 8) ^ 6. ● a(0)=262144, a(1)=47045881, a(2)=729000000, a(3)=4750104241, a(4)=19770609664, a(5)=62523502209, a(6)=164206490176, a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). - _ Harvey P. Dale _ , Nov 08 2013 ●

► [A017622] 262144,64000000,1073741824,7256313856,30840979456,98867482624,262144000000,606355001344,1265319018496,2436396322816,4398046511104,7529536000000,12332795428864,19456426971136,29721861554176,44151665987584,64000000000000,90785223184384 ⋆ a(n) = (12 * n + 8) ^ 6. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). - _ Vincenzo Librandi _ , May 07 2017 ●

► [A016905] 262144,387420489,20661046784,322687697779,2641807540224,145075145975869,607169927664 64,2087283611587 59,6181218395095 04,16284135979104449,39043059123133 44,86629958186549 39,180143985094819 84 ⋆ a(n) = (5 * n + 4) ^ 9. ● a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10). - _ Wesley Ivan Hurt _ , Jun 09 2023 ●

► [A075466] 266718,1017375,2019150,4934715,20413980,34239885,64220175,127195950,321080475,1286586060,2154739965,4288508415,8571775230,21401016315,85781907180,149736661725,278082371775,1369020907200,1433193762225 ⋆ Trajectory of 266718 under the Reverse and Add! operation carried out in base 4, written in base 10. ● a(0), ..., a(18) as above; a(19) = 2780823717750; a(20) = 5492189757120; a(21) = 5749636151985; a(22) = 11156010444150; a(23) = 21968759028480; a(24) = 22226205423345; a(25) = 44109148986870; for n > 25 and n = 2 (mod 6): a(n) = 5 * 4 ^ (2 * k + 14) - 83865605 * 4 ^ k where k = (n - 2) / 6; n = 3 (mod 6): a(n) = 5 * 4 ^ (2 * k + 14) + 3941683435 * 4 ^ k - 15 where k = (n - 3) / 6; n = 4 (mod 6): a(n) = 10 * 4 ^ (2 * k + 14) + 2515968150 * 4 ^ k - 10 where k = (n - 4) / 6; n = 5 (mod 6): a(n) = 20 * 4 ^ (2 * k + 14) - 335462420 * 4 ^ k where k = (n - 5) / 6; n = 0 (mod 6): a(n) = 20 * 4 ^ (2 * k + 14) + 3690086620 * 4 ^ k - 15 where k = (n - 6) / 6; n = 1 (mod 6): a(n) = 40 * 4 ^ (2 * k + 14) + 2012774520 * 4 ^ k - 10 where k = (n - 7) / 6. G.f.: - 15 * (47049901525664 * x ^ 11 + 23708157972464 * x ^ 10 + 23433347158016 * x ^ 9 - 46912496118440 * x ^ 8 - 23502049861628 * x ^ 7 - 23433347158016 * x ^ 6 - 11908468626600 * x ^ 5 - 6137441522940 * x ^ 4 - 5862630708480 * x ^ 3 + 11771063219370 * x ^ 2 + 5931333412095 * x + 5862630708480) / ((x - 1) * (x ^ 2 + x + 1) * (2 * x ^ 3 - 1) * (2 * x ^ 3 + 1) * (4 * x ^ 3 - 1)) ●

► [A075467] 270798,1005135,1994670,5058075,20047500,33313725,66545850,112201785,225464610,368353785,835135950,1587633825,2841028950,5347819200,5598498225,10862757750,21453946560,22456662705,43576370550 ⋆ Trajectory of 270798 under the Reverse and Add! operation carried out in base 4, written in base 10. ● a(0), ..., a(10) as above; for n > 10 and n = 5 (mod 6): a(n) = 5 * 4 ^ (2 * k + 10) + 15341035 * 4 ^ k - 15 where k = (n + 1) / 6; n = 0 (mod 6): a(n) = 10 * 4 ^ (2 * k + 10) + 9792150 * 4 ^ k - 10 where k = n / 6; n = 1 (mod 6): a(n) = 20 * 4 ^ (2 * k + 10) - 1305620 * 4 ^ k where k = (n - 1) / 6; n = 2 (mod 6): a(n) = 20 * 4 ^ (2 * k + 10) + 14361820 * 4 ^ k - 15 where k = (n - 2) / 6; n = 3 (mod 6): a(n) = 40 * 4 ^ (2 * k + 10) + 7833720 * 4 ^ k - 10 where k = (n - 3) / 6; n = 4 (mod 6): a(n) = 80 * 4 ^ (2 * k + 10) - 1305620 * 4 ^ k where k = (n - 4) / 6. G.f.: - 15 * (1426085120 * x ^ 11 + 749251744 * x ^ 10 + 419191024 * x ^ 9 - 1430263104 * x ^ 8 - 715827880 * x ^ 7 - 369055228 * x ^ 6 - 352343296 * x ^ 5 - 222825800 * x ^ 4 - 155978060 * x ^ 3 + 356521280 * x ^ 2 + 189401930 * x + 105842255) / ((x - 1) * (x ^ 2 + x + 1) * (2 * x ^ 3 - 1) * (2 * x ^ 3 + 1) * (4 * x ^ 3 - 1)) ●

► [A157839] 276240,2004240,3732240,5460240,7188240,8916240,10644240,12372240,14100240,15828240,17556240,19284240,21012240,22740240,24468240,26196240,27924240,29652240,31380240,33108240,34836240,36564240 ⋆ 1728000n - 1451760. ● a(n) = 2 * a(n - 1) - a(n - 2). ●

► [A017239] 279936,170859375,4586471424,42618442977,230539333248,897410677851,2799360000000,7446353252589,17565568854912,37725479487783,75144747810816,140710042265625,250226879128704,425927596977747 ⋆ a(n) = (9 * n + 6) ^ 7. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8); a(0)=279936, a(1)=170859375, a(2)=4586471424, a(3)=42618442977, a(4)=230539333248, a(5)=897410677851, a(6)=2799360000000, a(7)=7446353252589. - _ Harvey P. Dale _ , Feb 11 2015 ●

► [A157112] 285769,8478963,27975201,58774483,100876809,154282179,218990593,295002051,382316553,480934099,590854689,712078323,844605001,988434723,1143567489,1310003299,1487742153,1676784051,1877128993,2088776979,2311728009 ⋆ a(n) = 5651522 * n ^ 2 - 8761372 * n + 3395619. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Jan 25 2012 ●

► [A023351] 294793,2586943,5360623,6351613,7965743,11141083,11378453,13458923,14884823,15585523,18691633,25387763,29964293,30766283,32388253,38647723,40653433,48716873,48786593,52628473,54270533,55507853,56575633,59103403 ⋆ Primes that remain prime through 5 iterations of function f(x) = 8x + 9. ● a(n) == 23 (mod 70). - _ John Cerkan _ , Nov 13 2016 ●

► [A227700] 299671,1624639,9938719,60310495,352063711,1970086879,10608950239,55279894495,280190685151,1387684298719,6740446216159,32207067824095,151750499712991,706442679304159,3254507926208479,14856796917219295,67277314593931231,302489552025567199 ⋆ The hyper - Wiener index of the nanostar dendrimer defined pictorially in the Ashrafi et al. reference. ● a(n) = 16351 + 2 ^ n * (26400 * n ^ 2 + 52080 * n + 40656) + 4 ^ n * (57600 * n ^ 2 + 42240 * n + 242664). ●

► [A230717] 345744,1058841,1750329,8340544,22127616,67765824,68574961,95004009,112021056,252047376,533794816,771895089,1097199376,1232922769,1275989841,1416167424,2217373921,4337012736,4388797504,5402250000,5554571841,6080256576,7169347584,10721359936 ⋆ Squares that are both a sum and a difference of two positive cubes. ● a(n) = k ^ 2 = a ^ 3 + b ^ 3 = c ^ 3 - d ^ 3 for some natural numbers k, a, b, c, d. ●

► [A350458] 347998,348353,348708,349091,349445,349800,350185,350539,350922,351277,351631,352014,352369,352723,353108,353461,353815,354200,354555,354938,355292,355647,356030,356385,356739 ⋆ Chronological Julian day number of the first day (Tishri 1, Rosh Hashanah) of Hebrew calendar year n. ● a(n) = k(n) + 2 if k(n + 1) - k(n) = 356 (delay to avoid 356 - day year) ●

► [A029577] 0,0,0,0,0,0,0,0,0,0,362880,3991680,47900160,622702080,8717829120,130767436800,2092278988800,35568742809600,640237370572800,12164510040883200,231125690776780800,4853639506312396800,106780069138872729600,2455941590194072780800 ⋆ Number of permutations of an n - set containing a 10 - cycle. ● a(n) = n! * (1 - Sum _{ k=0..floor(n / 10) } (- 1) ^ k / (k!10 ^ k)); ● a(n) / n! is asymptotic to 1 - e ^ (- 1 / 10). ●

► [A133360] 362880,16329600,419126400,8083152000,130456085760,1863435974400,24359586451200,297846188640000,3457819037312640,38528927611574400,415357755774998400,4358654246117808000,44733116259693227520 ⋆ Number of surjections from an n - element set to a nine - element set. ● a(n)=sum((- 1) ^ (9 - k) * C(9,k) * k ^ n) with n>=9 and k=9,8,...,1. ●

► [A179064] 0,0,0,0,0,0,0,0,362880,36288000,1097712000,17563392000,185513328000,1454424491520,9090153072000,47491411968000,214453407168000,857813628672000,3096707199505920,10237048593408000,31350961317312000 ⋆ Number of non - attacking placements of 9 rooks on an n X n board. ● a(n) = 9! * binomial(n,9) ^ 2. ●

► [A157843] 384240,2112240,3840240,5568240,7296240,9024240,10752240,12480240,14208240,15936240,17664240,19392240,21120240,22848240,24576240,26304240,28032240,29760240,31488240,33216240,34944240,36672240 ⋆ 1728000n - 1343760. ● a(n) = 2 * a(n - 1) - a(n - 2). ●

► [A157739] 387199,1552321,3495367,6216337,9715231,13992049,19046791,24879457,31490047,38878561,47044999,55989361,65711647,76211857,87489991,99546049,112380031,125991937,140381767,155549521,171495199,188218801 ⋆ a(n) = 388962 * n ^ 2 - 1764 * n + 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Jan 25 2012 ●

► [A016820] 1,390625,43046721,815730721,6975757441,37822859361,152587890625,500246412961,1406408618241,3512479453921,7984925229121,16815125390625,33232930569601,62259690411361,111429157112001,191707312997281,318644812890625,513798374428641 ⋆ a(n) = (4 * n + 1) ^ 8. ● a(0) = 1, a(1) = 390625, a(2) = 43046721, a(3) = 815730721, a(4) = 6975757441, a(5) = 37822859361, a(6) = 152587890625, a(7) = 500246412961, a(8) = 1406408618241, a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9). - _ Harvey P. Dale _ , Jul 11 2013 ●

► [A017048] 390625,429981696,16983563041,208827064576,1406408618241,6553600000000,23811286661761,72301961339136,191707312997281,457163239653376,1001129150390625,2044140858654976,3936588805702081 ⋆ a(n) = (7 * n + 5) ^ 8. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9); a(0)=390625, a(1)=429981696, a(2)=16983563041, a(3)=208827064576, a(4)=1406408618241, a(5)=6553600000000, a(6)=23811286661761, a(7)=72301961339136, a(8)=191707312997281. - _ Harvey P. Dale _ , Oct 03 2012 ●

► [A157741] 390727,1559377,3505951,6230449,9732871,14013217,19071487,24907681,31521799,38913841,47083807,56031697,65757511,76261249,87542911,99602497,112440007,126055441,140448799,155620081,171569287,188296417 ⋆ a(n) = 388962 * n ^ 2 + 1764 * n + 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Feb 05 2012 ●

► [A157623] 392499,2281249,5732499,10746249,17322499,25461249,35162499,46426249,59252499,73641249,89592499,107106249,126182499,146821249,169022499,192786249,218112499,245001249,273452499,303466249,335042499,368181249 ⋆ 781250n ^ 2 - 455000n + 66249. ● a(1)=392499, a(2)=2281249, a(3)=5732499, a(n)=3 * a(n - 1) - 3 * a(n - 2) + a(n - 3) [From Harvey P. Dale, Jul 11 2011] ●

► [A157826] 403201,117014401,440985601,972316801,1711008001,2657059201,3810470401,5171241601,6739372801,8514864001,10497715201,12687926401,15085497601,17690428801,20502720001,23522371201,26749382401,30183753601 ⋆ 1036800 0n ^ 2 - 194428800n + 91152001. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A227711] 403929,7123491,73556943,584118615,3973793223,24439248231,140086159911,762624306855,3992164666791,20266876319655,100389136655271,487362872044455,2326764524198823,10952675858742183,50938660677696423,234448450914335655,1069296992883227559 ⋆ The hyper - Wiener index of the nanostar dendrimer defined pictorially in Fig. 2 of the Madanshekaf reference. ● a(n) = 4 ^ n * (254016 * n ^ 2 - 728028 * n + 1207116) + 2 ^ n * (13104 * n ^ 2 - 50682 * n - 1250685) + 48039. ●

► [A227702] 449908,1096118,3588202,14360018,64595362,307414082,1492075906,7247514626,34935347458,166607364866,785654642434,3665131036418,16929529343746,77501591179010,351950298746626,1586770938400514,7107632205434626,31651156830097154 ⋆ The hyper - Wiener index of the nanostar dendrimer defined pictorially in Fig. 1 of the Iranmanesh et al. reference. ● a(n) = 167682 + 2 ^ n * (79709 + 24876 * n + 3996 * n ^ (2)) + 4 ^ n * (13458 + 1512 * n + 1296 * n ^ (2)). ● a(n) = 19 * a(n - 1) - 150 * a(n - 2) + 636 * a(n - 3) - 1560 * a(n - 4) + 2208 * a(n - 5) - 1664 * a(n - 6) + 512 * a(n - 7) for n>6. - _ Colin Barker _ , May 30 2018 ●

► [A157759] 500001,21898963,74859849,159382659,275467393,423114051,602322633,813093139,1055425569,1329319923,1634776201,1971794403,2340374529,2740516579,3172220553,3635486451,4130314273,4656704019,5214655689,5804169283 ⋆ a(n) = 15780962 * n ^ 2 - 25943924 * n + 10662963. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A157803] 519420,9503670,18487920,27472170,36456420,45440670,54424920,63409170,72393420,81377670,90361920,99346170,108330420,117314670,126298920,135283170,144267420,153251670,162235920,171220170,180204420,189188670 ⋆ a(n) = 8984250 * n - 8464830. ● a(1) = 519420, a(2)=9503670; for n>2, a(n) = 2 * a(n - 1) - a(n - 2). ●

► [A075974] 524287,536347135,16659267087,121923751537,432270825142,1669779270546,2925034919093,13215281603292,52815987849274,211162780754599,373971566094226,1693443980145088,6773560256426439 ⋆ Basis for code in A075973. ● a(n) = b(2 ^ n), where b is A075973, the binary lexicode, d=19. ●

► [A017082] 1,531441,24137569,244140625,1291467969,4750104241,13841287201,34296447249,75418890625,151334226289,282429536481,496981290961,832972004929,1340095640625,2081951752609,3138428376721 ⋆ a(n) = (8 * n + 1) ^ 6. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7); a(0)=1, a(1)=531441, a(2)=24137569, a(3)=244140625, a(4)=1291467969, a(5)=4750104241, a(6)=13841287201. - _ Harvey P. Dale _ , Dec 18 2012 ●

► [A017166] 0,531441,34012224,387420489,2176782336,8303765625,24794911296,62523502209,139314069504,282429536481,531441000000,941480149401,1586874322944,2565164201769,4001504141376,6053445140625 ⋆ a(n) = (9 * n) ^ 6. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7); a(0)=0, a(1)=531441, a(2)=34012224, a(3)=387420489, a(4)=2176782336, a(5)=8303765625, a(6)=24794911296. - _ Harvey P. Dale _ , Apr 01 2014 ●

► [A017634] 531441,85766121,1291467969,8303765625,34296447249,107918163081,282429536481,646990183449,1340095640625,2565164201769,4608273662721,7858047974841,12827693806929,20179187015625 ⋆ (12n + 9) ^ 6. ● a(0)=531441, a(1)=85766121, a(2)=1291467969, a(3)=8303765625, a(4)=34296447249, a(5)=107918163081, a(6)=282429536481, a(n)= 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). - _ Harvey P. Dale _ , Sep 14 2014 ●

► [A227497] 535169,4777031,34585827,221183963,1302236107,7228350891,38398435691,197183359211,985730525163,4821548959211,23163432305131,109613958560235,512102661482987,2366223242742251,10829048025942507,49144438521268715,221377260695718379 ⋆ The hyper - Wiener index of the nanostar dendrimer defined pictorially as NS _ 3[n] in the Ashrafi et al. references. ● a(n) = 2539 + 2 ^ n * (- 79425 + 368 * n - 416 * n ^ 2) + 4 ^ n * (113822 + 15808 * n + 43264 * n ^ 2). ●

► [A156866] 612180,1341180,2070180,2799180,3528180,4257180,4986180,5715180,6444180,7173180,7902180,8631180,9360180,10089180,10818180,11547180,12276180,13005180,13734180,14463180,15192180,15921180,16650180,17379180 ⋆ a(n) = 729000 * n - 116820. ● a(n) = 2 * a(n - 1) - a(n - 2). ●

► [A216123] 657339,15126495,170253735,1399219767,9656453079,59728974615,342996234135,1867389894807,9768453728919,49540857757335,245123724445335,1188721211741847,5669374461982359,26661906782549655,123891350653597335,569765357115700887,2596763217388533399 ⋆ The hyper - Wiener index of the nanostar dendrimer NS[n], defined pictorially in the Ashrafi et al. reference. ● a(n) = - 685719 - 2949654 * 2 ^ n + 2264412 * 4 ^ n + 495780 * n * 2 ^ n - 1584720 * n * 4 ^ n - 136500 * n ^ 2 * 2 ^ n + 608400 * n ^ 2 * 4 ^ n. ●

► [A209596] 663552,996451875,161128382464,8009033203125,191221621088256,2767247026234327,27831388078080000,212299175847866409,1303210000000000000,6714011580463844811,29941085586484887552 ⋆ Number of 5X5 0..n arrays with every element equal to a diagonal or antidiagonal reflection ● a(n) = (n + 1) ^ 9 * ((n + 1) * (2 * n + 1)) ^ 4 ●

► [A156867] 728820,1457820,2186820,2915820,3644820,4373820,5102820,5831820,6560820,7289820,8018820,8747820,9476820,10205820,10934820,11663820,12392820,13121820,13850820,14579820,15308820,16037820,16766820,17495820 ⋆ a(n) = 729000 * n - 180. ● a(n) = 2 * a(n - 1) - a(n - 2). ●

► [A156868] 729180,1458180,2187180,2916180,3645180,4374180,5103180,5832180,6561180,7290180,8019180,8748180,9477180,10206180,10935180,11664180,12393180,13122180,13851180,14580180,15309180,16038180,16767180,17496180 ⋆ a(n) = 729000 * n + 180. ● a(n) = 2 * a(n - 1) - a(n - 2). ●

► [A014889] 761664,817499,817500,817507,817508,819609,823543,1585207,1641042,1641043,1641050,1641051,1643152,1647086,2408750,2464585,2464586,2464593,2464594,2466695,2470629,3232293,3288128,3288129,3288136 ⋆ n is equal to the number of 5s in all numbers <= n written in base 7. ● a(n) = a(n - 1) + a(n - 7) - a(n - 8) for 8 < n <= 34. - _ Chai Wah Wu _ , Jun 06 2016 ●

► [A023348] 774791,924731,4593221,5181641,9905521,11523361,11755831,12253321,14078711,14545331,14928791,18523361,18686531,24169001,25614361,26221051,26834461,30970201,33446521,40051021,42888191,43703201,47528561,48653951 ⋆ Primes that remain prime through 5 iterations of function f(x) = 8x + 3. ● a(n) == 31 (mod 70). - _ John Cerkan _ , Nov 04 2016 ●

► [A016927] 1,823543,62748517,893871739,6103515625,27512614111,94931877133,271818611107,678223072849,1522435234375,3142742836021,6060711605323,11047398519097,19203908986159,32057708828125,51676101935731,80798284478113,122987386542487,182803912081669 ⋆ a(n) = (6 * n + 1) ^ 7. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8). - _ Harvey P. Dale _ , May 12 2015 ●

► [A016987] 0,823543,105413504,1801088541,13492928512,64339296875,230539333248,678223072849,1727094849536,3938980639167,8235430000000,16048523266853,29509034655744,51676101935731 ⋆ a(n) = (7 * n) ^ 7. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8); a(0)=0, a(1)=823543, a(2)=105413504, a(3)=1801088541, a(4)=13492928512, a(5)=64339296875, a(6)=230539333248, a(7)=678223072849. - _ Harvey P. Dale _ , Apr 01 2013 ●

► [A017155] 823543,170859375,3404825447,27512614111,137231006679,506623120463,1522435234375,3938980639167,9095120158391,19203908986159,37725479487783,69833729609375,122987386542487,207616015289871 ⋆ a(n) = (8 * n + 7) ^ 7. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8); a(0)=823543, a(1)=170859375, a(2)=3404825447, a(3)=27512614111, a(4)=137231006679, a(5)=506623120463, a(6)=1522435234375, a(7)=3938980639167. - _ Harvey P. Dale _ , Jan 24 2015 ●

► [A017611] 823543,893871739,27512614111,271818611107,1522435234375,6060711605323,19203908986159,51676101935731,122987386542487,266001988046875,532875860165503,1002544368429379,1789940649848551 ⋆ (12n + 7) ^ 7. ● a(0)=823543, a(1)=893871739, a(2)=27512614111, a(3)=271818611107, a(4)=1522435234375, a(5)=6060711605323, a(6)=19203908986159, a(7)=51676101935731, a(n)=8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8). - _ Harvey P. Dale _ , Sep 30 2015 ●

► [A023347] 831167,1154567,2502767,3019787,3675197,5056577,6352487,14519177,26724377,43003577,47378927,47695607,56406197,86332457,86611757,99568757,121967987,126435527,127990997,128149127,128975057,145281557,155715407 ⋆ Primes which remain prime through 5 iterations of function f(x) = 8x + 1. ● a(n) == 197 (mod 210). - _ John Cerkan _ , Nov 04 2016 ●

► [A157078] 842401,44161201,153090001,327628801,567777601,873536401,1244905201,1681884001,2184472801,2752671601,3386480401,4085899201,4850928001,5681566801,6577815601,7539674401,8567143201,9660222001,10818910801,12043209601 ⋆ a(n) = 32805000 * n ^ 2 - 55096200 * n + 23133601. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A250859] 983950,5480917,20067117,57570016,140301126,303858745,601566177,1109545432,1932426406,3209691541,5122655965,7902083112,11836435822,17280762921,24666221281,34510233360,47427280222,64140330037,85492902061 ⋆ Number of (7 + 1) X (n + 1) 0..3 arrays with nondecreasing x(i,j) - x(i,j - 1) in the i direction and nondecreasing min(x(i,j),x(i - 1,j)) in the j direction. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) for n>7. ●

► [A017514] 1000000,85766121,1073741824,6321363049,24794911296,75418890625,192699928576,433626201009,885842380864,1677100110841,2985984000000,5053913144281,8198418170944,12827693806929,19456426971136 ⋆ a(n) = (11 * n + 10) ^ 6. ● a(n) = 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7); a(0)=1000000, a(1)=85766121, a(2)=1073741824, a(3)=6321363049, a(4)=24794911296, a(5)=75418890625, a(6)=192699928576. - _ Harvey P. Dale _ , Apr 21 2012 ●

► [A017646] 1000000,113379904,1544804416,9474296896,38068692544,117649000000,304006671424,689869781056,1418519112256,2699554153024,4826809000000,8198418170944,13339032325696,20924183895616 ⋆ (12n + 10) ^ 6. ● a(0)=1000000, a(1)=113379904, a(2)=1544804416, a(3)=9474296896, a(4)=38068692544, a(5)=117649000000, a(6)=304006671424, a(n)= 7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7) [From Harvey P. Dale, Aug 27 2011] ●

► [A075977] 1048575,1072694271,33318534175,243847503074,864541650285,3339558541092,5850069838187,26430563206584,105631975698549,422325561509199,747943132188453,3386887960290176,13547120512852878 ⋆ Basis for code in A075976. ● a(n) = b(2 ^ n), where b is A075976, the binary lexicode, d=20. ●

► [A016810] 0,1048576,1073741824,61917364224,1099511627776,10240000000000,63403380965376,296196766695424,1125899906842624,3656158440062976,10485760000000000,27197360938418176,64925062108545024,144555105949057024,303305489096114176,604661760000000000 ⋆ a(n) = (4n) ^ 10. ● a(n) = 11 * a(n - 1) - 55 * a(n - 2) + 165 * a(n - 3) - 330 * a(n - 4) + 462 * a(n - 5) - 462 * a(n - 6) + 330 * a(n - 7) - 165 * a(n - 8) + 55 * a(n - 9) - 11 * a(n - 10) + a(n - 11). - _ Wesley Ivan Hurt _ , Mar 08 2023 ●

► [A076247] 1059774,4187583,8355006,20822715,83391660,144328605,268919295,1339676160,1349598705,2683144950,5361370860,9358549725,17380163775,85563883200,89574690225,173801637750,343262166720,359352580785 ⋆ Trajectory of 1059774 under the Reverse and Add! operation carried out in base 4, written in base 10. ● a(0), ..., a(15) as above; for n > 15 and n = 4 (mod 6): a(n) = 5 * 4 ^ (2 * k + 12) - 5237765 * 4 ^ k where k = (n + 2) / 6; n = 5 (mod 6): a(n) = 5 * 4 ^ (2 * k + 12) + 246174955 * 4 ^ k - 15 where k = (n + 1) / 6; n = 0 (mod 6): a(n) = 10 * 4 ^ (2 * k + 12) + 157132950 * 4 ^ k - 10 where k = n / 6; n = 1 (mod 6): a(n) = 20 * 4 ^ (2 * k + 12) - 20951060 * 4 ^ k where k = (n -

1) / 6; n = 2 (mod 6): a(n) = 20 * 4 ^ (2 * k + 12) + 230461660 * 4 ^ k - 15 where k = (n - 2) / 6; n = 3 (mod 6): a(n) = 40 * 4 ^ (2 * k + 12) + 125706360 * 4 ^ k - 10 where k = (n - 3) / 6. G.f.: - 15 * (185397326496 * x ^ 11 + 95559181296 * x ^ 10 + 91268404224 * x ^ 9 - 183251937960 * x ^ 8 - 92341098492 * x ^ 7 - 91268404224 * x ^ 6 - 48628806952 * x ^ 5 - 27174921532 * x ^ 4 - 22884144448 * x ^ 3 + 46483418410 * x ^ 2 + 23956838719 * x + 22884144448) / ((x - 1) * (x ^ 2 + x + 1) * (2 * x ^ 3 - 1) * (2 * x ^ 3 + 1) * (4 * x ^ 3 - 1)) ●

► [A076248] 1059831,4728312,7831065,14433270,24913965,56412450,92165625,208908750,396926625,710289750,1336954560,1398889905,2715199350,5363547840,5614238385,10894222710,21453945600,21701687025,43073052150 ⋆ Trajectory of 1059831 under the Reverse and Add! operation carried out in base 4, written in base 10. ● a(0), ..., a(7) as above; for n > 7 and n = 2 (mod 6): a(n) = 5 * 4 ^ (2 * k + 9) + 3836395 * 4 ^ k - 15 where k = (n + 4) / 6; n = 3 (mod 6): a(n) = 10 * 4 ^ (2 * k + 9) + 2450070 * 4 ^ k - 10 where k = (n + 3) / 6; n = 4 (mod 6): a(n) = 20 * 4 ^ (2 * k + 9) - 326420 * 4 ^ k where k = (n + 2) / 6; n = 5 (mod 6): a(n) = 20 * 4 ^ (2 * k + 9) + 3544540 * 4 ^ k - 15 where k = (n + 1) / 6; n = 0 (mod 6): a(n) = 40 * 4 ^ (2 * k + 9) + 1927800 * 4 ^ k - 10 where k = n / 6; n = 1 (mod 6): a(n) = 80 * 4 ^ (2 * k + 9) - 322580 * 4 ^ k where k = (n - 1) / 6. G.f.: - 3 * (668508000 * x ^ 19 + 444361200 * x ^ 18 + 222142800 * x ^ 17 - 528080680 * x ^ 16 - 356464620 * x ^ 15 - 125753060 * x ^ 14 - 299532884 * x ^ 13 - 188180432 * x ^ 12 - 143040640 * x ^ 11 + 128992350 * x ^ 10 + 90219415 * x ^ 9 + 38288125 * x ^ 8 + 28112975 * x ^ 7 + 6666425 * x ^ 6 + 5752375 * x ^ 5 + 424135 * x ^ 4 + 3044705 * x ^ 3 + 2610355 * x ^ 2 + 1576104 * x + 353277) / ((x - 1) * (x ^ 2 + x + 1) * (2 * x ^ 3 - 1) * (2 * x ^ 3 + 1) * (4 * x ^ 3 - 1)) ●

► [A157854] 1343760,3071760,4799760,6527760,8255760,9983760,11711760,13439760,15167760,16895760,18623760,20351760,22079760,23807760,25535760,27263760,28991760,30719760,32447760,34175760,35903760,37631760 ⋆ 1728000n - 384240. ● a(n) = 2 * a(n - 1) - a(n - 2). ●

► [A220467] 0,0,0,0,0,0,1601292,314949564,17143061738,423677826986,6210264633994,62831788827614,481992723228798,2982908737810114,15548436178142582,70420082692285198,283631426534134042,1034163399690010346,3461457325296584554,10754832937513676198 ⋆ Number of ways to place 10 nonattacking kings on an n X n board. ● a(n) = n ^ 20 / 3628800 - n ^ 18 / 8960 + n ^ 17 / 6720 + 353 * n ^ 16 / 17280 - 53 * n ^ 15 / 1008 - 29467 * n ^ 14 / 13440 + 11867 * n ^ 13 / 1440 + 25901053 * n ^ 12 / 172800 - 107495 * n ^ 11 / 144 - 8467959 * n ^ 10 / 1280 + 122792641 * n ^ 9 / 2880 + 32499630031 * n ^ 8 / 181440 - 112903333 * n ^ 7 / 72 - 16042907329 * n ^ 6 / 6720 + 36445613711 * n ^ 5 / 1008 - 1784819159 * n ^ 4 / 300 - 9997453897 * n ^ 3 / 21 + 85979117831 * n ^ 2 / 140 + 13635070421 * n / 5 - 5609601346, for n>=9. ●

► [A016868] 1,1679616,214358881,4294967296,37822859361,208827064576,852891037441,2821109907456,7984925229121,20047612231936,45767944570401,96717311574016,191707312997281,360040606269696 ⋆ (5n + 1) ^ 8. ● a(0)=1, a(1)=1679616, a(2)=214358881, a(3)=4294967296, a(4)=37822859361, a(5)=208827064576, a(6)=852891037441, a(7)=2821109907456, a(8)=7984925229121, a(n)=9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9). - _ Harvey P. Dale _ , May 21 2013 ●

► [A017144] 1679616,1475789056,54875873536,656100000000,43477921384496,20047612231936,72301961339136,218340105584896,576480100000000,1370114370683136,2992179271065856,6095689385410816,11716593810022656 ⋆ a(n) = (8 * n + 6) ^ 8. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9); a(0)=1679616, a(1)=1475789056, a(2)=54875873536, a(3)=656100000000, a(4)=43477921384496, a(5)=20047612231936, a(6)=72301961339136, a(7)=218340105584896, a(8)=576480100000000. - _ Harvey P. Dale _ , Jul 23 2016 ●

► [A017600] 1679616,11019960576,656100000000,9682651996416,72301961339136,360040606269696,1370114370683136,4304672100000000,11716593810022656,28525864220672256,63527879748485376,131532383853732096 ⋆ (12n + 6) ^ 8. ● a(0)=1679616, a(1)=11019960576, a(2)=656100000000, a(3)=9682651996416, a(4)=72301961339136, a(5)=360040606269696, a(6)=1370114370683136, a(7)=4304672100000000, a(8)=11716593810022656, a(n)=9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9). - _ Harvey P. Dale _ , Apr 03 2015 ●

► [A157858] 1727760,3455760,5183760,6911760,8639760,10367760,12095760,13823760,15551760,17279760,19007760,20735760,22463760,24191760,25919760,27647760,29375760,31103760,32831760,34559760,36287760,38015760 ⋆ a(n) = 1728000 * n - 240. ● a(n) = 2 * a(n - 1) - a(n - 2). - _ Vincenzo Librandi _ , Jan 25 2012 ●

► [A157862] 1728240,3456240,5184240,6912240,8640240,10368240,12096240,13824240,15552240,17280240,19008240,20736240,22464240,24192240,25920240,27648240,29376240,31104240,32832240,34560240,36288240,38016240 ⋆ a(n) = 1728000 * n + 240. ● a(n) = 2 * a(n - 1) - a(n - 2). - _ Vincenzo Librandi _ , Jan 25 2012 ●

► [A350539] 1948440,1948794,1949149,1949503,1949857,1950212,1950566,1950921,1951275,1951629,1951984,1952338,1952692,1953047,1953401,1953755,1954110,1954464,1954819,1955173,1955527,1955882,1956236,1956590,1956945 ⋆ Chronological Julian day number of the first day (Muharram 1) of Tabular Islamic year n. ● a(n) = floor((n * 10631 + c) / 30) + 1948086. ●

► [A016857] 0,1953125,1000000000,38443359375,512000000000,3814697265625,19683000000000,78815638671875,262144000000000,756680642578125,1953125000000000,4605366583984375,10077696000000000,20711912837890625 ⋆ a(n) = (5n) ^ 9. ● a(0)=0, a(1)=1953125, a(2)=1000000000, a(3)=38443359375, a(4)=512000000000, a(5)=3814697265625, a(6)=19683000000000, a(7)=78815638671875, a(8)=262144000000000, a(9)=756680642578125, a(n)=10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10). - _ Harvey P. Dale _ , Jul 01 2014 ●

► [A017229] 1953125,20661046784,1801152661463,35184372088832,327381934393961,1953125000000000,8662995818654939,31087100296429568,951516944491714,2573274173116636 16,6302494097246093 75,14233118124214845 44 ⋆ a(n) = (9 * n + 5) ^ 9. ● a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10); a(0)=1953125, a(1)=20661046784, a(2)=1801152661463, a(3)=35184372088832, a(4)=327381934393961, a(5)=1953125000000000, a(6)=8662995818654939, a(7)=31087100296429568, a(8)=95151694449171437, a(9)=257327417311663616. - _ Harvey P. Dale _ , Mar 26 2013 ●

► [A195236] 2097152,10322065,20729610,31374671,42029278,52683885,63338492,73993099,84647706,95302313,105956920,116611527,127266134,137920741,148575348,159229955,169884562,180539169,191193776,201848383,212502990,223157597 ⋆ Number of lower triangles of a 6 X 6 0..n array with each element differing from all of its diagonal, vertical, antidiagonal and horizontal neighbors by one or less. ● a(n) = 2 * a(n - 1) - a(n - 2) for n>5. ●

► [A016999] 1,2097152,170859375,2494357888,17249876309,78364164096,271818611107,781250000000,1954897493193,4398046511104,9095120158391,17565568854912,32057708828125,55784660123648 ⋆ a(n) = (7 * n + 1) ^ 7. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8). - _ Wesley Ivan Hurt _ , Jun 26 2022 ●

► [A017263] 2097152,410338673,8031810176,64339296875,319277809664,1174711139837,3521614606208,9095120158391,20971520000000,44231334895529,86812553324672,160578147647843,282621973446656,476837158203125,777571085481344,1222791080775407,1874584905187328 ⋆ a(n) = (9 * n + 8) ^ 7. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8); a(0)=2097152, a(1)=410338673, a(2)=8031810176, a(3)=64339296875, a(4)=319277809664, a(5)=1174711139837, a(6)=3521614606208, a(7)=9095120158391. - _ Harvey P. Dale _ , Apr 06 2013 ●

► [A017491] 2097152,893871739,21870000000,194754273881,1028071702528,3938980639167,12151280273024,32057708828125,75144747810816,160578147647843,318547390056832,594467302491009,1054135040000000,1789940649848551,2928229434235008,4637914326451397,7140436495826944 ⋆ a(n) = (11 * n + 8) ^ 7. ● a(0)=2097152, a(1)=893871739, a(2)=21870000000, a(3)=194754273881, a(4)=1028071702528, a(5)=3938980639167, a(6)=12151280273024, a(7)=32057708828125, a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8). - _ Harvey P. Dale _ , Aug 14 2015 ●

► [A157769] 2515920,11500170,20484420,29468670,38452920,47437170,56421420,65405670,74389920,83374170,92358420,101342670,110326920,119311170,128295420,137279670,146263920,155248170,164232420,173216670,182200920,191185170 ⋆ 8984250n - 6468330. ● a(n) = 2 * a(n - 1) - a(n - 2). ●

► [A157840] 2649601,139478401,483667201,1035216001,1794124801,2760393601,3934022401,5315011201,6903360001,8699068801,10702137601,12912566401,15330355201,17955504001,20788012801,23827881601,27075110401,30529699201 ⋆ 103680000n ^ 2 - 174211200n + 73180801. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A217110] 0,0,0,0,0,0,0,0,0,0,3265920,179625600,5568393600,128432304000,2458427811840,41355201888000,632788296940800,9008498667168000,121205358007493760,1558813928579107200,19326359087766057600,232491479092720848000,2727512837264447527680,31331281164921975283200,353549170783043484480000 ⋆ Number of pandigital numbers with n places. ● a(n) = 9 * 9! * S2(n,10), where the S2(n,10) are the Stirling numbers of the second kind (cf. triangle A008277). ●

► [A217111] 0,0,0,0,0,0,0,0,0,0,3265920,182891520,5751285120,134183589120,2592611400960,43947813288960,676736110229760,9685234777397760,130890592784891520,1689704521363998720,21016063609130056320,253507542701850904320,2981020379966298432000 ⋆ Number of pandigital numbers <= 10 ^ n. ● a(n) = 9 * 9! * Sum _{ j=1..n } S2(j,10), where the S2(j,10) are the Stirling numbers of the second kind (cf. triangle A008277). ●

► [A157106] 3395619,17808513,43524451,80543433,128865459,188490529,259418643,341649801,435184003,540021249,656161539,783604873,922351251,1072400673,1233753139,1406408649,1590367203,1785628801,1992193443,2210061129 ⋆ 5651522n ^ 2 - 2541672n + 285769. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A244620] 3521210,6178458,13220900,15878148,22920590,25577838,32620280,35277528,42319970,44977218,52019660,54676908,61719350,64376598,71419040,74076288,81118730,83775978,90818420,93475668,100518110,103175358,110217800,112875048,119917490 ⋆ Initial terms of Erdős - Wood intervals of length 22. ● a(2 * n + 1) = 3521210 + 9699690 * n. ● a(2 * n + 2) = 6178458 + 9699690 * n. ● a(n) = (- 4849867 - 2192597 * (- 1) ^ n + 9699690 * n) / 2. ● a(n) = a(n - 1) + a(n - 2) - a(n - 3). ●

► [A179065] 0,0,0,0,0,0,0,0,0,3628800,439084800,15807052800,296821324800,3636061228800,32724551059200,232707918643200,1372501805875200,6948290392243200,30967071995059200,123868287980236800 ⋆ Number of non - attacking placements of 10 rooks on an n X n board. ● a(n) = 10! * binomial(n, 10) ^ 2. ●

► [A053501] 1,1,1,1,1,1,1,1,1,1,3628801,43545601,283046401,1320883201,4953312001,15850598401,44910028801,115482931201,274271961601,609493248001,1279935820801,4644633666390681601,10682652035635856640 1,12819181944572623872 01 ⋆ Number of degree - n permutations of order dividing 11. ● a(n) = n! * Sum _{ k=1..n } (if mod(11 * k - n,10)=0 then C(k,(11 * k - n) / 10) * (11) ^ ((k - n) / 10) / k!, else 0), n>0. - _ Vladimir Kruchinin _ , Sep 10 2010 ●

► [A271027] 3661529,14846339,26031149,37215959,48400769,59585579,70770389,81955199,93140009,104324819,115509629,126694439,137879249,149064059,160248669,171433679,182618489,193803299,204988109,216172919,227357729,238542539,249727349,260912159,272096969 ⋆ a(n) = 3661529 + 11184810 * n. ● a(n) = 2 * a(n - 1) - a(n - 2) for n>1. ●

► [A307846] 1,4085185 ⋆ Number of (undirected) cycles in the n - Sierpinski carpet graph. ● a(2) = 7 ^ 8 - 6 ^ 8. ●

► [A016787] 1,4194304,1977326743,100000000000,1792160394037,17592186044416,116490258898219,584318301411328,2384185791015625,8293509467471872,25408476896404831,70188843638032384,177917621779460413,419430400000000000,929293739471222707,1951354384207722496 ⋆ a(n) = (3 * n + 1) ^ 11. ● a(n) = 12 * a(n - 1) - 66 * a(n - 2) + 220 * a(n - 3) - 495 * a(n - 4) + 792 * a(n - 5) - 924 * a(n - 6) + 792 * a(n - 7) - 495 * a(n - 8) + 220 * a(n - 9) - 66 * a(n - 10) + 12 * a(n - 11) - a(n - 12). - _ Wesley Ivan Hurt _ , Apr 12 2023 ●

► [A017167] 0,4782969,612220032,10460353203,78364164096,373669453125,1338925209984,3938980639167,10030613004288,22876792454961,47829690000000,93206534790699,171382426877952,300124211606973 ⋆ a(n) = (9 * n) ^ 7. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8); a(0)=0, a(1)=4782969, a(2)=612220032, a(3)=10460353203, a(4)=78364164096, a(5)=373669453125, a(6)=1338925209984, a(7)=3938980639167. - _ Harvey P. Dale _ , Feb 21 2014 ●

► [A017538] 1,4826809,244140625,2565726409,13841287201,51520374361,151334226289,377149515625,832972004929,1677100110841,3138428376721,5534900853769,9294114390625,14976071831449,23298085122481 ⋆ (12n + 1) ^ 6. ● a(0)=1, a(1)=4826809, a(2)=244140625, a(3)=2565726409, a(4)=13841287201, a(5)=51520374361, a(6)=151334226289, a(n)=7 * a(n - 1) - 21 * a(n - 2) + 35 * a(n - 3) - 35 * a(n - 4) + 21 * a(n - 5) - 7 * a(n - 6) + a(n - 7). - _ Harvey P. Dale _ , Jan 14 2013 ●

► [A157804] 4954951,1658764801,6277377151,13860792001,24409009351,37922029201,54399851551,73842476401,96249903751,121622133601,149959165951,181261000801,215527638151,252759078001,292955320351,336116365201,382242212551 ⋆ a(n) = 1482401250 * n ^ 2 - 2793393900 * n + 1315947601. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A157844] 5126401,154915201,512064001,1076572801,1848441601,2827670401,4014259201,5408208001,7009516801,8818185601,10834214401,13057603201,15488352001,18126460801,20971929601,24024758401,27284947201,30752496001 ⋆ 103680000n ^ 2 - 161251200n + 62697601. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A017360] 5764801,6975757441,282429536481,3512479453921,2381128666176 1,111429157112001,406067677556641,1235736291547681,3282116715437121,7837433594376961,17181861798319201,35114532758015841,67675234241018881 ⋆ a(n) = (10 * n + 7) ^ 8. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9); a(0)=5764801, a(1)=6975757441, a(2)=282429536481, a(3)=3512479453921, a(4)=23811286661761, a(5)=111429157112001, a(6)=406067677556641, a(7)=1235736291547681, a(8)=3282116715437121. - _ Harvey P. Dale _ , Aug 25 2012 ●

► [A157787] 6468330,15452580,24436830,33421080,42405330,51389580,60373830,69358080,78342330,87326580,96310830,105295080,114279330,123263580,132247830,141232080,150216330,159200580,168184830,177169080,186153330,195137580 ⋆ 8984250n - 2515920. ● a(n) = 2 * a(n - 1) - a(n - 2). ●

► [A157797] 6988080,15972330,24956580,33940830,42925080,51909330,60893580,69877830,78862080,87846330,96830580,105814830,114799080,123783330,132767580,141751830,150736080,159720330,168704580,177688830,186673080,195657330 ⋆ a(n) = 8984250 * n - 1996170. ● a(n) = 2 * a(n - 1) - a(n - 2). ●

► [A157378] 7263026,85673537,250177490,500774885,837465722,1260250001,1769127722,2364098885,3045163490,3812321537,4665573026,5604917957,6630356330,7741888145,8939513402,10223232101,11593044242,13048949825,14590948850,16219041317 ⋆ a(n) = 43046721 * n ^ 2 - 50729652 * n + 14945957. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A080340] 7629217,18814027,29998837,41183647,52368457,63553267,74738077,85922887,97107697,108292507,119477317,130662127,141846937,153031747,164216557,175401367,186586177,197770987,208955797,220140607,231325417,242510227 ⋆ First known infinite sequence containing no odd integer of the form 2 ^ m + p (p prime). ● a(n) = n * 11184810 + 7629217. ●

► [A078143] 8870024,33908368,49250144,69147868,70918820,111500620,112931372,164786748,167854344,200997948,203356712,207543320,211014920,216785256,221167422,221167423,221167424,236645624,240574368,262315467,262315468 ⋆ Smallest term of a run of at least 9 consecutive integers which are not squarefree. ● a(n) < 4666864390 * n. With more work this bound can be decreased significantly. - _ Charles R Greathouse IV _ , Nov 05 2017 ●

► [A157815] 8983920,17968170,26952420,35936670,44920920,53905170,62889420,71873670,80857920,89842170,98826420,107810670,116794920,125779170,134763420,143747670,152731920,161716170,170700420,179684670,188668920,197653170 ⋆ a(n) = 8984250 * n - 330. ● a(n) = 2 * a(n - 1) - a(n - 2). ●

► [A157821] 8984580,17968830,26953080,35937330,44921580,53905830,62890080,71874330,80858580,89842830,98827080,107811330,116795580,125779830,134764080,143748330,152732580,161716830,170701080,179685330,188669580,197653830 ⋆ 8984250n + 330. ● a(n) = 2 * a(n - 1) - a(n - 2). ●

► [A270994] 9454129,20638939,31823749,43008559,54193369,65378179,76562989,87747799,98932609,110117419,121302229,132487039,143671849,154856659,166041469,177226279,188411089,199595899,210780709,221965519,233150329,244335139,255519949,266704759,277889569 ⋆ a(n) = 9454129 + 11184810 * n. ● a(n) = 2 * a(n - 1) - a(n - 2) for n > 1. ●

► [A016858] 0,9765625,10000000000,576650390625,10240000000000,95367431640625,590490000000000,2758547353515625,10485760000000000,34050628916015625,97656250000000000,252295162119140625,604661760000000000,1346274334462890625,2824752490000000000 ⋆ (5n) ^ 10. ● a(0)=0, a(1)=9765625, a(2)=10000000000, a(3)=576650390625, a(4)=10240000000000, a(5)=95367431640625, a(6)=590490000000000, a(7)=2758547353515625, a(8)=10485760000000000, a(9)=34050628916015625, a(10)=97656250000000000, a(n)=11 * a(n - 1) - 55 * a(n - 2) + 165 * a(n - 3) - 330 * a(n - 4) + 462 * a(n - 5) - 462 * a(n - 6) + 330 * a(n - 7) - 165 * a(n - 8) + 55 * a(n - 9) - 11 * a(n - 10) + a(n - 11). - _ Harvey P. Dale _ , Jul 07 2013 ●

► [A017179] 1,10000000,893871739,13492928512,94931877133,435817657216,1522435234375,4398046511104,11047398519097,24928547056768,51676101935731,100000000000000,182803912081669,318547390056832 ⋆ (9n + 1) ^ 7. ● a(0)=1, a(1)=10000000, a(2)=893871739, a(3)=13492928512, a(4)=94931877133, a(5)=435817657216, a(6)=1522435234375, a(7)=4398046511104; for n>7, a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8). - _ Harvey P. Dale _ , Jan 16 2014 ●

► [A017061] 10077696,10604499373,512000000000,7625597484987,60716992766464,327381934393961,1352605460594688,4605366583984375,13537086546263552,35452087835576229,84590643846578176,186940255267540403 ⋆ a(n) = (7 * n + 6) ^ 9. ● a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10). - _ Wesley Ivan Hurt _ , Jan 02 2022 ●

► [A157762] 10662963,52387849,125674659,230523393,366934051,534906633,734441139,965537569,1228195923,1522416201,1848198403,2205542529,2594448579,3014916553,3466946451,3950538273,4465692019,5012407689,5590685283 ⋆ a(n) = 15780962 * n ^ 2 - 5618000 * n + 500001. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A164338] 12334444,55667777,123334444,556667777,1233334444,5566667777,12333333444,55666667777,123333334444,556666667777,1233333334444,5566666667777,12333333333444,55666666667777,123333333334444 ⋆ Conway's creeper sequence ● a(n + 2) = 10 a(n) - 9996 (n odd) ● a(n + 2) = 10 a(n) - 9993 (n even) ● a(n + 4) = 11 a(n + 2) - 10 a(n) ●

► [A070189] 0,12345679,24691358,37037037,49382716,61728395,74074074,86419753,98765432,111111111,123456790,135802469,148148148,160493827,172839506,185185185,197530864,209876543,222222222,234567901,246913580,259259259 ⋆ 12345679n. ● a(n)=n * (10 ^ (10 - 1) - 1) / (10 - 1) ^ 2 ●

► [A353025] 1,13527684,34857216,65318724,73256481,81432576,139854276,152843769,157326849,215384976,245893761,254817369,326597184,361874529,375468129,382945761,385297641,412739856,523814769,529874361,537219684,549386721,587432169,589324176,597362481 ⋆ Terms of A352991 which are perfect powers. ● a(n) = m ^ 2, where the integer m := m(n) is not a perfect power itself (conjectured). ●

► [A111346] 14348908,134217729,1073741825,139314069505,231928233985,264479053825,282429536482,618475290625,705277476865,3570467226625,4398046511105,8349416423425,21134460321793,35664401793025,91507169819845 ⋆ Pierpont 6 - almost primes. 6 - almost primes of form (2 ^ K) * (3 ^ L) + 1. ● a(n) is in this sequence iff there exist nonnegative integers K and L such that Omega((2 ^ K) * (3 ^ L) + 1) = 6. ●

► [A017000] 1,16777216,2562890625,54875873536,500246412961,2821109907456,11688200277601,39062500000000,111429157112001,281474976710656,645753531245761,1370114370683136,2724905250390625,5132188731375616 ⋆ a(n) = (7 * n + 1) ^ 8. ● a(0)=1, a(1)=16777216, a(2)=2562890625, a(3)=54875873536, a(4)=500246412961, a(5)=2821109907456, a(6)=11688200277601, a(7)=39062500000000, a(8)=111429157112001, a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9). - _ Harvey P. Dale _ , Mar 30 2012 ● a(n) = 1679616 - 15676416 * n + 64012032 * n ^ 2 - 149361408 * n ^ 3 + 217818720 * n ^ 4 - 203297472 * n ^ 5 + 118590192 * n ^ 6 - 39530064 * n ^ 7 + 5764801 * n ^ 8. - _ Harvey P. Dale _ , Mar 30 2012 ●

► [A017372] 16777216,11019960576,377801998336,4347792138496,28179280429056,128063081718016,457163239653376,1370114370683136,3596345248055296,8507630225817856,18509302102818816,37588592026706176,72057594037927936,131532383853732096,230193853492166656 ⋆ (10 * n + 8) ^ 8. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9). ●

► [A138025] 19099919,52554569,85864769,171729539,198479579,226366139,305192579,344319029,396959159,474118349,574964129,610385159,685066979,764406059,1085182229,1126004219,1195651139,1372213439,1484454269,1573750049,2270291519,2365144079,2400025739 ⋆ Numbers n such that n remains prime through 7 iterations of function f(x) = 2x + 1. ● a(n) == 29 (mod 30). - _ John Cerkan _ , Nov 30 2016 ●

► [A017659] 19487171,3404825447,64339296875,506623120463,2488651484819,9095120158391,27136050989627,69833729609375,160578147647843,337931541778439,662062621900811,1222791080775407,2149422977421875 ⋆ a(n) = (12n + 11) ^ 7. ● a(n) = 8 * a(n - 1) - 28 * a(n - 2) + 56 * a(n - 3) - 70 * a(n - 4) + 56 * a(n - 5) - 28 * a(n - 6) + 8 * a(n - 7) - a(n - 8). - _ Harvey P. Dale _ , May 16 2012 ●

► [A157079] 23133601,111034801,264546001,483667201,768398401,1118739601,1534690801,2016252001,2563423201,3176204401,3854595601,4598596801,5408208001,6283429201,7224260401,8230701601,9302752801,10440414001,11643685201 ⋆ a(n) = 32805000 * n ^ 2 - 10513800 * n + 842401. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A243364] 23456789,23458679,23459687,23465789,23465987,23469587,23475869,23478569,23489657,23495867,23496587,23498567,23546879,23546987,23548697,23564897,23564987,23567849,23569487,23576489,23584679,23587649,23589647,23594687,23645879 ⋆ Primes whose reverse concatenation of divisors (A176558) contains all the digits 1 - 9 exactly once; the number of digits 0 is arbitrary (in base 10). ● a(1) ... a(3098) = A160402; a(3099) ... a(22656) = A243363; ... ●

► [A103576] 31000003,371000037,1511000151,1931000193,1991000199,2111000211,3131000313,3671000367,3971000397,4091000409,4571000457,5411000541,5471000547,5771000577,6191000619,6911000691,8291000829,8591000859 ⋆ Concatenations of pairs of primes that differ by 1000000. ● a(n) = Concatenate(P, P + 1000000) iff P prime and P + 1000000 prime. ●

► [A215414] 0,31536000,63072000,94694400,126230400,157766400,189302400,220924800,252460800,283996800,315532800,347155200,378691200,410227200,441763200,473385600,504921600,536457600,567993600,599616000,631152000,662688000,694224000,725846400,757382400 ⋆ Unix epoch timestamp for start of year, beginning with 1970. ● a(n) = 10800 * (2922 * n + (- 1) ^ n + (1 + i) * (- i) ^ n + (1 - i) * i ^ n - 2923). ● a(n + 4) = a(n) + 126230400. ●

► [A157080] 32788801,131187601,295196401,524815201,820044001,1180882801,1607331601,2099390401,2657059201,3280338001,3969226801,4723725601,5543834401,6429553201,7380882001,8397820801,9480369601 ⋆ a(n) = 32805000 * n ^ 2 - 16200 * n + 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A157081] 32821201,131252401,295293601,524944801,820206001,1181077201,1607558401,2099649601,2657350801,3280662001,3969583201,4724114401,5544255601,6430006801,7381368001,8398339201,9480920401,10629111601,11842912801 ⋆ a(n) = 32805000 * n ^ 2 + 16200 * n + 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A232636] 34012224,53747712,131010048,204073344,322486272,786060288,1224440064,1934917632,4716361728,7346640384,11609505792,28298170368,44079842304,69657034752,169789022208,264479053824,417942208512 ⋆ The second larges

t value of permanent of (0,1) square matrices of order n with row and column s ums equal to 3. ● a(n) = 9 / 16 * 6 ^ (n / 3), if n>=12, n==0 (mod 3) (Bolsha kov); a(n) = 8 / 9 * 6 ^ ((n - 1) / 3), if n>=28, n== 1 (mod 3); a(n) = 13 / 6 * 6 ^ ((n - 2) / 3), if n>=32, n==2 (mod 3). ● a(n) = 6 * a(n - 3) for n>32. ●

► [A263347] 37158601,1017439067,1242117623,1554424697,1905955429,2727763433,4512543497,4798554619,4954643117,4988327659,5367644183,5660978867,6107173883,7173264623,7425967459,8365215091,8776906457,9013226179,9095014883,9787717801,10466795551 ⋆ Odd numbers n such that for every k >= 1, n * 2 ^ k + 1 has a divisor in the set { 3, 5, 13, 17, 97, 241, 257 } . ● a(n) = a(n - 96) + 39832304070 for n > 96. ●

► [A272517] 37837800,100900800,588107520,2977294320,20020160160,164118754800,635661248040,3295178686800,17741374681800,95826446465904,623399389674600,2664090278249400,13876038856379700,71797074694745400,37527409887063620,219991143307973100 ⋆ Number of set partitions of [n] into five blocks with distinct sizes. ● a(n) = n! * [x ^ n * y ^ 5] Product _{ n>=1 } (1 + y * x ^ n / n!). ●

► [A016929] 1,40353607,10604499373,322687697779,3814697265625,26439622160671,129961739795077,502592611936843,1628413597910449,4605366583984375,11694146092834141,27206534396294947,58871586708267913,118951595982618319,231616946283203125,427929800129788411 ⋆ a(n) = (6 * n + 1) ^ 9. ● a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10). - _ Harvey P. Dale _ , Mar 22 2015 ●

► [A017361] 40353607,118587876497,7625597484987,129961739795077,1119130473102767,6351461955384057,27206534396294947,95151694449171437,285544154243029527,760231058654565217,1838459212420154507,4108400332687853397 ⋆ a(n) = (10 * n + 7) ^ 9. ● a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10); a(0)=40353607, a(1)=118587876497, a(2)=7625597484987, a(3)=129961739795077, a(4)=1119130473102767, a(5)=6351461955384057, a(6)=27206534396294947, a(7)=95151694449171437, a(8)=285544154243029527, a(9)=760231058654565217. - _ Harvey P. Dale _ , Dec 28 2011 ●

► [A017613] 40353607,322687697779,26439622160671,502592611936843,4605366583984375,27206534396294947,119851595982618319,427929800129788411,1304773183829244583,3517876291919921875,8594754748609397887 ⋆ (12n + 7) ^ 9. ● a(0)=40353607, a(1)=322687697779, a(2)=26439622160671, a(3)=502592611936843, a(4)=4605366583984375, a(5)=27206534396294947, a(6)=119851595982618319, a(7)=427929800129788411, a(8)=1304773183829244583, a(9)=3517876291919921875, a(n)= 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10). - _ Harvey P. Dale _ , Jan 11 2016 ●

► [A263561] 42270067,97579567,340716433,721933559,890948323,1726122269,1865978047,1889699677,2362339121,3185721853,3637126963,4668508603,5064217117,5569622789,7480754459,7701804269,8594194301,9005098303,9180863669,9939496717,9979211051 ⋆ Odd numbers n such that for every k >= 1, n * 2 ^ k - 1 has a divisor in the set { 3, 5, 13, 17, 97, 241, 257 } . ● a(n) = a(n - 96) + 39832304070 for n > 96. ●

► [A017084] 1,43046721,6975757441,152587890625,1406408618241,7984925229121,33232930569601,111429157112001,318644812890625,806460091894081,1853020188851841,3936588805702081,7837433594376961,14774554437890625 ⋆ a(n) = (8 * n + 1) ^ 8. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9); a(0)=1, a(1)=43046721, a(2)=6975757441, a(3)=152587890625, a(4)=1406408618241, a(5)=7984925229121, a(6)=33232930569601, a(7)=111429157112001, a(8)=318644812890625. - _ Harvey P. Dale _ , Feb 26 2012 ●

► [A017168] 0,43046721,11019960576,282429536481,2821109907456,16815125390625,72301961339136,248155780267521,722204136308736,1853020188851841,4304672100000000,9227446944279201,18509302102818816,35114532758015841 ⋆ a(n) = (9 * n) ^ 8. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9); a(0)=0, a(1)=43046721, a(2)=11019960576, a(3)=282429536481, a(4)=2821109907456, a(5)=16815125390625, a(6)=72301961339136, a(7)=248155780267521, a(8)=722204136308736. - _ Harvey P. Dale _ , May 01 2013 ●

► [A017384] 43046721,16983563041,500246412961,5352009260481,33232930569601,146830437604321,513798374428641,1517108809906561,3936588805702081,9227446944279201,19925626416901921,40213853471634241,76686282021340161 ⋆ a(n) = (10 * n + 9) ^ 8. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9), n > 8. ●

► [A017504] 43046721,25600000000,852891037441,9682651996416,62259690411361,281474976710656,1001129150390625,2992179271065856,7837433594376961,18509302102818816,40213853471634241,81573072100000000 ⋆ a(n) = (11 * n + 9) ^ 8. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9). - _ Harvey P. Dale _ , Dec 25 2013 ●

► [A017062] 60466176,137858491849,10240000000000,205891132094649,2064377754059776,13422659310152401,64925062108545024,253295162119140625,839299365868340224,2446194060654759801,6428888932339941376 ⋆ a(n) = (7 * n + 6) ^ 10. ● a(n) = 11 * a(n - 1) - 55 * a(n - 2) + 165 * a(n - 3) - 330 * a(n - 4) + 462 * a(n - 5) - 462 * a(n - 6) + 330 * a(n - 7) - 165 * a(n - 8) + 55 * a(n - 9) - 11 * a(n - 10) + a(n - 11). - _ Wesley Ivan Hurt _ , Jan 02 2022 ●

► [A157855] 62697601,327628801,799920001,1479571201,2366582401,3460953601,4762684801,6271776001,7988227201,9912038401,12043209601,14381740801,16927632001,19680883201,22641494401,25809465601,29184796801,32767488001 ⋆ 103680000n ^ 2 - 46108800n + 5126401. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A120316] 81450625,12594450625,29661450625,81924750625,195562950625,233313150625,308052750625,379733250625,764269350625,1490902050625,4606281750625,4995336750625,5551796250625,7502257950625,8450794350625,25857479250625 ⋆ Consecutive refactorable numbers a(n) - 1, a(n) in which 5 is the smallest prime divisor of a(n). ● a(n) is the first integer of the form (5 * k) ^ (5 - 1) such that both a(n) and a(n) - 1 is refactorable and 5 is the smallest prime divisor of a(n). ●

► [A138030] 85864769,198479579,305192579,2400025739,7606886429,7755909149,10378311899,16744125509,17029114499,17117793089,17574340739,26089808579,28889527679,43390196519,45424068359,52179617159,54293956289,56838102179,65639153579,66655116659 ⋆ Numbers n such that n remains prime through 8 iterations of function f(x) = 2x + 1. ● a(n) == 89 or 329 (mod 330). - _ John Cerkan _ , Nov 30 2016 ●

► [A017516] 100000000,37822859361,1099511627776,11688200277601,72301961339136,318644812890625,1113034787454976,3282116715437121,8507630225817856,19925626416901921,42998169600000000,86730203469006241 ⋆ a(n) = (11 * n + 10) ^ 8. ● a(n) = 9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9). - _ Harvey P. Dale _ , Mar 28 2015 ●

► [A017648] 100000000,54875873536,1785793904896,20047612231936,128063081718016,576480100000000,2044140858654976,6095689385410816,15938480745308416,37588592026706176,81573072100000000,165312903998914816 ⋆ (12n + 10) ^ 8. ● a(0)=100000000, a(1)=54875873536, a(2)=1785793904896, a(3)=20047612231936, a(4)=128063081718016, a(5)=576480100000000, a(6)=2044140858654976, a(7)=6095689385410816, a(8)=15938480745308416, a(n)=9 * a(n - 1) - 36 * a(n - 2) + 84 * a(n - 3) - 126 * a(n - 4) + 126 * a(n - 5) - 84 * a(n - 6) + 36 * a(n - 7) - 9 * a(n - 8) + a(n - 9). - _ Harvey P. Dale _ , Jul 28 2015 ●

► [A157859] 103651201,414662401,933033601,1658764801,2591856001,3732307201,5080118401,6635289601,8397820801,10367712001,12544963201,14929574401,17521545601,20320876801,23327568001,26541619201,29963030401,33591801601 ⋆ a(n) = 103680000 * n ^ 2 - 28800 * n + 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Jan 25 2012 ●

► [A157863] 103708801,414777601,933206401,1658995201,2592144001,3732652801,5080521601,6635750401,8398339201,10368288001,12545596801,14930265601,17522294401,20321683201,23328432001,26542540801,29964009601,33592838401 ⋆ a(n) = 103680000 * n ^ 2 + 28800 * n + 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). - _ Vincenzo Librandi _ , Jan 25 2012 ●

► [A172525] 111111111,222222222,333333333,444444444,555555555,666666666,777777777,888888888,999999999,1111111110,1222222221,1333333332,1444444443,1555555554,1666666665,1777777776,1888888887,1999999998,2111111109 ⋆ 9 * n * 12345679. ● a(n) = 2 * a(n - 1) - a(n - 2). - _ Colin Barker _ , Aug 20 2014 ●

► [A157770] 116250751,2428905601,7706362951,15948622801,27155685151,41327550001,58464217351,78565687201,101631959551,127663034401,156658911751,188619591601,223545073951,261435358801,302290446151,346110336001,392895028351,442644523201,495358820551 ⋆ 1482401250n ^ 2 - 2134548900n + 768398401. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A050289] 123456789,123456798,123456879,123456897,123456978,123456987,123457689,123457698,123457869,123457896,123457968,123457986,123458679,123458697,123458769,123458796,123458967,123458976,123459678,123459687,123459768,123459786,123459867,123459876,123465789 ⋆ Zeroless pandigital numbers: numbers containing the digits 1 - 9 (each appearing at least once) and no 0's. ● a(n + 9!) = a(n) + 10 ^ 9 for 1 <= n <= 8! + 7!. - _ M. F. Hasler _ , Jan 08 2020, corrected Aug 11 2022 ●

► [A053654] 123456789,246913578,370370367,493827156,617283945,740740734,864197523,987654312,1111111101,1234567890,1358024679,1481481468,1604938257,1728395046,1851851835,1975308624,2098765413,2222222202,2345678991 ⋆ Multiples of 123456789. ● a(n) = 2 * a(n - 1) - a(n - 2). - _ Wesley Ivan Hurt _ , Apr 25 2023 ●

► [A046327] 223092870,3234846615,33426748355,247357937827,1448810778701,5663533044013,20475850236047,63836474265323,198229051666003,525737919635921,1214635883296783,2781907990776503,5488629279099587 ⋆ Numbers that are the product of 9 successive primes. ● a(n) = Product _{ j=n..n + 8 } prime(j). - _ Jon E. Schoenfield _ , Jan 07 2015 ●

► [A231202] 0,259627885,282647041,290272800,293735421,295599350,296717583,297441109,297936141,298289730,298551077,298749699,298904183,299026704,299125511,299206353,299273337,299329458,299376946,299417483,299452365,299482595,299508967,299532109 ⋆ The smallest possible speed in m / s (rounded up) of an object whose relativistic mass is n times its rest mass. ● a(n) = ceiling(A003678 * sqrt(1 - 1 / n ^ 2)). ●

► [A195237] 268435456,1663418313,3601738548,5618308863,7640055854,9661943973,11683832092,13705720211,15727608330,17749496449,19771384568,21793272687,23815160806,25837048925,27858937044,29880825163,31902713282,33924601401 ⋆ Number of lower triangles of a 7 X 7 0..n array with each element differing from all of its diagonal, vertical, antidiagonal and horizontal neighbors by one or less. ● a(n) = 2 * a(n - 1) - a(n - 2) for n>6. ●

► [A017158] 282475249,576650390625,414265112136 49,819628286980801,8140406085191601,52599132235830049,253295162119140625,984930291881790849,3255243551009881201,9468276082626847201 ⋆ a(n) = (8 * n + 7) ^ 10. ● a(n) = 11 * a(n - 1) - 55 * a(n - 2) + 165 * a(n - 3) - 330 * a(n - 4) + 462 * a(n - 5) - 462 * a(n - 6) + 330 * a(n - 7) - 165 * a(n - 8) + 55 * a(n - 9) - 11 * a(n - 10) + a(n - 11). - _ Wesley Ivan Hurt _ , Apr 22 2021 ●

► [A113739] 339738625,10460353204,83682825625,669462604993,2641807540225,3761479876609,7625597484988,18075490334785,35184372088833,481469424205825,488038239039169,570630428688385,1125899906842625 ⋆ Pierpont 7 - almost primes. 7 - almost primes of form (2 ^ K) * (3 ^ L) + 1. ● a(n) is in this sequence iff there exist nonnegative integers K and L such that Omega((2 ^ K) * (3 ^ L) + 1) = 7. ●

► [A016871] 1,362797056,285311670611,17592186044416,350277500542221,3670344486987776,25408476896404831,131621703842267136,550329031716248441,1951354384207722496,6071163615208263051 ⋆ a(n) = (5n + 1) ^ 11. ● a(n) = 12 * a(n - 1) - 66 * a(n - 2) + 220 * a(n - 3) - 495 * a(n - 4) + 792 * a(n - 5) - 924 * a(n - 6) + 792 * a(n - 7) - 495 * a(n - 8) + 220 * a(n - 9) - 66 * a(n - 10) + 12 * a(n - 11) - a(n - 12). - _ Wesley Ivan Hurt _ , May 02 2023 ●

► [A016919] 0,362797056,743008370688,64268410079232,1521681143169024,17714700000000000,131621703842267136,717368321110468608,3116402981210161152,11384956040305711104,36279705600000000000 ⋆ a(n) = (6 * n) ^ 11. ● a(x) = 362797056 * (x - 1) * (x ^ 10 - 10 * x ^ 9 + 45 * x ^ 8 - 120 * x ^ 7 + 210 * x ^ 6 - 252 * x ^ 5 + 210 * x ^ 4 - 120 * x ^ 3 + 45 * x ^ 2 - 10 * x + 1). - _ Harvey P. Dale _ , Dec 22 2013 ●

► [A017637] 387420489,794280046581,46411484401953,756680642578125,6351461955384057,35452087835576229,150094635296999121,520411082988487293,1551328215978515625,4108400332687853397 ⋆ (12n + 9) ^ 9. ● a(0)=387420489, a(1)=794280046581, a(2)=46411484401953, a(3)=756680642578125, a(4)=6351461955384057, a(5)=35452087835576229, a(6)=150094635296999121, a(7)=520411082988487293, a(8)=1551328215978515625, a(9)=4108400332687853397, a(n)=10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10). - _ Harvey P. Dale _ , Jun 22 2013 ●

► [A101641] 499999984,499999985,499999986,499999987,499999988,499999989,499999990,499999991,499999992,499999993,500000000,10000000000,10499999984,10499999985,10499999986,10499999987,10499999988,10499999989 ⋆ Positive integers n for which n = f(n), where f(n) is the total number of 4's required when writing out all numbers between 0 and n. ● a(n) = 499999983 + n, n <= 10; a(n) = 500000000, n = 11 ●

► [A157788] 768398401,4385348551,10967101201,20513656351,33025014001,48501174151,66942136801,88347901951,112718469601,140053839751,170354012401,203618987551,239848765201,279043345351,321202728001,366326913151,414415900801 ⋆ 1482401250n ^ 2 - 830253600n + 116250751. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A157798] 896845951,4685313601,11438583751,21156656401,33839531551,49487209201,68099689351,89676972001,114219057151,141725944801,172197634951,205634127601,242035422751,281401520401,323732420551,369028123201,417288628351 ⋆ a(n) = 1482401250 * n ^ 2 - 658736100 * n + 73180801. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A287171] 998051413,4976990483,5038640083,5280622483,5901887533,6840045103,8733200093,11838052453,11978292923,12348742883,12844988753,13009792643,13658681843,13849573433 ⋆ Initial prime in set of 4 consecutive primes in arithmetic progression with difference 78. ● a(n) >> n log ^ 4 n. - _ Charles R Greathouse IV _ , May 28 2017 ●

► [A157816] 1482292351,5929387201,13341284551,23717984401,37059486751,53365791601,72636898951,94872808801,120073521151,148239036001,179369353351,213464473201,250524395551,290549120401,333538647751,379492977601,428412109951 ⋆ a(n) = 1482401250 * n ^ 2 - 108900 * n + 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A157822] 1482510151,5929822801,13341937951,23718855601,37060575751,53367098401,72638423551,94874551201,120075481351,148241214001,179371749151,213467086801,250527226951,290552169601,333541914751,379496462401,428415812551 ⋆ 1482401250n ^ 2 + 108900n + 1. ● a(n) = 3 * a(n - 1) - 3 * a(n - 2) + a(n - 3). ●

► [A017397] 0,2357947691,1207269217792,46411484401953,618121839509504,4605366583984375,23762680013799936,95151694449171437,316478381828866048,913517247483640899,2357947691000000000,5559917313492231481 ⋆ a(n) = (11 * n) ^ 9. ● a(n) = 10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10); a(0)=0, a(1)=2357947691, a(2)=1207269217792, a(3)=46411484401953, a(4)=618121839509504, a(5)=4605366583984375, a(6)=23762680013799936, a(7)=95151694449171437, a(8)=316478381828866048, a(9)=913517247483640899. - _ Harvey P. Dale _ , Aug 27 2013 ●

► [A017086] 1,3486784401,2015993900449,95367431640625,1531578985264449,13422659310152401,797922662976120 01,360233331456891249,1346274334462890625,4297625829703557649,12157665459056928801 ⋆ a(n) = (8 * n + 1) ^ 10. ● a(n) = 282475249 - 3228288560 * n + 16602626880 * n ^ 2 - 50598481920 * n ^ 3 + 101196963840 * n ^ 4 - 138784407552 * n ^ 5 + 132175626240 * n ^ 6 - 86318776320 * n ^ 7 + 36993761280 * n ^ 8 - 9395240960 * n ^ 9 + 1073741824 * n ^ 10. - _ Harvey P. Dale _ , Nov 01 2011 ●

► [A017409] 1,5159780352,1801152661463,60716992766464,756680642578125,5416169448144896,27206534396294947,106868920913284608,350356403707485209,1000000000000000000,2558036924386500591 ⋆ a(n) = (11n + 1) ^ 9. ● a(0)=1, a(1)=5159780352, a(2)=1801152661463, a(3)=60716992766464, a(4)=756680642578125, a(5)=5416169448144896, a(6)=27206534396294947, a(7)=106868920913284608, a(8)=350356403707485209, a(9)=1000000000000000000, a(n)=10 * a(n - 1) - 45 * a(n - 2) + 120 * a(n - 3) - 210 * a(n - 4) + 252 * a(n - 5) - 210 * a(n - 6) + 120 * a(n - 7) - 45 * a(n - 8) + 10 * a(n - 9) - a(n - 10). - _ Harvey P. Dale _ , Mar 13 2013 ●

► [A099600] 0,0,33333333333,97777777778,188000000000,296266666667,413555555556,530844444444,640314074074,736230320988,815361224691,876907483128,922041405981,953224843588,973494078033,985863508285,992931754142,996701485266,998570643615,999428257446,999790361064,999930120355,999979036106,999994409628,999998695580 ⋆ Inventory application: Numerator of the probability (rounded to the nearest trillionth: (10 ^- 12) - th) of at least one shortage per month when n customers each request one item on one independently - chosen random day of a 30 - day month, but when only exactly one such item is available per day. ● a(n) = round(10 ^ 12 * (1. - 30! / ((30 - n)! * 30 ^ n))) for 0 <= n <= 30. This corresponds, with d=30, to P _ 2(n, d) at the MathWorld Birthday Problem link. Clearly the probability is 1 and so a(n) = 10 ^ 12 here for all n > 30. ●

► [A103617] 71000000007,971000000097,1031000000103,1811000000181,2231000000223,2411000000241,2711000000271,3491000000349,4091000000409,4331000000433,4391000000439,6071000000607,6131000000613,7871000000787,8291000000829 ⋆ Concatenations of pairs of primes that differ by 10 ^ 9. ● a(n) = Concatenate(P, P + 1000000000) iff P prime and P + 1000000000 prime. ●

► [A074337] 107928278317,117851061187,127773844057,137696626927,147619409797,157542192667,167464975537,177387758407,187310541277,197233324147,207156107017,217078889887,227001672757,236924455627,246847238497,256770021367,266692804237,276615587107 ⋆ 18 primes in arithmetic progression. ● a(n)=107928278317 + n * 9922782870, n = 0, 1, 2, ...17 ●

► [A290157] 151646890045,836564809606,942785024683,1930996724334,3710346558623,6584128307640,12225471590597,22519946456860,41329546355097,76074964402554,139924457214511,257328967972162,473328389589227,870581814775900,1601239172337289,2945149376702416 ⋆ Tribonacci - like sequence of composite numbers with a(0) = 151646890045, a(1) = 836564809606 and a(2) = 942785024683. ● a(n) = a(n - 1) + a(n - 2) + a(n - 3) for n>2. ●

► [A076254] 248971642920,497943285840,746914928760,995886571680,1493829857520,1991773143360 ⋆ A list of six integers with property that for every 3 numbers a,b,c from the list axbxc is an integer, where axb=a * b / (a + b) and axbxc=a * b * c / (a * b + a * c + b * c). This is the so - called replus operation. ● a(n)=n * a(1) for n=1, 2, 3, 4 a(5)=6 * a(1), a(6)=8 * a(1) ●

► [A289111] 444813635231,188094798109001,375744782582771,563394767056541,751044751530311,938694736004081,1126344720477851,1313994704951621,1501644468942539 1,1689294673899161,1876944658372931,2064594642846701,2252244627320471,2439894611794241 ⋆ a(n) = (2 ^ 49 - 2) * n / 3 + 444813635231. ● a(n) = (2 ^ 49 - 2) * n / 3 + 444813635231. ● a(n) = 7 * (63544805033 + 26807140639110 * n). ● a(n) = 2 * a(n - 1) - a(n - 2) for n>1. ●

► [A122126] 32353461605953,98748204419968 57,108212083570456 99,20261841065985329,30672624709674923,126540093912585209,267908140423628051,538379772006780299,1713808283318707391,2413049165702037271 ⋆ Primes of form Sum[Prime[k] ^ 5, { k,1,n }] or primes in A122103[n]. ● a(n) = A122103[A122125[n]]. ●

► [A104873] 611000000000061,1631000000000163,1931000000000193,2111000000000211,2711000000000271,3311000000000331,5471000000000547,6611000000000661,7511000000000751,7871000000000787,9971000000000997,10511000000001051 ⋆ Concatenations of pairs of primes that differ by 10 ^ 12. ● a(n) = Concatenate(P, P + 10 ^ 12) iff P prime and P + 10 ^ 12 prime. ●

► [A204189] 43142746595714191,48425980631694091,53709214667673991,58992448703653891,64275682739633791,69558916775613691,74842150811593591,80125384847573491,85408618883553391,90691852919533291,95975086955513191,101258320991493091,106541555027472991,111824789063452891,117108023099432791,122391257135412691,127674491171392591,132957725207372491,138240959243352391,143524193279332291,148807427315312191,154090661351292091,159373895387271991,164657129423251891,169940363459231791 ⋆ Benoît Perichon's 26 primes in arithmetic progression. ● a(n) = 43142746595714191 + 5283234035979900 * (n - 1) for n = 1, 2, ..., 26. ●

► [A317163] 48277590120607451,56718325365929831,65159060611252211,73599795856574591,82040531101896971,90481266347219351,98922001592541731,107362736837864111,115803472083186491,124244207328508871,132684942573831251,141125677819153631,149566413064476011 ⋆ a(n) = 48277590120607451 + (n - 1) * 8440735245322380. ● a(n) = 48277590120607451 + a(n - 1) * 37835074 * 23 # , where 23 # := 2 * 3 * 5 * 7 * 11 * 13 * 17 * 19 * 23 = 223092870. ●

► [A317164] 55837783597462913,69696715810679003,83555648023895093,97414580237111183,111273512450327273,125132444663543363,138991376876759453,152850309089975543,166709241303191633,180568173516407723,194427105729623813,208286037942839903,222144970156055993 ⋆ a(n) = 55837783597462913 + (n - 1) * 13858932213216090. ● a(n) = 455837783597462913 + a(n - 1) * 62121807 * 23 # , where 23 # := 2 * 3 * 5 * 7 * 11 * 13 * 17 * 19 * 23 = 223092870. ●

► [A317914] 142099325379199423,145791319402366873,149483313425534323,153175307448701773,156867301471869223,160559295495036673,164251289518204123,167943283541371573,171635277564539023,175327271587706473,179019265610873923 ⋆ a(n) = 142099325379199423 + (n - 1) * 3691994023167450. ● a(n) = 142099325379199423 + a(n - 1) * 16549135 * 23 # , where 23 # := 2 * 3 * 5 * 7 * 11 * 13 * 17 * 19 * 23 = 223092870. ●

► [A308287] 185786062728816307,213323700687847507,240861338646878707,268398976605909907,295936614564941107,323474252523972307,351011890483003507,378549528442034707,406087166401065907,433624804360097107,461162442319128307,488700080278159507,516237718237190707,543775356196221907,571312994155253107,598850632114284307,626388270073315507,653925908032346707,681463545991377907,709001183950409107 ⋆ Length 20 arithmetic progression of primes (PAP - 20). ● a(n) = 185786062728816307 + 123435760 * 23 #* n for n = 0..19. ●

► [A270271] 201446503145165177,100723691377168162 9,169790624079385891 72,233102382210683959 9,293536333154192553 1,336703440984407348 3,391404260407577983 7,486349524687030831 1,503616257862585263 3,559019666944633286 3,670529076472171867 9,728444944408382254 7 ⋆ Odd numbers n such that for every k >= 1, n * 2 ^ k + 1 has a divisor in the set { 3, 5, 17, 257, 641, 65537, 6700417 } . ● a(n) = a(n - 64) + 2 * (2 ^ 64 - 1) for n > 64. ●

► [A363980] 277699295941594831,315809464967513821,353919633993432811,392029803019351801,430139972045270791,468250141071189781,506360310097108771,544470479123027761,582580648148946751,620690817174865741,658800986200784731,696911155226703721,735021324252622711 ⋆ Primes in Tom Greer's arithmetic progression of 27 primes. ● a(n + 1) = 277699295941594831 + n * 708267477 * 223092870, for n = 0, 1, ..., 26. ●

► [A286481] 100306228999939142,100306229989993914 2,100306238998993914 2,100306239988993914 2,100306248997993914 2,100306249987993914 2,100306258996993914 2,100306259986993914 2,100306268995993914 2,100306269985993914 2,100306278994993914 2,100306279984993914 2,100306288993993914 2,100306289983993914 2,100306298992993914 2,100306299982993914 2 ⋆ Numbers which require exactly 260 'Reverse and Add' steps to reach a palindrome ● a(n + 1) = a(n) + rev(a(n)). ●